Submission No 82

INQUIRY INTO INTEGRITY OF THE NSW BIODIVERSITY OFFSETS SCHEME

Organisation: Wilton Action Group

Date Received: 3 September 2021

Wilton Action Group

WAG

Better Community Outcomes

Submission to:

Inquiry into the Integrity of the NSW Biodiversity Offsets Scheme TERMS OF REFERENCE

1. That Portfolio Committee No. 7 - Environment and Planning inquire into and report on the integrity of the NSW Biodiversity Offsets Scheme, and in particular:

(a) the 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,

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

(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

(d) any other related matters.

Definition of Biodiversity Offset Schemes: NSW Department of Environment

https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme

The Biodiversity Offsets Scheme is the framework for offsetting unavoidable impacts on biodiversity from development with biodiversity gains through landholder stewardship agreements.

The Biodiversity Offsets Scheme (BOS) was established under the *Biodiversity Conservation Act 2016*.

Under the BOS, applications for development or clearing approvals must set out how impacts on biodiversity will be avoided and minimised. The remaining residual impacts can be offset by the purchase and/or retirement of biodiversity credits or payment to the Biodiversity Conservation Fund.

Landholders can establish Biodiversity Stewardship Agreements to create offset sites on their land to generate biodiversity credits. These credits are then available to the market for purchase by developers, landholders or the Biodiversity Conservation Trust to offset the impacts of development or clearing. Sufficient funds are held in trust to support the long-term management of the biodiversity stewardship sites.

Wilton Action Group

Wilton Action Group (WAG) was formed in early 2018 to advocate for a far more environmentally sensitive planning and design required in an area right next to the pristine headwaters of the Upper Nepean River, with significant critically endangered and threatened species including koalas and

Cumberland Plain Shale Transition Forest. Our concerns about the very dubious process of the approval of Walker Corp's rezoning for Wilton South East by then Planning Minister Anthony Roberts in April 2018 are in our attached Wilton timeline and were raised by David Shoebridge in his speech to the MLC in late September 2018 - video is on our Facebook front page.

WAG SUMMARY OF EFFECTIVENESS OF NSW BIODIVERSITY OFFSET SCHEMES:

The government is already failing to deliver on existing development offset obligations particularly for Cumberland Plain Woodland(CPW). It is trying to mask evidence of the shortfalls but it is not trying too hard, as per the Guardian stories below. The existing NSW-government growth area (the Western Sydney Growth Areas) are already unable to meet their obligations for biodiversity offsets. The Western Sydney Airport simply didn't deliver theirs - instead relabelling DEOH (an existing government conservation area under active restoration) as a 'new' offset to meet 70% of their target.

Since existing obligations for offsets can't be met. the CPCP has no chance of delivery on those obligations. By reducing the checks-and-balances on offsetting it will only further reduce offset price. It has no chance in getting landowners to sign up as offsets. And at the same time it naively claims it will (or rather, it promises to try to) miraculously deliver over 5,000 hectares of CPW for offsets. Again - it is openly, rather honestly, setting itself up to fail.

And we have seen the recent story which called into question the integrity of the biodiversity offset scheme with the story of consultants who appeared to profit from their work in advising the RMS on Cumberland Plain offsetting

https://www.theguardian.com/environment/2021/apr/17/we-need-to-change-the-scheme-calls-for-multiple-investigations-into-40m-gain-from-nsw-environmental-offsets?fbclid=IwAR0iY6InQHrM6_5Y3qg_8KGuXpgf6_VPYwWhTGrnCwGWOkehyMrGNBluvaA

These concerns were only reinforced by another story in which *Federal environmental department officials questioned the credibility of a government plan to use heritage-listed land it already owned as the main environmental offset for the western Sydney airport.*

Documents obtained by Guardian Australia under freedom of information laws show officials asked the federal infrastructure department to justify the use of Defence Establishment Orchard Hills to ***offset the destruction of more than 100ha of critically endangered Cumberland Plain woodland and other habitat****.*

https://www.theguardian.com/environment/2021/aug/02/environment-officials-questioned-use-of-heritage-listed-land-as-offset-for-western-sydney-airport

The consultants in the above story, Ecological Australia, were the consultants appointed by the Dept of Planning for the Greater Macarthur Biodiversity Assessment delivered in Sept 2015.

https://s3.ap-southeast-2.amazonaws.com/dpe-files-production/s3fs public/dpp/202311/Biodiversity%20Assessment%20final%20draft%20report.pdf

This report had significant red flagged areas identified for a range of critically and otherwise endangered species of flora and fauna which should not be 'urban capable'' for development. These consultants were then brought in to do the Wilton and Greater McArthur Priority Growth Areas Biodiversity Assessment delivered in mid 2017:

https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/Biodiversity-study-Wilton-and-Greater-Macarthur-Priority-Areas.pdf

Although this report showed a complete redefinition of Wilton South East koala habitat land as now 'urban capable', its title page had the advice that this 'should be cited as the 2015 report'.

From the above WAG has a number concerns about integrity of biodiversity offset scheme as it will affect not only Wilton principally through the pending release of the final Cumberland Plain Conservation Plan but also across the other affected areas of the Cumberland Plain:

(1) **KEY CHANGES WHICH ARE REQUIRED TO PROPOSED OFFSETS FOR CUMBERLAND PLAIN**
(2) **STAGING DEVELOPMENT TO MATCH DELIVERY OF OFFSETS**
(3) **NO PUBLIC LAND FOR DEVELOPER OFFSETS**
(4) **NO TAXPAYER SUBSIDY OF DEVELOPER OFFSETS**
(5) **NEW CONSERVATION RESERVES, NOT PLANTING**
(6) **SCRAP THE FAILED 'AVOIDED LAND' model (E2 ZONING & CREEKS)**
(7) **FINANCIAL MODELLING AND DATA STRATEGY RETHINK**
(8) **REDUCED COSTS MAKE REAL OFFSETS EXTREMELY UNLIKELY**
(9) **NSW OFFSETS NO LONGER A FREE MARKET**
(10) PUBLIC CONTRIBUTIONS TO DEVELOPER OFFSET OBLIGATIONS

In line with other WAG submissions, we refer to important global studies as below: from

INTEGRATING BIODIVERSITY INTO BUSINESS STRATEGIES. The Biodiversity Accountability Framework:
https://www.academia.edu/18549374/INTEGRATING_BIODIVERSITY_INTO_BUSINESS_STRATEGIES_The_Biodiversity_Accountability_Framework?email_work_card=title

Biological Diversity – Its Central importance to Human Society

Biological diversity, or biodiversity, refers to the dynamics of the interactions between organisms in environments subject to change. We speak of the fabric of the living world, developed over billions of years, whose component parts are interdependent and co-evolving. Biodiversity constitutes the engine which drives the ecosystems(1) of the biosphere(2), and refers specifically to: The genetic diversity and variability within each species, The diversity and variability of species and their forms of life, The diversity and variability of interactions between species and of the ecosystem processes directly or indirectly generated by living organisms. "In nature as in the economic world, there is neither balance nor imbalance; there is merely movement, variability and inertia" (Weber, 1996).

The second phase of globalisation of the discussion of diversity in living systems expands on and redirects the first phase. Biodiversity is taken beyond the traditional sphere of scientific analysis, to be reconceptualised on the social level (Perrings and Gadgil, 2002). In this context, the Convention on Biological Diversity(3), referred to as the CBD in what follows, considerably broadens the responsibilities of human societies. **Since the adoption of its text in 1992, these responsibilities have come to include the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits it generates or may generate in future.**

Taking these considerations into account concerns the social, economic and political construction of the issue of biodiversity.

P:15

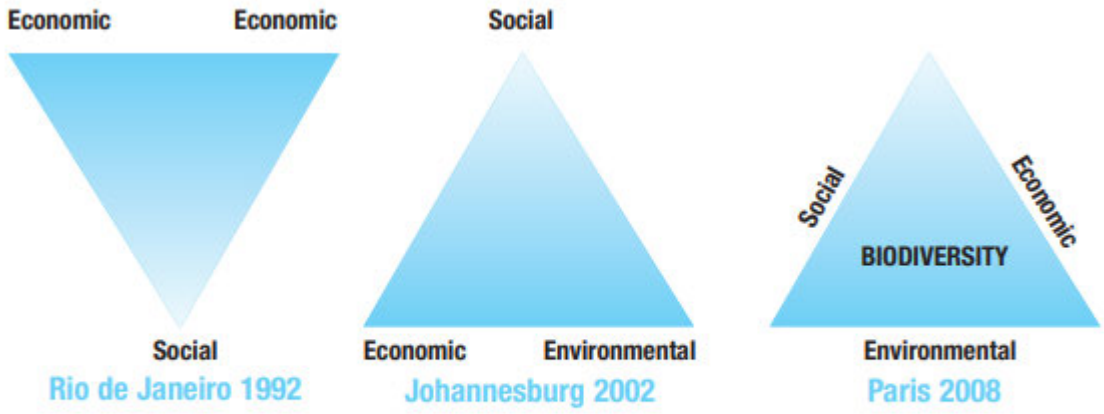

Figure 2 : The evolution of the hierarchy of issues, from Founex to Paris. Biodiversity underpins the interactions between social, economic and environmental issues (adapted from Weber, 2002b).

P.24 Global/Regional/Local Biodiversity Drivers of Change

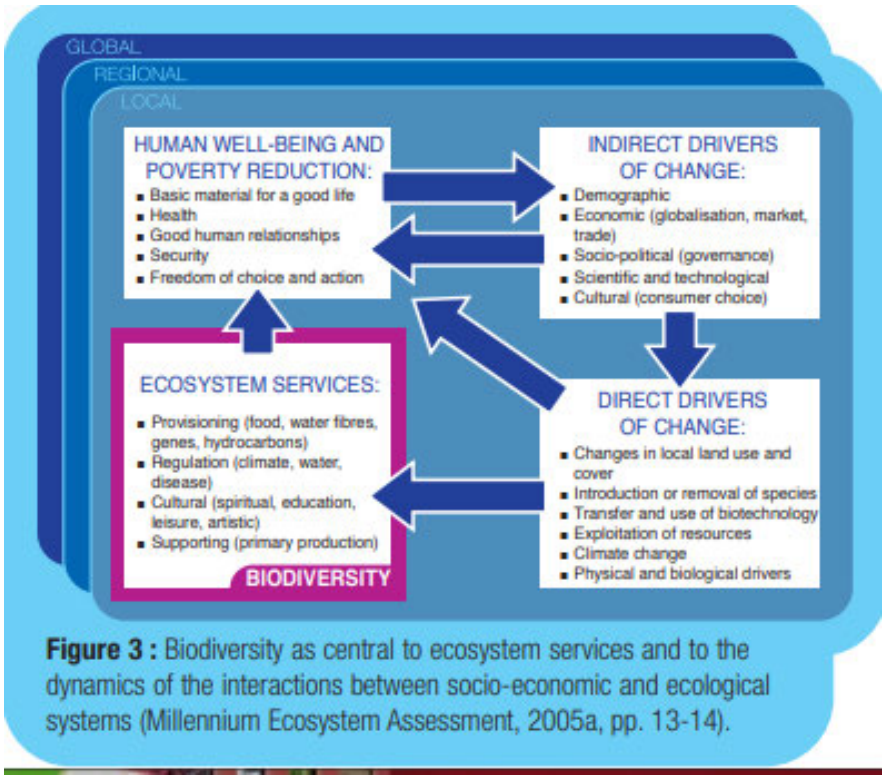

Figure 3 : Biodiversity as central to ecosystem services and to the dynamics of the interactions between socio-economic and ecological systems (Millennium Ecosystem Assessment, 2005a, pp. 13-14).

THE LOCAL EXPERIENCE: WILTON - BIOCERTIFICATION, BIODIVERSITY IMPACTS AND OFFSETTING

Wilton Action Group has been a strong advocate for **thorough biodiversity impact analysis for full biocertification before development and any offsetting**. This is also the position of the OEH in its **comments on the Wilton Priority Growth Interim Land Use and Infrastructure Implementation Plan (LUIIP) and the Wilton South East Planning Proposal – 2017:**

OEH Extract- 2017 submission to DPIE:

Wilton South East Planning Proposal 2.1 Biodiversity certification: The Wilton South East Precinct Planning Report states that "to enhance and protect the precinct's natural assets, we are pursuing biodiversity certification, a process that addresses biodiversity issues upfront, allows for the offsetting of the biodiversity impacts of development and certifies land as appropriate for development. Biodiversity Certification will allow the management of any unavoidable clearing for essential infrastructure to be offset within the precinct or adjoining lands". The PP refers to the need for offsets and that the "final outcome can only be determined through a bio-certification application and the proponent undertakes to complete a Bio-certification process within 2 years of the gazettal of the planning proposal". As stated above, rather than pursuing biodiversity certification assessment after rezoning has occurred, **OEH recommends that the process be made prior to rezoning and that is done in accordance with the principles of biodiversity certification so that biodiversity issues can be addressed up front.**

BIODIVERSITY CERTIFICATION – OEH VIEW

Biodiversity certification is intended to inform strategic planning decisions. It is not intended to be applied retrospectively once rezoning decisions have been made. OEH has previously recommended the application of biodiversity certification to the Wilton PGA because:

- **it delivers better environmental outcomes from urban development, at lower cost**

- **it ensures conservation issues are considered early in the planning process and new urban areas will 'improve or maintain' biodiversity values**

- **by switching off the need for assessments at the DA stage, it saves time and money for landowners and local government and potentially improves housing affordability. Avoiding impacts on environmental values including biodiversity is a fundamental planning principle**.

It is also an important part of the assessment for biodiversity certification. The land proposed for biodiversity certification should be areas free of environmental constraints. If impacts on biodiversity cannot be completely avoided, the impacts must be mitigated and any residual impacts after that, offset.

The OEH also stated:

If planning proposals for the Wilton PGA are progressed without a biodiversity certification in place, **the environmental assessments that underpin the proposals need to be complete, cohesive and comprehensive with adequate ground truthing and consideration of threatened flora and fauna.** Under the Guide to Preparing Planning Proposals the proponent will be required to undertake an assessment of significance in accordance with section 5A of the EP&A Act and the Threatened Species Assessment Guidelines. As previously advised if biodiversity certification is not achieved and there are biodiversity impacts (including red flag matters) that have not been adequately assessed, these impacts will have to be considered at development assessment stage. Consideration of any

Matters of National Environmental Significance (MNES) under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 will also be required.

Subsequently in the 27/9/19 advice below to DPIE the OEH recommended that Wilton South East not be rezoned because of its adverse impact on koalas and the loss of 373 hectares of critically endangered community Shale/ sandstone Transition forest. But Wilton South East was rezoned by then Planning Minister Anthony Roberts in April 2018 a decision that was challenged by Wollondilly Shire Council in the Land and Environment Court in July 2018, the OEH advice below being a principal cause of the challenge, Council media release p,7 below:

LUIIP

- The LUIIP states that it has been informed by a Biocertification technical investigation however the Biodiversity Study is a desktop assessment with no survey effort or additional mapping. This does not provide a basis for determining if biodiversity certification could be achieved and if so what the likely conservation measures would be.
- The potential loss of 373 hectares of the critically endangered ecological community Shale /Sandstone Transition Forest as reported in the Biodiversity Study is significant. An avoid and minimise approach must be demonstrated to achieve biodiversity certification.

Wilton South East PP

- Based on the advice presented in the attached OEH technical koala report, there would be an adverse impact on koalas because of the proposed residential development in the south-east corner of the Wilton South East precinct.

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- In the light of information now available on koalas, OEH recommends not rezoning predominantly cleared land within the identified primary koala corridor in the south-east portion of the site.

Should you have any questions regarding this advice please contact Susan Harrison, Senior Team Leader on 9995 6864 or by email at susan.harrison@environment.nsw.gov.au.

Yours sincerely

27/9/19

ALEX GRAHAM
Director Greater Sydney
Regional Operations

Wollondilly Shire Council

MEDIA RELEASE
13 July 2018

Council Appeals Rezoning Decision

Wollondilly Council is today lodging an appeal in the Land and Environment Court against the rezoning of the Wilton South East Precinct.

This action follows information obtained under the Government Information (Public Access) Act which has revealed that the NSW Department of Planning and Environment ignored advice from the Office of Environment and Heritage from 27 September 2017 recommending that land identified within the primary koala corridor *not* be rezoned.

Council sees this as a failure to comply with the appropriate procedure and grounds for a judicial review.

In addition, Council believes that the rezoning is premature given that the Interim Land Use and Infrastructure Implementation Plan adopted by the NSW Government clearly stated that rezoning would not occur until traffic, transport and infrastructure matters were resolved and the Land Use and Infrastructure Plan was finalised and subject to further community consultation.

Wollondilly Mayor, Cr Judith Hannan said, "Council has tried to engage with the Premier and the Minister for Planning to restore a proper planning process and ensure these matters were fully addressed."

"This has proved futile and as a result, Council has no alternative but to seek for the matter to be placed before the Courts."

"Council has been put in the position where we have no choice but to appeal what we see as an unreasonable and hasty decision," she said.

See:

Planning Department accused of ignoring koala advice at Wilton

https://www.dailytelegraph.com.au › newslocal › news-story

16 July 2018 — In an *OEH* submission to the Planning Department during the public ... *OEH* director greater Sydney regional operations *Alex Graham* said ...

Koala protection advice ignored during rezoning process

THE NSW Planning and Environment Department has been accused of ignoring expert advice on koala protection when it rezoned the Wilton South East Precinct earlier this year.

SUMMARY:

However, in 2021, there has still been no bio-certification completed for the Wilton Growth Area as it will now be implemented through the final Cumberland Plain Conservation Plan – delayed from 2020 and yet to be announced. And a much heralded Wilton South East Koala Plan of Management announced by Walker Corp and Wollondilly Council in September 2018 is yet to be implemented. The draft KPOM was held in commercial in confidence by Council and Walker Corp until WAG and the EDO combined to have it released by the Information Privacy Commissioner in late 2019.

CUMBERLAND PLAIN CONSERVATION PLAN TO BE THE BIOCERTIFICATION INSTRUMENT FOR WILTON GROWTH AREA:

From the draft Wilton Growth Area (GA) DCP - October 2019

1.4.4 Growth Centres Biodiversity Certification

Land within the Wilton Growth Area is not included in the area subject to the Biodiversity Certification Order made in 2007 (and as applied to existing Growth Centres at that time). A new bio-certification process will be implemented through the preparation of the *Cumberland Plain Conservation Plan* (CPCP), which will be finalised in 2020. The CPCP aims to facilitate the best conservation outcomes in new Growth Areas by addressing the costs of offsetting and impacts on development viability; identifying land for conservation; providing certainty for the development industry; and optimising conservation outcomes.

Future land development and infrastructure in the Wilton Growth Area will need to avoid areas of high biodiversity values where possible and implement strategies to mitigate avoidable impacts. The CPCP will detail a comprehensive assessment strategy that will include a methodology for assessing biodiversity loss and gain.

WAG commented on the above in our draft Wilton GA DCP submission of October 2019:

This lack of bio-certification for the Wilton Growth Area which lags the ongoing rezoning and likely approval of DAs by proponents has been a concern of WAG for some time. The above statement also appears to be make it the priority of the CPCP to 'facilitate the best conservation outcomes in the new Growth Areas by addressing the costs of offsetting and impacts on development viability' and 'providing certainty for the development industry'.

What a failure of the environmental planning process to have reached such a point of surrender to the developer in an area of such high conservation value with some of the largest biodiversity constraints in place!

Development consent should not be granted until biocertification and biobanking arrangements are approved.

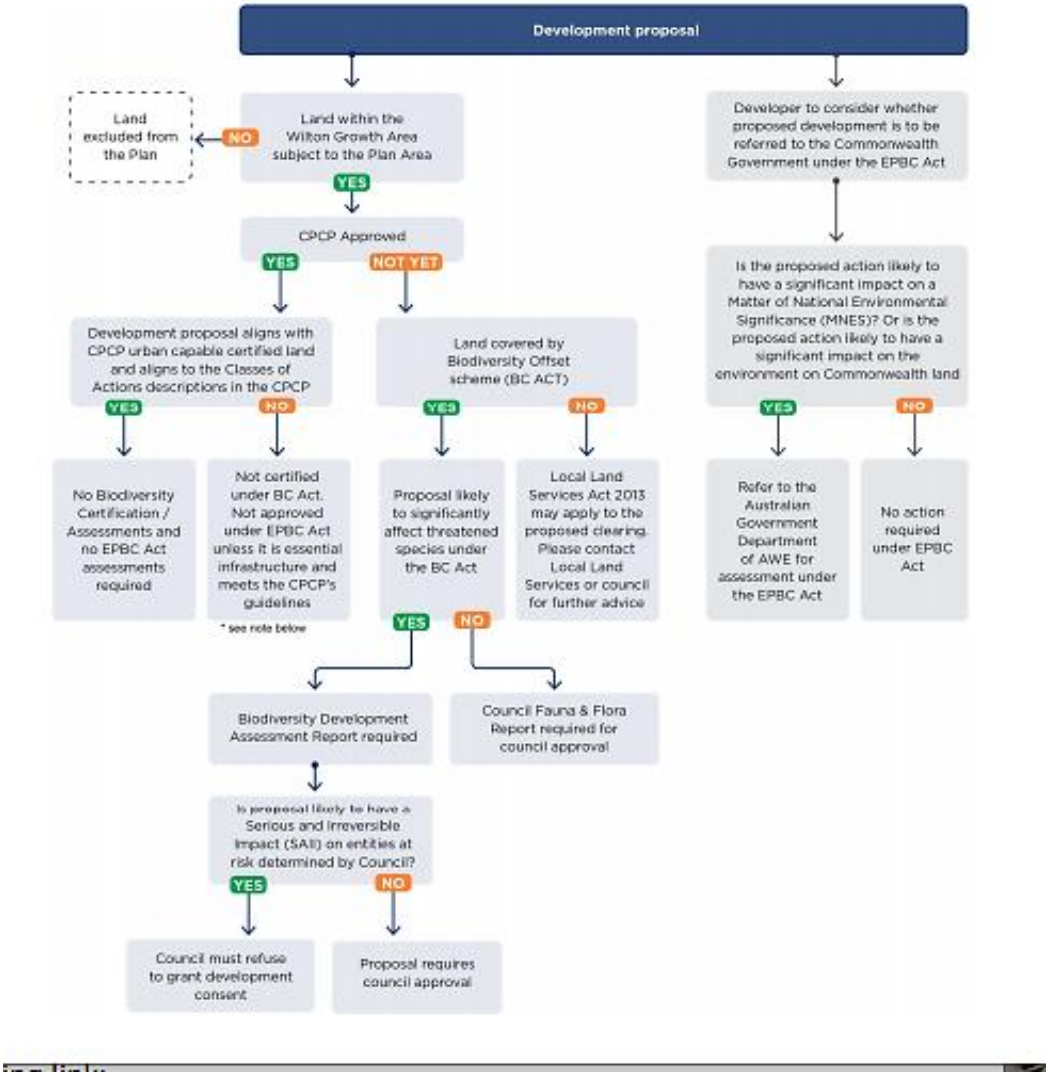
It appears the Wilton development has had significant changes in bio-diversity assessment between 2015 to 2017 which has expanded development within the urban capable footprint.

We note that Wilton Growth Area is still operating under the Threatened Species Act and the DCP does not reflect this.

And finally the question must be asked: how could a greenfield site of such size and importance as Wilton escape biocertification especially with the heavily reduced endangered Cumberland Plain/other sites present as the OEH has indicated above in its 2017 comments on the Wilton Priority Growth Interim Land Use and Infrastructure Implementation Plan (LUIIP) and the Wilton South East Planning Proposal. Or is it that there was no real capacity for offsetting as an equivalent could not be found?

A clue may be found in the biodiversity decision flowchart for the final Wilton Growth Area DCP released in August 2021 by the DPIE for submissions:

Figure 2: Biodiversity planning pathways and requirements



This is about FUTURE development proposals. After the experience of the Wilton South East Stage One rezoning can we have faith in rigorous biodiversity analysis and certification for the coming DA's for Wilton North which is ALREADY rezoned?

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WAG CONCERNS - BEYOND THE LOCAL – THE PENDING BATTLE ON BIODIVERSITY OFFSETS IN THE FINAL CUMBERLAND PLAIN CONSERVATION PLAN

KEY CHANGES REQUIRED TO PROPOSED OFFSETS FOR CUMBERLAND PLAIN
a. Protect the Cumberland Conservation Corridor within the Strategic Conservation Area (SCA

b. Allow smaller lots to be eligible for offsetting (SCA) and improve offset funding accordingly
c..Demand new, large public reserves of Cumberland Plain Woodland (CPW) to offset loss of CPW (in three new National Parks)
d. Restore the focus of offsets to Cumberland Plain Woodland – the ecosystem most impacted by these developments
e. Scrap landowner-specific exclusions in the SCA

2. **STAGING DEVELOPMENT to MATCH DELIVERY OF OFFSETS**: The CPCP must stage development and require the satisfactory delivery of offsets from each stage before further development proceeds (as per the Western Sydney Growth Centres)

3. **NO PUBLIC LAND FOR DEVELOPER OFFSETS**: Stop the CPCP using loopholes in NSW law to relabel existing public reserves as offsets for developers. This denies us new green spaces and denies farmers funding to conserve bushland on their land. No offsets should be created on existing public reserves of any kind.

4. NO TAXPAYER SUBSIDY OF DEVELOPER OFFSETS

Reducing offset cost This is the purpose of the CPCP. The CPCP is offered as an *optional alternative* to developers in meeting their offset needs, compared to the status quo. By being cheaper, the CPCP is pretty much doomed to deliver less biodiversity gains than the status quo, unless it were somehow overwhelmingly innovative & outstanding. So it's a loss on the status quo. So why would we want the CPCP?

There are a number of measures within the CPCP which help deliver this reduction in offset costs, but the primary mechanisms are by replacing existing offset arrangements with greater flexibility. Developers are presently legally required to deliver offsets, whatever the cost, at fixed ratios. Under the CPCP, in practice, they will not actually be required to deliver anything at all. The government will replace their obligations with a plan which has no minimum deliverables, no budget, and no staging. All it has are *targets*. In other words it is ***designed*** to fail to deliver it's offset requirements. This necessarily reduces the cost.

5. NEW CONSERVATION RESERVES, NOT PLANTING:

The CPCP tries to cut developer's costs by replacing the requirement for new conservation areas with tree planting on waste land (The Confluence). Research demonstrates that neither traditional nor scalp-and-seed revegetation compensates for clearing Cumberland Plain Woodland (CPW). We need to save the woodlands that remain, not plant seedlings.

So biodiversity offsetting may encourage clearing in more fragmented landscapes and offsetting in more intact landscapes, which has potential to increase the loss of already heavily impacted ecosystems if the policy does not restrict offsets to the same ecosystem types as those impacted

6.. SCRAP THE FAILED 'AVOIDED LAND' model (E2 ZONING & CREEKS)

CPCP riparian corridors and small bushland parcels are left in limbo, neither developed nor conserved as offsets. The Western Sydney Growth Centres program shows that this model fails – no agency wants to own or manage the unfunded creek corridors, and landowners on E2 zoned lands (left ineligible as offsets) illegally clear bushland

7. FINANCIAL MODELLING AND DATA STRATEGY RETHINK

The key to all of this is how offsetting is measured, how it is defined. The key to this is local diversity in land prices. The essential irony of biodiversity offsetting is that it can only be financially viable if a vast discrepancy exists in the financial value of land not only of the same ecosystem, but under the same degree of threat of development. This is for the *de facto* status of 'offsetting' as a scheme to limit (mitigate, rather than offset) the decline of conservation (the loss of remnant functional ecosystems). Of course the NSW scheme occasionally still claims to be a true *offset* scheme, that is a scheme where 'restoration' or 'revegetation' create gains which offset the loss of clearing, but the claimed benefits are directly contradicted by 2 decades of research

From our research budgeting $20-60,000/ha for land reservation while valuing developable land at $.125 M/Iha could give the CPCP half a chance for delivering its obligations. But that disparity only exists if you believe NSW Valuer General valuations, which everyone knows are set politically to limit land tax. No-one is going to conserve their land for $60,000/ha in a region where real-estate sells for more than ten times that rate. On that view, The CPCP will fail.

Biodiversity offsetting policies should therefore define appropriate sources of averted loss, justify how averted losses can be calculated on land insuring they are subject to a no net loss policy and make explicit the rates of loss that are used when calculating averted losses.

The value of integrating sound data collection and reporting systems with the implementation of policy should be a priority. To implement sound policy requires the collection of consistent, quantitative data at each site and investment to regularly map changes to the area of native vegetation Most of these data should be publicly accessible. However, what is currently lacking from this data is which conditions imposed upon developers were actually implemented on the ground.

8. REDUCED COSTS MAKE REAL OFFSETS EXTREMELY UNLIKELY

The lower the offset market costs, the fewer landowners can (and will) participate. Already the biodiversity offset market is failing. Farmers want to participate in the scheme, but they demand (fairly) to do so at market prices.

9.NSW OFFSETS NO LONGER A FREE MARKET

Of course, that situation would normally drive up the price of offsets. A founding principle of biodiversity offsetting is that as a market mechanism the rarer it gets, the more disincentive to clear (and offset) it. However the NSW scheme is no longer operated as a free market system. The latest biodiversity law reforms, and a lot of changes to implementation (changes which occur silently, without legislative change) have all seen the NSW Government take over control on price. This change occurred in response to pressure from developers. Now the BCT take on most developers obligations and buy offsets at prices they see fit.

10. PUBLIC CONTRIBUTIONS TO DEVELOPER OFFSET OBLIGATIONS

The fine print in the CPCP Draft Plan both directly contradict the CPCP 'Highlights' and confirm a public contribution toward developers offset costs.

What does a public contribution mean? It doesn't mean any change to housing costs, either way. For decades housing costs in Western Sydney have been set by *ability to pay, not by market factors.* This is the result of housing being a necessity not a choice, and being grossly undersupplied. So any tariffs placed on development (such as biodiversity offsets) come out of developers pockets, despite what their PR teams keep telling us. Such tarrifs cannot (and have not) resulted in actual increases in the cost of housing to the public, because the public is already paying as much as they can afford (or more). So the only thing that will be changed by a public contribution to the scheme, rather than the existing developer-pays offset model, is that the public taxes begin to subsidize directly into the developers purse.

EXTRACTS: FROM THE WOLLONDILLY SHIRE COUNCIL ANALYSIS OF THE EFFECTIVENESS OF BIODIVERSITY IMPACTS AND OFFSETS IN THE CUMBERLAND PLAIN PLAN ASSESSMENT REPORT

Table 1: Updated Council position statements over biodiversity issues for Wilton Priority Growth Area

Position statement on the initial	Adequacy of response	Adequacy in regard to the CPCP
Has not defined the full extent of (Critically) Endangered Ecological Communities on the site based on legally accepted definitions	Assessment Report has adequately identified vegetation communities including native grasses There is however insufficient incorporation of the analysis by the Assessment Report into the CPCP.	Partially adequate
Has not sufficiently assessed potential impacts on vegetation communities (including native grasses) and associated flora and fauna species	The Assessment Report has adequately described and quantified impacts. However, habitat connectivity in a landscape context has not been fully considered. The approach in quantifying area of impact based on Structure Planning mapping has resulted in instances of the identified impact not being based on updated mapping	Partially adequate
Has not used an appropriate policy framework for the determination of biodiversity offsets	Identification of biodiversity values by Assessment Report is adequate There are however inconsistencies in the adopted offsetting framework with best practice ecological principles as well as shortcomings in the implementation of the framework	Not adequate

Table 4: Identified consistency of the CPCP offsetting framework with offsetting principles

Basic Offsetting Principle	Adequacy/consistency comments in regard to the CPCP
Offsetting of losses to biodiversity should only be considered following detailed investigation and implementation of avoidance and mitigation measures.	The intended offsetting measures within Nominated Areas are defined in accordance with level of vegetation clearance based on mapping within LUIRP's rather than Section 8 of the BAM as well as offsetting principles such as those defined in the Principles for Offsetting in NSW prepared by EES.
Offsetting should involve enhancement of existing bushland areas (with planting if identified as necessary to supplement natural regeneration) as a preference to revegetation.	There is considerable research evidence demonstrating that revegetation is not ecologically effective in recreating CPW such as Wilkins et al 2003; Nichols et al 2000.
Offsetting should have a demonstrated ecological basis (such as credit calculations, offsetting ratios, assignment of value criteria amongst others).	The offsetting approach would appear in part to be designed to reduce the offsetting liability. While recognising the need for reducing financial costs, this approach is viewed as having inconsistency with a basic principle of offsetting that costs of offsetting increases proportionally to the level of rarity.

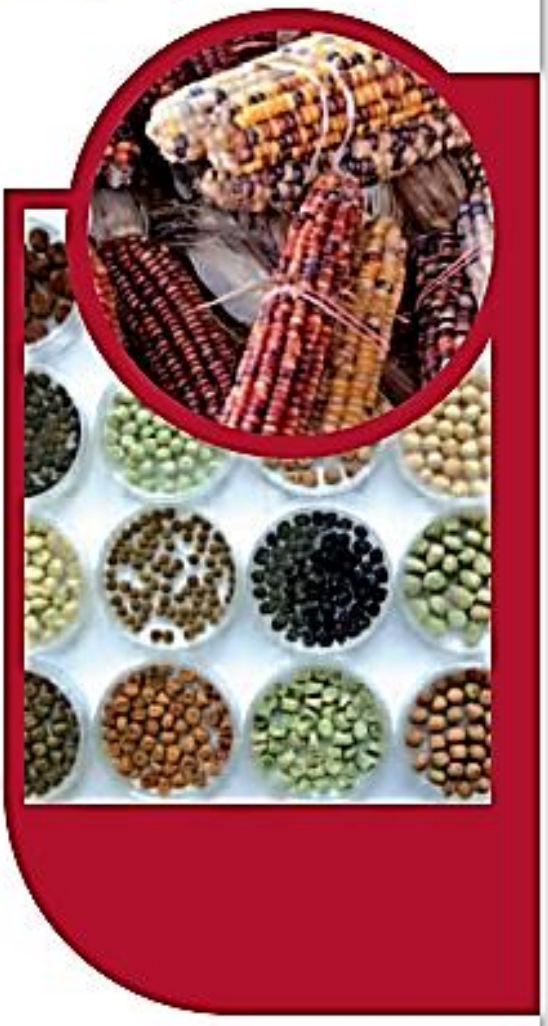
Basic Offsetting Principle	Adequacy/consistency comments in regard to the CPCP
Offsetting of vegetation losses should preferably occur in a biodiversity strategic context, (e.g. existing wildlife corridors) and preferably locally within the Wollondilly LGA.	The strategic location of the SCA's in large part is viewed as a strong positive of the CPCP. However, there are strong concerns over the apparent intention not to implement mechanisms such as requiring staging and procedures that would require suitable documentation over the delivery of intended offsetting measures.
Any application for reduction in credit retirement requirements must be largely based on biodiversity grounds and fully documented	The BC Act is recognised as permitting a range of offsetting measures for applications involving strategic biocertification. The utilisation of only biodiversity measures by the CPCP is a strong positive of the document. However, the approach adopted raises questions over the adequacy of the ecological basis of the offsetting.

THE GLOBAL PICTURE – BEST PRACTICE ON BIODIVERSITY VALUATION AND CONSERVATION

(1) Integrating Biodiversity into Business Strategies as above and relevant extract for consideration:
https://www.academia.edu/18549374/INTEGRATING_BIODIVERSITY_INTO_BUSINESS_STRATEGIES_The_Biodiversity_Accountability_Framework?email_work_card=title

p.26

1.1.3 Biodiversity as insurance policy



Biodiversity can be viewed as a **storehouse of responses which living systems can make when faced with ecosystem change**, including climate change (Abbadie and Lateltin, 2004). If the store is reduced due to the pressures of human activity, this will inevitably create a mismatch between the variability of the environment and the range of possible responses by biodiversity. We only view a snapshot image of the diversity of living systems, so that we are tempted to identify many species and habitats as redundant or inessential. But it is **crucial to take account of time scales** for an understanding of the importance of each component of biodiversity and of their **interactions**. We may see this is the case of animal or plant populations whose organisation and distribution vary depending on the climate conditions they have been subjected to over a span of years, centuries or millennia (Parmesan and Yohe, 2003; Pounds, *et al.*, 1999). The roles of species and associations between organisms are constantly changing within ecosystems.

We could take the operations of an investment bank as a parallel: the creation of diversified equity portfolios, that is, portfolios consisting of a variety of stocks which perform independently on the stock exchange, is designed to reduce the risks associated with the market in general and with the specific characteristics of each stock. The same holds true for the relations between humans and ecosystems. To rely solely on one type of land use which appears to be "optimal" at a given point in time, but which irreversibly degrades ecosystems by homogenising their biological components, amounts to a particularly risky gamble which threatens our future. That is why we view biodiversity in all its variety, complexity and variability as **insurance against the unexpected**[10] in the context of global ecosystem change, whether "natural" or produced by humans.

2. **Extracts from:** [Valuing nature conservation | McKinsey](https://www.mckinsey.com/business-functions/sustainability/our-insights/valuing-nature-conservation) September 2020

A methodology to evaluate where safeguarding *natural* capital could have the biggest impact on climate, economies and health.

Executive summary

Rigorous analysis of opportunities to expand nature conservation can help determine where natural capital could have the biggest impact on climate, jobs, and health.

Much of the global economy depends on natural capital—the world's stock of natural assets. Acting as the planet's balance sheet, natural capital provides critical services and resilience. It supports water cycles and soil formation while protecting our communities from major storms, floods, fires, and desertification. By absorbing CO_2, it limits the pace of climate change. Biodiversity, a core component of natural capital, supports activities as wide-ranging as pharmaceutical innovation, ecotourism, and crop pollination. These are just a few of the numerous "co-benefits" that make nature so valuable. Yet the complexity of natural capital makes its benefits hard to quantify, leading many to overlook nature as an investment opportunity. In this report, we describe and apply a methodology that can help quantify some of the costs and benefits of conserving natural capital.

Multiple scientific studies have found that human activity is eroding the value generated by natural capital. For example, deforestation is responsible for approximately 14 percent of global carbon emissions, accelerating climate change and increasing the frequency of extreme weather events.[1] The destruction of natural marine reefs and mangroves threatens the protection of coastal human populations against storms and flooding.[2] At the same time, ecosystem fragmentation, habitat loss, and climate change have caused wildlife populations to decline on average by two-thirds in the past 50 years, decreasing biodiversity worldwide.[3] The wildlife that remains comes in ever-closer contact with society, raising the risk of zoonotic diseases, such as COVID-19.[4]

The scale of these pressures has led scientists to conclude that we may have a limited window of opportunity to protect and stabilize nature.[5] To reduce the erosion of natural capital, scientists and policy makers have called for the permanent conservation of at least 30 percent of the planet's surface by 2030, nearly doubling nature conservation on land and in national waters.[6]

To pursue the 30 percent target, decision makers would need rigorous data-driven analysis to help them evaluate strategies and design conservation[7] efforts while capturing benefits and managing risks. Methodologies to evaluate the full spectrum of co-benefits from nature conservation could help stakeholders make informed trade-offs. This report seeks to contribute to such efforts, providing a fact base and methodology to help decision makers start this journey, as well as a set of actionable recommendations for further work.

[1] Carbon budget 2019, Global Carbon Project, December 4, 2019, globalcarbonproject.org.
[2] Holly P. Jones et al., "Global hotspots for coastal ecosystem-based adaptation," *PLOS ONE*, May 29, 2020, Volume 15, Number 5, journals.plos.org.
[3] *Living Planet Report 2020: Bending the curve of biodiversity loss*, World Wildlife Fund, September 10, 2020, wwf.panda.org.
[4] Zoonotic diseases are those passed from animals to humans.
[5] Eric Dinerstein et al., "A global deal for nature: Guiding principles, milestones, and targets," *Science Advances*, April 19, 2019, Volume 5, Number 4, advances.sciencemag.org.
[6] Conserving 30 percent of the planet's surface would also imply a significant increase in the 2 percent of international waters that are protected today. We do not include these in our analysis. The current protection figures of 16 percent of land and 17 percent of national waters include International Union for Conservation of Nature (IUCN) categories only—excluding other effective area-based conservation measures (OECMs).

Our approach

In this report, we propose an analytical methodology to help decision makers evaluate alternative ways to expand nature conservation. Using highly detailed geospatial analytics, we compared thousands of data layers and assessed around 6 million pixels of the Earth's surface. Through this analysis, we seek to:

—establish a baseline of existing Protected Areas

—identify a variety of scenarios that would result in the conservation of 30 percent of the planet

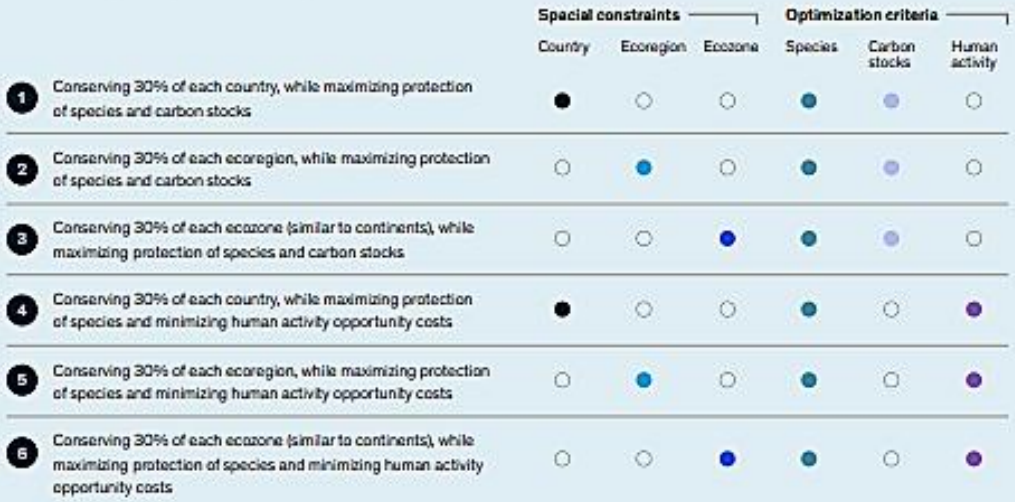
—quantify the potential impact of expanded nature conservation on climate, the economy, human health, and biodiversity

—calculate the potential operating costs of expanded nature conservation

Our analysis encompasses a diverse set of potential effects to provide an end-to-end examination of the benefits and costs of conserving the Earth's land and national waters at scale. This report presents the results of our analysis, aggregated at a global level. **The approach could also be applied to any local area (CPCP?).** Conserving nature has many benefits that we did not quantify—such as the value of protecting against physical climate risk for coastal communities or crop pollination—leaving opportunities to take this analysis further. For an overview of our analysis, see sidebar "About the methodology"; full details can be found in the technical appendix.

Exhibit 2

Six scenarios have been developed to identify the range of potential benefits and costs of conserving 30 percent of the planet.



characteristics such as agriculture revenue potential, elevation, initial forest cover, protected status, and slope.[22]

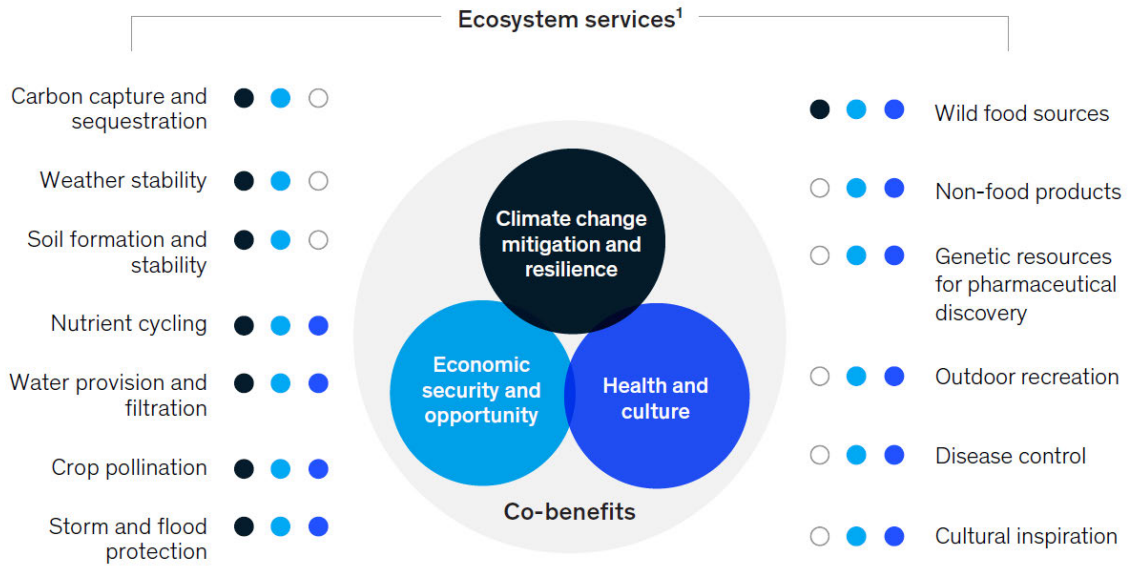
The potential of carbon offsets as a source of conservation funding was calculated based on combined avoided deforestation and possible reforestation. It assumes demand growth will be sufficient to absorb increased supply. Pricing was conservatively assumed at $5 per tonne of CO_2 and based on expert interviews.

The potential to create and safeguard jobs and GDP was measured for ecotourism in land areas and for both ecotourism and sustainable fishing in marine areas.

Land-based ecotourism potential was estimated using a regression model that drew on various area-specific (size, attractiveness, Human Footprint Index, remoteness) and country-specific (GDP per capita, global peace indices, tourist visits, and violent crime) variables and calibrated using data from around 500 Protected Areas.[23] We then projected the 2030 market size for Protected Area–based tourism by using growth forecasts and distributed projected tourist spending for each country that included both existing and newly identified areas for conservation. Marine ecotourism was estimated

Exhibit 3

Natural capital—the world's stock of natural assets—provides a wide range of ecosystem services with direct benefits to humanity.



The critical need for investments in natural capital

Natural capital supports a significant share of global economic activity—and it does so in myriad ways (Exhibit 3 above). These ecosystem services mitigate climate change, increase economic security and opportunity,and sustain health and culture. However, the number and complexity of ecosystem services may cause many to overlook and undervalue investment opportunities in natural capital. For instance, it can take years of research to account for the exact value of a single forest's water filtration, rainfall generation, soil formation, recreational opportunities, pest control, and agricultural pollination. Yet it is precisely this large stack of co-benefits that makes intact ecosystems so valuable.

WAG comment: So the CPCP appears to value intact eco-systems BUT only *where an action cannot feasibly or practically avoid impacts on an identified area, these impacts are to be minimised as far as possible. Minimisation can be achieved by refining design elements to reduce the overall impact.*

WAG suggests that this language only indicates a value for nature conservation that is conditional on development impacts to be minimised 'as far as possible'. The evaluation of the 'stack of co-benefits' of intact ecosystems is totally absent from this draft CPCP

3. **Extracts from BCG – the Biodiversity Imperative for Business**

   Preserving the Foundations of Our Well-Being – September 2020

   https://web-assets.bcg.com/2a/f5/e95293214c29877c11251290ebca/2020-09-the-biodiversity-imperative-for-business-final2-002.pdf

Executive Summary

Biodiversity, understood as the diversity of ecosystems, species, and genes, is at the core of human well-being. Its services allow our economy to thrive and ensure the livelihood of billions of people. Yet, the rate of biodiversity decline has never been so fast: Around one million species are facing extinction within the coming decades, and every year over $6 trillion of nature's economic benefits are lost.

In response to the growing crisis, NABU and BCG conducted a comprehensive analysis to answer three questions:

1. Why is biodiversity essential for our well-being, and what economic value does it provide?
2. What are the root causes of biodiversity loss?
3. How can biodiversity loss be stopped?

Among our findings:

Biodiversity provides over $170 trillion in yearly benefits on top of its inherent value. Firstly, a healthy nature holds enormous, intrinsic value and deserves to be protected for its own sake and for future generations. Secondly, ecosystems provide valuable services to humans, most importantly in the form of fertile soil, the regulation of the climate, and genetic resources for medicinal use, as well as cultural offerings for our recreation. The economic benefits of these ecosystem services are estimated at an annual value of $170–190 trillion, equivalent to double the value of global GDP. This value demonstrates the imperative to preserve biodiversity for the sake of all human well-being, including local communities but also global businesses and consumers.

The root causes of biodiversity loss arise from economic activities. Driven by evolving patterns of consumption, production, and trade, activities all along the economic value chain exert enormous pressure on biodiversity: Farming, forestry, mining, industrial production, and infrastructure expansion currently cause almost 60% of overall pressure. For example, infrastructure expansion, while crucial for economic and social development, may fragment habitats and affect species' survival if projects do not provide for adequate relocation or restoration. In many cases, a possible balanced coexistence of biodiversity and business has been impeded by target conflicts inherent to our economic system, which is based on the exploitation of land and natural resources. In consequence, preservation requires systemic change towards an internalization of the value of biodiversity in economic decisions.

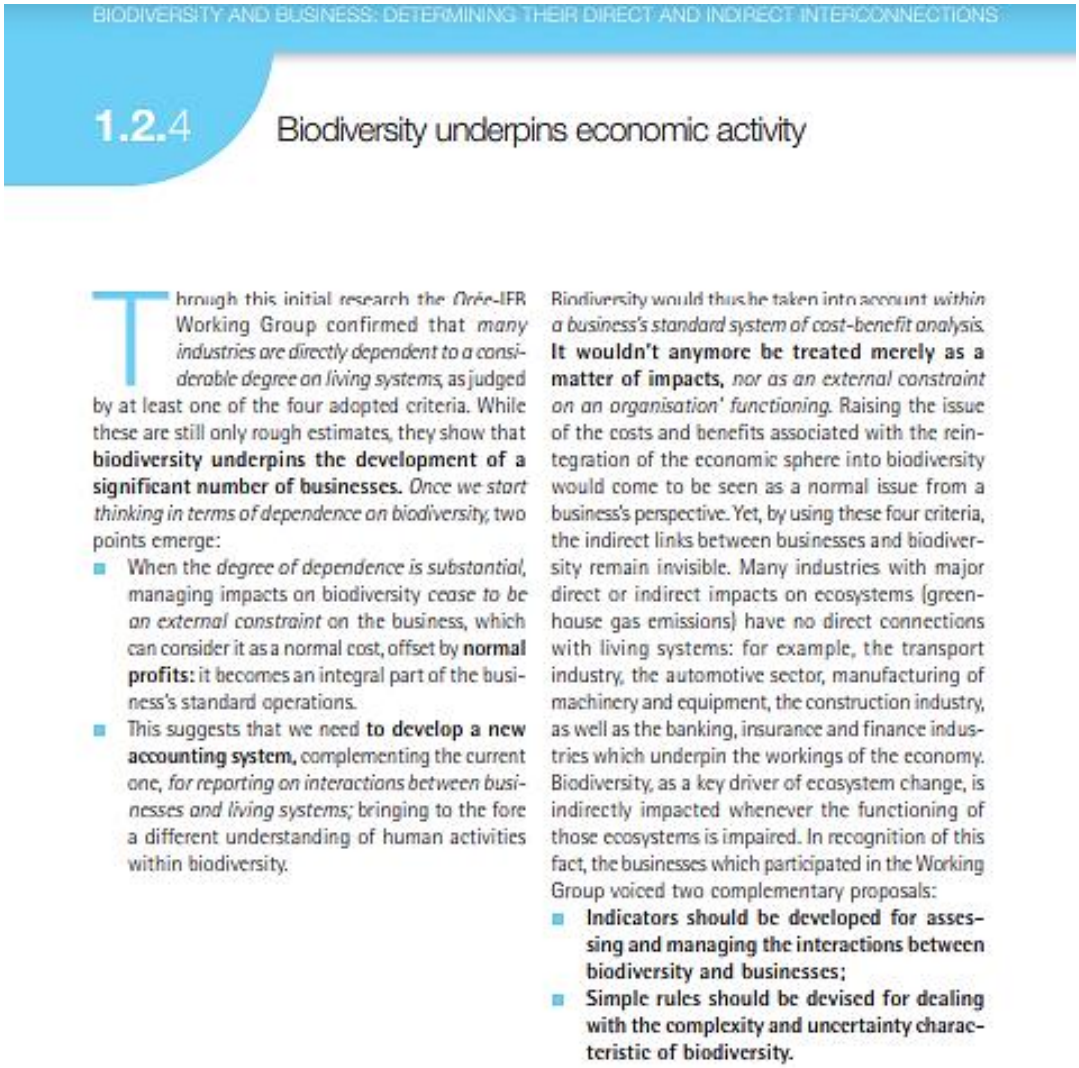
Biodiversity and climate change are strongly interlinked. Many ecosystems, such as forests, grasslands, and peatlands, store carbon on a massive scale and can make a substantial contribution to combating climate change. However, ecosystem degradation causes the release of carbon into the atmosphere; and in turn, climate change leads to further biodiversity decline—underlining the urgency of acting on both environmental crises.

A systemic approach to change is needed. Biodiversity loss cannot be addressed with the same tools as climate change: There is no single method for measurement and no universal solution. Rather, biodiversity is local and does not allow for one-size-fits-all solutions, as there is considerable variation in ecosystems, their species compositions, and processes. Resilience comes from diverse, connected land- and seascapes, where native species can exist and interact. The following six levers should guide stakeholders to developing a systemic biodiversity approach as well as setting and delivering on biodiversity targets:

- Since large shares of the Earth's surface are in human use, **integrative land use models** are required at least as much as **protection and restoration measures**.
- **Regulation and economic incentives** need to set the framework and create a level playing field for all stakeholders.
- Companies should engage in **voluntary commitments** as well as measuring and transparently disclosing their biodiversity impact.
- **Innovation and collaboration** are needed to develop biodiversity-friendly solutions.
- **Information and education campaigns** for the broader public are essential to promoting an understanding of biodiversity's state and needs.
- Local stakeholders such as land users need to be **enabled to act** on biodiversity preservation.

The evidence is clear: To maintain a stable and resilient planet, mitigating climate change and reversing the biodiversity crisis are two sides of the same coin and must be an imperative for businesses. The last years have witnessed an upsurge in public awareness, regulatory activity, and engagement among diverse stakeholders. Now is the time to take these initiatives to a coordinated, integrative level and establish systems that allow our economy and nature to grow together.

Each of us has a responsibility to act now. Collectively, we can preserve our endangered natural spaces to ensure a sustainable future for generations to come.



BIODIVERSITY AND BUSINESS: DETERMINING THEIR DIRECT AND INDIRECT INTERCONNECTIONS

1.2.4 Biodiversity underpins economic activity

Through this initial research the Orée-IFR Working Group confirmed that *many industries are directly dependent to a considerable degree on living systems*, as judged by at least one of the four adopted criteria. While these are still only rough estimates, they show that **biodiversity underpins the development of a significant number of businesses.** *Once we start thinking in terms of dependence on biodiversity*, two points emerge:

- When the *degree of dependence is substantial*, managing impacts on biodiversity *cease to be an external constraint* on the business, which can consider it as a normal cost, offset by **normal profits:** it becomes an integral part of the business's standard operations.
- This suggests that we need **to develop a new accounting system,** complementing the current one, *for reporting on interactions between businesses and living systems;* bringing to the fore a different understanding of human activities within biodiversity.

Biodiversity would thus be taken into account *within a business's standard system of cost-benefit analysis.* **It wouldn't anymore be treated merely as a matter of impacts,** *nor as an external constraint on an organisation' functioning.* Raising the issue of the costs and benefits associated with the reintegration of the economic sphere into biodiversity would come to be seen as a normal issue from a business's perspective. Yet, by using these four criteria, the indirect links between businesses and biodiversity remain invisible. Many industries with major direct or indirect impacts on ecosystems (greenhouse gas emissions) have no direct connections with living systems: for example, the transport industry, the automotive sector, manufacturing of machinery and equipment, the construction industry, as well as the banking, insurance and finance industries which underpin the workings of the economy. Biodiversity, as a key driver of ecosystem change, is indirectly impacted whenever the functioning of those ecosystems is impaired. In recognition of this fact, the businesses which participated in the Working Group voiced two complementary proposals:

- **Indicators should be developed for assessing and managing the interactions between biodiversity and businesses;**
- **Simple rules should be devised for dealing with the complexity and uncertainty characteristic of biodiversity.**

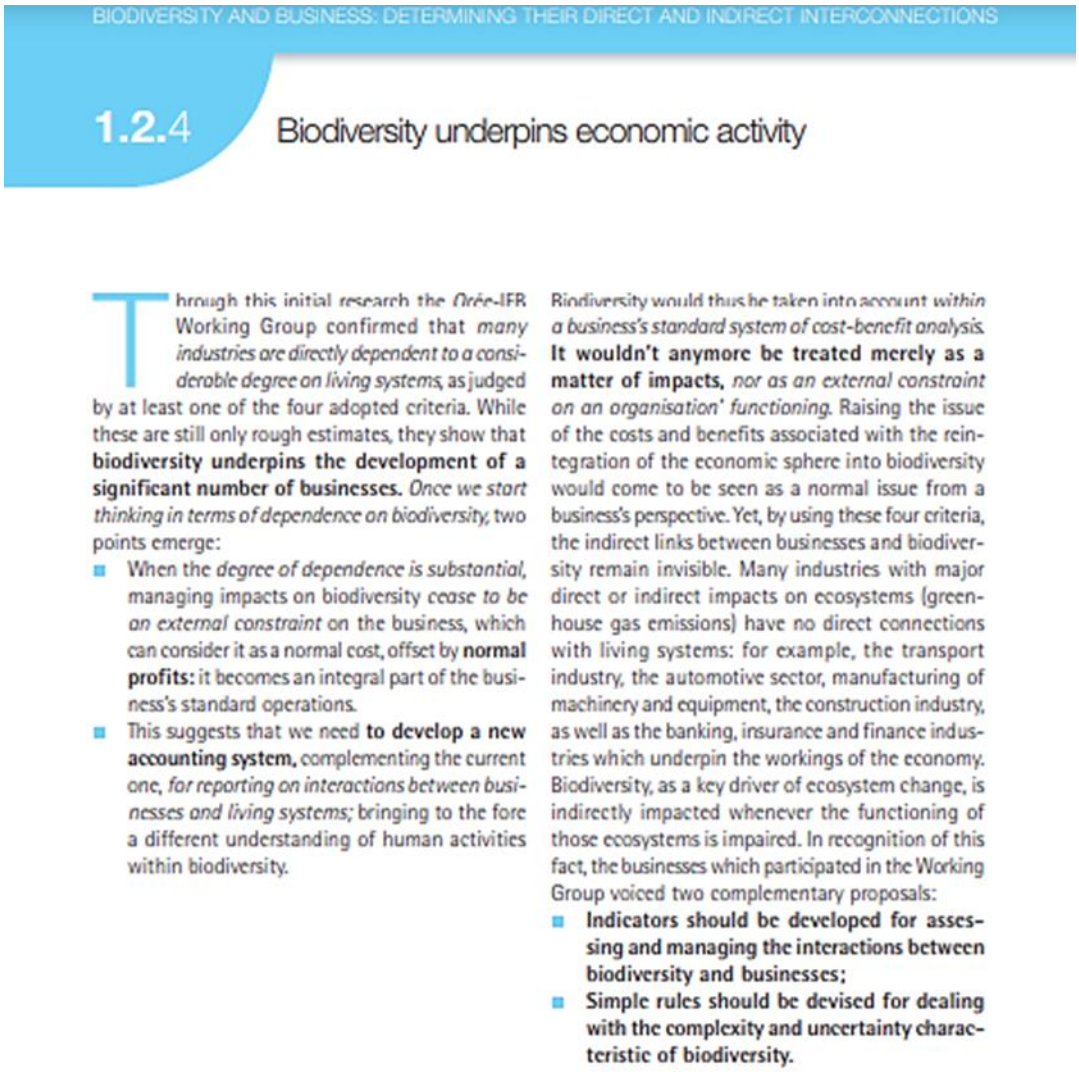
WAG CONCLUSIONS AND RECOMMENDATIONS

(1) It's clear that biodiversity offsetting by itself has not been able to stop the loss of biodiversity in NSW. Biodiversity appears to had significant reduction due to land clearing which continues:
https://www.abc.net.au/news/rural/2021-07-01/land-clearing-in-nsw-escalates-again/100252244
https://www.nature.org.au/media/355843/181109-tzd-report-final.pdf

(2) On the WAG and Wollondilly Council analysis of the deficiencies in the proposed offsets in the Cumberland Plain Conservation Plan(CPCP) it's clear that to achieve no further net loss of biodiversity the government must urgently identify ways that ongoing demands from population growth and economic growth can be met without further impacting on biodiversity.

(3) Therefore as plans such as the CPCP appear to not be able to achieve effective offsets and with the recent revelations from the Guardian articles above, public confidence in the integrity of the biodiversity offsets scheme is at an all time low. We suggest the NSW

government take a bold approach to redesign the scheme in line with the global best practice above. E,g Integrating Biodiversity in to Business Strategies below:



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- **Indicators should be developed for assessing and managing the interactions between biodiversity and businesses;**
- **Simple rules should be devised for dealing with the complexity and uncertainty characteristic of biodiversity.**

(4) The NSW government has already taken the bold decision to initiate its Electricity Infrastructure Roadmap as a coordinated framework to deliver a modern electricity system for NSW which is a transition from high emissions coal-based generation to a zero emissions renewable energy generation system by 2050. https://www.energy.nsw.gov.au/government-and-regulation/electricity-infrastructure-roadmap

(5) If the NSW government can recognise the need for such a transition that recognises climate change and the need to mitigate such risks for emission free power generation, then it cannot on the other hand, for example, act to allow defective biodiversity offsets further degrade the environments of the energy zones in which that roadmap will be implemented.

(6) And given that the McKinsey and BGC's reports quoted above have the detailed understanding of how to take an innovative approach to nature valuation and conservation

and their computation of 'co-benefits', we recommend the government study these reports closely for how to redesign their total approach to biodiversity including offsetting.

(7) An examination of the intricate implications of Covid 19 for urban planning can be found at: https://www.sciencedirect.com/science/article/pii/S0048969720359209

(8) Finally for changes such as these to occur, we recommend that any new biodiversity offsetting policy must be driven as part of holistic reforms across government rather than in silo dealings with powerful developer stakeholders and their exclusive economic interests for which 'certainty' is a priority. But that 'certainty' can then be one of the ultimate drivers of biodiversity loss. For example, the first NSW public health framework developed for adaptation and mitigation of climate change risks below could be looked at for integration into a new biodiversity offsetting policy that recognises how human health impacts should be considered as a driver for improved biodiversity conservation, as per McKinsey our approach p.16 above:
quantify the potential impact of expanded nature conservation on climate, the economy, human health, and biodiversity

https://www.phrp.com.au/wp-content/uploads/2018/12/PHRP2841826.pdf

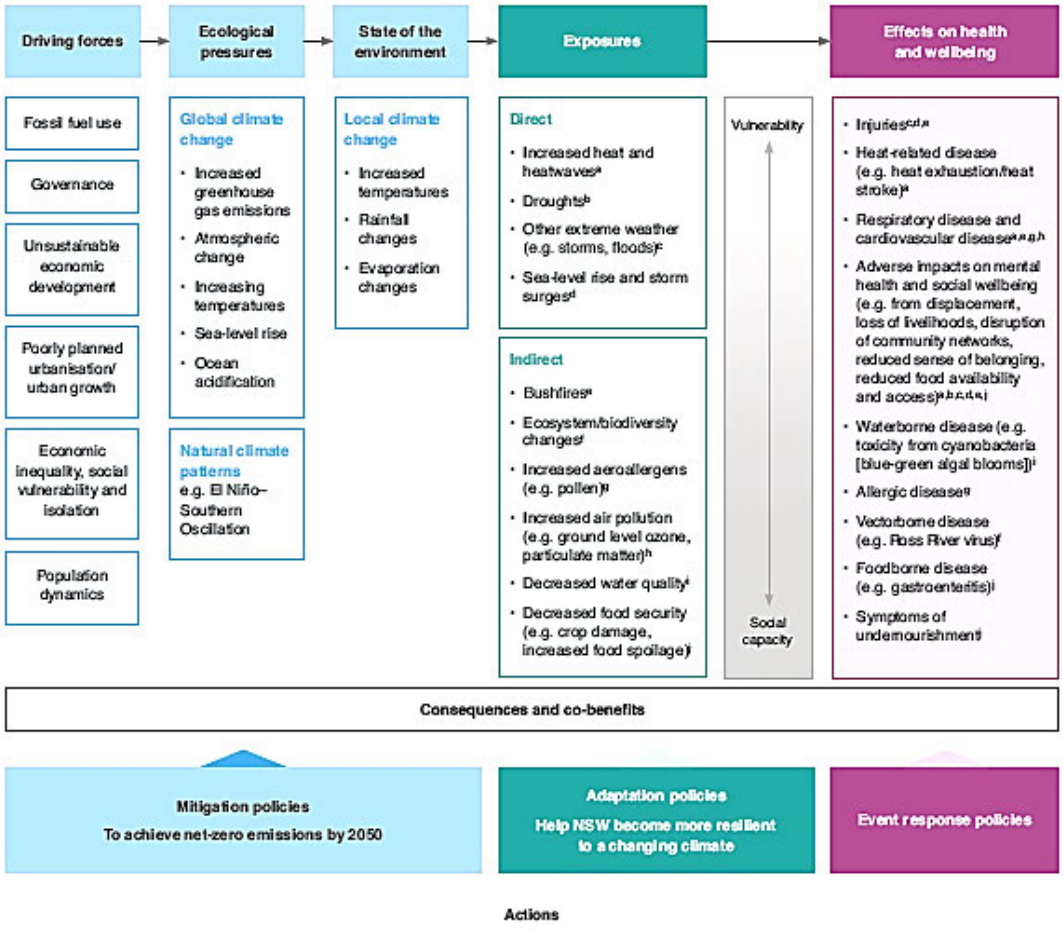
Extract:

The NSW Government's Climate Change Policy Framework recognises the need to reduce the effects of climate change on health and wellbeing. A conceptual framework can support the aims and objectives of the policy framework by depicting the effects of climate change on health, and individual and social wellbeing, and areas for policy actions and responses. A proposed conceptual framework has been developed, modelled on the Driving force, Pressure, State, Exposure, Effect and Action (DPSEEA) framework of the World Health Organization – a framework which shows the link between exposures and health effects as well as entry points for interventions. The proposed framework presented in this paper was developed in consultation with researchers and policy makers. The framework is guiding current research examining vulnerabilities to climate change and the effects of a range of exposures on health and wellbeing. (WAG note: the framework was devised before the advent of Covid-19)

Framework below which includes driving forces of unsustainable economic development and poorly planned urbanisation/urban growth.

Public Health Research & Practice December 2018; Vol. 28(4):e2841826 • https://doi.org/10.17061/phrp2841826
A framework for climate change and health

Figure 1. Proposed conceptual framework for climate change impacts on human health and wellbeing in NSW



Note: Superscript letters denote relationships between specific exposures and effects on health and wellbeing.