

Submission No 186

INQUIRY INTO REVIEW OF THE HERITAGE ACT 1977

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The Future is the Natural World



"Biodiversity loss is the most significant environmental problem facing Australia"
Professor David Lindenmayer. (2007) *"On Borrowed Time"*

Thank you - for extending the opportunity to make a submission to the Heritage Act Review.

NoEnvironment=NoEconomy=NoSociety is a Survival formula. If wildlife can't survive – neither will humans.

Tim Flannery's assessment of Australia's Natural Heritage is highly relevant to the Heritage Act Review.

Flannery says, *"Such is the depth of public ignorance about Australia's extinction crisis that most people are unaware that it is occurring, while those who do know of it commonly believe that our national parks and reserves are safe places for threatened species. In fact the second extinction wave is now in full swing, and it is emptying our national parks and wildlife reserves as ruthlessly as other landscapes."* Quarterly Essay 48 2012. *After the Future*

Action Research The Future is the Natural World says, **A Heritage Act must legislate to protect Natural Heritage.** Natural Heritage and Environment supports Economy & Society. For this reason, including Conservation of Environmental Heritage and Natural Heritage in the scope of the Heritage Act Review is to be applauded. There can be no Economy or Society - without conserving Environment. Already intersecting NSW laws impact Nature, heralding the demise of Nature. The process of "extinction debt" needs understanding. Extinction debt means, by the time the problem is grasped – it is probably too late to fix it. The anthropocentric push of development demands, without assessment of Survival Economics, urgently needs the protection of a Heritage Act. Ecological integrity of last native vegetation - is about to disappear under "activation" of "open space" for human use.¹ Yet, Social survival depends on the Natural World. *Caring for Country*² & protecting *Half Earth* are survival issues.³

Nature does not understand borders, finance or the Law. Legislation protecting the Natural Heritage is central to future socio-economic stability. There are no Social Issues without Environmental Heritage conservation.

All species need the same air, water and soil to survive. If wildlife can't survive – humans will not. Natural Heritage, if understood as Australia's original inhabitants understood it, is the [Land and its native fauna and flora](#).

Since Flannery wrote (2012), the status of the Natural World has worsened. Natural Heritage in Australia and its rare biological diversity are under extreme threat - [but today's State and Federal government appear not to know it](#). Survival is a double sided coin. On the one side we have biodiversity collapse and on the other the climate crisis. To leave inheritance for the future - biodiversity loss and the climate crisis need to be addressed simultaneously.

Heritage needs re-defining for Survival in the [Age of Environmental Breakdown](#). We are not ready and we don't know it. Without Environment there is no culture. Without Natural Heritage humans have no future.

A Heritage Act must bring legislation together to stop Natural Heritage **loss** in the Age of Environmental Breakdown. Political thinking must engage with the concept of "Survival Economics" to make decisions, policies and laws from an environmental perspective or humans will not survive. Nature needs places to restore herself – if we are to survive.

Survival Economics. In NSW Conservation is sought within the Planning process. Future conservation must be sought within the Accounting system. This, as Stuart Scott says, *The Economic system owns the Political system*.⁴

The UN warns, ["conservation efforts alone won't be enough to prevent biodiversity loss and collapse of ecosystems."](#) If the Heritage Act is about Conservation, the Act must modernize through accounting systems.⁵

Nature and intergenerational equity. Heritage is Inheritance for "kids and wildlife". Protecting *in situ* Nature was once a first principle of conservation. This has been overcome by financial "offsetting". Accountancy must value Nature to recognize /protect the non-use value of land – to add to biodiversity.⁶ Attached research & case study shows [NSW now needs Business as Un-Usual because Nature is no longer an Externality](#).

Realizing the above, can make the Heritage Act Review the most significant NSW legislative review done thus far.

¹ *Plans to Grow without Plans to Protect* - mean the Natural World is simply used, cumulatively, with an anthropocentric perspective, as a resource. Across NSW & Greater Sydney meaningless language (activation, green place, open space,) spells the end of *ecological integrity* - by development. Strong Laws and Eco-Literacy are needed to protect Natural Heritage – cared for by traditional custodians for tens of thousands of years.

² <https://www.integratesustainability.com.au/2018/01/18/caring-for-country/>

³ <https://e360.yale.edu/features/salvation-or-pipe-dream-a-movement-grows-to-protect-up-to-half-the-planet>

⁴ <https://www.youtube.com/watch?v=CXkGS44boXU>

⁵ Accounting for Nature <https://wentworthgroup.org/programs/environmental-accounts/>

⁶ <https://www.treasury.govt.nz/sites/default/files/2018-08/LSF-whats-the-use-of-non-use-values.pdf>

Appendix 1. - Eco-Literacy

Increasingly - some places also need to be valued for their importance Eco-Literacy.

As Flannery says, most people are not aware that there is a crisis – let alone how late it is to stop biodiversity loss.

We cannot stop biodiversity loss without addressing climate –and we cannot address climate without protecting soils, terrestrial forest, sea forests and wetlands (Biodiversity). ⁷ The world is finally taking the Biodiversity Crisis as seriously as the Climate Crisis by “developing a legal definition of ecocide”. ⁸

Current failure to implement Recommendations of the EPBC Act Review shows Australia is responding too slowly to our national biodiversity collapse. The Continent is in Crisis and Natural Heritage is already deteriorating via large scale agriculture, bushfires, drought, extraction and other human impact. The United Nations must be heard, because Nature does not understand borders. China has realized the importance of Biodiversity for human security. ⁹

Humans need an Eco-Literate Perspective in every decision now made. Why? [We don't have time.](#)

Natural Heritage decision-making in the Age of Environmental Breakdown is more complex today. For example: Natural heritage gazetted for Green Web corridor security - has not happened. Other examples:

1. Natural Heritage needs to be considered and prioritized over built heritage – quite simply for our Survival.
2. Human centred acceptance of “infrastructure” to mean roads and industry is a simplified view of how things work. It hides the reality that Natural infrastructure or *critical biological infrastructure* (CBI) is our Life-support. Yet the Life-support is vanishing mostly due to the construction of those roads and that industry.
3. Governments call for submissions “in isolation” from the common factor uniting them, the Environment. This means individual decisions on each policy are made “in isolation” (RFS 10/50, Heritage, Public Spaces, Crown Lands, Biodiversity Conservation, Urban Bushland Policy, Waterways etc. etc.).
4. Public and community groups responding to calls for individual submissions, are largely unaware of local and global problems impacting Environment. Most issues are seen from a human socio-economic centred perspective – not an environmental standpoint. Humans see themselves separate from Nature.
5. Acquisition before Impact (ABI), protection of Protected Areas (gazetting the E5-zone), has been too slow.
6. Delayed dealing with ABI, E5 and CBI has meant irreversible loss of ecological integrity and extinction debt.
7. Humanity is causing Natural World collapse and reaching (if not passing) several tipping points.
8. The result is: by the time we know there is a problem with Nature, it is already too late to fix it.

An ultramodern Heritage Act for the [Age of Environmental Breakdown](#)

A Review of the Heritage Act should elevate / educate consciousness of environmental inheritance. Advanced Landscape Conservation must protect, restore and fund: Native vegetation communities & heritage value reserves.

Urban areas are cumulatively and irreversibly impacted by development, regional areas face natural disasters. Natural Heritage is Complex heritage on which all species survival depends. It must be defined and protected in various ways:

- Natural heritage must include first nation knowledge of Land and Country. Indigenous knowledge systems are increasingly closer to scientific thinking. Ancient and modern knowledge is more linked than we know.
- If Threatened Ecological Communities exist - Heritage consideration needs elevation to all species Survival.
- Areas where built, cultural and natural heritage remain in intertwined locations are rare. For these E 5 is suggested as a zone tailored to suit different Natural Heritage. But since 2012 E5 is currently “Not Yet Issued”.
- Areas determined by “*environmental influences including landscape position, topography, aspect, geology, soil type, and variations in local rainfall, and surface and subsurface water flows*” need special protection.
- Areas for future inheritance need consideration of cumulative impacts, on broad setting and siting – especially if impacts will deplete and interfere with Matters of National Environmental Significance (MNES).

A Transition Town is proposed to protect Natural and Built Heritage (Inheritance).

In 2007 a strip of critically endangered BGHF along the Pacific Highway was saved from development, by community groups. Since then pressures have multiplied - due to the irreversible damage of un-assessed cumulative impact.

In 2008 a DECC director wrote that, “*Conservation is sought within the planning process*”. A submission was sent to the Threatened Species Scientific Committee (TSSC) that, “Zoning for development is a Key Threatening Process”. Too much re-zoning for development finally needs correction. Why? Damage to Natural Heritage is done at the point of re-zoning for development. Transition back to ecologically sustainable zoning is needed to protect Natural Heritage.

⁷ <https://www.conservation.org/stories/11-facts-you-need-to-know-about-mangroves> and

<https://e360.yale.edu/features/as-oceans-warm-the-worlds-giant-kelp-forests-begin-to-disappear>

⁸ <https://www.theguardian.com/environment/commentisfree/2021/jun/22/ecocide-must-be-listed-alongside-genocide-as-an-international-aoe>

⁹ <https://www.youtube.com/watch?v=kj15WVZZZsE>

Appendix 2 - Why Transition? How to start Transition?

Future Survival depends on inheritance of intact Natural Heritage. This is “ecological integrity”.

Local Government being closest to ecological assets in ESAs must: lead Transition to ecological integrity security, and promote Eco-literacy, by accounting for & tailoring management to environmental asset security, starting new ventures, initiating R-Economy, protecting National Reserve System (NRS), assisting the United Nations message. ¹⁰

[Since we do not have the luxury of time in Australia](#), points below are made for the Heritage Act to rescue and restore complex heritage (built and natural). A test must start in an environmentally sensitive area (ESA). Below shows why Accounting Systems must re-value lands for Ecology – to begin a Transition Town R-Economy.

Current NSW conservation systems are broken, to the extent small areas of ecological integrity cannot be gazetted – to maintain essential corridor ecology for urban biological diversity (flora and fauna habitat). Some places need a non-use value, but the E-5 zone to tailor protection to local conditions is “NOT ISSUED YET” (see page 5).

“Public ignorance” is now dangerous to Survival. E5 zones can increase Eco-Literacy. Especially in a [Continent in ecological Crisis](#), protection of future inheritance of Natural Heritage, can only be achieved by public awareness. Natural Heritage conservation must be aware of *shifting baseline syndrome* (SBS). Decision-making should avoid too much of a socio-economic perspective. Nature’s resilience and resistance to human impact is already compromised.

A Modernized Heritage Act must assist Transition to ESD in NSW.

ESAs where Natural and Built heritage (inheritance) co-exist - provide the first opportunity to modernize the Act. ¹¹

Natural Heritage tragedies occur across NSW - but a single Case Study of rare urban biodiversity loss is easier to see. Simultaneous removal of rare urban biodiversity has had catastrophic impact on insect and wildlife in a once enormously sensitive location. A Transition challenge is to restore the ecological integrity of Natural Heritage. ¹²

By removing incorrect re-zoning for development, Accounting for Inheritance (natural and built heritage). Until such time as a more formal system is reached, local conditions must be protected to maintain a simple publically understood framework for ecological integrity. ¹³

Not all decision-makers understand these local conditions. The system forces “in isolation” decisions which have combined impacts on voiceless species of fauna and flora each and every day. As a result much critically endangered native vegetation in the proposed Transition Town, is unprotected in effect, from cumulative impact.

Environmental sensitivity of the Transition Town is lost to future inheritance. Within it has disappeared: the habitat and hollows of unique birds, ground-bound wildlife, arboreal dwellers, insect life and small birds.

Construction has occurred in mapped BGHF biodiversity within the Town Centre, cumulatively radiating outward from the station. Damage begins at point of re-zoning and cumulatively reduces the ecological integrity of remaining habitat over a very short time, since LEP194 began in 2004, and now expected to encroach from Macquarie Park. ¹⁴

Can we stop simultaneous loss in the same sensitive area ?

Unforeseen and unstudied simultaneous impacts on remaining rare native vegetation (Endnote3). State Government’s Pinch-point widening (it must be noted the removal of rare vegetation on the Pacific highway for this project will not resolve traffic hold up at red lights for the M1), Sydney Rail authorities (environmentally sensitive rail corridor cleared), Ausgrid removal of old growth trees from road verges - the last places trees can stand (tree removal is often followed by sale of house next to tree), construction of so-called community Open Space at Duff Park required considerable removal of BGHF and vegetation (unforeseen impact has left high winds, drying and tree-fail in adjacent lands), private home construction (large footprint removes entire soil and old garden cover), side-effects of concrete foot-paths, plumbing, NBN services, Ausgrid maintenance of remaining vegetation growing into overhead powerlines.

Added to the above, removal of trees by private owners due to 10/50 for years and resulting loss of ecological integrity is enormous, unseen and dangerous: Removal of trees raises bushfire threat. Ecological integrity will rapidly be ended by cumulative impact.

¹⁰ <https://www.youtube.com/watch?v=kj15WVZZZsE> The UN stresses the need for biodiversity conservation – the best place to test Transition is in a known ESA. The Ku-ring-gai natural areas also contain vegetation [which is rare and endangered flora and fauna].These TECs and other communities are subject to recovery planning through the Saving Our Species Program

¹¹ To be expanded by TFNW Action Research through Survival Economics - The Public Broadcaster and Public Service are essential to the R-Economy.

¹² Densey Clyne in Turramurra http://www.step.org.au/images/STEPimages/STEPNewsletters/STEP-Newsletter_090.pdf and Clyne’s Natural World books <https://www.google.com/search?q=densey+clyne+books>

¹³ https://www.natureserve.org/sites/default/files/publications/files/nps_ecological_integrity_framework.pdf

¹⁴ <https://www.theurbandeveloper.com/articles/macquarie-park-nsw-strategy>

Appendix 3 - The Transition Town

Future urban Natural Heritage and ecological integrity of an “Eco-capsule”.¹⁵ Especially in the urban century, the Heritage Act Review can protect Natural Heritage.¹⁶

Introduced values and socio-economic perspectives, have taken the Continent into Crisis. Points below should become key concepts of Eco-literacy and public education by which the Accounting System can assist the Heritage Act Review. Limitations shown below should have been enacted and recognized before re-zoning for development began:

- Protecting fragile urban forest ecological integrity by limiting heavy construction machinery – consider future tunnel
- Correcting zoning to arrest cumulative loss (from zoning for development entire areas, streets and mapped biodiversity)
- Restricting and policing heavy traffic on main roads and off main streets – to extend rare urban forest area protected
- Policing and restricting tree removal via the 10/50 code much more rigorously in areas with TECs and CEECs.
- Changing out-dated development assumptions to arrest culture of demolition by design and neglect
- Designating areas of non-use value of land for biodiversity extension, observation, revegetation,
- Identifying and revaluing ecologically sensitive lands for groundwater replenishment
- Restricting the removal of seedbank from soils of the Pacific Highway ridge
- Reducing footprint of apartment blocks in or near native forest remnants

Local Accounting System - new values for eco-assets in a Transition Town The Transition Town and a prototypical Accounting System can thus assist the Heritage Act Review.

Government is not a “client” of Developers as proposed by the current GANSW Master Planning Process. In an ESA such as the proposed TTT Local Government must inform, guide and require development industry to act for the dual emergency.

In Environmental Breakdown: the ESA Transition Town must bring to the reference table - knowledge of local conditions and volunteer assistance. For eg built & natural heritage can be reused (suggested Landscape Museum).

Transition needs to (a) test new valuation techniques (b) signage Eco-awareness via an Ecology dept. (c) avoid heavy machinery use in rare vegetation landscapes (d) employ indigenous knowledge / perspectives (e) re-start Nursery to restore city wide native vegetation and (f) multipurpose “car-parks” for uses – cars by day / recreation by night.

Set in a location with remaining native ecological communities, the Transition Town can rethink: (a) Lands to be restored and protected from wildfire - not relinquished to recreational use and synthetic grass, (b) Eco-Literacy /education to support re-wilding, regeneration and mental health with local school help, and (c) *advanced landscape conservation* to retain vital survival culture/knowledge of first peoples for future city populations.

For NRS and MNES security the accounting system must guide the planning system toward R-Economy concepts:

1. Survival matters must be accounted for: master-planning should be costed for conservation of Natural and Built heritage as should rare urban biodiversity and habitat, advanced landscape conservation, cumulative environmental impacts, and a future R-Economy (rescue, re-use, regeneration, restoration, etc.)
2. Cumulative impacts: Transition lands are zoned for construction and other human activity without CONSIDERATION of the cumulative effects of multiple human impacts on rare, urban biodiversity, over the next 50 years.
3. Non-use valuation: By re-valuing & assessing the non-use value of land, the Accounting system can value the “Green heart of Sydney” beginning with the suggested Landscape Museum (pg 8). See advancement of non-use valuation.
4. Eco-literacy: Natural Heritage can and must raise Eco-literacy and awareness of future environmental changes.¹⁷
5. Business as Un-Usual: The Town Centre of the proposed Transition Town is currently zoned for development under developer assumptions. Each of 4 precincts is planned and zoned “in isolation” meaning the eventual size of the currently proposed Transition Town: will cumulatively over rapid time obliterate built and natural heritage.
6. Reversing accepted socio-economic perspectives: current development assumptions add to lost eco-assets.
7. Transition raising signage must be State and Federal funded for state-wide public awareness like current road upgrades.
8. Increment research and studies in biodiversity related institutions: RBG, CSIRO, the National Arboretum, etc.

The Accounting System in a Transition Town presents many solutions to assist the Heritage Act

Investment Entrepreneur Jeremy Grantham explains we are in the Race of our Lives (to Transition).¹⁸ The LGA of the suggested TTT is already trained in Ecology. This can enable a two-way process - The Heritage Act can assist the delivery of Accounting System solutions. The Accounting system can elevate the Heritage Act:

- (a) to protect Natural Heritage (more life-supporting than built and cultural heritage), and
- (b) to formalize tailored gazetted zones by non-use values and other valuing (for Natural Heritage Conservation).

¹⁵ As described by J Fairlie-Cunningham a resident in the local area for over 50 years.

¹⁶ [TNC NatureintheUrbanCentury_FullReport.pdf](https://www.northsydney.nsw.gov.au/Environment/Waste/The_Coal_Loader/About_the_Coal_Loader)

¹⁷ https://www.northsydney.nsw.gov.au/Environment/Waste/The_Coal_Loader/About_the_Coal_Loader

¹⁸ <https://finance.yahoo.com/video/watch-jeremy-granthams-race-lives-103306797.html>

Appendix 4 – Conclusion: Biodiversity has urgent timelines for deep awareness

The Heritage Act will elevate Heritage Consciousness by protecting Natural Heritage.

This Action Research says the message of climate crisis is best delivered through public understanding of Biodiversity.

1. A Covid world is a chance to reboot the Economy for future Survival in Local Government (closest to Eco-assets). A Transition case study will help the Heritage Act to protect Natural Heritage from the economic and political systems. However, Current zoning of the Transition Town Centre needs changing - it will cumulatively impact and eventually destroy built and natural heritage.
2. Survival Economics must re-value the ecological integrity of Nature to establish a framework for the non-use value of Land via the current Accounting system. Why? As explained by Stuart Scott, "The Economic System OWNS the political system" ¹⁹
3. Ecosystems will only survive if we ascribe a non-use value for Nature, to protect ecological integrity. The public need Eco-literacy to keep Nature protected from the double sided coin of biodiversity collapse and the climate.
4. The Heritage Act must legislate to protect Natural Heritage through an entirely ecological perspective. Why? The true FUTURE will be climate and extinction impacted. Nature's resilience/resistance to human impact is already compromised.

Submitted by Janet Harwood Email:

Endnotes & Solutions for timely, urgent protection of Natural Heritage The Future is the Natural World



"Biodiversity loss is the most significant environmental problem facing Australia"
Professor David Lindenmayer. (2007) "On Borrowed Time"

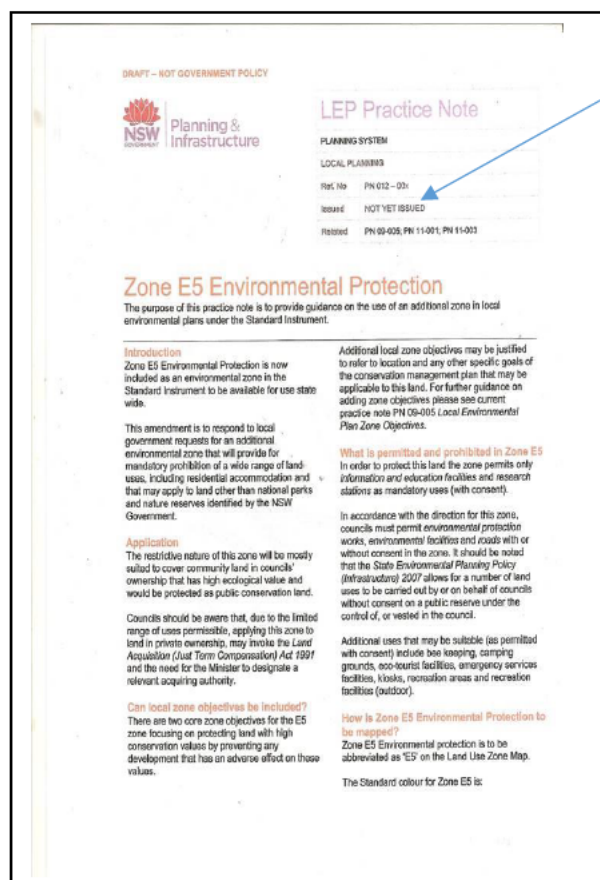
ENDNOTE #1 - The E-5 Zone A Survival Economics Strategy

Why is the Government 2012 Note – In the Age of essential that the E5 Zone tailored protection of Natural Environmentally Sensitive Environmental Protection is a to enable protection of NSW. It is an instrument for

The foreword to "Corridor Ecology - Landscapes for Biodiversity" appropriate as introductory,

"Maximising the diversity of species ecological services are major first century. The twin processes of have caused the local extinction of recognize that this leads us to the scientific question of the twenty-communities organized, and how allow them to undertake the full provide the services on which all life complexity of this problem easily scientific problems of physics such the universe....."

Attempting to understand the communities and food webs that ultimately prove as mathematically death of galaxies. developing a communities has an urgent understanding within the next few intact communities to use as hope to build. This will significantly viability of all human health and Andy Dobson's Foreword for Practice of Linking Landscapes for Authors: Jodi A. Hilty, William Z.



E5 zone - "Not Yet Issued" ? Environmental Breakdown - it is discussed in 2021 should become Heritage - especially for Areas in NSW. Zone E5 major solution for the Green Grid – remaining Natural Heritage in the Conservation of Biodiversity.

The Science and Practice of Linking Conservation" (2007), would be foundational public information.

we can save and minimising the loss of conservation challenges of the twenty-habitat conversion and fragmentation many species.....Ultimately we have to toughest theoretical and empirical first century: How are natural can we reassemble them in ways that diversity of ecosystem functions that on Earth depends? The scientific equals the complexity of the "deep" as the structure of atoms and the birth of

assembly and destruction of ecological live in small woodlots and lakes may taxing as understanding the birth and deeper understanding of ecological timeline. If we fail to develop such an twenty to fifty years, there will be very models for the restored communities we reduce our ability to maintain ...the economic welfare."
"Corridor Ecology - The Science and Biodiversity Conservation" (2007) Lidicker Jr., & Adina M. Merenlender.

¹⁹ <https://www.youtube.com/watch?v=CXkGS44boXU>

ENDNOTE #2 - Can the Heritage Act be a Global Leader? Why the Heritage Act must rescue Natural Heritage.

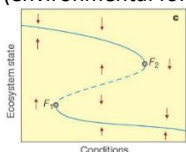
Future loss of biodiversity heritage/inheritance worse than reported.

Latest Post from a fabulous favourite funny Scientist CJABradshaw <https://conservationbytes.com/corey-j-a-bradshaw/>

Today, *The Guardian* reported that a leaked copy of an IPCC report scheduled for release soon indicated that, well, the climate-change situation is in fact worse than has been previously reported in IPCC documents.

If you're a biologist, climatologist, or otherwise-informed person, this won't come as much of a surprise. Why? Well, the latest report finally recognises that the biosphere is not just some big balloon that slowly inflates or deflates with the whims of long-term climate variation. Instead, climate records over millions of years show that the global climate can and often does shift rapidly between different states. This is the concept of 'tipping points'.

While the concept of tipping points has some scientific uncertainty at the global scale, it really embraces what ecologists call *ecological hysteresis*. This concept was beautifully described in one of my favourite papers of all time by Marten Scheffer and colleagues 20 years ago: Catastrophic shifts in ecosystems. It basically states that ecosystems have multiple stable states, and that the 'energy' (environmental forcings) that cause an ecosystem to shift from one state to another differs depending on the direction of transition.



That famous Fig. 1 from Scheffer et al. (2001)

As an example, let's say an ecosystem such as the Amazon rain forest biome (wet, tropical forest) is pushed via warming and increasing fire severity and frequency to a new stable state — a dry savanna (something not only predicted for the Amazon in the near future, but also something that has definitely happened in the past). If the system is cooled down by the same amount it was heated to shift from tropical forest to savanna, it is unlikely it will shift back into a tropical forest. To get the system back to its original state requires much more cooling (and wetting) before the tropical forest re-emerges.

i.e., $A \rightarrow B \neq B \rightarrow A$

There are many physical reasons this happens (e.g., fire changes moisture regimes, which change weather patterns, etc.), but there are a lot of biological reasons as well. Biotic transitions and extinctions caused by the disturbing/changing process can also cause hysteresis — once certain species disappear, the system cannot go back to its original state, because some components (species) of its original state are gone forever.

Back to the IPCC. It seems that this report finally addresses a common critique of the IPCC reporting process that such tipping points have been largely ignored in the past. Why? You need look no further than the IPCC process itself.

For the same reasons that the language in the IPCC reports inflates measures of uncertainty due in part to the conservative political process that must ensue to generate consensus, much of the science has stuck to the conservative or even 'middle road' of predictions.

In other words, to make the predictions palatable to politicians and the business community, they've watered down the message.

So, it appears that we're getting closer to the truth — it's bad, and it's going to get a lot worse before it gets better. Thank you to the IPCC and the authors of this imminent report for being bolder and embracing a more truthful narrative.

CJA Bradshaw

ENDNOTE #3 Eco-Literacy and rare Natural Heritage

Natural Heritage is cumulatively impacted by over-development within and around a proposed Transition Town. Surrounding rare urban biodiversity needs to be kept intact for future ecological integrity and eco-literacy. Assessment needs to be made & protected.

Twenty vegetation communities are found ranging from dry sclerophyll forests, heathlands, wet sclerophyll forests, forested wetlands, freshwater wetlands and saline wetlands. This variety is the result of regional and local environmental influences including landscape position, topography, aspect, geology, soil type, and variations in local rainfall, and surface and subsurface water flows. There are also several disturbance influences including wildfire and hazard reduction burns, clearing, weed invasion, altered hydrological regimes, and human land use patterns and wildlife interactions including seed dispersals. The vegetation communities are outlined in Appendix A and their distribution is shown in Figure 4. There are six Threatened Ecological Communities (TECs) listed under the NSW BC Act present in the Ku-ring-gai natural areas including: • Duffys Forest Ecological Community in the Sydney Basin Bioregion (Endangered) • Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions (Endangered) • Coastal Upland Swamp in the Sydney Basin Bioregion (Endangered) • Coastal Saltmarsh in the New South Wales North Coast, Sydney Basin and South East Corner Bioregions (Endangered) • Blue Gum High Forest in the Sydney Basin Bioregion (Critically Endangered) • Sydney Turpentine-Ironbark Forest in the Sydney Basin Bioregion (Critically Endangered). There are five TECs listed under the Commonwealth EPBC Act present in the Ku-ring-gai natural areas including: • Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community (Endangered) • Coastal Upland Swamps in the Sydney Basin Bioregion (Endangered) • Subtropical and Temperate Coastal Saltmarsh (Vulnerable) • Blue Gum High Forest of the Sydney Basin Bioregion (Critically Endangered) • Turpentine-Ironbark Forest of the Sydney Basin Bioregion (Critically Endangered). In addition to TECs, the Coastal Shale-Sandstone Forest community is recognised as a regionally significant vegetation community. Approximately 92% of the original extent of the community has been cleared.

Can the Heritage Act protect the ecological integrity of Environmentally Sensitive Areas (ESAs) ?

ENDNOTE #4

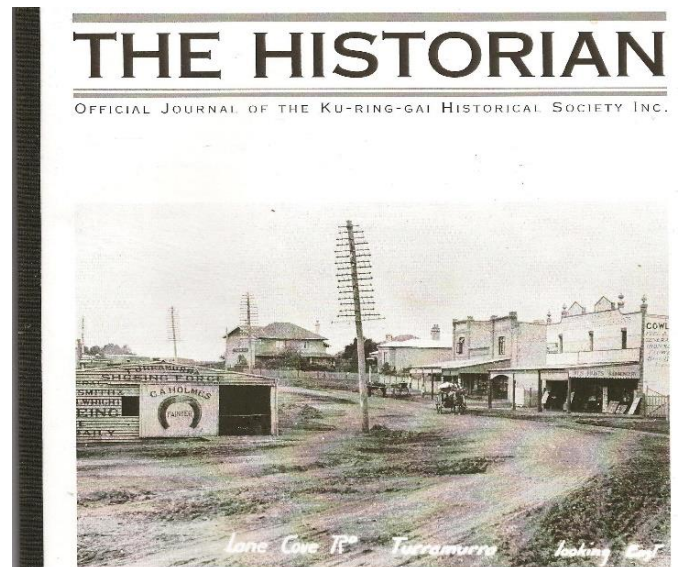
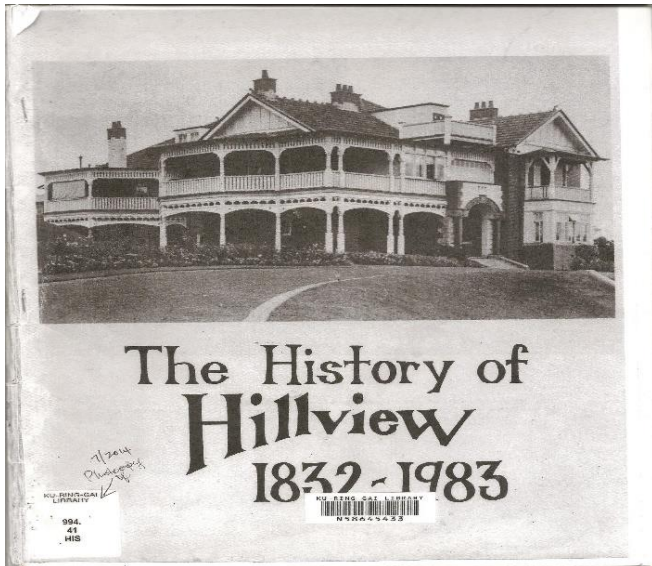
The Age of Environmental Breakdown and the Heritage Act Review

The “big hill” (Turramurra) connects future conservation with the Hillview Precinct’s setting and siting of remnant ancient forest and an indigenous land ethic which represents Caring for Country.

Heritage assessment is an opportunity to capture & consider more than economic profitability. The Criteria for Nomination of the entire precinct of the Hillview HCA - comes from an ecological perspective: *that there are lessons for the way in which the future city must understand & protect endangered ecological communities. Timber provided by the tall trees of Turramurra helped provide material by which early Sydney was built.*

Hillview HCA and a Transition Town Health Precinct at Turramurra Railway Station for a future city.

The picture has changed enormously, since a previous generation of environmentalists did their bit, to protect Australia’s natural heritage. Today the destruction of Natural Heritage is more immediate, hidden and voracious.



Why Hillview & the Heritage Act Review must work together to protect Natural Heritage in Australia The nominated Hillview HCA is unique in its landscape context. Adaptively reused, it has the ability to remind future urban generations of the way things were environmentally before European arrival. The Nomination integrates the Little Village Park and Hillview into cultural memory, showing why the Railway first came to Ku-ring-gai.

Significance of Hillview in an un-protected vanishing landscape of Blue Gum High Forest (BGHF).

The Garage and Stables would be a headquarters for the Transition Town’s ecological activities through the Urban Forest Strategy and Wildthings. Views of Sheldon Forest and remnant blue Gum High Forest - from the old croquet lawn would be an educational and ecological reminder of what Sydney was like when first white settlers arrived.

The Health Spa, Dentist, Health department activities, future medical consultation rooms etc. with the old Police buildings and Mayfield on Boyd Street, could create a place for repair and restoration of physical and mental health.

Hillview has historically attracted creativity and wealth, benevolence and health.

Why are the Little Village Park and Hillview so critical to a deeper understanding of the history of Sydney?

Why did the historic Railway first come to Ku-ring-gai and has the Burra Charter been consulted?

Who will be the “white knight” for Sydney in this location?

Why is Hillview HCA a natural Health Precinct?

The grand building is one of a rare group of buildings still standing on the “big hill” of Turramurra Looking across to the urban BGHF showpiece of Sheldon Forest, the Hillview HCA on the big hill has views which will remind the future city that Sydney was built by logging BGHF and other now critically endangered ecological communities (STIF), now disappearing habitat for unique Australian wildlife.

Today, benevolence and creativity could link old and new with cafes, galleries and medical rooms.

Visible in the distance is the Original Chemist Shop, still miraculously standing complete with verandah, but in need of a chimney. The Chemist Shop (*see Sands*) is today almost the last of the original character buildings in Turramurra. With the Art Deco Bank building, Federation terraces, the grand Hillview mansion, cottages, garages and croquet lawn on the “big hill” – and along with the Old Police Buildings and Mayfield on Boyd Street, *this complex of layered historical buildings could easily be adaptively restored and reused, if rescued by a benevolent “white knight”.*

Adaptively restored Hillview could create a thriving space like the Coal Loader or the Grounds of Alexandria.

But a crucially relevant space for Natural Heritage for raising Environmental Awareness (via Eco-Literacy, the R-Economy and Survival Economics).

ENDNOTE # 5 Heritage Act & the Landscape Museum & Hillview HCA

A Plan to Grow Sydney needs a Plan to Protect Sydney.

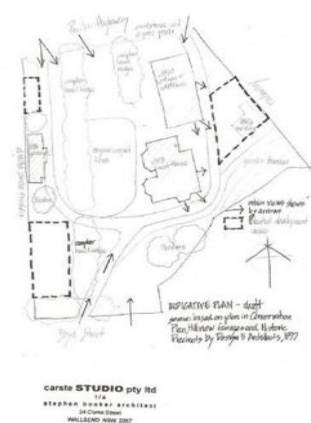
A Transition Town assists the Heritage Act to conserve Natural Heritage from cumulative impacts and over-development in an Age of Environmental Breakdown.

Can the Heritage Act Review prevent loss of this significant precinct? This precinct is symbolic of why a Continent in Crisis needs Transition to ecologically sustainable development (ESD)? Assessment that the heritage landscape is “adequately protected” is questioned because rare urban biodiversity within the the over-zoned “town centre” has already been converted to concrete. Even more threatened by below over-zoning – this unprotected rare Natural Heritage is even more threatened by massive development in nearby Macquarie Park. Across this entire district rare vegetation communities like Cumberland Plain vegetation need restoration. There is currently no recognition of the need to Protect, Restore and Fund vanishing Natural Heritage.



The nominated Hillview HCA is an important precinct - symbolic of what threatens a Continent in Crisis. It is one of 4 precincts in an ESA which have been zoned for development “in isolation” from each other. Such over-development of an ESA of Natural and Built Heritage cumulatively threatens last remaining native vegetation surrounding a proposed Turrumurra Transition Town (TTT).

Transition to ESD is possible by creating a Landscape Museum with gazetted tailored E-5 zones. This will achieve a prototype for the GSC Green Grid, by securing corridor ecology for the future city. This can be realized by a true FUTURE safe master-plan - to deal with cumulative impacts to retain ecological integrity (resistance and resilience) of rare urban forest into the next 100 years.



Three maps above show the Peer Review’s proposed full precinct Heritage Conservation Area, and threats.



RMS map (left) shows illogical points of widening on the wrong side of the dangerous curve in the Pacific Highway. Managed in such a way it requires unnecessary loss of important individual heritage items. It shows the way heritage in NSW is un-protected and often manipulated to be lost to pre-determined rezoning for development. On the right the red line shows the Peer Review proposed HCA. When nominated the GSC or OEH appeared to favour loss of the precinct to re-zoning for development.

Stop Natural and built heritage loss = stop Australia being a Continent in Crisis.

Endnote #6 A Landscape Museum & Advanced Landscape Conservation “The Little Village Park, Hillview HCA and Sheldon Forest Bird Sanctuary”

The Heritage Act Review can “account for Nature” by Landscape Conservation. ²⁰

How important is Natural Heritage to the Heritage Act Review? The Transition Town is a way to modernize the Heritage Act. Concepts of land use and Natural Heritage in the Age of Environmental Breakdown need rapid elevating - to consider ecological integrity for Survival Economics in times of biodiversity and climate crises.



The Little Village Park is integral to the history of Ku-ring-gai's railway and Hillview

History - Protection of setting & siting inherited from original inhabitants of Australia needs protection of Natural Heritage Review. The State Heritage Register needs to be increased by **advanced landscape conservation** to protect both built (cultural) and Natural (environmental) inheritance. The Little Village Park must be protected as a reminder of early rail corridor and the need to restore it as a biodiversity corridor.



Hillview Heritage Conservation Area is shown by the redline

History - An un-explained SP2 road zoned through heritage items as raised questions about the re-zoning of heritage for development. The landscape museum concept suggests ‘no conversion to concrete’ – instead rescue, repair, restoration and adaptive reuse matching the *Grounds of Alexandria, Paddington Reservoir and The North Sydney Coal Loader*. To give maximum respect and protection to the memory of the layered history of this unique complex (of un-touched buildings since settlement) PLUS its critically endangered setting and siting - the entire area was nominated for State Heritage Register (red line). However, the disregard of Peer Reviews (S.Jackson Stepowski 2013 review), and rejection of nomination based on the Peer Review, means the setting and siting of Hillview cannot be highlighted and will be eventually lost to cumulative impacts. Deterioration of the whole precinct, should not be used as an excuse by Heritage decision-makers, to not recognize the original significance of built and natural intertwined heritage. Its value for Eco-Literacy through the Landscape Museum - is irreplaceable.



Sheldon Forest is a rare wildlife sanctuary walkable from two railway stations

History - Sheldon Forest is currently under threat by RE1 zoning in its most valuable and vulnerable section. The Heritage Act review *mentions natural heritage*. To protect the Transition Town's remaining critically endangered ecological communities (CEEC) such as Sheldon Forest, Granny Springs Reserve and the wider Reserves of native vegetation - requires recognition and protection of an asset class which like Urban Greenfield – currently the planning system does not provide for protection of rare remnant urban forest.

Further, the urgent need to consider the cumulative impacts of future development radiating from the Town Centre means current zoning for development in the Town Centre needs to be removed to allow new ways of structuring the R-Economy of the future. It is the last publicly owned Blue Gum High Forest to stretch to the Pacific Highway. Future city population can access by foot from two railway stations – Turramurra and Pymble. It is a Bird Sanctuary as hollows are being lost in its vicinity and rare wildlife seek refuge in the ground, mid-storey and canopy levels of vegetation. Endangered fauna and flora habitat is Urban Forest but regenerative capacity and current coverage is vanishing.

Please email

²⁰ Accounting for Nature <https://wentworthgroup.org/programs/environmental-accounts/>

Endnote #7 - Conservation for the next 250 years.

Can a Heritage Act protect heritage landscape for Eco-Literacy?

Incorrect zonings show Master plans need update for Natural Heritage Conservation & *advanced landscape conservation* - for all species survival. Current re-zoning for development in the Transition Town needs correction to consider cumulative effects on the ecological integrity of surrounding rare Natural Heritage.

Sad neglect of Hillview HCA makes people ask why not adaptively restore this rare heritage complex to be an environmental education, health and well-being precinct in the 21st century?

Nomination photos of a unique complex of buildings within the nominated boundary.



Education, Health & Tourist Precinct in Turrumurra Transition Town.

Where built heritage is set within remnants of LISTED ecological communities of species, the Heritage Act must elevate respect for both. The HCA voted for protection - needs zoning for development to be removed.

A HEALTH PRECINCT IN A FOREST SETTING OF NATIONAL IMPORTANCE

Endnote#7 Ready-made Community Precinct for Wildthings NSW

E-zone for community awareness, wellbeing & eco-literacy by adaptive restoration.

Nomination photos of most (but not all) of unique complex of buildings within the nominated boundary.



A gem for Eco-literacy and Wellbeing - Hillview HCA

Why has this mostly publicly owned precinct and symbolic heritage of national significance been zoned for development? Why was a nomination for its listing on the State Register rejected?

The rarest Heritage is intertwined built and natural heritage. The setting and siting of this original precinct is rare future urban forest of native vegetation communities that the development industry must itself try to protect for ecological integrity. Sad heritage demolition by neglect – or design? Cast iron lion heads have all been removed from the heritage wall. See pages 5-11 and 2021 Nomination.

Endnote #8 THE OUTLOOK IS DIRE WITHOUT URGENT ACTION ... But is the law listening ?

References

"We must take action if we are to survive" <https://www.scientistswarning.org/>

"Solve the Problem" Hansen and Galpern Published Dec 2019 <https://www.youtube.com/watch?v=yYCx8ikCzlk>

"Age of Environmental Breakdown." <https://www.ippr.org/research/publications/age-of-environmental-breakdown>

Little left to lose: deforestation and forest degradation in Australia since European colonization 2012 CJABradshaw.
<https://conservationbytes.com/2011/10/06/little-left-to-lose/>

Fighting Endarkenment CJABradshaw

<https://conservationbytes.com/2016/04/19/shadow-of-ignorance-veiling-society-despite-more-science-communication/>

There is the appearance that economy is winning the battle. But as it is sometimes said, "Nature bats last." In the long run *ecology* will win in any confrontation between humans and the planet. When pressed too far out of balance, Nature will eliminate the source of the imbalance. Stuart Scott Scientists Warning.

"Collision course with Nature" <https://www.youtube.com/watch?v=RHVJr8XYLiU> (2min)

The clipping is a newspaper article with the headline "The outlook for humanity is dire without urgent action". It is dated 30/1/2020. The article is an open letter to Australia and its political leaders, signed by Steven Sherwood and 80 fellow Australian Research Council laureates. The text discusses the severity of the climate crisis, the impact of bushfires, and the need for urgent action to reduce greenhouse gas emissions. It mentions that a transition to lower and eventually net zero emissions is a huge task but achievable and far less risky than allowing unmitigated warming. The article also notes that large transformations in the face of comparable challenges have been achieved in the past, such as the development of road and mass transportation systems, waste-water and sewage handling to minimise diseases, and many others. These transformations created new jobs and whole industries, and will do so again. Australia cannot solve climate change on its own. But Australia's current visibility as ground zero for both climate impacts and climate policy uncertainty presents a unique opportunity for us to emerge as a leader on this challenge. Doing so will aid our economy, strengthen our standing in international affairs, and help secure Australia and the world from the impacts of climate change. Much research has been done to identify the policies that can move us to where we need to go. What is lacking is the courage to implement them. We call on all governments to acknowledge the gravity of the threat posed by climate change driven by human activities, and to implement policies to reduce greenhouse gas emissions in time to safeguard against catastrophe. We owe this to younger generations who will bear the brunt of our decisions. This is an edited version of the open letter, sent yesterday, led by Professor Steven Sherwood of the ARC Centre of Excellence for Climate Extremes, UNSW Climate Change Research Centre. A signatories list can be accessed via the online version of this article on smh.com.au.

More references and awareness available 2nd July 2021 please email

The Future is the Natural World



"Biodiversity loss is the most significant environmental problem facing Australia"
Professor David Lindenmayer. (2007) "On Borrowed Time"