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## ADRESSING ECOSYSTEM DECLINE IN VICTORIA

Hello. I live on Phillip Island, which you are probably aware in normal years has over one million visitors per year. I have been involved in environmental conservation and heritage here since 1968. I am an historian and my family has lived here since 1860s. so I am aware of the many post-contact ecosystem changes that have occurred here both through historical study and through personal experience of the last 50+ years. Some changes I have seen/studied that bear directly on ecosystem health here are:

**NOBODY ASKED THE REAL LOCALS:** The system of Recognised Aboriginal Parties was introduced in 2007, and in terms of Bass Coast, the Bunurong Land Council Aboriginal Land Corporation is our local RAP. While RAPs are a big dstep forward in terms of cultural protection there is not much mention of Country protection in their official roles. This may depend on the interpretation of: “entering into Aboriginal Cultural Heritage Land Management Agreements with public land managers”. Consultation with RAPs and other local Aboriginal people, respectfully listening while they share their knowledge of Country, will elicit very different ideas for reversing ecosystem decline in victoria, and will require a rethink of the current bureaucratic approaches which are obviously not working. RAPS need to be sufficiently resourced to participate in decisions regarding their Country. At present they are spread very thin, trying to deal with cultural assessments with limited resources and staff. It is definitely time we consulted with the real locals, but we need to make this possible for them and also provide some assurance that their knowledge of Country will be actually incorporated and even central to action to stop ecosystem decline on their Country.

**1.CHICORY INDUSTRY DIED OUT HERE:** the cessation of the chicory industry in the 1980s after 100 years of chopping down and burning local trees for the chicory kilns (2-3 tons of wood to dry every ton of green chicory) was one of the best things to happen for Phillip Island’s ecosystems in the 20<sup>th</sup> century. Large trees and fallen limbs were particularly targeted for the big kiln fire places to ensure the correct temperature was reached and maintained – about 150 degrees C - through the two days of drying the chicory root slices. Unfortunately, this was the very trees and fallen limbs with hollows for so many species.

**2. BUT BUSHFIRE REGULATIONS REPLACED IT:** There is no doubt that having Bass Coast Shire listed as a “Bushfire Prone Area” and the subsequent open slather by land owners of removing trees from their land remotely within the cleared area permitted under the regulations, has been a disaster for ecosystems in Phillip Island’s urban/and peri-urban areas. Prior to that, strict regulations and overlays applied in the planning scheme, and discouraged not just tree removal, but also the now ever-diminishing block size on new subdivisions and consequent burgeoning of gardens virtually devoid of habitat value.

**3. SAND EROSION CONTROL BECAME A PRIORITY:** I use the example of the soil conservation authority/fisheries and wildlife division dune restoration of Cape Woolamai project c.1974-84, which, although it initially used marram grass to stabilise the dunes, was also responsible for the planting of many thousands of indigenous seedlings among the marram which has resulted in the CW isthmus landscape we see today. Of course, it has also resulted in some negative effects on the dune profile from the surviving marram, but at the

Christine Grayden Species decline submission

time a fast solution was needed to stop the bare sand drifting over people's properties. The bare dunes at CW, Summerland, and other south coast beaches were caused by frequent burning and uncontrolled grazing of the foreshores. In some parts of the south coast the practice of cattle and sheep grazing the foreshore, including many shearwater burrows and Aboriginal middens, was not stopped until the late 1990s. While I am not familiar with much of Victoria's coastal sand dune systems, I would say that for all of its faults, the CW isthmus restoration project was a good outcome for the ecosystems there and showed what can be achieved on what was essentially bare shifting sand, given sufficient funding and commitment.

It is also a good example of how errors made with environmental or general coastal projects in the past (e.g. use of marram grass, council rubbish tips) also need funding and commitment to rectify them.

**4. COMMUNITY ENVIRONMENTAL ACTION GOT GOING:** The establishment of the Phillip Island Conservation Society (PICS) in 1968, which campaigned to stop many developments that would have been catastrophic to the island's ecosystems, was extremely important in the fight to retain and improve ecosystem health on the island. The first proposal PICS fought was the plan to put a marina and residential development at Rhyll Inlet (now State Wildlife Reserve). The subject land was owned by a councillor at the time, but subsequently purchased through PICS 'crowdfunding' (1960s style) and government funding, and is now the reserve "Conservation Hill", the start of the Rhyll Walking Trail adjacent to John Clarke and Helen McDonald's land, recently donated to the Trust for Nature.

Next fight was a proposal in 1980s to radically develop saltwater creek in Ventnor into a large residential canal development with walls across the anchorage beach and out into the bay to stop the sand building up in the saltwater creek mouth (the natural process there) was also stopped by a campaign led by the society's members. There are few fresh water courses on the island, and this creek is home to many species, including water rats.

There are many, many other instances of similar environmentally destructive proposals for Phillip Island over the years, which the society spent thousands of hours of volunteers' time opposing, (and still does) along with many others in the community, now that awareness is raised.

When the community is behind the environment, good things happen. Even if it takes a long time for results to show up in ecosystems.

**5. THE SHIPS & DREDGING SLOWED RIGHT DOWN:** the drastic reduction over the last 15 or so years in big ships using Western Port to access Port of Hastings has meant a corresponding lack of dredging in the channel, which has allowed much of the seagrass to recover from the 1980s mass seagrass dieback that occurred due to more sediment in the water column in much of the bay.

Keeping large ships and most heavy industry out of western port for the last decade or so has definitely improved the overall ecosystem of western port in my observations made over the last 50 years, and needs to be committed to through some sort of official protection. This could be something such as legislation recognising western port as a marine conservation area with only environmentally suitable activities being permitted.

Christine Grayden Species decline submission

The work of the Western Port Bay Environmental study (Shapiro report and many associated technical papers) of the 1970s clearly demonstrated the incredible richness – and in some cases, uniqueness - of western port's various ecosystems. Although various pockets of 'strategic research' (seagrass, fish, birds, modelling) continue to be done in Western Port, another overarching WPBES looking again at the health of all ecosystems in WP is long overdue.

6. WE WILL REDUCE OUR FOSSIL LOAD: It is my view that some of the most important moves Victoria can make towards arresting decline in Victoria's ecosystems is to accelerate the current moves away from fossil fuels and towards local manufacture (such as Australian-based 3d printing with recyclable bioplastics) as soon as possible so that our future port needs will not involve further major port development, which inevitably leads to environmental damage and species decline.

7. BLUE CARBON GOT RECOGNISED: Western Port has seagrass meadows, saltmarsh and mangroves. Not nearly as much as we used to have. All of these species, and all of the species they support, have been drastically reduced since colonisation, and especially since industrialisation of WP during the Bolte era of the 1960s. Seagrass meadows vanished with various sorts of abuse from the catchment and from the sediment from dredging and erosion of coastal clay cliffs. Saltmarsh has been drained, poisoned, bulldozed, bogged up by grazing cattle, prevented from migrating inland, and built on.

Mangroves were removed for industry, boat access, soap making, emergency feed for stock during droughts, etc. We are finally realising how stupid this was for so many reasons, not the least of which is the relatively recent discovery of the massive amounts of carbon these plants store.

While clearer water and better catchment management has resulted in regrowth of much seagrass meadow, unfortunately, this is not true for parts of the northern and eastern coasts of the bay due to severe erosion of the clay cliff foreshores there, with no mangroves left to protect the coast. Determined research into and trials to successfully grow and establish mangrove seedlings artificially is ongoing by various bodies and volunteers, but although other countries with more tropical mangrove species have had some success, the western port species white mangrove, *Avicennia marina*, continues to be problematic. Likewise, planting of seagrass seedlings is also being trialled. We are only just beginning to recognise the complex relationship between these specialised plants and the soils in which they live.

**Much more funding and a concerted effort** needs to go into this area, as mangroves are a well-known means of mitigating coastal erosion, and seagrass is vital habitat for many species. Given the right conditions, they can also migrate inland with sea level rise, which means that they can continue their coastal protection role well into the future. Mangroves also provide safe havens for many species, especially small or young marine species, and are important contributors to ecosystem health in our bays.

We can halt ecosystem decline associated with the many risks to these blue carbon plants – we just need firm policies and funded research.

8. COAST POLICIES: coastal policies developed by state governments over the last 15 or so years, some of which have had teeth, some not, have increased awareness of coastal and catchment issue at the local government and local community level. Unfortunately, we have

Christine Grayden Species decline submission

still seen instances where inappropriate developments have been allowed on the coast in various parts of Victoria, even with policies in place. These bad precedents are substantial barriers to addressing species decline in coastal areas.

In the past, a number of inappropriate subdivisions were allowed far too close to the coast on Phillip Island, and every home owner had their own beach access directly from their property boundaries. We are still faced with big problems such as annexation of the foreshore by adjacent landholders to create private gardens, lawns, cut down foreshore vegetation, private tracks to the beach, dumping garden cuttings and weeds, etc, ongoing and inherited from this poor planning of the past. This abuse has definitely resulted in ecosystem decline.

We need to recognise that coasts are actually fragile places, and should not be abused by locating infrastructure there in the first place, unless absolutely necessary. We also need to commit funding and other resources to rectify the damage and enforce regulations.

8. PHILLIP ISLAND NATURE PARKS - the creation of the Phillip Island Nature Parks (PINP) in 1996 was in my experience and historical knowledge, by far the best thing to have happened to the island's reserves since colonisation. After years of neglect and poor administration by hopelessly under-resourced government departments and the local council, Phillip Island's reserve ecosystems finally had, and have, management committed to best practice environmental outcomes. The staff know the ecosystems first hand, research is highly respected and inclusive of many student and fellow researchers from many countries, funding from the penguin parade goes directly back to the local environment (and community through staff living here), the board and management have the environment at the heart of all they do, including of course, the eco-tourism experiences they offer. Planning is in place and reviewed regularly. On-ground works get done.

Phillip Islanders were greatly relieved when the state government funded PINP to continue their vital on-ground work, research, education, etc, during the pandemic, so that our reserves and all the valuable work done to raise public awareness around a range of environmental issues on the island, can continue. I for one would definitely not appreciate Phillip Island's reserve system being handed back to a state-wide government department and the consequent risk of funds raised via the penguin parade, etc, being drained away from our reserves. I am sure from past experience that this would be a retrograde move for ecosystem health on the island.

In contrast, I consider PINP could be a model adopted elsewhere if appropriate, to address species decline in other parts of the state.

9. THREATENED SPECIES INTRODUCTION: PINP is also working with Zoos Victoria to introduce various Threatened Species to Phillip Island, which is one of the few fox-free areas in Victoria following a 40-year eradication campaign. The government's recent declaration of feral cats as a pest species is now enabling feral cats to also be targeted on Phillip Island. The Eastern Barred Bandicoot (threatened with extinction in Victoria) has been successfully introduced onto Churchill Island, off Phillip Island's north east coast, and onto Summerland Peninsula. They have been a success story so far, not just in terms of assisting a species survival, but in terms of public acceptance (in fact, fan club status), and their role as soil aerators can potentially assist various ecosystems on the island and arrest species decline.

Christine Grayden Species decline submission

This may be an important model for introducing species, threatened or otherwise, back into habitats destroyed by last summer's bushfires.

10. **SUCCESSFUL ERADICATION OF FOXES:** Phillip Island is an excellent example of how eradication of foxes (and hopefully, eventually feral cats) has resulted in a big increase in wildlife species numbers, especially ground dwelling/nesting species, and general improved ecosystem health. The fox-free status is maintained by the employment by PINP of a trained dog handler with 2 fox scat-detection dogs who follow up on all reports of possible fox sightings. Another dog is in training to detect feral cats. The Phillip Island fox eradication program commenced in the mid-1980s and accelerated in pace and area with the creation of the PINP. Fox eradication here has been a huge effort and commitment of time, effort and funding by two generations of Phillip Islanders, but the results are very evident in terms of ecosystem health.

11. **RAMSAR LISTING FOR WESTERN PORT:** The good in this story is that the migratory shorebirds that come here to rest and fatten up in summer, or in some species, our winter, finally got recognised as vital links in the ecosystem chain, they have value, and that Western Port as one of their chosen southern hemisphere sites, had importance for that value. This was a big step for the signatory nations to make at the time (1971). While countries dotted along their migratory flightways make life difficult for them through annexation of their stopover and feeding points for human uses, it is even more vital that Western Port remain a safe haven for these species. We can ensure this by committing as a society to keep activities out of Western port – and other RAMSAR areas - that threaten species decline.

12. **GIVE BEACH NESTING BIRDS A GO:** Phillip Island is home to Hooded Plovers, Oystercatchers, Terns and various other beach-nesting species. Some of them have a threatened status. They love sandy beaches, including to breed. Humans also love sandy beaches of course: dog owners, holiday makers, beach walkers, joggers, beach volleyballers, etc, etc. PINP has had a Hooded Plover Watch volunteer program for many years, where trained volunteers attend HP beaches during breeding season to inform beach users of correct behaviour around the HP breeding areas, which are always roped off once the nest is found and the beach signed accordingly. Many dog owners assume that because their dogs enjoy romping on the beach, that this is an essential part of their dog's daily regime, including on any beach near them regardless of whether it is an official off-leash dog beach or not. Or whether they can clearly see that birds are nesting there. Some of these people abuse Hooded Plover Watch volunteers, regardless of how politely they are approached. HPW volunteers have actually been threatened online with vigilante action by a local dog owner.

This has been very divisive for the Phillip Island community, and has greatly pained me to watch on, considering what a peaceful and helpful community we usually are. It has also resulted in some long-term HPW volunteers being badly upset and leaving the program. Meanwhile, the HPs slowly and painfully increase their numbers at their bare minimum rate required for the species survival, not just on the island, but on Australia's eastern seaboard.

An easy solution would be for high-quality land-based dog exercising facilities which offer good facilities and experiences for dogs and owners, to be located wherever such clashes are likely to occur.

**WE DRIVE TOO FAST:** Wildlife survival and habitat are key to ecosystem survival. One stretch of the Cowes-Rhyll Rd is monitored daily by a dedicated volunteer who enters into a

Christine Grayden Species decline submission

spreadsheet the species and number of wildlife he finds killed there every day. He has done this for over 12 months, in all weathers. He also photographs the dead wildlife. He shares this information with PINP, the council and the university with which he is working. He has also successfully applied for funding to trial a 'virtual fence' designed to alert wildlife to approaching vehicles before they are able to see or hear the vehicle.

In that time over 100 animals have been killed on that short stretch of road. They include wallabies, many magpies and various other birds, echidnas, reptiles, etc. While this is a particularly notorious wildlife-kill road on the island, all of the island's roads are used in various ways by many animals, simply because they are part of their habitat.

For Little Penguins, roads are welcome places to stop and rest on the sometimes arduous journey from sea to burrow. They have a clear view there while they rest and catch up with other penguins they may wish to spend time with. It is for this reason that the Summerland road was closed from dusk until dawn in the mid-1980s. At the time, it was a hugely controversial decision, because the humans considered they had a right to drive out to the Nobbies to watch the sunset, and driving over penguins on the drive home was neither here nor there to them. Wildlife on Phillip Island often has territory that must include one or more of the many roads that criss-cross the island.

All of these factors, plus so many drivers' inclination to drive as fast as possible, has led to hundreds of wildlife road kills per year on the island, which must surely result in ecosystem decline.

**WE BUILD BARRIERS & WATCH TOO MANY GARDEN DESIGN PROGRAMS:** Due to the advent of suburbanisation of the island's subdivisions, impermeable paling fences have proliferated, forcing wildlife to use roads to traverse their territory in these areas, rather than just go through yards and vacant blocks like they used to be able to do. The owners of these fenced properties usually have 'gardens' consisting of 'landscaped' boulders, pebbles, concrete, yuccas and the odd flowering plant. Any insects or 'disease' are religiously sprayed. Recognised weeds and few indigenous plants are sold in local nurseries, and few people know about the Barb Martin Bush Bank at the PINP's Koala Centre, where healthy indigenous plant species of numerous types and sizes are sold at very reasonable prices.

Although there are plants growing on the estates, they hardly constitute an 'ecosystem'. They have in fact replaced large areas of the island's open grasslands, trees and freshwater springs in a matter of 60 years. However, there is no reason why, with a bit of effort, imagination and education, the occupants of these housing estates cannot create viable ecosystems in their communities. The new ecosystems will not resemble those they have replaced, but they can still have value for the environment, and the human inhabitants.

**HOPE IN THE DISTINCTIVE AREAS AND LANDSCAPES LEGISLATION:** Bass Coast shire is one of four areas of Victoria chosen to come under this legislation. There has been much community input as the residents embrace the protection the legislation offers against further urban incursion into our many distinctive areas and wonderful landscapes. This may help address ecosystem decline on the island and in Bass Coast generally.

**MINING REMEDIATION DOES NOT RESTORE ECOSYSTEMS:** This fact also applies to Bass Coast. Large sandy areas of Bass Coast near Bass, Grantville, etc, are under threat of sand mining. Some of these areas include the last remaining bushland in that part of Bass

Coast, which is otherwise cleared farmland or urban/peri-urban. One such area includes a large, dense stand of extremely old and healthy grass trees which can never be replaced. Another is the remnant vegetation within the Lang Lang Holden Proving Ground, currently being sold to a car manufacturer. The Bass Coast community does not want to lose either of these irreplaceable and vital ecosystems, and has been lobbying the state government hard to intervene and purchase them for nature reserves, but the community is helpless in the face of legislation that prioritises mining over ecosystems.

Remediation is taking place within parts of the sand mining area there, but obviously all of the careful ground work and botanical work in the world is not going to replace the ecosystems lost when such a huge amount of sand is removed from on and below the surface, completely altering the balance of fungus and microbes formerly used by the plants prior to mining.

We need to re-examine not just the areas from which we mine our construction materials, but also the way we use the natural resources. Ecosystem decline will not be addressed if we do not face up to our over-consumption of natural resources removed heedlessly and destroying healthy ecosystems in the process.

**OFFSETS DO NOT REPLACE DESTROYED ECOSYSTEMS** The current system of offsets is failing to protect areas of very high ecological value. ‘Pragmatism’ reigns where permits to remove even high value areas of vegetation are given frequently because no other alternative means of development is considered, usually because of additional cost involved in the alternatives. The public has little faith in offsets. Council minutes record that a particular vegetation clearance will be ‘offset’ elsewhere and is never heard of again. There does not seem to be any follow-up or enforcement, and we have no idea if the offset is a plantation destined to become paper pulp, or a mono-culture grown for house frames, or even if it was actually undertaken. It is well known that airline passengers often do not pay the few dollars extra to offset their flight because they do not see evidence that their money is going towards anything that is actually offsetting the carbon they are producing in their flight.

In one case of Phillip Island that caused huge community angst, a healthy 100 year old much-loved Blue Gum, which was long-term home to a pair of kookaburras and also to galahs each nesting season, was removed with very little notice to the community to make way for a car park and bus transit hub in the middle of Cowes. A number of other healthy mature indigenous trees were also removed. With a tight budget and schedule, the engineer wanted a flat, clear site with no extra expense involved in redesigning the plans around the trees. PICS tried to intervene with an onsite meeting with councillors, but the trees’ fate had been sealed with an assurance that the removed trees would be ‘offset’ elsewhere. PICS requested that seed be collected from the Blue Gum to be propagated at the Barb Martin Bush Bank, and some of the offsets consist of the seedlings in the nearby Blue Gum Reserve.

Although over 18 months ago, nothing has been done with the seed, or with the logs which the community asked to be saved and placed in the Blue Gum Reserve as informal seating. They lie neglected in the council depot adjacent to the reserve. Where the rest of the offsets are supposed to be remains a mystery. A whole ecosystem was destroyed in a few days. The community felt so strongly about the loss of these beautiful trees that they arranged a memorial gathering to be held in the town square, which was attended by 80 people from toddlers to great grandparents. Many people shared memories, poems and stories of loss, and one of the councillors spoke of his shock at seeing the loss of vegetation in the hills for a new

Christine Grayden Species decline submission

subdivision. He had not realised what ‘vegetation removal’ had meant in that case. No doubt they were given permission provided the old trees being removed were ‘offset’ somewhere.

In my view the offset system does not arrest ecosystem decline. In its current form, and mode of operation, it is so simple to be given offset clearance, and there is no real way of the public knowing just what happens – where is the register of offset permits? Where is the bond the landclearer should pay to guarantee the offset takes place? Where is the vegetation survey of the area to be cleared to at least try to compensate? Who is enforcing the implementation of the offset? Where are the fauna surveys which should be done within the area to be cleared to enable wildlife to be rescued before clearing? Where are the plans to safely relocate these wildlife?

So many unanswered questions in relation to the system of offsets. We need to acknowledge that this system is not simply just not working, but it is basically flawed. Gearing the system to enable developers and others to ‘just get on with’ land clearing in exchange for offsets who knows where is definitely not helping ecosystem decline in Victoria.

**BIOSPHERES COULD DO MORE IF FUNDED PROPERLY:** Biospheres are by definition special places but in the case of the Western Port Biosphere, there are many constraints imposed by the Biosphere objectives, such as the need to ‘meet human needs’ and ‘to conserve and use resources for the well being of people everywhere’. This is a very anthropomorphic view of the natural world, and does not really prioritise addressing ecosystem declines. They also receive so little funding it is difficult for them to make an impact in addressing ecosystem decline at present. This is a missed opportunity, as the WPB covers the Bass Coast Shire, Cardinia Shire, City of Casey, Frankston City and the Mornington Peninsula Shire. The WPB organisation networks with many other different agencies and individuals, and has excellent potential to be a significant part of any region-wide attempts to address ecosystem decline in Western Port.

#### CONCLUSION: ATTITUDE

Addressing ecosystem decline could be so much easier if humans were better educated, not just about birds on beaches, or on species/ecosystem decline generally (about which there is quite often publicity), but about how better to relate to members of the other multi-millions of species with whom we have contact on the planet.

It astounds me that humans on the island’s beaches think it is fun to let their dogs chase a flock of resting Silver Gulls into flight, or fossick around on rock platforms when shorebirds are obviously trying to feed there. (Do they think these birds somehow have other places to rest or feed?) Or, that it’s ok to keep speeding and run over a bird, lizard, snake, echidna or any of the other species of wildlife that happens to be in your way on the island’s roads. Or that living surrounded by beautiful beaches, bushland, farmland, vistas, Western Port bay and Bass Strait and living with abundant wildlife, does not inspire residents to pay homage to the ecosystems around them by welcoming them into their own environs.

Although I have tried here to describe potential options for addressing ecosystem decline in my home part of Victoria, from long observation on Phillip Island, it is clear to me that it is in fact human attitudes that have more to do with ecosystem decline than almost anything else. The Victorian government is not likely to be able to address this very basic and pervasive problem through regulation. Somehow the public must be willingly brought on board and resourced to take ownership of this crisis we face in ecosystem decline in Victoria.

Christine Grayden Species decline submission

Thank you for considering my submission.

Christine Grayden.