

**Parliamentary Inquiry - The decline of Victoria's ecosystems and measures to restore habitats and populations of threatened and endangered species, including but not limited to —**

**(a) the extent of the decline of Victoria's biodiversity and the likely impact on people, particularly First Peoples, and ecosystems, if more is not done to address this, including consideration of climate change impacts;**

Comment: The extent of the decline encompasses the whole state. We need Federal umbrella legislation and State specific legislation similar to Mexico, which now recognizes light pollution on an equal par with air pollution and other processes; Germany is now currently drafting legislation to reduce light pollution and the overuse of pesticides in the environment which are both contributing to the decimation of insect populations in Europe. In Australia Zoos Australia have appealed for unnecessary lighting to be turned off (2019) to allow the Bogong Moth to reach Mt Hotham in times for the only hibernating marsupial to wake up, the Mountain Pygmy Possum to find its' main food source. In 2017-2018 Moth numbers were in severe decline. Indigenous Australians live with no division between the land and the sky, yet the sky is becoming more brighter with no end in sight and the heritage of the night sky story lines is being lost.

**(b) the adequacy of the legislative framework protecting Victoria's environment, including grasslands, forests and the marine and coastal environment, and native species;**

Comment: We need Federal umbrella legislation and State specific legislation similar to Mexico, which now recognizes light pollution on an equal par with air pollution, Germany is now currently drafting legislation to reduce light pollution and the overuse of pesticides in the environment which are both contributing to the decimation of insect populations.

The current permit before Heritage Victoria regarding the St Kilda boulevard Melbourne is expected to be installed for at least 25 years and it includes upward lighting, which is now considered to be environmentally harmful. Victoria. A project which gained funding a pre- election promise based on a very poor survey with <1.41 % of the City of Ballarat population supporting the project is now open for discussion at community level. The placing of this project right on the edge of Lake Wendouree will lead to further decline in the ecosystem supported by this lake. As temperatures rise over the future, Lake Wendouree placed in a cool temperate location could provide necessary survival conditions for some species, as such its importance could increase under the Ramsar Convention. Making promises about projects which have not been sufficiently tested or supported should not become election promises, this must become a thing of the past so that sound, long term planning becomes the rule rather than the exception. By adopting the 5 points for good lighting below for all homes, business and institutions, Government could contribute to the reducing the severe decline in insect numbers which is occurring generally worldwide and specifically in Australia.

An initiative begun on 5th May 2020 of the Ballarat Community including the Ballarat Astronomical Society, Field Naturalist's Club of Ballarat, Birdlife Ballarat, Friends of Canadian Corridor, Friends of Lake Wendouree Natural Environment Facebook Group, Friends of Buninyong Botanic Gardens and supported by the International Dark Sky Association Victoria, Chapter of IDA, to work towards a Ballarat Dark Sky Community (BDSC) with the aim of eventually being accredited by the International Dark Sky Association IDA. BDSC have begun a dialogue with the City of Ballarat and IDA and the process could take several years, the Dark Sky Community Guidelines can be found here <https://www.darksky.org/wp-content/uploads/2018/12/IDSC-Guidelines-2018.pdf> There are 3 accredited Dark Sky places in Australia and 4 communities in Victoria considering working towards accreditation. <https://bdsc.ballaratobservatory.org.au/community/>

Powercor and Ausnet need to move forward with more environmentally friendly lighting luminaires and dimming technologies as standard and extend the same service for the best technology as their out of date current offerings. An inquiry into the Essential Services to ensure the community have the best available

and already available elsewhere, technology, could provide further energy savings as well as beneficial environmental outcomes.

## LIGHT TO PROTECT THE NIGHT

Five Principles for Responsible Outdoor Lighting



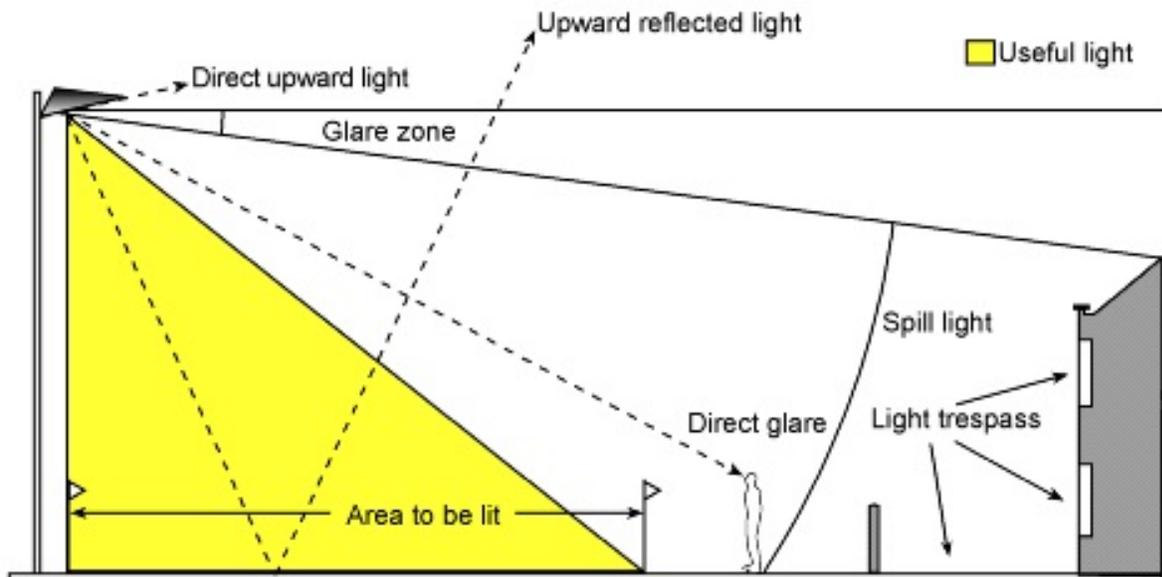
**USEFUL**  **ALL LIGHT SHOULD HAVE A CLEAR PURPOSE**  
Before installing or replacing a light, determine if light is needed. Consider how the use of light will impact the area, including wildlife and the environment. Consider using reflective paints or self-luminous markers for signs, curbs, and steps to reduce the need for permanently installed outdoor lighting.

**TARGETED**  **LIGHT SHOULD BE DIRECTED ONLY TO WHERE NEEDED**  
Use shielding and careful aiming to target the direction of the light beam so that it points downward and does not spill beyond where it is needed.

**LOW LIGHT LEVELS**  **LIGHT SHOULD BE NO BRIGHTER THAN NECESSARY**  
Use the lowest light level required. Be mindful of surface conditions as some surfaces may reflect more light into the night sky than intended.

**CONTROLLED**  **LIGHT SHOULD BE USED ONLY WHEN IT IS USEFUL**  
Use controls such as timers or motion detectors to ensure that light is available when it is needed, dimmed when possible, and turned off when not needed.

**COLOR**  **USE WARMER COLOR LIGHTS WHERE POSSIBLE**  
Limit the amount of shorter wavelength (blue-violet) light to the least amount needed.



Light pollution is often caused by the way light is emitted from lighting equipment. Choosing proper equipment and carefully mounting and aiming it can make a significant difference.

**(c)the adequacy and effectiveness of government programs and funding protecting and restoring Victoria's ecosystems;**

Comment: The protection of the environment must be top down. It is not possible to stop excessive use of pesticide /grass poisons if they are freely available to people who do not respect the side effects of the product they are using has in the environment. People use some of these products in a blanket approach. The death of Wedge tailed eagles and Koalas in illegal acts is leniently treated if at all. There is a lot of good work being done but strong deterrents must be seen to be applied. A minimum of forest preservation must be legislated for. Bhutan has legislated to protect 60% of its' forests. Industry must become sustainable, and it can, the example of the tobacco industry change is one example of how things can change for the better.

**(d)legislative, policy, program, governance and funding solutions to facilitate ecosystem and species protection, restoration and recovery in Victoria, in the context of climate change impacts;**

Comment: We must prepare for the inevitable increase in extremes in climate and environmental outcomes which we are already witnessing. The future of the sustainability of Victoria is on the line and to fail to act now, will lead to further decline in the ecosystem.

Experiencing six days of 36.3, 40.0, 41.4, 41.1,39.2, 34.7 degrees Celsius in January 2009 beginning on 27<sup>th</sup> I witnessed hundreds of insects seeking moisture inside our house in the shower cubicle on the 2<sup>rd</sup> and 3<sup>th</sup> days, birds of all shapes and sizes coming to drink at containers of water left out for them, an unprecedented heatwave. Five days followed recording from 27.5-36.7 degrees Celsius and then the Black Saturday Fires came the following day on the 7th February 2009 with a temperature of 44.1 recorded in Ballarat on that day, still the record high for February in Ballarat as I write. The leaves on the ground from trees on our property disintegrated under my footsteps, they were totally lacking moisture. The wind was blowing horizontal to the ground with debris caught up in it. Wind gusts up to 115km/hr were recorded at Mt William in Western Victoria.

I and my husband were lucky to escape severe damage during the Scotsburn fires in 2015, watching the horrific spread as the fire travelled South and then turning 90 degrees to head straight for us will remain etched in my memory forever. Funding for the environment must include legislation that can provide the protection it needs, without good legislation, many millions of dollars will be wasted as we move into the unknown future. The relentless need to expand population and the growth of regional cities, at some point must come to an end. At some point the growth must turn to sustainability. Gross National Product must change to Gross National Happiness, as is practiced by Bhutan. We only have one Planet, there is no planet B. Life on any other planetary body will never provide for a civilization like that living on Earth.

**(e)opportunities to restore Victoria's environment while upholding First Peoples' connection to country, and increasing and diversifying employment opportunities in Victoria; and**

Comment: The First people have always considered themselves caretakers of the land, not owners. We need to encourage cultural change at the gate of every property and business that the land must be cared for. We have a duty to those thousands of past Indigenous Australians that passed on a beautiful country, intact. Unfortunately, it has taken too much time to appreciate the legacy they passed on, but this is an opportunity to become in tune with the community who want to see change. Some of the most popular lectures that are completely booked out with my education programs are when I have Indigenous Australians speaking about their Night Sky Stories, how their culture is not separated by boundaries, but the land and the sky are one. Australia has one of the best examples to find direction for the future. We need to move forward with the best research in our hand to guide us.

**Judith Bailey**

Ballarat Dark Sky Community Co-ordinator, IDA Vic Interim President, Manager Ballarat Municipal Observatory and Museum, Friends of Lake Wendouree Natural Environment Facebook Group Co-ordinator. Member of all other groups mentioned above.

Address: [REDACTED]