

DRAFT WAPC Position Statement: Dark Sky
and Astrotourism
Department of Planning, Lands and Heritage
Locked Bag 2506
PERTH WA 6001

Our Ref: DWERT4935
Enquiries: Dr Shaun Meredith, 6364 6538
Email: shaun.meredith@dwer.wa.gov.au

Email: darksky@dplh.wa.gov.au

Dear Ms McGowan

ENVIRONMENTAL PROTECTION AUTHORITY SUBMISSION TO THE WESTERN AUSTRALIAN PLANNING COMMISSION'S DRAFT POSITION STATEMENT: DARK SKY AND ASTROTOURISM

Background

The Environmental Protection Authority (EPA) welcomes the Western Australian Planning Commission's (WAPC) Draft Dark Sky and Astrotourism Position Statement. Controlling and managing light pollution is an emerging priority and the EPA commends the WAPC for providing guidance on the provision and designation of dark sky locations, and the subdivision and development implications throughout WA.

Part IV of the *Environmental Protection Act 1986* (EP Act) makes provisions for the EPA to undertake environmental impact assessment (EIA) of significant proposals, strategic proposals, and planning schemes. The EPA uses environmental principles, factors and objectives as the basis for assessing whether a proposal or planning scheme's impact on the environment is acceptable.

Light impacts are assessed under the Marine Fauna Factor, the Social Surroundings Factor (Amenity) and the Terrestrial Fauna Factor. In doing so, the EPA refers to a number of documents, including its *Environmental Assessment Guideline for protecting marine turtles from light impacts 2010* (EAG 5) and the *National Light Pollution Guidelines for Wildlife including Marine Turtles, Seabirds and Migratory Shorebirds 2020* (National Light Pollution Guidelines).

Artificial light can alter the behaviour and physiology of marine and terrestrial fauna such as mammals, birds, reptiles and insects, impacting reproduction and survival. Effects may include: delayed reproduction; preventing hatching of fish eggs; disorientation of marine turtles and hatchlings, migratory birds, seabirds and insects. Light can also attract feral animals which may increase predation impacts on both terrestrial and marine fauna (e.g. predating on marine turtle eggs and hatchlings). It also has been reported to having implications for plants and their growth and times of flowering.

To raise awareness of the potential impacts of artificial light on wildlife and provide a framework for assessing and managing these impacts around susceptible listed

wildlife, the (then) Commonwealth Department of the Environment and Energy finalised the National Light Pollution Guidelines in January 2020 (<https://www.environment.gov.au/system/files/resources/2eb379de-931b-4547-8bcc-f96c73065f54/files/national-light-pollution-guidelines-wildlife.pdf>).

Draft Position Statement Objectives and Measures

The EPA supports the proposed policy objectives and policy measures WAPC seeks to achieve through its Draft Dark Sky and Astrotourism Position Statement. The EPA does, however, recommend that the Position Statement make clear reference to the recently finalised National Light Pollution Guidelines. This will further highlight the importance of controlling and managing light pollution, and will help to ensure that there is appropriate consideration of the impacts of light pollution on environment values during the planning process.

To further demonstrate the relevance of these objectives and measures to the EPA's decision making processes, and to provide some context for the WAPC that may be relevant during the finalisation of the Dark Sky and Astrotourism Position Statement, an example of work currently being undertaken by the EPA is provided below.

EPA Strategic Advice under Section 16(e) Potential cumulative impacts of the activities and developments proposed for Exmouth Gulf

The EPA is conducting a cumulative impact study into the current and proposed pressures on the values of Exmouth Gulf. Dark skies and astrotourism will be one of the considered issues in the Exmouth Gulf Strategic Advice. In conducting its investigations into the Exmouth Gulf cumulative impact study, the EPA considers the values (environmental, social and cultural) as identified under the EP Act.

Dark skies; clear atmosphere; and low levels of electromagnetic interference ('quiet') were significant considerations in the decision to locate Defence facilities in the Exmouth Gulf area. Defence sites within the Exmouth Gulf cumulative impact study area include:

- Naval Communication Station Harold E Holt – Areas A, B and C, and the Space Surveillance Telescope (SST);
- RAAF Base Learmonth (combined RAAF Air Base/civilian airport); and
- Learmonth Solar Observatory (jointly managed by the Australian Bureau of Meteorology (BOM) and the United States Air Force Weather Agency). The observatory is part of a global network of solar observatories known as the Solar Electro-Optical Network and one of two solar patrol observatories in Australia.

Future development may cause light pollution which has the potential to impact performance of optical space surveillance sensors. The EPA will take into consideration the unique and specific requirements of the Defence and BOM sites in delivering their section 16(e) Strategic Advice to the Minister.

Furthermore, during the public consultation phase of the study, a number of submissions were received stating the importance of dark skies and the ability to star gaze as a value for the Exmouth Gulf region.

Exmouth is one of the prime locations to view the rare solar hybrid eclipse in 2023, and the EPA has been informed that this will be a major tourism event for the area. The impact of light pollution on turtle hatchlings, both immediate and in the long term, and the effects of light spill affecting nesting and breeding was also cited repeatedly as a value during public consultation. The EPA will consider these pressures, along with other impacts of light (and dust) on the environment, when finalising their section 16(e) Strategic Advice to the Minister.

Yours Sincerely

A handwritten signature in blue ink, appearing to read 'M. Tonts', with a long horizontal flourish extending to the right.

Dr Matthew Tonts
CHAIR

26 March 2021