FACT SHEET

Proposed Dark Sky Reserve

Frequently Asked Questions

June 2025

Introduction

Sunshine Coast Council has commenced a phased community engagement process on a proposal to establish a Sunshine Coast Dark Sky Reserve through the International Dark Sky Places Program.

Light pollution can impact on the quality of our night skies and the amount of light pollution on the Sunshine Coast could be expected to increase across the next 20 years and beyond as our population increases.

These Frequently Asked Questions have been prepared to provide further information on the project.

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1. What is a dark sky?

A dark sky is the natural occurrence of the night sky that is free from human-caused light pollution.

2. What is light pollution?

Light pollution is the alteration of light levels due to human-made sources of light in the outdoor environment.

Components of light pollution include:

- glare - excessive brightness that causes visual discomfort.
- sky glow - brightening of the night sky over inhabited areas.
- light trespass - light falling where it is not intended or needed.

3. What can be done about light pollution?

There are many ways to manage the over-lighting of the night, such as:

- changing light fixtures outside your home or business
- using timers and motion sensors
- upgrading street lights
- regulation of better outdoor lighting standards
- community conversations about light trespass
- designating dark sky places.

4. What is the International Dark Sky Places Program?

Dark Sky International coordinate the International Dark Sky Places Program which seeks to preserve and protect dark sites through responsible lighting policies and public education.

Dark sky place locations include communities, private lands, parks and protected areas around the world under six designation types.

5. What are the different types of dark sky place designations?

There are six designation types offered under the International Dark Sky Places Program. These include:

1. International Dark Sky Sanctuaries
2. International Dark Sky Reserves
3. International Dark Sky Parks
4. International Dark Sky Communities
5. Urban Night Sky Places
6. DarkSky Approved Lodging.

As of May 2025, there are more than 200 places designated as Dark Sky Places across the world.

6. Does Australia have any Dark Sky Places?

Australia is home to seven accredited Dark Sky Places.

These are:

Queensland

- The Jump-Up

New South Wales

- Kestrel Nest EcoHut
- Palm Beach Headland
- Warrumbungle Dark Sky Park

South Australia

- Arkaroola Wilderness Sanctuary, Flinders Ranges
- Carrickalinga
- River Murray Dark Sky Reserve

The River Murray Dark Sky Reserve is currently the only reserve in Australia.

7. What is a Dark Sky Reserve designation?

A Dark Sky Reserve designation is across public or private land with an exceptional or distinguished quality of starry nights and nocturnal environment that is specifically protected for its scientific, natural, or educational value, its cultural heritage, and/or public enjoyment.

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Reserves consist of a 'core' area meeting minimum criteria for sky quality and natural darkness, and a 'buffer' area that supports dark sky preservation in the core.

Reserves are formed through a partnership of multiple land managers who have recognised the value of the natural night-time environment through regulations and long-term planning. The minimum area of a Dark Sky Reserve is 700 km^2.

8. What would a Dark Sky Reserve in the region look like?

An area incorporating the Mary River catchment and adjoining State protected areas within the Sunshine Coast Council local government area has been identified for a proposed Dark Sky Reserve.

The 'core' area of the proposed Reserve is the Council owned and managed Kirbys Road Environment Reserve and is close to 3km^2 in area.

The 'buffer' area surrounds Kirbys Road Environment Reserve which includes townships such as Maleny, Mapleton, Montville, Witta, Flaxton and Conondale.

The area includes two existing observatories.

1. Mapleton Observatory
2. Maleny Observatory.

9. Why designate an area as a Dark Sky Reserve on the Sunshine Coast?

A Dark Sky Reserve is seen to have many benefits and opportunities for the Sunshine Coast including:

- supporting our overall aspirations for a sustainable Sunshine Coast and enhancing our national and international recognition.
- contributing to the preservation of the hinterland landscape and character of the designated area through protection of its dark sky environment.
- attracting visitors to the area and bringing economic benefits to surrounding communities associated with astrotourism.
- supporting the health and wellbeing of Sunshine Coast residents and visitors.
- promoting wildlife sensitive environments
- recognising community efforts being made to protect the night skies of the designated area.
- enhancing both local and regional public education on the importance of dark sky environments and how community can contribute.

10. Why is the proposed area worthy of designation?

- Dark Sky Reserves need to be 700km^2 or larger to be eligible for designation under the program – the proposed area incorporating the Mary River catchment and adjoining State protected areas within the Sunshine Coast Council local government areas is over 870km^2.
- A Dark Sky Reserve area requires a core area that is protected for scientific, nature, educational, cultural, heritage and or public enjoyment. The proposed core area of the Kirbys Road Environment Reserve is an environment reserve in Council's conservation estate.
- Night sky quality is exceptional - Measurements in the proposed area exceeds the Dark Sky Reserve designation requirement of 21.2 magnitude per square arcsecond.
- Furthermore, the location and topography of the proposed area is ideal, with the Blackall Range acting as a natural shield protecting the area from much of the skyglow from coastal urban areas and surrounding cities and towns.
- There are townships within the proposed area providing opportunities for communities to implement dark sky friendly initiatives.

11. Is there a night sky quality measurement program being undertaken as part of the project?

Night sky quality data is being captured each season across the proposed reserve area. Two permanent night sky quality meters have also been installed within the proposed reserve and capture data daily.

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For a summary of data results - visit our project page here.

12. How do I find what dark sky friendly lighting is?

- Dark Sky friendly lighting is designed to direct light to the ground, not up into the sky where it can contribute to light pollution.
- Dark Sky International and the Australasian Dark Sky Alliance have listed lighting products that are dark sky friendly.
- Generally dark sky friendly lighting:
    - restricts the amount of upward-directed light
    - avoids glare
    - avoids over-lighting
    - utilises dimming and other appropriate lighting controls
    - minimises short-wavelength (blueish) light in the nighttime environment.



Source: darksky.org.au

13. What is the process of applying for a Dark Sky Reserve designation?

There is a formal written application process for applying for a Dark Sky Reserve designation under the International Dark Sky Places Program.

A comprehensive application includes:

- A lighting management plan and inventory
- Evidence of commitment and action to protecting the night sky and engaging with the community for a minimum of 12 months prior to submitting an application.
- Evidence of community support confirming long-term engagement and commitment towards the creation of the Dark Sky Place.

Council and key stakeholders would need to actively work with the Dark Sky International as part of the application development.

The application is then submitted to the Dark Sky Places Committee for review, who following assessment would submit recommendations to the Dark Sky International Association Board for consideration and approval.

14. What is a lighting inventory?

Under the International Dark Sky Places Program, a lighting inventory is a formal audit of outdoor lighting. It is used to determine rates of compliance with the lighting management plan within a Dark Sky Reserve core area and to identify lighting equipment in need of replacement or retrofitting.

A lighting inventory of public lighting for the buffer/periphery area is also helpful and required to understand approximately how many lights are within the proposed area and if they dark sky friendly.

15. What is a lighting management plan?

A lighting management plan is defined by Dark Sky International as a management plan to guide the selection, placement, installation and operation of all new and replacement/retrofitted lighting. It is to be adopted by a sufficient number of communities within the Dark Sky Reserve area. Minimum standards of the plan are outlined in the Dark Sky International (DSI) Reserve Guidelines.

A draft lighting management plan has been prepared for the proposed Sunshine Coast Dark Sky Reserve.

The Draft Lighting Management Plan:

- provides direction for new or upgraded Council-controlled outdoor lighting installations in public open spaces and other public lighting where appropriate within the proposed Dark Sky Reserve.
- establishes a common set of principles to guide lighting provided by other key stakeholders within the proposed Dark Sky Reserve including Energex, Queensland Parks and Wildlife Service and Partnerships, Department of Transport and Mains Roads and the community.

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- provides direction for the application of good practice lighting principles to inform the Sunshine Coast Planning Scheme in regard to outdoor lighting associated with new developments within the proposed Dark Sky Reserve.
- raises community awareness of the proposed Dark Sky Reserve and educates how the community can support dark sky aspirations through good practice lighting principles.

A copy of the Draft Plan is available on Council's Have your Say webpage here.

16. What does a Dark Sky Reserve mean for residents living within the proposed area?

We recognise close to 15,000 members of our community call the proposed area home including those in Maleny, Mapleton, Montville, Witta, Flaxton and Conondale.

A designation does not require all lights to be switched off but to support preservation of dark skies in the area, we do ask residents and visitors to understand the impacts of light pollution and do their best to reduce it by following considerate lighting practices. Wherever possible, outdoor lights should meet the following five principles:

1. useful – Use light only if it is needed.
2. targeted – Direct lighting so it falls only where it is needed.
3. low level – Light should be no brighter than necessary.
4. controlled – Use light only when it is needed.
5. warmer coloured – Use warmer coloured lights where possible.

There are eligibility and minimum lighting requirements for a Dark Sky Reserve outlined in Dark Sky International's (DSI) Guidelines. The guidelines also state the requirement of a lighting management plan to guide the use of lighting within the area.

Council has developed a Draft Lighting Management Plan for the proposed reserve. The draft plan has two levels of application:

1. mandatory
2. encouraged.

Mandatory application refers to Council owned and operated lighting in the proposed Reserve. It is also intended to inform outdoor lighting provisions in the Sunshine Coast Planning Scheme for new developments in the proposed Reserve.

Encouraged application applies to all other stakeholders responsible for outdoor lighting within the proposed reserve such as existing private developments and State Government assets etc.

A copy of the Draft Lighting Management Plan is available on Council's Have your Say webpage here.

17. What does a Dark Sky Reserve mean for residents/communities living outside the proposed area?

To achieve our vision of Australia's most sustainable region: Healthy. Smart. Creative, Council encourages everyone to make simple changes towards sustainable living.

Sustainable living applies to individuals, households, communities, businesses and industry. A key focus is energy consumption.

To maintain and improve our enviable lifestyle and healthy environment it is important that we all play our part to live, learn, work and play sustainably.

To maintain and protect our dark skies in the proposed reserve area from light pollution and sky glow, residents and communities outside the proposed reserve area are encouraged to also follow the identified considered lighting practices (refer to Question 16).

18. Does a commitment to dark sky friendly lighting need to be demonstrated to achieve a designation?

Yes. Council is undertaking demonstration lighting projects on public land at:

1. Isaac Moore Park amenities block, Kenilworth

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2. Maleny Community Precinct entry driveway and carpark adjoining Pattemore House and Maleny Golf Club,
3. The LED Street Light Replacement Project is continuing in partnership with Energex and will replace 4000 Energex-owned streetlights with LED lights across the region including a number of streetlights within the proposed Dark Sky Reserve. This project is being delivered through funding received from the Australian Government's Local Road and Community Infrastructure Program (LRCIP).

Any upgrades to lighting in public spaces to meet dark sky compliant lighting requirements also meet other public lighting standards, including any safety requirements. Smart lighting that directs light where it is needed creates a balance between safety and starlight.

If an application is pursued for a Dark Sky Reserve, public lighting upgrades within the proposed area are required to demonstrate ongoing commitment to the preservation of dark skies. Upgrades are subject to annual budget and operational planning an approval processes.

19. Who are the key stakeholders in considering this proposal?

Key stakeholders include:

- residents, landowners and businesses within the proposed reserve area and broader Sunshine Coast community.
- First Nations people – engagement and participation from our First Nations people is an important and critical part of the process.
- Energy Queensland – Energex: Energy Queensland manage and own many of region's streetlights.
- Department of Transport and Main Roads, Queensland Parks and Wildlife Service and Partnerships and other government agencies who are land managers within the proposed area.

20. How does the proposed Dark Sky Reserve align with our Sunshine Coast Biosphere?

Our Sunshine Coast biosphere is a special place where responsible development and people living sustainably, sit alongside active conservation.

A biosphere is about:

- creating a legacy for our children's future
- caring for our beautiful landscapes and stunning beach
- leveraging economic opportunities.

Light pollution can affect our health and wellbeing and can also have a negative effect on many species of plants and animals, including migratory species, both in protected areas and in urban and rural areas.

These aspirations are all complementary to protecting and celebrating our night sky environments and our overall goal is to live more sustainably.

21. How does the proposed Dark Sky Reserve support Council's strategic directions?

Council's Environment and Liveability Strategy provides long-term strategic directions to deliver a healthy environment and liveable Sunshine Coast in 2041

This project is responding to the Strategy's policy position to "recognise, protect and celebrate dark skies" and a Transformational Action to "investigate opportunities to recognise, protect and celebrate the Sunshine Coast dark sky, in partnership with the community".

22. When can I have a say on the proposal?

Community consultation on the proposal occurred in May 2024. A community consultation summary can be found here.

Feedback is welcome on the draft lighting management plan between 16 June and 11 July 2025. More information can be found on Council's Have Your Say website.

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23. How can I stay updated on the project?

Keep an eye out on the project page for updates on the project.

24. What can I do to play my part in reducing light pollution and support a dark sky place?

- Implement the five key principles for outdoor lighting (refer to Question 16)
- Undertake the DarkSky's Home Outdoor Lighting Assessment developed by Dark Sky International to help reduce light pollution around your home.
- Participate in the Globe at Night Program and by taking measurements of light pollution in the night sky using your mobile device.
- Collaborate with your neighbours to implement the five key principles and encourage a dark sky friendly neighbourhood.

Some information contained in this document has been sourced from Dark Sky International: darksky.org.au

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