

# GULF NEWS

10 August 2017

WAIHEKE'S COMMUNITY NEWS MAGAZINE SINCE 1973

[www.waihekegulfnews.co.nz](http://www.waihekegulfnews.co.nz) \$2

## Star bright

Great Barrier's  
freshly-won  
status as a Dark  
Sky Sanctuary  
protects it from  
unnecessary light  
pollution.

Should Waiheke  
follow suit?

Story: pages 24-26.

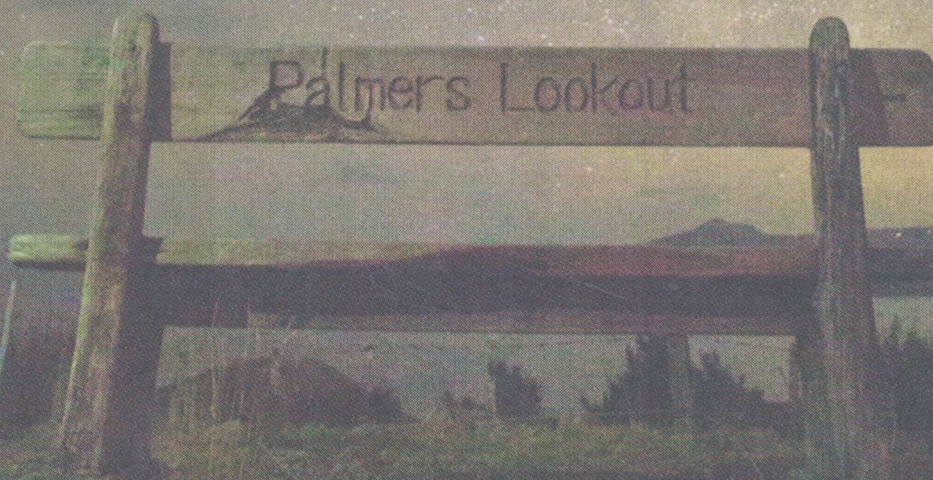


Photo Blair Quax



# Keeping the stars in our eyes

Originally an investment banker, long-time Rocky Bay holiday homeowner Nalayini Davies juggles a global career in economic development with stargazing. Known for her monthly astronomy column in *Waiheke Weekender*, Nalayini has quietly pulled off a big coup: having Great Barrier Island declared an international dark sky sanctuary. She tells Geoff Cumming that the night sky over Waiheke also merits international recognition.

Living on an island, most of us take for granted that we can step outside on a clear night to a panorama of stars.

Nalayini and Gareth Davies breathe in the galaxies on every visit to their Rocky Bay bach - keen astronomer Nalayini has been coming here for 30 years.

Back at their Epsom home, the milky way is not quite so clear. But it's some consolation that, in intensely-populated, brightly-lit cities around the world, billions of people never see the Milky Way.

Rocky Bay is just 25 kilometres from the bright lights of downtown Auckland, a sprawling city of 1.5 million. Although Waiheke is increasingly built-up, the darkness of our skies (yes, there is an international measuring standard) rates pretty highly.

Readings that Nalayini took of darkness - officially measured as night sky brightness - on Waiheke got her thinking about Great Barrier Island, which is even further from the big smoke and



The clarity of Great Barrier's skies is better than that of Lake Tekapo.



considerably less populated.

That triggered a process that culminated with Great Barrier's official recognition in June as a 'dark sky sanctuary' by the International Dark Sky Association. The sanctuary's launch on 19 August will be a huge affair on the Barrier.

It is just the third place in the world to be declared an international dark sky sanctuary and the first island. While other categories such as reserve status apply to more accessible locations such as Tekapo, dark sky sanctuary status is reserved for more remote areas. Yet it is just 80 kilometres from a large, 24-hour city.

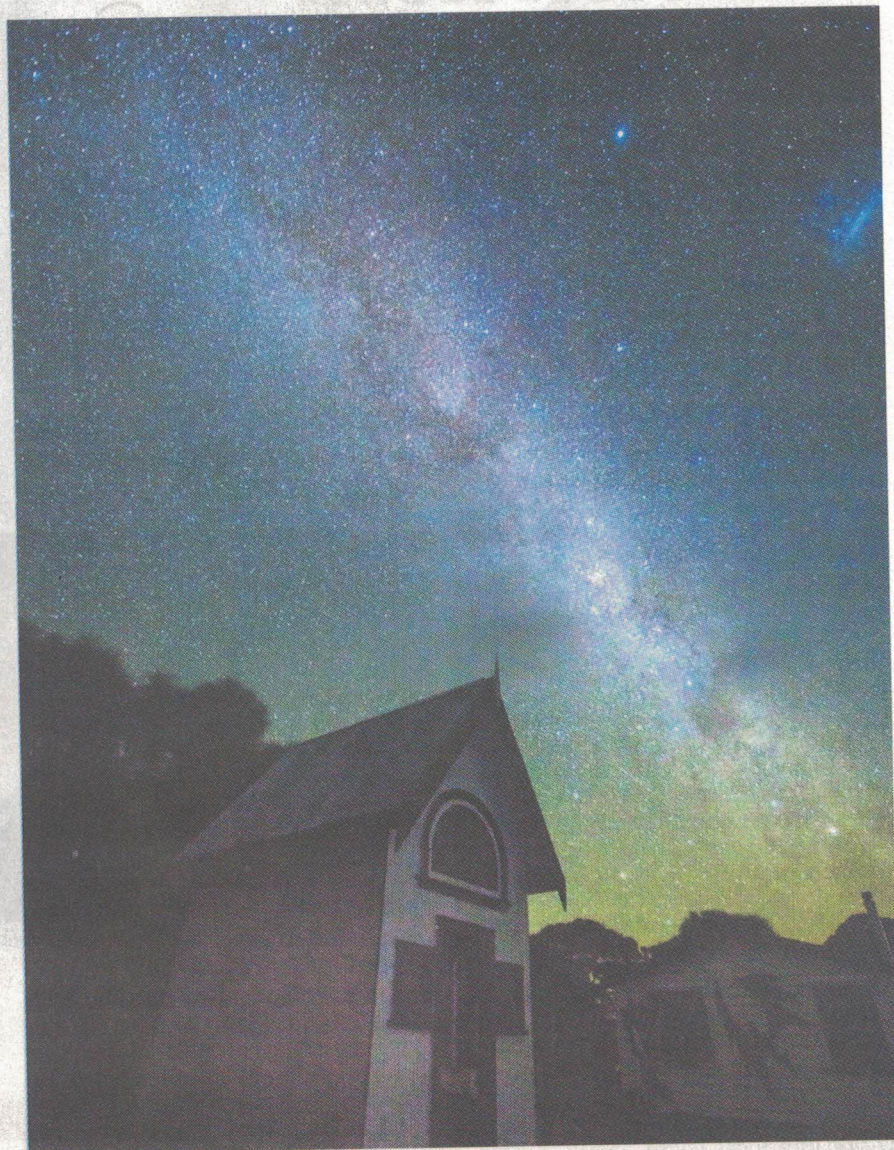
"Who would have thought that we had a dark spot like that right under our

sponsibilities - residents must commit to measures that will keep the skies above them dark.

Auckland, would be a little brighter than the northeastern side. But I quickly saw the whole island would qualify.



Natayini Davies (above) took readings on Great Barrier using a specially adapted meter (right).



The key to Great Barrier's dark sky is the lack of unnecessary lighting.

noses?", Nalayini says.

Nalayini's passion for astronomy dawned slowly - her career is grounded in the world of investment banking and she and Gareth, an IT specialist, have for some years run an international economic development consultancy. These days, however, she takes every chance to open people's eyes to the value of dark skies.

She is currently completing a masters in astronomy.

International dark sky certification for Great Barrier will put the island on the chart of stargazing enthusiasts around the world, giving another reason to visit the island beside the scenery visible by day. But sanctuary status also brings re-

Spearheaded by Nalayini and Gareth, a handful of locals and the Great Barrier local board, the application for sanctuary status proved compelling. It also happened surprisingly quickly. Just under a year ago, Nalayini visited the island out of curiosity, packing a sky quality meter to take some initial readings.

She teamed up with locals Richard and Gendie Sommerville-Ryan, retirees who had a developing interest in astronomy.

"I went over just before a new moon. Richard and Gendie drove me to the best spots and we took some measurements.

"I knew straight away Barrier was above the threshold. I'd suspected that the southwest side of the island, closest to

"Richard and Gendie arranged for me to see the local board and I told them that, on the readings I had, we could get provisional registration. The board didn't want provisional registration: they wanted to get full certification."

So she returned with a specially adapted meter. With Richard as driver, the pair criss-crossed the island in a single night taking multiple readings - avoiding the possibility that night-by-night variations in sky clarity could affect data.

"We adapted the equipment so that I could drive around and automatically pick up all the readings and analyse them against a stationary control unit. We had to work very quickly."



# Value it or lose it

Waiheke's night sky may not be as pristine as Great Barrier's, but it could nevertheless gain international dark sky status if islanders wished, Nalayini Davies says.

Nalayini took measurements on Waiheke last year and, despite significant residential development, street lighting and some glaring 'hot spots', she was encouraged. Our skies average 21 to 21.5 magnitude per square arc-second (mpsas), a reading that would qualify for an 'international dark sky park' bronze or silver rating by the International Dark Sky Association.

By comparison, the sky above the Stardown Observatory in Epsom measures 19.3 mpsas.

Nalayini says much of eastern Waiheke, including Man O' War Station, could achieve gold status.

She has already addressed Waiheke local board about the merits of dark sky recognition for Waiheke and offered her help.

"But the community would need to get behind the idea," she stresses.

"Having holidayed on the island for 30 years, I'm conscious that it doesn't need more tourists but my motivation has nothing to do with tourists. It's about preserving it for future generations.

"To be able to step outside on a moonless night and see the stars - it's something we just take for granted."

If Waihekeans were to embrace the idea, behavioural changes would be needed - but not necessarily drastic ones.

Businesses that leave lights on all night or gated communities whose entrances are lit up at 2am could contribute with relative ease. The ferry wharves remain brightly lit long after sailings have stopped for the night.

"People could still have security lighting but there's no need to have every light on right through the night. Lighting is a necessary thing but there's a lot of

unnecessary waste."

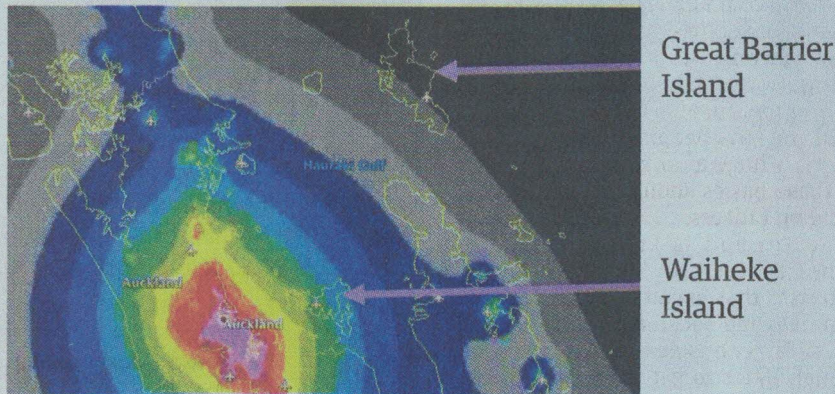
After she addressed the local board, the board arranged for the lights in the library to be dimmed at night.

Further seeds are being sown - the 'Stargazing Waiheke' Facebook page has 130 followers and last week she led a viewing evening for students at Waiheke High School, who follow her monthly column in *Waiheke Weekender*.

Nalayini believes the best approach is education. "It's better to get people interested in astronomy and to appreciate the skies. Then they will turn down the lights.

"People on Waiheke should realise what a wonderful thing we've got - because it's not the same in Epsom." •

The World Atlas' colour-coded light pollution forecasts for the Auckland region.



From page 25

The 'gold' threshold for dark sky sanctuary status is 21.5 magnitude per square arc-second. Nalayini found Great Barrier, at 21.8, was even darker than Tekapo (21.7). The results removed any doubts within the local board about seeking sanctuary status.

"Locals suddenly realised 'this is dark'.

"The main reason is they have no mains power and they generally use no unnecessary lighting. They rely on solar or diesel generators and they use it very carefully.

"They don't have neon billboards and they don't light up sculptures, as happens elsewhere in the Auckland region."

When her findings were revealed, locals "thought they were sitting on a goldmine and they hadn't realised it.

"The level of interest in astronomy on the island at the time was pretty low and they suddenly realised they had this precious resource."

Support for dark sky certification was not a stampede, however. Some feared

it might trigger a tourism invasion while others thought restrictions on lighting could restrict their lifestyle. "Barrier people are even more independently minded than Waiheke," Nalayini quips.

"So I told them if you want to proceed you need to build up appreciation of the sky."

The Sommerville-Ryans launched an astronomy enthusiasts' group and soon had 90 people signed up, about 10 per cent of the island's population.

Nalayini and Gareth gifted a telescope to help build further interest.

Meanwhile Nalayini helped the local board prepare the submission, which was delivered in March. The application also covered the island's fauna and flora.

"Because it's a conservation island there is the prospect of promoting it as a package, so visitors can wander the island enjoying the bush and coastline in the daytime and the sky at night.

"We also trained about 20 people to be dark sky ambassadors - people who understand the island and astronomy."

She says the international body was

highly complimentary about the thoroughness of the application.

"I knew it would be approved because it hit all the spots.

"While we were measuring up we only saw four lights that could be considered intrusive and two of them were visiting boats."

She believes certification will help the island to attract more visitors but she doubts it will ever be overrun.

"It's a long ferry ride to get there or else you have to fly, whereas Tekapo is easily accessible by car."

Stargazing might persuade visitors to stay an extra night or two and see more of the island.

But for Nalayini the bigger picture is to ensure our skies stay as dark as possible so our children and grandchildren can continue to step outside to gaze at the stars.

"If we don't do anything it will quickly go.

"We can't have whole generations growing up never seeing the Milky Way." •