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**Simon Jones**  
**National Oceanography Centre**  
**Ian Robert Felton**  
**Andrew Baldwin**  
**craft:pegg**

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# ALUNATIME AT TRINITY BUOY WHARF

London's First Public Moon and Tide Clock 51°30'27"N 0° 0' 31"E

'ALUNATIME' is a graphical notation of time in light designed by artist Laura Williams. It shows the lunar phase (wax & wane), the lunar day (rise & set) and tide cycles (ebb & flow). Governed by the relative position of the Earth, Moon and Sun, these fundamental rhythms have shaped our past and will continue to determine our future. The Moon creates our tides and 70% of the Earth's surface is water; with the rising tides of climate change, understanding these natural rhythms of our blue planet is now more important than ever.

Launched on the Full Moon of October 22nd 2010, this first ever, live 'real time' version of ALUNATIME provides vital ongoing research and development for the 38m diameter tidal powered clock known as ALUNA, planned for the Greenwich Peninsula. Find out more at [www.alunatime.org](http://www.alunatime.org).

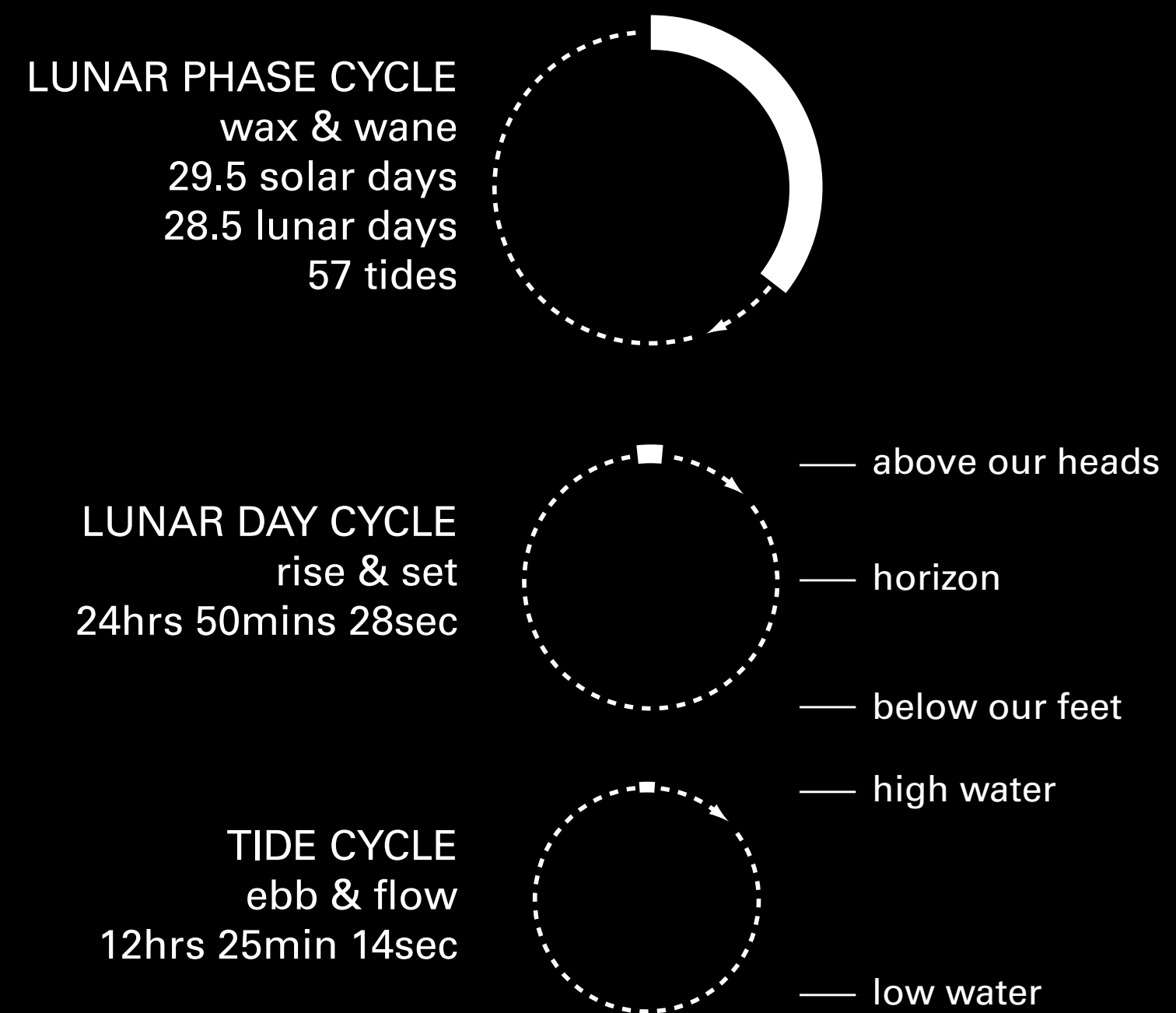


PHOTO MARK KING

## WAX & WANE

A ring of light slowly 'waxes on' and 'wanes off' in time with the Moon's phase, taking around 29.5 calendar days to complete a full cycle. At New Moon the unlit ring begins to gradually 'wax' on. By Full Moon, the whole ring is illuminated, the circle of light complete. The ring then 'waned' back to its unlit state by the next New Moon and the cycle begins again.

## RISE & SET

The 'large hand' of the clock follows the Moon's 24 hour 50 minute journey around the Earth. It always points directly to the Moon's position in the sky; at the top when the Moon is directly above, and at the bottom when the Moon is below our feet, on the other side of the Earth. The lunar day hand on the riverside face has been reversed so that it will track the Moon's trajectory anti-clockwise as river users look north to read the clock.

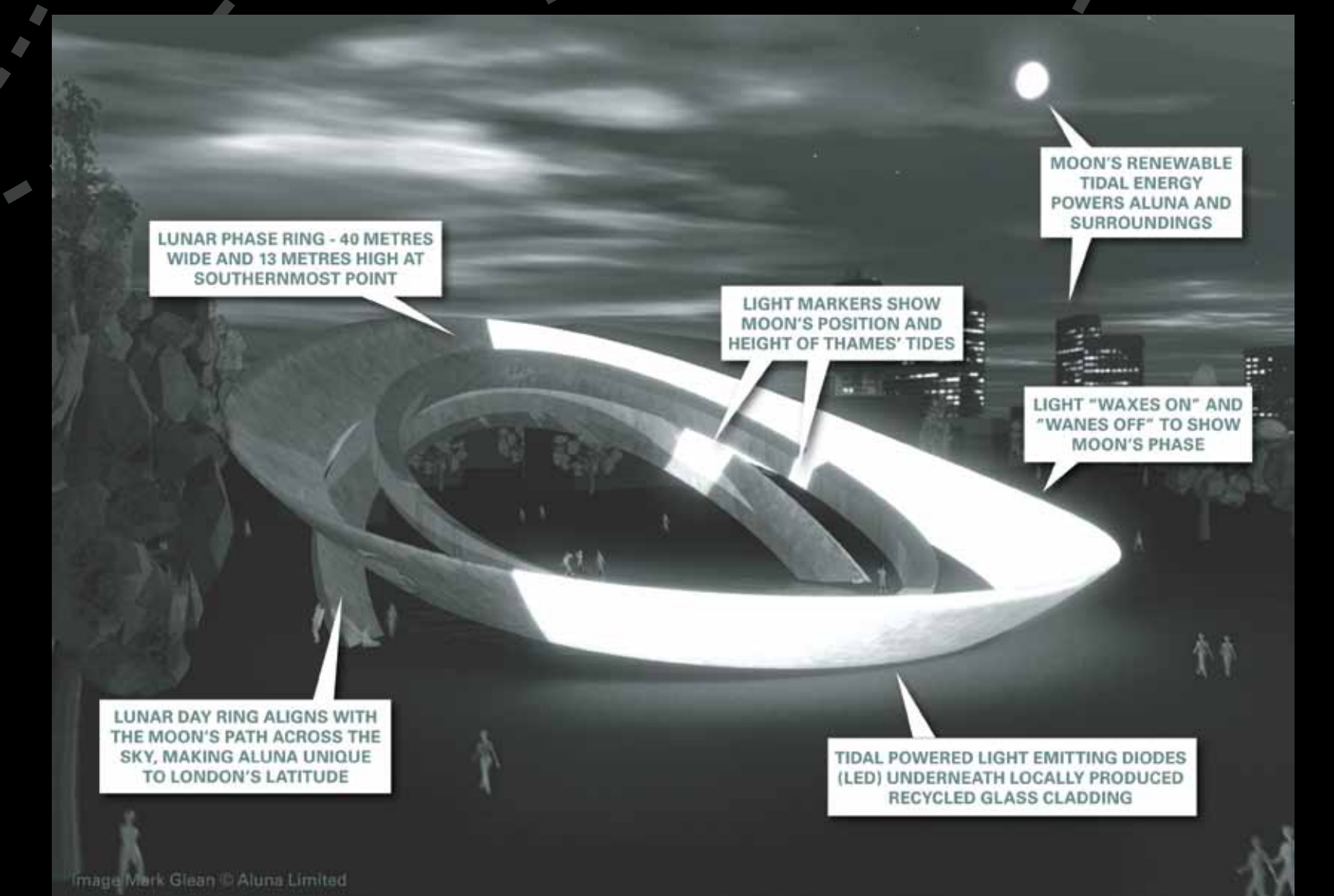
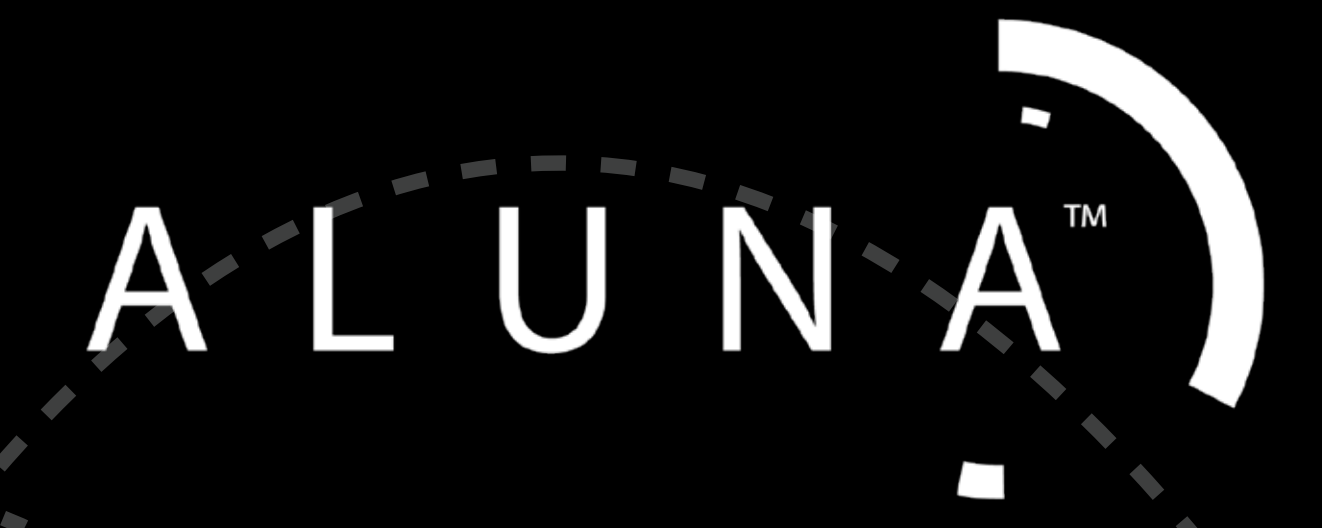
## EBB & FLOW

The 'small hand' follows the progress of the tides. High at high tide and low at low tide, this cycle takes 12 hours 25 minutes. Synchronised at a ratio of 2:1, the lunar day and tide cycles are the 'heartbeat' of our planet Earth.

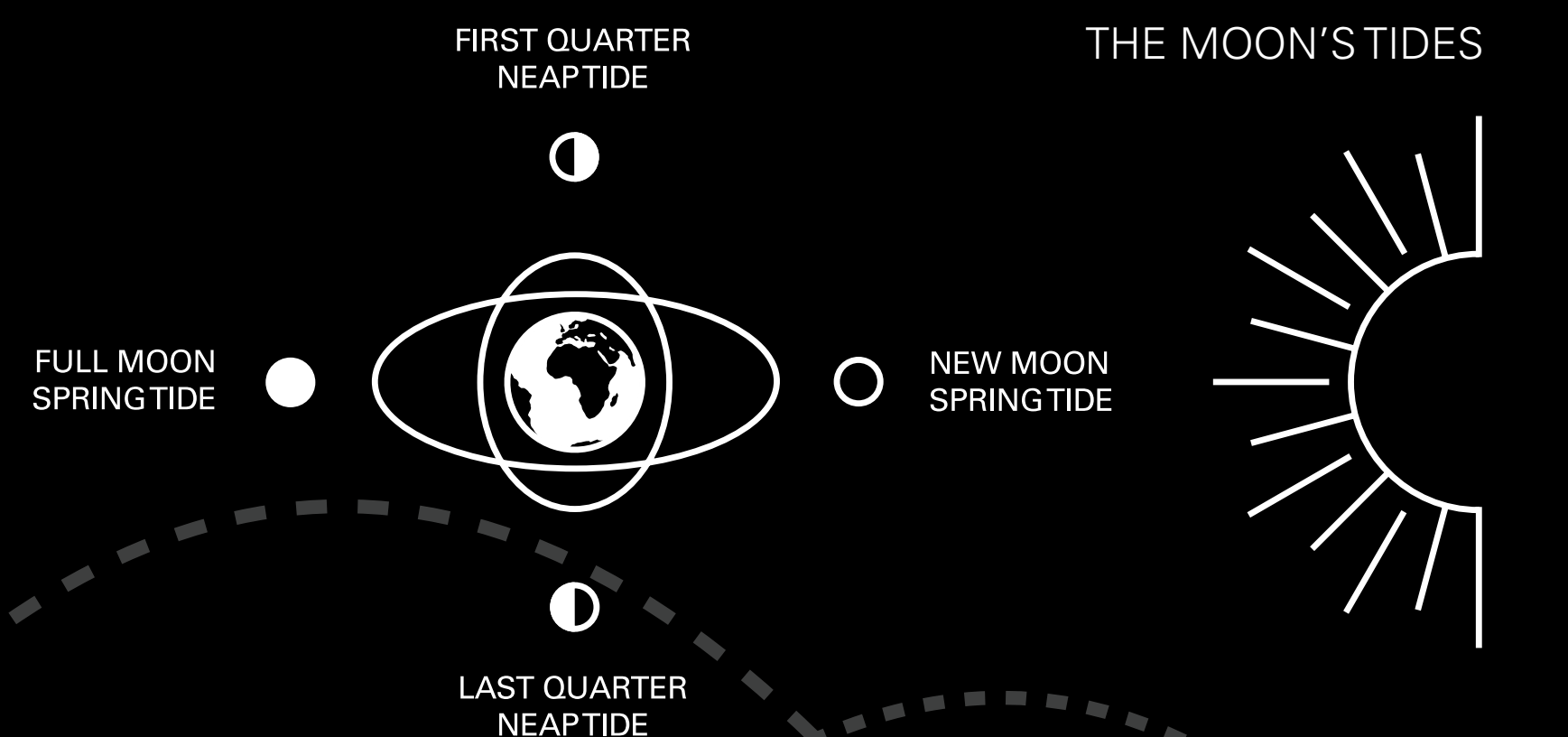
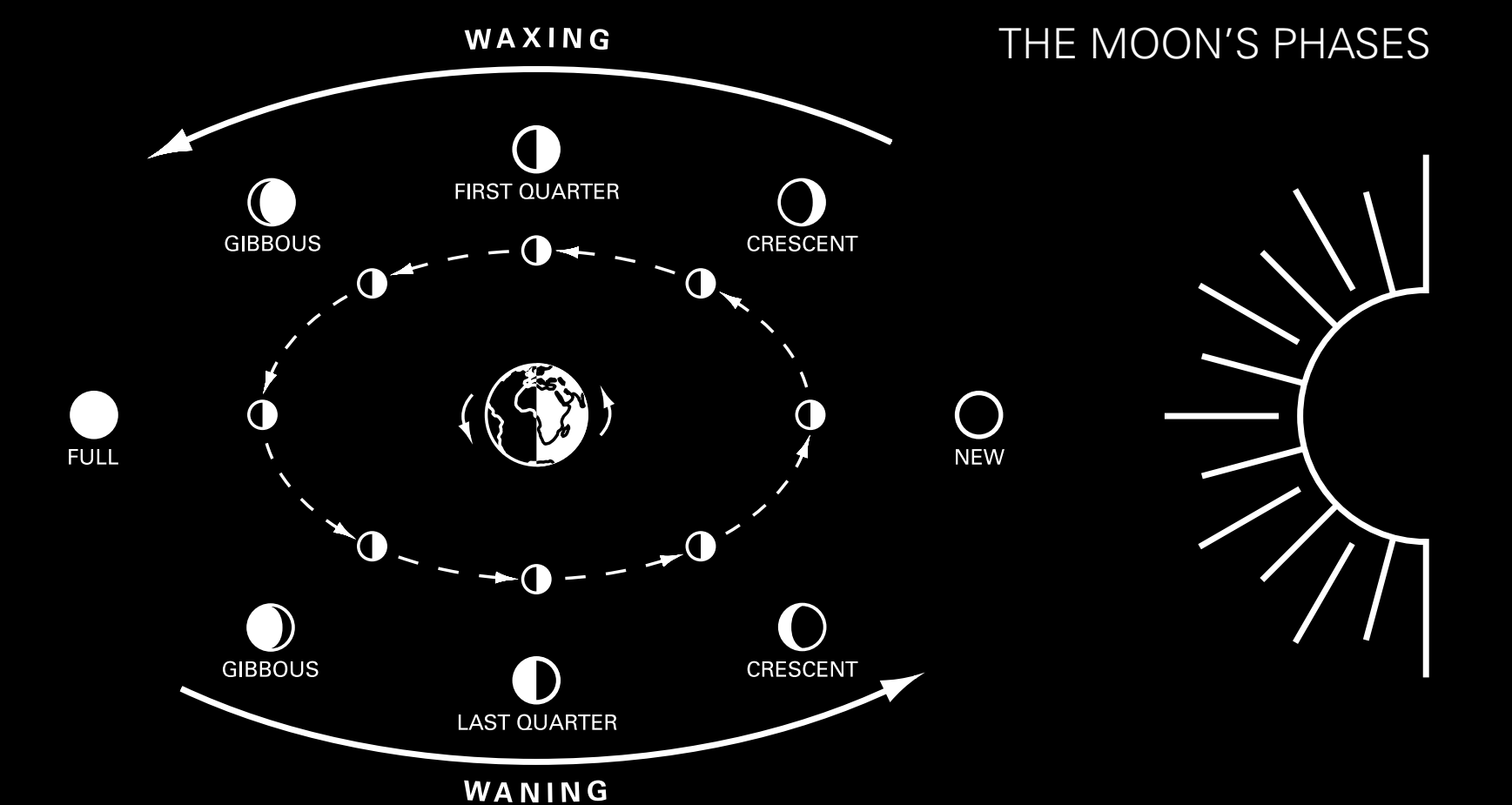
ALUNATIME is displayed here at TBW on two 1m diameter clock faces, each with 5,000 low energy LEDs programmed by electronic design engineer Simon Jones. National Oceanography Centre, global leaders in tidal prediction, have calculated the lunar and tidal data specifically for Trinity Buoy Wharf's geographic location from the harmonic analysis of river geography, local tide gauges and astronomical computations – including the world's most accurate lunar phase algorithm.

The steel housing was made by metal artist Andrew Baldwin, and weather-proofed by Sika and Saint Gobain Performance Plastics. It is mounted on an antique cast iron pillar reclaimed from Folkestone Harbour Station. The clock is fixed to a 4.2tonne concrete base designed and made by Laura Williams, fellow TBW artist Ian Robert Felton and volunteers.

The clock was grant-funded by the Royal Astronomical Society and Trinity Buoy Wharf Trust. The base was funded by TBW tenants, individual donations and material sponsorship from Hanson, Comast, BASF, Smiths Metal Centres London and creative sandblasters craft:pegg. An engraved stainless steel ring set into the base points to the compass points and the rising and setting of the Moon and Sun at the solstices and equinoxes.



ALUNA © LAURA WILLIAMS, IMAGE MARK GLEAN



ALUNATIME © LAURA WILLIAMS



WHEN YOU WATCH THE MOON, HALF THE WORLD IS WATCHING IT WITH YOU. [WWW.ALUNATIME.ORG](http://WWW.ALUNATIME.ORG)

