



Broads Authority
Dark Sky and Night Blight Data comparison
August 2016

1. Introduction

This report compares the two recent datasets that assess light pollution in the area.

The Dark Skies Survey¹ data was compiled between October 2015 and March 2016. More information can be found in the Dark Skies Survey Study. This work effectively looked up from the ground.

The other evidence (Night Blight²) was completed by the CPRE in 2016 and used satellites to assess the light pollution around the whole country, by looking down at the earth.

Both sets of data are important and this study shows how the results of the two studies compare to each other. It ends with a summary map that will accompany a Local Plan policy relating to light pollution.

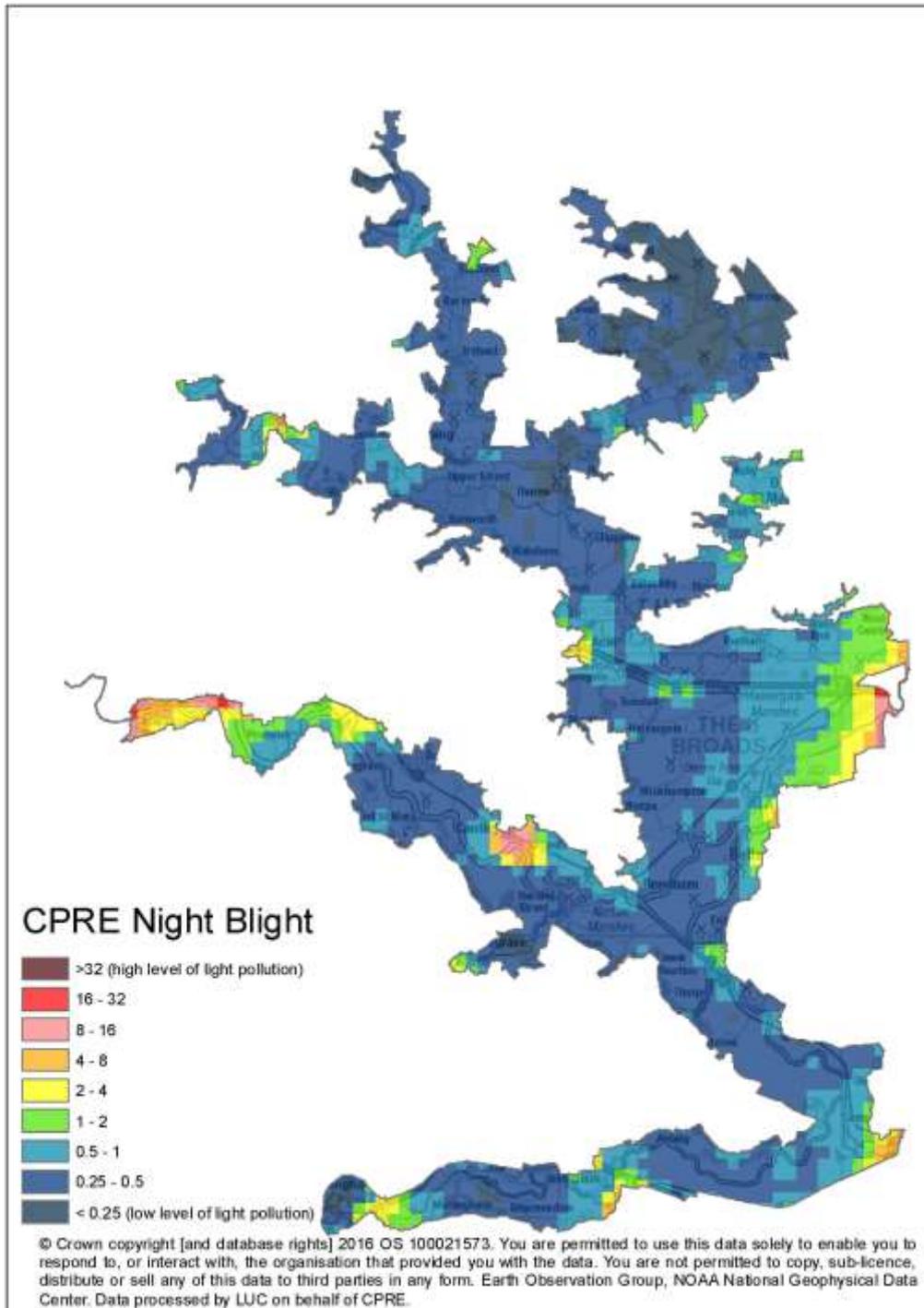
2. Assessment

¹ http://www.broads-authority.gov.uk/_data/assets/pdf_file/0007/757402/Broads-Authority-Dark-Skies-Study-March-20161.pdf

² <http://nightblight.cpre.org.uk/>

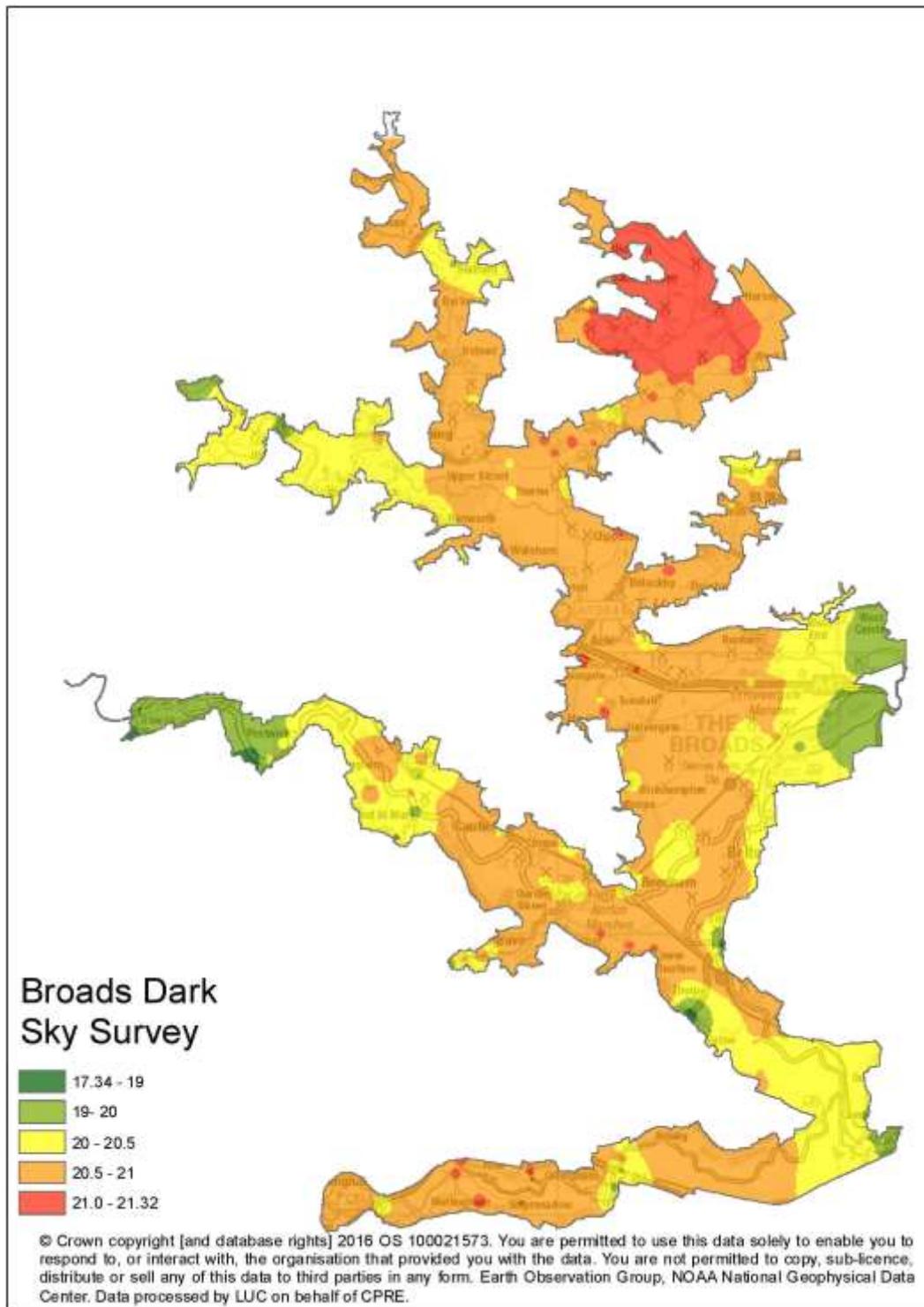
Map 1: Night Blight

This shows the amount of light spilling up into the night sky. Each pixel shows the level of radiance (night lights) shining up into the night sky. These have been categorised into colour bands to distinguish between different light levels. Areas with 0.25 or less radiance levels are the darkest. Each pixel represents 400m on the ground.



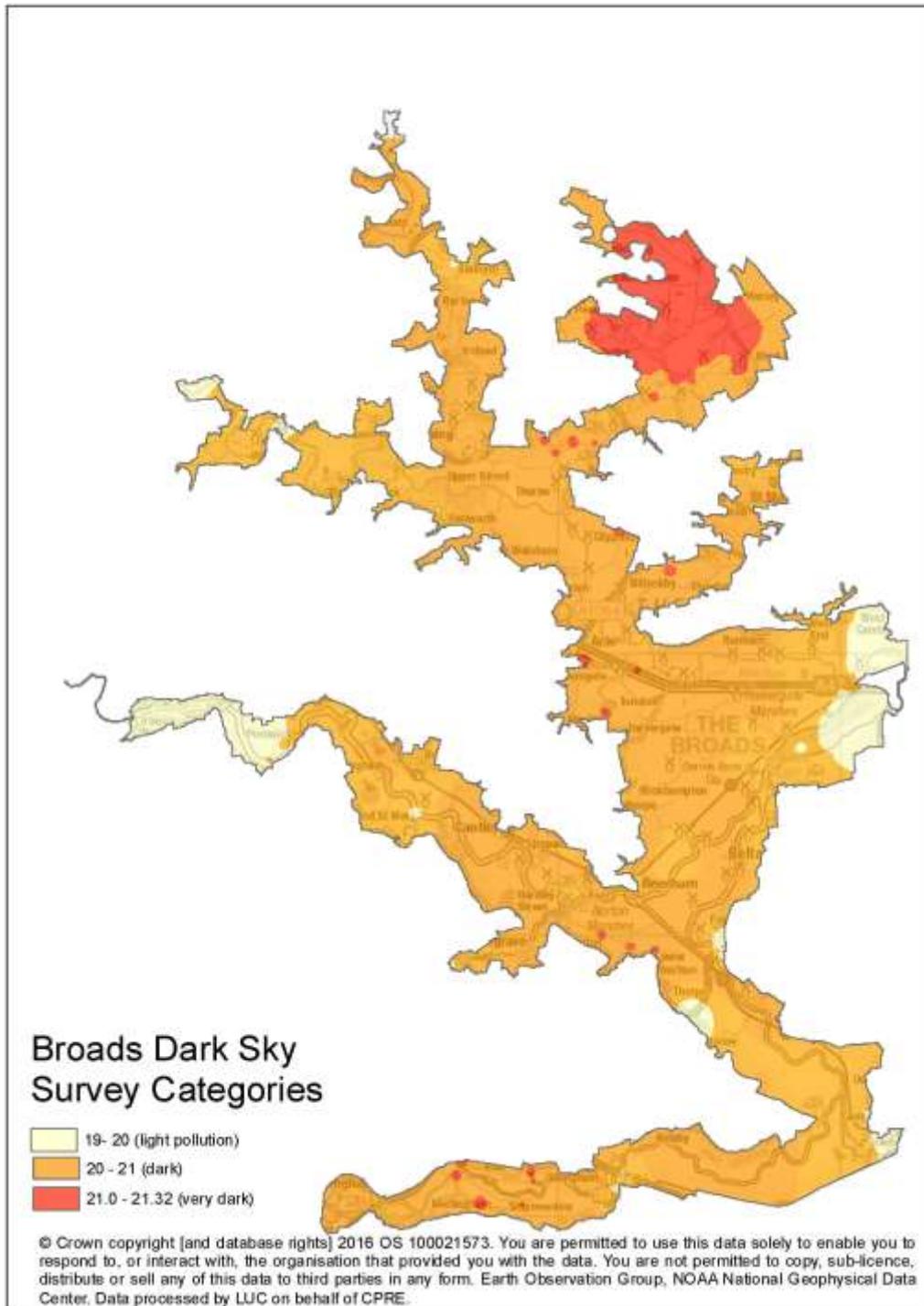
Map 2: Broads Dark Sky Survey

This measured brightness of the night sky from the ground. The survey point dark sky quality metre values have been interpolated using an Inverse Distance Weighted algorithm to create a surface indicating the levels of brightness at night across the Broads. This algorithm works on the assumption that things that are close to one another are more alike than those that are farther apart.



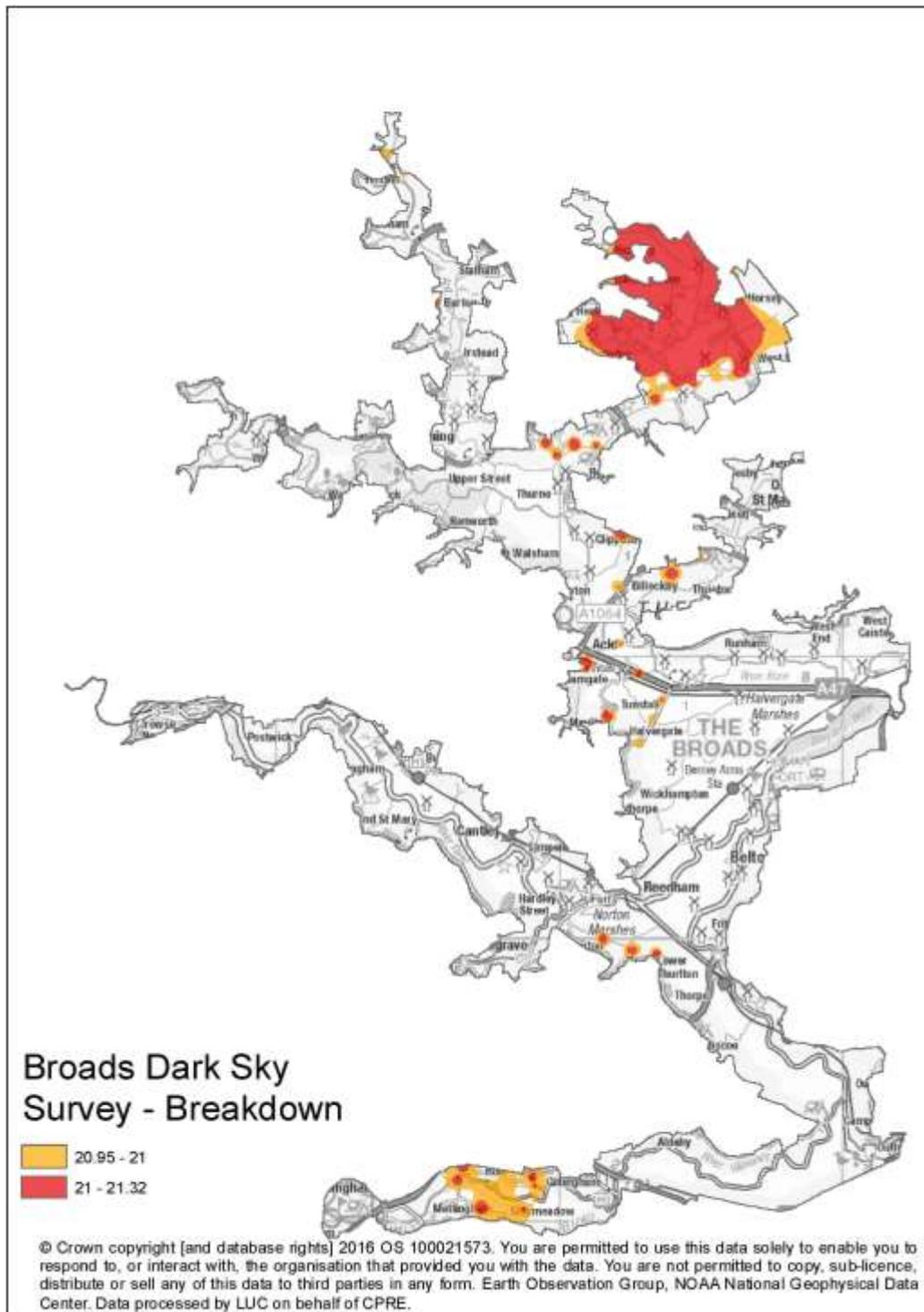
Map 3: Broads Dark Sky Survey Categories

The interpolated surface has been divided into 3 categories. This shows three clear general areas: Very Dark (>21), Dark (>20) and areas where light pollution has a significant effect on the readings taken.



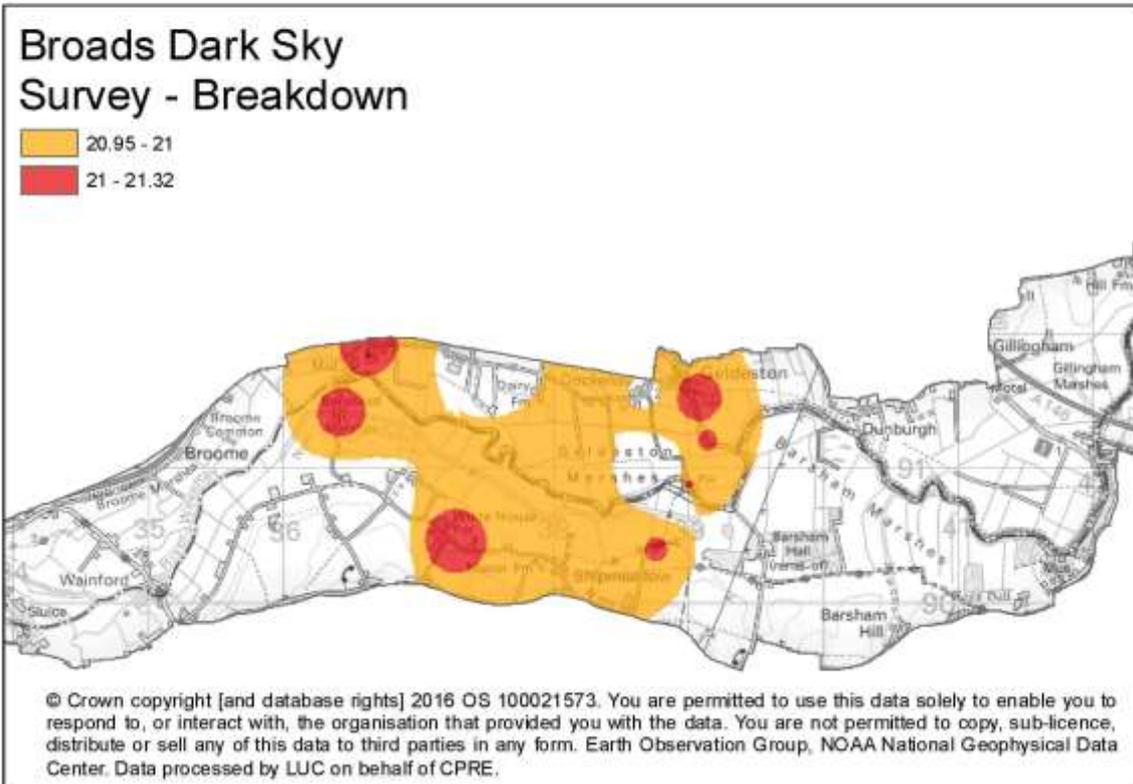
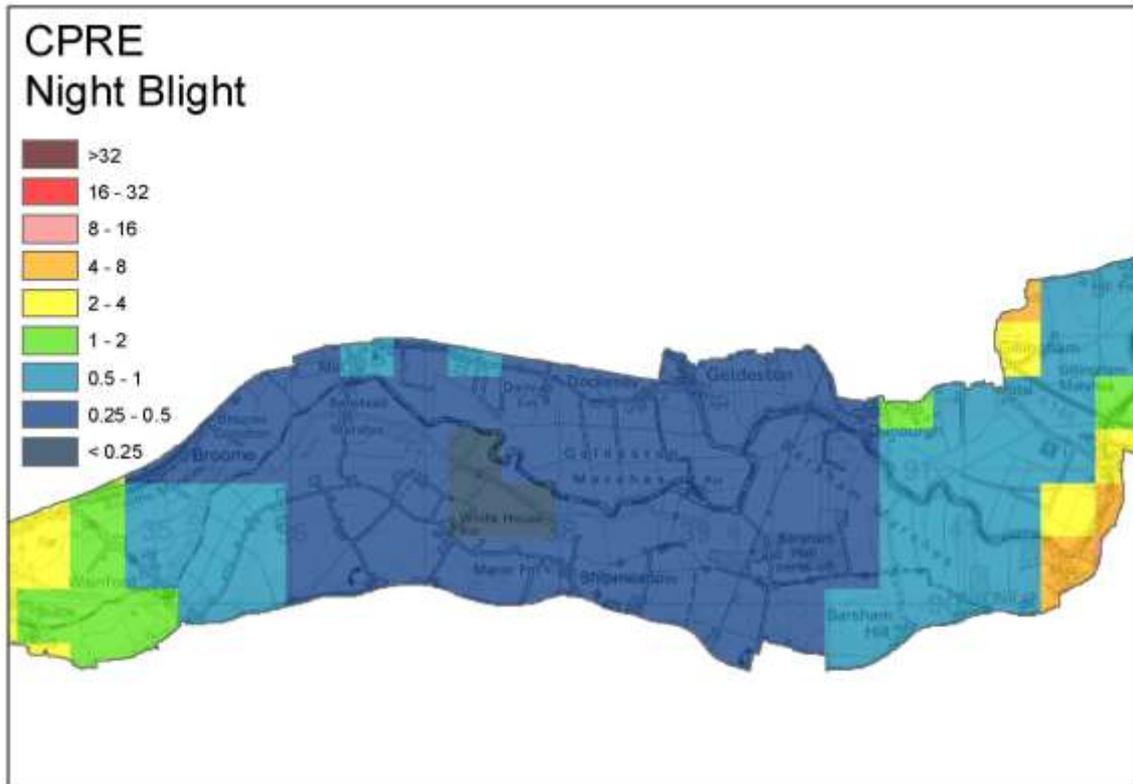
Map 4: Broads Dark Sky Survey – Breakdown

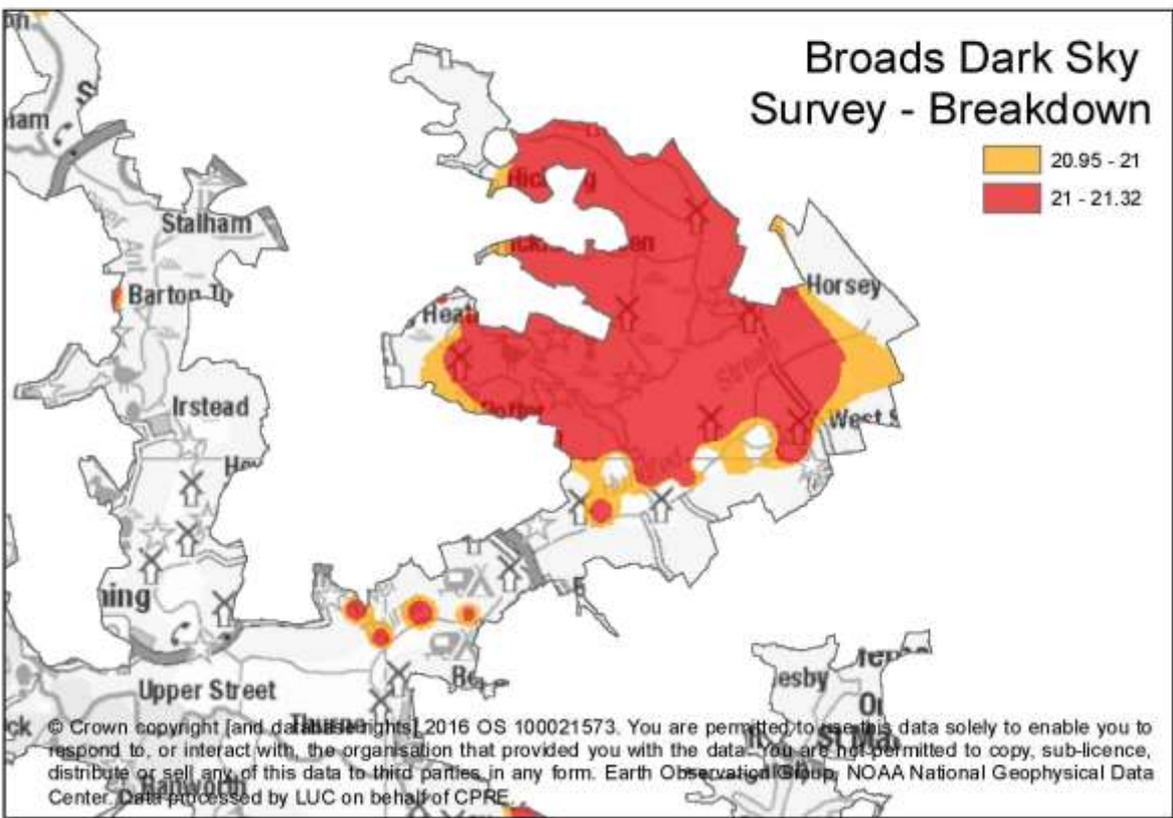
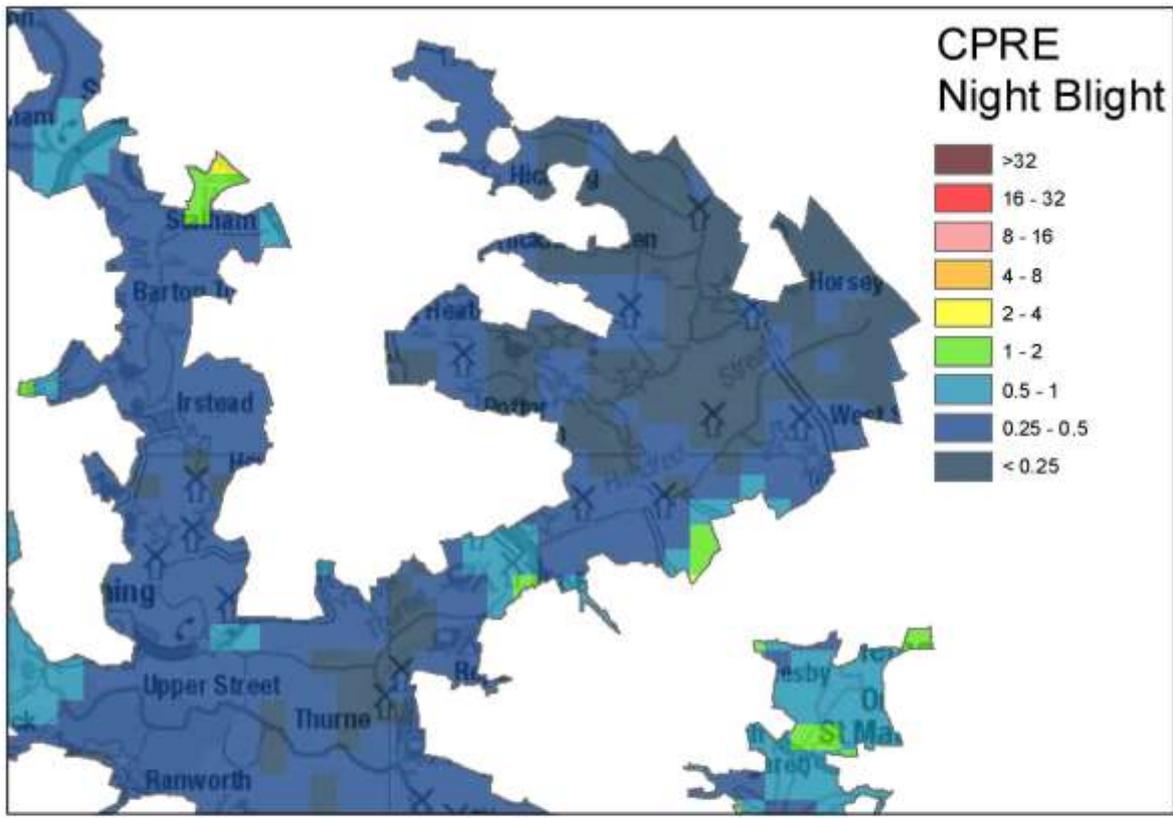
The very dark category (>21) does not highlight the area surrounding Geldeston. However if the upper end of the Dark category (20-21) is highlighted (20.95-21) there is a clear area surrounding Geldeston. The reason we are doing this reflects the nearby dark sky survey points being above 21 and that on the night the reading was taken, there was some fog and the pub lights were on; despite all these factors, readings in the area were just under 21. Furthermore, as the Night Blight data at Map 1 shows, this area is dark.



Map 5: Comparing the two datasets – darkest areas

This map shows the darkest areas as identified using the Dark Skies and Night Blight data. Both data sets seem to confirm these areas as being the darkest in the Broads. There are other individual sites that are dark around the Broads, but these areas are larger than individual sites.





3. Summary and conclusion

There seems to be three clear areas in the Broads which both datasets seem to confirm. As such, the proposed light pollution policy will relate to three areas as shown on Map 6. Map 6 is similar to Map 4 but in order to enable the policy to be interpreted on the ground, the boundaries of each zone have been 'snapped' to a feature on the ground (such as hedgerows or roads).

