

Listed below are some easy ways to reduce the problems of unnecessary, obtrusive light:

- Direct light downwards wherever possible to illuminate its target, not upwards. If there is no



alternative to up-lighting, then the use of shields and baffles will help to reduce spill light to a minimum.



- Use specifically designed lighting equipment that once installed minimises the spread of light near to, or above the horizontal.
- Do not “over” light. It is a cause of light pollution and a waste of money.



- Wherever possible use flood lights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit.



- For road lighting; light near to or above the horizon should be minimised and full cut off units used wherever safety permits.
- Switch off lights not required for safety, security or enhancement of the night-time scene.

The following websites provide more information on the subject of lighting and light pollution.

www.ile.co.uk

www.dark-skies.org

www.darksities4ni.co.uk

www.parliament.the-stationary-office.co.uk/pa/cm200203/cmselect/cmstech/747/74702

www.crimereduction.gov.uk/burglary45.htm



The Development Plan Manager
 Planning
 Infrastructure Services Department
 Grantfield
 Lerwick
 ZE1 0NT

(Photo Alan Harpin)

What is Light Pollution ?

Light pollution is created by the careless use of light; it represents a waste of energy and a source of irritation. Streetlights can be one significant source of light pollution, other sources may be various forms of floodlighting, including that provided at community facilities and lights associated with marine operations.

There are three forms of light pollution; **skyglow**, the brightening of the night sky above built-up areas. **Glare**, the uncomfortable brightness of a light source when viewed against a dark background and **Light Trespass**, the spilling of light beyond the boundary of the property.

Lighting can make a positive contribution to people's convenience and safety and it may greatly improve the visual appeal of buildings or areas. Proper design is the answer if the needs of all are to be met.

Why is Light Pollution a Problem?

Light pollution is a problem because it's a nuisance and it wastes electricity, costing significant sums of money. By wasting power through unnecessary or inefficient lighting, we further damage the earth's environment.



(Photo Chris Brown)

The astronomers' plea to darken our skies is a warning that unless light pollution is controlled and reduced, our view of the stars will be lost. In or near built up areas, and sometimes in very rural areas, light pollution means that people cannot experience the full, majestic beauty of the night skies that has provided scientific and cultural inspiration since ancient times.

Some of Your Questions Answered

Why is the light from a streetlight orange/yellow?

Unlike the bulb in your home, lamps used in street lighting emit light produced from a gas discharge lamp. Gas discharge lamps produce light more efficiently using less electricity. The chemicals used in the discharge give a colour to the light. The traditional efficient low-pressure sodium lamps emit strong yellow/orange colour. More modern high-pressure sodium lamps emit a pale honey coloured light when combined with high efficiency lanterns. With further developments in lamp technology it is hoped that white light will be developed.

Why are streetlights on all night?

Streetlights are generally operated throughout the hours of darkness as a service to the residents and road users in the area. There is very little difference in the cost of operating a street light all night as against part of the night and it is generally considered that the additional cost is more than offset by the safety benefits.

What is the cost of operating streetlights?

The lamps in most street lights are equivalent to a 70W domestic light bulb.

In Shetland the cost of electricity for road lighting is around £85k per year. The average cost of operating a streetlight inclusive of energy cost, lamp replacement and maintenance is calculated at approx £100 per annum-less than £2 per week.

Why does the Council put streetlights in rural areas?

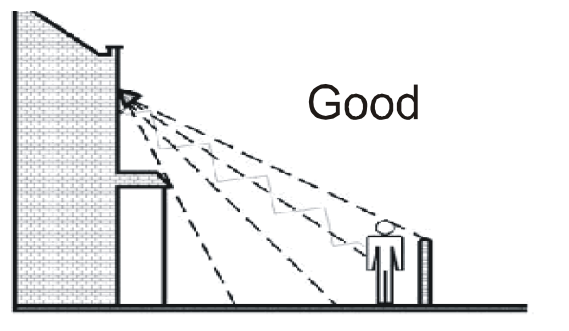
When the Council proposes major road improvements or the construction and upgrading of footpaths, public exhibitions are held to seek the views of residents, if the majority are in favour, streetlights are installed.

What is the Council Doing To Reduce Light Pollution?

The Council is moving away from the "Shetland" standard lamp-post design to one that gives more down light. The new design emits less upward light and in time will reduce light pollution from this source.

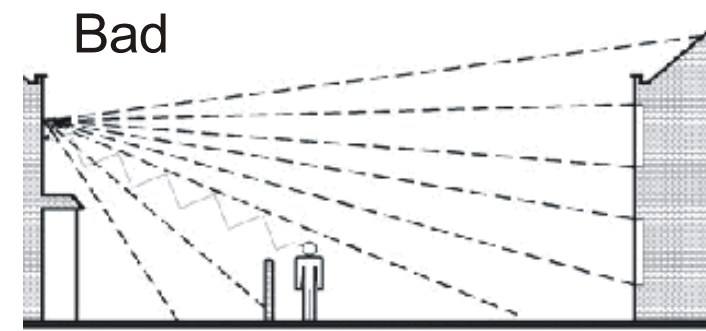
What Can I Do About Light Pollution?

- Ensure any exterior light you install is correctly aligned so that the light is directed to the areas where it is really needed.



(Diagrams used by the kind permission of the Institute of Lighting Engineers)

- If you buy a DIY security light, it may be fitted with a 300W bulb. This is likely to be more powerful than necessary for most domestic applications and can easily be replaced by a 150W bulb. 300/500W lamps create too much light, more glare and darker shadows. 150W bulbs are readily available, inexpensive and use only half the electricity.



- If you need to keep a porch light on all night, a low wattage, low energy bulb or a 9W (600 lumens) compact fluorescent lamp is more than adequate in most locations.
- You can control lights that don't have to be on all the time with passive infra-red detectors that are sensitive to movement.
- If you are concerned about light pollution in your area from any source. Please get in touch with us so that we can consider whether any improvement is possible.

Did you know that a 500W 'security' light is as bright as most UK lighthouses?

Do you really need that much light?

Remember - wasted light is wasted energy and wasted money - your money