

South Gloucestershire Council

LED Dimming (2024)

Frequently Asked Questions

April 2024

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Section 1

1.1 Overview

South Gloucestershire Council (SGC) needs to make significant financial savings and reductions in CO₂ emissions over the coming years. This is to meet national spending targets, as well as our commitment to reduce the Council's carbon footprint under European legislation.

The Council currently has approximately 31,000 streetlights and 3,500 lit road traffic signs.

Like many local authorities, we are introducing LED (Light Emitting Diode) street lighting technology to help reduce our energy costs and cut carbon emissions. Over the last decade, we have been gradually replacing all streetlights with LED units.

The following sets out answers to commonly asked questions about LED lights:

1.2 What are we doing?

South Gloucestershire Council will be amending the dimming regime of streetlights to the following.

The dimming will be applied to all lighting including those which were previously programmed to operate part-night only.

The new dimming profile below

<i>All Night Operation</i>	<i>35 lux [~Sunset + 15 mins] to 11:00 PM GMT</i>	<i>75%</i>
	<i>11:00 PM GMT to 06.00 AM GMT</i>	<i>25%</i>
	<i>06:00 AM (GMT) to 18 lux [~Sunrise - 15mins]</i>	<i>75%</i>

The old dimming profile below

<i>All Night Operation</i>	<i>35 lux [~Sunset + 15 mins] to 11:00 PM GMT</i>	<i>75%</i>
	<i>11:00 PM GMT to 06.00 AM GMT</i>	<i>50%</i>
	<i>06:00 AM (GMT) to 18 lux [~Sunrise - 15mins]</i>	<i>75%</i>

1.3 Program of reprogramming work

The reprogramming will be carried out at the same time as our scheduled routine inspection and test of the street lighting units. This will reduce the cost of implementation.

The project will be finished by April 2026.

1.4 What are other councils doing?

Other councils across the country have carried out similar exercises and have completed part night projects, switch off schemes and introduced LED lights and dimming.

Section 2

2.1 Process

The council has made a decision to dim **all** streetlights between 11pm and 6am to 25%.

Section 3 Frequently Asked Questions

3.1 What is dimming?

Dimming is reducing the output of light from the streetlight, lowering the lighting levels and reducing energy.

3.2 What if I disagree with the council's approach to dimming?

The council made a policy decision to dim all streetlighting across the district, via its normal democratic decision-making processes. The street lighting team cannot consider complaints relating to this policy decision.

3.3 Can the council legally dim the lights?

Yes, there is no statutory requirement that local authorities in the UK provide public lighting. The law states that:

- The Highways Act empowers local authorities to light roads but does not place a duty to do so.
- The council has a duty of care to road users and has an obligation in some circumstances to illuminate some types of street furniture of traffic calming features.
- The council has a statutory duty under the Highways Act to ensure the safety of the highway and this includes any lighting equipment placed on the highway.
- The Electricity at Work Regulations impose a duty on owners and operators of electrical equipment to ensure its safety.

3.4 What is being saved by dimming.

Each light switched to the amended dimming regime will save approx. 22% of its energy consumption and CO₂ emissions. Figure based this years costs.

3.5 What is the payback period?

The reprogramming will be carried out during the routine test and inspection. Aside a few extra minutes to program, on site costs are minimal. Hence the return on the investment can be measured in months.

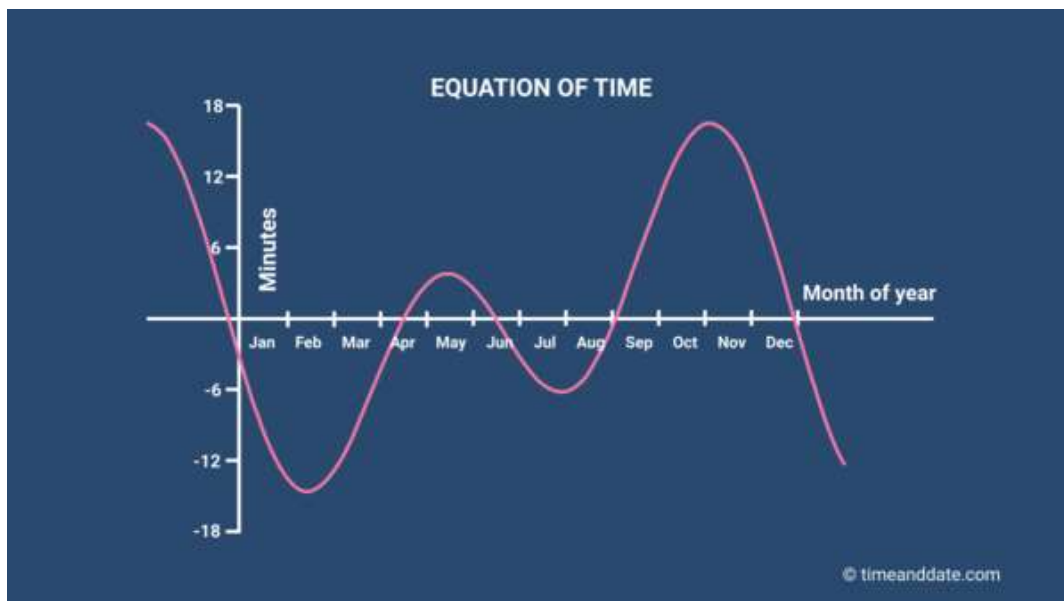
3.6 Why do the dimming hours vary during the year?

The dimming of streetlights changes throughout the year for a few reasons. The lights are controlled by sensors and timers. During winter, they're programmed to dim at midnight based on sunset and sunrise times. But because the Earth's orbit isn't a perfect circle and its axis is tilted, there's a natural variation in daylight hours, causing streetlights to turn on and off a bit earlier or later.

This natural variation is most noticeable in early November when the sun seems to set faster, and by mid-February, it appears slower. So, streetlights might not match our usual sense of time during these periods.

Also, when we switch to daylight saving time in March, the streetlights don't adjust right away, causing them to dim an hour later. They return to normal when we switch back to standard time in October.

On top of these factors, things like power fluctuations or cloudy weather can also affect when the streetlights dim.



Source: [What Is the Equation of Time? \(timeanddate.com\)](http://timeanddate.com)

3.7 Is this a trial?

No. Trials were undertaken in South Gloucestershire, and following consultation it was decided to roll out the initiative throughout the council.

3.8 How many lights will be affected?

All lights across the council will be programmed to the dimming regime set out in the 2024 council policy during the next two years.

3.9 Why haven't I received a letter from you telling me that this is happening?

There are almost 110,000 households in South Gloucestershire and many more thousand people who use our highway network regularly. It would cost a significant amount of money to write to every individual household that is affected.

Information is available on our website and other channels include social media, the press, local newsletters and magazines. In addition, we liaise closely with parish and town councils to disseminate information about the part-night programme.

3.10 Has a safety review been carried out on the roads affected?

All roads are monitored by our road safety team and/or the Police and where appropriate site/street specific reviews carried out.

Any concerns raised from the review will be considered and a decision will be made as to whether the lights will be included in the changes.

3.11 Will the roads become dangerous if the streetlight is dimmed?

The evidence suggests that roads that have been lit during part night only, or with dimmed street lighting, are no more hazardous.

3.12 Will parked cars on the road be a hazard if the lights are dimmed?

If you are parking your vehicle overnight on the road, you do have a responsibility to park in a manner to ensure other road users can see your vehicle. The Highway Code has the following rules for parking at night:

- You **MUST NOT** park on a road at night facing against the direction of the traffic flow unless in a recognised parking space.
- All vehicles **MUST** display parking lights when parked on a road or a lay-by on a road with a speed limit greater than 30 mph (48 km/h).
- Cars, goods vehicles not exceeding 1525 kg unladen weight, invalid carriages, motorcycles and pedal cycles may be parked without lights on a road (or lay-by) with a speed limit of 30 mph (48 km/h) or less if they are:
 - at least 10 metres (32 feet) away from any junction, close to the kerb and facing in the direction of the traffic flow
 - in a recognised parking place or lay-by
- Other vehicles and trailers, and all vehicles with projecting loads, **MUST NOT** be left on a road at night without lights.

Please note that a recognised parking place is defined by the Highway Code as “bays marked out with white lines on the road as parking places”. Generally in most residential areas there will be no recognised parking places, except possibly disabled bays.

3.13 Will this increase crime and traffic accidents?

There is very little in the way of empirical evidence to support the perception that dimming street lighting has an adverse effect on crime or accidents.

Studies which have set to explore the impact of street lighting adaption strategies found that switching off street lighting, or introducing part-night lighting, appeared to have no effect on incidents of crime, while dimming and white lighting were associated with small reductions in crime. Studies also indicated that there were no changes to the number of night-time traffic collisions.

3.14 Will there be a reduction in my Council Tax?

No, the council needs to reduce its spending as part of the national austerity programme which has seen its central government funding fall substantially in recent years. Money saved by dimming the street lights will go towards these savings rather than to reduce Council Tax payments.

3.15 Will my insurance premium go up?

Local authorities do not have a statutory requirement to provide public lighting. When public lighting is installed, it is in place to light areas of the highway. Lighting is not in place to protect private properties and as such, this is not taken into consideration.

Therefore, street lighting within the vicinity of property is not an element that insurance companies will or should take into account when developing home insurance or property policies.

3.16 Can the light not be dimmed if I work nightshift or unsociable hours?

Unfortunately, not – Dimming will be applied consistently to all areas. There is no statutory requirement on local authorities in the UK to provide public lighting.

3.17 If I become a victim of crime or have an accident, can I recoup losses from South Gloucestershire Council?

Unfortunately, not – There is no statutory requirement on local authorities in the UK to provide public lighting.

3.18 I believe I may become a victim of Anti-Social Behavior, crime or have an accident.

There is very little in the way of empirical evidence to support the perception that part night street lighting has an adverse effect on anti-social behaviour, crime or accidents.

Studies which have set to explore the impact of street lighting adaption strategies found that switching off street lighting, or introducing part-night lighting, appeared to have no effect on incidents of crime, while dimming and white lighting were associated with small reductions in crime. Studies also indicated that there were no changes to the number of night-time traffic collisions.

3.19 What should I do if there is Anti-Social Behavior, crime or accidents in my street?

- a) Should anti-social behavior be an issue – please refer to our website: www.southglos.gov.uk/report-anti-social-behaviour/
- b) Should crime be an issue – please report to the police: www.avonandsomerset.police.uk/
- c) Should you have any concerns over road safety please refer our website: www.southglos.gov.uk/roadsafety

3.20 Why not replace the lighting with new technology such as motion sensing or solar powered lighting?

To date such innovations as motion-sensing switches and solar powered lighting are not a feasible alternative. However, South Gloucestershire Council continues to monitor the progress of technical innovations for practical application.