

South Gloucestershire Council

Part-night lighting

Frequently Asked Questions

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Contents

Section 1	3
1.1 Overview	3
1.2 What are we doing?	3
1.3 What are other councils doing?	3
Section 2	4
2.1 Process	4
Section 3 Frequently Asked Questions	5
3.1 What is part-night lighting?	5
3.2 What if I disagree with the council’s approach to part night lighting?	5
3.3 Can the council legally turn off the lights?	5
3.4 Why can't the lights be dimmed instead of being part nighted or turned off?	5
3.5 Could you not switch alternative lights off or one in three etc?	5
3.6 What is being saved by part night lighting	6
3.7 What is the payback period?	6
3.8 Why do the switching times vary during the year?	6
3.9 Is this a trial?	7
3.10 How many lights will be affected?	7
3.11 Why has my street been chosen?	7
3.12 Why haven't I received a letter from you telling me that this is happening?	8
3.13 Has a safety review been carried out on the roads affected?	9
3.14 Will the roads become dangerous if the street light is part nighted?	9
3.15 Will parked cars on the road be a hazard if the lights are turned off?	9
3.16 Will this increase crime and traffic accidents?	10
3.17 Will 30mph speed limits be affected if lights are switched off?	10
3.18 Will there be a reduction in my Council Tax?	10
3.19 Will my insurance premium go up?	10
3.20 Can the light be on all night if I work nightshift or unsociable hours?	10
3.20 If I become a victim of crime or have an accident, can I rec1up losses from South Gloucestershire Council?	10
3.22 I believe I may become a victim of Anti Social Behavior, crime or have an accident.	11
3.23 What should I do if there is Anti Social Behavior, crime or accidents in my street?	11
3.24 Why not replace the lighting with new technology such as motion sensing or solar powered lighting?	11

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 29,500 street lights and 4000 lit road traffic signs which costs £1.25million in energy each year and create in the region of 8000 tonnes of CO₂ (prior to any changes in part night lighting or LED installations).

As a contribution to the savings required in both financial and CO₂ emission reductions, the council is undertaking a number of energy saving initiatives.

This document identifies the initiatives we are undertaking and provides the frequently asked questions relating to part night lighting. These will assist in the roll out of the part night initiative.

1.2 What are we doing?

South Gloucestershire Council is taking a number of energy saving initiatives. This will mean that the street lighting in your area may be subject to one or more of the following changes:

1. Part-night lighting 01.00 until 05.00 – Subject to an occasional variation of + or – 15mins, the lights ordinarily turn off from midnight until 05.00 for the original roll out although we are working through these units to switch to a 01.00 switch off
2. Dimming - Lights have reduced light output during off peak times when traffic flows are lighter.
3. Alternative (more efficient) light source – for example LED lanterns
4. Switch off - A small number of lights in rural or semi rural areas could be switched off and removed.
5. De-illuminating signs and bollards – removing the lighting units whilst still ensuring we comply with council policy and regulations.

1.3 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.

Section 2

2.1 Process

The council has made a decision to part-night street lighting across the district. We follow an assessment criteria (see [3.11](#)) when identifying which streetlights within each area should be turned off.

Information about the programme can be found on the public webpage at <http://www.southglos.gov.uk/partnightlighting>

Residents can comment on part-night lighting and tell us if any specific lights that have been identified for part-night operation conflict with our assessment criteria.

We are not inviting comments on the council's part-night lighting policy overall. This has been agreed by full Council (a meeting of all councillors) and is unlikely to change in the future.

Should you have any questions relating to part night lighting please see [Section 3](#) in the first instance.

Section 3 Frequently Asked Questions

3.1 What is part-night lighting?

Part-night lighting is when a street light is switched off for part of the night. See [3.8](#) for details of switching times

3.2 What if I disagree with the council's approach to part night lighting?

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

If you believe we have applied the criteria incorrectly, you can email us at Streetcare@southglos.gov.uk

3.3 Can the council legally turn off 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 Why can't the lights be dimmed instead of being part nighted or turned off?

To dim a street light, both the lamp and the gear that controls it needs to be capable of dimming. The vast majority of street lighting equipment is of an older generation and cannot be dimmed.

However looking forward, we will be replacing existing units with LED units and these are capable of being dimmed in addition to part night operation, thus maximising energy savings.

3.5 Could you not switch alternative lights off or one in three etc?

This option was considered as part of the part night lighting project and this included the need to develop a safe and sustainable method to mitigate against the long term risks of energy price increases and financial penalties

from CO₂ emissions. In order to meet this goal, the number of lights that can safely be part nighted needs to be maximised. Switching every other light off would not achieve this aim.

In addition, intermittent lighting can be detrimental to road users as uniformity would be compromised (drivers would need to adjust between bright and dark lighting levels).

3.6 What is being saved by part night lighting

Each light switched to part night operation saves approx 40% of its energy consumption and CO₂ emissions. We estimate that these plans will reduce our current CO₂ emissions by up to 2000 tonnes per year.

3.7 What is the payback period?

The cost to supply and install a part night cell is on average about £15. The return on the investment is approximately 18 months for residential roads and six months or less on major roads.

3.8 Why do the switching times vary during the year?

On the older lights switching is controlled by photocells installed on the lights. The Photocells are self calibrating and operate by calculating solar midnight as the “middle of the night” (the mid point between sunset and sunrise). During winter (GMT) the “middle of the night” is midnight i.e. 12.00am. The photocells are then set to switch off a set number of hours and come back on a prescribed number of hours after.

However this methodology of switching is subject to a natural variation throughout the year. This is because the use of daylight changes to determine the time of day is subject to an annual rhythm that naturally leads to a ±15 minute variation in timing throughout the year. This is known as the “Equation of Time”, which is the difference between Solar Time (time measured by the sun, e.g. on a sundial) and Mean Time (time measured by clocks and watches). It’s caused by the eccentricity of the Earth’s orbit around the sun (the orbit is an ellipse, not a circle) and the tilt of the Earth’s axis.

This effect is at its greatest extent in early November when the Sun appears to run up to 16.5 minutes “fast”. By late December the effect will be zero and by mid February the sun will appear to be about 14 minutes “slow”. Because the streetlights are triggered to switch off at solar midnight it means that in early November they will turn on and off earlier than expected, “on time” in late Dec and later than expected by mid Feb.

As well as the natural variance, some of our older photocells did not account for the change to BST. Therefore, when the clocks change to BST in March, some photocell timings will remain at GMT resulting in the street lights switching off an hour later (1:00am ±15 minutes). The timings will return to the original settings when the clocks go back to GMT in October.

The most recent photocells do recognise BST and adjust accordingly over a short period of time.

These issues have been considered when programming the photocells and theoretically they have been set so that they should not switch off before 11.44pm or switch on after 5:15am in both winter and summer.

As stated before this methodology of switching is subject to variation throughout the year. Additionally they are also susceptible to fluctuations in the electricity supply which can cause the lights to switch less accurately for a short period of time.

When LED lights are installed they are switched by a different processes and do not suffer such great variances as above

3.9 Is this a trial?

No. Trials were undertaken in South Gloucestershire and across the country in recent years. Following evaluation of these trials it was decided to roll out the initiative throughout the council.

3.10 How many lights will be affected?

We anticipate approx 60% of street lights in South Gloucestershire Council will be switched to part night operation, which is approximately 20,000 units.

3.11 Why has my street been chosen?

South Gloucestershire Council has an approved part night criteria which identify the lights that can and cannot be switched to part night operation:

The criteria for part night lighting

All street lighting will be part nighted except where it is specifically deemed by South Gloucestershire Council to be an area

- Previously identified with crime, antisocial behaviour, or traffic accident issue.
- Have CCTV local authority/police surveillance equipment reliant on street lighting. (not private CCTV)
- In close proximity of 24hr operational emergency services sites including hospitals.
- Have formal pedestrian crossings and traffic light controlled junctions (zebra, pelican, toucan, etc).
- Have traffic calming features (e.g. chicanes, speed humps, etc) where lighting is mandatory
- Designated on-site warden supported sheltered housing.
- Some enclosed (e.g. fenced on both sides) footpaths that South Gloucestershire Council considers all night lighting significantly reduces risk to users.

Future changes to the highway or its use that involves any of the above will be assessed and reviewed in line with the criteria at that time.

Additionally South Gloucestershire Council will consider concerns that are identified through discussion with the Parish or Town Council and/or local interest groups, the Police, and teams within SGC, will be considered on their respective merits and in accordance with policy.

The final decision rests with South Gloucestershire Council to part night.

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

There are almost 105,000 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.

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

Yes - 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.

3.14 Will the roads become dangerous if the street light is part nighted?

The evidence suggests that roads that have already been part night lit are no more hazardous. The part night criteria identify areas where the street lights will not be selected for part night lighting.

In addition, if a street light is part nighted on the highway, it will still need to be regularly inspected to ensure:

- Structural safety
- Electrical safety.

3.15 Will parked cars on the road be a hazard if the lights are turned off?

The residential areas where cars are likely to be parked on the road overnight, are only being switched off from midnight/01.00 (+/- 15 mins) to 5am (+/- 15 mins).

However 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.

3.16 Will this increase crime and traffic accidents?

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

To date our collective findings mirror the national picture, which is that part night lighting has so far not had any notable adverse impact on crime.

3.17 Will 30mph speed limits be affected if lights are switched off?

No - A 30mph speed limit automatically applies in any road containing a system of street lights placed not more than 200 yards apart, unless signposted with a different speed limit. The law does not state that these lights have to be switched on all night to be applicable. Therefore, motorists are advised that the usual 30mph speed limit will be in place regardless of whether the lights are switched on or not.

3.18 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 part-night lighting will go towards these savings rather than to reduce Council Tax payments.

3.19 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 is there 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.

3.20 Can the light be on all night if I work nightshift or unsociable hours?

No – The criteria for the part night lighting will be applied consistently to all areas and there is no statutory requirement on local authorities in the UK to provide public lighting.

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

No - There is no statutory requirement on local authorities in the UK to provide public lighting.

3.22 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 affect on anti social behaviour, crime or accidents.

To date our collective findings mirror the national picture, which is that part night lighting has so far not had any notable adverse impact on crime.

3.23 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 the council's website. This will give guidance on ASB.
To go to the council's site click the following link
<http://www.southglos.gov.uk/Pages/Article%20Pages/Community%20Services/Safer%20-%20Stronger/Anti-social-behaviour.aspx>
- b) Should crime be an issue – please report to the police.
The Avon and Somerset Constabulary website can be found at
<http://www.avonandsomerset.police.uk/>
- c) Should you have any concerns over road safety please refer to the council's website at
<http://www.southglos.gov.uk/roadsafety>

3.24 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.