



London Borough of Barnet,  
2 Bristol Avenue,  
Colindale,  
London NW9 4EW  
7 May 2020  
Our ref: 6238188

Thank you for your request received on 7 April 2020, for the following information:

**1. Do you have a 5G strategy?**

**1.1 If yes, I request to see the complete strategy, its ambitions and its objectives in PPTX, Word, PDF or picture format.**

**1.2 If yes, has the public had the opportunity to read and understand [Council's] 5G strategy? Where was this information published?**

**1.3 I also request a supplementary document that includes the highest level of detail on all 5G technology that's planned to be used and current in use in public spaces within [Council]:**

**(a) Companies and entities involved and the names of the company/entity officers.**

**(b) Specification sheets of 5G technology.**

**(c) What technology e.g. units and arrays are not currently 5G, but can be 5G enabled e.g. with current software, future software, hardware upgrades or retrofitting?**

**(d) What UK, EU and International safety standards is [Council] complying with for the 5G strategy and existing 5G technology.**

**(e) I request proof e.g. a certificate from [Council] that confirms that UK, EU and International safety standards for workers and the public have been met.**

**1.4 If no, I request to know when you will be chairing a 5G strategy?**

**1.5 I request the name/s of the Officer/s in charge of the 5G strategy and roll out for 5G and Smart Cities; and who their subject area expert or consultancy is, their CV and qualifications on 5G and Smart Cities.**

**2. Are you planning to rollout or have rolled out LED street lighting?**

**2.1 If yes, please answer these questions:**

**(a) What is the CMS and specification of the software and hardware of the LED street light system?**

- (b) What type of waveform is the LED? e.g. Square wave?**
- (c) Can you control the Pulse Width Modulation (PWM) of the streetlight system using the CMS?**
- (d) Can you control the PWM of each streetlight that's connected to the system?**
- (e) What restrictions do you have in place for the control of the PWM?**
- (f) What is the UK, EU and International safety limit (low and high) for the amount of 'flicker' (Hz) the Human Body and eyes can be exposed to and for how long?**
- (g) I request to see the training manual and safety operation manual for the CMS and the LED streetlight system.**
- (h) Who is the company who is or has installed the CMS LED streetlight system?**
- (i) What company maintains and repairs the CMS and LED streetlight system?**
- (j) What entity and Officer is responsible for the safety standards for the CMS and LED streetlight system?**
- (k) I request proof e.g. a certificate from [Council] that confirms that UK, EU and International safety standards for workers and the public have been met.**
- (l) What is the amount of Blue Light leakage that's safe for the public and workers during the LED streetlights operation?**
- (m) What level of LED streetlight exposure is safe for the public at daytime and night time?**
- (n) Is there a legal requirement for diffusers to be fitted to LED streetlights?**
- (o) How have you have addressed the amount of Oxidative Stress on Human and Animal cells that's produced from LED?**

**2.2 If no, then I request a declaration from [Council] that you will not be installing LED streetlights in the future. If you cannot provide a declaration, I would like the following answered in the future tense:**

- (a) What is the CMS and specification of the software and hardware of the LED street light system?**
- (b) What type of waveform is the LED? e.g. Square wave?**
- (c) Can you control the Pulse Width Modulation (PWM) of the streetlight system using the CMS?**
- (d) Can you control the PWM of each streetlight that's connected to the system?**
- (e) What restrictions do you have in place for the control of the PWM?**

- (f) What is the UK, EU and International safety limit (low and high) for the amount of 'flicker' (Hz) the Human Body and eyes can be exposed to and for how long?
- (g) I request to see the training manual and safety operation manual for the CMS and the LED streetlight system.
- (h) Who is the company who is or has installed the CMS LED streetlight system?
- (i) What company maintains and repairs the CMS and LED streetlight system?
- (j) What entity and Officer is responsible for the safety standards for the CMS and LED streetlight system?
- (k) I request proof e.g. a certificate from [Council] that confirms that UK, EU and International safety standards for workers and the public have been met.
- (l) What is the amount of Blue Light leakage that's safe for the public and workers during the LED streetlights operation?
- (m) What level of LED streetlight exposure is safe for the public at daytime and night time?
- (n) Is there a legal requirement for diffusers to be fitted to LED streetlights?
- (o) How have you have addressed the amount of Oxidative Stress on Human and Animal cells that's produced from LED?

## **Response**

I am writing to inform you that we have searched our records and although we hold some of the information requested, some is not held by London Borough of Barnet because for the reasons given below.

We have provided answers to your request below showing where we do not hold the information requested.

### **1. Do you have a 5G strategy?**

No we do not currently have a 5G Strategy

#### **1.1 If yes, I request to see the complete strategy, its ambitions and its objectives in PPTX, Word, PDF or picture format.**

Not applicable due to answer given to question 1

#### **1.2 If yes, has the public had the opportunity to read and understand [Council's] 5G strategy? Where was this information published?**

Not applicable due to answer given to question 1.

#### **1.3 I also request a supplementary document that includes the highest level of detail on all 5G technology that's planned to be used and current in use in public spaces within [Council]:**

Not applicable due to answer given to question 1.

**1.4 If no, I request to know when you will be chairing a 5G strategy?**

We have no plans at this stage to do so.

**1.5 I request the name/s of the Officer/s in charge of the 5G strategy and roll out for 5G and Smart Cities; and who their subject area expert or consultancy is, their CV and qualifications on 5G and Smart Cities.**

Not applicable due to the answer given above

**2. Are you planning to rollout or have rolled out LED street lighting?**

Yes, we are currently implementing a LED conversion programme for our street lighting

**2.1 If yes, please answer these questions:**

**(a) What is the CMS and specification of the software and hardware of the LED street light system?**

The CMS system is called 'City Touch' a propriety product of Philips Lighting Signify

**(b) What type of waveform is the LED? e.g. Square wave?**

This is a function of the product and not information held by the Council. I am sure that Philips Signify would be happy to provide this information on request and/or direct you to their publicly available technical product data.

**(c) Can you control the Pulse Width Modulation (PWM) of the streetlight system using the CMS?**

This is a function of the product and not information held by the Council. I am sure that Philips Signify would be happy to provide this information on request and/or direct you to their publicly available technical product data.

**(d) Can you control the PWM of each streetlight that's connected to the system?**

Each Luminaire can be individually controlled by the CMS

**(e) What restrictions do you have in place for the control of the PWM?**

This is a function of the product and not information held by the Council. I am sure that Philips Signify would be happy to provide this information on request and/or direct you to their publicly available technical product data.

**(f) What is the UK, EU and International safety limit (low and high) for the amount of 'flicker' (Hz) the Human Body and eyes can be exposed to and for how long?**

This is not information the Council holds. There are no UK, EU or International Safety limits for Temporal Light Artefacts (TLA) – the official term encompassing flicker, stroboscopic effect and phantom array effect in published regulations

**(g) I request to see the training manual and safety operation manual for the CMS and the LED streetlight system.**

These documents are not held by the Council

***(h) Who is the company who is or has installed the CMS LED streetlight system?***

Our Street Light contract is with Barnet Lighting Services and they have engaged Bouygues as their installing contractor

***(i) What company maintains and repairs the CMS and LED streetlight system?***

Our Street Light contract is with Barnet Lighting Services and they have engaged Bouygues as their maintenance contractor

***(j) What entity and Officer is responsible for the safety standards for the CMS and LED streetlight system?***

The Council has entered into a PFI Contract with Barnet Lighting Services and they are responsible for all aspects of the Street Lighting Service including ensuring compliance with all appropriate industry guidance, British and European Standards in respect to street lighting and associated legislation. The Council holds the usual responsibilities in respect to the Service Providers we contract with.

***(k) I request proof e.g. a certificate from [Council] that confirms that UK, EU and International safety standards for workers and the public have been met.***

It has been assumed that this question relates to the equipment LED Luminaires and/or CMS – that being the case the Council is satisfied that the manufacturer of the equipment installed in the borough sufficiently meets all required standards.

***(l) What is the amount of Blue Light leakage that's safe for the public and workers during the LED streetlights operation?***

The Philips Signify products have been tested according to IEC 62471 standard. For outdoor use, the combination of time-radiation-intensity is low, so the standard defines a Risk Group of 1 (RG1) as minimum.

***(m) What level of LED streetlight exposure is safe for the public at daytime and night time?***

In general, in normal outdoor use (not excessive over exposure) there are no adverse health effects for the general public from the LED luminaires provided they are appropriately designed. To ensure appropriate design the Council ensures that all relevant standards and industry guidance are met including ILP guidance and the current BS and EU standards related to road lighting.

***(n) Is there a legal requirement for diffusers to be fitted to LED streetlights?***

There is no regulation requiring that LED luminaires used in street lighting are fitted with diffusers, however the Council respond to any concerns raised by residents in respect to the use of shields to minimise any undesirable light spill. It is however worth noting that as the LED luminaires are generally better equipment to control the light distribution than the existing high pressure sodium luminaires they are replacing we anticipate a minimal likelihood of this being necessary.

***(o) How have you have addressed the amount of Oxidative Stress on Human and Animal cells that's produced from LED?***

The Philips products supplied and installed have been tested according to the IEC 62471 standard. The normal detailing photobiological safety, EN62471 (or IEC

62471) specifically takes photobiological damage through reactive oxidative species generated by light into account.

**2.2 If no, then I request a declaration from [Council] that you will not be installing LED streetlights in the future. If you cannot provide a declaration, I would like the following answered in the future tense:**

**(a)What is the CMS and specification of the software and hardware of the LED street light system?**

**(b)What type of waveform is the LED? e.g. Square wave?**

**(c)Can you control the Pulse Width Modulation (PWM) of the streetlight system using the CMS?**

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**(f)What is the UK, EU and International safety limit (low and high) for the amount of 'flicker' (Hz) the Human Body and eyes can be exposed to and for how long?**

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**(j)What entity and Officer is responsible for the safety standards for the CMS and LED streetlight system?**

**(k)I request proof e.g. a certificate from [Council] that confirms that UK, EU and International safety standards for workers and the public have been met.**

**(l)What is the amount of Blue Light leakage that's safe for the public and workers during the LED streetlights operation?**

**(m)What level of LED streetlight exposure is safe for the public at daytime and night time?**

**(n)Is there a legal requirement for diffusers to be fitted to LED streetlights?**

**(o)How have you have addressed the amount of Oxidative Stress on Human and Animal cells that's produced from LED?**

Not applicable based on the answer given above.

## **Further information**

If you are interested in the data that the council holds you may wish to visit Open Barnet, the council's data portal. This brings together all our published datasets and other information of interest on one searchable database for anyone, anywhere to access. <http://open.barnet.gov.uk/>

## **Advice and Assistance : Direct Marketing**

If you are a company that intends to use the names and contact details of council officers (or other officers) provided in this response for direct marketing, you need to be registered with the Information Commissioner to process personal data for this purpose. You must also check that the individual (whom you wish to contact for direct marketing purposes) is not registered with one of the Preference Services to prevent Direct Marketing. If they are you must adhere to this preference.

You must also ensure you comply with the Privacy Electronic and Communications Regulations (PECR). For more information follow this Link [www.ico.org.uk](http://www.ico.org.uk)

**For the avoidance of doubt the provision of council (and other) officer names and contact details under FOI does not give consent to receive direct marketing via any media and expressly does not constitute a 'soft opt-in' under PECR.**

### **Your rights**

If you are unhappy with the way your request for information has been handled, you can request a review within the next 40 working days by writing to the Information Management Team at: [foi@barnet.gov.uk](mailto:foi@barnet.gov.uk). Or by post to Information Management Team (FOI) London Borough of Barnet, 2 Bristol Avenue, Colindale, NW9 4EW

If, having exhausted our review procedure, you remain dissatisfied with the handling of your request or complaint, you will have a right to appeal to the Information Commissioner at: The Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF (telephone: 0303 123 1113; website [www.ico.org.uk](http://www.ico.org.uk)). There is no charge for making an appeal.