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Montfichet Road
London
E20 1EJ

[REDACTED]

16 October 2019

INTERNAL REVIEW - REFERENCE 19-025

Dear [REDACTED]

We refer to your email of 19 August 2019 where you requested an internal review under the Freedom of Information Act 2000 (FOIA) with regard to the response you received from the London Legacy Development Corporation (Legacy Corporation) in relation to your information request reference as above.

The internal review has been completed and the findings and recommendations of the internal review are as follows:

1. Background

1.1. The original request (Ref 19-025) was received on 9 June 2019 and requested that [REDACTED] and London Legacy Development Corporation (Legacy Corporation) provide information under the Environmental Information Regulations 2004 (EIR) in response to a series of questions as set out below:

“Please accept this as a request under the Freedom of Information Act for as many of the following as are available:

1. *Confirmation of both the day and night luminance levels (in cd/m²) set for the HD screen on the east exterior of the Olympic Stadium*
2. *A testing certificate for the screen showing the levels set*
3. *The actual luminance levels (in cd/m²) of the HD screen at 9.10pm on Saturday 1st June or as close to that time as data exists*
4. *The time the screen was dimmed to night levels on 1st June 2019*
5. *The lux levels recorded at the closest river monitoring stations on Saturday 1st June at 9.10pm or as close to that time as data exists”*

- 1.2. A response was sent on 8 July 2019 to inform you that the Legacy Corporation had considered your request and had the information to all questions numbered 1 and 5. This is attached at **Annex A**.
- 1.3. Your subsequent email request for an internal review was received on 19 August 2019 setting out the grounds for appeal as follows:
 - i. *I do not feel this FOI response is sufficient as it is contradictory in multiple places and doesn't appear to make sense scientifically. I would like to request an internal review.*
 - ii. *The answer to Q1 says the screen is set to 1Lux (0cd/m2) as the highest luminance level after sunset, but the answer to Q3 seems to contradict this as it says the actual luminance level at 9.10pm on 1st June was 1Lux (1cd/m2). Please can you clarify?*
 - iii. *The answer to Q4 also seems to contradict the answer to Q1 because it says that the screen stays at the same brightness level regardless of day or night. So, does this mean the screen is actually never at more than 1Lux (1cd/m2) and that the daytime setting of 1,444Lux (1.28cd/m2) is never actually used?*
 - iv. *A greater problem though is that it is very odd to see Lux and cd/m2 listed together, with cd/m2 in brackets as if it is just a different measurement of the same thing, almost like saying 1 mile (1.6 km). Unlike miles and kilometers, Lux and cd/m2 do not measure the same thing. Lux is a measure of illuminance (light falling onto a surface) while cd/m2 is a measure of luminous flux emitted per meter square. Please can you clarify from which two sources they were taken, as they must have been collected from different places?*
 - v. *Could you please confirm how the 1,444Lux and 1.28cd/m2 were measured?*
 - vi. *And where the illuminance (Lux) measurement was taken from?*
 - vii. *Is the luminance value provided by the Display Studio Software read out rather than actual measurement?*

2. Review findings:

- 2.1. The internal review, in which the panel reassessed the nature and full scope of your request, has now been completed and the findings and recommendations of the review are set out below.
- 2.2. The internal review panel has found that there were errors in the original response in relation to questions 1, 3 and 5 and further context should have been provided to the requester in relation to question 1 and 4. We apologise for this and would like to clarify the following in response to your questions:

- ii. *The answer to Q1 says the screen is set to 1Lux (0cd/m²) as the highest luminance level after sunset, but the answer to Q3 seems to contradict this as it says the actual luminance level at 9.10pm on 1st June was 1Lux (1cd/m²). Please can you clarify?*
- 2.3. The answer to question 1 did not provide enough context. We should have stated that there are no set day and night luminance levels for the screen. We should have also noted that we can only provide estimates of the screen luminance as we do not have the ability to provide actual Lux readings from the screen itself. Instead, we use the Lux reading from monitors located on the facing riverbank and divide this by the total area of the screen (996m²) to generate an estimated cd/m². The Lux monitors measure an amalgam of both the screen light and light emitted from other sources within the vicinity, so we can be confident that our cd/m² estimates for the screen are worst case. For example, the highest reading from the riverbank monitors this year was 1,896 Lux on 14 June which equates to 1.90cd/m². We should have also noted that the estimates depend on ambient lighting levels which vary day by day and therefore would have needed a date in order to provide the estimated luminance levels for a particular day and night.
- 2.4. In addition, the figures provided in our original answer for question 1 were incorrect, for clarity on 1 June 2019:
- The highest estimated luminance level during daylight was 1.449cd/m²
 - The highest luminance level after sunset was estimated to be 0.001cd/m² (the screen was turned off around sunset, which was at 21:06hrs on that day)
- 2.5. The answer to question 3 was incorrect. It should have clarified that it is not possible to provide actual luminance level and should have provided the estimated luminance level at or around 9.10pm on 1 June 2019 as 0.001cd/m².
- 2.6. The answer to question 5 should only have provided the actual Lux level at the closest river monitoring station at or around 9.10pm on 1 June 2019 as 1 Lux and should not have included the cd/m² figure.
- iii. *The answer to Q4 also seems to contradict the answer to Q1 because it says that the screen stays at the same brightness level regardless of day or night. So, does this mean the screen is actually never at more than 1Lux (1cd/m²) and that the daytime setting of 1,444Lux (1.28cd/m²) is never actually used?*
- 2.7. The response to question 4 should have set out that the screen was turned off around sunset at 21:06hrs and also explained that the screen can't be dimmed; the screen is at the same brightness level whenever it is on and it cannot be 'dialed' up and down. As noted in the original response, this brightness level is well within our Planning Condition of less than 40cd/m². In response to your specific question in point (iii), as noted below in para 2.10, the 1.28cd/m² referenced was incorrect. The screen does not have a "daytime setting". 1,444 Lux was the highest measurement recorded by the river bank monitors on 1 June 2019, until the time when the screen was turned off

around sunset , which reduced the Lux reading to 1 Lux, caused by ambient light sources in the vicinity of the monitors.

iv. *A greater problem though is that it is very odd to see Lux and cd/m2 listed together, with cd/m2 in brackets as if it is just a different measurement of the same thing, almost like saying 1 mile (1.6 km). Unlike miles and kilometers, Lux and cd/m2 do not measure the same thing. Lux is a measure of illuminance (light falling onto a surface) while cd/m2 is a measure of luminous flux emitted per meter square. Please can you clarify from which two sources they were taken, as they must have been collected from different places?*

2.8. The panel acknowledged that the Lux and cd/m2 measurements should not have been listed together. As previously mentioned, we only have one source of measurement - the river bank monitors. They record Lux readings. The response should have clarified that the cd/m2 measurement is an estimated output reading of the overall screen, based on the calculation Lux divided by the size of screen as noted in paragraph 2.4..

v. *Could you please confirm how the 1,444Lux and 1.28cd/m2 were measured?*

2.9. 1,444 Lux was the highest measurement recorded by the river bank monitors on 1 June 2019, until the time when the screen was turned off. The 1.28cd/m2 was incorrect. This should have read 1.449cd/m2, that being the product of 1,444 (Lux) divided by 996 (the size of the screen in square metres).

vi. *And where the illuminance (Lux) measurement was taken from?*

2.10. The river bank monitors.

vii. *Is the luminance value provided by the Display Studio Software read out rather than actual measurement?*

2.11. There is no luminance value provided by the Display Studio Software. Our only means of measuring the luminance of the screen is the river bank monitors which we use as a guideline to ensure the maximum output is not breached.

2.12. Finally, it is also worth mentioning that the screen was briefly turned on at the end of the concert to display a "Thank You For Coming" message as spectators left the venue. This was at approximately 22:30hrs, but was on the screen for an insufficient time to register on the output we downloaded from the Lux monitors.

2.13. We trust the above now fully answers the questions posed and, once again, our sincere apologies for the errors contained within our original response.

3. Panel Recommendations:

- 3.1. After a full consideration, the internal review panel consider that the original response had significant errors and should have provided more detail and context in some of its answers. The panel has now provided more detailed responses to your original questions and internal review request questions. The panel recommends that the Legacy Corporation's FOI process is reviewed to include an internal check of any technical information included in a response.

If you are not content with the outcome of the internal review, you may appeal directly to the Information Commissioner at the address given below. You should do this within two months of our final decision. There is no charge for making an appeal.

Further information on the Freedom of Information Act 2000 is available from the Information Commissioner's Office:

Wycliffe House
Water Lane
Wilmslow
SK9 5AF

Telephone 08456 30 60 60 or 01625 54 57 45

Website www.ico.gov.uk

Yours sincerely

Deputy Chief Executive
London Legacy Development Corporation