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Our Ref: SRS/BP/240253

Richard Barchha
Design Manager
Downing Construction

Email: richardbarchha@downing.com

Dear Richard

PLOT 11, FIRST STREET SOUTH, MANCHESTER – ECOLOGICAL REVIEW OF EXTERNAL LIGHTING DESIGN

Penny Anderson Associates (PAA) was commissioned to undertake a review of the lighting design for the development scheme at Plot 11, First Street, Manchester (Planning Permission Ref 125573/FO/2019). This review was needed to fulfil Planning Condition 10g which states:

> *"Street lighting around the site (which includes provision for consideration of older and disabled people) and which demonstrates clearly that any impacts on the River Medlock for bats would be negligible"*

Documents reviewed comprise:

- Site Wide Phasing Plan. Ref: 10266-Z0-A-G100-PL-XX-99001, dated January 2023;
- First Street, Manchester Phase A and B. Sitewide External Lighting Calculations. Ref: 0253-HES-ZZ-00-CA-63001 Rev C01, dated 04/03/2024;
- First Street, Manchester Phase A and B. Block A, B and D Podium Lighting Calculations. Ref: 0250-HES-ZZ-01-CA-63001 Rev C01, dated 04/03/2024; and
- Accompanying Covering Letter. Ref: 10266/MCC/AL/DL/30, dated 2nd May 2024.

Bats are known to use the local area, including roosting in a nearby (off-site) culvert of the River Irwell. The ecological report recommended that the lighting design should be sensitively developed allowing for some areas of darker/reduced lighting for at least some of the night to encourage use by species such as bats and moths (PAA 2023[1]).

The site is within a highly urban context and the lighting plan aims to balance the various requirements of illumination for the safety and intended use of the site along with providing some less well-lit areas to encourage bats to access the new soft landscaping (which could, therefore, provide an additional foraging resource for local bat populations).

The target bat species for the site are common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus)*, based on data provided in the ecology report (PAA 2023). These two species are known to be more tolerant of/less impacted by higher lighting levels than other species in the local area, such as brown long-eared bat (*Plecotus auritus*) (Bat Conservation Trust and Institute of Lighting Professionals 2023[2]).

For the sitewide external lighting plan (Ref: 0253-HES-ZZ-00-CA-63001 Rev C01), the following points are noted:

- The luminaires are all LED (not metal halide or fluorescent);
- The lighting design includes low level strip lighting, recessed lighting and downlighting, reducing glare at heights where bats fly/forage;
- Festoon lighting is included in localised areas only;
- Post-top luminaires mounted on 5m poles (EXT/H) are restricted to Holme Street frontage;
- 4m high feature LED column fittings (EXT/A) are limited to the central areas;

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[1] *PAA, 2023. Block C Plot 11 First Street, Manchester. Extended Phase 1 Habitat Survey and Biodiversity Net Gain Assessment. Report to Downing Living (Manchester South) Limited Partnership Incorporated.*

[2] *Bat Conservation Trust and Institute of Lighting Professionals, 2023. Bats and Artificial Lighting at Night. Bat Conservation Trust. <www.bats.org.uk>.*

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- The design plan presents lower levels of lighting along Willmott Street and Chester Street, while Holme Street frontage is well-lit; and
- The southern area of the site, which includes some tree planting, is shown as very low lighting levels, however, the lighting proposals for Phase C will likely increase light levels in this area as this detail comes forward.

For the Phase A and B (Block A, B and D) podium external lighting plan (0250-HES-ZZ-01-CA-63001 Rev C01), the following points are noted:

- The luminaires are all LED (not metal halide or fluorescent); and
- The lighting design includes recessed lighting and downlighting, reducing glare at heights where bats fly/forage.

In summary, the above indicates that the lighting plan is largely in line with recommendations by current guidelines in respect of bats and artificial lighting at night (Bat Conservation Trust and Institute of Lighting Professionals 2023[2]).

The following further measures are also included, to encourage bats to access larger proportions of the planted areas of the site for foraging:

- Festoon lighting will be installed as low as possible to retain a darker zone within the tree canopy above; and
- Timers and/or photocell scheduling programmes will be used to limit night-time illumination across parts of the site during the months when bats are active (April to October, inclusive). For example, this darker period could be scheduled for a time when the site will be less well used by the community (e.g. 1am to 3am).

Overall, the lighting scheme is assessed as a having a negligible impact on bats on the River Medlock and includes measures that will encourage bats to access the new tree planting areas for foraging.

I trust the above is helpful. If you would like clarification on any matter, please do not hesitate to contact me.

Yours sincerely
For and on Behalf of
PENNY ANDERSON ASSOCIATES LTD

Sarah Ross
Associate Director

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