

DESIGN AND ACCESS STATEMENT

ROYAL EXCHANGE HIGHWAY LIGHTING REPLACEMENT

MANCHESTER

SEPTEMBER 2022

Introduction

In 2016, the Council launched its LED Retrofit Project with the aim of replacing all highway light units with LED luminaires. This included all standard and non standard light units. The four units on the Royal Exchange building are part of this Project. They are non standard units. This design proposal has been developed to deliver the aims of the LED Retrofit Project within the constraints of the listed building requirements.

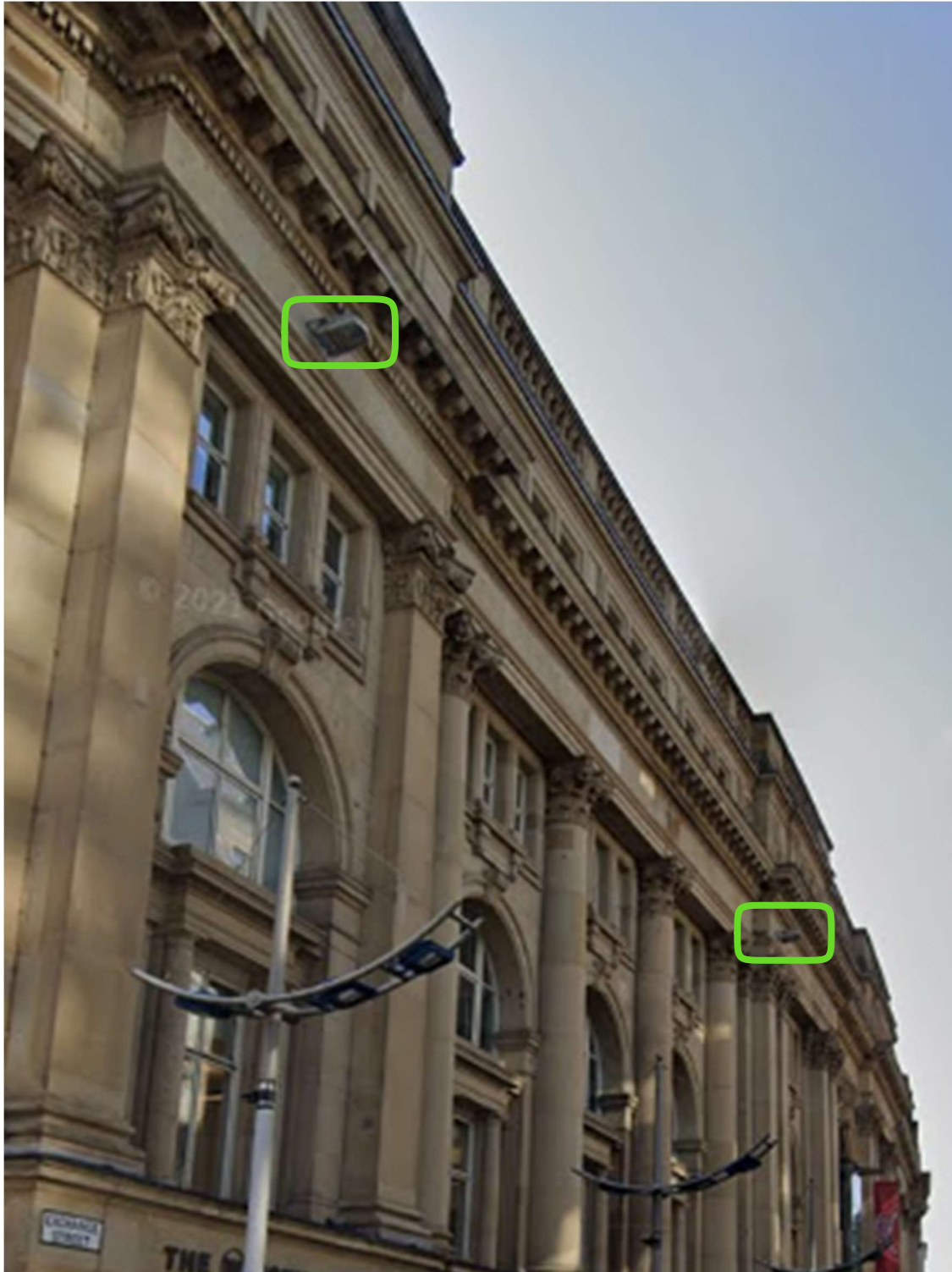
The documents provided in support of this application are –

1. MSL-12-24502531 Rev F – Site location plan and unit location details
2. MANCHESTERSTRLIGHTING-HS-SURVEYROYALEXCHANGE-SSOW-01 – Safe Systems of work to be applied to this project provided by Amey the Council's lighting contractor
3. MANCHESTERSTRLIGHTING-HS-SURVEYROYALEXCHANGE-RA-01 – Risk Assessment for this project provided by Amey.
4. Images of the existing light units – 3 no.
5. Clearflood Large M1 - LED unit technical data sheet

Existing Installation

The existing highway lighting system includes the 4 no. light units mounted on the Exchange Street elevation of the Royal Exchange Building. These units are mounted at some 17m above ground and have been in situ for over 20 years, though the date of installation is not known.

The existing units can be seen below and close up photos have been provided.



Electricity Supply

The existing electricity supply point is a feed pillar located adjacent to No.2 Market Street. This supply point has been in situ for over 20 years, as has the wall mounted electricity supply cable that connects all four light units to the supply point, shown below -



Design

Design Standard

In accordance with the Council's Highway Lighting Specification the appropriate lighting performance standard for the area of Exchange Street and St Ann's Square has been determined as C2 (BS 5489-1:2013).

Light Units

The proposed light unit is a Clearflood LED supplied by Signify. Each unit will be attached to the building via a U bracket which facilitates direct replacement of the existing light units using the existing fixing points and avoids any additional drilling or fixing to the building. This is detailed on the drawing - MSL-12-24502531 Rev F.

Once installed each light unit will be set at 0° tilt (perpendicular to the building facade). The operation of each light unit will be controlled via a City Touch node as detailed on the Clearflood data sheet. Each node communicates with the Council's Central Management System which enables the operating times and light output to be monitored and controlled remotely.

The life expectancy of the Clearflood unit is 20 years.

Electricity Supply

The electricity supply system is wholly contained on the exterior of the building. The existing feed pillar and wall mounted cable is to be retained without alteration. The light units will be replaced on a one for one basis allowing the new units to be connected to the existing electricity supply cable without alteration to the existing cable fixings.

Installation

The works will be undertaken by the Council's Street Lighting Contractor, Amey. A copy of their Risk Assessment and Safe Systems of Work documentation is provided.

Access to the units will be wholly from the exterior of the building, using a mobile elevated working platform as necessary.

Method

Working on one unit at a time, each existing unit –

- will be disconnected from the existing electricity supply cable
- removed from the existing wall bracket
- the existing wall bracket will be removed

Installation of the new units will be as follows -

- remove and replace the existing bolts
- affix the new wall bracket using the new bolts
- affix the new unit to the wall bracket
- reconnect the electricity supply cable

using hand tools as appropriate.

The new units will be affixed in accordance with the manufacturer's specification.

Maintenance

The units will be maintained in accordance with the Council's PFI Lighting Contract and delivered by the Services sub contractor, Amey.