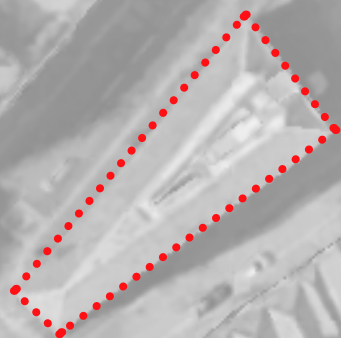






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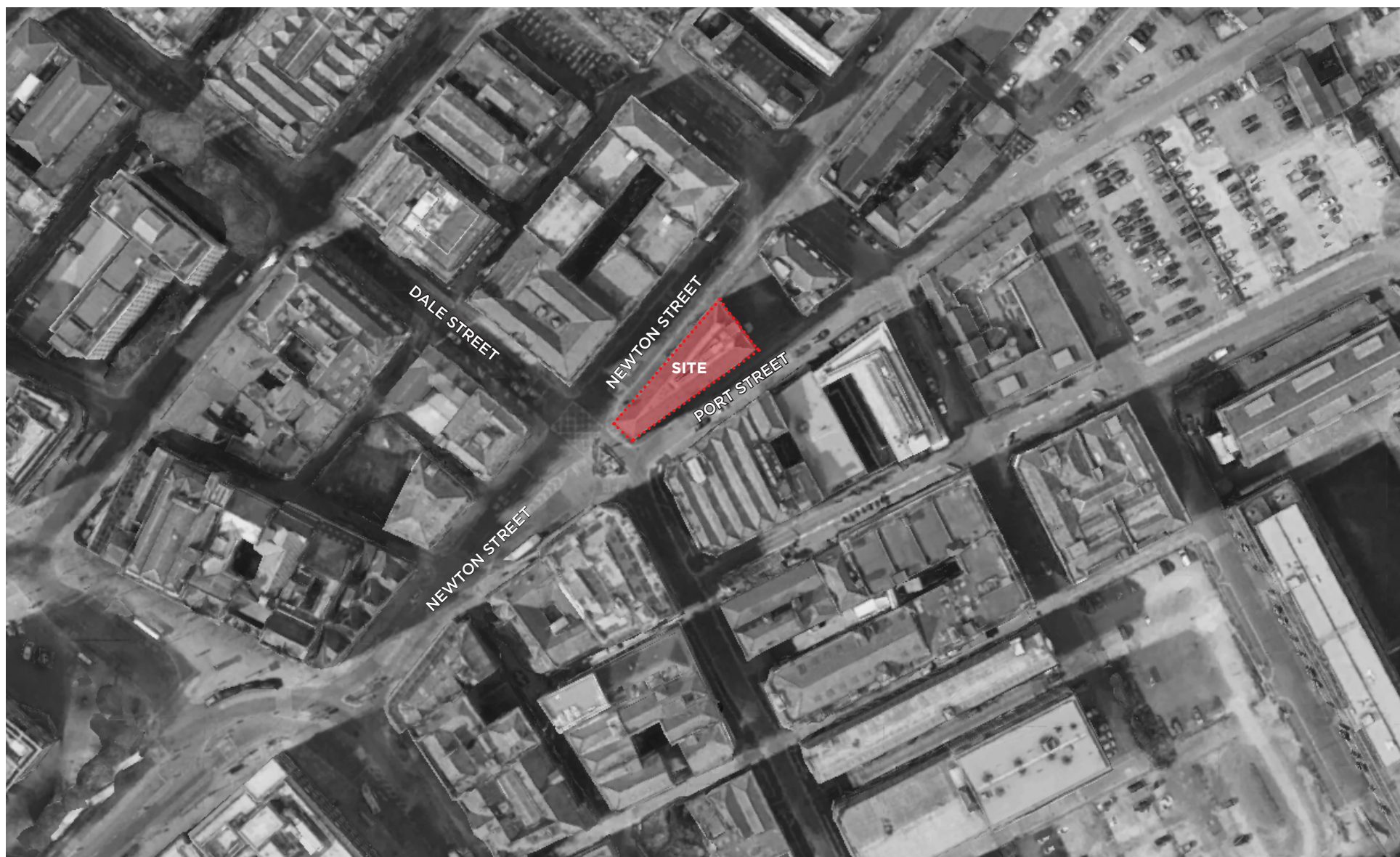
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1.1 INTRODUCTION

BRIEF



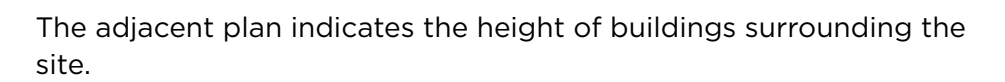
Location Plan

Axiom Architects have prepared the Design and Access Statement to inform and seek approval from Manchester City Council of the proposed installation of Photovoltaics (PV) panels, and associated building works, to improve the building services of 33 Dale Street to a sustainable alternative.

easyHotel, as part of its core values, is actively improving how its hotels operate in a greener way.

easyHotel is seeking to materially update the hotel services and install photovoltaic array.

The photovoltaic arrays are proposed on the existing main roof on Port Street, the PVs will be set back from the roof edge to minimise visual impact from the street and other key views on Portland and Newton Street.





1.3 INTRODUCTION

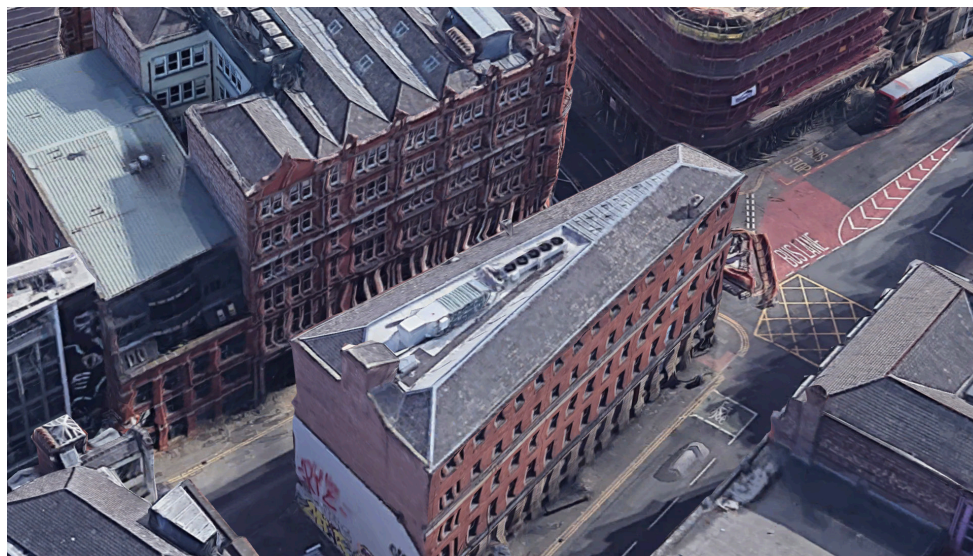
ROOF PHOTOS



The existing pitched slate and lead flat roof is in fair condition. The flat roof houses the existing mechanical plant.

Due to the limited space on this flat roof, there are no options to install low carbon measures, i.e. PV panels. As advised by our building services expert Port Street's South East roof pitch is the only viable option to achieve the necessary performance.

It is proposed that the PVs will have zero or limited visibility from the street level being set back from the roof's edge.





2.0 STREET LEVEL PHOTO STUDY - VIEW 01



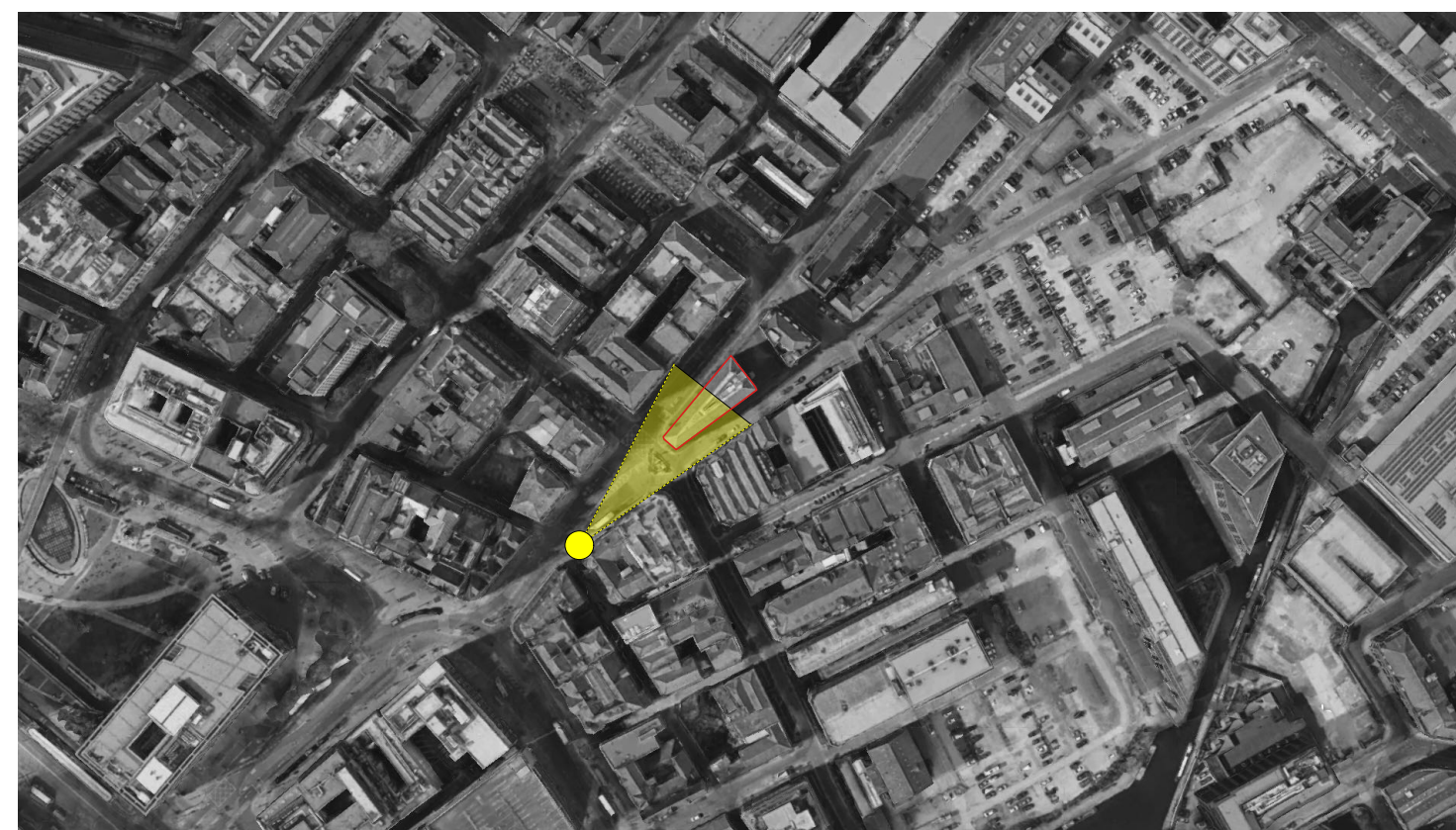
The following photographs were taken to demonstrate that the proposed Photovoltaics (PV) panels on the south eastern roof will have limited or zero visibility from street level.



— Site Demise

● Location of Photo

➤ Direction of View



Site Demise

Location of Photo

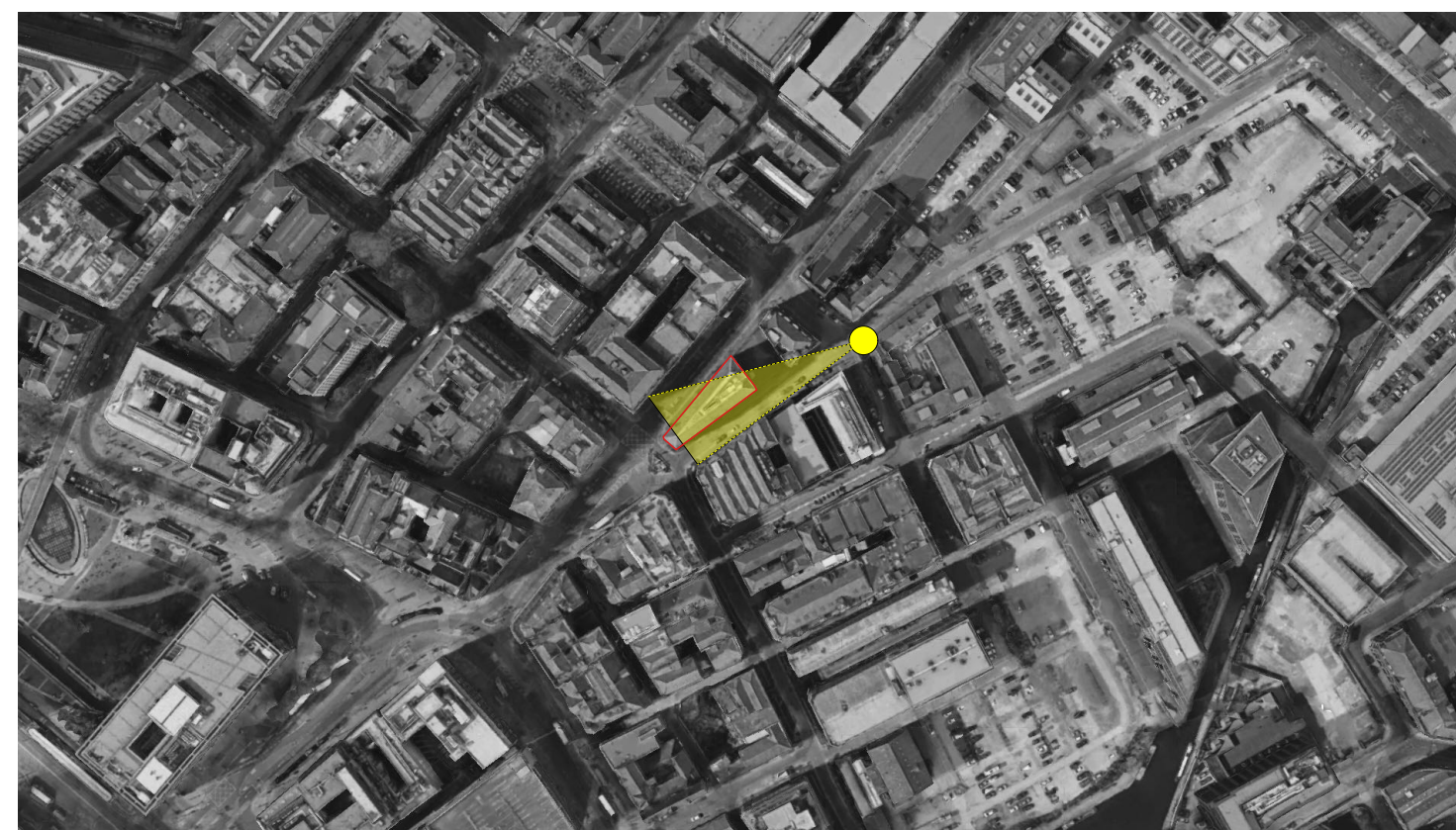
Direction of View



Site Demise

Location of Photo

Direction of View



Site Demise

Location of Photo

Direction of View



Photo taken from street level



Site Demise

Location of Photo

Direction of View



3.1 GOOD DESIGN PRINCIPLES FOR PV ARRAYS



Good example of low profile supporting frame

When designing Photovoltaics, the panel colour, reflectance, and finish can be chosen to complement the building or surroundings. In some cases, a contrast of panel colour and roof finish can work well, but generally, a match of panel and roof colour works better. Most crystalline and thin film panels are dark blue or black, but various finishes and tones are available. Using low-reflectivity PV can reduce glare which can be a nuisance to neighbouring properties.

On slate roofs, the roof anchors fix to the rafter below, but a proprietary clamp or lead flashing component is required to weatherproof the penetration through the slates. The roof slates will not be drilled through.

Roof-mounted PV arrays with low-profile supporting frameworks fitted over roof tiles arranged symmetrically and evenly spaced between chimneys and eaves will improve its appearance. Black anodised frames will help to blend in with the colour of the roof slates. Untreated or naturally finished metal panel frames can unnecessarily draw attention to the system and are not recommended.



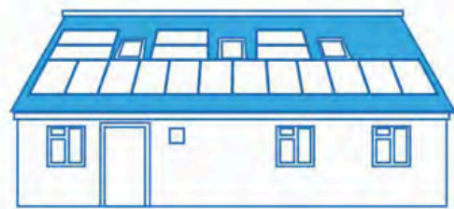
Good example of how the panels arranged symmetrically and evenly between chimneys, ridge and eaves



3.2 DESIGN PRINCIPLES

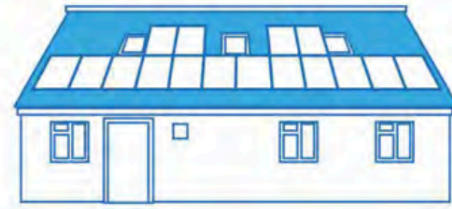
The symmetrical layout of panels can have a crucial effect on the appearance of an installed system. The illustrations below, produced by Viridian Solar, illustrate how different layouts have different levels of visual impact.

Poor



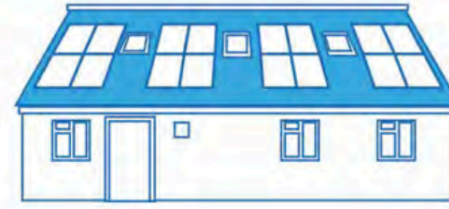
Poor: 18 panels in a mixture of landscape and portrait; little symmetry and panel edges not aligned between rows.

Better



Better: 16 panels with a single axis of symmetry; panels aligned between rows but not evenly spaced relative to roof lights.

Best



Best: 16 panels with two axes of symmetry; panels evenly spaced around roof lights, organised in broken blocks.

Poor



Poor: 13 panels, no symmetry, panels arranged around roof features, evenly spaced around windows but misalignment between rows.

Better



Better: 11 panels, no symmetry, neater arrangement with panels aligned between rows.

Best



Best: Eight panels, single rows of blocks with symmetry around dormer windows.

Poor



Poor: Seven panels, no symmetry, stepped edge and misalignment between rows, oddly placed single panel.

Better



Better: Six panels, no symmetry, stepped edge and misalignment between rows.

Best



Best: Six panels, rectangular blocks of portrait panels, trade off of shading in bottom left



3.3 INSTALLING THE PV PANELS TO A SLATE ROOF



Existing slate tiles are carefully removed and stored for future use.



Roof anchors will be fixed to the existing rafters.

A PV array is proposed to be installed over the existing roof, which will sit above the slates with only a small gap between the PV and the existing roof tiles. The slates will be carefully removed so roof anchors can be fitted to the rafters, see installation photos.

Existing slates will be carefully removed and stored for future reinstatement. The roof anchor will be installed to the height and spacing of the rafters and will not impose loads that compromise the roof's primary function.

New natural slate tiles will be cut to form a slot for the anchor, and new lead flashing will be installed to ensure the roof is watertight. It is proposed that no existing roof tiles are cut.

The supporting frame that the PV panel sits on will be anodised black to blend in better with the existing slates. A black finish for the rail and panel is the least visually obtrusive, and the cut ends will also be painted black.



Lead flashing installed over existing roof tiles.



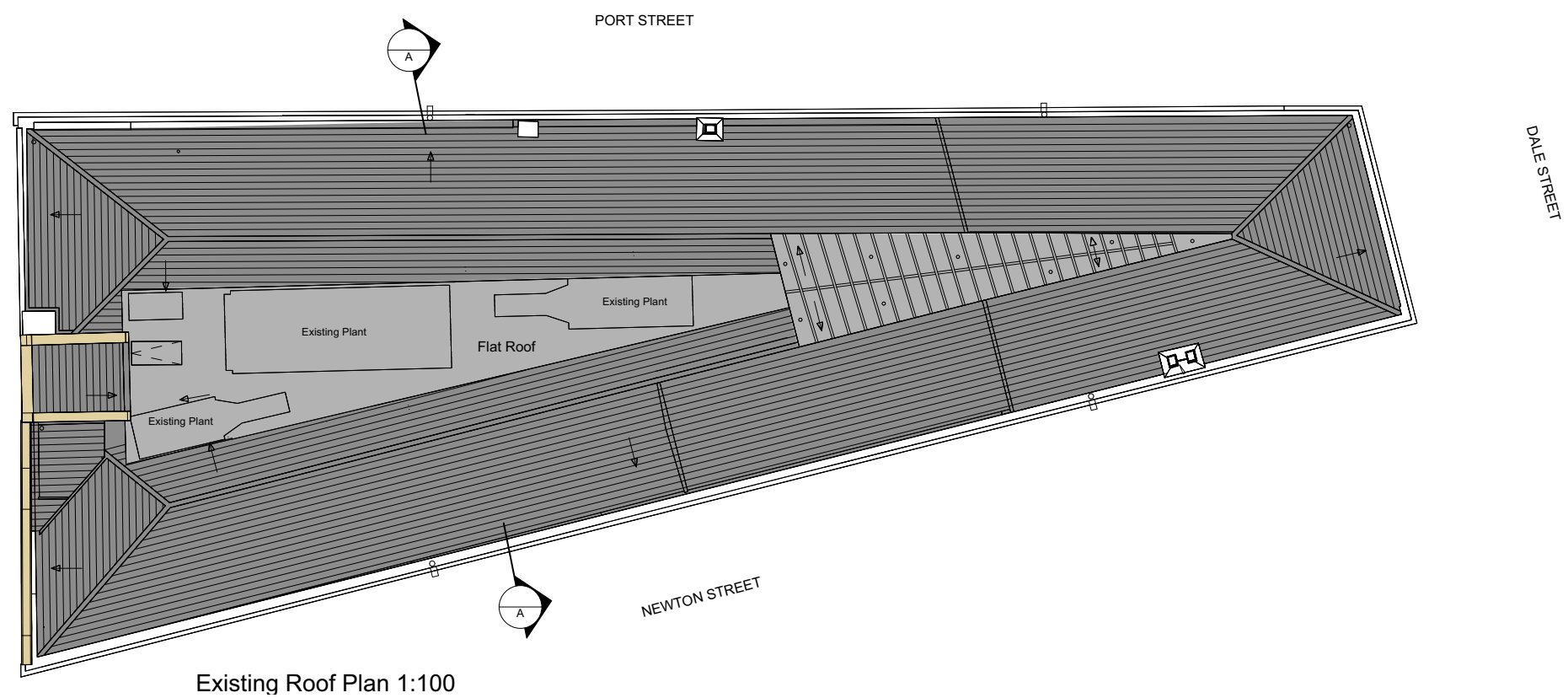
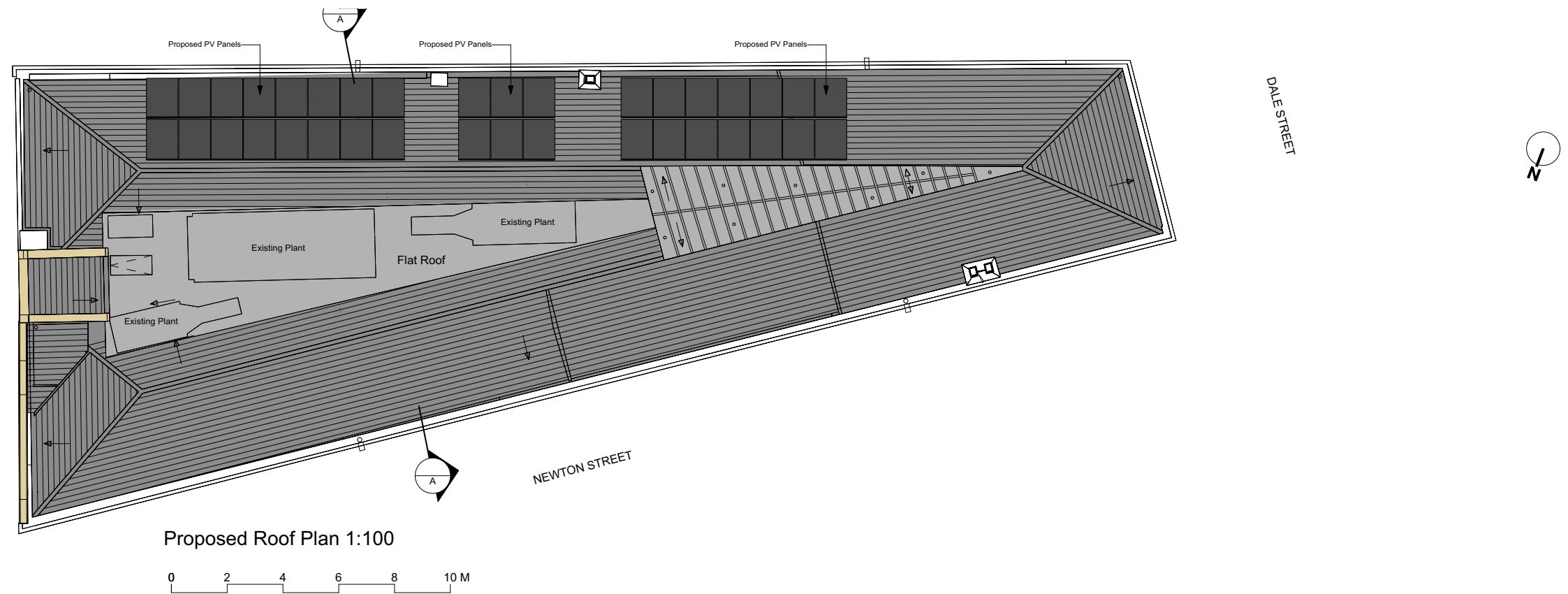
New reclaimed slate roof tile is cut to form a slot for the anchor and another layer of lead flashing is installed to keep the roof watertight



New roof tiles blend in with existing tile with no original slate tiles damaged. Please note proposed anchors will be anodised black.



4.1 EXISTING AND PROPOSED ROOF PLAN

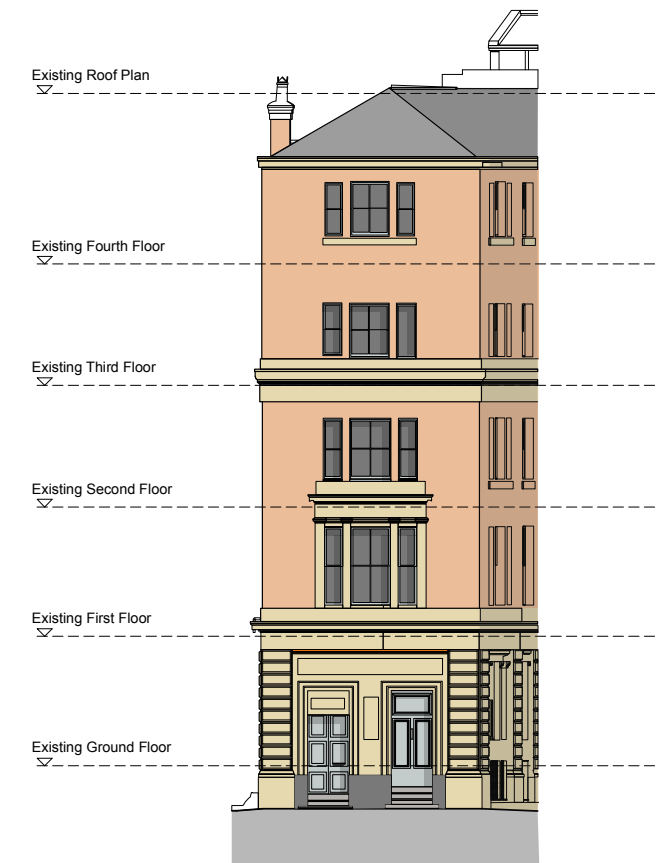
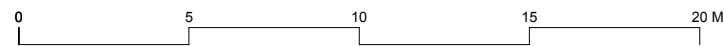




4.2 EXISTING NORTH WEST AND SOUTH WEST ELEVATION



Existing North West Elevation (Newton Street) 1:100



Existing South West Elevation (Dale Street) 1:100



4.3 EXISTING SOUTH EAST ELEVATION



Rev Date Description

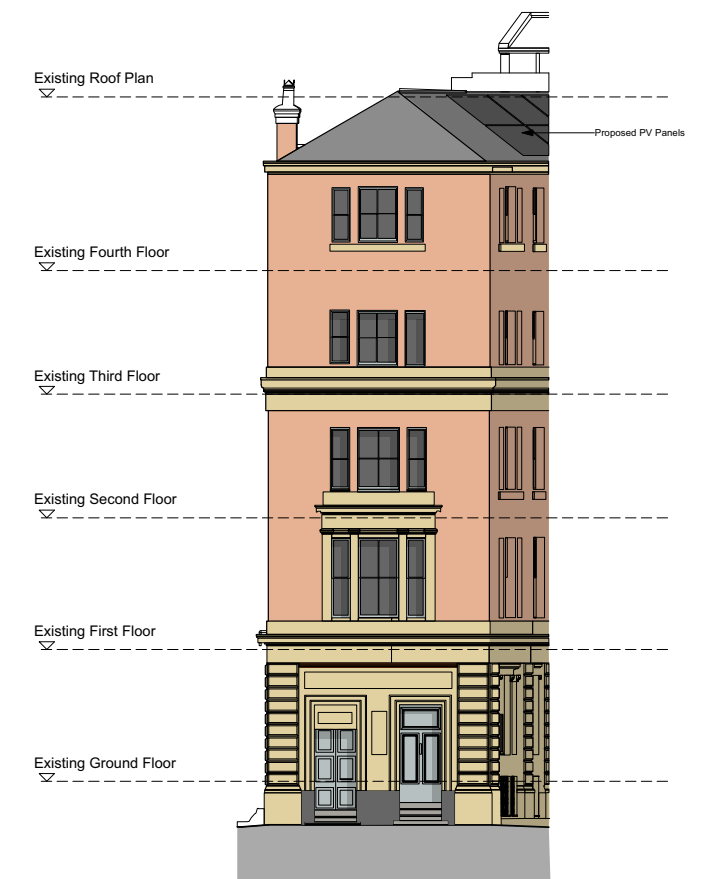


4.4 PROPOSED NORTH WEST AND SOUTH WEST ELEVATION



Proposed North West Elevation (Newton Street) 1:100

0 5 10 15 20 M



Proposed South West Elevation (Dale Street) 1:100



4.5 PROPOSED SOUTH EAST ELEVATION



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Axiom Architects LLP 2023

