

Application for Planning and Listed Building Consent
Buildings LO22, University of Reading
London Road Campus, off Redlands Road,
Reading, RG1 5AQ
Proposed Installation of Solar Photovoltaic (PV) Panels
DESIGN & ACCESS STATEMENT

0.0 Introduction

This Statement is prepared by Reading Community Energy Society which is intending to install Solar Photovoltaic (PV) Panels in collaboration with the University of Reading. The proposed Solar PV Panels will be installed on Building Number LO22 at the University's London Road Campus. The property is owned by the University of Reading. The building is used as lecture theatres and teaching space.

1.0 Site Analysis

Site Description:

- Building Use/Type: University educational facility
- Type of roof: Flat roofs
- Visibility of roof from surrounding sites and public spaces: Extremely limited

Local Context:

- Adjoining land uses: University buildings, school, museum and residential.
- Within or Close Proximity to Conservation Area: Yes. The site is within the Kendrick Conservation Area. See Heritage Statement.
- Within or Close Proximity to Listed Building: Yes, there are Listed Buildings in the Conservation Area. See Heritage Statement.
- Any other notable features in the surrounds: None



Building LO22, looking from
Acacia Road to the north-west.

Plan, Section and Elevation drawings have been submitted with the application.

2.0 Proposed Use

The existing flat roofs of the building will be used as a means to support solar PV panels which will generate electricity from radiation from the sun (renewable energy). The proposed Solar PV panel installation will make no change to the use of the building.

The installation of solar panels is reversible. In the unlikely case that the solar panels were no longer needed for microgeneration they could be removed with no lasting damage to the roof on which they will be installed.

3.0 Design

The solar PV panel system is designed to produce clean electricity from a renewable source in an attempt to reduce the amount of carbon dioxide (CO₂) created from energy use by the building.

Solar PV panels need to receive maximum solar radiation to generate the highest possible energy. This is achieved by installing panels on south facing pitched or flat roofs. On flat roofs the panels will be mounted on metal frames angled at between 10 and 20 degrees from the horizontal.

The Solar PV panels selected for this project are poly-crystalline modular panels and will be arranged in arrays facing east and west. The east-west orientation enables maximum solar capacity to be installed on the available roof area.

The colour of the panels will be grey or black and the frames of natural aluminium (grey too).

Inverters will be used for this system to convert the DC output of the panels to grid compatible AC supply. The inverters will be installed inside the building or in covers outside and will not be visible externally or will be hidden from view.

4.0 Scale & Amount

The scale of the existing building will not change. The application proposes the following:

- Number of panels: 170
- Mounting system to be used: The panels will be mounted on 15 degree (approx.) pitched mounting frames, oriented East/West

5.0 Layout

Please refer to the attached Block Plan and proposed array images. The total area of the proposed solar PV array is 280 m².

6.0 Appearance

A plan has been included to show the arrangement of panels. The overall character of the building and that of the conservation area will not suffer visually from the proposed Solar PV panel installation.

7.0 Landscaping

The proposed Solar PV system is to be installed on the roof of the building and will not affect the grounds or boundaries of the site. The impact of the installation will be minor and therefore no landscaping is considered necessary.

8.0 Environmental Sustainability

The Solar PV system is expected to have a productive life of more than 35 years, but if and when the modules are removed, the roof will retain its original structure. PV systems have no moving parts and are therefore bird friendly.

All of the energy generated by the Solar PV panels when used in the building will reduce the energy being procured elsewhere from conventional fossil fuel sources. With an expected productive life of the system in excess of 35 years, the Solar PV system will substantially reduce CO₂ emissions in its lifetime.

Both the Applicant (Reading Community Energy Society) and the University of Reading understand the need to balance the benefits to society of responding to climate change with impact on the surrounding area. In the case of the proposed solar PV panel array, this will be installed in such a way that the long-term impact on the roof and the building area will be minimal.

The solar PV panels do not present a major visual impact on the site as a whole and conservation area and their benefit to the University and to Reading will outweigh any minor impacts. It is noted that Reading Borough Council policies strongly encourage the use of renewable energy and in particular solar PV as can be seen in [this document¹](#)

9.0 Transport

The proposed Solar PV installation will have no impact on vehicle or pedestrian access to or from the public highway and there will no increase in the volume of traffic in the area due to the installation.

10.0 Accessibility

The proposed Solar PV panels will be installed on the roof of the building and they will not affect access to the building or the site by the users of the building, the General Public or the Emergency Services. No access is required to the roof for the general public or users of the building and so no permanent access is therefore necessary. However, should it become necessary to carry out maintenance work on the array, appropriate scaffold or restraint system shall be erected to gain access to the roof by trained personnel.

11.0 Conclusion

The proposed Solar PV installation will be in accordance with relevant Planning Policies and guidance regarding renewable energy projects and the effective protection of the environment by the reduction in emissions of Greenhouse Gases which affect Climate Change.

The proposed Solar PV panels are to be mounted on the roof of the building without affecting the integrity of the building. The vertical projection of the panels above the roof will be not more than 600mm in the case of flat roofs.

An aerial photograph of the building showing location of proposed PV panels has also been provided.

¹ http://www.reading.gov.uk/media/3516/item08a-Carbon-PlanJUN15/pdf/item08a_Carbon_Plan_JUN15.pdf