

VITAL ENERGI UTILITIES LIMITED

Westminster City Council

Dementia and Memory Resource Centre Roof Top Solar Technical Specifications

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1. Introduction

- 1.1 These Technical Specifications have been prepared on behalf of Westminster City Council as part of its application for Prior Approval: Roof Mounted Solar Array for a non-domestic building, for the solar array proposed at the Dementia and Memory Resource Centre.
- 1.2 The centre is located at
42 Westbourne Park Road,
London,
W2 5PH
- 1.3 The principal proposal is for the installation of 42.1m² of roof mounted photovoltaic panels, consisting of 21 individual panels.
- 1.4 The proposed installation is in support of Westminster City Council's targets of achieving net zero carbon and assisting with their decarbonising agenda.
- 1.5 The solar installation is anticipated to save over 530 kg CO₂/yr.

2. Existing Installations

- 2.1 The proposed installations are intended to be installed on the existing roof of the building.
- 2.2 The building appears to be an older building that has undergone recent renovations, with the inclusion of a hydrotherapy unit.
- 2.3 The existing roof that is proposed to be used is a pitched roof type at an angle of circa 17°, with no existing use and no clear obstructions.



Figure 1 - Existing Installations

3. Proposed Installation

- 3.1 The new installation will consist of the Photovoltaic panels being installed flush against the pitched roof, which is circa 17° (elevations not available).



Figure 2 - Proposed Dementia and Memory Centre Roof Installations

- 3.2 The panels will be mounted flush against the existing roof tiles, with space behind for sufficient air flow. To conform with the requirements of Class J (J.1) of the General Permitted Development Order (GPDO), the installation will not protrude further than 0.2m from the surface of the sloped roof. The panels will not be located within 1m of the roof perimeter or eaves of the roof.

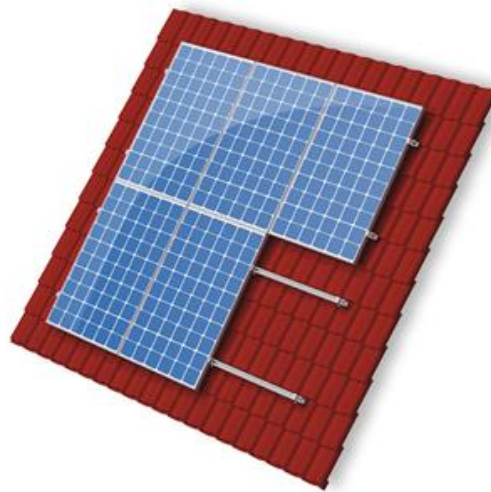


Figure 3 - Typical Example of Mounting

4. Proposed Photovoltaic Panel

4.1 The proposed photovoltaic panels are Trina Solar 400Wp. Technical details are included within the appendix.

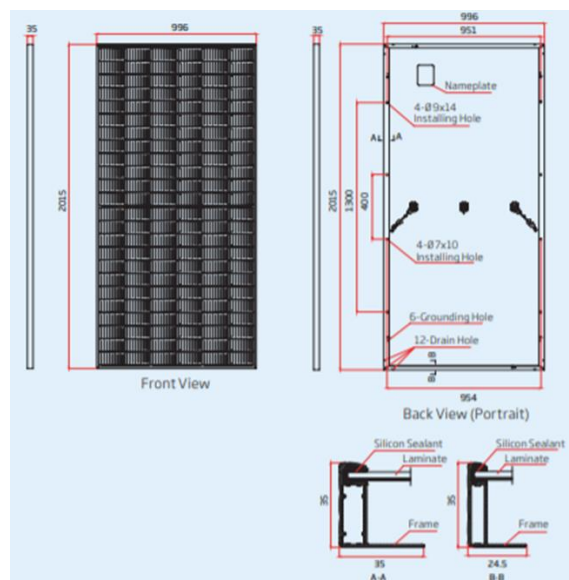


Figure 4- Trina Solar 400Wp

5. Photovoltaic Panel Locations and Configuration

Figure 5 shows the location of the proposed installation on the roof of the Dementia and Memory Resource Centre. The installation comprises 21 panels totalling 42.1m².



Figure 5 - Array Location

1. Module Area - Arbitrary Building 07-Mounting Surface East

PV Generator, 1. Module Area - Arbitrary Building 07-Mounting Surface East

Name	Arbitrary Building 07-Mounting Surface East
PV Modules	15 x TSM-400-DE15M (II) - 2020 (v1)
Manufacturer	Trina Solar
Inclination	17 °
Orientation	East 103 °
Installation Type	Roof parallel
PV Generator Surface	30.1 m ²

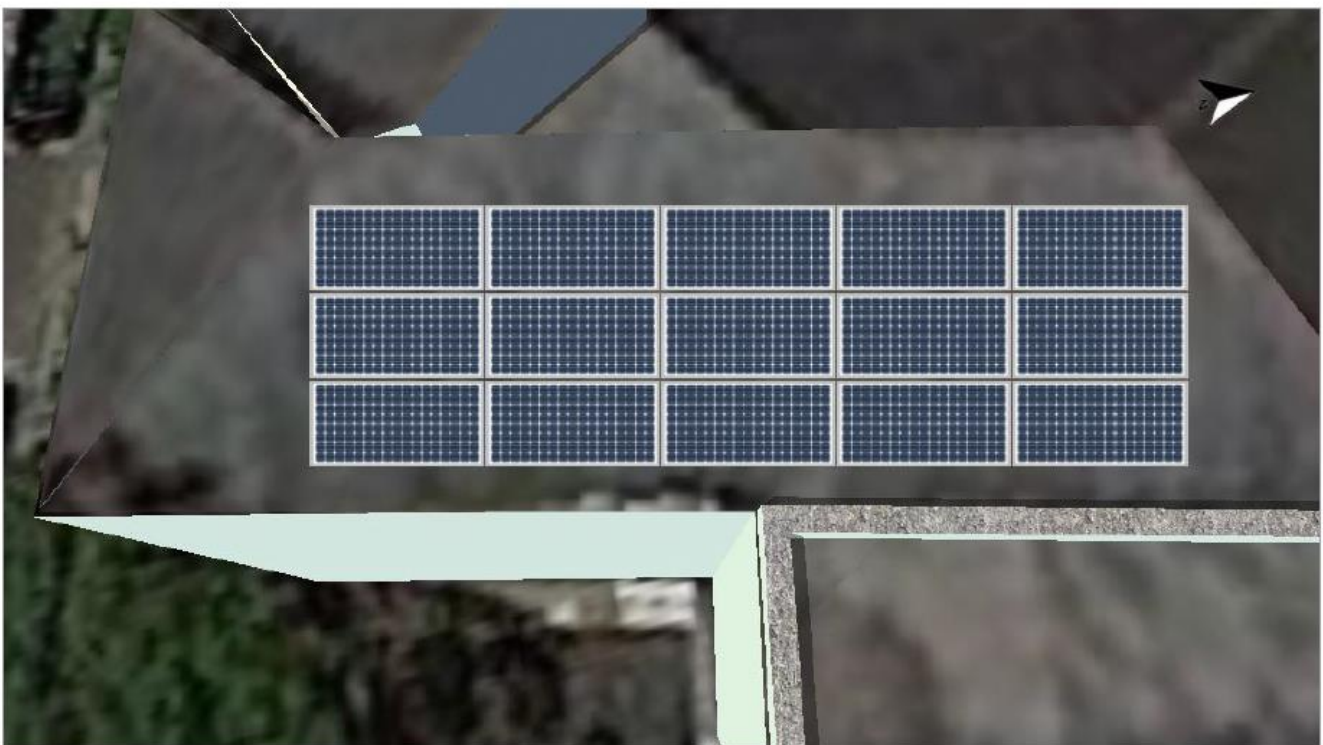


Figure 6 – West Roof PV Panels

2. Module Area - Arbitrary Building 07-Mounting Surface East

PV Generator, 2. Module Area - Arbitrary Building 07-Mounting Surface East

Name	Arbitrary Building 07-Mounting Surface East
PV Modules	9 x TSM-400-DE15M (II) - 2020 (v1)
Manufacturer	Trina Solar
Inclination	17 °
Orientation	East 103 °
Installation Type	Roof parallel
PV Generator Surface	18.1 m ²

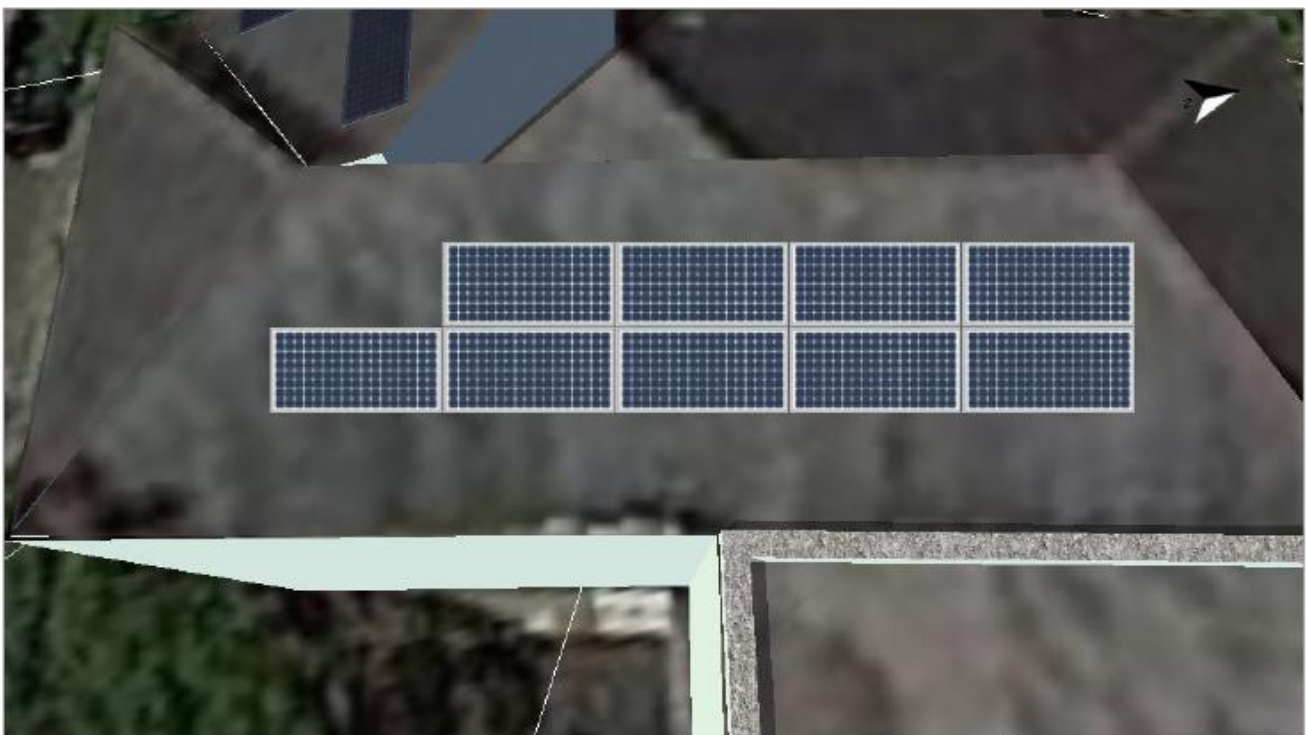


Figure: 2. Module Area - Arbitrary Building 07-Mounting Surface East

Figure 7 - East Roof PV Panels

6. Reference Drawings

Drawing Number	Description
50634-VE-15-RF-DR-Z-5002	DEMENTIA AND MEMORY CENTRE SOLAR PANEL GA
50634-VE-15-RF-DA-Z-5002	DEMENTIA AND MEMORY CENTRE SOLAR PANEL ROOF SECTION

7. Manufacturers Literature

Technical Sheet Title	Description
200115_EN_TSM_DE15M(II)_datasheet_A_2020	Photovoltaic Panel Datasheet