

From: Luke Lobo
Sent: 13 January 2021 07:58
To: Jamie Morrison; McCallum, Fiona
Cc: Jackson, Iain
Subject: RE: Request for Further Information and Intention to take Account of New Evidence - Notice of Review Reference 20/0012/LRB (Planning Ref: 20/00179/PP) - Cardross Golf Club, Main Road, Cardross [OFFICIAL]
Attachments: Initial Submission Panel Data Sheet.pdf; Initial Submission Complete Design.pdf; Initial Submission Roof Plan.pdf; Revised Submission Complete Design.pdf; Revised Submission Panel Datasheet.pdf; Revised Submission Roof Plan.pdf

Dear Fiona,

I hope you are well.

Could you please update the agent from Anthony Renwick to myself, to ensure that these matters are addressed in a timely manner?

In answer to the questions you have provided:

a) Confirmation as to why the number of panels were increased from those presented at the pre-application stage. Pre-application advice was sought at a very early stage of the process. At this point the only design that had been carried out was a desktop survey, and on this we proposed 108 panels on the roof (attachments Initial Submission). As part of the conversation regarding this with the planning team during the full planning application, we revised this to make use of larger output panels, creating the same system output with only 94 panels (attachments Revised Submission). As a result the PV Generator surface reduced from 176.2 m² on the pre-application to 155.8 m² on the submission as part of full planning. This has a further carbon efficiency, as less resources are used for this revised installation. This is reflected within the resubmitted plans and elevations provided, although was not referenced within the decision letter - it would appear that the earlier and later submissions were combined into one rather than being taken as superseding the initial submission. The specific location of the panels was amended as part of this work, owing to more accurate knowledge of roof obstacles, and to maintain the minimum 1m separation to the edge of the building.

b) Confirmation on the minimum number of panels the Applicant would consider to be economically viable for the future security of the clubhouse without a parapet being imposed as a condition and what the minimum number of panels the Applicant would consider to be economically viable for the future security of the clubhouse should a parapet be imposed as a condition. The current proposed installation size (30 kWp) represents the minimum economically viable system size. This has been sized in collaboration with the golf club to ensure that required returns on investment are achieved, and the fixed development costs of this project are largely responsible for this constraint. However, it is also important to note that sub-optimal deployment of solar PV panels is not resource efficient in terms of maximising renewable energy generation and hence returns on the installed system. We have explored the option of adding a parapet, however our analysis of this would be that a parapet of sufficient height to mask the view of the panels entirely would result in the number of panels having to be reduced due to additional shading, and this combined with the additional cost of the parapet would prevent this installation being economically viable if imposed as a condition.

c) Suggestions as to how these panels might blend in with the traditional materials and architecture of this Category B listed building. From our understanding of the project, two primary concerns have been particularly raised regarding the integration of the panels onto this building. We would like to address both of these concerns directly:

- * The panels as viewed from the upstairs of the golf course – unfortunately there is no measure that can take place to fully disguise the panels themselves. However, we have taken steps to reduce the variation in the visual nature of these, in particular replacing the initial Trina panels (with a silver frame) with larger output Longi panels (with a black frame), whilst retaining a white back sheet to address the second point below.
- * Further concern was raised about the view from the elevation further north of the golf course. We would like to again highlight that the view from this location will be solely of the reverse of the panels and mounting kit. These have been specifically selected to utilise a white back sheet to blend into the existing

building as much as possible, and hence limit the visual impact.

In general it is worth noting that the purpose of the panels is to absorb light, and therefore the panels are manufactured to minimise the reflection from them. Deployment of higher rated panels means that even more light is absorbed and consequently reflection and glare reduced even more. Additionally steps have been taken to ensure minimal projection above the height of the existing building, in particular by only elevating panels by 10 degrees. Consideration was given to laying panels flat, however, this was rejected on two grounds - firstly significant reduction of the energy production, but secondly this would negate the 'self-cleaning' aspect of the panels (whereby a heavy shower is sufficient to clean the panels of dust and debris). We have taken steps to minimise impact on visual amenity in the context of this project which serves to reduce the carbon impact from the built environment. We believe that solar PV panels and renewable energy generation equipment are already, and will become an even more common, element of our built environment as we move towards hitting local, regional and national net zero carbon targets.

d) Further information on the wider public benefits of securing the conservation and use of the building through the development which would significantly outweigh any disadvantages of the development eg measures to mitigate against the detrimental impact of the development of the building.

The implementation of solar PV panels reduces the operational costs of the built environment in general. For specific buildings, such as this one, those reduced costs are helpful now more than ever. It is critically important that listed buildings such as this remain occupied and financially secure, to enable timely and proactive maintenance and protection of the building. Reducing operational costs goes directly therefore to increasing the sustainability of the business operating from the building. In addition to those financial benefits, the implementation of solar PV panels reduces the carbon impact of operations - saving carbon as well as costs. We know, and support, the growing trend amongst consumers to seek goods and services from responsible businesses and organisations - meaning those that are aware of their broader impacts, including on the environment and sustainability, and have taken steps to manage

these impacts. These businesses are already proving more successful than competitors who aren't yet addressing these issues. This goes to the heart of the issue - solar PV reduces financial costs, carbon footprints and increases sustainability meaning that commercial activity, employment, longer-term investment all benefit. We believe that these significant benefits far outweigh any perceived detriments arising from a change in visual amenity.

Best wishes,
Luke

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