

# Sustainable Design Measures

## Renewable Energy

- We have installed a 6.8kWh solar array and 10kWh battery system here on the vineyard in 2021. This is connected in with the main power supply which serves the vineyard which means that any vineyard buildings, including the proposed staff dwelling, can utilise the solar or stored power from the renewable system.

## Use of Natural Screening

- The staff dwelling will be situated within a field which already has high (6-8m) pittosporum hedges to minimise wind from the south, east and west. Its situation on the southern side of St Martin's means that the island itself significantly reduces the strength of wind from the north, but existing hedging exists at a small distance and further landscaping to the north will provide natural screening from the wind - these are indicated in the landscaping scheme which accompanies the application. These measures will minimise the impacts of wind and thus minimise the requirement for heating.

## Insulation and Draught-proofing

- The staff accommodation will use the thickest grade of feather-edge cladding available - 32mm - in order to maximise the thermal properties of this element of the construction. Larch will be used which is renowned for its thermal properties due to its high density as a timber. The walls will be insulated to a high level, as will the ceiling structure and floor. The double-glazed hardwood windows and doors are constructed to a high standard and will be well-sealed with draft-proofing measures around opening elements. These measures combined will ensure that the dwelling is insulated to a high standard.

## Water Recovery

- Water harvesting infrastructure will be installed as part of the roof system with water pumped to an existing onsite storage system on the vineyard.