

Project	St Peters Place, Sompting
Document	Energy and Sustainability Statement

1. Energy and Sustainability Statement

Introduction

- 1.1. This Energy and Sustainability Statement has been produced on behalf of **Hamilton Investments Ltd** in support of a Full Planning Application for the redevelopment of St Peters Place in Sompting. The development description for the proposal reads:

“Full Planning Application for the demolition of existing garages and the erection of 18no. 1-bedroom apartments (including 30% affordable) across a 3-storey building with associated car parking and landscaping. Retention of existing flat block to the south and provision of additional car parking spaces for existing flats.”

- 1.2. This Statement addresses Policy 18 (Sustainable Design) and Policy 19 (Decentralised Energy, Stand-alone Energy Schemes and Renewable Energy) of the Adur Local Plan (ALP) (2017). Additionally, this Statement has been prepared in accordance with Adur District Council’s Sustainable Energy Supplementary Planning Document (SPD) dated August 2019.
- 1.3. Policy 18 of the ALP states that for residential ‘*all new dwelling must achieve a water efficiency standard of no more than 110 litres/person/day (lpd).*’ The proposals would meet this policy as all dwellings within the scheme will meet the water efficiency requirements by achieving a water efficiency standard of no more than 110 litres per person per day.
- 1.4. Policy 19 of the ALP states that “*An assessment of the opportunities to use low carbon energy, renewable energy and residual heat/ cooling for both domestic and non-domestic developments must be provided with any major planning application. This must include details of:*
- *Any new opportunities for providing or creating new heating/cooling networks.*
 - *The feasibility of connecting the development to existing heating / cooling / CHP networks where these already exist.*
 - *Opportunities for expansion of any proposed networks beyond the development area over time, and to plan for potential expansion. “*
- 1.5. Policy 19 of the ALP then goes on to state that “*All new major development will be expected to incorporate renewable/low carbon energy production equipment to provide at least 10% of predicted energy requirements.*” This planning application for 18no residential units falls into the definition of ‘major development’ as defined by the National Planning Policy Framework, therefore this part of Policy 19 is relevant to the proposals.
- 1.6. In addressing these policies, full consideration has been given to the Sustainable Energy SPD in the preparation of the application which provides further details on how proposals can contribute to reducing carbon dioxide emissions in accordance with the following energy hierarchy:

1. Be lean: use less energy;
2. Be clean: supply energy efficiently;
3. Be green: use renewable energy.

1.7. This Statement is set out in accordance with the Sustainable Energy SPD and will address the following under separate headings:

- Heating and cooling networks;
- Renewable and low carbon energy generation.

1.8. This Statement additionally addresses Adur & Worthing Council's Sustainability and Carbon Emission Reduction Design Strategy (2019-2020) which sets out the requirements of the future Building Regulations Part L and Part F which are due to be issued following consultation in 2020.

Heating and Cooling Networks

1.9. The design of the development prioritises passive measures to minimise energy demand by reducing the need for heating, cooling and ventilation systems, and reducing the reliance on mechanical lighting, heating and cooling. This has been achieved through the careful design of the building, taking into account landform, layout, building orientation, massing and landscaping.

1.10. Please refer to the below sections which set out how energy demand has been reduced in the proposals.

Renewable and Low Carbon Energy Generation

1.11. As set out within Policy 19 of the ALP, *"All new major development will be expected to incorporate renewable/low carbon energy production equipment to provide at least 10% of predicted energy requirements."*

1.12. The proposals seek to provide photovoltaic panels on the roof of the new building as demonstrated in Figure 1.

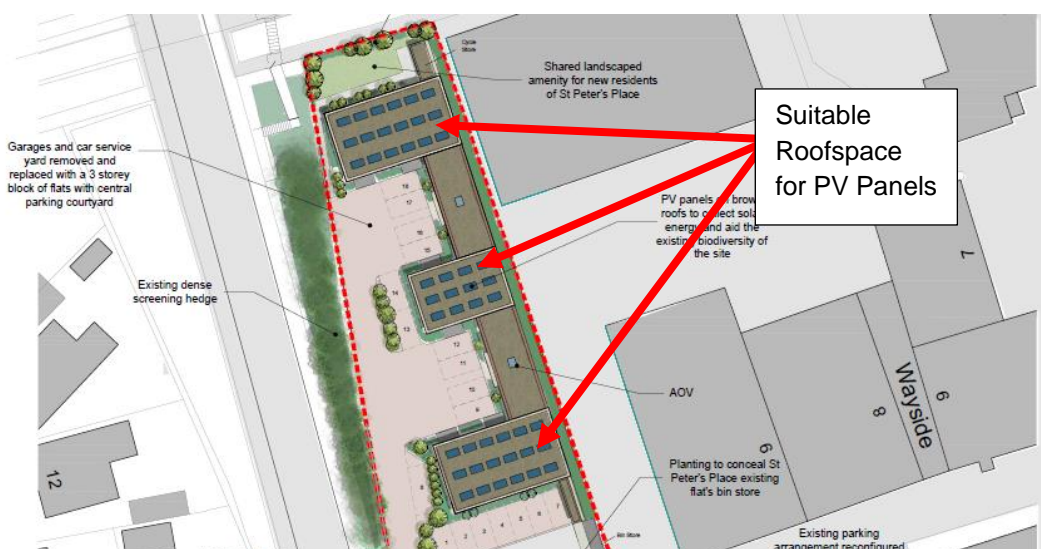


Figure 1 - Proposed Roof Plan Illustrating PV Locations



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- 1.13. As illustrated above, the panels are proposed in locations which limit the visual impact when viewed from the public realm. The areas shown for PV panels demonstrate that suitable roof space is available for sustainable energy production, the details of which can be controlled via condition.
- 1.14. Photovoltaic panels are a low-carbon energy source and can be sized to secure a proportion of a residential unit's energy supply.
- 1.15. Notwithstanding this, we have calculated that (subject to detailed SAP energy calculations) a photovoltaic requirement of circa 13.5kWp across the development would represent circa 10% energy production.
- 1.16. 1kWp is equivalent to 8.5m² of panel and on this basis $13.5 \times 8.5 = 114.75$ sqm of panel across the development could be delivered in the locations indicated on the accompanying plan to meet the requirements of policy.
- 1.17. The accompanying plan demonstrates 419.4sqm of suitable (i.e. visually acceptable) roofspace for PV provision. The 114.75sqm provision can clearly be easily accommodated within these roof spaces.
- 1.18. Further to the above, additional measures have been taken to reduce carbon dioxide emissions through the energy efficient design of the site and building as discussed in the next section. The proposals additionally include 6no electric vehicle charging points to encourage residents to use/purchase electric vehicles and sufficient cycle storage has been provided at the site to further encourage sustainable transport methods.

Adur & Worthing Council's Sustainability and Carbon Emission Reduction Design Strategy (2019-2020)

- 1.19. As set out within the Design & Access Statement, full regard has also been given to Adur & Worthing Council's Sustainability and Carbon Emission Reduction Design Strategy (2019-2020) as set out below.
 - **Building Fabric** - The building fabric will meet the required u-values outlined in the above document. Triple glazed windows are proposed in some area of the building, which will exceed the required 1.6 W/(m².K).
 - **Thermal Bridging** - A continuous insulation layer is proposed for the entirety of the building envelope to manage cold bridging and ensure optimum building performance.
 - **Managing Overheating** - The airtight building envelope will not encounter the risk of overheating due to the orientation of the built form. The building faces west capturing the evening sun and has minimal glazing to the east and south, in order to minimise solar gain in the apartments. Additionally, internal solar shading techniques will be used to obscure any unwanted solar gain.
 - **Comfort and environmental control** - All apartments will be naturally ventilated with cross ventilation in the main living spaces, in order to mitigate formation of condensation or mould. Openable windows are provided to all living spaces and bedrooms for regulated internal environment and heat loss.



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- **Energy Efficiency** - Photovoltaic panels are used as a low-carbon energy source, which can be sized to secure a proportion of a residential unit's energy supply. In this regard the scheme seeks to provide sufficient PV panels which are in excess of the recommend provision as set out by guidance and as set out above. Additionally, the required pipework systems will be insulated in order to manage system efficiency, as well as uncontrolled heat gains.
- **Simplifying ongoing maintenance and repairs** - The proposal comprises common high-quality equipment manufacturers and types in order to simplify ongoing maintenance and repair.

1.20. Please also refer to the Planning Statement and Design & Access Statement for further information.