



Randell Design Group
Halls Orchard Barn, Oak Lane
Apuldram, Chichester
West Sussex PO20 7FD



Planning Condition No. 8. Renewable Energy Supply

PROJECT NAME Royal Hotel
PROJECT NUMBER 169
Rev 01 Draft for review

"None of the new flats shall be occupied unless and until the applicant has submitted a scheme for approval by the Local Planning Authority to demonstrate that the development will incorporate decentralised, renewable and low carbon energy supply systems. The approved scheme shall thereafter be implemented prior to occupation of the flats and any approved renewable energy supply systems shall be permanently retained & maintained in good working order thereafter."

Referring to the Arun District Local Plan in regards to sustainability of developments:

- 1. How the proposal's location and design adapts to impacts arising from climate change such as the increased probability of tidal and fluvial flooding; water stress; health impacts as a result of extreme temperatures and a decline in the quality of habitats and richness of biodiversity.**

This proposal is for the refurbishment of an otherwise dilapidated and unused seafront building. There is no increase in footprint from the existing property and the existing asphalt forecourt is to be converted into two large low-level planters, which will incorporate hardy, water efficient planting appropriate to the coastal setting. Wildlife stacks will be provided within this landscaping to provide additional habitats for invertebrates. This will provide an increase in natural habitats and biodiversity from the existing condition.

The proposal is located outside of flood zones 2&3, and the existing rainwater and surface water system is being upgraded to increase efficacy and will be fed directly into the existing surface water sewer running behind the property in order to prevent runoff and pollutants impacting the coastal environment.

The water efficiency of the scheme will be much improved, including water flow restrictors on taps and low flow showers, dual flush 4/6litre toilet cisterns and water efficient white goods (dishwasher/washing machine). These measures will assist in mitigating potential future water stress due to climate change.

- 2. How the development is designed to mitigate against the impacts of climate change by reducing the emissions of greenhouse gas in line with the Energy Hierarchy.**

The top of the energy hierarchy is to reduce the use of energy, and use energy more efficiently, and this scheme does so by taking a sustainable approach to the works proposed. This will be achieved through a 'whole building design approach' integrating environmental performance, accessibility, cost effectiveness, function, preservation, security and aesthetics.

All lighting will be low-energy LEDs, and all appliances provided are to have very good efficiency ratings (as indicated in the table below), which will result in a lower consumption of energy throughout.

Appliance	Brand	Model Number	Energy Rating
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Oven	Bosch		A+
Dishwasher	Bosch	SMV40C00GB	A+
Dishwasher 45cm	Bosch	SPV25CX00G	A+
Washing Machine	Bosch	WIW28000GB	A+++
Tall 70/30 Fridge	Bosch	KIV38X22GB	A+
Undercounter Fridge	Bosch	KUL15A60GB	A++
Fridge per plot 27	Bosch	KUR15A50GB	A+
Fridge per plot 27	Bosch	GUD15A50GB	A+
Induction Hob	Bosch	PUE611BB1E	175 W/h

The complete building fabric – including walls, windows, floors, roofs – will be upgraded to provide greater energy efficiency and airtightness. All roofs are to be insulated and appropriately ventilated, while all external walls will be internally insulated with thermally lined plasterboard. This will result in a large decrease in the amount of energy required to heat the internal spaces.

Timber use in the construction will be FSC certified, and, where possible, the building's existing materials will be reused and recycled throughout. Existing features are to be retained and repaired as much as possible.

At the end of the proposals building life, the masonry, timber and steel used in the construction will all be able to be reused or recycled.

3. How proposal contributes to meeting the national targets to reduce carbon emissions.

The proposal massively increases the efficiency and reduces the consumption of energy as compared to its current state as described in prior points.

The scheme also discourages car usage in lieu of sustainable modes of transport, with no parking spaces provided but ample cycle storage. The scheme is also within easy walking distance of Bognor Regis train station, and there are 6 bus stops within a five minute walk of the site.

The existing parking bays to the front of the property along the Esplanade will be provided with electric car charging points, once again encouraging users to change to transport methods that reduce carbon emissions.

4. Demonstrate how the proposal will achieve energy efficiency measures that reflect the current standards applicable at the time of submission.

A fabric first approach has been applied to this scheme regarding the energy efficiency of the building's thermal elements, proposing to meet or exceed the following U-Values (as per Tables 2 & 3 of Approved Document Part L1B):

For upgraded elements:

Floors 0.25 W/(m²k)

Walls 0.30 W/(m²k)

Roofs 0.18 W/(m²k)

For New Elements:

Floors 0.22 W/(m²k),

Walls 0.28 W/(m²k),
Roofs 0.18 W/(m²k)

5. Demonstrate how the proposal will use design and layout to promote energy efficiency

The existing building fabric is being reused as much as practicable, and upgraded to meet or exceed Building Regulation requirements. The existing glazing is to be replaced with new, high-performance uPVC windows. On the south façade the majority of windows are shaded by overhangs and canopies as per the original design. This allows the windows to receive passive solar gain when the winter sun is at a low angle and avoid overheating in the summer when the sun is at a high angle.

6. Demonstrate how the proposal will incorporate decentralised, renewable and low carbon energy supply systems, for example small scale renewable energy systems such as solar panels.

Due to the prominent and exposed location of this scheme it is considered unviable to generate energy on-site. There is insufficient land area to provide energy via a ground source heat pumps. Air source heat pumps can only be located in high-visibility locations, and produce noise that may impact upon the surrounding areas. Solar panels are inefficient unless located on the prominent, south-facing façade which will adversely impact the heritage aspects of this property.

7. Schemes will be expected to contribute to the social, economic and environmental development and overall regeneration of the District.

The scheme contains a commercial component, a restaurant tenancy, which will provide local jobs and also additional amenity in the surrounding area. The restoration of the heritage building will contribute greatly to the regeneration of the area while remaining sympathetic to the local character.

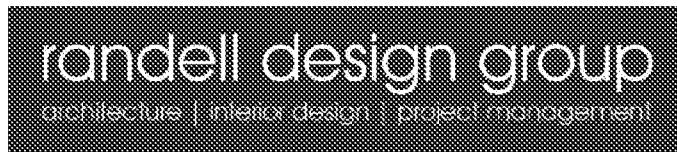
8. Demonstrate how the proposal is located and designed to minimise adverse impacts to landscape, habitats, the historic environment and residential amenity including visual, noise and odour impacts

The proposal consists mainly of restoring and renovating the abandoned and derelict seafront hotel in a manner that is sympathetic to the existing character and local surrounds. The visual amenity will be greatly increased by the updating and continued ongoing maintenance of this property in future.

The landscape component is being improved with the addition of 40sqm of additional landscaping, improving the visual amenity and enhancing the landscape and habitats in the vicinity.

Noise impact is being mitigated by a full internal acoustic upgrade to meet Building Regulations as per Approved Document E. All external plant shall be fitted with noise attenuating measures.

Odour impacts are being mitigated by providing dedicated bin stores for both residential and commercial uses, and a dedicated waste management plan for them, preventing unsightly and malodorous bins being left on the street.



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- 9. Demonstrate a suitable connection to the electricity distribution network, or appropriate energy storage facility, and provide evidence to demonstrate that the connection will not result in unacceptable impacts upon the landscape, natural and historic environment or visual and residential amenity.**

The property will undergo a complete rewire as part of the works, and the existing incoming mains distribution will be entirely replaced.

No external energy generation systems will be provided, so there will be no impact on the environment or visual amenity.