South Tyneside and Sunderland NHS Foundation Trust
Integrated Diagnostic Centre

Energy Statement

Consilium Solutions Group LLP
R5 Birch Suite
Mamhilad House
Mamhilad Park Estate
Pontypool
NP4 0HZ

T - 01633 373871
www.consiliumsg.com

Audit Sheet

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1.0 INTRODUCTION

This document has been prepared to support the planning application for a new clinical diagnostics centre at South Shields Hospital, South Shields.

2.0 BUILDING PERFORMANCE

2.1 General

The building will in all aspects comply with the requirements for building regulations Part L. Insulation and fabric performance will exceed the minimum requirements. A computational model will be provided to show compliance with the building regulations Part L. We understand there are no planning requirements beyond the Part L requirements.

2.2 Domestic Water

Currently the mains cold water enters the building on the ground floor within the kitchen. The supply point may be moved as part of the works and the exact location should be agreed. It would be relatively straightforward to move the incoming supply point.

3.0 ENERGY STRATEGY

3.1 Heating

Heat source for the development is from highly efficient air source heat pumps.

3.2 Cooling

Cooling for the development is from highly efficient air source heat pumps.

3.3 Ventilation

The facility will be mechanically ventilated throughout as required for the process and operations. High efficiency fans with inverter drives will be used. Heat recovery and recirculation principles will be used to avoid unnecessary energy use.

3.4 Hot Water

Hot water will be generated locally by high efficiency water heaters and use a pumped return system to maintain and control legionella

3.5 Lighting

Lighting will be high efficiency LED units with controls to limit energy usage when areas are not in use.

3.6 Energy Metering

Energy metering will be provided and linked to a central management systems to monitor individual system energy performance.

4.0 RENEWABLE ENERGY SOURCE CONSIDERATIONS

4.1 Heating Renewable Option (CHP/Biomass)

Consideration to using CHP/Biomass was given and due to impact on air quality and in favour of more efficient generation this technology was not considered viable.

4.2 Ground & Air Source Systems

High efficiency air source heat pumps will be used to generate heating and cooling for the facility. Ground source was considered to be uneconomically viable for this scheme.

4.3 Photovoltaics

There is potential to include photovoltaic panels if required to meet the requirements of Building Regulations Part L. These could be located on the roof of the proposed development. Access for maintenance would be required and given the building form would require significant investment to facilitate.

4.4 Hydro

There is no viable water source for hydro renewable systems.

4.5 Wind

The opportunity for installing a wind turbine on this site is limited and the average wind speed at 10m does not indicate a wind turbine as a suitable method in this case.