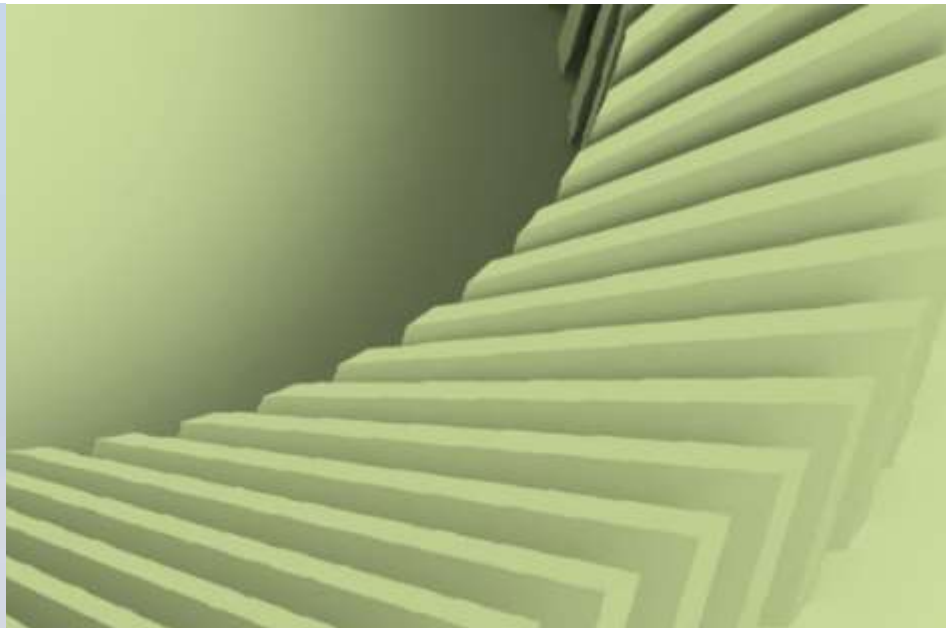


Planning Issues Ltd

South Street, Bridport
Energy Statement



June 2024



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Focus Consultants 2010 LLP, FocusHouse, Millennium Way West, Phoenix Business Park, Nottingham NG8 6AST. 0115 976 5050

Contact Information

Client:	Planning Issues Churchill House Parkside Ringwood Hampshire BH24 3SG
Client Lead:	Laura Coombe-Baker
Tel:	01425 462 140 / 07393 019 1
Email:	laura.coombes-baker@planningissues.co.uk
Prepared By:	Focus Consultants 2010 LLP Focus House Millennium Way West Phoenix Business Park Nottingham NG8 6AS
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Focus Contact Details:	Meridyth Rogerson, Graduate Sustainability Consultant meridyth.rogerson@focus-consultants.com
Authorised By:	Jason Redfearn, Partner
Signature:	

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Contents Page

	Page
1.0 Introduction	3
2.0 Planning Policy	4
3.0 Policy Response	6
4.0 Conclusion	14

Appendices

- Appendix 1 - Proposed Site Plan
- Appendix 2 - Part G Water Calculations
- Appendix 3 - SAP/SBEM Calculations (Available on request due to size)

1.0 Introduction

1.1 Purpose of the Report

Instructions were received from Laura Coombe-Baker of Planning Issues to produce an Energy Statement for the proposed development at South Street, Bridport. This report has been produced to support the planning application to be submitted for the proposed development, which is situated within the boundaries of Dorset County Council.

This statement provides a response to the relevant Dorset County Council documents and policies:

- West Dorset, Weymouth & Portland Local Plan 2015
 - INT1. Presumption In Favour of Sustainable Development
- The Bridport Area Neighbourhood Plan 2020 - 2036 Final Version - May 2020
 - Policies CC1, CC2, CC3 & D9

1.2 Site and Building Description

The development will be located between Doctor Roberts Close and South Street, Bridport DT6 3NP. The application seeks approval for the construction of a retirement living complex consisting of 48 apartment dwellings (a mix of 1- & 2-bed), as well as associated parking spaces, landscaping and communal areas. The communal areas comprise circulation spaces, a Guest Suite, a communal lounge and staff facilities. There will also be 25 2-bed cottages. A proposed site layout has been included in Appendix 1.

1.3 Methodology

The proposed specifications, house type drawings and site plan were reviewed to gain a good understanding of the development; following this, sample SAP & representative SBEM calculations for all proposed building types have been completed to determine the As Designed performance of the development. The application will be considered under the Part L 2022 regulations. Therefore, the new Elmhurst SAP 10 & SBEM software have been used to conduct the above calculations.

An assessment has been completed to review the potential connection of the proposed development to an existing district heat network. Up to date map data has been provided by the Association of Decentralised Energy, to enable the suitability and distance in relation to the location of the proposed development from a district heating network be reviewed.

In relation to the Part G water requirements, a proposed sanitaryware specification has been assessed against the 125 litre/person/day limit outlined in the building regulations requirements.

2.0 Planning Policy

2.1 West Dorset, Weymouth & Portland Local Plan 2015

The West Dorset, Weymouth & Portland Local Plan 2015 outlines the requirements for new developments regarding sustainability, with INT1. having been identified as relevant.

2.2 INT1. Presumption in Favour of Sustainable Development

i) *There will be a presumption in favour of sustainable development that will improve the economic, social and environmental conditions in the area. Where there are no policies relevant to an application, or relevant policies are out of date at the time of making the decision, the following matters will be taken into account:*

- *the extent to which the proposal positively contributes to the strategic objectives of the local plan;*
- *whether specific policies in that National Planning Policy Framework indicate that development should be restricted; and*
- *whether the adverse impacts of granting permission could significantly outweigh the benefits.*

2.3 The Bridport Area Neighbourhood Plan 2020 - 2036 Final Version - May 2020

The Bridport Area Neighbourhood Plan 2020 - 2036 Final Version - May 2020 outlines the requirements for new developments regarding sustainability, with Policies CC1, CC2, CC3 & D9 having been identified as relevant.

2.4 Policy CC1 Publicising Carbon Footprint

Applicants should seek to minimise the carbon footprint of development proposals and are encouraged to submit a statement setting out the anticipated carbon emissions of the proposed development.

2.5 Policy CC2 Energy and Carbon Emissions

New development should aim to meet a high level of energy efficiency where achievable, by:

- Exceeding the target emission rate of Building Regulations Part L 2013 for dwellings.*
- Meeting the relevant design category of Buildings Research Establishment BREEAM building standard "excellent" for non-residential development.*

2.6 Policy CC3 Energy generation to Offset Predicted Carbon Emissions

New development, both commercial and residential is encouraged, where possible, to secure at least 10% of its total unregulated energy from decentralised and renewable or low carbon sources.

2.7 Policy D9 Environmental Performance

Applicants are encouraged to design buildings to last, employing modern innovative technologies and methods of construction to, for instance, reduce construction costs, speed up construction, and minimise energy consumption and carbon emissions during the building's lifetime, such as:

- Adopting energy conservation in the construction phase of new buildings (including the use of local materials to avoid transport impacts).*

- b) *Avoid using those materials most harmful to the environment (those given a 'D' or 'E' rating in the Green Guide to Specification).*
- c) *Use southerly facing roof slopes for solar thermal and/or photovoltaic installations, where possible integrated into the roof design, subject to the appropriate level of heritage and conservation assessment.*
- d) *Maximise opportunities for natural lighting and ventilation to buildings.*
- e) *In areas with known flooding issues, or where extensive areas (greater than 5 square metres) of hard surfacing are required, using permeable materials.*
- f) *Including systems to collect rainwater for use, also the use of grey water.*
- g) *Designing homes to Lifetime Homes Standard.*

3.0 Policy Response

3.1 Energy Efficiency

In efforts to reduce the overall carbon emissions associated with the development and to maximise the energy efficiency, the developer has a robust ‘fabric first’ approach to the build specification, which allows it to achieve compliance with all metrics under the recently adopted and revised Approved Document Part L 2022.

This will be achieved in this project through building fabric improvements with an uplift on the minimum requirements of Approved Document Part L 2022, and also specification of efficient mechanical and electrical services, including a number of ‘add-on’ measures to improve efficiency and performance.

Fabric Energy Efficiency is a measure of the efficiency of the building fabric, the key areas being building fabric U-values, thermal bridging, air permeability, thermal mass and features which affect lighting and solar gains. A higher fabric energy efficiency means that the building will require less energy to heat and cool thus reducing the energy demand of the property and the CO₂ released.

Table 1 below demonstrates how the specification of the development at South Street, Bridport compares to the limiting values and minimum efficiencies allowed within Part L 2022.

Building Element	Limiting Part L 2022 Specification	Proposed Specification Part L
External Walls U-Value	0.26	0.17
Roof U-Value	0.16	0.11
Ground Floor U-Value	0.18	0.12
Window U-Value	1.60	0.80
Party Wall U-Value	0.20	0.00
Heating Efficiency	100%	100%
Pressure Test	8.00	5.00
Lighting Lumens	75 lm/w	80 lm/w

The development is proposed to adopt a ‘fabric first’ approach to the specification and as detailed above, the proposed U-Values are a significant uplift on the minimum requirements under Part L.

The build-up of external walls for the dwellings consist of a fully filled 150mm cavity that achieves a u-value of 0.17W/m²K with the addition of insulated plasterboard to the inside face. With regards to the thermal envelope as a whole, well insulated cavity walls, roof, floors and openings provide a comfortable environment within the development and reduce the buildings’ reliance on the main heating system. The high thermal mass, achieved through the use of dense blocks to the inner face of the external wall, will be key to temperature regulation. The air permeability target is 5.00 m³/(h.m²), again providing a significant improvement over the Notional Building target.

Triple Glazed windows are currently proposed for the scheme, which is a significant improvement over the requirements of ADL1 and is more in line with the proposed specification for the 2025 Future Homes Standard. This improved U-Value will provide significant benefit to the overall performance of the scheme, minimising heat loss through this construction element.

Intelligent construction methods are also utilised in the specification of this development. The use of bespoke calculated thermal bridge details and a relatively simple building form ensures that thermal performance is enhanced by minimising heat and energy losses through thermal bridges and air gaps.

In addition to the robust fabric specification as detailed above, the client is also proposing an efficient M&E strategy.

Space Heating is serviced through direct electric panel heaters which provide efficiencies of up to 100%.

The use of an electric heating solution strategy also brings the client in line with what appears to be the Government's preferred direction of travel for domestic heating going forward and given the continuing decarbonisation of the grid, electricity can be seen as an increasingly low carbon solution. The client's strategy for Water Heating is still under review, but a highly efficient electric based strategy will be employed.

A Mechanical Ventilation System (MEV) will be installed to all apartments and bungalows. MEV is a whole house ventilation methodology which consists of a system of extract fans and background ventilators in bathrooms and kitchens. These are set to run constantly at low speeds to draw moisture-laden air out of the home. As such, they provide the same benefits as intermittent fans in wet rooms, but do so with a higher degree of efficiency, minimising the need for electricity use for ventilation.

An EVCP control unit is used to monitor electricity use within the apartment building and assists with distribution of the solar photovoltaic (PV) output around the building and to elements such as Electric Vehicle (EV) charging points. Each apartment also benefits from its own individual smart meter.

3.2 Fabric Energy Efficiency

Table 2 below demonstrates the development's approximate average building fabric energy efficiency based on the sample domestic building types modelled.

Table 2: Fabric Energy Efficiency Breakdown	
Domestic	Average (kWh /m ² /yr)
Target Fabric Energy Efficiency (TFEE)	25.72
Dwelling Fabric Energy Efficiency (DFEE)	24.25
Percentage Reduction (%)	5.71%

As a result of the sample SAP outputs for the development, Table 2 shows the average Target Fabric Energy Efficiency (TFEE) of the development to be 25.72 kWh/m²/yr. The average Predicted Dwelling Fabric Energy Efficiency (DFEE) is demonstrated to be an improvement against this amount, currently modelled to achieve 24.25 kWh/m²/yr.

Overall, this is an improvement in fabric energy efficiency, equating approximately 5.71% reduction against the notional amount. This highlights the design specification performance of the development being an uplift to Building Regulations requirements.

3.3 Decentralised Energy

An exercise has been completed reviewing the potential for the proposed development at South Street, Bridport to connect to an existing district heat network. The Association for Decentralised Energy’s (ADE) District Heating connection map has been reviewed to confirm the closest possible connection point.

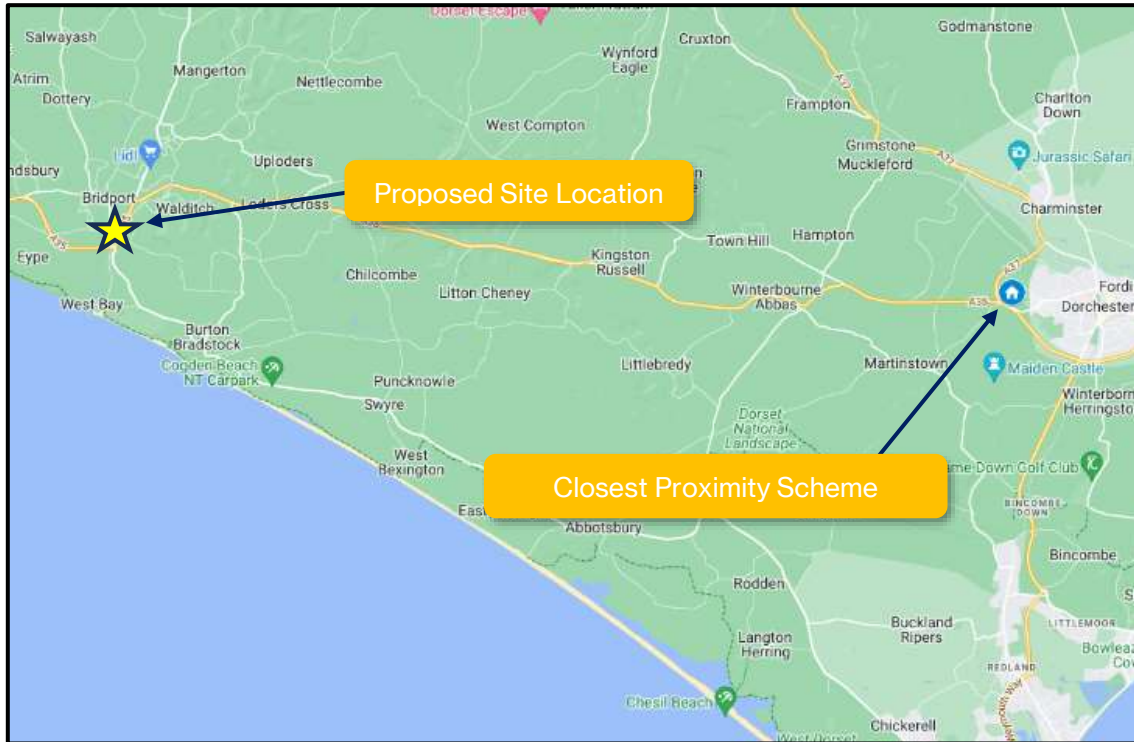


Figure 1 – Association of Decentralised Energy - www.theade.co.uk

As demonstrated in figure 1, the closest connection point is the *Poundbury Connection, DT1 3SU*, approximately 14 miles from the proposed site location. Due to the extended distance between these two points, it is considered that this would not be a feasible application

3.4 Renewable Energy

Photovoltaics

Photovoltaic panels convert solar radiation into direct current electricity. In principle, they are an ideal source of renewable energy as they harness the most abundant source of energy on the Earth, the sun, and they produce electricity, which is the most useful form of energy.

PV's are silent in operation, have no moving parts and have a long life with low maintenance levels. PV systems can be connected to the grid or battery arrays in remote locations. Grid connected systems consist of PV arrays connected to the grid through a charge controller and an inverter. PV cells are more efficient at lower temperatures so good ventilation should be allowed around the PV modules where possible.

As part of the design proposals, the development at South Street, Bridport will include a Solar PV array to contribute to total energy demand and reduce CO₂ emissions in operation.

Table 3 shows the modelled PV energy reduction for South Street, Bridport.

Table 3: Energy Reduction from PV

System	Proposed Energy Reduction (kWh/yr)	Kilowatt-peak Equivalent (kWp)
Photovoltaic Systems	111,927.17	124.36

Based on an average generation of 900kWh per 1kWp of PV, the results of the sample SAP and representative SBEM outputs demonstrate this will generate energy equivalent to an amount of approximately 111,927.17 kWh/yr.

Whilst an average figure of 900kWh per 1kWp of PV have been used, actual generation may vary depending on a number of factors, including orientation, angle and any shading to the PV panels installed.

3.5 Carbon Emissions Breakdown

To understand the overall approximate performance of the development, sample SAP and representative SBEM calculations have been undertaken. The initial calculations have been undertaken on a sample of the proposed dwellings at the development. Software outputs of the calculations completed can be made available on request.

Table 4 demonstrates the development’s total approximate breakdown of carbon emissions based on the employed specification and addition of Solar PV.

Table 4: Carbon Emission Breakdown

Domestic	Predicted Carbon Emissions (kgCO ₂ /yr)
Target Emission Rate (TER)	52,821.29
Dwelling Emission Rate (DER)	23,205.74
Non-Domestic	Predicted Carbon Emissions (kgCO ₂ /yr)
Target Emission Rate (TER)	4,291.75
Building Emission Rate (BER)	4,242.21
Total Reduction	29,665.09
Percentage Reduction (%)	51.94%

As a result of the sample SAP and representative SBEM outputs for the development, Table 4 shows the total Target CO₂ emissions (TER) of the development to be 57,113.04 kgCO₂/yr. The average Predicted CO₂ emissions (DER) is demonstrated to be an improvement against this amount, currently modelled to achieve 27,447.94 kgCO₂/yr.

Overall, this is a 29,665.09 kg/CO₂/yr reduction in carbon emissions, approximately 51.94% reduction against the notional amount. This highlights the design specification performance of the development being a significant improvement above Building Regulations requirements.

3.6 Unregulated Energy

Policy CC3 requires any new development to source at least 10% of its total unregulated energy from decentralised and renewable or low carbon sources. As such, unregulated energy has been calculated for the proposed development, in order to quantify if the proposed Solar PV provision is sufficient.

With regards to the sample SAP calculations completed, unregulated energy has been calculated utilising the figures founded by *The Good Homes Alliance Building Standards Comparison in 2020*, which provides a kWh/m² figure, based on the size of the development.

Gross Internal Floor Area (m ²)	Calculated Occupancy (SAP)	Unregulated Energy kWh / m ² / year
50	1.69	24.4
61	2.01	21.9
84	2.53	19.3
110	2.81	16.3

With regards to the representative SBEM utilised for the communal and circulation spaces within the development, the unregulated energy figure has been derived from the ‘equipment’ value in the corresponding BRUKL output document.

Table 5 details the total projected unregulated energy based on these values

Table 5: Unregulated Energy Breakdown	
	Energy Use (kWh /yr)
Total estimated unregulated energy (Residential)	110,583.17
Total estimated unregulated energy (Non-Residential)	26,629.90
Total unregulated energy	137,213.07
Policy CC3 10% Target	13,721.31
Proposed Solar PV Generation for Development	111,927.17
Renewable Energy > 10% of unregulated energy	Yes

As noted from Table 5, the development’s proposed Solar PV installation significantly exceeds the 10% requirement as stipulated by Policy CC3, in this regard, it can be confirmed the policy is achieved.

3.7 Water Use Efficiency

In order for the development to meet the requirement that planned water usage does not exceed the Building Regulations Requirement of 125 Litres/person/day. The development at South Street, Bridport, will incorporate efficient, water saving sanitaryware to meet this goal. Where this is not possible, flow restrictors will be installed to limit water use of sanitaryware items.

Representative specifications are shown in Tables 6 and 7. Based on these specifications, the 1 bed apartments at the site will achieve a predicted mains internal water consumption of 98.20 litres/person/day and the 2 bed apartments and cottages will achieve a predicted mains internal water consumption of 104.70 litres/person/day.

Whilst the final flow rates of individual sanitaryware items may change as detailed design progresses, performance sufficient to comply with this condition will be maintained. A full breakdown of calculations is available in Appendix 2.

Table 6: Proposed Sanitaryware Specification Flow Rates (1 Bed Apartments)

Component	Water Usage
WC's	4.5 Litres (Full Flush Volume), 3 Litres (Part Flush Volume)
Showers	8 Litres/Minute
Wash-hand basin taps	4 Litres/Minute
Kitchen taps	5 Litres/Minute
Bath	N/A
Washing Machine	8.17 Litres/kg (Default Figures)
Dishwasher	1.25 Litres/Place Setting (Default Figures)

Table 7: Proposed Sanitaryware Specification Flow Rates (2 Bed Apartments & Cottages)

Component	Water Usage
WC's	4.5 Litres (Full Flush Volume), 3 Litres (Part Flush Volume)
Showers	8 Litres/Minute
Wash-hand basin taps	4 Litres/Minute
Kitchen taps	5 Litres/Minute
Bath	155 Litres Capacity
Washing Machine	8.17 Litres/kg (Default Figures)
Dishwasher	1.25 Litres/Place Setting (Default Figures)

Both specifications provide expected flow rates below the Building Regulations requirement of 125 Litres/person/day.

3.8 BREEAM

The development at South Street, Bridport is understood to be a residential development and therefore BREEAM would not be considered an appropriate assessment methodology.

3.9 Building Orientation & Energy Consumption

The proposed dwellings under the application have been favourably orientated to allow for large solar gains to be received throughout the day, and as a result, a large portion of the apartments and cottages will receive passive heating and benefit from sunlight. The development will not be significantly shaded by surrounding buildings so that overshadowing will not be an issue.

The use of high thermal mass and good insulation levels in this proposed scheme provides an effective medium for managing solar gains, both having the ability to both hold heat and cool.

High levels of thermal mass will be present due to the nature of construction, which can absorb excess heat throughout the day, keeping the surrounding area cooler, and then slowly release and re-radiate the stored heat as the temperature drops. This prevents rooms from becoming uncomfortably hot in summer and stores warmth in winter.

The proposed development will have associated green amenity space for residents to serve as green infrastructure, as well as providing other green planting areas. This green infrastructure has the potential to reduce the risk of heat island effect, acting as a heat soak for the scheme.

The proposed scheme will be assessed against the new Part O Overheating Building Regulations. It is currently expected that compliance will be achieved through a combination of passive measures and mechanical ventilation, and the client is currently in the process of developing a rigorous strategy to ensure Part O Compliance. Where further measures are required to ensure Part O Compliance, these will be installed in full by the client.

3.10 Waste and Recycling

In efforts to reduce waste throughout the construction process, as part of the design development, the design team have implemented a number of measures to eliminate potential waste. The contractor will be required to have an effective site waste management system adopting waste hierarchy principles of reduce, reuse, or recycle. All waste will be handled by a licensed waste contractor who will segregate and process waste produced. Such waste will be separated into key waste groups and recycled at a waste processing plant to be refined into new products or reused in other projects where they cannot be reformed. A target will be set for the contractor in terms of reduction of waste that is taken to landfill that will be an improvement on standard market practices, and they will be expected to demonstrate compliance with this. Site hoarding or materials where safe and appropriate will be transported from other sites for reuse.

The design of the dwellings looks to incorporate recycling facilities for residents further encouraging the principles of recycling. The council operate's an alternative collection for refuse waste & recycling waste, allowing for residents to segregate waste types in a more sustainable manner. To enable efficient segregation of operational waste for their residents, sufficient spacings and access will be provided to dwellings to enable waste bins to be collected in line with Dorset County Council waste collection regime.

3.11 Material Selection

The new development at South Street, Bridport will strive to incorporate sustainable design into the building. Material selection will endeavour to show preference to suppliers who operate responsible sourcing practices and have current environmental management certificates. Examples including FSC/PEFC certified timber products will be utilised, this ensures all products have been obtained from sustainable and legal sources.

Where possible, the development will look to source building materials from local suppliers. Through this approach, delivery materials will be transported lesser distance, reducing the associated CO₂ emissions and fuel use of delivery loads. Similarly, where feasible contractors and site personnel required will be selected who are local to the site to aid the construction efforts. This again will reduce the associated CO₂ emissions of travel, in addition to supporting the local economy.

The development design is to standard material dimensions to avoid waste generation. This reduces waste not only at the manufacturing stage, but also during construction as it reduces the need to re-size materials on site. In addition, the use of standardised materials increases the ease of deconstruction and improves the likelihood that the materials will be reused, in the eventuality that the site is redeveloped in the future.

4.0 Conclusion

This statement has reviewed the proposed development at South Street, Bridport, a retirement living complex consisting of 48 apartment dwellings (a mix of 1- & 2-bed), as well as associated parking space, landscaping, and communal areas. The communal areas comprise circulation spaces, a Guest Suite, a communal lounge and staff facilities. Under the proposals, there will also be 25 2-bed cottages.

- West Dorset, Weymouth & Portland Local Plan 2015
 - INT1. PRESUMPTION IN FAVOUR OF SUSTAINABLE DEVELOPMENT
- The Bridport Area Neighbourhood Plan 2020 - 2036 Final Version - May 2020
 - Policies CC1, CC2, CC3 & D9

The statement has highlighted that the scheme currently proposes to utilise a robust, well insulated thermal envelope to minimise heat loss, as well as efficient heating and lighting systems, which will drive energy efficiency in the building. Solar Photovoltaic panels will be provided to the suitable roof areas of the scheme. It is currently proposed that an array with a total predicted output of 111,927.17 kWh/yr will be applied to the scheme. This is in line with the Policy CC2's objective of promoting development which minimises energy consumption, and in turn carbon emissions and greenhouse gas emissions.

The calculations completed on the building fabric confirm that the specification meets the required performance in relation to Dwelling Fabric Energy Efficiency (DFEE). The proposed carbon emissions of 24.25 kWh /m²/yr, against the Target Fabric Energy Efficiency (TFEE) of 25.72 kWh/m²/yr confirm an approximate 5.71% improvement, meeting Building Regulations Part L 2022 requirements.

The calculations completed on the building fabric confirm that the specification meets the required performance in relation carbon emissions. The proposed carbon emissions of 27,447.94 kg/CO₂/yr, against the target carbon emissions of 57,113.04 kg/CO₂/yr confirm an approximate 51.94% improvement, thereby exceeding Building Regulations Part L 2022 requirements.

The proposed provision of Solar PV included as part of the proposals has been found to significantly exceed the 10% requirement stipulated by Policy CC3 in relation to unregulated energy

Two proposed sanitaryware specifications have been detailed, both of which provide a significant improvement over the Building Regulations requirement of 125 Litres/per person/per day.

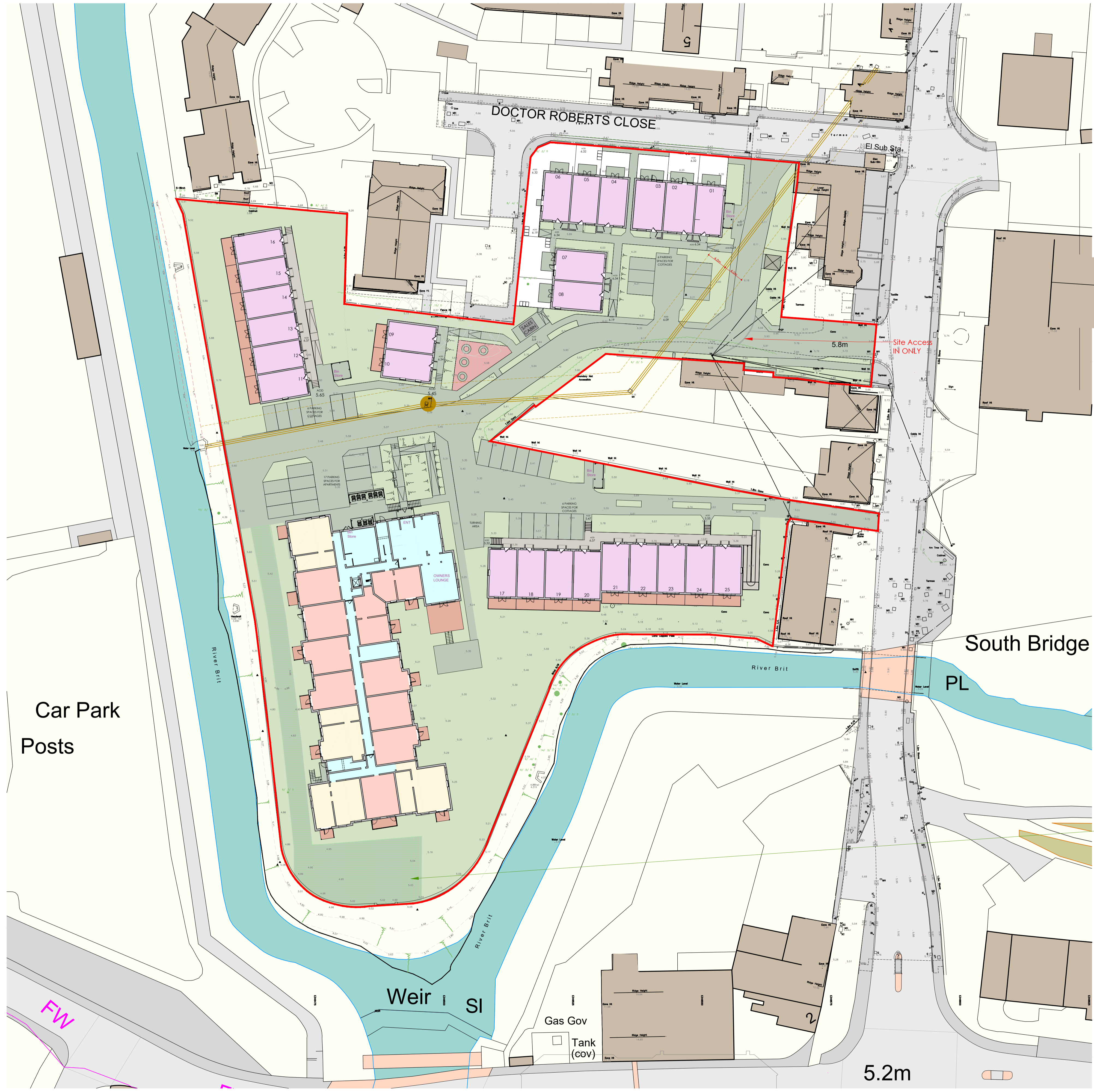
Whilst the proposed water sanitaryware flow rates and construction specification are the preferred specification at this present time. Nonetheless, it will be ensured that where any changes are made, the policy requirements listed will be maintained.



Appendix 1

Proposed Site Plan





REVISIONS		
Rev.	Date	By
A xxx	xxxx	xx

APARTMENTS	
1 bed	32
2 bed	16
TOTAL	48
(33.3% 2B)	
COTTAGES	25
TOTAL UNITS	73

SITE AREA	DENSITY
10,587 m ²	69 units/hectare

PARKING	
Apartments (unallocated)	17 (0.35)
Cottages (unallocated)	18 (0.72)
TOTAL	35

- Soft landscape
- Hard landscape
- Balconies/terraces
- Ramps, steps and raised access areas

©CHURCHILL RETIREMENT LIVING

planning issues
TOWN PLANNING AND ARCHITECTURAL DESIGN

Rob Jackson RIBA
Design Director - South West
Churchill House * Parkside
Ringwood * Hampshire BH24 3SG
Telephone: (01423) 462372
Fax: (01423) 462191
E-mail: design@planningissues.co.uk

Client

Churchill Retirement Living

Project Title

Retirement Housing
Hanson and Phillips Depot
Bridport
DT6 3NP

Drawing Title

SITE PLAN
RED FILE

Scale 1:400 © A1 Date May 2024

Drawn KR Checked RJ

Drawing No. Rev.

10070BP- RF 01

Bridport - Hanson and Phillips Depot, - Proposed Retirement Housing - Site Plan



Appendix 2

Part G Water Calculations





Job no:	R3499
Date:	June 2024
Assessor name:	Meridyth Rogerson
Registration no:	
Development name:	South Street, Bridport

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WATER EFFICIENCY CALCULATOR FOR NEW DWELLINGS - (BASIC CALCULATOR)

		Type 1		Type 2		Type 3		Type 4		Type 5		Type 6		Type 7		Type 8		Type 9		Type 10	
House Type:		Type 1		Type 2		Type 3		Type 4		Type 5		Type 6		Type 7		Type 8		Type 9		Type 10	
Description:		1 Bed Properties		2 Bed Properties																	
Installation Type	Unit of measure	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day	Capacity/flow rate	Litres/person/day
Is a dual or single flush WC specified?		Dual		Dual		Select option:		Select option:		Select option:		Select option:		Select option:		Click to Select		Click to Select		Click to Select	
WC	Full flush volume	4.5	6.57	4.5	6.57		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
	Part flush volume	3	8.88	3	8.88		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Taps (excluding kitchen and external taps)	Flow rate (litres / minute)	4	7.90	4	7.90		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Are both a Bath & Shower Present?		Shower only		Bath & Shower		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:	
Bath	Capacity to overflow		0.00	155	17.05		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Shower	Flow rate (litres / minute)	8	44.80	8	34.96		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Kitchen sink taps	Flow rate (litres / minute)	5	12.56	5	12.56		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Has a washing machine been specified?		Yes		Yes		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:	
Washing Machine	Litres / kg	8.17	17.16	8.17	17.16		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Has a dishwasher been specified?		Yes		Yes		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:		Select option:	
Dishwasher	Litres / place setting	1.25	4.50	1.25	4.50		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Has a waste disposal unit been specified?		No	0.00	No	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00
Water Softener	Litres / person / day		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
Calculated Use		102.4		109.6			0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0
Normalisation factor		0.91		0.91			0.91		0.91		0.91		0.91		0.91		0.91		0.91		0.91
Code for Sustainable Homes	Total Consumption	93.2		99.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	Mandatory level	Level 3/4		Level 3/4		-		-		-		-		-		-		-		-	
Building Regulations 17.K	External use	5.0		5.0		5.0		5.0		5.0		5.0		5.0		5.0		5.0		5.0	
	Total Consumption	98.2		104.7		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	17.K Compliance?	Yes		Yes		-		-		-		-		-		-		-		-	



Appendix 3

SAP/SBEM Calculations (Available on request due to size)