

Professionals delivering value



Energy
Consultancy

Apartment A
59 Bethel Street
Norwich

As Built Standard Assessment Procedure & Energy Performance Certificate

CNC CS Project
Ref: EC257



Professionals delivering value

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Regulated by RICS

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As Built SAP Data Sheet

This As Built submission has been carried out by an Authorised SAP Assessor. The Assessor has confirmed any changes from the Design Submission with the builder.

Assessor Name Mr Marco Valori **Assessor Number** 4544
Client Dart Property Co Ltd
Date Last Modified 15/06/2010
Address Apartment A, 59 Bethel Street, Norwich, Norfolk, NR2 1NR

Property type: Flat
 Built form: N/A
 Flat type: Ground floor
 Year built: 2010
 Degree day region: East Anglia
 Height above sea: 30
 Wind speed: 5.00
 Exposure: Average
 Number of sheltered sides: 4.00
 Terrain: Dense urban

Storeys:

Name	Basement	Area	Height
Lowest floor	No	56.39 m ²	2.20 m
Living room area =		31.77 m ²	Area Fraction = 0.56

Floors:

Name	Type	Construction	Sealed	Area	Zone 1	U-value
Floor 1	Ground	Solid ground floor	N/A	56.39 m ²	31.77 m ²	0.20 W/m ² K

Walls:

Name	Construction	Basement	Area	U-value
Wall 1	Brick	No basement present	26.18 m ²	1.28 W/m ² K

Roofs:

Name	Construction	Area	U-value
		m ²	W/m ² K

Opening Ref:

Type	1	Master:	Yes
From source:	Window	Linked to:	0.00
Description:	Table 6x (SAP 2005)	Location name:	Wall 1
Frame:	W1	Width:	0.92 m
Thermal break:	Wood	Height:	0.22 m
Draught proofing:	N/A	Area:	0.20 m ²
Metal lintel:	Good seal	Overhang depth:	0.00 m
Glazing Type:	No	Overhang width:	0.00 m
Orientation:	Single	Transmittance:	0.85
Overshading:	South West	Fraction glazed:	0.70
	Average / Unknown	U-value:	4.80 W/m ² K



FS 25719

Submission Reference Number:
NB-NES-00004544-10061508572035


URN: EC257 V: 10

Plan Assessor V: 4.4.25

SAP Worksheet (Version - 9.81)

Date Last Modified 15/06/2010

Assessor Name Mr Marco Valori

Assessor Number 4544

Opening Ref: 4

Type	Window	Master:	No		
From source:	Table 6x (SAP 2005)	Linked to:	1.00		
Description:	W3	Location name:	Wall 1		
Frame:	Wood	Width:	1.34 m	Transmittance:	0.85
Thermal break:	N/A	Height:	1.24 m	Fraction glazed:	0.70
Draught proofing:	Good seal	Area:	1.66 m ²	U-value:	4.80 W/m ² K
Metal lintel:	No	Overhang depth:	0.00 m		
Glazing Type:	Single	Overhang width:	0.00 m		
Orientation:	North East				
Overshading:	Average / Unknown				

Opening Ref: 5

Type	Window	Master:	No		
From source:	Table 6x (SAP 2005)	Linked to:	1.00		
Description:	D1	Location name:	Wall 1		
Frame:	Wood	Width:	1.13 m	Transmittance:	0.85
Thermal break:	N/A	Height:	2.42 m	Fraction glazed:	0.70
Draught proofing:	Good seal	Area:	2.73 m ²	U-value:	4.80 W/m ² K
Metal lintel:	No	Overhang depth:	0.00 m		
Glazing Type:	Single	Overhang width:	0.00 m		
Orientation:	North East				
Overshading:	Average / Unknown				

Thermal bridging:

Detailed thermal bridges calculation:	No
'y' value type:	0.15 default 'y' value used
User defined 'y' value:	N/A
'y' value calculation method:	N/A

Air permeability:

Air permeability entered:	No
Draught lobby:	No
Mechanical ventilation:	Not present (natural)
Number of fireplaces:	0
Number of flues:	0
Number of flueless gas fires:	0
Number of fans and vents:	2
Air Conditioning present?:	No

Main heating:

Electricity Tariff:	10 hour
Main heating type:	Room heaters
Efficiency from:	Manufacture declaration
Manufacturer description:	Electric Panel Heater
Second boiler/fuel:	N/A
Boiler type:	N/A



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Fuel:	Electricity
Fan flue:	N/A
Main heating system:	Panel, convector or radiant heaters
Controls:	Programmer and appliance stat
Emitter:	N/A
Boiler Interlock:	N/A
Compensator:	N/A
Pump in heated space:	N/A
Main heating efficiency:	100.00 %
Test method:	N/A

Community heating CHP:

Is there CHP:	N/A
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Secondary heating system:

Secondary heating present:	No
Open flue or chimney present:	No

A secondary heating system is defaulted by the software for calculating the DER, in accordance with the building regulations.

Water heating:

Water heating type:	Dual immersion
Cylinder within dwelling:	N/A
Water heating fuel:	Electricity
Water heating separately timed:	N/A

Cylinder details:

Manufacturer's loss factor :	Yes
Declared factor :	1.10
Cylinder volume:	120.00 (in litres)
Cylinder insulation:	N/A
Cylinder thickness:	N/A
Thermostat:	No
In heated space:	Yes
Primary pipework insulation:	N/A
Pumped primary system:	N/A

Solar water heating:

Solar water heating:	No
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Photovoltaics (PV):

Photovoltaics:	No
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Wind turbines:

Wind turbines:	No
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Additional allowable generation:

Is there additional Electricity generation: No

Low energy lighting:

 Low energy lights: 80.00 % of fixed lighting outlets
 (30% assumed for DER calculation)

External lighting:

 Assess external lighting: No
 Fittings only accept > 40 lumens per circuit watt: N/A
 Lamps not > 150W, off in day and at night when not needed: N/A

Appliances:

 Cooker type: No cooker supplied
 Cooker fuel: N/A

Number of Occupants:

 Occupants: Standard occupancy
 Adults: N/A

Heating pattern:

Heating pattern: Standard

Summer overheating:

Summer overheating included: Yes

Thermal Mass Parameter (TMP):

 User defined value: No
 TMP: 14.50
 Internal partition construction: Dense plaster, masonry
 Party wall construction: Dense plaster, masonry
 Description: N/A

Ventilation:

 User defined value: No
 Air change rate: 0.80
 Cross ventilation on most floors: Yes
 Window ventilation: Slightly open (50mm)


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Date Last Modified 15/06/2010**Assessor Name** Mr Marco Valori**Assessor Number** 4544**Solar Shading:**

Curtains closed in daylight hours: No
Fraction curtains closed: N/A
Blind/curtain type: N/A

Separated heated conservatory:

Heated conservatory present: No

Special features:

Special features included: No



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Energy Performance Certificate

Energy Performance Certificate




Apartment A
59, Bethel Street
NORWICH
NR2 1NR

Dwelling type: Ground floor flat
Date of assessment: 15 June 2010
Date of certificate: 15 June 2010
Reference number: 8930-6936-7520-9645-7992
Type of assessment: SAP, new dwelling
Total floor area: 56 m²


This home's performance is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO₂) emissions.

Energy Efficiency Rating

	Current	Potential
Very energy efficient - lower running costs		
(92 plus) A		
(81 - 91) B		
(69 - 80) C		
(55 - 68) D		
(39 - 54) E	52	52
(21 - 38) F		
(1 - 20) G		
Not energy efficient - higher running costs		
England & Wales EU Directive 2002/91/EC 		

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO₂) Rating

	Current	Potential
Very environmentally friendly - lower CO ₂ emissions		
(92 plus) A		
(81 - 91) B		
(69 - 80) C		
(55 - 68) D	66	66
(39 - 54) E		
(21 - 38) F		
(1 - 20) G		
Not environmentally friendly - higher CO ₂ emissions		
England & Wales EU Directive 2002/91/EC 		

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

Estimated energy use, carbon dioxide (CO₂) emissions and fuel costs of this home

	Current	Potential
Energy use	299 kWh/m ² per year	299 kWh/m ² per year
Carbon dioxide emissions	2.5 tonnes per year	2.5 tonnes per year
Lighting	£41 per year	£41 per year
Heating	£446 per year	£446 per year
Hot water	£133 per year	£133 per year

Based on standardised assumptions about occupancy, heating patterns and geographical location, the above table provides an indication of how much it will cost to provide lighting, heating and hot water to this home. The fuel costs only take into account the cost of fuel and not any associated service, maintenance or safety inspection. This certificate has been provided for comparative purposes only and enables one home to be compared with another. Always check the date the certificate was issued, because fuel prices can increase over time and energy saving recommendations will evolve.



Remember to look for the energy saving recommended logo when buying energy-efficient products. It's a quick and easy way to identify the most energy-efficient products on the market.

For advice on how to take action and to find out about offers available to help make your home more energy efficient, call **0800 512 012** or visit **www.energysavingtrust.org.uk**

About this document

The Energy Performance Certificate for this dwelling was produced following an energy assessment undertaken by a qualified assessor, accredited by the NHER Accreditation Scheme, to a scheme authorised by the Government. This certificate was produced using the SAP 2005 assessment methodology and has been produced under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007 as amended. A copy of the certificate has been lodged on a national register.

Assessor's accreditation number: NHER004544
Assessor's name: Mr Marco Valori
Company name/trading name: CNC Consultancy Services Ltd
Address: Thorpe Lodge, 1 Yarmouth Road, Norwich, NR7 0DU
Phone number: 01603430149
Fax number: 01603430541
E-mail address: enquiries@cncconsultancy.co.uk
Related party disclosure: No related party

If you have a complaint or wish to confirm that the certificate is genuine

Details of the assessor and the relevant accreditation scheme are as above. You can get contact details of the accreditation scheme from their website at www.nher.co.uk together with details of their procedures for confirming authenticity of a certificate and for making a complaint.

About the building's performance ratings

The ratings on the certificate provide a measure of the building's overall energy efficiency and its environmental impact, calculated in accordance with a national methodology that takes into account factors such as insulation, heating and hot water systems, ventilation and fuels used. The average Energy Efficiency Rating for a dwelling in England and Wales is band E (rating 46).

Not all buildings are used in the same way, so energy ratings use 'standard occupancy' assumptions which may be different from the specific way you use your home. Different methods of calculation are used for homes and for other buildings. Details can be found at www.communities.gov.uk/epbd.

Buildings that are more energy efficient use less energy, save money and help protect the environment. A building with a rating of 100 would cost almost nothing to heat and light and would cause almost no carbon emissions. The potential ratings on the certificate describe how close this building could get to 100 if all the cost effective recommended improvements were implemented.

About the impact of buildings on the environment

One of the biggest contributors to global warming is carbon dioxide. The way we use energy in buildings causes emissions of carbon. The energy we use for heating, lighting and power in homes produces over a quarter of the UK's carbon dioxide emissions and other buildings produce a further one-sixth.

The average household causes about 6 tonnes of carbon dioxide every year. Adopting the recommendations in this report can reduce emissions and protect the environment. You could reduce emissions even more by switching to renewable energy sources. In addition there are many simple everyday measures that will save money, improve comfort and reduce the impact on the environment. Some examples are given at the end of this report.

Visit the Government's website at www.communities.gov.uk/epbd to:

- Find how to confirm the authenticity of an energy performance certificate
- Find how to make a complaint about a certificate or the assessor who produced it
- Learn more about the national register where this certificate has been lodged
- Learn more about energy efficiency and reducing energy consumption

Recommended measures to improve this home's energy performance

Apartment A
59, Bethel Street
NORWICH
NR2 1NR

Date of certificate: 15 June 2010
Reference number: 8930-6936-7520-9645-7992

Summary of this home's energy performance related features

The following is an assessment of the key individual elements that have an impact on this home's performance rating. Each element is assessed against the following scale: Compliant / Average / Good / Very good.

Element	Description	Current performance	
		Energy Efficiency	Environmental
Walls	Average thermal transmittance 1.28 W/m ² K	Compliant	Compliant
Roof	(other premises above)	-	-
Floor	Average thermal transmittance 0.20 W/m ² K	Very good	Very good
Windows	Single glazed	Compliant	Compliant
Main heating	Room heaters, electric	Compliant	Compliant
Main heating controls	Programmer and appliance thermostats	Good	Good
Secondary heating	None	-	-
Hot water	Electric immersion, off-peak	Compliant	Compliant
Lighting	Low energy lighting in 80% of fixed outlets	Very good	Very good
Air tightness	(not tested)	-	-

Current energy efficiency rating

E 52

Current environmental impact (CO₂) rating

D 66

Thermal transmittance is a measure of the rate of heat loss through a building element; the lower the value the better the energy performance.

Air permeability is a measure of the air tightness of a building; the lower the value the better the air tightness.

Low and zero carbon energy sources

None

Recommendations

None.

Further measures to achieve even higher standards

None.

About the cost effective measures to improve this home's performance ratings

Not applicable.

About the further measures to achieve even higher standards

Not applicable.

What can I do today?

Actions that will save money and reduce the impact of your home on the environment include:

- Ensure that you understand the dwelling and how its energy systems are intended to work so as to obtain the maximum benefit in terms of reducing energy use and CO₂ emissions. The papers you are given by the builder and the warranty provider will help you in this.
- Check that your heating system thermostat is not set too high (in a home, 21°C in the living room is suggested) and use the timer to ensure you only heat the building when necessary.
- Make sure your hot water is not too hot - a cylinder thermostat need not normally be higher than 60°C.
- Turn off lights when not needed and do not leave appliances on standby. Remember not to leave chargers (e.g. for mobile phones) turned on when you are not using them.
- Close your curtains at night to reduce heat escaping through the windows.
- If you're not filling up the washing machine, tumble dryer or dishwasher, use the half-load or economy programme.



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