



Report Reference: Westhaven Area AF2
Site Registration: 004371-150212-89-1142
Site Name: Westhaven Area AF2
Assessor Number: STRO004371
Company: Building Energy Performance Ltd
Assessor: Kevin O'Donnell



Site Details

Site Name: Westhaven Area AF2
 Site Registration: 004371-150212-89-1142
 Site Address: Westhaven
 West Pond

 City/Town: Barry
 County: Vale of Glamorgan
 Postcode: CF62 5AZ
 No. of Dwellings: 2
 No. of Dwelling Types: 17
 Planning Authority: Vale of Glamorgan Council
 Funding Body:

Assessor Details

Company: Building Energy Performance Ltd
 Assessor Name: Kevin O'Donnell
 Cert Number: STRO004371
 Address: Unit 7 Roundabout Court
 Greenway
 Bedwas House Industrial Estate

 City/Town: Bedwas
 County: Caerphilly
 Postcode: CF83 8FS
 Tel: 029 20851111
 Email: office@bepltd.co.uk

Client Details

Company: Persimmon Homes East Wales Ltd
 Contact Name: Luke Davies
 Job Title: Planning Manager
 Email:
 Tel: 01443 445365
 Address: Persimmon House
 Llantrisant Business Park
 Llantrisant

 City/Town: Rhondda Cynon Taff
 County:
 Postcode: CF72 8YP

Architect Details

Company: Persimmon Homes East Wales Ltd
 Contact Name: Luke Davies
 Job Title: Planning Manager
 Email:
 Tel: 01443 445365
 Address: Persimmon House
 Llantrisant Business Park
 Llantrisant

 City/Town: Rhondda Cynon Taff
 County:
 Postcode: CF72 8YP

Developer Details

Company: Persimmon Homes East Wales Ltd
 Contact Name: Luke Davies
 Job Title: Planning Manager
 Email:
 Tel: 01443 445365
 Address: Persimmon House
 Llantrisant Business Park
 Llantrisant

 City/Town: Rhondda Cynon Taff
 County:
 Postcode: CF72 8YP

Dwelling ID	Plot No.	Address	Social Unit
1	28	Westhaven	No
2	29	Westhaven	No

Development Summary & Ratings

Dwelling ID	Dwelling Type	Description	Level	Score
		Westhaven	3	59.78
		Westhaven	3	58.15

Deviations from Standard

No deviations from standard

Score Sheet for Westhaven Area AF2

Dwelling ID	ENE									WAT		MAT			SUR		WAS			POL		HEA				MAN				ECO					Summary	
	1	2	3	4	5	6	7	8	9	1	2	1	2	3	1	2	1	2	3	1	2	1	2	3	4	1	2	3	4	1	2	3	4	5	Score	Level
1	2	7.9	2	1	1	2	0	2	0	3	1	12	6	3	0	2	4	3	1	1	3	3	3	1	0	3	1	2	0	0	1	0	0	0	59.78	3
2	1.8	7.7	2	1	1	2	0	2	0	3	1	12	6	3	0	2	4	3	1	1	3	2	3	1	0	3	1	2	0	0	1	0	0	0	58.15	3

Summary Score Sheet
 Dwelling Type: Westhaven

Dwelling ID: 1

			Score Assessment				
	Credit Score	Credits Available	Sub Total	Credits Available	%	Weighting Factor	Points Score
Energy & CO2 Emissions							
ENE 1 Dwelling Emission Rate	2	10	17.9	31	57.74	36.4	21.02
ENE 2 Fabric Energy Efficiency	7.9	9					
ENE 3 Energy Display Device	2	2					
ENE 4 Drying Space	1	1					
ENE 5 Energy Labelled White Goods	1	2					
ENE 6 External Lighting	2	2					
ENE 7 Low or Zero Carbon Energy Technologies	0	2					
ENE 8 Cycle Storage	2	2					
ENE 9 Home Office	0	1					
Water							
WAT 1 Internal Water Use	3	5	4	6	66.67	9	6
WAT 2 External Water Use	1	1					
Materials							
MAT 1 Environmental Impact of Materials	12	15	21	24	87.5	7.2	6.3
MAT 2 Responsible Sourcing (Basic Building Elements)	6	6					
MAT 3 Responsible Sourcing (Finishing Elements)	3	3					
Surface Water Run-off							
SUR 1 Management of Surface Water Run-Off from Site	0	2	2	4	50	2.2	1.1
SUR 2 Flood Risk	2	2					
Waste							
WAS 1 Household Waste Storage and Recycling Facilities	4	4	8	8	100	6.4	6.4
WAS 2 Construction Site Waste Management	3	3					
WAS 3 Composting	1	1					
Pollution							
POL 1 Global Warming Potential of Insulants	1	1	4	4	100	2.8	2.8
POL 2 NOx Emissions	3	3					
Health & Wellbeing							
HEA 1 Daylighting	3	3	7	12	58.33	14	8.17
HEA 2 Sound Insulation	3	4					
HEA 3 Private Space	1	1					
HEA 4 Lifetime Homes	0	4					
Management							
MAN 1 Home User Guide	3	3	6	9	66.67	10	6.67
MAN 2 Considerate Constructors Scheme	1	2					
MAN 3 Construction Site Impacts	2	2					
MAN 4 Security	0	2					
Ecology							
ECO 1 Ecological Value of Site	0	1	1	9	11.11	12	1.33
ECO 2 Ecological Enhancement	1	1					
ECO 3 Protection of Ecological Features	0	1					
ECO 4 Change of Ecological Value of Site	0	4					
ECO 5 Building Footprint	0	2					
			Level Achieved: 3		Total Points Scored: 59.78		

Evidence for ENE 1 (Dwelling Emission Rate)

Improvement above Part L Building Regulations 2010. 2 credits allocated

Refer to document: Elmhurst SAP Assessor Accreditation Cert 2013-14 in Ene1 folder.

Refer to document: Plot 28 Westhaven Area AF2 DS SAP Worksheet in Ene1 folder.

Refer to Ene1 Calculator Tool Result

Assumptions for ENE 1**Evidence for ENE 2 (Fabric Energy Efficiency)**

End Terrace

7.9 credits allocated

Refer to document: Elmhurst SAP Assessor Accreditation Cert 2013-14 in Ene1 folder.

Refer to document: Plot 28 Westhaven Area AF2 DS SAP Worksheet in Ene1 folder.

Refer to Ene1 Calculator Tool Result

Assumptions for ENE 2**Evidence for ENE 3 (Energy Display Device)**

Correctly specified display device showing current primary heating fuel consumption data.

Correctly specified display device showing current consumption data.

Refer to document: Page 1 item Ene3 Energy Display Device of Developers Letter in Ene3 folder.

Refer to document: EDD Information sub-folder in Ene3 folder for details of proposed Energy Display Device.

Assumptions for ENE 3**Evidence for ENE 4 (Drying Space)**

Compliant external drying space

Refer to document: Page 1 of Developers Letter (item Ene4 Drying Space) in Ene3 folder.

Refer to document: Westhaven Area AF2 External Works Site Plan within Ene4 folder.

Assumptions for ENE 4**Evidence for ENE 5 (Energy Labelled White Goods)**

EU energy efficiency labelling scheme leaflet provision/provided

Refer to document: Page 1 of Developer's Letter (item Ene5 Energy Labelled White Goods) in Ene3 folder.

Refer to document: Defra White Goods Energy Labelling Leaflet in Ene5 folder.

Assumptions for ENE 5**Evidence for ENE 6 (External Lighting)**

Complaint space lighting, no security lighting installed

Refer to document: Page 1 item Ene6 External Lighting of Developers Letter in Ene3 folder.

Assumptions for ENE 6**Evidence for ENE 7 (Low or Zero Carbon Energy Technologies)**

Credit(s) not sought or contribution of low or zero carbon technologies less than 10%

Credits Not Sought

Assumptions for ENE 7**Evidence for ENE 8 (Cycle Storage)**

2 or 3 bedroom dwelling - Storage for 2 cycles per dwelling

Refer to document: Page 1 of Developer's Letter (item Ene8 Cycle Storage) in Ene3 folder.

Assumptions for ENE 8**Evidence for ENE 9 (Home Office)**

Credit not sought or no compliant home office

Credit not sought.

Assumptions for ENE 9

Evidence for WAT 1 (Internal Water Use)

Internal water use less than or equal to 105 litres per person per day

Refer to document: Page 2 of Developer's Letter (item Wat1 Indoor Water Use) in Ene3 folder.

Refer to document: Greyfriars type Westhaven Area AF2 Water Calculator report in Wat1 folder.

Assumptions for WAT 1

Evidence for WAT 2 (External Water Use)

Compliant individual rainwater collection system

Refer to document: Page 2 of Developer's Letter (item Wat2 External Water Use) in Ene3 folder.

Assumptions for WAT 2

Evidence for MAT 1 (Environmental Impact of Materials)

Mandatory requirements met: At least 3 elements rated A+ to D, 12 credits scored

Refer to document: Page 2 of Developer's Letter (item Mat1 Environmental Impact of Materials) in Ene3 folder.

Refer to document: Green Guide Ratings Sub-Folder within Mat1 folder.

Refer to document: Mat1 Calculator Tool.

Assumptions for MAT 1

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements))

6 credits scored

Refer to document: Page 2 of Developer's Letter (item Mat2 Responsible Sourcing - Basic Building Elements) in Ene3 folder.

Refer to document: Mat2 Calculator.

Staircase: Refer to Stairs sub-folder in Mat2 folder for Travis Perkins evidence.

Internal Walls: Refer to Internal Walls sub-folder in Mat2 folder for Travis Perkins & Gyproc evidence.

External Walls: Refer to External Walls sub-folder in Mat2 folder for Ibstock, Space4 & Gyproc evidence.

Upper Floors: Refer to Upper Floors sub-folder in Mat2 folder for JJI Joists, Travis Perkins & Gyproc evidence.

Roof: Refer to Roof sub-folder in Mat2 folder for Marley Roofing & Travis Perkins evidence.

Assumptions for MAT 2

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements))

3 credits scored

Refer to document: Page 3 item Mat3 Responsible Sourcing - Finishing Elements of Developers Letter in Ene3 folder.

Stairs: Refer to Stairs sub-folder in Mat3 folder for Travis Perkins evidence.

Windows: Refer to Windows sub-folder in Mat3 folder for Duraflex Windows evidence.

Doors: Refer to Doors sub-folder in Mat3 folder for I G Doors evidence.

Skirtings: Refer to Skirtings sub-folder in Mat3 folder for Travis Perkins evidence.

Furniture: Refer to Furniture sub-folder in Mat3 folder for KWP Kitchens evidence.

Assumptions for MAT 3

Evidence for SUR 1 (Management of Surface Water Run-Off from Site)

Mandatory Met: Peak rate of run-off and annual volume of run-off is no greater for the developed than for the pre-development. The system has also been designed for local drainage system failure.

Credits not sought, water quality criteria not met/sought.

Refer to document: Westhaven, Barry Sur1 Template in Sur1 folder.

Refer to document: Westhaven, Barry Flood Risk Assessment Report in Sur1 folder.

Assumptions for SUR 1

Evidence for SUR 2 (Flood Risk)

Low flood risk - zone 1

Refer to document: Westhaven, Barry Sur1 Template in Sur1 folder.

Refer to document: Westhaven, Barry Flood Risk Assessment Report in Sur1 folder.

Assumptions for SUR 2**Evidence for WAS 1 (Household Waste Storage and Recycling Facilities)**

Mandatory requirements met: Adequate storage of household waste with accessibility in line with checklist WAS 1. Local authority collection: Before collection sorting with appropriate internal storage of recyclable materials

Refer to document: Page 2 of Developer's Letter (item Was1 Household Waste) in Ene3 folder.

Refer to document: Vale of Glamorgan CC Household Waste Collection Info within Was1 folder.

Refer to document: Completed IDP Checklist IDP (Westhaven Area Af2) in Was1 folder.

Refer to document: Westhaven Area AF2 Table Cat 5.1 in Was1 folder.

Assumptions for WAS 1**Evidence for WAS 2 (Construction Site Waste Management)**

Compliant site waste management plan containing benchmarks, procedures and commitments for the minimizing and diverting 80% waste from landfill in line with the criteria and with Checklist WAS 2a, 2b & 2c

.Refer to document: Page 2 item Was2 Construction Site Waste Management of Developers Letter in Ene3 folder

Assumptions for WAS 2**Evidence for WAS 3 (Composting)**

Individual compositing facility/facilities

Refer to document: Page 2 item Was3 Composting of Developers Letter in Ene3 folder.

Refer to document: Vale of Glamorgan CC Household Waste Collection Info within Was1 folder.

Refer to document: Completed IDP Checklist IDP (Westhaven Area AF2) in Was1 folder.

Refer to document: Westhaven Area AF2 Table Cat 5.1 in Was1 folder.

Assumptions for WAS 3**Evidence for POL 1 (Global Warming Potential of Insulants)**

All insulants have a GWP of less than 5

Refer to document: Westhaven Area AF2 completed Pol1 Checklist in Pol1 folder.

Refer to document: Insulants Manufacturers Information sub-folder within Pol1 folder

Assumptions for POL 1**Evidence for POL 2 (NOx Emissions)**

NOx emissions less than or equal to 40mg/kWh

Refer to document: Page 3 of Developer's Letter (item Pol2 NOx Emissions) in Ene3 folder.

Refer to document: Ideal Logic NOx Emissions Data in Pol2 folder.

Assumptions for POL 2**Evidence for HEA 1 (Daylighting)**

Kitchen: Average daylight factor of at least 2%

Living room: Average daylight factor of at least 1.5%

Dining room: Average daylight factor of at least 1.5%

All rooms (kitchen, living, dining and where applicable the home office) have 80% of the working plane with direct light from the sky

Refer to document: Page 3 item Hea1 Daylighting of Developers Letter in Ene3 folder.

Refer to document: CFSH Daylighting Calcs Greyfriars type Westhaven Area AF2 in Hea1 folder.

Refer to document: Westhaven Area AF2 View of Sky Sketches in Hea1 folder

Assumptions for HEA 1

Evidence for HEA 2 (Sound Insulation)

Accredited Part E sound testing has been undertaken
Airborne 5dB higher, impact 5dB lower

Refer to document: Page 3 item Hea 2 Sound Insulation of Developers Letter in Ene3 folder.

Assumptions for HEA 2

Evidence for HEA 3 (Private Space)

Individual private space provided.

Refer to document: Page 3 item Hea3 Private Space of Developers Letter in Ene3 folder.

Refer to document: Westhaven Area AF2 Site Plan Garden Sizes Sketch in Hea3 folder for garden sizes.

Refer to document: Completed IDP Checklist (Westhaven Area AF2) in Was1 folder.

Assumptions for HEA 3

Evidence for HEA 4 (Lifetime Homes)

Credits not sought

Credit not sought.

Assumptions for HEA 4

Evidence for MAN 1 (Home User Guide)

All criteria inline with checklist MAN 1 Part 1 - Operational Issues will be met

All criteria inline with checklist MAN 1 Part 2 - Site and Surroundings will be met

Refer to document: Page 3 item Man1 Home User Guide of Developers Letter in Ene3 folder.

Refer to document: Persimmon Homes Example HUG in Man1 folder.

Assumptions for MAN 1

Evidence for MAN 2 (Considerate Constructors Scheme)

Considerate constructors scheme: Best practise only, a score of between 25 - 34, and at least a score of 5 in each section*

Refer to document: Page 3 item Man2 Considerate Constructors Scheme of Developers Letter in Ene3 folder.

Refer to document: Westhaven Area AF2 CCS Registration in Man2 folder.

Assumptions for MAN 2

Evidence for MAN 3 (Construction Site Impacts)

Monitor, report and set targets for CO2 production or energy use from site activities

Monitor, report and set targets for water consumption from site activities

Adopt best practise policies in respects to air (dust) pollution from site activities

80% of timer reclaimed, re-used or responsibly sourced

Refer to document: Page 3 item Man3 Construction Site Impacts of Developers Letter in Ene3 folder

Assumptions for MAN 3

Evidence for MAN 4 (Security)

Credit not sought or no secure by design undertaken

Credit not sought.

Assumptions for MAN 4

Evidence for ECO 1 (Ecological Value of Site)

Credit not sought

Credits Not Sought

Assumptions for ECO 1

Evidence for ECO 2 (Ecological Enhancement)
Key recommendations and 30% additional recommendations by a suitably qualified ecologist
Refer to document: Westhaven Ecology Report in Ecology folder.
Assumptions for ECO 2

Evidence for ECO 3 (Protection of Ecological Features)
Credit not sought
Credits Not Sought
Assumptions for ECO 3

Evidence for ECO 4 (Change of Ecological Value of Site)
Credit not sought
Credits Not Sought
Assumptions for ECO 4

Evidence for ECO 5 (Building Footprint)
Credit not sought
Credits Not Sought
Assumptions for ECO 5

Summary Score Sheet
 Dwelling Type: Westhaven

Dwelling ID: 2

			Score Assessment					
	Credit Score	Credits Available	Sub Total	Credits Available	%	Weighting Factor	Points Score	
Energy & CO2 Emissions								
ENE 1	Dwelling Emission Rate	1.8	10	17.5	31	56.45	36.4	20.55
ENE 2	Fabric Energy Efficiency	7.7	9					
ENE 3	Energy Display Device	2	2					
ENE 4	Drying Space	1	1					
ENE 5	Energy Labelled White Goods	1	2					
ENE 6	External Lighting	2	2					
ENE 7	Low or Zero Carbon Energy Technologies	0	2					
ENE 8	Cycle Storage	2	2					
ENE 9	Home Office	0	1					
Water								
WAT 1	Internal Water Use	3	5	4	6	66.67	9	6
WAT 2	External Water Use	1	1					
Materials								
MAT 1	Environmental Impact of Materials	12	15	21	24	87.5	7.2	6.3
MAT 2	Responsible Sourcing (Basic Building Elements)	6	6					
MAT 3	Responsible Sourcing (Finishing Elements)	3	3					
Surface Water Run-off								
SUR 1	Management of Surface Water Run-Off from Site	0	2	2	4	50	2.2	1.1
SUR 2	Flood Risk	2	2					
Waste								
WAS 1	Household Waste Storage and Recycling Facilities	4	4	8	8	100	6.4	6.4
WAS 2	Construction Site Waste Management	3	3					
WAS 3	Composting	1	1					
Pollution								
POL 1	Global Warming Potential of Insulants	1	1	4	4	100	2.8	2.8
POL 2	NOx Emissions	3	3					
Health & Wellbeing								
HEA 1	Daylighting	2	3	6	12	50	14	7
HEA 2	Sound Insulation	3	4					
HEA 3	Private Space	1	1					
HEA 4	Lifetime Homes	0	4					
Management								
MAN 1	Home User Guide	3	3	6	9	66.67	10	6.67
MAN 2	Considerate Constructors Scheme	1	2					
MAN 3	Construction Site Impacts	2	2					
MAN 4	Security	0	2					
Ecology								
ECO 1	Ecological Value of Site	0	1	1	9	11.11	12	1.33
ECO 2	Ecological Enhancement	1	1					
ECO 3	Protection of Ecological Features	0	1					
ECO 4	Change of Ecological Value of Site	0	4					
ECO 5	Building Footprint	0	2					
			Level Achieved: 3	Total Points Scored: 58.15				

Evidence for ENE 1 (Dwelling Emission Rate)

Improvement above Part L Building Regulations 2010. 1.8 credits allocated

Refer to document: Elmhurst SAP Assessor Accreditation Cert 2013-14 in Ene1 folder.

Refer to document: Plot 29 Westhaven Area AF2 DS SAP Worksheet in Ene1 folder.

Refer to Ene1 Calculator Tool Result

Assumptions for ENE 1**Evidence for ENE 2 (Fabric Energy Efficiency)**

Mid Terrace

7.7 credits allocated

Refer to document: Elmhurst SAP Assessor Accreditation Cert 2013-14 in Ene1 folder.

Refer to document: Plot 29 Westhaven Area AF2 DS SAP Worksheet in Ene1 folder.

Refer to Ene1 Calculator Tool Result

Assumptions for ENE 2**Evidence for ENE 3 (Energy Display Device)**

Correctly specified display device showing current primary heating fuel consumption data.

Correctly specified display device showing current consumption data.

Refer to document: Page 1 item Ene3 Energy Display Device of Developers Letter in Ene3 folder.

Refer to document: EDD Information sub-folder in Ene3 folder for details of proposed Energy Display Device.

Assumptions for ENE 3**Evidence for ENE 4 (Drying Space)**

Compliant external drying space

Refer to document: Page 1 of Developers Letter (item Ene4 Drying Space) in Ene3 folder.

Refer to document: Westhaven Area AF2 External Works Site Plan within Ene4 folder.

Assumptions for ENE 4**Evidence for ENE 5 (Energy Labelled White Goods)**

EU energy efficiency labelling scheme leaflet provision/provided

Refer to document: Page 1 of Developer's Letter (item Ene5 Energy Labelled White Goods) in Ene3 folder.

Refer to document: Defra White Goods Energy Labelling Leaflet in Ene5 folder.

Assumptions for ENE 5**Evidence for ENE 6 (External Lighting)**

Complaint space lighting, no security lighting installed

Refer to document: Page 1 item Ene6 External Lighting of Developers Letter in Ene3 folder.

Assumptions for ENE 6**Evidence for ENE 7 (Low or Zero Carbon Energy Technologies)**

Credit(s) not sought or contribution of low or zero carbon technologies less than 10%

Credits Not Sought

Assumptions for ENE 7**Evidence for ENE 8 (Cycle Storage)**

2 or 3 bedroom dwelling - Storage for 2 cycles per dwelling

Refer to document: Page 1 of Developer's Letter (item Ene8 Cycle Storage) in Ene3 folder.

Assumptions for ENE 8**Evidence for ENE 9 (Home Office)**

Credit not sought or no compliant home office

Credit not sought.

Assumptions for ENE 9

Evidence for WAT 1 (Internal Water Use)

Internal water use less than or equal to 105 litres per person per day

Refer to document: Page 2 of Developer's Letter (item Wat1 Indoor Water Use) in Ene3 folder.

Refer to document: Morden type Westhaven Area AF2 Water Calculator report in Wat1 folder.

Assumptions for WAT 1

Evidence for WAT 2 (External Water Use)

Compliant individual rainwater collection system

Refer to document: Page 2 of Developer's Letter (item Wat2 External Water Use) in Ene3 folder.

Assumptions for WAT 2

Evidence for MAT 1 (Environmental Impact of Materials)

Mandatory requirements met: At least 3 elements rated A+ to D, 12 credits scored

Refer to document: Page 2 of Developer's Letter (item Mat1 Environmental Impact of Materials) in Ene3 folder.

Refer to document: Green Guide Ratings Sub-Folder within Mat1 folder.

Refer to document: Mat1 Calculator Tool.

Assumptions for MAT 1

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements))

6 credits scored

Refer to document: Page 2 of Developer's Letter (item Mat2 Responsible Sourcing - Basic Building Elements) in Ene3 folder.

Refer to document: Mat2 Calculator.

Staircase: Refer to Stairs sub-folder in Mat2 folder for Travis Perkins evidence.

Internal Walls: Refer to Internal Walls sub-folder in Mat2 folder for Travis Perkins & Gyproc evidence.

External Walls: Refer to External Walls sub-folder in Mat2 folder for Ibstock, Space4 & Gyproc evidence.

Upper Floors: Refer to Upper Floors sub-folder in Mat2 folder for JJI Joists, Travis Perkins & Gyproc evidence.

Roof: Refer to Roof sub-folder in Mat2 folder for Marley Roofing & Travis Perkins evidence.

Assumptions for MAT 2

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements))

3 credits scored

Refer to document: Page 3 item Mat3 Responsible Sourcing - Finishing Elements of Developers Letter in Ene3 folder.

Stairs: Refer to Stairs sub-folder in Mat3 folder for Travis Perkins evidence.

Windows: Refer to Windows sub-folder in Mat3 folder for Duraflex Windows evidence.

Doors: Refer to Doors sub-folder in Mat3 folder for I G Doors evidence.

Skirtings: Refer to Skirtings sub-folder in Mat3 folder for Travis Perkins evidence.

Furniture: Refer to Furniture sub-folder in Mat3 folder for KWP Kitchens evidence.

Assumptions for MAT 3

Evidence for SUR 1 (Management of Surface Water Run-Off from Site)

Mandatory Met: Peak rate of run-off and annual volume of run-off is no greater for the developed than for the pre-development. The system has also been designed for local drainage system failure.

Credits not sought, water quality criteria not met/sought.

Refer to document: Westhaven, Barry Sur1 Template in Sur1 folder.

Refer to document: Westhaven, Barry Flood Risk Assessment Report in Sur1 folder.

Assumptions for SUR 1

Evidence for SUR 2 (Flood Risk)

Low flood risk - zone 1

Refer to document: Westhaven, Barry Sur1 Template in Sur1 folder.

Refer to document: Westhaven, Barry Flood Risk Assessment Report in Sur1 folder.

Assumptions for SUR 2**Evidence for WAS 1 (Household Waste Storage and Recycling Facilities)**

Mandatory requirements met: Adequate storage of household waste with accessibility in line with checklist WAS 1. Local authority collection: Before collection sorting with appropriate internal storage of recyclable materials

Refer to document: Page 2 of Developer's Letter (item Was1 Household Waste) in Ene3 folder.

Refer to document: Vale of Glamorgan CC Household Waste Collection Info within Was1 folder.

Refer to document: Completed IDP Checklist IDP (Westhaven Area AF2) in Was1 folder.

Refer to document: Westhaven Area AF2 Table Cat 5.1 in Was1 folder.

Assumptions for WAS 1**Evidence for WAS 2 (Construction Site Waste Management)**

Compliant site waste management plan containing benchmarks, procedures and commitments for the minimizing and diverting 80% waste from landfill in line with the criteria and with Checklist WAS 2a, 2b & 2c

.Refer to document: Page 2 item Was2 Construction Site Waste Management of Developers Letter in Ene3 folder

Assumptions for WAS 2**Evidence for WAS 3 (Composting)**

Individual compositing facility/facilities

Refer to document: Page 2 item Was3 Composting of Developers Letter in Ene3 folder.

Refer to document: Vale of Glamorgan CC Household Waste Collection Info within Was1 folder.

Refer to document: Completed IDP Checklist IDP (Westhaven Area AF2) in Was1 folder.

Refer to document: Westhaven Area AF2 Table Cat 5.1 in Was1 folder.

Assumptions for WAS 3**Evidence for POL 1 (Global Warming Potential of Insulants)**

All insulants have a GWP of less than 5

Refer to document: Westhaven Area AF2 completed Pol1 Checklist in Pol1 folder.

Refer to document: Insulants Manufacturers Information sub-folder within Pol1 folder

Assumptions for POL 1**Evidence for POL 2 (NOx Emissions)**

NOx emissions less than or equal to 40mg/kWh

Refer to document: Page 3 of Developer's Letter (item Pol2 NOx Emissions) in Ene3 folder.

Refer to document: Ideal Logic NOx Emissions Data in Pol2 folder.

Assumptions for POL 2**Evidence for HEA 1 (Daylighting)**

Living room: Average daylight factor of at least 1.5%

Dining room: Average daylight factor of at least 1.5%

All rooms (kitchen, living, dining and where applicable the home office) have 80% of the working plane with direct light from the sky

Refer to document: Page 3 item Hea1 Daylighting of Developers Letter in Ene3 folder.

Refer to document: CFSH Daylighting Calcs Morden type Westhaven Area AF2 in Hea1 folder.

Refer to document: Westhaven Area AF2 View of Sky Sketches in Hea1 folder

Assumptions for HEA 1

Evidence for HEA 2 (Sound Insulation)

Accredited Part E sound testing has been undertaken
Airborne 5dB higher, impact 5dB lower

Refer to document: Page 3 item Hea 2 Sound Insulation of Developers Letter in Ene3 folder.

Assumptions for HEA 2

Evidence for HEA 3 (Private Space)

Individual private space provided.

Refer to document: Page 3 item Hea3 Private Space of Developers Letter in Ene3 folder.

Refer to document: Westhaven Area AF2 Site Plan Garden Sizes Sketch in Hea3 folder for garden sizes.

Refer to document: Completed IDP Checklist (Westhaven Area AF2) in Was1 folder.

Assumptions for HEA 3

Evidence for HEA 4 (Lifetime Homes)

Credits not sought

Credit not sought.

Assumptions for HEA 4

Evidence for MAN 1 (Home User Guide)

All criteria inline with checklist MAN 1 Part 1 - Operational Issues will be met

All criteria inline with checklist MAN 1 Part 2 - Site and Surroundings will be met

Refer to document: Page 3 item Man1 Home User Guide of Developers Letter in Ene3 folder.

Refer to document: Persimmon Homes Example HUG in Man1 folder.

Assumptions for MAN 1

Evidence for MAN 2 (Considerate Constructors Scheme)

Considerate constructors scheme: Best practise only, a score of between 25 - 34, and at least a score of 5 in each section*

Refer to document: Page 3 item Man2 Considerate Constructors Scheme of Developers Letter in Ene3 folder.

Refer to document: Westhaven Area AF2 CCS Registration in Man2 folder.

Assumptions for MAN 2

Evidence for MAN 3 (Construction Site Impacts)

Monitor, report and set targets for CO2 production or energy use from site activities

Monitor, report and set targets for water consumption from site activities

Adopt best practise policies in respects to air (dust) pollution from site activities

80% of timer reclaimed, re-used or responsibly sourced

Refer to document: Page 3 item Man3 Construction Site Impacts of Developers Letter in Ene3 folder

Assumptions for MAN 3

Evidence for MAN 4 (Security)

Credit not sought or no secure by design undertaken

Credit not sought.

Assumptions for MAN 4

Evidence for ECO 1 (Ecological Value of Site)

Credit not sought

Credits Not Sought

Assumptions for ECO 1

Evidence for ECO 2 (Ecological Enhancement)
Key recommendations and 30% additional recommendations by a suitably qualified ecologist
Refer to document: Westhaven Ecology Report in Ecology folder.
Assumptions for ECO 2

Evidence for ECO 3 (Protection of Ecological Features)
Credit not sought
Credits Not Sought
Assumptions for ECO 3

Evidence for ECO 4 (Change of Ecological Value of Site)
Credit not sought
Credits Not Sought
Assumptions for ECO 4

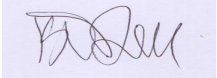
Evidence for ECO 5 (Building Footprint)
Credit not sought
Credits Not Sought
Assumptions for ECO 5

Assessor Declaration

I Kevin O'Donnell, can confirm that I have compiled this report to the best of my ability, I have based all findings on the information that is referenced within this report, and that this report is appropriate for the registered site.

To the best of my knowledge all the information contained within this report is correct and accurate. I have within my possession all the reference material that relates to this report, which is available for inspection by the client, the clients representative or Stroma Certification for Quality Assurance monitoring.

Signed:



Kevin O'Donnell
Building Energy Performance Ltd
12 February 2015

Information about Code for Sustainable Homes

The Code for Sustainable Homes (the Code) is an environmental assessment method for rating and certifying the performance of new homes. It is a national standard for use in the design and construction of new homes with a view to encouraging continuous improvement in sustainable home building. The Code is based on EcoHomes®.

It was launched in December 2006 with the publication of 'Code for Sustainable Homes: A stepchange in sustainable home building practice' (Communities and Local Government, 2006), and became operational in England from April 2007.

The Code for Sustainable Homes covers nine categories of sustainable design. Each category includes a number of environmental issues. Each issue is a source of impact on the environment which can be assessed against a performance target and awarded one or more credits. Performance targets are more demanding than the minimum standards needed to satisfy Building Regulations or other legislation. They represent good or best practice, are technically feasible, and can be delivered by the building industry. The issues and categories are as follows:

- Energy & CO2 Emissions
 - Dwelling Emission Rate
 - Building Fabric
 - Internal Lighting
 - Drying Space
 - Energy Labelled White Goods
 - External Lighting
 - Low or Zero Carbon Technologies
 - Cycle Storage
 - Home Office
- Water
 - Internal Water Use
 - External Water Use
- Materials
 - Environmental Impact of Materials
 - Responsible Sourcing of Materials - Basic Building Elements
 - Responsible Sourcing of Materials - Finishing Elements
- Surface Water Run-off
 - Management of Surface Water Run-off from the Development
 - Flood Risk
- Waste
 - Storage of Non-Recyclable Waste and Recyclable Household Waste
 - Construction Site Waste Management
 - Composting
- Pollution
 - Global Warming Potential of Insulants
 - NOx Emissions

- Health & Wellbeing
 - Daylighting
 - Sound Insulation
 - Private Space
 - Lifetime Homes
- Management
 - Home User Guide
 - Considerate Constructors Scheme
 - Construction Site Impacts
 - Security
- Ecology
 - Ecological Value of Site
 - Ecological Enhancement
 - Protection of Ecological Features
 - Change in Ecological Value of Site
 - Building Footprint

The Code assigns one or more performance requirements (assessment criteria) to all of the above environmental issues. When each performance requirement is achieved a credit is awarded (with the exception of the four mandatory requirements which have no associated credits). The total number of credits available to a category is the sum of credits available for all the issues within it.

Mandatory minimum performance standards are set for some issues. For four of these, a single mandatory requirement is set which must be met, whatever Code level rating is sought. Credits are not awarded for these issues. Confirmation that the performance requirements are met for all four is a minimum entry requirement for achieving a level 1 rating. The four un-credited issues are:

- Environmental Impacts of Materials
- Management of Surface Water Run-off from Developments
- Storage of Non-Recyclable Waste and Recyclable Household Waste
- Construction Site Waste Management

If the mandatory minimum performance standard is met for the four un-credited issues, four further mandatory issues need to be considered. These are agreed to be such important issues that separate Government policies are being pursued to mitigate their effects. For two of these, credits are awarded for every level of achievement recognised within the Code, and minimum mandatory standards increase with increasing rating levels.

The two issues with increasing mandatory minimum standards are:

- Dwelling Emission Rate
- Indoor Water Use

For one issue a mandatory requirement at Level 5 or 6:

- Fabric Energy Efficiency

The final issue with a mandatory requirement for Level 6 of the Code is:

- Lifetime Homes

Further credits are available on a free-choice or tradable basis from other issues so that the developer may choose how to add performance credits (converted through weighting to percentage points) achieve the rating which they are aiming for.

The environmental impact categories within the Code are not of equal importance. Their relative value is conveyed by applying a consensus-based environmental weighting factor (see details below) to the sum of all the raw credit scores in a category, resulting in a score expressed as percentage points. The points for each category add up to 100.

The weighting factors used in the Code have been derived from extensive studies involving a wide range of stakeholders who were asked to rank (in order of importance) a range of environmental impacts. Stakeholders included international experts and industry representatives.

It is also important to note that achieving a high performance in one category of environmental impact can sometimes result in a lower level of performance for another. For instance, if biomass is used to meet heating demands, credits will be available for performance in respect of energy supplied from a renewable source, but credits cannot be awarded for low NOX emission. It is therefore impossible to achieve a total percentage points score of 100.

The Code uses a rating system of one to six stars. A star is awarded for each level achieved. Where an assessment has taken place by where no rating is achieved, the certificate states that zero stars have been awarded:

Code Levels	Total Points Score (Equal to or Greater Than)
Level 1 ★☆☆☆☆☆	36 Points
Level 2 ★★☆☆☆☆	48 Points
Level 3 ★★★☆☆☆	57 Points
Level 4 ★★★★☆☆	68 Points
Level 5 ★★★★★☆	84 Points
Level 6 ★★★★★★	90 Points

Formal assessment of dwellings using the Code for Sustainable Homes may only be carried out using Certified assessors, who are qualified 'competent persons' for the purpose of carrying out Code assessments.

Energy & CO2 Emissions

ENE 1:Dwelling Emission Rate

Available Credits:10

Aim:To limit CO2 emissions arising from the operation of a dwelling and its services in line with current policy on the future direction of regulations.

ENE 2:Fabric Energy Efficiency

Available Credits:9

Aim:To improve fabric energy efficiency performance thus future-proofing reductions in CO2 for the life of the dwelling.

ENE 3:Energy Display Device

Available Credits:2

Aim:To promote the specification of equipment to display energy consumption data, thus empowering dwelling occupants to reduce energy use.

ENE 4:Drying Space

Available Credits:1

Aim:To promote a reduced energy means of drying clothes.

ENE 5:Energy Labelled White Goods

Available Credits:2

Aim:To promote the provision or purchase of energy efficient white goods, thus reducing the CO2 emissions from appliance use in the dwelling.

ENE 6:External Lighting

Available Credits:2

Aim:To promote the provision of energy efficient external lighting, thus reducing CO2 emissions associated with the dwelling.

ENE 7:Low or Zero Carbon Technologies

Available Credits:2

Aim:To limit CO2 emissions and running costs arising from the operation of a dwelling and its services by encouraging the specification of low and zero carbon energy sources to supply a significant proportion of energy demand.

ENE 8:Cycle Storage

Available Credits:2

Aim:To promote the wider use of bicycles as transport by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys and the associated CO2 emissions.

ENE 9:Home Office

Available Credits:1

Aim:To promote working from home by providing occupants with the necessary space and services thus reducing the need to commute.

Water

WAT 1:Indoor Water Use

Available Credits:5

Aim:To reduce the consumption of potable water in the home from all sources, including borehole well water, through the use of water efficient fittings, appliances and water recycling systems.

WAT 2:External Water Use

Available Credits:1

Aim:To promote the recycling of rainwater and reduce the amount of mains potable water used for external water uses.

Materials

MAT 1:Environmental Impact of Materials

Available Credits:15

Aim:To specify materials with lower environmental impacts over their life-cycle.

MAT 2:Responsible Sourcing of Materials - Basic Building Elements

Available Credits:6

Aim:To promote the specification of responsibly sourced materials for the basic building elements.

MAT 3:Responsible Sourcing of Materials - Finishing Elements

Available Credits:3

Aim:To promote the specification of responsibly sourced materials for the finishing elements.

Surface Water Run-off

SUR 1:Management of Surface Water Run-off from developments

Available Credits:2

Aim:To design surface water drainage for housing developments which avoid, reduce and delay the discharge of rainfall run-off to watercourses and public sewers using SuDS techniques. This will protect receiving waters from pollution and minimise the risk of flooding and other environmental damage in watercourses.

SUR 2:Flood Risk

Available Credits:2

Aim:To promote housing development in low flood risk areas, or to take measures to reduce the impact of flooding on houses built in areas with a medium or high risk of flooding.

Waste

WAS 1:Storage of non-recyclable waste and recyclable household waste

Available Credits:4

Aim:To promote resource efficiency via the effective and appropriate management of construction site waste.

WAS 2:Construction Site Waste Management

Available Credits:3

Aim:To promote resource efficiency via the effective and appropriate management of construction site waste.

WAS 3:Composting

Available Credits:1

Aim:To promote the provision of compost facilities to reduce the amount of household waste sent to landfill.

Pollution

POL 1:Global Warming Potential of Insulants

Available Credits:1

Aim:To promote the reduction of emissions of gases with high GWP associated with the manufacture, installation, use and disposal of foamed thermal and acoustic insulating materials.

POL 2:NOx Emissions

Available Credits:3

Aim:To promote the reduction of nitrogen oxide (NOX) emissions into the atmosphere.

Health & Wellbeing

HEA 1:Daylighting

Available Credits:3

Aim:To promote good daylighting and thereby improve quality of life and reduce the need for energy to light the home.

HEA 2:Sound Insulation

Available Credits:4

Aim:To promote the provision of improved sound insulation to reduce the likelihood of noise complaints from neighbours.

HEA 3:Private Space

Available Credits:1

Aim:To improve quality of life by promoting the provision of an inclusive outdoor space which is at least partially private.

HEA 4:Lifetime Homes

Available Credits:4

Aim:To encourage the construction of homes that are accessible and easily adaptable to meet the changing needs of current and future occupants.

Management

MAN 1:Home User Guide

Available Credits:3

Aim:To promote the provision of guidance enabling occupants to understand and operate their home efficiently and make the best use of local facilities.

MAN 2:Considerate Constructors Scheme

Available Credits:3

Aim:To promote the environmentally and socially considerate, and accountable management of construction sites.

MAN 3:Construction Site Impacts

Available Credits:2

Aim:To promote construction sites managed in a manner that mitigates environmental impacts.

MAN 4:Security

Available Credits:2

Aim:To promote the design of developments where people feel safe and secure- where crime and disorder, or the fear of crime, does not undermine quality of life or community cohesion.

Ecology

ECO 1:Ecological value of site

Available Credits:1

Aim:To promote development on land that already has a limited value to wildlife, and discourage the development of ecologically valuable sites.

ECO 2:Ecological enhancement

Available Credits:1

Aim:To enhance the ecological value of a site.

ECO 3:Protection of ecological features

Available Credits:1

Aim:To promote the protection of existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

ECO 4:Change in ecological value of site

Available Credits:4

Aim:To minimise reductions and promote an improvement in ecological value.

ECO 5:Building footprint

Available Credits:2

Aim:To promote the most efficient use of a building's footprint by ensuring that land and material use is optimised across the development.

Disclaimer

The contents of this publication reflect the assessment produced by the licensed Code assessor. Stroma Certification Ltd is not liable for any loss or damage sustained as a consequence of this report or any related information.

Copyright

The Code for Sustainable Homes, name, logo and associated documentation are owned by the Department for Communities and Local Government.

All software, calculation tools, templates and all related material provided by Stroma Certification remains the property of Stroma Certification Ltd.