



- architectural design
- town planning
- landscape architecture



John R Paley Associates

Report Reference: D09: 4198
Site Registration:
Site Name: Land off Wakefield Road
Assessor Number: STRO004941
Company: John R Paley Associates
Assessor: Kieran Mapplebeck



Site Details

Site Name: Land off Wakefield Road
 Site Registration:
 Site Address: Wakefield Road
 Mapplewell

 City/Town: Barnsley
 County: South Yorkshire
 Postcode: S75 6DN
 No. of Dwellings: 3
 No. of Dwelling Types: 4
 Planning Authority: Barnsley Metropolitan Borough Council
 Funding Body:

Assessor Details

Company: John R Paley Associates
 Assessor Name: Kieran Mapplebeck
 Cert Number: STRO004941
 Address: 1 Red Hall Crescent
 Paragon Business Village

 City/Town: Wakefield
 County: West Yorkshire
 Postcode: WF1 2DF
 Tel: 01924 383322
 Email: kieran.mapplebeck@jrpassoc.co.uk

Client Details

Company:
 Contact Name:
 Job Title:
 Email:
 Tel:
 Address:

 City/Town:
 County:
 Postcode:

Architect Details

Company: John R Paley Associates
 Contact Name: John Paley
 Job Title: Director
 Email:
 Tel:
 Address: 1 Red Hall Crescent
 Paragon Business Village

 City/Town: Wakefield
 County:
 Postcode:

Developer Details

Company:
 Contact Name:
 Job Title:
 Email:
 Tel:
 Address:

 City/Town:
 County:
 Postcode:

Dwelling ID	Plot No.	Address	Social Unit
1	1	Wakefield Road Mapplewell	No
2	2	Wakefield Road Mapplewell	No
3	3	Wakefield Road Mapplewell	No

Assessor Report Notes

This Pre-Assessment Report has been produced in support of an outline application to show a potential route to compliance with the Local Policy Target to achieve a Code for Sustainable Homes Level 3 rating.

The report contains three indicative Dwelling ID's representing three example routes to level 3 compliance for different house type as follows:

Dwelling ID1 Four Bedroom Detached Dwelling featuring roof mounted Solar PV panels to provide a 15% improvement in CO² Emissions.

Dwelling ID2 Four Bedroom Detached Dwelling with no renewables.

Dwelling ID3 Four Bedroom 2.5 storey Semi-detached Dwelling with no renewables

Each of the three dwelling types demonstrate potential routes to achieving a score higher than the minimum 57.00 point score required for reaching Level 3. Category credits are consistent for the site-wide categories: Water, Surface Water Run-off, Waste, Pollution, Management and Ecology.

Credit variation across the three example dwelling types occurs in the following categories:

Energy & CO² Emissions - 'Ene 7' credits for Solar PV renewable energy are traded with 'Ene 2' credits for increased fabric energy efficiency.

Health and Wellbeing – 'Hea 2' credit variation occurs between detached and attached dwellings due to detached dwellings scoring a maximum 4 credits by default. The semi-detached dwelling type scores 3 credits for this category for a robust detail separating wall with a 5dB sound reduction

Credit variation would also be likely for 'Hea 1' - Daylighting and 'Hea 3' – Private Space when detailed dwelling type information becomes available.

Development Summary & Ratings

Dwelling ID	Dwelling Type	Description	Level	Score
2	4 Bed Detached - No		3	57.14
1	4 Bed Detached - Solar		3	57.72
3	4 Bed SemiDet_		3	57.14

Deviations from Standard

No deviations from standard

Score Sheet for Land off Wakefield Road

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	1	3	1	1	2	2	2	2	1	3	1	8	4	2	0	2	4	1	1	1	1	2	4	1	0	2	1	2	2	0	1	1	3	0	57.72	3
2	1.5	4	1	1	2	2	0	2	1	3	1	8	3	3	0	2	4	1	1	1	1	2	4	1	0	2	1	2	2	0	1	1	3	0	57.14	3
3	1.5	4	1	1	2	2	0	2	1	3	1	8	3	3	0	2	4	1	1	1	1	2	4	1	0	2	1	2	2	0	1	1	3	0	57.14	3

Summary Score Sheet

Dwelling Type: 4 Bed Detached - Solar PV15%

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	1	10	15	31	48.39	36.4	17.61
ENE 2 Fabric Energy Efficiency	3	9					
ENE 3 Energy Display Device	1	2					
ENE 4 Drying Space	1	1					
ENE 5 Energy Labelled White Goods	2	2					
ENE 6 External Lighting	2	2					
ENE 7 Low or Zero Carbon Energy Technologies	2	2					
ENE 8 Cycle Storage	2	2					
ENE 9 Home Office	1	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	8	15	14	24	58.33	7.2	4.2
MAT 2 Responsible Sourcing (Basic Building Elements)	4	6					
MAT 3 Responsible Sourcing (Finishing Elements)	2	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	6	8	75	6.4	4.8
WAS 2 Construction Site Waste Management	1	3					
WAS 3 Composting	1	1					
Pollution							
POL 1 Global Warming Potential of Insulants	1	1	2	4	50	2.8	1.4
POL 2 NOx Emissions	1	3					
Health & Wellbeing							
HEA 1 Daylighting	2	3	7	12	58.33	14	8.17
HEA 2 Sound Insulation	4	4					
HEA 3 Private Space	1	1					
HEA 4 Lifetime Homes	0	4					
Management							
MAN 1 Home User Guide	2	3	7	9	77.78	10	7.78
MAN 2 Considerate Constructors Scheme	1	2					
MAN 3 Construction Site Impacts	2	2					
MAN 4 Security	2	2					
Ecology							
ECO 1 Ecological Value of Site	0	1	5	9	55.56	12	6.67
ECO 2 Ecological Enhancement	1	1					
ECO 3 Protection of Ecological Features	1	1					
ECO 4 Change of Ecological Value of Site	3	4					
ECO 5 Building Footprint	0	2					
			Level Achieved: 3		Total Points Scored: 57.72		

Evidence for ENE 1 (Dwelling Emission Rate) - 4 Bed Detached - Solar PV15%

Improvement above Part L Building Regulations 2010. 1 credits allocated

Assumptions for ENE 1

An improvement of approximately 8% over the minimum CO₂ emission standard required for 2010 Building Regulations compliance has been assumed. The exact credit score achieved will be dependant on construction specification and SAP assessment for each dwelling type.

Evidence for ENE 2 (Fabric Energy Efficiency) - 4 Bed Detached - Solar PV15%

Detached
3 credits allocated

Assumptions for ENE 2

A fabric energy efficiency of no worse than 60kWh/m²/year has been assumed in the absence of a construction specification. This reduced efficiency performance is in consideration of a minimum 15% improvement in the Dwelling Emission Rating to be provided by renewable energy sources (see 'Ene 7' category). The exact credit score achieved will be dependant on construction specification and SAP assessment for each dwelling type

Evidence for ENE 3 (Energy Display Device) - 4 Bed Detached - Solar PV15%

Correctly specified display device showing current consumption data.

Assumptions for ENE 3

A correctly specified Energy Display Device will be provided to display current mains energy consumption, associated emissions, cost and tariff information to empower dwelling occupants to reduce energy use.

Evidence for ENE 4 (Drying Space) - 4 Bed Detached - Solar PV15%

Compliant external drying space

Assumptions for ENE 4

Dwellings with 3 or more bedrooms will be provided with a dedicated drying facility in the form of a rotary clothes dryer or washing line of minimum 6m length, to be located in the secure rear garden.

Evidence for ENE 5 (Energy Labelled White Goods) - 4 Bed Detached - Solar PV15%

A+ rated fridge & freezers or fridge/freezer
A rated washing machine and dishwasher AND B rated washer-dryers & tumbles dryers, or EU energy efficiency labelling scheme leaflet where washing machines and/or dishwashers not provided

Assumptions for ENE 5

An A+ rated Fridge Freezer and A rated Washing machine to be provided along with an EU Energy Efficiency Labelling Scheme Leaflet.

Evidence for ENE 6 (External Lighting) - 4 Bed Detached - Solar PV15%

Complaint space lighting, no security lighting installed

Assumptions for ENE 6

It is assumed that dedicated energy efficient external space lighting will be provided. No Security Lighting is assumed.

Evidence for ENE 7 (Low or Zero Carbon Energy Technologies) - 4 Bed Detached - Solar PV15%

Contribution of low or zero carbon technologies greater than or equal to 15%

Assumptions for ENE 7

Roof mounted Solar Photovoltaic (PV) panels on a suitable dwelling with roof orientation (PV within 45 degrees of due south and roof pitch between 30 and 45 degrees (following feasibility report). Solar panel array to be sized to reduce dwelling carbon dioxide emissions by a minimum of 15%, following SAP calculation of dwelling type.

Evidence for ENE 8 (Cycle Storage) - 4 Bed Detached - Solar PV15%

4 bedrooms or more - Storage for 4 cycles per dwelling

Assumptions for ENE 8

All 4 Bedroom dwellings are to be provided with dedicated cycle storage for 2 cycles. It is assumed that the storage area will be provided in the rear garden of the dwelling.

Evidence for ENE 9 (Home Office) - 4 Bed Detached - Solar PV15%

Compliant home office

Assumptions for ENE 9

A code compliant Home Office will be provided with the following minimum provision:
Daylight Factor of 1.5, 1.8m length wall, 2 qty power sockets and 1 qty telephone socket (where cable/broadband is available).

Evidence for WAT 1 (Internal Water Use) - 4 Bed Detached - Solar PV15%

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

Assumptions for WAT 1

Indoor water consumption of less than or equal to 105 Litres/Person/Day will be specified for each dwelling, to achieve the mandatory requirement for Code Levels 3.

Evidence for WAT 2 (External Water Use) - 4 Bed Detached - Solar PV15%

Compliant individual rainwater collection system

Assumptions for WAT 2

A minimum 200 litre capacity water butt will be provided to all dwellings for garden irrigation use.

Evidence for MAT 1 (Environmental Impact of Materials) - 4 Bed Detached - Solar PV15%

Mandatory requirements met: At least 3 elements rated A+ to D, 8 credits scored

Assumptions for MAT 1

The mandatory requirement for at least 3 elements to be rated A+ to D in the Green Guide to materials will be met. It is assumed that 8 credits (out of a possible 15) will be awarded from the MAT 1 Calculation in the absence of an agreed materials specification. Materials with a low environmental impact will be specified to achieve this credit score.

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements)) - 4 Bed Detached - Solar PV15%

4 credits scored

Assumptions for MAT 2

It is assumed that 4 credits (out of a possible 6) will be awarded from the MAT 2 Calculation, in the absence of an agreed materials specification. Responsibly sourced basic building materials will be specified and sourced to achieve this credit score.

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements)) - 4 Bed Detached - Solar PV15%

2 credits scored

Assumptions for MAT 3

It is assumed that 2 credits (out of a possible 3) will be awarded from the MAT 3 Calculation, in the absence of an agreed materials specification. Responsibly sourced basic building materials will be specified and sourced to achieve this credit score.

Evidence for SUR 1 (Management of Surface Water Run-Off from Site) - 4 Bed Detached - Solar PV15%

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.

Assumptions for SUR 1

The Mandatory requirement for Peak Rate of Run-Off and Annual Volume of Run-Off to be no greater post development, will be met. In the absence of an outline drainage proposal no tradable credits have been awarded for 'No discharge to watercourse for rainfall depth up to 5mm' or 'treatment of surface water runoff'. It is possible that one or both of these tradable credits may be awarded, subject to detailed SUDS drainage design.

Evidence for SUR 2 (Flood Risk) - 4 Bed Detached - Solar PV15%

Low flood risk - zone 1

Assumptions for SUR 2

Environment Agency Flood Risk map consulted and resulting Zone 1 categorisation assumed, subject to Flood Risk Assessment being carried out.

Evidence for WAS 1 (Household Waste Storage and Recycling Facilities) - 4 Bed Detached - Solar PV15%

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

Assumptions for WAS 1

The mandatory requirement for adequate storage of household waste will be met. A Local Authority Recycling Collection Scheme has been assumed and appropriate internal and external storage of recyclable materials will be provided.

Evidence for WAS 2 (Construction Site Waste Management) - 4 Bed Detached - Solar PV15%

Compliant site waste management plant containing appropriate benchmarks, commitments and procedures for waste minimisation in line with the criteria and with Checklist WAS 2a, 2b & 2c

Assumptions for WAS 2

It is assumed that a Site Waste Management Plan will be implemented and contain benchmarks, commitments and procedures for waste minimisation.

Evidence for WAS 3 (Composting) - 4 Bed Detached - Solar PV15%

Individual composting facility/facilities

Assumptions for WAS 3

Dedicated composting facilities to be provided for all dwellings in a position providing inclusive access and usability. An information leaflet would also be provided.

Evidence for POL 1 (Global Warming Potential of Insulants) - 4 Bed Detached - Solar PV15%

All insulants have a GWP of less than 5

Assumptions for POL 1

An assumption is made that the Global Warming Potential (GWP) of all insulants will be less than 5.

Evidence for POL 2 (NOx Emissions) - 4 Bed Detached - Solar PV15%

Class 4 boiler

Assumptions for POL 2

An assumption is made that a Gas Condensing Boiler with NOx emissions less than or equal to 100mg/kWh (Class 4 Boiler) will be specified for all dwellings.

Evidence for HEA 1 (Daylighting) - 4 Bed Detached - Solar PV15%

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%

Assumptions for HEA 1

Subject to daylight factor calculation confirmation it has been assumed that dwellings will feature a minimum Daylight Factor of at least 1.5% in the Kitchen, Living Room and Dining Room.

Evidence for HEA 2 (Sound Insulation) - 4 Bed Detached - Solar PV15%

Detached property

Assumptions for HEA 2

Detached dwellings are awarded 4 credits by default.

Evidence for HEA 3 (Private Space) - 4 Bed Detached - Solar PV15%

Individual private space provided

Assumptions for HEA 3

The provided private space for dwellings (rear garden) is assumed to be comfortably more than the required minimum of 1.5 m² per bedroom.

Evidence for HEA 4 (Lifetime Homes) - 4 Bed Detached - Solar PV15%

Credits not sought

Assumptions for HEA 4

It is assumed that the Lifetime Homes criteria will not be met due to the possible compromise of internal layout design.

Evidence for MAN 1 (Home User Guide) - 4 Bed Detached - Solar PV15%

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

Assumptions for MAN 1

It is assumed that a compliant Home User Guide will be produced and provided to each dwelling. The guide will include additional information relating to the site and its surroundings.

Evidence for MAN 2 (Considerate Constructors Scheme) - 4 Bed Detached - Solar PV15%

Considerate constructors scheme: Best practise only, a score of between 24 and 31.5 and at least a score of 3 in every section

Assumptions for MAN 2

Registration of the site with the considerate constructor's scheme is assumed along with a score of between 24 and 31.5 and at least a score of 3 in all sections.

Evidence for MAN 3 (Construction Site Impacts) - 4 Bed Detached - Solar PV15%

Monitor, report and set targets for water consumption from site activities
 Adopt best practise policies in respects to air (dust) pollution from site activities
 Adopt best practise policies in respects to water (ground and surface) pollution
 80% of timber reclaimed, re-used or responsibly sourced

Assumptions for MAN 3

It is anticipated that procedures will be put into place to monitor, report and set targets for water consumption from site activities. A commitment would also be made to adopt best practice policies in respect of air (dust) and water (ground and surface) pollution and ensure a minimum of 80% of site timber is responsibly sourced.

Evidence for MAN 4 (Security) - 4 Bed Detached - Solar PV15%

Secure by design section 1 & 2 compliant

Assumptions for MAN 4

It is assumed that an Architectural Liaison Officer (ALO) will be consulted at design stage and their recommendations incorporated into the layout and design. Compliance with Section 2 of Secured by Design - 'Physical Security' standards is also assumed.

Evidence for ECO 1 (Ecological Value of Site) - 4 Bed Detached - Solar PV15%

Credit not sought

Assumptions for ECO 1

It is assumed that the requirements of the 'Eco 1' checklist will not be met, due to the presence of hedges and trees above 1m high.

Evidence for ECO 2 (Ecological Enhancement) - 4 Bed Detached - Solar PV15%

Key recommendations and 30% additional recommendations by a suitably qualified ecologist

Assumptions for ECO 2

It is assumed that Key Recommendations and 30% Additional Recommendations by a Suitably Qualified Ecologist will be followed.

Evidence for ECO 3 (Protection of Ecological Features) - 4 Bed Detached - Solar PV15%

Ecological features will be adequately protected and maintained

Assumptions for ECO 3

Appropriate measures have been assumed to protect retained existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

Evidence for ECO 4 (Change of Ecological Value of Site) - 4 Bed Detached - Solar PV15%

Minor enhancement: Greater than 3 and less than or equal to 9

It is assumed that the incorporation of a large ecological corridor, planting of a large number of native tree species and nectar rich species will result in a minor enhancement to the ecological value of the site. This assumption would be subject to confirmation from a suitably qualified ecologist.

Assumptions for ECO 4

It is assumed that the incorporation of a large ecological corridor, planting of a large number of native tree species and nectar rich species will result in a minor enhancement to the ecological value of the site. This assumption would be subject to confirmation from a suitably qualified ecologist.

Evidence for ECO 5 (Building Footprint) - 4 Bed Detached - Solar PV15%

Credit not sought

Assumptions for ECO 5

This credit is not sought, due to the presence of 2 storey dwellings on the proposed layout.

Summary Score Sheet

Dwelling Type: 4 Bed Detached - No Renewables

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	1.5	10	14.5	31	46.77	36.4	17.03
ENE 2 Fabric Energy Efficiency	4	9					
ENE 3 Energy Display Device	1	2					
ENE 4 Drying Space	1	1					
ENE 5 Energy Labelled White Goods	2	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	1	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	8	15	14	24	58.33	7.2	4.2
MAT 2 Responsible Sourcing (Basic Building Elements)	3	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	6	8	75	6.4	4.8
WAS 2 Construction Site Waste Management	1	3					
WAS 3 Composting	1	1					
Pollution							
POL 1 Global Warming Potential of Insulants	1	1	2	4	50	2.8	1.4
POL 2 NOx Emissions	1	3					
Health & Wellbeing							
HEA 1 Daylighting	2	3	7	12	58.33	14	8.17
HEA 2 Sound Insulation	4	4					
HEA 3 Private Space	1	1					
HEA 4 Lifetime Homes	0	4					
Management							
MAN 1 Home User Guide	2	3	7	9	77.78	10	7.78
MAN 2 Considerate Constructors Scheme	1	2					
MAN 3 Construction Site Impacts	2	2					
MAN 4 Security	2	2					
Ecology							
ECO 1 Ecological Value of Site	0	1	5	9	55.56	12	6.67
ECO 2 Ecological Enhancement	1	1					
ECO 3 Protection of Ecological Features	1	1					
ECO 4 Change of Ecological Value of Site	3	4					
ECO 5 Building Footprint	0	2					
			Level Achieved: 3		Total Points Scored: 57.14		

Evidence for ENE 1 (Dwelling Emission Rate) - 4 Bed Detached - No Renewables

Improvement above Part L Building Regulations 2010. 1.5 credits allocated

Assumptions for ENE 1

An improvement of approximately 8% over the minimum CO₂ emission standard required for 2010 Building Regulations compliance has been assumed. The exact credit score achieved will be dependant on construction specification and SAP assessment for each dwelling type.

Evidence for ENE 2 (Fabric Energy Efficiency) - 4 Bed Detached - No Renewables

Detached
4 credits allocated

Assumptions for ENE 2

A fabric energy efficiency of no worse than 55kWh/m²/year has been assumed. The exact credit score achieved will be dependant on construction specification and SAP assessment for each dwelling type.

Evidence for ENE 3 (Energy Display Device) - 4 Bed Detached - No Renewables

Correctly specified display device showing current consumption data.

Assumptions for ENE 3

A correctly specified Energy Display Device will be provided to display current mains energy consumption, associated emissions, cost and tariff information to empower dwelling occupants to reduce energy use.

Evidence for ENE 4 (Drying Space) - 4 Bed Detached - No Renewables

Compliant external drying space

Assumptions for ENE 4

Dwellings with 3 or more bedrooms will be provided with a dedicated drying facility in the form of a rotary clothes dryer or washing line of minimum 6m length, to be located in the secure rear garden.

Evidence for ENE 5 (Energy Labelled White Goods) - 4 Bed Detached - No Renewables

A+ rated fridge & freezers or fridge/freezer
A rated washing machine and dishwasher AND B rated washer-dryers & tumblers dryers, or EU energy efficiency labelling scheme leaflet where washing machines and/or dishwashers not provided

Assumptions for ENE 5

An A+ rated Fridge Freezer and A rated Washing machine to be provided along with an EU Energy Efficiency Labelling Scheme Leaflet.

Evidence for ENE 6 (External Lighting) - 4 Bed Detached - No Renewables

Complaint space lighting, no security lighting installed

Assumptions for ENE 6

It is assumed that dedicated energy efficient external space lighting will be provided. No Security Lighting is assumed.

Evidence for ENE 7 (Low or Zero Carbon Energy Technologies) - 4 Bed Detached - No Renewables

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

Assumptions for ENE 7

No renewable energy sources are assumed and the required dwelling emission rating will be reached through a 'fabric first' approach.

Evidence for ENE 8 (Cycle Storage) - 4 Bed Detached - No Renewables

4 bedrooms or more - Storage for 4 cycles per dwelling

Assumptions for ENE 8

All 4 Bedroom dwellings are to be provided with dedicated cycle storage for 2 cycles. It is assumed that the storage area will provided in the rear garden of the dwelling.

Evidence for ENE 9 (Home Office) - 4 Bed Detached - No Renewables

Compliant home office

Assumptions for ENE 9

A code compliant Home Office will be provided to all dwellings with the following minimum provision:
Daylight Factor of 1.5, 1.8m length wall, 2 qty power sockets and 1 qty telephone socket (where cable/broadband is available).

Evidence for WAT 1 (Internal Water Use) - 4 Bed Detached - No Renewables

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

Assumptions for WAT 1

Indoor water consumption of less than or equal to 105 Litres/Person/Day will be specified for each dwelling, to achieve the mandatory requirement for Code Levels 3.

Evidence for WAT 2 (External Water Use) - 4 Bed Detached - No Renewables

Compliant individual rainwater collection system

Assumptions for WAT 2

A minimum 200 litre capacity water butt will be provided to all dwellings for garden irrigation use.

Evidence for MAT 1 (Environmental Impact of Materials) - 4 Bed Detached - No Renewables

Mandatory requirements met: At least 3 elements rated A+ to D, 8 credits scored

Assumptions for MAT 1

The mandatory requirement for at least 3 elements to be rated A+ to D in the Green Guide to materials will be met. It is assumed that 8 credits (out of a possible 15) will be awarded from the MAT 1 Calculation in the absence of an agreed materials specification. Materials with a low environmental impact will be specified to achieve this credit score.

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements)) - 4 Bed Detached - No Renewables

3 credits scored

Assumptions for MAT 2

It is assumed that 4 credits (out of a possible 6) will be awarded from the MAT 2 Calculation, in the absence of an agreed materials specification. Responsibly sourced basic building materials will be specified and sourced to achieve this credit score.

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements)) - 4 Bed Detached - No Renewables

3 credits scored

Assumptions for MAT 3

It is assumed that 2 credits (out of a possible 3) will be awarded from the MAT 3 Calculation, in the absence of an agreed materials specification. Responsibly sourced basic building materials will be specified and sourced to achieve this credit score.

Evidence for SUR 1 (Management of Surface Water Run-Off from Site) - 4 Bed Detached - No Renewables

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.

Assumptions for SUR 1

The Mandatory requirement for Peak Rate of Run-Off and Annual Volume of Run-Off to be no greater post development, will be met. In the absence of an outline drainage proposal no tradable credits have been awarded for 'No discharge to watercourse for rainfall depth up to 5mm' or 'treatment of surface water runoff'. It is possible that one or both of these tradable credits may be awarded, subject to detailed SUDS drainage design.

Evidence for SUR 2 (Flood Risk) - 4 Bed Detached - No Renewables

Low flood risk - zone 1

Assumptions for SUR 2

Environment Agency Flood Risk map consulted and resulting Zone 1 categorisation assumed, subject to Flood Risk Assessment being carried out.

Evidence for WAS 1 (Household Waste Storage and Recycling Facilities) - 4 Bed Detached - No Renewables

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

Assumptions for WAS 1

The mandatory requirement for adequate storage of household waste will be met. A Local Authority Recycling Collection Scheme has been assumed and appropriate internal and external storage of recyclable materials will be provided.

Evidence for WAS 2 (Construction Site Waste Management) - 4 Bed Detached - No Renewables

Compliant site waste management plan containing appropriate benchmarks, commitments and procedures for waste minimisation in line with the criteria and with Checklist WAS 2a, 2b & 2c

Assumptions for WAS 2

It is assumed that a Site Waste Management Plan will be implemented and contain benchmarks, commitments and procedures for waste minimisation.

Evidence for WAS 3 (Composting) - 4 Bed Detached - No Renewables

Individual composting facility/facilities

Assumptions for WAS 3

Dedicated composting facilities to be provided for all dwellings in a position providing inclusive access and usability. An information leaflet would also be provided.

Evidence for POL 1 (Global Warming Potential of Insulants) - 4 Bed Detached - No Renewables

All insulants have a GWP of less than 5

Assumptions for POL 1

An assumption is made that the Global Warming Potential (GWP) of all insulants will be less than 5.

Evidence for POL 2 (NOx Emissions) - 4 Bed Detached - No Renewables

Class 4 boiler

Assumptions for POL 2

An assumption is made that a Gas Condensing Boiler with NOx emissions less than or equal to 100mg/kWh (Class 4 Boiler) will be specified for all dwellings.

Evidence for HEA 1 (Daylighting) - 4 Bed Detached - No Renewables

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%

Assumptions for HEA 1

Subject to daylight factor calculation confirmation it has been assumed that dwellings will feature a minimum Daylight Factor of at least 1.5% in the Kitchen, Living Room and Dining Room.

Evidence for HEA 2 (Sound Insulation) - 4 Bed Detached - No Renewables

Detached property

Assumptions for HEA 2

Detached dwellings are awarded 4 credits by default.

Evidence for HEA 3 (Private Space) - 4 Bed Detached - No Renewables

Individual private space provided

Assumptions for HEA 3

The provided private space for dwellings (rear garden) is assumed to be comfortably more than the required minimum of 1.5 m² per bedroom.

Evidence for HEA 4 (Lifetime Homes) - 4 Bed Detached - No Renewables

Credits not sought

Assumptions for HEA 4

It is assumed that the Lifetime Homes criteria will not be met due to a possible compromise of internal layout design.

Evidence for MAN 1 (Home User Guide) - 4 Bed Detached - No Renewables

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

Assumptions for MAN 1

It is assumed that a compliant Home User Guide will be produced and provided to each dwelling. The guide will include additional information relating to the site and its surroundings.

Evidence for MAN 2 (Considerate Constructors Scheme) - 4 Bed Detached - No Renewables

Considerate constructors scheme: Best practise only, a score of between 24 and 31.5 and at least a score of 3 in every section

Assumptions for MAN 2

Registration of the site with the considerate constructor's scheme is assumed along with a score of between 24 and 31.5 and at least a score of 3 in all sections.

Evidence for MAN 3 (Construction Site Impacts) - 4 Bed Detached - No Renewables

Monitor, report and set targets for water consumption from site activities
 Adopt best practise policies in respects to air (dust) pollution from site activities
 Adopt best practise policies in respects to water (ground and surface) pollution
 80% of timber reclaimed, re-used or responsibly sourced

Assumptions for MAN 3

It is anticipated that procedures will be put into place to monitor, report and set targets for water consumption from site activities. A commitment would also be made to adopt best practice policies in respect of air (dust) and water (ground and surface) pollution and ensure a minimum of 80% of site timber is responsibly sourced.

Evidence for MAN 4 (Security) - 4 Bed Detached - No Renewables

Secure by design section 1 & 2 compliant

Assumptions for MAN 4

It is assumed that an Architectural Liaison Officer (ALO) will be consulted at design stage and their recommendations incorporated into the layout and design. Compliance with Section 2 of Secured by Design - 'Physical Security' standards is also assumed.

Evidence for ECO 1 (Ecological Value of Site) - 4 Bed Detached - No Renewables

Credit not sought

Assumptions for ECO 1

It is assumed that the requirements of the 'Eco 1' checklist will not be met, due to the presence of hedges and trees above 1m high.

Evidence for ECO 2 (Ecological Enhancement) - 4 Bed Detached - No Renewables

Key recommendations and 30% additional recommendations by a suitably qualified ecologist

Assumptions for ECO 2

It is assumed that Key Recommendations and 30% Additional Recommendations by a Suitably Qualified Ecologist will be followed.

Evidence for ECO 3 (Protection of Ecological Features) - 4 Bed Detached - No Renewables

Ecological features will be adequately protected and maintained

Appropriate measures have been assumed to protect retained existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

Assumptions for ECO 3

Appropriate measures have been assumed to protect retained existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

Evidence for ECO 4 (Change of Ecological Value of Site) - 4 Bed Detached - No Renewables

Minor enhancement: Greater than 3 and less than or equal to 9

Assumptions for ECO 4

It is assumed that the incorporation of a large ecological corridor, planting of a large number of native tree species and nectar rich species will result in a minor enhancement to the ecological value of the site. This assumption would be subject to confirmation from a suitably qualified ecologist.

Evidence for ECO 5 (Building Footprint) - 4 Bed Detached - No Renewables

Credit not sought

Assumptions for ECO 5

This credit is not sought, due to the presence of 2 storey dwellings on the proposed layout.

Summary Score Sheet

Dwelling Type: 4 Bed SemiDet_ 2.5storey_No Renewables

Dwelling ID: 3

			Score Assessment						
			Credit Score	Credits Available	Sub Total	Credits Available	%	Weighting Factor	Points Score
Energy & CO2 Emissions									
ENE 1	Dwelling Emission Rate	1.5	10	14.5	31	46.77	36.4	17.03	
ENE 2	Fabric Energy Efficiency	4	9						
ENE 3	Energy Display Device	1	2						
ENE 4	Drying Space	1	1						
ENE 5	Energy Labelled White Goods	2	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	1	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	8	15	14	24	58.33	7.2	4.2	
MAT 2	Responsible Sourcing (Basic Building Elements)	3	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	6	8	75	6.4	4.8	
WAS 2	Construction Site Waste Management	1	3						
WAS 3	Composting	1	1						
Pollution									
POL 1	Global Warming Potential of Insulants	1	1	2	4	50	2.8	1.4	
POL 2	NOx Emissions	1	3						
Health & Wellbeing									
HEA 1	Daylighting	2	3	7	12	58.33	14	8.17	
HEA 2	Sound Insulation	4	4						
HEA 3	Private Space	1	1						
HEA 4	Lifetime Homes	0	4						
Management									
MAN 1	Home User Guide	2	3	7	9	77.78	10	7.78	
MAN 2	Considerate Constructors Scheme	1	2						
MAN 3	Construction Site Impacts	2	2						
MAN 4	Security	2	2						
Ecology									
ECO 1	Ecological Value of Site	0	1	5	9	55.56	12	6.67	
ECO 2	Ecological Enhancement	1	1						
ECO 3	Protection of Ecological Features	1	1						
ECO 4	Change of Ecological Value of Site	3	4						
ECO 5	Building Footprint	0	2						
			Level Achieved: 3	Total Points Scored: 57.14					

Evidence for ENE 1 (Dwelling Emission Rate) - 4 Bed SemiDet_ 2.5storey_No Renewables

Improvement above Part L Building Regulations 2010. 1.5 credits allocated

Assumptions for ENE 1

An improvement of approximately 8% over the minimum CO₂ emission standard required for 2010 Building Regulations compliance has been assumed. The exact credit score achieved will be dependant on construction specification and SAP assessment for each dwelling type.

Evidence for ENE 2 (Fabric Energy Efficiency) - 4 Bed SemiDet_ 2.5storey_No Renewables

Semi Detached
4 credits allocated

Assumptions for ENE 2

A fabric energy efficiency of no worse than 55kWh/m²/year has been assumed. The exact credit score achieved will be dependant on construction specification and SAP assessment for each dwelling type.

Evidence for ENE 3 (Energy Display Device) - 4 Bed SemiDet_ 2.5storey_No Renewables

Correctly specified display device showing current consumption data.

Assumptions for ENE 3

A correctly specified Energy Display Device will be provided to display current mains energy consumption, associated emissions, cost and tariff information to empower dwelling occupants to reduce energy use.

Evidence for ENE 4 (Drying Space) - 4 Bed SemiDet_ 2.5storey_No Renewables

Compliant external drying space

Assumptions for ENE 4

Dwellings with 3 or more bedrooms will be provided with a dedicated drying facility in the form of a rotary clothes dryer or washing line of minimum 6m length, to be located in the secure rear garden.

Evidence for ENE 5 (Energy Labelled White Goods) - 4 Bed SemiDet_ 2.5storey_No Renewables

A+ rated fridge & freezers or fridge/freezer
A rated washing machine and dishwasher AND B rated washer-dryers & tumbles dryers, or EU energy efficiency labelling scheme leaflet where washing machines and/or dishwashers not provided

Assumptions for ENE 5

An A+ rated Fridge Freezer and A rated Washing machine to be provided along with an EU Energy Efficiency Labelling Scheme Leaflet.

Evidence for ENE 6 (External Lighting) - 4 Bed SemiDet_ 2.5storey_No Renewables

Complaint space lighting, no security lighting installed

Assumptions for ENE 6

It is assumed that dedicated energy efficient external space lighting will be provided. No Security Lighting is assumed.

Evidence for ENE 7 (Low or Zero Carbon Energy Technologies) - 4 Bed SemiDet_ 2.5storey_No Renewables

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

Assumptions for ENE 7

No renewable energy sources are assumed and the required dwelling emission rating will be reached through a 'fabric first' approach.

Evidence for ENE 8 (Cycle Storage) - 4 Bed SemiDet_ 2.5storey_No Renewables

4 bedrooms or more - Storage for 4 cycles per dwelling

Assumptions for ENE 8

All 4 Bedroom dwellings are to be provided with dedicated cycle storage for 2 cycles. It is assumed that the storage area will provided in the rear garden of the dwelling.

Evidence for ENE 9 (Home Office) - 4 Bed SemiDet_ 2.5storey_No Renewables

Compliant home office

Assumptions for ENE 9

A code compliant Home Office will be provided to all dwellings with the following minimum provision:
Daylight Factor of 1.5, 1.8m length wall, 2 qty power sockets and 1 qty telephone socket (where cable/broadband is available).

Evidence for WAT 1 (Internal Water Use) - 4 Bed SemiDet_ 2.5storey_No Renewables

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

Assumptions for WAT 1

Indoor water consumption of less than or equal to 105 Litres/Person/Day will be specified for each dwelling, to achieve the mandatory requirement for Code Levels 3.

Evidence for WAT 2 (External Water Use) - 4 Bed SemiDet_ 2.5storey_No Renewables

Compliant individual rainwater collection system

Assumptions for WAT 2

A minimum 200 litre capacity water butt will be provided to all dwellings for garden irrigation use.

Evidence for MAT 1 (Environmental Impact of Materials) - 4 Bed SemiDet_ 2.5storey_No Renewables

Mandatory requirements met: At least 3 elements rated A+ to D, 8 credits scored

Assumptions for MAT 1

The mandatory requirement of at least 3 elements to be rated A+ to D in the Green Guide to materials will be met. It is assumed that 8 credits (out of a possible 15) will be awarded from the MAT 1 Calculation in the absence of an agreed materials specification. Materials with a low environmental impact will be specified to achieve this credit score.

Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements)) - 4 Bed SemiDet_ 2.5storey_No Renewables

3 credits scored

Assumptions for MAT 2

It is assumed that 4 credits (out of a possible 6) will be awarded from the MAT 2 Calculation, in the absence of an agreed materials specification. Responsibly sourced basic building materials will be specified and sourced to achieve this credit score.

Evidence for MAT 3 (Responsible Sourcing (Finishing Elements)) - 4 Bed SemiDet_ 2.5storey_No Renewables

3 credits scored

Assumptions for MAT 3

It is assumed that 2 credits (out of a possible 3) will be awarded from the MAT 3 Calculation, in the absence of an agreed materials specification. Responsibly sourced basic building materials will be specified and sourced to achieve this credit score.

Evidence for SUR 1 (Management of Surface Water Run-Off from Site) - 4 Bed SemiDet_ 2.5storey_No Renewables

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.

Assumptions for SUR 1

The Mandatory requirement for Peak Rate of Run-Off and Annual Volume of Run-Off to be no greater post-development, will be met. In the absence of an outline drainage proposal no tradable credits have been awarded for 'No discharge to watercourse for rainfall depth up to 5mm' or 'treatment of surface water runoff'. It is possible that one or both of these tradable credits may be awarded, subject to detailed SUDS drainage design.

Evidence for SUR 2 (Flood Risk) - 4 Bed SemiDet_ 2.5storey_No Renewables

Low flood risk - zone 1

Assumptions for SUR 2

Environment Agency Flood Risk map consulted and resulting Zone 1 categorisation assumed, subject to Flood Risk Assessment being carried out

Evidence for WAS 1 (Household Waste Storage and Recycling Facilities) - 4 Bed SemiDet_ 2.5storey_No Renewables

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

Assumptions for WAS 1

The mandatory requirement for adequate storage of household waste will be met. A Local Authority Recycling Collection Scheme has been assumed and appropriate internal and external storage of recyclable materials will be provided.

Evidence for WAS 2 (Construction Site Waste Management) - 4 Bed SemiDet_ 2.5storey_No Renewables

Compliant site waste management plan containing appropriate benchmarks, commitments and procedures for waste minimisation in line with the criteria and with Checklist WAS 2a, 2b & 2c

Assumptions for WAS 2

It is assumed that a Site Waste Management Plan will be implemented and contain benchmarks, commitments and procedures for waste minimisation.

Evidence for WAS 3 (Composting) - 4 Bed SemiDet_ 2.5storey_No Renewables

Individual composting facility/facilities

Assumptions for WAS 3

Dedicated composting facilities to be provided for all dwellings in a position providing inclusive access and usability. An information leaflet would also be provided.

Evidence for POL 1 (Global Warming Potential of Insulants) - 4 Bed SemiDet_ 2.5storey_No Renewables

All insulants have a GWP of less than 5

Assumptions for POL 1

An assumption is made that the Global Warming Potential (GWP) of all insulants will be less than 5.

Evidence for POL 2 (NOx Emissions) - 4 Bed SemiDet_ 2.5storey_No Renewables

Class 4 boiler

Assumptions for POL 2

An assumption is made that a Gas Condensing Boiler with NOx emissions less than or equal to 100mg/kWh (Class 4 Boiler) will be specified for all dwellings.

Evidence for HEA 1 (Daylighting) - 4 Bed SemiDet_ 2.5storey_No Renewables

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%

Assumptions for HEA 1

Subject to daylight factor calculation confirmation it has been assumed that dwellings will feature a minimum Daylight Factor of at least 1.5% in the Kitchen, Living Room and Dining Room.

Evidence for HEA 2 (Sound Insulation) - 4 Bed SemiDet_ 2.5storey_No Renewables

Robust details have been incorporated
Airborne 8dB higher, impact 8dB lower

Assumptions for HEA 2

It has been assumed that Robust Details would be utilised for the separating walls and a specification will be chosen to achieve a 5dB reduction in Impact and Airborne sound transmission.

Evidence for HEA 3 (Private Space) - 4 Bed SemiDet_ 2.5storey_No Renewables

Individual private space provided

Assumptions for HEA 3

The provided private space for dwellings (rear garden) is assumed to be comfortably more than the required minimum of 1.5 m² per bedroom.

Evidence for HEA 4 (Lifetime Homes) - 4 Bed SemiDet_ 2.5storey_No Renewables

Credits not sought

Assumptions for HEA 4

It is assumed that the Lifetime Homes criteria will not be met due to a resultant compromise of internal layout design.

Evidence for MAN 1 (Home User Guide) - 4 Bed SemiDet_ 2.5storey_No Renewables

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

Assumptions for MAN 1

It is assumed that a compliant Home User Guide will be produced and provided to each dwelling. The guide will include additional information relating to the site and its surroundings.

Evidence for MAN 2 (Considerate Constructors Scheme) - 4 Bed SemiDet_ 2.5storey_No Renewables

Considerate constructors scheme: Best practise only, a score of between 24 and 31.5 and at least a score of 3 in every section

Assumptions for MAN 2

Registration of the site with the considerate constructor's scheme is assumed along with a score of between 24 and 31.5 and at least a score of 3 in all sections.

Evidence for MAN 3 (Construction Site Impacts) - 4 Bed SemiDet_ 2.5storey_No Renewables

Monitor, report and set targets for water consumption from site activities
 Adopt best practise policies in respects to air (dust) pollution from site activities
 Adopt best practise policies in respects to water (ground and surface) pollution
 80% of timber reclaimed, re-used or responsibly sourced

Assumptions for MAN 3

It is anticipated that procedures will be put into place to monitor, report and set targets for water consumption from site activities. A commitment would also be made to adopt best practice policies in respect of air (dust) and water (ground and surface) pollution and ensure a minimum of 80% of site timber is responsibly sourced.

Evidence for MAN 4 (Security) - 4 Bed SemiDet_ 2.5storey_No Renewables

Secure by design section 1 & 2 compliant

Assumptions for MAN 4

It is assumed that an Architectural Liaison Officer (ALO) will be consulted at design stage and their recommendations incorporated into the layout and design. Compliance with Section 2 of Secured by Design - 'Physical Security' standards is also assumed.

Evidence for ECO 1 (Ecological Value of Site) - 4 Bed SemiDet_ 2.5storey_No Renewables

Credit not sought

Assumptions for ECO 1

It is assumed that the requirements of the 'Eco 1' checklist will not be met, due to the presence of hedges and trees above 1m high.

Evidence for ECO 2 (Ecological Enhancement) - 4 Bed SemiDet_ 2.5storey_No Renewables

Key recommendations and 30% additional recommendations by a suitably qualified ecologist

Assumptions for ECO 2

It is assumed that Key Recommendations and 30% Additional Recommendations by a Suitably Qualified Ecologist will be followed.

Evidence for ECO 3 (Protection of Ecological Features) - 4 Bed SemiDet_ 2.5storey_No Renewables

Ecological features will be adequately protected and maintained

Assumptions for ECO 3

Appropriate measures have been assumed to protect retained existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

Evidence for ECO 4 (Change of Ecological Value of Site) - 4 Bed SemiDet_ 2.5storey_No Renewables

Minor enhancement: Greater than 3 and less than or equal to 9

Assumptions for ECO 4

It is assumed that the incorporation of a large ecological corridor, planting of a large number of native tree species and nectar rich species will result in a minor enhancement to the ecological value of the site. This assumption would be subject to confirmation from a suitably qualified ecologist.

Evidence for ECO 5 (Building Footprint) - 4 Bed SemiDet_ 2.5storey_No Renewables

Credit not sought

Assumptions for ECO 5

Although this dwelling type has an approximate housing ratio of 2.5:1, no credits can be awarded due to the presence of 2 storey dwellings on the layout. This is due to the category credits being awarded across the development, as a whole.

Assessor Declaration

I Kieran Mapplebeck, 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:



Kieran Mapplebeck
John R Paley Associates
04 December 2012

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

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