



**ASHMOUNT  
CONSULTING  
ENGINEERS**



**Report Reference:** 170-175 High Street  
**Site Registration:**  
**Site Name:** 170-175 High Street  
**Assessor Number:** STRO000002  
**Company:** Ashmount Consulting Engineers  
**Assessor:** Dan Watt



#### Site Details

Site Name: 170-175 High Street  
 Site Registration:  
 Site Address: High Street  
  
 City/Town: Teddington  
 London  
 County: Greater London  
 Postcode: TW11 8HU  
 No. of Dwellings: 3  
 No. of Dwelling Types: 1  
 Planning Authority: London Borough of Richmond upon Thames  
 Funding Body:

#### Assessor Details

Company: Ashmount Consulting Engineers  
 Assessor Name: Dan Watt  
 Cert Number: STRO000002  
 Address: The Warehouse  
 Saxon Street  
 Denton  
 City/Town: Manchester  
 County: Greater Manchester  
 Postcode: M34 3DS  
 Tel: 0161 337 4353  
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#### Client Details

Company: N/A  
 Contact Name: Mr Vince Barber  
 Job Title: Owner  
 Email:  
 Tel:  
 Address:  
  
 City/Town:  
 County:  
 Postcode:

#### Architect Details

Company: Alan Ward Architects  
 Contact Name: Nick Howe  
 Job Title: Architect  
 Email: nick@alanwardarchitecture.co.uk  
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 City/Town: London  
 County: Gtr London  
 Postcode: TW1 3DY

#### Developer Details

Company: N/A  
 Contact Name: Mr Vince Barber  
 Job Title: Owner  
 Email:  
 Tel:  
 Address:  
  
 City/Town:  
 County:  
 Postcode:

Dwelling ID	Plot No.	Address	Social Unit
1	8	170-175 High Street	No
2	9	170-175 High Street	No
3	10	170-175 High Street	No

**Development Summary & Ratings**

Dwelling ID	Dwelling Type	Description	Level	Score
8	All Plots	all	3	58.75
9	All Plots	all	3	58.75
10	All Plots	all	3	58.75

**Deviations from Standard**

No deviations from standard

## Score Sheet for 170-175 High Street

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	5	3.8	1	1	1	2	2	0	1	4	1	12	0	0	0	2	4	2	0	1	3	3	3	0	0	3	0	0	2	1	0	1	2	1	58.75	3	
2	5	3.8	1	1	1	2	2	0	1	4	1	12	0	0	0	2	4	2	0	1	3	3	3	0	0	3	0	0	2	1	0	1	2	1	58.75	3	
3	5	3.8	1	1	1	2	2	0	1	4	1	12	0	0	0	2	4	2	0	1	3	3	3	0	0	3	0	0	2	1	0	1	2	1	58.75	3	

Summary Score Sheet

Dwelling Type: All Plots

Dwelling IDs: 1 to 3

			Score Assessment				
	Credit Score	Credits Available	Sub Total	Credits Available	%	Weighting Factor	Points Score
<b>Energy &amp; CO2 Emissions</b>							
ENE 1 Dwelling Emission Rate	5	10	16.8	31	54.19	36.4	19.73
ENE 2 Fabric Energy Efficiency	3.8	9					
ENE 3 Energy Display Device	1	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	2	2					
ENE 8 Cycle Storage	0	2					
ENE 9 Home Office	1	1					
<b>Water</b>							
WAT 1 Internal Water Use	4	5	5	6	83.33	9	7.5
WAT 2 External Water Use	1	1					
<b>Materials</b>							
MAT 1 Environmental Impact of Materials	12	15	12	24	50	7.2	3.6
MAT 2 Responsible Sourcing (Basic Building Elements)	0	6					
MAT 3 Responsible Sourcing (Finishing Elements)	0	3					
<b>Surface Water Run-off</b>							
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					
<b>Waste</b>							
WAS 1 Household Waste Storage and Recycling Facilities	4	4	6	8	75	6.4	4.8
WAS 2 Construction Site Waste Management	2	3					
WAS 3 Composting	0	1					
<b>Pollution</b>							
POL 1 Global Warming Potential of Insulants	1	1	4	4	100	2.8	2.8
POL 2 NOx Emissions	3	3					
<b>Health &amp; Wellbeing</b>							
HEA 1 Daylighting	3	3	6	12	50	14	7
HEA 2 Sound Insulation	3	4					
HEA 3 Private Space	0	1					
HEA 4 Lifetime Homes	0	4					
<b>Management</b>							
MAN 1 Home User Guide	3	3	5	9	55.56	10	5.56
MAN 2 Considerate Constructors Scheme	0	2					
MAN 3 Construction Site Impacts	0	2					
MAN 4 Security	2	2					
<b>Ecology</b>							
ECO 1 Ecological Value of Site	1	1	5	9	55.56	12	6.67
ECO 2 Ecological Enhancement	0	1					
ECO 3 Protection of Ecological Features	1	1					
ECO 4 Change of Ecological Value of Site	2	4					
ECO 5 Building Footprint	1	2					
			Level Achieved: 3		Total Points Scored: 58.75		

**Evidence for ENE 1 (Dwelling Emission Rate) - All Plots**

Improvement above Part L Building Regulations 2010. 5 credits allocated

**Assumptions for ENE 1**

**Evidence for ENE 2 (Fabric Energy Efficiency) - All Plots**

Apartment  
3.8 credits allocated

**Assumptions for ENE 2**

**Evidence for ENE 3 (Energy Display Device) - All Plots**

Correctly specified display device showing current consumption data.

**Assumptions for ENE 3**

**Evidence for ENE 4 (Drying Space) - All Plots**

Compliant internal drying space

**Assumptions for ENE 4**

**Evidence for ENE 5 (Energy Labelled White Goods) - All Plots**

EU energy efficiency labelling scheme leaflet provision/provided

**Assumptions for ENE 5**

**Evidence for ENE 6 (External Lighting) - All Plots**

Compliant space lighting  
Compliant security lighting

**Assumptions for ENE 6**

**Evidence for ENE 7 (Low or Zero Carbon Energy Technologies) - All Plots**

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

**Assumptions for ENE 7**

**Evidence for ENE 8 (Cycle Storage) - All Plots**

Credit(s) not sought or no compliant cycle storage

**Assumptions for ENE 8**

**Evidence for ENE 9 (Home Office) - All Plots**

Compliant home office

**Assumptions for ENE 9**

**Evidence for WAT 1 (Internal Water Use) - All Plots**

Internal water use less than or equal to 90 litres per person per day

**Assumptions for WAT 1**

## Evidence for WAT 2 (External Water Use) - All Plots

No communal garden space

## Assumptions for WAT 2

## Evidence for MAT 1 (Environmental Impact of Materials) - All Plots

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

## Assumptions for MAT 1

## Evidence for MAT 2 (Responsible Sourcing (Basic Building Elements)) - All Plots

Zero credits or credits not sought

## Assumptions for MAT 2

## Evidence for MAT 3 (Responsible Sourcing (Finishing Elements)) - All Plots

Zero credits or credits not sought

## Assumptions for MAT 3

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

Special Case: Existing drainage planning approval. Credits not available

## Assumptions for SUR 1

## Evidence for SUR 2 (Flood Risk) - All Plots

Low flood risk - zone 1

## Assumptions for SUR 2

## Evidence for WAS 1 (Household Waste Storage and Recycling Facilities) - All Plots

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

## Evidence for WAS 2 (Construction Site Waste Management) - All Plots

Compliant site waste management plan containing benchmarks, procedures and commitments for the minimizing and diverting 50% waste from landfill in line with the criteria and with Checklist WAS 2a, 2b &amp; 2c

## Assumptions for WAS 2

## Evidence for WAS 3 (Composting) - All Plots

Credits not sought or no compliant composting provision

## Assumptions for WAS 3

## Evidence for POL 1 (Global Warming Potential of Insulants) - All Plots

All insulants have a GWP of less than 5



Assumptions for POL 1

Evidence for POL 2 (NOx Emissions) - All Plots

NOx emissions less than or equal to 40mg/kWh

Assumptions for POL 2

Evidence for HEA 1 (Daylighting) - All Plots

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%

Home office: 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

Assumptions for HEA 1

Evidence for HEA 2 (Sound Insulation) - All Plots

Robust details have been incorporated

Airborne 5dB higher, impact 5dB lower

Assumptions for HEA 2

Evidence for HEA 3 (Private Space) - All Plots

Credit(s) not sought or no compliant space provided.

Assumptions for HEA 3

Evidence for HEA 4 (Lifetime Homes) - All Plots

Credits not sought

Assumptions for HEA 4

Evidence for MAN 1 (Home User Guide) - All Plots

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

Assumptions for MAN 1

Evidence for MAN 2 (Considerate Constructors Scheme) - All Plots

Credits not sought

Assumptions for MAN 2

Evidence for MAN 3 (Construction Site Impacts) - All Plots

Credit(s) not sought

Assumptions for MAN 3

Evidence for MAN 4 (Security) - All Plots

Secure by design section 2 compliant

**Assumptions for MAN 4**

**Evidence for ECO 1 (Ecological Value of Site) - All Plots**

Land of low ecological value, achieved through checklist ECO 1. Development site has been identified as low ecological value by a suitably qualified ecologist

**Assumptions for ECO 1**

**Evidence for ECO 2 (Ecological Enhancement) - All Plots**

Credit not sought or no compliant enhancement

**Assumptions for ECO 2**

**Evidence for ECO 3 (Protection of Ecological Features) - All Plots**

Land of low ecological value as identified under ECO 1

**Assumptions for ECO 3**

**Evidence for ECO 4 (Change of Ecological Value of Site) - All Plots**

Neutral: Greater than -3 and less than or equal to +3

**Assumptions for ECO 4**

**Evidence for ECO 5 (Building Footprint) - All Plots**

Flats ratio of 3:1

**Assumptions for ECO 5**

Assessor Declaration

I Dan Watt, 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:



Dan Watt  
Ashmount Consulting Engineers  
24 May 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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