

# Doherty Design & Planning Limited



# REPORT ON THE CODE FOR SUSTAINABLE HOMES PRE-ASSESSMENT

Site
120 KINGSGATE ROAD, LONDON NW6 2AE

Proposal

CONVERSION OF OFFICE INTO A TWO BEDROOM DWELLING

Client COBSTAR

18<sup>th</sup> NOVEMBER 2013 Ref. E370-00 - CSHPA

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#### 1.0 INTRODUCTION

- a) Doherty Design and Planning Limited have been instructed by Cobstar to undertake the Code for Sustainable Homes Pre-Assessment for the proposed development of a dwelling at 120 Kingsgate Road, London NW6 2AE.
- b) The aim of this review is to give a brief description of the Code for Sustainable Homes Assessment, assess the current specification for the construction of the dwelling and highlight areas of improvement to enable Code Level 4 to be achieved.
- In order to carry out the review, an initial review was held with The Design Works and Cobstar to undertake the Code for Sustainable Homes Pre-Assessment for to gain an understanding of the current specification. In some areas where the specification has not yet been defined, it is necessary to make assumptions that will need to be confirmed prior to the Code Assessment being submitted to the BRE. These assumptions, together with the required specification, have been clearly stated in Appendix A.

## 2.0 INTRODUCTION TO CODE FOR SUSTAINABLE HOMES

- a) 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 improvements in sustainable home building.
- b) The Code is based on EcoHomes and was launched in December 2006 and became operational in England in April 2007.
- c) From 1<sup>st</sup> May 2008 it is mandatory for a Code Sustainability Certificate or nil rated Certificate (where an assessments has not taken place) to be included in the information provided to prospective purchasers of properties in England. The Code has been revised in November 2010 and this report is based on the November 2010 version.
- d) The Code covers nine categories of sustainable design which are as follows:
  - Energy and CO<sub>2</sub> emissions
  - Water
  - Materials
  - Surface Water Run-off
  - Waste
  - Pollution
  - Health and Wellbeing
  - Management
  - Ecology
- e) Each category includes a number of environmental issues, which are assessed against performance targets for which credits are awarded. The performance targets are more demanding than the minimum standard needed to satisfy Building Regulations or other legislation. They represent good or best practise, are technically feasible and can be delivered by the building industry.



- f) There are mandatory minimum performance standards set for some of the above issues. Four of these have a single mandatory requirement, whatever Code level is sought, however credits are not awarded for these issues.
- g) If the mandatory minimum performance standard is met for these four issues, three further mandatory issues need to be considered. 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.
- h) Tables 1.2 and 1.3 below, taken from the Code Technical Guide, illustrate how, for the creditable mandatory issues, the minimum mandatory standards increase with increasing rating levels.

For CO2 emissions there are increased mandatory minimum standards for each increase in Code Level.

| Table 1.2: Code Levels for Mandatory Minimum Standards in CO₂ Emissions (Ene 1) |   |  |  |  |
|---|---|--|--|--|
| Code Level  | Minimum Percentage Improvement in Dwelling Emission Rate over<br>Target Emission Rate |  |  |  |
| Level 1 (★)   | 0% (Compliance with Part L 2010 only is required)                                     |  |  |  |
| Level 2 (★★)  | 0% (Compliance with Part L 2010 only is required)                                     |  |  |  |
| Level 3 (★★★)   | 0% (Compliance with Part L 2010 only is required)                                     |  |  |  |
| Level 4 (★★★★)  | 25%   |  |  |  |
| Level 5 (★★★★★)   | 100%  |  |  |  |
| Level 6 (★★★★★)   | Net Zero CO <sub>2</sub> Emissions  |  |  |  |

For Indoor water use there are increased mandatory minimum standards at Code levels 1, 3 and 5.

| Table 1.3: Code Levels for Mandatory Maximum Standards in Indoor Water Consumption |     |  |  |  |
|--|-----|--|--|--|
| Code Level Maximum Indoor Water Consumption in Litres per Person per Day           |     |  |  |  |
| Level 1 (★)  | 120 |  |  |  |
| Level 2 (★★)   | 120 |  |  |  |
| Level 3 (★★★)  | 105 |  |  |  |
| Level 4 (★★★★)   | 105 |  |  |  |
| Level 5 (★★★★)   | 80  |  |  |  |
| Level 6 (★★★★★)  | 80  |  |  |  |

- i) In addition to the mandatory standards, each design category scores a number of percentage points. Weighting factors are applied to each category. These have been derived from extensive studies involving a wide range of stakeholders who were asked to rank a range of environmental impacts. The weighting factor is applied to the percentage points which results in the credit for that issue.
- j) Table 1.4 shows how weightings are applied across all Code categories of environmental impact to adjust the relative values of credits within different categories. Within each category, credits are awarded for achieving specified degrees of performance. The weighting factors show the contribution made by each category to the total performance recognised and rewarded by the Code. The total available contribution is expressed as 100 per cent. The weighting of each category is expressed as a fraction of this, such that the sum of all the category contributions equals 100 per cent.

| Table 1.4: Total Credits Available, Weighting Factors and Points |                                |   |  |  |  |  |
|--|--------------------------------|---|--|--|--|--|
| Categories of<br>Environmental Impact                            | Total Credits in each Category | Weighting Factor<br>(% points contribution) | Approximate Weighted<br>Value of each Credit |  |  |  |
| Category 1<br>Energy and CO <sub>2</sub> Emissions               | 31                             | 36.4%                                       | 1.17   |  |  |  |
| Category 2<br>Water  | 6                              | 9.0%  | 1.50   |  |  |  |
| Category 3<br>Materials  | 24                             | 7.2%  | 0.30   |  |  |  |
| Category 4<br>Surface Water Run-off                              | 4                              | 2.2%  | 0.55   |  |  |  |
| Category 5<br>Waste  | 8                              | 6.4%  | 0.80   |  |  |  |
| Category 6<br>Pollution  | 4                              | 2.8%  | 0.70   |  |  |  |
| Category 7<br>Health and Well-being                              | 12                             | 14.0%                                       | 1.17   |  |  |  |
| Category 8<br>Management   | 9                              | 10.0%                                       | 1.11   |  |  |  |
| Category 9<br>Ecology  | 9                              | 12.0%                                       | 1.33   |  |  |  |
| Total  | -                              | 100.0%                                      | -  |  |  |  |



- K) The total number of credits establishes the Level or Rating for the dwelling. The certificate illustrates the rating achieved with a row of blue stars, one for each level. Where an assessment has taken place and no rating is achieved, the certificate states that no blue stars have been awarded.
- I) Table 1.6 below, taken from the Code Technical Guide, shows the relationship between the Total percentage points score and the Code Level.

| Table 1.6: Relationship Between Total Percentage Points Score and Code Level |                 |  |  |  |  |
|--|-----------------|--|--|--|--|
| Total Percentage Points Score (equal to or greater than)                     | Code Levels     |  |  |  |  |
| 36 Points  | Level 1 (★)     |  |  |  |  |
| 48 Points  | Level 2 (★★)    |  |  |  |  |
| 57 Points  | Level 3 (★★★)   |  |  |  |  |
| 68 Points  | Level 4 (★★★★)  |  |  |  |  |
| 84 Points  | Level 5 (★★★★★) |  |  |  |  |
| 90 Points  | Level 6 (★★★★★) |  |  |  |  |

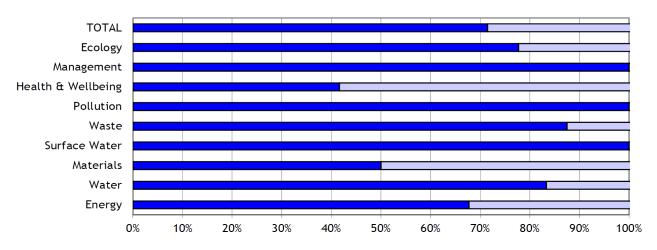
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Tables used in this document are taken from The Code for Sustainable Homes Technical Guide Nov 2010.

## 3.0 IMPROVEMENTS

- a) A Pre Assessment has been carried out for the proposed dwellings and this demonstrates that a Code Level 4 can be achieved if the requirements set out in Appendix A and B are implemented and all the evidence identified in Appendix C is gathered.
- b) The Assessment shows that the dwelling achieves approximate 71.51% of the Credits. However, during detailed design and construction, care must be taken as it is very easy to lose credits, especially by not gathering and maintaining the evidence. During the project, a natural slippage can occur and it is likely to be in the region of 0-3 credits, therefore, the current of 3.51 credit margin should be adequate and as the design is developed, the design team will seek to achieve additional credits.
- c) This report will try to identify any improvements that can be incorporated into all the dwelling to improve their score. Graph 1 shows a break down of the credits for each category and highlights the predicted percentage of their maximum.



Graph 1 - Predicted Percentage of credits achievable - Total and by Category

d) It must also be remembered that the category's are weighted, as shown in Table 1.4 above and therefore it is not just a simple matter of targeting the lower scored categories, for example materials only achieves 0.3 of a credit. In order to improve the rating, the more heavily weighted categories should be targeted first, e.g. Energy, Ecology, Water and Health & Well Being.



e) The dwelling currently has a score of 71.51. The table below shows some possible examples that could be incorporated, together with the revised Credit score if only the individual item is incorporated.

| Category | Title                     | Improvement   | New Score                 |
|----------|---------------------------|---|---------------------------|
| Ene 1    | Dwelling Emission<br>Rate | Improve the Insulation, Air tightness etc to achieve a greater reduction in CO2 emissions  59% improvement – 6 Credits          | Current<br>72.69          |
|          |                           | 72% improvement – 7 Credits<br>85% improvement – 8 Credits  | 73.86                     |
| Ene 2    | Fabric Energy             | Improve the fabric energy efficiency performance thus future proofing reduction in CO2 for the life of the dwelling             |                           |
|          | Efficiency                | ≤ 48 – 6 Credits<br>≤ 46 – 7 Credits<br>≤ 42 – 8 Credits  | Current<br>72.69<br>73.86 |
| F== 7    | Low or zero               | Reduce the Carbon Dioxide emissions by 10% by a renewable technology  | 72.69                     |
| Ene 7    | carbon<br>technologies    | Reduce the Carbon Dioxide emissions by 15% by a renewable technology  | 73.86                     |
| Wat 1    | Indoor Water Use          | Reduce the consumption of potable water in the home by specifying lower water use fittings/appliances or re-use rainwater       |                           |
|          |                           | ≤ 90 l/p/ day - 4 Credits<br>≤ 80 l/p/ day - 5 Credits  | Current<br>73.01          |
| Was 3    | Composting                | Provide a home composting facility in a dedicated position  | 72.31                     |
| Hea 1    | Day lighting              | Carry out Day lighting Calculations to ensure kitchen day light factor is achieved  | 72.68                     |
| пеат     | Day lighting              | Ensure 80% of working plane can receive direct light from the sky   | 73.84                     |
| Hea 2    | Sound Insulation          | Improve the acoustic performance of party walls and floors to be 5dB better than the Building Regulations – current             | Current                   |
| 1164 2   | Southa insulation         | Improve the acoustic performance of party walls and floors to be 8dB better than the Building Regulations – additional 1 credit | 73.68                     |
| Hea 4    | Lifetime Homes            | Design development to ensure that all Lifetime Homes criteria can be achieved   | 76.18                     |

## 4.0 CONCLUSION

- a) The report has given a brief description of the Code for Sustainable Homes, assessed the current specification that is to be used for the construction of the proposed development of a single 2 bedroom dwelling at 120 Kingsgate Road, London NW6 2AE and highlighted areas of improvement to ensure Code Level 4 can be achieved.
- b) Assumptions have been made when the current specification failed to provide adequate information. These assumptions have been clearly stated in Appendix A. With regard to Ene1 and Ene2, initial SAP assessments have been undertaken, however, once the working drawings are produced, these will need to be revisited.
- c) The Code for Sustainable Homes has a number of mandatory elements that must be achieved to successfully acquire a code rating. During this review, it is assumed that the mandatory elements will be achieved. If any of the mandatory elements are not achieved, a nil rating is all that can be provided.
- d) The assessment has highlighted areas where improvements can be made in order to achieve Code Level 4. If the current specification is incorporated and the current credits achieved, the Pre Assessment shows that a rating of for the dwelling is 71.51 or Level 4 can be possible. However, during detailed design and construction, care must be taken as it is very easy to lose credits, especially by not gathering and maintaining the evidence.
- e) It is important that the Client and Contractor understand the principles of the Code Assessment and they assist in gathering and recording the evidence.
- f) Specialist consultants are be required in order to achieve some the credits targeted and these include an ecologist and hydrological engineer. These must be suitably qualified to the requirements set out by the BRE.

# Appendix A – Assessment Comments

|         | Description  y 1: Energy and Carbon E | Mandatory ioxide Emission | Assumptions to Achieve Level 3  | Credits<br>Awarded | Comments  | Max<br>Credits |
|---------|---------------------------------------|---------------------------|---|--------------------|---|----------------|
| Ene 1   | Dwelling Emission Rate                |                           | Assumed SAP Calculations<br>have provided a DER 59%<br>better than the TER  | 6                  | The U Values of the various constructions could be improved by adding extra insulation and changing the construction  More efficient heating system or better controls  Improved Air Permeability  Incorporate renewable technology   | 10             |
| Ene 2   | Fabric Energy<br>Efficiency           | Yes                       | Assumed SAP Calculations have provided a FEE better than 49kWhr/m²/yr   | 6                  | Incorporate secondary heating source This should be provided by SAP Assessor. 4 Credits are awarded if FEE is less than or equal to 55 and 5 Credits are awarded if FEE is less than or equal to 52 and follows a sliding scale   | 9              |
| Ene 3   | Energy Display Devices                | No                        | Energy monitors are provided that monitor the electric and primary fuel consumption   | 2                  | For 1 Credit, primary heating fuel displayed or electricity displayed and 2 Credits can be awarded if both are displayed. If primary heating is feuled by electricty and the electrity is displayed, 2 credits can be awarded.  | 2              |
| Ene 4   | Drying Space                          | No                        | Dryers provided over the bath   | 1                  | For 1-2 bed dwelllings, 4+m of drying line are required. Permenant posts/fixing required. For 3+ bed dwelllings, 6+m of drying line are required. Permenant posts/fixing required.  | 1              |
| Ene 5   | Energy Labelled White goods           | No                        | Complaint Appliances and information on the EU Labelling Scheme is being provided   | 2                  | Credit if Fridge & Freezer or Fridge Freezer - A+ rated     Credit if Washing Machine & Dishwasher - A rated     AND EITHER washer dryer or tumbler dryer - B rated     OR washer dryer or tumble dryer is not provided but information the EU     Labelling Scheme is provided.  | 2              |
| Ene 6   | External Lighting                     | No                        | Space lighting meets specification  No security lighting is provided  | 1                  | Space Lighting - 1 Credit where all external space lighting is provided by dedicated energy efficient fittings  Security Lighting - 1 Credit where security light fittings are design for energy efficiency and are adequately controlled.  All burglar security lights must have a maximum wattage of 150W, Movement detecting controls devices and daylight cut off sensors  All other security lighting to be dedicated energy efficient fittings and fitted with daylight cut off sensors.  It No Security lighting provided, security lighting credit can be awarded   | 2              |
| Ene 7   | Low or Zero Carbon                    | No                        | No LZC technology is being  | 0                  | by default  Detailed calculations to demonstrate a 10% reduction for 1 credit and   | 2              |
| Ene 8   | Technology<br>Cycle Storage           | No                        | provided Secure storage is being  | 1                  | 15% or over reduction for 2 Credits  1 Credit - 2/3 bed - 1 cycle & 4+ bed - 2 cycles. 2  | 2              |
|         |                                       |                           | provided for 1 cycle in the refuse store  Storage could be provided in the cycle store  |                    | Credits - 2/3 bed - 2 cycles & 4+ bed - 4 cycles.  Adequately sized - 2 cycles 2m long x 1.5m wide. Cycles must be able to be removed independently. If in a shed, 1m2 is also required for garden tools and must have concrete base and secure fixings. If in garage, car must fit as well as cycles.  Convenient access - Easy and direct access from/to dwelling and public right of way, not through dwelling  Secure entrance lock - Permanent lock (not padlock) that conforms to BS3621:2004  Secure fixing - a steel fixing set in concrete which allows both wheel and frame to be locked securely, e.g. Sheffield type frame.  Secure storage - In dwellings - for fully enclosed solid structures - secure entrance lock or secure fixing; and for non solid enclosed structure - secure entrance lock and secure fixing; for non fully enclosed structures (three walls and roof) - secure fixings required.  Weatherproof = adequate protection from elements - normally at least three walls and a roof |                |
| Ene 9   | Home Office                           | No                        | Study shall be adequately sized to accommodate the livong room and office and include all necessary requirements, however, daylight calculations are required   | 1                  | This space must have at least 1.8m wall length, 2 double sockets, two telephone lines (1 phone and broadband), window (daylight factor 1.5%) and adequate ventilation (openable window minimum 0.5m2 opening.   | 1              |
| Categor | y 2: Water                            |                           | required  |                    |   |                |
| Wat 1   | Indoor Water Use                      | Yes                       | Calculations show a flow rate   | 4                  | Water Calculator tool (Wat 1) is used to calculate the water  | 5              |
|         |                                       |                           | of less than 90 l/p/day In order to achieve this level, the following speelfication shall be installed - 4/2.6 I dual flush WCs 3 l/min taps WHB 6 l/min sink 6 l/min shower 150 I bath Best Practice Washing |                    | consumption for the dwelling.  If appliance or fitting is specified the water consumption is used. If not, default figures are used, for example  - Regular taps for sink or basin - 12l/min - High flow shower - 14 l/min - Standard bath - 225 I capacity to overflow - Washing machine - 49 l/use - Dishwasher - 13 l/use - WC - 6 I cistern   |                |
|         |                                       |                           | Machine<br>Best Practice Dishwasher   |                    | The calculator tool uses standard usage patterns to estimate daily consumption. If all default figures are used, the daily consumption To achieve the flow rates stated, flow restrictors would need to be fitted.  No grey water or rain water is assumed to be used within the dwellings  |                |
| Wat 2   | External Water Use                    | No                        | Correctly specified water butt  | 1                  | The water butt needs to be on a base, connected to downpipe with  | 1              |
|         |                                       |                           | being provided  |                    | overflow and removable for cleaning.  |                |

| Issue ID          | Description   | Mandatory | Assumptions to Achieve Level 3   | Credits<br>Awarded | Comments  | Max<br>Credits |
|-------------------|---|-----------|--|--------------------|---|----------------|
| Category<br>Mat 1 | 3: Materials<br>Environmental Impact<br>of Materials                  | Yes       | Based on the Green Spec<br>Guide, three elements have<br>been given a rating<br>Windows - A<br>Roof - A<br>Ext Wall - A<br>Ext Wall (Party) - A  | 12                 | There is a mandatory requirement to achieve Green Guide Rating of between A+ and D for at least three of the five elements in the building envelope, those being  - Roof  - External walls  - Internal walls (inc separating walls)  - Upper and ground floors (inc separating walls)  - Windows  | 15             |
| Mat 2             | Responsible Sourcing of Material - Basic Building Elements            | No        | Credit not sought  | 0                  | Then to achieve between 1 and 15 credits, the Mat 1 Calculator Tools must be used.  Points are awarded where materials used in the key basic building elements are sourced according to the following criteria - Where 80% of the assessed materials in the following building elements are responsibly sourced:  - Frame - Ground floor - Upper floors (inc separating floors) - Roof - External walls - Internal walls (inc separating walls) - Foundations/substructures (exc sub base) - Staircase - Additionally 100% of timer in these elements must be sourced legally.  | 6              |
| Mat 3             | Responsible Sourcing of Material - Finishing Elements                 | No        | Credit not sought  | 0                  | Points are awarded where materials used in the key basic building elements are sourced according to the following criteria - Where 80% of the assessed materials in the following finishing elements are responsibly sourced:  - Stair  - Window - Upper floors (inc separating floors) - External & internal doors - Skirting - Panelling - Fanciling - Furniture - Fascias Additionally 100% of timer in these elements must be sourced legally.  | 3              |
| Category          | 4: Surface Water Run-o  | ff        | •  | •                  |   | •              |
| Sur 2             | Surface Water Run-off<br>from development                             | No        | Calcs and FRA required for a credits  Assume that the site is in Zone 1, however site specific Flood Risk Assessment is required   | 2                  | delay the discharge of rainfall to public sewers and watercourses, in order to protect watercourses and reduce the risk of localised flooding.  The mandatory element is to ensure that the Peak Rate of Runoff is no greater for the developed site than it was for the pre-developed site. An allowance for climate change as per PPS25 should be allowed.  The Volume of Runoff caused by the development for a 1 in 100 year event of 6 hours, should be reduced using infiltration and/or made available for use in the dwelling as a replacement for potable water use in non-potable applications  2 credits are available for using SUDS to improve the rainwater discharged or for protecting the quality of the receiving waters by ensuring no discharge to the watercourse for rainfall depths of up to 5mm  2 Credits are available for developments situated in Zone 1 - low annual probability of llooding, whilst 1 credit is available for developments situated in Zone 2 and 3 (medium to high annual probability and where mitigation has been incorporated, i.e. finished ground floor of habitable rooms and access routes to ground floor are at least 600mm above | 2              |
| İ                 |   |           |  |                    | flood level   |                |
|                   |   |           |  |                    |   |                |
| Category<br>Was1  | 5: Waste<br>Storage of non-<br>recyclable waste &<br>recyclable waste | Yes       | Mandatory element is met  A Local Authority Collection scheme, at least fortnightly, will be provided The recyclable waste is sorted after collection A combination of internal storage capacity provided in an adequate internal space with a Local Authority scheme. | M 4                | The space allocated for waste storage should be able to accommodate containers with at least the minimum volume recommended by BS5906 based on a maximum collection of once per week.  This is 100 litres for a single bedroom, with a further 70 litres for each additional bedroom  All containers must be accessible to disabled people and sited on hard, level surface   | M 4            |
|                   |   |           | A single 30 litre storage bin<br>with adequate internal space is<br>provided and the external<br>storage has a min total<br>capacity of 170 l, within 30m of   |                    | A local Authority recycling scheme offering containers equal or greater than this volume would meet the requirement, providing outdoor space is allocated to them.  |                |
|                   |   |           | the door.  |                    |   |                |
| Was 2             | Construction Site Waste Management                                    | Yes       |  | М                  | A Site Waste Management Plan must be developed and implemented, including monitoring and reporting the waste generated.   | М              |
| Was 2             |   | Yes       | the door.  | 3                  |   | 1              |

| Issue ID | Description                        | Mandatory     | Assumptions to Achieve Level  | Credits | Comments  | Max      |
|----------|------------------------------------|---------------|---|---------|---|----------|
| Category | 6: Pollution                       |               | 3   | Awarded |   | Credits  |
| Pol 1    | Global Warming                     | No            | All insulating materials in   | 1       | Including roofs (including loft access), walls (internal and external,  | 1        |
|          | Potential of Insulants             |               | elements have a GWP less<br>than 5  |         | including acoustic insulation and lintels), all ground and upper floors, hot water cylinders, pipe, cold water tanks and external doors   |          |
| Pol 2    | NOx Emissions                      | No            | Boiler to emit less than<br>40mg/kWh of dry NOx   | 3       | A boiler with less than 100mg/kWh would get 1 credit, under 70mg/kWh gets 2 credits and less than 40mg/kWh gets 3 credits.  | 3        |
| Category | 7: Health & Wellbeing              |               |   | •       |   |          |
| Hea 1    | Daylighting                        | No            | At this stage, it is envisaged<br>that the average day light<br>factors will be achieved in the<br>kitchen<br>Calculations are required to                                  | 0       | The average daylight factor, position of no-sky line and the percentage of working plane that receives direct sun light calculations need to be carried out  1 Credit if kitchen achieves a minimum average daylight factor of at   | 3        |
|          |                                    |               | show the average day light<br>factors for each of the rooms   | 1       | least 2% - Calculations are required to prove this.  1 Credit all living and dining rooms and studies achieve a daylight factor   |          |
|          |                                    |               | Calculations are required to show that view of sky is achieved for all assessed   | 0       | of at least 1.5% - Calculations are required to prove this.  1 Credit if 80% of the working plane in each kitchen, living room ,dinning room and study receive direct light from the sky - Calculations are required to prove this.   |          |
| Hea 2    | Sound Insulation                   | No            | rooms Specification required to show improvement over building  | 3       | Credit where the airbourne sound insulation values are at least 3dB higher and the impact sound insulation values are at least 3dB lower  | 4        |
|          |                                    |               | regulations by 5dB  |         | than the performance standards of the Bldg Regs<br>3 Credit where the airbourne sound insulation values are at least 5dB  |          |
|          |                                    |               |   |         | higher and the impact sound insulation values are at least 5dB lower than the performance standards of the Bdg Regs   |          |
|          |                                    |               |   |         | 4 Credit where the airbourne sound insulation values are at least 8dB higher and the impact sound insulation values are at least 8dB lower than the performance standards of the Bdg Regs   |          |
| Hea 3    | Private Space                      | No            | Amble private space is being provided   | 1       | Where outdoor space has been provided that is a minimum size that<br>allows all occupants to sit outside, allows easy access to all occupants,<br>including wheelchairs and accessible only to occupants to the<br>designated dwellings (minimum size 1.5m2/bedroom)  | 1        |
| Hea 4    | Lifetime Homes                     | Yes (Level 6) | Credit not sought   | 0       | All principles of Lifetime Homes have to be compiled with to achieve 4<br>Credits. A completed Lifetime Homes Checklist Hea4 indicating<br>compliance with all applicable points from 1-16, signed by the developer   | 4        |
| Category | 8: Management                      |               |   |         |   | <u> </u> |
| Man 1    | Home User Guide                    | No            | Home user guide will be provided and include operational issues  This will include site and surroundings information  | 1       | 2 Credits for a home user guide, complied using Checklist Man 1 Part 1 together with information that the guide is available in alternative accessible formats.  Checklist Man 1 Part 1 includes  - Environmental strategy/design features  - Energy  - Water Use  - Recycling and Waste  - Sustainable DIY  - Emergency Information  - Links, References and Further Information  - Provision of Information in Alternative Formats  1 Credit where the guide also covers information relating to the site and its surroundings, compiled using Checklist Man 1 Part 2  Checklist Man 1 Part 2 includes  - Recycling and Waste  - Sustainable (Urban) Drainage Systems | 3        |
|          |                                    |               |   |         | - Public Transport - Local amenities - Responsible Purchasing - Emergency Information - Links, References and Further Information   |          |
| Man 2    | Considerate<br>Constructors Scheme | No            | Conctractor will be required to go significantly beyond best practise   | 2       | Where there is a commitment to meet Best Practice under the<br>Considerate Constructors Scheme there is 1 Credit, but 2 Credits are<br>given where the commitment is to go significantly beyond Best Practice   | 2        |
| Man 3    | Construction Site<br>Impacts       | No            | Assume 4 of the procedures<br>are implemented, probably the<br>following ones-  | 2       | When procedures that cover the following items are put in place:  | 2        |
|          |                                    |               | Monitor, report and set targets for the energy use arising from site activities   |         | - Monitor, report and set targets for the CO2 production or energy use arising from site activities   |          |
|          |                                    |               | air (dust) pollution arising from<br>site activities<br>water consumption from site<br>activities<br>80% of site timber is<br>reclaimed, re-used or<br>responsibly sourced. |         | <ul> <li>Monitor and report CO2 or energy use arising from commercial<br/>transport to and from site</li> <li>Monitor, report and set targets for water consumption from site<br/>activities</li> <li>Adopt best practise policies in respect of air (dust) pollution arising<br/>from site activities</li> </ul>   |          |
|          |                                    |               |   |         | Adopt best practise policies in respect of water (ground and surface) pollution occurring on the site     80% of site timber is reclaimed, re-used or responsibly sourced.  1 Credit if 2 or more procedures are adopted and 2 Credits if 4 or more   |          |
| Man 4    | Security                           | No            | Liasion with the ACO will be<br>carried out and their<br>recommendations addressed  | 2       | are adopted Where an Architectural Liaison Officer or Crime Prevention Design Advisor from the local police is consulted at the design stage and their recommendations incorporated into the design of the dwellings  | 2        |
|          |                                    |               |   |         |   |          |

| Issue ID | Description                           | Mandatory | Assumptions to Achieve Level 3  | Credits<br>Awarded | Comments  | Max<br>Credits |
|----------|---------------------------------------|-----------|---|--------------------|---|----------------|
| Category | 9: Ecology                            |           |   |                    |   |                |
| Eco 1    | Ecological Value of Site              | No        | The site is believed to have a low ecological value   |                    | Where the development site is confirmed as land of inherently low ecological value, EITHER By meeting the criteria for low ecological value using Checklist Eco 1, OR By being confirmed by a Suitably Qualified Ecologist, OR Where an independent ecological report of the site, prepared by a Suitably Qualified Ecologist, confirms that the construction zone is of low ecological value AND Any land of ecological value outside the construction zone but within the development site remain undisturbed by the construction works | 1              |
| Eco 2    | Ecological<br>Enhancement             | No        | The Developer shall adopt all key recommendations and at least 30% of the additional recommendations from the Ecologist | 1                  | Where a Suitably Qualified Ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site, AND  Where the developer adopts all key recommendations and 30% of additional recommendations.   | 1              |
| Eco 3    | Protection of Ecological<br>Features  | No        | The site is believed to have a low ecological value   | 1                  | Where all existing features of ecological value on the developments site<br>potentially affected by the works are maintained and adequately<br>protected during site clearance, preparation and construction works.   | 1              |
| Eco 4    | Change in Ecological<br>Value of Site |           | The Ecologist report shall identify measures to ensure a major increase in ecological value of the site is achieved     | 4                  | The ecological value before and after development is measured, and the overall change in species per hectare is:  - 1 Credit - Minor negative change between -9 and less than or equal to -3  - 2 Credits - Neutral change greater than -3 and less than or equal to +3  - 3 Credits - Minor enhancement greater than 3 and less than or equal to 10.9  | 4              |
|          |                                       |           |   |                    | to 9 - 4 Credits - Major Enhancement greater than +9  |                |
| Eco 5    | Building Footprint                    | No        | The ratio of total floor area to ground floor area ratio is gless than 2.5:1  | 0                  | Credit where the Net Internal Floor Area:Net Ground Floor Area ratio is greater than or equal to 2.5:1 or 2 Credits where the Net Internal Floor Area:Net Ground Floor Area ratio is greater than or equal to 4:1   | 2              |

# Appendix B – Pre-Assessment Estimator

#### Results

Development Name: 120 Kingsgate Road, London NW6 2AE

Dwelling Description: 2 bedroom semi-detached dwelling

Name of Company: Cobstar

Code Assessor's Name: Jason Doherty

Company Address:

Notes/Comments:

Pre-Assessment (18th November 2013)

#### PREDICTED RATING - CODE LEVEL: 4

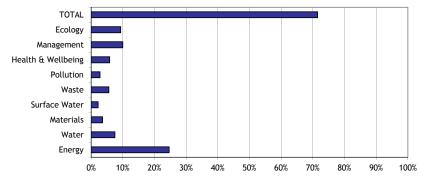
Mandatory Requirements: All Levels

 % Points:
 71.51%
 - Code Level: 4

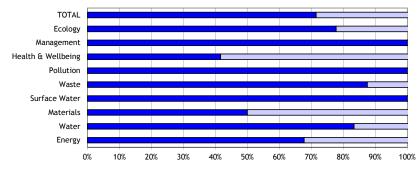
 Breakdown:
 Energy
 - Code Level: 4

 Water
 - Code Level: 4

Graph 1: Predicted contribution of individual sections to the total score and percentage of total achievable score



Graph 2: Predicted percentage of credits achievable: Total and by Category



NOTE: The rating obtained by using this Pre Assessment Estimator is for guidance only. Predicted ratings may differ from those obtained through a formal assessment, which must be carried out by a licensed Code assessor.

| CATEGOR                                 | Y 1 ENERGY   |   | Overall   | Level: 4                              | Overall Score      | 71.51   |
|---|--|---|---|---------------------------------------|--------------------|---------|
| % of Sect                               | ion Credits Pr   | edicted:  | 67.74   |                                       | Credits            | Level   |
| Contribut                               | ion to Overal  | l % Score:  | 24.65 points  |                                       | 21.0 of 31 Credits | Level 4 |
| Ene 1<br>Dwelling<br>Emission<br>Rate   | Credits are Dwelling Em calculated u apply. The predicted sc   | ission Rate<br>Ising SAP 2<br>Code ener<br>ore.   |   |                                       |                    |         |
|   | \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \   |   | predicted number of credits CO <sub>2</sub> emissions achieved? | 6.0                                   | 6.0 of 10 Credits  | Level 4 |
| Ene 2<br>Fabric<br>Energy<br>Efficiency | (kWh/m²/yr) 5 and 6. The predicted so the solution of the solu | of the dwo<br>ne Code en<br>ore.<br>predicted scor<br>partments,<br>nd terrace,<br>taggered M | Mid-terrace<br>Semi and Detached                                | oply at Code levels ed to calculate a | 6.0 of 9 Credits   | -       |
| Ene 3<br>Energy<br>Display<br>Devices   | Device is instance consumption Select who P OR E   | talled mon  tether the EDD  one Specifications Heal  lectricity o                             | ting only   | 3, ,                                  | 2 of 2 Credits     | -       |

| Issue                |   | Credits        | Level |
|----------------------|---|----------------|-------|
| Ene 4                | One credit is awarded for the provision of either internal or external  |                |       |
| Drying Space         | secure drying space with posts and footings or fixings capable of       |                |       |
|                      | holding 4m+ of drying line for 1-2 bed dwellings and 6m+ for            |                |       |
|                      | dwellings with 3 bedrooms or greater.                                   |                |       |
|                      | Will drying space meeting the criteria be provided?                     |                |       |
|                      | Yes   | 1 of 1 Credits | -     |
|                      | OR No   | -              |       |
|                      |   |                |       |
| Ene 5                | Credits are awarded where each dwelling is provided with either         |                |       |
| Energy<br>Labelled   | information about the EU Energy Labelling Scheme, White Goods with      |                |       |
| White Goods          | ratings ranging from A+ to B or a combination of the previous           |                |       |
|                      | according to the technical guide.                                       |                |       |
|                      | Select the appropriate option below                                     |                |       |
|                      | EU Energy labelling information only                                    |                |       |
|                      | A+ rated appliances   |                |       |
|                      | A rated washing machine and dishwasher                                  | 2 of 2 Credits | _     |
|                      | B rated tumble dryer or washer dryer                                    | 2 of 2 credits |       |
|                      | EU Energy labelling information provided                                |                |       |
|                      | Lo Lifely tabetting information provided                                |                |       |
| Ene 6                | Credits are awarded based on the provision of space lighting* with      |                |       |
| External<br>Lighting | dedicated energy efficient fittings and security lighting fittings with |                |       |
| Lighting             | appropriate control gear  |                |       |
|                      | Space Lighting  |                |       |
|                      | None provided   |                |       |
|                      | OR Non Code compliant lighting  |                |       |
|                      | OR Code compliant lighting  |                |       |
|                      | Security Lighting   | 2 (25 1)       |       |
|                      | None provided   | 2 of 2 Credits | -     |
|                      | OR Non Code compliant lighting  |                |       |
|                      | OR Code compliant lighting and controls                                 |                |       |
|                      | Dual lamp luminaires  |                |       |
|                      |   |                |       |
|                      | Compliant with both above criteria                                      |                |       |
|                      | * Statutory safety lighting is not covered by this requirement          |                |       |

| Issue                                 |   | Credits        | Level |
|---------------------------------------|---|----------------|-------|
| Ene 7                                 | Credits are awarded where there is a 10% or 15% reduction in CO <sub>2</sub>  | Cicuits        |       |
| Low or Zero<br>Carbon<br>Technologies | emissions resulting from the use of low or zero carbon technologies.  Select % contribution made by low or zero carbon technologies   |                |       |
|                                       | Less than 10% of demand  OR 10% of demand or greater  OR 15% of demand or greater   | 0 of 2 Credits | -     |
| Ene 8 Cycle<br>Storage                | Credits are awarded where adequate, safe, secure and weather proof cycle storage is provided according to the Code requirements.  Fill in the development details below  Number of bedrooms:  Number of cycles stored per dwelling*  * if you have storage for 1 cycle per two dwellings insert 0.5 in number of cycles stored per dwelling | 1 of 2 Credits | -     |
| Ene 9<br>Home<br>Office               | A credit is awarded for the provision of a home office. The location, space and services provided must meet the Code requirements.  Will there be provision for a Home Office?  Yes  OR  No   | 1 of 1 Credits | -     |

| CATEGOR'                                   | Y 2 WA               | TER   | Overall Level:  | 4      |    | Overall Score  | 71.51                     |
|--|----------------------|---|---|--------|----|----------------|---------------------------|
| % of Section                               | on Cre               | dits Predicted: 83.33   |   |        |    | Credits        | Level                     |
| Contribution to Overall Score: 7.50 points |                      |   |   |        |    | 5 of 6 Credits | Level 4                   |
| Wat 1<br>Indoor Water<br>Use               | water<br>Tool.       | s are awarded based on the<br>consumption, calculated usin<br>Minimum standards for each co<br>elect the predicted water use / Mandat | g the Code Water<br>ode level apply.                                      |        |    |                |                           |
|  | OF<br>OF<br>OF<br>OF | eless than 110 litres/ per<br>eless than 105 litres/ per<br>eless than 90 litres/ pers  | rson/ day<br>rson/ day<br>rson/ day<br>son/ day                           | 000000 |    | 4 of 5 Credits | Level 3<br>AND<br>Level 4 |
| Wat 2<br>External<br>Water Use             | collec<br>outdo      |   | rigation purposes.<br>can be achieved by<br>outdoor space<br>ction system | Where  | no | 1 of 1 Credits |                           |

| CATEGORY  | ' 3 MATERIALS Overall Level: 4   | Overall Score    | 71.51      |
|---|--|------------------|------------|
| % of Section  | on Credits Predicted: 50.00  | Credits          | Level      |
| Contributi  | on to Overall Score: 3.60 points   | 12 of 24 Credits | All Levels |
| Mat 1<br>Environm-<br>ental Impact<br>of Materials                          | <u>Mandatory Requirement:</u> At least three of the five key building elements must achieve a Green Guide 2008 Rating of A+ to D. <u>Tradable Credits:</u> Points are awarded on a scale based on the Green Guide Rating of the specifications. The Code Materials Calculator can be used to predict a potential score. <u>Mandatory Requirement</u> |                  |            |
|   | Will the mandatory requirement be met?   Enter the predicted score  What is the predicted number of credits? 12  | 12 of 15 Credits | All Levels |
| Mat 2<br>Responsible<br>Sourcing of<br>Materials -<br>Basic                 | Credits are awarded where materials used in the basic building elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score.  Enter the predicted Score  |                  |            |
| Building<br>Elements  | What is the predicted number of credits?   | 0 of 6 Credits   | -          |
| Mat 3<br>Responsible<br>Sourcing of<br>Materials -<br>Finishing<br>Elements | Credits are awarded where materials used in the finishing elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score.  Enter the predicted Score  What is the predicted number of credits?   | 0 of 3 Credits   | -          |

| % of Section Credits Predicted: 100.00%  Contribution to Overall Score: 2.20 points  Sur 1  Management of Surface Wedlopment site and that the additional predicted volume of rainwater discharge caused by the new development is entirely reduced as far as possible in accordance with the assessment criteria. Designing the drainage system to be able to cope with local drainage system failure. Tradable Credits: Where SUDS are used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters.  Mandatory Requirement  Will the mandatory requirement be met?  Will the mandatory requirement be met?  Select the appropriate option  No SUDS  No runoff into watercourses for the first 5 mm of rainfall  Runoff from hard surfaces will receive an   | CATEGORY   | 4 SURFACE WATER R  | UN-OFF   | Overall Level   | : 4   | Overall Score  | 71.51      |
|---|--|--|--|---|---|----------------|------------|
| Sur 1  Management of Surface Water Run-off from of developments is and that the additional predicted volume of animater discharge caused by the new development is entirely reduced as far as possible in accordance with the assessment criteria. Desiging the drainage system to be able to cope with local drainage system failure. Tradable Credits: Where SUDS are used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters.    Mandatory Requirement   Will the mandatory requirement be met?   Select the appropriate option  |  |  |  |   |   |                | Level      |
| Management of Surface Marker Run-off Surface development site and that the additional predicted volume of rainwater discharge caused by the new development is entirely reduced as far as possible in accordance with the assessment criteria. Desiging the drainage system to be able to cope with local drainage system failure. Tradable Credits: Where SUDS are used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters.  Mandatory Requirement  Will the mandatory requirement be met?  Select the appropriate option  No SUDS  No runoff into watercourses for the first 5 mm of rainfall  Runoff from hard surfaces will receive an appropriate level of treatment  Credits are awarded where developments are located in areas of low flood risk or where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria in the technical guide.  Select the annual probability of flooding (from PPS25*)  Zone 1 - Low  OR Zone 2 - Medium  OR Zone 3 - High | Contributio  | n to Overall Score:  | 2.20 points  |   |   | 4 of 4 Credits | All Levels |
| No runoff into watercourses for the first 5 mm of rainfall Runoff from hard surfaces will receive an appropriate level of treatment  Credits are awarded where developments are located in areas of low flood risk or where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria in the technical guide.  Select the annual probability of flooding (from PPS25*)  Zone 1 - Low  OR Zone 2 - Medium  OR Zone 3 - High   | Sur 1<br>Management<br>of Surface<br>Water Run-off<br>from | Mandatory Requirems no greater for the development site an rainwater discharge reduced as far as p criteria. Desiging the local drainage systen used to improve wat protecting the quality | ent: Peak rate of of developed site of that the additional developed site of the develop | than it was fo<br>cional predicted<br>we development<br>lance with the<br>n to be able to<br>e Credits: Wher<br>rainwater discha<br>waters. | r the pre-<br>volume of<br>is entirely<br>assessment<br>cope with<br>e SUDS are<br>arged or for | 4 of 4 Credits | All Levels |
| Flood Risk  Credits are awarded where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria in the technical guide.  Select the annual probability of flooding (from PPS25*)  Zone 1 - Low  OR Zone 2 - Medium  OR Zone 3 - High   |  | No runoff<br>5 mm of r<br>Runoff fro   | ainfall<br>m hard surfaces v   | vill receive an   | <b>I</b>  | 2 of 2 Credits | All Levels |
| 2 of 2 Credits  |  | low flood risk or whappropriate measure property and its cont the technical guide.  Select the annual pro  Zone 1 - L  OR  Zone 2 - A  | nere in areas of<br>es are taken to<br>ents in accordance<br>obability of flooding (fro  | medium or high<br>prevent dama<br>ce with the Code  | n flood risk<br>age to the<br>e criteria in   |                |            |
| Low risk of flooding from FRA**  All measures of protection are demonstrated in FRA  Ground floor level and access routes are 600 mm above design flood level  *Planning Policy Statement 25 - Planning and Flood Risk **FRA - Flood Risk Assessment  |  | Select the apropriate  Low risk of All me demonstrate Ground flow mm above  * Planning Policy Statemen   | option(s)  f flooding from FF asures of p ted in FRA our level and acce design flood leve  | orotection and are 60 el  | e   | 2 of 2 Credits | -          |

| CATEGORY  | 5 WASTE  | Overall Leve   | el: 4    | Overall Score  | 71.51      |
|---|--|--|----------|----------------|------------|
| % of Section  | Credits Predicted:   | 87.00%   |          | Credits        | Level      |
| Contributio   | n to Overall Score:  | 5.60 points  |          | 7 of 8 Credits | All Levels |
| Was 1<br>Storage of non-<br>recyclable<br>waste and<br>recyclable<br>household<br>waste | Mandatory Requirements should be sized to hold provided by the Location BS 5906. Trainternal and/or external Mandatory Requirements and the size of th | al containers<br>y calculated  |          |                |            |
|   | be accessible  | num space be provided and to disabled people?                        | <b>V</b> |                |            |
|   |  | is no external recyclable waste<br>o Local Authority collection      |          |                |            |
|   | Internal stora Local Authority collec  | ge (capacity 60 litres)<br>tion Scheme                               |          | 0 of 2 Credits |            |
|   | Pre-collection   | ge (capacity 30 litres)  |          | 4 of 4 Credits | All Levels |
|   | 3 separate in<br>(capacity 30<br><b>AND</b><br>Houses  | ternal storage bins<br>litres)                                       |          |                |            |
|   | Flats<br>Private recyc   | age(capacity 180 litres)<br>ling operator<br>ypes of waste collected |          | 0 of 4 Credits |            |

| Issue   |   | Credits        | Level |
|---|---|----------------|-------|
| Was 2<br>Construction<br>Site Waste<br>Management | A credit is awarded where a compliant SWMP is provided with targets and procedures to minimise construction waste. Credits are available where the SWMP include procedures and commitments for diverting either 50% or 85% of waste generated from landfill.  SWMP details  Does the SWMP include:  + No SWMP  + SWMP with targets and procedures to minimise waste?  + SWMP with procedures to divert 50% of waste  + SWMP with procedures to divert 85% of waste    | 3 of 3 Credits |       |
| Was 3<br>Composting                               | A credit is awarded where individual home composting facilities are provided, or where a community/ communal composting service, either run by the Local Authority or overseen by a management plan is in operation.  Select the facilities available  No composting facilities Individual composting facilities OR Communal/ community composting*? Local Authority OR Private with management plan  * including if an automated waste collection system is in place | 0 of 1 Credit  | -     |

| CATEGOR'   | Y 6 POLLU              | JTION Ove   | erall Level: 4      | Overall Score  | 71.51      |
|--|------------------------|---|---------------------|----------------|------------|
| % of Section   | on Credit              | Predicted: 100,00%  |                     | Credits        | Level      |
| Contributi   | ion to Ove             | erall Score: 2.80 points  |                     | 4 of 4 Credits | All Levels |
| Pol 1<br>Global<br>Warming<br>Potential<br>(GWP) of<br>Insulants | substance<br>less than | is awarded where <u>all</u> insulating es (in manufacture AND installation 5. t the most appropriate option  All insulants have a GWP less than Some insulants have a GWP of less No insulants have a GWP of less than 10 most of the 10 mos | that have a GWP of  | 1 of 1 Credits |            |
| Pol 2<br>NOx<br>Emissions  | the opera              | re awarded on the basis of NOx emitation of the space and water heating the most appropriate option  Greater than 100 mg/kWh Less than 100 mg/kWh Less than 70 mg/kWh Less than 40 mg/kWh Class 4 boiler Class 5 boiler  All space and hot water equirements are met by system of produce NOx emissions   | s system within the | 3 of 3 Credits |            |

| CATEGOR                      | 7 HEALTH & WELLBEING   | Overall Leve  | l: 4 | Overall Score   | 71.51    |
|------------------------------|--|---|------|-----------------|----------|
| % of Section                 | on Credits Predicted: 41.00  | %   |      | Credits         | Level    |
| Contributi                   | on to Overall Score: 5.83 p  | oints   |      | 5 of 12 Credits | No level |
| Hea 1<br>Daylighting         | Dining Room*: Avg<br>Study*: Avg DF of   | f at least 2%  DF of at least 1.5% DF of at least 1.5% at least 1.5% at least 1.5% plane in all above room at from the sky? |      | 1 of 3 Credits  | -        |
|                              |  |   |      |                 |          |
| Hea 2<br>Sound<br>Insulation | Credits are awarded where required in Building Regulatiby carrying out pre-comple Robust Details Limited.  Select a type of property |   |      |                 |          |
|                              | Detached Propert   | y   | 0    |                 |          |
|                              | Attached Propert   | es:   |      |                 |          |
| 1                            |  |   |      |                 |          |
|                              | - Separating walls non habitable space   | and floors only exist betweens  | en O |                 |          |
|                              | non habitable space  |   | 0    | 3 of 4 Credits  | -        |
|                              | non habitable space<br>- Separating walls  | es and floors exist betwee  | O en | 3 of 4 Credits  | -        |
|                              | non habitable space<br>- Separating walk<br>habitable spaces   | es  | O en | 3 of 4 Credits  | -        |
|                              | non habitable space - Separating wall habitable spaces  Select a performance standard  Performance stand                             | es  | • •  | 3 of 4 Credits  | -        |
|                              | non habitable space - Separating walls habitable spaces  Select a performance standard Performance stan Airborne: 3db hig            | and floors exist betwee   | •    | 3 of 4 Credits  | -        |

|                            |   | Credits        | Level |
|----------------------------|---|----------------|-------|
| Hea 3<br>Private<br>Space  | A credit is awarded for the provision of an outdoor space that is at least partially private. The space must allow easy access to all occupants.  Will a private/ semi-private space be provided?  Yes, private/semi-private space will be provided  OR No private/semi-private space | 1 of 1 Credits | -     |
| Hea 4<br>Lifetime<br>Homes | <u>Mandatory</u> <u>Requirement:</u> Lifetime Homes is mandatory when a dwelling is to achieve Code Level 6.  Tradable credits: Credits are awarded where the developer has   |                |       |

| CATEGORY                                       | 8 MANAGEMENT Overall Level: 4   | Overall Score  | 71.51      |
|--|---|----------------|------------|
| % of Section                                   | on Credits Predicted: 100.00%   | Credits        | Level      |
| Contributi                                     | on to Overall Score: 10.00 points   | 9 of 9 Credits | All Levels |
| Man 1<br>Home User<br>Guide                    | Credits are awarded where a simple guide is provided to each dwelling covering information relevant to the 'non-technical' home occupier, in accordance with the Code requirements.  Tick the topics covered by the Home User Guide  Operational Issues?  Site and Surroundings?  Is available in alternative formats?  | 3 of 3 Credits |            |
| Man 2<br>Considerate<br>Constructors<br>Scheme | Credits are awarded where there is a commitment to comply with<br>best practice site management principles using either the<br>Considerate Constructors Scheme or an alternative locally/<br>nationally recognised scheme.  |                |            |
|  | Select the appropriate scheme and score  No scheme used Considerate Constructors  OR Best Practice OR Significantly Beyond Best Practice Alternative Scheme*  OR Mandatory + 50% optional requirements OR Mandatory + 80% optional requirements  * In the first instance, contact a Code Service Provider if you are considering to use an alternative scheme.  | 2 of 2 Credits | -          |
| Man 3<br>Construction<br>Site Impacts          | Credits are awarded where there is a commitment and strategy to operate site management procedures on site as following:  Tick the impacts that will be addressed    Monitor, report and set targets, where applicable, for:   CO2/ energy use from site activities   CO2/ energy use from site related transport   water consumption from site activities   Adopt best practice policies in respect of:   air (dust) pollution from site activities   water (ground and surface) pollution on site   80% of site timber is reclaimed, re-used or responsibly sourced | 2 of 2 Credits | -          |

| Issue             |  | Credits        | Level |
|-------------------|--|----------------|-------|
| Man 4<br>Security | Credits are awarded for complying with Section 2 - Physical Security from Secured by Design - New Homes. An Architectural Liaison Officer (ALO), or alternative, needs to be appointed early in the design process and their recommendations incorporated.  Secured by Design Compliance |                |       |
|                   | Credit not sought OR Secured by Design Section 2 Compliance  | 2 of 2 Credits | -     |

| CATEGORY   | / 9                   | ECOLOC  | SY  |   | Overall Level:  | 4  | Overall Score  | 71.51      |
|--|-----------------------|---|---|---|---|--|----------------|------------|
| % of Section                                     | on                    | Credits I   | Predicted:  | 77.00%  |   |  | Credits        | Level      |
| Contributi                                       | on                    | to Over   | all Score:  | 9.33 points   |   |  | 7 of 9 Credits | All Levels |
| Eco 1<br>Ecological<br>Value of Site             | Oi                    |   | the appropriate<br>Credit not<br>Land has e   | e optionsought<br>cological value   | and of inherently   | 0 0  | 1 of 1 Credits |            |
|  | wh<br>an<br>the<br>de | hole develo<br>nd can confi<br>e construc<br>evelopment | ical value is de<br>pment site; or<br>irm or c) prodi<br>tion zone is<br>site will remai  | etermined either a) I<br>r b) where an suitab<br>uces an independent<br>of low/ insignifica<br>in undisturbed by the            | by using Checklist Eco<br>oly qualified ecologist<br>ecological report of t<br>int value; AND the<br>works. | o 1 across the<br>is appointed<br>he site, that<br>rest of the |                |            |
| Eco 2<br>Ecological<br>Enhancement               |                       | cological<br>Tick the                                   | value of the<br>e appropriate b<br>Will a St<br>appointed<br>ecological<br>Will all key   | e development si<br>poxes<br>uitably Qualifie<br>to recomme<br>features?<br>v recommendatio                                     | ed Ecologist be<br>end appropriate  |  | 1 of 1 Credits | -          |
| ECO 3<br>Protection of<br>Ecological<br>Features | *If                   | Type as  OR  AND  | y protect fe<br>and protection of<br>Site with for<br>Site of low<br>All* existin<br>site works<br>protected?<br>qualified ecolon<br>the ecological v | atures of ecologi of existing features eatures of ecolog ecological value g features poten are maintained ogist has confirmed t | gical value?  | ○<br>● removed due   | 1 of 1 Credits |            |

| Issue   |   | Credits        | Level |
|---|---|----------------|-------|
| Eco 4<br>Change of<br>Ecological<br>Value of Site | Credits are awarded where the change in ecological value has<br>been calculated in accordance with the Code requirements and is<br>calculated to be:  |                |       |
|   | Major negative change: fewer than -9  Minor negative change: between -9 and -3  OR  Neutral: between -3 and +3  Minor enhancement: between +3 and +9  Major enhancement: greater than 9   | 4 of 4 Credits |       |
| Eco 5<br>Building<br>Footprint                    | Credits are awarded where the ratio of combined floor area of all dwellings on the site to their footprint is:  Ratio of Net Internal Floor Area: Net Internal Ground Floor Area  Credit Not Sought  OR Houses: 2.5:1 OR Flats: 3:1 |                |       |
|   | OR Houses: 3:1 OR Flats: 4:1 O OR Houses & Flats Weighted (2.5:1 & 3:1) O OR Houses & Flats Weighted (3:1 & 4:1)  | 0 of 2 Credits |       |

# Appendix C – Evidence Requirements

# - Energy Category -

|       | Design Stage  |           |                     | Post Construction   | Stage     |                     |
|-------|---|-----------|---------------------|---|-----------|---------------------|
| Issue | All   | Mandatory | Where<br>Applicable | All   | Mandatory | Where<br>Applicable |
| Ene 1 | Design Stage - SAP 2009 Worksheets  | <b>√</b>  | Applicable          | As Built Stage – SAP 2009 Worksheet   |           | Applicable √        |
|       | Plans and elevations showing construction   |           |                     | Evidence confirming build form as   |           |                     |
|       | details   | ✓         |                     | described in As Built SAP Worksheets  |           | ✓                   |
|       | Specification text confirming intention where   |           |                     |   |           |                     |
|       | SAP cannot be produced at design stage  |           | ✓                   | Code Assessor Site Inspection Report  |           | ✓                   |
|       | Copy of Design Stage Part L1A Building  | ,         |                     | Confirmation of construction details for  |           | ,                   |
|       | Regulations Compliance Checklist  | ✓         |                     | each Energy Type  | 1         | <b>√</b>            |
|       | Copy of outputs from Ene1/Ene7 tool   | ✓         |                     | Copy of As Built Part L1A Building Regulations Compliance Checklist                   | <b>√</b>  |                     |
|       | Copy of outputs from Ener/Ene/ tool   | •         |                     | Documentary evidence from Building  | •         |                     |
|       | Utility location maps   |           | <b>√</b>            | Control Officer   |           | ✓                   |
|       | Copy of outputs from SAP input tool   |           | √                   | Copy of outputs from SAP input tool   |           | ✓                   |
|       |   |           |                     | Copy of outputs from Ene1/Ene7 tool   | <b>√</b>  |                     |
|       |   |           |                     | Utility location maps   |           | ✓                   |
| - ·   | D : 0: 04D 0000 W 1 1 1   |           | 1                   | I. D. ''. O   |           |                     |
| Ene 2 | Design Stage - SAP 2009 Worksheets  | ✓         |                     | As Built Stage – SAP 2009 Worksheet   |           | ✓                   |
|       | Copy of Design Stage Part L1A Building<br>Regulations Compliance Checklist            | <b>√</b>  |                     | Evidence of final construction materials, built form and specifications               | <b>√</b>  |                     |
|       | Written confirmation from the Environmental   | · ·       |                     | built form and specifications   | · ·       |                     |
|       | Agency where under protection of existing   |           |                     | Copy of As Built Part L1A Building  |           |                     |
|       | flood defences  | ✓         |                     | Regulations Compliance Checklist  | ✓         |                     |
|       | Specification text confirming intention where   |           |                     | g   |           |                     |
|       | SAP cannot be produced at design stage  |           | ✓                   | Letter of conformity to specification   |           | ✓                   |
|       |   |           |                     | Assessor Site Inspection Report   |           | ✓                   |
|       |   |           |                     | Documentary evidence from Building  |           |                     |
|       |   |           |                     | Control Officer   |           | ✓                   |
|       | Drawings (appointing tout detailing the time of                                       |           |                     | T   |           |                     |
| Ene 3 | Drawings/specification text detailing the type of<br>Energy Display device to be used | <b>√</b>  |                     | As Built drawings and specifications  |           | ✓                   |
|       | Specification text confirming intention to install                                    | •         |                     | As built drawings and specifications  |           | •                   |
|       | just an electric or to include primary heating  |           |                     | Manufacturer's details of the Energy  |           |                     |
|       | supply  |           | ✓                   | Diplay Devices  | ✓         |                     |
|       | Letter of instruction to contractor/supplier  |           | <b>√</b>            | Assessor Site Inspection Report   |           | <b>√</b>            |
|       | Letter from developer to assessor giving the  |           |                     | Purchase orders/receipts for energy   |           |                     |
|       | specific undertaking  |           | ✓                   | display devices   |           | ✓                   |
|       |   |           |                     | <u> </u>  |           |                     |
|       |   |           |                     | Photographic evidence for each spec ID  |           | ✓                   |
| Ene 4 | Text describing location and length of drying   |           |                     | Text describing location and length of  |           |                     |
|       | line  | ✓         |                     | drying line   | ✓         |                     |
|       | Drawings showing location and details of  |           |                     | Drawings showing location and details of  |           |                     |
|       | internal drying space and ventilation   |           | ✓                   | internal drying space and ventilation   |           | ✓                   |
|       | Duraniana abandian la sation of first was life ations                                 |           |                     | Descriptor alternity beaution of  |           |                     |
|       | Drawings showing location of fixtures/footings of external drying space               |           | ✓                   | Drawings showing location of  |           | ,                   |
|       | Specification text confirming intention where   |           | · ·                 | fixtures/footings of external drying space<br>Specification text confirming intention |           | · ·                 |
|       | drying space specification is not known at  |           |                     | where drying space specification is not   |           |                     |
|       | design stage  |           | ✓                   | known at design stage   |           | ✓                   |
|       | and grange  |           |                     |   |           |                     |
|       | Letter of instruction to contractor/supplier  |           | ✓                   | Letter of instruction to contractor/supplier  | •         | ✓                   |
|       | Letter from developer to assessor giving the  |           |                     | Letter from developer to assessor giving  |           |                     |
|       | specific undertaking  |           | ✓                   | the specific undertaking  |           | ✓                   |
|       |   |           |                     | Purchase orders/receipts of drying  |           |                     |
|       |   |           |                     | devices   |           | ✓                   |
|       |   |           |                     | Photographic evidence for each spec ID  |           | ✓                   |
|       |   |           |                     | Assessor Site Inspection Report   | 1         | <b>√</b>            |
| Ene 5 | Specification text confirming make and model  |           |                     | Manufacturer's literature for any white   |           |                     |
|       | of white goods provided   |           | ✓                   | goods installed   |           | ✓                   |
|       | Confirmation of energy rating for all white   |           |                     |   |           |                     |
|       | goods provided  |           | ✓                   | Assessor Site Inspection Report   |           | ✓                   |
|       | Copy of EU Energy Efficiency Labelling  |           |                     | Purchase orders/receipts for all white  |           |                     |
|       | Scheme leaflet  |           | ✓                   | goods provided  |           | ✓                   |
|       | Specification text/drawings confirming intention                                      |           | ./                  | Copy of EU Energy Efficiency Labelling  |           | ./                  |
|       | to provide leaflets or white goods  |           | ✓                   | Scheme leaflet  | ļ         | ✓                   |

|       | Design Stage   |           | Post Construction Stage |   |           |                                       |
|-------|--|-----------|-------------------------|---|-----------|---------------------------------------|
| Issue | All  | Mandatory | Where                   | All   | Mandatory | Where                                 |
|       |  | Ť         | Applicable              | Specification text/drawings confirming                            | Ť         | Applicable                            |
|       | Letter of instruction to contractor/supplier   |           | ✓                       | leaflets will be provided to all dwellings                        |           | ✓                                     |
|       | Letter from developer to assessor giving the   |           |                         |   |           |                                       |
|       | specific undertaking   |           | ✓                       | Letter of instruction to contractor/supplier                      |           | ✓                                     |
|       |  |           |                         | Letter from developer to assessor giving the specific undertaking |           | <b>√</b>                              |
|       |  |           |                         | Written confirmation of information                               |           | ·                                     |
|       |  |           |                         | provided to dwellings   |           | ✓                                     |
|       | <u></u>  |           | ı                       | T   | 1         | T                                     |
| Ene 6 | Drawings showing leasting of all outernal light  |           |                         | As Built drawings/specifications                                  |           |                                       |
|       | Drawings showing location of all external light fittings                                   | <b>√</b>  |                         | confirming construction in accordance with design stage           | ✓         |                                       |
|       | Text confirming location and type of all   | ,         |                         | With design stage   |           |                                       |
|       | external light fittings  | ✓         |                         | Manufacturer's literature   | ✓         |                                       |
|       | Specification text confirming intention where  |           |                         |   |           |                                       |
|       | external lighting specification is not known at  |           | ,                       | D web as a sudam to a sixta                                       |           |                                       |
|       | design stage Letter of instruction to contractor/supplier                                  |           | ✓<br>✓                  | Purchase orders/receipts Photographic evidence                    |           | <b>√</b>                              |
|       | Letter from developer to assessor giving the   |           | ,                       | Thotographic evidence   |           | ,                                     |
|       | specific undertaking   |           | ✓                       | Assessor Site Inspection Report                                   |           | ✓                                     |
|       |  |           |                         |   |           |                                       |
| Ene 7 |  |           |                         | Confirmation that design has been                                 |           |                                       |
|       | Confirmation that feasibility study has been completed by an independent energy specialist | <b>√</b>  |                         | carried out by an independent energy specialist                   | <b>✓</b>  |                                       |
|       | completed by an independent energy specialist  | V         |                         | Specialist  | · ·       |                                       |
|       |  |           |                         | Design Stage – SAP 2009 Worksheets                                |           |                                       |
|       | Design Stage – SAP 2009 Worksheet  | ✓         |                         | and supporting information  |           | ✓                                     |
|       | Drawings showing location of LZC   |           |                         | As Built – SAP 2009 Worksheets for                                |           |                                       |
|       | technologies Specification text detailing type, location and                               | ✓         |                         | each Energy Type Drawings showing location of LZC                 |           | <b>√</b>                              |
|       | use of LZC equipment in dwellings  | <b>√</b>  |                         | technologies  | ✓         |                                       |
|       | Manufacturer's details for LZC technologies  |           | <b>√</b>                | Assessor Site Inspection Report                                   |           | ✓                                     |
|       |  |           |                         |   |           |                                       |
|       | Specification text confirming intention where  |           | ,                       |   |           |                                       |
|       | details of LZCs are not known at design stage  |           | ✓                       | Photographic evidence  Manufacturer's details for LZC             |           | ✓                                     |
|       |  |           |                         | technologies  |           | <b>√</b>                              |
|       |  |           | l .                     | itoomio.og.oo   | ı         | l .                                   |
| Ene 8 | Drawings showing location, size, security and  |           |                         |   |           |                                       |
|       | access to cycle storage  | ✓         |                         | Assessor Site Inspection Report                                   |           | ✓                                     |
|       | Specification text detailing location, size, security and access to cycle storage          | <b>√</b>  |                         | Purchase orders/receipts  |           | _                                     |
|       | Drawings/specification text detailing any  | •         |                         | l dichase orders/receipts   |           | · · · · · · · · · · · · · · · · · · · |
|       | proprietary system   |           | ✓                       | Photographic evidence   |           | ✓                                     |
|       | Confirmation of bedrooms served by cycle   |           |                         |   |           |                                       |
|       | storage and relevant calculations  | ✓         | ,                       |   | 1         |                                       |
|       | Letter of instruction to contractor/supplier  Letter from developer to assessor giving the |           | ✓                       |   |           |                                       |
|       | specific undertaking   |           | ✓                       |   |           |                                       |
|       |  |           |                         | 1   |           |                                       |
| Ene 9 | Drawings/specification text detailing location,  |           |                         |   |           |                                       |
|       | size and services to the home office   | ✓         |                         | Assessor Site Inspection Report                                   |           | ✓                                     |
|       | Drawings/specification text confirming   | ,         |                         | As Built drawings showing location and                            |           | ,                                     |
|       | adequate ventilation to home office  Text confirming broadband availability to each        | ✓         |                         | services  | 1         | <b>√</b>                              |
|       | dwelling   |           | ✓                       | Photographic evidence   |           | ✓                                     |
|       | Specification text confirming intention where  |           |                         | - 7-3-ap  |           |                                       |
|       | details of home office are not known at design   |           |                         |   |           |                                       |
|       | stage  |           | ✓                       |   |           |                                       |
|       | Average Daylight Factor calculations   | ✓         | <b>√</b>                |   |           |                                       |
|       | Letter of instruction to contractor/supplier Letter from developer to assessor giving the  |           | · ·                     |   |           |                                       |
|       | specific undertaking   |           | ✓                       |   |           |                                       |
|       | 1-1  |           |                         | 1   | 1         |                                       |



## - Water Category -

|       | Design Stage  |           |                  | Post Construc                       | ction Stage |                  |
|-------|---|-----------|------------------|-------------------------------------|-------------|------------------|
| Issue | All   | Mandatory | Where Applicable | All                                 | Mandatory   | Where Applicable |
| Wat 1 |   |           |                  | As Built drawings/specification     |             |                  |
|       |   |           |                  | detailing internal, rainwater and   |             |                  |
|       | Specification text detailing water fittings           | ✓         |                  | greywater systems                   |             | ✓                |
|       | Drawings showing the location of internal water       |           |                  | Letter from developer confirming    |             |                  |
|       | fittings  | ✓         |                  | installed fittings and equipment    |             | ✓                |
|       | Manufacturers literature for water fittings and       |           |                  | Manufacturer's literature for       |             |                  |
|       | appliances confirming flow rates of any water         |           |                  | internal water fittings, and any    |             |                  |
|       | reduction equipment                                   |           | ✓                | greywater or rainwater systems      | ✓           |                  |
|       | Specification text detailing rainwater and greywater  |           |                  |                                     |             |                  |
|       | collection systems                                    |           | ✓                | Assessor Site Inspection Report     |             | ✓                |
|       | Manufacturer's literature for rainwater and greywater |           |                  |                                     |             |                  |
|       | appliances  |           | ✓                | Photographic evidence               |             | ✓                |
|       |   |           |                  |                                     |             |                  |
|       |   |           |                  | Completed Code Water Calculator     |             |                  |
|       | Drawings showing any rainwater and greywater          |           |                  | Tool, showing internal potable      |             |                  |
|       | systems   |           | ✓                | water use for each Spec ID          | ✓           |                  |
|       | Completed Code Water Calculator Tool, showing         |           |                  |                                     |             |                  |
|       | internal potable water use for each Spec ID           | ✓         |                  |                                     |             |                  |
|       | Specification text confirming intention where details |           |                  |                                     |             |                  |
|       | of water fittings are not known at design stage       |           | ✓                |                                     |             |                  |
|       | Letter of instruction to contractor/supplier          |           |                  |                                     |             |                  |
|       | Letter from developer to assessor giving the specific |           |                  |                                     |             |                  |
|       | undertaking   |           | ✓                |                                     |             |                  |
|       |   |           | •                |                                     |             | •                |
| Wat 2 | Drawings showing location of any rainwater            |           |                  | Letter from developer confirming    |             |                  |
|       | collection systems                                    | ✓         |                  | installed systems                   |             | ✓                |
|       | Written confirmation from the Environmental Agency    |           |                  |                                     |             |                  |
|       | where under protection of existing flood defences     | <b>√</b>  | ĺ                | As built drawings/specifications    |             | <b>√</b>         |
|       | Specification text confirming intention where details | •         | <del> </del>     | As built drawings/specifications    |             | · ·              |
|       | of external water collection systems are not known    |           |                  | Manufacturer's details of installed |             |                  |
|       | at design stage                                       |           | <b>√</b>         | systems                             | <b>/</b>    | ĺ                |
|       | Letter of instruction to contractor/supplier          |           | ,                | Assessor Site Inspection Report     | ,           | _                |
|       | Letter from developer to assessor giving the specific |           | ·                | Assessor offerinshediting Lebort    |             | Ť                |
|       | undertaking   |           | _                | Photographic evidence               |             | ./               |
|       | unuertaking   |           |                  | Friotographic evidence              |             | v                |



# - Materials Category -

|       | Design Stage  | <u> </u>  | Post Construction Stage |  |           |                  |
|-------|---|-----------|-------------------------|--|-----------|------------------|
| Issue | All   | Mandatory | Where Applicable        | All  | Mandatory | Where Applicable |
| Mat 1 |   |           | пррпоавто               | Letter from developer confirming                           |           | пррпоавто        |
|       | Drawings showing location, areas and                              |           |                         | dwellings were constructed as at                           |           |                  |
|       | specification of elements   | ✓         |                         | design stage   |           | ✓                |
|       | Specification text confirming element                             |           |                         |  |           |                  |
|       | specification details   | ✓         |                         | As Built drawings/specifications                           |           | ✓                |
|       | Completed Code Mat 1 Calculator Tool                              | ✓         |                         | Assessor Site Inspection Report                            |           | ✓                |
|       |   |           |                         |  |           |                  |
|       | Confirmation of Bespoke Ratings                                   |           | ✓                       | Documentary evidence for materials                         |           | ✓                |
|       |   |           |                         | Completed Code Mat 1 Calculator                            |           |                  |
|       | Letter of instruction to contractor/supplier                      |           | ✓                       | Tool showing elements As Built                             | ✓         |                  |
|       | Letter from developer to assessor giving the                      |           |                         |  |           |                  |
|       | specific undertaking  |           | ✓                       | Confirmation of Bespoke Ratings                            |           | ✓                |
| Mat 2 |   |           |                         | Letter from developer confirming                           |           |                  |
|       | Drawings or specification text detailing                          |           |                         | dwellings were constructed as at                           |           |                  |
|       | location, areas and details of materials                          | ✓         |                         | design stage   |           | ✓                |
|       | Completed Code Mat 2 Calculator Tool or                           |           |                         |  |           |                  |
|       | relevant calculations   | ✓         |                         | As Built drawings/specifications                           |           | ✓                |
|       |   |           |                         | Purchase orders, receipts or                               |           |                  |
|       |   |           |                         | certificates/letters confirming                            |           |                  |
|       | Confirmation to use specific timber schemes                       | ✓         |                         | materials  | ✓         |                  |
|       |   |           |                         |  |           |                  |
|       | Confirmation to use EMS suppliers certified                       |           |                         | Completed Code Mat 2 Calculator                            |           |                  |
|       | for key process and for extraction stage                          |           | ✓                       | Tool or relevant calculations                              |           | ✓                |
|       | Confirmation of any elements being                                |           |                         | Documentary details for re-used                            |           |                  |
|       | recycled/reused   |           | ✓                       | materials  |           | ✓                |
|       | Written confirmation from the Environmental                       |           |                         |  |           |                  |
|       | Agency where under protection of existing                         |           | ,                       | Documentary details for recycled                           |           | ,                |
|       | flood defences  |           | ✓                       | materials  |           | · ·              |
|       | Letter of instruction to contractor/quantier                      |           | <b>√</b>                | Documentary evidence for materials                         |           | <b>/</b>         |
|       | Letter of instruction to contractor/supplier                      |           | · ·                     | certified through EMS CoC certificate for certified timber |           | · ·              |
|       | Letter from developer to assessor giving the specific undertaking |           | <b>√</b>                | materials  |           | <b>√</b>         |
|       | specific undertaking  |           | •                       | Written confirmation from suppliers                        |           | · ·              |
|       |   |           |                         | confirming status of non-certified                         |           |                  |
|       |   |           |                         | timber materials   |           | /                |
|       |   |           |                         | timber materials   |           | ,                |
| Mat 3 |   |           |                         | Letter from developer confirming                           |           |                  |
| mar o | Drawings or specification text detailing                          |           |                         | dwellings were constructed as at                           |           |                  |
|       | location, areas and details of materials                          | ✓         |                         | design stage   |           | ✓                |
|       | Completed Code Mat 3 Calculator Tool or                           |           |                         |  |           |                  |
|       | relevant calculations   | ✓         |                         | As Built drawings/specifications                           |           | ✓                |
|       |   |           |                         | Purchase orders, receipts or                               |           |                  |
|       |   |           |                         | certificates/letters confirming                            |           |                  |
|       | Confirmation to use specific timber schemes                       | ✓         |                         | materials  | ✓         |                  |
|       | ·   |           |                         |  |           |                  |
|       | Confirmation to use EMS suppliers certified                       |           |                         | Completed Code Mat 3 Calculator                            |           |                  |
|       | for key process and for extraction stage                          |           | ✓                       | Tool or relevant calculations                              |           | ✓                |
|       | Confirmation of any elements being                                |           |                         | Documentary details for re-used                            |           |                  |
|       | recycled/reused   |           | ✓                       | materials  |           | ✓                |
|       | Confirmation to use suppliers who provide                         |           |                         | Documentary details for recycled                           |           |                  |
|       | EMS certification (recycled materials)                            |           | ✓                       | materials  |           | ✓                |
|       |   |           |                         | Documentary evidence for materials                         |           |                  |
|       | Letter of instruction to contractor/supplier                      |           | ✓                       | certified through EMS                                      |           | ✓                |
|       | Letter from developer to assessor giving the                      |           |                         | CoC certificate for certified timber                       |           |                  |
|       | specific undertaking  |           | ✓                       | materials  |           | ✓                |
|       |   |           |                         | Written confirmation from suppliers                        |           |                  |
|       |   |           |                         | confirming status of non-certified                         |           |                  |
|       |   |           |                         | timber materials   |           | ✓                |



## - Surface Water Runoff Category -

|       | Design Stage  | Post Construction Stage |                  |   |           |                  |
|-------|---|-------------------------|------------------|---|-----------|------------------|
| Issue | All   | Mandatory               | Where Applicable | All   | Mandatory | Where Applicable |
| Sur 1 | To achieve Mandatory Elements   |                         |                  |   |           |                  |
|       | Confirmation of appropriate consultant appointment                                  | ✓                       |                  | Written confirmation that solutions designed have been implemented        |           | ✓                |
|       | Consultants report  | ✓                       |                  | As Built drawings/specifications and calculations                         |           | <b>√</b>         |
|       | Flood Risk Assessment   | <b>√</b>                |                  | Confirmation that Flood Risk Assessment still up to date                  | ✓         |                  |
|       | Drawings and Text specifications necessary to confirm claims                        | ✓                       |                  |   |           |                  |
|       | To achieve tradable credits   |                         |                  |   |           |                  |
|       | Consultants report with design specifications, calculations and drawings to support | ✓                       |                  | Confirmation from hydrological consultant                                 | _         |                  |
|       | awarding credits  Proposed operation and maintenance plans.                         |                         |                  | that system meets credit requirements  As Built drawings and calculations | · ·       | /                |
|       | Froposed operation and maintenance plans.   | •                       |                  | Manufacturers' data for all devices                                       | <b>√</b>  | ·                |
|       |   |                         |                  | Copies of SUDs agreements   | · /       |                  |
| Sur 2 | Flood Risk Assessment confirming the zone of the development                        |                         |                  | Confirmation that Flood Risk Assessment still up to date                  | ·         | ./               |
|       | Written confirmation from the Environmental   | •                       |                  | Written confirmation from the   |           | ·                |
|       | Agency where under protection of existing   |                         |                  | Environmental Agency where under  |           |                  |
|       | flood defences  |                         | ✓                | protection of existing flood defences                                     |           | ✓                |
|       | Manufacturers details for flood protection  |                         |                  | Manufacturers details for flood protection                                |           |                  |
|       | measures for the dwelling   |                         | ✓                | measures for the dwelling   |           | ✓                |
|       | Site plans  |                         | ✓                | Site plans  |           | ✓                |
|       | Drawings showing location of flood protection                                       |                         |                  | Drawings showing location of flood  |           |                  |
|       | measures  |                         | ✓                | protection measures   |           | ✓                |
|       |   |                         |                  | Confirmation that specifications same as                                  |           |                  |
|       |   |                         |                  | design stage  |           | ✓                |
|       |   |                         |                  | As Built plans/specifications   |           | <b>√</b>         |



## - Waste Category -

|       | Design Stag   | е         |                     | Post Construction Stage  |           |                  |  |
|-------|---|-----------|---------------------|--|-----------|------------------|--|
| Issue | All   | Mandatory | Where<br>Applicable | All  | Mandatory | Where Applicable |  |
| Was 1 | To achieve Mandatory Elements   |           |                     |  |           |                  |  |
|       | Completed Supplementary Information Sheet   | ✓         |                     | Completed Supplementary Information Sheet                          | ✓         |                  |  |
|       | Completed Checklist Was 1   | ✓         |                     | Completed Checklist Was 1  | ✓         |                  |  |
|       | To achieve tradable credits   |           |                     |  |           |                  |  |
|       | Drawings or specification text confirming number of bedrooms & specifications of external storage | <b>√</b>  |                     | As Built drawings/specifications                                   |           | <b>√</b>         |  |
|       | Confirmation from LA detailing container specifications/frequency and waste streams of collection |           | ✓                   | Written confirmation dwellings were constructed as at design stage |           | ✓                |  |
|       | Confirmation of intention to use a private operator and details of the scheme                     |           | ✓                   | Written justification for bins further than 30m from external door |           | ✓                |  |
|       | Letter of instruction to contractor/supplier  |           | ✓                   | Confirmation of LA or similar private scheme details               | <b>√</b>  |                  |  |
|       | Letter from developer to assessor giving the specific undertaking                                 |           | ✓                   | Assessor Site Inspection Report                                    |           | ✓                |  |
|       |   |           |                     | Photographic Evidence  |           | ✓                |  |
| W 0   | To achieve Mandatam: Flamenta   | 1         |                     | 1  |           |                  |  |
| Was 2 | To achieve Mandatory Elements Written confirmation from the Environmental                         |           | <b>√</b>            | Copy of the Site Waste Management Plan                             |           |                  |  |
|       | Documentary Legal evidence confirming   |           | v                   | Copy of the Site waste Management Plan                             |           | · ·              |  |
|       | agreed cost of development  |           | ✓                   | Completed Checklist Was 2a   |           | ./               |  |
|       | Letter of instruction to contractor/supplier  |           | <u> </u>            | Completed Checklist Was 2d   |           | ,                |  |
|       | Letter from developer to assessor giving the  |           | •                   | Records confirming monitoring of site waste                        |           | · ·              |  |
|       | specific undertaking  |           | ✓                   | throughout construction  |           | ✓                |  |
|       | oposino andonaring  |           |                     | Documentary Legal evidence confirming                              |           |                  |  |
|       |   |           |                     | agreed cost of development   |           | ✓                |  |
|       | To achieve tradable credits   |           |                     | -g   |           |                  |  |
|       | Completed checklist Was 2b  |           | ✓                   | Completed checklist Was 2b   |           | ✓                |  |
|       | Completed checklist Was 2c  |           | ✓                   | Completed checklist Was 2c   |           | ✓                |  |
|       | Completed checklist Was 2d  |           | ✓                   | Completed checklist Was 2d   |           | ✓                |  |
|       |   |           |                     | Summary Report outlining overall waste performance                 | <b>√</b>  |                  |  |
| Was 3 | Completed copy of Checklist 1 – Was 1   | ✓         |                     | Letter from developer to assessor                                  |           | ✓                |  |
|       | Drawings or specification text confirming   |           |                     |  |           |                  |  |
|       | location, size and access to storage  | ✓         |                     | Assessor Site Inspection Report                                    |           | ✓                |  |
|       | Specification text confirming that an information booklet will be supplied to                     |           |                     | Drawings showing location, size and access                         |           |                  |  |
|       | residents   | ✓         |                     | route  |           | ✓                |  |
|       | Letter of instruction to contractor/supplier  |           | ✓                   | Photographic evidence  |           | ✓                |  |
|       | Letter from developer to assessor giving the specific undertaking                                 |           | ✓                   |  |           |                  |  |
|       | Manufacturer's information for proposed composting facilities                                     |           | ✓                   |  |           |                  |  |
|       | Details of communal/community composting scheme   |           | ✓                   |  |           |                  |  |
|       | Details of Local Authority kitchen waste collection scheme  |           | ✓                   |  |           |                  |  |
|       | Details of the automated waste collection system  |           | ✓                   |  |           |                  |  |



# - Pollution Category -

|       | Design Stage                                  |           |                     | Post Construction Stage               |           |                     |
|-------|---|-----------|---------------------|---------------------------------------|-----------|---------------------|
| Issue | All   | Mandatory | Where<br>Applicable | All                                   | Mandatory | Where<br>Applicable |
| Pol 1 |   |           |                     |                                       |           |                     |
|       |   |           |                     | Manufacturer's/installer's literature |           |                     |
|       | Completed Checklist Pol 1                     | ✓         |                     | for any foamed or blown insulation    | ✓         |                     |
|       | Drawings or specification text showing type   |           |                     | Written confirmation that Checklist   |           |                     |
|       | and location of insulation materials          | ✓         |                     | 6.1 Pol 1 is unchanged                |           | ✓                   |
|       | Manufacturer's/installer's literature for any |           |                     |                                       |           |                     |
|       | foamed or blown insulation                    |           | ✓                   | Purchase order/receipts               |           | ✓                   |
|       | Letter of intent to meet requirements for a   |           |                     | As built drawings/specification text  |           |                     |
|       | Design and Build contract                     |           | ✓                   | showing type and location of          |           | ✓                   |
|       | Letter of instruction to contractor/supplier  |           | ✓                   | Assessor Site Inspection Report       |           | ✓                   |
|       | Letter from developer to assessor giving      |           |                     | ·                                     |           |                     |
|       | the specific undertaking                      |           | ✓                   |                                       |           |                     |
| Pol 2 |   |           |                     | Manufacturer's literature             |           |                     |
|       | Drawings or specification text detailing      |           |                     | confirming dry NOx levels/boiler      |           |                     |
|       | heating systems                               | ✓         |                     | class of all heating systems          |           | ✓                   |
|       | Specification text confirming Dry NOx         |           |                     | Letter/email from manufacturer        |           |                     |
|       | levels and/or boiler class                    | ✓         |                     | confirming dry NOx levels             |           | ✓                   |
|       | Manufacturer's literature details of heating  |           |                     |                                       |           |                     |
|       | system  |           | ✓                   | Purchase order/receipts               |           | ✓                   |
|       | Calculation Procedures of dry NOx or          |           |                     | ·                                     |           |                     |
|       | weighted average NOx in accordance with       |           |                     |                                       |           |                     |
|       | the Guidance                                  |           | ✓                   | Assessor Site Inspection Report       |           | ✓                   |
|       | Design Stage - SAP 2005 Worksheets            |           | ✓                   | Calculation of dry or ave NOx         |           | ✓                   |
|       | Written confirmation from the                 |           |                     | -                                     |           |                     |
|       | Environmental Agency where under              |           |                     | As Built Stage - SAP 2005             |           |                     |
|       | protection of existing flood defences         |           | ✓                   | Worksheet                             |           | ✓                   |
|       |   |           |                     | Evidence of contractual               |           |                     |
|       |   |           |                     | commitment to activate heating        |           |                     |
|       | Letter from developer to assessor giving      |           |                     | system within 18 months of            |           |                     |
|       | the specific undertaking                      |           | ✓                   | completion                            |           | ✓                   |



# - Health & Wellbeing Category -

|       | Design Stage   |           |                  | Post Construction Stage   |           |                     |
|-------|--|-----------|------------------|---|-----------|---------------------|
| Issue | All  | Mandatory | Where Applicable | All   | Mandatory | Where<br>Applicable |
| Hea 1 | Average Daylight Factor calculations   | ✓         |                  | Calculations for all dwelling As Built  | ✓         |                     |
|       | No-sky line calculations   | ✓         |                  | Confirmation that inputs are accurate   |           | <b>√</b>            |
|       | Details of angle of visible sky, window glazing and room surface areas             | ✓         |                  | On-site measurements  |           | ✓                   |
|       | Plans indicating room heights, glazed areas, and external buildings                | ✓         |                  |   |           |                     |
|       | Manufacturer's details confirming specs where default values are not used          |           | ✓                |   |           |                     |
|       | Letter of instruction to contractor/supplier                                       |           | <b>√</b>         |   |           |                     |
|       | Letter from developer to assessor giving the specific undertaking                  |           | ✓                |   |           |                     |
| Hea 2 |  |           |                  | Specification text committing to meet   |           |                     |
|       | Specification text committing to meet relevant sound insulation performance levels | ✓         |                  | relevant sound insulation performance levels  | ✓         |                     |
|       | Details of pre-completion testing  |           | ✓                | Details of pre-completion testing   |           | ✓                   |
|       | Details of separating walls  |           | ✓                | Details of separating walls   |           | ✓                   |
|       | Confirmation of commitment to carry out remedial work where necessary              |           | ✓                | Confirmation of commitment to carry out remedial work where necessary   |           | ✓                   |
|       | Written confirmation from the Environmental  |           |                  |   |           |                     |
|       | Agency where under protection of existing flood defences                           |           | ✓                | Compliant Test Body accreditation details   |           | <b>✓</b>            |
|       | Confirmation that Robust Details will achieve                                      |           | ,                | Confirmation that Robust Details will   |           | ,                   |
|       | necessary standards  |           | <b>√</b>         | achieve necessary standards Confirmation that site is registered  |           | <b>√</b>            |
|       | Confirmation that site is registered by RDL<br>Letter of instruction to contractor |           | ✓<br>✓           | by RDL Letter of instruction to contractor  |           | <b>√</b>            |
|       | Letter from developer to assessor giving the                                       |           | ·                | Letter of instruction to contractor  Letter of intent from developer to assessor giving the specific  |           | · ·                 |
|       | specific undertaking   |           | ✓                | undertaking  Confirmation of sound insulation   |           | ✓                   |
|       |  |           |                  | results   |           | ✓                   |
|       |  |           |                  | Completed Robust Details Ltd<br>Checklist   |           | ✓                   |
|       |  |           |                  | A. D. ila dan di adam |           | ı                   |
| Hea 3 | Plan(s)/specification text showing the number of bedrooms served                   | ✓         |                  | As-Built drawing/specification confirmation   |           | ✓                   |
|       | Plan(s)/specification text showing location and size of private space(s)           | ✓         |                  | Confirmation that dwellings constructed in accordance with design stage spec  |           | <b>√</b>            |
|       | Details of accessibility in accordance with BS8300                                 |           |                  | design stage spec   |           |                     |
|       | Details of control arrangements for shared private spaces                          |           | <b>√</b>         |   |           |                     |
|       | Letter of instruction to contractor/supplier                                       |           | <b>√</b>         |   |           |                     |
|       | Letter from developer to assessor giving the specific undertaking                  |           | ✓                |   |           |                     |
| Hea 4 | Completed and signed Checklist Hea 4 –   |           |                  | Completed As Built Lifetime Homes   |           | <u> </u>            |
|       | Lifetime Homes   | ✓         |                  | Checklist Hea 4 Assessor Site Inspection Report   | ✓         |                     |
|       |  |           |                  |   |           |                     |



## - Management Category -

|       | Design Stage                                |           |                     | Post Construction Stage             |           |                     |
|-------|---|-----------|---------------------|-------------------------------------|-----------|---------------------|
| Issue | All   | Mandatory | Where<br>Applicable | All                                 | Mandatory | Where<br>Applicable |
| Man 1 | Confirmation that Homes User Guide will     |           |                     | Copy of the Home User Guide for     |           |                     |
|       | be supplied to all dwellings                | ✓         |                     | each type of dwelling               | ✓         |                     |
|       |   |           |                     | Confirmation that Home User         |           |                     |
|       |   |           |                     | Guide has been supplied to all      |           |                     |
|       | Checklist Man 1 Part 1                      |           | ✓                   | dwellings                           |           | ✓                   |
|       | Checklist Man 1 Part 1 AND Checklist        |           |                     | Copy of letter to occupants and     |           |                     |
|       | Man 1 Part 2                                |           | ✓                   | hard copy of contents page          |           | <b>√</b>            |
|       | Summary of Home User Guide contents         | ✓         |                     |                                     |           |                     |
|       | Letter from developer to assessor giving    |           |                     |                                     |           |                     |
|       | the specific undertaking                    |           | ✓                   |                                     |           |                     |
| Man 2 | Confirmation on/from                        |           | 1                   |                                     |           | 1                   |
| man 2 | contractor/developer to achieve a specific  |           |                     |                                     |           |                     |
|       | CCS score                                   |           | ✓                   | Copy of CCS certificate             |           | ✓                   |
|       | Completed Checklist Man 2 where an          |           |                     | Copy of CCS monitored report        |           |                     |
|       | alternative scheme is to be used            |           | ✓                   | with scorings                       |           | ✓                   |
|       | Letter of instruction/intent from developer |           |                     | Copy of alternative schemes         |           |                     |
|       | to contractor or assessr giving specific    |           |                     | certificate or equivalent           |           |                     |
|       | undertaking                                 |           | ✓                   | documentary evidence                |           | ✓                   |
|       |   |           | T                   | In                                  |           | T                   |
| Man 3 | 0   |           |                     | Documentary evidence that design    |           |                     |
|       | Commitment to meet either, two or more,     | ,         |                     | stage items from Man 3 have been    |           |                     |
|       | or four or more items in Checklist Man 3    | ✓         |                     | adhered to                          |           | <b>√</b>            |
|       | Completed Checklist Man 3 if available at   |           | _                   | Documentary evidence of target      |           |                     |
|       | design stage                                |           | ✓                   | records                             |           | ✓                   |
|       | Written confirmation from the               |           |                     |                                     |           |                     |
|       | Environmental Agency where under            |           | _                   | Graphs comparing consumption        |           |                     |
|       | protection of existing flood defences       |           | ✓                   | with targets                        |           | ✓                   |
|       |   |           |                     | Delivery records                    |           | <b>√</b>            |
|       |   |           |                     | Documentary evidence of site        |           |                     |
|       |   |           |                     | procedures for minimising pollution |           | ✓                   |
|       |   |           |                     | Coc certificates for site timber    |           | <b>✓</b>            |
|       |   |           |                     | Purchase orders confirming re-      |           |                     |
|       |   |           |                     | used/reclaimed timber               |           | ✓                   |
|       | ·   |           |                     |                                     |           |                     |
| Man 4 |   |           |                     | Confirmation that ALO/CPDA          |           |                     |
|       | Letter of appointment/letter from           | ,         |                     | recommendations have been           |           |                     |
|       | ALO/CPDA confirming appointment             | ✓         |                     | implemented in design               | <b>√</b>  |                     |
|       | Confirmation of commitment to meet          | ,         |                     | Confirmation that site meets        |           |                     |
|       | Section 2 of Secured By Design              | ✓         |                     | Section 2 of Secured by Design      | ✓         |                     |
|       | Confirmation of commitment to follow        |           |                     | Copy of Secured by Design           |           |                     |
|       | advice of the ALO/CPDA                      | ✓         |                     | certificate                         |           | <b>√</b>            |
|       | Letter of instruction to contractor         |           | ✓                   | Assessor Site Inspection Report     |           | ✓                   |
|       | Letter from developer to assessor giving    |           |                     |                                     |           |                     |
|       | the specific undertaking                    |           | ✓                   | As-built drawings                   |           | ✓                   |



# - Ecology Category -

|       | Design Stage  |           |                     | Post Construction Stage                                     |           |                     |
|-------|---|-----------|---------------------|---|-----------|---------------------|
| Issue | All   | Mandatory | Where<br>Applicable | All   | Mandatory | Where<br>Applicable |
| Eco 1 | Plans of site and surrounding area prior to                                     |           | •                   | Plans of site and surrounding area                          |           |                     |
|       | development Site visit report   |           | ✓<br>✓              | prior to development Site visit report                      |           | ✓<br>✓              |
|       | Completed Checklist Eco 1   |           | <b>√</b>            | Completed Checklist Eco 1                                   |           | · ·                 |
|       | Ecologists report using CSH Ecology Report                                      |           |                     | Ecologists report using CSH                                 |           |                     |
|       | Template  |           | ✓                   | Ecology Report Template                                     |           | ✓                   |
|       | Plans defining the construction site  | ✓         |                     | Plans defining construction site                            |           | ✓                   |
|       |   |           |                     | Confirmation that ecologist's                               |           |                     |
|       | Confirmation that ecologist's qualifications meet the requirements              |           | ✓                   | qualifications meet the requirements                        |           | <b>√</b>            |
|       | meet the requirements   |           | ,                   | As Built plans identifying features                         |           | ·                   |
|       | Letter of instruction to contractor/supplier                                    |           | ✓                   | present   |           | ✓                   |
|       | Letter from developer to assessor giving the                                    |           | ,                   |   |           |                     |
|       | specific undertaking  |           | ✓                   | Assessor Site Inspection Report                             |           | <b>√</b>            |
| Eco 2 | Completed Ecologists Report using the CSH                                       | ✓         |                     | Plans showing both proposed and implemented recommendations |           | ,                   |
|       | Ecology Report Template Specification text/illustrations detailing              | <b>v</b>  |                     | Implemented recommendations                                 |           | · ·                 |
|       | implementation of recommendations   | ✓         |                     | Photographic evidence                                       |           | ✓                   |
|       | Confirmation that Ecologist qualifications                                      |           |                     |   |           |                     |
|       | meet the requirements   | ✓         |                     | Assessor Site Inspection Report                             |           | ✓                   |
|       | Written confirmation from the Environmental                                     |           |                     | Confirmation of contract or letter                          |           |                     |
|       | Agency where under protection of existing flood defences                        | ✓         |                     | confirming planting will be completed within 18 months      |           | ,                   |
|       | Confirmation ecologist made site visit prior to                                 | · ·       |                     | completed within 18 months                                  |           | · ·                 |
|       | commencement of initial site preparation  |           |                     |   |           |                     |
|       | works   | ✓         |                     |   |           |                     |
|       | Confirmation detailing how ecologists   | ,         |                     |   |           |                     |
|       | recommendations will be implemented   | ✓         |                     |   |           |                     |
|       | Drawings/letter of instruction to contractor/supplier                           |           | ✓                   |   |           |                     |
|       | Letter from developer to assessor giving the                                    |           | ,                   |   |           |                     |
|       | specific undertaking  |           | ✓                   | Photographic evidence of                                    |           |                     |
| Eco 3 | Site Visit Report from design team  | ✓         |                     | protection measures   |           | ✓                   |
|       | Drawings/specification text detailing how                                       | ✓         |                     | Photographic evidence of                                    |           | ,                   |
|       | ecological features will be protected  Plans of site and boundary highlighting  | <b>√</b>  |                     | protected features  |           | <b>√</b>            |
|       | ecological features prior to development  |           | ✓                   | Assessor Site Inspection Report                             |           | ✓                   |
|       | Evidence of any requirement to remove a   |           |                     |   |           |                     |
|       | feature   |           | ✓                   |   |           |                     |
|       | Confirmation that all EU and UK laws to   |           | ,                   |   |           |                     |
|       | protect species have been adhered to Completed Ecologist's report using the CSH |           | ✓                   |   |           |                     |
|       | Ecology Report template   |           | ✓                   |   |           |                     |
|       | Letter of instruction to contractor/supplier                                    |           | <b>√</b>            |   |           |                     |
|       | Letter from developer to assessor giving the                                    |           |                     |   |           |                     |
| F     | specific undertaking  |           | ✓                   | 0   |           |                     |
| Eco 4 | Plans of the site pre-development showing areas, landscape and plot types       | ✓         |                     | Completed Eco 4 Calculator Tool or similar calculations     |           | <b>√</b>            |
|       | Copy of calculations (from assessor) of   | •         |                     | Letter/certificate of conformity from                       |           | •                   |
|       | proposed change in ecological value   | ✓         |                     | the developer   |           | ✓                   |
|       | Completed Ecologist's report using the CSH                                      |           |                     | Confirmation of contract or letter                          |           |                     |
|       | Ecology Report template   |           | ✓                   | confirming completion date                                  |           | ✓                   |
|       | Specification text/illustrations showing  |           |                     |   |           |                     |
|       | implementation of Ecologist's recommendations                                   |           | ✓                   |   |           |                     |
|       | Planting Schedule   |           | · ·                 |   |           |                     |
|       | Letter of instruction to contractor/supplier                                    |           | <b>√</b>            |   |           |                     |
|       | Letter from developer to assessor giving the                                    |           |                     |   |           |                     |
| F     | specific undertaking  |           | ✓                   |   |           |                     |
| Eco 5 | Plans showing the Net Internal Floor and Ground Floor areas of all buildings    | ✓         |                     | As Built drawings/specifications                            |           | <b>√</b>            |
|       | Elevations showing the number of storeys for                                    | <b>v</b>  |                     | Letter from developer confirming                            |           | · ·                 |
|       | each building   | ✓         |                     | construction as at design stage                             |           | ✓                   |
|       | Building Footprint Ratio Calculations   | ✓         |                     | <u> </u>  |           |                     |