

Doherty Design & Planning Limited



REPORT ON THE CODE FOR SUSTAINABLE HOMES PRE-ASSESSMENT

6-8 & 10 HIGH STREET, HAMPTON WICK KINGSTON UPON THAMES KT1 4DB

Proposal

CONVERSION OF LISTED BUILDING INTO 3-NO. DWELLINGS AND ADDITION OF 3-NO. DWELLINGS

Client COUNTRYWIDE DESIGN

28th JANUARY 2014 Ref. E378-00 - CSHPA

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1.0 INTRODUCTION

- a) Doherty Design and Planning Limited have been instructed by Countrywide Design to undertake the Code for Sustainable Homes Pre-Assessment for the proposed development of three houses on the rear of the site at 6-8 & 10 High Street, Hampton Wick, Kingston upon Thames, KT1 4DB.
- 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 3 to be achieved.
- c) In order to carry out the review, an initial review was held with the NISSEN RICHARDS studio 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 1st 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 CO₂ 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 CO ₂ Emissions (Ene 1)						
Code Level Minimum Percentage Improvement in Dwelling Emission Rate over 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 ₂ 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 Environmental Impact	Total Credits in each Category	Weighting Factor (% points contribution)	Approximate Weighted Value of each Credit				
Category 1 Energy and CO ₂ Emissions	31	36.4%	1.17				
Category 2 Water	6	9.0%	1.50				
Category 3 Materials	24	7.2%	0.30				
Category 4 Surface Water Run-off	4	2.2%	0.55				
Category 5 Waste	8	6.4%	0.80				
Category 6 Pollution	4	2.8%	0.70				
Category 7 Health and Well-being	12	14.0%	1.17				
Category 8 Management	9	10.0%	1.11				
Category 9 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 (★★★★★)					

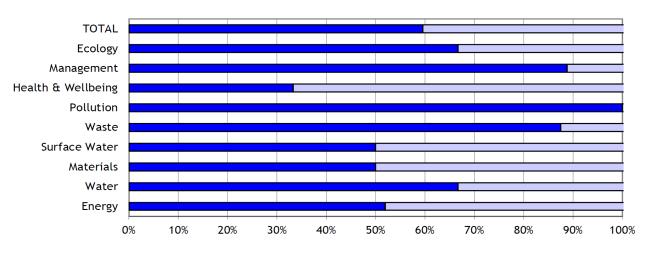
Disclaimer - The assessor (for itself and as agent for its staff) and its staff shall not be liable whether in Contract or in Tort or otherwise for any loss or damage sustained as a result of using or relying on the information contained in this report or the final certificate from BRE that it is based on.

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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 3 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. This report is based on the three bedroom Plot 5.
- b) The Assessment shows that the dwelling achieves approximate 59.54% 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 2.54 credit margin may not 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 59.54. 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	Improve the Insulation, Air tightness etc to achieve a greater reduction in CO2 emissions	
	Rate	48% improvement – 5.1 Credits 59% improvement – 6 Credits 72% improvement – 7 Credits	Current 60.60 61.77
Ene 2	Fabric Energy	Improve the fabric energy efficiency performance thus future proofing reduction in CO2 for the life of the dwelling	
	Efficiency	> 48 – 0 Credits ≤ 48 – 3 Credits ≤ 45 – 4 Credits	Current 63.06 64.24
Ene 3	Energy Display	Provide a correctly specified Energy Display Device to monitor the electricity consumption – 1 Credit	Current
	Device	Provide a correctly specified Energy Display Device to monitor the electricity and primary heating fuel consumption – 2 Credits	60.71
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	
		≤ 105 l/p/ day - 3 Credits ≤ 90 l/p/ day - 4 Credits ≤ 80 l/p/ day - 5 Credits	Current 61.04 62.54
Sur 1	Surface Water Run-off	Provide SuDs to ensure that no run-off into watercourse for first 5mm of rainfall – 1 Credit	60.09
	null-oil	Provide appropriate level of treatment – 1 Credit	60.64
Hea 1	Day lighting Carry out Day lighting Calculations to ensure 80% of working plane has direct light from the sky		60.71
		Improve the acoustic performance of party walls and floors to be 3dB better than the Building Regulations – current	Current
Hea 2	Sound Insulation	Improve the acoustic performance of party walls and floors to be 5dB better than the Building Regulations – additional 2 credits	61.88
		Improve the acoustic performance of party walls and floors to be 8dB better than the Building Regulations – additional 3 credits	63.04

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 three houses on the rear of the site at 6-8 & 10 High Street, Hampton Wick, Kingston upon Thames, KT1 4DB and highlighted areas of improvement to ensure Code Level 3 to 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 3. If the current specification is incorporated and the current credits achieved, the Pre Assessment shows that a rating of for the dwelling is 59.54 or Level 3 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	Mandatory	Assumptions to Achieve Level 3	Credits Awarded	Comments	Max Credits
Category Ene 1	1: Energy and Carbon D Dwelling Emission Rate		Assumed SAP Calculations	5.1	The U Values of the various constructions could be improved by adding	10
			have provided a DER 48% better than the TER		extra insulation and changing the construction More efficient heating system or better controls Improved Air Permeability Incorporate renewable technology	
			10100111		Incorporate secondary heating source	
Ene 2	Fabric Energy Efficiency	Yes	Assumed SAP Calculations have provided a FEE greater than 48kWhr/m ² /yr	0	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 consumption	1	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 to be provided over the baths	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 ND 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	1	Space Lightling - 1 Credit where all external space lightling is provided by dedicated energy efficient fittings Security Lightling - 1 Credit where security light fittings are design for	2
					Security Egitinity - Toeuti where executing fight mings 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	
			No security lighting is provided	1	It No Security lighting provided, security lighting credit can be awarded by default	
Ene 7	Low or Zero Carbon Technology	No	ASHP does not achieve BRE requirements for LZCT	0	Detailed calculations to demonstrate a 10% reduction for 1 credit and 15% or over reduction for 2 Credits	2
Ene 8	Cycle Storage	No	Secure storage is being provided for 2 cycle spaces per 3 bed dwelling and 4 spaces for the 4 bed dwellings	2	1 Credit - 2/3 bed - 1 cycle & 4+ bed - 2 cycles. 2 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.	2
			Storage could be provided in the cycle store		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 BS3621:200. 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 bedroom 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
Category Wat 1	2: Water Indoor Water Use	Yes	Calculations show a flow rate	3	Water Calculator tool (Wat 1) is used to calculate the water	5
		- 	of less than 105 l/p/day In order to achieve this level, the following specification shall be installed -	j	oconsumption for the dwelling. If appliance or fitting is specified the water consumption is used. If not, default figures are used, for example	
			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 Machine		- 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	
			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	No indivdual or communal	1	The water but needs to be on a base, connected to downpipe with	1
		-	gardens are being provided		overflow and removable for cleaning.	

Issue ID	Description	Mandatory	Assumptions to Achieve Level	Credits	Comments	Max
			3	Awarded		Credits
Mat 1	3: Materials Environmental Impact of Materials	Yes	Based on the Green Spec Guide, three elements have been given a rating Windows - A Roof - A Ext Wall - A 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 Then to achieve between 1 and 15 credits, the Mat 1 Calculator Tools must be used.	15
	Responsible Sourcing of Material - Basic Building 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 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.	
	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 - Skiring - Panelling - Panelling - Furniture - Fascias Additionally 100% of timer in these elements must be sourced legally.	3
	4: Surface Water Run-o Management of	ff Yes	Assume Mandatory element is	М	The aim is to design housing developments which avoid, reduce and	
Sur 2	from development	No	Calcs and FRA required for a credits FRA required	0	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 not 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 flooding, 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 flood level	2
	5: Waste	1.7				
	Storage of non- recyclable waste & 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 with adequate internal space is provided and the external storage has a min total capacity of 170 l, within 30m of the door.		A local Authority recycling scheme offering containers equal or greater than this volume would meet the requirement, providing outdoor space is allocated to them.	
	Construction Site Waste Management	Yes	Mandatory element is met SWMP is being developed and implemented Targets shall be set to sort and divert 85% of waste from landfill	М 3	A Site Waste Management Plan must be developed and implemented, including monitoring and reporting the waste generated. The SWMP must include procedures and commitments for reducing waste generated on site in accordance with best practise and the defined waste groups The SWMP must include procedures and commitments to sort and divert waste from landfill (reuse, recycle, compost or otherwise recover) according to the defined waste groups. This must be preformed either on site or through a licensed external contractor. Procedure to divert and sort 50% of waster get 1 Credits and 85% of waste for 2 Credits	M 1
Was 3	Composting	No	Home Composting bin is not being provided	0	Either individual or communal composting facilities can be provided. All facilities must be in a dedicate position, be accessible to disabled and have an information leaflet	1

3	Awarded		Max Credits
elements have a GWP less	1	Including roofs (including loft access), walls (internal and external, including acoustic insulation and lintels), all ground and upper floors, hot water cylinders, pipe, cold water tanks and external doors	1
	0	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
that the average day light		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	3
show the average day light	1	Credit if kitchen achieves a minimum average daylight factor of at least 2% - Calculations are required to prove this.	
	1	Credit all living and dining rooms and studies achieve a daylight factor of at least 1.5% - Calculations are required to prove this.	
show that view of sky is achieved for all assessed	0	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.	
mprovement over building	1	Credit where the airbourne sound insulation values are at least 3dB higher and the impact sound insulation values are at least 3dB lower than the performance standards of the Bldg Regs	4
		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	
	1	Where outdoor space has been provided that is a minimum size that allows all occupants to sit outside, allows easy access to all occupants, including wheelchairs and accessible only to occupants to the designated dwellings (minimum size 1.5m2/bedroom)	1
principles of Lifetime Homes	0	All principles of Lifetime Homes have to be compiled with to achieve 4 Credits. A completed Lifetime Homes Checklist Hea4 indicating compliance with all applicable points from 1-16, signed by the developer	4
			-
orovided and include operational issues	1	logether 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 - Recycling and Waste	
		- Local amenities - Responsible Purchasing - Emergency Information	
Constructor will be required to	1		2
go achieve best practise		Considerate Constructors Scheme there is 1 Credit, but 2 Credits are given where the commitment is to go significantly beyond Best Practice	
are implemented, probably the	2	When procedures that cover the following items are put in place:	2
for the energy use arising from site activities		Monitor, report and set targets for the CO2 production or energy use arising from site activities Monitor and report CO2 or energy use arising from commercial.	
site activities water consumption from site activities		transport to and from site - Monitor, report and set targets for water consumption from site activities	
reclaimed, re-used or		from site activities - Adopt best practise policies in respect of water (ground and surface) pollution occurring on the site	
		1 Credit if 2 or more procedures are adopted and 2 Credits if 4 or more are adopted	
Liasion with the ACO will be carried out and their recommendations addressed	2	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
	All insulating materials in elements have a GWP less than 5 Electric Heating emits around 1200mg/kWh All this stage, it is envisaged hat the average day light actors will be achieved Calculations are required to show the average day light actors for each of the rooms Calculations are required to show the average day light actors for each of the rooms Calculations are required to show that view of sky is achieved for all assessed rooms Assume specification required mycrowement over building regulations by 3dB Amble private space is being provided Check required to see if all principles of Lifetime Homes are complied with Home user guide will be provided and include operational issues This will include site and surroundings information Conctractor will be required to go achieve best practise is detailed. The procedures are implemented, probably the ollowing ones. Monitor, report and set targets for the entire site of the procedures are implemented, probably the ollowing ones are complied with surroundings information Conctractor will be required to go achieve best practise activities and surroundings information of the creativities are claimed, re-used or responsibly sourced.	elements have a GWP less han 5 Electric Heating emits around 1200mg/kWh At this stage, it is envisaged hat the average day light actors will be achieved Calculations are required to show the average day light actors for each of the rooms 1 Calculations are required to show that view of sky is achieved for all assessed or all assessed or all assessed or all assessed achieved for all all achieved for all assessed for achieved for all all achieved for achieved for all all achieved for achieve	selements have a GWP less have 5 Bedrich Heating emits around O paced in the stage, it is envisaged that the stage is the stage, it is envisaged that the average daylight actions with a calculation are required to prove the average daylight actions with a calculation are required to above the average daylight actions with a calculation are required to above the average daylight actions of the average daylight actions are required to above the average daylight factor of at least 15.5%. Calculations are required to prove this. 1 1 Credit if 80% of the working plane in each kitchen, living room, factor of at least 15.5%. Calculations are required to prove this. 1 1 Credit if 80% of the working plane in each kitchen, living room, factor of at least 15.5%. Calculations are required to prove this. 1 1 Credit if 80% of the working plane in each kitchen, living room, factoring own and study receive derical light from the sky - Calculations are required to prove this. 2 1 Credit where the airbourne sound insulation values are at least 308 hover than the performance standards of the Bigs Regs. 3 Credit where the airbourne sound insulation values are at least 308 hover than the performance standards of the Bigs Regs. 4 Credit where the airbourne sound insulation values are at least 308 hover than the performance standards of the Bigs Regs. 5 Credit where the airbourne sound insulation values are at least 308 hover than the performance standards of the Bigs Regs. 6 Credit where the airbourne sound insulation values are at least 308 hover than the performance standards of the Bigs Regs. 7 Credit where the airbourne sound insulation values are at least 308 hover than the performance standards of the Bigs Regs. 8 Credit where the airbourne sound insulation values are at least 308 hover than the performance standar

Issue ID	Description	Mandatory	Assumptions to Achieve Level 3	Credits Awarded	Comments	Max Credits
Category	9: Ecology					
Eco 1	Ecological Value of Site	No	The site is believed to have a low ecological value	1	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 Enhancement	No	Ecologist may be appointed	0	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 Features	No	The site is believed to have a low ecological value	1	Where all existing features of ecological value on the developments site potentially affected by the works are maintained and adequately protected during site clearance, preparation and construction works.	1
Eco 4	Change in Ecological Value of Site		The Ecologist report shall identify measures to enure a neutral change in ecological value of the site	2	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 9 - 4 Credits - Major Enhancement greater than +9	4
Eco 5	Building Footprint	No	The ratio of total floor area to ground floor area ratio is greater than 3:1	2	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: 6-8&10 High Street, Hampton Wick

Dwelling Description: 3-No. terraced dwellings

Name of Company: Countrywide Design

Code Assessor's Name: Jason Doherty

Company Address:

Notes/Comments:

Pre-Assessment (28th January 2014)

PREDICTED RATING - CODE LEVEL: 3

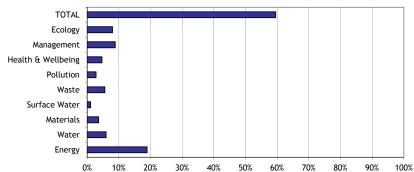
Mandatory Requirements: All Levels

 % Points:
 59.54%
 - Code Level: 3

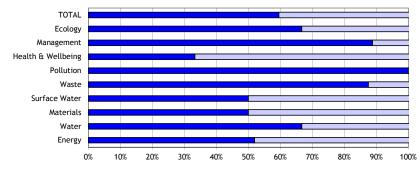
 Breakdown:
 Energy
 - Code Level: 4

 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 ENERO	GΥ	Overa	ll Level: 3	Overall Score	59.54
% of Secti	ion Credit	s Predicted:	51.93		Credits	Level
Contribut	ion to Ove	erall % Score:	18.90 points		16.1 of 31 Credits	Level 4
Ene 1 Dwelling Emission Rate	Dwelling calculate apply. To predicted					
	OR		predicted number of credi c CO ₂ emissions achieved?	ts? 5.1	5.1 of 10 Credits	Level 4
Ene 2 Fabric Energy Efficiency	(kWh/m ² 5 and 6 predicted	/yr) of the dw . The Code e d score. the predicted sco Apartments End terrace Staggered N	Mid-terrace , Semi and Detached	apply at Code levels used to calculate a	0.0 of 9 Credits	
Ene 3 Energy Display Devices	Device is consump	are awarded installed mon				
	OR OR	None Specif Primary Hea Electricity o Electricity a	ting only	O O O	1 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?		
	will drying space meeting the criteria be provided:		
	Yes ●	1 of 1 Credits	-
	OR No		
Ene 5 Energy	Credits are awarded where each dwelling is provided with either		
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		
	EU Energy labelling information provided		
Ene 6	Credits are awarded based on the provision of space lighting* with		
External Lighting	dedicated energy efficient fittings and security lighting fittings with		
Ligiting	appropriate control gear		
	Space Lighting		
	None provided O		
	OR Non Code compliant lighting		
	OR Code compliant lighting		
	Security Lighting		
	None amodele	2 of 2 Credits	-
	None provided OR Non Code compliant lighting		
	The state of the s		
	OK Code compliant tighting and controls		
	Dual lamp luminaires		
	Compliant with both above criteria		
	* Statutory safety lighting is not covered by this requirement		
	1 , , , , , , , , , , , , , , , , , , ,	1	ll II

Issue		Credits	Level
Ene 7	Credits are awarded where there is a 10% or 15% reduction in CO ₂	Credits	Levei
Low or Zero Carbon 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	2 of 2 Credits	-
Ene 8 Cycle 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	2 of 2 Credits	-
Ene 9 Home 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	-

CATEGORY	Y 2 WAT	ER		Overall Leve	el: 3		Overall Score	59.54
% of Section	on Credi	ts Predicted:	66.66				Credits	Level
Contributi	on to O	verall Score:	6.00 points				4 of 6 Credits	Level 4
Wat 1 Indoor Water Use	water o	consumption, inimum stand	based on the p calculated using ards for each coc water use / Mandator	the Code Wate le level apply.				
	OR OR OR OR	≤ less tha ≤ less tha ≤ less tha ≤ less tha	nan 120 litres/ per n 120 litres/ pers n 110 litres/ pers n 105 litres/ pers n 90 litres/ perso n 80 litres/ perso	on/ day on/ day on/ day on/ day	00000		3 of 5 Credits	Level 3 AND Level 4
Wat 2 External Water Use	collecti outdoor	ng rainwater space is provect the scenario t No interna Outdoor s	where a complifor external irr rided the credit of hat appliesal or communal of pace with collect pace without col	igation purposes can be achieved utdoor space cion system	. Where	no	1 of 1 Credits	

CATEGORY	3 MATERIALS Overall Level: 3	Overall Score	59.54
% of Section	n Credits Predicted: 50,00	Credits	Level
Contributi	on to Overall Score: 3.60 points	12 of 24 Credits	All Levels
Mat 1 Environm- ental Impact 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.		
	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 Responsible Sourcing of Materials -	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.	1	
Basic Building Elements	Enter the predicted Score What is the predicted number of credits?	0 of 6 Credits	-
Mat 3 Responsible Sourcing of Materials - Finishing 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	-

CATEGORY	4 SURFACE WATER RUN-OFF Overall Level: 3	Overall Score	59.54
	Credits Predicted: 50.00%	Credits	Level
Contributio	n to Overall Score: 1.10 points	2 of 4 Credits	All Levels
Sur 1 Management of Surface Water Run-off from developments	Mandatory Requirement: Peak rate of run-off into watercourses is no greater for the developed site than it was for the predevelopment 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	0 of 2 Credits	All Levels
Sur 2 Flood Risk	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		
	Select the apropriate option(s)	2 of 2 Credits	-
	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		

CATEGORY	5 WASTE	Overall Level	: 3	Overall Score	59.54
% of Section	Credits Predicted:	87.00%		Credits	Level
Contributio	n to Overall Score:	5.60 points		7 of 8 Credits	All Levels
Was 1 Storage of non- recyclable waste and recyclable household waste	Mandatory Requirements should be sized to hol provided by the Location BS 5906. Trainternal and/ or external mandatory Requirements.				
	be accessible	num space be provided and to disabled people? ousehold waste storage	V		
		is no external recyclable waste io Local Authority collection	П	0 of 2 Credits	
	Internal stora Local Authority collect	ge (capacity 60 litres) tion Scheme			
	Pre-collection	ge (capacity 30 litres)		4 of 4 Credits	All Levels
		Local Authority collection scheme			
	(capacity 30	ternal storage bins litres)			
	Flats	age(capacity 180 litres)		0 of 4 Credits	
	Private recyc 3 or greater t	ling operator ypes of waste collected			

Issue		Credits	Level
Was 2 Construction Site Waste Management	A credit is awarded where a compliant SWMP is provided with targets and procedures to minimise construction waste. Credit are available where the SWMP include procedures and commitments for diverting either 50% or 85% of waste generated from landfill. SWMP details	s d	
	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 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	3	,
	* including if an automated waste collection system is in place		

CATEGORY	6 POLLU	ITION	Ove	rall Level: 3	Ov	erall Score	59.54
% of Section	on Credits	Predicted:	100.00%		Cı	redits	Level
Contributi	on to Ove	rall Score:	2.80 points		4 of 4	4 Credits	All Levels
Pol 1 Global Warming Potential (GWP) of Insulants	substance less than	es (in manuf 5. t the most appro All insulan Some insul	d where all insulating acture AND installation; opriate optionts have a GWP less than lants have a GWP of less ts have a GWP of less ts have a GWP of less than a GWP of less th	that have a GWP 5 • than 5 •	of	1 Credits	-
Pol 2 NOx Emissions	the opera	ation of the statement appropriate the most appropriate the Less than Less than Class 4 boil Class 5 boil All spacerequireme	an 100 mg/kWh 100 mg/kWh 70 mg/kWh 40 mg/kWh iler	system within the		3 Credits	-

CATEGOR'	7 HEALTH & WELLBEING Overall Level: 3	Overall Score	59.54
% of Section	on Credits Predicted: 33.00%	Credits	Level
Contributi	on to Overall Score: 4.66 points	4 of 12 Credits	No level
Hea 1 Daylighting	Credits are awarded for ensuring key rooms in the dwelling has high daylight factors (DF) and a view of the sky. Select the compliant areas Room Kitchen: Avg DF of at least 2% Living Room*: Avg DF of at least 1.5% Dining Room*: Avg DF of at least 1.5% Study*: Avg DF of at least 1.5% V 80% of working plane in all above rooms receive direct light from the sky? Any room used for Ene 9 Home Office must also achieve a min DF of 1.5%.	ve 2 of 3 Credits	-
Hea 2 Sound Insulation	Credits are awarded where performance standards exceed tho required in Building Regulations Part E. This can be demonstrate by carrying out pre-completion testing or through the use Robust Details Limited. Select a type of property Detached Property Attached Properties: - Separating walls and floors only exist between non habitable spaces - Separating walls and floors exist between habitable spaces Select a performance standard Performance standard ont sought Airborne: 3db higher; Impact: 3dB lower OR Airborne: 5db higher; Impact: 5dB lower OR Airborne: 8db higher; Impact: 8dB lower	ed	-

				Credits	Level
Private at	t least p ccupant	is awarded for the provision of an outdoor s partially private. The space must allow easy s. private/ semi-private space be provided? Yes, private/semi-private space will be provided No private/semi-private space		1 of 1 Credits	-
Lifetime dv Homes	welling radable	<u>y Requirement:</u> Lifetime Homes is mandat is to achieve Code Level 6. <u>credits:</u> Credits are awarded where the de ted all of the principles of the Lifetime Hom	eveloper has		

CATEGORY	Y 8 MANAGEMENT	Overall Lev	rel: 3	Overall Score	59.54
	on Credits Predicted;			Credits	Level
Contributi	ion to Overall Score:	8.88 points		8 of 9 Credits	All Levels
Man 1 Home User Guide	dwelling covering in home occupier, in acc Tick the topics covere Operations Site and Su	where a simple guide is provident of the 'istordance with the Code required by the Home User Guide at Issues? Irroundings?	non-technical'	3 of 3 Credits	-
Man 2 Considerate Constructors Scheme	best practice site man Considerate Construct nationally recognised		r the		
	OR Best Pract OR Significant Alternative OR Mandatory OR Mandatory	e used e Constructors ice ly Beyond Best Practice Scheme* + 50% optional requirements + 80% optional requirements ontact a Code Service Provider if y	O O O O O O O O O O O O O O O O O O O	1 of 2 Credits	-
Man 3 Construction Site Impacts	to operate site managerick the impacts that Monitor, applicable	report and set targets, , for: gy use from site activities gy use from site related transpo sumption from site activities repractice policies in respect of pollution from site activities und and surface) pollution on s	where where ort ite	2 of 2 Credits	-

Issue		Credits	Level
Man 4 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		
		2 of 2 Credits	-

CATEGORY	' 9 ECOLOGY Overall Level: 3	Overall Score	59.54
% of Section	on Credits Predicted: 66.00%	Credits	Level
Contributi	on to Overall Score: 8.00 points	6 of 9 Credits	All Levels
Eco 1 Ecological Value of Site	One credit is awarded for developing land of inherently low value. Select the appropriate option Credit not sought OR Land has ecological value OR Land has low/ insignificant ecological value*	1 of 1 Credits	-
	* Low ecological value is determined either a) by using Checklist Eco 1 across the whole development site; or b) where an suitably qualified ecologist is appointed and can confirm or c) produces an independent ecological report of the site, that the construction zone is of low/ insignificant value; AND the rest of the development site will remain undisturbed by the works.		
Eco 2 Ecological Enhancement	A credit is awarded where there is a commitment to enhance the ecological value of the development site. Tick the appropriate boxes Will a Suitably Qualified Ecologist be appointed to recommend appropriate ecological features? AND Will all key recommendations be adopted? AND 30% of other recommendations be adopted?	0 of 1 Credits	-
Eco 3 Protection of Ecological Features	A credit is awarded where there is a commitment to maintain and adequately protect features of ecological value. Type and protection of existing features Site with features of ecological value? OR Site of low ecological value (as Eco 1)? AND All* existing features potentially affected by site works are maintained and adequately protected? "If a suitably qualified ecologist has confirmed that a feature can be removed due to insignificant ecological value or poor health conditions, as long all the rest have been protected, then this box can be ticked.	1 of 1 Credits	

Issue		Credits	Level
Eco 4 Change of Ecological Value of Site	Credits are awarded where the change in ecological value has been calculated in accordance with the Code requirements and is calculated to be: Change in Ecological Value 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	2 of 4 Credits	
Eco 5 Building 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 OR Houses & Flats Weighted (2.5:1 & 3:1) OR Houses & Flats Weighted (3:1 & 4:1)	2 of 2 Credits	

Appendix C – Evidence Requirements

- Energy Category -

	Design Stage			Post Construction		
Issue	All	Mandatory	Where Applicable	All	Mandatory	Where Applicable
Ene 1	Design Stage - SAP 2009 Worksheets	✓	пррпоавто	As Built Stage – SAP 2009 Worksheet		√
	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 Copy of As Built Part L1A Building		· ·
	Copy of outputs from Ene1/Ene7 tool	√		Regulations Compliance Checklist	√	
	Copy of datpats from Ener/Ener tool	,		Documentary evidence from Building	· ·	
	Utility location maps		✓	Control Officer		✓
	Copy of outputs from SAP input tool		✓	Copy of outputs from SAP input tool		√
				Copy of outputs from Ene1/Ene7 tool	✓	
				Utility location maps		✓
F 0	Desire Others OAD 0000 Westerlands	,	I	TA - D. Th Olever OAD 0000 West about		,
Ene 2	Design Stage - SAP 2009 Worksheets Copy of Design Stage Part L1A Building	✓		As Built Stage – SAP 2009 Worksheet Evidence of final construction materials,		✓
	Regulations Compliance Checklist	✓		built form and specifications	✓	
	Written confirmation from the Environmental	•		built form and specifications	<u> </u>	
	Agency where under protection of existing			Copy of As Built Part L1A Building		
	flood defences	✓		Regulations Compliance Checklist	✓	
	Specification text confirming intention where					
	SAP cannot be produced at design stage		✓	Letter of conformity to specification		✓
				Assessor Site Inspection Report		✓
				Documentary evidence from Building		
				Control Officer		✓
Ene 3	Drawings/specification text detailing the type of		I	T	I	
Elle 3	Energy Display device to be used	✓		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		✓	Assessor Site Inspection Report		✓
	Letter from developer to assessor giving the			Purchase orders/receipts for energy		
	specific undertaking		✓	display devices		✓
				Ī		
				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		✓
	Daniel de la contra del contra de la contra del la contra d			Description of the section of		
	Drawings showing location of fixtures/footings		√	Drawings showing location of fixtures/footings of external drying space		,
	of external drying space Specification text confirming intention where		v	Specification text confirming intention		•
	drying space specification is not known at			where drying space specification is not		
	design stage		✓	known at design stage		✓
	- J					
	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		√ ·
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	<u> </u>	✓

	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		./
				Written confirmation of information		•
				provided to dwellings		✓
Ene 6	Duraniana abandara la satista af all antonnal limbs			As Built drawings/specifications		
	Drawings showing location of all external light fittings	√		confirming construction in accordance with design stage	✓	
	Text confirming location and type of all	•		with design stage	<u> </u>	
	external light fittings	✓		Manufacturer's literature	✓	
	Specification text confirming intention where					
	external lighting specification is not known at					
	design stage		√	Purchase orders/receipts		√
	Letter of instruction to contractor/supplier Letter from developer to assessor giving the		✓	Photographic evidence		√
	specific undertaking		√	Assessor Site Inspection Report		√
	Specific directaking			Prodessor one inspection report		
Ene 7				Confirmation that design has been		
	Confirmation that feasibility study has been			carried out by an independent energy		
	completed by an independent energy specialist	✓		specialist	✓	
				Danisa Chana CAD 0000 Washahaata		
	Design Stage – SAP 2009 Worksheet	√		Design Stage – SAP 2009 Worksheets and supporting information		1
	Drawings showing location of LZC	•		As Built – SAP 2009 Worksheets for		, , , , , , , , , , , , , , , , , , ,
	technologies	✓		each Energy Type		✓
	Specification text detailing type, location and			Drawings showing location of LZC		
	use of LZC equipment in dwellings	✓		technologies	✓	
	Manufacturer's details for LZC technologies		✓	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		✓
- 0	<u> </u>		Г			Т
Ene 8	Drawings showing location, size, security and	√		Assessor Cita Inspection Depart		
	access to cycle storage Specification text detailing location, size,	•		Assessor Site Inspection Report		•
	security and access to cycle storage	✓		Purchase orders/receipts		✓
	Drawings/specification text detailing any			,		
	proprietary system		✓	Photographic evidence		✓
	Confirmation of bedrooms served by cycle	,				
	storage and relevant calculations Letter of instruction to contractor/supplier	✓	√			
	Letter from developer to assessor giving the		,			
	specific undertaking		✓			
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		· ·
	dwelling		✓	Photographic evidence		✓
	Specification text confirming intention where			U -Tr		
	details of home office are not known at design					
	stage	,	✓			
	Average Daylight Factor calculations	✓	√			
	Letter of instruction to contractor/supplier Letter from developer to assessor giving the		· ·		-	
	specific undertaking		✓			
	1-1		l	1		l



- Water Category -

	Design Stage	Post Construction 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		✓			
				<u></u>		
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	✓		As built drawings/specifications		✓
	Specification text confirming intention where details			3		1
	of external water collection systems are not known			Manufacturer's details of installed		
	at design stage		✓	systems	✓	
	Letter of instruction to contractor/supplier		✓	Assessor Site Inspection Report		✓
	Letter from developer to assessor giving the specific			The state of the s		1
	undertaking		✓	Photographic evidence		/



- Materials Category -

	Design Stage	Post Construction Stage				
Issue	All	Mandatory	Where Applicable	All	Mandatory	Where Applicable
Mat 1				Letter from developer confirming		
	Drawings showing location, areas and			dwellings were constructed as at		
	specification of elements	✓		design stage		✓
	Specification text confirming element					
	specification details	<u>√</u>		As Built drawings/specifications		√
	Completed Code Mat 1 Calculator Tool	√		Assessor Site Inspection Report		√
	Confirmation of Donnaka Datings		√	Decumentary avidence for metarials		√
	Confirmation of Bespoke Ratings		V	Documentary evidence for materials Completed Code Mat 1 Calculator		V
	Letter of instruction to contractor/supplier		✓	Tool showing elements As Built	√	
	Letter from developer to assessor giving the		•	Tool showing elements As Built	•	
	specific undertaking		✓	Confirmation of Bespoke Ratings		√
Mat 2	specific undertaking		,	Letter from developer confirming		,
wat 2	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			g		
	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			Decumentary details for recycled		
	Agency where under protection of existing flood defences		✓	Documentary details for recycled materials		/
	nood defences		*	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		✓
	<u> </u>			Written confirmation from suppliers		
				confirming status of non-certified		
				timber materials		✓
				•		
Mat 3				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 3 Calculator Tool or	✓		A B 31 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		~
	relevant calculations	· ·		As Built drawings/specifications Purchase orders, receipts or		V
				certificates/letters confirming		
	Confirmation to use specific timber schemes	✓		materials	√	
	Committation to use specific timber schemes	*		matoriais	,	
	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		✓
	Flood Risk Assessment	✓		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	✓		that system meets credit requirements	✓	
	Proposed operation and maintenance plans.	✓		As Built drawings and calculations		✓
				Manufacturers' data for all devices	✓	
Sur 2	Flood Risk Assessment confirming the zone			Copies of SUDs agreements Confirmation that Flood Risk Assessment	✓	
	of the development	✓		still up to date		✓
	Written confirmation from the Environmental Agency where under protection of existing			Written confirmation from the 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		✓
		<u> </u>		As Built plans/specifications		✓



- Waste Category -

	Design Stag	е		Post Construction Stage			
Issue	All	Mandatory	Where 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	✓		As Built drawings/specifications		✓	
	Confirmation from LA detailing container						
	specifications/frequency and waste streams			Written confirmation dwellings were			
	of collection		✓	constructed as at design stage		✓	
	Confirmation of intention to use a private			Written justification for bins further than 30m			
	operator and details of the scheme		✓	from external door		✓	
				Confirmation of LA or similar private scheme			
	Letter of instruction to contractor/supplier		✓	details	✓		
	Letter from developer to assessor giving the						
	specific undertaking		✓	Assessor Site Inspection Report		✓	
				Photographic Evidence		✓	
Was 2	To achieve Mandatory Elements						
	Written confirmation from the Environmental		✓	Copy of the Site Waste Management Plan		✓	
	Documentary Legal evidence confirming						
	agreed cost of development		✓	Completed Checklist Was 2a		✓	
	Letter of instruction to contractor/supplier		✓	Completed Checklist Was 2d		✓	
	Letter from developer to assessor giving the			Records confirming monitoring of site waste			
	specific undertaking		✓	throughout construction		✓	
				Documentary Legal evidence confirming			
				agreed cost of development		✓	
	To achieve tradable credits						
	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	✓		
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 Applicable	All	Mandatory	Where 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 Applicable
Hea 1	Average Daylight Factor calculations	✓		Calculations for all dwelling As Built	✓	
	No-sky line calculations	✓		Confirmation that inputs are accurate		✓
	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		√			
	Letter from developer to assessor giving the specific undertaking		√			
	1		T	To 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Т
Hea 2	Specification text committing to meet relevant sound insulation performance levels	✓		Specification text committing to meet 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		./
	Confirmation that Robust Details will achieve		v	Confirmation that Robust Details will		v
	necessary standards		✓	achieve necessary standards		✓
	Confirmation that site is registered by RDL		√	Confirmation that site is registered by RDL		✓
	Letter of instruction to contractor		✓	Letter of instruction to contractor		✓
	Letter from developer to assessor giving the specific undertaking		✓	Letter of intent from developer to assessor giving the specific undertaking		√
				Confirmation of sound insulation results		✓
				Completed Robust Details Ltd Checklist		✓
Hea 3	Plan(s)/specification text showing the			As-Built drawing/specification		
i iea 3	number of bedrooms served	✓		confirmation Confirmation that dwellings		✓
	Plan(s)/specification text showing location and size of private space(s)	✓		confirmation that dwellings constructed in accordance with design stage spec		√
	Details of accessibility in accordance with BS8300	✓				
	Details of control arrangements for shared private spaces		√			
	Letter of instruction to contractor/supplier		✓			
	Letter from developer to assessor giving the specific undertaking		✓			
Hea 4	Completed and signed Checklist Hea 4 –			Completed As Built Lifetime Homes		
1.04 4	Lifetime Homes	✓		Checklist Hea 4	✓	
				Assessor Site Inspection Report		√
				As Built Drawings		✓



- Management Category -

	Design Stage			Post Construction Stage		
Issue	All	Mandatory	Where Applicable	All	Mandatory	Where 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		✓
	Summary of Home User Guide contents	✓				
	Letter from developer to assessor giving					
	the specific undertaking		✓			
M 0	Confirmation on/from		T			T
Man 2	contractor/developer to achieve a specific					
	CCS score		✓	Copy of CCS certificate		_
	Completed Checklist Man 2 where an		•	Copy of CCS certificate 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		√
	undertaking		· · · · · · · · · · · · · · · · · · ·	documentary evidence		
Man 3				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		✓
	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		✓
				Decomposition of site		
				Documentary evidence of site procedures for minimising pollution		
				Coc certificates for site timber		v /
				Purchase orders confirming re-		· ·
				used/reclaimed timber		/
				used/reciaimed timber		· ·
Man 4				Confirmation that ALO/CPDA		
	Letter of appointment/letter from			recommendations have been		
	ALO/CPDA confirming appointment	✓		implemented in design	✓	
	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		✓
	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	All	Mandatory	Where
Eco 1	Plans of site and surrounding area prior to	•	Applicable	Plans of site and surrounding area	Í	Applicable
	development		✓	prior to development		✓
	Site visit report		√	Site visit report		✓
	Completed Checklist Eco 1		✓	Completed Checklist Eco 1		✓
	Ecologists report using CSH Ecology Report		✓	Ecologists report using CSH		
	Template Plans defining the construction site	✓	V	Ecology Report Template Plans defining construction site		√
	rians denining the constituction site	•		Confirmation that ecologist's		·
	Confirmation that ecologist's qualifications			qualifications meet the		
	meet the requirements		✓	requirements		✓
				As Built plans identifying features		
	Letter of instruction to contractor/supplier		✓	present		✓
	Letter from developer to assessor giving the		✓	A		
Eco 2	specific undertaking		¥	Assessor Site Inspection Report		· ·
ECO 2	Completed Ecologists Report using the CSH Ecology Report Template	√		Plans showing both proposed and implemented recommendations		✓
	Specification text/illustrations detailing	•		implemented recommendations		,
	implementation of recommendations	✓		Photographic evidence		✓
	Confirmation that Ecologist qualifications			- 3 - 4-		
	meet the requirements	✓		Assessor Site Inspection Report		✓
	Written confirmation from the Environmental			Confirmation of contract or letter		
	Agency where under protection of existing			confirming planting will be		_
	flood defences 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	✓		protected features		✓
	Plans of site and boundary highlighting		,	A 07 1 17 B		
	ecological features prior to development Evidence of any requirement to remove a		✓	Assessor Site Inspection Report		✓
	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		✓ ✓	<u> </u>		-
	Letter of instruction to contractor/supplier Letter from developer to assessor giving the		· ·	+		1
	specific undertaking		✓			
Eco 4	Plans of the site pre-development showing			Completed Eco 4 Calculator Tool		
	areas, landscape and plot types	✓		or similar calculations		✓
	Copy of calculations (from assessor) of	, –		Letter/certificate of conformity from		
	proposed change in ecological value Completed Ecologist's report using the CSH	✓		the developer		√
	Ecology Report template		✓	Confirmation of contract or letter confirming completion date		✓
	Specification text/illustrations showing		•	comming completion date		·
	implementation of Ecologist's					
	recommendations		✓			
	Planting Schedule		√			
	Letter of instruction to contractor/supplier		✓			
	Letter from developer to assessor giving the specific undertaking		✓			
Eco 5	Plans showing the Net Internal Floor and		*			
_500	Ground Floor areas of all buildings	✓		As Built drawings/specifications		✓
	Elevations showing the number of storeys for			Letter from developer confirming		
	each building	✓		construction as at design stage		✓
	Building Footprint Ratio Calculations	✓				