CODE FOR SUSTAINABLE HOMES PRE-ASSESSMENT REPORT

FOR

Queens Road, Richmond

ON BEHALF OF

FOM Properties Ltd

Wakefield

Manchester

Birmingham

London

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QUEENS ROAD, RICHMOND

on behalf of FOM Properties Ltd

Revision	Issued to	Date
0	Mr. Greg Hayden TPE Consulting Mr. Rory Burke TPE Consulting Mr. Paul Tighe Ethos Engineering Mr. Colin Mackay DTA Architects	23-04-2010
1	Mr. Greg Hayden TPE Consulting Mr. Rory Burke TPE Consulting Mr. Paul Tighe Ethos Engineering Mr. Colin Mackay DTA Architects	29-04-2010

Checked	Approved
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Mr. Leon Z Maddison accredited Code for Sustainable Homes Assessor. Accredited through Stroma Accreditation – membership number STRO000043

Contents;

2.0 Introduction to the Code;

The Code for sustainable homes assessment replaces the EcoHomes scheme, developed by the Building Research Establishment (BRE). The Code is now run and assessed by Communities and Local Government and is now mandatory for all new dwelling developments built after 01st May 2008. This mandatory requirement came into effect for all developments where a local authority received the building notice, initial notice or full plans application after 1st May 2008. Developments where a local authority had received these stages on or before 30th April 2008 are exempt.

The Code for Sustainable Homes has been implemented to create a national standard for sustainable design and construction of new homes.

The new Code (latest edition released May 2009) measures the sustainability of a new home against category's of sustainable design, rating the whole dwelling as a complete package. The Code uses a 1 to 6 star rating system (6 being the highest) to communicate the overall sustainability of a new home. The Code also sets a minimum standard for Energy and Water use at each level and additionally includes several mandatory elements required for assessment.

The Code assessment is a set of sustainable design principles covering performance, and is split into nine elements, comprising;

1. Energy
2. Water
3. Materials
4. Surface Water Run-off
5. Waste
6. Pollution
7. Health and Wellbeing
8. Management
9. Ecology

Each category includes a number of environmental issues, which when assessed are awarded credits if the targets are achieved. These performance targets are in excess of the minimum needed to satisfy Building Regulations, but are considered to be sound best practice, technically feasible, and within the capability of the building industry to supply.

The assessment contains minimum mandatory standards for energy, water materials, waste and surface water run-off, which must be met before even the lowest level of the Code can be achieved.

The code uses a rating system of 1 to 6 stars;

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 (★★★★★★)

Formal assessment of dwellings using the Code for Sustainable homes may only be carried out using licensed and registered individuals, who are qualified 'competent persons' for the purpose of carrying out Code assessments.

3.0 Introduction (project specific);

EDCM have been appointed by FOM Properties Ltd to advise and assess on the Code for Sustainable Housing requirements for the Queens Road scheme at Richmond.

The scheme comprises of the construction of 6 new dwellings at Queens Road in Richmond. 4 of the new dwellings will comprise apartments built within an existing Public House, previously named The Lass O' Richmond Hill public house. An additional detached property is to be constructed in the old rear carpark area of the development which is to include a self contained studio apartment on the lower Ground floor level.

The development is found at the following postal address:

8 Queens Road
Richmond
TW10 6JJ

It has been identified during the briefing process that all of the new dwellings shall be designed and built to achieve a minimum of Code for Sustainable homes Level 3. This is a requirement of the local council Richmond Council, and a response from their Development Office has been received to confirm that both the new build and conversions can be assessed under the current edition of Code for Sustainable Homes. The following report therefore highlights where credits are mandatory to achieve this level, as well as assist in identifying where credits can be achieved to meet this requirement.

Level 3 dictates that a minimum of 57 weighted credits must be achieved.

The following report has been based on the May 2009 edition of the Code for Sustainable Homes, and it is noted that EDCM have registered the site under this edition to secure the developments rating during any further updates (due October 2010).

The following sections of the report are written to highlight each credit requirement, as well as indicate if this has been achieved on this specific project.

4.0 Energy

4.1 Ene1;

To achieve Code for Sustainable homes Level 3, the mandatory dwelling emission rate reduction is some 25% (improvement of actual over target), as defined in the following extract from the Code;

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 1	Dwelling Emission Rate	15	Yes

Aim

To limit emissions of carbon dioxide (CO_2) to the atmosphere arising from the operation of a dwelling and its services.

Assessment Criteria

Credits are awarded based on the percentage improvement in the Dwelling Emission Rate (*DER*), (estimated carbon dioxide emissions in kg per m^2 per annum arising from energy use for heating, hot water and lighting for the actual dwelling), over the Target Emission Rate (*TER*) (the maximum emission rate permitted by Building Regulations), for the dwelling where DER and TER are as defined in AD L1A 2006 Edition of the Building Regulations. Credits are awarded in accordance with the table below. Note that to reach Level 6 (zero carbon) there are additional requirements.

Criteria		
% Improvement of DER over TER	Credits	Mandatory Levels
≥10%	1	Level 1
≥14%	2	
≥18%	3	Level 2
≥22%	4	
≥25%	5	Level 3
≥31%	6	
≥37%	7	
≥44%	8	Level 4
≥52%	9	
≥60%	10	
≥69%	11	
≥79%	12	
≥89%	13	
≥100%	14	Level 5
'Zero Carbon Home' as defined below	15	Level 6
Default Cases None		

4.2 Ene2;

The Heat Loss Parameter is calculated as part of the SAP energy loss and usage calculation.

It is noted that a HLP of <1.30 is achievable with good detailing and robust construction methods. Therefore a single credit has currently been included in the assessment.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 2	Building Fabric	2	No

Aim

To future proof the energy efficiency of dwellings over their whole life by limiting heat losses across the building envelope.

Assessment Criteria

Credits are awarded based on the Heat Loss Parameter (HLP) for each dwelling, in accordance with the table below:

Criteria	
Heat Loss Parameter (HLP)	Credits
≤1.30	1
≤1.10	2
Default Cases None	

4.3 Ene3;

To achieve Code level 3, two credits from the internal lighting section have been taken, meaning that >75% of the internal lighting must be specified as dedicated low energy lighting.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 3	Internal Lighting	2	No

Aim

To encourage the provision of energy efficient internal lighting, thus reducing the CO_2 emissions from the dwelling.

Assessment Criteria

Credits are awarded for the provision of fixed dedicated energy efficient internal light fittings as follows:

Criteria	
	Credits
Where ≥40% of fixed internal fittings are dedicated and energy efficient.	1
Where ≥75% of fixed internal fittings are dedicated and energy efficient.	2
Default Cases None	

4.4 Ene4;

The following extract from the Code specifies how the drying space credit can be achieved. In the initial assessment, this credit has been awarded.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 4	Drying Space	1	No

Aim

To provide a reduced energy means of drying clothes.

Assessment Criteria

Credits are awarded based on the provision for drying space for each dwelling type in accordance with the table below:

Criteria	
	Credits
Where space with posts and footings or fixings capable of holding 4m+ of drying line for 1–2 bed dwellings, and 6m+ of drying line for 3+ bed dwellings, is provided for drying clothes. The space (internal or external) should be secure.	1
Default Cases None	

4.5 Ene5;

All white goods provided within the new dwellings shall be complete with energy ratings as specified below in the following extract from the Code.

These credits have been awarded in the initial assessment.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 5	Energy Labelled White Goods	2	No

Aim

To encourage the provision or purchase of energy efficient white goods, thus reducing the CO_2 emissions from appliance use in the dwelling.

Assessment Criteria

Credits are awarded where information is provided relating to the provision of energy efficient white goods, or where energy efficient white goods are supplied in accordance with the criteria in the table below for each dwelling:

Criteria	
	Credits
Where the following appliances are provided and have an A+ rating under the EU Energy Efficiency Labelling Scheme: • Fridges and freezers or fridge-freezers	1
Where the following appliances are provided and have an A rating under the EU Energy Efficiency Labelling Scheme: • Washing machines and dishwashers **AND EITHER** • Washer-dryers or tumble dryers have a B rating **OR** • Where washer-dryers or tumble dryers are not provided, information on the EU Energy Labelling Scheme is provided to each dwelling where this is the case Note: Where washer dryers are provided it is not necessary to provide a washing machine to obtain this credit	1
If no (or not all) white goods are provided but information on the EU Energy Efficiency Labelling Scheme of efficient white goods is provided to each dwelling where this is the case	1
Default Cases None	

4.6 Ene6;

Any space lighting and security lighting specified for installation shall be provided to comply with the Code requirements.

In the initial assessment, both credits have been awarded from this section.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 6	External Lighting	2	No

Aim

To encourage the provision of energy efficient external lighting, thus reducing CO_2 emissions associated with the dwelling.

Assessment Criteria

Where all external lighting within the development is provided by dedicated energy efficient fittings, as follows:

Criteria	
	Credits
Space Lighting Where all external space lighting, including lighting in the common areas, is provided by dedicated energy efficient fittings. Note: Statutory safety lighting is not covered by this requirement **Security Lighting** Where all security light fittings are designed for energy efficiency and are adequately controlled such that: All burglar security lights have: • A maximum wattage of 150 W **AND** • Movement detecting control devices (PIR) **AND** • Daylight cut-off sensors All other security lighting: • Has dedicated energy efficient fittings **AND** • Is fitted with daylight cut-off sensors OR timers	1 1
Default Cases If no security lighting is installed, then the security lighting credit can be awarded by default, provided all the conditions of the first issue covering space lighting have been met. Dual lamp luminaires with both space and security lamps can be awarded both credits provided they meet the above criteria for energy efficiency	1 2

4.7 Ene7;

To achieve the required credits under item Ene1, and to comply with the local councils requirement for a 20% renewable inclusion, several LZC technologies will need to be considered. The inclusion of these technologies has resulted in both credits under Ene7 (calculations and report to be completed to confirm).

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 7	Low or Zero Carbon (LZC) Technologies	2	No

Aim

To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the energy demand.

Assessment Criteria

Credits are awarded based on the percentage reduction in total carbon emissions that result from using Low or Zero Carbon (LZC) Energy Technologies for each *dwelling* using the calculation method detailed in *Calculation Procedures*, with credits awarded as detailed below:

Criteria	
	Credits
Where energy is supplied from local renewable or low carbon energy sources funded under the Low Carbon Building Programme (or similar), or is designed and installed in a manner endorsed by a feasibility study prepared by an independent energy specialist	
AND	
There is a 10 per cent reduction in carbon emissions as a result of this method of supply.	1
OR	
There is a 15 per cent reduction in carbon emissions as a result of this method of supply.	2
Default Cases	
None	

4.8 Ene8;

A single credit has been provisionally awarded under this section of the Code, the following extract identifies the numbers of cycle storage points required to achieve this credit.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 8	Cycle Storage	2	No

Aim

To encourage the wider use of bicycles as transport by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys.

Assessment Criteria

Credits are awarded where adequately sized, safe, secure, convenient and weather-proof cycle storage is provided for each dwelling in accordance with the following criteria:

Criteria	
	Credits
Where either individual or communal cycle storage is provided that is adequate, safe, secure, convenient and weather-proof (as defined in *Relevant Definitions* below) for the following number of cycles:	
Studios or 1 bedroom dwellings – storage for 1 cycle for every two dwellings	1
2 and 3 bedroom dwellings – storage for 1 cycle per dwelling	
4 bedrooms and above – storage for 2 cycles per dwelling	
OR	
Studios or 1 bedroom dwellings – storage for 1 cycle per dwelling	2
2 and 3 bedroom dwellings – storage for 2 cycles per dwelling	
4 bedrooms and above – storage for 4 cycles per dwelling	
Default Cases	
None	

4.9 Ene9;

Each dwelling must be provided with a space complete with the necessary requirements to achieve the Home Office credit. This has been assumed as being achievable, and the credit gained.

Issue ID	Description	No. of credits available	Mandatory Elements
Ene 9	Home Office	1	No

Aim

To reduce the need to commute to work by providing residents with the necessary space and services to be able to work from home.

Assessment Criteria

Credits are awarded on the basis of the provision of space and services that enable a room to be used effectively as a home office.

Criteria	
	Credits
Where sufficient space and services (as defined below) have been provided which allow the occupants to set up a home office in a suitable quiet room.	1
Default Cases None	

5.0 Water

5.1 Wat1;

To achieve Code for Sustainable homes Level 3, the mandatory water usage per person is <105 l/person/day, as defined in the following extract from the Code;

Issue ID	Description	No. of credits available	Mandatory Elements
Wat 1	Indoor water use	5	Yes

Aim

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

Assessment Criteria

Up to 5 credits are available for performance which reduces the amount of potable water used in the dwelling. There are minimum mandatory performance requirements for achieving all levels of the Code. The minimum mandatory requirements begin at level 1 increasing at level 3 and again at level 5. Credits are available for all the indoor potable water performance levels required in the Code. They are awarded according to the predicted average water consumption calculated using the Code Water Calculator (see *Calculation Procedures*). The table below gives the details.

Criteria		
Water consumption (litres/person/day)	Credits	Mandatory Levels
≤120 l/p/day	1	Levels 1 and 2
≤110 l/p/day	2	
≤105 l/p/day	3	Levels 3 and 4
≤90 l/p/day	4	
≤80 l/p/day	5	Levels 5 and 6
Default Cases		
None		

Due to the mandatory requirement being set so low, 3 credits are achieved in this section of the Code requirements.

A critical review of the sanitaryware provisions and selected white goods will need to be undertaken at the appropriate time of the project.

5.2 Wat2;

It has been assumed that this credit is achievable, as the provision of a suitable water butt within each dwellings garden space can be provided. A single credit is awarded for this element.

Issue ID	Description	No. of credits available	Mandatory Elements
Wat 2	External Water Use	1	No

Aim

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

Assessment Criteria

One credit is awarded for providing a system to collect rainwater for use in irrigation as follows:

Criteria	
	Credits
Where a correctly specified and sufficient sized system to collect rainwater for external/internal irrigation use has been provided to a dwelling with a garden, patio or communal garden space (examples of such systems include rainwater butts and central rainwater collection systems)	1
Default Cases If no individual or communal garden spaces are specified or if only balconies are provided, the credit can be awarded by default	1

6.0 Materials

6.1 Mat1;

Construction materials shall be selected from the Green Guide to achieve the required credits. The major elements of construction shall all be reviewed.

Issue ID	Description	No. of credits available	Mandatory Elements
Mat 1	Environmental Impact of Materials	15	Yes

Aim

To encourage the use of materials with lower environmental impacts over their lifecycle.

Assessment Criteria

There is a mandatory requirement with no available credits to achieve a Green Guide rating of between A+ and D for at least three of the following five elements of the building envelope:

- Roof
- External Walls
- Internal Walls (including separating walls)
- Upper and Ground Floors (including separating floors)
- Windows

Between 1 and 15 credits are available depending on the Green Guide ratings and relative distributions of different materials across the five main elements of the building envelope. The method for determining the credits to award for any given situation is described in the calculation procedure below.

Assessment Criteria		
	Mandatory	Credits
Where at least three of the following five key elements achieve a relevant Green Guide rating from the 2008 version of *The Green Guide* of A+ to D: • Roof • External Walls • Internal Walls (including separating walls) • Upper and Ground Floors (including separating floors) • Windows	All Levels	
Where the *Code Mat 1 Calculator Tool* is used to assess the number of credits awarded for the five key elements described above		1 – 15
Default Cases None		

At this stage of the project, it has been assumed that a minimum of 5 credits can be awarded against this element. The project Architect shall need to assess further during the detailed design stage.

6.2 Mat2;

Construction materials shall be selected and responsibly sourced. At this stage of the project, it has been assumed that a minimum of 2 credits can be awarded against this element.
The project Architect shall need to assess further during the detailed design stage.

Issue ID	Description	No. of credits available	Mandatory Elements
Mat 2	Responsible Sourcing of Materials – Basic Building Elements	6	No

Aim

To recognise and encourage the specification of responsibly sourced materials for the basic building elements.

Assessment criteria

Points are awarded where materials used in key building elements are responsibly sourced according to the following criteria:

Criteria	
	Credits
Where 80% of the *assessed materials* in the following *Building Elements* are responsibly sourced: a) Frame b) Ground floor c) Upper floors (including separating floors) d) Roof e) External walls f) Internal walls (including separating walls) g) Foundation/substructure (excluding sub-base materials) h) Staircase Additionally, 100% of any timber in these elements must be legally sourced	1–6
Default Cases None	

Note: These criteria are assessed at the building envelope level

6.3 Mat3;

Construction materials used for all finishing elements shall be appropriately selected and responsibly sourced. At this stage of the project, it has been assumed that a minimum of 2 credits can be awarded against this element.
The project Architect shall need to assess further during the detailed design stage.

Issue ID	Description	No. of credits available	Mandatory Elements
Mat 3	Responsible Sourcing of Materials – Finishing Elements	3	No

Aim

To recognise and encourage the specification of responsibly sourced materials for the finishing elements.

Assessment criteria

Credits are awarded on the basis of the requirements in the table below:

Criteria	
	Credits
Where 80% of the assessed materials in the following *Finishing Elements* are responsibly sourced: a) Stair b) Window c) External & internal door d) Skirting e) Panelling f) Furniture g) Fascias h) Any other significant use Additionally, 100% of any timber in these elements must be legally sourced	1–3
Default Cases None	

7.0 Surface Water

7.1 Sur1;

Elements of the Sur1 credits are deemed mandatory under all levels, and are as identified in the following extract from the Code document.

No additional credits have at this stage been awarded by improving the water quality of the discharged rainwater, or for protecting the quality of the receiving waters. It is assumed that these additional two credits can not be awarded, however should be confirmed at the next stage of the project by the below ground drainage engineer, further to site assessment and calculation.

Issue ID	Description	No. of credits available	Mandatory Elements
Sur 1	Management of Surface Water Run-off from developments	2	Yes

Aim

To design housing developments which avoid, reduce and delay the discharge of rainfall to public sewers and watercourses. This will protect watercourses and reduce the risk of localised flooding, pollution and other environmental damage.

Assessment Criteria

Mandatory Elements must be achieved. Up to 2 credits are available for further improving management of rainfall runoff.

Criteria	Credits	Mandatory Elements
Peak Rate of Runoff Ensure that the peak rate of runoff into watercourses is no greater for the developed site than it was for the pre-development site (see definition). This should comply with the Interim Code of Practice for Sustainable Drainage systems (SUDS) (CIRIA, 2004), or for at least the 1 year and 100 year return period events. For sites of less than 200ha, the calculation of Greenfield runoff rates should be in accordance with Flood estimation for small catchments (Marshall and Bayliss, 1994) and any subsequent updates. For sites of 200ha and more, the calculation of Greenfield runoff rates should be in accordance with the Flood estimation handbook (Centre for ecology and hydrology, 1999) and any subsequent updates. An allowance for climate change should be made in accordance with current best practice (PPS25, 2006). **Volume of Runoff** Ensure that the additional predicted volume of rainwater discharge caused by the new development, for a 1 in 100 year event of 6 hour duration including an allowance for climate change (PPS25, 2006), 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 such as WC flushing or washing machine operation.	None	All Levels

Where this additional rainwater volume cannot be prevented from being discharged for any reason, for all events up to the 100-year return period, the peak discharge rate from the site should be reduced to: • the pre-development site's estimated mean annual flood flow rate (Qbar); or • 2l/s/ha;or • a minimum flow rate (litres per second), based on good practice guidelines to prevent easy blockage, by ensuring the outlet throttle is not too small. If rainwater is discharged to a public sewer or adopted surface water sewer, flow rate requirements will be defined by the Sewerage undertaker.		
2 credits are available for using SUDS to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters by: 1. Ensuring no discharge to the watercourse for rainfall depths up to 5mm (follow guidance in the Interim Code of Practice for Sustainable Drainage systems (SUDS) (CIRIA, 2004). or 2. Establish agreements for the ownership, long term operation and maintenance of all sustainable drainage elements used	2	
Default Cases: Credits can be awarded by default if the site discharges rainwater directly to a tidal estuary or the sea, because compliance with discharg e flow rate requirements will not be required.		

7.2 Sur2;

A flood risk assessment is required to be undertaken by a suitably qualified representative. Upon details of this report, appropriate credits from the Sur2 category can be awarded.

At this stage of the project, it is assumed that 2 credits will be available.

Issue ID	Description	No. of credits available	Mandatory Elements
Sur 2	Flood Risk	2	No

Aim

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

Assessment Criteria

Up to 2 credits are awarded where the assessed dwelling is located either in an area of low annual probability of flooding, or where a Flood Risk Assessment (FRA) shows that appropriate measures have been taken to ensure safe access and escape routes and flood resilient and resistant construction.

Criteria	
	Credits
EITHER 2 credits are available for developments situated in Zone 1 – low annual probability of flooding (as defined in PPS25 – 'Planning and Flood Risk') and where the site specific Flood Risk Assessment (FRA) indicates that there is low risk of flooding from all sources.	2
OR 1 credit is available for developments situated in Zones 2 and 3a – medium and high annual probability of flooding where the finished ground floor level of all habitable parts of dwellings and access routes to the ground level and the site, are placed at least 600mm above the design flood level of the flood zone. The Flood Risk Assessment (FRA) accompanying the planning application must demonstrate to the satisfaction of the local planning authority and statutory body that the development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed.	1
Default Cases None	

8.0 Waste

8.1 Was1;

The mandatory elements of Was1 must be achieved, and are as detailed in the following extract from the Code. Additional credits are available, and further to review of the local authority website, it is assumed 2 credits can be awarded (to be reviewed).

Issue ID	Description	No. of credits available	Mandatory Elements
Was 1	Storage of non-recyclable waste and recyclable household waste	4	Yes

Aim

To recognise and reward the provision of adequate internal and external storage space for non-recyclable waste and recyclable household waste.

Assessment Criteria

The first issue of **household waste storage** sets a mandatory performance requirement with no available credits. This requirement must be met if a Code rating is to be achieved. Adequate internal space and adequate external space are defined in the definitions section.

Credits are awarded for the provision of storage space for household and recycling waste, in accordance with the criteria below.

Care should be taken to make sure that facilities are accessible to disabled people.

Criteria		
	Credits	Mandatory Elements
Storage of household waste The space allocated for waste storage should be able to accommodate containers with at least the minimum volume recommended by British Standard 5906 (British Standards, 2005) based on a maximum collection frequency of once per week. This is 100 litres volume for a single bedroom dwelling, with a further 70 litres volume for each additional bedroom. A Local Authority recycling scheme offering containers equal to or greater than this volume would meet the requirement, providing adequate external space is allocated to accommodate them. If the Local Authority provides containers with a smaller volume, or if no Local Authority scheme exists, the developer will need to ensure and demonstrate that the minimum volume according to BS 5906 2005 and defined above, is met. All containers must be accessible to disabled people (checklist Was 1), particularly wheelchair users, and sited on a hard, level surface. To ensure easy access, the containers must not be stacked.	None	All Levels

Storage of recyclable household waste Dedicated internal storage for recyclable household waste can be credited where there is no (or insufficient) dedicated external storage capacity for recyclable material, no Local Authority collection scheme and where the following criteria are met: At least, three internal storage bins: • all located in an adequate internal space • no individual bin smaller than 15 litres • with a minimum total capacity 60 litres	2	
A combination of internal storage capacity provided in an adequate internal space, with either: • a Local Authority collection scheme; or • No Local Authority collection scheme but adequate external storage capacity. **Local Authority Collection Scheme** In addition to a Local Authority Collection Scheme (with a collection frequency of at least fortnightly) at least one of the following requirements must be met: • where recyclable household waste is sorted after collection and at least a single 30 litre bin is provided in an adequate internal space. • where materials are sorted before collection and at least three separate bins are provided with 30 litres total capacity. Every bin must have a capacity of at least 7 litres and be located in an adequate internal space. • an automated waste collection system which collects at least 3 different types of recyclable waste. **No Local Authority collection scheme but adequate external storage capacity** For houses and flats, there must be at least 3 identifiably different internal storage bins for recyclable waste, located in an adequate internal space: • with a minimum total capacity of 30 litres • where every bin has at least 7 litres capacity **AND** For houses, an adequate external space must be provided for storing, at least, three external bins for recyclable waste: • with a minimum total capacity of 180 litres • with no bin smaller than 40 litres • all bins should be located within 30m^2 of an external door For blocks of flats, a private recycling scheme operator must be appointed to maintain bins and collect recyclable waste regularly. Recycling containers must: • be located in an adequate external space • be sized according to the frequency of collection, based on guidance from the recycling scheme operator • store at least 3 types of recyclable waste in identifiably different bins • be located within 30m^2 of an external door * Where strategic reasons outside the control of the developer make it impossible to meet this requirement, the maximum allowable distance is 50m, and a written justification must be provided to the Code Service Provider.	4	
Default Cases None		

8.2 Was2;

The mandatory elements of Was2 must be achieved, and are as detailed in the following extract from the Code. The additional 2 credits can be awarded for implementing a site waste management plan, including recycling strategies to minimise landfill. These additional 2 credits have currently been included in the assessment.

Issue ID	Description	No. of credits available	Mandatory Elements
Was 2	Construction Site Waste Management	2	Yes

Aim

To promote reduction and effective management of construction related waste through the use of a Site Waste Management Plan (SWMP).

Assessment Criteria

Management of waste on the construction site must comply with the criteria below:

Criteria		
	Credits	Mandatory Elements
Mandatory Element: Site Waste Management A *Site Waste Management Plan* must be developed and implemented. This will require: Monitoring and reporting of waste generated on site in defined *waste groups*, and compliance with legal requirements as set in SWMP regulations 2008 for and with *best practice*. The plan should include the setting of targets to promote resource efficiency in accordance with guidance from WRAP, Envirowise, BRE and DEFRA. Specific quantitative targets are not set within this Technical Guidance. It is the responsibility of the client and/or the principal contractor (as defined by the SWMP regulations 2008) to ensure that appropriate targets are set for the site.		All levels
Default Cases For a development where the cost of construction is less than £300,000, this element will be awarded by default.		
Minimising Construction Waste The *Site Waste Management Plan* must include procedures and commitments for reducing waste generated on site in accordance with *best practice* and the defined *waste groups*. **AND** The *Site Waste Management Plan* 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 performed either on site or through a *licensed external contractor*, in accordance with *best practice*.	1 1	
Default Cases None		

8.3 Was3;

By including a home composting facility, the credit of Was3 is achieved. This credit is therefore included in this initial assessment.

Issue ID	Description	No. of credits available	Mandatory Elements
Was 3	Composting	1	No

Aim

To encourage developers to provide the facilities to compost household waste, reducing the amount of household waste sent to landfill.

Assessment Criteria

Credits are awarded where home composting facilities are provided in houses with gardens or Local Authority kitchen waste collection/communal/community composting service in other dwelling types. The composting facilities should be suitable for normal domestic, green/garden, food and other compostable household waste, as outlined below. All facilities should be accompanied by information explaining how they work.

Criteria	
	Credits
• Individual *home composting facilities*. OR • A local *communal or community composting service*, which the Local Authority runs or where there is a management plan in place. OR • A Local Authority green/kitchen waste collection system (this can include an automated waste collection system). All *facilities* must also: • be in a dedicated position • be accessible to disabled people (Checklist 1) • have an information leaflet that is delivered to each dwelling	1
Default Cases None	

9.0 Pollution

9.1 Pol1;

All insulation must be specified and installed with a GWP <5 (manufacture AND installation).
This credit is achievable with careful specification and implementation, therefore has been awarded under this preliminary assessment.

Issue ID	Description	No. of credits available	Mandatory Elements
Pol 1	Global Warming Potential (GWP) of Insulants	1	No

Aim

To reduce global warming from blowing agent emissions that arise from the manufacture, installation, use and disposal of foamed thermal and acoustic insulating materials.

Assessment Criteria

Criteria	
	Credits
Credits are awarded where all insulating materials in the elements of the dwelling listed below only use substances that have a GWP < 5 (manufacture AND installation): • Roofs: including loft access • Walls: internal and external including lintels and all acoustic insulation • Floors: including ground and upper floors • Hot water cylinder: pipe insulation and other thermal stores • Cold water storage tanks: where provided • External doors	1
Default Cases None	

9.2 Pol2;

Two credits have currently been awarded for the incorporation of a Class 5 boiler installation with an output NOx level of <70mg/kWh. Full details and confirmation will need to be assessed at the next stage of the project.

Issue ID	Description	No. of credits available	Mandatory Elements
Pol 2	NO_X Emissions	3	No

Aim

To reduce the emission of nitrogen oxides (NO_X) into the atmosphere.

Assessment Criteria

Credits are awarded on the basis of NO_X emissions arising from the operation of space heating and hot water systems for each dwelling, in accordance with the table below:

Criteria		
Dry NO_X level (mg/kWh)	Boiler class (BS EN 297: 1994)	Credits
≤100	4	1
≤70	5	2
≤40	–	3
Default Cases Where all space heating and hot water energy requirements are fully met by systems which do not produce NO_X emissions.		3

10.0 Health and Wellbeing

10.1 Hea1;

It has been assumed at this stage of the project, because of the retention of the existing building, only a single credit in the day lighting section of the code can be achieved. Calculations once layouts and window sizes have been prepared will need to be completed for verification by an appropriate member of the design team.

Issue ID	Description	No. of credits available	Mandatory Elements
Hea 1	Daylighting	3	No

Aim

To improve the quality of life in homes through good daylighting and to reduce the need for energy to light the home.

Assessment Criteria

Credits are awarded for the dwelling meeting the criteria below:

Criteria	
	Credits
Kitchens must achieve a minimum *average daylight factor* of at least 2%	1
All living rooms, dining rooms and studies (including any room designated as a home office under Ene 9 – Home Office) must achieve a minimum *average daylight factor* of at least 1.5%	1
80% of the working plane in each kitchen, living room, dining room and study (including any room designated as a home office under Ene 9 – Home Office) must receive direct light from the sky	1
Default Cases None	

10.2 Hea2;

Impact and airborne noise reduction measures shall be at least 3dB better than the standards set out in Approved Document E of the building regulations to achieve the single credit assumed to be achievable under Hea2.

Issue ID	Description	No. of credits available	Mandatory Elements
Hea 2	Sound Insulation	4	No

Aim

To ensure the provision of improved sound insulation to reduce the likelihood of noise complaints from neighbours.

Assessment Criteria

Credits are awarded for achieving higher standards of sound insulation than those given in Approved Document E of the Building Regulations and demonstrating it by either using pre-completion testing or Robust Details as follows:

Criteria	
	Credits
Where: • airborne sound insulation values are at least 3dB higher • impact sound insulation values are at least 3dB lower OR • airborne sound insulation values are at least 5dB higher • impact sound insulation values are at least 5dB lower	1
OR • airborne sound insulation values are at least 8dB higher • impact sound insulation values are at least 8dB lower	3
than the performance standards set out in the Building Regulations for England and Wales, Approved Document E (2003 Edition, with amendments 2004). This can be demonstrated through **EITHER** a programme of pre-completion testing based on the *Normal programme of testing* described in Approved Document E for every group or sub-group of houses or flats that demonstrates that the performance standard or standards above are achieved. OR use of constructions for all relevant building elements that have been assessed and approved by Robust Details Limited (RDL), and found to achieve the performance standards stated above and to register all relevant dwellings with RDL.	4
Default cases	
Detached dwellings	4
Attached dwellings where separating walls or floors only occur between non habitable rooms	3

Robust detailing and a post completion testing will need to be carried out by a specialist Acoustic Consultant at the appropriate stages of the project.

Note. All four credits can be achieved on the detached dwelling as default.

10.3 Hea3;

The private space credit has been awarded in this assessment as it is assumed a private space (either balcony or garden) will be provided to each dwelling.
Verification is required at the next stage of the project.

Issue ID	Description	No. of credits available	Mandatory Elements
Hea 3	Private Space	1	No

Aim

To improve the occupiers' quality of life by providing an outdoor space for their use, which is at least partially private.

Assessment Criteria

Criteria	
	Credits
Where outdoor space (private or semi-private) has been provided that is: • of a minimum size that allows all occupants to sit outside • allows easy access to all occupants, including wheelchair users • accessible only to occupants of designated dwellings	1
Default Cases None	

10.4 Hea4;

The Lifetime Homes credit has not currently been taken in the initial assessment due to the complexity of the requirements.
At the next stage of the project, the design team will need to review the requirements of this credit, to assess if these additional credits are feasible to obtain.

Issue ID	Description	No. of credits available	Mandatory Elements
Hea 4	Lifetime Homes	4	Yes (Level 6)

Aim

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

Assessment Criteria

For a Level 6 assessment achievement of the Lifetimes Homes criteria is a mandatory requirement.

Criteria	
	Credits
Where all principles of *Lifetime Homes*, applicable to the dwelling being assessed, have been complied with.	4
Default Cases None	

11.0 Management

11.1 Man1;

The completion of a Home User Guide shall be provided post construction for each individual dwelling. The requirements from both checklists shall be included, and as such all three credits from this section have been awarded in this initial assessment.

Issue ID	Description	No. of credits available	Mandatory Elements
Man 1	Home User Guide	3	No

Aim

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

Assessment Criteria

Credits are awarded for the provision of a simple user guide which covers information relevant to the 'non-technical' tenant/owner on the operation and environmental performance of their home, as follows:

Criteria	
	Credits
A Home User Guide, compiled using *Checklist Man 1 Part 1* together with information that the guide is available in alternative accessible formats	2
Where the guide also covers information relating to the site and its surroundings, compiled using Checklist Man 1 Part 2	1
Default Cases None	

11.2 Man2;

By careful selection of the main contractor, the following credits under Man2 can be achieved. The selected main contractor shall be capable of achieving all credits under the Considerate Constructors Scheme.
For the purposes of this initial assessment, both of the 2 credits have been awarded.

Issue ID	Description	No. of credits available	Mandatory Elements
Man 2	Considerate Constructors Scheme	2	No

Aim

To recognise and encourage construction sites managed in an environmentally and socially considerate and accountable manner.

Assessment Criteria

Credits are awarded where there is a commitment to comply with best practice site management principles as follows:

Criteria	
	Credits
Where there is a commitment to meet Best Practice under a nationally or locally recognised certification scheme such as the Considerate Constructors Scheme	1
Where there is a commitment to go significantly beyond Best Practice under a nationally or locally recognised certification scheme such as the Considerate Constructors Scheme	2
Default Cases None	

11.3 Man3;

For the purposes of this initial assessment, both of the 2 credits available under Man3 have been awarded. It shall be the main contractor's responsibility to include and adopt at least four of the procedures as listed in the following extract from the Code.

Issue ID	Description	No. of credits available	Mandatory Elements
Man 3	Construction Site Impacts	2	No

Aim

To recognise and encourage construction sites managed in a manner that mitigates environmental impacts.

Assessment Criteria

Credits are awarded where there is a commitment and strategy to operate site management procedures on site as follows:

Criteria	
	Credits
Where there are procedures that cover 2 or more of the following items: Monitor, report and set targets for CO_2 production or energy use arising from site activities Monitor and report CO_2 or energy use arising from commercial transport to and from site Monitor, report and set targets for water consumption from site activities Adopt best practice policies in respect of air (dust) pollution arising from site activities Adopt best practice 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
Where there are procedures that cover 4 or more of the items listed above.	2
Default Cases None	

11.4 Man4;

To achieve the credits of Man4, at an early stage in the project an Architectural Liaison officer or Crime Prevention Design Advisor shall be consulted, and their recommendations incorporated into the design.

For the purposes of this initial assessment, it is assumed that both of these available credits can be awarded.

Issue ID	Description	No. of credits available	Mandatory Elements
Man 4	Security	2	No

Aim

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

Assessment Criteria

Credits are achieved by complying with *Section 2 – Physical Security* from '*Secured by Design New Homes*', as follows:

Criteria	
	Credits
Where an *Architectural Liaison Officer* (ALO) or *Crime Prevention Design Advisor* (CPDA) from the local police force is consulted at the design stage and their recommendations are incorporated into the design of the dwelling (an actual *Secured by Design* Certificate is not required).	2
Default Cases None	

12.0 Ecology

The Ecology credits available under the Code for Sustainable Homes will need to be assessed by a Suitably Qualified Ecologist. The following notes and assessment of the available credits, and has been based on best practice and initial judgement only at this stage.

12.1 Eco1;

It has been assumed that the exiting land (which is to be developed) can be classed as that of Low Ecological Value due to existing public house and carpark already built. The available credit has therefore been awarded. A suitably qualified Ecologist will need to verify this at the next stage of the project.

Issue ID	Description	No. of credits available	Mandatory Elements
Eco 1	Ecological Value of Site	1	No

Aim

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

Assessment Criteria

Credits are awarded where the site is defined as land of inherently low ecological value in accordance with the following criteria:

Criteria	
	Credits
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 – Land of Low Ecological Value under Checklists and Tables below) **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 or insignificant ecological value **AND** Any land of ecological value outside the *construction zone* but within the *development site* will remain undisturbed by the construction works.	1
Default Cases None	

12.2 Eco2;

As noted below in the Eco2 credit extracted from the Code, a positive enhancement of the on site ecology must be made, with additional recommendations also being adopted.

The available credit under this element has been included in this initial assessment. A suitably qualified Ecologist will need to verify the viability of this at the next stage of the project.

Issue ID	Description	No. of credits available	Mandatory Elements
Eco 2	Ecological Enhancement	1	No

Aim

To enhance the ecological value of a site.

Assessment Criteria

Where there is a commitment to enhance the ecological value of the development site in accordance with the following criteria:

Criteria	
	Credits
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
Default Cases None	

12.3 Eco3;

Due to the assumption under Eco1, the existing land is of Low Ecological Value. The following credit in Eco3 is therefore also available. A suitably qualified Ecologist will need to verify the viability of this at the next stage of the project.

Issue ID	Description	No. of credits available	Mandatory Elements
Eco 3	Protection of Ecological Features	1	No

Aim

To protect existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

Assessment Criteria

Where there is a commitment to maintain and adequately protect features of ecological value during site preparation and construction works in accordance with the following criteria:

Criteria	
	Credits
Where all existing features of ecological value on the development site potentially affected by the works, are maintained and adequately protected during site clearance, preparation and construction works.	1
Default Cases The credit can be awarded by default where the site has been classified as having *low ecological value* in accordance with *Eco 1 – Ecological Value of the Site* AND no features of ecological value have been identified. If a Suitably Qualified Ecologist has confirmed a feature can be removed due to insignificant ecological value or where an arboriculturalist has confirmed a feature can be removed due to poor health/condition (e.g. diseased trees which require felling, either for health and safety and/or conservation reasons), the credit can be achieved provided all other features are adequately protected in accordance with the ecologist's recommendations.	

12.4 Eco4;

It has been assumed that 2 credits from a possible 4 can be gained from the following section of the Code. A suitably qualified Ecologist will need to verify the viability of this at the next stage of the project.

Issue ID	Description	No. of credits available	Mandatory Elements
Eco 4	Change in Ecological Value of Site	4	No

Aim

To reward steps taken to minimise reductions and to encourage an improvement in ecological value.

Assessment Criteria

Credits are awarded where the resulting change in ecological value is as follows:

Criteria	
	Credits
The ecological value before and after development is measured, and the overall change in species per hectare is:	
• Minor negative change: between –9 and less than or equal to –3	1
• Neutral: greater than –3 and less than or equal to +3	2
• Minor enhancement: greater than 3 and less than or equal to 9	3
• Major enhancement: greater than +9	4
Default Cases None	

12.5 Eco5;

The following extract from the Code identifies the Building Footprint credit allowance. No credit can be awarded under this element, due to the nature of the proposed dwellings.

Issue ID	Description	No. of credits available	Mandatory Elements
Eco 5	Building Footprint	2	No

Aim

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

Assessment Criteria

This issue is assessed on a site wide basis. Credits are awarded where the ratio of combined net internal floor area to footprint area (as measured by the total net internal ground floor area of all dwellings on the site) meets the requirements defined below: Individual dwellings (i.e. detached, semi-detached and terraces, not individual flats) that are not subject to a Code assessment, can be excluded from the assessment of this issue

Criteria	
	Credits
For houses, where the Net Internal Floor Area: Net Internal Ground Floor Area ratio is greater than or equal to 2.5:1 **OR** For blocks of flats, where the Net Internal Floor Area: Net Internal Ground Floor Area is greater than or equal to 3:1 **OR** For a combination of houses and flats, a ratio of Total Net Internal Floor Area: Total Net Internal Ground Floor Area of all houses and flats (i.e. the Site Wide Footprint to Floor Area ratio) is greater than the area weighted average of the two target ratios above (see calculation procedures)	1
For houses, where the Net Internal Floor Area: Net Internal Ground Floor Area ratio is greater than or equal to 3:1 **OR** For block of flats, where the Net Internal Floor Area: Net Internal Ground Floor Area is greater than or equal to 4:1 **OR** For a combination of houses and flats, a ratio of total Net Internal Floor Area: Total Net Internal Ground Floor Area of all houses and flats (i.e. the Site Wide Footprint to Floor Area ratio) is greater than the area weighted average of the two target ratios above (see calculation procedures)	2
Default Cases None	

13.0 Schedule of Credits;

The following schedule identifies the credits which have currently been included within the assessment. The credit scores are then identified as a weighted total, identifying the overall score for the development.

Credits awarded are based on assumptions and best practice at this stage of the project, and must be scrutinised at all available future dates during the design development.

The total weighted score for the 6 dwellings at Queens Road, Richmond is currently estimated at 57.98 which achieves Code for Sustainable Homes Level 3.
This is very close to the boarder of the score, and is recommended that additional credits are sought, to ensure that the level of achievement can be gained.

CODE FOR SUSTAINABLE HOMES REPORT
SUMMARY SCORE SHEET

Project: Queens Road, Richmond
Reference Number: 40155
Revision: 0
Date: Apr-10

Plot number: New detached dwelling + appartments
House Type: 1 to 6

EDCM Vigor
16-20 St. Johns North, Wakefield, W.Yorkshire, WF1 3QA
T: +44(0)1924 299366 F: +44(0)1924 380820
www.edcmvigor.co.uk

				Score Assessment					Additional Notes and Guidance		
		Credit Score	Credits Available	Sub Total	Credits Available	%	Weighting Factor	Points Score	Additional Credits Available	Notes / Guidance on achieving additional credits	Pottential Cost
Energy & CO2 Emmissions											
Ene 1	Dwelling Emission Rate	5	15	17	29	58.62	1.26	21.34	10	Additional improvements to energy efficiency	High
Ene 2	Building Fabric	1	2						1	Additional improvements to energy efficiency	High
Ene 3	Internal Lighting	2	2						0		
Ene 4	Drying Space	1	1						0		
Ene 5	Energy Labelled White Goods	2	2						0		
Ene 6	External Lighting	2	2						0		
Ene 7	Low or Zero Carbon Energy Technology	2	2						0		
Ene 8	Cycle Storage	1	2						1	Additional communal cycle storage facility to incorporate	Low
Ene 9	Home Office	1	1						0		
Water											
Wat 1	Internal Potable Water Use	3	5	4	6	66.67	1.50	6.00	2	Water harvesting to be included, to reduce water use	Medium
Wat 2	External Water Use	1	1						0		
Materials											
Mat 1	Environmental Impact of materials	5	15	9	24	37.50	0.30	2.70	10	Modification of building materials	Medium
Mat 2	Responsible Sourcing - Basic Building Elements	2	6						4	Alternative specification of materials	Medium
Mat 3	Responsible Sourcing - Finnishing Elements	2	3						1	Alternative specification of materials	Medium
Surface Water Run-Off											
Sur 1	Reduction of Surface Water Run-Off from site	0	2	2	4	50.00	0.55	1.10	2	SUDS to incorporate	High
Sur 2	Flood Risk	2	2						0	*To be checked*	
Waste											
Was 1	Household waste storage & Recycling facilities	2	4	5	7	71.43	0.91	4.57	2	*To be checked*	
Was 2	Construction site waste management	2	2						0		
Was 3	Composting	1	1						0		
Pollution											
Pol 1	Global Warming pottential of insulants	1	1	3	4	75.00	0.70	2.10	0		
Pol 2	NOx emmissions	2	3						1	High specification boiler selection	Medium
Health and Wellbeing											
Hea 1	Daylighting	1	3	3	12	25.00	1.17	3.50	2	Window Sizes to Change	Medium
Hea 2	Sound Insulation	1	4						3	Additional sound insulation to incorporate	High
Hea 3	Private space	1	1						0		
Hea 4	Lifetime Homes	0	4						4	ALL lifetime homes items to incorporate into design	Low
Management											
Man 1	Home User Guide	3	3	9	9	100.00	1.11	10.00	0		
Man 2	Considerate Contractors Scheme	2	2						0		
Man 3	Construction site impacts	2	2						0		
Man 4	Security	2	2						0		
Ecology											
Eco 1	Ecological Value of the Site	1	1	5	9	55.56	1.33	6.67	0		
Eco 2	Ecological Enhancement	1	1						0		
Eco 3	Protection of Ecological features	1	1						0		
Eco 4	Change of Ecological value of the site	2	4						2	Greater enhancement of Ecological Features to be made	Medium
Eco 5	Building Footprint	0	2						2	Building footprint / style to amend	Medium

Total Points Achieved: **57.98**
Code Level Achieved: **Level 3**
☆☆☆

14.0 Appendix I;

Associated drawings

Hill House

Queens Road

Stafford Place

Bedroom 1
16.8 sq m

Ensuite
3.2 sq m

W.C
2.1 sq m

Courtyard
37.5 sq m

LEVEL + 35.250

Bedroom 2
16.8 sq m

Ensuite
3.3 sq m

Stair Hall
18.8 sq m

NEW - TREE NO. 10

Bedroom 3
18.8 sq m

Ensuite
3.0 sq m

Play Space
55.5 sq m

Courtyard
26.5 sq m

LEVEL + 35.250

NEW - TREE NO. 12

Ensuite
4.5sq m

Courtyard
22.8 sq m

Bedroom
23.2 sq m

Bed-Sit
20.7 sq m

Bathroom
4.0 sq m

Stair
6.9 sq m

NEW - TREE NO. 11
LEVEL + 35.250

LEVEL + 35.250

Gym
16.4 sq m

Kitchen
4.75 sq m

Pool Side
26.3 sq m

W.C
2.4 sq m

Plant
3.8 sq m

Changing 2
4.9 sq m

Changing 1
8.6 sq m

Swimming Pool
49.5 sq m

Pool Side
18.8 sq m

Sauna
3.5 sq m

LEVEL + 38.700

Ladder Acess
to Above

Plant
73.25 sq m

PSL - TREE NO. 2

PSL - TREE NO.

PSL - TREE NO.

PSL - TREE NO.

#1 #4 #5 #6 #7 #13 #26 #27 #28 #29 #30 #45

REVISION	DATE	NOTES
A		
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REVISION	DATE	NOTES
F		
G		
H		
J		
K		

DRG NO: 1005 / QRR / PL/ 200

PROJECT: QUEENS ROAD, RICHMOND, SURREY

DRAWING: LOWER GROUND FLOOR PROPOSED

SCALE:	1.100
JOB NO:	1005/ QRR
SERIES:	PLANNING
DATE:	30.04.10
DRAWN:	DR
CHECKED:	CM

DTA ARCHITECTS
ARCHITECTURE & URBAN DESIGN
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F.353(0)1 6777713
INFO@DTA.IE
WWW.DTA.IE

Hill House

Queens Road

Stafford Place

PSL - TREE NO. 2

NEW - TREE NO. 9

NEW - TREE NO. 8

NEW - TREE NO. 10

NEW - TREE NO. 7

NEW - TREE NO. 12

NEW - TREE NO. 6

NEW - TREE NO. 11

NEW - TREE NO. 5

NEW - TREE NO. 4

NEW - TREE NO. 2

NEW - TREE NO. 1

NEW - TREE NO. 3

PSL - TREE NO. 1

PSL - TREE NO. 3

PSL - TREE NO. 4

PSL - TREE NO. 5

#1 #2 #3 #4 #5 #6 #7 #13 #21 #22 #23 #26 #27 #28 #29 #30 #45

Master Bedroom 34.5 sq m
Store 3.1 sq m
W.C 3.7 sq m
Study 18.7 sq m
Stair 14.8 sq m
Ground Floor Garden 337.7 sq m
Deck 21.4 sq m
Living 53.3 sq m
LEVEL + 38.700
Kitchen / Dining 73.4 sq m
Hall 14.7sq m
Entrance Hall 27.4aq m
Utility 6.2 sq m
Cloak Room 5.5q m
W.C 5.7aq m
Carport 66.6 sq m
Private Open Space 7.5 sq m
Living / Dining 15.6 sq m
Kitchen 7.8 sq m
Bathroom 3.5 sq m
Bedroom 1 11.8 sq m
Store 1.4 sq m
Entrance Hall 2.7 sq m
Bedroom 2 12.6 sq m
Bathroom 3.2 sq m
Stair Hall 22.4 sq m
Entrance Lobby 3.1 sq m
Store 1.5 sq m
Ladder Acess to Basement
Entrance 6.7 sq m
Private Open Space 16.5 sq m
Living / Dining 24.7 sq m
Kitchen 2.3 sq m
Ensuite 2.2 sq m
Bedroom 1 19.0 sq m

10851 7420 996 7565
9150
14286 6734 4676 11962
9215
8886 9550 11594 10651 13870 3821
6362 8585

N

REVISION	DATE	NOTES	REVISION	DATE	NOTES
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B			G		
C			H		
D			J		
E			K		

DRG NO: 1005 / QRR / PL/ 201

PROJECT: QUEENS ROAD, RICHMOND, SURREY

DRAWING: GROUND FLOOR PROPOSED

SCALE:	1:100
JOB NO:	1005/ QRR
SERIES:	PLANNING
DATE:	30.04.10
DRAWN:	DR
CHECKED:	CM

DTA ARCHITECTS
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22 WICKLOW STREET, DUBLIN 2
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Hill House

Queens Road

Stafford Place

Seldom Roof - Flat

PARAPET LEVEL + 42.800

Stone Roof - Sloped

Void

LEVEL + 42.150

Outdoor Terrace
42.6 sq m

Living / Dining
145.3 sq m

Private Open Space
7.5 sq m

Living / Dining
21.9 sq m

Kitchen
4.4 sq m

Bedroom 1
12.0 sq m

Bedroom 2
12.6 sq m

Ensuite
2.1 sq m

Entrance Hall
5.6 sq m

Bathroom
4.8 sq m

Store
1.5 sq m

Stairs + Landing
14.6 sq m

Entrance
7.9 sq m

Store
1.0 sq m

Private Open Space
16.5 sq m

Living / Dining
26.6 sq m

Kitchen
6.3 sq m

Ensuite
6.4 sq m

Bedroom 1
13.7 sq m

PSL - TREE NO. 2

PSL - TREE NO. 7

PSL - TREE NO. 6

PSL - TREE NO. 8

NEW - TREE NO. 9

NEW - TREE NO. 8

NEW - TREE NO. 10

NEW - TREE NO. 7

NEW - TREE NO. 12

NEW - TREE NO. 6

NEW - TREE NO. 5

NEW - TREE NO. 4

NEW - TREE NO. 11

NEW - TREE NO. 2

NEW - TREE NO. 1

NEW - TREE NO. 3

#1 #4 #5 #6 #7 #13 #21 #22 #23 #26 #27 #28 #29 #30 #45

REVISION	DATE	NOTES	REVISION	DATE	NOTES
A			F		
B			G		
C			H		
D			J		
E			K		

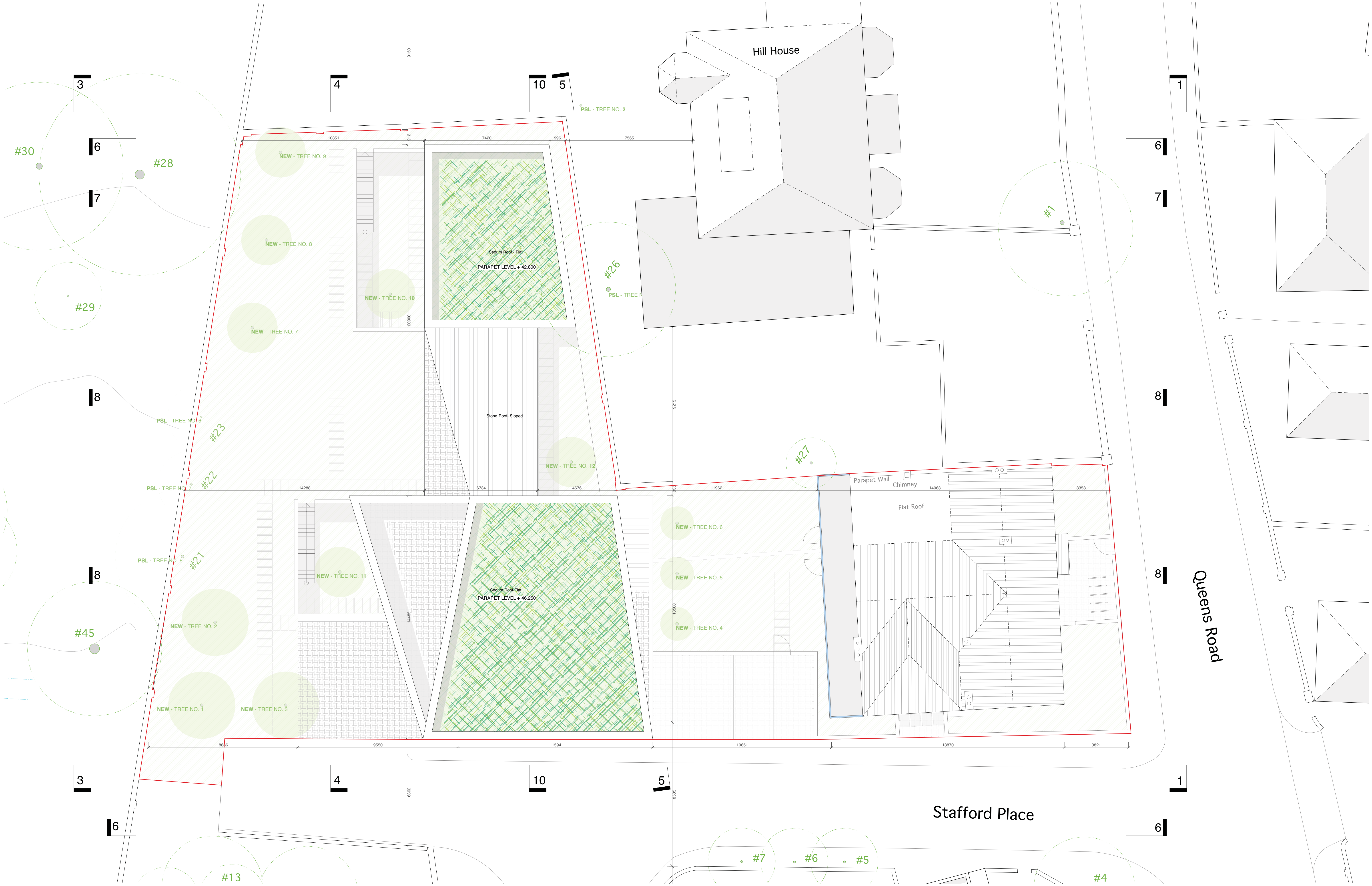
DRG NO: 1005 / QRR / PL/ 202

PROJECT: QUEENS ROAD, RICHMOND, SURREY

DRAWING: FIRST FLOOR PROPOSED

SCALE:	1:100
JOB NO:	1005/ QRR
SERIES:	PLANNING
DATE:	30.04.10
DRAWN:	DR
CHECKED:	CM

DTA ARCHITECTS
ARCHITECTURE & URBAN DESIGN
22 WICKLOW STREET, DUBLIN 2
T.353(0)1 6777742
F.353(0)1 6777713
INFO@DTA.IE
WWW.DTA.IE


Hill House
Queens Road
Stafford Place
Sedum Roof - Flat
PARAPET LEVEL + 42.800
Stone Roof- Sloped
Sedum Roof-Flat
PARAPET LEVEL + 46.250
Parapet Wall
Chimney
Flat Roof
PSL - TREE NO. 2
NEW - TREE NO. 9
NEW - TREE NO. 8
NEW - TREE NO. 10
NEW - TREE NO. 7
NEW - TREE NO. 12
NEW - TREE NO. 11
NEW - TREE NO. 2
NEW - TREE NO. 1
NEW - TREE NO. 3
NEW - TREE NO. 6
NEW - TREE NO. 5
NEW - TREE NO. 4
PSL - TREE NO. 7
PSL - TREE NO. 8
#30
#28
#29
#26
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#27
#21
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#13
#7
#6
#5
#4

REVISION	DATE	NOTES	REVISION	DATE	NOTES
A			F		
B			G		
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E			K		

DRG NO: 1005 / QRR / PL/ 203

PROJECT: QUEENS ROAD, RICHMOND, SURREY

DRAWING: ROOF PLAN PROPOSED

SCALE:	1.100
JOB NO:	1005/ QRR
SERIES:	PLANNING
DATE:	30.04.10
DRAWN:	DR
CHECKED:	CM

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