EAST THAMES DESIGN GUIDE

putting people first

DESIGN REQUIREMENTS

east THAMES

East Thames Design Requirements
produced by East Thames Group
with Levitt Bernstein and PRP Architects
July 2009

CONTENTS

East Thames Group's mission:
To make a positive and lasting contribution to the neighbourhoods in which we work

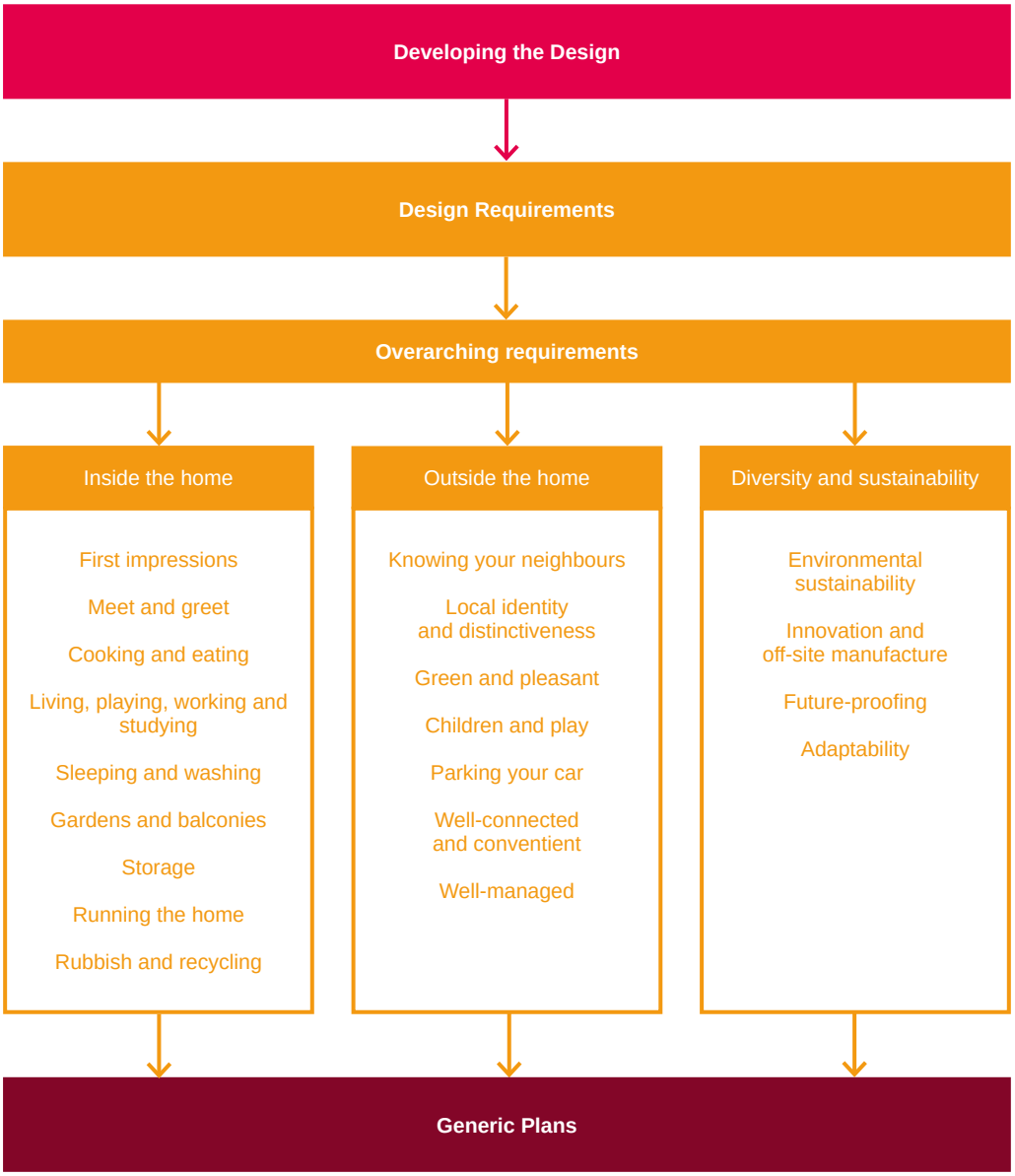
The East Thames Design Guide has been produced to ensure that high design standards prevail across the whole of our development portfolio, and to ensure that our new homes are designed to meet the changing needs of residents. This Design Requirements supplement expands the principles established in the Guide and identifies the key regulatory and advisory standards for contemporary affordable housing design, sets out guidance on the process for developing good design, and details the design requirements for East Thames homes. These requirements are supported by illustrative generic floor and block plans.

The East Thames Design Guide confirms our commitment to residents and to the investment in their homes by placing their needs and the quality of their lives at the heart of all new designs. We want residents to enjoy their homes, to live there by choice, to know their neighbours, to feel safe, and to take a sense of ownership and pride in their environments. Fundamental to this is the creation of high quality developments, considered thoroughly at every stage from the point of view of the end user. The Design Guide 'putting people first' establishes an agreed set of design principles underpinning our understanding of what constitutes high quality development and provides guidance on the core components of good design, both within the home and its surrounding environment.

This supplement to the Design Guide takes these principles and guidance a stage further, expanding them into a set of Design Requirements to be used by all those involved in the design and delivery of new East Thames homes for rent and for sale. The purpose of this document is to provide a design tool for establishing the brief and developing the design. It sets out the standards that must be met in the design of all projects developed by East Thames.

A further supplementary volume to the Design Guide is in preparation to identify the Design Requirements for specialist foyer and supported housing. The chart sets out the relationship of this suite of documents.

The chart below sets out the structure of the Design Requirements.



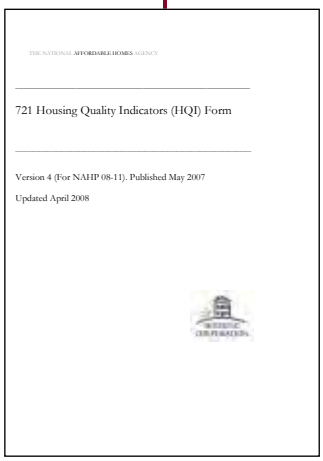
Setting the standard

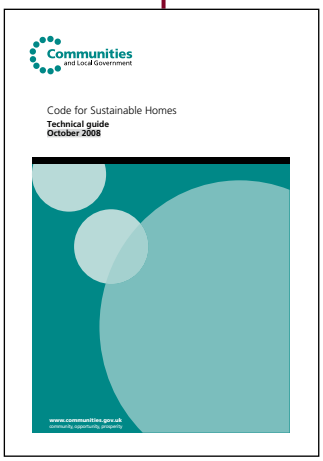
East Thames, as a Registered Social Landlord, is required to meet a number of mandatory standards to ensure the delivery of good design and sustainable development in all its grant-funded projects. These core standards are established in the Design and Quality Strategy and Design and Quality Standards, both published in 2007 by the Housing Corporation.

These set out the considerations regarding standards, compliance and monitoring, which East Thames has addressed in the preparation of these Design Requirements. They also require adherence to a range of supporting documentation.

These documents are illustrated below:

Mandatory standards





In addition, a number of advisory policies and standards, produced by a range of organisations including East Thames, have also been taken into consideration. These documents identify a raft of further strategic issues and specific design elements to be considered in delivering good design and quality developments.

These documents are illustrated below:

The specific Design Requirements listed in Section 2 build on these standards and requirements, at times reinforcing them, at times prioritising a higher standard or emphasising a detail in order to ensure that our own design requirements are understood and delivered.

Advisory documents

Developing good design is a complex process and requires the involvement and interrelationship of a number of professional disciplines and design approaches. East Thames will work closely with our design partners to deliver excellent designs meeting both our requirements and the aspirations of residents by ensuring that critical design issues have been identified and resolved at every stage of the development. This section sets out our expectations for the design development process.

The Design Team should work collaboratively with East Thames to develop a vision for every project. This vision should define the long-term aspirations for the site, considering the scene 10-15 years post completion. Developing the vision is an important and necessary forefront to the development of a project brief.

The project brief should provide the tangible development of these aspirations – a clear set of objectives - resulting from a series of options and feasibility studies testing the site capacity and viability.

Establishing the brief, including defining the character and setting of a project, is a critical first stage in its long-term success. This involves a range of design considerations and extensive consultation with the various stakeholders. Early emphasis should be placed on the potential for social and environmental sustainability in equal proportion to physical considerations.

In forming the project brief, and at every stage of the emerging scheme design, it is essential that the Design Team should take account of the following priorities:

- Understanding the context.
- Strengthening existing communities.
- Responding to local character.
- Providing green links and public realm.
- Minimising the carbon footprint.

Understanding the context

Understanding the site within its current and historical context and an appreciation of local and regional planning context and any specific planning designations should be the starting point in identifying site opportunities and constraints. Historic maps, such as early OS first and second edition, will be useful if the site use has changed within this period as they may identify old building locations and thereby potential for cellars, air raid shelters or other remnants.

In particular the contextual study should consider the following:

- Local and regional planning guidance as policy.
- Accessibility to local transport (PTAL).
- Conservation Area status.
- Listed buildings.
- Open space or protected habitat designations.
- Flood risk areas.
- Tree Preservation Orders.
- Public transport nodes such as bus stops or stations.
- Surrounding buildings, their character, heights and massing.
- Main roads, transport hubs, schools and retail facilities.
- Vehicular, pedestrian and cycle routes that run through or are adjacent to the site.
- Public Rights of Way.

Strengthening existing communities

Working with and strengthening existing communities is a key part of the design and masterplanning process, and is typically a fundamental requirement of the subsequent planning application. Understanding the physical and social dynamics of a place will assist with forming design proposals.

This should include research into and understanding of:
- The social and economic profile of the local community.
- The surrounding tenure map.
- Previous resident consultation and involvement.
- Perceived views on area issues and opportunities.
- Local desire lines and short cuts between homes, bus stops and local facilities.
- The value of communal spaces, parks and local facilities.
- Neighbourhood security and safety.

Working within existing community networks and building on previous consultation exercises will assist with the development of project design. A number of approaches and techniques can be used to achieve local buy-in including public exhibitions and workshops with local residents and community organisations.

Public consultation is best carried out at critical stages of project development and should include two to three sessions at the conceptual and masterplanning stage to assist with:

- Establishing the project aims.
- Gathering local ideas, concerns and issues.
- Testing options.
- Developing the masterplan.

Where an active local resident community is in place, further consultation should be considered in the form of design workshops and visits to precedent schemes.

Responding to local character

The emerging project design must consider how the intrinsic qualities of the site are enhanced to ensure integration with the local character, built form and landscape, local street patterns and block formation. Local landmarks such as prominent buildings, towers or parks should be used to aid legibility and wherever possible connected by new routes reinforcing visual links.

The main layout components of the design should include the:

- Site boundary and the proposed built form in relation to the surrounding context.
- Footprints of the individual buildings.
- Building interfaces – explaining transition from the private interior spaces into the public spaces.
- Focal points, views and landmarks.
- Entrances to the buildings.
- Heights, massing and facades of the buildings.
- Parking and services strategy.
- Long-term management and maintenance implications.
- Sustainable design so that the community is not car dependent.

The proposed building footprints and urban blocks must provide for:

- Well-designed private amenity space which overlooks and provides a positive relationship with the surrounding landscape and public realm.
- Well-designed guidelines for fenestration and façade treatment – considering human scale, proportion and comfort.
- Built edges that are responsive to the public realm, with no blank walls or building façades, especially at street level.
- An appropriate capacity in terms of mix, tenure, numbers of homes, requirement for specialist housing or other mixed-use requirements.
- A spread of densities, tenure and mix across the site.

Providing green links and public realm

Features within the site, such as mature trees, archaeology or ecology must be considered as assets and integrated into the design of schemes. Local landmarks can help establish the character and maturity of a development and add value.

Thinking through the development of a quality landscape, the public realm and green links to the wider environment at these early stages is essential. The Design Team should consider the built form and its relationship with the surrounding environment in equal balance. It is expected that landscape designers should have an early involvement in the design process. A Landscape Strategy should be produced responding to the Building for Life criteria and setting out compliance with the major components of HQI sections, in particular: Visual Impact, Layout, Landscaping, Open Space, and Routes and Movement:

The emerging design should consider:

- Existing trees co-ordinated with tree survey.
- Open space and tree planting strategy.
- Play strategy.
- Ecology and bio-diversity strategy.
- Walking distance diagram and access strategy.
- Paving and surfacing materials strategy.
- Routes and access including vehicle turning.
- Coordinated services strategy.
- Parking and servicing strategy.
- Lighting strategy.
- Management & maintenance strategy.

On a site with existing trees a tree survey must be commissioned from the outset as it can bring benefits during the design and planning process. This must be carried out by a member of the Arboriculture Association and identify if any trees are covered by a Tree Preservation Order (TPO). Existing trees must be retained where possible, particularly those identified in the survey as of high quality and in good condition.

The Design Team should advise the client of any further surveys it considers prudent to avoid later conflicts or constraints:

- Ecology survey.
- Bio-diversity.
- Archaeology.
- Flood risk.

Minimising the carbon footprint

East Thames will confirm the sustainable design targets, at the briefing stage, including the level to be met for the Code for Sustainable Homes. Development of these targets will necessitate specialist input to ensure that the technical elements of delivering these targets are fully integrated into the design process.

Early design considerations should be given to:
- Orientation (of habitable rooms, and for possible renewable energy sources).
- Dual aspect dwellings for cross-ventilation.
- Separate kitchens or kitchen-dining rooms in all 2-bed and larger dwellings.
- Daylight and sunlight levels in relation to adjacent buildings.
- Solar gain and the balancing shading.
- Natural ventilation.
- Ecological impact.
- Space and location requirements for communal heating plant, fuel storage and delivery, cycle storage, waste management and recycling.

As the design proceeds to 'concept' approval there must be, in parallel:
- A statement of overall strategy to meet the CSH targets.
- An option appraisal/ feasibility study of how the proposals will achieve the Low/Zero Carbon objectives.
- An initial review of the likely Environmental Impact Assessment.

The design must be consistently developed to secure the very best environmental, ecological, and technical targets, within proposals that are attractive to residents, and fully integrated into the existing neighbourhood.

The development of designs towards the planning application will require that the basic sustainable design strategies be developed further to maintain clear links both for the site overall and the building(s) located within it. In addition to the information required to support the planning application, such as the EIA and the Design and Access statement, there must be a clear statement setting out how the design meets the CSH targets and defining those design elements that are crucial to the project achieving the target Code level.

As materials and construction are considered for the planning application, there should, additionally be:
- A strategy report demonstrating how the proposals meet the East Thames targets for enabling MMC.
- A statement of innovation in implementation from contractors and developers.
- A clear strategy for selecting materials that input East Thames' priorities for using the BRE Green Guide.

Compliance with East Thames' Required standard for the development should also be confirmed at this stage, through the use of the spreadsheets in the following sections.

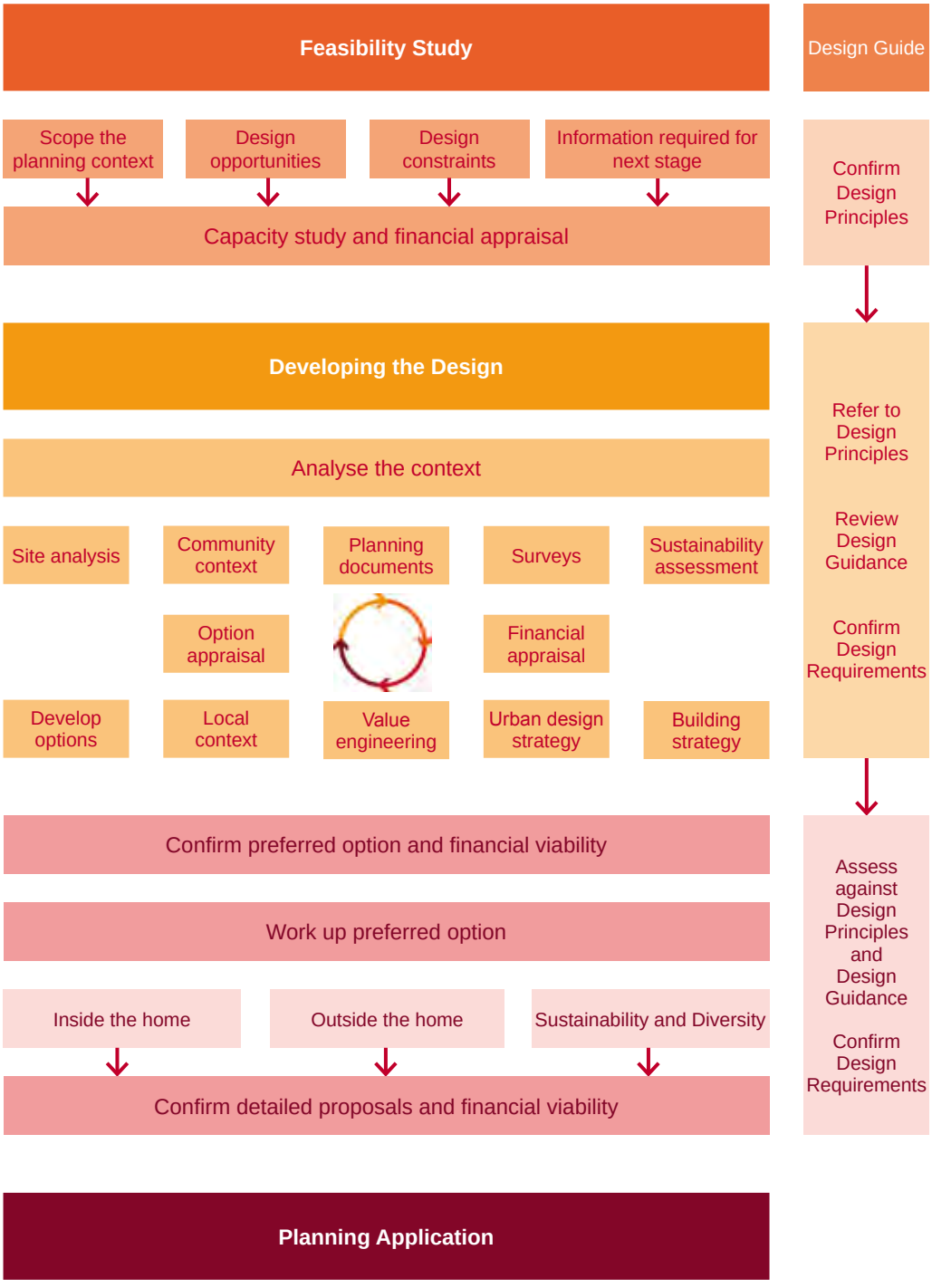
Developing the design

The success of the scheme design that ultimately emerges will depend on the thoroughness of this early approach and the buy-in of local residents and stakeholders.

The scheme design should be presented in a logical and coherent manner, setting out the design principles that underpin the scheme with the reasoning behind them. These may be on a series of drawings, but this is dependent upon the site and its size and complexity. For example, on larger schemes, a masterplan might consist of a package of layers explaining the movement and access, soft and hard landscaped spaces and built form including massing, heights and the varying densities, tenure and mix of the development.

In particular the scheme proposals should:
- Provide a clear presentation of the underlying reasoning behind the site planning process, in particular the access and movement hierarchies.
- Build the design sympathetically within the surrounding topography.
- Demonstrate an understanding of below ground considerations – levels, utilities and services.
- Clearly show a relationship to the context and the analysis carried out.
- Clearly relate to the brief and client requirements.
- Present a coherent and compelling landscape and public realm design indicating built to open space ratio.
- Have a strong character and identity and within the local context, also in relation to the historical patterns of development.
- Highlight key visual vistas and connections to important destinations within and around the site.
- Build on established design principles to demonstrate that the plan covers and complies with these.
- Identify the key strategies for achieving the desired sustainable design credentials, with particular reference to the Code for Sustainable Homes.
- Consider the impact of the design on service charge costs and on running costs, including maintenance costs.

Developing the design



This section sets out the detailed Design Requirements for the development of East Thames homes. These are identified in relation to three specific standards: Required, Exemplar and Baseline. These standards are described for both inside and outside the home, following the virtual journey through the home and surrounding environment established in the Design Guide. Requirements in relation to diversity and sustainability are also provided.

The detailed Design Requirements for East Thames homes have been developed to address the principles and guidance of the Design Guide. They have been tested iteratively against external mandatory and advisory standards set out in the Introduction and through the development of generic floor and block plans. They are provided in schedule format for use by East Thames' Design Team, consultants and developers.

East Thames develops homes for a range of tenures and expects to own and manage these as long-term assets for the foreseeable future. To ensure sustainability, tenure neutrality is essential in terms of appearance, materials and location. Additionally, the size and layout of homes for sale will need to respond to market conditions and affordability. This long term view has informed the the standards set.

Design Requirements are set out under three standards: Required, Exemplar and Baseline:

Required:
The Required standard is the benchmark for all schemes where East Thames takes the lead and acts as a developer. This comprehensive standard represents East Thames' requirements for good design, good space standards and homes which can be run, managed and maintained efficiently. It is expected that the majority of East Thames' new homes will be delivered to this standard.

Exemplar
Exemplar projects provide opportunities for enhanced performance and quality. This is an aspirational standard for all projects and relates to key design areas, such as higher density housing, high Code for Sustainable Homes levels, and opportunities for enhanced resident choice.

Baseline
The Baseline identifies the minimum standards which East Thames will accept in providing homes for residents. This relates to only limited areas of design. Proposals to design projects that include Baseline elements will be specifically monitored by East Thames as they move through design development. The Baseline standard is one that East Thames will not fall below for any tenure or development.

The spreadsheet format

The Design Requirements are provided as spreadsheet pages and follow the sequence established in the Design Guide, starting with Inside the Home, proceeding to Outside the Home, and followed by Diversity and Sustainability. Preliminary to these schedules are set out a number of key overarching requirements, drawn directly from the mandatory documentation and including minimum space standards. These are described in the first pages as they provide the basis for the detailed requirements.

The overarching requirements are not repeated in the text, except for clarification where necessary, such as:

- Where the standards are to be exceeded - this is noted.
- Where it is found that there is frequent non-compliance or misinterpretation - this standard is reiterated.
- Where the documents provide recommended standards, which East Thames regards as essential - this is stated.

The Design Requirements schedules have the Required standard as the first column of information. All standards identified have a Required standard. If no other information is provided in the Exemplar and Baseline columns, the Required standard is the East Thames requirement, relevant for all projects. Information is provided in the Baseline and Exemplar columns where East Thames accepts or seeks any variance from the Required standard.

Each section of the Design Requirements is introduced by a brief summary of the principles and guidance established in the Design Guide, with explanatory notes and partial plans taken from the generic plans, which illustrate the requirements.

Briefing and monitoring

At the beginning of every project, East Thames' Development Team will confirm any acceptable variation from the Required standard, by ticking the relevant column in the design Requirement schedules, thereby providing a project specific brief for the consultant or developer.

The Design Requirement schedules also provide a checklist for the consultant and/or developer to use to monitor and report compliance by ticking the relevant column. These will be used through the development of the design and construction. At handover, the developer will sign-off compliance with the agreed standard.

In addition, a sample of projects will be tested on compliance with the agreed standard. There will also be a scheme review, including resident and client feedback.

Overarching requirements

The overarching requirements are identified in the following pages. The mandatory standards and documents which form the basis for East Thames' detailed requirements are all publicly available. It is therefore assumed that the Development Team, consultants and developers are familiar with and able to source them.

However, the standards included here go further in their scope than the mandatory documents, as follows:

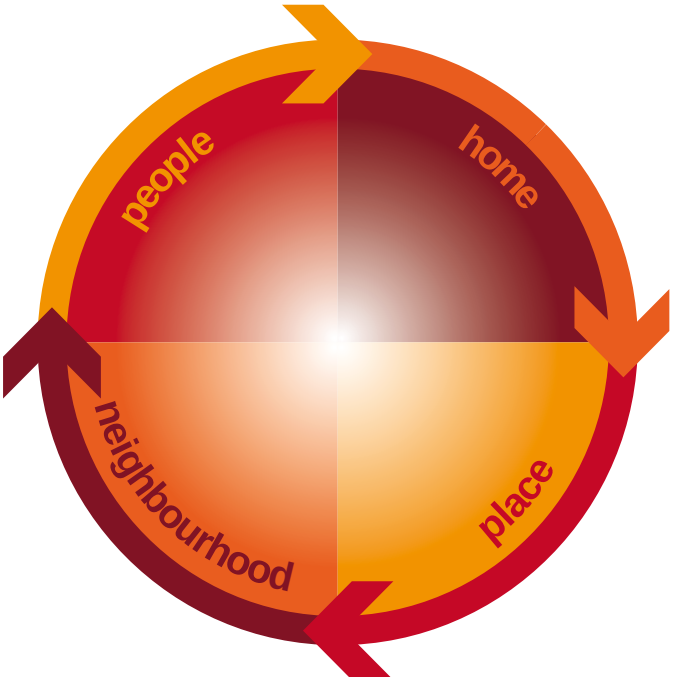
- Improved minimum space standards above those identified for unit size in the Housing Quality Indicators (HQI).
- HQI basic standards for unit layout plus the additional elements where indicated.
- Full HQI compliance with storage requirements.
- Full Lifetime Homes compliance.
- Code for Sustainable Homes target levels required against each of the East Thames standards.
- Sustainable design targets above the stated Code levels.
- National Housing Federation' Standards and Quality in Development 2008, activity and access spaces for standard furniture.
- Minimum daylight levels.
- Dual aspect design is required for all except for 2-person flats, where is it preferred.
- Separate kitchen-dining room for 3-person and larger homes.
- Future-proofed ICT requirements.
- Defined Building for Life targets.

Downloading schedules

For ease of use, the spreadsheets in this document can be photocopied from this document or downloaded from the East Thames website.

Abbreviations used in the schedules

BRE	Building Research Establishment.
CITES	Convention on International Trade in Endangered Species.
CO_2	Carbon Dioxide.
CSH	Code for Sustainable Homes.
DDA	Disability Discrimination Act.
EST	Energy Saving Trust.
GLA	Greater London Authority.
HQI	Housing Quality Indicators.
ICT	Information and Communication Technologies.
LTH	Lifetime Homes.
MMC	Modern Methods of Construction
NHF S&Q 08	National Housing Federation - Standards and Quality in Development 2008.
NPFA	National Playing Fields Association.
RoSPA	Royal Society for the Prevention of Accidents.



Project name:	Date:	Project No:			
Overarching requirements					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Minimum space standards					
Flats					
1b2p 53m²	58m²	48m²			
2b3p 68m²	74m²	60m²			
2b4p 76m²	83m²	68m²			
3b4p 82m²	88m²	76m²			
3b5p 92m²	99m²	88m²			
4b6p 106m²	109m²	96m²			
2-storey houses and maisonettes					
2b4p 85m²	98m²	77m²			
3b5p 97m²	106m²	93m²			
4b6p 111m²	118m²	106m²			
3-storey houses and maisonettes					
4b6p 122m²	138m²	112m²			

2 Housing Quality Indicators (HQI)					
1 HQI scores East Thames is committed to meeting the following minimum scores. Size: 60%, Layout 60%.	Size: 70% Layout: 70%	Size: 45% Layout: 60%			
2 Furniture All homes will be furnished in accordance with HQI v.4 2008, 'Design: Unit - Layout' pp 28-32.					
3 Activity zones Activity and access zones to the furniture and all circulation space as advised in the HQI and in accordance with the NHF S&Q 08.		As HQI			
4 Storage Internal storage provision should exceed HQI v4. Refer to section 8.1 and 8.6 for details.					
5 Additional HQI features Some additional features from HQI v4 2008, pp 33-35 are itemised in the text.	All additional features included from HQI pp 33-35.				

3 Dual aspect					
All 2-bed and larger homes must be dual aspect for ventilation and comfort.	All homes must be dual aspect.				

Overarching requirements					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
4 Separate kitchens					
All 2-bed and larger homes to have the kitchen or kitchen/dining room as a separate room with a window.	All homes must have the kitchen or kitchen/dining room as a separate room with a window.	All 3-bed homes and larger must have the kitchen or kitchen/dining room as a separate room with a window.			
5 Secured by Design					
All design proposals are to be discussed with the Crime Prevention Design Adviser and certified where possible as meeting Secured by Design standards.					
6 Lifetime Homes					
Meet all 16 criteria in full.					
7 Daylight					
All habitable rooms must receive a minimum of 2 hours sunlight a day.					
8 Acoustics					
NHF Standards and Quality in Development 2008 Part E, Chapter 7 applies.					
9 Code for Sustainable Homes					
Code 4* Minimum target of 71 credits (72 in London).	Code 5* Minimum target of 87 credits.	Code 3* Minimum target of 58 credits (60 in London).			
10 Information and Communication Technologies					
Each dwelling shall have fully integrated TV/ FM/DAB reception. Communal systems to have digital TV reception and be compatible with Sky+ services and some foreign channels (Hotbird).					
11 Building for Life					
Silver standard - 14 points minimum.	Gold standard - 16 points minimum.	12 points minimum.			
12 Amenity space					
All homes must have some private amenity space. Refer to Section 7 for details.					

Inside the Home

1 First mpressions

Whether the arrival at the home is the shared entrance to a block of flats, with communal area leading to the flat front door, or a front garden leading to the front door of an individual house or ground floor maisonette, the requirements remain the same. In each case there must be a clear distinction between public, semi-private and private space and a strong sense of security for everybody who will use the area. The emphasis is on a friendly, welcoming feel, and this can be conveyed through careful consideration of materials, finishes, design and layout.

2 Meet and greet

Once through the front door, the hallway or reception lobby must work in the same way for all residents. It should provide safe access to a well-planned circulation area, designed to create a sense of place, providing sufficient space where visitors can be greeted and residents can tidy away their outdoor wear.

Front gardens

Defensible space is required for all dwellings.

Gate provided to garden of ground floor-accessed homes.

Residents should be able to personalise their own external space.

Planting and design of front areas to be integral to the design of the building.

Hallway

Level threshold

Wide enough to greet visitors

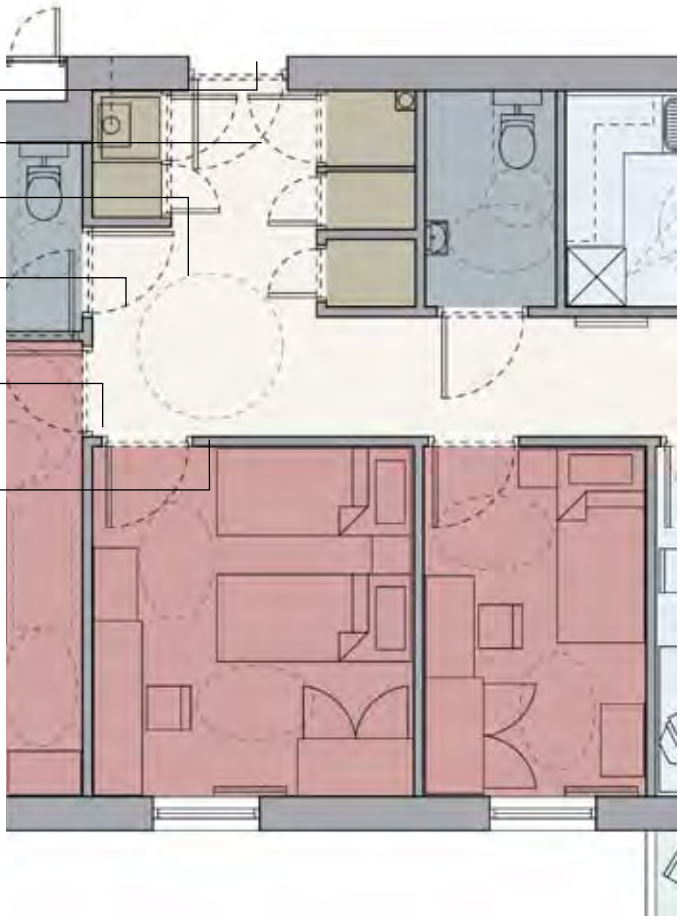
Space to turn a wheelchair

Door swings to rooms do not impede access, and do not clash

100mm nib provided to “push” side of door

300mm space on the “leading edge” of the door for wheelchair accessibility

Space provided for putting down shopping, storing a buggy and outdoor clothes



1 First impressions					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
Requirements for all dwellings					
1 Visibility					
There must be good overlooking of the front area and all shared spaces from within the building.					
2 Appearance					
External materials and details must be considered as part of the design concept for the development. They must be durable and low maintenance.					
3 Boundary at entrance					
Clear, maintainable and easily managed physical boundaries provided to the entrance area. Entrances can be located on the back edge of pavement only where there are shared surfaces or in a Homezone environment.					
4 Boundary Treatment					
Front boundary to be railings or wall to a minimum of 1200mm height. Railings to have a solid panel at the bottom to prevent drift of litter and/or topsoil.					
5 Gate					
Gate to be provided to all defensible space at the entrance to the property where space is sufficient. Gate to be of robust design, and of material to suit the boundary treatment.					
6 Front garden hard surfaces					
Front area to have paved footpath with level access to front door and paving to refuse storage area. There should be a line of pavings along the edge of the building to permit window cleaning and building maintenance. All paving to be permeable.		Front area to have paved footpath to front door and to refuse storage area. All paving to be permeable.			
7 Refuse storage					
Refuse storage location must be discrete, well lit and ventilated, but windproof.					
8 Materials					
Materials are to be good quality, attractive and capable of easy maintenance.					
9 Flood risk areas					
Front gardens must be long enough for a ramp.	No homes to be built with slab level below the height of the nearest road gulley.				
10 Design of front gardens					
Design and planting of front gardens areas to be integral to the design development.					

1 First impressions					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
11 Planting in front garden					
Unpaved areas to be planted with robust, slow-growing, dense ground cover, for ease of maintenance, with some feature shrubs for interest. A minimum of 5 palettes to be provided.	Planting should be designed to provide year-round interest.				
12 Consultation on design					
Where possible the design and layout of the front garden is to be carried out with input from the future resident.	Delay planting until residents are allocated for consultation on design.				
13 Storage space at entrance					
Space to park a bicycle in front garden area, lockable, covered and discrete. In flats, to be in groups of no more than 6 together.	Separate external storage area, lockable, covered and discrete, adjacent to entrance and within the footprint of the building.				
14 Recycling space					
Combined space is required for recycled materials and management of landfill waste storage.					
15 Wheelchair charging					
For wheelchair-accessible homes, there should be an external electrical charging facility for wheelchairs, which is secure and covered. In upper flats, the charging area will be internal.	External water supply and drainage to facilitate washing down an outside wheelchair.				
Requirements for flats					
16 Service risers					
Service risers should be internal as far as practicable. If external, they should be grouped, easily accessible and secure, and incorporated into the design from the outset.					
17 Meters for flats					
Meters must be internal but easily accessible for reading, and for monitoring energy use and cost. Electricity meters must be tamper-proof.	Locate meters behind a secured panel allowing viewing, but with access only by qualified engineers.				
18 Prepayment meters					
Provision to be made for future installation of prepayment meters, in a location where they are readily accessible by residents.					
Requirements for houses and GF flats					
19 Meters in houses and GF flats					
Utility meters should be integrated with the entrance design from the outset, located at a maximum height of 1200mm. Semi-submerged or recessed meters are not acceptable. They should be discrete and accessible.					

2 Meet and greet					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
Requirements for houses and GF flats					
1 Entrance canopy					
Main entrance covered by canopy (minimum 900 x 2000mm) at 2.3m maximum height, as part of an integrated design.					
2 Entrance width					
Main entrance to building has minimum clear opening of 800mm. Main entrance has minimum 300mm clear on leading edge side of front door, and corridor remains at 1200mm wide for minimum distance of 1500mm.					
3 Entrance door					
Main entrance door to home should be of high quality design, with a vision panel, spy hole and security chain, and should meet PAS 24 standard.					
4 Entrances to houses and 2-storey flats					
All houses and flats in two storey blocks shall have individual private external entrances at ground floor level.					
5 Signage					
Numbering and/or naming of houses and blocks of flats must be prominent and easily visible.					
6 Letter box to external-entry homes					
Letter box installed minimum 700mm, maximum 1200mm (to centre) from finished floor level for individual homes entered directly from the street.					
7 Entrance mat - GF homes					
Dirt track matting to all external front entrances for distance of 1.5m allowing for uninterrupted door swing.					
8 Stair					
The stair configuration should provide a half landing or rest platform within a stair of 42° pitch or a full flight at 35° pitch.	A reverse stair provided, which rises from the rear of the property, or a dog-leg stair in the middle of the plan, for increased privacy.				
Requirements for flats					
9 Entrance canopy to flats					
Canopies to large blocks of flats should be in proportion, and form part of an integrated design, while still providing protection from the elements.					

2 Meet and greet					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
10 Number of homes per core					
No more than 8-12 dwellings accessed from one secure door. This means that upper floors in medium to high rise blocks must have secure enrty after existing the core.					
11 Lighting at entrance					
Security lighting is required to the entrance door, and within larger gardens to light the pathway and bin/cycle storage area.	Discrete solar-powered illumination to be used for the edges of paths and gates.				
12 Individual entrances to flats					
Individual private entrances are required at ground level (in 2 storey flats and maisonettes).					
13 Glazing to flat entrances					
The entrance to flats should be clearly evident from a distance, and marked by double-height glazing, change in fenestration pattern, colour or other means.		The entrance to flats should be clearly evident from a distance and be distinct from the main body of the building.			
14 Concierge					
Where a concierge is required, provide minimum 9m^2 for concierge requirements, plus a WC and storage for security equipment, etc.	Provide a concierge system to all blocks of 30 flats or more.				
15 Common area layout					
Common/shared areas must be well planned to make efficient use of space and with natural lighting and ventilation. Corridors should be minimum 1500mm wide.	Corridors should be minimum 1800mm wide.	Corridors should be minimum 1200mm wide.			
16 Communal area finishes					
Finishes should be of high quality, robust but attractive, and capable of being maintained easily without the use of heavy equipment.					
17 Cleaner's store					
One lockable cleaner's store must be provided in each flat core for storage of equipment, with hot and cold water supplies, sink and bucket stand, and electrical points.					
18 Entrance mat					
A large dirt-track ribbed mat is provided at the entrance and rear doors to a block of flats, for full width of the hallway and for a depth of 1.5m.		Entrance mat the full width of the door and for a depth of 1.5m at each entrance.			
19 Lifts					
A lift is provided for any block of more than 4 storeys. The design must ensure that the lift serves more than 20 homes. Any block with wheelchair homes above ground level requires 2 lifts, one of which will meet wheelchair standards.					

2 Meet and greet					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
20 Communal Stairs					
Stairs should be well-planned for maximum visibility and good natural light and ventilation.					
21 Entry system					
Vandal resistant video entry system.		Vandal resistant telephone entry system.			
22 Access for utilities					
External access to meters is preferred where possible. In large and high density schemes, meters should be provided at each floor within the core area, with ease of access to residents and meter readers.					
23 Postal arrangements					
Arrangements for postal delivery to be discussed initially with residents and local agencies and agreed with the Development Team. A “tradesman” button is not to be provided in entry system.					
24 Letter boxes to small blocks of flats					
Letter boxes in individual flat front doors.		One lockable letter box per dwelling, accessed from within building, with delivery externally. They should be an integral element of the entrance design. Postal box size to be A4+.			
25 Letter boxes to large blocks of flats					
In blocks of more than 20 flats, the letter boxes should be arranged in banks within the lobby area, within 700 and 1500mm from finished floor level, with a secondary secure door beyond.	Letter boxes as Required standard, but they should be in sight of the concierge where one provided.				
Requirements for all dwellings					
26 Internal hall and corridor planning					
Internal halls and corridors to be well planned, making efficient use of space, with natural lighting and ventilation. HQI Recommended.		If no natural daylight is available to internal halls and corridors, borrowed light is provided above room doors.			
27 Circulation width					
To be 1200mm wide with reductions limited to 1050mm for maximum length of 900mm.		To be minimum 900mm wide with reductions limited to 750mm for maximum length of 900mm.			
28 Door swings					
Hanging of door swings should facilitate wheelchair manoeuvre in relation to the preferred furniture layout.					

2 Meet and greet					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
29 Space for outside clothes, etc					
Hanging space for outdoor clothes (not necessarily in a cupboard), and separate shoe storage near entrance doors of flats and houses. HQI recommended.	Cloakroom space or cupboard integrated fully with the entrance area design.				
30 Large item storage					
Large item (e.g. push chair, wheelchair) 'park' provided by external entrance doors. Refer to Wheelchair Housing Design Guide in the case of wheelchair-accessible homes. HQI recommended.					
31 Circulation					
Living room should not form an essential part of the circulation.					
32 Offsets beside doors					
100mm offset provided between opening edge of door and return wall, when pushing the door.	200mm offset provided between opening edge of door and return wall, when pushing the door.	Door architrave must be equal and continuous on all sides.			
33 Storage location					
Essential storage should not be located within or accessed from the living room. Access must be from the hallway.					
34 Burglar Alarm					
Fused spur for future burglar alarm system.	Intruder alarm installed.				
35 Internal thresholds					
No internal thresholds.					
36 Clear opening to doors					
775mm minimum opening to internal doors.					

3 Cooking and Eating

As the hub of a home, the kitchen or kitchen/dining room requires a welcoming design with a layout that provides for the essential functional standards. Good kitchen design is also vital to enable independent living.The plan for a kitchen should therefore include extra space to allow for additional appliances that may be required in the future.

Each household will stamp their own identity on their kitchen, so the design should allow for some adaptation to reflect individual needs and for the addition or omission of white goods or culinary equipment.

Kitchen

Designed to full Lifetime Homes and NHF D&QS 08 compliance

A window for ventilation and light is desirable in all kitchens, and essential in large family homes (2-bed and larger)

1.5 bowl deep sink

Full HQI dining table space standards are required

Wall cupboards should reach up to the ceiling with filler strip above to avoid grease traps

Dining space is essential in the kitchen for all except 1-bed flats

Washing machine and tumble dryer are preferred outside the kitchen in a utility cupboard or separate room

3 Cooking and eating					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Kitchen storage and equipment					
Provide an additional tall cupboard (minimum 600mm wide) for bulk purchase goods.	Provide secure, naturally ventilated pantry cupboard or additional bulk storage cupboard in larger homes.				
2 Kitchen access					
Separate access to kitchen directly from hall.	Separate access to kitchen directly from hall, with provision for double doors in the future between kitchen and dining room.	Access to kitchens can be from living /dining room in 1 bed flats.			
3 Kitchen layout					
The cooker should not be placed at the end of a work surface or under a window.					
4 Space round a cooker or hob					
There should be at least 500mm clear worktop on each side of the cooker and 300mm between cooker space and any internal worktop return.	Minimum 1200mm between cooked and sink. HQI recommended.				
5 Wall unit height					
Wall units must be 900mm high, including in wheelchair homes of 2-bed and larger. This means that the standard 600mm high units for wheelchair kitchens are only appropriate for a 1-bed flat, where a single occupant might be a wheelchair user.					
6 Wall units round a cooker					
The sides of wall units should be set back at least 100mm from adjacent cooker space to avoid heat damage from high level grills or hobs.	A cooker hood is to be provided (see item 21 below). Wall units will therefore line up against the side of the hood.				
7 Door clashes					
Avoid clashes between doors, drawers and facing appliances or handles.					
8 Widths for finishes					
To ensure minimum appliance and unit widths are achieved, design must consider plaster and skirtng depths, support battens and supply pipes.					
9 Continuous surface					
Kitchen work surface must not interrupted by circulation or tall fittings.					
10 Kitchen drawers					
Drawers of varying depth provided in kitchen units. HQI recommended.					

3 Cooking and eating					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
11 Work triangle					
Provide a work triangle between sink, cooker, microwave and fridge, between 3.3 and 6.6m long.					
12 Work layout					
Kitchen sequence should be: storage/prep: cook/serve:waste/wash-up. HQI recommended.					
13 Appliances					
Kitchen layout to include space provision for standard size cooker, upright full height fridge/freezer. Space for a washing machine to be included in 1 and 2-bed homes only. See item 35 below for requirements for larger homes.	As Required standard plus dishwasher space. Laundry equipment to be housed separately. See items 39 and 40 below.				
14 Provided appliances					
Appliances (where supplied) must be energy efficient to A-rating minimum. Where not supplied, provide information to householders in accordance with CSH credit for Energy.					
15 Wall units					
Space above wall units to be filled in to prevent build-up of grease/dust.	Cupboard storage provided above standard kitchen units where ceiling height allows.				
16 Resident choice					
Choice from range of 4 suites: worktop, cupboard front, flooring, wall colour and tiles.	Choice from range of 6 suites: worktop, cupboard front, flooring, wall colour and tiles.				
17 Access to outside					
Access to external space to be from kitchen or living room. Bedroom access is only permitted as an additional access.	Additional access from kitchen to external space, with view of outdoor area suitable for toddler to play.				
18 Space within kitchen					
1500 minimum clear space in front of kitchen units. HQI recommended.	1800 minimum clear space in front of kitchen units.	1200mm clear space between facing units.			
19 Accessibility					
1500 x 1500 circle or 1400 x 700 ellipse wheelchair manoeuvre space between kitchen base units.					
20 Window					
Window to be provided to kitchen in all 4-person houses and flats and larger.	Window to kitchen in all homes.				

3 Cooking and eating					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
21 Daylight requirements					
Achieve Daylight Factor (DF) of minimum 2% in accordance with CSH HEA1, for all homes.	Achieve Daylight Factor (DF) of minimum 2% and view of sky in accordance with CSH HEA1, for all homes.				
22 Ventilation					
Provide artificial ventilation over cooker, with minimum extract rate of 60 litres/sec with normal and boost positions.	Provide cooker hood with minimum extract rate of 60 litres/sec with normal and boost positions, vented to outside.				
23 Worktop length					
600mm extra length of worktop provided at a lower level for food preparation or space for an additional table for general use.	600mm extra length of worktop provided at a lower level for food preparation or space for an additional table for general use.				
24 Cookers					
Minimum 630mm space required with gas and electric supplies.	Minimum 650mm space required with gas and electric supplies.	Minimum 600mm space required with gas and electric supplies.			
25 Kitchen sinks					
Provide 1.5 deep bowl sink with double drainer located under the kitchen window where possible.	Provide 2 bowl sink with deep bowls located under the kitchen window where possible.				
26 Composting in houses and GF flats					
Provide space for an internal composting container.					
27 Kitchen tap					
High feed sink mixer tap is required to facilitate filling deep pans.					
28 Water flow restrictors					
Maximum 2.5 litres/min kitchen sink (flow restricted taps) in accordance with CSH WAT1.					
29 Grease traps					
Provide heavy duty waste and grease traps.					
30 Worktop colour and material					
Worktops should not be white. They must be capable of resisting high levels of moisture.					
31 Eating in kitchen					
Space for occasional eating in kitchen if dining space is in living room (in 1-bed flats only).					

3 Cooking and eating					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
32 Dining table					
Dining table to have full activity space around it, as HQIs.	Dining table to have full activity space around it, as HQIs, with space for (minimum) 2 visitors to join the family				
33 Dining space					
A kitchen/dining/living room is only acceptable in 1-bed flats. The dining table must be in the kitchen in all except 1-bed flats, unless a suitable alcove is provided in the living room, distinct from the living space.	The dining table must be in the kitchen in all homes, or in a separate room.	A living/kitchen/dining room is acceptable in 1 and 2-bed homes only.			
34 Refuse and recycling					
Clear space provided for a swing-top bin, and a cupboard with a range of supplied individual recycling bins. Consult with the local authority to ensure storage provision is compatible with collection requirements.					
35 Washing clothes in 1 and 2-bed homes					
In 1 and 2-bed homes, the washing machine will be located in the kitchen.	A utility cupboard is required for washing machine and tumble dryer in 1 and 2-bed homes.				
36 Washing clothes in 3-bed homes and larger					
The washing machine and tumble dryer space should be located separately from the kitchen. This could be a cupboard or utility room, with provision for the tumble dryer to stack above the washing machine, and with a dryer vent, ducted to outside.	Provide separate utility cupboard for washing machine and tumble dryer, ideally with sink and hanging space for clothes if possible.	A secondary drying area is to be provided with a slatted clothes airer over the bath.			
37 External clothes drying					
Clothes drying space must be provided externally with a rotary dryer for houses and ground floor flats. Communal drying areas are not acceptable. See below for arrangements for upper flats.	An enclosed but ventilated space (using louvred sides) must be provided on balconies to upper floor flats.				
38 Internal clothes drying					
A robust clothes dryer must be provided over the bath, for drying clothes internally.	For flats and maisonettes without external drying space, provide an internal drying cupboard. If the cupboard does not include a hot water cyclinder, the cupboard should include humidistat controlled ventilation and tubular heater.				

4 Living, playing, working and studying

A home must be designed with spaces that fulfil different needs and uses for individual residents. Spaces should be capable of being used in many ways, and by different members of a household at the same time, so that one person can study whilst others watch the TV, for example. The larger the household, the more critical this becomes. Every person needs space to call their own.

In smaller homes, the requirement to create individual areas within shared spaces is greater to enable a range of activities to take place simultaneously.

Living Rooms

A home office can be located in the living room in smaller homes

Minimum HQI furniture provision is shown

In flats,there is the potential for a sliding door access between the living room and kitchen/dining room

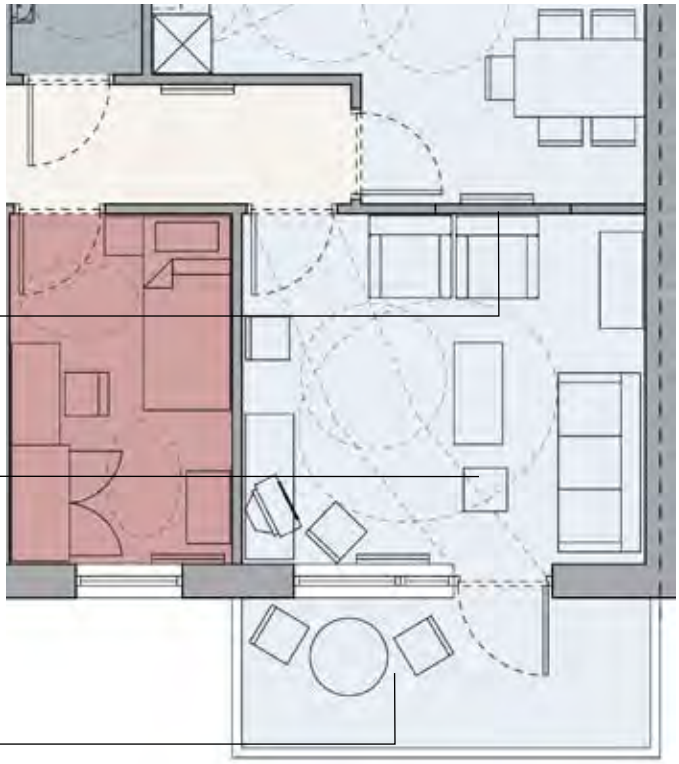
Living room is a minimum of 3.4m wide

There is space for a 600 x 600 toy store

Alternative layouts of furniture are possible

A daylight factor of 1.5% is achieved

Access to an external space (balcony) is through the living room



4 Living, playing, working and studying					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
Living					
1 Layout generally					
Provide for alternative uses of space, including studying while TV is on, reading while computer games are played, toys are played with while guests chat, etc.					
2 Living Room widths					
Minimum width 3.2m (1-bed). 3.5m (2-bed and larger).	Minimum width 3.4m (1-bed). 3.6m (2-bed and larger).	Minimum width 3.0m (1-bed). 3.2m (2-bed and larger).			
3 Daylight requirements					
Achieve Daylight Factor required by the Code for Sustainable Homes (CSH) level 4.	Achieve Daylight Factor required by the CSH level 5-6.	Achieve Daylight Factor required by the CSH level 3.			
4 Focal point					
Space for future focal point fire place or other feature (such as wide-screen TV) in living space. HQI recommended.	Provide focal point fireplace with mantle shelf for display.				
5 Furniture					
Demonstrate that the minimum HQI furniture can be located, plus one additional piece of furniture - storage unit or armchair. Include the access zones in NHF S&Q 08.	Demonstrate that the minimum HQI furniture can be located, plus two visitor armchairs above the number of bedspaces in the dwelling. Include the access zones in NHF S&Q 08.	As HQI, including access zones as NHF S&Q 08.			
6 Circulation					
The living room does not form an essential part of the circulation for the dwelling. HQI recommended.					
Playing					
7 Play space					
Space in living room for extra cupboard for toys (600 x 600mm).	Separate play area near living spaces (minimum 6m^2) for 3-bed homes and larger. HQI recommended.	Secondary bedroom to meet the minimum area above will be large enough for children to play.			
8 External space					
Direct access provided to private external space such as balcony, garden or winter garden. HQI recommended.	Intermediate covered area for outdoor dining/spill-over from living room.				
Working and studying					
9 Services for layouts					
Provide sufficient services in the room to allow safe alternative furniture layouts.	Provide sufficient services in the room to allow two substantial alternative furniture layouts.				

4 Living, playing, working and studying					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
10 Services required					
Provide integrated and easily upgradeable, discrete services for telephone, TV and broadband in all living spaces - living room, bedroom and dining space. Future-proof the services with appropriate ducting which should be flexible and demountable when no longer required, when wireless services are used.	Provide wireless hub.	Provide integrated and easily upgradeable, discrete services for telephone, TV and broadband in living room.			
11 TV reception					
All dwellings must have TV/FM/DAB reception. Where communal systems are installed they must have digital TV reception and be compatible with Sky+ services and some foreign channels (Hotbird).					
12 Home Office					
Under the CSH, the home office space can be anywhere in smaller homes of 1 or 2 bedrooms. For larger homes, with three or more bedrooms, the home office should not be in main bedroom, living room or kitchen to achieve points for the CSH. The home office should include ITC connections, a window, and be minimum 1800 x 1200mm.		Home office space is required, but can be in any room.			

5 Sleeping

The bedroom serves different uses – sleeping, storage, homework, relaxation and entertaining friends. The design should create spaces that can be laid out flexibly to provide for these uses, allowing rooms to be furnished individually and for safe movement.

6 Washing

Bathrooms are small, functional spaces and should be designed so household members can add their own character and personalise them. The layout should be space-efficient, allowing for later adaptation of additional supports and aids if required. In larger homes there should be sufficient space to bath a number of small children at the same time.

Bathroom

A window for ventilation and light is desirable in all homes, and essential in large family homes (3-bed and larger)

Designed to full Lifetime Homes compliance

All services are arranged in a row for simplicity of plumbing and water supply

Space is required for shelves, linen basket, etc, in family homes. This may be moveable for wheelchair access

Main Bedroom

Designed to full LTH compliance, the bedroom is in close proximity to the bathroom for ease of future installation of a hoist

There is the option of having a connecting door between bathroom and bedroom to make hoist installation even easier

All the required furniture provision is shown in the bedroom, including the cot space

There is space for a 1500mm diameter wheelchair turning circle in the main bedroom

The home office in the second bedroom is a feature of the CSH. There should be space for 1.8m of shelving and ITC connections

For the Required standard, a double bedroom is a minimum of 2.8m wide

5 Sleeping					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Single bedroom dimensions					
Single bedroom minimum 7.5m^2 and 2.3 m minimum width.	Single bedroom minimum 8.0m^2 and 2.5m minimum width.	Single bedroom minimum 7.5 m^2 and 2.1m minimum width.			
2 Single bedroom furniture layout					
Demonstrate that there is more than one way to arrange the furniture.	Demonstrate that there is more than one way to arrange the furniture, with no part of the bed under a window.				
3 Furniture requirement for single bedroom					
As HQI.	Wardrobe to be 600x 1200mm.				
4 Double/twin bedroom dimensions					
Double bedroom minimum 12m^2 and 2.8m minimum width.	Double bedroom minimum 13m^2 and 2.8m minimum width.	Double bedroom minimum 11.5m^2 and 2.7m minimum width.			
5 Subdividing twin rooms					
One twin bedroom in 3-bed homes and larger should be capable of future sub-division into two single bedrooms.	One twin bedroom in 3-bed homes and larger should be capable of future sub-division into two single bedrooms.	No requirement.			
6 Double/twin bedroom furniture layout					
Demonstrate that there is more than one way to arrange the furniture, with option of having 2 single beds in two alternative positions, with no part of the bed under a window.		As HQI.			
7 Furniture requirement for double bedroom					
Space provided for additional desk or dressing table.	Space provided for an extra wardrobe or chest of drawers in master bedroom.	No requirement.			
8 Access to window					
Bed position allows full access to window.		No requirement.			
9 Wardrobes					
Main bedroom wardrobe to be 1200mm and be built-in.	Main bedroom wardrobe to be 1500mm and be built-in.	As HQI.			
10 Services					
Socket outlets provided to meet the requirements of different furniture layouts.					
11 Radiator positions					
Radiator positions to be unobstructive and not hinder furniture relocation.	Underfloor heating provided where appropriate to construction method.				
12 Cot space					
Space for cot, 600 x 1200mm, provided in double bedroom without losing any furniture.		As HQI.			

5 Sleeping					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
13 Stacking					
Bedrooms must not be located adjacent to communal circulation areas or above/below living rooms or kitchens.					
14 Wheelchair turning space					
1500mm turning space in double bedrooms.					
15 Access to bathroom					
Bedroom can be adapted for direct access to bathroom / WC.	Provide door between bathroom and bedroom.				

6 Washing					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Bathroom layouts					
All fittings in a row for ease of installation and servicing. Provide extra space in bathroom in 3 bed family homes and larger for bathing several small children at the same time.	As Required standard with 1500 diameter wheelchair manoeuvre space.				
2 Linen storage					
Linen storage to be adjacent to bathroom or accessed from it. Size is dependent on number in family. Minimum size = 600 x 600m x 3 no. shelves, minimum 500mm apart.					
3 Ventilation and light					
Window is provided to bathrooms in all 3-bed homes and larger.	An easily accessible window is provided to all bathrooms.				
4 Artificial ventilation					
Humidistat or similar controlled ventilation required in accordance with Building Regulations part F and EST guidance GPG 268 and CE 291.					
5 Door					
Bathroom door opens outwards, except where safety may be jeopardised.					
6 Shower provision					
Shower over bath, with screen.	A separate shower is provided in separate WC in larger flats.	Shower over bath, with curtain.			
7 En-suite					
En-suite shower room is required in 2-bed and larger sale homes only.	En-suite shower room is provided to main bedrooms in 3-bed and larger family homes.				

6 Washing					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
8 Wash-down floors					
Bathrooms and separate WCs to have floors to a wash-down standard, and adaptable to provide washing facilities adjacent to the WC.					
9 Wet rooms					
In houses and maisonettes, provide the ground floor WC as a full wet-room with floor gully.					
10 Fittings					
Space to be provided for wall cupboard and wash basket.					
11 Mirrors					
Provide mirror above wash basin.	Provide mirror with integral lighting above wash basin.				
12 Towel rail					
Double towel rail above radiator, near to washbasin.	Heated towel rail.				
13 WCs					
Dual flush WC with 6-4 litre cistern.	WC to be separate from bath in 2-bed flats.				
14 WC orientation					
WCs should avoid the north-west, south-east axis. Ideally orientation should be at right-angles to this line.	WCs orientated approximately to north-east, south west axis.				

7 Gardens and balconies

Gardens

All homes should have private external space that can support a range of uses and layouts, such as sitting quietly, growing vegetables or flowers, or children playing. These should be functional, useful and safe spaces of an appropriate scale to the size of the home.

Balconies

Balconies or roof patios are required for flats and family homes on upper floors. These must be safe areas to use, easily accessible to all, provide privacy, have room for a table and chairs, and not cause nuisance to others.

Roof gardens and winter gardens

Consideration must be given to using roof spaces and enclosed balconies to provide additional amenity space in high density developments.

Gardens

Gardens must have a privacy screen of 1.8m height adjacent to the home

Between neighbouring gardens, boundaries are no higher than 1.2m

Drying space is required in the garden via a rotary dryer

A shed is required for storage in accordance with HQIs

Paving is needed to the dryer and shed

A paved patio must be permeable

Balconies

Balconies must be big enough for all the family to sit out, and a minimum of 1.5m deep

$4m^2$ minimum area for 1 and 2-bed flats, $6m^2$ minimum for 3-bed and larger flats for required standard

The balcony must be wheelchair accessible

Balcony surround must be opaque and easy to maintain

Flooring should not be slatted

Balcony drainage is required

Discrete drying space is required on a balcony if there is no other drying space

Balcony design must be tenure neutral

7 Gardens					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Ground floor homes					
Provide ground floor homes with a front garden and a rear garden/patio.					
2 Private open space					
Private open space should be accessed from circulation area, the living room or kitchen and provide privacy, play space, drying area and storage.					
3 Front gardens (refer to Section 2 - Meet and Greet)					
Nothing in the design of the front garden should inhibit casual surveillance of the street.					
4 Rear gardens side boundary					
The rear garden/patio should have a privacy screen 1.8m high for 2.0m length, providing separation from the neighbouring homes. The remainder of the side boundary to be 1.2m high.					
5 Recycling storage					
An external store should be provided for recyclable materials adjacent to the front door and incorporated with the bin store. HQI recommended.					
6 Rear boundaries					
The rear boundary should be 1.8m high, except abutting communal gardens. In this case the boundary treatment should be integrated with the design of the public open space.					
7 Water conservation - houses					
A water butt is provided to the rear garden of all houses for irrigation of plants.					
8 Water conservation - flats					
In flatted schemes, communal rainwater attenuation tanks to be provided for watering communal gardens.					
9 Paving to gardens					
A small paved area should be provided in the garden of houses, GF flats and maisonettes. It should be the width of the home x 1.8m. A footpath is required to the shed and washing line/dryer. All paving to be permeable.	Provide a covered patio.				
10 Plants in gardens					
Rear gardens should be grassed, but the soil made suitable for growing fruit and/or vegetables for home consumption.	In addition to Required standard, provide borders planted with a range of plants to encourage biodiversity.				

7 Gardens					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
11 Trees					
Provide a selection (palette) of large shrubs and trees for rear gardens.	Fruit trees to be planted in rear gardens wherever possible, ensuring that they will not overshadow the garden over time.				
12 Lighting					
An external light to be provided for all private external space. It should be switched from inside, overridden by a movement sensor, and shielded to prevent light pollution to neighbours and above.					
13 Drying space					
Washing lines or rotary dryers provided to all gardens.					
14 Balcony materials					
Boundaries to balcony and/or roof terrace should designed to provide privacy and avoid makeshift arrangements by residents.					
15 Balcony depth					
Balconies must be at least 1.5m deep and large enough for all the family to sit out.	Balconies must be at least 1.5m deep, and large enough to enable the family to sit round a table.				
16 Balcony size					
Balconies minimum of 4m^2 for 1-bed and 2-bed flats and 6m^2 for 3-bed and larger flats and must be fully wheelchair accessible.	Balconies minimum of 4m^2 for 1-bed flats, 6m^2 for 2-bed flats and 8m^2 for 3-bed flats and larger and must be fully wheelchair accessible.				
17 Roof gardens					
Incorporate roof gardens where possible.					
18 Balcony design					
Balconies must be contructed of and finished in good quality materials and their design should be tenure-neutral. Slatted floors are not acceptable. Balconies should be properly drained.	Balconies should be capable of simple conversion into a winter garden to allow year-round use. Drying racks provided to balconies, patios and roof gardens, screened from view, but well-ventilated.	Balcony design should be tenure-neutral.			

8 Storage

Sufficient storage should be provided to meet immediate needs and anticipate changing lifestyles. Each home will require a range of storage spaces to reflect the needs of residents who will have all kinds of items to display or store, whether these are small and personal mementos or bulky storage.

Internal Storage

Dirty storage is provided outside the flat, but easily accessible

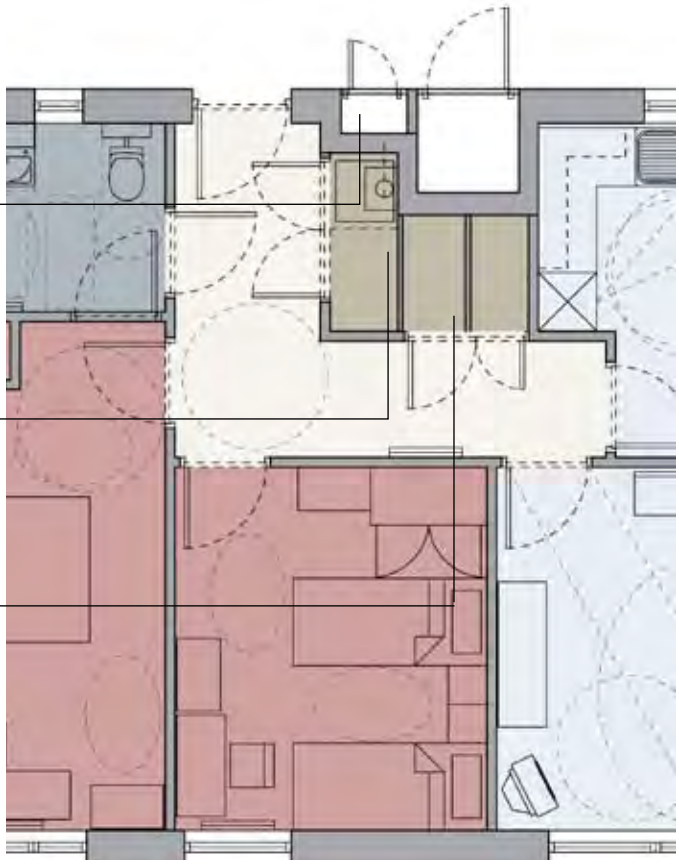
Meters and risers are accessible to residents

Boiler is located in a cupboard, rather than the kitchen to maximise storage options

The washing machine is in a cupboard, separating the noise from the kitchen

Storage space is generous for today's requirements

Space to store coats and shoes, as well as equipment such as buggies and skateboards



8 Storage					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Storage provision					
Essential storage should be full height and should not be accessed from the living room. For 1-bed homes, the minimum internal shelving provision complies with HQIs (v 4, April 2008). For larger homes general storage space is 1m^2 on plan, with shelving to HQI minimum area, set out at 600mm centres. Plus, tall storage/broom cupboard minimum 0.5m^2 on plan to full height.	Exceed the Required standard with an increased volume of storage.	Minimum internal shelving provision complies with HQIs (v 4, April 2008).			
2 Outdoor clothes					
Space is provided adjacent to the front door for outdoor coats, shoes, hats and gloves.					
3 Cleaning materials					
A secure, lockable cupboard is to be provided for storage of cleaning implements, materials and equipment.					
4 Linen storage/airing cupboard					
In addition to general storage, a heated linen store with slatted shelves is provided. If not containing a hot water storage tank, a tubular heater should be provided within the cupboard. Minimum plan area 0.4m^2 by full height, including three shelves.					
5 Shelves					
Walls in living room, dining room and bedrooms should be capable of taking shelving for personal effects, books and display items.					
6 Bulky storage					
Space is provided for bulky outdoor equipment, ('dirty' storage) such as buggies and prams, skateboards, etc, adjacent to the front door. If external, it should be lockable.					
7 Bicycle storage for houses					
Secure, covered, lockable cycle storage is to be provided for houses. To comply with the CSH requirements, this must not be accessed through the home.					
8 Bicycle storage for flats					
Secure, covered, lockable cycle storage is provided for flats: if internal, within the common areas; if external, it must be located at the rear, well-lit with CCTV monitoring.					
9 Space for technology controls					
Provide sufficient ducting and storage space to accommodate renewable energy technology controls. This includes heat recovery systems and enlarged thermal water stores.					

9 Running the home

A safe, warm, quiet, comfortable and affordable home is a basic requirement of life. The design of our homes should ensure that our homes are secure, well-orientated and insulated, and cheap to run.

10 Rubbish and Recycling

Every home and each block within a flatted development must be designed to encourage recycling and effective rubbish collection. The requirements vary between local authorities, depending on whether recycling is pre-sorted at the dwelling, or collected unsorted and taken to a depot, and these requirements need to be addressed early in the design process. The space required is growing and, as recycling and development of refuse systems continues, designs will be required to be innovative and adaptable to meet this objective.

9 Running the home					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Noise					
Noise insulation must be a minimum of 5dB higher than Building Regulations.	Noise insulation must be a minimum of 8dB above Building Regulations.	Insulation to meet CSH level 3 requirements.			
2 Noise within dwellings					
To prevent problems of noise transmission within a dwellings, all partitions must be insulated.		Partitions to bathrooms and WCs to be insulated.			
3 Stacking					
The layout of flats and houses must stack rooms of similar usage. Bedrooms are not located next to communal corridors or lift shafts.					
4 Metering					
All homes to be individually metered for fuel and water supply, including blocks of flats. This will mean the provision of a landlord's meter with sub-meters for all flats.					
5 Smart meters					
Provide a fully-accessible space for the future installation of Smart meters.	Provide Smart metering.				
6 Meter cuboards					
All meter cupboards located within the building, as part of an integrated design approach, easily accessible to residents for readings and pre-payment.					
7 TV and digital services					
As stated in item 4.12, all dwellings will have TV/FM/DAB reception. Communal systems must have digital TV reception and be compatible with Sky+ services and some foreign channels (Hotbird).					

10 Rubbish and recycling					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Landfill waste					
Follow local authority requirements for size and type of storage of landfill waste. Internally there should be space for a rubbish bin in the kitchen.					
2 Bin location - houses					
Refuse bins should be stored in the front garden, on a hard-standing in a discrete location, open to the air for ventilation, away from windows.	Bin stores should be covered if practicable.				
3 Bin location - flats					
Communal waste bin storage will be provided in flatted blocks in a location which is discrete but accessible by all. This may be internal to the block or external, with a convenient wash-down point and drainage gully. Doors should be designed so that they close gently when not in use. Externally accessed bin stores must be secure to non-residents.	Underground Refuse System (URS) to be provided where possible.				
4 Recyclable waste - in the home					
All kitchens to be supplied with containers for pre-sorting of recyclable materials, located within a kitchen.					
5 Recyclable waste - outside the home					
The local authority will have requirements for storage of recyclable waste. Externally to the dwelling there should be space for waste bin/s for recyclable materials in the front garden. It should be discrete and resistant to animal attack. It should be designed to prevent dumping by non-residents.					
6 Recyclable waste - for flats					
The form of storage of recyclable waste must be discussed at an early stage with the local authority and provision made within the curtilege of the block for their requirements.	Underground Refuse System (URS) to be provided where possible.				
7 Recycling bins					
Large developments may require a location for large recycling containers to serve the wider community. In this case, a wash down facility will be required. All waste storage areas must be secure to non-residents.	Underground Refuse System (URS) to be provided where possible.				

Outside the Home

11 Knowing your neighbours

Feeling safe and secure is a crucial element of enjoying your home. To achieve this, designs must balance the sense of security with creating a strong sense of community. This means that new developments must provide places and spaces that all residents can enjoy safely, and which provide opportunities for them to meet and get to know their neighbours.

Resident should be able to share a sense of identity with their immediate neighbours through a sequence of well-designed spaces that flow from their own home through each street and throughout all the external areas.

12 Local identity and distinctiveness

East Thames will create places that residents will feel proud of, that neighbours will see as having a clear identity that relates to the area, and that will mature over time to continue to add to the quality of the neighbourhood.

Each project requires an analysis of the character of the wider area, of the site, and of how the site sits within the neighbourhood. The design should establish a specific identity for the development, through the urban design and landscape proposals, that reflects the wider context and yet enables the development to be seen as distinct and of the highest quality.

11 Knowing your neighbours					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Casual surveillance					
Good casual surveillance and overlooking opportunities are to be provided to streets and front gardens from kitchens and living rooms.					
2 Windows to blank walls					
Windows should be provided above ground floor level on all flank walls.	Corners and flank walls should be designed with windows to provide additional street surveillance.				
3 Overlooking for community spaces					
External or community spaces must be designed to ensure they are overlooked by residents in adjacent dwellings.					
4 Meeting opportunities					
Create safe, well lit and overlooked meeting opportunities at entrances, front gardens, lobbies, communal garden spaces and at areas where public/private areas meet.					
5 Limited access					
Common and shared areas must have clearly defined access limited to a defined block or group of residents.					
6 Rear boundary walls					
No rear garden walls or boundaries to adjoin streets, public spaces or common areas, except private parking courts or communal gardens with controlled and limited access.					
7 Side walls					
Side walls adjoining pubic spaces must be minimum 1.8m high brick wall with minimum 300mm timber trellis above.	Long and high boundary walls should be perforated to provide relief along a street, but without jeopardising security.				
8 Rear boundaries					
Gardens should back onto each other where possible and adjoining boundaries should be brick or robust timber fences at 1.8m height with minimum 300mm timber trellis above.					
9 Boundaries between adjacent homes					
Between adjacent homes, the boundary should be no more than 1.2m high, of solid construction, with a 1.8m high privacy screen for a minimum length of 2m adjoining the home.					
10 Timber fences					
Timber fences to be feather board with pre-cast concrete posts or hardwood posts minimum 150 x 150mm square.					

11 Knowing your neighbours					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
11 Rear access					
Rear access alleys or routes must not be included in the design.					
12 Entrances					
Entrances to buildings are to be well lit, highly visible and welcoming, designed to promote a sense of safety and security.					
13 Uses at ground level					
Non- housing uses at ground floor level must provide an active street frontage.					
14 Prohibited uses at ground level					
Offices must not be the sole uses at ground level in a residential area as they are inactive in the evenings and weekends. Cafés, take-aways or uses with cooking that require extract flues are not acceptable without explicit approval.					
15 Common areas to flats					
Common areas in flats should be generous and appropriate to the number of flats served.	Meeting spaces must be provided to encourage social interaction.				
16 Overlooking to external common areas					
External common areas must be overlooked, secure and self policing.	Direct access is required from ground level homes to external communal space.				
17 Limit flats off one entrance					
The number of homes accessed by each entrance/stairwell must be limited to 20. In larger developments each secure landing must be limited to 12-20 homes.					
18 Active frontages					
Frontages to streets and public areas must be active and interesting. Parking below the building facing the street is not acceptable.					
19 Location of entrances					
Entrances must be directly off streets or spaces which are part of a main circulation route.					
20 Community participation					
Create opportunities for appropriate community/ resident activity in communal areas; eg. planting in containers, gardening or allotments to improve neighbourliness and ownership, through a consultation process.					
21 Accessibility					
All external areas must be Disability Discrimination Act compliant and meet all accessibility requirements.					

12 Local identity and distinctiveness					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Materials choice					
Use appropriate good quality materials to aid distinctiveness and sense of place.					
2 Strategy for paving					
Draw up a strategy for paving and surfacing that uses a range of complementary materials for coherence. Limit the number of products to avoid over complex design.					
3 Footpath materials					
Footpaths should be pre-cast concrete slabs or blocks with a high stone content giving a quality appearance and texture.	In addition to the Required standard, consider the additional use of natural stone at thresholds and key junctions.				
4 Curves in footpaths					
Avoid complex shapes or curves in footpaths unless using 'flexible' materials. Tarmac should not be used.					
5 Porous flexible paving round trees					
Resin bound finishes or porous paving is required around trees to aid tree growth.					
6 Demarcation of entrances					
Use paving and furniture to demarcate entrances by using different or contrasting tones of the same material.					
7 Tarmac on roads					
Roads must be good quality 'quiet running' tarmac with granite kerb.					
8 Kerbs					
Road kerbs should be set 100 -150mm above road surface. Dropped kerbs with tactile paving are required at all crossovers.					
9 Kerbs on shared surfaces					
Kerbs in shared surfaces should be set 25mm above road surfaces to demarcate the edge of road.					
10 Shared surfaces					
Shared surfaces and Homezones must be designed in accordance with Manual for Streets. Smaller unit materials should be used for pedestrian areas, such as setts or blocks in a complementary finish to kerbs and paving.					
11 Materials for front gardens					
Use domestic scale materials in front gardens and communal area where use is less intensive, such as brick paving, tiling, timber decking and self binding gravel.	Use more tactile materials such as brick paving, stone and resin bound gravel.				

12 Local identity and distinctiveness					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
12 Art in the landscape					
Opportunities for art should be explored and incorporated into the landscape to aid identity and legibility via a site wide strategy and realised via community workshops.	Art is required and must be incorporated into the landscape to aid identity and legibility via a site-wide strategy and realised via community workshops.				
13 Street furniture					
Street furniture such as bollards, seating and cycle stands must be of simple robust low maintenance materials such as stainless steel or Forest Stewardship Council (FSC) timber.					
14 Avoidance of clutter					
Street furniture should be designed, located and co-ordinated to avoid clutter and must be approved through the planning process.					
15 Railings					
Railings and metal elements must either be stainless steel, or galvanised finish.					
16 Seating					
Locations for seating must be carefully considered, to avoid the creation of opportunities for street drinking and gatherings. Consult with local people and police.					
17 Lighting					
External lighting must met the requirements of Secured by Design and be adequate for any future CCTV installation.	The base lighting level must be achieved but lifted with a hierarchy of colour and intensity to differentiate routes and access points. Use LED lighting to maximise sustainability.				
18 Feature lighting					
Additional external lighting can be used to enhance key points within a development and aid way finding and legibility.	Use feature lighting to aid wayfinding and light the landscape for effect and impact.				

13 Green and pleasant

Carefully designed private and communal spaces are required to create developments that are attractive and enhance the ecological and environmental qualities of the area. From the earliest stages of each project, East Thames requires high quality landscape designs that are based on a clear understanding of the environmental and ecological qualities of the site.

The starting point will be the retention of trees of value and the enhancement of the existing ecology by the development as part of a long term spatial, landscape, and ecological managment strategy.

External private amenity space is required for every home so that each household has the opportunity to personalise and enjoy their own space.

14 Children and play

All scheme designs must provide a range of opportunities for children and young people to play and to meet, both formally and informally. This requires knowledge of the number of children and young people who might live there.

A play strategy must therefore consider the development in relation to the facilities of the wider area, to ensure that there are a range of facilities within the development or within easy reach of it, that take account of the needs of all the residents. However, the location of play facilities must respect the privacy of other residents.

13 Green and pleasant					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Landscape strategy					
For each development prepare a landscape strategy to ensure adequate and high quality green space is incorporated.					
2 Ecology strategy					
For each development prepare an ecology/bio-diversity strategy.					
3 Tree planting					
Planting must be used to create identity and definition. Tree planting should be carried out to private spaces to the rear of dwellings, along access roads and avenues, and along all streets and main thoroughfares.					
4 Tree species					
Main thoroughfares and wide spaces must be planted with trees that, at maturity, are significant in size and long lived. Planes, maples, non-sticky limes are examples.					
5 Flowering trees					
Smaller spaces and streets or pedestrianised areas may be more planted with flowering trees such as cherry, crab apple or fastigiate pear.					
6 Size of trees					
Tree planting must be specified as semi-mature or Extra Heavy Standard. Specify semi-mature when stature and resistance to vandalism are a priority and EHS elsewhere.	Specify mature trees when stature and resistance to vandalism are a priority and semi-mature elsewhere.				
7 Tree distance from buildings					
Trees must be located at an appropriate distance from buildings to ensure root damage does not occur. This is dependent upon soil types and species. Guidance may be set out by the local planning authorities.					
8 Planting design for seasons					
Planting design must be carefully considered to provide seasonal effect. Scent, flower, colours and texture should be employed to bring diversity and identity.					
9 Inhibit ball games					
In common areas and open space provide lawns and grass areas for sitting out and casual play, but design large areas to inhibit ball games.					
10 Poisonous plants					
Poisonous plants must not be used, nor species susceptible to plant pathogens.					

13 Green and pleasant					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
11 Prohibited trees					
Trees that shed large leaves or fruit such as Aesculus (Conker) must not be specified nor should fast-growing, invasive or water-hungry species such Cupressus Leylandii, Willow or Poplar.					
12 Private garden to flats					
Private garden areas must be provided to ground floor flats, and should be a minimum of 20m^2 and have a paved outdoor area minimum 2.4m x 1.5m deep, turf, and an area for planting.					
13 Rear garden size and design					
Rear gardens to houses and family maisonettes should be a minimum 30m^2 with paved patio 1.8m deep x width of home, paving leading to drying area and shed, one ornamental tree and sufficient depth of topsoil to enable planting by occupier i.e. minimum 300mm.					
14 Paving to rear gardens adjoining communal space					
Rear gardens to dwellings adjoining communal gardens should have a paved patio of minimum1.5m depth x width of home and a drying area.					
15 Front garden design					
The front garden planting design must add value and amenity to the wider area, create privacy by separation or screening and contribute to the street-scene.					
16 Plant specification					
All planting must be in accordance with the National Plant Specification and relevant BS.					
17 Root barrier systems					
Trees should be planted in natural ground where possible, with a root barrier system, (not a concrete ring type) to allow lateral root movement and breathable soil conditions without affecting services distribution.					
18 Irrigation					
Irrigation systems must be avoided but access to water for establishment watering is essential.					
19 Biodiversity					
Planting must contribute to local biodiversity and ecology by using appropriate native planting or shrubs that encourage wildlife e.g. buddleia to encourage butterflies.					

13 Green and pleasant					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
20 Bat boxes					
Bird, bat and other biodiversity positive measures must be provided, such as bird boxes.					
21 Biodiverse roof construction					
Green and brown roofs must be considered in order to increase the bio-diversity of the develpment, and reduce rainwater run-off.	Green and brown roofs must be incorporated into the design.				
22 SUDS					
Sustainable Urban Drainage (SUDS) must be utilised on all schemes to reduce surface water run-off. This means permeable paving must be used throughout the development.					
23 Overshadowing					
Orientation and heights of the individual buildings must be carefully considered to avoid overshadowing of other structures and spaces, avoiding excessive shading and gloomy spaces.					
24 Spatial system					
A strong public spatial system is required with a range of intimate and public spaces for various social activities depending on the scale and type of development proposed.					
25 Links with green spaces					
Take advantage of adjacent or nearby green spaces by linking to these with planted streets and pedestrian routes.					
26 Balanced design					
Full sun must be balanced by shade structures or tree planting to create diversity of micro-climate.	A permanent shade structure is required in the sunniest areas.				
27 Trees and utilities					
Proposed and existing tree planting and existing / proposed utilities must be carefully considered from the outset to avoid clashes. This can be achieved through design co-ordination and defined service corridors.					
28 SLOAP					
Site planning must ensure that all land is designed with a use and purpose. There must be no SLOAP (space left over after planning).					
29 Management and maintenance					
The management and maintenance of green-space and public realm must be considered from the outset.					

14 Children and play					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Child density					
Review the potential child density for each development and prepare a play strategy that follows the '6 Acre Standard' by NPFA, GLA Supplementary Planning Guidance, and meets local authority planning requirements.					
2 Play strategy for larger developments					
A play strategy is required for all schemes having more than 20 family homes.					
2 Range of play oportunities					
A range of play opportunities must be provided in all larger schemes for young children across all age ranges, appropriate for their needs.					
4 Integrated play					
Play must be integrated within the landscape and built development plan and not treated as a peripheral activity.					
5 Overlooking play areas					
Young children's play must be overlooked and accessible for parents with seating proportional to the anticipated numbers of users.					
6 Provision for teenagers					
Teen play or recreation areas such as ball courts produce noise, so must be located away homes. Other forms of teen 'play' are essentially a social activity, so space for informal meeting and 'chatting' should be provided.					
7 Community involvement					
In larger projects, the community must be involved in the design process through workshops with schools, community groups and local artists.	As Required standard, with the addition of a community planting or installation day.				
8 Play and Home zones					
Homezones and private courtyards or communal garden areas are ideal locations for play areas.					
9 Play features					
in larger projects opportunities should be provided for incidental and embedded play, such as grass mounding, boulders, informal seating, climbing rocks, stepping stones, changes of level, water, logs and areas of longer grass.		The use of standard catalogue equipment and layouts is not acceptable.			

14 Children and play					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
10 RoSPA analysis					
A RoSPA analysis of the play proposals is required to ensure they meet approved safety standards.					
11 Dog-free play					
Play areas must be designed to keep dogs out. Signage, sprung gates and dog deterrent paving are required.					
12 Safety surfaces					
Safety surfaces such as sand or bark chippings are not to be used as they cannot be guaranteed safe for children.					

15 Parking your car

The well-considered design and management of car parking is essential for the success of every scheme. Whilst recognising that many residents will have, or need to have access to a car, the design should work to the minimum standards acceptable to the planning authority and to the housing-for-sale requirements.

Car parking must not dominate the appearance of the external environment. Pedestrians and cycle movement should take precedence over cars and vehicular movement. On-street parking may be applicable to lower density schemes, but fully-integrated, secure underground parking is required where financially viable.

Roads

A Homezone treatment can reduce speeds and make crossing safer for all

Roads are still accessible by emergency and refuse vehicles

Parking is arranged either parallel with or perpendicular to the direction of the road

Street trees and planting enhance the appearance of the street by providing a contrast with the mainly hard materials

Contrasting materials are used to delineate the pavement, road and crossing areas

Roads are designed and built to adoptable standards

15 Parking your car					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 In-line parking					
Parking should not dominate a development. Rows of 'in-line' parking must be a maximum of three cars long and broken up with tree or shrub planting.					
2 Delineate parking bays					
Parking areas must be subtly delineated with metal studs rather than white lines.					
3 Accessing home and facilities					
Residents should not have to traverse a car park to access homes and facilities.					
4 Disabled access					
There must be adequate provision for disabled access to meet the requirements of the local authority.					
5 Access for service vehicles					
Access for service vehicles must be considered in tandem with parking.					
6 Access to refuse storage					
Requirements for waste collection must be tested with and approved by the local authority. Access to bin stores must be within an agreed distance of collection lorries.					
7 Access for emergency vehicles					
Access for emergency vehicles should be clarified and approved by the appropriate authorities.					
8 On-plot parking					
On-plot parking is not acceptable, except for wheelchair users where space permits or where required by the planning authority.					
9 Permeable hard surfaces					
Hard surfaces must be permeable to allow sustainable drainage.					
10 Parking courts					
Parking courts should be avoided, unless they are well overlooked and incorporated into the public realm. Large car parking courts must be avoided.					
11 Underground parking					
Avoid underground parking for affordable housing. If essential in high density schemes it must be well lit, safe and secure. Where possible incorporate parking under buildings and/or decks with public realm above.					

15 Parking your car					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
12 Title					
Vehicle access must be restricted to roads. Kerbs, bollards and parking control mechanisms will be required, but a cluttered streetscape should be avoided.					
13 Priority for bikes and pedestrians					
Cyclists, cycle parking and pedestrian access must be considered at the same time as, and take priority over, vehicular access and parking.					
14 Bike parking					
Cycle parking numbers will be set out in planning guidance. Cycle stands and parking areas must be convenient and overlooked, safe, secure, and well lit.					
15 Charging points for cars					
Include infrastructure for evolving forms of transport such as charging points for electric cars and where there is a known requirement for charging mobility scooters.					
16 Car clubs					
Provision for parking space for car club vehicles and charging points for electric cars must be incorporated from the outset in high density, inner-city schemes.					

16 Well-connected and convenient

Every new development must sit comfortably within and connect to the surrounding neighbourhood. The design must ensure that there are clear, safe and convenient routes from the front door to local facilities and public transport.

Well-considered permeability and connectivity will establish a development into its locality and provide a clear sense of identity and security for those who live in the development as well as for those who pass through the area.

17 Well-managed

For all projects, the initial design is the beginning of the whole life of the development. As the design is finalised and materials selected, long term management and maintenance must be considered. There must be a clear definition of responsibilities and boundaries between public, private and adopted space. The design requirements and maintenance needs of each type of space must be defined at an early stage to ensure that the initial high quality can be maintained and improved upon as the development matures.

16 Well-connected and convenient					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Connect with local networks					
Road, pedestrian and cycle access to the development must connect into existing local networks, such as roads, footpaths, open spaces, bus stops and other transport hubs, in a clear and legible way.					
2 Access to local green space					
Access to local green-space must be clear, highly visible and easy to find.					
3 Design out short cuts					
Opportunities for short cuts across boundaries and through planted areas must be designed out. This can be achieved by logical locations for paths and roads and robust boundaries.					
4 Shared spaces					
Shared spaces and Homezones must be considered as a way of making public realm safer, more attractive and giving priority to pedestrians.					
5 Accessible routes and spaces					
All external routes and spaces must be accessible to all and designed in accordance with Manual for Streets and be DDA and LTH compliant.					
6 Walkable routes					
Walkable routes to key amenities are clear, direct and encourage active places.					
7 Transport links					
Local transport links and hubs must be connected to the proposed development.					
8 Focal points and gateways					
Focal points and gateways must be created at strategic points to orient pedestrians and provide a legible movement pattern through the development.					

17 Well-managed					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1 Choice of materials					
Materials must be considered from a whole-life perspective and must be robust, simple, replaceable and maintainable.					
2 Maintenance manuals					
Maintenance manuals or instructions must be prepared at the construction phase and in coordination with housing or maintenance managers.					
3 Planting design					
Planting must be designed to minimise maintenance by suppressing weeds and minimising or simplifying pruning operations.					
4 Narrow grass strips					
Narrow grass strips of less than one metre are not acceptable.					
5 Dominant planting					
Fussy planting design, fast growing hedges or species that self seed and become dominant are not acceptable.					
6 Mowing grass					
Grass areas must be designed to enable simple mowing by known machinery without the need for strimming.					
7 Access to soft landscape					
Soft landscape areas must be designed with management in mind e.g. access for workforce.					
8 Soft landscape maintenance					
Compost areas for green waste, watering points and sockets for electrical power must be included where machinery may need power.					
9 Adoptable standards					
All roads and pavements must be designed to adoptable standards.					
10 Refuse vehicles					
Access for refuse and recycling vehicles must be incorporated and this must meet the refuse and local authority requirements.					

Diversity and Sustainability

18 Diversity

To encompass the diversity of our residents, the Design Requirements ensure that:

- All supported housing will be provided in the form of high-quality homes fully integrated into the community.
- When commissioned as part of a larger development, supported housing will be fully integrated into the design to comply with the East Thames policy of tenure neutrality by appearance. The specification of fittings and finishes will be established for each project to meet the specific needs of the client group.
- The needs of these individual or groups will be met on an equal footing with all other tenures.
- All homes will meet Lifetime Homes standard, and 10% of homes will meet wheelchair standard. These targets will assist East Thames in meeting the demand for supported housing. In addition, we will adapt our general-needs housing to meet the needs of individual residents.
- The basic needs of the specific client group will be met in the allocation of sites within a larger development. For older residents, the proximity to shops or facilities is an important aspect of creating a sustainable community, and this must be a critical element of the brief.

At briefing stage, East Thames will identity the needs of the host community. Throughout the Design Requirements standards have been established to provide housing that either meets the cultural or religious needs of our residents, or facilitates their adaptation. Where appropriate East Thames will work with specialist housing providers and provide a project specific brief.

Key requirements that contribute to meeting the needs of our communities are contained within these Requirements and include:

- All 2-bed homes and larger are to have a separate kitchen/dining room with a window.
- Kitchen sinks to have one-and-a-half or two deep bowls.
- Kitchen to have a choice of gas or electricity for cooking.
- Bathrooms and separate WCs to have floors to a wash-down standard and adaptable to provide washing facilities adjoining the WC.
- Rear gardens to be suitable for growing vegetables and/or fruit for home consumption.

19 Future-proofing and adaptability

East Thames expects all new homes to last in excess of 60 years. Within that time span there will be considerable changes in technologies and life styles, in response to climate change and other factors.

Main services and primary distribution routes within the home and communal areas must be accessible for upgrading services and installing Smart meters without requiring significant remodelling.

Storage spaces within the home, and communally, must allow for the later addition of solar hot water and other technologies. Allow sufficient (vertical) storage space to accommodate renewable energy technologies such as heat recovery and enlarged thermal water stores.

Within communal spaces and homes, consider the floor-to-ceiling height to allow for the addition of energy technologies within ceiling voids.

Roofs must be considered and structured for the later addition of solar power, either hot water or photo-voltaic (PV) systems.

Materials must be selected on the basis of wearing and maturing well, and are suitable for simple future adaptation and maintenance. Any deviation from this principle must be discussed and agreed at an early stage in the design process.

The housing we create will serve many households, and the needs of those households will change over the life of the buildings. The design of each home and the communal areas must therefore allow for sensible adaptations. Internal walls may need to be moved to meet the need of families, aids and adaptations considered and installed. The application of the Lifetime Homes standard in all dwellings will assist in meeting many of these requirements, but not all. Prior to making a planning submission, the level of adaptability, as well as the design strategy and specific provisions for future-proofing must be agreed and incorporated.

20 Innovation and modern methods of construction

East Thames requires that all schemes will investigate different method of construction during the design development. Early discussion will ensure the integration of design and construction to provide an efficient building process. This is essential in order to deliver high-quality buildings to meet the anticipated life span, and to ensure that they are delivered economically and to an efficient programme. As part of that strategy there will be a risk management review considering and securing the optimum relationship between quality, programme, and value engineering to ensure that the quality is delivered efficiently and on time.

Our preference is that the design of individual projects does not lock our contractors into specific construction methods but allows for an early discussion between our Framework partners to enable the most appropriate construction methods to be chosen. Recognising that our buildings are assets that must have a long investment life, construction must be robust and easily maintainable. It is unlikely that timber framed construction will be acceptable in houses over three storeys. We will consider the use of prefabricated pods for kitchens and bathrooms on an individual project basis, but only on the assurance that fittings are maintainable and replaceable, that services are accessible, and that the installations positively contribute to meeting our requirement for Lifetime Homes.

For many of our projects, innovation and modern methods of construction will be focused on the design, procurement and construction process to ensure the best possible rate of completion to meet our need for zero defects at handover and effective management regimes.

21 Sustainability

East Thames has set the ambitious target of delivering the Code for Sustainable Homes earlier than the statutory deadlines. Our immediate target is to meet Code level 4, and then work to achieving Code level 5 by 2011. Pilot schemes will be brought forward to assist meeting these targets. Phased developments must be considered in this context.

The Code for Sustainable Homes (CSH) consists of 9 environmental sections, of which 4 categories (energy, water, materials and waste) have a single mandatory requirement that must be met to achieve a required Code level. For the other 5 categories East Thames has established its own minimum requirements.

The other 5 sections act as 'an environmental matrix' where, depending on the overall vision, additional credits can be gained to achieve the target score required. Whilst this does allow flexibility, the options that follow set out the priorities for East Thames and are in line with best practice; the intentions is to ensure that the maximum number of credits is within the control of East Thames.

These options should be seen as one but by no means the only route to meet the required Code levels. For example, there is the opportunity to increase surface water and ecology credits, depending on each site's condition and location. We have refrained from over-reliance on these credits, not because water or ecology are unimportant, but because they are site specific.

East Thames requires a clear design sequence for the development of the energy strategy within the CSH. Following the initial feasibility study and the confirmation that the project is to proceed, an energy environmental consultant will be required to provide an initial scoping study for energy/CO_2 reduction. This will then be developed to become the agreed energy strategy for the project.

The energy strategy is a key document that must be included in all design documentation and pass from designers to the constructors to ensure that the original concepts are delivered throughout the implementation process. At key stages the Design Team, including a representative of the East Thames Asset Management team, should assess the effective implementation of the energy strategy.

East Thames has a clear priority to provide affordable heating and utilities for its residents. The energy strategy must also demonstrate how energy consumption and CO_2 emissions are reduced in each home and how this will then reduce the utility bills for individual tenants.

Energy efficiency should be the first priority of the energy strategy for the project. By reducing the overall energy demand of the development the requirement for any renewable energy technology to meet mandatory requirements will be minimised.

The design process will follow this specific sequence:

1 A feasibility study is carried out to maximise, through the design of the building, the reduction in energy consumed and CO_2 produced.
2 Reduce energy demand - design for the maximum energy efficiency and minimum energy consumption.
3 Supply energy efficiently through efficient boilers and then consider CHP or other decentralised forms of energy supply.

And only then consider:

4 Supply renewable energy through on-site renewable energy technologies.

Whilst the contribution of renewable forms of energy generation may be determined in part upon local planning conditions, it is essential to ensure that the energy hierachy above is followed.

Full allowance is required at each stage to provide the space for all plant, servicing, storage, and infrastructure requirements.

East Thames seeks to achieve higher 'credit' scores wherever possible. Each category is clearly affected by the opportunities and constraints of the individual site. By careful consideration of the site, and the opportunity for high quality design responding to the site conditions, additional credits should be secured.

If, in response to on-site conditions, the agreed energy strategy should change, the Design Team should establish why this is proposed, and what changes are acceptable to East Thames.

The CSH requires careful consideration of the site and its surroundings to achieve the 'zero energy label', both for the production of renewable energy on site as well as ecological aspects. Therefore at feasibility and concept stages it is critical to ensure that the orientation and massing of the building(s) take full account of, for instance, the positive opportunities offered by the site to reduce energy demand and maximise natural (non-mechanical) solutions for through-ventilation controlled air flow. As the detailed design develops it is equally critical that the Code requirements inform the detailed design of the building overall and the individual home. Provision for recycling, storage and home working are examples of this, as is ensuring that reductions in energy and water usage are carried out in a way that is pragmatic, deliverable, and provides for day-to-day management of utilities by each individual household.

Although energy and carbon emissions are an important part of the Code, it is essential to consider the other elements of the Code, including the environmental impact of materials, management of surface water run-off and flood risk. In terms of wider sustainability issues, it is also important to consider the end-user experience in relation to the impact of technologies. This includes resident satisfaction, the need to ensure good quality site workmanship and the need to monitor our developments for actual energy, carbon and water consumption.

East Thames has specifically set higher priorities for the minimum credits required overall as the target for each level within the Code and also for each category within the Code.

Spreadsheet 21 on the next page shows East Thames' minimum requirements for credits in each category in the Code for Sustainable Homes, and the balance required for East Thames projects between each category.

Spreadsheet 22 on pages 67-71 provides further guidance on East Thames requirements with respect to achieving the credit scores under each category of the Code.

21 Code for Sustainable Homes minimum credit targets					
Required (R) Code 4	**Exemplar (E) Code 5**	**Baseline (B) Code 3**	**R**	**E**	**B**
Minimum target					
71 credits (72 in London).	87 credits	58 credits (60 in London).			
1a Energy					
20 (21 in London) out of a possible 29 credits (21 / 29).	28 out of a possible 29 credits (28 / 29).	14 (16 in London) out of a possible 29 credits (14 / 29).			
1b CO_2 reduction					
15%	15%	10%			
2 Water					
4 / 6	6 / 6	4 / 6			
3 Materials					
13 / 24	17 / 24	11 / 24			
4 Surface water					
3 / 4	3 / 4	3 / 4			
5 Waste					
6 / 7	6 / 7	6 / 7			
6 Pollution					
3 / 4	4 / 4	2 / 4			
7 Health and Well-being					
10 / 12 Plus Lifetime Homes compliance, plus high standards of sound insulation between dwellings.	11 / 12 Plus Lifetime Homes compliance, plus high standards of sound insulation between dwellings.	7 / 12 Plus Lifetime Homes compliance, plus high standards of sound insulation between dwellings.			
8 Management					
8 / 9 Including Secured by Design.	8 / 9 Including Secured by Design.	8 / 9 Including Secured by Design.			
9 Ecology					
4 / 9	4 / 9	3 / 9			

22 Sustainability					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
Category 1: Energy and carbon dioxide emissions					
1.1 Dwelling emission rate, building fabric, low & zero carbon (LZC) technologies					
Develop the design to meet the East Thames design sequence outlined on page 64, and ensure that a low or zero carbon feasibility study is carried out early in the design development stand as the basis for the development of the energy strategy.	Plus the dwellings will be constructed based on the principles of Passivhaus standard.				
1. A maximum U value of 0.2 (walls and exposed floors) : 0.13 (roofs) and air permeability rate of 3m³/hr/m² at 50Pa. Maximum heat loss parameter of 1.10 W/MK. For traditional construction external walls may exceed 400mm, for framed constructions this may be a minimum of approx 300mm.	Maximum u-value of exposed floors of 0.15. Maximum heat loss of 0.8 W/M²K.	Maximum heat loss parameter of 1.30 WM²K.			
2. Low or zero carbon technologies Although due regard must be paid to local planning requirements, steps need to be taken to ensure that energy efficicency measures are maximised first before low or zero carbon technologies are employed.		To provide 10% of CO_2 reduction from on-site renewable.			
3. Thermal bridging Limit and avoid where possible the impact of thermal bridging. The Energy Savings Trust's Enhanced Construction Details provides a model for acceptable detailing.					
4. Air tightness The air permeability of all dwellings is to be 3m³/hr/m² at 50Pa. An air pressure test will be required at completion of construction.	Dwellings to be constructed with air permeability less that 3m³/hr/m² at 50Pa.				
1.2 Windows and doors					
Windows must achieve a BFRC (British Fenestration Rating Council) rating in band B or better. Doors should achieve U-values better than 1.5 if glazed, or 1.0 if solid. The use of uPVC doors and windows is not permitted.	Windows must achieve a BFRC (British Fenestration Rating Council) rating in band A. Doors should achieve U-values better than 1.5 if glazed, or 1.0 if solid.	Windows must achieve a BFRC (British Fenestration Rating Council) rating in band C or better. Doors should achieve U-values better than 1.5 if glazed, or 1.0 if solid.			
1.3 Ventilation					
An appropriate ventilation strategy must be adopted using Energy Saving Trust best practice guidance and SAP Appendix Q.					
1.4 Overheating					
Follow Energy Saving Trust best practice guidance to avoid overheating by reducing heat gains, incorporating thermal mass and providing solar shading and secure night time ventilation. Mechancial cooling (air conditioning) is not permitted.					

22 Sustainability					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
1.5 Drying space					
Refer to section 3.35 to 3.37.					
1.6 Cycle storage					
Refer to section 8.7 and 8.8.					
1.7 Home office					
Refer to section 4.12.					
1.8 Future-proofing					
Not scored in the CSH but a critical issue for East Thames, services must be accessible with minimum demolition, via vertical risers then stored via dropped ceilings or alternatives. Allow for cylinder to become solar hotwater. heat store, and roofs to have renewable retro fitted.					
1.9 Monitoring					
Within the services strategy provide an accessible space for future installation of Smart meters.	Provide Smart metering.				
Category 2: Water					
2.1 Indoor water use					
A maximum use of 105 litres per person per day. Use of rainwater and greywater recycling must be considered.	A maximum use of 80 litres per person per day. Grey water and/or rainwater recycling must be provided.				
2.2 External water use					
Rainwater is to be collected and stored for external water usage.					
Category 3: Materials					
3.1 Environmental impact of materials					
The selection of materials must combine consideration of the embodied energy in the production, delivery, and incorporation of materials, and the environmental impact whilst in use. Materials should not be used that will harm residents or construction workers whilst in use or being installed. The BRE Green Guide to be used and a minimum score between A+ & D for all elements.	Achieve Green Guide rating between A+ and B.				

22 Sustainability					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
3.2 Responsible sourcing of materials – Basic building elements Responsible sourcing of materials – Finishing elements					
Recycled and responsibly sourced materials should be used. Projects will be audited to ensure that there are clear procurement strategies in use from design stage through implementation. No timber to be sourced from the Convention on International Trade in Endangered Species (CITES) and evidence to be provided of sourcing.					
3.3 Choice of materials					
All materials will be evaluated to consider their performance (including environmental), availability, cost in-use, whole life costs, and environmental impact. Use the BRE Green Guide and One Planet Living principles. Products and materials will be specified with good practice levels of recycled content relative to other products. At least 10% of total material value should derive from reused and recycled content.	As Required standard, plus at least 15% of total material value should derive from reused and recycled content.	As Required standard, plus at least 5% of total material value should derive from reused and recycled content.			
Category 4: Surface water run-off					
4.1 Management of surface water run-off from developments					
Sustainable Urban Drainage Systems, (SUDS) for surface water drainage.					
4.2 Flood risk					
Many sites that East Thames considers may be in higher flood risk areas. At feasibility and concept stages, designs must include for mitigation of the effects of floods on the residents and buildings through resistance and resilience measures. This may include sacrificial elements such as semi-basements or the design of services installations.					
Category 5: Waste					
5.1 Storage of non-recycle material waste and recyclable household waste					
All schemes to provide space and facilities for storage within the home and the site to promote recycling in order to gain the maximum credits.					

22 Sustainability					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
5.2 Construction site waste management					
The design must take account of the potential for waste in the construction process and design out waste wherever possible. A Site Waste Management Plan will be prepared independently at the earliest opportunity.					
5.3 Composting					
On all developments provide space for containers in each home and for external composters, both per house and per block of flats.	Communal composting in addition to individual composting.				
Category 6: Pollution					
6.1 Nitrous oxide (NOx) emissions					
Boiler selection is a critical element of the whole energy strategy, and of the space requirements withing the building design strategy. For example, bio-mass systems are recognised as low carbon systems but they can produce a significant amount of NOx. Storage space for biomass fuel must be provided.					
6.2 Global warming potential (GWP) of insulants					
The Global Warming Potential (GWP) of all insulation materials should be less than 5.					
Category 7: Health and well-being					
7.1 Daylighting					
All habitable rooms will meet the daylighting requirements of the CSH, and a minimum of 2 hours of daylight per day. These rooms will not rely on north facing daylight. Kitchens must achieve minimum average daylight factor of at least 2%.	80% view of sky provided in living/dining study and home office areas.	Kitchens must achieve minimum average daylight factor of at least 1.5%.			
7.2 Sound insulation					
A sound insulation strategy with advice from an acoustic consultant will be required for more complex proposals for flats and maisonettes. All similar uses are to be 'stacked' over each other. Sound insulation should meet the minimum credits or do better.	Airborne sound insulation values at least 8dB higher and impact sound values are at least 8dB lower than performance standards in the Building Regulations Approved Document E.	Airborne sound insulation values at least 3dB higher and impact sound values are at least 3dB lower than performance standards in the Building Regulations Approved Document E.			
7.3 Private outdoor space and storage space					
A minimum of 4m^2 per balcony for 1 bed flats and 6m^2 for larger flats, with 30m^2 as the minimum for gardens to homes and 20m^2 for maisonettes, for all occupants to sit outside.					

22 Sustainability					
Required (R)	**Exemplar (E)**	**Baseline (B)**	**R**	**E**	**B**
7.4 Service spaces					
Allow sufficient (vertical) services spaces with the home and communal areas (including additional ceiling heights to allow for drop ceiling) to accommodate renewable energy technologies and for example heat recovery systems and enlarged thermal water storage.					
7.5 Lifetime Homes					
All proposals will be designed to comply in full with the Lifetime Homes standard.					
Category 8: Management					
8.1 Secured by Design					
All design proposals are to be discussed with the Crime Prevention Design Adviser and certified where possible as meeting Secured by Design standards.					
8.2 Home users' guide and marketing of dwellings					
Retain relevant information for inclusion in Home Users' Guides which will be produced at the appropriate stage.					
Category 9: Ecology					
9.1 Ecological value of site					
Protect the current ecological value of the site and enhance it wherever possible. The ecological value of the site to be assessed at concept stage, and an ecological strategy proposed to assist design development.	The site should be of low ecological value, which should be enhanced through the development. Refer to 9.4 below.	No credits required but the current ecological value of the site should be retained.			
9.2 Ecological enhancement					
Key recommendations of an ecological advisor to be met, and a minimum of 30% of further recommendations to be implemented.					
9.3 Protection of ecological features					
No credit is required but protection of ecological features is expected.					
9.4 Change in ecological value of site					
No credits required, but a positive change in species of at least +2 is expected.	No credits required, but a positive change in species of at least +4 is expected.	No credits required, but a positive change in species of at least +1 is expected.			
9.5 Building footprint					
For both houses and flats achieve the maximum credits by achieving optimum ratios of net internal areas to net internal ground floor areas. For houses 3:1 or better; for flats 4:1 or better.					

This section provides a series of generic floor plans illustrating the Required and Exemplar design standards set out in Section 1. These cover a range of dwelling sizes and housing types. In addition, a suite of block plans illustrate how flat types can be combined to maximise dual aspect planning. These plans are for guidance only and are not site specific. They provide a series of templates for assessing individual scheme proposals.

The Design Requirements have been tested and defined through the preparation of floor and block plans for a range of dwelling sizes and housing types. These plans provide guidance on the arrangement, style of presentation and level of detail required by East Thames in order to explain a scheme and demonstrate compliance. In addition, the plans illustrate some of the important issues which are enshrined in the Design Requirements, such as the impact of furniture layouts and circulation space on home size. The plans are for guidance only and are not intended to be reproduced in projects.

Floor plans

Floor plans have been developed in detail to ascertain the likely sizes of different homes to achieve the Required and Exemplar standards.

Floor plans are provided as follows:

- Plans for all Required standard flats and houses.
- Plans for principal Exemplar standard flats and houses.

At feasibility stage, designers are expected to be confident that the furniture and activity spaces will fit easily; the level of detail shown below must be shown prior to planning submission.

1-bed 2-person flat
Required standard
53m²

The Lifetime Homes bathroom allows side access to the WC

A window is not essential in the bathroom in 1-bed 2-person homes

A lockable store is required for all dwellings, close to the home entrance

There should be space for a wheelchair turning circle in the hallway

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

A kitchen window is recommended in 1-bed homes

Full HQI access space is required around the dining table

It is required that the dining space be in the kitchen for all 2-bed homes and larger, but not essential in 1-bed homes

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

A cot space must be possible in the main bedroom without having to lose furniture

No focal feature is required in the living room - Exemplar standard only

External amenity space must be sufficient for the whole family to enjoy

CSH sets targets for the minimum daylight and view of the sky

1-bed 2-person flat
Exemplar standardt
58m²

2-bed 3-person flat
Required standard
68m²

The Lifetime Homes bathroom allows side access to the WC

A window is essential in the bathroom in 2-bed 3-person homes

A store for bulky outdoor items is required for all dwellings, close to the entrance

There should be space for a wheelchair turning circle in the hallway

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

A kitchen window is required in 2-bed homes and larger

Full HQI access space is required around the dining table

It is recommended that the dining space be in the kitchen for all 2-bed homes and larger

A 1200mm wide built-in wardrobe is required in the main bedroom in Required standard homes

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

No focal feature is required in the living room - Exemplar standard only

External amenity space must be sufficient for the whole family to enjoy

CSH sets targets for the minimum daylight and view of the sky

2-bed 4-person flat
Required standard
76m²

There should be a window in the bathroom in all 2-bed and larger homes

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

Washing machine and boiler located in cupboard away from kitchen

A lockable store is required for all dwellings, close to the home entrance

There should be a window to the kitchen in all 2-bed homes and larger

Full access space is required around the dining table

The dining space must be in the kitchen for all 2-bed homes and larger

A full wheelchair turning circle must be possible in the main bedroom

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

A cot space must be possible in the main bedroom without having to lose furniture

Twin bedroom width is 2.8m minimum, and area 12m² minimum

No focal feature is required - Exemplar standard only

External amenity space must be sufficient for the whole family to enjoy: 6m² for 3-bed homes and larger

CSH sets targets for the minimum daylight and view of the sky

3-bed 4-person flat
Required standard
82m²

There should be a window in the bathroom in all 2-bed and larger homes

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

Washing machine and tumble dryer space provided in cupboard

A lockable store is required for all dwellings, close to the home entrance

There should be a window to the kitchen in all 2-bed homes and larger

Full access space is required around the dining table

The dining space must be in the kitchen for all 2-bed homes and larger

A full wheelchair turning circle must be possible in the main bedroom

A cot space must be possible in the main bedroom without having to lose furniture

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

Single bedroom width is 2.3m minimum, and area 7.5m²

No focal feature is required - Exemplar standard only

External amenity space must be sufficient for the whole family to enjoy: 6m² for 3-bed homes and larger

CSH sets targets for the minimum daylight and view of the sky

3-bed 4-person flat
Exemplar standard
88m²

There should be a window in the bathroom in all 2-bed and larger homes

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

Washing machine and tumble dryer space provided in cupboard

A lockable store is required for all dwellings, close to the home entrance

There should be a window to the kitchen in all 2-bed homes and larger

Full access space is required around the dining table

The dining table must be large enough for 2 visitors in Exemplar homes

A 1500mm wide built-in wardrobe is required in the main bedroom in Exemplar homes

A full wheelchair turning circle must be possible in the main bedroom

A cot space must be possible in the main bedroom without having to lose furniture

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

Single bedroom width is 2.3m minimum, and area 7.5m²

A focal feature is required in Exemplar standard only

External amenity space must be sufficient for the whole family to enjoy: 6m² for 3-bed homes and larger

CSH sets targets for the minimum daylight and view of the sky

3-bed 5-person flat
Required standard
92m²

There should be a window in the bathroom in all 2-bed and larger homes

Space for boiler and washing machine in cupboard

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

A lockable store is required for all dwellings, close to the home entrance in flats

Ideally, the WC should be of the opposite handing to the bath for optional wheelchair access

There should be a window to the kitchen in all 2-bed homes and larger

Full access space is required around the dining table

The dining space must be in the kitchen for all 2-bed homes and larger

A full wheelchair turning circle must be possible in the main bedroom

A cot space must be possible in the main bedroom without having to lose furniture

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

Make rooms spacious enough for alternative furnituture arrangements

An over-sized wardrobe will help to meet the storage requirements

No focal feature is required - Exemplar standard only

External amenity space must be sufficient for the whole family to enjoy

CSH sets targets for the minimum daylight and view of the sky

4-bed 6-person flat
Required standard
106m²

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

Space for washing machine in cupboard

Hallway is wide enough for ease of access, with storage space for outdoor clothes and equipment

Ideally, the WC should be of the opposite handing to the bath for optional wheelchair access

A lockable store is required for all dwellings, close to the home entrance in flats

There should be a window to the bathroom in all 2-bed homes and larger

Full access space is required around the dining table

The dining space must be in the kitchen for all 2-bed homes and larger

A full wheelchair turning circle must be possible in the main bedroom

Rooms must be spacious enough for alternative furnituture arrangements

CSH sets targets for the minimum daylight and view of the sky

No focal feature is required - Exemplar standard only

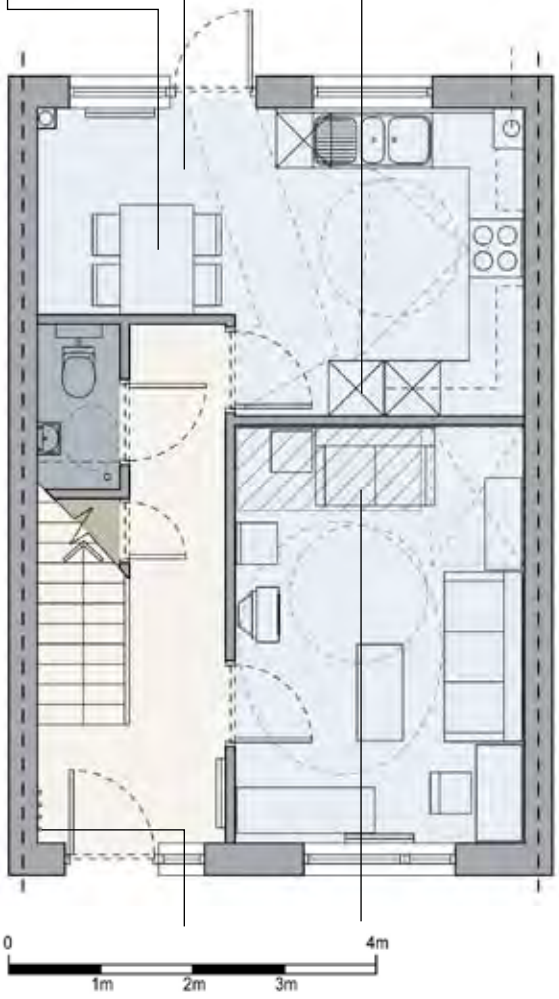
External amenity space must be sufficient for the whole family to enjoy

2-bed 4-person 2-storey house
Required standard
85m²

Full access space is required around the dining table

The dining space must be in the kitchen for all 2-bed homes and larger

An additional tall cupboard is required in the kitchen for bulk storage



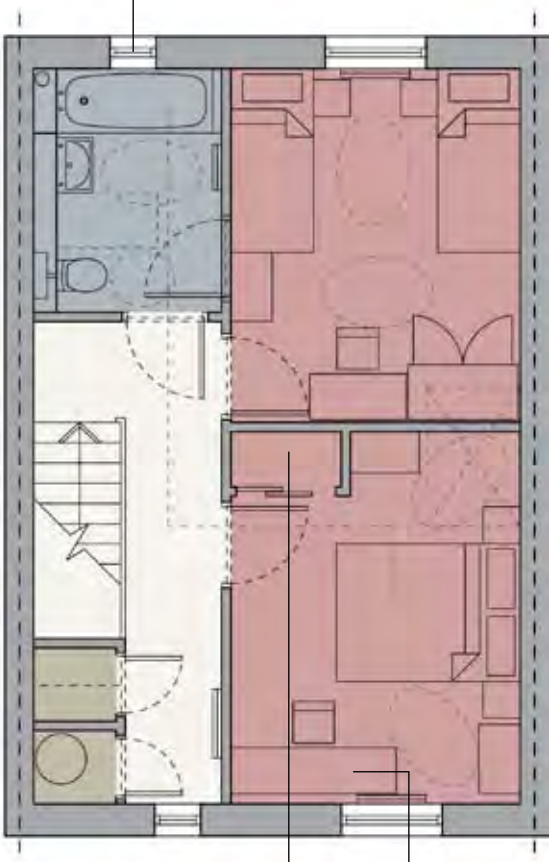
Ground Floor

Hallway is wide enough for ease of access, with wall space for hanging outdoor clothes and cupboard space for equipment

A bed space and through-floor lift location are indicated in the living room for Lifetime Homes compliance

There should be a window in the bathroom in all 2-bed homes and larger

Twin and double bedrooms should be 12m2 minimum are and 2.8m minimum width



First Floor

A cot space must be possible in the main bedroom without having to lose furniture

A fitted wardrobe in Required standard homes is 1200mm wide

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

2-bed 4-person 2-storey house
Exemplar standard
98m²

Full access space is required around the dining table

An additional tall cupboard is required in or adjacent to the kitchen for bulk storage

The dining space must be in the kitchen for all 2-bed homes and larger

Ground Floor

Hallway is wide enough for ease of access, with wall space for hanging outdoor clothes and cupboard space for equipment

A focal point is provided in the living room in Exemplar homes

A bed space and through-floor lift location are indicated in the living room for Lifetime Homes compliance

Stairs are straight with landings at top and bottom for ease of installation of a future stair-lift

There should be a window in the bathroom in all 2-bed homes and larger

Built-in wardrobes are provided in main bedrooms of Exemplar homes

First Floor

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

The twin bedroom furniture can be rearranged in a different configuration

Twin bedrooms should be 12m2 minimum are and 2.8m minimum width

3-bed 5-person 2-storey house
Required standard
97m²

Full access space is required around the dining table

The dining space must be in the kitchen for all 2-bed homes and larger

An additional tall cupboard is required in or near the kitchen for bulk storage

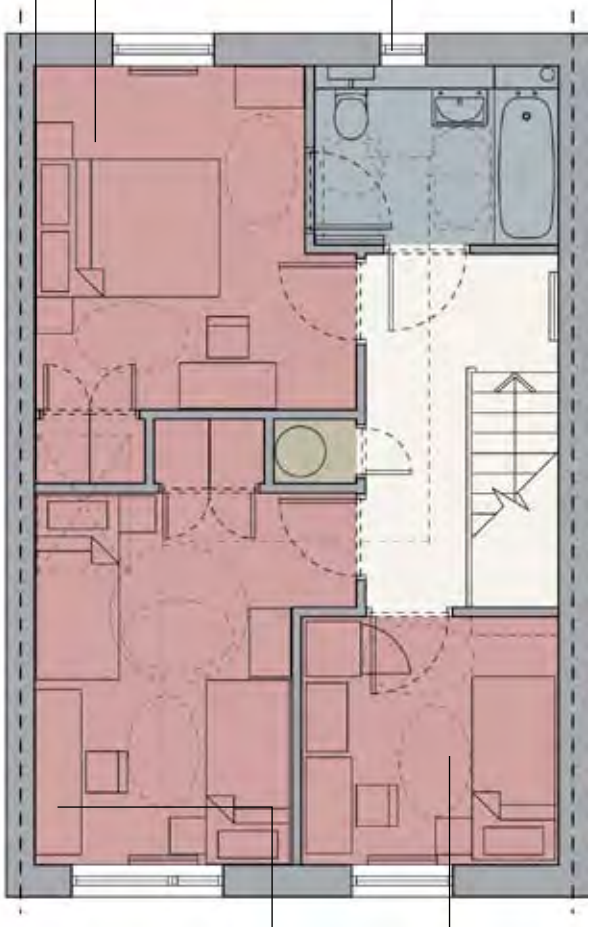
The washing machine is located in a separate space, away from the kitchen

The wardrobe is built-in, taking advantage of the depth of the HWC cupboard

There is plenty of space for a cot, without removing any furniture

There should be a window in the bathroom in all 2-bed homes and larger

Ground Floor



First Floor

A bed space and through-floor lift location are indicated in the living room for Lifetime Homes compliance

Hallway is wide enough for ease of access, with wall space for hanging outdoor clothes and cupboard space for equipment

The inset porch provides shelter at the door and space for meters to be located discretely

Twin bedrooms should be 12m2 minimum area and 2.8m minimum width

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

Single bedrooms are a minimum of 8m² with a minimum width of 2.3m

4-bed 6-person 3-storey house
Required standard
122m²

Full access space is required around the dining table

An additional tall cupboard is required in or adjacent to the kitchen for bulk storage

The washing machine is separate from the kitchen-dining room

Ground Floor

A bed space and through -floor lift location are indicated in the living room for Lifetime Homes compliance

Hallway is wide enough for ease of access, with cupboards for outdoor clothes and equipment

A good amount of storage is required in larger homes

There should be a window in the bathroom in all 2-bed homes and larger

The first flight or stairs is straight with landings at top and bottom for ease of installation of a future stair-lift

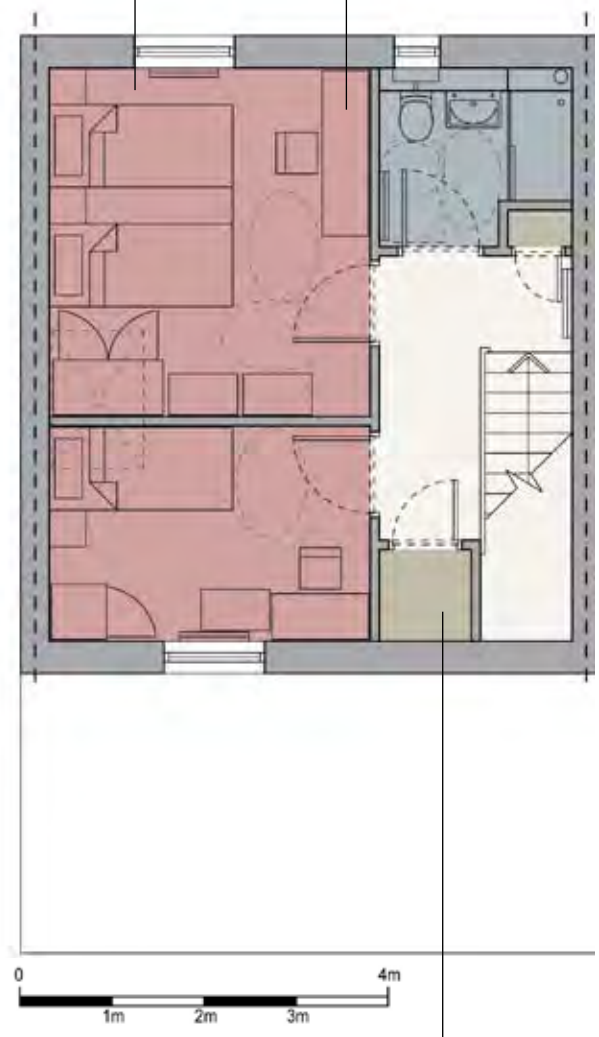
First Floor

Single bedrooms are a minimum of 8m² with a minimum width of 2.3m

Natural light and ventilation is required in corridor and stair areas

The twin bedroom furniture can be rearranged in a different configuration

A workspace situated in the bedroom, to comply with Code for Sustainable Homes



Second Floor

A good amount of storage is required in larger homes

4-bed 6-person 3-storey house
Exemplar standard
138m²

Full access space is required around the dining table

An additional tall cupboard is required in or adjacent to the kitchen for bulk storage

The dining space must be in the kitchen for all 2-bed homes and larger

The washing machine is separate from the kitchen

Ground Floor

A bed space and through-floor lift location are indicated in the living room for Lifetime Homes compliance

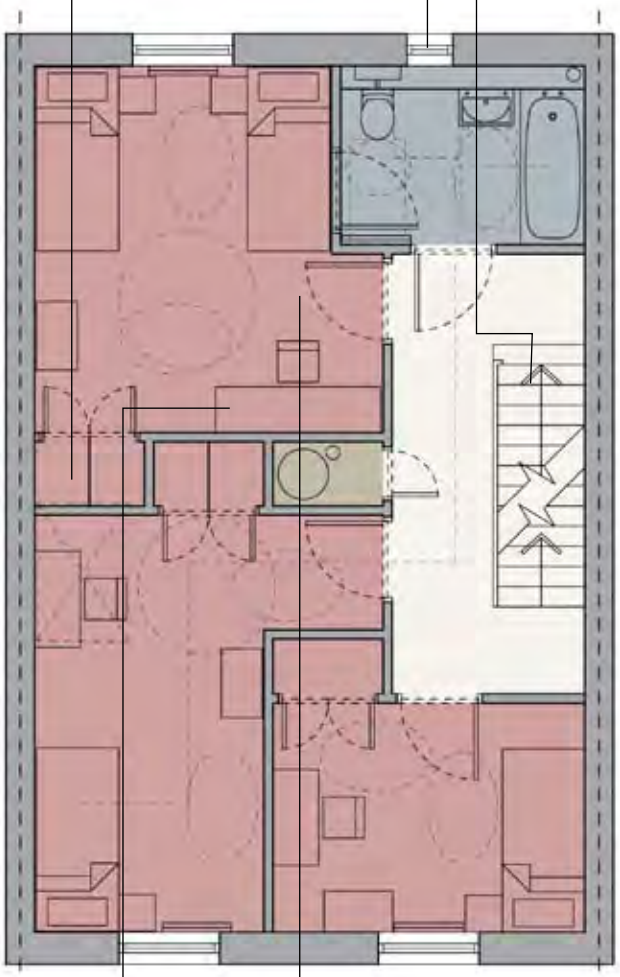
A focal point is provided in the living room in Exemplar homes

Hallway is wide enough for ease of access, with wall space for hanging outdoor clothes and cupboard space for equipment

Built-in wardrobes are provided in main bedrooms of Exemplar homes

There should be a window in the bathroom in all 2-bed homes and larger

Stairs are straight with landings at top and bottom for ease of installation of a future stair-lift

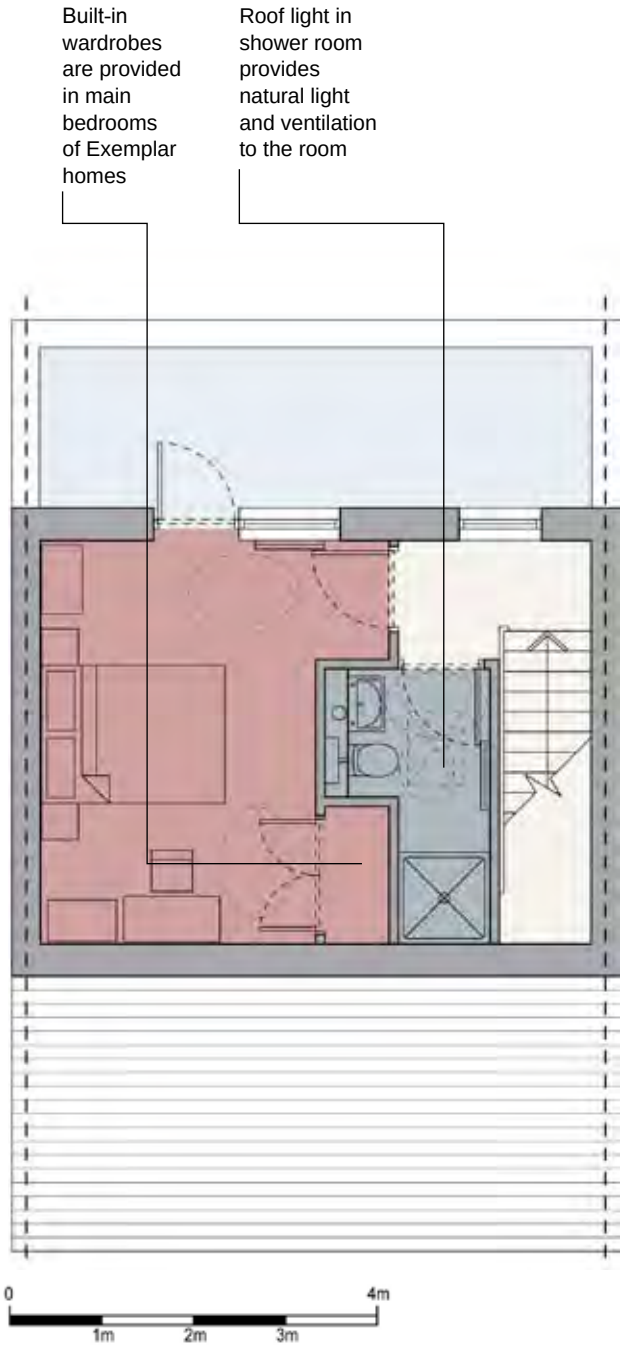


First Floor

A workspace situated in the bedroom, to comply with Code for Sustainable Homes

The twin bedroom furniture can be rearranged in a different configuration

Single bedrooms should be 8m² minimum area and 2.5m minimum width



Second Floor

Block plans

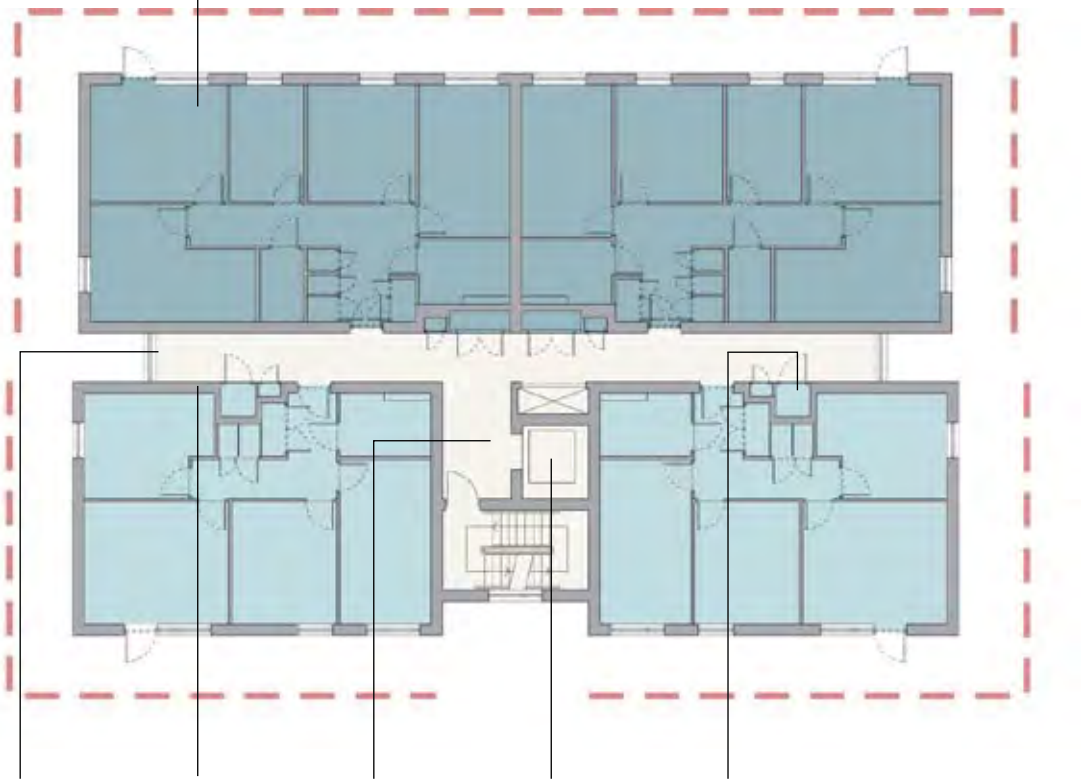
The Design Requirements have a number of consequences for the layout of blocks, and for the siting of buildings on any specific site. All proposals should indicate how these consequences have been considered, and are reflected in the proposals. Each site is unique so that for any given project a number of judgements have to be made to achieve the best balance between individual requirements, and mandatory and statutory standards.

Key considerations are likely to be:

- The provision of separate kitchens with windows with more than 4 occupants or larger.
- The Code for Sustainable Homes requirement for defined daylight to kitchens.
- The preference for dual aspect, naturally ventilated dwellings.
- The number of dwellings serviced by any one core.
- The number of dwellings serviced from any one lift or pair of lifts.
- The length for internal and external access corridors, and consideration of the potential for 'fire engineering' escape routes.

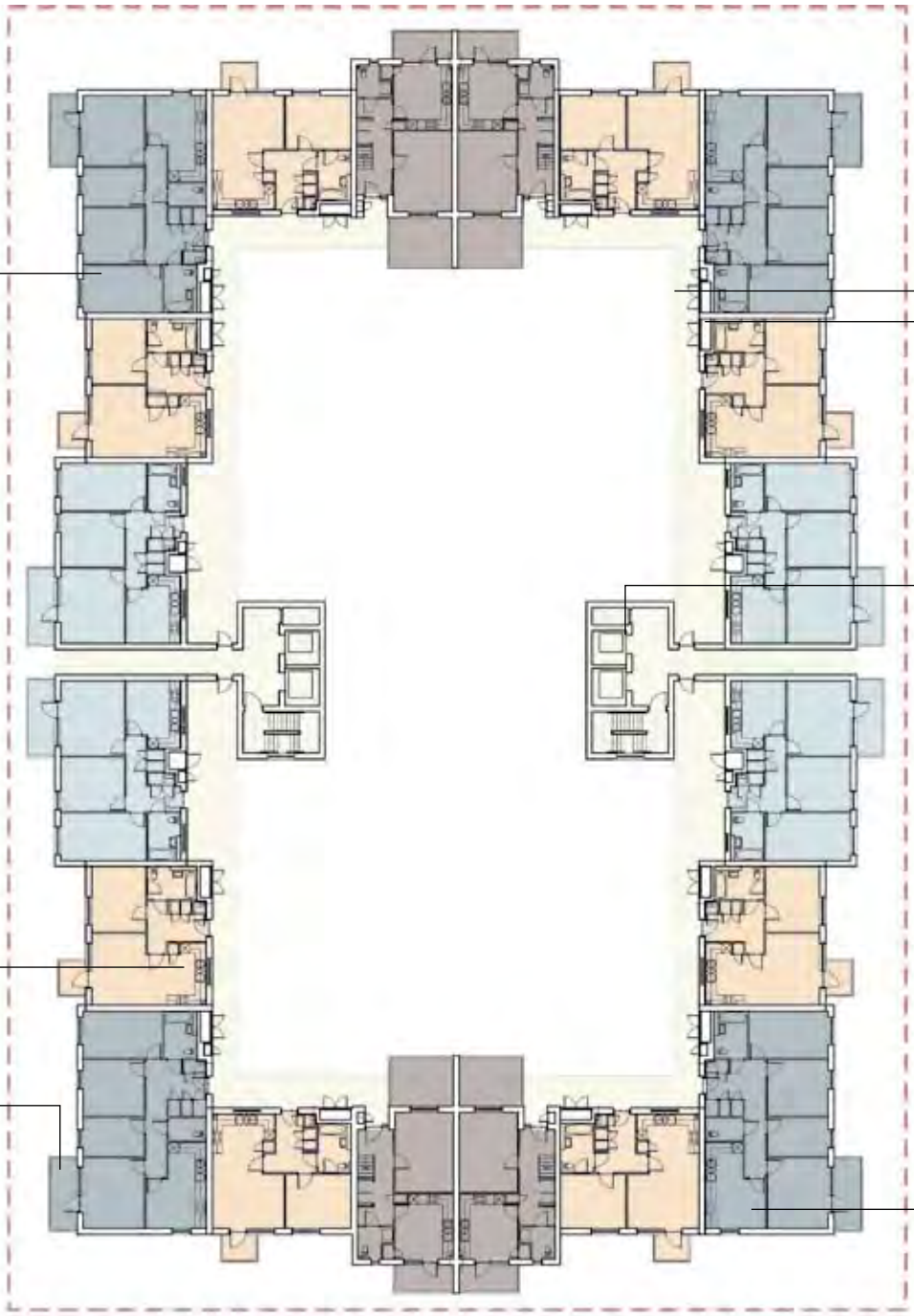
The plans indicate how these concerns impact on and can constrain the design of flats and maisonettes, but can also create opportunities for innovative designs.

Single core dual aspect block of flats
2 x 2b4p flats + 2 x 3b5p flats to a core on each floor



Single core, corridor access block of flats
Dual aspect flats, except for centre conditions
2 x 1b2p + 2 x 2b4p + 2 x 3b5p flats to a core on each floor

Atrium with balcony access
All flats and maisonettes are dual aspect



All flats are dual aspect as a minimum, with end flats having windows on three sides

The limitations on travel distances are greatly extended by using open access balconies or decks

An external 'dirty' store is provided for each flat, accessed from the main deck or balcony

Access to the block is achieved via a detached stair and lift core, keeping activity away from flat entrances

Windows to non-habitable rooms face onto the access deck to maintain privacy for residents

The flats at the end of the access balcony are the largest, with three beds, allowing good cross ventilation

Larger balconies are provided for the larger flats

1b2p flat
2b4p flat
3b5p flat
3b5p mais.
Circulation
Dual aspect

Acknowledgements

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