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Assessing the cost of Lifetime Homes Standards

**Building Cost Information Service (BICS)** 

July 2012 Department for Communities and Local Government This research was commissioned by the previous government. The views and analysis expressed in this report are those of the authors and do not necessarily reflect those of the Department for Communities and Local Government. This document is being published in the interests of transparency.

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# CONTENTS

EXECUTIVE SUMMARY	4
1.0 INTRODUCTION	6
1.1 Objective	
1.2 Background	
1.3 The Project	
1.3.1 The Designs	
1.3.2 Measurement and Pricing	
1.3.3 Report	
2.0 LIFETIME HOMES STANDARDS	9
3.0 THE DESIGNS — HOUSES	11
3.1 HTA Architects' Designs	11
3.2 Design Changes to Houses	11
3.3 Market Coverage	
3.3.1 Dwelling Types	
3.3.2 Number of Bedrooms	
3.3.3 Floor Areas	19
4.0 THE ESTIMATES — HOUSES	22
4.1 Pricing Base	22
4.2 Cost of Compliance for Individual Houses	22
4.3 Cost of LHS Compliance for Each Criterion	25
4.3.1 Costs of Compliance	25
4.3.2 Adjusted Costs of Compliance	25
4.4 Sensitivity Analysis	28
4.4.1 Contract Size Adjustment	28
5.0 THE DESIGNS — FLATS	
5.1 HTA Architects' Designs	
5.2 Design Changes to Flats	
5.3 Market Coverage	
5.3.1 Dwelling Types	
5.3.2 Number of Bedrooms	
5.3.3 Floor Areas	35
6.0 THE ESTIMATES — FLATS	
6.1 Cost of Compliance for Individual Flats	
6.2 Cost of LHS Compliance for Each Criterion for Flats	
6.2.1 Costs of Criteria for Flats	
6.2.2 Adjusted Costs of Compliance for Flats	42
6.3 Sensitivity Analysis	
6.3.1 Contract Size Adjustment	
6.3.2 Number of Storeys	45
7.0 CONCLUSIONS AND RECOMMENDATIONS	48
Glossary of Terms	50
-	

## **CONTENTS** (cont'd)

#### **List of Tables**

- Table 1: Summary of the Lifetime Homes Standards Applicability
- Table 2: Summary of Design Changes to Houses
- Table 3: Cost Summary of LHS Compliance for Houses
- Table 4: Costs for Layout and Criteria for Houses
- Table 5: Summary of Adjusted Costs of LHS Compliance for Houses
- Table 6: Cost Summary of LHS Compliance for Each Criterion for Houses
- Table 7: Adjusted Cost Summary of LHS Compliance for Each Criterion for Houses
- Table 8: Elemental Cost Summary of the Minor and Major Developments for Houses
- Table 9: Summary of Design Changes to Flats
- Table 10: Cost Summary of LHS Compliance for Flats
- Table 11: Costs for Layout and Criteria for Flats (Example 1)
- Table 12: Costs for Layout and Criteria for Flats (Example 2)
- Table 13: Cost Summary of LHS Compliance for Each Criterion for Flats
- Table 14: Summary of Adjusted Costs of LHS Compliance for Flats
- Table 15a: Adjusted Cost of LHS Compliance for Each Criterion for Flat —Example 1
- Table 15b: Adjusted Cost of LHS Compliance for Each Criterion for Flat Example 2
- Table 16: Elemental Cost Summary of the Minor and Major Developments for Flats
- Table 17: Cost Summary of the Effect of Number of Storeys

#### **List of Figures**

- Figure 1: Trends in Private Sector House Construction
- Figure 2: Changes in Number of Bedrooms in New Houses
- Figure 3: Market Proportion Two Bedroom Terraced
- Figure 4a: Market Proportion Three Bedroom Terraced (Example 1)
- Figure 4b: Market Proportion Three Bedroom Terraced (Example 2)
- Figure 5: Market Proportion Four Bedroom Semi-Detached
- Figure 6: Trends in Private Sector Flats Construction
- Figure 7: Changes in Number of Bedrooms in New Flats
- Figure 8a: Market Proportion One Bedroom Flats (Examples 1 and 2)
- Figure 8b: Market Proportion Two Bedroom Flats (Examples 1 and 2)

#### **List of Appendices**

### Appendix 1: Area Schedules

- Appendix 1a: Area Schedule Houses
- Appendix 1b: Area Schedule Flats

## Appendix 2: Elemental Cost Breakdowns

- Appendix 2a: Elemental Cost Breakdowns Two Bedroom Terraced House
- Appendix 2b: Elemental Cost Breakdowns Three Bedroom Terraced House
- Appendix 2c: Elemental Cost Breakdowns Four Bedroom Semi-Detached House
- Appendix 2d: Elemental Cost Breakdowns Flats Example 1
- Appendix 2e: Elemental Cost Breakdowns Flats Example 2

### **EXECUTIVE SUMMARY**

The Lifetime Homes Standards (LHS) can be achieved with a minimal increase to most dwelling sizes. The results showed that the implementation of LHS will have a cost implication on almost all units irrespective of size in any given typology.

The footprints and layouts of the houses and blocks of flats have to be altered to accommodate LHS features.

The new layouts for the houses have an open plan arrangement with through lounge/dining rooms thereby reducing the quantity of partition walls.

The frontage to the two bedroom house will have to be marginally increased to accommodate the additional features. Conversely, the depth of the three bedroom and four bedroom houses has increased.

Whilst the cost of complying with most criteria is similar in the three typologies, the biggest variance is in the cost associated with the increase in floor area and the cost of enhancing the specification of the bathroom and WC walls. The overall cost of LHS compliance has been mitigated by changes in the overall layout and footprint adapted. This varies between all the typologies, with the Example 2 three bedroom property being the greater beneficiary.

Most importantly, it should be noted that the number of designs produced for houses is limited and the typologies produced are only representative of the market of between 9–35%. Our database however, shows that the typical sizes of house being built are 67.5m² for a two bedroom terrace, 87.5m² for a three bedroom terrace and 114m² for a four bedroom semi-detached house. The report shows that the costs associated with implementing the criteria generally decrease as the size of the house increases. Therefore the overall cost of a market representative two, three and four bedroom designed house meeting LHS, would be lower.

With regards to flats, the overall cost of compliance is very much dependent upon the works required to the communal circulation areas and the effect the increase in gross internal floor areas (GIFA) of an individual flat has on the structure of the block. Unlike the houses, the flats are generally open plan design and therefore have had no radical changes in the design and layout which could have mitigated the LHS cost. Again, it should be noted that the number of designs produced for the flats were limited. However, the typologies produced are more representative, covering between 40–53% of the market.

Finally, none of the typologies produced for houses has been market tested for desirability and marketability. The overall layout of the flats is unchanged although the footprint of the Example 1 block has increased to accommodate the increase in the footprint of the one bedroom flat and the footprint of the Example 2 block has increased to accommodate the lift shaft increase. Therefore, it will take time for the industry to develop cost efficient designs which are marketable, desirable and comply with LHS.

4

The total impact on the seven typologies is as follows:

	Total	Costs
Dwelling Type	Minor	Major
	Development	Development
2 Bedroom Terraced House*	£928.10	£796.08
3 Bedroom Terraced House (Example1)*	£2,500.50	£2,117.65
3 Bedroom Terraced House (Example 2)*	£119.99	£119.54
4 Bedroom Semi-Detached House*	£687.47	£594.67
1 Bedroom Flat – Example 1 <sup>†</sup>	£845.05	£717.90
1 Bedroom Flat – Example 2 <sup>†</sup>	£1,216.18	£1,033.20
1 Bedroom Flat (Excluding Lift) - Example 2 <sup>†</sup>	£904.90	£779.63
2 Bedroom Flat – Example 1 <sup>†</sup>	£321.86	£273.44
2 Bedroom Flat – Example 2 <sup>†</sup>	£1,378.32	£1,170.94
2 Bedroom Flat (Excluding Lift) – Example 2 <sup>†</sup>	£906.32	£780.85

<sup>\*</sup> Refer to Table 8
† Refer to Table 16

#### 1.0 INTRODUCTION

## 1.1 Objective

To assess the cost implication of implementing Lifetime Homes Standards (LHS) in private sector housing based upon comparisons between typical speculative house builder example layouts and alternative Lifetime Homes layouts produced by HTA Architects for two, three and four bedroom houses and one and two bedroom flats.

### 1.2 Background

BCIS was commissioned by Communities and Local Government to establish the cost impact of introducing the Lifetime Homes Standards by the private sector and to identify best practice and the cost savings that can be delivered through efficiency of design.

Since the Lifetime Homes concept was first proposed by the Joseph Rowntree Foundation in the early 1990s, the standards have been revised and interpreted in a variety of ways. This has lead to a range of estimates of their impact. Some of this variability is down to the way the standards have been expressed, some to the way they have been interpreted, and some to the estimates themselves.

However, almost all of these studies were based on public or social housing standards and there has been little evidence that the impact of the concept has been fully explored in private sector housing.

In February 2008, the Department launched 'Lifetime Homes Lifetime Neighbourhoods — a National Strategy for Housing in an Ageing Society'.

The strategy is committed to ongoing research and development of the evidence based on Lifetime Homes, to support a review of policy in 2010 and an ambition to see all homes built to Lifetime Homes Standards by 2013.

Government also committed to promoting the take up of the standards in the private sector. One of the key issues facing the private sector is understanding the implications for size and cost of Lifetime Homes compliant house typologies, and also engaging in design from first principles (rather than re-designing existing typologies) in order to meet the standards most efficiently.

Whilst innovation is happening in some areas where public or social housing standards are applied, there is little evidence that this has been fully explored in relation to private sector housing. As a result, it is difficult to identify what impact LHS will have on private sector typologies.

6

## 1.3 The Project

### 1.3.1 The Designs

The Department commissioned a proof of concept for the design of efficient typical typologies facing the private sector which comply with the Lifetime Homes Standards. The designs carried out by HTA Architects provided the basis for a comparison with current typical typologies and existing house types in the market as a whole.

BCIS were expecting fully designed detailed plans and specifications required for measurement and pricing, but were informed by HTA that only outline 1:50 floor plan layouts were to be produced without elevations, sections and specifications. The measurement and pricing is based upon HTA Architects' *Lifetime Homes Standards for Private Sector Development* drawings Revision G, dated 14 August 2009.

A generic fit-out specification was made available and other outstanding specifics were agreed with the architects. However, it was still necessary to make assumptions on some aspects of the design.

To enable a like for like comparison, the new typologies had to maintain the same proportion of living space and bedroom areas. However, design changes were inevitable to accommodate the LHS requirements. In most cases, the footprints have been revised and the gross internal floor areas (GIFA) have increased marginally.

#### 1.3.2 Measurement and Pricing

Based on the level of detail of the three typologies provided, we identified the differences between the primary typologies and undertook detailed measurements. Elemental approximate quantities were abstracted and priced using a bespoke pricing schedule, based upon BCIS's own pricing database, prices from specialist suppliers, contractors and other external sources.

Cost estimates were produced for each criterion in element format where applicable. The costs reflect only the additional work over and above the current Building Regulations (Part M). The results showed that the implementation of LHS will have a cost implication on almost all units irrespective of size in any given typology.

For measuring and pricing purposes, the following assumptions were made, based on similar house types contained on the BCIS database.

- Pricing has been based upon two development scenarios:
  - (a) a development of 200+ properties with a contract value of approximately £20,000,000
  - (b) a development of 10+ properties with a contract value of approximately £750,000 for houses, and
  - (c) single blocks of low rise flats with a contract value of approximately £1,000,000.
- Pricing is based on the first quarter 2009.
- Preliminaries have been included at 10% for the 200+ development and 12% for the 10+ development.

7

- Contractors' overheads and profit have been included at 3.5% for the 200+ development and 5% for the 10+ development.
- Professional fees have been included at 6% for the 200+ development and 7.50% for the 10+ development.
- · Location factor has been taken as the UK mean.
- The site is accessible.
- Normal ground conditions.
- Although there are instances of kitchen units being reconfigured to each property on the revised Alternative Lifetime Homes layout, it is assumed that the quantities remain the same.
- The quantity of tiled splash back to bathrooms, WCs and kitchens remains the same.

The actual change in cost will ultimately depend on the base specification, which in this case was taken to be at the bottom end of the cost spectrum for speculative development.

#### 1.3.3 Report

The project comprises two phases. The first phase compares the design solutions in the new LHS compliant dwellings, and measures and prices the differences from two storey houses existing in the market comprising two, three and four bedroom dwellings. This was then replicated and expanded to include flats and a revised three bedroom typology only in phase two.

This is the final report which encompasses the findings of both phase one and phase two.

## 2.0 LIFETIME HOMES STANDARDS

The Lifetime Homes Standards used for this study are as published on the Lifetime website, <a href="http://www.lifetimehomes.org.uk/pages/home.html">http://www.lifetimehomes.org.uk/pages/home.html</a>. This defines Lifetime Homes as 'the incorporation of 16 design features that together create a flexible blueprint for accessible and adaptable housing in any setting'.

Not all the standards apply to all dwelling types. For example, some of the requirements are specific to two storey houses and will not apply to bungalows or flats, and some requirements only apply to larger houses. Furthermore, it should be noted that site specific provisions have been excluded from this study.

An analysis of the requirements and their applicability to each of the three unit types is shown in Table 1 below.

Table 1: Summary of the Lifetime Homes Standards Applicability

Criteria	Provision	Interpretation/Compliance	Applicability	Implications		
1	Car Parking Width	Where there is car parking adjacent to the home, it should be capable of enlargement to attain 3300mm width.	Site specific and therefore not considered	N/A		
2	Access From Car Parking	The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.	Site specific and therefore not considered	N/A		
3	Approach Gradients	The approach to all entrances should be level or gently sloping.	Site specific and therefore not considered	N/A		
4	External Entrances	All entrances should: a. be illuminated b. have level access over the threshold; and c. main entrances should be covered.	All units	a&c. Increases construction costs b. part of Part M requirement		
5	Communal Stairs and Lifts	a. Communal stairs should provide easy access.     b. Where homes are reached by a lift, it should be fully accessible.	Requirement for flats	a&b. Increases construction costs		
6	Doorways and Hallways	The width of internal doorways and hallways should conform to Part M, except that when the approach is not head on and the hallway width is 900mm, the clear opening width should be 900mm rather than 800mm. There should be 300mm nib or wall space to the side of the leading edge of the doors on entrance level.	Design layout issue	May have an effect on door sizes		

 Table 1: Summary of the Lifetime Homes Standards Applicability cont'd

9

Criteria	Provision	Interpretation/Compliance	Applicability	Implications	
7 Wheelchai Accessibili		There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchairs elsewhere.	All units, design issues	May have an effect on room and door sizes	
8	Living Room	The living room should be at entrance level.	Two or more storey houses, design and layout issues	No cost effect	
9	Entrance Level Bed Space	There should be space on the entrance level that could be used as a convenient bed space.	Two or more storey houses, design and layout issues	No cost effect	
10	Entrance Level WC and Shower Space	There should be:  a. a wheelchair accessible toilet at entrance level with  b. drainage provision enabling a shower to be fitted in the future.	Houses with three or more bedrooms and all dwellings on one level, also Part M requirement	Cost implications associated with forming and installing gulley drainage system and may increase the floor area	
11	Bathroom and WC Walls	Walls in the bathroom and WC should be capable of taking adaptations such as handrails	All units	Reinforcement of bathroom and WC walls	
12	Stair Lift and Through- Floor Lift	The design should incorporate provision for a future:  a. stair lift, and b. a suitably identified space for a through the floor lift from the ground floor to the first floor.	Dwellings with two or more storeys	Additional cost for forming future knock through panel	
13	Tracking Hoist Route	The design and specification should provide a reasonable route for a potential hoist from a main bedroom to the bathroom.	Standard trusses and precast concrete floors adequate	No cost effect	
14	Bathroom Layout	The bathroom should be designed for ease of access to the bath, WC and wash basin.	All units, layout issues	Additional cost associated with increases in floor area	
15	Window Specification	Living room window glazing should begin no higher than 800mm from the floor level and windows should be easy to open/operate.	Design and specification issue	No cost effect	
16	Controls, Fixtures and Fittings	Switches, sockets, ventilation and service controls should be at a height usable by all ( <i>ie</i> between 450 and 1200mm from the floor).	Design and specification issue	Negligible effect	

The standards used in the study were published by the Habinteg Housing Association. If the Department is to implement the Lifetime Homes concept as interpreted above it will need to issue clear guidance. The spirit of the standards should be to provide homes that fulfil the aspirations of modern living and are still adaptable and appropriate to changing needs.

### 3.0 THE DESIGNS — HOUSES

### 3.1 HTA Architects' Designs

The following is a summary of the specification.

- Standard strip foundations to all properties.
- The two and three bedroom properties are terraced and the four bedroom property is semi-detached.
- The height of the buildings to eaves level is 4875mm for all houses.
- The floor-to-ceiling height to the ground floor is 2375mm and 2320mm to the first floor on all houses.
- Cavity and party walls are assumed to be 300mm thick.
- Internal timber stud partitions are 100mm thick.
- Load bearing partitions to the typical speculative house builder, four bedroom property at ground floor level, are 150mm thick.
- In order to satisfy Building Regulation (Part E), partitions around bathrooms and WCs are insulated.
- All internal doors are assumed to be 838 x 1981 x 35mm to ground and first floor levels of the typical speculative developments of two and three bedroom houses. However, in typical speculative developments for the four bedroom properties the ground floor doors are assumed to be 838 x 1981 x 35mm to the ground floors but first floor doors are assumed to have 762 x 1981 x 35mm doors. Store doors to all house types are assumed to be 533 x 1981 x 35mm.
- Roofs to all houses have clay tiles with 45 degree pitches.
- The plans do not show external windows or patio doors, therefore, assumptions have been made with regard to location and size based upon what would be the norm.
- Wall and ceiling finishes to the kitchen, WC and bathrooms are anti-condensation emulsion paint, and standard emulsion paint to other areas. There are tiled splash backs to wet areas, *ie* to sinks and baths.
- Floor finishes to kitchens, WCs and bathrooms are tiled and floor finishes to the remaining areas of the house have been excluded.

### 3.2 Design Changes to Houses

The most radical changes are to the layouts to the ground floors of the two and three bedroom houses. The footprint of the four bedroom house has also changed significantly resulting in an increase of over a third in the depth of the house, accompanied by a decrease of just over a fifth in the frontage, see Table 2.

 Table 2: Summary of Design Changes to Houses

Area	2 Bed House			3 Bed House (Example 1)			3 Bed House (Example 2)			4 Bed House						
Area	Typical LHS House Layout Change Typical LHS House Layout Change		ange	Typical House	LHS Layout	(:hange		Typical House	LHS Layout	Cha	nge					
GIFA (m <sup>2</sup> )	62.01	63.21	1.20	1.94%	67.59	70.78	3.93	4.72%	80.30	83.24	2.94	3.66%	112.75	113.85	1.10	0.98%
Living Space (m <sup>2</sup> )	23.61	25.43	1.82	7.71%	24.78	26.04	1.26	5.08%	30.95	32.62	1.67	5.40%	45.50	44.65	(0.85)	(1.87%)
Bedroom Areas (m <sup>2</sup> )	21.77	21.96	0.19	0.87%	21.78	22.22	(0.44)	2.02%	26.05	25.54	(0.51)	(1.96%)	39.42	39.87	0.45	1.14%
Frontage (m)	4.20	4.50	0.30	7.14%	4.45	4.55	0.10	2.25%	5.35	4.95	(0.40)	(7.48%)	7.37	5.77	(1.60)	(21.68%)
Depth (m)	8.55	8.13	(0.43)	(4.97%)	7.60	8.11	0.51	6.71%	8.55	9.55	1.00	11.70%	8.75	11.80	3.05	34.80%
Perimeter (m)	23.70	23.45	(0.25)	(1.05%)	24.10	25.31	1.21	5.02%	27.80	29.00	1.20	4.32%	30.13	33.03	2.90	9.61%

The following summarises the differences between the *Typical Speculative House Builder Example Layout* and the *Alternative Lifetime Homes Layout* (refer to Appendix 1A: Area Schedule — Houses).

#### **Two Bedroom Terraced House**

The footprint and layout of the house has been revised, the GIFA has increased by 1.20m<sup>2</sup> and the frontage width has increased by 300mm and the depth decreased by 430mm.

- An external light and entrance canopy has been added to satisfy Criterion 4. Criterion
  4 also requires an accessible level threshold to external entrances, however, this is
  also a requirement of Approved Document M, 2004 (Part M) and all new houses must
  satisfy this requirement, thus there is no additional cost associated with this Criterion.
- Reconfiguration of the two bedroom house has resulted in the living room being moved to the front of the house and the kitchen to the back, resulting in the installation of an external door (838 x 1981mm) in lieu of a sliding patio door (1800 x 2100mm) and a larger window to the living/dining room, ie 1770 x 1350mm in lieu of 915 x 1200mm.
- The hall has been omitted and the entrance door now opens straight into the living/dining room. This may have an impact on energy conservation. The living/dining room area has been maintained.
- The kitchen has increased in size by over 2.50m<sup>2</sup> to satisfy the LHS Criterion 7 requirement for the provision of a turning circle of 1500mm diameter.
- The ground floor WC area has increased in size by 0.75m<sup>2</sup> in order to accommodate a
  future shower location and the requirement of 1100mm clear space to the front of the
  WC bowl to satisfy the Criterion 14 requirement. Also, the WC is now accessed
  directly from the kitchen, which makes the property less desirable.
- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the ground floor WC.
- The first floor bathroom has increased in size by 0.68m<sup>2</sup> in order to accommodate the requirement of 1100mm clear space to the front of the WC bowl to satisfy the Criterion 10 requirement.
- As a result of the elimination of the hall, there is one less internal door.
- Houses of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm which would satisfy Criterion 6.
- Whilst there is a decrease in partitions to the ground floor and an increase to the quantity of partitions to the first floor, overall there is approximately 0.95m² less partition wall. However, the walls to the WC, kitchen and bathroom have increased and in order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud partition walls to the WC and bathroom, which has resulted in an increase in cost. Also, wall finishes to these areas are more enhanced than they would normally be, which has again resulted in a more significant increase than had they been standard finishes.
- Changes in the GIFA have resulted in increases in the quantity of floor finishes to the WC, kitchen and bathroom.
- The increase in GIFA has increased both the ground floor slab area by 0.60m<sup>2</sup> and the upper floor structure by 0.60m<sup>2</sup>.

- Although the GIFA of the building has increased, the actual perimeter has decreased slightly by 2500mm hence a slight saving on brickwork and internal finishes to these walls.
- The house has increased in width by 300mm but the length has decreased by 4300mm. This has resulted in less brickwork to the gable end party cavity walls, however, the cavity walls have increased.

### **Three Bedroom Terraced House (Example 1)**

The footprint, shape and layout of the house had been revised; the GIFA increased by 3.19m<sup>2</sup> and frontage width increased by 1050mm.

- An external light and entrance canopy was added to satisfy Criterion 4. Criterion 4
  also requires an accessible level threshold to external entrances, however, this is also
  a requirement of Approved Document M, 2004 (Part M) and all new houses must
  satisfy this requirement, thus there is no additional cost associated with this Criterion.
- Reconfiguration of the three bedroom house had resulted in the living room being moved to the front of the house and the kitchen to the back, resulting in the installation of an external door (838 x 1981mm) in lieu of a sliding patio door (1800 x 2100mm) and a larger window to the living/dining room, ie 1770 x 1350mm in lieu of 915 x 1200mm.
- The hall area had decreased by 1.30m<sup>2</sup>.
- The living/dining area had increased by 0.85m<sup>2</sup>.
- The kitchen had increased in size by 0.40m<sup>2</sup> as kitchens in three bedroom houses are slightly larger in standard houses in comparison to kitchens in two bedroom houses, so the increase is not as significant as in the two bedroom property.
- The WC area had increased by 1.37m<sup>2</sup> in order to accommodate future shower location and have 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement. Also, the WC now incorporates a utility room. Furthermore, the WC is now accessed directly from the kitchen, which made the property less desirable.
- In order to satisfy Criterion 10, a functional shower gulley was incorporated into the ground floor WC.
- The first floor bathroom had increased in size by 1.06m<sup>2</sup> in order to accommodate the requirement of an 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.
- On the first floor, the hall size had been maintained as had the sizes of the bedrooms. The store was fractionally larger.
- There was no cost effect on the doors as houses of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm, which would satisfy Criterion 6.
- There was an increase of 4.12m² of partition wall. However, the walls to the WC, kitchen and bathroom had increased more than other areas to the house and in order to satisfy Criterion 11, 9mm plywood (full height) had been allowed to the internal face of the stud partition walls to the WC and bathroom, which had resulted in a more significant increase in cost than had they been standard walls to other areas. Also, wall finishes to these areas are more enhanced than they would normally be, which resulted in a more significant increase than had they been standard finishes.

- Increases of 2.84m<sup>2</sup> to the areas of the ground floor WC and kitchen, and first floor bathroom areas had a cost effect due to the enhanced finishes, *ie* to the floor and ceilings, which resulted in an increase in cost.
- The increase in GIFA increased both the ground floor slab area by 1.60m<sup>2</sup> and upper floor structure by 1.60m<sup>2</sup>.
- The 1210mm increase in the perimeter of the building resulted in an additional quantity of external wall, which had a cost effect on brickwork and internal finishes to these walls.
- The cost of the roof increased because the style has changed

## **Three Bedroom Terraced House (Example 2)**

The layout and footprint of the house has been revised; the GIFA has increased by 2.94m<sup>2</sup>, the frontage width has decreased by 400mm and the depth has increased by 1.00m.

- An external light and entrance canopy has been added to satisfy Criterion 4. Criterion
  4 also requires an accessible level threshold to external entrances. However, this is
  also a requirement of Approved Document M, 2004 (Part M) and all new houses must
  satisfy this requirement, thus there is no additional cost associated with this Criterion
- Reconfiguration of the house has resulted in the omission of the ground floor hall with the front door entrance to the house now opening directly into the living room and the dining room being combined with the kitchen. Also, there is the addition of a lobby off the kitchen/dining, WC and living rooms. This lobby has no natural daylight.
- The kitchen/dining combined area has resulted in an area increase of 1.09m<sup>2</sup>.
- The living room area has increased by 0.58m<sup>2</sup>.
- The WC has been relocated to the middle of the house resulting in the loss of a window and its area has increased by 1.20m<sup>2</sup> in order to accommodate a future shower location and provide 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.
- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the ground floor WC.
- The first floor bathroom has increased in size by 0.05m<sup>2</sup> in order to accommodate the requirement of 700mm to one side of the WC bowl and 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.
- On the first floor, the hall size has increased by 1.73m<sup>2</sup> having a negative impact on the area of three of the bedrooms by a total of 0.51m<sup>2</sup>
- The en-suite to bedroom one has been relocated to bedroom two and has increased in size by  $0.02m^2$ .
- There is no cost effect on the doors as houses of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm, which would satisfy Criterion 6.
- There is a decrease of 15.0m² of partition wall. However, the walls to the WC, kitchen and bathroom have increased more than the other areas of the house and in order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud partition walls to the WC and bathroom, which has resulted in a more significant increase in cost than had they been standard walls to other areas. Also, wall finishes to these areas are more enhanced than they would normally be, which has again resulted in a more significant increase than had they been standard

finishes. However, the substantial decrease in partition wall has mitigated the cost increases.

- Increases to the areas of the ground floor WC and kitchen, and first floor bathroom areas have had a cost effect due to the enhanced finishes, *ie* to the floor and ceilings; however, this has been mitigated by the decrease in skirting as a result of fewer partitions.
- The increase in GIFA has increased both the ground floor slab area by 1.47m<sup>2</sup> and the upper floor structure by 1.47m<sup>2</sup>.
- The 1210mm increase in the perimeter of the building has resulted in an additional quantity of foundations and external wall, which has a cost effect on brickwork and internal finishes to these walls.
- The cost of the roof has increased as a result of the GIFA increase.

#### Four Bedroom Semi-Detached House

The footprint, shape and layout of the house has been revised; the GIFA has increased by 1.10m<sup>2</sup>, the frontage width has reduced by 1.60m and the depth has been increased by a 3.05m.

- An external light and entrance canopy has been added to satisfy Criterion 4. Criterion
  4 also requires an accessible level threshold to external entrances. However, this is
  also a requirement of Approved Document M, 2004 (Part M) and all new houses must
  satisfy this requirement, thus there is no additional cost associated with this Criterion.
- The reconfiguration of the four bedroom house means that separate living and dining rooms have resulted in one combined room, although 1m<sup>2</sup> less than the sum of the previous arrangement.
- A hallway of 3.67m<sup>2</sup> has been introduced in lieu of a 1.26m<sup>2</sup> coat lobby.
- The kitchen has increased in size by 0.50m<sup>2</sup>.
- The WC area has increased by 0.66m<sup>2</sup> in order to accommodate a future shower location and to have 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement. Also, the WC is now accessed directly from the kitchen, which makes the property less desirable.
- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the ground floor WC.
- There is a decrease of 4.12m² of partition wall. However, the walls to the WC, kitchen and bathroom have increased more than in other areas of the house and in order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud partition walls to the WC and bathroom, which has resulted in a more significant increase in cost than had they been standard walls to other areas. Also, wall finishes to these areas are more enhanced than they would normally be, which has again resulted in a more significant cost increase than had they been standard finishes.
- On the first floor, the hall size has increased by 1.20m². Bedroom sizes overall have been maintained. The store is fractionally larger but is now located in bedroom three as opposed to the hallway as previously. The first floor bathroom has become slightly deeper in order to maintain an 1100mm clear space to front of the WC bowl and has increased in size by 0.50m² in order to satisfy Criterion 14.

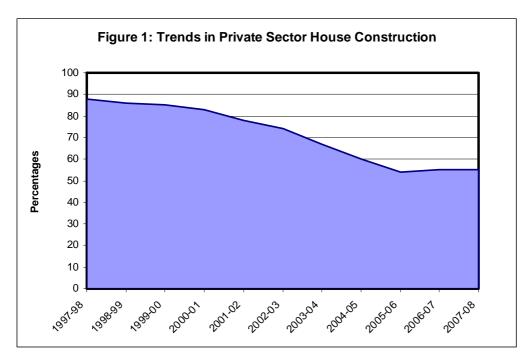
- The new ground floor layout dictates that 'l' joists are now required in lieu of traditional joists and load-bearing partition walls carry the load of the upper floors.
- Footprint changes have had a cost effect on the roof, foundations and external walls.
- One door has been omitted as a result of combining the dining room with the living room.
- Generally, doors to the first floor of four bedroom houses have an opening of 762mm. However, to satisfy Criterion 10, these doors will need to be increased to 838mm.
- The house has become 1.60m narrower and the length has increased by 3.05m. Brickwork has increased especially with the introduction of a gable to the front of the house.
- Increases of 1.27m<sup>2</sup> to the areas of the ground floor WC, kitchen, first floor bathroom and en-suite areas have had a cost effect due to the enhanced finishes, *ie* to the floors and ceilings, which has resulted in an increase in cost.
- The increase in GIFA has also increased the ground floor slab area by 0.55m<sup>2</sup> and the upper floor structure by 0.55m<sup>2</sup>.
- The 2.90m increase in the perimeter of the building has resulted in an additional quantity of external wall, which has a cost effect on brickwork, and internal finishes to these walls.
- The cost of the roof has increased because the style has changed.

## 3.3 Market Coverage

An exercise was undertaken to determine how the GIFA of the proposed LHS typologies fit within the current proportion of dwellings being built by type and size.

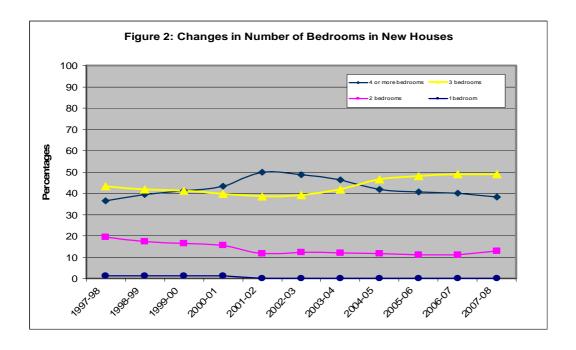
#### 3.3.1 Dwelling Types

In recent years, there has been a shift away from house building to flat building in the private sector, see Figure 1. In the 1997/1998 financial year, 88% of private dwellings completed were houses and only 12% were flats. However, over the last three reported periods of 2005/2006, 2006/2007 and 2007/2008, private sector accommodation now comprises on average 55% houses.



### 3.3.2 Number of Bedrooms

There have also been changes in the trend of sizes of dwellings being built in the UK over the past 10 years. There has been a steady increase in the proportion of new three bedroom houses from 43% during 1997/1998 to 49% in 2007/2008, while the proportion of four (or more) bedroom houses has dropped from a peak of 50% in 2001/2002 to 38% in 2007/2008, see Figure 2. There are virtually no one bedroom houses now being built and two bedroom houses make up just one eighth of the private housing market.



## 3.3.3 Floor Areas

An analysis of a log of survey returns by chartered surveyors currently undertaking insurance assessments of modern houses using the BCIS Rebuild Online Service, indicates that the proposed LHS typologies currently represents between 9–35% of properties in the market see Figures 3, 4a,4b and 5.

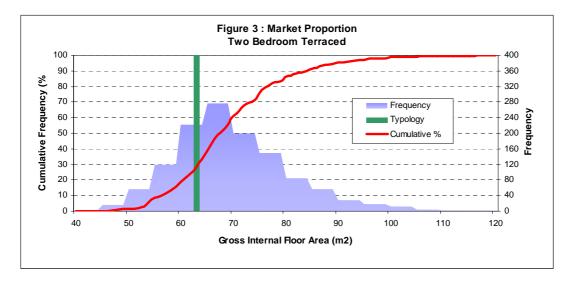


Figure 3 shows that the 63m<sup>2</sup> two bedroom property represents 28% of the market share which is below the mean of 67.5m<sup>2</sup>.

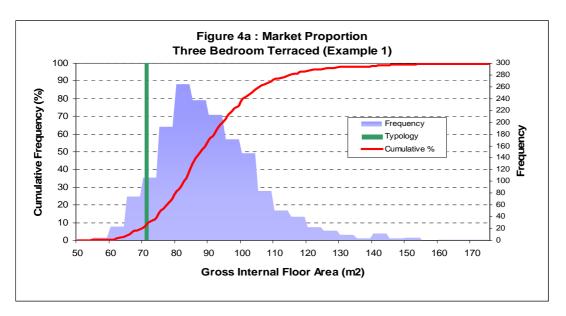


Figure 4a illustrates that the Example 1, 71m<sup>2</sup> three bedroom property represents just less than 9% of the market share which is substantially below the mean of 87.5m<sup>2</sup>

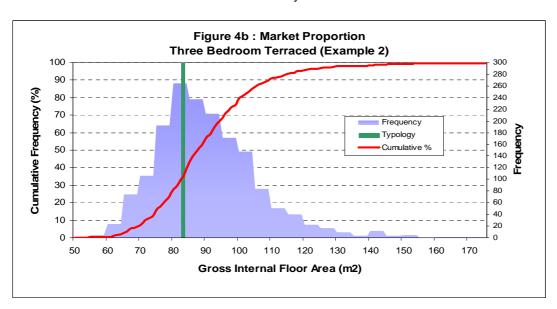


Figure 4b illustrates that the Example 2, 83m<sup>2</sup> three bedroom property represents 35% of the market share, which is slightly below the mean of 87.5m<sup>2</sup>.

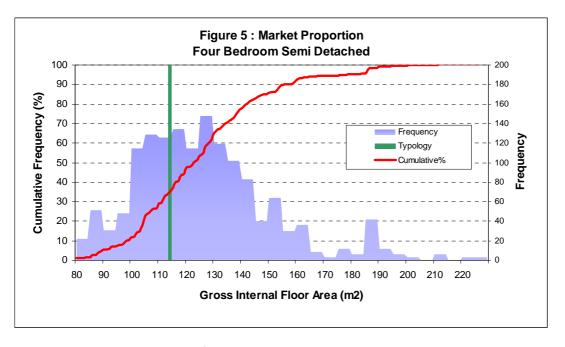


Figure 5 illustrates that the  $114m^2$  four bedroom property represents 35% of the market share, which is slightly below the mean of  $122.5m^2$ .

### 4.0 THE ESTIMATES — HOUSES

### 4.1 Pricing Base

The measuring and pricing are based on similar house types and schedule of rates contained on the BCIS database. The figures in the tables are indicative, but they are the result of calculations based on specific assumptions and have not been rounded.

# 4.2 Cost of Compliance for Individual Houses

In order to comply with the standards, the cost of the building works range from £586 to £2,966 for the four typologies provided on a small scale development with a contract value of approximately £750,000, see Table 3 below. This can be directly attributed to the revised footprint and layout, which increased the perimeter of the house.

Table 3: Cost Summary of LHS Compliance for a £750,000 House Development

Property Type	Construction Cost	Total Cost Including Fees			
2 Bed Terraced	£1,296.70	£1,393.96			
3 Bed Terraced (Example 1)	£2,759.40	£2,966.35			
3 Bed Terraced (Example 2)	£544.97	£ 585.85			
4 Bed Semi-Detached	£1,072.86	£1,153.32			

An elemental breakdown of the cost estimates on houses reveals that the largest proportion of the costs are in the roof, internal partitions, finishes and disposal, see Table 4. These costs are directly related to the provision of a covered entrance, reinforced partitions, and the drainage gully.

The additional costs to the foundations, external walls, roof and upper floors can be directly attributed to the revised footprint and layout, which increased the GIFA and perimeter of the house.

The ground floor WC for the two and three bedroom houses has been moved from the front of the house to a central location, resulting in the loss of a window.

Table 4 also illustrates that the direct cost of compliance with the criteria of the LHS ranges from £1,400 in the large four bedroom unit to £1,700 in smaller two bedroom terraced houses. However, the open plan layout adopted in all dwellings has resulted in fewer internal partitions, doors and associated wall finishes which has mitigated the overall cost of compliance.

The additional cost to the three bedroom terraced house (Example 1) is over twice the cost of the two bedroom terraced and the four bedroom semi-detached house. A closer look at the estimate revealed that a large proportion of the costs were in the foundations and external walls. This was directly attributed to the revised footprint and layout, which increased the GIFA by 3.90m<sup>2</sup>. Hence, HTA were instructed to produce a second three

bedroom typology (Example 2) which was more representative of the current market proportion of three bedroom terraced houses being built

On the other hand, at just under £586, the cost of LHS compliance for the three bedroom terraced house (Example 2) is approximately half of the two and four bedroom house compliance costs. This is a direct result of the layout changes which contributed to just over £1,440 of the reductions. Also as expected, the costs associated with the area increase will diminish as the GIFA of the house increases. Example 2 is larger by over  $10m^2$  compared to Example 1.

The revised layout of the four bedroom house has significantly reduced the costs of the upper floors, windows and external doors, internal partitions and doors. This implies that different layouts will produce different results.

On the two bedroom house, the living/dining room has been moved from the rear to the front of the property and vice versa for the kitchen, resulting in the substitution of a patio door for a single external door.

 Table 4: Costs for Layout and Criteria for a £750,000 Development

	2 Bed Terraced		3 Bed Te	3 Bed Terraced (Example 1) 3 E		3 Bed Ter	3 Bed Terraced (Example 2)		4 Bed Semi-Detached			
Summary	Layout	Criteria	Total	Layout	Criteria	Total	Layout	Criteria	Total	Layout	Criteria	Total
,	£	£	£	£	£	£	£	£	£	£	£	£
Foundations	99.86	0.00	99.86	312.52	0.00	312.52	78.63	0.00	78.63	101.01	0.00	101.01
External Walls	73.29	0.00	73.29	954.04	0.00	954.04	185.70	0.00	185.70	1,110.26	0.00	1,110.26
Roof	89.10	467.73	556.83	366.61	467.73	834.34	92.50	467.73	560.24	955.31	467.73	1,423.04
Upper Floor	19.77	73.62	93.39	115.07	75.99	191.06	122.02	75.99	198.01	(261.80)	75.12	(186.68)
Stairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windows and External Doors	(318.29)	0.00	(318.29)	(889.58)	0.00	(889.58)	(286.09)	0.00	(286.09)	(571.28)	0.00	(571.28)
Internal Walls and Partitions	(147.69)	393.67	245.97	(187.85)	673.68	485.84	(620.60)	550.33	(70.28)	(573.93)	407.82	(166.11)
Internal Doors	(26.87)	0.00	(26.87)	0.00	0.00	0.00	(342.14)	0.00	(342.14)	(1,160.81)	0.00	(1,160.81)
Floor Finishes	(5.09)	255.56	250.47	0.00	210.16	210.16	(126.51)	107.92	(18.59)	(75.99)	115.88	39.89
Wall Finishes	(32.76)	38.79	6.03	0.00	261.33	261.33	(215.36)	63.20	(152.16)	132.42	13.62	146.04
Ceiling Finishes	(162.47)	147.81	(14.66)	0.00	69.00	69.00	(23.75)	84.71	60.96	(39.90)	46.71	6.81
Kitchen Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitary Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disposal - Waste Pipes	0.00	233.57	233.57	0.00	233.57	233.57	0.00	233.57	233.57	0.00	233.57	233.57
Mechanical and Electrical	0.00	97.12	97.12	0.00	97.12	97.12	0.00	97.12	97.12	0.00	97.12	97.12
<b>Total Construction</b>	(411.15)	1,707.86	1,296.70	670.81	2,088.58	2,759.40	(1,135.59)	1,680.57	544.97	(384.72)	1,457.57	1,072.86
Professional Fees	(30.84)	128.09	97.25	50.31	156.64	206.95	(85.17)	126.04	40.87	(28.85)	109.32	80.46
Total Cost Including Fees	(441.99)	1,835.95	1,393.96	721.12	2,245.23	2,966.35	(1,220.76)	1,806.61	585.85	(413.57)	1,566.89	1,153.32

## 4.3 Cost of LHS Compliance for Each Criterion

The cost of compliance can broadly be divided into two categories, *ie* direct costs associated with LHS compliance and the indirect costs associated with the revised construction and layout of each typology.

### 4.3.1 Costs of Compliance

The costs associated with implementing the criteria generally decrease with the size of house, see Table 6 below. Whilst the cost of complying with most criteria is similar in the three typologies, the biggest variance is in the cost associated with the increase in floor area and the cost of enhancing the specification of the bathroom and WC walls.

The direct cost of meeting the requirements of the LHS criteria for each of the houses is fairly consistent, ranging from £1,100 to £1,260, see Table 6 below. However, the cost of implementing Criterion 11, *ie* the requirement to strengthen the walls in the bathroom and WC to be capable of taking adaptations, is greater in the three and four bedroom properties than the two bedroom property, because of the addition of an en-suite. But, where the circulation area related criteria 7 and 14 need to be met on the three types of property, this gets progressively cheaper the larger the house gets. Therefore, the overall cost of LHS compliance between the three typologies balance themselves out.

Complying with the additional area requirements has the largest impact on the smaller dwellings. This is expected as bigger dwellings will have larger proportioned rooms and circulation areas which require fewer adjustments to meet the standards.

## 4.3.2 Adjusted Costs of Compliance

It should be noted that most new built houses in the private sector incorporate a canopy or a covered entrance as part of the design. Statistical evidence from the English Homes Condition survey carried out by Communities and Local Government and published by the Office for National Statistics, suggests that as much as three quarters of new houses have a covered entrance and up to 85% of the units include an external light to the main entrance.

Thus, the true cost of compliance for an individual unit on a typical development should be adjusted accordingly, see Table 7.

These adjustments dramatically reduce the additional costs of compliance on all typologies, see Table 5 below.

Table 5: Summary of Adjusted Costs of LHS Compliance for a £750,000 Development

Property Type	Layout Costs	Adjusted Criteria Costs	Adjusted Construction Cost	Total Cost Including Fees
2 Bed Terraced	(£411.15)	1,274.51	£863.35	£928.10
3 Bed Terraced (Example 1)	£670.81	1,655.23	£2,326.05	£2,500.50
3 Bed Terraced (Example 2)	(£1,135.59)	1,247.22	£111.62	£119.99
4 Bed Semi-Detached	(£384.72)	1,024.21	£639.49	£687.45

 Table 6: Cost Summary of LHS Compliance for Each Criterion for a £750,000 Development

Crite	ria	Compliance Provision	2 Bed Terraced	3 Bed Terraced (Example1)	3 Bed Terraced (Example 2)	4 Bed Semi- Detached
		a. External light to canopy	£97.12	£97.12	£97.12	£97.12
4	External Entrances	b. Level access over the threshold	-	-	-	-
		c. Canopy over main entrances	£467.73	£467.73	£467.73	£467.73
10	Entrance Level WC and	a. Wheelchair accessible toilet at entrance level	-	-	-	-
10	Shower Drainage	b. Drainage provision enabling a shower to be fitted in the future	£233.57	£233.57	£233.57	£233.57
11	Bathroom and WC Walls	Plywood layer to bathroom and WC walls	£228.24	£251.07	£371.01	£384.44
	Stair Lift and Through-	a. Stair lift provision	-	-	-	-
12	Floor Lift	b. Provision for future knock through panel from the ground floor to the first floor	£73.62	£75.99	£75.98	£75.12
		Direct Costs Sub-total	£1,100.28	£1,125.48	£1,245.42	£1,257.98
7	Wheelchair Accessibility	Circulation space for wheelchairs	£273.40	£248.88	£127.74	£90.94
14	Bathroom Layout	Increase in bathroom and WC size	£334.18	£714.23	£307.40	£108.65
	Circul	ation Area Increase Related Costs Sub-total	£607.58	£963.11	£435.14	£199.59
	Total Cost Of Implementing Criteria (excluding Fees)			£2,088.58	£1,680.56	£1,457.57

Table 7: Adjusted Cost Summary of LHS Compliance for Each Criterion for a £750,000 Development

Crite	ria	Compliance Provision	2 Bed Terraced	3 Bed Terraced (Example1)	3 Bed Terraced (Example 2)	4 Bed Semi- Detached
		a. External light to canopy	£14.57	£14.57	£14.57	£14.57
4	External Entrances	b. Level access over the threshold	-	-	-	ı
		c. Canopy over main entrances	£116.93	£116.93	£116.93	£116.93
10	Entrance level WC and	a. Wheelchair accessible toilet at entrance level	-	-	-	-
10	Shower Drainage	b. Drainage provision enabling a shower to be fitted in the future	£233.57	£233.57	£233.57	£233.57
11	Bathroom and WC Walls	Plywood layer to bathroom and WC walls	£228.24	£251.07	£371.01	£384.44
	Stair Lift and Through-	a. Stair lift provision	-	-	-	-
12	Floor Lift	b. Provision for future knock through panel from the ground floor to the first floor	£73.62	£75.99	£75.99	£75.12
		Direct Costs Sub-total	£666.93	£692.13	£812.07	£824.62
7	Wheelchair Accessibility	Circulation space for wheelchairs	£273.40	£248.88	£127.75	£90.94
14	Bathroom Layout	Increase in bathroom and WC size	£334.18	£714.23	£307.40	£108.65
	Circul	ation Area Increase Related Costs Sub-total	£607.58	£963.11	£435.15	£199.59
	Total Cost Of Implementing Criteria (excluding Fees)			£1,655.23	£1,247.22	£1,024.21

The overall cost effect of making the cost adjustments to the canopy and external light which are attributed to the roof and mechanical and electrical elements of the dwelling, respectively, are reflected in Table 8 (Minor Development) which shows the transition of costs from Table 4 as a result of the adjustments shown above.

## 4.4 Sensitivity Analysis

## 4.4.1 Contract Size Adjustment

A sensitivity analysis was undertaken by repricing the contract using adjusted rates appropriate to the construction of a larger housing development costing in the region of £20million. The rates, adjusted using BCIS's contract adjustment factors, showed savings in the range of 12–16%. Table 8 shows the comparative costs between the two contract sizes (inclusive of the adjustments for covered entrances and external lights).

The effect of LHS on the number of storeys has not been considered for bungalows and houses with three or more storeys as all typologies provided were two storeys.

Table 8: Elemental Cost Summary of the Minor and Major Developments for Houses

		MINOR DE\	/ELOPMENT	Г	MAJOR DEVELOPMENT			
Element	2 Bed Terraced	3 Bed Terraced (Example 1)	3 Bed Terraced (Example 2)	4 Bed Semi- Detached	2 Bed Terraced	3 Bed Terraced (Example 1)	3 Bed Terraced (Example 2)	4 Bed Semi- Detached
	£	£	£	£	£	£	£	
Foundations	99.86	312.52	78.63	101.01	84.80	265.37	66.77	85.77
External Walls	73.29	954.04	185.70	1,110.26	62.23	810.10	157.68	942.75
Roof	206.03	483.54	209.44	1,072.24	188.15	423.79	191.04	923.68
Upper Floor	93.39	191.06	198.01	(186.68)	79.29	162.24	168.15	(158.52)
Stairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windows and Doors	(318.29)	(889.58)	(286.09)	(571.28)	(270.28)	(755.37)	(242.93)	(485.09)
Internal Walls and Partitions	245.97	485.84	(70.28)	(166.11)	208.86	412.53	(59.66)	(141.05)
Internal Doors	(26.87)	0.00	(342.14)	(1,160.81)	(22.82)	0.00	(290.52)	(985.67)
Floor Finishes	250.47	210.16	(18.59)	39.89	212.67	178.45	(15.78)	33.88
Wall Finishes	6.03	261.33	(152.16)	146.04	5.11	221.92	(129.19)	124.02
Ceiling Finishes	(14.66)	69.00	60.96	6.81	(12.45)	58.59	51.76	5.78
Kitchen Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitary Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disposal - Waste Pipes	233.57	233.57	233.57	233.57	203.08	203.08	203.08	203.08
Mechanical and Electrical	14.57	14.57	14.57	14.57	12.37	12.37	12.37	12.37
Total Construction	863.35	2,326.05	111.62	639.51	751.02	1,993.08	112.77	561.01
Professional Fees	64.75	174.45	8.37	47.96	45.06	124.57	6.77	33.66
Total Cost Including Fees	928.10	2,500.50	119.99	687.47	796.08	2,117.65	119.54	594.67

# 5.0 THE DESIGNS — FLATS

## 5.1 HTA Architects' Designs

The following is a summary of the specification.

- · Standard strip foundations.
- The height of the buildings to eaves level is 8550mm for all blocks of flats.
- The floor-to-ceiling height to the flats is 2450mm.
- Cavity and party walls are assumed to be 300mm thick.
- Internal timber stud partitions are 100mm thick.
- In order to satisfy Building Regulation (Part E), partitions around bathrooms and WCs are insulated.
- All internal doors are assumed to be 838 x 1981 x 35mm. Store doors are assumed to be 533 x 1981 x 35mm.
- Roofs to all dwelling types have clay tiles with 45 degree pitches.
- Wall and ceiling finishes to the kitchen, WC and bathrooms are anti-condensation emulsion paint, and standard emulsion paint to other areas. There are tiled splash backs to wet areas, *ie* to sinks and baths.
- Floor finishes to kitchens, WCs and bathrooms are tiled and floor finishes to the remaining areas of the flats have been excluded.

### 5.2 Design Changes to Flats

There were minor discrepancies between the area calculations by the architect and BCIS. The following table summarises the differences between the *Typical Speculative House Builder Example* Layout for three storey blocks of flats and the *Alternative Lifetime Homes Layout (refer to Appendix 1B: Area Schedule - Flats)* as per BCIS's measurements.

Generally, implementing the standards will have little or no effect on the size and layout of two bedroom flats. However, the GIFA of the one bedroom flats has increased and the circulation areas in smaller blocks enhanced, see Table 9 below.

 Table 9: Summary of Design Changes to Flats

					EXAMPL	.E 1						
Area	1 Bed Flat				2 Bed Flat				Block			
	Typical Flat	LTH Layout	Change		Typical Flat	LTH Layout	Change		Typical Block	LTH Layout	Change	
GIFA (m²)	45.55	47.07	1.520	3.34%	67.62	67.62	0.00	0.00%	414.26	418.82*	4.56	11.01%
Communal Areas (m <sup>2</sup> )	-	-	-	-	-	-	-	-	59.38	59.38	0.00	0.00%
Living Spaces (m <sup>2</sup> )	22.25	22.34	0.09	0.40%	25.11	25.11	0.00	0.00%	-	-	-	-
Bathroom Areas (m <sup>2</sup> )	3.96	5.17	1.21	30.56%	7.99	8.17	0.18	2.25%	-	-	-	-
Bedroom Areas (m <sup>2</sup> )	11.87	11.83	(0.04)	(0.34%)	22.16	22.20	0.04	0.18%	-	-	-	-
					EXAMPL	.E 2						
Area	1 Bed Flat				2 Bed Flat				Block			
	Typical Flat	LTH Layout	Change		Typical Flat	LTH Layout	Change		Typical Block	LTH Layout	Change	
GIFA (m²)	40.61	41.33	0.720	1.77%	62.14	62.67	0.530	0.85%	219.98	230.87*	10.89	4.95%
Communal Areas (m <sup>2</sup> )	-	-	-	-	-	-	-	-	84.39	89.94	5.55	6.58%
Living Spaces (m <sup>2</sup> )	19.46	19.46	0.00	0.00%	21.81	21.80	(0.01)	(0.05%)	-	-	-	-
Bathroom Areas (m <sup>2</sup> )	3.96	4.77	0.81	20.45%	7.27	7.66	0.39	5.36%	-	-	-	-
Bedroom Areas (m²)	9.80	9.83	0.03	0.31%	22.80	22.80	0.00	0.00%	-	-	-	-

<sup>\*</sup>Denotes areas which are different.

#### Example 1 — Block

The footprint and the GIFA of the block has increased by 4.56m<sup>2</sup>, however communal areas are unaffected.

- An external light and entrance canopy have been added to the entrance of the block to satisfy Criterion 4. Criterion 4 also requires an accessible level threshold to all external entrances of dwellings, however this is also a requirement of Approved Document M, 2004 (Part M) and as all new dwellings must satisfy this requirement, there is no additional cost associated with this Criterion.
- The increase in GIFA has increased the ground floor flat's slab area by 1.52m<sup>2</sup> and the two upper floor flats' slab area by 1.52m<sup>2</sup> each.
- As a result of the increase in the GIFA of the one bedroom flat, the quantity of cavity walls and roof area has increased in order to accommodate this.

### **Example 1 — One Bedroom Flat**

The layout of the flat is unchanged, however, the footprint and the GIFA has increased by 1.52m<sup>2</sup>.

- The bathroom area has increased in size by 1.21m<sup>2</sup> in order to accommodate the requirement of 700mm to one side of the WC bowl and 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.
- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the bathroom.
- There has been an increase to the quantity of partitions by approximately 0.49m² which is attributed to the increase in size of the bathroom. In order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud partition walls to the bathroom, which has resulted in an increase in cost. Also, wall finishes to these areas have resulted in a slight increase in cost than had they been standard finishes to other areas because of the enhanced nature of the finishes to bathroom areas.
- The area increase to the bathroom has increased the cost of the floor and ceiling finishes, which has resulted in a slight increase in cost than had they been standard finishes because of the enhanced nature of the finishes to bathroom areas.
- The hall has increased in size by 0.20m<sup>2</sup>.
- There is no cost effect on the doors as flats of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm, which would satisfy Criterion 6.
- The increase in GIFA has increased the ground floor flat's slab area by 1.52m<sup>2</sup> and two upper floor flats' slab area by 1.52m<sup>2</sup> each.
- As a result of the increase in the GIFA of the one bedroom flat, the quantity of cavity walls and roof area has increased in order to accommodate this.

## Example 1 — Two Bedroom Flat

The footprint and the GIFA of the flat is unchanged, however, there has been a slight change to the layout.

 The bathroom area has increased by 0.18m<sup>2</sup> in order to accommodate the requirement of 700mm to one side of the WC bowl and 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.

- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the bathroom.
- The quantity of partition walls remains unchanged, however, in order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud partition walls to the bathroom, which has resulted in a more significant increase in cost than had they been standard walls to other areas. Also, wall finishes to these areas have resulted in a slight increase in cost than had they been standard finishes to other areas because of the enhanced nature of the finishes to bathroom areas.
- The area increase to the bathroom has increased the cost of the floor and ceiling finishes, which has resulted in a slight increase in cost than had they been standard finishes because of the enhanced nature of the finishes to bathroom areas.
- The hall size has marginally decreased by 0.19m<sup>2</sup> in order to accommodate the larger bathroom.
- The kitchen area has become slightly narrower to accommodate the larger bathroom, however the overall area of the kitchen/living/dining room has been maintained by fractionally reducing the area of bedroom one next to it.
- There is no cost effect on the doors as flats of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm, which would satisfy Criterion 6.

#### Example 2 — Block

The footprint and the GIFA of the block have increased by 3.63m<sup>2</sup>.

- An external light and entrance canopy have been added to the entrance of the block to satisfy Criterion 4. Criterion 4 also requires an accessible level threshold to all external entrances of dwellings, however this is also a requirement of Approved Document M, 2004 (Part M) and as all new dwellings must satisfy this requirement, there is no additional cost associated with this Criterion.
- The communal corridor to each floor has increased by 0.05m<sup>2</sup>.
- The communal area for the lift and stairs to each floor has increased by 1.80m<sup>2</sup> in order to accommodate a larger lift shaft.
- The increase in GIFA to the one bedroom flats, two bedroom flats and communal areas has increased both the ground floor flat slab area by a total of 3.63m<sup>2</sup> and the two upper floors by 3.63m<sup>2</sup> each.
- As a result of the increase in the GIFA of the one bedroom and two bedroom flats and communal areas, the quantity of cavity walls and roof area has increased in order to accommodate this.

#### Example 2 — One Bedroom Flat

The footprint and layout of the flat has changed, resulting in the GIFA increasing by 0.72m<sup>2</sup>

- The bathroom area has increased in size by 0.81m<sup>2</sup> in order to accommodate the requirement of 700mm to one side of the WC bowl and 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.
- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the bathroom.
- There has been an increase to the quantity of partitions by approximately 1.96m<sup>2</sup> which is attributed to the increase in size of the bathroom. In order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud

partition walls to the bathroom, which have resulted in an increase in cost. Also, wall finishes to these areas have resulted in a slight increase in cost than had they been standard finishes to other areas because of the enhanced nature of the finishes to bathroom areas.

- The area increase to the bathroom has increased the cost of the floor and ceiling finishes, which has resulted in a slight increase in cost than had they been standard finishes because of the enhanced nature of the finishes to bathroom areas.
- The hall and storage areas have decreased in size by a total of 0.50m<sup>2</sup> and the storage arrangement has been rearranged which has had an effect on the footprint of the hall and the kitchen/living/dining room, although the latter's floor area has been maintained.
- Flats of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm, which would satisfy Criterion 6.
- The increase in GIFA has increased the ground floor flat's slab area by 0.72m<sup>2</sup> and the two upper floor flats' slab area by 0.72m<sup>2</sup> each.
- As a result of the increase in the GIFA of the one bedroom flat, the quantity of cavity walls and roof area has increased in order to accommodate this.

#### Example 2 —Two Bedroom Flat

The footprint and layout of the flat is unchanged, however the GIFA has increased by  $0.53 \text{m}^2$ .

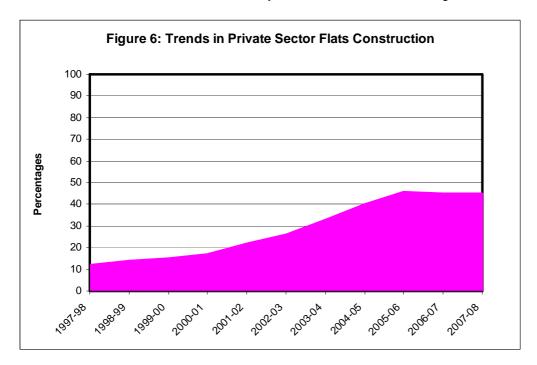
- The bathroom area has increased by 0.39m² in order to accommodate the requirement of 700mm to one side of the WC bowl and 1100mm clear space to the front of the WC bowl to satisfy the Criterion 14 requirement.
- In order to satisfy Criterion 10, a functional shower gulley has been incorporated into the bathroom.
- There has been an increase to the quantity of partitions by approximately 3.65m², which is attributed to the increase in size of the bathroom. In order to satisfy Criterion 11, 9mm plywood (full height) has been allowed to the internal face of the stud partition walls to the bathroom, which has resulted in an increase in cost. Also, wall finishes to these areas have resulted in a slight increase in cost than had they been standard finishes to other areas because of the enhanced nature of the finishes to the bathroom areas.
- The area increase to the bathroom has increased the cost of the floor and ceiling finishes, which has resulted in a slight increase in cost than had they been standard finishes because of the enhanced nature of the finishes to bathroom areas.
- There is no cost effect on the doors as flats of this type are normally built with doorway widths of more than 775mm and corridor widths of 1050mm, which would satisfy Criterion 6.
- The increase in GIFA has increased the ground floor flat's slab area by 0.53m<sup>2</sup> and the two upper floor flats' slab area by 0.53m<sup>2</sup> each.
- As a result of the increase in the GIFA of the two bedroom flat, the quantity of cavity walls and roof area has increased in order to accommodate this.

## 5.3 Market Coverage

An exercise was undertaken to determine the market coverage of the two proposed LHS typologies provided.

## 5.3.1 Dwelling Types

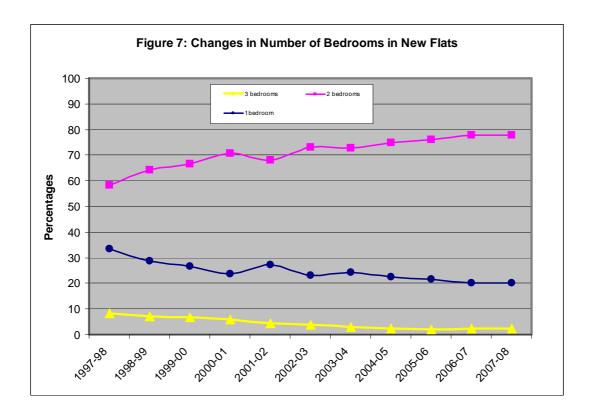
In recent years, there has been a shift away from house building to flat building in the private sector. This is because flats are a more efficient use of land and can achieve higher densities. In the 1997/1998 financial year, only 12% of private dwellings completed were flats. However, this has increased drastically to 45% in 2007/2008, see Figure 6,



## 5.3.2 Number of Bedrooms

In 2008, approximately 78% of new built flats were two bedroom, 20% were one bedroom, and only 2% were three bedroom, see Figure 7.

Therefore, the selected typologies are representative of the types of units currently being built.



## 5.3.3 Floor Areas

Figure 8a shows that the one bedroom flat in the smaller block, Example 1, represents just one fifth of the market and is not typical of the units on the market. On the other hand, the one bedroom flat in Example 2 represents the mode.

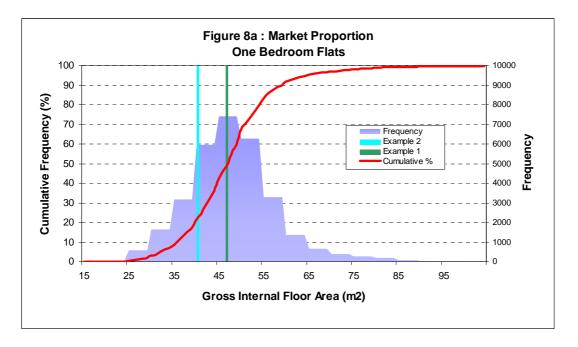
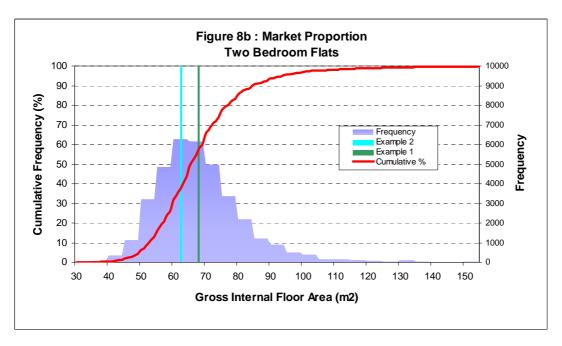


Figure 8b shows that the two examples of the two bedroom flat are typical typologies representing between 40–53% of the market.



#### 6.0 THE ESTIMATES — FLATS

## 6.1 Cost of Compliance for Individual Flats

In order to comply with the standards, the cost of the building works ranges from £638 in large two bedroom flats to £1,742 in small two bedroom units in a single three storey block of flats, see Table 10 below.

Table 10: Cost Summary of LHS Compliance for Single Blocks of Flats

Property	у Туре	Construction Cost	Total Cost Including Fees
Example 1	1 Bed Flat	£1,062.51	£1,142.19
Example	2 Bed Flat	£593.48	£637.99
Example 2	1 Bed Flat	£1,434.97	£1,542.59
Lxample 2	2 Bed Flat	£1,620.73	£1,742.29

A closer look at the estimates reveals that the costs can be divided into the cost of the work to the block, *ie* the provision of a covered entrance and communal circulation, and the work to the individual units associated with the revised footprint and layout, and work to the bathrooms, see Table 11.

#### Example 1

In this block the cost of complying with LHS affects to a greater extent the one bedroom flat and the block. The footprint of the flat has increased to improve the internal circulation in the hallway and bathrooms. Therefore, the costs of the work to foundations, roof and external walls of the structure attributable to the increase in GIFA, have been distributed to the one bedroom flats. The only cost effects on the two bedroom flat are as a result of those directly linked to criteria being met within the unit itself. These include the cost of reinforcing the bathroom and en-suite with plywood linings and the addition of a shower gulley.

The direct cost of the block complying with LHS such as the canopy and external light is £1,160.

Table 11 shows how the costs are distributed elementally between the block and each of the flats and also how the cost of the block is distributed between each of the flats.

 Table 11: Costs for Layout and Criteria for Flats (Example 1)

		Block					1 Bed							2 Bed			
		Criteria Cos	st	Costs	Excluding	j Block	C	ost Inclu	ding Blocl	k	Costs	Excluding	Block	(	Cost Includ	ling Block	ζ
Summary						Layout		Criteria		Layout					Criteria		Layout
	Access	Direct	Block Total	Layout	Criteria	and Criteria Total	Block Allocation	Flat	Total	and Criteria Total	Layout	Criteria	Total	Block Allocation	Flat	Total	& Criteria Total
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Foundations	0.00	0.00	0.00	55.72	0.00	55.72	0.00	0.00	0.00	55.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
External Walls	0.00	0.00	0.00	173.14	0.00	173.14	0.00	0.00	0.00	173.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Roof	0.00	983.03	983.03	71.06	0.00	71.06	48.57	0.00	48.57	119.63	0.00	0.00	0.00	69.78	0.00	69.78	69.78
Floors	0.00	0.00	0.00	118.38	0.00	118.38	0.00	0.00	0.00	118.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windows and Doors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Walls and Partitions	0.00	0.00	0.00	(115.15)	282.95	167.80	0.00	282.95	282.95	167.80	(38.39)	288.86	250.47	0.00	288.86	288.86	250.47
Internal Doors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Floor Finishes	0.00	0.00	0.00	10.61	69.12	79.73	0.00	69.12	69.12	79.73	0.00	9.43	9.43	0.00	9.43	9.43	9.43
Wall Finishes	0.00	0.00	0.00	24.65	26.96	51.62	0.00	26.96	26.96	51.62	(6.33)	15.87	9.53	0.00	15.87	15.87	9.53
Ceiling Finishes	0.00	0.00	0.00	2.13	53.65	55.79	0.00	53.65	53.65	55.79	4.08	7.43	11.51	0.00	7.43	7.43	11.51
Kitchen Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitary Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disposal - Waste Pipes	0.00	0.00	0.00	0.00	235.97	235.97	0.00	235.97	235.97	235.97	0.00	235.97	235.97	0.00	235.97	235.97	235.97
Mechanical and Electricals	0.00	95.72	95.72	0.00	0.00	0.00	4.73	0.00	4.73	4.73	0.00	0.00	0.00	6.79	0.00	6.79	6.79
Total Construction	0.00	1,078.75	1,078.75	340.55	668.66	1,009.21	53.30	668.66	721.96	1,062.51	(40.64)	557.55	516.91	76.57	557.55	634.12	593.48
Professional Fees	0.00	80.91	80.91	25.54	50.15	75.69	4.00	50.15	54.15	79.69	(3.05)	41.82	38.77	5.74	41.82	47.56	44.51
Total Cost Including Fees	0.00	1,159.65	1,159.65	366.09	718.81	1,084.90	57.30	718.81	776.11	1,142.19	(43.69)	599.36	555.67	82.31	599.36	681.68	637.99

#### Example 2

In this block the cost effect of complying with LHS affects both the one and two bedroom flats. The footprints of both types of flats have increased. The cost of meeting Criterion 11, reinforcement of bathroom walls, is more significant to the two bedroom flat as this needs to be undertaken to both the bathroom and en-suite.

The costs of work associated with the structure of the block affected by the GIFA increase to the circulation area as a result of the increase in size of the lift such as the foundations, roofs, external walls in addition to the direct costs of the block complying with LHS, *ie* the canopy and external light, total £4,926.

Table 12 shows how the costs are distributed elementally between the block and each of the flats and also how the cost of the block is distributed between each of the flats.

Table 12: Costs for Layout and Criteria for Flats (Example 2)

		Block					1 Bed							2 Bed			
	C	Criteria Cos	t	Costs	Excluding	j Block		Cost Inc	luding Bloc	:k	Costs	Excluding	j Block		Cost Incli	uding Blo	ck
Summary			<b>D</b>		0.11	Layout		Criteria		Layout					Criteria		Layout
	Access	Direct	Block Total	Layout	Criteri a	and Criteria Total	Block Allocation	Flat	Total	and Criteria Total	Layout	Criteria	Total	Block Allocation	Flat	Total	& Criteria Total
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Foundations	472.26	0.00	472.26	25.11	0.00	25.11	39.04	0.00	39.04	64.15	17.08	0.00	17.08	59.19	0.00	59.19	76.27
External Walls	840.40	0.00	840.40	173.14	0.00	173.14	69.47	0.00	69.47	242.61	77.03	0.00	77.03	105.33	0.00	105.33	182.36
Roof	189.96	983.03	1,172.99	69.74	0.00	69.74	96.96	0.00	96.96	166.69	24.72	0.00	24.72	147.02	0.00	147.02	171.73
Floors	384.83	0.00	384.83	49.92	0.00	49.92	31.81	0.00	31.81	81.73	36.75	0.00	36.75	48.23	0.00	48.23	84.98
Stairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windows and Doors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Walls and Partitions	468.26	0.00	468.26	76.77	198.17	274.93	38.71	198.17	236.87	313.64	105.56	290.37	395.92	58.69	290.37	349.06	454.61
Internal Doors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Floor Finishes	232.75	0.00	232.75	42.40	42.42	84.82	19.24	42.42	61.66	104.06	78.86	19.78	98.64	29.17	19.78	48.95	127.81
Wall Finishes	83.90	0.00	83.90	52.42	52.25	104.66	6.93	52.25	59.18	111.60	105.90	29.05	134.96	10.52	29.05	39.57	145.47
Ceiling Finishes	206.97	0.00	206.97	4.51	33.43	37.94	17.11	33.43	50.54	55.05	9.72	15.68	25.40	25.94	15.68	41.62	51.34
Kitchen Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitary Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disposal - Waste Pipes	0.00	0.00	0.00	0.00	235.97	235.97	0.00	235.97	235.97	235.97	0.00	235.97	235.97	0.00	235.97	235.97	235.97
Mechanical and Electricals	623.80	95.72	719.52	0.00	0.00	0.00	59.47	0.00	59.47	59.47	0.00	0.00	0.00	90.18	0.00	90.18	90.18
<b>Total Construction</b>	3,503.12	1,078.75	4,581.86	494.01	562.23	1,056.24	378.73	562.23	940.96	1,434.97	455.60	590.85	1,046.45	574.28	590.85	1,165.13	1,620.73
Professional Fees	262.73	80.91	343.64	37.05	42.17	79.22	28.40	42.17	70.57	107.62	34.17	44.31	78.48	43.07	44.31	87.38	121.55
Total Cost Including Fees	3,765.85	1,159.65	4,925.50	531.06	604.40	1,135.46	407.13	604.40	1,011.53	1,542.59	489.77	635.17	1,124.94	617.35	635.17	1,252.52	1,742.29

## 6.2 Cost of LHS Compliance for Each Criterion for Flats

LHS compliance in flats affects both the communal areas of the block and the individual units. This can be divided further into the direct costs associated with LHS compliance and the indirect costs associated with the revised construction and layout.

#### 6.2.1 Costs of Criteria for Flats

The direct costs associated with implementing the criteria generally decrease as the size of the flat increases, see Table 13 below. Whilst the cost of complying with most criteria is similar in the two typologies, the biggest variance is in the costs associated with the increase in floor area and the cost of enhancing the specification of the bathroom walls.

Complying with the additional area requirements has the largest impact on the smaller units. This is expected as bigger units will have larger proportioned rooms and circulation areas, which require fewer adjustments to meet the standards.

The communal circulation area in the smaller block had to be enhanced to improve accessibility to the lifts.

Table 13: Cost Summary of LHS Compliance for Each Criterion for Flats

				Example 1			Example 2	
	Criteria	Compliance Provision	Block	1 Bed Flat	2 Bed Flat	Block	1 Bed Flat	2 Bed Flat
		a. External light to canopy	£95.72	£0.00	£0.00	£95.72	£0.00	£0.00
4	External Entrances	b. Level access over the threshold	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
		c. Canopy over main entrances	£983.03	£0.00	£0.00	£983.03	£0.00	£0.00
10	Entrance Level WC and Shower Drainage	b. Drainage provision enabling a shower to be fitted in the future	n/a	£235.97	£235.97	n/a	£235.97	£235.97
11	Bathroom and WC Walls	Plywood layer to bathroom and en-suite walls	n/a	£112.80	£240.23	n/a	£198.17	£290.37
		Direct Costs Sub-total	£1,078.75	£348.77	£476.20	£1,078.75	£434.13	£526.34
5	Communal Stairs and Lifts	a. Lift shall be fully accessible	£0.00	£0.00	£0.00	£874.59	£0.00	£0.00
7	Wheelchair Accessibility	Circulation space for wheelchairs	£0.00	£15.27	£0.00	£2,628.53	£47.49	£28.00
14	Bathroom Layout	Increase in bathroom, WCs etc	n/a	£304.62	£81.35	n/a	£80.61	£36.52
	Circulation	Area Related Costs Sub-total	£0.00	£319.89	£81.35	£3,503.12	£128.10	£64.52
	Total Cost Of (Exc	£1,078.75	£668.66	£557.55	£4,581.86	£562.23	£590.85	

#### 6.2.2 Adjusted Costs of Compliance for Flats

The two typologies of blocks of flats provided have lifts. A closer inspection of the costs for Example 2, reveal that the large proportion of the additional work to the communal circulation areas are attributed to the lift shaft. However, the provision of a lift in a block of flats is not a LHS requirement. Criterion 5 only stipulates that where homes are reached by a lift, it should be fully accessible. As over three quarters of the low rise flats built do not incorporate a lift, a cost adjustment was undertaken to negate the cost effect of increasing the size of the lift and its associated works.

It should also be noted that according to the English Homes Condition Survey, as much as three quarters of new blocks in the private sector incorporate a canopy or a covered entrance as part of the design and up to 85% of the units include an external light to the main entrance.

Furthermore, Criterion 11, *ie* the provision for the future accessible shower can be enabled in the future by the removal of the existing bath and the provision of a proprietary accessible shower tray connecting to the existing drainage. Thus, the provision of an additional gulley is not necessary and has been omitted in the adjusted costs. Therefore, the true cost of compliance for an individual unit on a typical development should also be adjusted accordingly, see Table 15.

These adjustments dramatically reduce the additional costs of compliance on all typologies, see Table 14 below.

Table 14: Summary of Adjusted Costs of LHS Compliance for Flats

Property	Туре	Layout+	Criteria+	Construction Total	Adjusted Criteria*	Adjusted Construction	Total Including Fees
	1 Bed	£340.55	£721.96	£1,062.51	£445.54	£786.09	£845.05
Example 1	2 Bed	(£40.64)	£634.12	£593.48	£340.04	£299.40	£321.86
Example 2	1 Bed	£494.01	£940.96	£1,434.97	£637.33	£1,131.33	£1,216.18
(With Lift)	2 Bed	£455.60	£1,165.13	£1,620.73	£826.56	£1,282.16	£1,378.32
Example 2	1 Bed	£494.01	£940.96	£1,434.97	£347.76	£841.77	£904.90
(No Lift)	2 Bed	£455.60	£1,165.13	£1,620.73	£387.49	£843.09	£906.32

<sup>+</sup> see table 11 (example 1) and table 12 (example 2)

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<sup>\*</sup>see table 15a (example 1) and table 15b (example 2)

**Table 15a:** Adjusted Cost Summary of LHS Compliance for Each Criterion for Flats – Example 1

					Exam	ple 1		
	Criteria	Compliance Provision		1 Bed Fla	t		2 Bed Fla	1
		-	Block	Flat	Total	Block	Flat	Total
		a. External light to canopy	£0.71	£0.00	£0.71	£1.02	£0.00	£0.00
4	External Entrances	b. Level access over the threshold	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
		c. Canopy over main entrances	£12.14	£0.00	£12.14	£17.44	£0.00	£0.00
10	Entrance Level WC and Shower Drainage	b. Drainage provision enabling a shower to be fitted in the future	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
11	Bathroom and WC Walls	Plywood layer to bathroom and en-suite walls	£0.00	£112.80	£112.80	£0.00	£240.23	£240.23
		Direct Costs Sub-total	£12.85	£112.80	£125.65	£18.46	£240.23	£258.69
5	Communal Stairs and Lifts	a. Lift shall be fully accessible	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
7	Wheelchair Accessibility	Circulation space for wheelchairs	£0.00	£15.27	£15.27	£0.00	£0.00	£0.00
14	14 Bathroom Layout Increase in bathroom, WCs etc		£0.00	£304.62	£304.62	£0.00	£81.35	£81.35
	Circulation Area Related Costs Sub-total			£319.89	£319.89	£0.00	£81.35	£81.35
То	Total Cost Of Implementing Criteria (Excluding Fees)			£432.69	£445.54	£18.46	£321.58	£340.04

The overall cost effect of making the cost adjustments to the canopy and external light which are attributed to the roof and mechanical and electrical elements, respectively, are reflected in Table 16 (Minor Development) which shows the transition of costs from Table 11 as a result of the adjustments shown above.

Table 15b: Adjusted Cost Summary of LHS Compliance for Each Criterion for Flats – Example 2

				Ex	cample 2 (I	ncluding Li	ft)			Ex	ample 2 (E	xcluding	Lift)	
	Criteria	Compliance Provision		1 Bed Flat			2 Bed Flat			1 Bed Fla	t		2 Bed Flat	t
			Block	Flat	Total	Block	Flat	Total	Block	Flat	Total	Block	Flat	Total
		a. External light to canopy	£1.19	£0.00	£1.19	£1.80	£0.00	£1.80	£1.19	£0.00	£1.19	£1.80	£0.00	£1.80
4	External Entrances	b. Level access over the threshold	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
		c. Canopy over main entrances	£20.31	£0.00	£20.31	£30.80	£0.00	£30.80	£20.31	£0.00	£20.31	£30.80	£0.00	£30.80
10	Entrance Level WC and Shower Drainage	b. Drainage provision enabling a shower to be fitted in the future	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
11	Bathroom and WC Walls	Plywood layer to bathroom and ensuite walls	£0.00	£198.17	£198.17	£0.00	£290.37	£290.37	£0.00	£198.17	£198.17	£0.00	£290.37	£290.37
		Direct Costs Sub-total	£21.50	£198.17	£219.67	£32.60	£290.37	£322.97	£21.50	£198.17	£219.67	£32.60	£290.37	£322.97
5	Communal Stairs and Lifts	a. Lift shall be fully accessible	£51.56	£0.00	£51.56	£78.19	£0.00	£78.19	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00
7	Wheelchair Accessibility	Circulation space for wheelchairs	£238.00	£47.49	£285.49	£360.89	£28.00	£388.89	£0.00	£47.49	£47.49	£0.00	£28.00	£28.00
14	14 Bathroom Layout Increase in bathroom, WCs, etc		£0.00	£80.61	£80.61	£0.00	£36.52	£36.52	£0.00	£80.61	£80.61	£0.00	£36.52	£36.52
	Circulation Area Related Costs Sub-total		£289.56	£128.10	£417.66	£439.07	£64.52	£503.59	£0.00	£128.10	£128.10	£0.00	£64.52	£64.52
	Total Cost Of Implementing Criteria (Excluding Fees)		£311.06	£326.26	£637.33	£471.67	£354.89	£826.56	£21.50	£326.26	£347.76	£32.60	£354.89	£387.49

The overall cost effect of making the cost adjustments to the canopy and external light which are attributed to the roof and mechanical and electrical elements, respectively, are reflected in Table 16 (Minor Development) which shows the transition of costs from Table 12 as a result of the adjustments shown above.

## 6.3 Sensitivity Analysis

#### 6.3.1 Contract Size Adjustment

A sensitivity analysis was undertaken by repricing the contract using adjusted rates appropriate to the construction of a larger housing development costing in the region of £20million. The rates, adjusted using BCIS's contract adjustment factors, showed savings in the range of 12–16%. Tables 8 and 16 show the comparative costs between the two contract sizes (inclusive of the adjustments for covered entrances and external lights).

## 6.3.2 Number of Storeys

Table 17 below illustrates that where the increase in the GIFA for a flat affects the structure of the block such as the foundations, external walls and roof, then the more storeys that are built, the greater the distribution of these costs hence a lower cost per flat and vice versa. The same applies to the distribution of costs as a result of an increase in the GIFA of the circulation areas of the block and costs associated with the addition of an external canopy and external light.

The effect of LHS on the number of storeys has not been considered for bungalows and houses with three or more storeys as all typologies provided were two storeys.

 Table 16:
 Elemental Cost Summary of the Minor and Major Developments for Flats

		EXAM	IPLE 1		E	XAMPLE 2 (I	Excluding Lif	it)	E	EXAMPLE 2 (	Including Lift	:)
Element	MIN DEVELO		MA. DEVELO	JOR PMENTS		NOR PMENTS		JOR PMENTS	MIN DEVELO		MA. DEVELO	
	1 Bed Flat	2 Bed Flat	1 Bed Flat	2 Bed Flat								
	£	£	£	£	£	£	£	£	£	£	£	£
Foundations	55.72	0.00	48.01	0.00	25.11	17.08	21.64	14.71	64.15	76.27	55.27	65.71
External Walls	173.14	0.00	149.17	0.00	173.14	77.03	149.17	66.37	242.61	182.36	209.02	157.12
Roof	83.20	17.44	71.68	15.03	90.05	55.52	77.58	47.83	105.75	79.33	91.11	68.34
Upper Floor	118.38	0.00	101.99	0.00	49.92	36.75	43.01	31.66	81.73	84.98	70.42	73.22
Stairs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Windows and External Doors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Internal Walls and Partitions	167.80	250.47	144.59	215.80	274.93	395.92	236.87	341.11	313.64	454.61	270.22	391.68
Internal Doors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Floor Finishes	79.73	9.43	68.68	8.13	84.82	98.64	73.08	84.98	104.06	127.81	89.65	110.12
Wall Finishes	51.62	9.53	44.47	8.22	104.66	134.96	90.17	116.27	111.60	145.47	96.15	125.33
Ceiling Finishes	55.79	11.51	48.06	9.91	37.94	25.40	32.69	21.88	55.05	51.34	47.43	44.23
Kitchen Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitary Fittings	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Disposal - Waste Pipes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mechanical and Electrical	0.71	1.02	0.61	0.88	1.19	1.80	1.02	1.55	52.75	79.99	45.45	68.91
Total Construction	786.09	299.40	677.26	257.97	841.77	843.09	725.24	726.37	1,131.33	1,282.16	974.72	1,104.66
Professional Fees	58.96	22.46	40.64	15.48	63.13	63.23	54.39	54.48	84.85	96.16	58.48	66.28
Total Cost Including Fees	845.05	321.86	717.90	273.44	904.90	906.32	779.63	780.85	1,216.18	1,378.32	1,033.20	1,170.94

 Table 17: Cost Summary of the Effect of Number of Storeys

				EXAMP	LE 1				EXAMPLE 2								
		1 Bedro	om Flat	2 Bedroom Flat					1 Bedroom Flat 2 Bedroom Flat								
Summary	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat	Change	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat	Change	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat	Change	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat	Change	
	£	£	£	%	£	£	£	%	£	£	£	%	£	£	£	%	
2 Storey	1,156.29	85.95	1,242.24	8.05	555.67	123.47	679.14	6.06	1,176.28	477.96	1,654.24	6.75	1,160.70	724.74	1,885.44	7.59%	
3 Storey	1,084.90	57.30	1,142.19	-	555.67	82.31	637.99	-	1,135.46	407.13	1,542.59		1,124.94	617.35	1,742.29	-	
4 Storey	1,049.19	42.97	1,092.17	(4.58)	555.67	61.73	617.41	(3.33)	1,120.99	371.72	1,492.72	(3.34)	1,108.72	563.66	1,672.38	(4.18%)	

#### 7.0 CONCLUSIONS AND RECOMMENDATIONS

The functional requirements of Lifetime Homes Standards are not always easily achievable within the typical dwelling types currently built in the volume house building market. As a result, adopting existing layouts by 'adding in' or 'bolting on' Lifetime Homes Standards features can have a significant impact on the size of an existing typical design. However, by designing from first principles, the overall cost and the increase in base area are significantly reduced.

In the three house typologies considered, the frontage of the two bedroom house has had to be marginally increased but the depth of the house decreased in order to accommodate the additional features. However, conversely the frontage to the three and four bedroom houses has decreased but the depth increased. Also, the overall perimeter of the two bedroom house has decreased but has increased on the three and four bedroom houses. This will have an impact on the mix and number of units being built on a scheme.

The new layouts have an open plan arrangement which generally reduces the quantity of partition walls. The absence of an entrance hall on the two and three bedroom terraced houses may have an impact on the energy performance of the house, though it should be noted that in many house builders' standard ranges the addition of a lobby is optional. It is also noted that having the toilet leading from the kitchen may not be to everyone's taste.

It should be noted, however, that the house typologies considered are representative of only a small proportion of the size of properties currently built by the volume house building industry in the UK. Example 1 of the three bedroom typology, for instance, is close to the very smallest standard units analysed. Therefore, although the implementation of LHS will still have a cost implication irrespective of house size in any given typology, it is anticipated that the costs associated with the area increase will diminish as the GIFA of the house increases, *ie* there is less impact and cost as a house increases in size.

Based on the four house typologies provided, implementing the LHS requirements increases the cost of the foundations, external walls, roof, floor and ceiling finishes, disposal, and mechanical and electrical services. However, changes to the layout resulted in net savings mainly to the partitions, finishes, windows and external doors, and the savings are more profound in the three bedroom terraced property, Example 2.

Generally, the increase in the GIFA is more significant in the one bedroom flats than the two bedroom units. Communal circulation areas of smaller blocks with lift access may also have to be enhanced to accommodate compliant lifts.

In the Example 1 block there was no change in the GIFA of the two bedroom flat and the slight increase in the bathroom area was mitigated by reducing the storage area with no detrimental effect on the living and bedroom areas. However the requirements for enhanced circulation space in the one bedroom flat increased the bathroom area by 30%. Also, the bedroom areas were slightly reduced to increase the space of the living areas. As a direct result of these changes the structure of the block had to be adjusted; the costs of which were distributed amongst the one bedroom flats.

Significant changes were necessary to the smaller block, Example 2, to both the one bedroom and two bedroom flats and the communal areas. The GIFA was increased. Whereas the area of the bathroom in the two bedroom flat increased by just 5%, the area of the bathroom of the one bedroom flat increased by over 20%. However, as the size of the living areas and bedrooms has been maintained the knock-on effect increased the size of the structure as a whole and the cost of this has been proportionally split between the two types of flat.

The communal circulation area to the block has been increased to accommodate the larger lift shaft.

In order to establish the additional cost, a large number of cost assumptions needed to be made based on experience of typical costs in the volume house building sector. We believe that they are well reasoned assumptions, and they are fully detailed in the appendices supporting this report.

On the basis of information developed in the course of our analysis, we believe that it is reasonable to conclude that the cost impact of implementing LHS can be kept to a minimum, but this may require altering long standing accepted layouts which may affect the marketability of the property. However, given that only five design solutions were developed, the sample set is clearly quite small. We recommend that further designs are produced in order to broaden the sensitivity to a more acceptable level.

## **Glossary of Terms**

**Adjusted Cost of Compliance**: The *Cost of Compliance* adjusted to reflect current trends in the construction of private dwellings compliant with specific LHS criteria.

**Adjusted Criteria Cost**: The *Criteria Cost* and *Circulation Area Related Costs* of the building works in order to meet LHS Criteria requirements but excluding the *Layout Cost*.

**Circulation Area Related Cost**: Costs associated with internal reconfiguration of a dwelling with the view to improve wheelchair accessibility.

**Construction Cost**: Total cost of the building works associated with LHS compliance excluding *Professional Fees*.

**Cost of Compliance**: The total costs of the additional building works to a dwelling to meet the requirements of LHS.

**Criteria Cost**: The total of the *Direct Cost* and *Circulation Area Related Costs* of the building works in order to meet specific LHS Criteria requirements but excluding the *Layout Cost*.

**Direct Cost**: Costs associated with additional physical features to a dwelling in order to meet LHS Criteria requirements, namely the addition of a canopy and external light (Criterion 4), drainage gulley (Criterion 10) and plywood to bathroom walls (Criterion 11).

**Layout Cost**: Costs associated with changes to the footprint and the internal reconfiguration of a dwelling to accommodate the LHS.

**Major Development**: A development with a contract value of £20,000,000.

**Minor Development**: A development of 10+ properties with a contract value of approximately £750,000 for houses, and single blocks of low rise flats with a with a contract value of £1,000,000.

**Professional Fees**: Fees for the design and construction of the works for the architect, quantity surveyor, CDM co-ordinator and the project management adjusted according to the size of contract.

## **CONTENTS**

## **List of Appendices**

### Appendix 1: Area Schedules

- Appendix 1a: Area Schedule Houses
- Appendix 1b: Area Schedule Flats

## Appendix 2: Elemental Cost Breakdowns

- Appendix 2: Elemental Cost Breakdowns Two Bedroom Terraced House
   Appendix 2b1: Elemental Cost Breakdowns Three Bedroom Terraced House Example 1
   Appendix 2b2: Elemental Cost Breakdowns Three Bedroom Terraced House Example 2
   Appendix 2c: Elemental Cost Breakdowns Four Bedroom Semi-Detached House

- Appendix 2d: Elemental Cost Breakdowns Flats Example 1
- Appendix 2e: Elemental Cost Breakdowns Flats Example 2

## **APPENDIX 1**

## Area Schedules

# APPENDIX 1a

Area Schedule — Houses

## Area Schedule - Houses

	2 Bed H	OUSA	3 Bed House -	Evample 1	3 Bed House -	Evample 2	
Area	Typical Speculative House Builder Type	Alternative LTH Layout	Typical Speculative House Builder Type	Alternative LTH Layout	Typical Speculative House Builder Type	Alternative LTH Layout	Sp. Hou
External Width (mm)	4 200	4.500	4 745	4.950		4.050	
External Width (mm)  External Frontage Width (mm)	4.200	4.500	4.745	4.850	5.350	4.950	
Change	-	0.300	-	0.105	-	-0.400	
External Length (mm)	8.550	8.125	8.203	8.705	8.550	9.550	
External Length (mm) Change		(0.43)		0.50		1.00	
House Width (m)	3.900	4.200	4.445	4.550	5.050	4.650	
House Width Change (m)	-	0.300	-	0.105	-	-0.400	
House Length (m)	7.950	7.525	7.603	8.105	7.950	8.950	
House length Change (m)		(0.43)	•	2.07	•	1	
Deductions (m²)  GIFA (m2)	62.01	- 63.21	67.59	-2.97 70.78	80.30	83.24	
Total GIFA Change (m²)	62.01 -	1.200	67.59	3.193	60.30 -	2.940	
Total GIFA Change (%)	-	1.83%	-	4.72%	-	3.66%	
Perimeter (m)	23.700	23.450	24.096	25.310	27.800	29.000	
Perimeter (m)	-	(0.250)	-	1.21	-	1.20	
Ground Floor Lobby Area (m²)		- (0.200)		-	0.00	2.09	
Ground Floor Hall Area Change (m²)	-	-		-	-	2.09	
Ground Floor Hall Area (m²)	3.30	0.00	3.36	2.05	3.85	0.00	
Ground Floor Hall Area Change (m²)	<b>3.30</b>	(3.30)	3.30	(1.31)	3.83	(3.85)	
Ground Floor Storage Area (m²)	0.00	1.57	1.35	1.49	1.23	1.17	
Ground Floor StorageArea Change	0.00	1.57	1.55	1.43	1.20	1.17	
(m²)	-	1.57	-	0.14	-	(0.06)	
Ground Floor WC Area (m²)	1.71	2.44	1.99	3.36	1.56	2.76	
Ground Floor WC Area Change (m²)	-	0.73	-	1.37	-	1.20	
Ground Floor Utility Area (m²)	-	-	-	-	-	-	
Ground Floor Utility Area Change (m²)				_ 1			
Living Area (m <sup>2</sup> )	18.69	17.85	17.85	18.70	14.67	15.25	
Living Area Change (m²)	-	(0.84)	-	0.85	-	0.58	
Kitchen Area (m²)	4.92	7.58	6.93	7.34	9.34	9.75	
Kitchen Area Change(m²)	-	2.66	-	0.41	-	0.41	
Dining Area (m²)			_	-	6.94	7.62	
Dining Area Change(m²)		- 1		- 1	-	0.68	
Total Area of Living, Kitchen and						0.00	
Dining Areas (m <sup>2</sup> )	23.61	25.43	24.78	26.04	30.95	32.62	
First Floor Hall Area (m²)	1.96	1.47	3.29	3.59	2.62	4.35	
First Floor Hall Area Change (m²)	•	(0.49)		0.30		1.73	
First Floor Storage Area (m²)	0.81	0.59	0.65	1.08	0.65	0.97	
First Floor StorageArea Change (m²)	-	(0.22)	-	0.43	-	0.32	
First Floor Bath Area (m²)	3.42	4.10	3.61	4.67	3.95	4.00	
First Floor Bath Area Change (m²)	-	0.68	-	1.06	-	0.05	
Bed 1 Area (m²)	12.41	12.45	9.36	9.37	9.34	9.30	
Bed 1 Area Change (m²)	-	0.04	-	0.01	-	(0.04)	
Bed 1 En-Suite Area (m²)	-	-	-	-	2.24	2.26	
Bed 1 En-Suite Area Change (m²)	-		-		-	0.02	
Bed 2 Area (m²)	9.36	9.51	7.90	8.27	11.06	10.62	
Bed 2 Area Change (m²)		0.15	-	0.37	-	(0.44)	
Bed 3 Area (m²)	-	-	4.52	4.58	5.65	5.62	
Bed 3 Area Change (m²)	-	- 1	-	0.06	-	(0.03)	
Bed 4 Area (m <sup>2</sup> )	-	-	-	-	-	-	
Bed 4 Area Change (m²)		- 1		-		-	
244 1711 Ou Offurigo (III )							

# APPENDIX 1b

Area Schedule — Flats (Example 1)

## Area Schedule — Flats (Example 1)

	1 Bed	l Flat	2 Bed	Flat	Commun	al Area
Area	Typical Speculative Flat Builder Type	Alternative LTH Layout	Typical Speculative Flat Builder Type	Alternative LTH Layout	Typical Speculative Communal Area Builder Type	Alternative LTH Layout
External Width (mm)						
External Frontage Width (mm) Change						
External Length (mm)				-		
External Length (mm) Change						
House Width (m)		3 0		7		
House Width Change (m)						
House Length (m)						
House length Change (m)						
Deductions (m <sup>2</sup> )		, j				
GIFA (m²)	45.55	47.07	67.62	67.62		
Total GIFA Change (m²)		1.520		0.000		
Total GIFA Change (%)		3.34%		0.00%		
Perimeter (m)		3 3				
Perimeter Change (m)						
Communal Corridor Area (m²)	-			- 1	18.00	
Hall Area Change (m²)		-		- 2	- 3	(18.00)
Communal Stair and Lift Area (m <sup>2</sup> )			-	-	41.38	
Hall Area Change (m²)					-	(41.38)
Hall Area (m²)	4.08	4.28	6.53	6.34		
Hall Area Change (m²)	4.06	0.20	6.53	(0.19)		0.00
rail Area Orlange (III )		0.20		(0.13)		0.00
Storage Area (m²)	1.61	1.61	2.12	2.12		
Storage Area Change (m²)	-	0.00		0.00	-	0.00
Kitchen/Living/Dining Area (m²)	22.25	22.34	25.11	25.11		
Kitchen/Living/Dining Area Change (m²)		0.09		0.00	-	0.00
			Y Y			
Bath Area (m²)	3.96	5.17	4.41	4.59		
Bath Area Change (m²)	-	1.21	-	0.18	-	0.00
Bed 1 Area (m <sup>2</sup> )	11.87	11.83	10.19	10.09		
Bed 1 Area Change (m²)	-	(0.04)		(0.10)		0.00
Bed 2 Area (m²)	0.00	0.00	11.97	12.11		<b>-</b>
Bed 2 Area Change (m <sup>2</sup> )	0.00	0.00	-	0.14		0.00
2 Alea Grange (iii )		0.00		0.14		0.00
Bed 2 En-Suite Area (m²)	-		3.58	3.58	-	
Bed 2 En-Suite Area Change (m²)				0.00	- 3	-

# APPENDIX 1b

Area Schedule — Flats (Example 2)

# Area Schedule — Flats (Example 2)

	1 Bed	d Flat	2 Be	ed Flat	Commun	al Area
Area	Typical Speculative Flat Builder Type	Alternative LTH Layout	Typical Speculative Flat Builder Type	Alternative LTH Layout	Typical Speculative Communal Area Builder Type	Alternative LTH Layout
External Width (mm)						
External Frontage Width (mm) Change			9			
	9	7				
External Length (mm)						
External Length (mm) Change						
House Width (m)						
House Width Change (m)						
House Length (m)						
House Length Change (m)		8 8	a s			,
Deductions (m²)						20
GIFA (m²)	40.61	41.33	62.14	62.67		20
Total GIFA Change (m²)		0.720		0.530		
Total GIFA Change (%)		1.77%		0.85%		
Perimeter (m)  Perimeter Change (m)						
Communal Corridor Area (m²)					9.10	0.15
Hall Area Change (m2)	-			-	8.10	8.15 0.05
Hall Area Change (III2)		-		-	-	0.05
Communal Stair and Lift Area (m²)	-	-		-	20.03	21.83
Hall Area Change (m2)				-	-	1.80
			· ·			
Hall Area (m²)	4.08	3.93	5.55	5.62		· 24
Hall Area Change (m²)	-	(0.15)		0.07	-	0.00
Storage Area (m²)	1.61	1.26	1.47	1.47		32
Storage Area Change (m²)		(0.35)	-	0.00	-	0.00
	,		b A			
Kitchen/Living/Dining Area (m²)	19.46	19.46	21.81	21.80		
Kitchen/Living/Dining Area Change (m²)	-	0.00	-	(0.01)	-	0.00
Poth Area ( $\infty^2$ )	2.00	4 77	0.75	4 4 4		2
Bath Area (m²)  Bath Area Change (m²)	3.96	4.77 0.81	3.75	4.14 0.39		0.00
Balli Area Change (III )		0.81		0.39	-	0.00
Bed 1 Area (m²)	9.80	9.83	11.70	11.70		
Bed 1 Area Change (m²)	9.00	0.03	-	0.00		0.00
		3.00		3.00		3.00
Bed 2 Area (m <sup>2</sup> )	0.00	0.00	11.10	11.10		20
Bed 2 Area Change (m²)	-	0.00		0.00	-	0.00
Bed 1 En-Suite Area (m²)	-	-	3.52	3.52	-	-
Bed 2 En-Suite Area Change (m²)	-	-		0.00	-	-

## **APPENDIX 2**

# Elemental Cost Breakdowns

## **APPENDIX 2a**

**Elemental Cost Breakdowns** 

Two Bedroom Terraced House

10+ Developments

Item No I	Description	Amount
		£
	Summary	
A B C D E F G H I J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	99.86 73.29 556.83 93.39 0.00 (318.29) 245.97 (26.87) 250.47 6.03 (14.66) 0.00 0.00 233.57 97.12

**Total Construction Cost** 

1,296.70

Item No	Description		Quantity	Unit	Rate	Amount
	FOUNDATIONS					
Α	Foundations to cavity wall		0.60	m	145.60	87.36
В	Foundations to party wall		(0.85)	m	42.22	(35.89)
С	Floor slab		0.60	$m^2$	72.73	43.64
D	Sundries		5	%	-	4.76
		Total to Summary				99.86

Item No	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	2.66	m²	117.41	311.78
В	Party wall	(4.14)	$m^2$	31.48	(130.44)
С	Party wall gable	(3.54)	$m^2$	31.48	(111.54)
D	Sundries	5	%		3.49
	Total to S	Summary			73.29

Item No	Description	Quantity Width0.30 Length (0.43)	Unit	Rate	Amount
	ROOF — STRUCTURE				
Α	25 x100 softwood longitudinal tie braces	0.90	m	7.26	6.53
В	75 x 50 wall plate	0.60	m	7.26	4.35
	ROOF — COVERINGS				
С	Pitched roof covering	0.42	$m^2$	56.42	23.94
D	Ridge tile	0.30	m	33.78	10.13
E	Eaves	0.60	m	16.38	9.83
	ROOF — FITTINGS				
F	Roof insulation laid between joists and across	s (0.01)	$m^2$	21.69	(0.16)
G	Eaves boarding	0.60	m	31.51	18.91
Н	Gutter	0.60	m	18.87	11.32
1	Sundries	5	%		4.24
	LIFETIME HOMES CRITERION 4 EXTERNAL CANOPY — CRITERION 4				
J	Berkeley canopy 1250mm x 650mm	1	nr	445.46	445.46
К	Sundries	5	%		22.27
Total to Summary				556.83	

Item No	Description	Quantity	Unit	Rate	Amount
	UPPER FLOORS				
Α	200 x 75 softwood floor joists	1.85	m	6.45	11.93
В	200 x 75 timber strutting between joists	(0.85)	m	6.45	(5.48)
С	Joist hanger	(2)	nr	4.41	(9.38)
D	Floor boarding (T & G)	0.60	$m^2$	30.06	18.03
Е	Sound Deadening quilt	0.60	$m^2$	6.21	3.73
F	Sundries	5	%		0.94
G	LIFETIME HOMES CRITERION 12 200 x 75 softwood floor joists	5.40	m	6.45	34.81
Н	Joist hanger	8	nr	4.41	35.30
I	Sundries	5	%		3.51
	Total to Summary				93.39

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No	Description	Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS_				
Α	Window to living/dining room 1770 x 1350 mm	1	nr	599.61	599.61
	EXTERNAL DOORS				
В	External door size 838 x 1981 mm	1	nr	435.34	435.34
С	Sliding patio doors 1800 x 2100 mm	(1)	nr	1,338.08 (	1,338.08)
D	Sundries	5	%		(15.16)
	Total to Summary				(318.29)

Item No	Description	Quantity	Unit	Rate	Amount
	INTERNAL PARTITIONS				
Α	Timber stud partitions	(3.72)	m²	37.85	(140.66)
В	Sundries	5	%	-	(7.03)
	LIFETIME HOMES CRITERION 11				
С	Plywood lining to WC/bathroom walls	18.72	m²	11.61	217.37
D	Sundries	5	%	-	10.87
	LIFETIME HOMES CRITERION 14				
E	Extra over to for stud partitions to comply with Building Regs Part E	3.29	m²	10.09	33.16
F	Timber stud partitions	3.29	m²	37.85	124.39
G	Sundries	5	%	-	7.88
	Total to Summary				245.97

	Description FERNAL DOORS	Quantity	Unit	Rate	Amount
Α	Internal door 826 x 1981 x 35mm	5	nr	377.04	1,885.20
В	Internal door 826 x 1981 x 35mm	(6)	nr	377.04	(2,262.24)
С	Internal store door 533 x 1981 x 35mm	2	nr	351.44	702.89
D	Internal store door 533 x 1981 x 35mm	(1)	nr	351.44	(351.44)
Е	Sundries	5	%		(1.28)
	Total to Summary				(26.87)

Item No		Quantity House Perimeter (0.25) Floor to ceiling height — Ground Floor 2.375 Floor to ceiling height — First Floor 2.320		Rate	Amount
	WALL FINISHES				
Α	Plaster to brick walls	(0.35)	m²	16.09	(5.56)
В	Mist and 2 coats emulsion to brick walls	(2.01)	$m^2$	2.50	(5.01)
С	Plaster to internal stud partitions	(0.86)	$m^2$	12.30	(10.58)
D	Mist and 2 coats emulsion to internal stud part	(4.15)	m²	2.50	(10.35)
F	Mist and 2 coats to kitchen stud walls	0.50	$m^2$	6.26	3.14
G	Mist and 2 coats to kitchen walls brick walls	0.50	m²	6.26	3.14
Н	Sundries	5	%		(1.26)
	LIFETIME HOMES CRITERION 14				
1	Mist and 2 coats to WC, bathroom brick walls	1.66	m²	6.26	10.40
J	Mist and 2 coats to WC, bathroom internal stud partitions	3.29	$m^2$	6.26	20.56
K	Sundries	5	%		1.55
	Total to Summary			!	6.03

Item No	Description	Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Carpet finish to ground and first floor living areas	0.00	$m^2$	22.99	0.00
В	Skirting	(0.46)	m	10.45	(4.85)
D	Floor finish to kitchen	2.66	$m^2$	61.64	163.97
E	Sundries	5	%		7.96
	LIFETIME HOMES CRITERION 14				
F	Floor finish to ground floor WC	0.73	$m^2$	61.64	45.00
G	Floor finish to first floor bathroom	0.68	$m^2$	50.61	34.42
Н	Sundries	5	%		3.97
	Total to Summary				250.47

Item No	Description	Quantity	Unit	Rate	Amount
	CEILINGS FINISHES				
А	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor first floor	(2.57) (0.52)	m <sup>2</sup> 2 m	31.85 31.85	(81.86) (16.56)
В	Gypsum plaster cornice ground floor first floor	(6.70) 1.10	m m	10.86 10.86	(72.78) 11.95
С	Ceiling finish to joists incl. plasterboard, skim and emulsion  Kitchen	2.66	$m^2$	35.70	94.96
D	Sundries	5.00	%		(3.21)
	LIFETIME HOMES CRITERION 14				
E	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor WC first floor Bathroom	0.73 0.68	m² m²	35.70 35.70	26.06 24.27
F	Sundries	5.00	%		2.52
	Total to Summary				(14.66)

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount
	DISPOSAL — CRITERION 10				
Α	Gully trap and grating; ACO drainage	1.00	nr	145.12	145.12
В	32mm waste pipe	2.00	m	9.42	18.83
С	Joint to drain	1.00	nr	25.02	25.02
D	Filling around pipe; sand	0.06	$m^3$	55.71	3.48
E	Labour	1.50	hr	20.00	30.00
F	Sundries	5	%		11.12
Total to Summary					233.57

Item No	Description	Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation	1.10	$m^2$	0.00	0.00
В	Electrical installation	1.10	$m^2$	0.00	0.00
	ILLUMINATED ENTRANCES — CRITERION 4				
С	External Wall Light	1	nr	92.49	92.49
D	Sundries	5	%		4.62
Total to Summary					

#### APPENDIX 2a

Elemental Cost Breakdowns

Two Bedroom Terraced House

200+ Developments

Item No	Item No Description	
		£
	Summary	
A B C D E F G H L J K L M Z O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	84.80 62.23 525.64 79.29 0.00 (270.28) 208.86 (22.82) 212.67 5.11 (12.45) 0.00 0.00 203.08 82.47

**Total Construction Cost** 

1,158.61

Item No	Description		Quantity	Unit	Rate	Amount
	<u>FOUNDATIONS</u>					
Α	Foundations to cavity wall		0.60	m	123.63	74.18
В	Foundations to party wall		(0.85)	m	35.85	(30.47)
С	Floor slab		0.60	$m^2$	61.76	37.06
D	Sundries		5	%	-	4.04
Total to Summary					84.80	

Item No	Description	Quantity	Unit	Rate	Amount
	INTERNAL PARTITIONS				
Α	Timber stud partitions	(3.72)	m²	32.14	(119.44)
В	Sundries	5	%	-	(5.97)
	LIFETIME HOMES CRITERION 11				
С	Plywood lining to WC/bathroom walls	18.72	m²	9.86	184.57
D	Sundries	5	%	-	9.23
	LIFETIME HOMES CRITERION 14				
E	Extra over to for stud partitions to comply with Building Regs Part E	3.29	m²	8.57	28.16
F	Timber stud partitions	3.29	m²	32.14	105.62
G	Sundries	5	%	-	6.69
	Total to Summary				208.86

	Description FERNAL DOORS	Quantity	Unit	Rate	Amount
Α	Internal door 826 x 1981 x 35mm	5	nr	320.16	1,600.78
В	Internal door 826 x 1981 x 35mm	(6)	nr	320.16	(1,920.93)
С	Internal store door 533 x 1981 x 35mm	2	nr	298.42	596.84
D	Internal store door 533 x 1981 x 35mm	(1)	nr	298.42	(298.42)
Е	Sundries	5	%		(1.09)
	Total to Summ	ary			(22.82)

Item No I	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	2.66	$m^2$	99.70	264.74
В	Party wall	(4.14)	$m^2$	26.73	(110.76)
С	Party wall gable	(3.54)	$m^2$	26.73	(94.71)
D	Sundries	5	%		2.96
Total to Summary					62.23

Item No I	Description	Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	Window to living/dining room 1770 x 1350 mm	1	nr	509.14	509.14
	EXTERNAL DOORS				
В	External door size 838 x 1981 mm	1	nr	369.66	369.66
С	Sliding patio doors 1800 x 2100 mm	(1)	nr	1,136.21	( 1,136.21)
D	Sundries	5	%		(12.87)
	Total to Summary				(270.28)

Item No [	Description	Quantity Width0.30 Length (0.43)	Unit	Rate	Amount	
	ROOF — STRUCTURE					
Α	25 x100 softwood longitudinal tie braces	0.90	m	6.16	5.55	
В	75 x 50 wall plate	0.60	m	6.16	3.70	
	ROOF — COVERINGS					
С	Pitched roof covering	0.42	m²	47.91	20.33	Check rate
D	Ridge tile	0.30	m	28.68	8.61	
Е	Eaves	0.60	m	13.91	8.35	
	ROOF — FITTINGS					
F	Roof insulation laid between joists and across	(0.01)	$m^2$	18.42	(0.14)	
G	Eaves boarding	0.60	m	26.76	16.06	
Н	Gutter	0.60	m	16.02	9.61	
1	Sundries	5	%		3.60	
	LIFETIME HOMES CRITERION 4  EXTERNAL CANOPY — CRITERION 4					
J	Berkeley canopy 1250mm x 650mm	1	nr	428.56	428.56	
K	Sundries	5	%		21.43	
	Total to Sum	nmary			525.64	-

Item No Description		Quantity House Perimeter (0.2 Floor to ceiling height — Ground F Floor to ceiling height — First Flo	loor 2.375	Unit m m m	Rate	Amount
	WALL FINISHES					
Α	Plaster to brick walls		(0.35)	$m^2$	13.67	(4.72)
В	Mist and 2 coats emulsion	to brick walls	(2.01)	$m^2$	2.12	(4.25)
С	Plaster to internal stud par	rtitions	(0.86)	$m^2$	10.44	(8.98)
D	Mist and 2 coats emulsion	n to internal stud partitions	(4.15)	$m^2$	2.12	(8.79)
F	Mist and 2 coats to kitcher	n stud walls	0.50	$m^2$	5.31	2.66
G	Mist and 2 coats to kitcher	n walls brick walls	0.50	$m^2$	5.31	2.66
Н	Sundries		5	%		(1.07)
	LIFETIME HOMES CRITE	RION 14				
I	Mist and 2 coats to WC, ba	athroom brick walls	1.66	m²	5.31	8.83
J	Mist and 2 coats to WC, ba	athroom internal stud partitions	3.29	$m^2$	5.31	17.46
К	Sundries		5	%		1.31
		Total to Sumn	nary			5.11

Item No	Description	Quantity	Unit	Rate	Amount
	CEILINGS FINISHES				
А	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor first floor	(2.57) (0.52)	m² m²	27.05 27.05	(69.51) (14.06)
В	Gypsum plaster cornice ground floor first floor	(6.70) 1.10	m m	9.22 9.22	(61.80) 10.15
С	Ceiling finish to joists incl. plasterboard, skim and emulsion Kitchen	2.66	$m^2$	30.31	80.63
D	Sundries	5.00	%		(2.73)
	LIFETIME HOMES CRITERION 14				
E	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor WC first floor Bathroom	0.73 0.68	${ m m}^2 { m m}^2$	30.31 30.31	22.13 20.61
F	Sundries	5.00	%		2.14
	Total to Summary				(12.45)

Item No E	Description	Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Carpet finish to ground and first floor living areas	0.00	$m^2$	19.52	0.00
В	Skirting	(0.46)	m	8.88	(4.12)
D	Floor finish to kitchen	2.66	m²	52.34	139.23
E	Sundries	5	%		6.76
	LIFETIME HOMES CRITERION 14				
F	Floor finish to ground floor WC	0.73	$m^2$	52.34	38.21
G	Floor finish to first floor bathroom	0.68	$m^2$	42.98	29.22
Н	Sundries	5	%		3.37
	Total to Summary				212.67

Item No	Item No Description		Unit	Rate	Amount
	UPPER FLOORS				
Α	200 x 75 softwood floor joists	1.85	m	5.47	10.13
В	200 x 75 timber strutting between joists	(0.85)	m	5.47	(4.65)
С	Joist hanger	(2)	nr	3.75	(7.96)
D	Floor boarding (T & G)	0.60	$m^2$	25.52	15.31
E	Sound Deadening quilt	0.60	$m^2$	5.27	3.16
F	Sundries	5	%		0.80
G	LIFETIME HOMES CRITERION 12 200 x 75 softwood floor joists	5.40	m	5.47	29.56
Н	Joist hanger	8	nr	3.75	29.97
1	Sundries	5	%		2.98
	Total to Summary				79.29

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary 0.00

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No	Description	Quantity	Unit	Rate	Amount
	DISPOSAL— CRITERION 10				
Α	Gully trap and grating; ACO drainage	1.00	nr	123.22	123.22
В	32mm waste pipe	2.00	m	8.00	15.99
С	Joint to drain	1.00	nr	21.24	21.24
D	Filling around pipe; sand	0.06	$m^3$	47.31	2.96
Е	Labour	1.50	hr	20.00	30.00
F	Sundries	5	%		9.67
	Total to Summary				203.08

Item No I	Description	Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation	1.10	$m^2$	0.00	0.00
В	Electrical installation	1.10	$m^2$	0.00	0.00
	ILLUMINATED ENTRANCES — CRITERION 4				
С	External wall light	1	nr	78.54	78.54
D	Sundries	5	%		3.93
	Total to Summary				82.47

#### APPENDIX 2b1

#### **Elemental Cost Breakdowns**

#### Three Bedroom Terraced House – Example 1

10+ Developments

2,759.40

#### Summary A Foundations 312.52 External Walls 954.04 C Roof 834.34 D Upper Floor 191.06 Е Stairs 0.00 Windows and External Doors (889.58)Internal Walls & Partitions 485.84 H Internal Doors 0.00 ı Floor Finishes 210.16 Wall Finishes 261.33 K Ceiling Finishes 69.00 L Kitchen Fittings 0.00 M Sanitary Fittings 0.00 Disposal - Waste Pipes 233.57 O Mechanical & Electrical Installations 97.12

**Total construction Cost** 

	No Description NDATIONS		Quantity	Unit	Rate	Amount
Α	Foundations to cavity wall		1.26	m	145.60	183.45
В	Foundations to party wall		(0.05)	m	42.22	(1.94)
С	Floor slab		1.60	$m^2$	72.73	116.13
D	Sundries		5	%	-	14.88
		Total to Summary				312.52

Item I	Item No Description		Unit	Rate	Amount
EXTE	RNAL WALLS				
A B C D E F	Cavity walls Party wall Party wall gable Front elevation gable wall Party Wall in front roof space Sundries	7.49 (0.22) 0.18 0.00 0.55	m² m² m² m² m²	117.41 31.48 31.48 117.41 57.35	879.75 (7.06) 5.80 0.00 31.61 43.92
Total	to Summary				954.04

Item I	Item No Description		Unit	Rate	Amount
	Width Length	0.11 0.50			
ROOF	=				
A B C D	25x100 softwood longitudinal tie braces 75x50 wall plate Fink trusssed rafter 45 deg pitch, 7.60m span Fink trusssed rafter 45 deg pitch, 8.0m span	0.31 0.21 (13) 14	m m nr No	3.80 7.26 89.48 94.04	1.20 1.52 (1,133.47) 1,269.50
	ROOF - COVERINGS				
E F G	Pitched roof covering Ridge tile Eaves	2 0.11 1.26	m² m m	56.42 33.78 16.38	91.13 3.55 20.64
ROOF	- FITTINGS				
H I J K	Roof insulation laid between joists and across Eaves boarding Gutter Sundries	0.09 2.75 1.26 5%	m² m m	21.69 31.51 18.87	2.05 86.53 23.77 0.18
LIFET	TIME HOMES CRITERION 4				
EXTE	RNAL CANOPY - CRITERION 4				
L	Berkeley canopy 1250mm x 650mm	1	nr	445.46	445.46
M	Sundries	5	%		22.27
Total	to Summary				834.34

Item N	lo Description	Quantity	Unit	Rate	Amount
UPPE A B C D E F	R FLOORS  200 x 75 softwood floor joists 200 x 75 timber strutting between journ joist hanger Floor boarding (T & G) Sound Deadening quilt Sundries	5.65 1.00 2 1.60 1.60 5	m m nr m² %	6.45 6.45 4.41 30.06 6.21	36.40 6.47 8.82 47.99 9.91 5.48
LIFET	IME HOMES CRITERION 12				
G H I	200 x 75 softwood floor joists Joist hanger Sundries	5.7 5 8 5	m nr %	6.45 4.41	37.07 35.30 3.62

**Total to Summary** 

191.06

Item No Description Quantity Unit Rate Amount STAIRS

No cost effect

Total to Summary 0.00

Item No Description Quantity			Unit	Rate	Amount					
WIND	WINDOWS AND EXTERNAL DOORS									
WIND	ows									
Α	Window to living/dining room 1770	x 1350 mm	1	nr	599.61	599.61				
В	Window to living/dining room 915	x 1200 mm	(1)	nr	544.08	(544.08)				
EXTER	RNAL DOORS									
С	External door size 838 x 1981 mm	1	1	nr	435.34	435.34				
D	Sliding patio doors 1800 x 2100 m	im	(1)	nr	1,338.08 (	1,338.08)				
Е	Sundries		5	%		(42.36)				
Total t	Total to Summary (889.58)									

Item N	Item No Description		Unit	Rate	Amount
<b>INTER</b> A B	NAL PARTITIONS Timber stud partitions Sundries	(4. <del>73</del> ) 5	m² %	-	(178.90) (8.95)
	LIFETIME HOMES CRITERION 11				
С	Plywood lining to WC/bathroom walls	20.59	$m^2$	11.61	239.11
D	Sundries	5	%	-	11.96
LIFETI	ME HOMES CRITERION 14				
E F G	Extra over to for stud partitions to comply with Building Regs Part E Timber stud partitions Sundries	8.40 8.40 5	m² m² %	10.09 37.85 -	84.72 317.77 20.12

Item No Description		Quantity	Unit	Rate	Amount		
INTERNAL DOORS							
Α	Internal door 826 x 1981 x 35mm	7	nr	377.04	2,639.28		
В	Internal door 826 x 1981 x 35mm	(7)	nr	377.04	(2,639.28)		
С	Internal store door 533 x 1981 x 35mm	2	nr	351.44	702.89		
D	Internal store door 533 x 1981 x 35mm	(2)	nr	351.44	(702.89)		
Е	Sundries	5	%		0.00		
	Total to Summary				0.00		

Item No Description		Quantity	Unit	Rate	Amount			
FLOOR FINISHES								
A B C	Carpet finish to ground and first floor living areas Skirting Floor finish to kitchen	0.00 4.41 0.41	m² m m²	22.99 10.45 61.64	0.00 46.07 4.29			
D	Sundries	5	%		2.52			
LIFETIME HOMES CRITERION 14								
Е	Floor finish to first floor bathroom	1.06	$m^2$	50.61	65.34			
F G	Floor finish to ground floor WC Sundries	1.37 5	m² %	61.64	84.45 7.49			
Total to Summary								

Item No Description							
		House Perimeter Increase Floor to ceiling height - Ground Floor Floor to ceiling height - First Floor	Quantity 1.21 2.375 2.320	Unit m m m	Rate	Amount	
	WALL FINISHES						
Α	Plaster to brick walls		6.53	$m^2$	16.09	105.07	
В	Mist and 2 coats emulsion to brick walls		8.34	$m^2$	2.50	20.81	
С	Plaster to internal stud partitions		7.34	$m^2$	12.30	90.24	
D	Mist & and 2 coats emulsion to internal stud partitions		(1.06)	$m^2$	2.50	(2.64)	
Е	Mist & 2 coats to kitch	nen walls brick walls	0.24	$m^2$	6.26	1.49	
F	Mist & 2 coats to kitchen stud walls		(1.16)	$m^2$	6.26	(7.27)	
G	Sundries		5	%		10.39	
	LIFETIME HOMES CRITERION 14						
Н	Mist & 2 coats to WC partitions	, bathroom walls internal stud	8.40	m²	6.26	52.53	
I	Mist & 2 coats to WC	, bathroom walls brick walls	(1.81)	$m^2$	6.26	(11.34)	
J	Sundries		5	%		2.06	
Total to Summary					261.33		

Item I	No Description	Quantity	Unit	Rate	Amount
	CEILINGS FINISHES				
Α	Ceiling finish to joists incl. pl skim and emulsion ground floor first floor	(0	.32) m <sup>2</sup> .11 m <sup>2</sup>	31.85 31.85	(10.19) 35.36
В	Gypsum Plaster cornice ground floor first floor		. <mark>70)</mark> m .10 m	10.86 10.86	(72.78) 11.95
С	Ceiling finish to joists incl. pl skim and emulsion Kitchen		.41 m²	35.70	14.64
D	Sundries		5 %		(1.05)
	LIFETIME HOMES CRIT	TERION 14			
Е	Ceiling finish to joists incl. plasterboard, skim and emu ground floor WC first floor Bathroom	1.37 1.06	$\begin{array}{c} m^2 \\ m^2 \end{array}$	35.70 35.70	48.91 37.84
F	Sundries	5	%		4.34
	Total to Summa	ary			69.00

Quantity Unit Rate Amount

Item No Description KITCHEN FITTINGS

No cost effect

Total to Summary 0.00

Quantity Unit Rate Amount

Item No Description
SANITARY INSTALLATIONS

No cost effect

Total to Summary 0.00

Item N	lo Description	Quantity	Unit	Rate	Amount
	DISPOSAL- CRITERION 10				
A B C	Gully trap and grating; ACO drainage 32mm waste pipe Joint to drain	1.00 2.00 1.00	nr m nr	145.12 9.42 25.02	145.12 18.83 25.02
D E	Filling around pipe; sand Labour	0.06 1.50	m³ hr	55.71 20.00	3.48 30.00
F	Sundries	5	%		11.12
	Total to Summary				233.57

Item No Description		<b>Quantity Unit Rate Amount</b>			
	SERVICES				
А	Heating installation	1.10	m <sup>2</sup> 0.00	0.00	
В	Electrical installation	1.10 n	m <sup>2</sup> 0.00	0.00	
	ILLUMINATED ENTRANCES - CRITERION 4				
С	External Wall Light	1 nr	92.49	92.49	
D	Sundries	5 %		4.62	
	Total to Summary			<u>97.12</u>	

#### APPENDIX 2b2

#### **Elemental Cost Breakdowns**

#### Three Bedroom Terraced House – Example 1

200+ Developments

		£
Su	mmary	
Α	Foundations	005.07
В	External Walls	265.37 810.10
С	Roof	761.28
D	Upper Floor	162.24
Ε	Stairs	0.00
F G	Windows and External Doors Internal Walls & Partitions	( <mark>755.37)</mark> 412.53
Н	Internal Doors	0.00
I J	Floor Finishes Wall Finishes	178.45 221.92
K	Ceiling Finishes	58.59
L M	Kitchen Fittings Sanitary Fittings	0.00 0.00
N	Disposal - Waste Pipes	203.08
0	Mechanical & Electrical Installations	82.47
	Total construction Cost	2,400.67

	No Description IDATIONS	Quantity	Unit	Rate	Amount
Α	Foundations to cavity wall	1.26	m	123.63	155.77
В	Foundations to party wall	(0.05)	m	35.85	(1.65)
С	Floor slab	1.60	$m^2$	61.76	98.61
D	Sundries	5	%	-	12.64
	Total to Summary	Ī			265.37

Item No Description		Quantity	Unit	Rate	Amount
EXTE	RNAL WALLS				
A B C D E F	Cavity walls Party wall Party wall gable Front elevation gable wall Party Wall in front roof space Sundries	7.49 (0.22) 0.18 0.00 0.55 5	m² m² m² m² m²	99.70 26.73 26.73 99.70 48.70	747.03 (5.99) 4.93 0.00 26.84 37.30
Total	to Summary				810.10

Item	No Description	Quantity	Unit	Rate	Amount		
	Width Length	0.11 0.50					
ROO	F						
A B C D	25x100 softwood longitudinal tie braces 75x50 wall plate Fink trusssed rafter 45 deg pitch, 7.60m span Fink trusssed rafter 45 deg pitch, 8.0m span	0.31 0.21 (13) 14	m m nr No	3.22 6.16 75.98 79.85	1.02 1.29 ( <mark>962.46)</mark> 1,077.97		
	ROOF - COVERINGS						
E F G	Pitched roof covering Ridge tile Eaves	2 0.11 1.26	m² m m	47.91 28.68 13.91	77.38 3.01 17.53		
ROO	F - FITTINGS						
H I J K	Roof insulation laid between joists and across Eaves boarding Gutter Sundries	0.09 2.75 1.26 5%	m² m m	18.42 26.76 16.02	1.74 73.48 20.19 0.16		
LIFE	LIFETIME HOMES CRITERION 4						
EXT	ERNAL CANOPY - CRITERION 4						
L	Berkeley canopy 1250mm x 650mm	1	nr	428.56	428.56		
М	Sundries	5	%		21.43		
Tota	I to Summary				761.28		

Item N	lo Description	Quantity	Unit	Rate	Amount
UPPE A B C D E F	R FLOORS  200 x 75 softwood floor joists 200 x 75 timber strutting between journ Joist hanger Floor boarding (T & G) Sound Deadening quilt Sundries	5.65 1.00 2 1.60 1.60 5	m m nr m² m² %	5.47 5.47 3.75 25.52 5.27	30.91 5.50 7.49 40.75 8.42 4.65
LIFET	IME HOMES CRITERION 12				
G H I	200 x 75 softwood floor joists Joist hanger Sundries	5.	5 nr 3 %	5.47 3.75	31.48 29.97 3.07

**Total to Summary** 

162.24

Item No Description Quantity Unit Rate Amount STAIRS

No cost effect

Total to Summary 0.00

Item I	No Description	Quantity		Unit	Rate	Amount			
WIND	WINDOWS AND EXTERNAL DOORS								
WIND	OWS								
Α	Window to living/dining room 177	0 x 1350 mm	1	nr	509.14	509.14			
В	Window to living/dining room 915	x 1200 mm	(1)	nr	461.99	(461.99)			
EXTE	RNAL DOORS								
С	External door size 838 x 1981 mr	m	1	nr	369.66	369.66			
D	Sliding patio doors 1800 x 2100 n	nm	(1)	nr	1,136.21	(1,136.21)			
Е	Sundries		5	%		(35.97)			
Total	Total to Summary (755.37)								

Item N	lo Description	Quantity	Unit	Rate	Amount
INTER A B	NAL PARTITIONS Timber stud partitions Sundries	(4.73) 5	m² %	-	(151.91) (7.60)
	LIFETIME HOMES CRITERION 11				
С	Plywood lining to WC/bathroom walls	20.59	m²	9.86	203.03
D	Sundries	5	%	-	10.15
LIFET	IME HOMES CRITERION 14				
E F G	Extra over to for stud partitions to comply with Building Regs Part E Timber stud partitions Sundries	8.40 8.40 5	m² m² %	8.57 32.14 -	71.94 269.83 17.09

Item I	No Description	Quantity	Unit	Rate	Amount
INTER	RNAL DOORS				
Α	Internal door 826 x 1981 x 35mm	7	nr	320.16	2,241.09
В	Internal door 826 x 1981 x 35mm	(7)	nr	320.16	(2,241.09)
С	Internal store door 533 x 1981 x 35mm	2	nr	298.42	596.84
D	Internal store door 533 x 1981 x 35mm	(2)	nr	298.42	(596.84)
Е	Sundries	5	%		0.00
	Total to Summary				0.00

Item N	lo Description	Quantity	Unit	Rate	Amount			
FLOOR FINISHES								
A B C	Carpet finish to ground and first floor living areas Skirting Floor finish to kitchen	0.00 4.41 0.41	m² m m²	19.52 8.88 52.34	0.00 39.12 3.64			
D	Sundries	5	%		2.14			
LIFETIME HOMES CRITERION 14								
E	Floor finish to first floor bathroom	1.06	$m^2$	42.98	55.48			
F	Floor finish to ground floor WC	1.37	$m^2$	52.34	71.71			
G	Sundries	5	%		6.36			
Total to Summary					210.16			

Item N		House Perimeter Increase ceiling height - Ground Floor to ceiling height - First Floor	Quantity 1.21 2.375 2.320	Unit m m m	Rate	Amount
	WALL FINISHES					
Α	Plaster to brick walls		6.53	$m^2$	13.67	89.22
В	Mist and 2 coats emulsion to b	orick walls	8.34	m²	2.12	17.67
С	Plaster to internal stud partition	ns	7.34	m²	10.44	76.63
D	Mist & and 2 coats emulsion to	o internal stud partitions	(1.06)	m²	2.12	(2.24)
Е	Mist & 2 coats to kitchen walls	brick walls	0.24	m²	5.31	1.26
F	Mist & 2 coats to kitchen stud	walls	(1.16)	m²	5.31	(6.17)
G	Sundries		5	%		8.82
	LIFETIME HOM	ES CRITERION 14				
Н	Mist & 2 coats to WC, bathroo partitions	m walls internal stud	8.40	$m^2$	5.31	44.61
1	Mist & 2 coats to WC, bathroo	m walls brick walls	(1.81)	m²	5.31	(9.63)
J	Sundries		5	%		1.75
	Total to	Summary				221.92

Item I	No Description Qua	antity	Unit	Rate	Amount
	CEILINGS FINISHES				
Α	Ceiling finish to joists incl. plaste skim and emulsion ground floor first floor	(0.32) 1.11	m² m²	27.05 27.05	(8.65) 30.02
В	Gypsum Plaster cornice ground floor first floor	(6.70) 1.10	m m	9.22 9.22	(61.80) 10.15
С	Ceiling finish to joists incl. plaste skim and emulsion Kitchen	erboard, 0.41	$m^2$	30.31	12.43
D	Sundries	5	%		(0.89)
	LIFETIME HOMES CRITER	ION 14			
Е	Ceiling finish to joists incl. plasterboard, skim and emulsior ground floor WC first floor Bathroom	1.37 1.06	m² m²	30.31 30.31	41.53 32.13
F	Sundries	5	%		3.68
	Total to Summary				58.59

Quantity Unit Rate Amount

Item No Description KITCHEN FITTINGS

No cost effect

Total to Summary 0.00

Quantity Unit Rate Amount

Item No Description
SANITARY INSTALLATIONS

No cost effect

Total to Summary 0.00

Item N	No Description	Quantity	Unit	Rate	Amount
	DISPOSAL- CRITERION 10				
A B C	Gully trap and grating; ACO drainage 32mm waste pipe Joint to drain	1.00 2.00 1.00	nr m nr	123.22 8.00 21.24	123.22 15.99 21.24
D E	Filling around pipe; sand Labour	0.06 1.50	m <sup>3</sup> hr	47.31 20.00	2.96 30.00
F	Sundries	5	%		9.67
Total to Summary					

Item No Description		Quantity Unit Rate Amount			
	SERVICES				
А	A Heating installation	1.10	$m^2 0.00$	0.00	
В	Electrical installation	1.10	$m^2 0.00$	0.00	
	ILLUMINATED ENTRANCES - CRITERION 4				
С	External Wall Light	1 nr	92.49	92.49	
D	Sundries	5 %		4.62	

Total to Summary <u>97.12</u>

#### APPENDIX 2b2

#### **Elemental Cost Breakdowns**

#### Three Bedroom Terraced House – Example 2

10+ Developments

Summary  A Foundations B External Walls C Roof D Upper Floor E Stairs F Windows and External Doors G Internal Walls and Partitions H Internal Doors I Floor Finishes J Wall Finishes K Ceiling Finishes	£
A Foundations B External Walls C Roof D Upper Floor E Stairs F Windows and External Doors G Internal Walls and Partitions H Internal Doors I Floor Finishes J Wall Finishes	
B External Walls C Roof D Upper Floor E Stairs F Windows and External Doors G Internal Walls and Partitions H Internal Doors I Floor Finishes J Wall Finishes	
L Kitchen Fittings M Sanitary Fittings N Disposal — Waste Pipes O Mechanical and Electrical Installations	78.63 185.70 560.24 198.01 0.00 (286.09) (70.28) (342.14) (18.59) (152.16) 60.96 0.00 0.00 233.57 97.12

**Total Construction Cost** 

544.97

Item No Description		Quantity	Unit	Rate	Amount
	FOUNDATIONS				
Α	Foundations to cavity wall	(0.80)	m	145.60	(116.48)
В	Foundations to party wall	2.00	m	42.22	84.45
С	Floor slab	1.47	m²	72.73	106.92
D	Sundries	5	%	-	3.74
	Total to Su	ummary			78.63

Item No I	Description	Quantity	Unit	Rate	Amount	
	EXTERNAL WALLS					
Α	Cavity walls	(3.53)	m <sup>2</sup>	117.41	(414.93)	
В	Party wall	9.75	$m^2$	31.48	306.91	
С	Party wall gable	9.05	$m^2$	31.48	284.88	
D	Sundries	5	%		8.84	
	Total to Summary				185.70	

Item No	Description	Quantity Width (0.40) Length 1.00	Unit	Rate	Amount
	ROOF — STRUCTURE				
Α	25x100 softwood longitudinal tie braces	(1.20)	m	163.60	(196.32)
В	75x50 wall plate	(0.80)	m	163.60	(130.88)
С	Fink trussed rafter 45 deg pitch, 8.0m span	(13)	nr	94.04	(1,253.82)
D	Fink trussed rafter 45 deg pitch, 9.0m span	15	nr	105.79	1,586.87
	ROOF — COVERINGS				
E	Pitched roof covering	2.08	$m^2$	56.42	117.30
F	Ridge tile	(0.40)	m	33.78	(13.51)
G	Eaves	(0.80)	m	16.38	(13.11)
	ROOF — FITTINGS				
Н	Roof insulation laid between joists and across	1.47	$m^2$	21.69	31.88
1	Eaves boarding	(0.80)	m	31.51	(25.21)
J	Gutter	(0.80)	m	18.87	(15.09)
К	Sundries	5.00	%		4.41
	LIFETIME HOMES CRITERION 4 EXTERNAL CANOPY — CRITERION 4				
L	Berkeley canopy 1250mm x 650mm	1	nr	445.46	445.46
М	Sundries	5	%		22.27
	Total to Sum	nmary			560.24

Item No E	Description	Quantity	Unit	Rate	Amount
	UPPER FLOORS				
	<u></u>				
Α	200 x 75 softwood floor joists	£3.27	m	6.45	21.11
В	200 x 75 timber strutting between joists	2.00	m	6.45	12.89
С	Joist hanger	£6.55	nr	4.41	28.90
D	Floor boarding (T & G)	1.47	$m^2$	30.06	44.18
Е	Sound deadening quilt	1.47	$m^2$	6.21	9.13
F	Sundries	5	%		5.81
	LIFETIME HOMES CRITERION 12				
G	200 x 75 softwood floor joists	5.75	m	6.45	37.07
Н	Joist hanger	8	nr	4.41	35.30
1	Sundries	5	%		3.62
Total to Summary				198.01	

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	Window to WC 488 x 750 mm	(1)	nr	272.47	(272.47)
В	Sundries	5	%		(13.62)
Total to Summary					(286.09)

Item No I	Description	Quantity	Unit	Rate	Amount
	INTERNAL PARTITIONS				
Α	Timber stud partitions	(10.16)	$m^2$	37.85	(384.70)
В	Timber stud partitions	(5.45)	$m^2$	37.85	(206.35)
С	Sundries	5	%	-	(29.55)
	LIFETIME HOMES CRITERION 11				
D	Plywood lining to WC/bathroom walls	30.43	$m^2$	11.61	353.34
E	Sundries	5	%	-	17.67
	LIFETIME HOMES CRITERION 14				
F	Extra over to for stud partitions to comply with Building Regs Part E	3.56	$m^2$	10.09	35.95
G	Timber stud partitions	3.56	$m^2$	37.85	134.83
Н	Sundries	5	%	-	8.54
Total to Summary					

	Description ERNAL DOORS	Quantity	Unit	Rate	Amount
Α	Internal door 775 x 1981 x 35mm	8	nr	377.04	3,016.32
В	Internal door 826 x 1981 x 35mm	(7)	nr	377.04	(2,639.28)
С	Internal store door 533 x 1981 x 35mm	1	nr	351.44	351.44
D	Internal store door 533 x 1981 x 35mm	(3)	nr	351.44	(1,054.33)
E	Sundries	5	%		(16.29)
	Total to Sun	nmary			(342.14)

Item No Description		Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Carpet finish to ground and first floor living areas	0.00	$m^2$	22.99	0.00
В	Skirting	(11.52)	m	10.45	(120.44)
D	Floor finish to kitchen	0.41	$m^2$	61.64	25.27
Е	Sundries	5	%		(4.76)
	LIFETIME HOMES CRITERION 14				
F	Floor finish to ground floor WC	1.20	$m^2$	61.64	73.97
G	Floor finish to first floor bathroom	0.05	$m^2$	50.61	2.53
Н	Floor finish to first floor en-suite	0.02	$m^2$	50.61	1.01
I	Sundries	5	%		3.83
Total to Summary					(18.59)

Item No Description		Quantity House Perimeter1.20 Floor to ceiling height —Ground Floor 2.375 Floor to ceiling height — First Floor 2.320		Unit m m m	Rate	Amount
	WALL FINISHES					
Α	Plaster to brick walls		7.42	$m^2$	16.09	119.37
В	Mist and 2 coats emulsion t	o brick walls	10.85	$m^2$	2.50	27.07
С	Plaster to internal stud parti	tions	(24.11)	$m^2$	12.30	(296.45)
D	Mist and 2 coats emulsion t	o internal stud partitions	(22.08)	$m^2$	2.50	(55.09)
F	Mist and 2 coats to kitchen	stud walls	(5.59)	$m^2$	6.26	(35.00)
G	Mist and 2 coats to kitchen	walls brick walls	15.08	$m^2$	6.26	94.36
Н	Sundries		5	%		(7.29)
	LIFETIME HOMES CRITER	RION 14				
1	Mist and 2 coats to WC, en-	-suite, bathroom brick walls	(3.43)	$m^2$	6.26	(21.46)
J	Mist and 2 coats to WC, enpartitions	-suite, bathroom internal stud	3.56	$m^2$	6.26	22.29
K	Sundries		5	%		0.04
Total to Summary				(152.16)		

Item No Description		Quantity	Unit	Rate	Amount
	CEILINGS FINISHES				
А	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor first floor	(1.24) 1.57	m² m²	31.85 31.85	(39.50) 50.01
В	Gypsum plaster cornice ground floor first floor	(4.65) 1.60	m m	10.86 10.86	(50.51) 17.38
С	Ceiling finish to joists incl. plasterboard, skim and emulsion Kitchen	0.99	$m^2$	35.70	35.34
D	Sundries	5.00	%		0.64
	LIFETIME HOMES CRITERION 14				
E	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor WC first floor Bathroom En-suite	1.20 0.05 0.02	m² m² m²	35.70 35.70 35.70	42.84 1.78 0.71
F	Sundries	5.00	%		2.27
Total to Summary					60.96

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount
	DISPOSAL— CRITERION 10				
Α	Gully trap and grating; ACO drainage	1.00	nr	145.12	145.12
В	32mm waste pipe	2.00	m	9.42	18.83
С	Joint to drain	1.00	nr	25.02	25.02
D	Filling around pipe; sand	0.06	$m^3$	55.71	3.48
E	Labour	1.50	hr	20.00	30.00
F	Sundries	5	%		11.12
	Total to Summary				233.57

Item No	Description	Quantity	Unit	Rate	Amount
	<u>SERVICES</u>				
Α	Heating installation	0.00	$m^2$	0.00	0.00
В	Electrical installation	0.00	$m^2$	0.00	0.00
	ILLUMINATED ENTRANCES — CRITERION 4				
С	External wall light	1	nr	92.49	92.49
D	Sundries	5	%		4.62
Total to Summary					

## APPENDIX 2b2

## **Elemental Cost Breakdowns**

Three Bedroom Terraced House – Example 2

200+ Developments

Item No	Item No Description	
		£
	Summary	
ABCDEFGHLJKLMRO	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	66.77 157.68 528.53 168.15 0.00 (242.93) (59.66) (290.52) (15.78) (129.19) 51.76 0.00 0.00 203.08 82.47

**Total Construction Cost** 

520.36

Item No	Description	Quantity	Unit	Rate	Amount
	FOUNDATIONS				
Α	Foundations to cavity wall	(0.80)	m	123.63	(98.90)
В	Foundations to party wall	2.00	m	35.85	71.70
С	Floor slab	1.47	$m^2$	61.76	90.78
D	Sundries	5	%	-	3.18
Total to Summary					66.77

Item No I	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	(3.53)	$m^2$	99.70	(352.33)
В	Party wall	9.75	$m^2$	26.73	260.61
С	Party wall gable	9.05	m <sup>2</sup>	26.73	241.90
D	Sundries	5	%		7.51
Total to Summary					157.68

Item No	Description	Quantity Width (0.40) Length 1.00	Unit	Rate	Amount
	ROOF — STRUCTURE				
Α	25x100 softwood longitudinal tie braces	(1.20)	m	138.92	(166.70)
В	75x50 wall plate	(0.80)	m	138.92	(111.13)
С	Fink trussed rafter 45 deg pitch, 8.0m span	(13)	nr	79.85	(1,064.66)
D	Fink trussed rafter 45 deg pitch, 9.0m span	15	nr	89.83	1,347.46
	ROOF — COVERINGS				
E	Pitched roof covering	2.08	$m^2$	47.91	99.60
F	Ridge tile	(0.40)	m	28.68	(11.47)
G	Eaves	(0.80)	m	13.91	(11.13)
	ROOF — FITTINGS				
Н	Roof insulation laid between joists and across	1.47	$m^2$	18.42	27.07
1	Eaves boarding	(0.80)	m	26.76	(21.41)
J	Gutter	(0.80)	m	16.02	(12.82)
К	Sundries	5.00	%		3.74
	LIFETIME HOMES CRITERION 4 EXTERNAL CANOPY — CRITERION 4				
L	Berkeley canopy 1250mm x 650mm	1	nr	428.56	428.56
М	Sundries	5	%		21.43
	Total to Sum	nmary			528.53

Item No	Description	Quantity	Unit	Rate	Amount
	UPPER FLOORS				
Α	200 x 75 softwood floor joists	£3.27	m	5.47	17.93
В	200 x 75 timber strutting between joists	2.00	m	5.47	10.95
С	Joist hanger	£6.55	nr	3.75	24.54
D	Floor boarding (T & G)	1.47	$m^2$	25.52	37.52
Е	Sound deadening quilt	1.47	$m^2$	5.27	7.75
F	Sundries	5	%		4.93
G	LIFETIME HOMES CRITERION 12 200 x 75 softwood floor joists	5.75	m	5.47	31.48
Н	Joist hanger	8	nr	3.75	29.97
1	Sundries	5	%		3.07
	Total to Summary	′			168.15

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No	Description	Quantity	Unit	Rate	Amount		
	WINDOWS AND EXTERNAL DOORS						
	WINDOWS						
Α	Window to WC 488 x 750 mm	(1)	nr	231.36	(231.36)		
D	Sundries	5	%		(11.57)		
Total to Summary (2							

Item No Description		Quantity	Unit	Rate	Amount
	INTERNAL PARTITIONS				
Α	Timber stud partitions	(10.16)	$m^2$	32.14	(326.66)
В	Timber stud partitions	(5.45)	$m^2$	32.14	(175.21)
С	Sundries	5	%	-	(25.09)
	LIFETIME HOMES CRITERION 11				
D	Plywood lining to WC/bathroom walls	30.43	$m^2$	9.86	300.03
E	Sundries	5	%	-	15.00
	LIFETIME HOMES CRITERION 14				
F	Extra over to for stud partitions to comply with Building Regs Part E	3.56	$m^2$	8.57	30.53
G	Timber stud partitions	3.56	$m^2$	32.14	114.49
Н	Sundries	5	%	-	7.25
Total to Summary (					

	Description ERNAL DOORS	Quantity	Unit	Rate	Amount
Α	Internal door 775 x 1981 x 35mm	8	nr	320.16	2,561.25
В	Internal door 826 x 1981 x 35mm	(7)	nr	320.16	(2,241.09)
С	Internal store door 533 x 1981 x 35mm	1	nr	298.42	298.42
D	Internal store door 533 x 1981 x 35mm	(3)	nr	298.42	(895.27)
Е	Sundries	5	%		(13.83)
	Total to S	ummary			(290.52)

Item No	Description	Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Carpet finish to ground and first floor living areas	0.00	m <sup>2</sup>	19.52	0.00
В	Skirting	(11.52)	m	8.88	(102.27)
D	Floor finish to kitchen	0.41	m <sup>2</sup>	52.34	21.46
E	Sundries	5	%		(4.04)
	LIFETIME HOMES CRITERION 14				
F	Floor finish to ground floor WC	1.20	m <sup>2</sup>	52.34	62.81
G	Floor finish to first floor bathroom	0.05	$m^2$	42.98	2.15
Н	Floor finish to first floor en-suite	0.02	$m^2$	42.98	0.86
I	Sundries	5	%		3.25
	Total to Summary				(15.78)

Item No Description		Quantity House Perimeter1.20 Floor to ceiling height — Ground Floor 2.375 Floor to ceiling height — First Floor 2.320		Unit m m m	Rate	Amount
	WALL FINISHES					
Α	Plaster to brick walls		7.42	$m^2$	13.67	101.36
В	Mist and 2 coats emulsion	to brick walls	10.85	$m^2$	2.12	22.99
С	Plaster to internal stud part	itions	(24.11)	$m^2$	10.44	(251.73)
D	Mist and 2 coats emulsion	to internal stud partitions	(22.08)	$m^2$	2.12	(46.78)
F	Mist and 2 coats to kitchen	stud walls	(5.59)	$m^2$	5.31	(29.72)
G	Mist and 2 coats to kitchen	walls brick walls	15.08	$m^2$	5.31	80.13
Н	Sundries		5	%		(6.19)
	LIFETIME HOMES CRITER	RION 14				
1	Mist and 2 coats to WC, en	-suite, bathroom brick walls	(3.43)	$m^2$	5.31	(18.22)
J	Mist and 2 coats to WC, en partitions	-suite, bathroom internal stud	3.56	$m^2$	5.31	18.93
К	Sundries		5	%		0.04
	Total to Summary				(129.19)	

Item No I	Description	Quantity	Unit	Rate	Amount
	CEILINGS FINISHES				
А	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor first floor	(1.24) 1.57	m² m²	27.05 27.05	(33.54) 42.46
В	Gypsum plaster cornice ground floor first floor	(4.65) 1.60	m m	9.22 9.22	(42.89) 14.76
С	Ceiling finish to joists incl. plasterboard, skim and emulsion Kitchen	0.99	$m^2$	30.31	30.01
D	Sundries	5.00	%		0.54
	LIFETIME HOMES CRITERION 14				
Е	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor WC first floor Bathroom En-suite	1.20 0.05 0.02	m² m² m²	30.31 30.31 30.31	36.37 1.52 0.61
F	Sundries	5.00	%		1.92
	Total to Summary				51.76

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount
	DISPOSAL— CRITERION 10				
Α	Gully trap and grating; ACO drainage	1.00	nr	123.22	123.22
В	32mm waste pipe	2.00	m	8.00	15.99
С	Joint to drain	1.00	nr	21.24	21.24
D	Filling around pipe; sand	0.06	$m^3$	47.31	2.96
E	Labour	1.50	hr	20.00	30.00
F	Sundries	5	%		9.67
	Total to Summary				203.08

Item No	Description	Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation	0.00	$m^2$	0.00	0.00
В	Electrical installation	0.00	$m^2$	0.00	0.00
	ILLUMINATED ENTRANCES — CRITERION 4				
С	External wall light	1	nr	78.54	78.54
D	Sundries	5	%		3.93
Total to Summary					82.47

## **APPENDIX 2c**

# Elemental Cost Breakdowns

# Four Bedroom Semi-Detached House

10+ Developments

Item No [	Description	Amount
		£
	Summary	
A B C D E F G H I J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	101.01 1,110.26 1,423.04 (186.68) 0.00 (571.28) (166.11) (1,160.81) 39.89 146.04 6.81 0.00 0.00 233.57 97.12

**Total Construction Cost** 

1,072.86

Item No	Description	Quantity	Unit	Rate	Amount
	FOUNDATIONS—				
Α	Foundations to cavity wall	(0.15)	m	145.60	(21.69)
В	Foundations to party wall	1.85	m	42.22	77.90
С	Floor slab	0.55	m <sup>2</sup>	72.73	39.99
D	Sundries	5	%	-	4.81
	Total to Summary			,	101.01

Item No	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	1.66	$m^2$	117.41	195.27
В	Party wall	8.99	$m^2$	31.48	283.13
С	Party wall gable	8.92	$m^2$	31.48	280.88
D	Front elevation gable wall	2.54	$m^2$	117.41	298.11
E	Sundries	5	%		52.87
	Total to Summary				1,110.26

Item No	Description	Quantity Width (1.60) Length 1.85	Unit	Rate	Amount
	ROOF — STRUCTURE 1				
Α	25 x100 softwood longitudinal tie braces	(4.79)	m	3.80	(18.19)
В	75 x 50 wall plate	(3.19)	m	7.26	(23.18)
С	Fink trussed rafter 45 deg pitch, 8.15m span	(12)	nr	82.66	(953.30)
D	Fink trussed rafter 45 deg pitch, 10.6m span	9	nr	163.60	1,450.59
	ROOF — COVERINGS				
Е	Pitched roof covering	(4.70)	m²	56.42	(264.98)
F	Lead flashing 240mm girth to valleys	1.98	$m^2$	20.92	41.41
G	Ridge tile	(1.60)	m	33.78	(53.95)
Н	Eaves	(0.23)	m	16.38	(3.75)
	ROOF — FITTINGS.				
1	Sundries	5%			0.09
J	Roof insulation laid between joists and across	(3.59)	$m^2$	21.69	(77.76)
K	Eaves boarding	(0.23)	m	31.51	(7.22)
L	Gutter	(2.63)	m	18.87	(49.60)
М	Sundries	5%			(0.07)
	ROOF — STRUCTURE 2				
N	25x100 softwood longitudinal tie braces	3.60	m	3.80	13.67
0	75x50 wall plate	2.40	m	7.26	17.42
Р	Fink trussed rafter 45 deg pitch, 3.7m span	3	No	64.29	192.88
	ROOF — COVERINGS				
Q	Pitched roof covering	6.00	$m^2$	56.42	338.26
R	Ridge tile	1.70	m	33.78	57.43
S	Eaves	2.40	m	16.38	39.32

$\neg$	$\sim$ r	TINGS	•
RU	( )F —	 1111111	•

Т	Roof insulation laid between joists and across	4.23	$m^2$	21.69	91.74
U	Eaves boarding	2.40	m	31.51	75.63
V	Gutter	2.40	m	18.87	45.28
W	Sundries	5%			43.58
	LIFETIME HOMES CRITERION 4				
	EXTERNAL CANOPY — CRITERION 4				
X	Berkeley canopy 1250mm x 650mm	1	nr	445.46	445.46
Υ	Sundries	5	%		22.27
	Total to Summary			-	1,423.04

Item No Description		Quantity	Unit	Rate	Amount
	LIPPER FLOORS				
А	200 x 75 softwood floor joists	(141.65)	m	6.45	(913.21)
В	200 x 75 timber strutting between joists	(6.00)	m	6.45	(38.68)
В	Joist hanger	(31)	nr	4.41	(137.89)
С	220mm 'I' joists	97.93	m	8.38	820.51
D	Floor boarding (T & G)	0.55	$m^2$	30.06	16.53
Е	Sound deadening quilt	0.55	$m^2$	6.21	3.41
F	Sundries	5	%		(12.47)
	LIFETIME HOMES CRITERION 12				
G	200 x 75 softwood floor joists	0.00	m	6.45	0.00
Н	Joist hanger	8	nr	4.41	35.30
1	220mm 'l' joists	4.33	m	8.38	36.24
J	Sundries	5	%		3.58
Total to Summary				(186.68)	

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No	Description	Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS_				
Α	Window to dining room 1200 x 1350mm	(1)	nr	544.08	(544.08)
	EXTERNAL DOORS				
В	No Cost Effect				
С	Sundries	5	%		(27.20)
	Total to Summary				(571.28)

Item No Description		Quantity	Unit	Rate	Amount	
	INTERNAL PARTITIONS					
Α	Timber stud partitions	11.35	m²	37.85	429.46	
В	Load bearing stud partitions	(17.02)	m²	57.35	(976.06)	
С	Sundries	5	%		(27.33)	
	LIFETIME HOMES CRITERION 11					
D	Plywood lining to WC/bathroom walls	31.54	m²	11.61	366.13	
Е	Sundries	5	%		18.31	
	LIFETIME HOMES CRITERION 14					
F	Extra over to for stud partitions to comply with Building Regs Part E	0.46	m²	10.09	4.69	
G	Timber stud partitions	0.46	$m^2$	37.85	17.58	
Н	Sundries	5	%		1.11	
Total to Summary				(166.11)		

Item No Description INTERNAL DOORS		Quantity	Unit	Rate	Amount
Α	Internal door 826 x 1981 x 35mm	9	nr	377.04	3,393.36
В	Internal door 826 x 1981 x 35mm	(5)	nr	377.04	(1,885.20)
С	Internal door 762 x 1981 x 35mm	(6)	nr	377.04	(2,262.24)
D	Internal store door 533 x 1981 x 35mm	1	nr	351.44	351.44
Е	Internal store door 533 x 1981 x 35mm	(2)	nr	351.44	(702.89)
F	Sundries	5	%		(55.28)
	Total to Summary			(	1,160.81)

Item No Description		Quantity House Perimeter Increase2.90 Floor to ceiling height — Ground Floor 2.375 Floor to ceiling height — First Floor 2.320		Unit m m m	Rate	Amount
	WALL FINISHES					
Α	Plaster to brick walls		15.22	m²	16.09	244.91
В	Mist and 2 coats emulsi	on to brick walls	14.49	m²	2.50	36.16
D	Plaster to internal stud p	partitions	(10.42)	m²	12.30	(128.08)
Е	Mist and 2 coats emulsi	on to internal stud partitions	(10.88)	m²	2.50	(27.15)
F	Mist and 2 coats to kitch	nen walls brick walls	(0.24)	m²	6.26	(1.49)
G	Mist and 2 coats to kitch	nen stud walls	1.16	m²	6.26	7.27
Н	Sundries		5	%		6.58
	LIFETIME HOMES CRI	TERION 14				
I	Mist and 2 coats to WC	bathroom and kitchen walls brick walls	0.73	m²	6.26	4.56
J	Mist and 2 coats to WC partitions	bathroom walls internal stud	0.46	$m^2$	6.26	2.91
K	Sundries		5	%		0.37
Total to Summary			146.04			

Item No Description		Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Carpet finish to ground and first floor living areas	0.00	$m^2$	22.99	0.00
В	Floor finish to kitchen and utility	1.04	$m^2$	61.64	64.11
С	Skirting	(6.92)	m	10.45	(72.37)
D	Sundries	5	%		(0.41)
	LIFETIME HOMES CRITERION 14				
Е	Floor finish to first floor bathroom	0.49	m²	50.61	24.80
F	Floor finish to first floor en-suite	(0.38)	$m^2$	50.61	(19.23)
G	Floor finish to ground floor WC	0.66	$m^2$	61.64	40.68
Н	Sundries	5	%		2.31
Total to Summary				39.89	

Item No Description	Quantity	Unit	Rate	Amount
CEILINGS FINISHES				
Ceiling finish to joists incl.  A plasterboard, skim and emulsion ground floor first floor	1.06 (0.37)	m² m²	31.85 31.85	33.76 (11.79)
B Gypsum plaster cornice ground floor first floor	(6.70) 1.10	m m	10.86 10.86	( <mark>72.78</mark> ) 11.95
Ceiling finish to joists incl. C plasterboard, skim and emulsion kitchen	0.50	$m^2$	35.70	17.85
D Sundries	5	%		(1.05)
LIFETIME HOMES CRITERION 14				
Ceiling finish to joists incl. E plasterboard, skim and emulsion				
ground floor WC first floor bathroom and en-suite	0.66 0.11	m² ² m	35.70 35.70	23.56 3.93
F Sundries	5	%		1.37
Total to Summary				6.81

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No	Description	Quantity	Unit	Rate	Amount
	DISPOSAI — CRITERION 10				
Α	Gully trap and grating; ACO drainage	1.00	nr	145.12	145.12
В	32mm waste pipe	2.00	m	9.42	18.83
С	Joint to drain	1.00	nr	25.02	25.02
D	Filling around pipe; sand	0.06	$m^3$	55.71	3.48
E	Labour	1.50	hr	20.00	30.00
F	Sundries	5	%		11.12
	Total to Summary			!	233.57

Item No	Description	Quantity	Unit	Rate	Amount
	SERVICES				
А	Heating installation	1.20	$m^2$	0.00	0.00
В	Electrical installation	1.20	$m^2$	0.00	0.00
	ILLUMINATED ENTRANCES — CRITERION 4				
С	External wall light	1	nr	92.49	92.49
D	Sundries	5	%		4.62
	Total to Summary				97.12

# APPENDIX 2c

**Elemental Cost Breakdowns** 

Four Bedroom Semi-Detached House

200+ Developments

Item No Description		Amount
		£
	Summary	
A B C D E F G H I J K L	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings	85.77 942.75 1,261.17 (158.52) 0.00 (485.09) (141.05) (985.67) 33.88 124.02 5.78 0.00
M N O	Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	0.00 0.00 203.08 82.47

**Total Construction Cost** 

968.60

Item No	Description		Quantity	Unit	Rate	Amount	
	<u>FOUNDATIONS</u>						
Α	Foundations to cavity wall		(0.15)	m	123.63	(18.42)	
В	Foundations to party wall		1.85	m	35.85	66.15	
С	Floor slab		0.55	m²	61.76	33.96	
D	Sundries		5	%	-	4.08	
		Total to Summary				85.77	

Item No I	Description	Quantity	Unit	Rate	Amount
	INTERNAL PARTITIONS				
Α	Timber stud partitions	11.35	m²	32.14	364.67
В	Load bearing stud partitions	(17.02)	m²	48.70	(828.80)
С	Sundries	5	%		(23.21)
	LIFETIME HOMES CRITERION 11				
D	Plywood lining to WC/bathroom walls	31.54	m²	9.86	310.89
E	Sundries	5	%		15.54
	LIFETIME HOMES CRITERION 14				
F	Extra over to for stud partitions to comply with Building Regs Part E	0.46	m²	8.57	3.98
G	Timber stud partitions	0.46	m²	32.14	14.93
Н	Sundries	5	%		0.95
	Total to Summary				(141.05)

	Description ERNAL DOORS	Quantity	Unit	Rate	Amount
Α	Internal door 826 x 1981 x 35mm	9	nr	320.16	2,881.40
В	Internal door 826 x 1981 x 35mm	(5)	nr	320.16	(1,600.78)
С	Internal door 762 x 1981 x 35mm	(6)	nr	320.16	(1,920.93)
D	Internal store door 533 x 1981 x 35mm	1	nr	298.42	298.42
Е	Internal store door 533 x 1981 x 35mm	(2)	nr	298.42	(596.84)
F	Sundries	5	%		(46.94)
	Tot	al to Summary			(985.67)

Item No I	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	1.66	$m^2$	99.70	165.81
В	Party wall	8.99	$m^2$	26.73	240.41
С	Party wall gable	8.92	$m^2$	26.73	238.50
D	Front elevation gable wall	2.54	$m^2$	99.70	253.14
Е	Sundries	5	%		44.89
	Total to Summa	ary			942.75

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	Window to dining room 1200 x 1350mm	(1)	nr	461.99	(461.99)
	EXTERNAL DOORS				
В	No Cost Effect				
С	Sundries	5	%		(23.10)
	Total to Summary				(485.09)

	Width _ength	Quantity (1.60) 1.85	Unit	Rate	Amount
ROOF — STRUCTURE 1					
A 25 x100 softwood longitudinal tie braces		(4.79)	m	3.22	(15.45)
B 75 x 50 wall plate		(3.19)	m	6.16	(19.68)
C Fink trussed rafter 45 deg pitch, 8.15m span		(12)	nr	70.19	(809.47)
D Fink trussed rafter 45 deg pitch, 10.6m span		9	nr	138.92	1,231.74
ROOF — COVERINGS					
E Pitched roof covering		(4.70)	$m^2$	47.91	(225.01)
F Lead flashing 240mm girth to valleys		1.98	$m^2$	17.76	35.17
G Ridge tile		(1.60)	m	28.68	(45.81)
H Eaves		(0.23)	m	13.91	(3.19)
ROOF — FITTINGS					
I Sundries		5%			0.07
J Roof insulation laid between joists and across		(3.59)	$m^2$	18.42	(66.03)
K Eaves boarding		(0.23)	m	26.76	(6.13)
L Gutter		(2.63)	m	16.02	(42.12)
M Sundries		5%			(0.06)
	Width _ength	1.20 3.13			
N 25 x100 softwood longitudinal tie braces		3.60	m	3.22	11.61
O 75 x 50 wall plate		2.40	m	6.16	14.79
P Fink trussed rafter 45 deg pitch, 3.7m span		3	No	54.59	163.78
ROOF — COVERINGS					
Q Pitched roof covering		6.00	m²	47.91	287.23
R Ridge tile		1.70	m	28.68	48.76
S Eaves		2.40	m	13.91	33.39
ROOF — FITTINGS					
T Roof insulation laid between joists and across		4.23	$m^2$	18.42	77.90
U Eaves boarding		2.40	m	26.76	64.22
V Gutter		2.40	m	16.02	38.45
W Sundries		5%			37.01
LIFETIME HOMES CRITERION 4					
EXTERNAL CANOPY — CRITERION 4					
X Berkeley canopy 1250mm x 650mm		1	nr	428.56	428.56
Y Sundries		5	%		21.43
Total to Summ	nary				1,261.17

Floor to c		Quantity House Perimeter Increase 2.90 Floor to ceiling height — Ground Floor Floor to ceiling height — First Floor 2	ouse Perimeter Increase 2.90 ceiling height — Ground Floor 2.375		Rate	Amount
	WALL FINISHES					
Α	Plaster to brick walls		15.22	m²	13.67	207.96
В	Mist and 2 coats emulsion	on to brick walls	14.49	$m^2$	2.12	30.70
D	Plaster to internal stud p	artitions	(10.42)	$m^2$	10.44	(108.75)
Е	Mist and 2 coats emulsion	on to internal stud partitions	(10.88)	m²	2.12	(23.05)
F	Mist and 2 coats to kitch	en walls brick walls	(0.24)	m²	5.31	(1.26)
G	Mist and 2 coats to kitch	en stud walls	1.16	m²	5.31	6.17
Н	Sundries		5	%		5.59
	LIFETIME HOMES CRIT	TERION 14				
I	Mist and 2 coats to WC,	bathroom and kitchen walls brick walls	0.73	$m^2$	5.31	3.87
J	Mist and 2 coats to WC, partitions	bathroom walls internal stud	0.46	$m^2$	5.31	2.47
К	Sundries		5	%		0.32
		Total to Summary				124.02

Item No I	Description	Quantity	Unit	Rate	Amount
	CEILINGS FINISHES				
Α	Ceiling finish to joists incl. plasterboard, skim and emulsion ground floor first floor	1.06 (0.37)	m² m²	27.05 27.05	28.67 (10.01)
В	Gypsum plaster cornice ground floor first floor	(6.70) 1.10	m m	9.22 9.22	(61.80) 10.15
С	Ceiling finish to joists incl. plasterboard, skim and emulsion kitchen	0.50	${\sf m}^2$	30.31	15.16
D	Sundries	5	%		(0.89)
	LIFETIME HOMES CRITERION 14				
E	Ceiling finish to joists incl. plasterboard, skim and emulsion				
	ground floor WC first floor bathroom and en-suite	0.66 0.11	$m^2$ $m^2$	30.31 30.31	20.01 3.33
F	Sundries	5	%		1.17
	Total to Summary				5.78

Item No [	Description	Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Carpet finish to ground and first floor living areas	0.00	$m^2$	19.52	0.00
В	Floor finish to kitchen and utility	1.04	$m^2$	52.34	54.44
С	Skirting	(6.92)	m	8.88	(61.45)
D	Sundries	5	%		(0.35)
	LIFETIME HOMES CRITERION 14				
Е	Floor finish to first floor bathroom	0.49	$m^2$	42.98	21.06
F	Floor finish to first floor en-suite	(0.38)	$m^2$	42.98	(16.33)
G	Floor finish to ground floor WC	0.66	$m^2$	52.34	34.55
Н	Sundries	5	%		1.96
	Total to Summary				33.88

Item No I	Description	Quantity	Unit	Rate	Amount
	UPPER FLOORS				
Α	200 x 75 softwood floor joists	(141.65)	m	5.47	(775.43)
В	200 x 75 timber strutting between joists	(6.00)	m	5.47	(32.85)
В	Joist hanger	(31)	nr	3.75	(117.09)
С	220mm 'I' joists	97.93	m	7.11	696.72
D	Floor boarding (T & G)	0.55	$m^2$	25.52	14.03
Е	Sound deadening quilt	0.55	$m^2$	5.27	2.90
F	Sundries	5	%		(10.59)
	LIFETIME HOMES CRITERION 12				
G	200 x 75 softwood floor joists	0.00	m	5.47	0.00
Н	Joist hanger	8	nr	3.75	29.97
1	220mm 'I' joists	4.33	m	7.11	30.77
J	Sundries	5	%		3.04
	Total to Summary				(158.52)

Item No Description		Quantity	Unit	Rate	Amount
STAIRS					
No cost effect					
	Total to Summary				0.00

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No D	Description	Quantity	Unit	Rate	Amount
	DISPOSAL— CRITERION 10				
Α	Gully trap and grating; ACO drainage	1.00	nr	123.22	123.22
В	32mm waste pipe	2.00	m	8.00	15.99
С	Joint to drain	1.00	nr	21.24	21.24
D	Filling around pipe; sand	0.06	$m^3$	47.31	2.96
E	Labour	1.50	hr	20.00	30.00
F	Sundries	5	%		9.67
	Total to Summary				203.08

Item No I	Description	Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation	1.20	$m^2$	0.00	0.00
В	Electrical installation	1.20	$m^2$	0.00	0.00
	ILLUMINATED ENTRANCES — CRITERION 4				
С	External wall light	1	nr	78.54	78.54
D	Sundries	5	%		3.93
Total to Summary					82.47

# APPENDIX 2d

# **Elemental Cost Breakdowns**

Flats – Example 1

(Minor Development)

### LIFETIME HOMES BLOCK — EXAMPLE 1

	£
Summary	
A Foundations B External Walls C Roof D Upper Floor E Stairs F Windows and External Doors G Internal Walls and Partitions H Internal Doors I Floor Finishes J Wall Finishes K Ceiling Finishes L Kitchen Fittings M Sanitary Fittings N Disposal — Waste Pipes O Mechanical and Electrical Installations	0.00 0.00 983.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00

**Total Construction Cost** 

1,078.75

### LIFETIME HOMES BLOCK — EXAMPLE 1

Item No	Description		Quantity	Unit	Rate	Amount
	LIFETIME HOMES CRITERION 4					
	EXTERNAL CANOPY — CRITERION 4					
Α	Canopy 2000mm x 1200mm		1	nr	936.22	936.22
В	Sundries		5	%		46.81
		Total				983.03
	Cost allocated to each 1 bed flat					48.57
	Cost allocated to each 2 bed flat					69.78

### LIFETIME HOMES BLOCK — EXAMPLE 1

Item No	Description		Quantity	Unit	Rate	Amount
	SERVICES					
	ILLUMINATED ENTRANCES — CRITERION 4					
Α	External wall light		1.00	nr	91.16	91.16
В	Sundries		5.00	%		4.56
		Total				95.72
	Cost allocated to each 1 bed flat					4.73
	Cost allocated to each 2 bed flat					6.79

Item No	Description	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H I J K L M N O	Foundations External Walls Roof Floors Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	55.72 173.14 71.06 118.38 0.00 0.00 167.80 0.00 79.73 51.62 55.79 0.00 0.00 235.97	0.00 0.00 48.57 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	55.72 173.14 119.63 118.38 0.00 0.00 167.80 0.00 79.73 51.62 55.79 0.00 0.00 235.97 4.73

Total Construction Cost 1,009.21 53.30 1,062.51

Item No I	Description	Quantity	Unit	Rate	Amount
	FOUNDATIONS				
Α	Foundations to cavity wall	0.50	m	143.49	71.75
В	Ground bearing slab	1.52	$m^2$	57.54	87.46
С	Sundries	5	%	-	7.96
	Total per Block (3 units)				167.17
	Cost per Flat to Summary				55.72

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Item No	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	4.28	$m^2$	115.72	494.69
В	Sundries	5	%		24.73
	Total per Block (3 units)				519.42
	Cost per Flat to Summary				173.14

Item No		Quantity Width 6.80 Additional Length 0.25		Rate	Amount
	ROOF — STRUCTURE				
А	25 x100 softwood longitudinal tie braces	0.25	m	7.15	1.79
В	75 x 50 wall plate	0.25	m	7.15	1.79
	ROOF — COVERINGS				
С	Pitched roof covering	2.40	$m^2$	55.61	133.69
D	Ridge tile	0.25	m	33.29	8.32
Е	Eaves	0.25	m	16.15	4.04
	ROOF — FITTINGS				
F	Roof insulation laid between joists and across	1.70	$m^2$	21.38	36.34
G	Eaves boarding	0.25	m	31.06	7.76
Н	Gutter	0.50	m	18.60	9.30
1	Sundries	5	%	`	10.15
	Total Cost per Block (3 uni	ts)			213.18
	Cost per Flat to Summ	nary			71.06

Item No	Description	Quantity	Unit	Rate	Amount
	<u>FLOORS</u>				
Α	Beam and Block — Ground Floor	1.52	$m^2$	81.76	124.28 1nr one bed flat
В	Beam and Block — Upper Floors	3.04	$m^2$	70.38	213.95 2nr one bed flats
С	Sundries	5	%		16.91
	Т	otal			355.14
	Cost per Flat to Summary				118.38

Item No Description Quantity Unit Rate Amount

STAIRS

A No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	No cost effect				
	EXTERNAL DOORS				
В	No cost effect				
С	Sundries	F	0/		0.00
C	Sundries	5	%		0.00
	Total to Summary				0.00

Item No Description		Quantity U	nit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	(2.94)	$m^2$	37.30	(109.67)	3	(329.01)
В	Sundries	5	%	-	(5.48)	3	(16.45)
	LIFETIME HOMES CRITERION 11						
С	Plywood lining to bathroom walls	9.39	$m^2$	11.44	107.43	3	£322.29
D	Sundries	5	%	-	5.37	3	16.11
	LIFETIME HOMES CRITERION 14						
E	Extra over to for stud partitions to comply with Building Regs Part E	3.43	$m^2$	9.95	34.11	3	£102.33
F	Timber stud partitions	3.43	$m^2$	37.30	127.94	3	£383.82
G	Sundries	5	%	-	8.10	3	24.31
Total to Summary					167.80	•	503.40

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	Description ERNAL DOORS		Quantity	Unit	Rate	Amount Nr of	f Flats	Total for 3nr 1  Bed Flats
А	Sundries		5	%		0.00	3	£0.00
		Total to Summary				0.00		0.00

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Item No Description		Quantity	Unit	Rate	Amount Nr of Flats		Total for 3nr 1 Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	22.66	0.00	3	£0.00
В	Skirting	0.98	m	10.30	10.10	3	£30.30
D	Floor finish to kitchen	0.09	$m^2$	60.75	5.47	3	£16.41
Е	Sundries	5	%		0.78	3	£2.34
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	1.21	$m^2$	49.88	60.36	3	£181.08
G	Sundries	5	%		3.02	3	£9.05
	Total to Summary				79.73		239.18

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Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 3nr 1 Bed Flats
	Floor to ceiling height WALL FINISHES	2.45					
Α	Plaster to brick walls	1.23	m <sup>2</sup>	15.86	19.43	3	£58.29
В	Plaster to internal stud partitions	0.98	$m^2$	12.12	11.88	3	£35.64
С	Mist and 2 coats emulsion to internal stud partitions	(3.19)	$m^2$	2.46	(7.83)	3	(23.49)
D	Mist and 2 coats to kitchen walls	0.73	$m^2$	6.17	4.53	3	£13.59
E	Sundries	5	%		1.40	3	£4.20
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	3.43	m <sup>2</sup>	6.17	21.15	3	£63.45
G	Sundries	5	%		1.06	3	£3.17
	Total to Summary				51.62		154.85

Item No Description		Quantity	Unit	Rate	Amount Nr of Flats		Total for 3nr 1  Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	0.22	$m^2$	35.52	7.81	3	£23.44
В	Gypsum plaster cornice	(0.54)	m	10.71	(5.78)	3	(17.34)
С	Ceiling incl. battens, plasterboard, skim and emulsion Kitchen	0.09	${\sf m}^2$	39.31	3.54	3	£10.61
D	Sundries	5.00	%		0.28	3	£0.84
	LIFETIME HOMES CRITERION 14						
E	Ceiling incl. battens, plasterboard, skim and emulsion						
	Bathroom	1.21	m <sup>2</sup>	39.31	47.56	3	£142.68
F	Sundries	5.00	%		2.38	3	£7.13
	Total to Summary				55.79		167.36

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Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	DISPOSAL— CRITERION 10						
Α	Gully trap and grating	1.00	nr	224.73	224.73	3	674.20
В	Sundries	5	%		11.24	3	£33.71
	Total to Summary				235.97		707.91

Item No Description		Quantity	Unit	Rate	Amount	
	SERVICES					
Α	Heating installation		$m^2$	0.00	0.00	
В	Electrical installation		$m^2$	0.00	0.00	
С	Sundries	5	%		0.00	
Total to Summary						

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Item No [	Description	Amount	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H I J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	0.00 0.00 0.00 0.00 0.00 0.00 250.47 0.00 9.43 9.53 11.51 0.00 0.00 235.97	0.00 0.00 69.78 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 69.78 0.00 0.00 0.00 250.47 0.00 9.43 9.53 11.51 0.00 0.00 235.97 6.79

 Total Construction Cost
 516.91
 76.57
 593.48

Item No Description Quantity Unit Rate Amount

FOUNDATIONS

No cost effect

Cost per Flat to Summary

Item No Description Quantity Unit Rate Amount

EXTERNAL WALLS

No cost effect

Cost per Flat to Summary

ROOF

No cost effect

Cost per Flat to Summary

Quantity Unit Rate Amount

Rate Amount

0.00

Item No Description	Quantity	Unit	Rate	Amount
FLOORS				
No cost effect				
Т	<sup>-</sup> otal			0.00
Cost per Flat to Summary				0.00

No cost effect

Item No Description Quantity Unit Rate Amount

STAIRS

Total to Summary

Item No Description		Quantity	Unit	Rate	Amount	
	WINDOWS AND EXTERNAL DOORS					
	WINDOWS					
Α	No cost effect					
	EXTERNAL DOORS					
В	No cost effect					
С	Sundries	5	%		0.00	
C	Sululies	5	70		0.00	
Total to Summary						

Item No	Item No Description		Unit	Rate	Amount	Nr of Flats	Total for 12nr 2 Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	(0.98)	$m^2$	37.30	(36.56)	12	(438.72)
В	Sundries	5	%	-	(1.83)	12	(21.94)
	LIFETIME HOMES CRITERION 11						
С	Plywood lining to bathroom walls	12.82	$m^2$	11.44	146.68	12	1,760.16
D	Plywood lining to en-suite walls	7.18	$m^2$	11.44	82.11	12	985.32
Е	Sundries	5	%	-	11.44	12	137.27
	LIFETIME HOMES CRITERION 14						
F	Extra over to for stud partitions to comply with Building Regs Part E	0.98	m²	9.95	9.75	12	117.00
G	Timber stud partitions	0.98	$m^2$	37.30	36.56	12	438.72
Н	Sundries	5	%	-	2.32	12	27.79
	Total to Summary				250.47	•	3,005.60

	Description ERNAL DOORS	_	Quantity	Unit	Rate	Amount Nr of I	Flats	Total for 12nr 2 Bed Flats
Α	Sundries		5	%		0.00	12	£0.00
		Total to Summary				0.00		0.00

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Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2 Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	22.66	0.00	12	£0.00
В	Skirting	0.00	m	10.30	0.00	12	£0.00
D	Floor finish to kitchen	0.00	$m^2$	60.75	0.00	12	£0.00
E	Sundries	5	%		0.00	12	£0.00
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	0.18	$m^2$	49.88	8.98	12	£107.76
G	Floor finish to en-suite	0.00	$m^2$	49.88	0.00	12	£0.00
Н	Sundries	5	%		0.45	12	£5.39
	Total to Summary				9.43		113.15

Item No I	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2 Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	0.00	$m^2$	15.86	0.00	12	£0.00
В	Plaster to internal stud partitions	0.00	$m^2$	12.12	0.00	12	£0.00
С	Mist and 2 coats emulsion to internal stud partitions	(2.45)	$m^2$	2.46	(6.03)	12	(72.36)
D	Mist and 2 coats to kitchen walls	1.47	m²	6.17	9.07	12	£108.84
E	Sundries	5	%		0.15	12	£1.82
	LIFETIME HOMES CRITERION14						
F	Mist and 2 coats to WC, bathroom walls	0.98	$m^2$	6.17	6.04	12	£72.48
G	Sundries	5	%		0.30	12	£3.62
	Total to Summary				9.53		114.41

Item No Description		Quantity	Unit	Rate	Amount Nr of Flats		Total for 12nr 2 Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	(0.18)	$m^2$	35.52	(6.39)	12	(76.71)
В	Gypsum plaster cornice	0.96	m	10.71	10.28	12	£123.33
С	Ceiling incl. battens, plasterboard, skim and emulsion Kitchen	0.00	$m^2$	39.31	0.00	12	£0.00
D	Sundries	5.00	%		0.19	12	£2.33
	LIFETIME HOMES CRITERION 14						
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom En-Suite	0.18 0.00	m² ² m	39.31 39.31	7.08 0.00	12 12	£84.90 £0.00
F	Sundries	5.00	%		0.35	12	£4.25
	Total to Summary				11.51		138.09

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for Flats
	DISPOSAL— CRITERION 10						
Α	Gully trap and grating	1.00	nr	224.73	224.73	12	2696.78
В	Sundries	5	%		11.24	12	£134.84
	Total to Summary				235.97		2,831.62

Item No Description		Quantity	Unit	Rate	Amount	
	SERVICES					
Α	Heating installation			$m^2$	0.00	0.00
В	Electrical installation			$m^2$	0.00	0.00
С	Sundries		5	%		0.00
		Total to Summary				0.00

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#### LIFETIME HOMES BLOCK — EXAMPLE 1

	£
Summary	
A Foundations B External Walls C Roof D Upper Floor E Stairs F Windows and External Doors G Internal Walls and Partitions H Internal Doors I Floor Finishes J Wall Finishes K Ceiling Finishes L Kitchen Fittings M Sanitary Fittings N Disposal — Waste Pipes O Mechanical and Electrical Installations	0.00 0.00 983.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00

**Total Construction Cost** 

1,078.75

## LIFETIME HOMES BLOCK — EXAMPLE 1

Item No	Description		Quantity	Unit	Rate	Amount
	LIFETIME HOMES CRITERION 4					
	EXTERNAL CANOPY —CRITERION 4					
Α	Canopy 2000mm x 1200mm		1	nr	936.22	936.22
В	Sundries		5	%		46.81
		Total				983.03
	Cost allocated to each 1 bed flat					48.57
	Cost allocated to each 2 bed flat					69.78

## LIFETIME HOMES BLOCK — EXAMPLE 1

Item No	Description	Quantity	Unit	Rate	Amount
	<u>SERVICES</u>				
	ILLUMINATED ENTRANCES — CRITERION 4				
Α	External wall light	1.00	nr	91.16	91.16
В	Sundries	5.00	%		4.56
		Total			95.72
	Cost allocated to each 1 bed flat				4.73
	Cost allocated to each 2 bed flat				6.79

Item No Description		Cost Per Flat	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H I J K L M N O	Foundations External Walls Roof Floors Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	55.72 173.14 71.06 118.38 0.00 0.00 167.80 0.00 79.73 51.62 55.79 0.00 0.00 235.97	0.00 0.00 48.57 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	55.72 173.14 119.63 118.38 0.00 0.00 167.80 0.00 79.73 51.62 55.79 0.00 0.00 235.97 4.73

Total Construction Cost 1,009.21 53.30 1,062.51

Item No	Description	Quantity	Unit	Rate	Amount
	<u>FOUNDATIONS</u>				
Α	Foundations to cavity wall	0.50	m	143.49	71.75
В	Ground bearing slab	1.52	$m^2$	57.54	87.46
С	Sundries	5	%	-	7.96
	Total per Block (3 units)				167.17
	Cost per Flat to Summary				55.72

Item No	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	4.28	$m^2$	115.72	494.69
В	Sundries	5	%		24.73
	Total per Block (3 units)				519.42
	Cost per Flat to Summary				173.14

Item No		Quantity dth 6.80 Length 0.25	Unit	Rate	Amount	
	ROOF — STRUCTURE					
А	25 x100 softwood longitudinal tie braces	0.25	m	7.15	1.79	
В	75 x 50 wall plate	0.25	m	7.15	1.79	
	ROOF — COVERINGS					
С	Pitched roof covering	2.40	$m^2$	55.61	133.69	
D	Ridge tile	0.25	m	33.29	8.32	
Е	Eaves	0.25	m	16.15	4.04	
	ROOF — FITTINGS					
F	Roof insulation laid between joists and across	1.70	$m^2$	21.38	36.34	
G	Eaves boarding	0.25	m	31.06	7.76	
Н	Gutter	0.50	m	18.60	9.30	
1	Sundries	5	%	`	10.15	
Total Cost per Block (3 units)						
	Cost per Flat to Summary					

Item No	Description	Quantity	Unit	Rate	Amount
	<u>FLOORS</u>				
Α	Beam and Block — Ground Floor	1.52	$m^2$	81.76	124.28 1nr one bed flat
В	Beam and Block — Upper Floors	3.04	$m^2$	70.38	213.95 2nr one bed flats
С	Sundries	5	%		16.91
	Т	otal			355.14
	Cost per Flat to Summary				118.38

Item No Description Quantity Unit Rate Amount

STAIRS

A No cost effect

Total to Summary

Item No D	Item No Description		Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	No cost effect				
	EXTERNAL DOORS				
В	No cost effect				
С	Sundries	F	0/		0.00
C	Sundries	5	%		0.00
	Total to Summary				0.00

Item No D	escription	Quantity U	nit	Rate	Amount	Nr of Flats	Total for 3nr 1  Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	(2.94)	$m^2$	37.30	(109.67)	3	(329.01)
В	Sundries	5	%	-	(5.48)	3	(16.45)
	LIFETIME HOMES CRITERION11						
С	Plywood lining to bathroom walls	9.39	$m^2$	11.44	107.43	3	£322.29
D	Sundries	5	%	-	5.37	3	16.11
	LIFETIME HOMES CRITERION 14						
E	Extra over to for stud partitions to comply with Building Regs Part E	3.43	$m^2$	9.95	34.11	3	£102.33
F	Timber stud partitions	3.43	$m^2$	37.30	127.94	3	£383.82
G	Sundries	5	%	-	8.10	3	24.31
	Total to Summary				167.80		503.40

	Description ERNAL DOORS		Quantity	Unit	Rate	Amount Nr of	Flats	Total for 3nr 1  Bed Flats
А	Sundries		5	%		0.00	3	£0.00
		Total to Summary				0.00		0.00

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 3nr 1 Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	22.66	0.00	3	£0.00
В	Skirting	0.98	m	10.30	10.10	3	£30.30
D	Floor finish to kitchen	0.09	$m^2$	60.75	5.47	3	£16.41
Е	Sundries	5	%		0.78	3	£2.34
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	1.21	$m^2$	49.88	60.36	3	£181.08
G	Sundries	5	%		3.02	3	£9.05
	Total to Summary				79.73		239.18

Item No Description		Quantity	Unit	Rate	Amount Nr of Flats		Total for 3nr 1 Bed Flats
	Floor to ceiling height WALL FINISHES	2.45					
Α	Plaster to brick walls	1.23	$m^2$	15.86	19.43	3	£58.29
В	Plaster to internal stud partitions	0.98	$m^2$	12.12	11.88	3	£35.64
С	Mist and 2 coats emulsion to internal stud partitions	(3.19)	$m^2$	2.46	(7.83)	3	(23.49)
D	Mist and 2 coats to kitchen walls	0.73	$m^2$	6.17	4.53	3	£13.59
E	Sundries	5	%		1.40	3	£4.20
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	3.43	$m^2$	6.17	21.15	3	£63.45
G	Sundries	5	%		1.06	3	£3.17
	Total to Summary				51.62		154.85

Item No Description		Quantity	Unit	Rate	Amount Nr of Flats		Total for 3nr 1  Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	0.22	$m^2$	35.52	7.81	3	£23.44
В	Gypsum plaster cornice	(0.54)	m	10.71	(5.78)	3	(17.34)
С	Ceiling incl. battens, plasterboard, skim and emulsion Kitchen	0.09	m²	39.31	3.54	3	£10.61
D	Sundries	5.00	%		0.28	3	£0.84
	LIFETIME HOMES CRITERION14						
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom		2				
	Batilloom	1.21	m <sup>2</sup>	39.31	47.56	3	£142.68
F	Sundries	5.00	%		2.38	3	£7.13
	Total to Summary				55.79		167.36

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

,

Item No I	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	DISPOSAL—CRITERION 10						
Α	Gully trap and grating	1.00	nr	224.73	224.73	3	674.20
В	Sundries	5	%		11.24	3	£33.71
	Total to Summary				235.97		707.91

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Item No Description		Quantity	Unit	Rate	Amount	
	SERVICES					
Α	Heating installation		$m^2$	0.00	0.00	
В	Electrical installation		$m^2$	0.00	0.00	
С	Sundries	5	%		0.00	
Total to Summary						

`

Item No Description		Amount	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H I J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	0.00 0.00 0.00 0.00 0.00 0.00 250.47 0.00 9.43 9.53 11.51 0.00 0.00 235.97	0.00 0.00 69.78 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 69.78 0.00 0.00 0.00 250.47 0.00 9.43 9.53 11.51 0.00 0.00 235.97 6.79

 Total Construction Cost
 516.91
 76.57
 593.48

Item No Description Quantity Unit Rate Amount

FOUNDATIONS

No cost effect

Cost per Flat to Summary

0.00

Item No Description Quantity Unit Rate Amount

EXTERNAL WALLS

No cost effect

Cost per Flat to Summary

0.00

ROOF

No cost effect

Cost per Flat to Summary

Quantity Unit Rate Amount

Rate Amount

0.00

Item No Description	Quantity	Unit	Rate	Amount
FLOORS				
No cost effect				
Т	<sup>-</sup> otal			0.00
Cost per Flat to Summary				0.00

No cost effect

Item No Description Quantity Unit Rate Amount

STAIRS

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	No cost effect				
	EXTERNAL DOORS				
В	No cost effect				
С	Sundries	5	%		0.00
C	Sululies	5	70		0.00
	Total to Summary				0.00

Item No	Item No Description		Unit	Rate	Amount	Nr of Flats	Total for 12nr 2 Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	(0.98)	$m^2$	37.30	(36.56)	12	(438.72)
В	Sundries	5	%	-	(1.83)	12	(21.94)
	LIFETIME HOMES CRITERION 11						
С	Plywood lining to bathroom walls	12.82	$m^2$	11.44	146.68	12	1,760.16
D	Plywood lining to en-suite walls	7.18	$m^2$	11.44	82.11	12	985.32
Е	Sundries	5	%	-	11.44	12	137.27
	LIFETIME HOMES CRITERION 14						
F	Extra over to for stud partitions to comply with Building Regs Part E	0.98	m²	9.95	9.75	12	117.00
G	Timber stud partitions	0.98	$m^2$	37.30	36.56	12	438.72
Н	Sundries	5	%	-	2.32	12	27.79
	Total to Summary				250.47	•	3,005.60

	Description ERNAL DOORS	_	Quantity	Unit	Rate	Amount Nr of I	Flats	Total for 12nr 2 Bed Flats
Α	Sundries		5	%		0.00	12	£0.00
		Total to Summary				0.00		0.00

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Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2  Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	22.66	0.00	12	£0.00
В	Skirting	0.00	m	10.30	0.00	12	£0.00
D	Floor finish to kitchen	0.00	$m^2$	60.75	0.00	12	£0.00
Е	Sundries	5	%		0.00	12	£0.00
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	0.18	$m^2$	49.88	8.98	12	£107.76
G	Floor finish to en-suite	0.00	$m^2$	49.88	0.00	12	£0.00
Н	Sundries	5	%		0.45	12	£5.39
	Total to Summary				9.43		113.15

Item No I	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2 Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	0.00	$m^2$	15.86	0.00	12	£0.00
В	Plaster to internal stud partitions	0.00	m²	12.12	0.00	12	£0.00
С	Mist and 2 coats emulsion to internal stud partitions	(2.45)	m²	2.46	(6.03)	12	(72.36)
D	Mist and 2 coats to kitchen walls	1.47	$m^2$	6.17	9.07	12	£108.84
Е	Sundries	5	%		0.15	12	£1.82
	LIFETIME HOMES CRITERION14						
F	Mist and 2 coats to WC, bathroom walls	0.98	$m^2$	6.17	6.04	12	£72.48
G	Sundries	5	%		0.30	12	£3.62
	Total to Summary				9.53		114.41

Item N	Item No Description		Unit	Rate	Amount Nr of Flats		Total for 12nr 2  Bed Flats
	CEILINGS FINISHES						
А	Ceiling incl. battens, plasterboard, skim and emulsion	(0.18)	$m^2$	35.52	(6.39)	12	(76.71)
В	Gypsum plaster cornice	0.96	m	10.71	10.28	12	£123.33
С	Ceiling incl. battens, plasterboard, skim and emulsion Kitchen	0.00	m²	39.31	0.00	12	£0.00
D	Sundries	5.00	%		0.19	12	£2.33
	LIFETIME HOMES CRITERION 14						
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom En-Suite	0.18 0.00	m² ² m	39.31 39.31	7.08 0.00	12 12	£84.90 £0.00
F	Sundries	5.00	%		0.35	12	£4.25
	Total to Summary				11.51		138.09

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

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Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

,

Item No Description		Quantity	Unit	Rate	Amount	Nr of Flats	Total for Flats
	DISPOSAL— CRITERION 10						
Α	Gully trap and grating	1.00	nr	224.73	224.73	12	2696.78
В	Sundries	5	%		11.24	12	£134.84
	Total to Summary				235.97		2,831.62

Item No I	Item No Description		Quantity	Unit	Rate	Amount
	SERVICES					
Α	Heating installation			$m^2$	0.00	0.00
В	Electrical installation			$m^2$	0.00	0.00
С	Sundries		5	%		0.00
		Total to Summary				0.00

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### APPENDIX 2d

### Elemental Cost Breakdowns

Flats – Example 1

(Major Development)

Item No I	Item No Description		Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H L J K L M N O	Foundations External Walls Roof Floors Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	48.01 149.17 61.22 101.99 0.00 0.00 144.59 0.00 68.68 44.47 48.06 0.00 0.00 207.66 0.00	0.00 0.00 41.85 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	48.01 149.17 103.07 101.99 0.00 0.00 144.59 0.00 68.68 44.47 48.06 0.00 0.00 207.66 4.07
	Total Construction Cost	873.85	45.92	919.78

Item No [	tem No Description		Unit	Rate	Amount
	FOUNDATIONS				
Α	Foundations to cavity wall	0.50	m	123.63	61.81
В	Ground bearing slab	1.52	$m^2$	49.58	75.36
С	Sundries	5	%	-	6.86
Total per Block (3 units)					144.03
	Cost per Flat to Summary				48.01

Item No	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
Α	Cavity walls	4.28	$m^2$	99.70	426.21
В	Sundries	5	%		21.31
	Total per Block (3 units)				447.52
	Cost per Flat to Summary				149.17

Item No I		Quantity lth 6.80 Length 0.25	Unit	Rate	Amount	
	ROOF — STRUCTURE					
Α	25 x100 softwood longitudinal tie braces	0.25	m	6.16	1.54	
В	75 x 50 wall plate	0.25	m	6.16	1.54	
	ROOF — COVERINGS					
С	Pitched roof covering	2.40	$m^2$	47.91	115.18	
D	Ridge tile	0.25	m	28.68	7.17	
E	Eaves	0.25	m	13.91	3.48	
	ROOF — FITTINGS					
F	Roof insulation laid between joists and across	1.70	$m^2$	18.42	31.31	
G	Eaves boarding	0.25	m	26.76	6.69	
Н	Gutter	0.50	m	16.02	8.01	
1	Sundries	5	%		8.75	
	Total Cost per Block (3 unit	s)			183.67	
	Cost per Flat to Summ	ary			61.22	

Item No I	Description	Quantity	Unit	Rate	Amount
	FLOORS				
Α	Beam and Block — Ground Floor	1.52	$m^2$	70.44	107.07 1nr one bed flat
В	Beam and Block — Upper Floors	3.04	$m^2$	60.63	184.33 2nr one bed flats
С	Sundries	5	%		14.57
	Tota	al			305.97
Cost per Flat to Summary					101.99

Item No Description Quantity Unit Rate Amount

STAIRS

A No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	No cost effect				
	EXTERNAL DOORS				
В	No cost effect				
С	Sundries	E	0/		0.00
C	Surianes	5	%		0.00
	Total to Summary				0.00

Item No D	escription	Quantity U	nit	Rate	Amount	Nr of Flats	Total for 3nr 1  Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	(2.94)	m²	32.14	(94.48)	3	(283.44)
В	Sundries	5	%	-	(4.72)	3	(14.17)
	LIFETIME HOMES CRITERION 11						
С	Plywood lining to bathroom walls	9.39	m²	9.86	92.56	3	£277.68
D	Sundries	5	%	-	4.63	3	13.88
	LIFETIME HOMES CRITERION 14						
	Extra over to for stud partitions to						
Е	comply with Building Regs Part E	3.43	m <sup>2</sup>	8.57	29.39	3	£88.17
F	Timber stud partitions	3.43	$m^2$	32.14	110.23	3	£330.69
G	Sundries	5	%	-	6.98	3	20.94
	Total to Summary				144.59	•	433.76

	Description ERNAL DOORS		Quantity	Unit	Rate	Amount Nr o	f Flats	Total for 3nr 1 Bed Flats
Α	Sundries		5	%		0.00	3	£0.00
		Total to Summary				0.00		0.00

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 3nr 1  Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	19.52	0.00	3	£0.00
В	Skirting	0.98	m	8.88	8.70	3	£26.10
D	Floor finish to kitchen	0.09	$m^2$	52.34	4.71	3	£14.13
Е	Sundries	5	%		0.67	3	£2.01
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	1.21	m²	42.98	52.00	3	£156.00
G	Sundries	5	%		2.60	3	£7.80
	Total to Summary				68.68		206.04

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Bed Flats
	Floor to ceiling height	2.45					
А	Plaster to brick walls	1.23	$m^2$	13.67	16.74	3	£50.22
В	Plaster to internal stud partitions	0.98	$m^2$	10.44	10.23	3	£30.69
С	Mist and 2 coats emulsion to internal stud partitions	(3.19)	$m^2$	2.12	(6.75)	3	(20.25)
D	Mist and 2 coats to kitchen walls	0.73	$m^2$	5.31	3.91	3	£11.73
Е	Sundries	5	%		1.21	3	£3.62
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	3.43	m²	5.31	18.22	3	£54.66
G	Sundries	5	%		0.91	3	£2.73
	Total to Summary				44.47		133.40

Total for 3nr 1

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 3nr 1 Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	0.22	$m^2$	30.60	6.73	3	£20.20
В	Gypsum plaster cornice	(0.54)	m	9.22	(4.98)	3	(14.94)
С	Ceiling incl. battens, plasterboard, skim and emulsion						
	Kitchen	0.09	m <sup>2</sup>	33.86	3.05	3	£9.14
D	Sundries	5.00	%		0.24	3	£0.72
	LIFETIME HOMES CRITERION 14						
E	Ceiling incl. battens, plasterboard, skim and emulsion						
	Bathroom	1.21	$m^2$	33.86	40.98	3	£122.93
F	Sundries	5.00	%		2.05	3	£6.15
	Total to Summary				48.06		144.19

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1  Bed Flats
	DISPOSAL— CRITERION 10						
Α	Gully trap and grating	1.00	nr	197.77	197.77	3	593.32
В	Sundries	5	%		9.89	3	£29.67
	Total to Summary				207.66	•	622.99

Item No Description		Quantity	Unit	Rate	Amount	
	SERVICES_					
Α	Heating installation			$m^2$	0.00	0.00
В	Electrical installation			m <sup>2</sup>	0.00	0.00
С	Sundries		5	%		0.00
Total to Summary						0.00

Item No Description		Amount	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
ABCDEFGHLJKLMNO	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal - Waste Pipes Mechanical and Electrical Installations	0.00 0.00 0.00 0.00 0.00 215.80 0.00 8.13 8.22 9.91 0.00 0.00 207.66 0.00	0.00 0.00 60.12 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 60.12 0.00 0.00 215.80 0.00 8.13 8.22 9.91 0.00 0.00 207.66 5.85

Total Construction Cost 449.72 65.97 515.69

Item No Description Quantity Unit Rate Amount

FOUNDATIONS

No cost effect

Cost per Flat to Summary

Item No Description Quantity Unit Rate Amount

EXTERNAL WALLS

No cost effect

Cost per Flat to Summary

Item No Description Quantity Unit Rate Amount

ROOF

No cost effect

Cost per Flat to Summary

Item No Description	Quantity	Unit	Rate	Amount
FLOODS				
<u>FLOORS</u>				
No cost effect				
	Total			0.00
				500
Cost per Flat to Summa	ıry			0.00

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α	No cost effect				
	EXTERNAL DOORS				
В	No cost effect				
0	Our drive	-	0/		0.00
С	Sundries	5	%		0.00
	Total to Summary				0.00

Item No Description		Quantity	Unit	Rate	Amount	Nr of Flats	Total for 12nr 2 Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	(0.98)	$m^2$	32.14	(31.49)	12	(377.88)
В	Sundries	5	%	-	(1.57)	12	(18.89)
	LIFETIME HOMES CRITERION 11						
С	Plywood lining to bathroom walls	12.82	$m^2$	9.86	126.37	12	1,516.44
D	Plywood lining to en-suite walls	7.18	$m^2$	9.86	70.75	12	849.00
E	Sundries	5	%	-	9.86	12	118.27
	LIFETIME HOMES CRITERION 14						
F	Extra over to for stud partitions to comply with Building Regs Part E	0.98	$m^2$	8.57	8.40	12	100.80
G	Timber stud partitions	0.98	$m^2$	32.14	31.49	12	377.88
Н	Sundries	5	%	-	1.99	12	23.93
	Total to Summary				215.80	-11 -13	2,589.55

	Description ERNAL DOORS	_1	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 12nr 2 Bed Flats
Α	Sundries		5	%		0.00	12	£0.00
		Total to Summary				0.00	•	0.00

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2 Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	19.52	0.00	12	£0.00
В	Skirting	0.00	m	8.88	0.00	12	£0.00
D	Floor finish to kitchen	0.00	$m^2$	52.34	0.00	12	£0.00
E	Sundries	5	%		0.00	12	£0.00
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	0.18	$m^2$	42.98	7.74	12	£92.88
G	Floor finish to en-suite	0.00	$m^2$	42.98	0.00	12	£0.00
Н	Sundries	5	%		0.39	12	£4.64
	Total to Summary				8.13		97.52

Item No I	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2 Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	0.00	m²	13.67	0.00	12	£0.00
В	Plaster to internal stud partitions	0.00	m²	10.44	0.00	12	£0.00
С	Mist and 2 coats emulsion to internal stud partitions	(2.45)	m²	2.12	(5.19)	12	(62.28)
D	Mist and 2 coats to kitchen walls	1.47	$m^2$	5.31	7.81	12	£93.72
E	Sundries	5	%		0.13	12	£1.57
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	0.98	m²	5.31	5.21	12	£62.52
G	Sundries	5	%		0.26	12	£3.13
	Total to Summary				8.22		98.66

Item No Description		Quantity	Unit	Rate	Amount Nr	of Flats	Total for 12nr 2  Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	(0.18)	m²	30.60	(5.51)	12	(66.09)
В	Gypsum plaster cornice	0.96	m	9.22	8.85	12	£106.26
С	Ceiling incl. battens, plasterboard, skim and emulsion Kitchen	0.00	$m^2$	33.86	0.00	12	£0.00
D	Sundries	5.00	%		0.17	12	£2.01
	LIFETIME HOMES CRITERION 14						
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom En-Suite	0.18 0.00	m² m²	33.86 33.86	6.10 0.00	12 12	£73.15 £0.00
F	Sundries	5.00	%		0.30	12	£3.66
	Total to Summary				9.91		118.98

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for Flats
	DISPOSAL — CRITERION 10						
Α	Gully trap and grating	1.00	nr	197.77	197.77	12	2373.29
В	Sundries	5	%		9.89	12	£118.66
	Total to Summary				207.66	:	2,491.95

Item No Description		Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation		$m^2$	0.00	0.00
В	Electrical installation		$m^2$	0.00	0.00
С	Sundries	5	%		0.00
	Total to Summary				0.00

## APPENDIX 2e

Elemental Cost Breakdowns

Flats – Example 2

(Minor Development)

Item No D	Description	Amount
		£
	Summary	
ABCDEFGHIJKLMNO	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal —Waste Pipes Mechanical and Electrical Installations	472.26 840.40 1,172.99 384.83 0.00 0.00 468.26 0.00 232.75 83.90 206.97 0.00 0.00 0.00 719.52

**Total Construction Cost** 

4,581.86

Item No I	Description	Quantity	Unit	Rate	Amount 1 E	BED BLOCK ALL	2 BED BLOCK ALL
	FOUNDATIONS Perimeter incr	ease 0.75	m				
	Perimeter incr	ease 0.75	m				
Α	Foundations to perimeter cavity wall	0.75	m	143.49	107.62	8.90	13.49
В	Foundations to internal cavity wall	2.28	m	143.49	327.17	27.04	41.01
С	Sundries	5	%	-	21.74	1.80	2.72
	LIFT SHAFT SIZE — CRITERION 5						
D	Lift Pit Slab	0.08	m <sup>3</sup>	123.79	9.66	0.80	1.21
E	Lift Pit Exc	0.51	m <sup>3</sup>	10.50	5.32	0.44	0.67
F	Sundries	5	%	-	0.75	0.06	0.09
		Total			472.26		
	Cost allocated to each 1 bed flat				39.04	39.04	59.19
	Cost allocated to each 2 bed flat				59.19		

Item No I	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
	Building height	8.55			
Α	Cavity Walls (3 floors)	6.41	m²	115.72	742.03
В	Gable Cavity Walls Communal (3 floors)	0.50	$m^2$	115.72	58.35
С	Sundries	5	%		40.02
	Total				840.40
	Cost allocated to each 1 bed flat				69.47
	Cost allocated to each 2 bed flat				105.33

Item No I	Description	Quantity I	Jnit	Rate	Amount	1 BED BLOCK ALL	2 BED BLOCK ALL
	ROOF — STRUCTURE						
Α	25 x100 softwood longitudinal tie braces	0.72	m	7.15	5.15	0.43	0.65
В	75 x 50 wall plate	0.48	m	7.15	3.43	0.28	0.43
	ROOF — COVERINGS						
С	Pitched roof covering	1.70	$m^2$	55.61	94.28	7.79	11.82
D	Ridge tile	0.24	m	33.29	7.99	0.66	1.00
E	Eaves	0.48	m	16.15	7.75	0.64	0.97
	ROOF — FITTINGS.						
F	Roof insulation laid between joists and across	1.80	$m^2$	21.38	38.48	3.18	4.82
G	Eaves boarding	0.48	m	31.06	14.91	1.23	1.87
Н	Gutter	0.48	m	18.60	8.93	0.74	1.12
1	Sundries	5	%		9.05	0.75	1.13
	LIFETIME HOMES CRITERION 4						
	EXTERNAL CANOPY — CRITERION 4						
J	Canopy 2000mm x 1200mm	1	nr	936.22	936.22	77.39	117.34
K	Sundries	5	%		46.81	3.87	5.87
		Total			1,172.99	96.96	147.02
	Cost allocated to each 1 bed flat				96.96		
	Cost allocated to each 2 bed flat				147.02	•	

Item No	Item No Description		Unit	Rate	Amount
	<u>FLOORS</u>				
Α	Beam and Block — Ground Floor	1.85	$m^2$	74.61	138.02
В	Sundries	5	%		6.90
					144.92
			2		
С	Beam and Block — Upper Floor ( 2 upper floors)	3.70	m <sup>2</sup>	61.75	228.48
D	Sundries	5	%		11.42
					239.90
					384.83
	Cost allocated to each 1 bed flat				31.81
	Cost allocated to each 2 bed flat				48.23

Item No I	Description	Quantity	/ Unit	Rate	Amount	1 BED BLOCK ALL	2 BED BLOCK ALL
	LIFETIME HOMES CRITERION 5 Lift shaft perimeter change	0.40					
Α	Lift Shaft — Concrete Blocks (3 floors)	4.16	m²	53.81	223.86	18.50	28.06
В	Sundries	5	%	-	11.19	0.93	1.40
С	Block Cavity Wall (3 floors)	3.23	$m^2$	68.76	222.10	18.36	27.84
D	Sundries	5	%	-	11.11	0.92	1.39
		Total			468.26	38.71	58.69
	Cost allocated to each 1 bed flat				38.71		
	Cost allocated to each 2 bed flat				58.69		

Item No [	Description	Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Vinyl Tiles to Communal Areas	5.55	$m^2$	33.26	184.58
В	Skirting (3 floors)	3.60	m	10.30	37.09
С	Sundries	5	%		11.08
	Si	ummary			232.75
	Cost allocated to each 1 bed flat				19.24
	Cost allocated to each 2 bed flat				29.17

Item No I	Description		Quantity	Unit	Rate	Amount
	WALL FINISHES					
Α	Plaster and Paint to Walls (3 floors)		3.60	$m^2$	22.20	79.90
В	Sundries		5	%		4.00
		Total				83.90
	Cost allocated to each 1 bed flat					6.93
	Cost allocated to each 2 bed flat					10.52

Item No	Description		Quantity	Unit	Rate	Amount
	CEILINGS FINISHES					
А	Ceiling incl. battens, plasterboard, skim and emulsion (3 floors)		5.55	$m^2$	35.52	197.11
В	Sundries		5.00	%		9.86
		Total				206.97
	Cost allocated to each 1 bed flat					17.11
	Cost allocated to each 2 bed flat					25.94

Cost allocated to each 2 bed flat

Item No	Description	Quantity	Unit	Rate	Amount	1 BED BLOCK ALL	2 BED BLOCK ALL
	<u>SERVICES</u>						
	LIFT SHAFT SIZE — CRITERION 5						
Α	Omit Lift Cart (1000 x 1300)	(1)	nr	32,081.40	(32,081.40)	-2,651.80	-4,021.00
В	Lift Cart (1100 x 1400)	1	nr	32,675.50	32,675.50	2,700.90	4,095.47
С	Sundries	5.00	%		29.70	2.46	3.72
	ILLUMINATED ENTRANCES — CRITERION 4						
D	External Wall Light	1.00	nr	91.16	91.16	7.54	11.43
Е	Sundries	5.00	%		4.56	0.38	0.57
	To	otal			719.52	59.47	90.18
						_	
	Cost allocated to each 1 bed flat				59.47	3	

Item No [	Description	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H I J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	25.11 173.14 69.74 49.92 0.00 0.00 274.93 0.00 84.82 104.66 37.94 0.00 0.00 235.97 0.00	39.04 69.47 96.96 31.81 0.00 0.00 38.71 0.00 19.24 6.93 17.11 0.00 0.00 0.00 59.47	64.15 242.61 166.69 81.73 0.00 0.00 313.64 0.00 104.06 111.60 55.05 0.00 0.00 235.97 59.47

Total Construction Cost 1,056.24 378.73 1,434.97

Item No I	Description		Quantity	Unit	Rate	Amount
	<u>FOUNDATIONS</u>	Perimeter increase	0.50	m		
Α	Foundations to cavity wall		0.50	m	143.49	71.75
В	Sundries		5	%	-	3.59
		Total per Block (3 units)				75.33
	Co	ost per Flat to Summary				25.11

Item No I	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
	Building height	8.55			
Α	Cavity walls	4.28	m²	115.72	494.69
В	Sundries	5	%		24.73
	Total				519.42
					18
	Cost per One Bed Flat to Summary				173.14

Item No [	Description	Quantity	Unit	Rate	Amount
	ROOF — STRUCTURE				
Α	25 x100 softwood longitudinal tie braces	0.75	m	7.15	5.36
В	75 x 50 wall plate	0.50	m	7.15	3.58
	ROOF — COVERINGS				
С	Pitched roof covering	2.40	$m^2$	55.61	133.69
D	Ridge tile	0.25	m	33.29	8.32
Е	Eaves	0.50	m	16.15	8.07
	ROOF — FITTINGS				
F	Roof insulation laid between joists and across	0.72	$m^2$	21.38	15.39
G	Eaves boarding	0.50	m	31.06	15.53
Н	Gutter	0.50	m	18.60	9.30
1	Sundries	5	%		9.96
	Total Cost per Block (3 units)				209.21
					25 59

Cost per Flat to Summary

Item No Description		Quantity	Unit	Rate	Amount
	FLOORS				
Α	Beam and Block — Ground Floor	0.72	$m^2$	74.61	53.72
В	Beam and Block — Upper Floor (2nr)	1.44	$m^2$	61.75	88.92
С	Sundries	5	%		7.13
Total					
Cost per Flat to Summary					49.92

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α					
	EXTERNAL DOORS				
В					
•		_	0.4		0.00
С	Sundries	5	%		0.00
Total to Summary					

Item No Description		Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats		
	INTERNAL PARTITIONS								
Α	Timber stud partitions	1.96	m <sup>2</sup>	37.30	73.11	3	£219.33		
В	Sundries	5	%	-	3.66	3	£10.97		
	LIFETIME HOMES CRITERION 11								
С	Plywood lining to bathroom walls	16.49	m²	11.44	188.73	3	£566.19		
D	Sundries	5	%	-	9.44	3	£28.31		
	LIFETIME HOMES CRITERION 14								
E	Extra over to for stud partitions to comply with Building Regs Part E	0.00	$m^2$	9.95	0.00	3	£0.00		
_	5 5	0.00		0.00	0.00	Ü	20.00		
F	Timber stud partitions	0.00	m <sup>2</sup>	37.30	0.00	3	£0.00		
G	Sundries	5	%	-	0.00	3	£0.00		
Total to Summary					274.93	-	824.80		

	Description ERNAL DOORS		Quantity	Unit	Rate	Amount Nr o	f Flats	Total for 3nr 1  Bed Flats
Α	Sundries		5	%		0.00	3	£0.00
		Total to Summary				0.00		0.00

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	22.66	0.00	3	£0.00
В	Skirting	3.92	m	10.30	40.38	3	£121.14
D	Floor finish to kitchen	0.00	$m^2$	60.75	0.00	3	£0.00
Е	Sundries	5	%		2.02	3	£6.06
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	0.81	$m^2$	49.88	40.40	3	£121.20
G	Sundries	5	%		2.02	3	£6.06
	Total to Summary				84.82		254.46

Item No I	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 3nr 1  Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	1.43	m²	22.20	31.63	3	£94.89
В	Plaster to internal stud partitions	3.92	m²	12.12	47.51	3	£142.53
С	Mist and 2 coats emulsion to internal stud partitions	0.98	m²	2.46	2.41	3	£7.23
D	Mist and 2 coats to kitchen walls	2.21	m²	6.17	13.60	3	£40.80
E	Sundries	5	%		4.76	3	£14.27
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	0.73	$m^2$	6.17	4.53	3	£13.59
G	Sundries	5	%		0.23	3	£0.68
	Total to Summary				104.66		313.99

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1  Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	(0.09)	m²	35.52	(3.20)	3	(9.59)
В	Gypsum plaster cornice	0.70	m	10.71	7.49	3	£22.48
С	Ceiling incl. battens, plasterboard, skim and emulsion  Kitchen	0.00	${\sf m}^2$	39.31	0.00	3	£0.00
D	Sundries	5.00	%		0.21	3	£0.00
	LIFETIME HOMES CRITERION 14					3	£0.00
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom	0.81	$m^{2}$	39.31	31.84	3	£95.51
F	Sundries	5.00	%		1.59	3	£4.78
	Cost per Flat to Summary				37.94		113.18

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	DISPOSAL — CRITERION 10						
Α	Gully trap and grating	1.00	nr	224.73	224.73	12	2696.78
В	Sundries	5	%		11.24	12	£134.84
	Total to Summary				235.97		2,831.62

Item No I	Description		Quantity	Unit	Rate	Amount
	SERVICES					
Α	Heating installation			$m^2$	0.00	0.00
В	Electrical installation			$m^2$	0.00	0.00
С	Sundries		5	%		0.00
	Т	otal to Summary				0.00

Item No I	Description	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
ABCDEFGHLJKLMNO	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	17.08 77.03 24.72 36.75 0.00 0.00 395.92 0.00 98.64 134.96 25.40 0.00 0.00 235.97	59.19 105.33 147.02 48.23 0.00 0.00 58.69 0.00 29.17 10.52 25.94 0.00 0.00 0.00	76.27 182.36 171.73 84.98 0.00 0.00 454.61 0.00 127.81 145.47 51.34 0.00 0.00 235.97 90.18

Total Construction Cost 1,046.45 574.28 1,620.73

Item No I	Item No Description		Unit	Rate	Amount	
	FOUNDATIONS Perimeter increase	0.28	m			
Α	Foundations to cavity wall	0.28	m	143.49	40.18	
В	Foundations to internal cavity wall	0.40	m	143.49	57.40	
С	Sundries	5	%	-	4.88	
	Total per Block (6 units)					
	Cost per Flat to Summary					

Item No I	Item No Description		Unit	Rate	Amount
	EXTERNAL WALLS  Building height	8.55			
Α	Cavity Walls	2.39	m²	115.72	277.03
В	Gable Cavity Walls	1.41	m²	115.72	163.14
С	Sundries	5	%		22.01
	Total				462.17
Cost per Two Bed Flat to Summary					

Item No	Description	Quantity	Unit	Rate	Amount
	ROOF — STRUCTURE				
Α	25 x100 softwood longitudinal tie braces	0.75	m	7.15	5.36
В	75 x 50 wall plate	0.50	m	7.15	3.58
	ROOF — COVERINGS				
С	Pitched roof covering	0.40	$m^2$	55.61	22.02
D	Ridge tile	0.25	m	33.29	8.32
Е	Eaves	0.50	m	16.15	8.07
	ROOF — FITTINGS				
F	Roof insulation laid between joists and across	3.23	m²	21.38	69.04
G	Eaves boarding	0.50	m	31.06	15.53
Н	Gutter	0.50	m	18.60	9.30
1	Sundries	5	%		7.06
	Total Cost per Block (6 units)				148.29
	Cost per Flat to Summary				24.72

Item No	Description	Quantity	Unit	Rate	Amount
	FLOORS_				
Α	Beam and Block — Ground Floor	1.06	$m^2$	74.61	79.08
В	Beam and Block — Upper Floor (2nr)	2.12	$m^2$	61.75	130.91
С	Sundries	5	%		10.50
Total					
Cost per Flat to Summary					

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No I	Item No Description		Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α					
	EXTERNAL DOORS				
В					
0	0	_	0/		0.00
С	Sundries	5	%		0.00
	Total to Summary				0.00

Item No Description		Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2  Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	2.70	$m^2$	37.30	100.53	6	603.18
В	Block cavity wall	0.00	m²	68.76	0.00	6	0.00
С	Sundries	5	%	-	5.03	6	30.16
	LIFETIME HOMES CRITERION 11						
D	Plywood lining to bathroom walls	13.55	$m^2$	11.44	155.09	6	930.54
E	Plywood lining to en-suite walls	10.61	$m^2$	11.44	121.45	6	728.70
F	Sundries	5	%	-	13.83	6	82.96
	LIFETIME HOMES CRITERION 14						
G	Extra over to for stud partitions to comply with Building Regs Part E	0.00	$m^2$	9.95	0.00	6	0.00
Н	Timber stud partitions	0.00	$m^2$	37.30	0.00	6	0.00
	·						
ı	Sundries	5	%	-	0.00	6	0.00
	Total to Summary			9	395.92	<b>-</b> 3 8	2,375.54

	Description ERNAL DOORS	-10	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2 Bed Flats
А	Sundries		5	%		0.00	6	£0.00
		Total to Summary				0.00		0.00

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2 Bed Flats
	FLOOR FINISHES						
А	Carpet finish to living areas	0.00	$m^2$	22.66	0.00	6	£0.00
В	Skirting	7.29	m	10.30	75.10	6	£450.60
С	Floor finish to kitchen	(0.01)	$m^2$	60.75	(0.61)	6	(3.66)
D	Sundries	5	%		3.72	6	£22.35
	LIFETIME HOMES CRITERION 14						
Е	Floor finish to bathroom	0.39	$m^2$	49.88	19.45	6	£116.70
F	Floor finish to en-suite	0.00	$m^2$	49.88	0.00	6	£0.00
G	Sundries	5	%		0.97	6	£5.84
	Total to Summary				98.64		591.82

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 6nr 2 Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	0.63	m²	22.20	14.07	6	£84.42
В	Plaster to internal stud partitions	7.29	$m^2$	12.12	88.35	6	£530.10
С	Mist and 2 coats emulsion to internal stud partitions	5.09	m²	2.46	12.51	6	£75.06
D	Mist and 2 coats to kitchen walls	2.21	$m^2$	6.17	13.60	6	£81.60
E	Sundries	5	%		6.43	6	£38.56
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	0.00	$m^2$	6.17	0.00	6	£0.00
G	Sundries	5	%		0.00	6	£0.00
	Total to Summary				134.96		809.74

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2  Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	0.14	$m^2$	35.52	4.97	6	£29.83
В	Gypsum plaster cornice	0.40	m	10.71	4.28	6	£25.69
С	Ceiling incl. battens, plasterboard, skim and emulsion  Kitchen (0.01)		${\sf m}^2$	39.31	(0.39)	6	£0.00 £0.00
D	Sundries	5.00	%		0.44	6	
	LIFETIME HOMES CRITERION 14						£0.00
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom En-Suite	0.39 0.00	m² ² m	39.31 39.31	15.33 0.00	6 6	£91.98
F	Sundries	5.00	%		0.77	6	£0.00
	Total to Summary				25.40		147.50

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2 Bed Flats
	DISPOSAL — CRITERION 10						
Α	Gully trap and grating	1.00	nr	224.73	224.73	12	2696.78
В	Sundries	5	%		11.24	12	£134.84
	Total to Summary				235.97		2,831.62

Item No Description		Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation		$m^2$	0.00	0.00
В	Electrical installation		$m^2$	0.00	0.00
С	Sundries	5	%		0.00
	0.00				

## APPENDIX 2e

Elemental Cost Breakdowns

Flats – Example 2

(Major Development)

Item No D	Item No Description					
		£				
	Summary					
A B C D E F G H I J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	407.65 724.06 1,010.60 331.55 0.00 0.00 403.43 0.00 200.53 72.28 178.31 0.00 0.00 0.00				

**Total Construction Cost** 

3,948.34

Item No [	tem No Description			Unit	Rate	Amount 1 E	BED BLOCK ALL	2 BED BLOCK ALL
	FOUNDATIONS							
		Perimeter increase	0.75	m				
Α	Foundations to perimeter cavity wall		0.75	m	123.63	92.72	7.66	11.62
В	Foundations to internal cavity wall		2.28	m	123.63	281.88	23.30	35.33
С	Sundries		5	%	-	18.73	1.55	2.35
	LIFT SHAFT SIZE — CRITERION 5	K-el						
D	Lift Pit Slab		0.08	$m^3$	106.65	8.32	0.69	1.04
Е	Lift Pit Exc		0.51	$m^3$	10.50	5.32	0.44	0.67
F	Sundries		5	%	-	0.68	0.06	0.09
		Total				407.65		
	Cost allocated to each 1 bed flat					33.70	33.70	51.09
	Cost allocated to each 2 bed flat					51.09		

Item No I	Description	Quantity	Unit	Rate	Amount
	EXTERNAL WALLS				
	Building height	8.55			
Α	Cavity Walls (3 floors)	6.41	m²	99.70	639.31
В	Gable Cavity Walls Communal (3 floors)	0.50	m²	99.70	50.27
С	Sundries	5	%		34.48
	Total				724.06
	Cost allocated to each 1 bed flat				59.85
	Cost allocated to each 2 bed flat				90.75

Item No	Description	Quantity U	Quantity Unit Rate		Amount	1 BED BLOCK ALL	2 BED BLOCK ALL
	ROOF — STRUCTURE_						
Α	25 x 100 softwood longitudinal tie braces	0.72	m	6.16	4.44	0.37	0.56
В	75 x 50 wall plate	0.48	m	6.16	2.96	0.24	0.37
	ROOF — COVERINGS						
С	Pitched roof covering	1.70	$m^2$	47.91	81.22	6.71	10.18
D	Ridge tile	0.24	m	28.68	6.88	0.57	0.86
Е	Eaves	0.48	m	13.91	6.68	0.55	0.84
	ROOF — FITTINGS.						
F	Roof insulation laid between joists and across	1.80	$m^2$	18.42	33.15	2.74	4.15
G	Eaves boarding	0.48	m	26.76	12.84	1.06	1.61
Н	Gutter	0.48	m	16.02	7.69	0.64	0.96
1	Sundries	5	%		7.79	0.64	0.98
	LIFETIME HOMES CRITERION 4						
	EXTERNAL CANOPY — CRITERION 4						
J	Canopy 2000mm x 1200mm	1	nr	806.61	806.61	66.67	101.10
K	Sundries	5	%		40.33	3.33	5.05
					10		
		Total			1,010.60	83.53	126.67
	Cost allocated to each 1 bed flat				83.53		
	Cost allocated to each 2 bed flat				126.67	•	

Item No	Description	Quantity	Unit	Rate	Amount
	FLOORS				
Α	Beam and Block — Ground Floor	1.85	$m^2$	64.28	118.92
С	Sundries	5	%		5.95
					124.86
В	Beam and Block — Upper Floor ( 2 upper floors)	3.70	m <sup>2</sup>	53.20	196.85
С	Sundries	5	%		9.84
					206.69
					331.55
	Cost allocated to each 1 bed flat				27.41
	Cost allocated to each 2 bed flat				41.56

Item No Description		C	uantity	Unit	Rate	Amount	- 1	1 BED BLOCK ALL	2 BED BLOCK ALL
	LIFETIME HOMES CRITERION 5 Lift shaft perimeter change		0.40						
Α	Lift Shaft — Concrete Blocks (3 floors)		4.16	m²	46.36	192.87		15.94	24.17
В	Sundries		5	%	-	9.64		0.80	1.21
С	Block Cavity Wall (3 floors)		3.23	m <sup>2</sup>	59.24	191.35		15.82	23.98
D	Sundries		5	%	-	9.57		0.79	1.20
		Total				403.43	I	33.35	50.57
	Cost allocated to each 1 bed flat					33.35			
	Cost allocated to each 2 bed flat					50.57			

Item No Description		Quantity	Unit	Rate	Amount
	FLOOR FINISHES				
Α	Vinyl Tiles to Communal Areas	5.55	$m^2$	28.65	159.03
В	Skirting (3 floors)	3.60	m	8.88	31.95
С	Sundries	5	%		9.55
	Summa	ry			200.53
	Cost allocated to each 1 bed flat				16.58
	Cost allocated to each 2 bed flat				25.13

Item No Description			Quantity	Unit	Rate	Amount
	WALL FINISHES					
Α	Plaster and Paint to Walls (3 floors)		3.60	$m^2$	19.12	68.84
В	Sundries		5	%		3.44
		Total				72.28
	Cost allocated to each 1 bed flat					5.97
	Cost allocated to each 2 bed flat					9.06

Item No Description		Quantity	Unit	Rate	Amount	
	CEILINGS FINISHES					
А	Ceiling incl. battens, plasterboard, skim and emulsion (3 floors)		5.55	$m^2$	30.60	169.82
В	Sundries		5.00	%		8.49
		Total				178.31
	Cost allocated to each 1 bed flat					14.74
	Cost allocated to each 2 bed flat					22.35

Item No Description		Quantity	Unit	Rate	Amount	1 BED BLOCK ALL	2 BED BLOCK ALL
	SERVICES						
	LIFT SHAFT SIZE — CRITERION 5						
Α	Omit Lift Cart (1000 x 1300)	(1)	nr	27,640.20	(27,640.20)	-2,284.69	-3,464.35
В	Lift cart (1100 x 1400)	1	nr	28,152.06	28,152.06	2,327.00	3,528.51
С	Sundries	5.00	%		25.59	2.12	3.21
	ILLUMINATED ENTRANCES — CRITERION 4						
D	External Wall Light	1.00	nr	78.54	78.54	6.49	9.84
Е	Sundries	5.00	%		3.93	0.32	0.49
		Total			619.91	51.24	77.70
	Cost allocated to each 1 bed flat				51.24		
	Cost allocated to each 2 bed flat				77.70	-	

Item No I	Description	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
A B C D E F G H L J K L M N O	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	21.64 149.17 60.08 43.01 0.00 0.00 236.87 0.00 73.08 90.18 32.69 0.00 0.00 207.66 0.00	33.70 59.85 83.53 27.41 0.00 0.00 33.35 0.00 16.58 5.97 14.74 0.00 0.00 0.00 51.24	55.33 209.02 143.62 70.42 0.00 0.00 270.22 0.00 89.66 96.16 47.43 0.00 0.00 207.66 51.24

Total Construction Cost 914.39 326.36 1,240.75

Item No Description		Quantity	Unit	Rate	Amount	
	<u>FOUNDATIONS</u>	Perimeter increase	0.50	m		
Α	Foundations to cavity wall		0.50	m	123.63	61.81
В	Sundries		5	%	-	3.09
		Total per Block (3 units)				64.91
Cost per Flat to Summary						21.64

Item No I	Description	Quantity	Unit	Rate	Amount		
	EXTERNAL WALLS						
	Building height	8.55					
Α	Cavity walls	4.28	m²	99.70	426.21		
В	Sundries	5	%		21.31		
	Total				447.52		
					149.17		
	Cost per One Bed Flat to Summary						

Item No I	Item No Description		Unit	Rate	Amount
	ROOF — STRUCTURE				
Α	25 x 100 softwood longitudinal tie braces	0.75	m	6.16	4.62
В	75 x 50 wall plate	0.50	m	6.16	3.08
	ROOF — COVERINGS				
С	Pitched roof covering	2.40	$m^2$	47.91	115.18
D	Ridge tile	0.25	m	28.68	7.17
Е	Eaves	0.50	m	13.91	6.96
	ROOF — FITTINGS				
F	Roof insulation laid between joists and across	0.72	$m^2$	18.42	13.26
G	Eaves boarding	0.50	m	26.76	13.38
Н	Gutter	0.50	m	16.02	8.01
1	Sundries	5	%		8.58
	Total Cost per Block (3 units)				180.25
					33

Cost per Flat to Summary

60.08

Item No	Description	Quantity	Unit	Rate	Amount
	FLOORS				
Α	Beam and Block — Ground Floor	0.72	m <sup>2</sup>	64.28	46.28
В	Beam and Block — Upper Floor (2nr)	1.44	$m^2$	53.20	76.61
С	Sundries	5	%		6.14
	Total				129.04
	Cost nor Flot to Cummon.				42.04
	Cost per Flat to Summary				43.01

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α					
	EXTERNAL DOORS				
В					
С	Sundries	5	%		0.00
	Total to Summary				0.00

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1  Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	1.96	$m^2$	32.14	62.99	3	£188.97
В	Sundries	5	%	-	3.15	3	£9.45
	LIFETIME HOMES CRITERION 11						
С	Plywood lining to bathroom walls	16.49	$m^2$	9.86	162.60	3	£487.80
D	Sundries	5	%	-	8.13	3	£24.39
	LIFETIME HOMES CRITERION 14						
E	Extra over to for stud partitions to comply with Building Regs Part E	0.00	$m^2$	8.57	0.00	3	£0.00
F	Timber stud partitions	0.00	$m^2$	32.14	0.00	3	£0.00
G	Sundries	5	%	-	0.00	3	£0.00
	Total to Summary				236.87		710.61

	Description ERNAL DOORS		Quantity	Unit	Rate	Amount Nr o	f Flats	Total for 3nr 1  Bed Flats
Α	Sundries		5	%		0.00	3	£0.00
		Total to Summary				0.00		0.00

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	FLOOR FINISHES						
Α	Carpet finish to living areas	0.00	$m^2$	19.52	0.00	3	£0.00
В	Skirting	3.92	m	8.88	34.79	3	£104.37
D	Floor finish to kitchen	0.00	$m^2$	52.34	0.00	3	£0.00
E	Sundries	5	%		1.74	3	£5.22
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	0.81	$m^2$	42.98	34.81	3	£104.43
G	Sundries	5	%		1.74	3	£5.22
	Total to Summary				73.08		219.24

Item No I	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 3nr 1  Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	1.43	m²	19.12	27.25	3	£81.75
В	Plaster to internal stud partitions	3.92	$m^2$	10.44	40.93	3	£122.79
С	Mist and 2 coats emulsion to internal stud partitions	0.98	$m^2$	2.12	2.08	3	£6.24
D	Mist and 2 coats to kitchen walls	2.21	m²	5.31	11.72	3	£35.16
E	Sundries	5	%		4.10	3	£12.30
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	0.73	$m^2$	5.31	3.91	3	£11.73
G	Sundries	5	%		0.20	3	£0.59
	Total to Summary				90.18		270.55

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	CEILINGS FINISHES						
Α	Ceiling incl. battens, plasterboard, skim and emulsion	(0.09)	m²	30.60	(2.75)	3	(8.26)
В	Gypsum plaster cornice	0.70	m	9.22	6.46	3	£19.37
С	Ceiling incl. battens, plasterboard, skim and emulsion Kitchen	0.00	$m^2$	33.86	0.00	3	£0.00
D	Sundries	5.00	%		0.19	3	£0.00
	LIFETIME HOMES CRITERION 14					3	£0.00
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom	0.04	$m^2$	22.00	27.43	2	000.00
		0.81		33.86	27.43	3	£82.29
F	Sundries	5.00	%		1.37	3	£4.11
	Cost per Flat to Summary				32.69		97.51

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 3nr 1 Bed Flats
	DISPOSAL — CRITERION 10						
Α	Gully trap and grating	1.00	nr	197.77	197.77	12	2373.29
В	Sundries	5	%		9.89	12	£118.66
	Total to Summary				207.66		2,491.95

Item No I	Description		Quantity	Unit	Rate	Amount
	SERVICES					
Α	Heating installation			$m^2$	0.00	0.00
В	Electrical installation			$m^2$	0.00	0.00
С	Sundries		5	%		0.00
	Т	otal to Summary				0.00

Item No I	Description	Cost Per Flat	Block Cost Allocation	Total Cost Per Flat
		£	£	£
	Summary			
ABCDEFGHLJKLMNO	Foundations External Walls Roof Upper Floor Stairs Windows and External Doors Internal Walls and Partitions Internal Doors Floor Finishes Wall Finishes Ceiling Finishes Kitchen Fittings Sanitary Fittings Disposal — Waste Pipes Mechanical and Electrical Installations	14.71 66.37 21.29 31.66 0.00 0.00 341.10 0.00 84.99 116.28 21.88 0.00 0.00 207.66 0.00	51.09 90.75 126.67 41.56 0.00 0.00 50.57 0.00 25.13 9.06 22.35 0.00 0.00 0.00 77.70	65.81 157.12 147.96 73.22 0.00 0.00 391.67 0.00 110.12 125.34 44.23 0.00 0.00 207.66 77.70

Total Construction Cost 905.95 494.87 1,400.82

Item No [	Item No Description		Unit	Rate	Amount		
	FOUNDATIONS Perimeter increase	0.28	m				
Α	Foundations to cavity wall	0.28	m	123.63	34.62		
В	Foundations to internal cavity wall	0.40	m	123.63	49.45		
С	Sundries	5	%	-	4.20		
	Total per Block (6 units)						
	Cost per Flat to Summary				14.71		

Item No	Item No Description		Unit	Rate	Amount	
	EXTERNAL WALLS  Building height	8.55				
Α	Cavity walls	2.39	m²	99.70	238.68	
В	Gable Cavity Walls	1.41	m²	99.70	140.55	
С	Sundries	5	%		18.96	
	Total				398.19	
Cost per Two Bed Flat to Summary						

Item No	Description	Quantity	Unit	Rate	Amount	
	ROOF — STRUCTURE					
Α	25 x100 softwood longitudinal tie braces	0.75	m	6.16	4.62	
В	75 x 50 wall plate	0.50	m	6.16	3.08	
	ROOF — COVERINGS					
С	Pitched roof covering	0.40	$m^2$	47.91	18.97	
D	Ridge tile	0.25	m	28.68	7.17	
Е	Eaves	0.50	m	13.91	6.96	
	ROOF — FITTINGS					
F	Roof insulation laid between joists and across	3.23	m²	18.42	59.49	
G	Eaves boarding	0.50	m	26.76	13.38	
Н	Gutter	0.50	m	16.02	8.01	
1	Sundries	5	%		6.08	
	Total Cost per Block (6 units)				127.76	
	Cost per Flat to Summary					

Item No Description		Quantity	Unit	Rate	Amount
	FLOORS_				
Α	Beam and Block — Ground Floor	1.06	$m^2$	64.28	68.14
В	Beam and Block — Upper Floor (2nr)	2.12	$m^2$	53.20	112.79
С	Sundries	5	%		9.05
Total					
		31.66			

Item No Description Quantity Unit Rate Amount

STAIRS

No cost effect

Total to Summary

0.00

Item No Description		Quantity	Unit	Rate	Amount
	WINDOWS AND EXTERNAL DOORS				
	WINDOWS				
Α					
	EXTERNAL DOORS				
В					
0	0	_	0/		0.00
С	Sundries	5	%		0.00
	Total to Summary				0.00

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2  Bed Flats
	INTERNAL PARTITIONS						
Α	Timber stud partitions	2.70	$m^2$	32.14	86.61	6	519.66
В	Block cavity wall	0.00	$m^2$	59.24	0.00	6	0.00
С	Sundries	5	%	-	4.33	6	25.98
	LIFETIME HOMES CRITERION 11						
D	Plywood lining to bathroom walls	13.55	$m^2$	9.86	133.62	6	801.72
Е	Plywood lining to en-suite walls	10.61	$m^2$	9.86	104.63	6	627.78
F	Sundries	5	%	-	11.91	6	71.48
	LIFETIME HOMES CRITERION 14						
G	Extra over to for stud partitions to comply with Building Regs Part E	0.00	$m^2$	8.57	0.00	6	0.00
Н	Timber stud partitions	0.00	$m^2$	32.14	0.00	6	0.00
I	Sundries	5	%	-	0.00	6	0.00
	Total to Summary				341.10	-	2,046.62

	Description ERNAL DOORS	-1	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2 Bed Flats
Α	Sundries		5	%		0.00	6	£0.00
		Total to Summary				0.00		0.00

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2 Bed Flats
	FLOOR FINISHES						
А	Carpet finish to living areas	0.00	$m^2$	19.52	0.00	6	£0.00
В	Skirting	7.29	m	8.88	64.70	6	£388.20
D	Floor finish to kitchen	(0.01)	$m^2$	52.34	(0.52)	6	(3.12)
Е	Sundries	5	%		3.21	6	£19.25
	LIFETIME HOMES CRITERION 14						
F	Floor finish to bathroom	0.39	$m^2$	42.98	16.76	6	£100.56
G	Floor finish to en-suite	0.00	$m^2$	42.98	0.00	6	£0.00
Н	Sundries	5	%		0.84	6	£5.03
	Total to Summary				84.99		509.92

Item No	Description	Quantity	Unit	Rate	Amount Nr	of Flats	Total for 6nr 2 Bed Flats
	WALL FINISHES						
Α	Plaster to brick walls	0.63	$m^2$	19.12	12.12	6	£72.72
В	Plaster to internal stud partitions	7.29	m²	10.44	76.12	6	£456.72
С	Mist and 2 coats emulsion to internal stud partitions	5.09	m²	2.12	10.78	6	£64.68
D	Mist and 2 coats to kitchen walls	2.21	m²	5.31	11.72	6	£70.32
E	Sundries	5	%		5.54	6	£33.22
	LIFETIME HOMES CRITERION 14						
F	Mist and 2 coats to WC, bathroom walls	0.00	m²	5.31	0.00	6	£0.00
G	Sundries	5	%		0.00	6	£0.00
	Total to Summary				116.28		697.66

Item No	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Total for 6nr 2  Bed Flats
	CEILINGS FINISHES						
А	Ceiling incl. battens, plasterboard, skim and emulsion	0.14	$m^2$	30.60	4.28	6	£25.70
В	Gypsum plaster cornice	0.40	m	9.22	3.69	6	£22.14
С	Ceiling incl. battens, plasterboard, skim and emulsion  Kitchen (0.01)		$m^2$	33.86	(0.34)	6	£0.00 £0.00
D	Sundries	5.00	%		0.38	6	
	LIFETIME HOMES CRITERION 14						£0.00
E	Ceiling incl. battens, plasterboard, skim and emulsion Bathroom En-Suite	0.39 0.00	m² ² m	33.86 33.86	13.21 0.00	6 6	£79.24
F	Sundries	5.00	%		0.66	6	£0.00
	Total to Summary				21.88		127.08

Item No Description Quantity Unit Rate Amount

KITCHEN FITTINGS

No cost effect

Item No Description Quantity Unit Rate Amount

SANITARY INSTALLATIONS

No cost effect

Item No I	Description	Quantity	Unit	Rate	Amount	Nr of Flats	Bed Flats
	DISPOSAL— CRITERION 10						
Α	Gully trap and grating	1.00	nr	197.77	197.77	12	2373.29
В	Sundries	5	%		9.89	12	£118.66
	Total to Summary				207.66		2,491.95

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Item No [	Description	Quantity	Unit	Rate	Amount
	SERVICES				
Α	Heating installation		$m^2$	0.00	0.00
В	Electrical installation		$m^2$	0.00	0.00
С	Sundries	5	%		0.00
	Total to Summary				0.00