



# DSD/NIHE Main Stock Condition Report 2014/15

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**Housing**  
Executive



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# DSD/NIHE

## Main Stock Condition Survey Report 2014/15

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## EXECUTIVE SUMMARY

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In accordance with the requirements of the Department for Social Development (“DSD”) and the Northern Ireland Housing Executive (“NIHE”) we have carried out a comprehensive exercise to assess the current and future repairs and maintenance liabilities of NIHE’s properties and associated assets. This has involved a sample survey of 25% of the properties (over 22,400 surveys) and a detailed structural, mechanical and electrical assessment of the condition of the tower blocks. The work has taken 5 months on the ground to complete and has involved a team of over 70 surveyors, engineers, IT support staff and administrators.

We undertook a survey of the condition of the NIHE stock in 2009. This comprised a 10% sample survey only without any detailed structural assessment of the condition of the Tower Blocks. Hence the 2009 exercise was not as comprehensive as this current work.

The current exercise has confirmed that the full level of investment identified during the 2009 survey has not been made due to financial constraints and, as a consequence, the stock has deteriorated during the last 5 years. Our projections of costs moving forward have therefore increased and will continue to do so without sufficient investment.

In the short term, the pressing priorities are the internal fabric of the properties, particularly the bathrooms and wiring, but there will also be an increasing amount of work required to the external fabric, particularly the roofs. This is inevitable given the age of the properties.

Whilst the stock has lacked investment, it generally meets the minimum standard for housing set out in the Fitness Standard, the Housing Health and Safety System (HHSRS) and the Decent Homes Standard.

The 32 tower blocks are generally in reasonable condition but the structure of the blocks is deteriorating and they have poor thermal insulation qualities in comparison to traditionally built housing. The blocks would benefit from overcladding to protect the structure, improve the appearance and improve the thermal performance. The same principles apply to many of the low rise non traditional properties.

There is no single answer to the investment required to the stock either now or in the future. The amount of investment is highly dependent on the standards that are set. We have modelled our survey results based on two standards. Firstly the Tenantable Repair Standard which is essentially the minimum works required to meet all statutory obligations and to keep the properties in good and tenantable repair. Secondly, we have modelled the results against a Commonly Adopted Standard which is a higher standard adopted by many landlords in other jurisdictions, and includes a degree of improvement to the properties moving forward.

The total cost at today's prices to meet the Tenantable Repair Standard over 30 years for all the properties is £5.84 billion and the total cost to meet the Commonly Adopted Standard is £6.7billion.

Under both standards there is significant investment required during the next 5 years. In addition to the financial challenge this presents, there is also a significant practical challenge in terms of the capacity of the market to deliver such a large programme. A 3 year lead in time is likely to be required before the levels of investment identified can be delivered on the ground and current investment programmes are concluded. This "delay" will result in an increase in liability in the years that follow.

As part of the exercise, we have made an assessment of the energy performance of the properties. The average SAP rating is 57 which is relatively low in comparison with other portfolios we have inspected where we typically see average SAP ratings of 60 or above. The overall energy performance of the NIHE stock is significantly influenced by the fact that many areas within Northern Ireland are not yet served by a gas network, with the heating system being a major driver behind the SAP rating calculation. The average can be increased by replacement of some of the older and inefficient heating systems, improvements to wall and roof insulation and, in some cases, the introduction of renewable energies.

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In conclusion, this is generally a well built stock that has historically benefitted from significant ongoing investment. However, the stock is getting older which results in an inevitable requirement for increasing investment. This issue, combined with the limited investment that has taken place in recent years (particularly since 2009), means that significant investment is now required. This is reflected in our 30 year cost summaries (Section 6.0). It must be noted that this report represents just one of a number of considerations required to inform investment decisions, which should be made in the wider context of a comprehensive Asset Management Strategy and Government priorities.

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## 1.0 INTRODUCTION

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- 1.1 In accordance with instructions from DSD/NIHE received through the Asset Consultancy Services Commission, we have undertaken an assessment of the current condition of the Northern Ireland Housing Executive (NIHE) housing stock and associated assets together with an assessment of the future repairs and maintenance liability of the properties. The principal activity in this part of the commission has been carrying out a comprehensive stock condition survey of a representative sample of 25% of all the properties together with surveys of the associated assets.
- 1.2 As part of the process we engaged specialists to assist with more detailed investigations into the condition of the 32 tower blocks in relation to the structure and mechanical and electrical installations.
- 1.3 Our work commenced in late August 2014 and the main investigations on site commenced in early September 2014. All survey work was complete by the end of March 2015 and the data has now been validated, processed and passed to DSD and NIHE. The results from all of our work are summarised in this report.
- 1.4 This has been a major exercise and some of the constituent parts are substantial pieces of work in their own right. It is therefore not practical to include all the information arising from the wider commission in one report. However we have attempted to summarise all of the stock condition survey findings in this report. Any associated reports purely provide more detail in the areas they cover e.g. the structural assessment of the Tower Blocks.

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## 2.0 ASSETS TO BE ASSESSED

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2.1 The core of the exercise involved an assessment of the 87,439 general needs rented stock currently managed by NIHE. Details of the address list were provided by NIHE. A summary of the principal property types contained within the 87,439 units is set out below.

Table 1. Summary of NIHE property types

Property Type	Number of Properties
Bungalows	18,148
Cottages	768
Flats	15,868
Flats (Tower Blocks)	1,611
Houses	49,777
Maisonettes	1,267
Total	87,439

2.2 In addition to the core assets this exercise has involved an assessment of the condition of all associated assets. These include the following:

- Garages - 7,394
- Hostels – 175
- Commercial Units - 407
- Travellers sites - 34 sites across 3 pitches
- Leasehold Properties – 6,025
- Septic tanks - 552

2.3 Again details of the above assets were provided by NIHE.

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## 3.0 SURVEY SAMPLING PROCESS

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- 3.1 We went through a detailed exercise to establish the level of the sample survey required in order to produce statistically valid and robust survey results. A requirement of the brief was to have the ability to produce accurate survey results within the different groups of properties within the areas/districts. Our approach to the sampling process was therefore carried out on that basis. Our statistician carried out a detailed analysis of the survey data collected from our 2009 survey to assess the variability of the repairs and maintenance characteristics of the properties and this was supplemented by our extensive knowledge from surveys undertaken in other jurisdictions. A detailed piece of work was undertaken in order to calculate the number of surveys required by region, by district and by property type. The results of this analysis were shared with both DSD and NIHE and accepted as a sound approach.
- 3.2 The work culminated in the completion of 22,481 surveys, we have carried out a detailed analysis of the results to establish the statistical validity at regional, district and district/archetype level. The result has been that we have achieved the targeted level of accuracy of 95% +/- 4%.
- 3.3 A further requirement of the brief was that all of the 32 Tower Blocks would be the subject of a detailed survey of the structure and mechanical and electrical plant, together with an internal sample condition survey of flats in all of the blocks. As a result all of the tower blocks have been inspected in detail.
- 3.4 In terms of the associated assets our approach to surveying these can be summarised as follows:
- The external fabric and common areas to the leaseholder properties were inspected as part of our main survey of the blocks.
  - We surveyed all of the hostels.

- We surveyed all the commercial units where they did not form part of a block that had been already inspected as part of the main survey.
- We undertook a sample survey of 20% of the garages.
- We inspected the travellers sites where buildings are present.
- Our assessment of the repairs and maintenance liabilities associated with unadopted drainage / roads and septic tanks was undertaken on a desk top basis in accordance with normal practice.

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## 4.0 SURVEY DESIGN AND METHODOLOGY

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### 4.1 The Survey Form

4.1.1 We tabled a survey form design to collect all the information set out within the brief. The survey form was discussed in detail with DSD and NIHE, comments were taken on board and the forms duly amended. The forms adopted contain the following:

- Condition Survey
- The Energy Survey
- The Housing Health and Safety Rating System Survey
- The Fitness Survey
- Decent Homes
- Adaptations

### 4.2 Schedule of Rates and Life Cycles

4.2.1 The unit rates and life cycles applied to the survey data are a key driver to the overall outcome of the exercise. Small adjustments to unit costs for key components can have a very major impact. Hence it is extremely important that the unit rates and life cycles adopted are realistic and reflective of how much work will cost in the future and how long components are likely to last.

4.2.2 We tabled a set of unit rates and life cycles based on our experience of other jurisdictions and also our knowledge of the market in Northern Ireland. The schedule was discussed in detail with DSD and NIHE and there was broad agreement. In particular, NIHE's view was that the unit costs that we were proposing broadly aligned with their experience from their capital programme.

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## 4.3 Tower Block Inspections

4.3.1 A requirement of the brief was to carry out detailed due diligence into the condition of the 32 tower blocks. More particularly this was to include:

- A detailed assessment of the structural condition of the blocks, to involve abseiling inspections and testing of the concrete.
- Specialist inspections of the mechanical and electrical plant contained within each block.
- Sample surveys of the internal condition of the flats.

4.3.2 We commissioned Curtins Consulting Engineers to undertake the structural appraisal of the tower blocks. They are acknowledged experts in relation to such matters. We also commissioned Hulley and Kirkwood, specialist services engineers, to inspect the mechanical and electrical installations in the blocks. We undertook the condition surveys of a sample of flats within every block.

## 4.4 Adaptation Surveys

4.4.1 As part of our main survey we collected data on any adaptations carried out to properties. We collected this data for all 22,481 properties that we inspected.

4.4.2 In addition, we were asked to carry out some more detailed surveys to a small number of properties, to collect more extensive information in relation to adaptations. The detail collected in these surveys was above and beyond that normally gathered in a typical stock condition survey. The data collected was gathered for NIHE specifically for their Accessible Housing Register.

4.4.3 To support this activity we were provided with a list of properties to target by NIHE plus a bespoke survey form. This exercise involved completing 427 additional detailed adaptation surveys for NIHE.

## 4.5 Survey Team

4.5.1 We had a team of over 40 surveyors involved in undertaking the actual stock condition surveys, supported by IT specialists and administrative staff. All these surveyors were Access NI approved and suitably experienced to undertake this type of work. At the core of the team, were 10 surveyors who have worked for Savills for over 10 years undertaking these type of assignments and they led the survey teams on the ground.

## 4.6 Quality Control

4.6.1 Prior to survey commencement, extensive briefing was given to all of the survey team on the requirements of the exercise. Each of the surveyors was accompanied by one of the team leaders during the first few days of surveying to ensure that the methodology was fully understood and the data was being collected correctly. De-briefing sessions took place with the survey team at the end of each day.

4.6.2 The data was collected on hand held computers. Validation rules were built into the hand held data collection to ensure that all key information was collected and exceptional recording of data, i.e. very high quantities, was flagged to the surveyors as they entered the data. The survey data was uploaded by the team leaders and validation checks were undertaken to establish both accuracy and consistency. Once this process was completed, all data was uploaded onto our main system following which an extensive validation process was undertaken. This included reviewing all of the data in detail and also cross referencing the data recorded with photographs which we took of all the key components of each property.

4.6.3 In addition to our extensive quality control regime, which was applied throughout this exercise, quality control was also carried out by both DSD and NIHE. This involved representatives from both DSD and NIHE accompanying some of our surveyors during their inspections. In addition NIHE carried out a comprehensive telephone survey seeking confirmation from tenants that our surveyors had actually inspected their property and feedback on the whole survey experience. The feedback was positive.

## **4.7 Access Arrangements and Tenant Liaison**

4.7.1 A general notification letter was sent out to all tenants to explain the purpose of the survey and that Savills had been appointed to undertake the work. The letter was sent by NIHE on a phased basis as the survey progressed from September 2014 through to January 2015. Once the letters had been issued to tenants access arrangements were Savills responsibility.

4.7.2 During the course of our inspections if we identified any urgent repairs these were immediately notified to NIHE in line with the agreed protocol established before the survey commenced. Again this protocol worked well although there were relatively few instances where immediate and urgent reporting was needed.

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## 5.0 INVESTMENT STANDARDS

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### 5.1 Background

5.1.1 There is no single answer to the investment required in this stock, either now or in the future. The level of investment is, amongst other things, very much dependent on the standards DSD / NIHE is seeking to achieve. A requirement of the brief was that there would be analysis of the results of the stock condition survey, once completed, against a number of standards.

5.1.2 The various standards applied to the social housing sector have evolved over the years. Historically the minimum standard for housing was dictated by the 'Fitness Standard'. This was superseded by the Housing Health and Safety Rating System (HHSRS). In essence both are minimum standards for housing, primarily relating to health and safety. In addition there are various statutory obligations a landlord needs to meet e.g. servicing of gas boilers, carrying out electrical tests, holding asbestos registers etc, all of these are designed to ensure that properties are safe to live in. In NI, the minimum standard for housing is the Fitness Standard.

5.1.3 In 2001 the Department for Transport, Local Government and the Regions (DTLR) published the Decent Homes Standard. This required social landlords to bring their homes up to a Decent Standard by 2010. The standard was updated by the Department for Communities and Local Government (DCLG) in 2006. A decent home is one which

- Meets the current statutory minimum fitness standard for housing
- Is in a reasonable state of repair
- Has reasonably modern facilities and services
- Provides a reasonable degree of thermal comfort

Landlords in England were required to assess properties against the Decent Homes Standard and set out a plan to ensure that all properties were brought up to that standard by 2010. For many local authorities this resulted in a detailed option appraisal for their housing stock, and for some this led to the transfer of housing stock, the creation of arms length bodies and/or a range of alternative funding options. The Standard includes a set of rules in terms of what constitutes wind and weather tight, warm and modern facilities. Similar standards were adopted in Scotland and Wales and social landlords required to set out a funding plan for how they would achieve and maintain decency.

5.1.4 The fitness standard, and subsequently the Housing Health and Safety Rating System were then incorporated within the Decent Homes Standard. Therefore the Decent Homes Standard increased the minimum standard of housing but, if interpreted strictly, provides a relatively low standard in practice, e.g., a property can have either a modern kitchen or a modern bathroom to meet the standard but does not need both. Of particular note, the Decent Homes Standard does not make any reference to the environment around properties or local facilities. Therefore it is not necessary to undertake any environmental work in order to meet the Decent Homes Standard.

5.1.5 In the great majority of cases elsewhere, our experience has been that clients have modelled the results of their stock condition survey based on two standards. The first has been a minimum standard (including mandatory and legislative requirements) to keep the properties in tenable repair and to meet all relevant statutory obligations. Within the Asset Commission we have referred to this as the Tenable Repair Standard. The second standard typically includes an element of aspirational improvement, we have referred to this as the 'Commonly Adopted Higher Standard'.

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## 5.2 Tenatable Repair Standard

5.2.1 We have included the following work within the Tenatable Repair Standard:

- The Fitness Standard.
- The Housing Health and Safety Rating System (HHSRS).
- The Decent Homes Standard.
- Other work required to meet statutory obligations and to keep the property in tenatable repair e.g. servicing of boilers and lifts, repairs to paths and fencing where required etc.

5.2.2 Whilst all of the above can be reported in isolation the reality is that all of this work is required in order to provide a minimum standard. For example there are risks in reporting Decent Homes only because if this is interpreted strictly it is a low standard and in our experience unsustainable, e.g. under Decent Homes only either kitchens or bathrooms can be replaced to meet the standard but it is not necessary to replace both. However, the reality is that both kitchens and bathrooms will need to be replaced when they reach the end of their useful life. Similarly, the Decent Homes Standard makes no reference to the environment around properties, e.g. fencing, paths etc. Working on the assumption that no work will be undertaken to these areas is neither realistic nor sustainable. The Tenatable Repair Standard assumes that both kitchens and bathrooms will be replaced where needed. In addition the Standard assumes that any essential work in relation to the environment will be picked up as part of the day to day maintenance budgets and / or the paint and pre paint repair programme

5.2.3 In summary the Tenatable Repair Standard includes the minimum investment required to achieve statutory compliance plus the minimum investment required to ensure a property is fit for sustainable occupation.

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## 5.3 Commonly Adopted Standard

5.3.1 The following is a summary of the Commonly Adopted Higher Standard we have adopted as part of the Asset Commission work:

- All work included in the Tenantable Repair Standard (as described above).
- Provision of modern kitchens.
- Provision of modern bathrooms including overhead showers to all properties.
- Provision of a minimum number of socket outlets and, where appropriate, adjusting height of sockets as part of the electrical installation, which may necessitate either partial rewiring or full rewiring.
- Provision of full and modern central heating systems which are efficient in use. This generally involves provision of gas wet heating systems, although in rural locations, alternative options are necessary.
- Provision of modern double-glazing to all properties.
- Provision of modern, secure front and back doors to all properties.
- Improvements in insulation levels in general and, in particular, overcladding where appropriate to do so.
- Provision of improved ventilation and air tightness.
- Security improvements including improved external lighting and door entry systems.

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- Environmental improvements including the likes of landscaping, paths, fencing and car parking.
  - Carrying out external painting and repairs on a 5 year cycle, on average.

## 5.4 NIHE's Current Approach

5.4.1 The NIHEs interpretation of standards is broadly consistent with the two standards outlined above.

5.4.2 At its core the NIHE Standard acknowledges and delivers against the Decent Homes Standard along with other mandatory obligations. This element of the NIHE Standard is almost exactly the same as the Tenatable Repair Standard.

5.4.3 The NIHE Standard incorporates a number of additional discretionary elements of investment, which seek to go beyond the basic Tenatable Repair Standard. These additional discretionary elements of investment involve lowering the life cycles of certain components, enhancing the work and including components not provided for under the minimum Decent Homes Standard/Tenatable Repair Standard.

5.4.4 Historically the investment made by NIHE appears to have aligned with this "higher" NIHE standard. More recently however any investment made by the NIHE has been against the Tenatable Repair Standard as a result of insufficient funding. In practice this has meant that NIHE has only had funding to carry out work to a proportion of the stock and as a result work is continually being deferred and a backlog is being created.

5.4.5 In summary, the NIHE Standard broadly aligns with the Commonly Adopted Standard.

## 6.0 SURVEY RESULTS

We set out below a summary of our survey results providing costings for the next 30 years based on the Tenantable Repair Standard and the Commonly Adopted Standard. This is followed by an explanation of the work contained within the various categories of expenditure:

Table 2. Tenantable Repair Standard

Summary of All Costs							
Description	Years 1 to 5	Years 6 to 10	Years 11 to 15	Years 16 to 20	Years 21 to 25	Years 26 to 30	Total
Programmed Renewals	£733,373,987	£475,702,378	£620,285,195	£563,784,864	£412,441,571	£313,781,581	£3,119,369,577
Tower Block Structural	£5,015,860	£5,075,005	£120,715	£93,000	£4,443,575	£4,175,005	£18,923,160
Tower Block M & E	£1,979,000	£3,576,900	£1,563,500	£2,502,800	£2,407,500	£1,536,300	£13,916,000
Related Assets	£12,199,992	£10,807,525	£8,976,716	£8,450,787	£7,396,132	£7,006,079	£54,837,230
Response/Cyclical/Void	£325,832,461	£325,832,461	£325,832,461	£325,832,461	£325,832,461	£325,832,461	£1,954,994,765
Painting and Repairs	£96,523,500	£65,594,250	£65,594,250	£65,594,250	£65,594,250	£65,594,250	£424,494,750
Asbestos	£15,000,000	£5,000,000	£5,000,000	£5,000,000	£5,000,000	£5,000,000	£40,000,000
Fire Related Work	£10,000,000	£5,000,000	£2,500,000	£2,500,000	£2,500,000	£2,500,000	£25,000,000
Aids and Adaptations	£31,501,258	£31,501,258	£31,501,258	£31,501,258	£31,501,258	£31,501,258	£189,007,548
Grand Total	£1,231,426,057	£928,089,778	£1,061,374,094	£1,005,259,420	£857,116,747	£756,926,934	£5,840,543,030
Total per Annum	£246,285,211	£185,617,956	£212,274,819	£201,051,884	£171,423,349	£151,385,387	£194,684,768

Table 3. Commonly Adopted Standard

Summary of All Costs							
Description	Years 1 to 5	Years 6 to 10	Years 11 to 15	Years 16 to 20	Years 21 to 25	Years 26 to 30	Total
Programmed Renewals	£935,347,695	£585,199,868	£727,895,668	£633,706,093	£461,824,173	£354,779,098	£3,698,752,594
Tower Block Structural	£35,390,335	£0	£1,078,405	£0	£1,078,405	£0	£37,547,145
Tower Block M & E	£1,979,000	£3,576,900	£1,563,500	£2,502,800	£2,407,500	£1,536,300	£13,916,000
Related Assets	£12,199,992	£10,807,525	£8,976,716	£8,450,787	£7,396,132	£7,006,079	£54,837,230
Environmental Improvements	£43,729,500	£43,729,500	£43,729,500	£43,729,500	£43,729,500	£43,729,500	£262,377,000
Response/Cyclical/Void	£325,832,461	£325,832,461	£325,832,461	£325,832,461	£325,832,461	£325,832,461	£1,954,994,765
Painting and Repairs	£96,523,500	£65,594,250	£65,594,250	£65,594,250	£65,594,250	£65,594,250	£424,494,750
Asbestos	£15,000,000	£5,000,000	£5,000,000	£5,000,000	£5,000,000	£5,000,000	£40,000,000
Fire Related Work	£10,000,000	£5,000,000	£2,500,000	£2,500,000	£2,500,000	£2,500,000	£25,000,000
Aids and Adaptations	£31,501,258	£31,501,258	£31,501,258	£31,501,258	£31,501,258	£31,501,258	£189,007,548
Grand Total	£1,507,503,741	£1,076,241,762	£1,213,671,757	£1,118,817,148	£946,863,678	£837,478,945	£6,700,927,032
Total per Annum	£301,500,748	£215,248,352	£242,734,351	£223,763,430	£189,372,736	£167,495,789	£223,364,234

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The above costs are calculated on the following basis:

1. 87,439 properties in the NIHE stock and the retention of all of those properties for 30 years.
2. A price base as at February 2015 with no provision for inflation.
3. The costs are inclusive of preliminaries but exclusive of VAT.
4. The costs make no provision for the management costs associated with the programme or any professional fees incurred.
5. The costs make no allowance for decanting of tenants in the event that is necessary for some of the work to be carried out.
6. The assumption is that year 1 is the 2015/16 financial year.

## 6.1 Programmed Renewals

- 6.1.1 This line of expenditure is derived directly from the results of the stock condition survey. The primary purpose of the data collected during the survey was to assess when property components such as roofs, kitchens and bathrooms needed to be replaced in the future. This data should form the starting point of NIHEs capital and major works programme.
- 6.1.2 The most significant area of expenditure identified from the survey during the next 5 years is replacement of bathrooms and electrical wiring. The replacement of bathrooms has not been prioritised by NIHE in recent years and therefore this outcome is unsurprising. Significant expenditure is also required in relation to the replacement of kitchens and ongoing replacement of heating systems. Whilst expenditure is required to the external fabric of the properties in the early years this becomes far more significant over the next 20 years.

6.1.3 In particular, there will be a major requirement for re-roofing in the medium term. In addition repointing and re-rendering of properties and also the replacement of some of the earlier installed double glazed windows will be required.

## 6.2 Non Traditional Properties

6.2.1 Included within the programmed renewal costs is an allowance for repairs to the non-traditional properties.

6.2.2 There are around 9,000 low rise non-traditional properties within the NIHE stock which comprise 10% of the stock. The great majority were built in the 1950s and 1960s at a time when there was a large amount of system building in the UK. The system built properties were popular because they could be erected quickly and were a relatively inexpensive form of construction. Whilst there was never an intention for some of these properties to have a long term life, they generally remain in service throughout the UK and are often popular because they tend to be larger than traditionally built properties.

6.2.3 Some of these properties contained precast reinforced concrete (PRC) components and various defects became apparent in these properties during the 1970s and 1980s. As a result some of the properties were designated defective under the Housing Defects Act 1984.

6.2.4 The issues associated with non-traditional properties vary but general themes are that firstly many are prone to suffer from defects within the structural components of the property and, secondly, the properties generally have poor thermal insulation qualities, resulting in low SAP scores along with damp and condensation issues. As a consequence the issues with most non traditional properties can be addressed by carrying out any necessary repairs to the structural components followed by overcladding. This work can be costly but has the benefit of giving the property a longer life, improving the thermal performance and also improving the

appearance. The extent of work varies considerably depending on the type of property, with the PRC non-traditional properties attracting the most significant costs for repairs.

6.2.5 Once any structural works and necessary over cladding is carried out to these properties they generally exhibit the same characteristics as a “traditional” property in terms of future life.

6.2.6 The type of overcladding carried out to low rise non traditional properties is generally External Wall Insulation (“EWI”) although, in some cases, brickwork is adopted. All our costs assume the installation of EWI, which is the approach that NIHE has adopted until now and we agree with it.

6.2.7 We set out below a summary of the non traditional property types contained within the NIHE stock, the budget costs that we have allowed for repairs and overcladding, together with a brief comment against each type. These figures do not include routine Programmed Renewals which includes the likes of kitchens, bathrooms, boilers etc.

Table 4. Summary of low rise non traditional property costs.

Type	Bungalow	Flat	House	Comments
Aluminium Bungalow	£20,000			Repairs to structure followed by overcladding
Cross Wall		£7,000	£12,000	Repairs to structure followed by overcladding
Cross Wall Gregory			£19,000	Repairs to structure followed by overcladding ( these properties contain some pre fabricated reinforced concrete)
Cross Wall Timber Frame	£10,000		£12,000	Repairs to structure followed by overcladding
Dorran			£20,000	Repairs to structure followed by overcladding ( these properties contain some pre fabricated reinforced concrete)
Easiform / No Fines	£10,000	£7,000	£12,000	Some repairs required ( generally to defective lintels) followed by overcladding
Easiform Laings			£12,000	Some repairs required ( generally to defective lintels) followed by overcladding

Type	Bungalow	Flat	House	Comments
No Fines	£10,000	£7,000	£12,000	Some repairs required ( generally to defective lintels) followed by overcladding
No Fines Cross Wall	£10,000	£7,000	£12,000	Some repairs required ( generally to defective lintels) followed by overcladding
Orlit	£20,000	£17,500	£35,000	Repairs to structure followed by overcladding ( these properties contain some pre fabricated reinforced concrete which need repair / replacement, particularly the concrete beam structure on the first floor.)
Tarran or Dorrان	£15,000			Repairs to structure followed by overcladding ( these properties contain some pre fabricated reinforced concrete)
Timber Framed	£10,000	£7,000	£12,000	Repairs to structure followed by overcladding
Timber Framed / Liverpool			£12,000	Repairs to structure followed by overcladding
Timber Framed/Trusteel			£20,000	Repairs to the steel structure followed by overcladding
Ulster Cottage	£11,000			Repairs to structure followed by overcladding ( these properties contain some pre fabricated reinforced concrete)
Wilson Masonry	£13,500	£10,000	£20,000	Repairs to the structure ( including the ties between the cavities) followed by overcladding

## 6.3 Tower Block Structural and Tower Block Mechanical and Electrical

6.3.1 As referred to earlier in this report we commissioned specialist engineers to undertake detailed due diligence into the condition of the structure of the 32 tower blocks together with the mechanical and electrical installations contained within the common areas of the blocks.

6.3.2 There are 32 tower blocks in the portfolio and inevitably the condition varies both in terms of the external fabric and in terms of the amount of work that has been undertaken internally over the years. However, the general theme is that the strategy historically has been to maintain the blocks in their existing form carrying out repairs as and when required. None of the blocks

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have been completely refurbished and overclad, although work is currently underway to overclad Cuchulainn House. Internally, the condition does vary on a block by block basis, depending upon the levels of investment that have been made previously.

- 6.3.3 It would be possible to continue with the existing strategy of retaining the blocks in their existing form and carrying out repairs as and when required. This would necessitate frequent abseiling inspections to test the condition of the concrete, removing defective sections and carrying out repairs. Whilst this strategy has been effective up until now, inevitably the costs will increase over time as more extensive work will be required as the blocks get older. The alternative would be to carry out more extensive work which would generally involve repairing the blocks and then overcladding them. This has the advantage of protecting the structure moving forward, improving the aesthetic appearance of the blocks and, in particular, improving the thermal performance. Generally these blocks all perform poorly from a thermal point of view making them inefficient and expensive to heat.
- 6.3.4 Within the Tenantable Repair Costs we have included a “minimum repair option” for the Tower Blocks. These combine the results of the Condition Surveys, Mechanical & Electrical Survey and Structural assessments. They are calculated on the basis of retaining the blocks in their existing form and essentially adopting the existing strategy. Inside the flats themselves, the extent of work varies depending on current condition of the components. The costs include periodic inspection regimes.
- 6.3.5 Within the Commonly Adopted Standard summary we have adopted costs which assume the Tower Blocks will be overclad during the next 5 years, although NIHE in consultation with Tenants may elect for a 10 year programme to reduce disruption to residents. This clearly results in more significant expenditure up front but then lower expenditure moving forward since ongoing repairs to the structure should not be required. As mentioned above, this also has the benefit of greatly improving the thermal performance of the blocks together with the appearance. The assumption in the costs is that a rain screening system will be adopted. In contrast to internal insulation, over cladding will enhance and protect the life of the structure from further deterioration and will improve the habitability of the dwellings i.e. reduce any

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problems of damp internally and obviate the need for the cyclical form of works associated with the minimum recommendations. Furthermore, it is less disruptive to the residents, does not compromise internal dimensions and reduces cold bridging. The assumption within the “enhanced costs” also assumes the flat roofs will be converted to pitched roofs at the same time the overcladding works are undertaken.

6.3.6 The costs in respect of mechanical and electrical installations remain the same, whichever structural option is adopted. The overall findings from the mechanical and electrical engineers is that whilst the ‘front of house’ elements of the mechanical and electrical installations appear to be in good condition and many have benefitted from recent refurbishment and extensions, ‘back of house’ areas in many buildings largely comprise original infrastructure and plant. Put another way, the mechanical and electrical items that can be seen as you walk though the blocks have generally been replaced but the infrastructure behind them is original. This is an inevitable consequence of cash constraints in terms of the capital programme. The net result is that significant investment will be required to the Mechanical and Electrical Installations to the blocks in the short to medium term.

6.3.7 It should be emphasised that this report is purely focussed on the investment needs of the blocks. It does not take into account other factors such as demand and the wider sustainability of retaining the blocks in their existing form. It also does not consider the case for investment in Tower Blocks in the context of the investment requirements of the wider portfolio.

## 6.4 Associated Assets

6.4.1 As referred to earlier in this report we have made an assessment of the various associated assets. We undertook a sample survey of the garages. We also carried out a separate survey of all the commercial units where they did not form part of blocks already included within the main survey. Finally we surveyed all of the hostels as part of a separate exercise and inspected the travellers sites where buildings are present.

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6.4.2 In terms of the septic tanks and unadopted drains our assessment of costs was on a desk top basis. We obtained details of the extent of septic tanks and unadopted drains/roads and information on historic expenditure in these areas by NIHE. Based on a review of this information, together with our experience elsewhere, we have made an assessment of suitable provision for the ongoing repairs and maintenance of these assets.

## 6.5 Asbestos

6.5.1 As part of our work we have made an assessment of the potential ongoing liability associated with any asbestos present within the stock. The assessment has been based on:

- A detailed review of all current data held by NIHE in relation to asbestos.
- Any asbestos identified as part of our stock condition surveys.
- Our experience of the costs of managing asbestos for a property portfolio of this type and age.

6.5.2 Based on the above we have made a provision for the following:

- An on-going prioritised asbestos management survey programme.
- Pre-Works Surveys: localised targeted 'refurbishment surveys' prior to intrusive works associated with planned/ capital programmes, voids and responsive works, to be combined with the whole house management surveys.
- Asbestos Removal: removal/ encapsulation work associated with intrusive works programmes or asbestos survey recommendations. The higher allowance for asbestos in the first 5 years of the costs reflects the larger programme of major works

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during that time and the inevitable higher costs associated with asbestos, as previously untouched asbestos becomes disturbed.

- Re-inspection: active, demonstrable monitoring of identified asbestos containing materials within communal and a proportion of domestic areas.
- Compliance Auditing: activity associated with a strategic 'duty holder' compliance regime. Quality control measures are likely to include independent sample survey auditing, site analytical testing (associated with asbestos related works), spot checks upon non-licensed asbestos related work and active contractor compliance/ training auditing.

## 6.6 Fire Risk

6.6.1 As with asbestos we have made an assessment of the costs likely to be associated with the management of risk associated with fire. Again this was based on meetings with NIHE looking at their current systems and processes, the information that we recorded during the course of our inspections and also our experience from other surveys. We have made an ongoing allowance for the next 30 years within the summary of costs.

6.6.2 The overall and ongoing cost of fire safety can be sub-categorised as follows:

- Immediate (Compliance) remedial works.
- Good practice and responsive remedial works.
- Fire safety management, maintenance and training.

6.6.3 Immediate remedial works will be the result of an initial fire risk assessment (FRA) programme covering the relevant stock. A realistic programme for the completion of the collated remedial works could be 3-5 years. Typically this will take up to 75% of the annual budget. Such remedial work could include:

- Replacing/repairing flat entrance doors or other fire doors.
- Compartmentation works, particularly in service risers or roof voids.
- Automatic Fire Detection (AFD) or emergency lighting installations.
- Secure bin storage, door entry systems and other general arson prevention measures.
- Other general fire safety works.

6.6.4 Once the above is complete, the ongoing costs are likely to include:

- **Good practice and responsive remedial works**

Non-essential works identified in the previous FRA programme that can be undertaken whenever appropriate, and the ongoing works identified from FRA review programmes.

- **Fire safety management, maintenance and training**

Block inspections, staff training, testing and maintenance of fire safety equipment (AFD, emergency lighting, dry risers, etc).

- **Consultancy support**

For ongoing FRA's, reviewing FRA's and any retained fire safety support/fire service liaison.

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## 6.7 Painting and Repair

6.7.1 NIHE, in common with most landlords, has had an ongoing programme of painting and repair of properties. The aim has been to visit every property every 8 years to carry out any necessary external painting work, painting of common areas and also to carry out any repairs needing attention.

6.7.2 NIHE's programme has slipped in recent years, due to lack of funding, and there is therefore a backlog of this work. There is also a wish to undertake this programme on a 5 year cycle in accordance with best practice. This is reflected in the 30 year profiles of costs.

## 6.8 Response/Void/Cyclical Maintenance

6.8.1 The allowance included within the summary of costs in respect of response/void/cyclical maintenance has been derived from the work carried out with NIHE. This has involved a detailed analysis of recent and current expenditure by NIHE on all of these areas. The overall provision included is in line with our benchmarks/experience elsewhere.

## 6.9 Aids and Adaptations

6.9.1 The amount of expenditure on adaptations to properties for the purposes of the disabled is primarily driven by policy rather than the condition of the properties. Nevertheless, for completeness, we have included an allowance within our summaries in respect of general aids and adaptations. This allowance is based on recent expenditure by NIHE in this area. The amount of expenditure required in the future will be dictated by the policy and approach taken.

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## 6.10 Environmental Improvements

6.10.1 Within the Commonly Adopted Standard summary of costs we have added in an extra line called “environmental improvements”. This is a provision for general improvements to the environment adjacent to the properties and in the areas around them. Historically, significant investment has been made in the environment by NIHE although this has been limited in recent years. We have made an overall provision of £3,000 per property over the 30 years which is comparable with allowances made in other jurisdictions for similar purposes.

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## 7.0 DECENT HOMES / HHSRS AND FITNESS

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- 7.1 Part of the survey has included an assessment of the properties against the Decent Homes Standard, the Housing Health and Safety Rating System (HHSRS) and the Fitness Standard.
- 7.2 The HHSRS and Fitness Standard represent the minimum requirement for housing and we found very few properties failing against these standards. Where significant failures were identified they have been notified to NIHE and already been acted upon.
- 7.3 In terms of Decent Homes, the stock generally complies with a strict interpretation of the Decent Homes Standard with very few failures. It should be stressed that the Decent Homes standard is designed to represent the minimum acceptable standard for housing.
- 7.4 We have been asked to comment on the impact of applying the Fitness Standard instead of the HHSRS and vice versa. In reality, the impact is negligible because there were so few failures under each standard.

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## 8.0 ENERGY REVIEW

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8.1 As part of the survey, we collected energy data in order to calculate the SAP ratings of the properties. This data has all been processed and individual SAP ratings for every property has been provided. The average SAP rating of the stock is 57, which is relatively low in comparison with our benchmarks elsewhere. This is partly due to the fact that a large proportion of the stock is not serviced by the gas network. Gas heating is generally considered to be the most efficient form of heating and certainly produces higher SAP ratings. Many of the obvious opportunities of work to improve the SAP ratings have been undertaken by NIHE. Within our costings for the Commonly Adopted Standard we made provision for improvements to wall and roof insulation and also the gradual replacement of heating with more efficient systems. This work will gradually increase the energy efficiency of the stock and improve the SAP rating if completed.

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## 9.0 DATABASE

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9.1 All of our data has been loaded onto our database for the purposes of validation, analysis and reporting. The format of the data has been discussed with NIHE and we have provided a sample dataset and agreed a final format. The final datasets have now been downloaded by DSD and NIHE. The ultimate intention is for all of this data to be loaded onto NIHE's new asset management system as and when it is procured.

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## 10.0 DEVELOPING AND DELIVERING A PROGRAMME

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- 10.1 The results contained within this report are based on the findings of the survey and the investment need recorded by our surveyors and engineers. In making their assessment, they have not had regard to what is practical to deliver on the ground and how the work would best be packaged or procured. This is a separate issue which needs to be looked at in the wider context of procurement, affordability, market capacity and value for money.
- 10.2 The quantum of expenditure identified in the early years is such that delivering a programme of this magnitude at short notice is unlikely to be practical or possible. The level of expenditure is considerably more than NIHE is currently implementing or indeed what the landlord supply chain, as it stands, is able to deliver.
- 10.3 Separately we have taken a sounding of contractor capacity and appetite, and this exercise indicates that it would take an estimated three years to be in a position to deliver investment on this scale. Given allowance for a ramp-up on this basis our view is that the programme can be delivered.

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## 11.0 LIMITATIONS OF SURVEY

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The limitations of the stock condition survey are set out below. These do not go beyond those of normal surveying practice for this type of work. The limitations of the structural survey undertaken of the tower blocks are included within the structural report which has been submitted under separate cover.

- 11.1 Repairs and replacements have been costed on a “like for like” replacement basis, with improvements and contingency works dealt with as a separate exercise where they do not clearly form part of the repair process. In the event of remedial works requiring vacation of the property, no allowance has been made in the costings for such relocation.
- 11.2 Savills have not undertaken structural surveys of the properties and have not inspected woodwork or other parts of the structure, which were covered, unexposed or inaccessible. It is therefore not possible to report that such parts are free from defects.
- 11.3 Inspections have not been made of flues, ducts, voids or any similarly enclosed areas, access to which was not readily available at the time of our inspection and we are therefore unable to report that such areas remain free from defect.
- 11.4 No specific inspection or specialist testing has been undertaken to establish whether high alumina cement concrete, calcium chloride additives, woodwall slab permanent formwork construction, asbestos or other deleterious materials are present within the construction.
- 11.5 No samples have been taken nor any analysis made of the sulphate content of the load bearing sub-soil adjacent to the foundations.
- 11.6 No testing of electrical, mechanical, water, drainage, air conditioning, lifts or other services have been undertaken by Savills.

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- 11.7 Savills have not made any formal enquiries in respect of existing user rights, town planning and road widening, legal interests, fire certificates, effluent agreements, party wall agreements, prescriptive rights, easements, wayleaves, statutory consents or contaminated land.
- 11.8 We have not included in our calculations any costs or fees incurred which might arise from the application of the Party Wall Act 1996.