

# Generally Accepted UK Good Practice in Stock Condition Surveys

## 1.0 The Need for a Stock Condition Survey

RSLs (Registered Social Landlords – providers of social housing in the UK) are experiencing growing pressure from many areas to provide information on their business; much of this may be supplied by a Stock Condition Survey. The requirement for information comes both from within the RSL and from bodies external to the organisation. Listed below are some of those requesting information that may be obtained from a Stock Condition Survey. Also outlined are the reasons why this information is required.

### 1.1 Requirements of UK RSLs

RSLs should:

- Maintain their housing stock in a reasonable and lettable condition. They should achieve this by identifying, planning and making adequate financial provision for maintenance and improvement works.
- Know the condition of the housing for which they have repairing obligations, including its energy efficiency, by using appropriate survey or inspection methods.
- Have costed plans for future maintenance and improvement of their housing which will keep it in reasonable and lettable condition appropriate to likely future needs.
- Through their planned work help local authorities to meet their obligations under the Home Energy Efficiency Act 1995.
- Be able to demonstrate that they are making adequate financial provision for planned maintenance and improvement works.
- Have reliable arrangements for identifying, recording and analysing the physical condition of their property and its energy efficiency (for example through Stock Condition Surveys), which are adequate for preparing costed plans for future maintenance
- Using the information on stock condition, RSLs should develop and maintain a medium/long term strategy to keep their stock in reasonable and lettable condition, which should form part of the agreed business plan or similar document

The government is concerned to ensure that RSLs are operating as efficiently as possible whilst maintaining or improving the standards of their properties. It is therefore necessary to demonstrate that the organisation

is fully aware of its repair responsibilities and liabilities, has identified a workable programme for maintenance and is making adequate financial provision to undertake the works when they are required.

- Due to increased competition, any grants, which may be available for repair of existing stock, will, generally, be awarded on the basis of best value and where works of the highest priority are required to be undertaken by those with the lowest ability to fund. A RSL must be able to demonstrate these factors by way of valid data relating to all the stock in the ownership of the RSL.
- Increasingly RSLs must fund a greater proportion of the cost of new developments as the grant rates are reduced. In comparing RSLs' bids for grant monies the government funding agency (The Housing Corporation) will judge the ability of the RSL to fund new developments, and in doing this it will need to judge what the RSLs commitment is to funding repair of the existing stock.

## **1.2 Lending Institutions**

Private funders will consider loans on the basis of security, value of the stock and the ability to repay the loan. Previously funders have given little indication as to what information they require to satisfy the above, however, they are now requesting more and more information from RSLs:

- The funders have seen many RSLs outperform their Business Plans. Although there are many reasons for this, they see one of the most crucial as being the deferment of necessary repair works. This is now recognised as a possible ticking time bomb. Undertaking regular Stock Condition Surveys should identify the level of deferred works and therefore clarify whether the funder's concern is valid.
- When considering a new loan arrangement the funder will need to ensure that the RSL is a viable organisation. The funder will need to satisfy itself that adequate funds will be available not only to repay the loan in accordance with the agreement but that the RSL is also providing for maintaining the asset, and thereby maintaining its value. A significant amount of information may be required identifying costs relating to both major repair and improvement works that are to be undertaken.
- The fact that a RSL has undertaken a bona fide Stock Condition Survey will increase the confidence that the funder has in the Business Plan that has been presented.

- From time to time throughout the loan term funders will need to satisfy themselves that the RSL is complying with the gearing ratios and other provisions of the loan arrangement. Information relating to maintenance of the stock will be required to confirm this.
- It is important that the funders have confidence in the ability of the RSL's management team. There are many measures of ability, but an important one will be the borrowers ability to demonstrate that it can accurately project forward and then meet the cashflow targets.

### **1.3 Tenant Expectations**

It must not be forgotten that each property is a home and that the occupier has a very keen interest in how and when it is maintained.

- There is a culture shift within RSLs with customer satisfaction becoming increasingly important.

It is therefore essential to be able to advise tenants as to when renewals/major repairs or improvements will be undertaken. Tenants will quickly lose confidence if works are not carried out when promised. An agreed programme for which funding has been identified is therefore necessary.

- It may be necessary to seek tenants opinions on repair issues and these could influence programmes for repairs. If this is the case then a flexible approach will be required in order that works may be appropriately prioritised.
- Where tenant participation is an important factor and choices are to be offered, the RSL will need to ensure that works important to the future integrity of the property are not ignored. For instance, if funds were limited then it would not necessarily be advisable to replace kitchens if the roofs were in a dangerous condition. A Stock Condition Survey should identify such works and informed decisions may then be made, whilst justification of the decision may be given to the tenants.

### **1.4 Right to Buy Leaseholders**

The leasehold agreement requires the RSL to notify the leaseholder in advance of any costs that may be incurred in major repair or improvement of certain areas of the property. At the time of property sales the RSL may be required to notify prospective purchasers of the likely level of future service charges and any

major works that are planned over the following 5 years. If a maintenance programme is in place, then the RSL will be able to efficiently provide accurate information. If this information is not given at the correct time then the RSL may lose the right to recover costs through the service charge.

### **1.5 Local Authorities**

As previously mentioned RSLs are required to provide local authorities with information relating to the energy efficiency of their properties. The local authority will use this information to demonstrate progress in line with the requirements of the Home Energy Conservation Act 1995 (HECA).

Initially the local authority will identify the position as at the base year 1996, but regular reviews are then carried out at which time the RSL will need to provide information identifying how the energy efficiency of its stock has been improved. It is likely that the requirement for RSLs to improve the energy efficiency of their stock will become mandatory.

### **1.6 The RSL**

A RSL can use information from a Stock Condition Survey in almost every area of work:

- The information gained is critical to the preparation of budgets for repair, maintenance and improvement work.
- In many cases there is a direct correlation between the condition of properties and demand for them. Ensuring that properties are well maintained will almost certainly reduce rent loss incurred by properties lying empty. One large RSL in the Midlands has identified that approximately 12% of offer rejections are based on property condition and 15% on lack of central heating.
- As the age profile of the stock increases, so does the repair liability.
- Knowledge of what works are required will enable the RSL to determine staffing levels required and it may be possible to re-programme works to keep workloads constant, or identify where external consultants may need to be engaged.
- Information gained can be used to prioritise works where sufficient funds are not available to undertake all works that are desirable.
- On the knowledge of what will be spent and when, funds can be invested and manipulated for maximum gain.

- The RSL has statutory duties to its tenants to maintain properties at least to a minimum standard. By undertaking a Stock Condition Survey, programmes for repairs will be set up and catch-up repairs can be identified. By adhering to these programmes, properties should be maintained to at least the minimum standard and it is therefore possible for the RSL to reduce the occurrence of claims by tenants for disrepair. Such claims can have high associated costs and will result in a loss of reputation for the RSL.
- Identifying trends in repair requirements may lead to exposure of shortfalls in current strategy, unsuitability of materials/products currently in use.
- In the rent setting phase of the feasibility study for new stock it is necessary to make a provision for future maintenance requirements. This provision is normally calculated as a percentage of the redevelopment cost. Again this information can be provided from the Stock Condition Survey. Currently the Housing Corporation suggest that 0.8% of redevelopment cost should be allowed for new build, however from some stock survey results it appears that an allowance of 1.2% maybe more realistic for some RSLs.
- With increased competition and reducing margins the RSL now has to consider disposal of stock, or redevelopment where it has become uneconomic to maintain. Informed decisions on this process may only be made if reliable cost information is available.
- Action is now being taken to redevelop some of the most deprived inner city areas where social problems are prevalent; future predicted maintenance costs may well be used to add weight to the argument for redevelopment.
- Expenditure on repairs is one the greatest factors affecting cash flow. It is therefore important that accurate plans are put together to ensure that the organisation does not become insolvent.
- Many RSLs are now developing at well below the headline rate for social housing grant (SHG) and are either increasing the level of borrowing or putting reserves into new developments. Along with this rent increases are being restricted to the retail price index (RPI) plus 1%. The resultant reducing margins, exacerbated by the withdrawal of S.54 tax relief for non charitable RSLs, mean that tighter financial control is required.

## **1.7 Insurers**

Organisations such as Housing Association Property Mutual (HAPM) and Zurich Insurance now offer insurance against the premature failure of components to existing or refurbished properties. They are requesting detailed information from Stock Condition Surveys as a prerequisite for this insurance.

## **1.8 Valuers**

Valuers are increasingly being employed, particularly in relation to large scale voluntary transfers (LSVTs), and require information relating to future maintenance cost in undertaking the following:

- Loan security valuations
- LSVT valuations
- Accounts Valuations
- Sales and disposals
- Acquisition advice
- Option appraisal
- Strategic portfolio management

## **2.0 Setting Objectives**

It is critical to set objectives before launching into a Stock Condition Survey. Many RSLs have expended £,000s only to find that the survey does not tell them what they need to know. The data may be difficult to manipulate, impossible to keep updated and in many instances is incorrect. It is possible that many of these problems could have been avoided if clear objectives were set and understood from the start.

Due to the time and financial involvement associated with undertaking the survey it is important to know from the outset what it is expected to achieve.

In order to set the objectives it is imperative that all those who will ultimately require outputs from the survey are included at an early stage. The following points will therefore need to be considered:

- Identify who requires information and in what format.
- Be realistic about what level of information is required from the survey and distinguish this from what is desirable. The more information that is collected the more time consuming and costly the process and the more opportunity there is for error. Furthermore the data may be difficult to keep up to date. Providing more detailed information could lead to greater risk of error and little gain.
- Identify how the results are to be used.



In addition to this fundamental information it is likely that the information will be used to:

- Provide costings for financial planning
- Prioritise work by identifying the most urgent works
- Implement planned maintenance programmes
- Place properties on a scale based on factors such as amenities provided

Information to answer the above will need to be collected against the following:

## **2.1 Property Details**

It will be necessary to identify what information needs to be collected relating to the property, its address, size, local authority area, whether it is a flat, house or bungalow etc.

## **2.2 Property Attributes**

It is generally important to set benchmarks for standards that are required or are desirable, and these benchmarks may well be important factors used when prioritising work or setting policies, e.g. free from damp, may be essential, but provision of mains linked smoke detectors may be desirable.

Listed below are a number of attributes shown in categories and against which it may be decided that information needs to be collected. This is not however an exhaustive list and the attribute list will vary from RSL to RSL:

### **2.2.1 Fitness Standards**

It may be useful to record information relating to basic fitness criteria, which properties generally have to meet, in order that those properties failing to meet the minimum standard may be targeted for improvement or remedial works. The basic requirements may include the following.

- Rising and penetrating damp
- Insect infestation
- Structural defect
- Deleterious materials
- Condensation



### 2.2.2 Improvement attributes (typical)

- Central heating - full, partial or none?
- Double glazing - full, partial or none?
- Extractor fans - if fitted, how many?
- Mains smoke detectors - if fitted, how many?
- Does the property have a fitted kitchen?
- Depth of loft insulation?
- Whether cavity or wall insulation is provided?
- Whether security devices such as door entry systems and window locks are provided?
- Whether trickle ventilation is provided?
- Whether the property reaches a pre-set improvement benchmark?

### 2.2.3 Other attributes

- Whether the property is of a mobility standard
- Whether the property is close to certain amenities
- Ownership of the property
- When cyclical works are due
- Energy rating

## 2.3 Schedules for Planned Maintenance

Ultimately the survey will be used to set up programmes for future repairs. It is therefore necessary to determine what level of detail will be required for meaningful programmes to be set up and over what period the information is to be considered.

It is important to differentiate between elements and components; for instance a bathroom may be considered as an element whilst a bath, a basin, a wc, taps etc are all component parts to that element. It may not be appropriate within a Stock Condition Survey to collect information against the individual components as the renewal of a single component would not be planned and would be treated as a responsive repair, whilst the replacement of a whole bathroom would normally be planned.

Alternatively it may be appropriate to collect information against components rather than whole elements, eg. splitting a roof into the component parts of structure, coverings, rainwater goods, parapets etc.

Cost information should be collected for future major repair or replacement of certain elements or components. It will be necessary to determine whether information is to be collected against elements or components to avoid any confusion, which would result in errors.

In setting the objectives important factors to be considered are that the data must be:

#### 2.3.1 Adaptable

It is unlikely that it will be possible to undertake all works, when identified, as being required. It is therefore essential that information can be manipulated and priority given to certain types of work. In order to achieve economies of scale it may be desirable to group certain types of work and it is therefore necessary to determine at the start how survey data can be modified in the future.

The government has commented that, "...too often Stock Surveys are seen as providing a static output and the department wants more dynamic use of the information...". The survey should be seen as a flexible tool. It should be possible to report a variety of scenarios to identify those which suits the organisation best. Furthermore, over a period of time it is likely that views and priorities will change.

#### 2.3.2 Updatable

The stock condition survey should be capable of being updated relatively simply. If it is not then it will have a short life and will require replacement at an early stage. Depending on how the survey data is to be used, it may be desirable to update the survey on a regular basis, possibly every 2-3 years, whilst new properties to the RSLs stock may need to be added at the time at which they come into management.

#### 2.3.3 Reliable

As outlined earlier, costings are not only essential for future budget production but also a necessity for the Housing Corporation and funders. They will be required for financial planning within the RSL and as a consequence the reliability of the costings is often considered the single most important factor of the survey.

### **3.0 Progressing the Survey**

Once objectives have been set a plan can be formulated on how to proceed. Current paper or IT records will need to be reviewed to identify whether the information contained on them is capable of being used and whether the existing information can be integrated into the new system. New systems may need to be

designed and these will then require testing before they are put into operation. The following processes will need to be followed:

### **3.1 Review of Existing Information**

Maximum use should be made of information already in the possession of the RSL. Existing systems should therefore be interrogated to identify what information is already in existence and whether it is accurate. For instance, as built drawings can be used to assist in costing of works. This could be very useful where large cost items are involved and accurate measurements are required, e.g. replacing flat roof coverings to large estates, and will also result in reduced survey times.

### **3.2 Who undertakes the Survey?**

Initially it will be important to determine what resources are available to undertake the survey, not only from a personnel viewpoint but also financially.

Firstly it must be determined whether or not there are sufficient suitably qualified staff in-house with adequate capacity to undertake the surveys, or whether it will be necessary to employ external resources to carry out this function. On average, a surveyor should be able to undertake up to 10 surveys per day, although this will vary depending on the complexity and detail of information to be collected. However, this will reduce if:

- There is a wide geographical spread of properties
- Access problems are encountered
- The surveys are undertaken during the winter months when daylight hours are limited
- Individual units are large or complex in nature; for example a Victorian care home could take a day to survey as opposed to a newly built flat which may take only a few minutes
- The surveyor is to undertake other duties whilst on site, such as collection of information for energy rating purposes etc.

There are advantages and disadvantages to the options of using in-house or external resources; whilst not exhaustive a number of considerations are set out below.

#### IN-HOUSE STAFF

##### For

- Good knowledge of stock and past repair history.
- Greater understanding of issues raised by tenant groups.
- Survey can be incorporated in visits for other reasons where it is possible for surveys to be undertaken on an ad hoc basis and time is not of the essence.
- Can pick up and relay catch up repairs or tenant issues.
- More informed decisions can be made when compiling budgets.
- Generally cheaper than using consultant as maximum use is made of in-house resources and expenditure is minimised thereby giving value for money.

##### Against

- Surveys are often not a priority due to other work pressures and delays might occur.
- In-house staff can become embroiled in discussion with tenants leading to increased survey duration.
- In-house staff may not be appropriately skilled to undertake the survey.

#### EXTERNAL RESOURCES

##### For

- Good knowledge/expertise offered by selected consultants.
- Surveys can be undertaken in relatively short period.
- Unlikely to be waylaid by tenants over issues on which they have no knowledge.
- May pick up issues that are missed due to in-house staffs familiarity with property.
- Benefit of consultant Indemnity Liability Insurance cover if surveys are not carried out in accordance with the brief.
- May be more objective.

##### Against

- Relatively high cost.
- Some agency staff may be unreliable or inconsistent.
- Accurate briefing is critical.
- Lack of familiarity with the properties in respect of their day-to-day history of repairs and problems.
- Liability fears may result in exaggeration of disrepair.

### 3.3 On-Site Data Capture

It should be determined whether the survey is to be undertaken recording information by hand, or whether information should be recorded at the time of survey by computer. There are many different types of computer available, ranging from hand helds to laptops. The different types will, however, not be discussed further within this guide. The table at the bottom of the page lists the principle pros and cons of hand-written data capture versus computer.

### 3.4 On-Site Survey Format

All property data that will be required must be obtained on a first hit basis. Much time and therefore money will be wasted if return visits have to be made, unless these are necessary to undertake further investigations on issues such as structural defects. The preparation of the survey form therefore requires careful thought. Consideration should also be given to other data that may usefully be collected at the time of the survey, such as information that may be required for the assessment of energy ratings. However, it is equally important to try not to collect too much unnecessary data.

Once the survey form has been prepared, it should be tested on site at a number of varying properties eg flats, houses, sheltered schemes etc. This will not only ensure that it includes for all information that is required to be collected but also that the layout is in an easy to use format and naturally leads through from the beginning to the end. The form should be as concise as possible. Again, time can be lost on site if the survey form is in a poor format.

It may be necessary to have more than one survey form due to the different types of property against which information is to be collected, eg flats, houses, communal areas. However all forms should follow the same format if consistency is to be achieved.

Appendix 2 shows a sample survey form used for manual data collection (in conjunction with the HCOND2W software - see Appendix 3 and [www.uwe.ac.uk/fbe/hcond](http://www.uwe.ac.uk/fbe/hcond)). This form could also be entered onto a customised relational database. The front sheet of the form is shown below.

<b>syha</b>		Address		Ref. _____		<b>EMERGENCY REPAIRS</b>	
		Date	Surveyor	Units in duster specify nos.		<b>FURTHER ACTION eg. Structural Survey, Hazardous Material etc.</b>	
Town/Area <input type="checkbox"/>	Accommodation Type, Gen, Direct Care, Agency, Partnerships G, C, A, P <input type="checkbox"/>	New-build/rehab <input type="checkbox"/>		<b>ATTRIBUTES</b>			
Date of construction <input type="checkbox"/>	COST MULTIPLIERS		Externals <input type="checkbox"/>				
<b>CATCH UP REPAIRS (NON EMERGENCY)</b>		<b>SYHA STANDARDS</b>		Cracking free - Y, N, ? <input type="checkbox"/>			
Nature of repair & extent of work		Code : Total		Rising damp free - Y, N, ? <input type="checkbox"/>			
				Pen. damp free - Y, N, ? <input type="checkbox"/>			
				Condensation free - Y, N, ? <input type="checkbox"/>			
				Glass hazard free - Y, N, ? <input type="checkbox"/>			
				Other hazard free Y, N, ? (describe under Further Action) <input type="checkbox"/>			
Code against Period 0		£		Dwelling Y/N <input type="checkbox"/> Leasehold (L) <input type="checkbox"/>			
<b>DESIGN AND SPECIFICATION COMMENTS</b> (incl Painting Defects)		MEETS SYHA STANDARDS - F, P, H (five above) = Full <input type="checkbox"/>		Building - Trad, PRC, TF, Frame B, P, T, F <input type="checkbox"/>			
Energy Rating <input type="checkbox"/>				Hse, Flat, Bungalow, BSit, BSspace H, F, G, B, S <input type="checkbox"/>			
				Priority 1 - 6 <input type="checkbox"/> Assmt Y, N, ? <input type="checkbox"/>			
				1 = potentially unfit or catch up > £10,000 2 = potentially unfit or catch-up > £2500 3 = catch-up > £500 and < £2500 4 = not to SYHA Standards, CU <£500 5 = partially to SYHA Standards, CU <£900 6 = meets SYHA Standards, CU <£500 NB These costs are per dwelling			

Many surveyors are committed to hand held computers. Although they may save data input time, they are less flexible, more complex to alter and have capital cost implications. The HCOND survey software is

designed for small organisations and uses paper data collection forms. See the Web site for more information. Some further advantages and disadvantages are shown below.

#### **HAND-WRITTEN FORMAT**

##### **For**

- Easy to understand.
- Cheap.
- Can add notes for follow up enquiries and extend/elongate the thought process.
- Provide a hard copy of original data for validation or reference

##### **Against**

- Handwriting may be difficult to read.
- Data inputting will be required to load information onto PC.
- Not easy in bad weather.
- Can be easy to mislay.

#### **COMPUTER**

##### **For**

- Consistent.
- Fast data capture.
- Easy to download onto computer.

##### **Against**

- May not be appropriate for small RSL particularly where Stock Condition Survey is not computerised.
- Some tenants may not appreciate a high-tech approach.
- Expensive.
- Rigid format may mean that further notes cannot be made, flexibility needs to be built in at the design stage if this is a requirement.
- May be damaged easily (depending on type).
- May contain built-in software errors.

#### 3.5.1 Property details

As well as noting the address, property code, unit type, cost multiplier and attribute details, this example also includes a facility for noting catch up and emergency repairs, design and specification comments which may need to be fed back into the development process, and any further action required. With this extra information being recorded on the front page it is more likely that it will be actioned/passed on as may be necessary.

#### 3.5.2 Repair/renewal details

The information relating to future anticipated major repair or renewal of existing components or elements is recorded on a simple table with the costs being inserted against the component in the appropriate year band. There is also a note facility for use if it is not possible to apply spot pricing during the site survey or where costs inserted require further justification.

Separate sheets are provided for separate areas and in this sample the areas are divided as follows:

- External components/elements to the property
- External site areas
- Internal communal areas
- Internal areas to the unit

### 3.5.3 Improvements

This sheet lists all possible improvements that will be considered across the stock. Where improvements are desirable but have either not been undertaken or only partially undertaken then allowance should be made in year 0 for the associated cost of carrying out or completing the improvement.

It is important to be able to differentiate when reporting from the survey data between the repair/renewal of existing components which is a legal requirement, and the carrying out of improvements which is often a policy decision.

### 3.5.4 Sketch pad

This provides a facility for a rough sketch to be drawn of either the unit layout or a site plan. This can later be referred to when validating/checking costs or where costing of works is done off site due to their complexity, eg build up of costs for resurfacing roadways, car parks etc where a plan can be sketched and measurements inserted, areas can then be calculated off site.

## 3.6 Projection of Survey

A decision will be required as to the projection of the survey. Some organisations may only use a Stock Condition Survey to consider maintenance liabilities over a 5 or 10 year period, whilst others may consider the liability over a 30, 40 or even 50 year period.

In determining the period the decision should be led by the identified need for the survey. If the survey is only required for short-term maintenance planning and budgeting then 5 years of detailed information may be the best option. However, if the information gained is to be used for long term financial planning, or satisfying the Housing Corporation that the RSL is being managed competently then a 30-year overview may be more appropriate. If the information is to be used by private funders then the length of the loan agreement is likely to affect the length of the overview.

In the short term by considering the existing age and condition of a component/element, at a point in time, it is generally possible to predict its future maintenance requirements up to the point of renewal. Beyond the point of renewal a notional life will be given to a component/element, this will be theoretical and will assume a certain level of maintenance during the life of the component/element. Renewal will occur when it has become uneconomic to repair the component/element.

It should therefore be remembered that the longer the period considered the more the survey will become a life cycle costing exercise.

### **3.7 Property Codes**

To help data analysis an effective coding system is required, for example to enable sorting and selection by address, period or by element. There are two examples below:

#### **14a, Block 1, Brigstocke Road**

5 digits representing the estate

2 digits representing the block

4 digits representing the house/flat number

eg 134BR01014a - BRIGSTOCKE ROAD:BLOCK 1:NO 14a - a flat in a multiple block

#### **36, Knowles Road**

4 digits representing the estate

3 digits representing the block

4 digits representing the house/flat number

eg KNOR0000036 - KNOWLE ROAD: NO BLOCK: NO. 36 - a one-off property

It may be that the coding system adopted is that already used within the organisation or a new coding system may be devised. However, before any information is entered, it should be verified that the coding system can be used across the stock with no duplication.

The coding systems identified above would allow information to be entered against an estate, a block on an estate and a unit on an estate.



### **Example,**

Vintage Court is an estate of 60 flats arranged in 3 identical blocks of 20.

Against the estate, code VINC000SIT, only works should be entered for the external areas such as outbuildings, fencing, roads etc.

Against the block 1, code VINC001COM, works to the external fabric and internal communal areas of one block may be entered and given a multiplication factor of 3.

Whilst against the unit coding for flat 2, block 1, VINC0010002, 3 flats in total may be surveyed and each given a multiplication factor of 20.

### **3.8 Detail or Overview**

In the short term, it is generally possible to accurately predict failure of components or elements and works can be programmed on an annual basis. However, in the longer term, it will become more difficult to accurately predict the time of failure of components, as the rate of deterioration is affected by many factors such as severe weather, manufacturing defects, poor workmanship or use/abuse. It is, therefore, generally considered good practice to consider repairs on an annual basis certainly over the first 5 years and not more than 10 years with works beyond this considered in 5-10 year bands.

In preparing detailed programmes for maintenance or setting budgets for works, it is unlikely that more than a 5 year period would be considered, whilst for long term financial planning then an overview will be required.

Many surveys consider maintenance issues in individual years up to year 5 and thereafter in 5-year bands.

As time proceeds and the survey is updated then future works may be more accurately placed into individual years thereby maintaining the 5 year detailed view. However, there are no set rules and the survey time projection etc must reflect the nature and purpose of the survey.

5 out of 8 RSLs recently surveyed, in the preparation of this guide, considered that the information gained from a Stock Condition Survey should be used in the production of specifications. Considerable information would, however, have to be collected to enable this to occur and this may prove problematic for the following reasons:

- The more information that is collected the greater the risk of errors occurring as a result of duplication or misdiagnosis.
- Many IT systems previously used have been difficult to interrogate.
- The information may be difficult, time consuming and costly to keep updated and specifications may therefore be drawn up based on out of date information.
- The survey will give a prediction at a point in time; properties should therefore be re-inspected prior to works being instigated to verify not only that the works are still required and are appropriate, but also that budgets included at the time of inspection were realistic.

*For instance:*

A survey identifies a roof requiring replacement in year 3, costings are built up on the basis of a simple strip and replacement of the tiled coverings as no other defect is noted. However upon inspection in year 3 it is found that in addition to the works predicted, roof timbers have rotted and require replacement. Changes in health and safety regulations have led to increased preliminary costs, and grants available mean that funding has been agreed to upgrade loft insulation at the same time. The picture is now therefore very different and many problems might have arisen if the changing circumstances have not been considered.

Use of detailed information relating to materials and construction may also be counter productive.

*For instance:*

Some RSLs have collected detailed information on components such as rainwater goods, with information on profile, colour and size. However, without knowledge of the manufacturer the information may be of little use.

The information will require constant updating to ensure that it is correct and this may be a costly process.

### **3.9 Assumptions**

To achieve consistency and accuracy it is imperative that assumptions are set from the start. The list of assumptions should include for items such as:

- What is a repair and what is an improvement?
- What are the benchmarks that are set?
- List of indicative costs and where these should not be used
- List of indicative life cycles
- What is included as a unit and what is a communal item?

- Identify what is to be included in costs

### **3.10 Test/reviews**

Once the objectives and assumptions have been agreed, the survey form drawn up and, where appropriate, a consultant engaged, a sample of surveys should be undertaken and the results analysed and reviewed. All surveyors involved should be instructed on what is required, allowed to undertake a pilot survey and then de-briefed.

This process is critical to the success of the overall process, and should identify what could be costly mistakes and ensure these errors are eliminated.

Thereafter regular reviews should take place, to identify any inconsistencies or inaccuracies. Again the value of this process should not be underestimated.

A sample of surveys across varying sites should be audited to identify any inconsistencies.

It is also necessary to allow for follow up investigations where defects cannot be fully assessed at the time of the survey e.g. specialist surveys for dampness, structural faults etc, and ensure the findings are fed back into the Stock Condition Survey. The reviews are a good time to pick up and collate any such further investigations and where appropriate to feed back the results of the surveys into the overall survey process.

### **3.11 Assimilating the survey results**

Once the survey has been completed, the information collected will need to be analysed in order that it may provide useful data.

The information may be analysed either manually, in paper format, or it may be loaded onto a computer program. The method of analysing the data depends on cost constraints and size of housing stock.

If the organisation is very small then the survey results may be easily interpreted manually without the need for what could be expensive computer software. However, if the organisation has a medium to large housing stock it is likely that the information will be most useful if it is loaded onto a computerised system.

If the system employed has been correctly designed then there will be many advantages of using a computer based system as opposed to a manual system, these include: -

- Increased speed of reporting.
- Options available for reporting - graphs, tables, pie charts etc.
- The ability to easily look at 'what if' scenarios.
- Speed of updating the information.
- Reduced risk of error, once information has been input.

This guide is not intended to explore the pros and cons of the decision process involved or how to source such a package. The software will however be of one of the following types.

- Standard 'off the shelf' package - This is likely to require little in the way of planning but there may be no flexibility in the format of the survey. It is therefore essential to identify whether the package will be capable of meeting all the objectives set. This type of system may be relatively cost effective.
- Flexible 'off the shelf' package with facility for customising - These are generally cost effective and should be able to meet most of the objectives set. HCOND2W is such a system.
- Custom made packages - These can be developed to meet all the objectives, however it is essential that adequate planning is undertaken and that those writing the software fully understand what is required. A detailed brief will therefore be needed, this type of system may be costly if there are no other customers for the package.

When considering the options available it is advisable to visit an organisation that is already using the system; to identify whether it is likely that the system will meet all the requirements. From another organisations experience it should also be possible to identify how the system provider has performed in the provision of support, and any non standard facilities that need to be incorporated at the set-up stage.

## **4.0 Sampling**

Sampling size and method will directly affect the survey cost, duration and accuracy. The decision as to the % size of the sample will depend on:

- Age of the stock

- Whether the stock is new build or rehabilitated (more inconsistencies tend to exist in rehabilitated stock and a greater proportion will therefore require surveying).
- Whether the units are homogenous - why survey more than one identical unit?
- Whether the units are in the form of flats or houses
- Estate size
- The period over which forecasts are to be made
- Tenant type i.e. family, young single, elderly.

Unless the RSL is very small in size it is likely that a sample survey will be undertaken. Sampling will reduce both the cost and duration of the survey whilst the accuracy of the survey may not be adversely affected.

Quite often errors in survey data are put down to sampling errors. It is frequently thought that increasing the sample size may eliminate these errors. This however will not be the case if the error occurred as a result of faults in the assumptions originally used, or the surveyors interpretation of these assumptions.

All one-off type properties may need to be surveyed individually, however, where an estate consists of a number of similar properties, then the % sample may be quite low. For instance, a block of 100 flats may only have 2 flat types. If two flats of each type are surveyed and the results are very similar then it is likely that they are representative of the stock giving a total sample size for internal areas of 4%. If the results are, however, very different, then it may be desirable to increase the sample size to ensure that the sample is indicative of the average.

Where blocks of flats are to be included, then the unit surveys will include only for the internal areas relating to an individual unit; the sample taken may be very low as indicated above. However all communal and external areas would normally be surveyed and the sample for these areas would therefore be 100%. If the information produced is to be used for long term planning and therefore reflects the theoretical nature of the survey then the sample size may be reduced. If, however, the information is to be used for detailed short term planning then the sample size may need to be increased, as much of the work identified may be specific to certain dwellings.

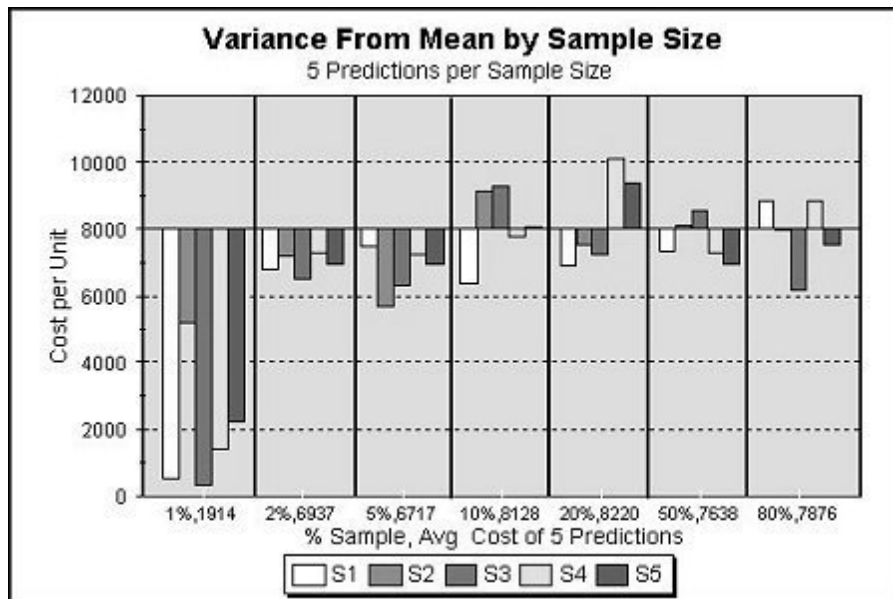
Samples should be randomly selected for each property type on each estate. If the sample is chosen other than randomly, then it is likely that the results will be biased and not representative of the whole estate.

- It can be argued that the sample size applied on larger estates may be reduced for the following reasons:
- If the properties surveyed are truly representative of the average in terms of condition, then little information will be gained from further properties being inspected.
- When looking at major repair programmes, these will generally be implemented when works can be undertaken to best effect; for instance, when determining when to undertake kitchen renewal:
  - Greater economies of scale can be achieved if all properties at a site are included within a single contract.
  - Tenants can become disgruntled if they perceive they are being unfairly treated. If their neighbour has a new kitchen, why do they have to wait 1, 2.. years for theirs?
  - Disruption can be kept to a minimum if all works are undertaken within a single contract.
  - Work loads for maintenance staff can be reduced if all works are undertaken under a single contract.
- The Stock Condition Survey may consider maintenance issues over a 30-year period. Once the time for the initial renewal/major repair has been identified, then the timing of future repairs or replacement will usually be a desktop exercise.
- In updating the survey in the future, different properties should be inspected; at this time any inconsistencies can be picked up and the sample size will increase.

The following example demonstrate clearly that a larger sample does not necessarily provide more accurate results.

Association 1 undertakes regular surveys of all its stock, which is largely acquired with very few estate type properties. The most recent survey suggests that the average cost over 10 years is £8,000. 5 random samples were taken from the data against 7 percentage samples ranging from 1% - 80% of stock surveyed. Table 1 indicates the variance from the mean for each random sample.

These results show that for a 1% sample, the costs would have been underestimated by a significant margin (-£2,750 to -£8,750), as the % sample increase, so does the accuracy of the sample. For instance, at a 10% sample size the variance is -£1,800 to +£1,100. Above a 10% survey there is however, little, if any, increase in accuracy.



The reason for the variance on the very small sample is that a small number of properties required a large amount of expenditure and these were not represented in the sample.

#### Example 2

Association 2 recently undertook a 30% sample survey of their stock which consists of a large number of homogenous units. The average cost over a 15 year period was £8,500 per unit. A 1% sample gave a variance of -£2,500 to +£2,500, whereas a 5% sample revealed a variance of only -£250 to +£500 and no greater accuracy was achieved with a 10% sample.

Once the sample size has been agreed it will be necessary to identify the multiplication factor to be applied to each survey record. For example a 10% sample survey is to be undertaken on a block of 60 flats; there are 10 bedsits, 30 one-bed flats and 20 two-bed flats. The sample will therefore consist of 1 bedsit with a multiplication factor of 10, 3 one-bed flats each with a multiplication factor of 10 and 2 two-bed flats, again, each with a multiplication factor of 10.

### 5.0 Briefing

If the decision is made that the survey is to be undertaken using external resources then the following options are available:

- a) Agency staff are employed to assist in undertaking surveys, but the process is managed in-house.

- b) A firm of external consultants are employed to undertake the property surveys and submit survey forms; data inputting and interpretation is undertaken in house.
- c) A firm of external consultants is employed to undertake the survey, input the data and hand over the system to the RSL who will thereafter maintain the system
- d) A firm of external consultants is employed to undertake the survey and input the data and is thereafter retained to update the system and advise the RSL on future programmes for maintenance.

Whichever method is decided upon then it is essential that a full brief is given, to ensure from the start that:

- a) all parties are fully aware of their responsibilities
- b) where the services are tendered, all parties are tendering on a like for like basis
- c) the objectives of the survey are known and understood

Below is a list of issues that should be considered when inviting tenders from external consultants:

- What will be required by way of a demonstration as part of the tender process?
- Who is to undertake the surveys and what are their experience and qualifications?
- Who is to make access arrangements (this can be very time consuming)?
- Whether contractor attendance (for access, opening up parts of the structure etc) is included within costs.
- What benchmarks have been set for certain standards?
- What improvements should be considered?
- What outputs are required?
- The period the survey will cover.
- A property list (if possible identifying property types).
- Any time constraints
- Where a tenant denies access and a survey has to be rearranged, whether abortive costs will be reimbursed.
- What liaison will be required with the RSL and at what frequency?
- What is to be included for future back up and at what cost?
- Penalty clauses for failure to perform.
- What post checking of surveys will be undertaken to validate the data?
- It may be necessary to include a copy of the survey form and information of computerised systems if these are to be set by the RSL.



- How the tender is to be priced.
- How information is to be presented.

## **6.0 Cost Forecasting**

There are various ways of building up costings for works:

- Historic costs from previous contracts for similar works.
- Pricing books and software.
- Quotations (this method would normally only be appropriate where the works are complex by their nature or component).
- Schedules of rates

Generally it is advisable to draw up a list of indicative costs against recurring items such as window replacements, kitchens renewals etc which can be used by all surveyors involved in the survey, thereby avoiding inconsistencies.

However, whatever method is used, it is vital that all costings are compiled on the same basis. Common pitfalls leading to inconsistent costings are:

- Confusing repairs, replacements and renewals.
- Variance in allowances for materials/quality.
- Allowance for consultants fees. Generally for larger projects which are likely to be administered by an external consultant, a flat rate % will be added to the works cost. However, consideration should be given to costs for planning supervisors, planning permission or building regulations approval where appropriate.
- Inclusion or exclusion of VAT. For most organisations costings should be compiled exclusive of VAT; this can then be added to reported costs by the user of the information. It is likely that over time VAT will change, whilst the VAT status of certain works on RSLs may vary.
- Contract size - costs will vary greatly depending on contract size. For instance, to replace one kitchen may cost £1,500 but if the kitchen is 1 of 100 in a contract, it may only cost £1,300 with savings being made on both material and labour costs. The surveyor undertaking the survey should therefore be clear as to how contracts will be arranged. For instance, it may be assumed that for kitchen replacements, all

properties on an estate will have their kitchens replaced within one contract but that separate estates will not be grouped into one contract.

- Allowance for access and other preliminary costs. For instance, it may be found that roof coverings to a block of flats require replacing at the same time as the windows and therefore scaffold costs are split between the two elements of work or scaffold costs are allowed separately against each element of work. It should be clear from the start how works are to be priced to ensure that the information is consistent, that there is no doubling up of costs and that if alteration of information is subsequently undertaken, it is understood on what basis the costs were put together so that these may also be revised if necessary.
- Inflation - over the period considered it is likely that inflation will have a significant effect on costs; however it is almost impossible to accurately predict the rate of inflation over 1 year, let alone 30 years. Costs should, therefore, be compiled as at day one and provision for inflation should be made by the user of the end report. HCOND2W is capable of spreadsheet output.
- Contingencies
- Hidden costs where survey does not reveal structural problems
- Vandalism may result in repeat work not included within survey
- Works may be brought forward or put back as they are packaged in different ways

Generally, replacement elements should be considered on a like for like basis. However, for some elements, it may be decided that replacements will result in an improvement. For instance, where single glazed windows are to be replaced, the policy may be that new windows should include for insulating glass and subsequent costings should reflect this, issues such as this should be agreed within the assumptions.

## **7.0 Life Cycles**

Once the first replacement has been identified by the survey, based on its current condition and the apparent rate of deterioration, then a cycle for subsequent replacements can be applied. The life of a component will be determined by:

- Manufacturers recommendations.
- Judgement/experience of past performance.
- Text books such as the HAPM Component Life Manual which give notional lives.
- Physical properties of construction which determine rate of deterioration.
- The tenant type.

Future renewals may be shown as an annual % replacement value, and this approach is used in the setting up of sinking funds, but will not show the date for renewal. This method is therefore normally only employed where the survey is to be used for financial planning purposes and not when cash flows are required. It may also be appropriate on certain estates, where Hard use or Low use are significant factors in the deterioration of properties, for indicative life cycles to be reduced or increased as appropriate.

The quality and regularity of its maintenance will affect the life of a component. Since maintenance will occur in the future, and therefore unknown errors may well result where actual maintenance varies from that assumed. It will be an important part of updating surveys to identify these discrepancies and alter life cycles applied as appropriate.

Whatever source is used initially to determine the replacement cycles, the cycles should be reassessed in future to reflect trends and the survey updated as appropriate.

It will normally be assumed that at the time of replacement of an element, the replacement will be similar to, or the modern equivalent of the existing. However, if it is known that the replacement element will have different maintenance requirements to the original, then this should be reflected in the maintenance programme.

Applying standard life cycle costings will normally give peaks and troughs in expenditure as some work will require to be carried out at the same time. Applying an annual % replacement will give an average assessment whereas a Stock condition Survey based upon the surveyors assessment, should provide for a median.

A simple approach to costs and lives is shown below. This has been used by several small RSLs in the UK.

Element	Sub element	Life	House	Flat	Rate	Unit
External Work						
102 Coverings	Interlocking	60	£3,000		£60	m2
	Slate(natural)	100	£10,000		£200	m2
	Slate(artificial)	40	£5,500		£110	m2
	Plain tiles(clay)	80	£6,000		£120	m2
	Plain tiles(conc)	60	£4,500		£90	m2
	Asphalt	30			£55	m2
	Built up felt	15			£30	m2
103 Chimney	Repoint	50			£300	each
	Rebuild	60			£1,500	each
104 Flashings	Flashings	60	£400		£60	lm
105 Fascias, bargeboards	Timber	60	£600		£50	lm
	PVC	40	£750		£60	lm
106 Gutters/RW pipes	PVC	20	£450		£20	lm
107 Windows	Timber	35	£2,500	£2,000	£250	m2
	PVC	35	£3,000	£2,400	£300	m2

## 8.0 Improvements & Catch-up Repairs

### 8.1 Improvements

Within the survey, it is not only important to identify the repair and replacement of elements but also to identify improvements that are required to bring the property to a desired standard.

Improvements should be identified separately to routine maintenance and it is recommended that initially they are not included within the programme but are indicated in year 0. No allowance should be made for the future maintenance requirements of such improvements until they have actually been undertaken.

Only once the full results of the survey are analysed is it possible to determine what improvements should be carried out and at what time. This process is normally one of policy and generally requires management team if not committee input. By recording possible improvement in this way they can be prioritised and programmed to use surplus funds when all necessary routine maintenance has been carried out, or to even out expenditure between years.

By identifying improvements separately, it is also possible to easily identify the cost of bringing all or certain stock up to a required standard for certain elements of improvement, or across all improvements. Once improvements have been undertaken it will be necessary to update the database to allow for future maintenance/replacement of those improvements and this will be on the basis of life cycles applied at the time of the works being undertaken.

## **8.2 Catch-up repairs**

On the attached sample survey form Appendix 1, Section 1 there is provision for catch up and emergency repairs to be noted. It is intended that this be used to report any works of a day to day nature which require ordering/chasing. It is not intended that this information is included within the major repair programming. It may however be desirable for some organisations, where there is a significant backlog of catch up repairs, to quantify the value of this backlog. If this is the case then this needs to be built into the survey in order that it may be reported against.

Where works of a major repair/replacement nature are identified as overdue, then they should be included within the programming sheets as required in year 0, in order that reports can be run indicating the level of overdue major repairs.

## **9.0 Updating the Survey**

Once the initial survey has been completed, it should not be considered as a static piece of data. Updating will be required to reflect:

- Works that have been undertaken.
- The changing priorities of the RSL.
- Experience that may give rise to an update of costs or life cycles.
- The initial survey may indicate works detailed on a yearly basis for the first 5 years. It will, therefore, be necessary to update the survey to be able to continue to show 5 year detailed projections, eg in year 3 you may wish to show the detailed projections for years 4-8.
- Adding new properties to the RSL stock or omitting those that have been disposed of.
- Changing statutory and other requirements.
- Changing requirements set by those requiring information that is to be obtained from the Stock Condition Survey.

- Changing standards.
- To take account of deterioration not in line with that predicted. For instance, very hot summers, cold winters, storms or heavy rainfall, hard or low use can significantly affect the maintenance requirements and longevity of an element.
- Monitor the effectiveness of the maintenance programme.

Some of the above updates will require alteration of the information held on the computer; however, the updating of other issues will necessitate further property inspections. These inspections may often be undertaken on an ad hoc basis being incorporated with routine maintenance inspections. Re-inspection is also advisable following major repair works.

Generally, it is considered good practice to update the database say every 2-3 years, and this will allow for the extension of the detailed plans for maintenance. It is important to determine from the outset how and when the survey is to be updated to ensure that any software used can accommodate this.

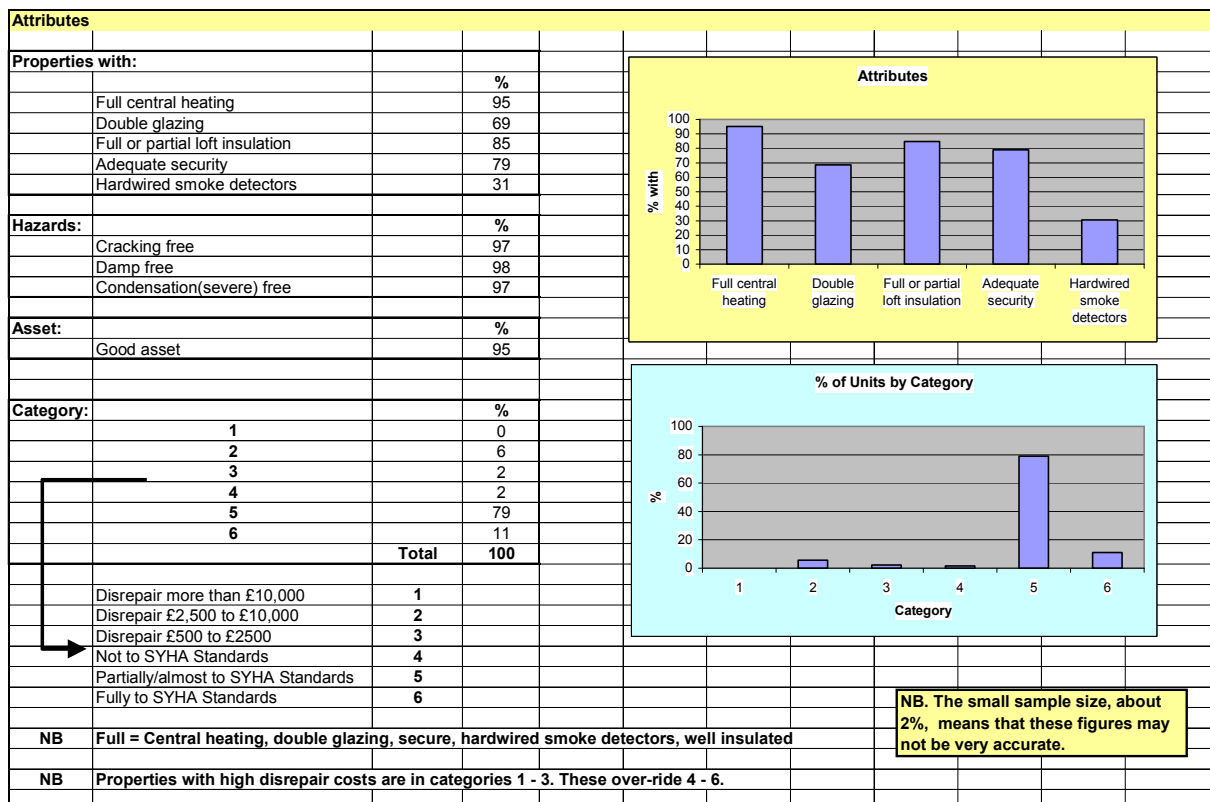
Updating the survey should identify previous errors in the data recorded and is a useful tool to eliminate such errors. Where sample surveys are undertaken, a different set of properties should be identified for survey, thereby reducing the risk of sample error.

Even if updated inspections are undertaken on an ad hoc basis there should be an agreed method of updating to ensure that there is no duplication and that the basis of the updates is consistent.

When updating the survey, any works previously identified as required that have not been undertaken when suggested, and are still required, should be indicated in the current year or year 0. The works are therefore recorded as backlog/catch up works.

## **11.0 Data Analysis**

The way in which the data is to be analysed will be based upon the assumptions set and objectives identified and for this reason it is clear how important it is to identify from the start the way in which the information is to be analysed. It may be desirable to be able to change the assumptions to investigate what if scenarios; if this is the case then this should be clear from the outset.



On Page seven it was stated that the three fundamental requirements of a stock survey are often to establish how much, which element, and when? Of course, if data regarding attributes and fitness standards have also been collected the property managers will have a wealth of statistics to help inform future decision making and to monitor long term trends. For example, with reference to the diagram above, the charts show the % of properties with certain attributes, the number of dwellings in each of the six priorities, the number of properties which are regarded as a good asset, and so on.

The reporting formats will vary between software packages; however it should always be ensured that report information may be loaded onto a spreadsheet package where it may be manipulated and presented graphically or in tables. At this stage, factors such as VAT and inflation can be added at the rate appropriate for the period being considered.

A record should be maintained at all times as to the base date that the potential costs were compiled or updated in order that there is no doubling up or omission of inflation.

### 11.1 Overdue and catch up repairs

For overdue or catch up works, reports may be run indicating overdue works against elements, schemes or the stock in general. This work can then be prioritised and programmed into future years. However, by initially placing the works in year 0, it is easily possible to identify shortfalls in previous maintenance programmes, and the financial burden of these on the RSL. Justification of this may be required to organisations such as the Housing Corporation or funders.

## **11.2 Planned Maintenance Programmes**

In considering the setting of planned maintenance programmes it should be possible to run reports that link repairs of a similar nature across the stock, or combine all works required at a single estate into one contract. Improvements

The decision-makers should be able to reach informed judgements over what improvements should be undertaken and when.

For instance, the management committee may decide that all properties should be fitted with wired smoke alarms; a report could then be prepared, identifying properties not fitted with smoke alarms along with the cost of undertaking this work.

Where research is being undertaken into the condition of stock by organisations such as the Housing Corporation information may be required as to % of stock achieving certain standards, eg free from damp, improved, etc.

It may be desirable to link programmes for major repair or improvements to the energy rating for the property; this would allow for targeting of those properties that fall below the benchmark set.

## **11.3 Presentation of information**

For finance departments or organisations such as the Housing Corporation or funders it is likely that results will need to be reported on the basis of all costs over the duration of the period considered in order that this can be matched against projected income and existing maintenance provisions.

It is likely that the result of the survey will not show a consistent level of expenditure in each year but that there will be peaks and troughs. These may exceed the maintenance provision and it may therefore be





## **12.0 Conclusion**

To demonstrate that it is managing the maintenance and improvement of its stock in a professional and efficient way a RSL must undertake a Stock Condition Survey. The data obtained from a Stock Condition Survey is not only of use to the RSL, but is also now required by other bodies such as the Housing Corporation and lenders.

A Stock Condition Survey is a useful tool in planning future repairs, and a sound survey is a critical component in the setting of Asset Management Strategies and from there it will be used to underpin the Business Plan.

It is vital that the survey data is capable of interrogation and adaptation, and it must be verifiable. A Stock Condition Survey will only be successful if the objectives are clearly set out from the start, and for this reason the planning process for a survey should not be underestimated. With so many potential customers for the outputs all their needs should be considered and understood at the outset to ensure that the information may be used to maximum advantage.

Undertaking a Stock Condition Survey will involve a high level of resourcing. At an early stage consideration will need to be given as to whether the survey is to be conducted using in house resources or whether consultants are to be employed. Whichever option is chosen, clear briefing will be required, and this should be followed by a period of testing to ensure that the survey will meet all the objectives.

A decision will also need to be made on how the data is to be recorded and stored. It is useful to see systems in use at other RSLs and a visit to see the system in operation should ideally be made before a decision is made to purchase a particular system.

Once the survey has been undertaken it is important that new properties are incorporated and that updates are undertaken to ensure that the RSL has a realistic view of its liabilities and is reflecting the implications of works that have been undertaken.

Although not a definitive document, it is hoped that this guide will highlight the issues to be considered before undertaking a Stock Condition Survey. A poorly conceived and planned survey will produce data of little use and may, in fact, be counterproductive. Careful planning and a sound methodology, backed up with

a systematic pilot study, should ensure that the data collected is concise, coherent and yet comprehensive enough to enable effective short term and strategic planning.