Appendix 2

PLANNED MAINTENANCE DEFINITION

1.0 Introduction

The purpose of this paper is to introduce to Housing Board the concept of a definition of planned maintenance. This was a matter raised by the Chartered Institute of Housing (CiH) during its recent review of Housing Services.

The absence of a clearly defined approach to maintenance was seen as a shortcoming in providing quality services to residents and having the ability to take a longer term view of the performance of the built assets in the Housing portfolio.

The Asset Management Strategy (AMS) is currently under review by the CiH and will set out a range of standards, policies and actions which will govern how the stock is managed. Not just from the perspective of repairs and improvements strategy, but also looking at the financial viability of the stock. Therefore the refined detail of the definition is a part of the AMS review.

In its most fundamental form planned maintenance is

> *"Works carried out to maintain, prolong or enhance the overall performance of a built asset. This includes*
>
> ***Cyclical maintenance** defined as work that requires to be carried out on an agreed cycle and can be annually or every number of years.*
>
> ***Major Repairs** are by definition fairly substantial works carried out over a longer time frame and would result in the replacement of elements and significant components (e.g. boiler)"*

In order to fully develop the definition and embed into the AMS the definition needs to take full account of a number of critical factors. The following information is to advise on how the Council will arrive at its detailed maintenance policy and strategy to be incorporated into the AMS.

The AMS is scheduled to be presented to Cabinet for consideration in September 2015.

2.0 Developing the maintenance strategy and establishing a policy

2.1 Business needs

The extent of the maintenance activity should be driven by the statutory requirements of landlord functions and the details outlined within the tenancy or lease agreement. This should include consideration of the potential impact of maintenance 'failure' on the organisation's ability to perform at optimum efficiency or reputational risks which may be presented. It is important for Housing Services to be able to demonstrate that the maintenance strategy is proportional to the Council's needs and policies associated with growth and the wider provision of services.

It is common that the maintenance strategy is agreed and authorised at Cabinet level, ensuring that all risks are clearly understood and demonstrated, in terms of both provision and non-provision of the agreed level of maintenance services. Maintenance delivery can then be managed against measurable outputs geared toward the HRA business plan.

As with any maintenance management service, the risks associated with the provision of maintenance vary substantially for a wide variety of reasons and might arise as a result of: geographic location; intensity of use; hours of operation and so on.

2.2 The maintenance strategy

In line with the above, a maintenance strategy should be established so that it shadows and complements, and is aligned with, the business strategy being pursued. It therefore follows that the maintenance service is involved at a high level so are fully aware of the long-term plans and overall direction being followed by the organisation, and understand the associated business drivers.

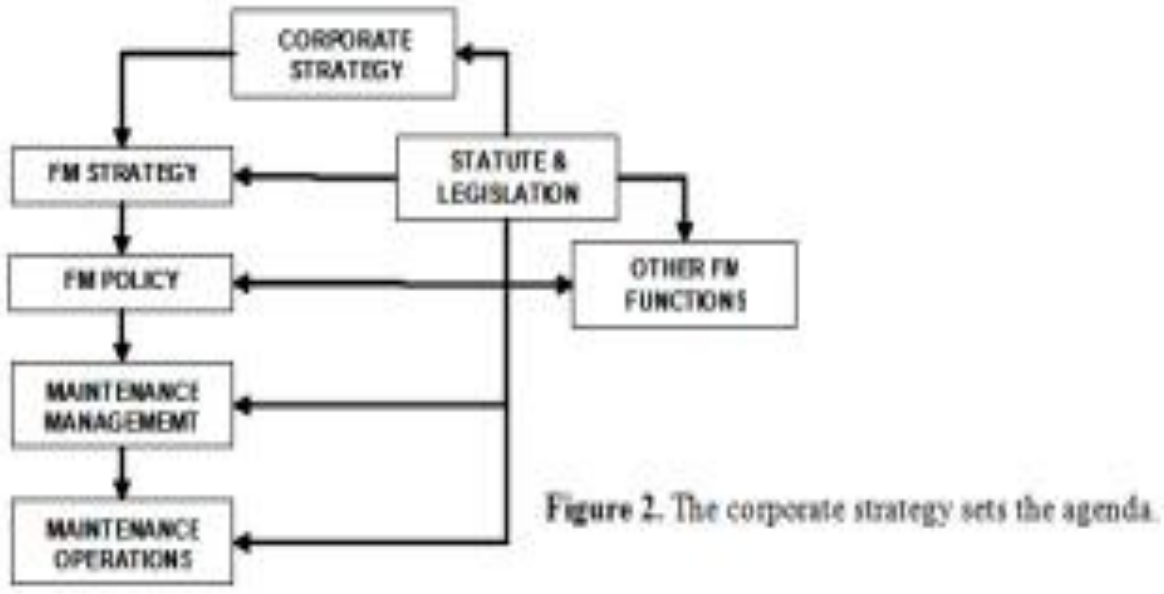

Figure 2. The corporate strategy sets the agenda.

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The Council's Housing Service is in the process of adopting the business strategy based on a short-, medium-, and long-term outlook. Any 'move' in direction the business plan directs may involve the re-alignment of maintenance, up- (or down-) sizing/re-engineering, or even a complete review. It is recognised any maintenance policy will have to have recognition of these potential changing demands. To meet these varying demands, and at the same time deliver a value-for-money service, timescales must be considered, and therefore the following issues should be taken into consideration:

- What services should be contracted, and how long should contracts be?
- Should maintenance specifications be input- or output-based, and what level of performance is required?
- What balance should be struck between planned preventive, condition-based, and corrective (reactive) maintenance?
- How far ahead should we project our life cycle replacements programme?

Once these questions have been answered, and a strategy has been 'set' and signed off, then it can be implemented through the formation of a 'maintenance policy'.

2.3 The maintenance policy

A maintenance policy should be developed that will allow the agreed strategy to be followed and value for money achieved. The maintenance policy should be a clear statement of the objectives and methods to be employed in keeping the built environment fit for use and in preserving its asset value. It should define the framework on which all maintenance and management operations are based and state the life expectancy, or required life expectancy, of the asset. The policy should lay down guidelines concerning acceptable thresholds for technical standards, civil and statutory legal considerations (particularly health and safety issues), and budgetary control, relations with the residents of the building and the control and execution of maintenance and servicing operations.

2.4 Maintenance policy in context

Buildings are a costly and valuable asset and need to be looked after. An often overlooked consequence of lack of maintenance is the potential cost of damage to reputation and relationships with residents. In addition, the costs incurred by, and the benefits accruing from, occupying and maintaining a building have a significant impact on the well-being of its residents. Maintenance management should therefore be seen as an important component in furthering the objectives of the Council.

Accordingly, the maintenance policy should integrate with the wider mission statement, business strategy and management policies of the Council impacting building management. Key stakeholders should be made aware of the maintenance requirements so that they can set the appropriate levels of funding required to ensure maintenance policy objectives are met. They also need to be informed of any adverse consequences that may follow from underfunding - this will typically include added expense due to having to perform unplanned maintenance at a later date, which by definition is more expensive to implement than the planned variety.

The absence of a formal maintenance policy can lead to a lack of focus in maintenance organisation, specification and funding which might manifest as misplaced effort, absence of clear direction, neglect and waste of resources. This in turn may result in undue disruption to building residents, create health and safety hazards, and cause asset depreciation and poor value for money spent. A maintenance policy is therefore an essential prerequisite for well-managed and cost-effective maintenance procurement.

2.5 Maintenance policy overview

The maintenance policy needs to be a formal document setting out parameters, guidelines and methods in some detail. There is no one universal format that will suit all maintenance management scenarios.

2.6 Impact of design on maintainability

Those involved in the maintenance of the built environment will invariably, at some stage, wish to be able to turn back the clock to the time of the design development. Where the original design may have had some shortcomings, this point in time can provide the

opportunity of correcting some of the original deficiencies in the design where maintainability is concerned.

All too often the maintenance of a building only comes to the fore following construction. This change in emphasis from design and construction to maintenance and occupation also epitomises the challenge of gaining the right balance between the needs of design and construction and that of maintenance and occupation. It is critical therefore that the built environment is designed with some thought to future activities, including maintainability. Similarly, care should be taken to ensure that maintainability is not 'value engineered' out of a project at the design stage in an effort to achieve cost reduction. This can be a false economy in the long term.

It is therefore important to achieve good design with the right balance between design/construction and occupation/maintenance. Where the emphasis is placed will vary depending on numerous factors such as use, design life, cash flow and similar matters. This can become more complex in projects such as public private partnership type schemes, when parties representing the same 'building' provider can have split responsibilities; for example, where the contracting operation is responsible for the construction and the maintenance management department takes similar responsibility for maintenance.

Good design should encompass consideration of the life of the building, envisaged occupancy and all other aspects which impact on maintenance; examples of the latter include:

- access to plant, equipment or other areas to be maintained;
- the selection of materials or products to give an appropriate level of maintenance to suit the building function, maintenance budget and desired level of building quality;
- adequate maintenance within the property to enable maintenance and cleaning;
- a suitable level of availability of maintenance materials, spare parts, etc.;
- achieving the design while minimizing, or using alternatives to, specialist maintenance.

Having established the maintenance policy, the next step is to consider how it is to be put into practice. This will entail the setting up of methods and procedures to determine among other considerations:

what maintenance and repair works need to be done;
when these works will need to be done;
how the work can be undertaken safely;
how much these works will cost; and
what works are the most necessary, if the funds available are not sufficient to cover all of the work identified as being necessary.

These criteria should be met by implementing the three operations detailed below.

3.0 Identifying the maintenance needs

Identifying the maintenance needs involves collecting and assimilating information derived from:

regular condition surveys of the building stock;
the existing planned maintenance programme (or profile);
faults and repairs notified by the building residents;
feedback from works of servicing, repairs and improvements in progress;
relevant legal requirements either from statute law or from lease and rent and repair covenants and any changes/updating of legislation;

existing building and service records; and
older buildings, which may be affected by regulation that came into effect after they were constructed. Regulation often necessitates asbestos surveys and management plans, health and safety assessment and fire risk assessment among other requirements.

3.2 Prioritising and costing the maintenance works

Once the information on the building, its condition, its use characteristics and any repairs required are known, then a clearer overall programme for costing and/or sequencing maintenance operations can be made.

Prioritising
Prioritising entails the maintenance function exercising a qualitative judgment on the urgency or criticality of the need for repairs and any servicing requirements, and then ranking these requirements in order of importance. In general terms, the criteria for prioritisation are:

Will the need for repair get worse, and if so how quickly?
Where the repair is located, and is this an important area of the building from a user perspective?
Are there any regulatory or civil requirements which affect the repair prioritisation?

It is usually necessary to target resources to address the more important needs, since it is only rarely economically possible to undertake every single repair that has been identified. This will be determined by the overall standards and maintenance policy ; the requirements of regulation; the terms of any lease or rental agreement; and available finance.

Costing
Maintenance and repair works can be difficult to cost accurately since there may be travelling and access time to take into consideration as well as the actual repair works. Furthermore, the full nature and extent of the repair may not be evident before the works are commenced.

3.3 Fixed-cost maintenance

As a result of the fluctuating nature of revenue accounts, some organisations have looked to fix the cost of their maintenance activity; there are two basic alternatives for this:

deferring the cost over a number of years; and
deferring the financial risk by procuring the works on a fixed-cost basis.

Deferment of costs over a number of years
With a properly prepared maintenance plan that has been costed and prioritised it is possible to assess the implications of carrying out all the recommended works in year one. This ensures that the built environment will remain relatively maintenance free over a predictable period. While this will not remove all maintenance expenditure (as there will always be matters such as vandalism or unexplained breakdown), the method can be used to good effect in certain circumstances and can help to reduce long-term maintenance costs.

Deferment of financial risk by procuring the works on a fixed-cost basis
Starting with periodic preventive maintenance plus the provision of a breakdown service gives a relatively simple maintenance contract.

3.4 Maintenance Policy contents
The content of any maintenance policy will vary substantially from organisation to organisation. The following is not intended to be exhaustive but simply to provide an outline of key aspects of maintenance and its overall fit within the Asset Management Strategy.

1 The policy statement (i.e. the maintenance policy in relation to the corporate strategy, and the overall management policy)

The production of a maintenance policy is initiated by an examination of the nature of the business strategy, of the buildings themselves and of the uses to which they are put. There are three key issues to be addressed at this preliminary stage of maintenance policy formulation:

(a) The user need and use pattern of the buildings
The policy statement must take into account the fact the Housing stock comprises of many buildings on more than one site and, indeed, we have a large portfolio of many different buildings over a large geographical area.

(b) The suitability of the buildings for their intended use
This constitutes an assessment of the buildings' adequacy in terms of location, size, layout and maintenance for both present and future predicted needs.

(c**) Environmental policy and sustainability**
The Council have developed an environmental policy statement detailing their approach to local environmental concerns, materials sourcing, waste disposal policies and energy management policies in an attempt to set up a framework to achieve a sustainable operation. The maintenance regime should be designed around the idea that the built environment should be socially, economically and environmentally sustainable, and not purely economically driven

2 The policy as it relates to building residents

2.1 Standards of maintenance
This section of the maintenance policy indicates the standards of maintenance considered appropriate for the building use and expected by the building residents. Standards will define key services that require special attention and may set down functional and cosmetic standards for different areas or use types within the building.

2.2 Health and safety
The minimum acceptable standard is that required by the regulatory framework. Other specific health and safety risks will be relevant to building maintenance operations.

2.3 Security and access
Access for maintenance works may in some cases compromise security provisions. Ways of monitoring access and egress and vetting and supervision of maintenance operatives may be required. The hazards associated with routine maintenance should also be considered, for example, maintenance that requires staff to go into hazardous areas such as high-level flat roofs for relatively small maintenance tasks.