

Appendix 1

Aberdeen City Council Cyclical Planned Preventative Maintenance (PPM) Review

01/06/2023

V.002

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1.0 Introduction

Maintenance is an essential to ensure that buildings and other built assets present a good appearance and operate at optimum efficiency. Apart from decay and degradation of the building itself, inadequate maintenance can reduce performance, affect health and threaten the safety of occupants and those in the vicinity. A PPM has the advantage of enabling more proactive approach to maintenance, and helps prevent small issues from becoming larger issues at a later date, with the knock-on negative impact on productivity. This also means that costs are distributed more evenly.

1.1 What is a PPM

“The planned and controlled programme of maintenance and inspection carried out at predetermined intervals (or corresponding to prescribed criteria) and intended to reduce the probability of failure or degradation of the functioning of an item. This includes inspections, adjustments, cleaning, lubrication and/or selective replacement of components (e.g. filters) and minor repairs, as well as performance testing and analysis intended to maximise the reliability, performance and life cycle of building

systems, equipment, etc. Preventive maintenance consists of many checkpoint activities on items that, if disabled, may interfere with an essential installation operation, endanger life or property, or involve high costs or long lead times for replacement.”

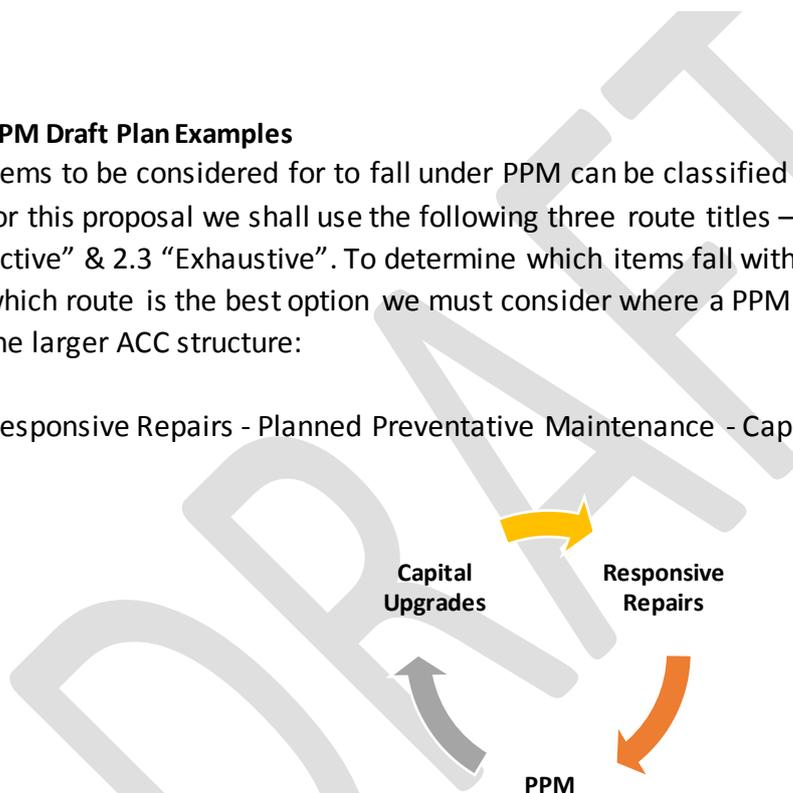
1.2 General Assumptions

Aberdeen City Council currently regularly maintain items, machinery and equipment in line with or exceeding statutory legislative requirements (i.e Lifts, Emergency Lighting), this proposal is for the reintroduction of regular maintenance to non-statutory items. For the purposes of this report I have evidenced additional options so to easier identify the best option to fulfil the goal of an “Essential PPM” plan.

2.0 PPM Draft Plan Examples

Items to be considered for to fall under PPM can be classified under different headings, for this proposal we shall use the following three route titles – 2.1 “Essential”, 2.2 “Pro-Active” & 2.3 “Exhaustive”. To determine which items fall within each category and which route is the best option we must consider where a PPM model would sit within the larger ACC structure:

Responsive Repairs - Planned Preventative Maintenance - Capital Investment/Upgrades



It is important to recognise that of the above stages are critical to the success of each other and should work closely to ensure the greatest efficiency and success. Responsive Repair trends can feed into the PPM and Capital Upgrades work requirements, PPM can reduce the regularity of Responsive Repairs and Capital Upgrades, and Capital Upgrade works can remove the problematic items that require such regular Responsive Repairs and PPM works. Any works and costs experienced within a PPM should achieve savings in excess of the total cost within the Responsive Repairs cycle and the Capital Upgrades cycle, as such PPM can be seen as cost neutral for this reason.

Fig.1 Example Painting Schedule (Costs still to be confirmed)

| STREET | Painting Area | Painting Year | Number Of Blocks | Estimated Total Cost |
|--------|---------------|---------------|------------------|----------------------|
| | | | | |

| | | | | |
|----------------------|---|---|----|-------|
| CHARLIE DEVINE COURT | 1 | 1 | 1 | 13300 |
| DENMORE COURT | 2 | 1 | 1 | 13300 |
| BALGOWNIE BRAE | 3 | 1 | 1 | 2000 |
| BALGOWNIE DRIVE | 3 | 1 | 2 | 4500 |
| BALGOWNIE PLACE | 3 | 1 | 2 | 3500 |
| BALGOWNIE WAY | 3 | 2 | 6 | 7000 |
| CAIRNFOLD ROAD | 3 | 2 | 4 | 4000 |
| CARDENS KNOWE | 3 | 2 | 3 | 3500 |
| CLASHIEKNOWE | 3 | 2 | 1 | 7000 |
| CLOVERHILL CRESCENT | 3 | 2 | 7 | 7000 |
| DENMORE GARDENS | 3 | 3 | 10 | 9500 |
| FOWLERSHILL GARDENS | 3 | 3 | 2 | 1500 |
| HAMEWITH | 3 | 3 | 1 | 15600 |
| HAREHILL ROAD | 3 | 3 | 5 | 4500 |
| OVERHILL GARDENS | 3 | 3 | 4 | 6500 |
| HUTCHEON GARDENS | 4 | 4 | 4 | 2500 |
| SEAVIEW ROAD | 4 | 4 | 7 | 8500 |
| SIMPSON ROAD | 4 | 4 | 3 | 12600 |
| ALEXANDER DRIVE | 5 | 4 | 4 | 7000 |
| ALEXANDER TERRACE | 5 | 4 | 20 | 27500 |
| AUCHINLECK ROAD | 5 | 5 | 1 | 6500 |
| BRADLEY TERRACE | 5 | 5 | 7 | 14700 |
| CONINGHAM GARDENS | 5 | 5 | 5 | 11200 |
| COWAN PLACE | 5 | 5 | 1 | 2000 |
| DEMPSEY TERRACE | 5 | 5 | 2 | 5000 |

OPTION 1
“ESSENTIAL”

2.1 Option 1

In order to ensure that the **Essential** items within our housing stock are maintained option 1 will map out the requirements to fulfil this. This option is the “preferred” option due to its ability to seamlessly fit into current requirements and set up, and to adapt as and when this may be required.

2.1.1 Operational Requirements

Operationally the requirements under this option would require short term increase in workforce until an equilibrium between the Responsive Repairs, PPM and Capital Upgrade cycles were found, after which a re-alignment of current Responsive Repairs staff to PPM should suffice

2.1.2 Indicative Essential PPM list

| ITEM | EXTERNAL | INTERNAL |
|-----------------|----------|----------|
| PAINTING | X | X |
| BEFORE PAINTER* | X | X |
| GUTTERS** | X | |

*(BP generally constitutes joinery repairs required prior to painting)

** (Clean & Minor Repair)

2.1.3 Justification & Implications

After an initial increase in costs and workloads this option should be seen as cost neutral within the current structure and workload. A fine balance of Responsive, PPM and Capital works should be achieved mainly through close working of these three areas through sharing of information and PPM schedules being created and recorded within the Asset Management Database and accessible to all interested stakeholders. Having these items within a regular PPM will improve the overall quality of our property portfolio with external and internal areas being of a more presentable condition for all residents and visitors alike.

OPTION 2

“PRO-ACTIVE”

2.2 Option 2

To fulfil a **Pro-active PPM** within our housing stock, additional consideration should be given to encapsulating all of ACC's current Statutory Maintenance works under this model. It is worth noting that all current statutory maintenance items, equipment and machinery are maintained within various different services across ACC and encapsulating all within this one model could be disruptive to the current successful statutory works being achieved across the board.

2.2.1 Operational Requirements

Operationally the requirements under this option would need the realignment of many services within a single PPM model. Additionally there would still see a short term increase in workforce until an equilibrium between the Responsive Repairs, PPM and Capital Upgrade cycles were found as per the "Essential" model.

2.2.2 Indicative Pro-Active PPM list

| ITEM* | EXTERNAL | INTERNAL |
|--|----------|----------|
| PAINTING | X | X |
| BEFORE PAINTER** | X | |
| GUTTERS** * | X | |
| PAT TESTING | X | |
| LAUNDRY MAINTENANCE | X | |
| GENERATOR MAINTENANCE | X | X |
| PUMP MAINTENANCE | X | X |
| FAN MAINTENANCE | X | X |
| DOMESTIC SMOKE ALARMS | X | |
| EMERGENCY LIGHTING SYSTEMS | X | X |
| ELECTRICAL INSTALLATION CONDITION REPORTS (EICR) | X | |
| LEGIONELLA | X | |
| ASBESTOS | X | X |
| CARBON MONOXIDE DETECTION | X | |
| FIRE FIGHTING EQUIPMENT | X | |
| HEATING & HOT WATER | X | |

*(Note, not a conclusive list, additional statutory maintenance items are to be expected)

** (BP generally constitutes joinery repairs required prior to painting)

*** (Clean & Minor Repairs)

2.2.3 Justification & Implications

This model presents risk to what can currently be seen as a successful statutory maintenance within the councils Housing stock and disruption to teams who carry out statutory maintenance items across further areas than simply the housing stock (i.e. Legionella which will reach within almost every area that the council operates in), this

model would require careful in depth planning and far reaching internal changes. This currently forms part of the ongoing transformation programme.

OPTION 3

“EXHAUSTIVE”

2.3 Option 3

Option 3 shows a fully managed “**Exhaustive**” PPM model within our housing stock, additional consideration should be given to encapsulating all of ACC’s current Statutory Maintenance works under this model and regular maintenance programmes for preventative maintenance to all elements* our housing stock. It is worth noting that all current statutory maintenance items, equipment, and machinery are maintained within various different services across ACC and encapsulating all within this one model could be disruptive to the current successful statutory works being achieved across the board.

*(For the purpose of this report “Elements” will encapsulate everything internal & external - doors, windows, building fabric, roof coverings, floor coverings, kitchens, bathrooms, statutory items, etc)

2.3.1 Operational Requirements

Operationally the requirements under this option would encapsulate the same requirements that fall under both previous options with a need for realignment of many services within a single PPM model. Additionally, there would be a permanent increase in workforce to achieve the exhaustive PPM repair and maintenance. Costs within this model would increase exponentially due to attending to carry out maintenance to items within a schedule that may not necessarily require repair works.

2.3.2 Indicative Exhaustive PPM list

It is not possible to provide a conclusive list within this report that would be suitable for an Exhaustive PPM, it would however incorporate all items contained within the “Pro-Active” model along with maintenance of every element within our housing stock at regular cyclical intervals.

2.3.3 Justification & Implications

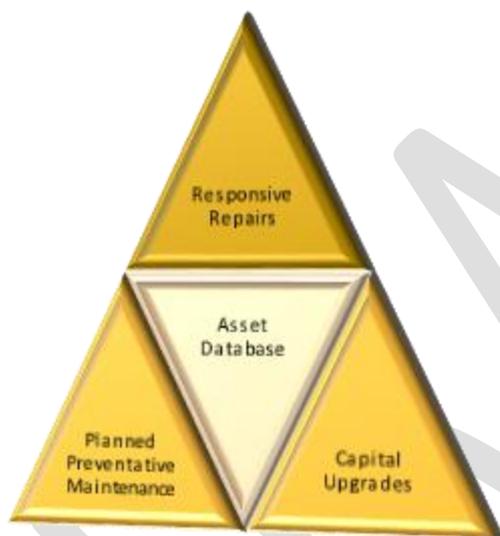
This model presents the same risks and disruption contained within the “Pro-Active” PPM with the addition of significantly increased staffing level and costs in order to accommodate the increased workloads, whilst an extremely high standard of housing stock would be achieved it would likely have further reaching impact on the cost of rent within the housing stock in order to affectively achieve the goals set out within this model and consideration

should be made as to whether this is an option prior to considering an Exhaustive PPM model.

Close working within all related services the sharing of information and PPM schedules would be essential, these would need to be created and recorded within a corporate Asset Management Database and accessible to all interested stakeholders.

3.0 Roles & Responsibilities

To ensure the success of a well laid out Planned Preventative Maintenance model it is critical that all stakeholders within councils Housing stock related maintenance, repair and upgrades work extremely closely so to ensure the same effective outcomes are achieved. Sharing of information and automated alerts should be implemented within all teams involved



Key to this success is the Asset information that is held within our Asset Database, the sharing of this information and how each team feeds into the bigger picture.

END