

PROFESSIONAL STANDARD



Planned preventative maintenance

Global

1st edition, January 2022

Effective from April 2022

Planned preventative maintenance

RICS professional standard, global

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RICS standards framework

RICS' standards setting is governed and overseen by the Standards and Regulation Board (SRB). The SRB's aims are to operate in the public interest, and to develop the technical and ethical competence of the profession and its ability to deliver ethical practice to high standards globally.

The RICS [Rules of Conduct](#) set high-level professional requirements for the global chartered surveying profession. These are supported by more detailed standards and information relating to professional conduct and technical competency.

The SRB focuses on the conduct and competence of RICS members, to set standards that are proportionate, in the public interest and based on risk. Its approach is to foster a supportive atmosphere that encourages a strong, diverse, inclusive, effective and sustainable surveying profession.

As well as developing its own standards, RICS works collaboratively with other bodies at a national and international level to develop documents relevant to professional practice, such as cross-sector guidance, codes and standards. The application of these collaborative documents by RICS members will be defined either within the document itself or in associated RICS-published documents.

Document definitions

<p>RICS professional standards</p>	<p>Set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions.</p> <p>RICS professional standards are principles-based and focused on outcomes and good practice. Any requirements included set a baseline expectation for competent delivery or ethical behaviour.</p> <p>They include practices and behaviours intended to protect clients and other stakeholders, as well as ensuring their reasonable expectations of ethics, integrity, technical competence and diligence are met. Members must comply with an RICS professional standard. They may include:</p> <ul style="list-style-type: none"> • mandatory requirements, which use the word ‘must’ and must be complied with, and/or • recommended best practice, which uses the word ‘should’. It is recognised that there may be acceptable alternatives to best practice that achieve the same or a better outcome. <p>In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence. It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.</p>
<p>RICS practice information</p>	<p>Information to support the practice, knowledge and performance of RICS members and regulated firms, and the demand for professional services.</p> <p>Practice information includes definitions, processes, toolkits, checklists, insights, research and technical information or advice. It also includes documents that aim to provide common benchmarks or approaches across a sector to help build efficient and consistent practice.</p> <p>This information is not mandatory and does not set requirements for RICS members or make explicit recommendations.</p>

Glossary and list of abbreviations

ACMs	Asbestos-containing materials and aluminium composite material cladding in the UK.
ACPs	Aluminium composite panels, a term widely used outside the UK.
AOVs	Automatic opening vents.
Condition survey	A standalone assessment of the physical condition of a property at a point in time.
Commercial property	<p>Any land or buildings being operated as a business. Commercial property can be subdivided into:</p> <ul style="list-style-type: none"> • offices • retail • industrial (manufacturing, storage, logistics) • leisure (hotels, recreation, sports, music, arts, etc.) • residential (housing portfolios, apartment buildings and complexes) and • public sector/infrastructure (education, civic administration, law and justice, health, transport). <p>While this standard is primarily concerned with buildings, the PPM of commercial properties may also include boundary walls, fencing, pavement, access roads and drainage associated with commercially operated land.</p>
HBE	Historic built environment: listed, protected, scheduled or classified buildings or areas of cultural or historical value as outlined in the relevant jurisdiction.
HVAC	Heating, ventilation and air conditioning.
IFSS	International Fire Safety Standards.
M&E	Mechanical and electrical.
O&M	Operation and maintenance.
PII	Professional indemnity insurance.

PPE	Personal protective equipment.
PPM	Planned preventative maintenance.
Residential property	Private dwelling houses or flats within apartment buildings, irrespective of size. These may be owner-occupied or the subject of private rental. Where dwellings form the assets of an incorporated company such as an investment portfolio or local authority housing stock, they should be considered and treated as a commercial entity (see <i>Commercial property</i>).
TDD	Technical due diligence.

1 Introduction

This standard has been prepared to provide RICS members, regulated firms and their clients with a source of best practice guidance in respect of planned preventative maintenance (PPM). This is a global standard, so has been written to cover all jurisdictions and apply to all sub-types of PPM survey.

PPM is the maintenance that is performed purposely and regularly to keep the structure and fabric, facilities, plant and equipment of a building in satisfactory operating condition. This is achieved by providing for systematic inspection, detection and correction of failures, either before they occur, where actually present or before they develop into major defects. PPM also helps to identify the point at which such items can reasonably be deemed to have reached the end of their economic lives, such that replacement or renewal may be necessary. PPM programmes are usually prepared to cover 5–10-year maintenance periods but can extend up to 30 years in duration and should be regularly reviewed and updated at frequent intervals.

Although the term PPM refers to 'preventative' maintenance, it should be acknowledged that maintenance is not always preventative. This standard also concerns all aspects of planned maintenance. It is intended to provide guidance to surveyors on how to go about undertaking a PPM survey and report for built assets, i.e. the type a building surveyor would undertake, rather than the type of 'planned maintenance' reports that may be carried out by an MEP engineer or facilities manager. It is important that RICS members undertaking this work should not exceed their level of competence and seek expert advice where required (see section 3.1).

1.1 Scope

This standard has been written for global application to commercial or residential properties. It has been prepared by a group of experienced surveyors connected with both the commercial and residential sectors. The relevant legal prescription associated with individual national, regional and local authorities must be followed. This standard and the subsequent undertaking of PPM surveys does not replace or remove the obligations on building owners, landlords and tenants for statutory compliance, reports and regimes.

This standard concerns the general application of surveying principles associated with the different property types and sectors. It does not cover all individual properties, sub-elements or building components. RICS members should assess each property on an individual basis, having regard for the specific needs of the client.

This standard is not intended to be an instruction manual detailing a step-by-step process that must be followed. Instead, it aims to set out the general principles that should be adopted when undertaking a PPM survey. Specific client requirements outside of the

principles detailed in this standard should be covered in the scope of services outlined in the client instruction, which is detailed in section 2.4.1.

1.2 Commercial and residential properties

PPM surveys for commercial properties allow owners, occupiers and investors to understand the current condition of their real estate assets, thus enabling them to plan the necessary investment, including the recovery of service charges, to ensure each element of the building performs as intended.

PPM surveys are not commonly undertaken for the majority of residential properties, but may be considered necessary for blocks of apartments and larger, complex historically important privately owned dwellings or to prepare sinking funds for properties that are owned or administered by management companies.

When considering the application of this PPM standard, it is important to acknowledge that the principles of assessing the key construction elements should be the same, irrespective of the property type or sector. The difference between commercial and residential properties is that much of the legal/technical requirements associated with the occupation or operation of the property are not applicable to private dwelling houses.

1.3 Effective date

This RICS professional standard is effective from 1 April 2022.

2 Client instruction

The principal requirement of a client instruction is to formalise the client's request by instructing the surveyor to undertake a PPM survey according to a defined scope of services.

PPM surveys utilise a methodical and systematic inspection or analysis of an asset, so it is feasible to use a generic format for client instructions that is transferable between different properties. However, RICS members should acknowledge the possible unique combinations or characteristics of different clients and properties, and treat each client instruction on an individual basis.

RICS members should make the client aware that the PPM survey does not replace the obligation for the building to comply with statutory procedures, and will not amount to or replace the relevant requirement for obtaining statutory compliance reports.

2.1 Initial discussion

In order to ensure that clients receive the most appropriate advice, RICS members should engage in an initial discussion to develop an understanding of their requirements. RICS members should begin by requesting information about the property from the client. This should include confirmation on ownership and any lease arrangements as well as any planned or proposed works such as refurbishment which may affect the maintenance strategy.

In order to ensure that they have the necessary experience to undertake the PPM instruction, RICS members should also establish the tenure, type, nature, size and age of the property. There is also a requirement to consider any specific characteristics such as historical value or listed status and whether this is located within an area of historical or cultural value. An understanding of the characteristics and complexity of the premises will allow RICS members to estimate the time required to undertake the survey and report. An appropriate fee can then be calculated, reflecting the timescales involved.

2.2 Client expectations and requirements

Clients obtaining PPM advice for their residential or commercial property should receive the following benefits:

- an understanding of the general construction detail and condition of the property, including the presence of defects and suitable recommended remedies such as repair, replacement or monitoring. Clients should also receive information concerning the potential risks associated with the cause and effect of defects, including the possibility of unchecked defect evolution
- sufficient advice to ascertain and prioritise the timing of repairs or replacements

- appropriately detailed information concerning the costs necessary for programming property maintenance, including cost liabilities, and
- robust information to support evidence-based negotiation for vendors, purchasers, landlords or tenants.

RICS members should establish any specific requirements that the client may have regarding the end use or purpose of the report.

While it is acceptable to receive an instruction where a client wishes the report to only address defects above a certain price threshold or within a limited time period, this may result in them receiving a report that does not accurately represent the current asset condition. For example, setting a cost threshold to report only defects above a certain threshold and limiting this to within a five-year period does not represent low-cost defects that have potentially damaging consequences. The client should be informed of the associated risks, limitations and exclusions. Where minimum cost thresholds are imposed, this does not absolve RICS members from identifying defects and notifying the client of their presence and potential evolution.

RICS members should state in the client instruction, as well as the subsequent report, any conditions imposed by the client. Furthermore, any future reliance letter or reliance clause in the contract (typical for PPM in vendors' packs) should state that the report findings are based upon the conditions and/or limitations of the initial client instruction.

RICS members are expected to deliver a comprehensive technical PPM survey, but it is acknowledged that some clients require this to be amended to reflect available budgets. While this can be done, it does not absolve the RICS member from informing the client of all relevant defects and issues. The survey can then be adapted into a PPM programme from the perspective of the 'service charge' or 'budget', where items (as discussed with the client) are prioritised and/or omitted in line with the funds available to maintain the asset. This means the client is notified of all the relevant defects or issues, while receiving sufficient cost information to make an informed decision on what to prioritise, and the RICS member has discharged their duty of care.

RICS members should consider advising their clients on the cost / benefit of undertaking works within the timescale stipulated and the possible risk of cost increases due to inflation or defect evolution attributable to delays in implementing timely repairs. Potential price inflation is important, but RICS members are not expected to be financial or fiscal experts in the forecasting rates of inflation (see also section 6.3).

It is recommended that RICS members should include a completed version of the RICS schedule of PPM services (Appendix A), which has been produced alongside this standard, to ensure the scope of instruction is clearly captured with the client.

2.3 Survey type

RICS members should assess the requirements of the client and advise as to whether PPM is the most appropriate type of survey. PPM is essentially concerned with surveying (inspecting

and reporting on) an existing residential or commercial property that may or may not be fully or partially occupied. The objective is for RICS members to advise on immediate reactive maintenance requirements that may be apparent, as well as construction elements that require proactive repair or replacement.

In most cases, the property in question will already be under ownership or leased by the client. This differs from the acquisition process associated with technical due diligence (TDD) surveys, in which property ownership or occupation is likely to change. If the property is the subject of a change of ownership, then a TDD survey is more relevant, although it is acknowledged that PPM may be instructed or included as part of vendor TDD information.

The process of undertaking a PPM survey includes a site inspection, which is a similar process to TDD. However, TDD can also involve the technical assessment of development proposals or works in progress (pre-completion), which is not normally the case for PPM. It is possible to forecast PPM in accordance with the building design to ensure that suitable maintenance regimes are in place from day one.

PPM survey reports used by the client to budget, prepare and procure maintenance works may be used as an 'internal' document by the client or their advisors. Once this document is disclosed 'externally' to tenants, end users or prospective alternative investors, it may no longer be fit for purpose. If the client seeks to obtain a report and budget estimate for immediate repairs and/or planned investment, the RICS member should recommend that a building survey or condition survey is more appropriate.

2.4 Key items

The following items should be included in the client instruction, irrespective of the property type or sector:

- names and addresses of the contracting parties ('consultant' and 'client')
- date of instruction
- scope of works: precisely what services will and will not be provided (see section 2.4.1)
- areas to be inspected or excluded
- list of agreed/requested documents to be reviewed (see section 2.4.3)
- all limitations that apply to the advice being obtained and on the scope of the survey/report
- the use of electronic data collection equipment and reporting
- programme or timescales for the inspection and report
- format of the report (e.g. hard copy, PDF, Excel, interactive database or a combination of these formats), with an example
- the appointment of other experts or subconsultants
- specific access requirements/health and safety
- specialist access requirements and restrictions

- fees and variations to the contract, including the provision for extra works (additional site visits, review of extra technical documents, supplementary meetings, etc.)
- provision for payment terms and late payment
- disbursements (specialist equipment, travel, accommodation, etc.)
- costs associated with subscription to any interactive databases or online access
- any standard terms of business
- prequalifying requirements such as non-disclosure/confidentiality agreements, work permits or specific training certificates/courses
- signatures of all relevant parties to the contract and
- level of liability and any other cover and limitations.

The following items may also be included:

- evidence of professional indemnity insurance (PII)
- arrangements for further investigations/opening up resulting in property damage
- dispute resolution
- personal guarantees for payment
- advance payments and
- reliance letters or agreements.

2.4.1 Scope of services

One of the most important features of the client instruction is the scope of services. This may be the most bespoke part of the instruction and RICS members should tailor it to the needs of the client, including any specific conditions or stipulations.

The key requirement of the scope of services is to expressly clarify items that will and will not be included in the PPM survey. RICS members should consider whether there are relevant local mechanisms for categorising building elements. Alternatively, the following listed key building elements and subcomponents can be used. It is not, however, considered to be an exhaustive list and should be tailored to the specific building in question:

- structure:
 - substructure
 - superstructure
- roof(s):
 - roof covering(s)
 - parapet walls
 - rainwater goods
 - roof lights
 - other (chimneys, flues, lightning conductors, access provision, walkways, lifelines or safety fixings, plant room compounds and doors or tenant installations)

- facades:
 - external walls and cladding
 - windows and doors
 - entrances
 - other
- internal finishes:
 - ceilings
 - internal walls and partitions
 - floor structures
 - floor finishes
 - stairs
 - internal joinery (windows, screens, doors, skirtings, etc.)
 - decorations
 - sanitaryware
 - fixtures and fittings
 - passive fire precautions (compartmentation, etc.)
- external areas:
 - access routes/entrance
 - external paving/pathways
 - parking
 - service/delivery yards
 - landscaping
 - other (street furniture, boundary treatments)
- service installation:
 - HVAC supply and distribution
 - electrical supply and distribution (power and lighting)
 - sanitary/water supply, distribution and evacuation (normally excluding sewers)
 - plumbing
 - storage tanks
 - fire detection, alarm and other active fire installations (automatic opening vents, etc.), including firefighting installations
 - lift installations
 - utility connections
 - renewable/sustainable energy
 - automatic sunscreens or power-assisted brise soleil, and

- other specialist services (trigeneration/photovoltaic cells, etc.).

The client may wish to add to these. Where they decide to omit building components partially or wholly from the scope of works, RICS members should advise on the potential consequences of doing this. Included in this advice should be the risk of cost omissions, as well as the potential for the evolution of defects in the affected areas.

The scope of services should also explicitly detail items in the PPM survey and report that will not be included, such as the internal finishes when those within the tenant demise are covered by existing lease repairing covenants. While the report may include items drawn from other documentation, it is not a health and safety audit, fire risk assessment, asbestos management plan or disabled access audit, and should not be relied upon for these purposes. Where these reports are deemed necessary then they should be advised upon in the outputs of the survey. The PPM survey will also not include tap or adhesion testing or fixing/torque tests.

Within the scope of services, RICS members should inform the client that the inspection is visual, with no attempt being made to open up shafts or concealed areas for detailed inspection unless otherwise requested by the client.

2.4.2 Survey

In the instruction, RICS members should inform the client about how concealed or inaccessible areas will be addressed. Essentially these will be noted during the survey, with an explanation as to why they were not inspected. In the event that areas of the property are not accessible, the potential risk associated with not gaining access should be detailed in the report, as well as a recommendation on what to do to mitigate that risk.

Generally, no intrusive inspection or tests of the services will be performed unless specifically requested by the client. This is particularly relevant to air or water flow rates associated with HVAC. Likewise, no temperature or light/lux recordings will be made unless stipulated by the client. The scope of works should make provision for RICS members to recommend appropriate further investigations if evidence exists to suggest the need for these extra works, such as closed-circuit television (CCTV) inspection of drainage or testing deleterious materials.

2.4.3 Document review

It should be noted that some information contained in the PPM may be drawn from other documentation, particularly statutory compliance documents such as fire risk assessments, disabled access audits, listing, classification or health and safety audits. In practice, these items may not be inspected. For example, it is appropriate to integrate the output from a fire risk assessment that has been specifically instructed to inspect fire stopping, rather than duplicate this aspect of the inspection.

Where instructed to review documents provided by other specialists, particularly those relating to fire safety, members should check that their PI insurance provides cover for such a review and should ensure that clients are aware that the member is not providing advice

on fire safety. Members should also consider appropriate contractual provisions to ensure proportionate liability between the professionals involved. For further guidance see the latest edition of RICS information on [Risk, liability and insurance](#).

The primary aim of the document review is to determine the scope of repairing responsibility and to identify work items from reports that go into greater depth than the PPM survey. In the scope of services, it is important to confirm any agreed key documents that will be reviewed. In most instances, these are documents prepared by others and the review is to establish their key findings. The role of RICS members is to report the findings of others and not to explicitly verify or confirm the findings (unless specifically requested by the client).

In the client instruction, it is important to agree a list of documents to be reviewed, and to stipulate that these are provided by the client or their agents (property or asset manager). If the agreed documents are not made available for review, RICS members should confirm their absence, assess the potential risk to the client of their absence and recommend a course of action to mitigate the risk. This may include the procurement of missing documents, which should be covered in the client instruction as extra works.

If instructed to do so RICS members should request copies of the documents identified in section 3.3.

Where PPMs are commissioned for properties which are partially or wholly subject to a lease, the scope of services may include the review of lease documentation to ascertain the extent of liability, the demise and the inclusion of M&E plant and equipment. While the review is not specifically to provide service charge advice, lease documentation will improve the understanding of RICS members and enable the PPM survey to be tailored to include only the elements that are relevant to the parts of the property which form the repairing responsibility of the Client

2.4.4 Safety requirements

The client instruction should detail the requirement for safe working access, and RICS members should make pre-visit access requests to the owner, occupier or property manager. RICS members should check in advance that roof access can be made, and also if there is a specific requirement for ladder or platform access (disbursement costs), whether internally or externally. Where access cannot be provided to all areas, the client instruction should advise that the RICS member will inform the client of this, any associated risks and appropriate recommendations to mitigate them. This may include the need for specific additional visits, accompanied access to secure or restricted areas, or specific access equipment such as platform lifts, binoculars or drones.

2.4.5 Timescales

In the client instruction, the key dates required by the client for the issuing of the report should be confirmed. Additional dates such as those for visits, interim submissions and payment of invoices may also be included in the timescales.

RICS members should assess the timescale and inform the client as to whether it is possible to achieve the objectives in the client instruction before confirming it. RICS members should suggest and agree to an appropriate and reasonable time that will enable them to complete the scope of services as required by the client. The agreed timescale should be subject to gaining the necessary access to the premises and obtaining all of the relevant documents for review. If safe access cannot be granted or areas of the property are inaccessible, the client instruction should allow for the provision of additional time and cost, if applicable.

2.4.6 Fees

In the client instruction, there should be clarity concerning professional fees irrespective of whether this is a fixed fee or calculated on an hourly or day rate. It should state whether tax (on goods and services) is applicable and whether disbursements are included or excluded. Where disbursements such as travel to the site or subsistence and overnight accommodation are necessary, the value of these should be defined and agreed in the client instruction.

Concerning extra works, there should be sufficient detail in the client instruction to address the basis for the calculation of additional fees (hourly or day rates).

2.5 Confirming the instruction

Both the client and the RICS member should acknowledge the contents of the client instruction by entering into a formal agreement. According to the relevant contract law of the country or region of operation, both the contracting parties should recognise to abide by the terms of the client instruction prior to commencing the PPM survey.

3 Survey preparation

Prior to undertaking the site survey, RICS members should obtain instruction from the client to proceed. This should be in accordance with the client instruction, which should be clear and unambiguous regarding the agreed scope of services.

3.1 Competence

RICS members undertaking PPM surveys must have the relevant training and experience to be deemed competent to do this, in line with the [RICS Rules of Conduct](#). RICS members should therefore have the relevant experience for the specific property types and sectors. They should be sufficiently skilled to inspect and report on all aspects of the property; this should include appropriate knowledge of building technology and pathology.

RICS members should recognise gaps in their knowledge or skills and, where appropriate, seek to appoint a suitably qualified expert or subconsultant, or a consultant directly appointed by the client, to advise on or undertake appropriate further investigation. The appointment of a subconsultant or expert is covered in section 3.6.

3.2 Project coordination

For large commercial properties or portfolios of buildings, it is likely that more than one surveyor and professionals from other disciplines will work together. Therefore, it is important to ensure that the group or team members are briefed on and are familiar with their relevant sections of the scope of services and the PPM format, including defined terms and costs, by a lead surveyor or consultant. RICS members may wish to appoint an individual person or central coordinator to brief the team members, allocate tasks and collate the findings or reports.

Clear lines of communication should be established between members of the team from the outset to prevent errors or duplication in data gathering.

All individuals involved in the project should be briefed on the following:

- site location
- any specific access requirements
- purpose of the survey (subject to client confidentiality)
- names and contact details of the surveyor(s)
- estimated time required for the visit(s)
- a list of key areas to be inspected (including roofs and basements)
- naming convention or room numbers and

- information concerning any known site risks or hazards.

RICS members should endeavour to obtain (where available) copies of the as-built floor plans, elevations and sections prior to the visit so that these can be taken to the site. With a copy of the plans, it is possible to annotate the information to include key measurements or dimensions, and mark areas or rooms that were not accessible during the inspection.

3.3 Information gathering

Prior to the visit and with reference to the scope of services, RICS members may seek to obtain the relevant information or documents for review (subject to those agreed in the client instruction), for example:

- equipment inventory (manufacturer and commissioning date)
- structural alterations
- O&M manuals and health and safety files
- guarantees or warranties (manufacturer and installer)
- local issues such as flooding, storms and earthquake damage
- the extent to which tenant equipment or operations are 'fixed' to the premises
- the instructing party's repairing obligations
- maintenance inspection reports for service installations, access equipment or roof-mounted equipment such as lightning conductors or life safety systems
- compliance with statutory requirements:
 - building permits and regulations
 - fire safety and engineering inspections (including fire risk assessments)
 - energy audits or energy performance certificates
 - mandatory statutory maintenance reports
- health and safety audits
- water hygiene and Legionella reports
- asbestos inventory and asbestos removal
- access audits
- investigation/treatment of deleterious materials and
- any existing condition surveys.

3.4 Equipment

Prior to the site visit, RICS members should obtain the equipment required to undertake the survey and record data. This may include:

- a notepad, pen, pencil or tablet/phone with appropriate apps

- a camera or phone/tablet with sufficient zoom facility or binoculars to record detailed defects from distance
- basic measuring devices such as laser tapes and tape measures for taking check dimensions, and
- devices to record the presence of moisture or dampness.

Prior to accessing the site, RICS members should establish any requirement to bring specific personal protective equipment (PPE) or verify that this will be made available on site.

Typically, PPE includes:

- hard hat
- safety glasses or goggles
- gloves
- face mask
- ear defenders
- safety boots and
- high visibility jacket or vest.

When working at height, RICS members may be able to clip onto fixed lifelines or anchor bolts. If these are available, RICS members should consider utilising them if they have the necessary safety harness and training, and the lifelines and bolts have been recently certified as safe.

3.5 Health and safety

RICS members should undertake a risk assessment prior to commencing the site visit, and as much information as possible should be gathered about the premises and its surroundings. A pre-site inspection visit to the premises or analysis of a previous PPM survey report may enable RICS members to identify potential risks related to the site and its operation. If it is not possible to visit the site before the survey, a desk survey can be undertaken with the use of satellite information gleaned from internet searches, although images may be date limited. This may highlight images of the roof, facades and external areas, but will not detail any internal risks associated with the building's operation. This pre-survey online assessment may identify the number of buildings (including outbuildings) and it may be possible to note the number of storeys to estimate the possible building height.

Images of the roof can be used to identify the presence of parapet walls or edge protection and access walkways. However, it is unlikely that these images can be used to conclusively verify the roofing materials or any fragile surfaces that cannot be walked upon. RICS members should seek clarification from the building owner, occupier or property manager about any areas of the roof that are, to their knowledge, fragile and/or dangerous.

Site operation should be verified prior to the survey by consulting the owner, occupier or property manager. Site characteristics and use will influence the risk assessment. For specific industrial or manufacturing sites, there are likely to be highly controlled health and

safety procedures in place. If there is little or no information available about the site or its operation, RICS members should consider the following potential risk areas:

- working close to plant or machinery (including lift machine rooms)
- lone working
- working at height
- working in confined spaces or underground
- vehicle movements
- excessive noise
- excessive heat or cold
- working in close proximity to microwaves, electromagnetic fields or radiation
- chemical emissions (fumes, gasses or liquids)
- specific hygiene requirement (food preparation)
- biohazards (laboratories)
- specific time restrictions/daylight hours
- unoccupied areas (including areas where lighting and heating have been isolated) and
- secure areas with requirements for specific security clearance.

Before the survey, RICS members should establish the potential implication of the visit, and whether their presence will disturb the operation of the premises and require a general or localised shutdown of the facility.

RICS members should be familiar with the current edition of the RICS standard [Surveying safely](#) and this should be contextualised with any information received about the premises.

3.6 Third-party consultants and their appointment

In order to prepare an objective and comprehensive PPM survey, there may be a requirement to engage specialist consultants or experts. These are typically used in relation to the service installations (M&E), including HVAC, electricity, vertical transportation, suspended access equipment and fire engineering. Other sub-specialisms may include structural engineers, fire engineers, cladding consultants and asbestos experts. Where possible, RICS members should be confident that subconsultants are sufficiently qualified to undertake the task and have the necessary PII cover. Their appointment may be made:

- directly by RICS members
- directly by the client or
- indirectly by RICS members on behalf of the client.

3.6.1 Directly by the RICS member

When directly appointing a third-party consultant, RICS members should:

- seek approval to appoint from their PII provider

- include the costs of the consultant in their own appointment
- check that the consultant has the appropriate level of PII as required by the client
- agree a scope of works with the consultant and
- coordinate and review the report of the consultant (subject to PII provider confirmation).

3.6.2 Directly by the client

When the third-party consultant is appointed directly by the client:

- the client is responsible for paying the consultant and confirming the client instruction and the scope of services, and
- RICS members may be asked to review the subconsultant's report.

3.6.3 Indirectly by RICS members on behalf of the client

When an RICS member indirectly appoints a third-party subconsultant on behalf of the client, the RICS member:

- coordinates the appointment of the subconsultant
- chooses the subconsultant, with the client's approval
- establishes the terms of the subconsultant's appointment, obtaining the client's agreement together with their approval for payment and
- should inform the client that they are not responsible for the content of the report by the subconsultant.

RICS members should consider stating in the client instruction that they are not responsible for the content of the subconsultant's report.

4 The inspection

While there is a bespoke nature to many buildings and client requirements, the principle of undertaking a PPM survey is universal: to undertake a methodical examination of the main building or construction elements.

RICS members should have sufficient experience and knowledge of the different materials used for the building elements and the associated requirements to prevent their decay or deterioration.

The inspection of the property is visual. Unsecured access hatches or doors should be opened in accordance with the client instruction. The visual inspection will not include concealed areas, or opening up raised floors or suspended ceilings, unless explicitly requested by the client. The presence of a tenant's fixtures, fittings, equipment, personnel or materials may also restrict the visual inspection. See section 4.2 for further information on access limitations.

Where the client has requested opening up concealed areas, this should be done where there is evidence to suggest defects are present or on a sample basis. It may be necessary to obtain a copy of the asbestos inventory or commission an asbestos survey prior to opening up. Opening up concealed areas may require specific equipment and/or the assistance of a contractor for removal and reinstatement works. There are also potential difficulties with the disruption this may cause to the tenant, occupation or operation of the premises. Where there is evidence of the need to open up areas that are likely to cause disruption, the RICS member should inform the client, and refer where necessary to any specific clauses in the lease agreement dealing with such an inspection or repair works.

RICS members may inspect aspects of the building on a sample basis where this is sufficient to validate the general or overall condition. The inspection and testing of repetitive items such as window mechanisms should also be done on a sample basis, and RICS members should agree the sample size in advance with the client, outlining and specifying this in the report. RICS members may also extrapolate quantities with the use of drawings by either counting or measuring from them. For example, it may be appropriate not to inspect every room, but to measure quantities and count numbers of doors from drawings etc.

RICS members may also rely on other more comprehensive inspection documents that are specifically designed to inspect one aspect or element of the building in greater detail.

4.1 Recording data

Working within the constraints of time and available access, RICS members should systematically inspect the property, taking notes and recording photographic evidence. Notes may be recorded in written form, dictated or with tech devices such as smartphones or tablets with cloud-based inspection/reporting software (see section 4.1.1). Data recorded

on site should be used to develop the survey report and RICS members should retain a copy of the original, unedited survey notes on file.

RICS members should agree on a naming convention or room numbers etc to ensure uniformity of reporting for large or complex assets or when working with multiple surveyors or professionals from other disciplines.

4.1.1 Electronic data capture software

Electronic data capture software may be used in PPM surveys, particularly for larger survey programmes with multiple surveyors or survey programmes spanning over several company office locations, where tools to increase consistency are key.

Rather than a traditional pen and paper approach, electronic data capture involves apps on mobile or tablet devices. With the wealth of data captured on site and the tools available to manipulate that information into dashboards, reports and planned maintenance programmes, IT systems can provide surveyors with the ability to provide consistent data and outputs across their portfolios.

Industry-recognised element lists can be prepopulated into the software, each with predefined defect descriptions, industry-recognised unit costs and activity lifespans. Collecting information in this way can ensure multiple surveyors are working to the same element lists in real time, using the same terminology and cost sources to ensure consistency of the data and report outputs. Additionally, collection of data in standard element formats can allow for intelligent analysis of the data by the client in order to manage their portfolio of assets.

RICS members should note, however, that software is to be used only as a tool to assist in the completion of these surveys, and their professional opinion will always be crucial to the success of any survey programme. RICS members should be sufficiently trained and competent in the use of such software, as well as being aware of its limitations.

4.2 Access

In accordance with the client instruction and agreed scope of services provided, RICS members should inspect all or part of the main building elements as instructed. Where possible and safe to do so, RICS members should seek to access all areas within their instruction. Where safe access is not possible or areas are inaccessible, RICS members should establish any known defects through dialogue with the user of the building, then seek to inspect or ascertain their cause, effect and significance. In the report, RICS members should detail the risk associated with inaccessible areas, proposing a solution to mitigate the risk. This may include further investigation or opening up, supplementary visits to locked or secured areas of the site, or the use of specific access equipment such as platform lifts or drone surveys.

4.3 Building elements

The PPM survey has the dual objective of capturing both the present-day condition of the property and the ongoing maintenance requirements over the reporting period (see section 2.2). It is therefore important that RICS members understand the typical lifecycle of each building element, and give due consideration to the specific location and use factors that may influence the building element's performance over a given time period.

Each building element should be considered, as well as its composite sub-elements, to ensure a complete picture of the building's condition and maintenance performance can be obtained. Whether this is reported on an elemental or sub-elemental basis will be determined by the client's instructions. RICS members may seek agreement with the client on how these need to be presented, this can include specific tailored format or in line with published standards such as NRM etc.

The following table identifies common building elements and should be used as a prompt during surveys. It is not, however, considered to be exhaustive and surveyors should ensure all elements and sub-elements are included or adapted to suit the needs of the client.

Element	Common sub-elements
Roofs	<ul style="list-style-type: none"> • Roof covering (structure, insulation and finish) • Parapet walls (structure, linings, flashings and copings) • Rainwater disposal systems (type, positioning, quantity and protective grilles) • Roof lights (structure or housing, type, fixed or opening and the presence of smoke vents) • Other items (chimneys, flues, lightning conductors, access provision, walkways, lifelines or safety fixings, plant room housings/compounds and doors or tenant installations)

RICS members should seek to inspect the external surface of the roof, and its internal underside where visible, to establish the construction detail, condition and evidence of defects. through visual inspection, RICS members should verify the roof structure, presence of insulation (warm or cold deck technology) and the roof finish or waterproof membranes. roofs should be inspected for loose components that may create a hazard, and appropriate advice should be reported accordingly.

Element	Common sub-elements
Structure	<ul style="list-style-type: none"> • Substructure • Superstructure • Floor structure • Roof structure

In most normal circumstances, it is unlikely that RICS members will be able to inspect the foundations of the premises without excavating or exposing them. This should be a normal limitation in the client instruction. However, if RICS members identify evidence to suggest the presence of structural movement, further investigation should be recommended to include the possibility of exposing the foundations.

RICS members are not expected to verify the design concept or calculations, but should note and report visual evidence of structural alteration, damage, defects, deterioration or deflection. During the inspection, RICS members should undertake some basic check dimensions, such as the finished floor-to-ceiling heights, storey heights, facade module and structural grid. This information is useful for generating quantities of work items.

Element	Common sub-elements
Facades	<ul style="list-style-type: none"> • External walls and cladding • External sub-blinds and brise soleil • Windows, doors and joinery

For curtain walling, cladding and complex facade systems, RICS members should seek the advice of a specialist facade consultant.

Facades should be inspected for loose components that may create a hazard, and advice should be given on the frequency of future inspections as part of the PPM report.

Element	Common sub-elements
Internal parts	<ul style="list-style-type: none"> • Floor finishes • Wall finishes • Ceiling finishes • Internal doors, fire doors, ironmongery • Sanitary and welfare installations • Stairs and handrails • Joinery • Internal wall/partition construction

It may be necessary for members to divide their reporting of internal building elements further, into location or use within the property, for example:

- entrance halls, lobbies and corridors
- staircases and emergency escape routes
- central core: lift lobbies, sanitary rooms, storage areas
- staff welfare, kitchens and changing facilities, and
- operational areas: offices, meeting rooms, shop floors, production, bedrooms, etc.

Element	Common sub-elements
External areas	<ul style="list-style-type: none"> • Access roads and car parking • Hardstanding areas, paths and patios • Perimeter fencing, walls and hedges • Access and exit points • Landscaping, including vegetation, water features and gardens • Outbuildings • Associated mechanical, electrical and plumbing features: surface drainage, irrigation systems, etc. • Facilities such as sports courts, swimming pools, etc.

An inspection of the external areas is usually limited by the boundaries of the premises/site.

Where there are visible features outside of the boundary that appear to be a health and safety risk or likely to cause harm, defects or cost to the premises, these should be noted and reported to the client and neighbouring occupier. Where it is not possible to contact the relevant neighbouring individuals or organisations, RICS members should raise the issue with the local authorities or emergency services as necessary.

Element	Common sub-elements
Building services	<ul style="list-style-type: none"> • HVAC supply and distribution • Electrical supply and distribution (power and lighting) • Public health systems (excluding sewers) • Domestic water supply and distribution • Fire detection and alarm systems • Firefighting (sprinklers, dry risers, etc.) • Vertical transportation • Utility connections • Renewal/sustainable energy • Automatic sunscreens or power-assisted brise soleil • Other specialist services (trigeneration/photovoltaic cells, etc.).

Members should refer to their instructions and consider the limitations of their knowledge before reporting on building services. It is likely that input from specialist engineers will be required to appropriately report upon the condition and maintenance requirements of building services.

It is not normal to undertake any tests of the service installations during the site inspection, particularly services related to fire detection, alarms or firefighting/suppression.

Assessments of serviceability are usually done through a review of the statutory documents,

which should be held as part of the onsite as-built file or provided by the client. Where there are copies of current, up-to-date maintenance reports or test certificates, RICS members should review these where instructed to do so, and report any comments or findings. If further clarification is required to understand or explain the information included in technical documents, RICS members should recommend further investigation or analysis from a suitably qualified expert (as detailed in section 3.6).

When advising on remedial works, members should consider the most appropriate repair in the best interests of the building to establish the best possible solutions. Unless otherwise instructed by the client, RICS members may later amend the findings or recommendations following discussion with the client, which can be documented in the report.

Concerning fire engineering, RICS members are not expected to take on the role of a qualified fire safety engineer or specialist. As part of the legal/technical document review (where instructed), RICS members should establish whether there are any acceptance reports from the initial design team or relevant authorities or fire risk assessments confirming compliance of the premises with fire regulations. During the visual inspection, RICS members should note any obvious evidence of alterations to the structure and its protection that may compromise resistance to fire.

RICS members should note the presence of potentially deleterious materials, including asbestos-containing materials, composite cladding, aluminium composite materials and high-pressure laminate (HPL). Where instructed, RICS members should review O&M manuals and discuss with manufacturers to ensure these materials are being used appropriately.

For the decoration of internal and external building elements, RICS members should consider the use of the building and the amount of wear the elements will receive, as well as the client's standard of decorative repair and the budget allowance for decorations. Occupational agreements may impose decoration intervals on occupiers and landlords.

Typically, PPM reports that cover periods of 5–10 years will not include day-to-day maintenance, testing, cleaning or security. The client may have separate annual PPM reports covering these maintenance items, often provided by a facilities/maintenance contractor. It may be applicable to include an overall cost of these services within a long-term PPM report for accountancy/service charge purposes.

5 Legal/technical

The PPM survey and report may include a review of legal/technical issues and associated limitations. When instructed and reporting on test certificates, specialist reports, existing plans, dimensions or measurements, health and safety, fire engineering or acceptance reports, RICS members are essentially reporting the findings of other specialists in each of these fields. It is not the responsibility of the RICS member to confirm or verify legal compliance unless specifically requested by the client. However, where there are obvious visual omissions or defects that affect legal compliance, RICS members should note this in the report. They should inform the client of the potential risk and propose a solution to resolve the issue or investigate it further.

RICS members should have appropriate knowledge and understanding of the legal/technical issues associated with the premises. Where the building or building elements have a technical application as well as a requirement to conform to legal obligations, there will be a wide variety of considerations for RICS members to take into account. While RICS members are not obliged to perform a regulatory audit on the premises unless otherwise instructed, they are required to be aware of legal compliance. It is the responsibility of the owner, occupier or property manager to make legal/technical documents available for review. An allowance for this, including cost and any limitations, should be included in the client instruction.

5.1 Health and safety

In most cases, commercial building occupation and use obliges the owner or occupier to implement health and safety legislation relevant to the country, state or region. RICS members should have awareness of the principal health and safety requirements, and in particular those affecting the occupation of the premises. Specific tenant operations or uses are typically outside the scope of the PPM survey. RICS members are expected to use their judgement, expertise and duty of care to inform the client immediately of health and safety issues that pose an imminent danger to life.

The PPM survey and report are not expected to comprise a health and safety audit or risk assessment of the property; RICS members should rely on the existing statutory documents, including the health and safety audit. However, the PPM survey should note any obvious health and safety maintenance items, for example:

- slips, trips and fall hazards
- low head heights
- overloading, including crowd loading requirements (e.g. for stadiums)
- instability
- demolition and maintenance hazards, presence of potential asbestos containing materials

- maintenance and other safe access issues
- confined spaces
- falls, falling objects and fragile material
- edge and barrier protection
- glazing
- fresh air, temperature and weather protection
- humidification and air purification
- passive and active fire precautions, fire alarm and detection systems, AOVs, and firefighting provision (wet/dry risers, fire shaft, firefighter lift, fire switch, etc.)
- emergency routes
- lighting levels and
- electrical installations.

5.2 Fire engineering

Fire safety is a complex issue and, unless otherwise qualified and competent, RICS members should not verify the compliance of the premises with the relevant legal regulations, standards and codes. Members should be clear with clients that the PPM survey and report do not constitute a fire safety audit or fire risk assessment and that specialist advice should be sought about these responsibilities.

If agreed in the instructions, members should review the findings of any existing fire risk strategy, fire risk assessment, audits or acceptance procedures insofar as they require maintenance work items to address them, and report on whether these specialist recommendations have been actioned.

Where the visual inspection or any agreed document review reveals obvious deficiencies or evidence to suggest breaches of fire safety regulations or good practice, the member should report these to the client with a recommendation that specialist advice should be sought.

The member should advise the client that their inspection does not replace the obligations for the building owner, landlord or tenant concerning statutory compliance and the need to obtain the relevant fire risk assessment associated with the property. Fire safety on the premises may require periodic inspection by the owner, landlord or tenant, and this should include regular inspection of fire doors as well as regular testing of fire alarm and detection systems, emergency lighting, AOVs, sprinklers, and other firefighting devices such as wet/dry risers, fire extinguishers, fire switches, firefighter lift, etc.

5.3 Accessibility

The requirements for disabled access or accessibility associated with inclusivity in the built environment also vary between countries, regions and states. The PPM survey and report do not constitute an access audit, but may note the findings of any existing access

reports although it should be acknowledged that work items are frequently recommended to be undertaken as part of refurbishment rather than maintenance works and therefore may largely be excluded. The definition of disability and the appropriate provisions for access should be explicitly defined by legislation and applicable regulations. Tenant use or occupation as a service provider may require explicit access considerations, including internal adjustments or operating policies. RICS members should not comment on this unless it is a building owner or landlord requirement to provide accessibility. Retrospective adjustment to existing buildings can be complex, particularly with older or historic properties; RICS members should note any key omissions and recommend further investigation or an access audit by a suitably qualified specialist if required.

5.4 Environmental considerations

The PPM survey and report do not constitute an environmental assessment, but RICS members should have sufficient knowledge and understanding to advise on the following environmental considerations:

- energy efficiency
- noise and disturbance, and
- pollution, contamination and environmental control.

5.4.1 Energy efficiency

The PPM survey and report should take into account the energy efficiency of the premises and any factors that may affect this. Where instructed, RICS members should review any existing energy audits provided for the building.

RICS members should consider the inclusion of energy efficiency recommendations in the PPM report outputs, where instructed to do so by their clients. Members should note that including energy efficiency improvements in a service charge PPM report may contravene the RICS standard [Service charges in commercial property](#). RICS members should consult a specialist before proceeding.

Where instructed to do so, RICS members should not be expected to inspect or examine the presence, type or thickness of insulation to roofs or facades if this is concealed or not visible. A visual inspection should note the presence of any construction detailing that may compromise the thermal efficiency of the premises. In particular, RICS members should note the presence of deficiencies in the building envelope, such as cold deck construction, cold bridging or inefficient facade and glazing systems. The building orientation, such as the north-south aspect, can affect solar gain as well as heat loss; this should be reported, along with the presence of any external solar blinds or brise soleil.

RICS members should not comment on the efficiency of service installations unless suitably qualified. The absence of insulation for pipework or ducting, and the presence of regulation systems for central HVAC or individual heating or cooling emitters, should be noted or reported on. If RICS members have insufficient knowledge of service installations or no

access to documents quantifying their efficiency, they should obtain a specialist report from an M&E engineer.

5.4.2 Noise and disturbance

Noise may be generated either internally or externally, and can have a detrimental effect on building occupants or the neighbouring environment. RICS members are not expected to undertake tests to record noise levels internally or externally, but should note any apparent evidence of high noise levels, including any complaints raised by the occupier to the owner or property manager. Where instructed to do so, RICS members should request confirmation from the owner, occupier or property manager of any reported noise issues. Where operating permits or licences stipulate compliance with maximum noise levels, RICS members should seek to obtain confirmation from the building owner, occupier or property manager that these have not been exceeded. Noise generated externally from aircraft, heavy traffic or industrialisation should be noted by RICS members and cross-referenced with any observations or internal complaints. If noise levels or complaints cannot be verified, RICS members should recommend obtaining confirmation from acoustic specialists.

5.4.3 Pollution, contamination and environmental control

The PPM survey does not constitute an environmental assessment. However, where instructed to do so, RICS members should report the findings in any existing reports in the technical documents held for the property concerning pollution, contamination and environmental control.

RICS members should note the presence on the site of material or activities that may pollute the ground, drainage or water courses, or air. Where instructed, RICS members may review the operating licences or permits concerning site use and any operating conditions relevant to them, if available. It is not the responsibility of RICS members to verify that the site is being operated in accordance with the relevant environmental control, but any obvious evidence suggesting possible pollution or contamination should be noted.

Visual evidence of possible air pollution in the immediate locality or from adjacent premises such as chimneys, flues and exhaust extracts should be noted, and RICS members should provide advice on the potential effects of these. The presence of fuel oil or gas storage, vehicle refuelling and vehicle washing facilities should also be noted, with a recommendation to cross-reference their use with the conditions stipulated in the relevant operating permit. It is not the responsibility of RICS members (unless qualified and instructed) to assess and report upon the condition of fuel storage facilities.

Waste management, including the storage and disposal of waste materials or products, should be noted. Evidence of vermin and existing pest control should also be noted and reported. It is not the role of RICS members to assess waste management processes, but they should report on any obvious problems associated with these processes. Uncontrolled storage of waste materials can pose a health hazard or risk of fire, particularly arson. RICS members should note this, informing the client immediately.

The risk of arson and vandalism, typically associated with nonsecure premises or sites, should be noted if observed by RICS members as part of their assessment of external areas, boundary walls, fencing, storage of materials and CCTV.

RICS members are expected to have knowledge and understanding of the area in which they operate, and this is of particular relevance concerning the potential presence of live or historic mining or specific ground conditions. While a PPM survey will not constitute a risk assessment for storms, flooding, earthquakes or other natural disasters, RICS members should have enough awareness to be able to inform the client of any known recent events.

5.5 Deleterious materials

RICS members should have sufficient knowledge of historic and current building technology to be able to note the presence of, and advise on, materials that are considered to be hazardous or deleterious within their locality. Where there is a legal requirement to control or manage the presence of such materials, RICS members should not undertake this, but should review any provided registers and reports prepared by specialists, where instructed to do so. If there is a suspicion of deleterious or hazardous materials within specific construction elements or components, RICS members should recommend, where necessary, further inspection or testing.

5.6 Sustainability

Sustainability in the built environment is of utmost importance. RICS members should consider the sustainability of their advice at all stages of the PPM process, including through specification of sustainable materials, recommendation of refurbishment of building elements over replacement and whether maintenance activities present opportunities for environmental enhancements. Where preparing service charge budgets, RICS members should ensure their advice aligns with local RICS guidance on service charge recoverable works, which may not allow full recovery of sustainability improvements.

5.7 Cultural heritage

Advising on buildings within the historic built environment (HBE) is a surveying sub-specialism, but RICS members are expected to have knowledge of the basic principles of listed or classified building status as well as that for collective areas of cultural or historical importance. When advising on the condition, maintenance and repair of historic buildings, RICS members should recognise any limitations in their knowledge or experience and where necessary seek the advice of appropriate specialists. In general, members should confirm the presence of a property listing or classification when undertaking the document review or analysis of the property. It is further acknowledged that protected, listed or classified buildings or premises within areas of cultural or historical importance require the application of specific repair techniques or materials. Consequently, this can increase the estimated costs of repair and when advising on this, members should consider also the necessary time

as well as any specific requirements to obtain all relevant statutory permissions. It is the responsibility of RICS members to make provision for this or seek specialist opinion when making cost advice in the PPM report.

5.8 Legal matters

5.8.1 Leasing and repairing liabilities

The client's legal advisors should be consulted regarding the presence of existing leases for the premises and any tenant repair obligations. Typically, PPM surveys and reports exclude tenant responsibility for repairs. RICS members should have sufficient knowledge and experience to analyse and advise on the repair obligations. When preparing cost advice, RICS members should be risk-averse and include repairs to all areas, subject to verification of the costs that are the responsibility of the tenant or recoverable through the service charge.

When undertaking PPM surveys and delivering cost advice, RICS members should refer to the current edition of the RICS standard [Service charges in commercial property](#).

5.8.2 Guarantees and warranties

The presence of existing guarantees and warranties is important, as these can transfer some of the cost liability of repairs to the named guarantors. Such documents are held by the building owner, occupier or property manager, and if there has been a transfer of building ownership, a copy of these documents may be held with the client's legal advisors. Where instructed to do so and where provided, RICS members should consult all relevant guarantees and warranties when preparing PPM cost advice. They should be risk-averse and include the cost of the works in the PPM schedule until credible evidence exists to verify that these are covered by existing guarantees or warranties. Members should recognise that a PPM report is likely to be used to maintain building elements in accordance with manufacturers guarantees/warranties, so any necessary works should be reported upon.

The statutory requirement to provide guarantees for building design and the construction of building components or elements varies between countries, regions and states. RICS members should have knowledge of such statutory guarantees or know where to source this information when advising the client.

6 The report

After undertaking the site inspection and reviewing the agreed technical documents supplied by the building owner, occupier or property manager, RICS members should collate all of the information into an easily readable document.

Before reporting, RICS members may have to research particular materials, maintenance requirements and life expectancy from product information included with the O&M manuals, or with the manufacturers.

The client may require a meeting to review the draft PPM report. The meeting should be used to agree any changes to the report, including aligning it with service charge budgets if applicable to the instruction. RICS members should be mindful that changes in costs, priorities and timings do not degrade or alter their professional opinion and advice. They should not agree to changes if they do not believe it is correct to do so, and should document any proposed or enacted changes. A separate version of the report can be delivered to advise on the most appropriate investment priority where there are insufficient funds or the client is unwilling to undertake the works recommended in the PPM survey. Such a report should be clearly indicated as constrained by the client's requirements and the original retained as a record of advice.

6.1 PPM schedule

The most appropriate way to illustrate condition, defects and costs is with a PPM schedule. This document should be created as a spreadsheet, as this makes it possible to insert, alter or omit costs and see the effect on overall cost planning. A PPM schedule consists of a series of columns that should cover the following.

Reference	Location (of the building element/defect)	Description of the building element/sub-element	Condition description/defect/repair recommendation	Year 1	Year 2	Year 3

In addition, the following columns may be added, subject to the client's instructions and surveyor's recommendations:

- condition category risk/priority code
- general comments
- budget allocation and
- photo reference (identification of defect/observation in a photo).

The PPM schedule should summarise the condition and give appropriate cost recommendations. Any unknown variables (such as tenant liabilities) concerned with the building condition should be given an estimated budget until more accurate information is available. Being risk-averse often means that cost estimates are based on a worst-case scenario. In most cases, as the PPM report is used to develop a schedule of works and as outstanding issues are resolved, the cost estimate may be reduced. If additional defects or maintenance obligations become apparent, extra costs may be introduced into the report. Any extra costs should be fully justified and evidenced.

Some clients may request an electronic version of the PPM schedule to help them manage the works over the PPM period. The client should be made aware that any direct adjustments, including delaying or omitting works, should only be taken with appropriate professional advice.

6.1.1 Condition ratings

When assessing the condition of the individual construction elements, sub-elements or components, RICS members should succinctly rate the condition. The following are some suggested examples.

- **Good:** Item currently in good condition and with no outstanding repair or maintenance requirements. Works of a cyclical nature may be applicable, for example periodic cleaning or decoration.
- **Fair:** Item is in serviceable and generally acceptable condition, but may exhibit signs of age-related wear and tear, weathering or superficial damage. Repair or renewal may be required.
- **Poor:** Item is reaching the end of its designed or intended service life, or is excessively weathered or damaged. Repair or renewal will be necessary within the timescales of this schedule.
- **Hazardous:** Item is in a dangerous condition and imminent works are required to rectify the problem, or to comply with health and safety or other statutory regulations.

6.1.2 Timeframe

The timing of works captured in a PPM schedule is critical to its beneficial use, as it allows clients and their advisors to forecast and undertake works without a detrimental impact on building performance. It is recognised that definitions of appropriate timeframes may vary between instructions; however, RICS members should consider the following:

- **urgent:** to be undertaken directly following survey
- **immediate:** within one year
- **short term:** one to two years
- **medium term:** three to five years and
- **long term:** six to ten years.

To ensure clarity in the reporting process, the timeframes should be explicitly defined or indicated in the report to avoid any doubt. Urgent items should be reported directly to the client/duty holder following the survey.

6.1.3 Risk/priority ratings

RICS members should assess the risk posed by a defect and its impact or consequence if left untreated. There is no set format for this, but observations and defects may be colour coded to indicate their level of risk or urgency. The following ratings are examples of what could be used:

- 1: urgent
- 2: essential
- 3: desirable
- 4: cyclical and
- 5: statutory.

6.2 Report layout and contents

To introduce the PPM schedule, an executive summary may be used to outline key information about the property and principal observations.

RICS members should undertake post-survey reflection when composing the report to ensure that the report is clear and there is consistency in the reporting of cost. This is particularly important where 'bulk' PPMs (multiple PPM surveys under one client instruction) are undertaken.

6.2.1 Executive summary

An executive summary is a succinct attempt to highlight the principal observations, going into sufficient detail to elaborate upon the causes and effects of the defects. The executive summary can be issued as a covering document for the cost matrix and PPM schedule.

The executive summary may include:

- summary of scope of services and whether it excludes areas where an occupier has responsibility for repairs.
- the nature of the property, its construction age and design
- the adequacy of the key construction elements, building envelope (documentation reviewed) and services
- compliance with statutory requirements:
 - building permits, regulations or codes
 - operating permits
 - fire and life safety
 - accessibility

- deleterious materials
- principle areas of concern
- areas requiring further investigation or statutory inspection,
- summary of estimated costs, remedial works or recommended actions and
- the period the PPM will last for and at what date it should be revised.

6.2.2 Full condition report

As an optional addition to the PPM schedule and if instructed by the client to write a full condition report, RICS members should commence with an introduction, followed by the main body or discussion, with a short conclusion used to sum up the findings. The introduction should frame or contextualise the survey by referring to the date and basis of the client instruction, and should touch upon any specific limitations that may have influenced the survey procedure or outcome.

The report should also include a brief description of the property and its location, before summarising the principal observations element by element. It can be used to detail the positive aspects of the property, but should also critically appraise the defects, seeking to offer a simple explanation of the science behind them. It is the first opportunity for the surveyor to express, in writing, the consequences of defects or abnormalities and begin to give the client an understanding of the options or evidence to make an informed decision.

The report should have a clear conclusion that is objective and reflects the outcome of the site survey. This is another opportunity to reiterate the principal findings, concerns and recommendations relating to the main body of the report and PPM schedule.

6.3 Cost data

The preparation of cost advice should be evidence-based, and although the PPM schedule will indicate a numerical figure, RICS members should be able to provide, if required, the methodology behind it. Component or elemental costs are generated by calculating the quantity, multiplying this by the rate and apportioning the relevant unit.

The PPM survey and review of the technical documents should include taking some check measurements or dimensions to generate the approximate quantities used to calculate costs. The rates can be taken from price books; online cost data sites; in-house cost databases that are derived from historic project costs; or from costs obtained by consulting professionals, colleagues and contractors. Where cloud-based software with online cost databases is used, RICS members should check that cost information is up to date and relevant to the specific situation. If the costs are challenged, RICS members should be able to explain how they have been calculated.

Costs are either 'day one', which are effectively present-day costs, or they can be indexed to allow for inflation based on documented forecasts to indicate what they will be in the short, medium and long terms. If challenged, RICS members should be able to explain the source of the index and how the cost projection has been made.

RICS members should have consideration of preliminaries, overheads, associated access costs, consultants' fees, and contingency within the cost items and how this is shown in the schedule.

RICS members should be risk-averse with cost estimates and recognise any limitations in how these have been calculated. According to the client instruction, how the costs have been generated should be documented in the PPM report. The report may include a statement similar to the following:

'Budget estimates have been assessed relative to the limited time available to report. They are "day one" costs subject to market conditions and future inflation. They are exclusive of professional fees, asbestos removal and VAT. Where prices have been estimated per m², this has been done based on plans received (where applicable) or approximate times required to perform tasks. The prices are budget estimates and are subject to a full brief and feasibility study to ascertain all relevant options and costs, including contractors' preliminaries, OHP, access, etc.'

6.3.1 Service charge code

It should be recognised that a large part of the market for PPMs is covered by the service charge. In some leases, the service charge can only be used to recover the cost of repairs and like-for-like replacements of building elements that are out of repair, or beyond economic repair; improvements or upgrades cannot be recovered. RICS members are expected to be familiar with local service charge codes, but ultimate responsibility for implementing service charges lies with the property managers charged with managing the asset.

6.4 Updating existing PPM reports

PPM reports should be updated and discussed with the relevant stakeholders regularly at intervals appropriate to the asset size, complexity and condition. Ideally, updates should be undertaken on an annual basis and the report should be submitted, where possible, with sufficient time for its content to be discussed in advance of the deadline for setting the budget. If not undertaken annually, larger, more complex assets and assets in poor condition may require updates at more frequent intervals.

Updates should not seek to extend the maintenance period beyond its original timeframe. They should report against the maintenance period captured in the original client instruction to ensure the surveyor is not overly focused on identifying new items beyond the horizon of the original reporting, as doing so may result in a risk that items will be missed.

Updates should not be undertaken for historic reports that are more than three years old. In such situations, new PPM surveys should be undertaken.

RICS members should not update reports prepared by other firms, to avoid inconsistency as well as potential liability and copyright issues. Updates should involve re-inspecting the property; it is not sufficient to update the report based on a meeting with the building

management or maintenance team. The basis for the update should be clearly stated in the report.

Delivering confidence

We are RICS. Everything we do is designed to effect positive change in the built and natural environments. Through our respected global standards, leading professional progression and our trusted data and insight, we promote and enforce the highest professional standards in the development and management of land, real estate, construction and infrastructure. Our work with others provides a foundation for confident markets, pioneers better places to live and work and is a force for positive social impact.

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