

Version Control

Change record

Change date	Changes made	Author
November 2015	Document has been updated to incorporate T/PR/LC/29 Management Procedure for Medium Rise Buildings	Stacey Goldsmith
	Document has been updated to include roles and responsibilities of CMAC, Strategic Partners, Operations, Customer Operations and Network Strategy.	
	Document has been updated to include revised survey documentation and Risk Assessment Form	
	Document has been updated to include the roll out of the T/PR/LC/33 work procedure for assessment of corrosion damage on steel pipework supplying multi occupancy high and medium rise buildings.	

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Brief history

Description	Date
Document has been updated following the Engineering Policy Transformation Project and now reflects the new process, roles and responsibilities and incorporates the requirements for medium rise building surveys as per T/PR/LC/29.	January 2016

Management Approval

Name	Position
Ian Aldridge	Engineering Policy Manager UKD

Implementation

Implementation timescales	
Approved	May 2016
Published	June 2016
Fully Implemented	July 2016

Training needs analysis

Identified users Specifically which roles must have an understanding of this Management Procedure	Level of understanding Aware Does Controls Manages	Training document / presentation	Dissemination method A, M email link and brief D, C brief and record
Network Supervisors	A, D, C, M	Formal Training	D, C
Surveyors	A, D, C, M	Formal Training	D, C
Customer Specialist	A, D, C, M	Formal Training	D, C
Mobs Asset Strategy Manager	A, D, C, M	Formal Training	D, C
CMAC	A, D, C, M	Formal Training	D, C

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Document Summary

Purpose

This management procedure was approved by the Engineering Policy Manager, in May 2016 for use throughout National Grid Gas.

Users should ensure that they are in possession of the latest edition and related bulletins by referring to the document library of Safety and Engineering documents available on the company Infonet.

Compliance with this safety and engineering document does not confer immunity from prosecution for breach of statutory or other legal obligations.

Disclaimer

This safety and engineering document is provided for use by National Grid Gas and such of its contractors as are obliged by the terms and conditions of their contracts to comply with this document.

Where this document is used by any other party, it is the responsibility of that party to ensure that this document is correctly applied.

Mandatory and Non-Mandatory requirements

In this document:

Shall: indicates a mandatory requirement

Should: indicates best practice and is the preferred option. If an alternative method is used then a suitable and sufficient risk assessment shall be completed to show that the alternative method delivers the same, or better, level of protection

Background

To comply with current legislation, National Grid Gas, as a gas transporter, shall satisfy the requirements of Regulation 13 of the Pipeline Safety Regulations 1996, and ensure pipelines are 'maintained in an efficient state, in efficient working order and in good repair'.

The application of this procedure shall satisfy the requirements of the Policy for Inspection, Maintenance and Monitoring of Supplies to Multi-Occupancy High and Medium Rise Buildings T/PL/LC/20.

This procedure follows on from a series of surveys of high rise flats that were undertaken in the period 2002 to present day and is fundamental to the previous version of this procedure.

This procedure incorporates the requirement to inspect and manage medium rise multi occupancy buildings.

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1. Scope

This management procedure details the process and requirements to ensure compliance with T/PL/LC/20 Policy for Inspection, Maintenance and Monitoring of Supplies to High and Medium Rise Buildings, which has been amended to incorporate the medium rise survey requirements.

The procedure includes an overview of the requirements and processes for leakage survey, data gathering and visual condition assessments to establish the condition of high and medium-rise buildings that contain an upstream pipework system.

This procedure defines key roles and responsibilities throughout the process and should be used alongside T/PR/LC/34 Work Procedure for High Rise Building Surveys and Risk Assessments and T/PR/LC/29 Work Procedure for Medium Rise Building Surveys and Risk Assessments.

Meter banks are excluded from this procedure.

2. Responsibilities

The table below provides a quick reference to the responsibilities detailed in this procedure.

Responsibilities		
Description	Typical Job Role	Section
Customer Operations	Resource Management or Data Assurance	5.1, 5.2, 5.3.1, 5.3.2
MOBS Asset Strategy Manager	Strategy Engineer (Multi Occupancy Buildings)	5.1, 5.2, 5.3.1, 5.3.2, 5.4.2, 5.4.4, 5.5.1, 5.5.3, 7.1, 7.3, 7.4, 7.5, 8, 8.2, 8.3, 9, 10.1, 10.2, 12.
Operations Manager	Network Operations Manager	4 5.1, 5.3.2, 5.4.1, 5.4.4, 7.3,
Customer Specialist	Network Customer Specialist or Engagement Lead	5.1, 5.2, 5.3.1, 5.4.1, 5.4.3, 5.5.2, 12
CMAC	Operational Interface Managers or Network Leads across CMAC	7.3, 8, 8.2, 8.3, 9
Strategic Partners	GDSP: Balfour Beatty or tRIO	7.3, 8, 8.3, 9
Network Supervisor	Network Supervisor	5.4.2, 5.4.4, 5.6, 7.5, 9
Surveyor	Operations First Call Operative	5.4.2, 5.4.3, 5.5.1, 5.5.2, 7.5
First Call Operative	Operations First Call Operative	10.2
Engineering Policy	Engineering Policy Manager	11

3. Definitions

Reference	Identifier
High rise building	Defined as a building having at least 6 storeys (six ceilings) above ground level (including the ground floor) that contains an up-stream pipe-work system, including internal and external risers and laterals to multiple meter points.
Medium rise building	Defined as a building having either 3, 4, or 5 storeys above ground level with multiple meter points within the building and serving multi-occupancy flats. This includes buildings with flats above shops/commercial premises. Gas supply includes internal and/or external risers and laterals to individual flats.
Multi occupancy building	A building with a number of dwellings used for domestic purposes that is 3 storeys or above.
Main	Defined as an extension of, or change to, the system with the potential to supply more than two (2) meter points. Thus, the buried pipe supplying gas to a multi-occupancy building (with multiple meter points) is classed as a main.
Supply pipe	This is the pipe which brings gas from the distribution main directly to the building and connects to a horizontal or vertical riser. Locally, this pipe may be referred to as the 'service pipe' to the building.
Riser	Risers are defined as an arrangement of pipes (predominantly vertical but with horizontal sections), which supply more than two meter points in an individual premise or a building containing many premises. A pipe is considered to be a riser (rather than a supply pipe/main) once it enters the building (for internal risers) or emerges from below ground (for external risers) In this survey, there are two types of risers considered: <ul style="list-style-type: none"> • Vertical Riser: A vertical pipe that carries gas between floors inside/outside a building. This is a pipe that supplies gas to more than two meter points. • Horizontal Riser: A horizontal pipe typically connected to a vertical riser that conveys gas along one floor level inside/outside a building. This is a pipe that supplies gas to more than two meter points.
Lateral	An above ground arrangement of pipes that supplies gas from the riser to the outlet of the ECVs for the meter installations on that floor.
Storey	Floor construction level. The ground floor is counted as a storey within the context of this procedure but any cellar/basement is not.
Emergency Control Valve	A valve for shutting off the supply of gas in an emergency, being a valve intended for use by the consumer.
Basement/ cellar	A room below ground level in the building that is being used for accommodation or as a storage area, or could easily be altered for accommodation or storage. (Basements/cellars shall NOT be regarded as a storey within the context of this procedure).

4. Identification of Multi Occupancy Buildings

National Grid Gas has undertaken an exercise to identify all buildings that meet the criteria for a Multi-Occupancy Building (MOB). A Multi Occupancy Building is defined as a building with a number of dwellings used for domestic purposes that are 3 storey's and above with multiple occupants who are supplied from the network via an up-stream pipework system that includes; a supply pipe; risers; and laterals to multiple meter points.

Depending on the height of the building, Multi Occupancy Buildings are categorised as either:

- Medium rise (3 – 5 storeys above ground level)
- High rise (6 or more storey above ground level).

5. Building surveys

Survey work on multi-occupancy buildings falls into two categories, proactive or reactive (please see appendix A1, A2 and A3 for flow diagrams).

5.1. Proactive work

Proactive survey work is a scheduled activity which, depending on the outcome, may generate refurbishment or replacement work.

5.2. Reactive work

Reactive work follows a customer reported gas escape or fault which, following initial site actions, may lead to the requirement for a survey (see section 10) which may also generate refurbishment or replacement work.

The Operations Manager shall ensure that only competent surveyors are used to carry out surveys on high and medium rise buildings. In addition, the Operations Manager shall ensure that Surveyors have the appropriate tools and equipment to complete the survey and associated remediation work as applicable.

5.3. Notification that a Multi-Occupancy Building Survey is required

Each building shall be allocated a scheduled date for survey. At the start of each planning cycle, as determined by Customer Operations Resource Management, the MOBs Asset Strategy Manager will review the buildings required to be surveyed in each network within that period. This information shall be communicated to Customer Operations, the Operations Managers across each network and the Customer Specialists across each network.

Customer Operations will produce a survey pack for each of the buildings requiring a survey (as per section 5.5). These survey pack(s) will then be issued to each of the networks in readiness for the survey work to be completed between 1st April and 31st October in each year. The Customer Specialist for each area shall arrange for the building owners to be contacted and ensure the necessary arrangements are in place to carry out the survey as per section 5.4.

Where surveys are required following reactive work, the MOB's Asset Strategy Manager shall follow the process described in section 10.

5.4. Engagement with Building Owners

The Customer Specialist for each area shall ensure that there is an engagement strategy in place and that the contact detail for each high rise building (in some situations this may include medium rise buildings that are managed by the same building owner) is maintained. This should include details from housing associations, local authorities and private landlords. Engagement with the organisations shall be undertaken prior to the survey to ensure a good relationship is developed and opportunities to work collaboratively are established and maintained throughout any works that may be required on the building.

The engagement strategy should address the following points, as applicable:

- Communicating the importance of completing the survey(s).
- Communicating the importance of protecting the gas pipework from damage / corrosion
- Seeking opportunities to work collaboratively on any building refurbishment, including the option for 'buy out' where applicable

- Identification of opportunities to provide alternative affordable energy supply using gas as the primary fuel.
- Establishing the proposed life and future use of the building.
- Agreement of a suitable time and date to carry out the survey.

The Customer Specialist should meet with the building owners to discuss progress of work and outcomes from completed surveys.

The Customer Specialist should ensure a record is kept of discussions with the Building Owners. These records should be shared with the MOB's Asset Strategy Manager and the appropriate Operations/CMAC Managers.

The MOBS Asset Strategy Manager shall ensure all work passed to CMAC/GDSP to be assessed for refurbishment / replacement has associated survey records and relevant communications with the building owner and/or occupiers.

All documentation relating to the survey pack will be retained within the Document Management System (DMS).

5.5. Preparation of pre-survey work pack

5.5.1. High rise pre-survey work pack

The MOBs Asset Strategy Manager shall ensure that Customer Operations, the Operations Managers and the Customer Specialists across each network have visibility of the survey address data no later than 6 months before the survey period is due to commence.

Customer Operations shall prepare the pre-survey packs for high rise buildings and issue to the Operations Manager in each network 3 months prior to the survey period commencing.

The high rise building work pack should include the following:

- Details and contact information for the building owner (to be provided by the Customer Specialist for each network)
- Specific information regarding any agreements made with the building owner (to be provided by the Customer Specialist for each network)
- Correspondence to the building owner and the building occupiers prior to survey (to be provided by the Customer Specialist for each network)
- Special circumstances associated with the building, e.g. number of priority customers. (to be provided by the Customer Specialist for each network)

- Previous survey reports (Provided by the MOB's Asset Strategy Manager)
- ESRI map of area around the building.
- Details of previous work carried out on the building, where available. This should include any reported gas escape(s) at the building along with any repairs made to the gas pipework associated with the building.
- Where applicable, MRPS risk scores for the relevant mains may be available from the asset repository record (provided by the MOB's Asset Strategy Manager).
- Survey spreadsheet for completion which should be populated with the building address details prior to sending, an example of the Survey Form can be found in T/PL/LC/34 however the Customer Specialist shall ensure that the survey pack includes the most up to date survey form confirmed by the MOB's Asset Strategy Manager.

5.5.2. Medium rise survey work issue

The requirement for a building survey on a medium rise building is issued via SAP. Survey packs are not required, however the MOBs Asset Strategy Manager shall ensure that Resource Management, and the Operations Managers have visibility of all medium rise surveys that will be undertaken in each financial year, medium rise building surveys shall be carried out in accordance with T/PR/LC/29 Work Procedure for Medium Rise Building Surveys and Risk Assessments.

5.6. High rise building surveys

High rise building surveys shall be carried out in accordance with work procedure T/PR/LC/34.

5.6.1. Notification

The Operations Manager, in conjunction with the Customer Specialist for each area, shall ensure that notification of the agreed appointment date and time has been issued to building owners and occupiers at least 1 month before a planned survey.

5.6.2. Survey outcomes

High rise building survey details shall be entered onto the building assessment form along with supporting photographs and should be sent to the Network Supervisor for acceptance within 5 working days of the survey being completed.

Where severe corrosion is identified, photographic evidence shall be collected and sent to the Network Supervisor within 5 working days of the severe corrosion being identified. The Network Supervisor shall review the findings and issue a copy of the survey report with photographs to the [.Box.NetworkStrategy.Mobs](#), please refer to section 7.5 for further information.

5.6.3. Access problems

Where the surveyor is having difficulty in accessing the building or individual flats to complete a survey, three attempts to gain access shall be made on separate days over a two week period. Following the three attempts, the surveyor shall record the details (dates, times, addresses, etc.) on the survey form and flag no access to the Customer Specialist.

The Customer Specialist shall contact the building owner/occupiers to confirm why access was not granted and to make arrangements to gain access.

5.6.4. Operations review of survey report

The Operation Manager shall appoint a competent Network Supervisor to review the high rise survey report. The Network Supervisor shall confirm and authorise the priority score generated by the reporting spreadsheet.

Network Supervisors shall ensure that there are supporting photographs and records of location for any areas of severe corrosion identified during the survey. In addition the survey shall include location records and photographs of internal and external isolation valves in accordance with T/PR/LC/34.

When the review is concluded, the Supervisor shall arrange for the survey report to be issued to the MOBs Asset Strategy Manager.

The Operations Manager shall ensure they track all work for their area and ensure progress MI is available when requested by the Mobs Asset Strategy Manager.

5.7. Medium rise building surveys

Medium Rise Surveys shall be carried out in accordance with T/PR/LC/29 work procedure for Medium Rise Building Surveys with the outcomes recorded in Syclo.

5.7.1. Severe corrosion

Where severe corrosion is detected, the Surveyor shall email the following information within 5 working days to their supervisor and the [.box.NetworkStrategy.Mobs.](#) as per section 7.5 and in accordance with section 5.3 T/PR/LC/29 Work Procedure for Medium Rise Building Survey and Risk Assessment:

- Work Order Number
- Building address
- Location (including grid reference) and photographs of the corroded area
- Location (including grid reference) of external isolation valves
- Any access issues (e.g. working at height, parking restrictions)
- Any customer information (e.g. vulnerability, unavailability)

The MOB's Asset Strategy Manager will progress as per section 7.6

5.7.2. Access problems

Where the surveyor is having difficulty in obtaining access to a medium rise building for survey, the steps detailed in 5.4.3 shall be followed.

5.7.3. Operations review of medium rise survey report

The MOB's Asset Strategy Manager shall provide a monthly report on all medium rise surveys completed to the Network Supervisors.

5.8. Audit requirements for survey work

The Network Supervisor shall ensure that 1 audit per year is completed for each high and medium rise surveyor.

Medium rise audits shall be completed by supervisors as part of the competency assurance programme using the AQAD application.

High rise audits shall be completed by a competent person with sufficient knowledge of the high rise survey process, e.g. successful completion of TSE61 training.

6. Gas Leak Found during the Survey

Any gas leaks identified during a survey shall be managed in accordance with T/PR/EM/72 and repaired in accordance with T/PR/EM/74.

7. Asset Strategy process

7.1. Survey review & reporting

The MOB's Asset Strategy Manager shall review the outcome from each survey, assess the generated risk score and produce a monthly report for all high and medium rise surveys completed.

7.2. Building priority score

The building priority score is a combination of site specific threats associated with supply pipes, risers and laterals. The scoring system is based on the surveyor's subjective judgement of the condition of our assets and the likelihood of a safety incident occurring.

Various mitigation factors are included in the calculation which reduce the likelihood of any such incidents occurring, for example, PE supply pipe entering above ground would score lower than a Steel below ground entry. Similarly, a higher priority score will be generated for instances where severe corrosion exists on internal pipework, or where there is no Pipeline Isolation Valve (PIV) present or where we have not been able to see the pipework to assess the condition.

7.3. Priority score is equal to or greater than 210,000

Where the survey has a priority score >210,000, the MOB's Asset Strategy Manager shall:

- Arrange a HAZOP risk assessment meeting within 3 months of the survey completion, the chair of the HAZOP meeting shall have the appropriate engineering knowledge and experience.
- Ensure input from Network Strategy, Operations, CMAC Engineering and the Strategic Partners.
- Act as technical secretary for the HAZOP meetings and ensure the meeting and actions are documented and issued to the CMAC Design Assurance Specialist for independent assurance.
- Following independent assurance of the HAZOP meeting recommendations, the MOB's Asset Strategy Manager shall arrange for the work to be issued to the relevant part of the business for completion.
- Liaise with the responsible department (see section 8) to ensure a post work completion survey is carried out within 42 days of the work being completed.

- Arrange for future surveys on completion of all works (including post completion survey) on the building as per the frequencies detailed in section 7.4.

7.4. Survey frequency

Following completion of the survey and/or risk assessment, the MOBS Asset Strategy Manager shall establish the survey frequency (table below) and liaise with customer operations to ensure the requirement is included in the relevant resource and maintenance plan.

Priority Score	Frequency of Re-Survey
≥210,000	1 year (the building shall be re-surveyed annually until risk reduction measures have been implemented)
100,000 – 209,999	5 Years
≤99,999	10 years

7.5. Severe corrosion reported

If severe corrosion has been identified, the surveyor shall document the location of where the severe corrosion has been identified within the relevant section on the survey form, take photographs of the area of severe corrosion and upload into the survey form, the surveyor shall then send an electronic version of the completed survey form to their Network Supervisor within 5 working days.

The Network Supervisor shall review the form and once they approve the content, they shall email the electronic form with photographs to MOB's Asset Strategy Manager [.box.NetworkStrategy.Mobs](#) who will arrange for a corrosion assessment to take place within 1 month of receipt of the form.

The corrosion assessment shall be carried out by a trained and competent corrosion assessor with support from the Network Supervisor as required.

The corrosion assessor shall:

- Complete the corrosion assessment as per T/PR/LC/33
- Assess whether remedial/repair work is required to mitigate the risk to the building and its occupants
- Carry out any remediation work
- Take photographs of the asset where remediation/repair work has been completed.

- Contact their Network Supervisor and the MOB's Asset Strategy Manager where remediation/repair works has not been possible and provide photographs and corrosion measurements of the asset to support the outcome of the assessment, as part of the required T/PR/LC/33 documentation
- Complete a Post Completion Survey on the asset where remediation/repair work has been carried out and update SAP with the output. – Please note the post completion survey can be completed on the existing survey form and should be completed within 42 days of the work being completed.

Where the output of the corrosion assessment has classified the pipework unable to be refurbished, the MOB's Asset Strategy Manager shall review the output of the corrosion assessment and:

- Determine which assets within the building require further work.
- Define the re-survey frequency of the Un-refurbishable pipework, until required further work is completed
- Arrange for future surveys on completion of all works (including post completion survey) on the building as per the frequencies detailed in section 7.4.

8. Contract Management and Control (CMAC)

8.1. Hazop Risk Assessment

Where the building survey has generated a risk score equal or greater than 210,000 the Mobs Asset Strategy Manager shall arrange for a HAZOP risk assessment to take place, CMAC shall:

- Confirm the cost code for which the HAZOP risk assessment meeting shall be aligned to.
- Provide input during the HAZOP risk assessment meeting.
- The CMAC Design Assurance Specialist shall review the meeting output and provide independent assurance to Network Strategy that the recommendations detailed in the HAZOP report are consistent with policy.

8.2. Replacement work generated by survey and assessment

Where it has been determined that the asset may require replacement work, MOB's Strategy Manager shall ensure that the work is issued to the strategic partner via CMAC Commercial, before the end of the next design cycle and shall:-

- Review the survey and corrosion assessment details.
- Liaise with the CMAC to plan in the replacement of the asset(s)
- Confirm CMAC Assurance team's approval to proceed

CMAC shall ensure:

- All work is tracked and reports are available as required by the MOB's Asset Strategy Manager.
- Post completion survey is carried out within 42 days of work being completed by the Strategic Partners and provided to the MOB's Asset Strategy Manager.

8.3. Scheduled mains replacement work on MOB's supply pipes

Where replacement work is being planned on mains and services that supply steel risers, CMAC and the Strategic Partner's design department shall liaise with the MOB's Asset Strategy Manager to identify any recent surveys on the MOB. The results of any survey shall be incorporated into the planning and design of the replacement project.

Where no surveys are identified the MOBs Asset Strategy Manager shall ensure a survey is undertaken and made available to CMAC before any replacement work commences.

Where a recent survey has been completed and the risers are confirmed to be in good condition with no further works required the associated pipework can be reconnected to the replacement main as part of the project.

9. Post Completion Survey

A post completion survey shall be carried out on all buildings where any remediation, repair or replacement work has taken place on the assets within the building and should be completed within 42 days of completion of the work.

Where remediation work has been completed during the initial survey, the surveyor shall update the survey form detailing works undertaken and issue to their Network Supervisor for review and approval.

Where the replacement or remedial work has been completed by the Gas Distribution Strategic Partner, CMAC will ensure the post completion survey is completed on all pipework within the building by Strategic Partner.

The priority score shall be recalculated based on the works undertaken and a record of completed work retained within SAP and ESRI.

All post completion surveys shall be issued to the MOB's Asset Strategy Manager via [Box.NetworkStrategy.Mobs](#) within 5 days of the post completion survey paperwork being completed.

The MOBs Asset Strategy Manager shall review all post completion surveys and confirm the re-survey frequency with Customer Operations as per section 7.4.

10. Gas Escape/Fault Reported

10.1. Reactive Process

The individual steps of each process are described in Appendix A3.

All repair work carried out on pipework shall be linked to the building within SAP and ESRI to ensure full visibility of all work that has taken place within the building.

The MOBs Asset Strategy Manager shall arrange for a monthly report of all gas escapes on high and medium rise buildings to ensure the building

10.2. Recording Reactive Work on Multi-Occupancy Buildings

First Call Operatives shall manage all gas escapes on MOB's in accordance with T/PR/EM/72 and carry out repair work in accordance with T/PR/EM/74. Where the FCO requires support, a repair team shall be requested as per normal escape management process.

When an emergency call is received and the FCO attends site they shall determine if the emergency relates to a MOB, as per the

definitions in section 4 and inform the MOBs Asset Strategy Manager via `.box.NetworkStrategy.Mobs`.

The MOB's Asset Strategy Manager shall:

- Arrange for a report to be generated on a weekly basis on all emergency calls received on MOBs.
- Analyse the report to determine whether a survey has been completed on the building.
- Analyse the report to determine whether the building has been passed to CMAC for replacement. Where the building has already been passed to CMAC under the proactive process, the MOBs Asset Manager shall discuss the proactive work planned to determine any changes following the reactive work, this should include any opportunity to work collaboratively with the building owner and the option for 'buy out' if applicable.
- Arrange for a survey to be scheduled where one has not previously been carried out.
- Track all reactive work against the proactive work plan to ensure there is no duplication.
- Arrange for a post completion survey to be carried out where partial or full replacement work has taken place; the post completion survey shall be completed within 42 days of completion of the works.

11. Audit and Review of the Asset Management of Multi-Occupancy Buildings

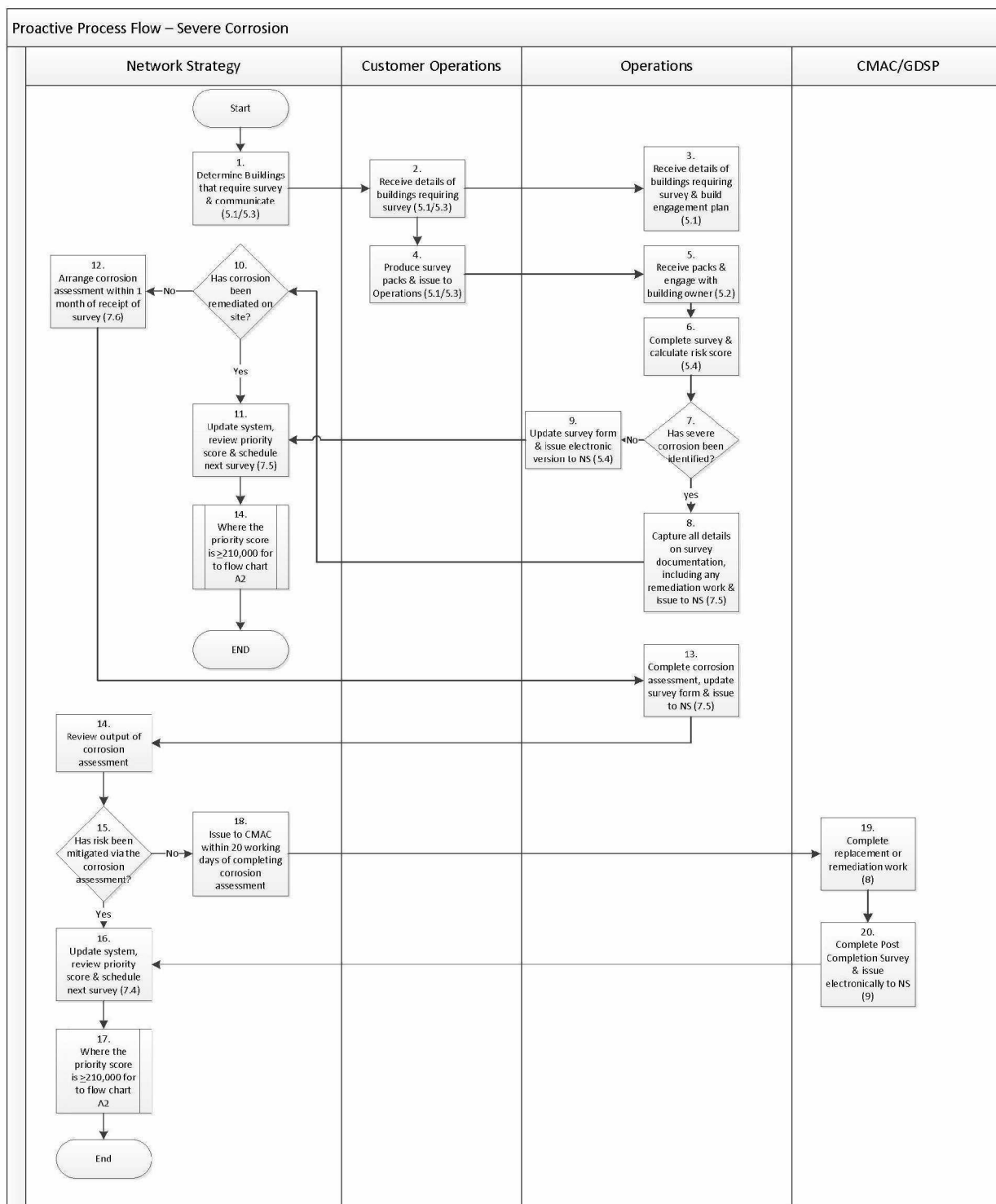
Network Strategy Engineering Policy shall arrange an annual compliance audit to be undertaken on this procedure.

12. Document Retention

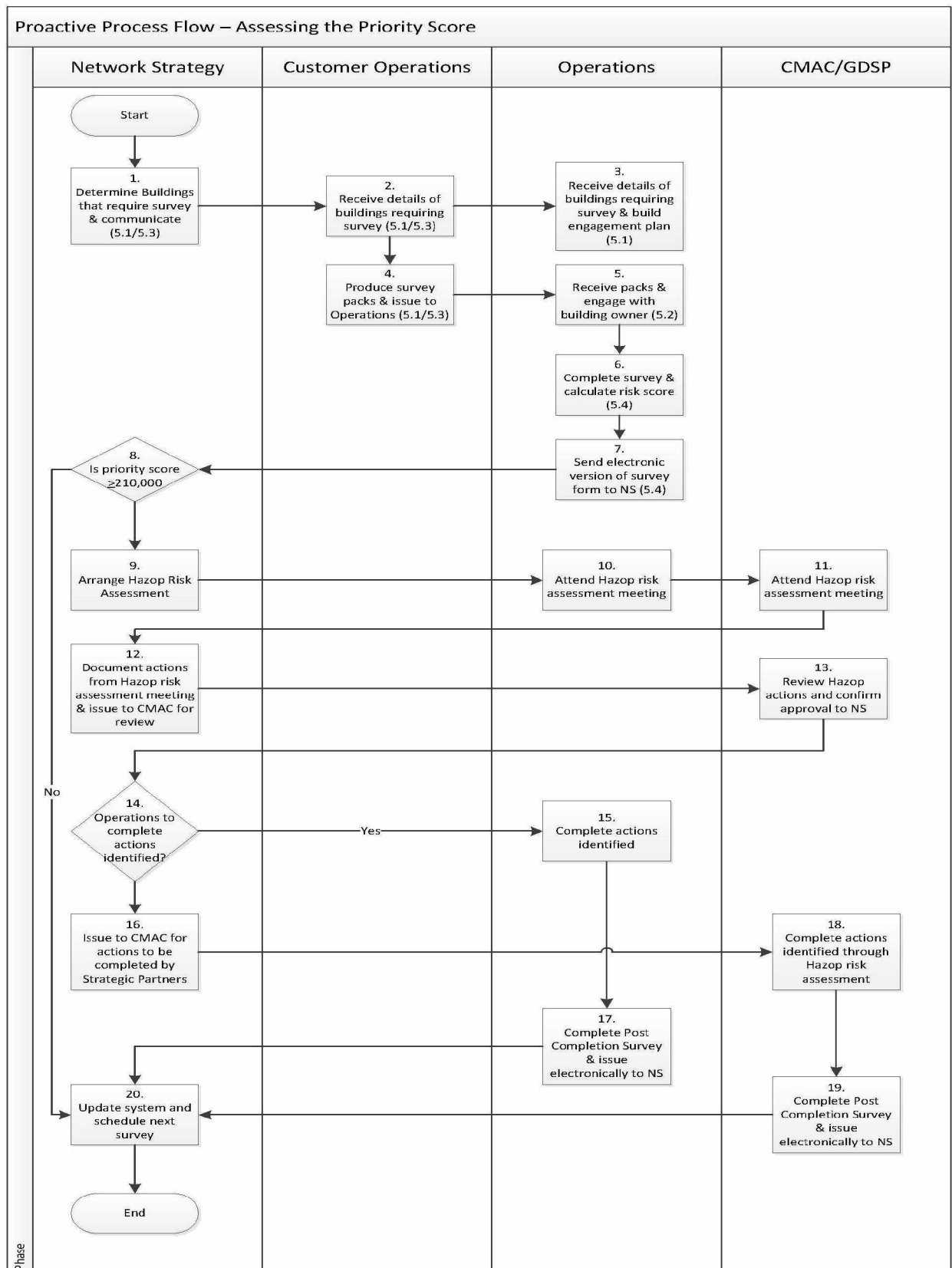
The Customer Specialist shall retain all documentation collated as part of the engagement with the building owner.

The MOBs Asset Strategy Manager shall retain a copy of all reports, notifications of survey required, risk and corrosion assessments, within a central repository.

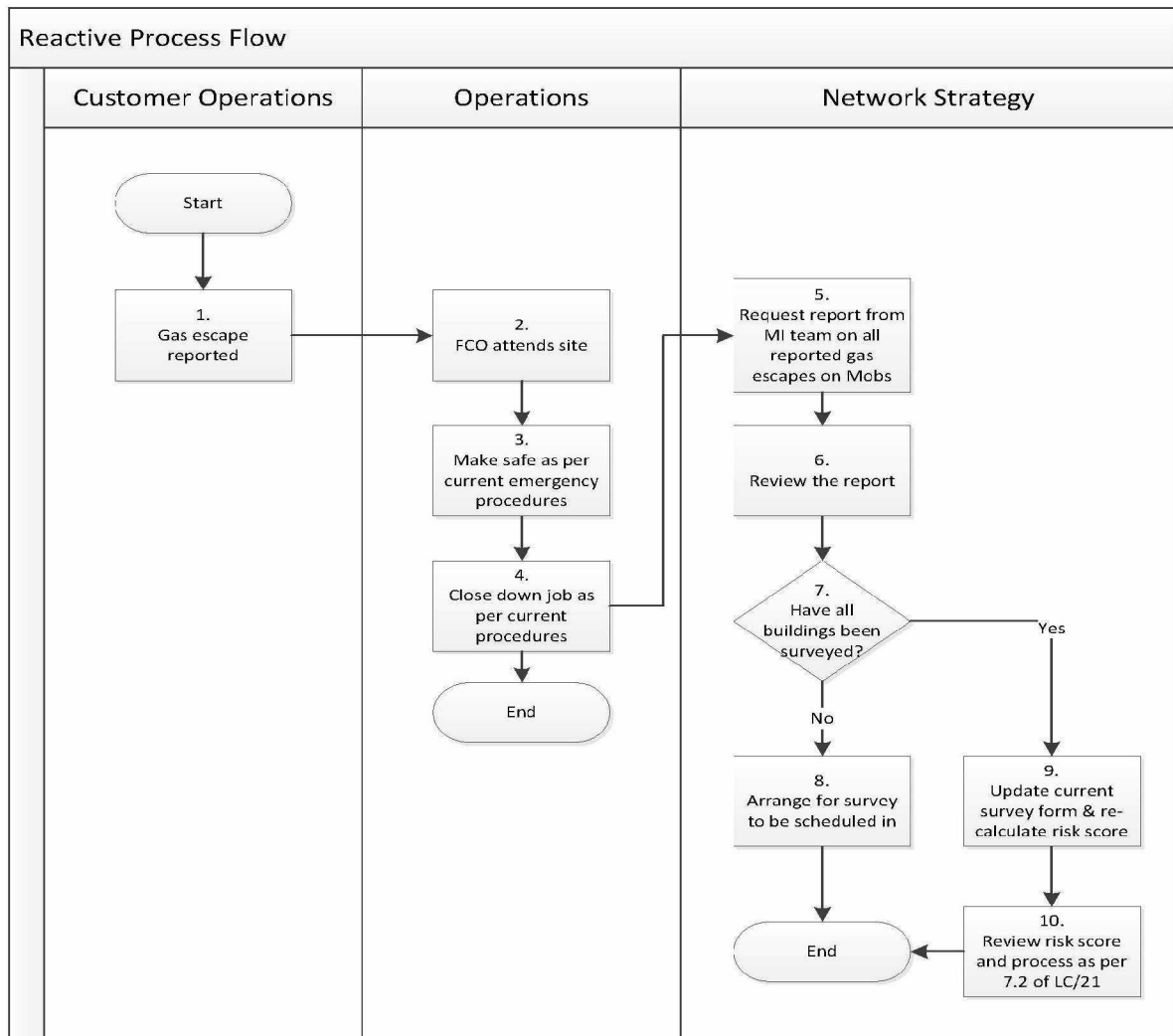
Appendix A1 - Proactive Process Flow – Severe Corrosion



Appendix A2 – Proactive Process Flow – Assessing the priority score



Appendix A3 – Reactive Process flow



Appendix B – Advice on cladding

1. External cladding

Although legislation does not specifically cover this issue, The Pipeline Safety Regulations 1996, which includes service pipes, places specific responsibilities on the pipeline operator and persons who carry out work in the vicinity of underground and /or above ground pipes.

During the refurbishment of some high rise properties cladding may be applied to the external face of the building to improve the insulation and appearance of external walls. Where the existing gas riser is routed externally it will be necessary to provide adequate measures to ensure that the gas riser and any associated laterals are not covered by insulation material but remain accessible for future inspection, maintenance or repair and comply with all applicable gas related statutory requirements.

In some cases instead of leaving exposed gas pipes the developer may prefer to enclose the pipes. This is accessible provided the entire pipe remains accessible, with ventilated and removable covers to allow for future access as and when required.

2. Ventilation requirements

The GS(I&U)R requires that any gas pipework installed in a shaft, duct or void shall be adequately ventilated. This is to ensure that any gas leaking from the pipework cannot exceed the lower flammable limit (5% gas in air for natural gas) and can be readily detected.

The size of the vents required to ensure there is no build-up of flammable gas in the enclosure depends on many parameters for example:-

- Cross sectional area
- Length
- Quantity of any potential gas leakage
- Location of the enclosure

3. Construction of pipe enclosure

National Grid's primary concerns are that the enclosure will provide adequate ventilation and allow future inspections and/or repair to the enclosed pipework

3.a Removal covers

The method of securing the removable covers should enable the covers to be readily removable by National Grid in the event of an emergency or routine inspection.

3.b Checks prior to the installation of the enclosure

Persons installing the enclosure should ensure all existing gas service entry points into the building that will be enclosed are adequately sealed. This is to prevent ingress of gas into the structure, should a gas leak occur within the enclosure. The enclosure shall be designed to provide sufficient clearance from the pipework to accommodate any expansion or contraction of the pipework.

3.c Warning notices

A warning notice should be placed on the front of the enclosure approximately 1.8metres from ground level to indicate the presence of the gas service riser and give emergency contact details in the event of a smell of gas being detected or other emergency event that may affect the integrity of the pipework.

End note

Comments

Comments and queries regarding the technical content of this document should be directed to:

Safety Registrar

SSR Directorate

National Grid

National Grid House

Warwick Technology Park

Gallows Hill

Warwick

CV34 6DA

Buying documents

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