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SPECIFICATION FOR

**AUDIT FRAMEWORK FOR ABOVE 7 BARG (NATURAL GAS)  
SELF-LAY PROJECTS**

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**JANUARY 2025**



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**Foreword**

This Specification was approved by the Engineering Committee on 05/09/2024 for use by managers, engineers and supervisors throughout SGN.

SGN documents are revised, when necessary, by the issue of new editions. Users should ensure that they are in possession of the latest edition by referring to the SHE & Engineering Document Library available on [DigitalHub](#)

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

**BRIEF HISTORY**

SGN/SP/SLO/1	05/09/2024	SMF-1563-06092024

**KEY CHANGES**

Section	Amendments
New document	New document

**DISCLAIMER**

This safety and engineering document is provided for use by SGN 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:

- must:** 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 must be completed to show that the alternative method delivers the same, or better, level of protection.

## **SPECIFICATION FOR**

# **AUDIT FRAMEWORK DOCUMENT FOR ABOVE 7 BARG SELF-LAY PROJECTS**

## **1 INTRODUCTION**

This document provides an audit framework to facilitate SGN taking ownership of new self-lay pipelines, that operate at pressures above 7 barg, which are designed and constructed by a Self-lay Organisation hereafter referred to as the SLO.

The purpose of the audit framework document is to provide a consistent, objective, systematic, and auditable approach to ensuring that a self-lay pipeline system is compatible with those designed and operated by SGN. Additionally, it is important to recognise that the costs associated with maintaining this compatibility, as well as the required level of safety and integrity, are enduring and will persist throughout the asset's lifespan.

The audit framework comprises a total of 7 phase audits that encompass the key stages of a self-lay project from Feasibility Study through Detail Design and Construction to Asset Acceptance ([Appendix A](#)).

Audits may be carried out by SGN personnel, or a third party nominated by SGN.

The SLO shall ensure their management system covers the entire scope of the works. Supporting evidence of SLO competency shall be demonstrated in advance to SGN.

- **Phase 1: Feasibility Study**
- **Phase 2: Environmental Statement**
- **Phase 3: Conceptual Design**
- **Phase 4: Detail Design**
- **Phase 5: Construction**
- **Phase 6: Operational Acceptance and Commissioning**
- **Phase 7: Asset Acceptance**

## **2 REFERENCES**

This Specification makes references to the documents listed in [Appendix A](#). Unless otherwise specified, the latest edition of the documents apply, including all amendments. It is the responsibility of the SLO to ensure the latest versions of all procedures, specifications and standards are applied. In addition, the list of documents in Appendix A is not exhaustive, and the applicable standards will depend on the nature of the works.



### 3 SCOPE

This framework applies exclusively to pipeline assets that supply natural gas to the network or take gas from the network, including pipelines connected to and from natural gas storage facilities.

This document applies to SGN technical auditing of projects for the planning, design, and construction of new assets operating at above 7 barg, which are constructed by others with the intention of SGN taking ownership. It shall only be applicable where a legally binding agreement has been made between SGN and the Self-Lay Organization (SLO). This agreement will initiate the auditing process, ensuring compliance with SGN's requirements throughout phases 1 through 7 of the self-lay project.

If projects have already entered any phase (1 through 7) of the audit, SGN will still consider taking ownership of the asset, although third parties are encouraged to contact SGN as early as possible. However, each milestone must meet the same level of compliance for approval and project sign-off.

This framework **does not** cover engineering requirements, although projects should comply with such requirements; please refer to; SGN/SP/TR/18 'Specification for Engineering of Pipelines and Installations Operating at above 7barg'.

This framework **does not** include commercial arrangements however should the SLO note any change to the specification or supporting specifications that may have cost implications, this should be advised to SGN immediately in writing.

## 4 FRAMEWORK STRUCTURE

To satisfy statutory obligations and the conditions of its Gas Transporter (GT) License, SGN maintains the safety and integrity of the gas supply network through the application of, amongst others:

- a) SGN Great Britain Safety Case;
- b) The Institution of Gas Engineers and Managers (IGEM) Recommendations on Transmission and Distribution Practice;
- c) External Standards and Specifications, including International, European and British Standards;
- d) SGN Safety Management Framework (SMF); including Engineering Policies, Procedures and Specifications; and
- e) Gas Industry Standards (GIS)

### 4.1 General Requirements

Prior to taking ownership of a self-lay pipeline, SGN shall be satisfied that adopting the pipeline shall not adversely affect the integrity and safety of the existing network.

A requirement of the taking ownership process is that self-lay pipelines are designed and constructed to standards and specifications that are compatible with those used by SGN, and demonstrate comparable integrity and safety.

Taking ownership of self-lay pipelines should generally not impose additional costs, risks or liabilities above those that would have been incurred had SGN constructed the pipeline.

Costs associated or incurred by SGN (or by service providers employed by SGN) facilitating audit phase (1-7) shall be reimbursed by the SLO.

To ensure compliance with these requirements, SGN must audit 7 key phases of self-lay projects during the project process. This shall confirm compatibility with the existing SGN gas supply network and provide assurance that the system is developed in an efficient, economical, safe and consistent manner.

Audits shall be carried out by qualified and competent auditors nominated by SGN, possessing evidence of suitable industry-recognised qualifications and suitable to SGN requirements.

The audit framework has been based on the SGN project process ([Appendix D](#) and [Appendix E](#)).

SLOs are required to submit (or provide access to) project-specific information to facilitate the audit process. SGN acceptance of the self-lay pipeline for the transfer of ownership shall be subject to a satisfactory review of information at each of the 7 audit phases. During the construction phase of the project, SGN shall require unrestricted access to the site works.

The SGN audits do NOT replace any standard audit and review activities that SLOs are required to undertake.

The forms in the various Appendices of this document are not the definitive versions and the SLO is responsible for ensuring those forms adopted are suitable for the purpose intended.

## **4.2 Design Appraisal**

To ensure compliance with legislative requirements, SGN requires an independent appraisal of the design and construction of all new equipment, modifications and repairs of existing systems in accordance with SGN/PM/PS/5 'Management Procedure for the Management of New Works, Modifications and Repairs'. SGN/PM/PS/5 is the SGN implementation of the IGEM Gas Legislation (GL) series, IGEM/GL/5 'Managing new works, modifications and repairs'.

The design information shall be subject to appraisal in accordance with the requirements of SGN/PM/PS/5 and should encompass design disciplines including mechanical, civil/structural engineering, electrical, control and instrumentation and corrosion protection.

The SGN/PM/PS/5 design appraisals shall be carried out by the SLO or an approved external organisation acting on SLO's behalf. Refer to Sections 6.1 and 6.2 for roles and responsibilities. Appraisers shall be approved, and their discipline authorisations recorded on the SGN register of design appraisers, in accordance with SGN/PM/PS/7.

## 5 FUTURE LIABILITIES

It is essential future liabilities are minimised. Liabilities arise from loss of development compensation payable to landowners. Liabilities also arise from agreements entered into by the SLO, including compensation and access agreements.

It is also essential that future operating costs are minimised. Operating costs of self-lay assets should in any case be comparable with operating costs of equivalent assets constructed by SGN. If SGN expects operating costs will be higher, it will need to carefully assess the viability of the proposal.

Critical issues for future liabilities include standard of construction, standard of corrosion protection, fatigue life, assessment of ground movement, drainage system and scope for development adjacent to the pipeline route.

It is a requirement that the SLO shall give SGN all relevant information relating to the assets. This extends to all agreements made and liabilities imposed and/or (as SGN may reasonably require) providing summaries of and guidance in relation to the same.

Routing and pipeline design determine future liabilities. Refer to:

- SGN/SP/TR/18 'Specification for Engineering of Pipelines and Installations Operating at above 7barg'
- SGN/SP/TR/21 'Specification for Feasibility Studies for Pipelines and Installations Operating at above 7bar'.
- SGN/SP/TR/23 'Specification for the Conceptual Design of Pipelines and installations Operating at above 7bar'.
- SGN/SP/TR/24 'Specification for Detailed Designs of Pipelines and Installations Operating at above 7 bar'
- SGN/SP/TR/25 'Specification for Construction of Pipelines and Installation Operating at above 7bar'
- SGN/SP/E/28 – The design of pressure regulating installations with inlet pressures not exceeding 100 bar

## 6 PROJECT PROCESS

The project should follow the requirements of the audit phases. (Refer to [Appendix D](#) and [Appendix E](#))

If work required for compliance with a later phase audit is carried out before the relevant milestone phase audits are satisfactorily completed, there is a risk that additional work may be required to meet SGN's standards and specifications.

For example, if a detailed design is carried out prior to the conceptual design being accepted by SGN, then SGN may require the detailed design to be redone to accommodate the results of the SGN Audit on the conceptual design.

Projects that progress through the Audit Phase process shall remain the responsibility of the SLO, the involvement of SGN and/or the conduct of the audit process described in this document shall in no way alter the SLO's ultimate responsibility for the project. It is essential that SGN personnel are kept informed at all relevant stages of the project.

Auditing timescales will depend on the nature and scope of the individual projects, availability of staff, resources, and level of compliance achieved during each auditing phase. While there is no fixed timeline, estimated timeframes for initial inquiries may be provided based on the complexity of the works. Additionally, SGN and the SLO should reach a prior agreement to establish these timeframes and avoid delays during the auditing process.

## **7 ROLES AND RESPONSIBILITIES**

### **7.1 SLO Roles and Responsibilities**

It is a requirement that the SLO shall give SGN all relevant information relating to the asset(s). For a project within the scope of this document the SLO is responsible for:

- a) Supplying details required for a load enquiry, refer to SGN/PM/NP/18 'Management Procedure for Network Planning';
- b) Feasibility study;
- c) Conceptual design;
- d) Detail design;
- e) Design appraisal in accordance with SGN/PM/PS/5;
- f) Formal Process Safety Assessments (FPSA) (e.g. HAZID, HAZOP, HAZCON, etc);
- g) Construction;
- h) On-line inspections (OL1/OLI4) and all other condition monitoring prior to transfer of ownership;
- i) Quality assurance; and
- j) Production and maintenance of accurate records.

For further details of what these comprise refer to:

- SGN/SP/TR/18 Specification for Engineering of Pipelines and installations Operating at above 7barg;
- SGN/SP/TR/21 Specification for Feasibility Studies for Pipelines and installations Operating at above 7bar;
- SGN/SP/TR/22 Specification for the Environmental Statement for Pipelines and Installations Operating at above 7bar;
- SGN/SP/TR/23 Specification for the conceptual Design of Pipelines and Installations Operating at above 7bar;
- SGN/SP/TR/24 Specification for Detailed Designs of Pipelines and Installations Operating at above 7 bar;
- SGN/SP/TR/25 Specification for the Construction of Pipelines and Installation Operating at above 7 bar.

The SLO shall be responsible for providing the following persons:

- a) Design Appraiser - refer to SGN/PM/PS/5.
- b) User under PSSR - prior to completion of Operational Acceptance. SGN shall assume User responsibilities where required subject to completion of operational acceptance. In this case the User responsibilities of the SLO are primarily the production of a written scheme of examination for pressure systems prior to commissioning.

- c) Operator under PSR-prior to commissioning. SGN shall assume Operator responsibilities where required subject to completion of operational acceptance. In this case the Operator responsibilities of the SLO are primarily notification before construction, and notification of change of operator.
- d) Qualified pipeline inspectors and land drainage specialists. Only BGAS (BGAS-CSWIP) or equivalent industry recognised, and qualified inspectors can be used on projects where SGN is to take ownership.

## **7.2 SGN Roles and Responsibilities**

SGN shall undertake network planning up to the network connection point on the existing network in response to a load inquiry, refer to SGN/PM/NP/18 'Management Procedure for Network Planning'.

SGN shall identify and provide SGN documents required by the SLO, such SGN engineering specifications and self-lay procedures on a project-by-project basis, see [Appendix A](#) 'References'. SGN shall not supply Institution of Gas Engineers documents (IGEM), British, European, American or ISO standards

SGN shall facilitate the final connection to its network, which includes network entry and exit connection points.

SGN can undertake commissioning where required and can undertake operator duties, subject to agreement with SGN. SGN shall only take ownership where the requirements of the phases are met.

SGN should not carry out the SGN/PM/PS/5 design appraisal, refer to section 4.2. but should ensure this process has been completed during the relevant audit phase.

Discretionary requirements outlined in relevant SGN specifications, under the title 'responsible' engineer, project manager, operational manager, or equivalent shall be set by SGN. This definition of responsible engineer must not be confused with the title 'Responsible Engineer' with SCO (safe control of operations) which is typically the Network Director.

SGN's role is to audit the SLO's management systems, and ensure they are competent to undertake the required work.

## **8 DEVIATION REQUESTS**

Requests for deviations to a SGN engineering requirement shall be made in accordance with the deviation process documented in SGN/SMF/1 and shall be supported by additional controls measures to mitigate associated risks. This may require independent assessment and assurance to be met at the SLOs expense. SGN approval shall be obtained prior to implementation of any deviation. It should be noted these are project specific, one-time deviation requests, valid for the duration of the project and for period for up to five years. All deviations must be reviewed in the event of significant changes to business's actives, operations, assets and conditions.

Deviations shall only be sought where there is no Engineering or Technical alternative to carry out the required work. Deviations shall not be considered where alternatives are available.



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## 9 AUDIT PHASES

The audit framework comprises a total of 7 phase audits that encompass the key stages of the self-lay project from Feasibility Study through Detail Design and Construction to Asset Acceptance, i.e:

**Phase 1: Feasibility Study**

**Phase 2: Environmental Statement**

**Phase 3: Conceptual Design**

**Phase 4: Detail Design**

**Phase 5: Construction**

**Phase 6: Operational Acceptance and Commissioning**

**Phase 7. Asset Acceptance**

The work elements of each of these phases are described in separate specification documents:

- SGN/SP/TR/21 'Specification for feasibility studies for pipelines and installations operating at above 7 bar'
- SGN/SP/TR/22 'Specification for the Environmental Statement for pipelines and installations operating at above 7'
- SGN/SP/TR/23 'Specification for the conceptual design of pipelines and installations Operating at above 7 bar'
- SGN/SP/TR/24 'Specification for detailed designs of pipelines and installations operating at above 7 bar'
- SGN/SP/TR/25 'Specification for Construction of Pipelines and Installation Operating at above 7bar'

Phases 6 and 7 covering "Operational Acceptance and Commissioning" and "Asset Acceptance" requirements are covered under SGN/PM/PS/5, Management Procedure for The Management of New Works, Modifications and Repairs.

Engineering requirements are described in SGN/SP/TR/18, Specification For Engineering Of Pipelines And Installations Operating At Above 7 barg.

### 9.1 Audit Phase 1 - Feasibility Study

#### 9.1.1 Purpose of the Audit

The purpose of the Audit is to:

- a) Review compliance with all audit phase requirements;
- b) Identify the design approach being considered (i.e. the primary standards, specifications and codes of practice proposed) and confirm compatibility with the SGN network;
- c) Review the pipeline routeing method;
- d) Determine the overall project scope and estimate the magnitude of SGN involvement (including resources and level of indicative costs);
- e) Evaluate the project programme and identify the stages at which SGN involvement is required;
- f) Ascertain the location of possible connection points onto the SGN network; and

- g) Identify factors that may affect future SGN asset ownership costs, e.g., liabilities operation and maintenance costs, refer to, Section 5, Future Liabilities.

### **9.1.2 SLO Deliverables**

The SLO shall submit to SGN, a Feasibility Study report as defined in SGN/SP/TR/21 'Specification For Feasibility Studies Of Pipelines And Installations Operating At Above 7barg'.

### **9.1.3 SGN Deliverables**

SGN should facilitate an audit of the Feasibility Study and return a signed copy of the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

### **9.1.4 Outstanding Actions**

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

## **9.2 Audit Phase 2 - Environmental Statement (ES)**

### **9.2.1 Purpose of the Audit**

The purpose of the audit is to:

- a) Review the environmental impact assessment undertaken by the SLO; and
- b) Provide awareness of all commitments made by the SLO that may subsequently become the responsibility of SGN following transfer of ownership.

SGN audit the ES prior to:

- 1) Submission to the DESNZ or Local Authority as appropriate; and/or
- 2) Notification and/or Circulation to statutory or non-statutory consultees (SGN/PM/G25 'Management Procedure for Statutory Notifications for Transmission Pipelines')

If the project has progressed beyond this stage, SGN will consider auditing the ES retrospectively (but as above third parties are encouraged to contact SGN as early as possible)

The audit should be conducted in conjunction with an environmental organisation familiar with SGN's pipeline systems and environmental requirements.

In certain cases, a 'Determination' against the requirement for an ES may be obtained. In these cases, the audit process should follow the same process as for an ES but it should be applied to the report required for the 'Determination'.

### **9.2.2 SLO Deliverables**

The SLO shall submit to SGN a project-specific ES or the report submitted for the 'Determination'.

Preparation of these reports is set out in SGN/SP/TR/22 'Specification for the Environmental Statement for Pipelines and Installations Operating at above 7bar'.

### **9.2.3 SGN Deliverables**

SGN shall facilitate an audit of the Environmental Statement and return a signed copy of the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

### **9.2.4 Outstanding Actions**

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

### **9.3 Audit Phase 3 - Conceptual Design**

#### **9.3.1 Purpose of the Audit**

The purpose of the Conceptual Design Audit is to:

- a) Ensure compliance with all the requirements for easement and land acquisition;
- b) Review the Level 2 (as described in TD1) Routeing Study (if applicable);
- c) Ensure that the SLO is able to demonstrate compliance with all applicable legislation;
- d) Audit the SGN/PM/PS/5 appraisal to ensure that the design approver and appraiser's qualification are satisfactory.
- e) Ensure the design is compatible with the SGN network in terms of technical criteria (equipment types, regulator type, material grades, pipe diameter, coating etc) including appraisal of the conceptual design in line with SGN/PM/PS/5; and

NOTE: Completion of all the steps in this audit prior to tendering for Detail Design or main works may:

- i) Minimise additional costs due to changes to the scope of the Detail Design.
- ii) Ensure that operating expenditure (OPEX) is minimised.

#### **9.3.2 SLO Deliverables**

The SLO shall submit to SGN, a Conceptual Design Report which shall include the requirements set out in SGN/SP/TR/23 'Specification for the conceptual Design of Pipelines and installations Operating at above 7 bar'

#### **9.3.3 SGN Deliverables**

SGN shall facilitate an audit of the Conceptual Design and return a signed copy of the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

#### **9.3.4 Outstanding Actions**

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

### **9.4 Audit Phase 4 - Detail Design**

#### **9.4.1 Purpose of the Audit**

The purpose of the Detail Design Audit is to:

- a) Review the Level 3 Routeing Study (if applicable);
- b) Audit the SGN/PM/PS/5 appraisal;
- c) Confirm that the required planning permission, consents and authorisations for new installations and pipeline (special crossings) have been obtained;
- d) Confirm that the SLO is able to demonstrate compliance with all relevant legislative requirements;

- e) Review the design parameters and ensure that the design methodology is compatible with that used by SGN and conforms with agreed industry standards;
- f) Undertake HAZard IDentification (HAZID) and HAZard Operability (HAZOP) studies on the Detail Design for installations to assess the interaction between the upstream SGN network, the proposed pipeline and the downstream systems, which remain in the ownership of the SLO. The SLO should carry out the HAZID and should arrange for the HAZOP to be carried out with SGN participation;
- g) Ensure that the design is compatible with the SGN network in terms of technical criteria (e.g. equipment types, material grades, pipe diameter etc) including appraisal of detailed design in line with SGN/PM/PS/5  
*i.e. when designing the CP system, a whole systems approach should be undertaken. The design should be supported by site surveys to establish the presence of any existing SGN CP and/or possible third-party systems to ensure compatibility with the SGNs network – SGN/PM/ECP-2; and*
- h) Ensure that in relation to the design all SGN requirements for Taking Ownership have been satisfied.

**Note 1:** Where there is any conflict between a SGN standard and any other design standard then the SGN standard will take precedence. Where any point of clarification is required, the matter should be referred to SGN for advice.

#### 9.4.2 SLO Deliverables

The SLO shall submit to SGN, a Detail Design Report including as a Minimum the requirements set out in SGN/SP/TR/24 'Specification for Detailed Designs of Pipelines and Installations Operating at above 7 bar'.

#### 9.4.3 SGN Deliverables

SGN shall facilitate an audit of the Detail Design, planning applications, and consents and return a signed copy of the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

#### 9.4.4 Outstanding Actions

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

### 9.5 Audit Phase 5 - Construction

#### 9.5.1 Scope

The Construction Phase Audit covers on-site construction activities and requires the SLO to grant SGN unrestricted access to the construction works, subject to Permit to Work and Site Security. The frequency of audits should be planned in relation to the scope of individual projects.

#### 9.5.2 Purpose of the Audit

The purpose of the construction audit is to:

- a) Confirm that the pipeline / installation(s) is constructed to standards compatible to those used by SGN and in accordance with the appraised Detail Design;
- b) Confirm that the required construction records and documentation are collated and are available;

- 
- c) Confirm that the SLO is able to demonstrate compliance with all relevant legislative requirements;
  - d) Confirm that all statutory notifications have been issued;
  - e) Ensure that the independent inspection company appointed by the SLO undertakes inspection activities in accordance with SGN's requirements for taking ownership;
  - f) Ensure that suitable and robust Quality Assurance (QA) and Quality Control (QC) systems are utilised during the construction phase of project and that the required documentation and records have been collated and are readily available;
  - g) Ensure Quality Assurance (QA) requirements related to the supplier of materials or services meet SGN's Quality Management Strategy, supported through SGN/PM/QA/1, SGN/SP/QA/2, and supplemented with MPH;
  - h) Ensure that the pipeline reinstatement is in accordance with SGN's Specifications; and
  - i) Ensure that the requirements of SGN/PM/PS/5 are fully complied with for all projects undertaken by the SLO.

### 9.5.3 SLO Deliverables

The SLO should employ an independent inspection company to undertake QA and QC activities for the project, see [Appendix G](#) for additional inspection reporting requirements.

The SLO shall provide access to the following:

- a) All construction records and documentation as specified by SGN and supplemented by MPH; are fully complied with for all SGN projects;
- b) Method statements and Risk Assessment associated with construction activities;
- c) Operational construction sites and assets; and
- d) Confirmation that the installation is in accordance with the appraised design as per SGN/PM/PS/5.

These requirements are defined in SGN/SP/TR/25 'Specification for the Construction of Pipelines and Installation Operating at above 7 bar'.

### 9.5.4 SGN Deliverables

SGN shall facilitate an audit of the Construction phase of the project and return a signed copy of the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

### 9.5.5 Outstanding Actions

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

## 9.6 Audit Phase 6 - Operational Acceptance and Commissioning

### 9.6.1 Scope

Prior to the commissioning of a pipeline or associated installation(s), SGN should undertake an Operational Acceptance Review using available SGN/PM/PS/5, (PS/6) and SGN/WI/PLANT/1 documentation. [Appendix C.1-2](#) provides a guideline template.

### 9.6.2 Purpose of the Audit

The purpose of the audit is to:

- a) Confirm, prior to connection to the gas network, that the self-lay pipeline complies with all applicable legislative requirements;
- b) Confirm equipment records required prior to commissioning are available; and
- c) Confirm that the pipeline system is compatible with the SGN network and that it shall not adversely affect the integrity and safety of the existing network.

### 9.6.3 SLO Deliverables

The SLO shall provide completed operational acceptance and commissioning certificates as per SGN/PM/PS/5, SGN/WI/PS/6 and supplemented by MPH.

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Further details of records required are detailed in SGN policy 'Management Procedure for the Capture of Plant and Equipment Records' SGN/PM/RE/2 and associated SGN records procedures (see [Appendix A](#)).

*Note: Major Projects Handbook (MPH) is an internal guide for the safe delivery of major construction works, including the construction of high-pressure pipelines. The MPH and referenced Data Books (6.1.3), in conjunction with PS/5 and Plant/1 records, details all of the documentation that should be handed over to SGN on project completion, i.e. asset handover; including documentation that is required under the Construction Design Management (CDM) Regulations.*

### 9.6.4 SGN Deliverables

SGN shall facilitate an audit of the project records and handover documentation and return a signed copy of SGN/WI/PS/6 – Part E 'Commissioning Completion' and the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

Confirmation that all of the commissioning documentation is in place as per SGN/PM/PS/5.

### 9.6.5 Outstanding Actions

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

## 9.7 Audit Phase 7 - Asset Acceptance

### 9.7.1 Scope

SGN should carry out an Asset Acceptance Review of all project records and legal documentation to confirm that the new pipeline and/or installation(s) are acceptable to SGN.

### 9.7.2 Purpose of the Audit

The purpose of the audit is to:

- a) Confirm that SGN's criteria for taking ownership has been satisfied;
- b) Confirm that all construction records and handover documentation are available in accordance with MPH (Data Books 1-6) and the 'Management Procedure for the Capture of Plant and Equipment Records', SGN/PM/RE/2 and associated SGN records procedures (see [Appendix A](#));
- c) Enable SGN to agree to take ownership as all relevant technical and legal documents and project records are handed over; and

- 
- d) Ensure completion and signed copies of SGN/PM/PLANT-1 Site Handover Form, and SGN/WI/PS/6 Part F, Records Completion Form.

### 9.7.3 SLO Deliverables

All asset acceptance records, and documentation detailed in SGN/PM/RE/2, SGN/WI/PS/6, MPH (*Data Books 1-6*) associated SGN records procedures (see [Appendix A](#)) and including **but not limited to**:

- a) The on-line inspection report where the pipeline is 150 mm NB or greater and greater than one kilometre in length (i.e. fingerprint, if applicable to a pipeline of that length and diameter). The on-line (OLI) inspection should be procured by the SLO.
  - i. As a minimum, pipeline geometry must be established either through the use of a geometric survey pig or a gauging pig with correctly sized plates – *SGN/SP/P/10 Section 32*.

**Note:** The condition of a pipeline shall be established by either the use of internal inspection devices on those pipelines that can be monitored using devices or the use of approved external inspection techniques on those pipelines or sections of pipelines that cannot be monitored using internal inspection techniques devices;

- b) Corrosion Monitoring Survey Reports (e.g. Close Interval Potential Survey (CIPS), Pearson survey etc);
- c) Land Drainage system records.

### 9.7.4 SGN Deliverables

SGN shall facilitate an audit of the project records including legal and technical documentation and return a signed copy of the SGN/WI/PLANT/1 'Site Handover (Post Commissioning)' and the form shown in [Appendix C.3](#) 'Notice of Satisfaction / Non-Satisfaction of Phase Audit Requirements' to the SLO.

Confirmation that records have been verified as per SGN/WI/PS/6 Part F

### 9.7.5 Outstanding Actions

An action plan to resolve any outstanding actions should be developed and agreed jointly between the SGN and the SLO.

**APPENDIX A – REFERENCES**

This Specification makes reference to the documents listed below

**A.1 Internal Documents**

SGN/PM/G/25	- Management Procedure for Statutory Notifications for Transmission Pipelines
SGN/PM/PS/5	- Management Procedure For The Management Of New Works, Modifications and Repairs.
SGN/PM/NP/18	- Management Procedure for Network Planning
IDN/SP/P/2	- Specification for Welding of Land Pipelines and Installations Designed to Operate at Pressures greater than 7 bar (Supplementary to BS 4515-1)
SGN/PM/RE/2	- Management Procedure for the Capture of Plant and Equipment Records
SGN/PM/RE/3	- Specification For Engineering Drawing Records
SGN/PM/RE/5	- Management Procedure for Records of Land and Buildings associated with SGN Plant
SGN/PM/RE/6	- Specification For Pressure And Volume Control Plant Records
SGN/PM/RE/8	- Specification For Diurnal Storage Records.
SGN/PM/RE/9	- Management Procedure For Instrumentation And Electrical Records Associated With SGN Plant
SGN/PM/TR/15	- Management Procedure for the Design and Construction of Pipelines and Installations Operating Above 7 barg
SGN/SP/TR/18	- Specification for Engineering of Pipelines and installations Operating at above 7barg
SGN/SP/TR/21	- Specification for Feasibility Studies for Pipelines and installations Operating at above 7bar.
SGN/SP/TR/22	- Specification for the Environmental Statement for Pipelines and Installations Operating at above 7bar
SGN/SP/TR/23	- Specification for the conceptual Design of Pipelines and Installations Operating at above 7bar
SGN/SP/TR/24	- Specification for Detailed Designs of Pipelines and Installations Operating at above 7 bar
SGN/SP/TR/25	- Specification for the Construction of Pipelines and Installation Operating at above 7 bar
IDN/SP/P/9	- Specification For The Welding Of Fittings To Pipelines Operating Under Pressure (Supplementary to BS 6990).



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SGN/WI/SW/2	- Work Instruction for Safe Working in the Vicinity of Pipelines & Associated Installations with maximum operation pressure >7barg
SGN/WI/PLANT/1	- Work Instruction for the Delivery of Plant Projects
SGN/PM/SCO/1-7	- Management Procedures for Safe Control of Operations
T/PR/NDT/1	- Work Procedure for Carrying out Non-Destructive Testing of Plant and Equipment
SGN/SP/NDT/2	- Specification for Non-Destructive Testing of Welding Joints on Construction and Fabrication Projects
CMS01 - 05	- Major Projects and Construction Management System Framework Documents
SGN/SP/QA/1	- Management Procedure for Quality Assurance of Suppliers to Scotia Gas Networks
SGN/SP/QA/2	- Specification for the Provision of Quality Assurance Inspection Services
SGN/PM/PS/3	- Management Procedure for the Registration of Project Coordinators, Designers and Appraisers
SGN/SP/P/10	- Specification for General Pipeline Design to Operate at Pressures Greater than 7Barg
SGN/SP/E/28	- The Design of Pressure Regulating Installations with Inlet Pressures not Exceeding 100 Bar
SGN/SP/W/8	- Specification for Welding of Natural Gas Steel Installations Pipework Designed to Operate at Pressures up to 100 bar – Supplement to BS EN 12732
SGN/SMF/1	- Safety Management Framework

## A.2 External Documents

IGEM/GL/5 Edition 3	- Managing new works, modifications and repairs (1783)
IGEM/TD/3	- Steel and PE pipelines for gas distribution
IGEM/TD/13	- Pressure regulating and above 7 Bar Pipelines Installations
IGEM/SR/25	- Hazardous area classification of Natural Gas Installations
IGEM/TD/1	- Steel pipelines and associated Installations for high pressure gas Transmission

## APPENDIX B – DEFINITIONS

The definitions applying to this Management Procedure are given below

<b>AGI</b>	- Above ground installations, including all PRIs, multi junctions, pig trap facilities, block valve sites, minimum exit connections
<b>Assets</b>	- Assets shall mean the pipeline and any other installations or apparatus through which natural gas is intended to flow, including block valves, a structure to be used solely for the support of a pipe, facilities to launch and receive Pigs, pressure reduction installations, cathodic protection system, odourisation plant, and, where requested, the metering installation and flow weighted average calorific value measuring equipment. This definition is aimed at self-lay type arrangements
<b>High Pressure Distribution System</b>	- SGN's gas transmission system that is downstream of the local distribution zone offtake and has an above 7 bar nominated maximum operating pressure.
<b>Project Manager</b>	- Party responsible for management of the design and installation of assets.
<b>Pipelines</b>	- Pipework defined as a pipeline under Pipelines Safety Regulations, this may include parts of an above ground installation, pipework inside and outside of any security fence and special crossings.  The pipeline may include above ground sections of pipework up to the pig trap.
<b>Pig</b>	- A device inserted into a pipeline to perform a variety of cleaning and inspection activities. Pigs can take many forms, utility pigs to assist hydrostatic pressure tests, debris and dust removal and proving the line for subsequent 'smart' pig inspection tools. Smart pigs use several different technologies to obtain information regarding the integrity of the pipeline, including Ultrasonics, EMAT & Magnetic Flux Leakage.
<b>Pressure</b>	- Pressure terminology, including design pressure, is as defined in IGE/TD/13 'Pressure Regulating Installations for Transmission and Distribution' and IGE TD/1 'Steel Pipeline for High Pressure Gas Transmission', Ed 4.
<b>SLO</b>	- Self-lay organisation: party (other than the SGN entity holding the relevant Gas Transporter licence) wishing to construct assets for the SGN entity holding the relevant Gas Transporter licence to take Ownership.
<b>DESNZ</b>	- Department for Energy Security and Net Zero
<b>BGAS -CSWIP</b>	- Certification process for the pipeline integrity competence in areas including welding, NDT, paint, and coating.
<b>MPH</b>	- Major Projects Handbook, internal guidance document for project delivery teams
<b>Final Connection</b>	- Consists of the labour and materials to physically connect the pipe at the point where it interfaces with our high pressure pipelines and network

**APPENDIX C:****C.1: Operational Acceptance Certificate****COMMISSIONING ACCEPTANCE CERTIFICATE TEMPLATE**

(to be completed at Audit Phase 6)

Organisation Name:	
Project Name / Details:	

**Part 1: Collation of Project Documentation** (to be completed by the SLO) should include but not be limited to the following:

- ☐ Hydrostatic Test Acceptance Certification
- ☐ Satisfactory testing of Electrical equipment and systems in line with SGN/PM/EL4 / BS7671
- ☐ Valves inspected and pre-commissioning checks completed satisfactorily
- ☐ Safety critical instrumentation, control systems and telemetry pre-commissioning complete
- ☐ Commissioning procedures and programme in place
- ☐ Satisfactory geometric pig runs completed
- ☐ Schedule of outstanding works
- ☐ SGN/PM/PS/5 procedure completed/Audit Phases 1 to 5 successfully completed\*.
- ☐ Written Schemes of examination required by PSSR completed and certified
- ☐ Drawings required prior to commissioning accepted as complete
- ☐ Ownership demarcation point between the existing SGN network and the SLO's new assets agreed. Safe Operating Limits of SGN's upstream protective device (and pipeline), required by PSSR agreed as being compatible.
- ☐ QA documentation for material certification, weld inspection, pressure testing and electrical testing reviewed and found to be satisfactory.

Having completed the review of the above certification documentation, I am able to certify Operational and Commissioning Acceptance of the new assets associated with this SLO project. I warrant that the SLO system is safe and suitable to receive natural gas in accordance with all statutory requirements. I confirm that the SLO assets have been designed, procured, and constructed as outlined in the submissions for Audit Phases 1 to 5 inclusive, successfully assessed by SGN.

<b>Name:</b> (SLO Responsible Person)	<b>Signature:</b>	<b>Date:</b>
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**Part 2: To be completed by SGN**

Based on the above certification, I am able to confirm Operational and Commissioning Acceptance of the new SLO assets. Commissioning may therefore proceed to the maximum permissible operating pressure.

<b>Name:</b> (Asset Engineer/ Asset Manager*)	<b>Signature:</b>	<b>Date:</b>
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\* delete as applicable

**C.2: Commissioning Acceptance Certificate****OPERATIONAL ACCEPTANCE CERTIFICATE**

Organisation Name:	
Project Name / Details:	

**Part 1: Collation of Project Documentation** (to be completed by the SLO) should include but not be limited to the following:

- ☐ Notification required by the Pipeline Safety Regulations 1996
- ☐ Notification under the Pipelines Act 1962 or Gas Act 1995 as applicable
- ☐ Planning Consents received.
- ☐ Notification under Planning Hazardous Substances Regs 1992 (installations >15 T) and COMAH (installations > 50 T as applicable).
- ☐ Deed of Grant of Easement sealed with evidence of registration
- ☐ Details of any concessions/deviations from Engineering requirements
- ☐ Asset database records and project documentation including drawings following commissioning
- ☐ Asset records updates completed (i.e. Part D of SGN/PM/PS/5)
- ☐ Confirmation that commissioning procedures are satisfactorily completed including all necessary electrical tests that can only be completed with energised circuits
- ☐ Results following online inspections online inspection (if pipeline is pigable)
- ☐ Results following Pearson and CIPS surveys
- ☐ Health and Safety file including handover documentation as required by CDM Regulations
- ☐ Demonstration of closeout of HAZID/HAZOP actions, audit actions

**Having completed the review of the above certification documentation, I am able to certify Operational and Commissioning Acceptance of the new assets associated with this SLO project. I warrant that the SLO system is safe and suitable to receive natural gas in accordance with all statutory requirements. I confirm that the SLO assets have been designed, procured and constructed as outlined in the submissions for Audit Phases 1 to 5 inclusive, successfully assessed by SGN.**

<b>Name:</b> (SLO Responsible Person)	<b>Signature:</b>	<b>Date:</b>
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**Part 2: To be completed by SGN**

**Based on the above certification, I can confirm Operational and Commissioning Acceptance of the new SLO assets. Commissioning may therefore proceed to the maximum permissible operating pressure.**

<b>Name:</b> (Asset Engineer/Asset Manger*)	<b>Signature:</b>	<b>Date:</b>
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\* delete as applicable

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**C.3: Satisfactory, Non-satisfactory Template**

*[to be typed on SGN headed notepaper]*

*[addressed to SLO]*

SGN Reference: *[to be populated by SGN]*

SLO Ref: *[SGN to enter if known]*

Dear Sirs,

**MILESTONE AUDIT** *[insert number and identification]*

We refer to your letter of *[insert date]* requiring SGN to carry out milestone Audit *[insert number and identification]* pursuant to the Above 7 barg Pipeline taking Ownership Agreement between us dated *[insert date]* SGN Reference *[insert reference]* ("the Agreement").

We hereby notify you that you have satisfied / not satisfied the Milestone Audit requirements in respect of milestone *[insert number and identification]*.

(\*delete as applicable).

The areas of failure in respect of Milestone *[insert number and identification]* are set out in the attached report.

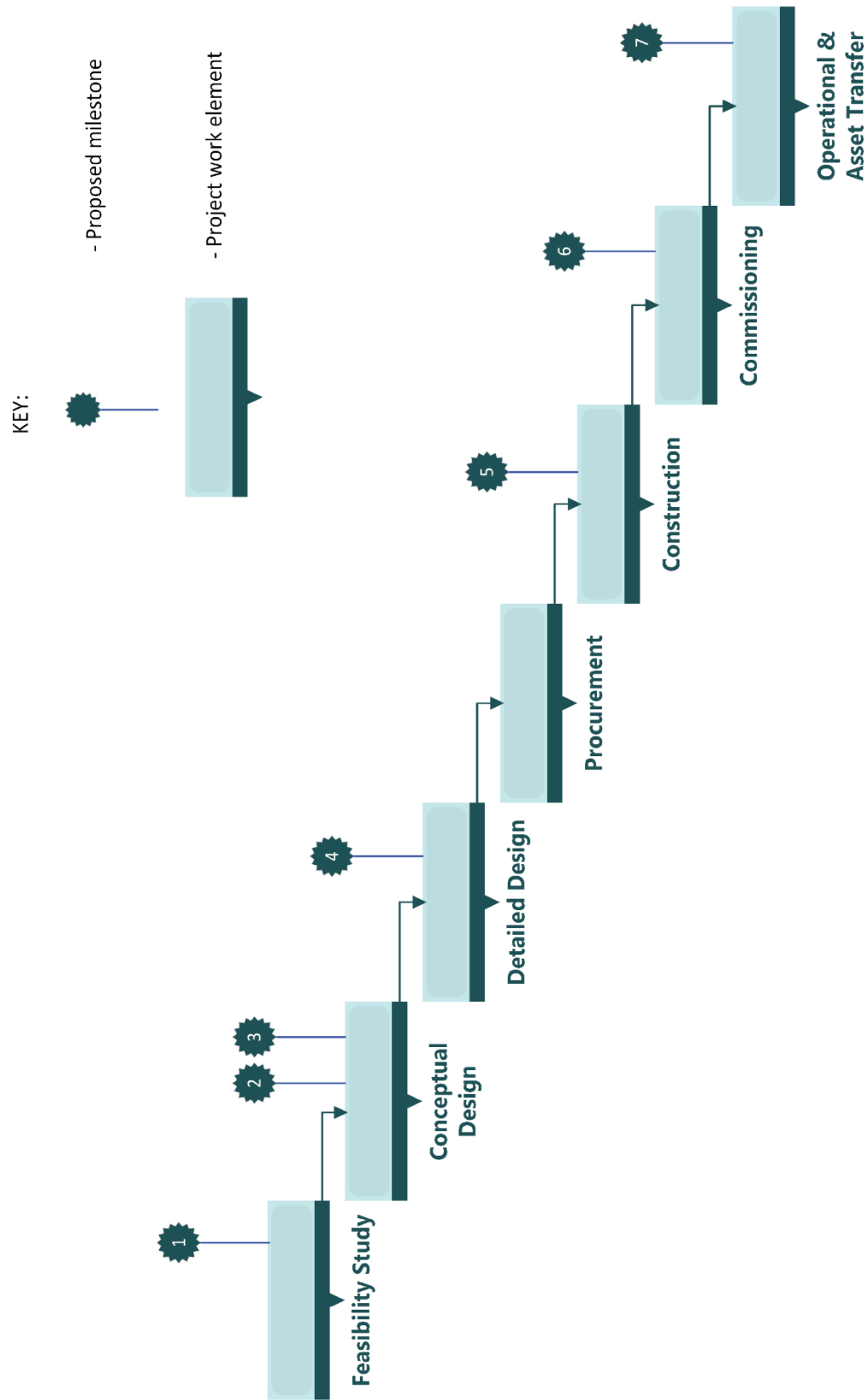
Yours sincerely,

*[name]*

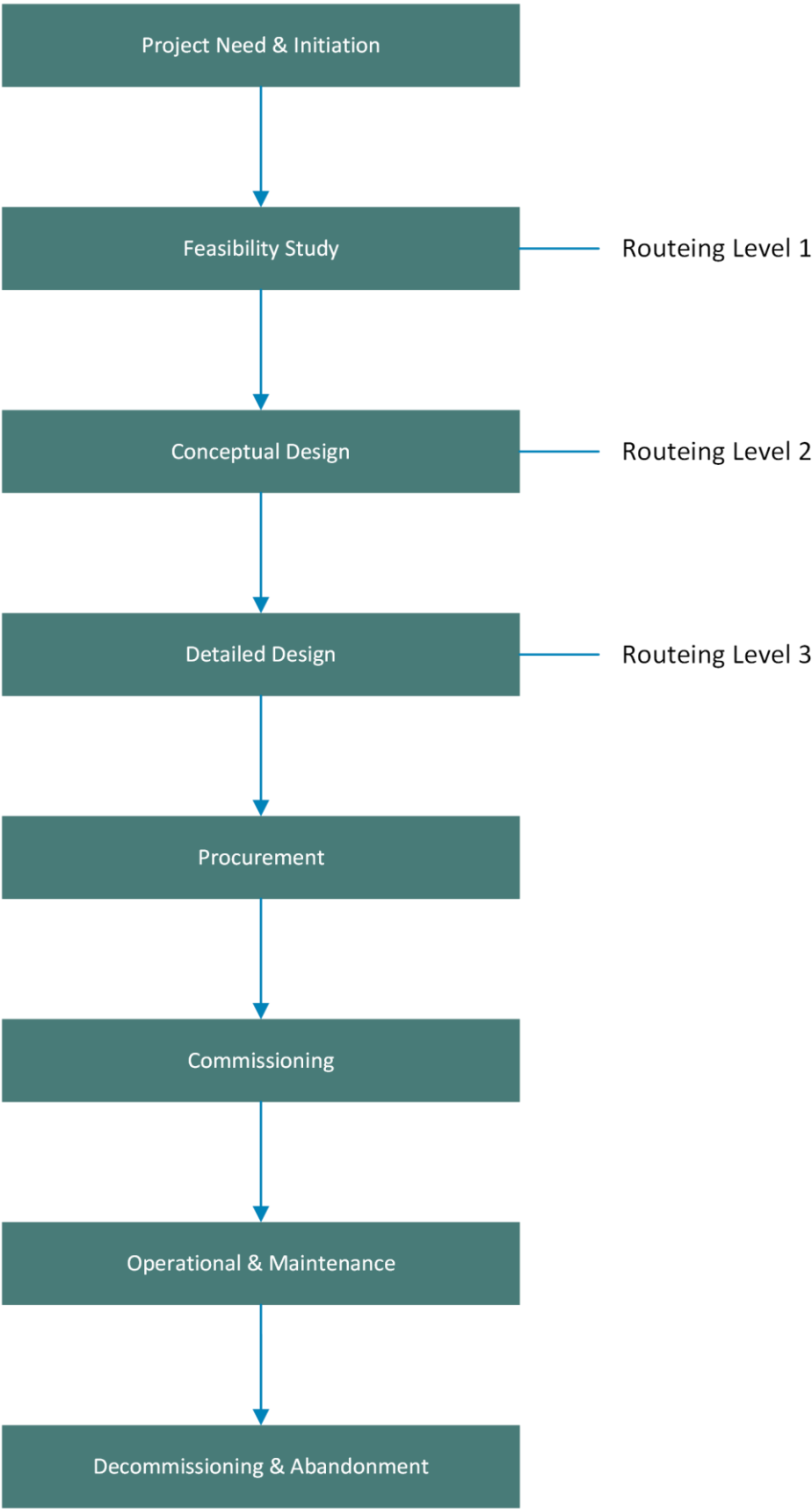
*[position]*

For and on behalf of SGN plc

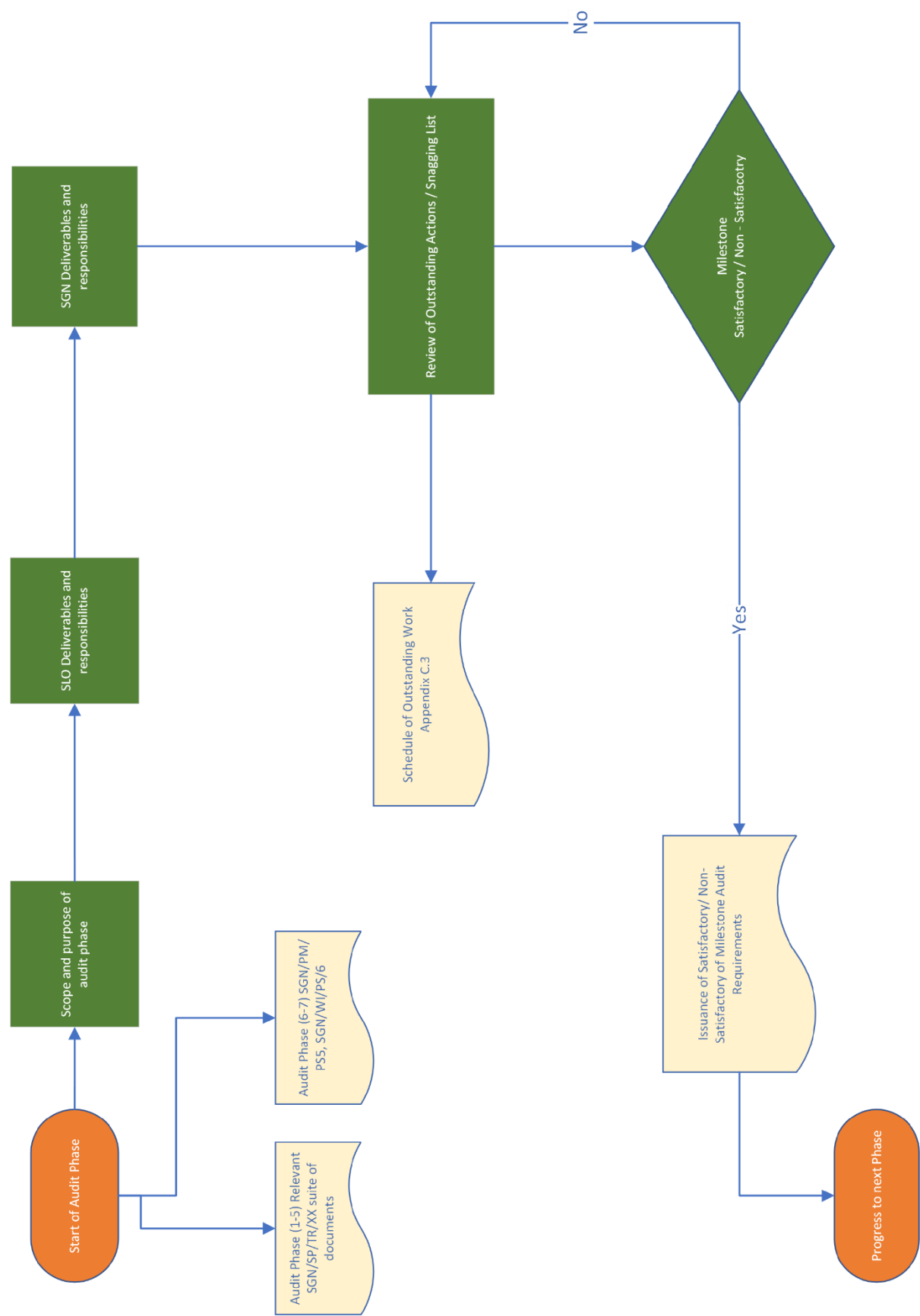
APPENDIX D – TYPICAL PROJECT PROCESS WITH MILESTONES



APPENDIX E – GENERAL PROJECT PROCESS & GOVERNANCE



APPENDIX F: AUDIT FLOW CHART, PHASE 1-7





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## APPENDIX G

### INSPECTION REQUIREMENTS

The inspection strategy must be agreed upon at the outset of engagement by SGN and the SLO. While the specific approach will depend on the project's scope and nature, the strategy should, at a minimum, ensure the following:

- Competent and appropriately qualified staff are used;
- The traceability of materials and records;
- The integrity of the final pipeline, including any pipeline repairs, shall also be ensured
- That the appropriate non-destructive testing has been carried out;
- The management of the site inspection team;
- All health safety issues associated with the inspection process are appropriately considered; and
- The inspection during the construction stage should include audit inspections, where deemed necessary full verification during the following stages:
  - Pipe delivery
  - Stringing and bending
  - Welding – front end, back end, fabrication and tie in welding, repair welding and re
  - Welds
  - Coating
  - Agricultural inspection
  - Hydro-testing
  - Pigging
  - Calliper surveys.
  - Land drainage system

## **ENDNOTE**

### **Comments**

Comments and queries regarding the technical content of this safety and engineering document should be directed to The SHE and Engineering Registrar at

**[engineering.registrar@sgn.co.uk](mailto:engineering.registrar@sgn.co.uk)**

### **Buying documents**

Contractors and other users external to SGN should direct their requests for further copies of SGN safety and engineering documents to the department or group responsible for the initial issue of their contract documentation.