ESP/PM/VMT

PROCEDURE FOR

Minor/Major Variations from Design for Construction.

June 2022

DOCUMENT AND VERSION CONTROL

Date	By	Notes	Version number (after changes)
February 2022	Vince Smith Asset Records Manager	Document created and approved	V1.0
June 2022	G Ansell	Overview and minor additions	V1.1

Audience

ESPUG staff, auditors and service providers' who have responsibility for the design, installation, and commissioning of Gas Network Infrastructures.

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Date Approved:	**June 2022**
Review Date:	**June 2023**

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1.0 FOREWORD

This variation procedure document is constructed to give guidance on Minor/Major variations encountered when circumstances on site vary from those detailed within the Approved and validated Design submission to ESP.

- Minor variation can be self-approved by the constructors Authorised Person and details provided to ESP, with supporting documentation, upon completion.
- Major variation must be submitted by the Authorised Person and/or competent Designer to ESP for approval prior to construction.

2.0 DISCLAIMER

This document is provided for use by ES Pipelines Limited 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.

3.0 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.

4.0 INTRODUCTION

This document describes applicable (but not limited to) scenarios that may be encountered and that require a minor or major variation to the validated Design.

Note: If a variation to the Design does not fall within the table as defined below, you must contact ESP for guidance.

5.0 References

This is not an exhaustive list of Gas Industry documents but highlights those that ESP Managers and Service Providers are expected to have a working knowledge of. This includes any Scottish equivalents as applicable.

5.1 Legislation

5.1.1 Acts

- Gas Act 1986 and 1995
- Health and Safety at Work etc. Act 1974 (HASWA)
- New Roads and Street Works Act 1991 (NRSWA)
- Traffic Management Act 2004 (TMA)
- Environmental Protection Act 1990

5.1.2 Regulations

- Construction (Design and Management) Regulations 2015 (CDM)
- Control of Substances Hazardous to Health Regulations 1999 (COSHH)
- Dangerous Substances and Explosive Atmosphere Regulations 2002 (DSEAR)
- Electricity at Work Regulations 1989 (EWR)
- Gas Safety (Installation & Use) Regulations 1998 (GS(I&U)R)
- Gas Safety (Management) Regulations 1996 (GSMR)
- Pipeline Safety Regulations 1996 (PSR)
- Pressure Systems Safety Regulations 2000 (PSSR)
- Workplace (Health and Safety) Regulations 1992 (WHSR)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)
- Personal Protective Equipment at Work Regulations 1992 (PPE)
- Control of Asbestos at Work Regulations 2002
- Management of Health and Safety at Work Regulations 1992 (MHSWR)
- The Work at Height Regulations 2005.
- Approved Document B Fire Safety in Dwellings (for MOBs)

5.2 IGEM Standards (Latest Edition)

- IGEM/TD/3 Steel and PE pipelines for gas distribution
- IGEM/TD/4 PE and steel gas services and service pipework
- IGEM/TD/13 Pressure regulating installations for Natural Gas, Liquefied Petroleum Gas and Liquefied Petroleum Gas/Air.
- IGEM/TD/101 Adoption of pipe system by a GT – management of UIP activities
- IGEM/TD/102 Competence Framework
- IGEM/UP/7 Gas installations in timber framed and light steel framed buildings
- IGEM/G/1 Defining the end of the Network, meter installation, etc.

- IGEM/G/5 Gas installations in multi-occupancy buildings
- IGEM/SR/25 Hazardous area classification of natural gas installations
- IGEM/SR/22 Purging operations for fuel gases in Transmission, Distribution and Storage
- IGEM/TD/1 Steel Pipelines & associated installations for HP gas transmission
- IGEM/TD/1 Supplement 1 Handling, transport and storage of steel pipe, bends and fittings
- IGEM/SR/28 Trenchless techniques

5.3 HSE Publications

- HSG 47 Avoiding danger from underground services

5.4 NJUG Publications

- NJUG Volume 1 Guidelines on positioning and colour coding of underground Utilities apparatus.
- NJUG Volume 2 Guidelines on the positioning of underground Utilities apparatus for new development sites.
- NJUG Volume 3 Guidelines on the management of third party cable ducting.
- NJUG Volume 4 Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.
- NJUG Volume 5 Guidelines on environmental practice.

5.5 British Standards (Latest Editions)

- BS6400-1: 2016 Specification for the installation, exchange, relocation and removal of domestic sized gas meters part 1 Low pressure.
- BS6400-2: 2018 Specification for the installation, exchange, relocation and removal of domestic sized gas meters part 2 Medium pressure.

5.6 Government Documents

- Department of Transport Safety at Street Works a Code of Practice 2013. Reference ISSN9780115531453.

5.7 ESP Standards

- ESP/PL/DM Management Policy for Design manual – Natural Gas Distribution Networks
- ESP/DP/2 Management Policy for Design requirements for the installation of gas systems into flats and multi-occupancy buildings
- ESP SCO Safe Control of Operations
- ESP/PM/MP5 The Design of Industrial and Commercial Metering Installations (Inlet Pressures not exceeding 7barg).
- ESP Health and Safety Plan-Construction (Design & Management) Regulations 2007

- ESP002 Technical Bulletin Notices/Labels for Gas Meters.
- ESP011 Technical Bulletin Valve information collection.
- ESP013 Technical Bulletin Product development, introduction of new PE pipe.
- ESP 018 Technical Bulletin Pneumatic Pressure Testing
- ESP 019 Technical Bulletin Gas Service Pipe Termination and Routing
- ESP 020 Technical Bulletin Product Development Donkin Series 217 Factory Entry Elbows with split flange.
- ESP 021 Technical Bulletin Introduction of AVK Donkin PUR coated Fig 555 Valves.

5.8 Other

- BIM (Building Information Modelling (Level 2)
- Lloyds GIG2 (Gas Industry Guidance document)
- Code of Practice for Meter Asset Managers and Approved Meter Installers (MCoP)

6.0 Variations Matrix Table

	ES Pipelines Variations Matrix		
	Based upon IGEM/TD101, Section 9		
Item No.	**Item**	**IGEM/TD/101**	**Minor/Major**
1	Increases in pipe depth of +25% to +50% for short distances i.e., to cross under other utilities' apparatus or +25% for longer lengths **(Must be accompanied by a specific, dimensioned sketch within the Completion Pack)**	Minor	Minor
2	Decreases in pipe depth of –5% to -10% for short distances i.e., to cross over obstructions, subject to additional pipe protection being installed **(Must be accompanied by a specific, dimensioned sketch within the Completion Pack)**	Minor	Minor
3	Short lengths of additional pipe i.e., up to 10m or 10% of total designed length, whichever is the least. [1]	Minor	Minor
4	Mains extensions >10m or >10% of total designed length. [1]	Major	Major
5	Change of meter position. Where the connection point remains on the same main, service length <=10% of original length and no further than 2 metres down a side elevation. [2]	Minor	Minor
6	Change in meter location external to internal. [2]	Major	Major
7	Change in meter location internal to external. [2]	Minor	Minor
8	Changes in construction methods, provided that the alternative methods have been approved as part of the generic method statements submitted to and approved by ESP.	Minor	Minor
9	Increase or decrease in plots/consumption, modification to consumption profile. CHP, Booster or compressor installations.	Major	Major
10	Increase or decrease in pipework size	Major	Major
11	Changes in pipe location, route	Major	Major
12	Changes in construction methods which are not covered by generic method statements.	Major	Major
13	Changes in pressure tier.	Major	Major
14	Changes to jointing methods(screwed/welded) in multi-occupancy dwellings. [3]	Major	Major
15	Changes to service entry type in multi-Occupancy buildings. [3]	Major	Major
16	Any other significant change to a previously authorised design submission not already stated above. [3]	Major	Major
	Note: If variation is not Minor, as defined above, then the variation is Major and must be referred to ESP for approval before implementation.		
	If in doubt refer to ESP for guidance.		

Notes:

[1] The 10% or 10m (whichever is the least) refers to the overall mains design length, not per design node.

[2] The changes to meter positions detailed apply to Low Pressure, domestic installations only. All Industrial and Commercial, and Medium Pressure meter installation varying from Design are designated a Major Variation.

[3] Any and all variations to Design for Multi-Occupancy buildings are designated a Major Variation, and as such MUST be submitted to ESP prior to construction by a GIG2 validated Designer or Design House as detailed under D-MOB, Design of Multi-Occupancy Buildings, within Lloyds GIG2. There are no exceptions to this.