

**GDN/PM/GT2**

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MANAGEMENT PROCEDURE FOR;

**REQUESTING A GAS TRANSPORTER TO:**

- **AUTHORISE THE SETTING AND SEALING OF REGULATORS AND ASSOCIATED SAFETY DEVICES.**
  - **AUTHORISE THE INSTALLATION OF A METER BY-PASS**
  - **APPROVE A METER HOUSING DESIGN.**
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## FOREWORD

The original procedures used by the Gas Transporters (GT) have now been superseded by this document. As a result there is no brief history of the management procedures from an individual GT.

This generic Management Procedure was approved by a collaboration of Gas Transporters on 18<sup>th</sup> February 2014 for use by managers, engineers and supervisors. This will give a consistent framework and approach for those who will use this document.

This document will be 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 Energy Network Association website.

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

## BRIEF HISTORY

Version 1.0, published following amalgamation of 4 DN versions. DN versions discontinued. Version 1.1, Revisions agreed but not published. Version 1.2, Revisions agreed and published Version 1.3 Revisions agreed and Published	May 2013  September 2013 January 2014 August 2015	GDN/PM/GT2
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## KEY CHANGES

(Identify the changes from the previous version of this document)

Section	Amendments
Obtaining Authorisation	Notification of non-standard meter exchanges Use of FM176 form
Appendix C	Minor changes to forms.

## DISCLAIMER

This document is provided for use by GTs 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:** Prescribes a procedure which it is intended will be complied with in full, without deviation.

**Should:** Prescribes a procedure which it is intended will be complied with unless, after prior consideration, deviation is considered to be acceptable.

## Introduction

Legislation, industry codes and standards describe how certain meter related activities require GT Authorisation and / or approval (*see appendix A*).

The Gas Safety (Management) Regulations 1996 place a duty on a GT to ensure that gas is at a suitable pressure to ensure the safe operation of any appliance that a consumer could reasonably expect to operate.

The Gas Safety (Installation and Use) Regulations 1998 requires that the person who installs or adjusts a regulator shall ensure that it is adequately sealed. This seal is to prevent the setting from being adjusted or interfered with. No person except the GT or a person authorised to act on his behalf shall break the seal applied to the regulator.

*The HSE have considered that the Gas Safety (Management) Regulations 1996 should be taken as meaning that a GT is deemed to have 'control of the meter regulator'. This should ensure the integrity of the system downstream of the meter regulator, and as far as reasonably practical, ensure that the downstream system is supplied with a satisfactory pressure to ensure the safe combustion of gas at a gas appliance.*

The Unified Network Code requires that following approval by a Gas Shipper, the provision and use of a meter by-pass shall be approved by the GT.

The Gas Act 1986 (As amended) requires that where a meter is to be installed in a meter house, the type and construction of the meter house shall be approved by the GT. Failure to obtain approval could result in the GT refusing to connect, or as the case maybe, disconnect the gas supply to the consumer's premises.

Where a meter installation is or is intended to be connected to a network operated by a GT, 'Authorisation' applies to any activity associated with the;

- Initial setting of a regulator, sealing or breaking a seal and adjustment of a regulator and any associated pressure control or protection devices,
- Installation of a meter by-pass.
- Design of meter housing.

This procedure shall be used by a Meter Asset Manager (MAM) to request an Authorisation.

The GT shall review requests and issue a 'Letter of Authorisation' or 'Notification of failure to obtain an Authorisation'.

The review will be limited to ensuring that the:

- Design of the gas supply meter installation is compatible with the operational pressures that may occur on the network to which the meter installation is to be connected,
- Appropriate pressure control and protection device(s) will be used,
- Pressure control and protection device(s) will be set at specified values,
- Gas supply meter installation will not absorb excessive pressure so as to affect the safe operation of any appliance a consumer may reasonably be expected to operate,
- Provision of a by-pass is appropriate and has been approved by a Gas Supplier.
- The meter housing is of an acceptable design.

The review will specifically exclude any validation that a meter satisfies the obligations under the Gas Act 1986 (as amended) Schedule 2B with respect to the meter being of a type appropriate for registering the quantity of gas supplied and any other statutory requirements, recommendations or good practices associated with a meter installation in a premises.

*Electronic copies of this procedure can be obtained from the Energy Network Association and GT's web site. (See Appendix J).*

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## Scope

This procedure applies to gas supply meter installations as described in Table 1 below that are, or are intended to be connected to a network operated by a GT for the transportation of Second Family Gas.

This procedure describes how to obtain GT Authorisation for;

- Setting and sealing meter regulators (*Section 3*)
- Setting and sealing any associated pressure control and protection devices (*Section 3*)
- Installing a meter by-pass. (*Section 4*)
- Approval of meter housing design. (*Section 5*)

It also describes how the GT verifies that the conditions associated with an Authorisation are satisfied.

**TABLE 1 CATEGORIES OF METER INSTALLATION WITHIN THE SCOPE OF THE PROCEDURE**

Work Category	Installation Details	Installation Description
Category 1 & COP 1a	$Q_{\max} \leq 6 \text{ m}^3 \text{ h}$ $\text{MOP} \leq 75 \text{ mbar}$ Standard Installation	Domestic Meter Installations supplied at Low Pressure and installed in accordance with BS 6400 - 1
Category 2 & COP 1c	$Q_{\max} \leq 6 \text{ m}^3 \text{ h}$ $75 \text{ mbar} < \text{MOP} \leq 2 \text{ bar}$ Standard Installation	Domestic Meter Installations supplied at Medium Pressure and installed in accordance with BS 6400 - 2
Category 3a & COP 1b	$6 \text{ m}^3 \text{ h} < Q_{\max} \leq 40 \text{ m}^3 \text{ h}$ $\text{MOP} \leq 75 \text{ mbar}$ Standard Installation	Domestic Meter Installations up to U40 supplied at Low Pressure and installed in accordance with IGEM/GM/6
Category 3b & COP 1b	$6 \text{ m}^3 \text{ h} < Q_{\max} \leq 1076 \text{ m}^3 \text{ h}$ $\text{MOP} \leq 75 \text{ mbar}$ Standard Installation	Industrial and Commercial Meter Installations supplied at Low Pressure and installed in accordance with IGEM/GM/6
Category 4a & COP 1c	$Q_{\max} > 6 \text{ m}^3 \text{ h}$ $75 \text{ mbar} < \text{MOP} \leq 38 \text{ bar}$ Non standard Installation	Industrial and Commercial Meter Installations supplied at pressures up to and including 38 bar, with a Metering Pressure of 21 mbar and installed in accordance with IGE/GM/8
Category 4b & COP 1c	$Q_{\max} > 6 \text{ m}^3 \text{ h}$ $75 \text{ mbar} < \text{MOP} \leq 100 \text{ bar}$ Non standard Installation	Industrial and Commercial Meter Installations supplied at pressures between 16 bar and 38 bar and installed in accordance with IGE/GM/8 or GM4 for installation up to 100 bar and where the metering pressure is greater than 21 mbar.

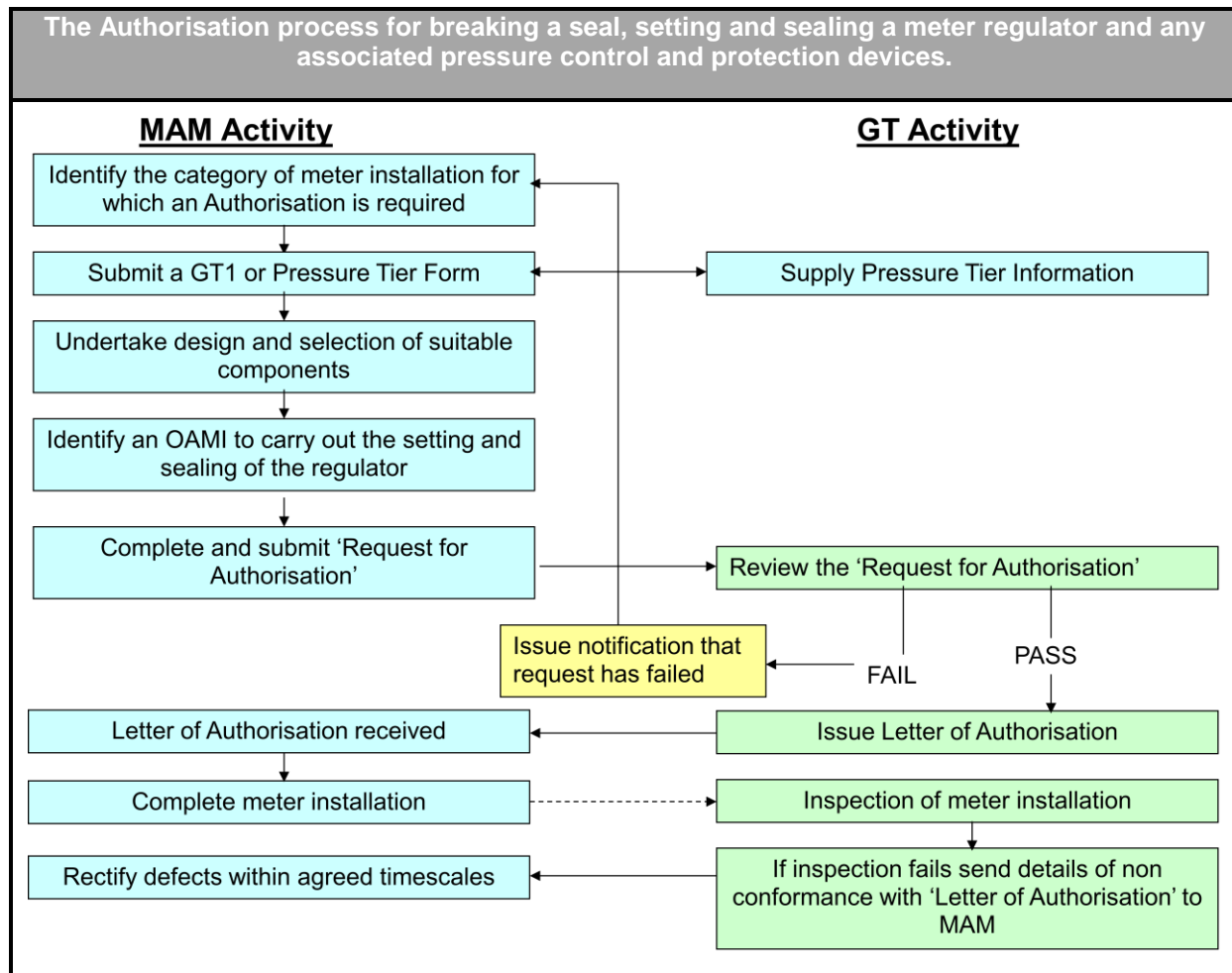
*Note 1: For supply points covered by a Gas Network Exit Agreement there may be additional requirements associated with the provision of the supply meter installation e.g. it may not be necessary for the applicant to be a Registered MAM.*

*Note 2: Where the meter installation is to supply a gas engine, compressor or any other apparatus which requires the use of anti-fluctuation devices or valves to protect the gas network, this shall be included in the GT2 request.*

## Obtaining an Authorisation to set and seal a meter regulator.

### Overview of Authorisation process

Figure 1: How to obtain an Authorisation.



Authorisations extend to;

- new meter installation work,
- meter exchange
- modifications to meter installations.

*Note 1: "modifications" includes any change to the set points that will take the installation out of the regime specified on the warrant.*

Work relating to the authorisation should not commence, until authorisation is obtained and the meter installation shall not be put into service until authorisation is obtained.

The above process relies on an exchange of correspondence between the applicant and the GT using the forms identified in Table 2 and Table 3 and shown in Appendix C and Appendix H.

*Note: Where an application is made for a Cat 4 installation, the network operational pressure limits for the site should be obtained from the GT using procedure GDN/PM/GT/1.*

**Identifying the correct form to use.**

**TABLE 2: THE FORMS TO BE USED BY THE APPLICANT TO REQUEST AN AUTHORISATION TO SET, SEAL AND BREAK A REGULATOR SEAL.**

(See Appendix C)

Category		Meter Capacity	Appropriate metering pressure	Appropriate for connection to	Request for Authorisation' Form	Type of Authorisation
1	Low pressure, domestic size meter installations	≤ 6 m <sup>3</sup> /h	21 mbar	Low pressure networks operating at standard pressures.	<b>C1</b>	Generic
2	Medium pressure, domestic size meter installations	≤ 6 m <sup>3</sup> /h	21 mbar	Medium pressure networks operating at standard pressures.	<b>C2</b>	Generic.
3A	Low pressure, standard, domestic size meter installations	≤ 40 m <sup>3</sup> /h	21 mbar	Low pressure networks operating at standard pressures.	<b>C3A</b>	Generic.
3B	Low pressure, standard, industrial and commercial size meter installations	≤ 1076 m <sup>3</sup> /h	21 mbar	Low pressure networks operating at standard pressures.	<b>C3B</b>	Generic.
4A	Low pressure non standard, or higher pressure industrial and commercial size meter installations	As stated on the 'Request for Authorisation'	21 mbar	Networks operating at standard pressures as stated on the 'Request for Authorisation'.	<b>C4A</b>	Specific applicable only to the meter being installed
4B	Low pressure non standard, or higher pressure industrial and commercial size meter installations	As stated on the 'Request for Authorisation'.	As stated on the 'Request for Authorisation'.	Networks operating at standard pressures or at enhanced pressure under a gas supply ancillary agreement as stated on the 'Request for Authorisation'.	<b>C4B</b>	Specific applicable only to the meter being installed

**TABLE 3: FORMS AND LETTERS USED BY THE GT TO REVIEW THE REQUEST**

(See Appendices D & H)

Request for Authorisation	GT Review of Request Form	GT Letter of Authorisation	GT Authorisation Failure Letter
<b>C1</b>	<b>D1</b>	<b>E1</b>	<b>F</b>
<b>C2</b>	<b>D2</b>	<b>E2</b>	
<b>C3A</b>	<b>D3A</b>	<b>E3A</b>	
<b>C3B</b>	<b>D3B</b>	<b>E3B</b>	
<b>C4A</b>	<b>D4A</b>	<b>E4A</b>	
<b>C4B</b>	<b>D4B</b>	<b>E4B</b>	

*Note 1: Subject to a satisfactory review, a 'Letter of Authorisation' will be issued which details the conditions of a particular Authorisation. This will be either generic or specific, dependant upon the category of the installation and the details stated in the request.*

*Note 2: A generic Authorisation is applicable to all meter installations within the defined category that fit the description given on the 'Request for Authorisation'.*

*Note 3: A specific Authorisation is applicable only to a single meter installation.*

### **Submitting a request for Authorisation to set and seal a Meter Regulator.**

The appropriate 'Request for Authorisation' form for the particular category of meter installation shall be used. (See *Appendix C*)

Consider the following prior to completing an application:

- Determine the Network Pressure. See Table 4 in Appendix I.
  - If there is doubt about the pressure tier or where the supply capacity is to be increased a GT1 application should have been completed. The response from the GT1 request, shall be appended to the GT2 application when it is submitted.
  - Where it is a new connection the FM176 form can be submitted with the GT2 application along with the service design and quotation reference number.
- What are the proposed or existing, capacity and characteristics of the appliances that will be supplied with gas?
- What is the required metering pressure?
- Are the gas supply arrangements for the meter installation appropriate?
- Is the design of the proposed meter installation compatible with the operational pressures of the network to which it will be connected?
- Has permission been requested for a by-pass?
- What pressure control and protection arrangements will be employed?
- Are the settings for the meter regulator and any associated pressure control and protection device(s) appropriate? See Appendix I.
- Is the meter installation un-regulated and is an exemption certificate under Regulation 40 of the Gas Safety (Installation and Use) Regulations 1998 required?
- Is the installation pipework, gas fittings and gas appliance(s) suitable for the pressures that may occur at the outlet of the meter installation under all circumstances?
- Is the organisation submitting the request a registered MAM or is the supply point subject to a Network Exit Agreement?
- Is the organisation undertaking the work an OAMI or will an OAMI be required to set and adjust the meter regulator and any associated pressure control and protection device(s)?
- Does the proposed meter installer and OAMI have the appropriate accreditations to undertake this category of work?
- Is the meter house / accommodation of a type and construction approved by the GT?

If the requirements above are not complied with, the GT may refuse to connect or, as the case may be, decide to disconnect the gas supply at the consumer's premises.

Where the installation is designed for consumer specific outlet pressures, e.g. When "Standard appliances" are not used, a copy of the letter from the consumer advising the operational limits of the downstream system shall be submitted with the application.

Where the meter installation is to be installed prior to there being any knowledge of the downstream installation pipework or gas appliance(s) then the applicant shall assume that only standard appliances will subsequently be connected.

A GT will only authorise an OAMI to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s). If the applicant is not an OAMI, or the applicant does not wish to break a seal, set and adjust the meter regulator and any associated pressure control and protection device(s), then the applicant will need to contact an OAMI to undertake this activity. The OAMI who will be undertaking this activity shall sign the relevant section of the appropriate 'Request for Authorisation' form.

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### **Notification of Non-Standard meter exchanges in emergency situations.**

A GT2 application is not required if a MAM carries out a meter exchange where it is only the meter that is replaced e.g. where the meter is faulty and the work is carried out by an OAMI that has previously been subject to a GT2 approval for the MAM on that Network. Where there are any material changes to the installation including hardware or settings or breaking of seals or there is a change to the MAM and/or OAMI, a new application is required but this can be submitted within 5 days of completion of the work. The 5 days are only applicable where it has been deemed that these works are an emergency in that there is a potential threat to safety or a supply failure. Any other meter exchanges must have a GT2 submission prior to any works being undertaken.”

### **Reviewing a Request for Authorisation to set and seal a Meter Regulator.**

Following receipt of a ‘Request for Authorisation’ the GT shall review the request and ensure that the following general criteria are satisfied:

- the arrangement of the meter regulator, associated pressure control and protection device(s) meet industry accepted practice and standards
- the settings requested for the meter regulator and any associated pressure control and protection device(s) are consistent with the range of pressures that both the appliance(s) and installation pipework are designed to operate; and
- the meter regulator should lock up at zero flow and in conjunction with any associated pressure control and protection device(s) limit the downstream pressure to an acceptable level when gas is supplied from the Network at the maximum operating pressure and the design maximum incidental pressure; and
- the proposed control and protection system and settings are consistent with acceptable arrangements and settings detailed in Appendix I; and
- other criteria detailed on the review forms in Appendix D.

If the ‘Request for Authorisation’ is incomplete or is not consistent with the criteria above, the request shall be rejected and the Failure ‘Notification Letter’ (Letter F), shall be sent to the applicant.

The GT’s Competent Person shall undertake an appraisal of the statements in the ‘Request for Authorisation’.

#### **Authorisation to set and seal a Meter Regulator and any associated pressure control and protection devices.**

Subject to a satisfactory review the GT shall issue a ‘Letter of Authorisation’ to the applicant using one of the letters contained in Appendix H, (*Letters E1, E2, E3A, E3B, E4A, E4B.*)

The Authorisation shall be subject to the following conditions:

- The organisation managing the meter installation is a Registered MAM, and
- The organisation undertaking the work is an OAMI, and
- The person undertaking the activity is competent and where appropriate accredited to do so, and
- The meter installation and housing are designed and will be installed in accordance with relevant industry standards and
- The meter regulator and any associated pressure control and protection device(s) are set to the values stated in the ‘Letter of Authorisation’, and
- The meter regulator and any associated pressure control and protection device(s) settings are clearly labelled on the installation, and
- The meter regulator and any associated pressure control and protection device(s) are subsequently sealed, to prevent unauthorised adjustment, with a seal marked with the OAMI registration number, and

- Any other conditions specified in the 'Letter of Authorisation'.

#### **Maintaining an Authorisation**

In order to ensure compliance with the undertakings made by the applicant in the 'Request for Authorisation' the GT reserves the right to inspect the meter installation whether it is a new installation, has been modified, exchanged or where the pressure settings have been set outside the original warrant.

All Cat 4 meter installations shall be inspected. However, where evidence proves a MAM's continued compliance with these procedures, the number of inspections carried out can be reduced in line with the perceived risk.

In order to facilitate the inspection regime, the MAM shall notify the GT via email (*see appendix J*) when a Category 4 installation is complete. For all other installations the GT should be notified via a system update e.g. Xoserve report. Inspections should be carried out within 12 months of the GT being notified and the number of inspections should be determined by the GT based on a number of risk factors including;

- The number of installations carried out by a MAM;
- Evidence of non-compliance with this procedure by the MAM / OAMI;
- Evidence of other non-compliance issues e.g. Gas escapes, RIDDOR etc.

Inspections shall be carried out by a Competent Person appointed by the GT and to ensure a consistent standard of inspection, mandatory requirements have been identified which shall form the basis for inspection. (*See Appendix E*).

*Note; the Competent Person will deal with Unsafe Situations identified on site by taking the appropriate action.*

The GT shall review inspections to determine compliance with the statements in the 'Request for Authorisation' and the 'Letter of Authorisation' and where appropriate the requirements of IGE/GL/5 edition 2.

#### **Removal of Authorisation**

The GT may withdraw an Authorisation in the event that:

- Gas Safe Register or any other body remove the registration or certificate of competence required by a meter installer to lawfully act as such;
- OFGEM remove the MAM / OAMI registration or certificate of compliance with the MAMCoP;
- The GT has material evidence that a meter installer is not operating in a manner consistent with the 'Request for Authorisation' or the 'Letter of Authorisation'.

Before the withdrawal of any Authorisation, the GT shall notify the MAM of their intention so as to provide an opportunity for the meter installer to submit further information to the MAM as to why the Authorisation should not be withdrawn.

Any evidence of non-compliance may be passed to the MAMCoP Board, a Nationally Accredited Certification Body, Gas Safe Register or the HSE in accordance with any requirements in force at the time or at the GT's discretion.

#### **Administration**

The GT shall ensure that adequate records are maintained of:-

- Requests for Authorisation (including any supporting information submitted).
- Correspondence between an applicant(s) and GT.
- Check lists / Inspection forms etc. used to review a 'Request for Authorisation'.
- Letters of Authorisation / failure to obtain Authorisation.

Such records shall be retrievable in order to facilitate management of the procedure.

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## **Requesting Authorisation to Install a Meter By-pass**

### **Provision of a meter by-pass.**

A meter by-pass shall be provided only where the Gas Supplier has deemed it necessary in order to avoid the risk of personal injury or death or damage to property (including prejudice to animal welfare) arising from a fault on the meter or metering equipment.

A by-pass should only be considered for the following types of premises:

- Hospitals or hospice
- Institutionalised accommodation (e.g. homes for the elderly, schools, and prisons)
- Large or complex plant supporting continuous processes (e.g. agricultural, baking processes)

And at meter installations connected to:

- Exceptionally complex pipework and gas consuming plant
- Multi-occupied premises (e.g. a single meter installation serving a block of flats).

### **GT Authorisation.**

Where the Gas Supplier has identified the need for a by-pass, the MAM shall:

- Submit a written request to the GT including justification for the by-pass by using the form in Appendix F).
- Not install the by-pass until the approved form has been returned.

### **Removal of existing meter by-pass.**

A meter by-pass shall only be removed at the GT or the Gas Act owner's discretion. Consideration should be given to removing the by-pass under the following conditions:

- It is suspected that the by-pass has been misused in any way
- The by-pass has been installed without the GT's Authorisation
- Where circumstances have changed and no longer meet the criteria for provision of a by-pass.

### **Sealing of by-pass valves and equipment.**

In order to minimise the opportunity for gas to flow undetected through the by-pass and to protect the system and consumers, the MAM shall ensure it is sealed with the relevant OAMI seal and in accordance with IGE/GM/8 such that the operation of the by-pass valve is evident.

## **Approval of Gas Supply Meter Housings.**

### **General requirements:**

The Gas Act requires a consumer to obtain approval from the GT for certain types of housing and relevant industry standards require that any meter installation location shall be agreed with the GT. When a meter is not to be installed within the premises or a pre-fabricated enclosure manufactured to a relevant standard or specification, GT approval is required for the type and construction of the meter housing where:

- a) it is to be installed in a separate meter house or other accommodation and;
- b) gas has not previously been conveyed by the GT to the consumer's premises and;
- c) a new or substituted pipe is to be laid between the GT's main and the meter or;
- d) the meter is to be installed in a different position.

The GT has the right to refuse to connect or, as the case may be, disconnect the consumers premises, where it has reason to believe that the housing / location is not appropriate, particularly with respect to safety or where it does not comply with relevant legislation.

### **Criteria for approval.**

Approval shall be granted only when the housing / location meets the following criteria:

- Complies with relevant legislation and industry standards;
- Is located as close as practicable to the site boundary nearest to the gas main;
- Does not create an unsafe environment;
- Has a total effective ventilation area that is sufficient to ensure that any hazardous area zone within the housing is no worse than;
  - Domestic = Zone 2
  - Industrial and commercial = Zone 1
- Has an explosion relief, if required,
- Has sufficient access for the Consumer and the ESP to operate the ECV;
- Enables the GT to have adequate access to undertake its' obligations under GS(M)R and GS(I&U)R;
- Suitable access provided to facilitate the installation and subsequent inspection, meter reading and maintenance activities
- The site is freely available to authorised personnel at all reasonable times;
- Provides adequate protection against vandalism and unauthorised access;
- The GT is informed of any special precautions that may be required before entering the meter housing / accommodation.

*Note: GT 'approval' does not confer or imply granting of planning permission. The obtaining of planning permission, where needed, is the responsibility of the consumer/housing designer. Neither does GT 'approval' imply the durability of any housing, or meter installation is appropriate for use.*

### **Information required for approval.**

To obtain approval for a meter housing / accommodation the applicant shall complete the form in Appendix G and submit it to the GT with the required supporting information as detailed in Appendix G2:

On receipt of a completed form and relevant information the GT shall assess the housing/accommodation for compliance with the criteria specified in clause 5.2.

Approval / rejection shall be given in the form of a letter as detailed in Appendix H. (Letter G1 / G2)

## **APPENDIX A: Legislation and References**

### **A.1 GAS SAFETY (MANAGEMENT) REGULATIONS 1996**

#### **A.1.1 Regulation 8**

Regulation 8 schedules 3 part 1 paragraph 3 places the following duty on the gas transporter: "The gas shall be at a suitable pressure to ensure the safe operation of any gas appliance which a consumer could reasonably be expected to operate"

### **A.2 GAS SAFETY (INSTALLATION AND USE) REGULATIONS 1998**

The Regulations place duties on persons undertaking work or using gas systems within the context of a business or domestic environment.

#### **A.2.3 Regulation 14 (1)**

"No person shall install a primary meter or by-pass used in connection with a primary meter unless:

- a) there is a regulator controlling the pressure of gas supplied through the meter or the by-pass, as the case may be, which provides adequate automatic means for preventing the gas fittings connected to the downstream side of the regulator from being subjected to a pressure greater than that for which they were designed
- b) where the normal pressure of the gas is 75 mbar or more at the inlet to the regulator, there are also adequate automatic means for preventing, in case the regulator should fail, those fittings from being subject to such a greater pressure; and
- c) where the regulator contains a relief valve or liquid seal, such valve or seal is connected to a vent pipe of adequate size and so installed that it is capable of venting safely."

#### **A.2.4 Regulation 14 (5)**

"Where a person installs a regulator for controlling the pressure of gas through a primary meter, a meter bypass used in connection with a primary meter or from a gas storage vessel, or installs a gas appliance itself fitted with a regulator for controlling the pressure of gas to that appliance, he shall immediately thereafter ensure, in either case, that the regulator is adequately sealed so as to prevent its setting from being interfered with without breaking of the seal.A.2.5 Regulation 14 (6)

"In relation to gas from:

- a) a distribution main, no person except the transporter or a person authorised to act on his behalf;
- b) a gas storage vessel, no person except the supplier or a person authorised to act on his behalf;

shall break a seal applied under paragraph (5) above other than a seal applied to a regulator for controlling the pressure of gas to the appliance to which that regulator is fitted."

#### **A.2.6 Regulation 14 (7)**

"A person who breaks a seal applied under paragraph (5) shall apply as soon as is practical a new seal which is adequate to prevent the setting of the regulator from being interfered with without breaking such seal."

### **A.3. Gas Safety (Rights Of Entry) Regulations 1996**

These regulations give GT's extensive powers to enter premises for the purposes of inspection of gas fittings etc.

### A.3.1 Regulation 5

"Any officer authorised by the relevant authority may, on production of some duly authenticated document showing his authority

- a) enter any premise in which there is a service pipe connected with a gas main for the purpose of inspecting any gas fitting on the premises, any flue or means of ventilation used in connection with such gas fitting, or part of the gas system on the premises, that is to say, any service pipe or other apparatus (not being a gas fitting) which is on the premises and is used for the conveyance or supply of gas or is connected with a gas main,
- b) where he so enters any such premises, examine or apply any test to any such object as is mentioned in paragraph (a) and (where the object is a gas fitting) verify what supply of air is available for it, and
- c) where in his opinion it is necessary to so do for the purpose of averting danger to life or property, and notwithstanding any contract previously existing, disconnect and seal off any gas fitting or any part of the gas system on the premises or disconnect the premises or, if the premises are not connected, signify the refusal of the relevant authority to convey gas or, as the case may be, allow gas to be conveyed to the premises."

### A 4 Gas Act 1986 (as amended 1995), Schedule 2B

5 (2) Subject to sub-paragraph (3) below, the meter shall be installed as near as practicable to the public gas transporter's main, but within a building comprised in the premises.

5 (3) The meter may be installed otherwise than within a building comprised in the premises if it is installed either:

- a) in accommodation of a type and construction approved by the public gas transporter by an approval given in relation to premises generally, or to any class or description; or
- b) in a separate meter house or other accommodation outside a building comprised in the premises which is approved by the public gas transporter in the case of those particular premises.

5 (4) If the requirement of the above paragraph are not complied with, the public gas transporter may refuse to connect or, as the case may be, disconnect the consumer's premises."

### A 5 Reference to standards and other procedures

**BS6400-1:** Specification for installation of domestic-sized gas meters maximum rated capacity not exceeding 6 m<sup>3</sup>/h (2<sup>nd</sup> and 3<sup>rd</sup> family gases) - Part 1: Low pressure (2<sup>nd</sup> family gases).

**BS6400-2:** Specification for installation of domestic-sized gas meters maximum rated capacity not exceeding 6 m<sup>3</sup>/h (2<sup>nd</sup> and 3<sup>rd</sup> family gases) - Part 2: Medium pressure (2<sup>nd</sup> family gases).

**IGE/G/1:** Definitions for the end of a network, a meter installation and installation pipework.

**IGE/GM/4** Flow metering practice for pressures between 38 and 250 bar

**IGEM/GM/6:** Specifications for low-pressure diaphragm and rotary displacement meter installations with badged meter capacities exceeding 6m<sup>3</sup>/h but not exceeding 1076 m<sup>3</sup>/h.

**IGE/GM/8:** Non-domestic meter installations. Flow rate exceeding 6 m<sup>3</sup> h and inlet pressure not exceeding 38 bar.

**IGE/GL/5 Ed 2:** Procedure for managing networks, modifications and repairs.

**Ofgas COP/1a:** Code of practice for low-pressure diaphragm and electronic meter installations with badged meter capacities not exceeding 6 m<sup>3</sup>/hr.

**Ofgas COP/1b:** Code of practice for low-pressure diaphragm and rotary displacement meter installations with badged meter capacities exceeding 6 m<sup>3</sup>/hr but not exceeding 1076 m<sup>3</sup>/hr.

**Ofgas COP/1c:** Code of practice for all high pressure and other low-pressure meter installations not covered by COP/1a or COP/1b.

**GDN/PM/GT/1:** Procedure for requesting gas service pipe pressure and capacity information from GT's.

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## APPENDIX B: Definitions

For the purposes of this Procedure the following definitions apply:

**Applicant:** The organisation or person who is to take full responsibility for the installation being undertaken by their organisation.(includes breaking a seal, setting and sealing of the meter regulator and any associated pressure control and protection device(s) and installing a by-pass).

**Approved Code of Practice:** Practical guidance produced by HSE to assist compliance with regulations.

**Competent Person:** An individual who holds an appropriate and valid certificate of competence under the Nationally Accredited Certification Scheme or an Approved Code of Practice.

**Consumer (“c” subscript):** The position on the gas system where the pressure reading is taken where this is downstream of the meter installation.

**Design Maximum Incidental Pressure (DMIP):** The maximum pressure a system is permitted to experience under fault conditions limited by safety devices when operated at the design pressure.

**Design Minimum Pressure (DMP):** The minimum pressure that may occur at the end of any service pipe at the time of system design flow rate under extreme gas supply and maintenance conditions.

**Design Pressure (DP):** The pressure on which design calculations are based.

**ECV:** Emergency Control Valve.

**ESP:** Emergency Service Provider.

**Gas fitting:** Pipework, valves, ECV's, regulators, slam shuts, relief valves, meters, apparatus, appliances.

**Gas Safe Register:** Organisation holding the registration details of gas installers.

**Gas Supply Arrangements:** The physical provision of gas supply pipes and the associated Network Code contractual agreement with the registered system for a gas capacity (peak flow) to be available at the outlet of the ECV which terminates the gas supply pipe.

**Lowest Operating Pressure (LOP):** Minimum pressure which a system is designed to experience under normal operating conditions.

**Maximum Incidental Pressure (MIP):** Maximum pressure which a system is permitted to experience under fault conditions, limited by safety devices.

**Maximum Operating Pressure (MOP):** Maximum pressure at which a system can be operated continuously under normal operating conditions.

**Meter Installation (“mi” subscript):** The position on the gas system where the pressure reading is taken where this is on the meter installation.

**Metering Pressure:** Pressure at which the meter is intended to measure the volume of gas supplied.

**Nationally Accredited Certification Body:** The organisation responsible for the administration of a Nationally Accredited Certification Scheme.

**Nationally Accredited Certification Scheme:** The scheme accredited by the United Kingdom Accreditation Service (UKAS) for assessing the competency of gas operatives to undertake specific categories of work on gas fittings.

**Ofgem Approved Meter Installer (OAMI):** An organisation which performs meter installation work and is registered with Gas Safe Register as a registered installer in accordance with regulation 3(3) of GS(I&U)R and with Ofgem under the terms of the Standard Supplier Licence Conditions. An OAMI can be contracted to carry out Meter Work for a Supplier, Shipper, a GT or a Gas User (or group of Gas Users) and may be an independent organisation or part of a Supplier, Shipper or GT organisation.

**Operating pressure range:** Range of pressures which a gas system operates under normal conditions.

**Primary Meter Installation:** The apparatus through which a consumer takes a gas supply into their premises, which includes the meter, filter (if fitted), regulator, interconnecting pipe work, semi-rigid connection, fittings and all necessary supports.

**Standard Appliance:** A domestic or non-domestic appliance manufactured to a National or European Standard and having a normal operating pressure of 20 mbar.

**Upstream (“u” subscript):** The position on the gas system where the pressure reading is taken where this is upstream of the meter installation.



# **APPENDIX C: Request for Authorisation to set & seal regulators forms.**

## **FORM C1**

<b>GT Ref:</b>		<b>MAM Ref:</b>		<b>Date:</b>	
<b>Line number</b>	<b>Request for Authorisation to undertake the setting and sealing of meter regulators on low pressure installations with a badged capacity not exceeding 6m³/hour.</b>				
	Is this request made as part of smart metering? <input type="checkbox"/> Yes <input type="checkbox"/> No				
1	Name and address of organisation submitting this request and installing the meter installation (Correspondence Address).		OAMI Number (If applicable)		
			MAM Registration Number.(Mandatory)		
2	Name and address of OAMI requesting Authorisation to break a seal, set and seal the meter regulator.		OAMI number (Mandatory)		
3	<b>Section A to be completed by the organisation requesting to install the meter installation.</b>				
4	We warrant that any meter installation of the category defined above installed or modified by this organisation following receipt of [ <span style="color: grey;">Insert name of GT</span> ] Letter of Authorisation will meet the following conditions:				
5	The meter installation & housing are designed and will be installed to comply with the requirements of BS6400-1:2006				
6	The meter installation is capable of sustaining a Design Maximum Incidental Pressure (DMIP <sub>u</sub> ) of 200 mbar at the inlet of the meter installation without jeopardising the integrity of any connected gas fittings, and will have an associated Design Pressure that must be ≥ (DP <sub>u</sub> ) of 75mbar.				
7	The meter installation will ensure that for gas flow rates greater than 5% of the maximum allowable flow rate, the operating pressure at the outlet of the meter installation is maintained between 15 – 25 mbar when the pressure at the inlet of the meter installation is between a DmP <sub>u</sub> 19 mbar and MOP <sub>u</sub> 75 mbar.				
8	The meter and the installation will meet the requirements Schedule 2B of the Gas Act with respect to compliance with Section 17 of the Gas Act.				
9	That the company responsible for undertaking the installation has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate and valid certificate of competence under Nationally Accredited Certification Scheme or ACOP.				
10	In the event that my organisation is not OAMI registered, the installation will be inspected by an OAMI in accordance with the Gas Suppliers Standard Licence Conditions.				
11	<b>Signed:</b> <span style="color: grey;">(By organisation installing meter installation)</span>				
12	<b>Name:</b> <span style="color: grey;">Date</span>				
13	<b>Position in Organisation:</b>				
<b>GT Ref:</b>		<b>Date:</b>			
14	<b>Section B to be completed by the organisation requesting Authorisation to break a seal, set and seal the meter regulator.</b>				
15	The regulator will be set to ensure a metering pressure (P <sub>mi</sub> ) of <span style="color: grey;">(see note 1)</span> ] mbar				
16	The regulator lock up pressure will not exceed <span style="color: grey;">(see note 1)</span> [ ] mbar				
17	Under all circumstances (including zero flow) the meter installation will protect the installation pipe work, gas fittings and any appliances from being exposed to pressures greater than [ 30 ] mbar. <span style="color: grey;">(see note 2)</span>				

18	The meter installation will be clearly labelled with its metering pressure.
19	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.
20	I confirm that this organisation is an OAMI and request Authorisation to break a seal, set and seal the meter regulator. I also confirm that a Gas Safe registered person with appropriate competencies for this category of work will ensure that the meter regulator, when installed and put to work will not exceed the values stated above. In the event that the meter regulator is adjusted it will be subsequently sealed with this organisation's seal marked with our OAMI registration number to prevent unauthorised adjustment.
21	<b>Signed:</b> (By organisation requesting to break a seal, set and seal the meter regulator).
22	<b>Name:</b> _____ <b>Date:</b> _____
23	<b>Position in Organisation</b> e.g. Responsible Engineer/Manager

*Note 1: Reference should be made to Appendix I for appropriate values.*

*Note 2: On low pressure installations where the metering pressure is 21mbar, this figure should be the lock-up pressure for the meter regulator, where the upstream network is in a fault condition and the Service Pressure is MIPu.*

**FORM C2**

<b>GT Ref:</b>		<b>MAM Ref:</b>		<b>Date:</b>	
<b>Line number</b>	<b>Request for Authorisation to undertake the setting and sealing of meter regulators on medium pressure installations with a badged capacity not exceeding 6m<sup>3</sup>/hour.</b>				
	Is this request made as part of smart metering? <input type="checkbox"/> Yes <input type="checkbox"/> No				
1	Name and address of organisation submitting this request and installing the meter installation (Correspondence Address).		OAMI Number (If applicable)		
			MAM Registration Number.(Mandatory)		
2	Name and address of OAMI requesting Authorisation to break a seal and set and seal the meter regulator and any associated pressure control and protection devices.		OAMI number (Mandatory)		
3	<b>Section A to be completed by the organisation requesting to install the meter installation.</b>				
4	We warrant that any meter installation of the category defined above installed or modified by this organisation following receipt of [ <i>Insert name of GT</i> ] Letter of Authorisation will meet the following conditions:				
5	The meter installation & housing are designed and will be installed to comply with the requirements of the BS6400-2:2006.				
6	The meter installation will be regulated and the pressure control and protection arrangements of the installation will comply with BS6400-2:2006 Fig [     ] ( <i>See note 1</i> )				
7	The meter installation is capable of sustaining a Design Maximum Incidental Pressure (DMIP <sub>u</sub> ) at the inlet of the meter installation of 2.7 bar without jeopardising the integrity of any connected gas fittings and will have an associated Design Pressure of 2.0 bar.				
8	The meter installation will ensure that at gas flow rates greater than 5% of the maximum allowable flow rates, the operating pressure at the outlet of the meter installation is maintained between 15 – 25 mbar when the pressure at the inlet of the meter installation is between the DmP <sub>u</sub> [     ] and MOP <sub>u</sub> [     ] ( <i>see note2</i> ).				
9	The meter and the installation will meet the requirements Schedule 2B of the Gas Act with respect to compliance with Section 17 of the Gas Act.				
10	That the company responsible for undertaking the installation has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate and valid certificate of competence under Nationally Accredited Certification Scheme or ACOP.				
11	In the event that my organisation is not OAMI registered, the installation will be inspected by an OAMI in accordance with the Gas Suppliers Standard Licence Conditions.				
12	<b>Signed:</b> <i>By organisation installing meter installation</i>				
13	<b>Name:</b>		<b>Date:</b>		
14	<b>Position in organisation:</b>				

Note 1: The applicant should state what pressure control Fig number taken from BS6400-2:2006 is to be used and a separate application shall be required for each regulator type e.g. Fig 1A or 1B.

Note 2: Reference to Appendix I table 4

<b>GT Reference Number:</b>		<b>Date:</b>
15	<b>Section B to be completed by the organisation requesting Authorisation to break a seal, set and seal the meter regulator.</b>	
16	The regulator will be set to ensure a Metering Pressure ( $P_{mi}$ ) of (see note 1) [     ] mbar	
17	The regulator lock up pressure will not exceed (see note 1) [     ] mbar	
18	The relief valve will be set to open at a pressure of (see note 1) [     ] mbar	
19	The final safety device will be set at a pressure of (see note 1) [     ] mbar	
20	Under all circumstances (including zero flow) the meter installation will protect the installation pipe work, gas fittings and any appliances from being exposed to pressures greater than [     ] mbar. ( $MIP_{mi}$ ) (see note 2)	
21	The meter installation will be clearly labelled with its metering pressure, the pressure any relief valve will open and the limiting pressure of any final protection device.	
22	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.	
23	I confirm that this organisation is an OAMI and request Authorisation to break a seal and set and seal the meter regulator and any associated pressure control and protection devices. I also confirm that a Gas Safe registered person with appropriate competencies for this category of work will ensure that the meter regulator, when installed and put to work will not exceed the values stated above. In the event that the meter regulator is adjusted it will be subsequently sealed with this organisation's seal marked with our OAMI registration number to prevent unauthorised adjustment.	
24	<b>Signed:</b> (By organisation requesting to break a seal, set and seal the meter regulator).	
25	<b>Name:</b>	<b>Date:</b>
26	<b>Position in Organisation</b> e.g. Responsible Engineer/Manager	

Note 1: Reference should be made to Appendix I for appropriate values or BS6400-2-2006..

Note 2: Insert the Maximum Incidental Pressure (MIP) of the final protection device (refer to BS6400-2:2006).

**FORM C3A**

<b>GT Ref:</b>		<b>MAM Ref:</b>		<b>Date:</b>	
<b>Line number</b>	<b>Request for Authorisation to undertake the setting and sealing of meter regulators on low pressure, standard, installations with a badged capacity exceeding 6m<sup>3</sup>/hour but not exceeding 40m<sup>3</sup>/hour (standard pressure service)</b>				
	Is this request made as part of advanced metering? <input type="checkbox"/> Yes <input type="checkbox"/> No				
1	Name And address of organisation submitting this request and installing the meter installation. (Correspondence Address)		OAMI Number (If applicable)		
			MAM Registration Number.(Mandatory)		
2	Name and address of OAMI requesting Authorisation to break a seal, set and seal the meter regulator.		OAMI number (Mandatory)		
3	<b>Section A to be completed by the organisation requesting to install the meter installation.</b>				
4	We warrant that any meter installation of the category defined above installed or modified by this organisation following receipt of [ <span style="color: grey;">Insert name of GT</span> ] Letter of Authorisation will meet the following conditions:				
5	The meter installation & housing are designed and will be installed to comply with the requirements of IGEM/GM/6.				
6	The meter installation is capable of sustaining a Design Maximum Incidental Pressure (DMIP <sub>u</sub> ) of 200 mbar at the inlet of the meter installation without jeopardising the integrity of any connected gas fittings, and will have an associated Design Pressure that must be $\geq$ (DP <sub>u</sub> ) of 75mbar.				
7	The meter installation will ensure that gas flow rates greater than 5% of the maximum allowable flow rates, the operating pressure at the outlet on the meter installation is maintained between 15 – 25 when the pressure at the inlet of the meter installation is between DmP <sub>u</sub> 19 mbar and MOP <sub>u</sub> 75 mbar.				
8	The meter and the installation will meet the requirements Schedule 2B of the Gas Act with respect to compliance with Section 17 of the Gas Act.				
9	That the company responsible for undertaking the installation has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate and valid certificate of competence under Nationally Accredited Certification Scheme or ACOP.				
10	In the event that my organisation is not OAMI registered, the installation will be inspected by an OAMI in accordance with the Gas Suppliers Standard Licence Conditions.				
11	<b>Signed:</b> <span style="color: grey;">By organisation installing meter installation</span>				
12	<b>Name:</b> <span style="color: grey;"></span> <b>Date:</b> <span style="color: grey;"></span>				
13	<b>Position in Organisation:</b> <span style="color: grey;"></span>				

<b>GT Reference Number:</b>		<b>Date:</b>
14	<b>Section B to be completed by the organisation requesting Authorisation to break a seal, set and seal the meter regulator.</b>	
15	The regulator will be set to ensure a metering pressure of (P <sub>mi</sub> ) (see note 1) [    ] mbar	
16	The regulator lock up pressure will not exceed (see note 1) [    ] mbar	
17	Under all circumstances (including zero flow) the meter installation will protect the installation pipe work, gas fittings and any appliances from being exposed to pressures greater than [ 30 ] mbar. (see note 1)	
18	The meter installation will be clearly labelled with its metering pressure.	
19	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.	
20	I confirm that this organisation is an OAMI and request Authorisation to break a seal, set and seal the meter regulator. I also confirm that a Gas Safe registered person with appropriate competencies for this category of work will ensure that the meter regulator, when installed and put to work will not exceed the values stated above. In the event that the meter regulator is adjusted it will be subsequently sealed with this organisation's seal marked with our OAMI registration number to prevent unauthorised adjustment.	
21	<b>Signed:</b> (By organisation requesting to break a seal, set and seal the meter regulator).	
22	<b>Name:</b>	<b>Date:</b>
23	<b>Position in Organisation</b> e.g. Responsible Engineer/Manager	

*Note 1: On low pressure installations where the metering pressure is 21mbar, this figure should be the lock-up setting for the meter regulator, where the upstream network is in a fault condition and the Service Pressure is MIPu.*

## Form C3B

GT Ref:		MAM Ref:		Date:
Line number	<b>Request for Authorisation to undertake the setting and sealing of meter regulators on low pressure, standard, installations with a badged capacity exceeding 40m<sup>3</sup>/hour but not exceeding 1076m<sup>3</sup>/hour (standard pressure service)</b>			
	Is this request made as part of advanced metering? <input type="checkbox"/> Yes <input type="checkbox"/> No			
1	Name And address of organisation submitting this request and installing the meter installation. (Correspondence Address)		OAMI Number (If applicable)	
			MAM Registration Number.(Mandatory)	
2	Name and address of OAMI requesting Authorisation to break a seal, set and seal the meter regulator.		OAMI number (Mandatory)	
3	<b>Section A to be completed by the organisation requesting to install the meter installation.</b>			
4	We warrant that any meter installation of the category defined above installed or modified by this organisation following receipt of [ <span style="color: grey;">Insert name of GT</span> ] Letter of Authorisation will meet the following conditions:			
5	The meter installations & housings are designed and will be installed to comply with the requirements of IGEM/GM/6.			
6	The meter installation is capable of sustaining a Design Maximum Incidental Pressure (DMIP <sub>u</sub> ) of 200 mbar at the inlet of the meter installation without jeopardising the integrity of any connected gas fittings, and will have an associated Design Pressure that must be $\geq$ (DP <sub>u</sub> ) of 75mbar.			
7	The meter installation will ensure that gas flow rates greater than 5% of the maximum allowable flow rates, the operating pressure at the outlet on the meter installation is maintained between 15 – 25 when the pressure at the inlet of the meter installation is between DmP <sub>u</sub> 19 mbar and MOP <sub>u</sub> 75 mbar.			
8	The meter and the installation will meet the requirements Schedule 2B of the Gas Act with respect to compliance with Section 17 of the Gas Act.			
9	That the company responsible for undertaking the installation has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate and valid certificate of competence under Nationally Accredited Certification Scheme or ACOP.			
10	In the event that my organisation is not OAMI registered, the installation will be inspected by an OAMI in accordance with the Gas Suppliers Standard Licence Conditions.			
11	<b>Signed:</b> <span style="color: grey;">By organisation installing meter installation</span>			
12	<b>Name:</b>		<b>Date:</b>	
13	<b>Position in Organisation:</b>			

<b>GT Reference Number:</b>		<b>Date:</b>
14	<b>Section B to be completed by the organisation requesting Authorisation to break a seal, set and seal the meter regulator.</b>	
15	The regulator will be set to ensure a metering pressure of (P <sub>mi</sub> ) (see note 1) [    ] mbar	
16	The regulator lock up pressure will not exceed (see note 1) [    ] mbar	
17	Under all circumstances (including zero flow) the meter installation will protect the installation pipe work, gas fittings and any appliances from being exposed to pressures greater than [    30    ] mbar. (see note 1)	
18	The meter installation will be clearly labelled with its metering pressure.	
19	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.	
20	I confirm that this organisation is an OAMI and request Authorisation to break a seal, set and seal the meter regulator. I also confirm that a Gas Safe registered person with appropriate competencies for this category of work will ensure that the meter regulator, when installed and put to work will not exceed the values stated above. In the event that the meter regulator is adjusted it will be subsequently sealed with this organisation's seal marked with our OAMI registration number to prevent unauthorised adjustment.	
21	<b>Signed:</b> (By organisation requesting to break a seal, set and seal the meter regulator).	
22	<b>Name:</b>	<b>Date:</b>
23	<b>Position in Organisation</b> e.g. Responsible Engineer/Manager	

*Note 1: On low pressure installations where the metering pressure is 21mbar, this figure should be the lock-up setting for the meter regulator, where the upstream network is in a fault condition and the Service Pressure is MIPu.*



**FORM C4A**

<b>GT Ref:</b>		<b>MAM Ref:</b>		<b>Date:</b>	
<b>Line number</b>	<b>Request for Authorisation to undertake the setting and sealing of the meter regulator, associated pressure control and protection devices on a low pressure, non-standard or higher pressure installation with a metering pressure of 21 mbar.</b>				
1	Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		OAMI Number (If applicable)		
			MAM Registration Number.(Mandatory)		
2	Name and address of OAMI requesting Authorisation to break a seal and set and seal the meter regulator and any associated pressure control and protection devices.		OAMI number (Mandatory)		
3	Address where meter installation is to be installed.				
4	MPRN or Confirmed Quotation Reference.				
5	<b>Section A to be completed by the organisation requesting to install the meter installation</b>				
6	We warrant that this meter installation of the category defined above and installed or modified by this organisation following receipt of [ Insert name of GT ] Letter of Authorisation will meet the following conditions:				
7	The meter installation & housing are designed and will be installed to comply with the requirements of the following standards. [IGE/GM/8] and/or [IGE/GM/4].				
8	The meter installation will be regulated and the pressure control and protection arrangements of the installation will comply with [ ] (see note 1)				
9	The meter installation is capable of sustaining a Design Maximum Incidental Pressure at the inlet of the meter installation of [ ] (DMIP <sub>u</sub> ) without jeopardising the integrity of any connected gas fittings, and will have an associated Design Pressure that must be $\geq$ [ ] (DP <sub>u</sub> ) (see note 2)				
10	The meter installation will ensure that at flow rates greater than 5% of the maximum allowable flow rate, the Operating Pressure at the outlet on the meter installation is maintained between 15 – 25 mbar when the pressure at the inlet of the meter installation is between DmP <sub>u</sub> [ ] and MOP <sub>u</sub> [ ]. (see note 2)				
11	The meter and the installation will meet the requirements Schedule 2B of the Gas Act with respect to compliance with Section 17 of the Gas Act. Does the consumer intend to use a compressor or booster on the gas supply [Yes/No/Don't know] Delete as appropriate and provide details where possible.				
12	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.				
13	In the event that my organisation is not OAMI Registered, the installation will be inspected by an OAMI in accordance with the Gas Suppliers Standard Licence Conditions.				
14	<b>Signed:</b> By organisation installing meter installation				
15	<b>Name:</b> <b>Date:</b>				
16	<b>Position in Organisation:</b>				

<b>GT Reference Number:</b>		<b>Date:</b>
18	<b>Section B to be completed by the organisation requesting Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s).</b>	
19	The regulator will be set to ensure a metering pressure of (P <sub>mi</sub> )	[ ] mbar
20	The regulator lock up pressure will not exceed (see note 3)	[ ] mbar
21	The relief valve will be set to open at a pressure of (see note 3)	[ ] mbar
22	The final safety device will be set at a pressure of (see note 3)	[ ] mbar
<b>For twin stream and installations with a monitor regulator.</b>		
23	The set point of the standby stream active	[ ] mbar
24	The set point of the monitor regulator if applicable	[ ] mbar
25	Under all circumstances (including zero flow) the meter installation will protect the installation pipe work, gas fittings and any appliances from pressures greater than [ ] mbar (MIP <sub>mi</sub> ). Any bypass arrangements, if fitted, will ensure this requirement is always met. (see note 3)	
26	The meter installation will be clearly labelled with its metering pressure, the pressure the relief valve will open and the limiting pressure of the final protection device.	
27	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.	
28	I confirm that this organisation is an OAMI and request Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and safety devices. I also confirm that a Gas Safe registered person with appropriate competencies for this category of work will ensure that the meter regulator and any associated pressure control and safety devices, when installed and put to work will not exceed the values stated above. In the event that the meter regulator is adjusted it will be subsequently sealed with this organisation's seal marked with our OAMI registration number to prevent unauthorised adjustment.	
29	<b>Signed:</b> (By organisation requesting to break a seal, set and seal the meter regulator).	
30	<b>Name:</b>	<b>Date:</b>
31	<b>Position in Organisation</b> e.g. Responsible Engineer/Manager	

*Note 1: State which Figure taken from Appendix 8 of IGE/GM/8 Part 1 will be used for Regulator design and meter type e.g. Fig 24 (diaphragm meter), Fig 25 (RPD), Fig 26 (Turbine), or submit a site specific drawing.*

*Note 2: Determine the DMIP, DP, DmP and MOP from Appendix I, Table 4.*

*Note 3: Reference should be made to Appendix I of this document or IGE/GM/8 Part 3 Table 1 for appropriate values.*

*Note 4: Insert the appropriate pressure of the final protection device, normally the set pressure. On low pressure installations where the metering pressure is 21mbar, this figure should be the lock-up setting for the meter regulator, where the upstream network is in a fault condition and the Service Pressure is MIPu. This would apply for example, where there was a standard installation with a by-pass.*

*Note 5: On installations incorporating multiple regulators, the lockup to be declared is that of the highest set regulator, e.g. A monitor where fitted.*

**FORM C4B**

<b>GT Ref:</b>		<b>MAM Ref:</b>		<b>Date:</b>	
<b>Line number</b>	<b>Request for Authorisation to undertake the setting and sealing of the meter regulator, associated pressure control and protection devices on a low pressure, non-standard or higher pressure installation with a metering pressure other than 21 mbar.</b>				
1	Name and address of organisation submitting this request and installing the meter installation (Correspondence Address)		OAMI Number (If applicable)		
			MAM Registration Number.(Mandatory)		
2	Name and address of OAMI requesting Authorisation to break a seal and set and seal the meter regulator and any associated pressure control and protection devices.		OAMI number (Mandatory)		
3	Address where meter installation is to be installed				
4	MPRN or Confirmed Quotation Reference				
5	<b>Section A to be completed by the organisation requesting to install the meter installation</b>				
6	We warrant that this meter installation of the category defined above and installed or modified by this organisation following receipt of [ <span style="color: grey;">Insert name of GT</span> ] Letter of Authorisation will meet the following conditions:				
7	The meter installation & housing are designed and will be installed to comply with the requirements of the following standards IGE/GM/4 and IGE/TD/13, or IGE/GM/8, as applicable.				
8	Will the meter installation be unregulated [ <b>Yes / No</b> ] ( <i>delete as appropriate</i> ) <i>If YES the applicant shall obtain and attach a copy of an exemption certificate under Regulation 40 of the GS(I&amp;U)R.</i>				
9	The meter installation will be regulated and the pressure control and protection arrangements will comply with [ ..... ] ( <i>see note 1</i> )				
10	The meter installation will be capable of sustaining a Design Maximum Incidental Pressure at the inlet of the meter installation of (DMIP <sub>u</sub> )[ ] mbar without jeopardising the integrity of any connected gas fittings and will have an associated Design Pressure that must be $\geq$ (DP <sub>u</sub> )[ ] ( <i>see note 2</i> )				
11	The meter installation will ensure that at flow rates greater than 5% of the maximum allowable flow rate, the operating pressure at the outlet of the meter installation is maintained between[ ] and [ ] when the pressure at the inlet of the meter installation is between DmP <sub>u</sub> [ ] and MOP <sub>u</sub> [ ]( <i>A Customer Warrant shall be submitted with this application</i> )				
12	The meter and the installation will meet the requirements Schedule 2B of the Gas Act with respect to compliance with Section 17 of the Gas Act. Does the consumer intend to use a compressor or booster on the gas supply [ <b>Yes/No/Don't know</b> ] Delete as appropriate and provide details where possible.				
13	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.				
14	In the event that my organisation is not OAMI Registered, the installation will be inspected by an OAMI in accordance with the Gas Suppliers Standard Licence Conditions.				
15	<b>Signed:</b>		<span style="color: grey;">By organisation installing meter installation</span>		
16	<b>Name:</b>		<b>Date:</b>		
17	<b>Position in Organisation:</b>				

<b>GT Reference Number:</b>		<b>Date:</b>
18	<b>Section B to be completed by the organisation requesting Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s).</b>	
19	The regulator will be set to ensure a metering pressure of (P <sub>mi</sub> )	[ ] mbar
20	The regulator lock up pressure will not exceed (see note 3)	[ ] mbar
21	The relief valve will be set to open at a pressure of (see note 3)	[ ] mbar
22	The final safety device will be set at a pressure of (see note 3)	[ ] mbar
<b>For twin stream and installations with a monitor regulator.</b>		
23	The set point of the standby stream active	[ ] mbar
24	The set point of the monitor regulator if applicable	[ ] mbar
25	Under all circumstances (including zero flow) the meter installation will protect the installation pipe work, gas fittings and any appliances from pressures greater than [ ] mbar (MIP <sub>mi</sub> ). Any bypass arrangements, if fitted, will ensure this requirement is always met. (see note 3)	
26	The meter installation will be clearly labelled with its metering pressure, the pressure the relief valve will open and the limiting pressure of the final protection device.	
27	The company responsible for undertaking any setting or adjustment has the appropriate Gas Safe registration and that the individual who undertakes the work holds an appropriate certificate of competence under Nationally Accredited Certification Scheme or ACOP.	
28	I confirm that this organisation is an OAMI and request Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and safety devices. I also confirm that a Gas Safe registered person with appropriate competencies for this category of work will ensure that the meter regulator and any associated pressure control and safety devices, when installed and put to work will not exceed the values stated above. In the event that the meter regulator is adjusted it will be subsequently sealed with this organisation's seal marked with our OAMI registration number to prevent unauthorised adjustment.	
29	<b>Signed:</b> (By organisation requesting to break a seal, set and seal the meter regulator).	
30	<b>Name:</b>	<b>Date:</b>
31	<b>Position in Organisation</b> e.g. Responsible Engineer/Manager	

Note 1: State which Figure taken from appendix 8 of IGE/GM/8 Part 1 will be used for Regulator design and meter type e.g. Fig 24 (diaphragm meter), Fig 25 (RPD), Fig 27 (Turbine), or submit a site specific drawing.

Note 2: Determine the DMIP, DP, DmP and MOP from Appendix I, Table 4.

Note 3: Reference should be made to IGE/GM/8 Part 3 for appropriate values.

Note 4: On installations incorporating multiple regulators, the lockup to be declared is that of the highest set regulator, e.g. A monitor where fitted.

# CUSTOMER WARRANT TYPE A.

<b>GT Ref:</b>		<b>MAM Ref:</b>		<b>Date:</b>	
<b>Customer warrant for submission with GT2 form C4B. (Request for Authorisation to undertake the setting and sealing of the meter regulator, associated pressure control and protection devices on a low pressure, non-standard or higher pressure installation with a metering pressure other than 21 mbar).</b>					
Name and address of organisation submitting this request and installing the meter installation:				<b>MAM registration number or OAMI number</b>	
Name and address of OAMI requesting Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection devices(s)				<b>OAMI Number</b>	
Address where meter installation is to be installed.					
MPRN or Confirmed Quotation Reference.					
<b>This section to be completed by the organisation requesting to install the meter installation.</b>					
<b>For the attention of the "Gas User",</b> The MAM is required to advise you of the pressures that the meter installation will provide under operating conditions. These being:					
Design Minimum Pressure ( <b>DmP<sub>mi</sub></b> ) <i>Minimum Outlet Pressure under extreme conditions</i>					mbar
Lowest Operating Pressure ( <b>LOP<sub>mi</sub></b> ) <i>Normal Outlet Pressure</i>					mbar
<b>Metering Pressure</b> ( <i>Pressure Requested by the consumer</i> )					mbar
Peak Level / Temporary Operating Pressure ( <b>PLOP<sub>mi</sub>/TOP<sub>mi</sub></b> ) <i>Maximum pressure at the meter installation outlet under normal conditions (TOP<sub>mi</sub> is the term when a monitor regulator is fitted, otherwise PLOP<sub>mi</sub> is used).</i>					mbar
Maximum Incidental Pressure ( <b>MIP<sub>mi</sub></b> ) <i>Maximum Outlet Pressure under extreme conditions</i>					mbar
<b>This section to be completed by a competent person on behalf of the gas consumer.</b>					
In return we are required to ask you to confirm to us in writing that your downstream system is capable of safely operating under all of the above supply conditions. Prior to replying your responsible engineer will need to consider the following aspects of the design of your downstream system.					
With the meter installation outlet pressure in the range LOP <sub>mi</sub> – MOP <sub>mi</sub> all connected equipment/appliances have to operate safely.					
All downstream pipe-work and equipment has been adequately strength tested to withstand pressure up to and including the MIP <sub>mi</sub> indicated above (In accordance with IGE/UP/1).					
We warrant that the downstream pipe-work & associated plant have been designed in accordance with the recognised industry standards. The design of both the pipe-work and associated plant are compatible with the range of pressures you have advised me the meter installation will provide, and will operate safely under all of the above conditions.					
We will ensure that any future modification to the system do not invalidate this declaration, if this is not possible, prior to making any such modifications we will request that the meter installation be modified.					
<b>We confirm that the operational limit of our downstream system are:</b>					
Design Minimum Pressure (DMP <sub>c</sub> )					mbar
Lowest Operating Pressure (LOP <sub>c</sub> )					mbar
Maximum Operating Pressure MOP <sub>c</sub> )					mbar
Strength Test Pressure (STP <sub>c</sub> ) <i>Note 1</i>					mbar
Maximum Incidental (Reverse) Pressure (MIP <sub>c</sub> where applicable)					mbar
<b>Signed</b> _____ <b>On behalf of the Consumer</b>					
<b>Name</b> _____			<b>Date</b> _____		
<b>Position in Organisation</b> _____					
<b>Company Name and Address:</b>					

*Note 1 : Where the exchange is on a like for like basis with no changes to pressure settings use Customer Warrant Type B.*

# CUSTOMER WARRANT TYPE B METER EXCHANGES.

GT Ref:	MAM Ref:	Date:
<b>Customer warrant for submission with GT2 form C4B.</b> <b>(Request for Authorisation to undertake the setting and sealing of the meter regulator, associated pressure control and protection devices on a low pressure, non-standard or higher pressure installation with a metering pressure other than 21 mbar).</b>		
Name and address of organisation submitting this request and installing the meter installation:		MAM registration number or OAMI number
Name and address of OAMI requesting Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection devices(s)		OAMI Number
Address where meter installation is to be installed.		
MPRN or Confirmed Quotation Reference.		
<b>This section is to be completed by the organisation requesting to <u>exchange</u> the meter installation.</b>		
<b>For the attention of the "Gas User"</b> , the MAM is required to advise you of the pressures that the meter installation will provide under operating conditions. These being:		
Design Minimum Pressure ( <b>DmP<sub>mi</sub></b> ) <i>Minimum Outlet Pressure under extreme conditions.</i>	mbar	
Lowest Operating Pressure ( <b>LOP<sub>mi</sub></b> ) <i>Normal Outlet Pressure</i>	mbar	
<b>Metering Pressure</b>	mbar	
Peak Level / Temporary Operating Pressure ( <b>PLOP<sub>mi</sub>/TOP<sub>mi</sub></b> ) <i>Maximum pressure at the meter installation outlet under normal conditions (TOP<sub>mi</sub> is the term when a monitor regulator is fitted, otherwise PLOP<sub>mi</sub> is used).</i>	mbar	
Maximum Incidental Pressure ( <b>MIP<sub>mi</sub></b> ) <i>Maximum Outlet Pressure under extreme conditions</i>	mbar	
<b>The MAM signs to confirm that no changes are made to the pressure settings and that the installation predates 2005 and that the installation is fit for purpose.</b>		
<b>Signed</b> _____ <b>On behalf of the Meter Asset Manager</b>		
<b>Name</b> _____		<b>Date</b> _____
<b>Position in Organisation</b> _____		
In return we are required to ask you to confirm to us in writing that your downstream system is capable of safely operating under all of the above supply conditions. Prior to replying your responsible engineer will need to consider the following aspects of the design of your downstream system.		
With the meter installation outlet pressure in the range LOP <sub>mi</sub> – MOP <sub>mi</sub> all connected equipment/appliances have to operate safely.		
All downstream pipe-work and equipment has been adequately strength tested to withstand pressure up to and including the MIP <sub>mi</sub> indicated above (In accordance with IGE/UP/1).		
We warrant that the downstream pipe-work & associated plant have been designed in accordance with the recognised industry standards. The design of both the pipe-work and associated plant are compatible with the range of pressures you have advised me the meter installation will provide, and will operate safely under all of the above conditions.		
We will ensure that any future modification to the system do not invalidate this declaration, if this is not possible, prior to making any such modifications we will request that the meter installation be modified.		
<b>Signed</b> _____ <b>On behalf of the Consumer</b>		
<b>Name</b> _____		<b>Date</b> _____
<b>Position in Organisation</b> _____		
<b>Company Name and Address:</b>		

**APPENDIX D: GT check lists for reviewing a Request for Authorisation.**

**Form D1 Check list for reviewing a Request for Authorisation to undertake the setting and sealing of meter regulators on low pressure (LP) standard meter installations with badged meter capacity not exceeding 6m<sup>3</sup>/hr.**

**Form D1**

GT Reference number		
Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		
Name and address of organisation requesting Authorisation to break a seal, set and seal the meter regulator.		
Date of the Request for Authorisation		
Appendix C1 Line No	Checks/criteria	Checks/ criteria satisfied
	Has the 'Request for Authorisation' been submitted on form C1?	Yes / No
11 & 21	Has the request been signed?	Yes / No
1	Has the request been submitted by a Registered MAM? (Check OFGEM web site)	Yes / No
2	Has the Request for Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s) been made by an OAMI? (Check OFGEM web site)	Yes / No
4	Is the application being made to the correct GT?	Yes / No
5	Have the meter installation & housing been designed or modified to comply with BS6400-1:2006?	Yes / No
6, 7, 8, 9, 10, 18,19 & 20	Has this clause remained unaltered (i.e. no additions or deletions made)?	Yes / No
15, 16 & 17	Is the value inserted into the clause appropriate?	Yes / No
<b>Comments:</b>		

**Form D2 Check list for reviewing a Request for Authorisation to undertake the setting and sealing of meter regulators on medium pressure (MP) standard meter installations with badged meter capacity not exceeding 6m<sup>3</sup>/hr.**

**Form D2**

Date of the Request for Authorisation		
Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		
Name and Address of Organisation requesting Authorisation to break a seal, set and seal the meter regulator.		
Application Reference Number		
<b>Appendix C2 Line No</b>	<b>Checks/criteria</b>	<b>Checks/ criteria satisfied</b>
	Has the 'Request for Authorisation' been submitted on form C2?	<b>Yes / No</b>
12 & 24	Has the request been signed?	<b>Yes / No</b>
1	Has the request been submitted by a Registered MAM? (Check OFGEM web site)	<b>Yes / No</b>
2	Has the Request for Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s) been made by an OAMI? (check OFGEM web site)	<b>Yes / No</b>
4	Is the application being made to the correct GT?	<b>Yes / No</b>
5	Have the meter installation & housing been designed or modified to comply with BS6400-2:2006?	<b>Yes / No</b>
6	Is the pressure control and protection arrangement acceptable? (check figure stated i.e. Fig 1A or 1B)	<b>Yes / No</b>
8	Are the DMP and MOP consistent with one of the options for a Medium Pressure tier?	<b>Yes / No</b>
7, 9, 10, 11, 21, 22 & 23	Has this clause remained unaltered (i.e. no additions or deletions made)?	<b>Yes / No</b>
16 & 17, 18, 19 & 20	Is the value inserted into the clause appropriate?	<b>Yes / No</b>
<b>Comments:</b>		



**Form D3A Check list for reviewing a Request for Authorisation to undertake the setting and sealing of meter regulators on low pressure (LP) standard meter installations with badged meter capacity exceeding 6m<sup>3</sup>/hr but not exceeding 40m<sup>3</sup>/hr (Standard pressure service).**

**Form D3A**

Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		
Name and Address of Organisation requesting Authorisation to break a seal, set and seal the meter regulator.		
Date of the Request for Authorisation		
Application Reference Number		
<b>Appendix C3A Line No</b>	<b>Checks/criteria</b>	<b>Checks/ criteria satisfied</b>
	Has the 'Request for Authorisation' been submitted on form C3A/B?	Yes / No
11 & 21	Has the request been signed?	Yes / No
1	Has the request been submitted by a Registered MAM? (Check OFGEM web site)	Yes / No
2	Has the Request for Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s) been made by an OAMI? (check OFGEM web site)	Yes / No
4	Is the application being made to the correct GT?	Yes / No
5	Have the meter installation & housing been designed or modified to comply with IGEM/GM/6?	Yes / No
6	Is the pressure control and protection arrangement acceptable? (check figure stated)	Yes / No
7, 8, 9, 10, 18,19 & 20	Has this clause remained unaltered (i.e. no additions or deletions made)?	Yes / No
15, 16 & 17	Is the value inserted into the clause appropriate?	Yes / No
<b>Comments:</b>		

**Form D3B Check list for reviewing a Request for Authorisation to undertake the setting and sealing of meter regulators on low pressure (LP) standard meter installations with badged meter capacity exceeding 40m<sup>3</sup>/hr but not exceeding 1076m<sup>3</sup>/hr (Standard pressure service).**

**Form D3B**

Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		
Name and Address of Organisation requesting Authorisation to break a seal, set and seal the meter regulator.		
Date of the Request for Authorisation		
Application Reference Number		
<b>Appendix C3B Line No</b>	<b>Checks/criteria</b>	<b>Checks/ criteria satisfied</b>
	Has the 'Request for Authorisation' been submitted on form C3A/B?	<b>Yes / No</b>
11 & 21	Has the request been signed?	<b>Yes / No</b>
1	Has the request been submitted by a Registered MAM? (Check OFGEM web site)	<b>Yes / No</b>
2	Has the Request for Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s) been made by an OAMI? (check OFGEM web site)	<b>Yes / No</b>
4	Is the application being made to the correct GT?	<b>Yes / No</b>
5	Have the meter installation & housing been designed or modified to comply with IGEM/GM/6?	<b>Yes / No</b>
6	Is the pressure control and protection arrangement acceptable? (check figure stated)	<b>Yes / No</b>
7, 8, 9, 10, 18,19 & 20	Has this clause remained unaltered (i.e. no additions or deletions made)?	<b>Yes / No</b>
15, 16 & 17	Is the value inserted into the clause appropriate?	<b>Yes / No</b>
<b>Comments:</b>		

**Form D4A Check list for reviewing a Request for Authorisation to undertake the setting and sealing of meter regulators and pressure control devices on Low pressure (LP) Non-Standard or higher pressure meter installations with a metering pressure of 21mbar.**

**Form D4A**

Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		
Name and Address of Organisation requesting Authorisation to break a seal, set and seal the meter regulator.		
Date of the Request for Authorisation		
Application Reference Number		
<b>Appendix C4A Line No</b>	<b>Checks/criteria</b>	<b>Checks/ criteria satisfied</b>
	Has the 'Request for Authorisation' been submitted on form C4A?	Yes / No
14 & 27	Has the request been signed?	Yes / No
1	Has the request been submitted by a Registered MAM? (Check OFGEM web site)	Yes / No
2	Has the Request for Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s) been made by an OAMI? (check OFGEM web site)	Yes / No
3, 4	Does the work address match the MPRN / QS number?	Yes / No
6	Is the application being made to the correct GT?	Yes / No
7	Have the meter installation & housing been designed or modified to comply with IGE/GM/8?	Yes / No
8	Is the pressure control and protection arrangement acceptable? (check figure stated)	Yes / No
11	Details of compressors / boosters inserted	Yes / No
12,13,, 24,25,26	Has this clause remained unaltered (i.e. no additions or deletions made)?	Yes / No
9,10,18,19, 20,21,22	Is the value inserted into the clause appropriate?	Yes / No
<b>Comments:</b>		

**Form D4B Check list for reviewing a Request for Authorisation to undertake the setting and sealing of meter regulators and pressure control devices on Low pressure (LP) Non-Standard or higher pressure meter installations with a metering pressure other than 21mbar.**

**FORM D4B**

Name and address of organisation submitting this request and installing the meter installation. (Correspondence Address)		
Name and Address of Organisation requesting Authorisation to break a seal, set and seal the meter regulator.		
Date of the Request for Authorisation		
Application Reference Number		
<b>Appendix C4B Line No</b>	<b>Checks/criteria</b>	<b>Checks/ criteria satisfied</b>
	Has the 'Request for Authorisation' been submitted on form C4B?	Yes / No
	Has a Customer Warrant been submitted?	Yes / No
15 & 27	Has the request been signed?	Yes / No
1	Has the request been submitted by a Registered MAM? (Check OFGEM web site)	Yes / No
2	Has the Request for Authorisation to break a seal, set and seal the meter regulator and any associated pressure control and protection device(s) been made by an OAMI? (check OFGEM web site)	Yes / No
3, 4	Does the work address match the MPRN / QS number?	Yes / No
6	Is the application being made to the correct GT?	Yes / No
7	Have the meter installation & housing been designed or modified to comply with IGE/GM/4, IGE/GM/8?	Yes / No
8	If supply is un-regulated is a copy of the exemption certificate included with the application?	Yes / No
9	Is the pressure control and protection arrangement acceptable? (check figure stated)	Yes / No
12	Details of compressors / boosters inserted	Yes / No
12,13,14, ,24,25,26	Has this clause remained unaltered (i.e. no additions or deletions made)?	Yes / No
10,11,19, 20,21,22,23	Are the value inserted into the clause appropriate?	Yes / No
<b>Comments:</b>		

## APPENDIX E: GT meter installation inspections.

A Competent Person nominated to act on behalf of the GT shall determine whether a meter installation has been installed, modified and/or commissioned in a way that is consistent with the 'Request for Authorisation' and the 'Letter of Authorisation' and whether in the view of that Competent Person the installation is safe.

The inspection will comprise a visual check of the meter installation and appropriate tests to verify the regulator setting is consistent with the 'Letter of Authorisation'.

An acceptable meter installation is one that meets all the '**mandatory criteria**' set out below which should also form the basis of check lists used during the inspection visit (example on next page).

*Note: The requirements of GIUSP and RIDDOR will be applied where applicable.*

<b>Inspection criteria for meter installations (Mandatory GT2 requirements)</b>
MPRN, Meter serial number, Site address, Site contact, Date of installation, Network pressure tier, MAM details, OAMI details, customer warrant are available.
OAMI seals are fitted to Regulators, final safety device, Slam Shut, Creep Relief, By-pass etc.
Impulse line valve is tamper proof or immobilised (see IGE/GM/8 section 13.8)
Installation pressure setting information is provided e.g. DMP, LOP, MOP which are consistent with those stated on the 'Request for Authorisation'.
Pressure setting information is provided for Slam Shut, Creep Relief and Operating Pressure.
Pressure control equipment is suitable for the pressure tier.
OFGEM Meter seal is present and intact (Gas Act requirement).
Installation inlet pressure is indicated (label)
By-pass (if fitted) is regulated.
The 'measured' lock up and operating pressure are consistent with those indicated.
The following labels are fitted and correctly completed: Ex; Line diagram (composite label); Emergency actions; ECV on/off; Remote ECV; *Secondary meter *where applicable

In addition to the mandatory criteria listed above, the Competent Person should also record other issues which may impact on the safe operation of the meter installation including;

- Is the ECV correctly designated, suitable for use and fitted with a handle?
- Is there a label fitted to the gas service pipe indicating its status?
- Are 'No Smoking' signs fitted where appropriate?
- Is ventilation provided?
- Is explosion relief provided where appropriate and have transit bolts been removed?
- Is the meter location suitable?
- Is creep relief vented to a safe location?

GT2 Inspection Checklist								
Site Address:								
Contact Name:			Contact Number:					
MPRN:			Meter Serial Number:					
Inspection Date:			Installation Date:					
MAM Details:			OAMI Details:					
<b>Inspection criteria for meter installations (Mandatory GT2 requirements)</b>								
Network supply pressure tier for this site: (circle)			LP	MP <sup>35</sup>	MP <sup>65</sup>	MP <sup>105</sup>	MP <sup>180</sup>	MP <sup>270</sup>
			Intermediate Pressure			High Pressure		
Warranted Metering Pressure for this site is: 21mbar			(If different please state pressure:          mbar)					
OAMI seals are fitted to Regulators, final safety device, Slam Shut, Creep Relief, By-pass etc.			Pass	Fail	Comments			
Impulse line valve is tamper proof or immobilised (see IGE/GM/8 section 13.8)			Pass	Fail	Comments			
Installation pressure setting information is provided e.g. DMP, LOP, MOP which are consistent with those stated on the 'Request for Authorisation'.			Pass	Fail	Comments			
Pressure setting information is provided for Slam Shut, Creep Relief and Operating Pressure.			Pass	Fail	Comments			
Pressure control equipment is suitable for the pressure tier.			Pass	Fail	Comments			
OFGEM Meter seal is present and intact (Gas Act requirement).			Pass	Fail	Comments			
Installation inlet pressure is indicated (label)			Pass	Fail	Comments			
By-pass (if fitted) is regulated.			Pass	Fail	Comments			
The 'measured' lock up and operating pressure are consistent with those indicated.			Pass	Fail	Comments			
The following labels are fitted and completed (where applicable):			Composite Label (line diagram)			Emergency Label		
			ECV On / Off			Remote ECV		
<i>In addition to the mandatory criteria listed above, the Competent Person should also record other issues which may impact on the safe operation of the meter installation including;</i>								
Is the ECV correctly designated, suitable for use and fitted with a handle?			Pass	Fail	Comments			
Is there a label fitted to the gas service pipe indicating its status?			Pass	Fail	Comments			
Are 'No Smoking' signs fitted where appropriate?			Pass	Fail	Comments			
Is ventilation provided?			Pass	Fail	Comments			
Is explosion relief provided where appropriate and have transit bolts been removed?			Pass	Fail	Comments			
Is the meter location suitable?			Pass	Fail	Comments			
Is creep relief vented to a safe location?			Pass	Fail	Comments			
Additional Information including details of any RIDDOR, ID, AR situation found on site:								
Inspected by:					Signed:			

## APPENDIX F Bypass Authorisation request form

### Request for meter by-pass Authorisation form.

<b>REQUEST FOR AUTHORISATION TO INSTALL A METER BYPASS</b> <i>NOTE: The form shall be completed in its entirety.</i>	
<b>MPRN or Confirmed Quote number:</b> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>	<b>Name &amp; Address of premises where bypass to be installed:</b>  
<div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>	<b>Post code:</b>  
<b>Name and address of the Gas Supplier:</b>  	
Has the supplier consented to a meter by-pass being installed?: <span style="float: right;">YES/NO*</span>	
<b>Name and address of the MAM who will be responsible for the installation of the meter bypass:</b>  	
<b>MAM Registration No:</b> <span style="float: right;"><b>Installers OAMI Registration No:</b></span>	
I warrant that the above named property falls into the category I have indicated below, and request Authorisation to install a meter by-pass in order to avoid a risk of personal injury or death or damage to property (including prejudice to animal welfare) arising from a fault on the meter or metering equipment.	
<b>Name:</b> <i>Please print</i>	<b>Signed by:</b> <span style="float: right;"><b>Date</b></span>
<b>Types of premises:</b>	Tick the required box below for the type of premises that the meter bypass is to be installed at.
a) Hospitals or hospice	
b) Institutionalised accommodation (for example homes for the elderly, schools, and prisons)	
c) Premises where prejudice to animal welfare may occur	
d) Premises utilising large or complex plant supporting continuous bulk manufacturing (for example agricultural, baking or other commercial processes) and in analogous circumstances	
e) At meter installations connected to:  Exceptionally extensive and complex pipework and gas consuming plant multi-occupied premises or a number of discrete consumers (for example a single meter installation serving a block of flats)	
<b>Approved/Rejected* by .....GT Position..... Date.....</b>	
<b>GT meter bypass Authorisation Reference Number:.....</b>	
<b>Reason for rejection</b>  	

\* Delete as appropriate

**APPENDIX G: Form for requesting meter housing / accommodation approval**

Request for GT approval for meter housing / accommodation			
GT Reference number:		Date:	
Applicant Name, Address and telephone number:		OAMI Number (if applicable)	
Responsible Engineer: Name address and telephone number:			
<b>General Installation Details:</b> The type of meter installation proposed to be installed* e.g. COP/1a, COP/1b, COP/1c. *delete as appropriate			
Maximum design capacity		[       ]	scmh
Installation inlet design pressure		[       ]	Bar/mbar*
*delete as appropriate.			
<b>Housing description</b>			
Type			
Site Name and Address (if site specific request)			
<b>Technical standards</b>			
Please list the technical standards and best practice/guidance documents used to design the Installation and housing.			
Signed		Date.	
Name and address of organisation			
Position held			

Please attach supporting information as detailed in Appendix G2:

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## **APPENDIX G2: Supporting Information required for meter housing approval.**

### **Installation pipework and layout**

Please attach a clear, dimensioned engineering drawing of the meter installation plan, front and side elevations. Showing details of all pipework and components installed, any vents and relief's fitted.

### **Installation Location and Zoning**

Please attach a dimensioned (distances shown in meters) general layout drawing showing the location, clearly indicating:

- The proximity of adjacent building(s), air intakes, etc,
- The location of the meter installation in relation to the site perimeter,
- The location/proximity of the electrical equipment (including instrumentation and any high voltage equipment),
- The hazardous area zone resulting from the installation,
- Any hazardous area resulting from neighbouring plant, etc,
- The means of access to the meter installation,
- The location of any crash barriers,
- The nearest vehicle access,

Supporting documentation will be required showing the results of any hazardous area assessment undertaken, the method used, (IGE/GM/7, IGE/SR/25 etc.)

### **Housing and Ventilation Details**

Please attach a clear, dimensioned, engineering drawing showing the plan, front and side elevations of the housing or enclosure, indicating the:

- Size, type and location of ventilation,
- Means of access/egress (including for maintenance activities, component exchange, etc.),
- Security arrangement,
- Details of any explosion relief,
- Position of vent stack terminations,
- Construction materials,
- Position of the electrical equipment within the housing/enclosure (e.g. flow computer/conversion systems, data logger etc.),
- Size of the meter installation floor area (Notional floor area),
- Size of the meter installation housing/accommodation floor area.

### **Electrical equipment details**

Details of the position of all electrical equipment (to be installed within the housing or immediate surroundings) and their method of protection, i.e. Type n, Intrinsically Safe etc.

### **Details of any special arrangements and or precautions that may be required before entering the meter housing/accommodation**

Please attach details of the 'key' arrangements for the installation and details of any special precautions that are required before entering the meter housing/accommodation. Confirm that appropriate warning notices will be installed on the housing/accommodation.

Where no special precautions are required a declaration to this effect should be submitted.

## APPENDIX H: Letters of Authorisation / rejection.

### Letter E1:

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

### **Authorisation to undertake the setting and sealing of meter regulators on low pressure (LP) meter installations with badged meter capacity not exceeding 6m<sup>3</sup>/hr.**

Thank you for completing the Request for Authorisation, dated <                      >.

Following our review I can confirm that we have authorised your organisation to break the seal and to set and seal the meter regulator in accordance with the following conditions.

The regulator shall be set to ensure a metering pressure of    21 mbar.

The regulator lock up pressure shall not exceed                      30 mbar.

Under all circumstances, including zero flow, the meter installation shall protect the installation pipe work, gas fittings and any appliances from pressures greater than 30 mbar.

The meter installation & housing shall be designed and installed or modified to comply with the requirements of BS6400-1:2006

The meter regulator shall be sealed immediately after any setting or adjustment with a suitable seal within the meaning of the Gas Safety (Installation and Use) Regulations. The seals shall bear the OAMI registration number of your organisation or nominated OAMI.

*This Authorisation specifically excludes any validation that the meter satisfies obligations under the Gas Act, Common Law Contract or other with respect to the meter being of a type appropriate for registering the quantity of gas supplied and it's installation in the premises. The responsibility of any design to meet the design objectives stated in your 'Request for Authorisation' and any other statutory obligations will remain with the OAMI acting on behalf of the meter owner as defined in the Gas Act 1986 (as amended 1995) Schedule 2B.*

The following reference number has been allocated to this Authorisation, which should be quoted in any subsequent correspondence.

Yours sincerely

< Position in GT >

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## Letter E2

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

### **Authorisation to undertake the setting and sealing of meter regulators on medium pressure (MP) meter installations with badged meter capacity not exceeding 6m<sup>3</sup>/hr. (Fig 1A or 1B)**

Thank you for completing the Request for Authorisation, dated <                      >.

Following our review I can confirm that we have authorised your organisation to break the seal and to set and seal the meter regulator in accordance with the following conditions.

The regulator shall be set to ensure a metering pressure of    21 mbar.

The regulator lock up pressure shall not exceed                      30 mbar.

The relief valve shall be set to open at a pressure of                      35 mbar.

The final safety device shall be set at a pressure of                      40 mbar for Fig 1A design or;

The final safety device shall be set at a pressure of                      47.5 mbar for Fig 1B design.

Under all circumstances, including zero flow, the meter installation shall protect the installation pipe work, gas fittings and any appliances from pressures greater than 50 mbar.

The meter installation & housing shall be designed and installed or modified to comply with the requirements of BS6400-2:2006

The meter installation shall be clearly labelled with the metering pressure, final safety device and creep relief setting.

The meter regulator shall be sealed immediately after any setting or adjustment with a suitable seal within the meaning of the Gas Safety (Installation and Use) Regulations. The seals shall bear the OAMI registration number of your organisation or nominated OAMI.

*This Authorisation specifically excludes any validation that the meter satisfies obligations under the Gas Act, Common Law Contract or other with respect to the meter being of a type appropriate for registering the quantity of gas supplied and it's installation in the premises. The responsibility of any design to meet the design objectives stated in your 'Request for Authorisation' and any other statutory obligations will remain with the OAMI acting on behalf of the meter owner as defined in the Gas Act 1986 (as amended 1995) Schedule 2B.*

The following reference number has been allocated to this Authorisation, which should be quoted in any subsequent correspondence.

Yours sincerely

< Position in GT >

**Letter E3A**

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

**Authorisation to undertake the setting and sealing of meter regulators on low pressure (LP) meter installations with badged meter capacity exceeding 6m<sup>3</sup>/hr but not exceeding 40m<sup>3</sup>/hr.**

Thank you for completing the Request for Authorisation, dated < >.

Following our review I can confirm that we have authorised your organisation to break the seal and to set and seal the meter regulator in accordance with the following conditions.

The regulator shall be set to ensure a metering pressure of 21 mbar.

The regulator lock up pressure shall not exceed 30 mbar.

Under all circumstances, including zero flow, the meter installation shall protect the installation pipe work, gas fittings and any appliances from pressures greater than 30 mbar.

The meter installation & housing shall be designed and installed or modified to comply with the requirements of IGEN/GM/6.

The meter installation shall be clearly labelled with the metering pressure.

The meter regulator shall be sealed immediately after any setting or adjustment with a suitable seal within the meaning of the Gas Safety (Installation and Use) Regulations. The seals shall bear the OAMI registration number of your organisation or nominated OAMI.

*This Authorisation specifically excludes any validation that the meter satisfies obligations under the Gas Act, Common Law Contract or other with respect to the meter being of a type appropriate for registering the quantity of gas supplied and it's installation in the premises. The responsibility of any design to meet the design objectives stated in your 'Request for Authorisation' and any other statutory obligations will remain with the OAMI acting on behalf of the meter owner as defined in the Gas Act 1986 (as amended 1995) Schedule 2B.*

The following reference number has been allocated to this Authorisation, which should be quoted in any subsequent correspondence.

Yours sincerely

< Position in GT >

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## Letter E3B

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

### **Authorisation to undertake the setting and sealing of meter regulators on low pressure (LP) meter installations with badged meter capacity exceeding 40m<sup>3</sup>/hr but not exceeding 1076m<sup>3</sup>/hr.**

Thank you for completing the Request for Authorisation, dated < >.

Following our review I can confirm that we have authorised your organisation to break the seal and to set and seal the meter regulator in accordance with the following conditions.

The regulator shall be set to ensure a metering pressure of 21 mbar.

The regulator lock up pressure shall not exceed 30 mbar.

Under all circumstances, including zero flow, the meter installation shall protect the installation pipe work, gas fittings and any appliances from pressures greater than 30 mbar.

The meter installation & housing shall be designed and installed or modified to comply with the requirements of IGEM/GM/6.

The meter installation shall be clearly labelled with the metering pressure.

The meter regulator shall be sealed immediately after any setting or adjustment with a suitable seal within the meaning of the Gas Safety (Installation and Use) Regulations. The seals shall bear the OAMI registration number of your organisation or nominated OAMI.

*This Authorisation specifically excludes any validation that the meter satisfies obligations under the Gas Act, Common Law Contract or other with respect to the meter being of a type appropriate for registering the quantity of gas supplied and its installation in the premises. The responsibility of any design to meet the design objectives stated in your 'Request for Authorisation' and any other statutory obligations will remain with the OAMI acting on behalf of the meter owner as defined in the Gas Act 1986 (as amended 1995) Schedule 2B.*

The following reference number has been allocated to this Authorisation, which should be quoted in any subsequent correspondence.

Yours sincerely

< Position in GT >

## Letter E4A

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

**Authorisation to undertake the setting and sealing of meter regulators and any associated pressure control devices on a low pressure (LP) non standard meter installation or higher pressure meter installation with a metering pressure of 21mbar.**

Thank you for completing the Request for Authorisation dated < > applicable to the following:

MPRN:

Address:

*Note: this Authorisation only applies to the job address detailed above.*

Following our review I can confirm that we have authorised your organisation to break the seal and to set and seal the meter regulator in accordance with the following conditions.

The regulator shall be set to ensure a metering pressure of 21 mbar.

The regulator lock up pressure shall not exceed 30 mbar.

The relief valve shall be set to open at a pressure of 35 mbar *(not applicable to LP)*.

The final safety device shall be set at a pressure of 47.5 mbar *(not applicable to LP)*.

Under all circumstances, including zero flow, the meter installation shall protect the installation pipe work, gas fittings and any appliances from pressures greater than 50 mbar.

The meter installation & housing shall be designed and installed or modified to comply with the requirements of IGE/GM/8 and shall be clearly labelled with the metering pressure.

The meter regulator, pressure control & protection devices and by-pass (where fitted) shall be sealed immediately after any setting or adjustment with a suitable seal within the meaning of the Gas Safety (Installation and Use) Regulations. The seals shall bear the OAMI registration number of your organisation or nominated OAMI.

*This Authorisation specifically excludes any validation that the meter satisfies obligations under the Gas Act, Common Law Contract or other with respect to the meter being of a type appropriate for registering the quantity of gas supplied and it's installation in the premises. The responsibility of any design to meet the design objectives stated in your 'Request for Authorisation' and any other statutory obligations will remain with the OAMI acting on behalf of the meter owner as defined in the Gas Act 1986 (as amended 1995) Schedule 2B.*

The following reference number has been allocated to this Authorisation, which should be quoted in any subsequent correspondence.

Yours sincerely

< Position in GT >

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## Letter E4B

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

### **Authorisation to undertake the setting and sealing of meter regulators and any associated pressure control devices on a low pressure (LP) non standard meter installation or higher pressure meter installation with a metering pressure other than 21mbar.**

Thank you for completing the Request for Authorisation dated <                      > applicable to the following:

MPRN:

Address:

*Note: this Authorisation only applies to the job address detailed above.*

Following our review I can confirm that we have authorised your organisation to break the seal and to set and seal the meter regulator in accordance with the following conditions.

The regulator shall be set to ensure a metering pressure of [       ] mbar.

The regulator lock up pressure shall not exceed [       ] mbar.

The relief valve shall be set to open at a pressure of [       ] mbar *(not applicable to LP).*

The final safety device shall be set at a pressure of [       ] mbar *(not applicable to LP)..*

Under all circumstances, including zero flow, the meter installation shall protect the installation pipe work, gas fittings and any appliances from pressures greater than [       ] mbar.

The meter installation & housing shall be designed and installed or modified to comply with the requirements of IGE/GM/4, IGE/GM/8 and shall be clearly labelled with the metering pressure, slam shut and creep relief setting.

The meter regulator, pressure control & protection devices and by-pass (where fitted) shall be sealed immediately after any setting or adjustment with a suitable seal within the meaning of the Gas Safety (Installation and Use) Regulations. The seals shall bear the OAMI registration number of your organisation or nominated OAMI.

*This Authorisation specifically excludes any validation that the meter satisfies obligations under the Gas Act, Common Law Contract or other with respect to the meter being of a type appropriate for registering the quantity of gas supplied and it's installation in the premises. The responsibility of any design to meet the design objectives stated in your 'Request for Authorisation' and any other statutory obligations will remain with the OAMI acting on behalf of the meter owner as defined in the Gas Act 1986 (as amended 1995) Schedule 2B.*

The following reference number has been allocated to this Authorisation, which should be quoted in any subsequent correspondence.

Yours sincerely

< Position in GT >

**Letter F Failure to obtain Authorisation to set & seal regulators.**

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name & Address of MAM>

<Name & Address of OAMI (if different)>

<OAMI Registration Number >

<MAM Registration Number >

**Notification of failure to obtain an Authorisation to undertake the setting and sealing of meter regulators, pressure control & protection devices on meter installations.**

Thank you for completing the Request for Authorisation, dated < >applicable to the following:

Generic request:\*

Job specific: MPRN\*

\*delete as appropriate

Following our review of your application I have to inform you that your Request for Authorisation has not been approved for the following reasons:

The following reference number has been allocated to this Request for Authorisation which should be quoted in any subsequent correspondence.

You are invited to re-submit your request once the issues outlined above have been addressed.

Yours sincerely

< Position in GT >

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**Letter G1     Meter housing/accommodation approval letter.**

GT Reference number:

<GT Address>

< Application reference number>

<Date>

<Name of applicant>

<Address>

<OAMI Registration Number (if applicable) >

<Name of Responsible Engineer>

<Address>

<Site name and address or state GENERIC request>

Thank you for completing the Request for Approval dated <                      >.

<Insert GT name> has undertaken an appraisal of the proposed meter housing/accommodation on the basis of the information submitted. The housing/accommodation meets our requirements and therefore is approved.

*It should be noted that 'approval' does not confer or imply granting of planning permission.  
The obtaining of planning permission, where needed, is the responsibility of the consumer/housing designer.*

*Approval does not imply the durability of any housing, or that the meter installation is appropriate for use. Where a purpose-designed enclosure is provided, including those within the main building, it shall not be used for purposes other than governing and metering the gas supply except as specifically allowed in the relevant meter installation design standards.*

Yours sincerely

< Position in GT >

**Letter G2    Meter housing/accommodation rejection letter.**

GT Reference number:

<GT Address>

<Date>

<Name of applicant>

<Address>

<OAMI Registration Number (if applicable) >

<Name of Responsible Engineer>

<Address>

<Site name and address or state GENERIC request>

Thank you for completing the Request for Approval dated <                      >.

<Insert GT name> have undertaken an appraisal of the proposed meter housing/accommodation described above. The housing/accommodation does not meet our requirements for the following reasons:

You are invited to submit a request for approval once the issues outlined above have been addressed.

Yours sincerely

< Position in GT >

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## **APPENDIX I: Pressure control arrangements.**

### **Acceptable pressure control and protection arrangements and operational pressures at the outlet of the meter regulator and any associated pressure control and protection device(s).**

This appendix provides details of pressure control and protection arrangements and;

- the operational pressure settings for meter regulators and
- any associated pressure control and protection device(s),

This information should be used when making a 'Request for Authorisation'.

When an installer proposes to provide alternative pressure control and protection arrangements, full details of their proposals should be included within any 'Request for Authorisation'.

*Refer to Table 5 and IGE/GM/8*

### **Gas supply arrangements.**

Pipes within the GT's network are designed both to provide the capacity requirement expected to occur in extreme conditions and to operate within specified pressure ranges such that the integrity of the pipes is maintained, and to ensure that a suitable pressure is available at the outlet of the ECV, for the safe operation of any gas appliance which a consumer could be reasonably expected to operate.

GT's assign pipes within their network to pressure tiers. Table 4 shows the standard operational pressures and the maximum design pressures that may occur at the outlet of the ECV, which terminates the gas supply pipe on a specific pressure tier.

These pressures should be used in the design and specification of the meter installation and when making a 'Request for Authorisation'.

In some circumstances there may be a requirement for the lowest operating pressure to be a higher value than that stated in Table 4. The Unified Network Code makes provision for an enhanced pressure service through a gas supply ancillary agreement between the GT and the registered system user (gas shipper).

Where an installer considers that an enhanced pressure service is appropriate they should contact the relevant registered system user.

Where it is identified (either from the information provided by the GT or the label on the service valve) that the capacity of a supply pipe is not consistent with gas users requirements, the meter installer should discuss this with the gas user who should arrange through their Gas Supplier for an increase in supply capacity.

**TABLE 4: NETWORK PRESSURE TIERS.**

Pressure Tier	OPERATIONAL PRESSURES AT THE OUTLET OF THE ECV			DESIGN PRESSURES AT THE OUTLET OF THE ECV	
	DESIGN MINIMUM PRESSURE (DMP)	LOWEST OPERATING PRESSURE (LOP)	MAXIMUM OPERATING PRESSURE (MOP)	DESIGN PRESSURE (DP)	DESIGN MAXIMUM INCIDENTAL PRESSURE (DMIP)
Low	19 mbar	25 mbar See Note 1.	75 mbar	75 mbar	200 mbar
Medium <sup>35</sup>	35 mbar	35 mbar	185 mbar	2.0 bar	2.7 bar
Medium <sup>65</sup>	65 mbar	75 mbar	250 mbar	2.0 bar	2.7 bar
Medium <sup>105</sup>	105 mbar	105 mbar	1.1 bar	2.0 bar	2.7 bar
Medium <sup>180</sup>	180 mbar	180 mbar	1.6 bar	2.0 bar	2.7 bar
Medium <sup>270</sup>	270 mbar	280 mbar	2.0 bar	2.0 bar	2.7 bar
Intermediate	See Note 2	See Note 2	See Note 2	7.0 bar	9.31 bar
High	See Note 2	See Note 2	See Note 2	See Note 2	MOP +10%
<p><b>Note 1:</b> Operating pressures of 21.5 mbar may occur, during normal operation, at the outlet of the ECV on parts of low pressure networks. However experience has shown that low pressure meter installations will provide a satisfactory outlet pressure when designed for an inlet pressure of 25 mbar and a maximum pressure absorption of 4mbar determined at an inlet design minimum pressure. BS 6400:1, IGEN/GM/6 and IGE/GM/8 have/will use these design criteria and therefore 25 mbar is used in this table for consistency with these metering standards.</p> <p><b>Note 2:</b> On intermediate and high pressure Networks the applicant shall confirm with the GT the operational pressures at the outlet of the particular service pipe ECV.</p>					
TERM	ABREVIATION	DEFINITIONS			
Design Minimum Pressure	DmP	The minimum pressure that may occur at the end of any service pipe at the time of system design flow rate under extreme gas supply and maintenance conditions.			
Lowest Operating Pressure	LOP	The lowest pressure that may occur under normal operating conditions.			
Maximum Operating Pressure	MOP	The maximum pressure at which a system can be operated continuously under normal operating conditions.			
Maximum Incidental pressure	MIP	The maximum pressure which a system is permitted to experience under fault conditions, limited by safety devices.			
Design Pressure	DP	The pressure on which design calculations are based.			
Design Maximum Incidental Pressure	DMIP	The maximum pressure which a system is permitted to experience under fault conditions, limited by safety devices, when the system is operated at the design pressure.			

**TABLE 5. GUIDANCE ON METER INSTALLATION CATEGORIES.**

		CATEGORY												
		1	2		3A	3B	4A							
Pressure tier		LP 0 < MOP ≤ 75m bar	MP MOP ≤ 2bar	MP 75m bar < MOP ≤ 2bar	LP 0 < MOP ≤ 75m bar	LP 0 < MOP ≤ 75m bar	LP 0 < MOP ≤ 75m bar	LP 0 < MOP ≤ 75m bar	MP 75m bar < MOP ≤ 2bar	MP 75m bar < MOP ≤ 2bar	IP 2bar < MOP ≤ 7 bar (legacy domestic only)	IP 2bar < MOP ≤ 7 bar	IP 2bar < MOP ≤ 7 bar	HP Above 7bar
Capacity		≤ 6m³/hr	≤ 6m³/hr	≤ 6m³/hr	6 < Q ≤ 40m³/hr	6 < Q ≤ 1076m³/hr	0 < Q ≤ 1076m³/hr	Q > 1076m³/hr	6 < Q ≤ 200m³/hr	200 < Q ≤ 1m³/hr	0 < Q ≤ 6m³/hr	6 < Q ≤ 200m³/hr	200 < Q ≤ 1m³/hr	6 < Q ≤ 1m³/hr
Pressure control and protection devices														
Regulator(s)		Single stage- single stream BS6400-1			Single stage- single stream IGE/M/GM/6	Single stage- single or twin stream IGE/M/GM/6	Single stage- single or twin stream IGE/M/GM/8	Single stage- single or twin stream IGE/M/GM/8						
Regulator(s), incorporating pressure relief and excess flow shut off devices		Fig 1A BS6400-2												
Regulator(s), pressure relief (creep) and pressure activated slam shut			Fig 1B BS6400-2						IGE/M/GM/8 Part 3 Table 1	IGE/M/GM/8 Part 3 Table 1		IGE/M/GM/8 Part 3 Table 1		
Monitor regulator plus active regulator, pressure relief (creep) and pressure activated slam shut												IGE/M/GM/8	IGE/M/GM/8	IGE/M/GM/8
First stage active/monitor regulator and second stage active regulator, pressure relief (creep) and pressure activated slam shut												IGE/M/GM/8	IGE/M/GM/8	IGE/M/GM/8
Operational pressures at the outlet of the pressure control and protections system. Regulator(s) nominal set pressure and maximum lock up pressure at the maximum incidental pressure on the network and where fitted the maximum operating pressure of the final protection device, allowing for the device accuracy. (Standard domestic or commercial type appliances)														
Regulator control	Pressure	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar	21mbar
Regulator lockup		30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar	30mbar
Additional final protection device required?		NO	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Relief valve opening			35mbar +3.5	35mbar + 3.5					35mbar + 3.5	35mbar + 3.5	35mbar + 3.5	35mbar + 3.5	35mbar + 3.5	35mbar + 3.5
Final safety device operation			40mbar (Max)	47.5mbar + 2.5					47.5mbar + 2.5	47.5mbar + 2.5	47.5mbar + 2.5	47.5mbar + 2.5	47.5mbar + 2.5	47.5mbar + 2.5
The meter installer shall determine the appropriate inter stage setting on 2 stage pressure reduction												Yes	Yes	Yes

**Additional requirements where 'Non-standard' appliances are used on Cat 4 installations:** Regulator set pressure shall be consistent with appliance manufacturers instructions for normal operating pressure. Lock up pressure shall limit any temporary operating pressure; Relief valve shall be set to open at a pressure between regulator lock up and slam shut setting (it's setting shall not cause nuisance venting or inadvertant firing of the slam shut valve). Slam shut shall be set to operate at a pressure higher than the relief valve setting and shall protect appliances and pipework from exceeding their tightness test pressure

Note: For LP lock up pressure shall not exceed the appliance tightness test pressure as specified by the manufacturer.

## **APPENDIX J: Addresses & WEB SITE links**

*These addresses were correct at the time of writing, but are subject to change.*

### **Energy Networks Association.**

Web: [www.energynetworks.org](http://www.energynetworks.org)

Address: 6th Floor, Dean Bradley House, 52 Horseferry Road, London, SW1P 2AF

### **National Grid – Gas Distribution**

Web: [www.nationalgrid.com/uk](http://www.nationalgrid.com/uk)

Email: [networkstrategy.gt1andgt2@uk.ngrid.com](mailto:networkstrategy.gt1andgt2@uk.ngrid.com)

Address: Customer Support Team National Grid Gas, Brick Kiln Street, Hinckley. Leics, LE10 0NA.

### **Northern Gas Networks**

Web: [www.northerngasnetworks.co.uk](http://www.northerngasnetworks.co.uk)

Email: [connections\\_gt1\\_2\\_3@northerngas.co.uk](mailto:connections_gt1_2_3@northerngas.co.uk)

Address: 1100 Century Way, Thorpe Park Business Park, Colton, Leeds, LS15 8TU

### **Scotia Gas Networks**

Web: [www.sgn.co.uk](http://www.sgn.co.uk)

Email: [gt1.gt2@sgn.co.uk](mailto:gt1.gt2@sgn.co.uk)

Address: St Lawrence House, Station Approach, Horley, Surrey, RH6 9HJ

### **Wales & West Networks**

Web: [www.wwutilities.co.uk](http://www.wwutilities.co.uk)

Email: [GT2requests@wwutilities.co.uk](mailto:GT2requests@wwutilities.co.uk)

Address: Wales and West House, Spooner Close, Celtic Springs, Coedkernew, Newport, NP10 8FZ.

**Ofgem** web site: <http://www.ofgem.gov.uk/ofgem/work/index.jsp?section=/areasofwork/metering#>

## **Independent Gas Transporters**

### **Association of Independent Gas Transporters (AIGT)**

Web: [www.aigt.org.uk](http://www.aigt.org.uk)

Email: [john.barret@aigt.org.uk](mailto:john.barret@aigt.org.uk)

Tel: 07790 877148

**INEXUS Group** : [www.inexus.co.uk](http://www.inexus.co.uk)

Email: [lenvoy\\_gt@envoyonline.co.uk](mailto:lenvoy_gt@envoyonline.co.uk)

Address: Driscoll Building No2, Ellen Street, Cardiff, CF10 4BQ

**GTC Pipelines Ltd** – [www.gtc-uk.co.uk](http://www.gtc-uk.co.uk)

Representing GTC Pipelines and Utility Grid Installations

**E. S. Pipelines Ltd** - [www.espipelines.com](http://www.espipelines.com)

Representing ES Pipelines, ESP Networks, ESP Pipelines and ESP Connections

**SSE Pipelines Ltd** - [www.scottish-southern.co.uk](http://www.scottish-southern.co.uk)

**Energetics Gas Ltd** - [www.energetics-uk.com](http://www.energetics-uk.com)

**British Gas Pipelines Ltd** - [www.centrica.co.uk](http://www.centrica.co.uk)

**Fulcrum Pipelines Ltd** - [www.fulcrum.co.uk](http://www.fulcrum.co.uk)