



Government of Western Australia
Department of Mines, Industry Regulation and Safety
Building and Energy

Guidelines for the approval

of Industrial gas appliances
(Type B appliances) in
Western Australia



Preface

These guidelines have been developed and issued by the Director of Energy Safety, Building and Energy Division of the Department of Mines, Industry Regulation and Safety, Western Australia.

The guidelines assist members of the gas industry by providing information on:

- how to obtain approval for installing and operating Type B appliances;
- the roles of industry participants in having a Type B appliance approved; and
- the Regulatory requirements to approve Type B appliances in Western Australia.

If any part of these guidelines is found to be in conflict with legislation, the legislation takes precedence.

Should any clarification be required about this document, please contact the Principal Engineer Gas Utilisation on 6251 1900 or be.energy@dmirs.wa.gov.au.



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1. Scope and application

This guideline outlines the regulatory requirements and responsibilities of the various industry participants involved in Type B appliance approval for use.

'Approval for use' is a detailed Type B appliance inspection and certification function designed to ensure the safety of people, plant and property.

A Type B appliance is a defined term in the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Examples of Type B appliances include, but are not limited to the following:

- Calciners
- Gas turbines
- Bake ovens
- Industrial ovens
- Heat-treatment furnaces
- Incinerators
- Dry-out burners
- Process kilns
- Stationary gas engines
- Steam and hot-water boilers

The guidelines explain the various stages of the approval process – from preparing a technical submission, applying for installation approval through to obtaining final certification and permanent gas supply. Process flow charts are supplied in Appendix A.

The guidelines apply to:

- new Type B appliances;
- modifications to existing installed Type B appliances; and
- existing Type B appliances that are relocated.

Technical considerations

Type B gas appliances and their installations must comply with the following requirements:

- AS/NZS 5601 Gas Installations and with requirements set out in Schedule 6 of the Regulations.
- AS3814 provides the minimum requirements for the design, construction and safe operation of Type B appliances.
- AS1375 sets out requirements and safety principles relating to the design, installation, and operation of industrial appliances that involve the combustion of gas or liquid fuels.

The requirements of the Standards listed in Schedule 7 of the Regulations are mandatory.

2. Introduction

These guidelines have been developed to assist Type B appliance manufacturers, engineering consultants, licensed gas fitters, gas suppliers and owner/operators of Type B appliances to understand the regulatory and technical requirements and processes involved in having these appliances approved for use in Western Australia.

The legislation relevant to the inspection, approval and certification of Type B appliances is the *Gas Standards Act 1972* and the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999 (Regulations).

The Director of Energy Safety is responsible for the administration of the *Gas Standards Act 1972* and the Regulations.

The Director:

- designates people as Inspectors (Gas) for carrying out installation inspections;
- delegates powers to approve Type B appliances (Type B Appliance Inspectors);
- receives the Certificate of Compliance (CoC) from the Type B Appliance Inspector. The CoC verifies that the Type B appliance has met the prescribed requirements of the Regulations;
- carries out sample inspections of such installations and audits the work processes of Type B Appliance Inspectors to ensure compliance with requirements as generally described in the document 'Code of Practice for Inspectors (Gas) in Western Australia'; and
- may, in relation to a requirement for consumer's gas installation or type of consumer's gas installation specified in Schedule 6 or 7 of the Regulations:
 - a) vary a requirement;
 - b) specify that a requirement does not apply; or
 - c) specify a requirement in addition to the requirements.

A variation/exemption application may be considered by the Director of Energy Safety or delegate under Sub-regulation 32(3) of the Regulations.

An application for a variation/exemption needs to be submitted at the design/planning stage prior to the proposed installation taking place. An application for an existing installation will not be considered.

Variation/exemption applications are only considered if a performance-based solution cannot be implemented. Proposals to review performance-based solutions are generally submitted by the gas fitter responsible for the Notice of Completion (NOC), and will form part of the technical submission supplied to the Type B appliance inspector, in order to obtain 'approval for installation'. A Type B appliance inspector must not design, recommend or provide technical solutions.

3. Definitions

For the purpose of this guideline, the following definitions apply. Words or terms not specifically defined below are to be interpreted as defined in relevant legislation or relevant prescribed standards.

Type A appliance An appliance of a class or type specified in Regulation 42B of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Type B appliance An appliance that has a maximum hourly input rate exceeding 10 megajoules, but is neither a Type A appliance nor a mobile engine, as defined in the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Appliance An appliance that consumes gas as a fuel.

Approval for installation Means obtaining written approval from a Type B appliance inspector (after the review of the technical submission) so that the Type B appliance may be installed.

Approved Means approved by the Director of Energy Safety.

Certification The issuing of a Certificate of Compliance (CoC) by a Type B appliance inspector for the Type B appliance to be permanently connected to a gas supply

Certificate of compliance (CoC) Issued to certify that the Type B appliance complies with Regulation 32 of the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999. Refer <https://www.commerce.wa.gov.au/sites/default/files/atoms/files/appendix-c-certificateofcompliance.pdf>. CoC is to be submitted using eNotice.

Class I Gasfitting work Gasfitting work -

(a) on a consumer's gas installation associated with a Type B appliance; or

(b) on piping that has an operating pressure of more than 200 kPa, not being gasfitting work referred to in paragraph (a) or classified as class E or P.

Commissioning The testing of safety critical parameters in order to bring the appliance into operation.

Gas for commissioning Gas made available by the gas supplier for the testing and commissioning of the Type B appliance for a defined period (which requires the endorsement of a Type B appliance inspector) prior to the Type B appliance being permanently connected to the gas supply.

Director Director of Energy Safety.

Building and Energy The Building and Energy Division of the Department of Mines, Industry Regulation and Safety in Western Australia.

Gas supplier A gas undertaker; a pipeline licensee; an operator of a reticulated gas supply system; or a person who supplies gas through a pressurised container, as defined in the Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Gas fitter A gas fitter currently licensed by the Director.

Type B appliance inspector A person delegated by the Director to approve Type B appliances

Gas supplier inspector A person designated by the Director to undertake gas installation inspections.

Modification An alteration that changes the safety integrity of the existing system or takes the appliance out of its original certification criteria.

Notice of Completion (NOC) The notice required to be issued by the responsible Gas fitter under Regulation 28 of the Regulations, upon completion of Gasfitting Work. Refer <https://www.commerce.wa.gov.au/building-and-energy/what-enotice>.

Notice of Intent (NOI) Consumer Gas Installations as defined by the [Notice of Intent form](https://www.commerce.wa.gov.au/building-and-energy/notice-intent-noi)
<https://www.commerce.wa.gov.au/building-and-energy/notice-intent-noi>

The NOI has been developed to advise the Gas Supplier of a likely significant future gas load that may impact on their supply infrastructure and enable them to monitor the progress of the Gasfitting Work being carried out.

Regulations The Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999.

Technical submission Typical information and technical data submission as referred to in Appendix A of AS 3814.

4. Regulatory requirements

The following information provides a summary of the requirements in Western Australia. It is not a substitute for gas utilisation legislation currently in force.

4.1 Approval of Type B appliances

The Regulations set out the requirements for approval of Type B appliances.

A summary of the regulatory requirements that needs to be satisfied to allow Type B appliances to be approved for use is provided in Schedule 6, Clause 501 items (2) and (3) of the Regulations.

The process for the approval of Type B appliances is detailed in section 5.

The prescribed Standards are listed in Schedule 7 of the Regulations.

Alternative to inspection on-site (provision for inspection other than at place of installation)

The inspection necessary under Regulation 22A(1) and the necessary certification and badging may, with the approval of the Director, be carried out at another place. For example, at the manufacturer's premises as provided for in Regulation 22A.

This approach is an option to avoid unnecessary on-site inspections where simple Type B appliances such as small kilns or furnaces are installed in remote areas.

Typical examples are:

- Type B appliances that are produced in quantity, to a specific design, are relatively small and only require connection to a gas supply (similar to Type A appliances); and/or
- where specific arrangements are in place for the installing gas fitter to install and commission to a demonstrated process or procedure.

If an appliance manufacturer, or owner, is seeking to obtain 'type approval' (that is, for more than one of the same appliance), approval must be sought from the Director.

4.2 Gasfitting on Type B appliances

Gasfitting work on Type B appliances must be carried out by gas fitters or authorisation holders issued by Building and Energy.

The applicable class of gasfitting permit is as set out in Schedule 5 of the Regulations.

4.3 Notice of completion (NOC)

Within 48 hours of completion of gasfitting work (other than gasfitting work that is the nature of servicing), Regulations require the gas fitter to submit a NOC.

In the NOC, the gas fitter must certify that every part of the gas installation on which the gasfitting work was carried out, or that is affected by the work, complies with the requirements of the Regulations, is safe to use and is completed to a trade finish.

4.4 Request of gas for commissioning

The permission of the gas supplier is required for the provision of gas for commissioning purposes. The gas fitter who is carrying out the commissioning of the Type B appliance is responsible for applying to the gas supplier for commencement of gas. To satisfy the gas supplier's requirement, the request needs to be endorsed by a Type B appliance inspector.

The Type B appliance inspector must approve the period where the Type B appliance may remain on gas for testing and commissioning prior to the on-site inspection of the appliance by the Type B Inspector.

A Type B appliance inspector may approve:

- any period of no more than 28 days; or
- a longer period, of up to 90 days provided the inspector gives written notice to the Director.

In special cases a further extension may be allowed with the approval of the Director.

4.5 Permanent gas supply

To provide permanent gas supply, the gas supplier must have (as a minimum):

- received NOC(s) for the gas installation. These must include (where appropriate):
 - installed pipe work;
 - appliance installation;
 - appliance commissioning;
- inspected the overall gas installation and made an assessment for compliance/completeness of work;
- demonstrated that any Type B appliance(s) have been approved and badged accordingly by a Type B appliance inspector with an appropriate designation; and
- provided confirmation to the Type B appliance owner/operator of commencement of permanent gas supply to the appliance.

4.6 Compliance badges for gasfitting work

A Building and Energy approved compliance badge must be attached to the Type B appliance in the following instances:

- upon completion of the installation of a Type B appliance; and
- upon completion of the commissioning of the Type B appliance.

The gas fitter must attach these approved compliance badges to the Type B appliance in an approved location, for example alongside the Type B appliance data plate.

Only approved metal compliance badges (shown below) must be used.

Gasfitting compliance badge

Building and Energy	
<small>Gas Standards Act 1972 - Compliance Badge</small>	
Gasfitting work: New Connection <input type="checkbox"/> Pipework Additional Work <input type="checkbox"/> Appliance Connection Repair Work <input type="checkbox"/> Commissioning	NOC No.: Variation/Exemption No.:
Installation address/registration number of mobile for non-propulsive purposes:	
I confirm that this gasfitting work complies with the Gas Standards Act 1972 and its regulations.	Work Completion Date:
Registered Gas Fitter's Name:	Gas Fitter's No.:
<small>ESWA G013 0719</small>	

4.7 Inspection and issue of certificate of compliance (CoC)

CoCs are issued by Type B appliance inspectors.

After the Type B appliance inspector has inspected the Type B appliance and has ascertained that it complies with the requirements referred to in Regulation 32 of the Regulations, the inspector issues a CoC.

The Type B appliance inspector issues the CoC by:

- providing the certificate in an approved form to the Director;
- providing copies of the certificate to the:
 - gas fitter who commissioned the appliance;
 - consumer; and
 - gas supplier.

Where the place of inspection is other than the place of installation the inspector gives the three certificates to the manufacturer. The manufacturer is then required under the regulations to pass them on to the:

- gas fitter who commissions the appliance;
- consumer; and
- gas supplier.

As part of the certification process the Type B appliance inspector attaches an approved metal badge (a sample of which is shown on the next page) to the Type B appliance in a conspicuous position (generally, adjacent to the Type B appliance installation and commissioning compliance plates).

A list of Type B Gas Appliance Inspectors can be obtained:

- from Building and Energy's website; or
- by contacting the Building and Energy Gas Inspectorate.

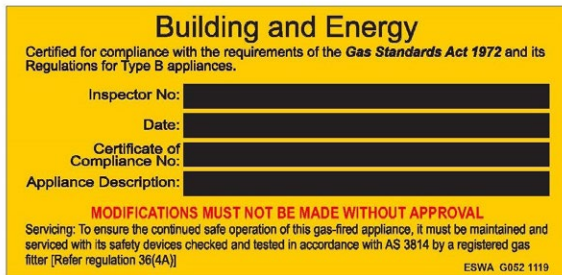
5. Approval process

The Type B inspector is required to carry out Type B appliance certification activities in accordance with the current Code of Practice for Inspectors (Gas).

5.1 New Type B appliance

The approval process, from obtaining approval to install the new Type B appliance, through to final certification and receiving permanent gas supply from the gas supplier to operate the Type B appliance, is usually conducted in five stages:

- obtaining 'approval for installation';
- installation of the Type B appliance;
- commissioning and compliance demonstration of the Type B appliance;
- certification by a Type B Appliance Inspector; and
- gas supplier approval for permanent connection to gas supply.



Approval badge issued by Type B appliance inspector

The flowcharts in Appendix A, illustrate the stages of the approval process for the stakeholders.

5.1.1 Approval for installation

It is recommended that the owner/operator of the installation engages the Type B appliance inspector to ensure the assessment is independent of the work of people contracted to design and/or install the Type B appliance.

Upon being satisfied that the proposed Type B appliance will meet the technical requirements of the prescribed standard, the Type B appliance inspector gives approval for installation. As part of this process, the inspector receives and reviews a technical submission from the Class I gas fitter and/or the applicant (owner/operator or appliance provider). For details of the contents of a technical submission, refer to AS3814.

The Type B appliance inspector cannot be held responsible for giving an 'approval for installation' for a Type B appliance that is subsequently found not to work satisfactorily as a result of a fault or deficiency in the design of the appliance.

5.1.2 Installation of the Type B appliance

After the Type B appliance inspector has given approval for installation an appropriately endorsed Class I gas fitter carries out the gasfitting work associated with the Type B appliance installation.

5.1.3 Commissioning and compliance demonstration of the Type B appliance

The Class I gas fitter commissions the appliance and provides advice to the Type B appliance inspector that the Type B appliance has been commissioned and is ready for on-site demonstration.

The Type B appliance inspector attends site and the Class I gas fitter demonstrates verification of the appliance functional safety and overall compliance.

It is expected that upon completion of commissioning, the Class I gas fitter will provide the owner with all associated technical documentation of the appliance.

5.1.4 Certification of the Type B appliance

The gas fitter certifies that the Type B appliance is compliant and safe to use through the submission of a NOC for commissioning.

When the Type B appliance inspector is satisfied with the demonstration, and has ascertained the appliance complies with the requirements of the Regulations, the inspector will issue a CoC and attach an approval badge in accordance with section 4.6.

The CoC is issued via eNotice.

5.1.5 Gas supplier approval for permanent connection to gas supply

The gas supplier may only give permission for gas to remain permanently connected to the Type B appliance if the gas supplier has completed the checks outlined in section 4.5.

5.1.6 Guideline for the owner/operator

If the proponent, manufacturer or design consultant intends to design a Type B appliance and/or its relevant installation equivalent to an international standard, or import a Type B appliance from overseas into WA site:

- At the earliest stage, engineers, technicians and project managers involved in the design, construction and installation of a Type B appliance and the associated consumer pipework are advised to consider the technical requirements in the following Standards and Legislation:
 - Gas Standards Act 1972
 - Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999, particularly Schedule 7
 - AS 3814
 - AS 1375
 - AS/NZS 5601.1

Redesigning the appliance and the installation at a later stage in the project to comply with Australian and Western Australian requirements can be extremely costly both in money and time, especially for appliances imported to Australia which are often designed to international standards.

It is advised that an appropriately qualified and experienced gasfitter should be engaged at the earliest possible time, ideally before and during Hazard Operability (HAZOP) analysis. Gas fitters can advise appliance owners and operators of these technical requirements and other requirements which may be specific to the type and size of appliance in consideration.

5.2 Type B appliance that is proposed to be modified

5.2.1 Existing Type B appliance with evidence of previous approval

The Type B appliance inspector must be satisfied through a technical submission that the Type B appliance, including the modification, will satisfy the technical standards required by the Regulations. However, depending on the complexity of the proposed modification, the owner/operator may need to address compliance of the proposed modification(s) with current prescribed standards.

Subject to these modification(s) meeting the required standards, the Type B gas appliance inspector will issue an approval for installation notice. This is required before any work in modifying the Type B appliance can take place.

The installation, commissioning and certification requirements for the modified Type B appliance are similar to that for a new appliance.

5.2.2 Existing Type B appliance without evidence of previous approval

The gas fitter shall contact Building and Energy for guidance during the planning stage.

5.3 Relocating a certified Type B appliance

If a Type B appliance is to be relocated, the certification of the appliance is required. The gas fitter shall submit a NOI to the gas supplier.

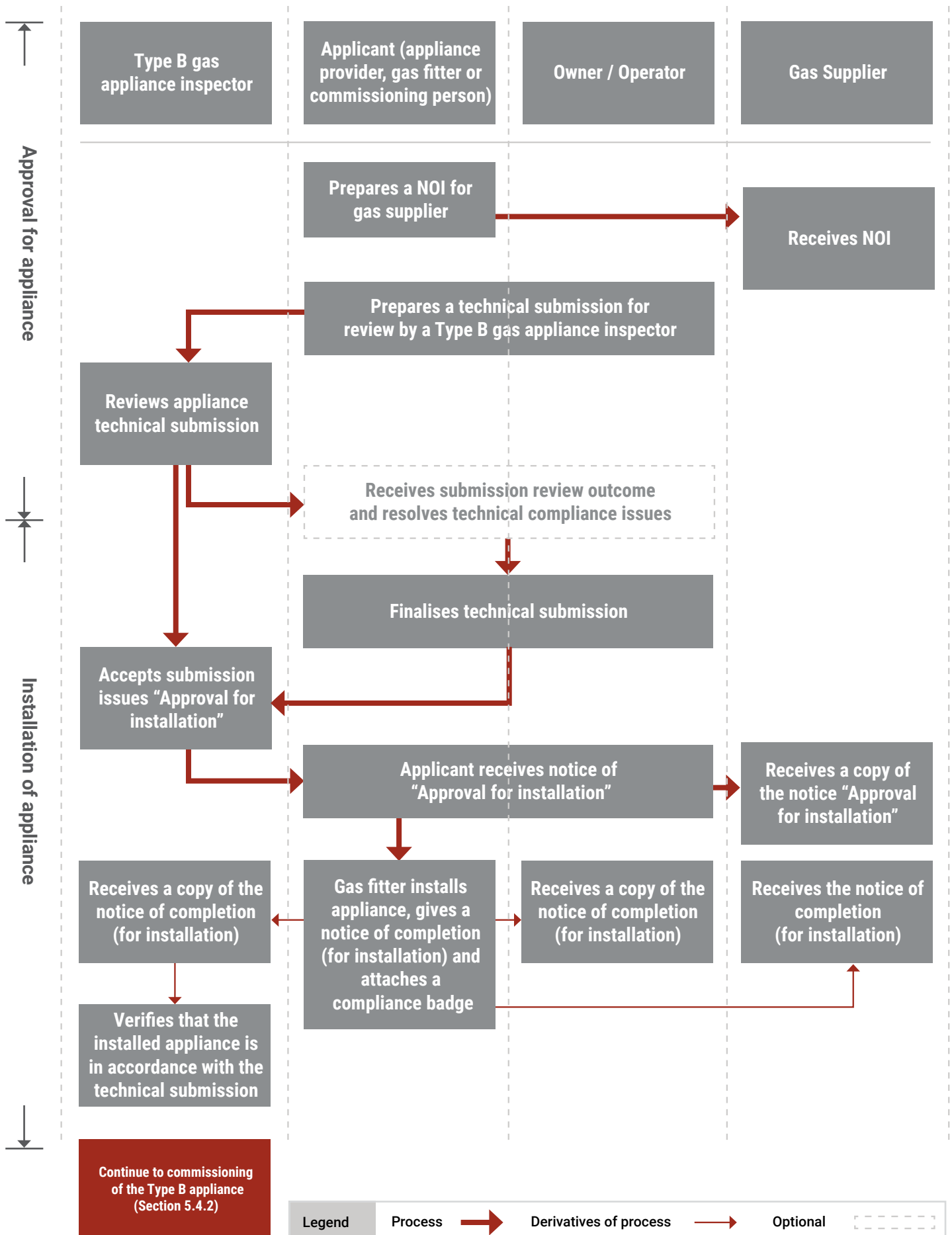
The inspection required under Regulation 22A(1) and the necessary certification and badging may, with the approval of the Director, be waived if it can be demonstrated that relocating a Type B appliance does not involve re-assembly and does not affect its original certification.

This requires the owner/operator to apply in writing to the Director providing evidence to support waiving the requirement to re-certify and re-badge the Type B appliance. By submission of an application does not guarantee a waiver.

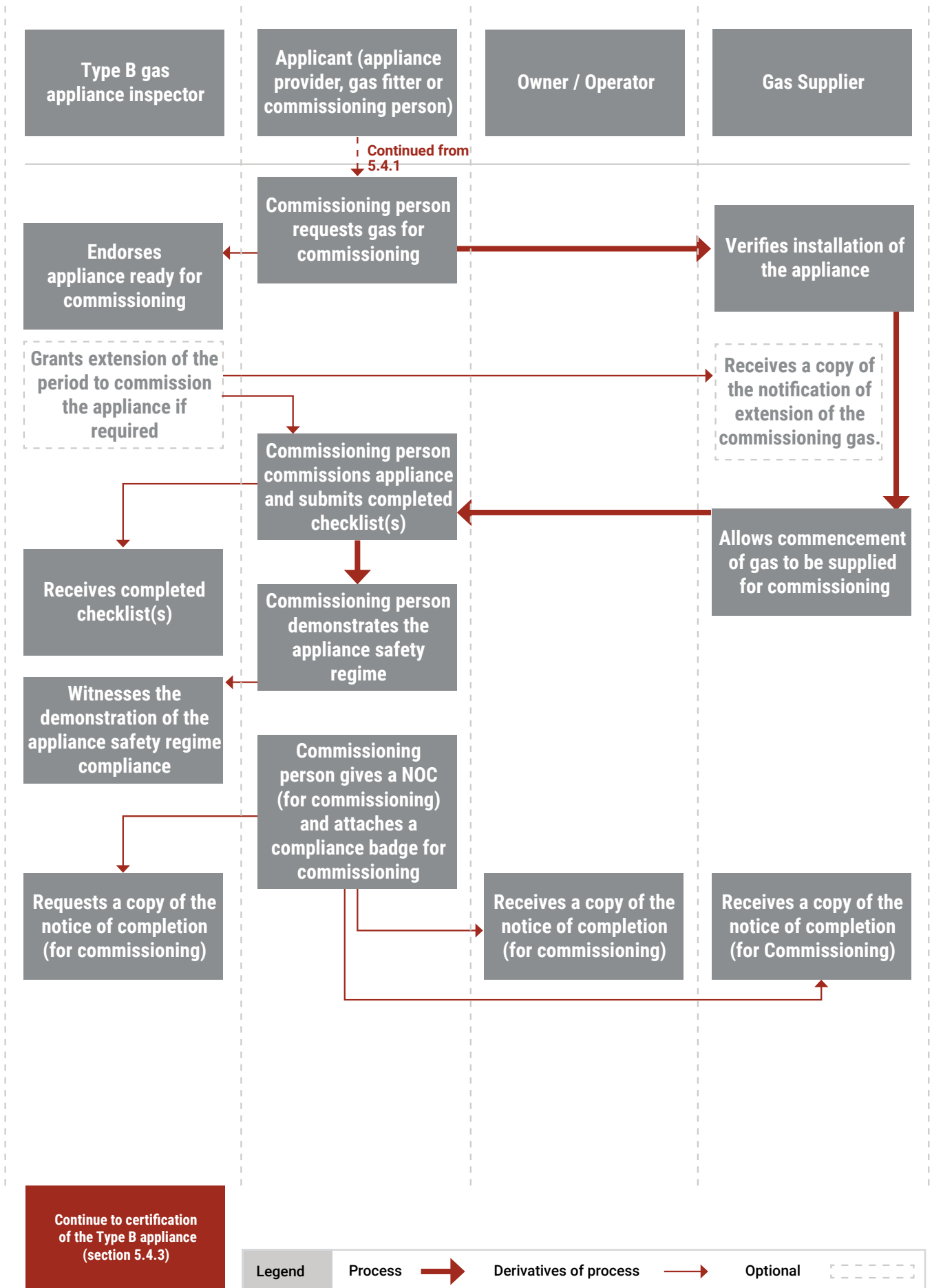
After relocating the Type B appliance, the gas fitter must submit a NOC to the relevant gas supplier who will inspect the gas installation in accordance with the requirements of the Regulations.

5.4 APPENDIX A Flowcharts of approval process

5.4.1 Approval for installation of a Type B appliance

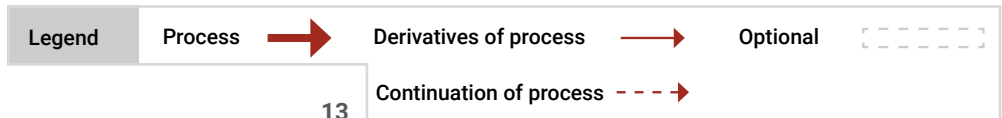
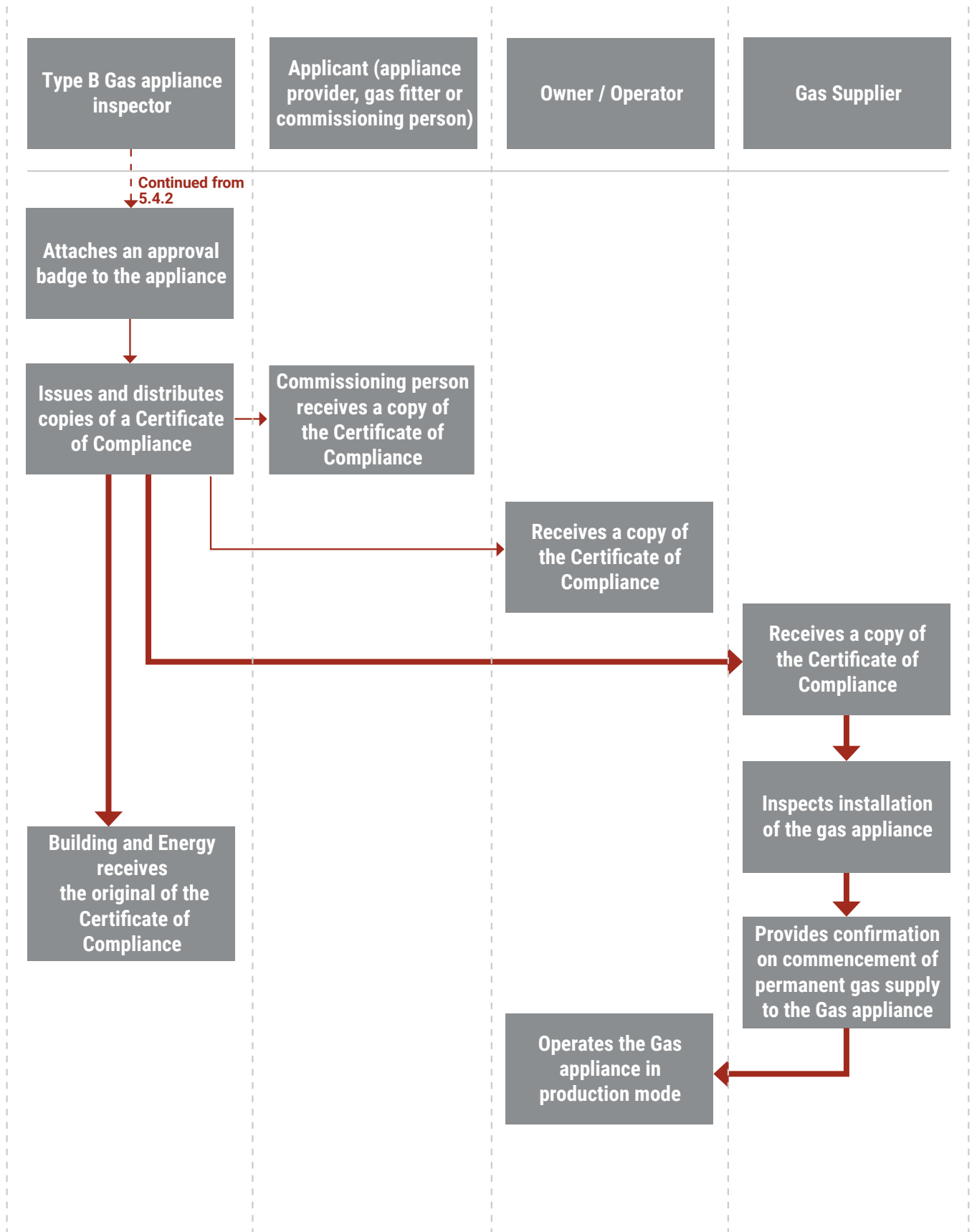


5.4.2 Commissioning of the Type B appliance



Continue to certification of the Type B appliance (section 5.4.3)

Certification of the Type B appliance



Government of Western Australia

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