# Level 3 Diploma in Gas Utilisation (6014)

## Qualification handbook for centres

6014-03 Level 3 Diploma in Gas Utilisation (Leading to Gas Safe Registration)
6014-04 Level 3 Diploma in Gas Utilisation
6014-55 Level 3 Diploma in Gas Utilisation (Installation and Maintenance)

www.cityandguilds.com
September 2017 Version 6.7

## About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

## City & Guilds Group

The City & Guilds Group is a leader in global skills development. Our purpose is to help people and organisations to develop their skills for personal and economic growth. Made up of City & Guilds, City & Guilds Kineo, The Oxford Group and ILM, we work with education providers, businesses and governments in over 100 countries.

## Equal opportunities

City & Guilds fully supports the principle of equal opportunities and we are committed to satisfying this principle in all our activities and published material. A copy of our equal opportunities policy statement is available on our website.

## Copyright

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute and may not be copied, reproduced or distributed without prior written consent.

However, approved City & Guilds centres and learners studying for City & Guilds qualifications may photocopy this document free of charge and/or include a PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching learners working towards a City & Guilds qualification, or for internal administration purposes
- learners may copy the material only for their own use when working towards a City & Guilds qualification

The *Standard Copying Conditions* (which can be found on our website) also apply.

Please note: National Occupational Standards are not © The City and Guilds of London Institute. Please check the conditions upon which they may be copied with the relevant Sector Skills Council.

## Publications

City & Guilds publications are available from our website or from our Publications Sales department, using the contact details shown below.

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

City & Guilds
1 Giltspur Street
London EC1A 9DD
www.cityandguilds.com
centresupport@cityandguilds.com

# Level 3 Diploma in Gas Utilisation (6014)

## Qualification handbook for centres

www.cityandguilds.com
September 2017 Version 6.7

| Qualification title | QAN |
|---|---|
| Level 3 Diploma in Gas Utilisation: Core Skills and Knowledge | 600/0894/5 |
| Level 3 Diploma for Gas Emergency First Call Operative | 600/0897/0 |
| Level 3 Diploma in Gas Utilisation Metering 2.5 – 16cu/m | 600/0896/9 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 600/0899/4 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 600/0905/6 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air | 600/0908/1 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 600/0910/X |
| Level 3 Diploma in Gas Utilisation Installation: Water Heating and Wet Central Heating | 600/0919/6 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 600/0920/2 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating and Domestic Warm Air | 600/0921/4 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers and Leisure | 600/0922/6 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Space Heating | 600/0923/8 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Warm Air | 600/0924/X |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Water Heating and Wet Central Heating | 600/0918/4 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 600/0917/2 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 600/0916/0 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air | 600/0915/9 |
| Level 3 Diploma in Gas Utilisation Maintenance: Water Heating and Wet Central Heating | 600/0914/7 |

| | |
|---|---|
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Limited Wet Central Heating and Domestic Warm Air | 600/2661/3 |
| Level 3 Diploma in Gas Utilisation: Technical Installation Engineer | 601/0199/4 |
| Level 3 Diploma in Gas Utilisation: Technical Maintenance Engineer | 601/0199/4 |

| Version and date | Change detail | Section |
|---|---|---|
| Version 2.4 July 2012 | Amend Unit 326 title from: Install, commission, service and maintain domestic plumbing and heating systems to: Install, commission, service and maintain domestic heating systems | Throughout document |
| | Amended the RWE Assessment column in the following tables: Unit 201-202, 310-318 and 321. | Evidence and Assessment Requirement Tables |
| Version 3 June 2013 | Test specifications added for units 203, 204, 205, 323, 324, 325 and 327. | Assessment |
| | Permitted open book reference materials list added. | Appendix 2 |
| Version 4 July 2013 | Two new pathways added: 6014-05 Level 3 Diploma in Gas utilisation: Technical Installation Engineer and Level 3 Diploma in Gas utilisation: Technical Installation Engineer | Throughout document |
| | Test specifications added for units 207, 208, 209, 210, 211, 238, 239 | Assessment |
| Version 5 September 2013 | Certification module 901 has been removed from table on page 6 | Introduction to the qualifications |
| Version 6 October 2013 | Removed references to BS 6700 and replaced with BS EN 806<br><br>Amended 323/023 unit title | Appendix 2<br><br>Throughout Handbook |
| Version 6.1 March 2014 | Amended assessment option for unit 328 within the two pathways for 6014-05 | Assessment |
| Version 6.2 March 2014 | Updated assessment method for 6014-05 | Assessment |
| Version 6.3 October 2014 | Added Unit 322 to structure for Level 3 Diploma in Gas Utilisation: Technical Maintenance Engineer | Structure |
| Version 6.4 November 2014 | Added guidance regarding acceptance of ACS as part of a qualification | 4.3 Recognition of prior learning |

| | | |
|---|---|---|
| Version 6.5<br>May 2016 | City & Guilds Group statement updated<br>Phone numbers removed<br>Reference materials added for Unit 329 | Page 2<br>Useful contacts<br>Appendix 2 |
| Version 6.6<br>May 2016 | 6014-05 updated to 6014-55<br>replaced units 208-211 with 218-221 | Units |
| Version 6.7<br>September 2017 | Added TQT and GLH details<br><br>Deleted QCF | Structure<br><br>Throughout |

# Contents


| | | |
|---|---|---|
| 1 | Introduction to the qualifications | 7 |
| 1.1 | Structures | 9 |
| 1.2 | Opportunities for progression | 32 |
| 2 | Centre requirements | 33 |
| 3 | Requirements for Assessment | 34 |
| 3.1 | Assessment requirements for Summit Skills units | 34 |
| 3.2 | Principles of Assessment | 37 |
| 3.3 | Test specifications | 40 |
| 3.4 | Assessment requirements for EUSkills units | 47 |
| 4 | Assessment requirements for Independent Summative Assessment (ISA) | 48 |
| 4.1 | Independent Assessment | 48 |
| 4.2 | Knowledge evidence | 51 |
| 4.3 | Recognition of Prior Learning | 53 |
| Appendix 1 | EU Skills Assessment Strategy | 55 |
| Appendix 2 | Permitted open book reference materials | 83 |
| Appendix 3 | Sources of general information | 87 |

# 1 Introduction to the qualifications

This document contains the information that centres need to offer the following qualifications:

| Qualification title and level | Certification grading number | Qualification accreditation number | Guided Learning Hours |
|---|---|---|---|
| Level 3 Diploma in Gas Utilisation: Core Skills and Knowledge | | 600/0894/5 | 410 |
| Level 3 Diploma in Gas Utilisation Metering 2.5 – 16cu/m | 902 | 600/0896/9 | 651 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers and Leisure | 905 | 600/0922/6 | 769 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Space Heating | 906 | 600/0923/8 | 837 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Warm Air | 907 | 600/0924/X | 871 |
| Level 3 Diploma in Gas Utilisation Installation: Water Heating and Wet Central Heating | 908 | 600/0919/6 | 1451 |
| Level 3 Diploma in Gas Utilisation Maintenance: Water Heating and Wet Central Heating | 909 | 600/0914/7 | 1392 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Water Heating and Wet Central Heating | 910 | 600/0918/4 | 1526 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 911 | 600/0899/4 | 803 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 912 | 600/0917/2 | 803 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 913 | 600/0910/X | 945 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 914 | 600/0905/6 | 1593 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 915 | 600/0916/0 | 1534 |

| | | | |
|---|---|---|---|
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 916 | 600/0920/2 | 1810 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air | 917 | 600/0908/1 | 1647 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air | 918 | 600/0915/9 | 1588 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating and Domestic Warm Air | 919 | 600/0921/4 | 1918 |
| Level 3 Diploma for Gas Emergency First Call Operative | 920 | 600/0897/0 | 1316 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Limited Wet Central Heating and Domestic Warm Air | 924 | 600/2661/3 | 1580 |
| Level 3 Diploma in Gas Utilisation: Technical Installation Engineer | 951 | 601/0199/4 | 993 |
| Level 3 Diploma in Gas Utilisation: Technical Maintenance Engineer | 952 | 601/0199/4 | 1130 |

For registration and certification end dates, please see the Walled Garden or Online Catalogue.

## 1.1 Structures

To achieve the **Level 3 Diploma in Gas Utilisation: Core Skills and Knowledge**, learners must achieve **57** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| **This is a knowledge-only qualification designed to provide underpinning knowledge in the gas industry and does not lead to Gas Safe Registration. The units covered form part of the following Diplomas.** | | | |

To achieve the **Level 3 Diploma for Gas Emergency First Call Operative**, learners must achieve **260** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| D/502/8486 | 306 | Specific core metering | 23 |
| K/502/8488 | 307 | Specific core emergency | 45 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| A/502/8303 | 202 | Install gas meters and regulators (2.5 to 16.0m3/hr) | 12 |
| L/502/8371 | 318 | Install gas meters and regulators (2.5 to 1076m3/hr) | 25 |
| Y/502/8373 | 319 | Dealing with reported upstream gas emergencies | 32 |
| T/502/8378 | 320 | Dealing with reported downstream gas emergencies | 32 |
| M/502/8380 | 321 | Strength testing, gas tightness testing and direct purging – IGE/UP/1A | 12 |
| **Completion of this Qualification Combination will enable Gas Registration in the following categories: CESP 1, MET 1, MET4, CMET1, TPCP1A, REGT1, CoNGLP1 PD** | | | |

To achieve the **Level 3 Diploma in Gas Utilisation Metering 2.5 – 16cu/m**, learners must achieve **114** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| D/502/8486 | 306 | Specific core metering | 23 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| A/502/8303 | 202 | Install gas meters and regulators (2.5 – 16.0 m3/hr) | 12 |
| Completion of this Qualification Combination will enable Gas Registration in the following categories: CMA 1, CoNGLP 1PD, MET 1/ 2, MET4, REGT 1 | | | |

To achieve the **Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure and Domestic Space Heating**, learners must achieve **125** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating**, learners must achieve **219** credits from the following mandatory units.

Learners will be completing the following types of assessment when taking this qualification:

- Portfolio
- Assignment
- On-line multiple choice

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness Test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |

| | | | |
|---|---|---|---|
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air**, learners must achieve **243** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |
| F/502/8299 | 316 | Install domestic gas warm air central heating systems and appliances | 12 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |

| | | | |
|---|---|---|---|
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, DAH 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating**, learners must achieve **153** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation: Water Heating and Wet Central Heating**, learners must achieve **206** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CENWAT 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating**, learners must achieve **263** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 4 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating and Domestic Warm Air**, learners must achieve **298** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| F/502/8299 | 316 | Install domestic gas warm air central heating systems and appliances | 12 |
| T/502/8302 | 317 | Maintain gas warm air central heating systems and appliances | 11 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |

| | | | |
|---|---|---|---|
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |
| Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, DAH 1, CPA 1, MET1/2, CoNGLP1 PD | | | |

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers and Leisure**, learners must achieve **123** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8292 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, CPA 1, MET1/2, CoNGLP1 PD | | | |

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Space Heating**, learners must achieve **130** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| D/502/8374 | 314 | Install domestic gas space heating appliances | 15 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, HTR 1, CPA 1, MET1/2, CoNGLP1 PD | | | |

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Warm Air**, learners must achieve **135** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| F/502/8299 | 316 | Install domestic gas warm air central heating systems | 12 |
| T/502/8302 | 317 | Maintain gas warm air central heating systems and appliances | 11 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, DAH 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Installation and Maintenance: Water Heating and Wet Central Heating**, learners must achieve **222** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CENWAT 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating**, learners must achieve **128** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CPA 1, MET1/2, CoNGLP1 PD.

To achieve the **Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating**, learners must achieve **232** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, CPA MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air**, learners must achieve **243** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| T/502/8302 | 317 | Maintain gas warm air central heating systems and appliances | 11 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |

| | | | |
|---|---|---|---|
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, DAH 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Maintenance: Water Heating and Wet Central Heating**, learners must achieve **204** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| R/602/2971 | 206 | Install and maintain domestic heating systems | 4 |
| A/502/8933 | 326 | Install, commission, service and maintain domestic heating systems | 3 |

| | | | |
|---|---|---|---|
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CENWAT 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Limited Wet Central Heating and Domestic Warm Air** learners must achieve **236** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understanding gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| T/502/8302 | 317 | Maintain gas warm air central heating systems and appliances | 11 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| H/602/2697 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| F/602/2884 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| Y/602/2888 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| K/502/8930 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| K/502/9155 | 324/024 | Understand and apply domestic hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| M/502/9156 | 325/025 | Understand and apply domestic central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| T/502/9157 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems | 12 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, DAH 1, CPA 1, MET1/2, CoNGLP1 PD

To achieve the **Level 3 Diploma in Gas Utilisation: Technical Installation Engineer** learners must achieve **145** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| J/600/1003 | 207/277 | Delivery of effective customer service | 6 |
| K/506/1880 | 218 | Understand the principles and operation of Government energy efficiency incentives | 1 |
| F/506/1884 | 219 | Understand the use of energy efficiency measures on existing buildings | 4 |
| J/506/1885 | 220 | Understand insulation and building treatment methods | 1 |
| L/506/1886 | 221 | Understand air quality and ventilation requirements for buildings | 1 |
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understand gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| Y/502/8454 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| T/504/1602 | 328 | Water Supply 'Water Fittings' Regulations and Water Byelaws in the UK | 3 |
| D/504/1545 | 329/330 | The installation, commissioning and safety aspects of hot water systems for domestic use in accordance with UK building regulations | 1 |

Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CENWAT 1, CPA 1, MET1/2, CoNGLP1 PD and registered as a competent person for Building Regulations G3 (Hot Water Supplies and systems)

To achieve the **Level 3 Diploma in Gas Utilisation: Technical Maintenance Engineer** learners must achieve **182** credits from the following mandatory units.

| Unit accreditation no. | City & Guilds unit no. | Unit title | Credit value |
|---|---|---|---|
| D/503/8628 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| J/600/1003 | 207/277 | Delivery of effective customer service | 6 |
| K/506/1880 | 218 | Understand the principles and operation of Government energy efficiency incentives | 1 |
| F/506/1884 | 219 | Understand the use of energy efficiency measures on existing buildings | 4 |
| J/506/1885 | 220 | Understand insulation and building treatment methods | 1 |
| L/506/1886 | 221 | Understand air quality and ventilation requirements for buildings | 1 |
| M/502/8461 | 301 | Understanding health and safety in gas utilisation | 11 |
| A/502/8463 | 302 | Understanding scientific principles in gas utilisation | 4 |
| M/502/8475 | 303 | Understanding combustion and properties of gas | 15 |
| A/502/8480 | 304 | Understanding buildings, services and structures | 12 |
| Y/502/8485 | 305 | Understand gas safety | 15 |
| H/502/8487 | 308 | Specific core installation and maintenance | 21 |
| L/502/8452 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| T/502/8459 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| T/502/8381 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| R/502/8372 | 315 | Maintain domestic gas space heating appliances | 15 |
| T/502/8302 | 317 | Maintain gas warm air central heating systems and appliances | 11 |
| J/502/8465 | 322 | Water compulsory core unit | 13 |
| T/504/1602 | 328 | Water Supply 'Water Fittings' Regulations and Water Byelaws in the UK | 3 |
| D/504/1545 | 329/330 | The installation, commissioning and safety aspects of hot water systems for domestic use in accordance with UK building regulations | 1 |

**Completion of this Qualification Combination will enable Gas Registration in the following categories: CCN 1, CKR 1, LAU 1, LEI 1, HTR 1, CENWAT 1, DAH 1, CPA 1, MET1/2, CoNGLP1 PD and registered as a competent person for Building Regulations G3 (Hot Water Supplies and systems)**

## Total Qualification Time

Total Qualification Time (TQT) is the total amount of time, in hours, expected to be spent by a Learner to achieve a qualification. It includes both guided learning hours (which are listed separately) and hours spent in preparation, study and assessment.

| Title and level | GLH | TQT |
|---|---|---|
| Level 3 Diploma in Gas Utilisation: Core Skills and Knowledge | 570 | 410 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers and Leisure | 1230 | 769 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Domestic Space Heating | 1300 | 837 |
| Level 3 Diploma in Gas Utilisation Installation: Water Heating and Wet Central Heating | 2060 | 1451 |
| Level 3 Diploma in Gas Utilisation Maintenance: Water Heating and Wet Central Heating | 2040 | 1392 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Water Heating and Wet Central Heating | 2220 | 1526 |
| Level 3 Diploma in Gas Utilisation Installation: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 1250 | 803 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 1280 | 803 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure and Domestic Space Heating | 1530 | 945 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 2320 | 1534 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating | 2750 | 1810 |
| Level 3 Diploma in Gas Utilisation Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating, Wet Central Heating and Domestic Warm Air | 2430 | 1588 |
| Level 3 Diploma in Gas Utilisation Installation and Maintenance: Cookers, Tumble Dryers, Leisure, Domestic Space Heating, Water Heating and Wet Central Heating and Domestic Warm Air | 2980 | 1918 |
| Level 3 Diploma for Gas Emergency First Call Operative | 2600 | 1316 |

## 1.2 Opportunities for progression

On completion of this qualification, learners may progress into employment or to the following City & Guilds qualifications:

- 7428 Level 2 Diploma in Smart Metering
- 6189 Level 2 and 3 Plumbing and Domestic Heating
- 4467 Level 4 in Building Services Engineering
- ILM Level 2 Qualifications in Team Leading
- ILM Level 2 Qualifications in Innovation in the Workplace
- ILM Level 3 Qualifications in Management

# 2 Centre requirements

This section outlines the approval processes for Centres to offer these qualifications and any resources that Centres will need in place to offer the qualifications including qualification-specific requirements for Centre staff.

### Centres already offering City & Guilds qualifications in this subject area

The following qualifications are the NQF City & Guilds qualifications in Domestic Natural Gas

- 6012 – Programme of study including: 02; 03; 05; 06; 12; 13; 20; 21; 22; 24; 25; 30; 31; 32; 55; 60; 62; 63; 66; 70; 74; 80
- 6034 – Programme of study including: 01; 02; 03; 04; 12; 13; 22; 33
- 6132 – Programme of study including: 22; 33; 44

If your Centre is approved to offer any programme of study in 6012 or 6034, you will gain automatic approval for 6014-03 and 6014-04.

If your Centre is approved to offer any programme of study in 6132, you will gain automatic approval for 6014-04.

To offer the Level 3 Diploma in Domestic Natural Gas (6014-03 and 6014-04) qualifications, new centres will need to gain both centre and qualification approval. Please refer to the *Centre Manual - Supporting Customer Excellence* for further information.

### Candidate entry requirements

There are no formal entry requirements for learners undertaking these qualifications. However, centres must ensure that learners have the potential and opportunity to gain the qualifications successfully.

### Age restrictions

These qualifications are not approved for use by learners under the age of 16, and City & Guilds cannot accept any registrations for learners in this age group.

# 3 Requirements for Assessment

The Diplomas in Domestic Natural Gas will be assessed through a combination of workplace assessment, simulation assessment and knowledge assessment.

The City & Guilds Level 3 Diploma in Gas Utilisation: Core Skills and Knowledge (6014-03) now forms an integral part, and is a prerequisite, of all the Gas Utilisation qualifications. As such the following options are available to Learners:

- 6014-04 may be completed as a stand alone qualification*
- 6014-04 may be completed as an introductory part of a larger qualification

* The 6014-04, taken as a stand alone qualification is **not** sufficient for eligibility for entry to the Gas Safe Register, via any assessment only route (e.g. ACS). Candidates must complete a minimum of one of the range of 6014-03 Level 3 Diplomas to meet the requirements for registering onto the Gas Safe Register.

* For 6014-55, learners must successfully complete the online test (328) or the paper based test (331)

## 3.1 Assessment requirements for Summit Skills units

The following information relates to SummitSkills units only.

| Summit Skills unit reference | City & Guilds unit number | Unit title | Credit value |
|---|---|---|---|
| DMES 02 | 203/003 | Understand and apply domestic cold water system installation and maintenance techniques | 8 |
| DMES 03 | 204/004 | Understand and apply domestic hot water system installation and maintenance techniques | 8 |
| DMES 04 | 205/005 | Understand and apply domestic central heating system installation and maintenance techniques | 10 |
| DMES 05 | 323/023 | Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques | 9 |
| DMES 06 | 324/024 | Understand and apply hot water systems installation, maintenance, commissioning and servicing techniques | 9 |
| DMES 07 | 325/025 | Understand and apply central heating system installation, maintenance, commissioning and servicing techniques | 12 |
| DTHG 02 | 206 | Install and Maintain Domestic Heating Systems | 4 |
| DTHG 04 | 326 | Install, commission, service and maintain domestic heating systems | 3 |
| MES02 | 327/027 | Understand and carry out electrical work on domestic plumbing and heating systems and components | 12 |
| MESWR1 | 328/331 | Water Supply 'Water Fittings' Regulations and Water Byelaws in the UK | 3 |
| MESUV1 | 329 | The installation, commissioning and safety aspects of hot water systems for domestic use in accordance with UK building regulations | 1 |

## Assessors and internal verifiers

### Assessors must:

- be working towards or have achieved A1 or A2 Standards and continue to practice to those standards or;
- have achieved D32 or D33 or TQFE/TQSE and possess CPD evidence of practicing to A1 or A2 Standards or;
- have other suitable 'equivalent assessor qualifications' endorsed by Summit Skills, which apply the principles of the A1/A2 Standards.

### Assessor Occupational Competence

Assessors must have verifiable relevant industry experience and current knowledge of industry working practices and techniques relevant to the occupational working area. This verifiable evidence must be **at or above the level being assessed** and include one or more of the following:

- A relevant qualification. Assessors must either be able to demonstrate that they are registered and up-to-date with their registration with an appropriate approved industry registration body or have one or more of a relevant occupational qualification to ensure that they can be regarded as occupational competent in terms of assessing or verifying the relevant qualifications, and units therein.

- NVQs/SVQs at Level 3 as a minimum or their equivalents in the Qualifications and Credit Framework:
  - Plumbing
  - Plumbing (Domestic) (SVQ)
  - Heating and Ventilating Installation (Domestic)

If older forerunner qualifications are held such as the City & Guilds Craft Certificate in Plumbing, then the assessor must have completed CPD updating as outlined under assessor continuing professional development.

Assessment of competence-based units/qualifications for mechanical services occupations will require assessors to have the relevant qualification that certifies their competence in key technical areas pertinent to the completion of the unit/qualification.

### Assessor Continuing Professional Development

The occupational competence of assessors must be updated on a regular basis and be periodically reconfirmed via continuing professional development (CPD) via the assessment centres and quality assured by City & Guilds.

It is the responsibility of each assessor to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and SSC and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge. It is imperative that records are kept of all such CPD opportunities/occasions and that they provide evidence of cascading such technical knowledge and industry intelligence to all relevant colleagues.

### Internal Verifiers role and responsibilities

The Sector Skills Council, Summit Skills considers the main focus of IVs to be the quality assurance of assessment procedures. The IV is also required to have a minimum of occupational experience evidenced by having a Building Services Engineering sector related qualification or proven sector competence/experience plus access to relevant 'occupational expertise' to enable them to conduct their role as internal verifier appropriately. This evidence and access to 'occupational expertise' is quality assured by City & Guilds.

Internal Verifiers must:

- be working towards or have achieved the V1 Standard and continue to practice to that standard or;
- have achieved D34 and possess CPD evidence of practicing to the V1 Standard and;
- demonstrate an understanding of the assessment process.

Internal Verifiers Continuing Professional Development

The occupational experience of IVs must be updated on a regular basis and be periodically reconfirmed via continuing professional development (CPD) via the assessment centres and quality assured by City & Guilds.

It is the responsibility of each IV to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and SSC and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge.

It is imperative that records are kept of all such CPD opportunities/occasions.

Expert Witnesses

Where Expert Witnesses are used in the assessment process identified above they must be sector competent individuals who can attest to the learner's performance in the workplace. It is not necessary for expert witnesses to hold an assessor qualification, as a qualified assessor must assess the performance evidence provided by an expert witness. Evidence from expert witnesses must meet the tests of validity, reliability, authenticity and sufficiency.

Expert witnesses will need to demonstrate:

- they have relevant current knowledge of industry working practices and techniques
- that they have no conflict of interest in the outcome of their evidence.

## 3.2 Principles of Assessment

The following information applies to Summit Skills units only (203/003, 204/004, 205/005, 323/023, 324/024, 325/025, 206, 326, 327/027, 328, 329)

Evidence requirements

The evidence requirements and City & Guilds assessment strategy for these qualifications has been designed within the confines of the SSC Summit Skills 'Consolidated Assessment Strategy for units and Qualifications of 'Occupational Competence' in the Qualifications and Credit Framework (England, Northern Ireland and Wales) for the Building Services Engineering Sector' (April 2010 v2.1a 06.10)'.

There are three types of units within these qualifications:

| | |
|---|---|
| Knowledge Unit | A unit that gives the learner the opportunity to demonstrate their knowledge and understanding of identified topics and subject areas. |
| Performance Unit | A unit that gives the learner the opportunity to demonstrate they have the practical skills that are in keeping with the relevant National Occupational Standards for identified activities. |
| Combination Unit | A unit that gives the learner the opportunity to demonstrate their understanding and application of specific knowledge, and is assessed in simulated conditions using particularly identified "relevant practical activities". |

Knowledge units must be undertaken in line with the City & Guilds assessment strategy for each unit as detailed in this handbook. All knowledge only units for the award are assessed by online multiple choice tests.

Evidence that is sourced from the real working environment for Performance units must be naturally occurring and can be generated by:

- direct observation of performance in the workplace by a qualified assessor and/or testimony from an expert witness subject to the activity being assessed; this will be the primary source of evidence
- candidate's reflective account of performance
- Work plans and work based products, e.g. diagrams, drawings, specifications, customer testimony, authorised & authenticated photographs/images and audiovisual records of work completed
- evidence from prior achievements that demonstrably match the requirements of the Performance Unit
- witness testimony.

Meeting the assessment requirements of Performance Units will need initial discussions and assessment planning between the learner and assessor, as an essential activity to identify opportunities to assess real working environment evidence, gaps that need to be filled or opportunities to recognise the prior achievement of the learner.

Competence must be demonstrated consistently over a period of time and on more than one occasion. Unless specifically stated otherwise within the unit, there is no stipulation what that period of time might be as this is a decision for the assessor. Based on their own professional judgement assessors must be capable of identifying when competence has been demonstrated by the learner.

### Simulation and Simulated Conditions (Performance Units)

#### Permissible

Simulation can take place in those rare circumstances where the opportunities to collect naturally occurring evidence are limited or absent and the learner lacks evidence for completion of the unit. However, this scenario is anticipated to be rare in relation to the qualifications and the units to which this strategy applies given the inherent flexibility of the evidence-gathering process.

#### Mandatory

Simulation must take place for industry-identified key safety critical aspects of the qualifications as listed below:

- Activities relating to F Gas installations/service and maintenance
- Pressure testing
- Handling of refrigerants (ODS, Ammonia, HC and $CO_2$)
- Thermal pipe joining methods – welding; brazing; soldering activities
- Limited scope electrical work
- As relevant, the installation, connection and servicing/maintenance of fuel systems and equipment – gas; oil; solid fuel
- As relevant, the installation, connection and servicing/maintenance of hot/cold water systems and equipment – unvented water; backflow prevention

The activities that will be undertaken demonstrating competence in these areas are contained within each industries "Assessment of Occupational Competence" arrangement and this

must not be undertaken before the learner has demonstrated sufficient technical expertise, knowledge, skill and maturity.

Where simulation does take place it must be in a realistic working environment and/or an independent assessment structure.

### Industry Arrangements for the Assessment of Occupational Competence

This is an independent part of the assessment process. Each industry will have its own arrangements which will be compliant with the following requirements:

- Activities relating to limited scope electrical work
- Assessment in the following competence areas must meet the minimum standards laid down by the following bodies and be capable of facilitating separate operative registration (without further assessment and training) with industry recognised bodies approved to register operatives in the listed competence area:
    - Water Regulations – DEFRA (WRAS)
    - Unvented hot water – Building Regulations/Standards
    - Energy efficiency – Building Regulations/Standards (Part L1 of the Building Regulations in England & Wales)
    - Gas – gas registration provider
    - Oil – OFTEC
    - Solid fuel – HETAS
    - Electrical – defined scope Part P electrics
    - Emerging technologies – MTC proposals (Competent Persons Schemes)

### Additional delivery and assessment requirements

MES Electrical Unit: Understand and carry out electrical work on domestic plumbing and heating systems and components (T/502/9157).

In relation to the delivery and assessment of the unit identified above the two statements below **must** be prominently included in any learner and assessor/assessment support and guidance documentation for the unit and/or the qualification the unit is a component of:

- A learner who completes this unit is **not** competent to inspect and test a complete electrical installation. The competencies identified in the unit and demonstrated by the learner are only applicable to **electrically operated mechanical services components and controls** up to 230V single phase supply.
- Individuals responsible for the delivery and/or assessment of this unit must provide auditable evidence that, as a minimum, they have the competencies that equate with the **Learning Outcomes and Assessment Criteria** of the unit.

NB – As the water regulations unit assessment can be taken online or paper based, the online test is schedule through component 328. The paper based test is claimed on the walled garden through component number 331.

## 3.3 Test specifications

The following knowledge only units are assessed by online multiple choice tests.

### Unit 203/003 Understand and apply domestic cold water system installation and maintenance techniques

6014-003 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 110 minutes

| Unit number | Outcome | No. of questions | % |
|---|---|---|---|
| 203/003 | Know the cold water supply route to dwellings | 5 | 9 |
| | Know the types of cold system and their layout requirements | 15 | 27 |
| | Know the site preparation techniques for cold water systems and components | 6 | 11 |
| | Know the installation requirements of cold water systems and components | 13 | 24 |
| | Know the service and maintenance requirements of cold water systems and components | 6 | 11 |
| | Know the decommissioning requirements of cold water systems and components | 5 | 9 |
| | Know the inspection and soundness testing requirements of cold water systems and components | 5 | 9 |
| | Total | 55 | 100 |

### Unit 204/004 Understand and apply domestic hot water system installation and maintenance techniques

6014-004 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 120 minutes

| Unit number | Outcome | No. of questions | % |
|---|---|---|---|
| 204/004 | Know the types of hot water system and their layout requirements | 22 | 37 |
| | Know the site preparation techniques for hot water systems and components | 6 | 9 |
| | Know the installation requirements of hot water systems and components | 14 | 25 |
| | Know the service and maintenance requirements of hot water systems and components | 7 | 11 |
| | Know the decommissioning requirements of hot water systems and components | 5 | 9 |
| | Know the inspection and soundness testing requirements of hot water systems and components | 6 | 9 |

| | | | |
|---|---|---|---|
| | Total | 60 | 100 |

## Unit 205/005 Understand and apply domestic central heating system installation and maintenance techniques

6014-005 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 120 minutes

| Unit number | Outcome | No. of questions | % |
|---|---|---|---|
| 205/005 | Know the uses of central heating systems in dwellings | 3 | 5 |
| | Know the types of central heating system and their layout requirements | 20 | 33 |
| | Know the site preparation techniques for central heating systems and components | 6 | 10 |
| | Know the installation requirements of central heating systems and components | 15 | 25 |
| | Know the service and maintenance requirements of central heating systems and components | 6 | 10 |
| | Know the decommissioning requirements of central heating systems and components | 6 | 10 |
| | Know the inspection and soundness testing requirements of central heating systems and components | 4 | 7 |
| | Total | 60 | 100 |

## Unit 207 Delivery of effective customer service

Duration: 1 hour and 15 minutes

| Unit | Outcome | Number of questions | % |
|---|---|---|---|
| 207 | Describe the principles of customer service | 15 | 33 |
| | Understand how customer needs and expectations are formed | 9 | 20 |
| | Understand principles of responding to customers' problems or complaints | 8 | 18 |
| | Identify the interpersonal and team working skills required in the service environment | 5 | 11 |
| | Identify the legislation which supports the customer service | 8 | 18 |
| | Total | 45 | 100 |

Unit 218 Understand the Principles and Operation of Government energy efficiency incentives

Duration: 2 hours

| Unit | Outcome | Number of questions | % |
|---|---|---|---|
| 218 | Understand the principles and operation of energy efficiency incentives | 7 | 78 |
| | Understand the funding mechanisms for energy efficiency incentives | 2 | 22 |
| | Total | 9 | 100 |

Unit 219 Understand the Use of Energy Efficiency Measures on existing buildings

Duration: 2 hours

| Unit | Outcome | Number of questions | % |
|---|---|---|---|
| 219 | Understand the main considerations to take account of when undertaking energy efficiency improvements | 6 | 54 |
| | Understand energy efficiency measures and priorities | 3 | 27 |
| | Understand the impact that energy efficiency measures could have on existing buildings | 1 | 9 |
| | Understand the recording and reporting procedures when carrying out energy efficiency measures on different buildings | 1 | 9 |
| | Total | 11 | 100 |

Unit 220 Understand Insulation and Building Treatment Methods

Duration: 2 hours

| Unit | Outcome | Number of questions | % |
|---|---|---|---|
| 220 | Understand the different insulation and building treatment methods | 6 | 38 |
| | Understand energy efficiency priorities | 3 | 38 |
| | Understand the advantages and disadvantages of using insulation measures on buildings | 2 | 24 |
| | Total | 8 | 100 |

Unit 221 Understand Air Quality and Ventilation Requirements for Buildings

Duration: 1 hour

| Unit | Outcome | Number of questions | % |
|---|---|---|---|
| 221 | Understand air quality requirements for buildings | 2 | 29 |
| | Understand ventilation requirements for buildings | 5 | 71 |

| | | | |
|---|---|---|---|
| | Total | 7 | 100 |

## Unit 323/023 Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques

6014-023 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 100 minutes

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| 323 | Know the legislation relating to the installation and maintenance of cold water supplied for domestic purposes | 3 | 6 |
| | Know the types of cold water system layout used in multi-storey dwellings | 6 | 12 |
| | Know the types of cold water system layout used with single occupancy dwellings fed by private water supplies | 6 | 12 |
| | Know the requirements for backflow protection in plumbing systems | 7 | 14 |
| | Know the uses of specialist components in cold water systems | 3 | 6 |
| | Know the design techniques for cold water systems | 4 | 8 |
| | Know the fault diagnosis and rectification procedures for cold water systems and components | 10 | 20 |
| | Know the commissioning requirements of cold water systems and components | 11 | 22 |
| | Total | 50 | 100 |

## Unit 324/024 Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques

6014-024 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 100 minutes

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| 324 | Know the types of hot water system and their layout requirements | 14 | 26 |
| | Know the uses of specialist components in hot water systems | 3 | 5 |
| | Know the design techniques for hot water systems | 7 | 13 |
| | Know the installation requirements of hot water systems and components | 10 | 18 |
| | Know the fault diagnosis and rectification procedures for hot water systems and components | 10 | 18 |
| | Know the commissioning requirements of hot water systems and components | 11 | 20 |
| | Total | 55 | 100 |

## Unit 325/025 Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques

6014-025 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 100 minutes

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| 325 | Know the types of central heating system and their layout requirements | 11 | 22 |
| | Know the design techniques for central heating systems | 14 | 28 |
| | Know the installation requirements of central heating systems and components | 5 | 10 |
| | Know the fault diagnosis and rectification procedures for central heating systems and components | 9 | 18 |
| | Know the commissioning requirements of central heating systems and components | 11 | 22 |
| | Total | 50 | 100 |

## Unit 327/027 Understand and carry out electrical work on domestic plumbing and heating systems and components

6014-027 is an open book examination - see **Appendix 2** for list of approved materials.

Duration: 70 minutes

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| 327 | Know the electrical standards that apply to the mechanical services industry | 2 | 5 |
| | Know the principles of electricity supply to buildings | 2 | 5 |
| | Know the layout features of electrical circuits in buildings | 9 | 25 |
| | Understand the electrical industry safe isolation procedure | 2 | 5 |
| | Know the site preparation techniques for the electrical connection of mechanical services components | 4 | 10 |
| | Understand the installation and connection requirements of electrically operated mechanical services components | 5 | 15 |
| | Know the inspection and testing requirements of electrically operated mechanical services components | 5 | 15 |
| | Know the procedures for safely diagnosing and rectifying faults in electrically operated mechanical services components | 7 | 20 |
| | Total | 36 | 100 |

## Unit 328 Water Supply 'Water Fittings' Regulations and Water Byelaws in the UK

Duration: 90 minutes

Candidates are allowed to take **The Water Regulations Guide (Second Edition)** as reference into the exam.

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| 328 | Understand the requirements of the Water Supply (Water Fittings) Regulations and Water Byelaws | 2 | 4 |
| | Understand terminology used to confirm requirements of the water regulations | 1 | 2 |
| | Know the suitability of materials and substances in contact with water | 2 | 4 |
| | Understand the requirements for water fittings | 7 | 14 |
| | Know the design and installation requirements for a water supply system | 9 | 18 |
| | Know the requirements for the prevention of cross connection to unwholesome water | 2 | 4 |
| | Know the backflow prevention fluid categories | 1 | 2 |
| | Know the requirements for backflow prevention | 1 | 2 |
| | Understand the guidance clauses relating to backflow prevention | 11 | 22 |

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| | Know the installation requirements for cold water services | 1 | 2 |
| | Know the installation requirements for hot water services | 4 | 8 |
| | Know the installation requirements for WC's, flushing devices and urinals approved for use | 4 | 8 |
| | Know the types of bath, sink, showers taps location and installation requirements | 2 | 4 |
| | Know the consumption limitations for washing machines, dishwashers and other appliances | 1 | 2 |
| | Know the requirements for water supplied for outside use. | 2 | 4 |
| | Total | 50 | 100 |

Unit 329 The installation, commissioning and safety aspects of hot water systems for domestic use in accordance with UK building regulations

Duration: 50 minutes

Candidates are allowed to take **The Water Regulations Guide (Second Edition)** as reference into the exam.

| Unit | Outcome | No. of questions | % |
|---|---|---|---|
| 329 | Understand the types and configurations of vented/unvented hot water systems including the design installation requirements | 5 | 20 |
| | Know the types and operation of specialist components used in hot water systems | 4 | 16 |
| | Understand the design requirements for hot water systems | 5 | 20 |
| | Know the installation and safety features of hot water systems and components | 5 | 20 |
| | Know the requirements for the installation of cold water components associated with hot water systems | 2 | 8 |
| | Know the commissioning requirements of hot water systems and components in accordance with design specifications | 4 | 16 |
| | Total | 25 | 100 |

## 3.4 Assessment requirements for EUSkills units

The following units are assessed against EUSkills Assessment Strategy. Please refer to **Appendix 1** for further detail.

| EUSkills unit reference | City & Guilds unit number | Unit title | Credit value |
|---|---|---|---|
| DSG 1.1 | 301 | Understanding health and safety in gas utilisation | 11 |
| DSG 1.2 | 302 | Understanding scientific principles in gas utilisation | 4 |
| DSG 1.3 | 303 | Understanding combustion and properties of gas | 15 |
| DSG 1.4 | 304 | Understanding building services and structures | 12 |
| DSG 1.5 | 305 | Understanding gas safety | 15 |
| DSG 2.1 | 306 | Specific core metering | 23 |
| DSG 2.2 | 307 | Specific core emergency | 45 |
| DSG 2.3 | 308 | Specific core installation and maintenance | 21 |
| DSG 3.1 | 309 | Install domestic gas cookers, tumble dryers and leisure appliances | 10 |
| DSG 3.2 | 310 | Maintain domestic gas cookers, tumble dryers and leisure appliances | 13 |
| DSG 3.3 | 311 | Install domestic gas water heaters and wet central heating appliances | 18 |
| DSG 3.4 | 312 | Maintain gas water heating and wet central heating appliances | 16 |
| DSG 3.5 | 313 | Install, commission and de-commission gas pipework up to 35mm (1 ¼ ) diameter in domestic and small commercial premises | 19 |
| DSG 3.6 | 201 | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations | 3 |
| DSG 3.7 | 314 | Install domestic gas space heating appliances | 15 |
| DSG 3.8 | 315 | Maintain domestic gas space heating appliances | 15 |
| DSG 3.10 | 316 | Install domestic gas warm air central heating appliances | 12 |
| DSG 3.11 | 317 | Maintain gas warm air central heating systems and appliances | 11 |
| DSG 3.12 | 202 | Install gas meters and regulators (2.5 to 16.0m³/hr) | 12 |
| DSG 3.13 | 318 | Install gas meters and regulators (2.5 to 1076m³/hr) | 25 |
| DSG 3.15 | 319 | Dealing with reported upstream gas emergencies | 32 |
| DSG 3.16 | 320 | Dealing with reported downstream gas emergencies | 32 |
| DSG 3.17 | 321 | Strength testing, gas tightness testing and direct purging – IGE/UP/1A | 12 |
| DSG 3.21 | 322 | Water compulsory core | 13 |

# 4 Assessment requirements for Independent Summative Assessment (ISA)

## 4.1 Independent Assessment

Due to its alignment with ACS, the 6014 Scheme introduced the requirement for 'Independent Assessment' of specific tasks within the qualification. This placed an additional requirement on the process that is not traditionally associated with NVQs. This 'Independent Assessment' provides confirmation that the learner can perform gas safety related tasks, competently.

### Independent Summative Assessments (ISAs)

To simplify the 'Independent Assessment' requirements' of the 6014 Scheme and to demonstrate alignment with the current ACS Assessments, a new concept is included in the Domestic Natural Gas Diplomas; this is the 'Independent Summative Assessment (ISA)'. The assessment process for the ISAs involves assessment of the Learner's performance by realistic simulation in a managed, independent assessment environment. The 'Independent Assessor' will observe assessments of the Learner's competence against a specified set of gas safety related performance criteria contained in the ISA Assessors Marking Sheets.

Several ISA's have been developed to compliment the full suite of Domestic Natural Gas Diplomas, and a detailed list documenting these, as applicable to each Award Complex (including all 'APRs'), can be found in the separate 'Quick Guide to ISA's' document. This 'Quick Guide' is periodically updated and the latest version must always be used. This document will be published on the City & Guilds website.

The introduction of these ISA's simplifies the process of 'Independent Assessment' on the 6014 Scheme. In particular it removes the need for an 'Independent Assessor' to be used for 'Workplace (Onsite / On the Job) Assessments'.

**Note:** It is important to recognise that the introduction of the ISA's only removes the requirement for 'Independent Assessment' in the workplace. It does **not** remove the requirement for 'Workplace Assessment' and this is still seen as the primary source of evidence for making judgements of competence. The 'Assessment Process' for the Domestic Natural Gas Schemes should be in accordance with this Centre Guide.

### ISA Assessment Process

To ensure a consistent approach is taken to delivering and implementing the ISA's, the following requirements have been laid down.

- The ISAs can only be undertaken at a convenient point in the learning programme;
- The Assessor for the ISAs should be 'Independent';
- The 'Assessment Area' that is used to assess the ISAs should be 'Independent', ie the learners should not have had access to the area prior to the initial assessment, the learners must not have been trained or coached on specific items of equipment / appliance / scenarios that could be found in the ISA assessment area over and above such training / coaching they may have normally received whilst working towards their Diploma and the area should have sufficient equipment / appliances to allow a selection of 'Learners Routes' to be planned to reduce assessment predictability and maintain the robustness of the assessment process;

- All ISA assessment documentation (Assessors Marking Sheets, Learners Job Sheets, Practical Assessment Workbooks, etc.) must remain within the Centre. Learners must not be allowed to remove these from the Centre, even when they have completed their Diploma and are entitled to retain their portfolio (as with the Knowledge & Understanding Paperwork).

### ISA Assessment Marking

Initial Assessment

- Learners that achieve 100% pass the ISA assessment.
- Where a Learner has failed to attain 100% (following any oral questioning asked as part of the assessment) at the Assessors discretion, the Learners may be re-assessed by oral questioning and / or observing the practical performance of the Learner against those performance criteria on which competence was not demonstrate during the initial assessment.
- Following the second attempt described in (b) above, Learners that achieve 100% pass the ISA assessment. Learners attaining less than 100% will be deemed to have referred on the ISA assessment / task undertaken and will require further training before undertaking a Partial Re-Take Assessment of the complete ISA / Task, as required.

**Note:** Due to the requirement for further training, the re-sitting of the entire ISA / Task should not take place for at least 48 hours after the initial assessment on which the Learner was referred.

Partial Re-Take Assessment

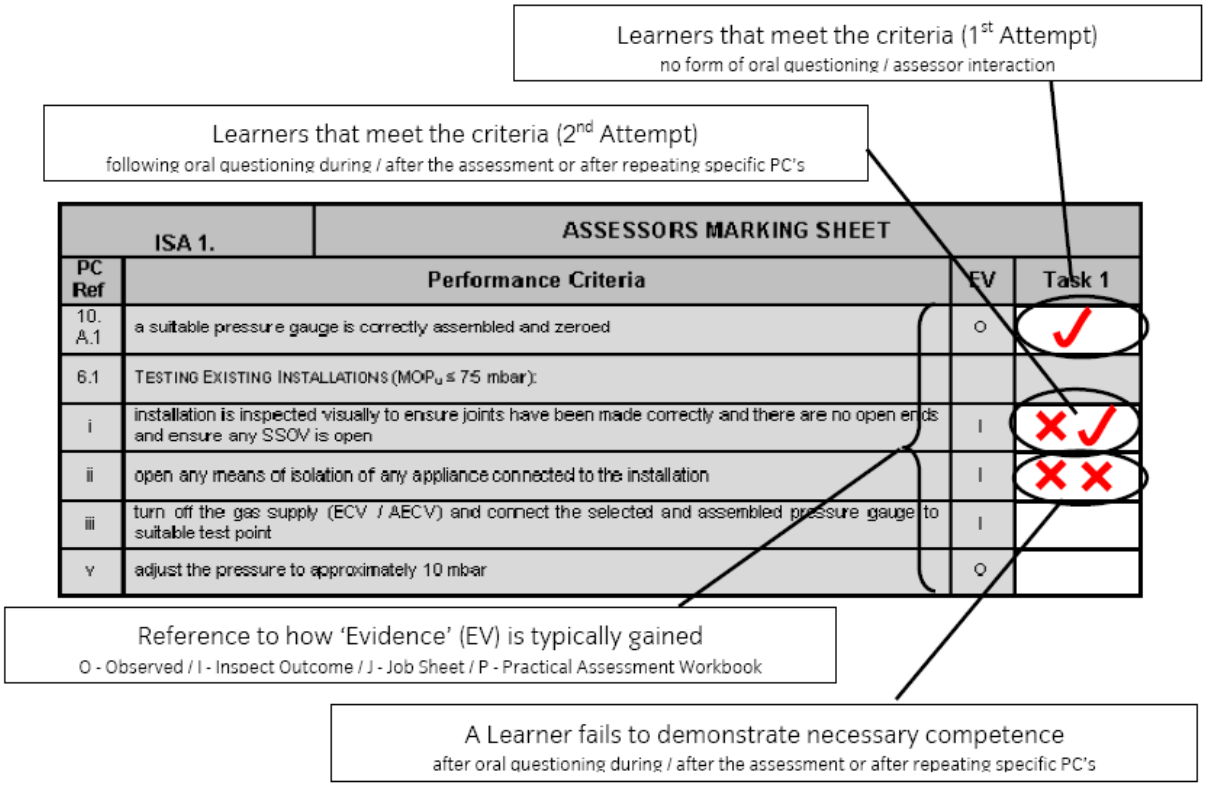
- The Learner may undertake a Partial Re-Take Assessment of the entire ISA / or the full task of the ISA referred.
- Following the Partial Re-Take Assessment described in (a) above, Learners that achieve 100% pass the ISA assessment. Where a Learner has failed to attain 100% (following any oral questioning asked as part of the assessment) at the Assessors discretion, the Learners may be re-assessed by oral questioning and / or observing the practical performance of the Learner against those performance criteria on which competence was not demonstrated during the Partial Re-Take Assessment.
- After undertaking a second attempt on a Partial Re-Take Assessment described above, Learners that achieve 100% pass the ISA assessment.
- Learners attaining less than 100% on a second attempt on a Partial Re-Take Assessment will be deemed to have failed to demonstrate a satisfactory competence level for the specific assessment.
- Where a Learner has failed to demonstrate a satisfactory competence level at this summative assessment stage in completing their Diploma, an interview should be set up between the Learner, the Learners workplace assessor(s), the independent assessor and the internal verifier (and employer if required) to review the Learners performance. Following this interview the decision should be made as to what action the Learner needs to take before re-attempting the entire ISA assessment (including all Tasks and Practical Assessment Workbook Scenarios)

**Note:** Due to the requirement for further actions, the re-sitting of the entire ISA should not take place for at least 14 days after the Partial Re-Take Assessment on which the Learner was referred.

## Completion of ISA Assessor Checklists

### Initial Assessment

The Assessors Checklist must be completed as indicated in the following diagram




### Partial Re-take Assessment

Assessors undertaking Partial Re-Take Assessment of Learners should use a 'Blank' Assessor Check List to mark the Learners performance against the task or tasks they are being asked to repeat. Learners should also be provided with a 'Blank' Candidates Job Sheet to complete during the assessment.

**Note:** It may be beneficial to ease identification of Partial Re-Take Assessment documentation by using a different colour paper to that used for Initial Assessment.

The Partial Re-Take Assessment should be marked on the paperwork as for Initial Assessment, but the Assessor should indicate in the appropriate box on the Assessor Checklist that a Partial Retake Assessment has taken place (see example below).

| | | |
|---|---|---|
| Task Decision: | Pass (P), Refer (R) or Fail (F) | P |
| Partial Re-Take Assessment of Task: | Yes (Y) or Not Applicable (N/A) | y |

| Practical Task / Activity | Initial Assessment Recommendation | Partial Re-Take Assessment Recommendation | Overall Task / Activity Recommendation [1] | Internally Verified [2] |
|---|---|---|---|---|
| Task 1 | PASS / ~~REFER~~* | PASS / ~~FAIL~~* | PASS / ~~FAIL~~* | YES / NO* |
| Task 2 | ~~PASS~~ / REFER* | PASS / ~~FAIL~~* | PASS / ~~FAIL~~* | YES / NO* |
| Task 3 | PASS / ~~REFER~~* | PASS / FAIL* | PASS / ~~FAIL~~* | YES / NO* |
| PAW Result from Candidates Job Sheet | PASS / ~~REFER~~* | PASS / FAIL* | PASS / ~~FAIL~~* | YES / NO* |
| PRACTICAL ASSESSMENT RECOMMENDATION: | | | PASS / ~~FAIL~~* | * Delete as required |

### ISA Route Plans

Each ISA contains a 'Route Plan' that enables Centres to document their approach to assessment.
Each plan contains at least 2 variations that enable the Centre to vary the assessment to reduce the predictability of the assessment occasion.

Centres should complete and retain copies of these to allow the Internal and External Verifiers to monitor the assessment process and make objective decisions on a Learner's performance during an assessment. The External Verifiers will audit Learner's records against these 'Route Plans' on their monitoring visits.

Each Route plan has a 'Used From' date, this clearly indicates the date the plan was used from. Where equipment, setups are modified etc. the Route Plan should be amended and a new one created with the appropriate revised 'Used From' date. Out of date 'Route Plans' should be retained by the Centre for use by Internal and External Verifiers.

Each ISA Assessment contains a 'Route Plan Example'; these are designed to give Centres guidance in developing routes. These examples show green and red text, the green text indicates areas that will be 'blank' on the normal 'Route Plan' and this gives the Centre a great deal of latitude to vary routes and utilise existing equipment. The red text remains on the normal 'Route Plan', this should not normally be altered as they are either requirements of the NVQ / ACS alignment process or are figures, etc. that are fixed for other reasons (eg a statutory requirement).

### ISA Practical Provisions

It is important to ensure that when ISA Assessments are carried out during the completion of Domestic Natural Gas Diploma's that suitable 'Practical Provisions' are available. Details of these practical provisions can be found in the 'Quick Guide to ISA Practical Provisions'. This 'Quick Guide' is periodically updated and the latest version must always be used.

## 4.2 Knowledge evidence

Knowledge and understanding written assessments will be undertaken via the use of City & Guilds set question papers. Several 'Question Papers' have been developed to compliment the full suite of Domestic Natural Gas Diplomas and a detailed list documenting these, as applicable to each Award Complex (including all 'APRs'), can be found on the City & Guilds website. **Centres must check the City & Guilds website regularly to ensure that the latest updated versions are being used**.

### Underpinning Knowledge Questions Assessment Process

All written question papers will be Centre delivered and Centre Assessed (ie within an approved 6014 Domestic Natural Gas centre).

The instructions for invigilating, marking and using the underpinning knowledge question papers are contained within each question paper. These instructions **must** be followed in their entirety for each question paper.

Trial or 'Mock' question papers must not be used or allowed into the assessment area, this includes any question papers that may have been used as 'Learning Aid' during the course of any training programme.

A copy of the answers completed on the 'Learners Answer Sheet' must not be made.

## Marking Criteria

Learners must achieve 100% by answering **all** questions correctly. To achieve this, learners shall go through the following stages:

- **First sitting** (Time allowed: as documented on the front cover)
  - Learners that achieve 100% pass this paper.
  - Learners that achieve **less than** 100% are referred and may undergo a second attempt of the individual questions answered incorrectly, using a blank 'Learners Answer Sheet' with the relevant questions that were answered incorrectly highlighted.
- **Second sitting** (Time allowed: 2 minutes per question to be answered)
  - Learners that achieve 100% pass this paper.
  - Learners attaining an overall result between 80% and 99% for all questions answered on the first and second sittings on this paper are referred, but may undergo a third sitting of the individual questions answered incorrectly, via oral questioning.
  - Learners attaining an overall result of less than 80% for all questions answered on the first and second sittings on this paper are referred and will require more training before sitting the **entire** question paper again.*
- **Third sitting** (Oral questioning)
  - Learners that achieve 100% pass this paper.
  - Learners attaining an overall result of less than 100% for all questions answered on this paper at this stage are referred and will require more training before sitting the **entire** question paper again.*

**Note:** The questions answered incorrectly on the second sitting shall be rephrased when asked as an oral question on this sitting, ensuring the required knowledge and understanding criteria is still covered. **All** questions asked and the Learners associated answer(s) shall be recorded on the reverse of the relevant 'Learners Answer Sheets'. Multiple choice questions shall not be used at this stage.

**Due to the requirement for further training, the re-sitting of the entire paper should not take place for at least 48 hours after the sitting on which the learner was referred.*

## Additional guidance for oral questioning

The Assessor should ask the oral questions on completion of the written assessment. When using oral questions, Assessors should be mindful of the effect their behaviour can have on learner performance. Questions should be asked in the spirit of gaining information rather than pressurising a Learner by creating the atmosphere of a test.

**All** oral questions must be relevant to the assessment criteria and the Assessor must not coach or lead the Learner towards providing correct answers. The Assessor must not ask the learner any 'leading' or 'closed' questions. Assessors should take care to ask clear questions.

## Assignments

Assignments will normally need to be undertaken to cover / supplement other evidence presented. Several 'Assignments' have been developed and are preset by City & Guilds to compliment the full suite of Domestic Natural Gas Diplomas.

Approved Centres may wish to supplement the preset 'Assignments' with their own 'Centre Set Assignments'. These Assignments should include reference to the Units and Elements they are covering and include detailed 'Marking Schedules' and 'Rationales'.

In relation to any ongoing Assignments, a record must be kept of all oral and written questions asked by the Assessor along with the Learners responses.

## 4.3 Recognition of Prior Learning

Recognition of Prior Learning (RPL) evidence is an acceptable source of evidence for these qualifications.

### RPL for Qualification Progression - Workplace and Simulation Assessment

Learners can RPL evidence to facilitate progression onto the Diploma pathways, provided it is less than 2 years old. When assessing the suitability of this evidence consideration needs to be given to its currency.

### RPL for Qualification Progression – ISAs / RPL for Qualification Progression

RPL can be used for any ISA's completed previously providing the following actions are undertaken.

- RPL directly the evidence gained in the ISA paperwork completed previously into the current version of the ISA documentation.
- A 'Gap Filling' exercise is carried out with the Learner to cover the criteria not already evidenced.

Note: The 'Gap Filling' exercise **must** be undertaken by an 'Independent Assessor' and the Learner must carry out any necessary practical activities required to complete the process.

The maximum time lapse allowed to RPL ISA evidence gained previously is 12 months from the date of issue of the relevant final certificate or certificate of unit credit to the date of proposed completion of the ISA in the subsequent unit / qualification. Where this timescale is not adhered to then the Learner will need to be re-assessed on the areas covered previously using the current appropriate ISA(s).

### RPL for Qualification Progression – Multiple Choice Knowledge Questions (Paper Based - Gas)

RPL can be used for any Paper Based Multiple Choice Knowledge Questions completed previously.
The maximum time lapse allowed to RPL the evidence gained previously is 12 months from the date of issue of the relevant final certificate or certificate of unit credit to the date of proposed completion of the Paper Based Multiple Choice Knowledge Questions in the subsequent unit / qualification. Where this timescale is not adhered to then the Learner will need to be re-assessed on the areas covered previously using the current appropriate question paper.

### ACS acceptance as part of a qualification

ACS evidence can be accepted against RWE assessments and relevant knowledge and understanding criteria contained in the Matters of Gas Safety criteria. The requirements are as follows:

a. ACS obtained prior to registration.

Where ACS is obtained prior to registration all assessments of experience and workplace assessment requirements tabulated in this document **must still** be adhered to.

b. ACS obtained whilst undertaking the qualification.

Where ACS is obtained whilst undertaking a qualification, all the assessment of experience and work place evidence requirements tabulated within this document must be achieved **prior** to the completion of the ACS.

Note: The relevant ACS assessments, must have at least 36 months remaining until the individual assessments expire at the time of claiming the full qualification..

# Appendix 1 EU Skills Assessment Strategy

## Requirements for Scheme Staff

### Assessors

#### General

The centre **must** nominate all Assessors to the Awarding Body for approval prior to them conducting any assessments. Assessors may be employed by the Centre (Centre Based Assessors) or be work based (Workplace Assessors) who may or may not be from the same organisation as the Learners.

Assessors **must** be vocationally and occupationally competent in the areas they are assessing and have a thorough knowledge of the National Occupational Standards

In addition to the qualifications listed below, the Assessor must be able to provide appropriate documented evidence that demonstrates they have a minimum of 5 years proven occupational experience in the activities they will be assessing. Particular attention should be paid to providing evidence of occupational experience in the gas safety critical areas being assessed.

Where Assessors undertake assessments in the workplace, and are not supported by a suitable gas operative, then they or their employer must be a member of an appropriate Gas Registration Body in accordance with the Gas Safety (Installation and Use) Regulations. In these circumstances they should also hold suitable insurance for this activity.

#### Qualifications

Assessors must be technically qualified in domestic gas installation / maintenance and hold one of the following qualifications

- C&G / SQA - S/NVQ in Domestic Natural Gas (Level 3); or
- C&G - 662 Certificate for Service Engineers (Gas); or
- C&G - 598-2 Certificate in Gas Installation Studies; or
- C&G - 660 Certificate in Gas Fitting - Final

This list is not considered exhaustive and other 'Mechanical Engineering Services' (MES) or 'Building Engineering Services' (BES) qualifications at Level 3/SCQF Level 6 or equivalent may be considered acceptable. Centres must submit requests to confirm the acceptability of other qualifications to their External Verifier for a decision regarding the acceptability of other qualifications. The External Verifier must keep a record of any such decisions.

In addition to the above qualifications, all Assessors must hold a current certificate of gas safety competence in the areas of gas work they will be assessing that is not more than 5 years old (either current ACS Certificates of Gas Safety Competence or a 6012 S/NVQ are acceptable).

'Centre Based Assessors' **must** hold:

- Level Three Award "Assessing Vocationally Related Achievement"

  or
- Level Three Certificate "Assessing Vocationally Related Achievement"

  or
- A1* or D32 /D33 with an Upgrade to A1 as a minimum

  or
- SQA Accredited Learning and Development Unit L&D 9DI – Assess workplace competence using direct and indirect methods (replaces Units A1)*

'Workplace Assessors' **must** hold

- Level Three Award "Assessing Competence in the Work Environment"

  or
- Level Three Certificate "Assessing Vocationally Related Achievement"

  or
- SQA Accredited Learning and Development Unit L&D 9D Assess workplace competence using direct methods

  or
- A2 or D32 with an upgrade to A2 as a minimum *

* The Teaching Qualification for Secondary Education (TQSE) or the Teaching Qualification for Further Education (TQFE) (which is recognised in Scotland) these awards are acceptable providing they are the versions that are recognised as equivalents to the A1 award plus appropriate CPD.
Assessors holding D units must have evidence of Continuing Professional Development (CPD) to demonstrate compliance with the A units.

A qualified Assessor shall supervise 'Candidate Assessors' who are working towards their Assessor qualifications. They should have a clear action plan for achieving the Assessor qualification(s).

Assessor approval will be withdrawn if the qualification / units have not been attained within 18 months. Evidence of CPD will be sought by the External Verifier for all Assessors approved to assess for the centre.

## Internal Quality assurance (internal verifiers)

### General

The centre **must** nominate all Internal Verifiers to the Awarding Organisation/Awarding Body for approval prior to them conducting any verification activities. Internal Verifiers can be employed by the centre or be work based who may or may not be from the same organisation as the learners.

Internal Verifiers **must** be vocationally and occupationally competent in the areas they are verifying and have a thorough knowledge of the qualification units being assessed.

In addition to the qualifications listed below, the Internal Verifiers must be able to provide appropriate documented evidence that demonstrates they have a minimum of 5 years' proven occupational experience in the activities they will be verifying. Particular attention should be

paid to providing evidence of occupational experience in the gas safety critical areas being verified.

Internal Verifiers shall be technically qualified in domestic gas installation / maintenance and hold one of the following qualifications:

- C&G / SQA - S/NVQ in Domestic Natural Gas (Level 3);

  or

- C&G - 662 Certificate for Service Engineers (Gas);

  or

- C&G - 598-2 Certificate in Gas Installation Studies;

  or

- C&G - 660 Certificate in Gas Fitting - Final

This list is not considered exhaustive and other 'Mechanical Engineering Services' (MES) or 'Building Engineering Services' (BES) qualifications at Level 3 or equivalent may be considered acceptable. Centres must submit requests to confirm the acceptability of other qualifications to their External Verifier for a decision regarding the acceptability of other qualifications. The External Verifier must keep a record of any such decisions.

In addition to the above the Internal Verifier must hold a current certificate of gas safety competence in the areas of gas work they will be internally verifying that is not more than 5 years old (either current ACS Certificates of Gas Safety Competence or a 6012 Domestic Natural Gas S/NVQ are acceptable).

Where the Internal Verifiers themselves do not hold a suitable technical qualifications they must have access to technical expertise from qualified personnel, who hold the relevant qualifications, to support them where the verification requires technical support and interpretation.

Internal Verifiers must hold the following:

- Level Three Certificate "Assessing Vocationally Related Achievement"

  or

- A1 or D32/D33 with an upgrade to A1 as a minimum

  or

- Learning and Development Unit L&D 9DI – Assess workplace competence using direct and indirect methods

  And

- Level Four Award " Internal Quality assurance of assessment processes and practice"

  or

- Level Four Certificate "leading the Internal Quality assurance of assessment processes and practice"

  or

- V1 or D34 with an upgrade to V1 as a minimum*

  * The Teaching Qualification for Secondary Education (TQSE) or the Teaching Qualification for Further Education (TQFE) (which is recognised in Scotland) these awards are acceptable providing they are the versions that are recognised as equivalents to the A1 award plus appropriate CPD.

    Internal Verifiers holding D units must have evidence of CPD to demonstrate compliance with the A and V units

  or

- SQA Accredited Learning and Development Unit L&D 11 "Internally monitor and maintain the quality of workplace assessment"

It is recommended that 'Candidate Internal Verifiers' have a clear action plan for achieving the Internal Verifier qualification(s).

Internal Verifier approval will be withdrawn if the qualification / units have not been attained within 18 months.

### Electrical and Plumbing Assessor/Internal verifier Competence

The requirements for staff delivering and assessing the plumbing and electrical activities contained in this qualification are set out in the Summit Skills Consolidated Assessment Strategy for Units and Qualifications of "Occupational Competence" in the Credit Framework (England, Northern Ireland and Wales) for the Building Services Engineering Sector.

In general terms Gas Assessors and Internal Verifiers who meet the criteria to assess and internally verify the gas components of these qualifications will be eligible to assess and internally verify plumbing and/or electrical activities, provided that they can demonstrate the additional competence and experience required to competently assess electrical and/or plumbing work.

Additional evidence for this competence and experience may be in the form of relevant plumbing/electrical qualifications, minimum technical competence type awards, building regulations competent person's schemes, CPD records and suitable work experience. This is not an exhaustive list and centres must submit requests to confirm the acceptability of other qualifications and experience to their External Verifier for a decision regarding the acceptability of other qualifications.

### Electrical and Plumbing units of Competence

The units in scope of these additional Assessor/IV requirements are:

- DMES 02 Understand and apply domestic cold water system installation and maintenance techniques
- DMES 03 Understand and apply domestic hot water system installation and maintenance techniques
- DMES 04 Understand and apply domestic central heating system installation and maintenance techniques
- DMES 05 Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques
- DMES 06 Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques
- DMES 07 Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques
- DHTG 02 Install and maintain domestic heating systems
- DHTG 04 Install, commission, service and maintain domestic heating systems
- MES 02 Understand and carry out electrical work on domestic plumbing and heating systems and components

## Requirements For Assessment

The Domestic Natural Gas qualifications (NVQs) are assessed through a combination of workplace assessment, simulation assessment and knowledge assessment.

The Level 3 Diploma in Gas Utilisation: Core Skills and Knowledge (EUSGU001) is now an integral part, and a prerequisite of, all the Gas Utilisation qualifications. As such the following options are available to Learners:

- EUSGU001 may be completed as a stand alone qualification*
- EUSGU001 may be completed as an introductory part of a larger qualification

### * Important Notes:

1. The assessment requirements set out in this document must be met in full.

2. In accordance with good practice and Ofqual requirements regarding Conflict of Interest in Assessment (Condition A4 in General Conditions of Regulation – Ofqual 2011) Assessors involved in providing direct training to a Learner, either as part of a group or on a 'one to one' basis should not carry out assessments for any of those trained aspects. Alternatively Awarding Organisations may put in place effective quality control measures to ensure that any potential conflicts of interest do not have an adverse effect on assessment outcomes.

3. The EUSGU001 Diploma, taken as a stand-alone qualification is not sufficient for eligibility for entry to the Gas Safe Register, via any assessment only route (eg ACS). Candidates must complete a minimum of one of the range of Diplomas (EUSGU002-EUSGU024) to meet the requirements for Gas Safe Registration.

4. Gas Safe Register competence criteria are incorporated in all assessments. It is essential that the Awarding Organisations/Awarding Bodies update their Assessors and Assessment Materials to ensure that any changes to these criteria are reflected in the performance of the candidate from the date they become effective. (for example: if the IGE/UP/1B Testing procedure changed six months prior to the candidate completing the qualification, all assessments including testing from the change date, must be completed against the changed procedure standard).

## Practical Evidence

**Learners must be able to practice on all specified unit components within the tables below.**

RWE assessments must be included in the portfolio of evidence leading to completion of a qualification unit in line with the requirements set out for each unit. This must be supplemented by evidence gathered directly from the workplace as required for each unit and a work experience portfolio, signed off as accurate and authentic by a suitably qualified and Gas Safe Registered engineer.

Learners **must** demonstrate competence in the workplace during the performance of genuine work activities, by carrying out the tasks and duties that would be reasonably expected of them as a competent operative. Learners will be expected to have demonstrated competence in the assessed tasks over a period of time under normal working conditions to generate a sufficiency of evidence.

The gas industry is highly regulated regarding safety requirements and this is reflected in these qualifications. Certain Gas Safety related assessments must only be carried out under simulated conditions. Gas Safety critical activities within the Units will normally be assessed in a simulated RWE and where necessary these requirements are incorporated in the tables.

Learners must demonstrate competence in each unit through assessments in line with the evidence and assessment requirement tables that follow.

| 6014 Unit 309 (EUS Unit 3.1) | Install domestic gas cookers, tumble dryers and leisure appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.1.1 Installation of a gas fired cooker

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Free Standing Cooker [1]<br>• Hob [2]<br>**Secondary Range:**<br>• Flueless *(Appliance Type A1)*<br>• Flexible Connection [3]<br>• Rigid Connection [4] | One Successful Assessment (ISA 2) | Evidence of experience undertaking the satisfactory installation of gas fired cookers is required across the documented ranges.<br>At least 5 [5] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3 [5] of the installation occasions must be from the workplace. | One Successful Assessment |

Table Notes:

1 A 'Free Standing Cooker' for the purpose of this document is deemed to be a cooking appliance resting directly on the floor and comprising a gas fired hotplate, gas fired oven and possibly a grill and / or griddle.

2 A 'Hob' for the purpose of this document is deemed to be a independent gas fired hotplate designed to be installed into the kitchen work top.

3 A 'Flexible Connection' for the purpose of this document is deemed to be a connection of the appliance between the termination point on the installation pipework and the appliance itself by means of a flexible connector and self-sealing plug in device.

4 A 'Rigid Connection' for the purpose of this document is deemed to be a connection of the appliance between the termination point on the installation pipework and the appliance itself by means of rigid pipework incorporating an appliance isolation valve.

5 [illegible]

| 6014 Unit 310 (EUS Unit 3.2) | Maintain domestic gas cookers, tumble dryers and leisure appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.2.1 Routine full service of a gas fired cooker

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Free Standing Cooker [1]<br>**Secondary Range:**<br>• Flueless *(Appliance Type A1)* | One Successful Assessment (ISA 2) | Evidence of experience undertaking the satisfactory full servicing of gas fired cookers is required across the documented ranges.<br>At least 5[2] separate servicing occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion<br>At least 3[2] of the servicing occasions must be from the workplace. | One Successful Assessment |

3.2.2 Identify and repair faults on gas fired cookers

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Free Standing Cooker [1]<br>**Secondary Range:**<br>• Flueless *(Appliance Type A1)*<br>• Gas Safety Control Defect<br>• Electrical Control Defect | One Successful Assessment (ISA 2) | Evidence of experience undertaking the identification and repairing of faults on gas fired cookers is required across the documented ranges.<br>At least 5 [2] separate fault rectification occasions must occur with the Learner demonstrating experience the Assessment Criteria on each occasion.<br>At least 2 [2] of the fault rectification occasions must be from the workplace. | N/A |

Table Notes:

[1] A 'Free Standing Cooker' for the purpose of this document is deemed to be a cooking appliance resting directly on the floor and comprising a gas fired hotplate, gas fired oven and possibly a grill and / or griddle.

[2] The documented numbers required to be evidenced do include the assessment occasions.

| 6014 Unit 311 (EUS Unit 3.3) | Install domestic gas water heaters and wet central heating appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.3.1 Installation of a gas fired boiler

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Traditional Boiler [1]<br>• System Boiler [2]<br>• Combination Boiler [3]<br>**Secondary Range:**<br>• Room Sealed Fanned Draught Appliance (Horizontal Chimney) *(Appliance Type $C_{12}$ or $C_{13}$)*<br>• Room Sealed Fanned Draught Appliance (Vertical Chimney) *(Appliance Type $C_{32}$ or $C_{33}$)*<br>• Condensing Appliance<br>• New Installation<br>• Installation Exchange | One Successful Assessment (ISA 5) | Evidence of experience undertaking the satisfactory installation of gas fired boilers is required across the documented ranges.<br>At least 5[4] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3[4] of the installation occasions must be from the workplace. | One Successful Assessment [5] |

Table Notes:

1 A 'Traditional Boiler' for the purpose of this document is deemed to be a boiler where the central heating system controls such as the pump, zone valves and other auxiliary controls are external to the appliance casing as supplied by the manufacturer.

2 A 'System Boiler' for the purpose of this document is deemed to be a boiler where one or more of the central heating system controls such as the pump, zone valves and other auxiliary controls are internal to the appliance casing as supplied by the manufacturer.

3 A 'Combination Boiler' for the purpose of this document is deemed to be a boiler that provides instantaneous hot water to single or multiple hot water outlets, such as taps, with no water storage capacity (other than small quantities that may, by manufacturers design, be stored internally to prevent any delay in hot water delivery).

4 The documented numbers required to be evidenced do include the assessment occasions.

5 [illegible]

| 6014 Unit 312 (FUS Unit 3.4) | Maintain gas water heating and wet central heating appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.4.1 Routine full service of a gas fired boiler

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Traditional Boiler [1]<br>• System Boiler [2]<br>• Combination Boiler [3]<br>• Gas Fire & Back Boiler [4]<br>**Secondary Range:**<br>• Open-Flued Natural Draught Appliance (incl. Draught Diverter) *(Appliance Type $B_{11}$)*<br>• Room Sealed Natural Draught Appliance *(Appliance Type $C_{11}$)*<br>• Room Sealed Fanned Draught Appliance *(Appliance Type $C_{12}$ or $C_{13}$ or $C_{32}$ or $C_{33}$ or $C_{52}$ or $C_{53}$)*<br>• Condensing Appliance<br>• Non Condensing | One Successful Assessment *(ISA 5)* | Evidence of experience undertaking the satisfactory full servicing of gas fired boilers is required across the documented ranges.<br>At least 5 [5] separate servicing occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion<br>At least 3 [5] of the servicing occasions must be from the workplace. | One Successful Assessment [6] |

3.4.2 Routine full service of a gas fired instantaneous water heater

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Multipoint Water Heater | One Successful Assessment | N/A | N/A |

3.4.3 Identify and repair faults on gas fired boilers and instantaneous water heaters

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Traditional Boiler [1]<br>• System Boiler [2]<br>• Combination Boiler [3]<br>• Multipoint Water Heater<br>**Secondary Range:**<br>• Open-Flued or Room Sealed Natural Draught Appliance *(Appliance Type $B_{11}$ or $C_{11}$)*<br>• Open-Flued or Room Sealed Fanned Draught Appliance *(Appliance Type $B_{12}$ or $B_{13}$ or $B_{14}$ or $C_{12}$ or $C_{13}$ or $C_{32}$ or $C_{33}$)*<br>• Gas Safety Control Defect [7]<br>• Electrical Control Defect [7]<br>• Water Control Defect [7] | One Successful Assessment *(ISA 5)* | Evidence of experience undertaking the identification and repairing of faults on gas fired boilers and instantaneous water heaters is required across the documented ranges.<br>At least 4 [5] separate fault rectification occasions must occur with the Learner demonstrating experience the Assessment Criteria on each occasion.<br>At least 2 [5] of the fault rectification occasions must be from the | N/A |

Table Notes:

1 A 'Traditional Boiler' for the purpose of this document is deemed to be a boiler where the central heating system controls such as the pump, zone valves and other auxiliary controls are external to the appliance casing as supplied by the manufacturer.

2 A 'System Boiler' for the purpose of this document is deemed to be a boiler where one or more of the central heating system controls such as the pump, zone valves and other auxiliary controls are internal to the appliance casing as supplied by the manufacturer.

3 A 'Combination Boiler' for the purpose of this document is deemed to be a boiler that provides instantaneous hot water to single or multiple hot water outlets, such as taps, with no water storage capacity (other than small quantities that may, by manufacturers design, be stored internally to prevent any delay in hot water delivery).

4 A 'Gas Fire & Boiler' for the purpose of this document is deemed to be a boiler, not a back circulator, that is connected to a flexible flue liner and has a gas fire connected to the front of the appliance.

5 The documented numbers required to be evidenced do include the assessment occasions.

6 The appliance must be of a different 'Primary Range' type than that the one utilised as part of the RWE Assessment.

7 The defects listed are 'Appliance Defects' and relate to controls within the appliance casing and do not refer to defects on controls on the

| 6014 Unit 313 (EUS Unit 3.5) | Install, commission and de-commission gas pipework up to 35mm 1¼ diameter in domestic and small commercial premises |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.5.1 Install gas pipework

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Copper Tube<br>• Steel Tube<br>• Corrugated Stainless Steel Tube (CSST)<br>• Polyethylene Tube (pe)<br>**Secondary Range:**<br>• Through Walls<br>• Under Wooden Floors<br>• Surface Mounted<br>• Capillary Joints<br>• Compression Joints<br>• CSST Joints<br>• Screwed Joints<br>• Formed Bends | One Successful Assessment<br>*(ISA 1)*<br>*or*<br>*(ISA 14)* | Evidence of experience undertaking the satisfactory tightness testing and purging is required across the documented ranges.<br>At least 5[1] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3[1] of the installation occasions must be from the workplace. | One Successful Assessment |

Table Notes:

[1] The documented numbers required to be evidenced do include the assessment occasions.

| 6014 Unit 201 (EUS Unit 3.6) | Tightness test, purge, commission and de-commission gas pipework up to 35mm (1 ¼) diameter in small natural gas installations |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.6.1 Tightness testing and purging gas installations

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Natural Gas Installations<br>• LPG Installations<br>**Secondary Range:**<br>• Purge Natural Gas Installation with Volume ≤ 0.02 $m^3$<br>• Purge Natural Gas Installation with Volume > 0.02 $m^3$ ≤≤ 0.035 $m^3$<br>• Including a Meter<br>• New Installation<br>• Existing Installation | One Successful Assessment<br>(ISA 1 & ISA 12)<br>or<br>(ISA 12 & ISA 14) | Evidence of experience undertaking the satisfactory tightness testing and purging is required across the documented ranges.<br>At least 5 [1] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3 [1] of the installation occasions must be from the workplace. | One Successful Assessment [2] |

Table Notes:

1 The documented numbers required to be evidenced do include the assessment occasions.

2 The assessment must be of a different 'Primary Range' type than that the one utilised as part of the RWE Assessment.

| 6014 Unit 314<br>(EUS Unit 3.7) | Install domestic gas space heating appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.7.1 Installation of a gas fired space heating appliance

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Outset Gas Fire [1]<br>• Inset Live Fuel Effect Gas Fire<br>• Decorative Fuel Effect Appliance<br>• Convector Heater [2]<br>**Secondary Range:**<br>• Flueless *(Appliance Type $A_1$)*<br>• Open-Flued Natural Draught Appliance *(Appliance Type $B_{11}$ or $B_{21}$)*<br>• Room Sealed Natural Draught Appliance *(Appliance Type $C_{11}$)*<br>• Open-Flued or Room Sealed Fanned Draught Appliance *(Appliance Type $B_{12}$ or $B_{13}$ or $B_{14}$ or $B_{22}$* | One Successful Assessment *(ISA 4)* | Evidence of experience undertaking the satisfactory installation of gas fired space heating appliances is required across the documented ranges.<br>At least 5 [3] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3 [3] of the installation occasions must be from the workplace. | One Successful Assessment [4] |

Table Notes:

1 An 'Outset Gas Fire' for the purpose of this document is deemed to be a gas fire incorporating a radiating surface, either in the form of a radiant or imitation fuel, that is either hearth or wall mounted in front of a closure plate which is fitted to a fireplace opening.

2 A 'Convector Heater' for the purpose of this document is deemed to be an appliance that is designed to heat a room mainly by the emission of air heated by convection.

3 The documented numbers required to be evidenced do include the assessment occasions.

4 The appliance must be of a different 'Primary Range' type than that the one utilised as part of the RWE Assessment.

| 6014 Unit 315<br>(EUS Unit 3.8) | Maintain domestic gas space heating appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

### 3.8.1 Routine full service of a gas fired space heating appliance

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Outset Gas Fire [1]<br>• Inset Live Fuel Effect Gas Fire<br>• Decorative Fuel Effect Appliance<br>• Convector Heater [2]<br>**Secondary Range:**<br>• Flueless *(Appliance Type $A_1$)*<br>• Open-Flued Natural Draught Appliance *(Appliance Type $B_{11}$ or $B_{21}$)*<br>• Room Sealed Natural Draught Appliance *(Appliance Type $C_{11}$)*<br>• Open-Flued or Room Sealed Fanned Draught Appliance *(Appliance Type $B_{12}$ or $B_{13}$ or $B_{14}$ or $B_{22}$ or $B_{23}$ or $C_{12}$ or $C_{13}$)* | One Successful Assessment *(ISA 4)* | Evidence of experience undertaking the satisfactory full servicing of gas fired space heating appliances is required across the documented ranges.<br>At least 5 [3] separate servicing occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion<br>At least 3 [3] of the servicing occasions must be from the workplace. | One Successful Assessment [4] |

### 3.8.2 Identify and repair faults on gas fired space heating appliances

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Outset Gas Fire [1]<br>• Inset Live Fuel Effect Gas Fire<br>• Decorative Fuel Effect Appliance<br>• Convector Heater [2]<br>**Secondary Range:**<br>• Flueless *(Appliance Type $A_1$)*<br>• Open-Flued or Room Sealed Natural Draught Appliance *(Appliance Type $B_{11}$ or $B_{21}$ or $C_{11}$)*<br>• Open-Flued or Room Sealed Fanned Draught Appliance *(Appliance Type $B_{12}$ or $B_{13}$ or $B_{14}$ or $B_{22}$ or $B_{23}$ or $C_{12}$ or $C_{13}$)*<br>• Gas Safety Control Defect | One Successful Assessment *(ISA 4)* | Evidence of experience undertaking the identification and repairing of faults on gas fired space heating appliances is required across the documented ranges.<br>At least 5 [3] separate fault rectification occasions must occur with the Learner demonstrating experience across of the Assessment Criteria on each occasion.<br>At least 2 [3] of the fault rectification occasions must be from the workplace. | N/A |

Continued from previous page: Table Notes for Unit 3.8:

1 An 'Outset Gas Fire' for the purpose of this document is deemed to be a gas fire incorporating a radiating surface, either in the form of a radiant or imitation fuel, that is either hearth or wall mounted in front of a closure plate which is fitted to a fireplace opening.

2 A 'Convector Heater' for the purpose of this document is deemed to be an appliance that is designed to heat a room mainly by the emission of air heated by convection.

3 The documented numbers required to be evidenced do include the assessment occasions.

4 The appliance must be of a different 'Primary Range' type than that the one utilised as part of the RWE Assessment.

| 6014 Unit 316 (EUS Unit 3.10) | Install domestic gas warm air central heating appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.10.1 Installation of a gas fired ducted air heater

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Ducted Air Heater [1]<br>**Secondary Range:**<br>• Open-Flued Natural Draught Appliance *(Appliance Type $B_{11}$ or $B_{21}$)*<br>• Room Sealed Fanned Draught Appliance *(Appliance Type $C_{12}$ or $C_{13}$ or $C_{32}$ or $C_{33}$)*<br>• Compartment Installation<br>• Positive Return Air Duct<br>• Installation Exchange | One Successful Assessment *(ISA 7)* | Evidence of experience undertaking the satisfactory installation of gas fired ducted air heating appliances is required across the documented ranges.<br>At least 5 [2] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3 [2] of the installation occasions must be from the workplace. | One Successful Assessment |

Table Notes:

1 A 'Ducted Air Heater' for the purpose of this document is deemed to be a flued warm air heating appliance that uses ducting to distribute the heating air around a premise.

2 The documented numbers required to be evidenced do include the assessment occasions.

| 6014 Unit 317 (EUS Unit 3.11) | Maintain gas warm air central heating systems and appliances |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.11.1 Routine full service of a gas fired ducted air heater

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Ducted Air Heater [1]<br>**Secondary Range:**<br>• Open-Flued Natural Draught Appliance *(Appliance Type $B_{11}$ or $B_{21}$)*<br>• Room Sealed Fanned Draught Appliance *(Appliance Type $C_{12}$ or $C_{13}$ or $C_{32}$ or $C_{33}$)*<br>• Compartment Installation<br>• Positive Return Air Duct | One Successful Assessment (ISA 7) | Evidence of experience undertaking the satisfactory full servicing of gas fired ducted air heating appliances is required across the documented ranges.<br>At least 5 [2] separate servicing occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion<br>At least 3 [2] of the servicing occasions must be from the workplace. | One Successful Assessment [4] |

3.11.2 Identify and repair faults on gas fired ducted air heaters

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Ducted Air Heater [1]<br>**Secondary Range:**<br>• Open-Flued Natural Draught Appliance *(Appliance Type $B_{11}$ or $B_{21}$)*<br>• Room Sealed Fanned Draught Appliance *(Appliance Type $C_{12}$ or $C_{13}$ or $C_{32}$ or $C_{33}$)*<br>• Gas Safety Control Defect<br>• Electrical Control Defect | One Successful Assessment (ISA 7) | Evidence of experience undertaking the identification and repairing of faults on gas fired ducted air heating appliances is required across the documented ranges.<br>At least 5 [2] separate fault rectification occasions must occur with the Learner demonstrating experience across of the Assessment Criteria on each occasion.<br>At least 2 [2] of the fault rectification occasions must be from the workplace. | N/A |

Table Notes:

1 A 'Ducted Air Heater' for the purpose of this document is deemed to be a flued warm air heating appliance that uses ducting to distribute the heating air around a premise.

2 The documented numbers required to be evidenced do include the assessment occasions.

| 6014 Unit 202 (EUS Unit 3.12) | Install gas meters and regulators (≥ 2.5 $m^3/h$ ≤ 16 $m^3/h$) |
|---|---|

UNIT ASSESSMENT REQUIREMENTS:

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.12.1 Installation of a gas meter

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| Primary Range:<br>• Meter ≤ 6 $m^3/h$<br>• Meter > 6 $m^3/h$ ≤ 16 $m^3/h$<br>Secondary Range:<br>• Credit Meter<br>• Prepayment Meter<br>• Low Pressure Fed Supply<br>• Medium Pressure Fed Supply<br>• Internal Installation<br>• Surface or Built In Meter Box<br>• Semi Concealed Meter Box<br>• New Installation<br>• Installation Exchange | One Successful Assessment<br>(ISA 3, ISA 8 & ISA 9) | Evidence of experience undertaking the satisfactory installation of gas meters is required across the documented ranges.<br>At least 10 [1] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 6[1] of the installation occasions must be from the workplace. | One Successful Assessment |

Table Notes:

[1] The documented numbers required to be evidenced do include the assessment occasions.

| 6014 Unit 318 (EUS Unit 3.13) | Install gas meters and regulators (≥ 2.5 $m^3/h$ ≤ 1076 $m^3/h$) |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.13.1 Installation of a gas meter

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Diaphragm Meter >16$m^3/hr$ ≤160 $m^3/h$<br>• Rotary Displacement Meter ≤≤ 1076 $m^3/h$<br>**Secondary Range:**<br>• Low Pressure Fed Supply<br>• Medium Pressure Fed Supply<br>• Internal Installation<br>• Meter Kiosk<br>• Meter with a Bypass<br>• New Installation<br>• Installation Exchange | One Successful Assessment<br>(ISA 9, ISA 15 and ISA 17) | Evidence of experience undertaking the satisfactory installation of gas meters is required across the documented ranges.<br>At least 5 [1] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3 [1] of the installation occasions must be from the workplace. | One Successful Assessment |

Table Notes:

[1] The documented numbers required to be evidenced do include the assessment occasions.

| 6014 Unit 319 (FUS Unit 3.15) | Dealing with reported upstream gas emergencies |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.15.1 Dealing safely with reported gas emergencies on the gas distribution (upstream) side of a main control valve

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Gas Distribution Assets [1]<br>• Low Pressure leakage<br>• Medium Pressure leakage<br>• LPG Installations<br>• Non Domestic Premises [2]<br>• Domestic Premises<br>• Confined Spaces<br>**Secondary Range:**<br>• Site Survey<br>• Risk Assessment<br>• Evacuation and Reoccupation<br>• No Access<br>• Forced Entry<br>• Reported Poor Pressure<br>• Detection Methods<br>• Concentration Readings<br>• Water Ingress to assets<br>• No Trace<br>• Third Party Liaison[5]<br>• Teamworking<br>• Verbal Communication<br>• Documented Reporting | One Successful Assessment | Evidence of experience undertaking the satisfactory response and action is required across both primary and secondary ranges.<br>Sourced from a minimum of 10 [3] separate reported emergency occasions the Learner must satisfy some (but not necessarily all) of the Assessment Criteria on each occasion.<br>The sum total of collected evidence must cover all the Primary and Secondary Ranges<br>At least 6 [3] of the occasions generating evidence must be from the workplace. | One Successful Assessment [4] |

Table Notes:

1 Gas Distribution Assets include: Mains, Services, Meters, Regulators and all other Valves and Mechanical Controls that form part of the gas infrastructure outside premises.

2 Non Domestic Premises include: Commercial Premises such as Shops, Factories, Hotels and Restaurants etc.

3 The documented numbers required to be evidenced do include the assessment occasions.

4 The assessment must involve a different 'Primary Range' category than that the one utilised as part of the RWE Assessment.

5 To include: Emergency Services and other external Agencies such as the HSE

| 6014 Unit 320 (FUS Unit 3.16) | Dealing with reported downstream gas emergencies |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.16.1 Dealing safely with reported gas emergencies on the gas utilisation (downstream) side of a main control valve

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Meter and Regulator [1]<br>• Internal Appliances<br>• Domestic Premises<br>• Non Domestic Premises [2]<br>• Low Pressure Installation<br>• Medium Pressure Installation<br>**Secondary Range:**<br>• Controlled [3]<br>• Uncontrolled<br>• LPG escapes<br>• No Gas<br>• No Trace<br>• Reports of Fumes [4]<br>• Blocked Chimneys<br>• Gas Ingress to Premises<br>• Evacuation and Reoccupation<br>• Third Party Liaison[5]<br>• Teamworking<br>• Leaving site in safe condition [6]<br>• Verbal Communication<br>• Documented Reporting | One Successful Assessment | Evidence of experience undertaking the satisfactory response and action is required across both primary and secondary ranges.<br>Sourced from a minimum of 10 [3] separate reported emergency occasions the Learner must satisfy some (but not necessarily all) of the Assessment Criteria on each occasion.<br>The sum total of collected evidence must cover all the Primary and Secondary Ranges<br>At least 6 [3] of the occasions generating evidence must be from the workplace. | One Successful Assessment [8] |

Table Notes:

[1] All types of meter with associated Control Valve(s) and Regulator(s)

[2] Non Domestic Premises include: Commercial Premises such as Shops, Factories, Hotels and Restaurants etc.

[3] Where the gas supply has been turned off prior to the arrival of the emergency response engineer

[4] To include: active Carbon Monoxide Alarms, customer reports, visual checks on appliances

[5] To include: Emergency Services and other external Agencies such as the HSE

[6] To protect Life, Property and the Environment

[7] The documented numbers required to be evidenced do include the assessment occasions.

[8] The assessment must involve a different 'Primary Range' category than that the one utilised as part of the RWE Assessment.

| 6014 Unit 321 (FUS Unit 3.17) | Strength testing, tightness testing and direct purging (IGEM/UP/1A) |
|---|---|

**UNIT ASSESSMENT REQUIREMENTS:**

- Assessments must be carried out as documented in this table
- Learners must demonstrate sufficient evidence of competence through experience of satisfactorily undertaking the work activities documented across the full range. This shall be evidenced via the Learner's Portfolio and be assessed as meeting the minimum documented requirements.

3.17.1 Strength testing, tightness testing and direct purging (IGE/UP/1A)

| RANGE | RWE ASSESSMENT | ASSESSMENT OF EXPERIENCE | WORKPLACE ASSESSMENT |
|---|---|---|---|
| **Primary Range:**<br>• Strength Test<br>• Tightness Test<br>• Commissioning Purge<br>• Decommissioning Purge<br>**Secondary Range:**<br>• New Installation<br>• Existing Installation<br>• Pipework Only<br>• Metered Installation<br>• Appliance Connection Test | One Successful Assessment [1]<br>(ISA 10) | Evidence of experience undertaking the satisfactory strength testing, tightness testing and direct purging is required across the documented ranges.<br>At least 5 [2] separate installation occasions must occur with the Learner demonstrating experience across the Assessment Criteria on each occasion.<br>At least 3 [2] of the installation occasions must be from the workplace. | N/A |

Table Notes:

[1] The RWE Assessment shall cover all the 'Primary Range'

[2] The documented numbers required to be evidenced do include the assessment occasions.

## Additional assessment requirements

### Generic Core Knowledge Units

All knowledge criteria must be evidenced by learners. Awarding Organisations can use a variety of assessment methods which will demonstrate that learners have successfully met the unit criteria. These can include Closed Book Written Questions, Open Book Written Questions, Recorded Oral Questions, Projects and Assignments.

### Specific Core Knowledge and Performance Units

All knowledge and performance criteria must be evidenced by learners. Awarding Organisations can use a variety of assessment methods which will demonstrate that learners have successfully met the unit criteria. These can include Closed Book Written Questions, Open Book Written Questions, Recorded Oral Questions, Projects, Assignments, Evidence from Practical Assessments conducted in a RWE and evidence from Practical Assessments conducted in the workplace.

### Optional Knowledge and Performance Units

All knowledge and performance criteria must be evidenced by learners. Awarding Organisations must ensure that the "Assessment Strategy Evidence and Assessment Requirement Tables" produced for each unit are followed. A variety of assessment methods can be used to demonstrate that learners have successfully met the unit criteria. These can include Closed Book Written Questions, Open Book Written Questions, Recorded Oral Questions Projects, Assignments, Evidence from Practical Assessments conducted in a RWE and evidence from Practical Assessments conducted in the workplace.

### Matters of Gas Safety

Awarding Organisations must ensure that all units and the associated "matters of gas safety criteria" are referenced to those issued by Energy & Utility Skills. The "matters of gas safety criteria" are updated on a six monthly cycle and any changes must be implemented in line with the industry requirements agreed with Gas Safe Register.

### Realistic Working Environment (RWE) Assessments

RWE simulated assessment may only be used as specified and, if necessary, with the prior approval of the External Verifier (see previous section). Any approval given by the External Verifier MUST be recorded and filed in the centre's Quality Manual and in the 'Learner's Portfolio' for audit purposes.

These assessments will normally be installation and maintenance activities conducted in a workshop area. These areas are considered to be a 'managed' environment because there is a degree of control over the conditions under which the activity is undertaken. The simulation activities and areas will normally include:

- real time pressures;
- a range of appliances, applicable to the assessment types;
- a variety of flue types, e.g. Type 'B', Type 'C', natural and fanned draught with a range of construction methods;
- a range of potential hazards that could realistically be found in a domestic dwelling, e.g. combustible surfaces, opening windows, doors, fans, curtains etc. *(Note: these hazards may be simulated)*;
- a range of installation conditions, e.g. surface installation, under floor installation, through 212
- wall installation etc
- a range of building material types, e.g. brick walls, block walls, plaster board and timber

walls.

The RWE must take account of health and safety requirements for risk assessments, gas safety related issues and against other activities where generating evidence is limited.

### Recognition of Prior Learning (RPL)

Recognition of Prior Learning (RPL) evidence is an acceptable source of evidence for these qualifications. All evidence shall be sufficient, valid, reliable, authentic and current (within the last three years).

For evidence of gas safety competence the following constraints shall apply:

- Certificates covering the competence criteria for Gas Safe Registration are acceptable as RPL evidence. However, as these do not attest to competence in the other essential aspects of gas installation and maintenance, all unit requirements must be satisfied in full to achieve the qualification.
  All evidence of current gas safety competence **must** be demonstrated throughout the qualification being undertaken.

All RPL evidence must be approved by the centre's RPL Advisor. The RPL Advisor shall hold D36 or equivalent.

### Gathering Evidence

In order to achieve a qualification, Learners **must** produce sufficient evidence of competence.

Documentation must be provided to ensure that evidence of competence is gathered, organised and recorded in a uniform manner across all centres.

Where appropriate, learners may provide evidence of prior learning (see RPL Section of this Guide).

Witness testimony may be used as supporting evidence to cover the range of activities not covered naturally by workplace assessment. This evidence will normally be via a completed document signed by a 'Technically and Occupationally Competent Witness' (the centres External Verifier will be able to give further advice on the use of witness testimony). **Note:** Witness testimony is not acceptable as evidence to meet the "Matters of Gas Safety" criteria, incorporated into each qualification.

### The Learner's Portfolio

The learner portfolio documents the evidence which will demonstrate learner progress. It records their assessment achievement, development and work experience leading to the attainment of their chosen qualification.

The 'Learner's Portfolio' could be made up of a combination of the following:

- Summary of the results from Knowledge & Understanding Question Papers
- Summary of the results from Assessments (RWE/Workplace)
- Assessment sheets
- Copies of all Learner specific questions together with a record of the answers given (oral or written)
- Feedback sheets
- Workplace Experience Evidence
- Witness Statements
- Work Method Statements

- Evidence of Prior Learning (RPL Evidence)
- Assessor Assessment Plans - feedback to Learners
- Company or employer job sheets and specifications
- Curriculum Vitae
- Photographic Evidence

### Witness Testimony

'Witness Testimony' can **not** be accepted as a primary source of evidence for all work activities. 'Witness Testimony' may be used as supporting evidence to cover the range of activities not covered by 'Workplace Assessment' or RWE Assessment.

'Witness Testimony' evidence can only be accepted if the testimony is completed by a 'Technically and Occupationally Competent Witness' and will normally be in the form of a completed and signed source of evidence with other supporting evidence (e.g. company or employer job sheets, photographic evidence). The centre's External Verifier will be able to give further advice on the use of witness testimony.

The evidence provided by 'Witness Testimony' and other non-observed sources must be substantiated by an Assessor (eg by confirming the suitability of the witness and by professional discussion). Once the evidence has been substantiated and suitably documented, then it can be referenced to the appropriate record of achievement by the Assessor.

### Written & Oral Questioning

Assessors should use questioning where they consider it is appropriate to fully cover the subject area being assessed and to allow the Learner to evidence their full understanding.

When using oral questions, Assessors should be mindful of the effect their behaviour can have on the Learner's performance. Questions should be asked in the spirit of gaining information rather than pressurising a Learner by creating the atmosphere of a test.

**All** oral questions must be relevant to the assessment criteria and the Assessor **must not** coach or lead the Learner towards providing correct answers. The Assessor **must not** ask the Learner any 'leading' or 'closed' questions. Assessors should take care to ask clear questions.

Questions and the Learner's responses should be recorded on the appropriate assessment documentation, for example on the 'Feedback Sheet' provided.

### Feedback

Learners shall be given feedback at appropriate times during the completion of their qualification, as determined suitable by the Assessor, employer, mentor, etc. This would normally be associated with an assessment activity with Assessor involvement and should be given as soon as practical after the completion of the activity.

It is important that a copy of all feedback and oral questioning sessions with Learners are kept for inclusion in the Learner Portfolio.

Notes from feedback and oral questioning sessions might not include a precise record of the feedback, questions and answers to every question, but a summary of the feedback, questions and answers must be recorded with reference to specific criteria as necessary.

## Glossary of Terms EU Skills Assessment strategy

Approved Centre: an organisation inspected by the Awarding Body and deemed to have the trained staff and resources to make assessment arrangements for particular qualifications.

Assessor: person accountable to the external verifier (through the internal verifier) who is both experienced and qualified/or working towards qualifications in assessing Learners. Assessor skills include observation, evaluation, making judgements about individual performance. Assessors may be based in the workplace, in an approved centre such as a college, or be peripatetic, visiting Learners in a variety of situations.

Assessment Plan: Between Assessor and Learner a structured approach is used to specify how, where and when evidence will be generated and what method of assessment will be used. This information is recorded, dated and signed by assessor and Learner and is used as the basis for review meetings between Learner and assessor.

Awarding Organisation: an organisation recognised by Ofqual for the purpose of awarding qualifications.

Learner: employee or student / trainee who wishes to be assessed in order to gain a qualification (formerly referred to as a candidate).

Competence: an assessment based on the Learner's ability to perform a task to a defined standard specified in the national occupational standards.

Evidence: the means by which an external verifier can be satisfied that an individual has been properly assessed, usually a combination of completed/endorsed witness statements, and assessments by a qualified assessor with additional documentation collected in a portfolio of evidence.

External Verifier: person accountable to the Awarding Body who by monitoring and advising internal verifiers and assessors effects quality assurance.

Internal Verifier: person accountable to the external verifier and the Awarding Body who is based in the approved centre and who co-ordinates assessment arrangements and monitors assessor standards.

National Standard of Work (Performance Criteria): required from learners to demonstrate their capability.

National Vocational Qualification: a qualification recognised by UKCES as being relevant to the need of industry.

Portfolio: a structured collection of evidence from several sources, gathered together and referenced to the national occupational standards, in which a learner's achievements are recorded.

Real Work: where the provision of the product or service by the Learner, if not carried out, would require an organisation to employ someone else to do it.

Realistic Working Environment (RWE): an environment within which Learners are producing performance evidence subject to the following conditions:

- real work pressures (e.g. working hours, timescales, accountability, establishing priorities)
- real work problems
- real tools to do the job (e.g. real information, industry standard equipment)
- a real client or customer (not the trainer or assessor).

RPL: the Recognition of Prior Learning- the facility for an individual to receive credit for previously acquired (and still current) competence.

Technically & Occupationally Competent Witness: a gas operative who holds a current certificate of competence in the area of work for which they are providing witness testimony (these operatives must be a 'member of a class of persons' as outlined in Regulation 3(3) of the Gas Safety (Installation and Use) Regulations).

# Appendix 2 Permitted open book reference materials

Reference materials permitted for:

- Unit 203/003 Understand and apply domestic cold water system installation and maintenance techniques

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| BS EN 806- Specification for installations inside buildings conveying water for human consumption (parts 1-5) |
| BS 8558- Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages – Complementary guidance to BS EN 806 |
| BS 8000 part 15 - Workmanship on building sites. Code of practice for hot and cold water services (domestic scale) |
| Building Regulations Approved Document A (D in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |
| Building Regulations Approved Document G (P in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |

Reference materials permitted for:

- Unit 204/004 Understand and apply domestic hot water system installation and maintenance techniques

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| BS EN 806- Specification for installations inside buildings conveying water for human consumption (parts 1-5) |
| BS 8558- Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages – Complementary guidance to BS EN 806 |
| BS 8000 part 15 - Workmanship on building sites. Code of practice for hot and cold water services (domestic scale) |
| Building Regulations Approved Document A (D in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |
| Building Regulations Approved Document G (P in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |
| Domestic Building Services Compliance Guide, freely downloaded at **www.planningportal.gov.uk** |

Reference materials permitted for:

- Unit 205/005 Understand and apply domestic central heating system installation and maintenance techniques

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| Building Regulations Approved Document A (D in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |
| ISBN 1 903287 40 5 CIBSE Domestic Heating Design Guide, revised 2011 |
| Domestic Building Services Compliance Guide, freely downloaded at **www.planningportal.gov.uk** |

Reference materials permitted for:

- Unit 323/023 Understand and apply domestic cold water system installation, commissioning, service and maintenance techniques

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| BS EN 806- Specification for installations inside buildings conveying water for human consumption (parts 1-5) |
| BS 8558- Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages – Complementary guidance to BS EN 806 |
| Building Regulations Approved Document G (P in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |
| OFWAT guaranteed standards scheme paper freely downloaded from **www.ofwat.gov.uk** |
| The Water Supply (Water Fittings) Regulations freely downloaded from **www.legislation.gov.uk** |

Reference materials permitted for:

- Unit 324/024 Understand and apply domestic hot water system installation, commissioning, service and maintenance techniques

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| BS EN 806- Specification for installations inside buildings conveying water for human consumption (parts 1-5) |
| BS 8558- Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages – Complementary guidance to BS EN 806 |
| Building Regulations Approved Document G (P in Northern Ireland), freely downloaded at **www.planningportal.gov.uk** (**www.dfpni.gov.uk** in Northern Ireland) |
| Domestic Building Services Compliance Guide, freely downloaded at **www.planningportal.gov.uk** |

The Water Supply (Water Fittings) Regulations freely downloaded from
www.legislation.gov.uk

Reference materials permitted for:

- Unit 325/025 Understand and apply domestic central heating system installation, commissioning, service and maintenance techniques

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| ISBN 1 903287 40 5 CIBSE Domestic Heating Design Guide, revised 2011 |
| Domestic Building Services Compliance Guide, freely downloaded at: **www.planningportal.gov.uk** |

Reference materials permitted for:

- Unit 327/027 Understand and carry out electrical work on domestic plumbing and heating systems and components

| Publication |
|---|
| On-site Guide |

Reference materials permitted for:

- Unit 329 The installation, commissioning and safety aspects of hot water systems for domestic use in accordance with UK building regulations

| Publication |
|---|
| Water Regulations Guide by Laurie Young & Graham May, published by WRAS, 2000 |
| BS EN 806- Specification for installations inside buildings conveying water for human consumption (parts 1-5) |
| Building regulation Approved Document G |

# Appendix 3 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on **www.cityandguilds.com**.

**Centre Manual - Supporting Customer Excellence** contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance

**Access to Assessment & Qualifications** provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information such on such things as:

- **Walled Garden:** how to register and certificate candidates on line
- **Events**: dates and information on the latest Centre events
- **Online assessment**: information on how to register for e-assessments

**Centre Guide – Delivering International Qualifications** contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification. Specifically, the document includes sections on:

- The centre and qualification approval process and forms
- Assessment, verification and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Frequently asked questions

# Useful contacts

| | |
|---|---|
| **UK learners**<br>General qualification information | E: learnersupport@cityandguilds.com |
| **International learners**<br>General qualification information | E: intcg@cityandguilds.com |
| **Centres**<br>Exam entries, Registrations/enrolment, Certificates, Invoices, Missing or late exam materials, Nominal roll reports, Results | E: centresupport@cityandguilds.com |
| **Single subject qualifications**<br>Exam entries, Results, Certification, Missing or late exam materials, Incorrect exam papers, Forms request (BB, results entry), Exam date and time change | E: singlesubjects@cityandguilds.com |
| **International awards**<br>Results, Entries, Enrolments, Invoices, Missing or late exam materials, Nominal roll reports | E: intops@cityandguilds.com |
| **Walled Garden**<br>Re-issue of password or username, Technical problems, Entries, Results, e-assessment, Navigation, User/menu option, Problems | E: walledgarden@cityandguilds.com |
| **Employer**<br>Employer solutions, Mapping, Accreditation, Development Skills, Consultancy | E: business@cityandguilds.com |
| **Publications**<br>Logbooks, Centre documents, Forms, Free literature | |

If you have a complaint, or any suggestions for improvement about any of the services that City & Guilds provides, email: feedbackandcomplaints@cityandguilds.com

Published by City & Guilds
1 Giltspur Street
London
EC1A 9DD
www.cityandguilds.com

City & Guilds is a registered charity
established to promote education
and training

WW-01-6014