

GAS PROTECTION VERIFICATION ACCREDITATION SCHEME

Overview & Scheme Outline

DRAFT CONSULTATION

CONTENTS

| | |
|--|---|
| GAS PROTECTION VERIFICATION ACCREDITATION SCHEME..... | 1 |
| INTRODUCTION | 1 |
| OVERVIEW AND OBJECTIVES OF THE SCHEME..... | 1 |
| Roles and responsibilities of the scheme | 2 |
| APPLICABILITY OF THE GAS VERIFICATION ACCREDITATION SCHEME | 2 |
| OPERATION OF THE GAS PROTECTION ACCREDITATION SCHEME | 2 |
| Scheme Process | 3 |

APPENDIX 1 - Scrutineer Process

APPENDIX 2 - Verification Record Template

APPENDIX 3 - Scheme Auditing Arrangements

DRAFT CONSULTATION

GAS PROTECTION VERIFICATION ACCREDITATION SCHEME

INTRODUCTION

Past economic activities have left the UK with a substantial legacy of land which is contaminated, for example by past industrial, mining and waste disposal facilities. Unless adequately addressed, this contamination can pose unacceptable risks to both people and the environment. It has been estimated that there may be between 50,000 and 100,000 potentially contaminated sites across the UK affecting over 300,000 hectares of land.

Although standards in the contaminated land sector have improved greatly over the last two decades it is acknowledged that the quality of gas protection design, installation and verification work remains variable. Thus, installers and verifiers came together to develop this accreditation scheme to improve the quality of gas protection verification and increase the knowledge of staff involved in this industry.

Raising the quality of gas protection design, installation and verification will result in economic benefits by 'getting it right first time' avoiding time consuming repairs that are the consequence of poor installation or poor understanding of follow on contractors that can result in damage to gas protection systems.

This scheme also helps demonstrate to a suitably qualified person (SQP) under the National Quality Mark Scheme (NQMS) for land contamination management that the gas protection verification work has been undertaken by competent personnel.

OVERVIEW AND OBJECTIVES OF THE SCHEME

This scheme seeks to raise standards in membrane verification and provide all stakeholders involved in land contamination management with enough confidence that risks associated with ground gases have been adequately managed.

The scheme applies to both the practical installation of the gas mitigation measures and to the verification reporting process. Thus, recognising different personnel often undertake the installation work to the reporting, there are two separate accreditation routes to demonstrate competence in the installation and the design, preparation of method statements and validation reporting. The two levels of accreditation available are: 'fundamental' and 'advanced':

- **Fundamental level of accreditation** is intended for field technicians who confine their work to inspections and do not prepare verification design or method statements (although they will follow ones prepared by others) and do not prepare verification reports (although they do prepare field records that form part of the verification report)
- **Advanced level of accreditation** applies to those involved in the whole range of gas protection verification including design of the verification, preparation of method statements, inspections and verification reports.

The competencies required for each accreditation route are detailed in Table 2 and are split into two categories; knowledge and understanding and the practical skills.

The objective of the gas verification accreditation scheme is to ensure that the gas verification part of land contamination management meets the necessary technical and regulatory standards. The specific aims of the scheme are to:

- a) Increase the knowledge of gas mitigation verification across the industry
- b) Provide a list of competent individuals to design the gas protection measures, prepare method statements, undertake the inspection of gas protection measures and prepare the verification reports
- c) Complement the NQMS by providing a process by which competency in gas protection verification can be demonstrated.

The scheme is voluntary and thus the procedure is simple, and costs will be kept as low as possible (but enough to cover its running costs). It has been designed to operate alongside and within existing quality management schemes such as the NQMS. Competencies of individuals can be demonstrated in several ways such as if people are in possession of the NVQ Level 4 Diploma in Verification of Ground Gas Protection Systems that has been designed by the British Verification Council and administered by the Property Care Association. This qualification will be recognised against a number of the key competencies that are required. Alternatively, people will be able to demonstrate their competencies through demonstration of experience.

ROLES AND RESPONSIBILITIES OF THE SCHEME

Table 1 presents the roles and responsibilities for those involved in the scheme.

Table 1: Roles and responsibilities

| Role | Responsibility |
|---------------------------------|--|
| Scheme administrator – CL:AIRE | Responsible for managing the scheme, maintaining the records of who has achieved each accreditation level, maintaining an up to date register of accredited practitioners and copies of declaration certificates. In addition, they will manage the audit and complaints process from which the scheme can be improved periodically. |
| Working Group | CL:AIRE will be supported by a working group to provide technical advice, which will be drawn from within its membership and wider representation who have expertise in gas verification. |
| Registered person – fundamental | Responsible for undertaking gas protection verification safely, diligently and with professionalism (eg in accordance with the verification plan and method statement, knowing when to ask for assistance and providing advice on how to inhibit damage to gas protection systems during follow up works). |
| Registered person – advanced | In addition to the responsibility for fundamental accreditation, the advanced registration also is responsible for data interpretation to enable gas protection design, preparation of method statements and verification reports in accordance with current guidance. |

APPLICABILITY OF THE GAS VERIFICATION ACCREDITATION SCHEME

The scheme is applicable for use within the Town and Country Planning and Building Control regimes primarily, although would also be of use in other circumstances where demonstrating competency is important, for example if properties require retrofitting or to support potential claims.

OPERATION OF THE GAS PROTECTION ACCREDITATION SCHEME

SCHEME PROCESS

The scheme aims to improve practitioners' skills and competencies in gas verification and the preparation of gas verification reports. A report produced by an accredited practitioner under the scheme will be

accompanied by a declaration certificate and will bear the Gas Verification Scheme “Quality Mark” logo so it can be clearly identified.

The Gas Verification Scheme process is as follows:

- Stage 1 – Eligibility Criteria of Practitioners
- Stage 2 – Application Process of Accreditation (Fundamental & Advanced)
- Stage 3 – Assuring the quality of the work on site
- Stage 4 – Preparation of the Verification Report
- Stage 5 – Applying a declaration of compliance
- Stage 6 – Process Review

Stage 1 – Eligibility Criteria of Practitioners

Table 2 specifies the core competency requirements for people applying for entry to the CL:AIRE register of gas protection verifiers via the fundamental and advanced levels. Once a candidate can demonstrate that they meet these requirements they can apply to be scrutinised. It is noted that those in possession of the NVQ Level 4 Diploma in Verification of Ground Gas Protection Systems will already have been tested against the core competencies required at fundamental and advanced levels. Therefore, these candidates will be able to go straight to the stage 2 application process.

Table 2: Capabilities that a candidate must demonstrate for accreditation

| Item | Description | F | A |
|--|---|---|---|
| KNOWLEDGE AND UNDERSTANDING SKILLS: YOU NEED TO KNOW AND UNDERSTAND | | | |
| K1 | Interpretation of information | | |
| i) | The information required to develop a verification method statement | | X |
| ii) | Where the information is likely to be obtained | | X |
| iii) | The difference between a verification plan and verification method statement | X | X |
| K2 | Safe working practices | | |
| i) | Relevant, current legislation and official guidance and how it is applied to verification | X | X |
| ii) | How emergencies should be responded to and who should respond | X | X |
| iii) | What the accident reporting procedures are and who is responsible for making the report | X | X |
| iv) | Why, when and how health and safety control equipment should be used | X | X |
| v) | How to comply with environmentally responsible working practices to meet current legislation and official guidance | X | X |
| vi) | Recognise high risk work areas that require special consideration (eg confined spaces or working at heights) | X | X |
| K3 | Contracting and programming issues | | |
| i) | How methods of work , to meet the specification for verification, are carried out and problems reported | X | X |
| ii) | How to protect completed installation work from damage and the purpose of protection | X | X |
| iii) | Understands when to carry out verification to minimise risk of damage post - verification | X | X |
| iv) | The impact of build programme on the verification and testing works and suitable test methods | X | X |
| K4 | Types of protection and methods of installation | | |
| i) | Different types of protection and types of gas membrane | X | X |
| ii) | The types of installation that are appropriate to different systems or membranes | X | X |

| | | | |
|---|--|---|---|
| iii) | Key problems that can occur with different systems or membranes | X | X |
| K5 | Construction drawings and specification | | |
| i) | How to interpret construction drawings for the building structure and the gas protection systems to identify key watch points for the verification | | X |
| ii) | How to interpret specifications for gas protection systems | | X |
| iii) | When to ask the designer for advice or clarification | X | X |
| iv) | Any health and safety issues that may arise in carrying out the verification works | | X |
| v) | How to interpret manufacturer's information and advice | X | X |
| K6 | Verification plans | | |
| i) | A risk based approach to the required contents of a verification plan and responsibility for its preparation | | X |
| ii) | How to interpret a verification plan prepared by the designer and confirm the verification process can be completed safely and practically | | X |
| iii) | How to prepare one based on the design of the protection measures | | X |
| iv) | The main contents of a verification plan | X | X |
| v) | The need to consult with designer if preparing a verification plan | | X |
| vi) | The need to check the competence of the installers and how to do this | X | X |
| K7 | Choice of verification and test methods | | |
| i) | How to select appropriate Verification and Test Methods and when each approach is appropriate | X | X |
| ii) | Visual inspection, seam tests, flat area tests, ventilation and pressure monitoring | X | X |
| iii) | How to choose an appropriate frequency of testing and the main advantages and disadvantages of integrity testing methods | X | X |
| iv) | The standard method statements for integrity testing from appropriate standards | X | X |
| K8 | Advice | | |
| i) | When to provide advice and when to refer to the designer. | X | X |
| ii) | When and how to provide advice on protecting gas membranes from damage post-verification | X | X |
| K9 | Verification reports | | |
| i) | What a verification report should include including daily record sheets, photos, etc. | | X |
| ii) | How to report and deal with defects and repairs | X | X |
| K10 | Independence | | |
| i) | The importance of verifiers being independent of the gas protection system supplier or installer | X | X |
| K11 | Understanding of other specialisms | | |
| i) | When additional specialist skills may be required, for example to carry out integrity testing | X | X |
| PRACTICAL SKILLS – YOU NEED TO DEMONSTRATE | | | |
| P1 | Safe working practices | | |
| i) | Safe working practices during the practical assessment | X | X |
| P2 | Apply the requirements of a verification plan | | |
| i) | That you can visually inspect underfloor voids, oversite capping, venting layers and gas membranes in accordance with a verification plan | X | X |
| P3 | Identify faults and damage | | |

| | | | |
|---|--|---|---|
| i) | You can identify faults including; poor preparation of laying surface, poor seals, damage, missing components, poor workmanship and blockages etc | X | X |
| ii) | You can identify discrepancies in installed gas membranes including; holes, rips, tears, punctures, missing seals, loose or unstuck tape, inadequate detailing and unbonded seams (loose edges and fish mouths | X | X |
| P4 | Integrity tests | | |
| i) | That you can critically observe and assess integrity testing completed by others | X | X |
| Note: 'F' denotes fundamental and 'A' denotes advanced level of accreditation | | | |

Stage 2 – Application Process of Accreditation

There are two stages to the application process for the fundamental and advanced levels of accreditation.

- i) Submission by the applicant and checking of the application by the scheme administrator
- ii) Assessment.

The stages are summarised in the flowcharts in Appendix A included as Figures 1 – Fundamental Level and Figure 2 – Advanced Level. The full scrutineering process requirements and interview feedback form are provided.

Once an individual has been approved, they will be eligible to be added to the register of competent accredited individuals at either a fundamental or advanced level.

Annually a fee will be paid to remain on the register of competent accredited individuals. On renewal, individuals will self-certify that they are maintaining their standards and keeping up to date with changes in industry practice in relation to gas membrane verification. This will be captured via an online CPD recording system.

Every four years accredited personnel will be required to sit an online test to ensure competency is maintained.

Stage 3 – Assuring the Quality of Work on Site

Accredited personnel will assure themselves that the quality of workmanship is in accordance with current standards to BS 8485: 2015+ A1 2019 and a suitable inspection record is prepared. An example template of site record is available in Appendix 2.

Stage 4 – Preparation of the Verification Report

Preparation of the verification report that demonstrates the effectiveness of the gas protection measures is produced in accordance with current standards.

Stage 5 – Applying a declaration of compliance

Once an accredited person prepares the verification report in line with current standards, they will be required to complete a standalone disclaimer (declaration certificate) in order to be able to apply the “Quality Mark”. The declaration certificate will be available to purchase online on the Gas Verification Accreditation Scheme website. Once the disclaimer is completed and a nominal fee paid to authenticate the declaration certificate, it will be available to be downloaded and appended to the verification report. Each certificate will have a unique reference number. The unique reference number will be publicly available for viewing on the register of accredited personnel as each unique number will be assigned against the accredited persons name. Each accredited person will be required to create an account on CL:AIRE’s (the Administrator’s) website to allow tracking of the declaration certificates and to assist with auditing.

The scheme administrator will maintain a record of all declaration certificates bearing the “Quality Mark”. Each declaration will have a unique reference number and will be linked to an individual accredited person. The declaration certificate will gather the following information:

- Name of Accredited Person
- Company of Accredited Person
- Accreditation Number
- Name of Verification Report
- Site Name
- Report Reference Number
- Client Name
- Date Certificate Purchased
- Room for Signature *

*The certificate is signed after download. Electronic signatures not accepted.

The purpose of the declaration certificate is to provide assurances to the client that the verification report has been prepared in accordance with industry standards. In preparing a declaration the accredited person is vouching for the quality of the product prepared.

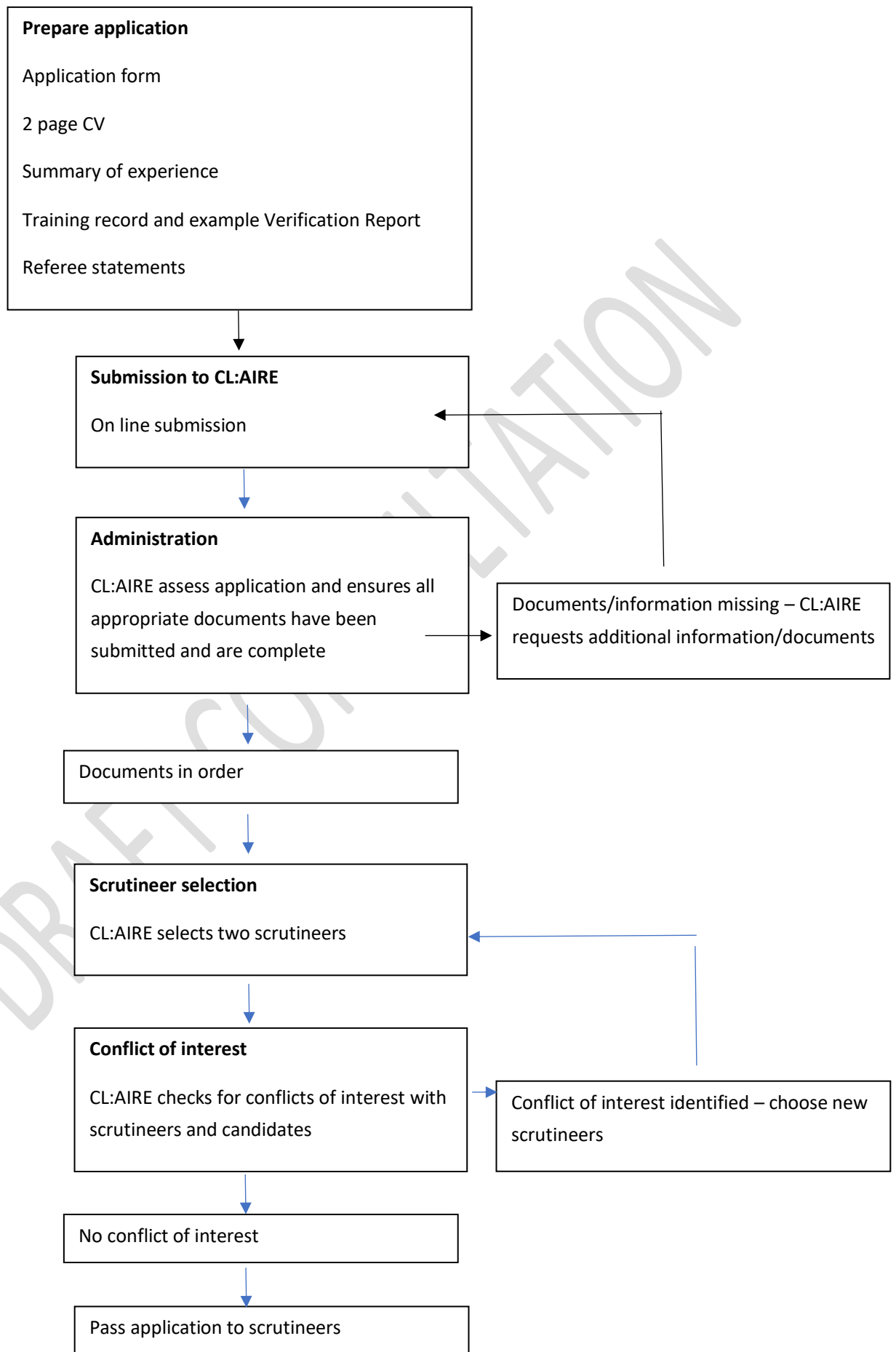
Stage 6 – Process Review

The accreditation scheme is designed to improve the competency of personnel and quality of verification report preparation for gas protection. Companies offering (and the individuals they employ) do so with the benefit of appropriate insurance (eg public and professional indemnity insurance). Liability for reports (and any advice they may contain) remains with the producing company or individual.

In order to ensure standards are maintained, the Scheme Administrator will ensure that both proactive and reactive mechanisms are in place to capture feedback with the aim of ensuring that the scheme objects are met and continually improve over time. Feedback mechanisms and scheme auditing will be in place, including a range of sanctions available for non-compliance. See Appendix 3 for further details.

APPENDIX 1 - Scrutineer Process

Figure 1: Fundamental Level - Stage 1 Submission and Checking of Application



Fundamental Level: Stage 2 Assessment and Interview/Practical

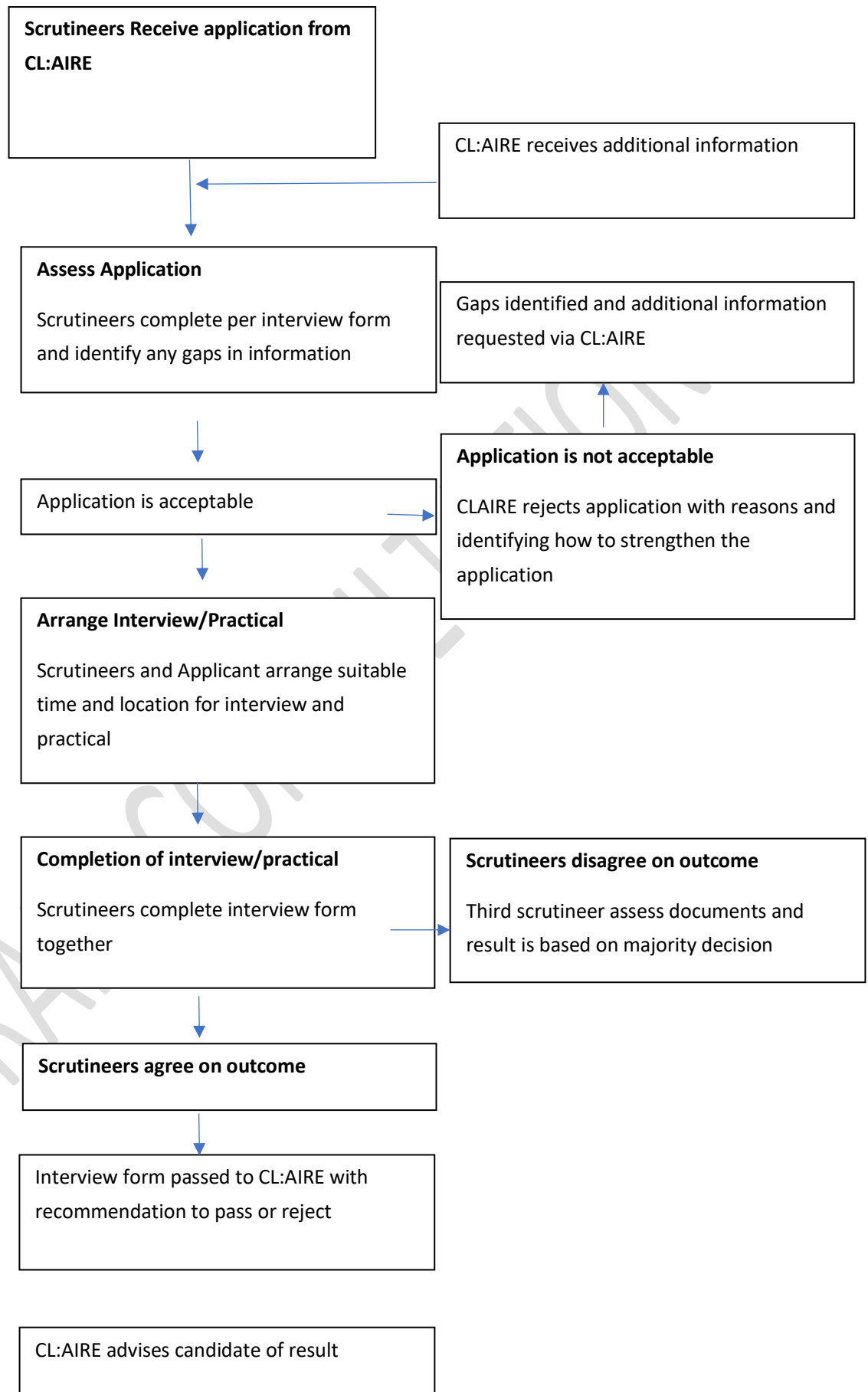
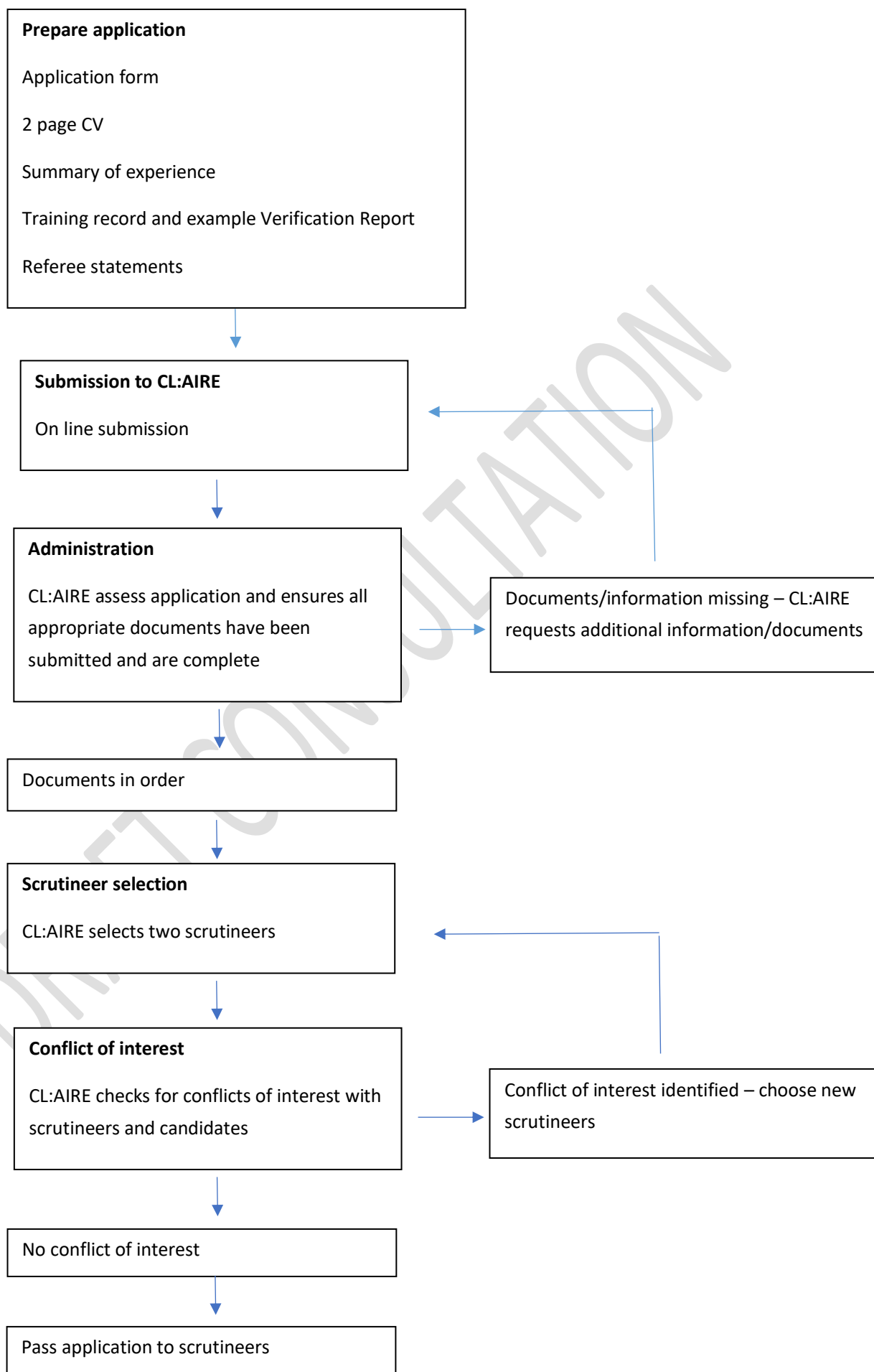
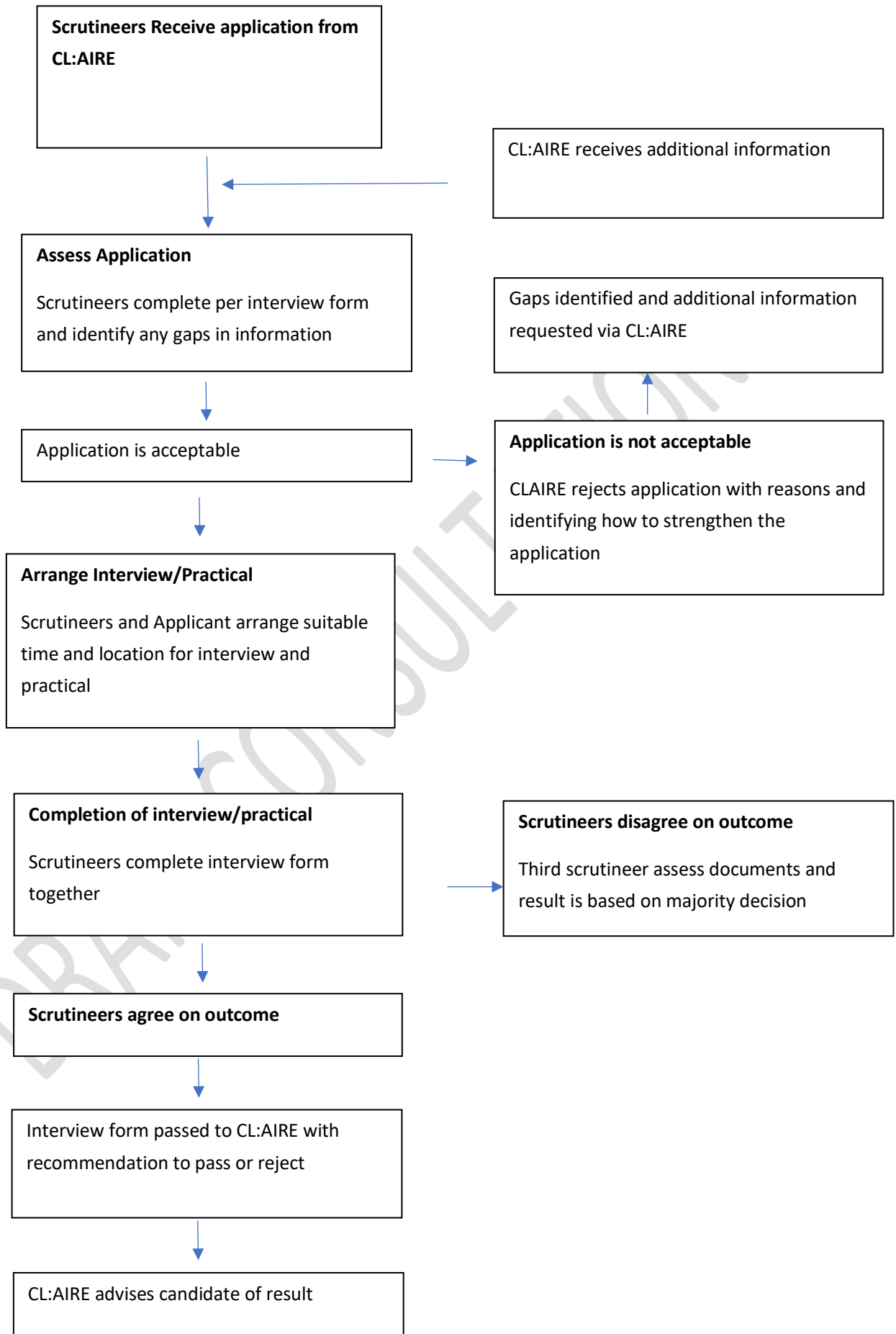


Figure 2: Advanced Level - Stage 1 Submission and Checking of Application



Advanced Level: Stage 2 Assessment and Interview/Practical



Scrutineering Process

Application Submission

Applications will be submitted on-line and the Scheme Administrator (CL:AIRE) will check that the appropriate application documents have been submitted. These are:

- Application form
- 2-Page CV
- Summary of experience
- Training record
- Example Verification Report
- Referee Statements

Scrutineer Selection

Once the Scheme Administrator is satisfied that the appropriate documents have been submitted they will select two Scrutineers. The Scrutineers must be accredited verifiers from different organisations.

The Scheme Administrator will then contact both Scrutineers to ask whether there are potential conflicts of interest and to make sure the Scrutineers are available to review the applications (Scrutineers are required to review the applications within four weeks of receipt).

Where no potentially significant conflicts of interest have been identified the Scheme Administrator will then contact the Applicant to inform them of who the Scrutineers are and to ask whether the Applicant knows of any potential conflicts of interest arising.

Conflict of Interest

Potential conflicts of interest that may arise include (but are not limited to):

- Scrutineer and Applicant work together in the same company
- Scrutineer and Applicant are close friends or are related
- Scrutineer and Applicant have had professional difficulties (e.g. one has been involved in the dismissal of the other) and or personal difficulties between them in the past

Where a Scrutineer and/or Applicant identifies potential conflicts of interest they should state what this is and give an opinion of whether or not this could influence the application process. Note that it will not be permitted for the Scrutineer and Applicant to work for the same company.

The Scheme Administrator will then decide on whether or not the identified conflict(s) of interest are potentially significant and will document their decision and rationale behind it. If the Scheme Administrator identifies a potentially significant conflict of interest then they will choose another Scrutineer and ask again about conflict of interest.

Application Document Assessment

Once the Scrutineers have been identified and potential conflicts of interest addressed the Scheme Administrator will email the application documents to the Scrutineers. The Scrutineers will then have four weeks to review the application documents and complete the pre-interview form. In the form the Scrutineer is required to state whether there are any gaps in the information provided and whether further information should be requested from the Applicant prior to interview. For example, this could be that the Summary of Experience is insufficient in detail or that it does not address some of the required skills criteria. The Scrutineer is also able to make recommendations to defer the interview if they believe that the Applicant is likely to be unsuccessful if an interview/practical were to take place. Under these circumstances the Scrutineer must give their reasons for deferring.

Once the pre-interview form has been completed the Scrutineer will email this to the Scheme Administrator. Once the Scheme Administrator has the forms from both Scrutineers they will decide on one of the following actions. Note that they may wish to hold a conference call with the Scrutineers to help them decide what the best course of action would be:

- Recommend that the Applicant goes for interview/practical test and make the necessary arrangements for the interview to take place
- Request further information from the Applicant. Once received they will forward this to the Scrutineers and ask them to re-submit the pre-interview form
- Recommend that the application in its current form is rejected giving reasons for why this is the case. The Applicant would then be given advice on how to strengthen their application (e.g. by gaining more practical experience/knowledge in specific skill areas).

Interview/Practical

Where the Applicant has been recommended for interview/practical assessment the Scheme Administrator will arrange a suitable interview/practical location, date and time between the Applicant and Scrutineers.

The interview and practical will normally last one hour. The purpose of the interview and practical will be for the Scrutineers to be satisfied that the Applicant meets the required level of competency in each of the required skill criteria. The interview may include specific questions on aspects of the Summary of Experience provided with the application, together with general questions aimed at giving the Applicant an opportunity to demonstrate competence, which may not have been fully reflected in the initial application documents. The Applicant will also be asked to carry out a practical test and comment on a membrane installation.

The Scrutineers will each fill out the interview form ensuring that they have indicated their assessment of the Applicant's meets the required competency level for each required skill on the form. If an applicant does not meet the competency level required then the reason must be stated.

For an Applicant to pass the interview and practical and be awarded accreditation they must be competent for all the required skills criteria.

At the end of the interview the Applicant will be asked if there is anything else that they would like to discuss, in order to cover all aspects of their competencies.

Post-interview

Immediately following interview the Scrutineers will confer over their individual assessments, try to resolve any differences in opinion between them and seek to agree on whether the Applicant is recommended for accreditation. Specifically, they will seek to agree on the following:

- The Applicant is recommended for accreditation; or
- The Applicant is not recommended for accreditation at this time. In this case, the Scrutineers will record recommendations to help ensure the Applicant is successful next time they apply.

Where agreement cannot be reached the Scrutineers will document this on the forms.

The Scrutineers will then finalise their interview forms and email these within 24 hours to the Scheme Administrator. Where a recommendation for accreditation has been made the Scheme Administrator will forward the forms to the Scheme Executive Committee who will validate the decision.

Where there has been no agreement between the Scrutineers the Scheme Administrator can call for a third Scrutineer to review the application documents and pre-interview and interview forms. The third Scrutineer will then hold a

telephone conference with the other two Scrutineers to try and resolve any differences in opinion. Where these cannot be resolved the decision will be based on the majority decision.

DRAFT CONSULTATION

JOINT POST-INTERVIEW REPORT OF SCRUTINEERS

This form should be completed jointly by the Scrutineers immediately after the interview and returned to CLAIRE.

Please use block capitals.

APPLICANT NAME

APPLICANT NUMBER

FIRST SCRUTINEER

SECOND SCRUTINEER

LOCATION OF INTERVIEW/PRACTICAL

DATE OF INTERVIEW/PRACTICAL

DURATION OF INTERVIEW/PRACTICAL

If the interview/practical took less than one hour please state reason:

.....
.....

WE HAVE ASSESSED THE APPLICANT ON THE BASIS OF THEIR EXPERIENCE, PRACTICAL SKILLS AND UNDERSTANDING OF PROFESSIONALISM AS DETAILED ON THE FOLLOWING PAGES

We recommend that the applicant is: **(Circle whichever applies and delete the others.)**

SUCCESSFUL

DEFER

SUCCESSFUL (conditional on submission of additional evidence)

Signatures:

FIRST SCRUTINEER

SECOND SCRUTINEER

DATE

OFFICE USE ONLY

WAS THIS INTERVIEW OBSERVED?

Y/N

OBSERVED BY

Presentation by Applicant

Please Comment on the Quality of Presentation if undertaken

| |
|--|
| |
|--|

Supporting Documents –

Please comment on the quality, quantity and relevance of the Supporting Documents and indicate if these were discussed at interview

| |
|--|
| |
|--|

Feedback to Applicant –

Please provide feedback and recommendations to applicant or referees

| |
|--|
| |
|--|

Applicants must show competence in the following areas/skills

| Interview - | | Scrutineers' Notes, Comments and Assessment | | | |
|-------------|---|---|--|--|--|
| K1 | Interpretation of information Evidence that the applicant understands what information | | | | |
| K2 | Safe Working Practices Evidence that the applicant understands the need for safe working practices, how to implement them and their responsibilities. Understands the legislation and guidance surrounding Health and Safety, when and how to use PPE or other control equipment. Is able to identify high risk work areas that require special consideration (eg confined spaces or working at heights) | | | | |
| K3 | Contractual and Programme Issue Evidence that the applicant understands the importance of the Specification for verification works or testing of gas protection systems. The impact of the build programme on the verification and integrity testing works. Understands when to carry out verification to minimise risk of damage by follow on trades. Impact of programme on choice of test methods. | | | | |
| K4 | Types of Protection and methods of Installation Evidence that the applicant understands the types and characteristics of protection systems and the installation methods. Likely types and causes of damage or poor performance to gas membranes, venting systems, etc. | | | | |
| K5 | Construction Drawings and Specification Evidence that the applicant knows how to interpret construction drawings for the building structure and the gas protection systems to identify key watch points for the verification. Understand and interpret Specifications for gas protection systems. When to ask the designer for advice or clarification. Identify any Health and Safety issues that may arise in carrying out the Verification works. Understand how to interpret Manufacturer's Information and Advice. | | | | |
| K6 | Verification Plans | | | | |

| | | | | | |
|-----------------------------|---|--|--|--|--|
| | <p>Evidence that the applicant is familiar with a risk based approach to the required contents of a Verification Plan and responsibility for its preparation. How to interpret one and confirm the verification process can be completed safely and practically.</p> <p>How to prepare one based on the design of the protection measures. Main contents of a Verification Plan. Understands the need to consult with designer if preparing a verification plan. Understands need to check the competence of the installers and how to do this.</p> | | | | |
| K7 | <p>Choice of Verification and Test Methods</p> <p>Evidence that the applicant has the skills to select appropriate Verification and Test Methods and when each approach is appropriate. Visual Inspection, Seam Tests, Flat Area Tests, Ventilation and Pressure Monitoring. Understands how to choose an appropriate frequency of testing and the main advantages and disadvantages of integrity testing methods. Understand the standard method statements for integrity testing from CIRIA C735 or other appropriate standards.</p> | | | | |
| K8 | <p>Advice</p> <p>Understand when to provide advice and when to refer to the designer. Understands when and how to provide advice on protecting gas membranes from damage.</p> | | | | |
| K9 | <p>Verification Reports</p> <p>Evidence that the applicant understands what a Verification Report should include including daily record sheets, photos, etc. How to report and deal with defects and repairs.</p> | | | | |
| K10 | <p>Independence</p> <p>Evidence that the applicant understands the importance of Verifiers being independent of the gas protection system supplier or installer</p> | | | | |
| K11 | <p>Understanding of Other Specialisms</p> <p>Evidence that the applicant understands when additional specialist skills may be required.</p> | | | | |
| Practical Assessment | | | | | |

| | | | | | |
|-----------|---|--|--|--|--|
| P1 | Safe Working Practices Evidence that the applicant demonstrates safe working practices during the practical assessment. | | | | |
| P2 | Apply the requirements of a Verification Plan Evidence that the applicant can visually inspect underfloor voids, oversite capping, venting layers and gas membranes in accordance with a verification plan. | | | | |
| P3 | Identify faults and Damage Evidence that the applicant can identify faults including; poor preparation of laying surface, poor seals, damage, missing components, poor workmanship and blockages etc Can identify discrepancies in installed gas membranes including; holes, rips, tears, punctures, missing seals, loose or unstuck tape, inadequate detailing and unbonded seams (loose edges and fish mouths) | | | | |
| P4 | Integrity tests Evidence that the applicant can critically observe and assess integrity testing completed by others. | | | | |

APPENDIX 2 VERIFICATION RECORD TEMPLATE

Copied from Appendix A5 CIRIA C735 – H. Mallett; L. Cox (nee Taffel-Andureau); S. Wilson; M. Corban, 2014. Good Practice on the Testing and Verification of Protection Systems for Buildings Against Hazardous Ground Gases, CIRIA, C735, London.

VISUAL INSPECTION OF GAS PROTECTION MEASURES

| | | |
|--------------------------------|--|--|
| Site name: | | Gas characteristic situation: |
| Job number: | | Type of development and building/block checked: (residential/commercial/other) |
| Date: | | Building description: |
| Visit by: | | Foundation type: (suspended floor/raft/other) |
| Weather at time of inspection: | | Gas protection type: passive/active |

| No. | Item | Comments (see notes) |
|--------------------------|--|----------------------|
| 1 Gas membrane | | |
| 1.1 | Condition of sub-grade and underside of gas membrane | |
| 1.2 | Gas membrane type | |
| 1.3 | Gas membrane condition | |
| 1.4 | Joining tape product | |
| 1.5 | Lapping design | |
| 1.6 | Laps, welds and joints seals | |
| 1.7 | Service entries seals | |
| 2 Passive venting | | |
| 2.1 | Sub-floor void | |
| 2.2 | External wall airbricks | |
| 2.3 | Internal sleeper walls | |
| 2.4 | External vent trenches/ducts | |
| 3 Active venting | | |
| 3.1 | System details | |
| Additional notes: | | |

Notes: inspection checklist

| | | |
|-----|------------------------------|--|
| 1.1 | Underside of gas membrane | Check that the sub grade does not contain rough/uneven surfaces, is appropriately clean and that there are no hard/sharp objects. That protective sand blinding or geotextile (if specified) is present and meets the design criteria. |
| 1.2 | Gas membrane type | Manufacturer and product specification, gauge, colour, brand/name, material batch/roll numbers, storage arrangements (protected from dirt/damage?) |
| 1.3 | Gas membrane condition | Open punctures, tears, rips, stretching? Excessive footprints/evidence of traffic? Presence of debris? Repairs? Signs of weakness such as raised or sunken indentations? Protection plan in place to restrict access to lain gas membrane? |
| 1.4 | Joining tape product | Product type, brand, thickness, material, width, colour? Use of double sided tape? |
| 1.5 | Lapping design | Joints lapped and sealed in accordance with manufacturer's requirements/specification? Minimum overlap insured? Sections taped twice? |
| 1.6 | Laps and joints sealed | Welds complete? Appropriate joining/double sided tape used? |
| 1.7 | Service entries sealed | Top hats seal arrangements fixed around service entries? Use of Jubilee clips? |
| 2.1 | Sub-floor void | Is a check possible? Void former? Gravel (type/specification)? Height of void space? Is it clear? |
| 2.2 | External wall airbricks | Numbers, size, positions as design drawing? |
| 2.3 | Internal sleeper walls | Ventilation holes (honeycomb brickwork/pipe crossings?) – size, spacing, location in accordance with design? |
| 2.4 | External vent trenches/ducts | Located and constructed in accordance with design drawings? If open-topped gravel – gravel type/presence of fines? If pipe or other vent, check position and construction for functionality and absence of blockages. Ability of void former to withstand bearing of the superstructure? |
| 3.1 | Active venting | Type of air supply: mechanical, natural, combined? Location/condition/number of fans and vents? Location and size of inlets? Provision of air-cleaning devices and air heaters? Supply and exhaust ductwork? Alarm provision/installation? Gas monitoring system in under-floor void? |

Photographs

| No. | Description |
|-----|-------------|
| | |
| | |
| | |
| | |

| | |
|--|---|
| The gas protection measures inspected: | a Are acceptable and comply with the specification |
| | b Are acceptable but attention is drawn to issues related to item no. xxx |
| | c Are not acceptable due to the issues related to item no. xxx |

Name:

Signature:

Date:

Appendix 3 – SCHEME AUDITING ARRANGEMENTS

All feedback regarding the adequacy of individual quality marked reports, operation of the scheme or whether it concerns the performance of an individual will be initially investigated by CL:AIRE.

If the feedback concerns the performance of an individual a complaints procedure will be followed. If a complaint is upheld, then a range of corrective actions can be taken depending on the facts of the case. Actions can range from making improvements to the procedures and guidance published to support the scheme, to highlighting areas of improvements in capability of individuals via CPD (continuing professional development), through to removal of an accredited person from the register (for the most serious cases).

DRAFT CONSULTATION