



Building Services Design Engineer

END POINT ASSESSMENT GUIDANCE – ST0372

CIBSE

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Introduction

During your apprenticeship you have undertaken many tests and assessments. To complete your apprenticeship, you need to be finally assessed by an external panel, unconnected with your employer. This assessment involves a technical project and a structured interview. Your apprenticeship should have equipped you with the knowledge, skills and understanding to easily satisfy this. The process is known as an **End Point Assessment**.

This Guide explains how to apply for and complete your End Point Assessment. Success in the Assessment will also enable you, if you wish, to become a registered Incorporated Engineer (IEng) and to become a member of the Chartered Institution of Building Services Engineers (CIBSE). Membership provides many benefits, including ways to demonstrate and maintain your professional standing nationally and internationally. In addition, membership gives access to networks for professional support and development.

If you have any questions please contact CIBSE on +44(0)208772 3650 or email membership@cibse.org

Applying for an End Point Assessment

Readiness for your EPA will be decided by your employer in consultation with your training provider.

When all parties are agreed, please visit www.cibse.org/epa and complete the **Online Gateway Application Form**.

You will need to upload copies of all the qualifying documents and relevant information when you submit the form, so it is a good idea to have these to hand before you login to MyCIBSE.

You will need the following documents:

Level 2 Maths and English certification or proof of successful completion.

Degree certificate, transcript, or proof of successful completion.

Unique Learner Number (10 digits available from your provider).

Contact details for your sponsor employer and training provider.

Photo ID (drivers licence or passport).

If you would like your application to be considered for professional recognition, then you will also be asked for the following:

Organisation Chart for your employer.

Development Action Plan.

What happens next

Following receipt of the application form, CIBSE will first check and confirm whether you satisfy the requirements to enter the *Gateway*. If nothing further is required, your employer and provider will be sent an email asking them to verify readiness. You will then receive your *Gateway* guide containing important dates, including the week of your interview, together with the confidential Research Assignment.

1. The Engineering Practice Report

With your Research Assignment you will need to submit a separate written report of between 4500 – 5000 words in which you demonstrate how, in the course of your apprenticeship, you attained the knowledge, skills and behaviours expected of a competent building services design engineer.

The Report should be a reflective review of your career and experiences to date including:

- A general overview of the type of work and training you have undertaken.
- A table setting out the different projects in which you have participated, and which you will describe later in the body of the Report. The number of projects you cite will be sufficient to demonstrate your achievement of the full range of knowledge, skills and behaviours set out in the Standard. This could be one long-term project or several shorter-term projects.
- A summary of key features of each project chosen – client, scope, value and dates.
- An account of how the experience gained in each project was linked to achievement of the knowledge, skills and behaviours listed in the Standard; your role; and insight into the important decisions you were responsible for or made a significant contribution to. The examples should demonstrate where you exercised independent judgment – as an engineer and a practising professional.

See Annex B for details of the criteria you must satisfy through your Engineering Practice Report and Interview.

Remember to include a title page for your Report, which states your word count. Clearly state your role and responsibilities; use the first person – *I, me, my* – to show the reader your personal contribution.

Your report will need to be certified by an Engineering Council registrant – Chartered Engineer, or Incorporated Engineer - and preferably a member of CIBSE. Please contact CIBSE if you have any difficulty in finding a qualified engineer to do this.

Your Engineering Practice Report should be submitted at least **3 weeks** before your *End Point Assessment* interview and will be used to inform the Structured Interview on the day.

2. The Research Assignment

The Research Assignment Brief will be designed to enable your assessors to evaluate whether you have gained the ability to integrate a range of knowledge, skills and understanding that you have acquired during your apprenticeship.

Your response to the Research Assignment Brief should be in the form of a 15-20 minute presentation to be delivered at the End Point Assessment interview, this will be followed by a 15-20 minute question and discussion session. Preparation should take around 30-40 hours.

The Assignment will require you to:

- Research and analyse the design, performance and/or delivery of building services systems and components with a view to innovation or improvement.
- Discuss the advantages and disadvantages of the chosen improvement or innovation paying particular attention to its impact on sustainability (e.g. energy usage, waste management, whole-life costing).
- Consider what changes need to occur to make the chosen improvement or innovation a reality. This will include critically examining the role of the design authority, asset owner, asset manager and supply chain in encouraging or impeding the deployment of the improvement or innovation.
- Make an informed prediction as to what will happen justifying your prediction with evidence from the market.

In undertaking the Research Assignment, you will need to make some decisions about your proposed approach to address issues raised by the Brief. The response should be **entirely your own work**, although you are permitted to seek advice from your employer or Training Provider.

If you are interviewing remotely you are required to screen share your presentation in Microsoft Teams. For face-to-face you should bring to the interview a laptop or tablet – CIBSE do not provide a presentation device - three 'hard copies' of your presentation and any supporting documents which may include additional slides, drawings and spreadsheets.

You must send a copy of your presentation at least 1 week prior to your interview date.

Your End Point Assessment Interview

We are currently interviewing remotely using Microsoft Teams. You will need to bring/have available an original item of identification¹, which must include your photograph, to your interview. Your interview will be conducted by two trained and experienced CIBSE-appointed assessors. (There may on occasion be an observer present, but they will not be there to assess you).

After introductions you will make a 15-20 minute presentation to the Assessor Panel on your response to the Research Assignment, supported by the 'hard copy' you have prepared. The presentation will be followed by 15-20 minutes of questions and discussion. The

¹ For example, student card, passport or driving licence.

presentation and questions following this, together with the 'hard copy', will be marked according to the criteria set out in Annex B and awarded a mark of Pass or Fail.

3. Structured Interview

This is then followed by a 40-50 minute structured interview with the Assessor Panel. The purpose of the discussion is to enable the Assessors to assure themselves that you have the competence to work as a Building Services Design Engineer. The questions will focus on the occupational specialism(s) demonstrated in the Engineering Practice Report.

Tips on preparing for your interview may be found at

<https://www.cibse.org/membership/help-for-applicants/interview-guidance>

If you are applying for professional recognition, then your Gateway Application must also include.

Development Action Plan

A statement of how you intend to continue with your personal and professional development. It is required that all engineers show commitment to keeping up to date with developments and with maintaining their skills and expertise. You should identify your short (1-3 years), medium (3-7 years) and long term (7-10+) goals and indicate how you propose to meet them. Examples are available online at www.cibse.org/applicanthelp

Organisational Chart

A departmental organisation chart which clearly indicates your position within your department/company and who you report to.

Success in completing your *End Point Assessment*

You, your employer and your Training Provider will receive confirmation of the result of your *End Point Assessment* following review and approval by CIBSE, normally within 8 weeks of your interview. CIBSE will apply for your apprenticeship completion certificate and forward it to you and your employer.

If you have successfully completed your *End Point Assessment*, you will have met the standards for registration as an Incorporated Engineer. Hence, notification will be accompanied by an invitation to apply for Associate Membership of CIBSE (ACIBSE). This will enable you to register with the Engineering Council as an Incorporated Engineer. Membership and registration both require you to undertake to meet the ethical requirements for practice as an Incorporated Engineer, which include undertaking continuing professional development, to maintain your skills and knowledge. There is also an annual fee to retain your membership and registration (see below).

Things you need to bear in mind.

Location of your Assessment

Interviews are held remotely using Microsoft Teams.

Problems in undertaking the *End Point Assessment*

If you are unable to complete the Report and Assignment in time you need to notify CIBSE as soon as possible. Where there are mitigating circumstances (health, bereavement, redeployment, etc) a delay may be allowed, but this is entirely at the discretion of CIBSE. An additional fee may be charged, depending on circumstances. Otherwise you will need to reapply and a different Research Assignment will be assigned.

While you are permitted to seek advice from your employer and learning provider, in no circumstances should you seek external assistance in completing your Engineering Practice Report or your Research Assignment response. If CIBSE detects that you have employed outside assistance, this will not only mean that you may not complete your apprenticeship, but you may be unable to apply for CIBSE membership or Engineering Council registration at any time in the future.

Unsuccessful Applications

If you are unsuccessful in your *End Point Assessment* CIBSE will provide feedback to you and your employer on the reasons for this. You will have to apply to retake the *End Point Assessment* taking into account assessor feedback on areas where you did not demonstrate competence. If you pass the Research Assignment presentation you only have to retake the Structured Interview. The retake will include a Structured Interview even if it was passed first time round. The retake must be taken within 6 months of the original *End Point Assessment*.

Otherwise you are permitted to reapply within 12 months, provided you are still in employment, but an additional fee will be payable.

Appeals

CIBSE operates an appeals process for applicants who wish to challenge the outcome of their application. Details appear on our website at [Appeal Procedure](#)

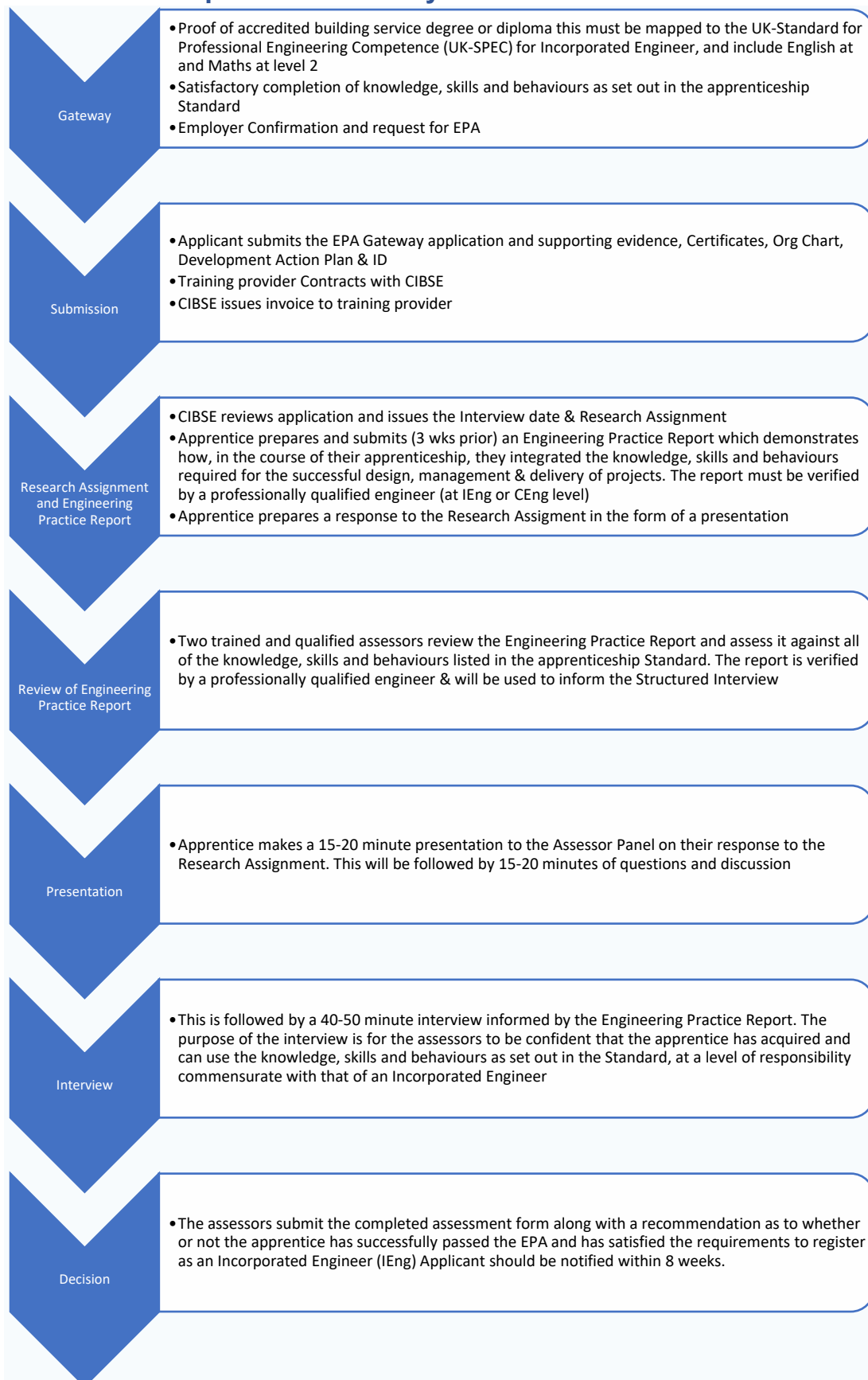
Fair Access

CIBSE will ensure that disability as defined by the Equality Act 2010 does not prevent you from completing your *End Point Assessment*, so long as the equity, validity and reliability of the assessments can be assured. A copy of our detailed policy statement may be found at [https:// www.cibse.org/epa/](https://www.cibse.org/epa/)

Fees

Details of the fees for membership of CIBSE and Engineering Council Registration may be found at <https://www.cibse.org/membership/membership-fees>

Annex A - EPA process summary



Annex B - Criteria for success

To pass the EPA you must demonstrate achievement of all the following criteria. References K1,S2, etc refer to Annex A of the Standard [ST0372 IFATE](#)

End point assessment method	Pass criteria
<p>Presentation (based on response to the Research Assignment. The presentation and questions following this, together with the 'hard copy', will be marked)</p>	<p>Provide evidence of knowledge, skills and behaviours required to</p> <ul style="list-style-type: none"> • Maintain and extend a sound theoretical approach to the application of technology in engineering practice (K1) • Use a sound evidence based approach to problem solving and contribute to continuous improvement (S1) • Identify, review and select techniques, procedures and methods to undertake engineering tasks (K1) • Contribute to, implement and evaluate the design and development of engineering solutions taking into account critical constraints such as concern for safety and sustainability (K3, K4, S3, B5) • Communicate with others at all levels including preparing communications, documents and reports on technical matters and exchanging information and providing advice to technical and non-technical colleagues (K8, S7) • Present and discuss proposals (K8, S7) • Demonstrate personal and social skills including those related to diversity and equality (B1, B6)

End point assessment method	Pass criteria
<p>Structured interview</p>	<p>Provide evidence of knowledge, skills and behaviours required to:</p> <ul style="list-style-type: none"> • Maintain and extend a sound theoretical approach to the application of technology in engineering practice (K1) • Use a sound evidence based approach to problem solving and contribute to continuous improvement (S1) • Identify, review and select techniques, procedures and methods to undertake engineering tasks (K1, K2, S2) • Contribute to, implement and evaluate the design and development of engineering solutions taking into account critical constraints such as concern for safety and sustainability (K3, K4, K5, S3, S4,) • Plan for effective project management including risk identification, assessment and management, securing the necessary resources and applying the necessary contractual arrangements with other stakeholders (K6, S5) • Manage tasks, people, and resources to plan and to budget working to agreed quality standards, programme and budget, within legal and statutory requirements (K4, K6, S5) • Manage teams and staff to meet changing technical and managerial needs (K7, S6) • Manage continuous quality improvement (S3) • Communicate with others at all levels including preparing communications, documents and reports on technical matters, exchanging information and providing advice to technical and non-technical colleagues.(K8, S7) • Present and discuss proposals (K8, S7) • Demonstrate personal and social skills including those related to diversity and equality (B1, B4) • Comply with relevant codes of conduct including the CIBSE Code of Conduct and all relevant legislation and regulatory frameworks. (K4, K9, B6) • Manage and apply safe systems of work.(K4,S4, B5) • Undertake engineering activities in a way that contributes to sustainable development.(K3, K5, S1) • Carry out and record Continuing Professional Development necessary to maintain and enhance competence in area of practice. (S8, B7) • Exercise responsibilities in an ethical manner. (B2, B6)