



# THE CIBSE

## TRAINING & DEVELOPMENT MANUAL

Information for  
Companies

Leading to  
LCIBSE EngTech, ACIBSE IEng, MCIBSE IEng and MCIBSE CEng



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# **Introduction to Training and Development (T&D)**

## ***Why Run an Accredited T&D Scheme?***

A T&D scheme allows your company to support prospective professional engineers as they develop their abilities and learn to demonstrate their competence towards becoming a corporate member of CIBSE and an Engineering Council registrant. Trainees are paired with an experienced mentor who will provide guidance and act as a sounding board as they track their progress against the relevant competences for their desired grade. In this way, trainees build a large portfolio of evidence towards their membership application, and also become familiar with the competence criteria.

A company that employs Chartered and Incorporated Engineers and Engineering Technicians will enhance its ability to win potential business. In some cases, evidence of employing registered engineers is necessary for the award of contracts in the UK and overseas.

There's no easier way to encourage your staff to become professionally registered than by running a training and development scheme. Operating a CIBSE approved T&D Scheme:

- Demonstrates your commitment to your staff's professional development and ensures that the resources are in place for everyone to succeed;
- Is a great way to attract younger engineers to your business, as graduates will be looking for additional benefits of employment and support towards their professional development;
- Reassures your staff that the scheme has been reviewed by a professional body;
- Allows greater contact between you, your staff and the institution;
- Gives trainees a structured support system to follow;
- Gives you the ability to draw upon the knowledge and experience of your peers at the annual T&D Forum;
- The approval process also allows an opportunity for feedback on which aspects of your scheme are working well, and where there may be room for improvement.

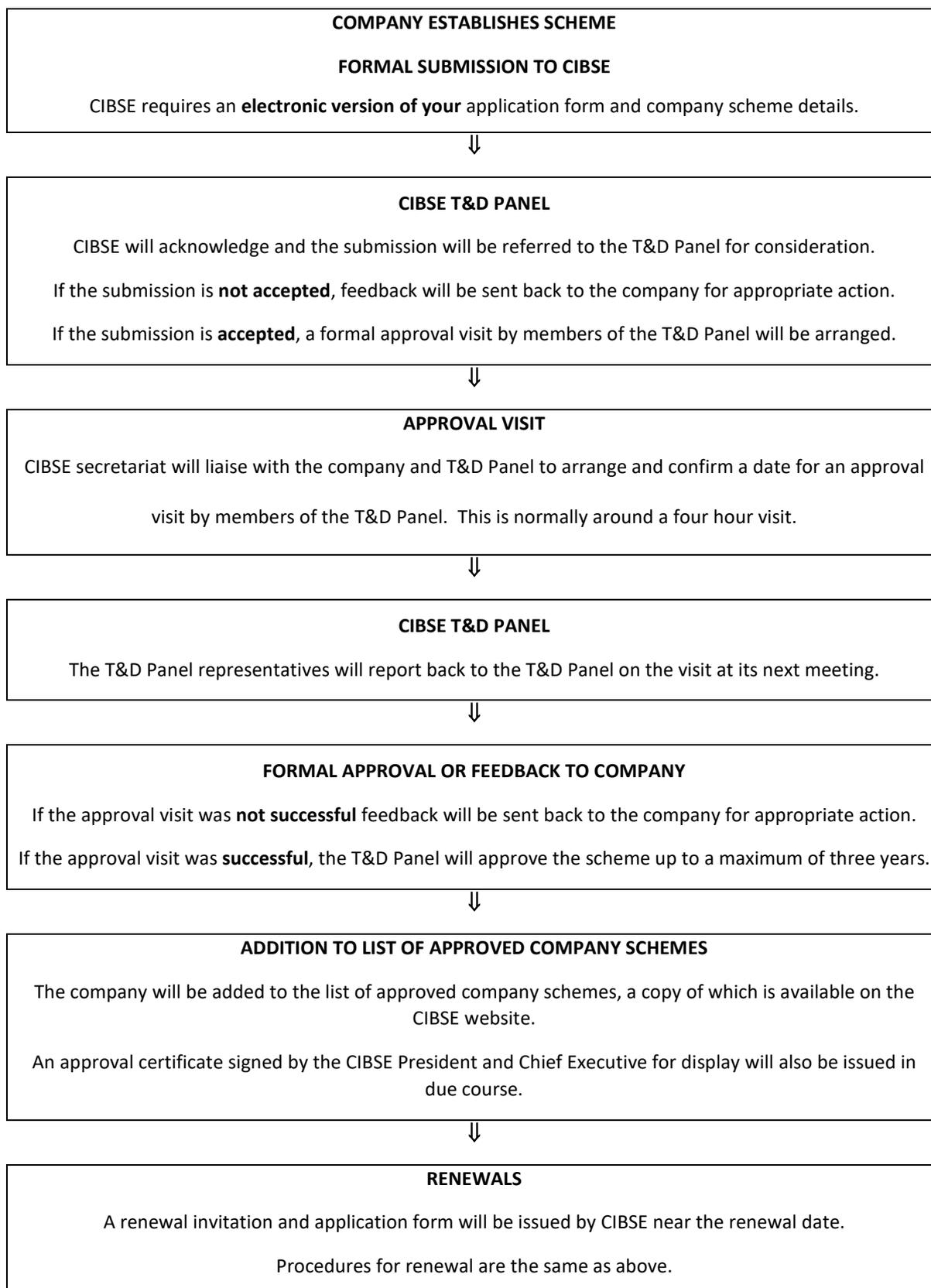
CIBSE's requirements have been made as flexible as possible, to ensure that trainees should be able to balance the demands of their employer (for completion of work on specific projects or contracts) and those of the Institution (for specific learning outcomes).

The scheme demands of trainees that they:

- Plan and develop their T&D in the light of personal goals;
- Recognise and grasp learning opportunities as and when they occur;
- Describe, analyse and record the learning they have achieved.

You will be expected to provide a strong support network for trainees by ensuring they have a suitable mentor and are registered with CIBSE, and make sure that their progress is tracked with written feedback from their mentors.

## Overview of the Process



# Establishing the Scheme

There are a number of key staff members who will be involved with the scheme:

## **Scheme Owner**

The scheme owner has ultimate responsibility for the scheme and will champion the scheme at a senior level. They will make sure that the scheme is run consistently across multiple offices if applicable.

## **Scheme Administrator**

The scheme administrator will be in charge of related administrative duties, and will make certain that all involved in the scheme will be aware of their roles and responsibilities. They will ensure that trainees are aware of how the scheme works and may be involved in allocating mentors to trainees. They may be responsible for sending T&D registration forms to CIBSE. The scheme administrator will play a key role in maintaining the overall smooth running of the scheme.

## **Mentor**

As a first step, each trainee on a company T&D scheme must be allocated a mentor.

The designated mentor must be an established engineer, in current membership with CIBSE or registered with the Engineering Council on a level at or above the registration level the trainee is working towards. It is recommended that the mentor is not the trainee's line manager, but it is recognised that this may not always be possible. CIBSE will expect the designated mentor, in addition to fulfilling the conditions above, to:

- Be familiar with the CIBSE Competence Criteria for membership and registration;
- Be capable of advising upon, and verifying, building services engineering activities across an appropriate range;
- Be committed to the professional development of others, and able and willing to devote reasonable time at regular intervals to meet with the trainee;
- Understand their role as mentor as making a major contribution to their own CPD.

Particularly in the early months, the trainee will need help to perceive links between their learning experiences and the individual criteria, and the mentor will act as a sounding board. Later, the mentor's role will become increasingly formal, since they will be responsible for confirming to CIBSE that the relevant learning and experience has taken place. They will make written comments on all trainee documentation.

## **Line Manager**

The line manager is the person with direct responsibility for the trainee on a day-to-day basis; they are responsible for assigning and co-ordinating the work the trainee is expected to carry out. They will appraise performance as necessary, agree developmental goals and find/provide opportunities to stretch and improve trainees' performance. Ideally, the line manager should *not* be the trainee's mentor (though we understand this may not always be possible).

# Trainee Process

CIBSE has produced an additional T&D manual for trainees, which you can use or adapt to support your company's scheme. This contains more detailed information regarding candidate documents, however an overview is provided below.

## **Registering Trainees**

Each trainee must be registered using a [T&D Trainee Registration form](#). This should be submitted to CIBSE at [membership@cibse.org](mailto:membership@cibse.org).

## **Objective Achieved Reports**

Each of the **Objective Achieved Reports (OARs)** uses a single pro-forma\*. One Objective Achieved Report should be completed for each competence the trainee is required to meet for the grade of membership they are aiming for.

The aim of an Objective Achieved Report is to track the trainee's progress against each of the competence criteria of the grade of membership and registration they are aiming for. They should document their experience, but also take time to analyse what they have learned.

## **Annual Reports**

An Annual Report\* along with all OARs must be submitted to the mentor at the end of each year they are on the scheme. The Annual Report summarises the trainee's progress to date with the mentor's overall comments, and can be formatted as a mini Engineering Practice Report to give the trainee experience in writing in this format. The OARs provide more detail against each competence.

## **Final Report**

The Final Report should be completed once the trainee has reached the end of their time on the scheme and is close to applying for membership and registration. The **Final Report only** should be submitted to CIBSE. The T&D Panel will then provide feedback to inform the trainee of the strengths and weaknesses of their report.

It is usually the case that only minimal revisions will be necessary to turn the final report into the full Engineering Practice Report needed for the membership application.

*\*For copies of pro-formas see [www.cibse.org/t-d](http://www.cibse.org/t-d)*

## **Trainee-Mentor Meetings**

It is expected that quarterly review meetings will be held between the mentor and the trainee to review progress and OARs and set short and medium term objectives. A record of these meetings must be maintained by the mentor and copied to the trainee.

### **How long does the T&D stage last?**

There is no concept of "time serving", so the total T&D period will last as long as it takes for a trainee to achieve the relevant Competence Objectives. In practice, it is unlikely that an adequate range of

learning and responsible experience will be acquired in a total T&D period of less than four years for CEng or three for IEng.

## **Getting Your Scheme Approved**

### ***Advisory Visits***

For newer schemes or those that are unsure of the process, CIBSE offer an advisory visit to take place prior to the approval visit. A T&D panel member and CIBSE secretariat will visit your offices to meet with key staff involved, answer any questions and provide an early view of the scheme's documentation if appropriate. Advisory visits are completely free of charge, and if you are interested in arranging one please contact CIBSE Membership at [membership@cibse.org](mailto:membership@cibse.org)

### ***The Submission Document***

Companies seeking approval or re-approval are asked to provide a submission covering the following headings:

**1**     *Identification of the scheme*

- The titles and internal references by which the scheme/programme is formally identified
- The sections of the Engineering Council Register (CEng, IEng, EngTech) for which the scheme supports

**2**     *Aims*

- Aims of the scheme
- Intended annual intake (number)

**3**     *Trainee profile*

- Selection and entry criteria
- Selection process

**4**     *The scheme environment: personnel and resources*

- The location of the scheme, including regional offices within the company organisation and how they are integrated into the whole company scheme
- Job titles and names of key personnel, including line managers (e.g. highlighted on an organisation chart)
- List of training staff showing designated mentors, and their membership and Engineering Council registration status
- Comparable schemes for other professionals within the company, e.g. does the organization operate approved training schemes for other EngC Institutions?
- The physical environment and resources for professional development on and off the job (e.g. learning resource centres, computer-based study packages, simulators, training centres)

**5**     *Content*

- Outline programme structure and content indicating the depth of coverage to be offered for each objective
- Expected learning outcomes, cross-matched to CIBSE's Competence Objectives
- Specific reference in the programme content to induction, safety, and personal development of trainees

**6**     *Collaboration with Further Education/Higher Education and further learning*

- Whether further learning studies are offered, and the arrangements for co-ordinating these with the requirements of the T&D programme

- Academic links of company staff associated with the scheme, e.g. as visiting professors/lecturers, industrial tutors, external examiners, or in connection with further learning provision if any
- The organisation's other formal links to FE and HE for example, providing sandwich and work experience placements

#### 7 *Mentoring and support*

- Arrangements for support and mentoring of trainees
- Training of Mentors in mentoring techniques
- For companies seeking re-approval copies of the Interim Trainee Reports and Final Reports should be provided

#### 8 *Supervision and assessment*

- How participants are assessed against the scheme objectives
- Nature and extent of supervision towards the completion of CIBSE's OARs, including arrangements for formative assessment and counselling of trainees
- Whether / how assessment against T&D scheme objectives are linked to the company's general performance appraisal scheme

#### 9 *Quality assurance and future plans*

- Arrangements for regular monitoring and evaluation of the scheme, including participant feedback and taking remedial action
- Data on the scheme's success to date including annual statistics on recruitment, progression, completion, drop-out, etc.
- How the scheme fits within the company's overall Quality Management systems
- Whether/how the scheme is involved in any external accreditation of training and development activities (e.g. Investors in People (IIP))

## ***The Approval Visit***

A typical visit will include the following:

### **Presentations by the Company**

The first presentation should briefly cover details of the practice and its commitment to professional development and mission statement.

The second presentation will cover the details of the T&D scheme and lead to an open discussion on the wider strategy, approach and culture for learning and development.

### **Interviews with Trainees**

The CIBSE panel will conduct private interviews with a group of trainees (some may join via video link if it is more convenient), interviewed as a group. The panel will also review their T&D portfolios (i.e. annual reports and OARs). If the scheme is based at multiple locations, CIBSE will expect to meet with trainees from each location.

### **Interviews with Mentors**

The CIBSE panel will conduct private interviews with a group of mentors, interviewed as a group. If the scheme is based at multiple locations, CIBSE will expect to meet with mentors from each location.

### **Lunch and Informal Discussion**

The CIBSE panel will usually have a buffet lunch with the scheme organisers, allowing for more informal discussions.

### **Private Meeting of the Panel**

The panel will conduct a private meeting to discuss the material and what the recommended outcome of the accreditation will be.

### **Feedback between the Panel and the Company**

The panel will comment on any areas of good practice and outline any aspects of the scheme that need to be improved. This discussion will feed into the visit report.

## ***Results of the Visit***

Within 4-6 weeks of the visit, CIBSE secretariat will produce a visit report. The report will be reviewed at the next meeting of the T&D panel.

If the scheme is unsuccessful, the company will receive the visit report with feedback. CIBSE will set out why the scheme was not approved and offer assistance in bringing the scheme up to the required standards.

If the scheme is successful, following the panel meeting the company will receive a letter of confirmation and a certificate. A copy of the visit report will also be sent.

### **Requirements and Recommendations**

The final visit report will contain any requirements and recommendations made by the visiting panel.

Requirements must be addressed within the given time period and are a condition of the approval. They may be subject to an interim visit.

Recommendations are suggestions from the panel as to how the scheme might be improved. At the renewal visit for the next approval period, the panel will consider whether or not these have been addressed.

### **Addition to Approved List of Company Schemes**

Once approved, the scheme will be added to the list of CIBSE approved schemes [here](#).

### **Approved Company T&D Scheme logo**

Companies with approved training & development schemes receive an approval certificate for display and are permitted to use the approved T&D logo on their documentation for the duration of the approval period.



## ***Scheme Renewal***

The T&D scheme will be approved for a maximum of three years. Towards the end of the approval period, CIBSE secretariat will contact the scheme to arrange a renewal visit. The documentation required is the same as the initial submission and the renewal visit will follow the same format as the approval visit.

## **How Can We Help?**

There are a number of ways in which CIBSE can support you and your trainees throughout the process.

### ***Webinars and Briefings***

CIBSE run a number of online webinars and regional briefings covering aspects of membership such as qualification requirements and how to start your Engineering Practice Report. You may wish to promote these to trainees, particularly those approaching the end of their time on the scheme, who may find a number of these incredibly useful.

For information on dates and how to book, see [www.cibse.org/briefings](http://www.cibse.org/briefings)

If you prefer, we are also able to run in-house membership briefing sessions that can be tailored to your company and give staff time to ask questions at the end. If interested, please contact [membership@cibse.org](mailto:membership@cibse.org)

### ***Online Learning Modules***

CIBSE have developed a number of online learning modules focussed on various aspects of Building Services. These can contribute to your trainees' development and knowledge of particular subjects. For more information and details of modules currently available please see Appendix B (page 12).

### ***T&D Forum***

The Training and Development Forum is an annual event hosted by CIBSE at our headquarters in Balham. All interested parties are welcome to attend, whether you have an accredited scheme or are looking to establish one. The T&D Panel will also be in attendance. The Forum usually contains a mixture of presentations and breakout sessions, and is a great opportunity to share best practice, get to know the T&D panel and network with other companies in similar positions.

The T&D Forum usually takes place in February, so look out for an invite towards the end of each year.

### ***T&D Newsletter***

The T&D Newsletter will be circulated to all scheme administrators and managers once a quarter. It contains information such as details of useful upcoming events and webinars, best practice advice and seasonal features. If there is something you would particularly like to see in the newsletter, just let us know!

### ***Stay in Touch***

Don't hesitate to get in touch with us at [membership@cibse.org](mailto:membership@cibse.org) or on 02087723650, we are always happy to help.

# **APPENDICES**

## Appendix A

### *Glossary of Terms*

<b>ACIBSE</b>	Associate of the Chartered Institution of Building Services Engineers
<b>Annual Report</b>	Annual Interim Overview summarising progress. To be submitted with OARs to the Mentor
<b>approved programme / scheme</b>	A company-based T&D programme that CIBSE approves for groups of trainees
<b>CEng</b>	Chartered Engineer, one of the three Engineering Council UK Registration grades
<b>CIBSE</b>	Chartered Institution of Building Services Engineers
<b>CPD</b>	Continuing Professional Development
<b>EngC</b>	Engineering Council
<b>Engineering Council</b>	the overarching organisation which links the specialist engineering institutions
<b>EngTech</b>	Engineering Technician, one of the three Engineering Council Registration grades
<b>Engineering Practice Report (EPR)</b>	E Engineering Practice Report to be submitted with MCIBSE or ACIBSE application and Development Action Plan
<b>experience</b>	in the context of the CIBSE T&D objectives, having been involved in a particular activity, and having knowledge of it
<b>IEng</b>	Incorporated Engineer, one of the three Engineering Council UK Registration grades
<b>LCIBSE</b>	Licentiate of the Chartered Institution of Building Services Engineers
<b>Mentor</b>	The mentor should be a senior engineer not working directly with the trainee on a day to day basis
<b>MCIBSE</b>	Member of the Chartered Institution of Building Services Engineers
<b>OAR</b>	Objective Achieved Report
<b>PEI</b>	Professional Engineering Institution. An institution licenced by the Engineering Council in the UK.
<b>PRI</b>	Professional Review Interview, the final stage leading to Registration as a professional engineer

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<b>T&amp;D Registration Form</b>	submitted at the commencement of a T&D programme by trainees following an approved scheme
<b>UK-SPEC</b>	The Engineering Council's UK Standard for Professional Engineering Competence 3 <sup>rd</sup> edition, last updated in 2014.
<b>Work Experience Report (WER)</b>	Work Experience Report to be submitted with LCIBSE application.

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## Appendix B

### Flexible Online Learning Modules

Designed by a collaborative group of key building services consultancies and contractors, CIBSE Online Learning Modules offer a practical, flexible and convenient alternative to classroom courses. Each unit has been peer reviewed and tested through this group. The units allow students to take a coordinated journey through an individual topic or a series of topics. The units form the backbone of several corporate training schemes.

Each module provides a thorough understanding of a subject with 7 hours of structured learning and a bank of material available for further reading. The supporting interactive elements help to guide the trainee through the subject matter and ensure that they finish the module with an excellent grasp of the topic. End of module quizzes will help to evaluate learning.

#### Companies

The online learning units have also been built to make it easy for companies to register a number of students and monitor their progress. Administrators can download reports showing students' progress and test results. To find out more go to [www.cibsetraining.co.uk/online-learning](http://www.cibsetraining.co.uk/online-learning), or to discuss a group's needs please contact the Events team on 020 8772 3660 or email [eventbookings@cibse.org](mailto:eventbookings@cibse.org).

#### List of Modules

[OL01 - Cable sizing](#)

[OL02 - Introduction to M&E services](#)

[OL03 - Hot and chilled water pipework systems](#)

[OL04 - Low voltage distribution](#)

[OL05 - Heating systems design](#)

[OL06 - Lighting design](#)

[OL07 - Ventilation design](#)

[OL08 - High voltage distribution](#)

[OL09 - Air distribution](#)

[OL10 - Air conditioning systems](#)

[OL11 - Electrical commissioning and testing](#)

[OL12 - Commissioning and testing of mechanical services](#)

[OL13 - Drainage](#)