



# Engineering Council Introduction & History

## Version 2 (March 2014)

## Introduction and History

### Document Location

The authoritative document is held as a pdf on the Governance page of the extranet managed through SharePoint.

### Revision History

Date of this revision:

Revision date	Summary of Changes
19 May 2015	Constitutional Documentation split into 3 documents: <i>Introduction/History, Charter &amp; Byelaws and Regulations</i>

### Approvals

This document has the following approvals.

Name	Date of Approval	Version
Privy Council	6 Nov 2013 (Charter & Bye-laws)	1
Board	5 Dec 2013 (Charter, Bye-laws and Regulations)	1
Board	20 March 2014 (Regulations 1B & 7A)	2

### Distribution

This document has been distributed to:

Name	Date of Issue	Version
EngC Staff	24 March 2014	2
Licensed Members	24 March 2014	2
Professional Affiliates	24 March 2014	2
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# 1. INTRODUCTION – THE ENGINEERING PROFESSION

## A short history

Up until the latter half of the 18<sup>th</sup> century, engineering was traditionally considered to be a military function, with public works mainly constructed in order to further the influence of the realm. However, as global trade and commerce increased in importance, then a need arose for civil (non-military) engineers to carry out works to support trade such as the construction of harbours and lighthouses. Methods and designs were developed using ‘rules of thumb’ and accidents and failures were common. In order to address this, the Society of Civil Engineers was established in 1771 to share and develop good practice. This society was subsequently renamed the Smeatonian Society, after John Smeaton its founder and the first person to call himself a ‘Civil Engineer’.

In 1818, a group of younger engineers, who were not sufficiently eminent to join their seniors in the Smeatonian Society, established their own learned society, the Institution of Civil Engineers, which was the first professional engineering institution in the world. Under the leadership of Thomas Telford, their first President, the Institution was awarded a Royal Charter in 1828, which set out its objects as facilitating:

*“the general advancement of Mechanical Science, and more particularly for promoting the acquisition of that species of knowledge which constitutes the profession of a Civil Engineer”*

This object laid the blueprint for all subsequent professional engineering bodies, establishing two core functions: firstly, as a knowledge standard setting body for members; and secondly, as a forum for the exchange of good practice. As the Industrial Revolution in Britain took hold, then so did the proliferation of engineering institutions, including, amongst others, those for Mechanical, Electrical, Mining, Marine, and Aeronautical, each with its own Royal Charter. It is worth noting that most commonwealth countries that subsequently established similar engineering institutions, elected to establish a sole institution for all engineering disciplines (notably Australia, Canada, Hong Kong and New Zealand). This is partially due to the numbers of engineers who were practising in the respective countries and the related economies of scale. However over time, some disciplines with fewer active members have found that their subject specialism does not receive adequate focus within a larger body to meet their particular knowledge needs.

One of the main benefits of the Industrial Revolution was the ability it created to mass produce goods at a relatively low cost. However a lack of control in terms of specification and quality meant that the market was awash with many different types of similar goods of variable quality. In terms of public procurement, this was highly inefficient. As a result the key Chartered Engineering Institutions established the Engineering Standards Committee to address product proliferation. An early success for the Committee was a 92 % reduction in the number of steel rail beams for trams from 75 different types to just six. As the Committee’s standardisation work developed to include a wider spectrum of goods and services, it was duly recognised with its own Royal Charter. In 1931 it was retitled the British Standards Institution (BSI). After the Second World War, the BSI became the UK’s National Standards Body and also went on to help establish the International Standards Organisation (ISO) to promote and develop standards globally.

As Britain emerged from the 1950s post-war austerity, the Chartered Engineering Institutions became concerned that there was a lack of conformity in professional engineering qualifications and agreed that they should work together to address this

variability by adopting a common threshold. By 1965, this joint initiative had formally come together as the Council of Engineering Institutions with its own Royal Charter, and for the first time a central register of Chartered Engineers, Technician Engineers (later called Incorporated) and Engineering Technicians, with the post-nominals CEng, TEng (later IEng) and EngTech denoting an engineer's level of registration. In the early 1970s, the profession also adopted graduate entry for Chartered level qualifications, whilst still maintaining non-graduate routes for those progressing up the 'hard way'. Such experiential routes have continued to be provided to this day, with much work undertaken by the institutions to develop methods to assess prior learning before candidates come forward for professional review interview by their peers.

During the late 1970s, as the UK experienced a decline in its manufacturing output, a school of thought developed that the Engineering Profession was not making the efficiency contribution to productivity that it should be when compared to Japan and the US. After much debate, a Committee of Inquiry was instigated under Sir Monty Finniston. Amongst the many issues that the inquiry considered, was the key question of whether engineering should be self-regulating or be subject to statutory regulation. When the report 'Engineering Our Future' was published by HMSO in 1980, self-regulation was favoured by Sir Keith Joseph, the then Secretary of State for Trade, as it was felt that statutory regulation would introduce an unnecessary level of bureaucracy and over prescription without significantly improving outcomes. However, statutory regulation was provided for in some areas of practice, where the risk to the public resulting from failure was deemed too great to be left to voluntary registration schemes (notably reservoirs, aviation and nuclear).

Thus the Engineering Council was created as a body incorporated by Royal Charter in 1981, inheriting the registers for Chartered Engineers, Incorporated Engineers and Engineering Technicians from the previous Council. One of the key changes from this previous regime was the introduction of a common requirement for initial professional training and an enduring commitment to lifelong education and training (subsequently called Continuing Professional Development). As of August 2013 the Engineering Council licenses 36 Professional Engineering Institutions to assess and nominate professional engineers and technicians to its registers, with over 230,000 individuals currently having demonstrated to their peers that they have attained the required competence and displayed the necessary commitment to practise and to observe a code of professional conduct. The Institutions also fulfil their learned society role, by informing professional practice and enabling the professional development of their members, who number some 500,000 in total. The Institutions further influence the work of an additional 1.2 million workers that the Office for National Statistics has classified as being in engineering roles.

### **Why Self-Regulate?**

An interest in professional regulation is generally driven by a wish to protect consumers and society at large. The National Consumer Council has summarised the justifications for regulation as being when there is evidence of:

- Inadequate competition – where suppliers, individually or collectively, dominate the market or make arrangements which reduce competition and consumer choice.
- Fraud, deception and oppressive marketing practices – where suppliers take advantage of consumers in ways that are illegal or unfair.
- Imperfect information – where the information essential to informed consumer choice is either completely unavailable, or false or misleading.

- Safety – where there is risk of consumers using goods or services which may damage their health.
- Resolution of disputes and the pursuit of redress – where easily accessible procedures are needed to make sure consumers can get a remedy for breaches of contract or other laws or codes.
- Externalities – where there is a need to ensure that the costs of producing goods and services reflect all the consequences of their production including the environmental impact.
- Social objectives – where the market is unable to make socially desirable goods and services available for defined groups of consumers. Also, where an unregulated market is unlikely to achieve democratically desirable results relating to public order, taste and decency, and similar goals.
- Vulnerable consumers – for example, those with weak bargaining power and children may need special or additional protection.
- Raising standards – in a sector where businesses can gain a competitive advantage or where there are known to be problems with compliance with the law.

The justifications that particularly apply to engineering relate to ‘Safety’ and ‘Raising Standards’.

A spectrum of regulation exists within the wider professions, ranging from those with voluntary codes (such as engineering) through to those with statutory duties (such as architecture and law). Professional self-regulation is a regulatory model which enables government to exercise a level of control (the level being dependent on the relative positioning within the spectrum) over the practice of a profession and the services provided by its members. Self-regulation is based on the concept of an occupational group formally entering into an agreement with government to regulate the activities of its members. In the UK, the agreement traditionally takes the form of the government granting or recognising self-regulatory status through the award of a Royal Charter.

The Privy Council Office not unsurprisingly endorses the view of the National Consumer Council and states that incorporation by Royal Charter should primarily be in the public interest. This consideration is important as it often differentiates those applying for a Charter from other membership organisations, such as trade bodies and trade unions, who generally act in the interests of their members. Once a body has become incorporated by Royal Charter, then it surrenders significant aspects of the control of its internal affairs to the Privy Council. Amendments to Charters can thereafter only be made with the agreement of ‘The Queen in Council’, and amendments to the body’s by-laws require the approval of the Council.

Questions about professional services, consumer protection and how professionals are regulated have been commonplace for some time. The principles of professional regulation can therefore be summarised as follows:

*A profession must have a governing body which sets standards of education as a condition of entry and achievement of professional status and which sets ethical standards and professional rules which are to be observed by its members. These rules are designed primarily for the benefit of the public. Professionals in breach of such rules are subject to disciplinary action and a breach may ultimately result in the loss of professional status.*

Professional regulation cannot, however, be a guarantee against the failure of professional services by individual members, nor can it be a substitute for other mechanisms for redress such as the civil and criminal courts or a substitute for the management of professional staff in the workplace. Rather, it is part of the spectrum of regulatory mechanisms which, taken together, are designed to protect consumers. The engineering institutions, working collegiately through the Engineering Council, seek to ensure they are upheld and it is this ethos on which the following Charter and Bye-laws are based.