Successful Professional Reviews for Civil Engineers

Fifth edition

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Chapter 2
The jigsaw concept for Review preparation

Watching people assembling a jigsaw, you will realise that they are doing exactly what every candidate for Review must do. It is no good trying to find a piece with the correct shape; what you have to do is find a piece that adds to the picture. Each piece has to be examined in detail to see how the part of the picture on it interlocks with the bits of picture on the pieces alongside. Continual reference has to be made to the picture on the box to see the position of each piece in the complete picture. It is no good picking up pieces that look as though they might be the correct shape without looking at the picture on the box, just as it is no good picking a particular piece of experience because it appeals to you or because it seems to fit the space. The process mirrors precisely the system that I recommend for compilation of your Review.

All the components of the Review, the documents making up the application, the interview and the Communication Task, are each an essential part of the whole picture. They form the pieces of your jigsaw, but the size and shape of each piece will vary from candidate to candidate. All the pieces are important; none can be omitted. Everyone remembers how frustrating it is when one final piece of a jigsaw is missing or is a bit mangled; you must not leave any possibility that the reviewers might feel that same frustration.

The picture is similar for everybody – either at Incorporated Professional Review (IPR) or Member Professional Review (MPR), as indicated here:

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Chapter 4
The professional engineer

What is a professional engineer? All of us in the profession are well aware of the misuse of the title in the media, the vast number of 'engineers' who are tasked with the simplest of technical tasks involving household appliances or items of public infrastructure. No doubt professional engineers have been involved in the design and creation of such things, but the ubiquitous labelling of other people as engineers can and does attract comment from members of our profession.

The Engineering Council says in UK-SPEC (EC, 2020):

> *Engineers and technicians respond to the needs of both society and business, solving complex challenges. Engineers and technicians work in the art and practice of changing our world, enhancing welfare, health and safety while paying due regard to the environment.*

> *Society places great faith in the engineering profession, trusting its members to regulate themselves. By achieving and demonstrating professional competence and commitment for the purpose of registration, engineers and technicians demonstrate that they are worthy of that trust.*

In a broader sense, Thomas Tredgold described civil engineering in ICE's first Royal Charter (1828) as '*the art of directing the great sources of power in nature for the use and convenience of Man*' but of more relevance to today is another part of our charter, added in 1972 (ICE, 2021):

> call for a high degree of professional knowledge and judgement in making the best use of scarce resources in care for the environment and in the interests of public health and safety

This description of our role is well worth remembering; it could be useful in many of the answers to the written part of the Review. The addition of the UNSDGs to the Reviews process is merely a contemporary interpretation of the 1972 text.

There are a good many 'definitions' of engineer from all over the world; all are trying to say the same thing, but none is a 'prescription'. If there were an easy definition, all

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Chapter 5
What you must demonstrate: the Attributes

Introduction to the Attributes

ICE (2022a) describes the Attributes as its '*standards of professional competence and commitment*'.

Looking initially at the seven Attributes of ICE's *Professional Review Guidance* documents (ICE, 2022a, 2022b), they do not seem too onerous. But once you start trying to demonstrate your ability in each of them, they become far less clear. Like all specifications, they should be read with the intention of finding out how best to comply, that is, demonstrate the performance. But this is not straightforward, particularly if you have become used to detailed syllabi during your education and are now using detailed specifications at work, many of which leave you little room for manoeuvre. Do not fall into the trap of wondering what the Institution expects; the straight answer is that neither it nor the reviewers know. There are so many ways and means of demonstrating capability in each Attribute that only you and your close advisers can choose what is best for you. This versatility is one of the great strengths of the Institution's reviewing process and should be used to your advantage.

It is useful to reflect on how the criteria are being interpreted. I have taken each section in turn and amplified it in the context of other documents about the responsibilities of professional civil engineers, issued by the Institution and others, and by my experience as a reviewer. But these interpretations are just that – my interpretations – and you, as a candidate, should think the problem through for yourself, hopefully with the cooperation of your mentors and by reading up-to-date Institution policy published on the website.

You have, of course, been following a training scheme, whether formal or not, so by now you must have developed, with the help of your mentors, some understanding of how to use your experience to demonstrate the Attributes. Your IPD, whether formally under Agreement or not, should have ensured that you have had adequate experience to be able to develop the Attributes.

What you must now do is edit the evidence that you have of that experience to present the best possible demonstration of your skills and abilities to the reviewers. This is unlikely to

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Chapter 9
The Professional Review Report

The Professional Review Report (the 'Report') is the key vehicle for you to demonstrate that you have acquired the Attributes. The Report is to enable you to demonstrate that, as a result of your experience, you have developed, and have used or could use, all the capabilities needed by a qualified member of ICE of the grade for which you are applying.

ICE advises you against structuring the Report around the Attributes (ICE, 2022): '*It is important not to address them in sequence but instead to give your reviewers a narrative, from your role activities, which will allow them to see how you have met all the Attributes at the required level.*' This is good advice and, if adopted, should lead to a more interesting Report that attracts the reviewers into your story.

The Report is subject to a maximum word limit of 5000 words for IPR and CPR. The Report for the CPRP is limited to 3000 words.

You can use anything that enables you to display your competence. The content might be your entire job, or bits of various recent work, or one extensive project. This decision on what to use needs careful thought, always bearing in mind that the aim is to display that you have developed and, wherever possible, utilised every one of the required Attributes. It requires a careful balance between the various types of work that need to be described and the need to clearly identify the Attributes displayed or developed by you; the more work needing description, the fewer words there are for your 'demonstration of competence'. This is where careful compilation of your CV (see Chapter 12) at the same time can be of great help.

The rules say that you should have had a major involvement and some degree of responsibility, such that you are able to demonstrate the required Attributes. In other words, this Report must *demonstrate* either that you have or that you could (given the chance) readily and confidently take the responsibilities and display all the Attributes of a qualified member.

This is an interesting and difficult concept for those well-schooled in academic examinations, where the emphasis seems very much on the transmission of as much knowledge as possible or on 'getting the correct answer'. Few academic examinations measure

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Chapter 10
Reports – common faults

Underplaying your hand

Many Professional Review Reports that I have read, as a mentor, SCE or reviewer, have underplayed the writer's hand; there seems to be a reluctance to spell out just exactly what you did and understood, expecting the reviewers to 'read between the lines' to decide for themselves. This is not good enough – you must *demonstrate* your abilities, not assume they can be tacitly inferred. It is not generally in an engineer's character to boast but, in this instance, you must try. It is also difficult to admit to mistakes, yet these are often where good experience was gained. The reviewers will not be so interested in the mistake as in what you did to rectify it and what you learnt from it.

Why do some candidates underplay their hand? I think there is one fundamental reason. Engineers are problem solvers; once a problem is resolved and a solution found, they go on, either to solve the problems of implementation or to another problem. In other words, they forget the original problem. So, to write the Report successfully requires you to remember the solution and then unravel the thinking behind your decisions to fully expose the original problem.

The difficulty becomes greater the more experience you have, because you may then know how to solve a recurring problem, which means it is not a problem *to you* any more. But, in fact, it still remains a problem, enabling you to demonstrate how your experience enabled you to solve it.

Another difficulty is that we all know that in reality, none of us works in isolation. Everything we do we discuss with others. As a result, we are loath to take personal credit for our work. But ask yourself who would have taken the blame if things had gone wrong – if it was you, then you were personally responsible, however many people you discussed the problem with.

Failing to demonstrate competence

Every time you mention that something was done or happened, immediately follow with a hypothetical 'because…' and ask yourself 'What else was considered and why were the alternatives rejected?' This will compel you to better explain your precise role in the process. Your reviewers are not so much interested in what was done, but why and how and what part you played in those decisions.