

APPENDIX A

Guidance Notes on the Preparation of the Technical Report (TR)

A1

Synopsis of proposed Technical report

You are also required to provide a synopsis of your proposed Technical Report for the Initial Assessment. It is essential that in this synopsis you set out clearly how you intend to demonstrate your technical competence. You must identify the engineering principles involved rather than just describing the project(s) on which you have been working.

The synopsis shall be a maximum of 750 words and should predict the content of the TR in such terms as will encourage the Reviewers to understand the intent.

The synopsis of the Technical Report should focus on demonstrating your understanding of engineering principles with regard to the following:

How you have developed of a good level of experience in your particular fields.

What technical judgement you have used when applying engineering principles and what is your ability to locate and use new research.

What you have used by way of established analytical or design techniques to solve problems.

Demonstrate you have the ability to apply methods that may be indeterminate or non-routine.

A2 Technical report structure

A3 The purpose of this guidance is to suggest a shape and structure for the TR. The guidance is not mandatory, and you should discuss your draft with your mentor.

A4 You may best prepare for the TR by selecting a project of some complexity from your experience in which you were deeply involved. The TR should be framed with an introduction, aim, discussion and evaluation.

A5 The TR should be self-contained, and not rely on other papers unless they are provided in appendices. The TR should flow logically from start to finish. It should be possible for an engineer to read a TR and understand it without prior knowledge of the subject.

A6 The TR may take a variety of forms but will generally fall into one or other of the following categories:

A collection of reports on design and/or maintenance projects.
A speciality paper based on a design or maintenance project(s).
A report on original work carried out by you.

A7 Subdivisions of the TR typically might be:

TITLE

INTRODUCTION - What the TR is about.

AIM – How does the report meet the requirements of A1?

BACKGROUND - Setting the scene. Where does the project lie in relation to the “total picture”?

TECHNICAL CONTENT/DESCRIPTION – Draws out the fundamentals underlying the subject(s). The TR must not simply demonstrate the application of codes and standards but must illustrate your understanding and application of engineering principles. Appropriate mathematical analysis should be included. Diagrams or drawing should preferably be close to the relevant text.

f) **CONCLUSIONS** - In relation to the application of engineering principles, what were the successes and failures?

g) **LESSONS LEARNED** – What were they?

h) **APPENDICES** - For supporting detail, if appropriate.

j) **BIBLIOGRAPHY** - If appropriate.

A8 The TR must be typed, it must be in English, and you and your mentor must sign it. PLEASE DO NOT staple or bind the report as this will need to be photocopied.

The overall length of the TR will depend upon the amount of academic shortfall to be demonstrated. However your report must be between 3,000 and 10,000 words in total.

Your Reviewers will focus on the quality rather than the quantity of the report and you are advised to be as concise as possible.

A9 Assessment Criteria

Your TR will be assessed against the following criteria:

Knowledge

Engineering principles

Appropriate application of a scientific approach

Design concepts including solutions to problems

Analytical methods and tools

Understanding

A feel for concepts and number capacities

Application of technical standards

Use of relevant engineering standards

Knowledge of the limits of the given process/es

Appropriate design methods including the use of IT

Abilities

Creativity and innovation

Use of theoretical principles to solve problems

Communication skills including Presentation and Technical Report
