

SCE'S METHODOLOGY FOR FORENSIC ENGINEERING ASSIGNMENTS

The following notes have been prepared to assist in understanding the way in which Shirley Consulting Engineers Pty Ltd [SCE] usually approaches a Client's forensic and investigative assignments.

The approach has been developed on the basis of many years of consulting experience and the current NSW Uniform Court Rules.

Note: Where SCE provides advice within different legal jurisdictions [e.g. Federal Court, State Courts of Queensland & Victoria], then some minor alterations to the approach may be needed to ensure compliance with the rules that apply in those jurisdictions.

1. Step 1 - Initial Review

As a part of a client's / legal practitioner's initial instructions to SCE, the documents considered most relevant should be provided to SCE for assessment.

Note: It is preferable that the various documents, photographs, etc., be provided in electronic / digital form [e.g. .pdf, .jpg].

Subsequently, SCE undertakes a 'scan' of the various documents and information that the client / legal practitioner has provided, and formulates an 'initial' scope of work to enable preliminary technical advice to be provided to the client / legal practitioner.

Note: This 'scan' is **not** a review of the provided documents, but rather an overall 'quick read' to establish whether the matter is within the province of SCE's expertise.

2. Step 2 - Preliminary Analysis / Conference

The second step in the process is normally for SCE to undertake a preliminary analysis of the documents and information, including a site inspection where appropriate. This work then allows for the formulation of an initial 'engineering view' of the matter.

Subsequently, a discussion takes place between SCE and the client / legal practitioner as to the initial engineering view formed. This discussion can take place either in a teleconference or office meeting. Following the meeting / teleconference, the opinions provided during the office meeting / teleconference are documented in SCE's standard manner [viz: a meeting précis or short letter of advice].

3. Step 3 - Preliminary Observations Report

Depending on the results of the opinions provided in Step 2, and after the provision of any additional documents, a more detailed analysis of the various documents and information is then undertaken.

On completion of the more detailed analysis, a 'Preliminary Observations Report' is prepared which summarises the various ground engineering technical issues. This report also often:

- includes a number of sketch diagrams and concise summaries of the situation / incident;
- makes recommendations as to further investigations and analysis.

As this preliminary observations report is usually couched in terms to assist a client in objectively assessing its legal position, it is not prepared in accordance with the various court rules, nor would it normally be suitable for submission to a court.

This report would also normally be submitted to the legal practitioner to preserve its 'privilege'.

4. Step 4 – Factual Report

The next step in the process is for the additional investigations & analyses suggested in the Preliminary Observations Report to be undertaken. If the investigations & analyses include site inspections, literature research, document summaries, etc., then these are documented in a 'factual report' which is normally prepared in a form suitable for submission to a court.

It is also to be especially noted that the factual report does not include expert opinions or conclusions, as it is primarily intended to provide the objective and relevant technical facts.

5. Step 5 - Analysis & Opinion Report [draft]

Following completion of the factual report, any further engineering analyses [e.g. calculations] are undertaken, and the concluded expert engineering opinions expressed in a separate report.

This report is normally prepared in accordance with the relevant Court rules, and usually includes:

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- a) The various assumptions & limitations of the opinions expressed.
- b) A 'comments' section which provides the reasoning behind the various conclusions.
- c) A 'technical appendix' which includes lists of the various documents & references supporting the opinions, together with appropriate calculations, diagrams, etc.

A 'draft' of the report is then submitted to the client's legal practitioner for comment.

Subsequently, and depending on the nature of the matter, a conference to discuss the draft report might take place, and the report finalised shortly after the conference.

6. Step 6 - Reports in Reply

Depending on the nature of the matter, it is often necessary for SCE to prepare a response to reports prepared by other experts engaged in the matter on behalf of other parties.

These reports are normally prepared in 'responsive' form, in which the various issues raised by other experts are responded to by SCE in a sequential manner.

7. Step 7 - Conclave Attendances

Following the submission of the various reports, it is common for a Court to direct that a conclave [or Joint Conference] of experts take place. The purposes of the 'conclave' or 'joint conference' is to establish the various areas of agreement / disagreement between the experts, and to see whether some areas of common ground can be found between the experts.

Note: As usually there are several experts involved who are briefed by different parties, it is common for one or more of the experts to produce some documents, photographs, etc. during the conclave which had not been previously sighted by an individual expert. This additional information often leads to an individual expert revising their original opinion.

A critical issue in any conclave is the establishment of the questions that need to be addressed by the experts. Whilst these questions are often suggested / determined by legal personnel, the conclave is usually much more effective if the various questions are drafted by SCE, or for SCE to have significant input into the questions.

SCE has also found that:

1. Conclaves are more likely to produce a sound technical outcome if the various questions are reviewed / commented on by SCE, and the other engineering experts, prior to the conclave.
2. Careful preparation for a conclave [e.g. in-house discussions as to the various questions] is of considerable assistance to the expert attending the conclave. Conversely, if the preparation is not done, then the SCE expert may not be able to appropriately respond to detailed questioning by other experts.
3. It is more efficient / economic for the technical issues to be resolved during the conclave process, rather than the technical issues being resolved by the more costly court processes.
4. It is usually worthwhile for a SCE staff member to be available in SCE's office as a technical backup to the SCE expert during the conclave. This backup is also usually essential in complex matters, where extraneous questions can require a suitable technical response during the conclave itself.

8. Step 8 - Court Attendances

Whilst concurrent evidence following the conclave process is increasingly becoming the 'norm' in the majority of legal proceedings, from time to time the traditional method of giving evidence is still followed.

In addition, as it is usually very difficult for legal personnel to accurately assess the timetable for the giving of expert evidence, it is usually necessary for the SCE expert to be held 'on standby' for court for a number of days, sometimes weeks, and then only attend court on a day or two.

For SCE to maintain a Senior Staff member on standby, and because of the distraction from other work caused by being on 'stand-by', SCE normally makes a 'stand-by charge' for each day that the Senior Staff member is held to be available for a court attendance.