



OmTrak

SAFETY IN DESIGN

What content should the SID Manual have?

Safety in Design – What content should the SID Manual have?

This guide was written to help architects and owners create Safety in Design Manuals that comply with the Safe Work Australia Code of Practice.

Safety in Design: What content should the SiD Manual have?

Using the Safe Work Australia (SWA) Code of Practice – Safe Design of Structures^[1] as a guide we have developed an outline that may be useful in creating a Safety in Design Report and a Safety in Design Manual.



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Statutory Requirements – Australia

As a reminder the Australian WHS Act section 22 requires a 'Designer' to give adequate information to each person who is provided with the design. That information in summary is:

- Purpose – of the plant, substance or structure
- Evidence – of testing, results etc
- Conditions – to ensure it is without risks to health and safety when used

In other jurisdictions like the USA SiD is called Prevention through Design^[2] (PtD) and in the UK is termed Construction (Design and Management) Regulations 2015^[3] (CDM).

The Work Health and Safety file

The SWA Code Practice, Safe Design Structures recommends the development of a work health and safety file. This is to assist the designer to meet the duty to provide information to others. It can include "copies of all relevant health and safety information the designer prepared and used in the design process, such as the safety report, risk register, safety data sheets, manuals and procedures for safe maintenance, dismantling or eventual demolition".

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Safety in Design – Two Stages

While the Code assumes a single file the process to produce this file has two very different stages. Stage 1 can be called the SiD Report whose objective is to 'inform the design'. The second stage has a different objective, this SiD Manual is to 'inform the owner or user'

Stage 1 – Safety in Design Report

This report will include the designers risk assessments and their approach to eliminating or mitigating the risks within the Design and or Specifications. This report is provided to the Client and to the Principal Contractor.



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Safety in Design Report Headings

The SiD Report should mirror the design development process. Below is an example report outline for a 3 stage design process. This includes; concept, schematic and final for each stage.

Design Stage (Concept/Schematic/Final)

- **Purpose & Objectives** – a description of the projects purpose and objectives
- **Research & Findings** – results of research on; type of facility, incidence of accidents, stakeholder consultations, references to relevant standards, reference to previous SiD Reports and the key findings relevant to safety in design
- **Risk Assessment** –results and copies of the risk assessment undertaken (by who & when) and design actions taken in regards to construction, use/operations, maintenance, dismantling and demolition
- **Actions Taken** – a summary of the design actions taken and evidence of their inclusion. When risk is not eliminated the instructions for the builders, owners, users and general public. This will allow them to safely operate, maintain or demolish over the intended design life cycle

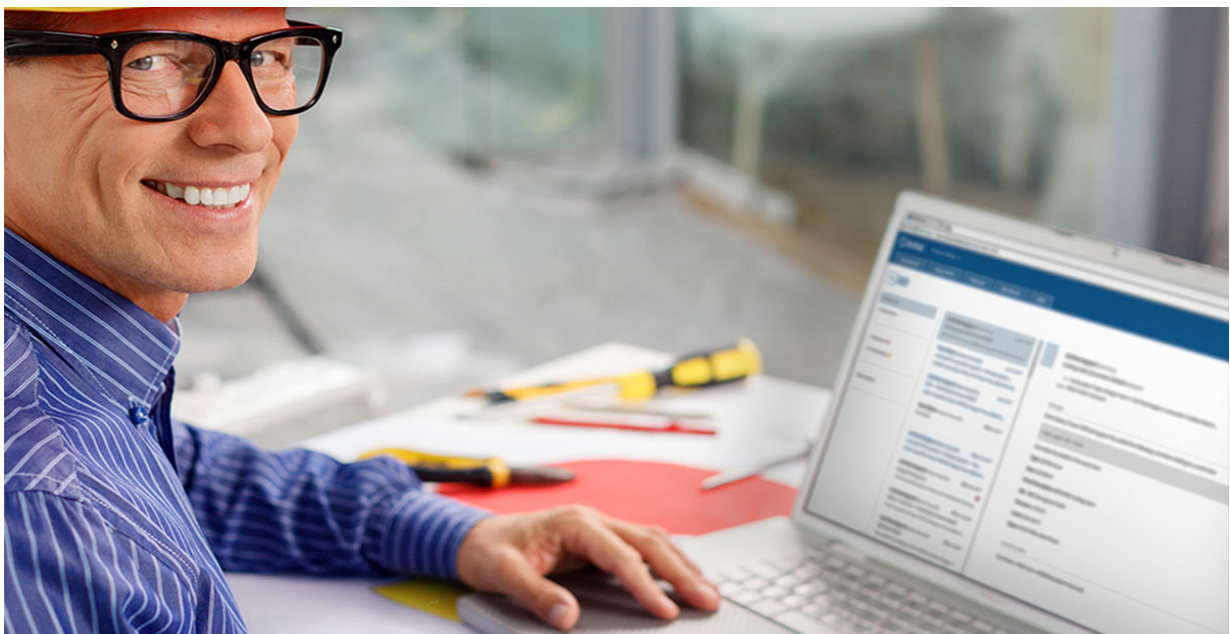
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Stage 2 – Safety in Design Manual

This stage 2 SiD Manual is intended to 'inform the owner or user' on how the new facility and its assets are designed to be used, maintained and any future works including demolition.

The SiD Manual is the Final document and should be completed prior to handover of the new works.

The SiD Manual could be incorporated into the Operations and Maintenance Manuals if needed, to aid in user access. It should be noted that the Principal Contractor and their sub-contractors provide a technical O&M Manual related to the individual elements of the new facilities. Eg the Contractors O&M explains how to operate and maintain a pump, the Design Manual explains why the pump is there.



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The SiD Manual could include the following outline headings;

- **Safety in Design Manual**
- **Purpose & Objectives of the Facilities** – final description of the new facilities purpose, capabilities, capacities, limitations and the likeNew item
- **Safety in Design Reports** – copies of the various SiD Reports developed during the design phase.
- **SiD Amendments during Construction** – any design changes implemented during the build phase (including changed regulations, substituted products) and the resulting amended risk assessments and actions taken
 - Description & Scope of amendments (inc ref to SiD Reports)
 - Research & Findings
 - Risk Assessment
 - Actions Taken
- **Owner Instructions** – clear instructions to the Owners/Users on how the completed works are to be safely operated, maintained, demolished and any life cycle considerations that must be addressed over the operation phase of the new facilities

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There are three basic approaches to developing the SiD Report and Manual.

Approach to completing your SiD Reports and SiD Manual

- **Collaborative Workshops** – this approach allows all the stakeholders and design specialists to collectively develop the SiD Reports at each design stage and the final SiD Manual. It does require a Design or Project Manager to facilitate the process and ensure proper documentation of the outcomes.
- **Design Discipline Approach** – this allows each specialist design consultant to create their SiD Report and SiD Manual as a contribution to the overall final Reports and Manual. This still requires a Design or Project Manager to co-ordinate and collate the completed document as well as detailing the common risks that may affect multiple design disciplines.
- **Combined Approach** – this is where the specialist or discipline based approach is undertaken as an input to a later collaborative workshop to better co-ordinate the various designer's individual assessments. The Design or Project Manager is still critical to co-ordinating and compiling the completed Reports and Manuals.

The Collaborative approach may be quicker however, it might be better suited to simpler projects. For very complex projects a much higher level of rigour may be needed from each design specialist. While the SWA Code Practice envisages a single 'safety file' it is more likely that a multiple of design specialists reports and manuals will need to be collated and combined into a single usable document.

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Safety in Design Challenges

With 10, 20 or even 100 design disciplines on a project this process can become a nightmare. If you would like to learn more about making the SiD process simple, effective and compliant then contact the team at WebFM. Our software OmTrak streamlines the Safety in Design Reports process. If you require some extra assistance our experts can provide consulting services to help you reach your project goals.

Contact WebFM

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References

[1] <https://www.safeworkaustralia.gov.au/doc/model-code-practice-safe-design-structures>

[2] <https://www.cdc.gov/niosh/topics/ptd/>

[3] <https://www.citb.co.uk/documents/cdm%20regs/2015/cdm-2015-principal-designers-printer-friendly.pdf>

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