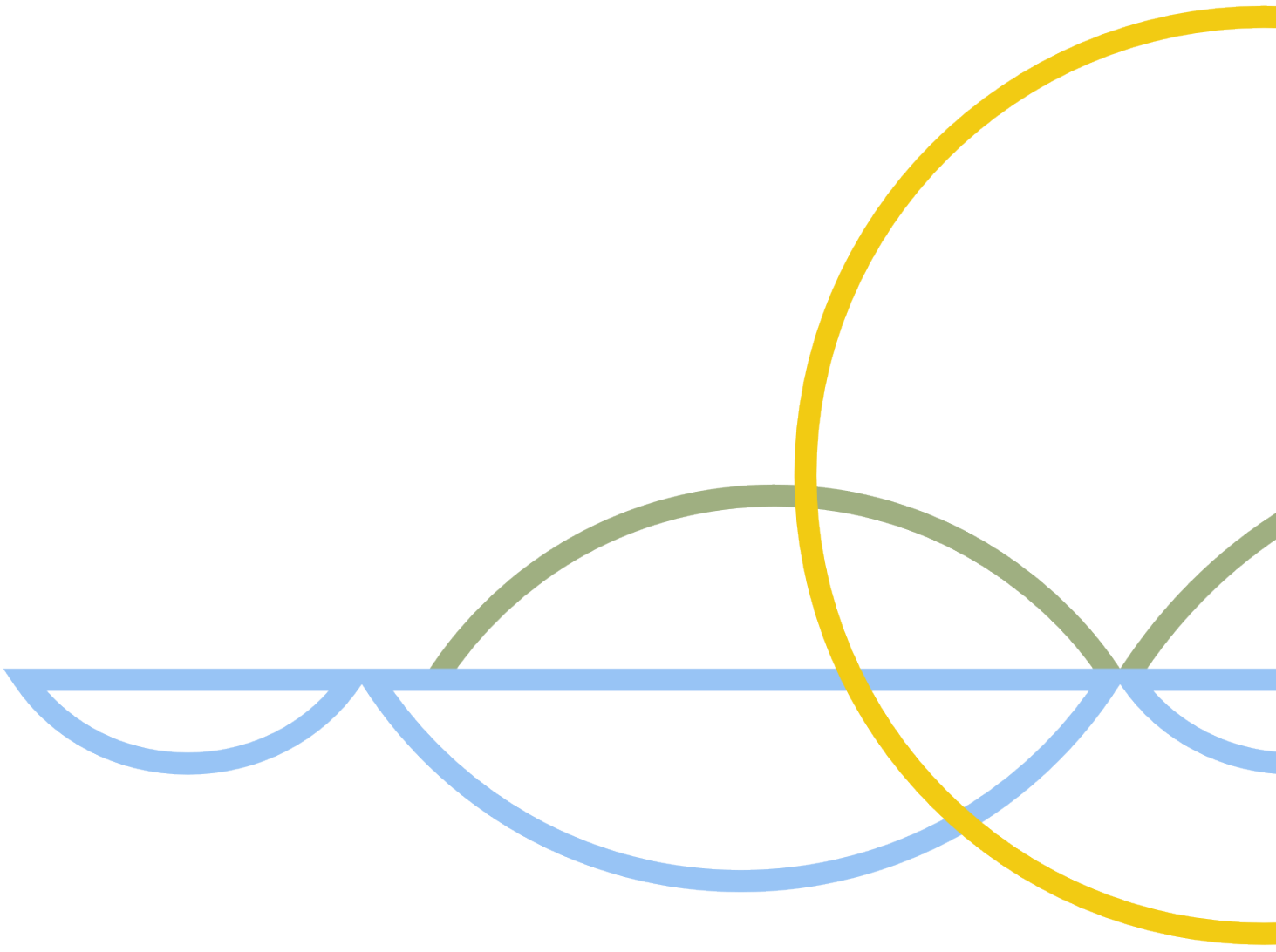
TIAKI WAI
Care in every drop | He wai whakauka

Safety in Design Process



Document control

Version	Version date	Changes	SME	Approver
3	07/09/2026	Rebranded from Wellington Water to Tiaki Wai		Francis Leniston, Head of Design
2	October 2025	Clear steps provided to define the process		Francis Leniston, Head of Design

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1 Introduction

1.1 Objective

To ensure a consistent 'safety in design' (SID) approach for managing health and safety risks arising from new or significant changes to plant, structure and use of substances to ensure that Tiaki Wai, and its designers, meet legislated requirements. The SID process applies to whole of life of an asset, including construction, normal and abnormal use, maintenance and demolition.

1.2 Purpose - why we need this process

1.2.1 A consistent approach to identifying risks and finding controls early on

Decisions made through the design phases of a project can have a significant effect on health and safety (see **Figure 1**). Risks identified during design are eliminated or minimised through controls. The process below provides a consistent approach to completing this work through all project phases.

Through this process, design decisions can influence the health and safety outcomes of a project. Safety in Design ensures that the risks and operability concerns identified are balanced with construction risks. This requires good dialogue between all project stakeholders, especially the operators.

For more about the research-identified benefits of safety in design, see: Section 2.2 of the WorkSafe guide, Health and safety by design: an introduction.

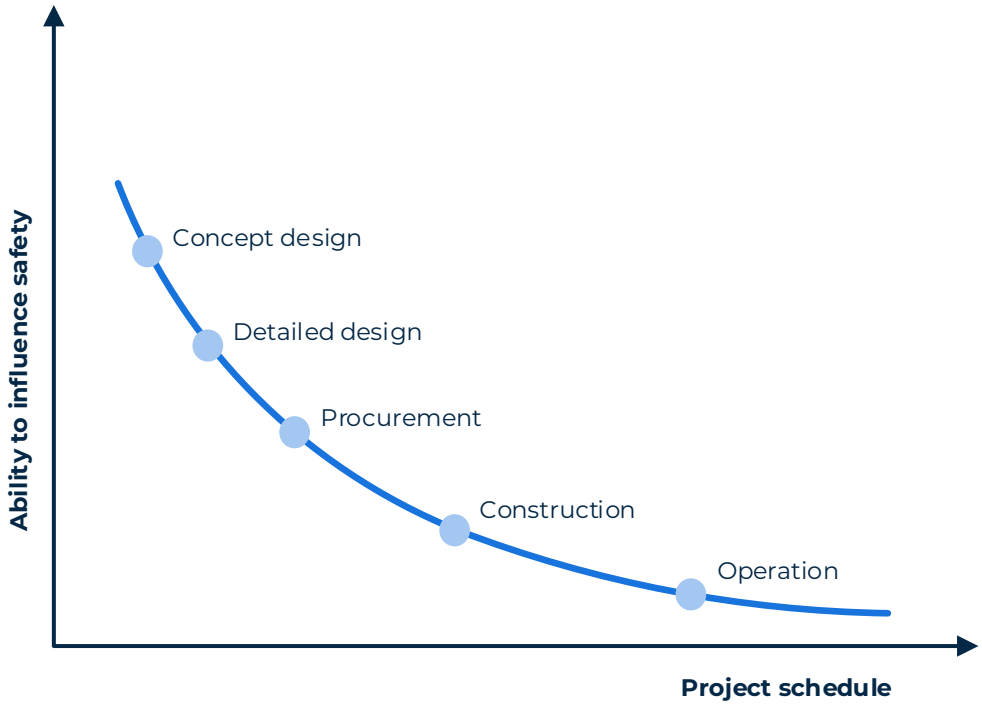


Figure 1: Changes in the ability to influence safety outcomes through a project. After Szymberski, R. 1997. Construction Project Safety Planning. TAPPI Journal, 80(11): 69-74.

1.2.2 Supporting staff to meet their legislated responsibilities

When the Health and Safety at Work Act 2015 (the Act) came into force, it introduced duties for groups of people, including responsibilities for designers of structures, plant and substances where these would be 'used, or could be reasonably expected to be used' at a workplace.

This process is designed to support staff to meet their responsibilities.

For more about these roles and responsibilities, see:

- WorkSafe guide: Introduction to the Health and Safety at Work Act 2015 – special guide
- Section 39 of the Health and Safety at Work Act 2015
- WorkSafe factsheet: 'Reasonably practicable'
- WorkSafe guide: Health and safety by design: an introduction

A hierarchy of control measures to be taken is included in the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 Section 6 (see **Figure 2**).

For Tiaki Wai health and safety documentation, see **Section 6 Related documents** below.

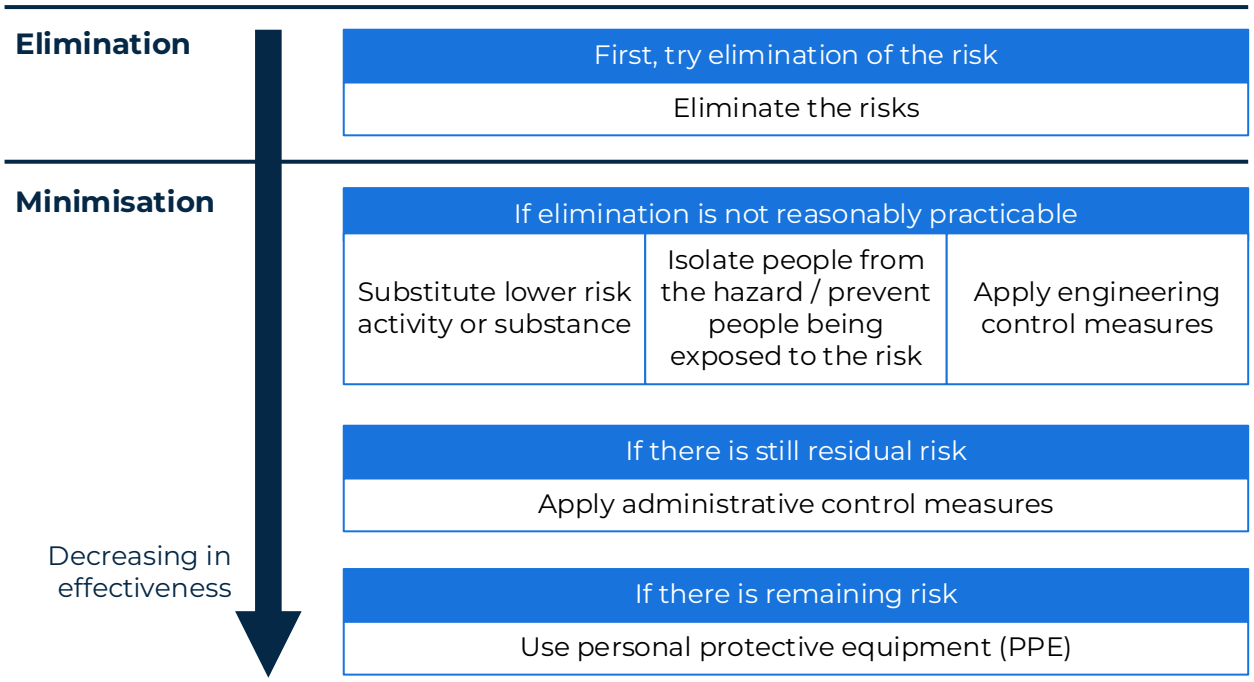


Figure 2: Hierarchy of control measures. Adapted from Figure 1 of the WorkSafe guide: General risk and workplace management – part 2. For more about this hierarchy, see Section 2.2.3 of the WorkSafe guide: General risk and workplace management – part 2. Documenting residual and remaining risks is covered in the process below.

1.3 Scope

The document covers the process to identify and document health and safety risks and their controls, including:

- risks that can be controlled through design decisions, and
- all other asset-related health and safety risks.

This means this document is broader in scope than typical safety in design documentation.

1.3.1 Out of scope

This process does not include training materials to ensure compliance with the duties in the Act.

It does not explain how to use the SID risk assessment form (HSER_0261). Guidance on the use of this form is included within worksheets in the form.

It does not cover the processes for identifying risks that would be recorded in other Tiaki Wai registers, such as:

- the Q-Pulse health and safety register, which is designed to report incidents and near misses
- the Tiaki Wai risk register, which captures high-level organisational risks
- project risk registers for capturing general risks that could impact the running or success of the project.

This process does not cover the related processes within operational teams for filing, communicating and managing any remaining residual risks during the project and after the handover.

1.4 When this process applies

The Safety in Design process applies as a part of the general 'design process', meaning the process of suitably qualified professionals designing the change, and all the other activities that accompany this.

1.4.1 Threshold of use

Projects that create new assets, or that result in significant changes to existing assets, should follow a design process, including safety in design risk management. This includes projects involving significant changes that result in alterations to location, performance, durability, operability or maintainability, and the work environment.

Repairs, maintenance, and like-for-like replacement of components of an asset are not considered significant changes and are therefore not required to follow a design process. Saying this, all like-for-like asset replacements must also conform to all contemporary standards. This can introduce configuration difficulties with existing assets, and a design process, including safety in design, should be followed where configuration issues result in significant changes, as described above.

1.4.2 Scope of use

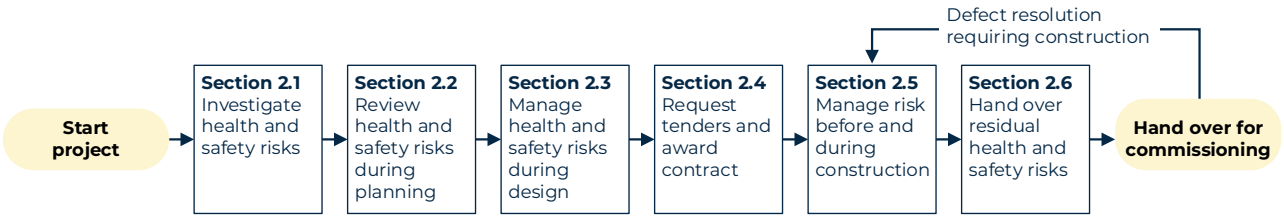
The Safety in Design process below isn't restricted to just risk management during design, as it also covers health and safety during construction, and the many stages of a project, including investigation, project planning, design, and construction or installation. The next section provides more detail about how the Tiaki Wai Safety in Design process applies during these project phases.

While eliminating and minimising health and safety risks through the project, the risks throughout the asset management lifecycle should be considered: asset planning, design, constructing, commissioning, operation and maintenance, to renewal or decommissioning (see **Figure 3**).

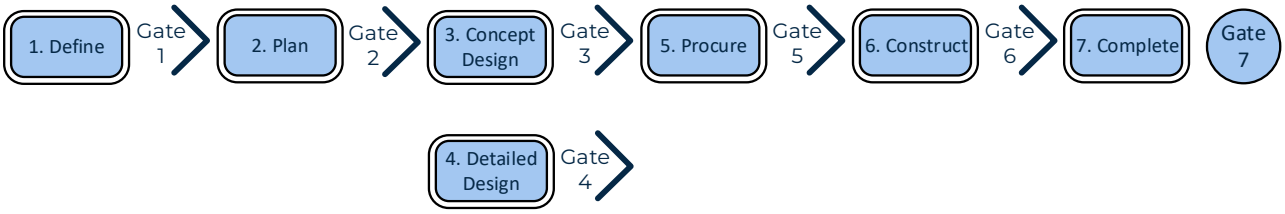


Figure 3: While identifying and managing the health and safety risks at each phase of a project, the designer and project team should also consider the future risks for each stage in the asset management lifecycle.

2 Safety in design process



Equivalent capital project phases and gateways:



Note: The process phases above apply to most types of capital projects with exceptions.

For design-and-build projects, for example, the procurement phase will be earlier and occur after the planning and before the design phases in the diagrams above, and the contractor may be following their own in-house SID process. In this case, the contract 'Principal's Requirements' document will determine how safety in design risk assessments are undertaken: an equivalent to the process below is expected as a minimum.

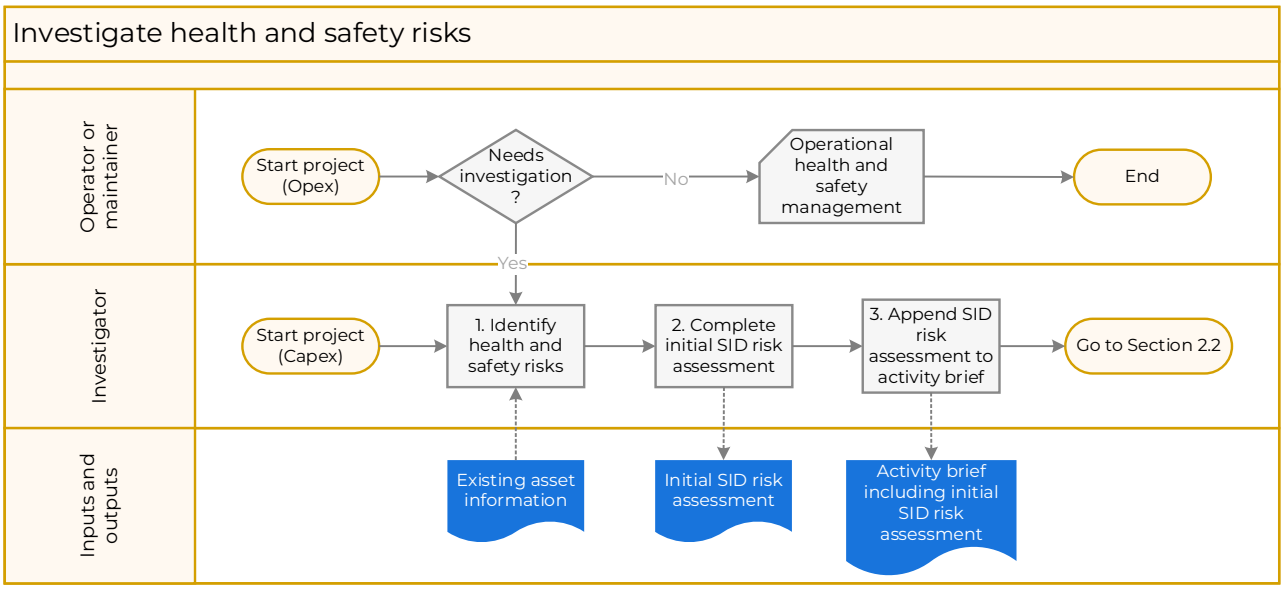
2.1 Investigate health and safety risks

2.1.1 Purpose

To investigate known health and safety risks and to prepare the initial SID risk assessment.

2.1.2 Process map

The swim lanes show who leads the work, supported by other roles where needed. See process steps for details.



2.1.3 Trigger

Propose a project involving a new structure, plant or substance for – or a significant replacement or changes to – the infrastructure managed by Tiaki Wai. Opex projects involving minor repairs or minor maintenance, or like-for-like replacements are generally not required to follow the SID process (see **Section 1.4** above).

It is important to note that regardless of whether or not the SID process is triggered, risks must also be identified and managed in accordance with the Tiaki Wai Health and Safety Manual (HSEG_0038).

2.1.4 Need an investigation of the health and safety risks? (Opex project)

- No – document this decision and follow the relevant operational health and safety risk management process while completing the work.
- Yes – continue and go to step 1.

Note: If an Opex project involves significant change or design, as defined in **Section 1.4** above, follow the SID process below and organise an investigation of the health and safety risks.

Note: Decisions not to follow the SID process for projects involving significant change or design must document how the decision does not create a risk of non-compliance with Tiaki Wai duties under sections 36 and 39 of the Act and signed off at a level above the decision makers (team lead, head or a higher level).

Step 1: Identify health and safety risks

1. Review the proposed change in detail to identify specific risks, particularly for specialist projects.
2. Check site-specific information, registers and systems, previous health and safety incidents, hazards associated with the project location, and previous risk assessments for the asset or similar infrastructure.
3. Consult the asset manager and operational staff who know the asset well.
4. Visit the site (optional).

Step 2: Complete initial SID risk assessment

1. Complete an initial assessment of the health and safety risks for the project.
2. Include the risks identified in step 1.
    - Template: SID risk assessment form (HSER_0261)
    - Guidance: See worksheets in the template

Step 3: Append SID risk assessment to activity brief

1. Append the initial SID risk assessment to the project 'activity brief'.
2. Organise sign off for the SID in the activity brief.
    - Template: Activity brief template (PCMT_0009)
    - Guidance: Activity brief guidance (PCMT_0008)

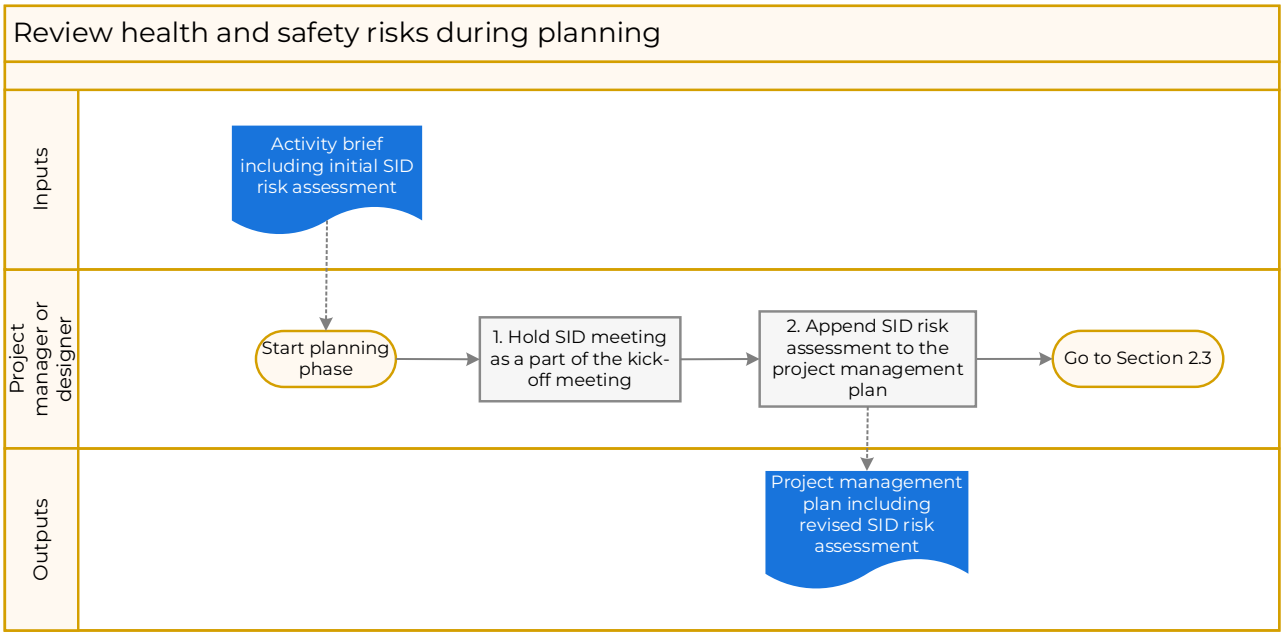
3. Include link to activity brief in the Gateway 1 checklist.
    - Template: Gateway checklist (PCMF_0001)

2.2 Review health and safety risks during planning

2.2.1 Purpose

To review and refine the SID risk assessment, including identification of new risks, for project management planning. For capital projects, this occurs during Phase 2 – 'Plan' of the Capital Projects Delivery framework.

2.2.2 Process map



2.2.3 Trigger

Programme lead receives the activity brief after the investigation (**Section 2.1**) and assigns the project to the project manager and the designer. The project manager begins preparing the project management plan.

Step 1: Hold SID meeting as a part of the kick-off meeting

1. Organise a kick-off meeting facilitated by the project manager or designer.
   Note: The programme lead, project manager, designer, investigator, and operator or maintainer must attend the discussion about SID.
2. Include an agenda item to review the initial SID risk assessment, including identification of new risks.
    - Template: Kick-off meeting agenda (PCM_0005)
3. Update the SID risk assessment to reflect the discussion in the kick-off meeting.
4. Save the revised SID risk assessment as a major version in the document management system (under the Capex Sharepoint project folder if being delivered through Capital Delivery, or under the appropriate Opex SharePoint project folder otherwise).

5. Circulate the revised SID assessment to all relevant stakeholders in the project.

Step 2: Append SID risk assessment to the project management plan

1. Append the revised SID risk assessment to the project management plan.
2. Add link to SID risk assessment in the Gateway 2 checklist.

2.3 Manage health and safety risks during design

2.3.1 Purpose

For the proposed change to plant, infrastructure or substance:

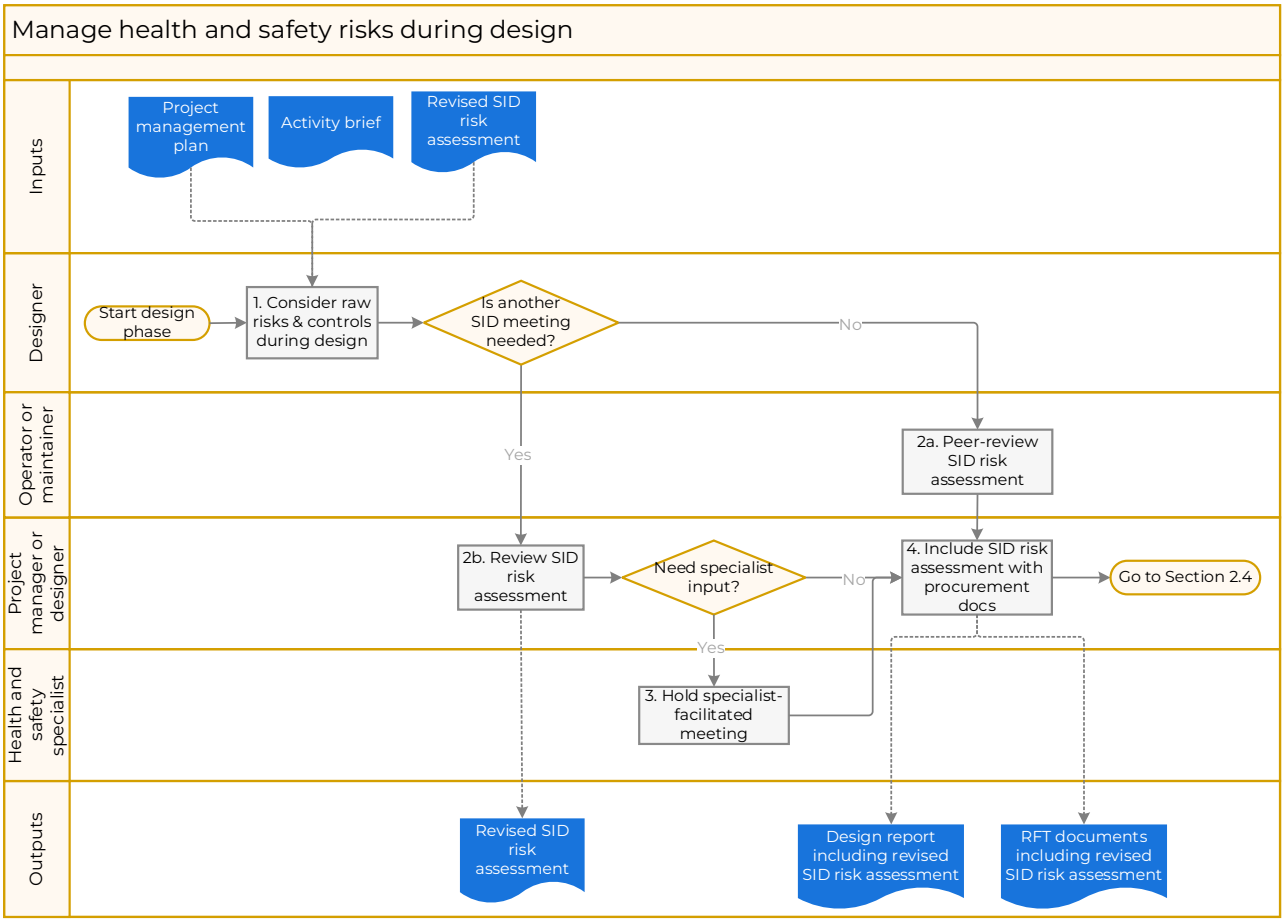
- develop controls in the design to eliminate identified risks for health and safety, or
- identify controls for the risks that cannot be eliminated through design.

For capital projects, this occurs during Phase 3 – 'Concept design' (if appliable) and Phase 4 'Detailed design' of the Capital Projects Delivery framework.

Note: For some projects, for example, design-and-build projects, the design may be outsourced to a contractor. The same or similar process steps will still apply.

2.3.2 Process map

The swim lanes show who leads the work, supported by other roles where needed. See process steps for details.



2.3.3 Trigger

Complete project planning and sign off project management plan. Start design phase.

Step 1: Consider raw risks and controls during design

Note: Raw risks and controls are identified early in the design process. For many capital projects, this occurs during Phase 3 – Concept design. Depending on the complexity of the project, some project managers can apply to skip Phase 3 and go straight to Phase 4 – 'Detailed design' (thereby combining concept and detailed design under one project phase). For both scenarios, managing the raw risks and identifying their controls occurs early in the design process, where this is most effective (**Figure 1**).

The steps below apply to both scenarios and the designer should use a commonsense approach for the timing for identifying risks and controls during the design.

1. Identify raw risks and their controls in the design to eliminate or minimise the health and safety risks identified in the SID risk assessment.
2. Assess the residual risks, including identification of new risks or increased consequence or likelihood of an existing risk, and update the SID risk assessment.

Is another SID meeting needed?

- No – if the risks are **routine** or the residual risk rating is assessed as **less than moderate**, ask the operator or maintainer to peer-review the risk assessment, go to step 2a then step 4 (see process map above).
- Yes – if the risks are **not routine** or the residual risk rating is assessed as **moderate or greater**, go to step 2b and follow the process from there (see process map above).

Record the justification for this decision in the SID risk assessment form in the panel at the top of the 'Assessment' tab in the SID risk assessment, under 'Record of decisions'.

Step 2a: Peer-review SID risk assessment

1. The operator or maintainer peer-reviews the SID risk assessment if the risks are **routine** or the residual risk rating is assessed as **less than moderate**.
2. Provide the operator or maintainer with a copy of the current SID risk assessment.
3. Peer-reviewers may:
   i. seek advice on any risk if needed (including expert advice),
   ii. identify risks not previously identified or which arise as a result of a control as part of their recommended changes to a SID risk assessment, and
   iii. recommend that the risk assessment go to a SID risk assessment meeting (Step 2b).
4. The operator or maintainer must communicate any recommended changes to the SID risk assessment to the project manager.
5. The project manager or designer must update the SID risk assessment to reflect any changes.
   Note: This peer-review must take place before the SID risk assessment is shared with any prospective contractors.
   Note: Go directly to Step 4 after this step (see process map above).

Step 2b: Review the SID risk assessment

1. If the risks are not routine and the residual risk rating is assessed as **moderate or greater**, the project manager or designer organises a meeting to review the health and safety risks and the controls needed. The purpose of this meeting is to identify, and eliminate or minimise, health and safety risks, including identification of new risks, 'so far as is reasonably practicable'.
2. Provide a copy of the current SID risk assessment to the relevant stakeholders in advance of this meeting.
3. Hold the meeting on site or complete a site visit as a part of, or in preparation for, this meeting.
   Note: If meeting on site is not practical for logistical reasons (such as safety, noise, access not yet arranged on private property, extremely large sites), hold an office-based meeting and consult a GIS map of the infrastructure overlaid on Google Maps or similar.
   Note: People to invite to the meeting.
   i. The designer or project manager facilitates this meeting and both roles must attend.
   ii. The operator and/or maintainer and a construction expert must attend.
   iii. Invite the investigator if further clarification and context is required for any of the identified risks.
   iv. If applicable, ask for input from the property owner or their representative, and other stakeholders or affected parties (e.g. those who are at or near the workplace and whose health or safety may be affected by the plant, structure or substance, such as a local school board or business owner).
4. Establish the context for the design during the meeting. Discuss the location and the history of the existing structure, plant or substance. Talk about the intended function and interaction with other on-site components. Discuss site-specific or unusual design risks, such as major hazards requiring safety critical equipment.
   - Guidance: See **Section 3 Organising and facilitating SID meetings** for guidance on preparing for SID meetings and eliciting and discussing the risks and controls.
5. Update the SID risk assessment to reflect this discussion. Save it as a major version in the document management system (under the Capex SharePoint project folder if being delivered through Capital Delivery, or under the appropriate Opex SharePoint project folder otherwise).
6. Send revised SID risk assessment to all relevant stakeholders involved.

Does the SID risk assessment need input from a health and safety specialist?

- YES – go to Step 3 if:
  - it's not possible to identify reasonable, practicable steps to minimise the residual risk from high or greater, or
  - the design is for a new or rehabilitated workplace area accessed frequently, or
  - there is a level of complexity in the design/project or uncertainty revolving around other on-going or upcoming projects, and how these might impact the effectiveness of the control and safeguarding measures, or

  - there is uncertainty about how a hazard may result injury or illness, or
  - the work activity involves different hazards and there is a lack of understanding about how these hazards may interact with each other to produce new or greater risks, or
  - changes at the workplace occur that may impact on the effectiveness of control measures, or
  - hazardous chemicals or biological hazards are present. or
  - there would be changes in energy levels are deliberately induced (for example, liquid to gas, low pressure to high pressure, high voltage to low voltage). or
  - new, or changed, controls are part of the project. or
  - the work involves a significant risk to the public or to the environment.
- NO – go directly to Step 4.

Record the justification for this decision in the SID risk assessment form in the panel at the top of the 'SID risk assessment' tab in the SID risk assessment, under 'Record of decisions'.

Step 3: Hold health and safety specialist-facilitated meeting

1. Engage specialist services to facilitate a more detailed health & safety risk assessment, including identification of new risks.
   Note: The health and safety specialist must have relevant experience and formal training or qualifications, such as: post-graduate training in risk management and/or safety in design, and/or demonstrated experience or training in the selection, application and/or facilitation of risk management tools and techniques (e.g. CHAIR, HAZOP, CHAZOP[1] etc).
   Note: The meeting must be attended by the designer, including all disciplines which are involved in the project, project manager, operator and/or maintainer, and any other relevant affected party, such as the property owner or their representative. The meeting should also include someone with construction experience.
   Note: See **Section 3 Organising and facilitating SID meetings** on ensuring all participants have the relevant information in advance of this meeting.
2. Hold the meeting on site or, if this is not possible, complete a site visit as part of the meeting.
   Note: If meeting on site is not practical for logistical reasons (such as safety, noise, access not yet arranged on private property, extremely large sites), hold an office-based meeting and consult a GIS map of the infrastructure overlaid on Google Maps or similar.
3. All identified actions and recommendations must be fully addressed and closed out. Take meeting minutes to ensure the detail on how risks are closed out or minimised are captured.
4. Update the SID risk assessment based on the review in this meeting and meeting minutes. Save SID risk assessment file as a major version in the document management system (in the project folder, as above). Circulate it to all stakeholders involved.

[1] Construction hazard assessment implication review (CHAIR) is a safety in design tool; hazard and operability study (HAZOP) and control hazard and operability study (CHAZOP) are systematic approaches to identifying hazards and controls.

5. Revise the design, where needed.

Step 4: Include SID risk assessment with documentation for procurement[2]

These tasks are undertaken by the project manager or designer, as per the process map above.

1. Check SID risk assessment is up-to-date, complete and ready to be released externally.
2. Prepare documentation for procurement of construction or physical works – include SID risk assessment with documentation for request for tender (RFT) or pricing.
3. Add link to SID risk assessment in the Gateway 3, 4 and 5 checklists.

2.4 Request tenders and award contract

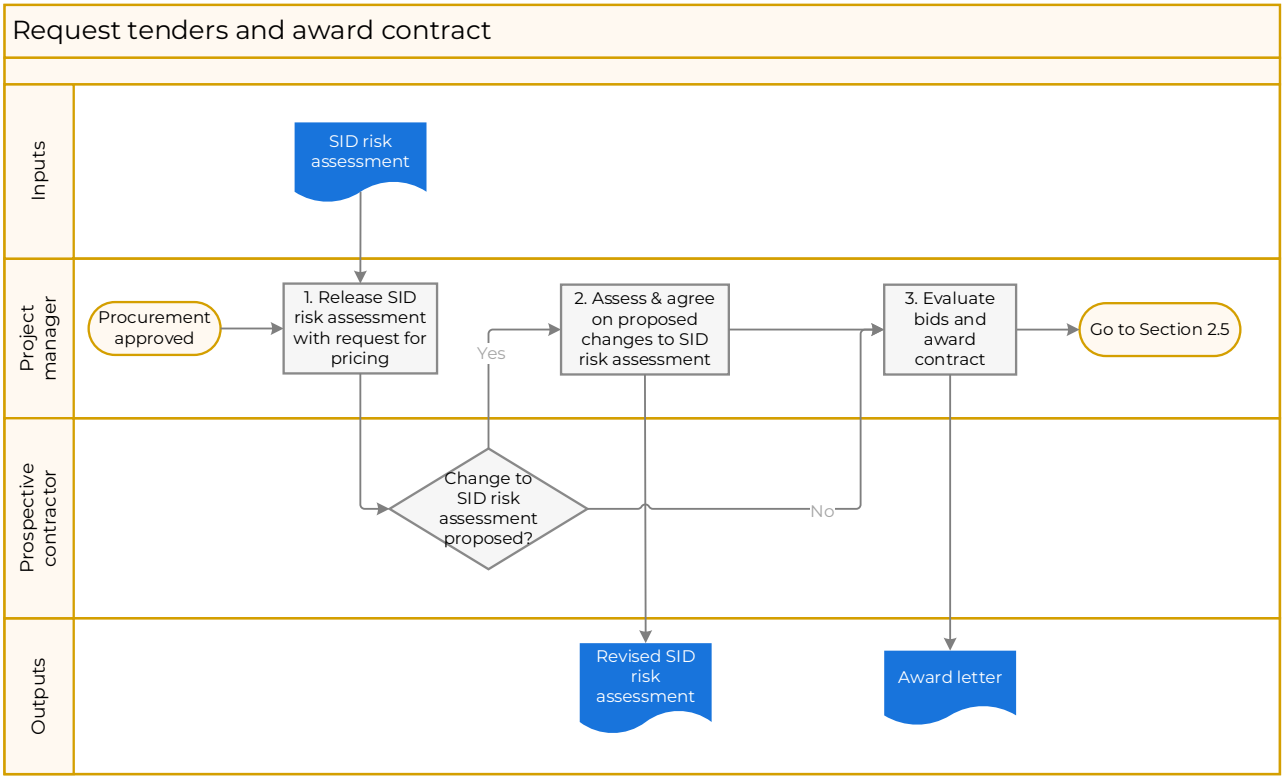
2.4.1 Purpose

- Communicate assessed health and safety risks to prospective contractors so that they can budget for them in their bids for work.
- Revise the SID risk assessment to include proposed changes based on the contractor's proposed methodology.

For most capital projects, this occurs during Phase 5 – 'Procure' of the Capital Projects Delivery framework. However, there are exceptions. For example, the procurement process step will be earlier for design-and-build projects, occurring after the planning and before the design phases in this framework.

[2] Note that for design-and-build projects, the contracts may be procured at the start of the design process.

2.4.2 Process map



2.4.3 Trigger

Procurement approved for project.

Step 1: Release SID risk assessment with request for pricing

1. Include the SID assessment with the request for tender (RFT) / request for pricing.

Change to SID risk assessment proposed by prospective contractor?

- Yes – go to Step 2
- No – go to Step 3

Step 2: Assess and agree on proposed update to SID risk assessment

1. If a prospective contractor requests a change to the SID risk assessment during procurement, discuss this and agree on whether there will be an update.
2. Save revised SID assessment as a major version in the document management system (under the Capex SharePoint project folder if being delivered through Capital Delivery, or under the appropriate Opex SharePoint project folder otherwise).
   Note: The final revision of the SID risk assessment may be completed after the walkover.

Step 3: Evaluate bids and award contract

1. Refer to the SID risk assessment in the award letter.
   Guidance: Guidance for Capital Project Delivery (PCMG_0002)

2.5 Manage risk before and during construction

2.5.1 Purpose

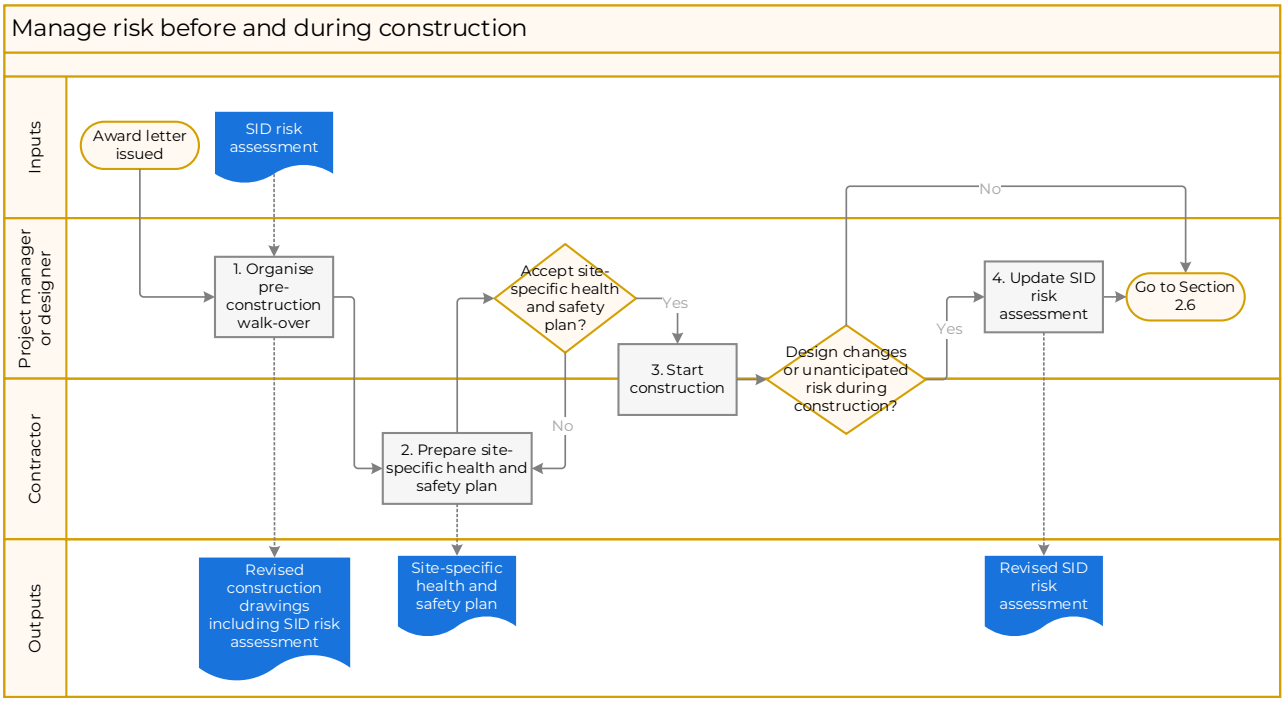
- Confirm known residual risks before construction/works with stakeholders
- Capture and manage additional risks that arise during the construction/works

For capital projects, this occurs during Phase 6 – 'Construct' of the Capital Projects Delivery framework.

Note: For some projects, for example, design-and-build projects, the transfer of the design to the construction phase may be managed by a contractor. The same or similar process steps will still apply.

2.5.2 Process map

The swim lanes show who leads the work, supported by other roles where needed. See process steps for details.



2.5.3 Trigger

Award letter issued.

Step 1: Organise pre-construction walk-over

1. Organise an onsite meeting to review the SID risk assessment, including identification of new risks, and to discuss the construction approach as it relates to the design, confirming that it can be constructed safely.
2. Identify any other risks and their controls at this meeting.
   Note: The designer or project manager facilitates this meeting.
   Note: The contractor must attend.
   Note: If the risks are not low and routine, the operator and/or maintainer must attend.

Note: If applicable, include the property owner or their representative, and other stakeholders or affected parties (for example, local school board, business owner, etc.) and consider their input.

3. Update the SID risk assessment based on this meeting. Update control owner to show where the control belongs to the designer or to the constructor.
4. Revise the construction drawings if necessary and issue 'for construction' set with SID risk assessment.
5. Save SID risk assessment file as a major version in the document management system (under the Capex SharePoint project folder if being delivered through Capital Delivery, or under the appropriate Opex SharePoint project folder). Circulate it to all stakeholders involved.

Step 2: Prepare site-specific health and safety plan

1. The contractor must identify proposed minimum controls for the residual risks in the latest version of the SID risk assessment received from the project manager or designer.
2. The contractor must prepare a site-specific health & safety plan for construction based on these controls.
3. The contractor must send the site-specific health & safety plan to the project manager for review.
4. The contractor must address any concerns raised by the project manager or designer.

Accept site-specific health and safety plan?

- No – go back to Step 2
- Yes – go to Step 3

Step 3: Start construction

1. The contractor is responsible for completing the design in line with site-specific health and safety plan.
2. The project manager must monitor the construction of the design to ensure compliance with the site-specific health and safety plan.

Design changes or unanticipated risk during construction?

- No – go to Section 2.6
- Yes – go to Step 4

Step 4: Update SID risk assessment

1. The contractor and project manager must ensure the SID risk assessment covers all risks arising from changes in the design or unanticipated risks encountered during construction. Use a specialist facilitator if needed.
   Note: Include the operator and maintainer as necessary, and all other relevant stakeholders.
2. Update the SID risk assessment based on this meeting. Save SID risk assessment file as a major version in the document management system (under the Capex SharePoint project

folder if being delivered through Capital Delivery, or under the appropriate Opex SharePoint project folder otherwise). Circulate it to all stakeholders involved.

2.6 Hand over residual health and safety risks

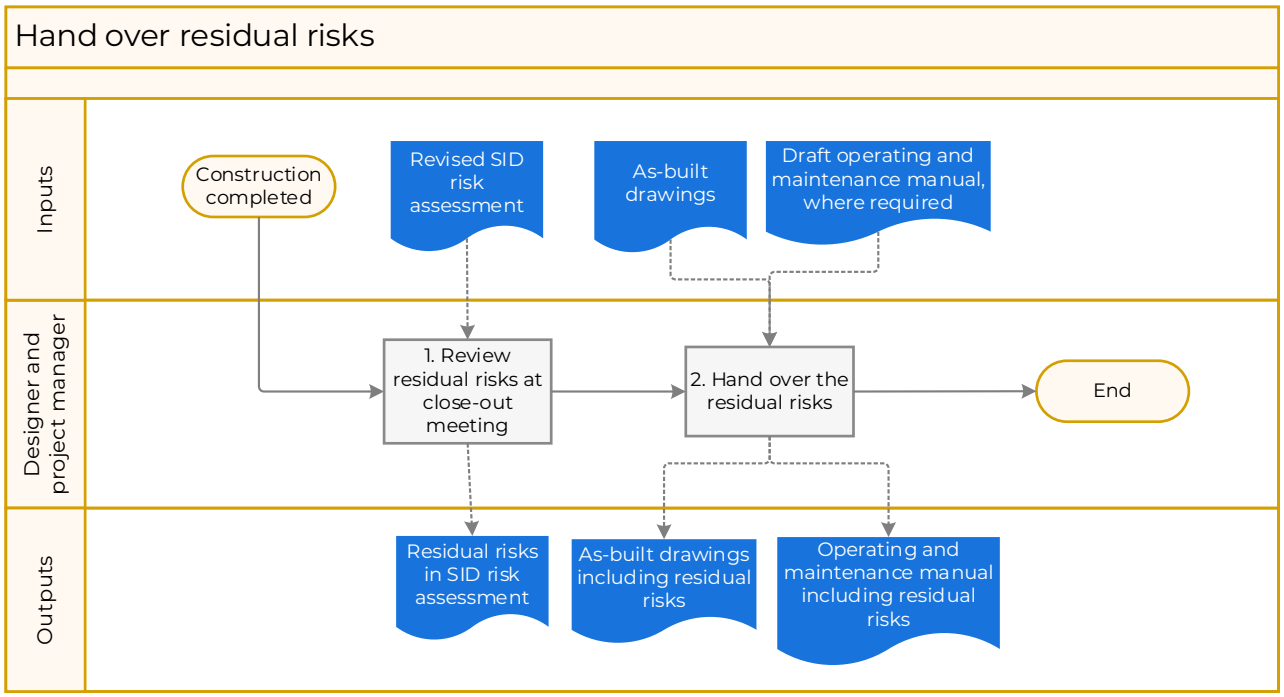
2.6.1 Purpose

- To communicate remaining residual risks.

For capital projects, this occurs towards the end of Phase 6 – 'Construct' of the Capital Projects Delivery framework.

2.6.2 Process map

The swim lanes show who leads the work, supported by other roles where needed. See process steps for details.



2.6.3 Trigger

Construction completed.

Step 1: Review residual risks during close-out meeting

1. The designer must organise and facilitate a close-out meeting to review the SID risk assessment and determine if any residual health and safety risks remain, including any new risks, once the construction is completed.
   Note: The roles required to attend depends on the level of residual risk remaining:
   - **low and routine** in the assessment, the designer, contractor and operator and/or maintainer must attend this meeting
   - **moderate and above** in the assessment, the designer, project manager, contractor, and operator and/or maintainer must attend and, where appropriate, invite and consider input from the property owner or their representative and any other affected party.

2. The designer must update the SID risk assessment based on this meeting. Ensure the risk assessment records all residual health and safety risks. Save SID risk assessment file as a major version in the project folder and circulate to all relevant stakeholders.

Step 2: Hand over the residual risks

Note: This step represents an interim process and should be updated once there is an organisational database/system for capturing the risks that have been eliminated as well as the residual and any new risks after construction.

1. The designer or project manager must save the register containing all risks, including risks that were identified and eliminated as well as all remaining and new risks in the SID risk assessment in the document management system (under the Capex SharePoint project folder if being delivered through Capital Delivery, or under the appropriate Opex SharePoint project folder otherwise).
2. The project manager should ensure that a copy of the SID risk assessment containing the residual risks is appended to the as-built drawings when these are supplied to the Data Quality (Asset Data Management) team in Digital Products and Services. The SID register should also be supplied in Excel form.
3. The remaining risks are communicated directly to the Asset Manager and the Investigator.
4. The project manager must ensure that the residual risks are captured in any draft operation and maintenance manuals provided by the contractor.
    - Guidance: Guidance for Capital Project Delivery (PCMG_0002)
    - Process: Asset Information Requirements (STD_0003)
5. The relevant operations teams are responsible for the ongoing safe operation and maintenance of the asset, including the control of any residual risk, once the new or changed infrastructure is in commission.
6. Add link and details in Gateway 6 checklist to show that residual operation, maintenance and decommissioning health and safety risks were communicated clearly.

2.7 Identify risks and controls for remediation construction during the defects period

1. If remediation requiring construction is required following practical completion and during the defects period, repeat the steps under **Section 2.5 Manage risk before and during construction** and **Section 2.6 Hand over residual health and safety risks**.

3 Organising and facilitating SID meetings

3.1 Before the meeting

When setting up a SID meeting, consider the following steps.

1. Establish who needs to attend the meeting.
2. Decide on the scope and objectives of the meeting and circulate a meeting agenda at least 48 hours in advance. If the discussion on SID is a part of a much longer meeting, consider holding this at the beginning or end of the meeting. This would support operational staff who need to be there to discuss health and safety risks, but whose roles mean they can't easily commit to long meetings, can attend.
3. Send out relevant information, such as drawings, reports and the version of the risk assessment you'll be reviewing in the meetings with advance notice to allow time for review.
4. Don't assume everyone will have time to read long documents before the meeting. If you are sending out a lot of information, point out the relevant sections or summarise the key points they need to be aware of while at the meeting and providing their expertise.
5. If there is a long list of risks to discuss, these can be challenging to review in meetings. Consider grouping the most common, low-impact risks with their known/accepted controls into one list. Circulate this before the meeting so that attendees have a chance to review it and ask for any feedback on the list at the meeting, including identification of new risks. The aim is to reduce the time spent going through common, low-impact risks individually in meetings.

3.2 Facilitating the SID meeting

When facilitating a SID meeting, consider the following steps.

1. Ask someone to keep minutes so that important conversations, decisions and assigned actions are captured.
2. After introductions, be clear about the purpose and objectives of the meeting. Keep this short and to the point.
3. Stick to the agenda. It's the facilitator's job to be assertive and take control if any discussion starts to become out of scope, or in too much depth, for the meeting. Invite people to finish their conversation after the meeting and to report any relevant points back.
4. Make sure everyone has a chance to contribute.
5. People can start to tune out if a meeting largely involves the facilitator reading a long list of risks from a spreadsheet. To make the meeting more interesting while eliciting and reaching agreement on risks and their controls, consider using one of the following.
6. Identify specific areas of risk to discuss and discuss sets of risks by theme.
7. Hold the meeting on site and discuss the risks and controls there.
8. Use a list of prompts to support identifying risks.

9. Define a specific task and ask people to add to an online whiteboard (e.g. Microsoft Whiteboard). There are many suitable templates on these platforms. Allow time for people to login and add to the board, and a separate time to discuss the group's collective input together. Don't run this activity concurrently with other conversations in the meeting, as people will find it difficult to focus.
10. Use white boards and post-its if you are at a physical meeting.
11. Have a map and the design drawings available in the meeting and use these as a prompt. Use Google Street View to look at the roading and for local risks.
12. Take regular breaks if the meeting is long.
13. After the meeting, confirm the minutes with the meeting attendees then circulate them to all relevant stakeholders.

4 Monitoring and review

Process Part	Summary of monitoring or reviewing	Monitoring or review schedule
2.6 Hand over residual risks	Update and include new process step if process agreed for capturing SID information within GIS capability.	Revisit October 2027 and annually until implemented

5 Roles and responsibilities

Note: An individual may hold more than one role depending on the size of the project.

Table 1: SID process roles and responsibilities

Role	Responsibilities
Investigator	Investigates the known health and safety risks at the site and for similar plant or structures and completes the initial SID risk assessment. Attends and provides expertise at meetings during planning and design.
Asset manager	Responsible for managing asset; consulted during the safety in design process.
Operator	Advises on health and safety risks arising from the operation of the plant. Receives and communicates residual risks after construction.
Maintainer	Provides health and safety expertise about maintaining certain parts of the infrastructure managed by Tiaki Wai. Receives and communicates residual risks after construction.

Role	Responsibilities
Programme lead	Provides end-to-end management of Capex projects and holds the relationship with council owner for the project. Hands over the residual risks after construction as per the documented process.
Project manager	Provides project management for all phases of the project including design work. Ensures the SID risk assessment is updated where required, and at least once during each Phase.
Designer	Creates design solution. Identifies any residual risks during designing. Minimises or eliminates identified health and safety risks through controls in the design.
Specialist facilitator	A specialist in risk assessment (for example, HAZOP and CHAZOP) who facilitates a SID risk assessment meeting when invited to do so under certain high-risk circumstances.
Contractor	May advise at an early stage in the project before a contract is awarded if there is an arrangement to do so. Provides input on constructability and safety of a design. Identifies at an early stage the health and safety risks associated with the construction phase. Prepares site-specific health and safety plan. Builds, replaces or installs structure or components in line with the design and the site-specific health and safety plan. Attends and contributes to meetings before, during and after construction.
Control owner	Responsible for implementing the 'control' or approach taken to minimise or eliminate risk. The responsibility under this role is assigned to people in the following roles, depending on the stage of the project and the type of risk: the designer, the contractor, the operator or the maintainer.
Risk owner	Owns the risk and is responsible for managing it.

The RACI matrix for the roles involved through the process are:

- **responsible** and does the work (R),
- **accountable** for delegating work and confirming when it is complete (A),
- **consulted** for their expertise (C) and
- kept **informed** about progress (I).

Table 2: RACI matrix

Sub-process	Section	Investigator	Asset manager	Operator or maintainer	Programme lead	Project manager	Designer	Specialist	Contractor
Investigate health and safety risks	2.1	R	C	C	-	-	-	-	-
Review health and safety risks during planning	2.2	C	-	C	I	A	R	-	-
Manage health and safety risks during design	2.3	C	-	C	I	A	R	R	-
Request tenders and award contract	2.4	-	-	I	-	A	R	-	C
Manage risk before and during construction	2.5	-	-	C	-	A	C	-	R
Hand over residual health and safety risks	2.6	-	I, R	I, R	I	A	C	-	R

6 Related documents

6.1 Tiaki Wai controlled documents

Document number	Title
Risk management	
POL_0801	Risk Management policy
HSER_0261	Safety in Design Risk Assessment form
PCM_0005	Kick-off meeting agenda
Asset information requirements	
STD_0003	Asset Information Requirements (formerly: the As-Build Specification for Water Services)
ICT_0004	Regional draughting manual for water services
Health and safety	
POL_0101	Health and safety policy
HSEG_0038	Health and safety manual
HSEP_0056	Health, safety and wellbeing expectations – guidance for supply chain partners
Capital project management	
PCMG_0002	Guidance for capital project delivery
PCMT_0009	Activity brief template
PCMT_0008	Activity brief guidance
PCMF_0001	Gateway checklist

6.2 Other references, legislation and standards

- WorkSafe NZ Good practice guidelines: Health and safety by design, an introduction
- WorkSafe factsheet: Reasonably practicable July 2017
- Health and Safety at Work Act 2015
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- Health and Safety at Work (Worker Engagement, Participation and Representation) Regulations 2016