RISK ASSESSMENT AND SAFETY IN DESIGN (SID)

PURPOSE AND SCOPE

The purpose of this System Requirement (SR) is to explain how health and safety risk is assessed and managed in line with the Laing O'Rourke Risk Management Procedure. It covers the construction and commissioning phase of projects and the operation and maintenance phase of Laing O'Rourke sites.

1.0 SAFETY IN DESIGN (SID)

Laing O'Rourke Safety in Design (SiD) system ensures work health and safety risks are mitigated through the design process by considering the procurement, construction, operation, maintenance and demolition / disposal phases. The purpose is to seek continuous improvement in our design and construction systems and processes. Where Laing O'Rourke is in control of the design and have contractual design responsibility, the assessment is carried out as per Safety in Design Procedure.

1.1 IDENTIFY RESIDUAL DESIGN RISKS AND TRANSFER TO THE CONSTRUCTION TEAM

Where residual design risks associated with procurement, construction, operation, maintenance and demolition / disposal phases of the project are identified and not closed out in the design phase, these are to be carried over to the Project Risk Assessment (PRA) (*See* **Section 0 PROJECT RISK ASSESSMENT (PRA**) and communicated to the site team and supply chain companies where applicable.

Where required, the project team must request from the client the SiD risk assessments produced by their consultants to assist in compiling the construction phase risk assessments.

Where appropriate specific risk meetings between the designers / constructors / supply chain / suppliers / end users must be convened. This is to ensure a clear understanding by all parties of residual design risks associated with the construction, operation, maintenance and demolition / disposal phases of the project.

Changes in design require a review of the SiD Register. All design change requests must be recorded on a register. Any new design risks in the construction phase are to be incorporated in the PRA.

2.0 RISK ASSESSMENT

The Project and Workplace Risk Assessment (PRA) is used to document risk assessment conducted for construction projects and sites. The risk assessment process identifies and records potential hazards and associated risk rating and the defined controls necessary to manage the hazards. It includes the following probability and consequence risk scoring system:

Risk scoring (Probability x Consequence = Risk Rating) provides a tool to measure the perceived level of risk:

Table 1 Risk Matrix

CONSEQUENCE CRITERIA							
SAFETY			1 Injured immediate return to work e.g. FAI	2 Injured return to work restricted duties e.g. MTI	3 Injured no return to work e.g. LTI	4 Nonfatal but permanent injury	5 Multiple/Single Fatality
PROBABILITY CRITERIA	5	Almost Certain	5	10	15	20	25
	4	Probable	4	8	12	16	20
	3	Moderate	3	6	9	12	15
	2	Unlikely	2	4	6	8	10
	1	Rare	1	2	3	4	5

Table 2 Risk Rating

RISK RATING	
0 - 6	**Acceptable**
7 - 12	**Acceptable with strict adherence to Control Measures**
13 - 25	**UNACCEPTABLE**

Any activity with a residual risk rating "**13 and above - UNACCEPTABLE**" must not commence until a safer alternative solution is found and re-assessed.

The project risk assessment must be approved by the project director or equivalent where the residual risk rating is **13 and above**. For risks of **20 or above** Delivery Director and GM Health and Safety approval is required

Risks must be prioritised, with higher residual risk scores assigned higher priorities with more frequent task observations for those activities with levels of risk assessed at **7-12**.

2.1 RISK CONTROLS

Risk controls must be allocated in accordance with the Hierarchy of Control. In the development and reviews of the PRA, controls must be selected according to the Hierarchy of Control to be As Low as Reasonably Practicable (ALARP), comply with or exceed requirements of legislation, codes and standards and be implemented So Far As Is reasonably Practicable (SFAIRP). Refer to Table 2 Hierarchy of Controls

Table 1 Hierarchy of Control

EFFECTIVENESS	CONTROL
Highest level of protection	**ELIMINATION**
	SUBSTITUTION
	ISOLATION
	ENGINEERING
	ADMINISTRATIVE
Lowest level of protection	**PERSONAL PROTECTIVE EQUIPMENT**

2.2 PRIMARY STANDARDS

The Primary Standards are developed with reference to (and to meet) legislative requirements along with examples of how the hierarchy of control is to be applied in real terms. Application of the Primary Standards as per their intent should provide the project sufficient assurance that the hierarchy of controls is applied and that legislative requirements are met.

2.2.1 HSEMS MINIMUM REQUIREMENT DISPENSATION

Where a HSE Management System (HSEMS) minimum requirement (eg requirements within Primary Standards or System Requirements) is unable to be implemented, a formal dispensation is to be requested and approved via the **HSEMS Dispensation Approval Form**. The dispensation must include:

- Date range for the minimum requirement dispensation;
- What alternative control(s) will be implemented; and
- How the control will be communicated and monitored.

Dispensations must be approved by the Site Safety or Environmental Manager, Project Director/Leader and Business HS or ES Leader.

All approved HSEMS dispensations must be submitted to Central HSEQ (centralhseq@laingorourke.com.au.

Central HSEQ will maintain a register of approved HSEMS dispensations and incorporate these into corporate HSEQ project audits.

2.3 FATAL AND SEVERE RISKS (FSRs)

Fatal and Severe Risks (FSRs) are activities that are considered to have high consequences to our people if not managed appropriately. They include critical controls that are the minimum mandatory requirements that must be in place, demonstrated and working effectively with the intent of managing FSR's within our operations.

The FSRs and critical controls must be a focus (but not the only focus) when planning and assessing risks. Critical controls are non-negotiable across Laing O'Rourke workplaces and if not in place effectively could contribute to a potentially significant incident.

FSR Subject Matter Experts can be consulted during the risk assessment. Each project is to appoint applicable FSR SME to support the risk management process.

2.3.1 FSR/SER CRITICAL CONTROL DISPENSATION

Where an FSR or SER Critical Control is unable to be implemented a formal dispensation is to be requested and approved via the **FSR & SER Critical Control Dispensation Approval Form**. The dispensation must include:

- Date range for the control dispensation;
- What alternative control(s) will be implemented;
- How the control will be communicated and monitored; and
- Any supporting documentation such as management plans, SWMS, Lift Plans, risk assessment, training records and assurance tools.

FSR & SER Critical Control dispensations require final approval from the Business Unit General Manager.

All approved FSR & SER Critical Control dispensations must be submitted to Central HSEQ (centralhseq@laingorourke.com.au) with any supporting documentation/materials.

Central HSEQ will maintain a register of approved FSR & SER Critical Control dispensations and incorporate these into corporate HSEQ project audits.

2.4 PROJECT RISK ASSESSMENT (PRA)

The Project Leader will convene a Risk Workshop comprising Senior Production and Safety Managers and Safety Representatives to produce a project risk assessment utilising the Project & Workplace Risk Assessment (PRA) prior to work commencing. This is a high-level risk analysis incorporating any Safety in Design residual risks as well as procurement and construction phase risks. When identifying construction phase risks the location specific hazards must be considered. This may include public safety, emergency response, site access/egress etc.

Key stakeholders are to be consulted when Laing O'Rourke is required to provide its services within or near a client's workplace or where activities conducted on the worksite could affect the client or other entity (i.e. shut down or interruption of services, customer or public interface, any hazards or risks) with the results documented in the project risk assessment.

The risk assessment process is to refer to the below for direction and consideration in compiling the PRA:

- Primary Standards
- Fatal and Severe Risk Controls Standard
- SiD Register
- Project Risk Register
- Construction program
- Information from company OHS subscriptions
- Learning bulletins and safety alerts .

As part of the PRA the team must identify the specifically how applicable critical controls and where relevant, requirements within the primary standards will be implemented on the project e.g. the project specific methods (including equipment) that will be used to separate plant and people.

3.0 RISK REVIEW

3.1 30/60/90 DAY RISK REVIEW

The objective of the 30/60/90-day risk review process is to provide projects with guidance on the approach to completing cyclical risk forecasting. Through the identification of high-risk activities, associated risks and assurance activities to ensure controls are in place.

Each project/workplace is to establish a 30/60/90-day risk review planning process within Intelex as a minimum that:

- Reviews the effectiveness of how the high-risk activities were managed in the previous month
- Reviews the high-risk activities planned to be undertaken in the coming month (i.e. 0 to 30 days out)
- Looks ahead at the high-risk activities planned for following months (i.e. 30 to 60 days out)

3.1.1 MEETINGS/WORKSHOPS

Wherever possible collaborative 30/60/90 meetings, discussions and activities should be coordinated by the project construction team, with the inclusion of other disciplines. Meetings should be facilitated in a workshop style arrangement encouraging different areas/disciplines to actively engage and discuss the construction risks. The combination of disciplines should also include our supply chain partners capturing the project scope of works and risk profile. As a minimum the meeting shall be held monthly.

3.1.2 ROLES AND RESPONSIBILITIES

It is the responsibility of the Project Leader to ensure that the 30/60/90 process is in place. Each area/department is responsible to ensure that the information from their area is presented during the workshop. Health, Safety and Environment Teams are encouraged to attend to highlight any specific risks or processes that may need additional technical support.

3.1.3 30/60/90 DAY RISK REVIEW PROCESS

The steps below are for the purposes of guidance. Project teams are encouraged to implement alternatives that improve efficiencies and meet the needs of the project. They must still maintain the intent of the process such that high risk activities outlined in the construction program being undertaken in the next 30, 60 and 90 days are reviewed.

Risk mitigation measures are then planned and completed accordingly. Projects are required to utilise the Intelex risk planning system to capture their 30/60/90 risk review outcomes to produce a HSE activity schedule to track and monitor completion.

The project's 30/60/90 risk review process is to meet the intent of the above and follow the process generally outlined below:

1. Review contract program (i.e. P6 contractual program) each month for high risk activities and or those that trigger Fatal and Sever Risks or Severe Environmental Risk protocols. Identify when these activities are to be undertaken within the next 30, 60 and 90 days. The time of the month that this is undertaken is not relevant, however once commenced the day of the month should be consent.
2. Review and update the project risk assessment as necessary should previously unidentified risks, aspects or impacts be identified.
3. Consider the high risk activities and identify proactive management measures and site assurance activities that are to be planned and completed to effectively mitigate the risk of the identified activities.
4. Management measures may include additional training, toolbox talks, FSR/SER system review activities, development of activity specific method statements, reviews of SWMSs
5. Assurance activities may include FSRs/SERs Control Assessments (system and field), additional site inspections, construction process audits

6. Identify high-risk deliverables or submissions from the contract documents, licences and or any planning conditions. Develop plans to complete these deliverables, accordingly, engaging other team members as necessary.
7. Update the 30/60/90 with planned activities, proactive measures and potential site assurance activities. Assign responsibilities for the completion of the proactive and assurance measures within Intelex. Communicate this during the project's 30/60/90-day risk review forums and the project's HSELT meetings.
8. Include any site assurance activities in the Project's HSE Activity Schedule. Ensure tasks are assigned to relevant members of the wider project team. Assurance activities should include components led by the project leadership team.
9. Site assurance activities are to be captured and completed in Intelex for record keeping purposes and data analytics.
10. Review the effectiveness of the proactive management measures and assurance activities and their completion in terms of planned vs actual. Identify and complete coaching opportunities where planned activities don't meet completed activities.

3.2 REVIEW OF PRA

The PRA must be reviewed to ensure the proposed controls are found to be suitable and effective. It is to be reviewed by a risk workshop convened by the Project Leader at a minimum of 6 monthly intervals and as required to suit the phase of the project. This may be after a significant change to the Safety in Design risk assessment, significant change in scope, systems of work or plant, company, project and legislative requirements, actual or potential class 1 events, adverse health effects identified by health surveillance, and when requested by a Health and Safety Representative. Whilst the whole risk assessment is to be reviewed, those activities with the higher residual risks are to be prioritised for more attention.

4.0 HSE ACTIVITY SCHEDULE

All projects shall have an HSE activity schedule in place to for the planning and management of HSE activities. This may include items such as:

- FSR/SER Assessments and Inspections
- Inspections and audits
- SWMS Observations and Leadership Engagements
- WHSP/EMP Reviews
- Emergency Management Reviews and Drills
- HSE Compliance reviews and activities

Project HSE Activity Schedule activities shall be tracked and monitored through Intelex. Refer to the Example **HSE Activity Schedule template** that outlines the minimum requirements to include within these schedules.

5.0 TRAINING

As a minimum level of training to be able to implement this System Requirement those that have responsibilities for developing risk assessments are to have completed all the LOR Risk Management 360 modules or HSEMS Workpack Delivery Excellence Training or the pervious LORA Frontline Leaders Programme Module 1 or equivalent. Until such time the training is completed a coach / mentor that has completed the training may oversee the implementation of this System Requirement.

5.1 RISK MANAGEMENT 360

The aim of this training is to provide an overview of the LOR risk management processes and applications. The training is available as eLearning or face-to-face. The 6 training modules cover:

1. Risk Assessment
2. Work Pack Development
3. FSR and SER's
4. High and Non-High-Risk Work
5. Permits
6. Change Management

6.0 REGULATIONS AND CODES

Key Regulations and Codes are as follows:

- Work Health & Safety Regulation 2011 (QLD, ACT), 2012 (SA) and 2017 (NSW, NT)
- Part 3.1 Managing risks to health and safety
- Part 6.2 Duty of designer of structure and person who commissions construction work
- Part 6.3 Duties of PCBU
- Work Health and Safety (General) Regulations 2022 (WA): Part 3.1 Managing risks to health and safety
- Part 6.2 Duty of designer of structure and person who commissions construction work
- Part 6.3 Duties of PCBU
- Occupational Health and Safety Regulations 2017 (VIC)
- 5.1.7 Control of risk, 5.1.8 Review of control measures, and various topic sections
- SafeWork Australia Code of Practice How to Manage Work Health and Safety Risks

7.0 PLANS, FORMS AND TEMPLATES

For relevant plans, forms and templates see the Laing O'Rourke HSEMS at www.lorhsems.com.