

CONTINGENCY PLAN - RISK

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OBJECTIVE:

To successfully complete the installation of new roof sheeting at the Lavarack Barracks within the specified timeframe, budget, and quality standards, ensuring structural integrity, safety compliance, and environmental sustainability while minimising disruptions to ongoing operations and maximising stakeholder satisfaction.

KEY TEAM MEMBERS AND ROLE:

Project Manager	Responsible for overall project planning, execution, and management. Coordinates activities, allocates resources, and ensures that the project is completed on time, within budget, and according to quality standards.
Site Supervisor	Oversees day-to-day operations at the construction site. Manages onsite activities, coordinates subcontractors, and ensures that work is carried out safely and efficiently.
Roofing Contractor	Responsible for installing the new roof sheeting according to specifications and industry standards. Coordinates with other trades as needed and ensures that the roofing work is completed to a high standard of quality.
Structural Engineer	Provides expertise in assessing the structural integrity of the building and ensuring that it can support the new roof system. Reviews design plans, conducts structural assessments, and recommends any necessary modifications or reinforcements.
Safety Officer	Ensures compliance with health and safety regulations at the construction site. Conducts safety inspections, implements safety protocols, and provides training to workers to prevent accidents and injuries.
Procurement Officer	Responsible for sourcing materials and equipment needed for the roof installation project. Coordinates with suppliers, manages procurement processes, and ensures that materials are delivered to the site on time and according to specifications.
Quality Control Inspector	Monitors the quality of workmanship and materials during the roof installation process. Conducts inspections, performs quality tests, and ensures that work meets industry standards and project requirements.
Environmental Specialist	Addresses environmental considerations associated with the roof installation project. Develops environmental management plans, monitors compliance with environmental regulations, and implements measures to minimise environmental impact.
Client Representative	Represents the interests of the client or building owner throughout the project. Provides input on project requirements, reviews progress, and communicates feedback to the project team.

RISK ASSESMENT AND CONTINGENCIES

Risk	Contingency
Structural Integrity Risks	Conduct thorough inspections and structural assessments by qualified engineers before and during construction to identify potential weaknesses or issues.
Weather-related Risks	Monitor weather forecasts closely and adjust work schedules accordingly to minimise the impact of adverse weather conditions.
Material Supply Risks	Identify alternative suppliers for roofing materials to mitigate the risk of supply chain disruptions.
Safety Hazards	Implement stringent safety measures, including regular safety training, strict adherence to safety guidelines, and provision of adequate personal protective equipment (PPE).

Environmental Risks	Develop and implement an environmental management plan to mitigate potential environmental risks associated with the construction activities
Regulatory Compliance Risks	Designate a team member to liaise with regulatory authorities and ensure compliance with building codes, permits, and regulations.
Stakeholder-related Risks	Develop a comprehensive communication plan to keep stakeholders informed of project progress, milestones, and potential disruptions.
Schedule Risks	Maintain flexibility in the project schedule to accommodate unforeseen delays or changes in project scope.

PLANNING AND PREPERATION

Initial Assessment and Planning

1.1. Roof Inspection- Conduct a thorough inspection of the existing roof to assess its condition, identify any damage, and determine the suitability for installing new sheeting.

1.2. Requirements Analysis- Identify the specific requirements for the new roof sheeting, including material type, dimensions, colour, and any additional features such as insulation or ventilation.

1.3. Budget and Timeline- Establish a budget for the project and develop a timeline for the installation process, considering factors such as weather conditions and availability of materials.

2. Design and Material Selection

2.1. Roof Design- Work with a qualified architect. Engineer or roofing contractor to design the layout and structure of the new roof, ensuring compliance with building codes and regulations.

2.2. Material Selection- Choose high-quality roofing materials that are suitable for the climate and conditions of the installation site, considering factors such as durability, energy efficiency, and aesthetics.

2.3. Procurement- Source the necessary materials and equipment from reputable suppliers, ensuring timely delivery and adherence to project specifications.

3. Permitting and Approvals

3.1. Building Permits- Obtain all required permits and approvals from local authorities before commencing any construction work, ensuring compliance with zoning regulations and building codes.

3.2. Inspections- Schedule inspections at key milestones throughout the installation process to ensure compliance with regulatory requirements and quality standards.

4. Safety Planning

4.1. Safety Assessment- Conduct a risk assessment to identify potential hazards and implement appropriate safety measures to protect workers and bystanders during the installation process.

4.2. Safety Training- Provide comprehensive safety training to all personnel involved in the installation, covering topics such as fall protection, equipment operation, and emergency procedures.

4.3. Personal Protective Equipment (PPE)- Ensure that all workers have access to and wear appropriate PPE, including hard hats, safety harnesses, gloves, and eye protection, to minimise the risk of injury.

5. Site Preparation

5.1. Clearing and Cleanup- Clear the installation site of any debris, obstructions, or vegetation that may interfere with the roofing process.

5.2. Access and Egress- Establish safe access and egress routes for workers and equipment, ensuring unobstructed pathways to and from the installation site including edge protection.

5.3. Material Handling- Arrange for the proper storage and handling of roofing materials to prevent damage and ensure easy access for installation.

Installation Procedures

6.1. Surface Preparation- Prepare the existing roof surface by cleaning, repairing, or reinforcing as needed to create a stable and even substrate for the new sheeting.

6.2. Installation Techniques- Follow manufacturer guidelines and best practices for installing the chosen roofing materials, including proper fastening methods, seam sealing, and flashing installation.

6.3. Quality Control- Implement quality control measures throughout the installation process to ensure that workmanship meets industry standards and project specifications.

7. Post-Installation Inspection and Maintenance

7.1. Final Inspection- Conduct a thorough inspection of the completed roof installation to verify that all work has been completed to satisfaction and in compliance with regulatory requirements.

7.2. Maintenance Planning- Develop a maintenance plan for the new roof, including regular inspections, cleaning, and repairs as needed to prolong its lifespan and maintain optimal performance.

7.3. Documentation -Maintain detailed records of the installation process, including permits, inspections, warranties, and maintenance activities, for future reference and compliance purposes.

EMERGENCY PROCEDURES

- **Emergency Contact Information**
 - Maintain a list of emergency contact numbers for local emergency services, including fire, police, and medical assistance.
 - Provide contact information for key personnel involved in the installation project, including the project manager, site supervisor, and designated safety officer.
- **Emergency Response Team**
 - Designate specific individuals as members of the emergency response team, responsible for coordinating emergency procedures and providing assistance as needed.
 - Clearly communicate the roles and responsibilities of each team member and ensure that they are trained in emergency response protocols.
- **Emergency Communication Plan**
 - Establish a communication protocol for notifying all personnel on the worksite in the event of an emergency.
 - Use a combination of verbal announcements, visual signals (such as sirens or flashing lights), and communication devices (such as two-way radios or cell phones) to alert workers to the emergency and provide instructions.
- **Evacuation Procedures**
 - Develop evacuation routes and assembly points for workers to follow in the event of an emergency, such as a fire or structural collapse.
 - Conduct regular drills to familiarise workers with evacuation procedures and ensure they know the location of emergency exits and assembly points.
- **Medical Emergencies**
 - Establish procedures for responding to medical emergencies, including providing first aid and summoning medical assistance.
 - Ensure that first aid kits and emergency medical supplies are readily available on the worksite, and that designated personnel are trained in first aid and CPR.
- **Fire Safety**
 - Implement fire safety measures to prevent and respond to fires on the worksite, including proper storage of flammable materials, maintenance of fire extinguishers, and training in fire extinguishing techniques.
 - Establish fire evacuation routes and assembly points and conduct regular fire drills to ensure that workers can evacuate safely in the event of a fire.
- **Hazardous Material Spills**
 - Develop procedures for responding to spills of hazardous materials, such as roofing adhesives or chemicals used in the installation process.
 - Provide appropriate personal protective equipment (PPE) for workers handling hazardous materials and establish containment and cleanup protocols to minimise the spread of contaminants.
- **Structural Collapse**
 - Assess the risk of structural collapse during the installation process, particularly when working on roofs with existing damage or instability.
 - Implement procedures for evacuating workers from the worksite and securing the area in the event of a structural collapse and ensure that workers are trained in recognising signs of structural instability.
- **Severe Weather Events**
 - Monitor weather forecasts regularly and implement procedures for suspending work and evacuating the worksite in the event of severe weather conditions, such as thunderstorms, high winds, or lightning.
 - Provide shelter and protective equipment for workers during severe weather events and ensure that they are aware of the risks and procedures for seeking shelter.
- **Post-Emergency Procedures**
 - Establish procedures for conducting a post-emergency assessment to evaluate the effectiveness of the response and identify areas for improvement.
 - Provide support and counselling for workers who may have been affected by the emergency and ensure that any necessary repairs or remediation actions are carried out promptly.

MONITORING AND REPORTING

- **Progress Monitoring**
 - Assign a project manager or site supervisor responsible for monitoring the progress of the roof sheeting installation on a regular basis.
 - Establish key milestones and checkpoints to track progress throughout the installation process, including the completion of preparatory tasks, material delivery, and actual installation activities.
- **Quality Assurance**
 - Conduct regular inspections of the installation work to ensure that it meets quality standards and specifications.
 - Document any defects, deficiencies, or deviations from the plan observed during inspections, and take corrective actions as needed to address them.
- **Safety Monitoring**
 - Implement safety monitoring procedures to identify potential hazards or safety risks on the worksite.
 - Encourage workers to report any safety concerns or incidents immediately and conduct regular safety audits or inspections to identify and address safety issues proactively.
- **Material and Equipment Monitoring**
 - Track the availability and usage of materials and equipment required for the installation process.
 - Monitor inventory levels and reorder materials as needed to prevent delays or disruptions to the project schedule.
- **Environmental Monitoring**
 - Monitor environmental conditions that could impact the installation process, such as weather conditions or air quality.
 - Take appropriate measures to mitigate any environmental risks or impacts associated with the installation activities.
- **Reporting Procedures**
 - Establish clear reporting procedures for documenting and communicating monitoring results and any significant developments or issues related to the installation project.
 - Designate specific individuals or teams responsible for generating reports and distributing them to relevant stakeholders in a timely manner.
- **Reporting Frequency**
 - Determine the frequency of reporting based on the project timeline and the criticality of the information being reported.
 - Schedule regular reporting intervals, such as daily or weekly updates, to keep stakeholders informed of project progress and any emerging issues.
- **Reporting Format**
 - Define the format and structure of reports to ensure consistency and clarity in the presentation of information.
 - Include key metrics, milestones, observations, and recommendations for action in each report to provide a comprehensive overview of project status and performance.
- **Escalation Procedures**
 - Establish escalation procedures for reporting significant issues or emergencies that require immediate attention or intervention.
 - Clearly define the chain of command and the appropriate escalation points for different types of issues and ensure that all personnel are aware of these procedures.
- **Documentation and Record-Keeping**
 - Maintain detailed records of monitoring activities, inspection reports, and other relevant documentation related to the installation project.
 - Store documentation in a centralised location and ensure that it is accessible to authorised personnel for reference and review as needed.

BUDGET AND RESOURCE ALLOCATION

1.1. Cost Estimation

- **Materials:**
 - Roofing sheets (type, quantity, and quality).
 - Fasteners, sealants, and insulation materials.
 - Tools and equipment rentals or purchases.
- **Labor:**
 - Wages for roofing contractors and laborers.
 - Overtime and weekend work considerations.
- **Permits and Inspections:**
 - Fees for building permits and inspection services.
- **Safety Measures:**
 - Personal Protective Equipment (PPE) and safety training.
 - Safety barriers and signage.
 - Edge Protection
- **Contingency:**
 - Allocate an additional 10 of the total budget for unforeseen expenses.

1.2. Budget Breakdown

- Create a detailed budget breakdown, itemising all estimated costs and allocating funds accordingly.

2. Resource Allocation

2.1. Materials

- **Procurement Plan:**
 - Identify reliable suppliers for roofing materials and negotiate bulk purchase discounts.
 - Schedule timely deliveries to align with the project timeline.
- **Inventory Management:**
 - Keep track of materials on-site and reorder as needed to prevent delays.
 - Ensure secure storage to prevent theft or damage.

2.2. Labor

- **Hiring Plan:**
 - Hire experienced roofing contractors and laborers.
 - Clearly define roles and responsibilities for each team member.
- **Work Schedule:**
 - Develop a work schedule that optimises labor resources, considering weather conditions and project deadlines.
 - Allocate shifts and manage work hours to prevent burnout and ensure safety.

2.3. Equipment

- **Equipment List:**
 - Identify all necessary tools and equipment for the installation process (e.g., ladders, scaffolding, power tools).
- **Rental vs. Purchase:**

3. Monitoring and Adjustments

3.1. Budget Tracking

- **Expense Tracking:**
 - Use accounting software or spreadsheets to track all project expenses against the budget.
- **Regular Reviews:**
 - Conduct weekly or bi-weekly budget reviews to identify any variances or unexpected costs.
- **Adjustments:**
 - Reallocate funds from the contingency budget as needed to cover unforeseen expenses.
 - Adjust resource allocation based on project progress and any changes in scope.

3.2. Performance Metrics

- **Key Performance Indicators (KPIs):**
 - Monitor KPIs such as cost variance, schedule adherence, and resource utilisation.
- **Reporting:**
 - Prepare regular reports for stakeholders summarising budget status, resource allocation, and project progress.
- **Feedback Loop:**
 - Use feedback from the project team and stakeholders to make informed decisions and adjustments.