



**TARONG ENERGY CORPORATION LIMITED**  
**OCCUPATIONAL HEALTH & SAFETY PROCEDURE FOR**  
**SAFE WORKING ON ROOFS**  
**OHS-PROC-106**

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**1. Purpose:**

This procedure defines the activities to be followed by those persons required to work on the roofs of structures (example: buildings, tanks etc) and applies specifically to those structures which **DO NOT** have edge protection / handrails fitted complying to AS1657 Fixed Platforms, walkways, stairways & ladders: Design, Construction & Installation). It ensures that there are safe systems of work in place. The procedure covers access to roofs, prevention of falls of persons or material from heights, and consideration of specific hazards such as vents and relief's.

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## 2. Scope:

This procedure shall apply to all Tarong Energy employees, visitors, contractors and their employees.

## 3. Procedure:

### 3.1. General

A roof on which people are required to work shall be designed to withstand minimum loads specified in *AS 1170 Part 1* unless specifically required otherwise.

Safe means of access shall be put in place for persons authorised to go onto a roof.



**Note.** Buildings that are under construction will fall under the Working at Height procedure *OHS- PROC- 100*.

### 3.2. Access to Roofs:

Any person required to work on or from a roof will have been trained and deemed competent in Tarong Energy's Safe working at heights training course or equivalent.

Any person requiring access to a roof must be authorised and approved to do so and have a current Job Safety Environment Analysis (JSEA).

Anyone requiring to access a roof that is under construction is required to be working under a HSE Plan and specific JSEA.

Roofs of old buildings, built before the current Australian Standards were in place shall be assessed as to their safety as part of the review and risk assessment for the JSEA.

Access /Egress to and from roofs shall be by:

- Permanent ladders;
- Scaffolding;
- Properly secured temporary ladders where the height to the roof does not exceed 6 metres;
- EWP'S (subject to JSEA).

### 3.3. Steps for Roof access:

When roof access has been deemed necessary the following steps shall be undertaken:

- A JSEA/ risk assessment for the proposed task shall be completed.
- The JSEA/risk assessment shall specify all of the controls required to proceed with the task safely.
- The selected controls shall be examined to ensure that they are the most effective control for the task at hand by completing the risk assessment on the JSEA. The Working with Heights Guide (Form T-1100) can be referred to for information if required.
- Any specific conditions for the work shall be identified on the JSEA.

### **3.4. Assessment / Job Safety Environmental Analysis (JSEA):**

The JSEA for roof access shall include assessment of:

- Hazards from adjacent activities and equipment such as vents, relief devices, travelling cranes operating under the roof and unguarded moving machinery.
- The presence of electrical conductors above and below the elevated work area.
- The actions to be taken in an emergency.
- The load carrying capability of the roof, means to prevent falls, the height above the ground, the slope, the nature of the surface covering, weather conditions, weight distribution of persons and equipment.
- Presence of skylights or penetrations. Fall protection cover must be securely fixed in place to prevent it being moved or removed accidentally.
- The precautions to be taken in storing materials on a roof (including the fitness of the roof for storage purposes).
- Any protective devices necessary for maintenance and construction activities having regard for the nature and condition of the roof and supporting structure.
- Advice of hazards from process situations that may affect the work.
- The conditions at the time of the work starting i.e. rain, wind, dust, etc and any other changes at the work site that could affect the work crew or any other persons in the area.

### **3.5. Working on Roofs:**

- Perform all work in accordance with all conditions of the JSEA.
- Persons going on roofs for any purpose shall be appropriately trained and formally approved to do so by reviewing and signing onto the JSEA.
- For roofs where planks are impractical or do not eliminate the fall risk, use either scaffolding or safety nets beneath the roof. Restraint lanyards and harnesses shall also be considered as an additional precaution.
- Where required, edge protection shall be installed and be in accordance with Barricades OHS-PROC-113.
- Ensure that all tools and equipment are secured from inadvertent dislodgement; this may include lanyards on tools.
- Work shall not be performed on roofs during periods of adverse weather conditions or poor light.
- Where appropriate, measures must be put in place to prevent unauthorised persons accessing a roof.
- Observe precautions to avoid falls and other hazards arising from the work.
- Additional specific controls must be evaluated if the roof being worked on has a slope of over 26°.

### **3.6. Barricading of Area:**

- Restrict access to the work site to personnel directly involved with the work by demarcating the general area with a barricade and placing danger signs.
- The use of and type of barricades used shall comply with OHS-PROC-113 Barricades.

### 3.7. Designated Danger Signs:

The “**DANGER - Restricted Access Area**”- signs shall be prominently displayed at each access to the area.

The signs should be secured to the barricading that is restricting access to the area where the roof is being accessed.

### 3.8. Fragile Roofs:

Where persons are not able to determine the roof composition or determine its condition, roofs shall be assumed to be covered with brittle or fragile material. Examples of fragile material include fibreglass, Asbestos / AC sheeting, “supersix”, and synthetic material e.g. “Alsynite”.

Where it is necessary for maintenance or repairs to be carried out on a roof containing fragile materials ensure:

- That the underside of the roof is inspected to determine the extent of fragile roof material, existence of any safety mesh, and the structural soundness of the roof, safety mesh and the spacing of roof sheeting, purlins or battens.
- Where temporary access is required on the roof, scaffolding planks/ boarding shall be used and fixed in a manner that will prevent them from moving. Authorised and competent personnel shall do this.
- Temporary walkways shall be provided where any person is required to work on or use as a means of access any part of a roof sheeted with fragile or brittle material and permanent walkways are not provided. The walkways shall be at least 450 mm in width, and shall incorporate a guardrail. Where the slope of the roof exceeds one vertical to six horizontal, cleats of not less than 50 mm by 12 mm should be fixed to the topside of the walkway planks at distances not more than 350 mm apart, centre-to-centre. The walkway shall be adequately secured.
- Individual fall restraint systems and anchorages are provided to prevent personnel from falling off the edge of the roof where the risk assessment determines that full edge protection is not practicable.
- Where a roof or part of a roof covering comprises fragile or brittle material warning signs shall be provided at any place where persons can gain access to the roof. The sign shall be not less than 200 mm by 300 mm and shall be securely fixed in an upright position where it will be clearly visible to anyone intending to gain access to the roof.

The warning notice should incorporate the symbol shown below and display the following words:



**DANGER - FRAGILE ROOFING - USE WORKING PLATFORM**

## 4. Responsibilities:

### 4.1. Manager Operations:

The Manager Operations shall ensure that a safe system of work for work on roofs is implemented and maintained in accordance with this procedure.

### 4.2. Coordinators & Supervisors:

Shall ensure that:

- JSEAs are conducted prior to the commencement of work on a roof and reviewed at any time the work scope changes during work.
- Fragile roofs in their plant and workshop areas of control are identified and managed in accordance with this procedure.
- Where work is to be performed on roofs or structures without edge protection, the requirements of this procedure are met.

## 5. Training and Competencies:

Before any person commences any work on a roof it shall be confirmed that they have current certification in the Tarong Energy Work at Heights training courses or equivalent.

### 5.1. Records:

**Training Records** –The People Services Department is responsible for managing & maintaining all training records. All hard copy training documentation shall be forwarded to the training coordinator for data entry and filing.



**Note: Record Keeping shall be in compliance Archival of Records Gov - Proc - 07.**

## 6. Statutory and Legal Considerations:

- Workplace Health and Safety Act 1995.
- Workplace Health and Safety Regulation (1997).

## 7. Health, Safety and Environmental Considerations:

Nil.

## 8. Definitions:

<b>EWP</b>	A telescoping device, scissor device, or articulated device, or any combination thereof used to position personnel, equipment and materials at work locations above or below the base support surface.
<b>JSEA</b>	Job Safety and Environmental Analysis
<b>Roof</b>	The upper covering of a building or structure.
<b>Shall</b>	Indicates that a statement is mandatory

<b>Should</b>	Indicates a recommendation
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## 9. Reference Documentation:

<b>AS1170.1 &amp; 2</b>	Structural Design Actions
<b>Corp-PTW-01</b>	Corporate Permit to Work Manual
<b>OHS-PROC-100</b>	Safe Working with Heights
<b>Gov- Proc- 07</b>	Archival of Records
<b>T-0843</b>	"DANGER-Restricted Access Area"- sign.
<b>T-1237</b>	Working with Heights Guide

## 10. Revision History:

<b>Rev No.</b>	<b>Revision. Date:</b>	<b>Revision Description:</b>	<b>Author:</b>	<b>Approved. By:</b>
0	31.07.2007	New Procedure	M Joy	J Judge