## Purpose
- Restraining vehicle loads

### Permits
- N/A

### Authorisations
- N/A

### Training
- Vehicle load management

### Equipment
- Chain binders, ratchet webbed tie downs, transport synthetic fibre ropes, container locks, chocks, rubber mats

### Hazards
- **Working at heights**
  - Ladders
  - Lifting equipment, EWP
  - Stairs/platforms
  - Working at height
  - Working above others
  - Multiple work requiring EWPs
- **Working with electricity**
  - Static electricity/induction
  - Substations/switch rooms
  - Underground cables
  - Contact with electrical equipment
  - Electrical cables
  - High voltage equipment
  - Overhead cables
  - Non-compliant earths, e.g. tagged/tested
- **Pressure**
  - Competitive pressures
  - Compressed gases/air
  - Fluid
  - High pressure steam
  - Hydraulic
  - Water
- **Human factors**
  - Rushing
  - Complacency
  - Fatigue
  - Unclear work direction
  - Stress/anxiety/frustration
  - Lack of knowledge
  - Poor communications
  - Negative attitudes
- **Using mobile plant**
  - Traffic/pedestrian interaction/collision
  - Uneven terrain
  - Unlicensed/untrained operators
  - Vehicle instability
  - Vehicle access
- **Manual handling (ergonomic)**
  - Awkward/unbalanced load
  - High/low reach
  - High force/heavy loads
  - Lighting
  - Over exertion/fatigue
  - Poor design/layout/surface
  - Repetitive movements
- **Environment**
  - Air contamination
  - Soil contamination
  - Storm water contamination
  - Waste, i.e. effluent/hazardous
  - Solid waste
- **Workplace**
  - Asbestos
  - Confined space/void space
  - Falling objects
  - General access
  - Housekeeping
  - Illumination/lighting
  - Noise, i.e. exposure/nuisance
  - Poor ventilation
  - Protrusions
  - Restricted visibility
  - Restricted work area
  - Slip and trip hazards
  - Unauthorised personnel
  - Unlabelled controls
  - Vibration
  - Wet/slippery
  - Wind/storm activity
  - Fog/mist/smoke
  - Working in isolation
  - Dust/particulates
- **Chemical**
  - Chemicals/reagents
  - Fumes/vapour/mist (e.g. SF₆)
  - Flammable gases
  - Handling flammable materials
  - Hazardous chemical exposure
  - Solid chemical
  - Splashes/burns
  - Spills to ground or work area
- **Thermal**
  - Cold – ambient temperature
  - Heat – ambient temperature
  - Hot materials/liquids
  - Hot surfaces
  - UV exposure

---

**Rev 1, July 2015**

**DM# 12694798**

1 of 4
<table>
<thead>
<tr>
<th>Step</th>
<th>Hazards</th>
<th>Initial risk rating</th>
<th>Controls</th>
<th>Controlled risk rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan and prepare</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plan and prepare</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pre-plan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Determine staff requirements</td>
<td></td>
<td>• Unfit for work</td>
<td>H</td>
</tr>
<tr>
<td></td>
<td>• Unfit for work</td>
<td></td>
<td>• Confirm staff are fit for work</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>• Unfit for work</td>
<td></td>
<td>• Comply with fatigue, drug and alcohol policies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fatigue</td>
<td></td>
<td>• Ensure all staff are trained and have the appropriate skills/competencies</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>• Not trained or authorised for tasks being performed</td>
<td>H</td>
<td>• Confirm all staff have required safety clothing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Not trained or authorised for tasks being performed</td>
<td></td>
<td>• Ensure that gloves, hard hats, tools and equipment are within functional date cycle and Western Power approved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Authorisations and training</td>
<td></td>
<td>• Confirm all staff have a valid Network Access Card (NAC)</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>• Expired/damaged PPE</td>
<td>M</td>
<td>• PPE requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Incorrect PPE</td>
<td></td>
<td>• Not trained or authorised for tasks being performed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Unroadworthy or incorrectly set up vehicles and plant</td>
<td>H</td>
<td>• Ensure all staff are trained and have the appropriate skills/competencies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Unroadworthy or incorrectly set up vehicles and plant</td>
<td></td>
<td>• Confirm all staff have required safety clothing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Weather conditions</td>
<td>H</td>
<td>• PPE requirements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Adverse weather – lightning, wind etc.</td>
<td></td>
<td>• Ensure that gloves, hard hats, tools and equipment are within functional date cycle and Western Power approved</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Avoid working during lightning and/or high wind conditions</td>
<td></td>
<td>• Ensure all staff are trained and have the appropriate skills/competencies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vehicle selection – size</td>
<td>H</td>
<td>• Vehicle selection – size</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Tare weight</td>
<td></td>
<td>• Correct selection of the vehicle; know the weight and the size of load/s</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Availability and location of tie down points</td>
<td></td>
<td>• Ensure tie down points are inspected and free from damage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Availability of attachments to container locks</td>
<td></td>
<td>• Ensure vehicle has correctly spaced container locks for specific attachments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Oversize load</td>
<td></td>
<td>• Selection of correct tie downs for restraining loads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Overloading vehicle</td>
<td></td>
<td>• Only use transport fibre rope which must be:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Incorrect tie down points</td>
<td></td>
<td>• made from synthetic fibre</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Incorrectly installed attachments into container locks</td>
<td></td>
<td>• colour-coded for its lashing capacity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Condition of tie downs (chains, ratchet straps and ropes)</td>
<td>H</td>
<td>• minimum of 12mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Incorrect ropes selected and used to secure loads</td>
<td></td>
<td>• only used for relatively lightweight loads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Damaged/faulty container locks</td>
<td></td>
<td>• Selection of correct tie downs for restraining loads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Damage to equipment</td>
<td></td>
<td>• Only use transport fibre rope which must be:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Unsecured loads</td>
<td></td>
<td>• use chains on steel, concrete, or any sharp objects</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Restraint selection</td>
<td></td>
<td>• use of packing on sharp edges when using webbed tie downs and ropes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Chain binders</td>
<td></td>
<td>• Ensure container locks operate freely and lock in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ratchet webbed tie downs</td>
<td></td>
<td>• Only use transport fibre rope which must be:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Approved ropes</td>
<td></td>
<td>• Selection of correct tie downs for restraining loads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Container locks</td>
<td></td>
<td>• Only use transport fibre rope which must be:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Other items to help prevent load movement</td>
<td></td>
<td>• Selection of correct tie downs for restraining loads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Chocks</td>
<td></td>
<td>• Only use transport fibre rope which must be:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Rubber mats</td>
<td></td>
<td>• Selection of correct tie downs for restraining loads</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Ensure container locks operate freely and lock in</td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Hazards</td>
<td>Initial risk rating</td>
<td>Controls</td>
<td>Controlled risk rating</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
<td>---------------------</td>
<td>----------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| Rated capacity of tie down attachment points | • Overloading of tie downs  
• Overloading of attachment points | H | • Know the weight of load and use suitably rated tie down and tensioning device/racket  
• Know the attachment point load rating | L |

### Carry out the task

<table>
<thead>
<tr>
<th>Step</th>
<th>Hazards</th>
<th>Initial risk rating</th>
<th>Controls</th>
<th>Controlled risk rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct a Workplace Risk Assessment Plan</td>
<td>• Local site hazards and unknown conditions</td>
<td>H</td>
<td>• Inspect the workplace for conditions and hazards, discuss and record on WRAP</td>
<td>L</td>
</tr>
</tbody>
</table>
| Manual handling | • Manual handling heavy objects  
• Pinch points  
• Sharp edges  
• Hot surfaces | H | • Use two person lift techniques or mechanical aids to shift/lift heavy objects  
• Use of correct gloves and other PPE | L |
| Positioning of load | • Stability of load  
• Small items unsecured  
• Over loading of one side of the vehicle, rollover, loss of control of vehicle | E | • Use of head board, if possible  
• Use of chocks for round loads  
• Use of rubber mats  
• Use of box, crate or cages for smaller items  
• Place load in the centre over the rear axle | L |
| Position of and securing restraints | • Poor access to restraints  
• In the line of fire of vehicle traffic  
• Fall from height | M | • Position the tensioning device part of the restraints on passenger side of vehicle to allow retightening if needed, in safe manner away from road side traffic  
• Three point of contact, barriers and kick boards | L |
| Checking the load and restraints | • Load movement  
• Loss of load  
• Damage to load  
• Transport of hazardous goods | H | • Prior to departure the driver, where possible, will have a team member check over the load and restraints, and approve if load and restraints are secured correctly  
• The correct size spill kits available to contain any spill | L |
| Store restraint equipment | • Falling objects while in transit, loss and damage | E | • Store correctly | L |
| Journey management and load checks | • Load movement, tie downs become loose during travel | M | • On long journeys check loads at two hour intervals when stopping in line with Western Power's Fatigue Management Standard  
• Ensure sufficient braking time with extra load on the vehicle | L |
<table>
<thead>
<tr>
<th>Document control</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Work Practice Development team, Lines and Cable Services</td>
</tr>
<tr>
<td>Document owner</td>
<td>Work Practice Development</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>Work Practice Development, Property and Fleet</td>
</tr>
<tr>
<td>Distribution list</td>
<td>Network Total Workforce</td>
</tr>
</tbody>
</table>

References

- Corporate Risk Assessment Criteria
- Fatigue Management Standard
- Safety Life Savers
- Transmission Substation Work Practice Manual, work practices 2.15, 5.32
- Vehicle load management training
- Workplace Risk Assessment Plan
- Work Practice Manual, work practices: 2.28, 5.26

Risk matrix and ratings

For details on assessing risks, see *Workplace Risk Assessment Plan, 4. Assess the risks*