



PRO-4.5-0001-1-06

Lifting Operations

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To review changes refer to the 'Version Summary' at the end of this document.

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1. Purpose

Whenever BP conducts construction, maintenance, demolition, remediation and other similar work that are typical of our industry, there is the potential for harm to people and the environment and for damage to equipment. This document provides requirements for Lifting Operations in support of *PRO 4.5-0001-0-01 Control of Work* and *WPCG-PRO-01 Work Authorisation*.

This procedure sets out a required approach to lifting operations in accordance with BP's Golden Rules of Safely, the requirements of GDP 4.5-0001 Control of Work, Annex1: Task Requirements:1.5 Lifting Operations and OMS Group Essentials 3.2.1 and 4.5.1.

The document defines the requirements that apply to lifting operations within ANZ MS&L to protect personnel from injury and property from damage.

This procedure specifically details the requirements of the following documents:

- Group Defined Practice (GDP); [GDP 4.5-0001_2016 Control of Work](#)

2. Scope

The requirement specified in this procedure applies equally to BP employees, contractors and visitors engaged in the ANZ MS&L business.

Specific sites, areas and activities may have more detailed OMS requirements and where these exist the requirements will be specified in local procedures, safe work instructions, manuals, handbooks or specific standards.

3. Terms, Definitions and Abbreviations

Table 1: Terms, Definitions and Abbreviations

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| Competent Person | A person who, through past experience, training or qualification, has demonstrated capability in performing a particular task. There are various levels of what is deemed competent for different aspects of lifting from simple lifts or basic rigging to operating cranes (fixed/mobile) to perform complex lifts. |
| Critical Lift | A lift, as prescribed in <i>WPCG-PRO-01 Work Authorisation</i> |
| Lifting Equipment | Mechanical or manual lifting device used to perform lifting operations, e.g. crane, forklift, Truck mounted crane (i.e. Hiab), winch, pulley, etc. and axillary equipment used in direct association of lifting operations, e.g. to secure a load (i.e. chains, slings, spreader beams) |

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| Lifting Operations | Lifting operations are the lifting of any load with lifting equipment. |
| Lift Plan /or Study | A study by a competent person(s) of the factors affecting the safety of a proposed lift and the controls necessary to manage it. The required level of competency of the person(s) depends on the complexity and hazards of the lift. |
| Rated Capacity (Safe Loading Load) | The maximum mass (in kg or tons) which may be handled by a crane at a specific working radius (in metres) and a specific boom or jib length without the strength or stability requirements being exceeded. The rated capacity shall comprise the following Mass of the lifted load and lifting attachment and Mass of the hook block in use. |
| Safe Working Load (SWL) | The maximum load, determined by an approved engineer that an item of Lifting Equipment might raise, lower or suspend under particular service conditions. |
| Simple Lift | A lift, as prescribed in <i>WPCG-PRO-01 Work Authorisation</i> |
| Working Load Limit (WLL) | The maximum load that the lifting equipment is designed to raise, lower or suspend under ideal conditions (the Safe Working Load will usually be the same as the Working Load Limit – but may be less). |

4. Roles and Responsibilities

The roles and responsibilities associated with this procedure are listed in the following table.

Table 2: Roles and Responsibilities

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| Planner | The person planning the Lifting Operations is responsible for ensuring that the performing authority is communicated the requirements of this procedure as part of the planning process prior to work. This may be discharged through the Issuing Authority if the work is conducted under a work permit. The planner role is often not a dedicated role and may be fulfilled by Project Manager, Project Engineer, Regional Maintenance Coordinator, etc. |
| Issuing Authority | <i>WPCG-PRO-01 Work Authorisation</i> documents the responsibilities of the Issuing Authority for work permits associated with Lifting Operations. The Issuing Authority is responsible for ensuring that: <ul style="list-style-type: none"> ○ The Lift Plan / Lift Study is undertaken by a competent person(s) and in consideration of the complexity and hazards of the lift and shall approve the Lift Plan / Lift Study. ○ Verifying that operators of lifting equipment are trained and certified for that equipment ○ Verifying that lifting devices and equipment are certified and inspected before each use. ○ Verify that rigging of the load will be undertaken by competent persons. |

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|------------------------------------|--|
| <p>Performing Authority</p> | <p><i>WPCG-PRO-01 Work Authorisation</i> documents the responsibilities of the Performing Authority for all work permits or work clearances (as applicable) associated with the Lifting Operations.</p> <p>Performing Authority is responsible for ensuring that:</p> <ul style="list-style-type: none"> ○ Providing the Lift Plan / Lift Study which is to be undertaken by a competent person(s), the required level of competency depends on the complexity and hazards of the lift. ○ Overall responsibility and control of the lifting operation. ○ Ensuring the lift is undertaken in accordance with the lift plan. ○ Ensuring that operators of lifting equipment are trained and certified for that equipment. ○ Ensuring that the rigging of the load is undertaken by competent persons. ○ Ensuring that lifting devices and equipment are certified and inspected before each use. ○ Ensuring that assembly and disassembly of cranes (if applicable) is risk assessed. |
| <p>Site Representative</p> | <p>The Site Representative shall be the Site Manager or delegate, or if the site is unmanned it may be the Issuing Authority. The Site Representative is responsible for the overall safety of the site.</p> <p>The Site Representative is responsible for communicating to the Issuing Authority (work under a Work Permit) or Performing Authority (work performed with a Work Clearance) the site operations that may affect the lifting operations. They shall also ensure that other parties on site that may be affected by the lifting operations are informed.</p> <p>No works shall be undertaken before the Site Representative countersigns the work permit or work clearance form.</p> |

5. Methodology - Lifting Operations

5.1. Risk Assessment

- a) Lifts utilising cranes, hoists or other mechanical lifting devices shall be risk assessed prior to the task commencing.
- b) A risk assessment shall be completed for the task, in addition to any requirements for a lift plan / lift study. A SWMS shall be completed if required by local regulations for the type of lift. A BP Task Risk Assessment, facilitated by a BP HITRA trained facilitator, is required for lifting over, or in close proximity to above ground equipment / plant containing flammable or combustible fuels or over occupied buildings, and/or the lift carries potential for severe business impact based on the outcome of the lift due to the potential consequences of a failed lift (e.g. process safety event) or the value of the load.

- c) The risk assessment for the task should utilise the hierarchy of controls, i.e.:
- **1. Elimination:** For example designing items so they are of a size, shape and weight that can be delivered to, handled or assembled at the location where they will be used without the need for a crane.
 - **2. Substitution:** For example, replace a crane with an operating cabin that has a restricted field of vision with one that has a clear field of vision.
 - **3. Engineering controls:** For example, enclosing the operator with a falling objects protective structure to minimise the risk of being hit by a falling object.
 - **4. Isolation:** For example, use of physical barricades to create an exclusion zone to separate mobile plant from crane operations and workers.
 - **5. Administrative controls:** For example, crane cleaning or maintenance procedures could require that all controllers are placed in the "off" position and the main switches are open and locked. Controls are physically locked out and tagged to prevent unauthorised or unintentional start-up.
 - **6. Personal protective equipment:** For example, gloves for rigging, hard hats, high visibility vests, and hearing and eye protection.

5.2. Requirement for Lift Plan / Lift Study

The requirement for a lift plan is defined within the Activity Matrix in *WPCG-PRO-01 Work Authorisation* and is dependent on the level of risk and complexity of the lift.

5.3. Lift Planning Considerations

A formal lift planning process shall include the following:

- a) Assessment of the lifting task (e.g., load rigging and handling arrangements, load manoeuvring, load integrity and stability, pick up and set down arrangements), including simultaneous operations.
- This shall be considered and documented within the lift study completed in accordance with the lift categorization in the WPCG Activity Matrix within *WPCG-PRO-01 Work Authorisation*.
- b) Use of certified personnel with clearly defined roles and responsibilities.
- 1. Operators of lifting equipment shall be familiar with and competent in the operation of the type of equipment (e.g. crane, forklift, etc.) that they are required to operate including with the design, layout, operating functions and maintenance and inspection requirements.
 - 2. All persons either operating, rigging, or inspecting cranes and auxiliary equipment shall be trained and qualified for the particular discipline and meet all regulatory competency requirements for the jurisdiction that the task is undertaken.

- c) A visual inspection of the crane and associated environmental and operational conditions in which the crane is intended to be installed, erected and used
- d) Confirmation of clear lines of communication to allow the work to be conducted in accordance with the approved lift plan.
- e) Assessment of overall lifting conditions (e.g., the adjacent live equipment, worksite environment, ground and weather conditions, load rigging method and handling arrangements), including lift area barrier management and warning signage.
- f) Verification that specified lifting equipment has been visually inspected and certified prior to the lift commencing in accordance with:
 - 1. Regulatory requirements.
 - 2. National standards.
 - 3. Applicable BP practices.
- g) The crane operator shall carry out a visual inspection and functional tests before the start of each work shift, including inspecting and testing the following:
 - 1. All relevant items indicated in the operations manual
 - 2. Operating and emergency controls
 - 3. Brakes
 - 4. Safety switches and interlocks, including limiting and indicating devices
 - 5. Visual inspection of the structure of the crane
 - 6. Wire ropes to ensure they are on the drum, correctly reeved on the sheave and are not damaged or excessively worn.

The results of the inspection shall be entered into a logbook and kept with the crane.

- h) Pre-use checks shall be completed for all lifting equipment confirming it is fit for purpose. All lifting equipment including slings and hooks shall be visually inspected prior to each use and periodically inspected for damage and wear by a competent person with inspection records kept. All auxiliary lifting equipment should be tagged or otherwise physically identified (e.g. plate on spreader beam) with the date of the lifting equipment's last inspection and shall be done so to certify equipment in accordance with regulatory requirements in jurisdictions where these exist. Documented maintenance records for the lifting equipment shall be available.
- i) Confirmation that lifting capacities which are specific to the crane and rigging configuration are detailed in the lift plan. The Performing Authority shall confirm that this is in place prior to commencement of the lift.

- j) Confirmation that safety and load limiting devices are installed and functional. The competent person conducting the lift shall confirm that these are in place prior to commencement of the lift, as part of the equipment pre start. The equipment pre start / log shall be kept with the vehicle.

5.4. Barricading and Exclusion Zones

- a) The isolation of personnel from lifting operations shall be considered in the risk assessment for the task.
 - 1. Workforce members who are not involved with the lift shall be restricted from the lift zone through effective barrier management.
 - 2. Personnel involved in lifting operations shall not walk under the load once the lift has commenced.
- b) Forklifts shall not be used without the operating area being segregated for pedestrians or warning signs are in place

5.5. Lifting Management

- a) Lifting operations should be conducted by BP accredited contractors or sub-contractors engaged through contractors BP Accredited to manage sub-contractors.
- b) The organisation (contractors or subcontractor) responsible for performing the lift shall keep auditable records of lifting equipment certification and competencies of those involved in the lift (including appropriate licences for the task as required by local regulations).

6. Verification

The key process steps outlined in this procedure shall be included in a Self-Verification Programme.

Refer to [PRO-8.2-0001-0-01 MS&L Self Verification Procedure](#) for further details to developing self-verification protocols.

7. Associated Documents

The following associated documents:

- Have been referenced in this procedure.
- Should be considered in understanding and applying the instructions provided in this procedure.

Table 3: Required References

| Document Name | Document No | Document Location |
|--|-----------------------------------|------------------------------|
| Group Defined Practice - Control of Work | GDP 4.5-0001 2016 | OMS Library |
| WPCG Work Authorisation | WPCG-PRO-01 | WPCG website |
| MS&L Self Verification Procedure | PRO-8.2-0001-0-01 | Controlled Document Register |

8. External References

This procedure was prepared with reference to relevant legislation/regulations including but not limited to, relevant Acts, Regulations, Australian Standards and industry codes and practices.

Details of current legislation/regulations can be provided by the HSSE Team on request.

9. Version Summary

The table below provides a summary of version history of this procedure.

Table 4: Document Version Summary

| Version | Prepared by | Description of Change | Date | MoC |
|---------|-----------------|---|-------------|-------|
| 1 | Adrian Connolly | Document created - Initial release | 14 Nov 2014 | |
| 2 | Adrian Connolly | Updated to improve formatting and readability. Incorporation of definitions of Critical, Complex and Simple lifts and details of what these levels subsequently require. Updates to responsibilities. | 13 May 2016 | |
| 3 | Adrian Connolly | Minor update to implement WPCG-PRO-01 Work Authorisation and moved to current template. | 22 Aug 2018 | 11449 |
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