



## BP Procedure

# Management of Lifting Operations and Lifting Equipment

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## Operating Management System (OMS) – Sub Elements and Group Essentials

Sub Element	Sub Element Title	Group Essentials
3.2	Personal Safety	
4.5	Control of Work	

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## Foreword

This is the first issue of BP Procedure Management of Lifting Operations and Lifting Equipment (100572). This BP Procedure supports BP Practice Management of Lifting Operations and Lifting Equipment (500080).

This BP Procedure sets out requirements and recommendations associated with Lifting Operations and Lifting Equipment, and defines the related methods and systems for the Upstream Operating Functions to which this Procedure applies.

The requirements set out in this BP Procedure support conformance to the Golden Rules of Safety (Lifting) and Operating Management System (OMS) Sub-Elements:

- 3.2 Personal Safety
- 4.5 Control of Work

Conformance to this BP Procedure is intended to provide conformance to BP Practices and the BP Golden Rules of Safety for Lifting.

## 1 Scope and exclusions

This BP Procedure provides the requirements and recommendations for the Management of Lifting Operations and Lifting Equipment.

The scope of this BP Procedure pertains to Lifting Equipment and its use.

This includes but is not limited to cranes, Power Industrial Lift Trucks, rigging, temporary supporting loads, Heavy Transportation or push and pull equipment in all environments (onshore, offshore, marine or subsea).

### 1.1 Applicability

This BP Procedure applies to the following Upstream Operating Functions, to the extent that the BP Control of Work (CoW) system applies:

- Global Operations Organization (GOO)
- Global Wells Organization (GWO)
- Global Projects Organization (GPO)

This BP Procedure relates to Lifting Equipment and its use in the following Upstream facilities and assets where BP Control of Work (CoW) system applies, including but not limited to:

- GOO-operated sites

*Where GOO relies on contractors to carry out work within the scope of this Procedure, the Procedure can be used by GOO in deciding on contractual provisions, bridging processes or the review of contractor's safety management systems, so that work is carried out in keeping with GOO application of OMS to GOO operating activities.*

- GWO-owned rigs and surface equipment
- GWO contractor-operated rigs and equipment unless a bridging document is in place to govern the interface between the contractor's lifting management system and the specific requirements of BP Procedure Management of Lifting Operations and Lifting Equipment (100572) as defined by GWO.

When a GPO contractor performs work, GPO-CM-PRO-00006 BP Procedure GPO Lifting (100346) governs unless BP CoW system applies.

### 1.2 Exclusions

The following is excluded from the scope of this document:

- marine towing operations and marine towing equipment
- mooring operations and mooring equipment
- personnel lifts, elevators, drilling articulated elevated platforms
- personnel or goods elevators
- Normal Freight Transportation
- manual handling operations

This BP Procedure does not apply to Operated by Others (OBO) facilities or to Non-Operated Joint Ventures (NOJVs).



## 2 References

### 2.1 Required References

The following documents are referenced in one or more requirements in this document. For dated references, only the version cited applies. For undated references, the latest version of the referenced document (including any amendments) applies.

#### BP

100241	BP Practice Diving
GOO-GE-PRA-00001	BP Practice Self-Verification in GOO (100536)
100340	BP Procedure Upstream Control of Work
GPO-CM-PRO-00006	BP Procedure GPO Lifting (100346)
GPO-PC-GLN-00013	Major Projects Verification and Approval Process Guide
GIS 38-202	Specification for Overhead and Gantry Travelling Cranes

#### Standards

API RP 5C1	Care and Use of Casing and Tubing
BS 7072	Code of Practice for Inspection and Repair of Offshore Containers

*Note: The Code of Practice is withdrawn. BS 7072 containers are acceptable for cargoes except for transport of Dangerous Goods.*

BS EN 12811-1:2003	Temporary works equipment. Scaffolds. Performance requirements and general design
BS EN 12079:2006	Offshore Containers and associated lifting sets (Parts 1 - 3)
DNV 2.7-1	Offshore Containers
DNV 2.7-2	Offshore Service Modules
DNV 2.7-3	Portable Offshore Units
ISO 1496-1:2013	Series 1 Freight Container - Part 1 General cargo container for general purposes
ISO 1496-3:2006	Series 1 Freight Container - Part 3 Tank containers for liquids, gases and pressurised dry bulk
ISO 10855-1	Offshore Containers and associated Lifting Sets
Oil & Gas UK	<a href="#">Best Practice for the Safe Packing &amp; Handling of Cargo to &amp; from Offshore Locations Issue 6</a>

### 2.2 Informative References

Unless stated otherwise in the content of this document, reference to the documents below is for information.

#### BP

000030	BP Policy Risk Management
500080	BP Practice Management of Lifting Operations and Lifting Equipment
GOO-GE-GLN-00007	BP Guide Self-verification in GOO (100573)
500059	BP Guide Safe Movement of Mobile Equipment GG 3.7-0002

## Standards

API RP 2D                      Operation and Maintenance of Offshore Cranes  
IMO MSC/Circ. 860        Guidelines for Offshore containers

## Additional Resources

International Rigging and Lifting Handbook (ISBN 978-1-904021-22-3)  
North American Rigging and Lifting Handbook (ISBN 978-1-904021-23-0)  
European Association of Abnormal Road Transport and Mobile Cranes (ESTA): [Best Practice Guide for Self-Propelled Modular Transporters](#)

[GOO Lifting Web Site](#)

## 3 Terms and definitions

For the purpose of this document, the following terms and definitions apply:

### May

Designates a Permissive Statement – an option that is neither mandatory nor specifically recommended.

### Shall

Designates a BP Requirement, and is used in BP Requirement Documents only when it is designating a BP Requirement.

### Should

Designates a specific recommendation where conformance is not mandatory.

### Anchoring Point

A point at which a heavy or immovable object is used to stabilise or secure an item that will have force applied to it. This could be a heavy equipment item, structure or heavy object such as a deadman.

### Appropriate Supervision

Supervision that is proportionate to the risk and takes into account the personnel involved in a particular Lifting Operation such as those with disabilities or inexperience. The levels of supervision are determined by the nature of the work and the competence of those involved.

### Banksman

An authorised and Competent Person who is responsible for giving clear and precise commands to an appliance operator.

### Blind Lift

A lift where, at any point in time during the Lifting Operation, the appliance operator cannot directly see the load.

### Cargo Carrying Unit (CCU)

Portable unit with dedicated Sling Set for repeated use in the transportation of goods or equipment handled in open seas to, from or between fixed and/or floating installations and ships.

### **Carrier**

A generic term used to describe a device that supports people or equipment while being lifted or lowered.

### **Centre of Gravity**

A point from which the weight of a body or system may be considered to act.

### **Certification (Certificate)**

An approved and legally compliant document providing written evidence that a piece of equipment meets a required standard or process.

### **Competent Person (or Competent People where plural)**

An individual, who, by way of education, training, experience and defined assessment, is knowledgeable of applicable standards, can identify workplace hazards relating to the specific operation, is designated by the employer, and has authority to take appropriate actions.

### **Crane Operator**

A person who operates the crane for the purpose of moving loads.

### **Crane Utilisation (displayed as a percentage)**

The total weight acting on the crane (including contingencies and factors) vs the available capacity of the crane as per the load chart or load curve (based on lift configuration and radius).

### **Damage or Deterioration**

The harmful effects of storage or environments on the integrity of equipment.

### **Dangerous Goods**

Goods classified and labelled, according to the International Maritime Dangerous Goods (IMDG) Code, as hazardous to personnel and equipment.

### **Defective**

Fault or weakness in equipment, or any of its components, which could arise during the manufacture, construction, installation or use.

### **Dynamic Amplification Factor (DAF)**

The factor by which the gross load weight is multiplied, to account for accelerations due to motion and impacts during the Lifting Operation.

### **Effectively Locked Out**

A system that prevents inadvertent activation.

### **Emergency Response and Rescue Plan**

Plan that defines the potential worst-case consequences in the event of a dropped object or catastrophic failure of the Lifting Equipment, documenting the control measures to be taken prior to the operation and the emergency response actions required in such an event.

### **Examination Report**

The record of the findings of the Thorough Examination and the actions that arise from it.

### **Excavator**

A powered machine for digging earth, gravel, sand (e.g. JCB or Caterpillar).

### **Exclusion Zone**

A delineated area of controlled access.

### **Extremely Valuable or Irreplaceable**

Lift assessed with equal to, or above a Level F Business Impact, using BP Policy Risk Management (000030).

### **Factor of Safety**

The ratio of the load that would cause failure of an item of Lifting Equipment for the load that is imposed upon it in service (e.g. Safe Working Load (SWL)).

### **Familiarisation Training**

Intensive training that allows an operator to be trained in the use of a specific item of Lifting Equipment, usually performed by an experience operator or the Original Equipment Manufacturer (OEM).

### **Fragile**

The integrity of the load is unknown (demolition), weak, could be damaged using normal lifting practices (e.g. crushing), or the load is subject to restrictions due to its construction (sling angles, sling positions).

### **Free Fall Capability**

A means of releasing the hoist brake completely to lower the load or hooks, with gravity and inertia allowing the load or hook to descend. Free fall is uncontrolled lowering, as opposed to controlled load lowering where the operator uses the machine gearing or a hydraulic means of control.

### **Ground Bearing Capacity (GBC)**

The maximum capacity of the ground or deck which is taking the applied load.

### **Hands Free Lifting**

A lift where personnel do not touch the load or the Lifting Accessories with any part of their body as the load is being lifted or before the load is properly set down and any potential energy has been released.

### **Heavy Lift**

A lift that is above the normal weight or complexity performed by the site.

### **Heavy Lift Crane**

A crane which requires an assist crane during assembly and erection on-site, any crane using a 'super-lift' or any marine crane performing a Heavy Lift as defined above.

### **Heavy Transportation**

Movement of a load by means of specialist multi-axle transporters, such as Self Propelled Modular Trailers (SPMT) or multi axle conventional trailers (this does not include Normal Freight Transportation).

### **Identification Number**

A unique number given to an item of Lifting Equipment for registration purposes and to allow traceability. This may contain numbers and/or letters.

### **ISO Container (Freight Container)**

International Standards Organization Container manufactured and tested in accordance with ISO standards, fitted with ISO corner fittings for use in general marine transport, loading and unloading in ports and inland waterways, usually by means of spreader frames.

### **Lifting Accessories**

Any device that is used or designed to be used directly or indirectly to connect a load to a Lifting Appliance and which does not form part of the load (e.g. slings, hooks and fittings, swivels, hoist rings, turnbuckles, sheave blocks, wedge sockets, lifting harnesses, shackles, eye-bolts, rigging screws, plate clamps, spreader beams, drill pipe and casing elevators).

### **Lifting Appliance**

Any machine which is able to raise, lower or suspend the load and includes its attachments used for anchoring, fixing or supporting it.

### **Lifting Equipment**

Term used to capture both Lifting Appliances and Lifting Accessories.

### **Lifting Operation**

An operation concerned with the moving, lifting or lowering of a load using any type of Lifting Equipment.

### **Lifting of Personnel**

The raising or lowering of personnel using Lifting Equipment.

### **Lifting Plan or Lift Plan**

A generic term used to describe a document that contains the use of Lifting or transportation Equipment within the scope of this Procedure.

### **Lifting Point**

A generic term for the calculated and designed lifting point(s) or attachment(s) on an item of equipment. From these points or attachments, the equipment can be safely lifted using certified Lifting Equipment and Appliances of adequate capacity. It includes common names such as pad eyes, lifting lugs, lifting cleats, lifting eyes, lifting trunnions and jacking points.

### **Lifting Set/Sling Set**

Items of integrated Lifting Equipment used to connect the offshore container or load to the Lifting Appliance.

### **Load (gross)**

Total weight to be lifted including accessories.

### **Load (net)**

Weight to be lifted not including accessories or contents.

### **Load Bearing Pressure**

The applied pressure when a load is placed on deck, ground, or on a supporting structure.

### **Load Chart**

Diagram or table showing the rated capacity relative to the radius, environmental conditions influences, out of plane influences, crane configuration and the type of operation. The load chart states the operational limits of the crane.

### **Load Sail Area**

The surface area of the load and its affect from environmental conditions (e.g. wind).

*The effect of wind on a load due to its sail area can be the governing factor when determining the safe environmental operating limits.*

### **Major Lift**

All lifts where one or more of the following applies:

- Planned activity involving purple and blue C+ severity risks based on the higher of the worst credible or net assessment risks.
- The regional Operations Authority considers that the risk associated with one or more of the following points requires an assurance review by the S&OR Segment Lifting Technical Authority:
  - The Lifting Operation is unusual for the Region.
  - The lift does not have an approved risk assessed procedure where required.
  - The lift involves specialist contractor support not normally used in the Region.
  - The lift demands a level of competency for which the Lifting Engineer has not been assessed.

### **Man-Riding**

Hoisting personnel with a winch above or below the rig floor to perform rig-up, inspection and maintenance tasks, where access platforms or any other means for accessing remote locations and equipment, such as maintenance baskets or ladder cannot be used due to worksite physical restrictions or equipment location.

### **Mobile Crane**

Lifting Appliance that has wheels or tracks and is capable of being driven or otherwise moved (e.g. towed) to the location of the lift.

### **Normal Freight Transportation**

A vehicle, vehicle combination transporting a load or loads, that are below authority public road limitations, hence does not require an authority notification or permit.

### **Overload**

Condition where the applied load exceeds the designed capacity or Safe Working Load (SWL)/Working Load Limit (WLL) of the Lifting Equipment.

### **Person in Charge**

Person with the applicable competency level who has been designated as responsible for a Lifting Operation.

### **Personnel Transfer Capsule (PTC)**

Transfer capsule that has been endorsed by the Regional Lifting Engineer such as a X904 or FROG.

### **Portable Offshore Unit (POU)**

A portable unit, specifically designed for repeated use in the transport of goods or equipment to, from or between fixed and floating offshore installations and ships.

### **Powered Industrial Lift Trucks**

A mobile, powered-propelled truck used to carry, push, lift, stack or tier materials. Commonly known as forklift trucks, Telehandlers, frontend loaders, pallet trucks rider trucks or lift trucks.

### **Pre-use Inspection**

A visual inspection and, where necessary, a function check of the Lifting Equipment by a Competent Person before each use.

### **Proximity Hazards**

Any obstacle, structure or item that may cause a hazard to the operation; for example, overhead power cable, public roads, railways, airport, helideck or buildings.

### **Pulling Operation**

An operation where conventional Lifting Equipment is used to move a load horizontally, including winches, skates, slings, shackles. Tractor and trailer (driving) operations are not included.

### **Qualified**

An individual in possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work or the project.

### **Radius**

Horizontal distance between the axis of rotation of the Lifting Appliance (crane) and the vertical centre line passing through the jib head sheave and the load hook.

### **Rated Capacity**

The load that a crane or Lifting Appliance is designed to lift for a given operating radius or parameter.

### **Rated Capacity Indicator (RCI)**

An automatic device that displays the Safe Working Load (SWL) that can be lifted, to the equipment operator (previously known as safe load indicator or load moment indicator).

### **Rated Capacity Limiter (RCL)**

An automatic device that stops the equipment from lifting loads which are beyond its rated capacity.

### **Regional Lifting Engineer (RLE)**

A person who has been assessed as competent by the Lifting Discipline Leader.

*This will typically be conducted by a GOO employee in-region who will provide cross function support as needed.*

### **Reports of Thorough Examination**

Formal statements made by a Competent Person(s) stating the outcome and finding(s) of a Thorough Examination of Lifting Equipment.

### **Safe Working Load (SWL)**

The maximum load (as determined by a Competent Person) which an item of Lifting Equipment may raise, lower or suspend under particular service conditions (e.g. the SWL may be lower than the Working Load Limit (WLL) - see Working Load Limit (WLL) definition below).

### **Signaller**

Person responsible for relaying crane movement signals to the crane or appliance operator.

### **Site Lifting Coordinator (SLC)**

Person responsible to perform on-site lifting task verification.

### **Slinger (Load Handler)**

Person responsible for attaching and detaching the load to/from the Lifting Appliance, and for the correct selection and use of Lifting Accessories in accordance with the Lift Plan.

### **Stability Angle**

The maximum angle, considered either through limitations on tipping or strength that the transportation can lean before becoming unstable when on level ground.

### **Sufficiently Independent**

Not influenced or controlled in any way by the company or organization executing or responsible for the task.

### **Suspension Point**

A suspension point, that suspends the Lifting Equipment (e.g. a suspension point, Uncertified Steelwork, temporary scaffolding lifting frame).

### **Tag Lines**

Ropes attached to loads to help in their orientation during Lifting Operations.

### **Technical Input**

Technical data provided from a degreed engineer to be incorporated into the Lift Plan.

### **Telehandler**

An item of equipment that operates as a forklift truck but has the ability to raise, lower or extend using a telescopic boom.

### **Third Party**

An organization providing services, materials or equipment.

### **Thorough Examination**

An examination by a Sufficiently Independent Competent Person in such depth and detail as the Competent Person considers necessary to enable them to determine whether the equipment examined is safe to use or continue to use. This may be also supplementary tests (e.g. non-destructive test, performance test, proof load test) where deemed appropriate by the Competent Person.



### **Toolbox Talk**

On-site, daily discussions or presentations focused on task-specific topics that provide an opportunity for the supervisor to emphasise the importance of particular issues or procedures, and for personnel to ask questions or make comments.

### **Uncertified Steelwork**

Any item that is used for suspending or supporting a Lifting Appliance that has not been certified for lifting by a Competent Person through testing or calculations and inspection.

### **Weight and Centre of Gravity Control**

A defined and documented system, in compliance with current industry practices, in order to establish the correct loads for the design of rigging and lift points.

### **Working Load Limit (WLL)**

Maximum load that the Lifting Equipment is designed to raise, lower or suspend. The WLL does not account for service conditions which may affect the final rating of the equipment (see Safe Working Load (SWL) definition above).

### **Written Scheme of Examination (WSE)**

A suitable scheme drawn up by a Competent Person for Thorough Examinations of Lifting Equipment at such intervals as may be appropriate, to verify the compliance and the integrity of the equipment. The intervals between examinations under a written scheme may be longer than the customary defined periods.

## 4 Symbols and abbreviations

For the purpose of this document, the following symbols and abbreviations apply:

BS	British Standard
CCU	Cargo Carrying Unit
DAF	Dynamic Amplification Factor
DNV	Det Norske Veritas
DP	Dynamic Positioning
EN	European Norm
GBC	Ground Bearing Capacity
GG	Group Guide
GoM	Gulf of Mexico
GOO	Global Operations Organization
GPO	Global Projects Organization
GWO	Global Wells Organization
IMO	International Maritime Organization
ISO	International Standards Organization
LDL	Lifting Discipline Leader
LOLER	Lifting Operations and Lifting Equipment Regulations (UK)
MEWP	Mobile Elevated Work Platform
MGW	Maximum Gross Weight
MoC	Management of Change
MSC	Maritime Safety Committee
OEM	Original Equipment Manufacturer
OMS	Operating Management System
OSHA	Occupational Safety and Health Administration
POU	Portable Offshore Unit
PPE	Personal Protective Equipment
PTC	Personnel Transfer Capsule

RCI	Rated Capacity Indicator
RCL	Rated Capacity Limiter
RLE	Regional Lifting Engineer
ROV	Remotely Operated Vehicle
S&OR	Safety and Operational Risk
SA	Site Authority
SLC	Site Lifting Coordinator
SLCP	Site Lifting Competent Person
SLTA	Segment Lifting Technical Authority
SPMT	Self-Propelled Modular Transporter
SWL	Safe Working Load
UHF	Ultra High Frequency
VHF	Very High Frequency
WLL	Working Load Limit
WSE	Written Scheme of Examination

## 5 BP Requirements - Management of Lifting Operations and Lifting Equipment

### 5.1 Document Structure

This BP Procedure is structured to follow the steps needed to plan, execute and continually improve a Lifting Operation as shown in Table 1.

**Table 1 - Document Structure**

<b>Primary Topic</b>	<b>Section Number</b>
People	5.2
Lifting Equipment	5.3
Lifting Equipment Integrity	5.4
Marking of Lifting Equipment	5.5
Equipment Registers	5.6
Pre-Use Inspection of Lifting Equipment	5.7
Rigging Loft Management	5.8
Defective or Unfit for Service Lifting Equipment	5.9
Risk Assessment	5.10
Lift Categorisation, Approval, Authorisation and Endorsement	5.11
Lift Plans	5.12
The Day of the Lift - Execute	5.13
Specific Task 1 - Hands Free Lifting	5.14
Specific Task 2 - Lifting Over or in Close Proximity to Live Plant	5.15
Specific Task 3 - Lifting from Uncertified Steelwork, Suspension or Anchoring Points	5.16
Specific Task 4 - Lifting from Scaffold	5.17
Specific Task 5 - Using Equipment as a Temporary Support	5.18
Specific Task 6 - Stacking Loads	5.19
Specific Task 7 - Drill Pipe Bundling Operations	5.20
Specific Task 8 - Drill Floor Operation	5.21
Specific Task 9 - Lifting of Personnel	5.22
Specific Task 10 - Subsea Lifts involving Divers	5.23
Specific Task 11 - Transportation	5.24
Documentation	5.25
Learn, Monitor and Take Corrective Action	5.26
Assurance	5.27
Verification	5.28
Legal Requirements	5.29
Interpretation	5.30
Changes and amendments	5.31
Deviation and Extensions	6

## 5.2 People

### 5.2.1 Lifting Organization

*Significant differences exist in job titles although the activities involved in performing a safe Lifting Operation remain the same (e.g. select equipment, plan, assess, operate and learn).*

*This BP Procedure does not standardise job titles, instead this BP Procedure attempts to attach core activities to generic role titles and appropriate levels of competence.*

*Table 2 provides guidance as to how these roles can be linked to common titles used across regions and functions.*

**Table 2 - Job Title Across Regions and Functions**

Generic Job Title	GOO US Sites	GOO Non-US Sites	GWO
Site Lifting Competent Person (SLCP) <i>Approval of Lift Plans</i>	Deck Foreman	Site Lifting Competent Person (SLCP)	Deck Pusher / Deck Foreman
Banksman <i>Gives instructions to equipment operators</i>	Signaller	Banksman	Driller or Assistant Driller (Person in Charge)
Powered Lift Appliance Operator <i>Operators of equipment (e.g. winches, Powered Industrial Lift Trucks)</i>	Powered Lift Appliance Operator	Powered Lift Appliance Operator	Utility or Man-Riding Winch Operator or FLT Operator
Crane Operator	Crane Operator	Crane Operator	Crane Operator
Slinger Load Handler <i>Connects the load to the Lifting Equipment</i>	Rigger	Slinger / Load Handler	Roughneck
Rigger <i>Uses portable Lifting Equipment to perform Lifting Operations (e.g. chain block)</i>	Rigger	Rigger	Roustabout
Rigging Loft Controller <i>Person responsible to manage and issue equipment from the rigging loft</i>	Rigging Loft Controller	Rigging Loft Controller	Storeman

- a. The Site Authority (SA) should perform the role of Site Lifting Coordinator (SLC).
- b. The SA may, with approval of the Area Operations Manager (AOM), delegate the role of SLC to a person who is Sufficiently Independent of the work group, but the SA remains accountable for the performance of Lifting Operations to the relevant standard.

*Within this BP Procedure, the term 'role' is used to represent a set of responsibilities that are performed by an individual in addition to other duties.*

*The term 'position' signifies a dedicated resource required to perform a set of responsibilities (e.g. as a standalone position).*

*Where workload and complexity provide justification, the SA can make the recommendation and seek approval to convert the SLC role into a position (e.g. on large onshore facilities or combined offshore facilities).*

- c. The SA shall be accountable for verifying that within each workgroup, the following roles are assigned and that the individuals understand their core responsibilities:
  1. Site Lifting Competent Person (SLCP)
  2. Banksman
  3. Powered Lifting Appliance Operator
  4. Crane Operator
  5. Slinger/Load Handler
  6. Technician
  7. Rigger
  8. Rigging Loft Controller

*Note that in GoM and Alaska, the term Slinger/Load Handler is not used. Instead, these duties fall under the role of Rigger.*

*Annex A provides a list of typical core roles and responsibilities for personnel assigned to each of the above roles.*

## **5.2.2 Competency**

*Competency can be described as the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely. Other factors, such as attitude and physical ability, can also affect someone's competence.*

*Risk assessments take account of team members competence, its relevance to the work place environment and the complexity of the task. This allows the level of information, instruction, training and adequate supervision to be identified and provided.*

- a. All personnel involved in Lifting Operations shall be appropriately trained, experienced and formally assessed, in both the task being performed and in the work place environment.

- b. Where a Third Party is contracted to perform Lifting Operations, the Regional Lifting Engineer (RLE) shall exercise oversight to confirm that the Third Party has a formal documented competency program that is applicable to the task and work place environment and that it meets the objectives set out in Annex B Competency System Review Guidance.

*It is acknowledged that within the boundaries of this BP Procedure, a variety of competence standards are used, which vary between function and geographic location. The intent of Table C.2 Execution Competencies in Annex C is to provide an initial list of standards that are currently deemed acceptable and hence can automatically be considered adequate. It is anticipated that this table will be expanded in a systematic manner as more systems are reviewed. Annex B provides guidance on the review process and how it is managed until codified.*

- c. Where a competency system is proposed by a Third Party which is not detailed within Table C.2, Annex C, it shall be reviewed by the RLE and subject to a Management of Change (MoC) until incorporated within the next revision of this BP Procedure.

*Many lifting incidents can be linked to competence or behaviour. The intent of this BP Procedure is to apply formally accredited levels of competence to all lifting core roles.*

- d. The SA shall be accountable for maintaining a register of personnel authorised to perform Lifting Operations, including but not limited to:
1. competence records and training certificates
  2. certificate expiry dates.
- e. BP Personnel performing verification roles (e.g. SLC and RLE) shall be trained to meet relevant competency standards using the BP in-house training courses contained within [My Talent and Learning](#) to the level detailed in Annex C, Table C.1.
- f. Any individual who has not achieved the required competency or is under development shall only assist, remaining under the supervision of a Competent Person at all times.
- g. For subsea Lifting Operations, competency assessment of divers and dive supervisors involved in Lifting Operations shall be the responsibility of the Diving Discipline Leader.
- h. For drill floor operations (normal drilling operations, not maintenance), competency assessment shall be the responsibility of the Well Site Leader and recorded within the GWO bridging documents.

### 5.2.3 Delegation of Duties

An individual may delegate his/her duties to another person who has reached the required competency level for the task being performed but shall remain accountable for the performance of those duties to the appropriate standard.

### 5.2.4 Team Selection

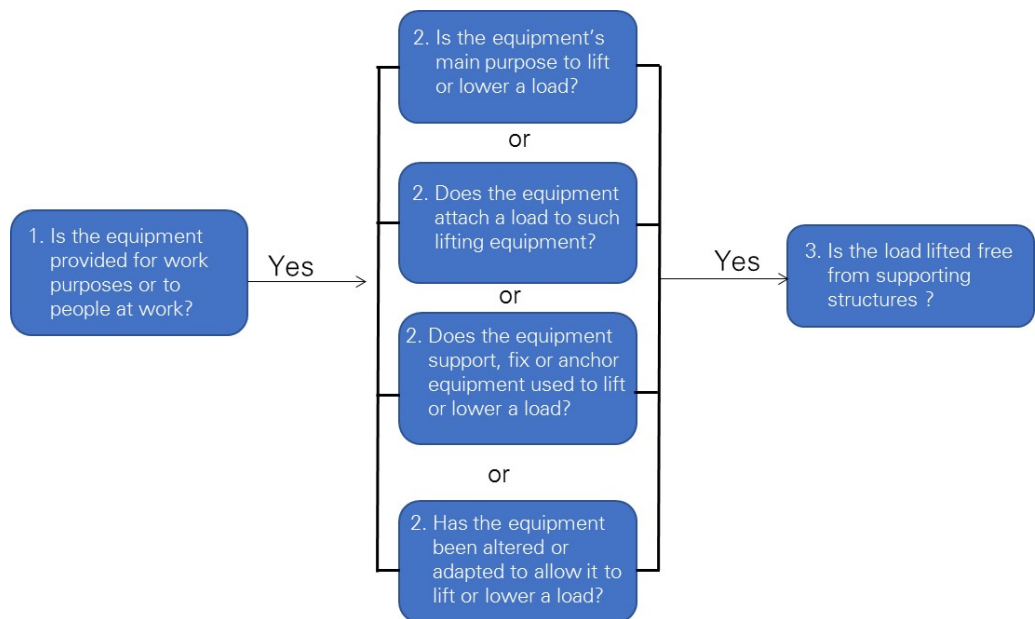
- a. The number of personnel and competencies required to perform a task shall be listed on the Lift Plan based on the risk assessment.
- b. Crane (excluding overhead cranes) Lifting Operations shall have a minimum of three Competent People (Banksman, Operator and Slinger (Load Handler)), unless a risk assessment shows the lift can be safely undertaken by fewer people.
- c. Powered Industrial Lift Truck operations shall use a Banksman in order to mitigate restrictions in vision and to maintain segregation from pedestrians unless a risk assessment shows the lift can be safely undertaken by fewer people.

## 5.3 Lifting Equipment

### 5.3.1 What is Lifting Equipment?

The SA shall identify and record all Lifting Equipment on-site, subject to the requirements of this BP Procedure (unless specifically excluded in Exclusions - see section 1.2).

The flow chart shown in Figure 1 is designed to allow the SA to determine if an item of equipment is defined as Lifting Equipment.



**Figure 1 - What is Lifting Equipment?**

*If the answer is yes to question 1, to any question in column 2 and to question 3, the equipment is likely to be subject to the requirements of this BP Procedure.*



*Lifting Equipment comprises of Lifting Appliances and Lifting Accessories and is further divided into five categories which reflect their different purposes, inspection requirements, control and marking. These categories are:*

- *portable Lifting Equipment*
- *fixed Lifting Equipment*
- *transit Slings*
- *Portable Offshore Units (POU)*
- *mobile Lifting Equipment*

### **5.3.2 Suitability of Lifting Equipment**

Before any Lifting Equipment is used, the SLCP shall check and confirm that the Lifting Equipment:

1. meets the requirements of this BP Procedure and local legislation.
2. meets the manufacturer's instructions.

*The manufacturer's instructions can be supplemented or replaced by specific equipment safe use guidance where it is approved by the RLE.*

3. has been pre-use inspected and all safety devices are fully operational.
4. is in a safe to operate condition.
5. is traceable to a valid report of Thorough Examination which is available on-site.

*Reports of Thorough Examination can be electronic or hard copy.*

### **5.3.3 Selection of Lifting Equipment**

- a. The equipment operator shall not use Lifting Equipment that does not have a documented safe operating limit(s), manufacturer's instructions and control decals that are either pictorial or in a language understood by the operator.
- b. The SLCP shall check and confirm that only Lifting Equipment that is detailed within an approved Lift Plan is used on-site.
- c. Lift Plan approval by the SLCP shall confirm that in relation to each Lift Plan:
  1. Lifting Equipment(s) safe operating limits have been verified as adequate.
  2. An adequate Factor of Safety has been applied, based on the accuracy of quantifiable data, lift characteristics and environmental conditions.
  3. Lifting Equipment(s) is suitable for the task and use at the task location.
  4. The Lift Plan only details the use of Lifting Equipment(s) in conformance with the manufacturer's instructions.
- d. Lifting Appliances (e.g. cranes, lorry loaders, knuckle booms) with a rated capacity above 1,000 kgs (2,200 lbs), shall be fitted with a Rated Capacity Indicator (RCI) and/or a Rated Capacity Limiter (RCL), that provide audible and/or visual warnings when the safe limits are approached.

*Excluded from number 5.3.3d is any Lifting Appliance, for which the rated capacity does not vary with the position of the load (e.g. overhead crane, swing jib, chain hoists).*

*Where the appliance has multiple hook blocks such as a crane with a main block and an auxiliary block, this is required for the hook that is used.*

### **5.3.4 Suitability of Lifting Equipment with End Stops**

- a. The operator shall conduct pre-use checks of Lifting Equipment with end stops which include the operator physically confirming their effectiveness to stop the specific trolley used.
- b. The RLE shall verify that end stops requirements as per this BP Procedure are included within the Third Party inspection protocols and discard criteria.

*End stops requirements can be found in GIS 38-202, Specification for Overhead and Gantry Travelling Cranes.*

### **5.3.5 Suitability of Third Party Lifting Equipment**

*Third Party equipment is any Lifting Equipment that is not owned by BP. Responsibility for its suitability for the task and workplace location resides with the user organization. Hence, the below activities verify that the user organization has adequate control measures that meet the requirements of this BP Procedure.*

- a. The SA shall be accountable for verifying that Third Party equipment mobilised to site conforms to the requirements of this BP Procedure prior to it being used at site, including that:
  1. it is traceable to a valid report of Thorough Examination.
  2. it is adequately maintained.
  3. it is supplied with operating instructions.
- b. The SA may consult the RLE to verify the supplier's maintenance systems and records.
- c. Where the Third Party equipment is provided with an operator, the SA shall be accountable for verifying that the operator meets the competency requirements of this BP Procedure.

### **5.3.6 Suitability of Marine Mission Specific Equipment**

The RLE shall verify the integrity of marine mission specific Lifting Equipment, competency of personnel and adequacy of the lifting management system used prior to mobilisation.

### **5.3.7 Portable Lifting Equipment**

The Rigging Loft Controller shall store portable Lifting Equipment within a rigging loft, which prevents unauthorised use and equipment degradation through environmental factors (see section 5.8 for more details on Rigging Loft Management).

### **5.3.8 Fixed Lifting Equipment**

The equipment operator shall only use fixed Lifting Equipment where the Safe Working Load(s) (SWLs) are clearly visible and marked in units used at the work place.

### 5.3.9 Transit Slings

- a. The SLCP shall not use transit slings for general Lifting Operations.
- b. Transit slings use offshore in a double wrap and choke configuration, shall be taken out of service and not returned to service until inspected by a Sufficiently Independent and Competent Person.
- c. The RLE shall be responsible to verify that:
  1. transit slings are marked with a unique colour code that distinguishes them from general slings.
  2. the construction of transit slings is adequate for the regional environmental conditions.

### 5.3.10 Portable Offshore Units (POU)

*Portable Offshore Units (POU) include:*

- *Cargo Carrying Units (CCU)*
  - *pre-slung equipment (e.g. generators)*
  - *skid mounted equipment*
  - *spools*
  - *frames*
  - *specialist plant*
- a. Portable Offshore Units (POU) shall conform to one of the standards below or be approved by a Qualified Structural Engineer (guidance is given in IMO MSC/Circ 860).
    1. DNV 2.7.1
    2. DNV 2.7.2
    3. DNV 2.7.3
    4. BS EN 12079
    5. ISO 10855-1
    6. BS 7072 (not acceptable for the transport of Dangerous Goods)
  - b. Any POU that does not have a valid report of Thorough Examination or data plate compliant with the relevant standard shall be marked 'NOT suitable for Lifting'.

*The POU is not to be sent offshore unless the Certificate of Thorough Examination has a minimum of 1-month validity.*

- c. The SA shall be accountable for verifying that POUs are in a safe to lift condition.

*Verification includes that:*

- *the load weight is accurate and does not exceed the maximum gross weight (MGW), and that the MGW is clearly marked on the CCU.*
- *the tagging system records all pre-lift checks are complete including dropped object inspection.*
- *the tagging system is traceable to the team member who performed the activity.*

- d. The weight of each POU shall be recorded on the manifest, with a copy made available to the receiving location.
- e. Each site shall use the Oil and Gas UK - Best Practice for the Safe Packing and Handling of Cargo to and from Offshore Locations ('the Standard'), unless a local system approved by the RLE is in place which meets or exceeds the Standard.

### 5.3.11 ISO Containers (Freight Container)

- a. ISO Containers (Freight Containers) shall not be lifted where offshore (open water) dynamic forces are present.

*Freight Containers are fitted with ISO corner blocks to be lifted with frames. They are primarily designed to be lifted in sheltered waters such as ports. They are not designed for the forces experienced offshore.*

- b. The SA shall be accountable for verifying that ISO Containers (Freight Containers) are in a safe condition prior to lifting at site.

*Verification includes that:*

- *the load weight is accurate and does not exceed the MGW and that the MGW is clearly marked on all ISO Containers (Freight Containers).*
- *the tagging system is used to indicate all pre-lift checks are complete (including dropped object inspection).*

- c. The SLCP shall only lift ISO Containers (Freight Containers) that are designed, manufactured, fabricated and tested in conformance with the applicable ISO standard for the style of container.

*(e.g. ISO 1496-1:2013 Series 1 Freight Container - Part 1 General cargo container for general purposes and ISO 1496-3:2006 Series 1 Freight Container - Part 3 Tank containers for liquids, gases and pressurised dry bulk).*

- d. The lifting or handling of ISO Containers (Freight Containers) shall only be permitted when in conformance with the applicable ISO standard.

*ISO Containers (Freight Containers) fitted with a data plate that clearly indicates:*

- *unique Identification Number*
- *container classification*
- *type of inspection performed*
- *date of last inspection*
- *due date of next inspection*

- e. The SLCP shall mark 'NOT suitable for Lifting' any ISO Container (Freight Container) that does not have a valid report of Thorough Examination or data plate compliant with the relevant standard.

### 5.3.12 Mobile Lifting Equipment

*Mobile Lifting Equipment moves between different task locations which can introduce additional risks.*

- a. The SLCP shall take into account factors that could affect the safety of the operation at different locations and apply adequate control measures and operational boundaries to the Lift Plan.
- b. The following factors should be considered:
  1. the standing and support conditions at the task location
  2. the presence and proximity hazards
  3. suitability of access and egress to the task location.

*For the purpose of this BP Procedure, lift categorisation Proximity Hazards include but are not limited to:*

- *overhead electrical lines and cables within the below distances measured at ground level: crane is within 15m (50ft) plus the maximum jib length (line supported by steel towers); crane is within 9m (30ft) plus maximum jib length (lines supported by wooden poles).*
  - *destabilisation factors such as underground services or voids, excavations: if the distance between the outer edge of where the load is applied (outside edge of load spreading mat) is less than twice the depth of the underground service or toe of an unsupported excavation.*
  - *other mobile Lifting Equipment or cranes: if the task location is adjacent to other mobile equipment and there is a risk of the load or part of the mobile equipment impacting adjacent equipment if the crane fails or overturns.*
  - *public roads or railways: if the task location is adjacent to a railway or a public road and there is a risk of the load or part of the crane obstructing the road or track if the crane fails or overturns (additionally, for public roads, see public access areas or buildings below).*
  - *public access areas or buildings: if injury of people could be caused by the load or the mobile Lifting Equipment if it fails or overturns.*
  - *Airfields: if the task location is within 6kms of the airfield and the mobile equipment exceeds a height of 10m (33ft) or exceeds the height of surrounding structures or trees.*
- c. Where mobile Lifting Equipment is used for lifting, but lifting is not the equipment primary purpose such as excavators, it shall only be used with the approval of the RLE for the proposed task, giving due consideration to:
    1. the equipment manufacturer's instructions and/or endorsement
    2. operators and lift team competency and experience of performing the planned task.
  - d. Mobile cranes shall not be used on floating appliances, structures or barges without approval of the RLE.

### 5.3.13 Safe Use of Lifting Equipment

Lifting Equipment shall only be used in conformance with one of the below:

1. the Original Equipment Manufacturer (OEM) operating instructions; or
2. an approved Management of Change (MoC).

## 5.4 Lifting Equipment Integrity

### 5.4.1 Purchase of Lifting Equipment

All Lifting Equipment shall be periodically verified by the RLE as being purchased to recognised standards, adequately constructed, certified and suitable for its intended task.

### 5.4.2 Maintenance

- a. All Lifting Equipment shall be maintained in a safe to operate condition, in accordance with:
  1. regulatory requirements, and
  2. OEM instructions
- b. Unless supported by an approved MoC, only OEM approved parts, components and fluids should be used.
- c. The RLE shall verify that the equipment maintenance strategies are consistent with the OEM instructions.
- d. Maintenance strategies for Lifting Equipment which utilise wire ropes shall include a wire rope inspection method and schedule, discard criteria and rope life span or replacement duration.

### 5.4.3 Inspection and Testing of Lifting Equipment

- a. Lifting Equipment that is in-service shall not be used unless it can be traced to a valid report of Thorough Examination.

*The frequency and, hence, validity of the reports depends on the type of equipment, geographical location and how it is used.*

*The frequencies stated in Table 3 represent the indicative periods between each examination by location (for simplicity, these do not show any change over period).*

**Table 3 - Equipment Examination Frequencies**

Type of equipment	North America GoM, ALASKA	All other Regions
Portable Lifting Equipment	Not to exceed 12 months	Not to exceed 6 months
Fixed Lifting Equipment (Not used to lift Personnel)	Not to exceed 12 months	Not to exceed 12 months
Transit Slings	Not to exceed 6 months	Not to exceed 6 months
CCUs / ISO Containers	Not to exceed 12 months	Not to exceed 12 months
Mobile Lifting Equipment	Not to exceed 12 months	Not to exceed 12 months
GWO Derrek, Crown Block	Not to exceed 12 months	Not to exceed 12 months
Equipment used for lifting Personnel	Not to exceed 6 months	Not to exceed 6 months

- b. Persons carrying out Thorough Examinations shall be Sufficiently Independent and impartial to allow objective decisions to be made.

*This person does not necessarily need to be employed by an external company. If there is a person within an organization with the necessary competency, he/she may be used.*

- c. The RLE shall verify that in-house examiners have genuine authority and independence to confirm the examinations are properly conducted and any decisions are made without fear or favour.
- d. In addition to the in-service requirements above, a Thorough Examination shall be conducted for any equipment that is being placed into service for the first time and:
  - 1. after any major repair, which may affect its safe use.
  - 2. after any exceptional circumstance which may have jeopardised its safety.

*The design of certain Lifting Equipment is such that damage may be caused by conventional overload tests. The Competent Person carrying out the Thorough Examination or testing is to take account of the instructions and other relevant information (e.g. regulatory requirements of such testing and OEM instructions).*

*Other testing may be carried out as part of the Thorough Examination where the Competent Person is able to properly assess the safety of the equipment (e.g. non-destructive, functional or overload tests).*

*This will depend on an assessment of the risks based on the type of Lifting Equipment, where it is installed and how it is to be used.*

- e. Where additional testing of Lifting Equipment is required, the RLE shall be consulted.

#### **5.4.4 Written Scheme of Examination (WSE)**

- a. The RLE shall approve the use of a Written Scheme of Examination (WSE).

*A WSE allows the specified in-service frequency of Thorough Examination (see Table 3) to be extended or reduced. In some circumstances, a WSE can be an efficient method to reduce inspection costs on infrequently used equipment.*

- b. The RLE may extend the frequency between Thorough Examinations (e.g. longer periods between examinations) based on an assessment of risk, giving due consideration of how and where the equipment is used, provided always that applicable local regulations and standards are met.

*A WSE identifies and specifies those parts of the Lifting Equipment that are to be examined or tested and the intervals and frequencies at which it is done.*

### **5.5 Marking of Lifting Equipment**

#### **5.5.1 General**

All Lifting Equipment shall be marked with:

- a. a unique Identification Number or serial number which is traceable to a report of Thorough Examination
- b. Safe Working Load (SWL) or Working Load Limit (WLL) which is in consistent units used at the facility
- c. a colour code or data plate.

### 5.5.2 Colour Coding or Data Plates

- a. All Lifting Equipment shall be colour coded or supplied with a data plate or tag that clearly defines the date of last inspection.
- b. Where colour codes are used, signs shall be displayed in prominent locations around the site informing people of the valid colour code colour.
- c. Marking on synthetic slings shall use a method that does not:
  1. damage the sling material
  2. introduce sharp edges
  3. obscure information on data labels.
- d. Out of service equipment shall be colour coded red.

### 5.6 Equipment Registers

- a. The SLCP at each site shall be accountable for the establishment and maintenance of a register of Lifting Equipment.
- b. Each register shall contain for each item of Lifting Equipment on-site, the following information as a minimum:
  - description of equipment
  - identification or serial number
  - date of purchase
  - date of manufacture
  - rated capacity (SWL or WLL)
  - current/valid Certificate of Thorough Examination number
  - date of last inspection
  - expiry date of current Certificate
  - equipment status (in-service, out of service, quarantine or WSE).

### 5.7 Pre-Use Inspection of Lifting Equipment

*Pre-use Inspection guidance videos and notes for Lifting Equipment is available on the [GOO Lifting Web Site](#) and can be accessed [here](#).*

- a. Lifting Equipment shall be inspected prior to use by a Competent Person.

*The Competent Person is responsible for the inspection of the equipment to an extent that confirms that the equipment has a valid report of Thorough Examination and remains in a condition that:*

  - *is fit for service*
  - *does not hold a risk of dropped objects*
  - *is fully operational and that all safety devices are fully operational.*

*The daily Pre-use Inspection of the following equipment (as a minimum) is documented and recorded on site by the SLCP, using a checklist (including dropped object inspection):*

  - *fixed Lifting Equipment*
  - *mobile Lifting Equipment (including Powered Industrial Lift Trucks).*
- b. The SLCP in consultation with the RLE and as appropriate with OEM shall produce the Pre-use Inspection checklists.



## 5.8 Rigging Loft Management

*See the [GOO Lifting Web Site](#) for guidance on rigging loft management.*

Rigging lofts shall:

1. be placed in a suitable location, providing protection from site activities, and allow safe access and egress.
2. provide environmental conditions that prevent damage or deterioration of equipment.
3. be of sufficient size or design to allow for uncluttered storage of equipment and prevent tripping hazards.
4. be fitted with a work area or bench.
5. be supplied with a portable Lifting Equipment register and an issue/return log or T-Card system.
6. be fitted with:
  - a) a secure lockable quarantine area
  - b) a sign that displays current colour code
  - c) a list that displays authorised personnel approved as competent to withdraw and use Lifting Equipment.

## 5.9 Defective or Unfit for Service Lifting Equipment

Any item of Lifting Equipment found to be Defective, unfit for service or not compliant with regulatory requirements or the requirements of this BP Procedure shall be rendered unusable, quarantined and colour coded red.

## 5.10 Risk Assessment

- a. All Lifting Operations shall be risk assessed.
- b. Risk assessments shall conform with the requirements of BP Procedure Upstream Control of Work (100340).
- c. Risk assessments shall be reviewed by the work group at the Toolbox Talk before the work commences.
- d. The Toolbox Talk shall be repeated:
  1. if the task stops and is restarted (for example between shifts).
  2. for any additional personnel joining the workgroup.

*The prompt sheet in Annex D is provided to assist in the identification of the potential hazards that may be considered during the risk assessment.*

**5.11 Lift Categorisation, Approval, Authorisation and Endorsement**

- a. Lifting Operations shall be categorised using the categorisation tables specific to the task environment detailed in Annex E and Annex F for GWO drill floor operations.
- b. Lift Plans shall be approved, authorised and endorsed as per the lift categorisation (see Table 4).

**Table 4 - Lift Plan Approval, Authorisation and Endorsement**

Activity				
Category of Lift Plan	Approval	Management and control	Authorisation	Endorsement
	Responsibility of			
	SLCP	SLC	SLC	RLE
1 (Repetitive Lift Plan valid up to a period of 6 months)	✓		✓	✓
Risk assessed procedures / Standard operating procedures	✓		Sample only	On request by SLC
1	✓	✓	Sample only	On request by SLC
2	✓	✓	✓	On request by SLC
3	✓	✓	✓	✓

*Approval signifies confirmation by the SLCP that a Lifting Plan is safe to execute and the Lifting Equipment is within safe operating limits and used in line with the manufacturer’s instructions. The Lift Plan details the control measures for all identified risks and hazards. It provides a safe system of work and it conforms to the legal requirements and the requirement of this BP Procedure.*

*The SLCP may seek contribution from the discipline engineers (civil, structural or mechanical) in the development of the Lift Plan but holds responsibility to identify the need for engineering input and to accurately incorporate input within the plan.*

*Authorisation signifies verification by the SLC that the Lift Plan has been developed correctly by the SLCP and conforms to the requirements of the BP Procedure.*

*Endorsement signifies confirmation from the RLE that the Lifting Plan provides a risk based safe, technically acceptable solution, it has accurately incorporated all data provided and it is in conformance with the requirements of this BP Procedure.*

- c. Approval, authorisation and endorsement of Lift Plans shall only be given by persons who meet the competency requirements set out in Annex C.

## 5.12 Lift Plans

### 5.12.1 General

- a. All Lifting Operations shall have a Lift Plan that has been approved in accordance with Table 4.

*Within this BP Procedure, the term 'Lift Plan' is used to describe any document that contains the use of Lifting Equipment.*

*Lift Plans are segregated into two types: plans created to support repetitive tasks or non-repetitive tasks.*

*The following list provides examples of typical documents considered as Lift Plans:*

- *Repetitive tasks:*
  - *Category 1 repetitive Lift Plan, approved for repeat use*
  - *Risk assessed procedure*
  - *Standard Operating Procedure (e.g. Powered Industrial Lift Truck operations)*
- *Non-repetitive tasks*
  - *Category 1 Lift Plan*
  - *Category 2 Lift Plan*
  - *Category 3 Lift Plan*
  - *Heavy Transportation plan*
  - *Temporary support plan*

*Lift Plans categorisation reflects the task complexity (see Annex E and Annex F for GWO drill floor operations for further details). For guidance on lift planning and Lift Plan templates, refer to the [GOO Lifting Web Site](#).*

*Approval, authorisation and endorsement are required each time a Lift Plan is used or modified. The only exception to this is a repetitive Lift Plan which is approved for retentive use within a defined period.*

- b. Lift Plans shall document that the Lifting Equipment is only to be used:
1. within its safe operating limits

*Safe operating limits can be influenced by the following:*

- *load to be lifted (shape, sail area or stability)*
- *place where the task is performed (e.g. SIMOPS, environment forces, sea state, wind speed, Proximity Hazards)*
- *way the equipment is used (e.g. configuration, angles).*

2. in line with the manufacturer's instructions
3. with an appropriate contingency based on the accuracy of data used to create the plan. Guidance values provided below may be reduced if an appropriate industry standard is used with approval of the RLE.

*The contingency factors described below provide an allowance for load weight inaccuracy or other tolerances (e.g. if the weight of a load is estimated, a contingency factor can be added and applied to all components within the load path (including accessories and ground or deck loadings)).*

*Increased accuracy of data reduces the contingency applied (e.g. engineering weight calculations or physically weighing, using calibrated load cell(s)).*

*The following contingency factors are provided for guidance:*

- *loads which have been physically weighed using calibrated load cell(s) = 3%*
- *loads which have engineering weight calculation = 5%*
- *all other loads = 10%*

- c. Any item that could affect vessel stability and/or the Lifting Equipment safe operating limits shall be detailed on the Lift Plan, giving operators clear boundaries of the safe operating limits.

*Raising loads from the deck and landing them elsewhere or between floating units can affect the vessel motion, trim, heel and stability, depending on the weight of the load in relation to the size of the vessel and the height and position of the boom head in relation to the centre of gravity of the vessel. This can be of note for even relatively small loads, increasing in significance for Heavy Lift operations.*

- d. Lift Plans shall be written in a language which is understood by the workgroup or where necessary, in dual languages.

*An example is provided on the [GOO Lifting Web Site](#).*

- e. Lift Plans shall include the following items as a minimum:

1. Lift Plan title
2. Location where the task will be performed
3. Lift Plan number, date and revision number
4. Description of the Lifting Operation
5. Method of Hands Free Lifting to be used (e.g. Tag Line, push pull poles)
6. Method of communication
7. Lift categorisation
8. Signatures and names of persons providing approval, authorisation and endorsement
9. Load details including descriptions, dimensions and weight
10. If the Centre of Gravity of the load is central or offset
11. Details of the Lifting Appliance(s) to be used and its safe operating limits
12. Configuration
13. SWL at the radius used
14. Total load to be lifted and the percentage of equipment utilisation
15. Potential destabilisation factors, such as ground or deck strength
16. Pressure imposed by the equipment or load
17. Load spreading required
18. Applied ground or deck bearing pressure after load spreading
19. Capacity of ground or deck at the task location
20. Number of personnel required for the task and their roles

21. Table of Lifting Accessories used including:
    - description of accessory
    - quantity required
    - SWL/WLL
    - weight of each item
    - total weight
  22. Interface between rigging and load (connection points)
  23. Method statement
  24. Sketches and drawings and or photographs:
    - plan view
    - side elevation
  25. Rigging arrangement (Lifting Accessories)
  26. Equipment rigging calculations
  27. Critical dimensions, angles and clearances
  28. References to associated documentation (for example, engineering drawings or calculations, risk assessment, contingency plan, rescue plan, Permit to Work (PTW)).
  29. Post lift lessons learned
- f. When using mobile equipment onshore, the Lift Plan shall identify if any destabilisation factors such as excavations or underground services could affect the stability of the equipment.
1. No load shall be applied to underground services (assuming a 45-degree load angle) without the approval of the RLE.
- g. The standard Lift Plan templates shall be used unless an alternative format has been approved by the RLE.
- [The standard Lift Plan templates for onshore and offshore lifts can be found on the GOO Lifting Web Site.](#)*
- h. Without prior written approval of the RLE, Lift Plans shall not make use of:
1. process pipework as a suspension point to bear any load
  2. flat or belt webbing sling for dynamic lifts
  3. choking of chain slings
  4. slings with aluminium ferrules for subsea lifts
  5. flat-braided slings.

### **5.12.2 Category 1 Lift Planning Requirements**

- a. Each RLE may provide additional guidance which effectively manages the risks associated with Category 1 repetitive Lifts Plans, appropriate to the regional workplace environments and functions.
- [Repetitive lift guidance can be found on the GOO Lifting Web Site.](#)*
- b. The RLE shall endorse repetitive Lift Plans following the review and comment cycle(s) as appropriate.

- c. Repetitive Lift Plans shall include adequate task details, to allow the risk assessment to identify and control the risks associated with the task.
- d. The use of repetitive Category 1 Lift Plan shall be limited to:
  - 1. a Lifting Appliance
  - 2. a task location
    - (e.g. identification of obstructions or potential snagging points within the load flight path).*
- e. Category 1 repetitive Lift Plans shall document any factors that are or may be variable within the period of the Lift Plan validity.
  - (e.g. weather, visibility, permafrost/soil stability, flooding).*
  - Category 1 repetitive Lift Plans allow multiple loads to be lifted from a common pick up location to common set down location using the same item of Lifting Appliance and the same load flight path. This allows the risk assessment to be specific to the task and the work place location at which it will be performed.*
  - Lift Plan guidance: guidance on the development of a Lifting Plan is provided on the [GOO Lifting Web Site](#).*

## **5.13 The Day of the Lift - Execute**

### **5.13.1 Toolbox Talk**

An onsite job walk-down and Toolbox Talk shall be carried out prior to the start of any Lifting Operation.

*The purpose of a Toolbox Talk is to explain the Lift Plan to each person on the lift team and to confirm their understanding of the plan and control measures. All personnel involved review the findings of the risk assessment and the details of the Lift Plan. They then sign the Toolbox Talk record confirming they understand and agree with the plan, the control measures and their responsibilities.*

### **5.13.2 Stop the Job**

- a. All personnel are empowered to stop the job at any time.
- b. If at any time either before or during a Lifting Operation, any of the following conditions are identified, the task shall be stopped immediately, until the Area Authority has reviewed the risk assessment and appropriate control measures:
  - 1. new hazard which has not been properly assessed
  - 2. work scope or work conditions change
  - 3. anyone thinks that the permit or control measures are not appropriate or they no longer apply
  - 4. task goes outside the permit scope
  - 5. changes in weather or site conditions affecting the task.

### 5.13.3 Communications

- a. A method of communication shall be established and agreed before the Lifting Operation commences.
- b. The communication method shall:
  1. be documented in the Lift Plan
  2. be communicated during the Toolbox Talk
  3. be tested prior to work starting
  4. provide suitable control measures for hazards involved with complex operations (e.g. Blind Lifts, lifts utilizing multiple Lifting Appliances or marine operations from or to a vessel).

### 5.13.4 Safe Positioning

*Everyone involved in the operation is responsible to correct their own position or the position of others if they move into an unsafe position.*

- a. The Banksman shall:
  1. be responsible for confirming that the work group members stay in safe positions.
  2. maintain visual contact with each member of the workgroup at all times.
- b. Where visual contact is not possible, additional Banksmen shall be used (e.g. Blind Lifts).

### 5.13.5 Exclusion Zones

- a. A lift shall not be permitted unless a defined Exclusion Zone which prevents access to non-essential personnel is in place.

*Personnel who have completed an activity or are waiting to perform an activity are not considered essential and wait outside the Exclusion Zone, ready to be called in by the Banksman as necessary.*

- b. Personnel inside the Exclusion Zone shall avoid Proximity Hazards and any area of high risk (e.g. between the load and a heavy or immovable object).
- c. Lift team personnel inside the Exclusion Zone, shall keep themselves and others out of unsafe positions (e.g. areas under a load, areas where they may be injured by a dropped object or a shifting load, between loads, walls, bulk heads or heavy or immovable objects).
- d. Exclusion Zones shall be sized based on risk.

*For example, Exclusion Zones for mobile equipment are sized based on equipment utilisation and/or risk of tipping/overturning.*

### 5.13.6 During the Lift - Crane Operator

Without approval of the SA, the Crane Operator shall:

- a. remain at the controls whenever a load is suspended.
- b. not use cranes in free fall mode.

*Where free fall is used, it is best practice for the crane boom to remain stationary.*

### 5.13.7 During the Lift - Banksman

*The Banksman may assist the Load Handlers in the preparation and checking of items to be lifted, including laying out slings, pennants, but only before assuming the role of Banksman to control the lift. The connection and removal of the rigging to/from the crane/equipment hook or pennant is done by a Slinger(s)/Riggers.*

- a. A Banksman shall be used for crane Lifting Operations (excluding overhead cranes).
- b. The Banksman shall be identifiable by wearing high visibility clothing, which differs from the other workgroup members.
- c. The Banksman shall verify that:
  1. Lift Plans and permit approvals are in place.
  2. the site walk and Toolbox Talk have been completed.
  3. any personnel involved or that could be affected have been briefed.
  4. the operation is conducted in full conformance with the approved Lift Plan.
  5. correct equipment is available as per the Lift Plan.
  6. the Lift Plan accurately describes the task.
  7. all risk control measures and mitigations are in place.
  8. All personnel are wearing the correct Personal Protective Equipment (PPE).
  9. Pre-use Inspections of the load and equipment are complete, including an inspection for potential dropped objects.
  10. an Exclusion Zone is established and access restricted to essential personnel only.
  11. the route to be travelled by the load and the landing area are clear.
  12. safe access to connect and disconnect the load is available.
  13. the load is landed and stable before disconnection of rigging or appliance.
  14. Tag Lines are only used after assessment.
  15. all personnel involved in the lift are instructed that anyone can 'stop the job'.
  16. the Exclusion Zone is removed and site reinstated.
  17. the Lifting Equipment has had a post-use inspection.
  18. the Lifting Accessories are returned to the rigging loft.



## 5.14 Specific Task 1 - Hands Free Lifting

- a. It is recognised that there are some lifting activities (e.g. rig floor tools, turbine overhauls) where Hands Free Lifting (using Tag Lines or push pull poles) is difficult to achieve. In these circumstances, touching the load may be permitted following a risk assessment.
- b. Once a load is connected to a Lifting Appliance, all personnel shall stay in a safe location and not touch the load or the Lifting Accessories with any part of their body until the load has been lifted, lowered, properly set down, and any potential energy has been released.
- c. The method used to control the load shall be detailed in the Lift Plan, the risks discussed and the controls agreed at the Toolbox Talk (e.g. Tag Lines, push pull poles or hands).
- d. Tag Lines shall only be used in normal operating conditions to adjust the position of a load that is stable and under full control of the Crane or powered equipment Operator.
- e. Tag Lines shall not be used to gain control of a load or enable a Lifting Operation to be carried out in adverse weather conditions.

*Although safer than touching the load, Tag Lines can potentially introduce a risk which is to be considered as part of the risk assessment process. The following risks are given as guidance:*

- *personnel being struck by a dropped object when retrieving a Tag Line that is in close proximity to the load*
  - *Tag Line becoming tangled around the body, limb and/or hand*
  - *Tag Line becoming snagged on an adjacent fixed structure.*
- f. Tag Lines shall:
    1. be made from one continuous length of rope, which is non-rotating, non-conductive and knot free.
    2. be retrieved from close proximity to the load using boat hooks or similar equipment.
    3. not be looped around the hand or any part of the body.
    4. be held such that they can be quickly released.
    5. be kept in front of the Load Handler while in use.
    6. be located so the Slinger(s)/Load Handler(s) can clearly see each other when two Tag Lines are used.
    7. be attached to the load and not to the Lifting Accessories by either snap-hooks or slip knots.
  - g. Tag Lines shall not be secured or attached to heavy or immovable objects to control the load.

*Further guidance on Hands Free Lifting can be found in the International Rigging and Lifting Handbook or the North American Rigging and Lifting Handbook.*

### 5.15 **Specific Task 2 - Lifting Over or in Close Proximity to Live Plant**

*Lifting over or in close proximity to live equipment means any Lifting Operation that poses a process safety risk to live equipment (see BP Procedure Upstream Control of Work (100340) for further details).*

- a. Lifting over or in close proximity to live plant, regardless of the lift category, shall not be undertaken unless:
  1. no other feasible alternative exists
  2. an Emergency Response and Rescue Plan is in place
  3. a level 2 risk assessment has been completed.
- b. All lifts over or in close proximity to live plant shall be assessed to determine if it is a Major Lift, which requires a Safety and Operational Risk (S&OR) assurance review.
- c. The SA shall be responsible to verify that an Emergency Response and Rescue Plan is available and communicated prior to the start of the operation.
- d. The Exclusion Zone used during the lift shall be extended to match the requirements of the operational contingency plan.

### 5.16 **Specific Task 3 - Lifting from Uncertified Steelwork, Suspension or Anchoring Points**

- a. Uncertified Steelwork, Suspension Points or Anchoring Points shall only be used after approval from a Structural Engineer.

*The Discipline Engineering Structural Engineer may establish a system to permit loads up to a known weight to be lifted from uncertified steel in defined areas.*

- b. Uncertified Steelwork and Suspension Points that are used repeatedly or periodically, shall be assessed, examined, overload tested, certified, marked with an SWL and unique identification mark and added to the fixed Lifting Equipment register.

### 5.17 **Specific Task 4 - Lifting from Scaffold**

- a. Scaffold lifting frames shall be subject to a level 2 risk assessment, which gives due consideration to other feasible alternatives.
- b. Scaffold lifting frames shall be inspected by a Scaffold Inspector and tagged with its maximum load bearing capacity.
- c. Where any of the following conditions exist, scaffold lifting frames shall be supported by design calculations and approved by a Structural Engineer:
  1. The scaffold lifting frame is not designed and constructed to BS 12811-1.
  2. The total load imposed (including any test load) is above 1,000kg (2,200lbs) including all component weights and weight contingency.
  3. The operation introduces side loads (e.g. cross hauling).
  4. The operation introduces vibration or significant dynamic load (e.g. supporting motorised Lifting Equipment).

### **5.18 Specific Task 5 - Using Equipment as a Temporary Support**

- a. The SLCP shall develop a temporary support plan whenever Lifting Equipment is used to temporarily support a load.
- b. The temporary support plan shall:
  1. minimise the use of temporary supports in favour of permanent installations.
  2. minimise the time a temporary support(s) is used.
  3. have 100% redundancy.
- c. The temporary support plan shall include:
  1. method of securing, detailing the Lifting Equipment used
  2. allowable attachment points
  3. requirements for periodic inspection and certification
  4. minimum calculated Factor of Safety
  5. risk control measures to be used such as Exclusion Zones, notifications, special considerations.

### **5.19 Specific Task 6 - Stacking Loads**

- a. The stacking of drill pipe (excluding marine risers) shall be in conformance with API RP 5C1.

*API RP 5C1 states that drill pipe is not stacked over 10ft (3m) high from grade level including the stack footing/pipe rack.*
- b. On a supply vessel, drill pipe bundles (excluding marine risers) shall not be stacked higher than 4.5ft (1.4m) below the vessel top rail.
- c. The stacking of loads shall not be permitted without a risk assessment which is approved by the SA, in consultation with the Lifting Engineer.
- d. The SA shall only approve stacking operations risk assessments where:
  1. the loads are specifically designed and marked as suitable for stacking.
  2. the loads are confined to pre-designated stacking area.
  3. facility is available to attach and detach the sling assembly at ground or deck level.

### **5.20 Specific Task 7 - Drill Pipe Bundling Operations**

Logistics Base Managers may consult the RLE to determine if efficiency or safety gains can be achieved through implementing alternative pipe handling methods.

### **5.21 Specific Task 8 - Drill Floor Operation**

- a. Drill floor winches working simultaneously shall use a colour match system, where the working end of the winch wire is colour matched to be the same colour as the winch.
- b. Colours shall be selected to avoid any confusion with colour code.
- c. Drill floor operations shall be categorised using the categorisation form in Annex F.
- d. Any pedestal cranes or winches located on the drill floor that could be used in error for lifting personnel shall be marked 'not for lifting personnel'.

## **5.22 Specific Task 9 - Lifting of Personnel**

### **5.22.1 General**

*Lifting of Personnel includes the use of any Lifting Equipment to lift a person or persons free from a supporting surface. Including but not limited to the use of:*

- *cranes*
  - *forklift trucks with a personnel carrier*
  - *Man-Riding winches*
  - *Mobile Elevated Work Platforms (MEWP)*
- a. Lifting of Personnel shall only be conducted when it is not feasible to gain access by a less hazardous means.
  - b. Any decision to use Lifting Equipment over alternative equipment which is purpose built (primary purpose) to lift personnel (e.g. Mobile Elevated Work Platform (MEWP) or walk to work system) shall be based on a level 2 risk assessment and agreement from the RLE.
  - c. Where used to lift personnel, the Lifting Equipment shall be fitted with a suitably designed carrier or work platform and the necessary controls in place.
  - d. The risk of personnel falling from a carrier, being crushed, trapped or stuck shall be reduced to as low as reasonably practicable.
  - e. Lifting Equipment with a free fall mode shall only be used to lift personnel if the free fall mode can be effectively locked out.
  - f. SLCs shall seek agreement from the SA before authorising any Lift Plan which involves the Lifting of Personnel.
  - g. All fixed Lifting Equipment approved for lifting personnel shall be marked as 'suitable for lifting personnel'.

### **5.22.2 Lifting of Personnel using Cranes**

- a. Where personnel are to be lifted using cranes, the Crane Operator(s) shall:
  1. be briefed in the operation to be performed.
  2. Verify the prevailing environmental conditions/influences such as wind speed, sea state and visibility fall within the criteria detailed on the Lift Plan.
  3. perform a Pre-use Inspection of the crane prior to the Lifting Operation including potential dropped objects inspection.
  4. verify that a Pre-use Inspection has been completed by a Competent Person of both the carrier and any Lifting Accessories.
  5. perform a trial lift without personnel prior to the actual lift commencing.
- b. Lifting of Personnel shall only be conducted following a level 2 risk assessment.
- c. Personnel shall be briefed prior to the Lifting Operation commencing.

- d. The Banksman shall confirm, before commencing the operation that:
  1. personnel are wearing the appropriate equipment (e.g. lifejackets, immersion suits, location beacons).
  2. personnel have been trained and/or have experience of personnel lifting.
  3. personnel have been trained in self-rescue from height equipment.
  4. passengers have been briefed on all aspects of the transfer.
  5. a second Banksman is in place on the platform and/or the vessel to provide signalling.
  6. roles and responsibilities are assigned and coordinated.
  7. radio communication is established prior to commencing the Lifting Operation.
  8. an alternative method of communication is agreed and in place in the event of radio communication failure.
  9. visual contact can be maintained throughout the Lifting Operation.
  10. the Crane Operator has been trained and assessed as competent for this type of operation.
  11. the environmental conditions have been established by the SLCP as being suitable for lifting/transferring personnel by this method.
  12. a rescue plan is in place, communicated and all required equipment is available on-site.
  13. a Pre-use Inspection has been carried out on both the carrier and any Lifting Accessory by a Competent Person and no defects have been identified.
  14. where it is necessary to transfer personnel to or from a vessel, the Crane Operator always has a clear view (line of sight or cameras) of the embarkation areas, load path and landing areas.

### **5.22.3 Suitability of Cranes for Lifting of Personnel and Personnel Transfer**

- a. Cranes used for Lifting of Personnel shall:
  1. be certified for lifting personnel.
  2. be clearly marked 'suitable for lifting personnel' using the checklist in Annex H.
  3. have protection that makes it impossible to inadvertently activate free fall while personnel are suspended.
  4. be fitted with an emergency stop button, in a location that allows for immediate operation by the Crane Operator.
  5. have brakes that can be progressively applied.
  6. have a secondary braking system.
  7. have a device, other than the load brake, to regulate the speed at which the load can be lowered.
  8. be fitted with an emergency lowering system.
- b. Floating cranes shall have suitable station-keeping ability recognised by the RLE (e.g. Dynamic Positioning (DP) class 2 or multi point mooring system).

#### **5.22.4 Personnel Transfer Capsules (PTCs) for Offshore**

- a. Only Reflex Marine (Frog) or Billy Pugh carriers (X904) shall be used as Personnel Transfer Capsules (PTCs) without approval from the RLE.
- b. The RLE shall approve any alternative carrier.
- c. PTCs and Lifting Accessories used to lift personnel shall have a minimum Factor of Safety 10:1.
- d. PTCs shall not be used as a workbasket.
- e. A PTC shall:
  1. have a valid report of Thorough Examination.
  2. be Pre-use inspected every day it is in use.
  3. be fitted with floatation and be self-righting.
- f. Suitable pre-designated area shall be marked on both pick up and sitting down locations.
- g. The Crane Operator shall lower the hook approximately 3m (10ft) to allow sufficient slack in the line to prevent snatching of the capsule due to unexpected heave or loss of vessel station.
- h. PTCs shall be capable of carrying casualties plus an attendant in the event of an incident.
- i. Where a stretcher is used, the PTC shall be detached from the crane while loading and unloading.

#### **5.22.5 Personnel Baskets**

- a. Standard cargo baskets shall not be used to lift personnel.
- b. Personnel baskets and Lifting Accessories used to lift personnel shall have a minimum Factor of Safety 10:1.
- c. Personnel baskets shall be:
  1. constructed and certified for the purpose of Lifting of Personnel.
  2. marked with a SWL, that it is suitable for Lifting of Personnel and the maximum number of passengers.
  3. securely attached to the crane (e.g. by safety pin, four-part shackle, positive lock hook).
  4. fitted with a redundant sling, preventing a single point of failure of below the hook rigging.
  5. fitted with internal handrails to prevent hands or fingers being trapped if the basket swings against an obstruction.
  6. fitted with a roof to protect personnel, if there is a risk of falling objects.
  7. fitted with slip resistant floor.
  8. fitted with internal anchor points for safety harnesses.
  9. fitted with inwardly opening doors and have a locking mechanism to prevent inadvertent opening.

10. constructed with materials and welding standards which are suitable for the task location environmental conditions.

*For example, constructed with materials and welding standards for use in cold climates and certified to a low temperature rating marked on the nameplate with the WLL when the basket is intended for use in temperatures below 0°C (32°F).*

- d. Personnel baskets may be fitted with integral ladder for access.

#### **5.22.6 Mobile Elevated Work Platforms (MEWP)**

- a. Mobile Elevated Work Platforms (MEWPs) shall be considered to be Lifting Equipment and subject to the requirements of this BP Procedure.
- b. MEWP platforms/baskets shall be kept tidy and free of obstacles.
- c. Where confined overhead working conditions are identified, MEWPs with shrouded or otherwise protected controls shall be used, preventing the operator from being pushed into the control panel.
- d. Ground conditions shall be assessed as suitable for MEWP operations prior to the operation commencing.
- e. Outriggers, when provided, shall be fully extended in line with the OEM operators manual and use adequate load spreading before raising the platform.
- f. An Exclusion Zone shall be established around the MEWP when in operation to prevent personnel entering a potential dropped object risk area.
- g. MEWPs shall be fitted with:
  1. guard rail and toe boards
  2. secure Anchoring Points for fall arrestors
  3. level gauges on each side
  4. emergency stop button at platform control and ground control
  5. safety switches for high and low positions
  6. maximum down speed restriction.

*Additional guidance is provided in BP Guide Safe Movement of Mobile Equipment GG 3.7-0002 (500059).*

#### **5.22.7 Suitability of Winches for Man-Riding Operations**

- a. Winches shall only be used to lift personnel when designed, certified and marked as 'suitable for Man-Riding'.
- b. Man-Riding winches shall have:
  1. high efficiency gearing
  2. dual automatic brakes or independent secondary braking system (if the power is lost, the brakes engage)
  3. a drum guard
  4. spooling device
  5. slack wire detector/shut-off mechanism
  6. overload protection, which limits the maximum line pull
  7. control, or remote control, with an emergency stop button

8. upper and lower hoist limit switches
  9. emergency lowering/hoisting facility
  10. snatch/sheave block with suitable sheave diameter (D/d) ratio and Factor of Safety for Man-Riding
  11. wire rope termination complying with current industry standards.
- c. All winches shall be mounted in a method that is in accordance with the OEM specifications, and is positively secured to the base and floor/deck by way of welding or bolted systems.
  - d. Before a Man-Riding operation starts, the Competent Person shall:
    1. verify the winch is designed, certified and marked 'suitable for Man-Riding'.
    2. complete a pre-Man-Riding checklist (see Annex G).
    3. define a communication method.
  - e. Dual purpose utility/Man-Riding winches shall not be used without prior approval of the RLE.

#### **5.22.8 Rescue Plans**

- a. The SLCP shall write a rescue plan for Lifting of Personnel operations approved by the SLC.
- b. A reliable means of personnel rescue shall be available prior to any Lifting of Personnel operation taking place.
- c. All relevant rescue equipment shall be readily available at the lifting site before the Lifting of Personnel operation commences.
- d. Personnel who are required to carry out rescue shall be suitably trained.

*A rescue plan is communicated before lifting personnel and details a method of retrieving personnel safely and efficiently in the event of an accident, incident or equipment malfunction.*

*The following equipment can be considered as an integral part of a rescue plan:*

- *alternative power supply to hoist*
- *emergency manual lowering device on hoist*
- *secondary hoist*
- *rescue basket (for use with alternative hoist)*
- *full body type harness fitted with a 'D' ring/lanyard suitable for rescue purposes*
- *MEWP*
- *emergency descent/ascent device.*



## 5.23 Specific Task 10 - Subsea Lifts involving Divers

### 5.23.1 General

No lifts shall be permitted over divers or their life support equipment.

*Additional requirements related to diving can be found in BP Practice Diving (100241).*

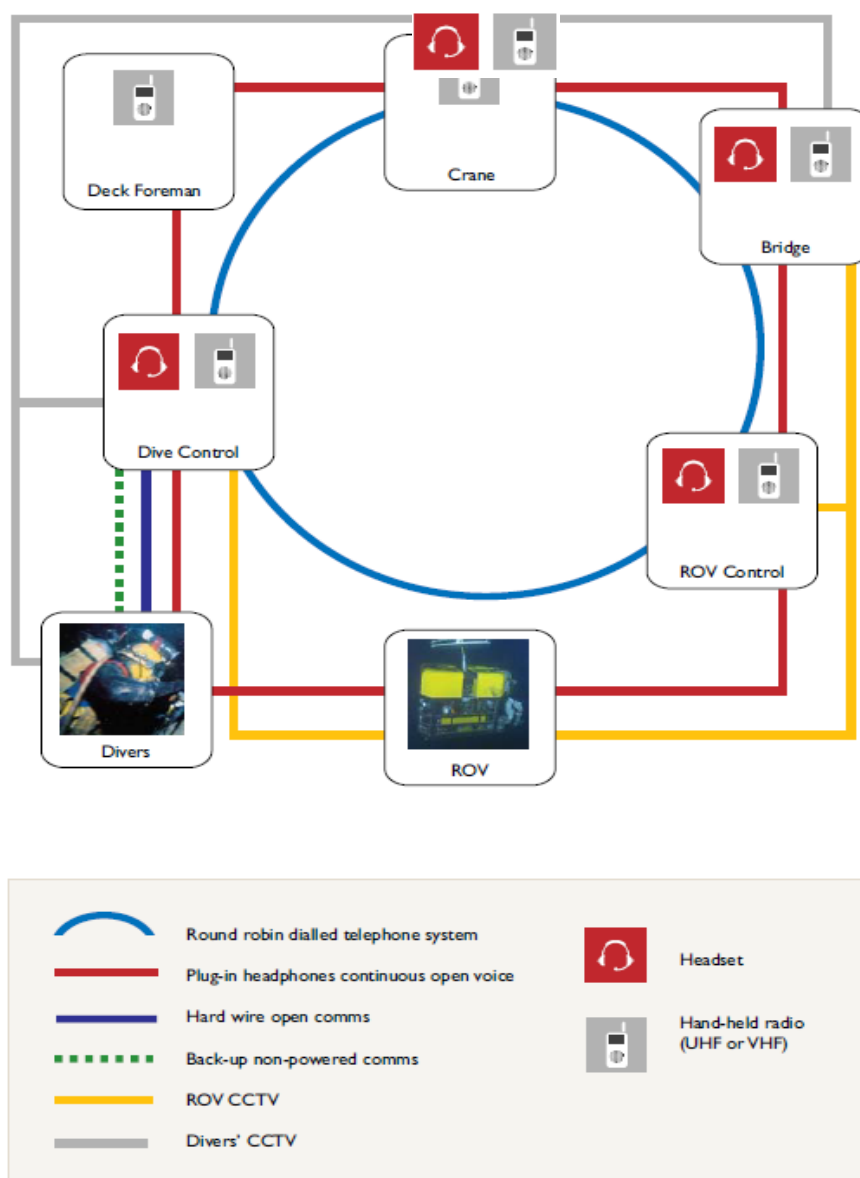
### 5.23.2 Communications

#### 5.23.2.1 General

All instructions and information communicated during subsea lifts involving divers shall be acknowledged prior to and during operations to avoid any misunderstandings.

*Clear communication is critical to safely conducting Lifting Operations.*

*Figure 2 illustrates a simple communication flowchart for subsea operations.*



**Figure 2 - Subsea Communications**

### 5.23.2.2 Crane Operator Handover during diving operations

- a. During diving operations, handover of the crane control shall not take place during crane operations; the Crane Operator waits until the current deployment/recovery is complete before handing over to the oncoming operator.
- b. The oncoming Crane Operator shall become familiar with the ongoing diving operation by attending the Toolbox Talk and by communicating with the Diving Supervisor at the start of his shift.
- c. At shift changeover occurring during a diving operation, Crane Operators shall complete the shift handover checklist.

*Handover checklists include the following information:*

- *communication checks*
  - *review of Lift Plan*
  - *weather*
  - *water depth*
  - *use of Tag Lines*
  - *existing seabed assets*
  - *height of existing assets*
  - *pipe lines*
  - *details of short marks*
  - *status of cranes, position of any loads subsea (to include the reference tugger)*
  - *safe over boarding position for subsea lifts relative to bell position*
  - *location of divers (e.g. divers on worksite, in bell, on guide weight)*
  - *detail of any subsea load (e.g. length of load, rigging, weight in air)*
- d. The Crane Operator shift handover checklist shall be signed by both the oncoming and off going Crane Operators and filed with Dive Control.
  - e. Sufficient time should be allowed by the Diving Supervisor to allow the Crane Operators to complete a handover discussion and the handover checklists.
  - f. Divers shall stop working and remain on standby during the Crane Operators' handovers.

### 5.23.2.3 Control Over Lifts during diving operations

- a. For lifts from deck to the sea surface which occur during diving operations, a Competent Banksman shall direct the Crane Operator until the load passes through the splash zone.
- b. The Diving Supervisor shall take control of the load once it passes through the splash zone.
- c. When recovering a load from the seabed, the Diving Supervisor shall guide the lift until it is clear to surface and then pass the banking control to the nominated Banksman on deck.

#### **5.23.2.4 Communication during diving operations**

- a. Before the load enters the splash zone (in air):
  1. The Banksman shall be responsible for the communication between the Diving Supervisor and the Crane Operator using UHF/VHF radio on a dedicated channel.
  2. In the event of radio failure before the load is deployed, hand signals shall be used as a back-up to make the load safe at which point the operation is suspended until the primary communication is re-established.
- b. When the load enters the splash zone (in the water):
  1. The Diving Supervisor shall be responsible for the communication between the Banksman, the Crane Operator and divers as per Figure 2.
  2. Hard-wired or round robin open communication system shall remain the primary system until the load has been recovered to the surface and the responsibility passed back to the Banksman.
  3. Communications shall be tested prior to the start of each operation and again at each shift changeover.
  4. If the hard-wired open communication system (clearcomms) fails, then the Diving Supervisor and Crane Operator shall have UHF/VHF radios as back-up.
  5. UHF/VHF radios shall be used to make the load safe and the operation suspended until the primary communication is re-established.

#### **5.23.2.5 Communication with Divers**

- a. Once the divers have visual contact with the descending load, the divers shall communicate the instructions for manoeuvring the load to the Crane Operator via the Diving Supervisor.
- b. The Diving Supervisor shall remain the interface for all communications from the divers and Remotely Operated Vehicle (ROV) to any personnel on the surface.
- c. The Diving Supervisor shall inform the divers prior to any load being over boarded and instruct them to go to the safe haven.
- d. The divers shall acknowledge each time such information is communicated.
- e. If no acknowledgement is received from the divers, the Diving Supervisor shall suspend the operations until the divers have confirmed that they are aware of the proposed movements.

## 5.24 Specific Task 11 - Transportation

*Transportation is divided into two categories for the purpose of this BP Procedure:*

- *Powered Industrial Lift Trucks operation*
- *Heavy Transportation using multi axle trailers (e.g. SPMT or conventional)*

### 5.24.1 Powered Industrial Lift Truck

- a. Powered Industrial Lift Trucks used to lift, lower or move a load shall be considered as mobile Lifting Equipment and subject to the applicable requirements of this BP Procedure, including the following as a minimum:
  1. approved risk assessed procedure, Lift Plan or standard operating procedure
  2. valid report of Thorough Examination and colour code
  3. verified maintenance regime
  4. Competent, qualified operator familiar with the equipment and controls
  5. daily Pre-use Inspection completed, confirming the equipment is fit for purpose.
- b. Powered Industrial Lift Trucks operating area shall have:
  1. segregation from pedestrians or a competent spotter in attendance
  2. a vehicle driver safe haven
  3. prominent warning signs
  4. adequate space and head room to manoeuvre the equipment
  5. no obstacles that could cause roll over
  6. an established system to control ground or deck strength and equipment bearing pressure
  7. edges of excavations or pits in the operating area clearly marked.
- c. Powered Industrial Lift Trucks not designed for rough terrain shall not be used where:
  1. speed humps are installed.
  2. ground is not level or prepared based on the manufacturer's instructions.
- d. The SLC shall verify by sampling that hired, leased or Third Party Powered Industrial Lift Trucks meet the requirements of this BP Procedure.
- e. Powered Industrial Lift Trucks shall be marked with:
  1. rated capacity plate
  2. colour code
  3. unique Identification Number
  4. all controls labelled in a language understood by the operator
  5. warnings and decals
  6. decal stating 'Authorised Operators Only'.

- f. Powered Industrial Lift Trucks shall be fitted with:
  1. a seat belt
  2. overturn/roll over cage
  3. operator protection from dropped objects
  4. speed limiter or speed warning device
  5. lights (front lights, brake lights and indicator lights)
  6. flashing beacon
  7. automatic audible device warning of reverse motion
  8. operator horn
  9. rear view mirrors
  10. hours meters
  11. fleet management system
  12. power source isolation
  13. seat interlock (e.g. system that prevents inadvertent movement without the operator sitting in the driver's seat).
- g. Powered Industrial Lift Trucks shall only be used with lifting attachments and/or Lifting Accessories if:
  1. an approved Lift Plan is in place.
  2. a certified device is fitted, to allow the connection of Lifting Accessories to the Powered Industrial Lift Truck (usually a fork or carriage mounted frame).
  3. the manufacturer duty chart and instructions allow for this mode of operation.
  4. the operator is trained in this type of operation.
- h. Lifting Accessories (e.g. slings or shackles) shall not be used directly on forks.

*Additional guidance is provided within the International Rigging and Lifting Handbook or the North American Rigging and Lifting Handbook and in BP Guide Safe Movement of Mobile Equipment GG 3.7-0002 (500059).*

### **5.24.2 Heavy Transportation**

- a. No Heavy Transportation shall be permitted without a transportation plan in place, developed by a Competent Person to demonstrate the load can be transported safely through to the point of installation.

*Heavy Transportation plans typically include:*

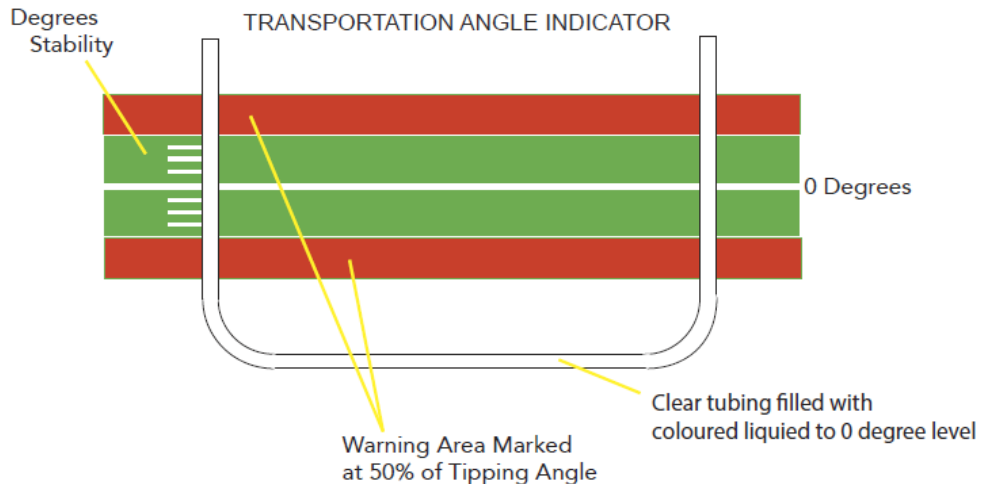
- *method statement*
- *risk assessment*
- *as-loaded drawing*
- *stability calculation*
- *route survey (including Ground Bearing Capacity (GBC))*
- *swept path analysis*
- *lashing calculations and plan*
- *operational contingency plan when transporting adjacent to live plant.*

- b. The RLE shall endorse Heavy Transportation plans following the review and comment cycle(s) as appropriate.

*Trailer stability is based on the European Association of Abnormal Road Transport and Mobile Cranes (ESTA) Best Practice Guide for Self-Propelled Modular Transporters.*

*A full function test is performed on multi-axle trailers prior to any operation starting.*

*Multi-axle trailers may use a simple level gauge in addition to the contractors monitoring system, as per Figure 3.*



**Figure 3 - Stability Indicator**

## 5.25 Documentation

The SA shall be accountable for retaining and maintain (as marked below), the following documentation:

- this BP Procedure
- Lifting Equipment registers (maintain)
- certificates of Thorough Examination (maintain - hard copy or digital)
- operating manuals and manufacturer instructions in a language that is understood by the operator or user or a suitable translation system is in place to verify that the operator fully understands the safe operating limits of the equipment being used.
- capacity charts or curves (legible and readily available in the operator cabin)
- personnel competency records (maintain)
- previous Lift Plans (maintain)
- verification records and findings.

## **5.26 Learn, Monitor and Take Corrective Action**

- a. Following each Lifting Operation within the scope of this BP Procedure, those involved should have the opportunity to discuss and record applicable improvements on the Lift Plan.
- b. Any learning points recorded on the Lift Plan shall be reviewed by the SLC and SLCP and appropriate actions taken and communicated to all relevant personnel.

## **5.27 Assurance**

A Major Lift shall be subject to an S&OR assurance review by the Segment Lifting Technical Authority (SLTA), prior to execution.

## **5.28 Verification**

- a. The SA shall be accountable for lifting verification using GOO-GE-PRA-00001 BP Practice Self-verification in GOO (100536).

*GOO-GE-PRA-00001 BP Practice Self-verification in GOO (100536) can be supplemented with GPO-PC-GLN-00013 Major Projects Verification and Approval Process Guide for GPO Major Projects or with GWO Self-verification process for drill floor operations.*

- b. The RLE shall perform system self-verification at each facility within the Region as a minimum, every two years.

*The RLE can increase the frequency based on the level of conformance to the requirements of this Procedure.*

## **5.29 Legal Requirements**

- a. In the event of conflict between this BP Procedure and applicable legal and regulatory requirements, the application of the applicable legal and regulatory requirements shall be followed.
- b. If this BP Procedure creates a higher obligation, this BP Procedure shall be followed as long as full compliance with the applicable legal and regulatory requirements is achieved.

## **5.30 Interpretation**

Questions of interpretation of this BP Procedure shall be directed in writing to the Lifting Discipline Leader (LDL).

## **5.31 Changes and amendments**

- a. Any suggested change(s) or amendment(s) to this BP Procedure should be forwarded to the LDL along with the reason for suggesting the change(s).
- b. The LDL should acknowledge all suggestions and, if rejected, give the reasons for rejection.

# **6 Deviation and Extensions**

For an entity to deviate from the application of any of the requirements contained in this BP Procedure, an approval shall be obtained from the relevant Head of Function.

## **Annex A**

### **Roles and Responsibilities**

#### **A.1 Verification Roles and Responsibilities**

##### **A.1.1 BP Lifting Discipline Leader (LDL)**

The Lifting Discipline Leader's responsibilities include the following:

- provide discipline leadership and strategic direction
- manage discipline capability
- manage the Lifting ELT network
- identify lifting risk, intervene, escalate potential issues before they impact safety or business performance
- provide deep technical support to Lifting Engineers and functions, confirm conformance with regulatory requirements and all relevant engineering standards
- participate in incident investigation
- support and performs S&OR Major Lift assurance reviews

##### **A.1.2 BP Regional Lifting Engineer (RLE)**

The RLE's responsibilities include the following:

- identify lifting risk, intervene, escalate potential issues before they impact safety or business performance
- consolidate and collate lifting performance management data. Work in partnership to causes corrective actions to deliver efficiency gains without compromising safety, risk management and compliance.
- implement and integrate BP Procedure Management of Lifting Operations and lifting Equipment (100572) requirements
- perform lifting system self-verification
- provide Lifting Equipment integrity, from initial purchase specification through equipment life cycle
- provide deep technical support across all functions and confirm regulatory requirements and all relevant engineering standards are applied
- provide a system to verify contractor provided Lifting Equipment integrity
- participate in incident investigation
- capture, coordinate, disseminate and track shared learnings for lifting and dropped object incidents.



### **A.1.3 Site Authority (SA)**

The SA provides:

- on-site task verification
- Lifting Equipment that is certified and in a safe to operate condition
- management of transit equipment.

### **A.1.4 Site Lifting Coordinator (SLC)**

The SLC is Sufficiently Independent of the lifting contractor or workgroup.

The SLC performs:

- authorisation of Lift Plans.
- task self-verification of on-site Lifting Operations in conformance with OMS requirements and GOO-GE-GLN-0007 BP Guide Self-verification in GOO (100573)

## **A.2 Execution Roles and Responsibilities**

### **A.2.1 Site Lifting Competent Person (SLCP)**

The Site Lifting Competent Person (SLCP) is the person that approves Lift Plans.

*On large sites, several people could be recognised as Competent to act on behalf of the SLCP.*

*Each SLCP is trained and assessed in conformance with Annex B.*

*SLCP (e.g. Deck Foreman, Site Lifting or Rigging Supervisor) has knowledge and experience to verify that the Lifting Operations are planned and executed safely in conformance with legislation, standards, codes and OMS requirements and that the Lifting Equipment used is in a safe to operate condition and suitable for the task.*

The SLCP's responsibilities include the following:

- provide Lifting Plan(S) and risk assessment(s) that meet, legal or regulatory requirements and OMS requirements
- confirm that the Lifting Equipment is only operated within its safe operating limits and OEM operating instructions
- advise others on preparation of the Lifting Plan
- confirm that the categorisation and technical content of the Lifting Plan is correct
- approve the Lifting Plan prior to submission for authorisation by the SLC
- confirm that the Lifting Operations are undertaken safely and in conformance the approved Lift Plan
- participate in and deliver Toolbox Talk
- confirm that all personnel involved in a Lifting Operation are protected at work from the risk to their health or safety by having sufficient training, experience and adequate supervision to perform the task competently relative to the categorisation of the lift.

### **A.2.2 Powered Lifting Appliance/Plant Operator (e.g. crane, gantry, forklift)**

The Powered Lifting Appliance/Plant Operator's responsibilities include the following:

- hold a valid certificate that meets local regulatory requirements
- verify all safety devices are operational and report any defects
- carry out Pre-use Inspections of Lifting Equipment including an inspection for potential dropped object
- confirm that the plant has a valid Certification, conforms to the requirements of this BP Procedure and is suitable for its intended use

*Additional guidance can be found on the [DROPSonline.org](http://DROPSonline.org) website.*

- participate in the planning, including risk assessment and Toolbox Talk
- agree the communication method with the Banksman prior to undertaking the lift (radio/hand signals)
- confirm the load weight and appliance setup is in accordance with OMS requirements, local legislation, the manufacturer recommendations and the approved Lifting Plan
- verify that the effects of wind and other environmental conditions are within defined limits.

### **A.2.3 Banksman/Signaller/Flagman**

The Banksman/Signaller/Flagman is the person directing the movement of Lifting Equipment such as a crane, Powered Industrial Lift Truck.

*Only the Banksman is authorised to give instructions to the equipment operator and the crew during Lifting Operation. But anyone can give an emergency STOP signal to the equipment operator.*

The Banksman's responsibilities include the following:

- control and supervise the Lifting Operation
- provide clear and precise communications to the equipment operator to control the movement of a load, using hand signal codes and/or radio communications
- establish an Exclusion Zone
- direct the movements of the equipment and load to confirm the safety of personnel within the Exclusion Zone
- verify that when Lifting Operations require more than one Banksman, only one Banksman provides instructions to the equipment operator at any time and an effective transfer of responsibilities is established prior to commencing the lift
- provide an effective Exclusion Zone to manage and control the entry of personnel, restricting access to essential personnel only
- remain in communications with and verify that the Slings/Load Handlers, or other personnel permitted within the Exclusion Zone, are in sight at all times and confirm they remain in safe positions
- be identifiable and distinguishable from others by wearing high-visibility identification
- participate in the planning, risk assessment and Toolbox Talk of Lifting Operations

- identify potential snagging points in the vicinity of the load
- continuously monitor the Lifting Operation
- confirm prior to the operation commencing that each person within the work group is trained and competent to perform the assigned task

The Banksman is responsible to verify that:

- the Lifting Appliances and Accessories are used in accordance with the Lift Plan
- the Pre-use Inspection of Lifting Appliances or Lifting Accessories is completed before use including inspection for potential dropped objects
- the load is inspected for potential dropped objects before commencing the lift
- the Lifting Equipment is used in line with its intended purpose as per the manufacturer instructions
- the weight of load is within the capacity of the Lifting Accessories and in conformance with the Lift Plan
- the personnel are wearing the correct PPE
- the cargo is securely packed
- slings are not used at an excessive angle, which is below 45 degrees from horizontal unless specifically detailed on the Lift Plan
- the route to be travelled is clear and the landing area is fit for purpose
- the area around the load to be lifted is clear and the load is free to lift.

#### **A.2.4 Slinger (Load Handler)**

The Slinger is the person who connects and disconnects the loads to powered lifting equipment.

The Slinger (Load Handler) is responsible to:

- complete Pre-use Inspection of Lifting Accessories before use and to prepare the load for lifting according to the approved Lifting Plan
- inspect the load for potential dropped objects before commencing the lift
- participate in the planning, risk assessment and Toolbox Talk
- control access to the area of operation to essential personnel only
- stand clear when the load is lifted or lowered
- confirm to the Banksman that everyone is clear
- comply with Hands Free and Tag Line rules
- assume a safe position during the Lifting Operations and be aware of the position of other and if necessary, take corrective action

*Never stand in between loads and objects that may cause entrapment or below the load. Always verify a clear escape route is available.*

- continuously monitor the Lifting Operation

- remain in communication with the Banksman at all times
- pack and secure cargo in conformance with the UK Oil and Gas Guidelines
- derig, store or quarantine the Lifting Accessories correctly

The Slinger confirms that:

- the loads are slung and unslung correctly
- the load accessories are securely attached
- the Lifting Equipment and Lifting Accessories have freedom of movement.

### **A.2.5 Rigger**

The Rigger is the person using portable Lifting Equipment to perform Lifting Operations in restricted spaces, without the use of powered Lifting Equipment.

The Rigger is responsible to:

- participate in the planning and risk assessment of Lifting Operations
- participate in and deliver Toolbox Talk
- verify all Lifting Appliances and Accessories are used in accordance with the approved Lift Plan
- verify the weight of load is within the capacity of the Lifting Appliances and Accessories
- restrict access to the area of operation to authorised personnel only
- verify the Lifting Equipment and loads are properly inspected before use including inspection for potential dropped objects
- verify the loads are slung correctly
- verify the Lifting Accessories are securely attached to the load
- verify the Lifting Accessories have freedom of movement
- verify the Lifting Equipment is used within its WLL/SWL
- confirm slings are not used at an excessive angle, which is below 45 degrees from horizontal unless specifically detailed on the Lift Plan
- confirm the route to be travelled is clear and the landing area is suitable
- identify and remove potential snagging points in the vicinity of the load
- confirm the area around the load to be lifted is clear and the load is free to lift
- assume a safe position during Lifting Operations and be aware of the position of others
- continuously monitor the Lifting Operation
- remain in communication the workgroup at all times
- derig, store or quarantine the Lifting Accessories correctly
- use the equipment according to the manufacturer recommendations.

### **A.2.6 Rigging Loft Controller**

The Rigging Loft Controller responsibilities include:

- restrict the issue of Lifting Equipment to authorised personnel only
- manage and control the rigging loft inventory
- accurately maintain the portable Lifting Equipment register
- maintain a copy of Thorough Examination Reports for each item of portable Lifting Equipment which is accurate and easily accessible
- only issue equipment that is safe to operate
- accept returned equipment and only return to service equipment that is safe to operate
- review the status of issued equipment on a weekly basis
- quarantine any item of portable equipment that is not safe to operate or does not meet local legislation or the requirements of this BP Procedure
- report any missing equipment to the SLCP or the SLC.

### **A.2.7 Lifting Equipment Inspector**

The Lifting Equipment Inspector is the person who performs Thorough Examination and provides Certification of Lifting Equipment.

The Lifting Equipment Inspector is responsible to:

- carry out periodic Thorough Examinations of Lifting Equipment in conformance with the requirements of local legislation, applicable industry standards recognised by the RLE
- be responsible to provide the Lifting Equipment Certificates or to remove Defective equipment from service
- be responsible for colour coding or updating the inspection tags and plates
- notify the SA and RLE and immediately remove from service any Lifting Equipment which are found to be substandard, modified, home-made, Defective or not fit for purpose.

## Annex B

### Competency System Review Guidance

This Annex contains guidance to assist the RLE in reviewing the adequacy of a competency program proposed by Third Parties (where such competency program is not listed in Annex C).

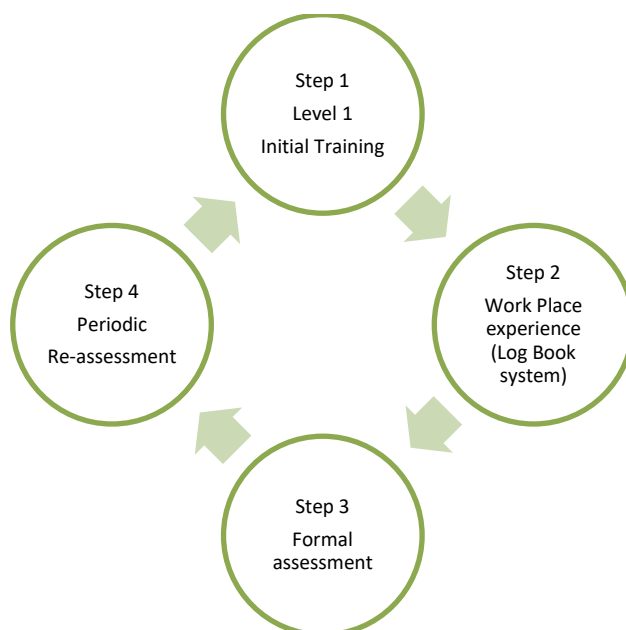
#### B.1 System Questions

Does the training provider's management system controlling competency have the following attributes?

- Is a customer services statement available that clearly defines the standards of service of which a delegate can expect from the training centre?
- Is there an organization chart with roles and responsibilities (job descriptions) for the management and the delivery of training? Are staff sufficiently qualified?
- Does the training provider schedule, conduct, and action findings in regular internal audits?
- Does the training provider have a procedure to guide internal audits and are the findings distributed to senior management?
- Is there a procedure to support delegate complaints?
- What system is in place to verify regular maintenance of training materials and slides? Is there a procedure that lays out schedule maintenance?
- Is there a system to control the registration and the verification of the training delegate pre-requisites, delegate identification proof and recording of successful completion?
- Is there a data security system in place?
- Is there a system that controls the accuracy of the candidate records?
- Is there sufficient control, systems and procedures to verify the delegate's safety and well-being during training?
  - safety procedures
  - emergency procedures
  - job safety analysis/risk assessments
  - medical screening procedures
  - accident reporting and investigation procedure
  - changing rooms, toilets, showers, washing facilities and canteen appropriate to the training provided and the number of delegates
- Does the training provider have sufficient facilities and equipment to conduct the training? Is the equipment in a safe to operate condition?
- Does the assessment programme clearly set out and references the course learning objectives?

## B.2 Learning Objectives

The competency system follows the stages shown in Figure B.1.



**Figure B.1 - Learning Cycle**

The following sections identify the minimum learning objectives for each position.

For the following positions, the applicable knowledge elements and practical elements are listed to help evaluate the relevant competency program.

### B.2.1 Banksman and Slinger

Minimum instructor-led initial Banksman and Slinger training (stage 1) course content:

#### B.2.1.1 Knowledge Elements

- applicable national legislation, technical standards and industry guidelines
- potential hazards and risk assessment
- lift categorization and planning
- working environment
- Permit to Work system, co-ordination and control of Lifting Operations
- Personal Protective Equipment (PPE)
- personnel roles and responsibilities
- SWL/WLL, weights and Centre of Gravity
- types of crane, basic principles and operation
- inspection of Lifting Accessories and loads (pre and post use)
- safe use of Lifting Accessories
- slinging modes, angles and tensions

- safe use of Tag Lines and safe positioning (Hands Free Lifting)
- types of Cargo Carrying Units (CCU) and loads
- packing and securing cargo
- communications
- trial lifting, route to be travelled and landing the load
- blind and tandem lifts
- Man-Riding/personnel transfer operations
- restoring the work area
- rigging loft management
- Manual handling and working at height awareness

#### **B.2.1.2 Practical Elements**

- verify load weight and Centre of Gravity
- assess the working environment
- risk assessment
- lift categorization and planning
- lead and contribute to a Toolbox Talk
- inspect Lifting Accessories and loads (pre and post use)
- safely use Lifting Accessories
- sling loads using various modes, connect and disconnect loads
- safe use of Tag Lines and safe positioning (Hands Free Lifting)
- communications
- carry out a trial lift, travel and land the load safely (various load types (e.g. CCU, tubulars, load with and offset Centre of Gravity))
- perform Lifting Operations (Slinger and Banksman duties)
- rigging loft control
- restore the work area

#### **B.2.2 Rigger**

Minimum instructor-led initial Rigging and Lifting training (stage 1) course content:

##### **B.2.2.1 Knowledge Elements**

- applicable national legislation, technical standards and industry guidelines
- potential hazards and risk assessment
- lift categorization and planning
- working environment
- Permit to Work system, co-ordination and control of Lifting Operations
- Personal Protective Equipment (PPE)



- personnel roles and responsibilities
- SWL/WLL, weights and Centre of Gravity
- safe use of cranes and overhead cranes
- safe use of applicable Lifting Appliances
- safe use of applicable Lifting Accessories
- inspection of Lifting Appliances, Accessories and loads (pre and post use)
- slinging modes, angles and tensions
- cross-hauling
- Uncertified Steelwork and temporary structures
- safe use of Tag Lines and safe positioning (Hands Free Lifting)
- communications
- trial lifting
- route to be travelled
- landing the load
- restoring the work area
- rigging loft management
- manual handling and working at height awareness

#### **B.2.2.2 Practical Elements**

- verify load weight and Centre of Gravity
- assess the working environment
- risk assessment
- lift categorization and planning
- lead and contribute to a Toolbox Talk
- inspect Lifting Appliances, Accessories and loads (pre and post use)
- safely use Lifting Appliances and Accessories
- sling loads using various modes, connect and disconnect loads
- safe positioning (Hands Free Lifting)
- communications
- carry out a trial lift, travel and land the load safely (various operations (e.g. lifting in an area with restricted space or low headroom, rotating or up-ending a load, operating two or more appliances in unison))
- rigging loft control
- restoring the work area

### **B.2.3 Site Lifting Competent Person (SLCP)**

- Instructor-led Banksman and Slinger training course (refer to section B.2.1), or
- Instructor-led Rigger course (refer to section B.2.2)

Supplementary instructor-led or computer based training course content:

- applicable national legislation, standards and industry guidance
- company core values
- company specific procedures

Competence and achievement award criteria, which validates the ability and experience against occupational standards, includes but is not limited to:

- planning Lifting Operations
- producing Lifting Plan scale or graphic representation diagrams
- performing risk assessments
- leading Toolbox Talks
- selecting suitable and correct Lifting Equipment
- carrying out Pre-use Inspections
- installing/setting up Lifting Appliances
- slinging loads
- executing various Lifting Operations (crane or rigging operations) (e.g. lifting loads in an area with restricted space, rotating or up-ending a load, cross-hauling a load, lifting tubulars, performing a Blind Lift using a crane, loading and unloading vessels)
- controlling Lifting Operations
- restoring the work area

### **B.2.4 Powered Lifting Equipment Operator (e.g. winches, air hoists, pendant controlled gantry cranes)**

Minimum instructor-led Powered Lifting Equipment Operator training course content:

#### **B.2.4.1 Knowledge Elements**

- applicable national legislation, technical standards and industry guidelines
- potential hazards and risk assessment
- lift categorization and planning awareness
- working environment
- Permit to Work system, co-ordination and control of Lifting Operations
- Personal Protective Equipment (PPE)
- personnel roles and responsibilities
- types of powered lifting equipment (equipment specific)

- basic construction and main components
- controls and instruments
- safety devices
- principles of operation
- power sources
- load handling capabilities and rated capacity
- Certification
- pre-operational checks
- operational area
- emergency actions
- handling attachments
- inspection of Lifting Accessories and loads (pre and post use)
- safe use of Lifting Accessories
- slinging modes, angles and tensions
- lifting personnel
- periodic Thorough Examination and testing
- maintenance

#### **B.2.4.2 Practical Elements**

- Pre-use Inspection
- use of controls
- safety devices
- functional operation
- slinging, lifting and landing various different types of loads
- removing load swing
- safe positioning
- maintenance

The initial training is followed by equipment and site-specific familiarisation training.

## **B.2.5 Offshore Crane Operator**

Instructor-led Banksman and Slinger training course (refer to section B.2.1), and minimum instructor-led initial Offshore Crane Operator (stage 1) training course content:

### **B.2.5.1 Knowledge Elements**

- applicable national legislation, technical standards and industry guidelines
- potential hazards and risk assessment
- lift categorization and planning awareness
- working environment
- Permit to Work system, co-ordination and control of Lifting Operations
- Personal Protective Equipment (PPE)
- personnel roles and responsibilities
- types of cranes
- basic construction, main components and terminology
- stability, configurations and load handling capabilities
- power sources
- controls and instruments
- static and dynamic forces
- Rated Capacity Indicator (RCI), load charts and range diagrams
- safety devices
- spooling and reeving
- recording devices and the management of records
- Certification
- operational area and environmental conditions
- principles of operation and operating techniques
- pre-start inspection, start-up procedures and pre-operational checks
- shutdown procedure and emergency actions
- crane Storage
- communications
- handling attachments
- blind and tandem lifts
- Man-Riding/personnel transfer
- periodic Thorough Examination and testing
- maintenance

### **B.2.5.2 Practical Elements**

- pre-start checks, start-up procedures and pre-operational checks
- use of controls
- shutdown
- co-ordination and control
- carry out a trial lift, travel and land the load safely
- responding to signals and instructions

### **B.2.6 Onshore Crane Operator**

Instructor-led Banksman and Slinger training course (refer to section B.2.1), and minimum instructor-led initial Onshore Crane Operator (stage 1) training course content:

#### **B.2.6.1 Knowledge Elements**

- applicable national legislation, technical standards and industry guidelines
- potential hazards and risk assessment
- lift categorization and planning awareness
- working environment
- Permit to Work system, co-ordination and control of Lifting Operations
- Personal Protective Equipment (PPE)
- personnel roles and responsibilities
- types of cranes, basic construction, main components and terminology
- stability, configurations and load handling capabilities
- power sources
- controls and instruments
- static and dynamic forces
- Rated Capacity Indicator (RCI), load charts and range diagrams
- safety devices
- spooling and reeving
- recording devices and management of records
- Certification
- operational area and environmental conditions
- Ground Bearing Capacity and pressure
- crane set up
- principles of operation and operating techniques
- pre-start inspection, start-up procedures and pre-operational checks
- shutdown procedure and emergency actions
- crane Storage

- communications
- handling attachments
- blind and tandem lifts
- Man-Riding/personnel transfer
- periodic Thorough Examination, testing and maintenance

#### **B.2.6.2 Practical Elements**

- crane set up and configuration
- Ground Bearing Capacity and pressure
- pre-start checks, start-up procedures and pre-operational checks
- use of controls
- shutdown
- co-ordination and control
- carry out a trial lift, travel and land the load safely
- responding to signals and instructions

#### **B.2.7 Forklift Truck Operator**

Minimum instructor-led initial Forklift Truck Operator training course content:

##### **B.2.7.1 Knowledge Elements**

- applicable national legislation, technical standards and industry guidelines
- potential hazards and risk assessment
- lift categorization and planning awareness
- working environment
- Permit to Work system, co-ordination and control of Lifting Operations
- Personal Protective Equipment (PPE)
- personnel roles and responsibilities
- types of forklift trucks
- basic construction and main components
- controls and instruments
- safety devices
- principles of operation
- power sources
- load handling capabilities, rated capacity and stability
- selection and types of loads
- certification (truck, attachments and the operator)
- Pre-operational checks
- operational area

- procedures for loading and stacking of loads
- procedure for unloading and de-stacking loads
- emergency actions
- bad habits and practices
- parking and security
- refuelling, changing gas bottles and/or charging batteries
- handling attachments
- lifting personnel
- periodic Thorough Examination and testing
- maintenance

#### **B.2.7.2 Practical Elements**

- Pre-use Inspection
- mounting and dismounting
- driving position
- operation of the truck
- use of controls
- operation of the truck with forks or attachments in the correct travel position, laden and unladen
- insertion and withdrawal of forks or other handling attachment without damage to pallet or load
- manoeuvring a loaded truck in a restricted space
- stacking and de-stacking loads
- loading and unloading a vehicle
- parking and security
- maintenance

The initial training is followed by equipment and site-specific familiarisation training and workplace supervision.

#### **B.2.8 Rigging Loft Controller**

Minimum instructor-led Rigging Loft Management and Lifting Equipment Inspection/Examination training course content:

##### **B.2.8.1 Knowledge Elements**

- applicable national legislation, technical standards and industry guidelines
- rigging loft overview
- rigging loft registers
- duties of the Rigging Loft Controller
- managing unreturned equipment

- control of transit and Third Party equipment
- Lifting Equipment inspection and periodic Thorough Examination and testing
- common faults and rejection criteria
- Certification

#### **B.2.8.2 Performance Elements**

Inspection of the following items:

- wire rope
- wire rope slings
- man-made fibre slings
- chain slings
- shackles
- hooks
- master links
- wedge sockets
- eyebolts/pad eyes
- rigging screws/turnbuckles
- chain hoists
- lever hoists
- rope hoists
- beam clamps
- beam trolleys
- lifting clamps
- sheave/snatch blocks
- jacks

#### **B.2.9 Technician**

When working under the supervision of a Qualified Rigger:

- Instructor-led Banksman and Slinger training course (refer to section B.2.1), or
- Instructor-led Rigger training course (refer to section B.2.2)

Before working independently, a technician requires the same competency as a Rigger (see above).



## Annex C Competency tables

### C.1 Verification Competencies

**Table C.1 - Verification Competencies**

Role	Category of Operation	Level of Competency
RLE	Verification All categories	BP level 4 and face-to face interview
SLC	Verification category 1 & 2 (independent) Category 3 with RLE endorsement	BP Level 2
SA	Verification only	BP Awareness Level

### C.2 Execution Competencies

**Table C.2 - Execution Competencies**

Role	Category of Operation	Level of Competency Regions	Level of Competency Off shore	Level of Competency On shore
SLCP	All Categories	LOLER Regions	CPCS Appointed Person or ECITB Level 4 Appointed Person Moving Load or EAL Certificate of Competency Level 2 A+B+C or OPITO LOLER Competent Person	CPCS Appointed Person or ECITB Level 4 Appointed Person Moving Load or EAL Certificate of Competency Level 2 A+B+C or OPITO LOLER Competent Person or NPORS Appointed Person
		US Regions	API Qualified Offshore Rigger (Advanced API RP 2D 2-day Course)	NCCCO – Certified Lift Director or NCCCO Mobile Crane & NCCCO Rigger Level II
Rigger	All Categories	LOLER Regions	SVQ/NVQ Level 3 Moving Loads/Technical Services or ECITB Level 3 Moving Loads / Technical Services or EAL Certificate of Competency Level 2 A+B or OPITO Stage 3 Rigger or NPORS Rigging and Fleeting Loads	SVQ/NVQ Level 3 Moving Loads/Technical Services or ECITB Level 3 Moving Loads / Technical Services or EAL Certificate of Competency Level 2 A+B or OPITO Stage 3 Rigger or NPORS Rigging and Fleeting Loads
		US Regions	API Qualified Offshore Rigger (Advanced API RP 2D 2-day Course)	NCCCO – Certified Rigger Level II

<b>Role</b>	<b>Category of Operation</b>	<b>Level of Competency Regions</b>	<b>Level of Competency Off shore</b>	<b>Level of Competency On shore</b>
Banksman	All Categories	LOLER Regions	ECITB Level 2 Lifting and Slinging Engineering or EAL Certificate of Competency Level 2 A+C or OPITO Stage 3 Banksman	ECITB Level 2 Lifting and Slinging Engineering or EAL Certificate of Competency Level 2 A+C or OPITO Stage 3 Banksman or NPORS
		US Regions	API Qualified Offshore Rigger (Advanced API RP 2D 2-day Course)	NCCO Certified Signal Person
Slinger & Load Handler	Category 1 Lifts unsupervised Category 2 & 3 Adequately Supervised	LOLER Regions	Completed EAL Certificate of Competency Level 1 A+C or OPITO Stage1 Banksman Slinger, working towards Stage 2. or ECITB Level 2 Lifting and Slinging Engineering or NPORS Slinger Signaller	Completed EAL Certificate of Competency Level 1 A+C or OPITO Stage1 Banksman Slinger, working towards Stage 2. or ECITB Level 2 Lifting and Slinging Engineering or NPORS Slinger Signaller
		US Regions	API Qualified Offshore Rigger (API RP 2D 2-day course)	NCCCO Certified Rigger Level I
Powered Lifting Equipment Operator (e.g. winches, air hoists)	All Categories	LOLER Regions	Equipment familiarisation and ECITB Level 2 Lifting and Slinging Engineering or EAL Certificate of Competency level 2+ B or NPORS Operators Training (Note Courses are specific to equipment type)	Equipment familiarisation and ECITB Level 2 Lifting and Slinging Engineering or EAL Certificate of Competency level 2+ B or NPORS Operators Training (Note Courses are specific to equipment type)
		US Regions	Equipment familiarisation and API Qualified Offshore Rigger (Advanced API RP 2D 2-day Course)	Equipment familiarisation and NCCCO Certified OHC Operator

<b>Role</b>	<b>Category of Operation</b>	<b>Level of Competency Regions</b>	<b>Level of Competency Off shore</b>	<b>Level of Competency On shore</b>
Offshore Crane Operator	Dynamic Lifts	LOLER Regions	Equipment Familiarisation and Stage 3 Operator (e.g. Sparrow, Enermech)  or Norwegian G5 Operator)	Not Applicable
		US Regions	Seatrax 3-day advanced crane operator course completed every 4 years (stage 2 crane operator) 1-day crane simulator assessment conducted at HOLC and completed every 4 years.	Not Applicable
Offshore Crane Operator	Non-Dynamic	LOLER Regions	Dynamic Operator Qualifications above are acceptable.  or Equipment Familiarisation and Stage 2 Operator (e.g. Sparrow, Enermech)	Not Applicable
		US Regions	Seatrax 3-day advanced crane operator course completed every 4 years (stage 2 crane operator) 1-day crane simulator assessment conducted at HOLC and completed every 4 years.	Not Applicable
Onshore Crane Operator	All Categories	LOLER Regions	Not Applicable	Equipment Familiarisation and Licenced by local authority (Government or regulatory board)
		US Regions	Not Applicable	Equipment Familiarisation and Licenced by local authority (Government or regulatory board) and NCCCO Certified Crane Operator

Role	Category of Operation	Level of Competency Regions	Level of Competency Off shore	Level of Competency On shore
Technician	Can only work under adequate supervision or held to appropriate level of competency detailed for the role being undertaken	LOLER Regions	Completed EAL Certificate of Competency Level 1 A+C or OPITO Stage1 Banksman Slinger, working towards Stage 2. or ECITB Level 2 Lifting and Slings Engineering	Completed EAL Certificate of Competency Level 1 A+C or OPITO Stage1 Banksman Slinger, working towards Stage 2. or ECITB Level 2 Lifting and Slings Engineering
		US Regions	API Qualified Offshore Rigger (API RP 2D 2-day course)	NCCCO Certified Rigger Level I
Fork Lift Operator	Forklift operations	LOLER Regions	CITB Forklift Operator CPCS Forklift Operator RITITB Forklift Operator NPORS Forklift Operator	CITB Forklift Operator CPCS Forklift Operator RITITB Forklift Operator NPORS Forklift Operator
		US Regions	OSHA 29 CFR 1910.178	OSHA 29 CFR 1910.178
Fork Lift Banksman	Not Applicable	See Banksman above		
Equipment Inspector	Lifting Equipment Inspector	LOLER Regions	LEEA Qualified for the class of equipment being inspected.	LEEA Qualified for the class of equipment being inspected.
		US Regions	Qualified API lifting equipment inspection & maintenance course.	NCCCO Overhead Crane Inspector Or Licensed Hoist/Lift Examiner (OSHA Act 2004/A2006)
Rigging Loft Controller	NA	All regions	Trained in either Rigging Loft Management Course or Equipment Inspection Course	

## Annex D Risk Assessment Prompt Sheet


**Table D.1 - Risk Assessment Prompt Sheet**

Element	Potential Hazard
People	Personnel under suspended load Incorrect training and low competence Personnel fitness Insufficient number of personnel Unsafe positioning Non-compliance with the Lift Plan, Control of Work and company practices Reduced concentration levels
Organization	Low competence in planning and performing the lift Lack of organizational capability to manage lift Inadequate interfaces and co-ordination Insufficient lift management Incorrect instructions
Control	Insufficient supervision Lack of clarity as to who is in charge Ineffective communication: visual, verbal, radio back-up systems Risk from not having a common language Incorrect approval, endorsement and authorization Ineffective/incorrect or break down in communications Tag Line (incorrect use)
Planning	Insufficient planning, hazard identification and risk assessment Incorrect data used for plans Confused instructions, wrong revision of plan or incomplete plan Non-returnable lifts
Load	Unexpected load movement at initial lift Unexpectedly heavier or lighter Instability Lifting point failure Structural integrity failure Excessive load movement during travel and landing Sharp edges Dropped/deflected objects Motion cause by wind due to sail area Means of attaching/detaching rigging Nature of load (Hazardous/dangerous substances/personnel)
Equipment	Insufficient maintenance Incorrect installation/connection Overload and failure Impacting with other equipment Uncertified equipment Inadequate or inoperative safety devices Overturning Proximity Hazards Clashes (with other equipment or structures)


Energy Source	Motion Chemical Radiation Electrical Gravity Heat/Cold Biological Pressure
Changes in Load	Unexpected increase or reduction in the load (e.g. flooding, mud suction, load transfer, splash zone) Dynamic loading Snagging/impingement Changes to centre of gravity/centre of buoyancy Cargo shift in a container/liquid movement/free surface of liquid Inertia effects in long loads
Working Environment	Poor visibility Plan susceptible to environment (high wind speed, high sea state, vessel movement, currents, tides, extreme heat or cold) Site conditions Adjacent structures Overhead cables Ground collapse Underground services Equipment stability Live plant/process safety Proximity Hazards, public roads, walk ways. Blind Lifts Weather window, such as wave height and vessel motion Time restrictions, tide Deterioration in the condition of Lifting Accessories Working at height Congested area/confined space

# Annex E Lift Categorisation

## E.1 Onshore Lift Categorisation


 <b>LIFTING CATEGORISATION FLOW CHART</b> <b>ONSHORE</b>		LIFT PLAN No: .....		TITLE .....	
Start at the top of the chart. Answer all the questions. The first question that is answered 'YES' will identify the lift category in the right hand column					
Tick YES if the statement is true or correct Tick NO if incorrect or false		NO	YES	CATEGORY	
• Does the lift use a heavy lift crane, which is assembled on-site (see section 3 Definitions)?				3	
• Is the mobile crane utilisation above 80% including weight contingency factor?					
• Does the lift involve any of the below? 1. Process pipework as a suspension point to bear any load 2. Choking of chain slings 3. Flat-braided slings					
• Does the lift involve lifting of personnel?					
• Does the lift require addition technical input?					
• Does the lift have limited boom clearance (i.e. less than 1 metre or 3.3 feet)?					
• Could the lift be affected by Proximity Hazards (public road, overhead power cables etc)?					
• Will the load be lifted directly over or in close proximity to live plant (with a crane utilisation equal to or exceeding 70%)?					
• Does the crane (mobile, crawler, excavator) have to travel or track with a suspended load?					
• Is this a tandem/multiple crane lift or is the load to be lifted, upended or rotated by two or more powered lifting devices (excluding cross haul by two air hoists)?					
• Is the fixed lifting system (overhead crane, runway beam or davit etc) utilisation above 95%?					
• Is the load extremely valuable or irreplaceable (see section 3 Definitions)?					
• Is the lift non-returnable or classed as demolition?					
• Will the consequences of failure of equipment or procedure be significant for the asset (process safety risk)?					
• Are the lift characteristics unusual (heavier, more complex than normally performed by this asset)?					
• Is the load to be lifted or cross hauled or restrained using two or more non-powered lifting appliances without 100% redundancy?					
• Is the load to be lifted or cross hauled or restrained using two or more non-powered lifting appliances with 100% redundancy?					
• Does the load have a centre of gravity above the lifting points or a high centre of gravity or the potential to become unstable?					
• Will the load be lifted directly over or in close proximity to live plant (with a crane utilisation below 70%)?					
• Is the lift blind or conducted within a confined space or trench or excavation?					
• Does the load have an offset centre of gravity without special slings to compensate or is it an awkward shape or have a large sail area?					
• Is the load fragile or is its integrity uncertain or is it difficult to sling (see section 3 Definitions)?					
• Are slings to be used at an angle of below 45 degrees from the horizontal?					
• Can the load ground bearing pressures (GBP) exceed the site maximum allowable GBP?					
• Is the lift in an area with restricted head room for the lifting appliance?				1	
• Will fixed, temporary installed, powered lifting appliances be used (not air/electric chain hoists)? Will excavators, fork lift trucks or telehandlers be used to lift slung loads?					
• None of the above applies to this lift, the load is pre slung or very easy to sling, with no external factors that complicate the operation. Note: repetitive lift plans require RLE endorsement The team is experienced and have performed a similar lift recently					
Competent Person:		Authorised by Site Lifting Coordinator:			
Name: .....		Name: .....			
Signature: .....DATE: .....		Signature: ..... DATE: .....			

## E.2 Offshore Lift Categorisation


 <b>LIFTING CATEGORISATION FLOW CHART</b> <b>OFFSHORE (in Air Lifts only)</b>			
<b>LIFT PLAN No:..... TITLE .....</b>			
Start at the top of the chart. Answer all the questions. The first question that is answered 'YES' will identify the lift category in the right hand column			
Tick YES if the statement is true or correct Tick NO if incorrect or false	NO	YES	CATEGORY
• Is the Pedestal crane whip line utilisation above 90% including weight contingency factor?			<b>3</b>
• Is the Pedestal crane main block utilisation above 80% including weight contingency factor?			
Does the lift involve any of the below? 1. Process pipework as a suspension point to bear any load 2. Flat or belt webbing sling for dynamic lifts 3. Choking of chain slings 4. Flat-braided slings			
• Does the lift involve lifting of personnel?			
• Does the lift require additional technical input (see section 3 Definitions)?			
• Does the lift have limited boom clearance (i.e. less than 1 metre or 3.3 feet)?			
• Is the lift to be performed by an external team (i.e. not a lifting team which normally perform lifts at the facility)?			
• Is the lift above or in close proximity to live plant, or in the event of an incident, can the lift affect any offshore or subsea assets (crane utilisation equal to or exceeding 70%)?			
• Will the load be, upended, rotated or overturned by 2 or more powered lifting devices?			
• Is the fixed lifting system utilisation above 95% (overhead crane, runway beam or davit etc)?			
• Is the load extremely valuable or irreplaceable (see section 3 Definitions)?			
• Is the lift non-returnable or classed as demolition?			
• Will the consequences of failure of equipment or procedure be significant for the asset (process safety risk)?			
• Can the load bearing pressure exceed the deck strength (see section 3 Definitions)?			
• Are the lift characteristics unusual for the assets (i.e. heavier, more complex than normally performed)?			
• is the load to be lifted or cross hauled or restrained using two or more non-powered lifting appliances without 100% redundancy?			
• is the load to be lifted or cross hauled or restrained using two or more non-powered lifting appliances with 100% redundancy?			
• Does the load have a centre of gravity above the lifting points or a high centre of gravity or the potential to become unstable?			
• Is the lift above or in close proximity to live plant, or in the event of an incident, can the lift affect any offshore or subsea assets (crane utilisation below 70%)?			
• Is the lift blind or conducted within a confined space?			
• Does the load have an offset centre of gravity without special slings to compensate or is it an awkward shape or have a large sail area?			
• Is the load fragile or is its integrity uncertain?			
• Are slings to be used at an angle of below 45 degrees from horizontal?			
• Is the lift in an area with restricted head room for the lifting appliance?			
• Does the load need to be slung (i.e. no certified point)? If so, does the load have any hazards such as sharp edges?			<b>1</b>
• Will temporary installed powered winches or cranes be used?			
• None of the above apply to this lift (i.e. the load is pre-slung or very easily slung, with no external factors that complicate the operation and is performed by a competent team which have recent experience of performing this type of operation).			
Competent Person: Name: ..... Signature: ..... DATE:.....		Authorised by Site Lifting Coordinator: Name: ..... Signature: .....DATE: .....	



### E.3 Marine Lift Categorisation


	<b>LIFTING CATEGORISATION FLOW CHART</b> <b>MARINE - Floating Cranes (in Air Lifts only)</b>		
<b>LIFT PLAN No:..... TITLE .....</b>			
Start at the top of the chart. Answer all the questions. The first question that is answered 'YES' will identify the lift category in the right hand column			
	NO	YES	CATEGORY
• Tick YES if the statement is true or correct Tick NO if incorrect or false			
• Is the lift executed by a heavy lift vessel (see section 3 Definitions)?			<b>3</b>
• Is the crane percentage of utilisation above 80% (including DAF, factors and contingencies, reference Noble Denton guidelines)?			
• Is the lift above or in the close proximity to live plant, or in the event of an incident, can the lift affect any in air or subsea assets (within the Drop Cone)?			
Does the lift involve any of the below? • 1. Flat or belt webbing sling for dynamic lifts • 2. Choking of chain slings • 3. Flat-braided slings			
• Does the lift involve lifting personnel?			
• Does the lift require additional technical support (see section 3 Definitions)?			
• Does the lift use two lifting appliances (i.e. two cranes, crane and winch both on vessel or one on vessel and one on fixed platform)?			
• Is the load extremely valuable or irreplaceable (see section 3 Definitions)?			
• Is the load non-returnable or will the lift take more than one shift?			
• Will the consequences of failure of equipment or procedure be significant for the asset (process safety risk)?			
• Are the lift characteristics unusual for the assets (i.e. heavier, more complex than normally performed)?			
• Will the load be, upended, rotated or overturned by 2 or more powered lifting devices?			
• Could the lift affect vessel stability?			
• Will the lift use bumpers specifically designed for this lift?			
• Is the lift, vessel to vessel, vessel to barge, vessel to fixed installation?			
• is the load to be lifted or cross hauled or restrained using two or more non-powered lifting appliances without 100% redundancy?			<b>2</b>
• is the load to be lifted or cross hauled or restrained using two or more non-powered lifting appliances with 100% redundancy?			
• Does the load have a large sail area or could it be unduly affected by wind?			
• Does the load have a centre of gravity above the lifting points or a high centre of gravity or the potential to become unstable?			
• Is the lift blind or conducted within a confined space?			
• Does the load have an offset centre of gravity without special slings to compensate or is it an awkward shape?			
• Is the load fragile (see section 3 Definitions)?			
• Will the slings be used at an angle of below 45 degrees from horizontal?			
• Does the lift have restricted head room (distance between hook and boom head) or reduced boom clearance?			
• Weight distribution is uneven or can shift?			
• Will fixed temporary installed powered lifting appliances be used?			
• None of the above apply to this lift (i.e. the load is pre-slung or very easily slung and is small/compact, with no external factors that complicate the operation). The team is experienced and have performed a similar lift recently.			<b>1</b>
Competent Person: Name: ..... Signature: ..... DATE:.....		Authorised by Site Lifting Coordinator: Name: ..... Signature: .....DATE: .....	

## E.4 Subsea Lift Categorisation

 <b>LIFTING CATEGORISATION FLOW CHART</b> <b>SUBSEA (in Water Lifts only)</b>				
<b>LIFT PLAN No:.....</b>		<b>TITLE .....</b>		
Start at the top of the chart. Answer all the questions. The first question that is answered 'YES' will identify the lift category in the right hand column (LIFTING OVER OR IN CLOSE PROXIMITY TO DIVERS BELL, SAFE HAVEN OR EMERGENCY RESPONSE EQUIPMENT IS PROHIBITED)				
<b>Tick YES if the statement is true or correct</b> <b>Tick NO if incorrect or false</b>		NO	YES	CATEGORY
<ul style="list-style-type: none"> <li>Is the lifting equipment utilisation above 80%, including DAF, factors and contingencies?</li> <li>Is the load non-returnable or will the lift take more than one shift?</li> <li>Does the lift involve any of the below?                             <ul style="list-style-type: none"> <li>1. Flat or belt webbing sling for dynamic lifts</li> <li>2. Slings with aluminium ferrules for subsea lifts</li> <li>3. Flat-braided slings</li> </ul> </li> <li>Does the lift require specific engineering design or technical input?</li> <li>Is the lift over live plant or in the event of an incident, can the lift affect any subsea asset?</li> <li>Could the shape of the load and potential energy cause loss of containment to a subsea asset within the drop cone (drop cone may be extended to allow for torpedo effect)?</li> <li>The consequences of failure of equipment or lifting procedure are considered significant by the vessel or asset.</li> <li>Does the lift involve divers?</li> <li>Does the lift use two lifting appliances (i.e. subsea load transfer using two cranes, crane and winch both on vessel or one on vessel and one fixed platform)?</li> <li>Does the lift involve the use of airbags or buoyancy units?</li> <li>Could the centre of buoyancy of the load change due to flooding?</li> <li>Are the lift characteristics unusual for the assets/vessel (i.e. heavier, more complex than normally performed or load integrity questionable)?</li> <li>Is the load being recovered from the seabed? If so, could the load be restrained or influenced by settlement, silt, sand mud or organic growth?</li> <li>Does the load have a large sail area or could it be unduly affected by wind or current?</li> <li>Is the load unstable (i.e. have a narrow or small base)?</li> <li>Does the load require transfer, cross haul, rotation or overturning?</li> <li>Does the load have lifting points below the centre of gravity?</li> <li>Will the slings be used at an angle of below 45 degrees from horizontal?</li> <li>Is the weight of the load to be lifted above 10 tonnes in weight?</li> <li>Will fixed temporary installed powered lifting appliances be used?</li> <li>Does the lift have restricted head room (distance between hook and boom head) or reduced boom clearance?</li> <li>Weight distribution is uneven or can shift?</li> <li>Vessel requires ballasting to perform the lift?</li> </ul>				<b>3</b>
<ul style="list-style-type: none"> <li>None of the above apply to this lift (i.e. the load is pre-slung or very easily slung, below 10 tonnes and is small/compact, with no external factors that complicate the operation). The team is experienced and have performed a similar lift recently</li> </ul>				<b>1</b>
Competent Person: Name: ..... Signature: ..... DATE:.....		Authorised by Site Lifting Coordinator: Name: ..... Signature: ..... DATE: .....		

## Annex F GWO Drill Floor Operations Lift Categorisation

Lift performs outside the drill floor are categorised as per Annex E.

		<b>LIFTING CATEGORISATION FLOW CHART</b> <b>GLOBAL WELLS ORGANISATION (GWO)</b>	
		LIFT PLAN No:..... TITLE .....	
Start at the top of the chart. Answer all the questions.			
	<b>Tick YES if the statement is true or correct</b> <b>Tick NO if incorrect or false</b>	NO	YES
•	Has a formal rig-site lifting competence assessment program been implemented and approved by the Regional Lifting Engineer (RLE)?		
•	Has the lifting plan been authorised by the Site Lifting Coordinator as Category 1 Lift?		
•	Has the Site Lifting Coordinator agreed that the drill crew can execute the lift?		
•	Does the risk assessment recognise that the lift is carried out by the drill and well service crew?		
•	Has the drilling and well service crew been assessed as competent to perform this category of lifting activities?		
•	The lift is for drilling and well operations only, not for the maintenance of associated drill floor or well operations equipment.		
•	Is the lift on or above the rig floor/pipe deck or other drilling areas?		
•	Is ONE person on the drill floor, appointed as the 'Person in Charge' and in control of lifting operations?		
•	Does the senior tool pusher/well site leader (or their delegate) maintain a register of the competent Person in Charge, to supervise lifting operations in drilling areas?		
•	Load is pre-slung or very easily slung, with no external factors that complicate the operation and is performed by a competent team which have recent experience of performing this type of operation.		
•	<b>If all questions above are answered YES, the lift can be categorized as category 1 Lift</b>		
•	<b>If any of the questions above are answered NO, the lift is categorized in accordance with the following:</b> Annex E.1 Onshore Lifting Annex E.2 Offshore Lifting Annex E.3 Marine – Floating Cranes (in Air Lifts only) Lifting Annex E.4 Subsea (in Water Lifts only) Lifting		
Competent Person:		Authorised by Site Lifting Coordinator:	
Name: .....		Name: .....	
Signature: ..... DATE:.....		Signature: ..... DATE: .....	

## Annex G Man-Riding

### G.1 Man-Riding Equipment Suitability Checklist

Table G.1 - Man-Riding Equipment Checklist

No.	Checklist	Yes
1	High efficiency gearing	
2	Dual automatic brakes/independent secondary braking system, which fail to safe, if power is lost	
3	Drum guard	
4	Spooling device	
5	Slack wire detector/shut off mechanism	
6	Overload protection, which limits the maximum line pull	
7	Control or remote control with emergency stop button	
8	Upper and lower travel limit switches	
9	An emergency lowering/raising facility	
10	Snatch/sheave block with suitable D/d ratio and Factor of Safety for Man-Riding	
11	A wire rope termination complying with current industry standards	

## G.2 Man-Riding Operations Checklist

**Table G.2 - Man-Riding Operations Checklist**

<b>Man-Riding Task:</b>		<b>Date:</b>	
<b>All persons involved in the man-riding operation are to be involved in the completion of the checklist</b>		<b>YES</b>	<b>NO</b>
1	Have the reasons for personnel lifting and job objectives been adequately explained to you?		
2	Have you reviewed the risk assessment and the specific plan/procedure for man-riding?		
3	Are the current environmental conditions suitable for performing man-riding activities?		
4	Have you attended a Toolbox Talk with all the people involved?		
5	Have you created/reviewed the rescue plan and examined the associated equipment?		
6	Is the relevant Permit to Work in place?		
7	Have all control measures been implemented?		
8	Have all other planned activities that may interfere with man-riding been stopped?		
9	Have 'DO NOT USE' warning signs been placed on any other machinery which may interfere with/compromise the safety of the operation (machinery isolated if possible)?		
10	If 'over the side' working is possible, has a standby boat been notified?		
11	Have the hand signals for RAISE, STOP and LOWER been agreed by all involved?		
12	Has the winch operator agreed the principle of 'NO SIGNAL = NO MOVEMENT'?		
13	If using radios, have the RAISE, STOP and LOWER commands been agreed with by all involved?		
14	Have the radios been checked and tested, using a dedicated channel?		
15	Is the harness, karabiner/shackle and winch rope certification in date, clean and all in good condition?		
16	Has the harness been adjusted properly, and is the rider wearing a helmet chinstrap?		
17	Is the winch line connected directly to the harness (i.e. no swivels or hooks)?		
18	Is the winch marked 'MAN-RIDING WINCH' and is the winch certification in date?		
19	Is the winch wire in good condition, and spooled correctly (min 5 turns on drum)?		
20	Where possible, have obstructions to vertical travel been removed or tied back?		
21	Are the manual/automatic brakes operating correctly?		
22	Is the control lever clearly marked, and does it return to neutral on release?		
23	Has the emergency stop facility been tested?		
24	Has the load limiter been tested?		
25	If a fall arrestor (inertia reel) is to be used, has it been tested before use, and does it have a separate means of connection to the harness (note: safety hooks are not permitted)?		
26	Is the winch operator aware that they are not to leave the winch while the person is man-riding?		
27	Are the hand tools of sufficient size for easy handling?		
28	Are the hand tools tied off to the harness/rider securely?		
29	Have the rider's pockets been emptied of loose articles (especially money and other small metal objects)?		
<b>Answer 'YES' to all the above and/or qualify any 'NO' answer before commencing with a man-riding or personnel transfer operation.</b>			
Comments:			
Signature:		Company:	Date:

## Annex H Personnel Transfer

### H.1 Suitability of Cranes for Personnel Transfer

**Table H.1 - Suitability of Cranes for Personnel Transfers**

No.	Checklist	Yes	No
1	Has it been established that no other viable option of carrying out the work is available?		
2	Are all the necessary certificates for the crane, crane wire ropes, slings and other associated equipment current?		
3	Has the crane and associated equipment been thoroughly inspected by a competent person?		
4	Is the crane in good condition, regularly inspected, maintained and are records kept to substantiate this?		
5	Are all the safety features and systems working properly (e.g. rated capacity indicators, over hoist limiters)?		
6	In the event of a complete power failure, does the crane maintain the load in a safe condition (e.g. do the brakes fail to the applied position)?		
7	Are the brakes applied progressively (e.g. to avoid shock or snatch loading)?		
8	In the event of a complete power failure, can the load be lowered manually to a position where the personnel can be recovered safely, or is self-rescue equipment available?		
9	In the event of a primary brake or transmission system failure, is the load be prevented from free falling (e.g. is there a secondary braking system or does the transmission system have hydraulic retardation to prevent this)?		
10	Is the crane fitted with an emergency stop, which is located for immediate operation by the crane operator (except North American Regions)?		
11	Is the crane so designed that inadvertent free fall is prevented when the drive train is in motion or the hook is loaded?		
12	Is the crane certified for personnel lifting and clearly marked as 'Suitable for Personnel Lifting'?		

## H.2 Personnel Transfer Operations Checklist

**Table H. 2 - Personnel transfer Operations Checklist**

<b>Personnel Lifting/Personnel Transfer</b>		<b>Date:</b>	
<b>All persons involved in the Personnel Lifting Operation are to be involved in the completion of the checklist</b>		<b>YES</b>	<b>NO</b>
1	Have the reasons for personnel lifting and job objectives been adequately explained to you?		
2	Have you reviewed the risk assessment and the specific plan/procedure for personnel lifting?		
3	Are the current environmental conditions suitable for performing the activities?		
4	Have you attended a Toolbox Talk with all the people involved?		
5	Have you created/reviewed the rescue plan and examined the associated equipment?		
6	Is the relevant Permit to Work in place?		
7	Have all control measures been implemented?		
8	Have all other planned activities that may interfere with personnel lifting been stopped?		
9	Have 'DO NOT USE' warning signs been placed on any other machinery which may interfere with/compromise the safety of the operation (machinery isolated if possible)?		
10	If 'over the side' working is possible, has a standby boat been notified?		
11	Have the radios been checked and tested, using a dedicated channel?		
12	Is the rider wearing a helmet chinstrap?		
13	Is the crane marked 'Suitable for Personnel Lifting' and is the crane certification in date?		
14	Is the crane operator aware that they are not to leave the crane while the person is being lifted?		
15	Is a second crane driver available in the event of illness?		
16	Are the loose items tied off to the harness/rider securely?		
17	Are the landing areas clear of obstructions and marked?		
18	Is the carrier marked with SWL/number of people 'Suitable for Personnel Lifting'?		
19	Is the carrier floor non-slip?		
20	When transfers over water, is the carrier fitted with floatation?		
<b>Answer 'YES' to all the above and/or qualify any 'NO' answer before commencing with a man-riding or personnel transfer operation.</b>			
Comments:			
Signature:		Company:	Date: