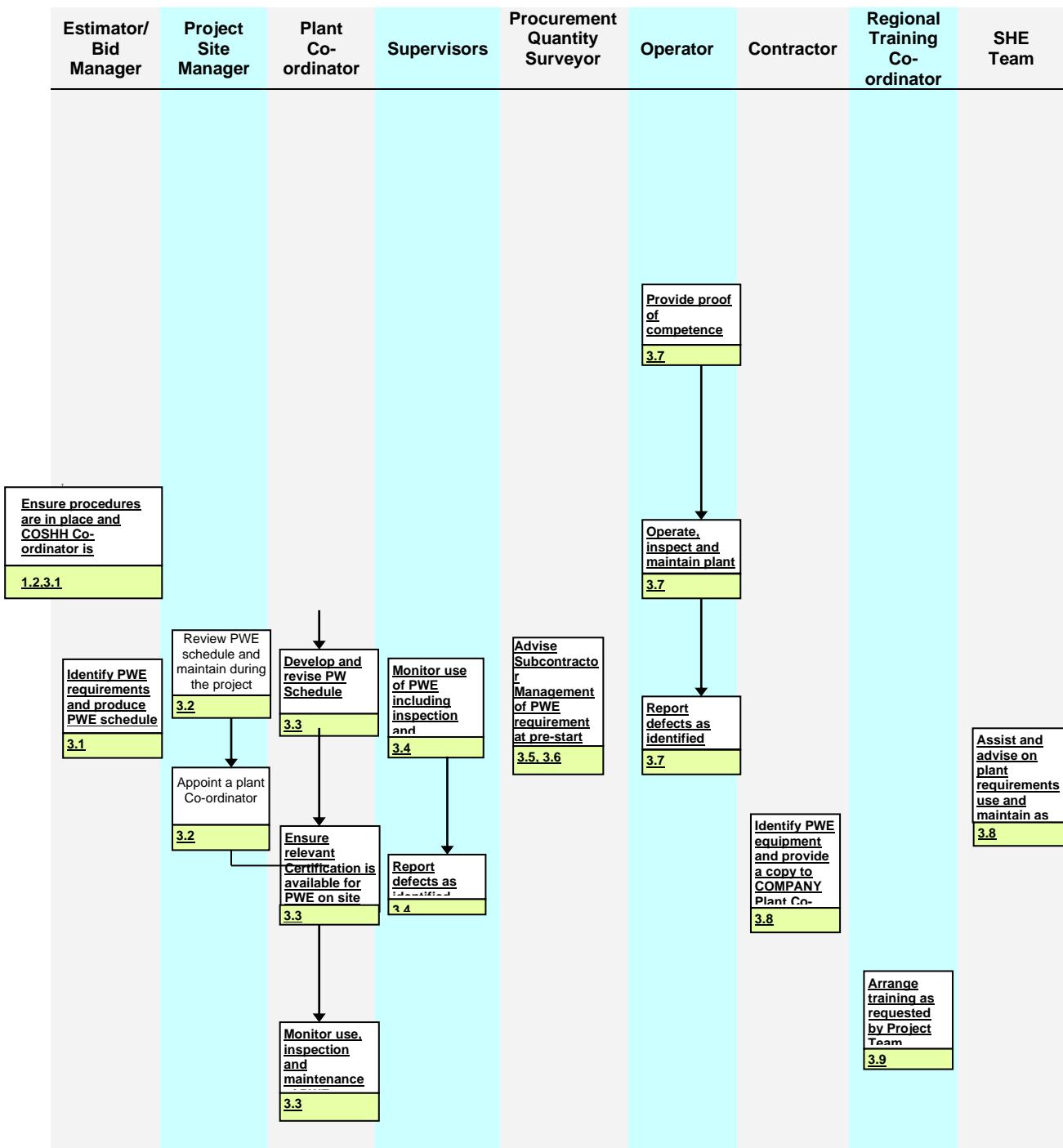


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**PROCESS MAP**



Key:

Activity
Guidance

## PURPOSE

1 The purpose of this procedure is to assign responsibilities and establish a system for the control and safe use of powered work equipment.

## SCOPE

1 This procedure covers all **COMPANY Projects** and locations under the control of **COMPANY**. A **COMPANY** is defined as the organization with responsibility for management of safety at a construction site.

## REFERENCE DOCUMENTS

- 1 Qatar Regulatory Document (Construction) RD1.4

## REFERENCE PROCEDURE

- 1 SHE PRO 001 – SHE Risk Management and Written Safe Systems of Work  
2 SHE PRO 010 – The Safe Use of Cranes and other Lifting Appliances

### 2.3.5.1 Responsibilities

#### SHE DIRECTOR

- 1 Authorises this procedure

#### ESTIMATOR/TENDER TEAM

- 2 Ensures that information provided by designers is utilised at tender stage for inclusion of resource to allow compliance by others with this procedure.

#### PROJECT/SITE MANAGER

- 3 Ensures this procedure is established on Projects under his control. For the purposes of this procedure, Project/Site Manager may also mean Office Manager.

#### PLANT CO-ORDINATOR

- 4 Applies the requirements of this procedure.
- 5 Note: The person appointed must be site based and competent to carry out their duties.

#### PROCUREMENT/BUYER/QS

- 6 Supports the Plant Co-ordinator in the application of this procedure.

#### SUPERVISOR

- 7 Supports the plant co-ordinator in the application of this procedure.

#### OPERATOR

- 8 Operates Plant in accordance with the requirements of this procedure.

#### SHE ADVISER

- a. Provides advice and guidance in support of this procedure and monitors the effectiveness of its application.

#### CONTRACTOR

- 9 Ensures only competent personnel are authorised to operate specifically dedicated/owned/hired plant and equipment.
- 10 Ensures maintenance is completed and recorded as appropriate.

#### REGIONAL TRAINING CO-ORDINATOR

- 11 Processes formal training requests from the Project/Site Manager.

### 2.3.5.2 Definitions

#### POWER

- 1 The Provision and Use of Work Equipment.

#### POWERED WORK EQUIPMENT (PWE)

- 2 Powered Work Equipment as referred to in PUWER.  
3 NB. The Requirements for the use of Lifting Equipment are contained in SHEPRO-010

#### SUITABILITY OF PWE

- 4 Defines the equipment as fit for its intended use within its design and operational parameters.

#### USE

- 5 For the purposes of this procedure, 'use' includes all activities involving PWE such as starting, operating and stopping the equipment, plus any setting, repair, modification, maintenance, servicing, transportation and cleaning.

#### CONTRACTOR

- 6 'Contractor' means any work package contractor or their sub-contractor and include any PWE supplier.

#### COMPETENCE

- 7 The individual's demonstrated capacity to perform, i.e., the possession of knowledge, experience, training, skills and personal characteristics needed to satisfy the special demands or requirements of a particular situation.

#### PWE SCHEDULE

- 8 A control/management document displayed within the project office to be updated regularly by the Plant Co-ordinator. SHE-FRM-5-001.

#### PWE CHECKLIST

- 9 An aide memoire and control document to be completed by the Plant Coordinator (COMPANY and Contractor) or nominated person for any equipment received onto site and filed within the SHE Register. SHE-FRM-5-02.

#### PLANNED PREVENTIVE MAINTENANCE (PPM)

- 10 Involves replacing parts and consumables or making necessary adjustments at preset intervals so that risks do not occur as a result of the deterioration or failure of the equipment.

### **CONDITION-BASED MAINTENANCE**

- 11 Involves monitoring the condition of safety-critical parts and carrying out maintenance whenever necessary to avoid hazards which could otherwise occur.

### **BREAKDOWN MAINTENANCE**

- 12 Involves carrying out maintenance only after faults or failures have occurred. It is appropriate only if the failure does not present an immediate risk and can be corrected before risk occurs, It is unlikely that this system of maintenance would be acceptable for the PWE covered by this procedure.

### **2.3.5.3 Action Required to Implement this Procedure**

#### **ESTIMATOR/TENDER TEAM**

- 1 Identify the PWE requirements for the project and complete the initial PWE schedule (Appendix 1) Allow resource for any equipment in the bid and include details and information relative to the same in the handover process between the pre-construction and construction teams.

#### **PROJECT/SITE MANAGER**

- 2 Review the initial PWE schedule (Appendix 1) and amend / maintain as required throughout the Project duration.
- 3 Where appropriate, appoint a Plant Co-ordinator or retain the duties of that appointment.
- 4 Arrange training for Directly employed persons through the Regional Training Co-ordinator as necessary to ensure the competence of appointees.
- 5 Monitor PWE use on site to ensure the effectiveness of controls.

#### **PLANT CO-ORDINATOR**

- 6 Take control of, review and develop the PWE Schedule as the project progresses.
- 7 Enter all details of PWE received on site into the PWE Schedule (SHE-FRM-5-01).
- 8 Act as the focal point for all PWE used on site and assist other management/supervision in the selection and control of the PWE used.
- 9 Must ensure either a certificate of thorough inspection not more than 12 months old (6 Months where lifting persons) for any lifting equipment received on site is attached to the site register and the next inspection date is logged on the PWE Schedule (SHE-FRM-5-001).
- 10 Arrange/Complete all pre-use checks as detailed on SHE-FRM-5-002.
- 11 Record operators/users of each PWE on the PWE Schedule.
- 12 Complete or ensure the completion of all regular inspections and maintenance of PWE in the appropriate Project SHE Register or the equivalent subcontractor control document.

- 13 Ensure arrangements are made for the safe-keeping and issue of all ignition and security keys and for smaller PWE for its safe storage and controlled issue.
- 14 Confirm a system of PPM or Condition Based Maintenance is applied by all sub-contractors on any PWE used on site.
- 15 Implement a system of PPM or Condition Based Maintenance on any PWE purchased for use on site based on manufacturers guidelines and completed by competent people (externally contracted as necessary).

### **SUPERVISORS**

- 16 Complete all duties as appointed and authorised by the **Plant Co-ordinator**.
- 17 Monitor PWE use on site to ensure the effectiveness of controls, maintenance and servicing.

### **PROCUREMENT/BUYERS**

- 18 Advise sub-contractor management at pre-start of requirements regarding PWE (see 'Contractor' actions below).

### **QS**

- 19 Advise sub-contractor management at pre-start of requirements regarding PWE (see 'Contractor' actions below) and issue copy of Appendices 1 & 2 where no sub-contractor internal control documents/system exists.

### **OPERATOR**

- 20 Provides proof of competence.
- 21 Operates plant and equipment when authorised to do so, in approved areas, subject to site or ordered limitations and in compliance with training and manufacturer's guidelines.
- 22 Ensures maintenance is completed in accordance with training, employers Risk Assessment and manufacturer's guidance.
- 23 Ensures defects are promptly reported to the plant co-ordinator and where necessary secures unsafe equipment in a safe location/state.

### **CONTRACTOR**

- 24 Identify the PWE requirements for the project and complete an initial PWE schedule (Appendix 1) or similar 'in-house' control document. Provide copy to **COMPANY** Project Manager/Plant Co-ordinator.
- 25 Monitor PWE use on site to ensure the effectiveness of controls, maintenance and servicing.

### **REGIONAL TRAINING CO-ORDINATOR**

- 26 Deliver or arrange to be delivered any training formally requested by the Project Team to ensure the competence of Directly employed appointees.

### SHE ADVISER

27 Assist pre-construction and construction teams as requested in application of this procedure.

#### 2.3.5.4 Guidance To This Procedure

1 This procedure and guidance is intended to ensure compliance with statutory requirements for all **COMPANY** projects regarding PWE.

2 Although POWER covers all ‘work equipment’, this procedure and guidance is only intended to provide direction on the control of Powered Work Equipment (PWE) which would include but is not limited to the following:

- (a) Drills - cable fed, hydraulic and petrol driven (it is not intended that sites include low risk battery drills etc within the scheduled part of this procedure however this does not remove the needs to monitor the use of such equipment to ensure it is fit for purpose and used correctly).
- (b) Saws – circular, reciprocating, bench and rip
- (c) Breakers/Hammers/Chisels/Tampers – All
- (d) Electric/petrol/diesel/gas Powered Plant – All
- (e) Self Propelled Work Equipment – Dumpers, Dozers, Rollers, Excavators etc
- (f) Cartridge Operated Fixing Tools - All
- (g) Lifting Equipment - FLTs, Hoists, HIABs, MEWPs
- (h) n.b. Other than inclusion on the PWE Schedule, all Crane Lifting Operations controls and requirements are covered in SHE-PRO-010.

### RISK ASSESSMENT

3 Where the specific controls required for the use of PWE have not been considered under the general Risk Assessment for work, a specific Risk Assessment is required prior to its use. The Plant Co-ordinator or Contractor (in the case of sub-contractor equipment) is responsible for its completion. See SHE-PRO-001.

### SELECTION AND SUITABILITY

4 The equipment ordered must be suitable to the work intended and the operating environment, e.g.

- (a) Telehandler – consider: loads, reach, site height/width/ground restrictions, operator competence/ability and delivery restrictions etc.
- (b) Breaker – consider: Individual capability, material to be broken, access, technological developments (noise/vibration suppression), tool outputs etc.

5 Experience coupled with Risk Assessment should allow the selection of the correct equipment, however, if doubt exists consult your local SHE Adviser.

### PRE-USE/RECEIPT INSPECTION

6 To ensure serviceability, all equipment received on site (COMPANY and Sub-contractor) must be subject to a pre-use inspection using either the COMPANY PWE Checklist (SHE-FRM-5-002) or manufacturers guidance as appropriate.

## REGISTRATION AND AUTHORISATION

7 To assist in ensuring only competent and authorised personnel use PWE on site, all operators shall be recorded on the PWE Schedule (SHE-FRM-5-001).

## COMPETENCE

8 Where a recognised industry standard exists i.e. certificate of training achievement, to show competence for the operation of particular equipment, the operator shall possess that appropriate certification, the details of which shall be entered on the PWE Schedule.

9 Where there is no recognised industry standard/certificate of training achievement, the operator shall possess evidence of training on that particular equipment or his employer shall provide written confirmation of training on that particular equipment.

## REGULAR INSPECTION

10 The purpose of an inspection is to identify whether the equipment can be operated, adjusted and maintained safely and that any deterioration (for example defect, damage, wear) can be detected and remedied before it results in unacceptable risks. Inspection should include, where appropriate, visual checks, functional checks and testing. Regular inspections in this context should be completed by the nominated competent person (usually the operator) and conform to the requirements of the Risk Assessment taking into account, training requirements, manufacturers guidelines and equipment specifications.

11 All PWE in use on **COMPANY** sites will subject to a regime of regular recorded inspection. The maximum period between inspections shall be **7 days** and these inspections shall be recorded in the site SHE Register.

12 The above does not include any pre-use checks required of the operator, the occurrence of which should be included in the monitoring checks.

## THOROUGH INSPECTION (LIFTING EQUIPMENT)

13 In line with current statutory requirements, all lifting equipment must be subject to 3<sup>rd</sup> party thorough inspection:

- (a) Before being put into service for the first time unless either:
  - (i) the lifting equipment has not been used before; and
  - (ii) in the case of lifting equipment, the employer has received such a declaration made not more than 12 months before the lifting equipment is put into service or if it is obtained from the undertaking of another person, it is accompanied by physical evidence of thorough inspection
  - (iii) Where the safety of the lifting equipment is dependent on the installation conditions

14 Where it is exposed to conditions causing deterioration which is liable to result in dangerous situations

15 As a maximum the thorough inspection should be completed at 12 monthly intervals, where the equipment is used for the lifting of persons, the period is reduced to 6 months.

## MAINTENANCE

16 It should be remembered that different maintenance management techniques have different benefits:

17 Where safety-critical parts could fail and cause the equipment, guards or other protection devices to fail and lead to immediate or hidden potential risks, a formal system of PPM or Conditioned Based Maintenance is likely to be required.

## RECORDS

18 The following records shall be maintained throughout the use of any PWE on site:

- (a) PWE Schedule - Completed on receipt of any PWE and maintained with all relevant detail until the PWE is removed from site. Any PWE merely 'Off-Hired' shall be subject to the same controls as other 'in-use' equipment.
- (b) Maintenance – A record of all maintenance completed shall be kept in the site SHE Register.
- (c) Regular Inspection – All regular inspections shall be recorded in the site SHE Register.
- (d) Thorough Inspection – A record of all thorough inspections completed prior to or during the PWE time on site shall be maintained in the site SHE Register.

### 2.3.5.5 Appendices

#### APPENDIX 1 – PWE SCHEDULE

Owner	Equipment Type	Registration/ Fleet/ Serial Number	Date Received on Site	Checklist Completed By	Date of Last Thorough Inspection	Date of Next Thorough Inspection	Authorised User(s) By Name	Competence Details	Risk Assessment Completed and Communicated By	Competent Inspector	Date Removed From Site
COMPANY											
Works Package/ Sub-contractor											

### Appendix 2 – PWE Checklist

PLANT/WORK EQUIPMENT DETAILS		
Contract:	Location:	
Type of plant/Equipment:		
Equipment Fleet or Serial No:		
Supplier:	Order No:	
Received by:	Date:	
User ( <b>COMPANY</b> or Sub-Contractor):		
CHECKLIST		
WORK EQUIPMENT	Yes	No
1. Is the item of plant/work equipment as ordered or a suitable alternative?		
2. Is the item of plant/work equipment in good condition? Are there any noticeable defects i.e. oil leaks, damaged panels, tyres, guards missing, etc?		
3. Has plant/equipment been supplied with the necessary: <ul style="list-style-type: none"> <li>• Operating instructions</li> <li>• Manufacturer's Handbook</li> <li>• Completed maintenance Checklist (PPM/Service Record)</li> <li>• Warning Notices/Signs/Safety Equipment (locking bars/pins etc.) attached</li> <li>• Appropriate Drip Trays/Spill Response Kit</li> <li>• Is all information in English</li> </ul>		
4. Has a current certificate of thorough examination (or EU Declaration of Conformity) been supplied/provided with the equipment (Lifting Equipment only)		
5. Where equipment has been assembled on site, has a written confirmation been provided as to its fitness for use?		
Defects/Comments/Actions:		
Signature:	Date:	

Notes:

- 1: Where a suitable alternative has been provided, the person completing the checklist must re-visit the Risk Assessment and amend controls as necessary.
- 2: Where lifting equipment is supplied for the lifting of persons, the thorough inspection/EU Declaration must be within 6 months of issue date.

COMPLETED FORM TO BE FILED IN PROJECT SHE REGISTER

#### 2.3.5.6 Author

SECTION	NAME	POSITION IN COMPANY	CONTACT DETAILS
		SHE Manager	

#### 2.3.5.7 Approvals

	NAME	POSITION IN COMPANY	SIGNATURE & DATE
<b>Approved by:</b>		SHEQ Director	

PLANT/WORK EQUIPMENT DETAILS		
Contract:	Location:	
Type of plant/Equipment:		
Equipment Fleet or Serial N°:		
Supplier:	Order N°:	
Received by:	Date:	
User ( <b>COMPANY</b> or Sub-Contractor):		
CHECKLIST		
WORK EQUIPMENT	Yes	No
1. Is the item of plant/work equipment as ordered or a suitable alternative?		
2. Is the item of plant/work equipment in good condition? Are there any noticeable defects i.e. oil leaks, damaged panels, tyres, guards missing, etc?		
3. Has plant/equipment been supplied with the necessary; <ul style="list-style-type: none"> <li>• Operating instructions</li> <li>• Manufacturer's Handbook</li> <li>• Completed maintenance Checklist (PPM/Service Record)</li> <li>• Warning Notices/Signs/Safety Equipment (locking bars/pins etc.) attached</li> <li>• Appropriate Drip Trays/Spill Response Kit</li> <li>• Is all information in English</li> </ul>		
4. Has a current certificate of thorough examination (or EU Declaration of Conformity) been supplied/provided with the equipment (Lifting Equipment only)		
5. Where equipment has been assembled on site, has a written confirmation been provided as to its fitness for use?		
Defects/Comments/Actions:		
Signature:	Date:	

Notes:

- 1: Where a suitable alternative has been provided, the person completing the checklist must re-visit the Risk Assessment and amend controls as necessary.
- 2: Where lifting equipment is supplied for the lifting of persons, the thorough inspection/EU Declaration must be within 6 months of issue date.

COMPLETED FORM TO BE FILED IN PROJECT SHE REGISTER

GENERAL REQUIREMENTS	Y	N	SPECIFIC REQUIREMENTS	Y	N
<p>1 Suitable for its purpose</p> <p>2 Suitable for its location</p> <p>3 In a good order</p> <p>4 Restricted to use by authorised personnel (if necessary)</p> <p>5 Provided with instruction for use and maintenance (in Arabic &amp; English)</p> <p>6 Have operators been trained?</p> <p>7 Have supervisors been trained?</p> <p>8 Is a maintenance log kept (plant and machinery only)</p> <p>9 Is log kept up to date (plant and machinery only)</p> <p>10 Are maintenance arrangement satisfactory</p>			<p>1 Satisfactory guards provided for dangerous parts of machinery?</p> <p>2 Other hazards minimised?</p> <p>a) Ejection/falling of anything</p> <p>b) Disintegration/collapse of equipment</p> <p>c) Fire or overheating</p> <p>d) Explosion of equipment or contents</p> <p>e) Hot/cold surfaces</p> <p>3 Controls satisfactory?</p> <p>a) Stop/start</p> <p>b) Emergency (over-rides others)</p> <p>c) Run controls</p> <p>d) Audible/visual warnings</p> <p>e) Clearly indicated, visible, safely positioned</p> <p>f) "Fail safe"</p> <p>g) Isolation arrangements</p> <p>4 Is equipment stable?</p> <p>5 Is lighting adequate?</p> <p>6 Have the safety of maintenance personnel been considered?</p> <p>7 Is safety information marked on the equipment</p> <p>8 Are necessary warnings/warning devices on equipment?</p> <p>9 If warnings not marked and necessary is there a written system of work/permit?</p>		