Jurong Port		
ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT SYSTEM	Doc No:	JPPL-EHS-19-03-SWP-03
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Title: OMC	Working	at Height
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1 PURPOSE

- 1.1 This procedure is to governing safe working at heights and to minimise the hazards exposed to personnel who is working at height that required ascending/descending to and from the work platform, lifting and lowering of the tools/equipment/materials and performing of the intended work order.
- 1.2 The hazards exposed when working at heights are mainly:
 - a) Falling of persons from height and
 - b) Falling of objects such as tools/equipment/materials on personnel working below

2 SCOPE

2.1 To minimise hazards that would lead to any mishaps whilst working at heights.

3 RESPONSIBILITIES

3.1 All working personnel who working at heights shall comply with the following safety requirements. They shall be aware of these requirements when involving working at heights.

4 PROCEDURES

4.1 General

- a) Contractors shall follow the OMC Working At Height Strategy, which shall be utilised in conjunction with this document.
- b) OMC and Contractor personnel shall be provided safe access and egress to all work areas.
- c) Contractor personnel required to work in elevated areas shall be provided with suitable bolt bags and or tool bags and or tool belts & pouches where possible tools shall be used at height with lanyards attached
- d) OMC and Contractors shall not obstruct or impede scaffold access temporary or permanent ladder access.
- e) All work where there is an identified potential to fall from one level to another, shall be subject to the OMC JSA risk assessment process irrespective of height.
- f) All work on fragile roofs shall be subject to risk assessment, where possible crawling boards shall be installed

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- g) Toolbox meetings shall be held covering working at height and fall prevention for all tasks where employees are assigned work in elevated areas.
- h) Any OMC and Contractor personnel who are performing work in unguarded areas and exposed to a potential fall of three (3) meters or more shall utilize fall protection equipment.
- Fall protection devices and systems shall be clearly identified and uniquely marked as such and shall not be used for any purpose other than safeguarding employees.
- j) Anchorage points use as a means of fall prevention or fall arrest must be capable of withstanding a static load of 2200kg.
- k) Access ways, and means of communication from one level to another such as ladders, shall be provided for personnel who must perform work in elevated areas.
- I) OMC and Contractor personnel who are observed not utilizing fall protection equipment, where required by this procedure, will be identified and the appropriate supervisor or Contractor will be notified. The site construction manager shall determine the appropriate level of disciplinary action, up to termination from the project.
- m)Details of emergency response shall be made available at the site, with reference to the OMC Emergency Response Plan.
- n) OMC and Contractor supervisors shall analyze all elevated tasks identify the fall protection/ prevention measures needed to ensure adequate protection of personnel and suitable protection systems are provided. After analyzing the tasks, Contractor supervisors shall instruct the personnel involved in the specifics of the fall protection measures to be used.
- o) Contractors shall make maximum use of primary fall protection systems such as scaffolds, aerials lifts, personnel hoists, etc. These systems shall be equipped with complete working/walking surfaces free of floor openings, with standard guardrail systems and toe boards in place and a safe means of access and egress.
- p) No person shall work at height alone. Each activity above grade shall have two persons minimum.
- q) Where alternatives to scaffolding access are used e.g. man-riding basket, MEWP etc wind loading shall not exceed the manufacturers rated loading or 17m/s (38mph) whichever is lower.
- r) Pipe work will not be used as anchor points due to the uncertain conditions of existing plant and equipment.

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4.2 Fall Protection System

Primary Fall Protection Systems

- These systems provide walking and working surfaces in elevated areas which are free from floor openings and are equipped with standard quard rail systems on all open sides and with closure apparatus for ladder openings or other points of access, as required.
- b) These systems include, but are not limited to, scaffolds, aerial lifts (articulating, scissor, etc.) and other approved personnel hoisting devices.
- c) Barricades shall:
 - 1.4.1 Display a tag similar to a Scaf-tag stating
 - 1.4.2 Date of erection
 - 1.4.3 **Erector Name**
 - 1.4.4 **Contractors Name**

Secondary Fall Protection Systems (Safety Harness/Lanyard Systems)

- d) These systems must be worn and used as a backup to primary fall protection systems or in the absence of primary systems, when working at height.
- e) The fall protection lanyard shall be attached to the Shock absorber or D-ring located in the middle back of the safety harness by a lock ring and shall have a large Scaff-hook on the other end of each lanyard. Safety Harness's shall only be used in accordance with manufactures Instructions
- D-rings located at the waist may only be used for positioning and with rail type ladder climbing devices.
- g) Shock absorbers shall be replaced immediately after a fall. No person shall attempt to reassemble the shock absorber.
- h) Work positioning assemblies are to be attached to D-rings at the harness belt location.
- Only approved Safety Harness/Lanyard/Shock absorbers/Karabiner systems furnished by the employer and approved by OMC are to be used.
- Harness anchor points should be as high as possible in order to minimise the fall distance

4.3 Fall Protection System

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- Lifeline systems are points of attachment for fall protection lanyards a) and must be capable of supporting at least 2,200 kg per employee. No more than two persons may attach to a single lifeline. Lifelines may be mounted either vertically or horizontally and are generally intended to provide mobility to personnel working elevated areas.
- b) Priority shall be given to lifeline placement as structures are erected.
- Horizontal lifelines shall be installed and maintained by persons c) competent in the rigging practices necessary to ensure adequate lifeline systems.
- d) Lifelines shall not be used for any purpose other than fall protection, and flexible steel wire rope used as lifelines shall be tagged and identified as such and shall not be used for any other purpose.

4.4 Man Riding Baskets

- OMC and Contractor personnel shall comply with OMC Emergency a) Response Plan which describes the detailed process and requirements for lightning. The Contractor shall inspect the Crane and the Man-riding baskets prior to use for lifting personnel.
- Man-riding baskets, ropes, and other attached lifting equipment b) must have a current test certificate and clearly marked as required by CP 63.
- All cranes used for carrying personnel must be provided with a c) deadman's handle. Crane hooks must be fitted with safety catches, and the operator must be in his cab at all times.
- At no time shall the crane be allowed to be used in a free fall d) situation. Cranes must have power lowering capabilities for carrying men.
- The limit switch must be tested and logged as such by the Contractor e) crane operator, daily, before raising persons in the baskets.
- f) Men must be secured inside the basket by a full body safety harness secured to the master link, of the crane

4.5 Temporary Work Platforms / Walkways

All temporary platforms/walkways, scaffolds, etc allowing access a) above 2 m, shall be equipped with solid decks free of openings and provided with standard guard rail systems regardless of height above grade.

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- b) OMC and Contractor personnel working from or travelling on temporary work platforms or catwalks must wear an approved safety harness and double lanyard at all times. Personnel are not required to secure their lanyards when the temporary work platform or catwalk is complete with standard guardrail systems/kick boards and walking/working surface (decks) are free of openings.
- c) All access openings and the platform or catwalk must be provided with closure devices such as ladder gates.
- d) OMC and Contractor personnel who are not protected by completed decks and guard rail systems must have their safety lanyards secured properly at all times. Personnel who must lean through or over protective railings must also secure their lanyards to ensure 100 % tie off.

Scaffolding

- Scaffolding shall as a minimum comply with Scaffolding Regulations 2004, CP 14: Code of Practice for scaffolds and CP 20: Code of Practice for suspended scaffold.
- Scaffolding used on the OMC Premises shall be in accordance with the BS EN standards for materials and erection. No timber scaffold is permitted on the OMC Premises.
- The Contractor shall ensure all documents such as PE drawings & certifications, certificates of scaffolders, material inspection certificate, scaffold registers, etc are readily available at site for inspection.
- Scaffolding must not be disturbed or altered by any unauthorised persons, i.e. only qualified scaffolders are permitted to add or remove scaffolding.
- All scaffolding work shall be carried out under an approved scaffold contractor via competent scaffold supervision using authorised scaffolders.
- Scaffolders shall practice 100% tie-off when erecting, amending or dismantling scaffolds. Rosett may be used for anchorage providing that the lanyard hook can be hooked in and that the scaffold bar is tied in two places. Where the potential fall distance is insufficient for fall protection devices to operate correctly and safely, additional measures shall be assessed for suitability e.g. removal of shock absorber, use of lifelines, inertia reels etc.
- The scaffold must be designed to carry the load, of adequate strength, and not be overloaded.
- ▶ Before use, the Contractor authorised scaffold supervisor shall inspect the scaffold, complete a 'GREEN SAFE FOR USE' scaffold tag and secure it at the base of all ladder access points. The scaffolding tag will clearly show the following information as a minimum:-

Location.

- Reference No.
- Requested by.
- Access Scaffold Classification.
- Maximum Distributed Load/Working Lift.
- Maximum number of Working Lifts to be used simultaneously.
- Date Erected.
- Erected by.
- Inspected by.
- > The use of fall protection is not required on a GREEN tagged scaffold.
- When a scaffold is being erected, amended or dismantled, only authorised scaffolders shall enter onto the scaffold, which shall be tagged 'RED - DO NOT USE' for the purpose of erecting, amending or dismantling – no other personnel shall enter onto the scaffold.
- Scaffolds shall be inspected, signed and dated at 7 day intervals by the authorised scaffold supervisor or where exposure to weather conditions likely to have affected its strength or stability or to have displaced any part. Scaffolding considered unsafe shall have the green scaffold tag withdrawn and a prominent 'RED - DO NOT USE' sign displayed.
- A scaffold register shall be kept by the Contractor authorised scaffold inspector. This shall contain:-
 - Date of First and subsequent inspections
 - Individual identifications of all scaffolds, cross referenced to the Scaffold Tag identity number.
 - Clear name and signature of the authorised scaffold inspector against each separate scaffold inspected.
 - Results of inspections.
- Scaffolds must not be erected that impede defined access routes or where they can be accidentally struck by moving plant, without prior consultation with OMC representatives. Foot ties are not allowed across pedestrian access ways.
- ➤ If there is any doubt about the security of any anchorage, suspension points or ties for a scaffold e.g. strength of existing buildings/ structures, or those under construction, OMC representatives must be consulted before proceeding with erection.
- All scaffolds must be provided with suitable access. Ladders used for this purpose must be of an adequate length and properly secured by lashing or fixing to prevent displacement. Ladders shall be located inside the scaffold structure.
- Ladders shall be installed at a suitable angle (not vertically) and positioned in such a way that the rungs are clear of pipes, scaffold poles etc that could interfere with the users foot or hand position on the rung.

- ➤ The location of scaffold material racks/compounds shall be approved by the OMC WSH Superintendent.
- Mobile scaffolds will not be constructed with a height greater than 3 times the minimum base width, and shall only be used on paved or prepared surfaces.
- Contractors are to ensure suitable measures are taken on the scaffolding against electrical hazards, where necessary. Testing of earth shall only be conducted by a qualified electrician. Scaffolders are not permitted to carry out such testing.
- Scaffold tube ends are to be protected with plastic caps. Physical hazards such as protruding clips etc. must be padded to avoid injury.
- 4.6 Mobile Elevated Work Platforms MEWP's (e.g. JLG, Scissor, Snorkel)
 - a) OMC or Contractor personnel riding in or working from these MEWP's must wear an approved safety harness/lanyard system and secure their safety lanyard to the lift basket anchorage point at all times.
 - b) Lifts shall be placed on firm and level surfaces so as to eliminate possibility of overturning.
 - c) Only authorized and trained personnel shall operate the MEWP's.
 - d) OMC and Contractor personnel shall be prohibited from tying off to an adjacent poles or structures or other equipment, while in the MEWP.
 - e) Personnel in the MEWP shall stand firmly on the floor of the basket. Climbing on the railing or using planks, ladders, or other devices is prohibited.
 - f) Boom and basket load limits shall not be exceeded e.g. the basket shall not be used as a lifting device i.e. no load shall be attached to the outside of the basket.

5 RECORDS

4.1 PTW - Working at Height

6 ATTACHMENTS

5.1 NIL

7 REFERENCES

6.1 All applicable legislation & other requirement

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