



MEMO

From Secretary for Development
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Construction Site Safety Manual

Secondary Guarding Device for Mobile Elevating Work Platform

The spate of incidents, especially the fatal ones, which involved the use of Mobile Elevating Work Platforms (“MEWPs”) on construction sites resulting in entrapment of workers by obstacles nearby has called for the need of mandating the installation of Secondary Guarding Device (“SGD”) to MEWPs in the form of physical barriers or smart devices to mitigate the entrapment hazard relating to the use of MEWPs. Particular Specification (“PS”) clauses to require MEWPs on public works sites to have SGD installed is enclosed at **Annex A**.

Effect on Public Works Contracts

2. The PS clauses at Annex A shall be incorporated in all new public works contracts (including capital works contracts and maintenance contracts) with tenders to be invited **on or after 29 November 2024**. For new public works contracts tendered before 29 November 2024, project officers should also incorporate the PS clauses at Annex A into the tender documents by way of tender addendum as far as practicable. For existing public works contracts which MEWPs have not been installed with SGD or the like, contract administrators should instruct contractors to install SGD to all outstanding MEWPs following the requirements in the PS clauses at Annex A in the shortest possible time, and no later than 23 December 2024.

3. The PS clauses at Annex A will be incorporated into the Construction Site Safety Manual in its next updating exercise.

4. Please bring this memo to the attention of the project officers who are responsible for the preparation of tenders for public works contracts and the project officers, consultants and resident site staff supervising public works contracts.

Enquiries

5. Any enquiries on the above should be addressed to Mr LEE Man-yiu, Assistant Secretary (Works Policies 5) 5 at 3509 8305.

(Terence T M LAM)
for Secretary for Development

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Particular Specification for Secondary Guarding Device for Mobile Elevating Work Platform

[NOTE:

- (i) *When installing a Secondary Guarding Device to address the single entrapment hazard, considerations should be given to the potential for significantly increasing other possible hazards.*
- (ii) *The installation of a Secondary Guarding Device does not relieve the operator's responsibility to remain aware of their surroundings and the need to follow safe working practice and protocol.*
- (iii) Other legends –

500 mm *This figure could be updated by the contract drafter suiting the actual circumstance of the site and the nature of works.*

* *Delete as appropriate.]*

- (a) Before a Mobile Elevating Work Platform (“MEWP”) is used, a safe system of work shall be developed and implemented, and all relevant personnel shall be trained and instructed to follow the safe system of work. The planning of the operation should include but not limit to the selection, provision and use of a suitable MEWP.
- (b) Secondary Guarding Device (“SGD”) is an equipment fitted to a MEWP intended to reduce the risk of entrapment. SGD could be in form of physical barriers or smart devices such as proximity sensors. SGD could either be a build-in feature of MEWP, integrated with MEWP, supplied by MEWP manufacturer or a third-party product.
- (c) The need for having SGD installed on MEWP should be evaluated, taking cognizance of the work environment, risk assessment, method statement, safe working procedures, type and operation of

MEWP and emergency rescue procedures.

- (d) Risk assessment shall be conducted for identifying potential hazards associated with the tasks to be performed and the use of MEWPs, including but not limited to entrapment of the operator or workers on MEWP. The risk assessment shall consider aspects including but not limited to the working environment, travelling path, ground conditions, weather (as applicable, if the MEWPs are used outdoors) and visibility of working location of MEWP, with due consideration on elevating of MEWP to the working position at height. In particular, a thorough assessment should be carried out to assess the working environment and the presence of other hazards on site, including but not limited to the operation of MEWP near overhead electrical lines.
- (e) The Contractor shall implement adequate safety control measures on the use of MEWPs in accordance with the risk assessment for controlling the associated safety hazards, including but not limited to –
 - (i) entrapment by MEWP;
 - (ii) overturning and collapsing of MEWP;
 - (iii) falling of worker from MEWP;
 - (iv) collision with MEWP; and
 - (v) electrocution in contact with live electricity.
- (f) All MEWPs used on site shall be fitted with SGD unless approved by the *Architect / Engineer / Maintenance Surveyor / Supervising Officer. The Contractor shall maintain a register to monitor whether all MEWPs on site are fitted with SGD. The register shall be included in the Contractor's monthly safety report.
- (g) In case the SGD is not a build-in feature of MEWP or the manufacturer is not liable for the installation of such SGD, the Contractor shall be liable for the adaptation, addition, modification and safe operation of MEWP with the SGD. In addition, the risk assessment as mentioned in sub-clause (d) above shall take into account the self-weight of the SGD, as well as the impact load of SGD of MEWP colliding with any obstacles.

- (h) The installation of SGD at MEWP shall not cause any insurmountable hindrance to the rescue of any operators or workers on MEWP in case of emergency.
- (i) The functionality of SGD shall be included as one of the checking items for pre-operation inspection of MEWP by the operator of MEWP.
- (j) SGD in form of physical barriers shall be fitted around the basket of MEWP with adequate strength to eliminate the entrapment hazards. It shall be able to restrict further movement of MEWP once SGD hits any obstacles in the vicinity of MEWP.
- (k) SGD in form of smart devices shall be a proximity sensor (or proximity sensors) fitted at MEWP for detecting any obstacles around MEWP and overhead. A visual and/or audio warning signal shall be issued to alert the operator and/or workers on MEWP if the distance between any operator or worker on MEWP and any obstacles around MEWP or overhead is less than [500 mm] or other distance as determined by the Safety Officer based on the risk assessment.
- (l) SGD shall only be retreated, retracted or defeated when –
 - (i) there is a genuine need such as the presence of SGD at MEWP will render the work to be carried out not practicable;
 - (ii) the MEWP is at stationary status;
 - (iii) the retreat, retract or defeat of SGD is authorised and under the immediate supervision of site foreman, Safety Supervisor or a person authorised by the Contractor;
 - (iv) there are other types of safety precautionary measures in place in lieu of SGD to eliminate the entrapment hazards of any operator or workers on MEWP; and
 - (v) the SGD shall be restored immediately if the need to retreat, retract or defeat the SGD no longer exists.

The criteria of retreating, retracting or defeating SGD on MEWP shall be documented and conveyed to all operators and workers using MEWP.

- (m) In situations where the SGD of MEWP is retreated, retracted or defeated, any mobilization or operation of MEWP concerned shall be under the immediate supervision of site foreman, Safety Supervisor or a person authorised by the Contractor until the SDG of MEWP concerned is restored.
- (n) The Contractor shall brief the features and operation of MEWP with SGD to all relevant operators and workers, as well as the persons responsible for emergency rescue.
- (o) For the avoidance of doubt, installation of any SGD intended to further reduce the risk of entrapment shall not absolve any responsibilities of contractors on discharging any contractual or legislative requirements on site safety. MEWP operator's responsibility should be aware of their surroundings and requirements to follow safe working procedures.
- (p) The Contractor shall use the permit-to-work system to conduct checking of full implementation of all necessary safety precautionary measures for use of MEWPs. Use of MEWPs on site shall be permitted only after the issue of a permit-to-work certificate by the Contractor. Apart from intermittent rest periods (such as tea breaks, etc.), a fresh application under the permit-to-work system and issuance of permit-to-work certificate shall be required before allowing use of MEWP concerned again. These certificates shall be kept for at least one month and shall be made available for inspection upon request by the *Architect / Engineer / Maintenance Surveyor / Supervising Officer.
- (q) Warning notices shall be displayed at prominent location at all MEWPs on site to alert all operators and workers on the potential hazards on using MEWPs including but not limited to the hazards of entrapment.

- (r) MEWP shall have two sets of controls, with one set of controls on the platform and the other set at ground or chassis level. The set at ground/chassis level shall be able to override the set on the basket of MEWP. A clearly marked overriding lowering control shall be fitted to enable a worker at ground level to lower the platform in case of emergency.