

Safety & Health Alert No. 17 / 2017

Provision of Barriers to External Openings and Floor Openings on Working Floors

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In April and May 2017, a few near miss incidents occurred on Housing Authority (HA) sites. One incident involved the falling of a steel bar from a working floor to an adjacent site. Another case involved a metal fence falling from a working floor onto the ground level. To prevent similar incidents on HA sites, contractors are strongly advised to take the following safety precautionary measures to prevent falling objects for the safety of the public and site personnel :

A. Barrier along edge of building and working platform

- a. Provide and secure rigid railings and toe boards at slab edges and above working platform:
 - top railings and middle railings at a height of 900mm to 1150mm and 450mm to 600mm respectively above working platform (PRE.B10.900.A);
 - toe boards of 200mm high above working platform (PRE.B10.1010.7);
- b. Provide barriers of at least 1200mm high with sufficient strength for all open sides of buildings before installation of precast facades (PRE.B8.260.A);
- c. Provided barrier at an effective height of 1100mm with wire mesh infill panel (e.g. maximum 50mm x 50mm) along building edges and gable end wall (PRE.B8.262.7);
- d. Provide safety net of sufficient size and strength to catch falling persons or objects (PRE.B8.260.A);
- e. Provide secure close boarding over entire floor openings (PRE.B10.1010.7);
- f. Clear working platform of debris. Do not stack any materials or debris on the working platform or near to external openings. (PRE.B10.930.A & PRE.B10.920.A);

B. Working Platform for Finishing Work

- g. Provide closed boardings and toe-boards of 200mm high for bamboo scaffolds (PRE.B10.880.A);
- h. Inspect and check the strength and stability of the scaffolds (PRE.B10.945.N);

C. Measures to Catch Falling Object

- i. Provide temporary protective canopy with horizontal projected width 3.6m (minimum) on the first floor level around the edges of domestic building and a suitable floor level of non-domestic building except in locations where there is concrete canopy with width 3m or more. If scaffold is used, do not remove the temporary protective canopy before the removal of the scaffold (PRE.B10.860.A).
- j. Cover the entire face of the building with nylon mesh safety nets if building is provided with scaffold (PRE.B10.910.A);
- k. Provide sloping catch fan of horizontal projected coverage 1.5m (minimum) and at not more than 15m vertical interval for all buildings provided with scaffold (PRE.B10.940.A);
- l. Maintain sloping catch fans, safety nets and temporary protective canopy properly in place until all works to the external building façades are completed (PRE.B10.950.A)

D. Measures to Prevent Spread of Dust and Nuisances

- m. Provide protection against the spread of dust and other nuisances by means of dust sheets, tarpaulins, boards and the like. Where work is carried out in, or adjacent to existing buildings, where work is carried out on the superstructure of the building, provide protection against the spread of dust and other nuisances by means of dust screens, sheeting or netting securely enclosing scaffolding from first floor to the highest level of the scaffolding (PRE.B8.465.7);
- n. Provide specially constructed dustproof or sound deadening screens, such as double layer of tarpaulin on substantial bamboo scaffolding, for the entire face of all buildings fronting on to road or at the boundary of the site (PRE.B8.875.7);
- o. Maintain the materials in a proper and efficient manner and ensure the barricade with sufficient strength and rigidity (PRE.B8.255.7 and PRE.B8.260.7);

- p. Check working procedures of works activities on working floor to ensure compliance with safety legislation, contractual requirements and safety control measures.
- q. Main Contractor's Representative or Safety Officer should inspect periodically and arrange maintenance work to ensure proper function of the safety precautionary works at all times.

The above precautionary measures are by no means exhaustive. Contractors are required to conduct risk assessments, formulate safe working methods and implement safety control measures to eliminate, mitigate and address hazards of falling objects on site particularly where the building blocks are in close proximity to the site boundary.