

23 December 2016

To : All Authorized Persons
Registered Structural Engineers
Registered Inspectors
Registered General Building Contractors
Registered Minor Works Contractors

Dear Sir/Madam,

**Guidelines for Designing Access and Safety Provisions for the
Maintenance and Repair (M&R) of External Air Conditioners (ACs) at Height**

Facilities for enhancing worker's safety in carrying out M&R of building components or plants on the external walls should be addressed in the design stage. PNAP ADV-14 has provided guidelines on the facilities for external inspection and maintenance of buildings.

PNAP ADV-33 has also stipulated that the provision of safe access and associated facilities for the M&R of external wall projections have to be clearly shown on general building plans as one of the conditions for granting exemptions to such projections from accountable Site Coverage and Plot Ratio.

While in the course of consultation with stakeholders for a full review of the facilities stipulated in PNAP ADV-14, it is opportune to promulgate the design guidelines for the AC related provisions as detailed in the Appendix for your reference and adoption as necessary.

Yours faithfully,



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Assistant Director / New Buildings 1
for Building Authority

**Guidelines for Design and Safety Provisions
for the Air Conditioners (ACs) Platforms**

Access

1. Access to an AC platform should be designed in the following order of preferred mode and clearly indicated on the General Building Plans (GBPs):
 - (a) From the inside of units which the AC serves via windows directly without necessitating the worker climbing out to the external;
 - (b) From common areas on the same floor of the unit which the AC serves via maintenance access doors where the worker may or may not have to climb out; or
 - (c) From the inside of the unit where the AC serves via openable windows where the worker has to climb out to the external.
2. The access openings should have a clearance of not less than 500mm by 900mm for the passage of workers or the AC, and in no case less than the size of the AC to be installed.

Configuration AC Platform

3. The sizes of the platform and the AC to be installed should be indicated on GBPs for assuring adequate working spaces around the AC. The optimum size of the platform is as follows:
 - (a) *Projection and Width* The current limit of 750mm projection may be relaxed up to 900mm if justified on a need basis (e.g. the more environmental friendly provision of a bigger AC than 2 small ACs, or the area that the AC serves requires a bigger AC). However, the whole or at least the outer 150mm of the platform should be of perforated construction so as to minimize the adverse effect on building bulk, lighting and ventilation. Width of the platform should be restricted to housing the AC and providing working space, but not serving as catwalks.
 - (b) *Working Space* A clear working space of minimum 400mm either in the front or back of the AC, and 300mm on both sides is required. On the side where the platform also serves as the worker's landing through windows, the working space can be increased to a maximum of 400mm.

- (c) *Ventilation Gap* A minimum gap of 100mm should be maintained between the AC and the outer edge of the platform (or inner side of screen if exists) or the external wall should be provided. A smaller dimension may be acceptable if justified by the specifications of the selected AC.
- (d) *Heights of AC and Screen* To minimize the extent of the platforms, those with access in/from the units can be designed with two layers of AC but the height of the screen, if any, should not be more than 1600mm. If one layer of AC is provided, the screen should not be higher than the AC. However, such restriction is not applicable to platforms with access from common areas.

Screens

- 4. Screens may be provided in front of a platform provided that they are:
 - (a) Maximum 50mm thick,
 - (b) 70% or more perforated from elevation,
 - (c) Constructed in panels with sizes and weight that are reasonably operable by a trade worker,
 - (d) Able to withstand impact load of the trade workers when repairing the AC, and
 - (e) Open on the sides (if not bound by external walls) except for the provision of necessary intermittent supports to the screens in the front.

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