

Annex 1

Details of Guidelines

As a principle, successful screening of above-grade car parks and Mechanical and Electrical Services is achieved when it is designed as an integral part of the façade, building envelope and/or roof crown expression.

Screening of Mechanical and Electrical Services²

- 1 All rooftop Mechanical and Electrical services, such as air-conditioning (A/C) condenser units, water tanks, lift motor rooms, etc., shall be well integrated within the building envelope and visually screened from the top and all sides in accordance with the performance guidelines stated in paragraph 7:
 - a) If proposed at the rooftop, the design of the roof crown should take into consideration screening of such equipment;
 - b) For intermediate Mechanical and Electrical floors in high-rise towers, an extension of the façade cladding is an acceptable screening solution, provided that these floors are not excessively lit internally at night and thus not visible from the streets.
- 2 To allow for sufficient air circulation to A/C equipment such as cooling towers or air-cooled chillers where ventilation is necessary, localised screening can be omitted directly above such A/C equipment. The remaining areas should be effectively screened on top.
- 3 For developments served by multiple independent Mechanical and Electrical services, Mechanical and Electrical equipment, such as A/C condenser units, shall be neatly mounted on the external building facades and ledges, visually well-screened from all sides. There is no need for screening on top, to allow for air flow.

Car Parks

- 4 Above-grade car parking levels shall be fully screened in accordance with the performance guidelines stated in paragraph 7. In addition, the façade design of all proposed above-grade car parks shall be considered as part of the overall architectural treatment of the development.
- 5 Rooftop car parks shall also be visually well-screened from the top according to the performance guidelines as stated in paragraph 7.
- 6 Alternative screening measures can be considered if effective screening of light from headlights from parked cars and unsightly services can be demonstrated. Additional submission requirements outlined in paragraph 9 will apply.

² Last updated on 19/01/2024

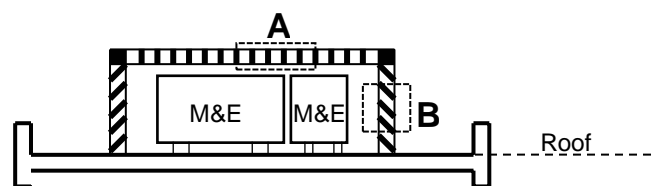
Performance requirements for screening

7 The requirements for the different forms of screening are as follows:

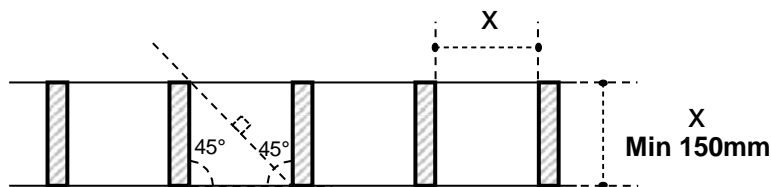
a) Trellis/ Louvres

The spacing of trellises, louvres or other similar types of construction used for screening shall be equal to or less than the depth of the screening element. The spacing to depth ratio is hence minimally at a ratio of 1:1. In addition, each screening element shall have a minimum depth of 150mm to ensure they are effective in terms of visually screening the services behind them. The screening elements shall be orientated to cut off views of the services from major public spaces, the street level, and surrounding buildings. See details A and B.

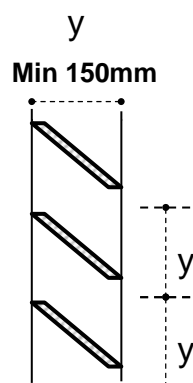
An example using trellises / louvres



Detail A – Sectional View of Screening Elements



Detail B – Sectional view of Screening Elements



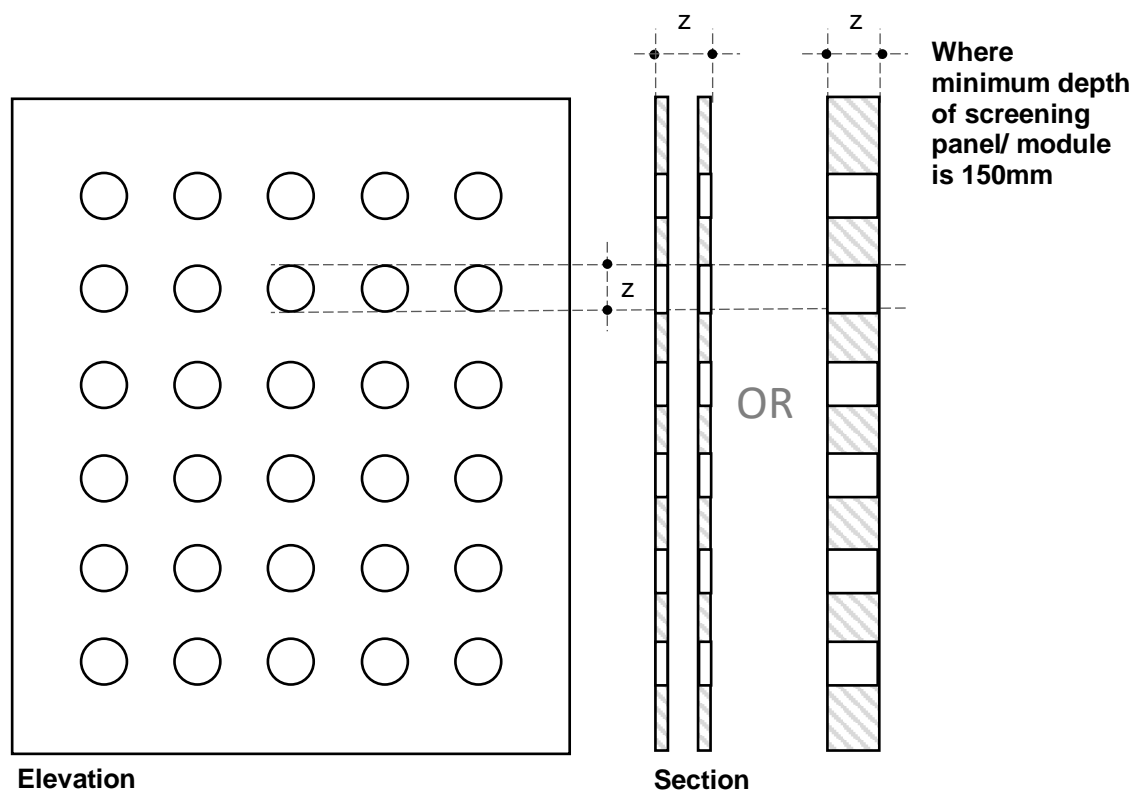
b) Perforated Panels

Perforated panels with insufficient depth (thickness) tend to be ineffective in providing visual screening, especially when the interior spaces are lit up. Hence, perforated panels that do not fulfil a minimum depth requirement of 150mm will not be accepted as a screening solution.

In line with the design principle behind trellises and louvres, if perforated panels are used, the depth of screening shall have a minimum depth of 150mm, for example by using double layer panels constituting a depth of 150mm. The size of opening shall be equal to or less than the depth of the screening. See detail C.

With this stipulation of minimum depth and size of opening to correspond to the depth of the panel, there is no more porosity requirement for the perforated panels. This is also aimed at reducing conflicts with natural ventilation and fire safety requirements.

Detail C



- 8 The revised performance guidelines are intended to provide clarity and transparency. Applicants can propose alternative screening types other than the examples shown above, provided they meet the performance requirements of effective visual screening from the street level and the surrounding developments. See Annex 2 for examples of effective screening design that have incorporated effective screening principles.

Submission Requirements

- 9 Details of the design, layout and material used for the screening of services shall be clearly annotated in the submission drawings to comply with the above guidelines. Where alternative design solutions are proposed that do not comply

with the performance criteria stated in paragraph 9, detailed drawings including sightlines analysis, 3-D digital models, etc, demonstrating the effectiveness in screening the car parks and rooftop Mechanical and Electrical equipment, are required to be submitted for detailed design evaluation.