

#### Design Load



Strategic placement of heavy plants over structural elements

- The structural integrity of the roof structure must not be compromised by the introduction of greenery and other relevant landscaping materials on the roof.
- The 'trees' and 'palms' estimated gross weight must be taken into account when tabulating the total imposed load.
- Bulk vegetation such as trees, palms and big shrubs, should be strategically located and preferably positioned over structural members such as columns. Design should optimally transfer tree loads through the building safely to the ground.

#### Securing and Planting Trees Safely

- All structural bracings used to stabilise rooftop trees and tall vegetation should have their load-bearing capacity certified by the PE.
- Please refer to the CUXE Publication CS EDP: Guidelines on Planting of Trees, Palms and Tall shrubs on Rooftop.

#### Lightning Protection



Lightning protection systems should be present on green roofs and rooftop gardens.

- Engage a Professional Electrical Engineer to ensure that the lightning protection system is fitted to requirements to protect people and the building from lightning strikes.

- The lightning protection system should be designed and installed in accordance with the Approved Document by BCA.



## BCA Roof Garden

Singapore 578774, Singapore

The BCA Roof Garden in Singapore is a community-led rooftop garden that provides fresh produce for the local community. The garden also includes a rainwater harvesting system and is designed to promote biodiversity and reduce the urban heat island effect.

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