

CLIMATE-SENSITIVE ONE-STOP-CENTRE IN JSNAC, NUSAJAYA -  
AN OASIS OF SHADE AMID SOLAR HEAT AND RADIATION

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## ABSTRAK

Kelompok-kelompok kawasan hijau yang kecil dapat merendahkan suhu sekitar, memberikan ruang dan pemandangan yang menarik serta senang dicapai kerana dekat dengan pengguna. Konsep reka bentuk ini boleh didapati di kawasan pentadbiran kerajaan iaitu kelompok bangunan pejabat di Putrajaya dan bangunan pejabat di Pusat Pentadbiran Baru Negeri Johor, JSNAC (2007). Blok pejabat kedua-dua reka bentuk ditempatkan mengelilingi sebuah plaza. Namun, masalah akan timbul jika perancangan blok pejabat dan plaza tidak dijalankan dengan baik, terutamanya dari aspek saiz, nisbah tinggi kepada lebar. Putrajaya didapati terlibat dalam isu *Urban Heat Island*, suhu kawasan ini lebih tinggi daripada kawasan sekeliling. Prinsip-prinsip yang digariskan di dalam reka bentuk perbandaran yang peka kepada iklim bertujuan mencapai keadaan bandar yang selesa dan terlindung daripada pancaran matahari. Cara yang utama ditimbang ialah merendahkan atau mengelakkan radiasi matahari terhadap ruang awam luar bilik, mencapai keselesaan melalui pendinginan sejatan dan penggunaan tanaman pokok. Oleh itu, kelompok pejabat ini, selain peraturan atau garis panduan oleh pihak berkuasa, akan direka bentuk mengikuti teori *shadow umbrella*, dengan menggunakan geometri bandar untuk menjana bayang di plaza dan melidungi fasad. Reka bentuk *One-Stop-Centre (OSC)* dapat melengkapi fungsi plaza dengan membekalkan ruang yang riuh-rendah dan terlindung kepada orang ramai.

## ABSTRACT

A small green pockets in the urban area, be it a plaza, a square, green roofs, or any simple plantings would be very useful for the comfort of the surrounding occupants and buildings. Not only it cooled the surroundings, it offered views and could also be used conveniently, as it was just amidst the urban neighbourhood. This design concept was found in our country's new administrative centers, first the clusters of office in Putrajaya and recently the office clusters in Johor State New Administrative Centre, JSNAC (2007). The office blocks in both designs were located enclosing a plaza. However, wrongly oriented and proportioned courtyard or plaza buildings were harming thermal comfort in less-winded areas, especially in equatorial tropics. Putrajaya experienced the phenomenon of Urban Heat Island. Principles of urban climate-sensitive design in the tropics highlighted a few strategies in achieving a cool and shaded urban environment. The major concern was to reduce or prevent solar radiation into public outdoors, achieve comfort by evaporative cooling and use of vegetation. With this, the office cluster, besides within the given rules and guidelines by the authority, it would then be designed according to shadow umbrella theory, with main focus on the planning of urban geometry (building mass), to cast shadows to the plaza and to achieve self-shaded facade. The design of the One-Stop-Centre (OSC) would complement the function of the plaza – as a shaded and vibrant space to serve the people.