

Ministry of Natural Resources & Environement

Block Menara 4G3 Precinct 4, Pusat Pentadbrian kerajaan persekutuan 62574 Putrajaya Putrajaya, Malaysia

Architects	Veritas Architects Kuala Lumpur, Malaysia
Clients	Putrajaya Holdings SDN BHD Wilayah Persekutuan, Malaysia
Commission	2000
Design	2000 - 2001
Construction	2001 - 2005
Occupancy	2006
Site	12,000 m²
Ground floor	8,800 m²
Total floor	86,514 m²
Costs	5,180,000 USD
Programme	A group of four curved towers flanking the central ceremonial boulevard of Putrajaya. The 18 storey towers rise from curved narrow atriums. The structure is reinforced concrete.

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PUTRAJAYA, MALAYSIA.



At night, the timber and stainless steel screens become a semi-transparent veil on the formal boulevard facade.



The footprint of the 4 towers trace a motif of interlocking corcles in the tradition of geometric Islamic forms.



Design Statement

The Ministry is one of 4 towers flanking the central boulevard of Putrajaya. The masterplan intended for the 4 buildings to form an urban gateway framing the main axis of the city, its scale creating a strong orientation node along the 4.7km boulevard. The elliptical footprints of the 4 towers were derived from a motif of interlocking circles in the tradition of geometric Islamic forms.

The tower is designed to touch the line of the streetwall and to disengage or ‘peel off’ from the podium, creating a semi-indoor ‘street’ that extends the public space of the boulevard directly into the building itself. Open bridges span this naturally ventilated sky-lit curved concourse or ‘street atrium’ to connect the offices in the tower and podium, allowing occupants a sense of openness to the outdoors as they move through the building. The corridors of government are literally exposed and made transparent to the public ‘street’ below. These open corridors work as open verandahs in traditional vernacular buildings, serving as shading devices and casual meeting places.

The 18 storey tower rises from curved narrow atriums - deep slits cut into the ground, bringing daylight to the sunken garden and basement. The western main street façade is a steel-framed screen wall inset with movable timber slatted screens - in day, opaque against the western sun and at night, a transparent veil revealing the offices behind. The tower is oriented east-west to minimize solar exposure. Ascending sky garden decks on the east end of the tower provide breakout spaces. The facade articulation reflects the distinctive diagonal bias motifs found in traditional "batik" fabric designs.

Building thermal simulation and energy studies were done to verify the design strategy. Overall energy consumption BEI of the building at 136 kWh/m2/year (OTTV 45 W/m2), ranks among the lowest 10% energy consuming office buildings, designed at a time when green certification was not yet instituted in Malaysia.



Public ‘internal street’ with sunken garden which brings daylight to basement carpark.



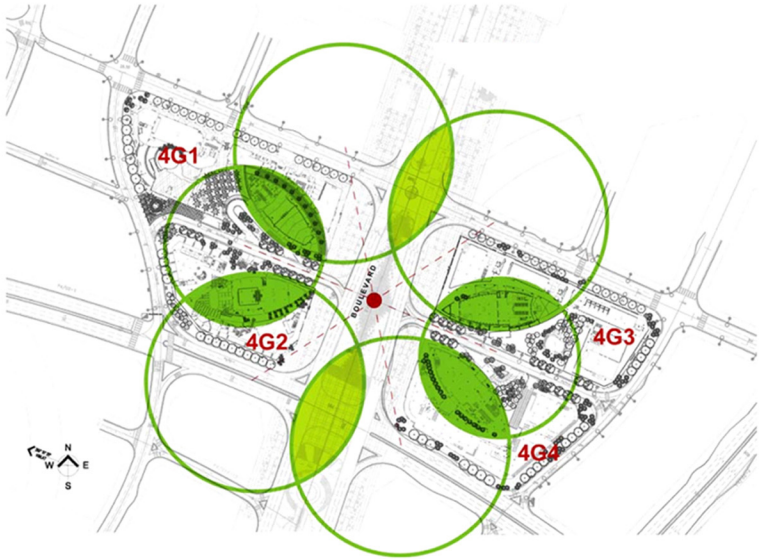
Front Facade - a screen of painted mild steel that creates a semi-transparent filter between the city and the building, a brise-soleil to diffuse glare and create shade.



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Late afternoon view reveals the transparent edge of the 18 storey tower



The footprint of the 4 towers trace a motif of interlocking circles in the tradition of geometric Islamic forms.



Design Statement

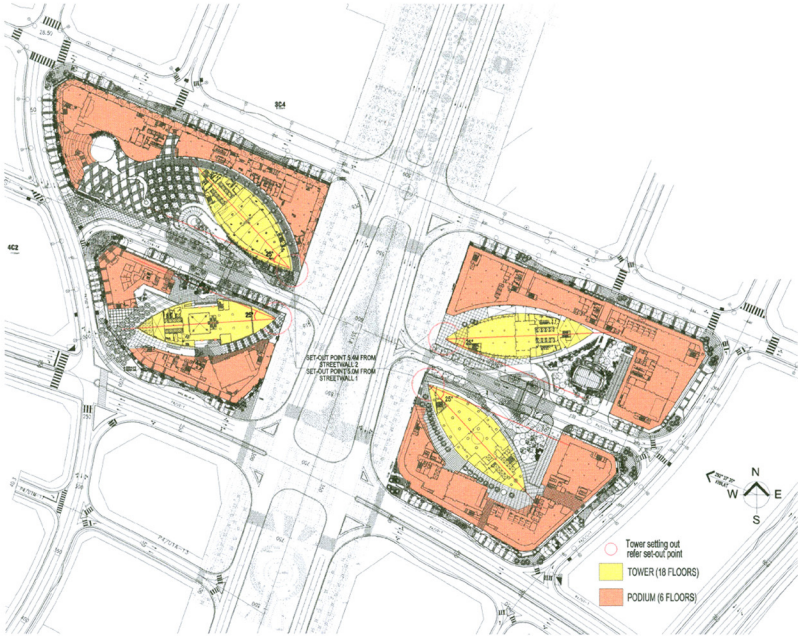
The ministry building is one of 4 curved towers forming a gateway on the central boulevard of Putrajaya, marking a threshold between the formal civic precinct and the commercial precinct.

The footprint of the 4 towers trace a motif of interlocking circles in the tradition of geometric Islamic forms. The sky-lit curved concourse atrium created between the tower and the podium extends the public space of the pedestrian boulevard into the building itself. The 18 storey tower rises from curved narrow atriums - deep slits cut into the ground, bringing daylight to the car-park basement below. The surau [prayer hall] is nestled in an earth mound in the central landscaped courtyard.

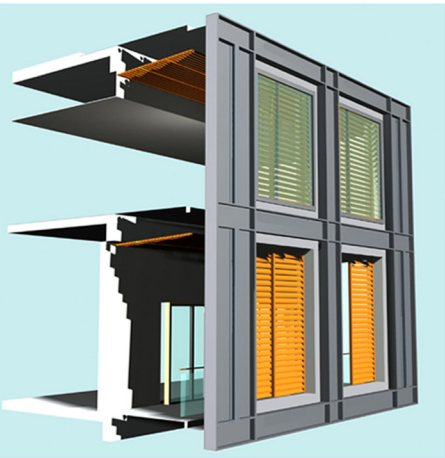
The west-facing front facade is designed as a steel framed screen wall inset with movable timber screens - in day, opaque against the western sun and at night, a transparent veil revealing the offices behind. The facade articulation reflects the distinctive diagonal bias motifs commonly found in traditional "batik" fabric designs in Malaysia.

Building thermal simulation studies were done to verify the effectiveness of the site planning strategy and passive shading devices. The overall energy consumption of the building is calculated at 136 kWh/m2/year with an OTTV of 45 W/m2.

- tower is oriented to minimize east - west exposure.
- office layout with perimeter naturally - ventilated corridors instead of internalized A/C corridors.
- light tray above windows act as both shading devices and reflect diffuse sunlight into the office space.
- sun shades concentrated at western side of the tower facade.
- sky gardens at eastern edge of tower provide shading and green break out areas.
- podium front facade of deep-set steel framing sliding timber screens



Public "internal street" with sunken garden which brings daylight to basement carpark



Exterior timber screens at verandahs front facade provide shading from the western afternoon sun

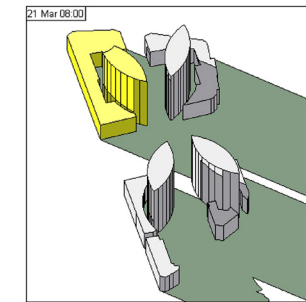




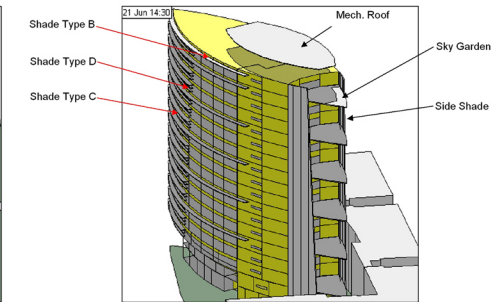


At night, the timber and stainless steel screens become a semi-transparent veil on the formal Boulevard facade

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Shading effect from neighbouring buildings at different times of the year.



Building Thermal Simulation showing the effectiveness of the site planning strategy and passive shading devices.



Ascending sky gardens perched at the eastern edge of the tower, provide common break-out areas.



Front Facade - a screen of painted mild steel that creates a semi-transparent filter between the city and the building, a brise-soleil to diffuse glare and create shade.

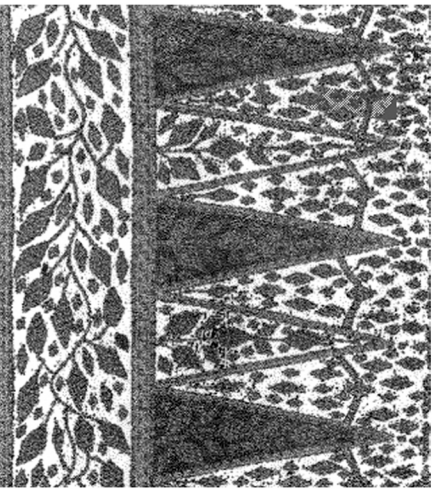




Diagonal bias motif at stainless steel screens



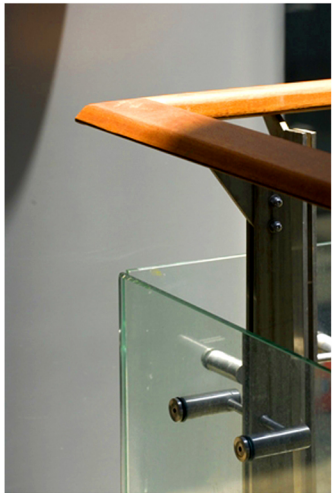
Sliding full height timber screens and Stainless steel weather screens at western front facade



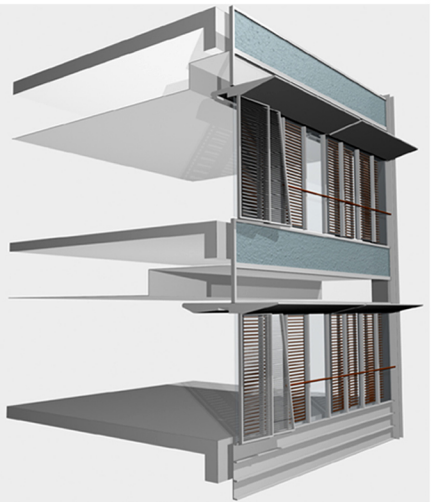
Diagonal motif of traditional batik



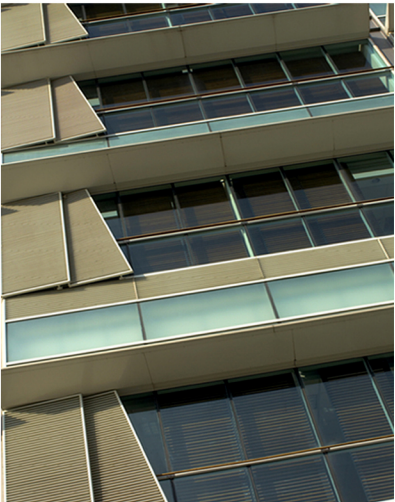
Entrance of multipurpose hall



Timber top rail echoes the warm tone of the ceiling



Light shelf of aluminium reflect daylight into the office space



Bias motif at podium and tower facade



Stainless steel weather screens at the 2-storey high pedestrian arcade which wraps around western and northern side

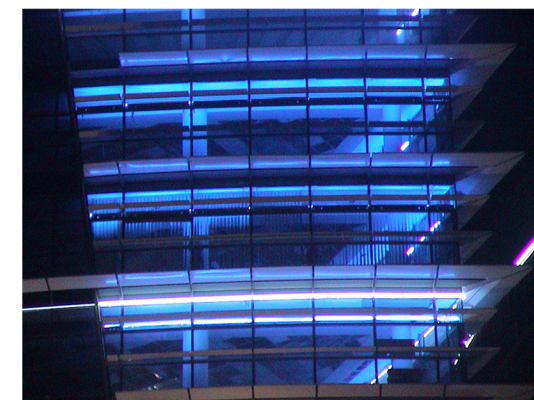




The tower is disengaged from the podium block to create a covered 'internal street' that brings in pedestrians from the boulevard



Facade Design : Diagonal motifs and textural interplay reminiscent of traditional 'batik' and weaving



Concealed strip lighting creates a glowing effect at the edge of the office tower.

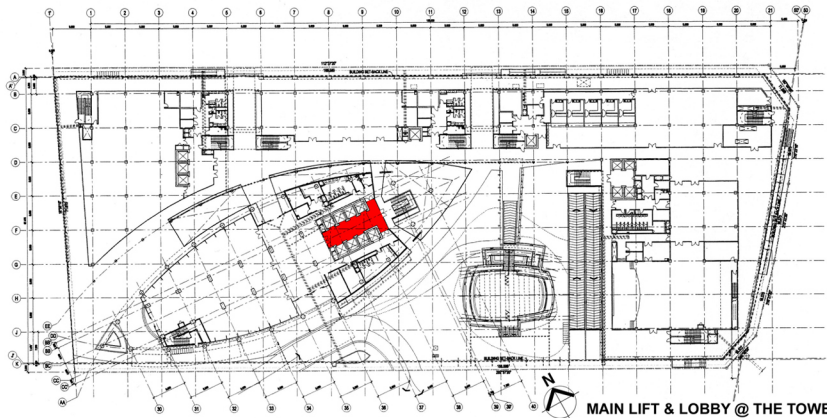




Each sky garden provides a welcome respite from the internal office spaces



External corridors create a sense of openness to the outdoors.



The timber and stainless steel screens on the formal Boulevard facade



A community surau nestled amongst the greenery in the courtyard.