Winning Entry
Library = Green Square

Green Square is an urban living room... It asks public space to do more.

The Library and the Plaza are faced into an urban terrain at the heart of Green Square, rejecting the model of the homogenous institution and instead architectural (it) into the fabric of the city. We imagine this site as a ‘field’ condition within which the library and a multitude of activities can occur. The site becomes a canvas for people to visit, gather and inspire themselves.

We don’t believe the brief calls for an architectural ‘full stop’, which seems too static and too definitive for Green Square: a place still finding its own identity. It is safe to say that during the life of Green Square, the place will undergo constant change and adjustment. This approach of tactical urbanism fosters opportunism, is speculative not prescribed and can be actively shaped and remade by the community.

The contemporary library is a place for unrestricted access to information and has a broad and informal role in the community. This proposal is a vehicle to both spatial and non-spatial social networks. One does not need to enter the library to experience it. The library is marked physically but also through what happens on the site and draws the young and mobile.

Key volumes of the library and specific public amenities are placed strategically in the fluid, inheriting a range of ground level possibilities including a projection screen, outdoor amphitheatre, movable seating and landscape elements, power and water outlets and a water play zone. The design is intentionally informal and highly flexible, providing a shared territory for all of the community.

In sync with the Sydney 2036 vision, this proposal is designed as a catalyst for Green Square to emerge as a place of distinct character and meaning within the broader fabric of Sydney.
TECHNICAL DESIGN

The design intents on the site of the Sydney GreenSquare Sustainable Library (JGSA) to create a world-leading model of sustainable development and community stewarding. The proposed design harnesses the green initiatives of the Green Square and plays into an energy system possible to be enabled on this ground-breaking project.

1. GLAZING SYSTEM

Glass placed throughout the site with SHGC = 0.8. Provide good daylight access as well as solar gain control. System opens as all are sun projections which are projected from the East Park (View from South - right).

2. PROVIDE VENTILATION AND COOLING SYSTEM

Please verify that fresh air is introduced on all levels of the building (1-10) at a level below the library. Ingress design, for energy efficiency, to ensure adequate air exchange and prevent condensation in the building. System control of fresh air intake and ventilation. Introduce temperature-temperature water from the absorption chiller which is hot by the heat distribution, but within the feel comfort.

3. BACK UP COOLING SYSTEM FOR TOWER BUILDING

Provide emergency cooling system for the library located in the tower building to safeguard the library from any failure of the cooling system for the collection. The library will have a back-up system for the temperature control system to ensure the library is not affected by any failure of the cooling system for the library.

4. TOWER FAN COIL UNITS

Fan coil units for the tower's chimneys (basement floor) provide cooling during the winter season and ventilation.

5. CLIMATE CONTROL SYSTEM

Automatic climate for the collection, library areas, all will include the cooling and heating system. The Building Control System will only operate when the library is open and the system is open.

6. SPECULATIVE WINDOWS

General windows for natural ventilation throughout the building, both for cool air to enter and to provide an air-conditioning when windows are present.

7. HEATING SYSTEM

The water from the collection's hot water network will be allowed to heat the building. In the heating of the tower, heat energy will be used throughout the building in the winter months. The heating will also improve people's comfort by reducing the need for electric heating on the ground floor. Heat exchange with the ground will also be possible through the placement of the spaces in the lower ground floor (design report).

8. SUBTERRANEAN WALLS

Subterranean walls that are heated from the ground floor to the top of the library. The tower's chimneys, which are parallel to the facade of the library, will include a separate zone that is high-grade waterproof membranes. (Design report - right).

9. WATER COLLECTION

Connected to the Green Square Infrastructure system via underground pipes, for the automated water collection and conserving. Pumps to the library are at the top floor of the library as needed.

10. INTERIOR

Users will walk through the library with fine architectural finish, material, and detailed surfaces with fine lighting details. Library and reading areas are located throughout the building. The library is placed to face the Sydney Park, which provides the library with a natural setting.

11. BUILDING MONITORING

The library will have a data management system, located at the reception. Staff will be able to monitor building efficiency and useful levels.

SECTION B - LIBRARY AND PLAza 1100