

Energy Efficiency

Goal:

100 kW hrs/m²/yr energy consumption

(This is less than half the energy that would be used by a conventional building of same nature)

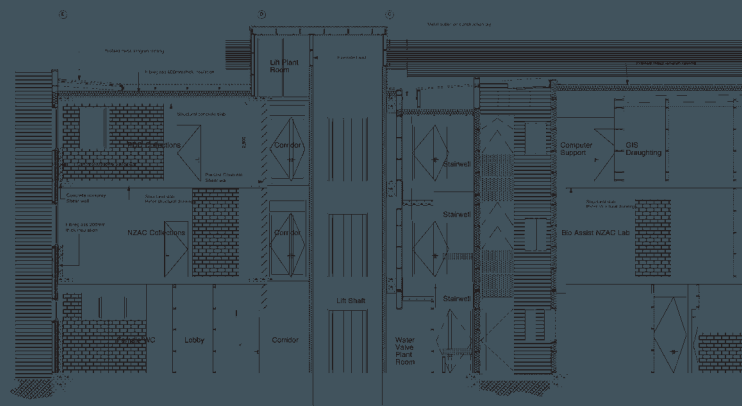
Energy efficiency has been achieved through integrating smart building design with innovative technology.

Design features include:

- multi-layered external shell with concrete (greatest thermal mass) on the inside
- fibreglass insulation layer in walls plus double glazed windows
- optimal use of natural lighting, heating and ventilation.

Innovative technology features include:

- waste heat recovery from refrigerator/freezer systems, fume cupboards, and dehumidifying systems
- recovered heat used to warm the building and supplement water heating
- solar water heating for the cafeteria, laboratories and toilets
- wind powered generator supplies enough power to pump rainwater to roof tanks for toilets and irrigation.



Section D-D Adjacent Gridline 5

INTEGRATING S M A R T DESIGN WITH INNOVATIVE TECHNOLOGY.

The building fabric helps cool the air on hot days and warm it in cold weather.

Additional technology provides some of the building's special requirements.

