FABRIC
The building fabric has been designed as a highly insulated, thermally massive and airtight envelope with carefully controlled solar access. BMS operated opening are located to maximise natural ventilation. All material selections have been made to comply with the stringent Material Petal Imperatives of the Living Building Challenge.

COMFORT
The indoor environment will be operate in naturally ventilated mode for up to 70% of occupied hours, assuming a occupant comfort band of 18-27°C. Spare plug-in points are provided to mechanical water supply and air handling units to allow the building to plug into experimental technologies.

INFORMATION
Feedback is a critical part of the SBRC research with all building analysis collected on a “converged backbone”. The BMS can be programmed as part of the research building performance an examine occupant response different building operation setups. In addition to information gather information dissemination and education is at the core of the centre function

ENERGY
SBRC will be net exporter of energy to the grid. The majority of building supply will come from mono crystalline PV with supplementary energy generated from testing technology that can be plugged in to the buildings micro grid matched to any load source. Task lighting, green IT and low energy loads will ensure extremely low energy demand

WATER
SBRC will be net exporter of water. All non-harvested stormwater is treated in the site wide detention basins and swales before leaving the site. All waste water is treated through the blackwater system and used for irrigation.

LAND AND ECOLOGY
Green roof an wall testing have been integrated, the wider landscape requires minimal irrigation and contain a permaculture and native urban garden

MOBILITY AND CONNECTIVITY
Green roof an wall testing have been integrated, the wider landscape requires minimal irrigation and contain a permaculture and native urban garden