04____Sustainable Design

4.1.5_Wind Evaluation

As can be seen from the wind roses above, the main wind influences are the cooler Easterly breezes in the summer and the cold Southerly winds in the winter. The building has been developed to create a new plaza spaces partially defined by the building which forms a protected East orientate public place. This plaza is protected form the cold Southerly winds whilst being open to the cool East breezes.

4.1.6_Reflectivity

By the introduction of a ceramic frit on the ventilated facade, it is possible to avoid the use of reflective glass to the building. The reflective glass would normally cut out the radiant heat energy - but would not necessarily deal with the remaining convection issues.

4.1.7_Visual privacy

Due to its position on the site, the CODCD has good visual privacy except on the boundary with Centenary. On this boundary, however, the design encourages visual connection to underpin the idea of collaboration between the Institutes.
Internally, rather that provide privacy between floors, the design also encourages visual connectivity between departments, and even into the Primary and Secondary laboratory spaces. The intention is also to allow visual connectivity from the internal' street' that connects the health precinct and the university through the CODCD along John Hopkins drive.

4.1.8_Acoustic Privacy

Refer to report in EA.

4.1.9_Safety and Security

Safer by Design principles are best identified and integrated into proposals during the initial design stage of a project while later stages allows for Safer by Design principles to be properly documented.

Our work within all contexts demonstrates a keen awareness of Safer by Design principles at all levels, from the strategic context to detailed design.

HASSELL have established a format for conducting Safer by Design reviews at strategic points of the project development.

4.1.10_Water Efficiency

The water efficiency measures are generally described in the sustainable design report but generally include rainwater collection from roofs and facade; efficient fixtures and fittings; water efficient urinals; solar hot water; reuse of fire services test water; storm water pollution control devices; water and energy metering, and water sensitive landscape design.

4.1.11_Energy Efficiency

Refer to sections 6.3.11 and 6.3.12 for both passive and active energy efficiency measures.

05____Materials and Finishes

5.1 Materials and Finishes Board for major building external finishes and paving surfaces

5.1.1_Wall Panelling

The external elevation of the CODCD comprises mainly combination of glazed screens or precast concrete as wall panelling. In terms of the solid portions of wall panelling the ends of the lab duct risers form a solid vertical element as do the walls of the Tertiary 'tower' which forms part of the west entry composition. The cladding is envisaged as an off-white honed finish precast concrete panel with varying joint set-outs. Other panelling to the exterior portions of wall, at low level, comprise zinc faced dark coloured panels with expressed mechanical joints.

5.1.2_Concrete

Exposed concrete will be used in a variety of places – including columns, some edge beam conditions, as precast ceiling systems in the dry labs (offices), escape stairs and some blade walls. Class 2 concrete will be specified in these locations.

5.1.3_Glazing and glazing treatments

The main feature incorporating glazing elements is the ventilated façade to the North east and North West. This screen is made up of alternating panels of toughened glass with a 50% ceramic frit baked on during the process. The patterning of the glass in the horizontal is an interpretation of the sandstone facades and helps to reduce the visual bulk of the building.

5.1.4_Metal window framing

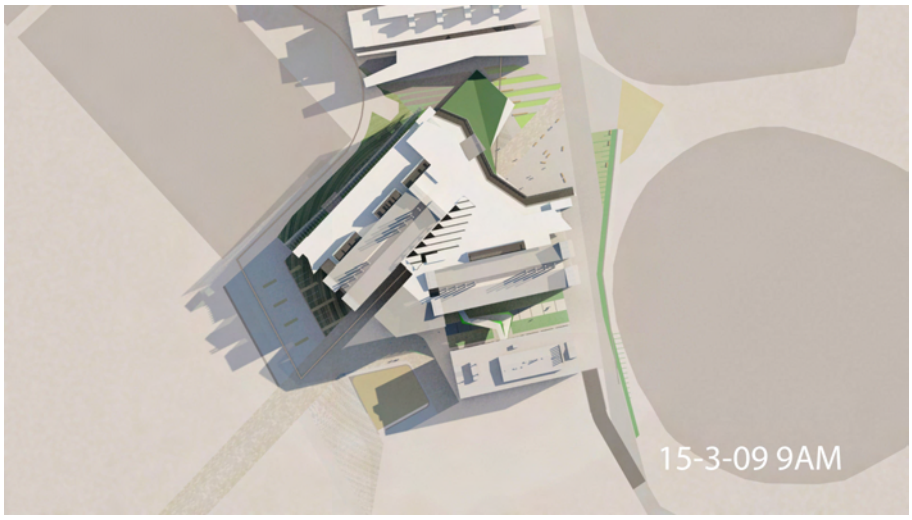
Window frames are generally aluminium or steel sections; the finish is contrasting to the light precast finish using a Satin Black finish in either aluminium- or microus oxide in steel frame sections. Some support structure behind the glazed ventilated screed will either be stainless steel or galvanised steel sections. Other exposed portions of structure will be a combination of black and galvanised contrast.

5.1.5_Screens and Louvres

Sun screens appear on the East and west facades in the narrow potion of dry lab space. These are generally microus oxide finish steel blades in a dark grey finish. Louvres appear mainly surrounding the plant space of the roof and comprised natural anodised aluminium propriety system

Internal View

06____Shadow Diagrams

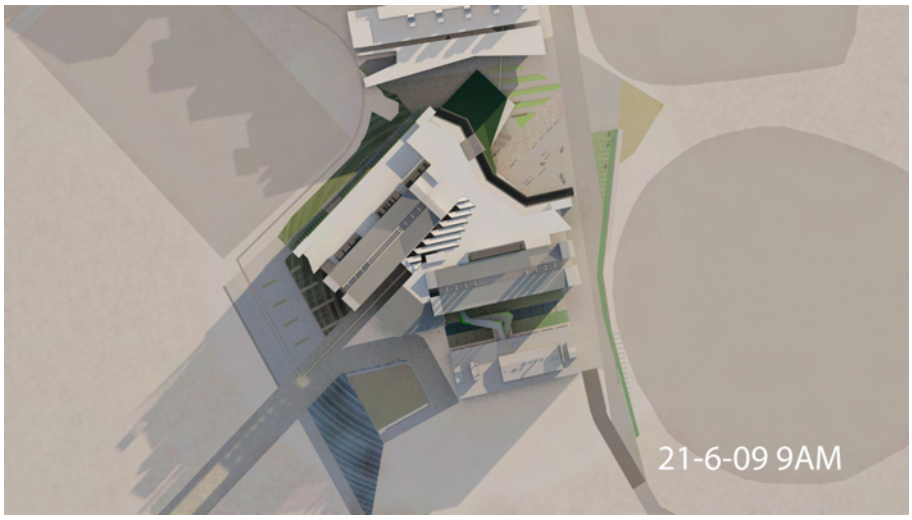


Equinox 15 March - 9am

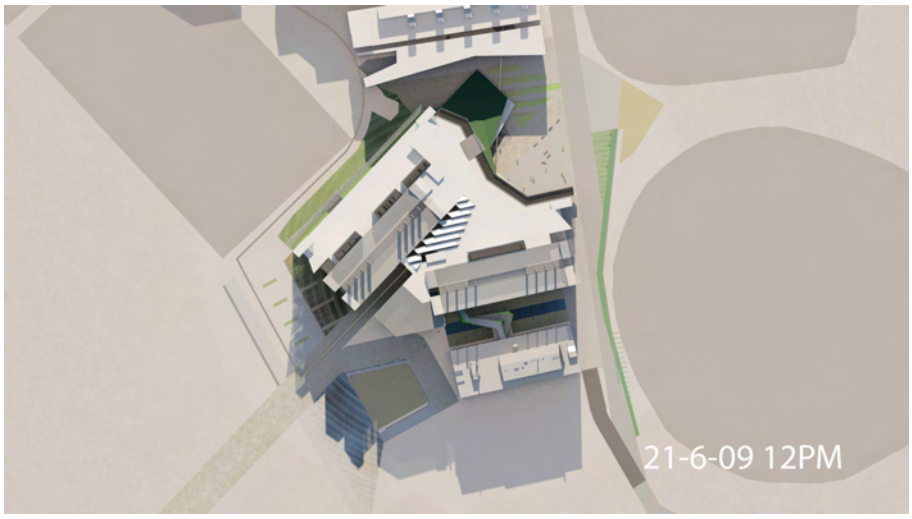
Equinox 15 March - 12pm

Equinox 15 March - 3pm

06____Shadow Diagrams



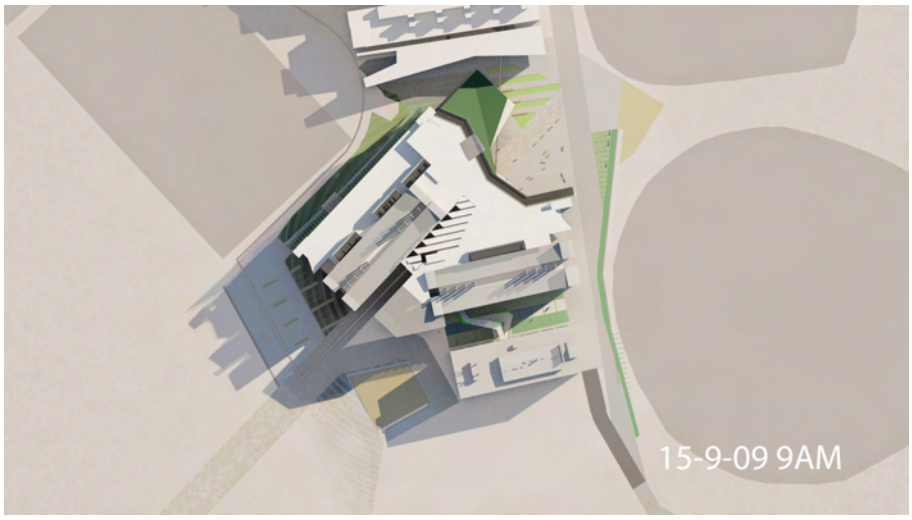
Mid Winter 21 June - 9am



Mid Winter 21 June - 12pm

Mid Winter 21 June - 3pm

06____Shadow Diagrams



Equinox 15 September - 9am

Equinox 15 September - 12pm

Equinox 15 September - 3pm

06____Shadow Diagrams

Mid Summer 22 December - 9am

Mid Summer 22 December - 12pm

Mid Summer 22 December - 3pm

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