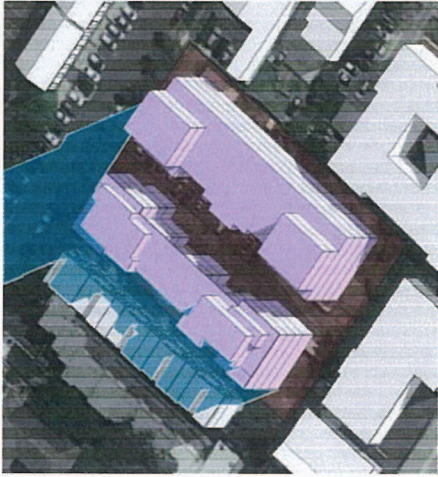


# 8 SHADOW ANALYSIS

MID-WINTER 21<sup>ST</sup> JUNE: OPTION 1



9am



10am



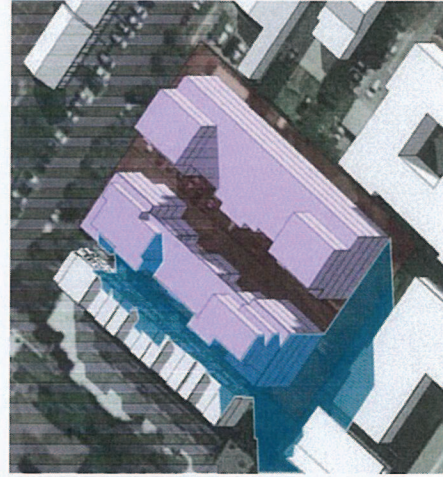
11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# 8 SHADOW ANALYSIS

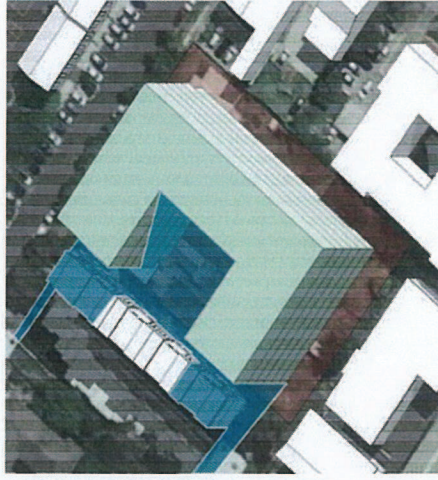
MID-WINTER 21<sup>ST</sup> JUNE: OPTION 2



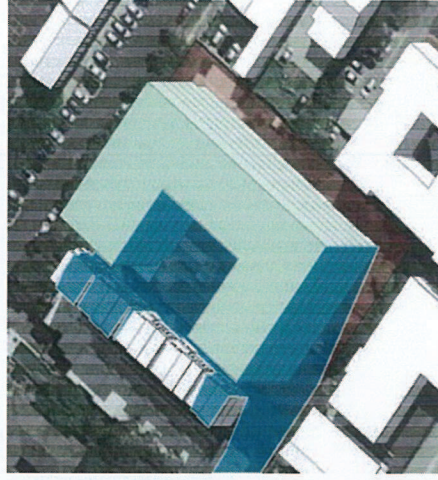
9am



10am

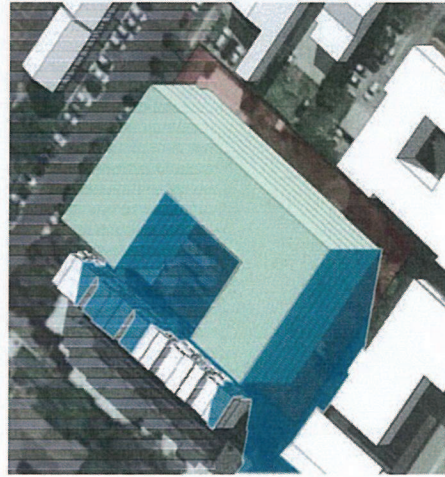


11am

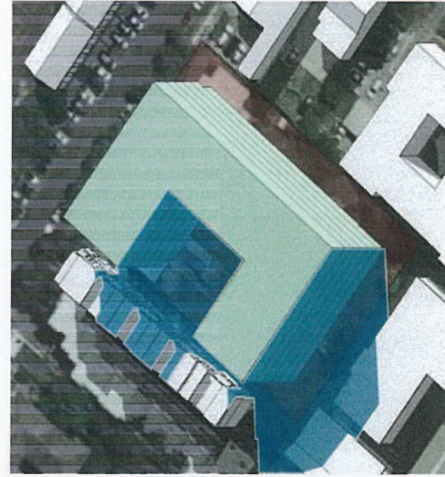


12pm

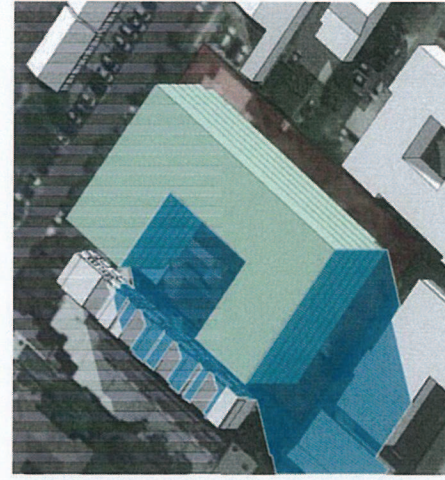
INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM



1pm



2pm

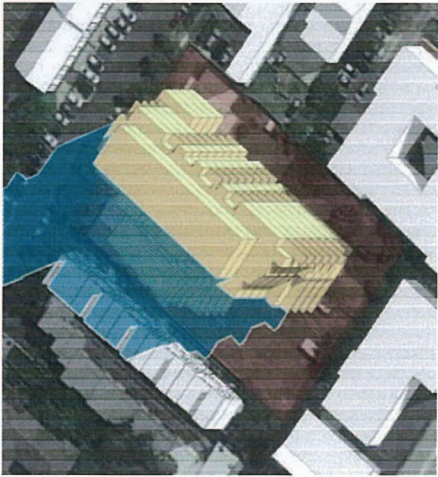


3pm



# 8 SHADOW ANALYSIS

MID-WINTER 21<sup>ST</sup> JUNE: OPTION 3



9am



10am



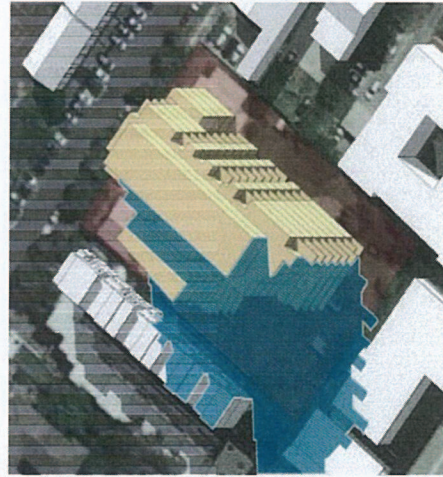
11am



12pm



1pm



2pm



3pm

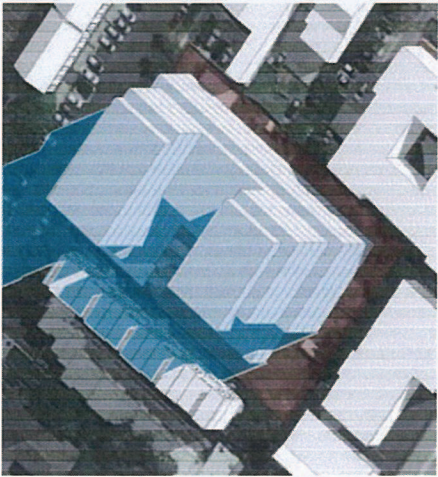
INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# 8 SHADOW ANALYSIS

MID-WINTER 21<sup>ST</sup> JUNE: OPTION 4



9am



10am



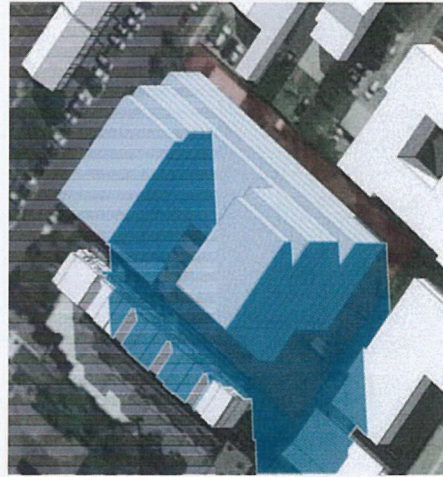
11am



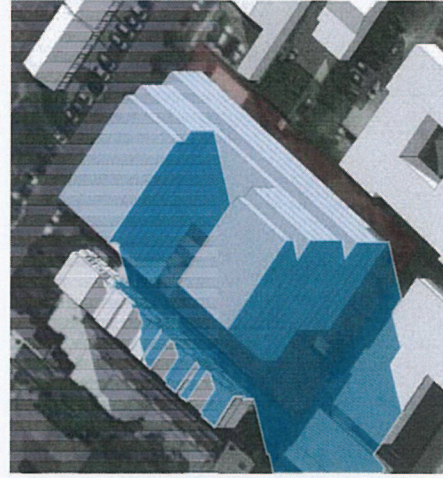
12pm



1pm



2pm

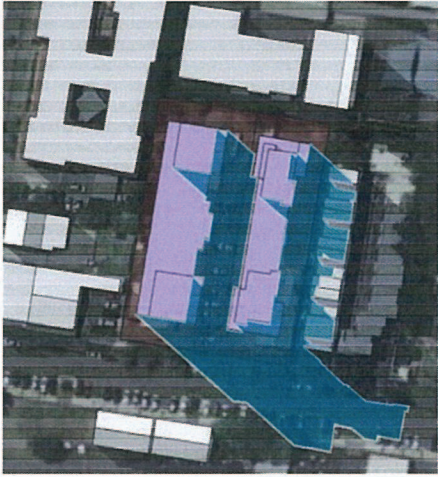


3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM







9am



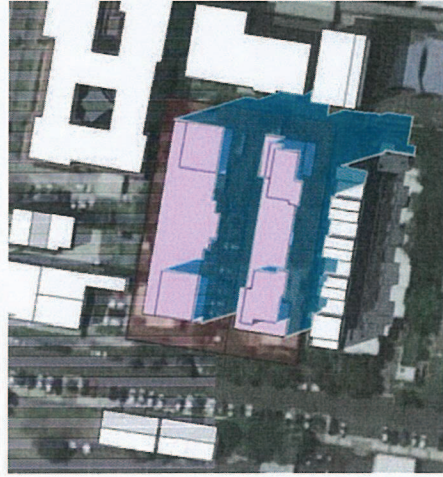
10am



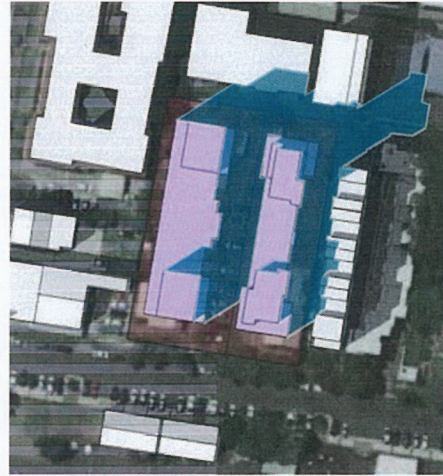
11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM



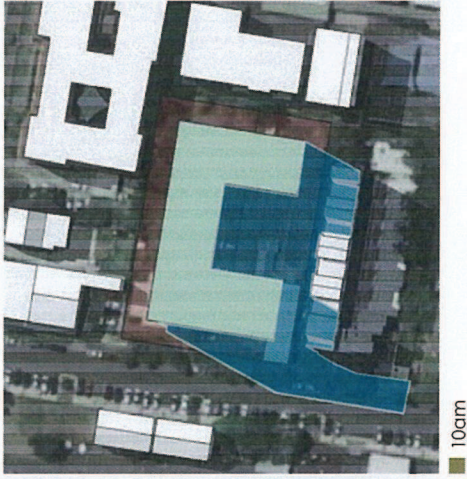


# 8 SHADOW ANALYSIS

MID-WINTER 21<sup>ST</sup> JUNE: OPTION 2



9am



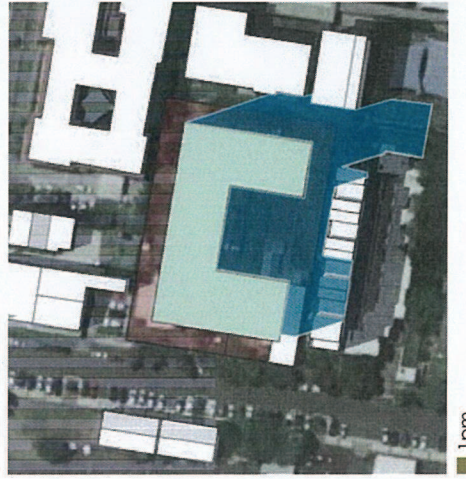
10am



11am



12pm



1pm



2pm



3pm

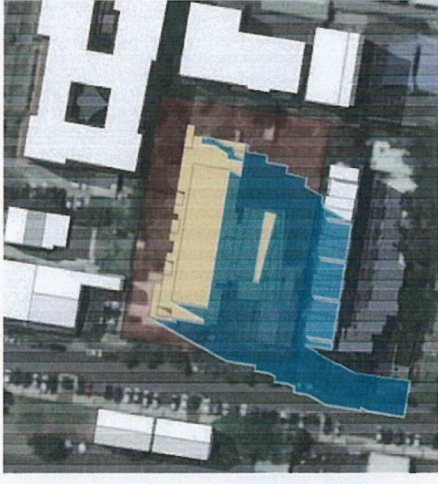
INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM



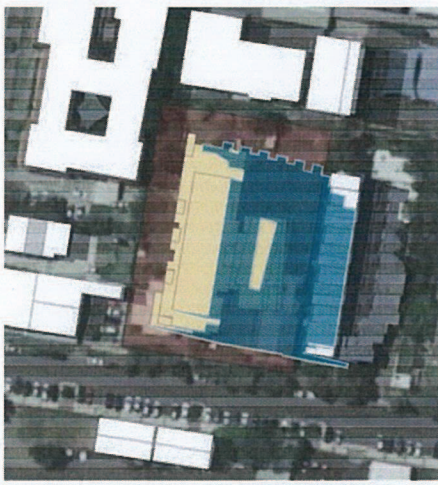




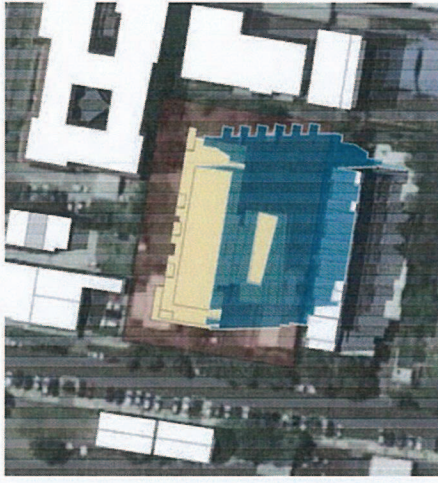
9am



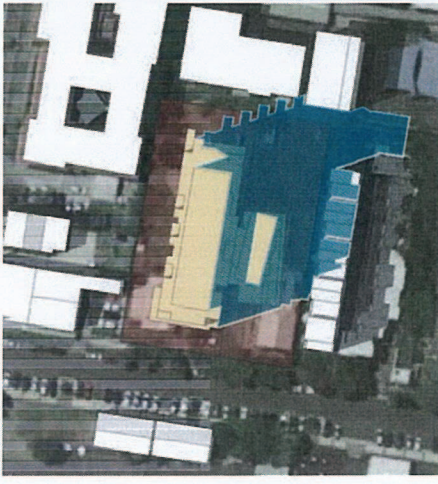
10am



11am



12pm



1pm



2pm

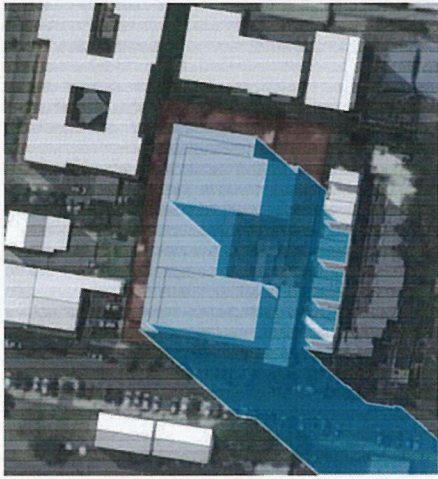


3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM







9am



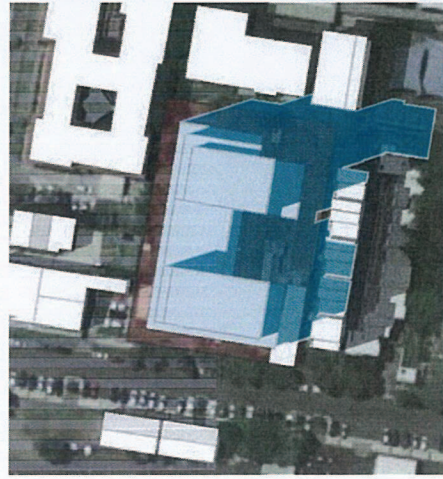
10am



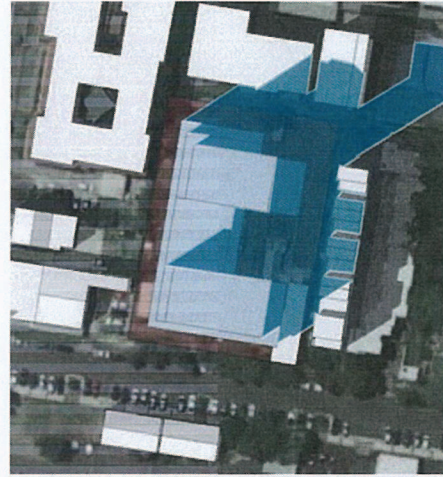
11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# EQUINOX 21<sup>ST</sup> MARCH: OPTION 1

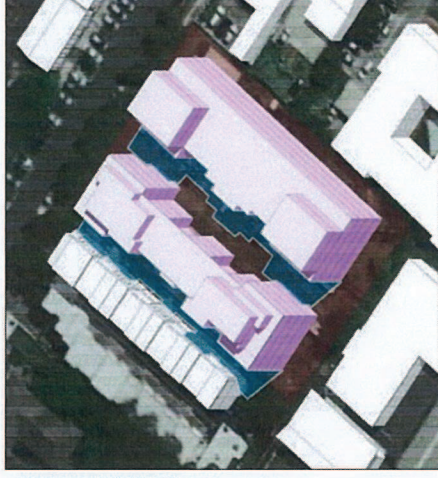
## 8 SHADOW ANALYSIS



9am



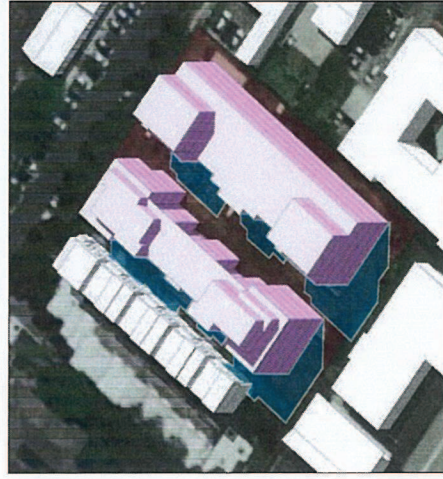
10am



11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM



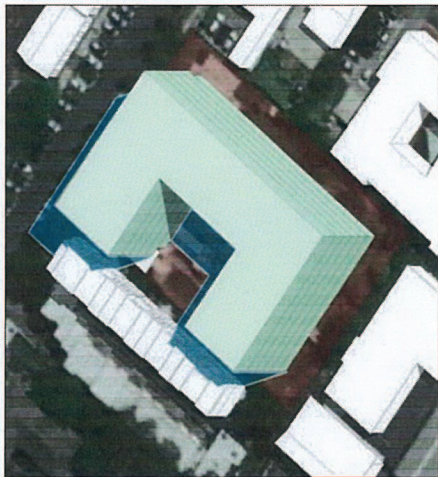


# EQUINOX 21<sup>ST</sup> MARCH: OPTION 2

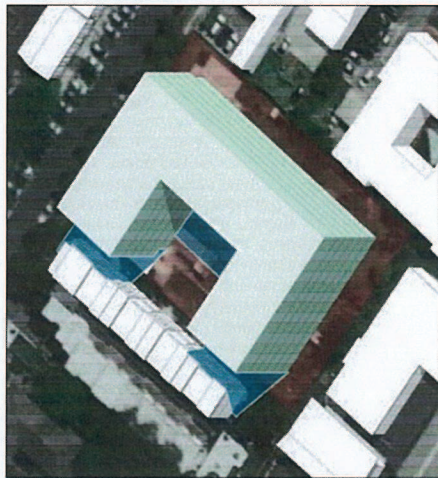
## 8 SHADOW ANALYSIS



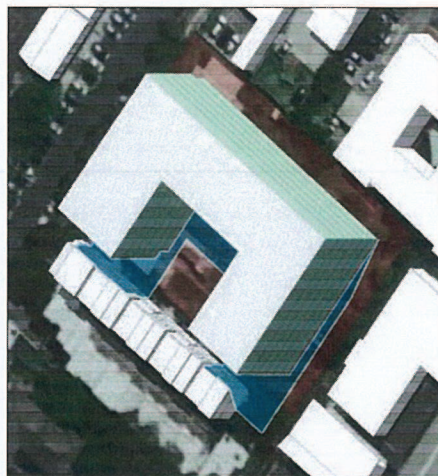
9am



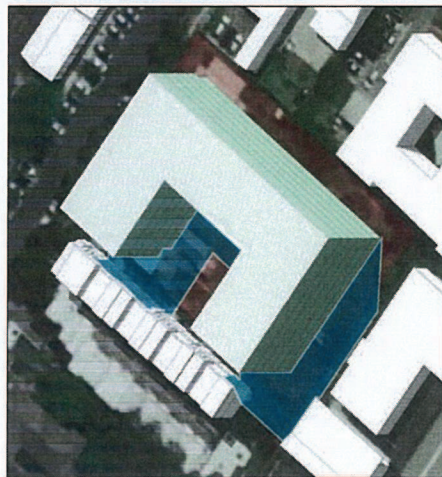
10am



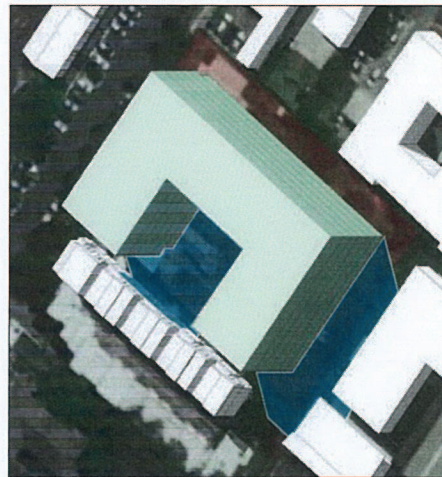
11am



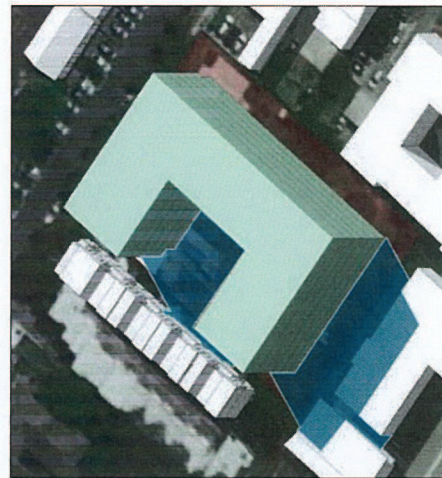
12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# EQUINOX 21<sup>ST</sup> MARCH: OPTION 3

## 8 SHADOW ANALYSIS



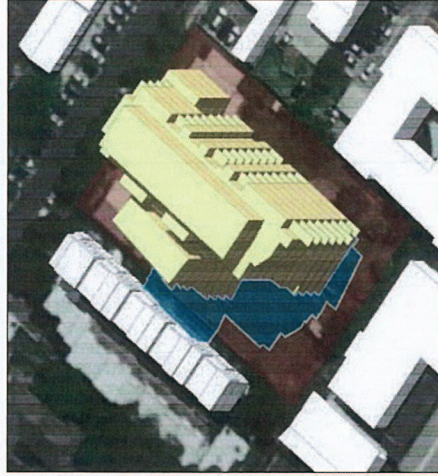
9am



10am



11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# EQUINOX 21<sup>ST</sup> MARCH: OPTION 4

## 8 SHADOW ANALYSIS



9am



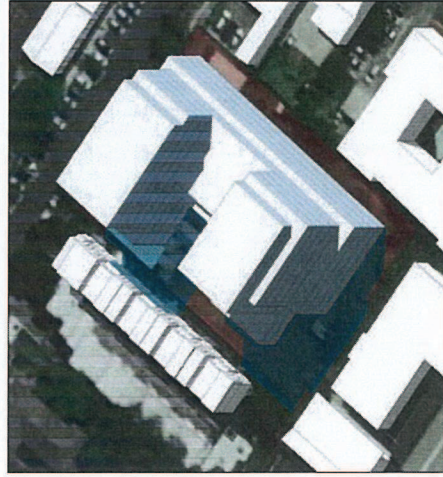
10am



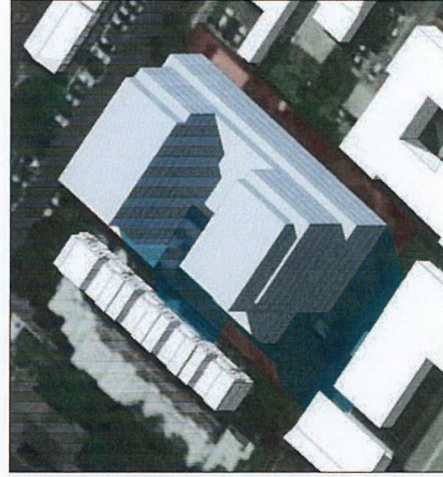
11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM







9am



10am



11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM







9am



10am



11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# EQUINOX 21<sup>ST</sup> MARCH: OPTION 3

## 8 SHADOW ANALYSIS



9am



10am



11am



12pm



1pm



2pm



3pm

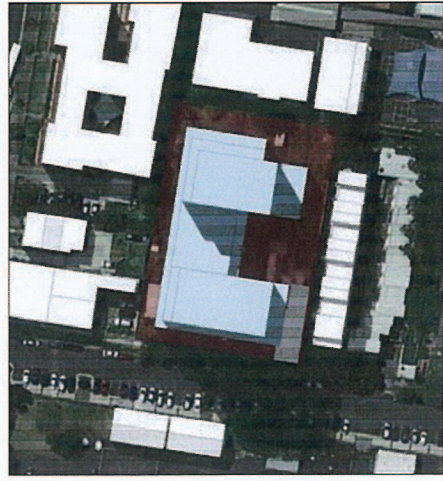
INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM





# 8 SHADOW ANALYSIS

EQUINOX 21<sup>ST</sup> MARCH: OPTION 4



9am



10am



11am



12pm



1pm



2pm



3pm

INDICATES ADDITIONAL  
SHADOW CAST BY  
PROPOSED BUILT FORM

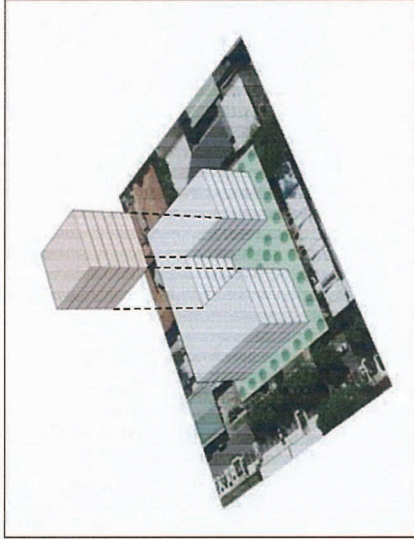




# 9 BUILT FORM EVOLUTION



1. 6 STOREY MASSING EXTRUDED WITH REFERENCE TO DCP SETBACKS.



2. MIDDLE MASSING REMOVED TO CREATE INTERNAL OPEN SPACE.



3. MASSING RELOCATED TO FORM CORNERS.



4. MASSING REMOVED TO DEFINE STREET LEVEL PODIUM.



5. FURTHER MASSING REMOVED PROVIDE GREATER SOLAR ACCESS TO NEIGHBOURING PROPERTIES.



6. PROPOSED MASSING DEFINED.



## PREFERRED FORM

### OPTION 4: AMENDED 9 STOREY OPTION PROPOSED BY ADG

#### OUTCOME

The study assessed 4 types of form and compared their overshadowing impacts. From the modelling it is clear to us that Option 4, the 9 storey scheme with the solar corridor through the centre, was the most successful at maintaining solar access to the neighbouring properties. Option 4 has a building height of 28m and an FSR of 2.5:1, while also exceeding the minimum of 30% landscape area.

Importantly, Option 4 results in greater solar access to the adjoining townhouses at 16-18 Merton St than Option 1, the 6 storey apartment building currently subject to DA assessment.

#### IMPACT ANALYSIS

The shadow analysis across the 4 schemes support Option 4 as the preferred outcome. Extensive shadow modelling indicates that Option 4 results in the least overshadowing of the townhouse development to the south. Only Option 4 results in all townhouses receiving direct solar access to their living area and ground floor private open space during mid-winter. This is a better outcome than Option 1, which is the compliant 6 storey scheme currently being assessed by council as a DA.

#### CONCLUSION

The shadow modelling indicates that a consolidated site scheme such as Option 4 results in superior urban design outcomes when compared to the other schemes, particularly Option 1.

In Option 4 the built form is pushed further away from the boundaries and shift on top of the building. This results in:

- Greater building setbacks to southern boundary and south-east corner.
- Less overshadowing of adjoining properties
- Increased landscape area at ground level with 45% landscape area
- Increased deep soil zones to boundaries

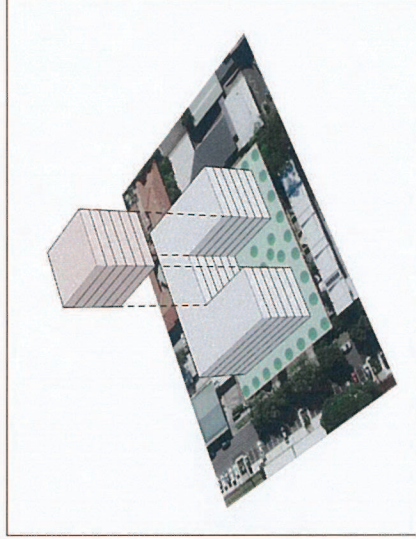


# PREFERRED FORM BUILT FORM EVOLUTION

## 9 PREFERRED FORM



1. 6 STOREY MASSING EXTRUDED WITH REFERENCE TO DCP SETBACKS.



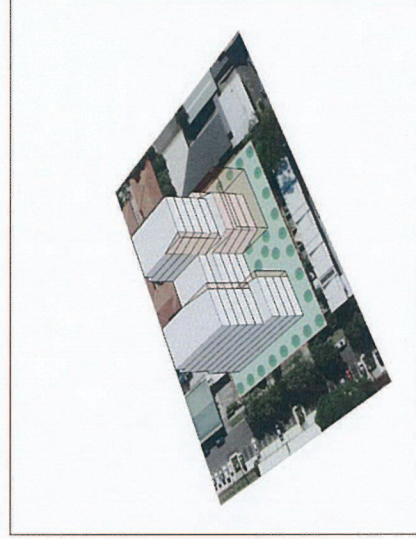
2. MIDDLE MASSING REMOVED TO CREATE INTERNAL OPEN SPACE.



3. MASSING RELOCATED TO DEFINE CORNERS. SOLAR CORRIDOR TO MIDDLE OF BUILDING ENABLES SOLAR ACCESS TO ADJACENT TOWNHOUSES.



4. MASSING REMOVED TO DEFINE PODIUM.



5. FURTHER MASSING REMOVED TO PROVIDE GREATER SOLAR ACCESS TO NEIGHBOURING PROPERTIES.

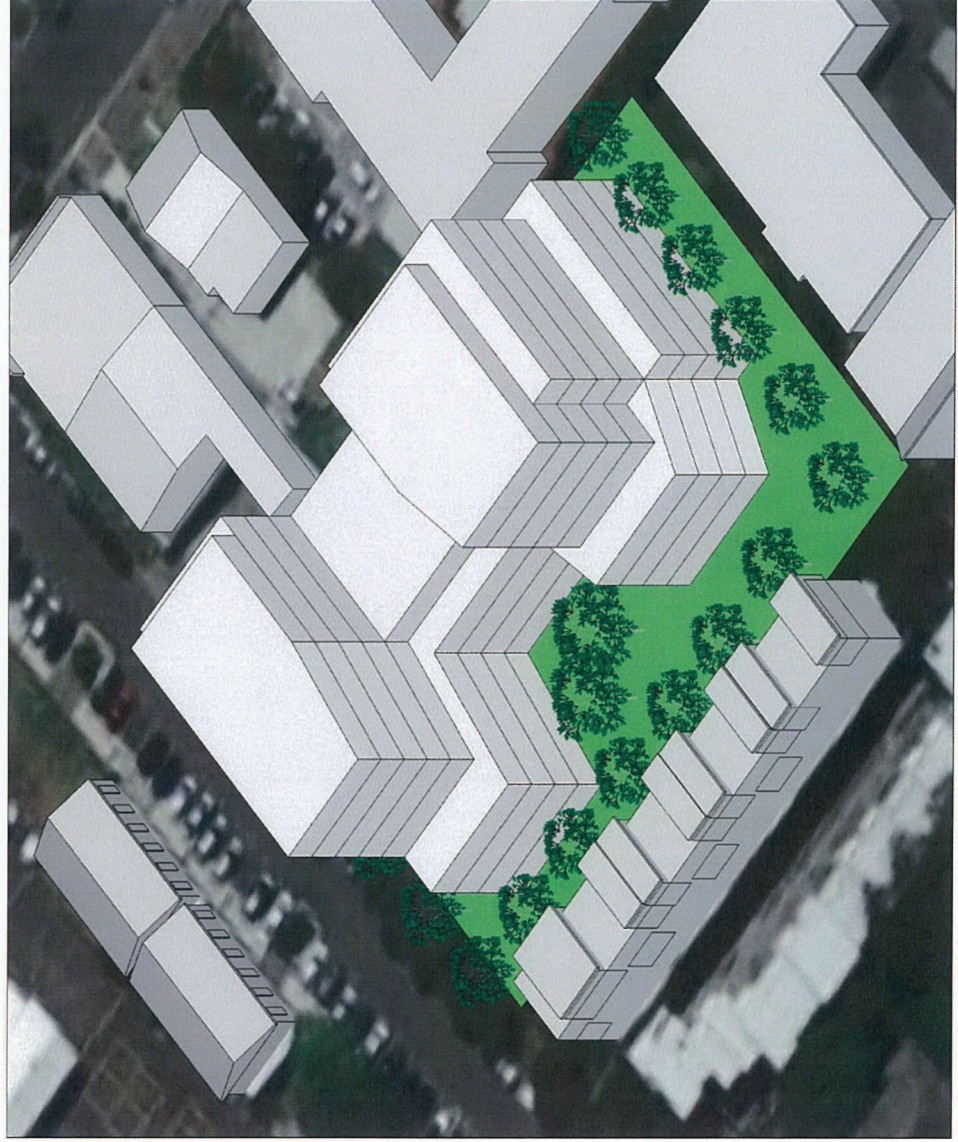


6. PROPOSED MASSING DEFINED.



## PREFERRED FORM OPEN SPACE

Option 4 exceeds the minimum 30% landscape requirement with 45% of the site provided as landscape area at ground level. As a result the scheme provides generous open spaces defined by the large central courtyard with deep soil zones for significant tree planting.





## CONTEXTUAL PRECEDENTS



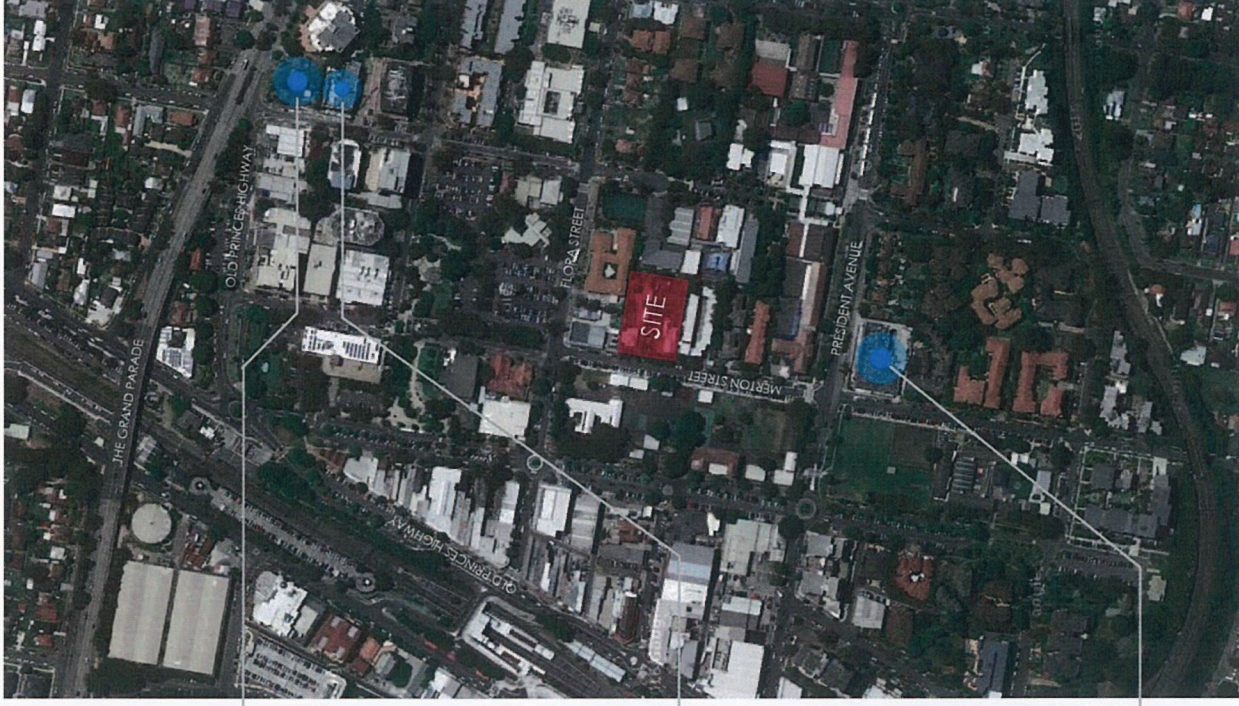
Loft Apartments - 680 - 684 Old Princes Highway, Sutherland



St George Community Housing - 22 - 26 Belmont Street, Sutherland



Rosa Bullara Apartments - 558 - 566 President Avenue, Sutherland



## 5 CONTEXTUAL ANALYSIS



