

# Novus Build to Rent 39-43 Hassall Street, Parramatta

---

City of Parramatta Council  
Presentation to Independent Planning Commission

31 January 2024



# Acknowledgement of Country

We respectfully acknowledge the traditional owners and custodians of the land and waters of parramatta, the Dharug peoples.

Nunanglanungdyu baramada gulbanga  
mawa naa baramadagal dharug ngurrawa  
badura baramada dharug yura



# Flood & Catchment Engineering



Aim (1)(g) of Parramatta LEP is:

**(g) to minimise risk to the community in areas subject to environmental hazards, particularly flooding and bushfire, by restricting development in sensitive areas,**

The site is severely impacted by both mainstream and overland flow flooding.

- The site is located along the northern edge of Clay Cliff Creek. This is partly contained in a concrete channel (1 in 5 year) but mostly traverses the site from West to East as mainstream above bank flow.
- As well there is a substantial watercourse / overland flow floodway across the site from the North West to Clay Cliff Creek.
- The proposed building would obstruct both of these floodways.
- Floodwaters will pass the building on all sides at high velocities and depths.
- High and very high hazard conditions are predicted surrounding the development.

# Initial Council Flood Risk Assessment

Council's adopted 2005 Flood Study identified substantial high hazard conditions but did not account for the overland flow path across the site from the North-West, nor the consequences of Climate Change. So it underestimated flood impacts.

Based on limited understanding of flood behaviour at the time, Council's initial flood risk assessments focussed on improving the conveyance from west to east alongside Clay Cliff Creek by removing obstructions and setting the ground level building back. This was related to treatment of neighbouring sites up to 20 years ago. The proponent has not accepted nor implemented this.

There were also other requirements including:

- to set habitable floor levels at or above the Flood Planning Level (not contentious)
- to provide adequate shelter in place. (Seen as a potential problem area)

Since the beginning, Council has raised concerns about the suitability of this development on this site because of flood safety risk to occupants and floodway obstruction.

# Recent Flood Risk Changes

Assessment of flood risk has changed as a result of new legislation and flood modelling.

## **Flood Risk Management Manual**

A new NSW State Flood Risk Policy and Flood Risk Management Manual have been gazetted together with guidelines.

- Under the Local Government Act s733 Councils and determining authorities are exempt from liability if they follow these Policies, Manual and Guidelines.

## **Council Flood Study**

Council has been preparing a Flood Study over about five years which is now accessible – but not yet adopted. This incorporates both mainstream flow and overland flow together and will update the previous adopted 2005 study. This study together with the 2005 study now guide Council's assessments.

## **Incorporation of Climate Change in Flood Modelling and Risk Assessments**

Until recently the effects of Climate change were not adequately addressed in flood risk assessments. There are now standards for both increased rainfall intensity and rising sea (harbour) water levels. Both have very significant effects on predicted flood levels, extent and behaviour.

# Key Flood Risk Assessments

There are three main Flood Risk criteria that concern Council for this development:







1. Placing large numbers of people in a high risk environment, surrounded by high and very high hazard floodwaters, where safe evacuation during floods and emergency services access to the site are not possible.
2. The proposed building as an obstruction to the main Clay Cliff Creek and tributary flood ways.
  - Clay Cliff Creek is a very substantial floodway and blocking it with this proposed building is likely to cause harmful impacts on neighbouring properties and make flooding worse upstream and downstream.
3. In extreme storms, flood hazard conditions are such that the structure is at risk of failure, with catastrophic risk to life.

# People at Risk of harm

Significant high hazard flooding would surround the proposed building in 1% and PMF floods.



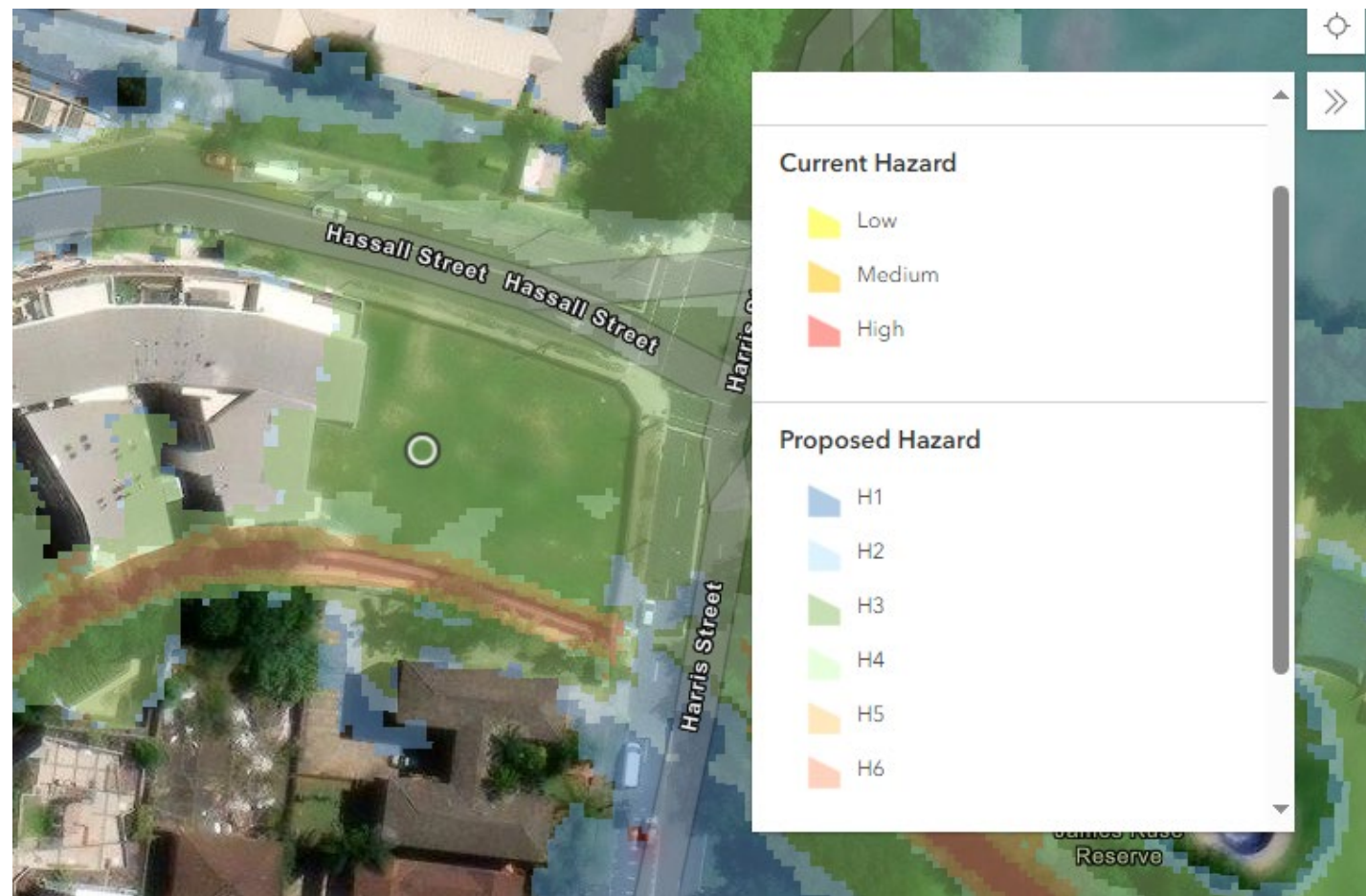
## 1% AEP Vulnerability Classification

-  H1 - Relatively benign flow conditions. No vulnerability constraints
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for all vehicles, children and the elderly
-  H4 - Unsafe for all people and all vehicles
-  H5 - Unsafe for all people and all vehicles. Buildings require special engineering design and construction
-  H6 - Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure

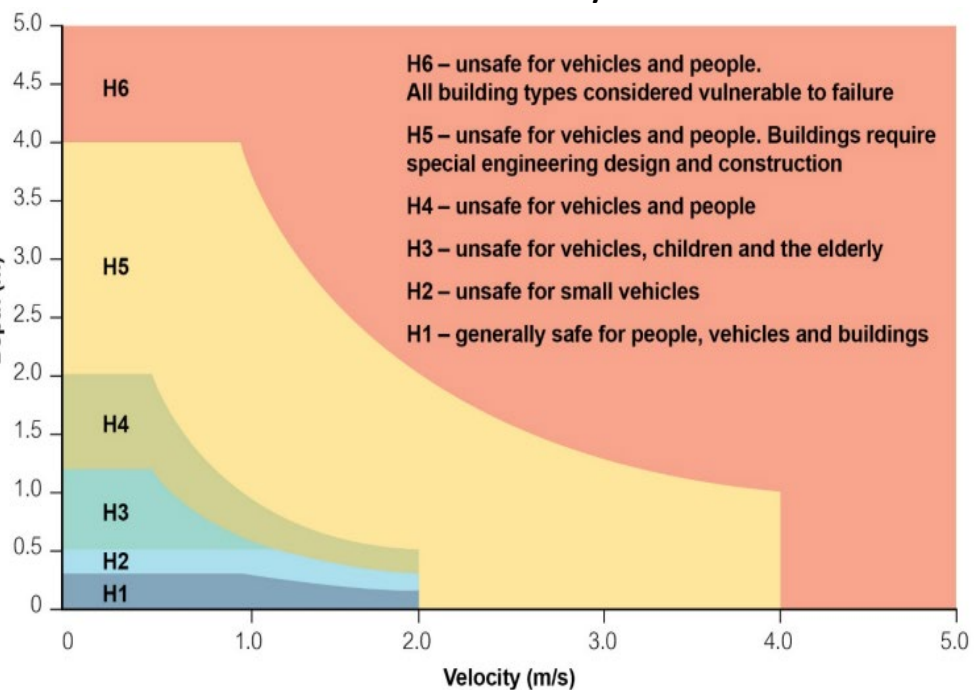


# 1% AEP Flood Hazard H3-H4

According to the Council's Draft Flood Study the entire site is flooded with H3 to H4 flood hazards. This information has been available on Councils website. In the Applicant's proposal the 1% AEP flood hazard has been shown only H1 to H2.



1% AEP flood Hazard (Source: Council draft flood study 2023)



General flood hazard vulnerability curve (Source: AIDR 2017)

# People at Risk of harm

Significant high hazard flooding would surround the proposed building in 1% and PMF floods.

There is no land connection above the 1% AEP flood level.

Evacuation is not possible or safe under these conditions even for able bodied people.

Access by Emergency Services to occupants is also not possible or safe under these conditions.

The development wholly relies on Shelter in Place which is problematic as advised by SES.

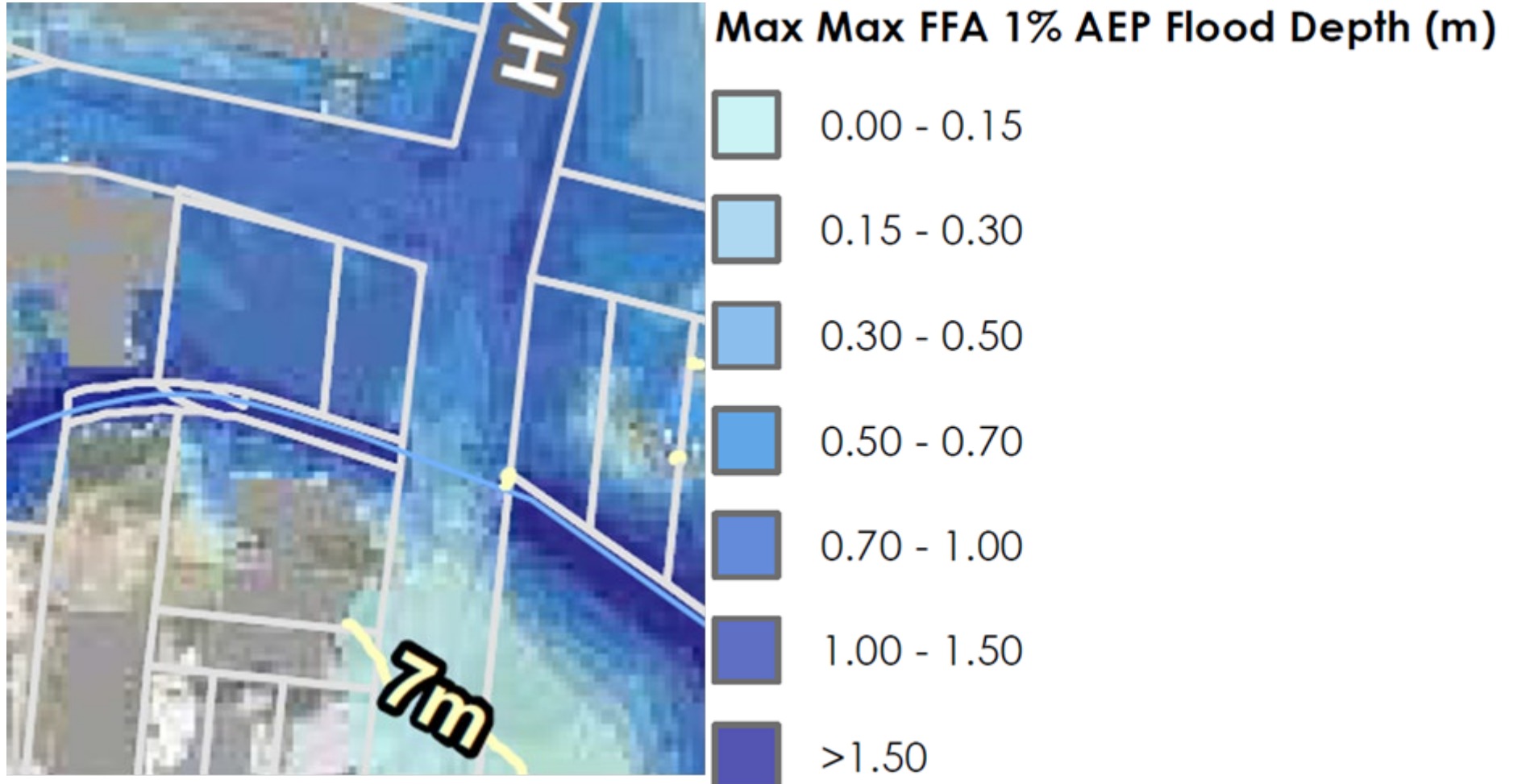
Many occupants will try to escape the building in unsafe conditions from floodwaters and severe storms.

It is unlikely that a safe refuge can be provided in perpetuity suitable for a significant number of occupants when all services such as power, sewerage, drinking water will likely be unavailable.

The high velocity floodwaters surrounding the building will also be contaminated and toxic.

# Conveyance and Obstructing the Floodway

All of the site would be flooded in a 1% AEP to significant depths.  
Building on the site would obstruct and displace the floodway onto other land.



# Conveyance and Obstructing the Floodway

The NSW Flood Risk Management Manual 2023 Principle 8 states:

***Maintain natural flood functions:***

*Understanding the natural flow conveyance and storage function of the floodplain is important for effective flood risk management.*

*Maintaining the conveyance of floodway areas and the capacity of storage areas can limit the impacts of change to the floodplain and associated flood risk to the existing community.*







*In local overland flooding, maintaining flowpaths is important to enable water to flow from the catchment into waterways. If flowpaths are partially or fully blocked by development or fill, alternative flowpaths may form, with potentially detrimental impacts to the community. In addition, identifying and maintaining local flowpaths is an important aspect of managing local overland flooding.*

**However, the project is an obstruction to the overland flow path and the mainstream flow that contradicts the NSW Flood Risk Management Manual principle.**



# Risk of structural failure

The PMF Hazard conditions are extreme, with H5 on site and H6 surrounding it

-  H1 - Relatively benign flow conditions. No vulnerability constraints
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for all vehicles, children and the elderly
-  H4 - Unsafe for all people and all vehicles
-  H5 - Unsafe for all people and all vehicles. Buildings require special engineering design and construction
-  H6 - Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure



Probable Maximum Flood (PMF) Hazard (Source: Council draft flood study 2023)

# Risk of structural failure - 2

In a range of floods up to the PMF it is likely that the building will be subject to structural failure because of the H5 and H6 hazard conditions.

This also means Shelter in Place within the building is not viable.

Clause 7.11 of the LEP under Floodplain Risk Management states:

- (3) Development consent must not be granted to the erection of a building on the land unless the consent authority is satisfied the building—
  - (c) is able to withstand the forces of floodwaters, debris and buoyancy resulting from a probable maximum **flood** event.

# Application of Parramatta LEP

Under LEP Clause 5.21 *Flood Planning* the following (relevant) stipulations are made:

(1) The objectives of this clause are as follows—

(a) to minimise the **flood** risk to life and property associated with the use of land,

With the information now available this objective is not met.

(b) to allow development on land that is compatible with the **flood** function and behaviour on the land, taking into account projected changes as a result of climate change,

With the information now available this objective is not met.

(c) to avoid adverse or cumulative impacts on **flood** behaviour and the environment,

With the information now available this objective is not met.

(d) to enable the safe occupation and efficient evacuation of people in the event of a **flood**.

With the information now available this objective is not met.

# Application of Parramatta LEP - 2

Under LEP Clause 5.21 *Flood Planning* the following (relevant) stipulations are made:

(2) Development consent must not be granted to development on land the consent authority considers to be within the **flood** planning area unless the consent authority is satisfied the development—

(a) is compatible with the **flood** function and behaviour on the land,

With the information now available this objective is not met.

(b) will not adversely affect **flood** behaviour in a way that results in detrimental increases in the potential **flood** affectation of other development or properties,

With the information now available this objective is not met.

(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a **flood**,

With the information now available this objective is not met.

(d) incorporates appropriate measures to manage risk to life in the event of a **flood**,

With the information now available this objective is not met.



# Application of Parramatta LEP - 3

Under LEP Clause 5.21 *Flood Planning* the following (relevant) stipulations are made:

(3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters—

(a) the impact of the development on projected changes to **flood** behaviour as a result of climate change,

Climate Change is incorporated in the new Council Draft Flood Study but this does not show the impact of the development itself on flood behaviour which will be adverse.

(b) the intended design and scale of buildings resulting from the development,

The intended design and scale of the development does not (and cannot) respond to the flood risk environment.

(c) whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a **flood**,

As noted the development can only provide shelter in place and safe evacuation is not possible.

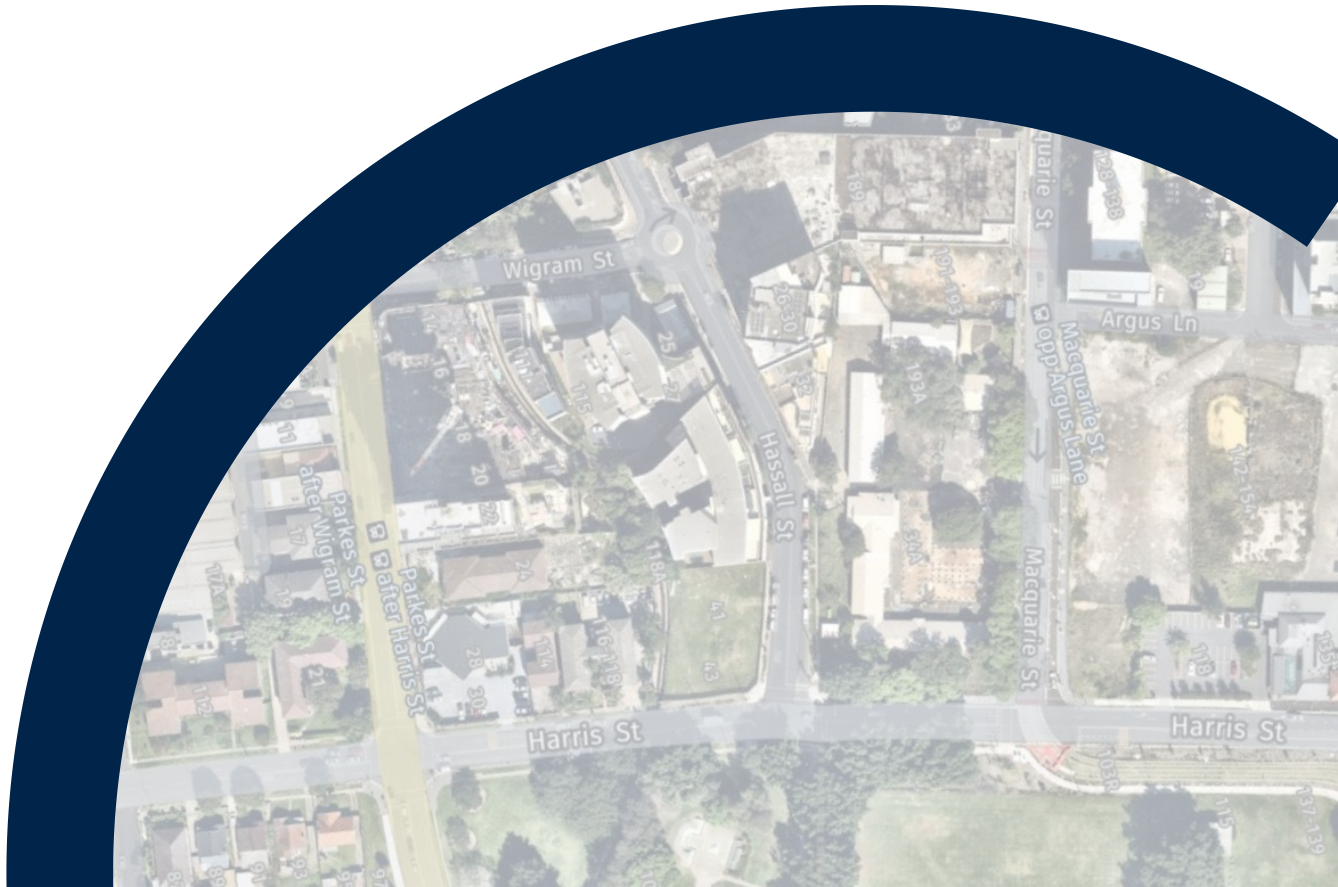
(d) the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.

- The entire site and surroundings are high flood hazard, making evacuation and emergency access dangerous or impossible. The development therefore relies on only Shelter In Place. It cannot be assumed that this is acceptable to SES and other relevant agencies.
- The proposal does not (and cannot) architecturally respond to the flood constraints of the site and would obstruct the overland and mainstream flow paths and have other negative consequences putting occupants and others at risk.
- The structure would be at risk of catastrophic failure in severe floods.

# Design Excellence and Built Form



# INTRODUCTION





# SITE LOCATION & CONTEXT



Context

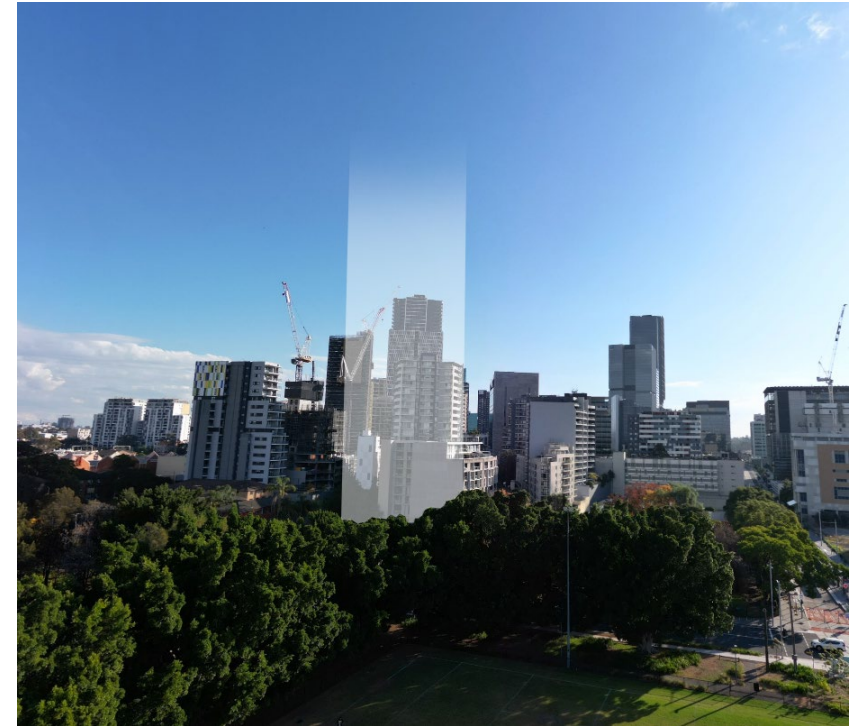


- Located at the Eastern edge of the Parramatta CBD, opposite James Ruse Reserve.
- Highly prominent visual location as seen from Parkes/Hassall and Harris/Macarthur Streets, public open spaces and Parramatta River, and from distant views.

- Part of a group of approved and pending podium and tower developments along Harris Street, framing the city.
- Mixed use zoning, with an active streetscape requirement.



Zoomed in satellite view of Harris Street, Parramatta



Perspective looking towards Parramatta CBD

# PARRAMATTA CITY CENTRE DCP OVERVIEW

## CITY PLANNING PRINCIPLES

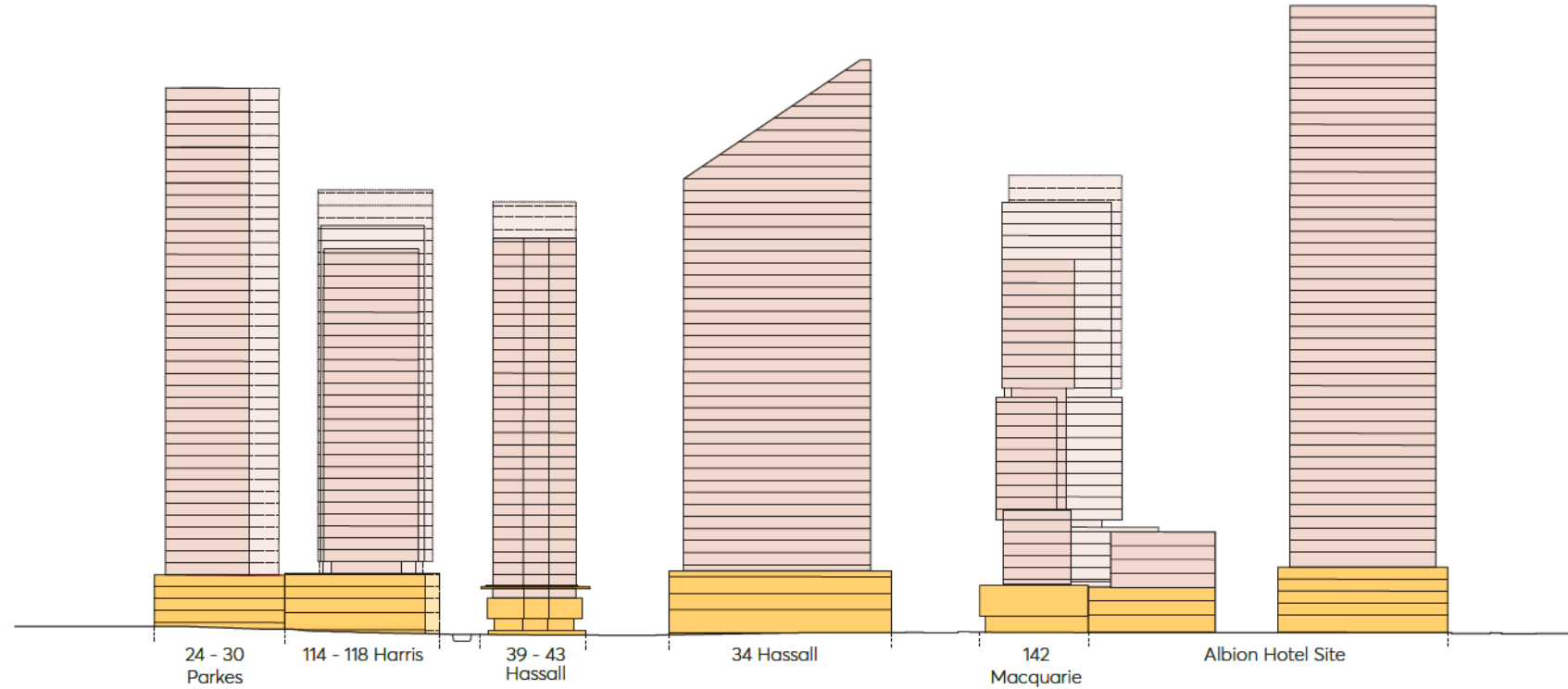
"The clarity and quality of public spaces is essential to this conception of a *City Centre focused on people*. The public spaces – streets, squares and parks – are the basic and enduring structuring spaces of a city, of which streets are the most prevalent.

*The interaction of buildings and public spaces* is critical in shaping the activities of the City Centre, *which occur most intensely at the lower levels*, where detail design plays an important part in the creation of an engaging pedestrian environment."

"the envisaged city form is broadly made up of two components: *a lower stratum of defined streets and public spaces, and an upper one of tall, slender towers*.

*The street wall*, aligned with and attached to adjacent street walls, is the *collective architectural component that defines the street* and forms its character.

*The towers*, set back from the street wall and free standing, generate a different type of city form of *detached towers above the streets*.



### Harris Street Wall Study

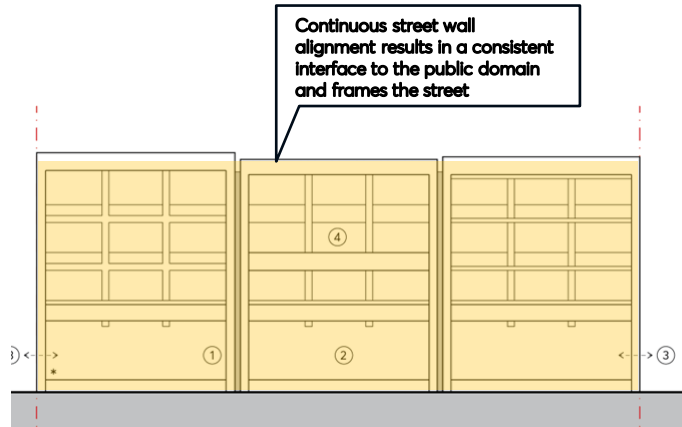
Current Street Elevation

- Definable Podium Footprint
- General Tower Footprint
- Ground Level Footprint

# PARRAMATTA CITY CENTRE DCP OVERVIEW

## THE STREET WALL

Establish a pattern of contextually-scaled 4-6 storey street wall podiums with active street frontages.

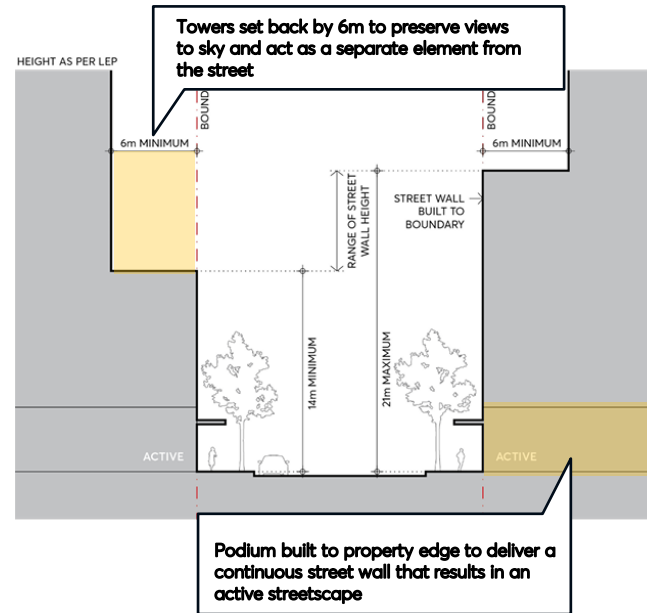


*"street walls are designed at appropriate heights to create spatially defined streets that are well proportioned, humanly scaled and finely grained, with facades of tactile material quality."*

*"Together with the attached adjacent street walls, all built to the street alignment, it defines and articulates the street with appropriate scale and detail."*

## PODIUM AND TOWER SETBACK

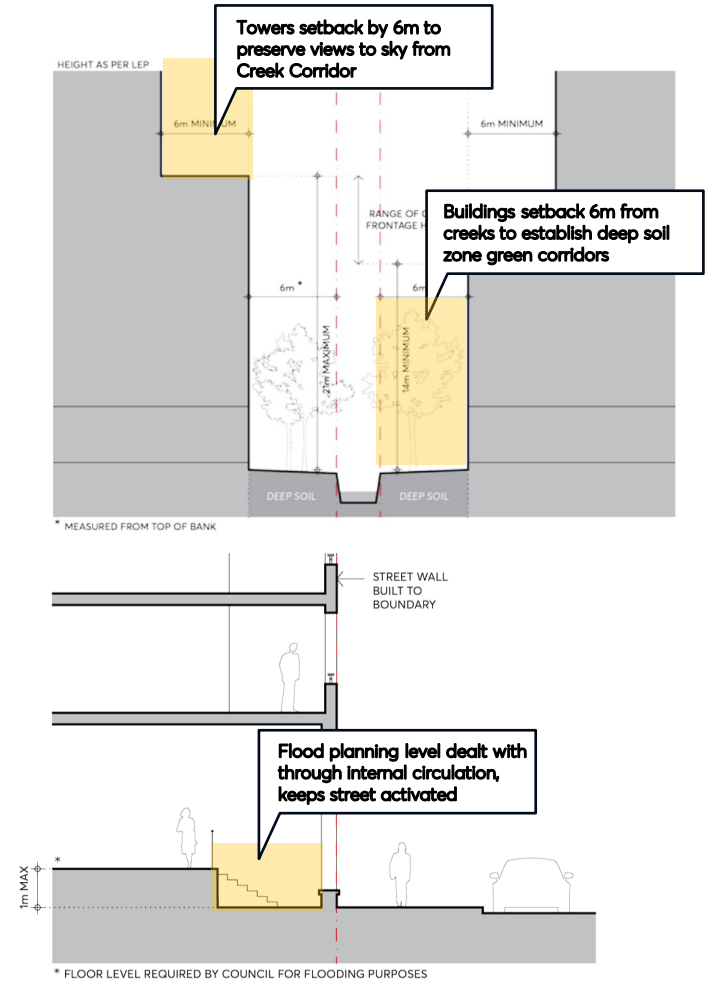
Visually separate towers from podiums through adequate upper-level setbacks.



*"Towers are set back above street walls to reinforce the scale of the streets, mitigate wind and urban heat impacts, enable views to the sky and protect amenity in streets and public places."*

## CREEK CORRIDORS

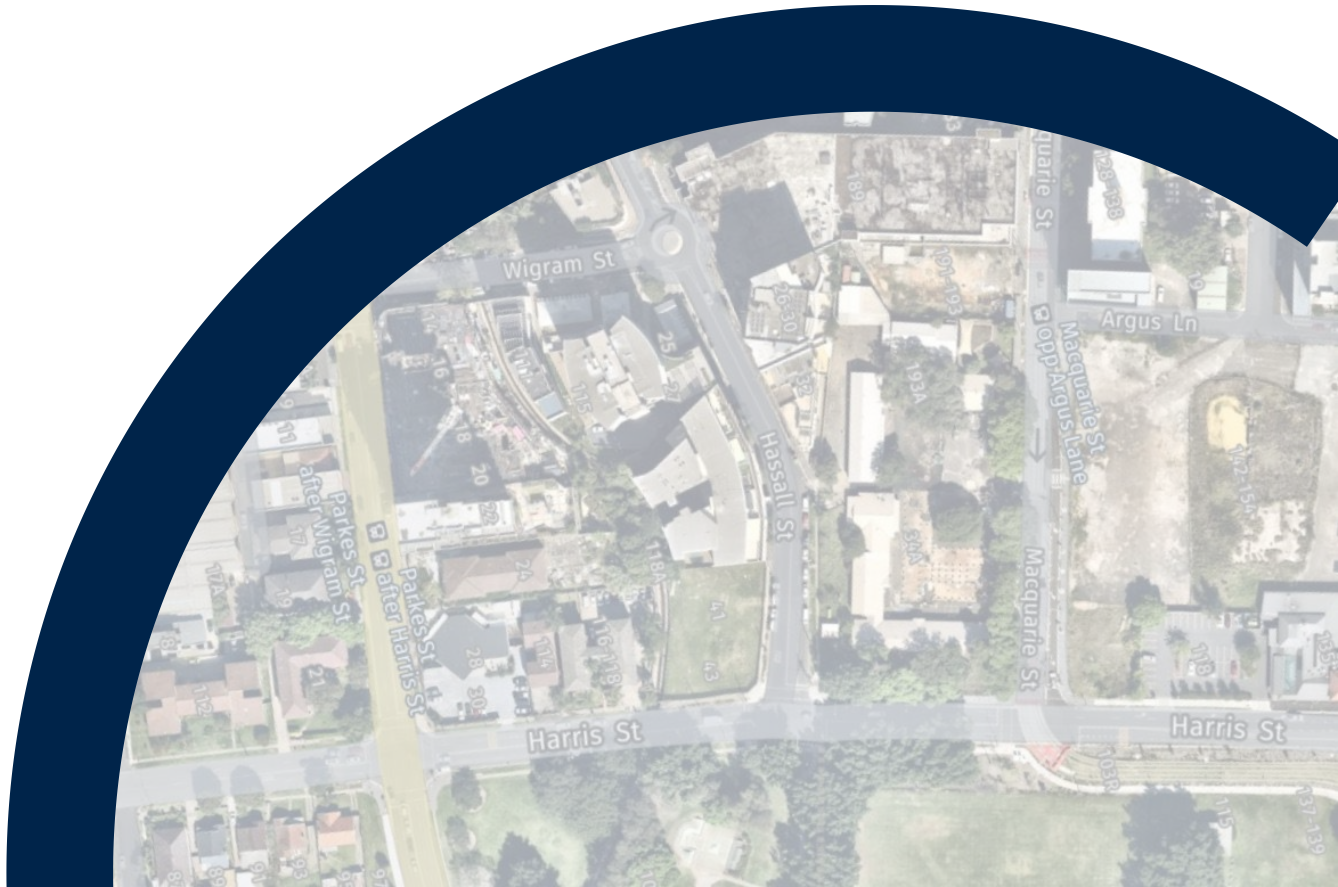
Establish Clay Cliff Creek as a deep soil green corridor with WSUD, views to sky and daylight.





# APPLICANT'S DESIGN

DESIGN EVALUATION





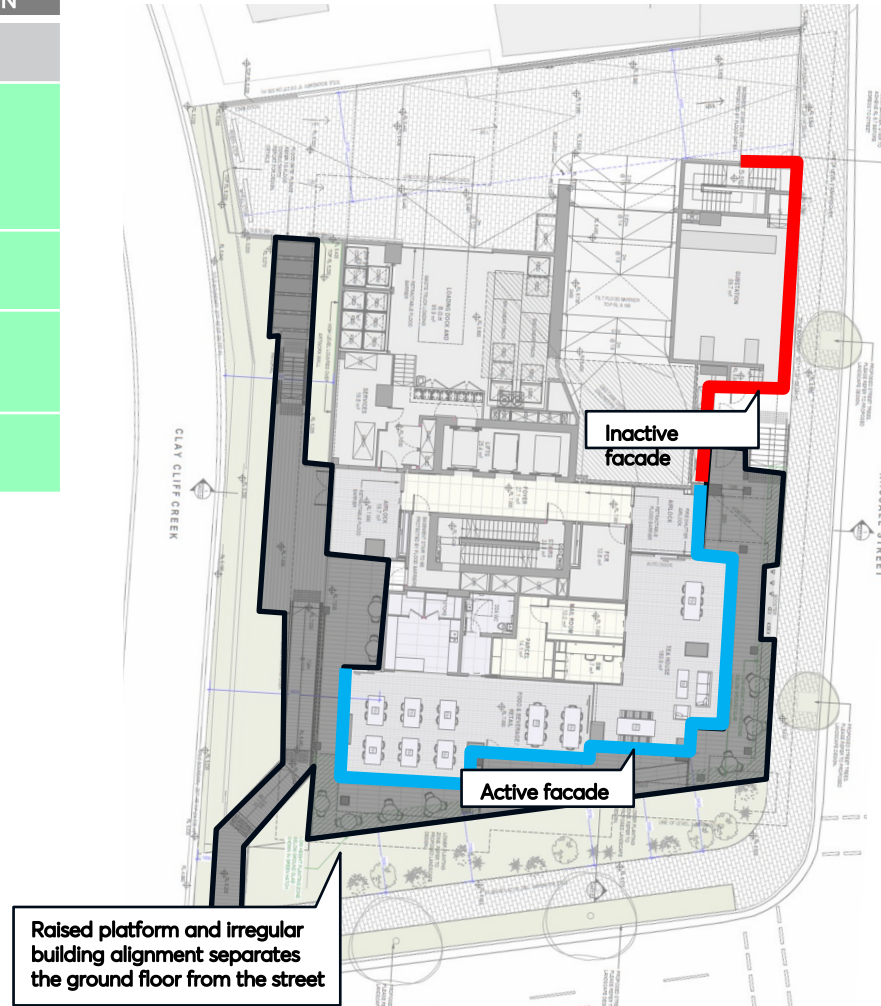
# STREET ACTIVATION

## INCONSISTENT STREET WALL

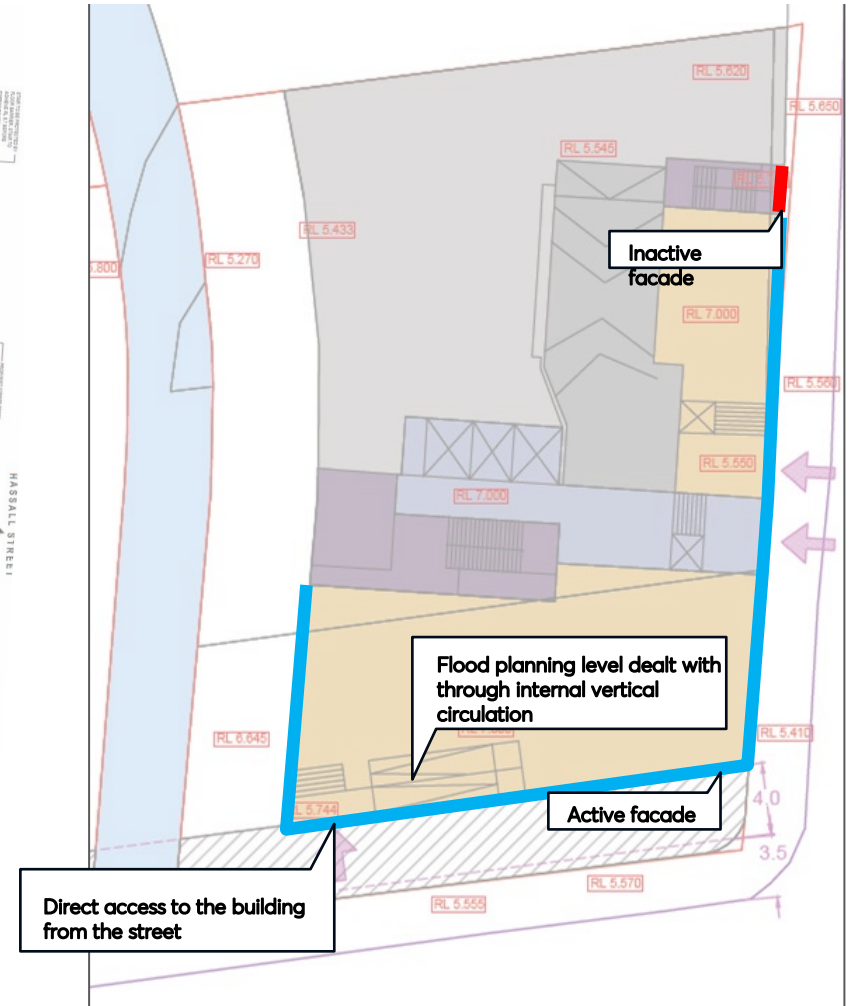
DESIGN PRINCIPLES		DESIGN EVALUATION
Establish a pattern of contextually-scaled 4-6 storey street wall podiums with active street frontages.		
P.01	In streets with active ground floor frontages, the development model for the city is for the lower 4-6 storeys to collectively define and articulate the spaces of the public domain, with towers set back as clearly distinct free-standing buildings	
O.04	Recognise the variation in street frontage heights throughout the city and allow flexibility to respond to context.	
C.01 b	The street wall must be built to the street boundary a minimum of 14 metres and a maximum of 21 metres above the footpath level.	
C.01 c	The tower above the street wall must be set back a minimum of 6 metres from the street boundary wall.	

Not supported
  Supported

APPLICANT'S GROUND FLOOR PLAN



COUNCIL PREFERRED GROUND FLOOR PLAN



All flood levels are indicative only. Final design should reflect Council's flooding advice.

# STREET ACTIVATION

## INCONSISTENT STREET WALL

DESIGN PRINCIPLES		DESIGN EVALUATION
<b>Establish a pattern of contextually-scaled 4-6 storey street wall podiums with active street frontages.</b>		
P.01	In streets with active ground floor frontages, the development model for the city is for the lower 4-6 storeys to collectively define and articulate the spaces of the public domain, with towers set back as clearly distinct free-standing buildings	
O.04	Recognise the variation in street frontage heights throughout the city and allow flexibility to respond to context.	
C.01 b	The street wall must be built to the street boundary a minimum of 14 metres and a maximum of 21 metres above the footpath level.	
C.01 c	The tower above the street wall must be set back a minimum of 6 metres from the street boundary wall.	

Not supported  Supported

PODIUM FLOORPLATES OVERLAYED ON EACH OTHER IN PLAN AND ISOMETRIC VIEW, RESULTING IN AN INCONSISTENT STREET WALL



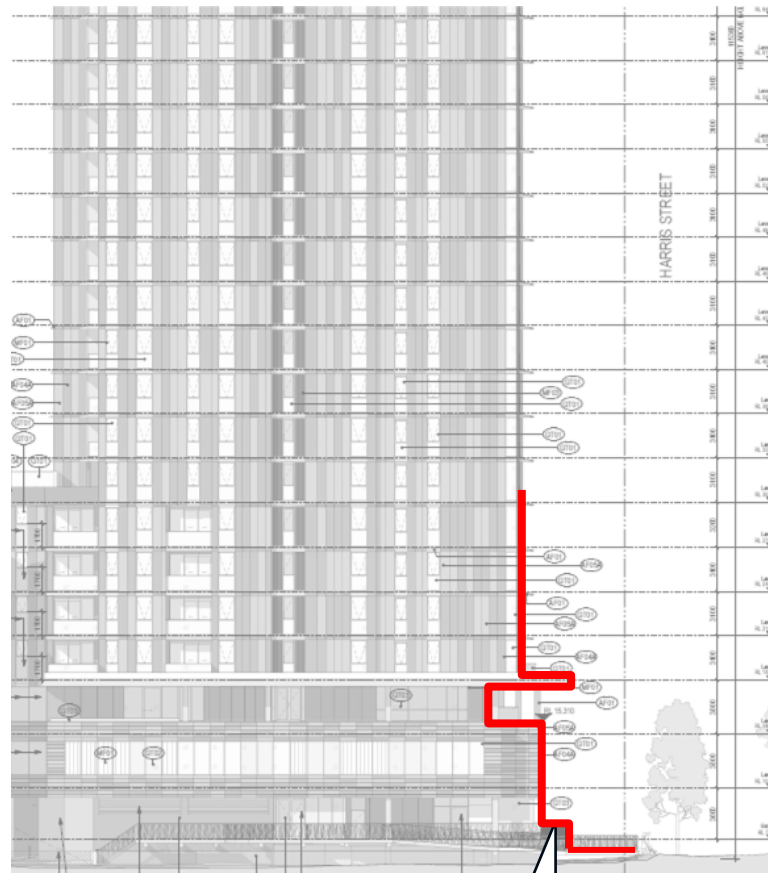
# STREET ACTIVATION

## INCONSISTENT STREET WALL

DESIGN PRINCIPLES		DESIGN EVALUATION
<b>Establish a pattern of contextually-scaled 4-6 storey street wall podiums with active street frontages.</b>		
P.01	In streets with active ground floor frontages, the development model for the city is for the lower 4-6 storeys to collectively define and articulate the spaces of the public domain, with towers set back as clearly distinct free-standing buildings	
O.04	Recognise the variation in street frontage heights throughout the city and allow flexibility to respond to context.	
C.01 b	The street wall must be built to the street boundary a minimum of 14 metres and a maximum of 21 metres above the footpath level.	
C.01 c	The tower above the street wall must be set back a minimum of 6 metres from the street boundary wall.	

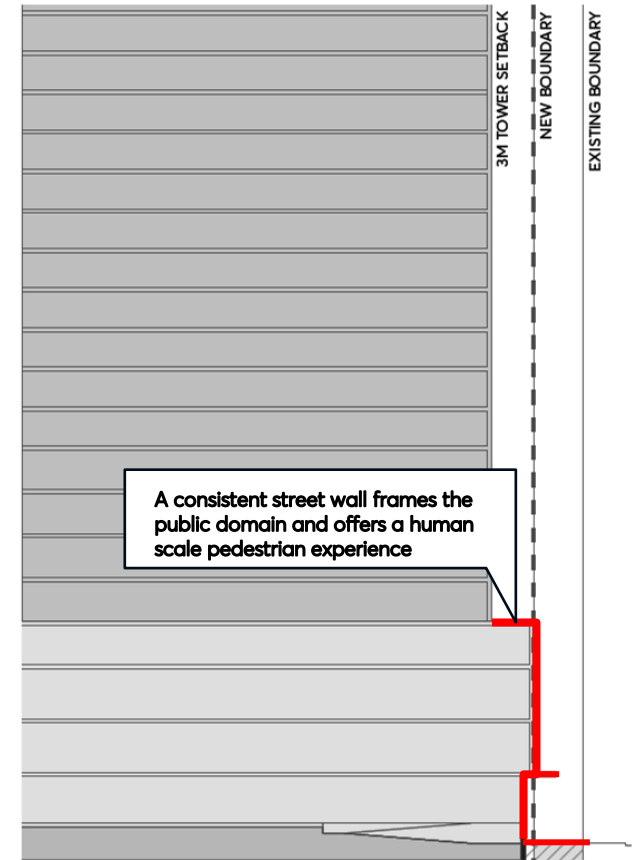
Not supported     Supported

STREET WALL OF THE PROPOSED DESIGN



**Inconsistent street wall takes away from a unified street level pedestrian experience**

COUNCIL PREFERRED STREET WALL



**A consistent street wall frames the public domain and offers a human scale pedestrian experience**

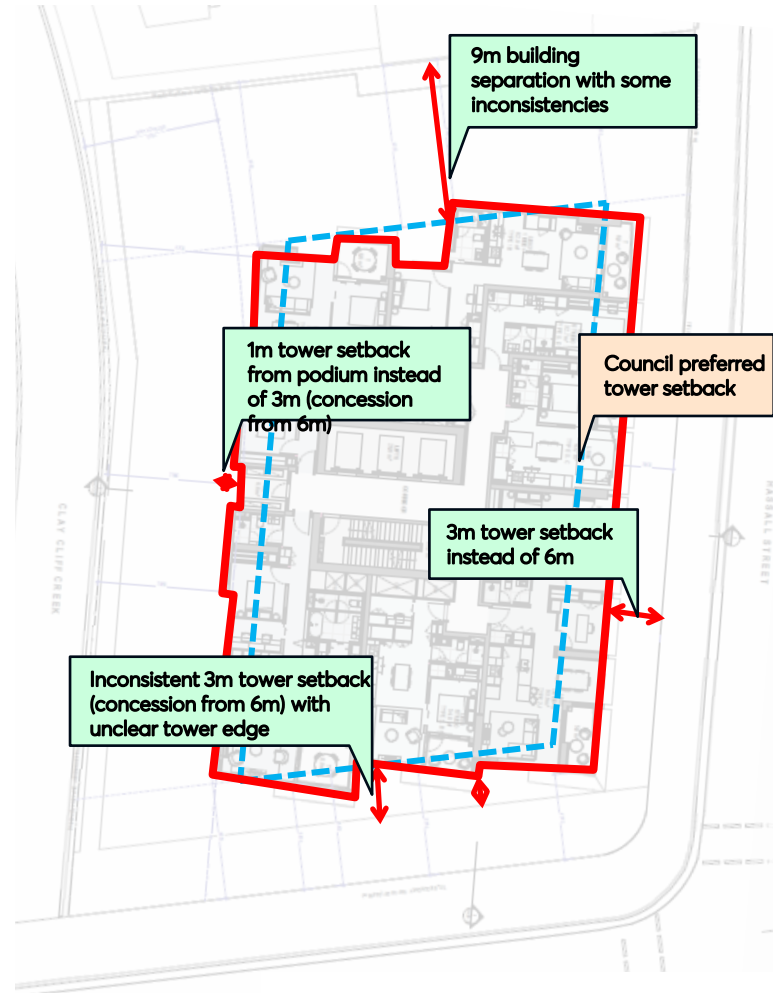
# PODIUM AND TOWER VISUAL SEPARATION

## UNCLEAR TOWER SETBACKS

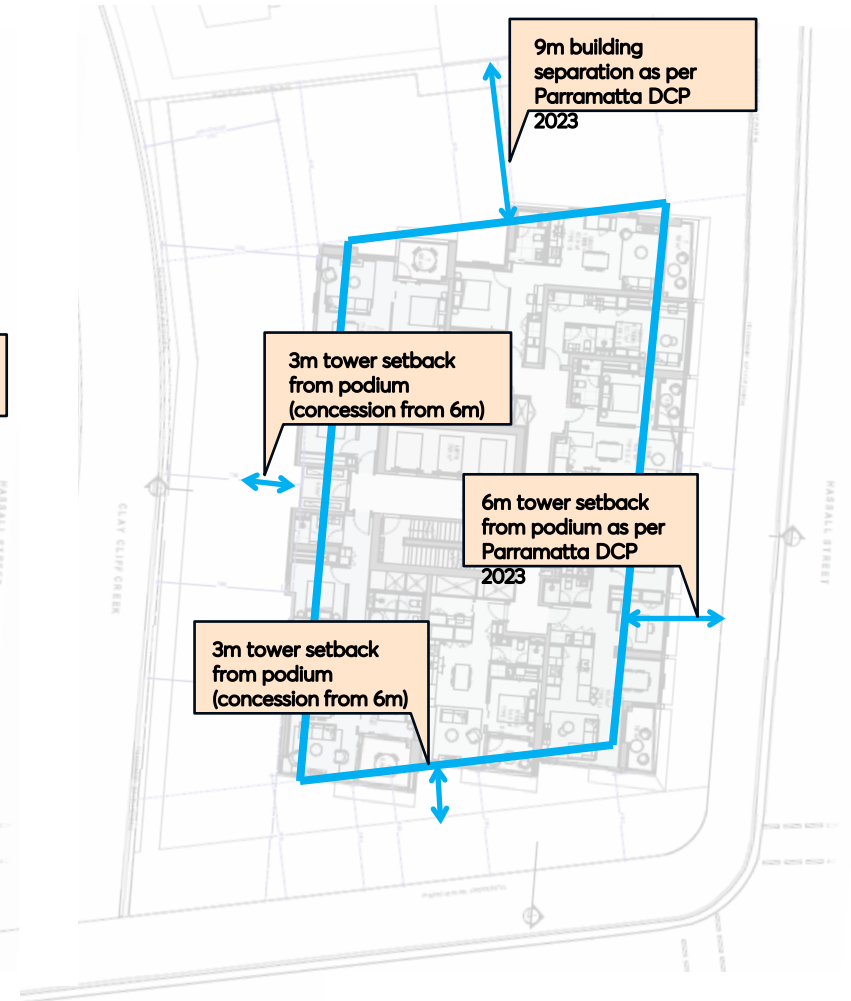
DESIGN PRINCIPLES		DESIGN EVALUATION
Visually separate towers from podiums through adequate upper-level setbacks.		
C.01 c	The tower above the street wall must be set back a minimum of 6 metres from the street boundary wall.	
C.03	Development must provide a minimum 6 metre tower setback to support views to sky from a creek corridor and natural daylighting to deep soil and vegetation.	
P.03	Towers are set back above street walls to reinforce the scale of the streets, mitigate wind and urban heat impacts, enable views to the sky and protect amenity in streets and public places.	

Not supported
  Supported

TOWER SETBACKS IN THE PROPOSED DESIGN SCHEME



COUNCIL PREFERRED TOWER SETBACKS





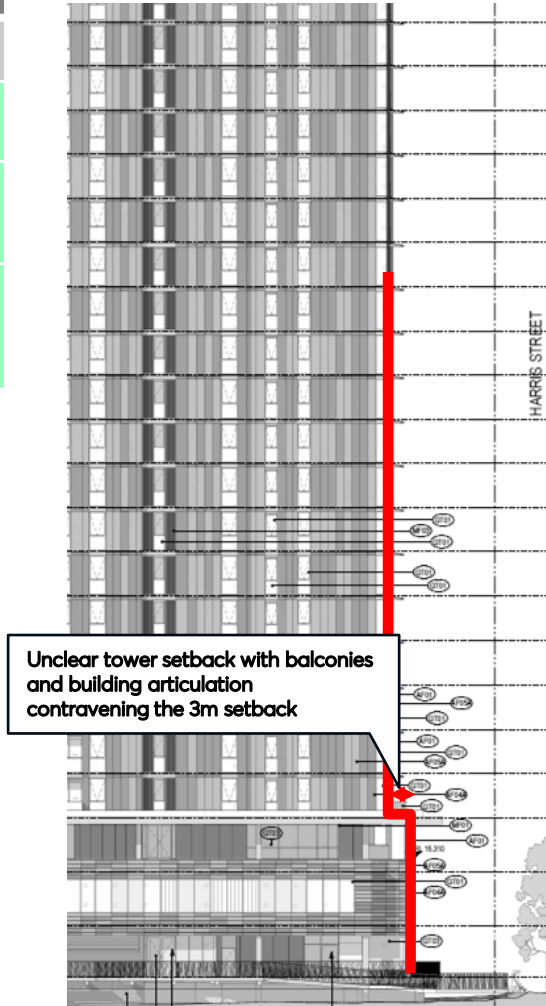
# PODIUM AND TOWER VISUAL SEPARATION

## UNCLEAR TOWER SETBACKS

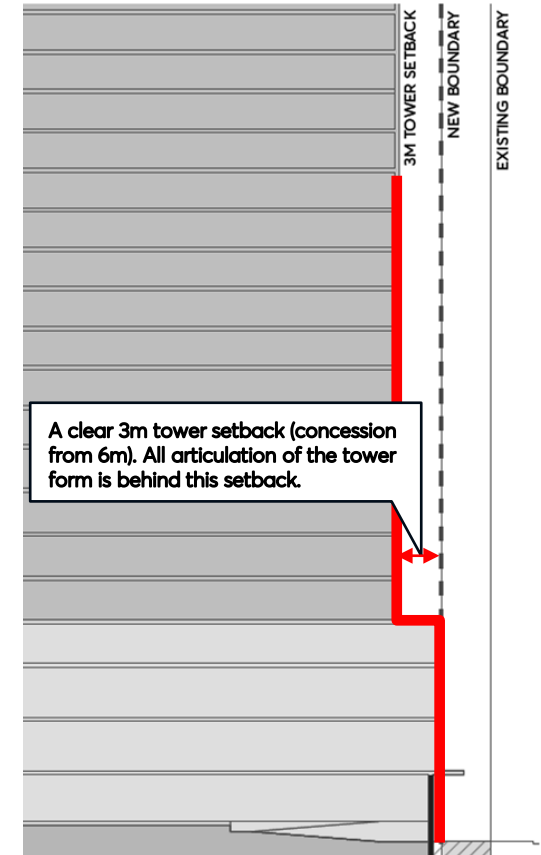
DESIGN PRINCIPLES		DESIGN EVALUATION
Visually separate towers from podiums through adequate upper-level setbacks.		
C.01 c	The tower above the street wall must be set back a minimum of 6 metres from the street boundary wall.	
C.03	Development must provide a minimum 6 metre tower setback to support views to sky from a creek corridor and natural daylighting to deep soil and vegetation.	
P.03	Towers are set back above street walls to reinforce the scale of the streets, mitigate wind and urban heat impacts, enable views to the sky and protect amenity in streets and public places.	

Not supported
  Supported

STREET WALL OF THE PROPOSED DESIGN



COUNCIL PREFERRED STREET WALL



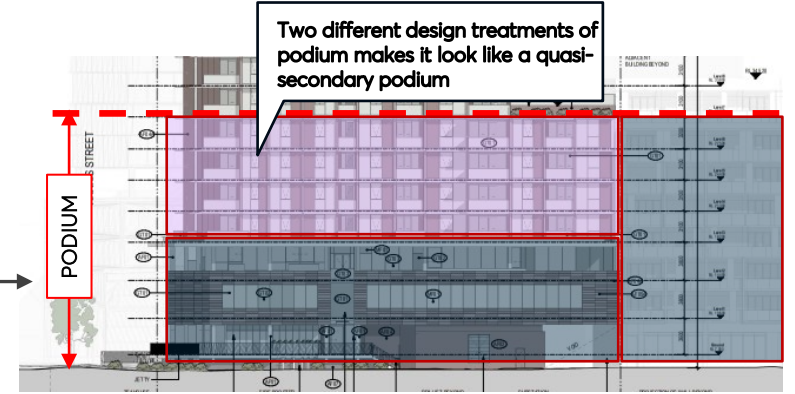
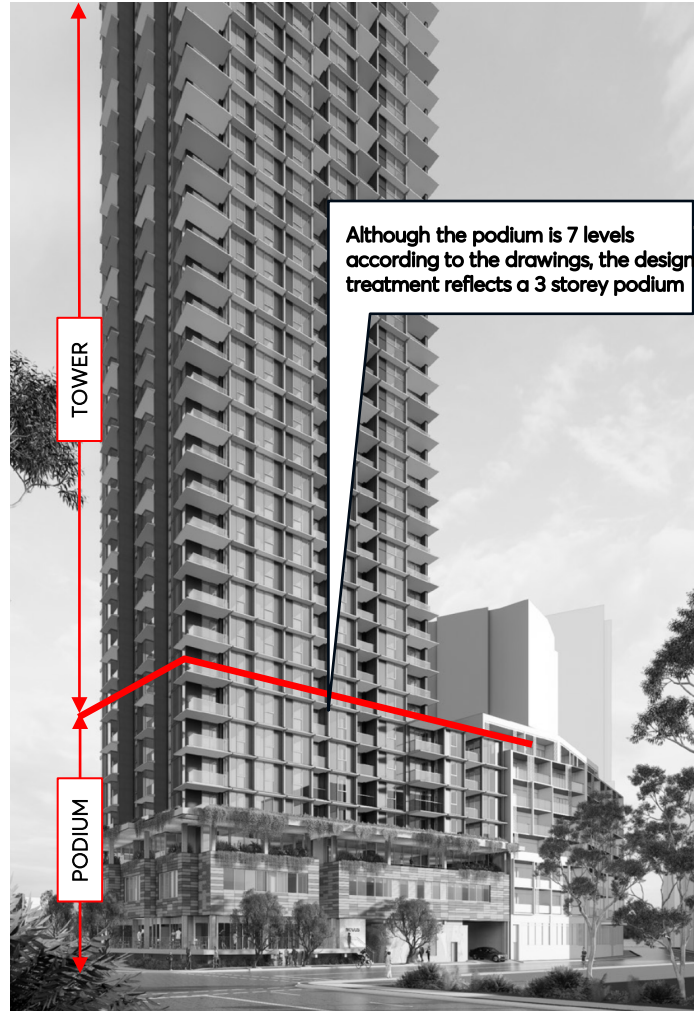
# PODIUM AND TOWER VISUAL SEPARATION

## DESIGN LANGUAGE

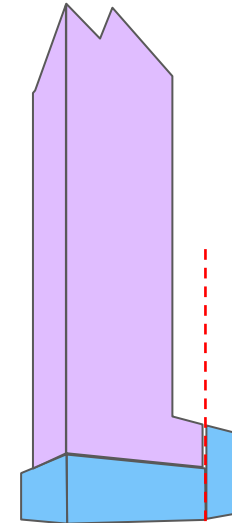
DESIGN PRINCIPLES		DESIGN EVALUATION
Visually separate towers from podiums through adequate upper-level setbacks.		
C.01 c	The tower above the street wall must be set back a minimum of 6 metres from the street boundary wall.	
C.03	Development must provide a minimum 6 metre tower setback to support views to sky from a creek corridor and natural daylighting to deep soil and vegetation.	
P.03	Towers are set back above street walls to reinforce the scale of the streets, mitigate wind and urban heat impacts, enable views to the sky and protect amenity in streets and public places.	

Not supported
  Supported

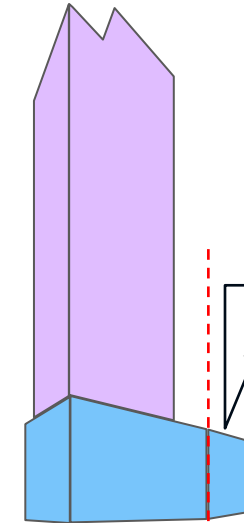
PROPOSED DESIGN – PODIUM AND TOWER DESIGN TREATMENT



PROPOSED DESIGN  
Podium and tower design treatment/language



COUNCIL PREFERRED  
Podium and tower design treatment



Podium height should respond to the existing and future neighbouring context



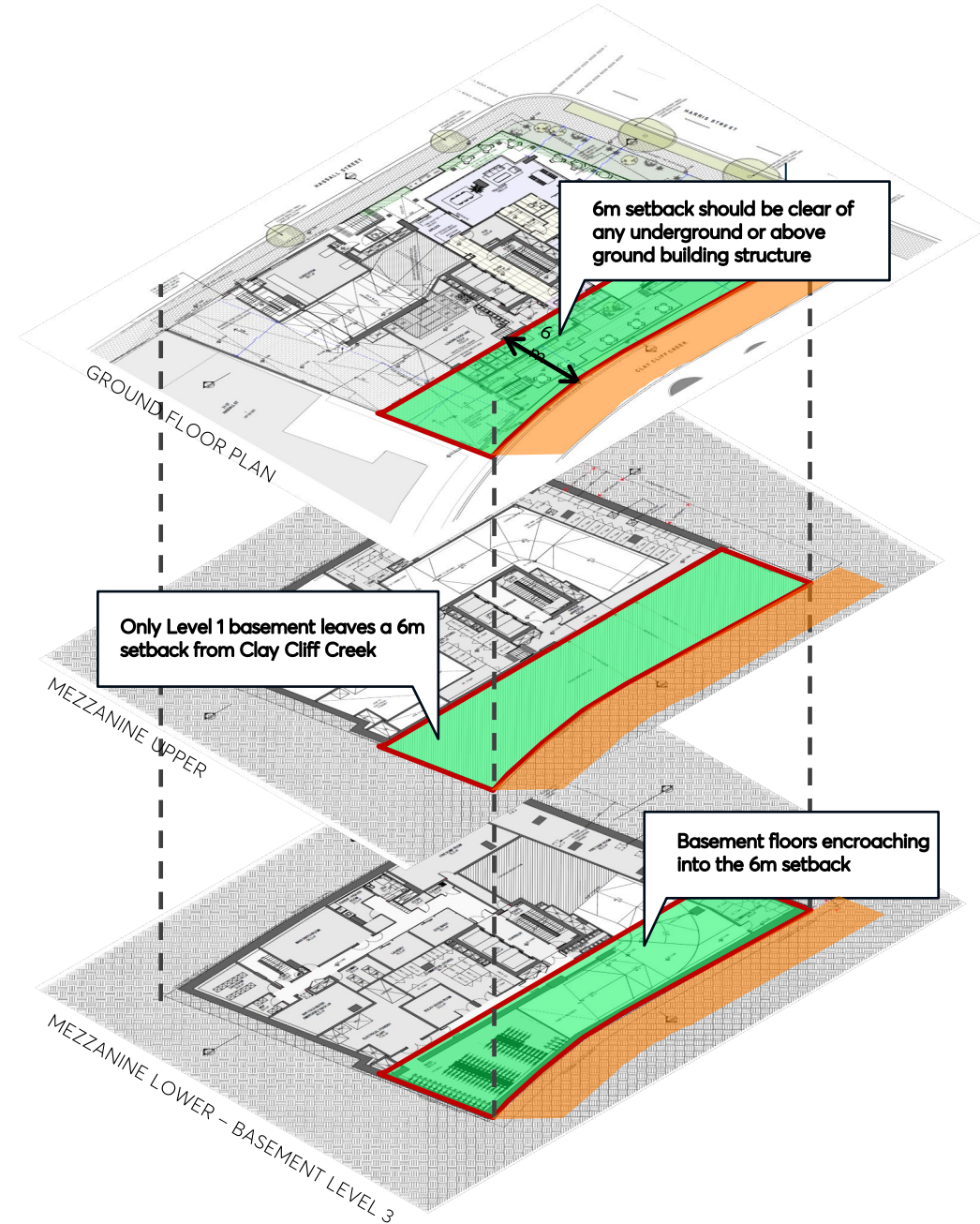
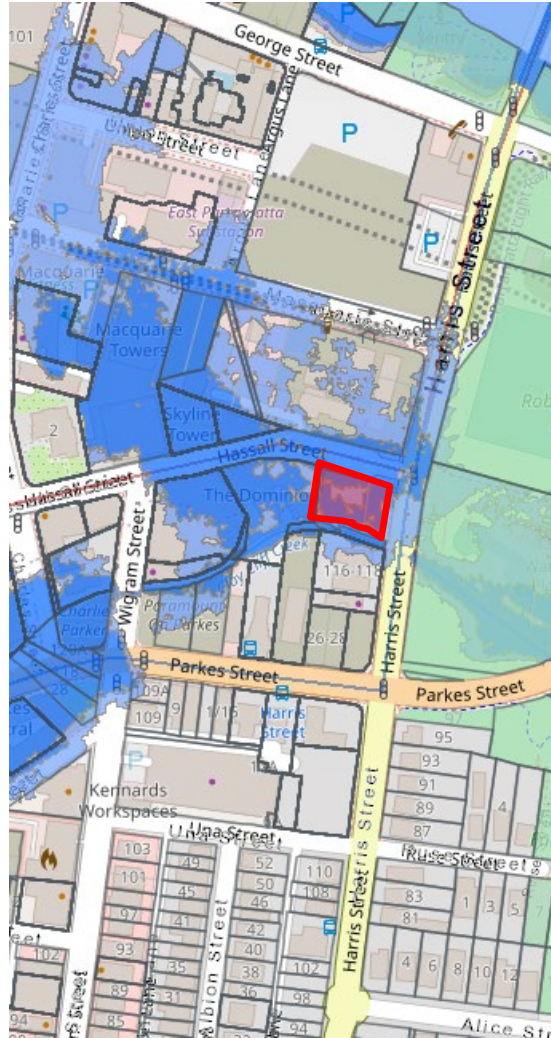
# CREEK CORRIDOR

## BASEMENT ENCROACHING CREEK CORRIDOR

DESIGN PRINCIPLES	DESIGN EVALUATION
Establish Clay Cliff Creek as a deep soil green corridor with WSUD, views to sky and daylight.	
Establish Clay Cliff Creek and other tributaries of the Parramatta River as priority green corridors for ecological protection, flood sensitive strategies and future landscape improvements.	
Utilise a deep soil setback zone to create a contiguous landscape along creek corridors with the intention of leaving space for a publicly accessible movement corridor in the future.	
C.03 Development must provide a minimum 6 metre tower setback to support views to sky from a creek corridor and natural daylighting to deep soil and vegetation.	

Not supported
  Supported

20ARI AND 100ARI FLOOD PRONE SITE





| PARRA **MATTA**

**OUR PEOPLE**