Hodyl & Co

493-497 Swan Street, Richmond
Built Form Review - Final Report

Prepared for the City of Yarra
April 2021

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Executive summary

Project purpose

This built form review progresses the strategic work for the land at 493-497 Swan Street. This land was identified as requiring future strategic work in the adopted Swan Street Framework Plan at clause 21.12.

Method

The method for the built form review included:

- A context, policy and development context analysis.
- An analysis of DDO28 to determine its relevance to the Subject Sites.
- The establishment of design principles based on the analysis and the integration of independent heritage advice for the Subject Sites and surrounds.
- Built form modelling of 12 built form scenarios.
- The assessment of 12 built form scenarios to determine a recommendation for the Subject Sites.

Built form testing findings

The built form testing indicated that the optimum built form outcome for the site was Scenario 8 (see Figure 1). This delivered the highest density on the site, while addressing the urban design/heritage principles established for the Subject Sites (see Table 1).

Recommendation

Currently, no built form controls apply to the Subject Sites as they are in Commercial Zone 1. Due to the sensitivity of the location, it is recommended that built form controls are introduced for the Subject Sites to ensure that any new development sufficiently responds to the urban design and heritage context.

Twelve built form scenarios were tested and assessed to inform a recommendation for the Subject Sites. Built form testing demonstrated that the optimum outcome is to adopt the following built form controls for the site:

- An overall mandatory building height of 11m (3 storeys).
- A ground floor setback and street wall height as determined by the form of the existing heritage buildings.
- An upper level setback of 12m from the Swan Street interface to retain the primary roof form, chimneys and the depth of the two front rooms.
- The application of Interface I to the rear interface and to the eastern interface of 497 Swan Street (as per DDO28).

Figure 1 indicates the built form outcome as viewed from the southern footpath on Swan Street. Table 1 summarises the assessment of the preferred built form scenario against the assessment principles established for this review.

Figure 1. VIEW 3 - Looking west from the southern footpath on Swan Street

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
8	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 65).	The consistent setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 17m would be able to be delivered.

Table 1. Scenario 8 assessment

- Optimum outcome
- Acceptable outcome
- Unacceptable outcome

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Introduction

Purpose

The project progresses the strategic work for the land at 493-497 Swan Street. This land was identified as requiring future strategic work in the adopted Swan Street Framework Plan at clause 21.12.

The purpose of this project was to undertake built form analysis of the land at 493-497 Swan Street and make recommendations regarding any built form requirements needed to better manage the design of new development (if required).

Project objectives

The following project objectives have guided the built form analysis:

- To undertake an urban design assessment of the Subject Sites.
- To provide recommendations for any built form controls for the Subject Sites, as deemed necessary.
- To assist Council in understanding whether there is a need and sufficient justification to include the Subject Sites in adopted Schedule 28 to the Design and Development Overlay (DDO28).
- To inform an officer report to be considered by Council in April, as required by the Council resolutions of the 10 September 2019 and 15 December 2020.
- To provide logic and evidence to support the introduction of built form controls into the Yarra Planning Scheme (if required).

Subject Sites

The purpose of the project is to progress strategic work for the sites at 493-497 Swan Street (see Figure 2). The properties at 493-497 Swan Street, Richmond form part of a red-brick masonry terraced row of four single storey houses. The end terrace at 499 Swan Street is in a different zone (Neighbourhood Residential Zone).

Heritage advice

This work has been informed by site-specific heritage advice provided by GJM Heritage (see page 22 to page 23).

Previous work

Leanne Hodyl provided expert urban design evidence to the C191 Swan Street Planning Panel in 2020.

Figure 2. Subject sites.

Context analysis

Overview

The Subject Sites are located on Swan Street and have a rear interface to an unnamed laneway to the north. The Subject Sites are mid-block and are directly adjacent to by buildings to the east and west. The north and east of the site consists of low-scale residential buildings. These buildings are a mixture of townhouses, attached houses and detached houses. To the west of the site are offices and to the south of the site is a reserve.

WESTERN INTERFACE

- The western interface of the Subject Sites interface a commercial building (487-491 Swan Street), located at the corner of Swan Street and Belgravia Street.
- The building is a three-storey, office building and is in marked contrast to the Edwardian terraces to the east. The building covers the entirety of the site, has a 'boxy' inelegant form and is rendered in dark grey with dark tinted windows.
- The building has a three-storey party wall that directly interfaces 483 Swan Street. This wall is brick and painted dark grey.
- At the western interface, there is an existing three-storey office building that contrasts the low-scale heritage buildings within the Subject Sites.

NORTHERN INTERFACE

- The laneway at the northern interface provides separation between the Subject Sites and the sensitive residential interfaces to the north.
- The two sites on the north side of the laneway have side interfaces oriented to the laneway. A 'side to rear' interface is considered less sensitive than a 'rear to rear' interface which is a more common condition in Precinct 4 (north side of Swan Street).

EASTERN INTERFACE

- The Subjects Sites interface with low-scale residential properties to the east. The property at 499 Swan Street forms part of the terraced row that also includes 493-497 Swan Street. The property at 501 Swan Street is a different form to the row of Edwardian terraces to the west and forms a corner 'bookend' to this row of terraces. These buildings are within the Bendigo Heritage Precinct (HO309).

SOUTHERN INTERFACE

- The southern interface of the Subject Sites is Swan Street. Swan Street forms the central spine in the Swan Street Major Activity Centre. The street is a tram corridor and has a significant traffic function.
- Across Swan Street is Ryan's Reserve - Tennis and Netball Centre. Ryan's Reserve has four outdoor courts.

Figure 3. Context map

Context analysis

Figure 4. Aerial map with photo locations

Image 1. View of the Subject Sites from the south-west. Demonstrates varying setbacks from the street, roofline and interfaces with neighbouring buildings to the east and west.

Image 2. Boundary interface between 499 Swan Street and 501 Swan Street - single-storey residential building with a pitched roof form that directly abuts the site. Front setbacks are generally in alignment.

Image 3. View from the west along unnamed laneway to the rear of the Subject Sites. The buildings to the north have side interfaces oriented to the laneway.

Image 4. Rear view of the 493 Swan Street from the north. This demonstrates the commercial nature of the Subject Sites when viewed from the rear. The laneway interface has setbacks dedicated to carparking and service entrances.

Image 5. Side and rear interface of two, two-storey townhouses to the north-west of the Subject Sites.

Image 6. View from the east along unnamed laneway to the rear of the Subject Sites. Demonstrates front profile of the two-storey townhouses fronting Belgravia Street.

Policy context analysis

Overview

The following policies are of relevance to the Subject Sites and the sites immediately adjacent to them:

- Plan Melbourne 2017 - 2050
- Yarra Housing Strategy, adopted September 2018
- Commercial 1 Zone (C1Z)
- Neighbourhood Residential Zone (NRZ1)
- Bendigo Street Heritage Precinct (HO309)
- Adopted Schedule 28 to the Design and Development Overlay (DDO28) which will replace Design and Development Overlay 17 (DDO17) once its approved by the Minister for Planning.
- Swan Street Built Form Framework, Tract 2017

Plan Melbourne 2017 - 2050

Plan Melbourne 2017 - 2050 defines Swan Street, Richmond as a Major Activity Centre. Major Activity Centres are suburban centres that provide access to a wide range of goods and services. They have different attributes and provide different functions, with some serving larger subregional catchments.

Yarra Housing Strategy

There are two types of change areas that apply to the Subject Sites and the sites immediately adjacent to the Subject Sites - moderate change area and minimal change area:

MODERATE CHANGE AREAS

The Yarra Housing Strategy (Strategy) identifies the sites at 487-497 Swan Street as moderate change, suitable for increased residential densities and housing diversity through mixed-use, infill and shop-top apartment development. The Strategy states that the provisions of built form overlays in the Yarra Planning Scheme will determine the scale and form of residential growth in moderate change areas.

MINIMIAL CHANGE AREAS

The Strategy identifies the land at 499 and 501 Swan Street as minimal change, given its location in the NRZ1. Minimal change areas are suitable for one or two dwellings and alterations and additions. The Strategy states that the provisions of the zone and/or Heritage Overlay in the Yarra Planning Scheme are to determine the scale and form of residential growth in these areas.

Commercial 1 Zone (C1Z)

The C1Z applies to 487-497 Swan Street (four sites). One of these sites was included in DDO28 (487-491 Swan Street), while the remaining sites were excluded from DDO28. The C1Z provides limited guidance on the desired built form outcomes. Therefore, there is limited built form guidance for the sites at 487-491 Swan Street due to their exclusion from DDO28.

Neighbourhood Residential Zone 1 (NRZ1)

The NRZ1 applies to areas where there is no anticipated change to the predominantly single and double storey character in an area. It also applies to areas that have been identified as having specific neighbourhood, heritage, environmental or landscape character values that distinguish the land from other parts of the municipality of surrounding area.

The following building heights apply in the NRZ1:

- the building height must not exceed 9 metres; and
- the building must contain no more than 2 storeys at any point.

A building may exceed the applicable maximum building height or contain more than the applicable maximum number of storeys if:

- It replaces an immediately pre-existing building and the new building does not exceed the building height or contain a greater number of storeys than the pre-existing building.
- There are existing buildings on both abutting allotments that face the same street and the new building does not exceed the building height or contain a greater number of storeys than the lower of the existing buildings on the abutting allotments.
- It is on a corner lot abutted by lots with existing buildings and the new building does not exceed the building height or contain a greater number of storeys than the lower of the existing buildings on the abutting allotments.
- It is constructed pursuant to a valid building permit that was in effect prior to the introduction of this provision.

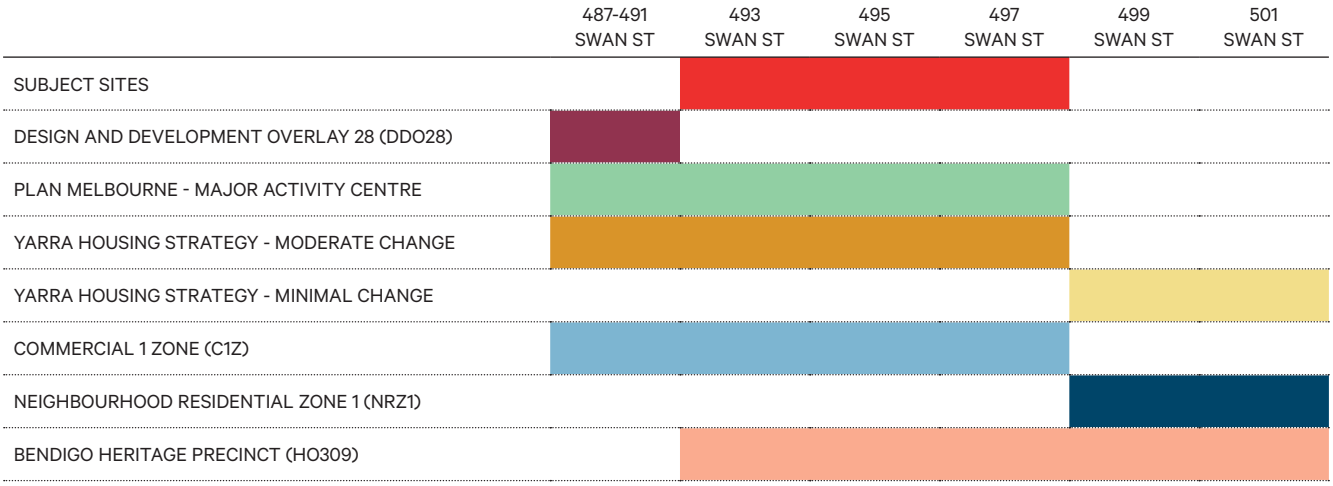

Table 2. Policy context of 487-501 Swan Street.

Policy context analysis

Bendigo Heritage Precinct (HO309)

HO309 Bendigo Street Heritage Overlay Area is aesthetically and historically significant to the City of Yarra. The Bendigo Street Heritage Overlay is significant for:

- Its substantially intact single-storey Victorian-era housing that varies between modest and ornate;
- Edwardian house examples, particularly in Swan and Moore Streets, being both typical and highly decorated Edwardian dwelling types, complemented by the significant Edwardian-era former Wertheim Piano Factory;
- The retention of early materials and elements in the public domain, such as street construction, and the retention of many bluestone laneways;
- The demonstration of a typical 19th century suburban area with its attached and detached housing stock and corner shops, that has been subsequently lost in other parts of the inner suburbs; and the consistency of building scale and setbacks, creating cohesive and homogeneous streetscapes that are enhanced by mature plane tree avenue plantings.

The Subject Sites are examples of a cohesive row of Edwardian terraces that are 'typical and highly decorated' and have a single roof form (constructed 1900-1915). They are graded “contributory” to the significance of the heritage precinct.

Adopted Amendment C191yara

At its meeting on 15 December 2020, Council resolved to adopt Amendment C191yara to the Yarra Planning Scheme with changes.

The amendment (amongst other things) sought to introduce:

- A new section on the Swan Street Activity Centre into Clause 21.12 Local Areas Policy; and
- Four schedules to the Design and Development Overlay to guide built form along Swan Street, including:
  - » Schedule 25 to the Design and Development Overlay (DDO25): Swan Street Activity Centre - Precinct 1 Richmond Station;
  - » Schedule 26 to the Design and Development Overlay (DDO26): Swan Street Activity Centre - Precinct 2 Swan Street Retail Centre;
  - » Schedule 27 to the Design and Development Overlay (DDO27): Swan Street Activity Centre - Precinct 3 Swan Street East; and
  - » Schedule 28 to the Design and Development Overlay (DDO28): Swan Street Activity Centre - Precinct 4 Burnley Station.

Adopted Amendment C191yara is awaiting approval by the Minister for Planning. The amendment is considered seriously entertained.

Adopted Clause 21.12 - Local Areas

Adopted Clause 21.12 includes the vision for the Swan Street Activity Centre and preferred future character statements for each of the four precincts that make up the centre:

- Precinct 1: Richmond Station
- Precinct 2: Swan Street Retail
- Precinct 3: Swan Street East
- Precinct 4: Burnley Station

It also includes the Swan Street Framework Plan. Any proposed use or development within the Swan Street Activity Centre should be generally consistent with plan.

As shown in the Swan Street Framework Plan, the properties at 493-497 Swan Street are identified, along with the land north of Precinct 1, as land subject to future strategic work.

Adopted Design and Development Overlay 28 (DDO28)

Adopted DDO28 applies to the land just east of 493 Swan Street, Richmond.

Adopted DDO28 includes precinct specific (Precinct 4 Burnley Station) design objectives and a mix of mandatory and preferred building height, street wall height and setback, upper level setback and overshadowing provisions. Mandatory controls were only applied to:

- Locations of intact heritage streetscape;
- Locations with a sensitive interface with low scale residential properties; and
- Protect southern footpath of Swan Street from overshadowing. A thorough assessment of DDO28 and its relevance to the Subject Sites can be found on pages 20-21.

Swan Street Built Form Framework, Tract 2017

The Swan Street Built Form Framework sets out a preferred built form framework and supporting design principles for the future development within the Swan Street Activity Centre. The recommendations are guided by design principles, which aim to achieve best practice development within Swan Street. The Framework incorporates the findings of a heritage review of the Swan Street Activity Centre by GJM Heritage.

The Framework formed the basis of DDO28 and Swan Street content of Clause 21.12 and was reviewed and refined through the Yarra C191 Panel.

Planning Practice Note 59

Planning Practice Note 59 (PPN59) provides guidance on the use of mandatory provisions generally within the planning scheme. PPN59 states that 'mandatory provisions will only be considered in circumstances where it can be clearly demonstrated that discretionary provisions are insufficient to achieve desired outcomes' (page 2). Key considerations that should be considered are:

- Is the mandatory provision strategically supported?
- Is the mandatory provision appropriate to the majority of proposals?
- Does the mandatory provision provide for the preferred outcome?
- Will the majority of proposals not in accordance with the mandatory provision be clearly unacceptable?
- Will the mandatory provision reduce administrative costs?

Planning Practice Note 60

Planning Practice Note 60 (PPN60): Height and setback controls for activity centres states that the application of height and setback controls must be 'soundly based on the outcomes of strategic research and background analysis that demonstrates consistency with state and regional policy and includes a comprehensive built form analysis' (page 2). The Practice Note states that a combination of discretionary and mandatory height and setback controls may be appropriate. Discretionary height and setback controls are preferred, with mandatory provisions supported when they are 'supported by robust and comprehensive strategic work or where exceptional circumstances warrant their introduction' (page 3).

PPN60 states (on page 3) that mandatory controls should only be applied where:

- Exceptional circumstances exist; or
- Council has undertaken comprehensive strategic work and is able to demonstrate that mandatory controls are appropriate in the context, and
- They are absolutely necessary to achieve the preferred built form outcomes and it can be demonstrated that exceeding these development parameters would result in unacceptable built form outcomes.

Policy context analysis

Figure 5. Zoning map

Figure 6. Heritage map

Development context analysis

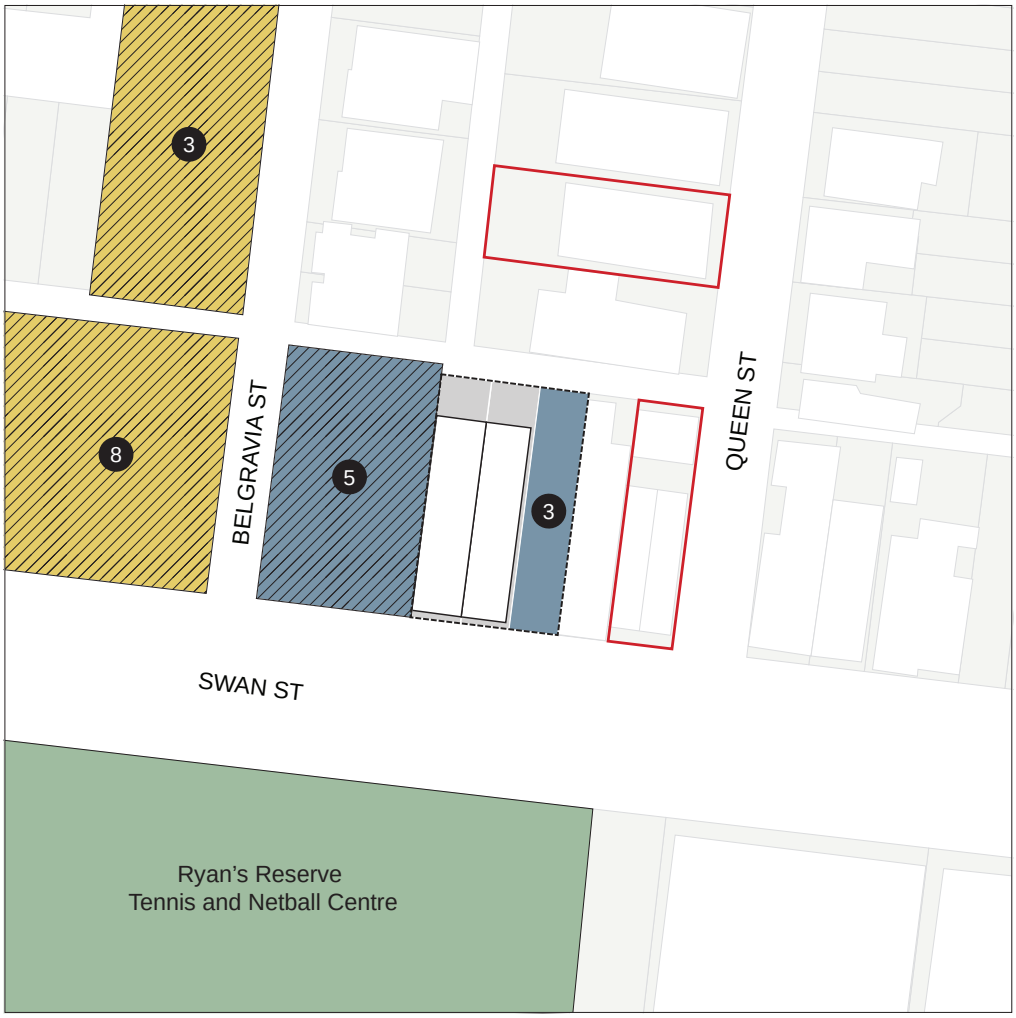

Figure 7. Development activity map

0 10 20

CONTEXT
Open space
Property
Subject Sites

ACTIVITY
Proposed Commercial development
Proposed Mixed use development
Single-storey rear extension
X No. of Storeys

Figure 8. A rear extension (now constructed) was approved at 501 Swan Street.

Figure 9. A development proposal for an eight-storey mixed-use building at 471-473 Swan Street is currently under consideration by the City of Yarra.

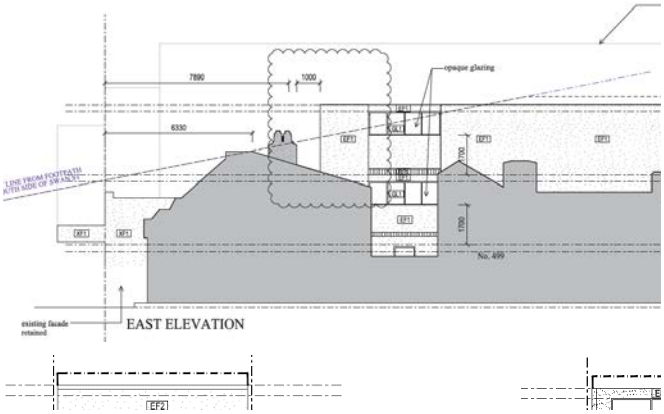

Figure 10. A permit (991710) has been approved at 497 Swan Street for the construction of a three-storey building. This east elevation demonstrates that the additional built form was proposed to be setback approximately 9m from the street frontage in order to retain the profile of the heritage building on the site.

Development context analysis

Council recently (11 February 2021) issued a Notice of Decision to Grant a Permit (PLN20/0420) for a five-storey (18m) office development (plus basement and roof terrace) for adjacent property at 487-491 Swan Street.

The permit proposes a three-storey boundary wall at the eastern interface to the Subject Sites. The upper levels are setback at the fourth and fifth storey. The building entrance has a ground floor setback at the eastern interface to align with the ground floor setback of the heritage buildings on the Subject Sites.

Figure 13 and Figure 14 demonstrate that the proposed development will not overshadow the Swan Street southern footpath between 10am and 2pm at the September equinox. This indicates that any proposed built form to the east built at 18m or below would meet the Swan Street solar access requirement.

Figure 11. Council recently (11 February 2021) issued a Notice of Decision to Grant a Permit (PLN20/0420) for a five-storey (18m) office development (plus basement and roof terrace) for adjacent property at 487-491 Swan Street. View from the south-west.

Figure 12. View from the south-east of approved development.

Figure 13. Overshadowing impact of the development approved at 487-491 Swan Street at 10am.

Figure 14. Overshadowing impact of the approved development at 487-491 Swan Street at 2pm.

Heritage analysis

An independent built form review and heritage analysis was undertaken by GJM Heritage. The following is a summary of the key findings from the analysis:

- The properties at 493-497 should provide a transition from the 18m mandatory height limit affecting 487-491 Swan Street and the 9m mandatory height limit affecting land within the NRZ (including 499 and 501 Swan Street).
- The single storey heritage buildings should remain the dominant built element when viewed from key view points including:
    - » from the southern side of Swan Street opposite the terrace row;
    - » obliquely from the southern side of Swan Street opposite the intersections with Belgravia and Queen street; and
    - » from the eastern side of the intersection of Queen and Swan streets.
- The residences and former residences at 493 and 495 Swan Street and the modest Inter-war shopfront at 497 Swan Street should remain a clearly legible part of HO309 and retain predominantly domestic character of the heritage precinct. New development on the subject sites should also consider the legibility of the Bendigo Street Precinct when viewed obliquely along Queen Street.
- The principal roof form and visible chimneys of 493, 495 and 497 Swan Street contribute to the significance of HO309 and these elements should be retained and remain visible as freestanding three-dimensional forms. The application of heritage policy at Clause 22.02 (or Clause 15.03-1L as proposed through Amendment C269yara) encourages the retention of these elements which include the front parts of the former dwellings effectively to a depth of the two front rooms.

GJM Heritage recommendations

GJM Heritage made the following recommendations based on their built form review and heritage analysis:

- A mandatory 11m (3 storey) height limit should be applied to 493, 495 and 497 Swan Street.
- New development should be set back a minimum of 12m to retain the primary roof form, chimneys and the depth of the two front rooms.
- The rear interface to the NRZ zoned properties should accord with the 11m maximum sought by interface I (Figure 1) within DDO28.
- The side interface to the eastern boundary of 497 Swan Street should accord with the direct abuttal interface I (Figure 2) within DDO28.

These recommendations inform then principles and viewing locations used to assess the built form testing.

Image 7. View from the south demonstrating ridgeline of the southern roof slope (with decorative tiles) facing Swan Street.

Image 8. View of the roofline at 493 Swan Street as it interfaces with 487-491 Swan Street to the west.

Image 9. View of chimneys above the roofline at the interface between 495 and 497 Swan Street.

Image 10. View of awning 497 Swan Street at the street interface. This demonstrates the addition that has been made at the street interface which interrupts the consistency of the row of Edwardian terraces.

Image 11. View of 499 Swan Street which is included in the NRZ1. Demonstrates that the verandah has been rendered and painted light grey. This interrupts the consistency of the row of Edwardian terraces.

Image 12. View of the chimney at 501 Swan Street from Queen Street.

DDO28 analysis

The following excerpts from adopted Clause 21.12 Local Areas policy and adopted DDO028 are of particular relevance to the Subject Sites. This includes excerpts from the preferred future character statement, the design objectives, the design quality requirements and the decision guidelines for Precinct 4: Burnley Station.

Adopted Clause 21.12 Local Areas

PREFERRED FUTURE CHARACTER STATEMENT: PRECINCT 4 BURNLEY STATION

This excerpt from the preferred future character statement is of the most direct relevance to the Subject Sites:

> Buildings behind Burnley Street and along the north side of Swan Street scale sensitively to the adjoining low scale residential area. Breaks between buildings at upper levels maintain views to the sky from street level and create a varied skyline when viewed from surrounding residential areas.

Adopted DDO28

DESIGN QUALITY REQUIREMENTS

The following design quality requirements of direct relevance to the Subjects Sites due to their interfaces with low-scale residential areas and their heritage context:

- Development should be designed to avoid repetitive stepped form at upper levels.
- Protect the amenity of existing residential properties in terms of visual bulk, overshadowing of private open space, overlooking and vehicle access.
- Upper level development on land within a Heritage Overlay or on land immediately adjoining a heritage building should:
  - » be visually recessive and not visually dominate the heritage building and the heritage streetscape; and
  - » avoid large expanses of glazing with a horizontal emphasis in the upper levels of development.

DECISION GUIDELINES

The following decision guidelines are of direct relevance to the Subjects Sites due to the sophistication of the design response required on these constrained sites and their heritage context.

- Whether design excellence is achieved (in terms of building siting, scale, massing, articulation and materials).
- The prominence of the heritage street wall in the vistas along Swan Street, Burnley Street, and local streets.
- Whether heritage buildings on street corners retain their prominence when viewed on both streets.
- Whether heritage buildings retain their three-dimensional form as viewed from the public realm.
- Whether upper level development above the heritage street wall is visually recessive and does not overwhelm the heritage buildings.

487 Swan Street built form controls

The following controls apply to 487 Swan Street, the site immediately adjacent to the Subject Sites:

- Mandatory 18 metre height limit. This represents the lowest height limit within Precinct 4.
- Table 3 provides a summary of the street wall heights, and setbacks that apply at each interface.

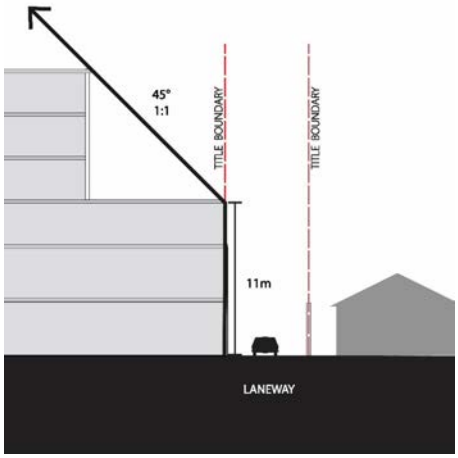

Figure 15. Interface with an existing laneway

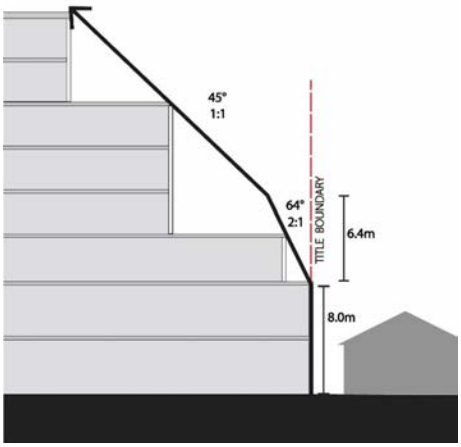

Figure 16. Interface direct abuttal

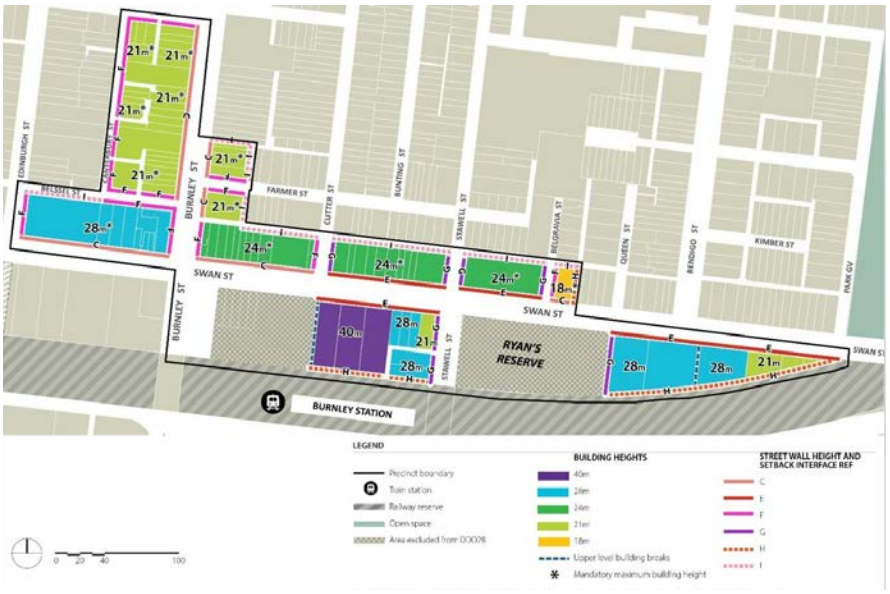

Figure 17. Plan 1: Height and Interface Plan - Precinct 4 Burnley Station.
Source: Design and Development Overlay 28.

INTERFACE	DESIGN ELEMENT	PREFERRED REQUIREMENTS	MANDATORY REQUIREMENTS
C at the Swan Street interface	Street wall height	11m maximum. 8m minimum. Match the parapet height of the taller adjoining heritage building, for a minimum length of 6m from the heritage building.	N/A
	Street wall setback		0m
	Upper level setback		10m minimum from Swan Street setback for land affected by HO286 (365 Swan Street). Minimum 6m for other heritage buildings
F at the Belgravia Street interface	Street wall height	11m Maximum	N/A
	Street wall setback	0m	
	Upper level setback	6m minimum for heritage buildings, 3m minimum elsewhere.	
H at the eastern, direct property interface	Street wall height	N/A	
	Street wall setback	0m minimum unless setback is identified on the Plan 2.	
	Upper level setback	0m	
I at the northern laneway interface	Side and rear wall height	8m maximum on a common boundary with a property in a residential zone. 11m maximum if boundary abuts a laneway.	
	Side and rear setback	Development should be setback in accordance with Figure 15 and Figure 16. Development should minimise stepped form.	

Table 3. Summary of street wall height and setback requirements.

Extending the built form controls to the Subject Sites

A starting point for testing is to apply the adopted built form controls in Precinct 4 to the Subject Sites. The logical extension of the built form controls would be as follows:

- Mandatory 18 metre height limit.
- Street wall and setback:
  - » Interface C at the Swan Street interface.
  - » Interface I at the northern laneway interface and at the eastern interface.
  - » Standard building separation requirements apply at all other interfaces.

Interface C is applied as it applies to heritage buildings that interface Swan Street. Interface I applies at the eastern interface as the adjacent site (499 Swan Street) is a residential interface. On all other interfaces, standard building separation requirements would apply.

BUILDING SEPARATION REQUIREMENTS

Where development shares a common boundary and no interface treatment is shown in Plan 1, upper level development should:

- For buildings up to 28 metres, be setback a minimum of 4.5m from the common boundary, where a habitable window or balcony is proposed.
- For buildings up to 28 metres, be setback a minimum of 3.0m from the common boundary where a commercial or non-habitable window is proposed.
- For buildings taller than 28 metres, be setback a minimum of 6 metres above 28 metres.

Key findings

Applying the extension of DDO28 to the Subject Sites with no site specific changes would result in an unacceptable building for outcome for such atypical sites. Applying the standard interface (Interface C) at the Swan Street interface would result in a poor response to the existing heritage buildings. Further to this, the extension of the 18m height limit to the Subject Sites would result in an insufficient transition to the low-scale residential buildings at 499 and 501 Swan Street.

Further testing is therefore required to determine an appropriate building height and interface treatment to Swan Street for the Subject Sites.

The application of Interface I is considered appropriate as the Subject Sites abut a laneway to the rear and sensitive residential interfaces to the east. This was supported by the C191 Panel and is consistent with the treatment of interfaces adopted in DDO28. Interface I will be adopted in the built form testing in order to assess its suitability when applied to the Subject Sites.

INTERFACE REFERENCE	DESIGN ELEMENT	MANDATORY REQUIREMENT	PREFERRED REQUIREMENT
C	Street wall height	N/A	11m maximum. 8m minimum. Match the parapet height of the taller adjoining heritage building, for a minimum length of 6m from the heritage building.
	Street wall setback	0m	N/A
	Upper level setback	10m minimum from Swan Street setback for land affected by HO286 (365 Swan Street). Minimum 6m for other heritage buildings	N/A
I	Side and rear wall height	N/A	8m maximum on a common boundary with a property in a residential zone. 11m maximum if boundary abuts a laneway.
	Side and rear setback	N/A	Development should be setback in accordance with Figure 1 and Figure 2. Development should minimise repetitive stepped form.

Table 4. Street wall height and setbacks. Source: Yarra C191 Panel Report.

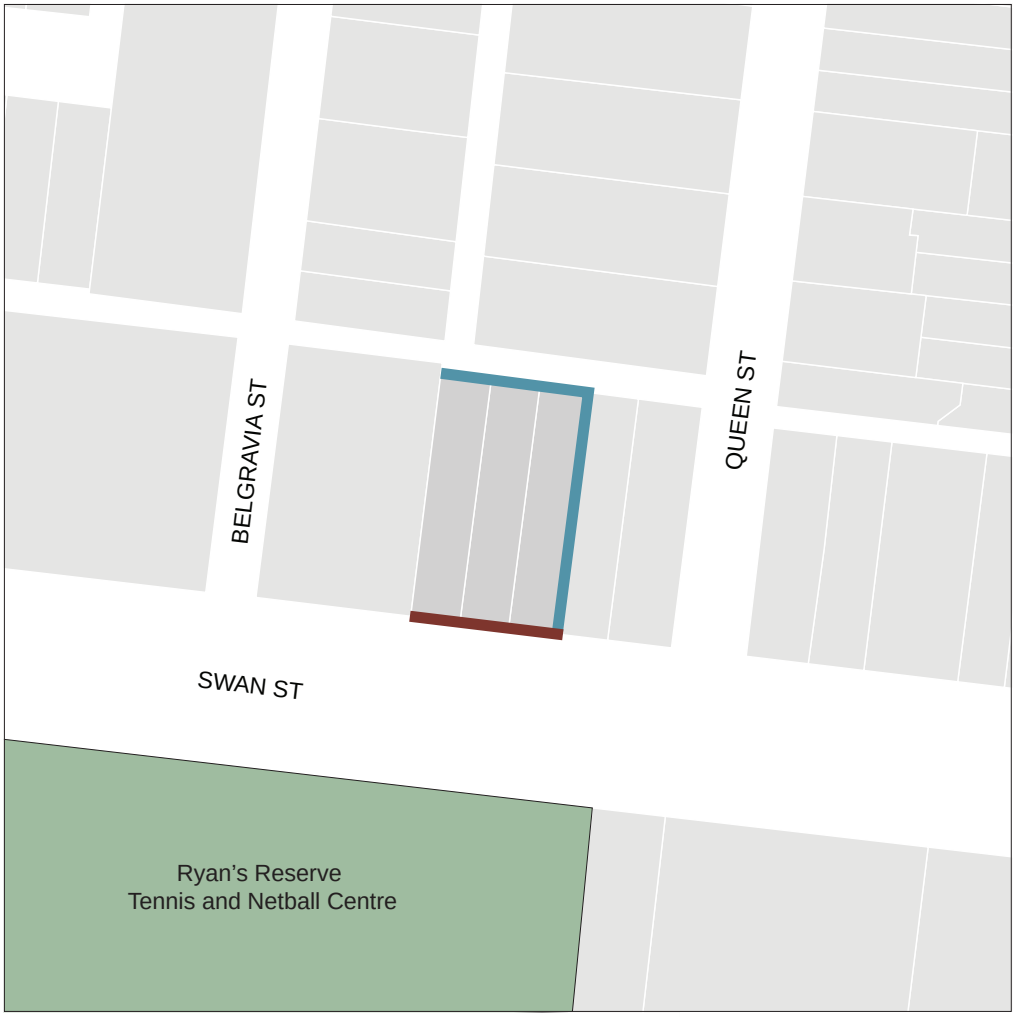

Figure 18. Draft interface map

Assessment principles

The built form scenarios were established to determine the appropriate upper level setbacks, overall height and interface requirements that should apply to the Subject Sites. These twelve built form scenarios were established to be tested against the following principles:

- To avoid a visually dominant upper level from above the heritage buildings.
- To maintain the cohesiveness of the cluster of heritage buildings with a shared roof form.
- To provide an appropriate transition in scale to the heritage and residential buildings in the east.
- To sufficiently retain the existing heritage fabric.
- To facilitate the delivery of buildings with a sufficient floorplate depth at upper levels. (a minimum depth of 10m and a minimum width of 5m).

The principles were established based on the urban design analysis and site specific heritage advice. Each scenario was assessed against the five principles with the design outcome deemed optimum, acceptable or unacceptable.

GROUND FLOOR SETBACK AND STREET WALL HEIGHT

The form of the existing heritage buildings would be retained,. The ground floor setback and street wall height would therefore be determined by the existing heritage form. This requires no further testing.

UPPER LEVEL SETBACKS

Determining the appropriate upper level setbacks is informed by the following principles:

- To avoid a visually dominant upper level from above the heritage buildings.
- To sufficiently retain the existing heritage fabric.

MAXIMUM HEIGHTS

Determining the appropriate maximum height is informed by the following principles:

- To avoid a visually dominant upper level from above the heritage buildings.
- To maintain the cohesiveness of the cluster of heritage buildings with a shared roof form.
- To provide an appropriate transition in scale to the heritage and residential buildings in the east.

The urban design analysis and heritage advice determined that is was unneccssary to test the application of the 18m building heights on the Subject Sites. This would not provide any transition to the heritage and residential buildings at 499 and 501 Swan Street.

INTERFACE REQUIREMENTS

Determining the appropriate interface requirements is informed by the following principles:

- To avoid a visually dominant upper level from above the heritage buildings.
- To provide an appropriate transition in scale to the heritage and residential buildings in the east.

MINIMUM BUILDING FLOORPLATES

Determining the reasonable delivery of sufficient floorplates is informed by the following principles:

- To facilitate the delivery of buildings with a sufficient floorplate depth at upper levels (a minimum depth of 10m and a minimum width of 5m).

Method

The method involved three steps:

1. Modelling 12 indicative built form envelopes on the Subject Sites (see Table 5).
2. Assessing the modelling from five key viewing locations (see Figure 19).
3. Assessing the modelling against five principles established based on the urban design analysis and site specific heritage advice.

Model details

- The development applications provided by the City of Yarra were used to model the proposed developments in the immediate context of the Subject Sites.
- The context model was provided by the City of Yarra.
- The existing buildings on the study sites were modelled based on the approved development application at 497 Swan Street which was provided by the City of Yarra.

Model view locations

- The lense angle is set between 30 - 50 to simulate the human eye perspective.
- The camera is positioned at 170mm above ground level and is angled at 90 degrees from the ground, creating a horizontal view line. However, an additional view was provided for Scenarios 9-12 (tilted above 90 degrees from the ground) in order to view the full extent of the test built form.

Views

The viewing locations included are considered key views as determined by the site visit and urban design analysis.

SCENARIO	UPPER FLOOR SETBACK	OVERALL BUILDING HEIGHT	REAR STREET WALL HEIGHT	UPPER LEVEL SETBACK
1	9m	9m	9m	N/A
2	10m			
3	11m			
4	12m			
5	9m	11m	11m	
6	10m			
7	11m			
8	12m			
9	9m	14.5m		4m
10	10m			
11	11m			
12	12m			

Table 5. Scenario built form metrics.

Assessment principles

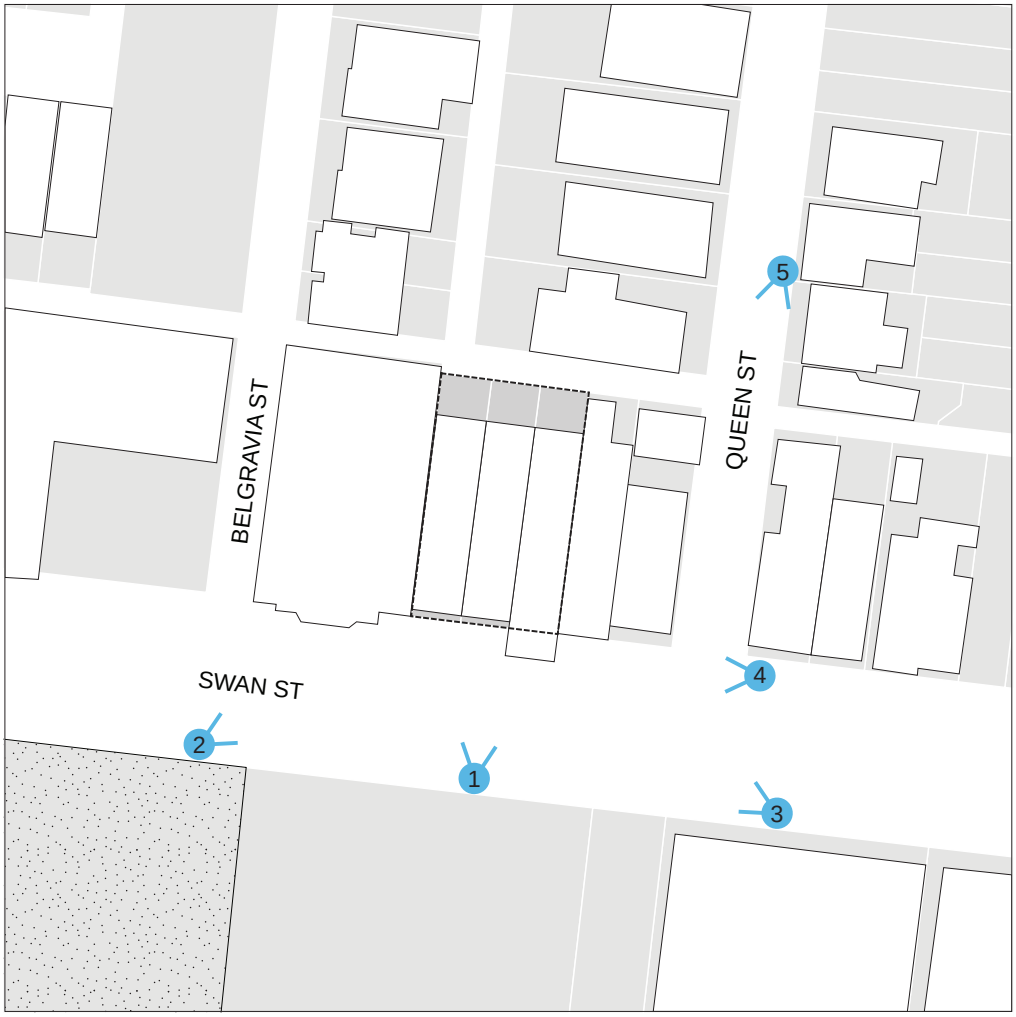

Figure 19. Map of viewing locations that will be used for the assessment.

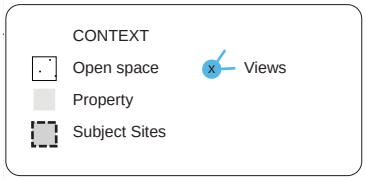

Image 13. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

Image 16. VIEW 2 - Looking east from the southern footpath on Swan Street.

Image 14. VIEW 3 - Looking west from the southern footpath on Swan Street.

Image 17. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

Image 15. VIEW 5 - Looking south from the eastern footpath on Queen Street.

Built form testing
Assessment summary

Table 6 is a summary of the findings from the built form testing. The details of the built form testing are included in the Appendix.

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
1	Height of the building is not visually dominant but the setback doesn't sufficiently retain the prominence of the chimneys when viewed from the west (see Figure 23).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	A 9m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice.	A building with a depth of 20m would be able to be delivered.
2	Height of the building is not visually dominant but the setback doesn't sufficiently retain the prominence of the chimneys when viewed from the west (see Figure 29).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	A 10m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 19m would be able to be delivered.
3	Height of the building is not visually dominant and the setback sufficiently retains the prominence of the chimneys when viewed from the west (see Figure 35).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	An 11m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 18m would be able to be delivered.
4	Height of the building is not visually dominant and the setback sufficiently retains the prominence of the chimneys when viewed from the west (see Figure 41).	The consistent setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 17m would be able to be delivered.
5	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 47).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 9m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered.
6	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 53).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 10m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 19m would be able to be delivered.

Table 6. Scenario assessment summary

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
7	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 59)	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	An 11m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 18m would be able to be delivered.
8	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 65).	The consistent setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 17m would be able to be delivered.
9	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 72)	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	A 9m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.
10	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 79).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	A 10m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.
11	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 85).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	An 11m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.
12	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 93).	The consistent setback between 493-497 and 499 Street is positive but the cohesiveness of the heritage cluster is compromised by the height variation of two storeys.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.

Table 7. Scenario assessment summary

Conclusion

Built form testing findings

The built form testing indicated that the optimum built form outcome for the site was Scenario 8. This delivered the highest density on the site, while addressing the urban design/heritage principles established for the Subject Sites (see Table 6).

This assessment indicated the following:

- That the height of the building at 11m is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 15).
- That the consistent upper level setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.
- That an overall building height of 11m provides an appropriate transition to the heritage and residential buildings in the east.
- That a 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.
- That the building depth and width at upper levels would be able to support a sufficient floorplate size.
- That the application of Interface I at the rear laneway interface is appropriate as consistent with the interface treatments adopted in DDO28.
- That the application of Interface I at the eastern interface is appropriate and provides an appropriate transition to the sensitive residential interface to the east.

Mandatory heights

The application of a mandatory height control is considered appropriate in accordance with PPN60 for the following reasons:

- Council is able to demonstrate that they have undertaken comprehensive strategic work in the form of this independent urban design analysis and an independent heritage review of the Subject Sites.
- Exceptional circumstances exist -
    - » The Subject Sites are significant heritage places with distinct features that require protection. Taller building forms would be inadequate to protect these unique heritage values.
    - » There is a shared roof form between the Subject Sites and 499 Swan Street to the east which together form a notable cluster of heritage buildings. New development must be carefully controlled to protect the cohesiveness of this building feature.
    - » A transition in scale is required between the 18m height limit to the west and the low-scale heritage context to the immediate east. This transition can only occur on the Subject Sites.
- The built form testing has demonstrated that buildings taller than 11 metres would result in an unacceptable built form outcome and therefore the application of a mandatory height is necessary.

Recommendation

Currently, no built form controls apply to the Subject Sites as they are in Commercial Zone 1. Due to the sensitivity of the location, it is recommended that built form controls are introduced for the Subject Sites to ensure that any new development sufficiently responds to the urban design and heritage context.

The following built form metrics should be adopted for the site:

- An overall mandatory building height of 11m (3 storeys).
- A ground floor setback and street wall height as determined by the form of the existing heritage buildings.
- An upper level setback of 12m from the Swan Street interface to retain the primary roof form, chimneys and the depth of the two front rooms.
- The application of Interface I to the rear interface and to the eastern interface of 497 Swan Street (as per DDO28).

Figure 20. SCENARIO 8/VIEW 3 - Looking west from the southern foorpath on Swan Street

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
8	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 69).	The consistent setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 17m would be able to be delivered.

Table 8. Scenario 8 assessment

Optimum outcome
Acceptable outcome
Unacceptable outcome

Existing buildings in study area
Test built form
Proposed developments
Context buildings
Neighbourhood Residential Zone controls modelled on adjacent sites

Appendix A

Built form testing

The appendix includes the details of the built form testing which informed the built form recommendations for the Subject Sites.


KELLEHERS
AUSTRALIA
KELLEHERS
AUSTRALIA

Built fom testing
Scenario 1

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
1	Height of the building is not visually dominant but the setback doesn't sufficiently retain the prominence of the chimneys when viewed from the west (see Figure 23).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	A 9m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice.	A building with a depth of 20m would be able to be delivered.

Table 10. Scenario 1 assessment.

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
9m	9m	9m	N/A

Table 9. Built form metrics

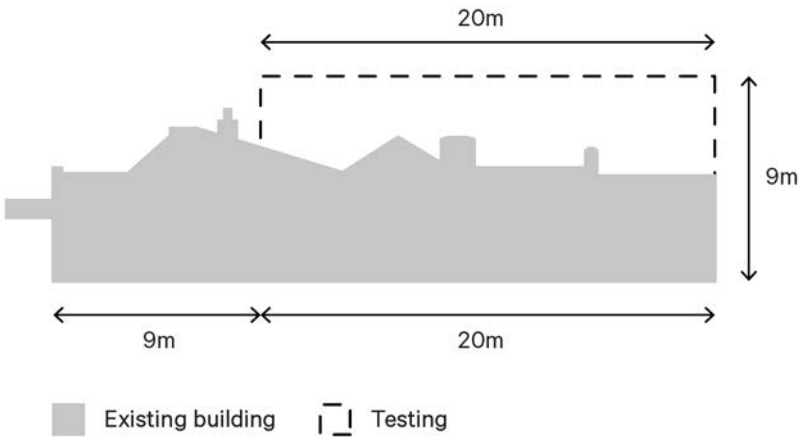

Figure 21. Scenario 1 section

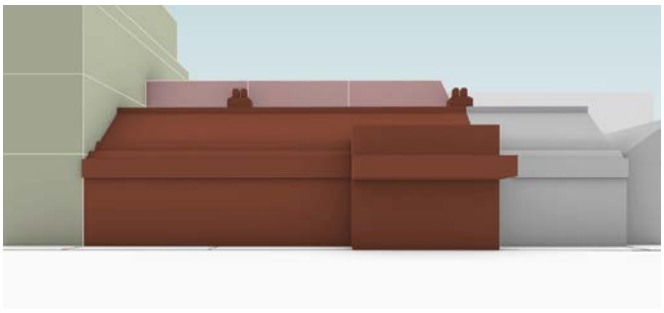

Figure 22. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

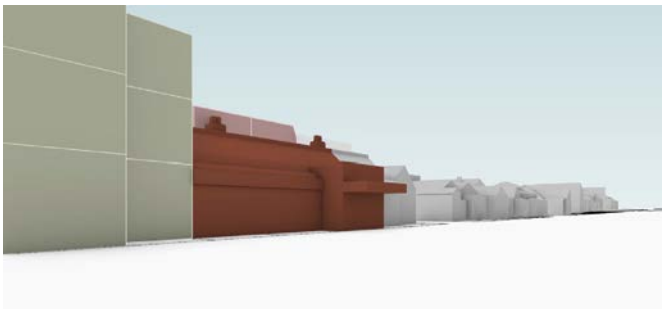

Figure 25. VIEW 2 - Looking east from the southern footpath on Swan Street.

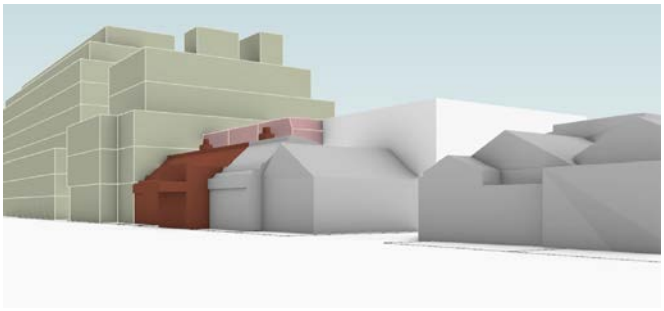

Figure 23. VIEW 3 - Looking west from the southern footpath on Swan Street.

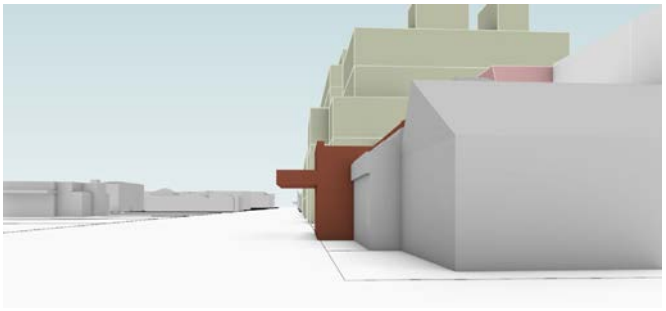

Figure 26. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

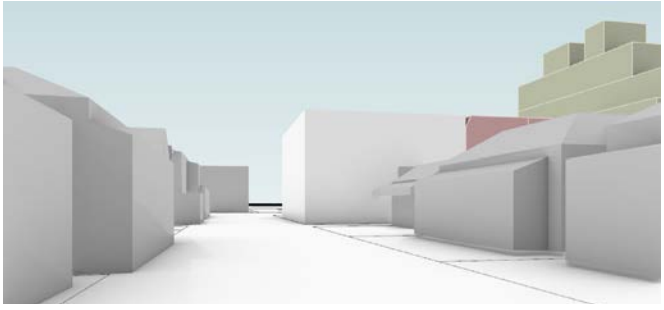

Figure 24. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Testing form
- Proposed developments
- Context buildings
- NRZ Controls

Built fom testing
Scenario 2

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
2	Height of the building is not visually dominant but the setback doesn't sufficiently retain the prominence of the chimneys when viewed from the west (see Figure 29).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	A 10m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 19m would be able to be delivered.

Table 12. Scenario 2 assessment.

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
9m	10m	9m	N/A

Table 11. Built form metrics

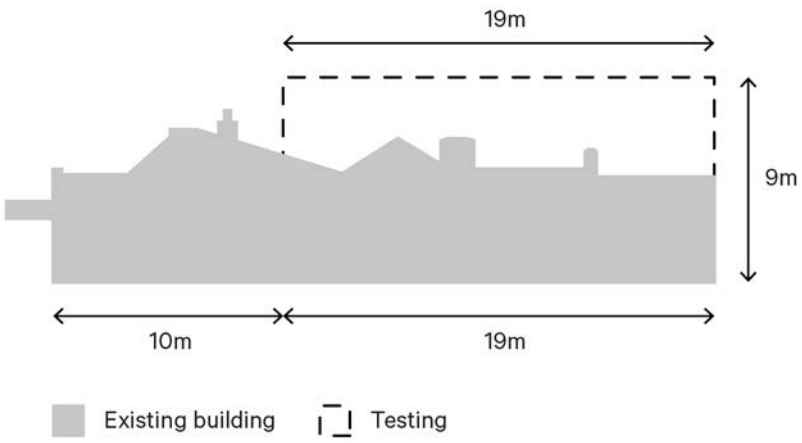

Figure 27. Scenario 2 section

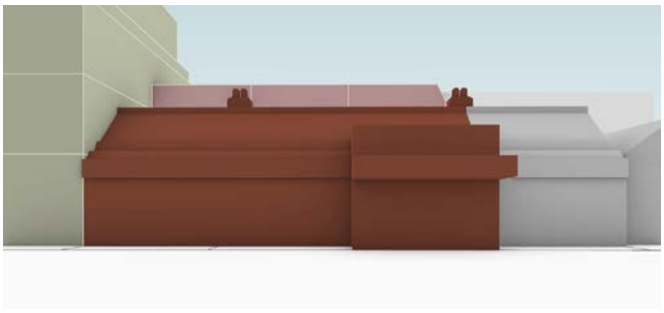

Figure 28. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

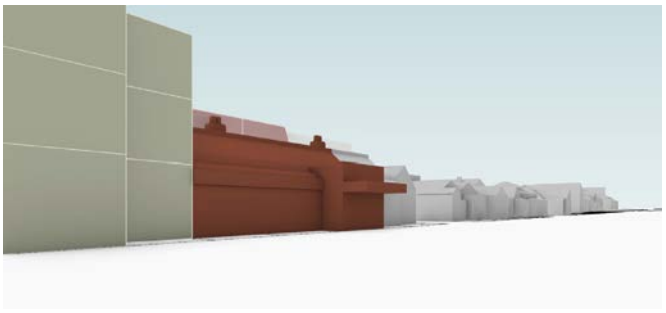

Figure 31. VIEW 2 - Looking east from the southern footpath on Swan Street.

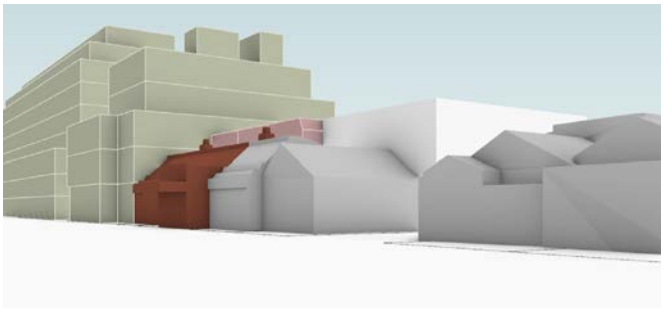

Figure 29. VIEW 3 - Looking west from the southern footpath on Swan Street.

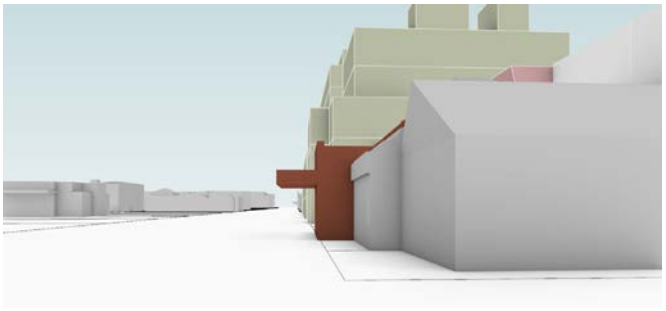

Figure 32. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

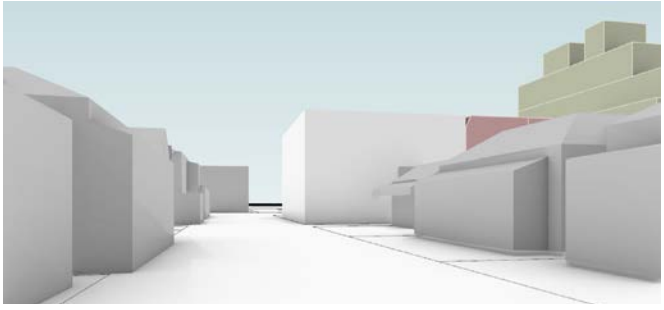

Figure 30. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 3

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
3	Height of the building is not visually dominant and the setback sufficiently retains the prominence of the chimneys when viewed from the west (see Figure 35).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	An 11m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 18m would be able to be delivered.

Table 13. Scenario 3 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
9m	11m	9m	N/A

Table 14. Built form metrics

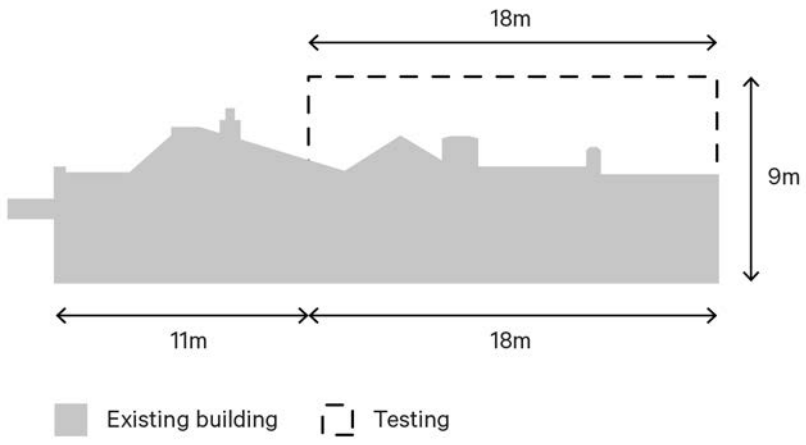

Figure 33. Scenario 3 section

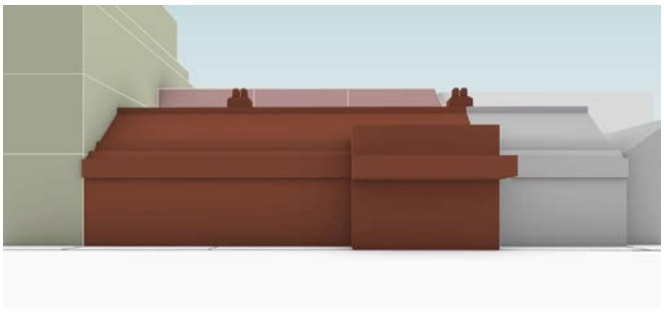

Figure 34. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

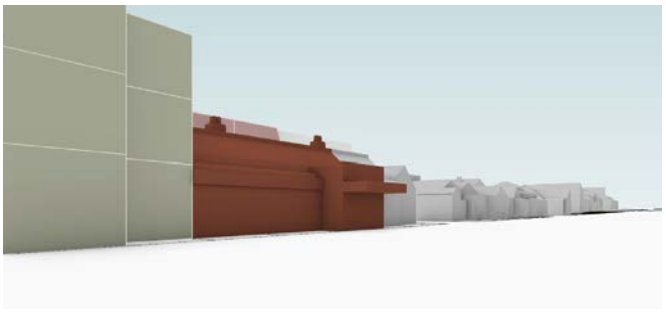

Figure 37. VIEW 2 - Looking east from the southern footpath on Swan Street.

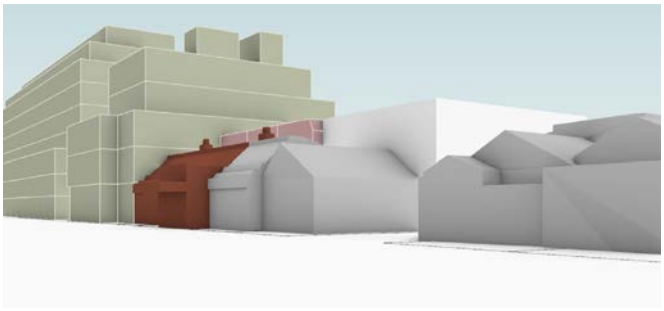

Figure 35. VIEW 3 - Looking west from the southern footpath on Swan Street.

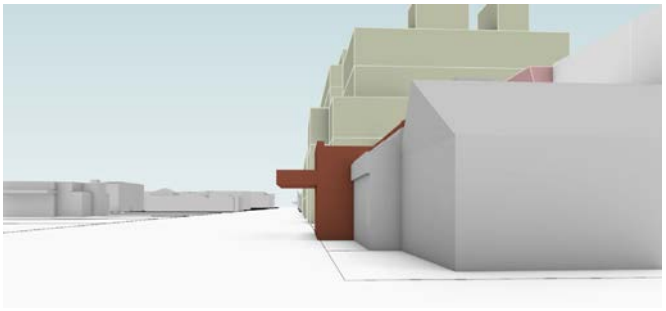

Figure 38. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

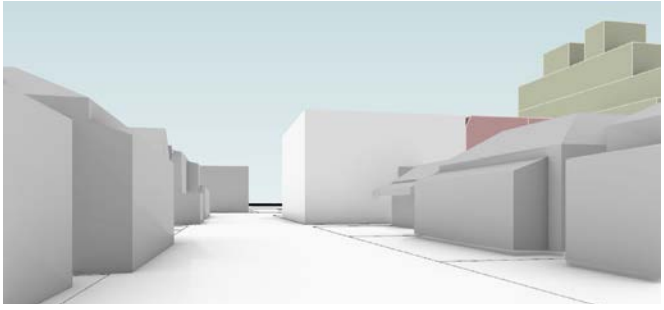

Figure 36. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 4

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
4	Height of the building is not visually dominant and the setback sufficiently retains the prominence of the chimneys when viewed from the west (see Figure 41).	The consistent setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.	Aligning the height with the heritage buildings to the east provides an appropriate transition.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 17m would be able to be delivered.

Table 15. Scenario 4 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
9m	12m	9m	N/A

Table 16. Built form metrics

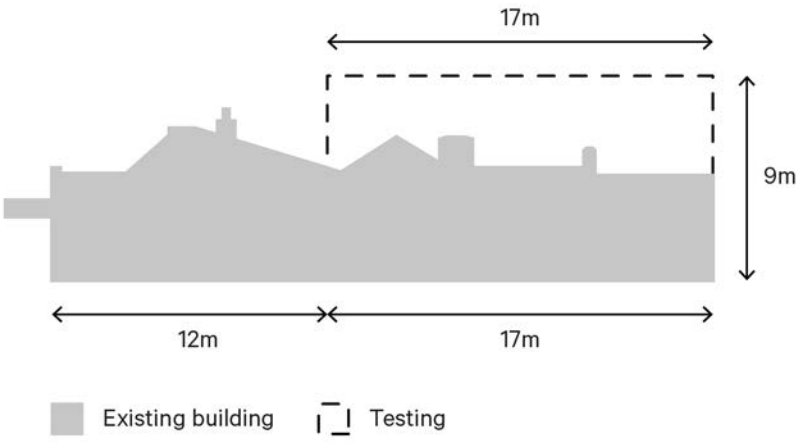

Figure 39. Scenario 4 section

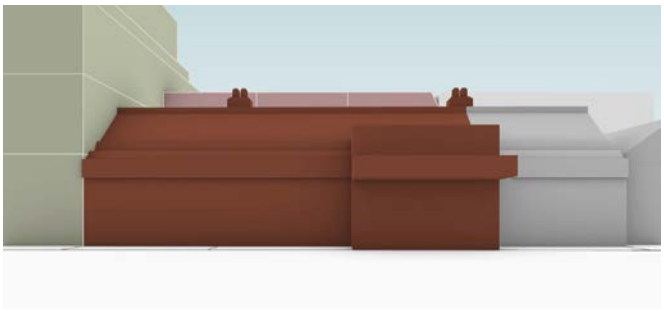

Figure 40. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

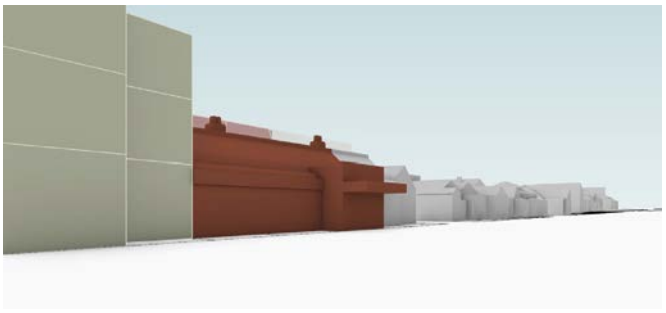

Figure 43. VIEW 2 - Looking east from the southern footpath on Swan Street.

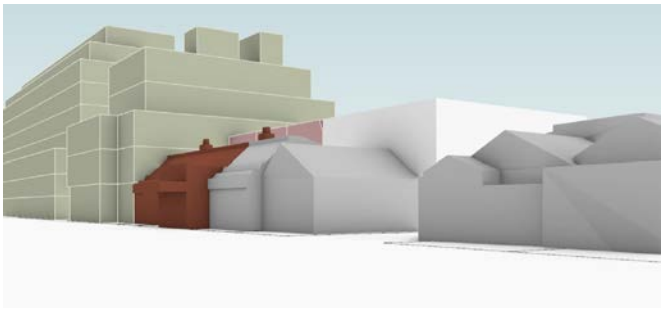

Figure 41. VIEW 3 - Looking west from the southern footpath on Swan Street.

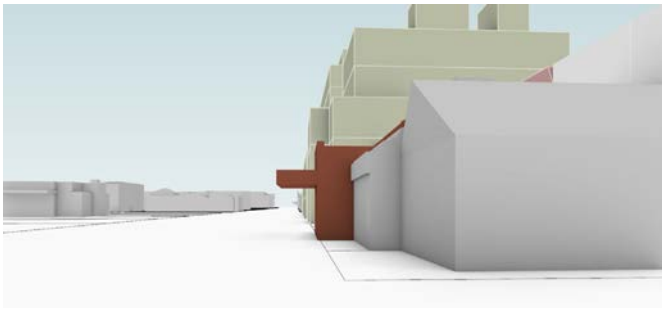

Figure 44. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

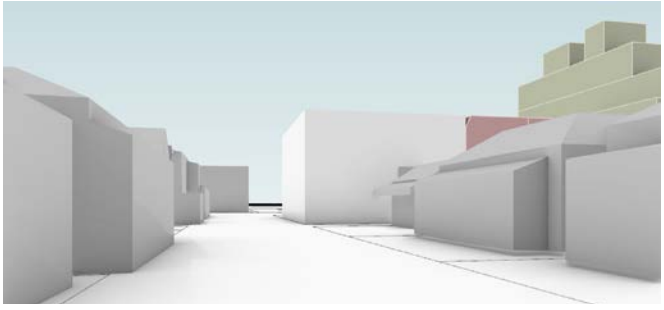

Figure 42. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 5

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
5	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 47).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 9m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered.

Table 17. Scenario 5 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
11m	9m	11m	N/A

Table 18. Built form metrics

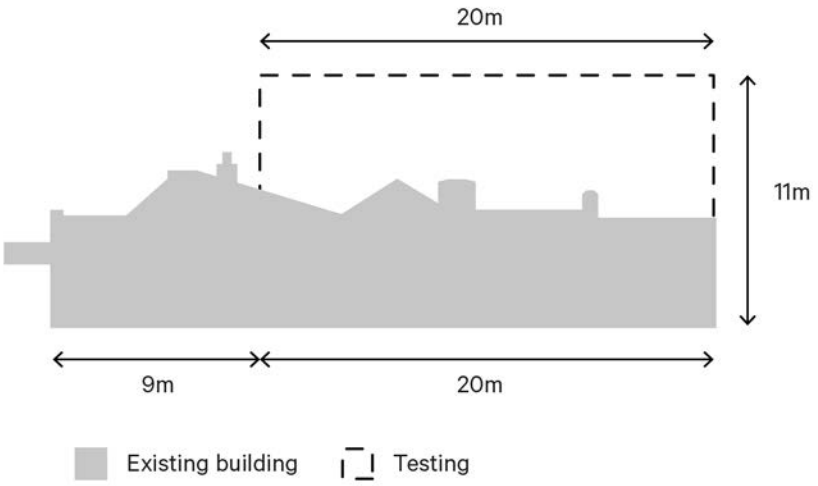

Figure 45. Scenario 5 section

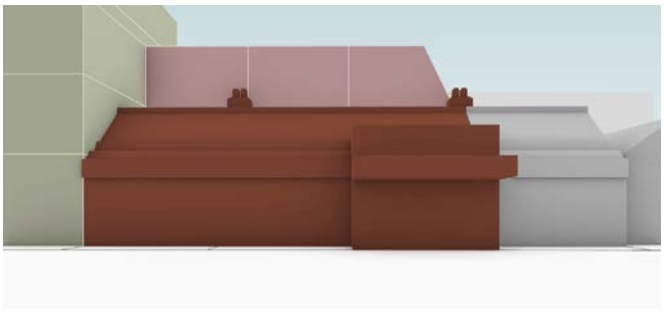

Figure 46. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

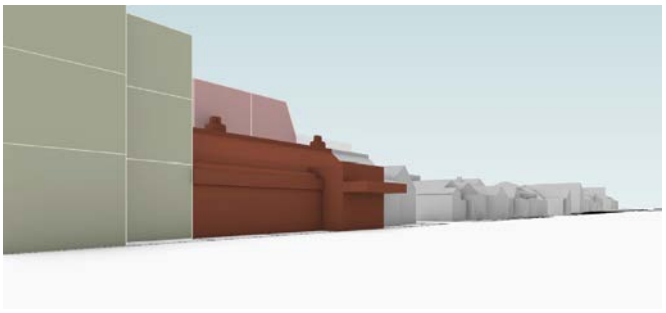

Figure 49. VIEW 2 - Looking east from the southern footpath on Swan Street.

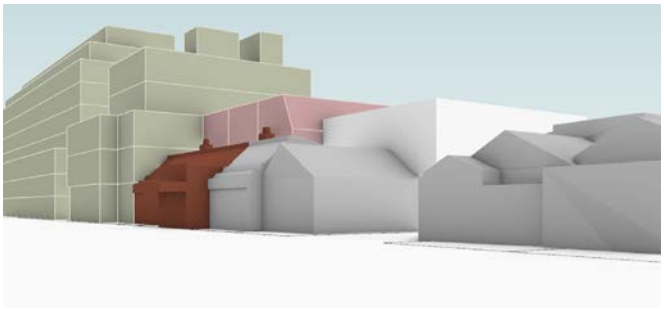

Figure 47. VIEW 3 - Looking west from the southern footpath on Swan Street.

Figure 50. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

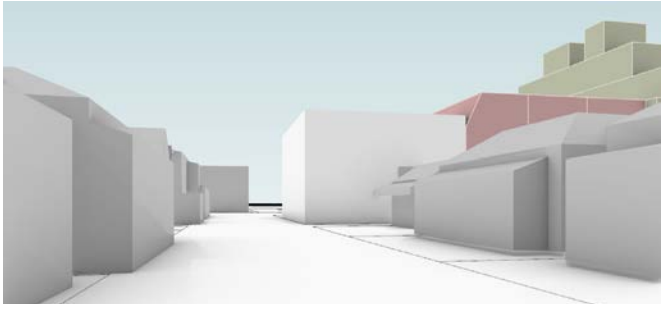

Figure 48. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 6

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
6	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 53).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 10m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 19m would be able to be delivered.

Table 19. Scenario 6 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
11m	10m	11m	N/A

Table 20. Built form metrics

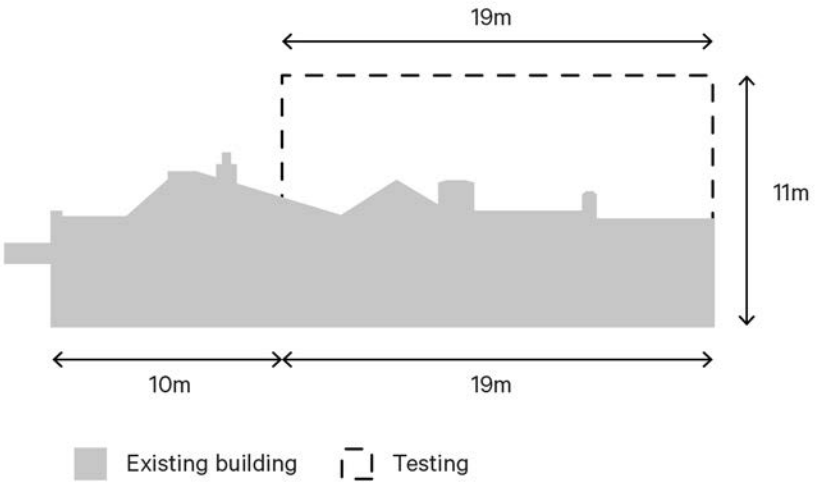

Figure 51. Scenario 6 section

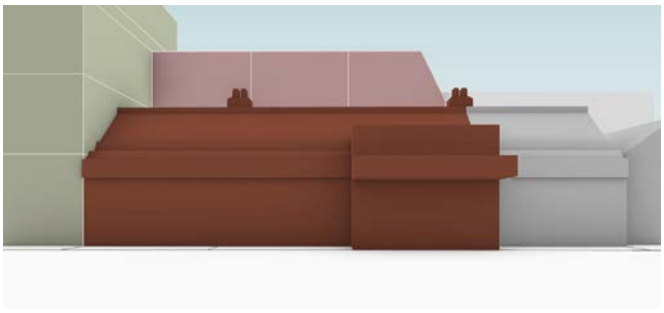

Figure 52. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

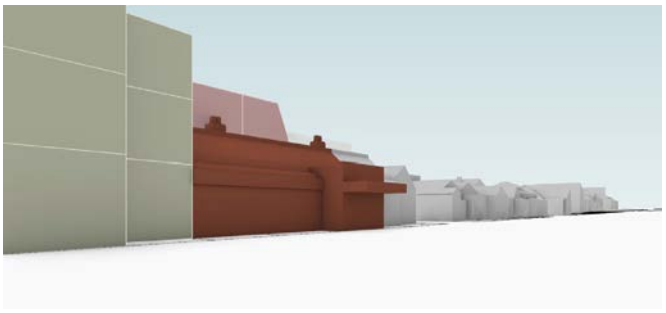

Figure 55. VIEW 2 - Looking east from the southern footpath on Swan Street.

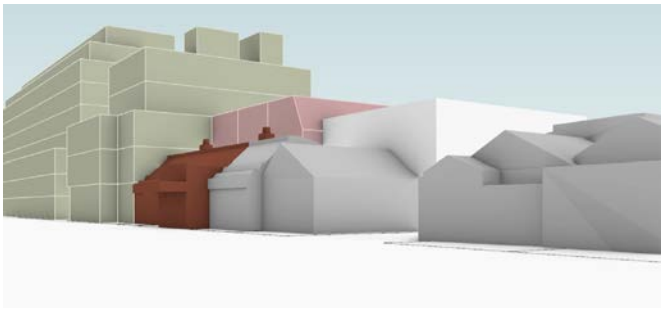

Figure 53. VIEW 3 - Looking west from the southern footpath on Swan Street.

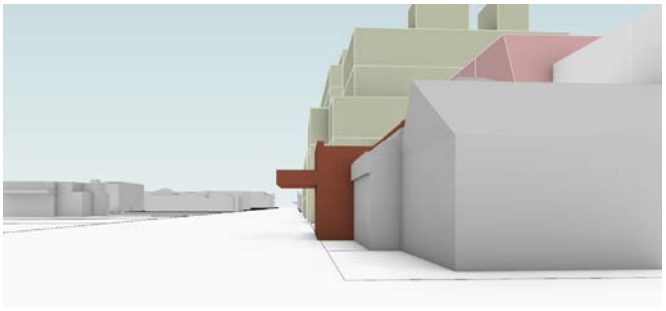

Figure 56. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

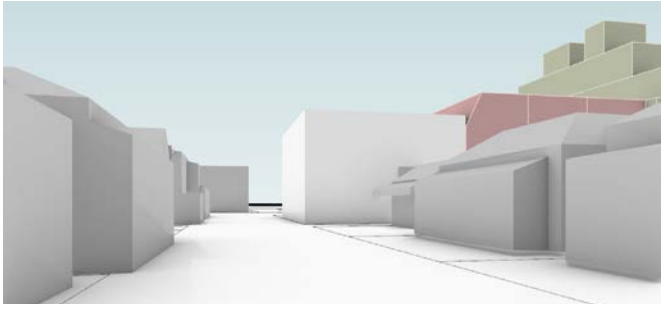

Figure 54. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 7

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
7	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 59)	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	An 11m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 18m would be able to be delivered.

Table 22. Scenario 7 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
11m	11m	11m	N/A

Table 21. Built form metrics

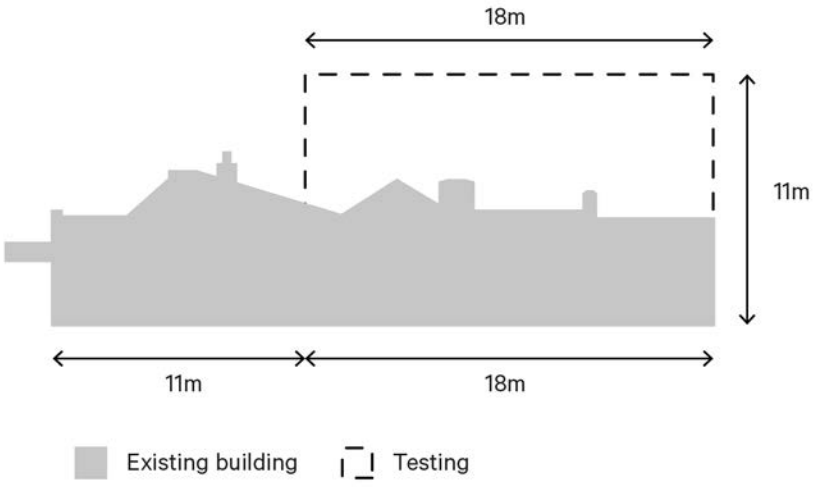

Figure 57. Scenario 7 section

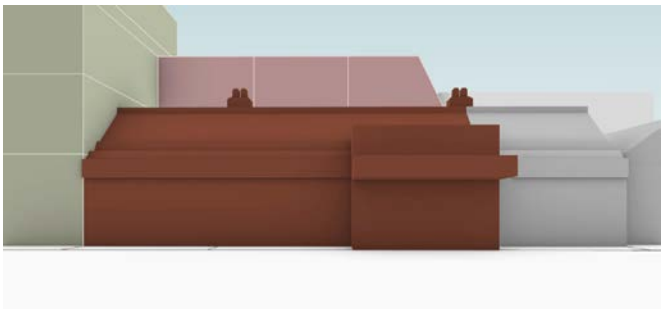

Figure 58. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

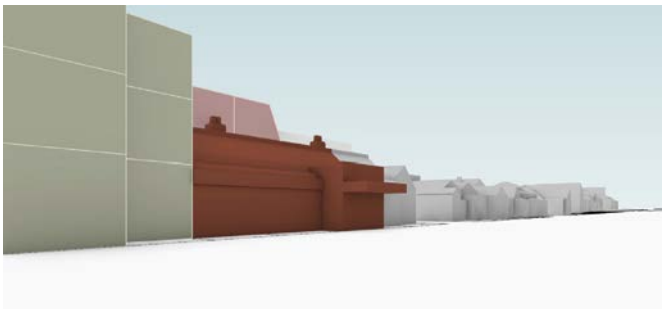

Figure 61. VIEW 2 - Looking east from the southern footpath on Swan Street.

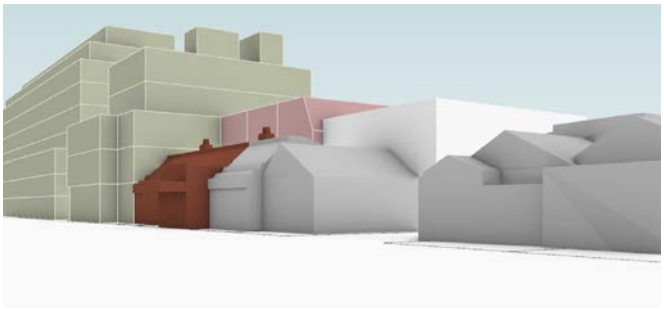

Figure 59. VIEW 3 - Looking west from the southern footpath on Swan Street.

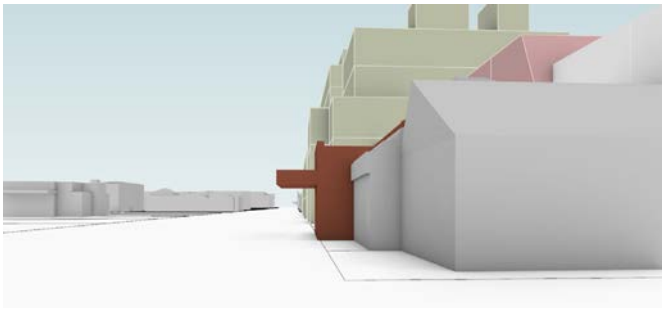

Figure 62. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

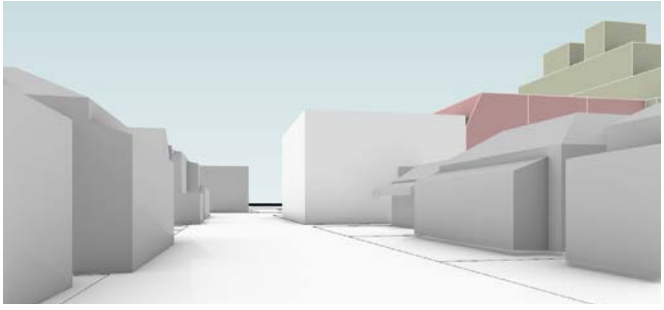

Figure 60. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 8

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
8	Height of the building is not visually dominant and aligns with the height of the proposed street wall at 487-491 Swan Street (see Figure 65).	The consistent setback between 493-497 and 499 Street retains the cohesiveness of the heritage cluster.	An overall building height of 11m provides an appropriate transition to the heritage buildings in the east.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 17m would be able to be delivered.

Table 24. Scenario 8 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
11m	12m	11m	N/A

Table 23. Built form metrics

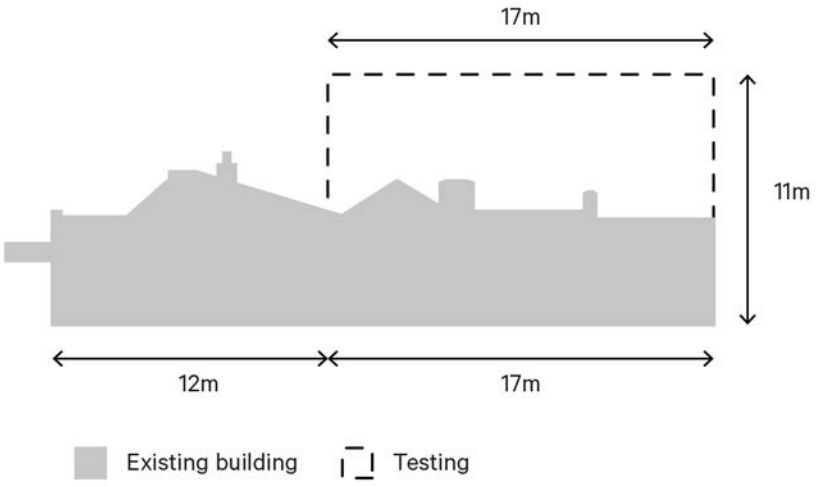

Figure 63. Scenario 8 section

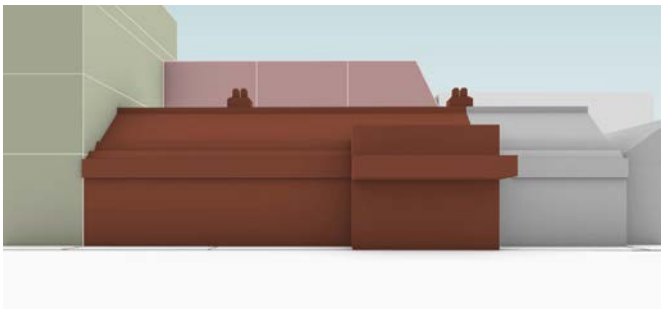

Figure 64. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

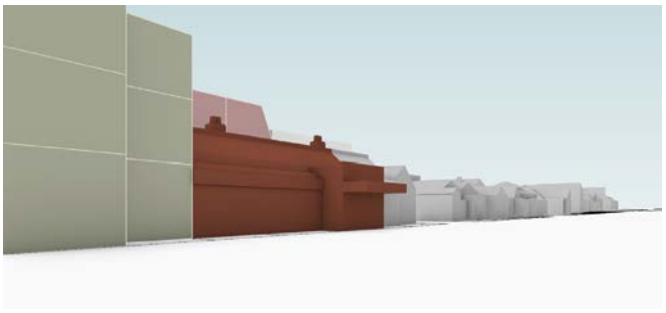

Figure 67. VIEW 2 - Looking east from the southern footpath on Swan Street.

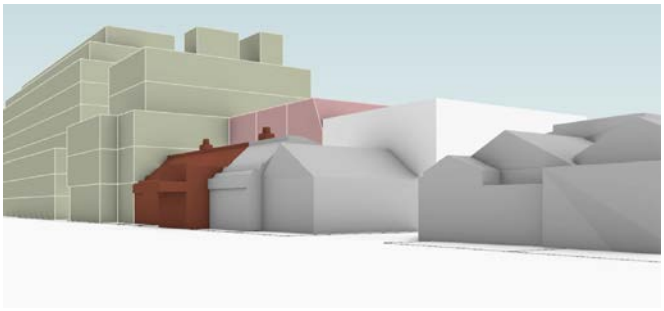

Figure 65. VIEW 3 - Looking west from the southern footpath on Swan Street.

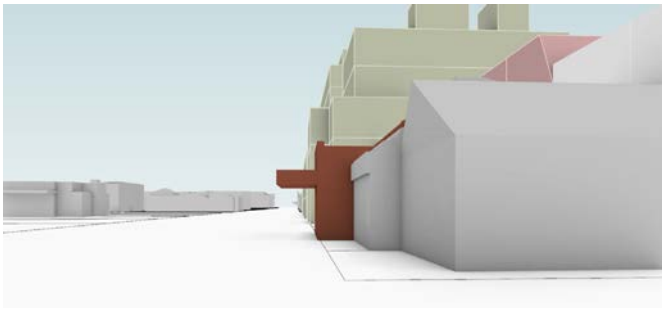

Figure 68. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

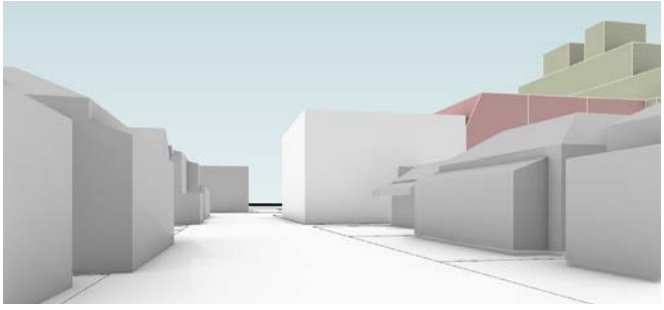

Figure 66. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 9

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
9	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 72)	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	A 9m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.

Table 26. Scenario 9 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
14.5m	9m	11m	4m

Table 25. Built form metrics

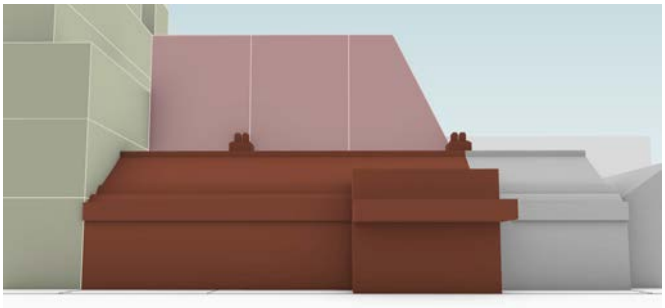

Figure 70. View front on from opposite side of Swan Street, view tilted upwards.

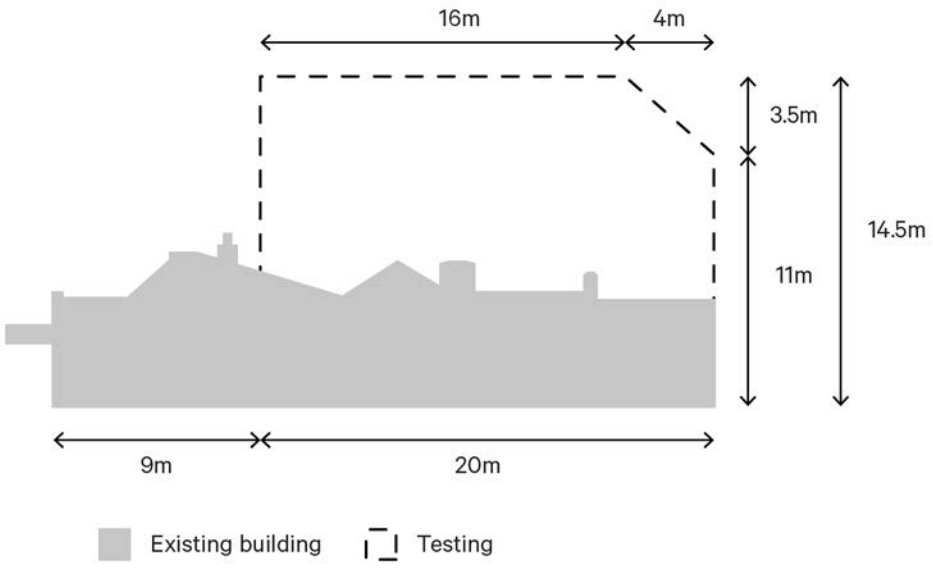

Figure 69. Scenario 9 section

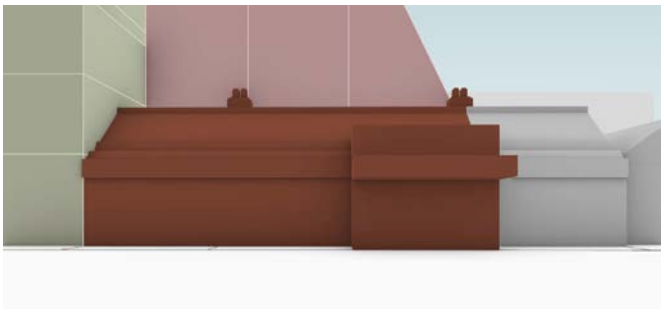

Figure 71. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

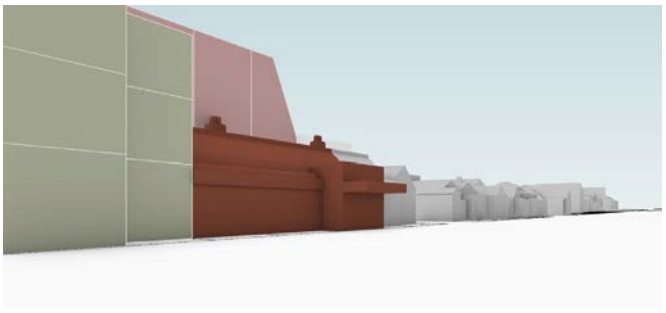

Figure 74. VIEW 2 - Looking east from the southern footpath on Swan Street.

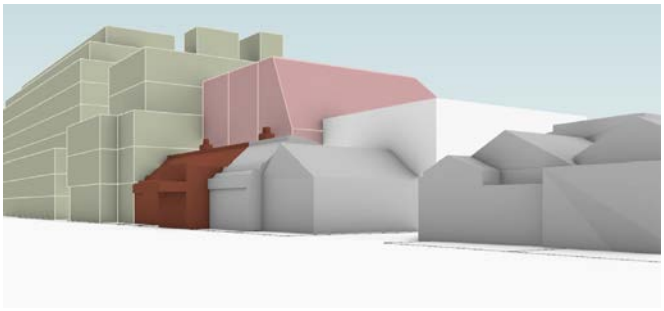

Figure 72. VIEW 3 - Looking west from the southern footpath on Swan Street.

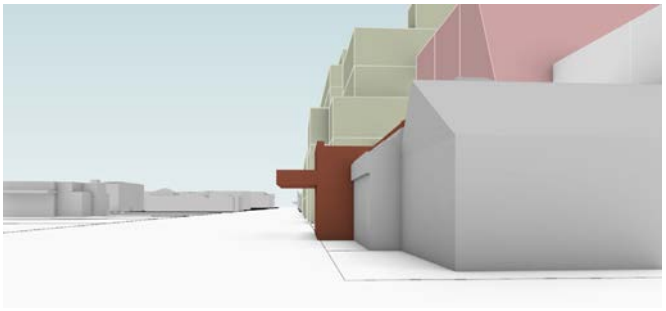

Figure 75. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

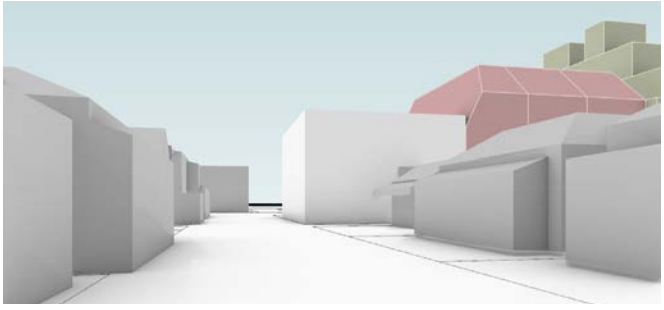

Figure 73. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 10

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
10	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 79).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	A 10m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.

Table 28. Scenario 10 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
14.5m	10m	11m	4m

Table 27. Built form metrics

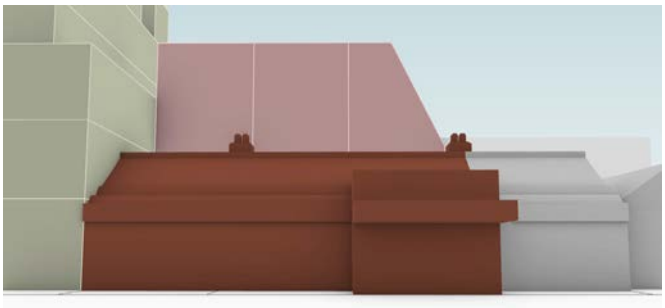

Figure 76. View front on from opposite side of Swan Street, view tilted upwards.

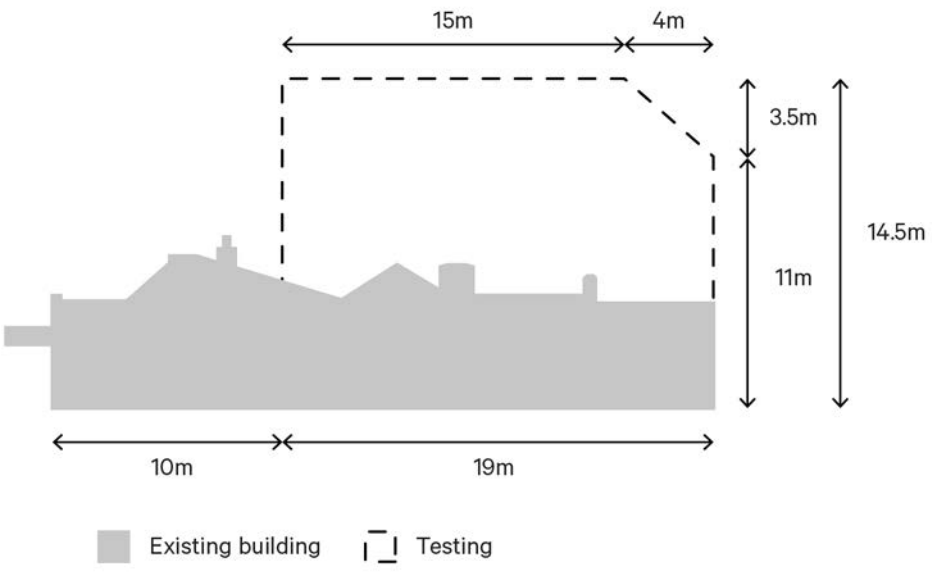

Figure 77. Scenario 10 section

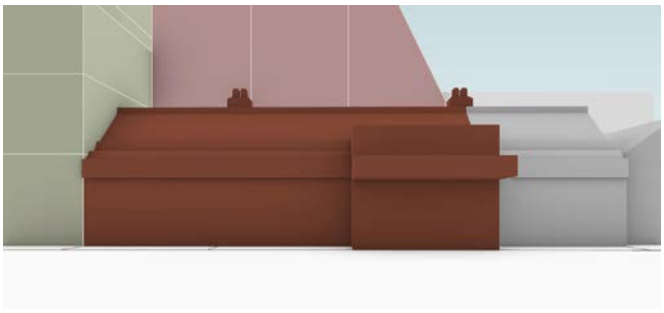

Figure 78. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

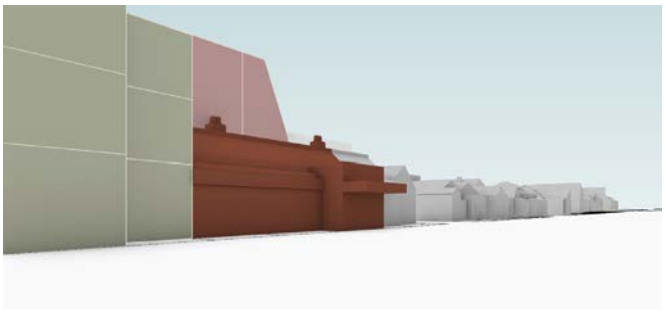

Figure 81. VIEW 2 - Looking east from the southern footpath on Swan Street.

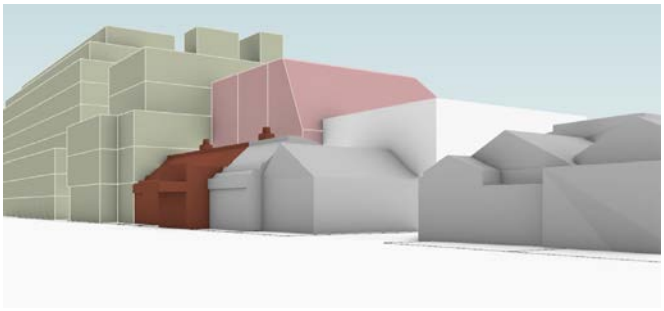

Figure 79. VIEW 3 - Looking west from the southern footpath on Swan Street.

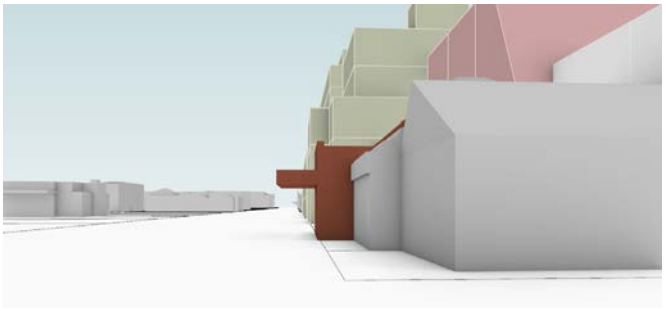

Figure 82. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

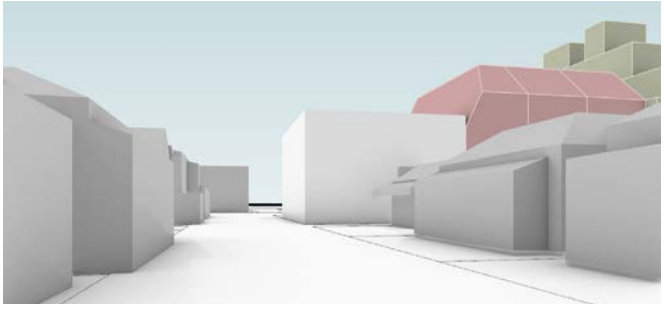

Figure 80. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 11

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
11	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 86).	The variable setback between 493-497 and 499 Swan Street reduces the cohesiveness of the heritage cluster.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	An 11m setback would retain the first roofline and the chimney. However, it would not retain the first two rooms of the building which is considered best-practice	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.

Table 30. Scenario 11 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
14.5m	11m	11m	4m

Table 29. Built form metrics

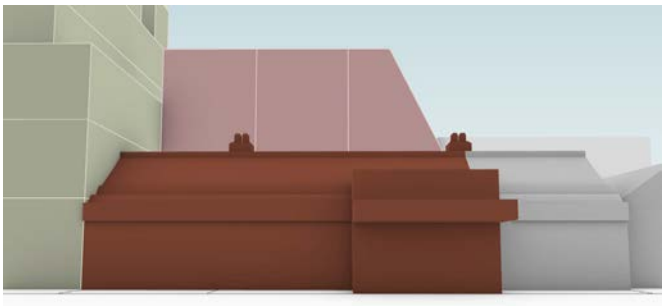

Figure 83. View front on from opposite side of Swan Street, view tilted upwards.

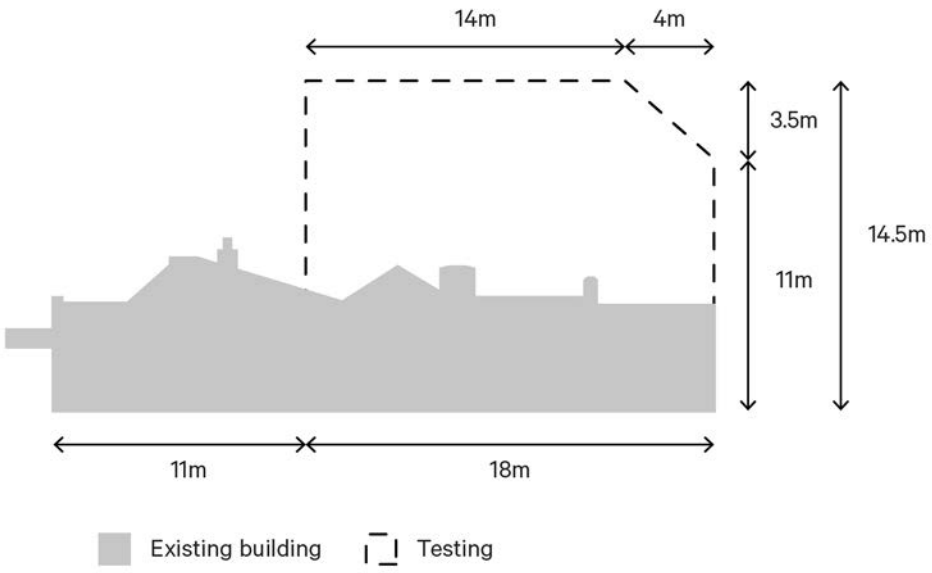

Figure 84. Scenario 11 section

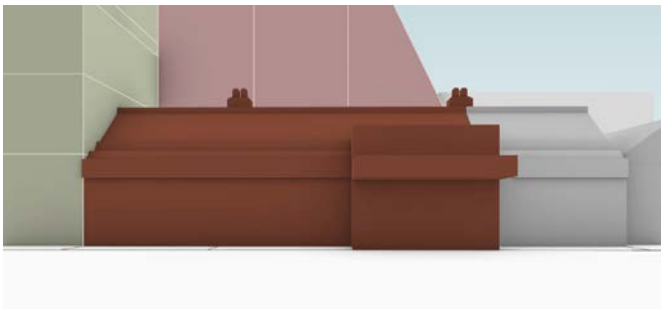

Figure 85. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

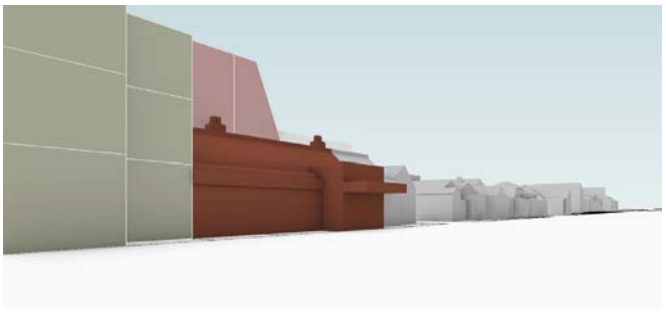

Figure 88. VIEW 2 - Looking east from the southern footpath on Swan Street.

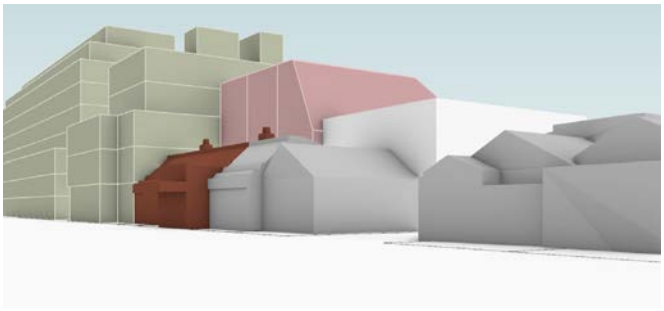

Figure 86. VIEW 3 - Looking west from the southern footpath on Swan Street.

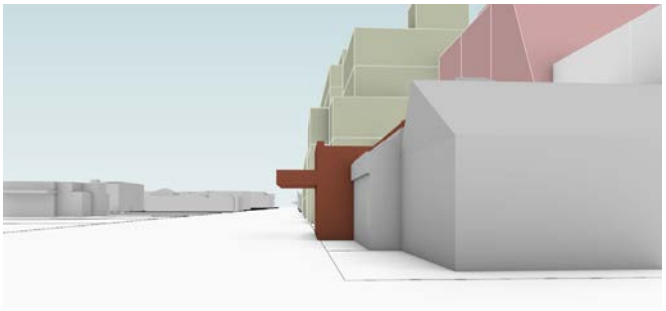

Figure 89. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

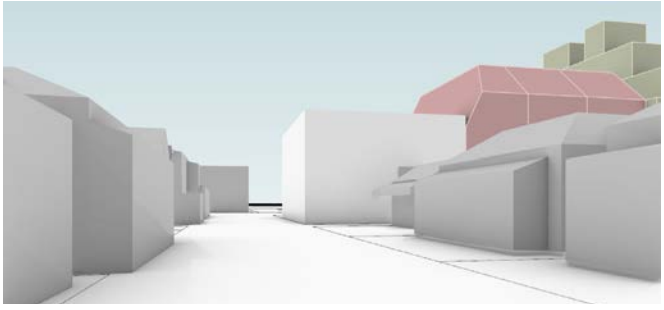

Figure 87. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

Built fom testing
Scenario 12

Optimum outcome
Acceptable outcome
Unacceptable outcome

SCENARIO	TO AVOID A VISUALLY DOMINANT UPPER LEVEL FORM ABOVE THE HERITAGE BUILDINGS.	TO MAINTAIN THE COHESIVENESS OF THE CLUSTER OF HERITAGE BUILDINGS WITH A SHARED ROOF FORM.	TO PROVIDE AN APPROPRIATE TRANSITION IN SCALE TO THE HERITAGE AND RESIDENTIAL BUILDINGS IN THE EAST.	TO SUFFICIENTLY RETAIN THE EXISTING HERITAGE FABRIC AS PER 15.03-1L.	TO FACILITATE THE DELIVERY OF BUILDINGS WITH A SUFFICIENT FLOORPLATE DEPTH AT UPPER LEVELS.
12	Height of the building is visually dominant and exceeds the height of proposed street wall at 487-491 Swan Street (see Figure 93).	The consistent setback between 493-497 and 499 Street is positive but the cohesiveness of the heritage cluster is compromised by the height variation of two storeys.	A building height of 14.5m is inappropriate and doesn't effectively transition to the scale of heritage buildings in the east.	A 12m setback would retain the first roofline, the chimney and the first two-rooms of the building which is considered best-practice.	A building with a depth of 20m would be able to be delivered. However, to meet the interface requirements to the east, the floorplate at the upper levels would be reduced to 2.5m in width, this would only be sufficient for a very small room.

Table 32. Scenario 12 assessment

OVERALL BUILDING HEIGHT	UPPER LEVEL STREET SETBACK	REAR STREET WALL HEIGHT	UPPER LEVEL SIDE AND REAR SETBACK
14.5m	12m	11m	4m

Table 31. Built form metrics

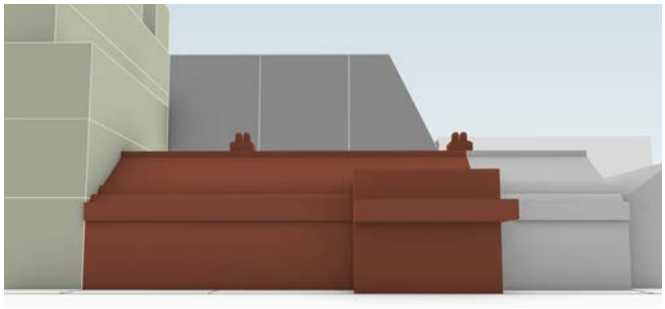

Figure 90. View front on from opposite side of Swan Street, view tilted upwards.

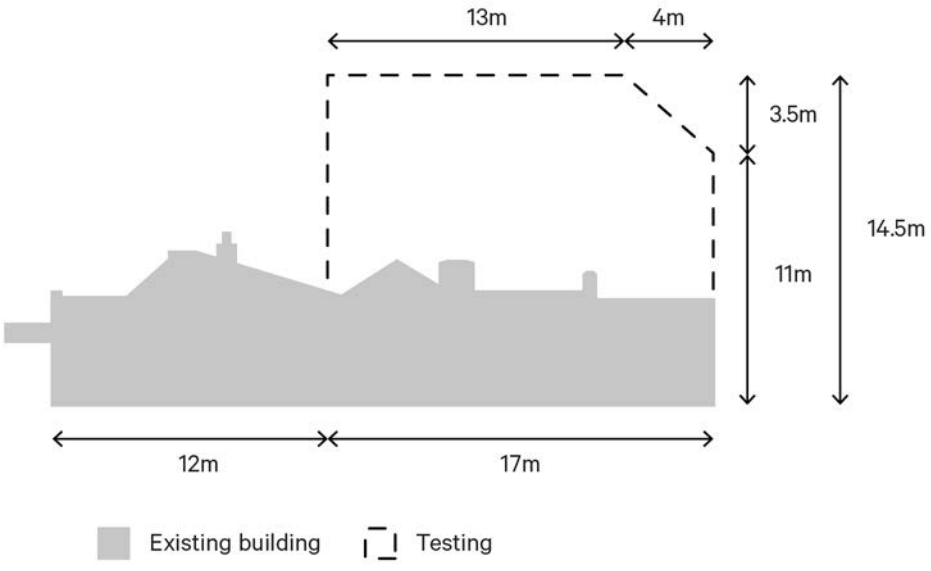

Figure 91. Scenario 12 section

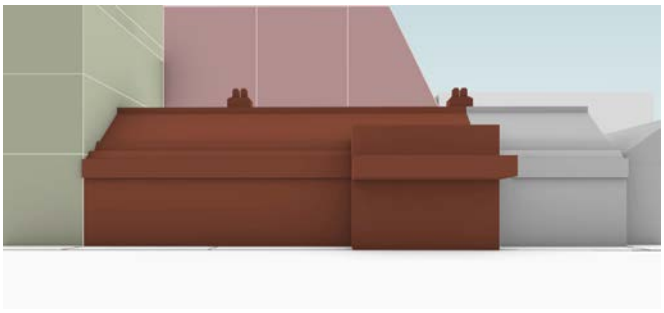

Figure 92. VIEW 1 - Looking north at the subject sites from the southern footpath on Swan Street.

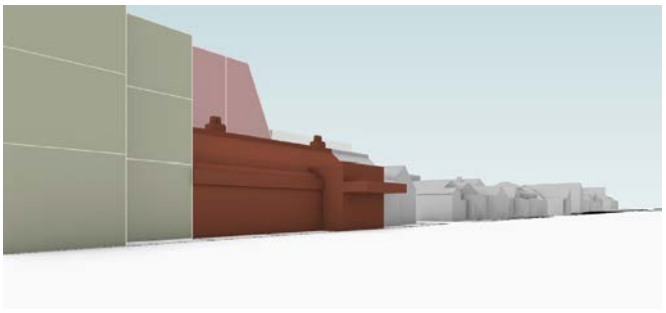

Figure 95. VIEW 2 - Looking east from the southern footpath on Swan Street.

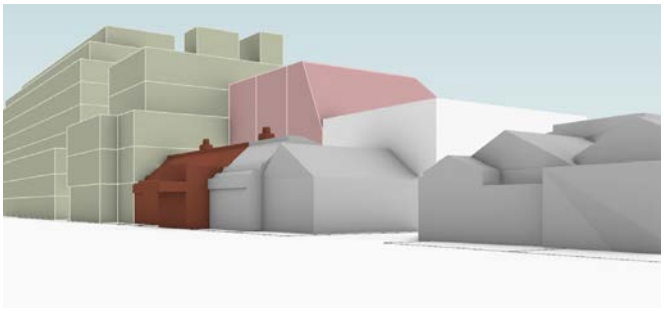

Figure 93. VIEW 3 - Looking west from the southern footpath on Swan Street.

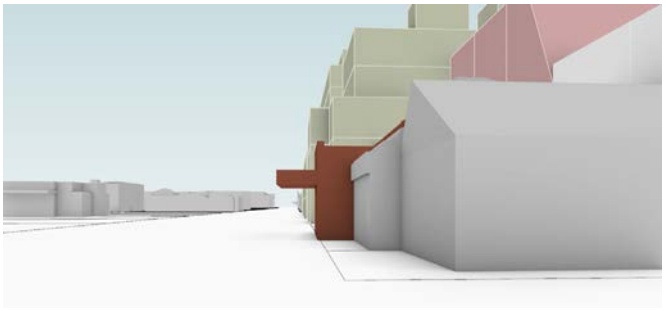

Figure 96. VIEW 4 - Looking west from the northern footpath on Swan Street at the intersection of Queen Street and Swan Street.

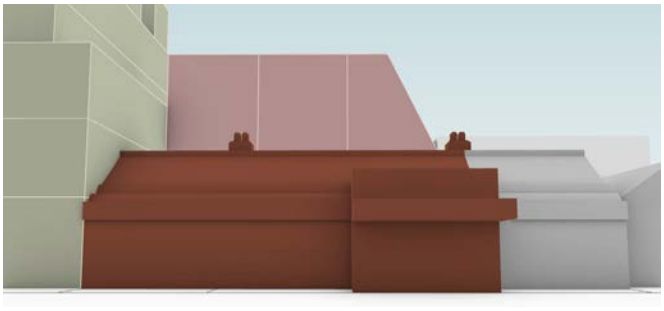

Figure 94. VIEW 5 - Looking south from the eastern footpath on Queen Street.

- Existing buildings in study area
- Test built form
- Proposed developments
- Context buildings
- Neighbourhood Residential Zone controls modelled on adjacent sites

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