

404-416 Windsor Road, 1-3 Meryll Ave, Baulkham Hills

21st October 2008

for Quay Projects

Urban Design Concept, Massing and Controls

prepared by

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INTRODUCTION

This report has been prepared by Ruker and Associates Urban Design for Quay Projects.

It is intended to elucidate and clarify why the site at 404-416 Windsor Road (including 1-3 Meryll Ave) Baulkham Hills is suitable for inclusion in the Baulkham Hills Town Centre area.

It also sets out general design criteria and controls commensurate with the sites inclusion into the Baulkham Hills Town Centre Area.

This report employs an urban design and place specific methodology which analyses the place to understand its spatial and physical structure to ensure that plans and developments improve the amenity, identity and livability of the centre.

URBAN STRUCTURE

TOWN CENTRE IDENTITY AND AMENITY

Defining public space

Urban design practice focuses firstly on public space as the primary structuring element for a place; that is the centres streets and other public open spaces. This is important as streets provide the primary means of circulation to and through the centre physically as well as access and orientation to and through the centre visually.

The identity, character and functionality of a centre is also experienced from the public domain, primarily its streets. As such it is important to consider both sides of streets or roads together and to include these within town centre area precincts. This will ensure a coordinated approach to the design of the centre is achieved and that built form (particularly building elevations) contribute to the quality of the public domain and the identity of the centre as a public place.

In architectural design terms this may include ensuring that new buildings:

- create enclosure to the street; create a façade with a high degree of enclosure to the street (required also for acoustic insulation),
- are commensurate with the height of buildings on the other side of the road,
- consider the effects of topography on building height given that the site is at the lowest point in the Town Centre and lower than the other side of the street.

The site

The site is located on the western side of Windsor Road and on the northern side of the Town Centre. On the opposite side of the road to the site is the new Stocklands Mall expansion. The Stocklands Mall is included in the Town Centre Masterplan area whereas the site is not. This section of Windsor Road is also not included in a precinct but the Draft DCP does have some general guidance including street tree planting and pedestrian access on the eastern side of the road.

When considering the town centre from its public domain, the site; in terms of its location, is visually and physically part of the Town Centre area.

As such it is important that the site is included in the Town Centre area and that the opportunity to ensure that building elevations are coordinated on both sides of the street is realised to improve the town centres identity to its western side.

By including the western side of Windsor Road in the Town Centre area this allows improvements to the ground plane; street trees and footpaths etc. to be coordinated along the road to fit with the design of the whole centre and to reflect the increase in density on the western side of Windsor Road.

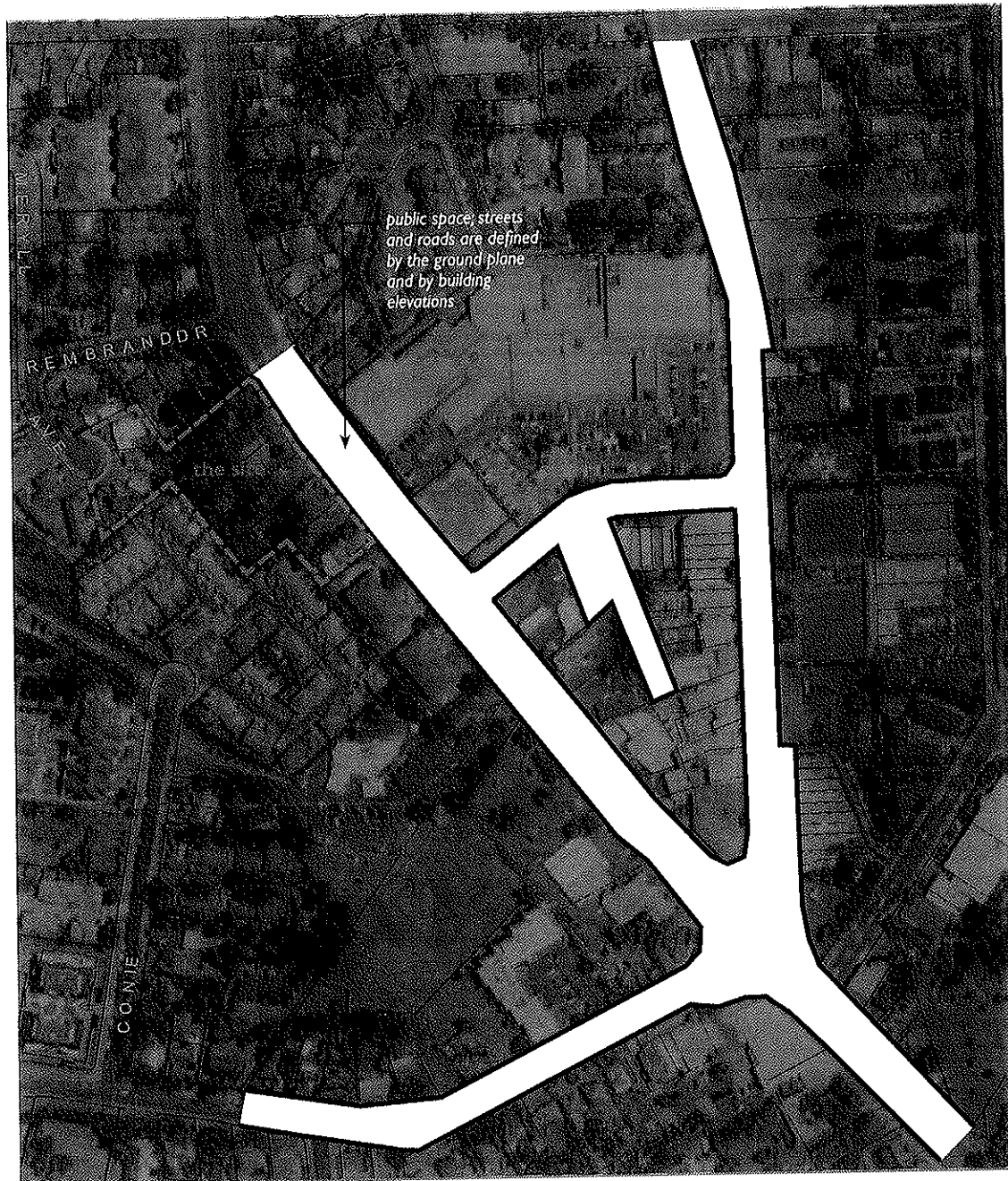


Figure Ground Diagram: Town Centres are experienced from the public domain. Building elevations on both sides of streets and roads create the primary Town Centre space.

Defining the western entry to the Town Centre

A important urban design principle when establishing a town centre area is to ensure the boundary goes mid block rather than along streets thereby recognising that the public domain (streets) is the focus of the place rather than private allotments.

The visual identity and clarity of a centre is experienced from its streets/roads and both sides of the street are read as part of the centre. So too the town centre boundary is experienced from the street or road, particularly when crossing the boundary and entering the centre area.

On entering the town centre drivers should be clearly given the necessary cues to share the street, slow down and generally be more aware of their surroundings.

A clearly defined boundary between the Town Centre area and the surrounding suburbs gives the cue to drivers and pedestrians of the change from suburban to urban. This signifies the type of activities to be expected different from the surroundings ie. turning vehicles, slower traffic, pedestrians, school children, visual messages and advertising, opportunities to stop or attractive places to shop.

Spatially and physically the transition from suburban to town centre is created by the design of:

- the ground plane of the street, and
- the streets elevation (building elevations).

Street wall buildings with enclosed facades, less private gardens and more footpaths, commercial and retail facades and narrower setbacks signify an urban shopping environment where greater pedestrian densities are encouraged.

The site

The Town Centre is located on the nexus of three major roads; Windsor Road, Old Northern Road and Seven Hills Road. Windsor Road is the primary road and provides the primary route of access to the Town Centre linking it to the regional area on a North-South, South-North axis. Old Northern Road and Seven Hills Road are also important access roads which link the centre to the regional area to the West and East respectively. All other streets are minor internal connectors.

The site is located on Windsor road and on the western side of the Town Centre.

Travelling either northward or southward along Windsor Road is the way most people would move to or through the centre. As such defining and clarifying the boundary between the centre and surrounding residential areas from both the south and the north is of primary importance to the identity and functionality of the centre.

The site is strategically located to provide the opportunity to define and enclose the Town Centre on its western boundary. When travelling south it is the first site visible after the bend in the road straightens out and is a key visual cue to signal arrival in the Centre.

The opportunity here is to recognise the importance of marking the change from suburban to urban, from car dominated to pedestrian pleasant to enhance the function and amenity of the town centre and to give it street life within the context of it being a busy thoroughfare.

There are examples in Sydney where traffic is slowed when entering an urban shopping area whilst still carrying significant amounts of through and to traffic thereby providing a balance between the different types and kinds of movement types required. (King Street Newtown, George Street Sydney, Oxford Street Bondi Junction).

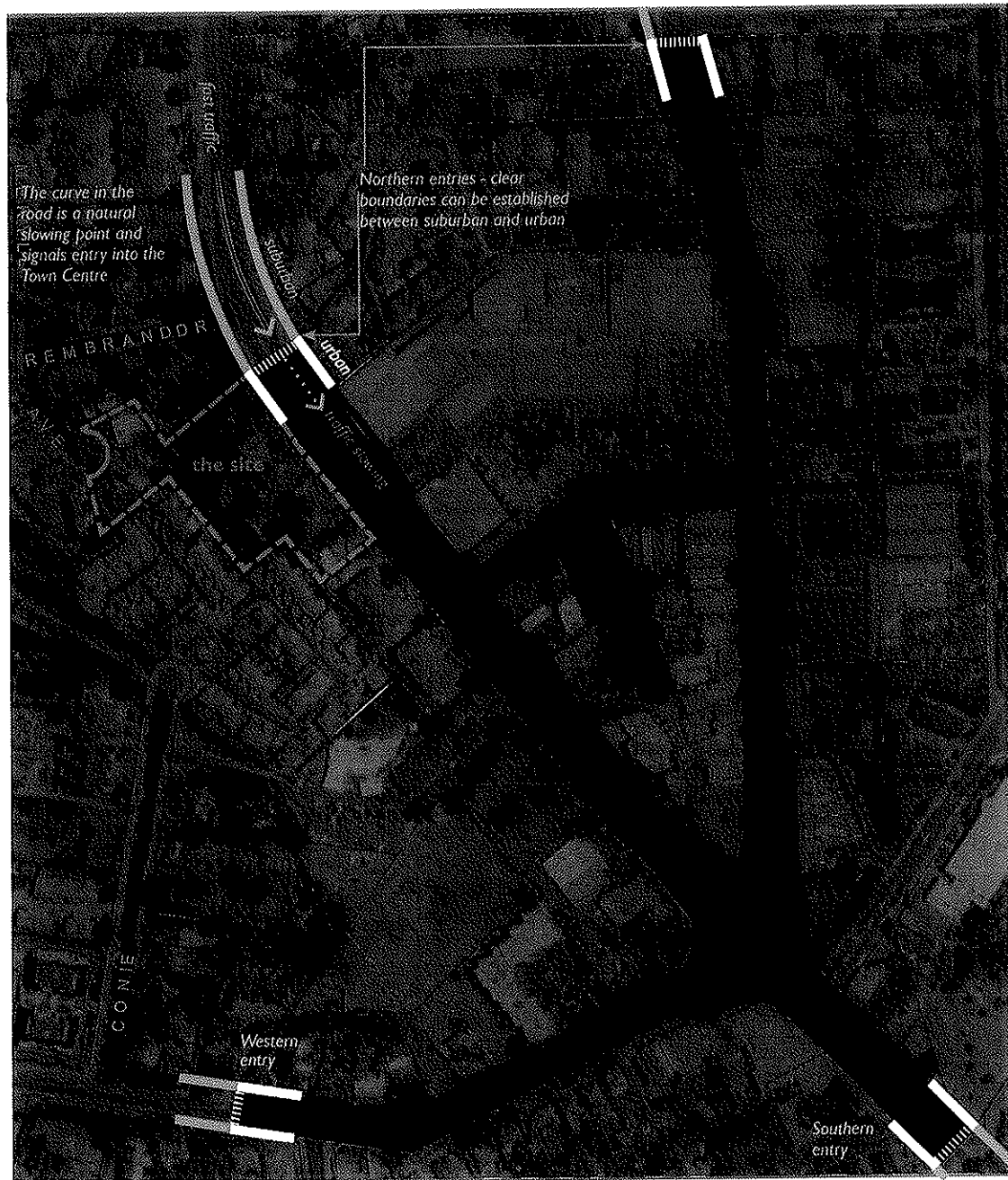


Figure Ground Diagram: Town Centre boundaries; the curve in the road, the change in building forms (street elevation) and change in traffic movement (Street ground plane) can be employed to signal entry to the Town Centre. The site is strategically located at the Northern entry within the Town Centre and has the potential to contribute to defining the entry and identity of the centre.



Photo looking north along Windsor Road.

Visually the boundary of the Town Centre to the north (street section shown with a white line) is where the topography drops down, the bend in the road and in proximity to the northern end of the site area.



Photo looking south along Windsor Road.

Visually the boundary of the Town Centre to the south (street section shown with a white line) is at the intersection of the three major roads; Windsor Road, Old Northern Road, Seven Hills Road and at the top of the ridge.

SUPPORTING VITALITY AND DIVERSITY

Use

It is important that a wide range of retail and commercial uses are encouraged in town centres complemented by civic, community and recreational uses. This helps to ensure the centre is an attractive and functional place to visit and where trips for a range of daily and weekly needs can be combined. In centres with public transport this provides the opportunity to leave the car at home and catch a bus instead.

Creating vitality and street life within the centre is a function of the range of services on offer and therefore the attractiveness of the place to visit regularly combined with the amount and quality of shopfronts activating street level.

The site

Part of the site is currently used as a medical centre and doctors suites. This use is at present extremely well patronized and indicates the need in the town centre for professional and/or medical suites.

This type of use does not generate as much movement and traffic as retail premises do and will complement and enhance the range of retail uses within the town centre. Patrons can access the suites either by parking within the Stocklands Mall Carpark and then a short walk across using the Olive Street lights or provision for underground parking can be made on site with access off Windsor Road.

Given that there are already significant community and commercial uses on the western side of Windsor Road (including Connie Avenue Reserve, Baulkham Hills Community Centre, Bull and Bush Hotel) the connection between the western and eastern sides of Windsor Road is already established.

Extending the Town Centre uses along Windsor Road to the northern end of the Stockland development can provide the opportunity to add to the range of uses available in the town centre. The pedestrian crossing at Olive Street is the major pedestrian connection over the road and public domain improvements to pedestrian amenity on the western side of Windsor Road can add to the attractiveness and safety for people using destinations on the western side of the road.

Including the whole of Windsor Road into the Town Centre area will provide a coherent precinct on the Western side of the road with a range of professional offices, community, civic and recreational facilities in proximity to medium density housing.



Photo looking north along Windsor Road.

The potential here is to improve the western part of the Town Centre particularly the pedestrian environment and movement along the western side of Windsor Road to link medium density residential, the Olive Street crossing and the community and recreational facilities.



The area for inclusion within the Town Centre boundary should include the northern entry.
The link between the eastern and western sides of Windsor Road is already established as a number of major civic, community and recreation facilities are located here. The inclusion of the western part of Windsor Road is logical given the amount of medium density housing.

Building form

A common misconception is that a landmark building can signal the entry to a town centre area. However a landmark building does not necessarily either improve the identity or amenity of the town centre for pedestrians, businesses or the public domain nor will it give drivers and people the necessary cues to expect a different urban environment. There are examples around Sydney where the idea of a landmark building soon becomes the eyesore of the area and if developed for residential purposes (which is generally the case) can become the least desirable housing due to its poor amenity.

Originally the concept of a landmark building came from the idea of a public building having greater prominence within the urban landscape. This was due to the important use and public significance the building and therefore the suitability of the building to be visually prominent from both near and far, of exceptional architectural merit and easily found due to its accessible location.

Unfortunately the understanding of the rationale for a landmark building is often misused to mean a large building. Usually these are residential in use and therefore not designed to add to the amenity, usability, civic or social life of the centre.

Making one building far higher than others in the town centre does not guarantee it will exhibit design excellence. Design quality is a challenge on all buildings (particularly residential) regardless of their location or size and starts with a solid understanding of the urban context, public domain and particularly streets.

So too it is not necessarily good to have building under scaled as this leads to an underdevelopment of potential floor space in an important strategic location such as a town centre which requires density for vitality and diversity.

It is also important to ensure that buildings are suited to the topography; ie. generally higher buildings on low topography and lower buildings on higher topography, in order to get more consistent heights along street and throughout the centre generally. It is however appropriate for public or civic buildings to have higher elements.

The Site

The site is located close to the lowest topographic part in the town centre. It is also 2-3m lower than Windsor Road and slopes away steeply from the road. Therefore the site provides the opportunity to achieve more density on the lower parts of the Town Centre where visual impacts are minimal whilst still attaining a consistent height level throughout the centre.

When comparing the site to others in the centre such as the Old Northern Road precinct the site is significantly lower topographically. Given this, the site can have a higher FSR than the Old Northern Road precinct (presently at 2.0:1) without being higher or more bulky.

The site is not on any major visual axis, vistas or views but will form an important part of the Windsor Road streetscape and as such development on the site will not have any adverse effect on views and vistas.

At present the site is not included in the Town Centre and as such is subject to the general medium density controls applying elsewhere in the LGA.

When comparing the site to others; such as the Northern Road Precinct and the Conie Avenue Reserve Precinct, that have been included in the Town Centre area and therefore have higher FSR's, the site is commensurate in terms of its location and its ability to provide greater residential densities whilst also having the least visual impact.

Given this at present the controls undervalue the importance of the site and will result in buildings lower than those within the Town Centre area.



Photo looking north along Windsor Road.

This photos shows the appreciable difference in height between the eastern and western sides (the site) of Windsor Road. Buildings on the western side will need to be higher than the eastern side to ensure the streetscape is similar in height on both sides.

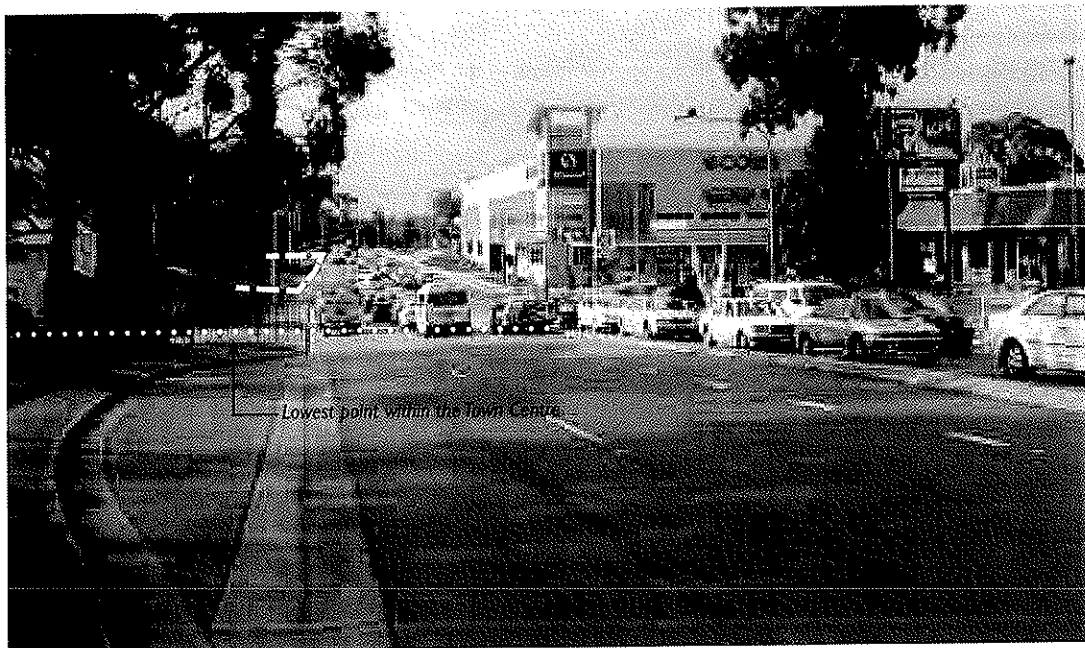


Photo looking north along Windsor Road.

The site (shown with a dashed line) is close to the lowest topographic part of the town centre (shown with a dotted line). To ensure the centre and Windsor Road has consistent heights, buildings in this location will need to be taller.

MASSING CONCEPT SCHEME

SITE CONTEXT

Issues

The sites context provides a fairly challenging environment as there is little coordination between building forms nor a resulting focus on the quality of the public domain.

Some of the contextual conditions for the site include:

- Recently built massive concrete wall to the road on the opposite side of the road at approximately 110m unbroken length and 17m high unbroken height. This is a poor outcome for this part of the Town Centre; for the pedestrian amenity of the road, for surrounding dwellings and for the image of the centre.
- The transition area between residential dwellings and Windsor Road.
- There is currently no definition of the entry to the Town Centre from the North.
- Pedestrian amenity and connectivity is poor for an area with so much medium density, thereby forcing people to drive even for short trips.

Challenges

Some of the key challenges for the development of the site include:

- Addressing the conflict of residential dwellings facing Windsor Road in terms of noise and pollution.
- Improving the pedestrian amenity of Windsor Road.
- Ensuring adequate separation between existing and new dwellings, particularly given there has not been a coordinated (masterplan) approach to medium density.
- Improving pedestrian connectivity.
- Ensuring the development contributes to future improvements to the Town Centre.
- Improves the entry to the Town Centre from the North.

Northern entry is indistinguishable



Stockland building has resulted in a very poor outcome for Windsor Road, for the entry to the Centre and the Centres image. The centre needs to resulting from consideration of streets not lots.

The current medical practice is extremely busy as a result of the convenient location (on the western side of Windsor Road) and much needed service.

Requires improved pedestrian amenity to encourage walking from medium density developments to the shops.

Buildings along the Western side of Windsor road form the edge to the town centre. Their presentation and use in contributing to the town centre are vital.

SITE ANALYSIS

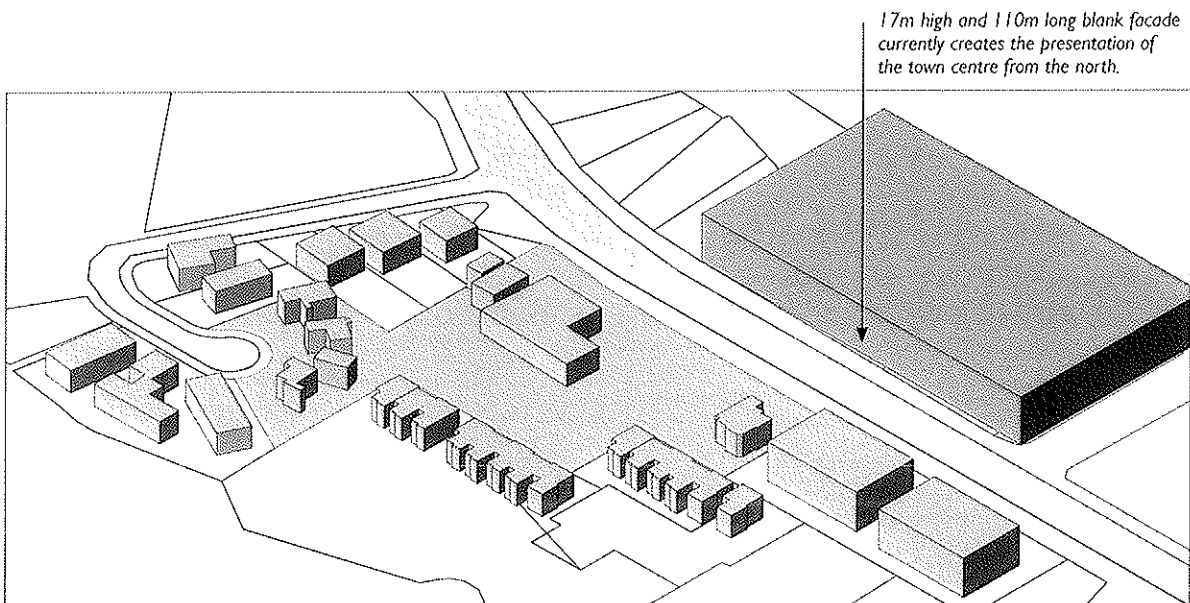
Above all the site is strategically located to provide housing in proximity to the centre however the sites context and current conditions are degraded. Some of the issues here include:

- The difficult context particularly Windsor Road for the presentation of the town centre and for residential development.
- The buildings ideal orientation is on the short axis of the site and along Windsor Road.
- Lack of coordination of medium density building forms.

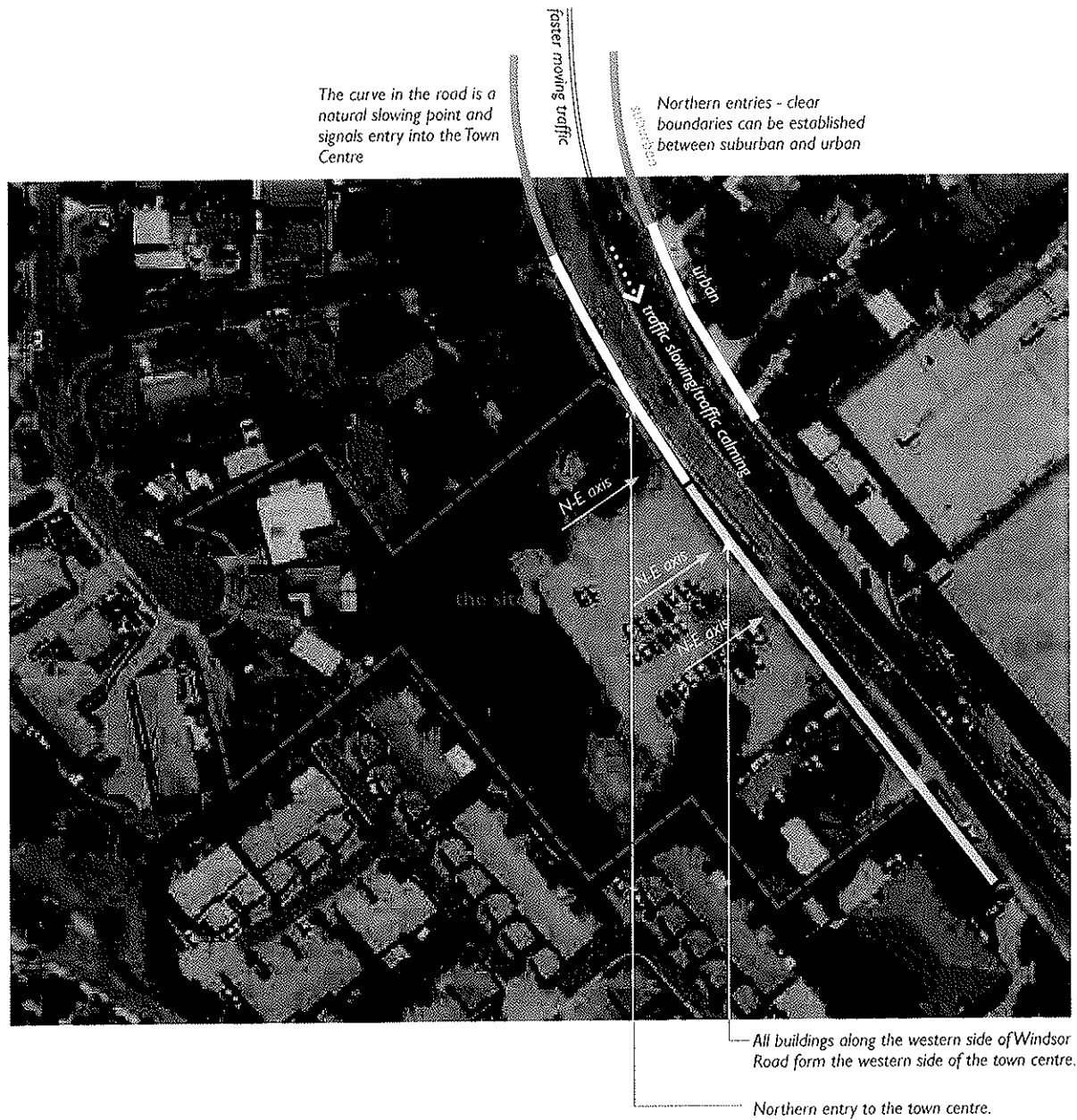
Opportunities

The development of the site will help address these issues as the site:

- Is a great location for high density providing services in walking distance to residences.
- Will help improve the town centre image from the northern entry and on its western boundary.
- Will improve pedestrian amenity along Windsor Road.
- Has a predominantly north-east orientation ideal for solar access.
- Is large enough for a quality built form arrangement with consolidated open space and large areas of deep soil.
- Can buffer noise from lots west of the site and western side of the site.
- Can complete the northern entry to the town centre.



Existing massing surrounding the site has little coordination. Recent developments have degraded the potential quality of this location.



MASSING OPTION 1 - DCP CONTROLS

This scheme represents building footprints that would be generated under the DCP controls.

The DCP sets out generic controls (not place specific) for residential flat buildings. As a result some of the controls will limit a quality outcome on high density sites such as the subject site. The main issue here is that the controls do not recognise the inherent qualities of the site nor the higher level of design required to achieve a good outcome where buildings are larger and closer together.

Issues with the DCP controls

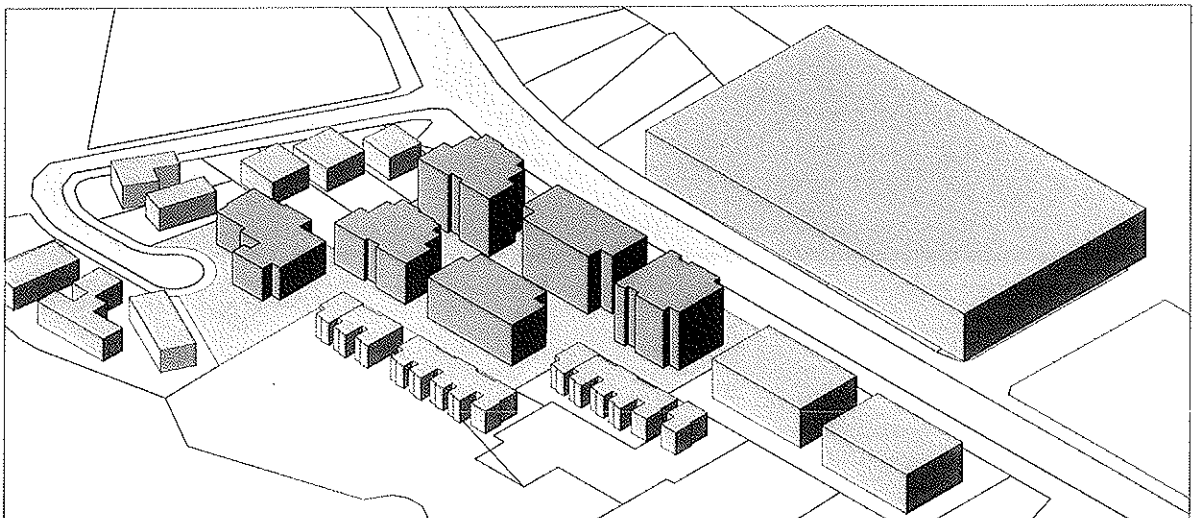
- Built form appropriate for an urban context (ie. block edge) is not possible using the controls as they force buildings to be separated and of short lengths (50m length rule and 12m separation rule).
- High quality noise attenuation using building mass is not possible (50m length rule and 12m separation rule).
- Forced buildings apart regardless of window type and location and orientation (50m length rule and 12m separation rule, side, front and rear setbacks).
- Limits built form outcome to a particular type. ie. deep, fat, short and disconnected buildings.
- Reduces consolidated areas for Deep Soil and large areas for usable communal space due to separation of buildings.

Benefits of the CODE

The residential flat design code provides the necessary flexibility to achieve urban form buildings. The key here is that the controls in the CODE provide *separation* distances between buildings rather than setbacks or max./min. lengths. Setbacks are also place specific depending on the context not generated by a generic density.

The other key benefits of the CODE include:

- A wide variety of setbacks are allowed including zero.
- Controls relate to overall built form outcome for a particular block, street or/and precinct.



General view from the West showing the scale transition which steps from Windsor Road down to the west. Built form here does not change in relation to the urban form conditions on different parts of the site nor recognise the importance of the site in completing the western side of the town centre.

Recommendations

1. Including the site into the Town Centre DCP will trigger a precinct approach and give the mechanism to generate the best outcome for the area. This should apply to all medium/high density residential development surrounding the area not just the subject site as similar problems will also arise when determining an outcome on these sites.
2. Those controls in the DCP that do not generate the best outcome should not be used but replaced with the CODE requirements.



Plan of the built form generated using the DCP requirements. Noise percolated throughout the site, a consolidated soil area is not possible and buildings will have equal amounts on north and south orientation.

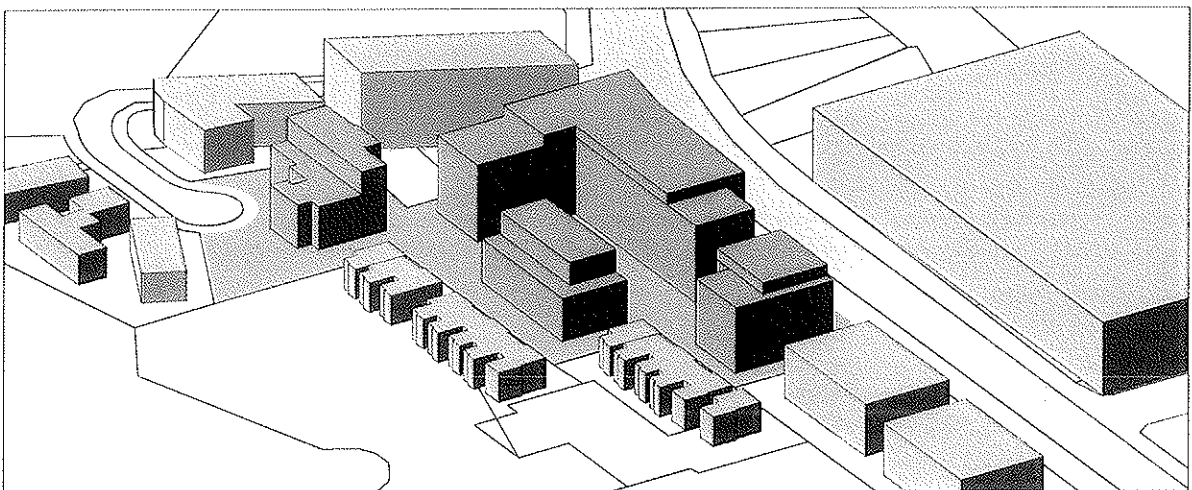
MASSING OPTION 2 - PRECINCT APPROACH

This scheme recognizes the importance of the site in completing the north-western side of the town centre and in being within an urban town centre context.

It recognizes that the location has the potential to be greatly improved in the future with traffic calming, pedestrian movement and amenity improvements and more small scale retail on the western side of Windsor Road.

Benefits of this approach

- Meets the CODE requirements.
- Contribute to the area as a town centre.
- Create a strong and attractive entry to the town centre.
- Blocks noise percolation into the site and neighboring sites further to the west whilst allowing an architectural solution to the buildings facade along Windsor road to achieve noise isolate ie. loggias and double glazing.
- Maximise northern, north-eastern orientation.
- Consolidate open space for separation, outlook, communal space and privacy.
- Steps down the South and the west whilst giving enough massing along Windsor Road to create the town centre entry.
- The building massing provides a quiet courtyard area that many apartments will look out onto at the centre of the site.
- The taller parts of the building massing are located furthest away from low scale dwellings.
- The building massing maximises that north-east orientation and minimises south orientations
- Provides the opportunity for ground level retail iff/when required.
- Creates an edge to the street commensurate with its location in the town centre.



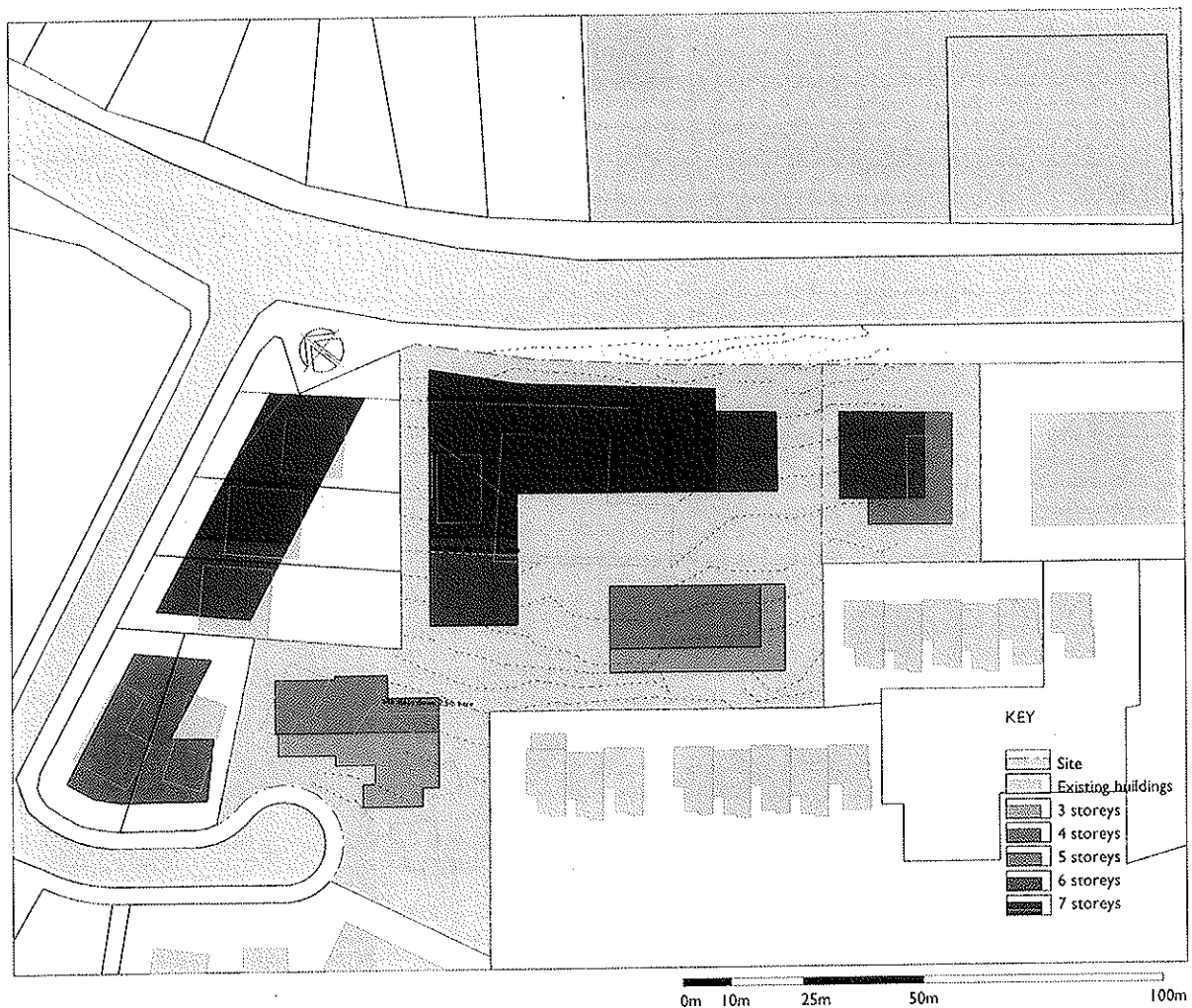
General view from the West showing the scale transition which steps from Windsor Road down to the west. Built form here changes in relation to the urban form conditions on different parts of the site to recognise and enhance the local context.

Recommendations

This option has been generated from a place specific approach and using the CODE requirements and generates a quality outcome for the local context.

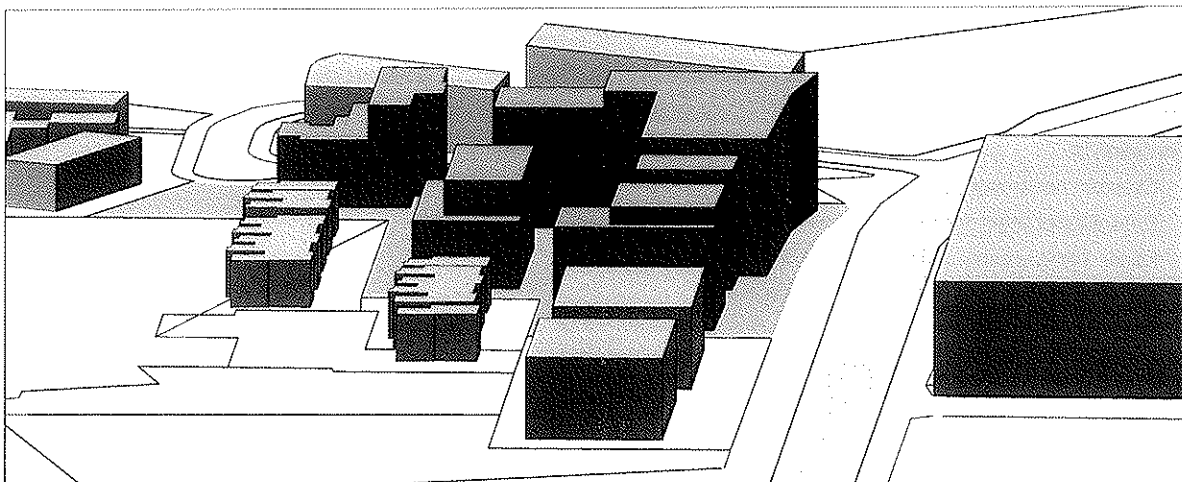
This option is:

- Oriented north-east.
- Consolidates larger forms furthest away from existing dwellings.
- Forms a strong entry definition to the Town Centre.
- Forms and urban presentation to Windsor Road.

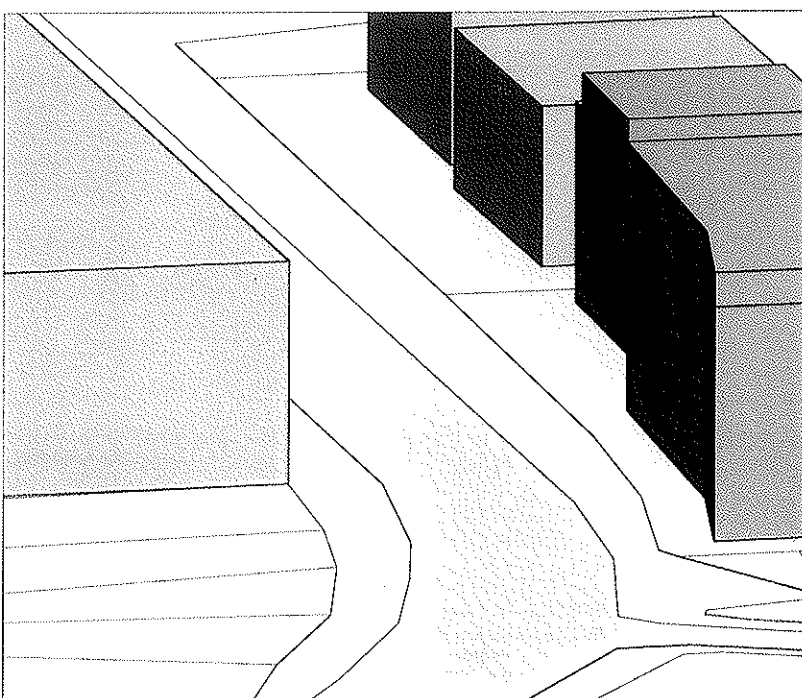


Plan indicating the buildings footprint locations, existing neighbouring buildings and heights.

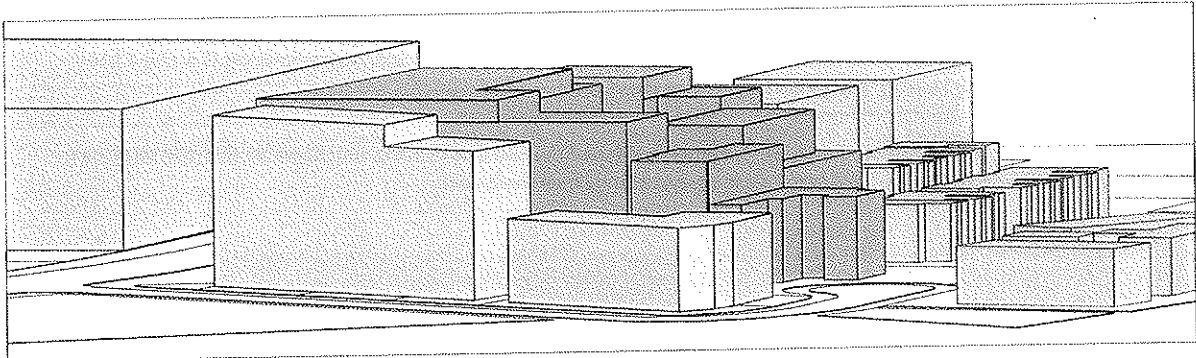
Massing Images



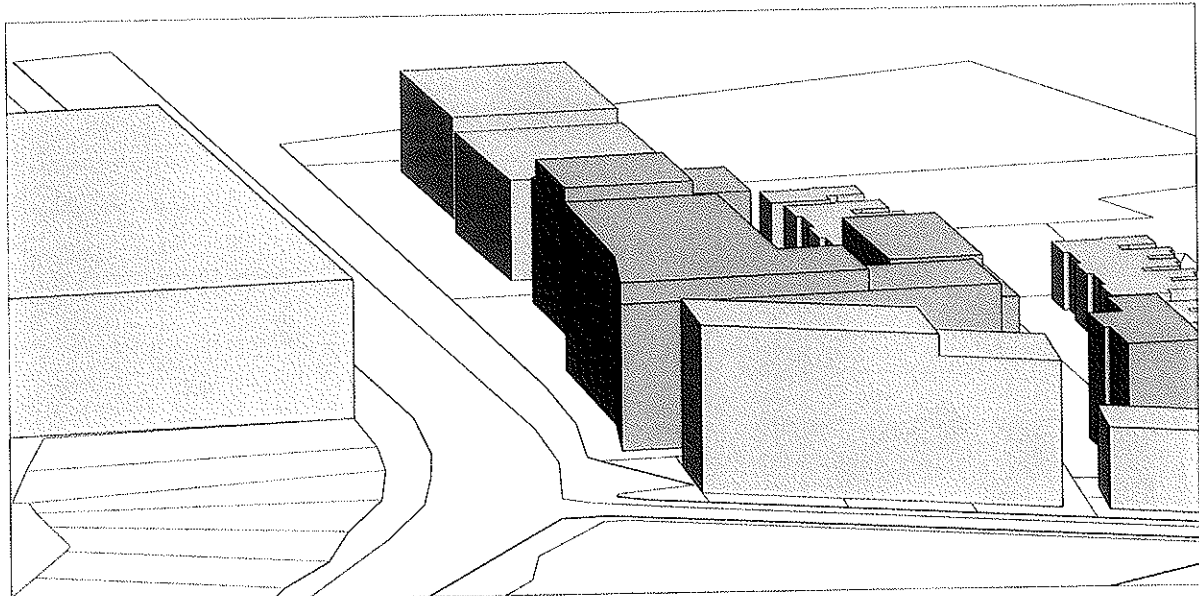
Looking North down Windsor Road. This option results in containment of the road as the main town centre entry street and defines the entry to the town centre area from the North.



Looking South along Windsor Road. Buildings appropriate for this location should be urban building forms, with retail at ground level strong facades with a high level of enclosure.



Looking South along Meryll Street showing how the buildings step down to the West and South.

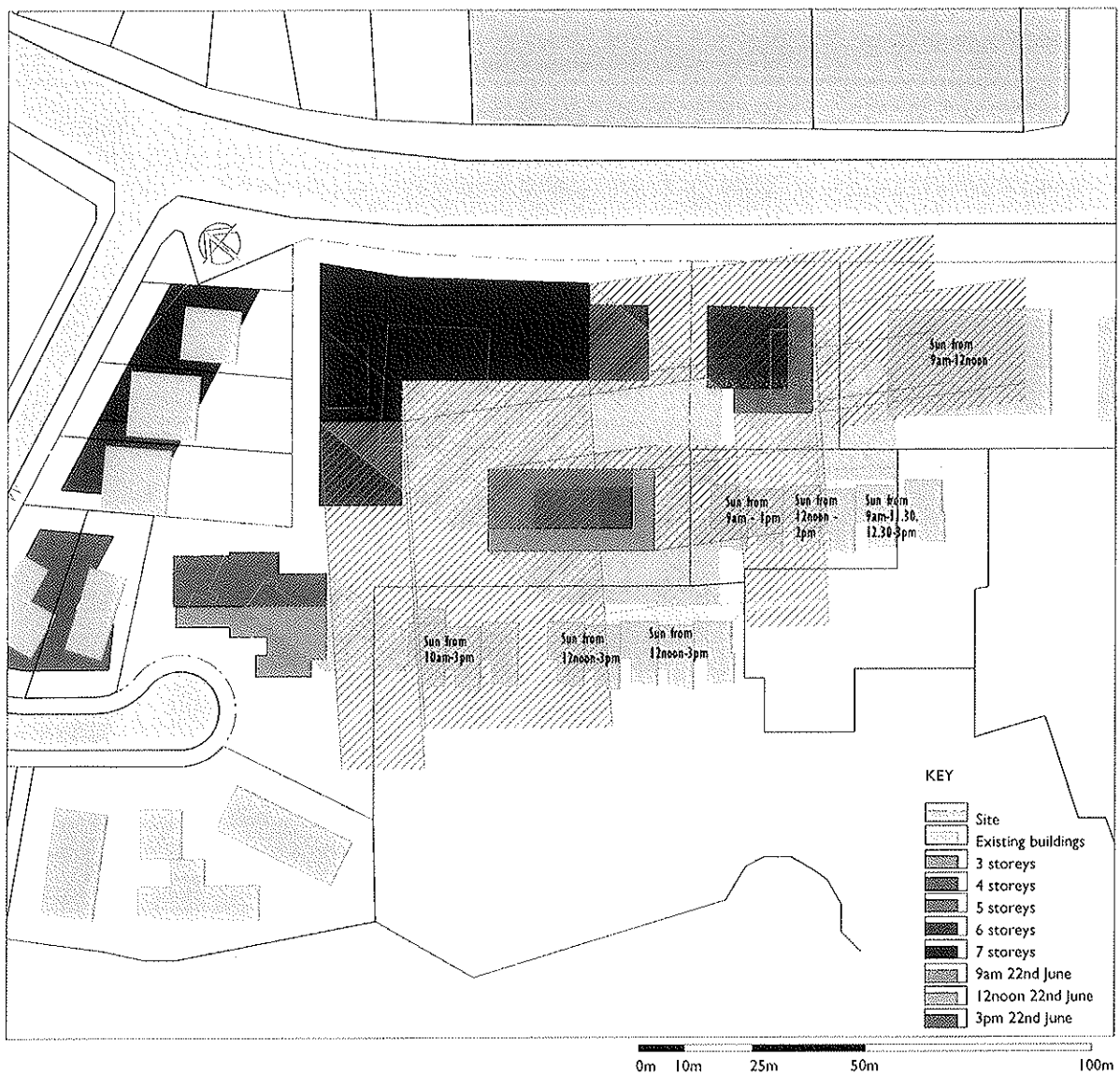


Looking South-west along Windsor Road ie. entering the centre from the North.

Shadow Diagrams

The long axis of the site is oriented to the north-east. This is not ideal as a northern orientation however it is still a good orientation. By massing the building along Windsor Road a great number of apartments will have a north-east orientation, very few apartments will have a south orientation.

Higher built form has been placed on the north and eastern sides of the site and building step down to the rear to ensure existing dwellings to the south-west and south-east are not unduly overshadowed.



Shadow diagram on 22nd June.

ELEVATIONS ALONG WINDSOR ROAD

Quality building facades along Windsor Road are important for the image, identity and presentation of the centre as a whole and in particular for the identify of the entry to the town centre from the north.

Building elevations along Windsor Road have a public role as they will be highly visible and enclose the town centre on the western side. They need to meet the dual objectives of maximizing residential amenity and being highly attractive to look at.

The images below show a range of suitable elevation treatments that can achieve the above goals for this particular location. The final architectural designs for the buildings elevations may combine a number of elements indicated within the images including:

- The combination of materials.
- The type and level of detailing.
- The amount of solid to void.
- The type of balcony/window shading for privacy and sun control.
- A high level of enclosure for noise attenuation and sun control.

Detailing and materials

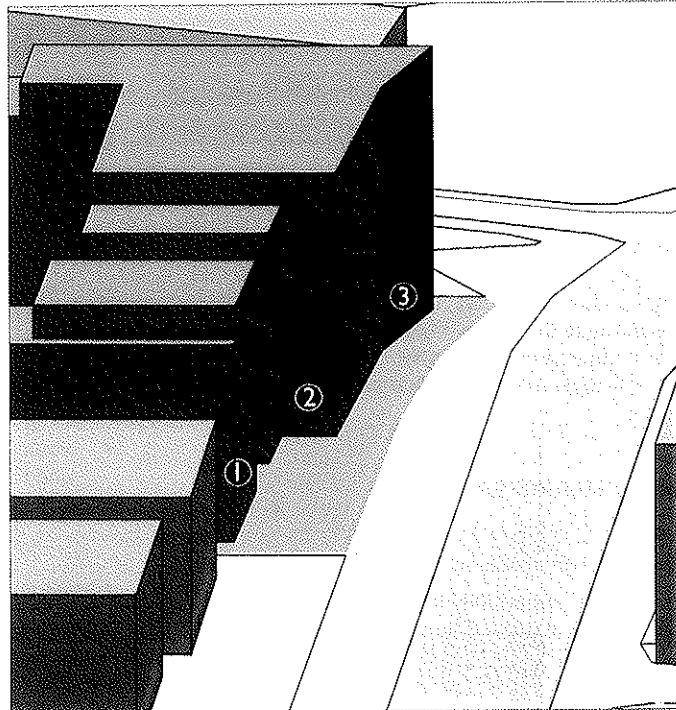
The five images below provide an indication of some of the types of materials and detailing that would be suitable for the Windsor Road elevation. The main idea is to ensure that both the internal and external areas of the dwelling can be fully enclosed from the road. This is to ensure that noise can be fully blocked and sun penetration can be controlled.



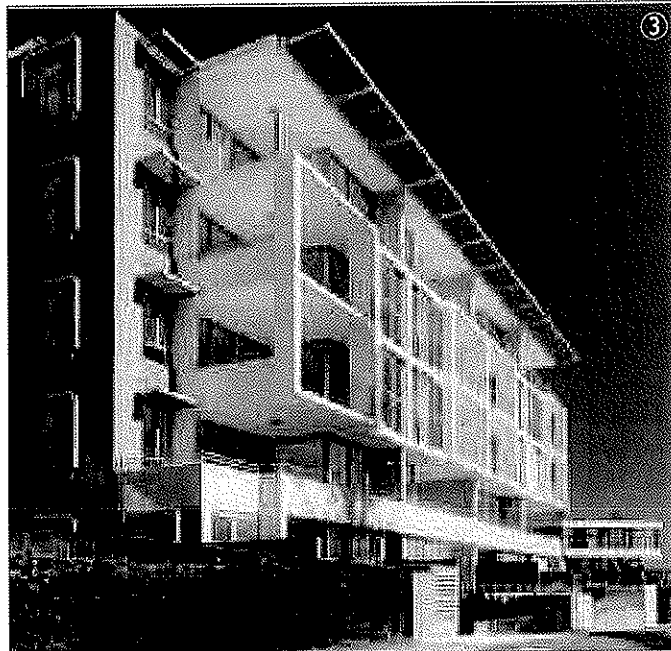
The Windsor Road elevation require a high degree of enclosure for privacy and noise attenuation.

Building Frontages

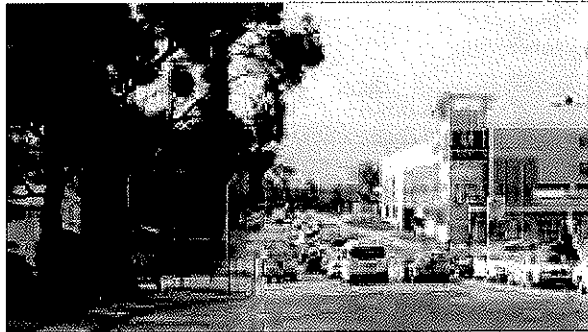
The images below show a range of possible facade design solutions. The buildings should create a positive image for Baulkham Hills as an urban centre. Each of the buildings can have a different facade treatment to provide variety along the street front.



Massing model looking north along Windsor Road.



3.6 NORTHERN ENTRY PRECINCT



EXISTING CHARACTER

The precinct is located on the western side of Windsor Road and on the northern side of the Town Centre. On the opposite side of the road to the site is the new Stocklands Mall expansion. The precinct completes the western side of the town centre and will play an important role in providing higher density housing and some small scale retail and office space in proximity to the centre.

DESIRED CHARACTER

Land Use

- Promote high quality residential development.
- Provide the opportunity for small scale retail/commercial at ground level along Windsor Road.

Built Form

- Built form is to define the western edge of the town centre.
- The Northern corner of the precinct should provide higher built form and spatially strongly define the corner to ensure the northern entry to the centre is clearly identifiable.
- Provide higher built form along Windsor Road with buildings stepping back to the rear of the precinct adjacent to existing two storey dwellings.
- Provide continuous built form along Windsor Road to block traffic noise from entering the precinct.
- Buildings are to maximise orientation for passive solar design.

Street Frontage

- Provide the opportunity for a current or future active street edge along Windsor Road.
- Building facades are to be acoustically treated along Windsor Road with the use of enclosed balconies, loggias or the like and with sound proof materials.
- Buildings must address the street (Windsor Road) with well designed and distinctive building facades commensurate with a town centre location.
- Setbacks along Windsor Road are to allow for an enhanced pedestrian area as well as privacy for dwellings.



Access

- Pedestrian access from the development must be made to Windsor Road.
- Pedestrian access from dwellings on the ground level facing Windsor Road must be made.
- Developments are to have a high level of pedestrian amenity along all streets and within the development at ground level.
- Vehicular access is to be made from Meryll Avenue and Rembrandt Drive.
- Vehicle access along Windsor Road is to be avoided.

DEVELOPMENT CONTROLS

3.6.1 Floor Space Ratio

- a) The maximum floor space ratio is 2.5:1

3.6.2 Building Height

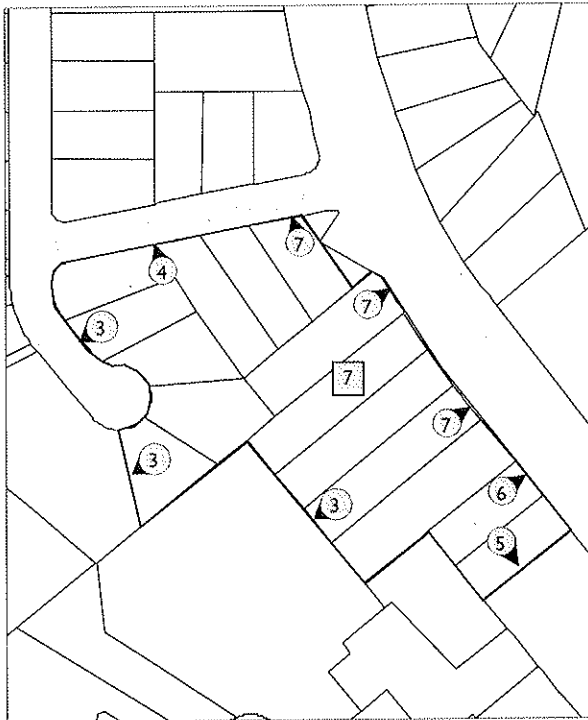
- a) The maximum height for buildings along Windsor Road is 7 storeys, stepping down to 5 storeys to the southern end of the precinct.
- b) Building are to step down to 3 storeys to the rear of the precinct.

3.6.3 Sun Access

- a) Sun access for existing adjoining dwellings and associated private open space is to be in accordance with Part C Section 7.
- b) Sun access for new dwellings and associated private open space is to be in accordance with the NSW Residential Flat Building CODE.

3.6.4 Setbacks and Building Separation

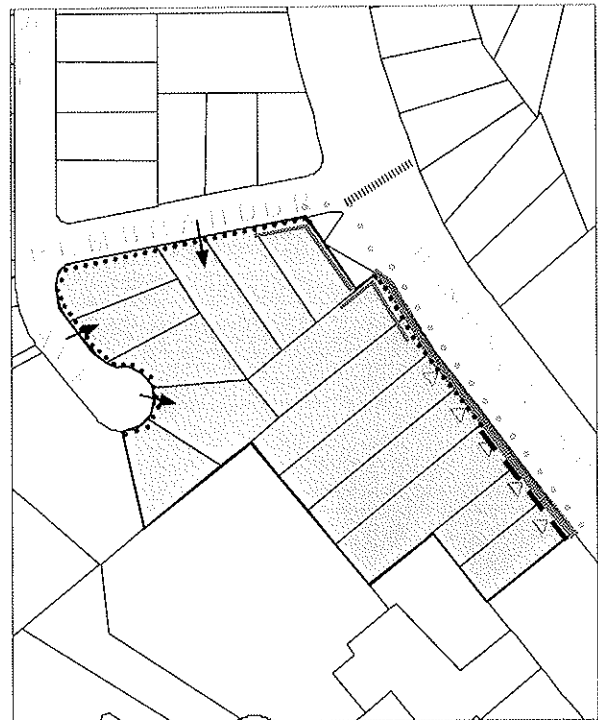
- a) Building setbacks; side, to be in accordance with Part C Section 7; rear, 6m min.
- b) Building setbacks; front, are to be generally 5m except for the southern section of Windsor Road which is to be 10m.
- c) Building separation is to be in accordance with the NSW Residential Flat Building CODE.
- d) There is no requirement for maximum building length.



All heights in storeys (equivalent)

Key

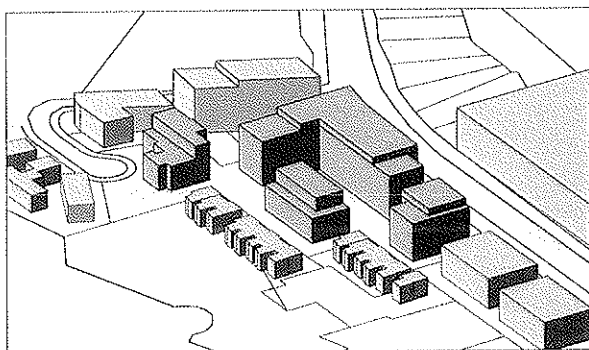
- 7 General maximum height
- 3 Maximum height adjoining street or property



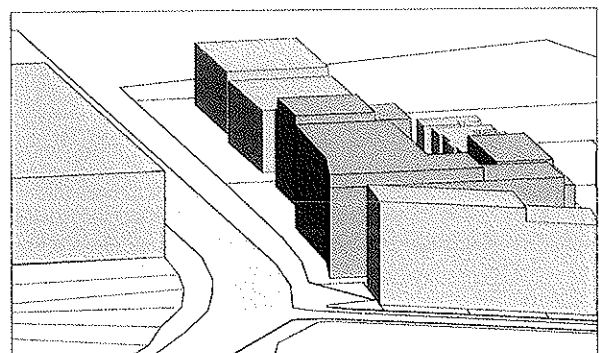
Key

- Northern Entry Precinct
- FSR 2.5:1
- HEIGHT Refer to height modelling diagram
- Street setback 5m
- Street setback 10m
- Transition area from suburban to urban
- Ground plane improvements: Footpaths, Avenue tree planting to separate pedestrians from road. Public domain elements to coordinate with town centre as a whole.
- Driveway access can occur anywhere along these frontages
- Potential for office suite and home office street frontage: doors + display windows + advertising
- Extension of same ground plane improvements into adjoining precinct
- Corner elements to address Windsor Road

Northern Entry Precinct Control Diagram



Northern Entry Precinct Illustrative building massing diagram, view from the South.



Northern Entry Precinct Illustrative building massing diagram, view from the Northern Entry.

