

- relate to the bushland setting;
- structure the site and reinforce the spatial organisation; and
- be useful-provide shade and food production etc.

Architectural Resolution

Buildings must be "fit for purpose". In the context of these principles it is the aspect of the external resolution of buildings which is addressed.

Buildings should be designed in a contemporary style using materials in a simple way to create well-proportioned, environmentally-sensitive, outcomes. They need to be respectful of the street and their neighbours, relate one to the other and not over-dominate the streetscape or landscape.

Scale

The apparent scale of a building is directly related to its siting, size, form and proportions.

Successful resolution of the scale of a building can be achieved in two ways: firstly, the resolution of the mass of building into a particular form as established by the setbacks, height and spatial organisation; and secondly, the resolution of that form into architecture. It is not a two-step linear process but an iterative design process.

Design of the Facades

The design of the external walls combined with the building mass and form determines their impact on the street. The apparent size of a building depends both on its actual size and how it is proportioned. The way in which the elevation of a building is organised in terms of the horizontal and vertical elements, openings and materials, will create the proportions and determine the apparent scale.

The external wall of a building impacts on the presentation of the building on the street in three main ways:

- *It is the part of a building which should be used to moderate climatic impacts;*
- *It is the part of a building which can provide the scaling elements to proportion a building. This is done by modulation, articulation and materials selection and application; and*

- *It is the part of a building which can provide "depth" in the external walls. Most buildings are viewed obliquely along the street, particularly in urban areas and it is the "depth" of the external wall that provides interest to the street.*

Climate

Façade design should also be manipulated to provide a range of responses to the climate. In "green" buildings many of the environmental benefits are gained through the design of the external wall. The external wall can be used as a shadowing element, or as a mass to retain cold and heat, or as an element where air passes over the external façade. It is therefore advantageous to have the external wall as climatically sensitive as possible to improve the environmental and amenity rating of each building. Responding to a particular orientation can also provide meaningful architectural variation.

Proportions

Modulation and articulation are methods used to proportion a building and provide "depth" to the external walls.

Modulation usually refers to the changes in the thickness or alignment of the external walls. Articulation usually refers to the way in which elements are detailed. Detailing may highlight openings or define a plinth, amongst other things.

The proportions of a building contribute to its visual impact. Proportions are created by modulation, articulation and the use of materials. Elevations on larger buildings need to be divided into horizontal and vertical patterns at the scale of the whole elevation and then further divided within that larger format.

Appropriately proportioned buildings will result in the "apparent" bulk of the buildings being reduced so that each building appears well scaled. If a building is poorly proportioned, it may appear more bulky. Good proportioning relies upon the skill of the designer; too much or too little modulation and articulation will make a building appear more dominant.

Depth in the External Walls

As most buildings are viewed obliquely along the street, particularly in urban areas, it is essential that the modulation and articulation provide "depth" to the external walls, as well as contributing to how the building is proportioned.

Depth makes an important contribution to the apparent scale of a building because it eliminates the potential "flatness" of the facade without contorted articulation. It provides shadow lines and strengthens the relationship between the building and the outside. Depth in a wall is achieved by the actual thickness of the wall; where the openings are located in that depth i.e. on the outer face or inner face or centre and blade walls. The use of panels of different materials, glazing to the underside of the ceiling and location of windows on the internal skin of the external wall all assist in this modulation.

Where buildings have external walls which are without depth, the same mass of building can appear much greater because there is nothing to create a sense of scale in the façade or relate the building to the street. Modulation and articulation provide shadow lines and rhythm for the oblique street view so that the street is provided with a sense of scale and rhythm together with points of visual interest. Various elements of a building are used to establish the proportions of a building and there is a wide range of ways that buildings can be designed. This is increasingly so common. The need for ecologically sustainable development, "green buildings" and bio-mimicry will further broaden the opportunities. The elements which form part of this design process are:

- *The shape in plan and/or section;*
- *Organisation of building parts by differentiation; top floor and/or ground floor; double-storey height definition; ground and first floor ; top floor/s; the arrangement of the vertical circulation;*
- *Climatic response / louvers / horizontal projections / green walls / water catchment;*
- *Thickness of the external wall;*
- *Solids and voids;*
- *Blade walls, party walls, pilasters;*
- *Entrances, balconies, verandas and canopies;*
- *"Hole in wall" windows related to panels of glazing;*
- *Window sills and reveals, door reveals related to wall thickness; and*
- *Materials: texture, scale and application.*

Roof Design

The design of the roof plays an important role in whether buildings relate to one another. Both skillion and flat roofs can be successfully used to create a clear roof line against the sky. It is important that buildings at the ends of the view corridors or the ends of view lines into the precincts are designed so that they offer a clear roof line against the sky. The building design needs to responds to this subtlety.

Material Selection

Material selection plays an important role in the resolution of buildings. Where buildings are separate entities and do not form a continuous street wall and they are constructed over a long time-frame, the styles can vary significantly. Consistency of materials and colours can assist in creating continuity between buildings. This is not to suggest that all buildings should use similar materials or be painted in the same colour, but rather that when an opportunity such as the Planning Proposal site presents itself, a theme of materials or colour should be used to create a more cohesive urban form.

Principles

The new buildings should:

- form a consistent urban fabric in accordance with the proposed spatial structure of the precinct;
- create a well-defined sequence of readable public and private spaces;
- reinforce the desired spatial structure with their form and by their detailed architectural resolution, including consideration of the climate; proportions; roof form(s) and materials;
- be well proportioned with appropriate modulation and articulation that reflects their actual size, uses, orientation and optimises their relationship with the public domain and with each other;
- have well-proportioned, modulated and articulated elevations related to use and climate;
- provide "depth" in the external walls; and
- use a simple roof form such as pitched / flat or skillion roofs, related to the overall size and form of the building and neighbouring buildings.

The building materials should:

- be contemporary materials, preferably those with low embodied energy. Consistency of materials and colours between buildings;
- be an appropriate scale. Materials which are too small or large in scale can distort the overall scale of the building;
- have textures and colours which are compatible with each other and the precinct;
- have a long life and low maintenance;
- use non-reflective glass so that it does not "flatten" the appearance of the building and does not impact negatively on neighbouring buildings; and
- respond to ESD requirements, long life and an appropriate maintenance regime.

BLOCK STUDIES FOR THE WESTERN PRECINCT

The following series of drawings illustrate some of the block study options tested for the development of the Western Precinct.

The drawings illustrate the existing situation the Northwood Neighbourhood Centre; the existing situation with the current Planning Proposal; the existing situation with the current Planning Proposal and three options for development on the Western Precinct.

The drawings describing and clarifying the existing situation are shown in Figures 5.1-5.3. The drawings which explore and test the options for the Western Precinct are:

- **Option 1 A:** Figures 5.4, 5.7 and 5.8 for elevations;
- **Option 1 B:** Figures 5.5, 5.9 and 5.10 for elevations; and
- **Option 2:** Figures 5.6, 5.11 and 5.12 for elevations.

FSR Assumptions

The heights and FSR is on the drawings. The FSR for the residential is derived from the total capacity of the building envelope minus 20%. The 20% is deducted to make allowance for wall thickness, vertical circulation and balconies. The FSR for the retail is derived from the total capacity of the building envelope minus 50%. The 50% is deducted to make allowance for wall thickness, vertical circulation, car access, loading and a cross block connection.

Clearly if larger floor plate retail was required or if a childcare facility were introduced the FSR would be higher.

The Existing Situation

Figure 5.1 is a ground drawing of the existing situation at Northwood Neighbourhood Centre. It illustrates how disconnected and ad hoc the existing centre is. Buildings are located without any relationship one to another. The only exception to this characteristic is the building from which Northwood Cellars operates. This corner building anchors in plan, the intersection of Kenneth Street and Northwood Road. The height of this building however, is not sufficient to "hold" the corner and it is lost in sea of telegraph poles. It is noticeable in this figure ground drawing the potential and in fact, the necessity, to balance the building at the junction of Northwood Road and Kenneth Street with a building at the junction of River Road West and Longueville Road. The combination of these two juxtaposed built forms aligned to their street frontages would indeed make this topographical high

point memorable. A strongly defined edge along Northwood Road would also assist the reading of this corner.

Figure 5.2 is an aerial photograph of the Northwood Neighbourhood Centre. Figures 5.1 and 5.2 illustrate the dispersed characteristics of the Centre. Despite clearly being at the junction of four main roads the built form fails to capitalise on or "mark" this important intersection. There are two main topographical points along River Road. Both of these points occur at road junctions relative to landform. They are the intersection of Greenwich Road and River Road and the junction of River Road, Kenneth Street and Longueville Road at Northwood. The topographical and historical power of these points should be strengthened by and reflected in, the built form. It is the manipulation of the spatial system by the built form that is the basis for identity, variety and legibility. In the case of Northwood Neighbourhood Centre the built form needs to be tightened because of the amount and width of the roads and the open space. In the case of Greenwich Road and River Road another solution may be appropriate.

These two images, Figures 5.1 and 5.2, also reveal the proximity of the open space bushland system to the Centre.

Figure 5.3 is a ground drawing the existing situation at Northwood Neighbourhood Centre and including the current Planning Proposal in the Eastern Precinct. In this drawing it can be seen how the building alignment along Northwood Road improves the reading of the street alignment and the intersection. The alignment of the buildings at the rear is slightly broken but it still provides a clear edge to the Lane Cove Country Club.

Figure 5.4 illustrates Option 1 A for the Western Precinct. This proposal sits within the existing situation at Northwood Neighbourhood Centre and includes the current Planning Proposal.

Option 1 A retains the existing apartment building on the southern boundary and assumes an amalgamation of the remaining sites. It illustrates four new buildings: a six storey building on the corner, four storey buildings along Kenneth Street and Northwood Road and a four storey building adjacent to the existing apartment block. The four new buildings are organised around a central courtyard but the arrangement is quite tight. Option 1A has a cross-site link. This is entered at the southern end of the corner building and the residential sits above the link. The FSR is 2.2:1 in Figure 5.5 illustrates Option 1 B for the Western Precinct. This proposal sits within the existing situation at Northwood Neighbourhood Centre and includes the current Planning Proposal.

Option 1 B does not retain the existing apartment building on the southern boundary and assumes an amalgamation of all sites in the B1 Zone. It illustrates four new buildings: a six storey building on the corner, four storey buildings along Kenneth Street and Northwood Road and a four storey building adjacent to the southern boundary. Option 1B has a cross-site link. This is entered at the southern end of the corner building and the residential sits above the link. The FSR is 2.29:1. Although the FSR is only slightly higher than Option 1A this is a superior scheme in that the four buildings are organised around a more generous central courtyard and there are less interface issues to be addressed.

Figure 5.6 illustrates Option 2 for the Western Precinct. This proposal sits within the existing situation at Northwood Neighbourhood Centre and includes the current Planning Proposal.

Option 2 does not retain the existing apartment building on the southern boundary and assumes an amalgamation of all sites in the B1 zoning. It illustrates three new buildings and a public walkway open to the sky. A six storey building on the corner, a four storey "L" shape building along Northwood Road and partly along Kenneth Street and a four storey "U" shape building adjacent to the southern boundary. This building has a frontage along Northwood Road and a shorter address to Kenneth Street. The FSR is 2.24:1.

The elevations illustrate the schemes in their context and the relationship to the Planning Proposal. The interventions are modest but they do assist the definition of the Centre as a discrete entity.

Conclusion

The Western Precinct is capable of accommodating mixed-use development. The final resolution of the site will depend on which sites can be amalgamated, the combination of uses and car parking requirements. The site that is most important is the corner site. Even if the Caltex and BP service stations were not developed the whole image and appearance of the Centre would be improved if the corner of Kenneth Street and Northwood Road were developed. A substantial corner building would mark the corner, balance street edge development along Northwood Road and also improve the surveillance and address of Central Park.

These options also illustrate that the four storey proposed height in the Planning Proposal along Northwood Road is an appropriate response to Northwood Road.



Figure 5.1: Northwood Neighbourhood Centre-Existing Plan

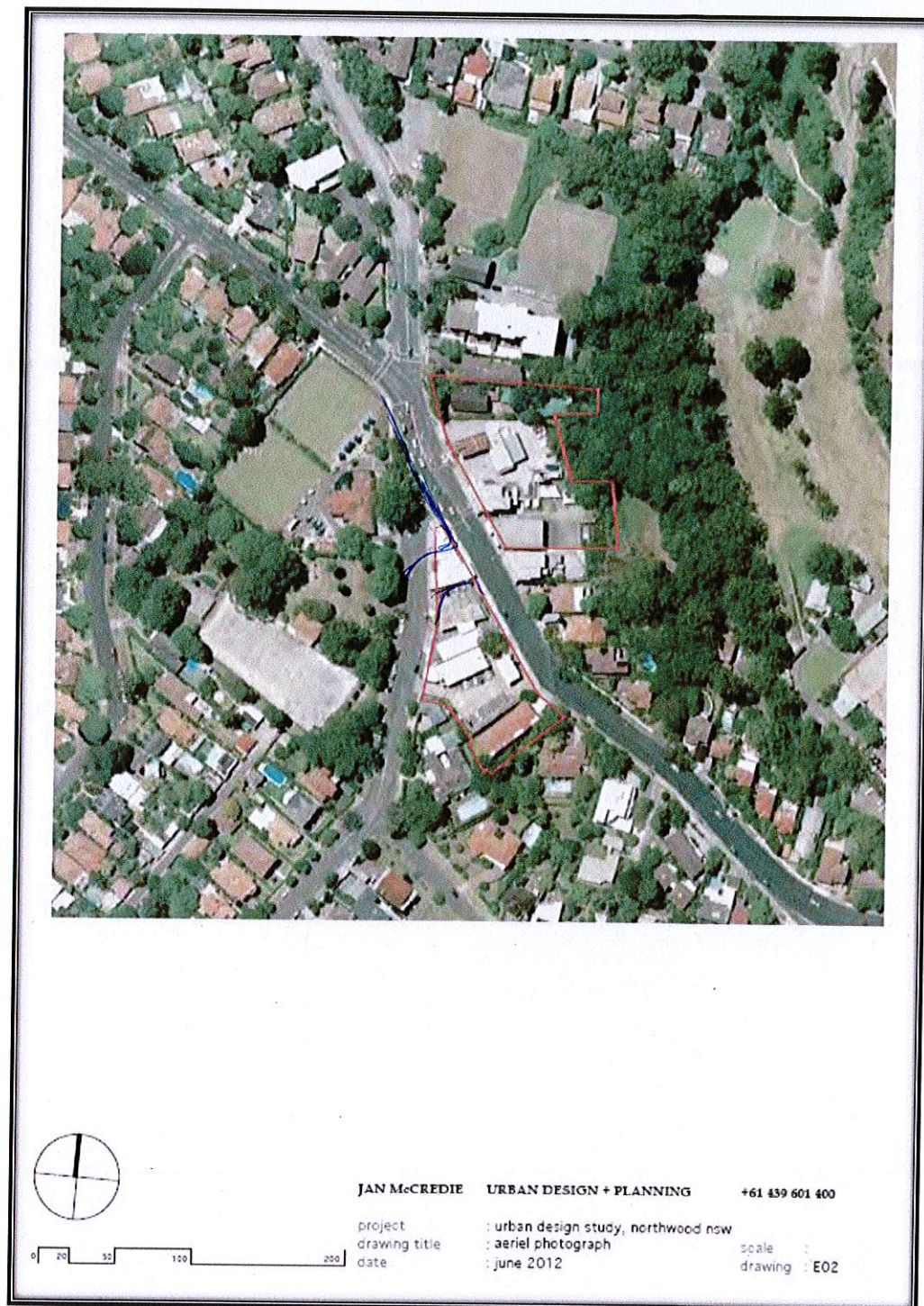


Figure 5.2: Aerial photograph of Northwood Neighbourhood Centre



Figure 5.3: Northwood Neighbourhood Centre-Existing Plan with Proposal for Subject Site

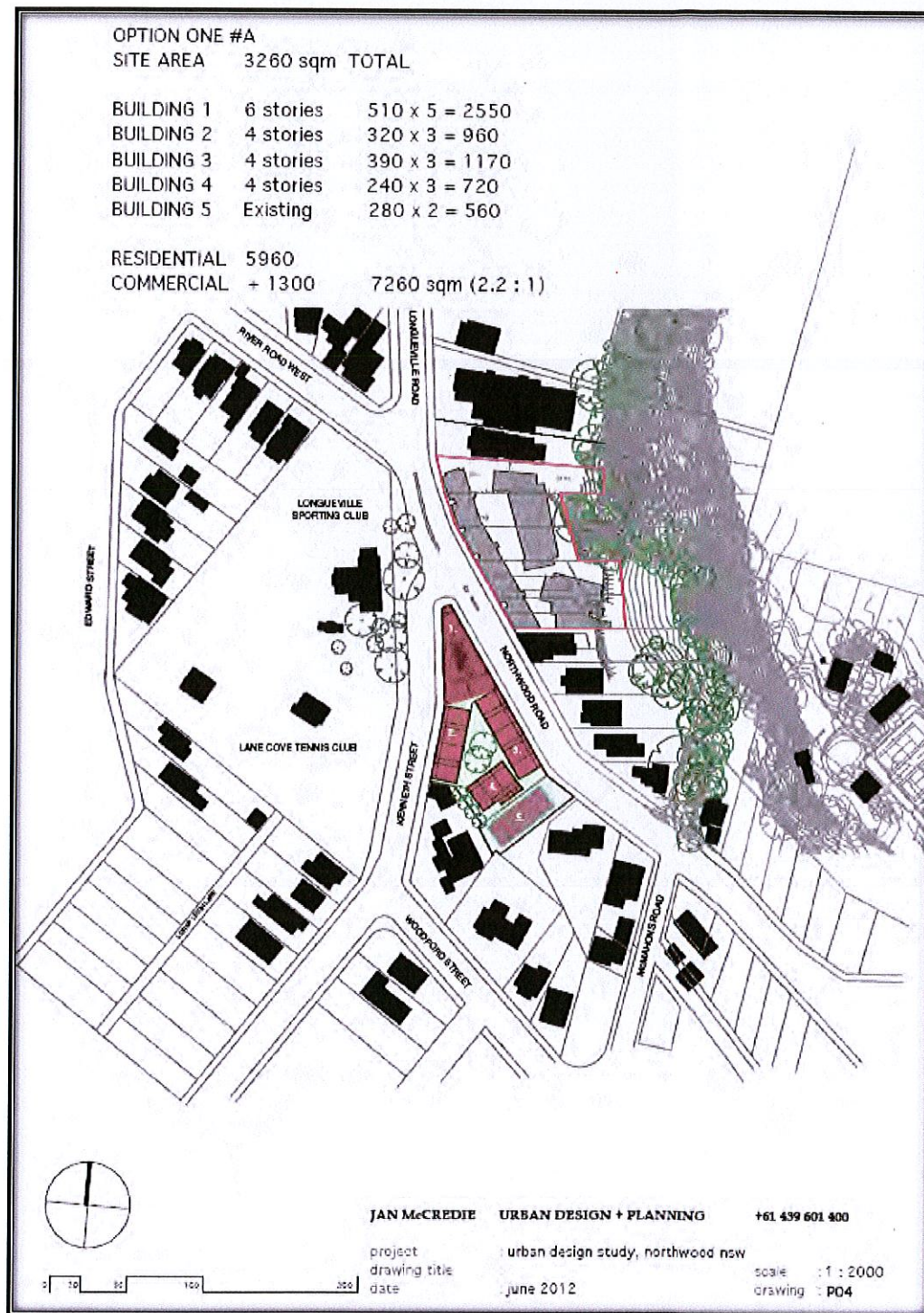


Figure 5.4: Option 1 A Plan for Western Precinct

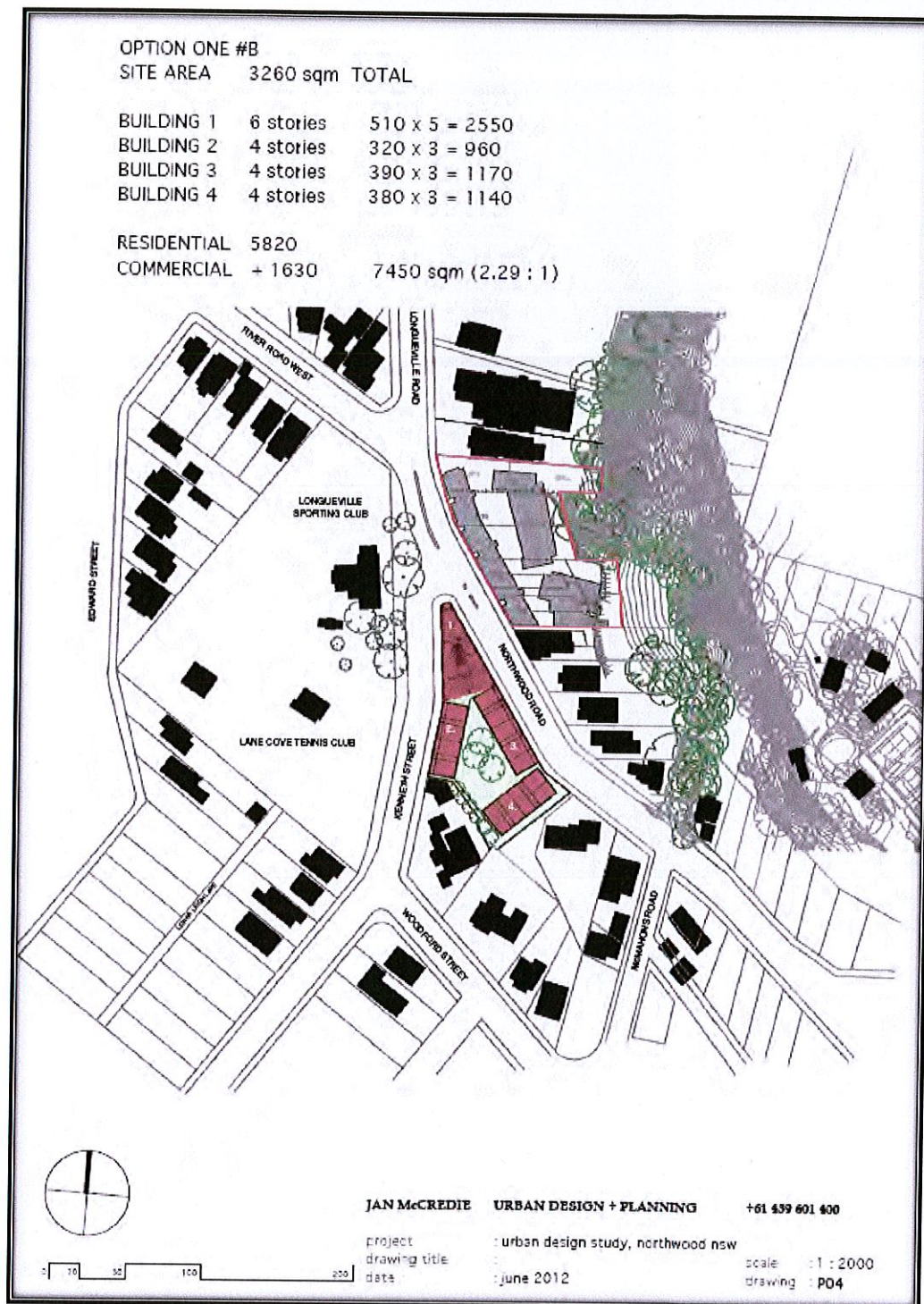


Figure 5.5: Option 1 B Plan for Western Precinct

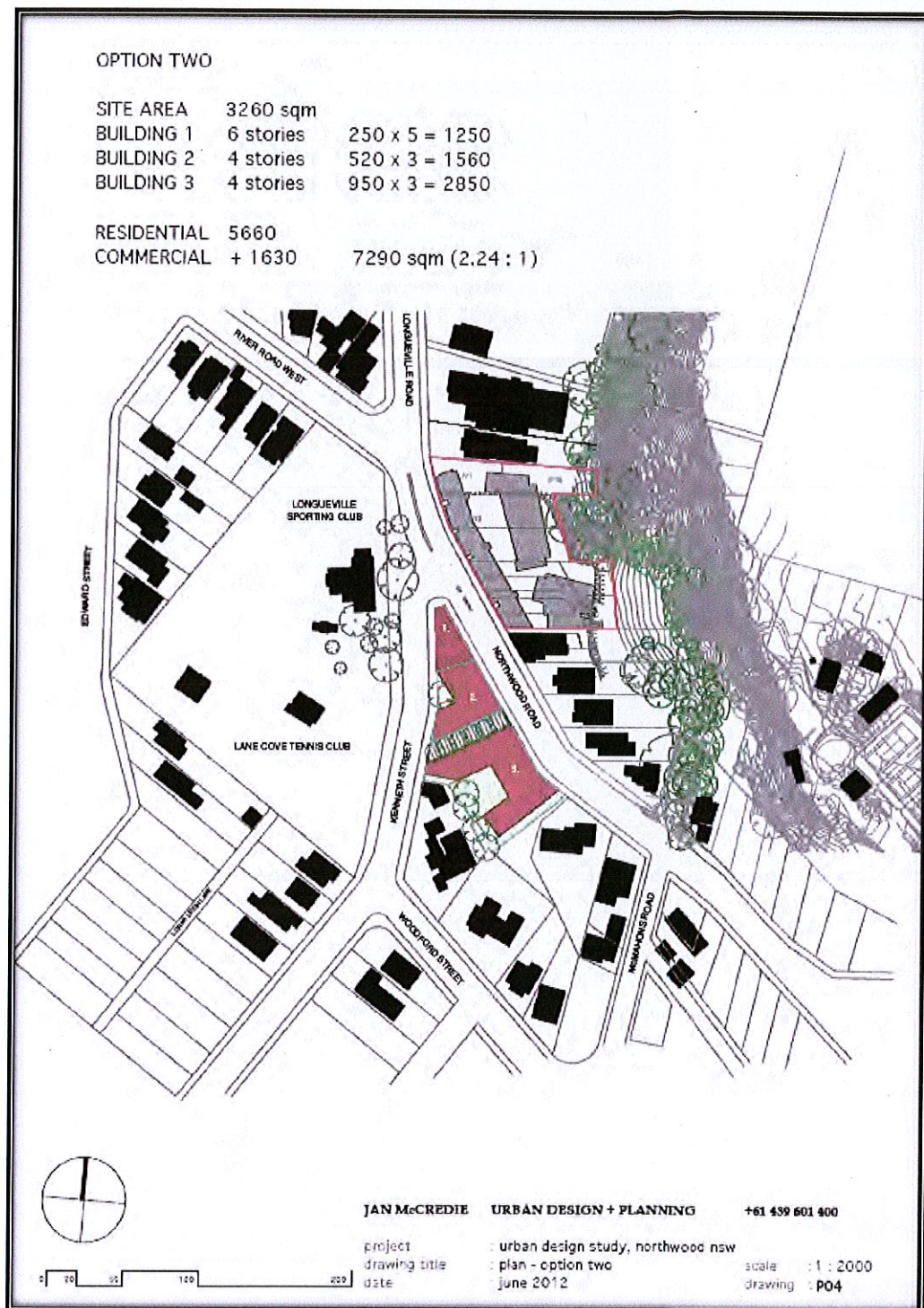


Figure 5.6: Option Two Plan for Western Precinct

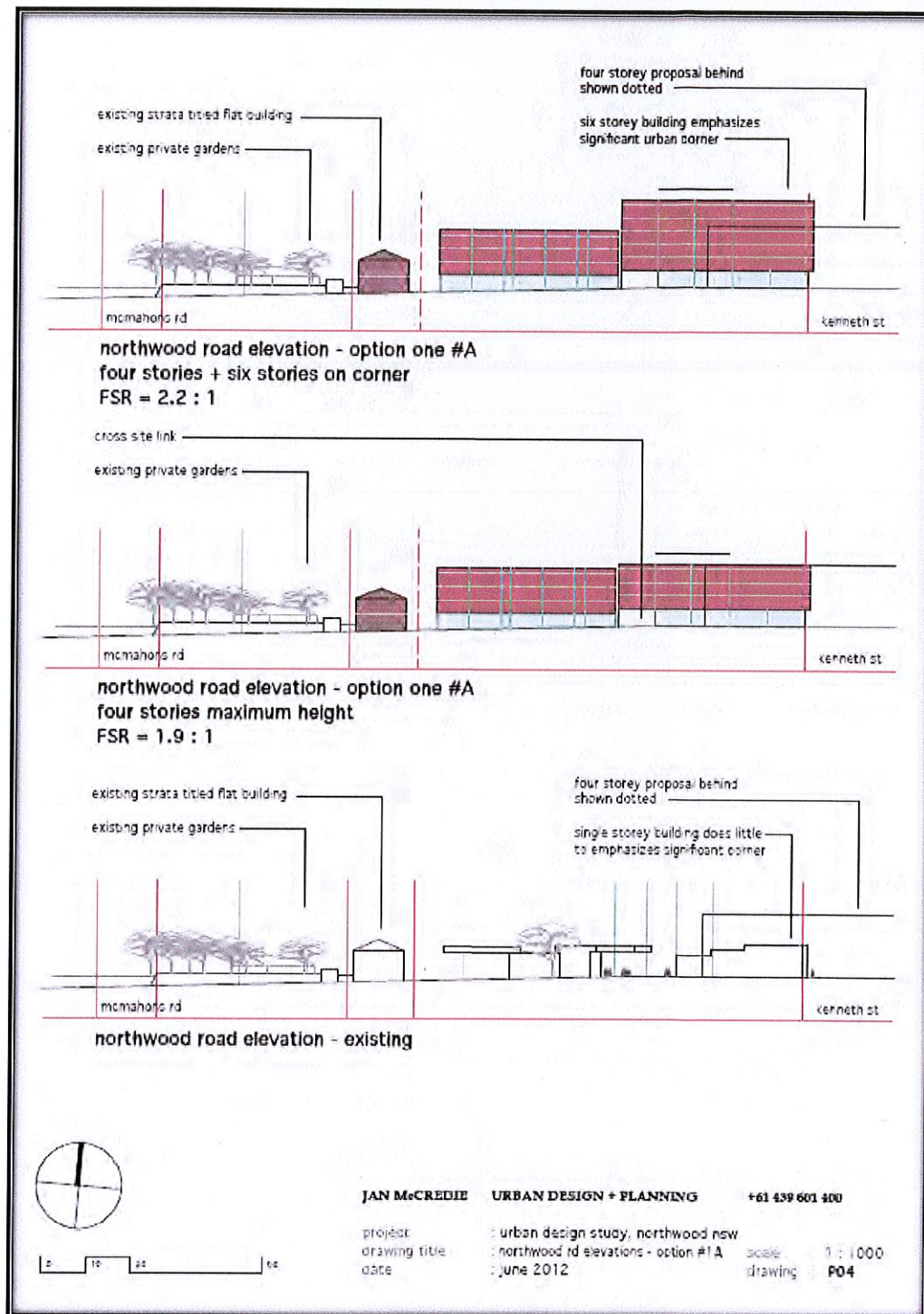


Figure 5.7: Option 1 A Elevations for Western Precinct

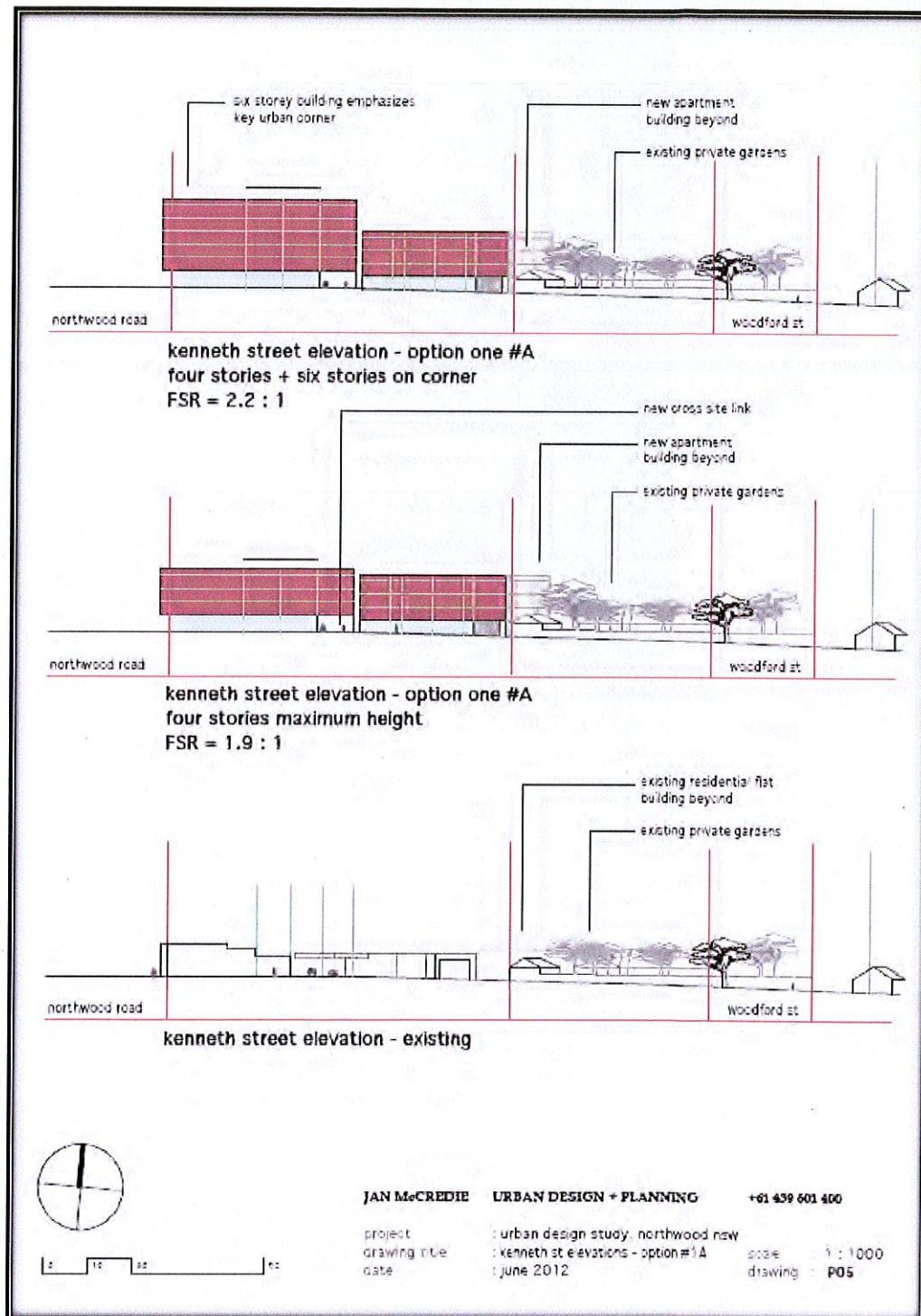


Figure 5.8: Option 1 A Elevations for Western Precinct

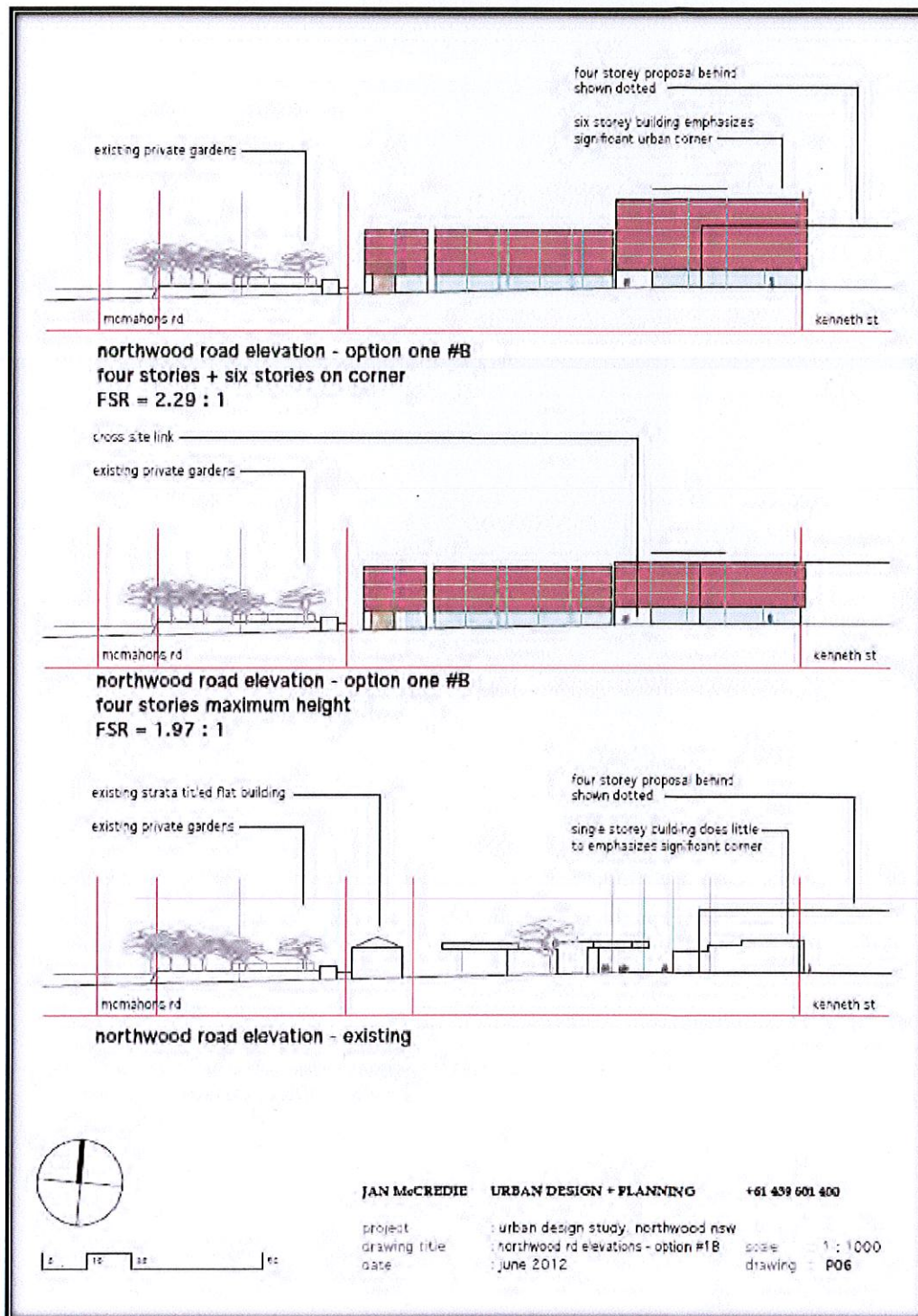


Figure 5.9: Option 1 B Elevations for Western Precinct

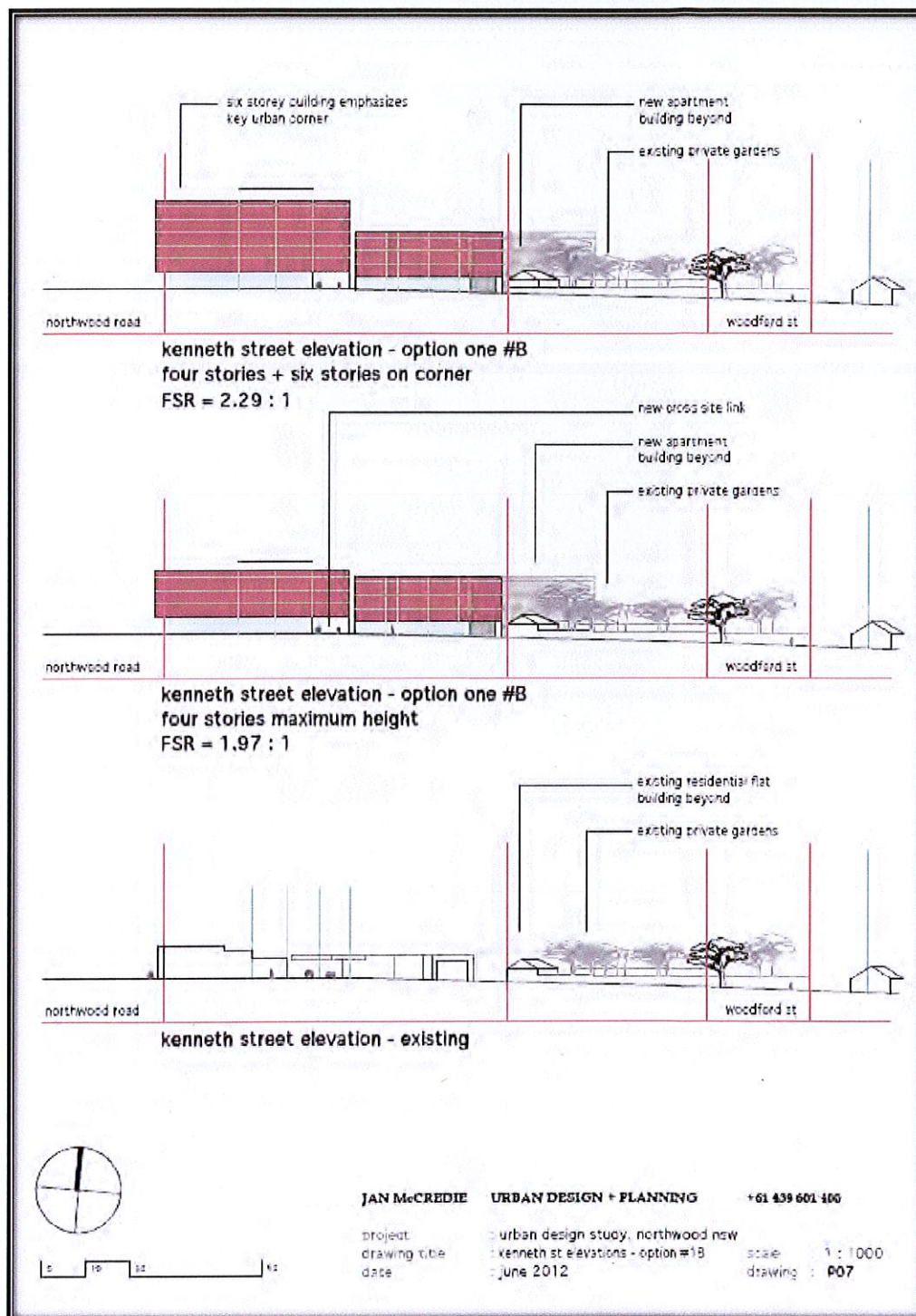


Figure 5.10: Option 1 B Elevations for Western Precinct

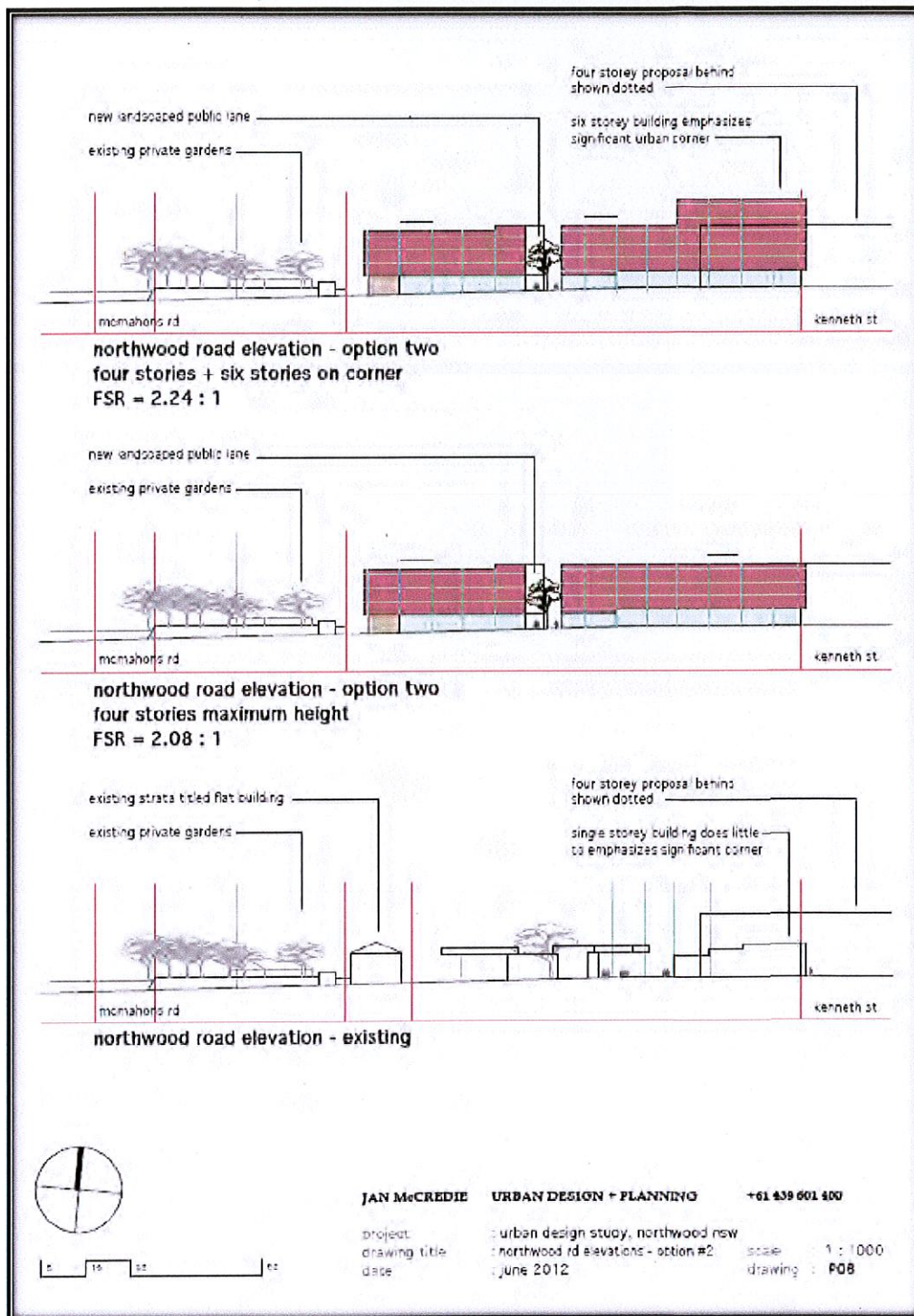


Figure 5.11: Option 2 Elevations for Western Precinct

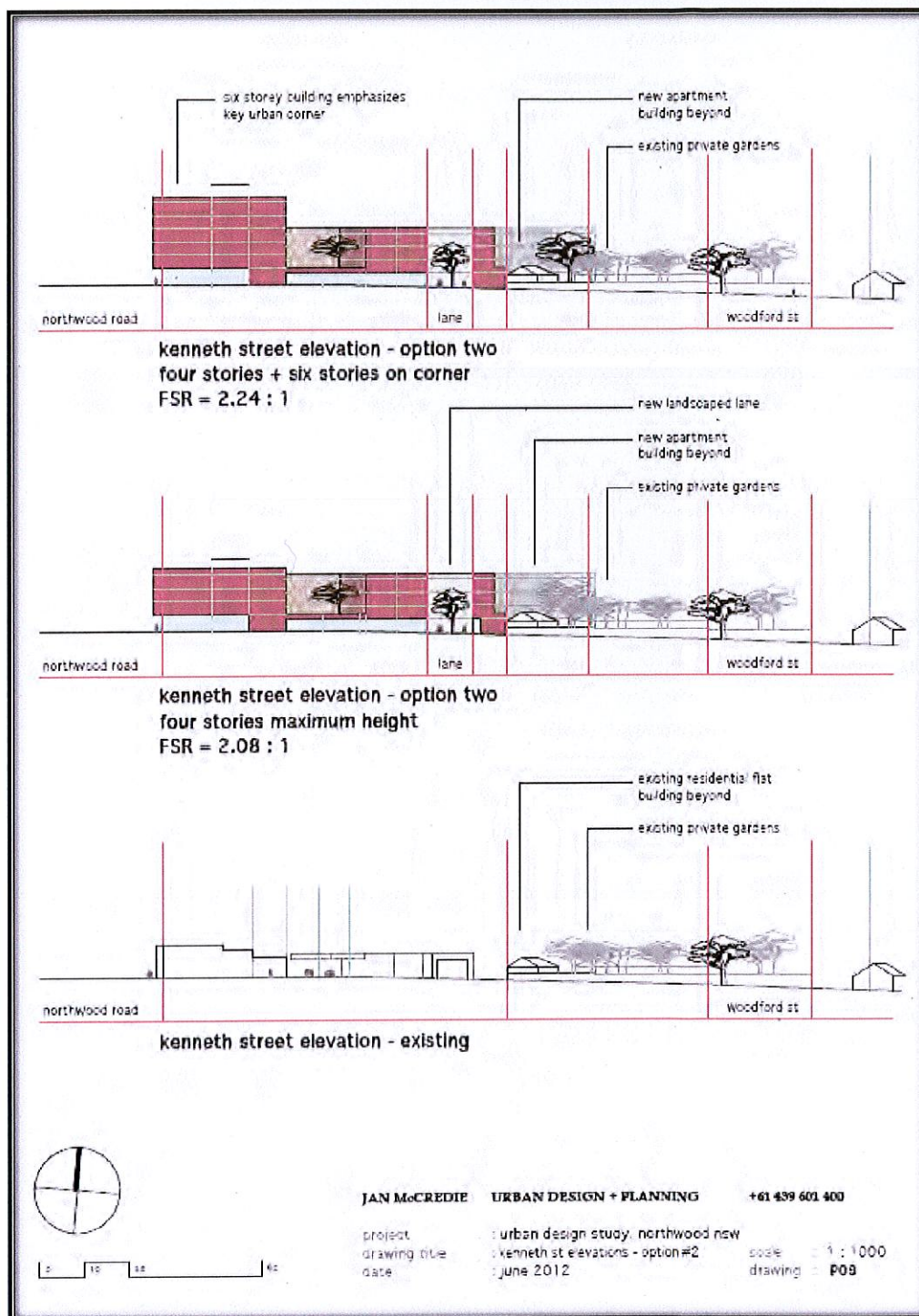


Figure 5.12: Option 2 Elevations for Western Precinct