



- A.** Ventilated terracotta façade cladding
Over off form concrete walls
- B.** Double skin ventilated glass plenum
Double skin ventilated glass plenum with double glazed internal skin and single glazed external skin. The external skin will include a digitally printed glass interlayer, the design of which, will be an artist commissioned digital or photographic artwork. The purpose of the printed interlayer is to provide some shading of the internal glazed skin. The image shown on the architectural elevations is not necessarily the image that will adorn the finished glazed façade.
- C.** Double glazed windows
Low-E glazing with external automatically retractable blinds.
- D.** Terracotta sun shading louvers
Integrated seamlessly with ventilated terracotta facade
- E.** Off-form concrete walls
Class 1 off-form concrete walls with clear sealer to prevent staining.
- F.** Off-form concrete roof and terrace awning
Class 1 off-form concrete where visible from the street. Awning to be perforated with large circular openings.
- G.** Aluminium composite core footpath awning cladding
Black flush jointed aluminium cladding panels fixed off cantilevered structural steel awning frame.
- H.** 'Sky glass' Frameless Glass balustrades
Toughened and laminated clear glass designed to comply with AS1288 and load bearing specifications in AS1170.1 eliminates the need for a handrail.
- I.** internal feature columns to lower ground floor
circular Mild steel columns arranged in random criss-cross pattern, core filled with concrete and painted purple to match the dental business branding.
- J.** External automatically retractable blinds
Helioscreen blind system. Fully automatic and integrated with the intelligent building management system. Can also be manually overridden if required.

07 view analysis

views to the site

There are four significant views of the proposed building.

View A: looking north from below rail bridge on Kiora Road;

View B: looking west on Urunga Parade;

View C: Distant view from intersection of Kanimbla Road & Kiora Road;

View D: Distant view from intersection of Jackson Ave and Urunga Parade.

Photomontages are provided from each of these vantage points on the following pages.



KEY

- Site
- Illawarra Railway Line

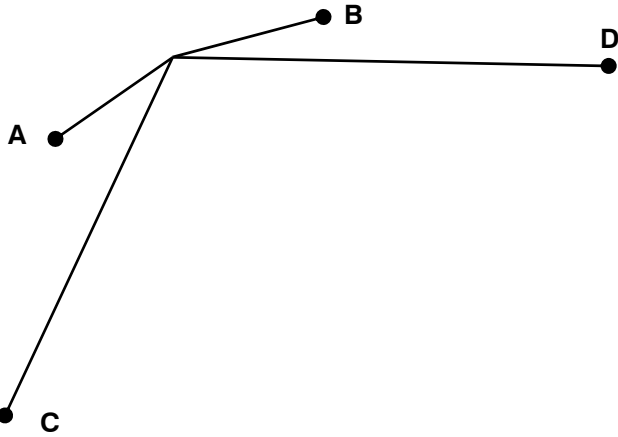


Figure 7.01



Figure 7.02

view A: looking north from below rail bridge on kiora road

< existing photo



Figure 7.03a

< photomontage of proposed building

Figure 7.03b, below, shows one ‘potential building form’ overlaid on the neighbouring site. Refer to section 13 for further discussion on this point.



Figure 7.03b



Figure 7.04

view B: looking west on Urunga parade

< existing photo



Figure 7.05

< photomontage of proposed building

Note that in each of these diagrams the existing building at 50-52 Urunga Parade is modeled with the Council approved third storey addition shown as per the development consent on this site dated 10 October 2008. Sutherland Council reference no. DA08/0201.

The two additional street trees forming part of this proposal are also shown Figure 7.05; one in front of the subject site and another in front of the neighbouring building at 50-52 Urunga Parade. These trees are included to reinforce the avenue of trees that currently exist on the northern side of Urunga Parade.



Figure 7.06

view C: distant view from intersection of Kanimbla Road & Kiora Road

< existing photo



Figure 7.07

< photomontage of proposed building



Figure 7.08

view D: distant view from intersection of Jackson Ave and Urunga Parade

< existing photo



Figure 7.09

< photomontage of proposed building

Key

Shadows cast by existing buildings

Additional shadows cast by proposed building

08 shadow diagrams

Shadow diagrams showing solar access to the site and adjacent properties have been prepared at the summer solstice (December 21), winter solstice (21 June) and the equinox (March 21 & September 21) at 9am, 12pm midday and 3pm. The shadow diagrams show a comparison of the extent of the shadows cast by the existing and proposed development.

The affect of the proposed building shadow was studied on neighbouring properties in the Miranda Commercial Centre. The extent of additional shadowing cast by the proposed building does not extend beyond the Miranda Commercial Centre.

These shadow diagrams include the proposed third storey additions to 50-52 Urunga Parade as per Council Consent #DA08/0201.

summer solstice (december 21)

Shadow diagrams at 9am, 12pm midday and 3pm at the summer solstice (December 21) indicate that the shadow from the proposed building falls on Kiara Road, the neighbouring site 88-90 Kiara Road, Urunga Lane and the neighbouring site 50-52 Urunga Parade.

The neighbouring site immediately south of the subject site, 88-90 Kiara Road, contains a two storey commercial building with rear bitumen sealed car parking accessed from Urunga Lane. Overshadowing of the building and car parking area is minimal with more than 50% of the rear building façade and car parking area receiving direct sunlight throughout the day.

The neighbouring site, 50-52 Urunga Parade, contains a two storey commercial building with basement car parking. The Council approved third storey addition is modelled in this diagram. The proposed building partially shields this site from the western summer sun in the afternoon.

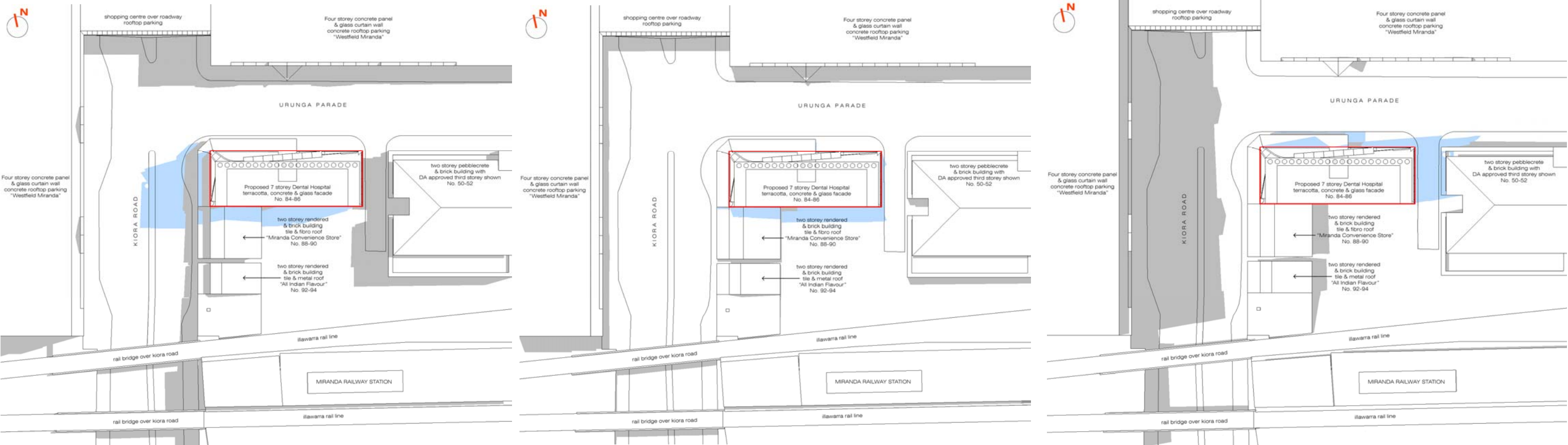


Figure 8.01 9am

12pm

3pm

Key

Shadows cast by existing buildings

Additional shadows cast by proposed building

equinox (march 21 / September 21)

Shadow diagrams at 9am, 12pm midday and 3pm at the equinox (march 21 & September 21) indicate that the shadow from the proposed building falls on Kiara Road, the neighbouring site 88-90 Kiara Road, the neighbouring site 92-94 Kiara Road, Urunga Lane and the neighbouring site 50-52 Urunga Parade.

The neighbouring site immediately south of the subject site, 88-90 Kiara Road, contains a two storey commercial building with rear bitumen sealed car parking accessed from Urunga Lane. Overshadowing of the building and car parking area is substantial, however, the impact is considered minimal given the use of the site as a commercial building and as a car parking area.

The next site further south of the subject site, 92-94 Kiara Road, also contains a two storey commercial building with rear bitumen sealed car parking accessed from Urunga Lane. Overshadowing of this building and car parking area is minimal and is limited to the morning hours.

The neighbouring site, 50-52 Urunga Parade, contains a two storey building with basement car parking. The Council approved third storey addition is modelled in this diagram. The proposed building partially shields this site from the western summer sun in the afternoon.

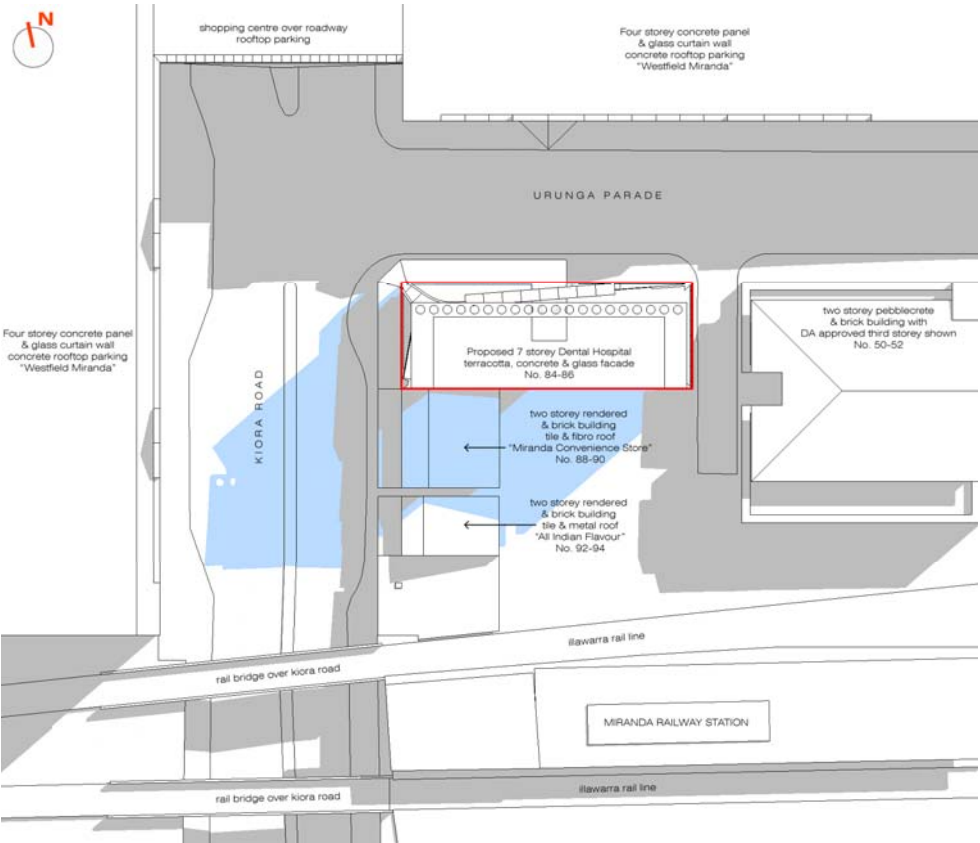
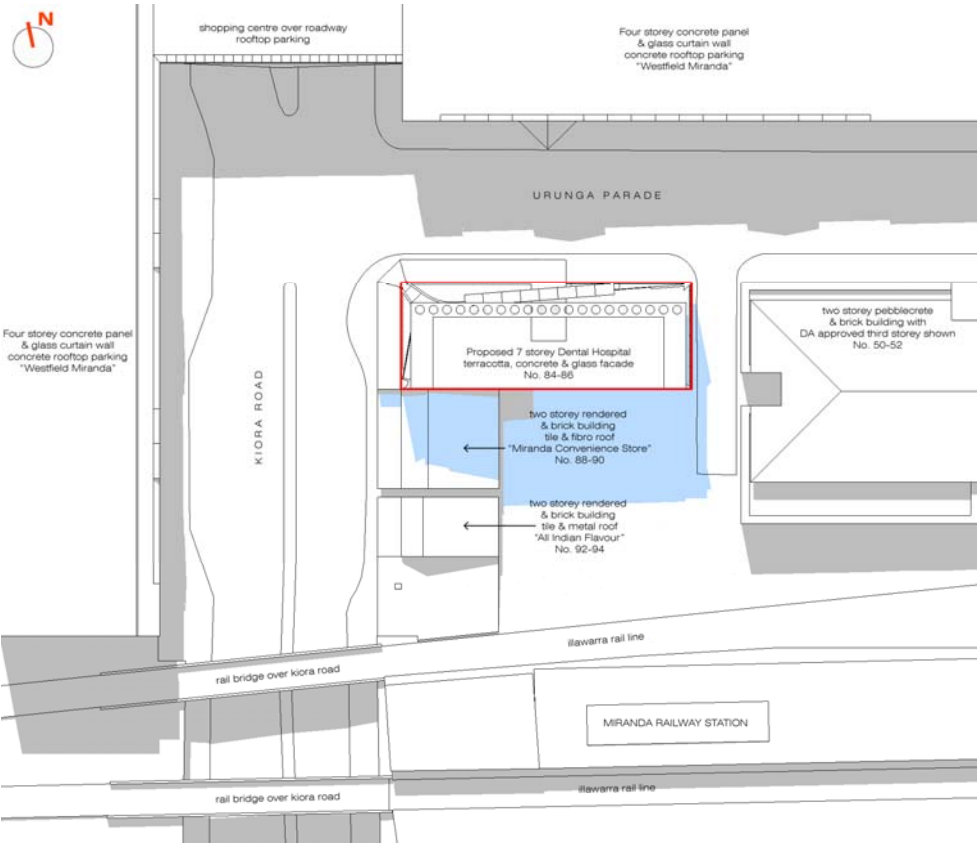
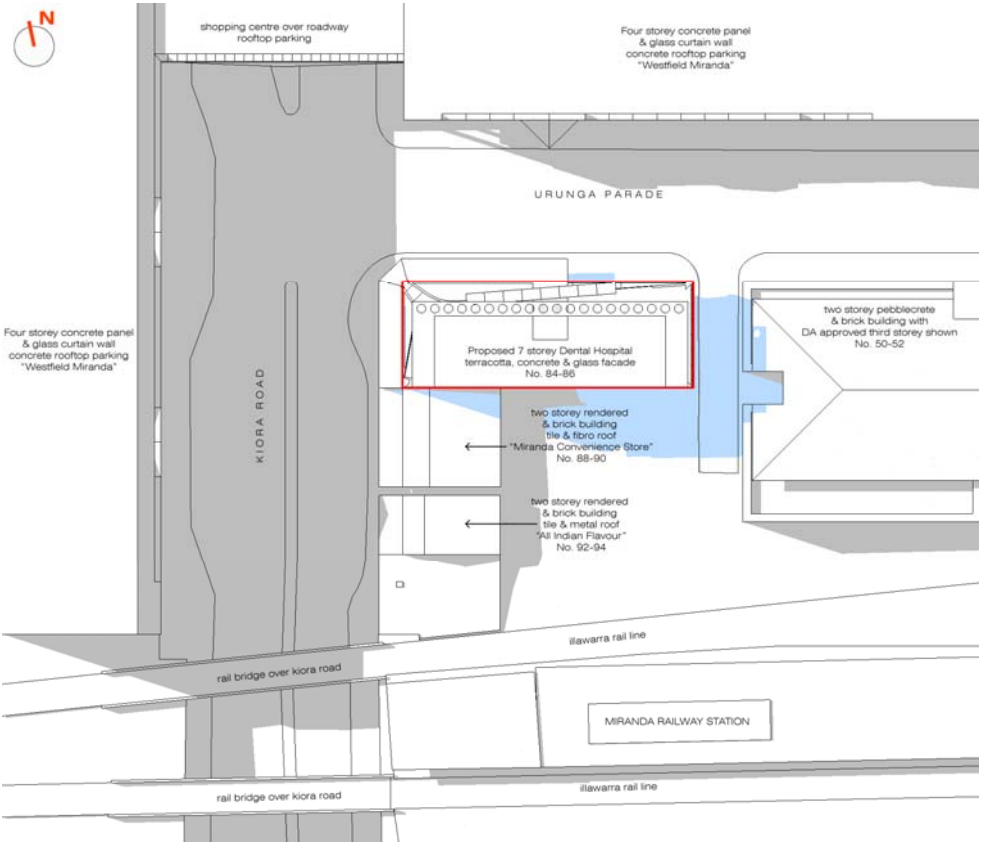


Figure 8.02

9am



12pm



3pm

Key

Shadows cast by existing buildings

Additional shadows cast by proposed building

winter solstice (june 21)

Shadow diagrams at 9am, 12pm midday and 3pm at the winter solstice (june 21) indicate that the shadow from the proposed building falls on Kiora Road, the neighbouring site 88-90 Kiora Road, the neighbouring site 92-94 Kiora Road, Urunga Lane and the neighbouring site 50-52 Urunga Parade.

The neighbouring site immediately south of the subject site, 88-90 Kiora Road, contains a two storey commercial building with rear bitumen sealed car parking accessed from Urunga Lane. Overshadowing of the building and car parking area is substantial, however, the impact is considered minimal given the use of the site as a commercial building and as a car parking area.

The next site further south of the subject site, 92-94 Kiora Road, also contains a two storey commercial building with rear bitumen sealed car parking accessed from Urunga Lane. Overshadowing of the building and car parking area is substantial, however, the impact is considered minimal given the use of the site as a commercial building and as a car parking area.

The neighbouring site, 50-52 Urunga Parade, contains a two storey building with basement car parking. The Council approved third storey addition is modelled in this diagram. The proposed building partially shields this site from the western summer sun in the afternoon.

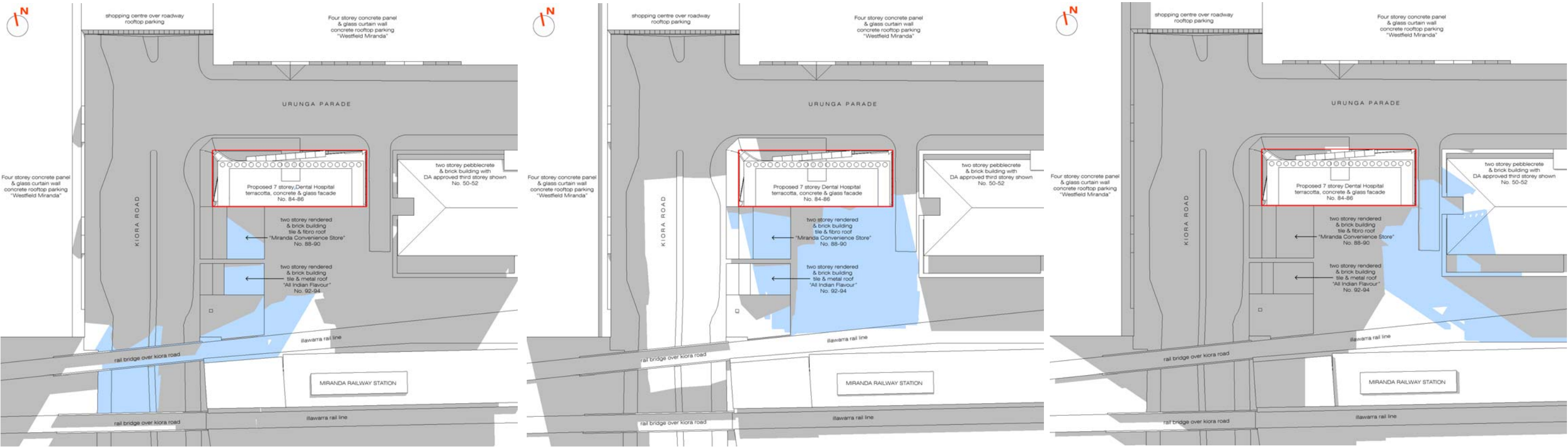


Figure 8.03

9am

12pm

3pm

09 design description

Detailed architectural Plans, Elevations and Sections are provided in the appendices to the Environmental Assessment Report.

The development includes a total of 44 car parking spaces comprising 43 spaces located at the basement level and 1 disable accessible space located at the upper ground floor level adjacent to Urunga Lane.

basement carpark

The proposed building incorporates a hi-technology fully automatic car parking system which is user friendly and provides secure undercover parking for 43 employee vehicles.

The 43 car spaces are accessed via a car lift setback from the Urunga Lane frontage.

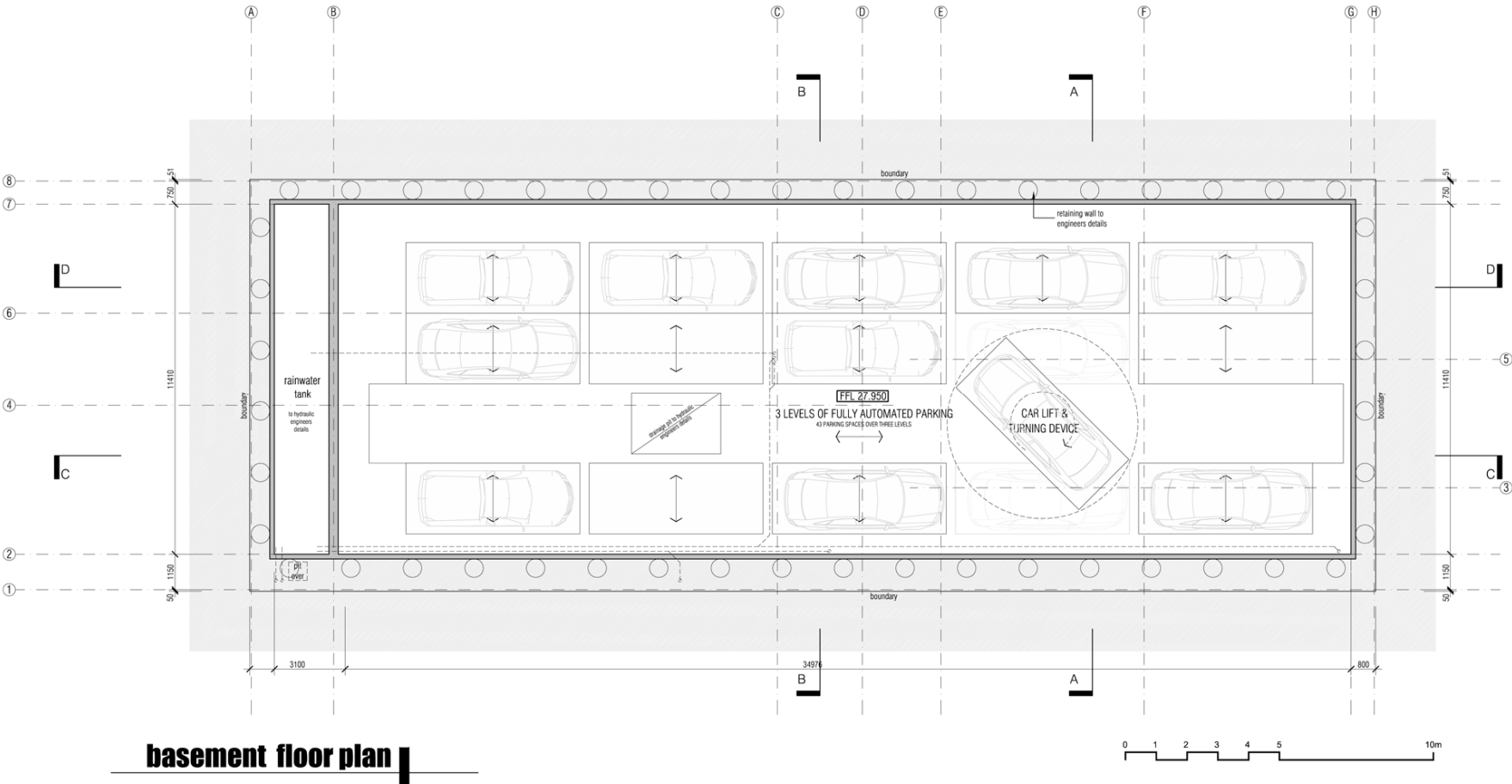
The fully automatic system allows for a car to be stored and retrieved without the need the driver to remain in their car. The car is simply dropped off in the transfer garage at ground level and the storage and retrieval machine transfers the car down to the basement and to the nearest available parking space below.

Each car is stored on its own car pallet and can be recalled by the respective driver from the convenience of their office or from call buttons located adjacent to the car lift itself.

The inclusion of a vehicle turning plate inside the car parking system allows vehicles to enter and exit the car lift in a forward direction.

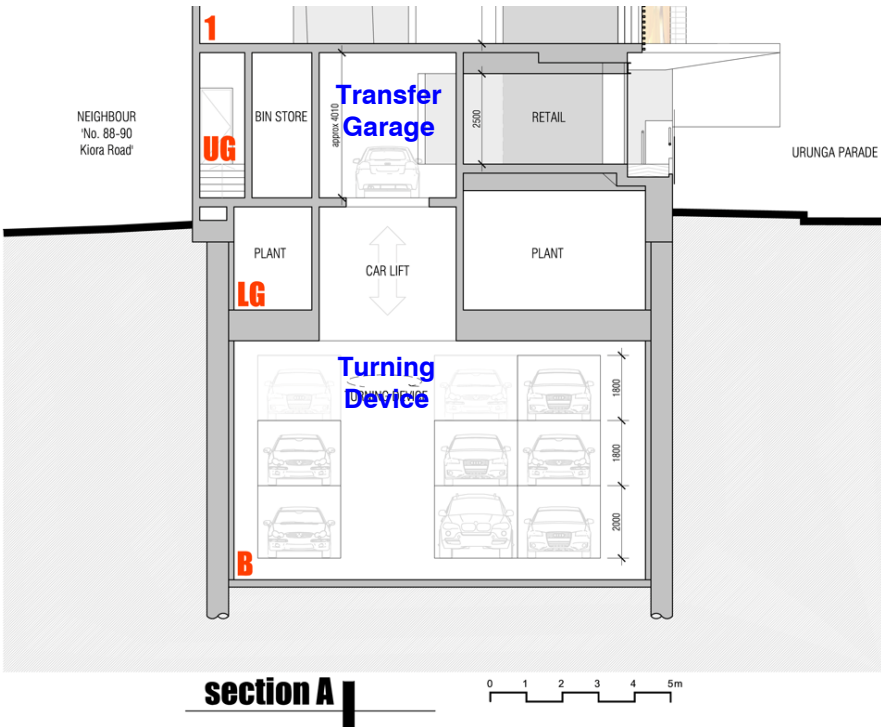
And with the incorporation of a ‘pallet changer’, the storage and retrieval times are further reduced. This allows an empty car pallet to be returned to the transfer garage at ground level while the previous car is still being stored.

The sections below show the setout of the car stacker and access to the transfer garage from Urunga Lane.



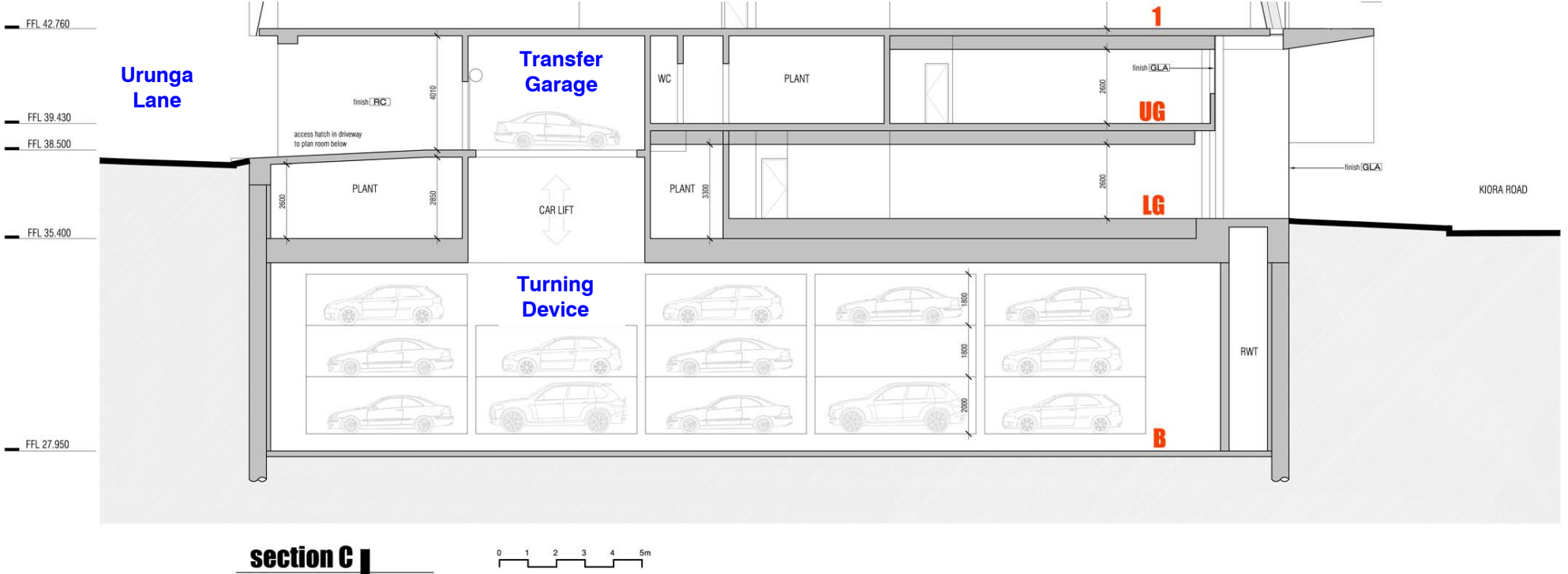
basement floor plan

Figure 9.01



section A

Figure 9.02



section C

Figure 9.03

ground floor plans

Due to the topography of the site there are two ground floor levels and are designated on the architectural plans as the lower ground floor level and upper ground floor plan. These two ground floor levels are the 1st and 2nd storeys of the building.

LOWER GROUND FLOOR PLAN (below left)

The lower ground floor plan allows for direct access from the Kiora Road frontage and incorporates two entry points to the Dental hospital reception and waiting area.

The entry points address the two main approaches to the building. The first entry point is located at the north western corner of the site and provides direct access from the intersection of Kiora Road and Urunga Parade. The second entry point is located at the south western corner of the site and caters for those people approaching the site from the train station to the south. This entry point also offers level access for wheelchairs, strollers and the like.

The lower ground floor level is connected to the rest of the building via the centrally located lift.

UPPER GROUND FLOOR PLAN (above left)

The upper ground floor plan allows for access directly from Urunga Parade via the centrally located stairs or the accessible ramp at the north eastern corner of the site. The main entry lobby provides easy access to the lift which connects all levels of the Dental Hospital.

Patients and staff are able to use the entry point that best suits their specific destination in the Dental Hospital as each department within the building has its own reception and waiting area. Those patients that arrive and do not know where to go will be directed to the general reception area on the lower ground floor.

There is a disable accessible parking space located adjacent to Urunga Lane.

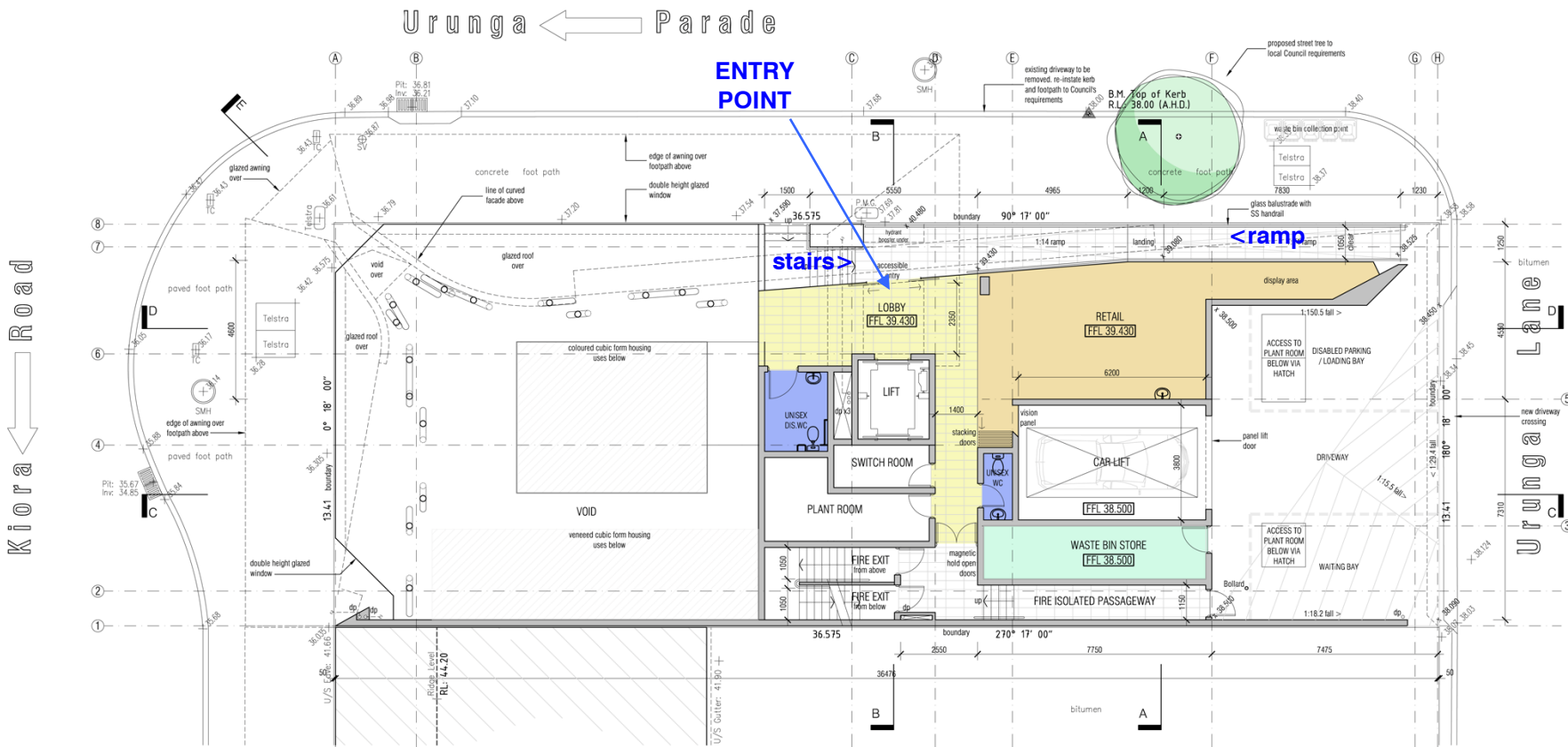


Figure 9.04 upper ground floor plan

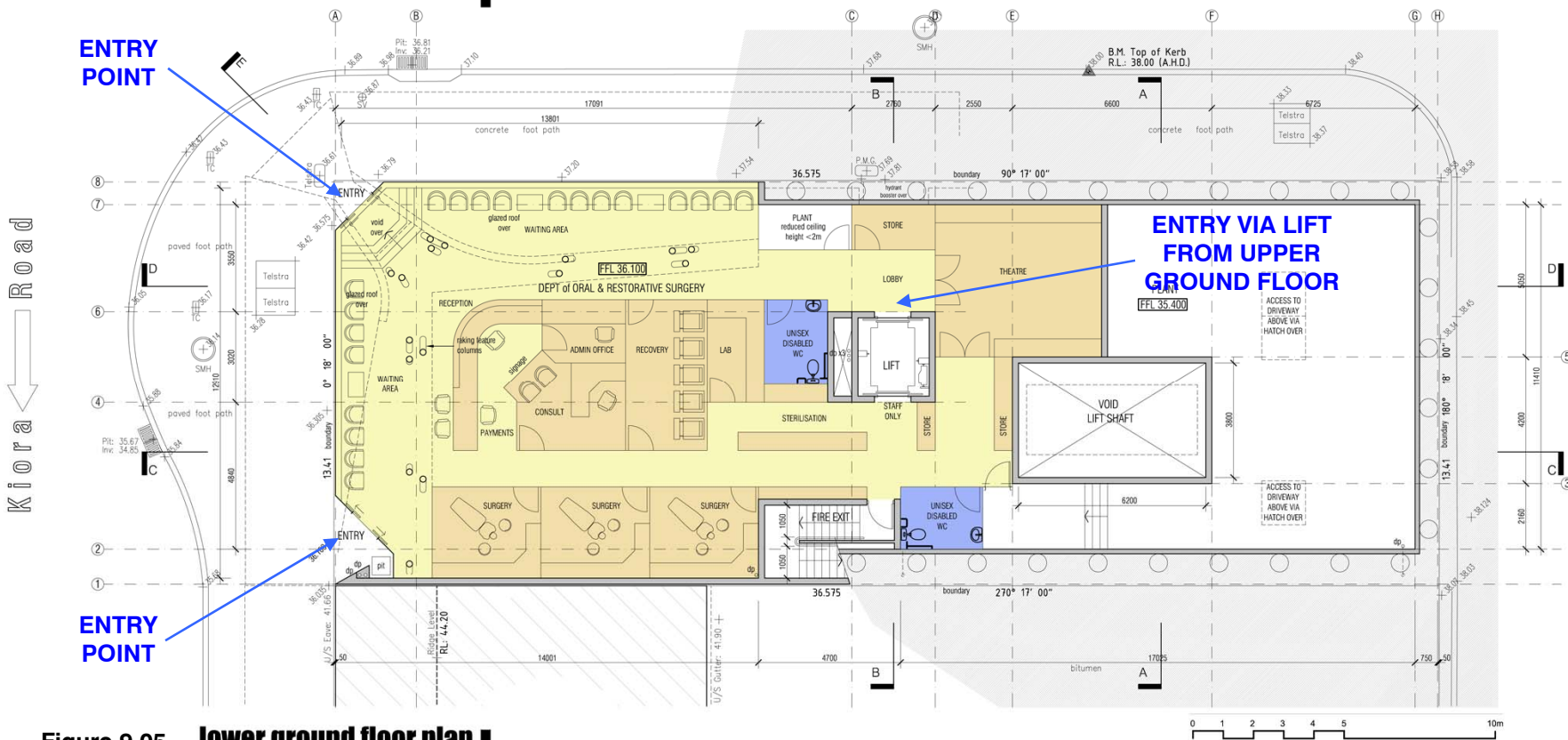


Figure 9.05 lower ground floor plan

intermediate floor plans

The intermediate floors of the Dental Hospital comprise levels 1 thru 4 (being the 3rd, 4th, 5th and 6th storeys of the building). These levels accommodate the remainder of the Dental Hospital departments and are connected to the rest of the building via the lift and fire stairs.

Each of these floors will be connected to the north facing façade plenum to provide natural ventilation and assist with heating and cooling in conjunction with the intelligent building management system.

There are plant rooms on each level of the dental hospital for each department so that selected plant and equipment can operate more efficiently. Some plant and systems, however, will also need to be housed in the main plant room on the lower ground floor and be distributed throughout the building via service risers adjacent to the lift core.

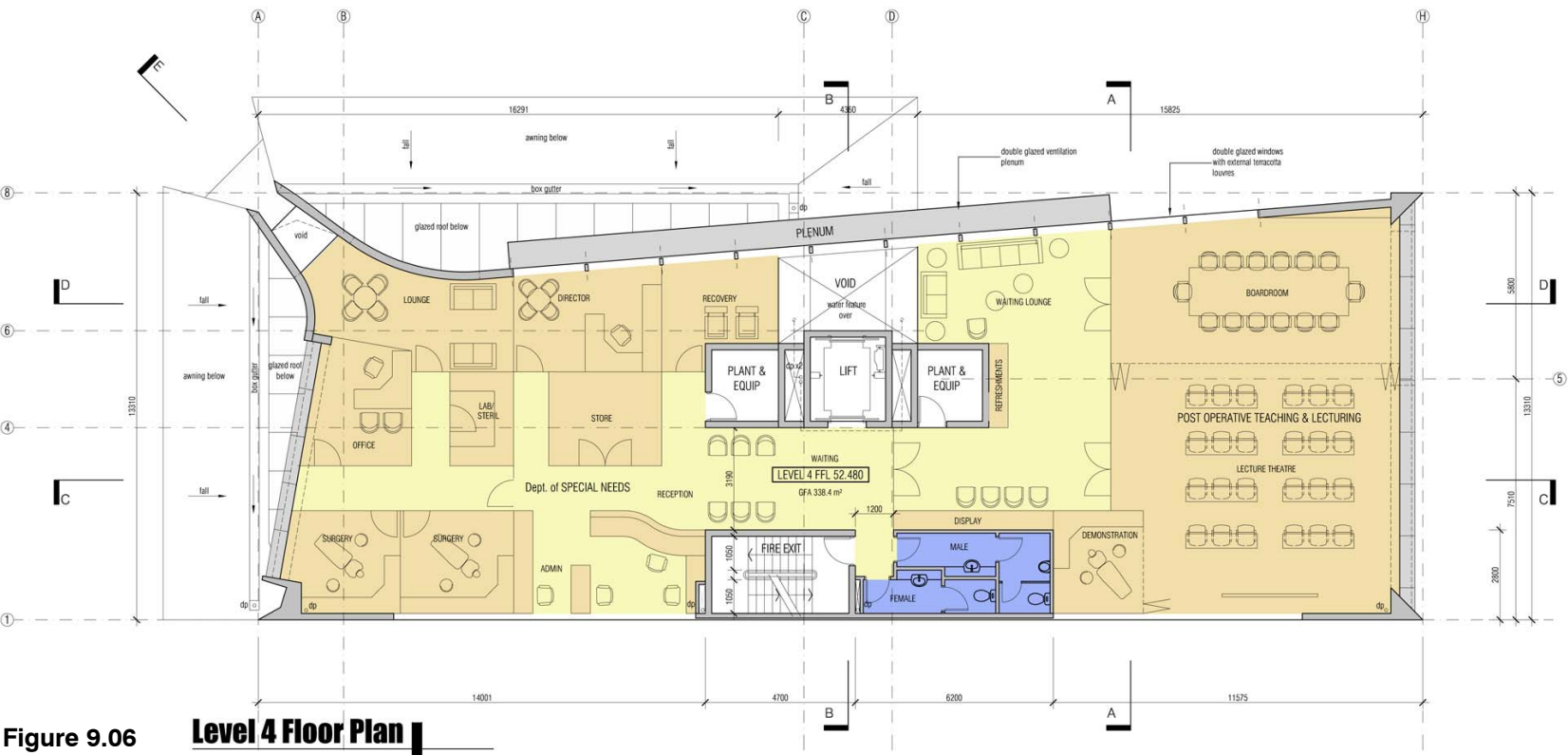


Figure 9.06 Level 4 Floor Plan

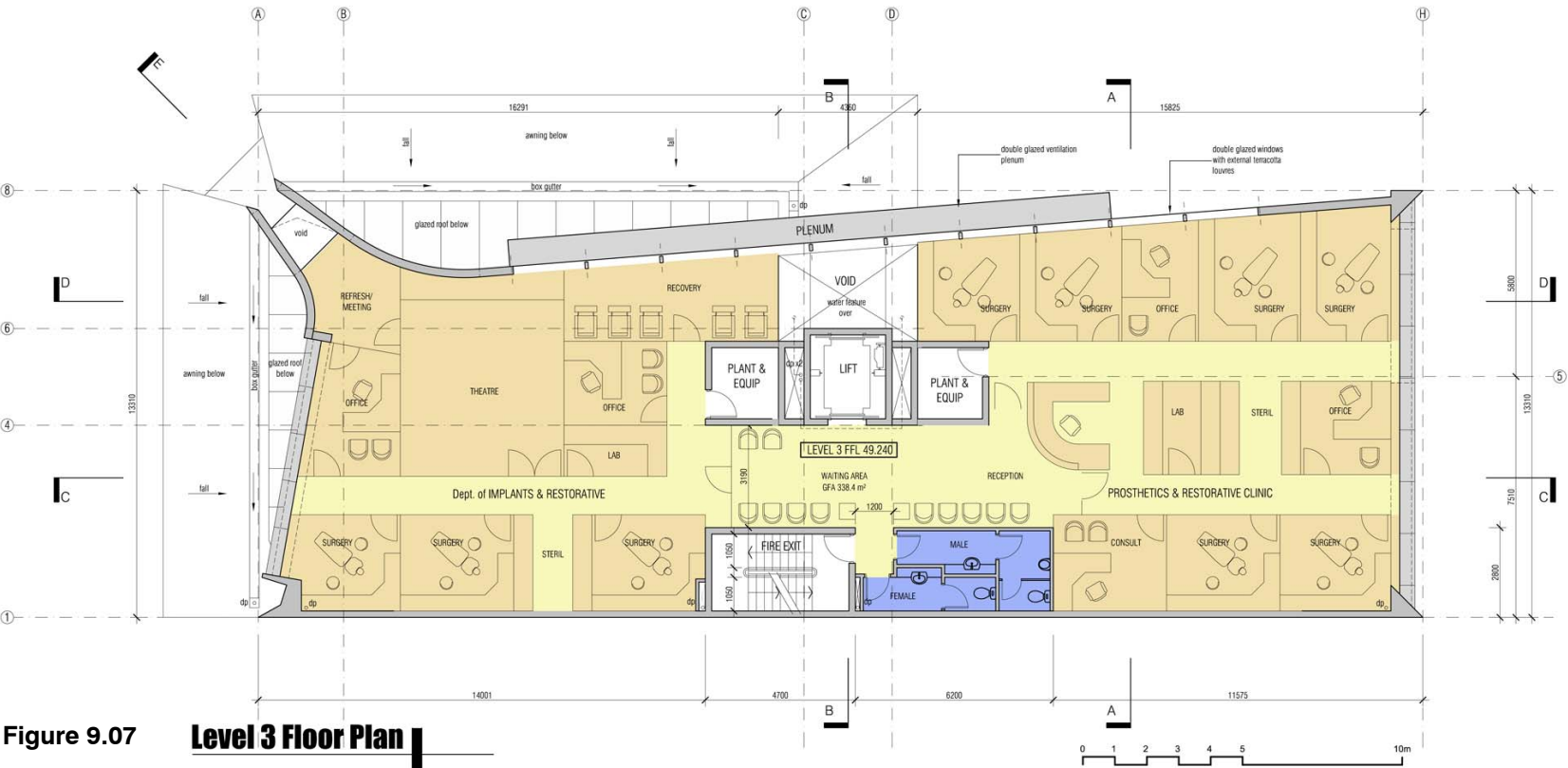


Figure 9.07 Level 3 Floor Plan

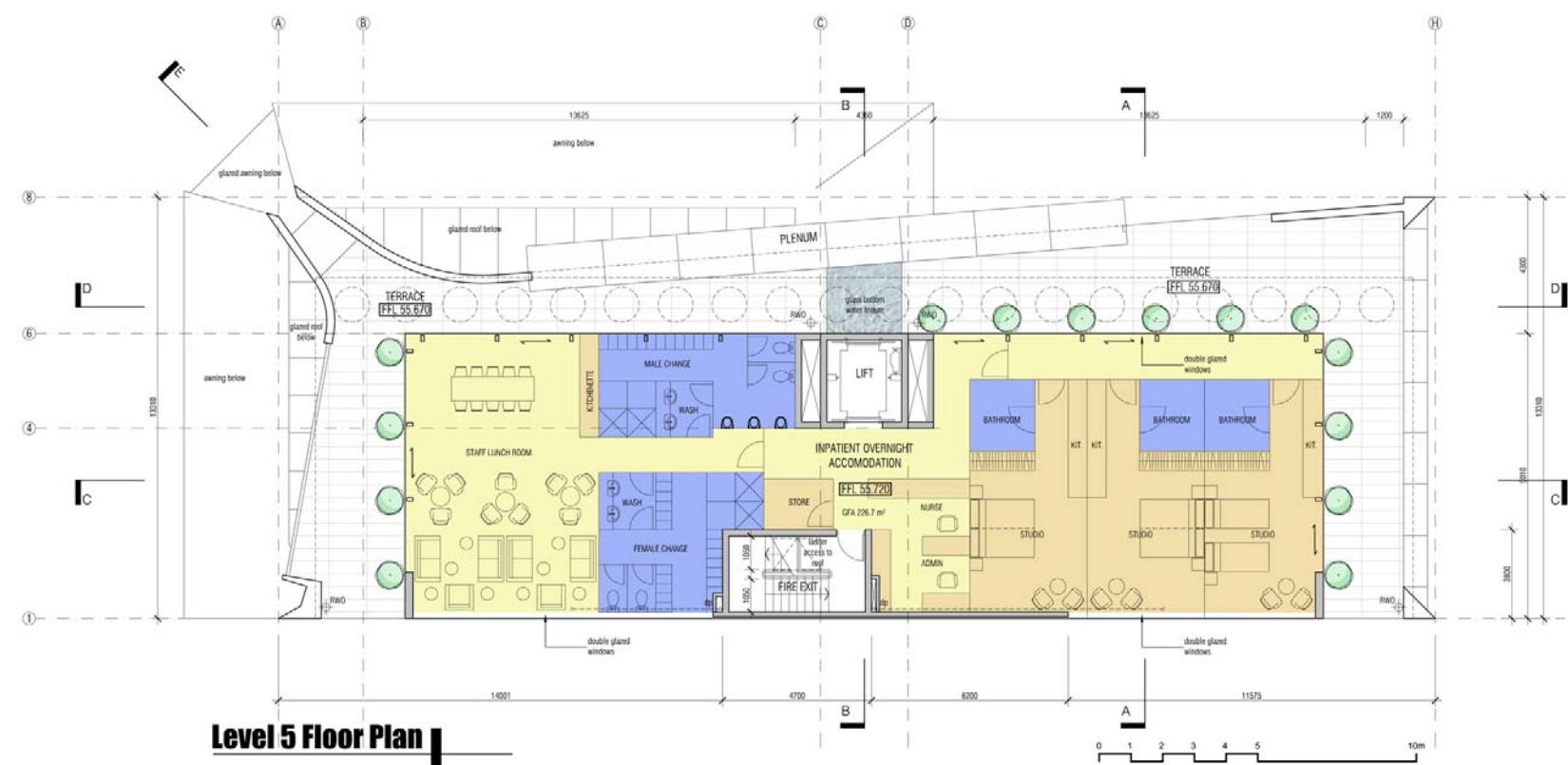


Figure 9.08

terrace level

The upper most level of the Dental Hospital is dedicated to staff facilities and the inpatient overnight accommodation area. Each area has access to the north facing terrace area that will be used as a break out space.

A feature of this area is the glass bottomed water feature located directly above the upper ground floor entry lobby that is accessed from Urunga Parade. Low maintenance potted feature planting is also provided.

10 development data

Zoning	Urban Centre 8
The site is not in a heritage conservation area.	
The existing building is not a heritage e item.	
Permissible height	28m
Max number of stories	7
Permissible FSR	2.5 : 1
Site Area	490.5m ²

gross floor areas

Measured in accordance with Sutherland Shire Council Local Environmental Plan 2006. Areas included in GFA calculations are shown coloured on the architectural floor plans attached as appendices to the Environmental Assessment Report.

Lower Ground Floor	(1 st storey)	266.5m ²
Upper Ground Floor	(2 nd storey)	91.5m ²
includes 43.7 m ² of retail space		
First Floor	(2 nd storey)	338.4m ²
Second Floor	(2 nd storey)	338.4m ²
Third Floor	(3 rd storey)	338.4m ²
Fourth Floor	(4 th storey)	338.4m ²
Fifth Floor	(5 th storey)	226.7m ²
TOTAL GFA		1938.3m ²
Proposed FSR		3.95 : 1

car parking

A total of 44 parking spaces are provided at basement level and upper ground level.

There are 43 basement car parking spaces comprising 3 levels of steel framed stack parking in a fully automatic car storage and retrieval parking system serviced by a vertical car lift, storage and retrieval machine with an integrated vehicle turntable allowing forward entry and forward exit manoeuvres to and from the site.

In addition to the parking in the basement, a disable accessible parking space is located adjacent to Urunga Lane at the upper ground floor level.

building use

- Dental Hospital and ancillary facilities including;
- day surgery, day procedures and health consulting rooms;
 - accommodation for persons receiving cosmetic dental care, reconstruction ect;
 - accommodation for special needs patients and their carers;
 - shops for refreshment rooms;
 - educational purposes;
 - research purposes; and
 - any other dental related use.



Figure 10.01 – automatic car parking system

sustainable initiatives

NATURAL VENTILATION

- automated operable window systems with induced air flow paths via ventilated plenums, on the northern façade, ceiling plenums & transfer ducts, and thermal chimneys.

DOUBLE GLAZED WINDOWS

- All windows and glazed roofs are proposed to be double glazed to assist in retaining heat in winter. These windows also have low emissivity films to reduce heat gain in summer. See also, intelligent building management system.

LOW EMISSIVITY VENTILATED PLENUM FAÇADE

- Glazed plenum façade to north facing façade with integrated digitally printed glass interlayer for increased shading. The plenum will have operable openings at each floor and will help to remove hot air from the building and reduce heat gain in summer. In winter the plenum will be closed off and provide a thermal buffer zone to reduce heat loss in winter. The ventilated plenum will serve the 3rd, 4th, 5th & 6th storeys.

SOLAR CHIMNEYS

- Also called thermal chimneys, solar chimneys are vertical shafts utilising solar energy to enhance the natural stack ventilation through the building. The most prominent solar chimney included in the design is located at the north western corner of the building and serves the lower ground floor level. Additional thermal chimneys could be integrated in the lift and fire stair shafts and, potentially, the risers accommodating the building services.

NIGHT PURGE

- The ventilated plenum on the northern façade, together with the solar chimneys and operable windows, assist with automatic night purging of the building.

INTELLIGENT BUILDING MANAGEMENT SYSTEM

- Controlling natural ventilation, operable windows, heating, cooling, solar chimneys, night purge, security & lighting.

RENEWABLE ENERGY PHOTOVOLTAIC'S ON THE ROOF

THERMAL MASS CONSTRUCTION

- polished concrete floors and precast concrete walls to be used throughout to improve summer and winter comfort.

LOW & NON-TOXIC FINISHES

- Use of non-toxic finishes and low VOC internal paints to maximize internal environment quality.

RAINWATER CAPTURE & STORAGE

- for reuse in sanitary facilities, watering of plants and washing down of hard surfaces.

WATER EFFICIENT FIXTURES & FITTINGS

- AAA rated fixtures and fittings generally except where higher flow rates are required by specific dental uses

MAXIMISED NATURAL DAYLIGHTING

- with low energy area light fittings and task lighting as required.

SOLAR HOT WATER UNITS

REDUCED CAR PARKING PROVISION

- To encourage the use of car pooling, walking, bike riding and public transport.

AIR QUALITY

- The proposed building seeks to protect the health of patients, staff, and visitors by providing a combination of natural ventilation and controlled filtered air for different parts of the dental hospital as required with a focus on providing natural ventilation wherever possible.

11 ESD statement

The proposed development at 84-86 Kiora Road, Miranda has an integrated design approach with environmentally sustainable initiatives built into the building fabric.

Selection of relevant environmentally sustainable design principles have been based on a climate responsive design methodology. The overall objective being to provide a building that has reduced running costs over the life of the building and one that is environmentally responsible.

Fundamental design inclusions relate to building health, air quality, natural ventilation, natural daylighting and reduced running costs with the inclusion of passive and low tech ESD principles.

Early design briefings were held with the client to assist the decision-making process and select appropriate strategies and energy systems that would suit the project requirements and budget.

A key element of the design is the building envelope that integrates:

- double glazing;
- low emissivity glass;
- ventilated plenums;
- digitally printed glass interlayer for shading; and
- external automatic blinds on the east and west facades.

Where façade elements are not required to be transparent, a combination a terracotta tile ventilated façade has been utilised over off-form concrete walls.

More detail on the ESD initiatives can be found in the ESD Report prepared by VIM Sustainability. A summary of the sustainable initiatives that have been incorporated in the building design are listed on the left of this page.

12 model photos





Figure 13.1



Figure 13.2

13 potential building form – neighbouring site

There is a clear perspex box representing a ‘potential building form’ adjacent to our site on the physical model. See figure 13.1 above left. This ‘potential building form’ is also represented in the photomontage figure 13.2 as a shaded white form and also referenced in section 7 of this report. This potential building form is shown located on both of the neighbouring sites to the south covering No. 88-90 Kiora Road & No. 92-94 Kiora Road.

This ‘potential building form’ represents just one, of many, potential building forms that may be built upon the two neighbouring sites either separately or combined as a consolidated lot.

The potential building form depicted in this report is 4 storeys high, has an FSR of 2.5:1 and complies with the 2m DCP setback for storeys above the second level.

The purpose of this shaded potential building form is to show the probable context that would occur when the neighbouring two sites are developed at some point in the future.

While we are not proposing to restrict the height of the neighbouring sites to four storeys, as these sites also have a permissible building height of 28m and can be up to 7 storeys, we are simply showing the minimum LEP compliant form that could potentially occupy these sites in the future.

As it is shown, the 4 storey potential building form assists positively to address the broader urban issues by both helping to express our corner form and, also contributes to a scaling down of the sightline that ultimately links and grounds the 23m tall bulk and mass of Westfield’s to the single level railway line form to the south.

Having said this, we are in no way advising on or limiting the height of the potential building/s on the neighbouring properties, which is a matter for Local Council in the future.