

PROJECTS



OBZ SQUARE

Observatory

Client / Developer

Cape Living Developments

End-user

University of Cape Town

Project Manager

LMC Consulting

Architects

mlh architects & planners

Quantity Surveyor

B & L Quantity Surveyors

Consulting Engineers:

Structural & Civil

BKS Engineers

Mechanical, Electrical, Fire & HVAC

SolutionStation

Town Planners

mlh architects & planners

Landscape Architects

OvP Associates

Main Contractor

NMC

Photography

Fiona Barclay Smith (courtesy of NMC)

Terry February (courtesy of NMC)

mlh architects & planners



Obz Square

A bold concept and design for the University of Cape Town's new 880 bedroom student residence

Working to an extremely tight programme, the R485 million Obz Square student residence for the University of Cape Town was completed in November 2011, following a 20 month construction period. Achieving this required some key design and construction decisions, including the construction of prefabricated bathroom “pods” off-site. Close co-ordination between the professional team and the main contractor was critical to the successful implementation of this project.

Contractual Arrangements, Statutory Approvals & Programme

The client, Cape Living Developments, reached agreement with the University of Cape Town, in December 2009, for the development of a new student residence on the corner of Main and Penzance Roads, Observatory. The site originally consisted of a number of properties supporting light-industrial operations, as well as an internal access lane. Consolidation into a single property required that the developer follow a statutory process to purchase a central service lane and make application to have it closed.

The consolidated property was some 6,000m² in extent, and had a general commercial use zoning. Due to the very tight programme, the development had to be designed to comply with the bulk, coverage and height parameters of the zoning scheme - any departure application would have resulted in costly delays. Within these development constraints, the architects nevertheless managed to optimise the use of the site, finally achieving 98% of the total permissible bulk for the site.

The main contractor, NMC, broke ground during February 2010. The building was completed and handed over to the client in November 2011, with the first intake of students taking occupation in February 2012.





The Brief & Design Concept

The brief from the client called for the optimal use of the development rights of the site and to maximise the number of student rooms, within the overall vision and design requirements of the end user, the University of Cape Town.

Given the site's location on Main Road, and the requirements of the brief, the optimum development form for the site was a building that embraced the perimeter boundaries of the property, with a secondary "bridge" section creating the largest possible internal courtyards. Student rooms are arranged along a central passage, and have either an external or courtyard outlook. The building is 7 storeys above ground, and includes a basement and semi-basement for parking.

During the initial design development process, UCT opted to provide individual rooms for students, with en-suite shower, toilet and wash basin. This is the first time that UCT has made use of this model.

The Façade & Elevation Treatment

The building base has been treated as a distinctive element, containing the retail component, study rooms, warden apartments, pedestrian and vehicular entrances.

The main building block has been treated as a matrix of three primary façade elements, defined by contrasting colours;

the lighter and medium colour containing the bedrooms, and the darkest colour containing the kitchen / dining rooms, which are fitted with large glass sliding doors giving increased visual connection between inside and out.

This approach has been successful in articulating the relatively large building, especially from a distance, while closer up, the building has a finer grain, with the texture of exposed painted bricks, sun control elements and bright panels of colour linking bedroom windows.

It is anticipated that Obz Square will, with the commencement of the 2012 academic year, have a positive and revitalising influence on the surrounding area and the greater suburb of Observatory



The communal internal space has large glazed doors to allow events to spill out into the courtyard space



Room Design

Student accommodation starts at first floor level - well above the surrounding streets - ensuring both privacy and security.

Each student room is 11m² in size, and is designed to accommodate a 3/4 bed, study space with a built-in desk, shelf, and under-counter storage space. Built-in cupboards and shelves with hanging space are also provided. Walls are plastered and

painted brick to limit noise between rooms. The en suite bathrooms of 2m² have tiled flooring and walls, and are mechanically ventilated, with a timer to save energy.

See Side Box

Rooms are naturally ventilated and the reveals of the windows are angled to maximise light penetration into the rooms. Rooms on the north-west and south-west





On the first floor level, the main social space is provided, separating two rectangular courtyards

façade have sun-shading to reduce sunlight ingress, glare and heat gain. Windows in the Main Road façade block are fitted with acoustic glazing to reduce external traffic noise. Nine universal access rooms, fitted with specially designed bathrooms have also been provided.

Shared Kitchens

In a further break from the traditional

residence dining hall facility, the Obz Square design provides for between 8 and 11 students to share one of the 91 communal kitchens. The kitchens are envisaged to become important social spaces, where students interact with each other in smaller groups. A table and chairs are provided, and floor-to-ceiling glazing provides ample natural light. Each kitchen is provided with a hob, microwave oven and freezer. Each



The Obz Square design provides for between 8 and 11 students to share one of the 91 communal kitchens



student has a locker to store food, and three to four students share a fridge. A dual system of wet and dry waste bins is provided, in line with UCT's recycling policy.

Entrance & Lobby

The Main Road edge of the development is set back 5 metres from the street boundary, offering a wide, safe and useable land-scaped pavement zone.

Here the building's ground floor comprises line shops totalling some 800m² of lettable area. Tenants will be selected according to student needs for convenience shops, ATMs and food and coffee outlets. The use of the pavement as spill-out space under the canopy and trees will be encouraged.

The Obz Square residence is accessed directly off Main Road, through the main





The lobby opens out into a linear
concourse running the length of the
building, parallel to Main Road

security lobby, by means of access-control cards. CCTV camera provides surveillance for both the interior and external public spaces. The entrance lobby includes the main reception desk, together with four reception offices and the central security suite, and a range of additional management and auxiliary facilities.

The residence is to be managed and controlled by wardens, and to this end, self-

catering live-in apartments have been provided. Each apartment has 2 / 3 bedrooms, kitchen / dining room and lounge, with a private terrace.

Atrium, Concourse & Circulation

The lobby opens out into a linear concourse running the length of the building, parallel to Main Road, and provides access to a number of student and





PRE-FABRICATED EN SUITE BATHROOM UNITS

The 871 en suite bathrooms units were manufactured off-site, in Atlantis. The “pods” have a steel base with propriety acoustic plasterboard walling and ceiling systems. Wall-to-wall tiling, all plumbing, fittings, fixtures and finishes were completed and snagged in the factory, prior to transport and final placement on site. During the six month pod manufacture phase of the contract, approximately 6 pods were positioned and commissioned on site every working day.



SECTION

management functions. An important feature of the concourse is an open-air landscaped atrium, with large glass panels that ensure natural light and ventilation to the concourse.

Two study rooms and four meeting rooms are provided, where students can work or have tutorials. A 40-workstation computer and printing facility is linked to UCT's intranet. A laundry is provided for use by the students, with 30 washing machines and driers.

With an average of 135 students per floor, the main vertical circulation is by way of two separate cores, each with two lifts and staircase, located on either side of the social space, and giving access to each of the 6 residential floors.

First Floor Social Space & Courtyards

On the first floor level, the main social space is provided, separating two rectangular

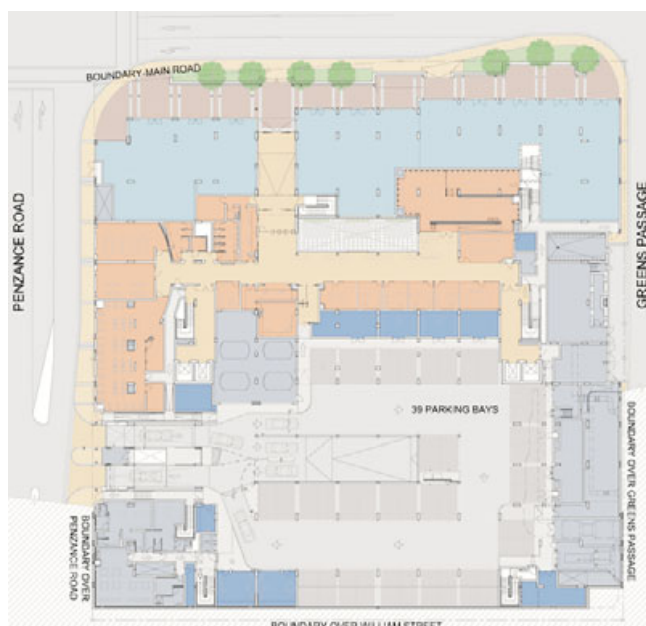
courtyards. This space, in tandem with the courtyards, is anticipated to become the most important meeting and socialising area for the residence. The social space is accessed from each floor via a lift lobby and stair well on either side.

The social space offers 240m² of living and recreation space, and provides the opportunity for both structured and casual events that are an integral part of residence life. This communal space has large glazed doors to allow these events to spill out into the courtyard space. The key components of this space are two communal lounges with large-screen televisions and acoustic sliding walls, a games area, and a kitchenette / serving counter for catering purposes.

Parking

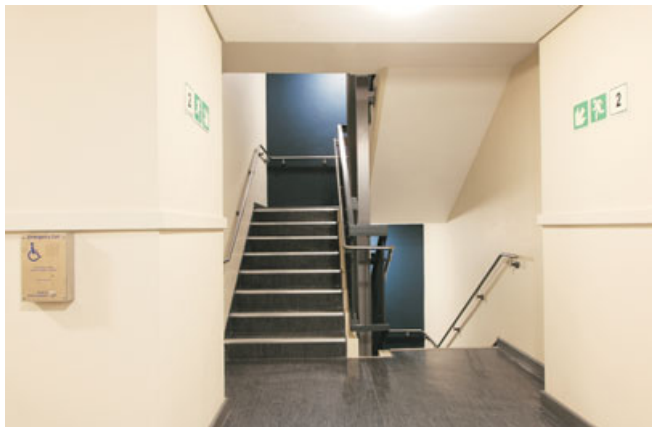
Some 180 parking bays, including universal access bays, have been provided, with 40

GROUND FLOOR PLAN



FIRST FLOOR PLAN





bays located at the rear of the ground floor semi-basement with direct access to the residence lobby - for deliveries and loading - and 140 bays in a lower basement for students and shoppers.

Provision has been made for scooter and motorbike parking, and secure bicycle storage. UCT has indicated that the well-supported Jammie Shuttle route has been extended to include a stop in the vicinity of Obz Square.

Green Building Principles

The design team were tasked with taking cognisance of evolving sustainability principles, policies and technologies, and to make informed decisions regarding the use of appropriate materials, systems and associated management practices.

Careful consideration was given to direct sunlight penetrating the building, and sun-studies were used to optimise the

use of sun-screening measures to reduce heat gain. One of the key energy-saving systems in use in the building is a central heat-pump which is located in the basement, and makes use of ambient heat extraction, thereby reducing the amount of energy required to provide heated water, circulated throughout the building.

The residence has been designed to allow for optimum natural light. Where required, energy efficient lighting in the form of compact florescent bulbs have been used. Further, all communal and circulation areas have been fitted with motion-detection sensors, to manage the illumination of these spaces.

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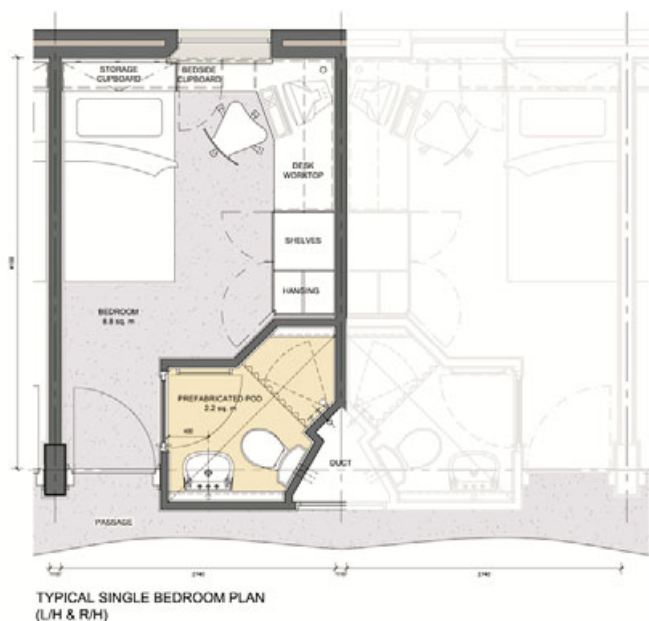
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TYPICAL SINGLE BEDROOM PLAN



TYPICAL KITCHEN (TYPE 1) PLAN

