

STUDENT ACCOMMODATION
RETURN BRIEF

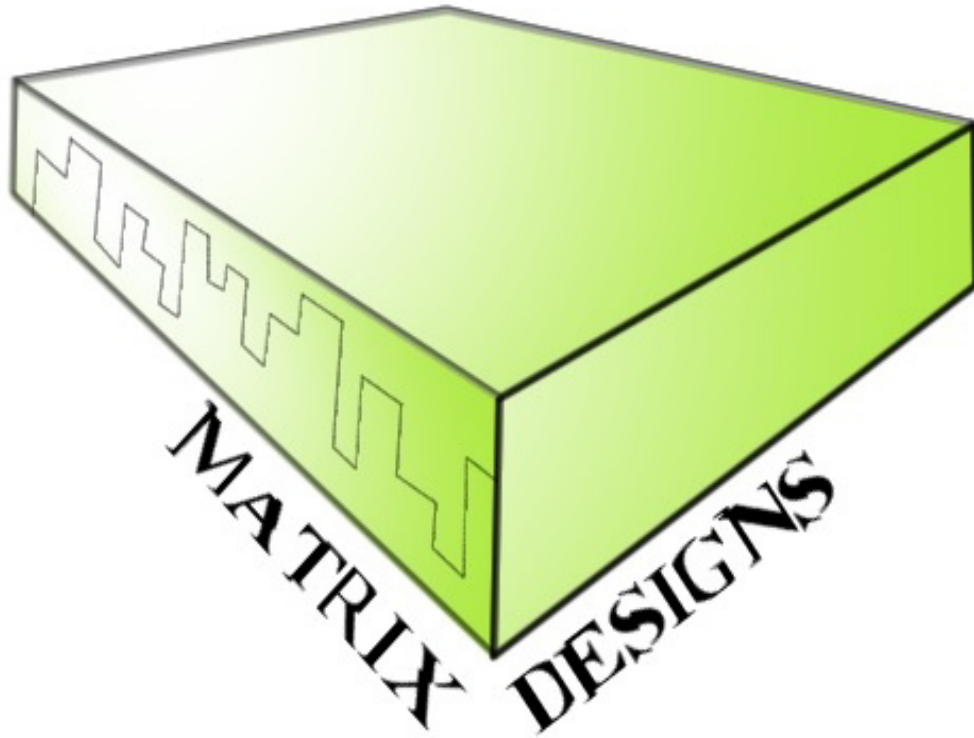
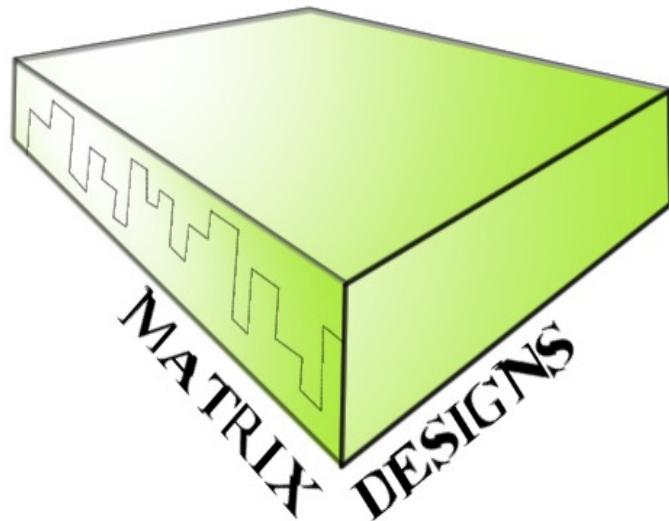


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PROJECT INFORMATION

Project Description

A multi-unit student residential development has been proposed by ROARK development which is situated on 69 young Street Frankston 3199.

The purpose of this development is based on the rejuvenation and invigoration of the central business district of Frankston and to provide low cost accommodation to the students of Chisholm Institute.

The Victorian state government have composed a document for developers and investors: The Frankston Tafe to Bay Structure Plan, in order to address the necessity of invigorating a vital part of Victoria which is a pivotal suburb in the context of Victoria's Transit Cities programme.

ROARK Developments have informed the requirements of the TAFE to bay strategy in their design by providing a design brief which incorporates and adheres to the Tafe to Bay structure plan.

The clients have adopted a green approach to the design and fit out of the building. The client also states that careful consideration must be taken when allocating sizes and spaces of the student apartments, because students require very little space and usually the students who will buy or rent these apartments don't drive cars.

The client brief requires and necessitates the following requirements:-

- Apartments must have a 16 – 18 square meter footprint
- Minimum of 60 students to be accommodated
- Repetitive in nature (maximum of 2 designs)
- Maximise the apartment space within the building
- Apartments to accommodate for:
 - Small Bathroom
 - kitchenette
 - Cupboard
 - Single bed
 - Desk
- General Requirements:

- Communal area to be provided on the ground floor
- Mail boxes
- Small reception area
- Security considerations essential
- Storage areas
- Waste bins with access for their removal from the building
- Lift access throughout the building is required
- Promoting sustainable living and promoting sustainable alternative transport systems
- Limited basement car park accommodating 12 cars (compromise with council regarding train station parking)
- Maximum of two different layouts
- \$8.25 million - excluding professional fees budget

Aesthetic requirements:

- Modernist look
- Capitalising on the views available from the site
- Regard and adhere to the TAFE to bay strategy
- Nature of repeating apartments to not be evident in the façade design
- Facades to be highly articulated (cladding, balconies and sun shading devices)
- Façade to be of precast panels and lightweight cladding
- Cladding materials will be left raw rather than pre-finished with paints

Structural requirements:

- Concrete framed structure with no band beams (to limit cost)
- Minimal slab depth to be achieved through every second internal wall to be load bearing (concrete)
- Floor to floor height to be 3000mm
- Plenums throughout the corridors ceiling height 2300mm
- Servicing to be achieved through the use of multiple risers
- Structure to allow for future consolidation of apartments
- Maximum of 5 storeys

CLIENT/STAKEHOLDERS NAMES

Roark developments – the developers/client of this development, involved throughout the whole process and states the requirements of the development as stated above and in the client design brief. The development is built according to their desires and allowable budget.

Frankston council – responsible for checking planning drawings, whether they are in accordance with the TAFE to buy strategy and providing feedback in regards to planning frameworks and planning requirements. Takes into consideration urban context local context and future planning requirements and documents.

Community – the surrounding community will be impacted by this design because the development will be placed with the central area district of Frankston and can have a possibility of impeding views from pedestrians walking past.

Students – students attending Chisholm TAFE will be provided with the opportunity to either buy an apartment or rent an apartment in order to have a closer means of traveling to school, and of having a quiet study environment for themselves.

Students buying or renting an apartment will maximise their learning and career potential. Pricing of buying apartments and renting them will be crucial to students as they most probably have limited funds.

Consideration must be taken when designing the student development and pricing must not exceed student expectations if apartments are to be sold and rented.

Chisholm Tafe – Chisholm TAFE is a public schooling facility providing education and trade apprenticeship courses. The nearby Chisholm TAFE will not have to take into consideration extra parking of students accommodated in the student development since the TAFE is in visual range and mobile transport is not required to attend classes.

Having a student apartment complex nearby can provide incentives for students to commence a course at Chisholm TAFE and will benefit them.

Investors – investors will play a crucial role in the revenue and profit that this development will provide, thought and consideration must be taken in order to lure in investors and sway them to purchase apartments.

Bank – the bank is a major investor in this development and is responsible for money flowing, if the bank evaluates the design prior to construction and decides that this proposal is not profitable they will not proceed with investing and giving the money to the client.

Metro – metro trains Melbourne is the franchise operator of the suburban railway network of Melbourne. Frankston train station is about 200m north from the development and the site boundary abuts to Frankston train lines.

Trains coming to and from Frankston station will create noise and vibration problems. Vibration problems to the footings and structure of the building and noise problems to the students who require a quiet environment to study in.

Vic roads – responsible for developing and managing of the arterial road network in Victoria along with delivering registration and licensing services.

The proposed development will most probably require road access from Fletcher road and also pedestrian access so they will be involved with this aspect.

CLIENT VISION STATEMENT

ROARK developments is a developer team fixated on adopting a green and sustainable approach to construction whilst providing the necessary requirements for the local councils adhering to local council terms and considerations.

RD's approach of modernistic designs are very appealing and aesthetically pleasing to the eye, whilst still containing costs and using standard construction technologies when construction is in progress, in order to not exceed budgets portrayed.

RD's previous developments portray a type of consistency and uniformity within their designs at the same time as not making the design seem monotonous and bland, RD's previous experience in developing high rise buildings is proof that they are not just talk but also action.

Their highly articulated facades create a continuous flow to their buildings and not just a monster building gleaming down over you.

- High rise apartments
- Uniformity
- Repetition
- Highly articulated facades
- Unique and identifiable to RD
- Containing costs
- Standard construction technologies

PROJECT REQUIREMENTS

Cultural Value

Frankston City is situated on the Eastern shores of Port Phillip Bay approx. 40 kilometres South of Melbourne and is made up of about 10 kilometres of coastline. It is defined as the Activity Centre and the gateway to the Mornington Peninsular and the nearby South East growth corridor of Melbourne.



The municipality encompasses suburbs - Seaford, Carrum Downs, Langwarrin, Frankston North, Frankston South, Skye and Sandhurst. It is accessible via many key routes including Nepean Highway, Frankston Freeway, Eastlink and Westernport Highway and Peninsula Link.



Frankston enjoys the spectacular amenity of a Bayside location providing regional shopping, education, health, community service, financial, recreation and leisure, and entertainment facilities being one of the largest retail centres

outside the Melbourne CAD servicing a population far greater than its municipal boundaries.

It is well known as a regional public transport node and interchange and positions itself as one of the premier transit cities as a substantial civic, commercial and retail hub as well as an urban activity centre on the edge of the bay.

Frankston is seen as an emerging tourism destination in its own right and visitation to the area has increased significantly producing increased economic impact for the local businesses.

The city has a rich and vibrant culture and is recognised for its creativity in the arts promoting distinct characteristics. Featuring year round attractions – events, arts, theatre, culture and comedy.

Major features of the City include;

- Frankston Central Activities District (CAD);
- Bayside Shopping Centre,
- Centro Karingal Shopping Centre,
- Chisholm Institute of TAFE (Frankston Campus),
- Monash University (Peninsula Campus),
- Frankston Hospital,
- McClelland Gallery and Sculpture Park,
- Frankston Pier and Boardwalk,
- Landmark Bridge,
- George Pentland Botanical Gardens,
- Langwarrin Flora and Fauna Reserve,
- The Pines Flora and Fauna Reserve, and
- the Frankston Reservoir.

The proposed building will incorporate urban design principles based on best practice techniques and approaches, Tafe to Bay Structure Plan, NCC and Australian Standards as key foundations for the design of the new development.

Key principles of urban design provide for people to interact with and respond to the environment. The proposed development will respond to the existing natural and developed features of the environment context and enhance the local landscape, sense of place and history whilst providing a quality of living environment.

Considerations include;

- Natural features;
- Locally distinctive built form;
- Streets patterns which respond to the context;
- Special spaces of natural or cultural significance;
- Skylines and roofscapes;
- Building materials;
- Local culture and traditions; and
- Avoiding standard solutions,



Functional Needs

Building

Primarily the proposed development will need to function as a student accommodation providing facilities and amenity in support of students. The development is located within walking distance to tertiary institution (Chisholm Tafe) and major activity centres to function as a student accommodation. The development will be affordable, cost effective and environmentally sustainable.

The proposal will include practical landscape solutions that compliment the value, character of the neighbourhood and support DSE principles with streetscapes that enhance and compliment character of the area and maximise on permeability of external ground surfaces.

Ground floor will be mainly allocated for retail use or hospitality uses and entry lobby/reception to generate activity, natural surveillance and revenue.



Student Needs

Students have different needs to many other residents and these need to be taken into consideration when designing student accommodation. The proposed development will provide facilities and amenity that support student practical, social and emotional needs.

Student will be provided with a bright and light room with sufficient space to cook, eat, meet, socialise and relax. Shared spaces within the development will accommodate for other needs such as terrace, common room, foyer,

mail collection areas, waste management facilities, storage lockers, laundry washing and drying facilities, bike lockers and parking.

The development will provide a quiet and studious environment with a collegiate

atmosphere with opportunities for students to meet others and avoid social isolation with surroundings that provide a safe and secure environment.

Aesthetic Value

The design will be driven by a modernist outlook free of clutter and unnecessary elements providing simplicity and clarity. It will be clean, functional and simple. Facades will be well articulated using various architectural techniques to provide visual admiration.

Materials will be shown in natural form (raw) and showcased. Structural elements will be exposed where possible with strong linear elements and bold horizontal and vertical features.

Natural elements plants, water, rock and vegetation will be integrated providing visual amenity and around less favourable areas (railway station). Outdoor areas will provide a place for social gathering with indigenous vegetation to provide shelter, shade and privacy.



A green roof with courtyard will reduce visual bulk and blend into the environment whilst increasing biodiversity with careful selection of plant species, and an outdoor area for students to interact, relax and escape from the stresses of urban living.

An atrium through the centre of the building orientated to the north will provide natural lighting throughout the building including a mechanical louvering system to allow for natural air and ventilation.

Solar lighting will be carefully located around the site, it will be visually pleasing and provide a sense of safety and security.

Environmental Approach



It is an important factor of the proposed design to incorporate and embrace environmentally sustainable practices and passive design principles. The construction phase is also crucial for the successful completion of a building aiming to reduce its impact on the environment.

ESD opportunities identified are as follows:-

Land Use and Ecology

Manage Soil on site – Manage the entire volume of soil on site, and keep the clean topsoil separate for redistribution on the site. This will save you money and reduce the emissions associated with cartage as well as preserve the valuable production capacity of the site.

Green Roof

Green Roof can help reduce the Urban Heat Island effect (UHIE) by lowering ambient air temperatures.



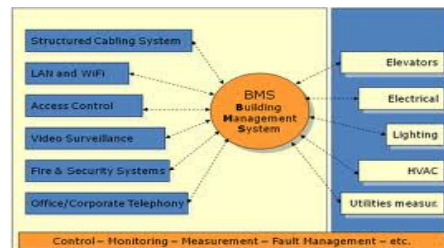
Reduce stormwater volume and attenuate water flow, helping to alleviate the pressure on stormwater infrastructure. Can also filter and cool water runoff and assist in preventing contamination from entering waterways.

May support higher rents and help maintain increase levels of occupancy. Resale prices may also increase with the added value of additional green space.

Thermal mass provides a more stable and temperate indoor environment inhibiting extreme fluctuations in internal temperatures. Reduction of artificial heating and cooling.

Building Management System (BMS)

Install a centralised Building Management system (BMS) that is partnered with a set of meter and sensors that is connected to the Building with separate sub meters for key activities to improve the usefulness of data collection and management.



Separate meters to be included;

- Bathroom water

- cooling towers
- irrigation and wash-down systems
- recycled water systems
- rainwater collection systems
- hotwater services
- fire services
- water features

Incorporate an Environmental Management System (EMS) – building user manuals into tenancy agreements and;

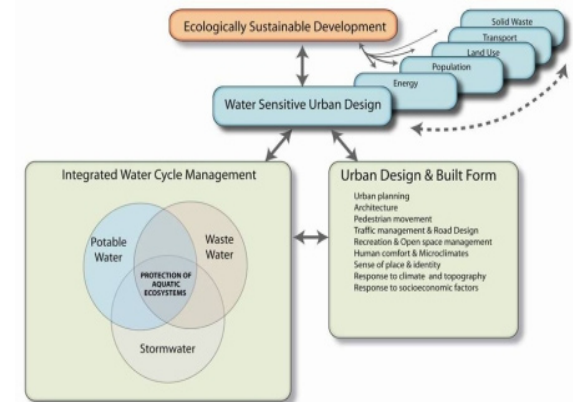
Waste Management Plan (WMP).

Water – Water Sensitive Urban Design (WSUD)

Reduce consumption (internal)

- Installation of water rating system)
- Low volume dual flush toilets
- waterless urinals
- low flow taps and showerheads
- washing equipment such as dishwashers and washing machines with high star ratings.
- further savings can be achieved by installing flow restrictors and tap an automatic shut off.

efficient appliances. (Six star



aerators, and sensor operated taps with

Landscaping

- Selection of local plants can significantly reduce the volume of water required for irrigation whilst mulch also assists in retaining moisture in the soil.
- Capillary based watering system to minimise the effects of

evaporation.

- Installing timers to taps, rain sensors and soil moisture sensors for the prevention of overwatering.

Fire Services

- Improving an automatic fire sprinkler system (AFSS). Maintenance of fire Protection Systems and equipment. Pressure and flow test are carried out, this involves large volumes of water that could be collected by a municipal tanker for use in garden irrigation or other common functions such as toilet flushing.
- Integrating speed fire system pump to reduce water loss through managing water pressure.

Storm Water Management

- Integration of rainwater collection/storage tank.
- implementation of permeable pavers (paths, driveways.)
- Green roof



Energy

Passive Design

- Building Orientation – to maximise north facade.
- East – west openings for capturing the prevailing winds.
- A combination of deep overhangs and operable shading devices.
- Summer breezes from the west and south-west straight off the bay will assist in natural ventilation and night purging.
- Atrium with mechanical operative louver system with shower tower to improve natural light, ventilation and manage heating and cooling.

Windows



- minimal glazing to the west facing with proper shading devices. Suitable glass on the north facing walls with access to winter sun.
- Implementation of a zoned mechanical and lighting system linked to a light and movement sensor system.

Renewable

energy

- photovoltaic cells to be integrated into the building fabric (cladding material)
- Solar hot water
- Wind turbines
- glazing
- Combined heat and power – (CHCP) Co-generation.
- Building rating tool to achieve a 5 Green Star rating.



Materials

Recycled and second hand materials will be used where possible and left over materials to be reused as architectural and non structural features.

Predominately the proposed building will be made up of concrete, steel and glass. However alternatives to Portland cement may reduce the impacts of mining and transport of the raw materials.

suggestion include:

- slag
- fly ash
- recycled aggregate

Reduction or alternative uses of PVC plasticisers to be sort out for plumbing and electrical conduits etc.

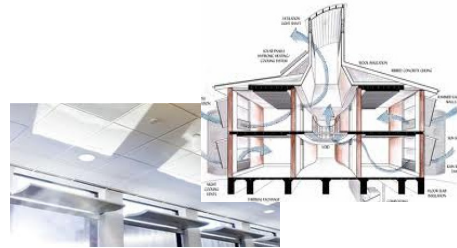
Minimising VOC emissions by:-

- using renewable, sustainably harvested natural materials,
- recycled or recyclable materials
- use modular reusable and recyclable carpet
- use water based paints, glues and caulking

Indoor Environmental Quality

Ventilation

- natural cross ventilation
- operable openings



Occupant Comfort

- delivery of daylight will be controlled to prevent glare through window orientation and the use of shading devices.
- Blind and screens are to be individually controlled for visual light transmittance and light shelves to diffuse sunlight.

Pollutants

- internal planting to be carried throughout internal spaces to help remove pollutants.
- affective ventilation to maximise breathable air and maintain low humidity levels.
- smooth duct walls to prevent dust and mould growth.

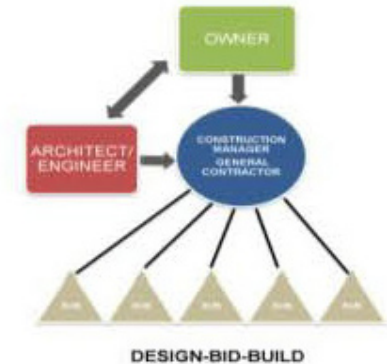
Transport

- Minimise the number of carparks provided to encourage alternative sustainable modes of transport (cycling, walking).
- Allocation of 25% of car spaces to be dimensioned specifically for small cars promote them as preferred modes. 2.3m wide x 5.0m long. AS 2890.1-1993

- provide vertical cycle storage in basement.
- control noise emission (train station) through engineer design methods.

Construction Delivery Method

Matrix Design has adopted the design-bid-build for the construction method, overseeing the tendering process and build of the new development. This delivery method offers the advantage of being widely applicable, well understood, with well-established and clearly defined roles for all parties involved.



It offers Roark developments a significant amount of control over the end product, as the proposed development features are determined and specified prior to selection of the contractor.

Once the final design has been signed off by you, the design goes out to tender to interested contractors who prepare bids for the work and implement contractors and subcontractors.

The contractor who submits the lowest bid is selected to perform the construction. Even though the contractor is responsible for the construction, Matrix Design ensures to oversee the work and respond on behalf of Roark Developments for an efficient and cost effective outcome.

Intended Future Use

Long term forecasting of the life of the structure will be implemented at the design phase to ensure that the building's future intended uses are not restricted to facilitate student housing.

The structure of the proposed building has allowed for future consolidation of apartments. Every second wall has been structurally engineered to be load bearing allowing for the removal of one to facilitate larger apartments should it no longer be used for student housing.

Services in the building are to be vertically aligned to allow for the potential future provisions of passenger lifts and the upgrade of electrical data.

PERFORMANCE REQUIREMENT

Quality Assurance: Company standards and procedures

At matrix designs we are dedicated to not only providing you with a top quality design, but a design which will suit its purpose based on your requirements 100%. We understand that as this is a project of huge scale and much is at stake should something not go as planned.

For this reason we have prepared a return brief based on our understanding of your desires. Please take some time to review the return brief and report back to the design team within 12 working days so that we can apply necessary changes to the conceptual design.

Our company has implanted the following strategies into our quality management system in compliance with ISO9001:

- We have prepared a quality management system, and update it regularly based on customer feedback and analysis of past failures
- All documentation produced within the design office and from outsourced consultants is double checked by different members of the design team to ensure that minimal discrepancies occur between the specifications and the drawings, and between the drawings themselves
- All designs are placed under copyright once complete to prevent other designers poaching designs, this is to ensure that your building remains unique and architecturally significant
- All personal information regarding you, the client, is kept strictly confidential with the exception of your name and the site address, which will be required for design team persons to prepare documentation. All other shared information is kept between the head designer for the project and yourself, unless you should choose to make your information known to other design team persons. Under no circumstances will outsourced consultants be informed of any of your personal information with the exception of the site address. All personal information is stored and backed up to the head designer's personal computer and external hard drive
- For your best interest, it is agreed among the design team that sensitive information (including address) regarding any project is not to be discussed other than with those involved with the project. Consultants will be informed upon initial meeting that they are not to discuss the project with third parties
- As the majority of works are computer stored and generated, all the utilized software programs are programmed to automatic save works at regular intervals to prevent sudden loss of significant work. In addition, daily back ups to external hard drives are conducted to ensure that should the business computer system malfunction, up to date, uncorrupted files are always available
- All members of the design team have their own personal computer, external hard drive and other accessories. The office is equipped with a back up desk top computer and small lap top for use should a member experience difficulties with their personal computer
- The design office and its facilities are cleaned and vacuumed daily, it is ensured that despite the pressures of the time the office does not become cluttered and unsafe. The office is mechanically air conditioned year round during office hours to ensure the comfort of all who are occupying the space. Should you at any time feel uncomfortable or unsafe whilst at the design office we strongly encourage you to inform one of the members. While the occasional site visit occur before construction works begin, at no time will you be asked to accompany any member of the design team onto a construction site.
- It is custom that during the design and construction processes, many services are outsourced to other consultants. It is ensured that upon engaging with other professionals that they have a clear understanding of both the project and what is to be expected from the final outcome.
- Once obtained, data regarding the parameters of a site or particular project is stored for future reference, and is well documented for ease of access. All information is backed up onto the designers external hard drive at the end of the day

- Providing you with a quality product is considered a paramount to us. For this reason, all members of the design team pay upmost attention to the requirements of the design brief and the return brief when designing aspects of the proposal. Upon conclusion of each design phase the designs are matched to the design brief and to any statutory constraints to ensure that all requirements are met prior to the conclusion of that phase being finalised.
- Although the entire design team will be dealing with the client brief, the client will be primarily dealing with one single consultant for the duration of the project; this will be the head designer for the project. Despite this, clients will be encouraged to discuss any concerns with other members of the design team, particularly when dealing with specific requirements such as energy efficiency or interior design, however it should be noted that no changes will be made to the final design until the head designer of the project has been consulted and the rest of the design team informed of the alteration. This is to prevent potential miscommunication during the construction phase.

Matrix designs are ISO9000 accredited, and so follow the following methods to provide you with the highest quality service possible, as well as to maintain our reputation of being a quality design company.

- Customer focus: At no point during the design process do we forget that it is you who we are designing for. When constraints arise, we will always do our best to come to a solution which idealizes the requirements of the brief as much as possible. Where it is necessary to alter some part of the design which affects the requirements of the brief, you will be notified and asked for input as to the direction you would like us to take.
- Leadership: In order to ensure as little miscommunication as possible, one member of the design team will be appointed the head designer for every project. This member will proceed to oversee the entire design process, and will be the initiator of large design decisions. They will also make all executive decisions and will act as the authority over the project.
- Involvement of people: While the head designer will make executive decisions, other members of the design team will each specialize in an

area during the various phases. Generally, each member will design based on their specialized area, for example one member will focus on EDS principals.

- Process approach: Each design project is separated into different stages; the inception stage, the predesign stage, the schematic design phase (in which this project currently sits), The design development stage, the Documentation stage, the contract stage and should the you wish the construction stage. During each phase each member will undertake a new role, new phases will not be begun until all members of the design team feel that the design is ready to progress to the next stage.
- Continual improvement: At the completion of each project we ask the client for their feedback, including where they though we should improve in terms of design, execution, time management, communication and overall engagement. Feedback is taken and analysed against past feedback. The design team then meets and discusses where they thing the quality management system can be improved to better suit the requirements of the clients
- Mutually beneficial supplier relationships: As a business, we ensure that we regularly engage with suppliers to ensure that a 'regular customer' status is established. This assists that we receive a high quality service from them, as well as better value for the products we intend to purchase.

As part of our practice we use quality assurance checklists to ensure that we are providing the best quality service to you. Appendix A of this document provides an example of the design process checklist which we use during the design phase, and Appendix B provides an example of the design drawings checklist.

Please note that while the design process check list is purely our own, the design drawing checklist was obtained from the University of Notre Dame: office of the University Architect, and we modify the checklist to suit the particular project. The document remains the intellectual property of the University of Notre Dame.

Statutory requirements:

Permits required

At matrix designs we want all statutory processes to run as quickly and smoothly as possible so that the project can move ahead with ease. For this reason we have provided you with a list of permits that will be required for the proposal before and during construction, so that you are aware of who we are dealing with and who we need to obtain permission from.

Please note that while town planning permit is listed here as a required permit, the majority of town planning based permits (required due to zoning or the like) are discussed in the 'Zoning' section of this report.

- 1. A Town Planning Permit:** We are required to apply for a town planning permit, to ensure that council approves of the proposal and that it confirms with the Frankston Planning Scheme Ordinance and other strategic planning documents, such as the TAFE to bay structure plan. Upon submission, a town planning permit can take up to 24 months to be approved depending on the location and information provided to them.
- 2. A building permit:** To ensure the safety and amenity of both the users of the building and others who will or may be in some way affected by it. Any building works over \$5000 is required to have a building permit. Building permits are obtained from the building surveyor of a particular job, who will review the construction documentation and check for compliance with the Building Code of Australia before issuing a building permit. The building surveyor will continue to play a part during the construction stage, and will ensure that all construction works are in compliance.
- 3. An Occupancy permit:** Once the building surveyor is satisfied that all building works have been undertaken with compliance, he will issue an occupancy permit. No-one is permitted to reside within the building until an occupancy permit has been issued.
- 4. Works within road reserve consent:** Due to the size and scale of the proposal, it is inevitable that construction works will interfere with the traffic along Fletcher road. Being an arterial road, consent must be obtained prior to construction works beginning, and notice must be given upon completion of road works.

- 5. License to perform high risk works:** For the erection of scaffolding, crane works, tilt panels and other high risk works, each member of the construction team must obtain a licence to perform high risk work from Worksafe. This is so that work safe can ensure that all who are conducting such works are capable of doing so safely.
- 6. Construction zone permit:** In order to allocate temporary parking and restrict public access a construction zone permit must be obtained. This will detail the area's which may be fenced off around the site for construction works, temporary parking of construction and tradesperson vehicles and material delivery vehicles
- 7. Construction licenses:** each member of the construction team must have all relevant licenses to their field. Under no circumstances should an unlicensed person perform construction works, nor should a licenced person perform works in a field other than those which they are licensed for

Statutory requirements: Zoning

Zoning - As part of the town planning process, the design of the proposal must comply with certain town planning requirements which are determined by the proposals location.

The area in question, 69 Young street, is affected by Business zone 1 and 2 and special use zone 4, as well as various overlays which are discussed below.

As well as planning scheme zoning, the site in question has been included as part of the TAFE to bay structure plan, this will also be discussed below.

- 1. Business zone 1: BZ1** is designated as an area for which to locate commercial scale buildings designed for retail, offices, high density residential and entertainment facilities. Using this zone for accommodation and basic retail will not require a permit other than those which are required for the construction of the building, however it should be noted that proposals are required to be maintained to a level which is deemed suitable by council.
- 2. Public use zone 4: PUZ4** is primarily used for public use of transport facilities, in this particular case, the railway and bus stops. Although the land is designated for transported uses, on these area's no permit is required for

any building other than during the construction phase. It should be noted that although no permit is required for any type of building within this zone, the use should be respected, and the proposal should be designed to promote use of the railway.

Overlays - as well as zoning regulations, overlays have been placed over the site to enforce additional requirements to any development. The site has been affected by the following overlays.

- 1. A Wildfire management overlay:** For the purpose of public safety in the event of a bushfire, a permit is required to construct both retail and accommodation premises. For the purpose of this overlay, a bushfire assessment will be conducted and a report prepared. Depending on the results of the report will determine whether any specific action will need to be taken for the prevention of bushfire, however it is estimated that the lack of vegetation within a 100m radius of the site will mean that additional action against bushfires will be unnecessary.
- 2. Design and development overlay 5:** DDO5 encourages the construction of taller structures to the northern and southern area's of the transit interchange, by proposing a <20m structure immediately to the south of the Wells street/Young street intersection we are assisting in maintaining the height flow from the north to the south of the site. It is asked that new developments provide for the possibility of an overpass over the rail corridor, despite the fact that we haven't left room on the site for a bridge, we have designed the ground floor as a hub for the public, encouraging the use of the area and potentially improving the overall amenity of the area.
- 3. Environmental significance overlay:** In accordance with ESO1 no native vegetation is to be removed unless a permit allowing one do so is issued. The proposal will require the removal of some vegetation separating the proposal will require the removal of some vegetation separating the existing car parks from the rail corridor, however this vegetation patch contains no vegetation native to the Frankston area, and a permit will not be required for its removal.
- 4. Heritage overlay:** The area in which the site is situated is regarded as having heritage value, and this will be respected during the design and

construction of the proposal. There are no buildings situated on the area which we are proposing to build, therefore no permits will be required for heritage specific reasons.

- 5. Land subjected to inundation overlay:** As part of the LSIO overlay we are required to apply for a permit to construct the building within the area, due to the site being prone to 1 in 100 year flooding.
- 6. Special building overlay:** SBO is concerned with sites subjected to inundation by flood or the like. A permit will need to be obtained, particularly for the basement car park should flooding ever occur, and for stormwater drainage and Water sensitive urban design to prevent stormwater from our development affecting neighbouring properties, including the rail corridor. WSUD principals are being explored and will be incorporated into the design.

TAFE to Bay Structure plan - In addition to the Frankston planning scheme, the development has been designed in response to the TAFE to bay structure plan; a strategic planning document which provides a long term vision for the city of Frankston.

In relation to the Structure plan, the proposed site is located within the transit interchange precinct, in specific sub-precinct 4. The proposal will respond to the structure plan in the following ways.

We have designed the buildings to have articulated and colourful facades, as well as local street art on the streetscape, providing a sense of place to those in the vicinity of the building.

1. By incorporating high quality landscaping on the ground floor and roof, and verticle gardens up the building, Upping the quality of air within and around the building and creating a high quality urban space within the concrete jungle which Frankston currently is.
2. By designing the building with the ground floor façade consisting primarily of clear glazing, to provide for natural lighting and a sense of continuance between the internal and external area's of the building, as well as providing for natural surveillance

Statutory requirements: Constraints

3. By incorporating a well designed walkway along the Fletcher road side of the building, promoting use of the area by pedestrians and cyclists.
4. By incorporating the use of solar panels and potentially wind turbines on the roof and facades of the building, promoting sustainable living and potentially inspiring passers by to incorporate sustainable energy into their own homes
1. By incorporating both a public (foyer and retail) and private space (entrance to disabled rooms and lift) to the ground floor, to increase use of the area and allow the building to be used as a meeting place for students, commuters and other members of the public.
2. By setting the building a substantial distance from the main road, preventing the discouraged “wall of buildings” along Fletcher road
3. By including bicycle parking facilities along side car parking, further promoting the use of bicycles by the public, and lowering road congestion
4. By Providing solar powered external lighting for security of the public at night time and for visual amenity of the building at night time
5. By positioning the utility areas of the building on the railway side of the building we are managing noise into the buildings habitable area’s and to the campus boulevard on the opposite side of the building
6. By designing the façade of the building to match the railway infrastructure, maintaining the architectural “robustness” of the area, and promoting the inclusion of an overpass to the north of the site in the future
7. By incorporating extensive tall vegetation onto the railway side of the development, making the site more aesthetically pleasing for train commuters and those who have a view of the building from Young street

Due to the nature of the proposal, there are several statutory bodies and constraints that will affect the design of the development. For the most part of the design, the Deemed to satisfy Provisions of the National Construction Code (2012) will be adhered to, with the exception of the construction type, which will be decided using an Alternative solution.

As well as the National Construction Code (2012), The design of the building will be designed in compliance with, but not limited to, the following Australian Standards

- AS1170.0-2002: Structural design actions – General principals
- AS1170.1-2002: Structural design actions – Permanent, imposed and other actions
- AS1170.2-2002: Structural design actions – Wind actions
- AS1288-2006: Glass in buildings – Selection and installation
- AS1289.1.3.1-1992: Methods of testing soil for engineering purposes – Sampling and preparation of soils – undisturbed samples – standard method
- AS1428.1-2009: Design for access and mobility
- AS1530.1-1994: Methods for fire tests on building materials, components and structures part 1; combustibility test for materials
- AS1668.1-1998: The use of ventilation and air-conditioning in buildings part 1: Fire and smoke control in multi-compartment buildings
- AS1680.0-2009: Interior lighting – safe movement
- AS1680.1-2006: Interior and workplace lighting part 1: General principals and recommendations
- AS1680.2.1-2008: Interior and workplace lighting part 2: Specific applications – circulation spaces and other general area’s
- AS2047-1999: Windows in buildings – selection and installation
- AS2419.1-2005: Fire hydrant installation part 1: System design, installation and commissioning
- AS2419.2-2009: Fire hydrant installation part 2: Fire hydrant valves
- AS2890.1-2004: Off-street parking
- AS2890.3-1993: Bike parking
- AS2890.6-2009: Parking off street for people with disabilities
- AS2904-2005: Damp proof courses and flashings

- AS3500.1-2003: Plumbing and drainage part 1: Water services
- AS3500.2-2003: Plumbing and drainage part 2: Sanitary plumbing and drainage
- AS3500.3-2003: Plumbing and drainage part 3: Stormwater drainage
- AS3500.4-2003: Plumbing and drainage part 4: Heated water service
- AS3600-2009: Concrete structures
- AS3610-1995: Formwork for concrete
- AS3786-1993: Smoke alarms
- AS3850-1993: Tilt-up concrete construction
- AS3959-2009: Building in bushfire prone area's
- AS4100-1998: Steel structures
- AS4200.1-1994: Pliable building membranes and underlays part 1: Materials
- AS4200.2-1994: Pliable building membranes and underlays part 2: Installation requirements
- AS4548.1-1999: Guide to long life coatings for masonry and concrete part 1: Wall coatings – latex extensible
- AS4600-2005: Cold rolled steel structures
- AS4858-2004: Wet area membranes
- AS4859.1-2002: Materials for the thermal insulation of buildings part 1: General criteria and technical provisions
- AS1478.1-2000: Chemical admixtures for concrete, mortar and grout part 1: Admixtures for concrete
- AS ISO140.4-2006: Acoustics - measurements of sound insulation in buildings and of building elements part 4: field measurements of airborne sound insulation between rooms
- AS/NZS ISO717.1-2004: Acoustics – rating of sound insulation in buildings and of building elements part 1: Airborne
- AS/NZS ISO717.2-2004: Acoustics – rating of sound insulation in buildings and of building elements part 2: Impact

Consultants

The processing of designing and constructing a 5 storey student accommodation is a very long one, the following consultants are listed in order as required for the design and construction of the student accommodation:

1. Architectural team – a trained person or group of design team who plans and designs a building. The first person you would go to is an architect/building designer to talk about the design of the building, they document (draft) and plan for planning drawings and construction drawings. They will also take you through the planning process with the relevant council
2. Quantity surveyor – the primary job of the quantity surveyor is to quantify the cost of the whole building development during the entire life cycle of the project from commencement to completion.

The quantity surveyor is a professional job which provides the most accurate cost estimate. The quantity surveyor will be consulted with pre-contract and will provide estimates, measurements, tenders and tender reports.

He will also be consulted with post-contract regarding: contract documents, contract administration, financial statement, variations, final accounts and a cost analysis.

3. Aboriginal Cultural Heritage advisor – is responsible for the management of aboriginal cultural heritage of the site in regards to history, archaeology, and anthropology.

They must be consulted before planning if relevant to the site, in this case is relevant because the site has an aboriginal heritage overlay over it.

4. Registered aboriginal party (RAP) –RAP's are licensed under the cultural heritage act, their responsibility are to evaluate cultural heritage management plan, consultation regarding applications for cultural heritage permits, decisions about cultural heritage agreements and consultation for temporary or ongoing protection declarations.
5. Council – The local city of Frankston council will process the planning drawings and check for any planning issues and inconsistencies, along with providing their consent or refusal of the proposal.
6. Geotechnical engineer – the geotechnical engineer's job is to take borehole samples of soil in order to assess and analyse the contents and properties of the soil. In order to be able to make a decision of what type of footing systems to use, geotechnical engineers will provide a soil classification report describing in detail the properties of the soil tested. It will also describe the moisture content and any potential problems that could be in the soil to be aware of. The geotechnical engineer will be consulted with during the predesign stage
7. Environmental engineer – the environmental engineer's job is to work with the geotechnical engineer and test and analyse the soil for any contaminants that could be present in the soil. The environmental engineer will provide an environmental management plan/environmental audit. They will assess water and waste water treatments including the application of re-using and recycling water. The environmental engineer will be consulted with at the same time as the geotechnical engineer (predesign stage).
8. Structural engineer – the structural engineer's duty is to provide specification, size and type of the nature of structure to be used including material type. They will design beams, columns and the types of connections to be made including types and sizes of nuts and bolts to be used. They will specify the structure in the drawings including the connection details. The structural engineer will work in conjunction with the architect during the designing stage.

9. Mechanical/Hydraulics engineer – the mechanical engineers job is to provide the heating and cooling provision for the building. They coordinate and oversee the following provision in a construction process : fire engineering, electrical engineering, acoustic engineering, Hydraulic engineering and energy assessing
10. Fire engineering – assists architects in designing buildings with as little as possible risk to fire and the controls to be put into place considering a fire occurs. They will specify: fire alarm systems, fire suppression systems, passive fire protection principles, smoke control and management, safe ingress and egress provisions, fire lifts, layout and space planning.
11. Electrical engineering – they will design, develop and supervise the manufacture and installation of the electrical system in the student accommodation. They will specify on drawings, arrangements of circuits, transformers, circuit breakers, and electrical telecommunications equipment's.
12. Energy Assessor/consultant- the energy assessor's job is to analyse the building and implement energy saving principles within the design, along with ESD principles. The energy assessor consults with all the other consultants very early on in the project in order to incorporate these principles within all aspects of the buildings. The energy assessor gathers all the drawings at the completion of them and puts them through a program which then comes up with an energy rating required prior to obtaining a building permit.
13. Acoustic engineer – acoustic assessments on the railway station
14. Landscape architect - the landscape architect is responsible for the design of vegetation and shrubs around the proposed development they will take into consideration the native vegetation and shrubbery required by the council.
15. Interior designer – interior designers are responsible for designing and furnishing the interiors of buildings according to what the client desires they will be consulted with after most of the essential and base consultations and drawings have been completed.
16. Project manager – can be a representative of the client but in this case responsible for the managing of the construction of the building, responsible for the overseeing of the construction, employing the accredited builder and accomplishing the objectives of the project.
17. Building surveyor – the job of the building surveyor is to inspect the building at certain stages of the construction and lookout for any of the faults that could affect the structure of the building and primarily the safety of human
18. Builder – responsible for employing the subcontractors for the trades required and overseeing the construction process.
 1. Architect
 2. Quantity surveyor (initial ballpark figure)
 3. Aboriginal cultural heritage advisor
 4. Registered aboriginal party (RAP)
 5. Council
 6. Environmental + geotechnical
 7. Structural engineers
 8. Mechanical engineer/electrical engineer/ fire engineering/ hydraulics + acoustic engineer/energy assessing
 9. Landscape architect
 10. Interior designer
 11. Project manager
 12. Building surveyor
 13. Builder

REFERENCES

Colombian M, Zobec M, Kragh M 2002, Environmental design guide 49: Building service systems—An integrated design approach to the environmental performance of buildings, Royal Australian Institute of Architects

Cox architects and planners 2005, Frankston TAFE to bay structure plan, Department of Planning and Community Development, Frankston, viewed 7th August, 2013

<http://www.dpcd.vic.gov.au/planning/plansandpolicies/centralactivitiesareas/frankston>

Department of infrastructure 2002, Melbourne 2030: Planning for sustainable growth, Department of Planning and Community Development, Melbourne, viewed 7th August, 2013

http://www.dpcd.vic.gov.au/__data/assets/pdf_file/0004/42772/2030_complete.pdf

Department of planning and community development 2013, Frankston Planning scheme Ordinance, Frankston, viewed 7th August, 2013
planningschemes.dpcd.vic.gov.au/Frankston/home.html

Department of Sustainability and Environment 2004, Guidelines for higher density residential development, Victorian Government Department of Sustainability and Environment, East Melbourne, viewed 7th August, 2013
<http://www.dpcd.vic.gov.au/planning/urbandesign/guidelines/guidelines-for-higher-density-residential-development-four-or-more-storeys>

Heritage Victoria 2007, Works and alterations to registered heritage places and objects, Department of planning and community development, Melbourne, viewed 7th August, 2013
http://www.dpcd.vic.gov.au/__data/assets/pdf_file/0010/36667/Work_and_alterations_1215490908165.pdf

NSW Government Department of Planning 2008, Development near rail corridors and busy roads – interim guideline, State government of NSW, Canberra, viewed 7th August, 2013
http://www.planning.nsw.gov.au/DoP_08_048

Office of building and development 1997, Building procurement: Choosing the best option for your next project, 2nd edition, Melbourne, viewed 7th August, 2013
<http://www.buildingcommission.com.au/www/html/840-building-procurement--choosing-the-best-option-for-your-next-project.asp>

Office of the University Architect 2006, Quality assurance document: review checklist, 3rd edition, University of Notre Dame, Indiana, viewed 7th August 2013
<http://www3.nd.edu/~univarch/documents/qualityassurance4.pdf>

Planisphere 2008, The Frankston project – creating an urban design vision for Frankston, Frankston city council, viewed 7th August 2013
<http://www.frankston.vic.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/241/93.pdf&..>

Rawlinsons 2012, Australian construction handbook, 30th edition, Rawlinsons Publishing,

Raworth B 2010, Frankston Central Activities District: Heritage Review, Frankston city council, St Kilda, viewed 7th August, 2013
<http://www.frankston.vic.gov.au/library/scripts/objectifyMedia.aspx?file=pdf/240/80.pdf&>

Royal Australian institute of Architects 2003, Practise note: Preparing a design brief, 2nd edition, RAI A practice services, Canberra

Royal Australian institute of Architects 2004, Fee guide and fee related practise notes, 3rd edition, RAI A practice services, Canberra