Fishermans Bend

Bringing innovation to life at an industrial scale

THE UNIVERSITY OF MELBOURNE

Secure your future at Fishermans Bend

* DSTG: Defence, Science and Technology Group
\# UoM: University of Melbourne

New purpose-built Facilities

Fishermans Bend, partners will have access to world-class equipment, laboratories and testing facilities — as well as technical expertise and experimental capabilities.

- Pressurised high Reynolds Number wind tunnel (X-Tunnel)
- Wind, wave current ocean facility (HyCASTT)
- Model manoeuvring basin (DMAD)
- Suite of smaller scale turbulence facilities
- Energy and propulsion test cells
- Smart grid energy lab
- Robotics lab
- Advanced material synthesis lab
- Future Factory for the Built Environment
- Construction system prototyping area
- Indoor and outdoor industrial fabrication spaces
- Structural testing facilities
- Built environment testing facilities
- Water security lab
- Geomechanics lab
- Urban ecology lab

World leading innovation capabilities

The University of Melbourne is consistently ranked among the leading universities in the world.

#1 in Australia[1]

#14 in the world[1]

#8 in the world for graduate employability[2]

#9 in the world for sustainability[3]

Sustainable & smart cities	Future resources	Future technologies
Architecture	Geomechanics and materials testing	Advanced manufacturing and materials technologies
Cultural and sustainable landscapes	Renewable Energy	Aerodynamics
Data and analysis		Autonomous Systems
Future building structures and materials		Buildings and houses of the future
Future cities		Defence technologies
Healthy communities and infrastructure		Design and creative research
Indigenous place		Energy and propulsion
Practice and construction innovation		Hydrodynamics
Sustainable buildings and infrastructure		Quantum technologies
Urban planning and design		Robotics, positioning, timing and sensing

1. QS World University Ranking 2024
2. QS Graduate Employability 2022
3. QS World University Rankings: Sustainability 2024

Propel your journey with us

The Fishermans Bend Campus will be a vibrant place of large-scale research and project based teaching that creates interdisciplinary collaboration and partnerships with industry.

It will provide the facilities, knowledge and partnerships to fast-track solutions to some of the world's greatest challenges including:

Next generation renewable electricity systems

More fuel-efficient aircraft

Structures, geomechanics and materials testing

Propulsion systems and power generation

Energy efficient, healthy, affordable housing

Advanced water systems

Climate change simulations

Smart grid technologies

Prototyping advanced solutions enabled by AI and quantum technologies

Improved construction standards for prefabricated buildings

Urban retrofitting and decarbonisation

Ocean engineering for offshore renewable energy production

How we will work with you

Relationships based on trust, collaboration and transparency.

At the University of Melbourne we bring together the best minds to solve big challenges. Collectively we can explore new opportunities to help your organisation and benefit society.

Depending on your needs, there are many ways that we can partner, from collaboration on strategic research projects to developing products that give your organisation an edge.

At Fishermans Bend this could include:

- Co-locating with us on site in laboratories or work spaces
- Co-development of shared research facilities
- Collaborating on your strategic research projects
- Delivering joint teaching and learning opportunities
- Accessing our research infrastructure and platforms
- Talent pipeline development and recruitment of graduates and graduate researchers
- Applying for a research grant
- Professional development for your employees
- Licensing existing technology or intellectual property

Industry benefits

The industrial scale of the Fishermans Bend campus will have large-scale equipment, laboratories and testing facilities unparalleled in the Southern Hemisphere.

It will be a place for true experimentation and pilot-testing, at scale and in real time, where we can work with you to explore and expand the horizons of what is possible in engineering and design.

Access to world-class facilities and infrastructure

Engagement with leading academics and research expertise

Engagement with students and next-generation workforce development

Collaborative prototyping and innovation

A global hub for industry engagement and networking

A place to push the limits

Key features

State-of-the-art, industrial scale research, development and testing facilities at scale for experimentation and testing in controlled environments.

Aero/Hydro globally unique and world-leading facilities for turbulent boundary layer and wind & water interaction research and development

- X-Tunnel – a new subsonic wind tunnel capable of high Reynolds numbers. The largest wind tunnel of its kind in Australia.
- Hybrid Continuous Loop Air-Sea Tow Tank (HyCASTT) and Deep Manoeuvring and Directional Wave Basin (DMAD) wind & wave current interaction facilities.

Energy for clean power generation and transport technologies and grids

- Energy Laboratory - one of a small number of labs globally and the only one in Australia able to undertake experimental Research, Development and Demonstration (RD&D) at 100 kW to MW scale.
- Smart Grid Lab for real-time and experimental testing of the power grid and future electricity grid architectures.

Geotechnical for more sustainable and resilient infrastructure

- Geotechnical Laboratory, including with a geo-material testing lab, geotechnical centrifuge facility and rock mechanics lab, and will be one of Australia's most advanced geo-materials testing facilities.

Structures

- Heavy Structures Lab for testing building and construction, and fabrication spaces.

The Future Factory initiative will deliver a new model for investigating major societal challenges, bringing together industry, researchers, and students, with a focus on applied experimentation, prototyping and pilot testing at scale.

This is a new innovative teaching and research model, focused on practical, hands-on experience, developed, and embedded with industry. New flagship spaces and facilities for the Future Factory include:

- Build Areas - a large indoor (870sqm) and outdoor (1,000sqm) fabrication and assembly area with overhead gantry cranes, integrated in-slab fixing points and pre-engineered slab to prototype multilevel structures. These spaces will provide a platform for a range of activities including experimental research, rapid prototyping and at-scale testing focused on cleaner, greener, and better performing infrastructure, materials, and construction methods. Highly visible from both inside and outside of the building, the fabrication zones will be a place for celebrating workshop activities and showcasing architectural, engineering and fabrication processes.
- Robotics Lab – An integrated industrial scale robotics lab, connected to the Build Areas, dedicated to the development and integration of digital technologies and automation in architecture and construction.
- Leading Edge Workshop – A cutting edge workshop providing access to advanced, multi axis CNC equipment, timber workshop equipment, metal working and welding areas and staffed by experienced technical leaders.
- Urban Ecology Design and Development Lab for green roof test plots where students and researchers will come together to explore the design, construction, and analysis of novel and adaptive urban ecosystems to inform and enhance resilient cities.

Importantly these Future Factory facilities will also be complemented by the other resources, labs and facilities of the Fishermans Bend Campus.

Capabilities

Fishermans Bend Campus will be a distinctive destination where industry experts, research leaders and students come together to solve challenges and develop new solutions. Examples of core capabilities and applications include:

Aero/Hydro

- Air/sea interaction modelling and simulations of operating conditions on ships or aircraft
- Turbulence simulation
- Understanding the causes of drag, and predicting and reducing drag
- Floating ice/wave/ship interaction simulation
- Testing of designs for wind-turbines, rotorcraft and unmanned aircraft

Energy

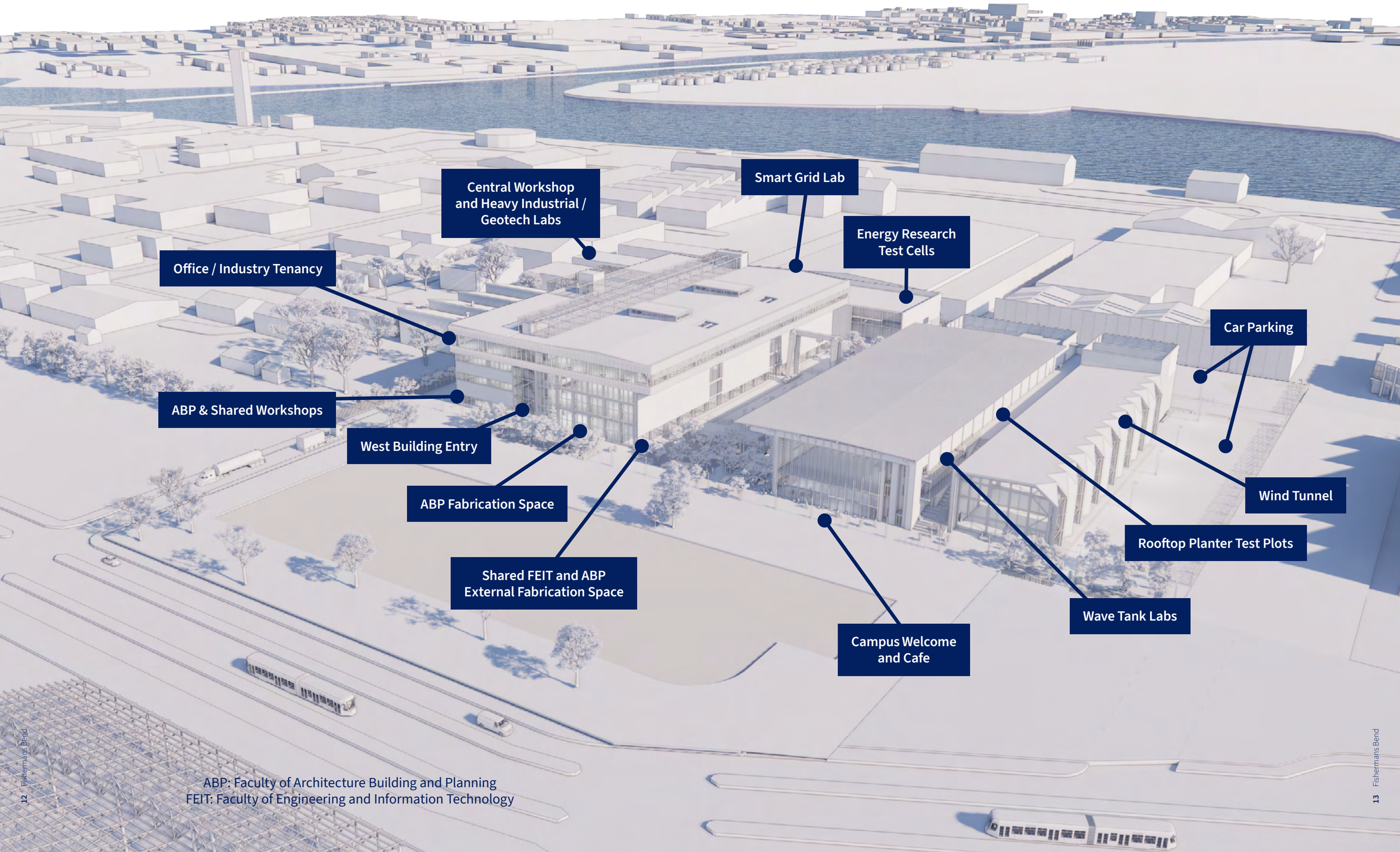
- Clean power generation and transport utilising renewable energy, electrification, batteries, clean fuels, and carbon capture and sequestration
- Demonstration of capabilities for new energy technologies (solar PV, wind, electric vehicles, electric heat pumps, etc)
- Alternative maritime fuel, propulsion and control systems
- Transformation of the power grid
- Decarbonisation of the power grid
- Grid fragility and stability properties for grid operators, for optimal grid and network control and energy system planning

The Built Environment, Structures and Sustainability

- Material and structure testing at full-scale of construction materials and different structure systems for buildings, bridges and other infrastructure
- Practice and construction innovation
- Sustainable cities through better design, planning and retrofitting of existing and future building stock
- Better and safer buildings through practice led capability
- Cultural and sustainable landscapes for human, ecological and sustainable centred design
- Data and Value by applying novel methods using big data, artificial intelligence, and advanced analytics to provide new insights that enhance urban environments
- Healthy communities and infrastructure through understanding how the design of towns, cities, neighbourhoods, and social systems greatly influences the social, economic, environmental, and health outcomes of populations
- Indigenous design
- Urban planning and design

Geotechnical

- Testing and characterisation of geomaterial from soft soils to hard rocks across scales (micro to full-scale) and their interaction with geostructures
- Modelling of large geotechnical infrastructure in challenging environments (eg tunnels and offshore windfarm foundations)
- Emerging issues in underground hydrogen, CO2, natural gas storage processes, and underground oil/gas production processes



ABP: Faculty of Architecture Building and Planning
FEIT: Faculty of Engineering and Information Technology

What's on offer

The deliberate integration of the commercial tenant areas with the University of Melbourne will deliver a truly unique and exemplary workplace, located in the heart of Australia's leading advanced manufacturing, engineering and design precinct.

The large floorplates have been designed to encourage interaction between the University and industry, with shared zones located adjacent to the central cores creating 'bump-spaces' where different occupants will regularly cross paths as much as possible. All levels have been designed to meet PCA-A Grade standards and features generous natural light.

Other features that enable the best possible workplace experience include end of trip facilities and secure bicycle parking.

- **Close proximity to key industry players** in advanced manufacturing and defence
- **World leading equipment**, research, resources and talent
- **Transport links**, port and freeways
- The Campus will support the bump-in/bump-out of large scale equipment and components with internal vehicular access **available for vehicles up to 19m long**
- **Access to natural gas** connection available
- **Dedicated industrial loading bay** with goods lift, up to 5,000kg capacity
- Secure, dual entry goods lift, dimensions, **doors 2.5m (W) x 2.9m (H), cabin 2.55m (W) x 3.33m (D)**
- **5,395m² NLA available** across three levels with up to 10KPA loading
- **3.8m** floor to underside services clearance
- Potential for **light manufacturing and prototyping**
- **State-of-the-art technology** and AV equipment throughout common areas
- **Onsite cafe, green spaces** for active and passive recreation
- Targeting **6 star green star rating**
- Flexible meeting, presentation and **exhibition/events spaces**
- **Onsite car parking** spaces
- **End of trip facilities** – secure bike parking, shower and end of trip facilities
- **24/7** security


Tenancy
Tenancy
Tenancy

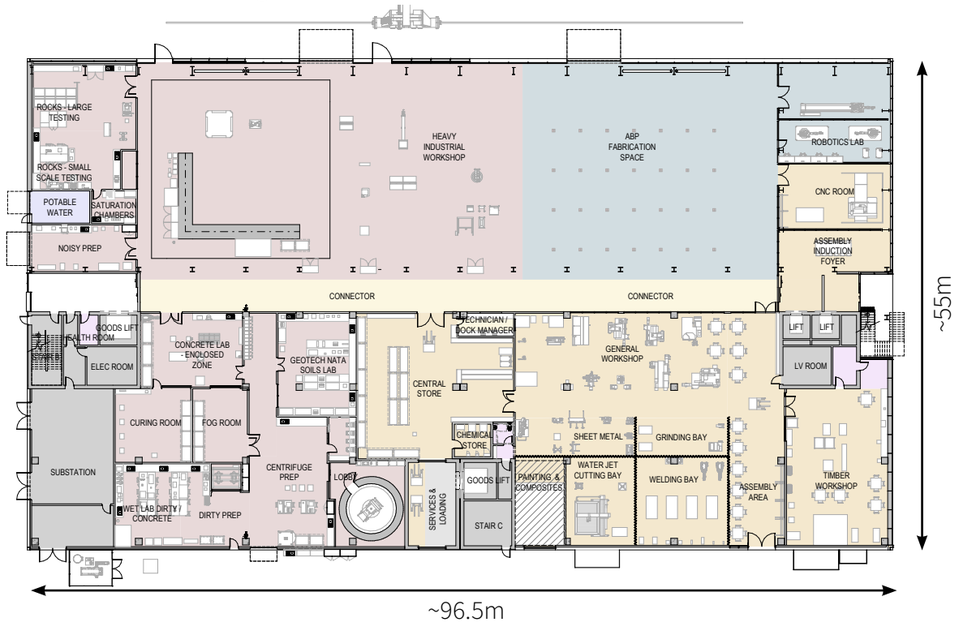
Floor plates and commercial offering

The West Building development will provide 5,395sqm NLA of cold shell space across 3 levels for industry co-location. Tenancy spaces on each level can be provided as a single space or can be divided to suit preferred requirements.

- Cold shell tenancy
- FEIT including industrial workspace
- Connector spaces
- ABP including, fabrication spaces, robotics lab, teaching
- General workshop, staff/student hub, workplace

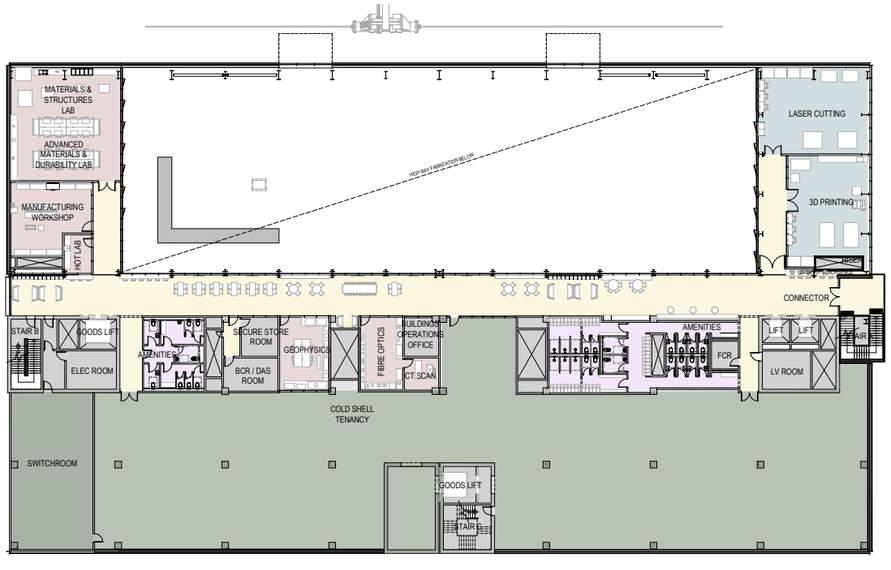
Ground floor:

UoM labs, workshops and servicing - no space available to lease.



Level 1:

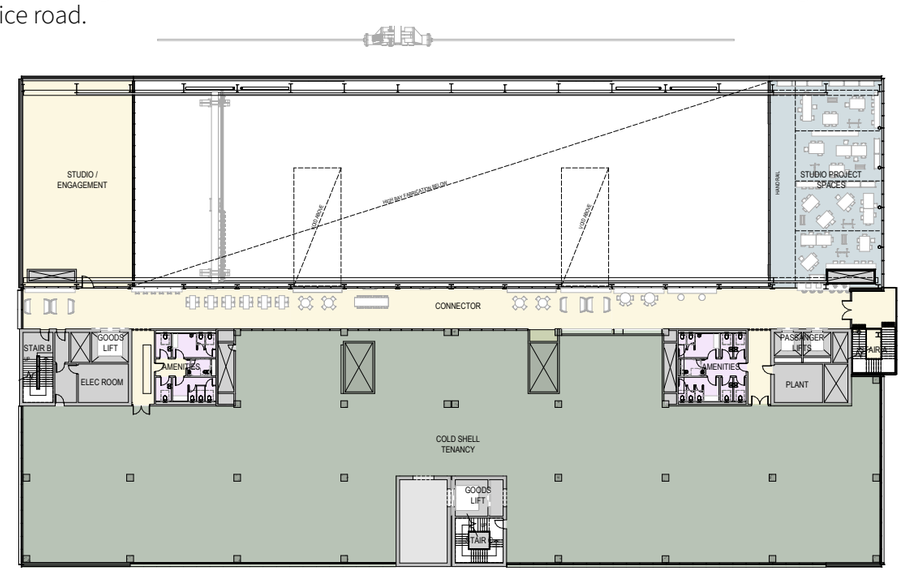
UoM labs and engagement spaces plus c.1,930 sqm NLA securable tenancy space with goods lift access from service road.



Accurate at date of publication, the University of Melbourne reserve the right to change any concept or any design elements depicted at any time.

Level 2:

UoM labs and engagement spaces plus c.2,350 sqm NLA securable tenancy space with goods lift access from service road.



Level 3:

UoM workplace, teaching and learning spaces and engagement spaces plus c.1,110 sqm NLA securable tenancy space with goods lift access from service road. Potential for this tenancy to be more integrated with the University's workplace and teaching and learning spaces if desired.

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