

Kaizen: Commercial Refurbishment 01 Greening and Preening

The cost of preening *and* greening your building

In the wake of the pandemic and the work-from-home revolution, landlords must offer space that ticks more boxes than ever before. The workplace must be safe and clean, enhance productivity, performance, health and wellbeing, accommodate flexibility and multiple workstyles, inspire collaboration and innovation, and act as a strong talent attraction and retention tool. Striking the right balance – and doing so on the right budget – is a big challenge for every landlord.

The Property Council of Australia's latest Office Market Report, which covered the six months up to January 2022, tells an interesting story. Office vacancy in Sydney's CBD has remained static since July 2021, hovering at 9.3%. Vacancy rates in the Melbourne and Brisbane CBDs have risen slightly, by 1.5% and 1.8% respectively. Generally, vacancy rates across Australia are slightly above the historical average and, understandably, significantly elevated since the start of the pandemic.

Hidden behind these statistics is a clear flight to quality. Secondary stock recorded higher vacancy over prime stock in all capital cities except the CBDs of Melbourne, Brisbane and Hobart.

While the pandemic reduced demand for office space in 2020 and 2021, the introduction of new office building stock also drove vacancy rates upward, according to the Property Council. A significant pipeline of new office buildings due throughout 2022 put further pressure on the market.

According to Jason Stevens, an office valuations director at Heron Todd White, face rents have not changed significantly since early 2020. However, increasing vacancies in major markets have influenced the growth of incentives as landlords are compelled to increase fitout contributions, rent-free periods, rent abatements and more flexible lease terms to retain and attract tenants.

In Melbourne and Sydney especially, Heron Todd White has noted the flight to quality. Many tenants are looking to upgrade to better quality buildings at little to no extra rental cost once landlord incentives are factored in. Given these difficult market conditions and the two-year growth in vacancy rates, landlords are evaluating existing assets more vigilantly to ensure they remain competitive and keep pace with a new commercial climate.

What's more, major commercial landlords are increasingly expected to meet high sustainability standards on both new and existing assets. Tenants are setting carbon reduction targets. Investors are scrutinising Environmental, Social and Governance (ESG) policies. Employees are looking to work for companies with strong sustainability credentials. Market and government policies are moving towards net zero.

Landlords looking to upgrade existing assets face a much more expensive construction market than they did just a few years ago. With new and on-hold projects coming back into play, Slattery is predicting a national average of 4-6% escalation over the next 12 months. While this is a wide range, much will depend on the local conditions and the type of project.

Scarcity in labour resources across the building industry is also putting pressure on pricing as builders are able to pick and choose projects.

The beginning of 2022 saw an increase in steel and copper prices as well as timber shortages - which drove costs upwards. Further into the year, we saw a steady decline on prices across steel and copper with our team predicting a normalisation of material costs in 2023.

2022 then continued to be an exceptionally busy year with a pipeline of government stimulus projects, international borders opening and overall developer confidence increasing.

A Valuer's Perspective – What are the Current Conditions?

Herron Todd White have provided the following commercial market report on current conditions within major Australian capital cities:

- Current leasing conditions, particularly in CBDs, are very soft.
- Incentives have increased substantially and are regularly in the 35-40% net range.
- Face rents have reduced only marginally.
- Annual rent reviews were being negotiated at an increase of 3.5% to 4.0% pre-pandemic, however tenants are now negotiating lower annual rent reviews in the 3% range.
- Buyers are factoring in "belowthe-line" deductions to the core value in the form of longer lease up terms, higher incentives and capex to improve tenancy areas, amenities and other front of house areas.
- The longer-term effects of the pandemic are still playing out from a valuer perspective because tenants are still yet to finalise their operating models.

What types of upgrades do landlords need to assess?

Flexible working arrangements have become a prerequisite for most office workers and new Premium and A grade office buildings are coming onto the market regularly. Landlords with ageing assets need to assess each of these spaces to weigh up the costs, benefits and risks of any proposed upgrades.

There are several typical but distinct spaces which remain consistent across most commercial office buildings. These generally include a main entry lobby, end of trip facilities, food and beverage offerings, retail tenancies, office tenancies, amenities and lift lobbies. Landlords will usually look to refurbish these spaces after 15 to 20 years in a building lifecycle, but the extent of these refurbishments can vary significantly. Refurbishment timelines are usually tied to major tenant lease expiry dates, which allows landlords to make upgrades without disrupting the operation of the building or having to stage works.

Typical office upgrades are explored in the table **below and on the following pages:**



Image: 44 Market Street, NSW Josh Hill Photography

Refurbishment Type	Benefits	Risks	Key Cost Drivers
Main entry lobby upgrades The principal opportunity for landlords to optimise branding	 Attractive to tenants willing to pay higher rent Improves asset and brand recognition Supports integration with new technology Creates a strong first impression and build brand. 	 Alignment of fit and finish with target market Disruptions to operation and function of building Major structural or façade refurbishments. 	Key cost drivers: Quality of finishes, ceiling heights, specialist lighting, technology. <u>Typical rates:</u> - Low: \$1,500-\$2,500 per sqm - Med: \$2,500-\$4,500 per sqm - High: >\$4,500 per sqm
End of Trip Facilities Upgrades Provisions for bike storage, showers, change rooms and storage lockers	 Attractive to prospective tenants Increasingly sought after in a flexible working arrangement market Considered a standard in any modern building in today's market Supports tenant retention Makes use of redundant areas in buildings or excess car parking which can be converted Directly correlates to higher rents. 	 Challenges of finding sufficient or appropriate space within existing buildings Will typically see a reduction in carparks in most instances. 	Key cost drivers: Quality of fixtures – vanities, lockers, bike racks and amenity finishes. Typical rates: – Low: \$2,500-\$3,000 per sqm – Med: \$3,000-\$4,000 per sqm – High: >\$4,000 per sqm
Amenities Upgrades (Typical Levels) Upgraded bathrooms servicing office levels	 Enhances quality of tenant offering Improves quality of asset and brand recognition Supports tenant retention Directly correlates to higher rents. 	 Over/under-capitalisation on fit and finish Coordination of services within existing core Evaluation of technology integration (i.e. touchless technology) and cost impact Sometimes amenities need to be entirely overhauled to meet BCA compliance. 	Key cost drivers: Quality of fixtures – vanities, toilet partitions, sanitary and hydraulic fixtures and quality of finishes. Typical rates: – Low: <\$3,000 per sqm – Med: \$4,000-\$5,000 per sqm – High: >\$5,000 per sqm
Reversion to warm shell (typical levels) Warm shell offering – carpet tiles, ceiling grid and basic services	 Usually coincides with services infrastructure upgrades to base building and providing tenants with higher performance services- A functional starting point for tenants wanting flexibility in fitout design. 	 Evaluation of "cold" versus "warm" shell offering and market preference Management of tenant fitouts and coordination of base building contractor and fitout contractors Tenants will typically require a significant contribution by the landlord towards fitout, which is often funded by incentives. 	Key cost drivers: Tenancy services and definition of "warm shell". Typical rates: – Low: \$300 per sqm – Med: \$400-500 per sqm – High: >\$600 per sqm

Refurbishment Type	Benefits	Risks	Key Cost Drivers
Food and beverage/retail upgrades Cold shell offering – no finishes, mechanical and hydraulic services to tenancy boundary, emergency electrical and basic fire services	 Improves atmosphere of entry spaces Typically a 'cold shell' offering is less expensive for landlords in capital costs Retail space often has the highest rental rate in a commercial office building Provides greater amenity for building occupants and users which equals a more attractive destination. 	 Aligning retail offerings with market trends Evaluation of requirement for grease traps, kitchen exhausts, hydraulic points, etc. which add significant cost Management of tenant fitouts and coordination of base building contractor and fitout contractors Risk of low interest from tenants or interest from the 'wrong' type of tenant and the subsequent effect on building operation. 	Key cost drivers: Associated services such as grease traps, kitchen exhausts, hydraulic points. Typical rates: – Low: \$800 per sqm – Med: \$1,500 per sqm – High: >\$2,500 per sqm
Modular / Co- working fitouts (typical levels) Fully furnished by base building contractor to suit multiple tenant layouts	 Modular fitout can be rearranged to suit different tenants over the course of the building lifecycle Reduced costs for landlords by facilitating tenant fitouts Standardisation streamlines the process for tenants and potentially avoids inefficient bespoke fitouts - Responds to changing density requirements in a post pandemic environment. 	 Difficulty coordinating mechanical, electrical and audio visual services, acoustics, ceiling and floor finishes, etc. to cater for different layouts Large up-front, capital costs Modular fitout can be costlier than a normal fitout due to operable walls, flexibility of the space, services, etc Modular fitout will attract a particular type of tenant, and higher end tenants will typically opt for their own fitouts. 	Key cost drivers: Internal wall and partition, floor ratio, extent and quality of joinery, FF&E and AV. <u>Typical rates:</u> - Low: <\$2,000 per sqm - Med: \$2,300 per sqm - High: >\$2,800 per sqm
Lift upgrades Bringing your vertical transport into the modern era	 Lift modernisation delivers better performing lifts Uplifts ageing assets with outdated technology Adapts services to suit altered building layouts (i.e. adding goods lifts, shuttle lifts, new openings, etc.). 	 Disruption to the operation of the building Upgrades need to be staged to allow for use as builder's lifts Significant capital investment required. 	Key cost drivers: Height of building, speed of lifts, extent of upgrades (i.e. adding new openings, lift modernisation, technology, new lifts, etc). <u>Typical rates:</u> Costs vary significantly based on the factors noted above.
Services infrastructure upgrades Major expense for landlords when upgrading existing assets	 Reduces building overall outgoings and maintenance costs Crucial for NABERS, Green Star, WiredScore, WELL ratings, etc Important to demonstrate ongoing commitment to modernisation of services to prospective tenants. 	 Latent conditions that may add significant cost to a project Assessing retention or replacement of existing services and capital costs against lifecycle costs. 	Key cost drivers: Demolition and removal of existing plant, age of existing infrastructure, ratings targets, building size, de- carbonisation requirements (i.e. removal of gas). Typical rates: Costs vary significantly based on the factors noted above.
Lift lobby upgrades (typical levels) Giving each tenancy a premium feel	 Supports quality of tenant offering. 	 Requirement for works to be done out of hours or staged if floor is currently tenanted. 	Key cost drivers: Extent of glazing, security, concierge technology, finishes and lighting. Typical rates: - Low: <\$1,500 per sqm - Med: \$2,000 per sqm - High: >\$2,500 per sqm

Refurbishment Type	Benefits	Risks	Key Cost Drivers
Plot ratio / floor space ratio increases Making use of underutilised space to increase overall revenue	 Can offer additional new revenue streams for existing assets- Realises development upside potential for existing assets 	 Large up-front, capital costs in upgrading plant areas to net lettable area (NLA) Evaluation of quality of offering Related upgrades required to lifts, stairs, structure, etc. 	Key cost drivers: Demolition and removal of existing plant and structure, new structural additions, upgrade works to existing structure, works carried out in occupied versus unoccupied building and associated construction material handling challenges. Typical rates: Costs vary significantly based on the factors noted above.
Façade cladding replacement Ensuring your building is compliant	 New building façade with state government funding (Victoria only) Reduce fire risk and liability for landlord resulting in lower insurance premiums. 	 Condition of existing frame and capacity to support new cladding The makeup of the insulation and other materials (e.g. packers, noggings, etc.) behind the existing cladding Fire separation of floors (e.g. requirement for smoke seals at slab edge) Specified cladding (e.g. requirement for proprietary framing systems) Specific building surveyor engaged. 	Key cost drivers: Risk items noted, condition of existing building, location, construction access and material handling requirements. Typical rates (across façade area): - Low: <\$1,600 per sqm - Med: \$1,900 per sqm - High: >\$2,500 per sqm



Slattery Recommendations & Lessons Learnt

- Try to align major works with lease expiry dates to ensure that there is no major cost premium for carrying out works in an occupied building – thereby minimising disruption to tenants and reducing costs related to staging.
- Choose the consultant team carefully with consideration for the project scope and scale.
- Initiate as much building access as possible for the consultant team during the design phase – this will assist in de-risking site unknowns.
- Conduct intrusive site inspections early to validate assumptions around structure, hazardous materials, existing services, etc.
- Carefully consider the level of design documentation when going out to tender. Documentation that is not advanced fully enough may result in additional cost premiums later in the project – this is especially important on refurbishment projects where contract exclusions are extensive and latent conditions are widespread.
- Consider technology early and think about engaging a technology specialist. Clarify overlaps between technology, security, electrical/mechanical/ hydraulic services and backbone vs data points.
- Obtain program advice for significant structural interventions to ensure no 'hidden' holding costs or construction lags.
- Try to create as much flexibility as possible in services upgrades as tenant requirements for fit-outs differ dramatically from industry to industry and are likely to further evolve in a post pandemic environment.

The rise of green and smart certifications in the commercial sector

Smart technology (WiredScore)

The connected digital worker demands a connected digital workplace. As they do, tenants are looking for smart buildings. But how do they know their building is a smart one?

Smart technology refers to technology that "optimises a user's experience, operational flexibility and user customisation" and/or "provides general operational efficiencies regarding both person hours, and energy or resource consumption"^{R1}.

With the help of smart technology, upgraded commercial buildings can:

- Reduce operational costs
- Enhance indoor working environments
- Boost energy efficiency and environmental sustainability.

WiredScore is the most popular rating tool and certification system for smart technology and digitisation. WiredScore describes itself as a "global digital connectivity certification system that helps landlords assess, improve, benchmark and promote their buildings".

Buildings that have been certified by WiredScore – which assesses building infrastructure, electrical resiliency, wireless capability, and ease and reliability of connectivity – are entered onto a publiclyavailable register. Like other ratings tools, this benchmarked certification allows landlords to differentiate their assets in an extremely competitive commercial market.

^{R1} https://www.investa.com.au/thrive/smartbuilding-tech-commercial-market

What is the cost of smart technology in commercial office refurbishments?

Smart technology can typically range from 1% to 2% of the total building cost and is dependent on the extent of technologies offered, the desired WiredScore certification and the existing baseline of technologies within the building.

It is important to note that there will be considerable overlap between the technology and ESD budgets as smart technologies like energy monitoring, smart lighting control systems and other smart management systems are crucial checkpoints within NABERS and Green Star pathways.

Depending on the scale of the project, smart technologies will generally be specified and budgeted for by a technology specialist in collaboration with the ESD or services engineer. Slattery will validate these figures and integrate them into the overall cost plan, while ensuring that additional items like associated builder's work in connection (BWIC), preliminaries and related on-costs are captured. It is also important to clarify overlaps in scope between technology, security, audio visual and services packages as early as possible in the design phase.

> "Based on our benchmark data, actual contingency expenditure ranges from 7% to 10% for larger projects and 10% to 30% for smaller projects"

National Australian Built Environment Rating System (NABERS)

One of the main considerations for landlords when assessing the refurbishment of an existing office building is the potential for performance upgrades and the subsequent increase in the building's NABERS star rating.

NABERS provides a rating from one to six stars for a building's efficiency across four different benchmarks: energy usage, water consumption, waste production and the quality of the indoor environment. The most influential benchmark from a direct cost perspective is the NABERS Energy rating which "measures the efficiency of an office building and rates either the base building, tenancy or whole building".

A NABERS Energy rating compares the energy consumption of a building against a set of benchmarks that have been developed using actual data.

The national regulatory Commercial Building Disclosure Program requires most sellers and lessors of office space of 1,000 sqm or more to obtain a Building Energy Efficiency Certificate (BEEC) before the building goes on the market for sale, lease or sublease. A BEEC also requires that the building's NABERS Energy star rating is disclosed in any advertising material for the sale, lease or sublease.

Most Australian office space is NABERSrated and is considered more important for valuations than in other sectors, such as residential or retail. The average office building within Australia has a rating of 4.5 stars (as of FY22) compared to an average of 2.5 stars when the NABERS scheme was first launched in 1999.

Darren Whitelegg, a commercial tenant representative from DAHO Property, has observed that many tenants use NABERS ratings to compare buildings' environmental efficiency, and the commitment by landlords to the ongoing modernisation. Specifically, indoor environmental air, lighting, temperature and acoustic quality are all factors that DAHO Property believes have become major considerations for tenants in the post-pandemic world.

These factors are benchmarked and rated by the NABERS Indoor Environment (IE) rating and are likely to be scrutinised much more closely by tenants moving forward.

Image: 65 Berry Street, NSW Buildcorp

What is the cost of NABERS in commercial office refurbishments?

Based on Slattery cost data from case studies within major CBD office buildings, we have analysed the capital cost of upgrading, for example, a 45,000 sqm (NLA) office building from a 3 to 5 star NABERS Energy rating. We find this is in the order of \$8 to \$15 million (excl. GST) depending on the intended energy savings. Conservative estimates and data provided by NABERS suggest that an office building could achieve a reduction in energy usage in the order of 30% (and as high as 40%) by elevating the NABERS Energy rating from a 3 to 5 stars.

As an illustration of the potential savings, NABERS has reported that 44 Market Street in Sydney improved its NABERS Energy rating from 2.5 to 5 stars and cut energy consumption by more than 50% after upgrading the air conditioning plant and controls including new chillers. 101 George Street in Parramatta improved its NABERS Energy rating from 5 to 5.5 stars and cut energy consumption by 30% after the landlord upgraded the building management system.

Services infrastructure upgrade works of this nature could be undertaken as part of a larger refurbishment of the building or as a standalone project. Each option would attract different cost premiums and result in varying disruptions to the operation of the building which would need to be considered on a case-by-case basis by the landlord.

A \$8 million capital works project would cover major services plant upgrades including chiller and cooling tower replacements, metering upgrades, variable speed drive upgrades, air handling unit and boiler replacements, pipework insulation replacement and upgrades to the building management and control systems. A \$15 million capital works project would cover the major services upgrades noted above, as well as minor services upgrades to the tenancies such as, for example, new energy efficient light fittings throughout the building.

This additional investment would decrease building energy usage significantly and would lead to a higher star rating.

The figures above include associated preliminaries and margin, design fees, project management and development management fees, and construction contingency. A conservative 30% reduction in energy usage would lead to a saving on a landlord's energy bill in the order of \$400,000 per annum (base building only). This estimate is based on an average energy cost of 20c/kWh for electricity and 4c/MJ for gas. We have also assumed a total average electricity usage of 118kWh/ m2/year and gas usage of 86MJ/m2/year.

A 30% reduction in energy usage in the same 45,000 sqm office building would also attract an additional saving in the order of \$330,000 per annum for tenants. Landlords can attract higher rent paying tenants based on building performance. A tenant that rents a single floor of an office building (assuming 1,500 sqm of NLA) would realise a cost saving of around \$11,000 per annum on energy usage. While this only equates to an additional \$7 per sqm per annum in rent on a 1,500 sqm office, this will be a significant additional rental income for a landlord over the NLA of an entire building.

Depending on the location and based on the above assumptions, a landlord could use combined base build and tenancy energy savings to pay off the capital cost of upgrades after 11 years. This does not take into consideration increased leasing rates and greater annual revenue over this period. Landlords need to consider the reduction in rent during capital works programs and this should be factored into feasibility studies when calculating cost offset periods.

"GPT have committed to a carbon neutral building in 51 Flinders Lane.

We have assisted with carbon planning in this building and achieve this goal"

Image: 51 Flinders Lane, GPT Group, VIC



What is the future for low carbon. climate ready commercial buildings?

Buildings still generate 23% of Australia's carbon emissions, according to the Green Building Council of Australia (GBCA). This makes climate change one of the biggest challenges facing the commercial sector today.

How sustainable design and net zero carbon imperatives will influence the commercial market in the future are still to be seen consistently.

which are entirely market driven and have very little input or incentive from local,

These tools include the Green Building

Council Australia's Green Star rating

system, the Australian Government's

voluntary Climate Active carbon neutral standard, NABERS Indoor Environment

rating and the WELL Building Standard

Sustainable design certifications often intersect with NABERS ratings, and the

The risk of stranded assets is a major concern for landlords considering Green Star or net zero carbon upgrades to existing assets. A stranded asset, in this particular context, is an existing office building that is upgraded to meet a certain standard or achieve a particular rating in. For example, 2022 that is no longer able to earn a financial return in 2032 due to an economic, physical or regulatory change such as the low carbon transition.

Green Star rating is generally recognised

as Australia's leading accreditation system

At present, there is no sole, universally recognised carbon rating or industry standard for refurbished commercial office buildings within Australia.

Carbon footprints are

different ratings tools

measured using several

state or federal government.

Core and Shell certification.

for the built environment.

How sustainable design and net zero carbon imperatives will influence the commercial market in the future are still to be seen consistently.

Currently, there is no legislation concerning the embodied or operational carbon emissions in commercial office buildings (or any other buildings) within Australia and the market is the only driver behind the reduction in carbon output.

At this time, landlords are not required to disclose Green Star ratings or carbon emissions (unlike the NABERS energy rating, which must be disclosed at the time of sale, lease or sublease). We expect to

see stranded assets in as little as 10 years when they should have a 20 to 30-year lifecycle.

However, tenant, shareholder and community demand for sustainable office spaces continues to grow. Leading institutional owners and property portfolio managers are increasingly motivated to achieve certified carbon neutrality on their assets

According to the GBCA, more than 25 major property portfolio managers have committed to upgrading their existing assets to meet net zero imperatives over the next 5 to 15 years. Some have already achieved Climate Active certification.

As a real life example, GPT have committed to a carbon neutral building in 51 Flinders Lane [1].

We have assisted with carbon planning and cost planning to assist GPT in achieving this goal.

What are the costs of Green Star ratings in commercial office refurbishments?

Benchmarking cost data for pathways to Green Star ratings in commercial refurbishments is inherently difficult. Each building has a different Green Star target and each building has a different starting point. Therefore, each building must be evaluated on a case-by-case basis. There are also significant overlaps between NABERS and Green Star pathways, so generally these costs are assessed from a combined perspective as "ESD initiatives".

GBCA has also recently released the Green Star Buildings rating tool which superseded the previous Green Star – Design & As Built rating tool in December 2021. Green Star Building certification is significantly harder to achieve, partly due to higher standards around carbon.

The new rating tool incorporates mandatory upfront embodied carbon reduction criteria. 4 Star and 5 Star certifications require at least a 10% reduction in the building's upfront embodied carbon, and 6 Star certifications requires at least a 20% reduction. These criteria will become even more stringent over the next eight years. By 2030, all Green Star certified buildings must have at least a 40% reduction in upfront embodied carbon. All levels of government are already looking to incorporate embodied carbon into their RFT submissions. NSW Government recently released that all business cases need to report on embodied carbon.

Slattery prices ESD initiatives using several different approaches. We may adopt benchmarked percentages as an extra over cost or, where sufficient detail is available, price ESD initiatives within cost plans. Detailed costings may not always provide a clear cost premium on a project as ESD initiatives are often embedded within the design rather than separated out as options.

Benchmarked percentages for commercial office refurbishments have historically sat in the region of 1.5% to 2.5% of the total building cost for 5 Star Green Star targets within the Design & As Built rating tool. However, to meet the new Green Star Buildings rating tool benchmarks, Slattery expects costs to rise significantly. Recently, Slattery modelled the cost uplift to elevate a 5 Star commercial building in Sydney to a 6 Star rating. The estimated uplift was 1.8% which is a major increase over the original Green Star Design & As Built rating for an upgrade of this nature. While this may appear high when considering that a \$50 million refurbishment could have an ESD uplift cost of \$1.25 million, it is not necessarily a bad investment when office buildings in Melbourne and Sydney with a NABERS Energy rating of up to 4.5 stars attract a premium of 8% on sales price compared to unrated buildings and those with a rating of 5 and above transact at a premium of around 18%. It should be noted that this will likely not be a direct cause and effect given that buildings with high ESD ratings are likely to also have a better overall fit and finish.

Image: Dexus, Gateway, NSW Image via Boon Edam



Electrification, decarbonisation and fossil fuel free

Under the new Green Star Buildings rating tool, full building electrification is now a requirement to achieve a 6 Star rating. More and more landlords with premium assets are making upgrades to achieve the label of "fully electric and fossil fuel free". This means eliminating natural gas for systems like HVAC, heating hot water and cooking.

Rather than being driven by increased efficiency, landlords are making the investment in response to investor demand, internal ESG policies, employee pressure and to reinforce their brands and social license to operate.

Typical upgrades required to achieve full electrification include switching gas boilers to air or water source heat pumps and heat recovery chillers, and upgrading main switchboards, submains and building management systems to cover increased electrical load. Typically, landlords will not be required to upgrade all their natural gas or fossil fuel powered systems to achieve the 6 Star Green Star rating.

Diesel back-up generators cannot be run off electricity. Furthermore, other proposed power sources, such as hydrogen fuel cells, are virtually untested in commercial applications, prohibitively expensive and come with added risks such as storage of highly flammable gas at high pressure.

Interestingly, electricity grids across Australia are currently far more greenhouse gas intensive than natural gas and are not expected to be as environmentally sustainable until at least 2030, when renewables reach a tipping point. Therefore, electrification is still at a stage of future proofing based on expected renewable expansion by state governments.

Slattery estimates that the cost premium of full electrification over traditional gas systems may be in the order of \$1 million for a comprehensive upgrade of a 20,000 -30,000 sqm commercial office building.

Image: Queen and Collins, VIC Slattery is proud to be the first quantity surveying firm in Australia to launch a carbon planning service. This new service is available in conjunction with cost planning to help our clients achieve their net zero and sustainability targets.

The focus of the carbon plan will address and educate clients on the embodied carbon of their current and future developments.

What is the cost of Net-Zero Carbon in commercial office refurbishments?

A key step in assessing the cost of net zero carbon is understanding the difference between embodied carbon and operational carbon.

Embodied carbon describes the carbon emissions that are associated with the materials and construction of a building and makes up around 35% of total carbon emissions in a commercial office building. The GBCA estimates embodied carbon could account for 80% of building emissions by 2050.

Operational carbon describes the carbon emissions emitted during the operation of a building.

The embodied carbon associated with a refurbished building is significantly less than a new building project that involves demolition and reconstruction. A case study by Slattery examined a recently refurbished commercial building that saved an estimated 450-500kg of carbon dioxide per sqm (GWP/m2) compared to a complete demolition and new build.

Embodied carbon reduction is heavily reliant on concrete (based on Slattery's carbon data, 30-50% of a building's upfront embodied carbon sits within the structural frame). A valuer's perspective: How is the market responding to ESD?

Herron Todd White has provided the following commercial market report on current ESD conditions within major Australian capital cities:

- Investment grade stock in CBDs require high NABERS ratings to compete with other buildings.
- Low environmental ratings are not so much factored into yields, but more so in the letting up assumptions.
- Certain submarkets, where government tenants make up a large part of that occupier market, will require landlord capex to maintain or improve the ESD credentials.
- ESD ratings are not as important for B or C grade buildings where smaller companies are the target market. Social responsibility is less developed than for larger companies.

- Large global companies that occupy premium grade offices have targets to reduce their carbon footprint. More and more, we are seeing CEO KPIs tied to this.
- There is an expectation for landlords to partner with anchor tenants to assist the tenant in reducing their energy usage and thus their carbon footprint. Any landlord investment is built into the rent with a longer lease term for investment payback. This results in the tenant being "stickier" and ultimately, a better cap rate is achieved because of the reduction in risks such as capex, ESD, tenant retention, etc.
- Any operational initiatives such as smart technology which reduces tenant gross occupancy costs will be viewed as value adding.
- Employee health and wellbeing is becoming more important and tenants are considering WELL and NABERS IE ratings more closely.



Image: 255 George Street, NSW

Summary / recommendations

So, what are the key takeaways for a sector that has been hit the hardest by the pandemic, but is still leading the way in sustainability and design ingenuity?

- Commercial market conditions are changing rapidly due to the pandemic and the significant growth in available office space. Landlords need to monitor these changes closely to maximise tenant retention and attraction.
- As occupiers come to terms with their operating models in a post-pandemic environment, building owners must provide flexibility in terms of services, potentially refitting, and offer a greater focus on indoor environmental quality. Now more than ever, tenants are driving the demand for safe, healthy indoor environments.
- 80% of commercial buildings in Australia are more than 15 years old. Evaluating and repositioning assets is a key consideration for landlords in a more competitive market.
- Leading property portfolio managers are committed to upgrading their existing assets to net-zero emissions by 2030. Regulatory bodies may introduce legislation to ensure commercial buildings are meeting emissions targets.
- Australian Carbon Credit Units (ACCUs) are rising rapidly, increasing from \$18 per tonne in March, 2021 to \$32 a tonne in November, 2022. Landlords need to consider this, especially in the current market where net zero carbon targets appear to be standard for premium office space in major CBDs.

- ESD initiatives make financial sense for landlords and should be strongly considered and factored into feasibility studies when undertaking capital works on existing assets. If landlords have already committed to net zero, they must now have a line item in the feasibility study.
- Green Star certifications are now more expensive to achieve and will become even more expensive after 2030.
 Landlords looking to bring assets up to a premium grade with a 5 or 6 Star rating will pay less in the next eight years.

Please reach out to the Slattery Commercial or Carbon team if you have any questions on the content in this Kaizen.



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Bibliography

[1] https://www.gpt.com.au/news-insights/ carbon-neutral-and-nature-positive

Further references for information in this paper are available on request.



About Slattery and Kaizen

Slattery is a property and construction advisory firm specialising in quantity surveying, cost management and early phase project advisory, with an outstanding history spanning more than 40 years.

We work hand-in-hand with governments, institutions and organisations as well as planners, developers, architects and design teams on a broad range of property and construction projects.

A commitment to excellence and innovation, and an ability to become an integral part of the project team has earned Slattery the trust and respect of clients and project teams alike. Slattery adds value by taking control and ownership of the cost management process from the outset. We understand the importance to drive innovation and productivity.

Slattery's Kaizen Papers focus on sharing knowledge, ideas and pertinent cost information related to our industry. Kaizen is the Japanese word for improvement, and a business philosophy that strives for continuous improvement in process. We produce papers across the sectors we work with, which are shared with our clients and made available on our website for all to view.

We invite you to explore our knowledge sharing further at www.slattery.com.au/thought-leadership

Slattery carbon planning

Slattery is proud to be the first quantity surveying firm in Australia to launch a carbon planning service.

Our service is available in conjunction with cost planning to assist our clients in achieving their net zero and sustainability targets. The focus of the carbon plan will address and educate clients on the embodied carbon of their current and future developments.

Read more about Slattery's carbon planning offering at www.slattery.com.au/carbon-planning

Our team is pleased to hold memberships to the following industry groups:





Kaizen: Commercial Refurbishment 01 Greening and Preening

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