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Welcome from the chair



As the Better Buildings Partnership settles into the next phase, we are delighted by the positive industry response to our guidelines and initiatives. It is exciting to see that over 7.5 million sqm of commercial space nationwide is now using our tools, and that 94% of Australian premium property owners are now using a green lease!

Having reduced our emissions by 52% from 2006, and with already 5 carbon neutral buildings, we now turn our attention to accelerating net zero.

The challenge ahead requires our tenants' and communities' collaboration. It requires vision and it requires practical solutions you can use to take action today.

Join us. Use the tools.

Spread the word. Be part of it.

Paul Wall
Chair (2016-)
DEXUS Property Group

Alicia Maynard Deputy Chair (2017-) ISPT

acknowledgements

The Better Buildings Partnership (BBP) would like to acknowledge the professional expertise and insights of all its partners and contributors and thank its members for their commitment to leadership excellence.

PARTNERS



































ASSOCIATES











SUPPORTERS











about the partnership

The Better Buildings Partnership was launched by the Lord Mayor of Sydney, Clover Moore, on 30 June 2011. It is a collaboration of leading property owners, managers, peak bodies and industry influencers that work to improve the performance and sustainability of existing commercial buildings in the City of Sydney area and across Australia.

The partnership represents more than half of Sydney's commercial floor space in the city centre and is demonstrating how effective new models of collective action can be to unlock complex barriers around change.

Under the banner of 'moving industry forward together', the partnership has worked with industry professionals to create and embed new best practice standards in key areas such as leasing, operational waste, refurbishment waste, solar installations, and optimising water use.

BEITER

Lord Mayor, Clover Moore launched the Better Buildings Partnership in 2011

background

The Better Buildings Partnership is a key initiative of Sustainable Sydney 2030.

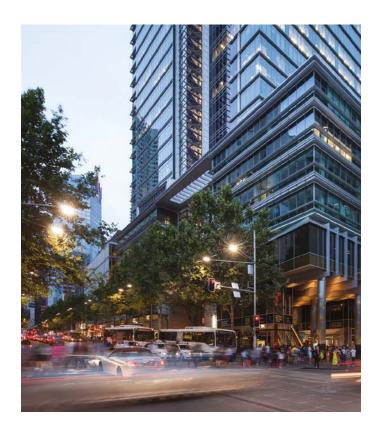
Sustainable Sydney 2030 is a vision and plan for the development of a green, global, and connected city. Formulated after extensive community consultation, the plan sets out to make Sydney a leading environmental performer and, among other things, to reduce greenhouse gas emissions by 70 per cent by 2030 (from 2006 baseline) and net zero by 2050.

A total of 44 per cent of the City of Sydney's greenhouse gas emissions come from its commercial office buildings and their occupants¹. These buildings are also responsible for significant water consumption and waste generation. Landlords and building managers play an important role in improving the energy, water and waste efficiency of Sydney's existing buildings.

¹ Office Sector Emissions Modelling Foundation Report Pitt and Sherry October 2016

How the BBP works





OBJECTIVES

- Work collaboratively to improve the sustainability of Sydney's commercial and public sector buildings and achieve the City's Sustainable Sydney 2030 goals
- Improve the environmental performance of buildings within the City's local government area
- Facilitate the rollout of, and connection to green infrastructure through the development of commercial propositions and removal of structural barriers to action
- Engage with regulators and governments on key environmental policy and regulatory issues
- Champion and promote the objectives and outcomes of the Better Buildings Partnership and Sustainable Sydney 2030 to tenants and the wider community.

governance

I FADERSHIP PANEL

The Better Buildings Partnership is a co-creative project where members actively participate in collaborative decision-making. The partnership is directed by a leadership panel comprising senior representatives from each member organisation. This panel sets the partnership's annual work program, addressing the issues of most importance to members regarding the performance of existing buildings. Senior representatives act as champions in embedding new practices within their respective organisations.

TECHNICAL WORKING GROUPS

In addition to the leadership panel, technical working groups cover key areas:

- environmental
- tenant and communities
- waste
- benchmarking and engagement

The technical working groups lead project-specific industry collaborations. They advise on and deliver key projects identified by the leadership panel and develop resources such as toolkits, guidelines and voluntary best practice standards.



Danielle McCartney Environmental Technical Working Group Co-Chair (2011-) UTS



Chris NunnEnvironmental Technical
Working Group
Co-Chair (2015-)
AMP Capital



Kim Host Waste Technical Working Group Chair (2017–) Mirvac Group



Claire Hashman
Tenant and Communities
Technical Working Group
Co-Chair (2016-)
DEXUS Property Group



Margot Black Tenant and Communities Technical Working Group Co-Chair (2016–) Charter Hall



Danny De Sousa
Benchmarking and
Engagement Technical
Working Group
Chair (2016-)
Brookfield Property Partners

SECRETARIAT

Project management of the Better Buildings Partnership is delivered through its secretariat, as provided by the City of Sydney.



Esther Bailey City of Sydney (2011-)



Alberto Jimenez City of Sydney (2015-)

Annual Results

Scope

The detailed scope of inclusions for this data is set out in the Partnership Benchmarking Handbook. A summary of the scope of the data includes:

- all NABERS rate-able commercial office buildings under operational control of the partners in Sydney LGA
 - base building services/meters
- emissions scope 1 & 2 electricity, energy and gas
 - diesel, refrigerants and scope 3 (waste) excluded
 - GreenPower and carbon offsets included

Data verification

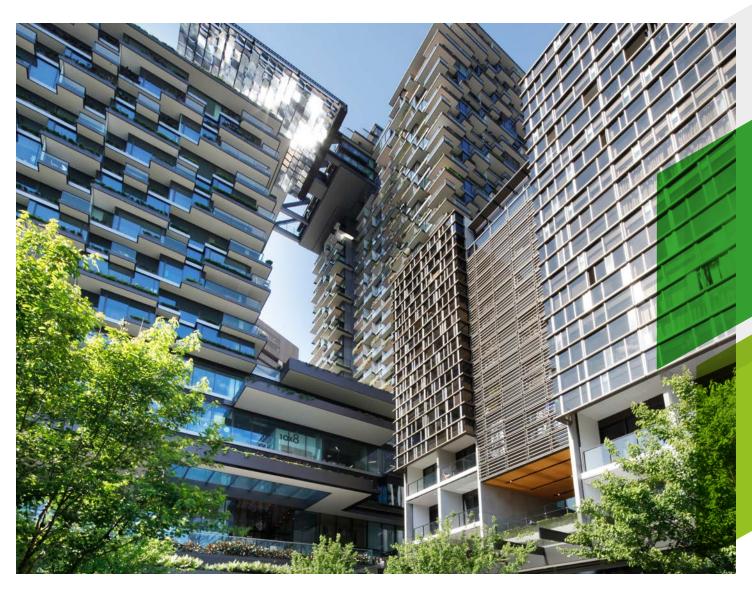
These outcomes rely upon the data reported by our partners. They are the result of best efforts in designing and model/process that provides metrics to measure sustainability performance over time.

New partners

In FY17 the Better Buildings Partnership welcomed ISPT Super Property. The BBP included ISPT historical data into its baseline to adequately benchmark their trajectory towards achieving the partnership's targets. This resulted in a slight recalculation of our baseline.

Confidence

The platform used by the Better Buildings Partnership calculated accruals where gaps in data exist. For FY17, 2.5% per cent of data is accrued.



Annual results key figures

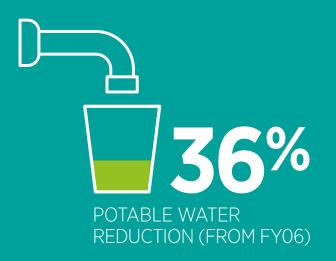




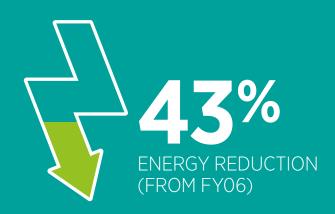


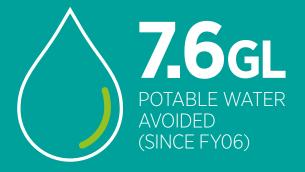
















OF LEADING PROPERTY OWNERS USING GREEN LEASES



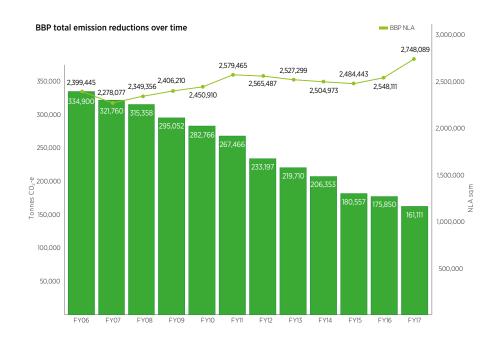
emissions

Partnership total emissions over time, on-site and off-site

In FY17, despite a portfolio 14 per cent larger, the partnership reduced emissions by 52 per cent from FY06 baseline, continuing its trajectory towards its target of reducing emissions by 70 per cent by 2030.

This exceeds the straight line target of 33 per cent.

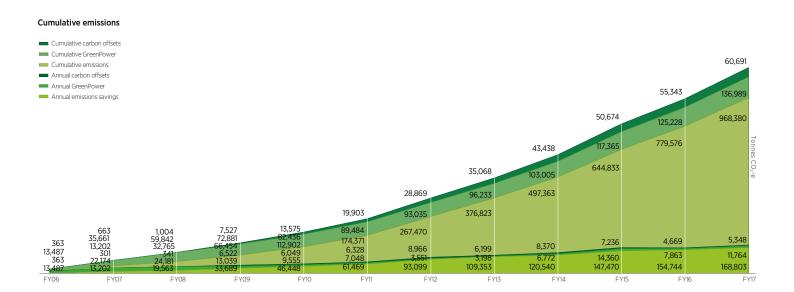
In FY17 the Better Buildings Partnership welcomed ISPT Super Property. The BBP included ISPT historical data into its baseline to adequately benchmark their trajectory towards achieving the partnership's targets.



Partnership cumulative emissions savings and savings per annum, on-site

The partnership abated almost 185 kilotonnes of CO_2 -e in FY17.

Since FY06, the partnership has abated over 1.1 million tonnes of CO_2 -e.

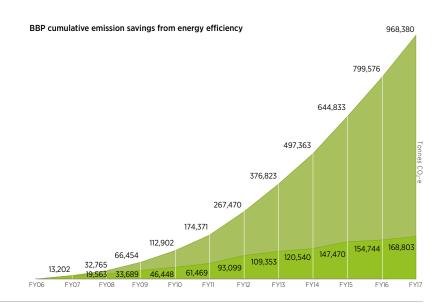


emissions

Partnership cumulative emissions savings and savings per annum on-site from building performance improvements

The partnership abated over 168 kilotonnes of CO₂-e in FY17, more than any year before from building performance improvements such as energy efficiency, trigeneration and onsite renewables.

Since FY06, the partnership has abated over 968 kilotonnes of CO₂-e from these building performance improvements.

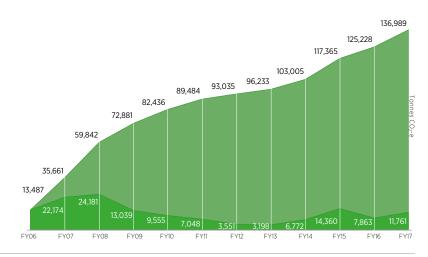


Partnership cumulative emissions savings and savings off-site per annum from GreenPower®

The partnership avoided over 11 kilotonnes of $\mathrm{CO_2}$ -e in FY17 from the use of GreenPower as a more sustainable utility option. Some members use GreenPower as a way of meeting their targets and creating a rational economic trigger for further action by the organisation on more cost-effective energy efficiency and other performance improvement measures in the future.

Since FY06, the partnership has avoided over 136 kilotonnes of CO₂-e through the use of GreenPower.

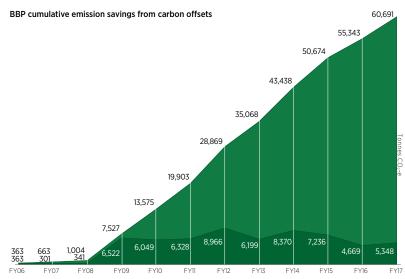
BBP cumulative emission savings from GreenPower



Partnership cumulative emissions savings and savings per annum from carbon offsets

The partnership abated over 5.3 kilotonnes of $\rm CO_2$ -e in FY17, including NCOS certified offsets where other measures were not feasible or as requested by tenants.

Since FY06, the partnership has abated over 60 kilotonnes of CO₂-e.



emissions intensity

Partnership emissions intensity, on-site and off-site (weighted average)

The average emissions intensity for a BBP building is 59 kg $\rm CO_2$ -e/sqm, 34% better than the market average². The average emissions intensity has more than halved since FY06.

In FY17, 5 BBP buildings were carbon neutral.

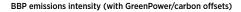
The highest-performing large building (over 25,000) operated at an emissions intensity of 30 kg CO_2 -e/sqm.

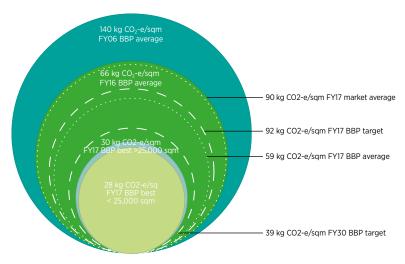
By 2030 BBP buildings are expected to have an emissions intensity of less than 39 kg CO_2 -e/sqm.

² NABERS 2017 Annual Report

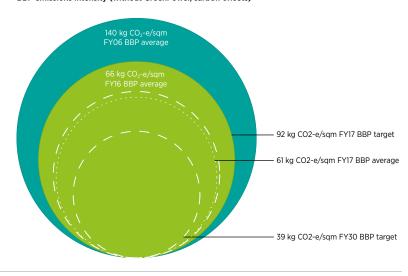
Partnership emissions intensity, on-site (weighted average)

In FY17, the highest-performing small building (under 25,000 sqm) operated at an emissions intensity of 28 kg CO₂-e/sqm.

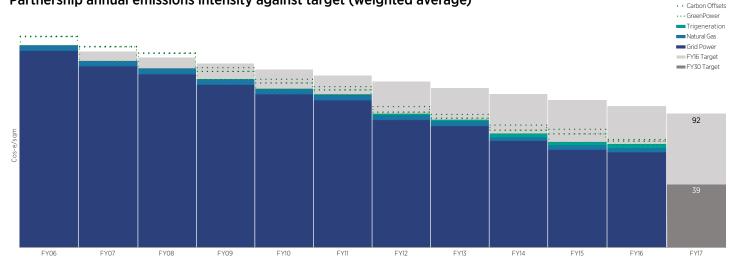




BBP emissions intensity (without GreenPower/carbon offsets)



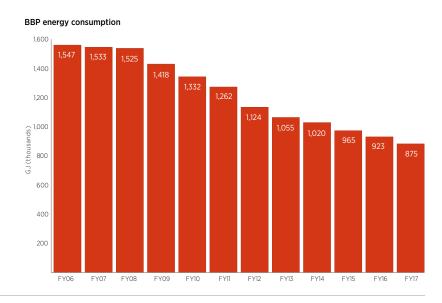
Partnership annual emissions intensity against target (weighted average)



energy

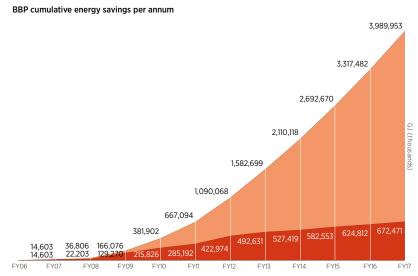
Partnership energy consumption over time

The partnership's energy consumption reduced by 5 per cent in FY17 from the previous year.



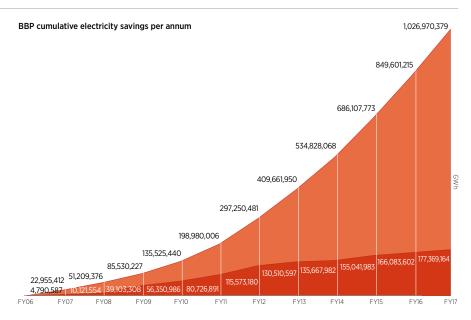
Partnership cumulative energy savings and savings per annum

Since FY06, the partnership has saved over 3.9 TJ of energy from building performance improvements. In FY17, the partnership saved 672 GJ.



Partnership cumulative electricity savings and savings per annum

The partnership is saving over \$33 million this year in electricity costs since FY06.



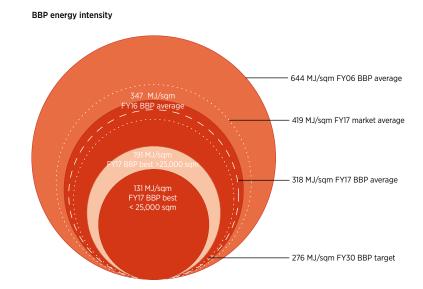
energy intensity

Partnership energy intensity (weighted average)

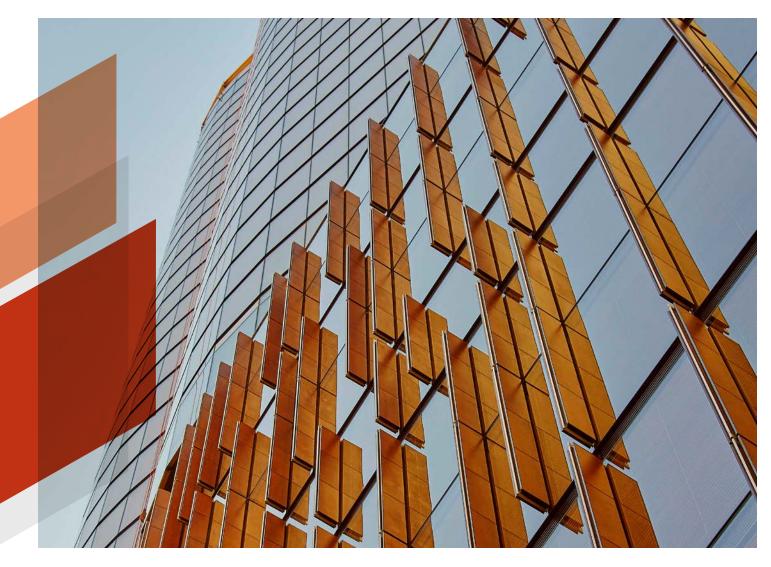
The average energy intensity for a BBP building is 318 MJ/sqm, 24 per cent better than the market average¹ and 13 per cent from the Sydney 2030 target.

The average energy intensity has reduced by 41 per cent since FY06.

In FY17, the highest-performing small building (under 25,000 sqm) performed at 131 MJ/sqm and the highest-performing large building (over 25,000 sqm) at 191 MJ/sqm; both of these are well under the Sydney 2030 target of 276 MJ/sqm.



¹ NABERS 2017 Annual Report

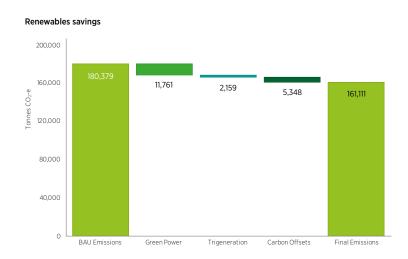


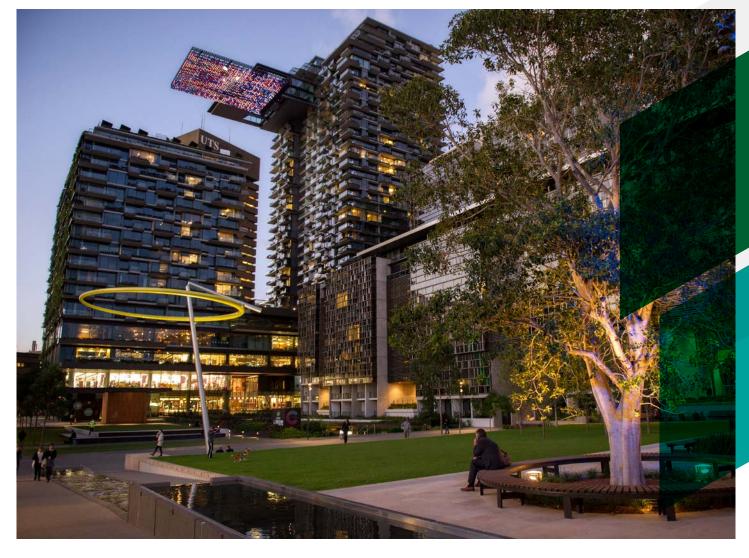
renewables and low-emissions technology

Partnership FY17 total savings from sources beyond energy efficiency

The partnership acknowledges that Sydney 2030 includes using low-emissions technologies like coand tri-generation and GreenPower® and carbon offsets as a legitimate way of meeting its targets.

In FY17, the use of alternative emissions reduction technologies provided an additional 10 per cent reduction in ${\rm CO_2}$ -e.

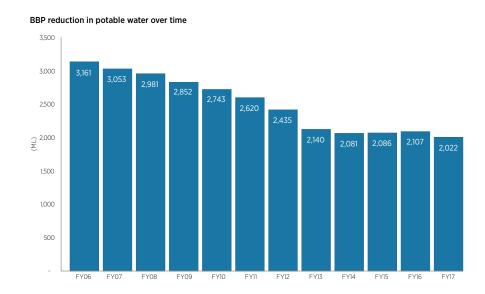




water

Partnership total potable water consumption over time

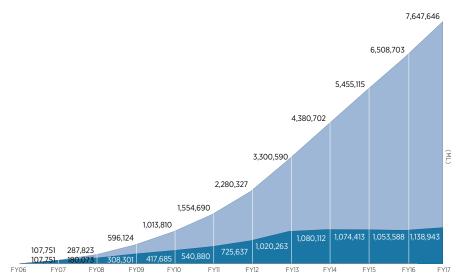
In FY17, the partnership's annual water consumption decreased by 4 per cent. Since FY06, the partnership has reduced its annual potable water consumption by 36 per cent and saved over 7.6 GL of potable water.



Partnership cumulative water savings and savings per annum

The partnership saved 1.1 GL of potable water in FY17.

BBP cumulative water savings per annum



water intensity

Partnership potable water intensity (weighted average)

In FY17 the partnership continued to work towards the Sydney 2030 potable water intensity target of 0.74 kL/sqm.

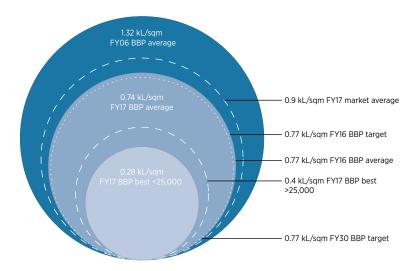
The average potable water intensity for a BBP building is 0.77 kL/sqm, a reduction of 43 per cent since FY06.

The average potable water intensity for a BBP building is 17 per cent better than known market average.¹

The highest-performing small building (under 25,000 sqm) in the BBP operates at a potable water intensity of 0.28 kL/sqm.

The highest-performing large building (over 25,000 sqm) in the BBP operates at a potable water intensity of 0.4 kL/sqm.

Water intensity averages - Australia compared with BBP portfolio of properties



¹ NABERS 2017 Annual Report



Commitments



FY2017 LEGACY PROJECTS AND COMMITMENTS

IDENTIFYING PATHWAYS TOWARDS

NET ZERO

BASELINING OPERATIONAL WASTE TOWARDS

80% DFFIT

RECOVERY

DATA
INSIGHTS FOR
PERFORMANCE

5

SYSTEMATISING GREEN LEASING

PROBLEM

Need for clarity as members begin their journey towards net zero emissions

SOLUTION

Increase industry awareness of the most efficient technical and commercial pathways towards net zero buildings.

ACHIEVEMENT

Developing a set of guidelines and tools which inform pathways that can be taken to achieve net zero buildings.

PROBLEM

Poor waste data integrity prevents well informed decision making and optimal resource recovery.

SOLUTION

Creation of a new operational waste management guidelines for contracting, improved performance benchmarking and reporting.

ACHIEVEMENT

Over 80 A grade buildings in the CBD operating under the BBP Operational Waste Guidelines at a bronze level.

Work continues with NABERS to embed in new national standard.

PROBLEM

80% of stripout waste goes to landfill due to contractual red tape.

SOLUTION

Creation of best practice stripout waste guidelines.

ACHIEVEMENT

50-60% resource recovery achieved from this year's BBP stripout projects. A 20% increase from our baseline.

PROBLEM

Lack of access to consistent and meaningful data impedes improved sustainability outcomes within buildings.

SOLUTION

Creation of best practice data guidelines.

ACHIEVEMENT

Developing a foundation report which outlines the barriers and opportunities for improved data management within commercial office buildings.

PROBLEM

Traditionally leases are not drafted to provide the level of flexibility and collaboration required to enable parties to implement sustainability improvements to buildings and/or premises during the lease term.

SOLUTION

Creation of best practice leasing standard, template clauses, a scoring tool and a badge to reward and recognise parties engaging in best practice leasing.

ACHIEVEMENT

50% of the commercial office space in Sydney CBD have integrated the BBP Leasing Standard into their leasing documents.

BBP project maturation model

The BBP focuses its efforts on intractable and systemic industry issues and seeks to identify best practice on a particular issue. While the exact delivery method is designed for each issue, projects are generally moved from identification to delivery and transition to industry standard using a series of maturation levels. This process is not always direct and linear, as different issues may require an iterative looping of key areas to achieve the long-term objectives.





environmental



NCC SECTION J COMPLIANCE CHECKLIST AND JV3 REPORT TEMPLATE

The partnership developed the National Construction Code (NCC) Section J Deemed To Satisfy Compliance checklist and JV3 Report Template. These tools facilitate improved compliance with current energy efficiency provisions according to the NCC Section J, which ensure that a minimum standard of energy efficiency is achieved in the design of building envelopes and engineering services. These tools are being tested with industry and BBP members.

DEFINE BEST PRACTICE

PLAN TOWARDS NET ZERO

The partnership, having already progressed significantly toward the greenhouse gas emissions, energy and water targets of Sydney 2030, began investigating its transition towards net zero emissions by 2050. The partnership is developing a set of guidelines and tools which inform building owners and tenants about the pathways that can be taken to achieve net zero buildings.

IMPLEMENTING BEST PRACTICE

BBP COOLING TOWER FOUNDATION REPORT

The partnership is finalising the BBP Cooling Tower Guidelines which include recommendations for best practice management for building owners to implement within their operations in order to unlock water saving opportunities.

PROBLEM IDENTIFICATION

INNOVATION RESEARCH

The partnership worked with key research bodies like the CSIRO and a variety of universities to support projects such as improving building air tightness and Building Management System fault detection diagnostics.

OTHER TOOLS AND PROJECTS AVAILABLE

✓ City of Sydney masterplan engagement

Engagement with the City of Sydney's masterplanning processes, providing key input to the environment strategy, renewable energy and energy efficiency masterplans and climate change adaptation plan.

✓ Thermal reticulation network checklist

Checklist and case studies providing guidance on how and when buildings may connect to a thermal reticulation network.

Recycled water connection guidelines

Guidance, specifications and scenarios on preparing a building to connect to recycled water sources.

Building performance case studies

Sharing of practical experience across a range of energy, water and renewables projects from industry leaders.

Current initiatives waste

TRANSITION TO STANDARD PRACTICE

BBP OPERATIONAL WASTE GUIDELINES

The partnership is considering ways to embed the principles of the guidelines into their supply chain. The partnership is collaborating with Good Environmental Choice Australia (GECA) in the creation of a certification for waste service providers. This certification will enable businesses to make an informed decision during the procurement process in regards to waste contractors' standards and integrity.

The guidelines are being used to inform a redevelopment of the NABERS waste tool. Training on the guidelines will be available through peak bodies and industry partners in the coming year.

DEFINE BEST PRACTICE

BBP STRIPOUT WASTE GUIDELINES

The partnership continued the development of the BBP Stripout Waste Guidelines. These guidelines set a new best practice standard which is aimed at the achievement of the minimum resource recovery target of 60% during the office strip-out and refurbishment process. These guidelines and its associated workbook provide a framework to improve stripout operations, procurement processes, and ensure consistent measurement and reporting.

IMPLEMENTING BEST PRACTICE

BBP STRIPOUT WASTE ANALYSIS

The BBP Stripout Waste Guidelines are now being embedded across the partnership's member portfolios, beginning with an analysis and benchmarking of members performance and management practices.

ITERATIVE CO-CREATION

CREATING NEW RESOURCE RECOVERY PATHWAYS FOR PROBLEM WASTE

The partnership engaged leading resource recovery facilities and UNSW on the development of new engineered timber from stripout waste such as loose furniture. This group is now studying the commercial feasibility of production at scale of new engineered timber from loose furniture.

OTHER TOOLS AND PROJECTS AVAILABLE

Best practice operational waste guidelines

Outlines best practice steps for the management of waste and provides flowcharts on what areas of procurement, management and reporting of waste are most appropriate for intervention.

Operational waste management plan template

Sets a common reporting standard that enables comparison between multiple sites and providers. Consistent application will reduce reporting costs.

✓ Data integrity rating matrix

Sets a framework for rating the confidence in the waste data based on consistent reporting and the ability to use a second source of data for reconciliation

Outcomes-based reporting paper

Offers a comparative analysis to evaluate the outcomes to improve resource recovery outcomes and aim towards closed-loop recycling for socially beneficial outcomes.

Commercial office industry density-weight conversions

Sets a common reporting standard that enables accurate comparison between multiples sites and providers. Consistent application will reduce reporting costs, increase reporting confidence and inform decision making.

✓ Model operational waste procurement clauses

Provides ready-to-use waste contract procurement clauses to ensure clear delineation of expectations and roles.

Resource recovery in office stripout case study

Provides a practical demonstration of how simple planning and procedural changes can dramatically increase recovery rates in office stripout.

Resource recovery facility directory

Provides a listing of Sydney (and eventually nationwide) operators that can assist in resource recovery for common materials from office stripout.

✓ Waste management report template

Provides consistent reporting framework to assist industry in establishing more robust data about the volume and composition of waste from office stripout.

tenant and communities



BBP LEASING STANDARD AND ASSOCIATED TOOLS

The partnership launched a new leasing standard which sets a minimum definition of green leasing as a way for tenant and landlords to collaborate for better sustainability and performance outcomes. For those seeking to participate, the standard also has bronze, silver and gold ratings which may be included in lease documentation and marketing materials.

The BBP Leasing Standard is aligned with GRESB reporting and endorsed by the Property Council of Australia.

TRANSITION TO STANDARD PRACTICE

BBP LEASING SCORING TOOL

This tool enables lease documents to be scored under the BBP Leasing Standard. The tool outputs a scorecard that can be used as a summary of the lease's green elements to brief prospective tenants or landlords or to instruct lawyers in drafting.

TRANSITION TO STANDARD BRACTICE

BBP TEMPLATE CLAUSES AND MEMORANDUM OF UNDERSTANDING

The template clauses cover 20 topics relating to energy, water, waste and IEQ management; sustainable transport; sustainable procurement; fitout works; social initiatives; comfort; and information sharing and provide background information and drafting to enable the clauses to be easily inserted into leases.

A standalone Memorandum of Understanding is also available for those wishing to agree principles mid-lease term or at the commencement of leasing discussions.

IMPLEMENTING BEST PRACTICE

BBP LEASING STANDARD TRAINING

The partnership held several members' events to consult and train industry professionals and leasing teams on its leasing work and seek feedback on its new leasing standard. A formal industry training module is in development with Property Council of Australia for use property managers and legal services.

OTHER TOOLS AND PROJECTS AVAILABLE

✓ Tenants and Landlords Guide to Happiness

An easy to read explanation of why collaboration and best practice leasing matters, how it works, and case studies on how it delivers benefits to both parties.

Why Choose High-Performing Buildings factsheet

Developed with CitySwitch, this factsheet demonstrates the value of choosing a building with strong environmental performance into financial value through direct savings, productivity and reduced employee churn. The documents builds the case for spending more per square metre while delivering improved value to tenants.

✓ Template site selection briefs

Helps tenants to articulate sustainability objectives in requests for information to the market and the detail expected in responses from leasing agents and tenant representatives.

✓ Vertical communities toolkit

Template tools to bring tenants together to collaborate through building management committees and engagement, establishing common goals, targets and unlocking building upgrades.

✓ Academic paper

A Method for Analysing and Assessing the Collaborative Potential and Environmental Commitment of Commercial Leases

BBP Leasing Index - Progress of Best Practice Leasing

A study to understand the current status of green leasing within the office market, by providing a statistical analysis and rating of the level of green leasing across the Sydney CBD.

Current initiatives benchmarking and engagement



BBP DATA GUIDELINES: FOUNDATION REPORT

The partnership started developing a foundation report which outlines the barriers and opportunities for improved data management within commercial office buildings. This report seeks to identify programs towards best practice management as well as identify the tools and activities that enable better performance.

ITERATIVE CO-CREATION

INSIGHTS TO IMPROVE ASSET PERFORMANCE

The partnership commenced evaluating opportunities to drive insights from existing data sets. Using historical BBP data and new data sets we will seek to produce leading and unique insights that will enable better informed decisions, help achieve sustainability targets, communicate trends and celebrate leading performers in order to shift industry.

BENCHMARK PROGRESS

SUPPORT CO-CREATION OF THE CITY OF SYDNEY ENVIRONMENTAL SUSTAINABILITY PLATFORM

The partnership supported the development of the City of Sydney's environmental sustainability platform. This platform will collect and manage building performance data from BBP members' assets. It will have the capacity to compare assets according to their sustainability performance, detailing the best and worst performers, in order to better knowledge share for improvements across the board.

OTHER TOOLS AND PROJECTS AVAILABLE

BBP benchmarking targets

Shared vision and interim markers to substantiate progress towards common goals such as the Sydney 2030 targets.

✓ Industry Workshop

Industry stakeholders participated in a workshop organised by the BBP to co-create solutions to existing barriers towards improved data management.



The year ahead big 5 commitments FY18





