



Rider  
Levett  
Bucknall

**RIDERS  
DIGEST  
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# **RIDERS DIGEST**

## **46<sup>TH</sup> EDITION**

A yearly publication from RLB's Research & Development department.

Riders Digest is a compendium of cost information and related data specifically prepared by RLB for the Australian construction industry.

While the information in this publication is believed to be correct, no responsibility is accepted for its accuracy. Persons desiring to utilise any information appearing in this publication should verify its applicability to their specific circumstances. Cost information in this publication is indicative and for general guidance only and is based on rates ruling at Fourth Quarter 2017 (unless stated differently). All figures exclude GST.

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# INTRODUCTION

## RIDER LEVETT BUCKNALL

### “CONFIDENCE TODAY INSPIRES TOMORROW”

With a network that covers the globe and a heritage spanning over two centuries, Rider Levett Bucknall is a leading independent organisation in quantity surveying and advisory services.

Our achievements are renowned: from the early days of pioneering quantity surveying, to landmark projects such as the Sydney Opera House, HSBC Headquarters Building in Hong Kong, the 2012 London Olympic Games and CityCenter in Las Vegas.

We continue this successful legacy with our dedication to the value, quality and sustainability of the built environment. Our innovative thinking, global reach, and flawless execution push the boundaries. Taking ambitious projects from an idea to reality.

### “CREATING A BETTER TOMORROW”

The Rider Levett Bucknall vision is to be the global leader in the market, through flawless execution, a fresh perspective and independent advice.

Our focus is to create value for our customers, through the skills and passion of our people, and to nurture strong long-term partnerships.

By fostering confidence in our customers, we empower them to bring their imagination to life, to shape the future of the built environment, and to create a better tomorrow.

# PROFESSIONAL SERVICES

Cost Management and Quantity Surveying	6
Advisory	9

# COST MANAGEMENT AND QUANTITY SURVEYING SERVICES

The skilled cost management professionals at RLB use many tools when creating a plan that optimises the relationship between the cost and quality of a project and a client's cost objectives. The services offered by the firm to achieve these objectives are:

- Preparation of preliminary elemental estimates based on preliminary design
- Preparation of detailed estimates and cost planning advice throughout design development
- Estimating of building services
- Participation and leadership in the value management process
- Comparative cost studies and advice on cost effective design solutions
- Advice on materials selection and general buildability advice
- Advice on selection of tenderers
- Attendance at design meetings and construction control meetings

## Feasibility Analysis

An accurate, reliable feasibility study is an essential prerequisite to any procurement decision-making process. Feasibility studies assess the viability of a project over its expected life and indicate the probable return, either at the point of sale or over a period of time, generally using discounted cash flow techniques. They can also assist in the process of obtaining project financing, as well as highlight variables that have the greatest impact on project returns.

Whether it's a simple developer's return on capital cost feasibility or a detailed discounted cash flow feasibility based on a range of rates of return and risk sensitivity tests, RLB can provide expert analysis and materials.

## Financial Institution Auditing

RLB takes a two-step approach to financial institution audits.

At the pre-commencement stage, the firm looks beyond the items identified in the financier's brief, and expands upon it with a full analysis of all risk-related issues, providing a comprehensive profile of the project.



During the post-contract stage, the company provides detailed cost-to-complete assessments. This ensures there are adequate funds should the financier be required to initiate step-in rights.

To provide effective financial management of the development process for the duration of the project, RLB will prepare a pre-commencement report including auditing project costs and the adequacy of project documentation, monitor authority approvals, prepare progress payment assessments and recommendations, and prepare cost-to-complete assessments.

### **Post-Contract Services**

RLB ensures the successful performance building contracts by applying proven cost management, monitoring and cost reporting procedures, as well as through managing a productive working relationship with the project team.

To ensure efficient progress as specified in the cost plan, the firm will:

- Review progress claims for work in progress and recommend payment values
- Monitor documentation changes
- Prepare regular financial statements forecasting final end cost
- Measure, price, and negotiate variations
- Structure agreement of final account
- Attend meetings to represent the financial interests of the client

### **Tendering and Documentation**

Among the tendering and documentation services offered by RLB:

- Preparation of bills/schedule bills of quantities or schedule of rates
- Preparation of bid documentation for tendering contractors
- Strategic advice of method of project procurement and tendering
- Advice on suitability of contractor tender lists
- Review of tenders received, reconciliation to budget, and recommendation of contractor
- Attendance at tender interviews

# COST MANAGEMENT AND QUANTITY SURVEYING SERVICES

## Value Management

RLB offers a strategic value-management process that is dedicated to assisting with the improvement of value obtained in capital expenditure. This is achieved through participatory workshops which challenge option and design assumptions and encourage creative and lateral thinking for better value solutions.

The integration of value management with cost management results in a powerful and dynamic approach to the economic management of projects, especially during the design process.

# ADVISORY SERVICES

RLB's depth of experience in all aspects of the property cycle enables us to deliver mature and innovative solutions for property, construction, and facilities sector clients in seven principal areas:

## Asset Advisory

With total operating costs amounting to several times the initial capital cost, clients are increasingly focused on longer term strategies that span their investment horizons and beyond, to ensure they are able to consider the impact on value at all points in a property's useful life. RLB works with owners and occupiers of buildings to ensure that they are able to take full account of the total impact of their buildings and can advise on many alternate methods of identifying and accounting for assets.

RLB is expert in the following strategic services:

- Total Asset Management Planning to ISO Standards
- Asset Recognition and Rationalisation
- Cost-Benefit Analysis
- Sustainability and Environmental Performance Issues
- Whole-Life Cost Modeling

## RElifying of Assets

RLB is a pioneer in using building life-extension and repositioning studies to realise and optimise the use of buildings. This methodology identifies if, when, and where to spend money to capture remaining asset values and extend the life of existing buildings.

## Facilities Consultancy

Facilities management is the business practice of optimising people, process, assets, and the work environment to support the delivery of the organisation's business objectives. As acknowledged thought-leaders in the facilities management field, RLB works with a diverse range of clients to enhance facilities performance through:

- Facilities Management (FM) Planning
- Building Quality Assessments (BQA)
- Facilities and Operational Performance Audits
- Maintenance Planning and Operating Expenditure Forecast
- Performance Reviews and Benchmarking
- Post-Occupancy Evaluations
- Space Audits and Utilisation Studies

# ADVISORY SERVICES

## Building Surveying

RLB works closely with major developers, corporations, fund managers, financial institutions, and property owners and tenants to understand, maintain, and enhance the value of their built assets. The firm's expertise includes:

- Condition/Dilapidation Surveys
- Compliance Advisory
- Conservation and Heritage Surveys
- Tenancy Make-Good Reinstatements Surveys

By combining a practical knowledge of construction issues with a strong understanding of property law, RLB offers a multi-faceted building surveying service that is and responsive to the client's needs. The firm's understanding of local markets enables us to deliver a solution that is appropriate to your specific requirements.

## Risk Mitigation and Due Diligence

RLB understands that clients and stakeholders are increasingly requiring more detailed information to ensure a level of confidence is achieved and maintained in terms of enhancing value and mitigating risks. The firm can conduct risk assessments to review the scope of required work, identify project risks, prioritise key issues, provide risk analysis and develop risk management action plans for your strategic asset/facilities plan or next capital works project.

RLB can provide key advisory services targeted at risk mitigation, including:

- Review of the scope of required work
- Identification of project risks
- Capital Expenditure Forecasting
- Prioritisation of key issues
- Risk analysis and customized risk-management action plans

In addition, RLB's expert services extend to specific associated property risks, among them:

- Insurance replacement cost assessments
- Technical due diligence (for owners, vendors, purchasers and tenants)
- Services procurement, outsourcing, compliance, and supply chain issues

## Property Taxation

RLB recognises the financial, compliance, and management benefits that can be achieved by adopting taxation advice from professionals who understand the business of property. The firm provides its clients with advice on capital allowances and property tax assessment and depreciation, inventories and asset registers, and changes in tax legislation to enable them to optimise their entitlements and potential for existing assets and new projects. Its experienced and qualified staff can provide proactive reporting and analysis of how taxation changes may affect a client's real estate decisions, including capital gains tax, land taxes and rating assessments, and stamp duty.

RLB's experience in property taxation covers all asset types. Data has been retained and compiled over many years to enable the firm to produce dynamic models that can quickly produce accurate indicative analysis for all property situations.

## Litigation Support

RLB has a team of highly seasoned professionals with considerable expertise in the litigation arena. The firm offers comprehensive front-end, claims management, and dispute resolution services, and has particular expertise in scope definition claims appraisal, documentation, and negotiation; expert witness and determination; and arbitration and mediation.

## Procurement Strategies

RLB develops procurement strategies that provide a systematic means of analysing the costs and benefits during project development, before any commitment is given to a particular option, including:

- Clear definition of project objectives
- Identification of practical ranges of options
- Quantification of the costs and benefits of each option
- Consideration for qualitative aspects
- Identification of the preferred option and development of action plans

## ADVISORY SERVICES

RLB can examine the issues and assist in the development and evaluation of a project or service delivery with vast experience and knowledge of value enhancement through:

- Needs Analysis and Brief Definition
- Feasibility Studies
- Develop, Own and Lease Options
- Contractual Arrangements
- Project Monitoring and Certifications
- Value Engineering/Management Workshops

Our services do not deal with asset creation and capital projects alone. RLB's expertise and experience extends to property transactions, services procurement, outsourcing operations and supply chain management. RLB is uniquely positioned to provide independent and specialist advisory services and supplementary support to a client who wishes for certainty in contractual outcomes.

### Research

- Industry and sectoral workload
- Cost escalation
- Cost benchmarking by sector
- Industry trend analysis

# INTERNATIONAL CONSTRUCTION

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# INTERNATIONAL CONSTRUCTION BUILDING COST RANGES

All costs are stated in local currency as shown below.

Refer to [www.rlbintelligence.com](http://www.rlbintelligence.com) for updates.

LOCATION /CITY	LOCAL CURRENCY	COST PER M <sup>2</sup>			
		OFFICE BUILDING			
		PREMIUM		GRADE A	
		LOW	HIGH	LOW	HIGH
<b>AMERICAS @ Q3 2017</b>					
BOSTON	USD	3,230	5,110	2,155	3,230
CHICAGO	USD	3,015	4,845	1,885	3,015
DENVER	USD	1,720	2,745	1,235	1,885
HONOLULU	USD	3,070	5,705	2,635	4,305
LAS VEGAS	USD	1,505	3,175	1,130	2,045
LOS ANGELES	USD	2,370	3,660	1,720	2,635
NEW YORK	USD	4,035	6,190	3,230	4,305
PHOENIX	USD	1,720	2,960	1,185	1,885
SEATTLE	USD	2,155	2,690	1,560	2,155
TORONTO	CAD	2,100	2,800	1,830	2,690
<b>ASIA @ Q3 2017</b>					
BEIJING	RMB	7,650	11,300	7,150	10,800
GUANGZHOU	RMB	7,200	10,900	6,650	10,050
HO CHI MINH CITY	VND ('000)	24,900	35,800	21,300	26,600
HONG KONG	\$HKD	23,600	35,200	20,100	27,300
JAKARTA	RP ('000)	10,130	13,200	6,870	11,000
KUALA LUMPUR	RINGGIT	2,800	4,000	2,200	3,000
MACAU	MOP	18,600	25,900	16,400	23,000
SEOUL	KRW ('000)	2,330	3,000	1,760	2,160
SHANGHAI	RMB	7,500	11,100	6,750	10,300
SINGAPORE	SGD	2,900	4,050	2,050	3,250
<b>EUROPE @ Q3 2017</b>					
BELFAST	GBP	1,325	1,865	1,155	1,870
BIRMINGHAM	GBP	1,850	2,700	1,500	2,700
BRISTOL	GBP	1,950	2,800	1,600	2,800
CARDIFF	GBP	1,655	2,335	1,440	2,340
EDINBURGH	GBP	1,745	2,455	1,515	2,460
LONDON	GBP	2,600	3,390	2,145	3,340
MANCHESTER	GBP	2,045	2,680	1,765	2,650
<b>MIDDLE EAST @ Q3 2017</b>					
ABU DHABI	AED	5,510	6,650	4,465	6,270
DUBAI	AED	5,800	7,000	4,700	6,600
DOHA	QAR	6,500	8,500	6,100	8,200
<b>OCEANIA @ Q4 2017</b>					
ADELAIDE	AUD	2,600	3,800	2,100	3,150
AUCKLAND	NZD	3,600	4,750	2,800	4,500
BRISBANE	AUD	2,600	3,900	2,200	3,500
CANBERRA	AUD	3,400	5,400	2,750	4,200
CHRISTCHURCH	NZD	3,600	4,500	2,750	4,250
DARWIN	AUD	3,100	4,150	2,400	3,800
GOLD COAST	AUD	2,450	4,000	1,900	3,000
MELBOURNE	AUD	3,150	4,250	2,450	3,350
PERTH	AUD	3,000	4,400	2,400	3,750
SYDNEY	AUD	3,550	4,750	2,650	3,850
WELLINGTON	NZD	3,100	4,500	2,700	4,450



The following data represents estimates of current building costs in the respective market. Costs may vary as a consequence of factors such as site conditions, climatic conditions, standards of specification, market conditions etc.

Rates are in national currency per square metre of Gross Floor Area except as follows:

**Chinese cities, Hong Kong and Macau:** Rates are per square metre of Construction Floor Area, measured to outer face of external walls.

**Singapore, Ho Chi Minh City, Jakarta and Kuala Lumpur:** Rates are per square metre of Construction Floor Area, measured to outer face of external walls and inclusive of covered basement and above ground parking areas.

**Chinese cities, Hong Kong, Macau and Singapore:** All hotel rates are inclusive of Furniture Fittings and Equipment (FF&E).

COST PER M <sup>2</sup>					
RETAIL				RESIDENTIAL MULTI STOREY	
MALL		STRIP SHOPPING		LOW	HIGH
LOW	HIGH	LOW	HIGH		
1,885	2,960	1,345	2,155	1,885	3,230
1,990	3,015	1,455	2,370	1,720	3,660
970	1,560	755	1,455	915	2,045
2,260	5,330	1,885	4,680	2,100	4,790
1,240	5,165	700	1,560	755	4,360
1,560	3,500	1,240	1,940	1,940	3,120
2,960	4,575	1,885	3,230	2,155	4,035
1,290	2,155	860	1,505	970	1,990
1,455	3,285	1,185	1,670	1,615	2,690
2,155	2,690	1,130	1,720	1,400	2,205
8,400	12,850	7,400	11,550	4,050	5,950
8,200	11,650	7,100	10,650	3,800	5,450
20,100	26,800	-	-	15,400	23,300
23,700	30,100	20,200	26,300	22,400	37,400
6,520	8,515	-	-	6,870	10,100
2,100	3,500	-	-	1,900	4,500
20,400	25,100	17,300	22,100	14,150	22,300
1,570	2,270	1,320	2,010	1,590	2,180
7,850	12,450	7,000	11,400	3,700	5,450
2,150	3,300	-	-	1,950	3,100
2,030	2,845	645	1,215	1,220	1,715
2,750	3,890	870	1,670	1,575	2,210
2,750	3,890	870	1,650	1,700	2,450
2,540	3,555	805	1,515	1,525	2,140
2,675	3,740	850	1,595	1,605	2,255
3,470	4,875	1,115	2,085	2,475	4,090
2,875	4,040	915	1,735	1,755	2,460
3,895	6,175	-	-	4,275	5,795
4,100	6,500	-	-	4,500	6,500
5,300	6,500	-	-	6,500	7,800
1,575	3,000	1,300	1,825	2,350	3,450
2,750	3,100	1,600	2,000	3,300	4,200
2,000	3,500	1,200	1,800	2,300	4,000
2,350	3,950	1,240	2,500	2,850	4,950
2,500	2,800	1,400	1,800	3,000	4,000
1,750	2,600	1,250	2,100	2,050	2,650
2,150	3,100	1,050	1,600	1,850	3,000
2,150	3,150	1,220	1,640	2,350	4,200
1,900	2,900	1,000	2,500	2,000	4,000
1,960	4,150	1,520	2,000	2,600	5,400
2,600	2,800	1,400	1,800	3,150	4,000

# INTERNATIONAL CONSTRUCTION BUILDING COST RANGES

All costs are stated in local currency as shown below.

**Refer to [www.rbintelligence.com](http://www.rbintelligence.com) for updates.**

LOCATION /CITY	LOCAL CURRENCY	COST PER M <sup>2</sup>			
		HOTELS			
		3 STAR		5 STAR	
		LOW	HIGH	LOW	HIGH
<b>AMERICAS @ Q3 2017</b>					
BOSTON	USD	2,690	4,035	4,035	5,920
CHICAGO	USD	2,905	4,200	4,200	6,995
DENVER	USD	1,615	1,990	2,155	3,335
HONOLULU	USD	3,500	5,865	5,545	8,020
LAS VEGAS	USD	1,615	3,230	3,765	5,380
LOS ANGELES	USD	2,690	3,500	3,765	5,545
NEW YORK	USD	3,230	4,305	4,305	6,460
PHOENIX	USD	1,615	2,690	3,230	5,380
SEATTLE	USD	2,370	2,530	2,585	3,550
TORONTO	USD	2,100	2,800	3,230	3,820
<b>ASIA @ Q3 2017</b>					
BEIJING	RMB	9,700	12,500	13,000	17,200
GUANGZHOU	RMB	9,600	11,700	13,000	16,700
HO CHI MINH CITY	VND ('000)	24,400	31,500	32,400	39,700
HONG KONG	\$HKD	30,300	35,100	36,800	45,000
JAKARTA	RP ('000)	11,140	12,470	13,670	17,420
KUALA LUMPUR	RINGGIT	2,500	3,500	5,000	7,000
MACAU	MOP	25,200	29,000	31,300	38,500
SEOUL	KRW ('000)	2,030	2,580	3,150	4,680
SHANGHAI	RMB	9,500	12,300	12,900	17,000
SINGAPORE	SGD	3,200	3,600	4,150	5,450
<b>EUROPE @ Q3 2017</b>					
BELFAST	GBP	975	1,435	1,550	2,115
BIRMINGHAM	GBP	1,280	1,970	2,100	3,000
BRISTOL	GBP	1,350	1,800	2,300	3,100
CARDIFF	GBP	1,220	1,795	1,935	2,640
EDINBURGH	GBP	1,285	1,890	2,035	2,780
LONDON	GBP	1,855	2,380	2,745	3,690
MANCHESTER	GBP	1,385	1,845	2,190	3,000
<b>MIDDLE EAST @ Q3 2017</b>					
ABU DHABI	AED	5,700	8,075	8,550	11,400
DUBAI	AED	6,000	9,000	9,000	14,000
DOHA	QAR	7,500	8,500	11,500	14,500
<b>OCEANIA @ Q4 2017</b>					
ADELAIDE	AUD	2,600	3,500	3,600	4,500
AUCKLAND	NZD	4,100	4,600	5,250	6,000
BRISBANE	AUD	2,800	4,000	4,000	5,500
CANBERRA	AUD	3,050	5,200	4,150	6,300
CHRISTCHURCH	NZD	3,800	4,300	4,500	5,500
DARWIN	AUD	2,850	3,550	3,600	4,450
GOLD COAST	AUD	2,600	4,000	3,400	5,500
MELBOURNE	AUD	2,850	3,700	4,050	5,300
PERTH	AUD	2,600	3,600	3,600	4,800
SYDNEY	AUD	3,150	4,000	4,450	6,000
WELLINGTON	NZD	3,800	4,300	4,500	5,500

The following data represents estimates of current building costs in the respective market. Costs may vary as a consequence of factors such as site conditions, climatic conditions, standards of specification, market conditions etc.

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**Chinese cities, Hong Kong, Macau and Singapore:** All hotel rates are inclusive of Furniture Fittings and Equipment (FF&E).

COST PER M <sup>2</sup>					
CAR PARKING				INDUSTRIAL WAREHOUSE	
MULTI STOREY		BASEMENT		LOW	HIGH
LOW	HIGH	LOW	HIGH		
805	1,345	970	1,615	1,075	1,885
860	1,345	970	1,670	1,185	1,990
540	755	970	1,290	970	1,615
1,075	1,560	1,505	2,850	1,560	2,420
540	915	645	1,615	540	1,075
1,075	1,290	1,345	1,830	1,130	1,885
1,025	1,885	1,345	2,155	1,240	2,155
485	755	645	1,185	590	1,075
970	1,185	1,400	1,720	1,025	1,345
755	970	755	970	1,240	1,615
2,250	3,050	3,750	6,550	4,350	5,500
2,100	3,000	3,700	6,400	4,150	5,150
9,100	13,600	18,700	25,500	6,210	9,400
9,250	10,950	19,000	26,000	15,600	19,600
3,500	4,500	4,500	6,190	4,790	6,080
800	1,200	1,400	3,200	1,000	1,800
-	-	10,850	13,700	-	-
670	820	850	1,090	1,180	1,460
2,100	3,050	4,000	6,650	4,050	5,200
700	1,350	1,450	2,200	1,100	1,450
245	490	615	1,055	270	490
350	675	800	1,375	400	560
400	800	950	1,500	400	650
305	610	770	1,320	335	610
325	640	810	1,390	355	640
445	890	1,185	1,910	480	870
345	695	940	1,500	380	695
1,710	3,420	2,710	4,275	1,425	2,565
2,300	3,600	3,100	4,500	1,850	2,900
2,750	4,500	2,500	4,250	-	-
630	930	1,325	1,950	630	1,100
900	1,200	2,200	2,700	750	1,000
900	1,300	1,700	2,200	700	1,100
770	1,300	1,040	1,800	720	1,360
850	1,350	1,750	2,200	720	1,100
750	1,250	1,175	1,550	800	1,425
700	1,100	1,500	2,050	600	1,100
690	1,120	1,180	1,540	580	1,160
650	1,000	1,800	3,100	550	1,050
770	1,160	1,120	1,800	730	1,160
800	1,100	2,000	2,500	750	1,000

# INTERNATIONAL CONSTRUCTION RLB ESCALATION FORECASTS

## RLB TENDER PRICE INDEX ANNUAL CHANGE

All indices are stated as annual percentage changes.

*Refer to [www.rlbintelligence.com](http://www.rlbintelligence.com) for updates.*

	2015	2016	2017 (F)	2018 (F)	2019 (F)	2020 (F)
<b>AFRICA @ Q3 2017</b>						
CAPE TOWN	6.0	7.3	NP	NP	NP	NP
JOHANNESBURG	7.2	6.4	7.9	7.0	7.6	10.9
MAPUTO	4.0	4.0	4.0	4.0	NP	NP
<b>AMERICAS @ Q3 2017</b>						
BOSTON	4.0	4.0	3.5	4.0	4.0	4.0
CALGARY	NP	NP	1.5	2.0	2.0	2.0
CHICAGO	4.1	4.3	5.0	4.0	4.0	4.0
HONOLULU	8.2	0.7	1.0	2.0	2.0	2.0
LAS VEGAS	4.4	3.3	3.0	5.0	5.0	5.0
LOS ANGELES	5.2	8.4	5.0	4.0	4.0	4.0
NEW YORK	3.9	3.9	3.5	4.0	4.0	4.0
PHOENIX	3.7	3.7	3.0	3.5	3.5	3.5
SEATTLE	4.9	4.7	5.0	4.0	4.0	4.0
TORONTO	NP	NP	1.5	3.0	3.0	3.0
WASHINGTON DC	4.4	4.3	4.0	4.0	4.0	4.0
<b>ASIA @ Q3 2017</b>						
BEIJING	-1.0	0.0	2.0	2.0	2.0	2.0
CHENGDU	0.3	-0.8	2.0	2.0	2.0	2.0
GUANGZHOU	-3.0	1.0	2.5	3.5	2.0	2.0
HONG KONG	1.2	0.4	0.0	2.0	2.0	2.0
MACAU	3.5	0.0	2.0	2.8	3.0	3.0
SEOUL	-0.5	3.9	2.5	2.1	1.9	1.8
SHANGHAI	-4.4	6.0	3.0	3.0	3.0	2.0
SHENZHEN	-0.7	1.0	2.0	3.5	4.1	4.1
SINGAPORE	1.5	-5.8	-1.5	NP	NP	NP
<b>EUROPE @ Q3 2017</b>						
BIRMINGHAM	4.0	3.0	2.8	2.5	3.0	3.0
BRISTOL	4.5	5.0	5.0	5.5	5.2	NP
BUDAPEST	1.0	5.5	9.5	8.0	8.0	5.0
LONDON	5.9	3.5	2.0	1.5	2.0	3.5
SHEFFIELD	9.0	2.5	-1.0	-3.0	0.5	NP
MADRID	0.0	0.1	0.8	0.1	0.1	NP
MANCHESTER	4.0	4.0	2.5	2.0	3.0	3.5
MOSCOW	-5.0	0.0	1.0	1.5	1.5	2.0
<b>MIDDLE EAST @ Q3 2017</b>						
ABU DHABI	4.7	-5.0	-3.0	2.0	7.0	8.0
DOHA	5.0	5.5	6.0	7.0	NP	NP
DUBAI	4.6	3.0	3.5	3.5	3.5	3.5
RIYADH	4.8	5.0	5.0	5.0	5.0	NP
<b>OCEANIA @ Q4 2017</b>						
ADELAIDE	0.8	1.8	3.1	3.5	4.0	4.0
AUCKLAND	5.1	5.5	8.0	6.0	3.5	3.0
BRISBANE	5.9	7.2	4.1	4.0	4.1	3.1
CANBERRA	2.0	2.5	2.8	3.5	3.2	3.0
CHRISTCHURCH	6.0	3.0	3.0	3.0	2.0	2.0
DARWIN	1.0	1.0	1.0	1.5	2.0	2.5
GOLD COAST	4.0	6.5	3.0	2.5	3.0	3.0
MELBOURNE	2.0	2.0	3.0	3.0	3.0	3.0
PERTH	0.8	0.0	0.0	1.5	2.5	3.0
SYDNEY	4.5	7.0	4.2	4.9	3.9	3.9
TOWNSVILLE	3.0	3.0	4.0	4.0	4.0	3.1
WELLINGTON	3.0	4.5	4.5	4.0	3.0	3.0

NP: Not published

# AUSTRALIAN CONSTRUCTION

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# AUSTRALIAN CONSTRUCTION BUILDING COST RANGES

## CONSTRUCTION RATES

The following range of current building costs could be expected should tenders be called in the respective city. Items specifically included are those normally contained in a Building Contract.

Specific exclusions:

- Goods & Services Tax (GST)
- Land
- Legal and professional fees
- Loose furniture and fittings
- Site works and drainage
- Subdivisional partitions in office buildings
- Telstra and private telephone systems (PABX)
- Tenancy works

CITY	ADELAIDE		BRISBANE	
	\$/M <sup>2</sup>		\$/M <sup>2</sup>	
	LOW	HIGH	LOW	HIGH
<b>COST RANGE PER GROSS FLOOR AREA</b>				
<b>OFFICE BUILDINGS</b>				
<b>Prestige, CBD</b>				
10 TO 25 STOREYS (75-80% EFFICIENCY)	2,600	3,400	2,600	3,700
25 TO 40 STOREYS (70-75% EFFICIENCY)	2,950	3,800	2,700	3,900
40 TO 55 STOREYS (68-73% EFFICIENCY)	-	-	2,900	4,200
<b>Investment, CBD</b>				
UP TO 10 STOREYS (81-85% EFFICIENCY)	2,100	2,600	2,200	2,600
10 TO 25 STOREYS (76-81% EFFICIENCY)	2,350	2,950	2,300	3,000
25 TO 40 STOREYS (71-76% EFFICIENCY)	2,550	3,150	2,400	3,500
<b>Investment, other than CBD</b>				
WALK UP (83-87% EFFICIENCY)	1,750	2,250	1,600	2,200
UP TO 10 STOREYS (82-86% EFFICIENCY)	2,000	2,500	1,800	2,400
10 TO 25 STOREYS (77-82% EFFICIENCY)	-	-	2,000	2,600
<b>HOTELS</b>				
<b>Multi-Storey (ex FF&amp;E)</b>				
FIVE STAR	3,600	4,500	4,000	5,500
FOUR STAR	3,100	4,200	3,400	4,500
THREE STAR	2,600	3,500	2,800	4,000
<b>CAR PARK</b>				
OPEN DECK MULTI-STOREY	625	925	900	1,300
BASEMENT: CBD	1,325	1,950	1,700	2,200
BASEMENT: OTHER THAN CBD	925	1,750	1,100	1,800
UNDERCROFT: OTHER THAN CBD	575	875	650	850
<b>INDUSTRIAL BUILDINGS</b>				
<b>6.00 M to underside of truss and 4,500 M<sup>2</sup> Gross Floor Area with:</b>				
ZINCALUME METAL CLADDING	625	1,000	700	1,000
PRECAST CONCRETE CLADDING	725	1,100	800	1,100
<b>Attached Airconditioned Offices</b>				
200 M <sup>2</sup>	1,550	2,150	1,800	2,500
400 M <sup>2</sup>	1,550	2,150	1,800	2,300

**NOTES**

- i Car Parking costs have been excluded to arrive at the various building rates.
- ii Refer to Page 30 for definitions.
- iii The percentages shown against each building may be used to calculate the rate per Net Lettable Area.

Example: the NLA rate for a Premium Office CBD 10 to 25 Storeys would be calculated  
 NLA rate = \$/M<sup>2</sup> ÷ the efficiency percentage.

**Refer to [www.rlbintelligence.com](http://www.rlbintelligence.com) for updates.**

CANBERRA		DARWIN		MELBOURNE		PERTH		SYDNEY	
\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
3,400	5,000	3,100	4,000	3,150	3,600	3,000	4,000	3,550	4,100
3,650	5,400	3,250	4,150	3,700	4,000	3,300	4,400	4,150	4,750
-	-	-	-	3,800	4,250	3,500	4,700	4,600	5,200
2,750	3,900	2,400	3,450	2,450	2,900	2,400	3,300	2,650	3,100
2,850	4,050	2,550	3,800	2,800	3,200	2,500	3,500	3,150	3,500
2,900	4,200	-	-	2,850	3,350	2,600	3,750	3,300	3,850
1,460	2,450	2,200	2,800	1,600	2,300	1,800	2,600	2,100	2,500
2,100	2,900	2,300	3,350	1,820	2,650	2,000	2,800	2,300	3,000
2,200	3,400	2,550	3,450	2,200	2,950	2,200	3,000	2,650	3,400
4,150	6,300	3,600	4,450	4,050	5,300	3,600	4,800	4,450	6,000
3,600	5,900	3,350	4,050	3,650	4,700	3,100	4,000	3,750	5,200
3,050	5,200	2,850	3,550	2,850	3,700	2,600	3,600	3,150	4,000
770	1,300	750	1,260	690	1,120	650	1,000	770	1,160
1,040	1,800	1,180	1,540	1,180	1,540	1,800	3,100	1,120	1,800
1,020	1,800	1,040	1,520	1,120	1,440	1,400	2,800	1,100	1,660
770	1,180	720	1,020	750	900	700	1,100	-	-
720	900	800	1,400	580	1,020	550	800	730	910
830	1,360	840	1,420	690	1,160	630	1,050	800	1,160
1,700	2,700	1,700	2,400	1,560	2,000	1,400	1,900	1,960	2,600
1,620	2,600	1,700	2,400	1,500	1,940	1,350	1,850	2,050	2,800

# AUSTRALIAN CONSTRUCTION BUILDING COST RANGES

All costs current as at Fourth Quarter 2017.

CITY	ADELAIDE		BRISBANE	
COST RANGE PER GROSS FLOOR AREA	\$/M <sup>2</sup>		\$/M <sup>2</sup>	
	LOW	HIGH	LOW	HIGH
<b>AGED CARE</b>				
SINGLE STOREY FACILITY	2,100	2,700	2,300	2,900
<b>PRIVATE HOSPITALS</b>				
Low Rise Hospital				
45-60 M <sup>2</sup> GFA/BED	3,700	5,700	4,500	5,800
55-80 M <sup>2</sup> GFA/BED WITH MAJOR OPERATING THEATRE	4,000	6,000	5,000	6,500
<b>CINEMAS</b>				
GROUP COMPLEX, 2,000-4,000 SEATS (WARM SHELL)	2,750	3,650	2,500	3,500
<b>REGIONAL SHOPPING CENTRES</b>				
DEPARTMENT STORE	1,375	2,400	1,600	2,100
SUPERMARKET/VARIETY STORE	1,300	1,750	1,600	2,000
DISCOUNT DEPARTMENT STORE	1,100	1,350	1,400	2,000
MALLS	1,575	3,000	2,000	3,500
SPECIALTY SHOPS	1,000	1,675	1,200	1,600
<b>SMALL SHOPS AND SHOWROOMS</b>				
SMALL SHOPS & SHOWROOMS	1,300	1,825	1,200	1,800
<b>RESIDENTIAL</b>				
SINGLE & DOUBLE STOREY DWELLINGS (CUSTOM BUILT)	1,575	3,450	1,800	4,000
<b>RESIDENTIAL UNITS</b>				
WALK-UP 85 TO 120 M <sup>2</sup> /UNIT	1,650	2,750	1,600	3,400
TOWNHOUSES 90 TO 120 M <sup>2</sup> /UNIT	1,725	2,625	1,300	2,800
<b>MULTI-STOREY UNITS</b>				
Up to 10 storeys with lift				
UNITS 60-70 M <sup>2</sup>	2,350	3,450	2,300	3,000
UNITS 90-120 M <sup>2</sup>	2,250	3,350	2,300	2,900
Over 10 and up to 20 storeys				
UNITS 60-70 M <sup>2</sup>	2,450	3,550	2,600	3,200
UNITS 90-120 M <sup>2</sup>	2,400	3,450	2,600	3,100
Over 20 and up to 40 storeys				
UNITS 60-70 M <sup>2</sup>	2,650	3,450	2,700	3,400
UNITS 90-120 M <sup>2</sup>	2,600	3,400	2,700	3,200
Over 40 and up to 80 storeys				
UNITS 60-70 M <sup>2</sup>	-	-	3,000	4,000
UNITS 90-120 M <sup>2</sup>	-	-	2,900	3,800



Building Costs include Building Works and Building Services

**Refer to [www.rlbintelligence.com](http://www.rlbintelligence.com) for updates.**

CANBERRA		DARWIN		MELBOURNE		PERTH		SYDNEY	
\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
2,050	3,400	2,400	3,550	1,840	2,950	1,750	2,800	2,650	3,450
4,300	7,100	3,850	4,600	2,750	3,250	3,400	4,300	2,850	3,600
4,700	7,800	4,500	5,500	3,050	4,200	3,600	4,500	3,600	4,750
3,000	4,100	2,700	3,450	2,450	3,250	2,200	2,700	3,300	4,550
2,400	3,150	1,700	2,400	2,050	2,450	1,900	2,600	1,520	2,150
1,440	2,400	1,800	2,450	1,280	1,900	1,200	1,750	1,480	2,900
1,320	1,880	1,640	2,250	1,320	1,680	1,200	1,700	1,300	1,600
2,350	3,950	1,740	2,600	2,150	3,150	1,900	2,900	1,960	4,150
1,220	1,980	1,440	2,050	1,220	1,680	1,000	1,500	1,700	2,550
1,240	2,500	1,240	2,100	1,220	1,640	1,000	2,500	1,520	2,000
1,620	3,250	1,780	2,750	1,640	3,250	1,400	2,700	1,700	4,800
1,720	4,200	1,980	2,400	1,540	3,250	1,450	2,900	-	-
1,720	4,100	1,980	2,400	1,500	2,800	1,450	2,900	-	-
2,850	4,300	2,050	2,450	2,350	3,000	2,000	3,000	2,850	3,650
2,800	4,200	2,050	2,400	2,350	3,050	1,900	2,900	2,600	3,400
3,100	4,550	2,100	2,550	2,700	3,400	2,300	3,300	3,000	4,000
3,050	4,550	2,050	2,500	2,650	3,450	2,200	3,200	2,850	3,750
3,550	4,950	2,350	2,650	3,150	3,700	2,800	3,600	3,900	4,850
3,450	4,700	2,300	2,600	2,950	3,600	2,700	3,500	3,700	4,400
-	-	-	-	3,550	4,200	3,300	4,100	4,500	5,600
-	-	-	-	3,400	4,100	3,200	4,000	4,350	5,400

# AUSTRALIAN CONSTRUCTION BUILDING SERVICES COST RANGES

All costs current as at Fourth Quarter 2017.

COST RANGE PER GROSS FLOOR AREA	ADELAIDE		BRISBANE	
	\$/M <sup>2</sup>		\$/M <sup>2</sup>	
	LOW	HIGH	LOW	HIGH
<b>OFFICE BUILDINGS</b>				
<b>Prestige, CBD</b>				
10 TO 25 STOREYS (75-80% EFFICIENCY)	748	1,122	789	1,153
25 TO 40 STOREYS (70-75% EFFICIENCY)	799	1,222	870	1,236
40 TO 55 STOREYS (68-73% EFFICIENCY)	-	-	1,016	1,409
<b>Investment, CBD</b>				
UP TO 10 STOREYS (81-85% EFFICIENCY)	731	998	719	945
10 TO 25 STOREYS (76-81% EFFICIENCY)	733	1,047	772	1,014
25 TO 40 STOREYS (71-76% EFFICIENCY)	753	1,096	814	1,135
<b>INVESTMENT, OTHER THAN CBD</b>				
WALK UP (83-87% EFFICIENCY)	398	580	523	648
UP TO 10 STOREYS (82-86% EFFICIENCY)	551	778	657	917
10 TO 25 STOREYS (77-82% EFFICIENCY)	-	-	728	1,028
<b>HOTELS</b>				
<b>Multi-Storey</b>				
FIVE STAR	1,037	1,456	963	1,211
FOUR STAR	931	1,277	937	1,187
THREE STAR	878	1,071	895	1,141
<b>CAR PARK</b>				
OPEN DECK MULTI-STOREY	132	268	136	271
BASEMENT: CBD	214	422	231	407
BASEMENT: OTHER THAN CBD	213	422	231	407
UNDERCROFT: OTHER THAN CBD	105	118	77	104
<b>INDUSTRIAL BUILDINGS</b>				
<b>6.00 M to underside of truss and 4,500 M<sup>2</sup> Gross Floor Area with:</b>				
ZINCALUME METAL CLADDING	213	302	197	351
PRECAST CONCRETE CLADDING	213	345	197	351
<b>Attached Airconditioned Offices</b>				
200 M <sup>2</sup>	481	631	473	602
400 M <sup>2</sup>	474	624	473	602

**BUILDING SERVICES COSTS INCLUDE:**

- Building Management
- Electrical
- Fire Protection
- Hydraulic
- Mechanical
- Special Equipment
- Vertical Transport

Refer to page 34 to 37 for detailed services costs.

CANBERRA		DARWIN		MELBOURNE		PERTH		SYDNEY	
\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
878	1,274	1,160	1,523	799	1,241	930	1,340	980	1,320
931	1,381	1,246	1,594	944	1,318	965	1,395	1,157	1,318
-	-	-	-	999	1,411	990	1,470	1,292	1,459
728	1,167	911	1,321	623	1,066	695	1,125	669	948
771	1,167	983	1,445	691	1,133	720	1,185	793	1,036
771	1,220	-	-	762	1,190	760	1,225	878	1,141
460	632	841	1,082	433	700	420	600	453	658
610	878	882	1,281	541	858	565	820	657	913
674	996	971	1,326	598	973	660	920	801	1,052
1,252	1,702	1,394	1,753	1,725	2,178	1,235	1,750	1,155	1,494
1,142	1,526	1,272	1,539	1,246	1,859	1,025	1,465	1,025	1,388
900	1,307	1,122	1,386	942	1,421	825	1,265	874	1,156
170	276	201	363	96	282	135	300	63	156
233	467	328	449	168	365	200	405	237	323
170	456	298	449	158	334	185	390	145	277
64	117	135	282	31	62	135	305	46	66
225	396	210	499	180	320	160	335	117	206
225	385	225	518	180	320	170	355	117	208
513	685	661	926	464	644	385	630	485	865
513	620	661	926	464	855	385	595	485	878

# AUSTRALIAN CONSTRUCTION BUILDING SERVICES COST RANGES

All costs current as at Fourth Quarter 2017.

COST RANGE PER GROSS FLOOR AREA	ADELAIDE		BRISBANE	
	\$/M <sup>2</sup>		\$/M <sup>2</sup>	
	LOW	HIGH	LOW	HIGH
<b>AGED CARE</b>				
SINGLE STOREY FACILITY	430	699	497	797
<b>PRIVATE HOSPITALS</b>				
<b>Low Rise Hospital</b>				
45-60 M <sup>2</sup> GFA/BED	1,234	1,500	906	1,622
55-80 M <sup>2</sup> GFA/BED WITH MAJOR OPERATING THEATRE	1,447	1,924	1,373	2,070
<b>CINEMAS</b>				
GROUP COMPLEX, 2,000-4,000 SEATS. (WARM SHELL)	794	1,071	624	969
<b>REGIONAL SHOPPING CENTRES</b>				
DEPARTMENT STORE	447	719	507	799
SUPERMARKET/VARIETY STORE	433	674	500	741
DISCOUNT DEPARTMENT STORE	440	616	490	652
MALLS	527	799	580	873
SPECIALTY SHOPS	302	577	478	683
<b>SMALL SHOPS AND SHOWROOMS</b>				
SMALL SHOPS & SHOWROOMS	411	642	340	647
<b>RESIDENTIAL</b>				
SINGLE & DOUBLE STOREY DWELLINGS (CUSTOM BUILT)	252	554	255	559
<b>RESIDENTIAL UNITS</b>				
WALK-UP 85 TO 120 M <sup>2</sup> /UNIT	212	480	243	483
TOWNHOUSES 90 TO 120 M <sup>2</sup> /UNIT	215	488	243	474
<b>MULTI-STOREY UNITS</b>				
<b>Up to 10 storeys with lift</b>				
UNITS 60-70 M <sup>2</sup>	476	749	445	852
UNITS 90-120 M <sup>2</sup>	455	703	424	818
<b>Over 10 and up to 20 storeys</b>				
UNITS 60-70 M <sup>2</sup>	482	811	539	850
UNITS 90-120 M <sup>2</sup>	468	796	512	809
<b>Over 20 and up to 40 storeys</b>				
UNITS 60-70 M <sup>2</sup>	527	913	614	972
UNITS 90-120 M <sup>2</sup>	511	884	592	932
<b>Over 40 and up to 80 storeys</b>				
UNITS 60-70 M <sup>2</sup>	-	-	825	1,097
UNITS 90-120 M <sup>2</sup>	-	-	765	1,040

CANBERRA		DARWIN		MELBOURNE		PERTH		SYDNEY	
\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
416	776	883	1,322	464	1,087	670	1,100	387	723
1,087	1,435	1,433	1,680	983	1,496	1,130	1,500	994	1,307
1,323	1,895	1,580	1,981	1,181	2,039	1,275	1,710	1,334	1,881
790	951	1,013	1,278	618	906	695	910	968	1,418
742	853	642	877	525	811	630	870	484	673
465	698	662	920	417	773	540	775	484	676
465	631	602	840	366	670	555	695	457	609
576	853	577	918	484	901	-	-	517	835
410	642	519	762	335	675	360	600	499	753
244	666	417	760	217	645	270	570	338	549
236	525	336	649	206	628	235	785	189	716
234	658	400	574	206	567	240	470	214	670
123	658	400	574	206	546	240	470	185	634
547	889	654	851	510	867	495	860	615	886
547	832	620	809	505	836	485	830	580	862
593	889	648	846	546	892	555	860	702	960
593	980	636	829	546	861	550	825	668	881
708	1,005	712	875	639	977	655	955	751	1,097
662	1,005	696	855	618	887	630	935	739	1,032
-	-	-	-	809	1,202	870	1,110	987	1,311
-	-	-	-	752	1,151	850	1,095	962	1,301

# AUSTRALIAN CONSTRUCTION RLB TENDER PRICE INDEX

DATE	ADELAIDE		BRISBANE		CANBERRA	
	TPI	CPI	TPI	CPI	TPI	CPI
DEC-1972	11.7	11.7	12.7	12.7		
DEC-1973	14.7	13.3	15.6	14.5		
DEC-1974	19.3	15.6	19.8	16.7		
DEC-1975	22.6	17.7	20.6	19.1		
DEC-1976	26.6	20.7	21.8	21.8		
DEC-1977	28.9	22.7	23.6	23.7		
DEC-1978	30.6	24.2	24.4	25.8	24.4	24.4
DEC-1979	32.6	26.7	26.9	28.1	26.7	26.9
DEC-1980	35.8	29.0	36.2	30.6	30.2	29.6
DEC-1981	40.5	32.3	41.0	34.2	34.9	32.9
DEC-1982	45.7	35.8	46.2	37.8	40.7	36.9
DEC-1983	48.5	39.1	49.5	40.9	45.2	39.8
DEC-1984	51.1	40.4	51.6	42.4	47.9	41.1
DEC-1985	55.6	43.8	54.3	45.7	53.9	44.7
DEC-1986	59.7	47.9	56.5	49.8	59.3	48.6
DEC-1987	65.0	51.1	60.4	53.3	63.3	51.8
DEC-1988	70.1	54.6	65.4	57.0	68.5	55.4
DEC-1989	75.4	58.6	60.5	61.4	70.9	59.5
DEC-1990	79.6	63.1	55.2	65.2	73.7	63.5
DEC-1991	79.7	64.3	53.3	66.3	65.8	64.6
DEC-1992	78.7	65.4	55.2	66.9	62.6	65.3
DEC-1993	81.2	66.6	57.5	68.1	76.0	66.7
DEC-1994	83.5	68.6	62.3	70.3	78.1	68.2
DEC-1995	84.7	71.6	65.5	73.4	82.6	71.9
DEC-1996	86.1	72.5	68.4	74.6	84.1	72.7
DEC-1997	86.8	71.6	71.7	75.1	83.9	71.8
DEC-1998	87.1	73.0	75.6	76.0	85.5	72.8
DEC-1999	87.0	74.3	78.2	76.7	87.1	74.0
DEC-2000	88.2	78.3	78.3	81.4	92.5	78.6
DEC-2001	90.1	80.7	79.7	84.0	93.1	80.8
DEC-2002	94.6	83.7	87.5	86.5	97.5	83.4
DEC-2003	102.9	86.4	95.0	89.2	103.0	85.6
DEC-2004	112.4	88.6	106.8	91.4	110.4	87.6
DEC-2005	119.4	91.0	118.9	94.1	117.8	90.3
DEC-2006	126.2	93.9	129.3	97.3	125.0	93.2
DEC-2007	134.0	96.5	137.5	101.0	130.8	96.3
DEC-2008	142.5	100.0	127.1	105.4	134.9	99.9
DEC-2009	138.6	102.1	119.8	108.0	136.5	102.2
DEC-2010	142.5	104.7	119.0	111.3	141.0	104.4
DEC-2011	137.9	108.5	119.3	114.0	143.0	108.0
DEC-2012	138.1	110.8	119.3	116.5	142.1	109.9
DEC-2013	139.3	113.3	117.0	119.6	145.3	112.3
DEC-2014	140.1	115.2	123.0	122.0	147.5	113.6
DEC-2015	141.2	116.4	130.3	124.0	150.5	114.4
DEC-2016	143.7	117.9	139.7	126.0	154.3	116.4
MAR-2017	144.8	118.4	140.8	126.3	155.3	117.2
JUN-2017	145.9	118.5	142.5	126.9	156.4	117.2
SEP-2017	147.0	119.8	143.9	127.3	157.5	118.3
DEC-2017	148.1		145.3		158.6	

The following indices reflect the change in tender levels for buildings, other than housing, as compared with the consumer price index. The Tender Price Index figures take into account labour and material cost changes and market conditions.

DARWIN		MELBOURNE		PERTH		SYDNEY	
TPI	CPI	TPI	CPI	TPI	CPI	TPI	CPI
		13.8	13.8	14.8	14.8	14.5	14.5
		15.3	15.7	17.0	16.4	16.2	16.4
		19.4	18.2	21.6	19.2	21.4	19.1
		22.6	20.9	26.3	22.0	24.6	21.7
		25.4	23.9	30.5	25.7	25.7	24.5
		27.7	26.2	34.2	28.6	27.7	26.5
		29.4	28.2	35.7	30.6	29.3	28.7
		32.3	31.0	36.0	33.5	32.5	31.7
		35.5	33.9	38.4	36.3	37.3	34.7
		39.6	37.8	43.9	40.8	43.6	38.6
		44.4	41.7	51.3	44.8	46.9	43.2
		47.3	45.7	53.4	48.6	49.7	46.4
		52.0	46.8	56.0	49.5	52.6	47.5
		58.5	50.7	65.8	53.6	60.6	51.5
		63.4	55.9	72.6	59.1	67.2	56.5
		69.3	59.8	76.5	63.2	74.1	60.5
		74.9	63.9	81.7	68.0	80.6	66.1
		81.9	69.2	89.5	73.3	86.8	71.0
		82.6	74.4	92.1	78.8	84.1	75.5
		76.7	75.6	91.2	78.6	75.1	76.6
		74.8	75.5	91.2	78.6	71.4	76.9
		77.0	77.4	91.2	80.5	72.5	77.9
		78.3	79.0	92.1	82.2	75.4	80.0
		79.8	82.7	93.0	86.2	79.1	84.7
		82.0	83.7	95.0	87.8	83.8	86.1
		84.1	83.7	97.2	87.1	89.7	86.0
		86.8	84.4	99.3	89.1	96.1	87.6
88.0		89.4	86.1	101.9	90.9	100.0	89.3
89.8		93.8	91.3	102.6	95.5	99.9	94.6
91.8		96.7	94.1	100.6	98.3	100.9	97.8
93.7	93.7	104.6	97.0	103.8	101.1	103.9	100.5
101.1	95.2	110.1	99.2	112.1	103.1	110.1	102.8
113.2	97.1	114.7	101.5	124.5	106.2	117.8	105.5
121.8	100.0	118.4	104.2	135.0	110.4	123.1	108.0
132.7	105.0	122.2	107.2	147.2	115.2	128.7	111.5
144.7	108.0	128.0	110.6	163.4	118.8	133.2	114.2
159.1	112.0	129.6	114.1	159.9	123.2	139.2	118.4
164.7	115.4	131.8	116.2	150.0	125.7	139.2	121.0
168.0	118.1	137.4	119.8	147.6	129.0	140.6	123.9
148.8	121.0	141.4	123.5	149.5	132.8	143.7	127.9
151.8	124.1	141.4	126.1	146.1	135.6	145.4	131.1
156.4	129.5	141.8	129.5	147.7	139.6	148.3	134.6
159.1	132.0	143.9	131.4	148.9	142.3	152.8	136.9
160.7	132.6	146.8	133.9	150.0	144.5	159.7	139.5
162.3	132.1	149.7	135.8	150.0	145.0	167.3	142.1
162.7	132.0	150.8	137.1	150.0	145.0	169.1	142.6
163.1	132.3	152.0	137.2	150.0	145.0	170.8	143.1
163.5	133.1	153.1	137.8	150.0	145.7	172.6	144.2
163.9		154.2		150.0		174.4	

# AUSTRALIAN CONSTRUCTION DEFINITIONS

## CBD

Central Business District.

## BUILDING WORKS

Building works include substructure, structure, finishings, fittings, preliminary items, attendance and builder's work in connection with services.

## BUILDING SERVICES

Building services include special equipment, hydraulics, fire protection, mechanical, vertical transport, building management and electrical services.

## OFFICE BUILDINGS

**Prestige offices** are based on landmark office buildings located in major CBD Office Markets, which are pacesetters in establishing rents.

**Investment offices** are based on high quality buildings which are built for the middle range of the rental market. (used as generic descriptions for International Building Cost Ranges on page 20).

## HOTELS

RATING	GFA PER ROOM		
	TOTAL	ACCOMMODATION	PUBLIC SPACE
FIVE STAR	85-120 M <sup>2</sup>	45-65 M <sup>2</sup>	40-55 M <sup>2</sup>
FOUR STAR	60-85 M <sup>2</sup>	35-45 M <sup>2</sup>	25-40 M <sup>2</sup>
THREE STAR	40-65 M <sup>2</sup>	30-40 M <sup>2</sup>	10-25 M <sup>2</sup>

Note: Public space includes service areas.

## CAR PARKS

Open Deck Multi-storey – minimal external walling.

Basement – CBD locations incur higher penalties for restricted sites and perimeter conditions.

## INDUSTRIAL BUILDINGS

Quality reflects a simplified type of construction suitable for light industry.

Exclusions: Hardstandings, Roadworks and Special Equipment.

## AGED CARE

Single storey domestic construction with no operating theatre capacity, minimal specialist and service areas. 35-45 M<sup>2</sup> GFA/bed (150 beds).



## **HOSPITAL**

Low rise hospital (45–60 M<sup>2</sup> GFA/Bed) - Minimal operating theatre capacity, specialist and service areas.

Low rise hospital (55–80 M<sup>2</sup> GFA/Bed) - Major operating theatre capacity including extensive specialist and service areas.

Exclusions: Loose furniture, special medical equipment.

## **CINEMAS**

Multiplex Group Complex (warm shell).

2,000–4,000 seats.

Exclusions: Projection equipment, seating.

## **SHOPPING CENTRES**

### **Department Store**

Partially finished suspended ceilings and painted walls.

Exclusions: Floor finishes, shop fittings etc.

### **Supermarket/Variety Store**

Fully finished and serviced space.

Exclusions: Cool rooms, shop fittings, refrigeration equipment etc.

### **Malls**

Fully finished and serviced space.

### **Specialty Shops**

Partially finished with ceilings, unpainted walls and power to perimeter point.

Exclusions: Floor finishes and shop fittings.

## **SMALL SHOPS AND SHOWROOMS**

Exclusions: Floor finishes, plumbing (other than hot and cold water to sink fittings in each shop) and shop fittings.

## **RESIDENTIAL**

### **Single Storey or 1-3 Storey**

Units reflect medium quality accommodation.

### **Multi-Storey**

Units reflect medium to luxury quality and air conditioned accommodation up to 80 storeys in height.

Note: the ratio of kitchen, laundry and bathroom areas to living areas considerably affects the cost range.

Range given is significantly affected by the height and configuration of the building.

Exclusions: Loose furniture, special fittings, washing machines, dryers and refrigerators.

# RIDERS DIGEST

## 46<sup>TH</sup> EDITION

### ACKNOWLEDGEMENTS

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**Property Council of Australia**

Measurement of Net Lettable Area.

**Savills Research**

Land Values, Rents and Yields, Rental Growth Rates and Construction Sector Data.

**Colliers International - NT**

Northern Territory Land Values & Yields and Rental Rates.

**WSP Structures**

Reinforcement Ratios.

**Australian Bureau of Statistics**

Construction and Building Data and CPI information.

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# PERTH CONSTRUCTION COSTS

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# PERTH CONSTRUCTION BUILDING SERVICES COSTS

All costs current as at Fourth Quarter 2017.

COST RANGE PER GROSS FLOOR AREA	SPECIAL EQUIPMENT		HYDRAULIC	
	\$/M <sup>2</sup>		\$/M <sup>2</sup>	
	LOW	HIGH	LOW	HIGH
<b>OFFICE BUILDINGS</b>				
<b>Prestige, CBD</b>				
10 TO 25 STOREYS (75-80% EFFICIENCY)	20	40	85	115
25 TO 40 STOREYS (70-75% EFFICIENCY)	10	20	85	115
40 TO 55 STOREYS (68-73% EFFICIENCY)	10	20	90	115
<b>Investment, CBD</b>				
UP TO 10 STOREYS (81-85% EFFICIENCY)	-	-	75	95
10 TO 25 STOREYS (76-81% EFFICIENCY)	10	20	75	95
25 TO 40 STOREYS (71-76% EFFICIENCY)	10	20	85	105
<b>Investment, other than CBD</b>				
1 TO 3 STOREYS (81-85% EFFICIENCY)	-	-	60	80
UP TO 10 STOREYS (82-86% EFFICIENCY)	-	-	60	80
10 TO 25 STOREYS (77-82% EFFICIENCY)	-	-	85	105
<b>HOTELS</b>				
<b>Multi-Storey</b>				
FIVE STAR	40	70	235	335
FOUR STAR	40	75	225	330
THREE STAR	30	55	215	320
<b>CAR PARK</b>				
OPEN DECK MULTI-STOREY	-	-	20	30
BASEMENT: CBD	-	-	35	45
BASEMENT: OTHER THAN CBD	-	-	25	35
UNDERCROFT: OTHER THAN CBD	-	-	20	30
<b>INDUSTRIAL BUILDINGS</b>				
<b>6.00 M to underside of truss and 4,500 M<sup>2</sup> Gross Floor Area with:</b>				
ZINCALUME METAL CLADDING	-	-	40	65
PRECAST CONCRETE CLADDING	-	-	50	85
<b>Attached Air Conditioned Offices</b>				
200 M <sup>2</sup>	-	-	45	85
400 M <sup>2</sup>	-	-	45	65

## SPECIAL EQUIPMENT

Special Equipment includes Building Maintenance Units, Medical Gases, Chutes, Incinerators and Compactors where appropriate.

## HYDRAULIC

Hydraulic Services include Cold Water Supply, Soil, Waste and Ventilation Plumbing and Associated Sanitary Fittings and Faucets where appropriate.

FIRE		MECH.		VERTICAL TRANSPORT		BUILDING MGT		ELECTRICAL		TOTAL	
\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
70	80	340	560	140	170	60	100	215	275	930	1,340
70	85	340	590	190	205	55	100	215	280	965	1,395
70	85	340	600	195	225	60	105	225	320	990	1,470
65	80	260	530	120	130	40	70	135	220	695	1,125
65	85	280	510	120	180	30	45	140	250	720	1,185
60	85	275	510	160	195	25	50	145	260	760	1,225
55	80	200	300	-	-	-	-	105	140	420	600
55	80	210	330	90	120	25	40	125	170	565	820
55	80	240	360	105	140	25	55	150	180	660	920
60	90	415	560	150	215	55	100	280	380	1,235	1,750
60	95	340	435	140	195	40	85	180	250	1,025	1,465
60	95	260	360	105	130	40	85	115	220	825	1,265
45	55	-	45	30	85	5	30	35	55	135	300
45	60	40	105	30	85	15	35	35	75	200	405
45	55	35	105	30	85	15	35	35	75	185	390
45	55	-	50	30	85	5	30	35	55	135	305
45	85	30	65	-	-	-	25	45	95	160	335
45	85	30	65	-	-	-	25	45	95	170	355
45	85	180	280	-	-	10	40	105	140	385	630
45	85	180	280	-	-	10	35	105	130	385	595

#### FIRE PROTECTION

Fire Services include Detectors, Warden Communication, Sprinklers, Hydrants, Hose Reels and Extinguishers.

#### MECHANICAL

Mechanical Services include Air Conditioning, Ventilation, Heating and Domestic Hot Water where appropriate.

# PERTH CONSTRUCTION BUILDING SERVICES COSTS

COST RANGE PER GROSS FLOOR AREA	SPECIAL EQUIPMENT		HYDRAULIC	
	\$/M <sup>2</sup>		\$/M <sup>2</sup>	
	LOW	HIGH	LOW	HIGH
<b>AGED CARE</b>				
SINGLE STOREY FACILITY	-	-	170	235
<b>PRIVATE HOSPITALS</b>				
Low Rise Hospital				
45-60 M <sup>2</sup> GFA/BED	85	130	140	190
55-80 M <sup>2</sup> GFA/BED WITH MAJOR OPERATING THEATRE	115	150	170	205
<b>CINEMAS</b>				
GROUP COMPLEX, 2,000-4,000 SEATS (WARM SHELL)	-	-	55	85
<b>REGIONAL SHOPPING CENTRES</b>				
DEPARTMENT STORE	30	40	55	85
SUPERMARKET/VARIETY STORE	40	45	50	80
DISCOUNT DEPARTMENT STORE	40	45	55	70
MALLS	-	-	-	-
SPECIALTY SHOPS	-	-	40	70
<b>SMALL SHOPS AND SHOWROOMS</b>				
SMALL SHOPS & SHOWROOMS	-	-	75	90
<b>RESIDENTIAL</b>				
SINGLE AND DOUBLE STOREY DWELLINGS (CUSTOM BUILT)	-	25	85	150
<b>RESIDENTIAL UNITS</b>				
WALK-UP 85 TO 120 M <sup>2</sup> /UNIT	-	-	85	160
TOWNHOUSES 90 TO 120 M <sup>2</sup> /UNIT	-	-	85	160
<b>MULTI-STOREY UNITS</b>				
Up to 10 storeys with lift				
UNITS 60-70 M <sup>2</sup>	5	35	180	225
UNITS 90-120 M <sup>2</sup>	5	35	170	225
Over 10 and up to 20 storeys				
UNITS 60-70 M <sup>2</sup>	5	35	175	225
UNITS 90-120 M <sup>2</sup>	5	35	175	220
Over 20 and up to 40 storeys				
UNITS 60-70 M <sup>2</sup>	5	25	205	220
UNITS 90-120 M <sup>2</sup>	5	25	200	225
Over 40 and up to 80 storeys				
UNITS 60-70 M <sup>2</sup>	5	20	220	215
UNITS 90-120 M <sup>2</sup>	5	20	220	215

## VERTICAL TRANSPORT

Transport Services include Lifts, Escalators, Travelators, Dumbwaiters, etc. where appropriate.

## BUILDING MANAGEMENT

Building Management Services include Communications, Security and Building Automation Systems where appropriate.

FIRE		MECH.		VERTICAL TRANSPORT		BUILDING MGT		ELECTRICAL		TOTAL	
\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>		\$/M <sup>2</sup>	
LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
60	90	230	380	-	-	20	45	190	350	670	1,100
60	90	510	580	40	70	40	60	255	380	1,130	1,500
60	90	550	650	55	85	70	80	255	450	1,275	1,710
70	90	450	520	-	-	15	35	105	180	695	910
60	70	260	320	-	70	25	40	200	245	630	870
55	70	250	350	-	-	25	40	120	190	540	775
55	70	250	300	-	-	25	40	130	170	555	695
55	75	200	305	-	-	-	25	65	125	360	600
55	75	75	285	-	-	-	-	65	120	270	570
5	10	75	180	-	250	-	20	70	150	235	785
5	10	75	165	-	-	-	20	75	115	240	470
5	10	75	165	-	-	-	20	75	115	240	470
60	80	100	290	20	45	10	25	120	160	495	860
60	80	100	270	20	45	10	25	120	150	485	830
60	80	160	260	30	40	10	25	115	195	555	860
60	80	155	245	30	40	10	25	115	180	550	825
65	90	195	300	50	85	10	25	125	210	655	955
65	90	180	295	50	85	10	25	120	190	630	935
70	95	275	360	130	180	10	25	160	215	870	1,110
70	95	265	350	125	185	10	25	155	205	850	1,095

**ELECTRICAL**

Electrical Services include the provision of Lighting and Power to occupied areas where appropriate.

# PERTH CONSTRUCTION UNIT COSTS

ITEM	CONSTRUCTION RANGE		PER
	LOW	HIGH	
<b>HOTELS</b>			
Multi-Storey (excluding basements)			
FIVE STAR	330,000	490,000	BEDROOM
FOUR STAR	270,000	350,000	BEDROOM
THREE STAR	160,000	240,000	BEDROOM
<b>CAR PARKS</b>			
Based on 30 M <sup>2</sup> per car			
OPEN DECK MULTI-STOREY	20,000	35,000	CAR
BASEMEN - CBD	60,000	110,000	CAR
BASEMENT - OTHER THAN CBD	50,000	100,000	CAR
UNDERCROFT - OTHER THAN CBD	20,000	37,000	CAR
<b>AGED CARE</b>			
FACILITY	135,000	185,000	BEDROOM
<b>PRIVATE HOSPITALS</b>			
Low Rise Hospital			
45-60 M <sup>2</sup> GFA/BED	205,000	260,000	BED
55-80 M <sup>2</sup> GFA/BED	290,000	350,000	BED
<b>CINEMAS</b>			
GROUP COMPLEX, 2,000-4,000 SEATS (WARM SHELL)	7,000	10,000	SEAT
<b>HOUSING</b>			
SINGLE AND DOUBLE STOREY DWELLINGS (CUSTOM BUILT) - 325 M <sup>2</sup>	455,000	900,000	HOUSE
<b>RESIDENTIAL UNITS (EXCL CARPARK/SITE WORKS)</b>			
TOWNHOUSES (90-120 M <sup>2</sup> )	130,000	320,000	UNIT
1 TO 3 STOREY UNITS (85-120 M <sup>2</sup> )	130,000	320,000	UNIT
<b>MULTI-STOREY RESIDENTIAL UNITS</b>			
Up to 10 storeys with lift			
UNITS 60-70 M <sup>2</sup>	170,000	255,000	UNIT
UNITS 90-120 M <sup>2</sup>	250,000	420,000	UNIT
Over 10 and up to 20 storeys			
UNITS 60-70 M <sup>2</sup>	195,000	280,000	UNIT
UNITS 90-120 M <sup>2</sup>	270,000	460,000	UNIT
Over 20 and up to 40 storeys			
UNITS 60-70 M <sup>2</sup>	235,000	305,000	UNIT
UNITS 90-120 M <sup>2</sup>	290,000	510,000	UNIT
Over 40 and up to 80 storeys			
UNITS 60-70 M <sup>2</sup>	280,000	390,000	UNIT
UNITS 90-120 M <sup>2</sup>	330,000	625,000	UNIT



# PERTH CONSTRUCTION SITEWORKS COSTS

## LANDSCAPING

	LOW	HIGH	PER
LIGHT LANDSCAPING TO LARGE AREAS WITH MINIMAL PLANTING AND SITE FORMATION BUT EXCLUDING TOPSOIL AND GRASSING.	33,000	47,000	HECTARE
DENSE LANDSCAPING AROUND BUILDINGS INCLUDING SHRUBS, PLANTS, TOPSOIL AND GRASSING.	65	120	M <sup>2</sup>
GRASSING ONLY TO LARGE AREAS INCLUDING TOPSOIL, SOWING AND TREATING.	20	30	M <sup>2</sup>

## CAR PARKS - ON GROUND

Based on 30 M<sup>2</sup> overall area per car with asphalt paving including sub base and sealing.

	LOW	HIGH	PER
LIGHT DUTY PAVING.	1,050	1,300	CARSPACE
HEAVY DUTY PAVING TO FACTORY TYPE COMPLEX, LARGE AREA WITH MINIMAL SITE FORMATION, DRAINAGE AND KERB TREATMENT.	2,050	2,700	CARSPACE
LIGHT DUTY PAVING TO SHOPPING CENTRE COMPLEX, LARGE AREA WITH MINIMAL SITE FORMATION, AND INCLUDING DRAINAGE AND KERB TREATMENT.	1,800	3,000	CARSPACE

## ROADS

Asphalt finish including kerb, channel and drainage.

	LOW	HIGH	PER
RESIDENTIAL ESTATE 6.80 METRES WIDE EXCLUDING FOOT PATH AND NATURE STRIP.	700	1,150	M
INDUSTRIAL ESTATE 10.4 METRES WIDE INCLUDING MINIMAL TO EXTENSIVE FORMATION.	1,100	1,850	M

## PERTH CONSTRUCTION DEMOLITION COSTS

Demolition costs include grubbing up footings, sealing services, temporary shoring, supports, removal of demolished materials, rubbish and site debris.

Exclusions: work carried out outside normal working hours, credit value of demolished materials and restricted site conditions.

BUILDING TYPE	LOW	HIGH	PER
SINGLE STOREY TIMBER FRAMED HOUSE WITH TIMBER CLADDING AND TILED ROOF	35	50	M <sup>2</sup>
SINGLE/DOUBLE STOREY BRICK HOUSE WITH TILED ROOF	45	55	M <sup>2</sup>
SINGLE STOREY FACTORY/ WAREHOUSE WITH REINFORCED CONCRETE GROUND SLAB, TIMBER OR STEEL FRAMED WALLS			
▪ METAL CLAD	45	80	M <sup>2</sup>
▪ BRICK CLAD	55	85	M <sup>2</sup>
TWO STOREY OFFICE BUILDING WITH REINFORCED CONCRETE FRAME MASONRY CLADDING AND METAL ROOF	65	95	M <sup>2</sup>
MULTI-STOREY OFFICE BUILDING UP TO 15 FLOORS WITH MASONRY CLADDING			
▪ REINFORCED CONCRETE	170	195	M <sup>2</sup>
▪ STRUCTURAL STEEL	180	210	M <sup>2</sup>
MULTI-STOREY OFFICE BUILDING UP TO 25 STOREYS, CONSTRUCTED OF STEEL FRAME WITH MASONRY CLADDING	190	220	M <sup>2</sup>

## HOTEL FURNITURE, FITTINGS & EQUIPMENT COSTS

The cost of hotel furniture, fittings and equipment (FF&E) varies within a wide range and is dependent on the quality of items provided. The following gives the expected cost ranges for different rating hotels. These costs include fitting out public areas.

	LOW	HIGH	PER
THREE STAR RATING	17,500	30,000	BEDROOM
FOUR STAR RATING	25,000	40,000	BEDROOM
FIVE STAR RATING	40,000	80,000	BEDROOM

# PERTH CONSTRUCTION OFFICE FITOUT COSTS

The following costs, which include workstations, are an indication of those currently achievable for good quality office accommodation, inclusive of all loose and fixed furniture.

TYPE OF TENANCY	OPEN PLANNED		FULLY PARTITIONED		PER
	LOW	HIGH	LOW	HIGH	
INSURANCE OFFICES, GOVERNMENT DEPARTMENT	800	1,200	1,000	1,550	M <sup>2</sup>
MAJOR COMPANY HEADQUARTERS	900	1,500	1,100	1,800	M <sup>2</sup>
SOLICITORS, FINANCIERS	1,100	1,800	1,450	2,100	M <sup>2</sup>
EXECUTIVE AREAS AND FRONT OF HOUSE	-	-	2,800	6,000	M <sup>2</sup>
COMPUTER AREAS	2,100	4,500	-	-	M <sup>2</sup>

Computer areas include access flooring and additional services costs but exclude computer equipment.

## WORKSTATIONS

Fully self-contained workstation module size 1,800 x 1,800 MM including screens generally 1,220 MM high (managerial 1,620 MM high), desks, storage cupboards, shelving.

TYPE OF WORKSTATION	LOW	HIGH	PER
CALL CENTRE	1,250	3,200	EACH
SECRETARIAL	1,800	4,500	EACH
TECHNICAL STAFF	1,250	4,000	EACH
EXECUTIVE	3,500	7,500	EACH

## REFURBISHMENT

### Office

The following refurbishment costs include for demolition and removal of partitions and internal finishes, provide new floor, ceiling and wall finishes, but excluding fitting out and removal of asbestos and upgrading of building for GreenStar ratings. The lower end of the range indicates re-use and modification of existing specialist building services, while the upper end of the range indicates complete replacement of equipment and accessories.

	LOW	HIGH	PER
CBD OFFICES TYPICAL FLOOR	800	2,100	M <sup>2</sup>
CBD OFFICES CORE UPGRADE (EXCLUDING LIFTS MODERNISATION)	600	1,000	M <sup>2</sup>

# PERTH CONSTRUCTION RECREATIONAL FACILITIES COSTS

## BASKETBALL CENTRE

	LOW	HIGH	PER
CONSISTING OF BRICK WALLS, STEEL PORTAL FRAME AND PURLINS WITH METAL ROOF, TIMBER FLOOR TO PLAYING AREA, PUBLIC SEATING, PUBLIC TOILETS AND CHANGE ROOMS.	1,300	2,500	M <sup>2</sup>

## SWIMMING POOL CENTRES

	LOW	HIGH	PER
INCLUDING FOYER, KIOSK, OFFICE, LOCKERS, ADMINISTRATION OFFICES, CHANGE ROOMS.	1,500	2,700	M <sup>2</sup>

## SWIMMING POOLS

High quality fully tiled including drainage and filtration but excluding surrounding paving and enclosures.

	LOW	HIGH	PER
HALF OLYMPIC (25.0 X 12.5 M)	900,000	1,000,000	EACH
▪ EXTRA FOR HEATING	80,000	140,000	EACH
▪ EXTRA OVER FILTRATION AND DOSING PLANT FOR OZONE BASED DOSING SYSTEM	180,000	270,000	EACH
▪ EXTRA FOR WET DECK	50,000	80,000	EACH
OLYMPIC (50.0 X 21.5 M)	1,800,000	2,000,000	EACH
▪ EXTRA FOR HEATING	180,000	240,000	EACH
▪ EXTRA FOR FILTRATION AND DOSING PLANT	300,000	500,000	EACH
▪ EXTRA OVER FILTRATION AND DOSING PLANT FOR OZONE BASED DOSING SYSTEM	100,000	150,000	EACH

## SMALL BOAT AND YACHT MARINA BERTHS

Floating pontoon walkways, serviced with power and water.

	LOW	HIGH	PER
DOUBLE LOADED BERTHS	20,000	35,000	BERTH
SINGLE LOADED BERTHS	35,000	55,000	BERTH
SUPER YACHTS	235,000	330,000	BERTH

# PERTH CONSTRUCTION RECREATIONAL FACILITIES COSTS

## TENNIS COURTS

Six courts with minimal site formation and including sub base playing surface, chainwire fence 3.60 M high and spoon drains.

	LOW	HIGH	PER
SYNTHETIC GRASS	46,500	56,000	COURT
RED POROUS (EN-TOUT-CAS)	29,000	37,000	COURT
SYNTHETIC ACRYLIC (FLEXIPAWE)	39,000	47,000	COURT
ASPHALT (5 MM)	30,000	38,500	COURT
REBOUND ACE	82,000	89,000	COURT
CONCRETE	37,500	42,000	COURT
FLOODLIGHTING	35,000	50,000	COURT

## GOLF COURSES

18 hole championship course including siteworks, finishing works, irrigation, grassing, landscaping, green keeping, plant and equipment, course furniture and groundstaff to practical completion but excluding mains water supply to course, roads, carparks and clubhouse. The following are indicative costs only.

	LOW	HIGH	PER
SANDY SOIL SITE, REQUIRING MINIMAL EXCAVATION AND SITE PREPARATION	7,250,000	11,500,000	COURSE
SITE REQUIRING ROCK EXCAVATION	11,250,000	14,000,000	COURSE
SWAMPY SITE REQUIRING DREDGING FOR LAKES, ETC. AND EXTENSIVE FILL	14,500,000	20,500,000	COURSE

## PLAYING FIELDS

Soccer, rugby, australian rules, hockey or similar turfed areas with minimal site formation and including sub base, drainage and turfing.

	LOW	HIGH	PER
EXCLUDES SPRINKLERS	35	50	M <sup>2</sup>

## GRANDSTANDS

Prestige metropolitan grandstand with a high standard of finishes and facilities including bars, stores, meeting/change rooms, dining and kitchen area.

	LOW	HIGH	PER
GRANDSTAND	4,500	9,000	SEAT

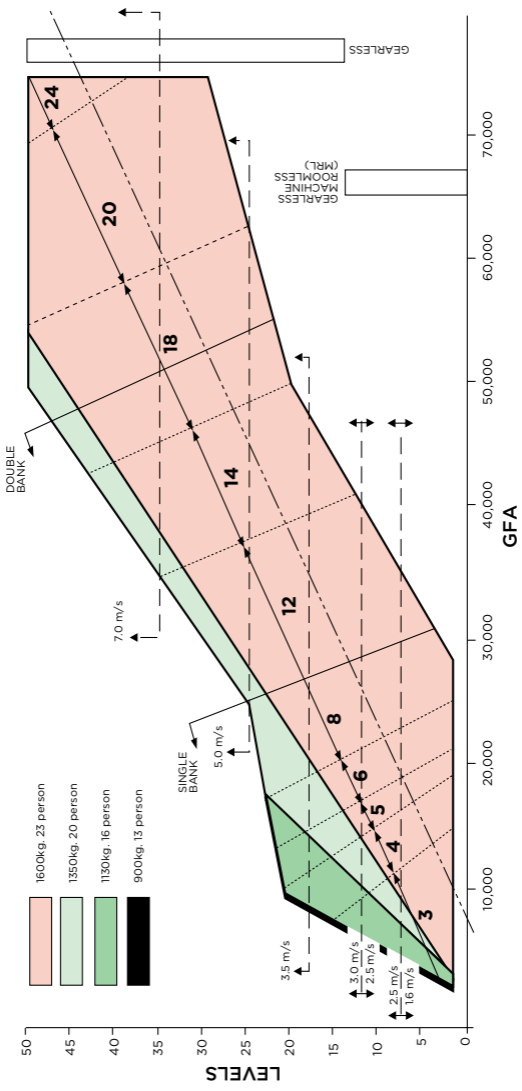
# PERTH CONSTRUCTION VERTICAL TRANSPORTATION

## LIFT SELECTION CHART

To calculate the number and type of lifts:

- Locate a point on the graph by using the GFA in M<sup>2</sup> shown on the bottom axis and number of levels on the left axis.
- The colour at the intersection point indicates the lift capacity, the horizontal lines the lift speed and the angled lines the number of lifts and the number of banks.
- By extending the horizontal line to the far right hand side, the type of lift required can be obtained.

Destination control is an optional lift control system in which passengers key-in the number of their destination floor at a button panel located in their current lift lobby area. Each floor lobby has a button panel. The lifts cars themselves do not have destination buttons and are designated to serve the floors as required. Destination control will generally boost the “Up peak” or morning performance of the lift system and will provide additional security provisions. The performance of the lift system during lunch times and at the end of the day is generally not improved with this control system. Lobby area may need to be increased.



# PERTH CONSTRUCTION VERTICAL TRANSPORTATION

APPLICATION	LIFT TYPE	SPEED M/S	NO. OF FLOORS SERVED	BASE COST \$		ADDITIONAL FLOOR	EXPRESS FLOOR
				LOW	HIGH	RATE	RATE
OFFICE & RESIDENTIAL	ELECTRO-HYDRAULIC PASSENGER	0.5	2	70,000	90,000	5,000	2,000
	GEARLESS TO 17 PASSENGER	1	5	115,000	175,000	5,000	2,000
	GEARLESS UP TO 17 PASSENGER	1.6	8	130,000	195,000	5,000	2,000
	GEARLESS	2.5	10	295,000	355,000	10,000	4,000
	GEARLESS	3.5	10	620,000	730,000	9,000	12,000
	GEARLESS	4	10	670,000	830,000	9,000	12,000
	GEARLESS	5	10	770,000	940,000	9,000	12,000
	GEARLESS	6	10	860,000	1,050,000	9,000	12,000
	GEARLESS	7	10	950,000	1,150,000	9,000	12,500
	GEARLESS	8	10	1,030,000	1,230,000	9,000	12,500
HOSPITAL	GEARED UP TO 40 PASSENGER	2	5	600,000	690,000	15,000	5,000
	GEARLESS	2.5	10	780,000	940,000	15,000	5,000
LARGE GOODS	GEARLESS MRL TO 2,000 KG	1.6	10	345,000	480,000	15,000	5,000
	ELECTRO-HYDRAULIC TO 5,000 KG	0.5	2	445,000	510,000	15,000	5,000
	GEARLESS 2,500 KG	2.5	10	690,000	820,000	15,000	5,000
ESCALATORS	RISE 2,600 TO 5,000 MM	0.5	-	125,000	200,000	-	-
MOVING WALKS	2,500 TO 5,000 MM	0.5	-	135,000	270,000	-	-
SERVICE LIFT	BENCH HEIGHT UNIT	0.2	3	35,000	50,000	5,000	2,000
	LARGER UNIT	0.2	3	50,000	65,000	6,500	2,000
DISABLED PLATFORM LIFT	TO 1,000 MM	0.1	2	30,000	45,000	-	-
	1,000 TO 4,000 MM	0.1	2	45,000	60,000	-	-

Note: Destination Control Lift System option costs are not included in the above rates.



# PERTH DEVELOPMENT

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# PERTH DEVELOPMENT STAMP DUTIES

Transfer duty applies to dutiable transactions over dutiable property in Western Australia.

Dutiable property is: land in Western Australia, certain rights over dutiable property, business assets and chattels located in Western Australia.

The general rate applies to commercial property, rural property that is not also used as residential property, and vacant land which does not qualify for the residence rate.

Where an eligible dutiable transaction includes residential property and other dutiable property (eg. business assets, commercial land) the entire transaction will be assessed at the residential rate.

Residential property includes primary residences, rental properties and vacant land where building commences within 5 years.

## GENERAL RATE OF DUTY

VALUE OF TRANSACTION	RATE OF DUTY
\$0-\$ 80,000	\$1.90 PER \$100 OR PART THEREOF
\$80,001-\$100,000	\$1,520 + \$2.85 PER \$100 OR PART THEREOF ABOVE \$80,000
\$100,001-\$250,000	\$2,090 + \$3.80 PER \$100 OR PART THEREOF ABOVE \$100,000
\$250,001-\$500,000	\$7,790 + \$4.75 PER \$100 OR PART THEREOF ABOVE \$250,000
\$500,001 UPWARDS	\$19,665 + \$5.15 PER \$100 OR PART THEREOF ABOVE \$500,000

## RESIDENTIAL RATE OF DUTY

VALUE OF TRANSACTION	RATE OF DUTY
\$0-\$120,000	\$1.90 PER \$100 OR PART THEREOF
\$120,001-\$150,000	\$2,280 + \$2.85 PER \$100 OR PART THEREOF ABOVE \$120,000
\$150,001-\$360,000	\$3,135 + \$3.80 PER \$100 OR PART THEREOF ABOVE \$150,000
\$360,001-\$725,000	\$11,115 + \$4.75 PER \$100 OR PART THEREOF ABOVE \$360,000
\$725,001 AND UPWARDS	\$28,453 + \$5.15 PER \$100 OR PART THEREOF ABOVE \$725,000

Refer to [www.finance.wa.gov.au](http://www.finance.wa.gov.au) for more details.

# PERTH DEVELOPMENT LAND TAX

Land Tax is an annual tax based on the ownership and usage of land owned at midnight on 30 June. Land tax is levied in respect of the financial year immediately following that date.

In general, Land Tax is not levied on the property if it is the principal place of residence.

<b>TOTAL UNIMPROVED VALUE OF LAND</b>	<b>2017/18 TAX RATES</b>
\$0 TO \$300,000	NIL
\$300,001 TO \$420,000	FLAT RATE OF \$300
\$420,001 TO \$1,000,000	\$300 + 0.25 CENT FOR EACH \$1 IN EXCESS OF \$420,000
\$1,000,001 TO \$1,800,000	\$1,750.00 + 0.90 CENT FOR EACH \$1 IN EXCESS OF \$1,000,000
\$1,800,001 TO \$5,000,000	\$8,950 + 1.80 CENTS FOR EACH \$1 IN EXCESS OF \$1,800,000
\$5,000,001 TO \$11,000,000	\$66,550 + 2.00 CENTS FOR EACH \$1 IN EXCESS OF \$5,000,000
>\$11,000,00	\$186,550.00 + 2.67 CENTS FOR EACH \$1 IN EXCESS OF \$11,000,000

Refer to [www.finance.wa.gov.au](http://www.finance.wa.gov.au) for more details.

## PERTH DEVELOPMENT PLANNING – CAR PARKING

Provisions for all developments in the city are provided in the City of Perth City Planning Scheme No. 2, Version 5, July 2015 (CPS2). This Policy sets out the additional considerations for off-street parking and should be used in conjunction with other planning documents, in particular the City Development Design Guidelines.

Parking for residential development in the Residential Scheme use area are assessed in accordance with the Residential Design Codes and variations to the Residential Design Codes set out in CPS2. As a guide, the following table represents the key residential car parking requirements.

	MINIMUM BAYS PER DWELLING	MAXIMUM BAYS PER DWELLING
CBD AREA	NIL	1.5
AREA TO THE WEST OF MITCHELL FREEWAY AND NORTH OF WELLINGTON ST.	1.0	2.0

The provision of parking for commercial development within the Perth Parking Management Area will be assessed in accordance with the Perth Parking Policy

The amount of parking that can be provided relates directly to the surface area of the lot or lots on which development is situated and not the amount of development in square meters of proposed retail and office uses.

The intention is to create a sustainable limit to the number of tenant parking bays within the central area, regardless of the density of development. The amount of tenant parking that can be provided per hectare of development foot print depends on the category of the street where parked vehicles enter the street system.

As a guide, the following table represents the key non-residential car parking requirements. Full details can be reviewed at <http://www.perth.wa.gov.au/planning-development/planning-schemes-and-policies/cps2-planning-policies>.

MAXIMUM ALLOWANCE (BAYS PER 10,000 M <sup>2</sup> OF LOT AREA)		
STREET PRIORITY	AT GRADE ACCESS	INTEGRATED ACCESS
<b>CATEGORY 1</b>	80 OR REPLACEMENT OF EXISTING LICENSED TENANT PARKING BAYS, WHICHEVER IS LESS	120 OR REPLACEMENT OF EXISTING LICENSED TENANT PARKING BAYS, WHICHEVER IS LESS
<b>CATEGORY 2</b>	100	150
<b>CATEGORY 3</b>	150	200
<b>CATEGORY 4</b>	200	250

# PERTH DEVELOPMENT LAND VALUES

The values shown are indicative of current land values in Western Australia and may vary according to position, planning requirements etc.

LOCATION (COSTS PER M <sup>2</sup> )	\$/M <sup>2</sup>	
	LOW	HIGH
<b>OFFICES</b>		
CBD OFFICES	3,000	8,000
WEST PERTH	2,500	4,500
<b>RETAIL (EG. 120 M<sup>2</sup>)</b>		
HAY STREET MALL	15,000	25,000
CBD - SECONDARY AREAS	2,000	3,500
NEIGHBOURHOOD SHOPPING CENTRE	200	350
SUBURBAN STRIP SHOPPING	200	3,000
<b>INDUSTRIAL (1HA TO 5HA)</b>		
CORE - PRIME	375	525
NORTH - PRIME	300	475
SOUTH - PRIME	175	450
EAST - PRIME	180	475

Prepared in association with Savills.

# PERTH DEVELOPMENT RENTAL RATES

The net rents indicated below show the change in levels since 1988. Allowance has been made for the effects of rental incentives, rent free periods etc.

	OFFICES		INDUSTRIAL
	CBD	WEST PERTH	PRIME
1988	156	140	65
1989	206	170	73
1990	224	189	76
1991	153	162	74
1992	77	59	60
1993	54	44	60
1994	81	49	55
1995	99	55	55
1996	133	125	56
1997	143	158	56
1998	149	176	58
1999	147	176	60
2000	163	182	62
2001	170	185	64
2002	186	193	64
2003	178	195	64
2004	171	186	65
2005	206	205	73
2006	296	277	83
2007	488	388	108
2008	735	575	123
2009	563	457	110
2010	460	360	98
2011	632	497	100
2012	708	527	113
2013	698	500	122
2014	698	500	122
2015	640	475	112
2016	458	353	112
2017	460	350	105

Prepared in association with Savills.

# PERTH DEVELOPMENT OFFICE SECTOR DATA

## PERTH CBD VACANCY RATES - Q2 2017

PCA GRADE	STOCK M <sup>2</sup>	VACANCY M <sup>2</sup>	VAC % JUN-17
PREMIUM	356,300	41,600	11.7
PCA GRADE A	726,300	140,900	19.4
SECONDARY	686,400	190,500	27.8
<b>TOTAL</b>	<b>1,769,000</b>	<b>373,000</b>	<b>21.1</b>

Source: PCA/Savills Research.

## CURRENT CBD OFFICE DEVELOPMENT ACTIVITY

PROPERTY	PRECINCT	NLA M <sup>2</sup>	TYPE	STATUS	COMPLETION	MAJOR TENANT
CAPITAL SQUARE 98 MOUNTS BAY RD	WEST CBD	55,000	NEW	UC	2018	WOODSIDE
QV2 SOUTH TOWER 250 ST GEORGES TERRACE	WEST CBD	7,365	NEW	DA	2019	
QV3 NORTH TOWER 250 ST GEORGES TERRACE	WEST CBD	20,565	NEW	DA	2019	
ANZAC HOUSE 28 ST GEORGES TERRACE	MID CBD	3,469	-	DA	2019/2020	RSL
ESPLANADE BUSPORT	WEST CBD	17,000	NEW	EP	2020	
LOT 7 AND 8 ELIZABETH QUAY	MID CBD	52,355	NEW	MOOTED	2021+	CHEVRON (OWNER OCCUPIED)

UC: Under Construction    DA: Development Approval    EP: Early Planning

Source: Cordell/Savills Research.

# PERTH DEVELOPMENT OFFICE SECTOR DATA

## KEY MARKET INDICATORS - Q3 2017

PERTH CBD	PCA PREMIUM	
	LOW	HIGH
RENTAL - GROSS FACE	775	900
RENTAL - NET FACE	600	725
INCENTIVE LEVEL (%) NET	45	50
RENTAL - NET EFFECTIVE	315	380
OUTGOINGS - OPERATING	115	125
OUTGOINGS - STATUTORY	50	60
OUTGOINGS - TOTAL	165	185
TYPICAL LEASE TERM	7	10
YIELD - MARKET (% NET FACE RENTAL)	5.75	7.75
IRR (%)	7.25	8.00
CARS PERMANENT RESERVED (\$/PCM)	675	750
CARS PERMANENT (\$/PCM)	675	750
OFFICE CAPITAL VALUES	8,500	12,500

WEST PERTH	PCA PREMIUM	
	LOW	HIGH
RENTAL - GROSS FACE	415	565
RENTAL - NET FACE	250	400
INCENTIVE LEVEL (%) GROSS	38	48
RENTAL - NET EFFECTIVE	145	230
OUTGOINGS - OPERATING	80	90
OUTGOINGS - STATUTORY	65	90
OUTGOINGS - TOTAL	145	180
TYPICAL LEASE TERM	3	5
YIELD - MARKET (% NET FACE RENTAL)	7.50	8.50
IRR (%)	8.00	8.75
CARS PERMANENT RESERVED (\$/PCM)	300	325
CARS PERMANENT (\$/PCM)	325	350
OFFICE CAPITAL VALUES	2,950	5,300

Source: Savills Research.

All rates are \$/M<sup>2</sup> unless otherwise noted.



PCA GRADE A		PCA GRADE B	
LOW	HIGH	LOW	HIGH
640	815	410	635
475	650	250	475
45	50	45	55
250	340	125	240
95	120	95	110
50	60	50	60
145	180	145	170
5	7	3	5
6.75	8.25	8.25	10.00
7.50	8.50	7.75	9.00
625	725	475	625
625	725	475	625
6,750	9,000	4,750	6,500

PCA GRADE A	
LOW	HIGH
355	405
225	275
38	48
130	160
50	55
65	90
115	145
3	5
8.25	9.50
8.00	10.00
300	350
300	325
2,400	3,300

# PERTH DEVELOPMENT RETAIL SECTOR DATA

## KEY MARKET INDICATORS - Q3 2017

PERTH ENCLOSED CENTRES	REGIONAL	
	LOW	HIGH
DEPARTMENT STORE RENT (GROSS)	220	250
DDS RENT (GROSS)	200	280
SUPERMARKET RENT (GROSS)	250	350
SPECIALTY TENANT RENT (GROSS)	1,100	2,000
MINI-MAJOR RENT (GROSS)	400	1,750
YIELD - MARKET (%)	4.50	5.75
IRR (%)	6.50	7.50
OUTGOINGS - OPERATING	80	125
OUTGOINGS - STATUTORY	40	50
OUTGOINGS - TOTAL	120	175
CAPITAL VALUES	5,000	10,500

## RETAIL SALES ACTIVITY

PROPERTY SALES	TYPE
5 CLAYTON ST, MIDLAND	LARGE FORMAT
15 SUNDEW RISE, JOONDALUP	LARGE FORMAT
JOONDALUP GATE	LARGE FORMAT
INNALOO CINEMA COMPLEX	FREESTANDING
322 STOCK RD, O'CONNOR	LARGE FORMAT
17-25 COLLIE ST, FREMANTLE	FREESTANDING
70 PENSACOLA TCE, CLARKSON	SHOPS
1215 HAY ST, WEST PERTH	FREESTANDING
147 GREAT EASTERN HWY, MIDLAND	LARGE FORMAT
ALBANY BROOKS GARDEN S.C.	NEIGHBOURHOOD
PORT HEDLAND BOULEVARD S.C.	NEIGHBOURHOOD
185 WILLIAM ST, NORTHBRIDGE	SHOPS
DARLING RIDGE S.C.	NEIGHBOURHOOD
592-612 HAY ST (2 BISHOP ST), JOLIMONT	OTHER
MARKET PLACE S.C.	NEIGHBOURHOOD

Source: Savills Research.

All rates are \$/M<sup>2</sup> unless otherwise noted.

SUB REGIONAL		NEIGHBOURHOOD		LARGE FORMAT	
LOW	HIGH	LOW	HIGH	LOW	HIGH
-	-	-	-	-	-
200	280	-	-	-	-
220	350	220	350	-	-
600	1,500	350	900	-	-
400	1,750	200	650	150	300
5.25	7.00	5.75	8.50	5.50	9.50
7.00	8.00	7.00	9.00	8.00	11.50
75	120	40	80	35	55
35	40	30	50	20	35
110	160	70	130	55	90
2,700	6,500	2,500	5,000	1,110	5,500

PRICE (\$M)	DATE	GLA (M <sup>2</sup> )	\$/M <sup>2</sup>
57.80	JAN-17	24,533	2,356
7.50	AUG-17	17,300	434
57.80	JAN-17	24,533	2,356
48.10	OCT-16	11,550	4,165
7.00	JUL-17	2,559	2,735
37.92	OCT-16	1,630	23,262
5.95	JUL-17	1,406	4,232
5.31	MAR-17	1,220	4,352
27.25	JUL-16	4,993	5,458
20.20	JAN-17	10,068	2,006
17.60	OCT-16	6,259	2,812
5.20	APR-17	500	10,400
17.35	OCT-16	2,226	7,794
13.00	APR-17	NA	NA
5.20	SEP-17	2,503	2,078

# PERTH DEVELOPMENT INDUSTRIAL SECTOR DATA

## KEY MARKET INDICATORS - Q3 2017

### PERTH CORE

	PRIME		SECONDARY	
	LOW	HIGH	LOW	HIGH
RENTAL NET FACE	75	105	55	85
INCENTIVES (%)	10	15	12	15
YIELD - MARKET (%)	6.25	7.50	7.25	9.00
IRR (%)	8.00	9.25	8.75	9.50
OUTGOINGS - TOTAL	20	35	15	30
CAPITAL VALUES	900	2,000	800	1,300
LAND VALUES 3,000-5,000 M <sup>2</sup>	350 (LOW)		500 (HIGH)	
LAND VALUES 10,000 - 50,000 M <sup>2</sup>	275 (LOW)		400 (HIGH)	
LAND VALUES 10 HA AND ABOVE	200 (LOW)		325 (HIGH)	

### PERTH NORTH

	PRIME		SECONDARY	
	LOW	HIGH	LOW	HIGH
RENTAL NET FACE	70	100	55	80
INCENTIVES (%)	10	20	10	20
YIELD - MARKET (%)	7.25	8.50	7.50	9.25
IRR (%)	8.25	9.25	8.75	9.75
OUTGOINGS - TOTAL	20	35	15	30
CAPITAL VALUES	900	1,700	650	1,100
LAND VALUES 3,000-5,000 M <sup>2</sup>	275 (LOW)		500 (HIGH)	
LAND VALUES 10,000-50,000 M <sup>2</sup>	200 (LOW)		400 (HIGH)	
LAND VALUES 10 HA AND ABOVE	100 (LOW)		325 (HIGH)	

### PERTH SOUTH

	PRIME		SECONDARY	
	LOW	HIGH	LOW	HIGH
RENTAL NET FACE	60	95	45	80
INCENTIVES (%)	10	20	10	25
YIELD - MARKET (%)	7.25	8.75	7.75	10.00
IRR (%)	8.50	9.75	9.25	10.50
OUTGOINGS - TOTAL	15	30	15	30
CAPITAL VALUES	750	1,500	650	900
LAND VALUES 3,000-5,000 M <sup>2</sup>	150 (LOW)		400 (HIGH)	
LAND VALUES 10,000-50,000 M <sup>2</sup>	125 (LOW)		300 (HIGH)	
LAND VALUES 10 HA AND ABOVE	100 (LOW)		200 (HIGH)	

Source: Savills Research.  
All rates are \$/M<sup>2</sup> unless otherwise noted.

# PERTH DEVELOPMENT CONSTRUCTION WORK DONE

## ANNUAL VALUE OF CONSTRUCTION WORK DONE IN WESTERN AUSTRALIA

YEAR ENDING	RESIDENTIAL	NON-RESIDENTIAL	ENGINEERING	TOTAL CONSTRUCTION
JUN-1990	1,633	1,277	1,432	4,342
JUN-1991	1,217	947	1,422	3,585
JUN-1992	1,226	643	1,506	3,375
JUN-1993	1,589	722	1,541	3,852
JUN-1994	1,973	867	1,805	4,645
JUN-1995	2,171	782	1,572	4,525
JUN-1996	1,696	820	2,654	5,169
JUN-1997	1,682	1,063	2,684	5,429
JUN-1998	1,954	1,135	3,252	6,341
JUN-1999	2,178	986	3,305	6,469
JUN-2000	2,788	1,210	2,775	6,774
JUN-2001	2,331	1,069	2,257	5,657
JUN-2002	2,660	1,051	3,119	6,831
JUN-2003	3,066	1,311	4,735	9,112
JUN-2004	3,395	1,449	4,881	9,725
JUN-2005	3,959	1,721	6,184	11,865
JUN-2006	5,051	2,018	11,490	18,559
JUN-2007	6,192	2,697	16,227	25,116
JUN-2008	6,809	3,770	19,559	30,139
JUN-2009	7,041	4,647	22,664	34,352
JUN-2010	7,000	4,593	23,513	35,106
JUN-2011	7,289	5,420	25,467	38,177
JUN-2012	6,351	6,169	41,399	53,920
JUN-2013	6,751	5,747	43,780	56,278
JUN-2014	8,307	5,494	43,845	57,646
JUN-2015	9,136	5,269	40,999	55,404
JUN-2016	8,910	4,803	36,162	49,876
JUN-2017	6,632	4,550	24,600	35,782

Source: ABS 8752.0 & 8755.0 (Current Prices – Original Series – \$ millions).

# PERTH DEVELOPMENT CONSTRUCTION WORK DONE

## ANNUAL VALUE OF NON-RESIDENTIAL BUILDING WORK DONE IN WESTERN AUSTRALIA

YEAR ENDING	COMMERCIAL	INDUSTRIAL	RETAIL	EDUCATION
JUN-2002	239	173	185	198
JUN-2003	281	259	252	157
JUN-2004	316	293	266	200
JUN-2005	365	340	310	203
JUN-2006	363	440	426	235
JUN-2007	447	672	531	351
JUN-2008	737	1,112	674	401
JUN-2009	1,308	1,432	566	427
JUN-2010	1,082	1,109	432	845
JUN-2011	945	1,294	507	1,180
JUN-2012	1,198	1,835	455	561
JUN-2013	998	1,868	519	497
JUN-2014	1,186	1,271	856	600
JUN-2015	1,370	825	778	651
JUN-2016	918	299	638	564
JUN-2017	675	413	915	530

Source: ABS 8752.0 (Original Cost - \$ millions).

HEALTH	AGED CARE	HOTELS	OTHER	TOTAL NON-RESIDENTIAL
38	37	34	147	1,051
41	43	59	219	1,311
77	83	74	140	1,449
129	59	123	192	1,721
75	57	123	300	2,018
93	111	149	342	2,697
146	70	204	427	3,770
152	103	143	515	4,647
466	78	110	470	4,593
708	65	161	559	5,420
1,144	64	236	677	6,169
1,132	43	182	509	5,747
946	52	120	465	5,494
600	84	309	651	5,269
368	121	520	864	4,803
272	145	450	983	4,550

# PERTH DEVELOPMENT CONSTRUCTION WORK DONE

## ANNUAL VALUE OF RESIDENTIAL BUILDING WORK DONE IN WESTERN AUSTRALIA

YEAR ENDING	NEW HOUSES	NEW APARTMENTS & SEMI DETACHED HOUSING	ALTERATIONS & ADDITIONS INCLUDING CONVERSIONS	TOTAL RESIDENTIAL
JUN-1990	1,120	363	150	1,633
JUN-1991	857	212	148	1,217
JUN-1992	872	228	127	1,226
JUN-1993	1,102	346	141	1,589
JUN-1994	1,412	411	150	1,973
JUN-1995	1,520	480	171	2,171
JUN-1996	1,190	323	182	1,696
JUN-1997	1,275	229	177	1,682
JUN-1998	1,548	213	193	1,954
JUN-1999	1,698	265	216	2,178
JUN-2000	2,097	410	282	2,788
JUN-2001	1,684	398	248	2,331
JUN-2002	1,977	396	287	2,660
JUN-2003	2,346	412	308	3,066
JUN-2004	2,569	507	319	3,395
JUN-2005	2,907	677	375	3,959
JUN-2006	3,803	818	430	5,051
JUN-2007	4,514	1,143	535	6,192
JUN-2008	4,687	1,458	664	6,809
JUN-2009	4,722	1,682	638	7,041
JUN-2010	5,006	1,267	727	7,000
JUN-2011	5,076	1,396	817	7,289
JUN-2012	4,620	984	748	6,351
JUN-2013	4,840	1,203	708	6,751
JUN-2014	6,008	1,626	673	8,307
JUN-2015	6,652	1,820	664	9,136
JUN-2016	6,108	2,014	787	8,910
JUN-2017	4,418	1,595	619	6,632

Source: ABS 8752.0 (Original Cost - \$ millions).



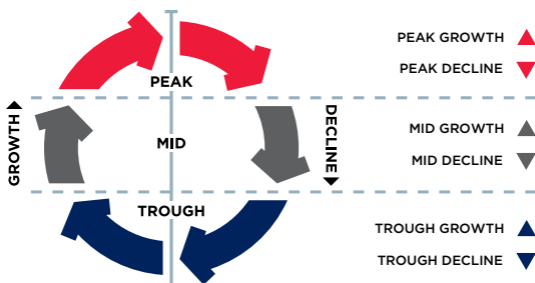
# PERTH DEVELOPMENT RLB CONSTRUCTION MARKET ACTIVITY CYCLE

Activity within the construction industry traditionally has been subject to volatile cyclical fluctuations. The RLB Construction Market Activity Cycle represents the construction development activity cycle.

Each RLB office highlights the current construction sector activity position within the market activity cycle of those key construction sectors within their region. Each sector is categorised by three positions within the cycle; Peak, Mid and Trough. Within each position, activity is further defined by either declining or growing within that sector.

The “up” and “down” arrows highlight the current status within the three positions of the cycle by means of the three colours identified in the cycle diagram below.

## RLB CONSTRUCTION MARKET ACTIVITY CYCLE



# PERTH DEVELOPMENT RLB CONSTRUCTION MARKET ACTIVITY CYCLE

The following tables represent the position of each sector within the RLB Market Activity Cycle. The tables reflect the movement of each sector within the cycle for the period represented.

PERTH	Q2 2015	Q4 2015	Q2 2016	Q4 2016	Q2 2017	Q4 2017
HOUSES	▲	▼	▲	▼	▼	▼
APARTMENTS	▲	▼	▲	▼	▼	▼
OFFICES	▼	▼	▼	▼	▼	▼
INDUSTRIAL	▲	▲	▲	▲	▲	▲
RETAIL	▲	▲	▲	▲	▲	▲
HOTEL	▲	▲	▲	▲	▼	▼
CIVIL	▼	▼	▼	▼	▲	▲

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## BENCHMARKS REGIONAL INDICES

The construction cost information in this publication is based upon rates for capital city construction projects and are current for the Fourth Quarter 2017. For towns or cities outside capital cities, costs can be expected to vary in accordance with the following table of indices:

NEW SOUTH WALES		QUEENSLAND		WESTERN AUSTRALIA	
SYDNEY	100	BRISBANE	100	PERTH	100
ARMIDALE	105	CAIRNS	105	ALBANY	110
COFFS HARBOUR	100	GLADSTONE	125	BROOME	145
NEWCASTLE	99	GOLD COAST	95	BUNBURY	103
ORANGE	106	MACKAY	114	CARNARVON	145
TAMWORTH	102	SUNSHINE COAST	95	ESPERANCE	125
WAGGA WAGGA	106	TOWNSVILLE	108	GERALDTON	105
WOLLONGONG	100			KALGOORLIE	125
				KUNUNURRA	165
				PORT HEDLAND	160
				TOM PRICE	165

The above table should be used only as a comparative guide, and is only appropriate for the urban precincts nominated and for the larger commercial projects.

Care must be taken to review specific local market conditions within the anticipated time frame of a project's development period before establishing and committing viable budgets for projects.

In the event that projects are required to be constructed in remote locations or in areas without urban infrastructure, then special consideration must be given to the budget structure of these projects. Each project must be considered in detail and its specific resource requirements assessed and sourced to establish budget costs.

RLB recommend that advice on local market conditions be sought from our regional offices when initial project budgets and feasibility studies are in the process of establishment. Our regional offices are identified on page 84.

# BENCHMARKS

## KEY CITY RELATIVITIES - Q4 2017

RLB's Key City Relativity Matrix highlights the cost relativity between key Australian cities. The Relativity Matrix compares the cost of a range of building types in a standardised form based on tender prices. Each column represents a base city indexed to 100 with other city's relativities reindexed to that base city.

In order to calculate the relativity between different cities, the difference can be calculated using the following formula:

Base city ( $C_b$ ), divided by the Relativity of city to be compared with ( $C_r$ ) i.e.  $(C_b/C_r) - 1$

For example, when comparing costs between Sydney and Perth, Sydney building costs are generally 11% more than Perth.

i.e.  $(100/90) - 1 = -11.1\%$

If the tendered price of a similar building in Sydney was \$1,000,000, the equivalent cost in Perth would be \$900,000 or conversely a \$1,000,000 building in Perth would cost \$1,110,000 in Sydney.

i.e.  $1,000,000 \times (100/90) = 1,111,111$

ADELAIDE 100		BRISBANE 100		CANBERRA 100		DARWIN 100		GOLD COAST 100	
BNE	98	ADE	102	ADE	93	ADE	90	ADE	111
CAN	107	CAN	109	BNE	92	BNE	89	BNE	109
DAR	111	DAR	113	DAR	103	CAN	97	CAN	119
GC	90	GC	92	GC	84	GC	82	DAR	123
MEL	104	MEL	106	MEL	97	MEL	94	MEL	115
PER	101	PER	103	PER	95	PER	91	PER	112
SYD	118	SYD	120	SYD	110	SYD	106	SYD	130
TVE	100	TVE	102	TVE	93	TVE	90	TVE	111

MELBOURNE 100		PERTH 100		SYDNEY 100		TOWNSVILLE 100	
ADE	96	ADE	99	ADE	85	ADE	100
BNE	94	BNE	97	BNE	83	BNE	98
CAN	103	CAN	106	CAN	91	CAN	107
GC	87	GC	89	GC	77	GC	90
DAR	106	DAR	109	DAR	94	DAR	111
PER	97	MEL	103	MEL	88	MEL	104
SYD	113	SYD	116	PER	86	PER	101
TVE	96	TVE	99	TVE	85	SYD	118

# BENCHMARKS

## OFFICE BUILDING EFFICIENCIES

The efficiency of an office building is expressed as a percentage of the Net Lettable Area (NLA) to the Gross Floor Area (GFA). The table below indicates that relationship to the GFA of the whole building both with car parks and basements included and excluded, that could be expected for an average project in the nominated category. Also shown is the average net to gross efficiency of the office floors only in each of the eight building types listed below.

TYPE OF CBD OFFICE BUILDING	EFFICIENCY		
	BASEMENTS AND CAR PARKS		
	INCLUDED %	EXCLUDED %	OFFICE FLOORS %
<b>PRESTIGE</b>			
10 TO 25 STOREYS	63-68	75-80	85-90
25 TO 40 STOREYS	58-63	70-75	80-85
40 TO 55 STOREYS	53-58	68-73	75-80
<b>INVESTMENT</b>			
UP TO 10 STOREYS	69-74	81-85	86-91
10 TO 25 STOREYS	64-69	76-81	81-86
25 TO 40 STOREYS	59-64	71-76	76-81
<b>INVESTMENT, OTHER THAN</b>			
UP TO 10 STOREYS	70-75	82-86	87-92
10 TO 25 STOREYS	65-70	77-82	82-87

## PLANT ROOM SPACE

Generally plant room space represents 6-11% of the GFA of a multi-storey office building.

## REINFORCEMENT RATIOS

The following ratios give an indication of the average weight of reinforcement per cubic metre of concrete for the listed elements. Differing structural systems and sizes of individual elements and grid sizes will cause considerable variation to the stated ratios. For project specific ratios a structural engineer should be consulted.

	AVE KG/M <sup>3</sup>		AVE KG/M <sup>3</sup>
STRIP FOOTINGS	50	STRAP BEAMS	120
COLUMN BASES	40	SLAB ON GROUND	40
PILE CAPS	50	SUSPENDED SLABS 100-150 MM ONE AND TWO WAY	90
BORED PIER	90	250 MM FLAT PLATE	120
RAFT FOUNDATION	70	250 MM WAFFLE	160
PEDESTAL & STUB COLUMNS	240	COLUMNS	240
<b>RETAINING WALLS</b>			
1-2 STOREY	70	BEAMS	170
2-3 STOREY	120		
GROUND BEAMS	120	WALLS (CORE)	140
		STAIRS	80

# BENCHMARKS

## LABOUR AND MATERIALS

### TRADE RATIOS

The following represents the ratio of on-site labour to material for various trades and sub-trades based upon our own survey.

The figures are relevant to all works constructed by traditional methods; variations to these methods will change the ratios, i.e. on-site fabrication of items traditionally factory fabricated such as joinery fittings, metalwork items, etc.

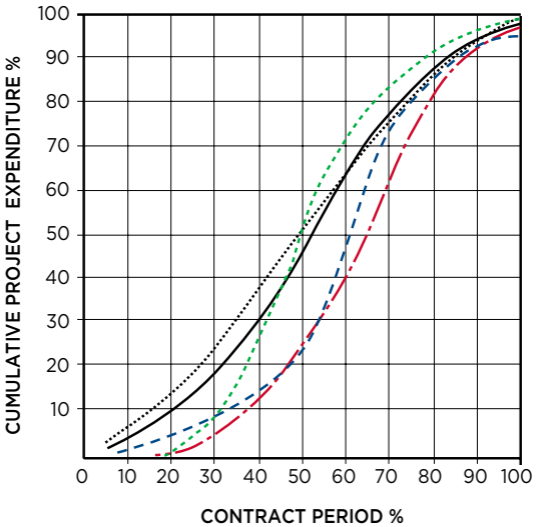
PRELIMINARIES	40	10	50
DEMOLISHER	85		15
EXCAVATOR	32	15	53
PILER	20	50	30
IN SITU CONCRETOR	25		75
FORMWORKER	70		30
REINFORCEMENT FIXER	20		80
PRECAST CONCRETOR	20		80
BRICKLAYER & BLOCKLAYER	50		50
MASON	10		90
ASPHALTOR	40		60
STRUCTURAL STEELWORK	60		40
METALWORKER	20		80
SUSPENDED CEILING FIXER	40		60
CARPENTER	45		55
JOINER	15		85
STEEL DECK ROOFER	40		60
BITUMINOUS BUILT UP ROOFER	30		70
PIPEWORK PLUMBER	60		40
FITTING PLUMBER	25		75
DRAINER	65		35
PLASTERER	80		20
PLASTERBOARD & FIB. PLASTER FIXER	40		60
CERAMIC TILER	55		45
VINYL TILER	45		55
IN SITU PAVIOR	75		25
GLAZIER	20		80
PAINTER	75		25
CARPET LAYER	10		90
ROADWORKER & EXTERNAL PAVIOR	15		85
AIR CONDITIONING SPECIALIST	35		65
LIFT INSTALLER	25		75
ELECTRICAL SPECIALIST	40		60
WATER FIRE SERVICE SPECIALIST	44		56

LABOUR
  MATERIAL
  FIXED FACTOR

# BENCHMARKS

## PROGRESS PAYMENT CLAIMS

Average rate of claims expenditure on construction projects from \$4,000,000 to \$34,000,000 and/or greater than one year but less than two years construction period to practical completion are depicted in the following graph.



- ..... BUILDERS WORK
- MECHANICAL SERVICES
- LIFT SERVICES
- .-.-.- ELECTRICAL SERVICES
- OVERALL PROJECT



# BENCHMARKS

## COMMON INDUSTRY ACRONYMS

### PROJECT MANAGEMENT

AA	Architects Advice
ABIC	Australian Building Industry Contracts
AI	Architects Instruction
AIA	Australian Institute of Architects
BCA	Building Code of Australia
BOQ	Bill of Quantities
BP	Building Permit
BS	Building Surveyor
CA	Contract Administration
CAN	Consultants Advice Notice
DA	Development Application
DD	Design Development
DWG	Drawing (also an Autocad file format)
EBD	Evidence Based Design
ESD	Environmentally Sustainable Design
PI	Professional Indemnity (Insurance)
PM	Project Manager
QS	Quantity Surveyor
RCP	Reflected Ceiling Plan
RFI	Request for Information
SD	Schematic Design

### ARCHITECTURAL DRAWINGS

ABS	Acrylonitrile Butadiene Styrene (Edging)
AS	Australian Standards
COL	Column
CTS	Centres (Spacing)
DP	Downpipe
ENS	Ensuite
EX	Existing
FC	Fibre Cement (Sheet)
FCL	Finished Ceiling Level
FFL	Finished Floor Level
FR	Fire Rated
GFA	Gross Floor Area
HMR	Highly Moisture Resistant (Particleboard)
KDHW	Kiln Dried Hardwood
MDF	Medium Density Fibreboard
PB	Plasterboard
RL	Relative Level
SS	Stainless Steel
TYP	Typical
VOC	Volatile Organic Compound
WC	Water Closet (Toilet)

### LAND SURVEYS

AHD	Australian Height Datum
AMG	Australian Mapping Grid
DP	Downpipe
IL	Invert Level
U/G	Underground
RL	Relative Level

### STRUCTURAL DRAWINGS

CFW	Continuous Fillet Weld
CHS	Cylindrical Hollow Section
CJ	Construction Joint
EA	Equal Angle
PFC	Parallel Flange Channel
RB	Roof Beam
RHS	Rectangular Hollow Section
SB	Sill Beam
SHS	Square Hollow Section
TB	Tie Beam
UA	Unequal Angle
UB	Universal Beam
UC	Universal Column
WT	Wall Tie

### HYDRAULIC DRAWINGS

DCW	Domestic Cold Water
DHW	Domestic Hot Water
FH	Fire Hydrant
FHR	Fire Hose Reel
FIP	Fire Indicator Panel
FS	Fire Service
FW	Floorwaste
HWS	Hot Water System
TD	Tundish
TMV	Thermostatic Mixing Valve
UPVC	Unplasticated Polyvinyl Chloride (Pipework)
VP	Vent Pipe

### MECHANICAL DRAWINGS

A/C	Air Conditioning
A/P	Access Panel
ACU	Air Conditioning Unit
AHU	Air Handling Unit
CU	Condensing Unit
FCU	Fan Coil Unit
FD	Fire Damper
R/A	Return Air
S/A	Supply Air
SD	Smoke Damper

### ELECTRICAL DRAWINGS

DB	Distribution Board
DGPO	Double General Power Outlet
GPO	General Power Outlet
MSB	Main Switchboard
RCD	Residual Current Device
SB	Switchboard

## **BENCHMARKS**

### **METHOD OF MEASUREMENT OF BUILDING AREAS**

The rules for measurement of building areas are defined by the Australian Institute of Quantity Surveyors and the Australian Institute of Architects.

The definitions are as follows: Unit of measurement: square metres (M<sup>2</sup>).

#### **GROSS FLOOR AREA (GFA)**

The sum of the "Fully Enclosed Covered Area" and "Unenclosed Covered Area" as defined.

#### **FULLY ENCLOSED COVERED AREA (FECA)**

The sum of all such areas at all building floor levels, including basements (except unexcavated portions), floored roof spaces and attics, garages, penthouses, enclosed porches and attached enclosed covered ways alongside buildings, equipment rooms, lift shafts, vertical ducts, staircases and any other fully enclosed spaces and usable areas of the building, computed by measuring from the normal inside face of exterior walls but ignoring any projections such as plinths, columns, piers and the like which project from the normal inside face of exterior walls. It shall not include open courts, lightwells, connecting or isolated covered ways and net open areas or upper portions of rooms, lobbies, halls, interstitial spaces and the like which extend through the storey being computed.

#### **UNENCLOSED COVERED AREA (UCA)**

The sum of all such areas at all building floor levels, including roofed balconies, open verandahs, porches and porticos, attached open covered ways alongside buildings, undercrofts and usable space under buildings, unenclosed access galleries (including ground floor) and any other trafficable covered areas of the building which are not totally enclosed by full height walls, computed by measuring the area between the enclosing walls or balustrade (ie. from the inside face of the UCA excluding the wall or balustrade thickness). When the covering element (ie. roof or upper floor) is supported by columns, is cantilevered or is suspended, or any combination of these, the measurements shall be taken to the edge of the paving or to the edge of the cover, whichever is the lesser. UCA shall not include eaves overhangs, sun shading, awnings and the like where these do not relate to the clearly defined trafficable areas, nor shall it include connecting or isolated covered ways.

# BENCHMARKS

## METHOD OF MEASUREMENT OF BUILDING AREAS

### BUILDING AREA (BA)

The total enclosed and unenclosed area of the building at all building floor levels measured between the normal outside face of any enclosing walls, balustrades and supports.

### USABLE FLOOR AREA (UFA)

The sum of the floor areas measured at floor level from the general inside face of walls of all interior spaces related to the primary function of the building. This will normally be computed by calculating the "Fully Enclosed Covered Area" (FECA) and deducting all the following areas supplementary to the primary function of the building:

#### Deductions

- (a) Common Use Areas
- (b) Service Areas
- (c) Non-Habitable Areas

### NET LETTABLE AREA (NLA)

#### Application

Calculating tenancy areas in office buildings and office & business parks.

#### Definition

3.1 The net lettable area of a building is the sum of its whole floor lettable areas.

3.2 Net Lettable Area - Whole Floors

The whole floor net lettable area is calculated by:

- 3.2.1 taking measurements from the internal finished surfaces of permanent internal walls and the internal finished surfaces of dominant portions of the permanent outer building walls.
- 3.2.2 included in the lettable area calculation are:
  - 3.2.2.1 window mullions
  - 3.2.2.2 window frames
  - 3.2.2.3 structural columns
  - 3.2.2.4 engaged perimeter columns or piers
  - 3.2.2.5 fire hose reels attached to walls, and,
  - 3.2.2.6 additional facilities specially constructed for or used by individual tenants that are not covered in section 3.2.3.

## BENCHMARKS

### METHOD OF MEASUREMENT OF BUILDING AREAS

3.2.3 Excluded from the lettable area of each tenancy are:

- 3.2.3.1 stairs, accessways, fire stairs, toilets, recessed doorways, cupboards, telecommunication cupboards, fire hose reel cupboards, lift shafts, escalators, smoke lobbies, plant/motor rooms, tea rooms and other service areas, where all are provided as standard facilities in the building.
- 3.2.3.2 lift lobbies where lifts face other lifts, blank walls or areas listed in section 3.2.3.1 above.
- 3.2.3.3 areas set aside for the provision of all services, such as electrical or telephone ducts and air conditioning risers to the floor, where such facilities are standard facilities in the building.
- 3.2.3.4 area dedicated as public spaces or thoroughfares such as foyers, atria and accessways in lift and building service areas.
- 3.2.3.5 areas and accessways set aside for use by service vehicles and for delivery of goods, where such areas are not for the exclusive use of occupiers of the floor or building.
- 3.2.3.6 areas and accessways set aside for car parking, and;
- 3.2.3.7 areas where there is less than 1.5 metre height clearance above floor level – these spaces should be measured and recorded separately.

#### 3.3 Net Lettable Area (NLA)

Follow 3.2 but measure to the centre line of inter-tenancy walls or partitions except where the walls or partitions adjoin public areas, such as lobbies and corridors, in which case measure to the line of the dominant portion of their public area faces.

#### 3.4 Treatment of Balconies, Verandahs etc.

Balconies, terraces, planter boxes, verandahs, awnings and covered areas should be excluded from tenancy area calculations, but may be separately identified for the purpose of negotiating rentals.

Areas should be measured to the inside face of the enclosing walls or structures. The outer edge of the awning or covered area is the defined edge.

# ASSETS AND FACILITIES

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Through the Rider Levett Bucknall | Life suite of services, we are able to provide meaningful, practical, commercial advice to clients in the delivery of sustainable and economically responsible projects.

The services help building owners understand the life value and expectancy of their buildings' whole life costs and provide options to extend the useful life of buildings and maintain quality.

## ASSETS AND FACILITIES SUSTAINABILITY AND QUALITY

Sustainability is concerned with improving the quality of life while living within the carrying capacity of supporting ecosystems. The planning, delivering and managing of our Built Environment requires a balance between environmental, economic and social factors.

The provision of a more productive, sustainable and liveable Built Environment is best considered in collaboration with all the stakeholders, including owners, managers and tenants. This process should include not only the review of sustainability objectives and initiatives, but address functional requirements and whole of life costings along with the implementation of facilities planning and asset management strategies. Rating systems developed to assist with performance benchmarking within Australia include:

**Green Star** - The Green Building Council of Australia's (GBCA) six star Environmental rating system evaluates: communities, design, as-built of buildings, interiors, building performance in terms of energy and water efficiency, indoor environmental quality and resource conservation.

**NABERS** - National Australian Built Environment Rating System is a national program managed by the NSW Department of Environment and Heritage. NABERS measures the environmental performance of Australian offices, tenancies, shopping centers, hotels, data centers and homes. There are NABERS tools for energy efficiency, water usage, waste management and indoor environment quality. Additionally, a NABERS Energy rating forms part of the Building Energy Efficiency Certificate (BEEC) requirement under the Commercial Building Disclosure (CBD) program. The CBD Program requires most sellers and lessors of office space of 2,000 M<sup>2</sup> or more to have an up-to-date Building Energy Efficiency Certificate (BEEC).

**IS** - The Infrastructure Sustainability Council of Australia's (ISCA) Infrastructure Sustainability (IS) rating scheme. IS is Australia's only comprehensive rating system for evaluating sustainability across design, construction and operation of infrastructure. IS evaluates the sustainability (including environmental, social, economic and governance aspects) of infrastructure projects and assets including transport, energy, water and communications sectors.

**Quality** - Property Council of Australia's (PCA) "a Guide to Office Building Quality" (2006, 2012), provides separate tools for assessing office building quality in new and existing buildings. The tools provide a guide to parameters that typically influence building quality. They offer a voluntary, market-based approach to classifying building characteristics and performance. The 2nd edition of the guide took effect on 1 January 2012 and includes expanded environmental performance criteria for Energy, Water, Waste and Indoor Environment. Additionally, the Building Management criteria was expanded to include Level of Service, Energy and Water Sub-Metering and Life Cycle/Maintenance Plan requirements.

**RLB** have staff accredited in the use of Green Star, NABERS, along with access to LEED, BREEAM, GreenMark and other international standards.

**RLB** also provides Building Quality Assessment (BQA) services for PCA Quality gradings.

# ASSETS AND FACILITIES MANAGEMENT STANDARDS

Since late 2012 Standards Australia, supported by FMA Australia, PCA, RICS, SBEnc, TEFMA and other industry bodies, have been involved with the ISO's international **Facilities Management (FM)** standards initiative. To date this has involved 34 countries, plus EuroFM and Global FM, looking at Terms and Definitions and Guidance on strategic sourcing and the development of agreements. Now designated ISO 41000, work has commenced on a Management Systems Standard for FM.

Separately, there was the release in 2014 of the ISO 55000 series for **Asset Management (AM)**. This comprises three parts: Overview, principles and terminology; Management systems requirements; and Guidelines for the application of *the standard*. ISO 55000 specifies the requirements for the establishment, implementation, maintenance and improvement of a management system for asset management, referred to as an "asset management system" for those wishing to:

- improve the realisation of value for their organization from their asset base
- be involved in the establishment, implementation, maintenance and improvement of an asset management system, and
- be involved in the planning, design, implementation and review of asset management activities along with service providers.



Meanwhile, FMA Australia's local efforts include "An Operational Guide to Sustainable Facilities Management" (2010) – a practical document that provides technical guidance in achieving a more sustainable FM approach in the Australian context.

Recent internationally publications have included the IFMA Foundation's "Work on the Move 2" (2016), IFMA's "FM Outlook" (2016) and "FM Outsourcing" (2016).

**RLB** can provide strategic advisory and technical support across the latest in AM and FM practices.

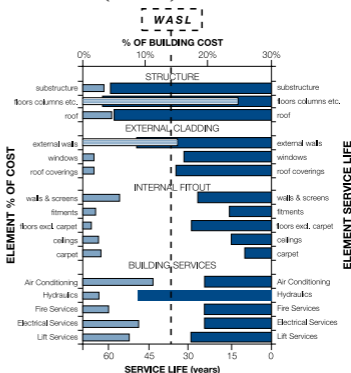
# ASSETS AND FACILITIES USEFUL LIFE ANALYSIS

## LIFE CYCLE ANALYSIS

Life Cycle Studies recognise that every 'whole' asset consists of many component parts, each with its own life expectancy, interrelationships, resulting quality and maintenance issues. However, in addition to physical obsolescence, useful life expectancy is also dependent on the influence of economic, functional, technological, social and legal obsolescence.

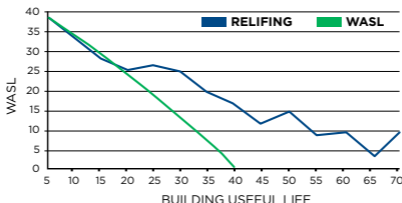
## WEIGHTED AVERAGE SERVICE LIFE

Weighted Average Service Life (WASL) is a methodology used to determine the "Useful Life" of an asset. For buildings the WASL is the collective result of applying service life criteria to each element of a cost analysis; excluding capital recurrent expenditure other than routine maintenance.



## RELIFING

RELifing takes the "WASL" a stage further by considering the effect of capital upgrades, refurbishments, replacement of plant, architectural fabric and finishes. Below is a graphical representation of a RELifing profile for a typical office building, compared to the base WASL. RELifing analysis is useful for developers, owners and occupiers in financial planning, calculating depreciation and in the negotiation of long term property costs.





# ASSETS AND FACILITIES OUTGOINGS

Outgoings are the costs required to operate a property that are generally recoverable by a Landlord from the tenants. The recovery of outgoing is usually calculated by a sharing of costs amongst tenants relative to their leasehold interest. They generally cover the recurrent costs for the delivery of services, maintenance, power and statutory and management costs.

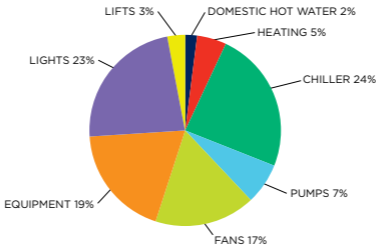
The level of recovery of outgoing is normally governed and regulated by leases and other agreements with tenants.

The cost of outgoing varies depending upon:

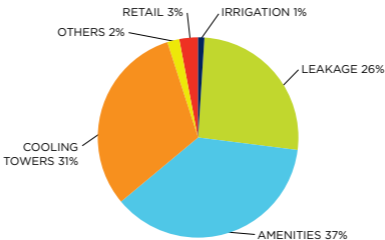
- the level of management and services provided
- lease agreements
- quality, type and efficiency of the building
- location and statutory regimes applicable

The following graphs highlight typical component usage of both energy and water consumption for office buildings.

**TYPICAL OFFICE ENERGY USAGE**



**TYPICAL OFFICE WATER USAGE**



## ASSETS AND FACILITIES ESSENTIAL SAFETY MEASURES

The following table provides a brief overview of building owners' responsibilities with regard to certifying the annual maintenance of essential safety systems and measures within commercial buildings.

	VIC	QLD	NSW	SA	TAS	ACT	WA
IS MAINTENANCE OF ESSENTIAL SAFETY MEASURES REQUIRED BY LEGISLATION (OTHER THAN BCA)?	✓	✓	✓	✓	✓	✓	✗
IS THERE A PRESCRIBED FORM OF CERTIFICATE?	✓	✓	✓	✓	✓	✗	✗
CERTIFICATE REQUIRED TO BE DISPLAYED	✗	✗	✓	✗	✓	NA	NA
CERTIFICATE REQUIRED TO BE FORWARDED TO AN AUTHORITY	✗	✓	✓	✓	✗	NA	NA
CAN FINES BE IMPOSED IF MAINTENANCE IS NOT CARRIED OUT?	✓	✓	✓	✗	✓	✓	NA

The relevant legislation governing the essential safety measures by State are:

- VIC** Building Regulations 2006 Part 12
- QLD** Queensland Fire and Rescue Service Amendment Act 2006
- NSW** Environmental Planning and Assessment Regulations 2000
- SA** SA Development Act 1993 & Minister's Specifications SA 76
- TAS** Fire Services Act 1979 & General Fire Regulations 2010
- ACT** ACT Emergencies Act 2004
- WA** No specific legislation

### Note:

The above is a brief guide only. Other state or national legislation and laws may also be relevant. It is recommended that all property owners consult a building surveyor regarding responsibilities associated with maintenance of essential measures within their buildings.

# ASSETS AND FACILITIES CAPITAL ALLOWANCES (TAX DEPRECIATION)

The Australian Taxation Office (ATO) allows a tax deduction for the recovery of the cost of assets used in a business or for the production of income. The Income Tax Assessment Act (ITAA) allows two types of allowances for assets:

## Division 40 - Depreciating Assets

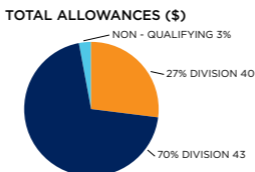
Assets with a limited effective life that are reasonably expected to decline in value. The decline in value is based on the cost and effective life of the depreciating asset, not its actual change in value. Examples of these are carpet, air conditioning plant, lights etc.

## Division 43 - Capital Allowances

Capital allowances are the Building Allowance and Structural Improvement deductions that are available for buildings. Depreciating rates are either 2.5% or 4% dependent on the use of the building and construction commencement date.

The ATO issued the latest effective life review of assets under TR2016/1 which came into effect on the 1st July 2016. The following broad principles outline the rates of depreciation deductions relative to income producing assets under ITAA 1997 (Division 40 & 43).

- The effective life and hence the rate of depreciation of an item of plant can be self-assessed by the taxpayer.
- Depreciating Assets (Division 40) are subject to a balancing adjustment on disposal. Capital works Deductions (Division 43) are subject to Capital Gains Tax on disposal.
- Low value pool option for assets less than \$1,000 in value depreciated at 18.75% in the first year and 37.50% in subsequent years.
- The Diminishing Value rate is currently 200% of Prime Cost rate (excluding Low value Pool), with the effect of accelerating the tax write off in earlier years of the asset's life.



Typical percentage apportionment of depreciation allowances based on new \$300m Commercial Office Tower with 6 Star Green Star certification.

RLB employs qualified staff, who are registered with the Tax Practitioners Board under the Tax Agent Services Act 2009, for the preparation of Capital Allowance Reports.

# ASSETS AND FACILITIES CAPITAL ALLOWANCES (TAX DEPRECIATION)

SCHEDULE OF ASSETS	PRIME COST %	DIMINISHING VALUE %
<b>THE FOLLOWING LIST GIVES A SAMPLE OF ELIGIBLE DEPRECIATING ASSETS.</b>		
<b>OFFICE BUILDING</b>		
HOT WATER INSTALLATIONS	6.667	13.333
MULTI TYPE FIRE DETECTION SYSTEMS	4-16.67	8-33.33
CENTRAL AIR CONDITIONING (VARIOUS RATES APPLY TO EQUIPMENT COMPONENTS)	4-10	8-20
ROOM AIR CONDITIONING	10	20
PACKAGED AIR CONDITIONING	6.667	13.333
ELECTRIC HAND DRYERS	10	20
DEMOUNTABLE PARTITIONS	5	10
SECURITY SYSTEMS	14.286-50	28.572-100
LIGHTING PLANT	5	10
VINYL FLOORING	10	20
CARPET	12.5	25
WINDOW BLINDS	5	10
OFFICE FURNITURE, FREESTANDING	4-10	8-20
ESCALATORS	5	10
LIFTS, ELEVATORS & HOISTS	3.333	6.667
SIGNAGE FOR BUSINESS IDENTIFICATION	10	20
<b>HOTELS, MOTELS</b>		
CARPETS	14.286	28.572
WINDOW BLINDS AND CURTAINS	16.667	33.333
FURNITURE AND FITTINGS (FREE STANDING)	14.286-20	28.572-40
HOT WATER SYSTEMS	10	20
BEDS AND BEDDING	14.286-50	28.572-100
<b>SHOPPING CENTRES</b>		
Generally, the list for office buildings will apply with the following additions:		
FLOATING TIMBER FLOORS	10	20
FURNITURE, FREESTANDING	10	20
<b>INDUSTRIAL</b>		
Generally, the list for office buildings will apply with the following additions:		
CRANES	5	10
GANTRIES	3	6
DOCK LEVELLERS	5	10
INFLATABLE DOCK SEALS	10	20
<b>RESIDENTIAL</b>		
Only for assets continuously owned prior to 10/05/17 or new assets (not used) purchased from 10/05/17.		
<b>FLOOR COVERINGS:</b>		
CARPET	10	20
FLOATING TIMBER	6.667	13.333
<b>Hotwater Systems (excluding piping):</b>		
ELECTRIC AND GAS	8.333	16.667
SOLAR	6.667	13.333
<b>Miscellaneous:</b>		
INTERCOM SYSTEM ASSETS	10	20
WINDOW BLINDS	10	20
ROOM AIR CONDITIONING	10	20
<b>Kitchen Assets:</b>		
COOKTOPS, OVENS, RANGEHOODS	8.333	16.667
DISHWASHERS, WASHING MACHINES, CLOTHES DRYERS	10	20

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Oceania	84
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# CALENDARS 2017 - 2020

## 2017

JANUARY 2017							FEBRUARY 2017							MARCH 2017						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	5	6	7	8	9	10	11	5	6	7	8	9	10	11
8	9	10	11	12	13	14	12	13	14	15	16	17	18	12	13	14	15	16	17	18
15	16	17	18	19	20	21	19	20	21	22	23	24	25	19	20	21	22	23	24	25
22	23	24	25	26	27	28	26	27	28	26	27	28	29	30	31					
29	30	31																		

APRIL 2017							MAY 2017							JUNE 2017							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
						1	1	2	3	4	5	6							1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10	
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17	
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24	
23	24	25	26	27	28	29	28	29	30	31	25	26	27	28	29	30					
30																					

JULY 2017							AUGUST 2017							SEPTEMBER 2017											
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S					
						1							1	2	3	4	5							1	2
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9					
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16					
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23					
23	24	25	26	27	28	29	27	28	29	30	31	24	25	26	27	28	29	30							
30	31																								

OCTOBER 2017							NOVEMBER 2017							DECEMBER 2017										
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S				
						1							1	2	3	4							1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9				
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16				
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23				
29	30	31					26	27	28	29	30	24	25	26	27	28	29	30						
													31											

## 2018

JANUARY 2018							FEBRUARY 2018							MARCH 2018									
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S			
	1	2	3	4	5	6						1	2	3							1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10			
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17			
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24			
28	29	30	31				25	26	27	28	25	26	27	28	29	30	31						

APRIL 2018							MAY 2018							JUNE 2018										
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S				
	1	2	3	4	5	6						1	2	3	4	5							1	2
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9				
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16				
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23				
29	30						27	28	29	30	31	24	25	26	27	28	29	30						

JULY 2018							AUGUST 2018							SEPTEMBER 2018								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
	1	2	3	4	5	6						1	2	3	4							1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8		
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15		
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22		
29	30	31					26	27	28	29	30	31	23	24	25	26	27	28	29			
													30									

OCTOBER 2018							NOVEMBER 2018							DECEMBER 2018							
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
	1	2	3	4	5	6						1	2	3							1
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8	
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15	
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22	
28	29	30	31				25	26	27	28	29	30	23	24	25	26	27	28	29		
													30	31							

# 2019

**JANUARY 2019**

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**FEBRUARY 2019**

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28		

**MARCH 2019**

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**APRIL 2019**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

**MAY 2019**

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

**JUNE 2019**

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

**JULY 2019**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**AUGUST 2019**

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

**SEPTEMBER 2019**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

**OCTOBER 2019**

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**NOVEMBER 2019**

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

**DECEMBER 2019**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

# 2020

**JANUARY 2020**

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

**FEBRUARY 2020**

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

**MARCH 2020**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**APRIL 2020**

S	M	T	W	T	F	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

**MAY 2020**

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

**JUNE 2020**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

**JULY 2020**

S	M	T	W	T	F	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

**AUGUST 2020**

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**SEPTEMBER 2020**

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

**OCTOBER 2020**

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

**NOVEMBER 2020**

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

**DECEMBER 2020**

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

# CALENDARS 2018

## ROSTERED DAYS OFF

	ADELAIDE	BRISBANE & DARWIN
BASIS	CFMEU EBA	CFMEU EBA
HOURS BASIS	36	36
JAN	MON 29	TUE 2
	TUE 30	WED 3
		THU 4
		FRI 5
FEB	MON 26	MON 5
	TUE 13	
MAR	WED 14	MON 5
	THU 29	
APR	TUE 3	TUE 3
	THU 26	WED 4
	FRI 27	THU 5
		FRI 6
		MON 23
		TUE 24
MAY	MON 14	MON 21
	MON 28	
JUN	TUE 12	MON 18
	WED 13	
JUL	MON 16	MON 16
	MON 30	
AUG	MON 13	MON 13
	MON 27	TUE 14
SEP	MON 10	MON 10
	MON 24	
OCT	TUE 2	TUE 2
	WED 3	
	MON 12	
NOV	MON 26	MON 5
		TUE 6
	FRI 21	
DEC	MON 24	MON 3
	MON 24	MON 24
		THU 27
		FRI 28
		MON 31
TOTAL	26	26



CANBERRA	MELBOURNE	PERTH	SYDNEY
CFMEU EBA	CFMEU EBA	CFMEU EBA	CFMEU EBA
36	36	36	36
TUE 2	FRI 5	TUE 2	MON 29
MON 29	MON 8	WED 3	
TUE 30	TUE 9	THU 4	
	MON 29	FRI 5	
		MON 29	
MON 12	MON 12	MON 12	MON 26
MON 26	MON 26		
MON 5	TUE 13	TUE 6	
TUE 13			
TUE 3	TUE 3		MON 23
MON 9		TUE 3	TUE 24
MON 23			
MON 7	MON 14		MON 21
MON 14	MON 28	MON 14	
FRI 8	TUE 12		TUE 12
TUE 12	MON 25	TUE 5	
MON 9	MON 9		MON 16
MON 16	MON 23	MON 2	
MON 6	MON 6	MON 30	MON 13
MON 20	MON 20	MON 27	
FRI 21	MON 3		MON 10
TUE 25	MON 17	TUE 25	
TUE 2	MON 1		TUE 2
MON 29	MON 15	MON 29	
MON 5	MON 5	MON 5	MON 5
TUE 6	WED 7	TUE 6	
	MON 19		
MON 3	MON 24	MON 24	TUE 4
THU 27	THU 27	THU 27	MON 24
	FRI 28	FRI 28	
		MON 31	
<b>26</b>	<b>26</b>	<b>21 FIXED &amp; 5 VARIABLE</b>	<b>13 FIXED &amp; 13 VARIABLE</b>

# CALENDARS

## PUBLIC HOLIDAYS IN AUSTRALIA

ALL STATES	2018	2019	2020
NEW YEARS DAY	1 JAN	1 JAN	1 JAN
AUSTRALIA DAY	26 JAN	28 JAN	26 JAN
GOOD FRIDAY	30 MAR	19 APR	10 APR
EASTER MONDAY	2 APR	22 APR	13 APR
ANZAC DAY	25 APR	25 APR	25 APR
QUEENS BIRTHDAY (EXCL QLD & WA)	11 JUN	10 JUN	8 JUN
CHRISTMAS DAY	25 DEC	25 DEC	25 DEC
BOXING DAY	26 DEC	26 DEC	26 DEC
<b>A.C.T</b>			
CANBERRA DAY	12 MAR	11 MAR	9 MAR
EASTER SATURDAY	31 MAR	20 APR	11 APR
EASTER SUNDAY	1 APR	21 APR	12 APR
RECONCILIATION DAY	28 MAY	27 MAY	25 MAY
LABOUR DAY	1 OCT	7 OCT	5 OCT
<b>NEW SOUTH WALES</b>			
EASTER SATURDAY	31 MAR	20 APR	11 APR
EASTER SUNDAY	1 APR	21 APR	12 APR
BANK HOLIDAY	6 AUG	5 AUG	3 AUG
LABOUR DAY	1 OCT	7 OCT	5 OCT
<b>NORTHERN TERRITORY</b>			
EASTER SATURDAY	31 MAR	20 APR	11 APR
MAY DAY	7 MAY	6 MAY	4 MAY
PICNIC DAY	6 AUG	5 AUG	3 AUG
<b>QUEENSLAND</b>			
EASTER SATURDAY	31 MAR	20 APR	11 APR
LABOUR DAY	7 MAY	6 MAY	4 MAY
ROYAL QUEENSLAND SHOW	15 AUG	14 AUG	12 AUG
QUEENS BIRTHDAY	1 OCT	7 OCT	5 OCT
<b>SOUTH AUSTRALIA</b>			
EASTER SATURDAY	31 MAR	20 APR	11 APR
ADELAIDE CUP DAY	12 MAR	11 MAR	9 MAR
LABOUR DAY	1 OCT	7 OCT	5 OCT
<b>TASMANIA</b>			
ROYAL HOBART REGATTA	12 FEB	11 FEB	10 FEB
LAUNCESTON CUP	28 FEB	27 FEB	26 FEB
EIGHT HOURS DAY	12 MAR	11 MAR	9 MAR
EASTER TUESDAY	3 APR	23 APR	14 APR
LAUNCESTON SHOW	11 OCT	10 OCT	8 OCT
HOBART SHOW	25 NOV	24 NOV	22 NOV
RECREATION DAY (NORTHERN)	5 NOV	4 NOV	2 NOV
<b>VICTORIA</b>			
LABOUR DAY	12 MAR	11 MAR	9 MAR
EASTER SATURDAY	31 MAR	20 APR	11 APR
EASTER SUNDAY	1 APR	21 APR	12 APR
GRAND FINAL EVE DAY	28 SEP	27 SEP	25 SEP
MELBOURNE CUP DAY	6 NOV	5 NOV	3 NOV
<b>WESTERN AUSTRALIA</b>			
LABOUR DAY	5 MAR	4 MAR	2 MAR
FOUNDATION DAY	4 JUN	3 JUN	1 JUN
QUEENS BIRTHDAY	24 SEP	30 SEP	28 SEP

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