



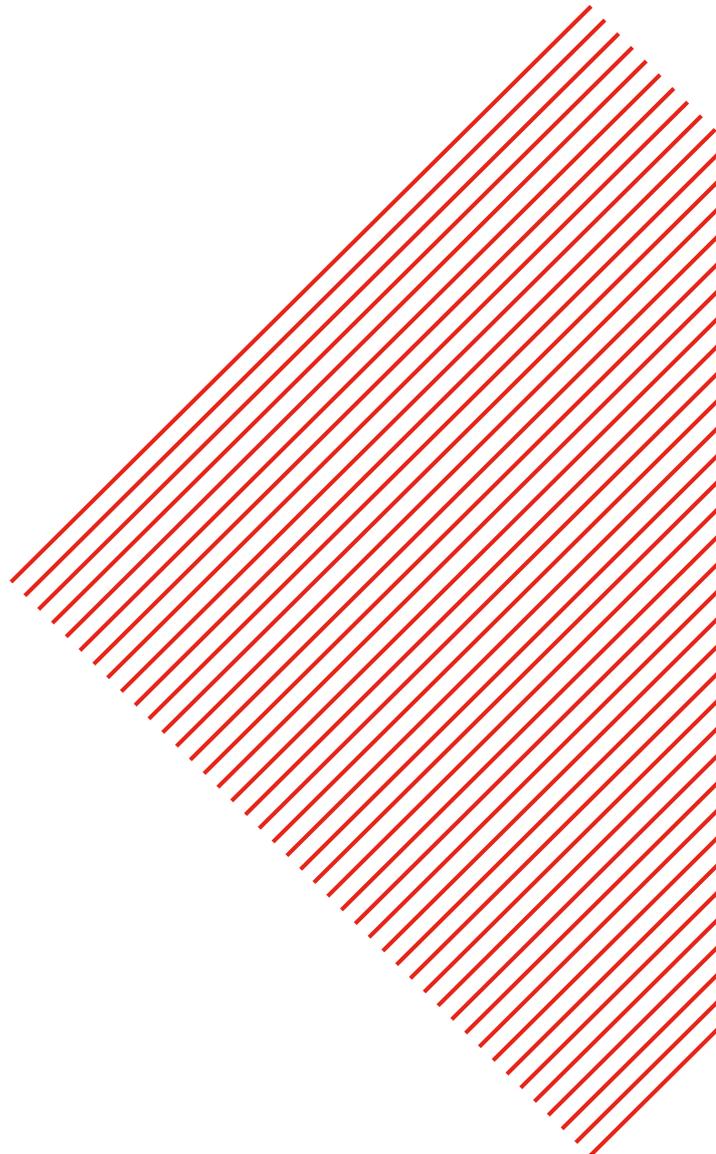
Association of Consulting Architects
The Business of Architecture

Procuring Architectural Services

An Industry
Discussion
Paper

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Prepared by ACA – WA





ACA – WA

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About the ACA

The Association of Consulting Architects (ACA) is a national, non-profit, member-based association that leads the discussion on business matters in architecture in Australia.

The ACA is the key body representing architectural employers and helps architectural firms navigate the changing world of practice.

The ACA provides regular advice and information on business and employment matters, promotes awareness of and discussion about business issues, and advocates for better business practices and legislative frameworks.

In Western Australia, the ACA is committed to ensuring the quality of our built environment, and the sustainability of the profession. The ACA aims to ensure that obligations to current and future generations of owners, users and investors are met through appropriate, well-resourced and well-briefed design teams.

In Western Australia, the ACA – WA Branch has a membership of over 50 practices, representing over 800 architects and design professionals. Our members include major national and international firms, and the majority of medium sized practices working in metropolitan Perth.

The ACA is committed to maintaining and improving standards in the provision of architectural services, and to ensuring that the community is well served by good architectural design. Good quality and robust procurement methodologies are central to this objective.



‘A key legacy offered by any government is the quality of buildings, infrastructure and the public realm that they produce. Well-designed buildings and places promote community pride and identity and offer an enduring legacy. Over the life of a building, evidence shows that bad design ends up costing money, while good design ends up costing less and, at the same time, adds real value.

Good design does not just happen: it is purposefully and carefully undertaken by skilled practitioners, valued by the client, and needs to be protected through delivery of the project.’

OVGA, *Government as Smart Client*

Introduction

This industry discussion paper aims to provoke conversation and thought about the role procurement practice plays in the development of our cities and communities. It helps inform clients about the fundamentals of good procurement of architectural services and the impact of procurement on projects. It encourages clients and their representatives to consider whole-of-life value when selecting an architect (rather than assess initial consulting costs in isolation) and provides guidance and advice on how to do this.

This is important because knowledgeable clients and effective procurement processes enable architects to meet client needs in an efficient, timely and cost-effective manner, and to produce buildings that contribute positively to both client success and community wellbeing.

All buildings should be designed to fulfill their intended purpose. They should be efficient to build, maintain and operate, and should have a positive impact on the communities they serve.

Procurement methods have a significant impact on quality, time frames and cost of architectural projects. Good procurement can support high quality design and documentation and establish effective, efficient relationships between client, architect, consultants and contractors. In this scenario, upfront investment in excellent design optimises construction cost value and whole-of-life costs. Conversely, poor procurement processes can entrench problems at the beginning of a project, which lead to inefficient processes, high on-costs and increased long-term life-cycle costs.

The key ingredients for a successful project are as follows:

- A clear project vision and well written and researched brief
- An experienced and committed client representative and project champion
- A program with achievable milestones and an appropriate budget
- A design team with the appropriate and relevant skills to the project task
- Adequate time and resources time for the design team to perform their services properly

This discussion paper explains how clients and client organisations can establish procurement processes that support and deliver these ingredients. The focus is on public sector procurement processes; however, the issues raised are also highly relevant to the private sector, where procurement methodologies and quality vary greatly.



Bunbury Catholic College: Mercy Campus

Architect: **CODA + Broderick Architects JV**
Client: **CEO**
Builder: **BGC (Stage 1) Smiths (Stage 2)**
Cost Manager: **Wilde + Woollard**
Year Completed: **2017**
Consultancy Agreement **AIA Client Architect Agreement**
Delivery Method: **Traditional: Invited Tender (AS 4000)**
Total Contract Value: **\$31m**
Photographer: **Peter Bennetts**
Awards: **2015 Think Brick Horbury Hunt Award**
2015 Design Institute of Australia (WA) Commendation
2016 Australian Institute of Architects (WA) Awards Education Commendation

The Value of Good Design

Investing in good design can have major benefits in social, cultural, environmental and economic terms. Good design brings value to the community in many different ways and the benefits of good design affect many different groups in society. Obviously design impacts on those immediately connected to a project – clients and users – but the social, economic and environmental benefits of good design are felt far more widely. Such benefits are cumulative – they have the potential to reinforce and enhance each other, and build up over time. Generations of our communities will derive benefit from the design decisions we make today.

This is an obligation that we at the ACA take very seriously indeed, and we work hard to ensure that our members can operate to the very best of their professional abilities, and thereby deliver the greatest benefit to clients and the community.

However, some recent trends in project procurement make it increasingly difficult for architects to contribute to the best of their abilities. This discussion paper draws on many research papers and considerable anecdotal evidence provided by ACA members across the country, all of which convey a clear common message – that standards of design documentation and coordination have fallen over the last 20 years or so and are continuing to fall. The leading cause is the decrease in real fee levels combined with increasingly complex design, services and structural requirements and greater levels of compliance and reporting requirements (such as sustainable standards and safety in design).

As a result, architects are not appropriately resourced and are therefore unable to spend sufficient time conducting research, exploring options, looking at whole-of-life value, checking documentation and co-ordinating the work of secondary consultants. The main factor driving down fees to unsustainable levels is the use of procurement methods that focus on price rather than quality and long-term value.

Clients and the wider community are also suffering as a result of this trend towards reduced fees, as they are not getting true value for money from projects. In this context, it is important to remember that, while architectural fees can amount to approximately 0.2% of the overall lifecycle cost of a building, the work done in the design stage can have the greatest influence on the initial capital cost and on the ongoing operational costs for the life of the building.

It is of utmost importance that this decline is addressed by those in a position to do something about it – the organisations responsible for procuring architectural services in both the public and private sectors.

This discussion paper offers guidelines and advice on how to develop procurement processes that will help achieve the best value and quality design.



‘We cannot afford **not to invest in good design. Good design is not just about the aesthetic improvement of our environment, it is as much about improved quality of life, equality of opportunity and economic growth. If we want to be a successful and sustainable society we have to overcome our ignorance about the importance of design and depart from our culturally-ingrained notion that a poor quality environment is the norm...’**

*Sir Stuart Lipton, Chairman, CABA,
The Value of Good Design*

8 Elements of Successful Procurement of an Architectural Project

To ensure a successful project outcome it is important to use a sound methodology for procuring the services of the right architect.

1. Prepare a well-researched project brief or project development plan, including an adequate budget and program

The standard of briefs available for the respondents during a Request for Proposal (RFP) or a Request for Tender (RFT) varies greatly from one client organisation to the next. To ensure that your organisation produces a great brief, refer to the 'Guidelines for the Preparation of a Brief for Architectural Services', prepared by the ACA. This valuable tool assists clients to develop a clear vision, brief, criteria for success and objectives for the project.

This enables architects to submit proposals that are based on a thorough understanding of the project requirements.

2. Commit to a quality-based selection (QBS) process or 'two envelope' methodology

Value for money is about more than getting the right architect at a reasonable fee. Using a quality based selection process is a critical part of this. Appointing a less skilled architect at a fee that discourages a full quality service does not result in value for money in the long term.

One successful QBS method is the 'two envelope' system. In this system the client determines an acceptable band of fees for the project, based upon industry feedback and experience, prior to assessment of the bid. Architects are then required to submit two separate documents (or envelopes) – one with responses to select criteria for the project, the other outlining a proposed fee or fee scale.

The client team and their representatives assess the quality, experience, approach and resources of the design teams first. A successful shortlist is then drawn up. The fee envelopes are only opened after the shortlist

has been compiled. If the top-ranking architect is within the acceptable fee band, they are selected. If not, a value-for-money assessment may be made, with a decision based on negotiating between costs and quality of the submissions.

3. Select the architect before selecting the secondary consultants

There are two key reasons for clients to engage the architect as the initial and primary design consultant. There is also a strong case for separating the procurement processes of architect and secondary consultants.

The first reason concerns the definition of scope. Unless the project brief is extremely thorough and comprehensive, it is unlikely to contain sufficient information to fully define the scope of services of the secondary consultants prior to the architect being engaged. Consulting services may also be required in a yet-to-be-identified area, which means bringing additional consultants on board as the project progresses. Conversely, secondary consultant services identified at the start of a project may not in fact be required as the project progresses.

The second reason concerns the quality of the team and value for money. Unless the architect has full confidence that the selection process will assess the quality of the whole design team, rather than assessing on price alone, they may be pressured into selecting the cheapest consultant rather than the most qualified and appropriate consultant in order to be competitive. This exposes the architect and the client to the risks associated with having the wrong consultant at the wrong fee on the design team.

When run correctly, a separate selection process for the remainder of the design team is also cost competitive. For example, the commissioned architect would be required to obtain detailed proposals from suitable consultants using a similar QBS process and criteria. This also allows the client to be involved in the evaluation.

4. Use an appropriate tendering system that matches submission demands with project complexity

A two-stage process may be appropriate for particularly large or important projects. In this scenario architects are required to respond to an Expression of Interest (EOI) that does not include a fee proposal. A shortlist group is then invited to enter the more detailed Request for Proposal (RFP) stage. This process can satisfy a client's needs (if required) to open the tender to the public without putting participating architects to the unnecessary expense of a full RFP.

This approach is appropriate for projects that are significant in terms of scale, complexity, aspiration and public importance. It is not necessary for many smaller projects normally procured through public commissions.

Clients considering such an approach should bear in mind that multi-stage submissions and protracted procurement processes favour practices with the resources to underwrite the (often substantial) costs of such submissions. Adopting this process for projects with a more standard scope may exclude smaller practices from projects for which their skills, resources and capability are entirely appropriate.

ACA members have noted an increase in submission requirements (and resulting costs for preparing submissions) for projects, often disproportionate to the scale, complexity and final feeable value of the project.

5. Use QBS criteria to evaluate proposals

A QBS process aims to qualitatively assess the capability of the respondents based on the scale, complexity and actual level of risk of the design services prior to considering price as part of an overall value-for-money assessment.

Important criteria (in no particular order) include the following:

- Design approach statement
- Evidence of ability to produce high quality design outcomes
- Proposed methodology for providing the services
- Evidence of capacity to undertake a project of this type, scale and complexity
- Experience and qualifications of nominated key personnel including their capacity to undertake their nominated role over the life of the project
- References and referees

Individual projects may have further specific criteria to be addressed as part of the qualitative assessment.

6. Appoint an experienced selection panel

An experienced, skilled selection panel is able to balance quantitative criteria (fees and cost) with qualitative aspects. In specialist projects it may also be necessary to engage independent consultants to inform the assessment process. The selection panel should include a diversity of knowledge and experience to enable considered and well-rounded decisions.

The determination of 'value for money' requires careful consideration. The selection panel should keep in mind that, over the life of a project, true value is maintained through a high quality design service and not from cutting fees.

7. Determine pre-set fees (using data derived from the ACA Architects' Time/Cost Calculation Guide)

This is an alternative approach to the two-envelope method. In this model, fees are pre-set, with the primary assessment process responding to qualitative criteria. A quantitative component can also be introduced by asking respondents to identify the tasks and time allocations they are offering to deliver the services for the identified fee.

The ACA has carried out substantial primary and secondary research on the average resources required to adequately perform architectural services across a range of project types and sizes. This research is the basis of the ACA Architects' Time/Cost Calculation Guide. This is an ACA member resource, but is also available to client groups under licence to assist in procurement processes and selection.

8. Use a consultancy agreement that fairly allocates risk and is insurable.

Choose a standard form of consultancy agreement that promotes collaboration, integration and direct communication with the design team. A collaborative integrated team results in the highest quality, best value-for-money project outcomes.

ACA members report a rise in unfair contracting terms in recent years and industry insurers have noted that the requirements of some agreements contravene policy allowances. This leads to the risk of a practice being uninsured in the event of a claim. Shifting risk that is best managed by the client or another party to the design team, who may not be able to manage and control it, is counterproductive when that risk becomes uninsurable.

Achieving Project Success

Informed clients understand the essential ingredients of a successful project and recognise that the measure of a successful project can extend many years beyond their own working life. Enlightened clients recognise the value that architects can bring to a project in the short term and to the community in the longer term. Such clients are defined by the approach they take to the procurement and the delivery of design services.

To start a project off on a solid footing, the informed client should adopt a sound strategic approach with the following goals:

- To achieve the best short-term and long-term outcomes
- To establish and realise a clear vision
- To engage the best team with the lowest level of risk
- To deliver the best possible value for money for the life of the project

Maximising value for money means prioritising the impact of design and documentation quality on the following:

- Construction costs
- Duration of construction
- Lifecycle costs of the project
- Quality of the contribution to the community

The following are the main factors affecting a successful project:

- **Design quality**
- **Effective risk management**
- **Design policies and culture**
- **Vision**
- **Project brief**
- **Project budget**
- **Project program**
- **Project procurement**
- **The right project team**
- **Design review processes**
- **Communication**

These are discussed in the following section.



Heirloom by Match

Architect: **Cameron Chisholm Nicol**
Client: **Match** and then novated to **Built**
Builder: **Built**
Project Manager: **Total Project Management**
Cost Manager: **RBB**
Year Completed: **2016**
Consultancy Agreement **Match – bespoke, Built – bespoke**
Delivery Method: **Novated Design & Construct**
Total Contract Value: **\$68m**
Photographer: **Greg Hocking**

1. Invest in design quality

'The greatest impact on the total lifecycle costs of a project occurs at the front end of the project and rapidly diminishes as the project proceeds.'

Michael Peck, *Sustaining Service Standards*

Investing in quality architectural services is the key to minimising project costs and maximising value for money. Good design provides great potential for savings at the construction stage of projects, while poor design increases the potential for cost blowouts during and after construction.

Good design is essential to achieving successful project outcomes, and selecting the best design team for the job is critical to project success. Good design involves delivering:

- Buildings that are a social, functional and financial success
- Buildings that maximise energy efficiency and minimise waste
- Buildings that encourage confidence and wellbeing in the community, are culturally rich, and offer an enduring legacy
- Buildings and places that are efficient, adaptable, resilient to climate change and contribute positively to urban growth challenges
- Buildings that demonstrate respect for the rich cultural heritage of the existing built environment and provide an ongoing culturally rich legacy that fosters community pride and prosperity
- Appropriate construction costs through the consideration of all options and the assessment of those options with an eye to reducing both construction and operating costs
- Lower construction variations and additional costs through the completion of high quality documentation
- Reduced running costs through the consideration of all options and the assessment of those options with a view to reducing costs over the life of the building

Good design requires engaging the right architects and consultants and allocating the fees necessary to ensure that the total cost of the project and, in particular, construction and operational costs are minimised through a strategic and informed consideration of all options and opportunities.

2. Manage risk appropriately

'Identification and analysis of all risks and uncertainty inherent in the project and its circumstances will form an integral part of risk management. All parties will assess and manage risk and will commit to using competent processes for identifying, analysing and mitigating risks at all stages of the project. Fair and adequate risk management and allocation processes will play a significant role in co-ordination and integration along the supply chain.'

Queensland Government Taskforce, *Getting It Right The First Time*

Good risk management is central to delivering successful project outcomes and is essential to effectively minimising the risks for clients. The best process is to identify the risks, engage the right consultants and allocate the identified risks to the appropriate consultant.

The following are central to effective risk management:

- Comprehensive project briefs
- Allowance of adequate time and resources
- The highest possible (or most appropriate) standard of competence
- Engaging consultants after the architect is appointed and seeking the assistance of the architect in the preparation of adequate consultant briefs
- Direct engagement of consultants by the client
- Identifying all risk collectively and allocating it appropriately to where it can be reasonably managed
- Preparing a risk management plan with input from all consultants
- Approaching risk strategically and being pragmatic
- Ensuring all contractual conditions are fair, deliverable and insurable
- Identifying unforeseen issues in design reviews
- Providing contingencies for risk
- Incorporating 'value for money' into all decision-making processes
- Interactive, integrated design and construction processes

3. Develop good design policies and cultures

'Western Australians have been blessed with a state of great beauty and reward. But with this gift comes great responsibility. Our wealth and economic momentum mean growth is both welcome and inevitable, but we have an obligation to ensure that this growth is carefully planned – and not allowed to happen unchecked.'

The pursuit of design excellence in our public buildings and spaces is consistent with Government's commitment to seeking the best possible value from its investment in state infrastructure. Better design will deliver better value by producing high quality, high performance facilities which will serve well the Western Australian community, both now and into the future.'

Colin Barnett, Premier of Western Australia, 'Foreword', *Better Places, Better Spaces*

Developing a clear client design policy is critical to ensuring successful project delivery. It should engender a healthy culture that fosters intelligent design and delivery processes, and that achieves the following:

- Recognition of the importance of a healthy culture in contemporary management
- An environment where there is a clear vision and where leadership is key
- A commitment to training for procurement and associated staff
- Value for money as the best criteria for the assessment of a tender
- An environment in which price is less important as part of a value assessment
- Consistency between government policy and procurement behaviour

A good design policy achieves the following:

- Clearly defined successful outcomes
- Consistency across the organisation and state
- Clear guidelines and direction
- An emphasis on the best qualified consultants
- A high-quality objective procurement process
- Establishment and use of design review panels
- Clear priority to value for money (not cost alone)

Good design policy ensures that the procurement team understands the critical role that the design team plays in maximising value. This includes ensuring that the project is fit for purpose, reducing overall construction costs and providing the systems that ensure appointments are made on the basis of value.

An informed public client understands the importance of the right culture, the right resources and the right people.

4. Have a clear vision statement

'The vision statement can be used to assess whether the objectives are being delivered as the building design takes shape. It gives everyone a central reference that will measure how well the project meets its aims.'

OVGA, *Government as Smart Client*

The OVGA observes that enlightened clients start every project by defining a vision statement, and notes that without one, a project can easily suffer from a lack of clarity and focus, and wasted time and resources.

A vision statement assists the design team to deliver good design outcomes. It should:

- Identify the vision at project inception
- Ensure it is positive and engaging
- Communicate it to all parties involved
- Ensure consensus
- Incorporate the vision into all documentation

5. Start with a good brief

The brief provides the necessary information to describe the rationale, purpose, goals, costs, risks, constraints and time and performance requirements of a project. It may have two components – the project brief and the design team brief. Between them, these documents should adequately define the project needs and the expectations of the services required to achieve them.

The Project Brief

The project brief is a dynamic working document. This starts as an outline brief prepared by the client that is then developed into a detailed design brief (or return brief). The detailed brief is often best developed by the design team in conjunction with the client and stakeholders through an iterative, collaborative process.

The following steps are critical to the development of the project brief:

- Ensure the project vision is incorporated in all documentation
- Develop a clear and holistic document
- Establish clear benchmarks for quality and success
- Identify all stakeholders
- Clearly describe the business objectives and associated outcomes
- Clearly describe criteria for post-occupancy evaluation
- Outline a realistic budget and program developed in conjunction with cost managers
- Provide for peer review (design advisory role)
- Develop a separate design team brief

Design Team Brief

The design team brief sets out the requirements of the architectural and consultant services and describes the aims and vision of the project through the inclusion of the outline brief.

The following steps are critical to the development of the design team brief:

- Ensure the project vision is incorporated
- Prioritise design quality and the ability to successfully deliver the project
- Clearly describe the requirements for architectural and other consultants' services
- Clearly outline budget and program, identifying any limitations or special conditions
- Clearly identify all stakeholders and any required management plan for these stakeholders
- Use performance indicators to guide design options, avoiding prescriptive requirements
- Provide for a peer review (design advisory role)

6. Set a realistic budget

The project budget is the estimate of funds required to deliver the project, and should directly relate to the needs of the project as expressed in the brief. The budget includes immediate costs such as land, capital costs of construction, professional fees, staff costs, contingencies for design and construction, as well as whole-of-life costs, fit-out and equipment, and financing.

The project budget must be set with a realistic understanding of how short-term and long-term outcomes might be achieved. The following steps are central to setting an appropriate budget for design:

- Recognise all factors contributing to value for money
- Understand feasibility and schematic design as an interactive process
- Include adequate allowances for contingencies in design and construction
- Refer to all relevant policies impacting on design
- Use relevant recent benchmarks
- Recognise the overall costs of the project

CSIRO research clearly shows that inadequate design fee budgets have significantly and negatively impacted on project outcomes over the last 12 to 15 years, noting that:

'By reducing design fees to minimise costs, clients and developers were by their own actions, contributing to the problems which lead to inefficiencies in the construction process and increases in overall project costs. The results of the survey (of designers and builders) clearly show a need for clients and developers to allocate adequate funds and time to the planning and design phases of a project, in order to maximise construction process efficiency and minimise overall project costs.'

...These benefits would be reflected in reduced project and contractual risk and a higher level of profitability for both contractors and developers. More reasonable fee levels would also enable designers to restore staff training programs – to develop a higher standard of designer – and encourage innovation. Increased fees may also stem the outflow of experienced designers, which has the potential to diminish the knowledge base in the industry.'

(Tilly, McFallan and Tucker)

7. Develop a clear program

The project program identifies dates for the completion of stages, including the design stages. This should represent a realistic schedule of activities and should allow adequate time to complete each task in an optimal manner. Many decisions will be made based on this program, including those related to design and finance.

There is a direct relationship between the quality of the outcome and the time allowed to achieve it. Time taken for design and documentation is a sound investment in the context of the project construction time and the life of the project.

Risk minimisation is best achieved and opportunities are best identified at the front end of the project, and this requires time.

The following are central to effective programming:

- Understand the time required to deliver the best outcomes
- Be aware of the importance of investing at the front end of the project
- Allow adequate time for briefing, design and documentation
- Seek input from the design team when setting the timeframe
- Allow for unforeseen circumstances and the delays they may cause
- Take past benchmarks into account

'Procurement of the design is the first and most significant part of an extended process that affects the design outcomes of a project. The figure below illustrates the diminishing ability to affect the quality of design outcomes as the project progresses through its stages of delivery.'

OVGA, *Government as Smart Client*

8. Use an effective procurement model

'The method by which a building project is procured has a significant impact on the quality of the final building. While good design is able to be achieved with all procurement methods, some make it seriously challenging unless their potential threats to design quality are understood and well managed.'

Geoffrey London, OVGA

The procurement process has a significant effect on the quality and value for money of built outcomes. There is a growing tendency in both the government and the private sector to procure projects through methods other than the traditional design/tender/construct approach. This has consequences for design quality and long-term outcomes. Alternative project procurement models such as PPP and D&C may have some time and short-term financial benefits for the client. However, these models also distance the design team from the client, and as a result it is difficult to produce projects with design quality superior to those procured through the traditional approach. These methods also often force design decisions to be made on price rather than on value for money and quality, and clients often do not have an adequate understanding of the long-term implications of such decisions.

The inaugural Victorian Government Architect, John Denton, led a Victorian Government Design procurement Review (over-viewed by an interdepartmental Committee) and developed key recommendations to Government based upon extensive project review, including:

1. For all projects of design importance the engagement of the design team should be direct between the State and the design firm. Design importance is a wide-ranging definition that can cover everything from schools to Supreme Courts.
2. For projects of design importance where a PPP is being considered, an additional procurement model should be available, allowing the direct engagement of the design team by the State rather than through a consortium.
3. For projects of design importance, the Design and Construct (D&C) approach should be discouraged in favour of at least the Document and Construct approach, or preferably construct only, with the design team being engaged directly by the State.

The traditional procurement approach (where the design team is engaged by the client) allows the enlightened client to select the design team based on their capacity to provide the standard of design and service that will ensure a successful outcome, in particular short-term and long-term value for money.

9. Select an excellent project team

The success of a project is heavily dependent on the quality of the project team. The project team includes the client (lead and representatives), key stakeholders, users and facility managers and the design team.

Key matters to consider in relation to the project team are identification of the client team members, the project 'champion' and design team members, and effective project management protocols and processes.

The client team should:

- Understand the implications of the procurement approach for design outcomes
- Be willing to seek external advice where warranted
- Include personnel who have a sound understanding of the design process
- Understand their responsibility for the design brief and as primary contacts

The project should include a qualified 'champion' who will:

- Comment on and endorse the design process
- Take responsibility for the delivery of good design
- Be involved in identifying risk and opportunities

The design team should:

- Be the team best able to deliver value for money
- Demonstrate an understanding of excellent design processes
- Have the capacity to deliver quality design
- Have a high capacity to work effectively and harmoniously with the client team

The client project manager leads the project on behalf of the client and should:

- Be design-oriented to ensure quality design
- Have direct and robust access to the client and design teams throughout the project
- Have direct input into the appointment of the other consultants
- Have a clearly defined role, particularly in terms of approvals and responsibilities

10. Embed design review

'It is through the design process that the largest impact can be made to the recurrent and operational costs of public infrastructure.'

Ashton Raggatt McDougall, 'How To Produce High Quality Design'

Design review is an essential element of the design process and is key to achieving high quality outcomes from the project as a whole.

Design review involves expert, independent assessment of design proposals at key stages of the project, with a view to ensuring that the emerging design meets the requirements of the vision, the project brief and the needs of the client to ensure the delivery of successful outcomes.

Design reviews offer objectivity and external perspectives on the project. The following are central to achieving successful outcomes:

- Undertaking reviews early in and often during the project
- Ensuring reviews are conducted by independent experts
- Including professions from across the built environment
- Allowing challenges to the design brief in the review process

Design reviews have been found time and again to deliver clear public and project benefits.

'Design reviews deliver public benefit by prioritising the quality of architecture, landscape architecture and urban design, including the design of streets and public spaces. It is a tried and tested method of promoting good design, a cost effective way to improve quality and is applicable to any procurement type.'

Design Council, *Design Review Principles + Practice*

11. Ensure effective communication

'Communication in the building and construction industry is constrained as a result of the adversarial climate and the blame culture this climate has engendered. This is one of the consequences of extremely tight time and cost pressures in a very competitive environment.'

Queensland Government Taskforce, *Getting It Right The First Time*

An extremely important ingredient in any successful project is people working together openly and collaboratively. This is supported by substantial research and literature, which also identifies that poor communication, decreases the likelihood of optimal outcomes. It is essential, therefore, that contractual arrangements encourage effective and open communication. The Government of Western Australia publication CIDA: Sources for Pursuing Design Quality for Public Infrastructure notes that, 'Poor communication and inadequacies in interactions between designers and other parties contribute to rework on Australian projects.'

The following steps support open and effective communication:

- Ensure that all documentation is accessible and intelligible
- Prepare a communication plan for each project
- Regularly assess the effectiveness of communication plans
- Prioritise face-to-face communication
- Use relevant information technology
- Use communication to drive good design and successful outcomes
- Use communication to support appropriate cultures and policies that encourage successful outcomes



'There is substantial opportunity to improve design outcomes by improving design procurement practices that impact on design quality. The procurement of a quality project relies upon the engagement of a quality design team. It involves not just the contractual method used, but also the implementation of a built project from idea to delivery and on to operation. It is important to distinguish between the procurement of buildings and infrastructure and the procurement of design services.'

OVGA, *Government as Smart Client*



Fiona Stanley Hospital

Architect: Fiona Stanley Hospital Design Collaboration
(comprising HASSELL, Silver Thomas Hanley and Hames Sharley)

Client: Brookfield Multiplex

Year Completed: 2014

Delivery Method: 2 stage Managing Contractor

Total Project Value: \$1.2b

Awards (select)

2016 Australian Institute of Landscape Architects National Awards – Landscape Architecture Award for Civic Landscape

2016 Australian Institute of Landscape Architects (Western Australia) Awards – Award of Excellence for Civic Landscape

2015 Australian Institute of Architects National Awards - National Commendation for Public Architecture

2015 Australian Institute of Architects Western Australian Awards - George Temple Poole Award

2015 Australian Institute of Architects (Western Australia) Awards - Jeffrey Howlett Award for Public Architecture

2015 Australian Institute of Architects (Western Australia) Awards – Wallace Greenham Award for Sustainable Architecture

2015 Australian Institute of Architects (Western Australia) Awards – State Commendation for Urban Design

Extracting Full Value: Understanding the Real Issues

'While the cost of design is a very small proportion of the total project cost, it has a direct relationship to overall value, including lower capital cost, lower running costs and higher quality.'

All Party Parliamentary Group for Excellence in the Built Environment, *A Better Deal For Public Building*

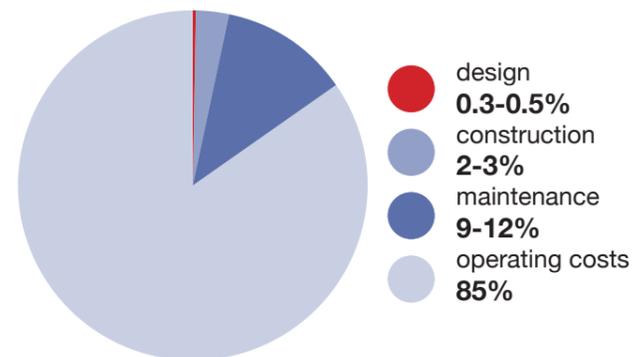


Figure 1: *Improving Standards of Design in the Procurement of Public Buildings*, Office of Government Commerce and CABE, October 2002, p. 6.

The best outcome of any architectural project is excellent value for money over the whole life of the building or project. These whole-of-life costs include consultancy fees, capital costs and running costs. Understanding these figures, and the cost and impact of both design fees and poor procurement, is key to improving procurement processes.

The advantages of early investment

Procurement processes that promote early investment in briefing, due diligence, cost planning, design and documentation ensure that the client gets the best possible project with the highest level of design for the optimum total capital cost, in the optimum total construction time, while minimising ongoing maintenance and operational costs.

Independent research conducted by the CSIRO (reported in *Design and Documentation Quality and Its Impact on the Construction Process*) demonstrates a clear and direct relationship between the quality of design and documentation and construction cost and time. That is, high quality design and documentation play a significant part in minimising construction cost overrun risks and optimising construction time, while poor design and documentation has serious negative impacts.

The UK government report *Improving Standards of Design in the Procurement of Public Buildings*, by the Office of Government Commerce and the Council for Architecture and the Built Environment (CABE), provides excellent analysis of design fees in relation to overall costs. This states that consultancy fees for design usually account for 0.3% to 0.5% of the overall cost of a project. In contrast, operational and maintenance costs can be up to 85% of whole-of-life costs. And yet the biggest impact on operating costs can be made at the design stage. The report concludes that the best way to reduce whole-of-life cost is to invest upfront in excellent architectural design and documentation.

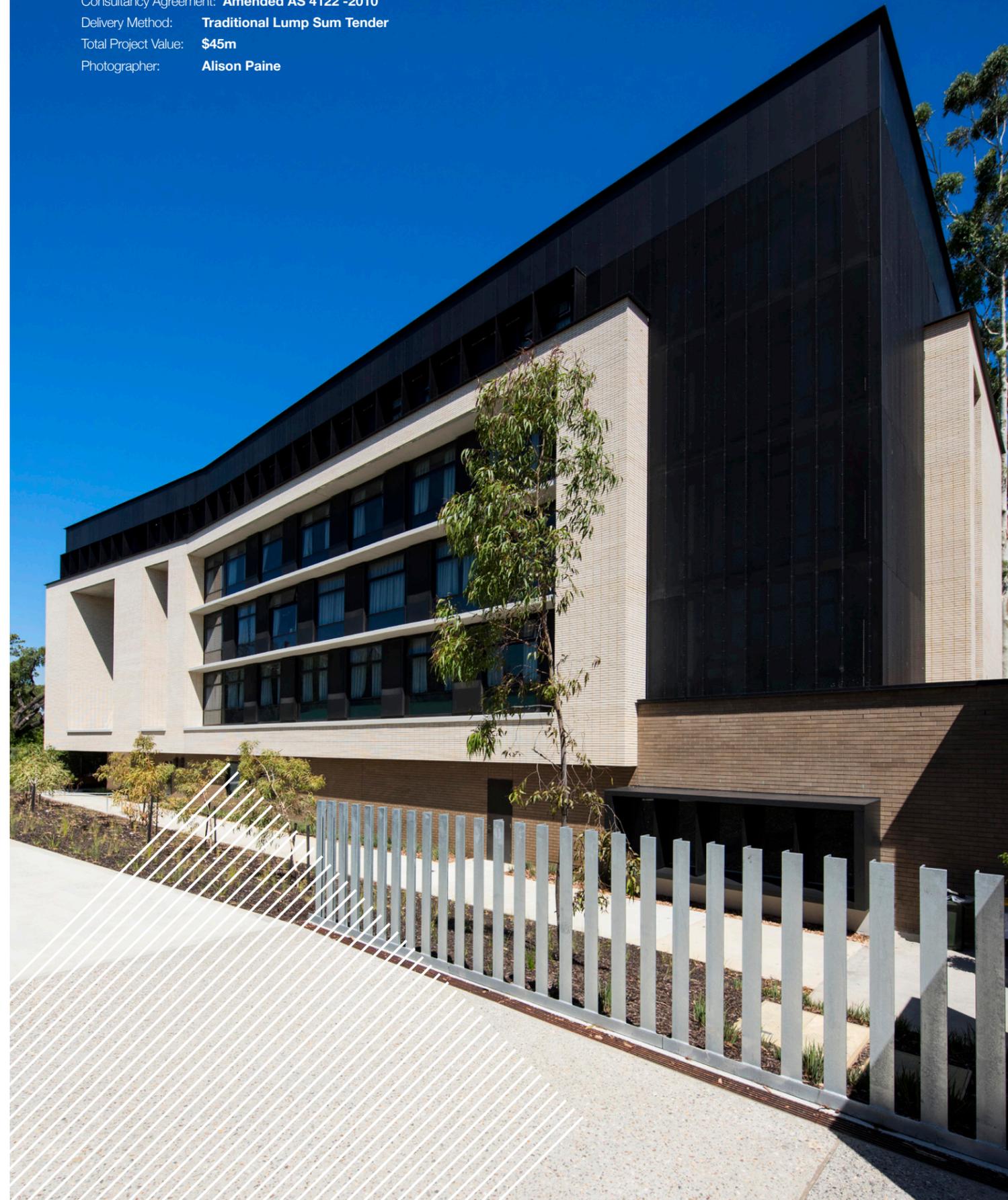
Enabling the design team to do their job properly (and funding this) at the beginning of the project results in substantial savings over the full life of the building. For example, an architect's fee that is 20% higher than the lowest tendered fee may represent only 0.06 – 0.1% of the total project cost, and yet has the potential to have a significant impact on the quality and overall costs of the project.

Selecting the design team on price alone facilitates selection on a very narrow band of assessment, leaving the client exposed to possible risks and challenges when building, delivering, selling or occupying the project. Regrettably, many clients are unaware of this. They are not familiar with the impact of good procurement processes or knowledgeable about how to conduct them. For example, a survey and report by the UK Chartered Institute of Building identified that '77 per cent of respondents believed clients are not sufficiently knowledgeable about procurement in the construction industry, which often leads to poor advice being taken and results in a project coming in over-budget, outside of time frames, or to a poor standard.'

In Australia, current procurement practices do not always favour the selection of the best design team based on value for money. Consequently, many projects fall short in delivering their goals. This section of the discussion paper aims to increase awareness within the industry of the risks and possible pitfalls of poor procurement processes and the impact of these on the delivery of quality projects.

St Thomas More College STUDENT ACCOMMODATION

Architect:	COX Howlett & Bailey Woodland
Client:	St Thomas More College Council
Builder:	Pindan
Project Manager:	COX Howlett & Bailey Woodland
Cost Manager:	DAVSON + WARD
Year Completed:	2016
Consultancy Agreement:	Amended AS 4122 -2010
Delivery Method:	Traditional Lump Sum Tender
Total Project Value:	\$45m
Photographer:	Alison Paine



Challenges to delivering quality design outcomes

Good outcomes resulting in true value for money in architecture and construction are being achieved less often than they should be, and less often than they once were.

The CSIRO research by Tilly, McFallan and Tucker identifies that the greatest decline in design standards is in the limited examination of design options and proposals and minimal emphasis on innovation.

In addition, contractors are concerned about the decline in the proper examination of design proposals and constructibility issues and the level of co-ordination of construction documentation.

It is important to understand the factors that contribute to this, so that they can be effectively addressed through better procurement processes.

What are some of the indicators of these impediments?

A. Declining consulting fees

Recently, there has been a growing focus on gross overall fees ahead of real value when selecting the design team. This is combined with a diminished emphasis on the team's capability and the time required to provide a professional level of service. This focus on lowering fees is exacerbated by the absence of guidance as to the fees necessary to provide appropriate service for different building types. The result is increasing pressure to reduce fees, and insufficient time to provide a professional standard of service.

Challenges from declining fees include low remuneration for most levels of architectural services, and the risk of losing skilled staff to other industries where design risk is acknowledged as a key element in delivery of value-for-money buildings (such as contractor-engaged design managers).

B. Declining standards

The direct result of declining fees is that architects have little choice but to reduce the hours spent on projects and the seniority of the staff working on them. This means that there is far less time spent looking at options and considering cost-effective solutions. The result is often an 'acceptable' solution rather than an 'excellent' solution. This tendency towards mediocrity is made worse when the fees don't allow adequate time to check and co-ordinate documentation. This is a major factor in cost increases during construction.

Tilly, McFallan and Tucker found a substantial increase in onsite issues such as rework, variations, cost overruns, extensions of time, program delays, contractual disputes and requests for information.

These had increased 46% over 12 to 15 years. They also identify that almost all contractors (93%) adjust the price submitted for tender in response to the quality of the documentation, and most (73%) also increased the time allocation.

This makes it very clear that reducing upfront design fees substantially increases the costs of the project.

These findings are reinforced by a study carried out by the Queensland Government Taskforce, *Getting It Right The First Time – A Plan To Reverse Declining Standards In Project Design Within The Building And Construction Industry*. This identifies the following:

- The declining standard of project design documentation can be directly connected to a 24% decrease in design fees over the past 12 to 15 years.
- 60% to 90% of all variations are due to poor project design documentation.
- Poor documentation has led to an inefficient, non-competitive industry; cost overruns, rework and timeframe extensions; high stress levels, loss of morale and reduced individual output; and adversarial behaviour and diminished reputations.

Clients and government have a significant role in addressing these serious issues. They must be more informed about the impact of existing procurement processes, and improving them to ensure our built environment meets the needs of clients and communities.

C. Unfair contracts

Increasingly architects are being asked to enter into unfair contracts. These are characterised by:

- Unfair and uninsurable transfer of risk through bespoke consultant services agreements
- Contracts novating the architect to the contractor on unfavourable terms

The current edition of Australian Standard AS 4122-2010 - General Conditions of Contract for Consultants, provides an up-to-date, contemporary, and relevant standard agreement, which was drafted by the key industry bodies to meet the needs of the building and construction industry and governments through the fair and proportionate allocation of risk in line with current industry best practice.

The AS contract is widely used. However, it is common practice to include substantial amendments to change this industry-agreed risk allocation to the detriment of the consultant. This re-allocation of risk can leave clients vulnerable to the loss of protection afforded by their consultants' insurance cover. Insurer Planned Cover has also identified a 'tendency by procurers at all levels of government to use client-drafted contracts rather than supporting Australian Standard contracts.'

Extreme examples of the unfair transfer of risk include clients in the private sector using bespoke contracts that reduce risks to the extent that the consultant is uninsured and of government amending the AS 4122-2010 by contracting out of its own legislation. These practices are grossly unfair and often counterproductive.

Recent legislation on unfair contract terms aims to address these issues. Wendy Poulton of informed by Planned Cover also observes architects are gaining the skills needed to evaluate contracts and manage negotiation and that clients increasingly expect architects to actively negotiate.

What we have seen increasingly over the last decade is clients investing their efforts and legal resources in seeking to transfer risks to other parties. It is apparent from the 1,500 consultancy agreements we review each year that some principals and their advisers believe that construction can be made wholly predictable and risk-free – for the principal. This misconception translates into onerous client/architect agreements that impose unmanageable risks, performance standards equivalent to perfection and require architects to 'contract out' of legislative protections, such as proportionate liability.

Principals are insisting on architects maintaining professional indemnity insurance policies with higher indemnity limits than ever before, yet many of the clauses being written into the client/architect agreements for these same projects risk enlivening policy exclusions in the event of claim, which may result in the cover available to the architect for that claim being reduced or perhaps denied.

*Planned Cover
Cos Cirocco, Business Manager*



'The quality of design and documentation has a major influence on the overall performance and efficiency of construction projects. As designers provide the graphic and written representations which allow contractors and subcontractors to transform concepts and ideas into physical reality, it is the efficiency with which this transformation occurs that determines the level of project performance and efficiency achieved.'

Tilly, McFallan and Tucker, *Design and Documentation Quality and Its Impact on the Construction Process*.

ACA Recommendations

Every client of architectural services has a responsibility to its stakeholders and the community to ensure the delivery of a successful project and to achieve the best possible outcome.

The following recommendations, combined with the guidance offered in preceding sections, will assist client representatives to develop design and procurement policies and processes that ensure we all benefit from good design, and that projects represent true value for money.

- 1. Establish a best practice procurement process as the critical first step to achieve the successful outcomes stakeholders deserve.**
- 2. Develop, support and maintain cultures within client organisations that value quality and 'value for money'.**
- 3. Ensure that every project is properly run from start to finish in terms of design, management and approach.**
- 4. Use appropriate quality based procurement criteria, balanced to the scale, complexity and overall feeable value of the project.**
- 5. Use qualification-based systems to appoint design teams and emphasise the architect's ability to deliver a high standard of service.**
- 6. Consider price in the context of the total cost and overall value for money**
- 7. Appoint architects as the first and lead consultant, and seek their assistance in engaging the right secondary consultants.**
- 8. Recognise that perceived or real savings at the design stage often increases costs at the construction stage and beyond.**

In addition to these recommendations for clients, there is a major recommendation for the wider industry. We need up-to-date, sophisticated analysis of the interplay between design fees, procurement processes, design quality and value for money over the life of a building. This discussion paper draws on excellent research and analysis from a wide range of sources.

The major Australian research, *Design and Documentation Quality and Its Impact on the Construction Process*, by Tilly, McFallan and Tucker at the CSIRO, was published in 2000. It has ongoing relevance at a time when fee levels have further reduced, applying increasing pressure on architects delivering quality services. However, we need new research and analysis of figures in the intervening 17 years.

The ACA hopes that these recommendations, and the guidelines offered in this discussion paper, provide useful and effective resources for those procuring buildings. This will ensure that clients, governments and the community all benefit from high quality design and the value that it brings to all.



Wembley Golf Course – Hospitality Redevelopment

Architect:	Gresley Abas Architects
Client:	Town of Cambridge
Project Manager:	NS Projects
Cost Manager:	Aquenta
Year Completed:	2016
Consultancy Agreement:	AS-4122
Delivery Method:	Design: Public EOI, shortlisted to (paid) design tender. Construction: Traditional delivery AS2124 - open tender PM as Superintendent's Representative
Total Project Value:	\$12M
Photographer:	Rob Frith

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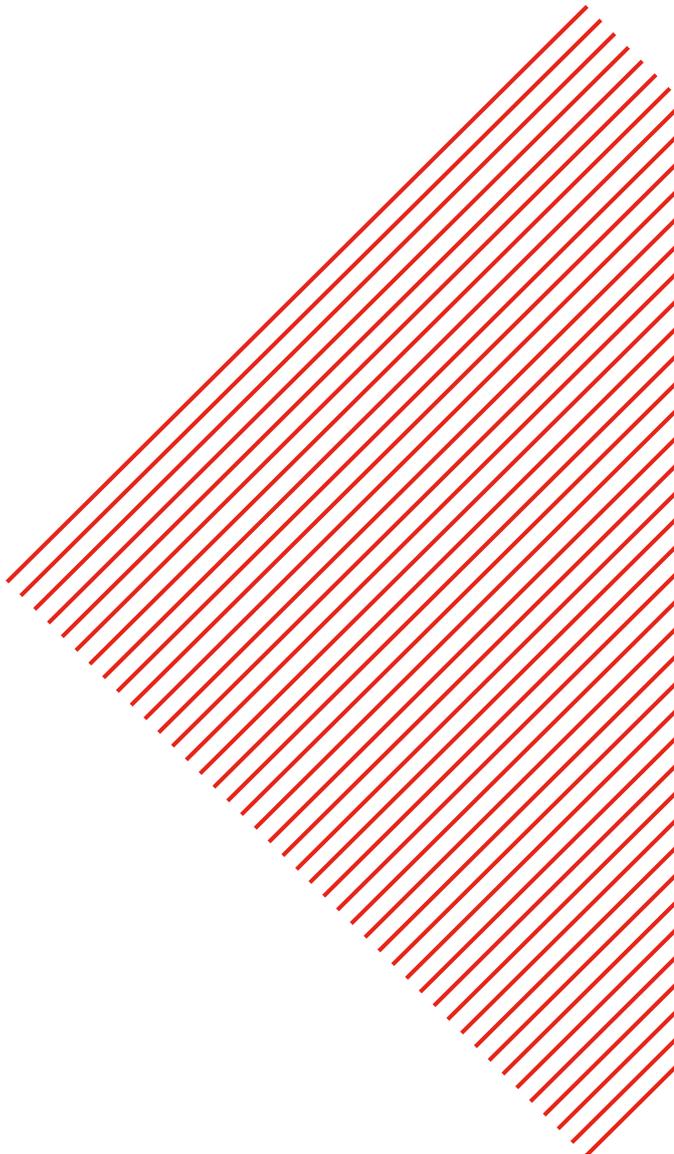
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Bunbury Catholic College: Mercy Campus

Architect:	CODA + Broderick Architects JV
Client:	CEO
Builder:	BGC (Stage 1) Smiths (Stage 2)
Cost Manager:	Wilde + Woollard
Year Completed:	2017
Consultancy Agreement:	AIA Client Architect Agreement
Delivery Method:	Traditional: Invited Tender (AS 4000)
Total Contract Value:	\$31m
Photographer:	Peter Bennetts
Awards:	2015 Think Brick Horbury Hunt Award 2015 Design Institute of Australia (WA) Commendation 2016 Australian Institute of Architects (WA) Awards Education Commendation



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