



CAPABILITY STATEMENT

COMMUNITY & CULTURAL



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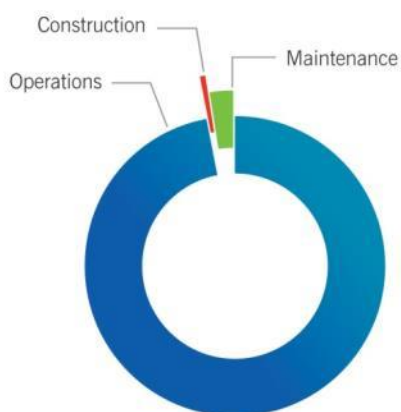
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1. AN ASTUTE INVESTMENT

Great design solutions are inherently easy to build and maintain. The cost of getting it right increases exponentially as the project progresses from design through to construction and operation.

For every \$1 spent on constructing a building, over the subsequent thirty years, \$5 will be spent on maintenance and \$200 on operations. The Whole of Life Cost¹ (WOLC) for each dollar spent on construction is \$206.²



The design decisions taken by the architect have the most significant influence on WOLC. This means every dollar invested in us can have the greatest multiplier effect on reducing subsequent costs and improving your project's economic return.

2. COST CONTROL & INNOVATION

During the Project Planning Phase, we will identify potential significant savings in both operational and capex expenditure, rather than looking to simply comply with the “deemed to satisfy” provisions of the code.

The use of “deemed to satisfy provisions” to obtain BCA compliance is often not the most cost-effective or efficient approach. We look beyond the letter of the law to identify and implement innovative performance-based solutions to

achieve compliance and the required safety standards.

At Karratha Airport we instigated wind tunnel testing based on a 3-D printout of the terminal generated from our CAD model. The purpose of this was to model and measure the actual wind pressures. Our performance-based analysis realised substantial savings in the structural steel costs as well as the glazing and roof sheeting as the resultant wind pressures were significantly less than those specified under the ‘deemed to satisfy’ provisions of the BCA.

Other examples of such investigations include:

- Fire modelling of the Conservatorium of Music and the Mackay Entertainment Centre to substantially reduce smoke venting requirements.
- Establishment of compartmentalisation at Karratha Airport to eliminate the requirement for smoke venting and sprinklers deemed mandatory by previous consultants.
- Compartmentalisation and fire isolation strategies at Mackay Airport to eliminate a \$1.5 million upgrade to the hydrant services.

Our approach to finding innovative solutions to meet required safety standards can realise significant cost savings for our clients.

Long before it was fashionable we were using ESD to reduce our client's WOLC. We have been in the forefront of utilising:

- 100% outside air cycling, CO₂ monitoring of return air to reduce fresh air requirements.
- Installation of low speed high-volume fans to permit raised set temperatures which can affect energy savings in the order of 30%.

¹ Excluding Inflation

² Office of Government Commerce, *Project procurement lifecycle the integrated process-Achieving Excellence in Construction Procurement Guide 03*, London 2007.

- Fluid modelling of natural ventilation to ensure effective natural ventilation and allow shutdown of air-conditioning compressor during winter months.

We consistently integrate passive features such as climatically appropriate construction, building management systems, natural lighting and ventilation into our designs. Thus reducing ongoing energy and operational costs for our clients.

3. WHO WE ARE

Stea have been operating for over 40 years. During this time, we have provided a comprehensive range of architectural services encompassing all aspects of building, planning and design and construction to a wide range of clients.

Our Practice is headed by Steve Turner and all staff including our 5 technical/professional staff report directly to Steve. Stea is a corporate member of the Australian Institute of Architects and both the practice and Steve are currently registered with the Australian, NSW, QLD and WA Board of Architects.

From our roots as a regional practice we have successfully expanded our portfolio, winning commissions across Australia. We deliver timeless designs that fulfil your requirements for space, function and economy while complementing the natural and built environment.

Our clients describe us as 'contemporary and innovative but balanced with relevant industry experience'. We believe that this is the perfect combination to deliver the best result for you

4. THE DESIGN CHALLENGES

Our experience has allowed us to formulate a deep understanding of the design and redevelopment challenges that face community and cultural projects. Our clients benefit from the knowledge transfer that we bring to the table.

Flexibility, functionality, efficiency, 'beginning with the end', and ESD are all critical components of any good design. The integration of these elements into our designs maximises your control over your building and enables you to respond effectively to economic changes.

FLEXIBILITY

One certainty for any building project is things change. The ever increasing acceleration in the rate of change reduces the probability of correctly anticipating future requirements. Flexible building designs mitigate this dilemma.

We strive to design buildings that are easy to extend with minimal disruption to their continued operation. By minimising internal structural support systems, we permit the reorganisation of spaces and the incorporation service provisions that are consistent with adaptation.

We have a fundamental belief that the maximum flexibility, permitted within the budgetary constraints, should be incorporated in any building, thus increasing its life expectancy.

FUNCTIONALITY

Functionality is a fundamental cornerstone of any well-designed building. Deficiencies in the building's support of the functions they accommodate will increase operational costs and will, over the life of the building, dwarf the construction costs.

The construction of a new building is an opportunity to investigate and challenge the functions to be accommodated. Our established methodologies have succeeded in realising significant operational cost reductions through providing the most supportive building layout.

Our innovative layout for a regional airport created a 'queuing by stealth' through a tropical walkway. This reduced the required number of security staff and resulted in annual savings in the order of \$250,000.

EFFICIENCY

We understand the importance of maximising the commercial return on any building project. We view all design decisions in the context of their impact on the whole of life cost of the building.

Energy efficiency, the reduction of maintenance costs, the ease of maintenance and plant replacement, and the incorporation of passive climatic controls, are just a few examples of areas that we take into consideration in all our designs.

BEGINNING WITH THE END

In today's climate significant up-front expenditure on possible future growth is difficult to justify.

However, without consideration of probable future development, any subsequent changes to the completed building will have a significant impact on its ultimate per square metre cost.

We believe in doing it once and minimising your capital costs over the life of the building. Accordingly, our design process includes consideration of the next development phase. This involves identifying the ultimate constraint parameters and anticipating how our design might accommodate expansion to these limits. Often, this involves a broad-brush master plan.

Our process ensures that the current design permits the future necessary stages of expansion without expensive modification to completed works and minimal disruption to the ongoing function.

ESD

Legislation and societal expectations make ESD an essential part of all new developments but, ESD is not new. Long before it was fashionable we were using ESD to reduce our client's WOLC.

We consistently integrate passive features such as climatically appropriate construction, building management systems, natural lighting and ventilation into our designs. Thus reducing ongoing energy costs for our clients.

We have a comprehensive understanding of the:

- Impact of climatic conditions,
- Importance of orientation, thermal mass, insulation and effective shading,
- Effect these passive measures can have on energy consumption.

For any project we undertake a detailed review of the climatic averages, establish the appropriate climatic design features and identify opportunities to reduce energy consumption.

With the redevelopment of existing buildings, we recommend a detailed audit of both its passive and active environmental controls. This allows us to identify opportunities to reduce current energy consumption.

Detailed below are some examples of our effective utilisation of ESD to deliver WOLC savings for our clients.

DUDLEY DENNY CITY LIBRARY



Our design incorporates skylights with operable windows, low speed high volume fans, 100% outside air cycling, CO² monitoring, north facing skylight to provide daylighting and a relief path for the 100% outside air cycling.

WHITSUNDAY, LONGREACH AND ONSLOW AIRPORTS



The introduction of low speed, high volume ceiling fans allowed an increase in the AC set temperatures, without any loss of comfort. Less cooling capacity was required, resulting in reduced plant and construction costs.

In addition to the reduced capital expenditure, these clients now enjoy ongoing energy savings of up to 30% of their cooling costs in peak load conditions.

GLADSTONE CITY LIBRARY



This library incorporates a fully computerised building management system (BMS) which automatically manages the air-conditioning and lighting. This supplements the natural lighting and ventilation provided in our design.

The design process involved detailed analysis of the natural ventilation with computerised fluid dynamic modelling to maximise the air distribution patterns and resultant temperature throughout the building.

Extensive analysis of the energy-saving features demonstrated a return period of less than four years for the capital investment required.

GORDON WHITE LIBRARY



Our design incorporates low maintenance materials and extensive natural lighting and ventilation. This reduces energy consumption in winter when the building can successfully operate without air-conditioning.

The lighting has been designed to allow stepping down of fluorescent light levels, when daylight is available, through the extensive skylight system.

CENTRAL QUEENSLAND CONSERVATORIUM OF MUSIC



Our design combines the theatre and foyer air-conditioning systems. This reduces the air-conditioning capacity required to cool the building by providing air conditioning only to areas currently in use.

Through CO₂ monitoring, we reduced the fresh air intakes when the theatre was being used in teaching and rehearsing mode, and required less fresh air, than when an audience was in attendance.

5. WHAT WE'VE DONE

Below is a brief description of a small selection of projects that demonstrate the breadth and depth of our relevant experience.

DUDLEY DENNY CITY LIBRARY



This project was based on the refurbishment of an CBD building, donated to Mackay Regional Council, to accommodate a new, state of the art city library.

The flexibility of the internal layout was maximised through a large open space surrounded by quiet areas, study rooms, booth seating, a young adults' area, a children's space and a special heritage display.

The main feature of the design is the overwhelming, floor to ceiling, glass light-well in the centre of the plan that opens the library and below arcade to the above skylight.

A two storey green wall, skylights, low speed high volume fans, 100% outside air cycling, CO² monitoring, glazing and forest planting to the north and glazing to the south create a calm and environmentally sustainable oasis in the hustle and bustle of the CBD, enticing passing pedestrians to enter.

KUCOM THEATRE



The concept plan for the Kucom Theatre provided a unique and extremely noticeable premises for a small amateur theatre company. Our concept used shipping containers as the primary structural form with economical sandwich panel infills providing the articulated roof form, niches for the required lighting rails and access walkways.

Shipping containers were placed end on end to create side walls, supporting two additional containers spanning between as the Theatre Gallery. An inclined vertical container was then utilised to provide an access stairway and generate a striking architectural form.

Access through the inclined side wall containers provided safe access to lighting grids as well as the required internal acoustic dispersion.

It was anticipated that the unique presentation of this experimental building would significantly lift the profile of the amateur theatre company and provide an exceedingly high level of public recognition as to their location. Unfortunately, due to funding constraints this did not proceed beyond concept.

TWEED REGIONAL ROWING CENTRE



We were commissioned to provide preliminary sketch of concept plan for new regional rowing centre to assist Tweed Heads and Coolangatta Rowing Club in securing development funding.

The concept plan provides easy access to the water, appropriate storage facilities for boats, a gymnasium, a club room and a café. Directly outside the café there is also an outdoor seating area (with clear view of the lake). The layout of the facilities is such that one set of amenities can serve all areas.

JURU ENTERPRISES BOWEN



This project includes training, administration and recreational facilities for an indigenous community organisation.

GORDON WHITE LIBRARY



We were awarded this commission despite being the only respondent not to submit the requested design with our tender.

Instead we submitted a comprehensive methodology that explained how we would go about ensuring that we could design a facility that would comprehensively meet all of Council's requirements and result in the most economical solution. This included public consultation and staff workshops to take into account the needs and wishes of all key stakeholders and end users and secure community ownership of the completed building.

Our implemented methodology resulted in great public acceptance and staff ownership of the final building. As a result, Steve Turner was invited to present a paper, on the project and process, at QLD State Library conference.

The building was recognised by the Australian Institute of Architects receiving a Regional Commendation and the Central QLD Building of the Year award.

GLADSTONE CITY LIBRARY



Due to the success of the Gordon White Library, we were engaged (through public tender) by Gladstone City Council to design a 2000m² library.

CENTRAL QUEENSLAND CONSERVATORIUM OF MUSIC



We were responsible for the design documentation and construction administration of the first Australian purpose-built Conservatorium of Music located outside of a capital city. All spaces within the building have been designed to be multifunctional as the building is used as both a teaching and performance facility.

The complex contains a 200 seat fully equipped training theatre, a recording studio and a dance studio, as well as teaching and practice facilities. Through innovative design and the creative use of low-cost materials, the conservatorium was constructed at two thirds the cost per square metre as the Queensland Conservatorium of Music at Southbank in Brisbane.

MACKAY ENTERTAINMENT CENTRE



This commission was won in an anonymous design completion against four national firms. The completed 1100 seat theatre won a RAIA state architectural award and was heralded in the theatrical press as one of the best regional theatres.

ANDERGROVE COMMUNITY CENTRE



We were responsible for the community consultation, preparation of brief, design documentation and contract administration of this community centre.

The resultant design included a community hall, kitchen, meeting rooms to accommodate community events and activities such as immunisation, and an extensive veranda and outdoor play area.

The building is now a well-used amenity for a wide range of activities from play groups, to meetings and functions.

Our design received a Commendation from the Australian Institute of Architects.

NEBO CULTURAL CENTRE



After completing the upgrade of the Shire of Nebo existing council chambers and library we were engaged to undertake the design and development of a tourism, arts and cultural and town service centre. This also incorporated a historic cottage, Snow's Place.

Our methodology consisted of three major stages:

- Public Forum / Public Consultation
- Preparation of the Design Brief
- Preparation of a Master Plan including costings.

Each stage was subject to review and confirmation with the Steering Committee and Council prior to progressing to the subsequent stage.

The resultant master plan proposed five main buildings:

- Snow's Place
- Library and Rural Transaction Centre
- Museum
- Kiosk/Gallery/Amenities Building
- Lookout Tower and external covered recreational area

We then undertook concept planning preparation, schematic design budgets and assisted Council with the preparation of funding applications.

Unfortunately, the project did not proceed due to Queensland's amalgamation of the shires.

GOOD SHEPHERD LODGE



Over a decade we undertook a major upgrade, in excess of \$20 million, on the Good Shepherd Lodge, a large aged care facility in Mackay.

Our aim was to provide an attractive well utilised non-institutional focal point for residents with a sense of community.

Our design was based on an 'indoor street' concept that included meeting facilities, consultation rooms, a community health centre, as well as retail outlets such as a coffee shop, hairdressers and podiatrists.

As part of this project we also redesigned the Good Shepard Lodge Dementia Unit. Through the inherent ability to connect multiple destinations within the lodge, our courtyard design significantly reduced the number of reportable incidences involving dementia patients.

As a result of the success of this building, Steve Turner was invited to present at the World Alzheimer's conference in Barcelona.

MACKAY BASE HOSPITAL

Working with a national firm, we were responsible for a major redevelopment of the Mackay Base Hospital. This included the development of a new entry, external presentation of the aged complex and upgrading major clinical, non-clinical and administration areas.

MACKAY COMMUNITY HEALTH CENTRE

The centre was commissioned by Queensland Health. While specifically pitched and equipped to provide health services the centre also includes meeting and retreat spaces and landscaped

outdoor areas. The incorporation of these elements has maximised the facility's use and enjoyment by the Mackay community

OTHER PROJECTS INCLUDE:

- The Blue Nursing Service and Day Respite Community Centre Mackay
- Mackay Surf Club
- Community halls for multiple schools
- Maternal and child health and numerous regional medical centres
- RSL independent living units



Examples of our work in other sectors can be viewed at our website www.stea.com.au.

6. HOW WE WORK WITH YOU

We have developed a tested methodology that ensures the best possible design solution is developed and then realised through the development and construction phase.

There are three critical factors essential to any successful community project:

- Public consultation and ownership
- A clear understanding of the projects goals, purpose, aspirations and values.
- The establishment of a masterplan which forms the underpinning blueprint for future development

We understand the importance of getting this right.

WE LISTEN

We are acutely aware of the importance of gaining a comprehensive understanding of your unique requirements. We recognise the benefit of experience and wisdom developed at the coal-face.

Where appropriate we facilitate workshops with representatives of your community to explore, identify and record the objectives, needs and aspirations for your project.

This broad consultation enables us to prepare a comprehensive project brief and engenders a sense of ownership in the final building for all those involved.

From the information recorded at the workshop a comprehensive schedule of accommodation is then formulated. This schedule together with the workshop outcomes forms the brief for the masterplan.

The masterplan seeks to:

- Clearly document the ultimate site development expectations
- Address possible problems
- Provide a vision for the final development of the facility.



The plan also seeks to ensure that each stage contributes to realising the best possible design alternative for the final building as well as meeting specific short and medium-term objectives.

When we have defined and documented the project scope, and confirmed and agreed the budget, we are responsible for the project delivery within budget.

KEY PERSONNEL

STEVEN TURNER

Practice Principal / Owner
Design Architect / Project Director



Steve is the Practice Principal and owner of Stea. He holds an honours degree in Architecture, a Bachelor of Design Studies from the University of Queensland and is a Fellow of the Australian Institute of Architects.

With more than 40 years experience in the design of a wide range of projects across Australia, Steve's forte is the creation of buildings of architectural merit within limited budgets.

His designs have been recognised through numerous awards in the areas of design, construction, tourism and operations including:

SUNSHINE COAST AIRPORT

Australian Airports Association
2011 & 2012 Major Airport of the Year

BHP Australia MBPM Association
1997 Award of Merit

ROCKHAMPTON AIRPORT

Australian Airport Association
2007 Major Airport of the Year

QLD Master Builders Association
2005 Central QLD Project of the Year

GORDON WHITE LIBRARY

Australian Institute of Architects
2001 Regional Building of the Year

MACKAY AIRPORT

Australian Institute of Architects
2003 Regional Commendation
1992 The FDG Stanley Award
1992 The Civic Design Award Finalist

Australian Airport Association
2002 Best Regional Airport

BHP Australia MBPM Association
1992 Award of Merit

THE WHARF MOOLOOLABA

Australian Institute of Architects
1990 State Commendation

MACKAY ENTERTAINMENT CENTRE

Australian Institute of Architects
1988 State Commendation

Steve has extensive experience in facilitating consultation, liaison with stakeholders and the preparation of master plans and reports.

His particular interest is in climatically appropriate and sustainable architecture, commencing in his architectural studies and continuing with his published thesis in Architectural Science Review.

Steve, as Practice Principal, maintains an involvement in the design and an ongoing overview of every project we undertake.

GEOFF DANIELS

Project Architect



Geoff is a registered architect with over 30 years' experience. He has a Bachelor Degree in Architecture and is an associate of the Australian Institute of Architects.

Some of his most significant projects include:

	Million
Central Queensland Conservatorium	\$8.0
Mackay Entertainment Centre	\$5.0
Mackay Base Hospital redevelopment	\$27.0
Mackay Airport redevelopment	\$3.5
Sunshine Coast Airport redevelopment	\$9.0
Rockhampton Airport redevelopment	\$ 7.0
Bundaberg terminal	\$19.0
Emerald Airport redevelopment	\$ 6.8
Whitsunday Coast terminal	\$6.5

Geoff's responsibilities include internal project team coordination, coordination of documentation, project planning and monitoring, and contract administration.

PRACTICE RESOURCES

We currently have offices in Mackay and Brisbane.



We have formed associations with specialist consultants to enable us to provide a comprehensive range of services. We have an established commercial relationship with a major national practice that can, when required, provide additional resources to complete documentation.

For interstate and international projects we actively seek to form associations with local architectural firms (when appropriate resources are available) to undertake documentation and administration. This work is completed under our guidance, direction and project methodology to ensure that it complies with our stringent quality control standards.

OUR SYSTEMS

We produce all designs and construction documentation in 3D modelling CAD format utilising Autodesk's REVIT. This program allows the early production of three-dimensional computer models which are used as an aid during design. The model is progressively refined as the design and documentation of the project proceeds. The result is a comprehensive virtual model of the final building from which the tender documentation is produced.

The building information management (BIM) capabilities of this program progressively allow the integration of sub consultants' information (such as a structural frame, hydraulics and air conditioning) on subsequent REVIT versions, for the individual disciplines within the virtual model. This ensures a far greater level of coordination and communication throughout the project.

REVIT also allows detailed sun and shading studies to be undertaken throughout the design phase. This ensures appropriate passive climatic features are incorporated within the building design.

REVIT is completely compatible with AutoCAD. This allows us to provide DWG files to sub-consultants and clients.



Our fully networked office and our 50/20 NBN connection allows the fast and reliable transfer of information between the consultant team, our client and those associated with the project.

In addition to our modelling and drawing production software, we maintain a comprehensive suite of Microsoft-based software programs.

We have standardised project administration procedures encompassing site minutes, registration of requests for information (RFI) and variation price requests (VPR). These procedures ensure the effective administration of the project and provide comprehensive project reporting.

Pro-formas of all reporting documents are established through consultation to ensure compatibility with the project manager's requirements.

QUALITY CONTROL

Stea is currently in the process of implementing project management software (eTrack). This program includes an embedded quality management system fully compliant with ISO 9001.

This system provides real-time monitoring of all project budgets, comparing them with committed project costs and expenditures to date. The system includes direct project costs, consultant fees and can incorporate any other relevant project costs if required. It enables us to provide project information in a specified client format tailored to suit the reporting frequency required.

Once the implementation of eTrack is complete, third-party accreditation by Benchmark will be sought. We anticipate this will occur early 2017.

7. WE'D LOVE TO HEAR FROM YOU

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