Capability Statement

Regional Airport Terminals

stea
astute architecture

Level 1, 25 River St,
PO Box 758 Mackay Q 4740
ABN 49 061 927 731

(07) 4957 7341
mail@stea.com.au
stea.com.au

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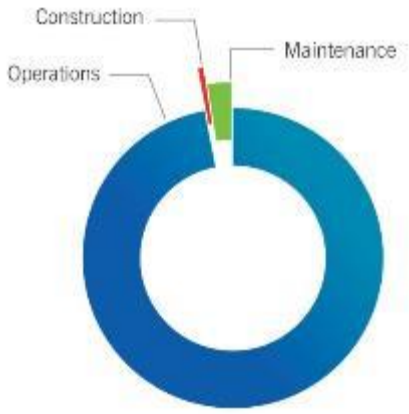
1. AN ASTUTE INVESTMENT

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 Cost[1] (WOLC) for each dollar spent on construction is $206.[2]



Consultants' fees usually represent between 8% and 15% of the construction cost of the terminal, less than 0.07% of the WOLC.

In aviation terms this is equivalent to the distance an aircraft taxis down the runway at Rockhampton airport as a proportion of its 3,477 km flight from Rockhampton to Karratha.

The design decisions taken by the Principal Consultant 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.

When budget constraints lead to architect selection based on cost, this often results in:

- Poor design
- Serious and expensive operational issues
- Major modification or abandonment of the existing terminal to accommodate future expansion.

In any design we undertake, we consider how and where the terminal can expand. This has minimal or no impact on the initial project cost.

We know how to plan for growth from 30,000 to over 1,000,000 passengers a year without major disruption to continued terminal operations.

Despite major changes in functional layout and security requirements, creating a positive gateway experience is still a fundamental consideration in our terminal designs.

COST CONTROL & INNOVATION

We have a proven track record in delivering innovative solutions that result in significant reductions in up front capital costs as well as saving millions of dollars over the operating life of the terminal.

We were engaged by Toll Remote Logistics (TRL) to review their existing proposals for Christmas Island Airport terminal and provide recommendations regarding the replacement of the roof and the deteriorating structure.

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

As an alternative to the conventional remedial repair work proposed in the other reports, we recommended the construction of a new roof structure supported from the external footprint of the existing building. This would then enclose the existing terminal and provide a more economical, faster, and lower risk solution to the immediate short term problem. It also eliminated the need for the proposed future construction of a new terminal on an alternative site.

By facilitating the progressive replacement of the existing terminal beneath the new roof structure, as funds became available we converted necessary short term maintenance expenditure, amortised over the limited extended life of the existing terminal, to a capital contribution to a new terminal building.

At Whitsunday and Karratha airports we provided alternative design solutions, with a substantially reduced proposed cost, to the concept plans prepared by GHD.

Our modifications to the original concept plan for the Whitsunday Coast Airport terminal provided a functionally more efficient building. It significantly reduced the energy consumption, and enabled a simpler and more economical expansion to the existing terminal.

We saved airport owners $250,000 per annum in security staff wages through the modification of the design which eliminated the need for an additional security person.

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:

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

2. WHAT MAKES US DIFFERENT

We are a regionally based architectural practice with over 35 years experience in regional airports encompasses over 70 projects in 20 airports including:

Longreach	Onslow	Sunshine Coast
Rockhampton	Mackay	Hamilton Island
Karratha	Bundaberg	Christmas Island
Mt Isa	Townsville	Whitsunday Coast
Barcaldine	Busselton	Emerald
Port Hedland	Roma	Proserpine
Ballina	Lord Howe Island	

We have designed more regional airport terminals than any other architecture firm in Australia.

The range and scope of domestic and international airport terminal projects we have undertaken, from Barcaldine (approximately 284m²) to Townsville (approximately 9,400m²), has given us a comprehensive understanding of the potential complexities of regional airport terminal design. It also allows our clients to benefit from the knowledge transfer that we bring to the table.

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Our ongoing commissions, in some cases over decades, at airports that have experienced substantial and rapid growth has taught us first-hand about the issues and hurdles you will face as your airport continues to grow.

We know:

- Regional airport terminals,
- Regional and remote access construction,
- How to design economical buildings,
- How to champion ESD efficiencies,
- The benefit of involving local specialist sub-contractors, and
- How to deliver buildings of architectural merit.

As a regional firm, we understand the importance of engaging local practitioners wherever possible to take advantage of the local understanding of the specific region.

Our approach to finding innovative solutions to meet required safety standards realises significant cost savings.

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, CO_2 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%.
- 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.

AWARD WINNING

Our airport terminal designs have been recognised through numerous awards in the areas of design, construction, tourism and operations.

The Sunshine Coast Airport received the Australian Airports Association (AAA) Major Airport of the year award in 2011 and 2012.

In 2002, Mackay won the AAA Best Regional Airport with the Sunshine Coast winning the same award in 1999.

Rockhampton won this award in 2007 and in 2005 was awarded QMBA Central Queensland, Project of the Year and the QMBA State Award in Tourism Hospitality Facilities.

Our terminals have also won awards from the following associations:

Airport	Year	Association
Mackay	1992	Queensland Tourism
	1992	Australian. Institute of Architects
	1992	BHP- Metal Building Products Assoc.
	2003	Australian Institute of Architects
Emerald	2002	Australian Institute of Architects
Sunshine Coast	1997	BHP- Metal Building Products Assoc

Our award winning practice has a unified staff of well-qualified professionals who are able to call upon international experience across Asia, Europe and the Americas.

4. THE DESIGN CHALLENGES

Flexibility, functionality, efficiency, a gateway experience, 'beginning with the end' and ESD are critical components of any good terminal design. The integration of these elements into our designs maximises your control over your terminal and enables you to respond effectively to industry movements.

FLEXIBILITY

We understand how to ensure terminal owners maintain control of their assets to facilitate timely and appropriate responses to changes in this volatile sector.

Changes in security requirements, aircraft configurations and frequency, airline companies operating services to regional areas, demand for lease space, outsourcing ground handling services, the demise of the two airline system and the emergence of multiple players in regional airline services are just some of the major changes our clients have faced over the last three decades.

The ever increasing acceleration in the rate of change reduces the probability of correctly anticipating future requirements. Flexible terminal design mitigates this dilemma.

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.

Essential to this flexibility is the multi-user functionality of any terminal. We have always been, and remain, committed to multi-user terminals.

As a multi-user terminal, Mackay (our first airport terminal design) coped operationally, far better than its regional neighbours, with the demise of Ansett and the introduction of new airlines.

They were able to immediately provide the necessary facilities to accommodate the new airlines without being dependent on negotiations with existing carriers or their receivers. The number of operators who could then, and still now, simultaneously operate through this terminal was unlimited.

FUNCTIONALITY

Through our extensive and successful negotiations with the airlines and regulatory authorities regarding the incorporation of true multi-user service facilities, such as airport owned check-in counters, we have established relationships. We know how to streamline what can be a complicated and protracted approval process.

We also appreciate the need for maximising the alternative use of the extensive areas required to accommodate the sometimes infrequent movements of larger aircraft.

EFFICIENCY

We understand the importance of maximising your commercial return while minimising operational costs. We view all design decisions in the context of their impact on the whole of life cost of the terminal.

We also understand the inevitable economic shift that occurs with growth. As passenger numbers grow the emphasis will move from aeronautical to non-aero-nautical revenue. Our designs maximise travellers' and airport users' exposure to airport concessions.

Through relocation and the appropriate design, we have effected an immediate 60% increase in the concession's turnover. Ultimately increasing rental returns to the airport owners.

LASTING FIRST IMPRESSIONS

We have built our reputation on the development of terminal designs which create a unique and appropriate gateway experience for the city or region they serve.

In the 1990s arriving at many regional terminals often involved little more than navigating an entrance to a generic baggage claim area.

At Mackay, Sunshine Coast, Emerald and Rockhampton airports we created a central concourse of regional significance. Passengers now arrive into the terminals most vibrant and interesting space.

We have maintained and enhanced this experience through successive internal re-organisations, necessitated by changing security requirements, at Mackay, Sunshine Coast, Emerald and Rockhampton.

Visitors leaving the airport, returning a rental car, hurrying to catch a plane, trying to find their baggage or those with little English – need a simple, legible, transparent building with obvious paths of travel. We use the building features and finishes to create subliminal way finding cues to alleviate their stress.

If travellers need to rely on signage then we have failed at our job.

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 terminal will have a significant impact on its ultimate per square metre cost.

Due to continuing volatility with airlines, increases in air travel aircraft configuration, security and statutory requirements the expansion of terminal buildings within their functional life is inevitable.

We believe in doing it once and minimising your capital cost over the life of the terminal. 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.

All our clients' terminals have been designed to permit their expansion without the disruption to the operating terminal.

At the Sunshine Coast Airport we were engaged to provide additional retail space and an extended departure lounge. The depth between the apron and the set down and car park did not allow much scope for extension. The compartment size of the terminal was on the threshold of mandatory sprinklers, making any extension of the building disproportionately expensive.

We utilised a landscaped area between the building and the set down awning to provide a 'rain forest walk' from check-in to security screening. This was located adjacent to the exit from the secured concourse to baggage claim.

This inexpensive solution didn't increase in the compartment size of the building and eliminated the need for additional security staff. The walkway provided 'queuing by stealth' and a unique Sunshine Coast experience.

ESD

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.

With the redevelopment of existing buildings, we recommend a detailed audit of 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.

Karratha Airport Redevelopment

Our design for Karratha incorporated extensive glazing shaded by wide overhangs which provides natural light into the two-storey departure lounge.

The air-conditioning system incorporates CO^2 monitoring of return air low speed high-volume fans, and entropy transfers to pre-cool supply air. All of which result in substantial ongoing energy savings as well as a natural and fresh internal environment.

Whitsunday Coast, 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 savings in 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.

Mackay Airport Redevelopment

This refurbishment incorporated a detailed analysis of the inclusion of CO^2 monitoring of return air to reduce the fresh air requirements and the energy consumption, when the terminal is not fully occupied.

Rockhampton Airport Concessions Expansion

Third party preliminary analysis of the existing chilled water air-conditioning system identified a requirement for additional air cooled package air-conditioning to accommodate the expansion.

Our proposal provided low speed high-volume fans throughout the terminal to released cooling capacity from the existing system. This eliminated the need for additional plant and reduced the capital cost. It also provided an ongoing operational energy savings as opposed to the increased energy costs that would have been incurred if the original recommendation had proceeded.

5. WHAT WE'VE DONE

Our role for airport projects, has included Principal Consultant, Architect and Project Manager, reporting directly to the airport owners, the Principal Consultant or the Design/Construct builder.

The tasks we have undertaken include:

- Client stakeholder and public consultations
- Preparation of project briefs
- Establishment of gross project budgets
- Preparation of schematic design, design development and documentation
- Contract administration
- Value management workshops
- Risk management workshops
- Staff, user, stakeholder workshops
- Project presentations
- Project management
- Approval procurement
- Negotiations with airlines, regulatory authorities and border protection
- Master planning.

NEW TERMINAL DESIGN

Stea have successfully won, through public tender, the design of five stand-alone new regional terminal buildings.

2013 ONSLOW $5.5 MILLION

We were engaged by the local authority to prepare concept layout plans to facilatate a Design/Construct tender. We then prepared the winning design and completed the design development and documentation of the 1,000 m² terminal for the selected contractor.

2012 LONGREACH $3.5 MILLION

We prepared an alternative design for to that tendered as a Design/Construct concept. Our design provided significant asthetic functional and operational improvements and won the tender. We then completed the design development and documentation for this 1000 m² stand-alone new terminal.

2011 ROMA $3.5 MILLION

A 700 m² terminal.

2008 BUNDABERG $19 MILLION

We were appointed as Principal Consultant for a new development including aprons, carparks and a standalone 3,000 m² terminal. Due to the amalagation of the regional councils this project did not proceed beyond documentation.

1991 MACKAY $6.5 MILLION

After being engaged by the Principal Consultant to document the original design, already accepted by the local Port Authority, we developed an alternative design which the client then embraced.

TERMINAL REDEVELOPMENT

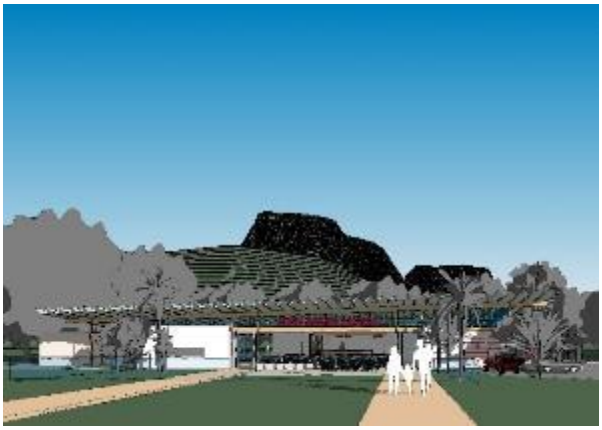
We have redeveloped a wide range of terminals with annual passenger capacity ranging from 30,000 to 1,500,000.

Our expertise lies in identifying significant functional and commercial issues associated with the existing terminal and prepared conceptual layouts.

Our redevelopments have included:

- Secure car parking
- Departure lounge and security processing expansion
- Checked bag screening extension
- Retail development and security upgrade
- Concourse redevelopment
- Taxi facilities
- Check-in counter upgrade
- Baggage handling extension
- Changed aircraft configuration
- Installation of airport owned check-in counters
- Flight information display.

2016 LORD HOWE ISLAND $1.9M



We were commissioned to design document and administer the construction of a new airport terminal building.

The terminal itself is a relatively small building catering for two simultaneous Dash 8 aircraft with a seating capacity of 30 passengers each.

The project however has a significant complication in that no building materials are available on-site. Thus necessitating all construction materials to be shipped from the mainland with significant length and weight limitations. Due to the World Heritage classification of the island, and the necessity of maintaining the island's bio uniqueness, materials such as sand and timber must be treated prior to delivery to the island.

We have designed a new terminal building on the site of the existing terminal utilising its existing

slabs and foundations with as much recycled material retrieved from the existing building as possible. We have utilised construction techniques that will minimise the remote area construction premium and energy consumption as all power on the island is provided by diesel generators.

The proposed building provides an appropriate and unique gateway to this spectacular world heritage destination.

WHITSUNDAY COAST

2016	International Facilities	$21 million
2015	Departure lounge	$200,000
2011	Redevelopment	$7.0 million

In 2016 we were engaged by Council to prepare a preliminary design and cost estimate suitable for a government funding application. The concept plan was designed to allow the simultaneous processing of domestic and international passengers.

In 2011, we were engaged to undertake the extensive upgrade of the existing terminal. This involved the reconfiguration and extension of internal volumes to provide common user lounge facilities together with new check in and baggage claim areas.

2015 KARRATHA $35 MILLION

After presenting an alternative design with the same busy hour capacity as the original concept, but at less than 40% of the proposed cost, Stea was engaged as the Principal Consultant for this extensive redevelopment.

This redevelopment trebled the size of the existing terminal footprint and required maintenance of secure operations for the 800,000 passengers during the construction year.

Our design addressed the existing shortfalls and operational issues as well as the anticipated increase of passenger numbers and provided international capabilities.

SUNSHINE COAST

2012	International facilities	$1.5 million
2009	Departure Lounge	$2.2 million
2008	Check bag screening	$1.5 million
1994	Redevelopment	$9.0 million

MACKAY

2011	$2.8 million
2008	$4.5 million
2007	$2.0 million
2000	$3.5 million

EMERALD

2010	Redevelopment	$6.8 million
2001	Upgrade	$1.0 million

2009 BUNDABERG $6.5 MILLION

Subsequent to the Council amalgamation, we were commissioned to prepare a project brief for agreement and sign-off, and establish a budget, for the redevelopment of the existing terminal.

We delivered the project within the specified 12 week construction period, with final gross project costs $100k under the agreed budget.

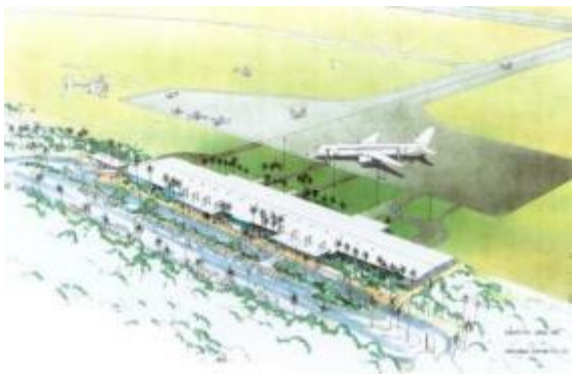
2006 ROCKHAMPTON $8.5 MILLION

We won the tender to design and documentation international passenger processing facility. Further to our recommendations we completed a major redevelopment of the existing terminal converting it from a joint use to a multi-user terminal with pre-emptive provision for future check bag screening.

2002 Townsville $20 Million

We were engaged at the late stage of this project to improve the interior presentation of the terminal and its functionality.

1999 Proserpine $7 Million



This project did not proceed beyond schematic design due to the financial problems of Aqua Del Rey.

TERMINAL MASTER PLANS

In addition to providing master planning for domestic terminals we have produced terminal area master plans to facilitate international arrivals and departures. This includes feasibility reviews to accommodate international charter operations within the existing terminal. The studies have encompassed financial models and included a brief for the design of the required terminal modifications including recommendations for landslide set down operations.

Mackay
Emerald
Bundaberg
Busselton
Sunshine Coast

INTERNATIONAL FACILITIES REVIEW

We have designed and documented terminal building extensions to facilitate the processing of international charters. This includes concept proposals and terminal reconfigurations to incorporate an international departure lounge, arrivals hall and customs facilities. Additional reports include an outline of the scope of work, services and building code review and cost analysis.

We have also provided conceptual design advice regarding the utilisation of unused international terminal areas. This included conceptual layouts and the provision of cost plans to enable commercial proposals to be provided to a possible user.

Sunshine Coast
Rockhampton
Proserpine
Busselton
Mackay
Whitsunday Coast
Townsville
Karratha

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.

This outcome is only possible through an effective partnership between us as principal design consultants, our clients the airport owners, users and stakeholders and our sub-consultants. Our methodology ensures the appropriate interaction between these parties takes place and that we deliver a responsive design that addresses your true needs.

WE LISTEN

We are acutely aware of the importance of gaining a comprehensive understanding of your unique regional and operational requirements. We anticipate working very closely with the airport management and operational staff in the design process. We recognise the benefit of experience and the wisdom developed at the coal-face.

Before commencing design we define, document and formalise the agreement of the project scope and all the relevant parameters. By listening to those affected by a project we get to understand what people need, want and feel. 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.

As the Principal Consultant, we then manage the project, in conjunction with the Project Manager, through the Concept Design, Design Development and Construction Documentation phases. It is our preference to have weekly meetings (either in person or via phone) with the Project Manager.

We allocate a Project Architect to each project. The Project Architect is responsible for the day-to-day liaison with the client and coordination of the project work and sub-consultants.

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

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

WHAT WE DON'T DO

There are a number of ways a new airport terminal or redevelopment can be managed. Over the 25 years that we have been involved in airport projects we have worked under a number of methodologies.

Some owners like the concept of Design/Construct as they are attracted to the concept of minimising the risk of budget blow outs. But a trade-off occurs. In reality this 'risk reduction' comes at the expense of surrendering control of the quality of the project.

Design/Construct can work well under certain parameters. When the project is of significant scale, has CBD budgets, an emphasis on design excellence (rather than cost management) and a first tier building firm is employed, Design/Construct can be a practical solution. Brisbane International Airport is an excellent example of this.

Design/Construct however, has several issues particularly for limited budget projects (such as regional airports). These are:

- As we are employed by, and are directly answerable to, the builder, we don't enjoy the benefit of a direct relationship with airport owners.
- All consultants are working for the builder, not you the client.
- Our fees and all consultants' fees are subject to a builder's mark-up - effectively reducing the funds available for design elements in the building.

- Concerns and issues we note and raise may not be communicated to you, ultimately resulting in a sub-optimal terminal and dis-satisfied stakeholders.

- When the cost and the time frame of the building are fixed, the only element that can be subject to variation is the quality.

- Most importantly, we cannot guarantee that what is designed is what gets built.

Our preference is to participate in a Quality Based Selection procurement methodology such as that outlined by the Australian Institute of Architects.

Details of this can be found at http://www.architecture.com.au/docs/default-source/national-policy/guide-to-quality-based-selection-of-architects.pdf?sfvrsn=2).

KEY PERSONNEL

STEVEN TURNER

Practice Principal / Owner

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

Steve has been the project director and designer of all the airport projects undertaken by the practice. He has also consulted on projects at Christmas Island, Port Headland and Busselton.

Steve's designs have been recognised through numerous awards in the areas of design, construction, tourism and operations.

These awards include:

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

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

Steve has extensive experience in facilitating consultation, liaison with stakeholders, negotiation with regulatory authorities and the preparation of master plans and reports. He has been involved in negotiations for approvals with customs, quarantine and airport security agencies. Has also undertaken extensive consultation and negotiation with airline representatives and has a wide network of useful contacts.

Steve has a particular interest in climatically appropriate and sustainable architecture, commencing in his architectural studies and continuing with his published thesis in Architectural Science Review. He has been invited to give presentations on various aspects of airport terminal design at Regional Airport Terminal conferences as well as the Australian Airports Association National Conference.

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.

Geoff has more than 25 years' experience as Project Architect on airport terminal buildings.

Significant airport projects have included:

	Million
Rockhampton redevelopment	$7.0
Bundaberg terminal	$19.0
Emerald redevelopment	$6.8
Whitsunday Coast terminal	$6.5
Mackay redevelopment	$3.5
Sunshine Coast redevelopment	$9.0

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 Kingscliff.

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

Level 1
25 River Street,
Mackay,
Q 4740

Postal Address:
PO Box 758
Mackay,
Q 4740

Telephone: (07) 4957 7341
Email: mail@stea.com.au