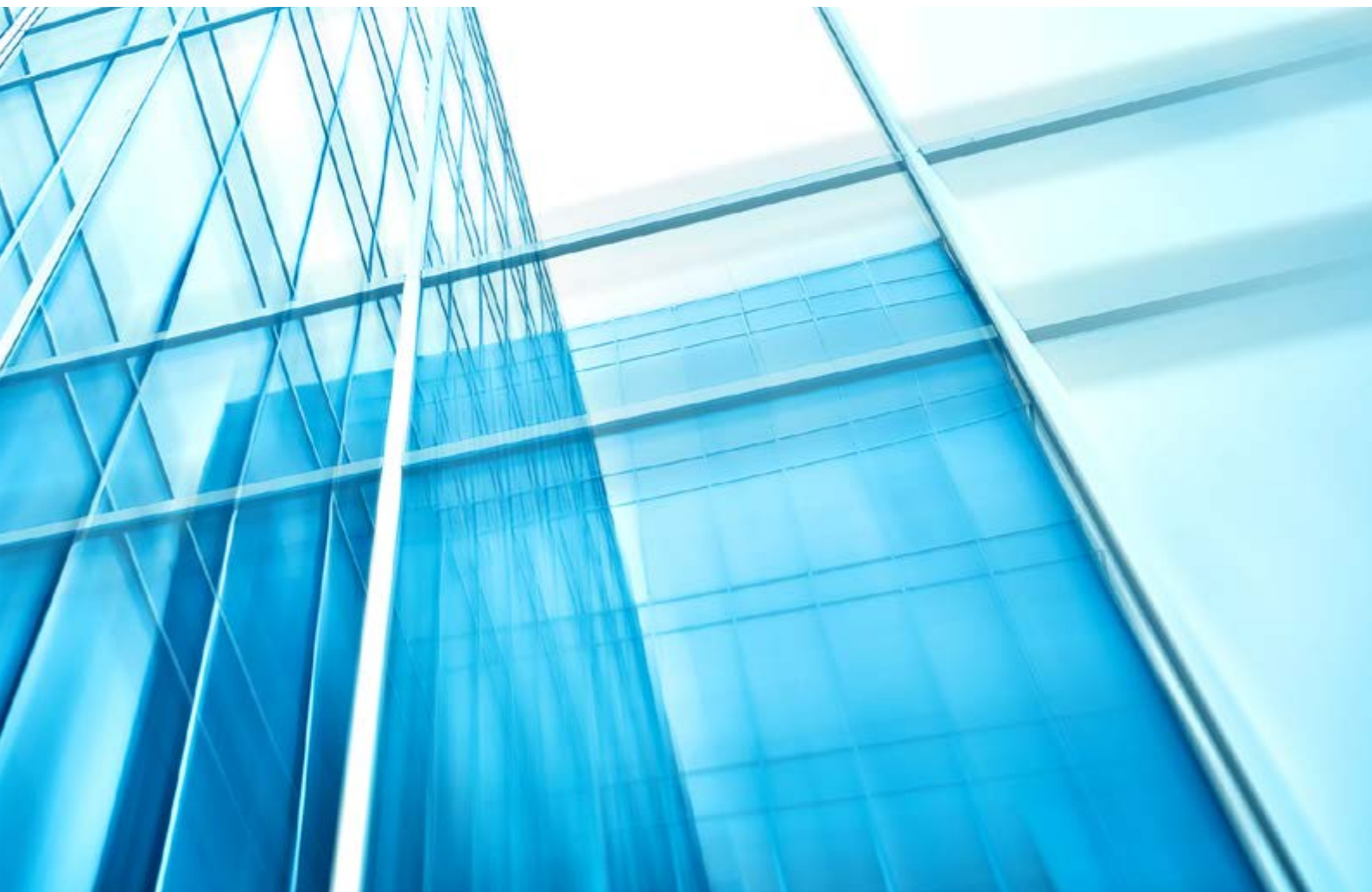




## COMPANY PROFILE





# COMPANY SNAPSHOT

## OVERVIEW

Beacon Consulting is an innovative and highly experienced construction and property consultancy firm focused on providing research and knowledge backed services and dedicated to delivering projects using BIM Implementation and Virtual Design and Construction Services.

We offer the following services throughout Australia and Papua New Guinea from our strategically located offices:

- Project Management
- 3D Laser Scanning and Reality Capture
- 3D Aerial Surveying and Mapping
- 4D Construction Programming and Production Control
- 5D Quantity Surveying
- BIM Implementation and Control
- Building Certification
- Fire Safety Consulting
- Disability Access Consulting

Our business is based on delivering excellent results and achieving high levels of repeat business. A strategy that has seen the company grow successfully and organically over the last eight years. Every year we conduct a survey of our clients and colleagues.

Our last client satisfaction survey identified that 94% of our Clients think that we are leaders in our field, a statistic we aim to improve every year.

## BEACON CONSULTING TIMELINE

- 2007 - Beacon Consulting is incorporated in Cairns
- 2008 - Papua New Guinea Company is incorporated
- 2012 - Building Certification Business Unit Added
- 2013 - Laser Scanning and HDR scanning Services Added
- 2014 - Dedicated BIM Services Business Unit Added, Aerial Surveying Services Business Unit Added

## QUALITY ASSURED TO ISO 9001:2008

Beacon Consulting maintain third party certification of our core activities to ISO 9001:2008 in all office locations including Brisbane, Townsville, and Cairns. We manage our quality management system using an internal intranet which is commonly accessed by all offices.



# OUR BIM 4D AND 5D ADVANTAGE

## INNOVATION DELIVERED

Beacon Consulting is a genuinely different consulting practice due to our early adoption and industry leading integration of BIM as an integrated project delivery tool.

Our 4D and 5D Project BIM Implementation Standards, and Virtual Design and Construction Delivery Model, sets us clearly apart from our competitors. **Put simply there really are no other firms like us in Australia.**

**Our core focus is to integrate BIM delivery into our construction delivery process and realise the benefits of BIM and Virtual Construction .**

## SYSTEMS THAT WORK

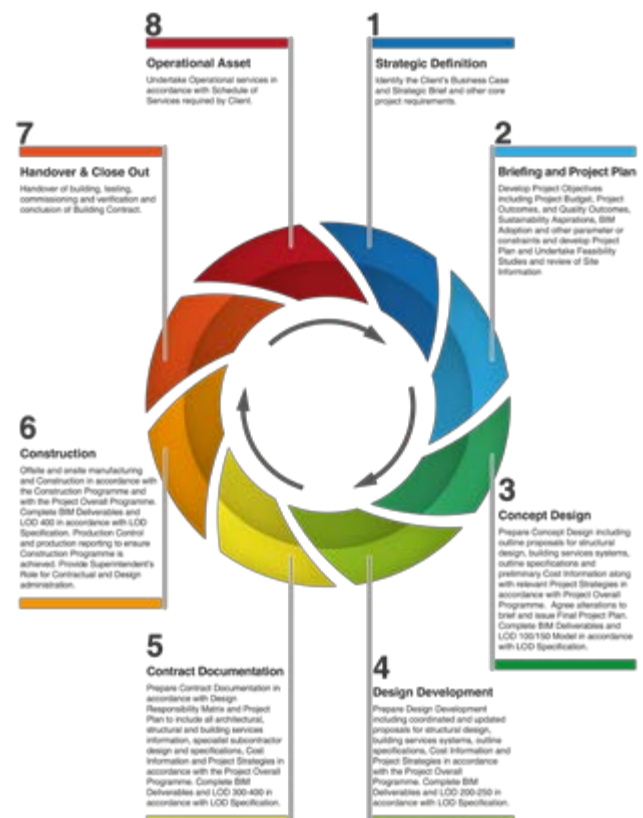
Our services are delivered with Beacon forming an integral part of the Design and Construction Team Leaders providing leadership, management and structured systems to deliver better design including;

- Integrated BIM design control and implementation.
- Intelligent risk based Procurement Planning and Contract Strategies.
- Integrated Cost Control and location based 5D Cost Planning.
- Design Review, Control, Co-Ordination and Quality Control.
- Integrated On-site Production Control to Identify Programme Failure and Control Actions.
- Collaborative Contract Management and Micro Managed Project Control.

From our experience other Project Management and Quantity Surveying firms tend to isolated themselves from the design team. This is where we are fundamentally different. Beacon Consulting form part of your team and deliver leadership where and when required to achieve project results.

Since 2007 we have been continuously improving our Project Management and Cost Control delivery strategies around BIM implementation and have delivered successfully over that time hundreds and millions of dollars of new construction and development work.

We work with project teams to deliver better design documents using our integrated BIM design process and Standard Plan of Work. Our robust and data driven cost planning service ensures design rework is not required and give you cost certainty at all times.



# PROJECT MANAGEMENT

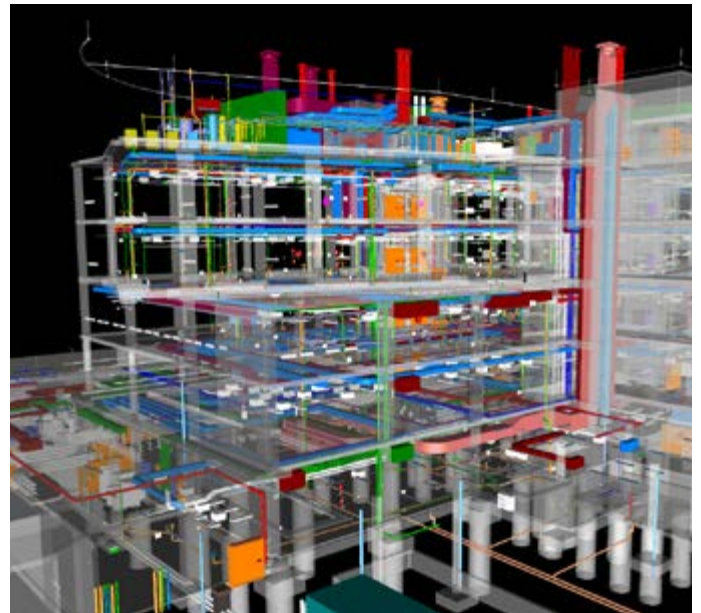
## WORLD CLASS SERVICE

Beacon Consulting has earned a reputation for managing projects with a range of quality services that consistently delivers on time and on budget. Offering a professional, personal and comprehensive Project Management service, our specialist team works very closely with clients, building up a relationship based on trust and openness, which helps to progress projects and resolve challenges.

Amongst the most experienced professionals in the industry, our team has worked on a wide variety of landmark projects worldwide. That breadth of experience enables us to take a fresh and pioneering approach in establishing a strategic framework to address the unique requirements of every project, irrespective of size.

Our project and programme management services include:

- Concept development and project definition
- Capital works programme development
- Project brief development
- Project controls and risk management
- Project management
- Program management
- Portfolio management and project prioritisation
- Procurement strategies
- Financial and project reporting
- Moves and migration planning
- Stakeholder consultation
- Management consultancy
- BIM Design management
- Construction management
- Change management
- Contract Administration and Superintendents Role
- Value management
- Risk management
- Integrated corporate resilience
- Construction planning including 4D BIM visualisation
- Dispute management
- Due diligence
- Technical advisory services to funders
- Project audit and recovery



## BIM-ENABLED APPROACH

**Our Standard Project Management Service is built on collaboration and BIM implementation** to produce superior design documentation and allow proactive construction and project planning outcomes.

Beacon Consulting organise all of our projects into a structured phase based process which is backed up by structured and clearly defined internal procedures and processes for our project managers, as well as clearly structured deliverables and responsibilities for project stakeholders, which are communicated using our standards Plan of Work Documents.

Everyone works within our BIM framework in a collaborative team to produce team based outcomes aligned with your requirements. Our Standard Plan of Work ensures that everyone involved on the project knows exactly what their roles, objectives, and deliverables are, and works as an integrated team to deliver project outcomes together.



# 4D CONSTRUCTION PROGRAMMING AND PRODUCTION CONTROL

## DELIVERING CONSTRUCTION ON-TIME

Beacon Consulting use a **scientifically based, practically delivered BIM based scheduling method** to work with Contractors and Clients to deliver our projects on-time.

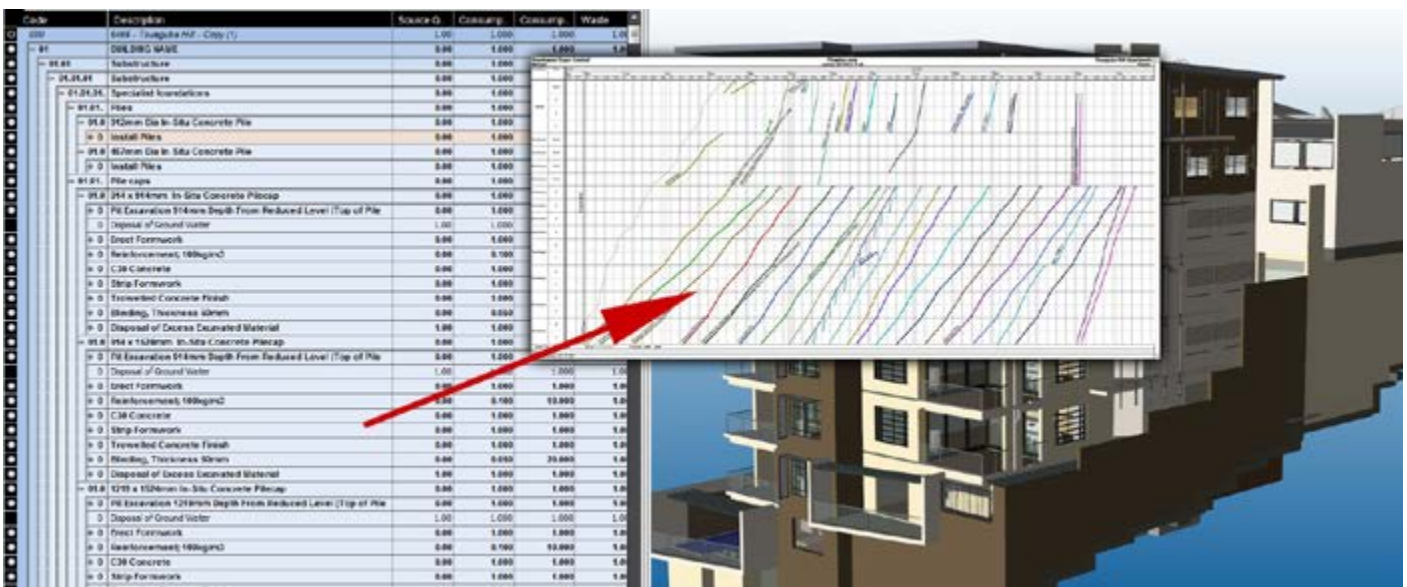
Essentially, we use our **5D BIM Model quantities** combined with the **productivity rates** contained in our Cost Plan to **calculate the durations for each task on the construction site**. It sounds so simple, but the reality is that no one does it in practice in the construction industry and it is a major reason why productivity is not properly controlled or tracked on a construction site, and why so often a project will run over programme and finish late.

**The end result is a cost and resource-loaded schedule** that provides Owners and Contractors with inside and out knowledge of the resources and tasks required in a project, resulting in appreciation and efficiencies on both sides of the equation.

## ONLINE PROJECT DOCUMENT AND COST CONTROL SYSTEM

Beacon Consulting has made a significant investment both in time and cost of developing our web based project management and document system, which has been specially customised to suit our business systems, and allows our project management teams to successfully deliver projects throughout Australia and Papua New Guinea.

With cost reporting in both Australian Dollar, New Zealand Dollar, US Dollar and Papua New Guinea Kina Contracts, our fully customised Prolog system provides a single point of origin of all project documentation, and a solid and robust system for collaboration, cost control, reporting, and document control. Our online system provides a single source of truth benefiting all project team members and clients.





# 5D QUANTITY SURVEYING AND COST MANAGEMENT

## OUR WORLD CLASS SERVICE

As one of Australia's leading quantity surveying practices, Beacon Consulting has a proven track record in providing cost management services on major projects.

Each team, led by a Director and backed up by the full infra-structural support of the Beacon Consulting organisation, offers a unique blend of experience and expertise to ensure we provide maximum and efficient cost control on all projects, no matter how specialised they are or where they are located around the world.

Depending on the nature of the project and the specific services needed, it will be allocated to a specialist team member and Directors are closely involved throughout each project to ensure the highest standards of work. As a result, Beacon has established longstanding relationships with many blue-chip companies.

Our 5D quantity surveying and cost management services include:

- Feasibility studies
- Cost planning and estimating
- Bills of quantities and trade quantities
- Value management
- Project procurement strategies
- Tender documentation and analysis
- Full post contract cost control
- Final account and project closeout
- Audit and verification during delivery
- Cash flow forecasting
- Financiers audits and cost to complete
- Tax depreciation schedules
- Insurance replacement cost estimates
- Sinking funds
- Aged care maintenance reserve and capital replacement funds
- Dispute resolution and expert

## COST CERTAINTY EVERY TIME

Our clients have told us that what they really want is an **accurate and dependable cost planning** and estimating service that delivers the right answers every time, and at every stage of the design process.

Our belief is that the best Quantity Surveyors are usually the ones with the most knowledge.

Not everyone in our company can have 30 years of experience so we use time proven and robust internal knowledge systems and director level project commitments to deliver consistent results on every project.

Our systems and continual research allows us to have an in depth knowledge and understanding of construction costs.



# 5D QUANTITY SURVEYING AND COST MANAGEMENT

## 5D BIM IS OUR CORE SERVICE OFFERING

BIM is something we have insisted on doing as a standard part of our service wherever possible since the firm first commenced. BIM based take-off has been part of our standard take-off procedures for over seven years and we have literally measured hundreds of cost plans and bills of quantities using part-BIM and full-BIM take-off. BIM take-off has the following advantages:

- Faster and more accurate way of controlling quantification of project materials and built form.
- Live linked models and cost plans allow for faster revisioning and optioneering of projects.
- The graphical and information based geometry of BIM allows for better visualisation of project scope and reduces risk.

**BIM alone though doesn't solve all of our problems** or deliver accurate cost plans. Solid Quantity Surveying fundamentals like excellent cost databases and real life and practical experience are required to deliver these results. The fact is that taking off quantities is only a small part of our role as Quantity Surveyor on your project.

## COSTS & QUANTITIES BY LOCATION

**Quantities and locations are the linchpins to our 5D Quantity Surveying and Cost Planning take-off processes.** An accurate quantity take-off is the start to both a precise construction programme and a precise estimate. So it is important to start with a comprehensive quantity take-off that analyses each piece of BIM geometry, and is exactly what you get with our 3D take-off ability.

**Beacon Consulting's unique systems allow quantities and cost plans to be broken down by any location and level**



**structure when using BIM design tools.** No additional works are required to obtain this take-off, and the cost by location system is a direct result of our unique 3D take-off system and 5D cost and resource based cost plans.

We can not only **instantly breakdown quantities and costs by building level**, but can also easily draw and define zones on each building level to quickly and effectively **generate breakdown of quantities and costs by locations on each floor as well.**

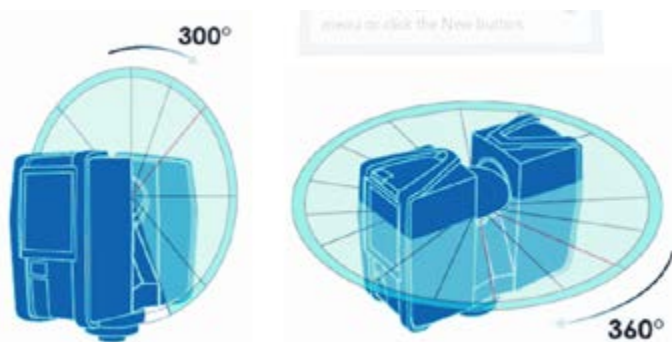
# 3D LASER SCANNING AND REALITY CAPTURE

## OUR WORLD CLASS SERVICE

Beacon Consulting's 3D laser scanning and advanced reality capture technologies **allow you to deliver fast and accurate surveys of as-built and on-site conditions** with direct benefits to the Architecture, Engineering and Construction (AEC) market.

**Our team deliver reality capture and point cloud models for use in Building Information Modelling (BIM) applications with full compatibility with all BIM design platforms.** Point cloud files for as-built structures can be provided in multiple point cloud formats. Where clients have no expertise using point cloud files Beacon Consulting offer a complete start to finish Scan-To-BIM delivery service as well as training on Scan-to-BIM workflows for engineers and designers.

Our fleet of HDR / Reality Capture scanning equipment and software is designed to support all major BIM software, ensuring our clients receive accurate, compatible, and georeferenced data. **Beacon Consulting have laser scanners in Australia and Papua New Guinea** are best positioned to support reality capture projects throughout Australia and the South Pacific. Our recent projects have included new construction, as built surveys, mining installations, multi-storey refurbishment projects, and heritage projects where we have provided accurate reality capture for measurement and dimensioning.



### The benefits and uses for our 3D Laser Scanning and Reality Capture services include:

- 3D Model generation of existing structures; assisting with further stages of a development through to simple additions.
- Project monitoring; regularly recording the development enables 3D models of different stages to be compared, thus aiding progress tracking and measurement exercises.
- Inspection of excavations; scan free form shapes to log data and monitor construction progress and detect discrepancies.
- Detailed measurements; capturing data quickly and recording high accuracy information, enabling easy extraction measurements from 3D model.
- 3D image recording; document large works easily and accurately allowing scene visualization and orthophoto generation.
- Condition/dilapidation reporting; capture 3D points and images creating an accurate visual report.
- Seamless use of 3D data within multiple CAD softwares.
- Inspection of excavations; scan free form shapes to log data, monitor construction progress and detect discrepancies.





# 3D LASER SCANNING AND REALITY CAPTURE

## 3D LASER SCANNING FOR ARCHITECTURE

Beacon Consulting work closely with architectural, engineering, and construction firms to document and provide Building Information Models (BIM) built directly from HDR / Reality Capture scans in today's most popular modelling tools such as Revit and AutoCAD.

We offer a dedicated team of Revit professionals who work in close consultation with you to ensure the delivery of fully compliant and audited Autodesk Revit BIM models. All 3D Laser Scan surveys are conducted by qualified technicians giving you the peace of mind that all works are conducted accurately and to world's best practice standards.

Laser scanning has multiple uses for Architects including:

- Modelling of actual conditions in BIM
- Visualisation of Existing Conditions and Clash Detection in BIM
- Surveys of existing conditions and services

## 3D LASER SCANNING TO BIM MODEL CONVERSION

Whilst Reality Capture and HDR scanning is an excellent tool for all projects, developing functional, and more importantly accurate, BIM models from the Laser Scanning Data is still a process which is not for beginners.

That is why Beacon Consulting offer Architects, Designers, Clients, and Builders the option of having us convert your scan data into fully functional parametric BIM models in Autodesk Revit, IFC or Tekla.

We have successfully partnered with Architects, Engineers, and Builders to provide data capture and documentation of intricate heritage listed facades, complex existing buildings, concrete frames of buildings under construction, and complete high definition laser scan surveys of an entire city blocks, which were then converted to Revit Models ready for Designers to begin their design works.





# 3D AERIAL SURVEYING AND MAPPING

## OUR WORLD CLASS SERVICE

**Beacon consulting are world leaders in deploying and delivering UAV's for aerial surveying, mapping, GIS and photogrammetry in Australia.** Beacon are **fully CASA certified and licenced** and provide an end-to-end service; the complete workflow, from flight planning and image acquisition through to 3D processing and geo-registration, is completed in house.

**Our 3D models and survey outputs are generated using advanced acquisition and photogrammetry techniques** that extract accurate geometric information from aerial and ground photographs. Extremely dense 3D point clouds are generated prior to being transformed into a fully-textured mesh object. To generate geographically accurate data, precise ground control points are integrated into our processing chain.

Special care and quality control systems are implemented at all stages of the process. The end result is a photo-realistic,

high-resolution, geographically accurate 3D model which includes all man-made and natural features present in a scene.

Beacon Consulting utilise the latest technology, ultra-light-weight aircraft, and hi resolution camera equipment to provide commercial, government, and research based clients with a range of aerial mapping, imaging, and cinematography services in Australia and Papua New Guinea.

- Aerial Surveying Mapping and GIS
- Aerial 3D Mapping, Modelling and Earthworks Computation
- Aerial 3D Point Cloud Mapping
- Aerial 3D Bulding and Infrastructure Modelling
- Aerial Digital Imaging and Cinematograph

## FOR ARCHITECTURE

Using our UAV fleet of drones we are able to provide high density point cloud models to architects for use in the following applications:

- 3D Visualisation for new projects
- Large scale site surveys
- Large scale topographical surveys

Architects and Engineers can use our 3D data natively in their design software or have us convert the data to traditional CAD based formats including AutoCAD, Autodesk Civil 3D, and Autodesk Revit.

## FOR MINING & INFRASTRUCTURE

Using our UAV fleet of drones we are able to provide high density point cloud models to architects for use in the following infrastructure and mining applications:

- 3D Visualisation for new projects
- 3D Visualisation for work in progress
- Large scale site surveys
- Large scale topographical surveys
- Volumetric Studies of Erodible Dumps
- Volumetric Studies of Earthworks Projects

Architects and Engineers can use our 3D data natively in their design software or have us convert the data to traditional CAD based formats including AutoCAD, Autodesk Civil 3D, and Autodesk Revit.





# BIM IMPLEMENTATION & CONTROL SERVICES

## OUR WORLD CLASS SERVICE

Beacon Consulting are one of **Australia's leading construction BIM integration services firms** specialising in managing and assisting project teams to successfully deliver BIM requirements on Building, Construction, and Infrastructure works Projects.

Beacon have developed our BIM services offering as a practical hands on solution which is **backed by a suite of our own pre-built industry leading tools and procedures** which assist teams to deliver real BIM outcomes that actually add value and reduce costs.

These services are **based on real hands on practical project experience** working on our own internal projects and projects where we are engaged as a standalone BIM services consultancy.

We have been drawing on local and international benchmarking and project experience in technology, development and business practices to:

- improve your organisation's performance, processes, systems and people.
- develop and grow your program and portfolio management and delivery capability.
- provide industry documents, systems and standards that reflect global best practice.
- develop BIM strategies and integrate them in to the fabric of your organisation.
- reduce the risk involved in integrating new systems.
- Audit and review BIM Models for accuracy and compliance.

## BIM IMPLEMENTATION SERVICES

Are you interested in establishing or using BIM on your Project, Portfolio, or within your Company? Do you have an upcoming project that's a perfect fit for BIM and want to do it right the first time? Has a Client specified that BIM be used on a building or Project you are tendering on or have won?

Beacon's BIM Services Team not only provides help to our Project Managers and Cost Managers to deliver BIM on our projects but also **offer a standalone BIM Consulting Service to**

**Clients, Contractors, and Design Teams across Australia and Papua New Guinea.**

Our BIM Services Team will **ensure that your BIM implementation actually works**, without spending wasted time, effort and costs, and set up your Project Team, or Teams, with the tools they need to meet your requirements and make your BIM project work first time. We can work as part of your team in your office, in our offices, or on your project site to meet the requirements of your particular project.



# BIM IMPLEMENTATION & CONTROL SERVICES

## IN-HOUSE BIM MODELLING SUPPORT STAFF

**Beacon Consulting has a team of fully qualified BIM Modellers and BIM experts** in house to deliver these supplementary resources as well as provide the core of our BIM services team.

This team forms part of our BIM model auditing team which is responsible for the BIM the control and checking process, but can also assist under performing or inexperienced consultants who are unable to, or have need to learn how to provide BIM models to meet our 4D and 5D requirements.

## BIM MODEL AUDITING & QUALITY ASSESSMENT

For BIM Models to be used as a tool for construction coordination, estimating, and scheduling, Clients, Project Managers, and Contractors who are relying on BIM models need a service to determine if the BIM model they have been given, or paid for, is fit for the use of its intended purpose.

Our BIM Model Auditing and Quality Assessment Service checks and inspects your BIM models system by system, family by family, noting any omissions, mistakes, or areas for improvement. Further, we conduct a full check of the 3D content in relation to the 2D drawings and documentation to the model's quality and detail.

Engaging Beacon as your BIM Model Auditing and Quality Assessment Service Provider ensures that your consultants are actually doing the BIM modelling you are paying for.

## STANDARD 5D VIRTUAL CONTENT LIBRARY

**Beacon Consulting have developed a comprehensive library of over 5,000 standard BIM building components** structured in our unique elemental format in both Autodesk Revit™ and Graphisoft ArchiCAD™ which we provide free of charge to Client/Owners and design teams for use to develop the BIM models for our Cost Management and Project Management projects.

The Beacon Standard 5D Virtual BIM Content Library works in conjunction with our Standard 5D Cost Plans. When using our Design Responsibility Matrix and Beacon Consulting LOD Specification the whole system combines to significantly deliver real BIM objectives that make life easier for our design teams and save Client/Owner time and money.





# BUILDING CERTIFICATION AND PROJECT COMPLIANCE SERVICES

## OUR WORLD CLASS SERVICE

**Beacon Consulting provide a solutions focused Building Certification and Approvals Service** to work with the design and construction team to deliver results that are appropriate, compliant, common sense, and cost effective.

Our professional service provides you with a **personalised one on one director level service** ensuring you get access to the right advice from our senior staff first time, every time. Beacon Consulting make a concerted effort to liaise with applicants and owners to ensure the approval and inspection process is

delivered seamlessly. Beacon Consulting is built on relationships and we actively aim to deliver our services in a proactive and efficient manner that ensures effective communication, research backed advice and repeat business.

Our diligence with the assessment of plans, clear consultation with designers and applicants regarding approval requirements, and a strong relationship with builders and contractors on site are the cornerstones of our Building Certification and Approval Service delivery.

## BCA CONSULTING

Our design and BCA consultancy services are designed to **deliver you with the right advice when you need it** during the design phase of your project.

As the complexity of building regulation increases so do the risks to property or building projects. Our building surveyors and certifiers provide the knowledge and technical expertise to minimise building compliance risks at feasibility stage, design stage, construction or for an existing building.

We appreciate the practical demands of business in the identification of optimum solutions for building owners, developers, managers and occupants.

**Our BCA Consulting and design compliance advice includes:**

- BCA compliance advice, interpretation, and application of Australian Standards
- building upgrade and building classification changes
- BCA compliance reports at all stages of design documentation
- performance based design advice
- assessment of performance based Fire Engineering Safety Reports

- peer review of fire engineered or performance based alternative solutions
- AS4299 Adaptable Housing assessments
- identification of cost saving design options
- preparation of Modification submissions
- schematic Design desk-top review and reporting
- disability access consultation
- expert Witness representation in relation to state based building regulations
- negotiations with local authorities including Councils, Fire Brigade, Commonwealth Agencies etc
- Part J Energy Efficiency Reviews
- interpretation of Building Legislation
- Aged Care Accreditation Inspections/Reports (pre-construction/post-construction)



# BUILDING CERTIFICATION AND PROJECT COMPLIANCE SERVICES

## DISABILITY ACCESS CONSULTING

**Beacon Consulting are experts in consulting, management, and design advice relating to disabled access.** We provide a comprehensive review and assessment of new and refurbished building plans and surrounding environs for compliance with disability access regulations.

Our Access Audit Service is an examination of a building and its facilities or services, reported on and against pre-determined criteria to assess its ease of use by people with a disability. Guidelines are from the Australian Standards AS1428 suite, Disability (Access to Premises – Buildings) Standards, Building Act, and the Disability Discrimination Act.

## FIRE SAFETY CONSULTING

**Our QBCC licensed Fire Safety Professionals and fully trained Fire Safety Advisors offer straightforward advice on what fire safety services are required for your building.** With a fully licensed building certifier on staff, Beacon Consulting specify exactly what services are required, saving building owners and body corporates both money on unnecessary requirements.

We offer an independent service and, apart from supplying evacuation diagrams and fire safety manifest cabinets, we have no interest in “upselling” fire safety equipment.

Our fire safety services include:

- Fire Safety Consulting
- Fire Safety Surveys of Existing Buildings
- Fire Safety Management Plans
- Fire Evacuation Practices and Procedures
- Fire Evacuation Diagrams





# LOCATIONS

**BRISBANE | CAIRNS | TOWNSVILLE | PNG**

[www.beaconconsulting.com.au](http://www.beaconconsulting.com.au)