

# Business System Quality Manual

# Quality Management System

Show Mission Management Process in Drawing 4.1; include all document numbers in ISO9001 Compliance Matrix;	1	9-1-07	MJS	MTW	MTW
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## 1. INTRODUCTION

### 1.1 Purpose

This document explains the PDC Consultants Quality Management System and how the organisation's processes deliver Clients' requirements.

### 1.2 Scope

This Business System Quality Manual provides an overview of PDC Consultants internal organisation, its business systems, operations and processes. Its methods of quality planning, quality control, quality assurance and quality improvement are in-line with the requirements of ISO 9001-2000.

### 1.3 Applicability

The Business System Quality Manual applies to the production of engineering documents, drawings and digital models, and addresses the processes used in the company to produce them. The accounting function is not included in the Quality Management System.

### 1.4 Definitions

<i>Definition / Abbreviation</i>	<i>Description</i>
PDC	PDC Consultants Pty Ltd
AS/NZS ISO 9001:2000	The Australian Standard titled 'Quality Management Systems – Requirements'
BMS / QMS	Business Management / Quality Management System
CAM / CNC	Computer Aided Manufacture / Computer Numerically Controlled
Output	The material, information and data provided to clients. The result of business processes.
Procedure	The written description of a business process
Process	A system of work tasks and work flows that produce specific outputs or work products from inputs.
Quality	Conformance to specified Requirements.
3D	Three (3) <u>D</u> imensional electronic models

## 2. BUSINESS OVERVIEW

### 2.1 The Company

Our company, PDC Consultants (PDC), is a structural and mechanical workshop drafting service with operations across Australia. Established in 1972, we have grown from three persons to a team of over 80 experienced professionals.

With offices in Perth and Sydney, we have contributed to many of Australia's most prestigious and important projects in both the commercial sector and the mining and resources sector. Example projects have included:-

- Rio Tinto Dampier Port Upgrade – CD3 Car Dumper, Conveyors and Wharf Extension.
- Rio Tinto Yandi 24 and 36 MTPA Upgrade.
- Alcoa Australia Pinjarra Efficiency Upgrade.
- Woodside Energy LNG V project.
- Newcrest Mining Telfer Gold Mine.
- BHP Billiton Mine Development Project.
- BHPBIO-OGW RGP1 and RGP3 projects.
- Geneesee Power Generation Station – Phase 3, Alberta, Canada.

This broad industry experience has been the basis for development of a quality professional service to accommodate the tight schedules and budgets of project work.

## 2.2 Nature of the Business

PDC's computerised drafting systems utilise the latest in 3D modelling systems and comprise StruCad, Prosteel, Xsteel 3D structural drafting and modelling software, AutoPLANT 3D piping software and Navisworks 3D clash detection software. This allows us to fully integrate with the whole range of engineering design office's computer aided drafting (CAD) systems, such as PDMS and PDS, and equally to service the computer aided manufacturing (CAM) systems predominantly used by our Clients.

We specialise in the production of detailed engineering drawings and 2D/3D models of structural steel components and mechanical equipment for the steel fabrication and construction industry. PDC derives a significant competitive advantage and delivers benefits to clients through its recognised expertise in the use of leading edge 3D drafting and modelling software and practices. PDC has a significant investment in computing hardware, software and skills engaged in the operation of its business.

PDC's range of structural and mechanical workshop engineering documents and electronic models for the design, fabrication and construction of structural steel components and equipment, from pre-feasibility, to feasibility and final detailed design encompasses:

- Mechanical layouts and concepts
- Hopper and chute layouts
- Conveyor design
- Storage structures
- Structural layouts
- Structural analysis and end connection design
- Fully-detailed shop fabrication drawings
- Fully-detailed general arrangement drawings

- Erection drawings
- Computer Aided Manufacturing data
- Fully-customised material lists
- Interfaces to management information systems
- Customisation to client individual information systems

To supplement the detailed engineering process for a project, PDC has alliances with organisations capable of complete detailed end connection design to the required project criteria and the relevant standards and statutory regulations.

With the rendering capabilities of the 3D packages, PDC can work with client's engineers and consultants to complete design reviews, right down to the individual nuts and bolts within a structure. Our 3D modelling technology provides an accurate 3D simulation of the structure being designed. It is programmed to ensure that all steel connections are consistent, detecting clashes and eliminating mistakes in joints which can cause delays and additional costs during fabrication and site construction.

According to Clients, our technology has proved efficient by increasing productivity both at the drafting stage and on-site. Gains are achieved through improved project purchasing, more accurate fabrication and delivery of materials and shorter construction times with reduced rework. Our 3D modelling technology ensures that Clients better manage their resources and time, resulting in the following benefits to them:

- The ability to review a model and its connections in a 3D environment enables engineers to quickly find workable solutions to problems
- Optimal use of materials through accurate control of items and quantities
- Identification of long lead items for advanced ordering to meet deadlines
- Decrease in material shortages
- Progressing the structure design in parallel with the connection design using PDC as a design resource
- Improved project scheduling
- Tighter budget control

Computer Aided Manufacturing data sent to fabricators ensures improved fabrication productivity and accuracy, reducing remedial work on the site. Erection time can be reduced by up to 60 per cent due to decreased fabrication and design changes.

## 2.3 Stakeholders

### Management

PDC is privately owned and Senior Management is handled by its founding partners. PDC also employs Project Managers and Project Supervisors, an Information Technology Manager and an Administration Manager. Please refer to the Organisation Chart (Figure 3.1) for details of the management structure.

## Staff

PDC currently employ approximately 80 drafting and project staff and 8 administration staff. Core staff is located in the Perth, Western Australia, Head Office.

PDC Consultants currently operates from the following areas:

- Head Office – Applecross, Perth
- Perth Metropolitan Area
- Sydney
- Cairns
- South-West Western Australia

Staff that work outside the head office access PDC Systems through the PDC Extranet access. All documents are transferred through the FTP site, VPN or e-mail.

## Contractors

A number of individual and small sub-contractor firms are used from time to time on PDC projects. Contractors generally work offsite with their output monitored and controlled to PDC specifications. Sub-contractors operate within Australia and most within the Perth metropolitan area. Information transfer between PDC and its contractors is handled via e-mail, fax, telephone, extranet, VPN and couriered CD, as required.

## Clients

PDC's clients fall into the following categories:

- Steel Fabricators
- Engineering Design Companies and Consultants
- Construction Companies
- Architects
- Operating Companies (BHPBilliton, Rio Tinto, ALCOA, Coogee Chemicals, etc)

Clients range from local, interstate and international companies, both small consultants and large multinational companies. For international clients, deliverables are generally transferred electronically via, e-mail, FTP, fax or telephone. For local and interstate clients, the information transfer is done in the same manner but hard copy drawings are also supplied via courier.

There are generally three types of payment contracts under which PDC operates with their Clients. They are:

- Lump sum
- Schedule of Rates
- Hourly Rate

## 2.4 The Organisation in Context

Working closely with its Clients and building alliances with third parties, such as engineering consultants, PDC produces the best results for each project. PDC's expertise is demonstrated through its reputation with long-standing Clients, many of whom have been dealing with the company since its early days. PDC's technologies and quality system guarantees PDC operates efficiently to optimise output and to provide the best results for its Clients.

Figure 2.1 outlines the PDC business processes and the information flows between its clients, its people and third parties.

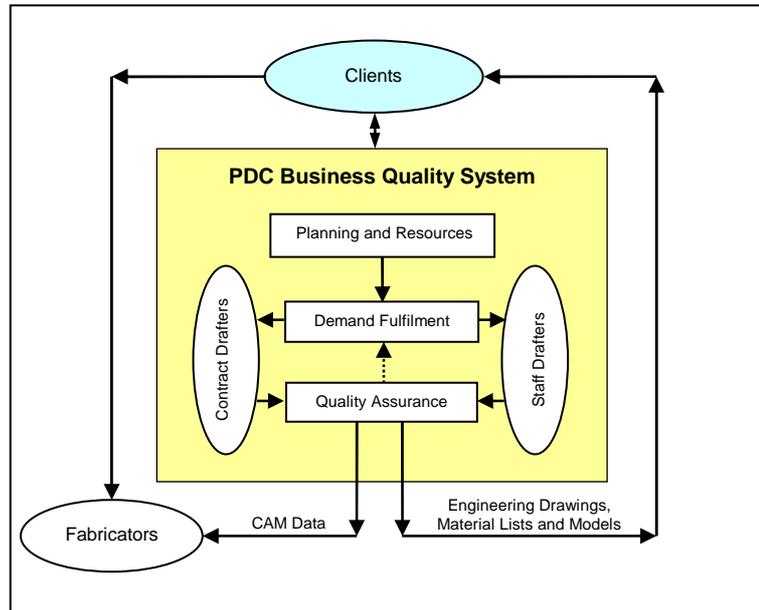


Figure 2.1 PDC Consultant's Operating Environment

Figure 2.2 details the demand fulfilment process used to provide clients with their drawings, electronic models and CAM data.

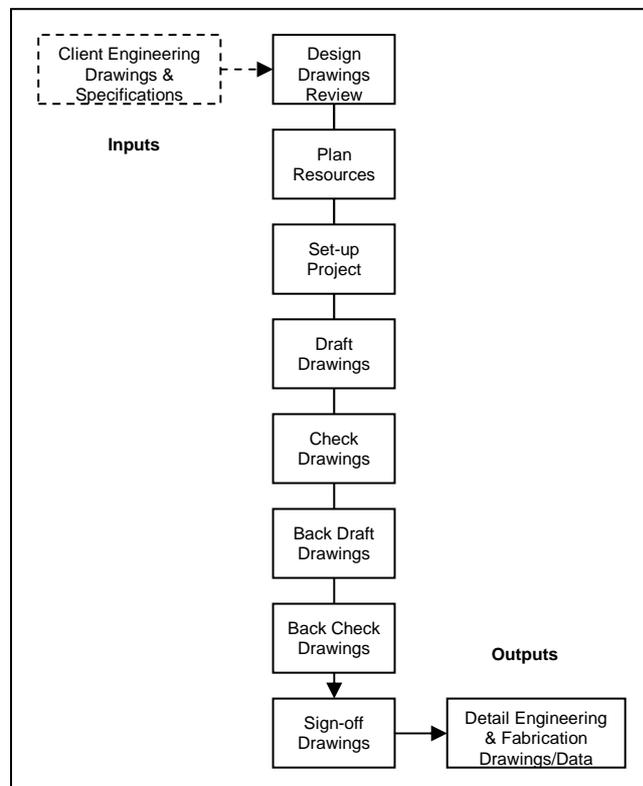


Figure 2.2 PDC Demand Fulfilment Process

## 2.5 Our Quality Goals

PDC Consultants recent projects have been completed with minimal and, in many cases, no fabrication rework from drawing errors. Our intention is to continue to give this reliability and to outperform competitors. To achieve these goals we are focused on quality, quality people, quality products, and quality work processes.

We are committed to do our work right, the best way, every time. No level of mistakes and errors is acceptable. This quality focus is summarised in our Quality Policy:

### ***PDC Consultants QUALITY POLICY***

*PDC Consultants provide integrated solutions that facilitate engineering design, workshop fabrication and site construction of structural steel, mechanical equipment and pipe work.*

*Our objective is to provide Clients with reliably accurate, easily interpreted electronic drawings, documents, information and data that add value to their design, purchasing, project management, fabrication and construction processes.*

*To achieve this we are committed to providing computer models, detailed engineering design, drawing and purchasing information, and CAM/CNC programming data that:*

- consistently meet our Client's agreed-to requirements,*
- help to streamline and automate their processes, and*
- add superior value in comparison to our competition.*

*We seek to become globally competitive by setting the standard of excellence through innovation and improvement to our quality.*

*We encourage the creativity, initiative and sense of accountability and responsibility of all our personnel to achieve these quality commitments.*

*Bill Weir  
Managing Director  
PDC Consultants*

*John Lyons  
Operations Manager  
PDC Consultants*

*Martyn Weir  
General Manager  
PDC Consultants*

## 2.6 Application of the Policy

PDC Consultants implements this quality policy by applying a comprehensive Quality Management System (QMS) to all projects undertaken by the business. The system is based upon and complies with the requirements of Australian Standard **AS/NZS ISO9001:2000**.

Four basic concepts underpin the PDC Consultants Quality Management System.

## **1. Quality is Conformance to Requirements**

All work is a Process. Processes add value to inputs to produce Outputs for Clients. We define quality as conformance to requirements in the following ways:

Our Clients have very definite needs and expectations of our document Outputs. When the Outputs of our work Processes meet the requirements of our Clients, that is quality. If not it is a Defect.

There are also requirements related specifically to our Processes and what each Process should be capable of doing. These Process requirements must also be met, or we will have a defective Process.

When our work conforms to both Process and Output requirements then that is Quality.

## **2. Our Focus is on Prevention**

It is costly and wasteful to allow our Processes to produce Outputs that do not conform to requirements. Therefore we must seek to remove the causes before Defects occur, and we must control the Process sufficiently to be assured that the Output will be Defect free.

## **3. Our Standard of Performance is Zero Defects**

No level of Defects is acceptable. "That's close enough" is not good enough at PDC. We must meet Output and Process requirements every time. We must all take responsibility for achieving this standard. Zero rework during construction is our goal.

## **4. Measurement is a Necessity**

The only way we know Process and Output requirements are being met is through continual, objective measurements. Quality measurements enable us to compare actual performance to Output or Process requirements so that we may take action. When kept as project records they demonstrate and give assurance of our quality.

## **2.7 Vision and Values**

Our Vision is to be a world leader in the use of 3D Modelling Technology which will be achieved by having the correct personnel and systems.

The values that fit our vision are to:

- Set the quality standard in our industry by adhering to the principles championed in the Quality Policy and this Quality Manual.
- Foster the creativity, initiative and sense of accountability and responsibility in our personnel to achieve our Vision.
- Provide a safe, enjoyable, innovative work environment conducive to high productivity.
- Provide all necessary training, equipment and software to maintain our technological and knowledge-based Competitive Advantage.

## 2.8 Mission

Our mission is to assist our Clients by providing innovation, integration and value to their business through utilising the latest in 3D Modelling, Design and Drafting Technology.

To achieve our Mission we will:

- Provide engineering documents and digital models that are reliably accurate, easily interpreted by users and add value to Clients' work execution processes.
- Have a Quality System accredited to the requirements of ISO 9001 so we can continually improve our efficiency and effectiveness.
- Continually develop local, regional and international relationships and strategic alliances that bring value to the business and its clients.
- Continually review our 3D and information systems to ensure they are leading edge technology and provide maximum efficiencies and accuracy in the services we provide.
- Reward, train and remunerate employees fairly because their energy, skills and knowledge are a foundation of the company's strength.
- Diversify our resources, technology and systems to ensure we provide a complete engineering design and detailing service second to none.

## 3. ORGANISATION

### 3.1 Function Descriptions

The business functions at PDC are provided by a Project and Operations Team, an Administration and Finance Team and an Information Technology Team.

#### **Project and Operations**

This group forms the core of the business in terms of the human resources employed in the creation of the company's products (detailed design engineering drawings and 3D models). Work provided by clients is managed on a project basis with drafting resources planned and programmed to meet the client's project schedule.

#### **Administration and Finance**

Accounting, payroll and human resource systems are managed and controlled by this group.

#### **Information Technology**

The IT Team support the use of the state-of-the-art drafting and modelling software. Their responsibility includes all software, hardware and associated communication and information systems needed to operate the business.

PDC invests in the latest technology so the company can handle complex projects more efficiently. This technology environment presents a significant opportunity for productivity and quality control gains to be realised through the extension of these resources into the administration, management and operations support functions of the business.

Due to the use of high-end drafting and modelling software in PDC Consultants' operation, a large part of the IT Department's role is the development, maintenance and control of the technical and administrative aspects of the drafting systems. This responsibility is undertaken in addition to the management of the company's general IT infrastructure and Quality Assurance program.

### 3.2 Organisation Chart

The following Organisational Chart (Figure 3.1) provides further details of the Management and Operations structure.

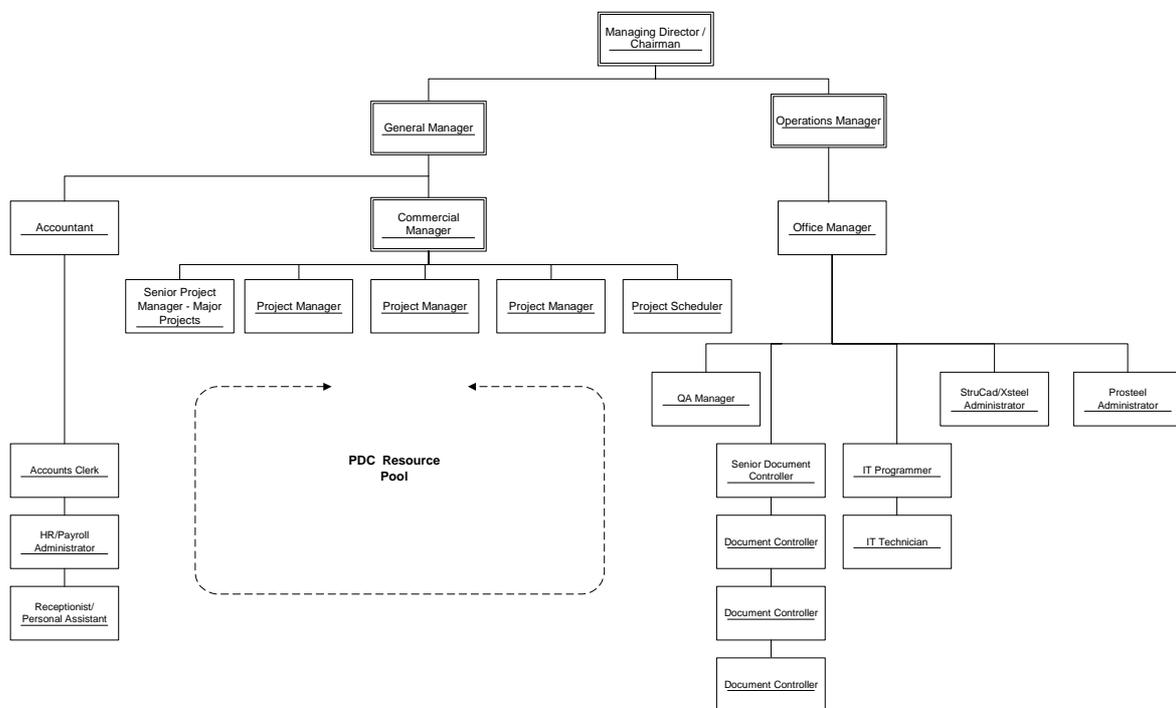


Figure 3.1 PDC Consultants Pty Ltd Organisation Chart

### 3.3 Business Locations

All management staff, IT information systems and the vast share of business operation are located at the head office in Applecross, Perth, Western Australia. The location map below (Figure 3.2) shows PDC Consultants Pty Ltd Head Office position in Australia, at:

48 Kishorn Road, APPLECROSS, WA, 6153.

Telephone +61 8 9315 6600

Facsimile +61 8 9364 7860

Email [pdc@pdcwa.com.au](mailto:pdc@pdcwa.com.au)



PDC Consultants occupies the entire premise, with the exception of two small offices. Access to management offices and the drafting sections is via a keycard security system.

## 4. BUSINESS PROCESSES

### 4.1 Key Business Processes

#### Business Processes Diagram

This diagram (Figure 4.1) presents an overview of the processes involved in developing, producing and delivering the business' products.

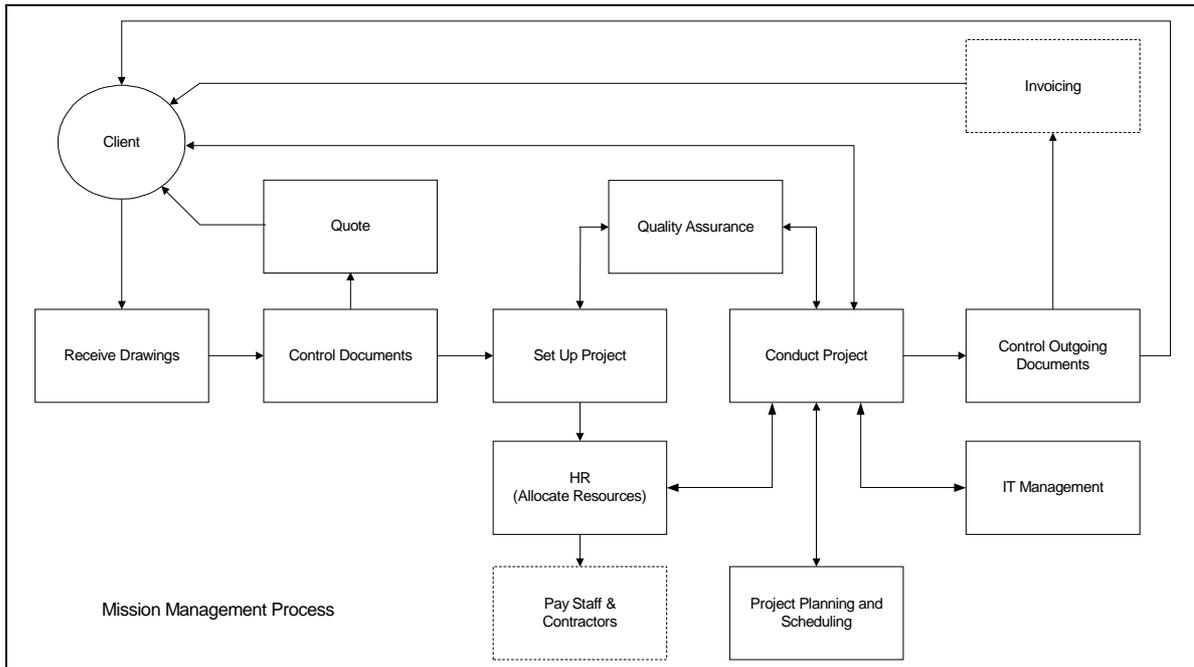


Figure 4.1 Overview of PDC Consultants' Business Processes

## 4.2 Business Performance Indicators and Measurement

In order for PDC to achieve its Vision and meet its Mission the company has establish measures for the key critical success factors that drive its business.

- 100% correct first time.
- Supply of drawings and information to schedule.
- Repeat business from clients.
- Retention rate of employees.

## 4.3 Mission Management Process

### Corporate Strategy

The organisation is continual focused on meeting its Vision and delivering its Mission. Business strategies and plans are aligned with the organisation's policies and their resulting objectives. Senior management meet bi-monthly to assess the operation and address non-conformities, along with identifying opportunities for greater business efficiency and effectiveness that will translate into benefits for PDC Clients.

The continuing suitability of objectives and strategies are formally reviewed annually by senior management, or as necessary if unusual circumstances arise. From these leadership meetings appropriate plans are developed to improve the business through enhancing its systems, processes or people.

## **Management Reporting**

Through well establish reporting and monitoring systems Senior Management are in control of the entire operation. Business systems information is available starting at the document receiving step and progressing through quotation, document control, project execution, project management and project completion. Each week project progress meetings are held where schedules and resources are updated so progress can be reported to clients. Management reporting and project management structures allow monitoring and measurement of performance and provide strong control over project and business systems. The capability of our technology and databases to search past projects provides Management with opportunity to benchmark improvement.

## **Change Control Reporting**

The tracking and reporting of changes to the original specifications of a job is an important aspect of PDC's operations. Project changes give rise to resource planning and scheduling issues for project management. Also, the billing for changes is processed based on the time involved. So, it is necessary to have a very efficient method of collecting and reporting the details of any changes and the time taken in handling them. The PDC database contains specifically developed proprietary functionality that addresses this requirement. It improves integration with the overall business process to simplify activity for staff, while providing management with the information needed to achieve the Mission.

## **Continual Improvement**

Quality is not separate from our day-to-day business processes. It focuses us on what we do, how we do it and how we can do it better.

There is a change in perspective necessary when participating in quality related activities. Rather than concentrating on the content of the job, we step back and look at the process itself; the step-by-step set of activities by which our work is completed and the required output produced. Our quality methodology is based on understanding our business processes and regularly performing a set of quality activities to make sure we are doing the right thing, the best way, every time.

Assurance of the BMS/QMS in operation is provided by formal records of all activities undertaken, through the use on internal audits, bi-monthly management reviews where Key Performance Indicators are monitored, quality documents control, resource management, and accreditation activities. Progress of the BMS/QMS is encouraged with the use of improvement, corrective and preventive actions at all levels of the organisation.

## **4.4 Resource Management Process**

### **HR Management**

Our quality assurance system provides a traceable and formal approach to the management of the skills, qualifications, and training of staff and contractors. Our information systems identify employees' skills and abilities and permit us to accurately match and manage the requirements for human resources in PDC projects.

## Information Management

With PDC's continual growth there has been significant documentation and development of the company's information and database systems over the years to provide a concise, yet comprehensive, reference for staff, management and IT to aid in the analysis and decision making required for the ongoing provision, maintenance and improvement of PDC's systems.

As the company grows and work is conducted in a more distributed environment, our technology and information systems provide secure and controlled access to project and cost control data related functions, integrating them with other business systems (e.g. Project Management, Billing, Change Control) to improve the flow of information throughout the company and to Clients, Contractors and Suppliers.

## Training and Development

Training and support for staff is considered vital by PDC, with a commitment to providing annual cadetships to graduates as part of a structured program to ensure a continuity of skills. PDC provides training in support of company quality objectives including:

- Use of 2D and 3D drafting software AutoCAD, StruCAD, Prosteel, Xsteel and AutoPLANT.

The drafting and modelling software we use requires experienced and versatile people, and hands-on training is on-going within the company. Mandatory minimum training is required prior to working on PDC projects. This includes structured, on-the-job training over the first three months of work. New drafting personnel are mentored by proficient and competent draftspersons to provide maximum opportunity to learn the right skills well. Training in new software upgrades is provided on their introduction to the business.

- Use of the quality system and procedures.

Everyone at PDC has a responsibility for quality - everyone has a contribution to make. Induction training and manuals are provided for all new personnel, and review sessions are held if internal audit results indicate a necessity. Training in access to the on-line QMS documentation is given to all employees. Records of training, including inductions are kept.

All staff is provided with clear job descriptions and their performance and training needs are reviewed annually. From the review their structured and personal training plans are developed and the necessary time and exposure is scheduled.

## 4.5 Demand Creation Process

### Customer Relations

PDC is conscious of the need to work in consultation with its Clients to ensure the best possible design is produced. Our Client requirements are recognised as the primary driver of the business and they describe the quality requirements. They are determined for each project from assessment of:

- knowledge from the tender process;
- review of the Client supplied documentation; and
- conduct of a Contract Review;
- completion of the start-up activities.
- the contractual agreements;

Our staff members are trained to consult with Clients during all stages of the design and drafting process. PDC's preferred approach to working with Clients is to form close relationships and alliances. Whether Clients are construction companies, engineering consultants or fabrication companies, PDC assist in their project planning and accurate budget control by providing correct drawings in a timely manner.

PDC has a fully traceable and auditable system so that information can be retrieved for Clients at any time. In an event where extra capacity is needed, PDC's relationship with other detailing companies and the quality controls employed ensures the reliability and accuracy of the results for the Client, while meeting necessary deadlines.

### Quoting

This key Client requirement is controlled by the Senior Managers on the basis of their extensive project experience and their expertise in estimating project requirements and resources. Other staff members become involved in the quoting process as their business knowledge and skills develop. The company's time-sheeting and project management information are used to continually improve the accuracy of estimating and quoting in order to remain strongly competitive in the international marketplace.

### Invoice Clients

Projects are quoted on either a fixed price, schedule of rates (\$ per unit of steel drawn) or hourly rate basis. Fixed price jobs are invoiced periodically by the accounting team based on the project managers' estimate of work complete (percentage). Schedule of rates jobs are invoiced periodically and also are based on the quantity of work complete. Variations for all projects are invoiced periodically based on the time involved in making the necessary modifications and with client approval.

## 4.6 Demand Fulfilment Process

PDC has standardised its work processes to settle on the current best working practices and allow everyone to do the job in the one best way. These standardised processes are set out in the Procedures and Work Instructions of the BMS/QMS as approved and amended from time to time. The procedures document the work processes in a way that can be easily communicated to everyone who will use them.

## **Receive Documents**

The initial requirement for almost every process in the business is the receipt of documents. These documents are usually design drawings (at various revisions) and associated specifications. Prior to winning a job the documents will be sent by potential clients to provide information for the generation of a quote. Subsequently, document packages are sent to provide the specifications for PDC's deliverables. The receipt and initial review of documents received from clients determines whether the documents need to be processed through document control.

Control of all documents, both Client supplied and PDC produced, is through use of a Document Database. This database provides registration, identification, tracking (status), and verification.

## **Control Incoming Documents**

Incoming document packages identified as controlled documents in the receive documents step are subject to incoming document control. This process ensures the appropriate logging, storage and distribution of documents.

## **Set-up Projects**

Upon reviewing the specifications and design drawings in detail, the Project Leader uses the structured Job Set-up Process to establish the project templates, database records and any other technical aspects of the project (including standards, macros, codes, rate schedules, etc). Drafting resources are assigned to the project and the Project Manager develops a plan for the conduct of the project.

Clear and useable descriptions of the drafting Process and Output requirements are developed for each project by activities including:

- selection of the appropriate CAD software and system;
- creation of an electronic Drafting Template within the CAD system to define the layout of the drawings, set detailing conventions and the extent and format of Output information;
- initialisation of a computerised document database to manage receipt and distribution of all technical documentation for the project; and
- agreement to transmittal receipt and verification Processes with the Client.

Project risk assessments to identify potential problems are conducted as required.

The Process targets are established on a Project Work Plan, including the delivery schedule and delivery sequence.

Approval by the Client of the requirements is sort prior to commencement of the work.

Work is then assigned to the members of the project team and they start drafting using the templates and specifications laid out by the Project Leader. Plans are updated as the design evolves.

## Conducting Projects

The range of PDC's staff's experience and its high retention rates ensures valuable ongoing knowledge is provided to Clients' projects. All projects are managed by experienced Project Leaders and supervisors to ensure schedules and budgets are met. Project Leaders monitor the progress of the job and ensure that the necessary resources are available to meet deadlines. They also liaise with the Client to ensure that any issues are handled promptly and that the Client is satisfied with project deliverables.

A project team consists of senior staff members, experienced checkers and quality control personnel, as well as junior personnel who can add an innovative touch. Each project team brings broad knowledge of the industry and relevant design standards and specifications to provide simple solutions and solve the more complex technical issues. The company's size also gives it the flexibility to handle both large and small projects and tight deadlines.

All project staff maintains comprehensive timesheets including allocation of time to projects, administration, leave and public holidays. The data is used for project management; billing for job variations, calculation of cost and monitoring hours of staff.

Variations in the job can occur during this stage. They may occur as a result of the Client requesting a design change or from technical issues identified by the drafting team. Variations are carefully documented to maintain a comprehensive record of the instructions received from the Client over the course of the project.

The tracking and reporting of changes to the original specifications of a job is an important aspect of PDC's operations. Project changes give rise to resource planning and scheduling issues for project management. Also, the billing for changes is processed based on the time involved. So, it is necessary to have a very efficient method of collecting and reporting the details of any changes and the time taken in handling them. The PDC database contains functionality that addresses this requirement and the way it integrates with the overall business process simplifies the document management and control activity for staff.

Control of work scope changes and additions is achieved through use of a NOC (Notice of Change) Form and status is controlled by the registers in the Document Database.

The emphasis of these control activities is on the prevention of Defects with particular emphasis on early identification of potential problems allowing Corrective Action and/or Process improvement. Defects can be identified from any of the checking activities as well as by management reviews and by quality audits.

All drawing work is independently checked using Check Prints to provide Design Verification and issues are resolved iteratively by the Drafters and Checkers. A further verification is made with a back drafting check. The checking results are monitored for consistency and accuracy issues by the use of the Checkers Summary Form. The drawing sign-off activity is used as the Validation of the conforming completion of all design activities. Sign-off checks of electronic data for CAM use are also made. 3D models also have the option of being electronically clash checked should the client specify it.

Our experienced Senior Checkers ensure the production of reliably accurate documents that are easily interpreted by the fabricator and construction site. Regardless of time pressures, documents do not leave PDC without a complete check by one of these staff members. Not only do the Checkers review internal integrity in a model and drawings, but also all work is crosschecked to ensure that civil, structural and mechanical elements of a project are consistent.

Corrective Action is generally managed (investigated, actioned and resolved) through use of the Non Conformance Procedure. In the case of interdisciplinary checks on Client supplied engineering design the Technical Query (TQ) system is used to resolve errors, inconsistencies and clashes.

Output defects may be identified by the Client during the use of the product for fabrication and construction work. These defects are advised to PDC as non-conformances and constitute the design validation process. Such defects may result in additional corrective action and are dealt with either by the Client's non-conformance process or PDC's non-conformance process.

Client complaints when received (verbally, letter form or otherwise) are dealt with through use of the Non Conformance Report.

### **Control Outgoing Documents**

The issuing of documents to Clients is a tightly controlled process. Subsequent to a number of checks, copies of completed drawings are issued to various parties as specified by the client. Drawings can be issued in various hard copy and electronic formats. Electronic fabrication and materials data can also be produced, from the drawings and models, and distributed via this process.

For every document transmitted, hard copies are filed and electronic copies are archived for future reference.

### **Document Storage**

For project work, assurance of the quality of PDC's process inputs, processes and outputs is provided by the assembly of data presenting records of contract review, amendments to the contract, the results of the quality checks, of verifications and validations. These records, in the form of documents, databases, reports, completed forms and registers are kept for durations as required by Clients, or as a minimum to the conclusion of the Defects Liability Period of the Project, as agreed. Check Prints are held for the project duration.

All Client supplied documents are stored in the medium supplied - hard copy or electronic file - for the same duration as PDC's records.

## 5. FUNCTION MATRIX

Function	Applicable Documentation	Document No
Client Support	Business System Quality Manual	PDC-HB-0004
	Tender and Quotation Procedure	PDC-PD-0032
	Customer Relations Procedure	PDC-PD-0037
IT Management	Document Control Procedure	PDC-PD-0003
	IT System Control Procedure	PDC-PD-0007
	Records Control Procedure	PDC-PD-0040
Project/Product Realisation	Document Control Procedure	PDC-PD-0003
	Drafting Management Procedure	PDC-PD-0004
	Checking Procedure	PDC-PD-0005
	Drafting Standard Procedure	PDC-PD-0006
	Notice of Change Procedure	PDC-PD-0015
	Technical Query Procedure	PDC-PD-0023
	Non-Conformance Procedure	PDC-PD-0028
	Cost Code Procedure	PDC-PD-0033
	Planning and Scheduling Procedure	PDC-PD-0035
	Records Control Procedure	PDC-PD-0040
	Monitoring and Measuring Procedure	PDC-PD-0042
Quality Assurance	Business System Quality Manual	PDC-HB-0004
	Business Systems Auditing Procedure	PDC-PD-0008
	Non-Conformance Procedure	PDC-PD-0028
	Preventive Action Procedure	PDC-PD-0036
	Management of Change Procedure	PDC-PD-0038
	Supplier and Purchased Product Procedure	PDC-PD-0039
	New Product Design and Development Procedure	PDC-PD-0041

## 6. AS/NZS ISO 9001 COMPLIANCE MATRIX

Clause	Location in PDC Consultants BMS/QMS	Document No
<b>4.1 General requirements</b>	Business System Quality Manual	PDC-HB-0004
	Planning and Scheduling Procedure	PDC-PD-0035
	Product Design and Development Procedure	PDC-PD-0041
	Non Conformance Procedure	PDC-PD-0028
	Preventive Action Procedure	PDC-PD-0036

Clause	Location in PDC Consultants BMS/QMS	Document No
	Business Systems Auditing Procedure	PDC-PD-0008
	Supplier and Purchased Product Procedure	PDC-PD-0039
<b>4.2 Documentation requirements</b>		
4.2.1 General	Business System Quality Manual	PDC-HB-0004
4.2.2 Quality manual	Business System Quality Manual	PDC-HB-0004
4.2.3 Control of documents	Document Control Procedure	PDC-PD-0003
4.2.4 Control of records	Records Control Procedure	PDC-PD-0040
<b>5.1 Management commitment</b>	Business System Quality Manual	PDC-HB-0004
<b>5.2 Customer focus</b>	Customer Relations Procedure	PDC-PD-0037
<b>5.3 Quality policy</b>	Business System Quality Manual	PDC-HB-0004
	Employee Handbook	PDC-HB-0002
<b>5.4 Planning</b>		
5.4.1 Quality objectives	Business System Quality Manual	PDC-HB-0004
5.4.2 Quality management system planning	Product Design and Development Procedure	PDC-PD-0041
	Management of Change Procedure	PDC-PD-0038
	Planning and Scheduling Procedure	PDC-PD-0035
<b>5.5 Responsibility, authority and communication</b>		
5.5.1 Responsibility and authority	Business System Quality Manual	PDC-HB-0004
5.5.2 Management representative	QM Position Statement	PDC-JD-0018
	Business System Quality Manual	PDC-HB-0004
5.5.3 Internal communication	Monitoring and Measuring Procedure	PDC-PD-0042
<b>5.6 Management review</b>		
5.6.1 General	Business System Quality Manual	PDC-HB-0004
5.6.2 Review input	Management Review Meeting Agenda	PDC-CL-0013
5.6.3 Review output	Business System Quality Manual	PDC-HB-0004
<b>6.1 Provision of resources</b>	Supplier and Purchased Product Procedure	PDC-PD-0039
	Customer Relations Procedure	PDC-PD-0037
<b>6.2 Human resources</b>		

Clause	Location in PDC Consultants BMS/QMS	Document No
6.2.1 General	Resource Skills Matrix	PDC-RG-0029
	Employee Records	Employee Name
	Position Statements	PDC-JD-0001 onward
6.2.2 Competence, awareness and training	Performance Review Guide	PDC-FM-0061
	Employee Handbook/Induction	PDC-HB-0002
	Employee Training Records	PDC-RG-0008
<b>6.3 Infrastructure</b>	Planning and Scheduling Procedure	PDC-PD-0035
<b>6.4 Work environment</b>	Employee Handbook/Induction	PDC-HB-0002
	Drafting Management Procedure	PDC-PD-0004
<b>7.1 Planning of product realisation</b>	Planning and Scheduling Procedure	PDC-PD-0035
	Flow Charts	PDC-FC-0001 onward
	Procedures	PDC-PD-0001 onward
	Monitoring and Measuring Procedure	PDC-PD-0042
<b>7.2 Customer-related processes</b>		
7.2.1 Determination of requirements related to the product	Business System Quality Manual	PDC-HB-0004
	Technical Query Procedure	PDC-PD-0023
	Tendering and Quotation Procedure	PDC-PD-0032
7.2.2 Review of requirements related to the product	Tendering and Quotation Procedure	PDC-PD-0032
	Preventive Action Procedure	PDC-PD-0036
7.2.3 Customer communication	PDC Web Site	www.pdc.com.au
	Notice of Change Procedure	PDC-PD-0015
	Technical Query Procedure	PDC-PD-0023
	Customer Relations Procedure	PDC-PD-0037
<b>7.3 Design and development</b>		
7.3.1 Design and development planning	Product Design and Development Procedure	PDC-PD-0041
7.3.2 Design and development inputs	Product Design and Development Procedure	PDC-PD-0041
7.3.3 Design and development outputs	Product Design and Development Procedure;	PDC-PD-0041
7.3.4 Design and	Product Design and Development Procedure	PDC-PD-0041

Clause	Location in PDC Consultants BMS/QMS	Document No
development review		
7.3.5 Design and development verification	Product Design and Development Procedure	PDC-PD-0041
7.3.6 Design and development validation	Product Design and Development Procedure	PDC-PD-0041
7.3.7 Control of design and development changes	Product Design and Development Procedure	PDC-PD-0041
<b>7.4 Purchasing</b>		
7.4.1 Purchasing process	Supplier and Purchased Product Procedure	PDC-PD-0039
7.4.2 Purchasing information	Supplier and Purchased Product Procedure	PDC-PD-0039
7.4.3 Verification of purchased product	Supplier and Purchased Product Procedure	PDC-PD-0039
<b>7.5 Production and service provision</b>		
7.5.1 Control of production and service provision	Drafting Standard Procedure	PDC-PD-0006
	Work Instructions	PDC-WI-0001 onward
	IT System Control Procedure	PDC-PD-0007
	Product Design and Development Procedure	PDC-PD-0041
	Drafting Management Procedure	PDC-PD-0004
	Checking Procedure	PDC-PD-0005
	Monitoring and Measurement Procedure	PDC-PD-0042
7.5.2 Validation of processes for production and service provision	Drafting Management Procedure	PDC-PD-0004
	Check Lists Procedure	PDC-PD-0031
	Monitoring and Measurement Procedure	PDC-PD-0042
7.5.3 Identification and traceability	Job Set-Up Sheet	PDC-FM-0048
	Checking Procedure	PDC-PD-0005
	Document Control Procedure	PDC-PD-0003
7.5.4 Customer property	Document Control Procedure	PDC-PD-0003
7.5.5 Preservation of product	Document Control Procedure	PDC-PD-0003
	Monitoring and Measurement Procedure	PDC-PD-0042
<b>7.6 Control of</b>	Drafting Management Procedure	PDC-PD-0004

Clause	Location in PDC Consultants BMS/QMS	Document No
<b>monitoring and measuring devices</b>	Checking Procedure	PDC-PD-0005
	Monitoring and Measurement Procedure	PDC-PD-0042
<b>8.1 General</b>	Checking Procedure	PDC-PD-0005
	Business Systems Auditing Procedure	PDC-PD-0008
	Non Conformance Procedure	PDC-PD-0028
	Preventive Action Procedure	PDC-PD-0036
	Customer Relations Procedure	PDC-PD-0037
	Drafting Management Procedure	PDC-PD-0004
<b>8.2 Monitoring and measurement</b>		
8.2.1 Customer satisfaction	Business Systems Auditing Procedure	PDC-PD-0008
	Customer Relations Procedure	PDC-PD-0037
8.2.2 Internal audit	Business Systems Auditing Procedure	PDC-PD-0008
	Drafting Management Procedure	PDC-PD-0004
8.2.3 Monitoring and measurement of processes	Checking Procedure	PDC-PD-0005
	Drafting Management Procedure	PDC-PD-0004
8.2.4 Monitoring and measurement of product	Monitoring and Measurement Procedure	PDC-PD-0042
	Non Conformance Procedure	PDC-PD-0028
	Checking Procedure	PDC-PD-0005
	Document Control Procedure	PDC-PD-0003
<b>8.3 Control of nonconforming product</b>	Drafting Management Procedure	PDC-PD-0004
	Checking Procedure	PDC-PD-0005
	Monitoring and Measurement Procedure	PDC-PD-0042
<b>8.4 Analysis of data</b>	Customer Relations Procedure	PDC-PD-0037
	Monitoring and Measurement Procedure	PDC-PD-0042
	Supplier and Purchased Product Procedure	PDC-PD-0039
<b>8.5 Improvement</b>		
8.5.1 Continual improvement	Preventive Action Procedure	PDC-PD-0036
	Business System Quality Manual	PDC-HB-0004
	Management Review Meeting Agenda	PDC-CL-0013
	Non-Conformance Procedure	PDC-PD-0028
	Monitoring and Measurement Procedure	PDC-PD-0042
8.5.2 Corrective action	Drafting Management Procedure	PDC-PD-0004
	Checking Procedure	PDC-PD-0005

Clause	Location in PDC Consultants BMS/QMS	Document No
	Management Review Meeting Agenda	PDC-CL-0013
	Non-Conformance Procedure	PDC-PD-0028
8.5.3 Preventive action	Management Review Meeting Agenda	PDC-CL-0013
	Preventive Action Procedure	PDC-PD-0036

## 7. REGULATION COMPLIANCE MATRIX

Regulation	Applicable Documentation	Document No
Privacy	Privacy Policy	PDC-PO-0001
	IT Policy	PDL-PO-0006
Occupational Health, Safety and Welfare	OHS Policy	PDC-PO-0002
	Medical Emergency	PDC-PD-0202
Equal Opportunity	Equal Opportunity Policy	PDC-PO-0003
Emergency Response	Emergency Control Organisation	PDC-PD-0200
	Instructions to Fire Wardens	PDC-PD-0201

## 8 APPROVALS

Approval	Certifying Organisation	Registration Date
ISO 9001-2000	SAI Global	Pending 1 <sup>st</sup> Qtr 2007