



▶ MANUFACTURERS INDUSTRY QUALITY STATEMENT

Precast New Zealand Inc. (PCNZ) was established in 1999 and is a national industry association of precast concrete manufacturers representing over 90% of the off site national precast concrete market.

Our Members are *off-site* manufacturers who supply precast concrete elements into the residential, commercial, industrial, and infrastructure markets.

Precast NZ members are committed to *quality and product support*.

For all enquiries and a list of Precast New Zealand Member and Associate Member companies please visit our website:

▶ www.precastnz.org.nz

Clients wishing to use the unmatched flexibility and economy of precast construction need to consider issues which make for smooth execution of the project.

Successful projects will need the involvement of your precaster.

The general precast concrete component range manufactured by Member companies includes the following:

Commercial Building (structural, architectural, including high rise residential)

- ▶ Columns, beams, wall and cladding panels, prestressed concrete floor systems, and stairs.
- ▶ Power and telecommunications poles, box culverts, piling (reinforced and prestressed)

Residential Building

- ▶ Wall and cladding panels, prestressed concrete floor systems, and stairs.

Infrastructure

- ▶ Highway bridge decks, farm bridges, bridge abutments, tunnel liners, median barriers, wharves and liquid retaining structures
- ▶ Power and telecommunications poles, box culverts, piling (reinforced and prestressed)

Where special, non standard shapes are required it is advisable to discuss your requirements with your local precast concrete manufacturer.

Precast construction is a proven construction method for delivering quality buildings on time

Advantages include:

- ▶ Certainty of quality – dimensions, strength, durability and appearance
- ▶ Reduced construction times
- ▶ Co-ordinated on-time delivery
- ▶ Firm prices for project evaluation and tender
- ▶ Specialist skills and expertise to overcome on site difficulties
- ▶ Reduced need for on site skilled labour.
- ▶ Reduced site congestion.
- ▶ Reduced on site environmental risk.



THE DEVELOPMENT OF FAVOURABLE AND SUSTAINABLE GROWTH OF THE NEW ZEALAND PRECAST CONCRETE MARKET."

THE PRECAST NEW ZEALAND STORY SO FAR

Precast New Zealand was formed to promote, aid, foster, research, and develop the interests of the precast concrete industry within New Zealand.

To do this Precast New Zealand (PCNZ) has become involved in the following activities:

Sponsoring and guiding seminars to industry

PCNZ has presented or promoted a number of seminars over the past several years including:

- Precast Concrete Design Seminars in association with CCANZ
- Sponsored PRESSS Technology (an introduction to the design of ductile jointed precast concrete structures)

Information exchange with organisations within New Zealand and offshore

These organisations include but are not limited to:

- The NZ Building Subcontractors Association
- The NZ Concrete Society
- The Cement and Concrete Association of New Zealand (CCANZ)
- National Precast Concrete Association of Australia
- The Precast/Prestressed Concrete Institute (United States)
- The Canadian Prestressed Concrete Institute

Providing an organisation that can co-ordinate problems of common concern

- The Construction Contracts Act 2002 – Representations to the bill's select committee to ensure that precast concrete supply was brought back into the Act's jurisdiction.
- Conditions of Quotation & Contract – formulating fair and reasonable quotation and tender conditions in the market place

Employee trade training

- To ensure that industry skills and standards are maintained and are recognised by the construction industry through the quality of the products manufactured.
- Representation on the Building Construction Industry Training Organisation – PCNZ has two representatives working with the BCITO

Representation to all divisions of Government and private organisations

- The Building Act 2004: Submissions to Dept. of Building and Housing regarding LBP's, Restricted building work,
- The Construction Contracts Act 2002, representations to select committee
- Transit NZ. – Bridge Manual amendments
- OSH – Code of Practice for the safe handling, transportation and erection of precast concrete

Representing industry interests through the development of building codes

- Financial sponsorship and participation in the NZS 3101 upgrade
- Transfund standard bridge decks, industry specifications
- Member of Technical Advisory Group on hollowcore flooring testing at Canterbury University
- Hollowcore floors:
Member of the Research Board for the Seismic Retrofit Solutions for Existing Buildings. Universities of Auckland and Canterbury joint research

Establishing Members quality manufacturing standards

- Plant certification to establish quality and performance standards for Members

▣ OUR WEBSITE

www.precastnz.org.nz provides the following data:

➤ [About PCNZ](#) ➤ [Joining PCNZ](#) ➤ [Contact PCNZ](#) ➤ [Members List](#) ➤ [Associate Members List](#) ➤ [Publications List](#) ➤ [Useful Links](#)

About PCNZ, Contact PCNZ etc.

Provides for general enquiries and contact details for:

1. The Executive Officer
2. The Executive of Precast New Zealand
3. Precast New Zealand Members
4. Associate Members

Visitors to our website may also find the following information useful:

Publications List

Provides a list of PCNZ Publications. A sample list follows:

1. Conditions of Subcontract
2. Designing/Specifying for Precast Concrete
3. Drawings Standards for Precast Concrete
4. Occupational Safety and Health
5. Industry Publications
6. Newsletters

Useful Links.

Here the visitor will find links with international and local precast organisations -

- NPCAA** National Precast Concrete Association of Australia
CPCI Prestressed Precast Concrete Institute
FIB International Federation of Structural Concrete (CEB -FIP)

and the following local organisations -

- CCANZ** Cement and Concrete Association of NZ
NZBSF NZ Building Subcontractors Federation
BCITO Building Construction Industry Training Organisation

Industry Publications which may be found on the website include:

- National Precaster Magazine (NPCAA publication)
- Construction Contracts Act 2002
- The Australian Precast Concrete Handbook (with New Zealand commentary)
- Hollowcore test report (Final). For Floor Unit Connections (University of Canterbury)
- Transfund NZ Research Report No. 252. New Standard Precast Bridge Beams.
- Members obligations relating to lifting inserts
- Construction Site - Incident Reporting
- Precast New Zealand brochure (this brochure and insert)



▶ USE YOUR PRECASTER TO BEST ADVANTAGE: A SUCCESSFUL PROJECT GUIDE

GUIDE TO GETTING THE MOST OUT OF YOUR PRECASTER

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1.0 DESIGN AND FEASIBILITY STAGE

Facilities available vary with geographic location. Involve your precaster early on in the design process to ensure economical and workable designs. Precast manufacturers are willing to provide information and assistance to designers and contractors at any stage of the design process.

Consultation should cover component size for handling and transport, fixing and jointing details, and architectural finishes. Early consultation assists in eliminating redesign after tender, and consideration of non conforming alternatives, thereby reducing costs.

Early consultation allows accurate pre tender estimates and reduces post tender budget problems.

2.0 ALLOW ADEQUATE LEAD TIME

Adequate lead time is probably the most important single factor in ensuring problem free execution of the contract.

Lead time is required for:

1. Program determination and production scheduling
2. Preparation of shop drawings and development of details
3. Resolving issues with the contract documentation
4. Approval of shop drawings and any revisions
5. Sourcing cast-in hardware and steel reinforcing
6. Mould preparation
7. Approval of prototypes or samples
8. Manufacture and storage of units ahead of delivery

Precast shop drawings often require accessing information prepared by different parties (engineer, architect, various services providers) and incomplete or inconsistent information can lead to delays. Preparation of precast shop drawings will often be the first time these issues arise and sufficient time needs to be allowed to resolve them.

Discuss lead times with your precaster before they are likely to become an issue. The amount of lead time required will depend on:

- ▶ Project size
- ▶ Complexity
- ▶ Adequacy of details supplied
- ▶ Choice of materials
- ▶ Types of finishes
- ▶ Mould numbers required
- ▶ Mould complexity
- ▶ Workload and resources required

3.0 SUPPLY TIMELY AND ACCURATE INFORMATION

Your precaster's progress is totally dependant on final approval of shop drawings. If information provided initially is inaccurate, incomplete, or subject to revision, it can cause delays. Amending shop drawings involves a real cost, diverts resources, and can cause programme slippage.

4.0 AGREED PROGRAM

A realistic program should be agreed with the precaster prior to entering into a contract. Programme changes require reallocation of resources which may be difficult.

5.0 VISIT YOUR PRECASTER

Precasters welcome visits by clients, designers, builders, students by arrangement. Visits help with an understanding of the precasting process which is of benefit to designers with detailing and expectations regarding the completed product.

Inspection of the first units produced for a project is essential.

6.0 QUALITY DOCUMENTATION – QUALITY OUTCOME

The better the quality of the tender documentation, specifications drawings and especially the details, the more successful will be the outcome. The introduction of variations and new details affects costs and programme.

7.0 SOURCES OF TECHNICAL INFORMATION

As well as the knowledge resident in experienced practitioners, the industry has available a number of publications and relevant standards.

Some publications which may be referred to include:

- Rawlinsons NZ construction Handbook
- NZ Standards:
- NZS 3114:1987 Concrete Surface Finishes
- NZS 3109:1997 Concrete Construction
- NZS 3101:1995 The design of Concrete Structures
- Australian Precaster Guide with New Zealand supplement
- Publications on the PrecastNZ website www.PrecastNZ.org.nz

CONCLUSION.

Using Precast concrete can add real value to a building project by adding quality and reducing construction time. Successful projects are planned and make best use of your precaster by requiring their involvement at appropriate stages. Successful projects will have adequate information and provide for suitable lead time.

Contact a Member company of PrecastNZ to discuss your next construction project in order to ensure a quality, successful, and economical outcome.

For more information see www.precastnz.org.nz

▶ BID AND SUCCESSFUL TENDER ACTIVITIES															
Item No.	Task Activity Weeks or Months depending on project type	Task Duration - Weeks or Months depending on project type													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
	CURRENT CONTRACT WORK	PERIOD 1*		PERIOD 2*						PERIOD 3*					
1	Feasibility studies. Architect and engineering concept drawings			It is often wise to nominate and start a precaster prior to choosing a builder											
2	Building contract let														
3	Precast sub-contract let					Delays in letting a sub-contract may delay the whole project or involve costly additional molds									
4	Realistic program agreed with precaster														
5	"For Construction" drawings received from contractor														
6	Precast shop drawings prepared							Delays may be due to: Precaster receiving basic drawing information Specifier answering precasters data queries							
7	Shop drawings approved by contractor														
8	Mould preparation and manufacture	This Activity cannot start until item 7 completed													
9	Mould setup and first unit approved														
10	Production														
11	Delivery to site (in agreed sequence)														

- * **PERIOD 1: CONCEPT DESIGN.** Consult precaster about contract, design and schedule matters
- * **PERIOD 2: PRE MANUFACTURE.** Time use is more dependant on the builder or specifier than precaster
- * **PERIOD 3: MANUFACTURE AND SUPPLY TO SITE.** Be prepared to communicate production problems