

**Procedure Manual**

# **Prequalification of Noise Barrier Design Companies**

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## 1 Introduction

### 1.1 Overview

This procedure manual describes the process by the Queensland Department of Transport and Main Roads (herein referred to as 'the department') Prequalification of Noise Barrier Design Companies (herein referred to as 'the Manual') in line with the manual's defined criteria. The purpose of the prequalification is to ensure that companies have the technical and managerial capacity to efficiently deliver the design of noise barriers, to minimise risks and promote best practice. The manual helps to ensure that robust, consistent, transparent and objective processes are used to determine the suitability of organisations which seek to undertake such work for the department.

Organisations permitted to undertake these assessments for the department (herein denoted 'Prequalified Company' or 'companies') are included on the register of Prequalified Noise Barrier Design Companies (herein denoted 'the Register'). The Register accessible via the departmental website [www.tmr.qld.gov.au](http://www.tmr.qld.gov.au).

The registration of companies described in this procedure are developed by the Geospatial, Design and Capability Directorate (GDC) of Engineering and Technology Branch of the department.

The Manual defines the system for prequalification of noise barrier design companies which has been prepared in accordance with the framework for establishing and maintaining registers of *Manual Consultants for Engineering Projects, Chapter 2: Consultant Prequalification System*.

### 1.2 Scope

This system applies to contracts that design of noise barriers. For this system, a company must be prequalified **before tendering on**, or becoming part of a tender for departmental contracts. It is intended that only those companies listed on the **Register of Prequalified Noise Barrier Design Companies** be engaged on departmental projects, irrespective of the scale of the project. Assessment of tenders for departmental projects will not be held over pending completion of applications for companies wishing to be prequalified.

The department is not precluded from adopting alternative forms of tendering (for example, open tenders or expression of interest) for specific contracts where prequalification may not be relevant or suitable.

For projects containing noise barrier design, the following typically apply:

- a) A project containing greater than 55% of design of noise barrier would be subject to open completion by prequalified noise barrier design companies, with any non-noise barrier design work being subcontracted to prequalified companies at the appropriate prequalification level.
- b) A project containing less than 45% of design of noise barrier would be subject to open completion by prequalified companies at the appropriate prequalification level, with any noise barrier design work being subcontracted to prequalified noise barrier design companies.

- c) For a project containing between 45% and 55% of noise barrier design (based on value) the Principal's Representative will use their discretion in making the final decision in calling tenders from prequalified companies or prequalified noise barrier design companies.

### **1.3 Management of prequalification**

The Deputy Chief Engineer (GDC) is responsible for management of the approval process and the Register. This includes removal of companies from the Register. The Director (Road Design) is a Delegated Authority of the Deputy Chief Engineer (GDC), and has the final authority to approve or withhold approval of any company applying for prequalification, or for upgrading and renewing of prequalification. All enquiries should be directed to:

Manager (Noise and Vibration)  
Geospatial, Design and Capability Directorate  
Engineering and Technology Branch  
Department of Transport and Main Roads  
GPO Box 1412  
Brisbane City QLD 4001

## **2 Prequalification requirements**

### **2.1 Requirements for companies**

Companies are required to demonstrate that they have in place and maintain:

- Appropriate staff members with appropriate delegation at all levels of the organisation to competently undertake the required work and make changes to processes / practices as necessary (that is, managers, supervisors and designers)
- Appropriately skilled and qualified staff in these positions
- Engineers having current relevant registration in Queensland under the Professional Engineers Act
- The capability to successfully undertake the noise barrier design to the code of practice, manuals, technical specification(s), standards and within any specific limitations specified by TMR in terms and conditions of prequalification
- Software which is capable of performing the work in an efficient manner
- A suitable checking plan (which includes references to Transport and Main Roads Technical Specification) for the noise barrier design
- Adequate design calculations for checking the design from actual products produced
- A Management System to control the noise barrier design, and
- Suitable third (3rd) party certified or independently audited quality management systems to control, document and ensure traceability of noise barrier design.

Appendix A provides criteria for the documentation required to be submitted in the application for registration.

## **2.2 Specification and standards**

The manual shall be read in conjunction with the following documents when applicable:

- Transport Noise Management Code of Practice: Volume 1 – Road Traffic Noise – Chapter 7: Integrated noise barrier design
- Manuals, in particular:
  - *Preconstruction Processes;*
  - *Road Planning and Design;*
  - *Road Drainage;*
  - *Road Landscape;*
  - *Standard Drawings Roads;*
  - *Drafting and Design Presentation;*
  - *Pavement Design Supplement;*
  - *Pavement Rehabilitation;*
  - *Project Cost Estimating*
- Transport and Main Roads Technical Specifications, in particular:
  - *MRTS15 Noise Fences*
  - *MRTS02 Provision for Traffic*
  - *MRTS03 Drainage, Retaining Structures and Protective Treatments*
  - *MRTS04 General Earthworks*
  - *MRTS14 Road Furniture*
  - *MRTS16 Landscape and Revegetation Works*
  - *MRTS50 Specific Quality Systems Requirements*
  - *MRTS83 Anti-Graffiti Protection, and*
  - *MRTS88 Painting New Work.*
- Standards, in particular:
  - *Drafting and Design Presentation*
  - *Surveying Standards*
  - *Geotechnical Design Standards – Minimum Requirements*
  - *Australian Standards*
- Third-Party (3rd) registration rules.

Companies shall demonstrate compliance with requirements of these documents at all times.

## **2.3 Supply chain**

While a company may be undertaking its business in a professional manner, external influences can adversely affect its performance. It is the responsibility of a company to ensure that all companies in

the supply chain (irrespective of whether the company is engaged directly by the department or by a head consultant) are providing goods to meet the performance requirements of the relevant Technical Specifications and Standards.

### 3 Prequalification levels

The successful applicant may be registered as a Level NBD-1 or Level NBD-2 or Level NBD-3 listed in Table 3. If a Company which has not previously undertaken TMR works applies and passes the assessment requirements, initial registration will be Level NBD-1. Level NBD-1 may also be applied to Companies demoted from Level NBD-2 which is for existing and large volume Companies. During the Level NBD-1 period, Companies must demonstrate their capability to effectively manage the design process and produce consistently conforming products.

**Table 3 – Transport and Main Roads Noise Barrier Design Prequalification levels**

Prequalification Level	Applicable to	Type of Approval	Prequalification valid for
NBD-1	New Companies; and Companies which have not previously undertaken departmental works.	Simple noise barrier design where geometry is substantially predetermined involving simple footing analysis, drainage and environmental issues.	Up to Twelve (12) months
NBD-2	New and low volume Companies; and Companies demoted from A-3	Noise barrier design where geometric complications involve detailed highway and traffic engineering and environmental issues including public consultation. Geotechnical design of all foundations types including driven pile, embankment design, stability and settlement analysis. Retaining wall design including boulder walls. Hydraulics for a single stream and overflows to assess culvert and floodway requirements.	Three (3) years
NBD-3	Existing and large volume Companies	As for Level NBD-2 plus: Complex noise barriers using non-standard structural members. Multiple geometric complications requiring detailed highway and traffic engineering design, geotechnical engineering and hydraulic and environmental issues.	Three (3) years

A Company will remain at prequalification Level NBD-1 for a maximum of twelve (12) months after which an additional assessment may be performed. A Company may remain at prequalification Level NBD-1 for an extended period due to low volume of work, or because its processes and systems are not mature enough to grant prequalification Level NBD-2 status.

The listing of an Approved Company on the Register at Level NBD-2 / Level NBD-3 will generally remain for a term of up to three (3) years after which the Company will be advised of the requirement to apply for renewal of their registration. Assessment audits will be conducted on an annual basis as part of the prequalification process. However the audit schedule may be varied depending upon the Company's performance and Departmental requirements.

Shorter terms for listing of Companies may be nominated by the Deputy Chief Engineer (GDC) in the following circumstances:

- Companies who have not previously undertaken works on departmental projects; and
- Companies who have been listed as "conditionally approved" for any reason (for example, mediocre performance).

#### **4 Removal and downgrading**

If the performance of a Company is unsatisfactory, the Company may be removed from the Registration List, or asked to undertake mandatory improvements followed by a reassessment.

That is:

- If level NBD-1 Companies' performance is unsatisfactory the Company may have Provisional Level prequalification withdrawn or asked to undertake improvements and be reassessed.
- If level NBD-2 Companies' performance is unsatisfactory, the Company may be removed from the Registration List, or asked to undertake mandatory improvements followed by a reassessment.
- If level NBD-3 Companies' performance is unsatisfactory, the Company may be removed from the Registration List, downgraded to Level NBD-2, or be asked to undertake mandatory improvements followed by a reassessment.

Reasons for removal from the Register include:

- Failure to behave in a relational way
- Not putting the success of the project as the first priority
- Delivery of a service in the knowledge that it does not comply with the Project Brief, Code of Practice, Manuals, Technical Specifications, Standard Drawings and procedures
- Unsatisfactory performance
- Failure to respond satisfactorily to a performance report within a reasonable time
- Change in permanent office personnel not assessed as equivalent to original application and a failure to notify and have change in status approved
- Failure to maintain functioning management systems in accordance with the latest edition of ISO or AS/NZS Quality Management Systems
- Repeated , significant product non-conformances



- Bankruptcy, insolvency, or significant unfavourable change in financial status
- Failure to make adequate management response to improve systems when required or specifically requested by the Deputy Chief Engineer (GDC), or the Delegated Authority.

The Company shall be notified of their removal from the Register in writing by the Deputy Chief Engineer (GDC) together with the reasons for the decision.

## **5 Appeals**

Applicants not satisfied with the decision made by the department to reject their application, or accept their application subject to certain conditions or restrictions may appeal the decision to the Deputy Chief Engineer (GDC), a Delegated Authority of the Chief Engineer (Engineering and Technology).

Companies not satisfied with a decision to remove them from the Register or to make their continued registration subject to certain conditions or restrictions, may appeal in the same manner as described above.

Appeals must be:

- in writing
- received within 28 days of the date the company is notified of a decision
- be accompanied by arguments supporting the appeal, and
- be accompanied by information to support the appeal.

All appeals will be considered in an expeditious manner and the Appellant will be informed in writing of any decision within 28 days of receipt of the appeal.

The Notice of Appeal should be addressed to:

Deputy Chief Engineer (Geospatial, Design and Capability)  
Engineering and Technology Branch  
Department of Transport and Main Roads  
GPO Box 1412  
Brisbane Qld 4001

## **6 Prequalification process**

### **6.1 Application**

To become a prequalified noise barrier design company (including renewal or upgrading), an application form with supporting information that addresses all specified criteria must be submitted. The application form can be obtained from the Manager (Noise and Vibration) or can be downloaded from the departmental website [www.tmr.qld.gov.au](http://www.tmr.qld.gov.au) via Technical Publications > Approved Products and Suppliers > Traffic Engineering, Traffic Management and Road Safety, or via <http://www.tmr.qld.gov.au/business-industry/Business-with-us/Approved-products-and-suppliers/Traffic-engineering-and-road-safety-approved-products>

An application for registration may be lodged in writing, or electronically to the Manager (Noise and Vibration) via:

Manager (Noise and Vibration)  
Geospatial, Design and Capability Directorate  
Engineering and Technology Branch  
Department of Transport and Main Roads  
GPO Box 1412  
Brisbane City QLD 4001

## **6.2 Assessment for prequalification**

Companies seeking prequalification will be assessed, on receipt of:

- A new application for prequalification, or
- An application for renewal or upgrade of prequalification.

Assessment will generally comprise both a technical and a system review against the nominated guidelines. Companies applying for prequalification must successfully meet the requirements of assessment if they are to be considered for prequalification.

Assessment of Application will be based on the following:

- a) Information contained in the completed Application and attached supporting documentation
- b) Referee reports
- c) Information evidence held by the department regarding the Company's previous performance, and
- d) Information obtained as part of a site assessment.

The department may consider any information in the assessment as it deems necessary.

The outcomes of the technical and system reviews are reviewed by the Deputy Chief Engineer (GDC) or delegate who then allocates the approval levels as appropriate. Companies will be notified of the results of the assessment within six (6) weeks of their application (providing all relevant information was included), unless significant issues arise during consideration of the application which require further information to be submitted.

A prequalified company must apply for a renewal of its prequalification before the expiry by completing and submitting a new Application Form.

A prequalified company may apply for an upgrade of its prequalification at any time completing and submitting a new application. However, the request for an upgrade must be accompanied by sufficient details supporting its performance and capability since its last prequalification Application was assessed.

### **6.2.1 Technical review**

The technical review includes:

- Review of experience in integrated noise barrier design;
- Review of the personnel and resources including Registered Professional Engineers Queensland (RPEQ) certification;

- Review of the Company's integrated noise barrier design processes and procedures; and
- Review of ability to liaise with project stakeholders and all other relevant disciplines.

### 6.2.2 System review

A system review will be undertaken upon receipt of an application by a new Company.

The system review includes:

- Review of the Company's management systems in areas of quality by either:
  - Reviewing written confirmation from an independent auditor that the quality management systems is based on the relevant International Standard Organisations (ISO) standards and have been implemented within the organisation, or
  - Reviewing third (3rd) party certification of the Company's quality management systems undertaken by a conformity assessment body accredited by the Joint Accreditation System for Australia and New Zealand (JAS-ANZ) to the relevant standards.
- Verifying information of new and existing Companies applying for prequalification such as:
  - Details of insurance policies (for example work compensation, public liability, professional indemnity and so on)
  - Company information (business check, ABN, and so on), and
  - Previous experience (for example, experience of personnel, qualifications, and so on).

Measuring the Company's management systems against the latest editions of either:

- *ISO 9001 – Quality Management Systems*, or
- *AS/NZS 9001 – Quality Management Systems*.

### 6.2.3 Approval

The Deputy Chief Engineer (GDC) is responsible for the prequalification. After both the Technical and System reviews are evaluated, an appropriate prequalification level is assigned by the Delegated Authority, Director (Road Design), for any Company wishing to undertake noise barrier design in departmental projects. Any such approval is subject to the outcomes of an assessment and is required for all noise barrier design irrespective of whether they are (or are not) prequalified. Where registration has been granted, the level of prequalification for noise barrier design will be advised.

Manager (Noise and Vibration) is responsible for administering and maintaining (including technical and system assessments) their part of the prequalification list.

## 7 Terms and conditions

Companies are required to comply the following terms and conditions and associated procedures described in Appendix A – Criteria for Applicants of this Manual.

- The Company must ensure that all particulars in the Application are true and correct in every detail.
- The Company has obligation to advise the department of any pertinent changes that may adversely affect the performance of the company or changes to any management details that may be material to their registration status.

- Prequalification is not to be construed as a guarantee of work. Prequalification only determines a Company's eligibility to tender, or be involved in tenders for noise barrier design.
- The Company must comply with all relevant local, state and federal legislation and requirements, including the Queensland Procurement Policy.
- Information on the Register pertaining to the approval status and performance of the Company may be made available to other parties with an interest in noise barrier design including:
  - The Principal
  - The Superintendent
  - Principal Contractors (including those tendering for departmental projects)
  - Other Government Agencies
  - Local Governments, and
  - TMR Officers.
- Lists of Prequalified Companies are made publicly available by TMR on its website. Details may include:
  - Name and address
  - Prequalification Level, and
  - Date of Expiry.
- The Company must get written consent of Transport and Main Road to use any information relating to its prequalification level or contract performance in its advertising or promotional material or publish such information in any form.

## **Appendix A - Criteria for applicants**

### **A-1 Introduction**

Organisations applying for prequalification are required to provide evidence of their experience, expertise, qualifications and capability for design noise barriers which address the various criteria defined below, including management of their own functions in cooperation with other organisations engaged on the same projects.

### **A-2 Expertise**

#### **A-2.1 General requirements**

Companies must have appropriately qualified and experienced staff and resources for the design of noise barriers to the specified specifications and standards. The criteria for the various levels of staff are defined below. These criteria are generally minimum requirements. Of prime importance is the combined experience of the Applicant's team of managerial and operational staff. Individual members of the Applicant's staff who do not have the nominated minimum experience on activities and/or works of the relevant type, scale or complexity may be accepted provided that:

- the total experience of the overall management team satisfies the intent of the various requirements
- critical requirements (e.g. Designers) are satisfied, and
- the Applicant has adequate measures in place, including training and supervision, to compensate for any shortcomings with respect to these criteria on the part of any members of its staff.

#### **A-2.2 Applicant organisation's experience**

The applicant organisation must be able to demonstrate sound experience over the past ten (10) years on design of noise barriers and/or specific road structures on a similar scale and complexity to those for which listing on the Register of Prequalified Noise Barrier Design Companies is currently being sought. Applicant organisations that do not satisfy this requirement must have managerial and operational staff that will satisfy all of the requirements defined below.

#### **A-2.3 Managerial staff**

Company level managerial staff of the Applicant should have:

- at least ten (10) years' experience on projects of the type which is the subject of the application
- extensive knowledge of relevant design processes
- experience in working with other experts (civil, geotechnical and structural engineers) and multi-disciplinary teams, and
- proven capability in planning and supervision of construction processes relevant to the products.

It is desirable that an Applicant's managerial staff includes at least one qualified engineer with knowledge of and understanding of the civil works in Transport and Main Roads projects of which the product being constructed is a component.

Alternatively, the Applicant is required to demonstrate how it will ensure that relevant technical criteria are competently assessed and complied with.

#### **A-2.4 Registered Professional Engineers**

The Company must hold current relevant registration under the Professional Engineers Act (i.e. RPEQ).

#### **A-2.5 Designers**

Designers of the Applicant should have;

- at least 5 years experience in design of the type which is the subject of the application
- detailed knowledge of relevant design processes and procedures, and
- detailed knowledge of relevant Transport and Main Roads documents.

#### **A-2.6 Computer Software**

The Company must be able to demonstrate sound design software experience in the delivery of projects. Transport and Main Roads has adopted the 12D Model Road Design Software for all road planning and design projects. Consultants requiring prequalification must have 12D Model Road Design Software.

#### **A-3 Proven capability**

Applicants are required to supply details of recent projects undertaken for the noise barrier design projects. These details are to include the names and phone numbers of persons who can be contacted in order to obtain verification of satisfactory design of the noise barriers.

#### **A-4 Management systems**

Applicant organisations are required to provide evidence of their management systems in accordance with the following:

##### **A-4.1 Quality Management Systems**

Applicant Quality Management Systems shall be certified in one of the following ways:

- certified against the requirements of the latest edition of *AS/NZS ISO 9001 - Quality Management Systems – Requirements* (by 3rd party certifying body), or
- certified against the requirements of a consulting industry based scheme which is recognised by the Department of Transport and Main Roads.

If an applicant organisation does not have any of the above certifications for its quality management systems, it may request Transport and Main Roads to initiate the 2nd party certification process by indicating this in its application.

##### **A-4.2 Evidence of satisfactory use of management systems**

Applicant organisations are required to supply evidence of effective use of their management systems on projects relevant to their application. The following types of evidence are listed as a guide to applicants:

- process management plans which have been updated during projects and which include evidence of use

- current insurances (public liability, professional indemnity, workers compensation and so on)
- records of design calculations and information and
- non-conformance reports including evidence of corrective actions.

