



New Zealand is a seismically active part of the world. Major earthquakes are unpredictable events that occur infrequently and they can have significant consequences.

Earthquakes cannot be prevented but the impact of a seismic event can be mitigated.

The Building Act 2004 (the Building Act) expresses the Government's objective for earthquake-prone buildings to be strengthened to the appropriate seismic standards, or alternatively all or part of a building be demolished. It has an underlying objective to reduce the potential for injury, loss of life or damage to other property that may result from the effects on buildings of a moderate earthquake.

Additionally the Health and Safety in Employment Act 1992 (OSH Legislation) provides a framework for an adequate facility for employees. Both of these statutes are currently being reviewed for possible amendment.

This policy and procedures framework is a 'living document' and will be subject to review in the light of changes to the regulatory environment or new knowledge.

1.0 OBJECTIVE

The primary objective of this policy is to reduce the potential for injury, loss of life, or damage to the property of others in a moderate earthquake. It also aims to reduce the potential disruption to the mission of the Diocese of Waikato and Taranaki that may result from an earthquake.

Further policy objectives are:

- to ensure that Diocesan responsibilities and obligations under the Building Act and OSH Legislation, with respect to earthquake-prone buildings, are fulfilled,
- to ensure priority is appropriately focused on high-risk buildings,
- to ensure future remedial works are undertaken with long-term sustainability in mind.

2.0 SCOPE

This Policy:

- forms part of the property policies of the Diocese of Waikato and Taranaki
- informs property decision-making for all buildings owned by the Waikato Diocesan Trust Board, the Taranaki Anglican Trust Board and the Waikato Diocesan Schools Board (WDTB, TATB and WDSB - the Trust Boards).



“Those responsible for buildings” as used in this policy means:

- **for parishes** – the appropriate Trust Board is the legal owner of the parish property. It holds the property of the parishes in trust, for the benefit of the parishes. Vestries have the *responsibility* for parish buildings. The Diocesan Management and the Trust Boards are to assist parishes with building related processes.
- **for schools** – The Waikato Diocesan Schools Board is the legal owner of Waikato Diocesan School for Girls. The Proprietors Board of Waikato Diocesan School for Girls has *responsibility* for school buildings. NOTE: The respective Boards of Proprietors of other schools associated with the Diocese of Waikato and Taranaki may choose to be guided by this policy.

3.0 PRINCIPLES

The purposes and principles of the Building Act are also ours. The Building Act seeks to ensure that:

- people who use the buildings can do so safely and without endangering their health,
- buildings have attributes that contribute appropriately to the health, physical independence and well-being of the people who use them,
- buildings are designed, constructed, and able to be used in ways that promote sustainable development.

Furthermore, the Diocese of Waikato and Taranaki seeks to ensure that:

- our buildings serve the mission of the Diocese. Our aim is that all users of our buildings experience them as the physical environment where “*we are Grounded in Prayer, Equipped for Discipleship and Connected to Community*”. A concern over the safety of the building in an earthquake is not conducive to this mission.
- all buildings in use in the Diocese of Waikato and Taranaki are fit for the purposes they are used for.

The benefits of aiming for a particular level of strengthening include:

- improved levels of safety for occupants, tenants and the public,
- allowance for a change of use to occur if needed,
- greater future-proofing against changes in either the legislation or structural codes which may require higher levels of strengthening to be achieved,
- leverage for improved insurance,
- reduced risk of damage to the building or other properties in its proximity, or impacts on continuity of use.



4.0 POLICY

The Diocese of Waikato and Taranaki can give no assurance or guarantee that any building is not earthquake-prone or an earthquake-risk until approved strengthening work has been completed. There are four clauses to the policy and to the procedures that together form and create a staged process. While many buildings will proceed through each stage sequentially, the full assessment process is not mandatory if a sensible decision can be made at an earlier stage.

4.1 Prioritisation (for procedure see 5.1 below)

- All existing buildings will be prioritised by the Diocese of Waikato and Taranaki for further assessment.
- Those responsible for a building and responsible for those who utilise the building, including any third party, will be informed of the category rating of the building as soon as it is known and all information resulting from the prioritization process held by the Diocese will be communicated in a timely way, on a periodic basis and by request.

4.2 Initial Evaluation (IEP)(for procedure see 5.2 below)

- Based on prioritisation, those responsible for buildings will ensure those buildings are assessed by an Initial Evaluation Procedure (IEP) by December 2016 with buildings prioritised as highest risk being assessed through an IEP first.
- Any information held by the appropriate Trust Board or by the Diocese of Waikato and Taranaki relevant to an IEP will be communicated in a timely way.
- The IEP will be performed by a suitably qualified person.
- Those responsible for a building will communicate the results of an IEP to the appropriate Trust Board and to the Diocese of Waikato and Taranaki following the completion of the IEP.
- If an IEP report is already held by those responsible for a building or has been performed by the local authority, those responsible for a building are required to provide the IEP report to the appropriate Trust Board and the Diocese of Waikato and Taranaki for review.
- All buildings will be rated against new building standards and given a percentage score New Building Standard percentage (%NBS) and grading (as per NZ Society of Earthquake Engineering (NZSEE) recommendations).
- The resulting grading will determine the decision-making parameters to be used for the ongoing use of the building as outlined in the procedures below. Should an IEP indicate a Detailed Assessment (DA) is required (see 4.3) a suitably qualified engineer will be engaged by the appropriate Trust Board to perform a DA. Buildings identified by the Trust Boards as being of concern will be prioritised.
- Any decision to temporarily close a building rests with the appropriate Trust Board as the owner.



4.3 Detailed Assessment (for procedure see 5.3 below)

- A Detailed Assessment (DA), is to be commissioned by the appropriate Trust Board, in consultation with the Parish Vestry or Proprietors Board, and will be performed by contracting a suitably qualified engineer.
- All priority buildings graded C, (as defined by the NZSEE scheme) in an initial evaluation, should the decision be made to retain the building for on-going use, require a DA within three years of receiving an IEP.
- All priority buildings graded D and E (as defined by the NZSEE scheme) in an initial evaluation, should the decision be made to retain the building for on-going use, require a DA as a matter of urgency.
- Those responsible for a building and those responsible for those who utilise the building, including any third party, will be informed of the results of a DA following a review as soon as it is known, and all the information held by the appropriate Trust Board and by the Diocese of Waikato and Taranaki will be communicated in a timely way, on a periodic basis or by request.
- All buildings will be rated against new building standards and given a percentage score (New Building Standard percentage (%NBS) and grading (as per NZ Society of Earthquake Engineering (NZSEE) recommendations).
- The resulting grading will determine the decision making parameters to be used for the on-going use of the building as outlined in the procedures. Consideration should be given to the long term plans for the building which might include re-strengthening work, demolition, partial demolition or divesting the asset.
- Any decision to temporarily close a building rests with the appropriate Trust Board as the owner.

4.4 Improvement Measures (for procedure see 5.4 below)

- While final approval on remedy rests with the appropriate Trust Board, those responsible for the building will follow the norms established by the Bishops and Standing Committee for approving extraordinary expenditure. (For example through the provision of a faculty).
- Remedy to 100%NBS is the ideal. As an interim state, remedy to above 67%NBS is required in the medium term except in exceptional circumstances, subject to particular local considerations including the staging of projects as resources allow.



5.0 PROCEDURES

5.1 Prioritisation

The Diocese will ensure that a 'triage' process is completed every 10 years or sooner if required. This allows the legal owners and those responsible for buildings to prioritise buildings for further assessment.

- A factor score and category will be given to each building.

Category	Factor Score	Risk Factors
1 and identified High Risk Heritage buildings	>5.0	Presents multiple risk factors and a lack of mitigating factors are associated with the building.
2	4.1-5.0	Multiple risk factors
3	3.1-4.0	Typically two or more risk factors
4	2.1-3.0	Two risk factors with a number of mitigating factors
5	1.1-2.0	Single risk factor
6	< 1.0	Low risk factors

- The category and factor score is not a formal assessment nor a determination.

Decision Making Parameters (following prioritization)

- No decision on building use or remedy should be based solely on the triage process results.
- Priority should be given to further assessment of:
 - Category 1 buildings,
 - Historic Places Trust and Local Authority heritage listed buildings,
 - buildings being proposed for renovation,
 - unreinforced masonry buildings, and,
 - sites with two or more buildings in Category 1-2.



- Funding
 - This prioritisation process is funded by the Diocese for parishes.
 - The Waikato Diocesan School for Girls will fund this process in relation to school buildings.
 - Paying for the cost of assessments is, in the first instance, to be a call on parish funds, including investment funds not subject to a specific trust;
 - A Grant in Aid application can be considered as a second possibility where the Parish genuinely cannot afford to meet the costs of the seismic assessment process. Such an application would be considered by Standing Committee and Parishes would need to apply to Standing Committee in the usual manner for a Grant in Aid;
 - Seismic assessments must be carried out by Seismic Engineers NZ Ltd (SENZ) unless the Parish has secured the approval of the Trust Board to use an alternative registered provider. This is because using SENZ is likely to be the cheapest option and builds consistency of approach across the Diocese.

- Publication
 - The Diocese will provide in written form the results of the triage process to those responsible for the building and the appropriate Trust Board.

5.2 Initial Evaluation (IEP)

An initial evaluation procedure (IEP) is a system used by engineers to initially assess the risk of buildings in an earthquake of moderate force and prioritise further assessment.

- Assessed buildings will be rated against New Building Standards and given a percentage score (New Building Standard percentage (%NBS) and grading (as per NZ Society of Earthquake Engineers (NZSEE) recommendations).

Note that the relative risk is of collapse versus a new building

%NBS	Grade	Relative Risk	Notes
>100	A+	<1 times	Over designed for emergency use
100	A	-	Standard for new buildings
80-99	A	1-2 times	Current preferred standard for existing buildings
67-80	B	2-3 times	Future focus, preferred minimum
33-67	C	5-10	Medium term focus
20-33	D	10-25	Short term focus, legally earthquake prone if a



			public building or multi story residential
<20	E	>25	Immediate focus, legally earthquake prone if a public building or multi story residential

- All IEP reports will be reviewed by the appropriate Trust Board and recommendations made on next steps.
- Decision making parameters (following an IEP)
 - The Diocese of Waikato and Taranaki expects that, for some communities, those responsible for the building may choose to temporarily close **Grade E** buildings, while a discussion is made on future steps. However those responsible for the building may choose to communicate reasons why a building should remain open.
 - Should the decision be made not to close the building, those responsible for the building must:
 - immediately install notification for site visitors of the earthquake status of the building via permanent and prominent signage, and,
 - consult with the parish or school community and continue to consider temporary closure of the facility pending future decision making processes (note; consultation should be a collaborative effort and involve the appropriate Trust Board and the Diocese of Waikato and Taranaki who will develop tools to assist in the consultation process).
 - Within two months of receiving notification of the assessment as Grade E those responsible for the building are to report back to the appropriate Trust Board (i.e. WDTB, TATB or WDSTB) and to the Diocese of Waikato and Taranaki on the actions taken and the results of any consultation process.
 - An immediate priority must be to decide whether or not to proceed to a Detailed Assessment (DA).
 - Buildings assessed as **Grade D** will require those responsible for the building to immediately:
 - install notification for site visitors of the earthquake status of the building via permanent and prominent signage, and,
 - consult with the parish or school community to consider temporary closure of the facility pending future decision make processes (note, consultation should be a collaborative effort and involve the appropriate Trust Board and the Diocese of Waikato and Taranaki who will develop tools to assist in the consultation process).



- Within two months of receiving notification of the assessment as *Grade D* those responsible for the building are to report back to the appropriate Trust Board on the action taken and the result of any consultation process.
 - Buildings assessed as Grade C require:
 - those responsible for the building to display signage as required, and,
 - a decision on proceeding to a DA by the appropriate Trust Board.
 - Buildings assessed as Grade B require:
 - a DA to be performed when considering renovation or structural works to see if strengthening the building to 100%NBS is possible or practical.
 - Building assessed as Grade A are considered by the Diocese of Waikato and Taranaki to be buildings of continual use.
 - Buildings assessed as Grade A+ are over-designed and will be considered for use in Diocesan organisational continuity plans if not required for civil uses by the State or local authority.
- Funding
 - The initial assessment process is funded by the Parish or School. (Application can be made to Standing Committee for financial support as per the provision of the 2014 Diocesan Synod).
 - The relocation of activities held in facilities faced with temporary closure is the responsibility of those responsible for the building.
 - Paying for the cost of assessments is, in the first instance, to be a call on parish funds, including investment funds not subject to a specific trust;
 - A Grant in Aid application can be considered as a second possibility where the Parish genuinely cannot afford to meet the costs of the seismic assessment process. Such an application would be considered by Standing Committee and Parishes would need to apply to Standing Committee in the usual manner for a Grant in Aid;
 - Seismic assessments must be carried out by Seismic Engineers NZ Ltd (SENZ) unless the Parish has secured the approval of the Trust Board to use an alternative registered provider. This is because using SENZ is likely to be the cheapest option and builds consistency of approach across the Diocese.
- Publication
 - The appropriate Trust Board will provide updates through the Diocesan website outlining which buildings are currently closed, including timelines and alternative venues for events usually held in the facility.



5.3 Detailed Assessment

A detailed assessment is a procedure used by engineers to determine risk as the basis for remedial options. The engineering determination is only the first stage of a final assessment on the remedial actions needed and the cost of the action. Other professional opinions are sought to determine the full cost and process for remedy.

- Finalisation may include:
 - A peer review of the detailed assessment
 - Quantity Surveyor Assessment
 - Engineering drawings for the final solution
 - Design Architecture solutions
 - Building service plans
 - Geotechnical engineering assessment
- Once finalised the DA and supporting assessments / estimates will be used by the Diocese and the appropriate Trust Board as part of the approval process to decide on improvement measures.
- If a DA is held already, those responsible for the building are required to provide the report to the Diocese and to the appropriate Trust Board for review and possible supplementation of services as above.
- Decision making parameters (following a Detailed Assessment)
 - Buildings determined to be **Grade E or D**
 - For parishes:
 - the requirement is that the process 5.3.1 will be followed.
 - For Waikato Diocesan School for Girls:
 - the WDSB will follow Ministry of Education / APIS guidelines to determine the expectation of use while improvement actions are considered or carried out, and,
 - notices will be displayed outlining the percentage of new building standard (%NBS) result.
 - Buildings determined to be **Grade C**
 - Those responsible for the buildings to display notification for site visitors of the earthquake status of the building via permanent and prominent signage.
 - Buildings determined to be **Grade B** will reference the detailed assessment as part of the process of renovation or structural works to see if strengthening the building to 100%NBS is possible or practical.
 - Buildings determined to be **Grade A** are considered by the Diocese of Waikato



and Taranaki to be buildings of continual use.

- Buildings determined to be **Grade A+** are “over-designed” for use in civil emergency situations. These (if any) will be identified and the relevant authorities notified.
- Funding
 - The Detailed Assessment process is funded by the Parish or School.
 - The relocation of activities held in facilities faced with temporary closure is the responsibility of those responsible for the building.
 - Paying for the cost of assessments is, in the first instance, to be a call on parish funds, including investment funds not subject to a specific trust;
 - A Grant in Aid application can be considered as a second possibility where the Parish genuinely cannot afford to meet the costs of the seismic assessment process. Such an application would be considered by Standing Committee and Parishes would need to apply to Standing Committee in the usual manner for a Grant in Aid;
 - Seismic assessments must be carried out by Seismic Engineers NZ Ltd (SENZ) unless the Parish has secured the approval of the Trust Board to use an alternative registered provider. This is because using SENZ is likely to be the cheapest option and builds consistency of approach across the Diocese.

5.3.1 Process for parishes following receipt of a DA determining Earthquake Prone

- A letter is written by the Chair of the appropriate Trust Board, co-signed by the Bishops, outlining receipt of the DA, the policy and the process to be followed, and enclosing a copy of this Policy and Procedures Framework.
- The Trust Board / Bishops letter will be addressed to the chair of the parish vestry and the Minister in Charge of the parish and may be copied to other stakeholders.
- The process steps to be covered are:
 1. Liaison appointed

The parish shall appoint a liaison person to work with the Diocese and the appropriate Trust Board. The expectation being that the Liaison will update the Chair of the appropriate Trust Board and the Diocesan Manager at least once a month on progress. The updates will be provided to the members of the appropriate Trust Board and to members of the Standing Committee.

2. Communication:

Upon receipt of the finalised DA parish leadership will communicate to all users of the building (including third parties) that:



- the parish has received a DA that confirms the building as earthquake prone and outline the %NBS of the worst performing element of the building,
- the report identifies Critical Structural Weakness (CSW) in the building,
- (if applicable) the parish is obtaining costs for the proposed indicative strengthening works,
- the report is available on a web site and the web address will be made available for parishioners to download the report. The web address will be published in the parish bulletin / newsletter,
- Notices will be displayed outlining the percentage New Building Standard (%NBS) result. The appropriate Trust Board will provide the notice template for display, and,
- for third party users, those responsible for the building, will require confirmation that their users have been informed.

The Parish will be part of a consultation process as outlined below.

The appropriate Trust Board will ensure that:

- the DA result is published on the Diocesan website
- the report is sent to the Territorial Authority
- a plain-English DDD (likelihood of Durability, Damage and or Death assessment) is commissioned to assist in the decision making process.

3. Costing

If not already present in the DA, the parish may engage engineering or quantity surveying resources to complete the development of indicative strengthening plans and costings. NOTE: this step will not necessarily delay the consultation process and will run concurrently with the communication and consultation steps. The Diocese can assist with identifying professional resources to enable this step.

4. Consultation

The consultation process between the appropriate Trust Board and the parish commences immediately once the DA has been received.

Within 30 days of the receipt of the communication from the chair of the appropriate Trust Board and the Bishops, a meeting is held between the appropriate Trust Board and representatives of the parish, including the appointed liaison person in order for:

- all parties to discuss the report,
- the Trust Board to present general risk related information,



- the parish to discuss and clarify the consultation expectations about temporary closure / use of the building while decisions about remediation are progressed, and,
- all parties to develop an integrated communication plan.

Buildings determined to be Earthquake Prone (Grade D) or significantly Earthquake Prone (Grade E)

- *Grade D buildings (20-33%NBS) are considered Earthquake-prone; Parish communities must immediately consider with the appropriate Trust Board and the Bishops the use of these buildings based on the information in the Detailed Assessment. Such consideration must include consultation around temporary closure.*
 - Warning notices must be immediately displayed for buildings in Grade D whether open or closed.
- *Grade E buildings (0-19%NBS) are considered significantly Earthquake-prone; the policy requires immediate consultation on temporary closure. The standing expectation is that Grade E buildings will be temporarily closed.*
 - Warning notices must be displayed for buildings in Grade E whether closed or open.
- If a parish desires to explore mitigating factors to continue the use of the building, these discussions should focus on:
 1. the likelihood of the parish's ability to remediate the building. Can the parish:
 - a. quickly remediate the Critical Structural Weaknesses (CSW) to take the building to a lower risk rating (i.e. a higher percentage of New Building Standard),
 - b. complete the remediation of all Critical Structural Weaknesses and bring the building to an appropriate percentage of the New Building Standard, and,
 - c. fund remediation from already available funds?
 2. restrictions on the nature of use until remediation. Is it possible to restrict certain uses of the building to reduce the risk and ensure all users are fully informed of the risks prior to use?
 3. possible alternative locations. Is it possible that another location will be temporarily suitable?
 - a. if a Church, for the celebration of the Sunday Eucharist and other services, for congregational members, volunteers and visitors,
 - b. if Clergy Housing, for the accommodation of Clergy,



- c. if an office, for the people who work and volunteer in the building, or,
- d. if a hall, for the activities and events usually held in that building.

5. Parish Response

Parishes have 30 days following the meeting with the Trust Board and Bishop to respond formally, in writing, to the Trust Board on the question of the use of the building.

6. Decision

The Trust Board meets monthly and will provide a decision at the meeting following the receipt of the formal parish response. Trustees will weigh up all the information provided by the DA, the parish consultation and the formal response from the parish. The Bishops and Standing Committee will be informed of the decision.



5.4 Improvement Measures

- All building projects requiring the consent of the appropriate Trust Board and that require the issue of a faculty must:
 - outline what other earthquake remediation work may be needed in the wider parish or Region, and,
 - indicate that those responsible for the building have consulted with and carry the support of other congregations in the parish, or other parishes in the Region.
- Multiple options for strengthening buildings should be gained. Where only one option is available this must be compared against the option of demolition and rebuilding under a new design.
- Options for strengthening should include remedy to 100%NBS and to different stages of improvement. The following chart (NZSEE, AISPBE report, 2006) outlines the recommendation of the NZ Society of Earthquake Engineering.

Description	Grade	Risk	%NBS	Existing Building Structural Performance	Improvement of Structural Performance	
					Legal Requirement	NZSEE Recommendation
Low Risk Building	A or B	Low	Above 67	Acceptable (Improvement may be desirable)	The Building Act sets no required level of structural improvement (unless change in use) This is for each TA to decide. Improvement is not limited to 34% NBS	100%NBS desirable. Improvement should achieve at least 67%NBS
Moderate Risk Building	B or C	Moderate	34 - 66	Acceptable legally. Improvement recommended.		Not recommended. Acceptable only in exceptional circumstances
High Risk Building	D or E	High	33 or lower	Unacceptable. (Improvement required under the Act)	Unacceptable	Unacceptable

- Funding
 - For parishes the funding process is led by the local parish community with the first role to ascertain funding streams.
 - For Waikato Diocesan School for Girls the process is led by the Proprietors Board and Board of Trustees.
 - Paying for the cost of assessments is, in the first instance, to be a call on parish funds, including investment funds not subject to a specific trust;



- A Grant in Aid application can be considered as a second possibility where the Parish genuinely cannot afford to meet the costs of the seismic assessment process. Such an application would be considered by Standing Committee and Parishes would need to apply to Standing Committee in the usual manner for a Grant in Aid;
 - Seismic assessments must be carried out by Seismic Engineers NZ Ltd (SENZ) unless the Parish has secured the approval of the Trust Board to use an alternative registered provider. This is because using SENZ is likely to be the cheapest option and builds consistency of approach across the Diocese.
- Publication
 - The Diocese will provide updates on the Diocesan web site outlining which buildings are currently under-going strengthening work including timelines and alternative venues for events usually held in that facility.

6.0 Specific Definitions

- The Building Act 2004 (the 'Building Act')
- Health and Safety in Employment Act 1992 ('OSH Legislation')
- The Bishops of the Diocese of Waikato and Taranaki (The Bishops)
- The Waikato Diocesan Trust Board (WDTB)
- The Taranaki Anglican Trust Board (TATB)
- The Waikato Diocesan Schools Trust Board (WDSB)
- Initial Evaluation Procedure (IEP)
- Detailed Assessment (DA)
- New Building Standard percentage (%NBS)
- NZ Society of Earthquake Engineering (NZSEE)

7.0 Related Policies and Procedures

Legislation of New Zealand, including but not limited to:

- Building Act 2004
- The Health and Safety in Employment Act 1992
- Crimes Act 1961

8.0 Review



This document will be reviewed annually by the Standing Committee of the Diocese of Waikato and Taranaki and by the Trust Boards.

9.0 Execution

This Policy and Procedure Framework is executed by:

+Helen-Ann Hartley

++Philip Richardson

Bishops of the Diocese of Waikato and Taranaki