



CDEM Resilience Fund project application form

This form provides the minimum of information for the application; a detailed project plan should be developed to inform this application and may be attached.

Project title	Preparation of Technical Note on the Design and Evaluating of Existing Buildings as Emergency Co-ordination Centres
Date of application	January 2021

Details on application

Applicant	Bay of Plenty CDEM Group
CDEM Group/s affected	Bay of Plenty CDEM Group
Other local authorities, Groups or organisations supporting this proposal	None

Project description

Executive summary *[200 words maximum description.]*

This proposed technical note will outline the processes followed in 2020 by the Bay of Plenty Regional Council and Emergency Management Bay of Plenty in evaluating the suitability of an existing building for use as the region's GECC by comparing against an equivalent new building design. This comparison included a range of natural hazard events.

The key requirement for an existing building when used as an EOC or ECC (or lifeline utility operational centre) is to understand all the implications of designing for continued functionality (or usability) beyond simply seismic. 'Usability' has several dimensions, with no degree of certainty. The starting point is that there are no absolute guarantees that even a newly designed and constructed IL4 building will be operational after a major natural hazard event, especially earthquake.

The purpose of this technical note (or report) is to convey current practice and key concepts in evaluating existing buildings for earthquake for use as EOCs and ECCs, and to promote further discussion around better defining operational expectations and establishing functionality criteria for new buildings that go beyond building regulatory requirements. It is envisaged that the report could form the basis of a CDEM Technical Standard.

Challenge/opportunity *[200 words maximum description.]*

The criteria for buildings to meet in relation to seismic performance when used as an Emergency Operations or Co-ordination Centre are not clearly defined, even for new buildings. Importance Level 4 requirements are defined in relatively broad terms only, with a primary focus on life safety in severe natural hazard events (ie. those with a 1 in 2,500 year return period). Buildings that fall under the IL4 categorisation of structures with special post-disaster functions are not in fact intended to be usable following such events, but they are expected to be operational following 500 year events. However only the high-level design objective of minimising damage to structural and non-structural components is provided as the basis for enabling operational use. Functionality (or usability) as it applies to operational facilities is not defined in either building regulations or technical guidance.

The lack of specific functionality criteria is heightened in relation to existing buildings when used as an EOC or ECC – either as a current use, or as a consequence of a change in location. Firstly, there are no legal or regulatory requirements for existing buildings used as post-disaster facilities with special functions to meet the requirements of an IL4 structure (in either the Building Act or the CDEM Act). Secondly, the focus when evaluating an existing building is typically on the %NBS rating, but this only addresses life safety matters in a severe earthquake (2,500 year return period) and provides little insight about likely damage (and hence the likely usability) in a 500 year event.

Alignment with identified goals and objectives identified in the CDEM sector [200 words maximum description.]

National Disaster Resilience Strategy

Project supports priority 2 of the National Disaster Resilience Strategy – Effective Response to and Recovery from Emergencies.

Group and Local Level ECC/EOC Development

As part of the sector’s general drive to improve operational effectiveness, a number of regions and local district councils have identified the provision of a new or upgraded ECC/EOC facility as an objective in their Annual/Group Plan. To this point, the criteria used for the development of existing facilities has been developed through individual work shop efforts supported, in some cases, by repeated fact finding visits to other IL4 sites (e.g. Christchurch Justice Precinct, Waikato ECC) or to what are viewed as best practice facilities overseas. No technical standard exists that would negate this level of duplicated effort and resulting variation across the nation.

Dissemination of benefits to sector [200 words maximum description.]

General Emergency Management Sector

This *Technical Note* will help advise any entity, public or private, which is required to establish or build a coordination/operations centre capable of continuing through or functioning *immediately* after a significant emergency. This could include but is not limited to:

- ECC/EOCs
- Utility Control Centres
- IT Crisis Centres

The key elements of the report, agreed upon through a workshop with targeted attendees, could then help form the foundation of any *Technical Standard* subsequently initiated.

Project design

Project manager	Lee Hazlewood, Principal Advisor
Other project members	
External providers/contractors	Dave Brunsdon, Engineer – Kestrel Group

Deliverables

Milestones	Date for completion	Cost
<ul style="list-style-type: none"> • Draft Technical Note, including outline of the ‘usability’ criterion used for EMBOP GECC evaluation, augmented with any similar effort from across the CDEM sector. 	April 2021	\$11,000
<ul style="list-style-type: none"> • Workshop with those recently involved in IL4 projects to confirm key elements of draft Technical Note. 	May 2021	
<ul style="list-style-type: none"> • Report finalisation and project completion. 	Early June 2021	

Identified risks

Risks	Suggested management
<ul style="list-style-type: none"> • Potential cost overruns • Timeline over-run due to emergency • Disagreement on key elements of report 	<ul style="list-style-type: none"> • Accommodated within the Group budgets • The contractor is employed outside the emergency response sector and would not be affected by a CDEM event. • Dave Brunsdon is held with high regard as an engineer and SME, being involved in a number of IL4 projects in

	<p>NZ to include Canterbury and Waikato ECCs. Likewise, Lee Hazlewood has been directly involved in the design of a number of new ECC/EOC facilities both in NZ and the US. The engagement experience and network of both individuals should help in mitigating this risk.</p>		
Funding request and use			
CDEM resilience fund contribution	\$11,000		
Local authority/organisation contribution	Project Management		
Other sources of funding or support	N/A		
Budget <i>[Please supply spreadsheet]</i>	\$11,000		
Applies if application exceeds \$100,000 over the life of the project	Do you wish to attend a hearing in support of this application?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Application confirmation			
Approval of Director, Emergency Management Bay of Plenty			
CDEM Group comment			
Comment N/A - Group Submission.			

Budget (GST Inclusive)	
Workshop travel, accommodation and supplies.	\$1,000
Contractor cost	\$10,000