




CDEM Resilience Fund project application form

Application for CDEM Resilience Collaborative fund approval	
Project title	Critical facility flood protection unit (prototype)
Date of application	December 2012
Details on application	
Lead local authority	Dunedin City Council
CDEM Group	Otago
Other local authorities or Groups supporting the proposal	
Project description	
Executive summary [200 words maximum description.]	
<p>In flood events in recent years it has been observed that critical facilities can be at risk and traditional sandbagging is too slow and ineffective to divert flows or exclude water from them.</p> <p>Water-filled flood barriers offer an effective solution but are not readily available for rapid deployment with all of the associated equipment required.</p> <p>This project proposes the design, development and operational testing of a dedicated trailer, holding a range of flood barriers and the ancillary equipment to allow their rapid deployment. Once designed, the unit will be tested under simulated flood conditions in Dunedin and other areas of the Otago Group.</p> <p>Once the concept has been tested and proven the prototype could tour New Zealand for evaluation and comment by other interested civil defence emergency management organisations with the final project outcome being a national standard design, training standard and operating procedure.</p>	
Problem/opportunity [200 words maximum description.]	
<p>Increased incidence of extreme rainfall events is predicted for many parts of the country as a result of climate change and the beginnings of this may have been observed in Dunedin with an increase in urban flooding events and rapid onset river flooding events in recent years.</p> <p>While many civil defence emergency management organisations may have stocks of 'traditional' sandbag supplies and equipment and train personnel in its use, it is considered that this is not adequate or appropriate for rapid response to urban flood situations that threaten critical infrastructure or other property.</p> <p>The development of water-filled flood barriers offers an opportunity to develop a rapid response unit capable of providing enhanced protection to such facilities and property.</p> <p>Dunedin City Civil Defence Emergency Management has run some training and exercises to test the use of flood barriers and believes that a dedicated rapid response capability based on them would be beneficial in the protection of critical community facilities such as telephone exchanges, substations or medical centres.</p> <p>They would also offer the capability to divert urban flood flows away from vulnerable properties or contaminated water flows from hazardous substance and fire operations away from watercourses.</p>	

<p>Alignment with identified goals and objectives [200 words maximum description.]</p> <p>This project would contribute to national goals and objectives:</p> <ul style="list-style-type: none"> - Goal 2, Objective 2c - Goal 3, Objective 3b 		
<p>Dissemination of benefits to sector [200 words maximum description.]</p> <p>It is proposed that the outcomes of this project will include:</p> <ul style="list-style-type: none"> - Enhanced ability to protect critical infrastructure from flood damage. - Availability of unit for rapid deployment to other civil defence emergency management organisations in Otago/Southland. - A national standard design for flood protection units. - A national standard training and operating manual for flood protection units. 		
Project design		
Project manager	Manager Civil Defence & Rural Fires, Dunedin City Council	
Other project members	Dunedin City Civil Defence Emergency Management staff Dunedin City Council fleet manager Staff of other Otago civil defence emergency management organisations Ministry of Civil Defence and Emergency Management staff for advice on locations of other specialist trailers, facilitation of national evaluation and collaboration on development of national standards	
External providers/contractors	Manufacturer of trailer Suppliers of equipment Dunedin Voluntary Rural Fire Force, Red Cross, New Zealand Fire Service brigades for testing and evaluation.	
Deliverables		
Milestone	Date for completion	Cost
Investigate the design of existing 'special purpose' trailers (eg rescue trailers). Ministry advice on appropriate units would be sought. Develop concept design for flood protection trailer (based on standard tandem braked trailer chassis if practicable). Obtain quote for construction of trailer unit. Project decision point If project is feasible, build and equip trailer:		\$2,000 Travel/accommodation Dunedin City Civil Defence Emergency Management staff time \$4,000 \$7,000 \$6,000 \$1,000 \$1,000 \$700 \$500 \$500 \$500
<ul style="list-style-type: none"> - Tandem-wheel, braked trailer - Flood barriers (water-filled) x3 - Pump (high vol, low pressure) - Standpipe (double) - Fire hose x 2 lengths 70mm - Fire hose 1x 90mm (low barrier) - Dividing breech and ball valves - Barrier membranes - Road safety cones/flashers 		

<ul style="list-style-type: none"> - Battery lighting - Locker boxes - PPE (including reflector vests, life jackets, throw ropes) <p>Develop training manual for use of unit</p>	<p>End of financial year 1</p>	<p>\$1,000 \$2,000 Provided by authority</p> <p>Dunedin City Civil Defence Emergency Management staff time & materials</p>
<p>Conduct operator training and exercises (Red Cross, Rural Fire, Volunteer Fire)</p> <p>Evaluate unit and training manual and modify as required.</p> <p>Make unit available to other Otago civil defence emergency management organisations for evaluation.</p> <p>Make unit available for national trial and evaluation tour.</p> <p>Develop national design, operating and training standards in conjunction with Ministry of Civil Defence and Emergency Management.</p>	<p>Mid financial year 2</p> <p>End of financial year 2</p>	<p>Ministry of Civil Defence and Emergency Management to facilitate</p> <p>Dunedin City Civil Defence Emergency Management and Ministry of Civil Defence and Emergency Management</p>
Identified risks		
Risk	Suggested management	
Cost of development not justified by expected benefits	Decision point prior to commitment of main expenditure	
Funding request and use		
CDEM resilience fund contribution	\$26,200	
Local authority contribution	<p>Staff time</p> <p>Equipment from current holdings</p> <p>Continued maintenance, storage and availability of prototype unit</p> <p>Training and evaluation process</p>	
Other sources of funding		
Expenditure <i>[Please supply details]</i>		
Application confirmation		
Approval of Chief Executive		
CDEM Group comment		
Comment		
Approval of Coordinating Executive Group Chair	