

## 5.5 COASTAL HAZARD ADAPTATION STRATEGY GRANT APPLICATION

**REPORT AUTHOR(S):** Nicola Learmond, Sustainability Officer  
**GENERAL MANAGER:** Nicholas Wellwood, General Manager Operations  
**DEPARTMENT:** Sustainable Communities

### RECOMMENDATION

**That Council resolves to:-**

- 1. Support the submission of the attached draft Coastal Hazard Adaptation Strategy Grant Application, for Phases One and Two, to the QCoast2100 program; and**
- 2. The submission of the application be subject to Council receiving the necessary quotations for completion of the required work, for inclusion in the application.**

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### EXECUTIVE SUMMARY

Council has the opportunity to apply for a State grant for the development of a Coastal Hazard Adaptation Strategy (CHAS). This will enable Council to develop a medium to long term coastal management plan addressing projected sea level rises, more intense cyclones and accelerated coastal erosion. In addition, the strategy will include a stakeholder engagement and consultation component, which is crucial for managing expectations around adaptation, disaster management and resilience.

### BACKGROUND

Queensland's coastal councils have been invited to submit a bid for funding as part of a \$12 million State Government fund to help safeguard their communities from the impacts of climate change. Scientific data suggests that by 2100 we can expect a projected sea level rise of 0.8 meters, cyclone intensity increases and possible tracking of these cyclones further south more often. This will result in accelerated coastal erosion, permanent inundation of low lying areas and an increase in the areas impacted by storm surge and king tides.

Douglas Shire has a number of coastal settlements, as well as areas of interest, assets and infrastructure which may be at risk (or further risk) from increasing sea levels. An initial internal review has shown areas of particular interest are: Wangetti; Oak Beach to Pebbly Beach; Mowbray to Newell Beach (including Port Douglas); Rocky Point to Wonga Beach; Cape Kimberley; Thornton Beach and Cape Tribulation.

LGAQ, through the Queensland Local Government Coastal Hazard Adaptation Program (QCoast<sub>2100</sub>) encourages coastal councils to develop a Coastal Hazard Adaptation Strategy (CHAS). A CHAS aims to identify vulnerabilities, coastal hazard risks and informs the identification of suitable options for adaptation. Adaptation strategies are intended to facilitate the mitigation of short, medium and long-term coastal hazard risks for the whole community and ecosystem. The Minimum Standards and Guidelines working document provides guidance and minimum requirements for the CHAS. The Guidelines encourage councils to work through eight phases, which are:

Phase	Description
1	Plan for life-of-project stakeholder communication and engagement
2	Scope coastal hazard issues for the area of interest
3	Identify areas exposed to current and future coastal hazards
4	Identify key assets potentially impacted
5	Undertake a risk assessment of key assets in coastal hazard areas
6	Identify potential adaptation options
7	Undertake a socio-economic appraisal of adaptation options
8	Strategy development, implementation and review

Council can apply for funding for:

- Land use planning and development assessment
- Infrastructure planning and management (including roads, storm water and foreshores)
- Asset management and planning (including nature conservation, recreation, cultural heritage values and other public amenities)
- Community planning
- Emergency management

Funds are not available for:

- Detailed design works for ongoing or selected adaptation works
- Capital works or any aspect of construction
- Studies or data collated to assess catchment specific fluvial flooding

Multiple grant applications can be made at any time during the project life of the three year QCoast<sub>2100</sub> program launched in August 2016. It has been recommended by the Project Advisor that Council initially applies for funding for Phases One and Two.

## PROPOSAL

It is proposed that Council submits a CHAS grant application for Phases One and Two. This will enable Council to commission the following work:

- Develop an External Stakeholder Communication & Engagement Plan for all eight stages of the CHAS.
- Review all existing erosion, flood and storm tide inundation studies covering the Douglas Shire in line with best practice; and undertake a gap analysis identifying any additional studies required.
- Prepare a preliminary list of coastal hazard areas and identify vulnerabilities to coastal settlements, Council assets, infrastructure (e.g. roads and communication networks) and any other areas of particular interest.

## FINANCIAL/RESOURCE IMPLICATIONS

Council is required to contribute 2% of the total cost of the grant, this is estimated to be \$884. This cost will be met through the existing Sustainable Communities budget.

Council is currently providing an in-kind contribution in the form of a Project Manager to oversee the delivery of the project. This is being undertaken by Council's Sustainability Officer and currently amounts to approximately eight (8) hours per week.

In addition, a CHAS Working Group has been set up to oversee the project, this includes representation from the CEO Unit, Disaster Management, Engineering, Infrastructure, Planning and Sustainability.

## **RISK MANAGEMENT IMPLICATIONS**

The increasing risks of coastal hazards will likely affect Council in the areas of:

- Litigation and legal liability
- Community expectations
- Land use planning and development assessments
- Asset and infrastructure planning and management
- Financial sustainability
- Disaster Management

It is therefore important that Council uses the fund to develop a Coastal Hazard Adaptation Strategy which will address these issues.

## **SUSTAINABILITY IMPLICATIONS**

**Economic:** Lost productivity and greater damage from more intense disasters.

**Environmental:** Accelerated coastal erosion, permanent inundation of low lying areas and an increase in areas impacted by storm surge and king tides; impacting biodiversity, habitats and World Heritage sites.

**Social:** Significant risk to coastal communities including property loss, insurance, litigation and legal liability.

## **CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE**

This report has been prepared in accordance with the following:

### **Corporate Plan 2014-2019 Initiatives:**

#### **Theme 4 - Engage, Plan, Partner**

*4.2.2 - Provide leadership to secure beneficial social, environmental and economic outcomes for the Shire.*

*4.2.3 - Work with regional, state, national and international stakeholders to promote beneficial partnerships to support strong, resilient and sustainable communities.*

### **Operational Plan 2016-2017 Actions:**

4.3.1 - Review disaster management sub-plans and proficiencies in communications, hazard mitigation and warnings processes.

## **COUNCIL'S ROLE**

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

**Facilitator**                      Bringing people together to develop solutions to problems

## **CONSULTATION**

**Internal:**                      The CHAS Working Group includes representation from the CEO Unit, Disaster Management, Engineering, Infrastructure, Planning and Sustainability.

**External:**                      Nil

## **COMMUNITY ENGAGEMENT**

Community engagement is critical and will take place during the later stages of the development of the Coastal Hazard Adaptation Strategy.

## **ATTACHMENTS**

Attachment 1 - CHAS Grant Application Phases 1-2

Attachment 2 - CHAS Grant Application Phases 1-2 Attachment A



## QCoast<sub>2100</sub> Funding Application (*Draft*)



<b>Project Name:</b>	<b>Douglas Shire Phases One &amp; Two</b>
<b>Council(s):</b>	<b>Douglas Shire Council</b>
<b>Collaborators:</b>	

### Key Contact Details:

<b>Name:</b>	<b>Nicola Learmond</b>
<b>Position:</b>	<b>Sustainability Officer</b>
<b>Phone:</b>	<b>07 4099 9511</b>
<b>Email:</b>	<b><a href="mailto:Nicola.Learmond@douglas.qld.gov.au">Nicola.Learmond@douglas.qld.gov.au</a></b>
<b>Postal Address:</b>	<b>PO Box 723, Mossman 4873</b>

### Note:

- Please ensure that the application is compliant with the Project Eligibility Criteria discussed in the Funding Application Guidelines and the Minimum Standards and Guidelines (MS&G). If not, please provide reason for non-compliance in the various sections.
- Please note that the Project Application Template is provided to guide and assist councils in preparing project proposals. The template may be modified to suit councils' needs.
- If additional support is required in the development of the project proposal, please contact the Program Coordinator, Subathra Ramachandram at [Subathra\\_Ramachandram@lgaq.asn.au](mailto:Subathra_Ramachandram@lgaq.asn.au) prior to the submission of an application.

## 1.0 Project Purpose

### 1.1 What is the purpose of the project?

The purpose of the project is to undertake the following phases of the Coastal Hazard Adaptation Strategy (CHAS) for Douglas Shire Council:

- Phase One – Plan for life-of-project stakeholder communication and engagement.
- Phase Two – Scope coastal hazard issues for the area of issue.

### 1.2 Please list project objectives.

#### Phase One

- Identify key stakeholders and the level/type of engagement required for each Phase of the CHAS.
- Identify key points including approaches and resources for the project communication and engagement.
- Capture communication risks and mitigation strategies.

#### Phase Two

- Identify all current mapping of likely inundation and coastal hazards available to DSC to determine any gaps in mapping and knowledge.
- Identify a preliminary list of coastal hazards affecting the Douglas Shire.
- Integrate current coastal hazard mapping with Council's GIS to allow analysis of affected areas, assets and infrastructure to take place.

### 1.3 Please describe project outcomes.

The findings of Phases One and Two will inform the type of study/assessments, level of detail, resource and capability required for Douglas Shire Council to undertake all remaining phases of CHAS.

The findings of Phase One will identify stakeholders and provide a plan for engagement throughout the life of the CHAS.

The findings of the initial two parts of Phase Two will provide mapping of likely inundation that will affect coastal settlements, assets and infrastructure in the Shire. It will also identify any gaps in the current mapping. This will then allow gaps in mapping to be filled and assessment of the risk to assets across all tenures.

## 2.0 Project Scope

2.1 Please provide information about the project location and project area. A map of the project area is preferred.

Douglas Shire covers an area of 2,445km from north of Ellis Beach in the south to the Bloomfield River in the north. It includes 95km of coastline and a population of just under 12,000 people. The Shire has two major population centres, Port Douglas and Mossman, as well as a number of small coastal and rural settlements. Significant stretches of the coastline are sparsely populated or not in danger of inundation due to height above sea level. A map of the Shire is included as Attachment A.

This project will focus on inundation mapping of the coastal settlements of Wangetti; Oak Beach to Pebbly Beach; Mowbray to Newell Beach (including Port Douglas); Rocky Point to Wonga Beach; Cape Kimberley; Thornton Beach and Cape Tribulation. These areas are identified on Attachment A.

2.2 Please provide details on how the entire coastline was considered to arrive at specific focus areas.

In choosing the focus areas consideration was given to population patterns and prevailing topography to identify areas likely to be in danger of inundation. Significant stretches of the coastline are very sparsely populated or not in danger of inundation due to height above sea level and these were excluded from the focus areas. Parts of the main access roads in and around the Shire are in close proximity to the coastline and the need to secure these roads was considered when choosing the focal areas.

Much of the Shire is within a World Heritage area and the protection and conservation of these areas was also considered. Consideration was also given to currently available sea rise and inundation mapping which showed the information available was at times inconsistent and incomplete.

Hence, this project will focus on coastal settlements of Wangetti; Oak Beach to Pebbly Beach; Mowbray to Newell Beach (including Port Douglas); Rocky Point to Wonga Beach; Cape Kimberley; Thornton Beach and Cape Tribulation.

2.3 Please provide details of high level assessment undertaken for all assets across all tenures if this data is available. We note that the response to this is dependent on the information available to local governments at the time of this submission. If this dataset is not available, please include this assessment as part of the proposed project.

An assessment of tangible and intangible assets and infrastructure across all tenures will be able to be undertaken once the mapping and integration into the GIS are completed. Data from the Department of Transport and Main Roads, other Government departments and utility providers will be collected.

2.4 How does the project consider environmental, social, cultural and economic impact and co-dependencies? We note that this may only be relevant to certain phases in the CHAS process.

Using the mapping information available to Council, a gap analysis will be undertaken to understand all available and required datasets and information. This would include environmental, social, cultural and economic data. Assessment of this data including quantification of impact and co-dependencies will be undertaken in the latter phases of the CHAS.

2.5 How will the project outcome/s be integrated into council's decision making process and operations? We note that this may only be relevant to the later phases in the CHAS process and may not apply to local governments applying for the initial phases of the CHAS.

N/A

### 3.0 Methodology & Compliance with Minimum Requirement and Guidelines

3.1 Please fill in Table 1 below to provide details of any Coastal Hazard Adaptation Strategy (CHAS) work undertaken previously. This section serves to understand if any existing CHAS work that has been undertaken is compliant with the Minimum Standards and Guidelines (MS&G) or if a review is required to assess compliance. Compliance to MS&G should be assessed based on the minimum requirements for each phase of CHAS as indicated in the MS&G document. If leading practice elements have been incorporated in the assessment, please provide details in the 'additional comments' column.

Please note that funding is also applicable for review of existing CHAS work undertaken to assess compliance to MS&G.

**Table 1: Assessment of existing CHAS work undertaken**

Item	Indicative phases of CHAS (as per MS&G)	Commenced or Completed?	Study/ assessment/ data available? If yes, please provide list	Study/ assessment compliant with MS&G?	If not compliant, what is required for compliance?	Is expert input/ Consultant required to assess study/ assessment/ data?	Additional comments
1	Plan for stakeholder communication and engagement	Commenced	Internal stakeholders identified	N	Identification of external stakeholders; preparation of communication plan.	Consultant required to identify external stakeholders and write communication plan	-
2	Scope coastal hazard adaptation issues for the area of interest	Data gathering commenced	Data available to date: <ul style="list-style-type: none"> <li>Queensland Government Version 4 Storm Tide Mapping (July 2015)</li> <li>Queensland Government Erosion Prone Areas (July 2015)</li> <li>Daintree Village State Level 2 Flood Hazard Mapping (September 2014)</li> <li>Port Douglas State Level 2 Food Hazard Mapping (April 2013)</li> <li>Mossman State Level 2 Flood</li> </ul>	N/A	N/A	Consultant required to undertake gap analysis and preliminary identification of coastal hazards	-

			<p>Hazard Mapping (April 2013)</p> <ul style="list-style-type: none"> <li>• Cairns Region Storm Tide Inundation Study (January 2013)</li> <li>• Cairns Region Storm Tide Study (2009)</li> <li>• DSC Town Planning maps</li> <li>• DCDB and cadastral information from Council's database</li> <li>• GIS information on culturally and environmentally sensitive areas from Council's database</li> </ul>				
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3.2 Please fill in Table 2 below to provide details of the phases of CHAS that will be undertaken for the project and proposed approaches/methodologies. If the proposed methodology sits outside the recommendations prescribed in the MS&G, please provide reason and justification for non-compliance.

**Table 2: CHAS phases applied for in proposal**

Item	Indicative phases of CHAS (as per MS&G)	Describe proposed approach/methodology & demonstrates how it complies with the MS&G. If approach is non-compliant and/or innovation or a pilot project is proposed, please provide details in the 'Additional comments' column.	Project outputs	Additional comments
1	Plan for stakeholder communication and engagement	<p>A project management team has been set up to manage this project. Phases 1 &amp; 2 will be undertaken concurrently as they inform each other. The methodology proposed for Phase 1 entails planning for stakeholder communication and engagement for the whole CHAS process:</p> <ol style="list-style-type: none"> <li>1. Identify critical external stakeholders for CHAS.</li> <li>2. Determine key internal personnel and external consultants to be involved in engagement with key stakeholders.</li> <li>3. Consider whether a project reference group with representatives from Council, community groups and consultants should be</li> </ol>	Communication strategy and action plan for undertaking a CHAS. The strategy and action plan will be updated as the project progresses.	

		<p>convened. Such a group could periodically meet and be consulted throughout the project.</p> <ol style="list-style-type: none"> <li>4. Determine key project milestones and timeframes for communication and engagement with stakeholders for all CHAS phases. Identify preferred approaches for relevant stakeholders such as facilitated workshops and/or one on one meetings.</li> <li>5. Identify communication and engagement risks and possible mitigation strategies.</li> <li>6. Develop a communication strategy and action plan capturing all items above including defining target audience, key messaging and suitable channels/tactics for messaging. Online surveys and telephone interviews may be undertaken to understand stakeholder engagement requirements.</li> <li>7. Identify/prepare informative materials that are technically suitable and framed from the perspective of the target stakeholder group.</li> </ol> <p>The methodology proposed satisfies the minimum requirement for phase 1 and includes a leading practice element (item 3).</p>		
2	Scope coastal hazard adaptation issues for the area of interest	<p>The methodology for this phase is:</p> <ol style="list-style-type: none"> <li>1. Justify the need for, and risks and benefits of, a CHAS and how it aligns with Council instruments.</li> <li>2. Identify the organisational decision-making needs that the CHAS studies should inform.</li> <li>3. Identify existing internal and external studies, instruments, projects and possible data requirements related to each relevant phase of the development of a CHAS.</li> <li>4. Identify existing external resources which may assist in further understanding local conditions, including coastal processes studies, coastal hazard assessments, shoreline erosion management lands, industry expansion projections, population growth projections, digital elevation models, built environment inventories.</li> <li>5. Describe the imminence or timeframe for emergence of the risk.</li> <li>6. Identify knowledge and information gaps possible sources of information.</li> <li>7. Prepare a preliminary list of coastal hazard impact on tangible and intangible assets.</li> </ol>	<p>Internal report on need for CHAS planning and decision making processes.</p> <p>Consultant report detailing the review of all existing erosion, flood and storm tide inundation studies covering the Douglas Shire and any gaps in mapping or information required for the CHAS.</p> <p>Consultant report detailing a preliminary list of coastal hazards affecting the Douglas Shire.</p>	

		<p>8. Describe any significant vulnerabilities of the community.</p> <p>The methodology proposed satisfies the minimum requirements for phase 2 and includes several leading practice elements.</p>		
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3.3 Please provide details on procurement of data including new data (such as LiDAR, bathymetric survey, floor level data, ecological survey etc.) that may be required for the project. The following information should be included:

- Status on existing information available for the data or similar dataset.
- If existing data is available and not being utilised, reason for this (such as 'quality of data unsuitable for use in the project').

The requirement for this will be informed by the findings of phase 2.

## 4.0 Project Governance and Communication

4.1 Please provide details of:

- Council wide project management or steering committee members who will be overseeing this project.
- Proposed timeframes/intervals for management meetings.
- How Council will be informed of project progress.

The project has an interdepartmental project management team consisting of:

Nicola Learmond, Sustainability Officer – Project Manager  
 Paul Hoye, Manager Sustainable Communities  
 Michael Kriedemann, Manager Infrastructure  
 Simon Clarke, Consultant Town Planner  
 Scott Hahn, Project Engineer  
 Daniel Lamond, Planning Officer  
 Annette Tranent, Grants Officer

4.2 Please list the proposed project team's relevant qualifications and experience (include both in-house council staff and proposed external consultants). We understand that some local governments may submit a funding application prior to the engagement of consultants. For such cases, please only include details of in-house council staff.

### Internal Staff

Nicola Learmond, Sustainability Officer, MSc Carbon Management, M Arts Business Studies (Hons), PEIMA

Paul Hoye, Manager Sustainability, BSc, GC Disaster Management

Michael Kriedemann, Manager Infrastructure, MBA, B Eng. (Civil) (Hons), Dip Local Govt (Asset Management, MIEAust, CPEng, NER, RPEQ, General Safety Induction "White Card"

Simon Clarke, Consultant Town Planner, B Regional and Town Planning (Hons), M Built Environment

Scott Hahne, Project Engineer, B Eng. (Civil) (Hons), Qld Nominee Supervisor Licence #1037789 – Builder Open

Daniel Lamond, Planning Officer, BA Regional and Town Planning (Hons)

Annette Tranent, Grants Officer, GC Commerce, M Commerce

4.3 Please list tangible project milestones (deliverables) that have been identified and associated timeframes for delivery. Please note that payment (funding) for the project will be remitted upon submission of invoices following achievement of tangible milestones.

<b>Milestone</b>	<b>Deliverable</b>	<b>Due Date</b>	<b>Payment</b>
Project commencement	Agreement on scopes of work for phases 1 & 2 Project plan completed	01/11/2016	
Consultants	Engagement of consultants for phases 1 & 2	01/12/2016	
Phase 1 stakeholder engagement plan	Delivery of completed plan	31/01/2017	
Phase 2 Scoping	Delivery of completed gap analysis and preliminary list of coastal hazards	15/02/2017	

4.4 Please provide details of the following and include attachments for insurance policies (insurance policies not required if council is a member of both LGM Queensland and Local Government Workcare):

- Quality Assurance processes that will be used to monitor and manage timeframes, budget, reporting and deliverables.
- Professional indemnity insurance cover of \$2,000,000 (minimum for the duration of the project).
- Public liability insurance cover of \$10,000,000 (for the duration of the project).
- Workers' compensation insurance and any other insurances as required by law.

Council is a member of LGM Queensland and Local Government Workcare.

4.5 Please provide details of any collaboration (with local governments, key stakeholders, research organisations, universities etc.) identified. This is not mandatory but preferred.

Initial discussions have taken place with Cairns Regional Council, Cook Shire Council and Cassowary Coast Regional Council to open the communication lines for potential collaboration and sharing of information as the project progresses.

## 5.0 Project Funding

### 5.1 Please provide the following details:

- The total project value (fee estimate) including GST. If this project is a collaborative effort, please provide total project value and approximate value for individual local governments.
- Fee estimate based on breakdown of tasks corresponding to tangible milestones identified in section 4.3 and hourly rates for consultants for any future work/variations.

Total Estimated Project Value for Phases One and Two: \$44,200

Phase 1 - External stakeholder communication & engagement plan

Consultant hourly rate: \$160

Estimated number of hours: 100

Total Cost: \$16,000

Phase 2a – Review of existing studies, gap analysis & preliminary list of coastal hazards

Consultant hourly rate: \$200

Estimated number of hours: 120

Total Cost: \$24,000

Phase 2b – Integration of current coastal hazard mapping with Council's GIS to allow analysis of affected areas, assets and infrastructure.

Consultant hourly rate: \$105

Estimated number of hours: 40

Total Cost: \$4,200

*Final costs will be determined through an official invitation to quote and will be updated before submission of the grant application.*

### 5.2 Please provide the following details where applicable:

- Co-contribution (cash only value) by council.
- In-kind contribution from council.
- Any additional funding sources/grants identified/sourced for this project.

DSC will contribute 2% (estimated at \$884) of the total cost of Phases One and Two.

DSC is also providing an in-kind contribution in the form of a Project Manager to oversee delivery of the project. This is approximately 8 hours per week.

## 6.0 Additional Information (Optional)

6.1 Are there any known issues, concerns or risks identified with the proposed project?

None at this stage. A risk register will be set up, monitored and reviewed to mitigate risks.

6.2 Do you require advisory support and guidance from the Project Advisor or the Expert Panel for the Project?

A meeting has taken place with Evan Raymond, CHAS Project Advisor and DSC will request further guidance, e.g. from the Expert Panel as required throughout the project.

## 7.0 Submitting your application

This is a non-competitive bid and all projects will be considered against their merits and the project eligibility criteria discussed in the Funding Application Guidelines. There are also no due dates for proposal submission (open for entire Program duration) and local governments may choose to submit a single proposal upfront or multiple proposals throughout the Program duration.

Project proposals must be submitted using the Program's funding application template. However, the template may be modified to suit.

A copy of the consultant's brief /specification is preferred but not mandatory.

Project proposals are to be submitted via email or post to the Program Coordinator:

Subathra Ramachandram  
Program Coordinator - Coastal Hazards Adaptation Program (QCoast<sub>t2100</sub>)  
Local Government Association of Queensland  
PO Box 2230  
FORTITUDE VALLEY BC QLD 4006  
[Subathra\\_Ramachandram@lgaq.asn.au](mailto:Subathra_Ramachandram@lgaq.asn.au)

The Program Coordinator and Project Advisor will liaise with local government representatives if any additional information is required for submission to the Board.

Local governments will be notified within 30 days on the status of their applications and if successful, a funding offer and contract will be provided.

For any further inquiries/clarifications or concerns, please contact the Program Coordinator – Subathra Ramachandram at [Subathra\\_Ramachandram@lgaq.asn.au](mailto:Subathra_Ramachandram@lgaq.asn.au) or 07 3000 2107.

**Attachment A**

**Douglas Shire: Known Coastal Hazard Areas Shown in Blue**

