



# RESILIENCE FUND FINAL REPORT FOR A NEEDS ASSESSMENT TECHNOLOGY SOLUTION

NORTHLAND CDEM GROUP

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## Executive Summary

Needs assessment is the process of understanding the needs of people affected by an emergency in order for welfare services to be delivered by Civil Defence Emergency Management (CDEM) and partner agencies. Needs assessment includes the provision of a system to assist with meeting the immediate and ongoing welfare needs, and coordinating the actions required to meet those needs, in an integrated and flexible way (*Welfare Services in an Emergency Director's Guideline [DGL 11/15]*).

Currently the Northland Emergency Management Agency (NEMA) host and make available the Awhina welfare needs assessment system which the Northland CDEM Group utilised during the COVID pandemic in early 2020. However, the use of Awhina during the pandemic was not without difficulty and feedback from stakeholders, users and recipients of welfare services through this system felt that it did not keep people at the heart of emergency management. The Northland CDEM Group were challenged by their customers and stakeholders to create a much user-friendly welfare needs assessment system that would suit the needs of Northlanders.

In January 2021, the Northland CDEM Group made a late application to the National Emergency Management Agency (NEMA) to apply for unspent resilience funds, to establish a welfare needs assessment software system. The CDEM Resilience Fund awarded the Northland CDEM Group \$30,000.00 to undertake the project.

Under the guidance of the Northland Regional Council's (NRC) Geospatial Information Systems (GIS) team of specialists, a vision and scoping document was designed. From this a software application options and requirements report was completed to determine the best software available to meet the needs of a system as identified in the vision and scoping document.

The Northland Welfare Needs Assessment System (WeINAS) was created using an ARG GIS platform and survey 123. A landing page directs the users to either create an enquiry and referral or to complete a needs assessment. Three dashboards have been designed to monitor the enquiries and referrals, the CDEM assistance being delivered and the health of the system. WeINAS is backed up by a user interactive map of welfare services available in Northland which has been a separate piece of work to enhance the system that the Northland CDEM Group have funded.

## Background

In the past, welfare needs have been managed through the Emergency Management System (EMIS) which is now no longer supported, and through case management using excel spreadsheets. Changes to how we manage people's personal information and the level of reporting demanded by central government agencies and Ministers have meant that simple solutions no longer met requirements.

In response to this the Northland CDEM Group was supportive of the development of the national Awhina welfare needs assessment system. However, during the roll out of this system for use during the COVID pandemic in 2020 the Northland CDEM came across a number of issues around the use of Awhina in Northland which resulted in the move away from this system and into something more tailored to Northlanders needs.

## Project team

<b>Project Sponsor:</b>	Graeme MacDonald, Northland CDEM Group Manager
<b>Project Lead:</b>	Claire Nyberg, Group Welfare Manager
<b>Project Group:</b>	Anya Duxfield, Geospatial Analyst (current) Rebecca Norman, Geospatial Analyst (previous) Gail Townsend, Data Analyst Kym Ace, Corporate Systems Champion Gail Yearbury, Data Governance Lead
<b>Other project members:</b>	Northland CDEM Group office staff, welfare contractor, Welfare Coordination Group members.

The project team have engaged with wider stakeholder members as required through agenda topics, at meetings, presentations, email's and system demonstrations both regionally and nationally with demonstrations to both Taranaki and Canterbury CDEM groups.

## Purpose and intended outcomes

The purpose of the project and the intended outcomes were to create a system that:

- Meets all security and privacy requirements outlined by the NZ Government
- Ensures the product provided is robust and agile and can be used in multiple responses, by both internal and external staff, and be used on a variety of devices
- Continues to work with CDEM to develop the product further should software or requirements change at short notice
- Contributes towards establishing situational awareness in a response through the application of visual displays and robust reporting outputs
- Ensures that there is a strong focus on the customer experience keeping people rather than process and systems at the heart of emergency management.

## Key outcomes and deliverables

- Identification of the system specification/requirements for a desired Welfare Needs Assessment System.
- Criteria developed to assess software applications
  - Completion of a report on the CDEM Welfare Needs Assessment Software Application- Phase 1- Solution of Recommendation. (Northland Regional Council, December 2020. Internal Report, 14 pages).
- Selection of preferred software options and further analysis to select one provider
  - Completion of a report on for a Recommendation of Software Application for the Welfare Needs Assessment System
- Development and design using the preferred software package
- Testing of the software system and refinements

This project was undertaken in a two phase approach with the first phase being investigation and the second phase being software development.

## Phase One: Investigation

A list of needs assessment system requirements was created and ranked in list of priority of ‘must haves’ to underpin an initial analysis of all identified software applications available on the market. Once this was complete the two remaining software applications, Microsoft Teams and ArcGIS where investigated in depth against the following components:

- Privacy legislations surrounding gathering private information about members of the public.
- Security requirements surrounding the technology that hosted the welfare needs assessment data.
- CDEM Welfare Needs Assessment requirements – mandatory components
- If the desired CDEM Welfare Needs Assessment workflow (appendix 1) can be achieved with the two software applications.

Upon the impletion of phase 1, a recommendation document was created which outlined the software most compatible with the desired workflow and requirements of welfare needs assessment software (CDEM Welfare Needs Assessment Software Application- Phase 1- Solution of Recommendation. Northland Regional Council, December 2020. Internal Report, 14 pages).

## Phase Two: Software development.

Phase two involved the development of the Welfare Needs Assessment System (WeINAS) based on the preferred software option of ARC GIS and the use of Survey 123 (Recommendation of Software Application for the Welfare Needs Assessment System. Northland Regional Council, March 2021. Internal Report, 31 pages). This involved the development of a landing page to access the following:

- enquiries and referrals
- needs assessments
- an enquiries and referral reporting dashboard
- a CDEM assistance reporting dashboard
- system health reporting dashboard.

See product development for further detail on the landing page and components.

## Successes and challenges

While there were many successes with the WeINAS project there were also many more challenges that presented themselves along the way.

Some of the successes involved:

- Development of the key principles to underpin the WeINAS system
  - Customer centred
  - User friendly
  - Meets NEMA requirements
  - Robust metric reporting capability
- Development of some very detailed reports to support the two phases of the project
- The involvement of different areas of council including business, GIS, data analytics and welfare experts
- The involvement of a Data Analyst who had extensive experience not only in data but also in design of questionnaires and workflows

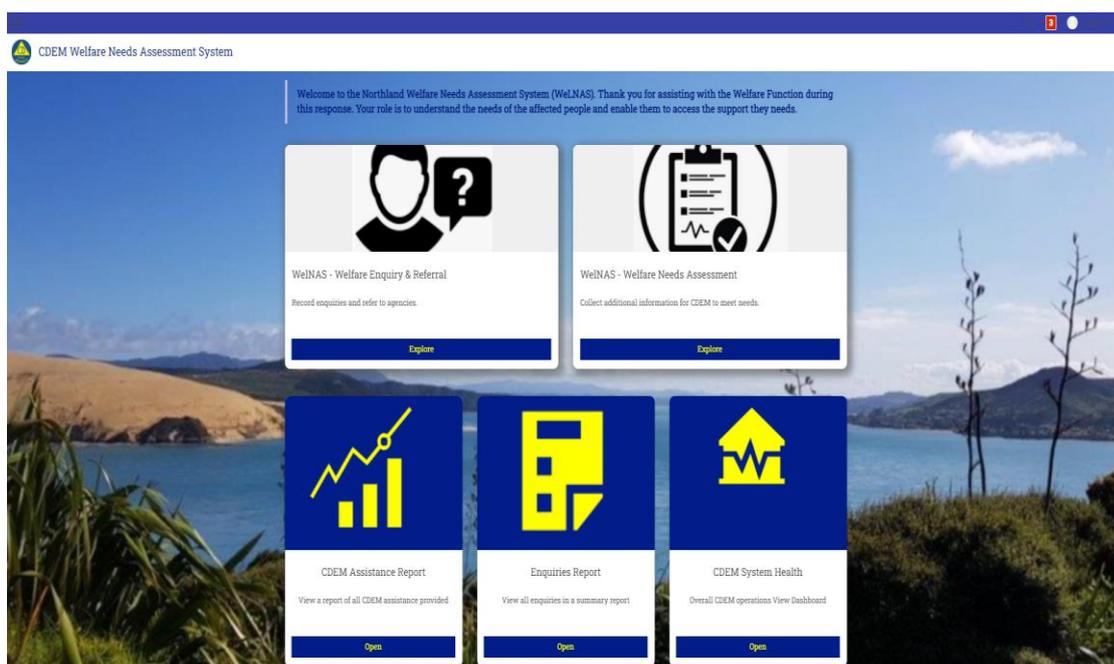
- The use of off the shelf software which is well supported nationally and had already been used in house during previous emergencies
- A well tested workflow and automation of certain tasks
- Agreement by NRC to assist with design, hosting, support and maintenance of the system during readiness and response
- A broader project team able to assist during a response to ensure the system operates to full capability

Some of the challenges involved:

- The GIS project coordinator leaving part way through the project
- Training a consultant to complete the project who then become an NRC employee in a full time capacity
- The on-going events and emergencies over the project timeframe with added workload stress for the NRC staff and the Group Welfare Manager
- The initial concept of keeping the needs assessment as close to the Awhina questions as possible- this led to an adhoc workflow which then had to be re-designed with re-worded Awhina questions
- Competing work priorities of the project team
- An initial underestimate of the hours to complete the project by the project team
- Unforeseen upgrades required to the components of the NRC system to get the full extend of ARC GIS capabilities required.
- A number of system enhancements that were identified through the project process which were not in the original project scope/budget but which are still being progressed.

## Product development

Below is the landing page where all those involved with the collection of welfare information will access the components of the system that they have been tasked with operating. From this landing page the user, depending on their role will have access to the enquiry and referral survey, the needs assessment survey, the CDEM assistance report, enquiries report or the CDEM System health report.



## WellNAS Enquiry & Referral

The Enquiry and Referral page is where the initial information is captured including the type of need and the address where assistance is required. Where possible the enquiry is matched with an existing welfare service and the enquiry is closed if a match can be made. If the need cannot be referred onto another welfare service provider or the need is one that CDEM is responsible for the enquiry is escalated to a needs assessor for follow up and a priority assigned to the record.

**WellNAS - Enquiry & Referral** Return to WellNAS Home page

Initial Assessment

Emergency Event\*

-Please Select-

Date and Time of Assessment\*

3/23/2022 07:47 AM

Have you rung us before during this emergency?\*

-Please Select-

What is your name?

First Name

Last Name

Location for Assistance\*

Find address or place

Welfare Enquiries Locations

Map of New Zealand showing various locations marked with red and orange dots.

## WellNAS- Welfare Needs Assessment

The needs assessor selects the enquiry record from the list and/or map view, selecting the most urgent and or longest outstanding enquiry. Here the needs are re-assessed and CDEM follow up with appropriate assistance.

**WellNAS - Needs Assessment** Event Selector: All Events

Assessments In Progress

- Name: Bud Buster  
Address: 55 Matarau Road, Matarau, Whangarei District, Matarau  
Status: In progress  
Priority: P1 - High: less than 24 hours  
Case Opened: 12/8/2021, 9:57 AM  
[Click to open Survey Form](#)
- Name: [Redacted]  
Address: 36 Water Street, Whangarei, Whangarei District, Whangarei, Avenues  
Status: In progress  
Priority: P0 - Immediate  
Case Opened: 12/8/2021, 9:24 AM  
[Click to open Survey Form](#)
- Name: A Duxfield  
Address: 21 Totara Street, Dargaville, Kaipara District, Dargaville  
Status: In progress  
Priority: P0 - Immediate  
Case Opened: 2/8/2022, 11:33 AM  
[Click to open Survey Form](#)
- Name: Anya Duxfield  
Address: 26 Moka Road, Okara, Whangarei District, Okara  
Status: Case management required  
Priority: P0 - Immediate  
Case Opened: 2/8/2022, 12:11 PM  
[Click to open Survey Form](#)
- Name: Anya Duxfield  
Address: 103 State Highway 1, Ohasewai  
Status: In progress  
Priority: P0 - Immediate  
Case Opened: 2/16/2022, 10:03 AM  
[Click to open Survey Form](#)

Initial Assessment

Emergency Event\*

Tsunami

Date and Time of Assessment\*

12/8/2021 09:24 AM

Have you rung us before during this emergency?\*

No

What is your name?

First Name

Anya

Last Name

Duxfield

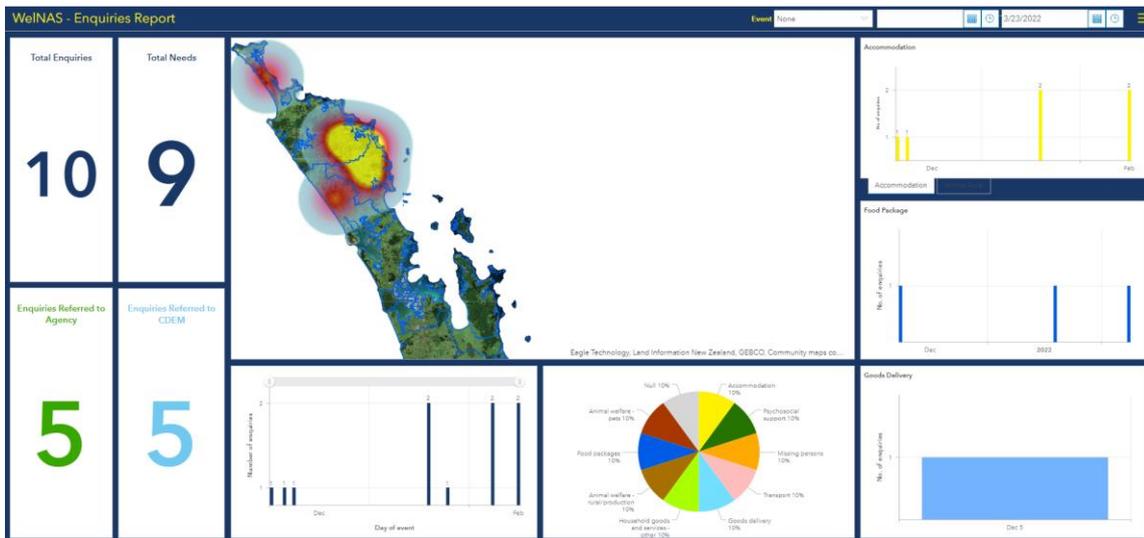
Location for Assistance\*

Map of New Zealand showing various locations marked with red and orange dots.

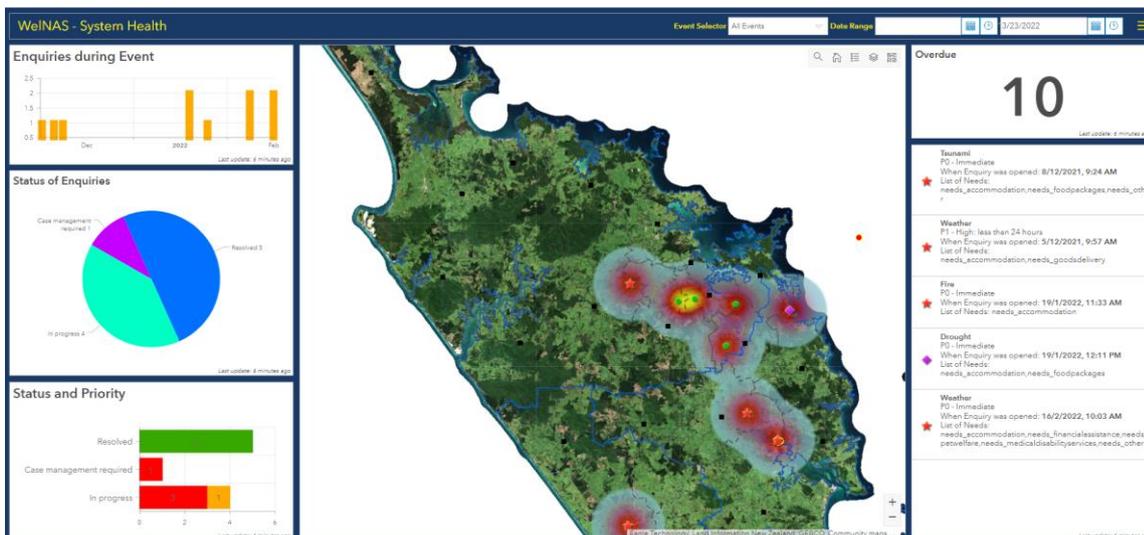
# CDEM Assistance Report



# Enquiries report



# CDEM System Health



## On-going project management

The scope of the project did not include the User Acceptance Testing (UAT), further enhancements required from UAT, development of training material and the training of staff and volunteers across Northland. These costs will be met by the Northland CDEM Group in existing budgets as on-going costs. The development of the welfare services availability map is also being met by the Northland CDEM group and is being completed by an external contractor and will be available after July 2022. In the meantime, the existing 4w (who, what, where why of welfare services) document to capture available welfare services available has been updated for use with WeINAS.

The Group Welfare Manager will be available to demonstrate the system to other regions as requested.

## Appendix 1 Workflow for welfare needs assessment process

