**Notes for all projects:**

1. You are required to create a fully functioning application, not just a design that does not function.
2. You may not use ‘canned web site’ tools like wordpress or other cloud hosted tools that do the implementation for you.
3. You will be provided with access to a virtual server to set up your application, and this must be used rather than an external hosting service.

**Project 1: Redevelopment of New Zealand Gazetteer Web Site**

This project brief is to **design and implement** a new web site for the New Zealand Gazetteer, to replace the current one that can be found at: <https://gazetteer.linz.govt.nz/>. The NZ Gazetteer is a register of New Zealand’s place names and their locations. The new web site needs to contain a map that shows the location of place names, but other than that there is some flexibility about the design. There are various third party tools that can be used to produce the map (Leaflet is used in this example, but there are others).

Consider the functions that the user might want – you need not be constrained by what is already there.

Resources:

1. The gazetteer data can be downloaded from the page above (see the footer).
2. LINZ is currently running a survey to collect views about the design, and this gives an indication of some of the issues and questions you might consider in your design. The link is here: <https://landinformationnz.au1.qualtrics.com/jfe/form/SV_5gotS0tinxGQQ1T>. **Note that this is only available until 6th March, so you will need to download it to make sure you don’t lose the content.**
3. I have a contact person at the New Zealand Geographic Board who runs the department that maintains the web site, so we can arrange an interview with her, but I would like to first see what you plan to ask her.

**Project 2: Redevelopment of Manaaki Whenua’s Flora, Fungii and Fauna Web Site**

The project brief is to design and implement a new web site to replace:

* Nzflora.landcareresearch.co.nz
* Nzfungi.landcareresearch.co.nz
* NZFungi2.landcareresearch.co.nz
* NZInverts.landcareresearch.co.nz.
* (NZFungi2 is a replacement for NZFungi)

You are required to design a new website that combines all three data sets into a single data portal.

The project should consider the design and functionality of the website, including new functionality that could be added. (Note some parts of the current site are no longer functioning – should these be re-instated in a new site?). The site should provide for:

* Search and filter for taxonomic data
* Display details for selected records
* Help/documentation
* Links to other resources (see for e.g., rss feed on nzflora site; Data store links; links to full specimen information on scd.landcareresearch.co.nz)

Important criteria to consider:

* Usability for audiences.
  + Clarity of information delivery
  + Clarity and simplicity of functionality
  + Clarity of navigation
* Visual impact/appeal (professional; clean)
* Innovative delivery or functionality
* Rationale of design
* (If appropriate, clarity and level of documentation in the code).

Key audiences are:

* Professionals interested in a single taxon group (plant, insect, fungi) (e.g., DOC entomologist)
* Professionals interested in multiple taxonomic groups (e.g., spanning plants and fungi) (e.g., MPI scientist)
* Members of public
* Education sector (primary through to tertiary)

Each website derives data from separate instances of the same management systems (Names DB; Collection Db; Images), with data held in MS SQL Server.

The new website will be built on a new architecture.

The new site will utilise SOLR for a search engine. The ability for richer searching and faceting should be considered. The main taxonomic record details will be held in a document store – probably as JSON or XML.

The taxonomic and collection data running the current sites is not directly accessible via webservices. The images are available via a REST service.

Resources:

1. A download of taxonomic and collection data can be provided (e.g., as XML).
2. A template for another MW-LR site that illustrations the documentation we require for website design documentation that can be used as a basis for the new site.
3. A survey conducted of existing users. (This was undertaken a few years back and need to retrieve the results from surveymonkey.)
4. If desired can provide the Google Analytics for the current sites for the past 12 months.

**Project 3: Redevelopment of Manaaki Whenua’s Māori Plant Use Web Site**

The project brief is to design and implement a new web site to replace:

<https://maoriplantuse.landcareresearch.co.nz/WebForms/default.aspx>

The project should consider the design and functionality of the website, including new functionality that could be added

The site should provide at least (but does not need to be limited to) the currently level of functionality, and should provide for:

* Search and filter for data
* Display details for selected records
* Help/documentation
* Links to other resources

The new website will be built on a new architecture.

The new site will utilise SOLR for a search engine. The ability for richer searching and faceting should be considered. The main record details will be held in a document store – probably as JSON or XML.

Important criteria to consider:

* Usability for audiences.
  + Clarity of information delivery
  + Clarity and simplicity of functionality
  + Clarity of navigation
* Visual impact/appeal (professional; clean)
* Innovative delivery or functionality
* Rationale of design
* (If appropriate, clarity and level of documentation in the code).

Key audiences are:

* Iwi and hapu
* Professionals interested in ethnobotany
* Members of public
* Education sector (primary through to tertiary)

Resources:

1. The main data running the current sites is not directly accessible via webservices. The images are available via a REST service.
2. A download of the main data can be provided (e.g., as XML).
3. A template for another MW-LR site that illustrations the documentation we require for website design documentation that can be used as a basis for the new site.
4. If desired can provide the Google Analytics for the current sites for the past 12 months.