

2013

# Plan Components

e-RMA



## **e-RMA**

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The internet and online technology enable 'anytime, anywhere' access to information and services and offers the potential to enhance the connection between the public and local government.

Increasingly the public is seeking to use the internet not just as a source of information, but as a medium to complete transactions. The demand for an internet-enabled local government sector has implications for RMA administration and this guidance note has been developed to encourage and assist councils to develop administration systems that will support the online delivery of RMA services (e-RMA).

The guidance note:

- describes what e-RMA is
- identifies the benefits of e-RMA
- identifies the key issues that should be considered when implementing e-RMA
- proposes key actions to help councils develop an e-RMA system.

## **Guidance note**

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## Introduction

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Increasingly councils are relying on technology to help streamline their RMA administrative processes so that people can more easily access relevant information and services at a time and location that suits.

To help encourage increased take up of e-RMA this note provides guidance on a range of matters councils should take into account before providing RMA related information and services electronically, including:

- ways an e-RMA system can be delivered
- ways councils can gauge their current provision of e-RMA information and services
- ideas on how councils can move towards achieving the electronic administration of the RMA
- key issues that RMA managers should consider to successfully adopt new technology.

The guidance note is not intended to be a technical 'how to' manual but to outline the organisational and structural features of an e-RMA system.

## What is e-RMA?

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In this guidance note e-RMA refers to an internet-enabled system of administering the RMA and includes:

- the range of applications of information and communications technology to support RMA planning
- the organisational and structural change required to support an e-RMA system.

The key features of e-RMA are:

- RMA information and services can be accessed online - providing access to RMA information and services is a primary feature of e-RMA. The range of information and services set out in this note form a starting point for developing an e-RMA system.
- a 'joined up' approach - an e-RMA system should be compatible with other information and services provided on a Council's website. RMA information and services should also be usable and accessible by all potential users, and adhere to government standards and best practice.
- appropriate use of technology - technology should support RMA administration and enhance the performance of RMA practice. It should not require users to have unusual, costly and/or unsupported software. Text and map-based information should be presented in an appropriate format.
- fully integrated information technology 'back office' systems- developing an e-RMA system provides an opportunity to integrate the 'front' and 'back' office practices of councils and to create an integrated and coherent electronic process for RMA practice and procedures. The term 'back office' comes from the building layout of early companies where the front office would contain the customer-facing staff and the back office would be those involved in administration. In a



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virtual world, the front office is the Council's website, while the back office is the internal computing system.

### **Directions and Priorities for Government Information and Communication Technology (ICT)**

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The Directions and Priorities for Government ICT is a medium-term strategy for how central government will more collectively lead the use, development and purchasing of government ICT over three years. In October 2010 the Directions and Priorities for Government ICT replaced the e-government strategy 2006.

The strategy has five directions for ICT management and investment. There are a further fifteen priorities which sit under these directions. The five directions are:

- Provide clear leadership and direction;
- Support open and transparent government;
- Improve integrated service delivery;
- Strengthen cross-government business capability; and
- Improve operational ICT management

The Directions and Priorities for Government ICT are complemented by the Government ICT Roadmap and a broader work programme. The Government ICT Roadmap provides a mechanism for identifying opportunities for shared capability and enables agencies to align their ICT planning so that scale can be leveraged for wider system benefits.

Further information is available on [Directions and Priorities for Government ICT](#). Other useful websites include:

- [UK Planning Portal](#). The United Kingdom is a leader in the provision of e-planning services and has developed a centralised website or planning portal to provide a one-stop shop to cater for all participants in the planning system.
- [Local Government Online](#)
- [Internet New Zealand](#)



## Benefits of e-RMA

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A significant benefit of e-RMA is that it delivers RMA-related information and services to the public wherever and whenever they want to access them (e.g. at home or work). Good access to RMA information and services:

- enables the public to participate in local government by being better informed
- provides a better and more available flow of information to agencies, applicants and other stakeholders
- improves efficiency by making RMA plans, policy statements and procedures more accessible
- improves accountability by making council records of RMA practices and procedures more accessible.

Access to a well developed e-RMA system also allows councils to:

- streamline their RMA consultation processes
- improve the efficiency of their RMA administration
- reduce 'face to face' enquiries and allow RMA practitioners to focus on their other responsibilities
- reduce duplication and achieve economies of scale (e.g. sharing information between organisations)
- increase productivity and improve customer service
- lower costs.



## How to Implement e-RMA

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One of the primary issues for RMA managers is the need to be able to effectively communicate their requirements to those involved in the technical aspects of providing internet-enabled RMA administration systems. When considering the introduction of such a system RMA managers should, in conjunction with their information technology advisers, identify:

- who the potential users of the e-RMA information and services will be
- what their likely requirements are.

Potential users of internet-enabled services will generally expect:

- sites to be technically robust (i.e. load well, perform well and have links that work) and easy to navigate (e.g. through use of search aids)
- information to be up to date, relevant and authoritative and is able to be copied or printed
- access across a range of users and computer hardware and software platforms
- quick download speeds (eg, broad band vs dial-up).



## Key issues for delivery of e-RMA

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Some key issues that should be considered when deciding how RMA information and services will be delivered through the internet include:

### Access to the internet

Internet access cannot be assumed. Barriers to access may be physical (e.g. the availability of computers, modems, telephone lines and network hardware) or may refer to a person's ability or willingness to engage with a council through the internet. As it is impossible for councils to remove all of these barriers some level of 'face-to-face' service will still need to be provided.

### Connection capacity

Developing e-RMA is currently limited by existing levels of broadband access. In 2009, approximately 25 percent of New Zealand households did not have internet access at home. Of those households that did have internet access, approximately 12 percent had a dial-up connection. Each region had close to, or over 50 percent, broadband access and the majority had upload speeds of 256kbps or more. In 2012 the number of households without internet access had decreased by 5 percent to only 20 percent of New Zealand households.

### Web accessibility

Between 10 percent and 20 percent of the New Zealand population have disabilities. The internet offers people with disabilities the possibility of unprecedented access to information and interaction. However, to be accessible RMA information and services need to be available in a format that can be altered by persons with disabilities or impairments otherwise this communication opportunity will be lost.

Web accessibility refers to the ability for people with disabilities to perceive, understand, navigate and interact with the web. The Government [Web Standards](#) contain standards to help address barriers that may be encountered by people with physical, visual, hearing and cognitive and/or neurological disabilities. In developing information and services for the internet, account should also be taken of international (e.g. [W3C](#)) and local standards (e.g. [Internet NZ](#)). For more information on web accessibility refer to the [World Wide Web Consortium \(W3C\)](#) website.

### Cultural barriers

When developing material for the internet councils should consider the cultural diversity in their local area (e.g. language) and how that may affect access to e-RMA services.

### Trust

The security of personal data is a fundamental concern for internet users and may mean that some information should not be stored on internet-accessible databases.

## Usability

Website users should be able to easily orientate themselves and to quickly navigate to the information and services they are seeking. When they have found their way to the information/services they should be able to easily interact with any feature available or conveniently download information.

Usability is a quality attribute to assess how easy the user interfaces are to operate. It also refers to methods for improving ease-of-use during the design process. Usability is critical to the success of a website as people are unlikely to use it if it is difficult to navigate.

Usability is comprised of five quality components:

- learnability - how easy is it for users to accomplish basic tasks the first time they encounter the design, particularly with little or no instruction?
- efficiency - how quickly can users perform tasks once they understand the design?
- memorability - how easily can users re-establish proficiency after a period of non-use?
- errors - how many errors do users make, how severe are these errors and how easily can they recover from these?
- satisfaction - does the design of the site satisfy user requirements?

Another important quality attribute is utility, which refers to the design's functionality: does it offer what users need?

Usability and utility are equally important. For instance, it matters little that something is easy to use if it does not contain the information sought.

## Integrity

Integrity refers to the quality of the website and the internet-enabled RMA information and services available. Links within websites need to be robust and any information provided should be up to date, complete and authoritative.

## Authentication

Authenticating the identity of a user is an important aspect of many RMA practices and procedures (e.g. resource consent applications, submissions). It is a common issue in business and councils will also need to consider ways in which user identity can be authenticated.

## Interoperability

Interoperability refers to the ability to transfer and use information in a uniform and efficient manner across multiple organisations and information technology systems.





## Service delivery architecture

As well as engaging appropriate technical expertise to deliver an e-RMA system, RMA managers will need to consider how they organise or structure the technology (known as 'service delivery architecture') that will be used to deliver RMA information and services. The broad objectives for organising service delivery architecture are to:

- develop a common standard to avoid replicating efforts
- ensure organisational operations are externally and internally integrated
- allow seamless provision of information and services.

Councils should adopt a consistent approach to the management and delivery of on-line services. The [Government ICT Directions and Priorities website](#) provides a useful source of further information



## Developing an e-RMA Framework

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The following list outlines a range of actions councils can take to create an internet-enabled RMA administration system. The actions are set out in order of priority, moving from those that allow online access to government information, services and processes, to those that allow the public to interact and undertake e-RMA transactions online (e.g. lodging resource consent applications and submissions).

The list is not exhaustive and is not intended to limit the range of information and services councils may wish to offer. A [self-assessment](#) template is also available. The template allows councils to measure their current online performance against the listed actions and to identify future targets.

1. [RMA information and services are located and accessed from the council home page](#)
2. [Online RMA guidance is available](#)
3. [Text of RMA policies and plans can be accessed online](#)
4. [Maps in RMA planning documents can be accessed online](#)
5. [Iwi and hapu RMA documents and contact details are available online](#)
6. [RMA-related committee papers, minutes of proceeding, and schedules of council meetings can be viewed online](#)
7. [RMA fee schedule is available online](#)
8. [RMA forms can be downloaded](#)
9. [Publicly notified resource consent applications, notices of requirement and proposed plan changes/variations can be viewed online](#)
10. [Submissions can be prepared and lodged online](#)
11. [Current appeals to the Environment Court can be viewed online](#)
12. [The status and decision notice of all determined resource consents can be located and viewed online](#)
13. [Statutory applications can be lodged online](#)
14. [Applicants can monitor the progress of their statutory applications online](#)
15. [Council RMA monitoring records can be viewed online](#)
16. [State of the environment monitoring records can be viewed online](#)
17. [Authoritativeness of online RMA information Self assessment template](#)

### **Action 1 - RMA information and services are located and accessed from the council home page**

#### **Objective**

Resource management related information and services can be easily accessed online from the council home page.

#### **Why is this action important?**

- To make RMA related information and services easy to find and access
- To encourage people to use online resource management information and services.

#### **Implementation issues**



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Councils are the primary point of contact for RMA information and services, particularly resource consents. Consequently, it is important that RMA information and services are as accessible as possible on council websites and not concealed within more generic information relating to their wider regulatory functions.

Improved access can be achieved through providing a direct link to RMA information from either the council home page or an RMA portal (portals are internet points of access for structuring information and services around the needs of the public which at their more basic act as a billboard). This will create a 'one-stop shop' for RMA information and services (i.e. RMA plans and consents).

If a separate RMA page or portal is not provided the following questions should be considered:

- how well can the site be intuitively navigated by users?
- how many different places do users need to visit to find the information or service they are seeking?
- You can improve accessibility and usability by providing:
  - key information categories
  - good design factors including colour
  - clear navigation aids.

### How to implement this action

Provide a direct link from the council home page to an RMA information portal, or have separate links to information about resource consents and RMA policies and plans.

## Action 2 - Online RMA guidance is available

### Objective

The provision of online guidance to the public on the RMA and relevant policy statements and plans. Online guidance material should include sufficient detail to allow a basic RMA enquiry to be answered without having to phone or visit the council.

### Why is this action important?

- To make the RMA and related processes more understandable and less complex for members of the public.
- To reduce the number of front office, telephone and email queries.
- To reduce the need for qualified RMA practitioners to provide basic advice.

### Implementation issues

The extent and quality (e.g. interactive features) of guidance material provided on council websites will depend on the council's resources and capacity. The key issue is to ensure that the RMA advice is:

- trustworthy
- consistent

- authoritative
- up to date.

A range of options are available to provide online RMA guidance, from the provision of static information (i.e. using the internet as a billboard) to interactive features that allow a user to establish whether an activity requires a resource consent and the category of consent that applies. Delivery options include:

- frequently asked questions (FAQ's)
- printable leaflets
- links to RMA advice and related websites
- interactive features (e.g. software that can be used to interrogate a district plan, sunlight access plane calculators)
- an online RMA 'help desk '
- regular maintenance of links to external websites to ensure they are still active and 'fit for purpose'.

Where an online RMA help desk is provided it is important that enquiries are responded to in a timely and comprehensive manner.

### **How to implement this action**

Links to external websites that provide planning guidance (e.g. the Ministry for the Environment) are easily accessible.

Existing council leaflets are generally best presented in PDF format with links to related websites embedded in the text. Interactive features such as on-line enquiries can only be provided through HTML and associated databases.

Recording the range of planning related enquiries received over a 3-6 month period and then preparing FAQs to address issues that were frequently raised is an effective way to provide online guidance that fits the local context.

### **Action 3 - Text of RMA policies and plans can be accessed online**

#### **Objective**

An up-to-date text version of RMA planning documents and material included by reference is able to be accessed online for use by the public.

#### **Why is this action important?**

- To provide open and transparent access to a full range of RMA information.
- To reduce the number of front office, telephone and email queries, and the time and money spent sending out hard copy excerpts of RMA planning documents.

## Implementation issues

Councils should ensure RMA planning documents (e.g. regional policy statements, district and/or regional plans) are available online as they are a key information source for people looking at carrying out an activity. Material that should be accessible to the public includes:

- if a combined planning document is prepared, clear identification of the regional policy statement provisions
- clearly identified operative and proposed versions of plans, policy statements and plan changes
- an explanation of the status and relative weight that should be assigned to respective plans
- an explanation of their status and relative weighting of any variations and/or plan changes
- the legal effect of any proposed rules
- links to national policy statements and national environmental standards
- documents included by reference in RMA policy statements and plans (e.g. design guidance relating to a heritage precinct or a character area).

Some of the documents intended to be included by reference may not, however, be freely or readily available, or may contravene copyright laws if published on the internet (e.g. New Zealand Standards are often referred to in RMA plans but must be purchased before they can be viewed). The location of these documents should be identified so users can access them by other means.

Practical issues to consider when making these documents available online include:

- providing guidance on how to use an RMA plan
- how best to distinguish between an operative and proposed version of a plan (e.g. use of underlining or different font colours)
- how best to identify those proposed rules that have legal effect at any particular time
- the ability for users to download files through a dial up connection
- how easy it is for users to search policy statements and plans
- whether special software is required to view the plan (e.g. Java or Adobe software will help plan users).
- Basic features sought by online RMA plan users include:
  - short 'drilling' distances - being able to get to a document with minimal 'drill down' from the home page (i.e. through hyperlinks to different pages)
  - two-way indexing - a well set-out index with linked access to different sections of the plan. There should also be ready access within each section back to the index page, including the map index page
  - authoritative - an up-to-date and accurate version, including an indication of the status of the plan and when the information was last updated (including plan changes)
  - internal links - hyperlinks are used to access cross-referenced objectives and policies or relevant provisions (e.g. definitions)
  - external links - providing links to documents incorporated by reference into RMA plans, for example design guidance
  - printing - text can be printed without the loss of formatting



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- copying - the ability to cut and paste discrete sections of text without the loss of formatting, or to download either the entire plan or specific parts of it
- searching - the ability to search for specific words and terms and/or discrete sections or subsections
- accessibility - the ability to read and use the plan across a range of computer platforms and hardware, without having to download special software.

Alternative options to the current practice of separating text from spatial information should also be explored (refer Action 4 - RMA maps). Geographic Information Systems (GIS) are powerful spatial tools that could be utilized to deliver plan information and integrate that information with other development related information. Several councils currently provide excellent GIS or other mapping services online, including district or regional zoning maps, but these are often not directly linked to online RMA planning documents. In future interactive maps are likely to become a standard feature of online council websites.

### How to implement this action

The easiest way to display plans is in a PDF format, keeping the file size as small as possible. This can be done by:

- breaking up the plan into chapters with file sizes less than 1MB
- using an HTML page as a table of contents with a set of links to related PDFs. Using an HTML contents page is an easy way to enhance the ability to search within the plan.
- ensuring files open up at a readable size (i.e. 50 per cent or greater)
- ensuring best use is made of the features available on Adobe Acrobat, including indexing.

A more advanced and preferred method is a database-driven HTML page. This has significant advantages for plan usability as it allows for enhanced search capability.

### Action 4 -Maps in RMA planning documents can be accessed online

#### Objective

The public is able to access and use up-to-date online maps in RMA planning documents.

#### Why is this action important?

- To provide open and transparent access to the full range of RMA information.
- To reduce the number of front office, telephone and email queries, and the time and money spent sending out hard copies of RMA planning maps.

#### Implementation issues

Planning maps form an integral part of an RMA plan, with the zoning and other related information displayed directing a user to relevant sections of a plan they need to refer to.



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However, the physical size (usually A3) and often detailed nature of map information can pose a challenge to effective online delivery, particularly where councils rely on a PDF format. Hard copy versions of planning maps typically have a legend on each page, or in a convenient location that is readily accessible to a user, and include a street index or other means of searching. As these are often created as separate documents when put online, this may result in a user having to open several PDF files at once to identify a site and its associated zoning.

Providing an effective link between the planning maps and the plan text can also present difficulties. Generally there are no established links between the zoning information shown on council GIS mapping systems and the associated objectives, policies and rules in the corresponding RMA plan.

Practical issues to consider when making planning maps available online include:

- whether a user can see the map legend when viewing a map
- how to index/arrange the maps (e.g. an individual map can be selected by clicking on a master map for the whole district or region)
- whether street names are legible, or can be zoomed in on
- whether searching by street name or property address is provided
- whether the colours used to differentiate zones are clearly distinguishable on screen
- how areas that are subject to a proposed plan change are to be identified and displayed
- ease of navigation between adjoining maps
- whether printing is possible without loss of formatting
- the ability to read and use the plan maps across a range of computer platforms and hardware, without having to download special software
- the file size of the maps and the ability for users to download files through a dial up connection (preferably less than 1MB).

### How to implement this action

Planning maps can be put online in HTML format featuring the bullet points set out above.

A more advanced approach is to also include the ability to click on a symbol on a planning map (e.g. a heritage building) and be taken to a schedule that provides relevant information relating to that symbol.

## Action 5 - Iwi and hapu RMA documents and contact details are available online

### Objective

To provide the public with access to relevant iwi and hapū contact information and any iwi planning documents lodged with the council.

### Why is this action important?

- To provide access to planning documents recognised by iwi authorities under the RMA.
- To assist consultation with iwi and hapu.

### Implementation issues

Collecting and maintaining specific information relating to iwi and hapū is a requirement under s35A of the RMA and includes:

- the contact details of every iwi authority within a region or district, and any groups within the region or district that represent hapu for the purposes of the Act. This includes details of relevant entities contained in [Te Kahui Mangai](#), the national directory of iwi and Maori organisations maintained by Te Puni Kokiri (the Ministry of Maori Affairs)
- any planning documents that are recognised by an iwi authority and have been lodged with a council (e.g. iwi management plans)
- any area of the region or district over which one or more iwi or hapu exercise kaitiakitanga.

In addition to this required information it would also be useful to include online any Memorandum of Agreement, Memorandum of Understanding or Charter of Understanding that has been entered into between the council and an iwi.

An indication of the date when these records were last updated should also be provided.

### How to implement this action

The simplest way of implementing this criterion is to:

- provide a link to the [Te Kahui Mangai web page](#)
- include any agreements online (e.g. a memorandum of understanding)
- provide links to any iwi management plans that are available online
- include contact details with other relevant guidance material (e.g. iwi management plans).

## Action 6 - RMA related committee papers, minutes of proceeding and schedules of council meetings can be viewed online

### Objectives

To promote public access to RMA processes by making all relevant meeting papers, minutes and schedules of forthcoming council committees available online.

### Why is this action important?

- To provide open and transparent access to a full range of RMA information.
- To make information more accessible to customers.
- To reduce the number of front office, telephone and email queries.



## Implementation issues

Information can be made available through an online calendar or schedule. These schedules should:

- include information about upcoming RMA consent hearings and policy committee meetings
- be published regularly (e.g. weekly)
- enable users to easily look up the date of the next meeting
- enable users to identify how current the information is and/or where the last update can be viewed.

## How to implement this action

Notice of upcoming council meetings is usually required to be publicly advertised under the Local Government Act. Often the newspaper is the primary means of notification. Providing similar notice of RMA consent and policy hearings on the resource management section of the council website, with links to relevant documents, would also meet the objectives of this action. Archive and search facilities will be required to provide access to previous agendas, reports and decisions.

## Action 7 - RMA fee schedule is available online

### Objective

To enable online public access to current fee schedules for RMA related applications. This should include, where relevant, an explanation of any variable charges.

### Why is this action important?

- To provide the public with open and transparent information about the costs of RMA services.
- To reduce the number of front office, telephone and email queries, and the amount of time qualified RMA practitioners spend providing basic information.

## Implementation issues

The information provided should include:

- a list of all application fees including monitoring charges
- an explanation of any variable charges (e.g. where an initial deposit is paid and any subsequent charges beyond those covered by the deposit are charged at an hourly rate).

Where variable charges apply, the council should provide guidance to help users estimate the cost of different types of applications (ie, indicate the range of costs, including median and upper costs, and could include an online fee calculator).



## How to implement this action

PDF is often the best option due to the static nature of a fee schedule, and the ease of use and security of conveying static information. However, HTML and XML offer more potential to include interactive features such as calculators for variable charges.

### Action 8 - RMA forms can be downloaded

#### Objective

To make all commonly used RMA forms (Resource Management (forms, Fees and Procedure) Regulations 2003) available online so they can be readily downloaded and printed.

#### Why is this action important?

- To reduce the number of front office, telephone and email queries.
- To reduce the amount of time qualified RMA practitioners spend providing basic advice.

#### Implementation issues

Providing RMA forms online that can be printed is a good basis to start from. However forms that can be completed online and then printed or submitted electronically offer added value to the public.

Supplying online RMA forms in a downloadable format could extend to include:

- standard RMA forms available from the [Ministry for the Environment](#) website
- links to relevant council guidance or material on the [Ministry for Environment](#) or [Quality Planning websites](#).
- Things to consider when placing forms online include:
  - where the forms are located on the website (eg, separately or with all other council forms)
  - the relative download speeds of broadband and dial-up and the size of the file
  - whether the form can be submitted without a signature
  - the usability of the forms.

#### How to implement this action

Where a council has prepared its own forms, these should be provided on its website in a static format such as PDF. Additional features can include the ability to fill in the forms online, and to either print them or submit them electronically. Alternatively, links could be provided to the standard RMA forms prepared by the [Ministry for the Environment](#).



## **Action 9 - Publicly notified resource consent applications, notices of requirement and proposed plan changes/variations can be viewed online**

### **Objective**

To enable the public to view online all publicly notified resource management applications.

### **Why is this action important?**

- To provide greater access to RMA processes that invite public comment.
- To improve existing consultation practices and processes.
- To reduce the number of front office, telephone and email queries.
- To reduce the amount of time qualified RMA practitioners spend providing basic advice.

### **Implementation issues**

Councils should ideally provide online access to the following information for all RMA applications that are publicly notified:

- the notice of the application (in accordance with the prescribed form set out in Schedule 1 of Resource Management (Forms, Fees and Procedures) Regulations 2003), designation, variation or plan change, including the closing date for submissions (Note: the internet version of a public notice is legally part of the public notice and so should be accurate in all its details)
- a full copy of all the material lodged, including drawings and attachments (Note: the size of some of these files may deter easy access)
- the information should also include all applications in the Council's area that have been:
  - lodged directly with the EPA
  - directly referred to the Environment Court
  - subject of a direction by the Minister for the Environment (i.e. proposals of national significance)

When a plan change or variation is notified the online version of the plan should also be amended to identify the relevant provisions affected.

A more advanced option could include the ability to write and lodge a submission online on a notified application (refer Action 10). A facility allowing people to register and receive automatic updates through email at key processing milestones could also be considered.

### **How to implement this action**

Council's need to build the use of the internet into their notification processes. When public notices are arranged for the newspaper, they should also be included on the council website. The simplest means is to use PDF as a delivery method so:

- users can easily print the information



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- information cannot be altered
- links to other documents or features (e.g. submission forms) can be provided.

Other options include having an HTML contents page with links to associated PDF's or a database-driven HTML page.

### **Action 10 - Submissions can be prepared and lodged online**

#### **Objective**

To enable the public to prepare and lodge online electronic submissions for all publicly notified resource consent applications, designations, plan changes and any other RMA related matters being consulted on.

#### **Why is this action important?**

- To make it easier for the public to be involved in resource management processes.
- To provide an improved service by removing postal delays.
- To give submitters a choice of how they lodge submissions with the council.
- To enable data to be transferred automatically to the back-end system.
- To reduce manual entry of data and scanning of documents.

#### **Implementation issues**

The effectiveness of any online submissions facility is largely dependent on its usability. Issues that should be considered include:

- creating an electronic submission form that can be submitted to council through their website
- the capacity of the council's systems to accept electronic submissions, including attachments
- the ability to electronically lodge further submissions on plan changes, including information on the restrictions on who can make further submissions
- providing email updates on the progress of submissions, including the availability of a summary of submissions
- providing an electronic acknowledgement of submissions received.

#### **How to implement this action**

The simplest option is to use HTML to create a web page with forms that can be completed and submitted to the council online. The submission can then be forwarded to the processing officer. A more advanced approach would see the submission details inserted into a table format for inclusion in the processing officer's report.



## **Action 11 - Current appeals to the Environment Court can be viewed online**

### **Objective**

To enable the public to view online all current appeals to the Environment Court relating to council decisions on resource consents, notices of requirement, policy statements, plans and proposed plan changes/variations.

### **Why is this action important?**

- To provide open and transparent access to a full range of RMA information.
- To reduce the number of front office, telephone and email queries.

### **Implementation issues**

The delivery of this action could include:

- appeals lodged to proposed policy statements, plans, variations and plan changes, including their status
- appeals lodged to consent applications and/or conditions of consent, including their status
- key dates (e.g. lodgement dates, hearing fixtures).
- details of those resource consent applications that have been directly referred to the Environment Court.

### **How to implement this action**

Include a list of all matters currently before the Environment Court on the council website. Because this list will generally be short the simplest delivery method is a static list. This could be provided in either an HTML or PDF format, but it is important that the information is kept up to date. Another way to keep the public informed is through regular email updates.

## **Action 12 - The status and decision notice of all resource consent applications can be located and viewed online**

### **Objective**

To enable people to search for resource consent applications relating to their district or region and to determine whether a consent has been granted and what, if any, conditions have been imposed.

### **Why is this action important?**

- To provide open and transparent access to a full range of RMA information.
- To allow for community involvement and participation.
- To reduce the number of front office, telephone and email queries.

## Implementation issues

Councils should nominate a date when consent information will be made available online and also indicate whether previous records can be accessed (e.g. consents for the past 2 years). This action can be provided for by either:

- posting the information on the internet in the form of a regularly updated database, or
- enabling data to transfer directly from the back office system.

Basic delivery of this option would consist of:

- a searchable register of resource consents
- a number of search fields such as consent holder, location and category.

A searchable register of decisions could also be provided that includes:

- the date of the decision
- the location of the site
- the application number
- a description of the activity
- the full notice of decision in accordance with s113 of the RMA.
- In future, interactive maps could assist users to more easily search for consent related information. A good online archive and search system would also be required.

## How to implement this action

Although basic information can be provided by a static list in a PDF document, this may be of limited use for councils that are processing a large volume of consents. Optimum usability would be provided through an online database that allows users to search by street address or consent number.

## Action 13 - Statutory applications can be lodged online

### Objective

To enable the public to submit RMA applications online, including supporting documentation.

### Why is this action important?

- To provide applicants with the choice of submitting applications electronically.
- To enable data to transfer automatically to the back-end system.
- To reduce manual entry of data and scanning of documents.
- To improve the quality and completeness of RMA applications.
- To increase the speed of the process.
- To reduce the number of front office, telephone and email queries.

## Implementation issues

This action would provide the public with the ability to lodge any RMA application online, but is likely to be used most often for resource consent applications. E-lodgement could be extended to include:

- notices of requirement
- alterations to designations
- outline plans
- private plan changes.
- requests for direct referral.

The initial focus should be on relatively simple or common applications. Issues to consider include:

- attaching supporting electronic documents and reports to an application
- providing a registration system to identify an application and to allow its progress to be tracked
- electronic acknowledgement of an application
- managing requests for further information
- paying lodgement fees by credit card

To implement this action, application forms must be able to:

- be downloaded and/or completed online
- be submitted electronically
- take into account requirements to lodge both written and graphic material.

## How to implement this action

Council's can use the ready made Go-Forms developed by [Local Government Online](#) for a cost. These forms can be tailored to allow individual council logos and contact details to be included.

Council's could also develop their own system for accepting applications electronically, based on their existing application forms. These could be altered to allow them to be completed online. A further extension of this would be provision for supporting documents to be electronically attached to an online application and facility for lodgement fees to be paid online by credit card.

## Action 14 - Applicants can monitor the progress of their statutory applications online

### Objective

To enable applicants to track the progress of their statutory applications from lodgement to determination.



### Why is this action important?

- To advise applicants on the progress of their application.
- To provide open and transparent access to a full range of information.
- To make services and information more accessible to customers.
- To reduce the number of front office, telephone and email queries.

### Implementation issues

This is an advancement on Action 13 (lodging an application online) and involves the provision of further information to an applicant such as:

- an automatic update on key processing milestones where this has been requested
- any requests for further information
- processing costs to date
- the due date for the notice of decision
- contact details of the processing officer.

This information could be provided in a static form (e.g. by email update). Alternatively, a more advanced integrated system linked to the 'back office system' could be used which would allow the details of each individual application to be updated in a database as the consent is processed, and for these to be viewed online by the applicant.

### How to implement this action

While email updates are relatively straightforward, a more sophisticated system could be created using an HTML front page driven by a computer database behind the scenes.

## Action 15 - Council RMA monitoring records can be viewed online

### Objective

To provide RMA monitoring records online.

### Why is this action important?

- To provide open and transparent access to a full range of RMA information
- To make information and services more accessible to customers
- To reduce the number of front office, telephone and email queries

### Implementation issues

This action allows the public to view environmental monitoring information about the region, district or city online. It includes the ability to access online information relating to:

- the efficiency and effectiveness of policies, rules or other methods in policy statements and plans
- compliance with resource consent conditions
- the transfer or delegation of any functions, powers or duties





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- the exercise of recognised customary activities and any associated controls.

### How to implement this action

Use HTML as the front page but insert monitoring data directly into an online database that will allow users to readily access up to date monitoring information.

## Action 16 - State of the environment monitoring records can be viewed online

### Objective

The public is able to access online state of the environment monitoring records compiled by councils.

### Why is this action important?

- To enable the public to access information on the state of the environment, including information on relevant changes or trends over time.

### Implementation issues

Placing completed state of the environment reports online as PDF documents should be relatively straightforward. However, reports may need to be broken down into chapters to ensure the file size is manageable.

State of the environment reports can be large, technical documents. Providing an additional one to two page non-technical summary of these reports online can help make the information accessible to a wider audience.

Where reports have been prepared on a similar topic area over time (e.g. water quality) the full time series of records should be made available on the council's website. The website could also be used to alert users to the availability of new monitoring data or reports.

### How to implement this action

Place all state of the environment reports on the council website. These could be included in the resource management 'portal' referred to in Action 1.

## Action 17 - Authoritativeness of online RMA information

### Objective

An overriding principle applicable to every e-RMA action is that all online information relating to the RMA is reliable, up to date, consistent and clearly indicated as such.



### Why is this action important?

- To ensure the public has confidence that the RMA information they are viewing online is trustworthy, consistent, up to date and reliable.
- To avoid confusion arising from inaccurate or out of date information being presented.
- To reduce the number of front office, telephone and email queries regarding the status of RMA planning documents and applications.

### Implementation issues

Information on websites changes regularly. It is important that RMA information remains accurate and up to date, so the public can confidently rely on the information contained on the website. This includes links from a council website to external sites that may provide additional planning guidance.

As more councils move to prepare combined planning documents it will be important that the regional policy statement provisions are clearly identified. Many councils have both operative and proposed versions of their RMA plan online. At the same time, numerous plan changes may be in process. This can cause confusion for online plan users, particularly concerning the particular provisions of each plan they need to refer to, the relative weight that applies to each, and what rules have legal effect. It is important that the different versions are accurately described, and that plan users are aware of which document to use or that certain provisions may change following submissions or appeals. The provisions should clearly identify when proposed rules have legal effect.

Similarly, notified consent applications, or any process that is no longer open to public comment or submission, should be clearly identified online as having 'closed' for public comment.

Ensuring guidance and information is updated following any amendments to the RMA is important.

Website users are best placed to identify or question the authoritativeness of a particular web page. Some councils provide a feedback option on each page to allow comments to be submitted.

### How to implement this action

- Review all RMA related website content on a regular basis to ensure it is up to date and accurate - include links to external sites, to ensure they are working and that information is being maintained.
- Undertake a specific review of RMA website content following any amendments to the RMA.
- Build an online notification component into public notification processes (e.g. resource consents and plan changes).
- Clearly identify the regional policy statement provisions in a combined planning document.



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- Clearly state the status of the online plan, and for partially operative online plans highlight/identify any text subject to challenge - this may be provided in a separate section.
- Clearly identify plan changes, including text subject to submissions/appeal.
- Clearly identify when proposed rules have legal effect.
- Provide a feedback section on each web page for user comments.

### **Self Assessment Template: e-RMA actions**

The following template contains a range of actions councils can use to assess their current e-RMA performance. They are not intended to act as absolute standards but as targets that councils can incrementally move towards in developing an e-RMA administration system.

Some of the outcomes that an e-RMA system seeks to achieve are:

#### **Customer service**

Providing faster, more convenient and higher quality RMA information and services to the public.

#### **Back office improvements**

- Increasing workplace efficiency and effectiveness.
- Reducing system administration and public queries, including freeing resources for higher value planning work.
- Reducing workplace stress.

#### **Linking up/partnerships**

Ensuring that:

- e-RMA is integrated into a coherent corporate approach to online delivery of services
- investment in technology is minimised
- duplication in other service areas is avoided.



**e-RMA actions**

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The following "score" can be applied to each of the identified performance measures in the assessment template.

Minimum

Progressing

Excellent

**Self - Assessment**

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No.	Action	Performance measure	Score
1	RMA information and services are located and accessed from the council home page	<p>Minimum - Two clicks from the council home page to either RMA plan or resource consent related information (e.g. &lt;services&gt;&lt;planning&gt;), but the information is held in separate areas.</p> <p>Progressing - One click from the council home page to a specific resource management area, but all relevant information may not be held in this area.</p> <p>Excellent - A dedicated page (portal) for all council RMA related information and services (consents and plans) that is directly accessible (one click) from the council home page.</p>	
2	Online RMA guidance is available	<p>Minimum - Advice on RMA processes (e.g. applying for a resource consent) is available online with external links to national advice.</p> <p>Progressing - General district-wide guidance/advice (e.g. through FAQs) and general planning advice is available online.</p> <p>Excellent - Site-specific guidance/advice is available online. Users can identify a property and an activity and receive guidance on specific RMA consent requirements.</p>	
3	Text of RMA policies and plans can be accessed online	<p>Minimum - Text of RMA policies and plans is available online in PDF format with all of the following features:</p> <ul style="list-style-type: none"> <li>the status of the policy or plan (proposed, operative or under appeal) is clearly</li> </ul>	



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identified either on the council website, the cover of the document, on each page or somewhere apparent

- the legal effect of proposed rules is clearly identified
- the text is broken up into labelled sections with file sizes less than 1MB
- the text makes use of the Adobe index
- files open up at 50 percent viewing size or greater
- file information can be copied and pasted (i.e. they have been written using Adobe Acrobat reader, not scanned in).

Progressing - Text of RMA policies and plans is online in HTML format with all of the following features:

- the status of the policy or plan (proposed, operative or under appeal) is clearly identified either on the council website, the cover of the document, on each page, or somewhere apparent
- the legal effect of proposed rules is clearly identified
- internal links are embedded within the text to defined terms and to cross referenced objectives, policies, rules and other methods
- every page has a visible index that provides a link back to the central index page and a link to view the associated planning maps.

Excellent - As with progressing but including:

- external links to documents incorporated by reference (e.g. design guidance), or
- ability to search the plan text for chosen terms, or
- the ability to identify the physical address and any proposed activity for a particular site and to obtain a breakdown of the relevant planning provisions relating to a proposal.

4 Maps in RMA planning documents can be accessed online

Minimum - RMA planning maps are available online in PDF format with all of the following features:

- each PDF planning map is clearly labelled with file sizes less than 1MB
- PDF files open up at 50% viewing size or



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- greater
- each individual PDF map has a legend or a legend is clearly identified as a separate document
- the maps are clearly indexed or displayed using a district/region wide 'master map'.

Progressing - RMA planning maps are available online in HTML format with all of the following features:

- a legend is visible from each individual map
- an individual map can be identified by clicking on an 'index ' or 'master ' map
- street names are legible or can be zoomed in on
- a scale is visible (and automatically adjusts when zooming in or out)
- a map can be printed without loss of formatting (a printer friendly option).

Excellent - As with progressing but including either:

- icons and symbols on the maps (e.g. a heritage icon, a designation number) hyperlink to relevant plan schedules or tables, or
- the ability to search for a site on the planning maps by street address or legal description.

5 Iwi and hapu RMA documents and contact details are available online

Minimum - Link to the [Te Kahui Mangai website](#) located within a resource management related web page.

Progressing - Links to the Te Kahui Mangai website located within a resource management related web page and any associated information/guidance on when consultation with local iwi may be required (including links to any signed memorandums of agreement or understanding).

Excellent - Links to the Te Kahui Mangai website, local iwi management plans and information on when consultation with local iwi may be required (including links to any signed memorandums of agreement or understanding) is located within a resource management related web page.

6 RMA-related

Minimum - Planning policy and resource consent



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committee papers, minutes of proceeding, and schedules of council meetings can be viewed online	hearings committee meeting schedules, agendas and associated minutes are available online in static form and grouped in chronological order by Committee for the preceding year.
7 RMA fee schedule is available online	Excellent - Planning policy and resource consent hearings committee meeting schedules, agendas and minutes are available online in a searchable format that is linked to a database containing records for the preceding five years.  Minimum - Fee schedule is available online.
8 RMA forms can be downloaded	Excellent - Fee schedule is available online along with a clear explanation as to whether the charges are a fixed fee or a deposit only. May also include features such as fee calculator.  Minimum - All of the following commonly used RMA forms can be downloaded in PDF format and completed manually: <ul style="list-style-type: none"><li>• Resource consent application (Form 9)</li><li>• Submission form (Form 13)</li><li>• Affected party approval form.</li></ul> Progressing - All of the above forms can be completed online and printed out ready for lodgement.  Excellent - All council produced RMA forms can be filled out online and submitted electronically, and guidance is provided to help users complete each section, (see Criterion 14 - all <a href="#">statutory applications</a> can be lodged online).
9 Publicly notified resource consent applications, notices of requirement and proposed plan changes/variations can be viewed online	Minimum - Static list of all notified applications (i.e. resource consent applications, notices of requirement and proposed variations and plan changes), including the public notice (Forms 4 and 12).  Progressing - Static list of all notified applications (i.e. resource consent applications, notices of requirement and proposed variations and plan changes), including the public notice (Forms 4 and 12) and a link which enables the application to be viewed online or a copy of the application be requested.



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Excellent - Searchable list of all notified applications (i.e. resource consent applications, notices of requirement and proposed variations and plan changes), including the public notice (Forms 4 and 12), a link which enables the application to either be viewed online or a copy to be requested, and a clear indication of what stage in the consent process the application is currently at (e.g. appeal period, hearing adjourned).

10 Submissions can be prepared and lodged online

Minimum - Submissions on publicly notified RMA processes can be prepared and lodged using an online form.

Excellent - Submissions on publicly notified RMA processes can be prepared and lodged online, automatically uploaded into the back office planning system and an automated confirmation receipt forwarded to the submitter.

11 Current appeals to the Environment Court can be viewed online

Minimum - Ability for users to view a static list of current appeals to council decisions that have been lodged with the Environment Court.

Excellent - Ability for users to view a static list of current appeals to council decisions that have been lodged with the Environment Court, including details of appellants, section 274 parties and the status of the appeal (e.g. in mediation).

12 The status and decision notice of all determined resource consents can be located and viewed online

Minimum - Access to a chronological list of consents that have been determined in the preceding calendar year, along with the consent number, address, description of the activity and the decision (e.g. granted/declined).

Excellent - Access to a searchable database that includes the status of all consents determined since the database was available, basic information on consents that have been granted and are still active and access to individual decision notices.

13 Statutory applications can be lodged online

Minimum - Applicants can submit RMA applications and associated documents (e.g. drawings, plans) and pay their application fee online.

Excellent - Users can submit RMA and regulatory service applications and pay associated fees online. These are automatically uploaded into the back office systems and the user sent an automated confirmation of receipt.





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- |    |  |   |
|----|--|---|
| 14 | Applicants can monitor the progress of their statutory applications online | <p>Minimum - The status of applications currently being processed is available online as a static list that is updated weekly. Applicants are advised in their acknowledgement letter how this list can be accessed.</p> <p>Excellent - Applicants and the general public are able to monitor, through the council website, progress on consent processing, with information updated as each stage is completed.</p>  |
| 15 | Council RMA monitoring records can be viewed online                        | <p>Minimum - Results of the review of the efficiency and effectiveness of policies, rules or other methods in a policy statement or plan is available online in a PDF format.</p> <p>Excellent - Like minimum but with the further ability to access online monitoring records relating to resource consent applications that are still active, any functions, duties or powers that have been delegated and the exercise of any recognised customary activity and associated controls.</p> |
| 16 | State of the Environment monitoring records can be viewed online           | <p>Minimum - State of the environment monitoring reports can be viewed online in a PDF format.</p> <p>Excellent - State of the environment monitoring reports are available online along with relevant time series data and any recent updates of environmental performance (e.g. water quality).</p>   |
| 17 | Authoritative-ness of online RMA information                               | <p>Minimum - An annual review of online RMA content for authoritative-ness is carried out, including links to external websites. A complete review is undertaken immediately following any amendments to the RMA.</p> <p>Excellent - In house processes developed to review online RMA content for authoritative-ness on a monthly basis. A web page user is able to provide feedback on web content and/or usability.</p>  |



## e-RMA Delivery Options

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The following information details the most common formats or mediums that can be used to deliver online information and services. It is not an exhaustive list and you should focus on what is required by the actions, rather than on technology when considering the suitability of options.

### Portable Document Format (PDF)

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What is it?

PDF is a way of viewing files online. Documents appear exactly like the original version but the sophisticated viewing features offered by PDF mean that it is more than a simple photographic replica. A number of programmes can be used to convert documents into PDF, including Adobe PageMaker and Adobe Acrobat.

PDFs retain their appearance across all platforms, and can be viewed independently of the software, hardware and operating system used to create the file. This provides it with a major advantage over Word or HTML documents. All that is required to read a PDF file is Adobe Acrobat Reader (AAR), a free and readily available programme that is already installed on most computers or can be downloaded from the [Adobe website](#).

PDF does not format documents - it simply converts, without alteration, the format of the original document. In setting up a PDF document security controls can be used to permit or limit printing, copying and modifications.

Other features of PDF include:

- PDF documents print to a high quality and, because they are an exact copy of the original, allow those familiar with the hard copy to navigate around the online version. This feature also has advantages for other online planning uses (e.g. submission forms).
- The toolbar available when viewing a PDF document provides a variety of navigation and function options, including searches, text copying, diagram and image copying, saving, enlarging, and printing. Further capabilities include thumbnails of each page, internal and external links, bookmarks, article threads, form fields, notes to annotate information, and views to allow a user to magnify or reduce a page to fit their computer screen.
- For documents that are only in hard copy PDF is a useful way of transforming the information into a format that can be put on the internet.
- PDFs can be saved for offline browsing in personal directories. Any indexing (referred to as bookmarks) and other document-specific features associated with the PDF can also be retained.
- PDFs can be used in a variety of mediums (e.g. intranet, CD-ROM and email attachments).
- While PDFs can be converted to simple word files for editing purposes (provided the security options have not been set to prevent this), the original text format will not be retained and some reformatting will be necessary.
- PDF files can be security protected with printing and copying prevented. However, for a public document like a RMA plan this security measure is largely unnecessary and should be avoided.



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- Thumbnail and bookmarks provide an overview of the document content and act as an onscreen index that can take the user to specific parts of the PDF document.
- PDF files allow the user to magnify documents up to 800 per cent with no significant loss of clarity in text or graphics.
- PDF maps will shrink according to the page size under page set-up, with no loss of clarity.
- PDF files can be optimised to reduce their file size so they do not take up much memory: this feature is particularly helpful for maps, which can require a lot of memory.

### **Advantages**

- Original formatting is preserved in this format.
- Security settings can restrict printing and/or editing so the original file cannot be easily copied, thus reducing the chance of changes being made.
- Digital signatures can be added.
- Easy to convert Microsoft Word documents with the proper programme and requires minimal technical knowledge.
- What is on the screen is what is printed out.
- Text zooming is easy and useful to those with impaired sight.
- Recent versions of the software include read-aloud capacity for the blind.
- Information can usually be accessed with only one click.
- Images or graphs inserted into PDF documents are preserved.
- Hyperlinks, multi-media, forms and buttons can all be added.
- Collaboration tools mean that a group working on a PDF can add annotations.
- PDF is a cross platform standard meaning PC and Mac users can both use it.
- PDF online forms can be interactive (where the form can be filled in online) or non-interactive (where it has to be printed out). Interactive forms can also be submitted either through email or a web-based application.
- PDF documents can be password protected.
- Information can be easily updated by creating a new PDF version that overwrites the previous material.

### **Disadvantages**

- Unreasonably sized files can sometimes be produced, particularly when the file contains images or graphs. As users with dial-up may have difficulty downloading large files, delivery options may need to be carefully considered (e.g. individual chapters vs an entire document).
- Advanced settings are sometimes not used to their full advantage, reducing the benefits of security and print settings. Some technical knowledge is required to get the best out of PDF.
- Compatibility issues, with files produced by older versions not always being able to be read by newer versions (i.e. backwards compatibility).
- Requires the user to have Adobe PDF loaded on their computer.
- Creating documents in PDF requires an Adobe PDF writer.
- PDF is designed primarily for printing. Reading long documents online can be more difficult because of set page size.
- PDF pages are not indexed by spiders of web pages all the way through (i.e. the contents of PDFs are not always searchable through the web).



## Hypertext mark-up language (HTML)

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HTML (hypertext markup language) is the name of the code used to create web pages and is probably the most successful document markup language in the world. Hypertext refers to the use of cross-references or links between bodies of text or images in electronic medium. HTML provides the ability to insert electronic links within the same document or externally to other documents. For example, planning maps can contain direct links to relevant provisions within a district plan, such as the relevant item on a district plan 's schedule of heritage features.

HTML uses hidden instructions (i.e. 'marking up' or 'tags') to provide structure to information. The most common use of HTML is to create web pages with the format or design of web pages increasingly being achieved through the use of style sheets (e.g. such as Cascading Style Sheets).

Formatting an HTML document is not simple, and amending the code to update an HTML-based web page (other than very simple pages) is often not an easy process, particularly when compared with a PDF document. However, a number of proprietary programmes exist which require minimal knowledge of HTML language. These include Macromedia 's Dreamweaver or Microsoft 's SharePoint Designer and Expression Web. In addition to these programs there are a number of free HTML editors that are available on the internet, but these may lack much of the functionality and site management of the proprietary products.

Documents created in HTML can have the following features:

- Links within a document that allow easy and accessible internal cross-referencing (e.g. between the index, text and maps). This is a significant advantage for most RMA plans, which typically contain a large amount of internal cross-referencing.
- Links that provide direct connection with other websites and on-line documents. This is an advantage for RMA plans that cross-reference other documents.
- An HTML document is user-friendly as it provides links and greater compatibility with different computers and settings (i.e. with advances in mobile technology it allows people to search the net from a personal digital assistant or cellphone).
- Images (including graphics) and a variety of other media can be included in a HTML.
- Simple amendments can be made without having to alter or replace the entire document.
- Provided they do not contain a large amount of graphics and images, HTML files are faster than PDF files to download onto a computer, particularly if the capacity of the connection and/or computer is limited.
- Documents in HTML may be more difficult to maintain than those in PDF. Depending on how the original document is coded (i.e. what software was used), it can be quite a major job to keep it up to date, and may entail engaging a person with skills in HTML to maintain the online information.

### Advantages

- Files load quickly because of their small file size.
- HTML adjusts to different screen sizes if a fixed format is not used in their design.



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- No propriety software is required, although the use of one such as Dreamweaver can save time in maintenance and upkeep.
- Many small free software authoring tools are in the public domain.
- Very easy to update by someone with technical knowledge of HTML.

### **Disadvantages**

- Printing can sometimes produce uncertain results as the main purpose of HTML is to encourage reading of information online. A 'printer friendly version' can be provided, but this requires two pages to be maintained.
- Formatting of a document is not preserved.
- Information is often split among many pages.
- Technical knowledge is required to produce HTML.
- Applying security protocols is difficult and requires a reasonably high level of technical knowledge.
- Graphs and images are not necessarily preserved with a document.

### **Extensible mark-up language (XML)**

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XML is a cross-platform, software- and hardware-independent tool for transmitting information. A good way to describe XML is that it is a recognised standard or protocol for the way to describe information. It does not format documents but is a behind the scenes form of defining the data displayed on-screen. Visually it is difficult to determine whether a document is in XML or not.

While the use of XML is likely to be widespread in future, XML is currently not a replacement for HTML as most web browsers cannot readily use XML-based information. XML will therefore be used to describe the data, while PDF or HTML will still need to be used to present the information on individual browsers.

XML and HTML were designed with different goals: XML was designed to describe data and to focus on what that data is, while HTML was designed to display and structure data. XML is used to describe and carry data, with the author of the document defining all XML tags for marking up the contents.

At present few browsers would be able to directly handle XML documents, and XML documents would still need to be made available through other mediums. For example, documents created using Word can be converted into XML documents and 'published' electronically using PDF or Rich Text mediums.

XML has been created to structure, store and send information. It is not a proprietary language - anyone can use it, and no special software is required to use it - it is simply information wrapped in tags (or labels). The author of a document in XML invents the tags to be used for that document, and they are not predefined by anyone else. The tags must, however, conform to a prescribed set of protocols (or schema). For example, different RMA plans should use compatible tags to provide consistent descriptions and allow for broader searching.



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XML has the potential to make plans prepared in XML much more flexible, with the information described (i.e. marked-up) in such a way as to help people use the plan (e.g. in searching for information on a common topic such as all rules relating to forestry).

However, the use of XML in formal and widespread public documents such as RMA plans will be most effectively and efficiently achieved through the development and use of widely accepted schema (i.e. an agreed tag structure of an XML-encoded document) to provide, for example, common descriptions to assist document searching. Until this work is done the focus should be on extending the current use of HTML and PDF for putting plans online.

Other features of XML include:

- XML is a structured way of encoding text information that provides discipline and structure, enabling richer searching and increased flexibility. It is designed to increase the functionality of the web by providing a means for information more flexible and adaptable identification of information.
- XML allows documents to be indefinitely broken down into component parts and cross linked.
- XML is called extensible because it is not a fixed format like HTML (a single, predefined mark-up language). Instead, XML is actually a 'meta-language' - a language for describing other languages - that lets you design your own customised mark-up languages for limitless different types of documents.
- XML is not just for web pages: it can be used to store any kind of structured information, and to enclose or encapsulate information so it can be passed between different computing systems which would otherwise be unable to communicate.
- Information content can be richer and easier to use in XML because the descriptive and hypertext linking abilities of XML are much greater than HTML. Because RMA plans have their own language XML could be used to provide an online internal structure to the use of that language. This would allow plan information to be transferred independent of computer hardware and enable councils to provide plans in a more accessible way than is currently available.

In New Zealand two large projects are currently using XML-based technology:

The [New Zealand Electronic Text Centre](#) at Victoria University of Wellington is making New Zealand material available for study through the use of XML.

The 'Public Access to Legislation (PAL)' project of the Parliamentary Counsel Office is designed to improve the way New Zealand legislation, including Bills, is made publicly available. The aim of the PAL Project is to provide public access to up-to-date official legislation in both printed and electronic form. The PAL Project is part of the Government's e-Government vision, which specifically refers to people being better informed because they can get up-to-date and comprehensive information about government statutes, regulations, policies and services. The result of the PAL project is the [New Zealand Legislation Website](#).

Further reading on XML is available on the following link: [Extensible Markup Language \(XML\)](#)

### **Advantages**

- Content can be immediately updated as changes are made to the information in the database.
- Documents can be coded more precisely as XML tags are defined.
- A single document can be utilised in a number of different ways.
- XML is an open standard.
- A number of XML tools are freely available.

### **Disadvantages**

- Requires skilled staff to create the system and maintain it.
- Lack of current support by internet web browsers.
- Requires greater technical skill and precision to use than HTML.
- Data size and computer processing time may increase due to the extra tags required.

## Legal Considerations

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### Legal disclaimers

A statement of the provider's legal position in relation to its e-RMA information and services should be visible to any person accessing the website. When preparing this statement, councils should consider:

- the robustness and accuracy of the information they are providing
- what caveats are applicable.

Many council websites already provide a disclaimer. The following is an example of the type of disclaimer that could be considered:

The information and advice contained on this website is made available in good faith but its accuracy and completeness cannot be guaranteed. If the information is to be relied on to support a resource consent or building consent application, it should be independently verified.

## Resource Management Act (Forms, Fees and Procedures) Regulations

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The Resource Management Act (Forms, Fees and Procedures) Regulations state that signatures are not required to be affixed on forms that are electronically submitted such as submission forms.

The RMA states that a submission can be either written or electronic (see definition of submission in section 2). A public notice includes a notice posted on the internet, as well as in the newspaper (see definition of public notice in section 2). The RMA also provides for various other processes to be either written or electronic. These include:

- councils giving notice that further information is available (section 92(3B))
- councils giving notice to submitters that an officers report is available (section 42A(4))
- providing information that is required at a hearing (section 41C(5A))
- requesting direct referral of a resource consent application to the Environment Court (sections 87D and 198B)
- councils giving their reasons for declining or returning a request for direct referral (sections 87E(8) and 198C(7)).

## Electronic Transactions Act 2002 (ETA)

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The basic premise of the ETA is that electronic documents are no more anonymous than any other form of communication, and that physical authentication requirements such as signatures now have computer-based 'electronic signature' equivalents.

However, an electronic signature is only reliable if the technology used to create it can reveal any alteration to the information after it has been signed. This means that appropriate technology support needs to be provided to cover those circumstances where





**THE RMA QUALITY PLANNING RESOURCE**

authentication is important (eg, submissions on RMA plans or resource consents). Currently, this requirement can be met by electronic signature systems administered by certification authorities.

