

OnValue.co.nz

From November 30th 2011 until February 23rd 2012, I was commissioned by Mr Julian Harrison-Tubb of Knight Frank Valuations to progressively implement a secure website through which a real estate property valuer could perform an assessment of the current market value of a piece of real estate, and then produce an official report detailing their findings. The portion of the site I completed before commencing my 2012 university studies – and passing the project onto another developer – is detailed here. This site is unfortunately no longer located at the web address <http://onvalue.co.nz>.

Site Components/Features

The description of the site and the report it produces (in Word document format) has been divided into several sections – relating to the different areas of the site:

1. Login Page
2. Valuer Dashboard
3. New Valuation/Quote
4. Valuation Details
5. Valuation Report
6. Administration Panel

1. Login Page

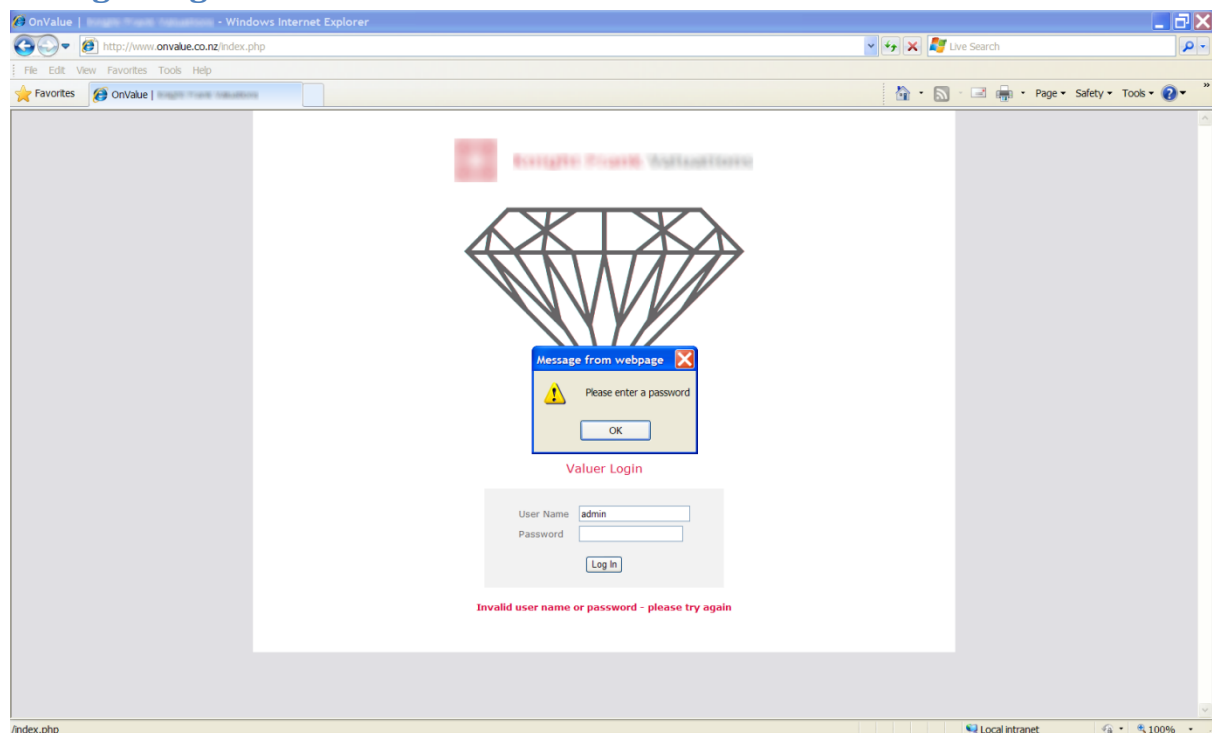


Figure 1: The login page.

When a user first arrives at the site – or tries to visit another of the site's pages without being logged in – they are presented with the login page. Through this, a registered user can securely log into the site. Their password is encrypted before it is sent over the internet, and in order to prevent someone

else – who may intercept a valid username and encrypted password pair while it is en route to the server – from reusing this information to fraudulently gain access to the site by impersonating a registered user, a password is encrypted differently on each login attempt by first being combined with a serial number which is unique to each attempt. On a successful login, this serial number is removed from the server's list of numbers representing login attempts in progress – meaning that a legitimate username and encrypted password pair cannot be used to perform more than one login.

Two layers of error checking and authentication are performed on user details submitted through this page – mirroring the rest of the site's behaviour. The first layer of error checking is performed within a user's browser: If an entry has not been supplied for both the username and password, the login attempt is not sent and the user is prompted via a popup box to supply entries for both of these fields. In the screenshot above, the user has failed to provide a password – resulting in the popup box being displayed.

Just in case a malfunction occurs with the browser-based error checking – or the user has disabled it – this same check is performed on the server. If the server encounters any problems with user input, the details are displayed underneath the page's login box. The server also checks whether a legitimate username and password pair have been supplied: If not, this fact is displayed – as can be seen in the screenshot above. Only three unsuccessful login attempts can be made on a particular username within a 24-hour period, unless a site administrator resets this count (as detailed in the *Administration Panel* section of this document).

2. Valuer Dashboard

The screenshot shows the OnValue Valuer Dashboard. The top navigation bar includes the OnValue logo and a diamond icon. The main content area is titled "Valuer Dashboard" and contains several sections:

- Quotes:** A table with columns: Valuation no., Received, Type, Client name, Referred from, Address, Last updated, Follow up. The first row shows valuation 1000, received 02/12/2011 01:18, Residential CMV, John Smith Holdings, John Smith, Unit 7/54 Fictional Way, Albany, Auckland 0632, last updated 30/03/2012 12:24, and follow up overdue.
- Valuation list / follow up:** A table with the same columns as the Quotes section, currently empty.
- Booked inspections:** A table with columns: Valuation no., Received, Type, Client name, Referred from, Address, Appointment, Due date. The first row shows valuation 1004, received 02/12/2011 01:18, Residential CMV, John Smith Holdings, John Smith, Unit 7/54 Fictional Way, Albany, Auckland 0632, appointment 02/12/2011 01:18, and due date 02/12/2011 01:18.
- Saved valuations:** A table with columns: Valuation no., Received, Type, Client name, Referred from, Address, Appointment, Due date. The first row shows valuation 1002, received 02/12/2011 01:18, Residential CMV, John Smith Holdings, John Smith, Unit 7/54 Fictional Way, Albany, Auckland 0632, appointment 02/12/2011 01:18, and due date 02/12/2011 01:18.

At the bottom, there is a detailed view of valuation 1000:

Valuation no.	1000	Address	Unit 7/54 Fictional Way, Albany, Auckland 0632
Type	Residential CMV	Received	02/12/2011 01:18 PM
Client name	John Smith Holdings	Last updated	30/03/2012 12:24 PM
Referred from	John Smith	Follow up	25/02/2012 12:00 AM

Below this table, it says "You are logged in as 'Valuer' (Log Out)".

Figure 2: The Valuer Dashboard for a standard user.

Valuer Dashboard

Quotes

Valuation no.	Received	Type	Client name	Referred from	Address	Last updated	Follow up
1000	02/12/2011 01:	Residential CMV	John Smith Hold	John Smith	Unit 7/54 Fictional Wa	30/03/2012 12:	overdue

Valuation list / follow up

Valuation no.	Received	Type	Client name	Referred from	Address	Last updated	Follow up
1004	02/12/2011 01:	Commercial CMV	John Smith Hold	John Smith	Unit 7/54 Fictional Wa	30/03/2012 12:	overdue

Booked inspections

Valuation no.	Received	Type	Client name	Referred from	Address	Appointment	Due date
1004	02/12/2011 01:	Commercial CMV	John Smith Hold	John Smith	Unit 7/54 Fictional Wa	30/03/2012 12:	overdue

Saved valuations

Valuation no.	Received	Type	Client name	Referred from	Address	Appointment	Due date
1002	02/12/2011 01:	Commercial CMV	John Smith Hold	John Smith	Unit 7/54 Fictional Wa	30/03/2012 12:	overdue
1003	02/12/2011 01:	Commercial CMV	John Smith Hold	John Smith	Unit 7/54 Fictional Wa	30/03/2012 12:	overdue

Completed valuations

Valuation no.	Received	Type	Client name	Referred from	Address	Appointment	Due date
1001	02/12/2011 01:	Commercial CMV	John Smith Hold	John Smith	Unit 7/54 Fictional Wa	30/03/2012 12:	overdue

Valuation no. 1003

Address 01/12/2011 01:00:00

Type Residential CMV

Received 02/12/2011 01:00:00

Client name John Smith

Appointment 30/03/2012 12:00:00

Referred from John Smith

Due date 30/03/2012 12:00:00

New Valuation

New Quote

You are logged in as 'admin' ([Log Out](#))

[Administration Panel](#)

onvalue.co.nz/valuation/fieldInformation.php?valNumber=1003

Figure 3: The Valuer Dashboard for an administrator.

When a user has been successfully logged in, the central page from which they navigate the site is the Valuer Dashboard. From here, a user can go to an existing valuation they have on file by clicking on its listing, or create a new one. When the cursor has passed over a valuation's listing, an expanded version of its basic details is displayed at the bottom of the page, as the width of the columns may result in details being truncated.

The dashboard shown to an administrator differs from that displayed to a standard user in several ways. Firstly, a standard user will only see their own valuations listed, while an administrator will see all valuations filed within the system. In the development version of the site, all valuations were filed by the same user, so Figures Two and Three above don't differ in this regard. Also, an extra category is displayed to an administrator: *Completed valuations*. This is an archive of valuations that are no longer part of the current workload of the users who performed them. Another feature only displayed to an administrator, on this and other pages, is a link at the bottom to the Administration Panel – detailed later on in this document.

3. New Valuation/Quote

A user can commence adding a new valuation to their – or someone else's – record by pressing either the *New Valuation* or *New Quote* button on the Valuer Dashboard. The primary difference between a New Quote and New Valuation is there are fewer mandatory fields (indicated by asterisks) when submitting a New Quote, as it represents an earlier stage in the valuation process.

Figure Four portrays a New Valuation page. One of its features – shown in the middle of the page – is the ability to associate from one to three different addresses with a valuation record. Another feature – seen underneath – is the automated, real-time calculation of the GST component of the valuation fee.

New Valuation

Valuation number 1005 **Type** Rural/Lifestyle CMV **Valuer** John Bull

Client name John Bull **Referred from** Direct **Previously valued** Yes

Received 11/11/2012 04:45 PM **Follow up/Due date** Date: 18 November 2012 Time: 5:00 PM

Appointment Date: 14 November 2012 Time: 10:45 AM

Property address

Flat/Unit number: 2
 Street number: 59
 Street name: Imaginary Crescent
 Suburb: Albany
 Town/City: Auckland
 Postcode: 0632
 Landline: 09 123 4567
 Mobile: 027 123 4567
 Fax:
 Email: john@bull.co.nz

Report address

☒ Same as property address
 Client/Bank: John Bull
 Attention:
 Flat/Unit number: 2
 Street/PO Box number: 59
 Street name: Imaginary Crescent
 Suburb: Albany
 Town/City: Auckland
 Postcode: 0632
 Landline:
 Mobile:
 Fax:
 Email:

Invoice address

☐ Same as property address
 Name: Jane Bull
 Flat/Unit number:
 Street/PO Box number: PO Box 1234
 Street name:
 Suburb: Albany
 Town/City: Auckland
 Postcode: 0632
 Landline: 09 765 4321
 Mobile: 027 765 4321
 Fax:
 Email: jane@bull.co.nz

Fee breakdown

Payment method: Pay on pick up ☒ Prepay ☐ Charge ☐

Base fee: \$ 500
 Disbursements: \$ 25.50
 Total net fee: \$ 525.50
 GST: \$ 78.83
 Gross fee: \$ 604.33

Additional information

Owner's estimated value: \$ 1,200,000

Special instructions: Beware the dog in the back garden

[Upload Additional Information](#)

* Indicates a required field

[Save](#) [Cancel](#)

You are logged in as 'John Bull' (Log Out)

Figure 4: The New Valuation page.

4. Valuation Details

When a user clicks on a valuation's listing in the Valuer Dashboard, they are initially taken to the first of ten tabbed pages that display different details about the valuation in question. At the bottom of each page are links to both return to the Valuer Dashboard, and produce an official report for the valuation currently being viewed – as described in the next section of this document.

Figure Five show the first of the ten tabbed pages: Field Information, which largely reproduces the input fields available on the New Valuation/Quote page. The last of the tabbed pages, Analysis, is displayed in Figure Six. It contains two equations of importance to the valuation process – each featuring automatic, real-time calculation of the relevant sums. This page also provides the means to upload images or other files related to the current valuation.

OnValue - Valuation: Field Information | Mozilla Firefox

Field Information | Title details | Main building | Interior | Improvements | Evidence | Valuation summary | Comments | Analysis

Field Information Valuation number: 1000

Valuer: [dropdown] Valuation lodged by: admin Client name: John Smith Holdings Referred from: John Smith

Property address

Flat/Unit number: Unit 7
 Street number: 54
 Street name: Fictional Way
 Suburb: Albany
 Town/City: Auckland
 Postcode: 0632

Landline: [text]
 Mobile: [text]
 Fax: [text]
 Email: [text]

Report address

☐ Same as property address

Client/Bank: Westpac Bank Limited
 Attention: Accounts Receivable
 Flat/Unit number: [text]
 Street/PO Box number: PO Box 56
 Street name: Shorthand Street
 Suburb: Auckland
 Town/City: Auckland
 Postcode: 1001

Landline: [text]
 Mobile: [text]
 Fax: [text]
 Email: [text]

Invoice address

☒ Same as property address

Name: John Smith Holdings
 Flat/Unit number: Unit 7
 Street/PO Box number: 54
 Street name: Fictional Way
 Suburb: Albany
 Town/City: Auckland
 Postcode: 0632

Landline: [text]
 Mobile: [text]
 Fax: [text]
 Email: [text]

Fee breakdown

Payment method:
 Pay on pick up ☐ Prepay ☐ Charge ☒

Base fee: \$ 200.00
 Disbursements: \$ 100.00
 Total net fee: \$ 300.00
 GST: \$ 45.00
 Gross fee: \$ 345.00

Type Residential CMV **Status** Quote **Previously valued** ☐ Yes

Received 02/12/2011 01:18 PM **Follow up/Date date** Date: 25 February 2012 Time: 12:00 AM

Last updated 11/11/2012 05:46 PM **Appointment** Date: 18 February 2012 Time: 3:20 PM

Additional information

Owner's estimated value: \$ [text]
 Special instructions: [text area]

Changes Saved

[Return to Valuer Dashboard](#) [Produce Report](#)

You are logged in as "John Smith Holdings" (Log Out)

Figure 5: The Field Information page – displaying some of the details involved in a valuation.

Analysis Valuation number: 1000

Valuation Summary

Land:	\$ 100,100.00
Improvements:	\$ 455,700.00
Other improvements:	\$ 70,000.00
Mortgage security value:	\$ 625,800.00
Chattels:	\$ 8000.00
Market value:	\$ 633,800.00

Field Notes

NB: Capitalisation approach notes to be entered into field notes section.

Improvements Analysis

Dwelling:	232 m² @ 1500 psm = \$ 348,000.00
Car accommodation:	Double Detached Garage 54 m² @ 1000 psm = \$ 54,000.00
Outdoor imp:	Porch 20 m² @ 50 psm = \$ 1000.00
Other imp:	Enclosed Patio 22 m² @ 350 psm = \$ 7700.00
Additional value:	Pool, Landscaping and Spa = \$ 45000
Total Improvements	= \$ 455,700.00

Property Sketch Plans Upload: [Choose File](#) No file chosen

Property Photos Upload: [Choose File](#) No file chosen

Signature.pdf photo 5.JPG

Last updated: 30/03/2012 12:24 PM

[Save](#) [Cancel](#)

[Return to Valuer Dashboard](#) [Produce Report](#)

You are logged in as 'admin' ([Log Out](#))

[Administration Panel](#)

Figure 6: The Analysis page – also displaying some of the details involved in a valuation.

5. Valuation Report

Valuation Report Valuation number: 1000

The report for valuation number 1000 has been produced - [Download Report](#)

[Return to Valuer Dashboard](#)

You are logged in as 'admin' ([Log Out](#))

[Administration Panel](#)


Figure 7: The page displayed when a valuation report has been generated.

When the Produce Report link is selected in one of the tabbed pages containing a valuation's details, an official report for the valuation in question is produced, and a link to download this report is provided on the page the user is then taken to – shown in Figure Seven. An exception is when a valuation has been listed in the first two categories of the Valuer Dashboard: *Quotes* or *Valuation list/follow up*. In this case, an inspection of the property has yet to be performed, so not enough

authoritative information would have been collected to justify the production of an official report – the user is redirected to the Valuer Dashboard instead.

The official valuation report is produced in Word document form. Unfortunately, my work on the site ended before a complete report – based on the information contained in the ten tabbed pages of a valuation's details – could be automatically generated. Figures Eight and Nine show pages from a report generated by the site as it had been developed by February 23rd 2012. The areas circled in red denote information that was dynamically inserted into the Word document when the report was generated.

**RESIDENTIAL
VALUATION REPORT**



Property	Unit 7 54 Fictional Way Albany Auckland 0632
Date of Valuation	: 18 February 2012
Prepared for	: Westpac Bank Limited PO Box 56 Shorthand Street Auckland Auckland 1001
Attention	: Accounts Receivable

Figure 8: The first page of the produced valuation report.

John Smith Holdings

10.0 Valuation Certification

Acting under instruction from John Smith Holdings, Knight Frank Valuations has undertaken a valuation of Unit 7, 54 Fictional Way, Albany, Auckland 0632. We confirm that we have inspected the property as herein described on 18 February 2012 and have prepared this report.

Subject to the overriding stipulations contained within the body of this report, we are of the opinion that the current market value of the subject property as at the date of inspection for mortgage security purposes to be relied upon by Westpac Bank Limited is:

Valuation Basis	Lending Caution
Fee Simple	None

VALUATION

\$633,800.00
(Six Hundred and Thirty Three Thousand Dollars)
Inclusive of GST

This certificate of valuation forms part of, and should not be used or read independently from, the complete report.

Knight Frank Valuations

Registered Valuer

Address: Unit 7, 54 Fictional Way, Albany, Auckland 0632
File Reference: V- 11 November 2012 23

Figure 9: The penultimate page of the produced valuation report.

6. Administration Panel

This page is only accessible by an administrator, and contains two controls: One enables a standard user's password to be changed, and the other allows a standard user to have three more attempts at correctly entering their password within a 24-hour period. Figure Ten demonstrates the error checking which values entered for a change of password undergo within the user's browser. Firstly, as the user types in the duplicate values for a new password, they are informed via a message underneath the entry boxes whether the two values entered match each other (denoted by the text *matching password*), and whether they constitute a password which meets the criteria set for the website (indicated by the text *valid password*).

Secondly, if the user presses the *Apply Changes* button without having entered two matching, valid entries for a password, this request is not sent, and a popup box is generated – informing the user of the errors encountered. Just in case a malfunction occurs with the browser-based error checking – or the user has disabled it – this same check is performed on the server before a password change is carried out.

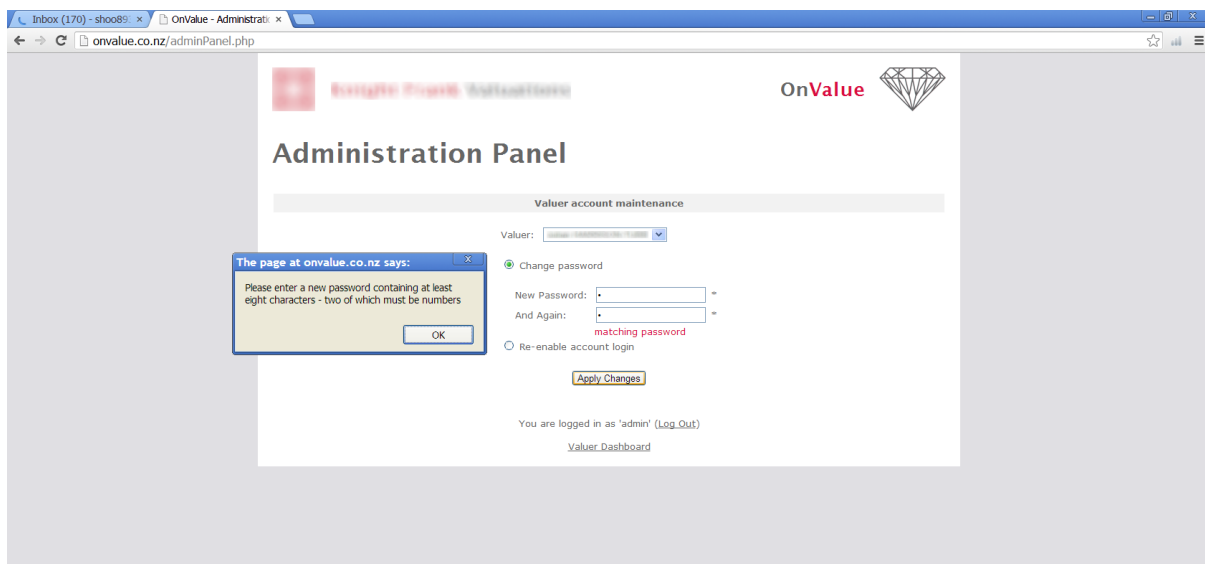


Figure 10: The Administration Panel.