



from the **STEP UP GROUP**

Jan 2012

These case studies are some of the thousands of properties that have used the Step Up Group's proactive building management system to successfully protect and enhance their building and market value.

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The buildings were assessed using the Mdu Probe System



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The moisture, timber condition and treatment records for every case study were collected using the patented **Mdu Probe System** – the only system to allow accurate ongoing moisture records for a timber-framed building and thorough timber assessment without causing damage.



The Mdu Probe System assesses Moisture, Timber Condition and Treatment Levels



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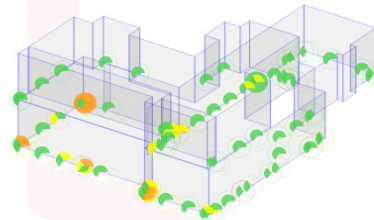
The Mdu Probe System performs a thorough and highly accurate invasive weathertightness and structural analysis **WITHOUT DAMAGE** to either internal lining or external cladding, and gives the ability to easily monitor moisture levels ongoing



Using monitoring technologies derived from Project M, owners can easily find and fix leaks before damage is caused even if there are no visible signs of moisture ingress.

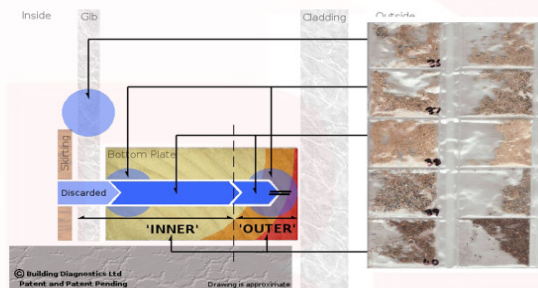


Permanent moisture probes (Mdu Probes) are installed into the bottom plate from internally to allow ongoing moisture readings

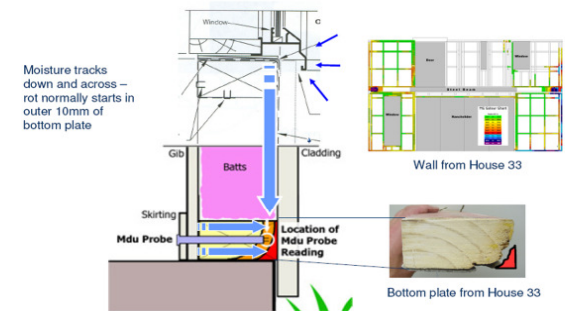


- Moisture levels
- Timber Sampling
- Timber Strength
- Timber Treatment

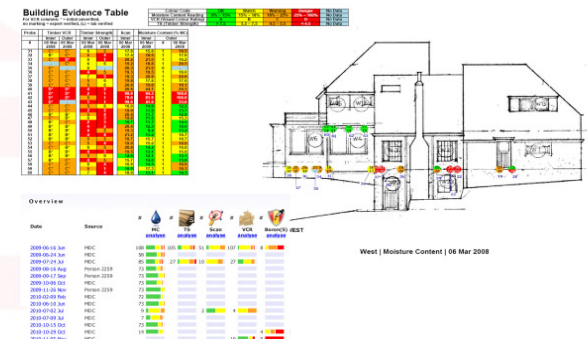
The important facts about the condition and performance of the property are collected from key locations around the property



The Mdu Probe System is specially designed to reach, sample and test at the all-important outside face of the structural framing timber, as this is where the 'worst-case-scenario' is. This is done internally to prevent creating further external weathertightness problems



During standard installations, Mdu Probes are nominally installed into the bottom plate of walls where the majority of problems are found first. Further installation locations can be ordered at any time by building experts



Results are presented using BNet which is a sophisticated online reporting platform giving complete flexibility of angles of analysis, presentation and reporting options

Summary findings show all buildings can leak – the question is how much, when and where?



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Database results of over 1500 houses assessed by the Mdu Probe System show the majority of areas of buildings are dry and sound, however there are typically minor, localised areas that are not performing as well as they could be. The key for owners and professionals is to:

- Find problem areas as quickly as possible to rectify wet areas before major problems
- Prove good areas to limit over-remediation costs and provide proof of performance

Many buildings: no major damage, majority of areas dry most of the time. Incidental leaks are quickly attended to with maintenance. These houses retain their value with monitoring, improvement and maintenance regimes.

Some problem houses: major damage and widespread leaks. These were not found or addressed in time to prevent rot. These houses require major intervention and restorative works to prevent further slide in value & condition

All other houses fit in between these extremes. Understanding where a building sits is the most important first step in deciding how to best retain equity in the building and care for it

GREEN/YELLOW = DRY

Most areas are dry and weathertight (>70%)









RED = WET: Some areas are badly leaking (~10%) – these need immediate attention

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
Moisture Content (%MC)

Recent plaster-clad property sales above CV - assisted by Mdu System information



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House #		Sale Price	Date Sold	CV (2011)
785		\$2,200,000	21 Sep 2007	\$2,100,000
84		\$3,200,000	13 Mar 2009	\$2,900,000
189		\$265,000	12 Jul 2009	\$205,000
708		\$690,000	30 Nov 2007	\$640,000
140		\$1,100,000	31 Jul 2007	\$930,000
1229		\$420,000	24 Jun 2009	\$385,000
562		\$330,000	12 Jun 2007	\$290,000
607		\$838,000	9 Dec 2009	\$820,000



CCC gained successfully despite Council request for reclad

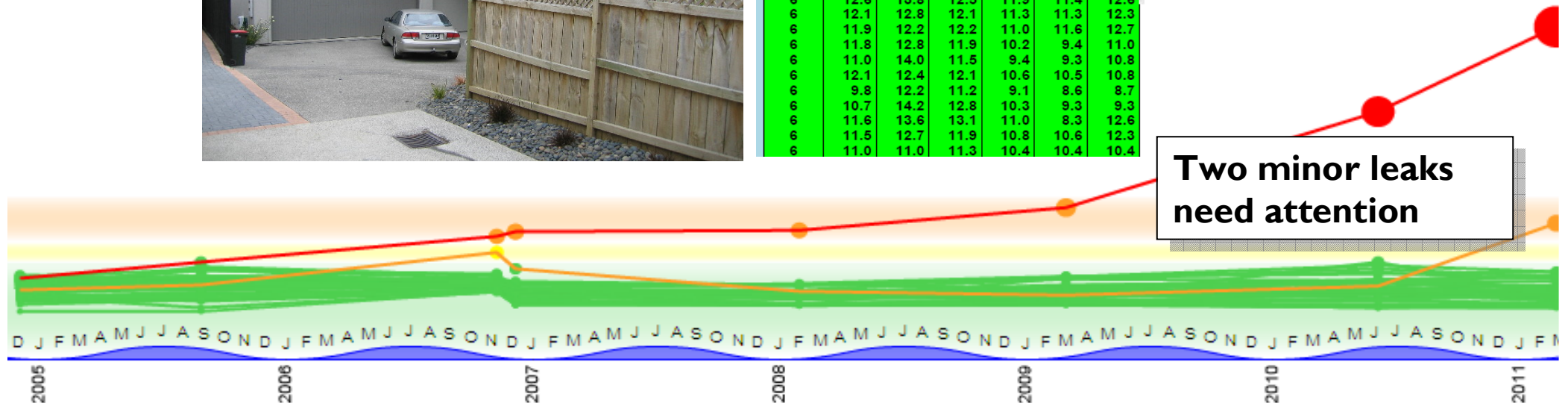


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Success Story: CCC gained despite a council order to reclad, stakeholders protected for the long term and property successfully sold later. During final inspection of their dream home, the owners of this property were told by the council that they would need to reclad in order to gain a Code of Compliance Certificate as they thought the house may be a 'leaky home'. By getting the Mdu PROBE System installed, the owners were able to demonstrate to the council that the house was performing and a CCC was issued.



Moisture Content (%)						
No. of Reading	01 Dec 2004	26 Aug 2005	07 Nov 2006	05 Dec 2006	29 Jan 2008	27 Feb 2009
6	9.9	11.6	11.0	10.2	9.6	10.9
6	10.1	11.0	11.6	10.0	10.1	11.2
6	10.7	10.9	11.1	10.1	9.8	10.5
6	10.5	10.9	11.1	9.9	10.1	9.8
6	12.9	12.5	12.3	11.6	11.4	10.9
6	11.4	12.3	11.6	10.1	9.3	10.0
6	9.6	10.2	10.3	8.9	8.3	9.4
6	9.9	9.0	10.3	8.9	8.3	8.4
6	11.7	10.9	11.7	10.7	10.2	11.5
5	9.6	9.9	10.4	9.0	8.3	-
6	12.6	13.8	12.5	11.9	11.4	12.6
6	12.1	12.8	12.1	11.3	11.3	12.3
6	11.9	12.2	12.2	11.0	11.6	12.7
6	11.8	12.8	11.9	10.2	9.4	11.0
6	11.0	14.0	11.5	9.4	9.3	10.8
6	12.1	12.4	12.1	10.6	10.5	10.8
6	9.8	12.2	11.2	9.1	8.6	8.7
6	10.7	14.2	12.8	10.3	9.3	9.3
6	11.6	13.6	13.1	11.0	8.3	12.6
6	11.5	12.7	11.9	10.8	10.6	12.3
6	11.0	11.0	11.3	10.4	10.4	10.4





Peace of Mind from ongoing monitoring

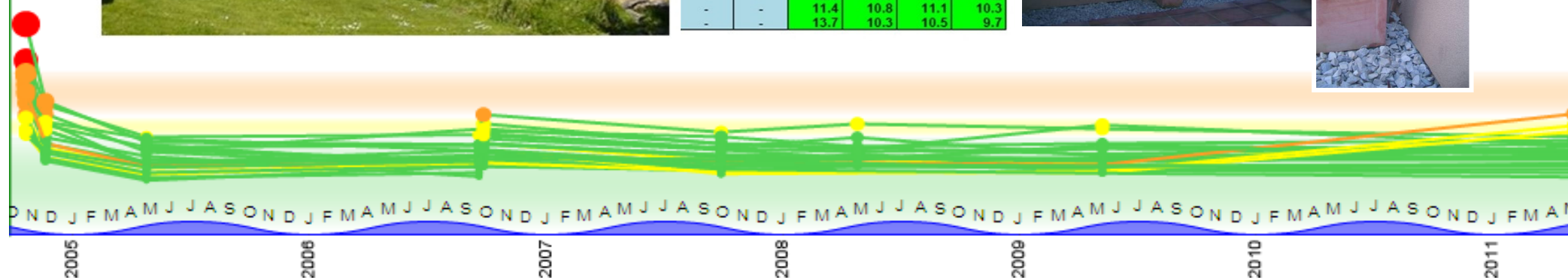
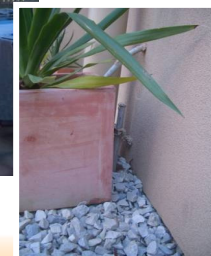


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Success Story: Moisture monitoring from construction shows construction moisture dried out. Mdu Probe System pays off and avoids costly future damages for designer and others. Built 2004, EIFS Cladding, Moisture readings showed construction moisture dried out. Owner landscaped in 2006 and put dirt around base of house. Showed up in moisture readings, owner removed dirt, problem went away by 2007.



Moisture Content (% MC)					
Outer					
19 Oct 2004	18 Nov 2004	23 Apr 2005	18 Sep 2006	25 Sep 2006	27 Sep 2007
17.9	13.2	10.1	11.1	14.0	11.2
21.9	13.9	10.3	11.0	12.7	11.0
21.5	17.2	14.6	12.8	15.8	14.9
26.8	19.8	15.0	15.2	18.3	15.6
24.7	18.4	12.6	-	16.1	14.0
32.2	20.5	14.1	13.7	15.1	13.1
22.9	16.7	13.3	13.6	16.9	13.8
26.3	17.2	10.3	12.1	15.5	13.2
26.6	15.9	10.9	12.8	14.0	12.1
21.6	14.8	11.9	8.8	14.6	12.9
24.2	15.9	10.7	11.8	14.0	11.8
20.1	13.8	11.0	11.7	13.7	12.1
18.4	11.2	8.2	10.4	11.8	11.5
15.4	11.7	9.1	10.6	10.9	9.6
16.1	12.8	9.3	10.9	13.0	9.2
15.2	12.4	9.5	10.5	12.6	9.9
17.8	11.6	8.6	9.5	12.5	10.4
15.8	12.8	10.2	11.1	12.9	10.8
-	-	13.2	11.1	11.5	11.5
-	-	12.9	11.1	11.4	11.4
-	-	12.6	10.3	10.5	10.2
-	-	11.4	10.8	11.1	10.3
-	-	13.7	10.3	10.5	9.7





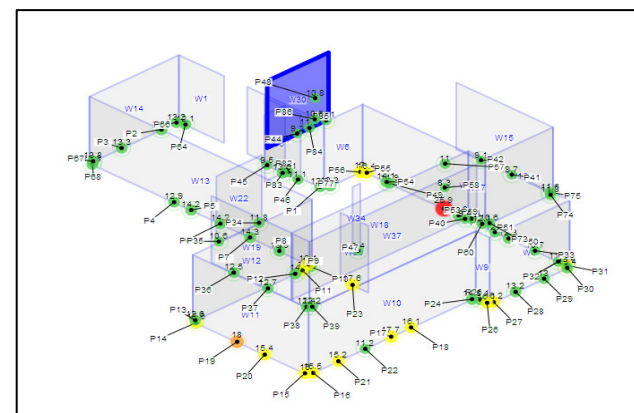
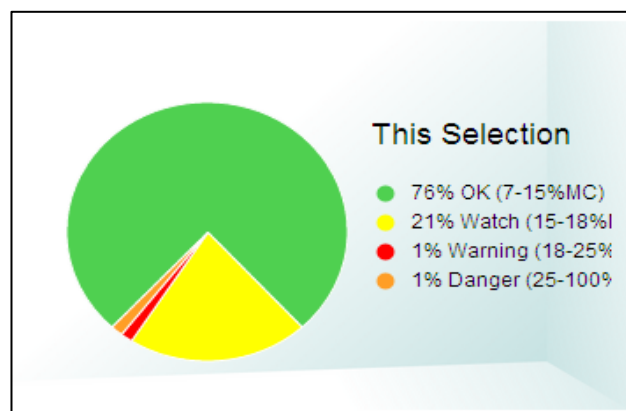
Owner seeks CCC for 7 yr house via proof of performance instead of reclad



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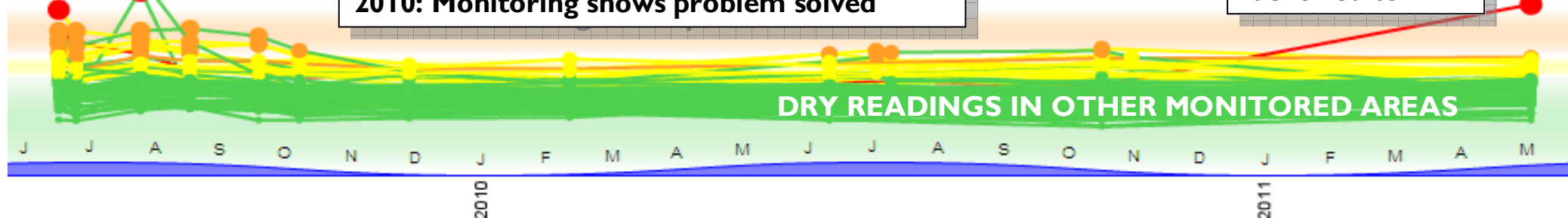
Success Story: Regular moisture readings has allowed the owner to take control of their building, prove their building is dry and find out when and where leaks appear for them to carry out minor maintenance. The owner is continuing to monitor and improve the building until he is able to satisfy Council of adequate performance, or will use positive results to sell property for high value without CCC

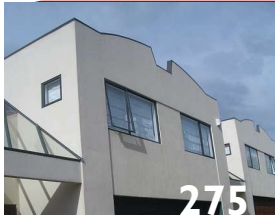
2009: Problem found, maintenance on window



2010: Monitoring shows problem solved

2011: New leak identified to fix





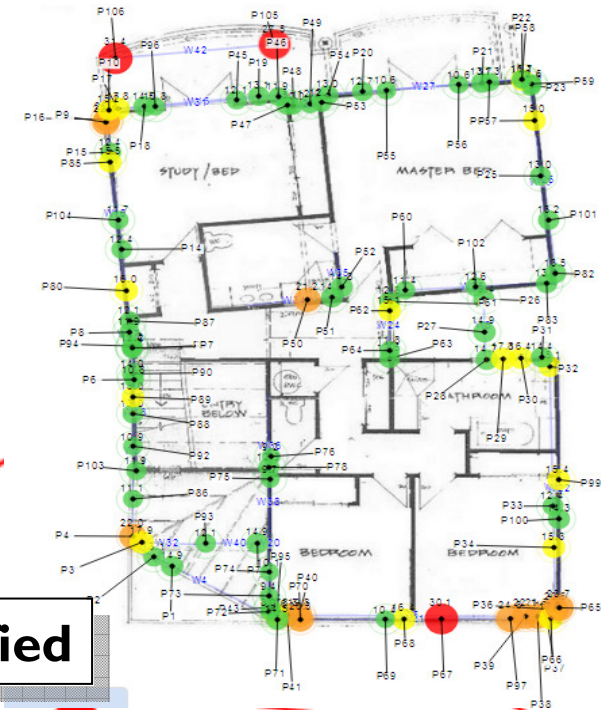
Low-cost alternative to recladding improves building for minimal cost



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Success Story: Quality Assurance System shows repair work is successful, and highlights areas not yet rectified (owner's decision)

Series of 5 Stucco houses 14 years old, H1 boron treated timber, outside the claims period, 3 are probed, 2 have reclad yet still have issues. This house has had the baseline cut away, decayed wood traced up the walls and replaced and details fixed during 2006 for under \$20K - less than 1/10th of the reclad of neighbours. Monitoring shows work is successful and home drying out – except deck area yet to be repaired. Ongoing maintenance needed but small costs in comparison with full reclad.



**BEFORE
repair**

Deck not rectified

**AFTER
repair**

Minor maintenance needed

