

# A.D architecture

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**Green Tick<sup>®</sup> Sustainable**



**Green Tick<sup>®</sup> Carbon Neutral**

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***Application for Certification | Audit Report***

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***RECOMMENDATION: GRANT***

*Issue Number: 1*

*12 September 2012*



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**Applicant: AD Architecture Limited**

**Application for Certification: Green Tick<sup>®</sup> Sustainable**

**Green Tick<sup>®</sup> Carbon Neutral**

***Audit Report***

**FINAL**

*Issue No. 1*

*12 September 2012*

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## EXECUTIVE SUMMARY

AD Architecture Limited (ADA) of The Pier, 6-8 Seaview Road, Paraparaumu, New Zealand, has applied for Green Tick<sup>®</sup> SUSTAINABLE and CARBON NEUTRAL Certification of its professional service operations and architectural practice. ADA operates throughout New Zealand, with its head office located at Paraparaumu Beach, on the Kapiti Coast, north of Wellington, New Zealand. Since 2008, the company has been involved in providing sustainability-based architectural design and supervision services to residential, commercial and industrial clients. It now wishes to formalise its green credentials by obtaining robust independent sustainability and carbon neutral certification of its operations in New Zealand.

Green Tick<sup>®</sup> Certification Limited (GTC) is a Government approved, independent sustainability certification agency that operates worldwide. GTC's sustainability certification programme is based on a life cycle assessment of an applicant's operations in accordance with the relevant ISO 14000 series of standards for environmental management, and the requirement of the New Zealand Commerce Commission that green claims be supported by life-cycle based evidence. The Green Tick<sup>®</sup> SUSTAINABLE standard has eight health and safety, and 12 environmental performance standards that applicants must meet in order to be awarded Green Tick<sup>®</sup> SUSTAINABLE certification. A further two standards covering attainment of carbon neutral status are mandated for CARBON NEUTRAL certification.

ADA has applied for SUSTAINABLE and CARBON NEUTRAL certification, providing documentation of its health, safety and environmental policies and programmes (HSE), design standards, operational procedures and records, sustainable procurement actions, and examples of client projects and feedback records, in support of its application. In particular, ADA has provided detailed records of two residential design projects completed under the Homestar and (the now discontinued) Green Homes sustainability schemes.

A registered Green Tick<sup>®</sup> Lead Auditor conducted a site visit at the Paraparaumu office on 31 August 2012. Documentation was reviewed, a walk-through of the site occurred, staff were interviewed on the day-to-day policies and operations of the company. Over the next few days a legal Compliance Check of the operations at the site was undertaken by inspection of ADA's relevant HSE records and online records of HSE authorities.

The audit findings were that ADA was sensitive to managing all of its operations in an efficient manner throughout the whole life cycle of the business. The two project examples examined provided extensive and detailed evidence of meaningful and material architectural design and recommendations that provide ADA's clients with genuinely sustainable building solutions. The evidence provided showed ready compliance with all 20 Green Tick<sup>®</sup> SUSTAINABLE standards. An observation was made by the auditor (not part of the audit recommendation), that the company might benchmark the carbon and total footprint of one of these projects to complete a first-ever life cycle based footprint of a residential home in New Zealand. The Green Tick<sup>®</sup> Certification Board awarded ADA Green Tick<sup>®</sup> SUSTAINABLE and CARBON NEUTRAL certification for a period of three years from 19 September 2012 – 19 September 2015.



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## 1 INTRODUCTION

AD Architecture Limited (ADA) has applied for Green Tick<sup>®</sup> SUSTAINABLE and Green Tick<sup>®</sup> CARBON NEUTRAL certification of its architectural practice and design process in Paraparaumu on the Kapiti Coast, north of Wellington, in New Zealand. ADA is an architectural company that is dedicated to providing sustainable building design solutions to the New Zealand (NZ) market [www.adarchitecture.co.nz](http://www.adarchitecture.co.nz). ADA has sustainability as one of its key business pillars.

Since 2008, ADA has been dedicated to providing sustainable building solutions with quality eco-design as their central principle. The company now wishes to formalise its green credentials by obtaining independent sustainability and carbon neutral certification of its operations in NZ.



*Figure 1: ADA design examples*

(Photographs: Left photo Erin King, Right photo Paddy Riley)

## 2 GREEN TICK<sup>®</sup> CERTIFICATION PROCESS

Green Tick<sup>®</sup> Certification Limited (GTC) is a Government approved, independent sustainability certification agency that operates worldwide. GTC's sustainability certification programme is based on a life cycle assessment of an applicant's operations in accordance with the relevant ISO 14000 series of standards for environmental management, and the requirement of the NZ Commerce Commission that green claims be supported by life-cycle based evidence.

GTC's definition of sustainability is that activities under the Applicant's direct control occur without causing permanent damage to the environment. The Green Tick<sup>®</sup> SUSTAINABLE standard has eight health and safety and 12 environmental performance standards, and Green Tick<sup>®</sup> CARBON NEUTRAL has two further carbon standards (see Appendix 1). A minimum of 12 months' evidence of compliance with these standards must be provided by an Applicant in order to be awarded Green Tick<sup>®</sup> SUSTAINABLE and CARBON NEUTRAL certification. There are four types of certification:

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- Corporate – where the entire corporation is certified for its genuine commitment to sustainability, and the strong sustainability culture present in the organisation;
- Site – where a site’s operations are certified as sustainable;
- Product – where a product is certified as sustainable;
- Service – where a service is certified as sustainable.

A formal on-site audit of the applicant’s product or service is undertaken by a registered Green Tick® auditor. Documentation is reviewed; communications regarding the sustainability culture and performance of the applicant with their staff, suppliers, clients, government authorities and other stakeholders occur; and if required, independent testing of the Applicant’s products or services is completed.

The Audit Report is provided in draft form to the Applicant, with a draft recommendation to the Certification Board. There are three recommendation options:

- GRANT
- GRANT on completion of corrective actions required; and
- DECLINE.

Should the draft recommendation be to “GRANT on completion of corrective actions”, the Applicant is given a reasonable timeframe to complete those actions. A Final Audit Report is submitted to the Certification Board, and the Certification Board makes the final decision on the award of Green Tick® Certification. If the decision is to GRANT, the successful Applicant enters into a licensing agreement with GTC to use the Green Tick® brand as a certification mark for a period of three years. After three years, a recertification audit occurs to verify that the Applicant still meets the certification standards. At any time, GTC reserves the right to “spot audit” the Applicant, at no charge, with a minimum of 24 hours’ notice.

The Final Audit Report is published on-line for free on the GTC website [www.greentick.com](http://www.greentick.com). The certification is linked to GTC’s Facebook page <http://www.facebook.com/pages/Green-Tick-Certification-Limited/45639086590>. It is also linked to the GTC YouTube channel [www.youtube.com/greentickglobal](http://www.youtube.com/greentickglobal), if a YouTube video option has been chosen by the Applicant.



Figure 2: Global coverage of a successful certification





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## 3 THE APPLICATION

### 3.1 Scope

The scope of this application includes the operations and services provided by ADA within NZ. This starts from the initial inquiry from customer, to delivery of contract documentation and construction observation. It does not include any work completed off-site by either contract staff or employees, or parts of projects undertaken by other specialists such as engineers, surveyors or quantity surveyors, whether their work forms part of the design and contract documentation or not. ADA operates nationwide, and provides architectural services to residential, commercial and industrial clients throughout NZ.



**Figure 3: Sustainable design criteria used by ADA**

ADA has a strong commitment to genuine sustainable design, with all its designers working as Homestar Practitioners. ADA in its Environmental Policy has committed itself to designing all new residential projects with a minimum Homestar rating of 4, with 75% of projects to level 5, and 10% over 6. The Homestar rating scheme provides detailed guidance on the incorporation of sustainability principles into a home's design. Points can be awarded for design features in energy efficiency, health and comfort, water, waste, management, materials, site aspects and innovation (see Appendix 2). ADA completes a rating based on the design it has done, and the client's brief. An official Homestar rating is received when built and independently assessed by Homestar.

The Building Research Association of NZ (BRANZ) promoted the now discontinued Green Home Scheme. This scheme had 13 criteria covering key aspects such as site selection, thermal efficiency, sustainable materials, water economy, climate change readiness, hazardous material storage and waste management (see Appendix 3). These two schemes specify readily auditable standards enabling comparison of specific designs with the minimum design standards required to achieve the desired rating. ADA also partners with Heart of Green, a local company specialising in solutions for energy efficiency and comfort in homes.

Thus the application for certification is threefold:

1. Corporate certification of ADA as an architectural business dedicated to sustainability;
2. Service certification of ADA as an architectural practice that delivers sustainable design services; and

3. Operational certification of ADA as a professional services business that operates in a sustainable manner.

## 3.2 Description of operations

### 3.2.1 Architectural services

Customers contact ADA either by phone, from ADA's website, in email or in-person. A meeting is arranged either in the office or frequently at the project location or client's home. A design brief is agreed and contract signed.

The designer then prepares concept design(s), which is presented to the customer. This is usually by email with a follow-up meeting. Any amendments are negotiated and developed designs are presented to the customer either by email or follow-up meeting.

Once the customer is happy with the design, approval is given to commence to consent drawing stage. This is normally undertaken by the drawing staff on high-tech CAD computer systems. Draft plans for checking, are printed on the back of paper recycled from other jobs. Designers check and review these before the final plans are emailed to customers for approval. Plan sets are then printed for submission to the appropriate Territorial Authority for resource and /or building consent. Additional sets are printed if the project is subject to a tender process.

If the engagement also includes construction observation or contract administration then contract documents will be prepared, site meeting minutes held, progress claims certified and variations processed. Progress photos will also be taken. Electronic records of all documentation and project files are held by ADA for at least 10 years.

### 3.2.2 Professional office operations

The ADA professional services office is located in a commercial area in the coastal township at 6-8 Seaview Road, Paraparaumu Beach on the Kapiti Coast north of Wellington city in NZ.

The office is a typical modern commercial office equipped with personal computers, printers, plan printers, desks and design bays, with a meeting room and staff kitchen. It is well orientated to capture natural light. Lighting in most of the commercial office areas has recently been upgraded to more efficient LED systems. Heating is by heat pumps, with auxiliary heating to remote parts of the office with stand-alone electrical heaters

Water is from local authority supply, wastewater services are also provided by community sewerage systems to consented treatment and disposal facilities. Compostables and domestic refuse go to local authority recycling bins (eg. paper, plastics, metals), and disposal services.

Staff maximise use of remote sensing equipment and videoconferencing technologies to minimise travel, with vehicle kilometres all related to specific projects or business



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administration tasks. Staff are encouraged to use public transport, or walk or cycle to work, with a shower provided in the office, and space to store bikes. Air travel is minimal, and domestic in nature.

Table 1 summarises some sustainability practices currently observed at ADA's office.

**Table 1: Sustainability practices at ADA's office**

Sustainability Practice	Description
Energy efficiency – personal computers and printers	<p>PSU's in new PCs are 80PLUS Bronze certified</p> <p>Latest components are more efficient with less power consumption</p> <p>Computers and monitors go into sleep/energy saving mode after set time</p> <p>Computers and monitors turned off overnight, except for main server</p> <p>Printers on energy saving mode overnight</p> <p>Use draft mode for printing (50%) toner saving</p> <p>Use rechargeable batteries on electronic devices</p>
Recycling	<p>Recycle printer consumables (toner cartridges, imaging units and other) with TRC</p> <p>Parts from no longer required computers kept as spares</p> <p>Give away old computers to charities or recycling centres</p> <p>Two way paper recycling:</p> <ol style="list-style-type: none"> <li>1. Print on back of used A3 and A4 sheets for internal use</li> <li>2. Finally green bin (recycling)</li> </ol>
Electronic filing	<p>Keep number of printed products to a minimum. Only commonly used manuals kept as hard copy</p> <p>Manuals kept as e-copy, only printed (parts) if required for building consent applications</p> <p>Send files electronically and use internet file sharing systems</p>
General waste	Recycle waste in local authority green bin system if possible

## 3.3 Certification boundaries

The certification boundaries set for this audit are:

**START:** ADA Inwards Goods at the Kapiti office site.

**OPERATIONS:** ADA operations at the Kapiti office site, and at client sites.

**STOP:** ADA Outwards Goods at the Kapiti office site.



## 3.4 Life cycle

Figure 4 below illustrates the life cycle of ADA's operations.



**Figure 4: ADA operations life cycle**

Architectural services provided by ADA are focused on sustainable design features to maximise, for example, the efficient use of space and light. Figure 5 illustrates some examples of ADA's sustainable design innovations.



**Figure 5: ADA sustainable design examples**

(Photographs: Left photo Dominion Post, Right photo Paddy Riley)

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## 4 AUDIT METHODOLOGY

### 4.1 Documentation review

The first phase of the audit process involved the collection of the Applicant's health, safety and environmental information for the previous 12 month period. ADA elected to use the *Application for Certification: Supporting Information* template provided on a complimentary basis to all Green Tick® applicants. ADA provided certification documentation by completing the template, accompanied by copies of their:

- *Ferndale Show Home Custom Solution Report* (for David Reid Homes date: 20.11.2009);
- *Green Home Scheme Report* - Ferndale Show Home (for David Reid Homes);
- Home Star Credit Summary for a 7 Star Design Home (Mr & Mrs Smith, Carterton, total score 71.8);
- H1 Energy Analysis Calculation for Mr and Mrs Smith's house in Carterton;
- Building Consent Drawings Schedule dated 01.07.2011 for Mr and Mrs Smith's house in Carterton;
- Occupational Safety and Health Policy and Plan dated 1 June 2012 – sighted 31 August 2012;
- Environmental Policy and Plan dated 15 August 2012 – sighted 31 August 2012;
- Electricity, air and vehicle travel records for the previous 12 months; and
- Business carbon footprint of 5.2 tonnes CO<sub>2</sub>e for the previous year (Ministry for the Environment worksheets 2010, <http://www.mfe.govt.nz/publications/climate/guidance-greenhouse-gas-reporting-2010/>).

### 4.2 Site visit

A site visit to the Paraparaumu office site was carried out by the Green Tick® Lead Auditor on Friday 31 August 2012. The purpose of the site visit was to verify that the certification documentation is accurate, conduct a walk-through of the site facility with ADA staff to observe operations live on site, and to discuss with staff the sustainability practices, culture, and commitment of the organisation being audited.

### 4.3 Compliance check

The Compliance Check involved telephone inquiries to authorities, and a review of their on-line databases. It concluded that no consents are required for ADA's activities at the site.

### 4.4 Stakeholder inquiries

Inquiries to the relevant health and safety and environmental authorities revealed that ADA's operations are fully compliant and have generated no complaints or community concerns. ADA has a good reputation in the community as a genuinely "green" designer of sustainable buildings, and has won a large number of industry awards for its designs, notably a Gold Award from the Master Builders Federation for Sustainable Home Design with the Ferndale Show Home in 2010.



## 5 AUDIT FINDINGS

### 5.1 Life cycle analysis

The life cycle analysis followed the sustainability practice of ADA through its life cycle as a professional services office operator in Figure 4 (ADA itself as a sustainable business). Discussions with ADA's staff showed that they have a good understanding and strong commitment to life-cycle based efficiency as the foundation of sustainability. ADA's staff had detailed knowledge of day-to-day sustainability practices that are core for a genuinely sustainable business, such as being aware of energy efficiency, recycling of office materials, and keeping the carbon footprint down by minimising unnecessary travel or plan printing. The staff interviewed mentioned areas in their line of work where they thought they could look for improvement by innovation or more careful housekeeping. They also noted that building authorities' outmoded requirements to receive two or even three hard copies of consent drawings added significantly to ADA's and Council footprints, when using e-copies of drawings is now standard across the construction industry. ADA has provided a carbon footprint calculation of 5.2 tonnes CO<sub>2</sub>e for its previous year of office operation. ADA is now considering forming a sustainable procurement policy so it can seek goods and services from sustainable suppliers, and encourage the spread of sustainable practice up the supply chain.

With respect to sustainable architectural design, ADA provided some examples of projects where it has used the Homestar and BRANZ Green Home rating programmes to supply proven sustainable design to customers. Both of these schemes are detailed, life cycle-based design systems. The examples submitted are summarised below.

### 5.2 Homestar and Green Home examples

#### 5.2.1 Homestar example

This example was presented with three source references:

- Home Star Credit Summary for a 7 Star Design Home (Mr & Mrs Smith, Carterton, total score 71.8);
- H1 Energy Analysis Calculation; and,
- Building Consent Drawings Schedule dated 01.07.2011.

A 3D perspective, and the floor plan of the Smith residence are shown below in Figures 6 and 7.



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Rev	Date	Description	
PROPOSED HOUSE for R. & T. SMITH 61C MALINGAHU ROAD CARTERTON Lot 1 DP 425553			
<b>A.D</b> <b>architecture</b>			
PH: 04 228 5652 Fax: 04 228 5663 www.adarchitecture.co.nz 100 The Hill, Papanui, Christchurch			
BUILDING 3D			
BUILDING CONSENT			
DO NOT SCALE DRAWING			
Job	Date	Rev	Sheet
11022	01-07-11	A	01

Figure 6: 3D perspective Smith residence

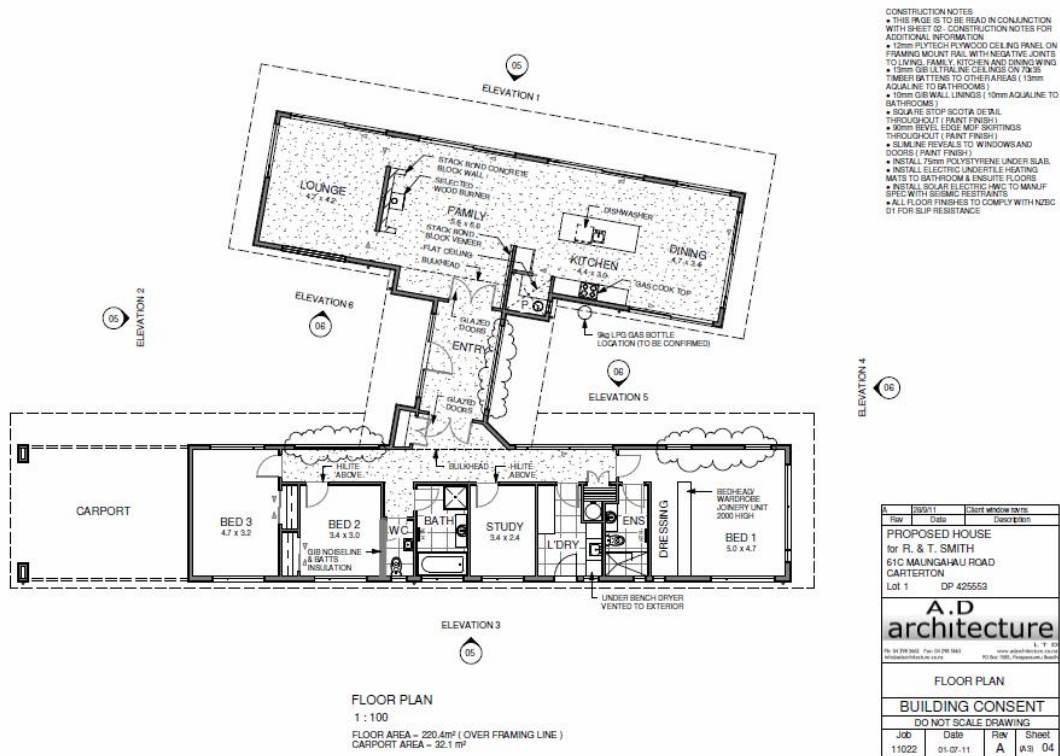


Figure 7: Floor plan Smith residence



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Table 2 summarises the credit summary for the Homestar example.

**Table 2: Homestar credit summary**

Homestar Credit Summary					
					<b>7 Stars</b>
<b>OVERALL SCORE:</b>					<b>71.8</b>
Credit	Credit No.	Points Available	Points Achieved	Adjusted Points Available	Weighted Points for NAs
<b>Energy, Health and Comfort</b>					
<input type="checkbox"/> Space Heating	EHC-1	6.0	5.7	6.0	5.70
<input type="checkbox"/> Hot Water	EHC-2	4.5	4.1	4.5	4.1
<input type="checkbox"/> Lighting	EHC-3	2.0	0.5	2.0	0.5
<input checked="" type="checkbox"/> Whiteware and Appliances	EHC-4	2.0	1.6	2.0	1.6
<input type="checkbox"/> Renewable Energy	EHC-5	8.0	0.0	8.0	0.0
<input type="checkbox"/> Whole House Thermal Performance	EHC-6	12.0	11.4	12.0	11.4
<input checked="" type="checkbox"/> Moisture Control	EHC-7	4.5	4.0	4.5	4.0
<input type="checkbox"/> Washing Line	EHC-8	1.0	0.8	1.0	0.8
<input type="checkbox"/> Sound Insulation	EHC-9	3.0	3.0	3.0	3.0
<input type="checkbox"/> Inclusive Design	EHC-10	3.0	2.0	3.0	2.0
<b>TOTAL</b>		<b>46.0</b>	<b>33.1</b>	<b>46.0</b>	<b>33.1</b>
<b>Water</b>					
<input checked="" type="checkbox"/> Rainwater Harvesting	WAT-1	6.0	6.0	6.0	6.0
<input type="checkbox"/> Internal Potable Water Use	WAT-2	6.0	5.1	6.0	5.1
<input checked="" type="checkbox"/> Grey Water Reuse	WAT-3	3.0	3.0	3.0	3.0
<b>TOTAL</b>		<b>15.0</b>	<b>14.1</b>	<b>15.0</b>	<b>14.1</b>
<b>Waste</b>					
<input checked="" type="checkbox"/> Construction Waste Management	WST-1	3.0	3.0	3.0	3.0
<input type="checkbox"/> Construction Waste Reduction	WST-2	3.0	2.0	3.0	2.0
<input type="checkbox"/> Household Recycling Facility	WST-3	1.0	1.0	1.0	1.0
<input checked="" type="checkbox"/> Composting Facilities	WST-4	2.0	2.0	2.0	2.0
<b>TOTAL</b>		<b>9.0</b>	<b>8.0</b>	<b>9.0</b>	<b>8.0</b>
<b>Management</b>					
<input checked="" type="checkbox"/> Miscellaneous	MAN-1	2.0	2.0	2.0	2.0
<input type="checkbox"/> Security	MAN-2	3.0	2.0	3.0	2.0
<input type="checkbox"/> Home User Guide	MAN-3	2.0	2.0	2.0	2.0
<input type="checkbox"/> Responsible Contracting	MAN-4	2.0	1.0	2.0	1.0
<b>TOTAL</b>		<b>9.0</b>	<b>7.0</b>	<b>9.0</b>	<b>7.0</b>
<b>Materials</b>					
<input checked="" type="checkbox"/> Materials Selection	MAT-1	9.0	5.0	9.0	5.0
<input type="checkbox"/> VOCs & Toxic Materials	MAT-2	3.0	3.0	3.0	3.0
<b>TOTAL</b>		<b>12.0</b>	<b>8.0</b>	<b>12.0</b>	<b>8.0</b>
<b>Site</b>					
<input checked="" type="checkbox"/> Stormwater Management	STE-1	4.0	4.0	4.0	4.0
<input type="checkbox"/> Native Ecology	STE-2	1.5	0.0	1.5	0.0
<input checked="" type="checkbox"/> On Site Food Production	STE-3	1.5	1.5	1.5	1.5
<input type="checkbox"/> Transport	STE-4	2.0	1.0	2.0	1.0
<b>TOTAL</b>		<b>9.0</b>	<b>6.5</b>	<b>9.0</b>	<b>6.5</b>
<b>Innovation</b>					
<input type="checkbox"/> Innovation	INN	5.0	0.0	5.0	0.0
<b>TOTAL</b>		<b>5.0</b>	<b>0.0</b>	<b>5.0</b>	<b>0.0</b>
<b>TOTAL POINTS EXCLUDING RESOURCE ADJUSTMENT FACTI</b>		<b>105.0</b>	<b>76.7</b>	<b>105.0</b>	<b>76.7</b>





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## 5.2.3 Green Home example

This example was presented with two source references:

- *Ferndale Show Home Custom Solution Report* (for David Reid Homes date: 20.11.2009);
- *Green Home Scheme Report - Ferndale Show Home* (for David Reid Homes).

A 3D perspective and floor plan for the show home appear below in Figures 8 and 9.



Rev	Date	Description	
		Proposed Showhome David Reid Homes Kapiti Lot 59 Ferndale Wairarapa Lot 59 DP 434113	
<b>A.D</b> <b>architecture</b>			
<small>16, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100</small>			
BUILDING 3D			
SALES			
DO NOT SCALE DRAWING			
Job	Date	Rev	Sheet
08019	Mar 09		A3: 01

**Figure 8: 3D perspective Ferndale Show Home**



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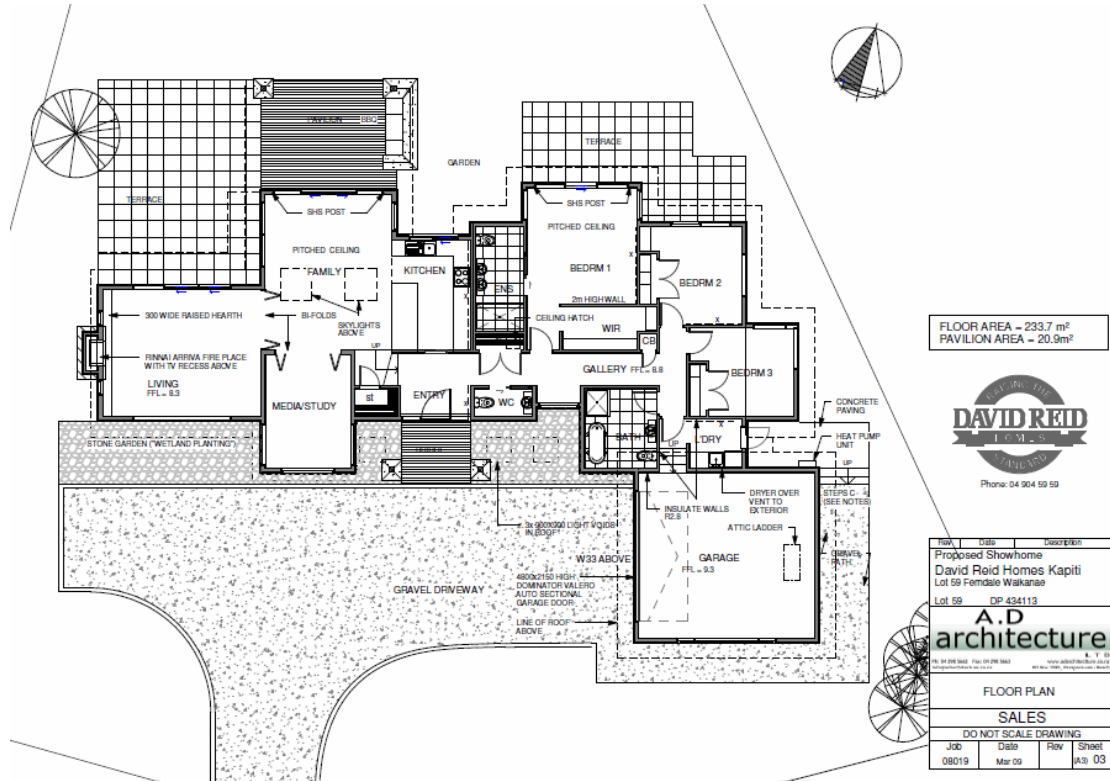


Figure 9: Floor plan Ferndale Show Home




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The Green Home performance summary is shown below in Table 3.


**Table 3: Green Home summary of environmental performance**

## Green Home Scheme Report

Your Score: **125**   Environmental Rating: **"Excellent"**



fair      good      very good      excellent



40      56      70      87

*Assessment Worksheet: Performance Summary*

Issue	Your Score	Possible Score
1. Thermal Efficiency	23	27
2. Appliance Efficiency	18	21
3. More Sustainable Materials	24	26
4. Recyclable Material Storage	4	4
5. Water Economy	15	20
6. Site Selection	5	5
7. Compost System	3	3
8. Spatial Efficiency	0	8
9. Climate Change Readiness	16	22
10. Moisture Management	5	6
11. Smoke Detection	7	7
12. Hazardous Material Storage	2	4
Bonus Issue: Design Excellence	3	8
<b>Total</b>	<b>125</b>	<b>161</b>

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Project Id:

Project Name:

Owner: First Name

Surname

Building: Address 1

Address 2

City

These examples, and their very detailed design specifications, made it very easy for the auditor to verify the robustness of the sustainability design principles followed and implemented by ADA to levels well in excess of the minimum required.



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## 5.3 Management of material risks

The audit process identified five material sustainability risks for ADA. Table 4 below describes those risks and how they are managed by the company.

**Table 4: Key Risks**

Risk Type	Description	Risk Level 1= very high 5 = very low	Risk Priority 1= highest 4 = lowest	Action
Territorial authority (TA) IT compliant documentation and version control	TA's cannot use standard Adobe documents, means all documents must be printed	1	1	Currently print documentation. Talk to TAs about options for the future
Leaky building claims	Claims on work completed in the last 10 years	3	1	Keep appropriate insurance in place. Maintain very high standard of documentation during construction
Provision of out of date information or advice	Failing to remain up to date with technological advances or code changes	2	1	Retain ADNZ professional status for Directors. Read trade information regularly. Attend CPD events
Accidents during building site visits	Failure to adhere to site safety instructions, wear or use appropriate safety equipment	1	1	Provision of training for staff Provide appropriate safety gear such as hi-viz vests, hard hats, torch. Ensure appropriate footwear is worn on sites. Ensure staff adheres to site safety instructions.
Occupational overuse syndrome	OOS symptoms due to repetitive work, bad posture or lack of breaks	1	1	Ensure all computer equipment is personally fitted. Ensure staff are trained to take breaks, problems reported

## 5.4 Sustainability culture and practice

A genuine sustainability culture, and embedded sustainability practices based on ADA's management and staff commitment to sustainability are present at every level in the ADA operation – this is regarded as 'business as usual'. The company is "walking the talk" by patiently and steadily promoting efficient and comfortable building designs with net positive impacts to its clients and to colleagues within the building and construction industries. In this way, ADA seeks to gradually raise the standards of all the building projects and stock that it is responsible for in the market. ADA is actively working on improving its performance, and is seeking independent, scientific sustainability certification to verify its commitment to minimising its impacts upon the environment by efficient practice, transparency, and continuous improvement. By using footprinting technologies and dedicated sustainability design tools now available in the construction industry, especially through the Homestar and Green Homes programmes, ADA is able to provide solid, independently verifiable evidence of state-of-the-art sustainability practice both in the office, and in the conduct of its architectural services for clients.



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## 6 COMPLIANCE SUMMARY

### 6.1 Sustainable certification

Table 5: Green Tick® SUSTAINABLE Compliance Summary





KEY PERFORMANCE INDICATOR	STANDARD: GREEN TICK SUSTAINABLE	EVIDENCE PRESENTED OR SIGHTED	COMPLIANCE
1.1 Safety Accident Record	No major harm accidents, incidents, injuries recorded in past 12 months.	Accident register	
1.2 Safety Staff Health and Safety (H&S)	No substantiated staff complaints about working conditions in past 12 months.	Complaints register Staff interviews Site Safe certificates	
1.3 Safety Supplier Health and Safety	No substantiated supplier issues with on-site working conditions in past 12 months.	Complaints register	
1.4 Safety Customer Health and Safety	No substantiated customer complaints about health or safety issues (including product quality) in past 12 months.	Complaints register	
1.5 Safety Management System	OSH-compliant health and safety management system in place.	Accident register. H&S Management System policy and records.	
1.6 Safety Minimising Risk	Annual reviews of potential risk areas and mitigation taken.	H&S Management System records	
1.7 Safety Performance Records	Less than five minor non-conformances per 100 workers to H&S management system reported in past 12 months.	Accident register Staff interviews	
1.8 Safety Legal Compliance	i) 100% compliance with all legal requirements; ii) No successful enforcement actions by government agencies in past 12 months.	Accident register. H&S Management System records. Inquiry to OSH authority.	

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KEY PERFORMANCE INDICATOR	STANDARD: GREEN TICK SUSTAINABLE	EVIDENCE PRESENTED OR SIGHTED	COMPLIANCE
<b>2.1 Environmental Product Origin</b>	All product content identified by country of origin.	Applicant's records of product/service origin and sourcing.	
<b>2.2 Environmental Product Quality</b>	Product meets all quality standards of industry or government authority.	Applicant's quality records, tests, inspections, surveys. Food Safety Authority records, or equivalent for other industry types.	
<b>2.3 Environmental Product Labeling</b>	Labeling meets required legal standards.	Applicant's labeling criteria, labeling examples. Government authority records.	
<b>2.4 Environmental Resource Use</b>	<ul style="list-style-type: none"> <li>i) Programme in place to maximise resource use efficiency with defined performance targets;</li> <li>ii) Resources used at lowest practical for site/s with current technology per sales unit;</li> <li>iii) Programme in place to identify and use recycled materials where appropriate;</li> <li>iv) Where resource use is extractive, relevant industry or government sustainability standards met.</li> </ul>	<ul style="list-style-type: none"> <li>i) Applicant's records and targets, eg. raw materials, equipment, carbon, energy, water use.</li> <li>ii) Details of technologies used to achieve targets. Records of system performance and any independent audits completed.</li> <li>iii) Details of recycled products used (if any), material recycled (if any), recycling programmes and performance.</li> <li>iv) Applicant's records of extractive uses that meet sustainability levels, allocations or limits.</li> </ul>	
<b>2.5 Environmental Chemical Use</b>	Chemical residues comply with industry or government standard.	Applicant's records of chemical purchase, use and management of residues and their environmental effects. Government Environmental Agency or other independent records that verify residue status.	
<b>2.6 Environmental Energy Use</b>	<ul style="list-style-type: none"> <li>i) Programme in place to minimise energy use with defined performance targets;</li> <li>ii) Energy resources used at lowest practical for site/s with current technology per sales unit.</li> </ul>	<ul style="list-style-type: none"> <li>i) Results of internal programmes to minimise energy use.</li> <li>ii) Details of technologies, manufacturing systems used to achieve energy efficiencies. Reports or records to show systems chosen are the best for the circumstances. Records of system performance and any independent audits completed.</li> </ul>	
<b>2.7 Environmental Nuisance Effects</b>	No substantiated complaints from neighbours about nuisances in past 12 months.	Complaints register. Local Government Authority (Council), and or Health Authority complaints register.	
<b>2.8 Environmental Contaminant Discharges</b>	<ul style="list-style-type: none"> <li>i) Programme in place to minimise contaminant discharges with defined performance targets;</li> <li>ii) Contaminant discharges</li> </ul>	<ul style="list-style-type: none"> <li>i) Applicant's records of means used to minimise contaminant discharges. Records of system performance, independent</li> </ul>	



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KEY PERFORMANCE INDICATOR	STANDARD: GREEN TICK SUSTAINABLE	EVIDENCE PRESENTED OR SIGHTED	COMPLIANCE
	at lowest practical for site/s with current technology per sales unit.	audits. ii) Reports or records to show systems chosen the best for circumstances. Government Environmental Agency or other independent records that verify reported performance.	
<b>2.9 Environmental Waste Management</b>	i) Waste minimization and recycling programme in place with defined performance targets; ii) Wastes reduced, re-used, recycled, or properly disposed to authorised facilities.	i) Applicant's records of programmes in place. Records of system performance and any independent audits completed. ii) Records that show how wastes managed, eg. those reduced, reused, recycled, or disposed. Evidence that wastes properly disposed to authorised facilities. Government Environmental Agency, Local Authority, or other independent records that verify reported waste management.	
<b>2.10 Environmental Management System</b>	Environmental management programme (EMP) or formal environmental management system (EMS) in place with defined performance targets consistent with industry or government standards.	Applicant's EMP or formal EMS. Applicant's objectives and policies on environmental management, and means to achieve and monitor performance of objectives.	
<b>2.11 Environmental Management Performance</b>	Less than five minor non-conformances per 100 workers with EMS reported in past 12 months.	Applicant's EMP or EMS records. Records of system performance and any independent audits completed.	
<b>2.12 Environmental Legal Compliance</b>	i) 100% legal compliance with any environmental consents and applicable plan rules; ii) No successful enforcement actions by government environmental agencies in past 12 months.	i) Applicant's EMP or EMS records. ii) Government Environmental Agency, Local Authority, or other independent records that verify reported compliance.	

Ends.

## 6.2 Carbon Neutral Certification

To achieve carbon neutral certification, the Applicant must:

- (a) Meet the standards for Green Tick<sup>®</sup> Sustainable certification; and,
- (b) Be carbon neutral over its whole life cycle according to ISO 14064:2006 for organisations or PAS 2050 for products; or,
- (c) Must hold sufficient verified carbon credits to achieve carbon neutral status for the organisation or product over its whole life cycle.

As an organisation, ADA has a very small carbon footprint at 5.2 tonnes CO<sub>2</sub>e per annum. It has offset this amount by purchasing carbon credits; see Appendix 4 for purchase certificate. The Green Tick<sup>®</sup> auditor has checked the calculations and statements made to certify that the claims are properly scoped, calculated, and presented in accordance with the relevant ISO standards.

ADA is proceeding with a footprinting project to carbon footprint and total footprint one of its residential designs. As far as is known, this will be the first time that an entire house has been fully footprinted according to the relevant international standards.



# Audit Report

## 7 RECOMMENDATION



*That GREEN TICK® SUSTAINABLE AND CARBON NEUTRAL CERTIFICATION is GRANTED to the Applicant:*

**NAME:** AD ARCHITECTURE LIMITED

**SERVICE:** ARCHITECTURAL DESIGN AND SUPERVISION

**SITES:** (1) THE PIER, 6-8 SEAVIEW ROAD, PARAPARUMU BEACH,  
WELLINGTON 5252

(2) CLIENT CONSTRUCTION SITES

SIGNED:

A handwritten signature in blue ink that reads 'S Harris'.

SUSAN HARRIS BSc (Hons), MEIANZ, MNZPI  
LEAD AUDITOR CERTIFICATE NUMBER: 4732SAI

Date: 18 September 2012

**APPROVED:**

A handwritten signature in black ink that reads 'Jeffrey V Kemp'.

**JEFFREY V KEMP**

**Date: 19 SEPTEMBER 2012**

**CHAIR - CERTIFICATION BOARD**



# Audit Report

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*OBSERVATION (not part of the audit recommendation):*

- 1. That the company would benefit from carbon footprinting and total footprinting a residential project example to provide a robust example of certifiable sustainability profiling and leading edge architectural design.*



## **8 APPENDICES**

### **8.1 Appendix 1: Green Tick® certification standards**

<http://www.greentick.com/Html/standardsF.html>

### **8.2 Appendix 2: Homestar standards**

<http://homestar.org.nz/what-matters>

### **8.3 Appendix 3: Green Home standards**

<http://www.greenhomescheme.org.nz/>



## 8.4 Appendix 4: Carbon credit purchase verification





[www.greentick.com](http://www.greentick.com)