

# Building consent 101197

Section 51, Building Act 2004



## The building

Street address of building: 274 Kingsbury Avenue, Rangiora

Legal description of land where building is located: Lot 21 DP 44633

Valuation number: 2159444100

Building name:

Location of building within site/block number:

Level/unit number:

## The owner

Name of owner: R J & N Whyte

Contact person:

Mailing address: 274 Kingsbury Avenue, Rangiora 7400

Street address/registered office:

Phone number: Landline:

Mobile:

Daytime: 3135752

After hours:

Facsimile number:

Email address:

Website:

First point of contact for communications with the council/building consent authority:

As above

## Building work

The following building work is authorised by this building consent:

Metro Eco Euro Ped Freestanding Clean Air 06007

Heating

This building consent is issued under section 51 of the Building Act 2004. This building consent does not relieve the owner of the building (or proposed building) of any duty or responsibility under any other Act relating to or affecting the building (or proposed building).

This building consent also does not permit the construction, alteration, demolition, or removal of the building (or proposed building) if that construction, alteration, demolition, or removal would be in breach of any other Act.

This building consent is subject to the following condition:

The Building Act 2004, s90, states that agents authorised by the building consent authority (the Council) for the purposes of this section are entitled, at all times during normal working hours or while building work is being done, to inspect –

- (a) land on which building work is being or is proposed to be carried out; and





- (b) building work that has been or is being carried out on or off the building site; and
- (c) any building.

This building consent is issued with the following advice notes:

1. This consent is issued subject to the attached Building Inspection Works Schedule:
2. Please note that the consent fees allow for a single inspection of construction stages of the project as specified in the inspection schedule. Any extra inspections required will be invoiced before a code compliance certificate is issued.
3. HEATING UNIT. An inspection of the installation of the unit is required before its first use.
4. The duplicate copy of the approved consent documents and inspection schedule must remain on site during construction.
5. All inspections listed must be requested. It is advisable to give at least 48 Hours Notice.
6. Please note that any deviation from the approved documents will require application for amendment.
7. Your consent is issued subject to manufactures technical information about their products, installation and maintenance is to be as this technical information requires.

#### **Compliance schedule**

A compliance schedule is not required for the building.

#### **Attachments**

Copies of the following documents are attached to this building consent:

Signature

Position

On behalf of: Waimakariri District Council

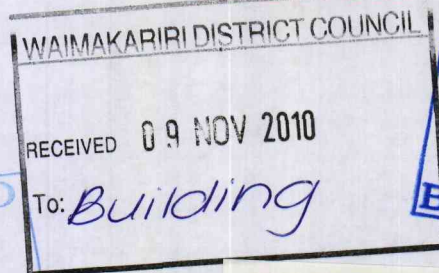
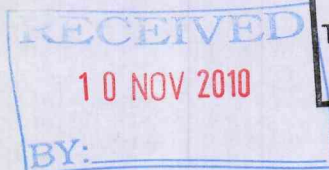
Date: 15/09/10

**COUNCIL COPY**

BC 101197

Kings Mowers & Heating  
1 Percival St  
Rangiora

9/11/10



Building Services  
Waimakariri District Council  
Bag 1005  
Rangiora

101110042681

2159444100



TRIM Record Number

Re: BC 101197 Log Fire upgrade

Dear Sir / Madam

Please be advised that we have had to change the Flue kit for the above job for Mr & Mrs Whyte of 274 Kingsbury Ave from a Metro to a ENI kit details of which are attached hereto

Thanking you

Yours sincerely

Kings Mowers & Heating

Philip Walton



10 NOV 2010

Appendix 2. Manufacturer's installation instructions**Free Standing 4.2 Flue Kit**

This Flue Kit must be installed by a suitably qualified tradesperson or a solid fuel heater installer. This Flue Kit complies with AS/NZS 2918: 2001.

\* This kit may require additional components to complete installation.

**Roof & Ceiling Installation**

Spigot of cowl to float free inside stainless flue to allow for expansion during fire operation.

Secure cowl brackets to outside of galv. liner.

Trim flue and liner to obtain correct chimney height.

Spider bracket clamped to flue to space galv. liner.

Flashing to weatherproof around liner where it exits the roof. (to be supplied by installer)

Galv. liner is fixed to the mounting rails by rivets or screws.

Crimp on liner to face upwards.

Crimp on flue to face downwards.

25mm (min) air gap between liner and any timber.

Galv. liner is fixed to the mounting rails by rivets or screws.

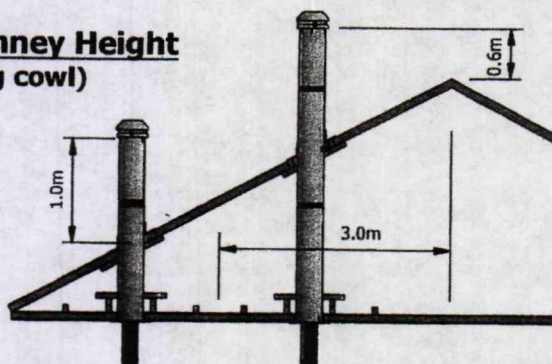
Spider bracket clamped to flue to space galv. liner.

roof studs

200mm or existing roof stud + 90mm

Special ceiling plates are available for sloping ceilings.

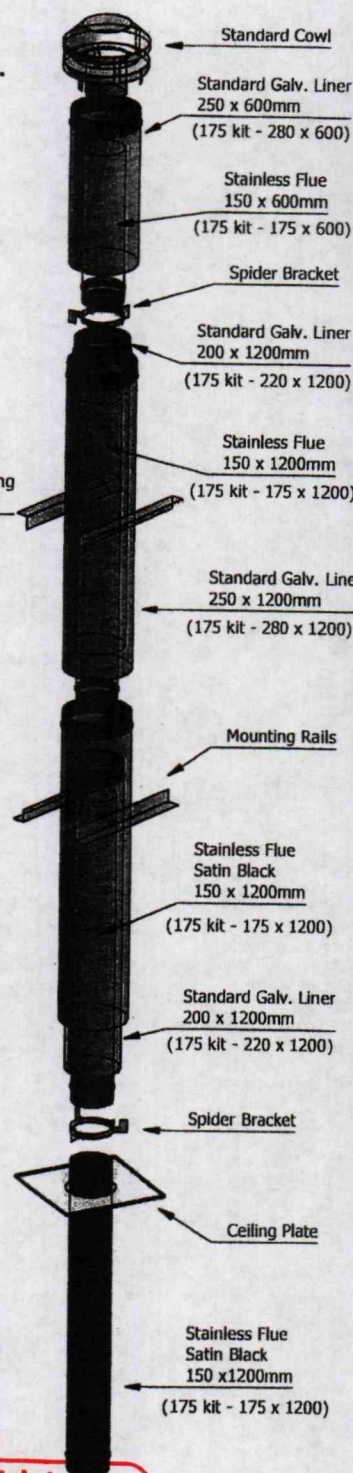
Build a timber frame to support the flue assembly in the ceiling on roof studs.

**Minimum Chimney Height (excluding cowl)**

Notes:

#1 ~ Refer to your heater manufacturers recommendations for flue heights.

#2 ~ Depending on local circumstances, taller chimneys may be required for satisfactory performance. Check with your local building authority.



**Waimakariri District Council Assembly List**  
**AMENDED Plan and/or Specifications APPROVED.**

Signed .....

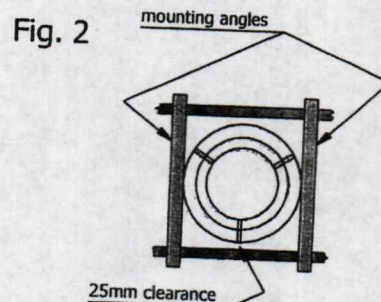
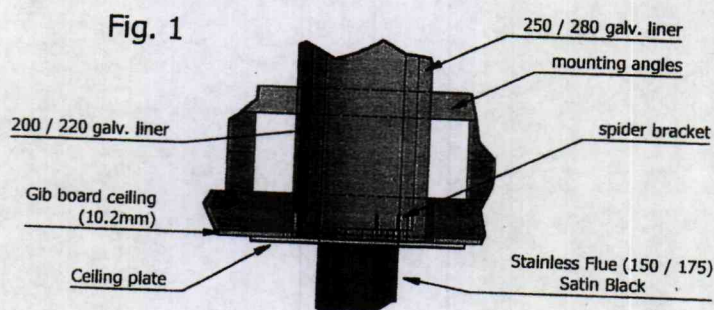
11/11/10



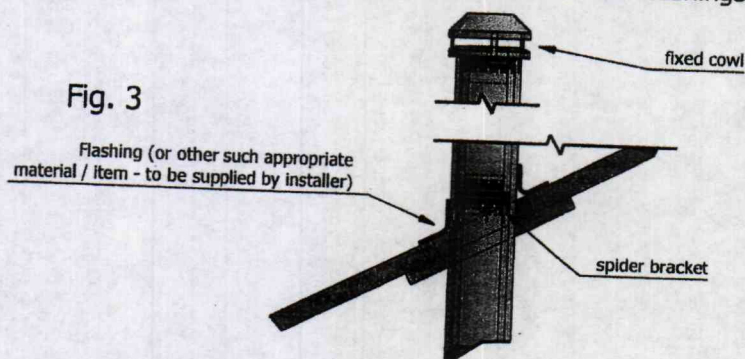
Appendix 2. Manufacturer's installation instructions (cont.)**INSTALLATION INSTRUCTIONS FOR CEILING UP TRIPLE FLUE SYSTEM****INSTRUCTIONS:**

1. Check that area where flue is to be installed is clear of any structural framing in the roof. Use a plumb line vertically from the centre of the flue outlet through the ceiling.
2. Cut a circular hole in the ceiling and roof of 300mm (175 kit - 330mm) in diameter.
3. Position liner with crimped end upwards and bottom end flush with ceiling. Spider bracket also to be flush with ceiling. 200 or 220 galv. liner to sit 'on top' of spider bracket to allow air gap. Fix at 4 points with pop rivets using mounting angles supplied (Fig. 1 & 2). Note that there needs to be a minimum of 25mm per side (50mm overall) clearance between the outer liner and any timber (see Fig.2)

NOTE: Outer liners on the 250 & 200 (175 kit - 280 & 220) to be set to height and fixed with pop rivets.

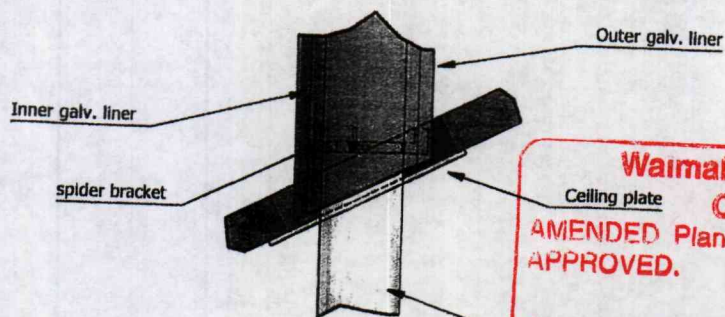


4. Contact your local dealer or plumber for external roof flashings (as shown in Fig. 3).



5. Fit kit (as in Fig. 4) for sloping ceilings. The sloping ceiling liner will have to be cut to the angle of the ceiling. On steep sloping ceilings, the ceiling plate will also need cutting (oval).

Fig. 4



**Waimakariri District Council**  
**AMENDED Plan and/or Specifications**  
**APPROVED.**

Signed: \_\_\_\_\_



# REFERRAL INFORMATION



## FIXED FEE:

Solarwater Heater:

☐

Log Fire:

☒

Marquee:

☐

BC NO: 101197

WDC Rec 10.09.2010

OWNER: R J & N Whyte  
PHONE: 3135752

AGENT:  
EMAIL:

DESIGNER: Metro Eco Euro Ped  
SITE: 274 Kingsbury Avenue, Rangiora  
BUILDER/PH: Ricky Gill

TYPE: Freestanding Heating Unit

Functions	Date	Actioned By (initial)	Standard Conditions
Log In Admin	14/9/10	NH	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
			12, 13, 14, 15, 16, 17, 18, 19, 20
Vetting			Special Conditions:
Processing	14/9/10	NH	
Compliance Schedule			
Peer Review			
Validation	15/9/10	BM	
Issue			
Cancellation			





WAIMAKARIRI  
DISTRICT COUNCIL

Application No: Bc 101197

## APPLICATION FOR A BUILDING CONSENT FOR A SOLID/LIQUID FUEL HEATER

Section 40, Building Act 2004 (Please attach all relevant documents in triplicate)

### 1. OWNER

Name: A J & N. Whyte

Postal Address: 274 Kingsbury Ave

Phone N°: 313 5752 Fax N°: \_\_\_\_\_

### 2. AGENT (Owner's Representative)

Contact Name: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Phone N°: \_\_\_\_\_ Fax N°: \_\_\_\_\_

### 3. PROJECT LOCATION

Street Address: as above

### 4. LEGAL DESCRIPTION

Valuation N°: <u>215 944 100</u>		<b>OFFICE USE ONLY</b>	
Property ID: _____		_____	
Lot(s): (Section) <u>21</u>	DP/S: (Block) <u>44633</u>	Lot Area(s): <u>798</u>	Square Metres <input checked="" type="checkbox"/> Hectares <input type="checkbox"/>

### 5. ROOF DETAILS

Pitch: 30° Material: Long run

Flashing type: (please tick below)

☐ Concrete tiles with lead flashing

☒ Metal tiles & profiled metal sheets with EPDM flexible boot with soaker flashing

☐ Other (Specify in detail) \_\_\_\_\_

### 6. PROJECT

Solid/Liquid Heater (Please attach installation instructions)	Make: <u>Metro</u>	<input checked="" type="checkbox"/> Solid Fuel <input checked="" type="checkbox"/> Gas/Liquid Fuel <input type="checkbox"/>
Clean Air Certification No: <u>102678 06007</u>	Model: <u>Eco Euro Peel</u>	Wetback <input type="checkbox"/> Dryback <input checked="" type="checkbox"/>
Installer's Name: <u>Ricky Gill</u> if not applicant		Freestanding <input checked="" type="checkbox"/> Inbuilt <input type="checkbox"/>
Address: <u>67 Seddon St. Rg</u>		Replacement <input checked="" type="checkbox"/> New <input type="checkbox"/>
Plumber's Name: <u>N/A</u> if wetback		2 <sup>nd</sup> Hand Unit <input type="checkbox"/>
Address: _____		(Engineers Report enclosed?) <input type="checkbox"/>

Signature: [Signature]  
Owner / Agent\* (please delete one)

Date: 31-8-10

### DETAILS TO ACCOMPANY THIS APPLICATION

- ☒ Three copies of the installation instructions prepared by the heater manufacturer.
- ☒ Three copies of floor plan of the building showing the proposed sitting of the heater (see over).
- ☒ Three copies of detailed installation instructions for flue system.
- ☒ Three copies of flashing details (as per note in checklist).





BUILDING CONSENT FEES - The Fee \$340.00 (inbuilt fire) or \$245.00. (freestanding) GST incl. is payable at time of application

**FOR COUNCIL USE**

Date Received: \_\_\_\_\_

Receipt No: \_\_\_\_\_

Receiving Officer: \_\_\_\_\_

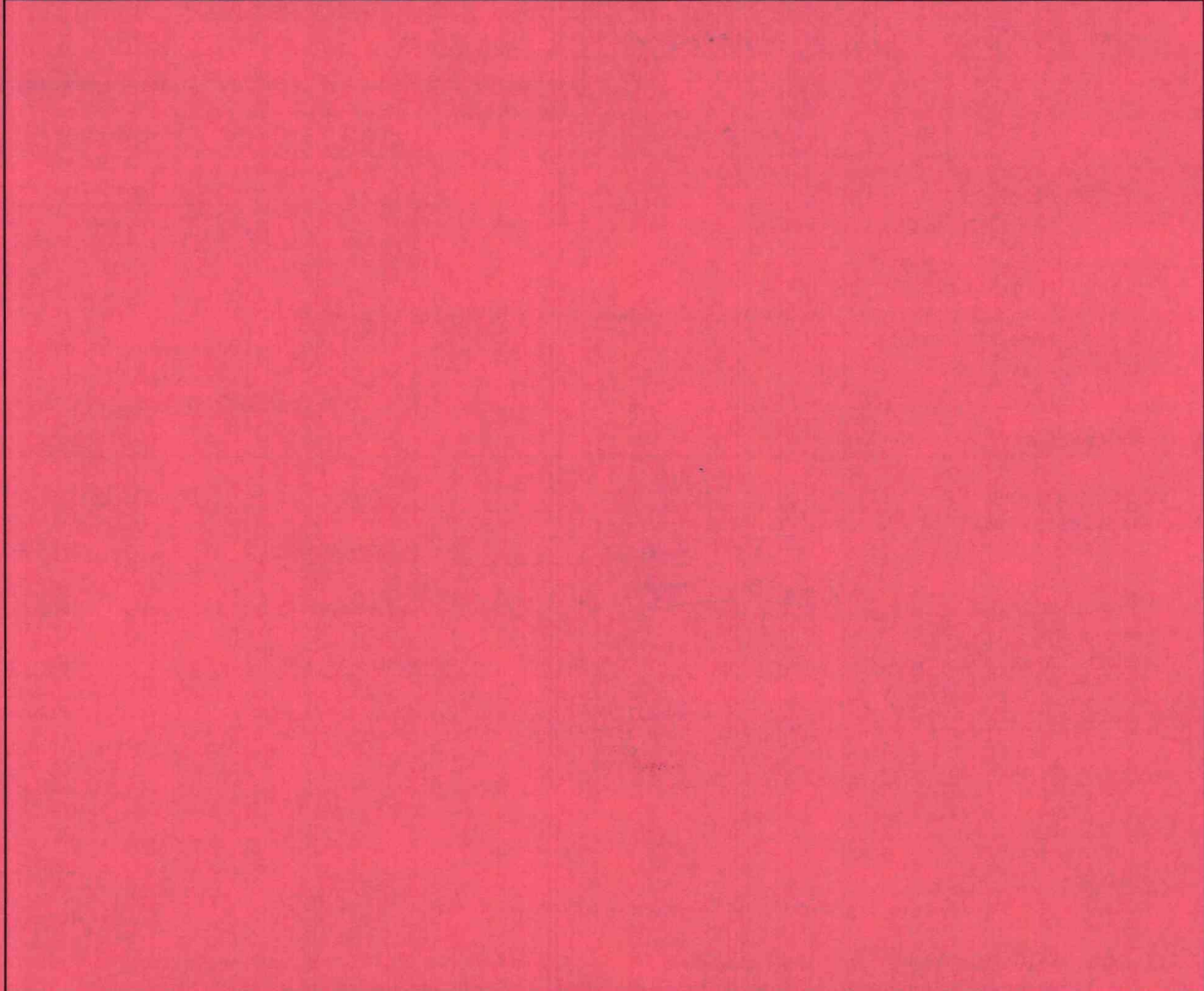
***The information contained in this application may be made available to other units of the Council***

Please use the space below to illustrate the location of the heater.

Notes: 1. Draw a floor plan that accurately shows the location of the heater within the building.

2. Show the location of adjacent walls, windows and doors.

3. Show the location of the existing cylinder size and type and state if a wetback/hot water booster is to be fitted.



**Waimakariri District Council, Private Bag 1005, Rangiora; Telephone (03) 311 8900 - Fax (03) 313 4432**



# Wood Burners Check List

## What we need to know:

- ☐ Make and model of wood burner & installation instructions
- ☐ Make and model of flue & installation instructions
- ☐ Is it Ministry for Environment approved in the Waimakariri District? And is it approved for your property size? ([www.mfe.govt.nz/standards/woodburners](http://www.mfe.govt.nz/standards/woodburners))

- ☐ Floor plan showing where the heater is sited in the room in relation to windows and doors. The floor plan must be scaled or dimensioned. (*See Floor Plan example over page*)
- ☐ Smoke detectors (where they are located in the building)

All smoke detectors must be installed prior to final inspection and must be fitted with the "Hush" Button facility.

**NB:** Must be within three metres from the bedroom door and in the escape route.

For further information read our fact sheet "Domestic Smoke Alarm Systems for Dwellings".

## Details on the Fire location (*See Fire Site example over page*)

- ☐ Distance from walls
- ☐ Distance from windows and curtains (if any)
- ☐ Distance from Doors

## Roof Details

- ☐ Pitch \_\_\_\_\_
- ☐ Material \_\_\_\_\_

Flashing type (please tick below)

- ☐ Concrete tiles with lead flashings
- ☐ Metal tiles & profiled metal sheets with EPDM flexible boot with soaker flashing
- ☐ Other (specify in detail)

## Hot Water Cylinder

- ☐ Wetback/Hot water booster location (show location on floor plan if applicable)
- ☐ If no previous wetback, then full details of HWC and valving is required

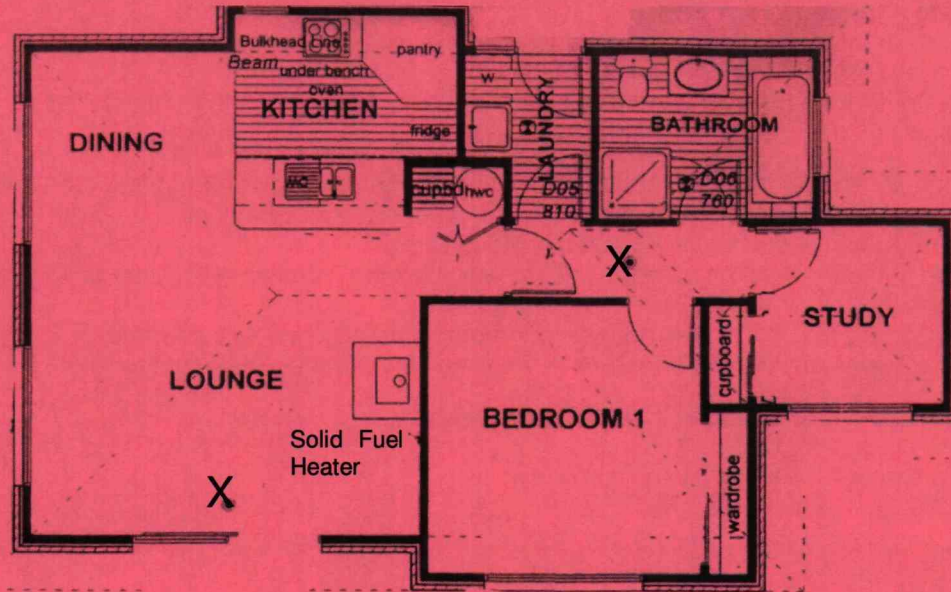
## Inbuilt specific information

- ☐ Is the fire being placed into an existing fire place or ready made alcove? (Tick one)
  - ☐ Existing fire place                      ☐ Ready made alcove
- ☐ If purpose made alcove we need to know construction materials used, alcove size, and construction details for any proposed heat screens.

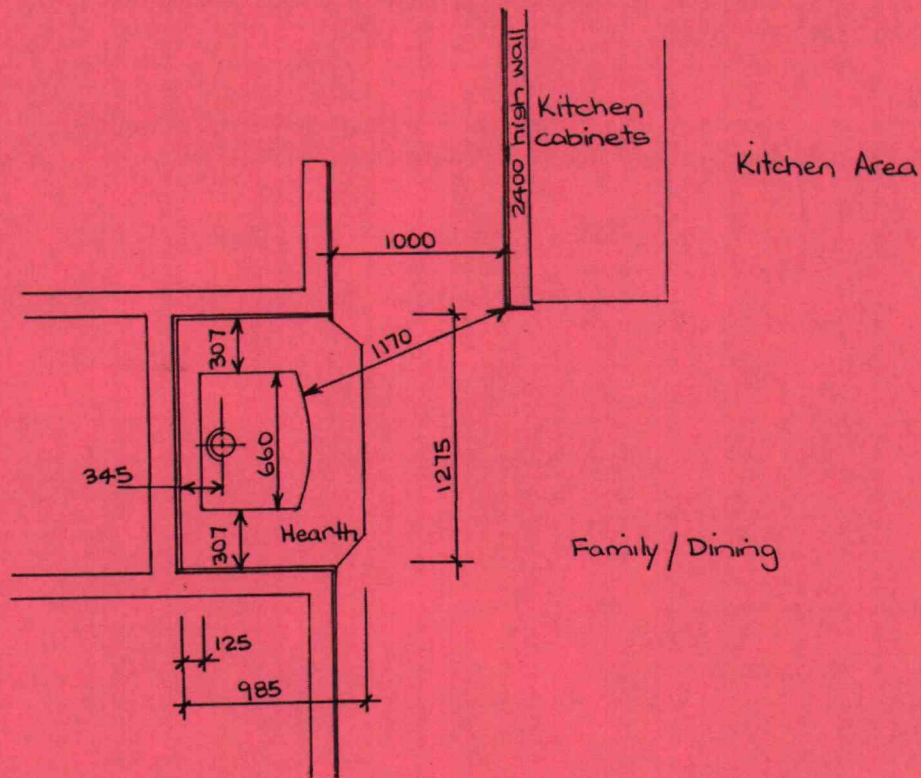


## FLOOR PLAN EXAMPLE

X = SMOKE ALARMS

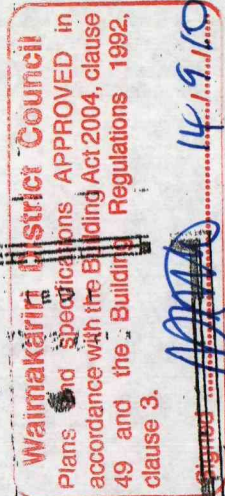


## FIRE SITE EXAMPLE





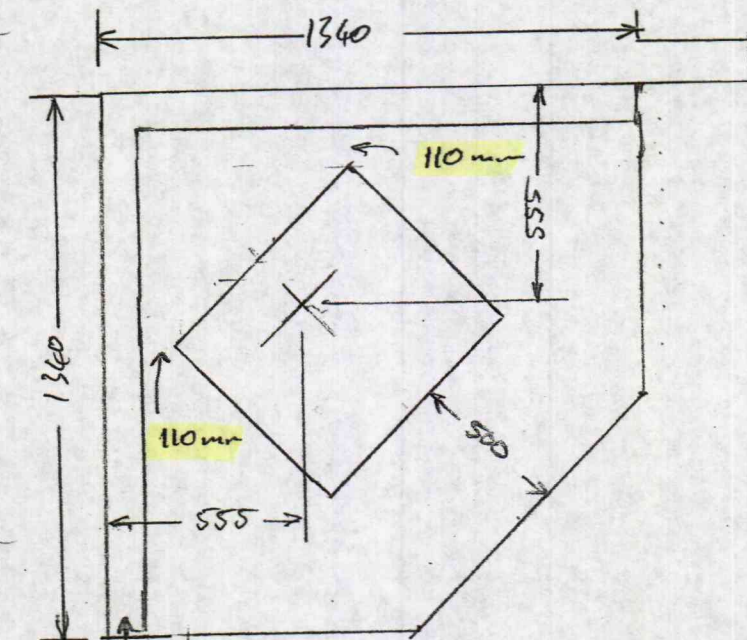
MONKEY POINTS (07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 84



⊗ Smoke alarm



Smoke detectors are required.  
The smoke detector must comply  
with Section 3F7 of NZBC



Brick wall 1130 high. (not heat shield).

Whyte 274 Kingsbury Ave Reg.

Metro Eco Euro Red

670 wide  
575 deep.

Waimakariri District Council  
Plans and specifications APPROVED in  
accordance with the Building Act 2004, clause  
49 and the Building Regulations 1992,  
clause 3.  
Signed ..... 14.7.10



## 09 Wood Fire Specifications



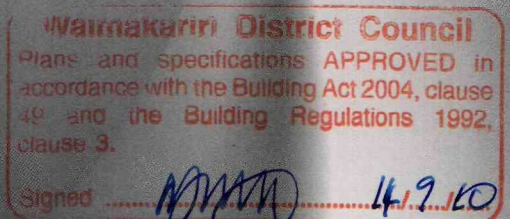
# metrofires

### Outside of Central Otago Air Shed 1, Canterbury & Nelson Clean Air Zones

As a general rule, any wood fire that is tested and complies with the National Environmental Standard can be installed on properties less than 2 hectares. ECAN and MFE have an approved list of wood fires that comply with their "more stringent" requirements for Canterbury and Nelson clean air areas.

If you live outside of these areas (the rest of New Zealand) legally all you need to gain approval from your local authority is a copy of the test certificate detailing that the Metro of your choice complies with the National Environmental Standard. Metro test certificates are available from the Metro website.

[www.metrofires.co.nz](http://www.metrofires.co.nz)





# National Environmental Standards

National Environmental Standards came into effect throughout New Zealand in 2005, imposing a minimum 65% efficiency and maximum 1.5gm emission requirements on all woodfires installed on properties with a land area of less than two hectares. Properties of two hectares or more are exempt from this National Environmental Standard. This effectively creates two woodfire markets, and as a consequence Metro are manufacturing a range of product for each;

## ECO Metros

Designed for properties less than two hectares, ECO Metros surpass the requirements of the National Environmental Standard. Utilising advanced combustion technology ECO Metros have a more complex firebox design which operate at higher combustion temperatures, but offer shorter burn times than their LTD Metro equivalents.

## LTD Metros

Designed for properties two hectares or more, LTD Metros retain features like overnight burning and genuine wetbacks while still meeting internationally accepted efficiency and emission standards.

*Note – Some regional councils have imposed emission requirements which take precedence over the National Environmental Standard, while some other councils within New Zealand have imposed or are considering adopting bylaws relating to environmental issues. If in doubt talk to your Metro retailer.*

ECO Models	Tested Emission & Efficiency		Complies with National Environmental Standards
	Without Wetback	With Wetback	
ECO Tiny Rad	0.94gms/75.0%	0.85gms/67.0%	With & Without Wetback
ECO Tiny Trad	0.72gms/78.0%	1.0gms/66%	With & Without Wetback
ECO Tiny Ped	0.72gms/78.0%	1.0gms/66%	With & Without Wetback
ECO Wee Rad	0.88gms/70.4%	0.96gms/65.2%	With & Without Wetback
ECO Wee Trad	0.88gms/70.4%	0.96gms/65.2%	With & Without Wetback
ECO Wee Ped	0.88gms/70.4%	0.96gms/65.2%	With & Without Wetback
ECO Wee Curve (DV)	0.65gms/68.0%	Under test at time of printing	
ECO Xtreme Rad (DV)	0.89gms/68.2 %	0.94gms/68.8%	With & Without Wetback
ECO Xtreme Ped (DV)	0.86gms/69.4%	1.04gms/67.4%	With & Without Wetback
ECO Euro Rad (DV)	0.72gms/72.0%	Not tested	Without Wetback only
ECO Euro Trad (DV)	0.65gms/70.4%	1.08gms/70.2%	With & Without Wetback
ECO Euro Ped (DV)	0.65gms/70.4%	1.08gms/70.2%	With & Without Wetback
ECO Insert	0.91gms/65.0%	Not tested	Without Wetback only

LTD Models	Tested Emission & Efficiency		Complies with AS/NZS4013:1999
	Without Wetback	With Wetback	
LTD Wee Rad	2.3gms/71%		With & Without Wetback
LTD Wee Ped	2.3gms/71%		With & Without Wetback
LTD Xtreme Rad	3.3gms/63%		With & Without Wetback
LTD Xtreme Ped	3.3gms/63%		With & Without Wetback
LTD Euro Ped	3.3gms/63%		With & Without Wetback
LTD Mega Rad	2.0gms/65.6%		With & Without Wetback
LTD Mega Ped	2.0gms/65.6%		With & Without Wetback
LTD Mega Built-In	1.5gms/53%		With & Without Wetback
LTD Insert	2.3gms/58%		With & Without Wetback

- Test certificates for all Metro ECO fires are on [www.metrofires.co.nz](http://www.metrofires.co.nz)
- All ECO Metros "without wetbacks" can be installed on any property size New Zealand wide. Nelson & Christchurch have specific zones restricting the installation of woodfires for homes that have not had an existing woodfire previously installed (see your Metro retailer)

- All ECO Metros "with wetbacks" can be installed within New Zealand on any property that is two hectares or more in size. Most ECO models can be installed with a wetback in clean air zones, some restrictions apply to some models/regions.
- All LTD Metros "with or without wetbacks" can be installed anywhere in New Zealand providing the property is two hectares or more.

## Direct Vent ECO Metro's

New to the Metro range are the larger ECO Metros which incorporate the very latest Direct Vent [DV] technology. These "DV" Metros offer two significant advantages;

- All air consumed during combustion enters the appliance near the bottom/rear of the firebox, this enables both the primary and secondary air supply to be pre-heated to very high temperatures before entering the firebox. This air supply is ducted over the rear face of the firebox, then through preheating tubes fitted into the firebox's secondary burn chamber, resulting in emission and efficiency levels detailed in the chart above.



There are three Direct Vent kits available – DV WALL KIT ducts through an outside wall, DV FLOOR KIT ducts through the floor directly behind the Metro and the DV CEILING KIT ducts into the wall cavity and up into the ceiling cavity.

- Metros with the "DV" technology also offer the option of connecting the air supply to outside the home. laboratory testing confirms a typical woodfire producing 10kW's of heat at 67% efficiency consumes 8.4 litres of air per second burning fuel with a 17% moisture content, equating to around one "roomful" of air every hour. By connecting the air supply to outside the home the Metro consumes air drawn in from outside the home rather than using the heated air from within the home, saving fuel and further increasing the overall efficiency of the Metro.





# Insert Specification Sheet

## Pre Installation

Metro fireplace inserts are tested to/comply with AS/NZS 2918:2001 incorporating appendix "E" when installed in accordance with the installation and operation manual supplied with every Metro wood fire. Prior to installing your Metro fireplace insert into a masonry chimney, it is important that certain clearances and other requirements are complied with as detailed below :-

Chimney – The masonry chimney must be swept and checked for: -

- Cracks and general overall condition, with repairs carried out if necessary by a suitably qualified person.
- Cavity dimensions to ensure the fireplace insert will fit, it is usually necessary to remove the fire bricks from the lower masonry chimney cavity.
- The base of the masonry chimney cavity on which the Metro fireplace insert will rest must be level, if it is not, it should be levelled using mortar.
- If an ash removal door exists in the base of the chimney it should be sealed shut to prevent air entering the cavity.

## Mantel

If a timber or combustible mantelshelf exists above the fireplace insert opening, it should be a minimum distance above the top of the Metro's fascia, minimum distances are:

- Metro LTD Insert = 460mm
- Metro ECO Insert = 340mm
- Metro LTD Mega Built-In = 500mm

If less than the above minimum specified, a deflector or heat shield will be required to be fitted under the mantel.

## ECO Insert Fan

On properties less than 2 hectares, the Metro ECO Insert must be installed with Metro's ECO Insert fan which is a single speed, thermostatically controlled device. This fan must be permanently wired and therefore requires the services of a registered electrician. Fitting instructions for the fan are supplied with the fan module.

## Floor Protector Requirements

A floor protector must extend from behind the fascia the distance specified in the table below, and 200mm to each side of door opening.

NOTE – Floor protector requirements differ for the three models listed;

**LTD Insert:** Requires an insulated floor protector and the forward projection is dependant on the height of the fireplace insert above the combustible floor. The schedule of projections listed for heights of 0mm to 50mm+ can be achieved by the thickness of the floor protector, raising the insert or a combination of the two.

[Recommended construction is "tiled Promina board" with a combined thickness as specified]

**LTD Mega Built-In:** Requires a "minimal" insulating floor protector [recommended construction is "tiles on 6mm thick Promina board", although any non-combustible material fixed to the 6mm Promina board is suitable including glass or steel/aluminum sheet etc]

**ECO Insert:** Only requires a non-insulating "ash-hearth" floor protector [recommended construction is "tiles on 6mm thick villa board", although any non-combustible material fixed direct to the combustible floor is acceptable including glass or steel/aluminum sheet etc]

## Flue Systems

It is recommended all Metro wood fires be installed with the Metro ECO Flue System which comes complete with detailed installation instructions. All Metro ECO Flue Systems include Metro's vertical discharge cowl which improves draft and performance.

## Vented Zero Clearance Cabinet

The function of the Metro Vented Zero Clearance Cabinet (VZCC) is to enable the Metro LTD Insert and ECO Insert Fireplace to be installed into a timber framed wall. The VZCC therefore replaces the more traditional masonry chimney at a fraction of the cost. Detailed instructions for the VZCC are available from your Metro retailer.

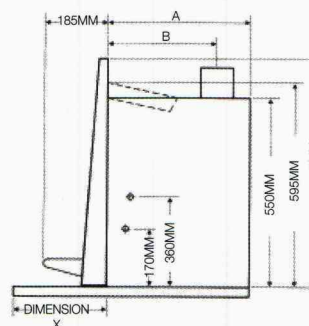
### Floor Protector Requirements

Height (Floor Protector)	0mm	10mm	15mm	20mm	25mm	30mm	35mm	40mm	41mm	45mm	50mm+
LTD Insert (Dimension X)	455mm	455mm	455mm	436mm	424mm	408mm	396mm	366mm	350mm	350mm	350mm
LTD Mega Built-In	Dimension X = 330mm minimum projection is required irrespective of the height of the floor protector.										
ECO Insert	Dimension X = 300mm minimum projection is required irrespective of the height of the floor protector.										

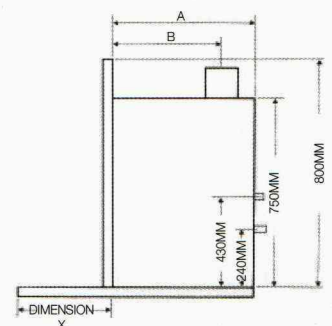
Fascia Model	Base width	Body Width
LTD & ECO Trend Fascia	810mm	810mm
LTD & ECO Trad Fascia	900mm	810mm
LTD Mega Built-In Fascia	900mm	900mm

Firebox Model	A	B	Width
ECO Insert	500mm	405mm	560mm
LTD Insert	500mm	405mm	560mm
LTD Mega Built-In	600mm	340mm	800mm

### LTD & ECO Inserts



### LTD Mega Built-In



### LTD & ECO Inserts - The wall opening cavity size required

Width of opening	Height of opening	Depth of opening
700mm Suggested	685mm Suggested	575mm Minimum
800mm Maximum	690mm Maximum	
690mm Minimum	685mm Minimum	

### LTD Mega Built-In - The wall opening cavity size required

Width of opening	Height of opening	Depth of opening
850mm Suggested	780mm Suggested	650mm Minimum
880mm Maximum	790mm Maximum	
820mm Minimum	760mm Minimum	



# Installation Clearances & Specifications

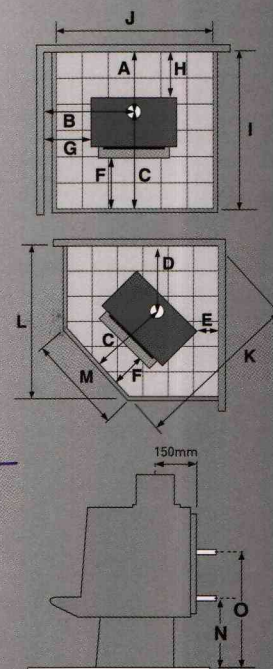
Minimum clearances shown are in mm, with a Pioneer double flue mounted shield fitted. All Metro wood fires comply with AS/NZS2918:2001. Specifications were correct at the time of printing, but may alter and those detailed within should be used only as a guide. Refer to the installation and operation manual supplied with every Metro, or if in doubt, consult your Metro retailer.

## Clearance reductions

AS/NZS 2918:2001 allows for a reduction in minimum clearances as detailed in tables 3.1 and 3.2 of the standard which your Metro retailer will be able to advise you on. Pioneer has also tested certain model Metros with "side extensions" fitted to the Pioneer double flue mounted shield, to achieve a reduction in clearances, details are;

- The LTD Wee Ped installed with a Pioneer double flue mounted shield with side extensions fitted can have side clearances B and G reduced by 80mm if installed into an alcove which does not project forward of the Metro.
- The ECO Euro Ped, ECO Xtreme Ped and ECO Euro Trad installed with a Pioneer double flue mounted shield with side extensions fitted reduces minimum corner clearance E from 170mm to 110mm. In this situation use the LTD Metro equivalent for measurements E, D, K & L. (i.e use LTD Euro Ped chart for ECO Euro Ped for E, D, K & L).
- The LTD Wee Rad and LTD Wee Ped rear clearance (H) and overall floor protector depth (I) can reduce by 50mm providing a wetback is not fitted and therefore maintenance access is not required.

Model Clearances	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
ECO Tiny Rad	225	552	580	420	150	200	300	75	805	650	1165	925	250	280	470
ECO Tiny Trad	210	430	580	290	25	200	185	60	790	650	990	875	250	295	485
ECO Tiny Ped	210	430	580	290	25	200	185	60	790	650	990	875	250	280	470
ECO Wee Rad	260	525	580	385	80	200	220	110	840	825	1125	950	425	295	485
ECO Wee Trad	260	595	580	385	85	200	300	110	840	825	1120	950	425	295	485
ECO Wee Ped	260	595	580	385	85	200	300	110	840	825	1120	950	425	295	485
ECO Wee Curve (DV)	300	555	580	385	80	200	250	150	880	825	1125	950	425	280	470
ECO Xtreme Rad (DV)	250	575	625	435	80	200	200	100	875	905	1240	1065	505	338	528
ECO Xtreme Ped (DV)	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515
ECO Euro Rad (DV)	250	625	625	435	80	200	250	100	875	905	1240	1065	505	338	528
ECO Euro Trad (DV)	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515
ECO Euro Ped (DV)	230	585	625	495	170	200	250	80	855	905	1325	1120	505	325	515
LTD Wee Rad	250	555	580	400	80	200	250	100	830	825	1145	950	425	295	485
LTD Wee Ped	250	595	580	400	85	200	300	100	830	825	1145	950	425	295	485
LTD Xtreme Rad	250	575	625	455	80	200	200	100	875	905	1265	1065	505	353	543
LTD Xtreme Ped	250	575	625	455	110	200	240	100	875	905	1265	1065	505	340	530
LTD Euro Ped	250	575	625	455	110	200	240	100	875	905	1265	1065	505	340	530
LTD Mega Rad	270	675	725	500	125	200	300	120	995	905	1425	1175	505	353	543
LTD Mega Ped	270	610	725	465	130	200	275	120	995	905	1400	1140	505	340	530



Wetback connections for the Tiny models are 92mm left of the flue centre, all other Metro models are 140mm left of the flue centre facing the Metro/wall.

Model Dimensions	Width	Depth	Height	Firebox	*Area
ECO Tiny Rad	505	530	665	36 litres	120m2
ECO Tiny Ped/Trad	490	530	665	36 litres	120m2
ECO & LTD Wee Rad	607	530	665	50 litres	150m2
ECO & LTD Wee Ped/Trad	590	530	665	50 litres	150m2
ECO Wee Curve	607	530	665	50 litres	150m2
ECO & LTD Xtreme Rad	750	575	745	68 litres	220m2
ECO & LTD Xtreme Ped/Trad	670	575	715	68 litres	200m2
ECO Euro Rad	750	575	745	68 litres	220m2
ECO & LTD Euro Ped/Trad	670	575	715	68 litres	220m2
LTD Mega Ped	670	675	715	103 litres	280m2
LTD Mega Rad	750	675	745	103 litres	280m2
ECO Insert Firebox	560	500	550	56 litres	140m2
LTD Insert Firebox	560	500	550	63 litres	150m2
LTD Mega Built-In	800	600	750	70 litres	220m2
ECO/LTD Trad Fascia	805/900	195	655/685		
ECO/LTD Trend Fascia	810	180	650		
LTD Mega Built-In Fascia	900	30	800		

\*Area - Estimated on a 2.4m stud height in an average climate/insulation. If you are unsure of the correct Metro for your requirements, please consult with your Metro retailer.

## Floor Protectors

Freestanding Metro wood fires do not require an insulating floor protector, as they are tested and comply with the minimum floor protector requirements of AS/NZS 2918:2001. Note:

- Minimum floor protector sizes are specified in the clearance chart above.
- A floor protector can include ceramic tiles with grouted joints, a sheet of toughened glass, panel steel or any other non combustible material laid directly onto a wooden floor.
- If being installed onto a concrete or non combustible floor, no floor protector is required.

## Flue Systems

All Metro freestanding wood fires should be installed with the energy efficient Metro ECO Flue System which comes complete with detailed installation instructions. All Metro ECO Flue Systems include Metro's vertical discharge cowl which improves draft and performance.

**PIONEER**  
MANUFACTURING LIMITED

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Phone 06-756 6520 | Fax 0800 HOTFAX - 0800 468 329  
www.metrofires.co.nz | info@metrofires.co.nz

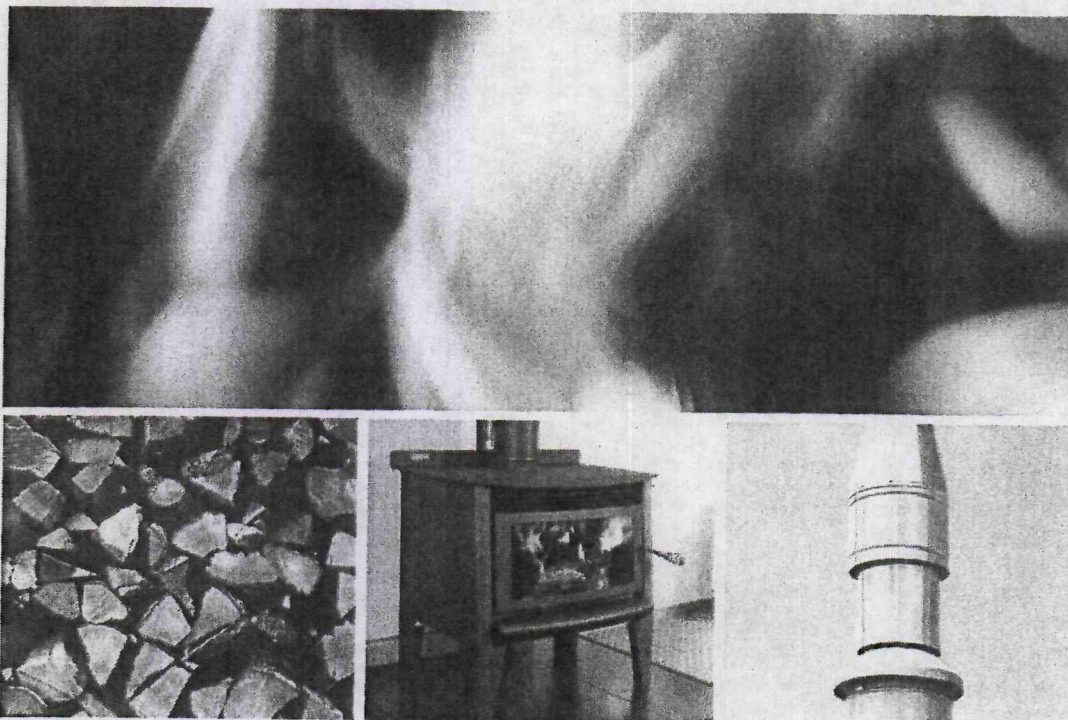
All measurements listed are correct at time of printing.



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## ECO Flue System Installation Manual



# metrofires

## ECO Flue Systems

### Freestanding Flue Systems

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## ⚠ **WARNING!** Important Information

- Metro ECO Base Flue Systems must be installed to allow unrestricted air supply from either the ceiling cavity for an eco base kit, or above the roof line if the base & option kits are both installed. Please read these and familiarise yourself with the installation options and various components of the ECO Flue Systems
- The ECO Base Flue System must be installed into a "vented" flat ceiling cavity, or have an ECO Option Kit added to the flue system to provide an external air supply
- The ECO Flue Systems shall be installed in accordance with AS/NZS2918:2001 and the appropriate requirements of the relevant building codes
- Any modification to this flue system that has not been approved in writing by the testing authority is considered to be in breach of all approvals granted

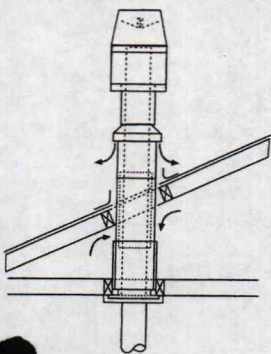
## ⚠ **CAUTION!** Important Information

- Mixing of flue system components from different sources or modifying the dimensional specification or components may result in hazardous conditions. Where such action is considered, the manufacturer should be consulted.
- Prior to installing the assembled flue pipe into the masonry chimney cavity, take careful note to ensure there are no overhead power lines in close proximity.

## Installation Options ECO Flue Systems

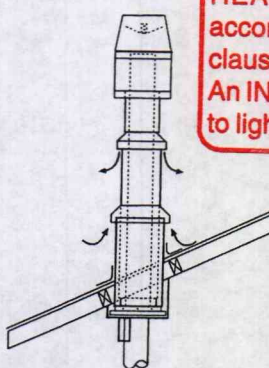
Detailed below are the more common installation methods for installing Metro ECO Flue Systems. To ensure a safe and efficient installation, this flue system must be installed as detailed below by either a registered installer, or someone competent in installing solid fuel appliances.

### Single Storey Installations



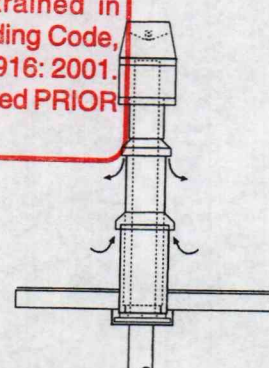
**FLAT CAVITY CEILING**

ECO Base Flue System only required as air is drawn into the flue system direct from the ceiling cavity.



**SLOPING CEILING**

Both the ECO Base Flue System and Option kit are required to enable air to be drawn from outside the home.

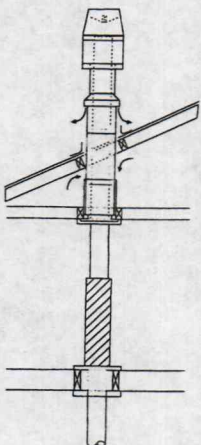


**FLAT CEILING/ROOF**

Requires both ECO Base Flue System and Option kit as per sloping ceiling unless a vented ceiling cavity exists.

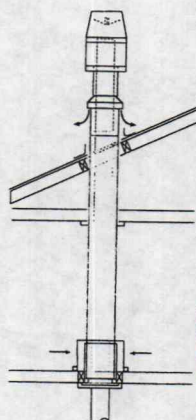
**HEATING UNIT and FLUE to be installed in strict accordance with the manufacturers instructions. UNIT and HEARTH shall be restrained in accordance with the Building Code, clause B1 and AS/NZS 2916: 2001. An INSPECTION is required PRIOR to lighting the fire.**

### Two Storey Installations



**2ND FLOOR EXPOSED FLUEPIPE**

Requires an ECO Base Flue System only with additional lengths of Fluepipe, a floor penetration kit, 1 x 1200mm long mesh/screen.



**2ND FLOOR ENCLOSED FLUEPIPE**

Requires an ECO Base Flue System only with additional lengths of Fluepipe, 200mm & 250mm inner/outer combination liners, an ECO 2nd floor vent cover and an additional ceiling plate with a 250mm diameter hole.

**Wairarapa District Council**  
Planned and Specified Building Act 2004, clause 49 and the Building Regulations 1992, clause 3.  
Signed  14.7.10



# Component Checklist ECO Base Flue System Kit & ECO Option Kit

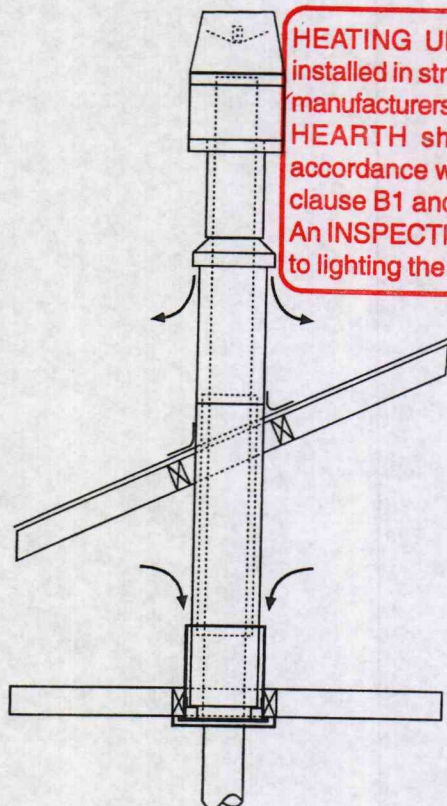
Metro offer both the ECO Base Flue System, which is designed to be installed on its own and the ECO Option kit which is designed to be installed in conjunction with the ECO Base Flue System. The specific application for each of these two options is detailed below.

**Metro ECO Base Flue System Kit** - Metro ECO Base Flue Systems are designed for installation into a building that has a "ceiling cavity" with unrestricted air supply as is the case with

conventional homes. A vented ceiling cavity is required as the base kit draws its cooling air from the ceiling cavity.

**Metro ECO Option kits** - The Metro ECO Option kit is designed to be "added to" the Metro ECO Base Flue System for installations that do not have a vented ceiling cavity and require the flue systems cooling air to be drawn in from above the roofline (outside the building).

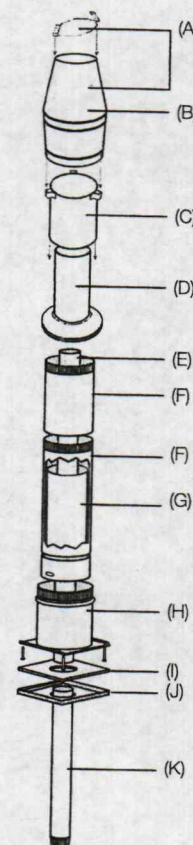
## ECO BASE FLUE SYSTEM ASSEMBLED



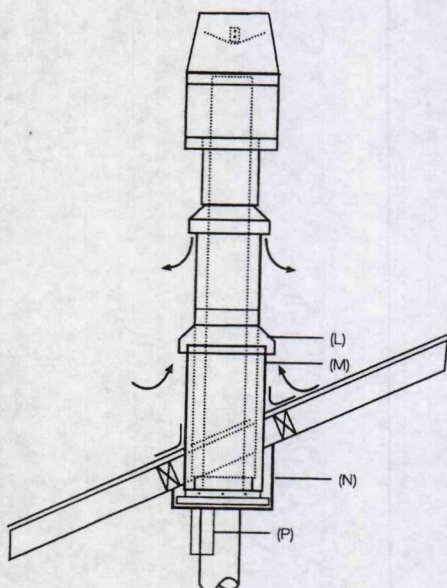
**HEATING UNIT and FLUE to be installed in strict accordance with the manufacturers instructions. UNIT and HEARTH shall be restrained in accordance with the Building Code, clause B1 and AS/NZS 2916: 2001. An INSPECTION is required PRIOR to lighting the fire.**

## ECO BASE FLUE SYSTEM COMPONENTS

- (A) 1 x Stainless steel weather butterfly
- (B) 1 x Stainless steel ECO cowl housing
- (C) 1 x 225mm x 200mm diameter stainless steel outer casing extension
- (D) 1 x 480mm long stainless steel flue pipe extension with flashing cone
- (E) 1 x 1200mm x 150mm diameter stainless steel flue pipe
- (F) 1 x 1200mm x 250mm diameter galvanised outer casing with 750mm long slip section
- (G) 1 x 800mm x 200mm diameter galvanised inner casing
- (H) 1 x Galvanised mounting plate with brackets and 300mm long x 300mm diameter casing attached
- (I) 1 x insulation gasket
- (J) 1 x black clip-on ceiling plate
- (K) 2 x 1200mm lengths of 150mm diameter stainless steel flue pipe painted metallic black
- (+) - 1 x Plastic bag of assembly bolts

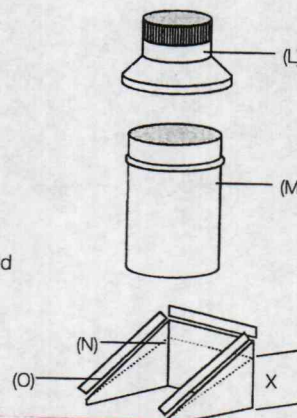


## ECO BASE FLUE SYSTEM & ECO OPTION KIT ASSEMBLED



## ECO OPTION KIT COMPONENTS

- (L) External intake flashing cone
- (M) 300mm diameter outer liner extension
- (N) Drop box infill panel
- (O) Drop box edge covers
- (P) Ceiling plate mounted heat shield



**Waimakariri District Council**  
Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, clause 3.  
Signed *[Signature]* 14/9/10



# Installation Instructions ECO Base Flue System

Having positioned the wood fire in the desired location, check to ensure the wood fire and floor protector have adequate clearances/projections, and that the flue system is clear of ceiling joists, trusses etc. (refer to the wood fire Installation and Operation Manual).

*Note: ECO Flue Systems use stainless steel brackets enabling movement due to expansion, while centralising flue pipes and casings. These brackets may require resetting after transport, if they are too loose or tight during assembly;*

1. At a point directly above the wood fires flue centre, cut a 300mm square hole through the ceiling and a 250mm diameter hole through the outer roof lining providing it is non combustible (iron, tiles etc) otherwise cut a 250mm square hole through the roof lining. "Trim out" the top face of the ceiling using timber nog's creating a square aperture measuring 300mm internally.

*Note: Certain flashing manufacturers detail specific size and shape of the aperture to be cut for their flashing, which must be adhered to.*

2. Fit mounting plate (H) into the ceiling by sliding the 300mm diameter casing attached to the mounting plate up into the ceiling until the two upturned edges rest against the under side of the ceiling. Square the mounting plate to the wall and secure it in location with the 4 coach bolts supplied, into the nogs just fitted. To further improve the rigidity of the installation, nail through the 300mm diameter casing at 4 points into the timber nogs.
3. Moving onto the roof with the 1200mm x 250mm diameter galvanised outer casing (F) with 750mm long slip section fitted, lower the slotted end of this casing (F) into the roof cavity until it locates inside the brackets on the top face of the mounting plate. Return back into the room and using the 2 x 6mm bolts and washers supplied, securely bolt the base of the 250mm diameter outer casing to the rivet nuts pre-fitted into the mounting plate brackets.

*Note: As there are two bolts, the outer casing can be rotated 180 degrees. Ensure the lock-form seam is rotated so the seam is sheltered as much as possible from the prevailing weather direction.*

Return back onto the roof and using a suitable flashing, weather proof the joint where the 250mm diameter outer casing penetrates the roof. Ensure the flashing used is compatible with the roofing material, and if fitting instructions are supplied with the flashing, these must be adhered to. Prior to fitting the flashing, by fitting brackets securing the outer casing (F) to the roof material will further improve rigidity of the installation.

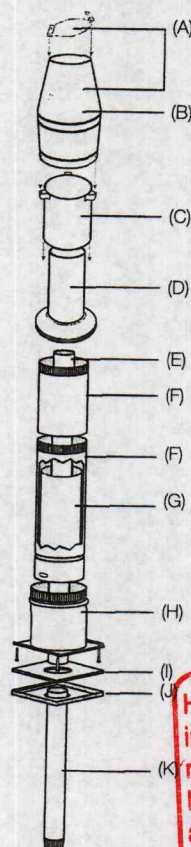
5. While on the roof fit the 800mm x 200mm diameter galvanised inner casing (G).

*Note: This inner casing has a top and bottom, the bottom end has both internal and external brackets while the top end has external only. Fit the bottom end of this inner casing (G) down into the 250mm diameter outer casing (F) until the casings lower external brackets locate on the internal swadge of the outer casing.*

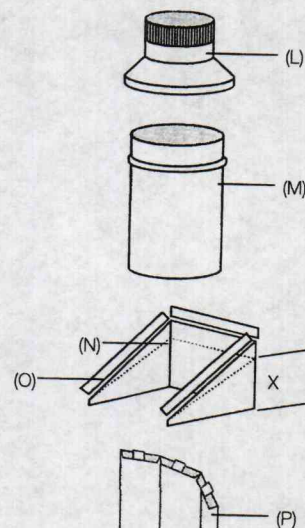
## ⚠ WARNING! Important Information

- If there is timber or combustibles within 25mm of the outer casing (f) in a zone "above the top end of the inner casing (g) and below the roof line" additional 200mm inner casing must be fitted.

### ECO BASE FLUE SYSTEM KIT COMPONENTS



### ECO OPTION KIT COMPONENTS



**HEATING UNIT and FLUE to be installed in strict accordance with the manufacturers instructions. UNIT and HEARTH shall be restrained in accordance with the Building Code, clause B1 and AS/NZS 2916: 2001. An INSPECTION is required PRIOR to lighting the fire.**

6. Moving back into the home, remove the plastic film from the ceiling plate (J) and place it black side down over the flue outlet of the woodfire. Using a high temperature black aerosol, spray around the hole in the centre of the white insulation gasket, and when dry lay this centrally on the ceiling plate.
7. Unwrap the two painted flue pipes (K) taking care not to mark the painted surface (use a metallic black Stovebright aerosol for touch ups) and proceed to assemble the three fluepipe sections as described below;
  - Smear an adequate amount of Pioneer fire cement inside the "top/un-crimped" end of both painted flue pipes (K).
  - Taking the unpainted stainless steel fluepipe (E) insert its top "un-crimped" end up through the mounting plate (H) and up into the casings until its bottom "crimped" end is 1250mm above the top of the wood fire.
  - Take one of the two painted stainless steel flue pipes (K) and fit its lower "crimped" end into the Metro wood fires flue outlet. Now lower the unpainted stainless steel flue (E) which is protruding down from the mounting plate so that it fully connects into the lower painted flue pipe (K). Ensure these two flue pipe sections are firmly connected and aligned, then secure with three stainless steel or monel rivets spaced equally around the joint.
  - Lift the two assembled flue pipe sections so the bottom of the lower section is 1250mm above the top of the wood fire, and repeat the above procedure to fit the remaining painted flue pipe (K).

signed .....

14.9.10



## Installation Instructions ECO Base Flue System - continued

- With all three fluepipe sections securely joined, lift this three section assembly out of the wood fires flue outlet, then move it slightly off centre and lower the flue pipe assembly "on top" of the wood fires flue outlet. Smear an adequate amount of Pioneer fire cement inside the wood fires flue outlet (move the flue pipe assembly as required to ensure the entire flue outlet is coated in fire cement) then lower the flue pipe back into the wood fires flue outlet, with the vertical flue seam facing the rear.
- 8. Taking the ceiling plate (J) with insulation gasket (I) fitted which are laying on top of the wood fire, with the flue pipe passing through them. Carefully lift them up the flue pipe trying not to mark the painted flue, and clip the ceiling plate onto the mounting plate.
- 9. While still on the ground, assemble the ECO vertical discharge cowl as follows;
  - Take the stainless steel weather butterfly (A) so the angled sections are facing up and fold "up" both arms at the slot provided to just over 90 degrees as shown.
  - With both arms and angled sections of the stainless steel weather butterfly (A) facing up, fit it into the stainless steel cowl housing (B), and secure in position through the holes provided with stainless steel rivets.

*Note: Once fitted the weather butterfly will be slightly angled within the cowl housing.*
- Now fit the base of the cowl housing (B) over the brackets of the outer casing extension (C) ensuring the 3 x prepunched holes punched in its lower skirt align centrally over the 3 brackets attached to the casing extension as illustrated. Push the cowl housing down fully until its internal swage rests on the casing extension brackets (the brackets should be "just but fully" inside the base of the cowl housing). Drill through the 3 pre-punched holes in the cowl housing through the 3 brackets and secure with stainless steel rivets.
- 10. Making your way back onto the roof, slide the 750mm long slip section of the outer casing (F) until the top of this slip section is "level" (+ or -10mm) with the top of the 150mm stainless steel flue pipe, then secure this slip section of the outer casing with rivets.
- 11. Fit the 480mm long flue pipe extension/flashing cone (D), with the flashing cone at the bottom, fit its short flue section inside the top of the already installed 150mm diameter flue pipe. Ensure the 3 brackets extended below the flashing cone fit "outside" the outer casing slip section. Drill through the pre-punched hole in all 3 brackets into the outer casing slip and secure with rivets.
- 12. Taking the "removable section of the ECO cowl", position it over the top of the stainless steel flue pipe extension, and slide it down fully. This removable section does not require riveting and therefore enables easy removal for future flue cleaning.

## Installation Instructions ECO Option Kit

Dependant on whether you are installing into a flat roof/ ceiling or sloping ceiling situation as detailed on page 2, will determine if you require all the components of the ECO Option kit, if installing into a flat ceiling/roof you will not require the drop box or drop box edge covers.

*Note: The 300mm diameter outer liner extension (M) supplied with the ECO Option kit is supplied at the maximum length it has been tested, and must not be extended.*

- 13. Slip the 300mm outer extension liner supplied with the ECO Option kit over the 300mm outer liner "stub" attached to the mounting plate (H) supplied with the base kit. Permanently secure these two components together by drilling 4 evenly spaced holes around the circumference and rivet with stainless steel rivets.
- 14. Proceed as detailed in item's 1 and 2 of the ECO Base Flue System kit's installation sheet and note:
  - If the ceiling is angled, it is critical that the mounting plate is correctly positioned so the drop box in-fill panel can be fitted. Ensure the two "upturned folds" on the mounting plate are aligned parallel to the roof joists, i.e pointing towards the apex.
  - If the ceiling is angled, you will only be able to use two of the securing holes provided in the mounting plate. To give additional support to the installation nail through the 300mm diameter outer liner into the timber framing, access is through the 200mm hole in the base of the mounting plate.
- 15. Proceed as detailed in item 3 of the ECO Base Flue System Kit installation instructions.
- 16. Fit the external "intake" flashing cone supplied with the option kit as illustrated, and secure it to the top of the 300mm diameter extension liner through the 4 x brackets which protrude below the base of the external "intake" flashing cone.
- 17. Proceed as detailed in items 4 through 9 of the ECO Base Flue System Kit installation instructions.
- 18. Measure dimension "X" as shown opposite and transfer this measurement to the drop box in-fill panel as shown.
  - Cut the in-fill panel to the correct size and fit the 3 x edge covers.

*Note the side edge covers will require trimming on the ends to suit the angle of the ceiling.*

- Secure the in-fill panel in position by fitting three rivets to each side through the holes provided.
- 19. Back in the room, lift the ceiling plate then attach the "ceiling plate mounted heat shield" to the lower face of the ceiling plate so that it acts as a deflector shield between the flue pipe and the lower side of the ceiling (refer assembled diagram on page 3). This heat shield has 3 tabs on its top face enabling it to be "clipped" into the 160mm diameter hole in the ceiling plate. Attach the ceiling plate by clipping it onto the mount plate and the installation is now complete.

Signed

14/9/10



# Component Checklist ECO Base Flue System Kit & ECO Option Kit

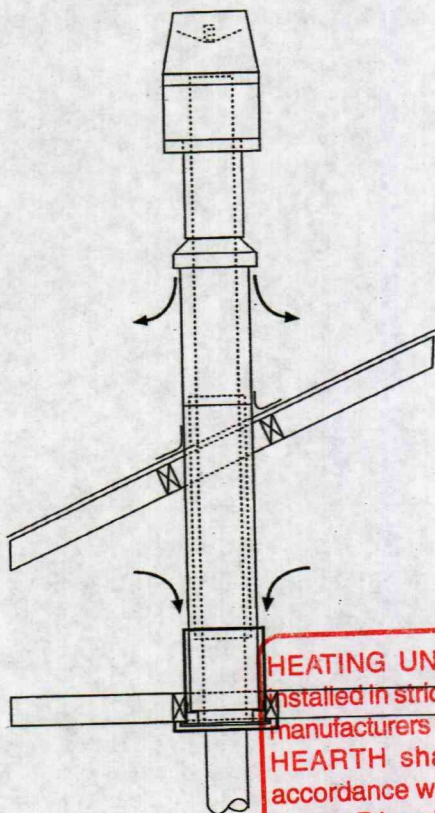
to offer both the ECO Base Flue System, which is designed to be installed on its own and the ECO Option kit which is designed to be installed in conjunction with the ECO Base Flue System. The specific application for each of these two options is detailed below.

**Metro ECO Base Flue System Kit** - Metro ECO Base Flue Systems are designed for installation into a building that has a "vented ceiling cavity" with unrestricted air supply as is the case with

conventional homes. A vented ceiling cavity is required as the base kit draws its cooling air from the ceiling cavity.

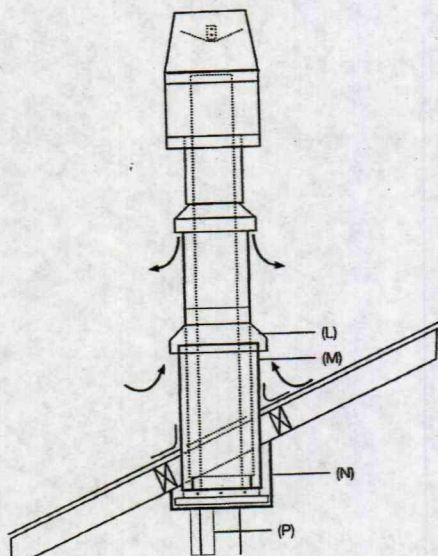
**Metro ECO Option kits** - The Metro ECO Option kit is designed to be "added to" the Metro ECO Base Flue System for installations that do not have a vented ceiling cavity and require the flue systems cooling air to be drawn in from above the roofline (outside the building).

## ECO BASE FLUE SYSTEM ASSEMBLED



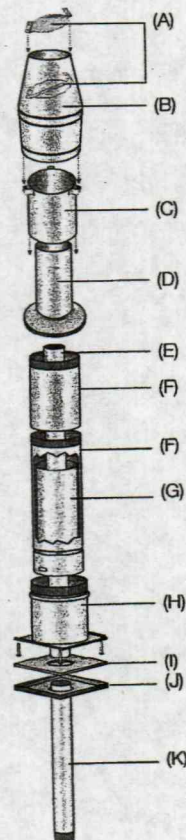
**HEATING UNIT and FLUE to be installed in strict accordance with the manufacturers instructions. UNIT and HEARTH shall be restrained in accordance with the Building Code, clause B1 and AS/NZS 2916: 2001. An INSPECTION is required PRIOR to lighting the fire.**

## ECO BASE FLUE SYSTEM & ECO OPTION KIT ASSEMBLED



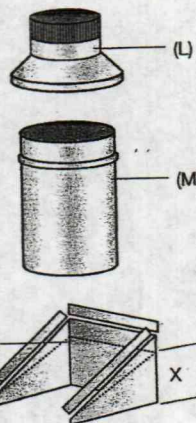
## ECO BASE FLUE SYSTEM COMPONENTS

- (A) 1 x Stainless steel weather butterfly
- (B) 1 x Stainless steel ECO cowl housing
- (C) 1 x 225mm x 200mm diameter stainless steel outer casing extension
- (D) 1 x 480mm long stainless steel flue pipe extension with flashing cone
- (E) 1 x 1200mm x 150mm diameter stainless steel flue pipe
- (F) 1 x 1200mm x 250mm diameter galvanised outer casing with 750mm long slip section
- (G) 1 x 800mm x 200mm diameter galvanised inner casing
- (H) 1 x Galvanised mounting plate with brackets and 300mm long x 300mm diameter casing attached
- (I) 1 x insulation gasket
- (J) 1 x black clip-on ceiling plate
- (K) 2 x 1200mm lengths of 150mm diameter stainless steel flue pipe painted metallic black
- (L) 1 x Plastic bag of assembly bolts



## ECO OPTION KIT COMPONENTS

- (L) External intake flashing cone
- (M) 300mm diameter outer liner extension
- (N) Drop box infill panel
- (O) Drop box edge covers
- (P) Ceiling plate mounted heat shield



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**Waimakariri District Council**  
Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, clause 3.

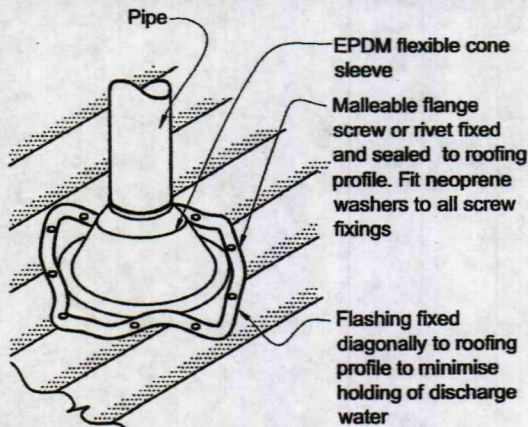
Signed .....

*[Signature]* 14/7/10



Figure 53: Flashing for small pipes

Paragraphs 8.3.10, 8.4.17 a), 9.6.8.5 and 9.6.9.6



## NOTE:

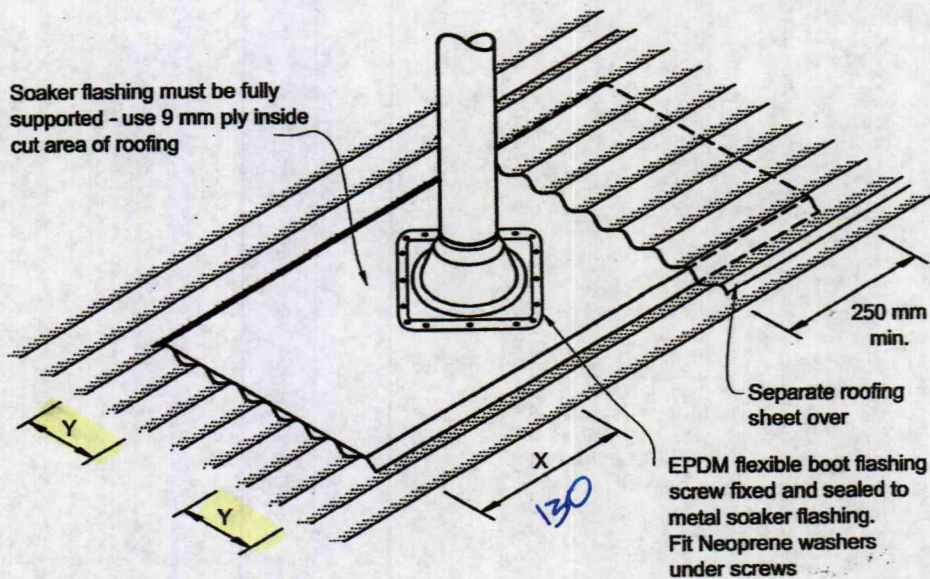
- (1) Max. roof pitch for this flashing 45°, minimum pitch 10°.
- (2) For pipes up to 60 mm diameter.

Soaker Flashings

Figure 54: Soaker flashing for pipe penetrations

Paragraphs 8.3.10 and 8.4.17 b)

- NOTE: (1) X = variable according to wind zone – refer Table 7.
- (2) Y = to cover minimum of two crests – refer Table 7.
- (3) Suitable for pipes from 60 mm to 500 mm diameter.
- (4) Suitable only for roof pitches of 10° or higher.

Amend 2  
Jul 2005Amend 2  
Jul 2005

Waimakariri District Council

Plans and specifications APPROVED in accordance with the Building Act 2004, clause 49 and the Building Regulations 1992, clause 3.

Signed

14/9/10