Evidence in chief from AIR Inc. (prepared by John Hoare, Secretary) concerning the matter of Public Hearings on the Proposed Canterbury Air Regional Plan March 2015

1. Introduction/background (to this Evidence in chief)
   From the internet I gather that, in the present instance, Evidence in Chief refers essentially to all written material, emails, bona fide records, etc. advanced/referred to by AIR Inc. considered (by us) relevant to its case. For the record, the stated Objects of the self funded/non profit-making Association for Independent Research (AIR) Inc are: “To assess and comment on the scientific basis for public health and resource management policy with particular reference to air quality issues”. Since our bona fide membership currently consists of 2 eminent (Christchurch) physicians plus several other highly qualified and experienced scientists, engineers, technicians, an energy analyst, a lawyer and a few community advocates (retired or self employed in the main) and with the core members of AIR Inc. having been intimately involved with the topic for 15 years or more, we consider ourselves well suited to preparing evidence in chief relevant to the public interest in the present context (urban air quality).

To help us here I’ve identified some relevant correspondence (by no means complete) identified under 1.1 – 1.16 below viz:

1.1 Email “Air Plan Review” 20th June 2014, being a summary of AIR Inc’s position at the time, as sent to ECan.  
1.2 Email 14th December 2014 sent to Murray Cleverly (CDHB)/Margaret Bazley (ECan) ——- concerning AIR Inc. member Pat Palmer’s 9/12/2014 letter to “The Press” doubting that removing domestic fires/reducing PM10 levels has, as claimed by ECan (David Bedford)/CDHB (Alistair Humphrey), materially improved public health (i.e. fewer hospital admissions) as a direct result of reducing levels of PM10 locally i.e. in Christchurch.  
1.3 Email 27th January 2015 sent to Margaret Bazley/CDHB ——- regarding published results showing respiratory illness/influenza-associated mortality is increasing not decreasing/recent dramatic reductions in hospitalization rates in Christchurch are largely due to better organized primary (community-type) care  
1.4. Email 24th March 2015 as sent to Canterbury Mayors (copied to ECan) ——- regarding AIR Inc’s concerns about the validity of ECan’s proposed Canterbury air plan (March 2015) NB Sir David Hay is a Kt not a Kt Bach  
1.5 Email 29th April 2015 sent to ECan ——- consisting of a submission from the Association for Independent Research (AIR) Inc. regarding the Proposed Canterbury Air Regional Plan March 2015  
1.6. Attachment to Email 1st May 2015 as sent to MfE ——- providing reasons for my/AIR Inc.’s opposition to the proposed mixed model governance structure/why we wish to see a return to full democracy for ECan – Appendix 1.  
1.7. Email 15th May 2015 sent to CDHB/Alistair Humphrey ——- regarding claims made by Bedford/Humphrey concerning respiratory illness cf. 1.2 above – Appendix 2.  
1.8 Email 17th May 2015 reply from Alistair Humphrey ——- regarding respiratory illness incidence claims – Appendix 3  
1.9 Email 20th May 2015 sent to Capital & Coast DHB’s Kyle Perrin thanking him for ——- his comments on behalf of the Asthma and Respiratory Foundation concerning the evident lack of improvement in respiratory health and for suggesting likely reasons, largely unrelated to air pollution as such, for this state of affairs – Appendix 4.  
1.10 Email #2 (corrected!) 9th July 2015 sent to ECan/Andrew Parrish ——- regarding my/AIR Inc.’s Further Submissions on the Proposed Air Plan (March 2015).  
1.11 Email 3rd June 2015 sent to Dr Nick Smith (not yet answered) ——- regarding an email sent to the PCE (Dr Jan Wright) on the 23rd May 2015. – Appendix 5.  
1.12. Email 11th Aug 2015 sent to Dr Nick Smith (not yet answered) ——- regarding his reply of 11th August (enclosed) to my email dated 17th March – Appendix 6.  
1.13 Email 2nd July 2015 sent to ECan ——- formally complaining about the announced composition of the Hearing Panel  
1.14. Email 9th August sent to ECan ——- disagreeing with the reasons given by ECan’s Regulation Hearing Committee confirming composition of Hearing Panel  
1.15. Details of article “Mental health services could go” by Ashleigh Stewart published in “The Press” on 13th June 2015 (pA3) providing details of recent significant increases in mental illness in Christchurch/Canterbury leading to an
"intolerable burden" being placed upon the CDHB – Appendix 7. 
1.15 Details of Paper "Dubious use of fine particle mass-derived standards for regulating urban air quality in a hypothermic environment" by John L. Hoare published in Chemistry in New Zealand April 2015 illustrating the flawed nature of NESAQ (PM10) compliance as a means of safeguarding/improving public health locally sent 29th April 2015 to ECan

2. Obstacles to AIR Inc. obtaining a fair hearing during this public hearing

2.1. A central point of AIR Inc.'s case as presented herein, disconcerting in itself, is that ECan all along has been unreceptive to/dissmissive of any argument construed/potentially able to be construed as undermining the National Environmental Standards for Ambient Air Quality (as published in 2004 and amended in 2005 and 20011) otherwise referred to herein as NESAQ - measured as PM10. Equally, ECan's choice of relatively inexperienced "non-scientists" i.e. Mesdames Lisa Jenkins and Carmel Rowlands, (planners) and Ms Michelle Melhopt and Mr Philip Maw (lawyers) - with all 4 individuals identified thus either employed by or retained professionally by ECan - as authors of the Section 42A report is we believe characteristic of a misdirected, pseudo scientific, approach to the topic of air quality generally.

Unquestionably, understanding the intricacies of submissions concerning matters of public health related to air quality demands a multi-disciplinary approach with science and scientific expertise featuring prominently. Frankly, for this reason, that the pCARP s42A report meets the necessary requirements of compliance with the Code of Conduct for Expert Witnesses i.e. an expert witness has an overriding duty to impartially assist the Court on matters within the expert's area of expertise on the evidence, highly unlikely. As a corollary to this requirement we believe it is quite inappropriate for the authors of the aforesaid report to hinder the Court as is evident therein by ignoring/failing to respond adequately to arguments advanced by experts opposed, largely on scientific grounds, to ECan's proposed (March 2015) air plan this shortcoming seemingly attributable mainly (giving them the benefit of the doubt) to the authors' lack of knowledge of/commitment to the tenets of medicine/public health/science.

Similarly unwelcome, for reasons provided earlier cf. 1.13, 1.14 above, is the choice by ECan as a member of the Hearing Panel of Ms Jenny Simpson. Undoubtedly, on account of her primary professional/career allegiances, Ms Simpson would ordinarily be expected to reaffirm the need for the NESAQ (PM) to be enforced no less stringently than currently applies irrespective of the airshed locations/exposure scenarios. Such a stance, corresponding to the outmoded approach favoured by ECan, presumably would play directly into its hands. Unfortunately, (biased) input of this type already is proving very hard to exclude from the air plan as reflected by the unwillingness of the authors of the pCARP s42A report to i) accept that ECan's perception of the meaning of 'ambient' is fundamentally flawed ii) concede that indoor air, typically, holds the key to public health air quality-wise in urban New Zealand.*

*NB Because of difficulties/confusion in this area previously, I/AIR felt there was a need to submit to the journal Clean Air and Environmental Quality (CASANZ) the paper "Interpretation of 'ambient' in the context of Air Quality Management" subsequently published verbatim in the May 2005 issue. To the best of my knowledge no formal criticism of any aspect of this paper has been made yet the points made therein continue to be ignored/fail to be accepted by either ECan or MfE (cf. Points 2.3.1 and 2.3.2 of our 29th April 2015 submission) as essentially correct and with no convincing reason being given so far for this attitude/behaviour.

2.2 Minute 1 of the Hearing Commissioners re the Hearing Procedure.

Concerning Points 14 and 15 in Minute 1, AIR Inc. has no way of confirming the accuracy of the promise "the Panel will read submissions and evidence in advance and take such materials as read, so time allocations will be fixed to enable submitters to speak to their submission and/or provide evidence in response to new issues." Accordingly, in the interests of assuring AIR Inc. a fair hearing I have little choice but to draw your attention to go over old ground in the hope that you will see the merits of ECan aligning itself, in the interests of genuine progress, with views opposed to obsolescent law/laws as embodied in the current NESAQ.

In our opinion, as things stand, central government through ECan is dictating policies frequently incompatible with the interests of the (regional) poor, frail, and elderly and/or those who incline naturally towards self-dependency/self-sufficiency, environmental sustainability, and similar lifestyles. Meanwhile, steps taken to reduce PM levels as a means of saving/extending lives in fact seem more likely to result in increased death rates especially in communities residing in the colder/less temperate regions of New Zealand. Given that the role of Treasury in matters related to the affairs of the Ministry for the Environment is now more obvious (cf. Appendix 6), ECan's emphasis via its air plan(s) on reducing levels of air pollution in the interests of NESAQ (PM10) compliance could well be acting as a
smoke screen for more sinister objectives. All the more reason therefore, we believe, for these hearings to be conducted in a manner seen, as much as possible, to be independent of such influences.

2.3 Notwithstanding the apparent willingness of the current "Government appointed Commissioner-led ECan" administration to do the Government’s bidding by effectively rolling the current NESAQ (PM) over into the Proposed Canterbury Air Regional Plan March 2015, the fact remains that an important adviser of central government namely the Parliamentary Commissioner for the Environment has recommended (March 2015):

The Minister for the Environment initiate a review of how particulate matter is managed that determines:

a. Whether PM2.5 should be measured across the country in airsheds where there is likely to be a problem;

b. The value of setting rules for PM2.5 and for long-term exposure;

c. Whether the PM10 short-term rule still has value;

d. The impact of air quality rules on other public health issues, such as cold damp homes; and

e. How air quality policies might be designed so as to achieve progressive improvement

Arising from these recommendations the Minister for the Environment Dr Nick Smith has agreed in principle* to revisit the NESAQ this gesture appearing to strengthen our case requesting withdrawal or at least shelving of the proposed air plan while numerous matters known to be/suspected as being wrong/misguided are investigated.

* in a letter sent to AIR Inc. (cf. enclosure referred to in 1.12 above i.e. Appendix 6) reading: “I am intending to do a review of the Air Quality NES next year (2016) and to have a fresh look at concerns you and others raise”.

3. Specific comments pertaining to the pCARP Section 42A report

3.1 Background and context (Section 3 of the pCARP s42A report)

3.1.1 “Quick wins” (Page 3.1)

No mention is made here of the very real (as opposed to the hypothetical quick wins) “quick losses” e.g. in a public health context likely to be involved simultaneously. cf Point 2.4.1 in AIR Inc.’s submission.

3.1.2 Statutory and legal foundation for the pCARP (Page 3-2)

As discussed at length in our submission cf. Points 2.3.1, 2.3.2, 2.14 but not acknowledged in the pCARP s42A report AIR Inc.’s 2007 appeal of ECan’s Proposed Canterbury Natural Resources Regional Plan (air) although “signed off” ultimately by the two parties involved left unresolved 2 important matters in contention namely i) the (scientific) integrity of the NESAQ (PM) ii) the significance/importance of the indoor atmospheric environment.

Since then, air quality science has continued to evolve affirming AIR’s stance as correct and/or reasonable. In spite of this ECan continues to buy time by attempting to incorporate what amounts to discredited science as part and parcel of its proposed new air plan.

3.1.3 Section 68 (page 3.6) Under the second bullet point it is stated that a rule may: Make different provision for different parts of the region, or different classes of effects arising from an activity

Clearly this is a sensible provision unfortunately completely undermined by the NESAQ given that, contrary to good practice/common sense and/or the purpose of the RMA (cf. 1st bullet point of reference 9 in my/AIR Inc.’s submission) the relevant PM10 “standards” are enforceable everywhere in New Zealand once the final deadline (1 September 2020) is reached.

3.1.4 ULEBs definition (page 3-23)

Under point 1 we have: an enclosed solid fuel burning device that has been certified by the CRC in accordance with Schedule 8 to achieve an emission and efficiency standard of 38mg/MJ when tested to simulated real life conditions as set out in Schedule 8

NB Responding to AIR Inc.’s comments in this regard cf Point 3.9 in our submission ECAn’s proposal to add the words “useful energy” after the 38mg/MJ above in our opinion suitably clarifies matters here and elsewhere in the proposed air plan.

3.1.5 Page 3-27 paragraph beginning “The World Health Organisation (WHO) sets guideline values for PM2.5 as well as PM10 -----” containing the phrase: PM2.5 is considered to be more harmful to human health than the larger components of PM10 due to its extremely small size.

i) Bearing in mind our submission here under Point 2.4.2 we assert that, to minimize the risk of hyperbole/confusion, the words extremely small ought to be omitted here/replaced by the word smaller.

ii) Also, in the interests of accuracy, ECAn needs to appreciate/be clear that, in practice, PM2.5 (the values reported representing the mass/volume concentration of this particular fraction) is not a discrete entity i.e. as experienced by the organism exposed to air pollution. Rather it is part and parcel of all the particulate matter inhaled. Anyone inhaling PM2.5 has, in fact, no choice but to simultaneously inhale larger amounts (mass/atoms) of particles defined as being larger in size than this up to and including PM100 approx.

Typically respired, moreover, will be significant amounts of volatile/semi-volatile material plus gases whose collective overall toxicity may well be, in many circumstances, largely independent of the size of the particles
inhaled. For the sake of convenience during monitoring of air pollution a "cut" is taken e.g. "PM1", "PM2.5", "PM10", etc. but without any guarantee that this is accurate in terms of the nominated fraction actually present (due to the inexact methods of separation employed) or fully representative of any intrinsic toxicity possessed by the air in question.

In spite of what ECAN and others supporting its policies may allege, determination of PM for assessment of atmospheric polluting effects is far from being an exact science as illustrated/confirmed by the evidence members of AIR Inc. both individually and collectively have submitted as part of the present hearing process.

iii) In the absence of precise knowledge pertaining e.g. to chemical composition governing the toxicity of the air in question it is AIR Inc.'s considered view that to maintain/imply, as many air pollution scientists are inclined to do, that a particular example of PM2.5 is necessarily more toxic than the PM10 accompanying it cannot be sustained.

Clearly every situation regarding potentially unhealthy air is unique/different and needs to be treated as such meaning that in practice if using, as typically is the case, PM (mass) determined on samples of air obtained outdoors as the sole regulatory criterion of inhalable air quality, several additional matters need to be taken into account regarding the actual health effects cf. AIR Inc.'s submission under Point 2.4.1 of AIR Inc.'s submission.

iv) We would question whether, necessarily, WHO is the most suitable arbiter here concerning PM10/PM2.5 levels employed as standards certainly in the absence of any consideration by ECAN of the relevance of air quality standards employed/preferred by the USEPA and/or EU. Guidelines most certainly are not standards and the two ought not to be confused as ECAN evidently is happy to do cf. AIR Inc.'s submission under Point 2.4.1 of AIR Inc.'s submission.

v) Also, ECAN is being selective if wishing to refer to WHO seen as the ultimate authority cf. my/AIR Inc.'s submission under Point 2.3.3 G with the advice presented therein seemingly not given any credence as shown by ECAN preferring instead to defer to edicts issued by MfE. Clearly, this falls short of what one might expect of ECAN originally established as an autonomous, self-governing, regional regulatory authority but now Government-appointed Commissioner led cf. Appendix 1.

3.2 General submissions (Section 4 of the s42A report)

i) A ratio of nine (for retention) to twenty (opposed to the air plan or seeking its withdrawal) ought, we suggest, to sound a alarm bells in high places.

ii) Concerning the observation: "Many submissions have questioned the science basis of the pCARP. The science underpinning the NESAQ is not relevant to the imperative that the CRC must enforce observance of the NESAQ. Beyond that, the science that has informed the Air Plan review is robust and current." such evasiveness/dogmatism, in our opinion, makes plain a blatant self-interest on the part of those involved. Certainly such statements completely ignore/are oblivious to the published results of studies we and other reputable parties have conducted confirming the opposite cf. 1.16 above with the paper in question being cited in our submission. What, we ask, is the point in such circumstances of a review (i.e. of the older Air Plan) if those conducting it intend to preserve, essentially, the status quo?

3.3 pCARP Introduction (Section 5 of the s42A report)

3.3.1 Air quality issues in Canterbury (Page 5-2)

i) As commented on here in the first two sentences of the first paragraph, "Eight submissions have been made on this part of the pCARP introduction. William, Moller & Hay, Wells, Anderson, McChesney, Hurrell and Harris seek changes to the discussion of the health effects of poor air quality."

Indicative of the overall standard of the pCARP s42A report, the submitters listed here in fact number 7 given that "William, Moller & Hay" refers to eminent physician members of AIR Inc. Mr Peter William Moller and Sir David Russell Hay. Also, AIR Inc. itself commented at length in its submissions on the inadequacies of the proposed air plan insofar as the health effects of poor/defective air quality are concerned. Frankly we find it hard to believe that this aspect of AIR Inc.'s submission escaped the notice of the authors of the pCARP s42A report in which case our suspicions of bias on their part are confirmed.

ii) Regarding the comment "As such, reference to the findings of the HAPINZ study is appropriate within the introduction of the pCARP" this assessment simply cannot be sustained as discussed under Point 2.3.3 H in AIR Inc's submission which again, we feel, reflects badly on the competence/objectivity of the authors of the pCARP s42A report. In fact the 3 'in house commissioned/published' HAPINZ reports have been criticized at length by AIR Inc. in various submissions/publications sent to MfE/copied to ECAN without eliciting anything of significance in their defense i.e. from the authors of the said reports.

iii) Concerning the relative importance of PM10 and PM2.5 (cf. comments made in the 2nd paragraph here) I agree that the health effects resulting from exposure to PM10 necessarily includes the health effects attributable to all the particles ≤ in size to those comprising PM100 approx., PM2.5 included, not to mention health effects attributable to all the other potentially harmful (volatile) liquid and gaseous substances present. When it comes to setting guidelines or standards, however, the fact remains that, internationally, limits for both PM10 (24hr and annual averages) and
PM2.5 (20 µg/cubic metre max., measured as the annual average exposure, currently is preferred by the EU as the singular standard here) are routinely employed* "cf. AIR Inc.'s submission regarding the paper "New Directions: Questions surrounding suspended particle mass used as a surrogate for air quality and for regulatory control of ambient urban air pollution" by John L Hoare (Atmos. Environ., July 2014).

NB So far neither ECan nor MfE have presented cogent evidence why New Zealand needs standards/guidelines materially different to the limits adopted by the EU/USEPA summarized/discussed in this paper.

3.3.2 Contaminants
i) The alternative wording employed here does not reflect the wording employed by AIR Inc. in its submission (micro metres is correct not micro grams) cf. 3.14.2 (i) below

ii) Concerning the comment "The amendment sought says almost the same thing as the existing pCARP, but the statement regarding the potential for more harm on a mass/mass basis is not qualified - it is not clear that more harm is necessarily caused (sic) on a mass/mass basis." AIR Inc. disagrees. Typically, health assessments are based on PM10 and/or PM2.5 both mass-based indices. Frankly we suspect the authors of the pCARP s42A report are out of their depth here.

iii) Concerning comments made under the headings Outdoor burning and rural discharges of contaminants/Recommendation R-Section 1-5, the phrase "Burning of inorganic waste" needs to be clarified cf. 3.14.2 (ii) below. Also, in this context, use of the phrase "adverse effects" we believe is, on the evidence available, unjustified/too strong; nuisance describes the situation better with the practice of (controlled) outdoor burning both in a rural and urban setting often justifiable, we believe, on economic/safety/health grounds considered objectively.

3.4 pCARP Definitions (Section 6 of the s42A report)
3.4.1 Definition of Ambient Air defined as:

Means the air outside buildings and structures. This does not refer to indoor air, air in the workplace, or contaminated air discharged from a source.

In AIR Inc.'s considered opinion based on established science this definition in the context of any valid, self respecting, air plan is entirely inappropriate. Thus we have:

pCARP-2506 Association for Independent Research (AIR) Inc. Oppose Insert definitions for "air" and "ambient air quality" that include both indoor and outdoor air.

Additional comment. Justified by (the first paper listed in) reference 7 of AIR Inc.'s submission i.e. "Interpretation of 'ambient' in the context of Air Quality Management" by J.L.Hoare (Clean Air and Environmental Quality, May 2005) since basically it is exposure to (all) health-determining influences that is important in practice.* Also insert/include (in Table 2.2) a definition for fuel as agreed earlier/included in the current air plan.

*NB Remembering that, as stated in 3.14.1 below, 80-90% of our time is spent indoors.

If, as stated publicly in April-May 2014 by ECAn Chief Commissioner Dame Margaret Bazley, ECAn's policies vis a vis air quality genuinely are scientifically (as opposed to politically) based there should be no argument here in which case ECAn’s definition above needs to be discarded in favour of something better suited to realistic urban air quality management.

3.5 How the plan works (Section 7 of the s42A report)
3.5.1 Under the heading Timeframes in this section, the statement "The NESAQ sets time frames for the achievement of air quality targets and so it is important, within Clean Air Zones, to ensure rapid implementation of the pCARP." is made. In this regard AIR Inc. believes, in the light of recent advances in the knowledge surrounding air quality science/registration corresponding i.e. to the requirements of Section 35 subsection (1) of the RMA namely:

Every local authority shall gather such information, and undertake or commission such research, as is necessary to carry out effectively its functions under this Act** or regulations under this Act.

as discussed under Point 2.6 of AIR Inc.'s submission whereupon it is made clear that ECAn has failed to do this/do this adequately/competently, caution is required. Frankly we cannot see any good purpose is served by (further) cementing in place an Air Plan which is based on flawed/incorrect science.

3.6 Issues of significance to Ngai Tahu (Section 8 of the s42A report)
3.6.1 If sincere under this heading, ECAn needs to be sensitive to Pearson's submission seeking to "retain (in Table 4.1) the reference to permitting outdoor burning for cooking purposes." cf. AIR Inc.'s submission under Point 3.17 A
3.12 Rural discharges (Section 14 of the s42A report)

No comment
3.13 Space heating (Section 15 of the s42A report)
3.13.1 General comments etc. (Pages 15-1 to 15-4)

i) With NESAQ compliance obviously being the principal driver here no sound/valid reason, we contend, is provided anywhere by ECan justifying banning the use of non compliant burners inside the period 1 October -31 March. Given that such logic (resulting from Inc.’s appeal (2007) to the Environment Court) was accepted as reasonable earlier this provision/dispensation needs to be accommodated in the new air plan thereby ensuring that such burners are retained e.g. in case they are needed as a backup (cf. 3.13.4 below).

ii) AIR Inc.’s basic argument is that, considering the levels of PM10 (annual average or 24hr average) routinely experienced in Canterbury nowadays, the existing NESAQ (PM10) are much too stringent in the sense of being incompatible with the need for people generally to keep warm affordably. With the adoption of more realistic/reasonable standards/guidelines for PM2.5 locally as discussed in AIR Inc.’s submission cf. Point 2.4.1 and also under 3.3.1 (iii) above, restrictions on burner use PM10 wise could, we believe, be safely relaxed considerably without causing, on balance, any significant harm while at the same time contributing valuable health and other benefits simultaneously (see also 3.13.4 below)

iii) Having (cf. 2.3 above) subjected the winter months in under (PM10 of technology. It would also make enforcing the observance of the appliances being used during winter will be greatly increased if the incentives to install other heating sources are not and other benefits obviously there “

iv) As for “William, Moller & Hay” seeking revision of the plan to ensure home heating is not blamed for potentially harmful smog, fog and haze this is not strictly true; in fact AIR Inc. as a whole (cf. Point 2.4.3 in our submission) made this request.

v) Regarding the Association for Independent Research seeking provisions discouraging the use of unflued heaters (i.e. cabinet LPG heaters as discussed under Point 3.18 in our submission) the response as recorded in the pCARP s42A report itself - reading “While these heaters are likely to adversely effect indoor air quality, discharges are unlikely to affect ambient air quality” - confirms that the authors are, through not having not read and/or understood AIR Inc.’s submission as provided under “Interpretation of ‘ambient’ in the context of Air Quality Management” by J.L.Hoare (Clean Air and Environmental Quality, May 2005), ill-informed. Clearly, the risks involved when using such heaters are palpable. Also, discouraging the use of such heaters is entirely different to banning their use outright. Accordingly, ECan needs in the public interest to be more realistic/consistent here .

vi) Regarding the Association for Independent Research (Page 15-3 in the pCARP s42A report) seeking inclusion of a list of common plastic objects/materials considered suitable as kindling, the authors of the aforesaid report seem to agree here, providing visible smoke does not persist beyond start-up which situation in my experience can easily be avoided ordinarily, that such usage and hence provision of such a list is practicable/feasible.

3.13.2 Rules 7.75 and 7.76 (Pages 15-5 – 15-7)
Concerning Anderson seeking deletion of Condition 1 and Meluish seeking amendment of Condition 1 to provide for the use of older-style enclosed burners the response “While the condition restricts installation of older-style burners (as do the NESAQ and the Building Act 2004), it does not restrict their continued use” this remark is obviously is incorrect/insincere beyond January 1st 2019 as things stand currently.

3.13.3 Space Heating within Clean Air Zones/General submissions (Page 15-10)
Concerning the Association for Independent Research seeking provision for use of all wood burners outside of winter months in Clean Air Zones whereby the response “Such provision would not serve to encourage the upgrade of technology. It would also make enforcing the observance of the NESAQ difficult as the likelihood of these appliances being used during winter will be greatly increased if the incentives to install other heating sources are not there” is elicited, AIR Inc. considers this attitude, in the circumstances, to be draconian. Particularly since there are many occasions throughout the year ordinarily when i) use of such burners serves a useful purpose ii) there is little/no risk of an “exceedence”,

3.13.4 Rules 7.88, 7.89, 7.90
Concerning the merits of including, as submitted by AIR Inc. (cf. Page 15-21 in the pCARP s42A report), “provisions to require an advisory system for limited use of wood burners on high pollution days” the response “Such a system would require people to have alternative heat sources to be used on the coldest days of the year. Enforcement and adequate notification would also be problematic.” is we believe inadequate/defeatist. Typically, many people have access to several alternative heat sources and prefer things that way.

AIR Inc.’s view here is that people should be able to retain their “low emission” burners/use them on the not infrequent days when little harm/considerable advantage accrues from them doing so. Clearly, quit apart from the convenience of occasionally being enabled thereby to have a burn up of e.g. waste paper, the fact remains that, with
the elimination of such burners, should there be a power failure or some other catastrophic/unexpected event preventing e.g. electrically-driven heat pumps or equivalent resistance-type heaters from working as they should, considerable risks healthwise would be introduced thereby.

Furthermore, if ECAn genuinely wishes to get pollution levels down, it needs to do everything it can to get the local population "on side" with appropriate education/advice thereby offering the possibility of a "win-win" solution. As it happens, such advisory systems are employed overseas e.g in California USA viz: http://www.lomaprietafire.org/home/links/santa-cruz-county-backyard-burn-rules

3.14 Appendices (Section 16 of the pCARP s42A report)

3.14.1 Appendix 1 Discussion on the pCARP approach with regard to local and ambient air quality effects

In AIR Inc.'s view the whole of the discussion on pages 16-1 and 16-2 misses the point i.e. that air quality ultimately is determined by discernible effects. To this extent "local" necessarily refers to the environment in question including a) where the crucial exposures occur (typically mainly indoors since this is where we spend 80-90% of our time) and b) what particular agency is involved. Ultimately, this is what the term 'ambient' is all about as discussed at length/referred to under various heading in AIR Inc.'s submission. Basically, ECAn needs to face facts here and cease trying to manipulate the reader towards what obviously is a distorted view of reality.

3.14.2 Appendix 2 – Recommendations

i) Recommendation R-Section 1-3

In AIR Inc.'s view this recommendation needs amending to read:

PM2.5 is a component of PM10 consisting of particles of 2.5 micro grammetres and smaller. Due to their smaller relatively small size they and/or the associated volatile/semi volatile substances can get are believed to penetrate deeply within our lungs. Sources of PM2.5 emission sources include condensation products of combustion e.g. home heating, transport and industry although natural discharges to air e.g. crustal dust may also contribute significantly to the levels detected ordinarily.

ii) Recommendation R-Section 1-5

Reference is made here to "--- Burning of inorganic waste ---" described elsewhere in the document (?) as including plastic material. This needs to be corrected if, as I believe it to be true, plastics generally are, intrinsically, organic in nature. In contrast, inorganic material in my experience typically is non-combustible.

Finally, in this context, just because doing something creates a nuisance occasionally is, we maintain, hardly a reason to ban the practice entirely; not when significant benefits are conferred simultaneously.

iii) Recommendation R-Section 1-9.

Concerning reference made under this heading to "--- Regional Councils must also observe and enforce any National Environmental Standards. ECAn needs in our opinion to concede that standards sometimes need modifying one way or another. To persist in using 'old' standards in such circumstances could be construed as being irresponsible/careless.

iv) Recommendation R-T2.1 regarding the definition for Ambient air provided in Table 2.1 General Definitions. Clearly, the definition given here: Means the air outside buildings and structures. This does not refer to indoor air, air in the workplace, or contaminated air discharged from a source being essentially the same as that provided earlier in Chapter 1 of the Canterbury NRRP (Air) is, as already submitted in that context and subsequently also, scientifically invalid/incompatible with the RMA (purpose) and hence cannot be sustained cf. 3.14.1 above.

In our view the proposed air plan founders, entirely, on this very point.

v) Recommendation 6.32 point 1. See 3.1.4 above

vi) Recommendation R-7.87 3(a) regarding emissions from a low emitting enclosed burner being a 

"--- permitted activity provided ---

2. --- The low emitting enclosed burner is not installed after 1 January 2019;
3. --- the discharge is not from a low emitting enclosed burner after 15 years from the date of issue of the Code of Compliance Certificate.

As already submitted AIR Inc. is opposed to these and similar recommendations elsewhere in the proposed air plan because ECAn has not made a convincing case cost-benefit wise pertaining to them. Neither has it seriously considered any reasonable alternative designed to extend the life of existing older, but still relatively modern, burners cf. Point 3.14 in our submission. Better, we suggest, to first confirm whether the recommended Ultra-low Emission burners are indeed a genuine all-round improvement on existing "low emission" models before committing the public any further via the proposed air plan, at their own expense, to irreversible change potentially with very large public health/social consequences.
Critical issues for Canterbury governance

1. In your view, what are the most significant regional issues for Canterbury (for example, resource management or governance issues)? Please explain.

Both resource management and governance issues – in particular those affecting or related to indoor and outdoor air quality and, also water quality and quantity (streams, rivers, lakes, aquifers, canals, dams, ponds, seepage, oceans, rainfall, erosion, leaching, etc.) are highly important/significant for Canterbury. Issues surrounding land either in its natural, existing or potential state clearly are very important too but probably are subject ordinarily to more control via means other than those requiring input from Environment Canterbury. Ditto transport, health and countless other matters determining the quality of life in Canterbury not necessarily remediable from an environmental standpoint i.e. by more than a token or small amount (directly).

The way forward for Canterbury governance

2. Do you agree with the goals for ECan’s governance? (These are: high quality leadership, economic growth, strong environmental stewardship, strong accountability to local communities, and value and efficiency for ratepayer money.) Please explain.

No. Not without more information being provided and/or agreed upon as to the meaning of: high quality leadership, economic growth, strong environmental stewardship, strong accountability to local communities, and value for ratepayer money interpreted or considered as achievable in either case (fully democratic or the model as proposed above i.e. by the Government). Thus there seems little point in ‘strong’ leadership, etc. if, considered in retrospect, the decisions arising as a result of simplistic/ignorant/arrogant inputs are/were wrong/mistaken.

3. In your view, are some of the goals more important than others? Please explain.

This is a very open-ended question depending, ultimately, on how high minded/animalistic one is and/or aspires to be in a given situation and hence impossible to answer here.

4. Do you think the proposal is suited to Canterbury and meets the goals for ECan? Please explain.
4. Do you think the proposal is suited to Canterbury and meets the goals for ECan? Please explain.

No. (see below)

5. In your view, is there a governance model that better addresses the goals for ECan? Please explain.

This question presupposes that the goals for ECan as set out (broadly) in point 2 above have been precisely enunciated in detail and that, in this event, they have been suitably discussed/agreed upon. With a fully democratically elected ECan there is a better chance that the latter outcome will occur/be achieved leading either to pro-active decisions or the status quo seen as the best/most sensible decision in the meantime.

6. Are there any considerations we need to give when transitioning to the proposed mixed-model governance structure? Please explain.

The need for people to feel fulfilled, have a sense of purpose, have/retain a significant measure of control over their lives and/or destiny surely is most important. Overly intrusive/all-powerful government can/will seriously undermine these essentials of a truly healthy society requiring those holding the reins of power to be fully aware of their responsibilities and the risks their positions, jobs, etc. entail including at a local/regional level.

7. Should the mixed-model governance structure retain the special resource management powers currently used by the commissioners? If so, for how long? Please explain.

If the MMGS is chosen/employed the special resource management powers currently by used the commissioners should continue for as short a time as possible. Overall, the best possible balance between local/regional needs and/or wishes and those of central government needs to be struck with, we believe, the 100% democratically elected councillor model offering the best prospects in this connection.

Other comments

8. Is there any further information you wish the Government to consider? Please explain.

Consider the value of education (both formal and informal), experience, knowledge, culture, etc. manifested as democracy - as opposed to dictatorship and/or undue concentration of power - as the means of best protecting us from the consequences of bad decisions affecting people nationally/locally/regionally. Consequently, to single out Canterbury Regional Council for the less than democratic "solution" proposed here by the Government is totally unacceptable.

J.L.H.

Dated: 1 May 2015
Appendix 2.

----- Original Message ----- 
From: John Hoare 
To: alistair.humphrey@cdhb.health.nz 
Sent: Friday, May 15, 2015 10:31 AM 
Subject: Respiratory illness 

Dear Alistair, 

No doubt you will have read in "The Press" recently of the report of the Asthma and Respiratory Foundation of New Zealand Inc. establishing that "hospitalisation rates for respiratory disease have increased by 11% in the past 10 years despite a drop in smoking, better medication and improved healthcare." Particularly interesting also, we would have thought, in light of the fact that levels of PM-type air pollution have been steadily declining simultaneously corresponding to the elimination of e.g. wood burners in the interests of complying with the NESAQ.

Would you care to comment on the possibility that there may, somehow, be a substantive connection between the two i.e. less domestic heating via woodburners and increased respiratory illness? Also on the possibility that, since the incidence of asthma in New Zealand (as in the USA) appears to be increasing in spite of efforts to reduce urban air pollution (outdoors), asthma - as well as many other kinds of respiratory illness - may have a rather different etiology less crucially dependent on outdoor air pollution measured as PM10 and more on other factors suspected as being involved such as indoor air quality?

Yours sincerely, 
John Hoare, 
Secretary, Association for Independent Research (AIR) Inc.
Christchurch.
Dear John,

I have attached the report to which I think you are alluding, and you will note that hospitalisations for most respiratory conditions (including asthma) have reduced over the last few years. The one exception is bronchiectasis which is most likely a feature of an aging population.

Micro-particulates do cause an increase in respiratory illness of many kinds as well as cardiovascular related disease, and as our (outdoor) air quality improves we can expect to see a reduction in exacerbations of respiratory illness. As smoking rates reduce we can also expect to see a decrease in smoking related illnesses, though there is a considerable lag time for this.

I agree that for asthma there are other factors involved in its aetiology and that the relationship is complex. Notwithstanding this, there is a relationship between exacerbations of asthma (among other respiratory disorders) and poor outdoor air quality, though the relationship, because of the variable delay in presentation is complex. I have attached an article by staff in Christchurch for your perusal.

I do agree with you that indoor air quality has a role in respiratory illness, and I believe there are examples from overseas where sealing up chimneys and then fitting double glazed windows to properties which were previously coal fired have led to mould problems inside those houses, as the chimneys and leaky windows were previously ventilating the properties. I also agree that cold, damp homes are an important cause of mortality (which you have described in your editorial in the NZMJ in 2011) and that any perceived improvements in outdoor air quality have to be seriously and scientifically balanced against those suffering from fuel poverty.

To this end, CDHB and ECAN jointly commissioned a health impact assessment of ECAN’s air quality policies. I attach this also. You will note that the report recommends financial support (especially for heat pumps) for those most adversely affected by the wood burner ban.

Policies to improve outdoor air quality are designed to improve health, so their implementation should be carried out in a way that does not have unintended negative health consequences for some sub-sections of the populations they seek to benefit. However, it should not be forgotten that the HIA indicates that most wood burning households are middle and upper income earners. A few less crackles in the hearths of the wealthy will lead to less crackles in the lungs of the poor.

Regards,

Dr. Alistair R.G. Humphrey MPH FAFPHM FRACGP
Medical Officer of Health (Canterbury)

PO Box 1475
Christchurch

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Appendix 4.

----- Original Message -----  
From: John Hoare  
To: Kyle Perrin [CCDHB]  
Sent: Wednesday, May 20, 2015 11:25 AM  
Subject: Re: Recent Report - Asthma and Respiratory Foundation of New Zealand Inc  

Dear Kyle,

Many thanks. Pleased to have made contact in relation to what seems a particularly fraught field.

Yours sincerely,
John.

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----- Original Message -----  
From: Kyle Perrin [CCDHB]  
To: johnlh@xtra.co.nz  
Cc: Teresa Demetriou  
Sent: Tuesday, May 19, 2015 4:20 PM  
Subject: RE: Recent Report - Asthma and Respiratory Foundation of New Zealand Inc  

Dear John

Thanks for your enquiry and interest in our recent report on the impact of respiratory disease.

You are correct that good progress has been made in the control of air pollution, and indeed in tobacco smoking rates. The fact that there has not been a corresponding improvement in respiratory health is disappointing. Our view is that while air pollution is an important issue for lung health generally, it is overwhelmed in term of magnitude by the social determinants of health which are worsening. Things such as overcrowding, lack of heating and insulation, mould and damp, and poverty in general, are responsible for some of the increase we have seen.

You are also correct to say that asthma incidence is increasing in all western countries. This is not due to pollution. The factors are complex and likely include diet, use of antibiotics in childhood, use of paracetamol, obesity and others.
Best wishes

Kyle Perrin
Medical Director, Asthma Foundation.

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From: John Hoare <johnlh@xtra.co.nz>
Sent: Thursday, 14 May 2015 11:30 a.m.
To: Enquiries; enquires@asthmafoundation.org.nz
Subject: Recent Report - Asthma and Respiratory Foundation of New Zealand Inc

Dear Sir/Madam,

In connection with our interest in the Public Health consequences of measures aimed at remediation of ambient (outdoor) air quality we were most interested to read in "The Press" recently of your report indicating that hospitalisation rates for respiratory disease have increased by 11% in the past 10 years. Particularly in light of the fact that levels of PM-type air pollution have been steadily declining simultaneously corresponding to the elimination of e.g. wood burners in the interests of complying with the NESAQ.

Would you care to comment on the possibility that there may, somehow, be a connection i.e. between the two trends? Also on the possibility that, since the incidence of asthma in New Zealand (as in the USA) appears to be increasing in spite of efforts to reduce urban air pollution, asthma may have a rather different etiology?

Yours sincerely,
John Hoare (PhD)
Secretary, Association for Independent Research (AIR) Inc.
Christchurch.
From: John Hoare

To: jan.wright@ministers.govt.nz
Cc: Jan Wright

Sent: Wednesday, June 03, 2015 12:22 PM

Subject: Air pollution/quality

Hon Dr Nick Smith,
Minister for the Environment,
Parliament Buildings,
Wellington.

Dear Dr Smith,

Please find pasted below/attached for your interest details of an email sent recently to the Parliamentary Commissioner for the Environment Dr Jan Wright copied to the Ministry for the Environment and to the Ministry for Health.

As you will recall from earlier emails sent/copied to you on behalf of the Association for Independent Research (Inc.) it is our belief that a significant, growing, body of opinion is critical of/unconvinced of the merits claimed for the National Environmental Standards for Air Quality (PM10) as they stand. How much longer, we wonder, will it take for those driving this and related initiatives e.g. Proposed/Current Regional Air Plans to admit that such views, in the main, are well-founded and that the aforementioned standards accordingly are, themselves, in urgent need of revision?

Yours sincerely,

John Hoare
Ph.D.,
Secretary, Association for Independent Research (AIR) Inc.

----- Original Message -----

From: John Hoare
To: Jan Wright
Cc: info@mfe.govt.nz; info@health.govt.nz

Sent: Saturday, May 23, 2015 11:57 AM

Subject: Air quality

Dear Dr Wright,

Please find attached for your interest a copy of the paper "Dubious use of fine particle mass-based standards for regulating urban air quality in a hypothermic environment", authored by myself, published recently in Chemistry in New Zealand (NZIC).

To the extent that both this paper and the recent publication The state of air quality in New Zealand - Commentary by the Parliamentary Commissioner for the Environment on the 2014 Air Domain Report are critical of the present regulatory framework (NESAQ - PM10) they clearly have much in common. Certainly both publications point to the need for an urgent review of the whole arrangement concerning the public health implications of remediable air pollution generally in New Zealand.

In our experience (over the past 15 years approx.) those determining the scope and thrust of legislation governing "ambient" air quality in New Zealand have been loath to accept that anything other than a "status quo" interpretation of the facts has validity. In the hope of persuading them that such attitudes are incompatible with real progress I am forwarding a copies of this letter to the Ministry for the Environment and the Ministry of Health.

Yours sincerely,

John Hoare,
Secretary, Association for Independent Research (AIR) Inc.
Hon Dr Nick Smith,
Minister for the Environment,
Parliament Buildings,
Wellington.

Dear Dr Smith,

Thank you for your response (cf. the letter pasted below) to my email dated 17th March 2015.

Clearly there are lots of points at issue if, as discussed in my (as yet unanswered) email to you dated 3 June 2015, air quality is to be appropriately managed environmentally. As for the Minister for the Environment (yourself) being charged with the responsibility of recommending as part and parcel of the Resource Management Act (1991) the development of national environmental standards, our contention is that fulfillment of this obligation is not, and never was, a simple matter apropos air in particular. Not if the purpose of the RMA includes, as it does, requirements as elaborated under:

(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety.

When the NESAQ were announced/gazetted in 2004/2005 it was already known (as of November 2000*) that a working guideline approach (taking into account local circumstances) was preferable to setting fixed, legally enforceable, standards based on, for example, the levels of pollution found outdoors alone.


Quantifying the impact of air pollution on the public’s health has become an increasingly critical component in policy discussion. Those responsible for any health impact assessment must address important methodological issues related to both its design and conduct. A WHO Working Group examined several of these issues as they applied specifically to assessments of air pollution. The Group concluded that the most complete estimates of both attributable numbers of deaths and average reductions in life-span associated with exposure to air pollution are those based on cohort studies. Time-series studies would continue to contribute to scientific understanding of exposure–response relationships. The Group identified sensitivity analysis as an intrinsic part of impact estimation that is critical for quantifying the uncertainty of the estimates. Such analysis should consider deviations of the conditions in the target population from those in The assessed population, which would plausibly affect estimated pollution effects.

For you to say, therefore, that the "National Environmental Standards for Air Quality were based on the best available science at the time" is simply not true. Also unconvincing in this context - cf. RMA purpose paragraph (2) as quoted above - is your claim that "-- controlling - in the sense of ameliorating or maintaining - indoor air quality is outside of the jurisdiction of the act (RMA) and is not a matter regional councils or I have control over." Certainly you/they do if the wording of the RMA (above) is to be believed/taken literally. Hopefully, such misunderstandings will be addressed in the near future corresponding to the intentions described in the footnote corresponding to your letter.

With an "erstwhile rising star at the Treasury" in the form of Ms Vicky Robertson now CEO of MIE perhaps the real point of a highly stringent NESAQ (PM10) applied from one end of the country to the other (regardless of climatic and other relevant regional distinctions) becomes clearer. If, as seems possible, more elderly and/or frail people die or suffer from stress-related illnesses as a result of attempts by regional councils to achieve NESAQ (PM10) compliance The Treasury (department) for one, I suggest, might not necessarily be too dismayed.

Yours sincerely,
John Hoare (Dr)
Secretary, AIR Inc.
Dear Mr Hoare

Thank you for your email of 17 March 2015 regarding air quality management in New Zealand.

I appreciate your continued interest in New Zealand's air quality management regime and have noted the comments you made in your letter to the Editor of The Press. However, I respectfully disagree with your view that the Ministry for the Environment and New Zealand's local authorities are unsuited to the task of managing New Zealand's Air Quality.

The Resource Management Act (the Act) gives me, as the Minister for the Environment, the function of recommending the development of national environmental standards. The Act requires local authorities, such as Environment Canterbury, to observe and enforce these standards. The National Environmental Standards for Air Quality were based on the best available science at the time. Additionally, in accordance with the Act, a comprehensive public consultation process was followed to develop the Standards.

With regard to the health effects of particulate matter, I wish to highlight that many international organisations (including the World Health Organization) recognise that both acute and chronic exposure to ambient particulate matter pollution poses a real and credible threat to public health. There is a significant body of evidence to support this assertion.

I understand that the World Health Organization cites indoor air quality as a public health issue. However, controlling indoor air quality is outside of the jurisdiction of the Act and is not a matter regional councils or I have control over.

I have noted your concerns and your dissatisfaction with the approach to air quality regulation in New Zealand and have passed your comments on to the officials at the Ministry for the Environment responsible for monitoring the implementation of the National Environmental Standards for Air Quality.

Yours sincerely

Hon Dr Nick Smith
Minister for the Environment

P.S. I am intending to do a review of the Air Quality NES next year and to have a fresh look at concerns you and others raise.
Emails from Canterbury District Health Board chief executive Meates to the Ministry of Health have suggested mental health services could go if they do not receive additional funding.

Canterbury’s cash-strapped health authority has warned that mental health services could be cut if the Government does not step in.

The Canterbury District Health Board (CDHB) put forward a proposal to the Ministry of Health in March 2014 outlining a plea for a further $4.5 million a year for 10 years, for the "intolerable burden" mental health was placing on the system.

The debate over funding has delayed the sign-off of the CDHB’s 2014 annual plan, despite the financial year being all but over.

Three years of discussions between the CDHB and ministry over quake-related issues and funding woes, released under the Official Information Act, reveal the growing rift between the two organisations.

The most up-to-date mental health figures show child and youth cases up 67 per cent, rural adult cases up 80 per cent and emergency adult psychiatric ED assessments up 102 per cent from 2012 rates. Inpatient child and youth rates are up 92 per cent.

CDHB member Andrew Dickerson said in his 30 years in the health industry, he had "never come across an issue that I was more concerned about".

"I’m staggered that the soaring rates of mental illness doesn’t appear to be ringing alarm bells in Wellington."

Ministry representatives had been "indifferent" about the issues, he said.

While Dickerson would not be drawn on the potential for cuts, he said continuing to provide mental health services without sufficient funding was "unsustainable".

An external review commissioned by the CDHB last year identified $106m in earthquake-related spending over four years.
The ministry has granted the CDHB $70m extra since the quakes. This equates to about 1 per cent of their annual budget of about $1.4 billion.

Over the last 12 months, correspondence between the two parties has grown heated.

In November last year, Meates wrote to the ministry reporting a "crisis meeting" involving all non-government organisations, over "very close calls regarding suicide attempts and the very obvious stress being evidenced across the sector".

The meeting explored service reductions to "deal with the underlying distress being created".

In December, another email to the ministry from Meates indicated cutting services may be their only option.

"We are spending beyond the ring fence, and that is not enough[..]" he wrote.

The CDHB's annual plan is the only outstanding annual plan of the 20 New Zealand DHBs.

CDHB chief executive David Meates said it would be "inappropriate to comment".

Ministry acting national director Michael Hundleby said the ministry supported CDHB's implementation of their $4.5m mental health service.

"What we've said is have you incurred that extra cost in mental health, or has it been offset by other things."

The CDHB had originally asked for a $12.5m deficit, but that was now at least $17m.

Hundleby said the ministry had requested further information from the CDHB to show the "true deficit".

"We've had assurances from the DHB that there have not been any cuts in services due to discussions around their annual plan."

Whether or not there would be cuts next year would be discussed in their next budget, he said.

Chief Human Rights Commissioner David Rutherford requested mental health information in 2013. The commission had kept in touch with the CDHB since, and "generally publicly supported the CDHB's approach" for further funding.

The commission had since asked the Government for an update on the situation in Christchurch, "so we can assess what progress has been made in the last 12 months".

Stuff
Supplementary evidence from AIR Inc. pertaining to the forthcoming Public Hearings on ECan’s pCARP March 2015 consisting of annotations (in italics) to the 21st September 2015 article by Anna Bradley-Smith (Stuff newspapers) regarding: **Government review of air quality standards could delay woodburners in Nelson**

Getting woodburners in to cold Nelson homes could be delayed another winter by a government review of air quality regulation and the possible introduction of national standards for log and low emission burners.

- **Given the provision of more equitable, regionally-justified, limits=guidelines for particulate matter (PM) there is no valid reason why, given the levels of air pollution experienced currently:**
  
  i) existing well maintained relatively modern, “low emission”, woodburners should be forcibly decommissioned/prevented from being used in Nelson and Christchurch in order to facilitate compliance with the existing, obsolete, NESAQ (PM10).
  
  ii) locally manufactured (cord) wood burners capable of meeting 1.0-1.5g (TSP)/kg at 65% efficiency min. via AS/NZS 4013:1999 and AS/NZS 4012:1999 should not be able to be installed in homes where the homeowner feels the need to replace/refurbish an existing burner/fireplace/chimney with such appliances.

Nelson City Council is currently reviewing its air quality plan with the hopes of relaxing some of its stringent woodburner regulations by next winter, but a recently announced government review of the National Environment Standards for Air Quality could hinder the council's process and delay changes being made, NCC group manager strategy and environment Clare Barton said.

- **Since, viewed in the light of recent developments, ECan’s earlier NRRP (Air) clearly is of dubious validity both scientifically and legally its logical successor the pCARP (March 2015) should be shelved, at least for the time being.**

She said any changes in the council's plan would have to align with the national standards, and that could prove difficult if the standards were likely to change.

- **Unquestionably. cf. ECan’s pCARP.**

She said it was too early to know how the process would develop, but the council would work with the ministry and speak to the Minister for the Environment Nick Smith to try and mitigate any delays.

- **Why the rush? Surely a wider pool of expertise needs to be consulted bearing in mind the Government/MfE’s decision in 2003/2004 to move from guidelines to standards (NES) for PM this now seen as being misguided/a mistake.**
Smith said there was nothing stopping the council making amendments to its own plan while the review was taking place and "that was a call for them".

- Maybe so in the case of NCC but hardly likely in Canterbury given that ECan is Government-appointed Commissioner-led)

He said he wanted staff from all councils, not just Nelson, to be working with his ministry on meeting the national standard.

- What national standard exactly is Minister Smith hinting at here? Does he mean the present (obsolete) one or whatever the planned review decides is appropriate? If the former why should they (the individual councils) bother?

The government is reviewing standards to reflect current scientific findings on the health impacts of air pollution and the advances in woodburner technology.

- Amounting to a significant turnaround given that this advice parallels what many of us have been requesting for a long time. Frankly, at the risk of appearing naive, I cannot see much difference in the basic intent here compared to:

“(point 16) The relief sought is for Chapter 3 and the relevant parts of Chapter 1 to be rejected, and for an independent panel of experts to review the scientific basis and methods to facilitate regulation of environmental air quality.”

as included in the original version of AIR In.’s 2007 appeal to the Environment Court of ECan’s 2002 Proposed NRRP (Air) and with the spirit of this request evident in the Memorandum of Understanding agreed to/signed off by both parties subsequently.

This review follows a substantial report by the Parliamentary Commissioner for the Environment Jan Wright on improvements the government should make in how it regulates particulate pollution.

- Let it be known in this regard that representatives of AIR Inc. were invited by the PCE to contribute to this report and did so both in the form of written advice and as the result of meeting in Christchurch with representatives of her staff.

The report says the rule whereby PM10 (particles less than 10 microns in diameter that can get into the lungs) emissions cannot exceed 50 micrograms a day more than a few days a year may not be the best way of ensuring ongoing improvement of air quality.

- The PCE could easily/should have been more forthright here. Undoubtedly the existing NESAQ (PM10) is unsuitable for ensuring maintenance and/or ongoing improvement of effective (urban) air quality cf. RMA (Purpose).

Wright says in the report that the basis for this rule is on the World Health Organisation's least important of four guidelines on particulate matter - that governing short-term exposure to PM10.
As a corollary to this the EU has in fact no 24hr av. Standard for PM2.5 preferring instead a singular standard based on annual average exposure. While the EU does have a 24hr av. standard for PM10 this is much more (35 times!) more liberal than NZ’s NESAQ (PM10).

NB PM10/PM2.5 as employed in this context is merely a contrivance = a surrogate for all the effects of the pollution or, as in the present case, any dearth thereof. ECan/MfE need to remember/acknowledge this as true.

The most important guideline is on long-term exposure to PM2.5 (smaller airborne particles that are a greater risk to those who inhale them) and there is strong case for a rule monitoring the long-term exposure to PM2.5 and limiting the annual concentration, it says.

We agree that annual average exposure is likely to be (more) appropriate for regulatory purposes involving PM. Meanwhile, for a given airshed the mass/volume concentration of airborne particulate matter whether measured individually as PM100, PM10, PM2.5 or PM1.0 could well be informative but not exclusively since measurement (mass/volume) of the larger particles necessarily includes measurement of (a lesser amount) the smaller particles also. In practice the actual health effects, specifically, of the pollution or the proposed countermeasures need to be determined and this is likely to depend on many factors besides PM levels measured outdoors.

The report says the transition of heating homes with wood or coal to heating homes with electricity and the introduction of efficient wood burners has had a notable impact on air quality in New Zealand.

However it says that particulate matter is not the only pollutant and increasing nitrogen oxide emissions from transport could become an issue.

The report recommends any review look into the impact of air quality rules on other health issues such as cold damp homes, and whether monitoring one-off high concentrations of PM10 is still of value.

Also of potential relevance here public healthwise, presumably, is the lack of ventilation and/or acceptance/tolerance of rarified/overheated air and associated lifestyles as the norm nowadays i.e. as a consequence of modern trends in housing/involving widespread use of heat pumps.

Smith said Nelson had made more progress in improving air quality than any other area in the country and any adjustments "made to national standards or council's air quality plan needs to ensure the days of thick unhealthy smog in the city remain a think of the past".

"I am sympathetic to concerns that the policies around air quality have been too rigid in preventing people from being able to use log burners and low emission burners where the impacts on air quality would be low," he said.

When referring here to “where the impacts on air quality would be low” Dr Smith obviously is meaning the air quality outdoors. In practice, however, a compromise needs to be reached between achieving/maintaining necessary air quality (warmth, principally) indoors and acceptable outdoor air quality considered in terms of the 6 criteria air pollutants. Thus in many parts of New Zealand the need to keep warm (indoors) typically is much more important than the need to control existing levels of air pollution outdoors. This is where, principally, the
current NESAQ (PM10) goes astray in failing to heed both the requirements of the RMA (Purpose) and the advice of the WHO concerning its preference for AQ guidelines (as opposed to standards).

"But we need to work through that review in a careful and systematic way before changing the rules."

- *Hear, hear in respect of “a careful and systematic way” provided good science (is allowed) prevails in the public interest something that has yet to occur/be provided by MfE seen as the guiding light.*

He said the council's plan review was a chance for the council "to knock off some of the hard edges of the plan that are causing angst in the community", and it was not dependent on the government's review.

- *What “hard edges”, one wonders, is Dr Smith thinking of here? Our/AIR Inc.'s experience is that its very hard/well nigh impossible to make any worthwhile gains due to the entrenched attitudes of Regional Council Councillors, their staff, and their (in many cases) retained advisers either unfamiliar with the issues or more concerned with preserving the status quo.*

He said he had concerns over how different councils across the country had set different standards for wood and low emission burners to comply with their policies.

- *Dr Smith obviously is unfamiliar with WHO’s position here and/or the provisions of the RMA encouraging such variations!*  

"We're a little country of 4.5 million. Fire place manufacturers cannot be making different low emission log fires for each one of the markets," he said.

- *Can Dr Smith be serious here when MfE keeps shifting the goal posts/raising the bar without checking, objectively, to see whether such changes are really justified?*

"So my hope through the review is to get some standardisation around the requirements for low emission burners rather than having councils with different rules that undermine cost efficiency in the log burner industry."

- *How about, for a start, adopting guidelines for PM10/PM2.5 applicable regionally that bear some resemblance to the EU standards for these indices thereby allowing Regional Councils a degree of “slippage” whereby outdoor PM levels as enforceable standards are no longer regarded as the be all and end all of effective air quality public healthwise*  

The national review is due to be complete by October next year

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Comments provided by J.L.H. AIR Inc.  
25/9/2015
Proposed Canterbury Air Regional Plan,
Environment Canterbury,
PO Box 345,
Christchurch 8140.

Attention Tera Maka.

Hi Tera,

Thank you for assisting me regarding provision of Evidence in Chief, Rebuttal Evidence, and related matters.

As discussed this morning on the telephone please find attached a copy of article (published by Stuff newspapers just a few days ago on the 21st September) annotated according to AIR Inc.'s views on the matters raised therein.

Partly because of the disparity in dates and partly because Environment Minister Dr Nick Smith has all along tended to keep his thoughts to himself regarding any necessary review of the NESAQ (PM) and, crucially, any effect this might have on intended or proposed regional air plans, ECan's March 2015 version in particular, we have unfortunately not been able to communicate e.g. as part of our Evidence in Chief the sort of detail as is provided in the attachment. Our purpose in writing to you now therefore is to request that, one way or another acting in the public interest, you bring these latest comments of ours to the attention of the Commissioners appointed to hear Public Submissions on ECan's pCARP (March 2015).

Clearly, the matter of the NESAQ (PM10) itself being worthy of a review is covered several times over both by AIR Inc. not to mention individual members of AIR Inc. and numerous other people in respect of their own submissions. To this extent I would imagine that the material supplied herein would legitimately qualify as coming under the heading of Rebuttal Evidence in which case problems related to deadlines, etc. ought not to apply. Certainly I hope so.

Yours sincerely,
John Hoare,
Secretary, AIR Inc.
Proposed Canterbury Air Regional Plan,
Environment Canterbury,
PO Box 345,
Christchurch 8140.

Attention Tera Maka.

Hi Tera,

Further to my email dated 25th September 2015 I have received a letter from Environment Minister Dr Nick Smith dated 30th September in response the letter from me dated 3rd June 2015 (referred to in my Evidence in Chief) confirming the following:

i) His intention to review the National Environmental Standards for Air Quality (the Standards)
ii) The purpose of the review will be to evaluate the effectiveness of the Standards and assess potential improvements
iii) The findings of the Parliamentary Commissioner for the Environment's report will be fully considered as part of the review process
iv) Interested parties, including AIR Inc., will be consulted (during 2016 aiming for completion by October)

Please find attached a copy of the aforementioned letter from Dr Smith. As before I would be grateful if this information could be brought to the attention of the Hearing Commissioners, possibly under the heading of Rebuttal Evidence.

Yours sincerely,
John Hoare,
Secretary, AIR Inc.
Dear Mr Hoare

Thank you for your email of 3 June 2015 regarding the National Environmental Standards for Air Quality (the Standards).

On 13 August 2015, I announced my intention to review the Standards. The purpose of the review will be to evaluate the effectiveness of the Standards and assess potential improvements. Interested parties will be consulted during the course of the review.

The findings of the Parliamentary Commissioner for the Environment’s report will be fully considered as part of that process.

It is good of you to take the time to write to me about your ideas for the future management of air quality in New Zealand. I would encourage you to participate in the review consultation, planned for 2016. Further details will be published on the Ministry for the Environment website once the review is underway.

Yours sincerely

Hon Dr Nick Smith
Minister for the Environment