

Submission on the Auckland Climate Action Framework

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I am a senior lecturer in environmental planning at the University of Auckland. My submission is primarily concerned with the following:

- Climate compatible development and the integration of mitigation and adaptation.
- The legislative and regulatory framework for the ACAF.
- The need for long-term and interim goals.
- Clarity of mechanisms of delivery.

Note I was involved in co-ordinating with Professor Niki Harré a joint submission from academics and graduate researchers from the University of Auckland earlier this month. My submission is complementary to that one. I have attached a copy of the Harré submission for your information.

Climate Compatible Development

Please see the additional attachment. The relevant article by Knight-Lenihan and Scanlen is on p 43.

Climate compatible development is noted in the ACAF at p 29 point 9. CCD promotes the idea of explicitly combining strategies and policies for emissions reductions and adaptation initiatives while enabling improvements in human wellbeing. The advantage of this approach is it places all development within a climate change framework. This encourages an approach where all activity is assessed according to both emission implications as well as through adaptation risk analysis.

An example is giving a resource consent to a large development, and including an assessment of the emissions implications relating to (among other things):

- Construction
- Running costs
- Induced traffic activity

Included in the consent should be clarity over:

- What the projected increased emissions are.
- Where responsibility for these emissions fall (central or local government, or the private sector, or a combination).
- How emissions are to be avoided (preferred) and/or offset (less preferred).

The next stage in the CCD process is to integrate emissions-adaptation with development implications and existing and potential co-benefits (Table 1)

Table 1: CCD pillar identification matrix, modified from the work of Harkes et al. (2015). Black wording is a positive and red a negative trade-off.

Intervention	Adaptation outcomes	Mitigation outcomes	Development outcomes	Co-benefits
Subdivision of 1000 new lots	<ul style="list-style-type: none"> - Reduction in agricultural land for food production - Risk from any potential natural hazards in area increases; OR Reduced exposure if climate change impact projections accounted for in location.	<ul style="list-style-type: none"> - High density subdivision increases emission efficiency of land use. - Opportunity to reduce emissions if build in energy efficiency. - Urbanisation of green/natural space that could be used for carbon sequestration. - Increased demand for driving. 	<ul style="list-style-type: none"> - New land available for development. - New housing stock may reduce dwelling costs BUT Higher up front build costs for efficient housing.	<ul style="list-style-type: none"> - Attach ecological enhancement requirements to consents for carbon sequestration and storage, biodiversity, cultural and recreational values.
Dwelling design and construction x1000	<ul style="list-style-type: none"> - Designed for current and future climate change impacts. OR <ul style="list-style-type: none"> - Fail to incorporate adaptation requirements, leaving houses exposed to hazards. 	<ul style="list-style-type: none"> - Sustainable design incorporated from outset – double glazing, insulation envelope, water tanks, solar to reduce energy and water use. OR <ul style="list-style-type: none"> - Follow current practice and fail to integrate such features. 	<ul style="list-style-type: none"> - Work for design, construction and real estate sector and demand for building materials. - Potential for investment into innovative sustainable housing designs and solutions. 	<ul style="list-style-type: none"> - Increase to Auckland housing stock – potential benefits to affordability. - Quality homes and better public health
Transport: private vehicle, public transport, walking and cycling.	<ul style="list-style-type: none"> - Increased access reduces risk from natural hazards by providing exit strategies. <ul style="list-style-type: none"> - Road access may induce further development in more exposed areas - needs to be accounted for. 	<ul style="list-style-type: none"> - From outset designed for better pedestrian and cyclist outcomes to help reduce emissions. BUT <ul style="list-style-type: none"> - This may create ‘sustainability ghettos’ where active transport occurs within a subdivision, but driving is required outside it. - Production/construction all emit GHGs and need to be offset. - Induced road transport increases emissions. 	<ul style="list-style-type: none"> - Work for road-building sector. - Increased access across new areas. - Generates demand for vehicle (motorised and non-motorised) sales and maintenance. - Integrates with other public transport and action travel options. <ul style="list-style-type: none"> - May generate more road traffic and congestion. 	<ul style="list-style-type: none"> - Active transport can improve population health and create demand for local goods and services.
Underground infrastructure – electricity, waters, fibre internet	<ul style="list-style-type: none"> - Increased capacity pre-built to account for demands of future climate change. <ul style="list-style-type: none"> - Exposure to intruding groundwater or increased flooding. 	<ul style="list-style-type: none"> - Fibre internet creates opportunities to work from home, reducing need to drive. 	<ul style="list-style-type: none"> - More public assets. - More opportunity to establish self-employment/small business and a flexible economy to help transitioning to a low carbon system. 	<ul style="list-style-type: none"> - Water sensitive designs minimises offsite stormwater flows, reduces pollution, augments biodiversity, recreational and cultural values

Reviewing legislative and regulatory frameworks

The regulatory and legislative context of the CCD suggestion is of course vital. For example, while the Auckland Unitary Plan operative in part (AUP(OP)) encourages increasing density, permission is still being given for residential and commercial development that creates further demand for private vehicle traffic. These decisions need to include assessments of the emissions implications as part of the resource consent process.

Research undertaken by Kate Scanlen and myself on the AUP(OP) (*in press*) concludes that the current plan is relatively weak in terms of adaptation guidelines, such that there is no clarity over reducing existing exposure to climate change hazards, nor in terms of avoiding exposure through new resource consents. This research also concludes that because the AUP(OP) was drafted to reflect the limitations on local government's influence on emissions, the Plan is very weak on clarifying what Council can do to substantially reduce emissions and contribute to New Zealand's emissions targets. This will compromise the ability of the ACAF to deliver outcomes.

Therefore, I recommend:

- Lobbying central government to amend RMA ss70A and 104E. Currently local government is effectively limited to influencing emissions through land use and encouraging suitable building design. The current review of the Resource Management system (including the RMA, LGA and LTMA, along with the evolving CC Response (Zero Carbon) Amendment Bill) offers the ideal opportunity to do this. In addition the Building Act needs to be significantly changed to include requirements to improve energy and water efficiency for both new and existing building stock.
- Review the AUP to enable achieving emissions reductions and a more aggressive approach to managing exposure to current and future climate change impacts.

I note that the AUP(OP) was drafted during a period (2010-2016) when the current emissions reductions targets for New Zealand were still being established, and the threat posed by climate change was seen as less urgent. Both situations have changed dramatically. Auckland Council has recognised a climate emergency exists, and so must focus on enabling itself to take meaningful action to reduce emissions and make the city more resilient.

Resilience is part of the proposed ACAF's key moves, but requires addressing the legislative and regulatory regime to enable this to be done. In addition, the key moves need to be placed within an overarching CCD framework (or equivalent – CCD is just an example of such an approach). This would result in all decisions being assessed in terms of climate change; currently, the ACAF takes the approach of adding emissions-adaptations actions into an existing social-economic system. This modified business-as-usual approach will be insufficient.

Existing decision-making

Development is still being permitted exposing development unnecessarily to the impacts of climate change. An example is the permitting of a subdivision at

Parakai near the Kaipara Harbour. I have included an article by Mark-Brown and Scott that details the case.

In brief, the Council objected to the subdivision, but an appeal to the Environment Court resulted in a mediated settlement allowing the consent to be granted. In this case, the Council (on advice) assessed the subdivision was ill-advised due to the projected climate change-exacerbated flooding risk, but this was not sufficient to prevent permission being given.

I recommend that, in addition to the lobbying noted above, the council needs to ask the Government to give councils greater clarity over what limitations can be placed on developments that appear to increase exposure to hazards. I realise this is likely to be part of the work by the proposed Climate Change Commission, but feel interim guidelines should be available now.

While it is accepted the Parakai case occurred prior to the finalising of the AUP, I note the original Proposed AUP promoted avoidance while the final AUP(OP) promotes adaptability in line with the Independent Hearings Panel. For example, where the PAUP stated that greenfield or future urban land affected by coastal inundation and sea level rise is to be avoided, the IHP's revised version of the proposed AUP said coastal hazards and flooding had to be avoided where practicable, and the AUP(OP) says subdivisions must respond and adapt to the effects of climate change (B2.3.1(1)(f)). Hence set-backs may be imposed primarily to address coastal amenity and access but it is unclear whether a consent could be denied on the basis of predicted climate change impacts on property alone.

This shifts the decision-making about risk to the property owner, raising questions about liability and accountability. New Zealand is currently clarifying the extent to which local government is obliged to prevent further development in areas exposed to the effects of climate change, how it should do that, the relationship between the robustness of the data and the restrictions on development, the extent to which local government should require and/or build protection, and when it should facilitate the removal of existing development (Iorns Magallanes *et al.* 2018, MfE 2017, Knight-Lenihan and Scanlen 2018). The IHP's promoting of adaptability, adopted in the AUP(OP), implies an interpretation of legal liability and the ability to predict the extent to which future adaptation will be feasible.

ACAF key moves and outcomes

I highlight the following as particularly points I support:

- Integration between blue and green spaces and the creation of healthy ecosystems contributing to carbon storage (p 30).
- The associated actions on p 31.
- The flagship action on p 32.
- Key move 3 on making development and infrastructure climate compatible (p 33).
- Making CCD assessments standard for all new development and infrastructure (p 34), with the proviso that this should be done

retrospectively as well, focusing on large-scale existing urban development initially. This would link with Key Move 4 on transforming existing buildings and places.

- Key Move 10 on decentralised renewable energy.

Targets

While recognising the ACAF is a non-statutory document, and bearing in mind the legislative changes noted earlier, provision should be made to link with the creation of specific emissions reduction targets to be put in place for Auckland. These targets will be influenced by the final form of the CC Response (Zero Carbon) Amendment Bill, and advice from the Climate Change Commission on evolving national interim targets and climate budgets.

Regional targets would then profoundly influence transport investment, the built environment form, and the integration of green infrastructure as part of both emissions management and adaptation. The latter should include a far more integrative approach to including developer contributions toward green infrastructure.

These targets need to be put in place as a matter of urgency to drive decision-making. Part of the monitoring provisions in the ACAF would be to report on progress toward targets, and steps required to address any failure to achieve targets.

Public engagement

An important aspect is the influence ACAF will have on the regional economy and land-use practice. It will be important to engage immediately with the public to emphasise that, in order to significantly reduce emissions and adapt to climate change, there will be profound changes. These have yet to be fully clarified, but such a public engagement will be vital to ensure public support for substantial changes when they are introduced.

Immediate actions

The following ideas are offered as possible mechanisms within the framework outlined above.

1. Kickstart *Green Developer* rewards

All development should demonstrate how it will contribute to a net reduction in emissions. Green developer points could reward net emissions reductions. For example, in the City of Vancouver developers wanting to do business must demonstrate how they contribute to emissions reductions targets (among other things). The City leverages off the fact that developers want to be there and make more profit doing so. Targets are a mix of statutory and non-statutory, and include energy efficiency standards for buildings down to requiring all new parking infrastructure to include electric vehicle charging options.

A points system can be used: the more a development includes emission reduction initiatives, the more points it earns, and the greater the chance of

gaining a resource consent. Failure to demonstrate emissions reductions should prevent development. At a regional scale, development inducing private vehicle transport should have a per kilometre tariff placed on it. At some point, exceeding an acceptable level of induced transport should rule out the development.

Countries within the European Union use variations of this approach, including [green space and green points systems](#).

2. Use developer levies for climate action

There needs to be better targeting of developer levies for public greenspace that contributes to climate change adaptation through soft engineering. Levies can be allocated between infrastructure options, including green infrastructure, as required. This is already allowed for, and has been done in some areas, but needs to become standard practice.

Public greenspace projects funded this way should include water sensitive design where parks are used as flood sacrifice zones, meanders are put back into waterways, or wetlands are reinstated or created. Consents should also require integration of on-site adaptation systems with the surrounding land.

Direct benefits would include better flood and drought management, reduced erosion and protection of coastlines. It would also contribute to discussions regarding the need for some communities to more actively adapt to climate change as part of adaptive planning. Other possible benefits include reducing the heat island effect and contributions to carbon sequestration and storage, although the latter is more challenging due to measurement uncertainty.

There is also overlap with the National Policy Statement for Freshwater Management. Achieving NPS targets and goals requires management catchments within freshwater management units, and there is potential for CCD and water management co-benefits which should be explored. This also relates to the next point.

3. Drive green infrastructure solutions for water management

Globally, initiatives show green infrastructure approaches to water management lead to better water quality, greater efficiencies and ultimately lower costs. However, initial design and therefore investment costs are high. There is a need to consider how to raise funds without compromising public control.

[Greater Manchester](#) in the UK and New York City are examples of urban centres investigating and implementing options. With the right returns, potential investors would be global and include for example pension funds, with potential conduits including green bond facilities. This can be seen as part of a trend of broadening private investment for public good outcomes generating profits, as demonstrated already by Auckland Council's [Green](#)

[Bond](#) initiative. This existing initiative could become the vehicle for this action.

4. Dramatically improve support for building retrofits

Council support for retrofitting existing building stock to become more energy efficient is currently limited, but could be greatly increased. Requirements for new builds to be energy efficient are inadequate on their own when the bulk of the built environment remains energy inefficient.

Auckland Council may be in a position to directly support the expansion of schemes retrofitting homes for both energy efficiency and health benefits. Overall benefits would include reducing energy supply uncertainty, as well as contributing to lowering the risk of generating power from non-renewable resources at least in the interim. This would fit well with proposals in the Climate Action Framework to consider distributed energy systems (Key Move 10, p 49).

5. Subsidise electric bikes

The subsidising of electric bikes and charging stations could be done by the Council through the Green Bond initiative. While electric cars are important, these do not solve congestion. While ebikes are less convenient (exposure to weather, the need to have panniers, helmets etc) they are far cheaper and more flexible in terms of travel and parking.

Bikes can currently use bus lanes and, as usage increases, infrastructure will continue to improve. It would be useful to undertake a benefit costs analysis to establish whether it is more cost effective to subsidise ebikes than invest in roads and/or public transport.

There is an obvious question here regarding fairness and equitable access to technology. Those likely to benefit from access to ebikes in terms of reduced running costs, and equally contribute the most to emissions reductions, are those commuting long distances. However, those most able to take up ebikes are likely disproportionately well off and living closer to shops, work or school.

This idea would need to be assessed carefully in order to make a significant rather than apparent contribution to emissions reductions.

References

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