Report to Policy and Strategy Committee February 2011 – for Decision

File No:	04 02 05A
Date:	13 January 2011
To:	Chief Executive Officer
From:	Group Manager - Biosecurity-Heritage
Subject:	**Regional Carbon Strategy - Investigation Report**
Section:	B (for recommendation to Council)

Purpose
To update the Committee on the proposed regional carbon strategy second stage investigations that were endorsed by Council in September 2010.

Recommendations

1. That the report Regional Carbon Strategy – Investigation Report (Doc's # 1902048 dated 13 January 2011) be received.
2. That the Policy and Strategy Committee endorse the primary role of Council as facilitation and co-ordination to implement the Regional Carbon Strategy.
3. That the Policy and Strategy Committee recommend the proposed regional carbon strategy to Council for approval and inclusion in the draft annual plan (DAP) as a new activity to give effect to the Regional Policy Statement.
4. That staff report back with an implementation plan once the annual plan process is complete and the strategy is confirmed.

Background

Since the enactment of the ETS legislation via the Climate Change Response Amendment Act 2009, opportunities exist for the council to promote advantages of ETS participation.
The regional carbon strategy is a mechanism to achieve policies prescribed in the proposed Regional Policy Statement, relating to reduction of greenhouse gases, soil conservation, biodiversity, water quality and catchment protection.

The concept has two components:

1. Provide an incentive to landowners to initiate land use changes on marginal farmland by entering into joint venture investment for (a) plantation forestry or (b) retirement of land and regeneration of native forest.

2. Provide a regional facility to aggregate carbon credits into a regional pool. This provides capacity for self insurance, and potential buffering for price and harvest variations.

When the proposed Strategy was presented to Policy Committee in September a number of key points were highlighted, and are reiterated here for the benefit of new councillors.

- The concept should be considered as fundamental core business of the Council, as a means to achieve environmental, social and economic outcomes for the benefit of the region.

- The issue for landowners currently is that ETS is complex, risky, has uncertainty and inertia. Council can provide greater certainty by:

  i) encouraging carbon forestry and generation of an alternative cash flow from carbon credits, thereby improving farm economics
  ii) facilitating carbon trading opportunities by assisting landowners to register, claim and aggregate credits.

- Council is able to use forestry opportunities to bring about environmental outcomes.

- The Waikato region generally will benefit from 'green investment'

- Emitters see substantial marketing and branding opportunities from 'sustainable carbon credits' that provide added benefits to the environment.

- Strong partnerships need to be developed with Waikato Tainui and other river settlement iwi. The Waikato River Independent Scoping Study (WRISS) provides major linkages with the regional carbon strategy in terms of afforestation of marginal land and establishment of riparian protection.

- Any afforestation investment needs to examine what regional priority areas are to be targeted; applications via an environmental tender process may be useful; joint ventures with emitters/purchasers holding carbon agreements for 10-15 years are a good option.

Action Points from Council resolution (September 2010)
Scion Forest Research has been engaged to report on the concept feasibility and will present their findings to the Committee. Several work streams were necessary to advance the concept which Council endorsed

- *Provide examples of forestry plantings and permanent forest sink initiatives (PFSI) to Council's investment advisor to analyse and review as an investment option. This is likely to require the preparation of a detailed 10 year investment proposal for an in depth cost benefit analysis.*

  Commentary – The Scion report commissioned in November has presented substantial data on a variety of investment scenarios that can now be passed to EW investment advisor for analysis. Whilst initially proposing that EW may be an investor in the strategy, it appears that there is significant emitter and commercial investor interest, that EW involvement may be restricted to facilitation and possible incentive payments to reflect public good. Council will need to address the issue of whether they wish to be an active investor participant in the strategy.

- *Develop case studies based on differing forestry tree species and PFSI to provide guidance to Waikato landowners on how they can utilise ETS in their farming situation.*

- Commentary – While limited time has prevented specific case studies for the Waikato, Scion and AgResearch have taken data from similar farm situations and modelled for Waikato farm examples to provide good indicators how the strategy would impact on farm economics.

- *Investigate potential for collaborating with Waikato River Authority to apply such incentives.*

- Commentary – the WRISS report provides a clear direction inasmuch as major gains in sediment reduction and water quality are going to derive from afforestation and riparian fencing and plantings. If funding linkages with the carbon strategy, Clean-up Fund and ETS can be made there are really substantial synergies.

- *Initiate dialogue with potential stakeholders interested in purchasing carbon credits.*

- Commentary – staff have entered into discussions with Fonterra, Mighty River Power, Genesis Energy, and several forestry /investment companies to ascertain their level of interest in participating in the regional carbon strategy. The response has been strongly supportive, and encouraging of EW in taking such an initiative. Emitters are interested in obtaining credits to offset their liabilities and are attracted to EW's ability to aggregate larger tranches of credits for trading. There is a strong interest in entering into joint ventures, longer term supply contracts and branding opportunities. Added value for marketing potential is seen as very important, maybe not presently but certainly in the longer term. There is some apprehension over the future of the ETS and one emitter is waiting until the government ETS review is completed. The global outlook for the carbon market is bullish, and hinges significantly on the European economy. Within 12-24 months it is expected the world market price for EUA (European allocated permits) will reach €20 (NZ$ 35) (currently €11 or NZ$ 19). *Refer to carbon market analyst's assessment of future market trends appended to this report.*

Scion Report

Scion formed a consortium with AgResearch and Hardwood Management Ltd to undertake the investigation report that EW commissioned in November 2010. The brief was to develop the concept of a regional carbon strategy the objectives of which are to:-

- Utilise the cash flow from carbon credits to establish new forest plantings which generate environmental benefits
- Create an incentive to channel investment in carbon forestry to wise land use
- Capitalise on potential added value to emitters which regional carbon credits may provide in terms of increasing biodiversity and protecting soil and water
- Facilitate a coordinated approach to investment which maximises environmental and financial benefits while minimising risk

It was suggested EW could be a facilitator/enabler/coordinator of a regional carbon strategy, by bringing parties together and building synergies rather than being an investor/ funder. There are public good benefits that can be realised from such a concept and it is reasonable that some public funds should be invested for the environmental outcomes.

The Executive Summary of the Scion report is appended to this report and the key points are referenced here:

1. The opportunity to sell carbon credits from forest plantations substantially improves the profitability of forestry. If forestry displaces farming on marginal hill country, and complements farming on better hill country the annual cash flow and profitability of sheep and beef farming is enhanced.
2. The ETS liability of farming enterprises can be markedly reduced in an economically viable way by forestry establishment.
3. The value of carbon forestry opportunity is likely to be very specific to landowner's individual circumstances and priorities.
4. The most successful structures for forestry encouragement involve some assistance to achieve off-site environmental benefits.
5. Farmers' attitudes to land use change are risk adverse and will take considerable facilitation to change.
6. Environment Waikato support to landowners at technical, advisory, financial planning level is essential. Providing a regional service for verification and registration of credits to establish a regional pool is worthy of more investigation.
7. The economic benefits of carbon forestry are positive. The environmental benefits of carbon forestry are numerous, but not well metricated.

Discussion

The basic premise of the regional carbon concept is to capture the opportunity that the ETS presents to encourage better land use on marginal land by providing a more sustainable land use and a more sustainable revenue stream. Such a land use change would also provide downstream or offsite environmental benefits. To encourage the change the carbon credit income will be the main incentive; however in some instances the financial package may need some central or regional funding to enable the change to be effective.

The Scion report verifies that the economics of land use change on marginal hill country pastoral land is substantially improved by carbon farming opportunities presented by the ETS. From their data analysis, economic farm surplus figures per ha can change from an annual loss of $150 from grazing to an annual return of over $400 under forestry.
From a Council perspective the added values that such plantings achieve need to be counted into the equation – what value do we place on the soil conservation, improved water quality, increased biodiversity, aesthetics and landscape benefits?

Farmers often view the downside on the basis of the ETS liabilities, but this is countered by the revenue earning potential. If carbon credit values are high the tree crop is retained to earn credit revenue, and if timber values are high then harvesting is a serious option. The important point is that appropriate forest management and budgeting is done to manage the liability impact at harvest, by either spreading the harvest age of the forest or ensuring liability provisions are banked.

Scion has drawn on the East Coast Forestry Project and Afforestation Grant Scheme principles to demonstrate how incentives have assisted projects to get started. Horizons Regional Council has embarked on an ambitious soil conservation scheme with central government SLM (Hill Country Erosion) Programme funding, part of which now involves carbon forestry.

Hawkes Bay Regional Council has extensive areas of class VIe and VIIe pastoral land well suited to carbon farming and is similarly examining how they may act as facilitator and financier to such a concept.

The recent release of the NIWA report on the Waikato River Scoping Study flags strong synergies between the carbon strategy and landuse changes for improved water quality and sediment reduction. The Waikato River Authority may view the regional carbon strategy as a key mechanism and vehicle to implement their objectives. The opportunity to leverage the Clean-up funding could be enhanced substantially via implementation of this strategy. This report was released after the Scion report initial due date so has not featured in the recommendations.

How could it work

It is envisaged that the concept will be promoted via a website and publicity in the rural supply sector, through advisories to banking personnel, rural accountants and solicitors.

Landowners who have an interest in participating are invited to contact EW for an initial site assessment to verify eligibility, and to discuss their circumstances and motivation to engage in an afforestation proposal.

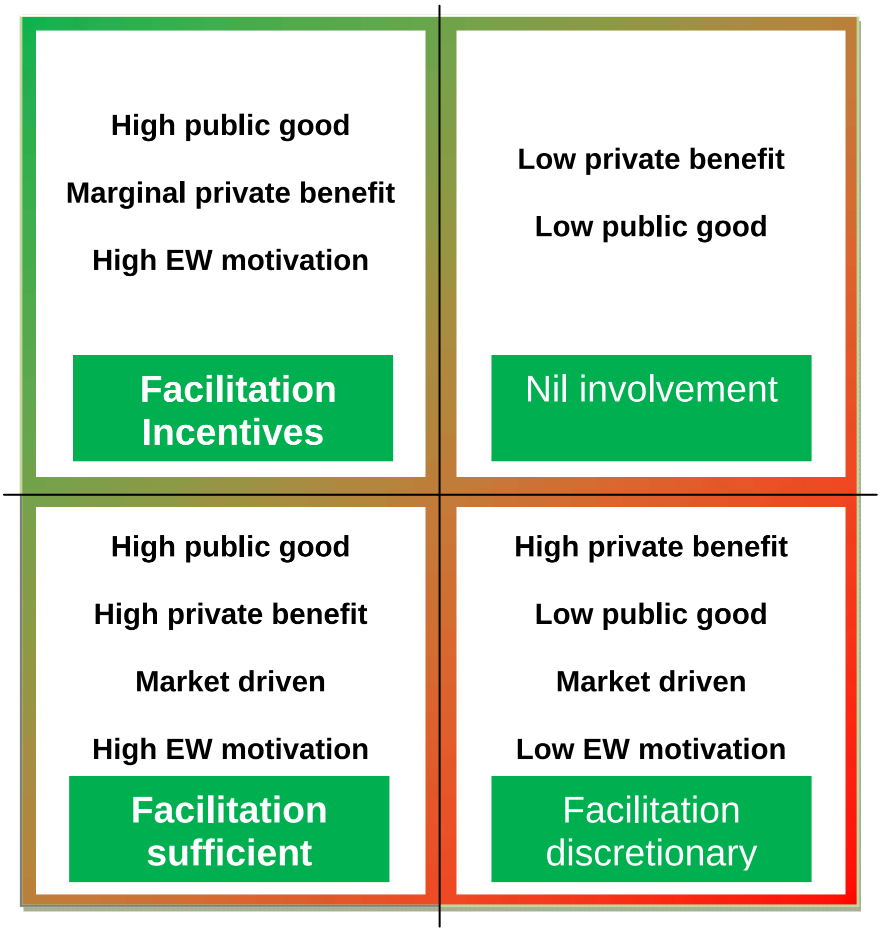
A draft proposal will be prepared setting out the landowners requirements to qualify for entering into a joint venture agreement. If they agree then the agreement can be signed and consolidated into a bundle of agreements for completion with an emitter/ investor who has entered into a supply agreement with EW.

Depending on the terms of the joint venture, it is most likely the investor provides funding for the planting, then annual payments in return for all or part of the carbon credits accruing to the forest. The landowner provides the land, fencing and protection of the trees, and meets the annual outgoings of rates and insurance etc. The ETS liabilities are managed either jointly or by agreement that they are transferred fully to the landowner on termination of the supply contract.

EW facilitation costs are recovered from the joint venture as an initial fee over the first two years.

For more difficult sites, where erosion or difficult access exists, this may increase costs or limit the type of sequestering species that can be used, it is reasonable to expect some incentive funding may be required to make the joint venture agreement more viable e.g. such as Lake Taupo. In these cases it expected EW may be able to leverage additional funding from the WRA Clean-up fund, the Afforestation Grant Scheme, catchment works or Hill Country Erosion Programme. The following graphic sets out the mix of situations which are likely to be encountered.

Matrix of Incentive Applications



It is likely that emitters/investors will be most interested in sizeable bundles of carbon credits involving maybe 500 hectares of forest as a minimum. This may involve possibly 10 to 20 individual landowner parcels to form a suitable tranche of credits for purchase in a joint venture agreement.

The second part of the concept is for EW to provide a service to landowners to assist them in identifying post 1989 forests, verifying them as ETS and PFSI compliant and undertaking the registration process, claiming the credits, aggregating and bundling for sale as Waikato Region branded credits. In discussion with emitters they consider this concept has merit in bringing credits to the market that may not be available otherwise.
The potential advantage of holding a portfolio of geographically diverse forestry stands is that it is feasible to self insure against losses, and to buffer changes in carbon credit prices and harvesting liabilities. This is a specialist area that needs more due diligence to develop the business model.

Statutory Responsibilities

As identified elsewhere, this concept should be considered as core business for Council. It is endorsed via the Regional Policy Statement and meets all prerequisites under the Local Government Act 2002. The carbon strategy would directly or partially support the RPS policy directions, particularly:

Objectives 3.1 (Integrated Management); 3.3 (Health and Wellbeing of the Waikato River); 3.7 (Ecosystem Services); 3.13 (Mauri and health of fresh water bodies); 3.15 (Riparian areas and wetlands); 3.18 (Ecosystem integrity and indigenous biodiversity); and 3.21 (Natural Character).

Community View

The views of the community have not been canvassed at this point however the Annual Plan consultative process is intended to be used to obtain community feedback.

Annual Plan/LTP Implications

The concept is not within the approved Long Term Plan. Provision has been made within the Annual Plan by featuring it as an activity and making budget allocation of $50,000 for 2011/12 to initiate the facilitation process and prepare suitable joint venture documentation.
It is proposed to be included as an amendment in the 2011/2012 Annual Plan if Council is supports the concept.

Conclusion

This is an opportunity for the Council to take an innovative stance and put in place an initiative that will attract investment to the Waikato.

Scion investigation has confirmed that the concept is viable noting that individual landowners circumstances and motivation will drive the uptake of the concept. The ability of the Council to provide facilitation and promote the land use change opportunity will be pivotal to success.
The concept has risks and uncertainty. It also has great potential and benefits to landowners and the Region. It could provide a vehicle to achieve many objectives of both EW and the WRA, and to enhance the economic future for pastoral hill country farmers. The dairy sector can also engage with the concept to improve their waterways and marginal lands. The CO_2 emitters within the region support the concept and have indicated their willingness to become involved.

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Declaration: - The author declares an interest in two forestry companies and considers that interest does not create any conflict of interest with Council issues.

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Appendices

1. **Scion report – Achieving Multiple Regional Goals with Carbon Forestry**
2. **Statement on carbon market trends – N Brunel, OM Financial**
3. **Extract – Positive Carbon dated Sept 2010**

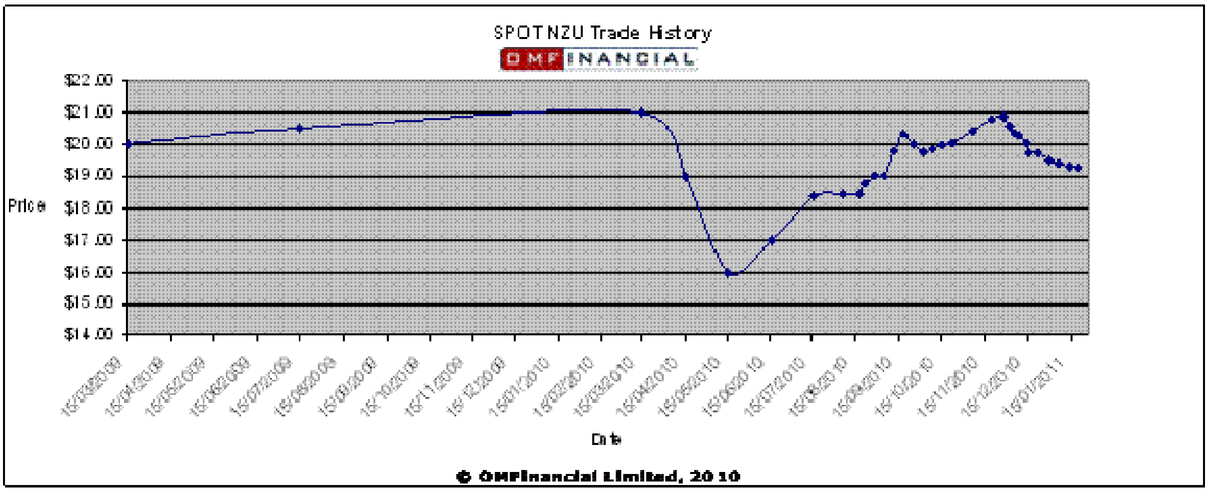
Appendix 1 – Achieving multiple regional goals with Carbon Forestry – Scion Report

Appendix 2 – Statement of Carbon Market Trends – N Brunel- (OMFinancial Ltd)

The first question to ask is what does the price of carbon actually mean? In our view – the price of carbon reflects the cost of emissions. Emissions are driven by energy output and energy output is driven by growth. Right now – growth globally is effectively flat and has been for over two years. Looking at a chart of global carbon (in Europe) over the last two years – it is actually a reflection of global growth. This trend could continue for several years.

The holistic view on the price of carbon is that theoretically it will rise dramatically and eventually fall to zero. This is based on the view that if we continue to force emitters in reducing their allowable emissions (CAP) – it will force them to change to their energy use from dirty to clean. When everyone is using renewable energy – there will be no emissions and therefore no price on carbon.

The price of New Zealand carbon has traded between $16 and $21 since the ETS has been in place – see chart below. Most of the trading has taken place in the $19 to $20 range. Looking further back – before the ETS was in place – the theoretical price of New Zealand carbon was nearly $50 – as CERs were trading at €23 and the NZDEUR exchange rate was close to .4000.



The outlook for the next two years is that the price of New Zealand carbon will be capped at $25 due to the “tax & trade” ETS we have operating where the government will sell carbon to emitters at $25. Right now – the price of New Zealand carbon is $19 due to a weak carbon price overseas. The outlook for carbon for the next 10 years is that is will slowly increase in price as the world economy improves and emitters face ever-increasing pressure to reduce emissions via an ETS or tax or a hybrid of both. Our view is that the price of carbon will rise to NZ$50 by 2020 as the government reduces this ‘compensation” to emitters and more countries move to some form of emissions trading.

Nigel Brunel
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OMFinancial Limited

28th January 2011

Appendix 3

EU carbon price may triple by 2013

Thursday, 23 September 2010

The price of European carbon emissions permits, may hit €40 by 2013 on the back of a recovery in the price of gas, according to analysts at Swiss bank UBS.

The bank predicts that an oversupply of gas will dissipate over the next 18 months leading to a rise in the gas price and fuel switching to coal among European power generators. Even without a recovery in gas prices, carbon prices could double by 2014, Bloomberg reports UBS analyst Per Lekander as saying.

The relative prices of gas and coal are the biggest drivers of EU carbon prices. A lift of just 16 per cent in the gas price by 2013 could push EUA prices to toward €42.

A switch to dirtier coal would increase emissions per megawatt of power produced, raising demand for EUAs and driving up the price. While environmentally detrimental in the short run, the switch to dirtier coal and resulting higher carbon prices is likely to drive higher levels of investment in low-carbon technology.

EU carbon prices have languished since the recession set in following the global financial crisis, prompting critics to say the market is not fulfilling its objective to drive a low-carbon transition in the economy.

The benchmark EU carbon price, for EUA Dec 10 futures, settled at €15.03 on the European Climate Exchange on Wednesday.