

**IN THE MATTER OF
AND**

The Resource Management Act 1991

IN THE MATTER OF

appeals under clause 14 of the First Schedule to the Resource Management Act 1991 concerning proposed One Plan (Combined Regional Policy Statement and Regional Plan) for the Manawatu-Wanganui Region.

BETWEEN

MERIDIAN ENERGY LIMITED
ENV-2010-WLG-000149

AND

TRUSTPOWER LIMITED
ENV-2010-WLG-000145

AND

OTHER PARTIES
Appellants

AND

**MANAWATU-WANGANUI (HORIZONS)
REGIONAL COUNCIL**
Respondent

**STATEMENT OF SUPPLEMENTARY EVIDENCE OF MATIU CORRIGILL PARK ON
BEHALF OF MERIDIAN ENERGY LIMITED AND TRUSTPOWER LIMITED
RELATING TO THE PROPOSED ONE PLAN BIODIVERSITY PROVISIONS**

14 March 2012

1 INTRODUCTION

- 1.1 My full name is Matiu Corrigill Park. I have previously prepared a statement of evidence in this proceeding, dated 17 February 2012. I confirm that the further opinion I provide in this supplementary evidence is within my area of expertise and experience.
- 1.2 I have read, and agree to comply with, the Code of Conduct for Expert Witnesses set out in Schedule 4 of the Environment Court Practice Note 2011.
- 1.3 I have prepared this supplementary evidence to address matters arising from the exchange of evidence and planning caucusing which has occurred since my evidence-in-chief was circulated, namely:
- Ecological evidence prepared by Amy Hawcroft, Philippe Gerbeaux and Spencer Clubb of the Department of Conservation; and
 - Planner's Conferencing on the application of ecological significance assessment criteria, 27 February 2012.
- 1.4 In addition to responding to these statements, my supplementary evidence takes into account the supplementary planning evidence of Robert Schofield.
- 1.5 I will now address each of these matters in turn.

2 BIODIVERSITY OFFSETS

- 2.1 Mr Schofield and I have discussed in some detail the issues associated with the appellants' position on biodiversity offsets from planning and ecological perspectives. The evidence-in-chief and the supplementary evidence of Mr Schofield considers the 'no effects' basis of the framework for biodiversity offsets sought by the appellants'.
- 2.2 Having reference to Mr Schofield's position, I have considered the practical application of the amendments sought by the appellants. However, before I discuss the specific matters raised by the appellants' experts, I would like to highlight the issues surrounding incorporation of a biodiversity offsetting tool,

as described by the Department of Conservation, into a framework for assessing ecological effects.

2.3 The preservation of indigenous biodiversity is a matter of national importance which gained national prominence with publication of the New Zealand Biodiversity Strategy (2000), and more recently with notification of the draft National Policy Statement on Indigenous Biodiversity (2011). There is no debate between experts that halting biodiversity decline is a key consideration for any ecological assessments carried out under the RMA.

2.4 The Department of Conservation, in attempting to grapple with biodiversity decline has looked to an international programme called the International Business and Biodiversity Offsets Programme (BBOP). BBOP is a partnership between companies, financial institutions, governments and civil society organisations to explore biodiversity offsets. Biodiversity offsets are defined by BBOP as¹:

“...measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting after appropriate prevention and mitigation measures have been implemented. The goal of biodiversity offsets is to achieve no net loss, or preferably a net gain, of biodiversity on the ground with respect to species composition, habitat structure and ecosystem services, including livelihood aspects.”

2.5 In particular the BBOP require:

“Adherence to the mitigation hierarchy: A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance, minimization and on-site rehabilitation measures have been taken according to the mitigation hierarchy.”

2.6 BBOP define their mitigation hierarchy as:

¹ Business and Biodiversity Offsets Programme (BBOP). 2009. *Biodiversity Offset Design Handbook*. BBOP, Washington, D.C.

Avoidance: measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure, in order to completely avoid impacts on certain components of biodiversity. This results in a change to a ‘business as usual’ approach.

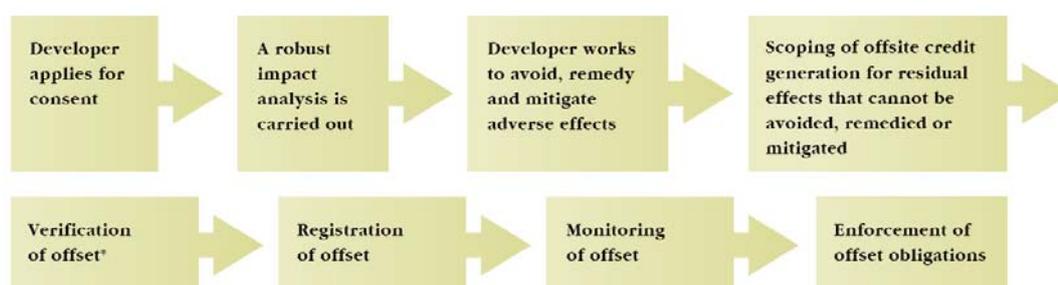
Minimisation: measures taken to reduce the duration, intensity and / or extent of impacts that cannot be completely avoided, as far as is practically feasible.

Rehabilitation / restoration: measures taken to rehabilitate degraded ecosystems or restore cleared ecosystems following exposure to impacts that cannot be completely avoided and / or minimised.

Offset: measures taken to compensate for any residual significant, adverse impacts that cannot be avoided, minimised and / or rehabilitated or restored, in order to achieve no net loss or a net gain of biodiversity. Offsets can take the form of positive management interventions such as restoration of degraded habitat, arrested degradation or averted risk, protecting areas where there is imminent or projected loss of biodiversity.

2.7 An area where I feel the debate on biodiversity offsetting has become difficult is that, in my view, ‘offsetting’ in the BBOP guidelines is interchangeable with ‘mitigation’ in the RMA. However, the appellants’ appear to be seeking to have offsetting included as an additional measure to mitigation in line with the BBOP approach as follows:

“Biodiversity offsetting can be defined as measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken.”²



² Biodiversity Offsets Programme A CDRP-funded research programme: 2009-2012

2.8 This means that conversations over the issue of offsetting and mitigation have become confused, as I have summarised in the following table:

RMA	BBOP	DOC
Avoid Remedy Mitigate	Avoid Minimise Rehabilitate Offset	Avoid Remedy Mitigate Offset

2.9 Further to this, the Department of Conservation is looking to establish within the One Plan the BBOP mitigation hierarchy, whereby offsetting can only be considered where avoidance, remedy or mitigation are not practicable.

2.10 This creates a tension between the Department of Conservation’s biodiversity objectives, and the requirements of the RMA under which ecological practitioners must operate. The Department acknowledges this in its programme summary:

The Resource Management Act (RMA) is designed as enabling legislation. There are important tensions between it and conservation legislation, which means that care needs to be taken when applying the developing RMA jurisprudence to statutory processes under the Conservation Act.

2.11 Mr Clubb’s statement for the Department of Conservation is largely consistent with the developing principles from BBOP. Overall, Mr Clubb’s statement highlights well the many issues associated with the concept of biodiversity offsets. Mr Clubb cites the mission of the BBOP framework to develop and promote best practice, based on agreed principles (paragraph 11). Most pertinently, at paragraph 21 of his statement, Mr Clubb cites BBOP’s acknowledgement that biodiversity offsetting is a “*new and emerging field and that while the definition and principles are well founded, there is benefit in further refinement, testing and dialogue... on the detailed implementation of the principles*”. Mr Clubb notes that BBOP has been working on the second phase of work to advance the ‘proof of concept’ for biodiversity offsetting. This phase is not anticipated to be complete before mid-2012.

- 2.12 Overall, I agree that the BBOP principles outlined and discussed in Mr Clubb's statement provide a good theoretical basis for ensuring a biodiversity offset is well considered and relevant to the anticipated effect. This was agreed during expert caucusing on 30 Jan 2012. However, I consider embedding these principles in the One Plan in the manner sought by the appellants' is inappropriate given their as-yet untested nature in New Zealand. While I recognise the RMA identifies biodiversity as a section 6 matter, the statutory framework does not include biodiversity offsetting as an adjunct to mitigation, nor does it require no-net-loss, or call for adherence to a mitigation hierarchy. The supplementary evidence (refer Appendix 1) of Mr Schofield outlines his proposed resolution of these issues.
- 2.13 As outlined in my evidence-in-chief, the decisions version of the One Plan contained a straightforward framework for biodiversity offsets that allowed their consideration on a case-by-case basis, with a focus on application to regionally or nationally important infrastructure. This approach was considered appropriate by experts at the time, and reflected the relatively untested and rapidly developing nature of the concept.
- 2.14 Linked to the application of biodiversity offsets is the issue of 'no net loss' or 'net gain' of biodiversity. This term was the subject of discussion during earlier submissions and caucusing on the One Plan - which in my opinion simply sought to embed a positive term to address the trend of biodiversity decline in the Region. While 'no net loss' or 'net gain' may seem relatively simple concepts in terms of biodiversity, the reality when applied through the BBOP framework is somewhat different. This is demonstrated by Mr Clubb's statement that *"it is very difficult to build an offset that exactly achieves no net loss, as this represents a point along a continuum from net loss to net gain"* (paragraph 36).
- 2.15 The findings of a recent BBOP draft paper on the concept of no net loss³ illustrate how at least seven different components of an offset are necessary to demonstrate no net loss. These include, for example, a requirement for the *'explicit calculation of loss and gain at impact and offset sites'* amongst other wide-ranging research undertakings and other considerations. To illustrate the

³ Refer BBOP Draft Resource Paper NNL 16-6-2011 CONSULTATION

complex requirements of the offsetting framework sought by the appellants', Mr Clubb goes on to state that there must be a form of rigour applied to calculating biodiversity losses at the impact site and demonstrating equivalent gains at the proposed offset site. He states his agreement with the views of the BBOP that *"it is impossible to demonstrate that gains match or exceed losses without going through this exercise"* (paragraph 25).

- 2.16 Mr Clubb also discusses the necessity of biodiversity offsetting to be "like for like" (or offsets comparable in ecological terms) consistent with the BBOP principles as sought by the appellants' relief. However, it is important that the Court is aware that the BBOP also recognises situations where development activities that impact low conservation priority components of biodiversity can be offset by taking opportunities for enhancement of sites of high conservation priority but which are not like for like (the concept of 'trading-up').
- 2.17 The amendments sought by the appellants' effectively exclude the consideration of 'like for unlike' offsets. In my opinion such a restrictive approach to biodiversity offsetting could preclude some valid forms of beneficial ecological mitigation under the RMA.
- 2.18 In my opinion, Mr Clubb's evidence on the other BBOP principles complements the matters raised in my evidence-in-chief and serves to further highlight the complexities and uncertainties associated with the biodiversity offsets framework proposed by the appellants'. Similarly, Ms Hawcroft for the Department of Conservation also highlights the high costs and long-term nature of biodiversity monitoring (paragraphs 117 – 124) as well as the inherent difficulties in interpretation of outcome monitoring results which would be required under the amendments proposed. For example, Ms Hawcroft at paragraph 22 stated her concern that *"without a robust approach to monitoring the outcome and adapting management as needed, there will be no certainty that net biodiversity will be maintained"*. Ms Hawcroft's statement illustrates the inherent difficulties raised in my evidence-in-chief around the measurement of ecological factors when considering a biodiversity offset. This lack of detailed knowledge about species, habitats and ecosystem processes continue to delay any agreement on a single system for calculating net loss or gain of biodiversity.

2.19 Mr Clubb and Ms Hawcroft for the Department of Conservation raise, in no uncertain terms, the many issues associated with incorporating this emerging concept into the One Plan. I therefore remain of the opinion that the biodiversity offsetting framework sought by the appellants' is in its infancy in New Zealand (and internationally) and there is still some work required to ensure the concept is scientifically tested to ensure its robustness for application under the RMA. Accordingly, it is my position that the decisions version of Policies 7-2A and 12-5 that applied a flexible framework for biodiversity offsetting was appropriate. In light of the appellants' position on the concept of no net loss/net biodiversity gain, some amendments are also necessary to either delete or clarify that this concept is not intended to apply as absolute.

3 POLICY 12-6 CRITERIA AND FUNCTIONING ECOSYSTEM PROCESSES

3.1 Policy 12-6 has been discussed in some detail in my evidence-in-chief and Mr Schofield's evidence-in-chief. However, as a result changes proposed by the appellants' to the beginning of this policy there was some confusion during the planners caucusing as to how the "functioning ecosystem processes" component of Policy 12-6 was intended to apply. The decisions version of this policy currently states:

An area of rare habitat, threatened habitat* or at-risk habitat* may be recognised as being an area of significant indigenous vegetation or a significant habitat of indigenous fauna if: ...*

3.2 The respondent and appellants' are now proposing that it say:

One or more of the criteria below will contribute to the significance of an area of rare habitat, or threatened habitat*. An area of at-risk habitat* may be recognised as being an area of significant indigenous vegetation or a significant habitat of indigenous fauna if: ...*

3.3 I am concerned that this new wording changes the intent of this provision from requiring consideration of a range of ecological assessment matters necessary to confirm significance, to a pointless exercise where all rare and

threatened habitats in Schedule E are automatically significant simply by being in Schedule E. This box is ticked and further assessment of ecological significance becomes irrelevant. As I noted in my evidence-in-chief, this is contrary to good ecological practice.

- 3.4 To illustrate this; a wetland is considered to be a threatened habitat type in Schedule E because a threatened habitat automatically ticks Policy 12-6 (a)(i)(A) *“comprising habitat type that is under-represented (20% or less of known or likely former cover)”*. Therefore any further assessments of condition, or ecological context, or rarity, or functioning, are redundant, even though at the site level they may be highly modified or compromised and would otherwise fail a test of significance.
- 3.5 Secondly, Policy 12-6 should reflect that Schedule E has done only half the job in determining representativeness (based on habitats being estimated as less than 20% of their former extent for rare and threatened habitat or less than 50% for at-risk habitat). In the absence of a criterion relating to a site’s characteristics or ecological functioning, there is no basis to exclude areas which trigger the default 20% rule (rare, threatened or at-risk habitats) even though a habitat type has poor or non-existent ecosystem processes. It is therefore important that Policy 12-6 retains an evaluative judgement to confirm the significance of a particular habitat consistent with section 6(c) RMA. My evidence-in-chief outlines the consistency of this approach with other regional planning documents.
- 3.6 If this tick-the-box approach was to be applied, some substantial further amendments to the Policy 12-6 criteria would in my opinion be required to delete those assessment matters already used to determine habitat rarity in Schedule E.

4 THE RELATIONSHIP BETWEEN SCHEDULE E AND THE POLICY FRAMEWORK

- 4.1 At paragraph 50 of Ms Hawcroft’s evidence for the appellants’, she states her understanding that *‘all ecologists giving evidence for this hearing support the approach Horizons has adopted for maintaining indigenous biodiversity at a*

regional scale by describing notable habitats based largely on predicting modelling, as distinct from mapping significant areas'.

- 4.2 I can confirm that Meridian and TrustPower have accepted the regional council's approach to the development of Schedule E through predictive and spatial imagery, due to the extent and complexity of the Region's indigenous flora and fauna and the difficulties associated with other alternative methods. However, the acceptance of the Schedule E approach was contingent on a flexible policy and rule framework that recognised the limitations of this approach and allowed for the finding of field investigations which may be contrary to the predictive model outputs. As I have just outlined, the amendments proposed by the appellants' do not take into account these limitations, instead deeming all rare and threatened habitats in Schedule E ecologically significant under section 6(c) RMA.
- 4.3 The evidence of Ms Hawcroft relied strongly on habitats being threatened if less than 20% of the original extent remains (citing Walker et.al. 2008 as an example) and this approach being the basis of Schedule E. However, there was less discussion on the role of a site's ecological characteristics, condition and ecological functioning – core measures of the ecological significance of a site as demonstrated by established ecological assessment criteria and as outlined in the examples of other regional policy statements outlined in my evidence-in-chief (paragraph 6.3).
- 4.4 Similarly, in her discussion of the exclusion criteria in Table E2(a) at paragraph 84, Ms Hawcroft outlines the potential risk that in setting reasonable limits, some important small habitats will inevitably be overlooked (for example, there are some habitats where areas of less than 10m² support populations of threatened species). However, Ms Hawcroft does not address the converse situation where there will also be habitats that while meeting the size and habitat definitions may not ultimately comprise significant indigenous vegetation. Accordingly, I disagree with Ms Hawcroft's inference that all rare and threatened habitats are significant by virtue of Ms Maseyk's statement (cited in paragraph 86) that *'Table E.2 of Schedule E provides a second set of thresholds which in effect ensures non-significant sites are likely to be filtered out...'*

- 4.5 As I outlined in my evidence-in-chief, there are numerous examples of sites captured by Schedule E that are not ecologically significant. Ms Hawcroft clarifies that this is indeed the case, by stating that the habitat types ‘scree and boulderfields’ and ‘cliffs, scarps and tors’ may be better treated as at-risk (both currently identified in Schedule E as rare) as these either may require further research to confirm their status or further data collection is required to confirm their significance (paragraphs 104 – 108).
- 4.6 Finally, I comment on the statement in Ms Hawcroft’s evidence that the distinction between rare, threatened and at-risk habitats is important because it allows for a two-tiered approach to management. Ms Hawcroft states that *‘rare and threatened habitats which are determined to be significant – because the criteria used to identify those habitats in Schedule E are based on the criteria used to assess significance in Policy 12-6 – are strictly protected because of the high likelihood that any land disturbance or vegetation clearance would have significant impacts’*.
- 4.7 As I have explained earlier, this statement is incorrect as the identification of areas of potential ecological significance in Schedule E does not take into account the full suite of typical assessment criteria. Instead, Schedule E simply relies on ‘representativeness’ for the inclusion of threatened habitats (that are at less than 20% of their former extent) and ‘rarity and distinctiveness’ for the rare habitats. By not taking into account the other range of factors (such as ecological context, ecosystem functioning etc.) the Schedule E approach will always be somewhat limited. In my opinion, Schedule E can only be applied as a broad-brush tool for identifying at a broad regional scale, habitats that are potentially ecologically significant and whether resource consent is required. Therein lies the risk I highlighted in my evidence-in-chief that not everything captured by Schedule E will be significant as required by section 6(c) RMA.

5 THE IMPORTANCE OF FIELDWORK

- 5.1 The debate over the need for fieldwork was not resolved during caucusing and I restate my opinion that it is essential as part of any assessment of significance and effects.

- 5.2 I believe it is the position of the appellants' experts that any indigenous community that is classified as rare or threatened in Schedule E is of such rarity that it is automatically significant under section 6(c) RMA irrespective of its condition or how compromised it is ecologically. They therefore see no reason for field assessment to confirm or otherwise a site's significance.
- 5.3 It is my experience that this is not the case. In my work within the Manawatu I have viewed many seepages, small wetlands, rock outcroppings and the like that are so modified or compromised that they do not, in my view, meet any currently accepted criteria for significance under section 6(c) RMA.
- 5.4 Further, it is my opinion that Schedule E was developed on the premise there would be site visits to confirm or ground truth significance. The first page of Schedule E includes a comment - "a site visit where required" in terms of interpreting the Schedule. It is also my understanding that DOC initially supported the site visit approach. I note Ms Hawcroft's evidence to the council hearing on this matter where she stated in support of the Schedule E approach that:

The combination of a schedule that identifies habitats as likely to be more or less significant (rare, threatened, at risk or no-threat) and the requirement for site-specific decisions where habitat is likely to be significant is a practical middle ground between a default vegetation clearance and land disturbance rule (which assumes all habitat is significant) and a schedule of significant sites (which assumes any sites not in the schedule are not important)⁴.

- 5.5 Ms Hawcroft also stated in response to the Schedule E approach that it "is much preferable to have a process that triggers an inspection that will be site-specific and up to date, rather than relying on patchy and dated information"⁵.

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14 March 2012

⁴ Refer Statement of Evidence of Ms Amy Hawcroft, 11 July 2008, paras 14 and 19

⁵ Ibid, para 124, page 31