Adaptive Management Under the RMA: The Tension Between Finality and Flexibility

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Adaptive management is commonly used to manage activities that require resource consents under the Resource Management Act 1991 (RMA) that have uncertain, complex and potentially significant environmental effects. This article examines the tension between the finality of decision-making under the RMA and the need for flexibility in adaptively managing the activity over the consent term. It explores the concept of adaptive management, the matters of general legal principle that it raises, and the approach to it taken in the courts. It offers generic insights that can be used to develop guidance for practitioners involved in the resource consent process, particularly for drafting environmental management plans. It concludes that the RMA provides legal mechanisms that accommodate all steps of the adaptive management process, but that, in practice, these mechanisms are not always used effectively. Consents often lack clear criteria and procedures for the modification of environmental management plans, for staged developments, and for step-back from activities that turn out to have unacceptable adverse effects. Furthermore, when adverse effects are potentially irreversible, so that the experimentation inherent in adaptive management is impossible, other management approaches are required. Notwithstanding these difficulties, adaptive management is

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a beneficial approach to complex projects that need ongoing adjustment and flexibility beyond the fixed requirements imposed in conventional resource consent conditions.

1. INTRODUCTION

Adaptive management is an approach that has become commonly used to support the management of activities that require resource consents under the Resource Management Act 1991 (RMA), and that have uncertain, complex and potentially significant environmental effects over time. Adaptive management is based on the premise that, although there is uncertainty as a result of incomplete knowledge, decision-makers must act. It puts an emphasis on learning and the subsequent adaptation of management based on that learning. The concept of adaptive management is intuitive and resonates well with resource management practitioners and scientists.[1] It is a broad concept, but the breadth has resulted in multiple interpretations, causing confusion and limiting the ability of resource management agencies to develop successful implementation processes.[2] As Gregory and others have said, "[f]ew concepts in environmental management are both as widely promoted and as widely misunderstood as adaptive management".[3]

In New Zealand, once a resource consent has been granted under the RMA, the decision is effective and final — subject of course to rights of appeal and limited review powers. The consent authority has no general power to revise and adjust the consent to make improvements. The inherent tension between the finality of decision-making under the RMA and the need to allow flexibility to "adapt" management actions during the lifetime of a resource consent, perhaps many years, is a likely source of legal problems. The extent to which the RMA authorises adaptive management needs to be examined carefully. The leading case on adaptive management is the Supreme Court of New Zealand decision *Sustain Our Sounds Inc v New Zealand King Salmon Co Ltd* (*Sustain Our Sounds*).[4] It provides guidance on the circumstances under which adaptive management can be considered and the requirements for its implementation. However, even with the decision several issues concerning

1 CR Allen and others "Adaptive management for a turbulent future" (2011) 92 J Environ Manage 1339 at 1339.
2 Allen and others, above n 1, at 1342; R Gregory, D Ohlson and J Arvai "Deconstructing adaptive management: criteria for applications to environmental management" (2006) 16(6) Ecol Appl 2411 at 2411.
3 Gregory, Ohlson and Arvai, above n 2, at 2411.
4 *Sustain Our Sounds Inc v New Zealand King Salmon Co Ltd* [2014] 1 NZLR 673 (SCNZ).

adaptive management are still to be explored. Environmental practitioners may wish to use approaches to adaptive management other than the one used in that particular decision.

The objective of this article is to examine the tension between the finality of decision-making under the RMA and the need for flexibility in adaptive management. It puts a particular focus on the role of environmental management plans (EMPs), which have become increasingly important for complex consents.[5] Specifically, this article provides clarity on what successful adaptive management is, and evaluates whether the adjustment of resource consent decisions required to implement adaptive management can be made lawfully under the RMA. It proposes generic requirements that can be used to develop guidance and best-practice guidelines on adaptive management for practitioners. This exercise may make directions given by the courts more accessible to non-legal practitioners and thus support more consistent and effective implementation of adaptive management in the resource consent process.

2. ADAPTIVE MANAGEMENT

2.1 What is Adaptive Management?

Adaptive management emerged in the late 1970s as a response to research on ecosystem resilience led by CS Holling.[6] It has been described as a process with:[7]

> flexible decision-making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process.

5 J Caldwell and others "Conditions of consent" (paper presented to Resource Management Law Association Conditions of Consent Roadshow, 2014) <http://www.rmla.org.nz/wp-content/uploads/2016/09/010714_conditions_of_consent_legal_paper.pdf > at [47].

6 CJ Walters and R Hilborn "Ecological optimization and adaptive management" (1978) 9 Annu Rev Ecol Syst 157; CS Holling (ed) *Adaptive Environmental Assessment and Management* (Wiley, Chichester, 1978); CS Holling and SM Sundstrom "Chapter 2 Adaptive Management, a Personal History" in CR Allen and AS Garmestani (eds) *Adaptive Management of Social-Ecological Systems* (Springer Science+Business Media, Dordrecht (outside the USA), 2015) 11.

7 National Research Council *Adaptive Management for Water Resources Project Planning* (National Academies Press, Washington DC, 2004) at 1.

Under adaptive management, regulatory, development or improvement actions become explicit experiments with uncertain outcomes that emphasise learning and the subsequent adaptation of management based on that learning.[8]

Adaptive management is a systematic and goal-oriented process that builds knowledge, improves management and reduces uncertainty.[9] The process can be separated into a set-up phase and an iterative phase in which the elements of the set-up phase are incorporated into an iterative decision-making process that creates technical learning about the resource system (Figure 1, Table 1).[10] Adaptive management also provides opportunities to learn about non-technical aspects of the decision-making process by periodic return to the set-up phase. It becomes possible to account for evolving stakeholder perspectives and values, changes in the resource system that occur independent from the managed activity, and changes in institutional arrangements.[11]

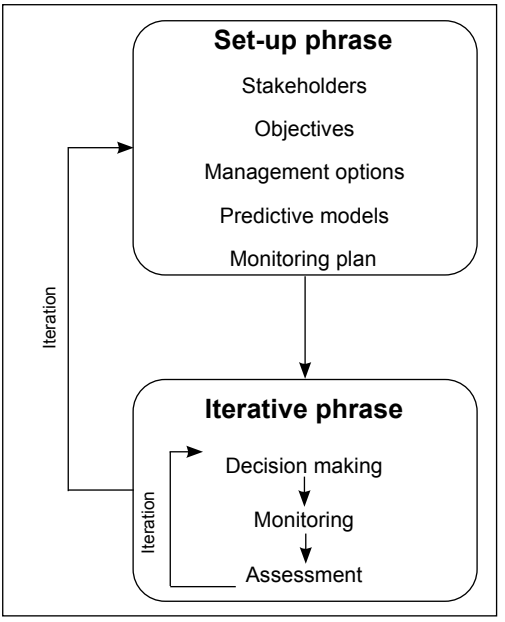

Figure 1: The two phases and elements of adaptive management.[12]

8 Allen and others, above n 1, at 1340; CJ Walters *Adaptive Management of Renewable Resources* (Macmillan, New York, 1986) at 3.
9 Allen and others, above n 1.
10 BK Williams "Adaptive management of natural resources — framework and issues" (2011) 92 J Environ Manage 1346 at 1346.
11 At 1350.
12 Modified from Williams, above n 10, at 1348.

Adaptive management is often misunderstood because of a belief that it is no more than "trial and error" (Figure 2).[13] Some believe that management approaches underpinned by expert advice or the requirement of environmental monitoring are sufficient to make a project "adaptive".[14] However, this opinion overlooks vital elements of the adaptive management process, especially the development of multiple management options during the set-up phase.

Adaptive management can take two forms, passive and active. Active adaptive management (represented by the "horse race" approach; Figure 2) "actively" pursues long-term benefit and learning about the resource system by reduction of uncertainty through management interventions.[15] Multiple management options are developed at the outset and implemented at the same time. Each option is assessed and the most successful one maintained. This approach results in maximum inference and learning.

Passive adaptive management (represented by the "step-wise" approach; Figure 2) focuses on management objectives with a strong emphasis on implementation, typically within the bounds of current management practices, and learning as a useful but secondary by-product of improved management.[16] Under this approach, multiple alternative management options are developed, and one chosen for initial implementation. If assessment reveals that it is unsuccessful, an alternative (already developed) management option is implemented. These steps may be repeated until a successful management option has been found.

13 Allen and others, above n 1, at 1339.

14 BK Williams and ED Brown "Adaptive Management: From More Talk to Real Action" (2014) 53 Environ Manage 465 at 469.

15 Allen and others, above n 1, at 1341; BK Williams "Passive and active adaptive management: Approaches and an example" (2011) 92 J Environ Manage 1371 at 1371.

16 Allen and others, above n 1, at 1341; Williams, above n 15, at 1371.

Table 1: Descriptions of the elements of the adaptive management process[17]

Element	Description
Set-up phase	
Stakeholder involvement	Engage the appropriate stakeholders and ensure their involvement in the entire process.
Objectives	Identify clear, measurable, and agreed-upon management objectives to guide decision-making and evaluate management effectiveness over time.
Management options	Identify a set of potential management options at each decision point, given the status of the resources being managed at that time.
Predictive models	Create models to predict how the resource system responds to the potential management options. Note: A model may be a deterministic model, quantitative conceptual model, statistical model, or another appropriate predictive tool.
Monitoring plan	Design and implement a monitoring plan to: (i) evaluate progress towards achieving objectives; (ii) determine resource status; (iii) increase understanding of resource dynamics via the comparison of predictions against survey data; and (iv) develop and refine models.
Iterative phase	
Decision-making	At each decision point, select management actions based on management objectives, resource conditions, and enhanced understanding.
Monitoring	Use ongoing monitoring to track resource change in response to management options.
Assessment	Assess predicted against actual outcomes to: (i) improve understanding of resource dynamics (= learning); (ii) increase confidence for models that accurately predict change and decrease confidence for models that are poor predictors of change; and (iii) evaluate effectiveness of management and measure its success in attaining management objectives.
Iteration	Cycle through the iterative phase and, less frequently, back to the set-up phase.

17 Based on published descriptions of the adaptive management process. See, for example, JB Ruhl "Regulation by Adaptive Management — Is It Possible?" (2005–2006) 7 Minn J L Sci & Tech 21; MJ Westgate, GE Likens and DB Lindenmayer "Adaptive management of biological systems: A review" (2013) 158 Biol Conserv 128; BK Williams, RC Szaro and CD Shapiro *Adaptive Management: The U.S. Department of the Interior Technical Guide* (US Department of the Interior, Washington DC, 2009); Williams, above n 10.

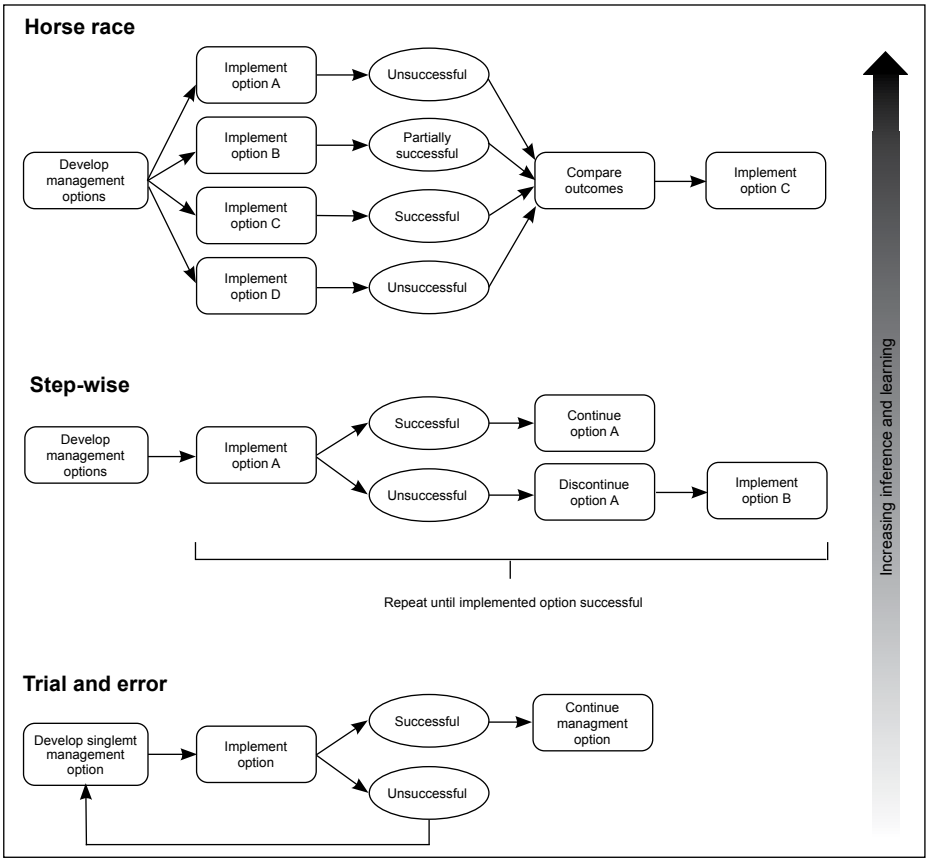

Figure 2: Examples of different resource management approaches with their respective potential for inference and learning.[18]

2.2 When is Adaptive Management Appropriate?

Adaptive management is useful for many but certainly not all resource management problems. It is useful for long-term management where uncertainty at the time of granting consent means that more than a single decision is required. But it should never be regarded as a route to push through applications that are unready for the making of a well-informed decision on an application for a resource consent. It should be approached with extreme caution if there is a risk of irreversible outcomes. This risk was emphasised by the Supreme Court in *Sustain Our Sounds*, accepting the finding of the Board of Inquiry that "for adaptive management to be appropriate in this instance we must

18 Modified from Allen and others, above n 1, at 1341.

be satisfied that: … [d] Effects that might arise can be remedied before they become irreversible".[19]

Especially under passive adaptive management there can be substantial delays before an effective management option is found. Adaptive management is also unsuitable if it is merely an excuse for conducting small management experiments in perpetuity in order to avoid addressing difficult underlying problems.[20] It must not allow hard management decisions to be deferred and unacceptable environmental degradation to occur. For example, if a project has the potential to harm a critically endangered species, the experimentation inherent in adaptive management may be entirely unacceptable. For all that, there are many situations where the RMA decision-making can draw on the flexibility of adaptive management to produce better environmental results than would be obtained by relying on consent conditions that fix methods and requirements rigidly for long periods.

3. *SUSTAIN OUR SOUNDS* AND *TRANS-TASMAN RESOURCES*

The Supreme Court decision *Sustain Our Sounds Inc v New Zealand King Salmon Co Ltd* provides guidance on the circumstances under which adaptive management can be considered, and indicates how it can be implemented under the New Zealand Coastal Policy Statement 2010 (NZCPS).[21] Regarding the threshold question of "what must be present before an adaptive management approach can even be considered", Glazebrook J for the Court commented that the Board of Inquiry that made the initial decision did not explicitly consider the question, but rather appeared to assume that taking an adaptive management approach was appropriate.[22] She noted however that "there was clearly an adequate foundation in this case".[23] The Court particularly considered whether adaptive management could legitimately be adopted to give effect to the precautionary approach, and Glazebrook J identified four factors that should be assessed to decide:[24]

19 Board of Inquiry *New Zealand King Salmon Requests for Plan Changes and Applications for Resource Consents*, 22 February 2013 at [181]; *Sustain Our Sounds*, above n 4, at [133].
20 CR Allen and LH Gunderson "Pathology and failure in the design and implementation of adaptive management" (2011) 92 J Environ Manage 1379 at 1382.
21 *Sustain Our Sounds*, above n 4, at [124].
22 At [125].
23 At [125].
24 At [129].

(a) the extent of the environmental risk (including the gravity of the consequences if the risk is realised);
(b) the importance of the activity (which could in some circumstances be an activity it is hoped will protect the environment);
(c) the degree of uncertainty; and
(d) the extent to which an adaptive management approach will sufficiently diminish the risk and the uncertainty.

Glazebrook J regarded the test contained in (d) as the vital one because it addresses whether the adaptive management regime can deal with risk and uncertainty surrounding the activity. The Court accepted that, at least for this case, the following factors identified by the Board of Inquiry were appropriate to consider:[25]

(a) there will be good baseline information about the receiving environment;
(b) the conditions provide for effective monitoring of adverse effects using appropriate indicators;
(c) thresholds are set to trigger remedial action before the effects become overly damaging; and
(d) effects that might arise can be remedied before they become irreversible.

The Board of Inquiry's final conditions of consent contained a comprehensive framework for marine environmental monitoring, adaptive management and reporting. The conditions specified environmental objectives and included environmental quality standards for the water column and seabed. The conditions stipulated that management plans, a baseline plan and a baseline report must be completed before farms could be developed or fish could be stocked. They imposed ongoing requirements for annual environmental monitoring under an adaptive management plan, annual reports, and reviews of all plans and reports by a peer-review panel.[26]

Sustain Our Sounds confirmed that this comprehensive adaptive management approach, as proposed by New Zealand King Salmon and then extensively modified by the Board of Inquiry, was lawful. However, the decision does not provide a rigid formula for adaptive management. It is therefore open to practitioners to use other approaches to adaptive management, providing that they meet the requirements set out in the factors listed above. Most resource consent applications that propose adaptive management are for activities that are less complex than in *Sustain Our Sounds*. Furthermore, the process in

25 At [133].
26 Board of Inquiry, above n 19, Volume 2, Appendix 7 to 11: Final Conditions of Consent.

Sustain Our Sounds included a private plan change, but most applications for consents do not have that added complexity. In these instances, it is typical to see less detailed conditions of consent and more emphasis on more detailed provisions in environmental management plans (EMPs).

While *Sustain Our Sounds* is binding for cases subject to the NZCPS and will be influential for other decisions, there remains uncertainty how the guidance it provides applies to cases not subject to the NZCPS and how the courts will decide if presented with a framework of conditions of consent and EMPs that are set up differently.

In *Trans-Tasman Resources Ltd v Taranaki-Whanganui Conservation Board* the Court of Appeal followed *Sustain Our Sounds* and applied it to an application for consents under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (the EEZ Act).[27] The precautionary approach was important in the decision, just as it was in *Sustain Our Sounds*, because the EEZ Act included information principles which were an implementation of the precautionary approach or principle. The EEZ Act is also distinctive in that it specifically approves the adaptive management approach for some types of consent, but it prohibits it for the marine discharge consents that were in issue.[28] The appellants attacked the consents for using an adaptive management approach, so the Court had to decide what that meant. The Act gave examples of the approach but no definition. The Court held that the key characteristic of adaptive management was whether the terms of the consent allowed the "consent envelope" to be adjusted; that is, the scope of the activities authorised or the effects permitted. If the envelope could be adjusted, then that would be adaptive management. If it was only the manner of operations that could be adjusted, to ensure that they remained within the consent envelope, then it would not be. Reporting, monitoring and review conditions were common and in themselves did not amount to adaptive management. The envelope could be adjusted by discontinuing or scaling back an activity, or by approving it on a staged basis. Overall the Court held that the consents were not flawed for using an adaptive management approach where the Act did not allow it.[29] But there were more fundamental failings in the decision to issue the consents: it failed to recognise that for these consents the Act made protection an environmental bottom line; especially in that context, it could not resort to post-decision information-gathering and monitoring to fill critical gaps in the information available about the likely environmental effects; and it could not give consent with vague requirements, such as to avoid adverse effects on

27 *Trans-Tasman Resources Ltd v Taranaki-Whanganui Conservation Board* [2020] NZCA 86 [*Trans-Tasman Resources Ltd* (CA)].

28 At [67]: Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, ss 63(2)(b) and 87F(4).

29 *Trans-Tasman Resources Ltd* (CA), above n 27, at [218]–[228].

seabirds and marine mammals, which would be given meaning with specific controls only later when management plans were made. The latter two of these problems deserve noting at different points in our discussion below.

4. ADAPTIVE MANAGEMENT OF ACTIVITIES UNDER THE RMA

In New Zealand, most activities that have potential adverse effects require a resource consent under the RMA. Some of these activities will take place over a long term and will have effects over that time that are uncertain, unpredictable, complex and potentially significant. The need to allow flexibility to "adapt" management actions during the lifetime of the resource consent may be in tension with the finality of decision-making under the RMA. It may be desirable to adjust the consent envelope (to use the *Trans-Tasman Resources* phrase), but the manner and extent of an adjustment will depend on conformity with the Act. If the RMA cannot support proper adaptive management it may only allow a stripped-down version similar to what Ruhl and Fischman called "a/m-lite" and described as "a watered-down version of the theory that resembles ad hoc contingency planning more than it does planned 'learning while doing'".[30]

The long-term capability that adaptive management offers is particularly important for environmental offsets and compensation. Environmental offsets and compensation, like adaptive management, provide flexibility while pursuing environmental objectives, but they are decided on at a point in time even though they may take time for their benefits to be realised. Adaptive management can therefore protect and support them by ensuring that the predicted long-term gains are obtained and last long enough. It can allow inputs and monitoring to be adjusted to reflect changes in the environment, to allow the incorporation of new methods, and to respond to unexpected trajectories and outcomes. This flexibility avoids locking in to requirements that are inefficient or ineffective.[31] Environmental offsets and compensation have had cautious acceptance by the courts, even though they have not been explicitly warranted by the RMA. Since 2017 the Act allows a voluntary offset or compensation arrangement to be taken into account in deciding on a resource consent and imposed as a condition.[32]

30 JB Ruhl and RL Fischman "Adaptive Management in the Courts" (2010) 95(2) Minn L Rev 424 at 426.

31 Fleur Maseyk, Graham Ussher, Gerry Kessels, Mark Christensen and Marie Brown *Biodiversity Offsetting under the Resource Management Act* (Local Government NZ, 2018).

32 Resource Management Act 1991 [RMA], ss 104(1)(ab) and 108AA, inserted by the Resource Legislation Amendment Act 2017; Kenneth Palmer "Resource

The *Sustain Our Sounds v New Zealand King Salmon Co Ltd* decision affirms adaptive management, but no judgment, no matter how important, tries to answer all possible questions on a subject. The context of *Sustain Our Sounds* was the NZCPS and it addressed the precautionary approach in some detail. Other cases will raise other questions about the legal framework within which adaptive management must fit. Like any other environmental technique, no matter how beneficial, it can only be used in ways that are lawful, and it is desirable to identify the legal limits. The RMA does not address adaptive management expressly, so we need to consider the relevant general principles. They can be summarised as: the decision-making authority must decide; it must come to a final decision; and it must make its decision itself. To put these three elements more specifically, if negatively, for what adaptive management will be acceptable we can say there must be no failure to decide, no failure to produce finality, and no delegation. We should add that such general principles are often modified by specific statutory powers, and we should say straight away that they do not prevent good adaptive management from happening.

First, the duty of RMA decision-makers, whether local authorities, commissioners, or the Environment Court, is to decide the matters that come to them through the statutory procedures. They must exercise their power to decide. They cannot put cases off because they are awkward or because they can more readily be addressed at some later date.[33] A recent environmental case from Canada is striking for holding that the decision-maker, Cabinet, could not indefinitely postpone a decision: "By granting Cabinet the power to approve the project, the legislature has imposed by implication a duty to exercise that power."[34] Thus a proposal for adaptive management would be open to attack if it was so weak as to amount to a failure to exercise the duty to decide the application.

Directly related is the second principle, that the decision-maker must make a final decision. Of course, there are interim and procedural decisions, and there are appeals and statutory powers of variation, but ultimately what the RMA contemplates is that the decision-making comes to an end and the decision-maker has no further role in the matter unless a new procedure of some kind begins. The decision-maker cannot reopen its decision from time to time and

Legislation Amendment Bill 2015 — summary and comment" (2016) 11 BRMB 114.

33 *Fleetwing Farms Ltd v Marlborough District Council* [1997] NZRMA 385 (CA): an application must be advanced through the statutory timetable towards a timely decision without holding it for comparison with another. Also see *Genesis Power Ltd v Manawatu-Wanganui Regional Council* [2006] NZRMA 536 (HC); and generally Philip Joseph *Constitutional and Administrative Law in New Zealand* (4th ed, Brookers, Wellington, 2014) at 972.

34 *Prosper Petroleum Ltd v Alberta*, 2020 ABQB 127 at [14].

tinker with it, even with the best of intentions in the pursuit of sustainable management. In administrative law generally the principle is that a decision in the exercise of a statutory power which is the outcome of a completed process is final and irrevocable once it has been communicated to the persons to whom it relates, although it can be changed at any time prior to being communicated.[35] In the courts, the principle is that a judgment is final subject to any appeal brought against it.[36] Even the exception of judgments obtained by fraud is narrowly construed.[37] The Latin phrase *functus officio* is often used to describe the status of a court that has decided a matter and cannot vary its final judgment.[38] In *ZJV (NZ) Ltd v Queenstown Lakes District Council* the Environment Court held it was *functus officio* in having decided a matter,[39] but there are other cases where the Court has been found not to be *functus* particularly because the District Court rules as to slips and oversights apply to it.[40] For adaptive management, the chief point is that the parties cannot invite the consent authority or the court to retain an ongoing supervisory role, adjusting the resource consent as seems convenient from time to time.

The third principle is best expressed by Wade and Forsyth:[41]

> An element which is essential to the lawful exercise of a power is that it should be exercised by the authority upon whom it is conferred, and by no one else.

Thus, where Parliament has laid down that a consent authority must decide on resource consents and conditions, then the consent authority cannot change what Parliament said and get someone else to do it. The principle is often expressed as the rule that a delegate cannot sub-delegate, or in Latin *delegatus non potest delegare*, and in administrative law it is attended by some complexity in the numerous exceptions to it.[42] It arose in one of New Zealand's earliest

35 *Goulding v Chief Executive, Ministry of Fisheries* [2004] 3 NZLR 173 (CA).

36 Matthew Casey and others *New Zealand Procedure Manual: High Court* (3rd ed, LexisNexis, Wellington, 2015) at 457; Andrew Beck *Principles of Civil Procedure* (3rd ed, Thomson Reuters, Wellington, 2012) at 232.

37 *Commissioner of Inland Revenue v Redcliffe Forestry Venture Ltd* [2013] 1 NZLR 804, [2012] NZSC 94 at [28]–[32].

38 *R v Nakhla (No 2)* [1974] 1 NZLR 453 (CA), once judgment is finally recorded; *Robin v The Queen* [2013] NZCA 330 at [76] on common law power to correct. More literally the Latin indicates that a person has performed a duty or role.

39 *ZJV (NZ) Ltd v Queenstown Lakes District Council* [2016] NZEnvC 90.

40 *National Investment Trust v Christchurch City Council* [2001] NZRMA 289 (HC). Also *Hurunui Water Project Ltd v Canterbury Regional Council* [2016] NZRMA 71 (HC): signing a consent memorandum does not render a consent authority *functus officio* if subject to approval by the Environment Court.

41 HWR Wade and CF Forsyth *Administrative Law* (11th ed, Oxford University Press, Oxford, 2014) at 259.

42 Joseph, above n 33, at 972.

high-level cases on the RMA's predecessor, *Turner v Allison*,[43] dealing with the construction of Fendalton Shopping Centre in Christchurch. The Court of Appeal applied the principle of non-delegation in a judicial context, so that a consent condition could not authorise a council officer to settle disputes that arose, acting in effect as an arbitrator; but a condition could authorise her to act as a certifier, using her skill and qualifications to determine that something had been done to her satisfaction or approval.

The RMA itself provides exceptions by authorising local authorities to delegate RMA powers to committees, community boards, local boards, employees, and hearings commissioners.[44] Although these powers to delegate are important and are often exercised, they are not generally a problem for adaptive management. What is in issue is that adaptive management cannot be brought about by a consent authority delegating its power over the consent and its conditions to another person or body. We return shortly to delegation in the context of environmental management plans.

These general principles certainly impose limits on RMA decision-making; there is no general administrative power to vary and adjust resource consents as circumstances suggest. However, they leave plenty of room for high-quality adaptive management to take place.

We proceed to analyse the case law in order to ascertain whether the adjustment of resource consent decisions required to implement adaptive management successfully can be made lawfully under the RMA. The analysis is focused on two core questions:

(1) How much certainty does the RMA require at the time of decision-making on granting a resource consent?
(2) What mechanisms are available under the RMA to allow decisions to be adjusted to implement the iterative adaptive management approach?

As described above, *Sustain Our Sounds* provides clear guidance for cases subject to the NZCPS. However, there remains uncertainty how this guidance applies to other cases and how the courts would decide if presented with a framework of conditions of consent and environmental management plans (EMPs) that are set up differently. Most resource consent applications that utilise adaptive management are for activities that are less complex, propose fewer detailed conditions of consent, and place more emphasis on EMPs as the place for detailed provisions, sometimes to be provided after consent has

43 *Turner v Allison* [1971] NZLR 833 (CA) at 856 line 24.

44 RMA, ss 34 and 34A. *Just One Life Ltd v Queenstown Lakes District Council* [2004] 3 NZLR 226 (CA) held that powers could not be delegated to a company under an earlier version of the provisions because a company would have to sub-delegate its powers to a natural person.

been granted. This article focuses on these more common and less complex resource consent applications and aims to derive some generic requirements for conditions of consent that reflect the direction provided by the courts.

5. CONDITIONS OF CONSENT AND ENVIRONMENTAL MANAGEMENT PLANS

A resource consent may be granted on conditions through powers conferred on the consent authority under s 108 of the RMA. Conditions form part of the resource consent.[45] To manage the environmental effects of consented activities, EMPs often include requirements for mitigation methods, monitoring and other consent compliance aspects.[46] However, as Hassan and Kirkpatrick have observed, it is important "to ensure that [an EMP] is used as an appropriate method and is not treated as a sort of dumping ground for problems and a way of avoiding those that are too hard".[47]

EMPs are particularly important for resource consents that use adaptive management to deal with environmental effects. In fact, the weight placed on EMPs in "adaptively managed" projects can create misunderstandings of their role, as highlighted by Gregory and others:[48]

> Adaptive management, as currently invoked, is far too often used simply as a euphemism for environmental management plans that admit to the need for learning in the face of ecological uncertainty but lack the other components … that are necessary for the design of an effective and defensible [adaptive management] plan.

While no specific authorisation is provided in the RMA for the preparation or approval of EMPs,[49] several court decisions have confirmed that an EMP

45 RMA, s 2.

46 Depending on their scope and topic area, these plans are also called "environmental monitoring plans", "management plans", or are given topic-specific titles — for example, "biodiversity management plans". For the purpose of this article the term "environmental management plan" encompasses all of these plans.

47 J Hassan and DA Kirkpatrick "Conditions of consent for complex development" (paper presented to Resource Management Law Association Conditions of Consent Roadshow, 2014) <www.rmla.org.nz/wp-content/uploads/2016/09/complex_consent_conditions_paper_judge_k.pdf> at [35].

48 Gregory, Ohlson and Arvai, above n 2, at 2424.

49 *New Zealand Rail Ltd v Marlborough District Council* (1993) 2 NZRMA 449 (PT) at 453.

can be required under s 108.[50] The association between consent conditions and EMPs has been the subject of several decisions. In 1993 the Planning Tribunal held that "if management plans are to have any force and effect this can only be achieved by incorporating them into resource consents pursuant to conditions imposed under s 108".[51] Subsequent cases did not require EMPs to be incorporated as conditions. In 2000 in *Wood v West Coast Regional Council* the Environment Court held that an EMP is an appropriate alternative to requiring management plans as part of the conditions of consent.[52] Equally, in *Crest Energy Kaipara Ltd v Northland Regional Council* the Court accepted that EMPs do not have to be incorporated in conditions.[53] Court direction has varied on the level of completion and detail that EMPs are required to have reached at the time of the decision to grant a resource consent. This is examined in the following part of the article.

6. HOW MUCH CERTAINTY DOES THE RMA REQUIRE AT THE TIME OF DECISION-MAKING ON GRANTING A RESOURCE CONSENT?

6.1 Conditions of Consent: Environmental Outcomes, Objectives and Performance Standards

The Environment Court has given consistent direction that conditions of consents must specify clear environmental outcomes and objectives for EMPs.[54] In addition, several judgments have required performance standards to be specified in the conditions of consent.[55] In *Auckland Volcanic Cones*

50 For example, at 477; *Wood v West Coast Regional Council* [2000] NZRMA 193 (EnvC) at 193.
51 *New Zealand Rail Ltd v Marlborough District Council*, above n 49, at 477.
52 *Wood v West Coast Regional Council*, above n 50, at 193.
53 *Crest Energy Kaipara Ltd v Northland Regional Council* [2009] NZEnvC 374 at [222].
54 *Mount Field Ltd v Queenstown Lakes District Council* [2012] NZEnvC 262 at [7], [77] and [79]; *Royal Forest and Bird Protection Society Inc v Gisborne District Council* [2013] NZRMA 336 (EnvC) at 337 and [87]; *Lower Waitaki River Management Society Inc v Canterbury Regional Council* [2009] NZEnvC 242 at [463].
55 *Wellington Fish and Game Council v Manawatu-Wanganui Regional Council* [2017] NZEnvC 37 at [175]; *Auckland Volcanic Cones Society Inc v Transit New Zealand Ltd* [2003] NZRMA 54 (EnvC) at [199]; *Lower Waitaki River Management Society*, above n 54, at [385].

Society Inc v Transit New Zealand the Court considered it unsatisfactory that conditions designed to control the discharge of sediment left "a significant discretion as to the acceptability of the details".[56] While it acknowledged that the nature of the works required for the proposed extension of the motorway made the formulation of precise well-defined permits difficult, it requested that as an alternative a standard should be included as a condition "for the control of sediment discharges that is effective in protecting the environment from adverse effects and which is clear, practicable and enforceable".[57] In *Lower Waitaki River Management Society Inc v Canterbury Regional Council* the Court redrafted conditions "by moving the objectives so they are performance standards to be complied with, not only objectives for management plans".[58] These strictures are similar to those of the Court of Appeal in *Trans-Tasman Resources* against vague language in a consent about avoiding adverse effects and leaving what it might really mean to management plans.[59] The Court of Appeal was equally insistent that if, at the time of granting the consent, there was uncertainty about likely environmental effects, the critical information gaps could not be filled by post-decision information-gathering.

In summary, the following requirements relating to environmental outcomes, objectives and performance measures can be derived from these cases:

- conditions of consent must specify clear environmental outcomes and objectives for EMPs;
- objectives cannot be too vague to be enforceable;
- acceptable levels of performance standards (for example, for monitoring parameters) must be specified in conditions of consent; and
- where the nature of the activity makes it difficult to formulate precise well-defined standards, clear, practicable, effective and enforceable standards should be specified in conditions of consent to protect the environment from adverse effects.

56 *Auckland Volcanic Cones Society*, above n 55, at [199].
57 At [199].
58 *Lower Waitaki River Management Society*, above n 54, at [385].
59 *Trans-Tasman Resources Ltd* (CA), above n 27, at [12] and [227].

6.2 Environmental Management Plans: Purpose, Level of Completion and Detail

Environmental management plans should stipulate how objectives specified in conditions will be met.[60] They can also be used to provide the methodology of how acceptable environmental limits are to be achieved.[61]

A group of Environment Court decisions made over a short period of time differed in their expectations of the level of completeness that EMPs should have reached at the time the decision to grant consent is made. In 2009 in *Crest Energy Kaipara v Northland Regional Council* the Court required EMPs to be "fully fleshed out" at the time of making decisions on whether the consent should be granted because "[t]he question of whether consent should be granted at all hinges on the ability to create an EMP that will adequately address the issues".[62] This stance was affirmed in 2011 when the decision to grant consent was made.[63] In 2012 in *Mount Field Ltd v Queenstown Lakes District Council* the Court did not assign any weight to the EMP because of insufficient detail, and Judge Thompson commented that "[t]he applicant should have given these matters full and proper consideration well before bringing them before the Court".[64] *West Coast Environmental Network v West Coast Regional Council* in 2013 was based on less absolute criteria on completeness but considered the adequacy of detail provided in light of the certainty required to make substantive decisions on the effects of the activity.[65] The Court put the specification of EMP requirements into the wider context of controls within a consent by acknowledging that, while "the [management plans] contain less certainty in some areas at this stage" and "more detail could have been provided", "we have decided that the extent of drafting undertaken at this stage is adequate because the requirements for these management plans must be read in conjunction with the hold points and controls embedded in other conditions".[66]

The level of detail required in an EMP at the time of decision-making on a consent has also received varying direction from the Environment Court. In the frequently cited judgment of *Director-General of Conservation v Marlborough District Council*, Judge Jackson declared that "[i]n our view it is absurd to think that an applicant must try to anticipate and research all hypotheses that may

60 *West Coast Environmental Network v West Coast Regional Council* [2013] NZEnvC 178 at [44]; *Wood v West Coast Regional Council*, above n 50, at 193; *Mount Field Ltd*, above n 54, at [77].
61 *Wellington Fish and Game Council*, above n 55, at [175].
62 *Crest Energy Kaipara Ltd*, above n 53, at [222].
63 *Crest Energy Kaipara Ltd v Northland Regional Council* [2011] NZEnvC 26, [2011] NZRMA 420 at [26].
64 *Mount Field Ltd*, above n 54, at [82].
65 *West Coast Environmental Network*, above n 60.
66 *West Coast Environmental Network*, above n 60, at [45].

occur to someone during the course of the application process" — a point he made on the appellant's submission that the applicant should have conducted research to test a hypothesis that the proposed marine farm site may have been of special significance for Hector's dolphins.[67] In *Crest Energy Kaipara Ltd v Northland Regional Council* Judge Newhook responded to that observation by stating:[68]

> The converse is that the applicant must establish sufficient of a case to persuade the court to grant consent on the basis of allowing the adaptive management process to be embarked upon. That is, the court must be satisfied that the environmental management plan can operate in a way that will serve the purpose of the Act.

Canterbury Cricket Association Inc provides what could be considered a minimum expectation on the specified terms of EMPs at the time of granting consent:[69]

> Where management plans are proposed, it is our expectation that the applicant lead evidence demonstrating how the effects of the activity are to be managed (a) under the management plans' objectives and (b) in broad terms how those objectives are to be achieved.

In summary, the following requirements relating to the purpose, level of completion and detail of EMPs can be derived from these decisions:

- the purpose of EMPs is to specify how the objectives specified in conditions will be met;
- the methodology of how acceptable environmental limits are to be achieved can be provided in EMPs; and
- if the level of detail required in an EMP cannot be provided at the time of decision-making on granting consent:
  - as a minimum, the applicant must provide evidence demonstrating in broad terms how the objectives of the EMP are to be achieved; and
  - the requirements for EMPs must be read in conjunction with other controls embedded in conditions.

67 *Director-General of Conservation v Marlborough District Council* EnvC C113/2005, 17 August 2004 at [40].
68 *Crest Energy Kaipara Ltd*, above n 53, at [229].
69 *Canterbury Cricket Association Inc* [2013] NZEnvC 184 at [130].

6.3 Implementation and Enforceability of EMPs

The Environment Court has consistently stipulated that conditions of consents must specify implementation requirements for EMPs to ensure enforceability.[70] It also requires that there are no legal obstacles to the conduct of works required under an EMP. This issue arose in *Lower Waitaki River Management Society Inc v Canterbury Regional Council*, where the Court was not "satisfied that any consent holder would have the legal right to perform all of the works that might be required under the Management Plans".[71]

In summary, the following requirements relating to the implementation and enforceability of EMPs can be derived from these decisions:

- consents must specify implementation requirements for EMPs in conditions to ensure they can be enforced; and
- there must be certainty that a consent holder has the legal right to perform all works that might be required under an EMP.

6.4 Delegation

In the context of EMPs, there arises the principle that we identified earlier, that a power must be exercised by the authority upon whom it is conferred and no one else. What type of decision-making can the consent authority allow some other party to make at a later date, after the granting of the resource consent, if EMPs are yet to be prepared or completed?

The Environment Court and High Court have been consistent in holding that it is not lawful to delegate the making of substantive decisions — ie decisions that are sufficiently important to have a bearing on whether a consent should be granted or not.[72] Despite this general agreement, there are different views on what constitutes a substantive decision. As described earlier, there has been varying direction from the Environment Court on the balance between providing enough EMP content to support the decision to grant consent, and the need to retain some flexibility to incorporate additional information that may emerge later. It is this balance that determines what constitutes a substantive decision in the sense of this analysis. This is clearly a matter that needs to be determined on a case-by-case basis.

70 *West Coast Environmental Network*, above n 60, at [54]; *Lower Waitaki River Management Society*, above n 54, at [554] and [408].

71 At [554].

72 *Director-General of Conservation v Marlborough District Council* [2004] 3 NZLR 127 (HC) at [28]; *Crest Energy Kaipara Ltd*, above n 53, at [222]; *Royal Forest and Bird Protection Society*, above n 54, at 337; *Mount Field Ltd*, above n 54, at [77].

The courts have often followed *Turner v Allison*,[73] allowing a consent authority to delegate to an official the role of certifying adherence to a standard, while not permitting the delegation of arbitral or judicial functions that the consent authority should have exercised itself.[74] In *Royal Forest and Bird Protection Society Inc v Gisborne District Council* Judge Thompson discussed the difference between approval and certification. He explained that a condition that delegated substantive decision-making was not acceptable, and commented that the proposed conditions were so uncertain that "it was difficult to see how the council will be acting in a certifier role, rather than making decisions that should have been made at first instance".[75] Judge Skelton made a similar observation in *Wood v West Coast Regional Council*, saying:[76]

> It was generally accepted that it is not appropriate to provide for a management plan on the basis that it is to be approved by a consent authority or some delegated official at a later time, except to the extent that they may be regarded as certifiers.

In *West Coast Environmental Network v West Coast Regional Council* Principal Judge Newhook expressed the importance of certification in situations where knowledge is incomplete and is expected to advance after granting resource consent.[77] He said that in such circumstances, conditions "need to be flexible enough to allow the best possible environmental outcome to be achieved in the light of advancing knowledge and experience" and that:[78]

> What a management plan certifier is being asked to do is to confirm that the management plan concerned is the most appropriate means available at any given time to achieve the objectives stated in the conditions.

In the High Court, MacKenzie J noted the need to examine the real nature of the decision that is to be delegated, to prevent unlawful delegation:[79]

> The role of the delegate as certifier may conceal the fact that what is being delegated is the power to certify a matter which is an essential element of the decision which should be made by the tribunal. It is necessary to examine the

73 *Turner v Allison*, above n 43.
74 *Royal Forest and Bird Protection Society*, above n 54, at 337; *Mount Field Ltd*, above n 54, at [77].
75 *Royal Forest and Bird Protection Society*, above n 54, at [88].
76 *Wood v West Coast Regional Council*, above n 50, at [18].
77 *West Coast Environmental Network*, above n 60, at [43].
78 At [43].
79 *Director-General of Conservation*, above n 72, at [27].

> real nature of the decision which the delegate is required to make, rather than the form in which the power to make that decision is conferred.

This analysis has revealed that the preparation or completion of EMPs after consent has been granted creates a risk of unlawful delegation. Managing this risk requires careful examination of the nature of the delegated decisions.

In summary, the following requirements relating to delegation and certification can be derived from the cases analysed in this section:

- It is not lawful to delegate the making of substantive decisions except as Parliament provides. Substantive decisions are decisions that are sufficiently important to have a bearing on whether the consent should be granted or not.
- Conditions of consent can delegate a power of certification, but that power must not constitute approval, arbitration, or a judicial function.
- The preparation or completion of EMPs after consent has been granted creates a risk of unlawful delegation. Managing this risk requires careful examination of the nature of the delegated decisions.

6.5 Summary of Case Law Analysis

A summary of the case law analysis described in this section is presented in Table 2 on pages 24–25.

7. WHAT MECHANISMS ARE AVAILABLE UNDER THE RMA TO ALLOW DECISIONS TO BE ADJUSTED TO IMPLEMENT THE ITERATIVE ADAPTIVE MANAGEMENT APPROACH?

7.1 Modifications of EMPs

It is clear from this discussion that consent conditions can allow for EMPs to be amended by certification. The important limitations are that the decision-making involved cannot constitute approval, arbitration, or a judicial function, on the consent as a whole or even a part of it. What exact changes can lawfully be made to EMPs by certification is a complex question, partly because of the different ways EMPs are incorporated in or connected to consents through conditions. The Environment Court has provided some clarification of this point and has set limits on the extent to which EMPs can be modified after consent has been granted.

In *Wood v West Coast Regional Council* Judge Skelton held that "because technology may change, the consent holder should be able to change the

management plan without having to seek a change to the conditions of consent".[80] Clarification of the permitted grounds for changes was provided by Principal Judge Newhook in *West Coast Environmental Network v West Coast Regional Council* in relation to changes of five proposed EMPs.[81] The Judge directed that "[t]he sole purpose of this [EMP review] condition is to enhance environmental performance, not to reduce it, so an Advice Note is to be included to that effect"[82] and that "[a]ny modification of the plan is to be based on monitoring the performance of the [monitoring parameters]".[83] He further specified the procedure for making changes as:[84]

> [A]ppropriate conditions are required that require a feedback loop from monitoring and reporting of each plan and which provide for review, evolution and amendment of all or any plans in the event that they do not prove as effective as anticipated.

In summary, the following requirements relating to modifications of EMPs via certification can be derived from these decisions:

- EMPs can be changed to reflect changes in technology;
- EMPs must only be changed for the purpose of enhancing environmental performance, not reducing it; and
- modifications of EMPs must be based on monitoring results.

In his examination of resource consent condition mechanisms that can be used to address environmental modelling uncertainties in the resource consent process, Mike Freeman explored the use of certification.[85] He outlines several examples of "a more advanced certification mechanism" that centre on the requirement that "modelling choices need to be certified by an independent person in accordance with a specific or generally-accepted method".[86] This approach extends certification beyond certifying compliance with specific performance standards. However, by specifying the methods used for decision-making in conditions of consent, this approach may meet RMA requirements.

80 *Wood v West Coast Regional Council*, above n 50, at 193.
81 *West Coast Environmental Network*, above n 60, at [54].
82 At [54].
83 At [44].
84 At [54].
85 M Freeman "The resource consent process: Environmental models and uncertainty" (2011) 2 Resource Management Journal 1.
86 At 5.

Table 2: Summary of case law analysis on the level of certainty required at the time of decision-making on granting a resource consent under the RMA, focusing on (1) conditions of consent; (2) EMPs; (3) implementation and enforceability of EMPs; and (4) delegation

Cases reviewed	Requirements derived from case analysis
(1) Conditions of consent	
Auckland Volcanic Cones Society Inc v Transit New Zealand Ltd [2003] NZRMA 54 (EnvC) at [199].	• Conditions of consent must specify clear environmental outcomes and objectives for EMPs. • Objectives must not be too vague to be enforceable. • Acceptable levels of performance standards (for example, for monitoring parameters) must be specified in conditions of consent. • Where the nature of the activity makes it difficult to formulate precise well-defined standards, clear, practicable, effective and enforceable standards should be specified in conditions of consent to protect the environment from adverse effects.
Lower Waitaki River Management Society Inc v Canterbury Regional Council EnvC Christchurch C80/2009, 21 September 2009 at [385] and [463].	
Mount Field Ltd v Queenstown Lakes District Council [2012] NZEnvC 262 at [7], [77] and [79].	
Royal Forest and Bird Protection Society Inc v Gisborne District Council [2013] NZRMA 336 (EnvC) at 337 and [87].	
Wellington Fish and Game Council v Manawatu-Wanganui Regional Council [2017] NZEnvC 37 at [175].	
(2) EMPs (purpose, content and level of completion)	

Re Canterbury Cricket Association Inc [2013] NZEnvC 184.	• The purpose of EMPs is to specify how objectives specified in conditions will be met.
	• The methodology of how acceptable environmental limits are to be achieved can be provided in EMPs.
	• If the level of detail required in an EMP cannot be provided at the time of decision-making on granting consent:
	  • As a minimum, the applicant must provide evidence demonstrating in broad terms how the objectives of the EMP are to be achieved; and
	  • The requirements for EMPs must be read in conjunction with other controls embedded in conditions.

Crest Energy Kaipara Ltd v Northland Regional Council EnvC Auckland A132/2009, 22 December 2009 at [222].	
Crest Energy Kaipara Ltd v Northland Regional Council [2011] NZEnvC 26, [2011] NZRMA 420 at [26].	
Director-General of Conservation v Marlborough District Council EnvC Christchurch C113/2004, 17 August 2004 at [40].	
Mount Field Ltd v Queenstown Lakes District Council [2012] NZEnvC 262 at [77] and [82].	
Wellington Fish and Game Council v Manawatu-Wanganui Regional Council [2017] NZEnvC 37 at [175].	
West Coast Environmental Network v West Coast Regional Council [2013] NZEnvC 178 at [44] and [45].	
Wood v West Coast Regional Council [2000] NZRMA 193 (EnvC) at 193.	

(3) Implementation and enforceability of EMPs	
Lower Waitaki River Management Society Inc v Canterbury Regional Council [2009] NZEnvC 242 at [408] and [554].	• Consents must specify implementation requirements for EMPs in conditions to ensure they can be enforced. • There must be certainty that a consent holder has the legal right to perform all works that might be required under an EMP.
West Coast Environmental Network v West Coast Regional Council [2013] NZEnvC 178 at [54].	
(4) Delegation	
Crest Energy Kaipara Ltd v Northland Regional Council EnvC Auckland A132/2009, 22 December 2009 at [222].	• It is not lawful to delegate the making of substantive decisions. Substantive decisions are decisions that are sufficiently important to have a bearing on whether the consent should be granted or not. • Conditions of consent can delegate certification, but decision-making must not constitute approval, arbitration, or a judicial function. • The preparation or completion of EMPs after consent has been granted creates a risk of unlawful delegation. Managing this risk requires careful examination of the nature of the delegated decisions.
Director-General of Conservation v Marlborough District Council [2004] 3 NZLR 127 (HC) at [28].	
Mount Field Ltd v Queenstown Lakes District Council [2012] NZEnvC 262 at [77].	
Royal Forest and Bird Protection Society Inc v Gisborne District Council [2013] NZRMA 336 (EnvC) at 337 and at [88].	
Turner v Allison [1971] NZLR 833 (CA) at 856.	
West Coast Environmental Network v West Coast Regional Council [2013] NZEnvC 178 at [27] and [43].	
Wood v West Coast Regional Council [2000] NZRMA 193 (EnvC).	

Of interest to the matter of certification examined in this article is Freeman's observation that:[87]

> Many consent authorities appear to favour ultra vires secondary approvals over certification or other mechanisms, presumably because of a perception that an "approval" process provides a greater level of control over outcomes and because of a limited range of relevant professional qualifications that could be specified for a certifier. However, qualification requirements can be specified or developed, and appropriately formulated certification conditions have the benefits of being lawful and certain.

This shows that there is an opportunity further to explore the concept of certification in order to advance our understanding of the lawful mechanisms available to support adaptive management via EMPs.

7.2 Planned Staged Development

Planned staged development allows for pre-defined changes in management actions (typically increased development) if pre-defined conditions have been met, typically confirmed by monitoring results. The concept of staged development has, for example, been described by the New Zealand King Salmon Board of Inquiry as:[88]

> Sites are proposed to be developed in a staged manner, with expansion contingent on compliance with pre-defined seabed and environmental quality standards (EQS [environmental quality standards] to be specified in the consent conditions) and on regular reviews of wide-scale water column and wider eco-system monitoring results[.]

To be credible, adaptive management that uses planned stage development must include the possibility that the project goes no further than its initial stage if severe adverse effects appear and cannot be mitigated. But used properly, planned staged development provides a mechanism to manage uncertainty that is in good alignment with the objectives and elements of adaptive management.

7.3 Step-Back from an Activity

Adaptive management also needs to provide the pathway for an activity to be discontinued if it produces an unacceptable adverse effect. A part of a project

87 At 6.
88 Board of Inquiry, above n 19, at [54].

can be approved on the basis that a trigger level in the measurement of the relevant effect is not reached, but if the monitoring programme shows that the trigger level is reached, then the consent holder must discontinue or remove that part of the project as soon as practicable. The obligation to discontinue should be part of the resource consent conditions, along with the key metrics of trigger levels and the monitoring programme. Such pre-determined responses in the conditions, which we can call step-back or roll-back conditions, are a core aspect of adaptive management, allowing for a swift response to the potentially unacceptable effects of an activity. They allow for a smooth adjustment of the "consent envelope", without entailing review or alteration of consent conditions. Unfortunately, such step-back provisions are not employed as often as they should be, so that adaptive management takes the form of a unidirectional path for staged development. In situations where monitoring results indicate a need to step back from the activity, it is common to see disagreements between the council and consent holder, typically involving further technical assessments and advice, going on for months and years, during which time the activity and the adverse effects continue unchanged. Specifying clear criteria for stepping back from the activity based on monitoring results is therefore an important aspect of consent conditions that claim to codify an adaptive management framework.

7.4 Change and Review of Consent Conditions

An RMA consent authority can place a review condition in a resource consent at the time it grants the consent, so that later on it can initiate a review "to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage".[89] However, the procedure for one of these reviews is not flexible; it is substantially the same as that for a resource consent application, possibly including public notification and a hearing, and of course it depends on the review condition having been included in the resource consent in the first place. These reviews have been described as a tool of last resort.[90] On the other hand, Hassan and Kirkpatrick have argued that:[91]

> Considered properly, a well-drafted review condition can be beneficial to all parties, including affected persons, by enabling adjustment and adaptation over time without the cost and trouble of a full application. Such conditions

89 RMA, ss 128–133.
90 P Milne *When is enough, enough? Dealing with cumulative effects under the Resource Management Act* (Simpson Grierson, Wellington, 2008) at 27.
91 Hassan and Kirkpatrick, above n 47, at [36].

> recognise that complexity will often involve adaptation and provide a mechanism for ongoing sustainable management into the future.

Just as we concluded in relation to modifications of EMPs, we can identify an opportunity to explore review conditions further to support adaptive management. Otherwise, an RMA consent authority has no general power to institute adaptive management by varying resource consent conditions from time to time. There is a power to change a condition of a consent under s 127, but only if the consent holder applies for it; the consent authority — the regulator — cannot apply. The procedure that must be followed is very similar to applying for a new resource consent, so it is unattractive to consent holders in any event, and adds very little flexibility to resource management.

7.5 Cancellation of a Resource Consent

In certain circumstances, a review of consent conditions may result in cancellation of the consent.[92] The possibility of cancellation of consent has been considered by the Environment Court and High Court. Initially, the Planning Tribunal took a very narrow view of whether and when a consent could be cancelled. In 1994 in *Medical Officer of Health v Canterbury Regional Council* Judge Willy stated that "[review of conditions] is not a mechanism by which a resource consent can be repugned" and that "the consent authority is not entitled to amend those conditions or impose new conditions which has the effect of preventing the activity for which the resource consent was granted".[93]

Over time, the courts became more accepting of the possibility of cancellations in the event that there were material inaccuracies in the application, including incorrect predictions of effects, or significant adverse effects resulting from the exercise of the consent.[94] In a recent case, Judge Borthwick in *Pickering v Christchurch City Council* confirmed that if predictions of environmental effects were incorrect, cancellation of consent may be possible:[95]

> If the prediction of turbine noise level is proven to be inaccurate, s 128(c) provides a separate ground for review and, if made out, then under s 132(4) such a review can result in the cancellation of the consent.

92 RMA, ss 132(3) and (4).
93 *Medical Officer of Health v Canterbury Regional Council* [1995] NZRMA 49 (PT) at 63.
94 *Feltex Carpets Ltd v Canterbury Regional Council* (2000) 6 ELRNZ 275 (EnvC) at [20]; *Director-General of Conservation*, above n 72, at 128; *Genesis Power Ltd*, above n 33, at [81] and [84].
95 *Pickering v Christchurch City Council* [2017] NZEnvC 68 at [8].

While the courts indicate that cancellation of consent is an option under unique circumstances, resorting to this option would be an indication that the planned management of effects has failed.

Cancellation as part of enforcement proceedings is not considered here because it cannot be considered a cooperative planned mechanism under an adaptive management approach.[96]

7.6 Shortened Duration of Consent

Another mechanism to address uncertainty is to grant a resource consent application with a shortened duration, either because an applicant applied for a short duration or because a consent authority shortens the duration applied for. The rationale for shortened duration of consent is typically that additional information or alternatives are expected to be available at the end of that period, which would change circumstances to an extent that necessitates a new consent application process.

The Environment Court and High Court have addressed duration of consent in the context of other processes available under the conditions of consent to manage uncertainty. Decisions reflect a balancing of certainty and security for existing and future investment for the applicant, national and regional economy,[97] the existence of appropriate measures to mitigate effects,[98] the potential for adverse impacts to increase or vary during the term,[99] when new material information is likely to become available,[100] and the cost of funding a replacement consent.[101] These cases show that shortened duration of consent can be an effective way to address uncertainty — although not in all cases — and provide some guidance on how this mechanism can be applied under the circumstances of a specific case.

96 RMA, ss 314 and 339(5). See Matthew Casey "Land Use" in Peter Salmon and David Grinlinton (eds) *Environmental Law in New Zealand* (2nd ed, Thomson Reuters, Wellington, 2018) 688.

97 *Bright Wood New Zealand Ltd v Southland Regional Council* EnvC Christchurch C143/99, 17 August 1999 at [10]; *Te Rangatiratanga o Ngati Rangitihi Inc v Bay of Plenty Regional Council* (2010) 16 ELRNZ 312 (HC) at [93] and [95].

98 *Genesis Power Ltd v Manawatu-Wanganui Regional Council* (2006) 12 ELRNZ 241, [2006] NZRMA 536 (HC) at [89]; *Te Rangatiratanga o Ngati Rangitihi*, above n 97, at [93].

99 *Royal Forest and Bird Protection Society of New Zealand Inc v Waikato Regional Council* [2007] NZRMA 439 at [45].

100 At [48].

101 At [53].

8. CAN ADAPTIVE MANAGEMENT BE IMPLEMENTED LAWFULLY UNDER THE RMA?

In order to assess whether adaptive management can be lawfully implemented under the RMA under a framework of conditions of consent and EMPs different from that proposed by New Zealand King Salmon and modified during the Board of Inquiry process, the findings of this article have been applied to the elements of the adaptive management process.

8.1 Set-up Phase

The RMA framework supports a good implementation of the set-up phase of adaptive management. The insistence of the Act, as interpreted by the courts, that resource consents are specific as to environmental outcomes, objectives and performance aligns well with the design of adaptive management. So too do the considerations stipulated by s 104. Whether these mechanisms are used in practice to allow the "consent envelope" to be adjusted and thus set up an effective adaptive management framework for a specific consent is a different matter.

8.2 Iterative Phase

8.2.1 Decision-making

The adjustment of decisions required under the adaptive management element of "decision-making", together with the element "iteration", is at the heart of the tension between finality and flexibility discussed in this article. The analysis shows that mechanisms are available under the RMA to provide for planned iterative decision-making after consent is granted. These are, first, modifications of EMPs via certification; and, secondly, review conditions to make more substantial changes. This indicates that there are no fundamental legal impediments to implementing this element of adaptive management. However, as outlined earlier, reviews of conditions are often seen as a threat by consent holders and consent authorities are wary of using them.

Depending on the specific circumstances, there may also be legal difficulties. As explored through the case law analysis, the legal options available at a time after consent has been granted depend on the specific nature of conditions of consent and EMPs. This indicates that there likely is a strong negative correlation between the effort made during the set-up phase of adaptive management and the potential for legal disputes related to adjustments in decision-making after consent has been granted.

8.2.2 Follow-up monitoring

Monitoring of environmental effects is provided for under the RMA and routinely required as a condition of consent. To effectively support adaptive management, EMPs should include clear provisions that cover the components listed in Table 1 and thus ensure that follow-up monitoring can fulfil the important role it plays in successful adaptive management.

8.2.3 Assessment

Assessments as intended in the adaptive management process may be part of monitoring, or considerations to inform modification of EMPs, changes of consent, or review of consent. There is no fundamental legal constraint on assessment under the RMA. However, the ability for assessment to influence decision-making, especially to increase the effectiveness of management, depends on the specificity with which management objectives and outcomes were identified. If during the set-up phase objectives and management options are not well defined, the ability of effective assessment to be lawfully requested or acted upon may be limited.

8.2.4 Iteration

Provision for iterations can be made as conditions of consent. The mechanisms to trigger iteration differ depending on whether they relate to iteration through the iterative phase or a return to the set-up phase. Conditions can lawfully provide for the following triggers to cycle through the iterative phase:

- modifications of EMPs in response to monitoring results (which Freeman calls "trigger response");[102] and
- planned staged development.

To return to the set-up phase, conditions can provide for review of consent. Under some circumstances, change and review of consent can also be triggered at times not planned for in conditions of consent.

Legal limits on the discretion of decision-makers to initiate or accept either type of iteration have been identified in the case law analysis, especially if the set-up phase focused on meeting minimum RMA requirements. These limits may restrict the implementation of successful adaptive management.

102 Freeman, above n 85, at 6.

9. CONCLUSIONS

There is an inherent tension between the finality of decision-making under the RMA and the need for flexibility in adaptive management. *Sustain Our Sounds* gave useful guidance for complex resource consent applications subject to the NZCPS, and *Trans-Tasman Resources* provided additional insights into changing the "consent envelope". This article has sought to add to that guidance by taking a broader view of legal issues that may arise under different frameworks, especially resource consent applications under the RMA. The analysis shows that the RMA provides legal mechanisms for all steps of the adaptive management process. However, it appears that, in practice, these mechanisms are not always used effectively. Consents often lack clear criteria and procedures to step back from an activity that turns out to have unacceptable adverse effects.

Monitoring is essential for effective adaptive management, but the conditions for it that appear in resource consents are often inadequate. Monitoring sometimes gets neglected in the final stages of the consenting process where the main focus tends to be on getting the consent over the line. If monitoring is inadequate it may fail to achieve the learning which is so integral to the adaptive management approach. Sometimes hastily agreed monitoring regimes turn out to be expensive as well as ineffectual. Technical expertise needs to be brought to bear on such issues at all stages of the consenting process.

This research has revealed several opportunities for improving the implementation of adaptive management under the RMA. These include:

- exploring how existing mechanisms available under the RMA can be used more effectively in support of adaptive management — for example, certification procedures and reviews of consent conditions;
- being more precise in the consent conditions required to support effective adaptive management, including criteria for rolling back or stepping back from stated activities where adverse effect triggers are exceeded;
- reviewing the balance between legal, planning and technical expertise in the final consent decision-making steps, to ensure that the decision can be implemented effectively and economically over the duration of the consent;
- strengthening the focus on adaptive management as an opportunity for cooperation rather than as a means of prevailing in an adversarial process; and
- developing guidance and best-practice guidelines for those involved in the consenting process (including applicants, councils, decision-makers, technical experts and submitters) to help make directions given by the courts more accessible and support the effective implementation of adaptive management.

Adaptive management, like any technique, can be done well and it can be done badly. The flexibility that it offers is open to abuse if it is a cloak for an application that is unready for serious consideration, or for an attempt to get the resource consent first and put off difficult decisions until later. Many such misuses are unlikely to be legally acceptable as well as being unsound environmental practice. Equally, when the risks of serious adverse environmental effects are high, especially irreversible effects, so that the experimentation inherent in adaptive management is impossible, then other management approaches are required. For all those difficulties, adaptive management is a beneficial approach to complex projects that need ongoing adjustment and flexibility beyond the fixed requirements that are imposed in conventional resource consent conditions.