

# BEST PRACTICABLE OPTION – WHAT DO WE REALLY MEAN?

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## ABSTRACT

The Resource Management Act 1991 introduced the concept of the Best Practicable Option (BPO) with respect to the management of discharges of contaminants and noise emissions, and henceforth set the framework for the way in which many if not most stormwater-related activities would be regulated. This framework however is complex and open to interpretation and discretion, leading to inconsistencies in the way that the BPO is argued and determined.

Drawing on considerable experience gained by the authors over the past 10 years, both through the design of numerous projects and the review of a large number and variety of resource consent applications on behalf of Auckland councils, this paper presents a synopsis of the interpretation and implementation of the BPO framework, and attempts to provide a clearer understanding and greater consistency in the implementation of BPO criteria, specifically in the context of stormwater management in the Auckland region.

## KEYWORDS

**Stormwater, Best Practicable Option (BPO), Resource Management Act (RMA)**

## PRESENTER PROFILE

Jack Turner, BE (Civil) GIPENZ, is an environmental planner and civil engineer at AR Civil Consulting Ltd – a civil engineering consultancy firm based in Takapuna, Auckland. Jack has over seven years post-graduate experience in the field of environmental management, with a particular emphasis over the past few years on stormwater management. Jack has gained valuable planning-related experience during this time, primarily through work for and with Auckland councils, and is in the process of completing a master's degree in resource and environmental planning.

## 1 INTRODUCTION

The introduction of the Resource Management Act (RMA, or the Act) in 1991 established a conceptual framework to aid in the management of discharges of contaminants as well as noise emissions in the form of the Best Practicable Option (BPO). This framework provides for the authorisation of a discharge of a contaminant or an emission of noise where it can be demonstrated that the best method has been adopted with respect to preventing or minimising the adverse effects on the environment. The RMA (1991) prescribes that in determining the best method through the BPO framework, regard should be given to a number matters, including the nature of the discharge and the financial implications of the adopted method in comparison to other options. Case law since the enactment of the RMA (1991) has drawn attention to the fact that this framework has "*many matters of interpretation and discretion built into it*" (Salmon,

RM2.10.01), which can lead to inconsistencies in the way that a BPO is argued, determined and implemented.

Drawing on experience gained by the authors, this paper attempts to provide a clearer understanding of the BPO framework, specifically in the context of stormwater management in the Auckland region under the current statutory system. It thereby aims to help provide greater consistency in the way that the BPO framework criteria may be implemented in the future.

## **2 THE BEST PRACTICABLE OPTION**

### **2.1 WHAT DO WE MEAN?**

In order to consider what is actually meant by the phrase – the best practicable option, there is value in considering the individual definitions of each of its three components. The online Oxford Dictionaries defines the 'best' as "*that which is the most excellent, outstanding or desirable*"; 'practicable' as "*being able to be done or put into practice successfully*"; and 'option' as "*a thing that is or may be chosen*" (Oxford Dictionaries, 2013). Bringing these individual definitions together, we can explain the phrase to mean – the most excellent, outstanding or desirable choice of some thing that can be done or put into practice successfully.

With the above explanation in mind, it is evident that the best practicable option phrase can be used in different situations. For example, and in the context of a topic of particular social interest, one could refer to the decision to purchase a particular house – affordable or not, as the best practicable option. Clearly the use of the phrase in this context is highly situational and open to debate, and one which is inflamed by an array of contributing factors such as price, budget, location, number of bedrooms, outdoor space and so on. In this scenario however, arguably the person who chooses to buy a particular house is in the most appropriate position to determine what their best practicable option is. They have weighed up the contributing factors of most importance to them, and have made a decision within those constraints. Nonetheless, even a slight change in circumstances could cause the decision to no longer be the best practicable option. An increase in mortgage interest rates for instance. In light of this, it can be construed that in whatever context, the best practicable option is situational, affected by perspective and reliant on a finely balanced decision process. However in the context of stormwater management within New Zealand, the phrase has a specific meaning because of the wording and subsequent interpretation of the RMA (1991) – ostensibly reducing the uncertainties illustrated above. This is discussed further through this paper.

### **2.2 STATUTORY PROVISIONS**

#### **2.2.1 OVERVIEW**

The BPO framework within the RMA expressly relates to managing discharges of contaminants and noise emissions, and incorporates the ability for the framework to be developed further with respect to specific regional contexts. The following sections provide an overview of this framework, specifically in the context of stormwater discharges within the Auckland region.

#### **2.2.2 RESOURCE MANAGEMENT ACT**

The BPO framework is integrated throughout the RMA (1991), but most critically through three main sections. First and foremost, Section 2 (Interpretation and application) includes the definition of what is meant by the best practicable option in relation to a

discharge of a contaminant or an emission of noise in the context of the RMA (1991). In this context it means *“the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to—*

*(a) the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and*

*(b) the financial implications, and the effects on the environment, of that option when compared with other options; and*

*(c) the current state of technical knowledge and the likelihood that the option can be successfully applied.”*

The interpretation as to what is meant by a *contaminant* is addressed later in Section 2, and encompasses stormwater within the definition. Accordingly, the RMA (1991) interpretation of the best practicable option prescribes a suite of matters which should be considered when determining, within this framework, the best method for preventing or mitigating the adverse effects in relation to discharges of stormwater (among other things).

This interpretation of the BPO has been developed further through case law since the enactment of the RMA in 1991, and in particular through a case heard through the former Planning Tribunal in 1992 – Auckland Kart Club Inc v Auckland CC A124/92. The outcome of this case helped clarify that the phrase *“among other things”* within the BPO definition does not just limit consideration to the three provisions (a), (b) and (c); nor does it mean that one provision should be prioritised above another. In addition, the question of significance accorded to each provision is dependent on the particular case, while the use of the conjunction *“and”* linking each provision means that in evaluating the best method account should be taken of all of the factors referred to in the provisions. Nonetheless, individual components of the provisions may be exclusive of others at any one time. *“What is reasonable is a question of fact and degree”* (Salmon, RM2.10.01). This refined understanding of the meaning of BPO is then reflected through a number of different sections in the Act, with two specific sections having a particular influence on the management of stormwater discharges.

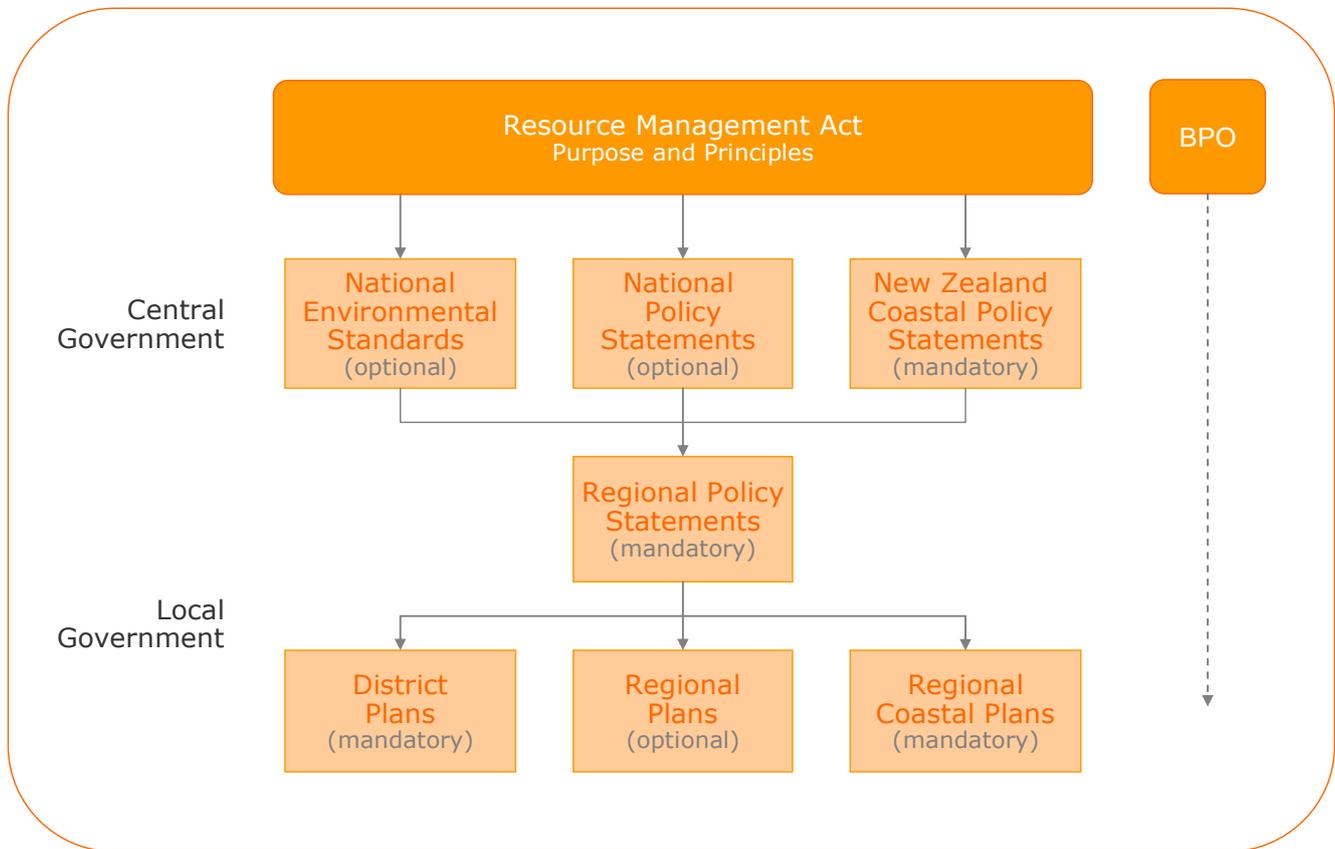
The second part of the Act that helps to establish the overall BPO framework relates to the potential for plans to be developed and approved by regional councils – or unitary authorities as is now the case with Auckland Council. Having established the interpretation of what actually constitutes the BPO within the RMA context through Section 2 of the Act, Section 70(2) (Rules about discharges) goes on to offer the ability for regional councils to include a rule within a regional plan that requires the adoption of the best practicable option in order to prevent or minimise adverse effects on the environment of any discharge of a contaminant. The Act prescribes that the council must be satisfied that the inclusion of such a rule is the most efficient and effective means of mitigating those adverse effects on the environment. And in order to be satisfied, regard should be given to:

*“(a) the nature of the discharge and the receiving environment; and*

*(b) other alternatives, including a rule requiring the observance of minimum standards of quality of the environment.”*

In terms of the management of stormwater discharges, this ability to include such a rule within a regional plan is perhaps the pivotal component of the Act’s BPO framework. Indeed, and as outlined further below, this approach was adopted by the former

Auckland Regional Council through its various statutory documents (both mandatory and optional under the Act), including the Regional Policy Statement (1999) and Regional Plan (Air, Land and Water, 2012). *Figure 1* below illustrates the RMA-based hierarchical structure for these statutory documents, with each layer having to give effect to the tier above. It also highlights the potential scope for the BPO framework across this structure.



*Figure 1: The Resource Management Act’s planning and BPO framework (adapted from Controller and Auditor-General, 2013)*

The third important part of the Act that helps to establish the overall BPO framework is those sections which relate to conditions of resource consents. The BPO provisions that relate to regional plans are emulated through Section 108 of the Act – Conditions of resource consents. This section (specifically Sections 108(1), 108(2)(e) and 108(8)) prescribes that a resource consent may be granted with any appropriate conditions, including one which requires a consent holder to adopt the best practicable option to mitigate adverse effects of a discharge made by the person from the same site or source. Before doing so, and as with Section 70(2) providing for a BPO rule within a regional plan, the consent authority should be satisfied that when including such a condition, regard has been given to the same provisions, (a) and (b) above, and that it is the most efficient and effective means of preventing or minimising those adverse effects on the environment. Similarly, the Act also enables the conditions of a discharge permit to be reviewed at a later point (Section 128). In doing so, and with due regard given to provision (a) above, as well as the financial implications of the option and other alternatives, the consent authority may require a permit holder to adopt the BPO to mitigate any adverse effects.

It is interesting to note that the consent condition-related component of the BPO framework is not commonly relied on within the Auckland region, with both former and current councils preferring to determine the BPO through a consent application process,

rather than through conditions and the compliance phase of a resource consent. This approach seeks to ensure a greater level of certainty with respect to environmental outcomes at the point at which consent is granted.

There are a number of other sections within the RMA (1991) that add to the overall BPO framework, however the main foundations are provided by those sections outlined in Section 2.2.2 of this paper. This framework, with respect to stormwater, therefore consists of the following:

- an interpretation of what matters should be considered when determining the best method to prevent and minimise the effects of a discharge of stormwater;
- the ability for regional plans to include rules that require adoption of the BPO; and,
- the enabling of consent authorities to impose and later review conditions of consent to require the BPO to be implemented.

The framework goes some way toward constraining the otherwise highly situational variability in what is meant by the BPO. This thereby reduces the potential sensitivity of the determination process, although arguably the main system and perspective for determining the BPO is focused on regional councils and other consent authorities.

In the Auckland region, the existing regional planning documents inherently endorse the BPO approach with regard to managing stormwater discharges. A synopsis of the central BPO provisions within these documents is provided below.

### **2.2.3 AUCKLAND COUNCIL REGIONAL POLICY STATEMENT**

The Auckland Council Regional Policy Statement (1999) is an overarching statement about managing the use, development and protection of the natural and physical resources of the Auckland region. It was developed by the former Auckland Regional Council and is now implemented by the Auckland Council. Until the Unitary Plan (Auckland Council, in prep.) for the entire Auckland region comes into effect, this Statement remains the primary strategic regional planning instrument, and to which all other plans must give effect.

Chapter 8 of the Auckland Council Regional Policy Statement (1999) pertains to water quality and explicitly addresses the management of stormwater. To provide context, it recognises the following with regard to water quality:

*"Water quality is a significant issue in the Auckland Region. Auckland is a maritime Region with an extensive, often rugged, coastline, large harbours and estuaries and attractive islands of the Hauraki Gulf. The Region also has numerous lakes, rivers, streams, wetlands and aquifers. The quality of water can either enhance the values of these resources or degrade them with a direct effect on the quality of life of Aucklanders, visitors and all those who are resource users. Water is a resource which is sensitive to the impacts of activities on land or water. Hence, maintaining or enhancing its quality requires a comprehensive and integrated approach to its management."*

In order to achieve the goal of maintaining or enhancing water quality within the Auckland region, the Regional Policy Statement (1999) includes various methods to address matters that can contribute to the degradation of water quality, including discharges of stormwater. Pivotal to these methods are Sections 8.4.8(5) and (6) which require that the best practicable option must be adopted to mitigate the effects of

discharges of stormwater. This applies to both existing urban catchments as well as all new developments – whether allowed as a permitted activity or by a resource consent. These methods and requirements to implement the BPO are then prescribed further through specific regional plans – as outlined below.

#### **2.2.4 AUCKLAND COUNCIL REGIONAL PLAN (COASTAL)**

The Auckland Council Regional Plan (Coastal, 2004) provides the framework to promote the integrated and sustainable management of the Auckland region's coastal environment, and through which the discharge of stormwater is also addressed. This Plan (2004) however essentially reverts the control of stormwater management to another regional plan, being the Auckland Council Regional Plan (Air, Land and Water, 2012) – as outlined below. This is essentially on the basis that the management of stormwater and its effects is arguably, best addressed through land-based measures.

#### **2.2.5 AUCKLAND COUNCIL REGIONAL PLAN (AIR, LAND AND WATER)**

The Air, Land and Water Plan (2012) provides for the management of, as the name suggests, air, land and water resources in the region. The management of stormwater is a core element of this plan and is specifically addressed in Chapter 5.

Chapter 5 of the Air, Land and Water Plan (2012) provides a specific framework for the management of stormwater within the Auckland region, and critical to this framework is the concept of the BPO. The central objective to this Plan is summarised by Section 5.3.8, which explains that the Plan seeks to provide for and enable discharges of stormwater while adopting the BPO to manage adverse effects on the environment. This objective is then echoed and explained further through a number of specific policies, including 5.4.4 and 5.4.4B (relating to smaller, non-network discharges) and 5.4.8 (large-scale network discharges). These policies develop the RMA (1991) interpretation of the BPO in a manner that is specific to stormwater management in the Auckland region, and which expands the consideration for determining the BPO to include the following matters. The following bullet points are amalgamated from the aforementioned policies, and paraphrased for readability.

- The scale and intensity of development relative to that which is provided for through associated planning documents;
- the level of adverse effects on the receiving environment due to the quality of the discharge;
- the health and safety of people and communities from flooding;
- aquatic habitat from erosion and sedimentation;
- the level of adverse effects arising from the cumulative effects of stormwater discharges;
- the outcomes of any consultation undertaken with any potentially adversely affected parties;
- the extent to which a wide range of management options have been considered to mitigate the adverse effects of any existing and future maximum potential developments and their consequential discharges;
- the extent to which there is the potential for local scour;

- the extent to which the activity incorporates low impact design and nonstructural methods to prevent or minimise adverse effects (including minimising the extent of impervious area and stormwater runoff volumes);
- the extent to which operation and maintenance programmes are provided to ensure the effective ongoing functioning of the discharge;
- the timeframe within which the identified adverse effects can be addressed;
- funding availability; and,
- methods to mitigate any significant unavoidable adverse effects.

It is evident that the Air, Land and Water Plan (2012) provides a comprehensive expansion of the fundamental BPO framework afforded by the RMA (1991), and identifies and advocates those matters that should be considered when determining the BPO for a particular situation. This expanded BPO framework is then implemented through rules that prescribe when and where stormwater discharges can be undertaken as a permitted activity, or which otherwise require resource consent.

The Air, Land and Water Plan (2012) also refers to the non-statutory document known as 'TP10' – *Stormwater Management Devices: Design Guidelines Manual, Second Edition* (Auckland Regional Council, 2003). This guideline document helps to provide a consistent foundation for various methods and devices that can be implemented to prevent and minimise adverse effects from the discharge of stormwater, and thereby achieve the BPO. Significantly, policy 5.4.4C of the Plan provides that where proposed stormwater management systems are in accordance with the design methods in TP10 (2003), an application for consent (relative to specific rules) need not include a detailed assessment of environmental effects – thereby overriding the requirements of RMA (1991). However TP10 (2003) does not only provide specific device design guidance, but also prescribes objectives and methods to differentiate between the various devices relative to achieving different outcomes. With this in mind, designing a stormwater management system in accordance with TP10 (2003), does not automatically correlate to achieving the BPO. In some cases a particular device that is designed in full accordance with the methods prescribed by TP10 (2003) may not be justifiable as the BPO, for example due to particular sensitivities with the associated receiving environments or high ongoing maintenance costs associated with that particular method. TP10 (2003) therefore provides guidance in achieving the BPO, but is not a prescriptive answer to the BPO framework.

## **2.3 SUMMARY**

The BPO framework provided by the RMA (1991) was adopted by the former Auckland Regional Council as a critical method to assist in the management of stormwater discharges in the region, and was consequently developed further through regional planning instruments. Of most significance is the Air, Land and Water Plan, which provides a comprehensive expansion of the overarching RMA-based BPO framework. As a consequence of this detailed and stormwater-specific framework, it is apparent that in any particular scenario that involves the discharge of stormwater, the decision as to what constitutes the BPO is not simple. As described above, a complex array of matters must be considered in support of a particular method, and account should be taken of all of the factors referred to in the provisions in evaluating the best method to discharge stormwater. In addition, the decisive judgment as to what constitutes the BPO lies with the consent authority – in this case Auckland Council.

Therefore, in the context of stormwater management within the Auckland region, what is meant by the phrase best practicable option is much more than mere tokenism. In order to justify a particular BPO, regard must be given to an extensive framework of considerations prescribed by, in the Auckland case, the RMA (1991), the Regional Policy Statement (1999) and the Air, Land and Water Plan (2012). However experience has shown that this framework is often not fully recognised by stormwater practitioners.

### **2.3.1 FUTURE PROVISIONS**

At present, the RMA (1991) planning environment, particularly for the Auckland region is in a state of flux due to the imminent arrival of an all-encompassing Unitary Plan. Additionally, the National Policy Statement for Freshwater Management 2011 further complicates the existing system with the requirement for councils to set enforceable freshwater quality limits in the coming years. Despite these forthcoming changes, it is likely that the existing BPO framework will be continued in some form and to some extent in order to aid in differentiating between potential options that achieve the required standards. With this in mind, the reflections within this paper are likely to remain valid beyond the current statutory system.

## **3 IMPLEMENTATION OF THE BEST PRACTICABLE OPTION**

### **3.1 EXPERIENCE TO DATE**

Over the past 10 years, the authors have developed extensive experience in the consideration, determination and implementation of the best practicable option framework, particularly in the Auckland region with respect to stormwater management. This experience has been gained as a result of commissions with former and existing Auckland councils, both in terms of carrying out specific projects and through the review of a broad range and number of resource consent applications, as well as through involvement as consultants in a wide variety of private developments. Collectively, this experience spans across all manners of land uses and development scales, from small residential projects to roads of national significance. As a result, the authors have had considerable exposure to a multitude of BPO arguments and proposals, particularly the more specific framework for the BPO in the Auckland stormwater context. By reflecting on this experience, it is hoped that wider thinking and comprehension around this BPO framework will be developed, allowing for greater consistency in the application of BPO and enhanced overall outcomes.

### **3.2 SUMMARY OF FINDINGS**

A number of common issues with the arguments associated with the BPO and the design of stormwater management systems have been observed over time. Some of the more significant matters are outlined below.

- Inconsistent arguments and considerations with respect to stormwater management methods. Through an enhanced awareness and understanding of the specific BPO framework for stormwater management in the Auckland region, it should be feasible to reduce these inconsistencies.
- Proposed methods for stormwater management often lack justification as to why they may represent the BPO. As above, with a greater awareness and understanding of the stormwater-specific BPO framework, appropriate justification for a particular BPO should be achievable.

- Similarly, particular stormwater methods are often proposed by a process that seems to jump to conclusions without reason and without adequate consideration of alternatives. Through our experience as stormwater practitioners, it is often straightforward and logical to pre-determine a particular method for managing stormwater in a given scenario. In some cases, this pre-determined outcome, when considered in the context of the matters prescribed through the BPO framework, is indeed justifiable as the BPO. However, in order for it to actually be considered the BPO, and for those determining the BPO (for example Auckland Council), it must be evident that account has been taken of all of the factors referred to in the provisions. To achieve this, we need to improve the way we document our decisions and thought processes as to how we arrived at the conclusion that a particular stormwater management approach constitutes the BPO.
- A particularly fundamental issue arises in the case where methods have been proposed without associating these with the relative receiving environments. As the sensitivity of the receiving environment is pivotal to the BPO framework, this is clearly a critical flaw in such proposals.
- Furthermore, accurate consideration of financial implications is very rarely demonstrated. This is particularly true in terms of the long-term costs associated with different methods. With readily-available tools to quantify the various life-cycle costs of different methods, such as the Landcare Research COSTnz tool, this oversight within many BPO justifications can at least be improved.
- It is also suggested that there is a general lack of innovation that could otherwise be proposed in light of contemporary technical knowledge. Rarely have innovative solutions to stormwater management problems as a result of technical developments in the field been observed. This lack of innovation is perhaps surprising given the ongoing research and development across the public, private and academic sectors. Some might argue that the reliance on guidelines such as TP10 (2003) has the effect of stifling innovation, however, in many instances this more than likely relates to the risk-averse nature of councils in general. However it is important not to confuse the notion of innovation with either novelty or short-cut solutions. Where there is genuine technical support and knowledge for a given innovation, such as recent research into raingarden media depths (Facility for Advancing Water Biofiltration, 2009), the implementation of such innovations may very well be justifiable as the BPO.
- Experience also suggests that there is rare consideration given to the likelihood of success, particularly long-term success of proposed stormwater management methods. The likelihood of success could be considered as an inherent trait for particular methods; however specific regard should nonetheless be given to the long-term prospects of success of a proposed solution. This is perhaps particularly relevant where physically constrained systems are proposed, limiting the potential for future changes to the system in the event that its success is inadequate.

Ultimately, the consideration as to what constitutes the BPO in any given case is very complex and contextual. The RMA (1991), and in the Auckland context – the Air, Land and Water Plan (2012), provide for a specific framework for determining the BPO relative to discharges of stormwater. However, this framework is not commonly applied in a comprehensive or accurate manner, and in the opinion of the authors, this leads to inconsistencies in its implementation and associated outcomes. A wider understanding and appreciation for the BPO framework is likely to help resolve these inconsistencies, and reduce potential bias caused through differing perspectives.

## 4 CONCLUSIONS

The phrase *best practicable option* can be used in a wide range of contexts. However as shown through this paper, this phrase has a specific meaning in the context of stormwater management within the Auckland region.

Subsequent to the overarching requirements of the RMA (1991), the Air, Land and Water Plan (2012) adopts a best practicable option framework for the management of stormwater discharges within the region. This framework incorporates a specific suite of matters which should be accounted for when developing, considering and determining methods to manage discharges of stormwater, thereby ultimately leading to the best practicable option. When correctly implemented, it is argued that this framework can lead to wide-ranging positive outcomes. However, at present the BPO framework is generally not widely understood or appreciated, leading to compromised outcomes. Through a greater appreciation and understanding of the BPO framework provided for by the RMA (1991) and more specifically through Auckland's regional planning documents, current inconsistencies in stormwater management approaches can be lessened. An enhanced awareness and understanding of the BPO framework across all industries in the stormwater management field would lead to greater consistency and improved outcomes.

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