

Section 104(1)(b) Assessment in relation to a proposal for an expansion of the existing C&D Landfill, 50 Landfill Road, Happy Valley.

In support of Applications for Resource Consents and Discharge Permits;

- **WGN90036 (Greater Wellington Regional Council)**
- **SR215490 (Wellington City Council)**

Applicants – Burrell Demolition Ltd and C&D Landfill Ltd

April 2013

1 Introduction

An assessment of relevant matters under section 104(1)(b) of the Resource Management Act 1991 (the Act) is required to assist the consent authority in consideration of the consent applications WGN090036 (submitted to Greater Wellington Regional Council (GWRC)) and SR265761 (submitted to Wellington City Council (WCC)). Section 104(1)(b) states;

104 Consideration of applications

- (1) *When considering an application for resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to-*
- (b) *any relevant provisions of –*
- *A national environmental standard*
 - *Other regulations*
 - *A national policy statement*
 - *A regional policy statement or proposed policy statement*
 - *A plan or proposed plan*

An assessment of the proposed expansion against the Act s104(1)(b) matters and also against the Act s5 Purposes and Principles was specifically requested by the WCC consent planner. The requested information is provided in the following order:

- Part 2 Matters
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
- National Environmental Standard for Air Quality
- The New Zealand Coastal Policy Statement 2010
- National Policy Statement for Freshwater Management 2011
- Draft National Policy Statement on Indigenous Biodiversity
- Greater Wellington Regional Policy Statement Operative 1995
- Greater Wellington Regional Policy Statement Proposed (Decisions Version) 2010
- Greater Wellington Regional Plans

2 Part 2 Matters

2.1 Section 5

Part 2 of the Act contains the purpose and principles to be considered when undertaking an activity.

Section 5, being the purpose of the Act, is to promote the sustainable management of natural and physical resources. Section 5 expands to define sustainable management which means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety. This is done through Section 5(2) by:

- (a) *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) *Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) *Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

In terms of s5(2)(a) the activity is a proposal to expand the operational area of an existing landfill over land which has been leased to the applicant by WCC for that purpose. The site is also part of land legally gazetted for the purpose of 'refuse disposal', and fits within a designation for the same purpose (although the designation is held by WCC as the requiring authority). Although the natural and physical resource of the site is recognised as having ecological and landscape values (as WCC District Plan Open Space B Zone, and WCC 'Outer Green Belt'), the value of the expansion site for these purposes is diminished by its topographic position, and land development/landfill or industrial land use activities which have and are occurring within the lower parts of the site catchment. The landfill is a valuable physical resource in the sense of being a specific place for the deposition of construction and demolition material, and with a renewed emphasis of the requirements for earthquake strengthened buildings there is likely to be an increased demand for landfill space of the type provided by the landfill. The proposal in this consent application sustains the viability of the landfill as a physical resource for the foreseeable needs of future generations. It does so without adversely affecting the potential of the overall landform to meet the amenity and recreation needs of future generations in terms of the Open Space B Zone.

In terms of s5(2)(b) the proposal does have the potential to impact upon air, water, soil, and ecosystems. Specifically, the proposal expansion would progressively divert and infill the bed of the upper Demolition Gully Stream, a tributary of the Owhiro stream, and would clear regenerating indigenous forest and remove soil from a steeply sloping gully. However these are the same type of activities which have occurred within the currently operational landfill for approximately 35 years as it developed up the gully from Landfill Road. The landfill operator has managed the development process in a manner which has minimised effects upon air, water, soil and ecosystems in terms of safe guarding their life supporting capacities.

In terms of s5(2)(c) the proposed expansion would be managed in the same fashion as the existing landfill. Management includes controlling the types of material allowed into the landfill, regular testing of downstream water quality, and constructing the landfill surface in a manner that avoids the potential for instability or subsidence into undeveloped areas of the lease site. Management processes and methods are described in the landfill Site Management Plan and would avoid, remedy or mitigate the identified adverse effects upon the environment.

Another issues for discussion under s5(2)(c) is that the current landfill design has provided for a stormwater ponding area between Zone 1 and the main access road. A structural assessment of the existing culvert has also identified weaknesses and a likelihood that these would contribute to a blockage of the drain. An objective for the proposed expansion is to provide for the reduction of the potential instability risk at this site (if the passage of the Demolition Gully becomes blocked off) by the infilling of this ponding area and the rerouting of catchment surface flows to avoid sections of the existing culvert.

On the basis of this information and as further described in this report, it is considered that the proposal is consistent with the purpose of the Act.

2.2 Section 6

Section 6 of the Act sets out matters of national importance that are to be recognised and provided for in achieving the purpose of the Act. Of relevance to this application are:

6(a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development

The proposed expansion would partially infill a gully and divert the permanent flow of the upper Demolition Gully stream above the existing landfill. The site is influenced by the coastal environment in terms of climate (exposed to southerly weather systems) and the catchment

contributes fresh water into Owhiro Bay. However the application site is located beneath the Tip Track Spur and the Te Kopahu ridgeline and is not visible from the coastal marine area or from the Owhiro Valley¹. The application site has been observed to not contain any wetlands².

The relevance of s6(a) matters to be recognised and provided for under this proposal relates to the natural character of the upper Demolition Gully stream that would be piped and infilled by the proposed expansion. The site and stream fits within a location considered to have a high natural character value at a regional and district wide context in relation to visual, landscape, indigenous fauna, and ecosystem matters³.

However it should be recognised that natural character values are diminished by the presence of the subject site landfill, the downstream culvert, and the location of the WCC sanitary landfill and associated support service, and light industry along Landfill Road in proximity to the proposal.

It is the intention of the applicant that (when final landfill levels are achieved in stages) the natural character of the site would be progressively restored. This would be achieved by re-vegetation strategy using native plants appropriate for the contour and climate conditions, pest plant management and off site aquatic habitat restoration. Restoration planting is discussed in Section 9 of the Landfill Site Management Plan. An indicative planting plan is also provided in the Proposed Expansion Drawing Set. The landscape plan is subject to confirmation through the consent process and agreement by the consent authorities.

An offsite restoration of aquatic habitat within the reaches of the Owhiro and Landfill Road streams is proposed as environmental compensation for the works within the landfill lease area. A detailed strategy is still to be worked out subject to an agreement with landowners and interested parties. The intention of the offsite works is to assist in returning natural character to water courses below the landfill making them more attractive for aquatic fauna (banded kokopu, red finned bully, long fin eel, and giant kokopu) that may reside in the catchments below the site.

In conjunction with restoration works proposed and the applicants monitoring of environmental quality above and below the site, it is considered that the proposal is not an inappropriate use or development in terms of s.6(a).

6(c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna

The protection of significant vegetation and significant habitat is a matter of national importance to be recognised and provided for. The proposed expansion of the landfill would impact on land recognised as having significant indigenous vegetation and aquatic habitat for koura, koaro, banded kokopu, and long fin eel⁴. The presence of some indigenous and at risk fauna was confirmed by a stream ecological valuation (SEV)⁵.

In recognising and providing for the value of the terrestrial vegetation habitat it is proposed that after completion of stage landfill, that restoration planting would be undertaken over the final surfaces as per a planting strategy discussed in section 9 of the landfill Site Management Plan. This is the same (stormwater drainage surface, pest plant control, and the application of organic material and top soil) that would occur first at the currently operating landfill (known as Zones 4, 5 & 6) east of the undeveloped gully, and followed by native planting.

¹ Refer Landscape van visual assessment, Opus 2013

² Refer Wildlands, 2012

³ Refer section 6.4 of Wildlands (2012), and Opus (2012A), and Opus (2013A)

⁴ Refer Page 28, Wildlands (2012)

⁵ Refer Opus (2012A).

In recognising and providing for the loss of aquatic habitat from the upper Demolition Gully stream it is proposed as part of this application that there would be an on-going staged aquatic habitat restoration of the lower Owhiro and Landfill Road streams. In providing for the aquatic fauna that is resident in the upper Demolition Gully stream, and before any works have occurred, the applicant would ensure to undertake an aquatic fauna relocation program (for koura, and indigenous vertebrate fauna). During the damming and diversion works as part of the landfill development, operations staff would be observing and checking for the presence of aquatic fauna. These measures as discussed above will recognise and provide for the values of the indigenous vegetation and habitat of aquatic fauna.

Other than subsections 6(a) and 6(c), no other matters of national importance are considered relevant. On the basis of the discussion above (and referencing supporting documents) it is considered that the proposal will not contravene Section 6 of the Act.

2.3 Section 7

Section 7 of the Act sets out matters to have particular regard to in achieving the purpose of the Act. Those of relevance to this application are:

7(b) The efficient use and development of natural and physical resources

The proposed expansion is an efficient use and development of the existing land, including its current use, as a natural and physical resource. The proposal would allow for approximately 35 years of capacity for the current landfill which has existed at the site since 1978. The proposal would also mean that non-toxic landfill material is able to be diverted from the WCC Careys Gully landfill, therefore increasing that sites capacity to accept general landfill material within its defined area. The expansion of the landfill into the application site is an efficient use of a physical resource being a site available in Wellington for managing construction and demolition waste to meet its future needs in terms of earthquake re-strengthening (for buildings) and transport network development.

7(c) The maintenance and enhancement of amenity values

In terms of Section 7(c), 'Amenity values' are defined as;

'those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes'.

The proposal is located within the lower elevation of a landform which is identified in the WCC DP as having high visual and landscape values but is also adjacent to the operational WCC landfill, recycling centre, WCC depot and industrial uses along Landfill Road. Whilst the proposed expansion of the C & D Landfill would result in a short term loss of amenity while works are occurring, the proposal does encompass a staged restoration so once completed, the existing landfill site would be returned to a more natural character through contouring and vegetation replanting. This means that over part of the landfill lease area amenity values would be enhanced while the proposed expansion area is developed. Except from the surrounding ridgelines the assessment of the visual effects⁶ confirms that very little of this proposed expansion would be visible from residential viewpoints. The proposed expansion would also not affect the main view points for people from the Te Kopahu ridgeline. The existing landfill operation area would be progressively restored in terms of a final land surface and drainage pattern fitting with the surrounding land, and native vegetation planting. Therefore the proposed expansion, balanced with the expansion into a less visible site area, and its setting within an environment used for both

⁶ Refer Landscape and Visual Assessment, Opus (2013)

landfill and industrial purposes, is concluded in Opus (2013) to not overall negatively impact upon maintaining amenity values.

7(d) Intrinsic values of ecosystems

The site of the proposal relates in part to an existing landfill, and mostly in relation to land containing aquatic and terrestrial indigenous vegetation habitats for indigenous fauna. Prior to the landfill and the discontinuation of pastoral farming, the site of the proposal and surrounding land were subjected to deforestation and grazing from domesticated livestock.

The land within the lease of the C & D Landfill which includes the expansion site has been assessed by ecologists (refer Wildlands, 2012) to contain a variety of habitats or ecosystem types. Those contained within the western gully are generally of a moderate to high quality (including the permanent and ephemeral water courses). A stream ecological valuation (SEV) of the aquatic habitat above the culvert inlet of the C & D Landfill (refer Opus, 2012) confirmed the earlier assessment by assigning a high value score of 0.816.

Several measures are however proposed under this application to counter the loss of the intrinsic values of the habitats within the expansion site.

Firstly, restoration of the landfill site area would occur on a staged basis beginning with the current operational areas and moving onto newer areas as these were completed. Restoration of the existing operational landfill would involve firstly finalising a land and drainage surface, the clearance of any pest plant species on the site, and then the planting and maintenance of appropriate native plant species. This work is identified under the landfill Site Management Plan.

To have regard for the intrinsic values of ecosystems means for this proposal a terrestrial onsite restoration and off site aquatic habitat restoration to compensate for the loss of Demolition Gully stream aquatic habitat. The detail of these proposals is still to be finalised and agreed with off-site landowners but a proposal is outlined⁷. Prior to establishment works occurring in the expansion site the applicant would undertake a discovery, relocation and transference program for affected of indigenous aquatic fauna to lower parts of the catchment using trained ecological personal.

In light of the proposed mitigation measures, it is considered that the proposal is consistent with Section 7(d).

7(f) Maintenance and enhancement of the quality of the environment

The maintenance and enhancement of the quality of the environment for the proposed landfill expansion relates to visual/landscape, ecological/ecosystem, water quality, and amenity as values representing the site environment. The site of the expansion is over both the existing landfill operation and the undeveloped western gully within the boundary of the current lease.

The proposal will maintain and enhance the quality of visual / landscape values by a progressive staged development as illustrated in the drawing set. Once development of the current operational landfill⁸ has reached its maximum surface level, that area would be subject to a landscape and ecological restoration program. Aside from the retention of an access road, the completed landfill area would be allowed to revegetate with grass and native plantings. In the first 5 years of establishment, the applicant proposes to manage the site for weed control to ensure the successful establishment of native plants.

The landfill operation would then move over into the upper 1/3 (known as 'Stage 12 Phase 1) at approximately 245m AMSL. After landfill operations were completed in terms of reaching the

⁷ Refer section 4 of Opus (2012A)

⁸ As at April 2013 the Operational Landfill is within Zones 4, 5, and 6.

desired final surface the same style of landscape and ecosystem restoration would occur as was applied to the previous operational landfill area.

In terms of maintaining and enhancing the quality of amenity values the proposed expansion would provide for a shift of the operational landfill area from a physical position that is more visible from distant views to a position that is less visible from distant public views. The expansion of the landfill into what is a currently undeveloped gully would have a short to medium term effect on the amenity value when viewed from the publicly accessible tracks on the Te Kopahau Ridge and Tip Track spur. The position of the proposed expansion is however low and not considered part of the main viewing aspect. Should consent be granted, after approximately 15-20 years with the restoration of both the current operational landfill and the upper 1/3 (245m-299m AMSL) of the expanded landfill underway, the impact on amenity would have decreased.

In terms of maintaining and enhancing the quality of ecological and ecosystem values, an integral component for the proposed landfill expansion is a comprehensive restoration strategy for both terrestrial and aquatic ecosystem habitats and values. These would occur on a staged basis as components of the expanded landfill are finished. This would allow on and off site restoration to occur synchronously with landfill development (until completion) and would provide for maintaining and enhancing the quality of the environment.

In terms of maintaining and enhancing the quality of water values the proposed expansion would be done in accordance with a construction management plan with an objective of minimising sediment inflows into the current upper Demolition Gully Stream. The development and operation of the landfill is also undertaken in a manner that avoids surface run off from the landfill entering watercourses downstream. In addition to avoiding or minimising the impacts of construction and operational run off on water quality, the landfill is constructed with materials which do not readily degrade in terms of the infiltration of contaminants into groundwater and downstream watercourses. The current landfill operator regularly samples for key water quality indicators and this would continue with the land fill expansion.

It is considered that this discussion demonstrates that the proposal would contribute to maintaining and enhancing the quality of the environment of the site and surrounds.

7(g) any finite characteristics of natural and physical resources

In relation to *any finite characteristic of natural and physical resources*, for this application these are considered in relation to;

- Any amenity, ecological, landscape, and recreation characteristics that are finite, and,
- Any physical resource characteristics of the use of the site for a construction, demolition and cleanfill material landfill as a finite physical resource.

In terms of the first bullet point it is considered that the amenity, ecological, landscape, and recreation elements that form natural characteristics are widely found both within the land fitting within the WCC Outer Town Belt and also the wider Wellington Region.

In terms of the second bullet point it is considered that the physical resource characteristics of the site as a construction, demolition and cleanfill material landfill are finite. This is because the use of the land for that purpose is allowed only within that location demarcated by the lease.

2.4 Section 8

Section 8 of the Act relates to the Treaty of Waitangi. Cognisance of the principles of the Treaty of Waitangi is to be had. Based upon the experience of the applicant with the consent process under WGN940057, it is considered that the site of the proposed landfill expansion is not a location

identified as culturally significant. There are also no known or recorded archaeological sites within the proposed expansion area.

The proposal will however have the potential to impact upon the water quality of the Owhiro Stream catchment, and the proposal will have an impact upon indigenous aquatic fauna species which may be regarded as taonga by local tangata whenua. The applicant has not undertaken specific pre-application consultation with tangata whenua but would be happy to discuss any issues if these arose through the notification and submissions process. It is understood that tangata whenua were a submitter to the consent application approved under WGN940057. At this stage it is considered that the proposal does not conflict with the requirement of Section 8.

2.5 Summary of Part 2

Based on the above assessment, it is submitted that the proposal is consistent with the purpose and principles of the Act.

3 National Environmental Standards (NES)

3.1 NES for Assessing and Managing Contaminants in Soil to Protect Human Health

A National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES) was made operative in 2012. The application of the NES for the proposed consent expansion relates to proposed additional landfill development over the existing consented operational landfill. The NES applies in relation to the soil disturbance. A statement of opinion by a suitably qualified person in relation to the application of the NES to the current landfill has been provided for the approved resource consent for additional landfill over Zones 4, 5 & 6 up to 240m AMSL.

The existing landfill is listed as a known contaminated site (SN/05/124/02) under the Significant Land Use Register (SLUR) held by GWRC. The landfill is also an activity that is recognised under the Hazardous Activities and Industries List (HAIL) system.

The applicant has prepared an assessment of the existing landfill in terms of the applicability of the NES (refer Appendices). An expansion of the existing landfill beyond its current consented height (240m AMSL) is an activity that requires resource consent from WCC in terms of the use or development of a contaminated site (WCC Plan Rule 32.2.2).

The activity of soil disturbance on the landfill (either disturbance of natural soil or placed fill) is not permitted and triggers a requirement for resource consent under the NES. Without a preliminary detailed site investigation (DSI), the proposal under the NES is a discretionary activity, however at this stage because the site is an active landfill, with more fill material being added, and the final capping yet to be placed a DSI is not appropriate. For this reason a discretionary activity approval under the NES is sought.

The placement of originally off site contaminants and the disturbance of a potentially contaminated site are also classified as 'discretionary' activities under the GWRC Discharge to Land Regional Plan and the Wellington City District Plan. The applicant is applying for these in relation to the proposed expansion, in addition to the consent required under the NES. Matters for consideration under the proposed expansion that are relevant to the NES are set out below.

The C&D Landfill creates a *potential* risk to human health through four exposure pathways:

- Personnel working on the site in direct contact with fill material, e.g. walking on soil, breathing dust, handling waste materials (e.g. removing non-acceptable materials received at the landfill),
- Soil tracking off site with vehicles,
- Material blowing off site, and,
- Material washing or leaching into waterways.

These exposure pathways are recognised and managed under the landfill Site Management Plan.

We conclude that the NES is triggered for the C & D Landfill as changes are proposed to the site footprint and height. The existing use approved by WGN 940057 can no longer be relied upon and a land use resource consent is required as a discretionary activity.

Based upon the information presented for the proposed expansion (i.e. Landfill Site Management Plan) we consider that approval under the NES can be granted as the pathways by which a risk to human health could arise are all recognised and addressed, and can be regulated through conditions imposed on a resource consent.

3.2 NES for Air Quality

The National Environmental Standards for Air Quality (NESAQ) were introduced in 2004 to set a guaranteed minimum level of health protection for all New Zealanders. In June 2011 the standards were revised and an amended NESAQ came into force.

The NESAQ set and controls discharges related to dioxin and other toxic substances, and ambient air quality standards for carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide, PM10 (particulate matter from vehicle exhausts), and domestic fires.

The NESAQ also applies to the operation of landfills in relation to the discharge of methane and greenhouse gases, and the lighting of fires. A landfill is defined under Regulation 3 as:

Landfill means a site where waste is disposed of by burying it, or placing it upon land or other waste.

NESAQ Regulations 6 to 10 ban the lighting of fires and burning of waste (tyres, bitumen, coated wire, and oil) at landfills in terms of reducing the discharge of dioxin and other air toxins. However for the current and proposed C & D Landfill materials such as tyres and oil are non-acceptable and cannot be deposited into the landfill.

The NESAQ also relates to the potential for the discharge of methane or other 'greenhouse' gases at a landfill. The NESAQ has specific regulations which specify whether the landfill gas standards are applicable, and these are;

25 Application of regulations 26 and 27

(1) Regulations 26 and 27 apply to a landfill if –

a. the landfill –

i. has a total capacity of not less than 1 million tonnes; and

ii. contains not less than 200,000 tonnes of waste; and

iii. is or is likely to be accepting waste; and

b. the waste in or to be included in the landfill is likely to consist of 5% or more (by weight) of matter that is putrescible or biodegradable.

(2) However, regulations 26 and 27 do not apply to a landfill until 8 October 2007 if the landfill –

a. has a total capacity of not less than 1 million tonnes of waste; and

b. on 8 October 2004 –

- i. contains not less than 200,000 tonnes of waste; and*
 - ii. is accepting waste; and*
 - c. does not operate a gas collection system.*
- (3) Regulations 26 and 27 do not apply to a cleanfill.*

The volume of the proposed expansion is estimated to be 3.5 million m³, and once developed in combination with the current operating area, the total capacity would exceed 1 million tonnes. However due to the type of materials (approximately 55% construction and demolition, and 45% cleanfill) it is considered that there is no more than 5% by weight matter that is putrescible or biodegradable (such as wood, or organic matter trapped amongst cleanfill). Because of the high proportion of cleanfill that is mixed with construction and demolition materials the application of regulation 25 does not apply for the proposal.

In conclusion we consider that the NESAQ is not applicable for the following reasons;

- 1 The proposed landfill expansion has not been given effect to (i.e. not consented),
- 2 The proposed expansion will comprise approximately 45% cleanfill,
- 3 No more than a maximum of 5% by weight of organic materials would be deposited into the landfill.

4 Relevant National Policy Statements (NPS)

4.1 The New Zealand Coastal Policy Statement

A New Zealand Coastal Policy Statement (NZCPS) has been in effect since 1994, and a revision made operative in 2010. It is considered that in terms of water quality there is the potential for the proposed expansion to have an impact upon the coastal marine area. In terms of visual impact there is no potential for the proposed expansion to have an impact. There are three policies which reference water quality and contaminants in the NZCPS and are discussed below.

Policy 21 Enhancement of water quality

The enhancement of the coastal water quality at Owhiro Bay is influenced by the overall quality of the Owhiro stream which has significant inflows from other catchments in addition to the Demolition Gully stream (site of expansion proposal). The proposal for the landfill expansion is based upon the premise that materials received at the landfill are strictly managed (as defined in the site management plan), and that the landfill operator undertakes regular monitoring of key water quality parameters⁹ to determine that water quality is maintained.

Policy 22 Sedimentation

The proposed expansion will follow best practice guidelines and methods to ensure while construction of the landfill watercourse diversions occur, and as the landfill develops, that surface water runoff, and sediment laden water does not enter the Demolition Gully Stream downstream of the landfill.

Policy 23 Discharge of contaminants

It is considered that the actual or potential adverse effects of a contaminant discharge from the expansion proposal upon the coastal water quality receiving environment would be less than minor. This is because;

⁹ As referenced in the Greater Wellington discharge permit WGN130070[31937] conditions 6, 7, & 8.

- Any discharge of landfill leachate into downstream watercourses would need to be at level detected as within acceptable water guideline set out under current conditions of consent,
- The concentration of landfill leachate reaching the Owhiro Bay coastal waters is likely to have been mixed in the receiving waters of the Owhiro Stream so its overall concentration would have an effect less than minor. However, this also assumes that there is no cumulative adverse effect from contaminants originating from either the Carey's Gully Stream or the upper Owhiro Stream catchment.

We consider that overall the expansion proposal is not inconsistent with the NZCPS.

4.2 NPS for Freshwater Management

An NPS for freshwater management was made operative on 1 July 2011. It applies to any new discharges or increases / changes to existing contaminant discharges into or upon freshwater. The NPS is therefore applicable to the proposed expansion as there is a potential for an increased sediment or contaminant discharge from the construction and ongoing operation of the expanded landfill.

Section A relating to Water Quality of the NPS is relevant to the proposal. Section A of the NPS contains 2 objectives and 4 policies. These are in summary;

- Objective A1 is *“To safeguard the life-supporting capacity, ecosystem processes and indigenous species...”*
- Objective A2 is that *“The overall quality of fresh water within a region is maintained or improved while:*

The wording of these objectives is already found under section 5.1 of the Greater Wellington Regional Freshwater Plan (RFP).

Policy A1 directs GWRC to *“establish freshwater objectives and set freshwater quality limits”* by way of making or changing regional plans. Freshwater objectives and quality limits are already present in the RFP (Section 5, and Appendix 8). The limits may require amending in terms of a revised water quality standard ANZECC(2000)¹⁰. The existing landfill operates to consent conditions which reference the ANZECC guidelines in terms of the contaminant discharge monitoring regime. The proposed expansion is being applied for on the basis that it would operate under the same parameters.

Policy A2 directs GWRC to specify targets and methods to assist the improvement of water quality in the water bodies that do not meet the freshwater objectives made pursuant to Policy A1 within a defined timeframe. This policy is not considered as directly applicable to the proposal as the existing landfill is required by consent conditions¹¹ to operate within limits for its discharge of landfill leachate into watercourses downstream of the site.

Policy A3 directs GWRC to set impose conditions on discharge permits and to requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of any discharge of a contaminant into fresh water. This policy has been achieved in relation to the current operating C & D Landfill in terms of WGN130070[31937] and the fact that the proposed expansion, as for the current operation, is for a landfill which accepts defined construction and demolition materials, and cleanfill. These materials are typically not prone to a

¹⁰ ANZECC refers to the Australia and new Zealand Guidelines for Fresh and Marine Water Quality (October 2000).

¹¹ Conditions 6, 7, & 8 of discharge permit WGN130070[31937].

process of biological or chemical breakdown that is known to produce leachate of a composition that has a significant adverse effect on the life-supporting capacity, ecosystem processes and indigenous species of fresh water.

Policy A4 is an interim measure which directs GWRC to insert a policy as stated below until such a time those policies A1 and A2 are given effect in the Regional Freshwater Plan. Policy A4 states;

- “1. *When considering any application for a discharge the consent authority must have regard to the following matters:*
 - a) the extent to which the discharge would avoid contamination that will have an effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and*
 - b) the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.*

The proposed expansion has the potential to increase the amount of landfill leachate and thus contaminant source into downstream water courses. Policy A4 has been inserted into the RFP as Policy 5.2.10A 1 and is applicable to an assessment of this application. This is discussed further under section 6.1 below. A preliminary view point is that based upon the type of materials allowed into the landfill, the operational management for the construction of the landfill, and the requirement for ongoing monitoring of the landfill's leachate, that any adverse effects on fresh water, and on any ecosystem associated with fresh water would be no more than minor.

It is considered that the proposed expansion of the existing landfill is consistent with the NPSFM.

4.3 NPS for Indigenous Biodiversity

The Draft National Policy Statement for Indigenous Biodiversity (NPSIB) reached the stage of a summary of submissions in December 2011. At that date it was announced that the draft NPSIB is being considered by the Government in terms of a broader context of Resource Management reforms.

The draft NPSIB identified national priorities for the protection of indigenous biodiversity on private land, which although the site is not, provide a guide for an assessment of significance)

National Priority 1: To protect indigenous vegetation associated with land environments, that have 20% or less remaining in indigenous cover,

As stated in the Wildland's assessment; *“Habitats at the site are classified as ‘At Risk’ land environments (20–30% of indigenous cover remains), not ‘Acutely Threatened’ (<10% indigenous vegetation cover remaining) or ‘Chronically Threatened’ (10-20% indigenous vegetation cover remaining). Thus indigenous vegetation at this site is not considered to be a national priority for protection.”*

National Priority 2: To protect indigenous vegetation associated with sand dunes and wetlands (as ecosystem types that have become uncommon due to human activity.)

The Wildland's assessment stated *“The steepness of subject site ensures that there are no substantive wetlands. Any small seeps or wetlands associated with the C&D Landfill Tributary are too small to be considered significant.”*

National Priority 3: To protect indigenous vegetation associated with 'originally rare' terrestrial ecosystem types not already covered by Priorities 1 and 2.

The Wildland's assessment reported that no originally rare ecosystem types have been recorded at the site.

National Priority 4: To protect habitats of acutely and chronically threatened indigenous species.

The Wildland's assessment considers a range of 'At Risk' species have been reported from aquatic habitats at the site (Appendix 5 Section 9.1). Although not seen, 'At Risk' lizard species are likely to be present at the site (Section 9.3). It is also possible that regionally threatened plant species could be present at the site (Section 8). The current proposal does not protect the habitats (streams and indigenous vegetation) of these species.

The development of the proposed expansion may not be consistent with the Draft NPSIB Priority 4, however the wording and form of an NPS for Biological Diversity has not been decided.

5 Regional Policy Statement

5.1 Operative Regional Policy Statement

The Regional Policy Statement 1995 is the operative RPS for the Wellington Region. The relevant objectives and policies in relation to the proposed expansion are discussed as follows.

Freshwater

Objective 2 The quality of fresh water meets the range of uses and values for which it is required, safeguards its life supporting capacity, and has the potential to meet the reasonably foreseeable needs of future generations.

Objective 3 Freshwater resources of significance or of high value for cultural, spiritual, scenic, ecosystem, natural, recreational, or other amenity reasons are protected or enhanced.

Policy 4 To maintain and protect the quality of fresh water so that it is available for a range of uses and values, and:
(1) Its life supporting capacity is safeguarded; and
(2) Its potential to meet the reasonably foreseeable needs of future generations is sustained; and
(3) For surface water, any adverse effects on aquatic and riparian ecosystems are avoided, remedied, or mitigated.

Policy 5 To improve water quality and restore contaminated water to a standard which is appropriate for its desired uses and natural values.

Policy 6 To ensure that the effects of contaminants contained in point source discharges on the quality of fresh water and aquatic ecosystems are avoided, remedied, or mitigated and allowing for reasonable mixing:
(1) Do not render any fresh water unsuitable for any purpose specified in any regional plan for that water;
(2) Do not prevent the receiving fresh water from meeting any standards established in any regional plan for that water;
(3) Do not render any water in the coastal marine area unsuitable for any purpose specified in a regional coastal plan for the Wellington Region.

- Policy 7 To avoid, remedy, or mitigate adverse effects on water quality and aquatic ecosystems of contaminants contained in non-point source discharges.*
- Policy 8 To promote the retirement and planting of riparian margins for the purposes of maintaining or improving the structural integrity of the beds and banks of water bodies, flood management, maintaining or enhancing water quality, and encouraging the healthy functioning of aquatic and riparian ecosystems.*
- Policy 9 To avoid, remedy, or mitigate the adverse effects of modifications to the beds of water bodies on water quality, groundwater, aquatic ecosystems, and the amenity and cultural values of water*
- Policy 11 To ensure that, in respect of all water bodies not covered by Fresh Water Policy 10, any adverse effects on amenity values or the intrinsic values of ecosystems which may result from any use and development, and on any natural or near natural areas, are avoided, remedied, or mitigated.*

Comment

The proposed expansion is designed to avoid or mitigate adverse effects upon the life supporting capacity and aquatic ecological function of the downstream Demolition Gully, Landfill Road, and Owhiro streams. The lower 500m of the Demolition Gully Stream is already culverted under the C & D Landfill and WCC Stage 1 (closed) landfill, with an outlet into the Landfill Road Stream. Surface water runoff during construction and operation of the landfill will be diverted to collection ponds and then to the kerb and channel drainage system. The existing landfill also has a leachate collection system at the base of the WCC Stage 1 (closed) landfill, which the proposed expansion would also connect into. In consideration of the ecosystem values of the upper Demolition Gully Stream which will be affected by the proposal, as stages of the landfill are completed, the applicant is to undertake a restoration of the landfill site to provide for catchment overland flow, and in synchronised fashion will also be undertaking off site restoration of downstream aquatic ecosystems of the Owhiro and Landfill Road Streams.

Water quality testing for the existing operation indicates that the level of tested potential contaminants within the tributary stream and landfill groundwater are of a level that would not cause adverse effects to aquatic ecological function. The water quality parameters would be regularly monitored to ensure that the ongoing landfill will not compromise the water quality for the Demolition Gully and downstream watercourses.

These measures as discussed will avoid, remedy, or mitigate the potential for adverse effects from the proposed landfill expansion upon the freshwater resources through the site. The proposed expansion would manage surface run off or sedimentation to ensure there was no significant discharge into the tributary streams of the Owhiro Stream. It is considered that these policies are not being compromised by the proposal.

Soil and Minerals

- Objective 1 The soils of the Wellington Region maintain those desirable physical, chemical, and biological characteristics which enable them to retain their life supporting capacity and to sustain plant growth.*
- Objective 5 The off-site impacts of soil degradation on land, water, air, ecosystems and communities are avoided or mitigated.*
- Policy 1 To avoid, remedy or mitigate erosion and other forms of soil degradation on susceptible sites and avoid off-site effects of erosion and other soil degradation,*

including the contamination of water, contamination of the beds of water bodies and the coastal marine area and contamination of air.

Policy 3 To ensure that, where feasible, sites are rehabilitated in circumstances where, as a result of either natural processes or human activities, or some combination of both, soils are, or are likely to be, eroded, removed, disturbed or otherwise rendered unable to sustain their life supporting capacity or to meet the needs of the local or regional community.

Policy 6 To avoid, remedy or mitigate the adverse effects of harmful waste and contaminants on soil, and to dispose of these in ways which respect the assimilative capacity of the soil and which comply with relevant standards set for water quality and air quality.

Comment

The proposed landfill expansion would occur mostly over moderate to steeply sloping land that has the potential to be erosion prone due to topography, geology, and its former use for livestock grazing. The proposed expansion would use the same construction method as for the existing landfill which has not recorded any significant erosion or stability issues in its 30 years of operation. The current construction method is employed to mix construction/demolition materials and cleanfill which avoids the potential for the harmful release of contaminants into the soil or into downstream water bodies. The method in summary is that after establishing an access track to the proposed expansion area, vegetation and topsoil cover would be stripped off and stockpiled, followed by vertical or horizontal cuts to create benched spaces that follow the ground contour. This would enable deposition of mixed construction / demolition material and cleanfill to integrate onto the underlying ground in a manner that will avoid erosion. The landfill would be developed in a staged fashion and after achieving a final surface level a capping layer of course rock material would be placed and compacted followed by topsoil and organic matter to provide for the establishment of vegetation. As the final level is established the new surface would be contoured in a direction to provide a gently grading downslope drainage for overland water flows. After placement of the topsoil new plants (grass and indigenous vegetation would be established as per an agreed restoration strategy). In terms of re-vegetating the proposed expansion to a state that avoids erosion, it can be observed that at older parts of the existing landfill vegetation can successfully establish and creates a land surface cover which is not subject to erosion or degradation. It is considered that these policies are not being compromised by the proposal.

The Coastal Environment

Objective 1 The natural character of the coastal environment is preserved through:
(1) The protection of nationally and regionally significant areas and values;
(2) The protection of the integrity, functioning and resilience of physical and ecological processes in the coastal environment;
(3) The restoration and rehabilitation of degraded areas; and
(4) The management of subdivision, use and development, and the allocation of resources in the coastal environment so that adverse effects are avoided, remedied or mitigated.

Objective 3 Coastal water quality is of a high standard.

Policy 5 To maintain or improve the quality of coastal water by:
(1) Improving, where necessary, the quality of fresh water entering the coastal marine area;

- (2) Avoiding, remedying or mitigating the effects of activities in the coastal environment that can degrade coastal water; and*
- (3) Avoiding, remedying or mitigating the effects of point discharges that directly enter the coastal marine area so the effects do not render any water in the coastal marine area unsuitable for any purpose specified in a Regional Coastal Plan for the Wellington Region.*

Comment

The proposed expansion is considered not to occur within land viewed as part of the 'coastal environment'¹². However the proposed expansion has the potential to affect coastal water quality in terms of influencing the freshwater entering into the receiving environment of Owhiro Bay. Based upon ecological assessments of the proposed expansion site¹³ it is assumed that on a yearly average the Demolition Gully Stream and tributaries (above the existing culvert) provide a small quantity of high quality fresh water, which is mixed with a larger quantity of lower quality freshwater emanating from Carey's Gully, Landfill Stream, and the Owhiro Stream catchment above and below the Landfill Stream confluence.

The proposed expansion has been designed to undertaken in a manner which provides for the supply of fresh water (drained from the catchment) and to avoid or mitigate adverse effects (in terms of water quality) upon the life supporting capacity and aquatic ecological function of the downstream water bodies including Owhiro Bay. Surface water runoff during construction and operation of the landfill will be diverted to sediment collection ponds and then to the kerb and channel drainage system. The existing landfill also has a leachate collection system at the base of the WCC Stage 1 (closed) landfill, which the proposed expansion would also connect into. Current water quality testing for the existing operation indicates that the level of tested potential contaminants are not significant in terms of adverse effects to aquatic ecological function. The water quality parameters would be regularly monitored to ensure that the ongoing landfill will not compromise the water quality for the Demolition Gully and downstream watercourses.

These measures will mitigate or avoid the potential for the discharge of contaminated water into water bodies and into Owhiro Bay. From the above discussion and supporting information it is considered that the proposal does compromise the objectives and policies for the coastal environment.

Air

- Objective 3 The adverse effects of the discharge of contaminants into air on human health, local or global environmental systems and public amenity are avoided, remedied or mitigated.*
- Objective 4 The output of gases which potentially promote climate change is at a level which is consistent with central government climate change policy.*
- Policy 6 To avoid or minimise, where appropriate and practicable, the discharge of contaminants to air at their source by the development and implementation of improved control technology and by good pollution control practice.*
- Policy 9 To promote measures that achieve a net reduction in the emission of greenhouse gases and ozone depleting substances.*

¹² Landscape and visual assessment for landfill expansion, Opus (2013A)

¹³ Refer Wildlands (2012), and Opus (2012A)

Policy 12 To avoid, remedy or mitigate the adverse effects of odours on public amenity.

Comment

It is considered that the proposed expansion, in conjunction with the existing landfill operation, is in compliance with the NES Air Quality as discussed in section 3.2 above. The proposed expansion is of a landfill type which does not emit any significant level of harmful greenhouse gases. The operation of a construction and demolition materials and cleanfill landfill enables a longer continuance for the WCC sanitary landfill which is collecting greenhouse gases (assists Policy 9).

Based upon knowledge of the existing landfill operation, the proposed expansion would not create any significant adverse effect upon amenity in terms of an odour or dust nuisance. The proximity of the WCC sanitary landfill has a discernible level of stronger ambient odour in comparison with the applicant's existing operation. During dry climatic periods the applicant would use dust suppression such as a water cart (as at the existing landfill).

From the above discussion it is considered that the proposal does not compromise relevant objectives and policies related to air quality.

Ecosystems

Objective 1 The overall quality of ecosystems in the Region is increased.

Objective 2 Healthy, functioning ecosystems are distributed throughout the Region, including the rural and urban environments.

Objective 3 The area and quality of indigenous ecosystems in the Region is increased.

Objective 5 Special ecosystems in the Region are actively protected and appropriately managed.

Policy 4 To avoid, remedy or mitigate the adverse effects of activities on ecosystems, and in particular, to avoid, remedy or mitigate any of the following effects:
(1) Reduction in the indigenous biodiversity of an ecosystem;
(2) Prevention of the natural processes of an ecosystem, including nutrient cycles and energy flows, from operating effectively;
(3) Simplification of the structure of indigenous ecosystems; and
(4) Reduction in the quality or quantity of the non-living parts of an ecosystem (e.g., decaying plant and animal remains, water, air, soil) to a level which adversely affects the life supporting capacity of the ecosystem.

Policy 5 To prioritise ecosystems for restoration and protection in the Region, on the basis of the following criteria:
(1) Ecosystems with a high priority for protection:
(a) are currently or are likely to be under a high degree of threat; and
(b) are representative of the Region's natural (indigenous) diversity; or
(c) are regionally or nationally rare or vulnerable; or
(d) have special features such as regionally or nationally rare, vulnerable or unique species, populations of species known or likely to be of value as a genetic resource, an unusually high diversity of indigenous species, unique or unusual geological features, or special cultural or spiritual values.
(2) Ecosystems with a high priority for restoration are degraded and:
(a) are currently under a high degree of threat; and

- (b) have one or more of the criteria listed under (1)(b)-(1)(d) above; or*
- (c) have the potential to be significant areas of indigenous vegetation or significant habitats of indigenous fauna; or*
- (d) have significant public support for their restoration.*

Policy 6 To restore or enhance:

- (1) Indigenous ecosystems which have been degraded; and*
- (2) Urban and rural ecosystems which have been identified as being of high priority for restoration.*

Comment

The proposed expansion would occur onto land that is undergoing a regeneration of indigenous plant species from its former use of pastoral grazing. Various types of habitat dominated by plant species ranging from Mahoe (*Melicytus ramiflorus*) to gorse (*Ulex europaeus*) and pastureland have been observed¹⁴. Overall the site for the proposed expansion is not a site that is an ecosystem with a high component of native species, there is a greater area of land dominated by non-indigenous compared with indigenous species. The ecosystem types represented within the proposed expansion are commonly found in the Wellington region.

Within the aquatic habitat of the site at risk aquatic fauna species such as koaro, banded kokopu and long finned eel have been found. Given the culverted nature of the lower Demolition Gully Stream for approximately 500m, the biological diversity of the upper stream within the expansion site is likely to have reduced.

In recognising that the site is part of a wider area with indigenous ecosystem values, the applicant is proposing that the landfill expansion area would be restored in a staged fashion as per a planting strategy using appropriate indigenous plants, pest plant control and maintenance. It is also proposed that aquatic fauna in the Demolition Gully Stream would be relocated and that offsite aquatic habitat restoration is undertaken downstream within the Owhiro and Landfill Road Streams (depending upon land owner access agreements).

Overall it is considered that biological diversity at the expansion site would be reduced in the short to medium term during the operation of the landfill. As stages of landfill activity are completed and with progressive restoration both within the site (terrestrial) and off site (aquatic habitat downstream), the biological diversity of the wider area could increase. Therefore it is considered that the proposed expansion is not in conflict with these objectives and policies.

Natural Hazards

- Objective 1 Any adverse effects of natural hazards on the environment of the Wellington Region are reduced to an acceptable level.*
- Policy 3 To recognise the risks to existing development from natural hazards and promote risk reduction measures to reduce this risk to an acceptable level, consistent with Part II of the Act.*
- Policy 4 To ensure that human activities which modify the environment only change the probability and magnitude of natural hazard events where these changes have been explicitly recognised and accepted.*

¹⁴ Refer Wildlands (2012)

Comment

The proposed expansion of the landfill would provide for the re-routing of catchment drainage and infilling of part of the current landfill lease. The existing landfill site poses a potential risk of subsidence in the event of a blockage of the existing culvert or a slip of the existing landfill into Demolition Gully Stream above the culvert inlet. The landfill operator has a management plan that responds to these scenarios but in the longer term it is the most practical option to undertake further landfill and to provide for an alternative catchment drainage. Therefore it is considered that the proposed expansion is not in conflict with these objectives and policies.

Waste Management and Hazardous Substances

Objective 1 The quantity of waste generated is reduced.

Objective 2 The quantity of residual wastes for disposal is minimised through reuse, recycling and resource recovery.

Objective 3 Adverse effects on the environment and human health from the inappropriate disposal of residual liquid and solid wastes are avoided or, where this is not possible, remedied or mitigated.

Policy 6 To provide opportunities for the reuse of waste materials, recycling, and the recovery of resources from waste (including composting and the recovery of landfill gas).

Policy 7 To ensure that all residual wastes are safely disposed of in an appropriate facility

Policy 8 To avoid, remedy or mitigate all adverse effects of waste disposal sites, including those sites that are no longer used for waste disposal, and as a matter of priority to avoid the adverse effects of landfill leachate.

Comment

The proposed expansion is within a leased area (from WCC) for the purpose of a construction and demolition landfill that has been operating since 1978. The proposal will enable the currently operating landfill to maintain a practice of recyclable and reusable resource recovery in terms of steel, concrete, wood, asphalt, and other materials brought to the site. The practice of the applicant as the current landfill operator is to sort through and recycle as much material as is feasible rather than allowing it to be placed into the landfill.

The proposed expansion site would also operate under the same materials acceptance criteria and process which would avoid adverse effects as stated under objective 3.

The proposed expansion would operate under the same site management plan which has been endorsed by GWRC and WCC in term of the existing operation approved under consents WGN130070 and SR265761.

5.2 Proposed Regional Policy Statement

The Proposed Regional Policy Statement (PRPS) had a decision version released in May 2010. Communication from GWRC staff indicates that appeals have been resolved but the PRPS is not officially operative. Objectives and policies of the PRPS relevant for this proposal are as follows.

Air Quality

Objective 1 Discharges of odour, smoke and dust to air do not adversely affect amenity values and people's wellbeing.

Comment

Materials proposed for acceptance at the landfill do not create discernible adverse effects from odour. The current landfill operation actively manages the potential for dust nuisance by employing a water cart to disperse water along heavily trafficked parts of the landfill. The landfill is also not immediately adjacent to any residential properties, and the public records do not indicate that there have been any complaints related to dust or odour in terms of the landfill operations. The potential discharges are therefore submitted as not adversely affecting amenity values and people's wellbeing.

Coastal Environment

Objective 6 The quality of coastal waters is maintained or enhanced to a level that is suitable for the health and vitality of coastal and marine ecosystems.

Policy 36 Safeguarding the life supporting capacity of coastal ecosystems.

Policy 37 Identifying the landward extent of the coastal environment

Comment

The proposed expansion is considered as not physically located within the coastal environment. The landfill is however within a catchment of tributary watercourses which discharge into the Owhiro Stream and then into the Owhiro Bay on the south coast of the Wellington Region.

The proposed expansion would have the same operational management as the existing landfill and would have the same water quality parameters and sampling regime. The applicant would also employ measures for reducing sedimentation into the downstream catchment as recommended in GWRC guidelines. Overall it is considered that the proposal would not adversely affect coastal waters.

Freshwater

Objective 12 The quantity and quality of fresh water:
(a) meet the range of uses and values for which water is required;
(b) safeguard the life supporting capacity of water bodies; and
(c) meet the reasonably foreseeable needs of future generations.

Objective 13 The region's rivers, lakes and wetlands support healthy functioning ecosystems.

Policy 39 Maintaining and enhancing aquatic ecosystem health.

Policy 40 Minimising the effects of earthworks and vegetation disturbance.

Policy 41 Minimising contamination in stormwater from development.

Policy 42 Protecting aquatic ecological function of water bodies.

Comment

The proposed expansion is designed to avoid or mitigate adverse effects upon the life supporting capacity and aquatic ecological function of the downstream Demolition Gully, Landfill Road, and Owhiro Streams. The lower 500m of the Demolition Gully Stream is already culverted under the C

& D Landfill and WCC Stage 1 (closed) landfill, with an outlet into the Landfill Road Stream. Surface water runoff during construction and operation of the landfill will be diverted to collection ponds and then to the kerb and channel drainage system. These measures will mitigate or avoid the potential for contaminant run off to discharge into the tributary streams of the Owhiro Stream.

Water quality testing for the existing operation indicates that the level of tested potential contaminants within the tributary stream and landfill groundwater are of a level that would not cause adverse effects to aquatic ecological function. The water quality parameters would be regularly monitored to ensure that the ongoing landfill will not compromise the water quality for the Demolition Gully and downstream watercourses.

It is considered that these policies are not being compromised by the proposal.

Indigenous ecosystems

Objective 16 Indigenous ecosystems and habitats with significant biodiversity values are maintained and restored to a healthy functioning state.

Policy 46 Managing effects on indigenous ecosystems and habitats with significant indigenous biodiversity values.

Comment

The proposed landfill expansion would occur over land that has been assessed as containing terrestrial and aquatic habitats of moderate to high biodiversity values¹⁵. However the proposed expansion fits within a land parcel of approximately 800ha, all of which is recognised as having ecological values¹⁶. In recognising the biodiversity and ecosystem values as part of the overall project, it is proposed that as the landfill is completed in a staged fashion, and that it is consequentially remediated under a strategy including pest plant control and restoration planting with appropriate indigenous plants and maintenance. The applicant also proposes that indigenous aquatic fauna are relocated and that an offsite aquatic habitat restoration of downstream watercourses occurs in a synchronised fashion with the landfill expansion. It is considered that the adverse effects can be mitigated so that overall these are no more than minor, and therefore the proposal may be assessed as consistent with these provisions of the PRPS.

Landscape

Objective 17A The region's significant amenity landscapes are identified and their values are maintained and enhanced.

Policy 49 Managing effects on outstanding natural features and landscapes, and significant amenity landscapes

Comment

The proposed expansion would occur over land identified as having amenity, landscape, and natural ecosystem values (Open Space B under the WCC District Plan). The upper most portion of the expansion would also occur above an area noted as having district wide landscape significance (the WCC Ridgeline and Hilltop overlay). Based upon the position of the expansion, and its ability to be seen from public viewpoints, a landscape and visual assessment¹⁷ considers that the proposed expansion will not have adverse effects that are more than minor. This is in consideration that the staging of the landfill expansion would ensure that the visual impact of those parts under

¹⁵ Refer report by Wildlands Consultants 2012

¹⁶ The landfill site and surrounding land is zoned as 'Open Space B – Natural Environment in the WCC District Plan. It is also part of the WCC 'Outer Town Belt' contains part of a District Plan landscape overlay.

¹⁷ Refer Opus D - Landscape and visual assessment for landfill expansion (Opus, 2013)

development would be offset by those parts being restored in terms of a finished final contour and the regrowth of indigenous plant species. It is considered that there are no adverse effects upon landscape values as the proposed expansion fits beneath the current contours and does not significantly alter the prevailing drainage contour of the site catchment.

The effects upon the landscape and visual values are therefore managed in accordance with this provision of the Plan.

Natural hazards

Objective 18 The risks and consequences to people, communities, property and infrastructure from natural hazards and climate change effects are reduced.

Policy 50 Minimising the risks and consequences of natural hazards - consideration

Comment

The landfill has developed in its current manner for 30 years without having experienced any significant adverse effects related to a natural hazard event. The proposed expansion would be similarly constructed and with the use of the management plan in place, the risks and consequences of natural hazards are submitted as being minimised.

Resource management with tangata whenua

Objective 23 The principles of the Treaty of Waitangi are taken into account in a systematic way when resource management decisions are made.

Objective 24 The concept of kaitiakitanga is integrated into the sustainable management of the Wellington region's natural and physical resources.

Objective 26 Mahinga kai and natural resources used for customary purposes, are maintained and enhanced, and these resources are healthy and accessible to tangata whenua.

Policy 47 Principles of the Treaty of Waitangi - consideration

Policy 48 Avoiding adverse effects on matters of significance to tangata whenua - consideration

Comment

No issues of significance in terms of archaeology, heritage, cultural sites, food gathering, or the protection of freshwater values were raised in terms of previous consultation with tangata whenua during the consent process for the landfill under WGN940057.

However the proposed expansion over a freshwater resource within the landfill lease may trigger questions or issues which the applicant would look to address. It is understood that GWRC has a consultation process for consents and permits with the regions tangata whenua.

6 Regional Plans

The Greater Wellington Regional Plans relating to Freshwater, Discharges to Land, Soil and Air Quality are relevant to the proposed expansion.

6.1 Regional Freshwater Plan for the Wellington Region

Objectives and policies of the Regional Freshwater Plan for the Wellington Region (RFP) relevant for this proposal are;

Natural values

Objective 4.1.4 The natural character of wetlands, and lakes and rivers and their margins, is preserved and protected from inappropriate subdivision, use and development.

Objective 4.1.5 The life-supporting capacity of water and aquatic ecosystems is safeguarded from the adverse effects of any subdivision, use and development.

Objective 4.1.6 Significant indigenous aquatic vegetation and significant habitats of fresh water fauna in water bodies are protected.

Policy 4.2.9 To have regard to the following characteristics of wetlands, and lakes and rivers and their margins, when considering the protection of their natural character from the adverse effects of subdivision, use, and development:

- *ecosystems, habitats and species; and*
- *water quality; and*
- *the natural flow characteristics and hydraulic processes (such as sediment transport) of rivers or the pattern and range of water level fluctuations that occur naturally in wetlands or lakes; and*
- *the topography and physical composition of river or lake beds and the course of the river.*

Policy 4.2.11 To avoid, remedy or mitigate the adverse effects of the use and development of water bodies and river and lake beds on aquatic habitats and freshwater ecosystems by having regard to:

- *the maintenance of biological and physical processes; and*
- *the maintenance of habitat for feeding, breeding and sheltering aquatic life; and*
- *the maintenance of the diversity of aquatic life; and*
- *the maintenance of the ability of fish to disperse and migrate; and*
- *the times which will least affect feeding, spawning, dispersal or migratory patterns of fish and other aquatic species; and,*
- *the prevention of irreversible adverse effects.*

Policy 4.2.12 To promote the maintenance and enhancement of aquatic habitats and ecosystems when considering the adverse effects of the subdivision, use and development of land outside river and lake beds.

Comment

The proposed expansion of the existing landfill would result in a loss of natural character in terms of the existing aquatic ecosystem diversity and functioning for the upper part of the Demolition Gully Stream. However the applicant has developed measures to avoid, remedy or mitigate these adverse effects. These include construction works commencing only after the watercourse has been assessed to find and relocate significant fresh water fauna (koura, fish, eels). The construction method for the proposed expansion would also utilise surface run off control and sediment management techniques to avoid sediment entering the clean water and to maintain clear water

flows through the site. At the same time that landfill development was occurring, the applicant would also be involved in a program of aquatic habitat restoration on watercourses in the lower Owhiro Stream catchment. As each stage of the landfill was completed, there would also be on site restoration to establish channels for ephemeral and permanent overland flow, in addition to indigenous vegetation to provide for restarting ecosystem diversity. It is considered that overall the proposal is consistent with the relevant objectives and policies discussed under ‘natural values’.

Use and development

- Objective 4.1.11* *People and communities are able to use and develop freshwater resources to provide for their social, economic, and cultural well-being and for their health and safety.*
- Objective 4.1.12* *The adverse effects of the use and development of freshwater resources are avoided, remedied, or mitigated.*
- Policy 4.2.23* *To have regard to the benefits arising from any proposal for the use and development of a water body when assessing the proposal.*
- Policy 4.2.24* *To have regard to the effects on other established activities when considering any proposal for the use and development of water bodies.*
- Policy 4.2.27* *To encourage the restoration or rehabilitation of freshwater resources in the Region, including the establishment of wetlands, where appropriate.*

Comment

The proposed expansion of the landfill is required to enable the city of Wellington to provide for its social and economic wellbeing, as a response for health and safety in the event of a major seismic event. The benefit of this proposal is that it is based in part upon an existing facility and it does not create a landfill development in another part of the city (as a new use). It also provides a facility which enables the adjacent WCC sanitary landfill to sustain its landfill capacity, in terms of diverting non-hazardous construction and demolition materials to the proposed expansion, rather than into a landfill that is suited for hazardous waste.

The proposed expansion of the landfill is designed and is to be constructed in a manner that avoids adverse effects upon freshwater resources. An off-site aquatic habitat restoration of the lower Owhiro Stream would occur to offset the loss of aquatic habitat and ecosystem functioning during the expansion. A proposal for the off-site restoration is outlined in the SEV report¹⁸. The objective of the off-site restoration would be to increase the value and diversity of aquatic habitat and ecosystem functioning in the lower catchment.

It is considered that the proposal is consistent with the relevant objectives and policies under ‘use and development’.

Water Quality and Discharges to Fresh Water

Objective 5.1.1 *The quality of fresh water meets the range of uses and values for which it is required while the life supporting capacity of water and aquatic ecosystems is safeguarded.*

¹⁸ Refer Section 4 of Opus (2012A).

Policy 5.2.6 Except for rivers and streams identified in Appendix 7, to manage the water quality of all surface water bodies in the Region for aquatic ecosystem purposes (subject to Policy 5.2.10).

Policy 5.2.8 To have regard to the relevant guidelines in Appendix 8 when deciding whether a discharge is able to satisfy Policies 5.2.1 to 5.2.7 (above) when considering applications for resource consents (subject to Policy 5.2.10).

Comment

The proposed expansion would occur in the upper Demolition Gully Stream, a permanently flowing tributary of the Owhiro Stream. The lower catchment of the Demolition Gully Stream is already piped by part of the existing private landfill, and also by the WCC Stage 1 (closed) landfill. The proposed expansion would result in the loss of the aquatic ecosystem function in that watercourse, however, the expansion would be undertaken in manner that would provide for the conveyance of clean freshwater through to the Owhiro Stream. The proposed expansion would provide for a future overland flow channel to collect surface water across the site when landfilling has finished. The proposed expansion would be constructed with materials that would avoid adverse effects of leachate from the landfill entering the downstream water course. A suite of potential contaminant parameters as required under the current resource consent WGN130070[31937] would be regularly monitored to determine that water quality was being maintained. It is considered that the proposal is consistent with the relevant objectives and policies.

Policy 5.2.10A 1 When considering any application for a discharge the consent authority must have regard to the following matters:

a) the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with freshwater; and

b) the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

2. This policy applies to the following discharges (including a diffuse discharge by any person or animal):

a) a new discharge or

b) a change or increase in any discharge –

of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.]

Comment

Policy 5.2.10A 1 was inserted in April 2012 into the RFP to give effect to policy A4 of the National Policy Statement for Freshwater Management 2011.

The proposed expansion would avoid the potential for the discharge of a level of contaminants that will have an adverse effect upon freshwater and associated ecosystems. The basis for this is that the applicant has been and is currently required to monitor a suite of water quality parameters for potential contaminants in the Demolition Gully Stream above and below the existing landfill.

Water quality sample data has been reviewed to assess the level and potential environmental effects of the leachate discharge from the existing landfill. The current level of leachate discharge

into both ground or downstream freshwater is considered to fit within median values for ANZECC (2000) guidelines related to the 90% protection of species occurring within a lowland stream. However there was some fluctuation of sample results, and only a limited set of water quality data in terms of time and parameters tested. There is also a lack of a definite conclusion in terms of separating any effects of the discharge from the private C & D Landfill from that of the effects of the discharge from the WCC Stage 1 closed landfill (which is below the expansion site). To provide for more robust information the applicant has developed and is implementing a discharge management plan based upon conditions 5-9 set out under the GW discharge permit WGN130070[31937] which provides for the current operation of the existing landfill.

The applicant will actively monitor the results of the water quality sampling program which would provide for an adaptive response to any emerging contaminant discharge issues, and provide a mechanism to ensure that any adverse effects are no more than minor.

It is considered that this information demonstrates that the likely discharge from the proposed expansion, in combination with any discharge from the existing landfill is likely to be no more than minor. Water quality monitoring undertaken by the applicant would provide for an adaptive management response in the event that a leachate discharge was to exceed the applicable ANZECC (2000) guidelines based upon the 90% trigger values for water quality and species protection.

6.2 Regional Plan for Discharges to Land

Objectives and policies relevant for this proposal are;

Solid contaminants

Objective 4.1.2 The Region's landfills are sited rationally, with respect to community benefit and environmental considerations.

Policy 4.2.5 To promote a regional approach to the siting of new landfills by requiring consideration of the following matters in relation to decisions on siting of new landfills in the Region (particularly considering that land use aspects of landfill siting are addressed by territorial authorities through district plan provisions):

- (1) the existing and future waste disposal needs of adjacent territorial authorities; and*
- (2) the costs and benefits of various landfill site options to the regional community as a whole, including:*
 - (a) energy efficiency;*
 - (b) economies of scale in relation to landfill design and costs;*
 - (c) making the best use of the limited number of cost-effective potential landfill sites in the Region; and*
 - (d) the ability of districts to pay for waste disposal options which benefit the Region as a whole.*

Comment

The proposed expansion relates to the existing landfill operation that has occurred at the present site since 1978. The proposed expansion would occur within the area of land leased by the landfill operator from WCC, is on land that is legally gazetted for sanitary landfill purposes, and also fits within a Designation under the WCC District Plan for 'Refuse Disposal' purposes. The landfill is accessed from Landfill Road which is the access road to the WCC Carey's Gully Sanitary Landfill.

It is likely that the demand for dedicated construction and demolition landfill facilities will increase due to increased building code requirements related to the earthquake strengthening of existing buildings within Wellington City.

It is considered that the proposal is consistent with this objective and policy.

Managing adverse effects of solid contaminant discharges

Objective 4.1.3 Any adverse effects from discharging solid contaminants to land are avoided, remedied or mitigated.

Policy 4.2.8 To ensure that discharges of residual solid wastes to land in the Region occur only by way of:

- (1) Disposal in municipal or private landfills which have the appropriate discharge consents required by the Act and this Plan; or*
- (2) Disposal in cleanfills, provided that the discharge is not subject to biological or chemical breakdown; or*
- (3) Disposal in any other situation where the discharge consists only of household or farm wastes generated on the property, or inert solids, provided that any adverse effects are avoided, remedied or mitigated*

Policy 4.2.9 To give particular consideration to the following matters when assessing applications for permits to discharge contaminants to land, in relation to the operation of a landfill:

- (1) The nature of the residual wastes to be discharged*
- (2) The location of the landfill and the hydrogeological conditions at and around the site, and any actions which may be required in order to address any risks posed by the site*
- (3) Any steps taken or planned to reduce the quantity of residual wastes disposed of at the landfill*
- (4) The potential for any long term contamination or other long term effects arising from the landfill operation, and any actions planned or required in order to avoid, remedy or mitigate any adverse effects of the landfill when it is no longer used for the disposal of residual wastes*
- (5) Any effects of landfill leachate and stormwater on groundwater, surface water and coastal water*
- (6) The effects of any discharge of landfill gas, odour or other contaminant to air, and the desirability of recovering landfill gas where practicable*
- (7) Any actual or potential effects of any discharges on human health or amenity, and on the health and functioning of plants, animals or ecosystems*
- (8) Whether the discharge will attract pest populations, and the potential effects of the pests on sensitive land uses*
- (9) Any other uses or values of the site and surrounding area, including any values placed on the site by tangata whenua; and*
- (10) The need for, and adequacy of, discharge monitoring systems at the landfill, including:*
 - (a) the Waste Analysis Protocol*
 - (b) landfill leachate monitoring*
 - (c) landfill gas monitoring*

Policy 4.2.10 To require the effects of discharges to and from landfills to be managed in accordance with site specific landfill management plans.

Policy 4.2.11 To allow the temporary discharge of solid contaminants onto land, provided that any adverse effects on water quality, soils and amenity values can be avoided, remedied or mitigated.

Comment

The proposed expansion relates to an existing landfill which is approved for the disposal of certain types of non-hazardous construction and demolition materials and cleanfill. A minor amount of non-acceptable material, up to 5% by weight (such as timber and green waste material), may enter the landfill given the waste streams that materials are sourced from. Ongoing water quality tests from the watercourse and groundwater below the landfill indicate that the level of landfill leachate entering downstream watercourses is not significant. There would be no discernible discharges of odour or of landfill gas from the proposed expansion. The types of materials approved to be deposited means that there are no pest animal or plant populations on the landfill site of any greater occurrence than for surrounding land uses.

Some materials brought to the landfill are recycled, such as milled asphalt which can be used to improve the landfill road system.

The proposed expansion would operate under the Site Management Plan which exists for the current landfill. The proposed expansion has assessed the risks of the site and its activities upon human health in terms of a NES and considers these can be avoided, remedied, or mitigated.

The proposed expansion would occur partly on land which is also recognised for conservation, landscape and recreation values. This land is also legally gazetted and designated under the RMA for sanitary and refuse disposal purposes. It is considered that conservation, landscape and recreation values can co-exist in proximity with the proposed expansion. These values or uses would not be significantly adversely impacted by the proposal as these matters have been considered in the design of the expansion development.

At this stage it is considered that the proposed expansion would not to adversely affect tangata whenua values based upon the identification of issues which occurred for the consent process leading to the approval of WGN940057 in 1995.

The proposed expansion would have a discharge monitoring system specified under the SMP which is the same as for existing GWRC / WCC consents. Water quality samples would be regularly taken from 4 locations and tested for elements specific elements.

Hazardous substances

Objective 4.1.7 The potential for unplanned discharges of hazardous substances in the Region is minimised, and appropriate action is taken to avoid, remedy or mitigate the adverse effects of any unplanned discharge that does occur.

Policy 4.2.28 To ensure that facilities where hazardous substances are used or stored have appropriate structures, procedures and contingency plans in place in order to:
(1) reduce the potential for an unplanned discharge to occur; and
(2) in the event of an unplanned discharge, prevent or minimise:
(a) any adverse effects beyond the boundary of the site; and
(b) any discharge of a hazardous substance into water, whether directly, through land, or through a drainage system.

Comment

The proposed expansion would not accept hazardous substances or waste as per its Site Management Plan. The landfill operator has a procedure for checking the acceptability of materials

being tipped at the landfill. However there is the potential for non-acceptable materials to unintentionally be deposited into the landfill. A load testing procedure for soils and the requirements for water quality testing are mechanisms for determining if there is an unplanned discharge occurring.

The applicant would be required to use diesel fuel, lubricants and other liquid products to run and maintain landfill machinery. Diesel refuelling is undertaken via a mobile tanker stored at the main landfill office (50 Landfill Road), and any maintenance of landfill machines using oils/lubricants will be using small quantities.

Any spills onto the ground would be minor and would be contained by being dug up, and placed into a leak proof container for disposal at suitable facility. The proposal does not result in a discharge that compromises these provisions of the Plan.

Managing contaminated sites

Objective 4.1.10 Any risk to human and environmental health presented by contaminated sites is lowered to an acceptable level or the site is otherwise managed in an appropriate and timely manner.

Policy 4.2.48 To give particular consideration to the following matters when assessing applications for permits for discharges associated with contaminated sites:

- (1) the nature, concentration and quantity of contaminants at the site*
- (2) the potential for contaminants from the site to contaminate surrounding:*
 - groundwater, surface water, soil; or air, and any effects of that contamination*
- (3) the potential for direct or indirect contact of humans or animals with contaminants on the site;*
- (4) any actual or potential adverse effects on:*
 - human health, the health and functioning of plants, animals or ecosystems; or existing or future uses of water or land on the site and in the surrounding area*
- (5) any potential long-term or cumulative effects of discharges from the site*
- (6) any remedial action planned or required in relation to the site, and the potential adverse effects of any remedial action on the matters listed in (1)-(5) above, whether at the site or at another location; and*
- (7) The ANZECC Guidelines for the Assessment and Management of Contaminated Sites and the Draft Health and Environmental Guidelines for Selected Timber Treatment Chemicals, and any other relevant national or international guidelines of standards.*

Comment

The proposed expansion is to occur over an existing landfill which is recognised as a contaminated site (GWRC SLUR database as SN/05/124/02). The land use for the proposal is no different to the existing operation. The applicant has already undertaken a study of the landfill in terms of a NES for protecting human health from contaminated soil (discussed in section 3.1 above). The nature of the potential contaminants are described in the Site Management Plan contained with this application. The design and operation of the proposed landfill expansion will ensure that any contamination of groundwater, soil, or water is within acceptable parameters. Once landfill operations have finished the site will be remediated according to the Site Management Plan. These provisions of the Plan are therefore submitted as not being compromised.

6.3 Regional Soil Plan

Objectives and policies relevant for this proposal are listed under the following matters.

Objective 4.1.1 Land use practices reflect the inherent susceptibility of some landforms to erosion.

Objective 4.1.2 The potential of the Region's soils to provide for a full range of uses for present and future generations is maintained or enhanced.

Objective 4.1.3 The life-supporting capacity of the Region's soils is maintained.

Policy 4.2.2 When considering land use activities which have the potential for irreversible effects on soils, to have regard to locating those activities, where practicable, on soils of low versatility.

Policy 4.2.4 To encourage users of soil resources to adopt an ethic of stewardship for future generations.

Comment

The proposed expansion site is on sloping land recognised as 'erosion-prone'. The proposed expansions development would occur in a similar fashion to that of the existing landfill. The land's prior uses has related to the clearance of indigenous forest and subsequent pastoral farming practices which are likely to have increased accelerated soil erosion processes. In the 1970's the wider area including the site was retired from farming that allowed the regeneration of indigenous and exotic pioneering plant species. In 1978 the existing landfill was established at an elevation between 115m to 130m as a private construction and demolition landfill. In 1995 the existing landfill was approved under WGN940057 to develop up to 150m AMSL. The existing landfill development reflected the steeply sided topography and occurred in an 'uphill' fashion with a need to utilise engineering techniques to mitigate erosion and stability issues.

The site of the proposed expansion is generally within an area of low soil versatility, however the rehabilitation of the site once landfill activity has achieved the final fill level will provide for natural soils to establish and consequently the long term effects will not be irreversible. Indigenous vegetation endemic to the Wellington eco district would be re-established over the site once the landfill operations were completed. The proposal for resource consents is considered consistent with these objectives and policies.

Objective 4.1.9 On erosion prone areas vegetative cover is maintained (including maintained through revegetation), enhanced or established; or where the retention of vegetation is not practical, other methods are used so that the adverse effects of erosion are avoided, remedied or mitigated.

Policy 4.2.14 To avoid, remedy or mitigate the adverse effects of vegetation disturbance by promoting:

- *the maintenance and enhancement of vegetation in erosion prone areas;*
- *the conversion of erosion prone areas to forestry or soil conservation woodlots, or regeneration or active restoration to native bush;*
- *riparian management, including where this will help safeguard the life supporting capacity of aquatic ecosystems;*
- *compliance with industry recognised standards and procedures such as the Logging Industry Research Organisation's (LIRO) "Forestry Code of Practice" (Second Edition, 1993); and/or*
- *the maintenance and retention of erosion control plantings.*

Comment

The clearance of vegetation and the excavation of insitu ground within the proposed expansion area for benches or fill mixing would be the minimum required to develop the landfill in an 'uphill' fashion and to provide for the stable integration of the landfill onto natural ground. Those parts of

the landfill which are completed would be provided with organic soil materials and revegetated with indigenous and exotic pioneering plant species. The current proposal is considered consistent with this objectives and policy.

Objective 4.1.11 Land management practices are adopted for the effective control of sediment runoff to water bodies.

Policy 4.2.16 To ensure that recognised erosion control and land rehabilitation techniques are adopted to avoid, remedy or mitigate any adverse effects resulting from soil disturbance activities

Comment

The proposed expansion would maintain a drainage system to control surface water runoff within the landfill tipping and operational areas. Silt detention ponds would collect sediment at the lower parts of the site. A shallow reverse drainage gradient would prevent surface runoff draining over the landfill tipping faces or batter slopes and avoids the potential for batter slope slumping or failure. During the 34 years of the existing landfill operation there have been no major slumping or instability issues recorded on the landfill. From this discussion it is considered that the proposal for resource consents is consistent with this objective and policy.

6.4 Regional Air Quality Management Plan

Objectives and policies relevant for this proposal are listed under the following matters.

Objective 4.1.2 Discharges to air in the Region are managed in a way, or at a rate which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while ensuring that adverse effects, including any adverse effects on local ambient air quality, human health, amenity values, resources or values of significance to tangata whenua, the quality of ecosystems, water, and soil, and the global atmosphere; are avoided, remedied or mitigated.

Policy 4.2.4 To avoid, remedy or mitigate any adverse effect of the discharge of contaminants to air that is noxious, dangerous, offensive, or objectionable.

Policy 4.2.7 To avoid, remedy or mitigate the adverse effects of the discharge of contaminants to air on amenity values.

Comment

The proposed expansion would operate as a private landfill for the deposition of non-hazardous construction and demolition material, and cleanfill. The nearest dwelling to the proposed expansion is on the Te Kopahu ridge and would be approximately 350m west and some 200m higher than the closest part of the landfill expansion. Based upon the previous existing operation there have been no known complaints in terms of noxious air discharges. The proposed expansion would operate under a dust management plan as set out under the Site Management Plan which would ensure that dust emissions are not objectionable beyond the site boundary.

The amenity values of the expansion site are influenced by the industrial land uses that occur in the lower areas of the valley, and odour emissions from the WCC Carey's Gully Sanitary Landfill. The proposed expansion would not worsen the existing amenity in terms of dust or odour detected at the boundaries of other sites.

It is considered that the proposal for resource consents is consistent with this objective and policy.

7 Conclusion

In relation to applications for consents and permits for a proposal for an expansion of a construction and demolition materials and cleanfill landfill an assessment of the RMA Part 2, national environmental standards, national policy statements, and regional statutory planning documents has been undertaken. It is considered that in relation to the relevant matters under each, the proposed expansion is demonstrated as being not in conflict with the intentions expressed within the documents and provisions.

8 References

<i>Reference code</i>	<i>Reference author</i>	<i>Reference title</i>	<i>Organisation & published date</i>
Opus 2012A	Connolly, T & MacGibbon R	SEV Stream Assessment, C & D Landfill	Opus Consultants Ltd, 25/10/2012
Opus 2012B	Brixton, B	Landscape and Visual Assessment for Temporary Landfill Consent	Opus Consultants Ltd, August 2012
Opus 2012C	Askey, P	C & D Landfill NES Assessment	Opus Consultants Ltd, 7/09/2012
Opus 2013A	Preston-Jones, H	Landscape and Visual Assessment for Landfill Expansion	Opus Consultants Ltd, April 2013
Wildlands 2012	Van Meeuwen-Dijkgraaf, A & Shaw, W.B	Assessment of Ecological Effects for a Proposed Expansion of C&D Landfill, Happy Valley, Wellington	Wildlands Consultants, January 2012