

BEFORE THE NORTHLAND REGIONAL COUNCIL

IN THE MATTER OF

The Resource Management
Act 1991

AND

IN THE MATTER OF

A resource consent
application by Mr Doug
Schmuck C/- Dougs Opuu
Boatyard and Interesting
Projects Limited to the
Northland Regional Council

NRC APP. 041365.01.01

**ADDENDUM TO SECTION 42A REPORT PREPARED FOR NORTHLAND
REGIONAL COUNCIL BY ALISTER HARTSTONE**

July 2020

Purpose of this Addendum

1. This Addendum to the Section 42A report prepared and presented on behalf of the Northland Regional Council is in response to the Commissioners Minute #2 dated 26th July 2020.
2. The Minute highlights sections of the Section 42A report that reference correspondence and communications with Northland Regional Council staff regarding material matters associated with the application and assessment thereof. An explanation associated with various matters as stated in the Section 42A report is provided below. Attachments to this Addendum are provided where they assist in providing a response to the Commissioner.
3. As a general comment, reliance has been placed on technical advice provided as part of the previous consent application where, following discussion with NRC staff, there is considered to be no substantive difference in potential resulting effects. In some cases, written confirmation of this has been provided, in other cases it has been confirmed in phone discussions. The concerns of the Commissioner in raising this issue are acknowledged and an apology is offered for not detailing this background information as part of the Section 42A report.
4. In addition, the Commissioner has sought legal advice on the 'existing environment' as it relates to the assessment of effects and the Environment Court proceedings taking place in parallel with this application. NRC has sought and received legal advice as Attachment A to this Addendum.

Decision on Technical Review of Reports

5. Following receipt and review of the amended complete application on the 8th January 2020, a telephone conversation was held between the author and Mr Paul Maxwell of NRC on the 22nd January 2020 regarding an initial approach to the notification and review of technical information. The decision was made at that time that no such reviews were required unless specific matters requiring further consideration were raised following public notification. This advice was communicated in an email to the applicant on the 24th January 2020 (see Attachment B).
6. Following the close of submissions, a review of the matters raised in those submissions was conducted. No technical information was provided in the submissions received that argued against the conclusions in the technical evidence provided with the application.
7. The comments of the Harbour Master are contained in paragraph 120. The Harbour Master confirmed those comments were appropriate as per e-mail contained in Attachment C.
8. The statement provided in paragraph 66 addressing the subsurface erosion barrier was taken verbatim from Mr Paul Maxwell following a telephone discussion on the 19th June 2020.
9. The air discharge consents proposed as part of the previous resource consent application (and now subject to appeal) were subject to review by Tonkin and Taylor Limited on behalf of NRC. A copy of the advice received from Tonkin and Taylor Limited

by NRC is contained in Attachment D. Mr Paul Maxwell confirmed during the teleconference on the 19th June 2020 that this advice has informed the NRC position on the appeal before the Environment Court, noting that the air discharge consents sought have not changed since this advice was received.

10. The technical report addressing ecological effects associated with the previous resource consent application was reviewed by Mr Richard Griffiths (NRC Marine Research Specialist). Mr Griffiths comments provided for the previous application are contained in Attachment E. The 4Sight report provided with the current application was not referred back to Mr Griffiths to review and comment on.
11. Reference to the effect of coastal hazards and coastal processes associated with the site and proposed activities relies on previous consideration of these matters by Mr Paul Maxwell as part of the previous resource consent application. That advice is provided in Attachment F. Mr Maxwell has verbally confirmed that this advice stands for consideration of the current application.



A Hartstone BREP (Hons) MNZPI
Director, Set Consulting Limited

Attachments

- Attachment A – Legal advice received by NRC
- Attachment B – Email to applicant regarding review of technical information
- Attachment C – NRC Harbour Master Advice
- Attachment D – Tonkin and Taylor Limited advice regarding air discharge (previous consent application)
- Attachment E – NRC advice re review of ecology (previous consent application)
- Attachment F – NRC advice re review of coastal processes (previous consent application)

Attachment A – Legal advice received by NRC

Partners

Graeme Mathias, LLB (Hons)
Grant Currie, LLB
Arthur Fairley, LLB (Hons)
Michael Badham, LLB, BA
Vaughan Syers, LLB
Peter Magee, LLB
Anna Patterson, LLB (Hons), BA (Hons)

Associates

Wayne Coutts, NZILE
Rupert Wakeman, LLB, BA
Maree Stenberg, LLB, BA
Alice Dombroski, LLB
Andrew Neill, LLB, BCom

29 July 2020

Northland Regional Council
Private Bag 9021
Whangarei 0148

Attention: Paul Maxwell

Email: paulm@nrc.govt.nz

re: Schmuck – Interesting Projects Limited – Dougs Opu Boat Yard Application

The Commissioner hearing the current application before the Regional Council from Mr Schmuck and Interesting Projects Limited has asked the Regional Council to provide legal advice on two matters with respect to the application.

These matters are:

- (1) What is the existing environment in the context of this application?; and
- (2) Can the appointed Commissioner make a decision on activities which are also the subject of an appeal currently being considered by the Environment Court?

I will deal with each matter in turn:

1. The Existing Environment

- 1.1 In my view the existing environment is simply the environment as it legally exists at the present time.
- 1.2 In *Queenstown Lakes District Council v Hawthorn Estate Limited*¹ when reviewing the permitted baseline analysis as against what constituted the receiving environment the Court of Appeal commented as follows:

“We do not overlook what was said in *Bayley v Manukau City Council* at p.577 where the Court referred to what Salmon J had said in *Aley v North Shore City Council [1998] NZRMA 361* at p.377:

On this basis a consideration of the effect on the environment of the activity for which consent is sought requires an assessment to be made of the effects of the proposal on the environment as it exists.”

- 1.3 The Court said that it would add to that sentence the words:
“...or as it would exist if the land were used in a manner permitted as of right by the plan”

¹ [2006] NZRMA 424 at para 67

hence the recognition of the permitted baseline test.

- 1.4 As the Commissioner is to consider the effect of the activity for which consent is sought "on the environment as it exists" so assessment in my opinion requires consideration of the development which currently exists. While the permitted baseline analysis will be an extension of that there is no reason to assess the existing environment as anything other than what currently exists save to say that case law has since made it clear it is only the environment as legally exists which is to be considered. Illegal or unauthorised structures while part of the environment are to be excluded from consideration².
- 1.5 It is understood that the jetty and slipway as they existed before the 2002 resource consent constitute deemed coastal permits. As deemed coastal permits, it being my view that the fact that there has been consented changes to such structures not changing the status of their original form, so they remain part of the existing environment.
- 1.6 I would also express the view that the consented structures, albeit with an expiry date of 2036, would also form part of the existing environment. I can find no caselaw directly relevant but given that such structures are legally constructed so they should be considered part of the existing environment.

2. Successive Applications

- 2.1 There is nothing in the resource management legislation that precludes successive applications. This goes back to the Town and Country Planning Act 1977 where the Court of Appeal in *Sutton v Moule*³ accepted that there was an ability for a subsequent consent to be granted while an existing consent was in place.
- 2.2 The decision in *Sutton v Moule* was adopted by the High Court in *Northcote Mainstreet Incorporated v Northshore City Council*⁴ where the Court said at para 236:
- "I therefore do not consider that there is any legal impediment to an application being made for a resource consent when another consent is already in existence in relation to the same activity or use".
- 2.3 The Court identified that time and effort might be spent by the consent authority in processing an application where the validity of an existing resource consent was being tested with the result that there may be some duplication of a consent authority's efforts. However the Court went on at para 239 to say:
- "It seems to me, however, that a consent authority has a duty to process any applications that may be lodged with it under the Act".
- 2.4 The Court cited an English decision in which where the Court was considering whether a pre-existing planning permission rendered a subsequent permission relating to the same land use incapable of implementation said,

² Guilty As Ltd v Queenstown Lakes District Council [2010] NZEnvC 191

³ (1992) NZRMA 41...

⁴ [2006] NZRMA 137...

"In the first place I have no doubt that a landowner is entitled to make any number of applications for planning permission which his fancy dictates, even though the development referred to is quite different when one compares one application to another. It is open to a landowner to test the market by putting in a number of applications and seeing what the attitude of the planning authority is to his proposals. Equally it seems to me that a planning authority receiving a number of planning applications in respect of the same land is required to deal with them, and to deal with them even though they are mutually inconsistent one with the other. Of course, special cases will arise where one application deliberately and expressly refers to or incorporates another,"⁵

2.5 The question posed by the Commissioner here is as to the implications which might arise should the Commissioner's decision on the application be somehow different or different in terms or conditions from the decision on the hearing which is still before the Environment Court.

2.6 As Thomas J in *Sutton v Moule* said:

"Whether the latter consent is to be read as a new consent or as one which supplements the earlier consent must depend on the wording which was adopted in granting the consent, having regard to the circumstances of the case"

2.7 It may be that the applicant for the consent currently under consideration might end up with two different consents but each decision is of itself subject to appeal and in any event the applicant can only exercise one consent.

2.8 It seems to me that here it would be open to the Commissioner to include a condition of any consent that might be granted that before such could be exercised any other consents which were in any way in conflict with such consents would need to be surrendered. That way the applicant could not pick and choose between conflicting consents and their conditions.

Yours faithfully
THOMSON WILSON

Approved:



G J MATHIAS
Partner

E-mail: dy@thomsonwilson.co.nz

⁵ *Pilkington v Secretary of State for the Environment* [1974] 1AER 283

Attachment B – Email to applicant regarding review of technical information

From: [Alister Hartstone](#)
To: [Brett Hood](#)
Cc: ["Paul Maxwell"](#)
Subject: Dougs Opuu Boatyard application - APP.041365.01
Date: Friday, January 24, 2020 11:13:00 AM
Attachments: [image002.jpg](#)

Good morning Brett

I refer to the above matter and further to more recent discussions regarding the possible 'unbundling' of activities associated with contaminated soil identification and remediation on the site. As I understand it, there is agreement that no specific NRC consent is required for that activity (ie. it is a permitted activity) and that the matter falls solely to FNDC in their role as administrator of the NESCS. However, I have received recent advice from FNDC indicating that they may be seeking to have the NESCS application jointly processed with the NRC application, with NRC as the lead agency.

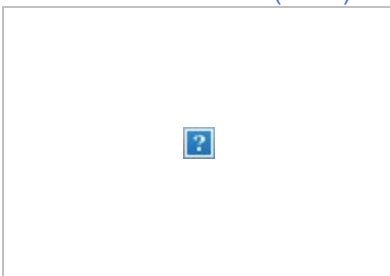
I have asked FNDC to provide confirmation of whether a formal decision has been made on this matter and have heard nothing more to date. Obviously, I cannot proceed with public notification until a final determination on the joint processing in accordance with Section 91 has been made – that decision needs to come from FNDC. Until that decision is made, processing of the NRC consent must be suspended.

My intention at this stage, regardless of any outcome of the Section 91 matter, is to proceed with public notification on the basis of the application as now presented. My understanding is that the existing site and operation, and proposed activities, appears to have been subject to considerable scrutiny through previous consenting processes already. Therefore, my intention would be to seek any technical reviews that may be required of information contained in the application following close of submissions. That may (or may not) result in a Section 92 request in the period between close of notification and formal notice of any hearing.

At this stage, this advice is for your information only but if you can update me at all on the joint notification matter that would be appreciated.

Regards

[Alister Hartstone BREP\(Hons\) MNZPI | Director](#)



p. [0277555607](#)

e. alister@setconsulting.co.nz

Attachment C – NRC Harbour Master Advice

From: [Alister Hartstone](#)
To: ["Jim Lyle"](#)
Cc: ["Alissa Sluys"](#)
Subject: RE: Schmuck consent application APP.041365.01.01 - DC Schmuck
Date: Tuesday, June 23, 2020 12:04:00 PM
Attachments: [image004.jpg](#)
[image005.jpg](#)
[image006.jpg](#)

Thanks Jim

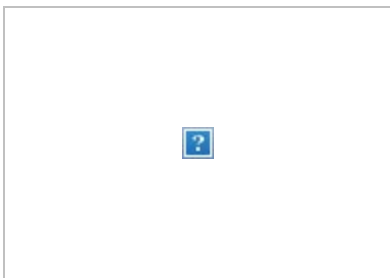
Much appreciated

regards

[Alister Hartstone BREP \(Hons\) MNZPI](#)

[0277555607](#)

alister@setconsulting.co.nz



From: Jim Lyle <jiml@nrc.govt.nz>
Sent: Tuesday, June 23, 2020 10:18 AM
To: Alister Hartstone <alister@setconsulting.co.nz>
Subject: Re: Schmuck consent application APP.041365.01.01 - DC Schmuck

Hi Alister

Yes same concerns, and still no management plan. But yes could be sorted as a condition.

Cheers

Jim

Sent from my mobile.

On 23 Jun 2020, at 08:39, Alister Hartstone <alister@setconsulting.co.nz> wrote:

Thanks Jim

Sorry – I'm acting for NRC as reporting planner.

Just to confirm, this is the advice contained in the previous hearing report from 2018:

The Regional Harbourmaster has expressed concern with the proposal to dredge an approach channel in the proposed location. He has indicated that he has not been convinced of the benefit of a dredged channel to the jetty facility through a dedicated mooring field, although he is reasonably comfortable with the proposed dredging in the immediate vicinity of the proposed new jetty facility i.e. dredging associated with the jetty berth areas including the mudcrete grids and with the adjacent slipway as these areas are well away from the existing moorings.

The Harbourmaster is able to direct the movement of the relocation of vessels and moorings within a Mooring Area as a permitted activity. The Walls Bay mooring area is presently highly allocated and a high degree of precision is required for the placement of moorings to ensure that maritime incidents do not occur as a result of movement of moorings.

The Harbourmaster has indicated that he would not be prepared to issue any direction to move or relocate moorings (and their associated vessels) in respect of the Applicant's proposal. Based on the information provided to him to date, the Harbourmaster has raised the following particular concerns:

- No management plan has been provided to the Harbourmaster with details of how the moorings and their vessels will be safely moved prior to dredging, securely stored during dredging and replaced upon the conclusion of the dredging activities.*
- To date the Applicant has not provided sufficient detail of the proposed dredging area and location (lack of specific location co-ordinates for the position of the channel and batters) in order that potentially affected moorings can be specifically identified. The Harbourmaster considers that there may be significantly more moorings affected by the proposed channel dredging than those identified in the application.*
- No details of how the dredging operator proposes to undertake the dredging within this highly allocated mooring area has been provided with the application. More details of the operational footprint of the dredge barge (including buffer distances) and how the dredger proposes to manage the dredging activity whilst ensuring safety of adjacent vessels and moorings is required.*
- The dredging operator is not a contractor that has been approved for the removal, upgrade and replacement of moorings, and may lack the required plant and equipment to ensure the replacement of moorings with the precision required and upgraded configuration*
- Mooring configurations (i.e. ground and intermediate chain lengths) may need to be upgraded to accommodate the increased depth of the dredged channel and batters.*
- No agreements appear to be in place as to who will bear the cost of any removal, storage or replacement of moorings and vessels during the proposed dredging.*

The Harbourmaster has indicated that a detailed Mooring Management Plan for the proposed dredging prepared by an approved mooring contractor would be required to be provided before he would consider approving the movement of moorings and vessels to enable the proposed dredging to occur.

I've attached the plan showing proposed dredging/mooring for the current application FYI

<image005.jpg>

If the same concerns apply, are the matters you have raised able to be covered off by way of conditions of consent?

regards

Alister Hartstone BREP (Hons) MNZPI

<image006.jpg>

0277555607

<image007.jpg>

alister@setconsulting.co.nz

<image008.jpg>

From: Jim Lyle <jiml@nrc.govt.nz>

Sent: Tuesday, June 23, 2020 8:21 AM

To: Alister Hartstone <alister@setconsulting.co.nz>

Subject: Re: Schmuck consent application APP.041365.01.01 - DC Schmuck

Hi Alistair

I'm pretty sure the same concerns would stand.

Can I ask who you are acting for?

Regards

Jim

Sent from my mobile.

On 22 Jun 2020, at 21:57, Alister Hartstone <alister@setconsulting.co.nz> wrote:

Good evening Jim

I trust all is well with you.

I am not sure whether you are the right person to advise on this – apologies if you aren't. I'm working my way through processing of an

application by Doug Schmuck for various consents associated with his boatyard at Walls Bay, Opuia. A similar application went to a Council hearing a couple of years ago and I see there were some fairly detailed comments and concerns from (presumably) yourself at that stage, mainly to do with dredging of a channel and shifting of moorings.

I'm not sure whether you have seen the current application (it was public notified earlier this year) and have the same or similar concerns – it now only involves shifting of one of Dougs moorings but dredging of a channel is still proposed. Can you let me know of any concerns you have and whether the concerns you raised back in 2018 for the previous application still stand?

Much appreciated

regards

Alister Hartstone BREP (Hons) MNZPI

<image007.jpg>

0277555607

<image008.jpg>

alister@setconsulting.co.nz

<image009.jpg>

Attachment D – Tonkin and Taylor Limited advice regarding air discharge (previous consent application)

Northland Regional Council
Private Bag 9021
Whangarei Mail Centre
WHANGAREI 0148

Attention: Paul Maxwell

Dear Paul

Doug's Opuia Boat Yard - Technical review of air quality assessment

1 Introduction

Tonkin & Taylor Ltd (T+T) has been engaged by Northland Regional Council (NRC) to undertake a review of the air quality assessment prepared by AECOM New Zealand Limited (AECOM) for Doug's Opuia Boat Yard at Opuia, Bay of Islands.

The Boat Yard currently holds a resource consent (Air Discharge Permit CON20060791410 – 12) that authorises the discharge of contaminants to air from marine vessel construction, sale, repair, maintenance and associated activities. This resource consent expired on 30 March 2018 and an application for a replacement consent was lodged on 23 September 2017. The application was publically notified and a Council hearing commenced on 17 May 2018. AECOM has prepared an air quality assessment (dated 9 July 2018¹) to provide additional information to the Hearing Commissioners.

In reviewing the air quality assessment we have referred to requirements and guidance from various sources including:

- Ministry for the Environment Good Practice Guide for Assessing and Managing Dust² (Dust GPG)
- Ministry for the Environment Good Practice Guide for Atmospheric Dispersion Modelling³ (Dispersion Modelling GPG)
- The Environmental Protection Agency Controls for Anti-Foul Paints
- Requirements for similar activities in other parts of New Zealand, for instances where the NRC's planning documents do not provide specific controls or guidance

This report has been prepared in accordance with the request from NRC dated 26 July 2018 and the conditions attached to our standing agreement with NRC for consultancy services.

¹ AECOM New Zealand Limited. Doug's Opuia Boat Yard - Air Quality Assessment. Assessment of Air Emissions from Boat Yard Activities. 9 July 2018.

² Ministry for the Environment. 2016. Good Practice Guide for Assessing and Managing Dust. Wellington.

³ Ministry for the Environment. 2004. Good Practice Guide for Atmospheric Dispersion Modelling. Wellington

2 Nature of discharges to air

AECOM has identified the following activities at the Boat Yard as having the greatest potential for discharges to air:

- Water blasting of vessels;
- Sanding and grinding of vessels;
- Application of antifouling coatings to vessels; and
- Painting of vessels.

The principal discharges to air from these activities are identified by AECOM as particulate and volatile organic compound (VOC) emissions.

The air discharge conditions proposed in the Officers Report (reproduced in Section 10 of the AECOM report) would permit effects within the "Discharge to air and offensive odour boundary" shown in the Figure in Appendix C of the AECOM report. This area includes both Doug's Boat Yard and the adjacent area shown as Esplanade Reserve in Figure 4 in the AECOM report. AECOM's assessment principally focuses on "off-site" effects, meaning effects beyond this compliance boundary.

We understand that the extent of boat maintenance activities in the Esplanade Reserve is a matter of contention in the hearing. Therefore, in this review, we have also commented on effects within the Reserve and considered mitigation that might be required if the compliance boundary were to be moved closer to the boat maintenance activities.

3 Effects of particulate and water overspray

3.1 Potential effects

The effects of particulate matter are related to particle size:

- Total Suspended Particulate (TSP) is particulate smaller than approximately 100 micron (μm). The effects of TSP are principally nuisance effects such as soiling and visible dust. At very high concentrations, TSP can have adverse effects on plants and crops or water quality through deposition into water.
- Small particles that can be inhaled into the lungs have the potential to cause health effects. The potential for health effects is typically considered in terms of PM_{10} (particulate less than 10 μm diameter) or $\text{PM}_{2.5}$ (particulate less than 2.5 μm diameter).

The majority of particulate matter generated by mechanical activities such as water blasting, sanding and grinding will be relatively large particles and flakes, with minimal PM_{10} . Larger airborne particles tend to be trapped in the nose or mouth, so exposure to contaminants in particulate matter would be via ingestion (rather than inhalation).

Large particles tend to deposit to the ground close to the source, so that effects are localised. Under wind speeds of 5 m/s, a 10 μm particle has the potential to be blown hundreds of metres while a 100 μm particle would only travel about 10 m away from the source before it falls to the ground (depending on the height at which it is released).

3.2 Particulate monitoring

AECOM undertook monitoring of TSP concentrations in ambient air over an 8 day period while a range of typical activities were being undertaken, including water blasting, scraping, grinding, application of antifouling, both sprayed on and rolled on, and polishing of topsides. The monitoring

was undertaken adjacent to the slipway (where the activity was being carried out) at a distance of approximately 3 m.

The monitoring was carried out using E-BAMs. E-BAMs are commonly used for investigative studies where less portable and more expensive reference methods are not warranted. However, they are not suitable for monitoring in moisture laden conditions.

E-BAMs are typically fitted with a heated sample inlet to vaporise water and prevent it from condensing on the filter tape. The heated inlets are designed to cope with high humidity but are unlikely to be effective where there are high levels of free moisture. If moisture gets into the E-BAM, it can give readings that are overly high or overly low (including negative). Based on this, I consider that the particulate measurements while water blasting was being carried out (which were very low) are subject to a high level of uncertainty. However, I have undertaken a qualitative assessment of the effects of water blasting that draws the same conclusions as the AECOM report with respect to off-site effects.

The close proximity of monitors (3 m) to the maintenance activities also needs to be considered when evaluating the results. Large particles will fall to the ground close the source compared to smaller particles that remain suspended in the air over greater distances. The high recorded particulate concentrations during scraping and grinding could be caused by large number of small particles that have the potential to be transported greater distances by the wind, or by a small number of large particles that are unlikely to travel more than a few metres past the monitoring location.

E-BAMs have a default hourly measurement cycle, however they can also record concentrations over shorter averaging periods (1, 5, 10, 15, 30-minute averages of 60 second readings). These real-time concentrations are less accurate than the 1-hour average concentration but can be useful for understanding short term variability in particulate concentrations. Sub-hourly concentration data from the E-BAMs would have been useful, but have not been reported.

3.3 Assessment criteria

The TSP monitoring results have been compared to trigger levels for on-site dust control recommended in the relevant Ministry for the Environment good practice guidance⁴ (Dust GPG). The AECOM assessment considers trigger levels set for moderate sensitivity receiving environments on the basis that the measurement point is so close to the source that it will overstate potential impacts at high sensitivity receptors located some distance away. We consider it would have been more consistent with the recommendations in the Dust GPG to consider the trigger levels for high sensitivity receiving environments at neighbouring dwellings, but apply a dilution factor to the measured concentrations to account for the distance between the measurement location and the receptor being considered. However, this would not materially alter the findings of the air quality assessment.

The Dusts GPG includes a 5-minute average trigger level of 250 µg/m³ for high sensitivity receiving environments. This trigger level is intended to manage the acute effects of brief spikes in dust emissions that may be masked by hourly averages. Given the intermittent nature of the boat maintenance activities and the infrequent but potentially close proximity of people in the reserve, short term dust emissions have the greatest potential to cause nuisance effects within the Reserve.

⁴ Ministry for the Environment. 2016. Good Practice Guide for Assessing and Managing Dust. Wellington.

3.4 Effects of scraping, grinding and sanding

The particulate monitoring showed that scraping and grinding (on 12 and 19 June 2018) were the activities that generated the highest concentrations of particulate. There was no appreciable TSP measured during other activities.

AECOM has not considered the potential for exposure to contaminants in dust from anti-foul paints. However the proposed consent conditions include a requirement to use vacuum sanders for preparation or smoothing of antifouling. Vacuum sanders will effectively control dust emissions and therefore we consider that the potential for effects will be adequately mitigated.

The inferred 24 hour average concentrations of TSP are well below the trigger levels, which would be expected for activities that only occur for a few hours each day. 1-hour average concentrations exceeding the trigger threshold were recorded on 19 June 2018. However, as discussed in Section 3.1, we agree with AECOM's conclusion that the majority of particles generated from these activities will fall to the ground close to the source and will not cause a dust nuisance at the nearest residential locations.

As previously noted, the AECOM report does not include sub-hourly TSP concentrations. However, given the close proximity of the monitors to the slipway, short term dust levels are likely to be highly variable as grinding and scraping activities move along the hull at varying distances to the monitor. As an example of how presenting the data as hourly average concentrations could mask large spikes, a 1-hour average concentration of $392 \mu\text{g}/\text{m}^3$ could arise from:

- Twelve 5-minute periods with a concentration of $392 \mu\text{g}/\text{m}^3$; or
- Eleven 5-minute periods with a concentration of $245 \mu\text{g}/\text{m}^3$ and one 5-minute period with a concentration of $2,000 \mu\text{g}/\text{m}^3$.

In the absence of further data, we consider that there is the potential for short term elevated concentrations of dust within the Reserve (within the current "Discharge to air and offensive odour boundary") at levels that could nuisance effects. The AECOM report indicates that sanding and grinding activities are estimated to occur for 1 to 2 hours a day on up to 40 days in the year (page 10). The extent to which there would be an offensive or objectionable effect from these discharges is dependent on the patterns of use of the Reserve and the frequency at which the discharges coincide with people being present. This has not been assessed by AECOM as the Reserve is within the proposed compliance boundary.

3.5 Effects of water blasting

With regard to water blasting, the AECOM report states that:

"This operation will generate a visible water vapour plume with any particulate disturbed from the vessel likely to fall immediately to the ground or be contained within large water droplets which would also fall to the ground very near to the vessel."

High pressure water blasting will tend to dislodge larger flakes of dirt and substrate compared to grinding and sanding. The distance this material travels from the slipway will largely be determined by the pressure of the water blaster and height above the ground, would generally be of the order of 5 to 10 metres from the source. Therefore, we agree with AECOM that there is no potential for nuisance from dust or contaminants entrained in water droplets at the nearest house (approximately 50 m away).

The large particles and debris dislodged by water blasting are unlikely to be inhalable, but could cause a nuisance by depositing within the Reserve. There is the potential for effects on people via ingestion or skin exposure, however we consider that the risk of people remaining in close proximity to the waterblasting (being sprayed with water) for any length of time is low, so the risk is mitigated

by the very short duration of exposure. We agree with the control recommended by AECOM that the water used for water blasting meets drinking water standards, as a prudent precautionary measure.

We have seen video footage submitted by M Rashbrooke to the Hearing that included recordings and photographs of water blasting activities. The video shows a visible plume generated by the water blasting being carried into the vegetation to the north of the slipway, during waterblasting on the southern side of a boat. AECOM's description of the plume generated by water blasting as "water vapour" is inaccurate because the water is not in the gaseous phase. The plume is a mist of fine liquid aerosol droplets, which are technically a component of particulate matter emissions (particulate matter includes both solid and liquid particles⁵). However, compared to solid particles (dust⁶), the potential effects of the mist from water blasting are limited. The water mist is unlikely to contain appreciable contaminants and is therefore unlikely to cause soiling of surfaces (as the water evaporates after it deposits). This water mist can have visual effects and be a physical nuisance within the Reserve (i.e. people can be physically wetted by the overspray and mist).

4 Effects of VOCs and odour from anti-fouling and paint

4.1 Assessment methodology

AECOM has undertaken dispersion modelling of estimated VOC emissions from application of antifouling coating and paint. We have not undertaken a detailed review of the dispersion modelling but there are several aspects that we consider are not consistent with good practice. For this reason, we consider that it should be considered as a screening assessment only. The AECOM assessment considers potential health effects of exposure to VOCs, and does not consider potential odour effects.

A key area of uncertainty in the modelling is that the emissions have been modelled as a stack (point source). We consider that a volume source would provide a better representation of the emissions and be more consistent with the recommendations in the Dispersion Modelling GPG. The dispersion modelling found the worst case concentrations within the Reserve (approximately 20 m from the source) were lower than at the closest house (approximately 50 m from the source). In reality, I expect that concentrations will reduce rapidly with distance, with the highest concentrations occurring close to the source (within the Reserve).

Notwithstanding these limitations in the modelling, I consider there is enough information to understand the potential air quality effects of anti-foul and paint coating activities based largely on a qualitative assessment.

The overall scale of the painting activities assessed by AECOM (using less than 10 L/day of paint or antifoul on less than 40 days per year) is small. For comparison, the Northland Regional Air Plan sets a permitted activity threshold for consumption of coating materials at spray coating facilities of 30 L/day. The small scale of the operation is a key mitigation measure for effects and it may be appropriate to limit daily and/or total coating application rates as a condition of consent.

4.2 Effects of applying paints

The AECOM report indicates that boats are painted at the site approximately 4 times per year with a total paint usage of the order of 30 L of paint each year (an average of about 7.5 L per boat). In

⁵ Dust GPG, p6

⁶ The Northland Regional Air Plan includes the following definition "Dust - All solid particulate matter that is suspended in the air, or has settled after being airborne"

general terms the painting activity is of such a small scale that the potential for off-site effects is negligible (notwithstanding the potential impacts of the isocyanate content of certain paints).

One of the top coat systems that could be used is a two-part polyurethane, containing diisocyanates. The main potential effects associated with diisocyanate exposure is respiratory irritation, as well as skin and eye irritation. Two-part polyurethane coating systems can be used to maintain infrastructure on public land, such as roadside bridge rails, etc. Exposure to diisocyanates from these activities was considered in the Auckland Unitary Plan, which sets the following controls for spray application of surface coatings containing diisocyanates for maintenance of infrastructure (Chapter E14.6.1.4):

- There must be no activities sensitive to air discharges⁷ within 30m of the activity.
- There must be an exclusion zone that prevents public access within 15m of the activity.
- The quantity of paint containing diisocyanates or organic plasticisers applied in a continuous application at a single location must not exceed 18 litres per day.

Based on this, we consider that AECOM's assessment of potential effects of diisocyanates at the closest residential house to the south of the Boat Yard is likely to be conservative (i.e. over predict likely concentrations). However, avoiding spray painting of materials containing diisocyanates when winds are blowing towards this house would be a prudent, precautionary measure.

Spray painting of diisocyanate coatings is only likely to occur on up to 3 occasions each year, so the risk of adverse effects is low. However, in my opinion, it would be appropriate to maintain an exclusion zone around this activity to minimise exposure to people within the Reserve. In the absence of further information, a separation distance of 15 m would seem appropriate.

4.3 Effects of applying anti-fouling

The AECOM report states that antifouling coating is generally applied by brushing and that spray painting is only undertaken "from time to time". Discharges to air from application of solvent-based surface coatings using a roller or brush are unlikely to have any effects other than localised odours (within 5 to 10 metres of the activity). Therefore, I consider only spray application of anti-fouling paint warrants further consideration.

The AECOM report states that the anti-foul paint is applied at a rate of up to 6.125 L/hour (5 L paint and up to 1.125L thinner) and that there are "*.. in the order of 80 to 100 hours of paint applications per year*". The proportion of this activity that involves spray painting is not stated.

Anti-foul paints contain biocides and metals that are toxic to people if they are exposed at sufficient quantities. The Environmental Protection Agency Controls for Anti-Foul Paints require establishment of a controlled work area and signage, including "using a method and located such that off-target deposition of the substance, including onto bystanders, is avoided by taking all practicable steps⁸". This control is intended to protect the public from adverse effects of direct exposure to overspray from the anti-foul paints (note: this differs to the suggested exclusion area for spray painting of diisocyanates, which is intended to protect the public from exposure to airborne vapours, so a smaller separation distance is likely to be appropriate).

Assuming a controlled work area is in place, we agree with AECOM that emissions of VOCs that volatilise from the solvent-borne paint mixture during application and as it dries are the most likely cause of potential effects. The main VOCs generated from the use of anti-foul paints are substances

⁷ Activities sensitive to air discharges includes dwellings

⁸ Environmental Protection Agency. Decision on the Application for reassessment of Antifouling Paints (APP201051). 26 June 2013

such as xylene, n-butanol and ethyl benzene (Table 5 in the AECOM report). These VOCs are common to many different solvent-based coating systems.

AECOM has calculated that the VOC emitted at the highest rate from spray painting of anti-fouling is xylene. The odour threshold for xylene is 4,340 µg/m³ compared to the health effects threshold concentration of 22,000 µg/m³ used in the air quality assessment. This means that xylene would cause significant odour effects at concentrations well below levels that are protective of health effects. This is consistent with our experience that the principal effects of small scale spray painting are related to odour.

We consider that odour effects are unlikely at residential dwelling located approximately 50 m away. However there are likely to be noticeable odours in the Reserve (within the current "Discharge to air and offensive odour boundary") during times when spray painting is being carried out. The extent to which there would be an offensive or objectionable effect of these odours is dependent on the patterns of use of the Reserve and the frequency at which the discharges coincide with people being present. This has not been assessed by AECOM as the Reserve is within the proposed compliance boundary.

5 Mitigation measures

5.1 Proposed consent conditions

Section 10 of the AECOM report sets out their comments on the conditions of the air discharge consent recommended in the Officers Report. Key mitigation measures required by these conditions, or suggested by AECOM, include:

- The requirement to use vacuum sanders for removal or smoothing of surfaces coated with anti-fouling.
- That sanding and grinding only be conducted when the wind speed is between 0.5 m/s and 5 m/s as a 60 second average (AECOM suggestion). See comments below about the practicability of using 60 second average wind speeds as the basis for a consent limit.
- That spray application of anti-fouling paint only be undertaken under these same wind speed conditions and when the wind direction is from between 45° and 170° (i.e. not from the northwest through to the northeast).
- That screens to be erected during high pressure water blasting or that water used for water blasting meets drinking water standards (AECOM suggestion). See comments below.

Practicability of 60 second averaging period for wind speed conditions

In my opinion, setting the wind speed conditions based on a 60 second averaging period is impractical for the consent holder and would be difficult to enforce or monitor compliance. In practice, the consent holder will need to anticipate likely wind speeds over the coming hour prior to starting boat maintenance activities and, if the wind speed criterion is likely to be exceeded, activities will need to be stopped. It is impractical for activities to be stopped and re-started over time periods of the order of minutes.

A "wind gust to average wind speed" relationship may be able to be developed from local data, however this would only be indicative. The meteorological data used by AECOM (including the wind roses in Figure 8) and the dispersion modelling predictions are all based on hourly averaging periods. While it is less conservative (protective) than using a 60-second average, in my opinion, the use of an hourly averaging period would be more practical and enforceable and is consistent with AECOM's assessment methodology.

Use of screens for water blasting

The potential effects of water blasting are visual effects and physical wetting of people close to the water blasting activity. These effects are likely to be confined to within the “Discharge to air and offensive odour boundary” in Appendix C of the AECOM report. Therefore mitigation, such as screens, would only be required if there were a need to reduce effects to within a smaller compliance boundary than shown in Appendix C.

Impermeable or low permeability screens are commonly used to control overspray and debris from water blasting. Screens would reduce visible mist to a varying degree depending on their height. It is unlikely that visual emissions would be completely eliminated as some water mist is likely to go over the top of the screens. The screens themselves would also have a visual effect. Given the practical constraints of installing and removing the screens, they would likely need to be in place for longer than the duration of the waterblasting activity. AECOM’s report does not address visual effects, and T+T does not have expertise in assessing visual effects.

Smaller screens could be used in specific locations to avoid physically wetting people who might approach the water blasting activity. Physically wetting people with clean water could cause annoyance but does not pose any health risk provided the water meets drinking water standards. This is not an air quality issue *per se*.

5.2 Additional mitigation measures for dust emissions

The effects of dust emissions are confined to within the “Discharge to air and offensive odour boundary” in Appendix C of the AECOM report. The effects of dust within the Reserve has not been characterised and is dependent on the frequency at which the discharges coincide with people being present.

If the compliance boundary were to be moved closer to the activities, then we consider that additional mitigation measures are likely to be required to avoid offensive or objectionable effects of dust:

- The use of tarpaulins or sheeting to enclose dust generating activities; and/or
- The use of vacuum attachments on all grinding and sanding equipment (note: the proposed Condition 6) would only require the use of dust collection when preparing or finishing surfaces painted with anti-foul).

5.3 Additional mitigation measures for emissions from paint and anti-fouling

The effects of emissions from application of paint and anti-foul are likely to be confined to within the “Discharge to air and offensive odour boundary” in Appendix C of the AECOM report.

Notwithstanding this, I consider that additional controls are warranted when spray painting of coatings containing diisocyanates is being carried out. Although this activity is very infrequent, we consider that there should be measures in place to exclude the public from a compliance zone of the order of 15 m from the spray painting activities when diisocyanates are being used. This is to avoid the potential for adverse effects on the public using the Reserve.

The effects of odours within the Reserve associated with VOC emissions from spray painting has not been characterised and is dependent on the frequency at which the discharges coincide with people being present. However, we consider that if the compliance boundary were to be moved closer to the activities, it may be difficult to avoid odours when spray painting is being carried out, unless these activities can be shifted into an enclosed area (or building) with controlled ventilation and exhaust treatment. The frequency of these activities occurring may be so low that the odours do not constitute an offensive or objectionable effect, however this has not been assessed.

6 Applicability

This report has been prepared for the exclusive use of our client Northland Regional Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Tonkin & Taylor Ltd

Environmental and Engineering Consultants

Report prepared by:

Authorised for Tonkin & Taylor Ltd by:



Jenny Simpson

Technical Director – Environmental Engineering



Penny Kneebone

Project Director

JMS

p:\1007901\issueddocuments\jms010818.rpt.docx

Attachment E – NRC advice re review of ecology (previous consent application)

APPENDIX 2

Expert Advice from Richard Griffiths, NRC Marine Research Specialist

From: Richard Griffiths

Sent: Friday, 27 July 2018 2:43 p.m.

To: Paul Maxwell <PaulM@nrc.govt.nz>

Cc: Ricky Eyre <rickye@nrc.govt.nz>

Subject: Review of 4SIGHT 'Ecological Assessment: Doug's Opuia Boatyard: Assessment of ecological effects for proposed dredging and structural works.'

Hi Paul

As per your request I have reviewed the 4SIGHT 'Ecological Assessment: Doug's Opuia Boatyard: Assessment of ecological effects for proposed dredging and structural works.'

Overall the sampling, analysis and scope of the report is appropriate for the scale of the activity that has been applied for. Here are my specific comments on the findings:

Section 5

5.2.1 Sediment dynamics

I agree with the conclusion that that in the context of the large quantities of sediment discharged from the Kawakawa and Waikare catchments the contribution from the proposed dredging will be small and short in duration. I agree with the recommendation on page 14 'that a silt curtain be deployed around the dredging plant for the duration of the dredging operation'.

5.2.2 Contaminants in sediments

The levels of heavy metals at site ISL, M and I3 are very high for Northland. These are much higher than background levels recorded in the wider Bay of Islands. With the exception of sites S1 and S2 and SC, all of the sites sampled are well above the levels recorded by Council's State of the Environment Monitoring in the Bay of Islands. Council's sediment monitoring showed that the highest copper concentrations in the Bay of Islands was 15mg/kg and the highest zinc concentration was 82

mg/kg [https://resources.nrc.govt.nz/upload/23554/BOI%20and%20Whangarei%20Sediment%20Report%202016%20\(Final\).pdf](https://resources.nrc.govt.nz/upload/23554/BOI%20and%20Whangarei%20Sediment%20Report%202016%20(Final).pdf)

The concentrations of metal contamination at sites ISL, M, I3 and S3 are at levels where you would expect to observe impacts on marine organisms and ecological communities.

I do not agree with the statement on page 14 that:

Given that Walls Bay has been the site of vessel haul-out, slipway and vessel maintenance activities since the 1960's and the site of a commercial boatyard since the 1970's it is likely that much of the contaminant load found in intertidal sediments is the result of those historical activities, and DOB is now likely to be only a small contributor to the overall potential contaminant load in the wider area.

Recent compliance monitoring of the facility shows that the concentrations of metals in the discharge water are high. These results suggest that the current activities at the facility are continuing to contribute to the high levels of metals in Walls Bay.

This is outside the scope of my expertise, but given the levels of contamination in the sediment, care may need to be taken when selecting the disposal site for dredged material. The disposal of this material may also require resource consent.

5.3 Effects on water quality

I broadly agree that as long as the operation is well managed and that a silt curtain is deployed, the effects are likely to be localised and of relatively short duration.

However, I recommend that a temporal restriction be placed on dredging activity. This was a key recommendation of a report by Cawthron Institute 'Review of Northland Regional Council's consent conditions for dredging' (Morrisey and Barter 2015). This report recommends a closed season for cockle and pipi spawning and settlement of October – January inclusive.

The area in question has high recreational values during the summer period, and users will have higher expectations of water clarity during the summer period.

5.4 Effects of subtidal and intertidal habitat and biota

5.4.1 Subtidal and intertidal infauna and epifauna

I agree that the taxa found within the footprint of the dredge area are common and widespread species in the Bay of Islands. I also agree that the area will be recolonised relatively quickly with a similar ecological community.

5.4.2 Intertidal shellfish bed

As per my comments above. I recommend that a closed season be included to provide safeguards for cockles and pipis. I strongly favour the inclusion of closed seasons in dredging consents as they provide protection to key species at the most vulnerable stages of their life cycle.

I question the need to install a subsurface erosion barrier. The beach platform itself appears to be relatively hard packed and stable. The beach is relatively sheltered and there are no visible signs of erosion. In Marsden Cove where a much larger channel has been dredged through an intertidal sand/shell habitat, there has been no slumping or erosion caused by the dredging on the adjacent beach. The installation of the barrier is likely to cause more disturbance to the beach and intertidal shellfish bed during construction and may have unintended consequences for the ongoing beach hydrodynamics.

Kind regards,

Richie

Attachment F – NRC advice re review of coastal processes (previous consent application)

APPENDIX 3

Expert Advice from Paul Maxwell, NRC Coastal and Works Consents Manager

From: Paul Maxwell <PaulM@nrc.govt.nz>
Date: Friday, 27 July 2018 at 10:52 AM
To: Melanie Donaghy <melanie@mjdenvironmental.co.nz>
Subject: RE: Sub Surface Erosion Barrier

Re the subsurface erosion Barrier- Despite the issue of the structure not being notified as part of the application, which may preclude it even being considered. The applicant does not appear to have demonstrated a clear need for the subsurface erosion barrier or its efficacy for its intended purpose. A shallow sloping batter is preferred.

The cross section plan provided by total Marine refers to the barrier to be formed of spoil run (uncertain what that is – may be unstable) and shows it keyed in to the new ground level by 0.7 of a metres. The top of the dredge batters shown by the plan are north of the location of the barrier. It would be more appropriate to have a gentle batter and minimise the modification of the stable bed levels and introduction of additional structure (with uncertain effects) on to what is a stable beach profile. As marked up below.

The Total Marine Report says the purpose is to stabilise the shellfish bed and to prevent material building up on the slipway. The total marine report provides a limited analysis of how the structure will function and which indicates that the scouring arising from the structure will maintain the slipway free of material. This is a concern as it results in further modification of the natural cycling of sediments within the bay. The beach is currently in equilibrium and if the proposed activities are granted then there're should be provision for the beach to come to a natural equilibrium state over time.

The 4 sight report mentions the erosion barrier and its intended purpose and concludes ecological effects arising from its installation will be no more than minor. But Is silent on any potential effects arising over the longer term.

From: Paul Maxwell <PaulM@nrc.govt.nz>
Date: Monday, 30 July 2018 at 6:17 AM
To: Melanie Donaghy <melanie@mjdenvironmental.co.nz>
Subject: RE: MetOcean Solutions Ltd Report - Opuia Marina Stage 2 Dev

Hi Mel,

The modelling was undertaken for the Opuia Marina Stage 2 Development and presents a models and interpretation of water flows on a broader scale. The Modelling was undertaken by a reputable Company with a high level of expertise and experience in hydrodynamic modelling. The models provide an broad understanding of water flows within the dynamic confluence of the Waikare Inlet, the Kawakawa River and Veronica Channel however, the model does not provide detail at a resolution to understand potential sediment transport within Walls Bay and the vicinity of the jetty and Marina Facility. One can infer from the model presented that once suspended sediment from dredging activities is transported into the vicinity of the Veronica Channel it is highly likely that strong tidal flows will quickly entrain and disperse the suspended sediments.