

## **Coastal-Burwood Community Board AGENDA**

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### **Notice of Meeting:**

An ordinary meeting of the Coastal-Burwood Community Board will be held on:

**Date:** Monday 2 October 2017  
**Time:** 4.30pm  
**Venue:** Boardroom, Corner Beresford and Union Streets,  
New Brighton

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### **Membership**

Chairperson	Kim Money
Deputy Chairperson	Tim Sintes
Members	Tim Baker
	David East
	Glenn Livingstone
	Linda Stewart

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15 September 2017

Jo Wells  
Manager Community Governance, Coastal-Burwood  
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[www.ccc.govt.nz](http://www.ccc.govt.nz)

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted.  
If you require further information relating to any reports, please contact the person named on the report.

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Part A	Matters Requiring a Council Decision
Part B	Reports for Information
Part C	Decisions Under Delegation

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## **1. Apologies**

An apology was received from Kim Money.

## **2. Declarations of Interest**

Members are reminded of the need to be vigilant and to stand aside from decision making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

## **3. Confirmation of Previous Minutes**

That the minutes of the Coastal-Burwood Community Board meeting held on [Monday, 18 September 2017](#) be confirmed (refer page 5).

## **4. Public Forum**

A period of up to 30 minutes may be available for people to speak for up to five minutes on any issue that is not the subject of a separate hearings process.

It is intended that a public forum session will be held at this meeting.

## **5. Deputations by Appointment**

Deputations may be heard on a matter or matters covered by a report on this agenda and approved by the Chairperson.

There were no deputations by appointment at the time the agenda was prepared.

## **6. Presentation of Petitions**

There were no petitions received at the time the agenda was prepared.

**Secretarial Note**

At the time that the agenda was prepared the Coastal-Burwood Community Board Meeting for 18 September 2017 had not yet been held. Therefore the minutes for that meeting were not able to be included in this agenda.

A Supplementary Agenda will be available on Wednesday 27 September 2017 which will contain the minutes from the 18 September 2017 Coastal-Burwood Community Board Meeting. This agenda will also contain additional reports.



## 7. Muka Park: Future of the Flying Fox

Reference: 17/913569

Contact: Russel Wedge russel.wedge@ccc.govt.nz 941 8270

### 1. Purpose and Origin of Report

#### Purpose of Report

- 1.1 The purpose of this report is to recommend that the Coastal-Burwood Community Board approve permanently removing the flying fox from Muka Park and reducing the height of the southern mound supporting the flying fox pole to 1 metre. A flying fox could be included in one of the new parks being developed in the area through the subdivision process, such as Prestons Park subdivision as part of the CDL development south of Prestons Road.

#### Origin of Report

- 1.2 This report is being provided to fulfil the Coastal-Burwood Community Board resolution CBCB/2017/00095 Muka Park: Consultation on Future of the Flying Fox.

1. Following the completion of successful trials of alternative flying fox mechanisms, approve Staff to consult with residents in Prestons North subdivision on whether:
  - a. the flying fox should be reinstated in Muka Park
  - or
  - b. the flying fox is permanently removed from Muka Park and the height of the southern mound supporting the flying fox pole reduced to 1 metre above ground.
2. If the results of the trial meet the district plan rules, that the Board be informed of the flying fox test results before consultation takes place and that staff look concurrently at mitigation options.

David East/Glenn Livingstone  
**Board Consideration**

Carried

### 2. Significance

- 2.1 The decision(s) in this report are of medium significance in relation to the Christchurch City Council's Significance and Engagement Policy.
- 2.1.1 The level of significance was determined on the suggested thresholds for assessing criteria, which had a high level of community interest, associated cost, and risk involved with either option.

### 3. Staff Recommendations

That the Coastal-Burwood Community Board:

1. Approve the removal of the flying fox from Muka Park and reduction of the height of the southern mound supporting the flying fox pole to 1 metre above the ground.
2. Direct staff to investigate erecting a flying fox in one of the new parks being developed in the area through the subdivision process.

### 4. Key Points

- 4.1 This report supports the [Council's Long Term Plan \(2015 - 2025\)](#):
- 4.1.1 Activity: Neighbourhood Parks

- Level of Service: 6.0.2 Customer satisfaction with the range of recreation facilities

4.2 The following feasible options have been considered:

- Option 1 - Permanently Remove Flying Fox and Reduce Mound to 1 Metre High (preferred option)
- Option 2 - Permanently Remove Flying Fox and Reduce Mound to Ground Level
- Option 3 - Retain Flying Fox and Lock Pulley Mechanism at Night

4.3 Option Summary - Advantages and Disadvantages (Preferred Option)

4.3.1 The advantages of this option include:

- Removing the risk of the Council breaching the noise rules of the District Plan
- Remove the on-going costs and risks of needing to lock the flying fox every night.
- Reducing the mound to 1 metre above ground level better protects privacy and amenity values for nearby property.
- The cost to cut the flying fox poles, return the cable and pulley system to the supplier and reduce the mound to 1 metre above ground is less than removing all the mound to ground level.
- The positioning of the playground and flying fox to take advantage of the new park in relation to the aspects of the site.

4.3.2 The disadvantages of this option include:

- Some residents will be disappointed the flying fox is removed from Muka Park.
- There will be a delay before the flying fox can be installed in a new park as subdivision construction of the Stage with the proposed park will not commence for possibly 12 - 24 months.

## 5. Context

### Muka Park - Flying Fox Acoustic Test

- 5.1 An independent acoustic consultant engaged by staff carried out acoustic noise emission testing on 28 June 2017 from 1700 to 1830 hours at Muka Park. Three locations were used to measure noise levels: one against the northeast boundary, another on the corner of the residential property closest to the playground and the third on the opposite side of the road to the playground. The recordings were for a minimum of 15 minutes continuous.
- 5.2 The flying fox was used continuously and involved a person riding the flying fox for approximately 10 – 15 seconds and then dragging the seat back to the platform which could take up to one minute.
- 5.3 Taken from the Acoustic Engineer's report (refer **Attachment A: Muka Park Flying Fox Noise Emissions Report**), a summary of the Christchurch District Plan Noise Rules in relation to noise limits in relation to the acoustic trial at Muka Park are:
- Daytime (0700- 2200 hours) 50 dB  $L_{Aeq}$
  - Night-time (2200-0700 hours) 40 dB  $L_{Aeq}$  .
- 5.4 The Acoustic Engineer concluded from their trial test that on the day of 28 June 2017:
- All of the noise measurements exceed the night-time limit of 40 dB  $L_{Aeq}$



- The majority of the noise levels recorded (except for the last period at 39 Taiore Crescent) were lower than 50 dB  $L_{Aeq}$
- The later measurement periods were dominated by heavier adults continuously using the flying fox, which increased the noise levels.
- Over the course of the measurements, the flying fox developed a 'squeak' that was particularly apparent when the user was dragging the seat back to the elevated platform, we have advised that this is able to be corrected. This would reduce the noise levels.
- The measured level of 53 dB  $L_{Aeq}$  was for a period where both heavier adults were using the flying fox, and the 'squeak' was most apparent.

5.5 The Acoustic Engineer concluded that the noise emissions from the flying fox complied with the District Plan daytime noise limits. Although a reading of 53 dB  $L_{Aeq}$  was recorded that is in breach of the 50 dB  $L_{Aeq}$ , section 6.4.3 of the NZS6802:2008 allows for a duration adjustment of more than -3 dB that can be applied to the highest measured level. The adjustment was allowable due to the flying fox was only available for use for a 90-minute portion of the daytime period. For a fuller explanation refer Attachment A: Muka Park Flying Fox Noise Emissions Report.

#### Alternative Location for Flying Fox in Nearby Parks

- 5.6 Staff considered the possibility of relocating the flying fox to Kahu Kiwi Park, at the northern end of Prestons North development. Although this park has a greater separation distance from nearby residents than Muka Park, this park is not considered suitable as it was never designed to accommodate a flying fox.
- 5.7 One of the new parks proposed for Prestons Park subdivision (south of Preston Road) may be suitable for a flying fox. This park should have a greater distance between the flying fox and nearby residential properties than the parks in Prestons North. The construction of this park is not anticipated to be completed for at least 12 -24 months, possibly longer depending upon the developer's response to the housing market. The developer has said they intend to have the playground completed before titles are issued to the nearby residential properties.

#### Nuisance Factor – Retaining Flying Fox in Muka Park

- 5.8 The acoustic noise tests undertaken on 28 June 2017 indicated the flying fox at Muka Park is within the acceptable noise limits in the District Plan for daytime use.
- 5.9 The Council's Environmental Officers have commented that although the acoustic noise tests are within the daytime standards of the District Plan the margin of difference between compliance and non-compliance of the acceptable noise limit is very slight. This marginal level of compliance was demonstrated when the flying fox developed a noticeable 'squeak' and the flying fox was also used by 'heavier adults' as indicated in the acoustic report. For further comment on the Acoustic Engineering Services Report refer (**Attachment B**): Memorandum from Team Leader Environmental Health Officer, Muka Park Flying Fox, Prestons Subdivision.
- 5.10 If the flying fox was to remain in Muka Park the seat and pulley mechanism would have to be locked up each evening to ensure it couldn't be used at night and breach the night-time noise standards in the District Plan. A person(s) or company could be contracted to lock the flying fox every evening and unlock it each morning. There is always a risk associated with any agreement such as locking and unlocking a facility, that for whatever reason it doesn't get locked one or more nights. This could result in the Christchurch City Council being in breach of its District Plan and needing to investigate compliance and enforcement action against itself. Residents may also be disturbed due to the noise from the flying fox and ultimately ringing the after-hours Council contact number to call out a contractor to lock the flying fox. Each call-out has an after-hours charge that the ratepayers will ultimately be required to cover, via Council rates.

- 5.11 The nuisance factor of retaining the flying fox is the potential disturbance to the residents from the flying fox being used in the early evening (before 2200 hours) when the ambient noise from the surrounding environment is at low levels. This quieter time of the early evening may or may not increase the intensity of the noise generated from the flying fox with the result of residents contacting Council's Environmental Services to measure the perceived high levels of noise from the flying fox. Other factors that may cause residents to contact the Council's Environmental Services could potentially be such things as a noisy mechanism or being used by heavier people/multiple users creating high levels of noise that residents believe would breach the District Plan noise standards.

## 6. Background

### **A Brief Background Summary from Community Board meeting 6 June 2017 Report: Muka Park: Consultation on Future of the Flying Fox, – relevant to this report:**

#### **Muka Park**

- 6.1 The Muka Park and playground were planned as part of a green corridor concept in a subdivision Outline Development Plan (ODP) proposed by Ngai Tahu Property Limited, pre-2010 Christchurch earthquakes.
- 6.2 The playground in Muka Park was designed as the centre piece or showcase, for the Prestons North subdivision. It is centrally located in the subdivision with a smaller playground to the north and another smaller one to the south. The Muka Park playground has a range of activities including the flying fox, half-court, skate path, slide, supernova, tyre swing, spica and balancing poles.
- 6.3 Muka Park, within Prestons subdivision has its own zoning within the District Plan, Living G (Prestons) Zone. The parks in the Prestons development do not contravene rules in the District Plan.
- 6.4 The flying fox in Muka Park was opened to the public on the 6<sup>th</sup> January 2016, under the control of Ngai Tahu Property Limited. The playground was handed over to Council as a Council asset in June 2016.

#### **Noise Complaints – Flying Fox**

- 6.5 On 15 February 2016 the Council's Environmental Health Officer received a complaint from a person about the noise generated by the flying fox. The Environmental Health officer went out to Muka Park and measured the noise from the flying fox at 7.10 pm – 8.10 pm. The flying fox was in breach of the acceptable noise limits. Ngai Tahu Property Limited were notified of the breach of the City Plan.
- 6.6 On 22 February 2016 a second noise complaint was received by the Council's Environmental Health Officer about the noise generated by the flying fox. The Environmental Health officer measured the noise levels at 2.30 pm – 3.00 pm. The flying fox was in breach of the acceptable noise limits. Ngai Tahu Property Limited were notified of the breach of the City Plan.
- 6.7 There are no rules in the District Plan that relate to regulating noise levels from children playing in a playground or park.
- 6.8 The cable and pulley mechanism from the flying fox were removed as a result of the noise complaints, which disabled the flying fox. A different type of pulley mechanism on the flying fox was trialled at Muka Park, but the noise generated by the mechanism exceeded the noise limits from the previous model. The pulley and cable were removed. After further investigations into types of cable and pulley mechanisms it was decided in conjunction with Ngai Tahu Properties Limited, who were still managing the playground as part of the subdivision development to remove the flying fox.

- 6.9 Council staff were contacted by the people who had complained about the noise generated by the flying fox. A site meeting was held with these people at the beginning of May 2016 where staff agreed after consulting with Ngai Tahu Property Limited to put out an information flyer. The flyer advised residents that the flying fox had breached the City Plan noise standards, a different pulley system had been trialled but still failed the noise standards. Therefore the flying fox would be removed and the eastern mound supporting the flying fox pole would be reduced in height.
- 6.10 On 24 May 2016 an Information leaflet produced by the Council was delivered to residents of Prestons North. The leaflet advised the flying fox had breached the City Plan noise limits and attempts to reduce the noise had been unsuccessful. The flying fox was therefore going to be removed and the area re-landscaped.
- 6.11 Upon residents receiving notification the flying fox was to be removed the Council received over a dozen phone calls and emails complaining about the removal of the flying fox. Numerous comments were made on the Preston residents Facebook and a petition was circulated by some of the residents to keep the flying fox. All of the comments, messages and signatures on the petition wanted the flying fox to be retained. All of the comments and messages received by the Council were not part of any formal Council Staff consultation with the community.

#### **Ownership of Muka Park Playground**

- 6.12 Muka Park is located within a sub-stage of Stage 2 of the subdivision development. The timing of construction within the Stages and sub-stages of this subdivision was managed by the developer, Ngai Tahu Property Limited. The development of Muka Park including the playground was not started until the last sub-stage in Stage 2, although the planning and approval process for the park and playground had commenced during the early stages of the development.
- 6.13 A consequence of the late playground construction start and being located next to other sub-stages where residential properties had already sold, resulted in the construction of houses commencing before the playground. In subdivisions the playground is usually completed before any titles are issued or building commences of residential properties within the vicinity of a park.
- 6.14 Muka Park playground was handed over to the Council in June 2016 and the Community Board has a delegation from the Council to make alterations to any structure or area, and other landscape changes, to a Council park.

### **7. Option 1 – Permanently Remove Flying Fox and Reduce Mound to 1 Metre High (preferred)**

#### **Option Description**

- 7.1 The flying fox is permanently removed from Muka Park and the height of the southern mound supporting the flying fox pole is reduced to 1 metre above ground. The 1 metre high mound would provide to support the existing skate board area.
- 7.2 The intention is to relocate the flying fox to a new park in a nearby subdivision such as Preston Park subdivision (south of Prestons Road). It is anticipated the park in Prestons Park where the flying fox would be relocated will be completed in approximately 12 -24 months, depending upon the developer's response to the housing market.

#### **Significance**

- 7.3 The level of significance of this option is medium and consistent with section 2 of this report.
- 7.4 Engagement requirements for this level of significance will include notification to residents in Prestons North who have expressed an interest in being updated with this report.

### **Impact on Mana Whenua**

- 7.5 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.
- 7.6 Ngai Tahu Property Limited have been consulted throughout this process.

### **Community Views and Preferences**

- 7.7 This report is in response to a previous Community Board report on 6 June 2017 resulting from a breach of the City Plan noise standards of the flying fox at Muka Park. Deputations were heard by the Board on whether the flying fox should be retained or removed. The residents who have so requested, have been kept informed on the flying fox by the Community Board Advisor.
- 7.8 This option is consistent with Council's Plans and Policies

### **Financial Implications**

- 7.9 Cost of Implementation – The cost is approximately \$20,000 plus GST to remove the flying fox, reduce the mound and replant the site.
- 7.10 Maintenance / Ongoing Costs – There are no additional maintenance or on-going costs.
- 7.11 Funding source – There is no funding allocated to undertake this work.

### **Legal Implications**

- 7.12 It is illegal to operate a flying fox if it breaches the District Plan noise standards. The flying fox in the Muka Park playground can only be reinstated if it is compliant with the District Plan rules.

### **Risks and Mitigations**

- 7.13 There are two groups of residents in the Prestons North subdivision who have opposing views on whether the flying fox should be retained or removed. No matter what decision the Board makes one group will not be pleased with the Board's decision.
- 7.14 All residents will also have the opportunity to make a deputation to the Community Board if they would like to voice their concerns on the future of the flying fox in Muka Park. Any decisions made by the Board will be after all views have been considered.

### **Implementation**

- 7.15 Implementation dependencies - There is no budget allocated to remove the flying fox and mound or to reinstate the site. Funds would need to be found to be able to proceed with this option.
- 7.16 Implementation timeframe – If funds are found the flying fox should be able to be removed and the site reinstated within 4 weeks from the Board's approval.

### **Option Summary - Advantages and Disadvantages**

- 7.17 The advantages of this option include:
- Removing the risk of the Council breaching the noise rules of the District Plan
  - Remove the on-going costs and risks of needing to lock the flying fox every night.
  - Reducing the mound to 1 metre above ground level better protects privacy and amenity values for nearby properties.
  - The cost to cut the flying fox poles, return the cable and pulley system to the supplier and reduce the mound to 1 metre above ground is less than removing all the mound to ground level.
- 7.18 The disadvantages of this option include:
- Some residents will be disappointed the flying fox is removed from Muka Park.

- There will be a delay before the flying fox can be installed in a new park as subdivision construction of the Stage with the proposed park will not commence for possibly 12 -24 months.

## 8. Option 2 - Permanently Remove Flying Fox and Reduce Mound to Ground Level

### Option Description

- 8.1 The flying fox is permanently removed from Muka Park and the height of the southern mound supporting the flying fox pole is reduced to ground. The flying fox is relocated to a new park in a nearby subdivision, such as Preston Park (south of Prestons Road) subdivision.

### Significance

- 8.2 The level of significance of this option is medium and consistent with section 2 of this report.
- 8.3 Engagement requirements for this level of significance will include notification to residents in Prestons North who have expressed an interest in being updated with this report.

### Impact on Mana Whenua

- 8.4 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.
- 8.5 Ngai Tahu Property Limited have been consulted throughout this process.

### Community Views and Preferences

- 8.6 This report is in response to a previous Community Board report on 6 June 2017 resulting from a breach of the City Plan noise standards of the flying fox at Muka Park. Deputations were heard by the Board on whether the flying fox should be retained or removed. The residents who have so requested, have been kept informed on the flying fox by the Community Board Advisor.

### Alignment with Council Plans and Policies

- 8.7 This option is consistent with Council's Plans and Policies

### Financial Implications

- 8.8 Cost of Implementation – The cost is approximately \$25,000 plus GST to remove the flying fox, remove the mound and replant the site.
- 8.9 Maintenance / Ongoing Costs - There are no additional maintenance or on-going costs.
- 8.10 Funding source – There is no funding allocated to undertake this work.

### Legal Implications

- 8.11 It is illegal to operate a flying fox if it breaches the District Plan noise standards. The flying fox in the Muka Park playground can only be reinstated if it is compliant with the District Plan rules.

### Risks and Mitigations

- 8.12 There are two groups of residents in the Prestons North subdivision who have opposing views on whether the flying fox should be retained or removed. No matter what decision the Board makes one group will not be pleased with the Board's decision.
- 8.13 Residents will also have the opportunity to make a deputation to the Community Board if they would like to voice their concerns on the future of the flying fox in Muka Park. Any decisions made by the Board will be after all views have been considered.

### Implementation

- 8.14 Implementation dependencies - There is no budget allocated to remove the flying fox and mound or to reinstate the site. Funds would need to be found to be able to proceed with this option.

- 8.15 Implementation timeframe – If funding is allocated the flying fox should be able to be removed and the site reinstated within 4 weeks from the Board's approval.

#### **Option Summary - Advantages and Disadvantages**

- 8.16 The advantages of this option include:

- Noise generated from the flying fox mechanism and people using the flying fox will be alleviated.
- Complaints of people standing on the top of the mound looking into resident's properties will be alleviated by reducing the mound to ground level.

- 8.17 The disadvantages of this option include:

- Some residents will be disappointed the flying fox is removed from Muka Park.
- There are additional financial implications with reducing the mound to ground level due to the size of the mound.
- The mound is reducing the noise from the skate path, which may become more noticeable if the mound was reduced to ground level.

### **9. Option 3 – Retain Flying Fox and Lock Pulley Mechanism at Night**

#### **Option Description**

- 9.1 To retain the flying fox in its present location and lock the seat and pulley mechanism at dusk (not later than 10 pm). The noise generated by the flying fox mechanism does not comply with the City Plan night time noise standards (night-time 2200 – 0700 hours). This option would rely on a person or company locking the seat and pulley mechanism each night, before 10pm and unlocking it after 7am each morning.
- 9.2 In the early evening when the surrounding noise levels decline, such as when there are fewer cars on the roads, the noise generated by the flying fox may be perceived to be higher than the permitted daytime noise specified in the City Plan. This perception of the flying fox potentially breaching the City Plan noise standards by residents could result in the Council's Environmental Health officer(s) receiving complaints of the flying fox and being called out in the early evening to monitor the noise.
- 9.3 If the Council's Environmental Health officer(s) were called out to monitor the flying fox this is an additional cost that would need to be met by the city's ratepayers.

#### **Significance**

- 9.4 The level of significance of this option is medium and consistent with section 2 of this report.
- 9.5 Engagement requirements for this level of significance will include notification to residents in Prestons North who have expressed an interest in being updated with this report.

#### **Impact on Mana Whenua**

- 9.6 This option does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Ngāi Tahu, their culture and traditions.
- 9.7 Ngai Tahu Property Limited have been consulted throughout this process.

#### **Community Views and Preferences**

- 9.8 This report is in response to a previous Community Board report on 6 June 2017 resulting from a breach of the City Plan noise standards of the flying fox at Muka Park. Deputations were heard by the Board on whether the flying fox should be retained or removed. The residents who have so requested, have been kept informed on the flying fox by the Community Board Advisor.



### **Alignment with Council Plans and Policies**

- 9.9 This option is consistent with Council's Plans and Policies

### **Financial Implications**

- 9.10 Cost of Implementation – there are no cost implications.
- 9.11 Maintenance / Ongoing Costs – There is an on-going cost to lock up the seat and pulley mechanism in the evening and unlock it in the morning. The cost would be approximately \$2,000 – \$3,000 per annum.
- 9.12 Funding source – No funding has been allocated in the budget.

### **Legal Implications**

- 9.13 The flying fox acoustic noise readings have shown the mechanism is compliant with the City Plan noise standards during the daytime operation but is non-compliant at night. Providing the flying fox is locked up from 10.00pm to 7.00am each day it should be compliant with the City Plan noise standards.
- 9.14 The Council can enter into a legal contract with a person or company to lock and unlock the flying fox each day to meet the City Plan noise standards.

### **Risks and Mitigations**

- 9.15 There is a risk, for whatever reason, that the flying fox seat and mechanism aren't locked one or more evenings. This could result in the Council receiving complaints from the residents of excessive noise from the flying fox during the evening due to people using the flying fox when it should be locked.
- 9.16 The consequence of the flying fox being used in the evening would be the Council's Environmental Services officers are called out to measure the noise or afterhours contractors called out to lock the seat and pulley mechanism. These are additional costs to the Council and ratepayers.

### **Implementation**

- 9.17 Implementation dependencies - A person or company would be required to enter into an agreement to
- 9.18 Implementation timeframe – Approximately one to two months depending upon the suitability of a person or company to lock and unlock the flying fox.

### **Option Summary - Advantages and Disadvantages**

- 9.19 The advantages of this option include:
- The residents who enjoy using the flying fox will be able to continue using it.
- 9.20 The disadvantages of this option include:
- The flying fox may be left unlocked during an evening resulting in complaints to Council and additional costs to secure the flying fox, which have not been forecast in the operational budget.
  - The noise of the flying fox in the early evening may be perceived to be higher than the City Plan noise standards, resulting in the Council's Environmental Health officer(s) being called out and additional costs to the ratepayers for the call-out.
  - There could be continuing complaints from residents about the noise generated from the flying fox mechanism and people using the flying fox.
  - There could be continuing complaints from residents about people standing on the top of the mound looking into their properties.

- While the flying fox was locked up during the acoustic testing period, safety issues arose due to people swinging/ hanging off the seat. The seat had to be removed to prevent safety risks. Therefore even if the seat could be locked up, it could still present safety risks.
- During the acoustic testing period, the flying fox was locked up, however during that time it was found to be unlocked and required a new lock to be fitted.

## Attachments

No.	Title	Page
A <a href="#">↓</a>	Muka Park Flying Fox Noise Emissions Report	17
B <a href="#">↓</a>	Memorandum from Team Leader Environmental Health Officer - Muka Park Flying Fox - Prestons Subdivision	23

## Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

## Signatories

Author	Russel Wedge - Senior Network Planner Parks
Approved By	Andrew Rutledge - Head of Parks Mary Richardson - General Manager Citizen and Community





File Ref: AC17136 – 01 – D1

5 July 2017

Mr R. Wedge  
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PO Box 549  
Christchurch 8140

Ph 03 377 8952  
www.aeservices.co.nz  
office@aeservices.co.nz

Dear Russel,

**Re: Muka Park Flying Fox, Preston Subdivision, Christchurch  
Noise emissions from Flying Fox**

As requested, we have undertaken noise monitoring of a flying fox at 30R Raranga Street in Christchurch, with regard to compliance with the Christchurch District Plan noise limits.

## 1.0 BACKGROUND

A flying fox has been installed at a play area at 30R Raranga Street, in the Preston Subdivision in Christchurch. The flying fox comprises of an elevated platform with an approximate 50-metre-long cable running north.

The site is located within the Residential New Neighbourhood zone as defined by the Christchurch District Plan, as are all of the surrounding sites. The majority of the neighbouring sites are residential dwellings (some of which are still in construction).

We understand that the original flying fox cable and mechanism installed on the site were dismantled as they were found to breach the noise limits. A new cable and pulley mechanism has been installed and the purpose of this assessment is to determine whether their use complies with the District Plan noise limits.

## 2.0 CHRISTCHURCH DISTRICT PLAN NOISE RULES

The noise limits for the Residential New Neighbourhood zone are outlined in *Christchurch District Plan, Chapter 6 General Rules and Procedures, 6.1 Noise, 6.1.5 Zone Specific Noise Rules, 6.1.5.2 Noise standards, 6.1.5.2.1 Zone noise limits outside the Central City*, and are as follows:

Daytime (0700 – 2200 hours)	50 dB $L_{Aeq}$
Night-time (2200 – 0700 hours)	40 dB $L_{Aeq}$ / 65 dB $L_{Amax}$

Section 6.1.4.1 of the District Plan states that noise shall be measured and assessed in accordance with NZS 6801:2008 *Acoustics – Measurement of environmental sound*, and assessed in accordance with NZS 6802:2008 *Acoustics – Environmental noise*, except that provisions in NZS 6802 referring to Special Audible Characteristics shall not be applied.

NZS6802:2008 *Acoustics – Environmental noise* includes a number of key factors that are to be taken into account when undertaking an assessment. The most relevant sections of NZS6802:2008 for this assessment are attached as Appendix A, and are summarised as follows:

AC17136 – 01 – D1: Muka Park Flying Fox, Preston subdivision, Christchurch: Noise emissions

- Section 6.4.1 of the Standard describes how after a 15-minute measurement has been completed during a relevant and representative daytime period, an adjustment may be applied if the sound under investigation is not present for the entire daytime period. In this case the 'daytime' period to be considered is the entire 15-hour period from 0700 to 2200 hours on any day.
- Section 6.4.3 states that if the sound is received for less than 50 % of the daytime period a -3 dB adjustment may be applied to the measured 15 minute average noise level.
- Section 6.4.6 of the Standard also states that where the level of sound reduces significantly for large periods of time but the sound does not switch off completely some adjustment is also appropriate. The averaging method outlined in the Standard in that situation effectively amounts to considering the 15-hour daytime  $L_{Aeq}$  level, and applying an adjustment to the measured 15-minute average noise level of up to -5 dB, depending on how low the 15-hour average noise level is.

Based on the above, for a sound source such as a flying fox where the sound under investigation may not necessarily be present continuously during the daytime period, and where significant variations in noise level may be expected when the sound is present (depending on the weight and behaviour of the user), we observe the following:

- If the measured noise level during all relevant and representative 15-minute periods is equal to or less than 50 dB  $L_{Aeq}$ , it will be possible to conclude that the sound complies with the District Plan daytime limits with some certainty.
- Similarly, if the measured noise level during any relevant and representative 15-minute period exceeds 55 dB  $L_{Aeq}$ , it will be possible to conclude that the sound does not comply with the District Plan daytime limits with some certainty.
- However, if the measured noise level during any relevant and representative 15-minute period is between 50 and 55 dB  $L_{Aeq}$ , whether or not the sound complies with the District Plan daytime noise limits will depend on the duration adjustment which is appropriate under section 6.4 of NZS6802:2008. As described above, determination of what adjustment (if any) may be appropriate requires knowledge of a number of additional factors, such as the total duration of use of the flying fox during the daytime period on the day that the 15-minute measurement was undertaken, and the variation in noise levels on that day when the flying fox was being used.

### 3.0 NOISE MEASUREMENTS

Measurements were conducted during the evening period on a Wednesday. Details of the measurements completed in accordance with NZS 6801:2008 *Measurement of Sound* and conducted on the 28<sup>th</sup> of June 2017 are as follows:

<b>Date and time:</b>	1700 to 1830 hours on Wednesday the 28 <sup>th</sup> of June 2017
<b>Personnel:</b>	Clare Dykes, Acoustic Engineering Services
<b>Weather:</b>	Light southeast wind, mild temperature (11°C)
<b>Instrumentation:</b>	Brüel & Kjær Type 2250 Class 1 Sound Analyser (Serial Number 3008199, last calibrated 22 March 2017) Brüel & Kjær Type 2250 Class 1 Sound Analyser (Serial Number 2630291, last calibrated 29 March 2016) Brüel & Kjær 4231 Acoustic calibrator (Serial Number 3011404, last calibrated 22 March 2017)

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**Field calibration:** The analyser was calibrated before measurements, and the calibration checked after measurements. No significant change was noted (<0.1 dB).

**Settings:** A weighting (dBA), fast response.

During the measurement period, the flying fox was used continuously. This involved a person riding the flying fox for approximately 10 to 15 seconds, and then dragging the seat back to the platform, which could take up to one minute. Due to the cyclic nature of the noise, the measurement period was determined by the time taken for the  $L_{Aeq}$  value to become steady in accordance with NZS 6801:2008 (typically 7 to 15 minutes). The purpose of the measurements was to capture the noise emissions from the mechanism in operation.

Other ambient noise in the vicinity included children on other areas of the playground (particularly the basketball court), traffic from roads, aircraft, and the like.

Three measurement positions at the boundaries of sites in the vicinity were considered. A logger was set up along the northeast residential property boundary, with handheld noise measurements taken at the nearest corner of 39 Taiore Crescent, and on the opposite side of Raranga Street. Noise measurement positions are shown in figure 3.1 below.



Figure 3.1 – Noise measurement locations

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The resultant measured noise levels are shown in table 3.1 below.

Table 3.1 – Measured noise levels

Position	Measurement period	Noise level (dB L <sub>Aeq</sub> )
A	1718 – 1732 hours	46
	1733 – 1747 hours	45
	1748 – 1802 hours	44
	1802 – 1817 hours	48
B	1718 – 1732 hours	47
	1759 – 1806 hours	49
	1810 – 1818 hours	53
C	1743 – 1755 hours	47

Key observations / comments are as follows:

- All of the noise measurements exceed the night-time noise limit of 40 dB L<sub>Aeq</sub>.
- The majority of the noise levels recorded (except for the last period at 39 Taiore Crescent) were lower than 50 dB L<sub>Aeq</sub>.
- The later measurement periods were dominated by heavier adults continuously using the flying fox, which increased the noise levels. This is in line with the residents' comments contained in the Russell Malthus letter (dated the 23<sup>rd</sup> of June 2017) which states *'the residents have commented that adults can make a difference of about 5 dB, based on their own observations and informal measurements at another park.'*
- Over the course of the measurements, the flying fox developed a 'squeak' that was particularly apparent when the user was dragging the seat back to the elevated platform. We have been advised that this is able to be corrected. This would reduce the noise levels.
- The measured level of 53 dB L<sub>Aeq</sub> was for a period where both heavier adults were using the flying fox, and the 'squeak' was most apparent.

Based on the above, when considering the discussion regarding duration adjustment in section 2.0, it can be concluded with some certainty that on the day of the trial (Wednesday the 28<sup>th</sup> of June 2017), noise emissions from the flying fox complied with the District Plan daytime noise limits. This is because the flying fox was only available for use for a 90-minute portion of the daytime period, so clearly a duration adjustment of more than -3 dB can be applied to the highest measured level of 53 dB L<sub>Aeq</sub> in accordance with section 6.4.3 of NZS6802:2008.

However, these results confirm that if the 'squeak' is not corrected, and if heavier adults use the flying fox for extended continuous periods during the daytime (for example, continuously for over 8 hours), then it is technically possible that non-complying noise could be generated on some other day.

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Please do not hesitate to contact us to discuss further as required.

Kind Regards,



Clare Dykes  
MBSc, MASNZ  
**Acoustic Engineering Services**

5 July 2017

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APPENDIX A – Excerpt from NZS6802:2008

6.4 DURATION

- 6.4.1 If a sound is not present all of the time it is likely to create lesser annoyance than the same sound if it were continuously present. In this Standard, an adjustment to representative sound levels of up to 5 dB shall be used to take this into account. However, because of the importance of protecting sleep, no adjustment is allowed during a prescribed time frame defined in a consent condition, rule or national environmental standard as night-time (for example, 2200 h to 0700 h the following day).

*C6.4.1 In this Standard a duration adjustment is required if the sound under investigation is intermittent during the prescribed time frame. The more the sound is present, the less the value of the duration adjustment. Continuous sound warrants no adjustment.*

*Sleep disturbance is related to both the level and number of intrusive events and therefore no duration adjustment is permitted at night.*

- 6.4.2 In some exceptional circumstances where a local authority has determined that sleep protection is essential during daytime hours in a locality, a duration adjustment may be prohibited for daytime hours as well as night-time hours.
- 6.4.3 The rating level shall be determined by subtracting a value of duration adjustment given in table 2 from the representative level. No duration adjustment is to be made at night.

Table 2 – Duration adjustments

Percentage duration of specific sound in the prescribed time frame	Adjustment value
Less than 80%	1 dB
Less than 60%	2 dB
Less than 50%	3 dB
Less than 40%	4 dB
Less than 30%	5 dB

- 6.4.4 In determining the percentage duration of the specific sound, the total duration should be based on the longest typical durations within the prescribed time frame.
- 6.4.5 When using the detailed method, if individual occurrences of specific sounds are shorter than 15 minutes, then the duration of each occurrence shall be taken as 15 minutes for the purposes of calculating the total duration of the specific sound.
- 6.4.6 For situations where the level of the sound reduces significantly for large periods of time but the sound does not switch off completely, some adjustment to account for this relief to persons exposed to the sound is also appropriate. In these cases the energy average of the sound under investigation should be calculated over the entire prescribed time frame. The rating level shall be the greater of this average value or the representative level over the reference time interval –5 dB.



## Memorandum

**To:** Russel Wedge – Senior Network Planner Parks  
**From:** Nigel Grant – Team Leader Environmental Health  
**Date:** 12 September 2017  
**Subject:** Muka Park Flying Fox, Prestons Subdivision.

### Introduction

The purpose of this memo is to provide comment on the Acoustic Engineering Services report on sound levels recorded during the trialling of an alternative flying fox mechanism at Muka Park in June 2017. The report was commissioned by the Assets and Management team in response to the Coastal-Burwood Community Board resolution (CBCB/2017/00095) that dependent on the outcome of the alternative flying fox mechanism trials there be advice back to the Board or further community consultation. This memo was also requested by the Assets and Management team. The findings of the report prepared by Acoustics Engineering Services following consideration of the readings taken was that the operation of the flying fox complies with the daytime noise standards set by the District Plan but that its operation would not meet the night time standards. Therefore in regard to the Boards resolution, the trial has not been completely successful in meeting the District Plan Rules.

### Background

Environmental Health staff became aware of noise issues regarding the Flying Fox at Muka Park in February of 2016. An onsite assessment was carried out on 15<sup>th</sup> of February and a sound level reading of 57.3 dB Laeq was recorded while the flying fox was in use for 2 cycles. At 7:20pm in the evening the noise level without the flying fox operating was 38 dB Laeq. Based on a reading of 57.3, which was considered to be both above the plan level and also subjectively excessive, an Excessive Noise Direction was issued under section 327 of the Resource Management Act. This required that the use of the apparatus cease for a period of 72 hours and gave a clear message that work was required to reduce the noise.

An alternative flying fox trolley was fitted and further tests were carried out at 2:30 pm on the 22<sup>nd</sup> February 2016. Over a period of 3 cycles the noise was measured at 65.4 dB Laeq. At the same time, without the flying fox being used, noise in the area was measured at 41db Laeq.

The noise was still clearly above the City Plan daytime limit of 50. Kerry Watson of Ngai Tahu issued an instruction on the 23<sup>rd</sup> February 2016 for the Flying Fox apparatus to be taken down.

### Comment on Noise Measurements By Acoustic Engineering Services

As part of the process of investigating if the flying Fox could be re-instated, the Parks Unit commissioned Acoustic Engineering Services to carry out sound level readings of an alternative flying fox mechanism. A copy of these readings was provided to the Environmental Health team for comment. It is noted that:

- The readings were conducted on the 28<sup>th</sup> June 2017.
- At the time the readings were taken, a group of residents not wanting the apparatus to be re-instated commissioned readings to be taken by another acoustics consultant.
- It is understood that the readings measured by the respective consultants are consistent.

Acoustic Engineering Services provided a report to Council dated 5<sup>th</sup> July 2017. The report, which forms part of Council's records stated that –

The residences in the neighbourhood around the flying fox/Muka Park are zoned “Residential New Neighbourhood”. The noise standards are –

Daytime (0700 – 2200hours) 50dB Laeq

Night-time (2200 – 0700 hours) 40dB Laeq/65/dB Lmax

It is useful to point out that the units of measurements are in decibels which is the standard unit of sound measurement and that it is taken on the A weighted scale which best emulates the human ears response. Leq is the averaging of the sound level energy over a period of time so gives an average of the sound level recorded over that period. Lmax refers to the maximum sound level recorded and applies to night time readings in this case and is intended to avoid sleep disturbance from sudden loud noises.

Noise is to be measured in accordance with the current NZ Standard NZS6801:2008 but the report points out that the standard allows for a penalty to be applied to sounds which have a special audible characteristic, but that the District Plan does not allow for these penalties to be applied.

The District Plan does allow for the clause which allows for an adjustment (downwards) to be made if the noise being measured is not likely to be present for the whole of a daytime period. For example, a reduction of -3 could be applied if the noise is present for less than 50% of the time.

The measurements are set out in the report and range between 46 – 48 and 47 – 53 at two residential sites closest to the flying fox location. All readings were in dB Laeq.

The report introduces the section of the NZ Standard which allows for a minus 3 adjustment due to the amount of time the noise goes for. It is estimated that the operation of the flying fox would not go for more than 50% of the whole daytime period (0700 – 2200) so that the sound level reading which did exceed the daytime standard of 50 could still be considered to be complying, after the application of the minus 3 adjustment.

It is useful to consider though that whilst the flying fox would be unlikely to be operated for long periods over the whole day, use in the late afternoon and evening could be continuous. This is the time period when the park would get most of its use and nearby residences would be expecting to enjoy the amenity of their properties.

The readings make it clear operation of the flying fox apparatus at night cannot comply. Restricting its use at night has difficulties –

- ☐ Council will need to arrange for the flying fox to be locked up every night.
- ☐ Experience with locking up of Council's buildings and gates indicates that for a variety of reasons from time to time locks are either left undone or re-opened.
- ☐ There are ongoing costs for securing the flying fox and also responding to complaints when it has not been secured.
- ☐ There is a reputational risk for Council both when the apparatus is not locked which upsets neighbours, and then has to use security guards to arrive and stop people using it afterhours.

From the readings taken, the flying fox apparatus does comply with the District Plan day time standards. However the noise levels are very close to the maximum permitted and in one case relies



on an adjustment factor. This means that there is little margin for error if the continued use of the apparatus results in wear and tear increasing the operational noise levels.

It is referred earlier to noise levels in this area being in the range of 38 - 41 dB laeq. These are considered by Council Officers with experience in environmental noise to be typical for a residential area at that time of day. Operation of the flying fox will result in these levels being exceeded by 10 decibels or more above what would typically be expected in a residential area.

#### **Conclusion**

Sound level readings taken on the 28 June 2017 and the subsequent acoustics report suggest that the operation of the flying fox will meet the day time noise requirements of the District Plan. However, the apparatus will not meet the night time standards. Therefore in terms of Boards resolution CBCB/2017/00095, the trial of an alternative flying fox mechanism has not been completely successful.

Environmental Health staff note that nearby residents may still find the noise disturbing for the reasons that –

- Compliance is relying on an adjustment factor which takes the whole 15 hour daytime period into account.
- Sound levels from the operation of the flying fox are significantly higher than background sound levels.
- Restricting night-time use will be difficult, as well as being an ongoing cost to council.

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## 8. Elected Members' Information Exchange

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This item provides an opportunity for Board Members to update each other on recent events and/or issues of relevance and interest to the Board.

Item 8