PALMERSTON NORTH CITY COUNCIL

AGENDA

PLAY, RECREATION & SPORT COMMITTEE

2PM, WEDNESDAY 21 OCTOBER 2020

RUSSELL LOUNGE, CENTRAL ENERGY TRUST ARENA,
61 PASCAL STREET, PALMERSTON NORTH.

MEMBERSHIP

Leonie Hapeta (Chairperson)
Billy Meehan (Deputy Chairperson)
Grant Smith (The Mayor)

Brent Barrett
Zulfiqar Butt
Vaughan Dennison
Lew Findlay QSM
Patrick Handcock ONZM
Karen Naylor
Bruno Petrenas

Agenda items, if not attached, can be viewed at:

pncc.govt.nz | Civic Administration Building, 32 The Square
City Library | Ashhurst Community Library | Linton Library

Heather Shotter

Chief Executive, Palmerston North City Council

Palmerston North City Council

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PALMERSTON NORTH CITY COUNCIL

PLAY, RECREATION & SPORT COMMITTEE MEETING

21 October 2020

ORDER OF BUSINESS

1. Apologies

2. Notification of Additional Items

Pursuant to Sections 46A(7) and 46A(7A) of the Local Government Official Information and Meetings Act 1987, to receive the Chairperson's explanation that specified item(s), which do not appear on the Agenda of this meeting and/or the meeting to be held with the public excluded, will be discussed.

Any additions in accordance with Section 46A(7) must be approved by resolution with an explanation as to why they cannot be delayed until a future meeting.

Any additions in accordance with Section 46A(7A) may be received or referred to a subsequent meeting for further discussion. No resolution, decision or recommendation can be made in respect of a minor item.

3. Declarations of Interest (if any)

Members are reminded of their duty to give a general notice of any interest of items to be considered on this agenda and the need to declare these interests.

4. Public Comment

To receive comments from members of the public on matters specified on this Agenda or, if time permits, on other Committee matters.

(NOTE: If the Committee wishes to consider or discuss any issue raised that is not specified on the Agenda, other than to receive the comment made or refer it to the Chief Executive, then a resolution will need to be made in accordance with clause 2 above.)

5. Deputation - New Zealand Super 6's Golf Tournament Page 7

Deputation, by Warren Collett and Ewan Westergaard. Manawatū Golf Club

6. Deputation - WBSC U18 Men's Softball World Cup Page 9

Deputation, by Vaughan Dennison, Chair Softball 2020 and Tony Giles, CEO, Softball NZ.

7. Confirmation of Minutes Page 11

"That the minutes of the Play, Recreation & Sport Committee meeting of 17 June 2020 Part I Public be confirmed as a true and correct record."

8. Petition - Construction of the Palmerston North Children's Skatepark. Page 17

Presentation, by Leo Mwape Matongkanshi.

REPORTS

9. Hokowhitu Lagoon Water Quality - Investigation and Monitoring Progress Report - October 2020 Page 29

Memorandum, presented by Robert van Bentum, Manager - Transport and Infrastructure.

10. Artificial Turf - Needs Assessment Page 51

Memorandum, presented by Julie Macdonald, Strategy and Policy Manager.

11. Proposal from Sport Manawatū to use carried-forward unspent Sports Event Partnership Funds Page 115

Memorandum, presented by Julie Macdonald, Strategy & Policy Manager.

12. Committee Work Schedule Page 119

13. Exclusion of Public

To be moved:

"That the public be excluded from the following parts of the proceedings of this meeting listed in the table below.

The general subject of each matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under Section 48(1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution are as follows:

General subject of each matter to be considered		Reason for passing this resolution in relation to each matter	Ground(s) under Section 48(1) for passing this resolution
14.	**Proposal from Sport Manawatū to repurpose carried-forward 2019/20 Sports Event Partnership Funds for its bid to host a national tournament**	**Third Party Commercial**	**s7(2)(b)(ii)**

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public as stated in the above table.

Also that the persons listed below be permitted to remain after the public has been excluded for the reasons stated.

[Add Third Parties], because of their knowledge and ability to assist the meeting in speaking to their report/s [or other matters as specified] and answering questions, noting that such person/s will be present at the meeting only for the items that relate to their respective report/s [or matters as specified].

DEPUTATION

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Deputation - New Zealand Super 6's Golf Tournament**

RECOMMENDATION TO PLAY, RECREATION & SPORT COMMITTEE

1. That the Play, Recreation & Sport Committee receive the deputation for information.

SUMMARY

Warren Collett and Ewan Westergaard from Manawatū Golf Club will speak to the Committee on the success of the New Zealand Super 6's Golf Tournament held in March 2020.

ATTACHMENTS

Nil

DEPUTATION

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Deputation - WBSC U18 Men's Softball World Cup**

RECOMMENDATION TO PLAY, RECREATION & SPORT COMMITTEE

1. That the Play, Recreation & Sport Committee receive the deputation for information.

SUMMARY

Softball 2020 was the Local Organising Committee responsible for delivering the WBSC U18 Men's Softball World Cup in Palmerston North, 22 February - 1 March 2020,

Vaughan Dennison, Chair - Softball 2020 and Tony Giles, CEO Softball NZ will present the key highlights and acknowledgements that contributed to the success of this event, plus share insights towards what future opportunities now exist.

ATTACHMENTS

Nil

PALMERSTON NORTH CITY COUNCIL

Minutes of the Play, Recreation & Sport Committee Meeting Part I Public, held in the Elwood Room, Conference & Function Centre, 354 Main Street, Palmerston North on 17 June 2020, commencing at 9.00am

Members Present: Councillor Leonie Hapeta (in the Chair), The Mayor (Grant Smith) and Councillors Brent Barrett, Zulfiqar Butt, Vaughan Dennison, Lew Findlay QSM, Patrick Handcock ONZM, Billy Meehan, Karen Naylor and Bruno Petrenas.

Non Members: Councillors Susan Baty, Rachel Bowen, Renee Dingwall, Lorna Johnson, Aleisha Rutherford and Tangi Utikere.

Apologies: Councillor Tangi Utikere

12-20 Apologies

Moved Leonie Hapeta, seconded Billy Meehan.

The **COMMITTEE RESOLVED**

1. The Committee received the apologies.

Clause 12-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

13-20 Presentation - Netball Manawatu

Chris Gunn, General Manager and Deb Gurney, Chairperson made a presentation to the Committee on the status of Netball Manawatū.

They made the following comments:

Netball participation numbers are stable, there is a desire to keep competitions local to encourage participation.

Fully supportive of working with other sport codes, Netball Manawatū is taking part in the 5 code school holiday programme.

Fortunate to have a number of sponsors that provide not only financial but in-kind support.

Open to the idea of sharing facilities with other codes, the issue is that

everyone wants to use the facilities in the late afternoons and early evenings which can cause scheduling problems.

The Arena is used for the Premiere and Year 5 and 6 leagues. It is a great facility but it can be disruptive when local netball games have to be moved because of international events. This can make organising club competitions difficult.

It would be great to have more indoor courts available in the city.

Moved Leonie Hapeta, seconded Billy Meehan.

The **COMMITTEE RESOLVED**

1. That the Play, Recreation & Sport Committee receive the presentation for information.

Clause 13-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

14-20 Presentation - Combat Sports in the Manawatu

Filipo Saua, Coach and Charmaine Saua, Director of SnapBACK Gym made a presentation to the Committee.

They made the following comments:

The Gym is more than a boxing club. It transforms the mental wellbeing and attitudes of disadvantaged youths.

Boxing facilitates all walks of life, the gym specialises in making sure Māori and Pacifika youth feel that they have a sense of belonging and connection.

The youth classes use boxing to develop trust, instil honesty, and teach young people tools to believe in themselves. The focus is on developing social skills, self-esteem, increasing achievement through schooling and turning young people into adults that can give back to their community. The gym is concerned with teen suicide and actively work to prevent it by improving the mental wellbeing of the community.

The Gym has a good relationship with health providers and the Police who often referred young people to them.

The SnapBACK Gym is a charitable trust and is run by volunteers. Raising funds is a constant issue. Sport Manawatū provides support and the Gym has applied for funding through the Active Communities Fund.

The Gym would like to raise funds to buy a van to collect and drop off kids before and after their boxing session.

In terms of financial support, it would be great to have assistance with rent, equipment and transportation. Sport Manawatū can contribute towards equipment but not operational expenses.

The Committee ask officers to help the SnapBACK Gym with providing mentoring and assistance in filling out funding applications.

Moved Leonie Hapeta, seconded Billy Meehan.

The **COMMITTEE RESOLVED**

1. That the Play, Recreation & Sport Committee receive the presentation for information.

Clause 14-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

15-20 Confirmation of Minutes

Moved Leonie Hapeta, seconded Brent Barrett.

The **COMMITTEE RESOLVED**

1. That the minutes of the Play, Recreation & Sport Committee meeting of 18 March 2020 Part I Public be confirmed as a true and correct record.

Clause 15-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

16-20 Public Comment

Grant Taylor, President of Victoria Esplanade Scenic Railway spoke in support of their submission to the options outlined in Item 8 Victoria Esplanade Park Road entrance and Cook Street/Park Road Intersection options (clause 16)

He made the following comments:

The Victoria Esplanade Scenic Railway does not support any option in respect to provision of parking. An increase of 5 carparks (Option One) is not enough and does not provide a vehicle link to the existing carpark at Victoria

Esplanade Station.

Landscaped hard surfaced parks should be created in the grass area to provide for the large number of visitors. This parking should be linked to the parking by the Victoria Esplanade Railway Station.

The established car park around the railway also needs replacing.

Moved Leonie Hapeta, seconded Billy Meehan.

The **COMMITTEE RESOLVED**

That the public comment be received for information.

Clause 16-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

17-20 Victoria Esplanade Park Road entrance and Cook Street/Park Road Intersection options

Kathy Dever-Tod - Manager Parks and Reserves and Aaron Philips, Senior Parks Planner presented the report. Officers explained that Option One was the best fit to meet the requirements of the Strategic Plan, stakeholder feedback from the Victoria Esplanade User Group and available budget.

A motion to seek an alternative option was lost because the Committee felt the report provided enough information to make a decision.

Moved Leonie Hapeta, seconded Billy Meehan.

The **COMMITTEE RECOMMENDS**

1. That the report entitled "Victoria Esplanade Park Road entrance and Cook Street/Park Road intersection options", dated 17 June 2020, be received.
2. That Council approve Scenario A for the controlled intersection upgrade of Cook Street and Park Road, which includes a traffic signal upgrade and closing the access from Nathan Place to Park Road on a temporary basis to assess the impacts, before a decision is made to proceed with the permanent closure.

Clause 17.1 and 17.2 above were carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

Moved Grant Smith, seconded Vaughan Dennison.

3. That Council approve Option One for the Park Road entrance reconfiguration to the Victoria Esplanade, which includes a replacement car park, as detailed in this report.
4. That Council note that Victoria Esplanade Park Road entrance and Cook Street/Park Road intersection projects will be tendered together to try and obtain cost savings for both projects, to remain with the current budget provision.
5. That Council note that the results of the tender will be reported to the Finance and Audit Committee.

Clause 17.3 to 17.5 were carried 11 votes to 3, with 1 abstention, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Susan Baty, Rachel Bowen, Vaughan Dennison, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor and Bruno Petrenas.

Against:
Councillors Brent Barrett, Renee Dingwall and Aleisha Rutherford.

Abstained:
Councillor Zulfiqar Butt.

Note:

Moved Aleisha Rutherford, seconded Leonie Hapeta.

On a motion: "That the Chief Executive report back on an alternative option encompassing the following features, and that this option be assessed against the criteria included in clause 5.4 of the officer's report titled "Victoria Esplanade Park Road Entrance and Cook Street/ Park Road Intersection Options":

a/ providing distinct separation between Esplanade Scenic Drive and the carpark areas near Park Road entrance and Esplanade Scenic Railway station

b/ using the majority of the existing Esplanade Scenic Drive as the main motor vehicular route into the Esplanade from Park Road

c/ not proceeding with an additional road on the sightline

d/ advancing the lower cost option to reconfigure and improve access and safety near the Esplanade Scenic Railway station

e/ preserving heritage value of the Park Road entry to Victoria Esplanade Drive

The motion was lost 5 votes to 9, with 1 abstention, the voting being as follows:

For:
Councillors Leonie Hapeta, Brent Barrett, Renee Dingwall, Bruno Petrenas and Aleisha Rutherford.

Against:
The Mayor (Grant Smith) and Councillors Susan Baty, Rachel Bowen, Vaughan Dennison, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan and Karen Naylor.

Abstained:
Councillor Zulfiqar Butt.

18-20 **Linklater Reserve Development Plan Implementation Update**

Memorandum, presented by Kathy Dever-Tod - Manager Parks and Reserves.

The Committee congratulated the officers involved in the work done to transform Linklater Reserve. It is a fantastic destination park.

Moved Leonie Hapeta, seconded Billy Meehan.

The **COMMITTEE RESOLVED**

That the update on the Linklater Reserve Development be received.

Clause 18-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

19-20 **Committee Work Schedule**

Moved Leonie Hapeta, seconded Aleisha Rutherford.

The **COMMITTEE RESOLVED**

1. That the Play, Recreation & Sport Committee receive its Work Schedule dated June 2020.

Clause 19-20 above was carried 15 votes to 0, the voting being as follows:

For:
The Mayor (Grant Smith) and Councillors Leonie Hapeta, Brent Barrett, Susan Baty, Rachel Bowen, Zulfiqar Butt, Vaughan Dennison, Renee Dingwall, Lew Findlay QSM, Patrick Handcock ONZM, Lorna Johnson, Billy Meehan, Karen Naylor, Bruno Petrenas and Aleisha Rutherford.

The meeting finished at 3.44pm.

Confirmed 21 October 2020

Chairperson

PRESENTATION

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Petition - Construction of the Palmerston North Children's Skatepark.**

FROM: **Leo Mwape Matongkanshi**

RECOMMENDATIONS TO PLAY, RECREATION & SPORT COMMITTEE

1. **That the Play, Recreation & Sport Committee receive the petition for information.**

SUMMARY

Petition requesting the construction of a children's skatepark will be presented by Leo Mwape Matongkanshi

The petition is as follows:
I, by signing this petition is voicing my support for the construction of a new skate park for the younger children of Palmerston North. We the people believe that the skatepark has become a hazardous area for not only our younger children, but our youths and other users of the skatepark. We sign this in the hopes it will reach our council and our voices be heard as is our right under Section 14 of the New Zealand Bill of Rights Act 1990. In unison we propose the construction of a new skatepark specifically for children as a safety precaution for all.

Signed by 101 people.

Note: To protect the privacy of the young people who have signed this petition it has not been attached.

ATTACHMENT

1. Background Information - Petition - Children's Skatepark ⇩

Skatepark Proposal

He aha te kai o te Rangatira?
He Korero, He Korero, He Korero.

So in unison, we present to you or voices.

The past few years has come to see the recreational sport of skating experience a great renaissance. Skating has come to affect not only skaters, but now the world around them in all aspects. Even the fashion industry has come to be influenced by skating. The clothes and shoes people wear on the street are skating clothes. Big brands such as Gucci, Supreme, Louis Vuitton and many more are producing more and more clothes like these to supply the public demand. As skating culture grows, so does the number of skaters.

Over the years the number of people flocking to their local Skateparks has increased exponentially. We in the beautiful city of Palmerston North are very fortunate as our Skatepark is known all around the North Island as one of the best there is. The Skatepark is even considered by some to be a tourist attraction in the city, and for good reason. User numbers are at record highs and the people know it. On the average day it is not uncommon to meet people who have driven here to use it from even the wider Manawatu and even parts of the Wellington region and the capital itself.

As an Immigrant to New Zealand and specifically Palmerston North, I have noticed that the Skatepark is one of the most diverse places in the city. It attracts people of all ages, genders, races, cultures, and walks of life. The Skatepark has provided me with all sorts of opportunities and experiences I never would have had anywhere else. I have seen people form relationships thought impossible, I've seen people learn from each other, I've seen my own confidence and the confidence of others grow. All there, at the Skatepark, as many have come to love the Skatepark as a home, and the people as a community. As my community.

Yet with the growth in foot traffic, the dangers and frequencies of collisions rise. For anyone who visits the Skatepark on a regular basis whether they be a skater or observer a common theme is noticeable. A younger child is hit or nearly hit by an older skater. The occurrence of such events can leave children, skaters or parents traumatised to the point that they don't want to be there anymore or feeling unpleasant about their time there. Some accidents have left people in hospital and seriously injured. The accidents can also shatter confidence in unrepairable ways. As a Skatepark is all concrete any accident could be fatal and knocks to the head could even lead to a premature death.

Such is the intensity of the impending threat at our beloved 220 Church St.

This is why I wrote this. This is why you are here where you are, reading this document. To protect our city, to protect our people. Walking around the Skatepark this issue was brought to my attention by the skaters all around me. At the Skatepark the issue of accidents between younger children and older skaters is a hot topic and likely to be the most spoken about subject on the park. After meeting with many skaters a common solution arose among us. That solution is why I'm here. As to represent my brothers and sisters in wheels.

Facts must always be presented as opinion is questionable but facts cannot be fought. It was with this philosophy in mind that I took a survey regarding our current debacle with forty skaters by random selection. The tally chart results for the survey can be found near the back of this folder just in front of the petition. Every question on the survey was answered on a scale of 1-5. The survey contained 5 questions which were as states below:

- **Do you feel it is safe having children playing on the park?**
- **Do you find that the amount of children playing around make your time here unpleasant?**
- **Do you find it hard to keep track of where the children are because of how much they move?**
- **How often do you see a close call involving children when you're here?**
- **Have you ever had a close call involving children?**

After the end of surveying all forty skaters, the results were as I thought yet also much that I did not anticipate. When asked if they found it safe having children (specified to them as 10 and under) on the park the vast majority said they did not find it safe at all having children on the park. The number who answered this totaled 45%. Then I asked them if the amount of children playing around made their time at the Skatepark unpleasant. To my disheartenment 17 of them (42.5%) claimed that their time has become quite unpleasant due to the amount of children at the park.

Being at the park I also found that multiple of the accidents were due to skaters, even though trying their hardest not to, being caught by surprise as they did not see the children coming. I found that this was due to the speed and randomness at which the children move. Thus the cause for my third question which asked if they found it hard to keep track of the children because of how fast they move. And out of the 40 again 45% was the majority, answering that they found it very hard to do as such.

So after establishing all this, naturally the next two questions to follow inquired how often they see a close call involving children when they come to the Skatepark and if and how many close calls they have had themselves. The results were as follows. In the first question the majority claimed they saw a close call every time they are at the Skatepark. The number of people who answered totaled at 57.5%. And saddest part was that the remaining 42.5% was not spread throughout the rest of the options but instead all answered that they saw close calls most times they were there. But even this was not the worst to come. On the following question which asked if they had ever had a close call involving children themselves 12.5% said they had between 5-10 and that, rather depressingly, was the lowest amount claimed by anyone. 15% said they had over 10 and a shocking 72.5% said they have had countless close calls with children. Therefore, the highest percentage for one answer in a question.

Tell me, with numbers like these how can one not expect casualties in the very near future. Lives are on the line!
Such is the intensity of the impending threat at our beloved 220 Church St.

Whilst others may not even be aware, for the skaters this is a constant reality. The skaters know the severity of our situation. Understandably frustration is mounting in our community. The Skatepark is a safe haven, a home, and yet we live in fear of our safety. We don't want to hit the children yet understand that even in incidences when the children are in the wrong the responsibility will lay on our shoulders. The skaters are constantly looking out for children in the knowledge that if they do collide with the children the child is more likely to get the shorter end of the stick to speak metaphorically.

The skaters do care. Yet for some reason there are people still under the sad and rather old stereotype that skaters are all thugs who drink, smoke, and graffiti. I tell you now from my experiences with fellow skaters this is not in the slightest true. Some of the most compassionate people you will ever meet you may meet at the Skatepark.

Parents are more and more bringing their younger children to the Skatepark to play rather than other places. They find that their children are getting a good amount of sunshine and exercise whilst having even more fun than in other places such as an average playpark or the pools and best of all its all free! Why would they not bring their child? For some reason though, some parents think it adequate for them to have their children virtually unsupervised and instead just stare down at their phones. And then there are the parents who go on the other extreme end of the line. These are the parents who walk almost hand in hand with their children all around the Skatepark. While their intentions are honorable, their actions create a hazardous environment in a way that only puts them as well in danger.

For parents who stay more moderate than this there is no guarantee for safety still, which there could never be on any Skatepark. Still for them they have no control in the event of a crash. Even if they see it coming beforehand and call out to their child their powers are very limited.

On the side of the children, they're just kids. Most times they aren't even aware of what they're doing. They are just having fun and normally, as it would do with a child, the epiphany that they should look around before they speed off. I have even found myself being cut off by children appearing from my blindside especially when using the pump track at the back of the park. They normally even hurt themselves as they see the bigger kids doing tricks using obstacles much too advanced for their skill level and decide to try it for themselves such as trying to 'drop in' the bowl. They also love to watch sometimes too closely and have even been known for being hit by skaters coming out of the bowl. They sometimes even fall in the bowl accidentally. It's much more than just issues involving the bowl but I used it only because it is a good example for many of these issues

So this is the situation. The older skaters are unhappy and having issues with the lack of safety due to the younger children. The rising number of close calls and collisions has made them skeptical of their safety and an overwhelming feeling of anxiety has consumed their hearts. The parents have an ever growing concern for the safety of their children while the children themselves continue to cause havoc without even knowing it. Tension is building and is slowly turning to verbal violence between the sides all of whom have their reasons to be enraged. As we speak, a great aura of unrest encompasses the Palmerston North Skatepark.

Such is the intensity of the impending threat at our beloved 220 Church St.

But what could be the solution to such a dilemma? Many people would argue the simplicity of taking out the children by directly banning them from the Skatepark. I think not. Resolving to such means is immoral and unjust. The younger children though unknowingly a problem should still have a place to skate. As much as it is a home for us so is it for them. The children of Palmerston North love the times of leisure they spend at the Skatepark. It is a place of joy so much so that you may almost never see a sad child at the park. The rights to such liberties should not and cannot be taken from any human being and there should be no reason even to state these as they are the basic principles we as a world have come to treasure. To quote Thomas Jefferson in the U.S Declaration of Independence:

"We hold these truths to be self-evident, that all men are created equal, that they are endowed by their creator with certain unalienable rights, that among these Life,Liberty and the pursuit of Happiness."

So, with all this in mind, this is what not only I but countless Skaters and parents propose to you. The possible solution we have seen fitting to bring to your attention is this: that a new, much smaller Skatepark be built as an alternative Skatepark for the younger children to instead attend to.

But how would this work? you may ask. In both the sense of how it would function and how it solves our problem. This is how it would work.

Having a Skatepark built for our younger children (10 and under) would allow more freedom and space for them to use and develop in doing the same for the older youths using the current Skatepark. The construction of the new Skatepark, by freeing up new space, would encourage more and more users of both groups to come and enjoy the comforts of a Skatepark. Having a Skatepark to themselves would also obviously reduce the risk and amount of accidents happening at the Skatepark.

The separation of skaters by age would also allow easier development as already cited above. In the current Skatepark people have less time actually practicing skating. This is because of the children and some older skaters in ability to look before they move and thus creating a hazard that does not allow others to. With the separation, the different age groups are more likely to respond better to each other and allow each person enough time skating giving them an all-round better experience of Palmerston North has to offer in the terms of skating.

The age limit would have to be 10 and under for the little Skatepark however allowing the exception of the younger but more mature skaters. These are skaters who are known to respect the safety of the skatepark and are much more experienced in keeping themselves and others from unwanted accidents and injuries. Experience, in these terms, is NOT defined by their skill level or certain tricks or stunts they can execute but instead the way they use their logic and common sense overall when riding the Skatepark.

As is obvious and may be a query that has already come to your mind, is the dilemma of policing the park. The park would not be able to be guarded by higher authorities 24/7 and so then would need to be self sufficient /reliant on these terms. The park would need to be able to make clear distinctions on who may and may not use it, whilst at the same time have measures that physically insure this as best conceivable. The best way of doing this, we believe, is to form the Skatepark in a way that resembles on the most part the current one. But of course, in a much smaller fashion. With nothing new or ‘wow’ that would act as a hook or give reason for the older skaters to go to. This requires a certain amount of trust on the side of the skaters, which I believe can be given in good faith by the council. I personally have talked to many of these skaters and all I have met are willing to respect the space and safety of the children as is their duty.

But what would it mean in skate terms to build a park in the goldilocks zone as we hope. Attractive and advanced enough to keep the children safe from casualties and still help then develop their skating, but watered down enough to keep the more unthoughtful skaters to the facilities already made available to them. We hope for it to be much more successful than the attempt to make the pump track a place for children as we now know there have been many accidents on it as it is a hot spot for the more experienced of the skaters. After much discussion across many days on the skatepark with many different skaters, the vast majority of us came to the concession that such a Skatepark, remembering that would only be a diluted version of our own could possibly include:

- **A few small ramps connected to a Funbox**

- **Small quarter pipes around half to ¾ the size of our current ones**
- **A small pump track**
- **A small circular bum much like our current one but of course half the size**
- **A triangular ramp like the one we have but again half the size**
- **ECT.**

Now to what is possibly our most difficult issue yet. Where to build the park? The first fact needed to take into consideration is that the park's location needs to be central and safe, or otherwise it would defeat the purpose of building the park. Many parents whom I talked to portrayed their worries that the park could be built far away and therefore they would not be able to watch more than one of their children who may be at different stages in their skating. I gave them all my word that their thoughts would not go unwritten about in this document and so I write them here. The solution to their problem would be to build the new Skatepark on the railway land reserve that is there currently, as this allows them to be flexible in their looking after all their kids. Having the park there also resolves the problem of travel, as many people who take their kids to the Skatepark have become acclimated to that spot and having them move elsewhere would see some not do so for reasons stated above. Not having the park at the reserve also allows for more people who are NOT 10 and under to use it as they would only see it as another Skatepark for our city. This again would defeat the purpose of having the park as it truly does become not the safe haven for child skaters as we hoped but indeed a new Skatepark to utilise for the good of whoever feels the urging to.

Through all this, we do understand that the Railway Land Reserve is one of the most historic places in the city. Being the place where the Train station was moved to in 1871 from its previous home of the square which was then known as 'the flat'. Though we acknowledge and fully recognise the cultural and historical significance of the reserve, we see no real reason or way that the building of our proposition would make too much of a difference that would disrespect or negatively affect the mana that the reserve carries with it.

The building of this Skatepark would help the city vastly by improving the happiness and overall satisfaction and protection of individuals in the Skating community, young and old. As to quote Zambia's first president Mr. Kenneth Kaunda,
"The moment you have protected an individual you have protected a society"
Protecting our society is protecting our freedom. Giving us the opportunity to have a place to call our own, a place to stand, our Turangawaewae. The building of this park would also allow for more space in the current Skatepark. Attracting more Skaters and tourists to our city and bringing them close to the heart of the CBD. Their coming would allow them to spend and invest in our local businesses and help to strengthen our economy. And in times like these, there is no better moment to give our businesses a boost to help them on their way.

Doing this for our city would also set an example for other places around New Zealand, and around the world. We would show that we the people, care for our safety and the safety of those around us. It would show the true spirit of Palmerston North. Brotherhood and unity. One large family united for the sake of our people. Who would not be proud of that? We as youth are

always told to be the change we wish to see. And now I urge you, as a council to help us to be that change. I strongly encourage you to do all within your power, as is right, to push the building of this Skatepark to bring safety to all of our vast community. Not just Skaters, but Parents, hopeful Skaters and others alike. Our safety is in your hands.

Nga mihi,

Leo Robin Mwape Matongkanshi:
In Representation of the Skating community of Palmerston North

The Survey

Do you feel it is safe having children playing on the park?

1: Not safe at all	2: A little safe	3:Sort of safe	4: Mostly safe	5: 100% safe
13	9	7		1

Do you find that the amount of children playing around make your time here unplesant?

1: No, not at all	2: Slightly	3: Sometimes	4:Most of the time	5:Yes, very much
9		9	5	12

Do you find it hard to keep track of where the children are because of how much they move?

1: No, not at all	2: A bit	3:Sometimes	4: Most times	5: Yes, all the time
𝍸	𝍸	𝍸	𝍸 𝍸 𝍸	𝍸 𝍸 𝍸 𝍸

How often do you see a close call involving children when you're here?

1: Never	2: Rarely	3: Sometimes	4: Most times	5: Everytime
			𝍸 𝍸 𝍸 𝍸	𝍸 𝍸 𝍸 𝍸 𝍸

Have you ever had a close call involving children?

1: No,never	2: Very few (1-5)	3: Some 5-10	4: Lots, over 10	5: Countless times
		𝍸	𝍸 |	𝍸 𝍸 𝍸 𝍸 ||||

MEMORANDUM

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Hokowhitu Lagoon Water Quality - Investigation and Monitoring Progress Report - October 2020**

PRESENTED BY: **Robert van Bentum, Manager - Transport and Infrastructure**

APPROVED BY: **Sheryl Bryant, Acting Chief Infrastructure Officer**

RECOMMENDATION TO PLAY, RECREATION & SPORT COMMITTEE

1. **To receive the report titled "Hokowhitu Lagoon Water Quality – Investigation and Monitoring Progress Report – October 2020", noting the progress made and the further work scheduled to be undertaken in the 2020-21 Financial Year.**

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1. ISSUE

1.1 In June 2018, following several reported incidents of recreational users of Hokowhitu Lagoon becoming sick, follow-up monitoring of the lagoon waters confirmed elevated levels of a range of bacterial species. Council Officers subsequently committed to a series of actions to respond to the contamination risks. In addition to upgrading signage at the lagoon to advise users of the health risks of contact recreation, and development of a Health Risk Management Plan, Officers agreed to advance a coordinated investigation and monitoring programme. The aim of the work was to identify significant sources of contamination and identify any cost-effective options for reducing or mitigating the negative effects on lagoon water quality.

1.2 The Sport and Recreation Committee was presented with the first in a series of annual reports on progress made with the investigation and monitoring work being undertaken in September 2019. The Committee endorsed the proposed monitoring plan and investigation approach and requested a further update be provided in September 2020. This report comprises that update.

2. BACKGROUND

2.1 Hokowhitu Lagoon is one of several remnant water bodies within the city boundaries which were previous alignments of the Manawatu River. Like many of these bodies

they have been significantly modified over the period of development of the city. Private properties have been constructed right up to the water's edge with landscaped gardens developed along much of the western fringe. The eastern fringe of the Lagoon is public park with significant numbers of waterfowl including ducks, geese and swans. Public users of the park include large numbers of dog walkers.

2.2 The Hokowhitu Lagoon is estimated to be the receiving environment for approximately 275 ha of urban land (refer figure 1 below). Council asset management system records 14 separate stormwater discharges ranging from individual road sumps, and property level connections to extensive stormwater networks extending into the Hokowhitu residential area. Figure 2 indicates the approximate location of the various point discharges.

Figure 1 – Plan of the Approximate Catchment Draining to Hokowhitu Lagoon

Figure 2 - Existing Stormwater Discharge Locations to Hokowhitu Lagoon.

2.3 Through stormwater discharges from the network, the lagoon is receiving significant quantities of urban pollutants including oils, sediments and metal contaminants from roads as well as litter and organic material via roofs, property hard stand areas as well as berms and footpaths. Significant quantities of animal faeces, plant organic matter and soil is also being entrained in the stormwater. There is also likely to be some wastewater entering the stormwater network from leaking and faulty wastewater networks.

3. FINDINGS / PROGRESS TO DATE

3.1 A comprehensive and robust monitoring approach and plan was developed by consultants GHD in June 2018 to try to identify the key sources of significant contamination and any practical mitigation options. The comprehensive monitoring plan provided sampling of stormwater at 20 locations within the lagoon both prior to, during and following major rain events.

3.2 Implementation of the monitoring programme was constrained by several factors including the practicality of accessing many of the outfalls and the practicality of obtaining samples from all 20 locations (shown in Figure 2) within the 1st hour of any storm. To address this a baseline monitoring programme was developed which provided for monthly monitoring of 6 mid-point locations within the lagoon (refer Figure 3).

3.3 Two rounds out of four baseline monitoring consistently revealed high E-coli readings at mid-point 1, 5 and 6 (mid-01, mid-05 and mid-06). The third and fourth round of monitoring included sampling some of the outfalls discharging directly to the lagoon in the vicinity of mid-points 1 and 5. Based on the sampling undertaken in September and October 2019, it was discovered that outlet SW-10 comprising DN 750mm diameter pipe discharging from Ihaka Street had significantly higher E-coli levels compared to the other outfalls and mid-point sampling locations.

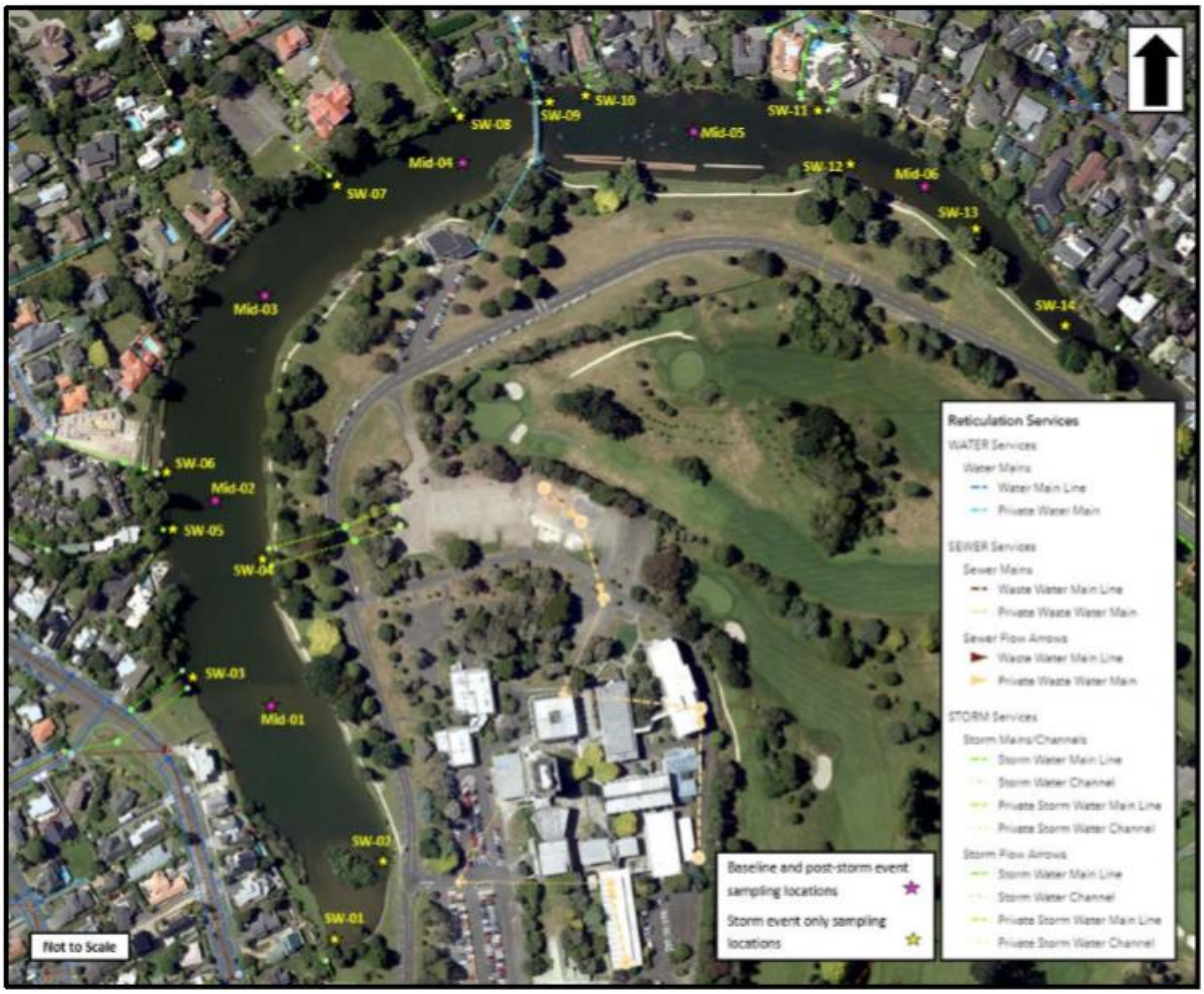


Figure 3 - Proposed Locations for Long Term Monitoring Plan

3.4 The findings prompted Council Officers to amend the monitoring plan to target the investigations on the specific stormwater outfalls where higher levels of E coli had been detected. Sampling was subsequently focussed on the stormwater network draining to SW-03, SW09 and SW-10, in order to identify the specific sub-catchments or streets with the higher levels of contamination. This approach will enable the larger catchments to be further divided enabling localised monitoring and sampling to hopefully identify specific point sources of contamination.

3.5 From February 2020 till September 2020, 4 rounds of event-based sampling have been undertaken at 23 stormwater manholes within the three catchments. The samples were collected within 2-4 hours from the start of the rain event. Except for the 18 February no other sampling was undertaken during the whole summer season. The programme was suspended during the lockdown period and re-commenced at end of May 2020. Samples were collected from the selected manholes for the following four storm events:

- 18 February 2020 (results in red)
- 25 May 2020 (results in blue)
- 12 June 2020 (results in green)
- 18 September 2020 (results in black)

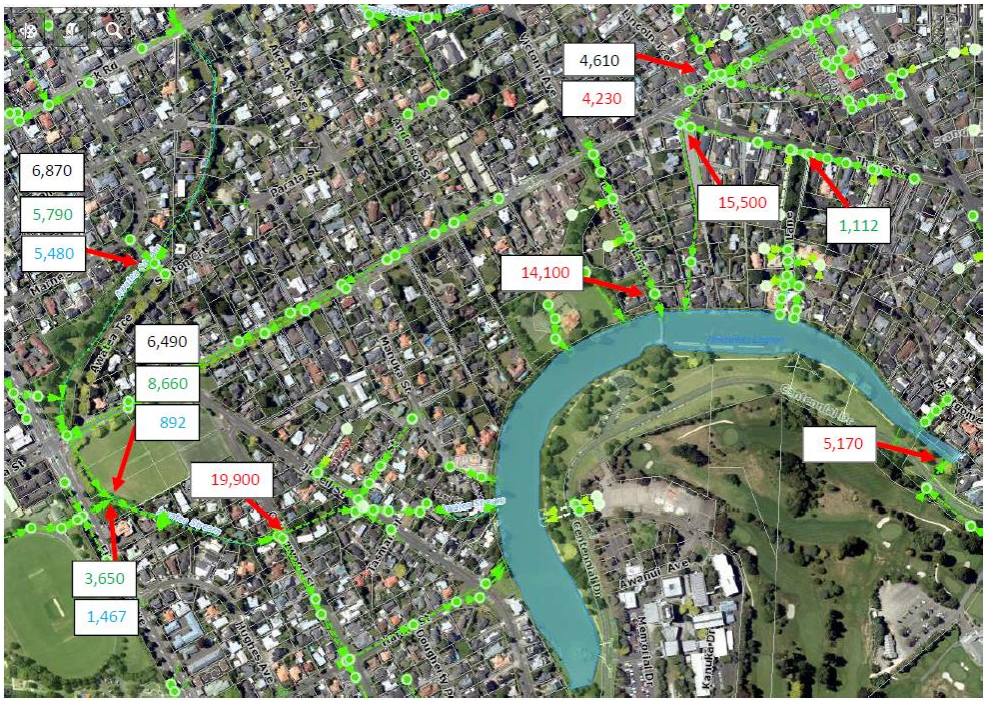
3.6 The samples were analysed for the following water quality parameters:

- Escherichia coli (E coli);
- Suspended solids
- pH
- Conductivity
- Total Nitrogen
- Total Phosphorus

3.7 The sampled locations and specifically the E-coli results (MPN/100mL) for the four events are shown in Figure 4, with data displayed for the events for which results are available (refer Attachment 1 for a higher resolution version of Figure 4)

3.8 The sample results for E-coli undertaken in 2020 are summarised in Table 1 below (refer Attachment 2 for full sampling results). The major outcome of the sampling has been to confirm that the main source of contamination is the DN 750mm pipe discharging through Ihaka Street. This 750mm pipe drains approximately 50% or

close to 140 ha of the total 275 ha of catchment draining into the Hokowhitu Lagoon. This 140 ha includes Te Awe Awe St, and a significant portion of the Awatea catchment extending to Churchill basin up to Main St.



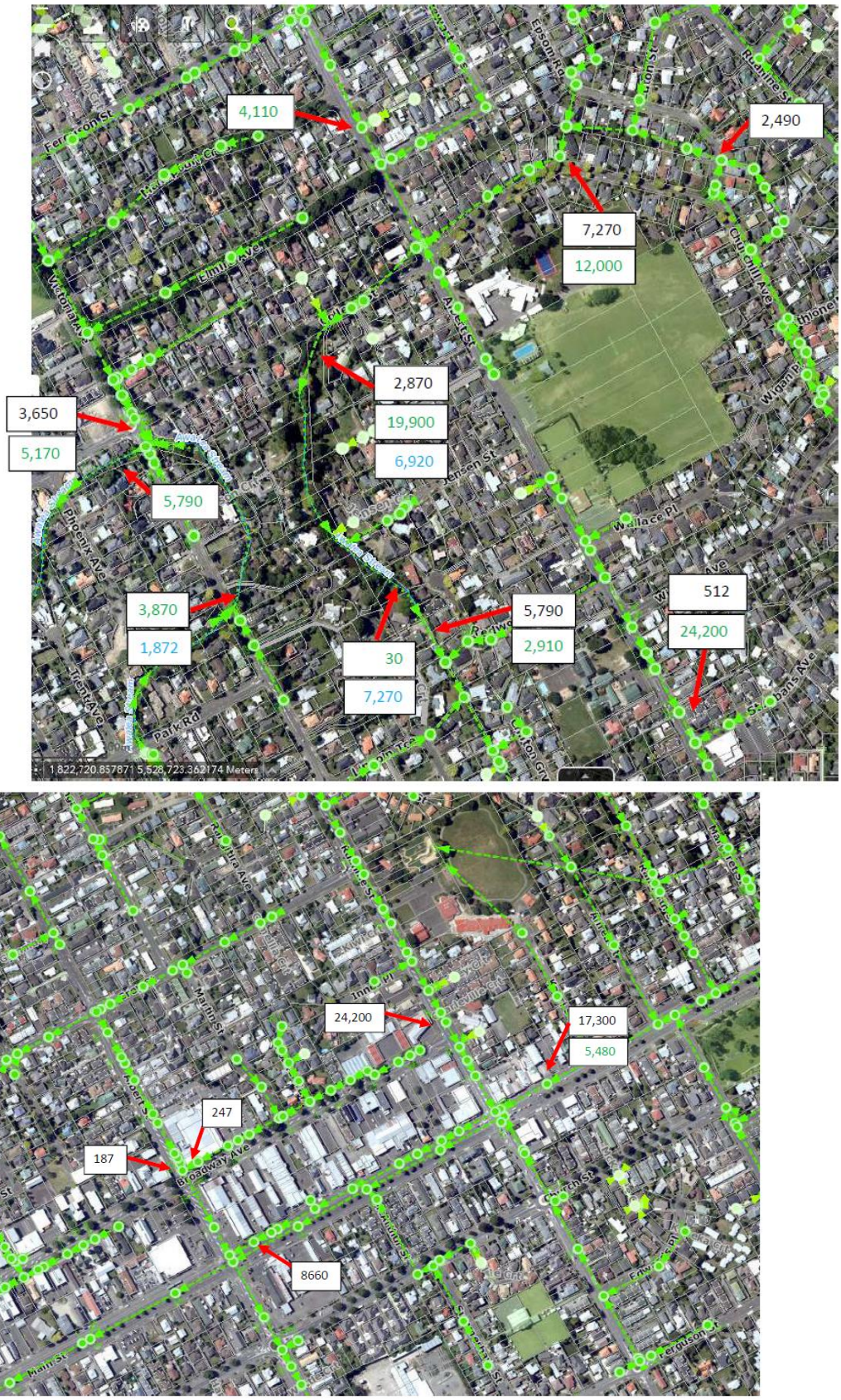


Figure 4: E-coli sampling points and results (MPN/100mL)

Table 1. Summary of Monitoring Results

Location ID	Sample ID	Parameters	Sampled Date	Unit	Results
Awatea		Escherichia coli	18/09/2020	MPN / 100 mL	6,870
23 Lincoln		Escherichia coli	18/09/2020	MPN / 100 mL	5,790
No. 19		Escherichia coli	22/06/2020	MPN / 100 mL	9
St. Albans		Escherichia coli	12/06/2020	MPN / 100 mL	24,201
No. 478		Escherichia coli	12/06/2020	MPN / 100 mL	19,900
Churchill		Escherichia coli	12/06/2020	MPN / 100 mL	12,000
Wallace No. 1		Escherichia coli	12/06/2020	MPN / 100 mL	8,660
Phoenix		Escherichia coli	12/06/2020	MPN / 100 mL	5,790
Awatea		Escherichia coli	12/06/2020	MPN / 100 mL	5,790
No. 785		Escherichia coli	12/06/2020	MPN / 100 mL	5,480
147 Victoria		Escherichia coli	12/06/2020	MPN / 100 mL	5,170
183 Albert		Escherichia coli	12/06/2020	MPN / 100 mL	4,110
No. 21 SW		Escherichia coli	12/06/2020	MPN / 100 mL	3,870
Wallace No. 2		Escherichia coli	12/06/2020	MPN / 100 mL	3,650
23 Lincoln		Escherichia coli	12/06/2020	MPN / 100 mL	2,910
42 Ihaka		Escherichia coli	12/06/2020	MPN / 100 mL	1,112
Dixon		Escherichia coli	12/06/2020	MPN / 100 mL	121
Behind No. 21		Escherichia coli	12/06/2020	MPN / 100 mL	30
Behind no. 21		Escherichia coli	25/05/2020	MPN / 100 mL	7,270
no. 478		Escherichia coli	25/05/2020	MPN / 100 mL	6,920
no. 5154		Escherichia coli	25/05/2020	MPN / 100 mL	5,480
no. 22395		Escherichia coli	25/05/2020	MPN / 100 mL	1,872
no. 17968		Escherichia coli	25/05/2020	MPN / 100 mL	1,467
no. 6395		Escherichia coli	25/05/2020	MPN / 100 mL	892
Behind no. 21		Escherichia coli	22/05/2020	MPN / 100 mL	946
SW No.5071	23 Lincoln Tce	Escherichia coli	18/03/2020	MPN / 100 mL	13,000
MH3205		Escherichia coli	18/02/2020	MPN / 100 mL	19,900
MH313		Escherichia coli	18/02/2020	MPN / 100 mL	15,500
MH2711		Escherichia coli	18/02/2020	MPN / 100 mL	14,100
MH9080		Escherichia coli	18/02/2020	MPN / 100 mL	5,170
MH3160		Escherichia coli	18/02/2020	MPN / 100 mL	4,230
SW-MH 313		Escherichia coli	17/02/2020	MPN / 100 mL	24,201
SW-MH 3160	Sample 1	Escherichia coli	17/02/2020	MPN / 100 mL	24,201
SW-MH 3160	Sample 2	Escherichia coli	17/02/2020	MPN / 100 mL	24,201
SW-MH 3205		Escherichia coli	17/02/2020	MPN / 100 mL	1,153

4. ANALYSIS OF MONITORING RESULTS AND FOLLOW-UP

4.1 The acceptable levels of E-coli for a single sample within a recreational water body as stipulated within the Ministry for the Environment Microbiological Guidelines is 550 MPN/100 mL while the requirement in the National Policy Statement for Freshwater Management is 540 MPN/100mL. E coli readings for the sampling locations in the stormwater network are all higher than acceptable levels for freshwater. Although, the E-coli levels vary significantly across the sampled locations, E-coli is present at elevated levels in all the stormwater networks discharging to the Hokowhitu Lagoon catchment.

4.2 Results for other water quality parameters, such as suspended solids, pH, conductivity, total nitrogen and total phosphorus, indicate elevated levels of these contaminants in the stormwater discharge.

4.3 Those sampling locations where E-coli concentrations exceed 5000 MPN/100mL, have been defined as higher risk catchments and sampling points were concentrated within these catchments. More specific investigations are being planned to try to identify specific contamination sources. For network sections with E-coli levels less than 5000 MPN/100mL, monitoring and sampling will continue by sampling more manholes to better understand the pattern and specific source of the contaminants, in the coming months.

4.4 To-date, sampling locations have been randomly selected, and the results vary significantly between events and within the same network line. On-going sampling is required to establish both baseline and event related contamination levels to enable more targeted approach to the next level of investigation.

4.5 The next area planned for intensive monitoring will be manholes or discharge locations to the Awatea Stream. Testing will be undertaken both pre and post rain events, to establish levels and locations of elevated contamination.

5. SPECIFIC INVESTIGATIONS FOR HIGH RISK CATCHMENTS

5.1 For sub-catchments or streets identified as high risk based on E-coli levels, smoke testing and CCTV visual inspection will be undertaken in order to try to identify problem connections or sections of the wastewater network which might be contributing wastewater to the stormwater network.

5.2 Smoke testing involves injecting a dense, non-toxic and odourless smoke into the wastewater network and then observing where the smoke escapes. If smoke emerges from storm drains or rises from lawns, pavements or the streets, this typically indicates problems with cracked wastewater pipes, damaged manholes, and or potential cross-connections to the stormwater network.

5.3 Lawns and open spaces such as parks and reserves within these high-risk catchments with high avian and animal faecal matter levels will be investigated further to identify whether they are a significant source of pollutants. This work as well as identifying wastewater contamination sources is also likely to identify stormwater discharges to wastewater network (Infiltration and Inflow – I&I).

6. NETWORK INVESTIGATION WORK

6.1 As part of the on-going annual CCTV inspection programme undertaken by Council of its buried stormwater and sewer network, several stormwater pipes discharging to the Hokowhitu Lagoon catchment were included in the 2018 programme of work. The results of the CCTV inspection revealed the DN 750 pipe (SW-10) had significant cracking at 2 locations requiring significant repair work. As the DN 750 pipe runs underneath private properties, the most cost-effective solution is to reline the pipe.

6.2 The relining work has been included in the schedule of lining work to be undertaken this year. The work is planned for the coming summer season when the water level in the lagoon will be low enough to enable construction of a temporary platform at the outfall to facilitate the relining works to proceed.

6.3 It is envisaged that some improvement in water quality should be achieved through this relining work, as there are several private sewer pipe connections as well as Council's waste-water pipe laid within the same corridor as the DN 750 stormwater pipe. There is high risk that any wastewater leaking from the wastewater pipes could infiltrate into the stormwater pipeline along this reach.

6.4 CCTV inspection of the stormwater network will be continued over the next 2-3 years with priority given to inspection of those stormwater lines which run close to existing sewer pipelines and wherever there is evidence of structural or performance defects. Some of the proposed pipe lengths to be inspected in this year's CCTV programme are shown in Figure 5 below.

Figure 5 –Proposed Sections for CCTV Inspection 20/21 within Churchill Basin

7. PROGRESS OF WIDER INITIATIVES CONTRIBUTING TO IMPROVING HOKOWHITU LAGOON WATER QUALITY AND HEALTH

7.1 Since the September 2019 report, progress has been made by Council in combination with several developers to advance planning and design of projects and initiatives with the objective of improving the quality of stormwater discharges to the lagoon. The specific initiatives and the potential effect on water quality are briefly described below.

7.2 Bore Water Replenishment System. The bore water replenishment system to enable the Hokowhitu lagoon ground and surface water inflows to be supplemented with pumped shallow groundwater particularly during the summer period has been working well. This will continue to encourage flushing of nutrient and other contaminants during lagoon low water inflow periods contributing to improvements in water quality. The water levels in the lagoon has been steadily maintained via this system and the weir control structure at the outlet end of the lagoon.

7.3 Stage1 – Centennial Development. Significant change has been made to the Stage 1 of the residential sub-division development of the Hokowhitu campus. This development does not drain into the lagoon anymore and the proposed network has been re-routed to discharge into the existing Council's network downstream which is draining to the Manawatu River. There is still expected to be some measurable improvement to the water quality in the lagoon as stormwater from the entire development will now be treated through rain gardens and discharged downstream of the lagoon outlet.

7.4 Lake Edge Refurbishment: Council has completed work on upgrading the eastern lake edge to replace the failing timber retaining wall with more natural landscaped edges that provides some degree of treatment. The banks are now planted with suitable species of plants both to promote enough vegetation cover and to intercept and capture some of the overland flow which entrains animal faecal material and sediment.

7.5 City Wide Water Quality and Cultural Monitoring Programme: In the coming Long-Term Plan, specific locations have been identified for long-term real-time monitoring of critical water quality parameters. Awatea Stream and the Hokowhitu Lagoon have been identified as key locations to be included in this monitoring programme.

8. SCOPE OF WORK FOR 2020/21

8.1 All work undertaken to date has been funded from existing maintenance and operational programme budgets and specifically:

- Stormwater Activity budgets – Investigations and Planning (CCTV inspections and sampling)
- Operating Programme 1369 City-Wide Water Quality and Cultural Monitoring (sample analysis)

8.2 Officers have identified a range of the actions identified in sections 5 and 6 which can be advanced from existing budgets including:

- CCTV of selected pipelines in high risk catchments to be funded from Stormwater Activity Budget – Planning and Investigations

- Lining repairs of the 750 mm pipe draining Te Awe Awe and Albert Street sub-catchment to be funded from Programme 1060 – Stormwater Pipe Renewals

8.3 The further work including event based sampling and analysis of stormwater discharges in the Awatea Stream and smoke testing and more detailed CCTV inspection of high risk catchments will be put on hold pending approval of a dedicated budget as part of the 2021-31 LTP.

9. SUMMARY

9.1 Identifying and addressing the discharge of contaminated stormwater to the Hokowhitu lagoon is problematic given the size of the catchment, the variety and number of potential contaminant sources and the complexity of the network. Achieving any measurable improvement will require significant effort over an extended period.

9.2 The inspection and monitoring work completed to date have identified that all sections of the sewer network contribute some contaminants to the Hokowhitu lagoon, although some sub-catchments appear to contribute disproportionately higher levels based on the E-coli results.

9.3 Long term it is recommended that pipes in high risk catchments are smoke tested and CCTV inspected to identify potential sources for the contamination. It is also recommended that event based stormwater monitoring continue and be extended to other parts of the wider catchment.

9.4 Council will advance some limited CCTV inspection and lining work under existing 2020-21 programmes budgets. However smoke testing, extensive CCTV inspections of the priority catchments as well as an extension of event based stormwater monitoring to the Awatea Stream will be put on hold. On-going funding will be sought to fund on-going investigations and remediation of stormwater contamination through a dedicated programme as part of the 2021-31 LTP.

9.5 Council will continue to collaborate with developers, residents and other stakeholders to identify and implement other initiatives to improve the water quality in the Hokowhitu Lagoon, including implementing at source treatment solutions.

10. COMPLIANCE AND ADMINISTRATION

Does the Committee have delegated authority to decide? If Yes quote relevant clause(s) from Delegations Manual	**Yes**
Are the decisions significant?	**No**
If they are significant do they affect land or a body of water?	

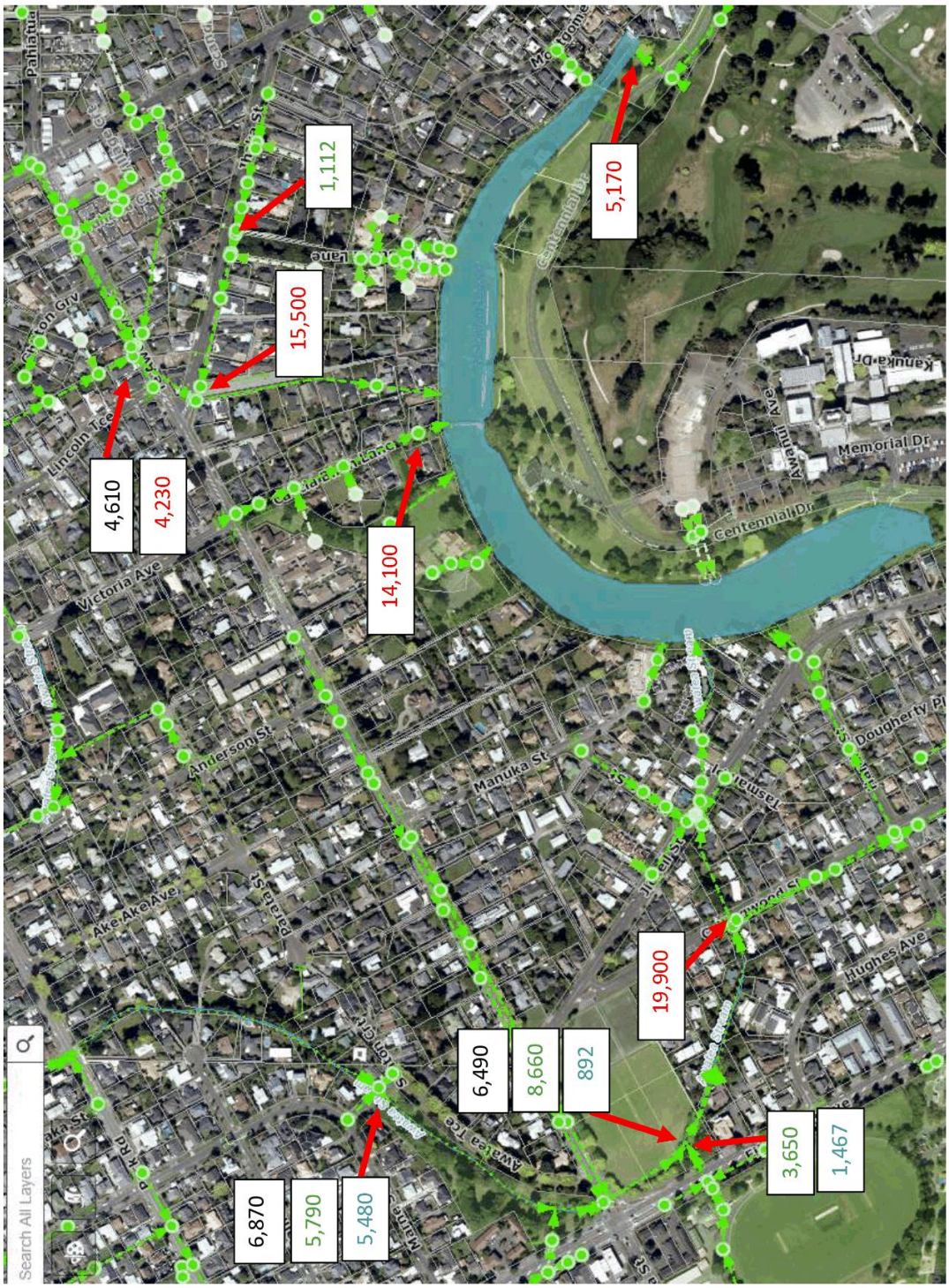
Can this decision only be made through a 10 Year Plan?	**No**
Does this decision require consultation through the Special Consultative procedure?	**No**
Is there funding in the current Annual Plan for these actions?	**Yes**
Are the recommendations inconsistent with any of Council's policies or plans?	**No**
The recommendations contribute to Goal 2: A Creative and Exciting City and Goal 4 an Eco-City.	
The recommendations contribute to the outcomes of the Creative and Liveable Strategy and the Eco-City Strategy.	
The recommendations contribute to the achievement of action/actions in the Active Community Plan and the Three Waters Plan The actions include: • Provide and maintain city reserves, neighbourhood reserves, playgrounds, sports field, Central Energy Trust Arena Manawatu, aquatic facilities, walkways, shared paths, sport and recreation facilities. • Urban waterways (sic. lagoons) are thriving eco-systems	
Contribution to strategic direction and to social, economic, environmental and cultural well-being	The programme of work is helping to establish the baseline water quality in the lagoon and the various contributing stormwater networks. By identifying specific high risk catchments and locations with elevated E.coli levels, Council can target investigation and remediation work to reduce stormwater contamination of the Hokowhitu lagoon and reduce health risks for recreational users of the lagoon.

ATTACHMENTS

1. Attachment 1 High Resolution version of Figure 4
2. Attachment 2 Full Set of Monitoring Results


17,300
5,480
24,200
8660
247
187
Broadway Ave
Martin St
Regent St
Albert St

ITEM 9 - ATTACHMENT 1


1,112
15,500
4,610
4,230
14,100
5,170
19,900
6,490
8,660
892
3,650
1,467
6,870
5,790
5,480
Victoria Ave
Anderson St
Manuka St
Centennial Dr
Memorial Dr
Hughes Ave
Ake Ake Ave
Awatea Tce
Search All Layers

Location ID	Sample ID	Parameters	Sampled Date	Unit	Results
Awatea		Escherichia coli	18/09/2020	MPN / 100 mL	6,870
23 Lincoln		Escherichia coli	18/09/2020	MPN / 100 mL	5,790
23 Lincoln		Nitrogen - Total	18/09/2020	g/m³	0.9
23 Lincoln		Phosphorus - Total	18/09/2020	g/m³	0.2
23 Lincoln		Solids - Suspended	18/09/2020	g/m³	40
Awatea		Nitrogen - Total	18/09/2020	g/m³	1.1
Awatea		Phosphorus - Total	18/09/2020	g/m³	0.2
Awatea		Solids - Suspended	18/09/2020	g/m³	13
23 Lincoln		Conductivity	18/09/2020	mS/m at 25°C	4.1
23 Lincoln		pH	18/09/2020		7.1
Awatea		Conductivity	18/09/2020	mS/m at 25°C	4.6
Awatea		pH	18/09/2020		6.7
No. 19		Conductivity	22/06/2020	mS/m at 25°C	11.1
No. 19		Nitrogen - Total	22/06/2020	g/m³	0.2
No. 19		Phosphorus - Total	22/06/2020	g/m³	0
No. 19		pH	22/06/2020		7.4
No. 19		Solids - Suspended	22/06/2020	g/m³	0
No. 19		Escherichia coli	22/06/2020	MPN / 100 mL	9
St. Albans		Escherichia coli	12/06/2020	MPN / 100 mL	24,201
No. 478		Escherichia coli	12/06/2020	MPN / 100 mL	19,900
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Awatea		Escherichia coli	12/06/2020	MPN / 100 mL	5,790
No. 785		Escherichia coli	12/06/2020	MPN / 100 mL	5,480
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183 Albert		Escherichia coli	12/06/2020	MPN / 100 mL	4,110
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42 Ihaka		Escherichia coli	12/06/2020	MPN / 100 mL	1,112
Dixon		Escherichia coli	12/06/2020	MPN / 100 mL	121
Behind No. 21		Escherichia coli	12/06/2020	MPN / 100 mL	30
Dixon		Nitrogen - Total	12/06/2020	g/m³	2.4
Dixon		Phosphorus - Total	12/06/2020	g/m³	0.4
Dixon		Solids - Suspended	12/06/2020	g/m³	320
No. 785		Nitrogen - Total	12/06/2020	g/m³	1
No. 785		Phosphorus - Total	12/06/2020	g/m³	0.3
No. 785		Solids - Suspended	12/06/2020	g/m³	32
183 Albert		Nitrogen - Total	12/06/2020	g/m³	2.3
183 Albert		Phosphorus - Total	12/06/2020	g/m³	1
183 Albert		Solids - Suspended	12/06/2020	g/m³	280
Churchill		Nitrogen - Total	12/06/2020	g/m³	0.7
Churchill		Phosphorus - Total	12/06/2020	g/m³	0.2
Churchill		Solids - Suspended	12/06/2020	g/m³	17
St. Albans		Nitrogen - Total	12/06/2020	g/m³	0.4
St. Albans		Phosphorus - Total	12/06/2020	g/m³	0.2
St. Albans		Solids - Suspended	12/06/2020	g/m³	12
No. 21 SW		Nitrogen - Total	12/06/2020	g/m³	0.3
No. 21 SW		Phosphorus - Total	12/06/2020	g/m³	0.1
No. 21 SW		Solids - Suspended	12/06/2020	g/m³	5
147 Victoria		Nitrogen - Total	12/06/2020	g/m³	0.5
147 Victoria		Phosphorus - Total	12/06/2020	g/m³	0.3
147 Victoria		Solids - Suspended	12/06/2020	g/m³	18
Phoenix		Nitrogen - Total	12/06/2020	g/m³	24
Phoenix		Phosphorus - Total	12/06/2020	g/m³	5.4

Phoenix		Solids - Suspended	12/06/2020	g/m³	2400
23 Lincoln		Nitrogen - Total	12/06/2020	g/m³	1.1
23 Lincoln		Phosphorus - Total	12/06/2020	g/m³	0.4
23 Lincoln		Solids - Suspended	12/06/2020	g/m³	13
Wallace No. 1		Nitrogen - Total	12/06/2020	g/m³	0.5
Wallace No. 1		Phosphorus - Total	12/06/2020	g/m³	0.2
Wallace No. 1		Solids - Suspended	12/06/2020	g/m³	12
Wallace No. 2		Nitrogen - Total	12/06/2020	g/m³	0.7
Wallace No. 2		Phosphorus - Total	12/06/2020	g/m³	0.2
Wallace No. 2		Solids - Suspended	12/06/2020	g/m³	19
42 Ihaka		Nitrogen - Total	12/06/2020	g/m³	0.4
42 Ihaka		Phosphorus - Total	12/06/2020	g/m³	0.2
42 Ihaka		Solids - Suspended	12/06/2020	g/m³	3
Awatea		Nitrogen - Total	12/06/2020	g/m³	0.5
Awatea		Phosphorus - Total	12/06/2020	g/m³	0.2
Awatea		Solids - Suspended	12/06/2020	g/m³	6
Behind No. 21		Conductivity	12/06/2020	mS/m at 25°C	8.3
Behind No. 21		pH	12/06/2020		6.6
Behind No. 21		Nitrogen - Total	12/06/2020	g/m³	1.8
Behind No. 21		Phosphorus - Total	12/06/2020	g/m³	0.5
Behind No. 21		Solids - Suspended	12/06/2020	g/m³	100
No. 478		Conductivity	12/06/2020	mS/m at 25°C	5.2
No. 478		Nitrogen - Total	12/06/2020	g/m³	1.4
No. 478		Phosphorus - Total	12/06/2020	g/m³	0.5
No. 478		pH	12/06/2020		7.1
No. 478		Solids - Suspended	12/06/2020	g/m³	140
Dixon		Conductivity	12/06/2020	mS/m at 25°C	17.9
Dixon		pH	12/06/2020		6.7
No. 785		Conductivity	12/06/2020	mS/m at 25°C	5.4
No. 785		pH	12/06/2020		6.9
183 Albert		Conductivity	12/06/2020	mS/m at 25°C	6.4
183 Albert		pH	12/06/2020		7.9
Churchill		Conductivity	12/06/2020	mS/m at 25°C	3.9
Churchill		pH	12/06/2020		7.1
St. Albans		Conductivity	12/06/2020	mS/m at 25°C	4.5
St. Albans		pH	12/06/2020		6.8
No. 21 SW		Conductivity	12/06/2020	mS/m at 25°C	3.8
No. 21 SW		pH	12/06/2020		6.8
147 Victoria		Conductivity	12/06/2020	mS/m at 25°C	6.9
147 Victoria		pH	12/06/2020		7
Phoenix		Conductivity	12/06/2020	mS/m at 25°C	7.4
Phoenix		pH	12/06/2020		6.7
23 Lincoln		Conductivity	12/06/2020	mS/m at 25°C	8.7
23 Lincoln		pH	12/06/2020		6.5
Awatea		Conductivity	12/06/2020	mS/m at 25°C	7.1
Awatea		pH	12/06/2020		6.7
Wallace No. 1		Conductivity	12/06/2020	mS/m at 25°C	8.2
Wallace No. 1		pH	12/06/2020		6.7
Wallace No. 2		Conductivity	12/06/2020	mS/m at 25°C	7.3
Wallace No. 2		pH	12/06/2020		7
42 Ihaka		Conductivity	12/06/2020	mS/m at 25°C	5.4
42 Ihaka		pH	12/06/2020		6.9
Behind no. 21		Escherichia coli	25/05/2020	MPN / 100 mL	7,270
no. 478		Escherichia coli	25/05/2020	MPN / 100 mL	6,920
no. 5154		Escherichia coli	25/05/2020	MPN / 100 mL	5,480
no. 22395		Escherichia coli	25/05/2020	MPN / 100 mL	1,872
no. 17968		Escherichia coli	25/05/2020	MPN / 100 mL	1,467
no. 6395		Escherichia coli	25/05/2020	MPN / 100 mL	892

Behind no. 21		Conductivity	25/05/2020	mS/m at 25°C	2.8
Behind no. 21		pH	25/05/2020		7.3
Behind no. 21		Nitrogen - Total	25/05/2020	g/m³	0.5
Behind no. 21		Phosphorus - Total	25/05/2020	g/m³	0.1
Behind no. 21		Solids - Suspended	25/05/2020	g/m³	12
no. 22395		Conductivity	25/05/2020	mS/m at 25°C	1.6
no. 22395		Nitrogen - Total	25/05/2020	g/m³	0.2
no. 22395		Phosphorus - Total	25/05/2020	g/m³	0
no. 22395		pH	25/05/2020		7.2
no. 22395		Solids - Suspended	25/05/2020	g/m³	5
no. 478		Conductivity	25/05/2020	mS/m at 25°C	2
no. 478		Nitrogen - Total	25/05/2020	g/m³	0.7
no. 478		Phosphorus - Total	25/05/2020	g/m³	0.2
no. 478		pH	25/05/2020		7
no. 478		Solids - Suspended	25/05/2020	g/m³	51
no. 5154		Conductivity	25/05/2020	mS/m at 25°C	3.6
no. 5154		Nitrogen - Total	25/05/2020	g/m³	0.5
no. 5154		Phosphorus - Total	25/05/2020	g/m³	0.2
no. 5154		pH	25/05/2020		6.8
no. 5154		Solids - Suspended	25/05/2020	g/m³	4
no. 6395		Conductivity	25/05/2020	mS/m at 25°C	3.7
no. 6395		Nitrogen - Total	25/05/2020	g/m³	0.6
no. 6395		Phosphorus - Total	25/05/2020	g/m³	0.2
no. 6395		pH	25/05/2020		7
no. 6395		Solids - Suspended	25/05/2020	g/m³	10
no. 17968		Conductivity	25/05/2020	mS/m at 25°C	4
no. 17968		Nitrogen - Total	25/05/2020	g/m³	0.7
no. 17968		Phosphorus - Total	25/05/2020	g/m³	0.2
no. 17968		pH	25/05/2020		6.9
no. 17968		Solids - Suspended	25/05/2020	g/m³	5
Behind no. 21		Escherichia coli	22/05/2020	MPN / 100 mL	946
Behind no. 21		Conductivity	22/05/2020	µS/cm at 25°C	71
Behind no. 21		pH	22/05/2020		6.5
Behind no. 21		Nitrogen - Total	22/05/2020	g/m³	3.1
Behind no. 21		Phosphorus - Total	22/05/2020	g/m³	0.5
Behind no. 21		Solids - Suspended	22/05/2020	g/m³	89
SW No.5071	23 Lincoln Tce	Escherichia coli	18/03/2020	MPN / 100 mL	13,000
SW No.5071	23 Lincoln Tce	Conductivity	18/03/2020	mS/m at 25°C	46000
SW No.5071	23 Lincoln Tce	pH	18/03/2020		7.2
SW No.5071	23 Lincoln Tce	Solids - Suspended	18/03/2020	g/m³	350
SW No.5071	23 Lincoln Tce	Nitrogen - Total	18/03/2020	g/m³	10
SW No.5071	23 Lincoln Tce	Phosphorus - Total	18/03/2020	g/m³	1.8
MH3205		Escherichia coli	18/02/2020	MPN / 100 mL	19,900
MH313		Escherichia coli	18/02/2020	MPN / 100 mL	15,500
MH2711		Escherichia coli	18/02/2020	MPN / 100 mL	14,100
MH9080		Escherichia coli	18/02/2020	MPN / 100 mL	5,170
MH3160		Escherichia coli	18/02/2020	MPN / 100 mL	4,230
MH313		Conductivity	18/02/2020	mS/m at 25°C	10.4
MH313		pH	18/02/2020		6.3
MH3160		Conductivity	18/02/2020	mS/m at 25°C	7.9
MH3160		pH	18/02/2020		6.3
MH3205		Conductivity	18/02/2020	mS/m at 25°C	14
MH3205		pH	18/02/2020		6.5
MH2711		Conductivity	18/02/2020	mS/m at 25°C	7.9
MH2711		pH	18/02/2020		6.4
MH9080		Conductivity	18/02/2020	mS/m at 25°C	9.3
MH9080		pH	18/02/2020		6.1
MH313		Solids - Suspended	18/02/2020	g/m³	42

MH3160		Solids - Suspended	18/02/2020	g/m³	21
MH3205		Solids - Suspended	18/02/2020	g/m³	32
MH2711		Solids - Suspended	18/02/2020	g/m³	11
MH9080		Solids - Suspended	18/02/2020	g/m³	1600
SW-MH 313		Escherichia coli	17/02/2020	MPN / 100 mL	24,201
SW-MH 3160	Sample 1	Escherichia coli	17/02/2020	MPN / 100 mL	24,201
SW-MH 3160	Sample 2	Escherichia coli	17/02/2020	MPN / 100 mL	24,201
SW-MH 3205		Escherichia coli	17/02/2020	MPN / 100 mL	1,153
SW-MH 3205		Conductivity	17/02/2020	mS/m at 25°C	37.7
SW-MH 3205		pH	17/02/2020		7
SW-MH 313		Conductivity	17/02/2020	mS/m at 25°C	42.6
SW-MH 313		pH	17/02/2020		7.3
SW-MH 3160	Sample 1	Conductivity	17/02/2020	mS/m at 25°C	71.8
SW-MH 3160	Sample 1	pH	17/02/2020		7.7
SW-MH 3160	Sample 2	Conductivity	17/02/2020	mS/m at 25°C	17
SW-MH 3160	Sample 2	pH	17/02/2020		7
SW-MH 3205		Solids - Suspended	17/02/2020	g/m³	5
SW-MH 313		Solids - Suspended	17/02/2020	g/m³	680
SW-MH 3160	Sample 1	Solids - Suspended	17/02/2020	g/m³	39
SW-MH 3160	Sample 2	Solids - Suspended	17/02/2020	g/m³	210
Hokowhitu Lagoon	SW-10	Conductivity	17/10/2019	mS/m at 25°C	7.6
Hokowhitu Lagoon	SW-10	pH	17/10/2019		7.2
Hokowhitu Lagoon	SW-10	Solids - Suspended	17/10/2019	g/m³	4
Hokowhitu Lagoon	Mid-01	Conductivity	17/10/2019	mS/m at 25°C	8.4
Hokowhitu Lagoon	Mid-01	pH	17/10/2019		7.6
Hokowhitu Lagoon	Mid-01	Solids - Suspended	17/10/2019	g/m³	2
Hokowhitu Lagoon	Mid-02	Conductivity	17/10/2019	mS/m at 25°C	8.4
Hokowhitu Lagoon	Mid-02	pH	17/10/2019		7.5
Hokowhitu Lagoon	Mid-02	Solids - Suspended	17/10/2019	g/m³	2
Hokowhitu Lagoon	Mid-03	Conductivity	17/10/2019	mS/m at 25°C	8
Hokowhitu Lagoon	Mid-03	pH	17/10/2019		7.4
Hokowhitu Lagoon	Mid-03	Solids - Suspended	17/10/2019	g/m³	2
Hokowhitu Lagoon	Mid-04	Conductivity	17/10/2019	mS/m at 25°C	7.5
Hokowhitu Lagoon	SW-10	Escherichia coli	17/10/2019	MPN / 100 mL	638
Hokowhitu Lagoon	Mid-04	pH	17/10/2019		7.2
Hokowhitu Lagoon	Mid-04	Solids - Suspended	17/10/2019	g/m³	4
Hokowhitu Lagoon	Mid-05	Conductivity	17/10/2019	mS/m at 25°C	7.2
Hokowhitu Lagoon	Mid-05	pH	17/10/2019		7.2
Hokowhitu Lagoon	Mid-05	Solids - Suspended	17/10/2019	g/m³	5
Hokowhitu Lagoon	Mid-06	Conductivity	17/10/2019	mS/m at 25°C	7.7
Hokowhitu Lagoon	Mid-06	pH	17/10/2019		7.3
Hokowhitu Lagoon	Mid-06	Solids - Suspended	17/10/2019	g/m³	3
Hokowhitu Lagoon	Mid-04	Escherichia coli	17/10/2019	MPN / 100 mL	504
Hokowhitu Lagoon	Mid-01	Escherichia coli	17/10/2019	MPN / 100 mL	457
Hokowhitu Lagoon	Mid-05	Escherichia coli	17/10/2019	MPN / 100 mL	368
Hokowhitu Lagoon	Mid-06	Escherichia coli	17/10/2019	MPN / 100 mL	317
Hokowhitu Lagoon	Mid-03	Escherichia coli	17/10/2019	MPN / 100 mL	84
Hokowhitu Lagoon	Mid-02	Escherichia coli	17/10/2019	MPN / 100 mL	52
Hokowhitu Lagoon	Mid 1	Conductivity	20/09/2019	mS/m at 25°C	7.4
Hokowhitu Lagoon	Mid 1	pH	20/09/2019		8.1
Hokowhitu Lagoon	Mid 1	Solids - Suspended	20/09/2019	g/m³	2
Hokowhitu Lagoon	Mid 2	Conductivity	20/09/2019	mS/m at 25°C	7.4
Hokowhitu Lagoon	Mid 2	pH	20/09/2019		9.2
Hokowhitu Lagoon	Mid 2	Solids - Suspended	20/09/2019	g/m³	1
Hokowhitu Lagoon	Mid 3	Conductivity	20/09/2019	mS/m at 25°C	7.7
Hokowhitu Lagoon	Mid 3	Solids - Suspended	20/09/2019	g/m³	1
Hokowhitu Lagoon	Mid 4	Conductivity	20/09/2019	mS/m at 25°C	8
Hokowhitu Lagoon	Mid 4	pH	20/09/2019		7.9

Hokowhitu Lagoon	Mid 4	Solids - Suspended	20/09/2019	g/m³	1
Hokowhitu Lagoon	Mid 5	pH	20/09/2019		7.8
Hokowhitu Lagoon	Mid 5	Solids - Suspended	20/09/2019	g/m³	2
Hokowhitu Lagoon	Mid 6	Conductivity	20/09/2019	mS/m at 25°C	8.7
Hokowhitu Lagoon	Mid 6	pH	20/09/2019		7.7
Hokowhitu Lagoon	Mid 6	Solids - Suspended	20/09/2019	g/m³	4
Hokowhitu Lagoon	SW-09	Conductivity	20/09/2019	mS/m at 25°C	9.4
Hokowhitu Lagoon	SW-09	pH	20/09/2019		7.4
Hokowhitu Lagoon	SW-09	Solids - Suspended	20/09/2019	g/m³	3
Hokowhitu Lagoon	SW-10	Conductivity	20/09/2019	mS/m at 25°C	22.1
Hokowhitu Lagoon	SW-10	pH	20/09/2019		6.9
Hokowhitu Lagoon	SW-10	Solids - Suspended	20/09/2019	g/m³	2
Hokowhitu Lagoon	Mid 3	pH	20/09/2019		8.2
Hokowhitu Lagoon	Mid 5	Conductivity	20/09/2019	mS/m at 25°C	8.7
Hokowhitu Lagoon	SW9	Conductivity	20/09/2019	mS/m at 25°C	9.4
Hokowhitu Lagoon	SW9	pH	20/09/2019		7.4
Hokowhitu Lagoon	SW9	Solids - Suspended	20/09/2019	g/m³	3
Hokowhitu Lagoon	SW10	Conductivity	20/09/2019	mS/m at 25°C	22.1
Hokowhitu Lagoon	SW10	pH	20/09/2019		6.9
Hokowhitu Lagoon	SW10	Solids - Suspended	20/09/2019	g/m³	2
Hokowhitu Lagoon	Mid-01	Conductivity	20/09/2019	mS/m at 25°C	7.4
Hokowhitu Lagoon	Mid-01	pH	20/09/2019		8.1
Hokowhitu Lagoon	Mid-01	Solids - Suspended	20/09/2019	g/m³	2
Hokowhitu Lagoon	Mid-02	Conductivity	20/09/2019	mS/m at 25°C	7.4
Hokowhitu Lagoon	Mid-02	pH	20/09/2019		9.2
Hokowhitu Lagoon	Mid-02	Solids - Suspended	20/09/2019	g/m³	1
Hokowhitu Lagoon	Mid-03	Conductivity	20/09/2019	mS/m at 25°C	7.7
Hokowhitu Lagoon	Mid-03	pH	20/09/2019		8.2
Hokowhitu Lagoon	Mid-03	Solids - Suspended	20/09/2019	g/m³	1
Hokowhitu Lagoon	Mid-04	Conductivity	20/09/2019	mS/m at 25°C	8
Hokowhitu Lagoon	Mid-04	pH	20/09/2019		7.9
Hokowhitu Lagoon	Mid-04	Solids - Suspended	20/09/2019	g/m³	1
Hokowhitu Lagoon	Mid-05	Conductivity	20/09/2019	mS/m at 25°C	8.7
Hokowhitu Lagoon	Mid-05	pH	20/09/2019		7.8
Hokowhitu Lagoon	Mid-05	Solids - Suspended	20/09/2019	g/m³	2
Hokowhitu Lagoon	Mid-06	Conductivity	20/09/2019	mS/m at 25°C	8.7
Hokowhitu Lagoon	Mid-06	pH	20/09/2019		7.7
Hokowhitu Lagoon	Mid-06	Solids - Suspended	20/09/2019	g/m³	4
Hokowhitu Lagoon	SW-10	Escherichia coli	20/09/2019	MPN / 100 mL	520
Hokowhitu Lagoon	SW10	Escherichia coli	20/09/2019	MPN / 100 mL	520
Hokowhitu Lagoon	SW-09	Escherichia coli	20/09/2019	MPN / 100 mL	85
Hokowhitu Lagoon	SW9	Escherichia coli	20/09/2019	MPN / 100 mL	85
Hokowhitu Lagoon	Mid 4	Escherichia coli	20/09/2019	MPN / 100 mL	30
Hokowhitu Lagoon	Mid-04	Escherichia coli	20/09/2019	MPN / 100 mL	30
Hokowhitu Lagoon	Mid 3	Escherichia coli	20/09/2019	MPN / 100 mL	20
Hokowhitu Lagoon	Mid 6	Escherichia coli	20/09/2019	MPN / 100 mL	20
Hokowhitu Lagoon	Mid-03	Escherichia coli	20/09/2019	MPN / 100 mL	20
Hokowhitu Lagoon	Mid-06	Escherichia coli	20/09/2019	MPN / 100 mL	20
Hokowhitu Lagoon	Mid 5	Escherichia coli	20/09/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid 2	Escherichia coli	20/09/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid-02	Escherichia coli	20/09/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid-05	Escherichia coli	20/09/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid 1	Escherichia coli	20/09/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-01	Escherichia coli	20/09/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-01	Conductivity	29/08/2019	mS/m at 25°C	6.8
Hokowhitu Lagoon	Mid-01	pH	29/08/2019		7.3
Hokowhitu Lagoon	Mid-01	Solids - Suspended	29/08/2019	g/m³	2
Hokowhitu Lagoon	Mid-02	Conductivity	29/08/2019	mS/m at 25°C	6.8

Hokowhitu Lagoon	Mid-02	pH	29/08/2019		7.4
Hokowhitu Lagoon	Mid-02	Solids - Suspended	29/08/2019	g/m³	1
Hokowhitu Lagoon	Mid-03	Conductivity	29/08/2019	mS/m at 25°C	6.8
Hokowhitu Lagoon	Mid-03	pH	29/08/2019		7.3
Hokowhitu Lagoon	Mid-03	Solids - Suspended	29/08/2019	g/m³	1
Hokowhitu Lagoon	Mid-04	Conductivity	29/08/2019	mS/m at 25°C	7.2
Hokowhitu Lagoon	Mid-04	pH	29/08/2019		7.2
Hokowhitu Lagoon	Mid-04	Solids - Suspended	29/08/2019	g/m³	1
Hokowhitu Lagoon	Mid-05	Conductivity	29/08/2019	mS/m at 25°C	7.6
Hokowhitu Lagoon	Mid-05	pH	29/08/2019		7.2
Hokowhitu Lagoon	Mid-05	Solids - Suspended	29/08/2019	g/m³	3
Hokowhitu Lagoon	Mid-06	Conductivity	29/08/2019	mS/m at 25°C	7.4
Hokowhitu Lagoon	Mid-06	pH	29/08/2019		7.1
Hokowhitu Lagoon	Mid-06	Solids - Suspended	29/08/2019	g/m³	4
Hokowhitu Lagoon	Mid-05	Escherichia coli	29/08/2019	MPN / 100 mL	41
Hokowhitu Lagoon	Mid-02	Escherichia coli	29/08/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid-04	Escherichia coli	29/08/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid-01	Escherichia coli	29/08/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-03	Escherichia coli	29/08/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-06	Escherichia coli	29/08/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-01	Conductivity	25/07/2019	mS/m at 25°C	8.2
Hokowhitu Lagoon	Mid-01	pH	25/07/2019		7.5
Hokowhitu Lagoon	Mid-01	Solids - Suspended	25/07/2019	g/m³	1
Hokowhitu Lagoon	Mid-02	Conductivity	25/07/2019	mS/m at 25°C	8.1
Hokowhitu Lagoon	Mid-02	pH	25/07/2019		7.5
Hokowhitu Lagoon	Mid-02	Solids - Suspended	25/07/2019	g/m³	2
Hokowhitu Lagoon	Mid-03	Conductivity	25/07/2019	mS/m at 25°C	8.3
Hokowhitu Lagoon	Mid-03	pH	25/07/2019		7.5
Hokowhitu Lagoon	Mid-03	Solids - Suspended	25/07/2019	g/m³	2
Hokowhitu Lagoon	Mid-04	Conductivity	25/07/2019	mS/m at 25°C	8.6
Hokowhitu Lagoon	Mid-04	pH	25/07/2019		7.4
Hokowhitu Lagoon	Mid-04	Solids - Suspended	25/07/2019	g/m³	3
Hokowhitu Lagoon	Mid-05	Conductivity	25/07/2019	mS/m at 25°C	10.5
Hokowhitu Lagoon	Mid-05	pH	25/07/2019		7.4
Hokowhitu Lagoon	Mid-05	Solids - Suspended	25/07/2019	g/m³	3
Hokowhitu Lagoon	Mid-06	Conductivity	25/07/2019	mS/m at 25°C	13
Hokowhitu Lagoon	Mid-06	pH	25/07/2019		7.5
Hokowhitu Lagoon	Mid-06	Solids - Suspended	25/07/2019	g/m³	3
Hokowhitu Lagoon	Mid-05	Escherichia coli	25/07/2019	MPN / 100 mL	20
Hokowhitu Lagoon	Mid-06	Escherichia coli	25/07/2019	MPN / 100 mL	10
Hokowhitu Lagoon	Mid-01	Escherichia coli	25/07/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-02	Escherichia coli	25/07/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-03	Escherichia coli	25/07/2019	MPN / 100 mL	9
Hokowhitu Lagoon	Mid-04	Escherichia coli	25/07/2019	MPN / 100 mL	9

MEMORANDUM

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Artificial Turf - Needs Assessment**

PRESENTED BY: **Julie Macdonald, Strategy and Policy Manager**

APPROVED BY: **David Murphy, Acting General Manager - Strategy and Planning**

RECOMMENDATIONS TO PLAY, RECREATION AND SPORT COMMITTEE:

1. **To receive the report 'Artificial Turf – Needs Assessment' by Recreation, Sport and Leisure Consultancy as provided in attachment 1.**
2. **That the proposal to do a feasibility study (at a cost of $35,000) outlined in attachment 1 be referred to the 10 Year Plan 2021–31 process.**
3. **That other programmes relating to programme #1133 – Artificial Football Turf, such as design and consenting and Council's capital contribution to an artificial turf, are also referred to the 10 Year Plan 2021–31 decision-making process.**

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1. ISSUE

1.1 Following the presentation of a financial assessment of a proposed artificial football surface in September 2019, Council commissioned an independent needs assessment to examine the current and future demand for both grass and artificial sports fields. This report was prepared by Recreation, Sport, Leisure (RSL) Consultants (attachment 1).

1.2 The 'Artificial Turf – Needs Assessment' (June 2020) concluded:

- Population growth will generate increased participation in winter sports codes and changes in approach that will encourage greater participation.
- Football and rugby union sporting codes currently have to compromise their delivery as they cannot consistently access enough training venues.
- Modelling of future field requirements show an undersupply in current and future weekday training capacity.

1.3 RSL recommends proceeding to the feasibility phase of this project to meet the identified needs of the sporting codes outlined in the report. Staff support this recommendation, which is consistent with the next step of the Council-endorsed investment decision-making process in the Manawatū-Whanganui Regional Sports Facility Plan.

1.4 As there is no budget to proceed with this work in the current 2020/21 financial year, a programme to prepare a feasibility study in 2021/22 needs to be considered as part of the 10 Year Plan 2021-31 process. Future stages of the current programme (#1133) will also need to be considered as part of the 10 Year Plan process.

2. BACKGROUND

2.1 Demand for an artificial football turf has been expressed by the football community for many years through the Central Football Federation, football's regional organisation representing the Central North Island. Central Football successfully lobbied, through a submission to Council, to develop an artificial turf with budgets subsequently included in the Council's 2015-25 10 Year Plan. A key driver for this project was the prospect of Central Football accessing a significant proportion of the cost of the turf through 'Facility Forward' funding through football's international governing body, FIFA.

2.2 The 2018-28 10 Year Plan re-prioritised the timing of the original budgets for this project, moving the construction budget to 2021/22 (from 2020/21) and allowing for a $83,000 budget for design in consenting in 2019/20.

2.3 Due to a desire for Council to consider a partnered turf option as raised as a preference by Central Football, in April 2018 the Council decided that should the turf be constructed on a non-Council site then the funding would be as an operational grant of $550,000. The balance of any funding for the construction of any artificial turf would need to be externally fundraised.

2.3 A site selection process for the turf facility was undertaken by an assessment team in late 2018. At the March 2019 meeting of the Sport and Recreation Committee, staff, on behalf of the assessment team, recommended a preferred site for the artificial turf. Council decided that further investigation of the financial aspects of the proposed turf was required prior to deciding about the location of the turf

2.4 The $83,000 budgeted for design and consenting for the 2019/20 financial year was unspent, due to Council requiring further financial and needs assessments to be undertaken.

2.5 The financial assessment was reported to the Sport and Recreation Committee in September 2019 (in Part II) but has since been released to the public. The recommendations adopted by Council were:

58-19 Artificial football turf - Financial Assessment

1. *That the Council receives the report 'Financial Assessment of the Proposed Football Surface' by Recreation, Sport and Leisure Consultancy as provided in Attachment 1.*

2. *That the Council defer a decision on a preferred location for the artificial football turf until further work is undertaken as detailed in the Recreation, Sport and Leisure Consultancy Financial Assessment report (Attachment 1).*

3. *That a portion of the $83,000 budget for artificial football turf design and consenting (refer programme #1133 for the 2019/20 year) is reallocated to fund the recommended needs analysis and feasibility work in the Recreation, Sport and Leisure Consultancy report.*

4. *That the investment decision-making process (adopted by Council) in the Manawatū-Whanganui Regional Sport Facility Plan (RSFP) guides future actions relating to this project.*

5. *That the assessment team is thanked for their work and informed that the RSFP investment decision-making process will guide the future process steps.*

6. *That any decisions arising from this report are released to Part I once Central Football, Massey University and Central Energy Trust Arena representatives have been advised of the next steps.*

3. KEY FINDINGS OF THE NEEDS ASSESSMENT

3.1 The key findings of the RSL 'Artificial Turf – Needs Assessment' report (attachment 1) are summarised as:

- An increase in the City's population will generate an increase in participants in winter sports codes. This increase is likely to be further consolidated by several codes who are changing their approach to encourage greater participation.

- Football, rugby union and hockey codes will remain the largest users of winter sports fields. Both football and rugby union codes are currently having to compromise their delivery as they cannot consistently access enough training venues. Hockey has moved to an artificial turf model and this ensures players train and compete on quality surfaces, regardless of environmental conditions.

- Several scenarios relating to future field requirements all show an undersupply in current and future weekday training capacity. Codes are implementing the following strategies to overcome this shortfall:
    - Reducing optimal training time allocations for teams.
    - More teams training on these fields than is ideal.
    - Training on fields that are designated for competitions.
    - Cancelling trainings to preserve competition fields.
- Artificial turf has been proven in other centres and is seen as an efficient way of increasing training capacity. PNCC has already invested in one multi-use artificial turf at the Central Energy Trust Arena.

3.2 The RSL report recommends that Council proceeds to the feasibility phase of this project to determine the preferred option to meet the identified needs of the sporting codes. This feasibility study would also allow greater analysis of the impact the Arena artificial turf has had on the overall sportsfield network.

4. FEEDBACK ON THE RSL REPORT FROM KEY STAKEHOLDERS

4.1 Key project stakeholders Central Football, New Zealand Football, Massey University, Sport New Zealand, and other sports codes referenced in the report, were given the opportunity to provide feedback on the needs assessment report.

4.2 Central Football's comments on the needs assessment report are summarised as:

- *The needs assessment report concludes that improved and more facilities are needed for this sport (football).*
- *There needs to be two new multi-code lit artificial turfs, with the positioning of such critical.*
- *If two new multi-code artificial turfs are not a consideration, there needs to be one new football-specific lit artificial turf.*
- *Alongside any new artificial turf, upgrades to current grass turfs will still be required, which would be applicable across all codes.*

4.3 Massey University, Sport NZ and NZ Football have supported the Council following the decision-making process and commended the thoroughness of the RSL report. Sports codes involved in providing input into the needs assessment have not provided any further comment on the completed RSL report.

4.4 The report was also shared with the Manawatū-Whanganui Regional Sports Facility Plan Steering Group comprised of representatives from Sport Manawatū (as the RSFP lead), Sport NZ, and the seven territorial authorities that make up the region. The feedback from Steering Group members is:

- *Support for future stages of work, such as the recommended feasibility study, to follow the investment decision-making process in the RSFP.*
- *Unknown sport and recreation preferences of people in the future that may have a bearing on decision-making for artificial surfaces.*
- *Preparedness of sports codes that require artificial surfaces to accommodate active ageing population and the activities that could be undertaken.*
- *Use of school artificial turfs after-hours – more information on community use required.*
- *Benefits of developing a 'schools framework' for sports facility developments that may meet both school and community needs (a recommendation in the RSFP).*
- *Impacts on regional football performance (competition level), due to the lack of an artificial surface, have been experienced in other regions.*
- *Potential to examine the charging model for the Arena turf for Central Football.*
- *Identification of more collaboration across the sector through user group meetings, shared calendars and regular contact with Council.*
- *How does the sport fields deficit highlighted in the report compare to other centres of a similar size?*

5. DISCUSSION

5.1 Staff consider there are several benefits of proceeding with the next stage of work. The proposed feasibility study will:

- Confirm Council's commitment to progress through the steps in the investment decision-making process when considering new sports facilities.
- Examine the project in a broader regional context in line with the implementation of the Regional Sports Facility Plan.
- Inform decisions that need to be made on future CETA Master plan programmes related to the construction of a second artificial sports turf and the reconfiguration of the rear fields (Arena 6).

- Reconnect with and explore the aspirations of other potential partners, particularly those in the education sector who have previously indicated interest in the construction of artificial sports surfaces.

- Reconsider the financial aspects of the project given changes to the funding landscape since the financial assessment was carried out (including examining any impacts of COVID-19 on external funding opportunities).

- Ensure Council's relationship with the main proponent of the football turf, Central Football, is maintained alongside any other potential partners and stakeholders.

6. NEXT STEPS

6.1 If the Council adopts the recommendations then the proposed feasibility study will be considered as part of the 10 Year Plan process.

7. COMPLIANCE AND ADMINISTRATION

Does the Committee have delegated authority to decide? If Yes quote relevant clause(s) from Delegations Manual <Enter text>	**No**
Are the decisions significant?	**No**
If they are significant do they affect land or a body of water?	**No**
Can this decision only be made through a 10 Year Plan?	**Yes**
Does this decision require consultation through the Special Consultative procedure?	**No**
Is there funding in the current Annual Plan for these actions?	**No**
Are the recommendations inconsistent with any of Council's policies or plans?	**No**
The recommendations contribute to Goal 2: A Creative and Exciting City	
The recommendations contribute to the outcomes of the Creative and Liveable Strategy	
The recommendations contribute to the achievement of action/actions in the Active Community Plan The action is: Facilitate sports code-led developments where there is demonstrated community benefit.	
Contribution to strategic direction and to social, economic, environmental	The needs assessment work has provided evidence of needs of particular sporting codes for both grass and artificial sports fields that justify progressing to examining the feasibility aspects of the proposal. This work will progress a football-led proposal for an artificial football turf and will assist in Council's future decision-making processes

and cultural well-being	related to being a more active community.

ATTACHMENTS

1. Artificial Turf - Needs Assessment (June 2020) ⇩

RECREATION | SPORT | LEISURE | CONSULTANCY

Artificial Turf Needs Assessment

A report for Palmerston North City Council

June 2020

Document Information and Acknowledgements

Document version: Final

Authors: Deb Hurdle, Richard Lindsay, Katelyn Elley.

Acknowledgements

RSL would like to thank for following people and organisations for their input into developing this plan:

Project Team

Ann-Marie Mori, Kathy Dever-Tod, Aaron Phillips, Dave Evans, Brian Way, Brad Cassidy

With Thanks To

Local, regional and national stakeholders who have contributed information toward this report

Disclaimer

Contents Page

Executive Summary

Palmerston North City Council (PNCC) has commissioned this report to understand if there is a need for an additional artificial sports turf. A network of sports fields is provided by PNCC for sport participation and wider use. There is a pro-active, ongoing maintenance programme, with innovations including hybrid implants in high wear areas and the development of the first multi-code artificial turf at Central Energy Trust Arena (Arena).

The primary purpose of this report is to determine if there is a need for an additional artificial surface. This report has confirmed there is a need to explore options to address the shortfall in capacity for winter code training. Analysis confirms there is ample provision of fields for competition games, but significant compromises are being made with regard to training.

An artificial turf is one option to address some of the shortfall of sports field capacity. Other options include the development of new fields, upgrading the quality of existing fields or converting existing soil-based fields to sand carpets, or newer hybrid technology (a combination of natural and artificial fibres).

Some training needs may be able to be met through greater use of third-party playing surfaces, such as the multi-use turfs at schools.

Conclusions

Demographic data provided by PNCC shows moderate population growth in the area. All other things remaining equal, this increase in population will generate increased participants in winter sports codes. This increase is likely to be further consolidated by a number of codes who are changing their approach to encourage greater participation.

It is likely that Football, Rugby Union and Hockey will remain the largest users of winter sports fields. Hockey has moved to an artificial turf model and this ensures players train and compete on quality surfaces, regardless of environmental conditions. Both Football and Rugby Union are currently having to compromise their delivery as they cannot consistently access enough training venues.

Several scenarios relating to future field requirements all show an undersupply in current and future weekday training capacity. Codes are implementing the following strategies to overcome this shortfall:

- Reducing optimal training time allocations for teams.
- More teams training on these fields than ideal.
- Training on fields that are designated for competitions.
- Cancelling trainings to preserve competition fields.

Artificial turf has been proven in other centres and is seen as an efficient way of creating increased supply of training capacity. PNCC has already invested in one multi-use artificial turf.

It is recommended that PNCC proceed to the feasibility phase of this project to determine the preferred option to meet the identified needs of the sporting codes. This feasibility

study would also allow greater analysis of the impact the Arena artificial turf has had on the network.

Further education is also required with sporting codes on PNCC's sports field management programme and the process for the codes and PNCC to work collaboratively on solutions where issues have been identified.

COVID - 19 Note

As the report was commissioned and well under way before the outbreak of COVID-19 in New Zealand, the implications of what effect that may have on the ability of people in Manawatū to afford to play competitive sport in the future, a code's ability to pay to use another artificial turf or the ability to secure funds to develop it either through PNCC and/or alternative funders has not been considered. This consideration would more appropriately sit within a feasibility study, if PNCC decides to proceed to that step.

1. Introduction

1.1 Purpose

The purpose of this report is to provide an independent assessment of the need for a further artificial sports turf in Palmerston North, on behalf of PNCC. In doing so the report investigates the needs of seven sports codes – selected in consultation with PNCC officers. These codes make up the key users of sports fields in the region. It is recognised there will be other users of sports fields, but numbers will be small and have little impact on the outcome of this report.

1.2 Scope and Methodology

This report takes an objective, evidence-based approach to assessing the need for a further artificial sports turf in Palmerston North. This process is aligned to the agreed decision-making framework in the 2018 Manawatū – Whanganui Regional Sports Facility Plan.

The agreed scope and methodology included:

- A review of previous reports relating to sports field supply and demand in Palmerston North. The most significant of these being the 2016 PNCC Recreation Needs Assessment and the 2018 Manawatū - Whanganui Regional Sports Facility Plan
- An assessment of sports participation and demographic trends as they relate to the provision of sports fields
- Engagement with key stakeholder groups. A survey and interviews were undertaken with key user groups from Sport Manawatū, Football, Rugby League, Rugby Union, Touch, Hockey, Cricket, Softball, local secondary schools and Massey University
- A workshop with the Project Steering Group[1] to provide initial feedback and receive further direction
- A preliminary assessment of the supply and demand of sports fields to understand current and future needs.
- An investigation of what options are available to meet future needs
- Providing further detail on the development of a preferred option (should PNCC wish to proceed to the feasibility study stage).

For the purposes of this report it is acknowledged that most weekday use of PNCC sports fields is for training and most weekend use is for competitions, with some notable exceptions.

During the process of development PNCC has provided feedback, advice and additional information as it has arisen.

The scope of the report is limited to analysis of sports fields within Palmerston North, recognising that the codes also use sports fields in surrounding council areas.

[1] The Project Steering Group comprised PNCC Officers and a Senior Manager from Sport Manawatu.

Outside of Scope

While the report makes a high-level analysis of supply and demand it is not a detailed supply and demand study and is reliant on information provided in good faith.

The report is not a feasibility study and as such has not considered the ability or desire of potential users to pay for the use of an additional artificial turf, nor their ability to contribute to the cost of developing and maintaining it.

The report does not assess the wider facility needs of codes, for example the need for additional indoor space, changing rooms or clubrooms, nor the potential wider community demand or use of an additional artificial turf.

As the report was commissioned and well under way before the outbreak of COVID-19 in New Zealand, the implications of what effect that may have on the ability of people in Manawatū to afford to play competitive sport in the future, a code's ability to pay to use another artificial turf or the ability to secure funds to develop it either through PNCC and/or alternative funders has not been considered. These considerations would more appropriately sit within a feasibility study, if PNCC decides to proceed to that step.

1.3 Background

PNCC provides a network of parks with fields for a range of sporting codes. These fields are predominantly natural, soil-based turfs. There are 23 parks offering sports fields for summer and winter ball sports.

Over recent years this network has seen the introduction of several technologies that has seen an improvement to the overall level of service offered to sport field users. Artificial surfaces have been developed to support the development of cricket and field hockey in the region, and more recently a multi-use artificial turf has been developed at Arena for Football, Rugby and other user groups. The introduction of hybrid surfaces (combining synthetic grass with natural grass) has also helped address wear in heavy use areas of some sports fields.

The 2018 Manawatū – Whanganui Regional Sports Facility Plan (RSFP), a high-level strategic framework for regional sport and recreation facility planning, took a detailed snapshot of all sports facilities, including sports fields across the Manawatū and Whanganui regions. The RSFP identified facility gaps, over supply challenges (such as with clubrooms) and a number of areas where partnership approaches could be explored. It also set out a framework for the development of new facilities that would ensure informed decision making and provide potential investors confidence in the need and feasibility of such facilities. This decision-making framework has been adopted by PNCC.

The RSFP documented each sports field within the Manawatū area, noting what supporting assets each field had, such as changing rooms and lights and any issues they may have such as drainage or irrigation. While drainage and irrigation were noted to provide some capacity and quality concerns, these did not suggest any notable supply side issues, with virtually all field facility sites meeting sporting needs. The demand by Football for an artificial turf was noted.

The proposed facility approach for artificial turf surfaces for Palmerston North was to undertake a needs analysis and feasibility assessment to investigate the need for and

viability of multi-code artificial turf/s. Of the high priority projects identified across the regions for development over the next ten years, prioritising investment in the development of multi-code artificial turf surfaces at Arena Manawatū and at one other City location was identified for Palmerston North City to be undertaken over the next 1-3 years.

In 2019 RSL Consultancy was engaged by PNCC to undertake a financial assessment of two proposals to develop an artificial football turf in Palmerston North. Investigation into the development of this artificial football turf had begun before the 2018 RSFP was published. While working alongside PNCC and engaging with key stakeholders it became clear that before PNCC can commit to any financial contribution to such a project, a formal needs assessment to establish the need for an additional artificial sports turf should be undertaken. If a justifiable need is established, then a feasibility study should be undertaken, considering all aspects of potential viability. Such an approach is in line with the decision-making framework PNCC has agreed to in the 2018 Manawatū - Whanganui Regional Sports Facility Plan.

2. Population Trends

When investigating the need for a potential new facility it is important to understand the current and future demographic profile of the area.

PNCC demographic data projections have been provisionally updated by Infometrics based on 2018 Census data. It is this updated, albeit provisional, data that has been used as the primary data source for this report to ensure alignment with the strategic assumptions informing other planning in the district.

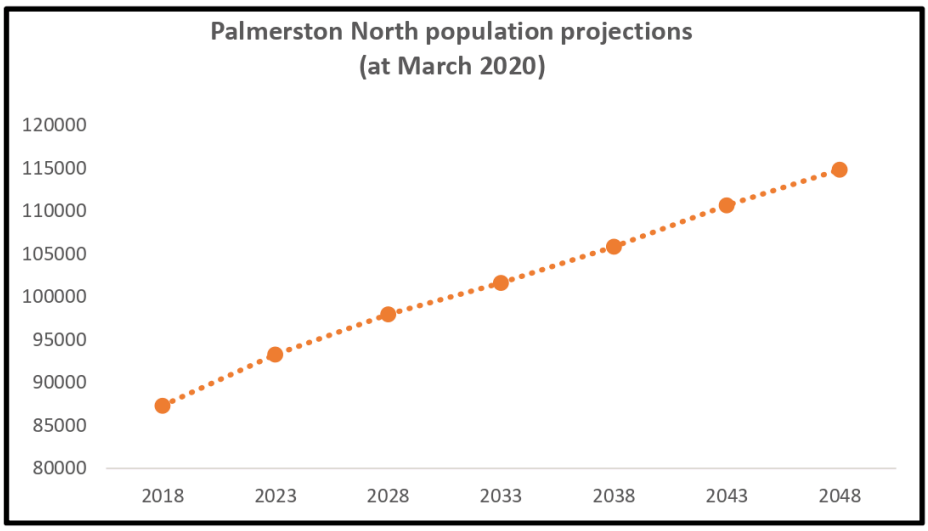
2.1 Current and Projected Population

According to the 2020 provisional population projections provided by Infometrics, the population of Palmerston North is predicted to grow at a moderate rate overall and is most likely to continue growing at a similar rate over the 30 years 2018-2048. Over this period the city will grow by a total of 27,503 people or 917 people on average per annum.

Information provided by PNCC suggests that the factors driving this expected continual growth in population include:

- Population growth partially due to natural increases, where the number of births is greater than the number of deaths.
- Increases in international net migration to Palmerston North, with a continued upward trend in the numbers of overseas arrivals to the area.

Figure 2.1: Population Projections 2018-2048



Source: Infometrics - 2018-base (provisional) March 2020

Table 2.1: Population Projections 2018-2048

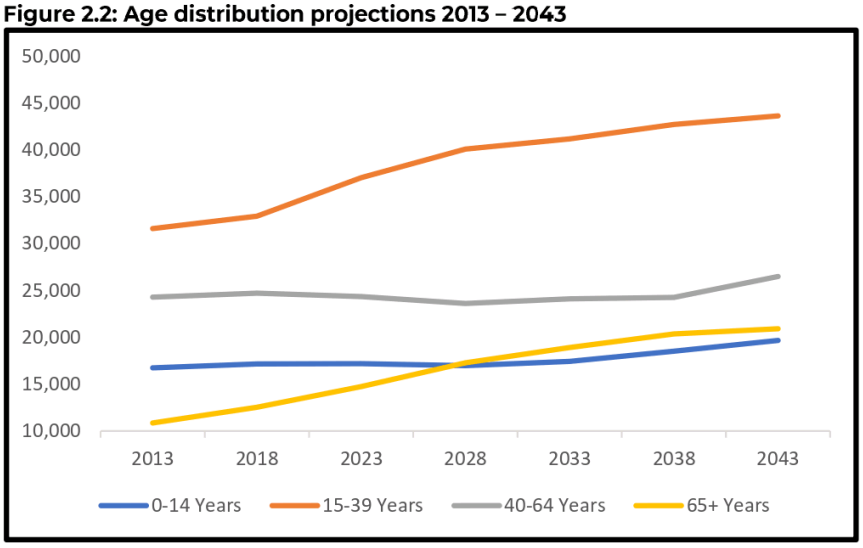
Year	Projection	Change	% Change
2018	87,320		
2023	93,280	+5960	7%
2028	97,948	+4668	5%
2033	101,608	+3660	4%
2038	105,843	+4235	4%
2043	110,676	+4833	5%
2048	114,823	+4147	4%

Source: Infometrics - 2018-base (provisional) March 2020

2.2 Current and Future Age-Group Projections

Looking ahead over the next 30 years, Figure 2.2 shows the projected changes in age groups for Palmerston North (see appendix five for further breakdown). It is evident from Figure 2.2 that the 15-39 age-group holds the largest proportion of the population and along with the 65+ age group has a steady growth projection. Other age groups show relatively small growth projected for the future.

Figure 2.2: Age distribution projections 2013 – 2043



Source: Infometrics (2018-base (provisional)) March 2020

The potential main users of any artificial turf development in the area usually fall within the 5-49 age-group, although with a healthy, active aging population this could change and extend more into the 50-65 age group over time. The 15-49 age group is projected to grow at a steady rate and continue to hold the largest proportion of the population over the next 30 years (Table 2.2 below shows an overall growth of over 16,000 people in the 5-49 year age group from 2013 to 2043). This indicates that there would be an on-going supply of potential users of any artificial turf development in the area.

Table 2.2: Palmerston North: Age-group projections – Playing population (5 years– 49 years)

	2013	2018	2023	2028	2033	2038	2043	Change 2013-2043	% Change
5-9 Years	5,470	5,960	5,626	5,470	5,765	6,091	6,551	1,081	20%
10-14 Years	5,390	5,520	6,010	5,658	5,493	5,790	6,119	729	13.5%
15-19 Years	6,900	6,660	8,270	8,356	7,572	7,589	8,129	1,229	18%
20-24 Years	8,480	8,500	10,091	11,152	10,695	10,137	10,452	1.972	23%
25-29 Years	6,040	6,880	6,741	8,221	9,282	8,828	8,272	2,232	37%
30-34 Years	5,250	5,740	6,413	6,205	7,684	8,745	8,294	3,044	58%
35-39 Years	4,930	5,150	5,501	6,144	5,938	7,414	8,474	3,544	72%
40-44 Years	5,330	4,930	4,905	5,237	5,880	5,676	7,150	1,820	34%
45-49 Years	4,990	5,260	4,645	4,604	4,938	5,580	5,380	390	8%

Source: Infometrics (2018-base (provisional)) March 2020

3. Sports Participation Trends (Demand)

Seven sports codes have been identified as the primary users of sports fields in Palmerston North. The sports codes have provided the current number of teams participating in their local competitions.

Predicting future team numbers (and therefore required fields) is more challenging. Several tools have been used to assist in the participation forecasts for this report. They are:

- Population data supplied by PNCC, particularly amongst the playing age (see section 2).
- The Sport NZ Active NZ Survey which records point in time participation levels.
- The Sport NZ Insights Tool, which considers a range of factors to predict current participation.
- The New Zealand Secondary School Sports Council annual census of sports participation.
- Sport code predictions.

3.1 Sport NZ Active NZ Survey and Insights Participation Data[2]

Table 3.1 below shows the level of participation by Manawatū adults aged 18 years and over and those aged 5-17 years, across the seven different identified field sports. An estimate has been made of how many people this involves in Manawatū. The term "estimate" has been used because the calculation is based on supplied data (Refer Table 2.2) which categorises population figures as under and over 20 years old, whereas Sport NZ refers to adults as 18 plus.

Table 3.1 Estimated Participation Estimates by Sporting Code (2018)

Code	% of Manawatū adults participating	Approx. number Manawatū adults (20 +) participating	% of Manawatū young people participating	Approx. number Manawatū young people (5-19) participating
Football	8%	3728	20%	3628
League	0%	0	4%	726
Rugby	4%	1864	14%	2540
Touch	3%	1398	11%	1995
Hockey	4%	1864	9%	1633
Cricket	5%	2330	11%	1995
Softball	1%	466	2%	363

Data supplied by Sport NZ Active NZ and Insights Surveys 2018

[2] It should be noted that the Sport NZ Insights tool is still relatively new and records people's recollection of what activities they have undertaken in the last 12 months for adults and last seven day for young people. It does not ask them about the regularity of that activity only whether they have done it. So, it is likely that participation numbers, which could relate to a one off experience rather than a regular/seasonal competition, will actually be higher than the numbers provided by the sporting codes. The reason being that the sporting codes reporting the number of members rather than the number of people who have participated. It simply provides us with another data set which if nothing else gives us some comfort that the code reported figures are not over inflated.

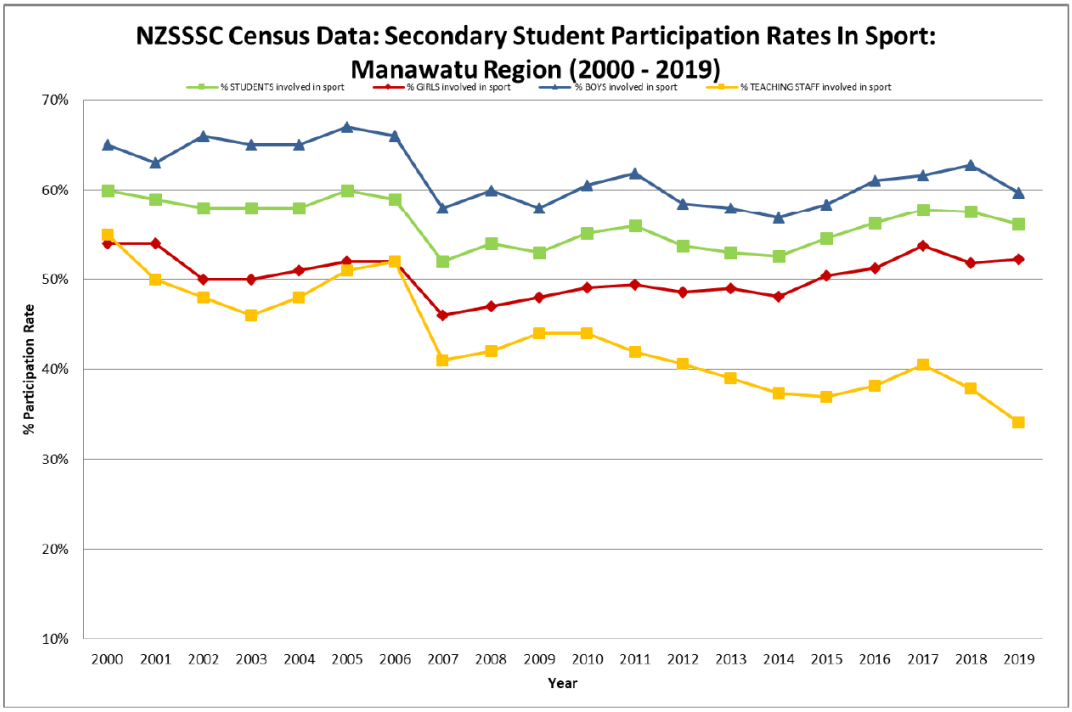
3.2 Secondary School Sport Participation Levels

Data from the New Zealand Secondary School Sports Council (NZSSSC) shows that participation levels of secondary school students in sports in Manawatū (and across the whole of New Zealand) have declined between 2000 and 2019[3]. However, the level of decline is relatively small overall, with participation declines greater among boys compared with girls.

This participation data includes all students that had a meaningful engagement in each sport in the school setting, for example representing a school at that sport or taking part in a sport provided in-school over a period of six weeks. It does not include students that took part in a one-off event.

Of the 10,250 young people enrolled in secondary school in Manawatū in 2019, 56% (5,752) were involved in sport. This data aligns with the advice from Sport New Zealand about decreasing levels of participation in young people across New Zealand and the focus on tamariki and rangatahi that underpins the 2020-2025 Sport NZ Strategic Plan[4]

Figure 3.2: NZSSSC Census data for Manawatū 2000-2019



Source: New Zealand Secondary School Sports Council Annual Sport Participation Census

[3] According to NZSSSC, the significant dip in recorded participation levels between 2006 and 2007 is an anomaly in Manawatū that is not reported across New Zealand. It relates to the quality of reporting in that year rather than an actual dip in participation levels

[4] Strategy currently on hold as a result of COVID-19

Secondary schools were asked for their views on their use of and need for artificial turfs. Ten schools responded. Seven of those have their own artificial turfs. In all cases these are well used by the school in some instances several times a day for a variety of sports, games and PE classes. Four of the seven schools with artificial turf make their turf available for community use.

There is a trend in New Zealand for schools to re-develop areas with multi-use, artificial turf areas as they can intensify use of space. Many of these artificial turfs are not full size and are used by the school for the majority of time. Often these turfs are being developed without floodlights, ruling out the ability for winter sports codes to hire this space for evening trainings.

3.3 Sports Code Participation in the Manawatu

Sport Manawatū has provided code specific membership numbers from 2013-2018 for regional and PNCC members (except Softball). PNCC members come from Palmerston North and Regional members come from the wider Manawatū and neighbouring regions that participate in local competitions. Each code was asked to predict what they anticipated their membership would be in 2025 and 2030 (refer appendix one) and explain the rationale behind their predictions.

Codes were also asked to make similar predictions about team numbers (refer to Table 3.3 below). All codes predicted an increase in the number of teams they envisaged would be playing their code and that the biggest increase in player numbers would be young people, women and girls. This aligns with the Government's 2018 Strategy for Women and Girls in Sport and Sport NZ's 2020-2025 Strategic Plan[5] which focus on increasing participation in these cohorts. Also, of note is a recent partnership between Sport NZ, NZ Football, NZ Cricket, NZ Rugby, Netball NZ and Hockey NZ to address the declining participation rates of young people in NZ sport and develop solutions to address those.

Each of the sports communicated with during this process alluded to new initiatives and programmes they are developing to address the issue of declining youth participation and this is where they universally saw opportunities to increase involvement in their sport.

Table 3.3: Percentage increases in membership, as predicted by each code by 2030

	Football	League	Rugby	Touch	Hockey[6]	Cricket	Softball
% increase 2020-2030	1.4	11	44	56	18	7	23

Source: Code provided forecasts

[5] Currently on hold as a result of COVID-19

[6] Winter only

3.4 Predicting Future Participation

There are a number of factors that determine future participation numbers including historical trends, new initiatives looking at modified versions of the game or targeting segments of the community and population growth.

Table 3.4 compares the current number of teams with both the team predictions made by the codes based on a number of assumptions and predictions gained through population growth alone, with all other factors remaining equal.

Table 3.4: Current & future team numbers based on code predictions & population growth

	Number of teams in 2020	Number of teams in 2030 (as predicted by the sport)	Number of teams in 2030 (only allowing for population growth)
Football	328	352	380
Rugby League	37	42	43
Rugby Union	156	235	181
Touch	160	250	185
Hockey (winter)	224	278	259
Hockey (summer)	241	383	279
Cricket	127	148	147
Softball	83	91	96

Table 3.4 above highlights that some sports expect to have participation growth that matches population growth or less, for example rugby league and cricket; while others for example rugby union, touch and summer hockey are predicting participation growth rates far exceeding the impacts of population growth alone. Football has taken a more conservative approach basing their predictions on their 1.4% membership increase over the last 10 years.

3.5 Analysis of Sporting Codes Participation and Demand

A code by code summary of forecast projections is provided below:

Football

Football has the most teams per allocated field of any of the winter codes[7]. This is reflected in its identified need for additional floodlit training fields of a high quality, noting that it is currently up to the individual code to provide their own lights. Central Football forecast modest growth in the sport, however this is from a significant starting point.

Rugby League

[7] This excludes hockey who have converted to training and playing on artificial surfaces.

The current participation numbers in Rugby League are low. Projections for future playing numbers are in line with population growth. The needs of Rugby League can be fully met within the existing sports field network.

Rugby Union

The projected participation numbers from Rugby are significant. Although Rugby has plans to introduce further modifications to the game it is difficult to see the predicted growth being realised.

Touch

The participant numbers provided by Touch require significant introduction of new initiatives to attract the numbers predicted. This requires significant recruitment of new players above what would be expected from population growth alone. Given the lack of pressure on summer field capacity there appears to be enough room for growth for Touch.

Hockey

Hockey has benefited from the development of artificial turfs. Growth in both winter and summer hockey is significant. The development of a third hockey specific turf in the city (at Massey University) will future proof capacity and enable them to move their junior games from the grass fields at Manawaroa Park. This has the potential to free up playing space for use by other codes. Any further demand could be met through partnerships with schools for under-sized turfs for junior training and play.

Cricket

Cricket has a range of specialist (artificial pitch) turf needs to deliver the game across all levels. An artificial surface could be used for cricket grades that use a soft ball (generally years 1-4). While there may be some additions required to cater for growth, there are sufficient sports fields within the network to meet the current and forecast future needs.

Softball

There are enough grounds to meet the current and forecast future needs of Softball. An artificial turf could be used to provide a wet weather training venue for the sport's representative squads.

3.6 Summary of Identified Needs

The seven identified codes have also provided feedback on the current issues and opportunities relating to the sports field network. Much of the feedback relates to either the quality or quantity of sports fields, particularly training fields. Some of the feedback indicates a lack of understanding of PNCC sports field management practices. Additional discussions with individual codes may be useful to increase the codes' understanding of PNCC's position.

Feedback from the seven codes has been summarised to identify the key areas of need. These needs can be categorised as follows (further code specific feedback can be found in appendix one).

- Community Competition – the ability to consistently play competition games, which can be cancelled due to poor ground conditions caused by poor weather. Floodlit artificial surfaces also allow codes to review when their competitions are played.

- Training – the ability to offer floodlit training venues that can be used multiple nights of the week, without damaging the surface. This would also reduce pressure on other grounds currently used for both training and competition.

- Performance - there is some feedback from codes, particularly Football, that Palmerston North teams are at a disadvantage not being able to train and play regularly on artificial surfaces. When teams travel to other areas and play on artificial surfaces, they are unfamiliar with the surface and therefore struggle to compete.

- Service level expectation – over a long period of time the increase in service levels has occurred across many sectors, including sports facility provision.

  Within sport, a number of codes have benefited through facilities that are developed at a higher quality than previously. Athletics tracks, Hockey turfs, Indoor Courts for Basketball and Netball are just some examples where original service levels have been built upon. Many of these upgraded facilities have been developed to address the need for better quality playing surfaces and conditions for participants to train and compete.

  The development of a large number of artificial turf surfaces used by Rugby and Football across New Zealand has seen the Palmerston North sporting community also wish to increase the level of service for their codes.

Feedback from the codes interviewed has illustrated that winter sports are those with a higher level of need that are currently not being met through the current sports field network.

4. Sports Field Supply

4.1 Provision of Sports Fields in Palmerston North

PNCC currently provides a range of sports fields throughout the city.

The codes each have a service level agreement with PNCC which identifies the number of fields they have access to. They are charged for senior and training fields. There is no charge for junior fields. That contract covers use of the identified fields for approximately seven months.

The cost of use of Arena grass and artificial fields is charged separately by Arena. Rugby has a separate agreement with Arena that allows them access to the grass and artificial fields at Arena charged on a per day rate. Central Football does not have access to the grass fields and access to the artificial turf would be charged on a per game or training session basis, rather than a per season basis which is how they are charged for the use of other PNCC fields.

Table 4.1 below provides a summary of the sports fields available to the various codes (see appendix three for an inventory of sports fields in Palmerston North).

Table 4.1 Summary of available Sports Field Network[8]

	Football	League	Rugby	Touch	Hockey	Cricket	Softball	Multi-use
Competition Fields	23 Snr[9]. 30 Jnr.	3 Snr. 6 Jnr	25 Snr. 14 Jnr.	10 Snr. 10 Jnr.	3 Artificial 20 Jnr.	32 (13 Grass / 19 Artificial)	5 (2 "skins") Multiple Jnr.	4 Fields (1 artificial)
Dedicated Training Areas*	4	1	7 plus indoor facility at Arena			3 x training blocks 3 Training nets [10]		Arena turf is multi-use training & comp.
Fields with Lights	9	1	13					2

* A dedicated training area (DTA) is an area that is only used for training, preserving competition fields for games.

Many of the competition fields are also used for training during the week as some clubs do not have dedicated training fields. Clubs are responsible for costs associated with the installation and use of training lights. This limits the number of training grounds available for winter codes. Codes have reported they often cancel trainings to ensure the fields are playable for weekend competitions.

There are also fields not owned or managed by PNCC that are used by the codes to deliver training and competition. Massey University has 13 fields along with an indoor artificial turf area. Linton Military Base has four fields with limited community access. Schools also

[8] **Note**: Most of the fields in the PNCC sports field network are used by both a winter and summer sport.

[9] Includes Linton and Massey that only have access to if home games

[10] Indoor/covered training opportunities also exist for cricket

provide some playing fields, although generally these are only used by school teams. School grounds are generally of an inferior quality than PNCC grounds.

4.2 Current Capacity of Winter Sport Fields

To determine current and future needs it is also important to understand the capacity of sport fields. In this instance the focus is on winter sports fields, given this is the area of most need. Table 4.2 outlines the available capacity of training and competition fields (detail of capacity can be found in appendix three). Hours required by sports codes are outlined in section five.

Table 4.2 Summary of available capacity

	Hours Available for Training	Hours Available for Competition
Football	16	115
Rugby Union	28	140
Rugby League	4	15
Total	48	505

Note: The new Arena artificial turf has added up to an additional 55 hours of capacity to the network.

This summary capacity is based on the following advice provided by PNCC Officers:

- Training fields have an average capacity of four hours per week.
- Competition fields have an average capacity of five hours per week.

This capacity includes all PNCC fields as well as both Massey University and Linton Military Base which the codes can schedule games at, provided the relevant organisation's team/s are playing there. When considering the network of sports fields available some general findings are:

- Third party fields add capacity to the network of fields that is available for use.
- These additional fields are seen as an important part of network. If current access arrangements change, this would place the sports field network under greater pressure.
- It is key to consolidate (and formalise) the relationship between PNCC and other providers of sports fields.
- School grounds are also used for a significant amount of youth grade training and competition.
- It is also acknowledged that the codes also train and play on a wider regional network of sports fields, as identified in the RSFP.

4.3 Recent and Planned Changes to the Sports Field Network

PNCC has undertaken the following work in recent years:

- A major upgrade to the softball diamonds at Colquhoun Park.
- Realignment of a rugby playing field at Colquhoun Park when the softball diamond upgrade was undertaken.
- Scheduled upgrades such as drainage, levelling and irrigation at Manawaroa Park, Coronation Park, Ongley Park, Bill Brown Park and Skoglund Park.
- Installation of a hybrid turf system in high wear areas in football goal areas at Skoglund Park (2) and Memorial Park (1) to eliminate turf degradation.
- Two more hybrid turf systems for high wear areas are planned for Skoglund Park in 2020/2021.
- The installation of an artificial turf at Arena (see next section for details).

These changes demonstrate PNCC's commitment to providing a sports field network that can meet the needs of participants wherever possible and where budget provision has been made.

The Palmerston North Bowling Club has recently laid a multi-use turf on their third green. This turf will be available for codes to hire and may provide some additional relief to the demand for training grounds. However, the size and type of turf will limit the type of use that can occur.

4.4 New Artificial Turf at Central Energy Trust Arena (Arena)

A full size, multi-use artificial turf has recently been installed at Arena. The turf has been in use since August 2019. Initial findings from data provided by Arena staff regarding the use of the turf are:

- Football use makes up over 70% of the bookings.
- The turf is being well used as a supplementary training and competition field for the neighbouring Marist Club.
- Other users have included the NZ Defence Force, some schools and some cultural organisations, for either one-off football tournaments or sports days.
- Manawatū Touch has a block booking throughout winter 2020.
- PNBHS has made regular bookings for winter football training.
- Ultimate Frisbee has also become a regular user[11] .

To date no bookings have been made by Central Football. They advise this is due partly to the overall cost of hiring the turf, which is charged on a per game basis, with additional costs for lights and changing rooms, compared to the cost of other PNCC grounds which are charged on a per season basis. Central Football also state the available booking spots are not of a reasonable length to make a booking worthwhile.

Arena advise that the cost to hire the artificial turf and associated facilities such as changing rooms and lights is no more than the cost of hiring one of their grass turfs with associated facilities. Annual pricing reviews sometimes lead to CPI adjustments being made to costs, but this was not applied for 2020.

[11] This is a relatively unexpected use for the turf but does highlight there is a wide range of potential users looking for high quality surfaces to train and compete on.

5. Analysis of Supply and Demand

5.1 Summer Sports Fields

There is sufficient supply of fields to cater for current and predicted participation in summer sports. However, there are some identified challenges.

The maintenance window between the winter and summer sports seasons is critical to ensuring fields are able to be maintained / renovated and are ready for a new use. As sporting seasons have become longer there has been more pressure placed on the network of fields.

Year-round delivery from some sports means there are more sports codes wanting to use the existing network in the summer months. Football has moved to a 48-week season and this has seen their requirements for sports fields for training and competition to be provided year-round. Sport New Zealand, with support from national sports organisations, is encouraging codes to focus on "balance is better" which aims to allow children and youth to play both summer and winter sports. However, the effects of this strategy are still unclear.

Hockey has thriving summer engagement but has the benefit of access to artificial turf which increases the opportunity to run back to back games and training on the same turf. Access to artificial turf also provides the option of running competitions during the week as well as the weekends which means there is an ability to attract people already playing other codes, without interfering in the player numbers of those codes.

5.2 Winter Sports Fields

The feedback from sports codes and independent analysis of the available data confirms the key challenges are centred on the winter season, particularly accessing quality training space. This appears to be heightened by the length of the season and overlap with summer codes. Football need access to fields for seven months of the year (with some fields required for 48 weeks each year).

Table 5.1 looks at a range of scenarios to determine the future demand for winter sports fields in Palmerston North.

Participants in the three winter sports codes come from across the Manawatu region, and from further afield in some cases. Analysis of local sports competition draws and feedback from schools and the winter codes has been analysed to accurately reflect the demand on PNCC sports fields.

The following calculations have been used[12].:

Sports field lighting is owned and maintained by individual codes. The exception to this is at Arena where the lights are owned by PNCC and the use of and cost recovery for that use is managed by Arena.

[12] Each code has slightly different definitions of Adult, Youth and Junior grades. For the purposes of this report Juniors is up to 12 years (year 8 students). Youth are primarily secondary school age participations (13-19 years or years 9-13) and Adults anything above that.

- 70 % of adult Football teams train and play on PNCC sports fields.
- 70 % of adult Rugby Union teams train and play on PNCC sports fields.
- 75 % of adult Rugby League teams train and play on PNCC sports fields.
- 35% of youth Football teams train and play on PNCC sports fields.
- 45% of youth Rugby Union teams play on PNCC sports fields.
- 100% of youth Rugby League teams train and play on PNCC sports fields.
- 65% of junior football teams train and play on PNCC grounds.
- 65% of junior Rugby teams train and play on PNCC grounds.
- 100% of junior Rugby League teams train and play on PNCC grounds.

- Training fields are available for an average of four hours use per week (some are used more; some are used less).
- Competition fields are available for an average of five hours per week (some are used more; some are used less).
- Two teams share each training field and there are two teams per game.
- Arena capacity is calculated on weekdays as 6.5 hours / day and weekend availability of 11 hours per day, totalling 54.5 hours of capacity.

The table also looks at three scenarios and outlines the potential surplus or deficit of sports fields in Palmerston North. Each scenario also factors in the capacity the Arena turf has added to the network.:

Scenario one: Future forecast of team numbers as supplied by the regional sports organisations.

Scenario two: Growth in line with the forecast population growth of those aged between 5-49 years in the Palmerston North area.

Scenario three: Future membership numbers forecast using code supplied trend data of the previous five seasons.

Table 5.1 Scenarios outlining anticipated hours of surplus/deficit of weekday and weekend winter sports fields in Palmerston North

	Current Surplus/Deficit		Scenario One: Surplus/Deficit based on Code Predictions		Scenario Two: Surplus / Deficit based on Population growth		Scenario Three: Surplus/ Deficit based on code trend data (last five years)	
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend
Football	-139	129	-148	122	-164	107	-133	152
Rugby Union	-83	122	-105	110	-100	116	-33	165
Rugby League	-14	1	-27	1	-17	12	-23	7
Total	-236	252	-280	233	-281	235	-189	324

Table Note: Of the above hours the new Arena turf is contributing approximately 55 hours of additional capacity to the winter sports field network, split with 33 hours during the week and 22 hours during weekends.

A more detailed breakdown of these scenarios can be found in appendix three. All scenarios demonstrate adequate supply of competition fields for weekend play. All three scenarios suggest the undersupply of quality training fields is forecast to continue. The scenarios forecast a deficit of sports field available hours for 2030 for training anywhere between 189 to 281 hours per week.

Currently this undersupply of weekday training fields is addressed by the codes through the following "work around" strategies:

- Reduced training time allocations for teams.
- More teams training on these fields than optimal.
- Training on fields that are designated for competitions.
- Cancelling trainings to preserve competition fields.

These "work around" strategies result in sub-optimal training conditions and also lead to competition fields being in poor condition prior to weekend use. Therefore, it is highly likely that the surplus of fields for weekend use is over-inflated in these scenarios.

6. Options to Meet Needs

There are several options that could be implemented to increase the capacity of the sports field network, particularly in relation to winter training undersupply.

Options include:

- Reallocation of existing fields. (particularly if Hockey moves Junior games off Manawaroa to new Massey turf).
- Converting some of the competition fields that are already being used for training into additional training fields (dependent upon flood lighting)
- Upgrades of existing competition and training fields to increase their capacity.
- Conversion of soil-based fields to sand-based fields.
- Development of hybrid fields.
- Development of additional soil fields[13].
- Development of additional artificial turf/s.

A range of options could occur to increase the carrying capacity of the current sports field network in Palmerston North, although options that focus on upgrading existing surfaces will not address issues created by season overlaps and therefore competing use of fields by different seasonal codes.

There may be opportunities for PNCC to partner with other providers of sports fields when implementing any of these options.

Sport New Zealand has recently released an updated version of their Sports Field Guidance document[14] that compares the various types of sports fields (see appendix six for an explanation on the various field types). The following table incorporates data that helps to understand the whole of life cost for the various types of sports fields.

Table 5.3 outlines the broad options for increasing the quality and quantity of sports fields in PNCC along with the whole of life costs.

[13] PNCC Officers note there is potential to develop additional sports fields at Horizons land at Riverside Drive (10-12 fields) (would need changing rooms above flood level) and Ashhurst Domain (4-5 fields), Lincoln Park (Deer Park 1 Field.)

[14] Sport NZ (December 2019) Guidance Document for Sports Field Development (data will vary from 2013 report)

Table 5.3 Sport Field Development Options over a 30-year lifespan

	Option One: Upgrade existing (or develop new) soil-based fields	Option Two: Convert to sand-based fields	Option Three: Hybrid Technology	Option Four: Artificial Turf
Pros	Increase capacity of some existing fields.	Increase capacity of some existing fields.	Can target high wear areas with hybrid technology	Best carrying capacity. Best intensive use of available space. Guaranteed use, regardless of weather.
Cons	Continued low carrying capacity compared with other options. Significant number of new or upgraded fields required to create the capacity advantages of some other options	A number of sports fields required to be upgraded to meet needs.	Increased irrigation in summer months. Increased specialist technical support that may not be readily available.	Higher capital cost. Some wider environmental concerns as non-natural.
Capital Costs (per full sized field)	$170,000	$400,000	$850,000	$1.75m - $2.05m
Operating Costs (over 30 year period)	$300,000	$750,000	$1.2m	$750,000
Renewals		$250,000	$500,000	$1.0m
Disposals			$100,000	$100,000
Cost – Totals	$470,000	$1.4m	$2.65m	$3.6m - $3.9m
Approx. Annual hours of Use (winter)[15]	217	400	750	1375
Hours of Play over 30 year period	6,510	12,000	22,500	4++1.250
Approx. Cost Per Hour of Play[16]	$72	$117	$118	$87 - $94

The options presented in the table are based on recently released guidance from Sport New Zealand on sports field developments. The facts presented are based on averages of a range of fields across New Zealand.

[15] Taken from Sport New Zealand (Dec 2019) Guidance Document for Sports Field Development p.28. Hours will vary depending on soil & climatic conditions.

[16] Assuming average whole of life costs for a full-size field. Note: No discount factor has been included in these figures. Taken from Sport New Zealand (Dec 2019) Guidance Document for Sports Field Development p.28

Should PNCC wish to proceed to investigating the feasibility of an additional artificial turf then all available options should be assessed in further detail to determine the most effective strategy to meet needs in Palmerston North.

7. Conclusions and recommendations

PNCC commissioned this report to understand if there was a need for an additional artificial turf. PNCC provides a network of sports fields for sport participation and wider use. There is an ongoing maintenance programme, with innovations including hybrid implants in high wear areas and the development of the first multi-code artificial turf at Arena.

This report has confirmed that there is an undersupply of quality, floodlit training areas, particularly for rugby and football. This is impacting on these sports ability to train, often cancelling practices to preserve grounds for competition. There will also be an increasing pressure on the existing fields used for competitions should player numbers increase as anticipated.

7.1 Conclusions

Demographic data provided by PNCC shows significant population growth in the area. All other things being equal, this increase in population will generate increased participants in winter sports codes. This increase is likely to be further consolidated by a number of codes who are implementing various growth strategies.

It is likely that Football, Rugby Union and Hockey will remain the largest users of winter sports fields. Hockey has moved to an artificial turf model and this ensures players train and compete on quality surfaces, regardless of environmental conditions. Both Football and Rugby Union are currently having to compromise their delivery as they cannot consistently access enough suitable training venues.

Several scenarios relating to future field requirements all show an undersupply in week-day training capacity.

If codes desire to train and play on artificial turfs, they will need to adapt and operate a more flexible delivery model. The example of Hockey's move to artificial turfs has shown how sport can change their delivery model to maximise any advantages an artificial turf may present. The traditional model of Tuesday and Thursday night practices and Saturday afternoon competitions for many codes is only possible with a significant supply of fields.

PNCC has already invested in one multi-use artificial turf. While limited information was provided on the turf at Arena, feedback received from codes would suggest that there is an element of capture by the neighbouring club, primarily for football.

An additional artificial turf is only one option that has been presented to meet the needs of the codes. The primary benefit of an artificial turf is the ability to use the surface for more hours than any other surface and secondary to that is to provide an additional field to address the winter/summer overlap.

Other options to future proof the sports field network include the reallocation of existing fields, upgrades of soil-based fields or conversion to either sand-based or hybrid turf

surfaces or developing new fields or a combination of these. A preferred option would be explored during the development of an independent feasibility report.

7.2 Recommendations

- Proceed to the feasibility phase of this project to determine the preferred option to meet the needs of the sporting codes.

- As part of the recommended feasibility:
    - Investigate the impact of the new artificial turf at Arena, including revenue and expenditure.
    - Investigate the whole-of-life costs of artificial versus alternative solutions.

- Develop a strategy to further educate sporting codes on PNCC's sports field management programme. and a process for the codes and PNCC to work collaboratively on solutions where issues have been identified

- Work with Sport Manawatū to encourage more community use of available school artificial turfs, particularly for junior and youth age training.

- Reconsider the current approach to lighting ownership and use to determine whether PNCC ownership, management and cost recovery is an option to relieve pressure on clubs

Appendices

8. Appendix 1 - Sports Code Context and Needs

This section provides information about the seven field codes identified by PNCC to be part of this project. In each case it provides the following:

- Participation data sourced from Sport NZ for New Zealand and the Manawatū Regional Sports Trust region (known as Sport Manawatū).
- Current and future membership and team data sourced from the regional association for each code and their rationale for their predictions.
- Field requirements identified by each code based on current membership.
- Field availability data provided by PNCC personnel.
- Additional feedback from each code provided during the process of developing this report.

8.1 Football

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- 8% of Manawatū adults 18 plus (approximately 3728 people) participated in football in the previous 12 months.
- 20% of Manawatū young people 5-17 years old (approximately 3628 young people) participated in football in the last seven days.
- 2202 adults and young people from Manawatū expressed an interest to participate in football in the next 12 months.

Current and projected membership

Central Football, the regional association for football in Manawatū, advise their membership has remained fairly static over the last 10 years with a total growth cf 1.4% for the 10 year period. On that basis they have predicted a similar conservative growth in membership to 2030 which would take their membership from 3550 in 2020 to 3600 in 2030. They have predicted that growth in both membership and teams could be as much as 3.6% if a further artificial turf is built in Palmerston North.

Rationale for growth:

- Increase in females (both women and girls) playing the sport.
- Other targeted population initiatives.
- Expansion of business house, masters and other social leagues
    - An additional artificial turf would increase the opportunities for this

While taking a conservative approach they do believe there are opportunities to build on their projections with plans they have in the diversity and inclusion, disabled and gender equity spaces.

Table 81.1 Football Team Numbers 2019/2025/2030) – Code Predictions

	Gender	Seniors			Youth			Juniors			Tiny Tots [17]		
		2019	2025	2030	2019	2025	2030	2019	2025	2030	2019	2025	2030
Status quo	Male	50	50	52	42	42	44	206	144	126	290	305	330
	Female	11	12	14	19	20	22		62	84			
With new artificial	Male	-	53	55	-	44	46	N/A			N/A		
	Female	-	13	14	-	22	24						

Identified field requirements

Central Football has identified current field requirements based on their current membership.

Table 8.1.2: Field Requirements based on current membership (code provided)

	Full size	3/4	Junior (1/2)	Tiny Tots (1/8) (2-4 yr. olds)
Training	6	6	5	N/A
Competition	16	12	10	30

The following fields are available:

- 23 playing/competition fields (includes Massey and Linton)
- 30 junior fields
- 4 training fields

The Service Level Agreement with PNCC shows an allocation of:

- 17 playing/competition fields
- 23 + junior fields
- 4 training fields

Additional feedback from Central Football

- Need access to more training and competition grounds:
  - Some clubs have no access to allocated training grounds
  - Less than 50% of members train on lit fields[18]
- Would like to see the quality of the existing fields improved
  - Better drainage and irrigation
  - More hybrid in goal areas
  - Better wearing grass that can handle multiple games over a weekend
- Some changing rooms need upgrading.
- Need for all-weather surfaces for Futsal competition.

[17] (2-4 yr. olds – actual players rather than team numbers)

[18] Under the current model clubs are responsible for the supply of lights

- Keen to have a centre for football in each region (note this is different to Football NZ defined Hub of Football. Central Football covers so many regions Hawkes Bay, Manawatū, Gisborne, Taranaki and Whanganui) therefore it is difficult to centralise services in just one area.
- Access to affordable indoor facilities to cope with the increasing demand from Futsal
- Access to affordable/lit artificial turf to cope with increasing numbers and game format changes
    - Currently costs to hire existing artificial turf at Arena, in addition to the cost of hiring the lights and the changing rooms are a barrier to use.
    - Due to existing block bookings at Arena, the length of available booking times for the artificial turf do not meet needs.

8.2 Rugby League

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- No (0%) Manawatū adults 18 plus who were surveyed participated in league in the previous 12 months. This is at odds with the data provided by Manawatū Rugby league who advise that had enough adult players in 2017/18 to field teams and may be an anomaly in survey sampling.
- 4% of Manawatū young people 5-17 years old (approximately 726 young people) participated in league in the last seven days.
- 181 young people and zero adults from Manawatū expressed an interest to participate in league in the next 12 months.

Current and projected membership

Manawatū Rugby League (MRL) has seen membership grow from 603 in 2013 to 740 in 2020. They are predicting a total increase of 5% through to 2030 (from 740 to 780).

They attribute growth over the last three years to junior and youth programmes.

Their rationale for the predicted levels of growth:

- New pathway for girls in the sport
- Growth in mini-mods (mixed teams of boys and girls) and youth
    - They anticipate this will eventually lead to a growth in senior members

Table 8.2 below sets out MRL current and predicted team numbers taking into account the impact of increased membership through the proposed changes referred to above.

Table 8.2: Rugby League - Current and future team numbers

Team Numbers – Current and Future									
Gender	Senior			Junior			Mini		
	2020	2025	2030	2020	2025	2030	2020	2025	2030
Male	3	4	6	13	16	20	21	24	30
Female	0	2	4	2	12	20	1	4	8

Identified field requirements

Manawatū Rugby League has identified their current field requirements based on their current membership.

Table 8.3 Field requirements based on current membership

Field Requirements			
	Full size	Junior (1/2)	Mini (1/4)
Training	1	2	5
Competition	1	1	0

They have access to:

- 2 general playing fields
- 1 training specific field with lights
- Limited access to 1 playing field at Linton

Additional feedback from Manawatū Rugby League

- Currently no 'home' of league – share with other codes.
- Training fields meet needs.
- Competition fields do not meet needs.
- Lights need upgrading[19].
- More changing room facilities required.
- Fields need resurfacing and appropriate drainage to avoid water pooling.
- Grandstand seating required.

8.3 Rugby Union

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- 4% of Manawatū adults 18 plus (approximately 1864 people) participated in rugby in the previous 12 months.
- 14% of Manawatū young people 5-17 years old (approximately 2540 young people) participated in rugby in the last seven days.
- 647 adults and young people from Manawatū expressed an interest to participate in rugby in the next 12 months.

Current and projected membership

Manawatū Rugby has seen membership grow from 4232 in 2013 to 5500 in 2020. They are predicting a 5% increase up to 2025 and then an annual 2.5% increase through to 2030.

Their rationale for the predicted levels of growth:

- Increase in females playing the sport.
- Expansion of non-contact forms of the game.
- Expansion of competitions into social, ethnic and business house leagues.
- Potential introduction of pre-school sessions focussing on the development of fundamental skills.

[19] Under the current model responsibility for lighting upgrades would sit with the clubs

Table 8.4 below sets out their current and predicted team numbers taking into account the impact of increased membership through the proposed changes referred to above. While not predicting significant increases in the contact forms of the game (15 s and sevens) they do see potential for significant increases in modified versions of the game such as Rip (non-contact version of rugby with all the skills for young people and adults, popular with masters) and Rippa (non-contact version of rugby for primary school aged children. Can be played on any grassed area and does not require a traditional rugby field).

Table 8.4: Current and future team numbers

Team Numbers – current and future												
Gender	Seniors			Youth			Juniors (Rippa)			Midgets (2-4 yr. olds fundamental skills)		
	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030
Male	47	50	50	30	35	40	60	65	70	0	2	5
Female	7	10	10	12	15	18	0	10	15	0	2	5

Identified field requirements

Manawatū Rugby has identified their current field requirements based on current membership.

Table 8.5: Field requirements based on current membership

	Full size	3/4	Junior (1/2)	Midget (1/8)
Training	31	4	16	16
Competition	31	4	16	16

The following fields are available to Rugby:

- 28 general playing fields without lights.
- 7 training specific fields all with lights.
- 2 junior fields.
- 4 Rippa fields (1/8 of a full field).

Additional feedback from Manawatū Rugby

- Non-contact forms of the game do not necessarily need rugby fields to play on, they just need a green space.
- Many fields are used for both training and competition.
- Overall quality of fields is poor:
    - Inconsistent grass cover.
    - Many fields are multi-use.
    - Roughed up in the summer.
    - Insufficient irrigation and drainage.
    - Creates issues with moving venues during the season.

8.4 Touch

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- 3% of Manawatū adults 18 plus (approximately 1398 people) participated in touch in the previous 12 months.
- 11% of Manawatū young people 5-17 years old (approximately 1995 young people) participated in touch in the last seven days.
- 1295 adults and young people from Manawatū expressed an interest to participate in touch in the next 12 months.

Current and projected membership

Manawatū Touch has seen membership grow 63% from 2013 (2958) to 2020 (4853). They are predicting a further 56% increase from 2020 to 2030, taking membership in 2030 to 7573.

Their rationale for the predicted levels of growth:

- Shift from performance to participation model.
    - Especially at youth level
- Promotion of mixed gender teams.
- Creating more and varied competitions.
    - Including female only models with support from KiwiSport investment
- With discouragement of early sport specialisation increasing, Touch as a non/ limited contact sport could be seen as an attractive option.
- Increased engagement of players/teams from outside the region that do not have access to leagues in their region
    - Levin, Whanganui, Taihape

Table 8.6 below sets out their current and predicted team numbers taking into account the impact of increased membership through the proposed changes referred to above.

Table 8.6 Touch Team Numbers – current and future

Gender	Seniors			Juniors		
	2020	2025	2030	2020	2025	2030
Male	34	42	48	78	97	111
Female	28	34	39	33	41	48
Mixed	98	122	140	134	167	192

Identified field requirements

Manawatū Touch has identified current field requirements based on their current membership:

Table 8.7: Field requirements based on current membership

	Full size
Training	5
Competition	10-15

The following fields are available to Touch:

- 10 playing/training fields at Colquhoun.
- 10 junior fields at Monrad.
- Have access for up to 12 fields at Ongley Park for tournaments.
- Fields at Queen Elizabeth College in terms 1 and 4.

Additional feedback from Manawatū Touch

- Run differing sized competitions requiring anywhere from 3-10 fields on a night.
- No 'home' of Touch since forced to uproot modules from Colquhoun Park due to upgrades for softball. Unsure if it is viable to return
    - Have been able to access Queen Elizabeth College fields in Terms 1 and 4
    - Sometimes they are the best available
- No access to designated training fields.
- Issues with quality of fields:
    - Sometimes very dusty
    - Often playing/training on nothing more than dirt in the summer
    - Grounds too hard – realistically unplayable
- Multiple injuries as a result of ground conditions.
- Will need access to 13-14 fields concurrently (with good grass coverage) in December 2020 when host/run the Central Inter Provincial Tournament.
    - Ongley Park was used for this in 2019 (12 fields available there) and hopefully will be available this year

Our Assessment of the Needs of Touch

The participant numbers provided by Touch require significant introduction of new initiatives to attract the numbers predicted. This require significant recruitment of new players above what would be expected from population growth alone. Given the lack of pressure on summer field capacity there appears to be enough room for growth for Touch.

8.5 Hockey

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- 3% of Manawatū adults 18 plus (approximately 1398 people) participated in hockey in the previous 12 months
- 9% of Manawatū young people 5-17 years old (approximately 1633 young people) participated in hockey in the last seven days
- 1192 adults and young people from Manawatū expressed an interest to participate in hockey in the next 12 months.

Current and projected membership

Manawatū Hockey has seen winter membership grow from 2,183 in 2013 to 3,800 in 2020. Hockey has also introduced a summer competition attracting significantly more players. Hockey are predicting an overall increase of 18% through to 2030 which would see winter hockey at 4500 and summer hockey at 11,500.

Rationale for the predicted levels of growth:

- Women's club competition prioritised to have eight teams per grade.
- Likely increase in youth competition from 2020 as intercity competition grows.
    - Accommodating teams from the wider region into schools' competition. It is anticipated this will lead to growth in club competition from 2021
- Major growth is planned:
    - Summer competitions for schools in terms 1 and 4

- Modified versions of the game such as 5-a-side
- Increased community participation through social, business house and masters' leagues
- Regional talent development centre

- Offering more opportunities for Juniors and Yr1-Yr2 on artificial turf:
  - Allow teams to choose which days they wish to play.
  - Offer a more enjoyable all-weather sport experience.
  - Develop appropriate player skills.
  - May offer opportunities for people who play other sports on the weekend.
- Potential introduction of pre-school sessions focussing on the development of fundamental skills.

Table 8.8 below sets out current and predicted team numbers for Hockey, taking into account the impact of increased membership through the proposed changes referred to above.

Table 8.8: Manawatū Hockey Current and future team numbers for winter hockey

Team Numbers – current and future												
Gender	Seniors			Youth			Juniors (Y5-8)			Midgets (Y1-4)		
	2020	2025	2030	2020	2025	2030	2020	2025	2030	2020	2025	2030
Male	24	28	32	30	36	40	25	32	40	34	40	50
Female	20	28	32	32	36	40	25	32	40	34	40	50

Identified field requirements for hockey

Manawatū Hockey has identified their current field requirements for hockey based on their current membership.

Table 8.9: Current field requirements for current membership

	Full size	Junior (1/2)
Training	3 artificial	Use 3 full size turfs
Competition	3 artificial	26 grass fields

The following is available to them for use:

- 2 water based synthetic turfs
- 20 junior grass fields
- 2 multi-use turf with lights at Massey
- 1 hockey specific artificial turf in development at Massey

Despite hockey having the highest membership numbers in the region of any of the surveyed sports, because of their access to artificial turf they have much lower ground capacity requirements than the other codes. The artificial surfaces provide them opportunities for multiple back to back games and training in all weather conditions with little impact on the surface. Access to fields with lights also means they can take full advantage of available space for evening games and training.

Additional feedback from Manawatū Hockey:

- Some junior hockey is still played at Manawaroa, ideally that would move to Massey artificial for benefits outline above.
- Current training fields meet needs.
- Current competition fields satisfy current community use but require investment to cover growth and national/international requirements.
- Lights at Twin Turfs very poor for night hockey.
- Looking to develop indoor hockey competition but a suitable, affordable indoor facility will need to be found.

8.6 Cricket

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- 5% of Manawatū adults 18 plus (approximately 2330 people) participated in cricket in the previous 12 months.
- 11% of Manawatū young people 5-17 years old (approximately 1995 young people) participated in cricket in the last seven days.
- 1010 adults and young people from Manawatū expressed an interest to participate in cricket in the next 12 months.

Current and projected membership

Manawatū Cricket has seen membership numbers fall from 3487 in 2013 to 1450 in 2020. They are predicting an overall increase of 7% through to 2030 which would take membership numbers to 1550.

Their rationale for the predicted levels of growth:

- Continued growth in girls' cricket
  - There has been a 250% increase in the last two years.
  - Growth in this area is expected to slow but still continue.
- Plan to facilitate more inclusive and modified forms of the game.
- Changes in junior cricket (age and stage) will lead to increase participation in the next 5-10 years.

Table 8.10 below sets out their current and predicted team numbers taking into account the impact of increased membership through the proposed changes referred to above.

Table 8.10 Manawatū Cricket Current and Future team numbers, by turf type

Team Numbers Current and Future Use									
Gender	Natural Prepared Block			Artificial Block			Mown Strip		
	2020	2025	2030	2020	2025	2030	2020	2025	2030
Male	4	5	9	77	82	91	28	29	29
Female	4	5	9	11	18	27	4	7	9

Identified field requirements

Manawatū Cricket has identified their current field requirements based on their current membership. Cricket at a senior level prefers well maintained grass blocks. Social grades can be played on artificial and junior cricket a mix of grass, artificial and mown strips in outfields (depending on level of play).

Table 8.11 Cricket Field requirements based on current membership

Field Requirements		
	Full size Outfield	Junior Outfield
Training	15	25
Competition	25	25

They have access to:

- 32 grounds
  - 13 grass pitches
  - 19 artificial pitches
- 3 training blocks
- 3 training nets

Additional feedback from Manawatū Cricket

- Would like to see Rugby League move from Fitzherbert to Coronation to limit the damage to the grounds.
- Happy to work with Hockey for junior hockey to be played at Fitzherbert in the winter as they do less damage than League.
- 53 teams play in the morning, 52 in the afternoon
  - On-going struggle to try to get junior cricket finished by 11.30am so senior cricket can start at 12
  - Main issue for this is Ongley Park
- Grass pitches cannot be used on wet days
  - Additional artificial pitch at Ongley would help significantly
- Cost for preparing pitches and fields is a significant expense at $45,000 per annum.

8.7 Softball

Participation rates

The 2018 Sport NZ Active NZ Survey and Insights data indicates:

- 1% of Manawatū adults 18 plus (approximately 466 people) participated in softball in the previous 12 months.
- 2% of Manawatū young people 5-17 years old (approximately 1363 young people) participated in softball in the last seven days.
- 829 adults and young people from Manawatū expressed an interest to participate in softball in the next 12 months.

Current and projected membership

Manawatū Softball (MS) membership data prior to 2018 was unavailable, but there has been a decrease in membership numbers from 1395 in 2018 to 1260 in 2020. Manawatū Softball is predicting an overall increase of 23% through to 2030 which take membership numbers to 1550.

The rationale provided by MS for the predicted levels of growth is as follows:

- Annual 'Give it a go' initiatives.
- Specifically targeting women and girls.
- Return of Armed Forces personnel from deployment – across all grades.
- Plans to focus on retaining junior members. One mechanism to achieve this is to keep fees to a minimum.
- Modifications to the game such as introducing slow pitch.
- Social competitions during the week.

Table 8.12 below sets out their current and predicted team numbers taking into account the impact of increased membership through the proposed changes referred to above.

Table 8.12: Manawatū Softball: Current and future team numbers

	Team Numbers – current and future								
Gender	Seniors			Youth			Juniors		
	2020	2025	2030	2020	2025	2030	2020	2025	2030
Male	19	21	25	10	12	15	31	50	50
Female	6	12	20	4	10	15	13	25	30

Identified field requirements

Manawatū Softball has identified their current field requirements based on their current membership.

Table 8.13: Field requirements based on current membership

	Field Requirements		
	Full	Youth	Junior
Training	5	4	10
Competition	6	5	17

The facilities currently available for Softball are all located at Colquhoun Park. They are as follows:

- 2 skin diamonds
- 3 grass diamonds
- Multiple T-ball

Additional feedback from Manawatū Softball

- Other than issues when the ground is wet, no complaints with the available ground.
- Some improvements would be welcome in the following areas:
    - Natural shade
    - More hydration stations (taps) around the diamond
    - Continued growth and changes to the facility
- Artificial turf at Colquhoun would be beneficial to softball:
    - Training space for the 13-15 representative sides when the ground is wet would avoid additional cost to hire indoor venue for training.
    - Option for U5-7 grades who play first thing in the morning and have the most games cancelled as the ground is still wet from overnight dew.

9. Appendix 2 – Sport Membership Data

The following table outlines historical, current and forecast membership supplied by the identified sports both at a Manawatū regional and PNCC level.

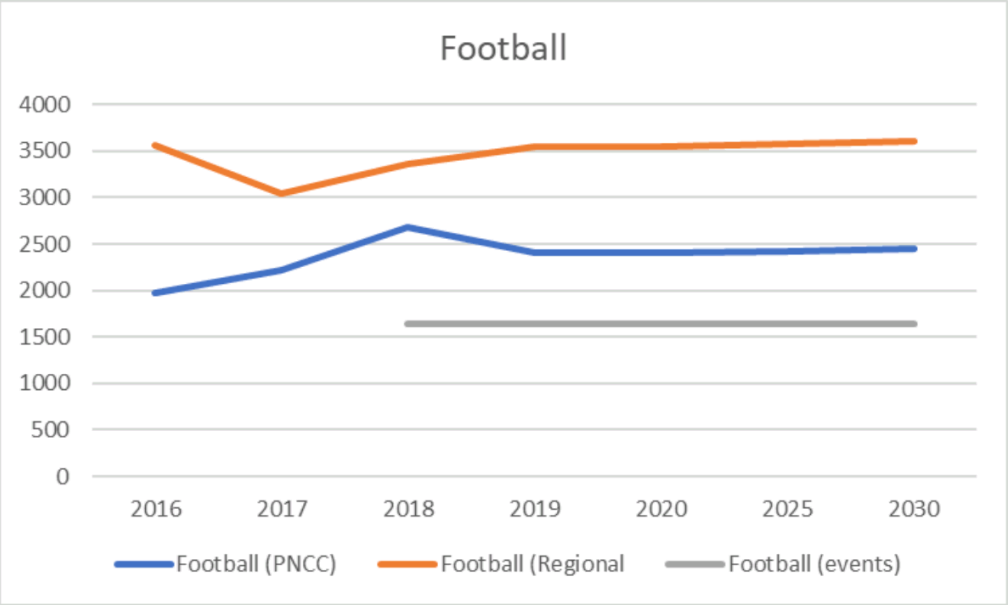
Table 9.1: Current and future membership numbers provided by the codes (PNCC specific numbers extrapolated where possible).

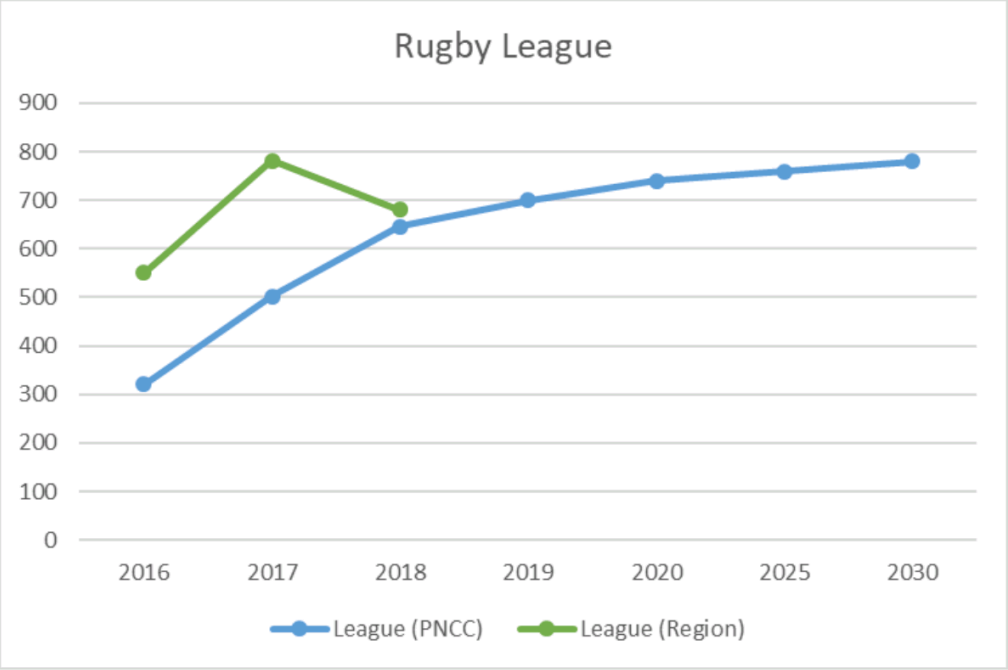
Code	2016 Region	2016 PNCC	2017 Region	2017 PNCC	2018 Region	2018 PNCC	2019 Region	2019 PNCC	2020 Region	2020 PNCC	2025 Region	2025 PNCC	2030 Region	2030 PNCC
Football	3564	1969	3045	2223	3358	2686	3542	2408	3550	2410	3575	2427	3600	2444
Football events					1230	1640	1230	1640	1230	1640	1230	1640	1230	1640
League	551	320	782	502	680	646		700		740		760		780
Rugby	5429	3385	5757	3945	5270	3629	5249	3621	5500	3795	7019	4843	7940	5479
Touch	3071	2578	3046	2452	4142	3342			4853	3764	6468	5409	7573	6484
Hockey winter	3954	2455	3045	2560	3631	3007	3670	2903	3800	3100	4000	3500	4500	4000
Hockey summer					7232	3092	7586	2413	8200	2400	10000	3000	11500	4000
Cricket	3602	2343	1639	1531	1332	1018	1400	1100	1450	1150	1500	1150	1500	1200
Softball					1395	1095	1335	1065	1260	1050	1515	1200	1550	1200

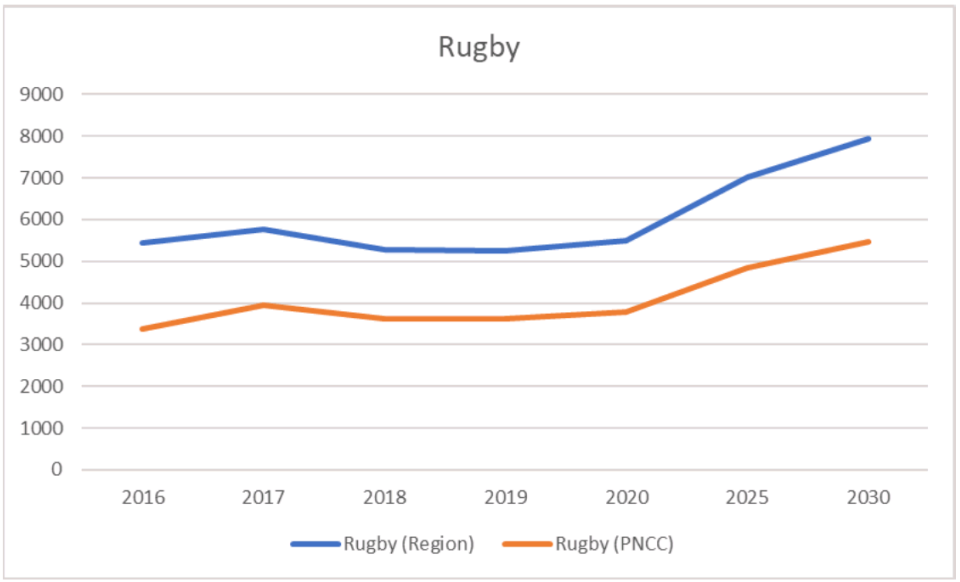
9.1 Sport Membership Trends by Code

The last five years of data for Football, Rugby and League have been used to calculate membership trends and are reflected in the scenario testing in section 5.

Membership numbers from 2020-2030 in the following graphs are the forecast membership as provided by codes. This is also reflected in the scenario testing used to determine future membership numbers.






Rugby
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
2016
2017
2018
2019
2020
2025
2030
Rugby (Region)
Rugby (PNCC)

10. Appendix 3 – Inventory of Sports Fields

Information on PNCC Sports fields as provided by PNCC Parks Officers

Key: C = Competition, T = Training

Table 10.1 Inventory of Sports Fields

Venue	Football [20]	League	Rugby	Touch	Hockey	Cricket	Softball	Multi-use
Arena	Some summer use		3 x C					1 x C/T (artificial with lights) 1 x ¾ T
Ashhurst	4 x C 6 x jnr 1 x T with lights					1 x C artificial		
Bill Brown			3 x C 1 x T with lights					
Bunnythorpe			1 x C 1 x T both with lights					
Celaeno	5 x C[21]							
Cloverlea			4 x Rippa					
Colquhoun	3 x jnr[22]		3 x C 1 x T with lights	10 x C			2 x skin 3 x grass Multiple T-ball	
Coronation		1 x C 6 x Jnr 1 x T with lights	4 x C			3 x artificial		
Fitzherbert		1 x C			2 x water based synthetic	2 x Club (grass on clay) 1 x T grass block (1st class)		

[20] Other than at Celaeno and Memorial, 2 games are played on each field on most Saturdays
[21] Usually 2 games per field on both Saturday and 1 game played on 2 fields on Sunday
[22] Previously 4 junior football fields but reduced to 3 when softball upgrades made

Venue	Football [20]	League	Rugby	Touch	Hockey	Cricket	Softball	Multi-use
Hokowhitu	3 x C 4 x jnr					3 x artificial		
Lincoln			1 x C 1 x T with lights					
Linton (limited access) [23]	1 x C	1 x C	2 x C			2 x T (net)		
Mahanga Kakariki	2 x jnr							
Manawaroa					20 x jnr	6 x C (grass on clay)		
Massey (limited access) [24]	5 x C (2 with lights)		5 x C with lights 1 x T with lights		1 x C/T artificial			2 (1 with lights)
Memorial	1 x C[25] (with hybrid in goal							
Monrad	9 x jnr 1 x T with lights			10 x jnr				
Ongley			3 x C 6 Jnr 2 x T with lights	Space for 12 for tourneys		5 x C Multiple jnr 5 x C (artificial) 3 x T (nets) 2 x T (grass blocks) 1 x indoor centre		
Paneiri			4 x Jnr			5 x C (artificial)		
Papaioea	4 x jnr					1 x C (artificial) 1 x T (net)		

[23] Inside NZDF fence. Only available when local club has home games

[24] Only available when University teams have home games

[25] 2 games played on both Saturday and Sunday

Venue	Football [20]	League	Rugby	Touch	Hockey	Cricket	Softball	Multi-use
						Some casual mown		
Rangitane (no longer in use)[26]								
Savage (no longer in use)								
Skoglund	4 x C (2 with hybrid in goal)							
Takaro	1 x T with lights							
Wahikoa						1 x T (indoor centre)		
Wallace	2 x jnr					1 x C (artificial)		
Waterloo	1 x T with lights							
TOTALS	Football	League	Rugby	Touch	Hockey	Cricket	Softball	Multi-use
Competition Fields	23 Snr[27]. 30 Jnr.	3 Snr. 6 Jnr	25 Snr[28]. 14 Jnr.	10 Snr. 10 Jnr.	3 Artificial 20 Jnr.	32 (13 Grass / 19 Artificial)	5 (2 "skins") Multiple Jnr.	1 artificial at Arena
Dedicated Training Areas	4	1	7			3 x Training blocks 3 Training nets		1
Fields with Lights	9	1	13					2

[26] Used to be used by football but is a water overflow area with a culvert. Viewed by football as a health and safety issue. Also no changing rooms

[27] Taking into account limited access issues to Linton and Massey, arguably only 17 full sized fields are available for football

[28] Taking into account access issues to Linton and Massey, arguably only 18 full sized fields are available for rugby

10.1 Current Capacity Football per Week

The following table outlines available fields for Football each week.

Venue	Number of Senior Fields Available	Dedicated Training Areas Available	Number of Undersized Fields Available	Weekday Hours Available	Weekend Hours Available	Total Hours Available
Ashhurst	4	1	6	4	20	
Celaeno	5				30	30
Colquhoun			3			
Hokowhitu	3		4			
Linton (limited access)	1					
Mahanga Kakariki			2			
Massey University	5					
Memorial	1					
Monrad		1	9			
Papaioea			4			
Skoglund	4					
Takaro		1				
Wallace			2			
Waterloo		1				
Totals	23	4	30			

Field use requirements

Grade	Field hours for game	Field hours for training per training session
Senior	2-2.5	2
Youth	1.5	1.5
Junior	1	1
Tiny Tots	1	0

Football Training requirements

Minimum training for Senior, Youth and Junior teams is once a week

50% of Senior teams would train twice a week

25% of Youth and Junior teams would train twice a week

10.2 Current Capacity Rugby League per Week

The following table outlines available fields for Rugby League

Venue	Number of Senior Fields Available	Dedicated Training Areas Available	Number of Undersized Fields Available	Weekday Hours Available	Weekend Hours Available	Total Hours Available
Arena						
Coronation	1	1	6	4	11	
Fitzherbert	1			-	5	
Linton (limited access)	1				5	
Totals	3	1	6	4	21	

Field use requirements

Grade	Field hours for game	Field hours for training
Senior	2.5	2
Junior	1.5-2	1.5
Mini	0.75-1	1

Rugby League Training Requirements

Seniors and Juniors train twice per week and Minis train once per week.

Undersized field is calculated as 0.5 of a full field equivalent

Most teams train twice a week, Minis train one to two times a week

10.3 Current Capacity Rugby Union per Week

The following table outlines available fields for Rugby

Venue	Number of Senior Fields Available	Decicated Training Areas Available	Number of Undersized Fields Available	Weekday Hours Available	Weekend Hours Available	Total Hours Available
Arena	4					
Bill Brown	3[29]	1		4	15	23
Bunnythorpe	1	1		4	5	9
Cloverlea			4			
Colquhoun	3	1		4	15	23
Coronation	4				20	20
Lincoln	1	1		4	5	9
Linton (only accessible when Linton have home games)	2					
Massey University (only accessible when Massey has home games)	5	1				
Ongley	3	2	6			
Paneiri			4			
Totals	28	7	14			

Field use requirements

Grade	Field hours for game	Field hours for training
Senior	2.5	1.5-2
Youth	2.25	1-1.5
Junior	1	1
Rippa	0.5	0

Rugby Union Training requirements

Each adult team requires a ½ field for approx. 2 hours for training (some more, some less – but as an average)

Each Junior team requires a field for 1 hour for competition and 1 hour /week for training (some more / some less – but as an average).

Rippa teams generally do not train

[29] Actually four fields at Bill Brown, however one is problematic. It is considered very poor quality and close to houses. The owners have objected to the noise and balls going onto their properties

10.4 Sports Field Supply and Demand - Scenario Testing

Current Field Requirements	Participation trend	Week day capacity (hours)	Weekend capacity (hours)	Weekday hours required	Weekend hours required	Weekday shortfall / surplus	Weekend shortfall / surplus
Football		16	265	155	136	-139	129
Rugby Union		28	210	111	88	-83	122
Rugby League		4	30	18	29	-14	1
Total		48	505	284	253	-236	252
Scenario one - Code participation rates in line with population growth							
Football	15.80%	16	265	180	158	-164	107
Rugby Union	15.80%	28	210	128	94	-100	116
Rugby League	15.80%	4	30	21	18	-17	12
Total	15.80%	48	505	329	270	-281	235
Scenario two - Code participation rates in line with past 5 years							
Football	-0.83%	16	265	129	113	-113	152
Rugby Union	-3.90%	28	210	61	45	-33	165
Rugby League	3.34%	4	30	27	23	-23	7
Total		48	505	217	181	-169	324
Scenario three - Code participation rates as predicted by codes							
Football	1.40%	16	265	164	143	-148	122
Rugby Union	83%	28	210	133	100	-105	110
Rugby League	12%	4	30	31	29	-27	1
Total		48	505	328	272	-280	233

Note: The Arena artificial turf has added approximately 55 hours of capacity to the network (see over leaf for detail).

10.5 Assumptions used in Supply and Demand Calculations

Availability of Arena turf

The existing artificial turf is reasonably available for the following hours per week (on average). While it will be available for longer periods during weekdays it is unlikely bookings will be made with regularity, given work and education commitments.

Mon – Fri 7:30am – 9:00am (1.5 hours/day) and 4:30 pm – 9:30pm (5 hours/day)

Sat – Sun 8:30 am – 7:30 pm (22 hours)

Totalling 54.5 hours per week

It is recognised some weekday use will be for games and some weekend use for training, however these calculations are based on week days being used for training and weekends for competitions.

Code membership in Palmerston North area

Regional sports organisation membership has been used to calculate the percentage of players (therefore teams) that reside and therefore train in Palmerton North. We have rounded up where appropriate.

Approximate Percentage of Players who reside in the PNCC area						
	2016	2017	2018	2019	2020	5 year average (2016-2020)
Football	55%	73%	80%	68%	68%	69%
Rugby	62%	69%	69%	69%	69%	68%
League	58%	64%	95%			72%

Proportion of teams using PNCC fields

Code draws and fixtures from 2019 were also reviewed to determine the proportion of teams that are Palmerston North based and play on PNCC grounds. Secondary schools were surveyed to understand the proportion of games and training that occur on PNCC grounds.

- 70 % of adult Football teams train and play on PNCC sports fields.
- 70 % of adult Rugby Union teams train and play on PNCC sports fields.
- 75 % of adult Rugby League teams train and play on PNCC sports fields.
- 35% of youth Football teams train and play on PNCC sports fields.
- 45% of youth Rugby Union teams play on PNCC sports fields.
- 100% of youth Rugby League teams train and play on PNCC sports fields.
- 65% of Junior football teams train and play on PNCC grounds
- 65% of Junior Rugby teams train and play on PNCC grounds
- 100% of Junior Rugby League teams train and play on PNCC grounds

- Training fields are available for an average of four hours use per week (some are used more; some are used less)

- Competition fields are available for an average of five hours per week (some are used more; some are used less).
- Two teams share each training field and

11. Appendix 4 – Secondary School Responses to Artificial Turfs

Ten secondary schools in the Palmerston North area were approached to ascertain:

- Whether they have their own artificial turf
- If so
  - the level and type of use it has; and
  - Whether they allow anyone else to use
- What use if any, they make of the artificial turf at Arena; and
- What use they would make of any additional artificial turf

Table 11.1 Feedback from Schools on Artificial Turf Use

School	Existing Artificial	Frequency of Use	Type of Use	Any Community Use	School Use of artificial at Arena	Would use additional artificial
Awatapu	Yes	Daily	PE classes. Winter training for hockey and netball	No. Would consider it	No	Depend on cost and location
Cornerstone Christian School	Yes. Have been investigating whether a decent game artificial (probably for hockey) could be built in partnership with others.	Daily	Junior kids play football and class games on	No. Not big enough for others to be interested in	No	Depend on cost and location
Freyberg High School	Yes .	Daily	Unstructured activity, mainly basketball hoops and football goals. Hockey, netball and football train on it.	Community use was a condition of funding. Used for hockey and tennis by others	Not specifically used by school, but pupils involved in summer soccer and winter touch.	If nearby (and with lights) see opportunities for evening games during the week. Many students work in the weekend, so no longer available for weekend sport
Longburn Adventist College	No	N/A	N/A	N/A	No	Depend on cost and availability. Could use it for mini football, hockey, cricket and other field activities for training and games
Manukura	No	N/A	N/A	N/A	No	
PNBHS	No. Desire to build an artificial hockey turf for PE	N/A	N/A	N/A	Yes. Have 86 off peak (winter)	Depend on location and cost

School	Existing Artificial	Frequency of Use	Type of Use	Any Community Use	School Use of artificial at Arena	Would use additional artificial
	classes and other codes as and when it is available and for community use after 5pm				bookings for football training	
PNGHS	Yes	Frequently during and after school	PE classes, sport practices – mainly netball in winter / tennis in summer	Yes. Local tennis club	No	Refer previous question If did would only be for one off exchanges with schools from around the region. Potentially once or twice a year
Queen Elizabeth College	Yes	Several times a week.	PE in the summer. Rugby and netball	Yes. The community can hire it. Sports coaches use it. COB rugby uses it as a wet weather option 2 nights a week	No	No
St Peters College	Yes	Several times a day	Training, games, PE classes and lunchtime activities	Yes. Weekly for training when not in use by the school	No	Sports games on special occasions. Depend on cost and location
Tu Toa	Yes	Daily	PE, fitness, breaks	N/A	No	Use indoor venue when required

12. Appendix 5 – Population Age Group Projections

Table 12.1: Palmerston North: Age-group projections – Playing population (5 years– 49 years)[30]

	2013	2018	2023	2028	2033	2038	2043	Change (2013-2043)	% Change (2013-2043)
5-9 Years	5,470	5,960	5,626	5,470	5,765	6,091	6,551	1,081	20%
10-14 Years	5,390	5,520	6,010	5,658	5,493	5,790	6,119	729	13.5%
15-19 Years	6,900	6,660	8,270	8,356	7,572	7,589	8,129	1,229	18%
20-24 Years	8,480	8,500	10,091	11,152	10,695	10,137	10,452	1,972	23%
25-29 Years	6,040	6,880	6,741	8,221	9,282	8,828	8,272	2,232	37%
30-34 Years	5,250	5,740	6,413	6,205	7,684	8,745	8,294	3,044	58%
35-39 Years	4,930	5,150	5,501	6,144	5,938	7,414	8,474	3,544	72%
40-44 Years	5,330	4,930	4,905	5,237	5,880	5,676	7,150	1,820	34%
45-49 Years	4,990	5,260	4,645	4,604	4,938	5,580	5,380	390	8%
Participant Age Total	52,780	54,600	58,202	61,047	63,247	65,850	68,821	16,041	30%

Source: Infometrics (2018-base (provisional)) March 2020

[30] Playing age population is a term used to define the portion of the population that is more likely to participate in team based sports. It is acknowledged there will be some participants either younger than 5 or older than 49, however this age-range covers the vast majority of players for planning [purposes. This playing age population has been used by several sports national facility strategies.

13. Appendix 6 – Sports Field Types

(Taken from Sport NZ (Dec 2019) Sports Field Guidance Document Pp13-15)

Soil-based Sports Fields

Soil-Based Sports Fields Historically in New Zealand, sports fields have been built using locally available materials, and the performance of these sports fields are governed by a range of geographical and environmental elements. The main limitation of the standard soil-based field is the inability to cope with wet conditions, and in addition, there is also a greater potential for the surface to get overly hard under dry conditions. However, if usage pressures are light, soil-based fields can be laser graded to shed water and an enhanced turf management programme may improve grass cover and playability during the winter months.

Sand-Based Sports Fields

Where usage demands a sports field that can tolerate high levels of winter use, a sand-based field may be preferable. The most common option in New Zealand being the slit drain-sand carpet system. This system as described by Sport Surface Design and Management (2007) uses a network of primary drains (subsoil lateral drains connecting into a main drain) with the addition of secondary drainage which is typically closely spaced with narrow slit drains. Once installed the entire playing surface is topped with a sand layer. The design of sand carpet-based fields is constantly evolving including the appropriate breed of grass and the spacing of slit drains.

Hybrid Sports Fields

A hybrid turf playing surface, is a blend of natural sports turf over artificial fibre. A hybrid turf offers the benefits of both an artificial turf and a natural field, with studies showing that the integration of both types achieves optimal levels of use.

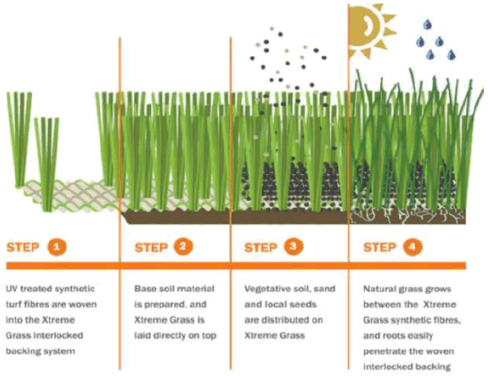
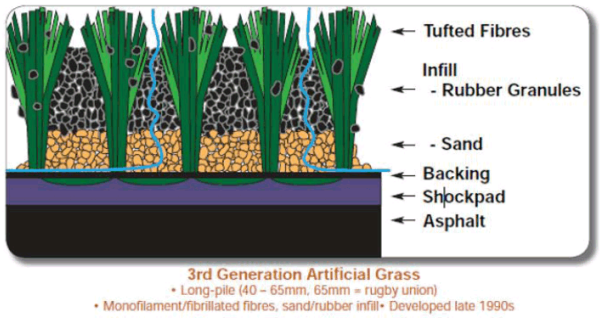


Figure 3 ActGlobal Xtreme Grass: The Hybrid Method

Reinforced turf is new technology and for this reason a case study on Nixon Park, Auckland has been included at the end of this document. Key lessons learnt from this case are; 1 Guidance regarding installation and maintenance are critical to consider prior to proceeding, 2 Regular renovations and maintenance are critical to the success of the turf. If your organization is considering installing a hybrid turf, ensure you know whether there is skilled operators and specialist machinery available in your region (UEFA Pitch Quality Guidelines, 2018). 3 A monitored irrigation programme (especially in the first two years of establishment) are a critical part of ensuring the field meets playing capacity. This is due to the under sowing of rye which needs a lot of water in the summer months to ensure winter play.

Artificial Sports Fields

Development of the first artificial turf surfaces began in the United States of America (USA) in the 1960s and during the 20 years that followed, several high-profile fields were converted to artificial.



The continued development of artificial surfaces has meant that the current third generation1 (3G) artificial surfaces perform similarly to natural turf. However, artificial turf is still considered a recent development for winter sport in New Zealand (except for hockey) and little is known on the lifespan and maintenance costs here. The main advantage of artificial sports fields over natural grass fields is that they can withstand much higher levels of use. Typically, most artificial surfaces have a warranty for 40 to 50 hours per week. However, collective usage figures show that artificial fields are generally used between 30 to 40 hours per week. In comparison research undertaken by Longdill (2011) suggests that sand-based fields (within the Auckland region) can withstand 18 to 20 hours of use per week, and statistics from Wellington City Council shows some sandbased fields can only manage 4 to 8 hours play per week during the winter months.

MEMORANDUM

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Proposal from Sport Manawatū to use carried-forward unspent Sports Event Partnership Funds**

PRESENTED BY: **Julie Macdonald, Strategy & Policy Manager**

APPROVED BY: **David Murphy, Acting General Manager - Strategy and Planning**

RECOMMENDATIONS TO COMMITTEE

1. **That the Committee receive the report titled Proposal from Sport Manawatū to use carried-forward unspent Sports Event Partnership Funds dated 21 October 2020.**
2. **That the Council approve the use of $31,000 of the carried-forward Sports Event Partnership Fund from 2019/20 for Sport Manawatū to review the Sports Event Partnership Fund and prepare a retention and attraction plan for secondary school and other sports events.**

1. ISSUE

1.1 Sport Manawatū proposes that $31,000 of the carried-forward Sport Events Partnership Fund (SEPF) from the 2019/20 year be allocated to review the SEPF and prepare a retention and attraction plan for secondary school and other sports events (the development of a less in-depth piece of work is identified as an action in the current funding agreement).

2. BACKGROUND

2.1 The Sports Event Partnership Fund (SEPF) comprises 10-year plan programme #799 Events - Major School Sports Events funding (a budget of $88,312 in the 2019/20 year) and an additional budget of $128,859 (some of which is specifically targeted to the retention of secondary school sports events).

2.2 COVID-19 gathering restrictions meant the cancellation or postponement of some planned sports events that were to receive support through the Sports Event Partnership Fund. There is, therefore, $95,902 of the 2019/20 allocation of $217,171 annual fund budget currently unspent that has been carried forward to 2020/21. These funds are held by Sport Manawatū.

2.3 During the 2020/21 Annual Budget process the funding position was recognised, and it was agreed that Sport Manawatū return $20,000 of these unspent funds to the Council. At that time, Council and Sport Manawatū reached an agreement that any other remaining funds would be carried forward to the 2020/21 funding year to be available for distribution to applicants to the SEPF. Sport Manawatū and Council also agreed that any repurposing of unspent funds would be brought to Council for consideration.

2.4 Sport Manawatū now proposes that $31,000 of the carried-forward Sport Events Partnership Fund from the 2019/20 year be allocated to review the SEPF and prepare a retention and attraction plan for secondary school and other sports events (the development of a less in-depth piece of work is identified as an action in the current funding agreement). An outcome of this proposed work is to clarify roles and responsibilities for sports events management.

2.5 This work will be carried out by a consultant and will involve a stakeholder reference group to oversee the development of the plan. Council staff will be part of this group.

3. ANALYSIS OF SPORT MANAWATŪ'S PROPOSAL

3.1 Staff consider that Sport Manawatū is not sufficiently funded by Council to carry out proactive work around the retention and attraction of sports events; its predominant focus under the agreement is on the administration of the SEPF and some limited support for local/community event co-ordination and leverage opportunities. The scope of work that Sport Manawatū is suggesting is greater than what was originally envisaged within the funding agreement.

3.2 While Council is carrying out some general events retention work (focussing on capability and capacity) sports event management is a specialised area and Sport Manawatū is better placed to deliver this work at this time. There is an action in Council's Events and Festivals Plan 'to develop and events and festivals retention plan' however this work has not been scoped and is now planned to commence next year.

3.3 Currently the SEPF is a reactive process reliant on event organisers approaching Sport Manawatū for funding assistance and, due to an increasingly competitive events market, a more proactive approach is essential to retain the national secondary school events the City has traditionally hosted (particularly basketball, volleyball and badminton secondary school events).

3.4 While there are a number of benefits of carrying out this work (especially as these events generate considerable economic benefit to the City) it is noted that Council is under considerable financial pressure as a result of the COVID-19 restrictions. Agreement to this proposal will preclude at least this portion of the carried-forward

funds being available either to be reallocated to sports events or to be returned to Council at the end of the year.

4. NEXT STEPS

4.1 The funding agreement will be updated for year two to reflect any changes agreed by Council as a result of Sport Manawatū's request to repurpose unspent SEPF from 2019/20.

5. COMPLIANCE AND ADMINISTRATION

Does the Committee have delegated authority to decide? If Yes quote relevant clause(s) from Delegations Manual clause	**No**
Are the decisions significant?	**No**
If they are significant do they affect land or a body of water?	**No**
Can this decision only be made through a 10 Year Plan?	**No**
Does this decision require consultation through the Special Consultative procedure?	**No**
Is there funding in the current Annual Plan for these actions?	**Yes**
Are the recommendations inconsistent with any of Council's policies or plans?	**No**
The recommendations contribute to Goal 2: A Creative and Exciting City	
The recommendations contribute to the outcomes of the Creative and Liveable Strategy	
The recommendations contribute to the achievement of action/actions in the Active Community Plan The action is: Contract Sport Manawatū to deliver sport and recreation services to meet a number of community outcomes sought by Council It also contributes to actions in the Events and Festivals and the Economic Development Plans.	
Contribution to strategic direction and to social, economic, environmental and cultural well-being	A strong working relationship with Sport Manawatū is essential in meeting a range of strategic outcomes sought by the Council. The delivery of actions, priorities and outcomes in the Active Community Plan requires close collaboration with Sport Manawatū who are well-positioned in the community to deliver relevant services. The new funding agreement and strategic partnership plan will assist future services and activities to be delivered to the community.

ATTACHMENTS

NIL

COMMITTEE WORK SCHEDULE

TO: **Play, Recreation & Sport Committee**

MEETING DATE: **21 October 2020**

TITLE: **Committee Work Schedule**

RECOMMENDATION TO PLAY, RECREATION & SPORT COMMITTEE

1. **That the Play, Recreation & Sport Committee receive its Work Schedule for October 2020.**

ATTACHMENTS

1. Work Schedule ⇩

PLAY, RECREATION & SPORT COMMITTEE

COMMITTEE WORK SCHEDULE 2020

Item No.	Estimated Report Date	Subject	Officer Responsible	Current Position	Date of Instruction/ Point of Origin
1	~~October~~ December 2020	Colquhoun Park Final Report	Chief Infrastructure Officer	Moved to December.	
~~2.~~	~~October 2020~~	~~Progress Report on the Hokowhitu Lagoon Water Quality – Investigation and Monitoring Plan~~	~~Chief Infrastructure Officer~~		~~16 September 2019 Clause 55.1~~
3.	~~October~~ December 2020	Memorial Park Update	Chief Infrastructure Officer	Moved to December.	

Oasis # 13973736