



# **Infrastructure Committee Meeting**

**on**

**Tuesday 12 March 2019**

**Council Chambers  
District Council Building  
2 King George Place  
Timaru**

## **Timaru District Council**

**Notice is hereby given that a meeting of the Infrastructure Committee will be held in the Council Chamber, Timaru District Council Building, 2 King George Place, Timaru on Tuesday 12 March 2019, immediately following the Environmental Services Committee meeting.**

### **Committee Members**

Clrs David Jack (Chairperson), Paddy O'Reilly (Deputy Chairperson), Nigel Bowen, Peter Burt, Andrea Leslie, Richard Lyon, Sally Parker, Kerry Stevens, Steve Wills and the Mayor.

### **Local Authorities (Members' Interests) Act 1968**

Committee members are reminded that if you have a pecuniary interest in any item on the agenda, then you must declare this interest and refrain from discussing or voting on this item, and are advised to withdraw from the meeting table.

Bede Carran  
**Chief Executive**

## Infrastructure Committee

29 January 2019

### Agenda

<b>Item No</b>	<b>Page No</b>	
1		Apologies
2		Identification of Urgent Business
3		Identification of Matters of a Minor Nature
4		Declaration of Conflicts of Interest
5		Chairperson's Report
6	1	Confirmation of Minutes
7	6	Receipt of Downlands Joint Standing Committee Minutes
8	9	Timaru Demand Responsive Transport Update
9	12	Geraldine-Winchester/Coach/Tiplady Roads intersection update
10	16	Patiti Point Access
11		Consideration of Urgent Business Items
12		Consideration of Minor Nature Matters

**Infrastructure Committee  
for the Meeting of 12 March 2019**

**Report for Agenda Item No 6**

**Prepared by Ashley Harper  
Group Manager Infrastructure**

**Confirmation of Minutes**

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Minutes of the January Infrastructure Committee meeting.

**Recommendation**

**That the minutes of the Infrastructure Committee meeting, held on 29 January 2019  
be confirmed as a true and correct record.**

# Timaru District Council

## Minutes of a Meeting of the Infrastructure Committee held in the Council Chamber, District Council Building, King George Place, Timaru on 29 January 2019 at 9am.

**Present** Clrs David Jack (Chairperson), Peter Burt, Nigel Bowen, Andrea Leslie, Richard Lyon, Paddy O'Reilly, Sally Parker, Kerry Stevens, Steve Wills and the Mayor

**In Attendance** Noeline Clarke – Temuka Community Board  
Neville Gould – Pleasant Point Community Board  
Janene Adams – Geraldine Community Board  
Chief Executive (Bede Carran), Drainage and Water Manager (Grant Hall), Communications Manager (Stephen Doran) and Council Secretary (Joanne Brownie)

### 1. **Minor Nature**

The Committee agreed to discuss the leachate issue at Redruth as a minor nature matter at this meeting.

### 2. **Declaration of Conflicts of Interest**

There were no conflicts of interest declared.

### 3. **Chairperson's Report**

The Chairperson reported on meetings he had attended and duties he had carried out on behalf of the Committee since the last meeting including the Extraordinary Council meeting to hear submissions on the AEL issue, meeting with the Group Manager and meetings with members of the public. He noted that the Christmas New Year period is traditionally a quieter one for Council duties.

Proposed Clr Jack  
Seconded Clr Burt

"That the Chairperson's report be noted."

Motion carried

### 4. **Confirmation of Minutes**

Proposed Clr Wills  
Seconded Clr Burt

"That the minutes of the Infrastructure Committee meeting of 27 November 2018, be confirmed as a true and correct record."

Motion carried

### 5. **Timaru Water Supply**

The Committee considered a detailed progress report by the Drainage and Water Manager, on resilience for the Timaru community drinking water supply, including an additional storage option using the old Landsborough Road reservoirs, a water filtration/treatment facility and bore water options. The

Drainage and Water Manager further explained the issues and options in the report, and noted there is still significant work to be done on this matter to improve the knowledge and assess the costings involved.

It was noted that the storage option by itself will provide an additional 3 day buffer but will not address the issue sufficiently.

Points identified by councillors included –

- Need to focus on our own distinctive catchment, rather than compare situations in other regions
- Need to be very careful around the cost/benefit analysis for storage, taking and treating water – use existing infrastructure to the maximum to provide an adequate service
- Support investigation of a bore that is close to the reservoir
- Keep all options open at this stage as we face climate change and possible regulations that restrict water takes, do not relinquish any water take consents
- Support further analysis.

The water operations team was commended for its successful handling of the heavy rain event in October/November 2018, with staff working under very challenging conditions.

Proposed Damon Odey  
Seconded Clr Peter Burt

“That all water supply resilience options continue to be investigated and assessed, including particular analysis of the impacts on storage options of reduced quantities of water used during a period of restriction.”

Motion carried

#### 6. **Consideration of Minor Nature Matter – Leachate at Redruth**

The Drainage and Water Manager gave a brief update on the situation at Redruth caused by a period of above average rainfall and high groundwater levels on a site that was an historic landfill.

A risk assessment and an action plan is being prepared. The remedial work was approved in the Long Term Plan and is now being fast tracked in order to address the problem as soon as practicable. Environment Canterbury has indicated its approval for the proposed work.

The meeting concluded at 9.35am.

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Chairperson

**Infrastructure Committee  
for the Meeting of 12 March 2019**

**Report for Agenda Item No 7**

**Prepared by Ashley Harper  
Group Manager Infrastructure**

**Receipt of Minutes**

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Minutes of the February Downlands Joint Standing Committee meeting.

**Recommendation**

**That the minutes of the Downlands Joint Standing Committee meeting, held on 18 February 2019 be received.**

# Timaru District Council

## Downlands Joint Standing Committee

**Minutes of the Downlands Joint Standing Committee Meeting held on 18 February 2019 at 1pm in Meeting Room 1, Timaru District Council Building, King George Place, Timaru.**

### Present

Timaru District Council      Clrs Richard Lyon (Chairperson) Kerry Stevens, Dave Jack and Mr John McDonald

Waimate District Council      Clr David Anderson

Mackenzie District Council      Clr Anne Munro

Waimate and Mackenzie District Councils      Mr Bill Wright

**Apologies**      Clr Peter Burt

**In Attendance**      Group Manager Infrastructure (Ashley Harper), Drainage and Water Manager (Grant Hall), Development and Renewals Engineer (Selwyn Chang) and Downlands Secretary (Kate Walkinshaw)

### 1. Apologies

Proposed Clr Lyon  
Seconded Clr Jack

“That the apology of Clr Peter Burt be accepted”

Motion Carried

### 2. Identification of items of urgent business

There were no items of urgent business identified.

### 3. Identification of matters of a minor nature

There were no matters of a minor nature identified.

### 4. Declaration of Conflicts of Interest

There were no conflicts of interest declared.



5. **Confirmation of Minutes**

Proposed John McDonald  
Seconded Clr Anderson

“That the minutes of the Downlands Joint Standing Committee meeting held on 19 November 2018 be confirmed as a true and correct record.”

Motion carried

6. **Downlands Water Supply Upgrade Projects Update**

The Committee considered a report from the Drainage and Water Manager in regards to an update on the status of the Downlands Water Supply upgrade projects.

Te Ana Wai Trunk Main

Progress has been made with the Rock Art Trust for information for the Archaeological Applications. Aoraki Environmental Consultants are preparing the Cultural Impact Assessment (CIA) report for both section 1 and 2. Tendering for section 1 is programmed for April 2019 with work commencing in July 2019. Tendering for section 2 in July 2019 with work commencing in October 2019.

There was discussion over the tender process. Lowest price conforming and having the same contractor for both sections were the preferred options.

Te Ana Wai Water Treatment Plant

An agreement with the land owner of the preferred location has been reached. A memo with the agreement details will be provided to the Chief Executive to sign.

There was discussion around the supply of membranes and the tender process.

Te Ana Wai Intake and Low Head Pump Station

The results from the pipe samples showed that both pipes are in moderate condition with approximately 30/40 years life left with minor joint leakage to be repaired within 10-15 years. WSP-Opus will obtain the CIA and undertake the design. This is programmed to be completed in August 2019 and construction to commence in November 2019.

The communications strategy is still in the draft stage. This should be available for the June meeting. Potential availability of water will be part of the communication strategy. It was agreed that there is a need to know that project is confirmed before releasing communications.

Proposed Clr Jack  
Seconded Clr Anderson

“That the report be received and noted.”

Motion Carried

**7. Water Supply Activity Report**

The Group Manager explained the Water Supply Activity Report that was provided to the committee on Friday 15 February as previously requested at the November meeting.

Feedback from the Committee was positive, noting that the response times had a good result. Going forward, only Downlands information will be provided and anything relating to the Downlands Water Supply Scheme. This report will be supplied to the Committee every 4, 8 and 12 months.

Proposed Clr Stevens  
Seconded Clr Jack

“That the report be received and noted.”

Motion Carried

**8. Draft Budget 2019/20**

The Committee considered a report by the Drainage and Water Manager in regards to the draft budget for 2019/2020.

There was a discussion over the 12% rate increase due to the impending projects and if this should be adjusted now or once the project has commenced. It was decided to leave as it is and any additional revenue will be put aside for the projects.

It was suggested that Council provide a table of users ie. lifestyle blocks, farmers etc and number of units, supply points within the scheme and what proportion of demand that it is. This was welcomed by the Committee.

Proposed John MacDonald  
Seconded Bill Wright

“That the 2019/2020 Draft Budget be approved.”

Motion carried

The meeting concluded at 2:18pm.

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Chairperson

**Infrastructure Committee**  
**for the Meeting of 12 March 2019**

**Report for Agenda Item No 8**

**Prepared by Andrew Dixon**  
**Land Transport Manager**

**Timaru Demand Responsive Public Transport update**

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**Purpose of Report**

1. To update the Infrastructure Committee with progress on the investigation of the Demand Responsive Public Transport System (DRPTS) for Timaru.

**Background**

2. A DRPTS is being investigated for Timaru to eventually replace the traditional scheduled service. This proposal was initiated as part of the Canterbury Regional Public Transport Plan review. The principle driver for this change is that the Timaru scheduled bus service patronage is continuing to decline and may no longer be financially sustainable.
3. The DRPTS has had limited use in New Zealand but has not been used to replace an existing public transport system. However, there has been overseas experience, in particular NSW Australia, where a number of services are operating. With the proposed Timaru DRPTS being a first for New Zealand to replace an existing public transport system, there has been a lot of assistance from the NZ Transport Agency (NZTA) both in resourcing and funding.
4. Progress on the feasibility of a DRPTS for Timaru is continuing.
5. The preliminary engagement with our community on the proposed DRPTS for Timaru has been completed. This included an Environment Canterbury (ECan) initiated online survey and a number of “pop-up” sessions jointly conducted by ECan and Timaru District Council (TDC) at our library, CBay, supermarkets and the Timaru town centre. This also gave us the opportunity to engage with both current bus users and non-users.
6. The response from the Timaru public to the possible introduction of a DRPTS has been cautiously optimistic.
7. The feasibility project has recently progressed to a prototype testing stage, where aspects of the service such as functionality, hours, cost of operation and service coverage are being tested with individuals and focus groups, who were recruited from across Timaru and validated with “On Demand” technology provider, Via Limited. Via are the international technology provider for the feasibility study.

8. This prototype testing phase takes a robust, community focused approach to ensure the technology and the service is easy to understand and to use. Practical testing has also been undertaken with mock bookings through a call centre and an App, a trial vehicle and volunteers being picked up. NZTA have provided resources to undertake this task.
9. At the same time, the project team is preparing a business case for enhanced NZTA operation funding for a robust trial. The research and testing will inform this business case. This is critical for the implementation.
10. Communication plans, stakeholder engagement plans and marketing plans are in development and will recognise the need to get it right from the get go to achieve success.

### **Options**

11. The consultation to date has indicated that success may require the transitioning of the new service. This will require the current scheduled bus service or part of the service to run alongside the DRPTS for a period of time. This has cost implications and raises funding issues.
12. Environment Canterbury have requested that Timaru District Council provide some funding for the transitioning of the bus services. A letter of request is attached.
13. If the DRPTS does not go ahead, funding restrictions are likely to lead to an overhaul of the Timaru bus service, resulting in the possible reduction to frequency and coverage.

### **Identification of Relevant Legislation, Council Policy and Plans**

14. Canterbury Regional Public Passenger Transport Plan 2018-28
15. Timaru District Long Term Plan 2018-28

### **Assessment of Significance**

16. This matter is not deemed significant under the Council's Significance and Engagement Policy.

### **Consultation**

17. Consultation is an important factor of success and is on-going. There has been a comprehensive communication plan developed for this project. Some initial consultation has been undertaken as outlined in paragraph 5 and 6 above.

### **Other Considerations**

18. There are no other considerations relevant to this matter.

## **Funding Implications**

19. The cost of the Timaru public transport service is generally funded by Environment Canterbury, NZTA and passengers.
20. The proposed new service will require set up costs and pilot trials. It is anticipated that these costs will be met through additional financial assistance from NZTA. However, the anticipated fixed term transitioning will have an additional cost that is outside the current ECan and NZTA funding envelope.
21. Environment Canterbury has requested that Timaru District consider financially assisting this transition. This would need to be a cost on the Timaru urban area and could be funded in the Timaru footpath budget. The Timaru cost would be 100% rates funded and not eligible for NZTA financial assistance.
22. The request is for \$100,000 in 2019/20 and also 2020/21. The cost could be offset by a reduction in footpath expenditure in both years which was recently significantly increased following the additional unbudgeted revenue of \$500,000 with the footpath maintenance and renewals now being eligible for NZTA financial assistance.

## **Conclusion**

23. The progress towards implementing a new DRPTS is progressing as expected. A feasibility study will be completed this month.
24. Some community engagement and testing has been completed and is considered positive.
25. Council has been requested to assist with funding for the transitioning of the new service to ensure the best chance of success and should be considered during the forthcoming budget deliberations.

## **Recommendations**

- a **That the report be received.**
- b **That the funding request from Environment Canterbury to support the transitioning of the new Timaru On Demand public transport service be considered at the Council budget consideration meetings to be held on the 18 and 19 March 2019 .**

## **Infrastructure Committee**

### **for the Meeting of 12 March 2019**

#### **Report for Agenda Item No 9**

**Prepared by Andrew Dixon  
Land Transport Manager**

#### **Geraldine-Winchester/Coach/Tiplady Roads intersection upgrade**

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##### **Purpose of Report**

1. To consider the approval and funding of a proposed upgrade of the intersection of Winchester-Geraldine, Coach and Tiplady Roads (aerial map attached).

##### **Background**

2. A key strategic outcome in the Government Policy Statement of Transport (GPS) is improving road safety. To encourage safety improvements on local roads NZTA will fund selected projects on a Targeted Enhanced Financial Assistance Rate (TEFAR) basis that will provide 75% financial assistance.
3. The intersection of Winchester-Geraldine, Coach and Tiplady Roads as shown in the attached map, has been considered a safety issue for a number of years. This is reflected by a high vehicle crash history in the last 10 years where there have been eight injury crashes with three of them serious injuries. An assessment of the Canterbury region intersections by the NZ Transport Agency (NZTA) has identified this intersection as a regional safety priority.
4. The Coach/Tiplady Roads route is used by motorists and heavy vehicles travelling from Christchurch to Queenstown. The number of overseas based drivers has reduced slightly with the recent change in the Google Maps navigation system that now routes these drivers through Geraldine on State Highway 79. The number of heavy vehicles has increased significantly in the last ten years (20 per day to over 200 per day).
5. A number of measures to improve the safety of this intersection have been implemented. These include active "Stop Ahead" signage, other traffic signage improved road markings and road surfacing.
6. NZTA have assessed the intersection and recommend that a large rural round-a-bout be installed that will create a much improved road safety environment. The total cost is estimated to be in the order of \$2m, including design fees. The current road reserve land is sufficient for a round-a-bout so there are minimal, if any, land issues involved.

7. NZTA have indicated that this project would be supported for TEFAR funding and is seeking a commitment from Timaru District Council to fund the local share.

### **Options**

8. The options are –
  - Option 1 – Decline to support the recommended project and decline the 75% NZTA financial assistance TEFAR funding and not proceed with the proposed intersection improvements.
  - Option 2 – Confirm Council’s commitment to the intersection upgrade and funding of the 25% local share. This is a capital cost.
  - Option 3 – Install some low cost measures such as improved road signage, rumble strips and potential speed restrictions.

### **Identification of Relevant Legislation, Council Policy and Plans**

9. The following documents are applicable:
  - Land Transport Management Act 2003
  - Government Policy Statement on Transport 2018-28
  - Canterbury Regional Land Transport Plan 2015-25
  - Timaru District Long Term Plan 2018-28

### **Assessment of Significance**

10. This matter is not deemed significant under the Council’s Significance and Engagement Policy.

### **Consultation**

11. If supported consultation and communication with landowners, stakeholders, road users and Community Board will commence.

### **Other Considerations**

12. To be eligible for NZTA funding this project must be identified in the Canterbury Land Transport programme. It is currently not included but a variation request will be submitted for consideration by the Regional Transport Committee at their next meeting in April 2019.

### **Funding Implications**

13. This initiative has reached the stage where it has been provisionally approved by NZTA with a Financial Assistance Rate (FAR) of 75%. The normal FAR for TDC is 52%. We would need to meet the other (local) 25% (\$500,000) which could reasonably be funded by loan as the work will benefit future road users.

14. The project is currently not funded in the LTP or included in the Canterbury Regional Transport Plan. Variations will be sought if the project is supported and local share funding is allocated.

### **Conclusion**

15. The safety of the Winchester-Geraldine/Coach/Tiplady Roads intersection has been a concern and the crash statistics support improvements. We have been progressing with low cost measures such as improving signage and road markings to improve safety.
16. The intersection has been identified as a Canterbury Regional priority, one of only a few on local roads.
17. NZTA have indicated support for the upgrading of this intersection to a rural round-a-bout to significantly improve road safety at the intersection. This is a significant cost in the order of \$2 million. NZTA enhanced 75% financial assistance funding criteria requires that eligible approved projects must be completed by June 2021.

### **Recommendations**

- a **That the Infrastructure Committee support the new road safety project, Winchester-Geraldine/Coad/Tiplady intersection upgrade for an estimated cost of \$2.0 million subject to NZTA financial assistance of 75% of the project cost.**
- b **That this project be included in the 2019/20 Annual Plan.**





**Infrastructure Committee**  
**for the Meeting of 12 March 2019**

**Report for Agenda Item No 10**

**Prepared by Fabia Fox**  
**Policy Analyst**

**Patiti Point Access**

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**Purpose of Report**

1. To consider options for the future management of a section of South Street at Patiti Point, including the carpark and walkway, to minimise the risk posed by ongoing cliff erosion.

**Background**

2. Patiti Point is a popular recreational area located at the end of South Street, Timaru. The southern end of Patiti Point is located to the east of the Caledonian Grounds. The eastern extension of the road, located close to the shoreline, leads to a small carpark (colloquially known as the Surfers' Carpark) and provides access to Otipua Beach (see Figure 1).
3. The site was historically used as a landfill and this has resulted in upper layer of fill material with a significantly lower cohesive strength and density than the underlying silt.
4. Erosion is an increasing issue on Timaru's coastline. In August 2012 and June 2015 storm surges caused erosion along the rail corridor between Patiti Point and Scarborough effecting freight traffic. During the July 2017 weather event Council officers closed the extension of South Street due to the extent of cliff erosion from Patiti Point to Otipua Beach and the risk of cliff collapse.
5. In late February 2018 remnants of ex-cyclone Gita hit the South Island and storm swells again caused considerable erosion with the loss of between 0.5m and 1.5m of ground at localised areas along the cliffs. As a safety measure, the road was closed until a geotechnical inspection could be undertaken to ascertain any risk. The carpark was reduced with a barrier fence erected 10m from the edge of the cliff and permanent gate was installed at the entrance to the eastern extension of the road to allow for its closure when necessary.
6. WSP-Opus undertook a geotechnical assessment on the cliffs in early March 2018. The assessment did not identify a significant cliff collapse risk and found the erosion to be mainly localised and limited to slips in the overlying fill material which forms the top layer of the cliffs. The assessment also made recommendations including establishing a retreat line at least three metres from

the cliff, closing the road and carpark during and following storm events, completing drone surveys and investigating long-term management options for the road and carpark.

7. Heavy rain and high seas during 2018 exacerbated the erosion. The barrier fence, installed to protect pedestrians at several points along the walkway, was moved back as the cliff eroded to within a metre of the walkway. Much of the walkway is now closed making this section of South Street a single-lane shared use road for vehicles, pedestrians and cyclists.
8. This unexpected acceleration in the rate and level of erosion, particularly to the underlying silt layer, prompted Council officers to commission a second assessment by WSP-Opus to assess the extent of cliff erosion and loss, recommend trigger points for the closure of the walkway and road, and recommend possible remedial options.
9. In November 2018 a WSP-Opus geotechnical engineer undertook a walkover of the site and noted that since the March assessment several metres had been lost at some locations along the cliff, and that the wave action was causing the lower parts of the cliffs to erode (see Figures 2-5).
10. Based on the November assessment WSP-Opus have recommend further sections of the walkway and traffic lane be closed if the following trigger points are identified:
  - a. If the distance from the cliff edge to the outer edge of the walkway and traffic lane is between 0.5 to 1.5 metres (typically 1.0 metres); and
  - b. During or immediately after storm events.
11. Based on visual inspections completed by Council officers in late February, there are at least six points where the walkway is within three metres of the cliff edge and there are spots with considerable overhang. Because of the rate of erosion at the north eastern end of the walkway and road the barrier gate and fence have been relocated inland (Figure 6). Warning signs have installed along the site detailing the cliff loss hazard.
12. The Parks and Recreation Unit are in the process of rerouting the coastal walkway away from this site due to the increasing erosion along South Street. Once the new route is confirmed existing signage will be amended and new signs installed to direct the public.
13. It is timely that the Infrastructure Committee now consider options for the future management of the road, walkway and carpark.

## Options

14. The possible remedial options recommended by WSP-Opus are –
  - Option 1 – Do minimum
  - Option 2 – Further site monitoring
  - Option 3 – Wave protection systems
15. Option 1 – This option includes the continuous monitoring of the site using a drone survey and closing off additional sections of the site if the recommended trigger points are identified. Drone surveys would be completed quarterly and following storm events. The site would be closed during and immediately following storm events, until an inspection is undertaken.
16. Once the trigger points are reached and vehicle access is no longer safe, it is recommended that only pedestrian access be allowed. Figure 6 shows a concept drawing of the closure of the South Street access road. There will be minor upgrades to the berm outside the pistol club for drainage and to create an informal carpark. Permanent bollards and fencing have already been installed at this site (Figure 7).
17. Pedestrian access will remain and a safety fence will be erected along the length of the walkway. The rate of erosion will continue to be monitored and once the cliff is within one metre of the edge of the walkway pedestrian access will also be closed.
18. This option does not address the ongoing erosion issues at the site or guarantee ongoing vehicle or pedestrian access to Otipua Beach. There is a medium residual risk, with a low relative cost. It is estimated to cost \$8,000 per annum for surveying and monitoring and \$25,000 for the road upgrade and fence installation.
19. Option 2 – This option is similar to Option 1, with the addition of further and more frequent site monitoring. Manual measurements of cliff loss would be undertaken at least monthly to complement the drone footage and provide a better understanding of the rate of erosion.
20. Once the trigger points are reached vehicle access will be closed and South Street will be upgraded as in Option 1. Pedestrian access will remain with a safety fence until the cliff erodes to the one metre trigger point.
21. This option does not address the ongoing erosion issues at the site or guarantee ongoing vehicle or pedestrian access to Otipua Beach. However, with a greater level of information available through increased monitoring, Council will be better equipped to manage the risk of cliff instability and loss. There is a low to medium residual risk, with a low to moderate relative cost. More robust monitoring is estimated to cost \$15,000 per annum and \$25,000 for the road upgrade, as in Option 1.

22. Option 3 – This option includes increased monitoring and the construction of a wave protection system at the beach level along this site to reduce the impact of wave action against the cliffs and slow down the rate of erosion. The protection system may take the form of rock rip-rap, geotextile sand bags, concrete tetrapods, a retaining structure, or a composite solution. Detailed geotechnical and hydraulics assessments will be required to design the wave protection system.
23. This option is considered to unsustainable with high relative cost. WSP-Opus estimated the geotechnical and hydraulic investigation and design at between \$30,000 and \$50,000 (dependant on the protection system), construction costs at \$150,000 for a rip rap, and \$200,000 and \$350,000 for a retaining structure. Maintenance costs are estimated to be at least \$5,000 per annum, resulting in a total maintenance cost of at least \$250,000 for a system with a design life of 50 years.
24. The total estimated costs provided by WSP-Opus are between \$250,000 and \$500,000, subject to the form of the protection system. The rate at which a protection system would slow the erosion is difficult to determine with any accuracy.
25. Even if the current access road is fully eroded, pedestrian access to Otipua Beach will continue from the south and north at low tide along the intertidal zone of the beach. Protection identified in Option 3 may impact on this access to and from the north.
26. An option to create a public access road through the Caledonian Grounds is not favoured because of security concerns from sports clubs who have facilities there. For several years the gates have been locked to the Caledonian Grounds when the facilities have not been in use to reduce the risk of criminal activities and vandalism. There is also an area of soft fill at this location which would make road construction more expensive.
27. Machinery and service vehicles requiring access the Saltwater Creek mouth and to carry out maintenance operations will be able to gain access via the Caledonian Grounds.

### **Identification of Relevant Legislation, Council Policy and Plans**

28. Local Government Act 1974.

### **Assessment of Significance**

29. This matter is not deemed significant under the Council's Significance and Engagement Policy.

### **Consultation**

30. No consultation has taken place.

## Other Considerations

31. Council has the power, under section 342 (in the manner provided in Schedule 10) of the Local Government Act 1974 to temporarily close a road when for any reason it is considered desirable that traffic should be temporarily diverted to other roads. The risk posed by erosion and cliff instability is sufficient to comply with this criteria.

## Funding Implications

32. Council expenditure at this site since February 2018 has been \$17,000. This included installing and relocating safety barriers and gates and consultant costs and has been funded from road maintenance budgets. This figure does not include staff time monitoring the erosion.
33. Options 1 and 2 could be funded through existing budgets.
34. There is no current budget for Option 3.

## Conclusion

35. The south eastern end of South Street, at Patiti Point, has been subject to an increasing rate of erosion. The erosion rate is higher than expected due to the increased frequency of storm events, very high tides and poor geological conditions.
36. The road and walkway access to the Surfers Carpark and Otipua Beach is limited as the ongoing erosion will eventually result in the access being unsafe for the public.
37. It is necessary to determine a future management plan for the road and walkway, either through increased monitoring of the rate of erosion and reducing access to the road, walkway and carpark accordingly, or by installing costly wave protection systems to slow the rate of erosion to the cliffs.

## Recommendation

- a **That Option 2 is implemented for the future management of South Street at Patiti Point, with additional site monitoring, that vehicle and pedestrian access is closed when the trigger points are reached, and an informal carpark is created.**

Figure 1: Map of site



**Figure 2: Showing cliff erosion at South Street, Patiti Point. 13 December 2018**



**Figure 3: Showing cliff erosion at South Street, Patiti Point. 1 March 2019.**





**Figure 4: Showing cliff erosion at South Street, Patiti Point, 19 February 2019**



**Figure 5: Showing cliff erosion at South Street, Patiti Point, 19 February 2019**



**Figure 6: South Street, Patiti Point Car Park Option Concept**



**Figure 7: South Street Barrier and Gate, 19 February 2019**

