

## MCDA CRITERIA – PUBLIC ACCESS AND RECREATION VALUES

| Management Unit  | Pathway | Pathway Description   |   |   | Public Access and Recreation values |  |
|------------------|---------|---|---|---|-------------------------------------|--|
|                  |         | Short term  | Medium term   | Long term   | Score                               | Notes  |
| Waikanae Unit 5A | 1       | <b>Enhance</b> - Dune and wetland resilience, community education and emergency management  | <b>Soft Engineering</b> - Dune reconstruction   | <b>Soft Engineering</b> - Beach renourishment           |                                     | <ul style="list-style-type: none"> <li>Short term <b>dune resilience</b> will maintain the natural amenity and landscape values of the coastal environment.</li> <li>Ongoing <b>dune maintenance and protection</b> in medium and longer term is likely to further benefit ecosystems, foster nature appreciation &amp; supports community values.</li> <li>Both the medium (<b>Dune reconstruction</b>) and long-term options (<b>beach renourishment</b>) may temporarily impact access during construction, but overall, public access to the coastal environment will be maintained.</li> <li>Recreation that damages dunes needs to be restricted to protect ecosystems &amp; encourage dune stability. Beach renourishment can result in changes to the beach profile and increased swimmer injuries, e.g. steeper, more dangerous shore break.</li> </ul>   |
|                  | 2       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Dune reconstruction | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Beach renourishment | <b>Protect - Hard Engineering</b> - Sea wall            |                                     | <ul style="list-style-type: none"> <li>This short-med term <b>dune resilience &amp; dune reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation.</li> <li>Public access to the coastal environment will be maintained. Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>The long-term <b>seawall</b> option may contribute to beach narrowing which may restrict public access to beach at high tides. However, seawall could potentially be designed to incorporate amenity / recreational value.</li> <li>During seawall construction, public access to beachfront may be temporarily restricted.</li> </ul>  |
|                  | 3       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Dune reconstruction | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Beach renourishment | <b>Protect - Hard Engineering</b> - Detached Breakwater |                                     | <ul style="list-style-type: none"> <li>This short-med term <b>dune resilience</b> and <b>reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation.</li> <li>Public access to the coastal environment will be maintained. Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>The long-term <b>breakwater</b> option may change beach conditions, e.g. beach narrowing (may restrict public access to beach at high tides).</li> <li>During breakwater construction, public access to beachfront may be temporarily restricted.</li> </ul>  |
|                  | 4       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Dune reconstruction | <b>Protect - Hard Engineering</b> - Sea wall  | <b>Retreat</b>  |                                     | <ul style="list-style-type: none"> <li>This short-term <b>dune resilience &amp; dune reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation. While public access to the coastal environment will be maintained, it may be temporarily restricted while <b>dune reconstruction</b> works are being done.</li> <li>Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>The medium-term <b>seawall</b> option may contribute to beach narrowing which may restrict public access to beach at high tides. However, seawall could potentially be designed to incorporate amenity value/ recreational access.</li> <li>During seawall construction, public access to beachfront will be temporarily restricted.</li> </ul> |

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| Waikanae Unit 5A | 5 | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Dune reconstruction | <b>Protect - Hard Engineering</b> - Detached Breakwater | <b>Retreat</b> |  | <ul style="list-style-type: none"> <li>• This short-term <b>dune resilience and reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation.</li> <li>• While public access to the coastal environment will be maintained, it may be temporarily restricted while dune reconstruction works are being done. Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• The med-term <b>breakwater</b> option may change beach conditions, e.g. beach narrowing (may restrict public access to beach at high tides).</li> <li>• During breakwater construction, public access to beachfront may be temporarily restricted.</li> <li>• Long term <b>retreat</b> may offer opportunities for ecological restoration of the foredunes and opportunities for managed public access &amp; recreation.</li> </ul> |
|                  | 6 | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Soft Engineering</b> - Dune reconstruction | <b>Retreat</b>  | <b>Retreat</b> |  | <ul style="list-style-type: none"> <li>• This short-term <b>dune enhancement</b> options will maintain the natural appeal of the coastal environment and ecosystem protection could enhance both community and environmental values and foster nature appreciation.</li> <li>• While public access to the coastal environment will be maintained, it may be temporarily restricted while <b>dune reconstruction</b> works are being done.</li> <li>• Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• The med-long term option for <b>retreat</b> could allow opportunities for land to be incorporated into public space. This could allow for continued ecological restoration, and recreation and public access could be planned for (prior to the actual relocation of affected properties).</li> </ul>  |
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# Waikanae Unit 5B

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|---|--|--|--|--|--|
| 1 | Status Quo AND Community Education and Emergency Management  | Status Quo AND Community Education and Emergency Management  | Enhance - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management |  | <ul style="list-style-type: none"> <li>• In the short-medium term, infrastructure will be maintained &amp; public access to recreation areas will continue subject to any public safety issues, e.g. due to required maintenance, health risks or flood events.</li> <li>• To maintain goodwill and support for adaptation options, the community will need to be informed on changes to public access and why.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li> <li>• In the long term, increased inundation protection may restrict access to some areas while works are being undertaken.</li> </ul>   |
| 2 | Status Quo AND Community Education and Emergency Management  | Enhance - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | Protect - Additional Hard Protection - e.g. stopbanks, Culverts and Pump stations  |  | <ul style="list-style-type: none"> <li>• In the short-medium term, infrastructure will be maintained &amp; public access to recreation areas will continue subject to any public safety issues, e.g. due to required maintenance, health risks or flood events.</li> <li>• To maintain goodwill the community will need to be informed on changes to public access and why.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness and response during flood events.</li> <li>• In the long term, <b>additional hard protection</b> may restrict access to some areas while works are being undertaken.</li> </ul>  |
| 3 | Enhance - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | Enhance - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | Accommodate - Elevate floor levels of buildings and flood proofing buildings and infrastructure                                    |  | <ul style="list-style-type: none"> <li>• In the short-medium term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. <b>Enhanced inundation protection</b> or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li> <li>• In the long term, most <b>Accommodate</b> options are unlikely to impact public access and recreation.</li> </ul>  |
| 4 | Enhance - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | Accommodate - Elevate floor levels of buildings and flood proofing buildings and infrastructure                                    | Retreat  |  | <ul style="list-style-type: none"> <li>• In the short term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. <b>Enhanced inundation protection</b> or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li> <li>• In the medium term, most <b>Accommodate</b> options are unlikely to impact public access and recreation.</li> <li>• In the long term, <b>retreat</b> may provide opportunities for land to be acquired for ecological restoration or managed public access for low impact recreation.</li> </ul>                          |
| 5 | Enhance - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | Protect - Additional Hard Protection - e.g. stopbanks, Culverts and Pump stations  | Retreat  |  | <ul style="list-style-type: none"> <li>• In the short term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. <b>Enhanced inundation protection</b> or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li> <li>• In the medium term, <b>additional hard protection</b> options may impact public access and recreation while works are being done.</li> <li>• In the long term, <b>retreat</b> may provide opportunities for land to be acquired for ecological restoration or managed public access for low impact recreation.</li> </ul> |

| Management Unit                | Pathway | Pathway Description  |  |  | Public Recreation and Access values |  |
|--------------------------------|---------|--|--|--|-------------------------------------|--|
|                                |         | Short term   | Medium term  | Long term  | Score                               | Notes  |
| Waikanae Estuary Unit 6A and B | 1       | Status Quo AND Community Education and Emergency Management                            | Enhance - Dune and/or wetland resilience, community education and emergency management | Enhance - Dune and/or wetland resilience, community education and emergency management |                                     | <ul style="list-style-type: none"> <li>• In the short term, <b>status quo</b> allows for continued public access to recreation activities in the estuary (and Otaihanga) area. Access may be restricted during maintenance or for safety reasons.</li> <li>• Recreation that negatively impacts dunes or wetlands may need to be restricted.</li> <li>• In the med-long term, more frequent flood events may restrict public access to the estuary, due to public safety concerns or track maintenance.</li> <li>• Existing recreation facilities and tracks may need to be relocated to allow continued public access.</li> <li>• Opportunities for nature appreciation e.g. bird watching, could be impacted. This depends on the ecological response from animal populations to changing estuarine conditions.</li> </ul>   |
|                                | 2       | Status Quo AND Community Education and Emergency Management                            | Enhance - Dune and/or wetland resilience, community education and emergency management | Protect - Bank protection  |                                     | <ul style="list-style-type: none"> <li>• In the short term, <b>status quo</b> allows for continued public access to recreation activities in the estuary (and Otaihanga) area. Access may be restricted during maintenance or for safety reasons.</li> <li>• Recreation that negatively impacts dunes or wetlands may need to be restricted.</li> <li>• In the medium term, more frequent flood events may restrict public access to the estuary, due to public safety concerns or remedial track maintenance. Over time, existing recreation facilities and tracks, may need to be relocated to allow continued public access.</li> <li>• In the long term, the design of <b>bank protection</b> solution may provide opportunities to maintain recreational access and/or more durable surfaces.</li> <li>• Opportunities for nature appreciation e.g. bird watching, could be impacted. This depends on the ecological response from animal populations to changing estuarine conditions.</li> </ul>  |
|                                | 3       | Enhance - Dune and/or wetland resilience, community education and emergency management | Enhance - Dune and/or wetland resilience, community education and emergency management | Protect - Bank protection  |                                     | <ul style="list-style-type: none"> <li>• In the short-medium terms, <b>dune &amp; wetland resilience</b> allows for continued public access to recreation activities in the estuary (and Otaihanga) area. Community involvement in enhancement activities is likely to support community wellbeing and provide connection to place.</li> <li>• Public access may be restricted at any time during remedial maintenance, track construction, or for safety reasons.</li> <li>• Recreation that negatively impacts dunes or wetlands may need to be restricted.</li> <li>• In the medium term, existing recreation facilities and tracks, may need to be relocated to allow continued public access.</li> <li>• In the long term, the design of <b>bank protection</b> solution may provide opportunities to maintain recreational access and/or more durable surfaces.</li> <li>• Opportunities for nature appreciation e.g. bird watching, could be impacted. This depends on the ecological response from animal populations to changing estuarine conditions.</li> </ul> |
|                                | 4       | Enhance - Dune and/or wetland resilience, community education and emergency management | Protect - Bank protection  | Protect - Bank protection  |                                     | <ul style="list-style-type: none"> <li>• In the short-medium terms, <b>dune &amp; wetland resilience</b> allows for continued public access to recreation activities in the estuary (and Otaihanga) area. Community involvement in enhancement activities is likely to support community wellbeing and provide connection to place.</li> <li>• Public access may be restricted at any time during remedial maintenance, track construction, or for safety reasons.</li> <li>• Recreation that negatively impacts dunes or wetlands may need to be restricted.</li> <li>• In the med-long term, existing recreation facilities and tracks, may need to be relocated to allow continued public access. The design of <b>bank protection</b> solution may provide opportunities to maintain recreational access and/or more durable surfaces.</li> <li>• Opportunities for nature appreciation e.g. bird watching, could be impacted. This depends on the ecological response from animal populations to changing estuarine conditions.</li> </ul>                            |

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|  | 5 | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management | <b>Retreat</b> - Retreat recreational infrastructure to make way for wetland migration | <b>Retreat</b> - Retreat recreational infrastructure to make way for wetland migration |  | <ul style="list-style-type: none"><li>• In the short-medium terms, <b>dune &amp; wetland resilience</b> allows for continued public access to recreation activities in the estuary (and Otaihanga) area. Community involvement in enhancement activities is likely to support community wellbeing and provide connection to place.</li><li>• Public access may be restricted at any time during remedial maintenance, track construction, or for safety reasons.</li><li>• Recreation that negatively impacts dunes or wetlands may need to be restricted.</li><li>• In the med-long term, <b>retreat</b> of recreational infrastructure at Waikanae estuary, may not necessarily signify a loss of a valuable public recreation asset, as there may be opportunities to relocate / redesign amenities to minimise impact and retain public access.</li><li>• Opportunities for nature appreciation e.g. bird watching, could be impacted. This depends on the ecological response from animal populations to changing estuarine conditions.</li></ul> |
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| Management Unit   | Pathway | Pathway Description   |  |  | Public Access and Recreation values |  |
|-------------------|---------|---|--|--|-------------------------------------|--|
|                   |         | Short term  | Medium term  | Long term  | Score                               | Notes  |
| Otaihanga Unit 7B | 1       | <b>Status Quo</b> AND Community Education and Emergency Management  | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management  | <b>Protect - Additional Hard Protection</b> (e.g. stopbanks, culverts and pump stations)               |                                     | <ul style="list-style-type: none"> <li>In the short term, <b>status quo</b> ensures existing infrastructure will be maintained &amp; public access to recreation areas will continue, subject to any public safety issues, e.g. due to required maintenance, health risks or flood events.</li> <li>To maintain goodwill the community will need to be informed on changes to public access and why.</li> <li>Ongoing education and increased awareness of risk by local community (and recreation users) to ensure preparedness and emergency response during flood events, e.g. road, bridge &amp; recreation track access.</li> <li>Medium term: <b>Enhancement of existing inundation protection</b> may restrict access to some area while works are being undertaken.</li> <li>Long term: construction of <b>additional hard protection</b> may restrict access to some areas while works are being undertaken.</li> </ul> |
|                   | 2       | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management  | <b>Accommodate</b> - Elevate floor levels of buildings and flood proofing buildings and infrastructure |                                     | <ul style="list-style-type: none"> <li>In the short-medium term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. <b>Enhanced inundation protection</b> or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>Ongoing education and increased local community awareness of risk will ensure appropriate emergency preparedness.</li> <li>Long term: most <b>Accommodate</b> options occur on private properties &amp; are unlikely to impact public access and recreation.</li> </ul>   |
|                   | 3       | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Accommodate</b> - Elevate floor levels of buildings and flood proofing buildings and infrastructure                                     | <b>Retreat</b>   |                                     | <ul style="list-style-type: none"> <li>In the short term, public access to recreation areas will continue subject to any public safety issues, eg. health risks or flood events. <b>Enhanced inundation protection</b> or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>Ongoing <b>education</b> and increased awareness of risk will ensure community preparedness.</li> <li>In the medium term, most <b>Accommodate</b> options are unlikely to impact public access and recreation.</li> <li>In the long term, <b>retreat</b> may provide opportunities for land to be acquired for ecological restoration or managed public access for low impact recreation.</li> </ul>  |
|                   | 4       | <b>Protect - Additional Hard Protection</b> (e.g. stopbanks, culverts and pump stations)  | <b>Enhance</b> - Enhance new inundation protection, dune and/or wetland resilience, and c and community education and emergency management | <b>Retreat</b>   |                                     | <ul style="list-style-type: none"> <li>Short term, public access to recreation areas may be restricted temporarily during construction of <b>additional infrastructure</b> and/or required maintenance.</li> <li>To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>Ongoing <b>education</b> and increased awareness of risk will ensure community preparedness.</li> <li>In the medium term, <b>new inundation protection</b> works are likely to temporarily impact public access to recreation areas.</li> <li>In the long term, <b>retreat</b> may provide opportunities for land to be acquired for ecological restoration or managed public access for low impact recreation. May require removal of existing built structures as part of restoration efforts.</li> </ul>   |

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|  | 5 | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Protect - Additional Hard Protection</b> (e.g. stopbanks, culverts and pump stations) | <b>Protect - Additional Hard Protection</b> (e.g. stopbanks, culverts and pump stations) |  | <ul style="list-style-type: none"><li>• In the short term, <b>enhanced inundation protection</b> may restrict access to some public areas while works are being undertaken. Public access to recreation areas likely to continue subject to any public safety issues, e.g. flood events, health risks, or required infrastructure maintenance.</li><li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li><li>• In the med - long term: <b>additional hard protection</b> options may impact public access and recreation while works are being done. Likely to allow for continued public access for recreation activities.</li><li>• Hard engineering measures are likely to change the natural feel of the Waikanae River area. Amenity &amp; aesthetic values could be incorporated into hard engineering solutions.</li></ul> |
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| Management Unit     | Pathway | Pathway Description   |   |   | Public Access and Recreation values |  |
|---------------------|---------|---|---|---|-------------------------------------|--|
|                     |         | Short term  | Medium term   | Long term   | Score                               | Notes  |
| Paraparaumu Unit 8A | 1       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management   | <b>Protect - Soft Engineering</b> - Dune Reconstruction   | <b>Protect - Soft Engineering</b> - Beach Renourishment |                                     | <ul style="list-style-type: none"> <li>Short term <b>dune resilience</b> will maintain the natural amenity and landscape values of the coastal environment.</li> <li>Ongoing <b>dune maintenance and protection</b> in medium and longer term is likely to further benefit ecosystems, foster nature appreciation &amp; supports community values.</li> <li>Both the medium (<b>Dune reconstruction</b>) and long term options (<b>beach renourishment</b>) may temporarily impact access during construction, but overall, public access to the coastal environment will be maintained.</li> <li>Recreation that damages dunes needs to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li><b>Beach renourishment</b> can result in changes to the beach profile and increased swimmer injuries, e.g. steeper, more dangerous shore break.</li> </ul>   |
|                     | 2       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Protect - Soft Engineering</b> - Dune reconstruction | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Protect - Soft Engineering</b> - Beach Renourishment | <b>Protect - Hard Engineering</b> - Sea wall            |                                     | <ul style="list-style-type: none"> <li>This short-med term <b>dune resilience &amp; dune reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation.</li> <li>Public access to the coastal environment will be maintained.</li> <li>Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>The long-term <b>seawall</b> option may contribute to beach narrowing which may restrict public access to beach at high tides. However, seawall could potentially be designed to incorporate amenity / recreational value.</li> <li>During seawall construction, public access to beachfront may be temporarily restricted.</li> </ul>   |
|                     | 3       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Protect - Soft Engineering</b> - Dune reconstruction | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Protect - Soft Engineering</b> - Beach Renourishment | <b>Protect - Hard Engineering</b> - Detached Breakwater |                                     | <ul style="list-style-type: none"> <li>This short-med term <b>dune resilience and reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation.</li> <li>Public access to the coastal environment will be maintained.</li> <li>Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>The long term <b>detached breakwater</b> option may change beach conditions, e.g. beach narrowing (may restrict public access to beach at high tides).</li> <li>During breakwater construction, public access to beachfront may be temporarily restricted.</li> </ul>   |
|                     | 4       | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Protect - Soft Engineering</b> - Dune reconstruction | <b>Protect - Hard Engineering</b> - Sea wall  | <b>Retreat</b>  |                                     | <ul style="list-style-type: none"> <li>This short-term <b>dune resilience &amp; dune reconstruction</b> option will maintain the natural appeal of the coastal environment. Ecosystem protection could enhance community values and foster nature appreciation. While public access to the coastal environment will be maintained, it may be temporarily restricted while <b>dune reconstruction</b> works are being done.</li> <li>Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>The medium-term <b>seawall</b> option may contribute to beach narrowing which may restrict public access to beach at high tides. However, seawall could potentially be designed to incorporate amenity value/ recreational access.</li> <li>During seawall construction, public access to beachfront will be temporarily restricted.</li> <li>Long term <b>retreat</b> may offer opportunities for ecological restoration of the foredunes and opportunities for managed public access &amp; recreation.</li> </ul> |



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|---------------------|---|---|--|----------------|--|---|
| Paraparaumu Unit 8A | 5 | <b>Protect - Hard Engineering</b> - Sea wall  | <b>Protect - Hard Engineering</b> - Sea wall | <b>Retreat</b> |  | <ul style="list-style-type: none"> <li>• In the short term, public access to the southern end of Paraparaumu Beach may be restricted during the construction of the <b>seawall</b>, and during periods of ongoing maintenance.</li> <li>• it may be possible to incorporate public access on/ around the seawall depending on the final design.</li> <li>• likely that visual impacts of seawall may deter from the natural feel of the coastline.</li> <li>• seawall could result in beach access being more restricted during mid to higher tides.</li> <li>• In the long term, if ongoing maintenance continues, the seawall may provide safe public access if the area experiences <b>retreat</b>.</li> </ul>   |
|                     | 6 | <b>Enhance</b> - Dune and/or wetland resilience, community education and emergency management AND <b>Protect - Soft Engineering</b> - Dune reconstruction | <b>Retreat</b>                               | <b>Retreat</b> |  | <ul style="list-style-type: none"> <li>• This short-term <b>dune resilience &amp; dune reconstruction</b> options will maintain the natural appeal of the coastal environment and ecosystem protection could enhance both community and environmental values and foster nature appreciation.</li> <li>• While public access to the coastal environment will be maintained, it may be temporarily restricted while <b>dune reconstruction</b> works are being done.</li> <li>• Recreation that damages dunes will need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• The med-long term option for <b>retreat</b> could allow opportunities for land to be incorporated into public space. Includes activities that promote continued ecological restoration, and public access managed to allow for lower impact recreation uses. Could be planned for prior to the actual relocation of affected properties.</li> </ul> |
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## Paraparaumu Unit 8B

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|---|---|---|---|---|--|---|
| 1 |   | <b>Status Quo</b> AND Community Education and Emergency Management  | <b>Status Quo</b> AND Community Education and Emergency Management  | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management |  | <ul style="list-style-type: none"> <li>• In the short-medium term, infrastructure will be maintained &amp; public access to recreation areas will continue as status quo, subject to any public safety issues, e.g. due to required maintenance, health risks or flood events.</li> <li>• To maintain goodwill and support for adaptation options, the community will need to be informed on changes to public access and why and impacts to other values e.g. ecology.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li> <li>• Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• In the long term, increased inundation protection may restrict access to some areas while works are being undertaken. Enhanced dune and/or wetland resilience may provide community with opportunities to appreciate nature, foster wellbeing &amp; social cohesion.</li> </ul>  |
|   | 2 | <b>Status Quo</b> AND Community Education and Emergency Management  | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Protect</b> - Additional hard protection (e.g. stopbanks, culverts and pump stations)  |  | <ul style="list-style-type: none"> <li>• In the short term, infrastructure will be maintained at Status quo &amp; public access to recreation areas will continue subject to any public safety issues, e.g. due to required maintenance, health risks or flood events.</li> <li>• To maintain goodwill the community will need to be informed on changes to public access and why.</li> <li>• Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• Med term: enhancing dune and/or wetlands provides community with opportunities to appreciate nature, foster wellbeing &amp; social cohesion. Ongoing education for community on benefits of ecology protection. Increasing awareness of risk will ensure community preparedness and response during flood events.</li> <li>• In the long term, additional hard protection may restrict access to some areas while works are being undertaken. Opportunity to potentially integrate recreation &amp; amenity values into infrastructure design.</li> </ul>  |
|   | 3 | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Accommodate</b> - Elevate floor levels of buildings and flood proofing buildings and infrastructure                                    |  | <ul style="list-style-type: none"> <li>• In the short-medium term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. Enhanced inundation protection or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>• Enhancing dune and/or wetlands provides community with opportunities to appreciate nature, foster wellbeing &amp; social cohesion. Ongoing education for community on benefits of ecology protection. Increasing awareness of risk will ensure community preparedness and response during flood events.</li> <li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>• Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• In the long term, most accommodate options are unlikely to impact public access and recreation.</li> </ul>  |
|   | 4 | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Accommodate</b> - Elevate floor levels of buildings and flood proofing buildings and infrastructure                                    | <b>Retreat</b>  |  | <ul style="list-style-type: none"> <li>• In the short term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. Enhanced inundation protection or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li> <li>• Enhancing dune and/or wetlands provides community with opportunities to appreciate nature, foster wellbeing &amp; social cohesion. Ongoing education for community on benefits of ecology protection. Increasing awareness of risk will ensure community preparedness and response during flood events.</li> <li>• Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li> <li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li> <li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li> <li>• Med term: most Accommodate options are unlikely to impact public access and recreation.</li> <li>• Long term: retreat may provide opportunities for land to be acquired for ecological restoration or managed public access for low impact recreation.</li> </ul> |

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| Paraparaumu Unit 8B | 5 | <b>Enhance</b> - Enhance existing inundation protection, dune and/or wetland resilience, and community education and emergency management | <b>Protect - Additional Hard Protection</b> (e.g. stopbanks, culverts and pump stations) | <b>Retreat</b> |  | <ul style="list-style-type: none"><li>• In the short term, public access to recreation areas will continue subject to any public safety issues, e.g. health risks or flood events. Enhanced inundation protection or required infrastructure maintenance, may restrict access to some public areas while works are being undertaken.</li><li>• Enhancing dune and/or wetlands provides community with opportunities to appreciate nature, foster wellbeing &amp; social cohesion.</li><li>• Recreation that damages dunes may need to be restricted to protect ecosystems &amp; encourage dune stability.</li><li>• To maintain goodwill and support the community will need to be informed on changes to public access and why.</li><li>• Ongoing education and increased awareness of risk will ensure community preparedness.</li><li>• In the medium term, additional hard protection options may impact public access and recreation while works are being done. Opportunity to potentially integrate recreation &amp; amenity values into infrastructure design.</li><li>• In the long term, retreat may provide opportunities for land to be acquired for ecological restoration or managed public access for low impact recreation.</li></ul> |
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