



Areas of South Dunedin will be flooded, as seen in blue, in a sea-level rise scenario. Photo: Stuff

This issue has major impacts on both the environment and the people who live in South Dunedin. The area is home to more than 10,000 residents and contains billions of dollars worth of essential infrastructure. Local anxiety about flooding is widespread. Resident Eleanor Doig from low-lying Musselburgh explained that “you say the word ‘water’ around here and everyone gets anxious,” highlighting how deeply this issue affects daily life.

South Dunedin’s social and economic vulnerability makes the situation even more serious. Parts of the suburb rank within the bottom 10% nationally for socioeconomic wellbeing, and average personal income is already low, around \$20,100 in 2019, with some parts averaging below \$14,000. Much of the housing consists of rentals and council flats, meaning many residents do not own their homes, have limited financial stability, and may be unable to relocate easily. Lower income households are also less likely to have adequate insurance, increasing the long-term consequences of flood damage.

Social deprivation data of the area shows that much of South Dunedin is ranked highly for deprivation. Social deprivation refers to people being disconnected from society due to factors such as low income, disability, poor health, or limited access to resources. The suburb’s flat terrain, high proportion of rental housing, and accessibility make it a common home for people with disabilities or mobility needs. These conditions contribute to the high deprivation levels across the community.

While the flooding issue is concentrated locally, mainly affecting South Dunedin and neighbouring suburbs, the impacts can extend across the whole city. South Dunedin contains several major supermarkets, businesses, and services that the wider Dunedin population relies on. Additionally, any large-scale damage would require significant funding from the Dunedin City Council, potentially diverting resources away from other suburbs and projects.

Flooding also brings substantial environmental consequences. It can damage local ecosystems, contaminate water supplies, and accelerate erosion. Floodwaters often carry debris and pollutants into rivers, lakes, and the ocean, harming aquatic life and reducing water quality. Repeated flooding can strip soil, kill vegetation, and reshape

the landscape, reducing the area’s natural resilience to future storms

A full explanation that details how a range of people’s values and perceptions of the issue have led to their responses

Plan:

Person	Perception and values	Response
Eleanor Doig	= serious social and economic issue for the community. Values - resilience, creativity, and long-term community wellbeing	Community facilitator Hui organiser
Dave Cull	= an economic risk for council as the cost of flood management will be on going – can’t afford. Values – honesty, openness and accountability	Proposed ‘Managed retreat’ but also encouraged discussion of other solutions. Created a public platform ‘South Dunedin future’

After further research, I have found two people who have responded to this issue. One being Eleanor Doig who is trying hard to come up with a solution to the issue that isn't retreating as well as making sure the community gets to contribute their ideas to the big conversations about the issue. The other person is Dave Cull who was Dunedin's mayor from 2010 - 2019, who thinks that there may not be a good solution and proposed the idea that a managed retreat somewhere in the future may be the best option.

The Dunedin City Council (DCC) has played a major role in shaping the conversation around how South Dunedin should respond to the issue of an increasing flood risk. Former mayor Dave Cull, who served from 2010 to 2019, strongly supported the idea of managed retreat. His response was influenced by his responsibility to protect the long-term financial stability of the city. From an economic perspective, he believed it would be irresponsible to continue spending large amounts of money defending land which he perceives as being extremely vulnerable to climate change driven flooding, especially when those efforts might fail or require ongoing, expensive maintenance. Dave Cull perceives the cost of ongoing maintenance and flood protection schemes to be seriously beyond the ability of the City Council and an unnecessary burden on ratepayers.

Cull's values centred on ensuring that council spending benefited Dunedin as a whole. From this viewpoint, encouraging retreat and allowing low lying land to return to natural use could free up millions of dollars that might otherwise be used on temporary solutions. Those savings, in his view, could be better invested in infrastructure and services in areas that are not at such high risk.

Community tensions rose after the 2015 flood, when South Dunedin residents questioned whether the disaster was caused solely by extreme rainfall or whether it had been made worse by ageing infrastructure and poor maintenance. The council defended itself by arguing that the rainfall event, three months worth of rain in 24 hours, was the main cause. The day after the flood, Cull publicly stated that climate change was a key driver of the event and introduced managed retreat as a possible long-term solution. His response shows how his environmental awareness and

acceptance of climate science shaped his willingness to discuss retreat earlier than others.

To address community concerns, the DCC created South Dunedin Future, a platform designed to provide accessible information, explain the science, and keep the community updated. This action reflected Cull's belief in transparency and his value of keeping residents informed, especially when decisions could affect their homes and livelihoods.

Cull also spoke openly to the media about managed retreat, despite being told not to use the term. His statement "I didn't take any notice" shows that he valued honest public discussion over political caution. He believed that facing the reality of climate risk was more important than avoiding public backlash.

Although the DCC's stance has evolved, managed retreat remains one of the main long-term strategies being considered. The council has pushed for government funding to begin purchasing at risk properties, but these requests have so far been declined. In response to the complex nature of the issue, the DCC has developed 16 possible solutions, which were shared with the public to ensure community participation in the decision-making process. This reflects the council's values of democratic engagement and transparency.

Eleanor Doig strongly opposes the idea of a managed retreat from South Dunedin, and her response to the flooding issue is shaped by her deep social connection to the community. She approaches the issue from a social and community centred perspective, valuing stability, belonging, and the ability for residents to remain in the place many have lived for decades. As a long-time resident of low-lying Musselburgh, a suburb at risk, she personally understands the emotional, cultural, and practical challenges that relocating would create for local people. Because she shares the same risks and experiences as her neighbours, she feels closely aligned with their values of community cohesion and protection of place.

Her strong belief that the community should not be forced out of their homes has guided her actions. In response to the threat of retreat, Eleanor became a community facilitator, a role focused on empowering residents, improving engagement, and helping ensure that decisions about South Dunedin's future are not made without local input. She has organised multiple community hui to discuss sea level rise and future planning, including one meeting that attracted more than 130 attendees. These gatherings reflect her value of collective decision making and her determination to give residents a meaningful voice. As she stated, "What we're trying to do in these hui is say we are determined that no one sitting in Wellington, or at the city council, will make decisions without us being a part of that." This shows her commitment to community autonomy and her strong belief that solutions should be shaped with, not for, the people who live there.

Eleanor's perspective also influences the type of solutions she supports. Rather than relocating residents, she believes South Dunedin should be protected and improved through upgraded infrastructure and innovative urban design. Her statement, "We've got the opportunity to do some creative, innovative urban design," demonstrates her optimism that the suburb can be adapted to withstand climate change. This reflects her values of resilience, creativity, and long-term community wellbeing.

Ultimately, Eleanor Doig's response is rooted in her identity as a resident, her commitment to community empowerment, and her belief that South Dunedin should be strengthened rather than abandoned. Her actions, facilitating discussions, organising

community meetings, giving residents a platform, and advocating for upgraded infrastructure, are all direct expressions of these values and her determination to protect the place she and many others call home.

Solution

The most suitable course of action for South Dunedin is a planned and voluntary managed retreat combined with long term flood mitigation development. This approach allows the city to gradually reduce risk while avoiding sudden disruption to residents.

In 2023, the Dunedin City Council proposed a voluntary property-acquisition programme costing up to \$132 million over the first five years, based on buying around 65 houses per year. These homes could be rented out in the short term to maintain housing supply until the land is needed for adaptation projects. By purchasing land slowly over several decades, the council can create enough space for major flood-management infrastructure such as upgraded stormwater pipes, pumping stations, expanded parks, and new wetlands.

This option is far more cost-effective than waiting for disaster. The 2015 flood caused an estimated \$138 million in combined insurance, social, and economic losses, affecting around 1,200 homes and businesses. Choosing proactive retreat now prevents repeated cycles of damage and repair, which would ultimately cost more than a planned adaptation strategy. As current mayor Jules Radich explains, buying land early “gives us more options tomorrow,” because it makes space for whatever protective structures the area will eventually need.

Another advantage of managed retreat is that it aligns with scientific research on South Dunedin’s future. Studies show that as sea-level rise continues, the groundwater table will rise as well, reducing the soil’s ability to absorb rainfall and increasing the likelihood of both surface flooding and flooding from below. These groundwater related issues are predicted to become the dominant challenge over the next few decades. Creating new wetlands, open spaces, and engineered flood storage areas is one of the few ways to reduce this risk. This requires land, which the acquisition programme can provide gradually over time.

Alongside managed retreat, the councils have published a list of 16 possible adaptation approaches, ranging from drainage upgrades to ground strengthening and floodable parks. A final combined strategy is expected to be shaped with community input by 2026. One useful short-term option is to lower sports fields or playgrounds to act as temporary water storage basins during heavy rain. This reduces pressure on homes and businesses and is relatively inexpensive. However, this solution alone is limited by the small amount of recreational land available and cannot provide long-term protection as groundwater continues to rise.

Another alternative is reactive relocation, where people move only after a major disaster. While this protects residents during emergencies, it is highly disruptive and does not prevent repeated flooding. The 2015 event showed how stressful and damaging this can be. Relying on a response-only system would leave residents vulnerable whenever extreme rainfall occurs.

When comparing all options, planned managed retreat is the only approach that addresses long term risk, economic sustainability, and community wellbeing at the same time. It allows the council to gradually reshape the landscape for climate resilience, provides certainty to homeowners over decades rather than months, and

ensures that protective infrastructure can be built before severe flooding becomes unmanageable. Lowering parks or upgrading drains may help in the short term, and reactive relocation can save lives after a disaster, but neither creates the long-term resilience that South Dunedin needs. Managed retreat, combined with continued investment in stormwater improvements (such as the \$29 million drainage upgrades already planned), offers a balanced, future-proof path for the suburb.