

Follow-up of Protecting Victoria's Coastal Assets

August 2022

Independent assurance report to Parliament
2022–23:3

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Follow-up of Protecting Victoria's Coastal Assets

Independent assurance report to Parliament

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The Hon Nazih Elasmr MLC
President
Legislative Council
Parliament House
Melbourne

The Hon Colin Brooks MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of the *Audit Act 1994*, I transmit my report *Follow-up of Protecting Victoria's Coastal Assets*.

Yours faithfully



Andrew Greaves
Auditor-General
31 August 2022

The Victorian Auditor-General's Office acknowledges the Wurundjeri Woi Wurrung People as the traditional custodians of the land on which our office is located. We pay our respects to their Elders past and present.

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Review snapshot

Has the Department of Environment, Land, Water and Planning (DELWP) effectively responded to the recommendations from our 2018 *Protecting Victoria's Coastal Assets* audit?

Why this review is important

DELWP has oversight of over 1,500 coastal protection assets (CPAs), valued at approximately \$1.13 billion in total.

This infrastructure helps protect Victoria's coastline from hazards including inundation and erosion.

DELWP oversees 54 organisations that look after these assets as delegated coastal managers.

Our 2018 audit found weakness in DELWP's management of CPAs and oversight of coastal managers.

With climate change increasing the frequency and severity of erosion and inundation, it is timely to review DELWP's progress in addressing our 2018 audit recommendations.

Who and what we examined

We looked at DELWP's progress in implementing our 2018 *Protecting Victoria's Coastal Assets* audit recommendations.

What we concluded

Based on the evidence we obtained, nothing has come to our attention that DELWP has not addressed our recommendations for collection and management of CPA data and coastal hazard and risk assessment. It has also improved its asset management practices.

While DELWP has made progress, it is yet to complete addressing our recommendations relating to:

- oversight and support for coastal managers
- developing a sustainable funding model.

Key facts



1,572

CPAs identified in the 2021 Condition Inspections project



\$1.13b

estimated value



3

annual AMAF* assessments completed since 2018



54

coastal managers



34%

of coastal assets are in poor or very poor condition

Note: *Asset Management Accountability Framework.

Source: VAGO, based on DELWP data.

What we found

We consulted with the Department of Environment, Land, Water and Planning (DELWP) and considered its views in reaching our conclusions. DELWP's full response is in Appendix A.

Victoria's coastal protection assets

Victoria's coastline provides significant economic, social and environmental benefits to the community.

Coastal protection assets (CPAs) help to manage a range of threats and hazards along the state's coastline. Figure A shows some of the most common CPAs—seawalls, groynes, revetments and breakwaters.

Figure A: **Typical seawalls, groynes, revetments and breakwaters**



Source: DELWP's Visual inspection guidelines for coastal protection structures on Crown land (2021).

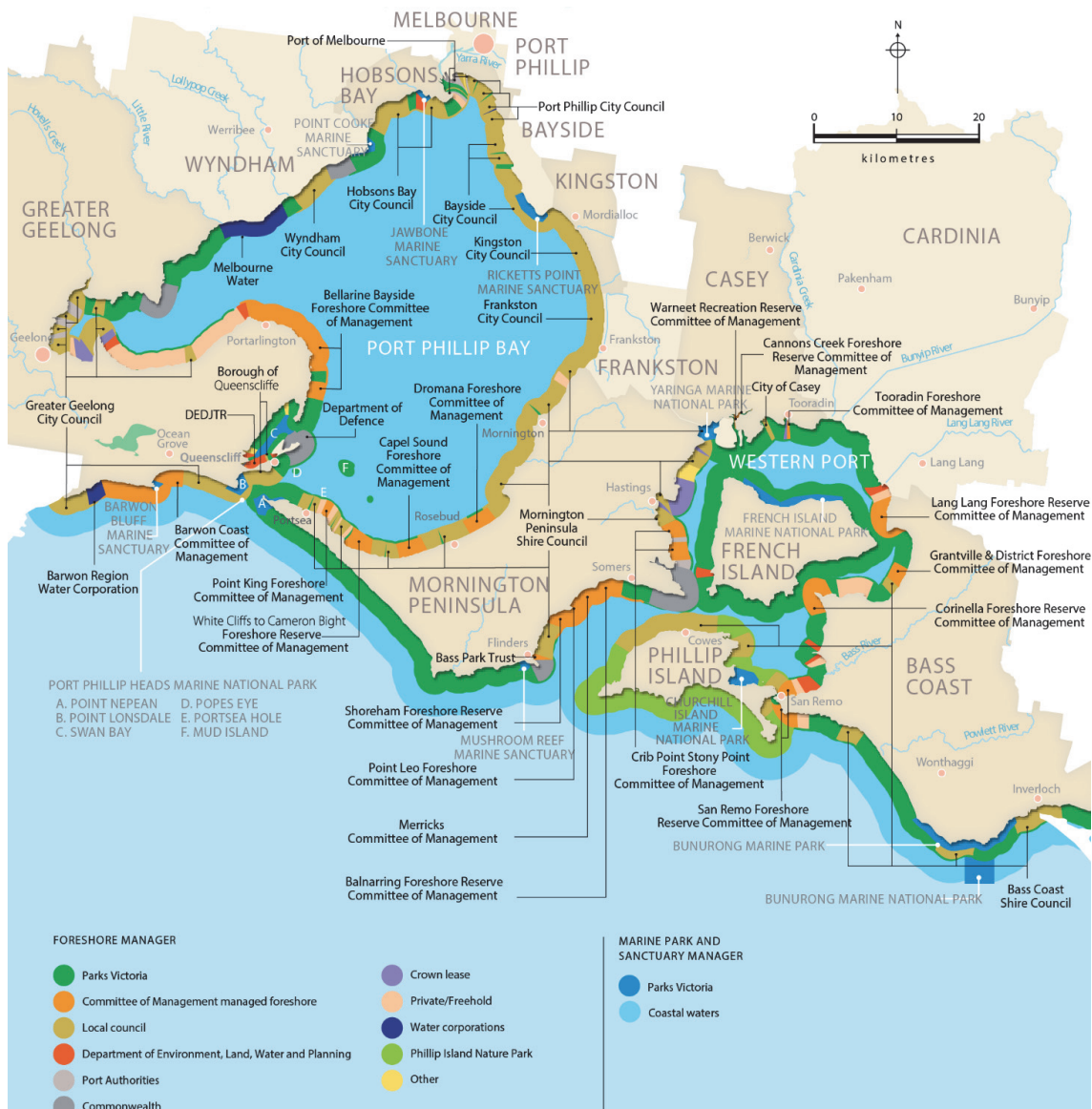
Victoria's CPAs are increasingly vulnerable to coastal hazards including inundation and erosion, as climate change makes these events more frequent and intense.

Managing coastal protection assets

DELWP oversees the effective management and protection of public coastal land and its assets. It is also responsible for developing statewide policy for coastal planning and management, and guiding its implementation. It also appoints coastal managers and oversees how they perform. These include Parks Victoria, local councils and Committees of Management (CoMs).

There are 54 known entities responsible for managing and protecting Victoria's CPAs. Along some areas of the coast, multiple coastal managers form a patchwork of relatively small areas of responsibility. Figure B shows the coastal management arrangement for the Port Phillip Bay and Western Port coastline.

Figure B: **Management arrangement along Port Phillip Bay and Western Port coastline**



Note: Not all land managers are shown; DEDJTR is the former Department of Economic Development, Jobs, Transport and Resources.

Source: DELWP, *Central regional coastal plan 2015–2020* (2015).

Our 2018 audit

Our 2018 *Protecting Victoria's Coastal Assets* (our 2018 audit) concluded that the agencies responsible for Victoria's CPAs were not adequately managing them or protecting them from current and future coastal hazards.

It called for more statewide oversight of CPAs and the risks they face, and more support for coastal managers in the form of asset management skills, and climate change adaptation guidance and resourcing.

DELWP's progress in addressing our 2018 audit recommendations

Figure C outlines DELWP's own assessment and our assessment of progress in addressing the recommendations of our 2018 audit.

Figure C: **Assessment of DELWP's progress on our 2018 recommendations**

Recommended area for improvement	DELWP assessment	VAGO assessment	Details of VAGO assessment
1. Coastal protection asset data	Complete	Complete	<ul style="list-style-type: none">DELWP has improved its collection of asset data, including the number, location, value and condition of assets.DELWP has identified high-risk assets, supported by asset condition assessments.
2. Oversight and support for coastal managers	In progress	In progress	<ul style="list-style-type: none">The new Marine and Coastal Policy 2020 and Marine and Coastal Strategy 2022 are strong foundations for marine and coastal management.DELWP has introduced various initiatives to engage coastal managers.There is no clear mechanism to monitor coastal managers' performance.Regional DELWP staff still need more resourcing to ensure they can give CPAs more attention, including the delegated coastal management of CPAs.
3. Sustainable funding models	Complete	In progress	<ul style="list-style-type: none">DELWP has estimated like-for-like replacement costs for its portfolio of assets.DELWP modelled costs of managing and maintaining CPAs from 2021–41.CPA costing interventions are in early development. With many assets being in poor condition, fix-on-fail may be still occurring while DELWP addresses a backlog of asset maintenance.DELWP is yet to complete its risk treatment planning project. This will allow it to share CPA and condition data with coastal managers.
4. Asset management practices	Complete	Complete	<ul style="list-style-type: none">DELWP has participated in annual Asset Management Accountability Framework (AMAF) assessments (2020, 2021, 2022).DELWP developed its Asset Class Management Plan to address AMAF gaps.The 2022 AMAF assessment showed no 'non-compliance' findings (18 compliance findings, 18 partial compliance findings).

Recommended area for improvement	DELWP assessment	VAGO assessment	Details of VAGO assessment
			<ul style="list-style-type: none"> CPAs were assessed as materially compliant with the AMAF each year from 2020 to 2022. The 2022 AMAF assessment found DELWP has: <ul style="list-style-type: none"> improved its provision of asset management provided updated guidance to CoMs implemented an approved CPA governance model.
5. Coastal hazard and risk assessment	Complete	Complete	<ul style="list-style-type: none"> Collection of hazard data has improved. DELWP has updated its statewide coastal hazard assessment. DELWP has made coastal hazard data available to coastal managers.

Source: VAGO, from DELWP documents.

We found nothing in the documentation we reviewed that leads us to believe that DELWP has not addressed our 2018 audit recommendations for:

- collecting and maintaining data on CPAs
- better understanding coastal hazards and risks
- asset management practices.

However, we found that DELWP needs to do further work to address our recommendations relating to:

- oversight of coastal managers
- developing a sustainable funding model.

Improved collection and management of CPA data

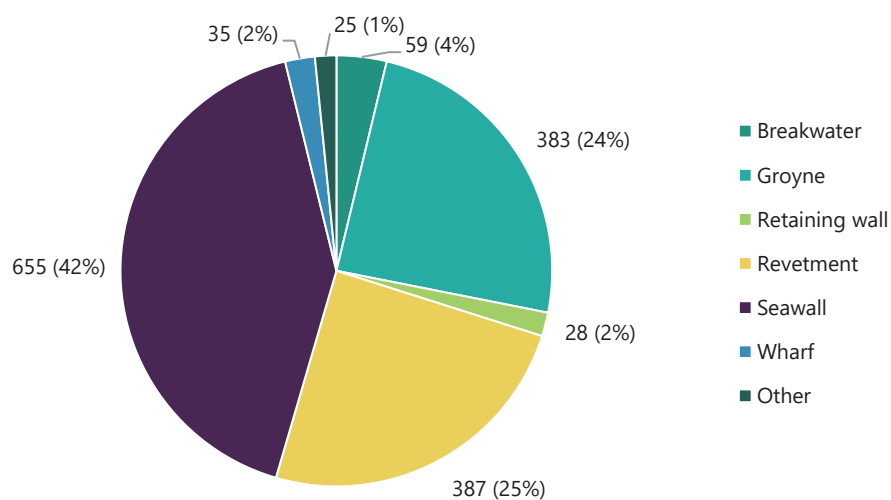
What DELWP has done to address our recommendation

Developing a CPA inventory

DELWP has made significant progress addressing our recommendation to improve the way it collects CPA data.

DELWP's asset portfolio includes assets on land managed by DELWP and voluntary CoMs. In 2021, DELWP conducted an inventory of the CPAs across Victoria. Figure D shows the different types of the 1,572 CPAs that DELWP surveyed as part of this project.

Figure D: **Number, proportion and type of CPAs inspected (2021)**



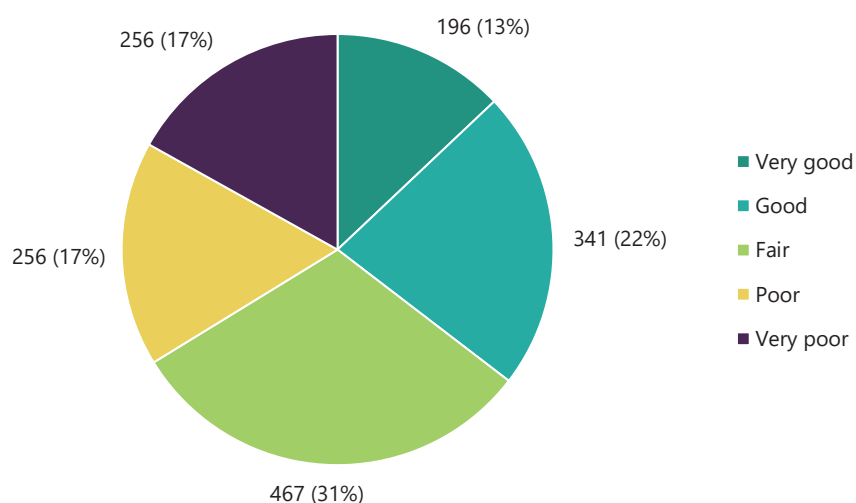
Note: Percentages are rounded.

Source: Coastal protection asset condition data collection, summary report, DELWP.

Understanding CPA condition

As part of the 2021 inventory, DELWP also rated the condition of 1,516 CPAs, as shown in Figure E.

Figure E: **Asset condition assessment results (2021)**



Note: DELWP told us that it gave a condition grade to only 1,516 of 1,572 inspected assets because some assets were partially buried and could not be graded; percentages are rounded.

Source: Coastal protection asset condition data collection, summary report, DELWP.

DELWP collected detailed information about the assets, including their heights, lengths, primary materials and conditions. It then compiled the data in its Coastal Asset Management System (CAMS).

Inspectors collected more comprehensive condition data on CPAs in 'poor' or 'very poor' condition to better understand the work needed to fix them.

Improved oversight of coastal managers

In 2018 we found DELWP had limited oversight of coastal managers. This made it harder for DELWP to integrate its planning with coastal managers' and develop risk-based approaches to managing CPAs.

To address governance and oversight issues, we recommended that DELWP:

- adequately resource its oversight role
- clarify coastal asset management roles and responsibilities, including the performance measures it will hold coastal managers accountable for.

What DELWP has done to address our recommendation

DELWP has completed its Marine and Coastal Policy 2020 (the Policy) and Marine and Coastal Strategy 2022 (the Strategy). These address our recommendation in our 2018 audit and establish strong foundations for the state's marine and coastal management.

The Policy and Strategy have clarified DELWP's and coastal managers' roles and responsibilities for managing coastal assets. They also offer some principles to support the oversight of coastal asset managers.

However, while the Policy and Strategy lay the foundations for better statewide oversight of coastal asset managers, DELWP is yet to establish monitoring and evaluation processes to oversee and support coastal managers' performance.

Areas for improvement

Progress in overseeing managers' performance

According to DELWP, the Policy and the Strategy provide mechanisms to guide integrated planning with coastal managers and allow DELWP to monitor, evaluate and report on their performance.

The Policy guides coastal managers to plan and manage marine and coastal areas in accordance with the guiding principles and objectives of the *Marine and Coastal Act 2018* (the Act). It provides direction to coastal managers on how to integrate marine and coastal planning and management by using planning tools such as coastal and marine management plans (CMMPs) and other mechanisms outlined in the Act.

However, most small-to-medium-sized coastal managers do not have CMMPs because the Act does not require it. This means DELWP is yet to establish a performance monitoring and evaluation process for most coastal managers.

DELWP is also yet to identify key indicators and targets to monitor and evaluate coastal managers' performance.

Providing sufficient resources to regional staff

Good governance facilitates sound planning, effective decision-making, knowledge sharing and better prioritisation of resources along the coast.

For DELWP's oversight to be effective, it needs to actively engage and monitor a large number of coastal managers and other stakeholders across the state.

Regional staff are DELWP's key point of contact with coastal managers. DELWP can better oversee coastal managers by making sure these staff have the training and resources to engage with and support them.

Sustainable funding models

In 2018 we found that it was challenging for DELWP to meet the costs of ageing and deteriorating assets. CPAs can be expensive to maintain, replace and decommission. Coastal hazards and risks can increase these costs, such as when extreme weather damages or destroys assets.

Ineffective targeting of constrained funding was preventing effective asset protection and management.

We also found that instead of a risk-based approach that targeted limited resources to assets with the highest value and risk, agencies were reacting to assets as they failed. In our 2018 audit, we referred to this as a 'fix-on-fail' approach.

Our 2018 audit recommended that DELWP develop an understanding of the statewide costs of properly managing and maintaining significant CPAs. This would enable coastal managers to prioritise their constrained resources to best protect and maintain current CPAs.

What DELWP has done to address our recommendation

While funding challenges continue, DELWP has made progress in costing CPAs' values and maintenance requirements. In late 2021, DELWP estimated the total value of CPAs in Victoria at \$1.13 billion. The number and asset value of CPAs for which DELWP has direct responsibility is a lower figure of 495 assets, worth \$297.3 million.

DELWP has improved its understanding of costs by:

- assessing the quality and scope of its asset data, including condition assessments
- working with the Valuer-General's Office to confirm the data requirements to value all CPAs on coastal Crown land
- contracting a consultant to estimate like-for-like replacement costs for DELWP's portfolio of assets.

DELWP developed a 'desired funding model' for the services—including CPAs—covered by its Strategic Asset Management Plan 2021–2041 (SAMP). This 20-year funding model aims to 'enable assets to meet expected useful lives through sufficient capital and maintenance funding'.

The model accounts for capital upgrade and renewal, maintenance and operational costs, which total an estimated \$23.5 million per year for the entire Victorian portfolio, which DELWP oversees. This includes \$6.9 million per year for the assets DELWP is

directly responsible for under the *Standing Directions 2018 under the Financial Management Act 1994*.

Using risk data to prioritise asset funding

DELWP's SAMP acknowledges that pre-existing asset funding models '[do] not incorporate risk and climate change impacts due to limited data availability'.

Given the financial challenges of maintaining many assets in poor and very poor condition, DELWP has focused on collecting data to create risk treatment plans that will guide its funding decisions.

DELWP's commissioned report, *Coastal Protection Assets—Risk Assessments and Treatment Plans summary report*, was completed in May 2022. Building on DELWP's 2021 CPA condition assessments and valuations data, the report presented:

- risk assessments for assets in 'poor' or 'very poor' condition
- risk treatment plans for assets rated as 'a significant risk or worse'.

DELWP's risk assessment process complied with ISO31000 risk management standards, addressing a component of our 2018 recommendations.

DELWP is currently procuring services to use this report to inform a proposed capital works and maintenance program based on various funding scenarios. It also plans to update CAMS to include fields for risk assessment data to support more efficient and transparent decision-making.

Areas for improvement

Transitioning from 'fix-on-fail' to risk-based approaches

DELWP's 2021 Coastal Protection Assets—Service Framework acknowledged that its current planning approach to fix assets as they fail is 'short sighted' and 'is not the best use of constrained capital budgets'.

DELWP's 2022 Risk Assessment report and SAMP express an intention to move away from reactively repairing assets when they break. But with so many CPAs in poor condition, fix-on-fail may be still occurring while a backlog of asset maintenance is being addressed. However, DELWP advised that a June 2022 funding agreement had been informed by a risk-based maintenance approach.

Sharing CPA data as part of coastal managers' practice

DELWP still needs to strengthen coastal management practices by sharing CPA data with coastal managers.

DELWP told us it will share this condition data after it completes its risk treatment planning project. This is because it wants to give coastal managers information from expert engineers about the risks at each site and a treatment plan to mitigate these risks.

Developing better CPA management practices

In our 2018 audit we assessed DELWP's CPA management practices against key elements of Victoria's Asset Management Accountability Framework (AMAF) and found significant gaps.

What DELWP has done to address our recommendation

Since our 2018 audit, DELWP has participated in 3 annual AMAF assessments. These assessments show improvements since 2018.

Moreover, DELWP developed its 2020 building capability of land managers in asset management project to:

- align coastal management practices with the AMAF
- develop risk registers to comply with ISO31000.

Compliance with the AMAF

Three annual assessments since 2019–20 found CPAs to be materially compliant with the AMAF.

The 2021 AMAF assessment found that DELWP:

- had improved its CPA management practices
- had significantly improved its asset condition data
- was undergoing a 'maturation process'.

It gave DELWP's CPA management practices no 'non-compliant' ratings, though it assessed most areas as 'partially compliant'.

The 2022 AMAF assessment showed further improvement. It found that DELWP had:

- improved its provision of asset management
- provided updated guidance to CoMs
- implemented an approved CPA governance model.

It gave DELWP 18 compliant and 18 partial compliance findings.

Better understanding coastal hazards and risks

Our 2018 audit noted gaps in DELWP's understanding of coastal hazards and risks, including:

- inundation and erosion because of climate change
- rising sea levels
- increasingly extreme weather events.

What DELWP has done to address our recommendation

Since 2018 DELWP has made considerable progress in monitoring Victorian coasts and assessing the hazards they face. This work has improved the quality of DELWP's coastal hazard data and helped fill knowledge gaps about the future risks of climate change on CPAs.

Progress in coastal monitoring

Through its Victorian Coastal Monitoring Program (VCMP) and Wave Climate projects, DELWP has collected large-scale data and analysed sediment and coastal waters. This has improved its forecasting of sea-level rise and extreme coastal wave movement.

These outputs address our 2018 recommendations relating to the lack of recorded data about coastal hazards and the risks they pose to CPAs.

Progress in assessing coastal hazards

Prior to our 2018 audit, DELWP had completed 4 pilot coastal hazard assessments for Port Fairy, Bellarine, Western Port and Gippsland (between 2013 and 2017), producing valuable coastal hazard data.

Since 2018, DELWP has used its hazard assessment output data and data from the VCMP and Wave Climate project to update the statewide coastal hazard assessment of erosion and inundation in future climate change scenarios.

DELWP is also addressing our 2018 recommendations through several other significant projects.

For example, it is using high-resolution aerial images from the VCMP's citizen science programs to model future change in shoreline position and beach sediment volume.

DELWP is also leading the Port Phillip Bay coastal hazard assessment and modelling future climate scenarios for land around Port Phillip Bay that flooding, shoreline, and groundwater changes is likely to affect.

Guidance in responding to climate hazards

Our 2018 audit found coastal managers lacked guidance in future planning for climate change adaptation. We recommended that DELWP give coastal managers more support to respond to climate change risks.

We found that DELWP has since developed tools and online resources to support coastal manager's decision-making and planning relating to climate change.

DELWP has also revised policies and regulation to support planning authorities and coastal managers to:

- evaluate and mitigate coastal hazard risks from projected sea-level rise
- avoid or minimise exposing current and future CPAs to these risks.

In addition, DELWP organised 4 workshops in 2019–20 that aimed to improve coastal managers' understanding and build their capacity to respond to coastal risks and climate change.

APPENDIX A

Submissions and comments

We have consulted with DELWP, and we considered its views when reaching our review conclusions. As required by the *Audit Act 1994*, we gave a draft copy of this report to DELWP and asked for its submissions and comments.

Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Responses were received as follows:

DELWP	13
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Department of Environment,
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Victoria 8002 Australia
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Mr Andrew Greaves
Auditor-General
Victorian Auditor-General's Office
Level 31, 35 Collins Street
MELBOURNE VIC 3000

Ref: SEC015696



Dear Mr Greaves

PROPOSED PERFORMANCE AUDIT REPORT - FOLLOW UP OF PROTECTING VICTORIA'S COASTAL ASSETS

Thank you for your letter of 4 August 2022, providing the Department of Environment, Land, Water and Planning (DELWP) with the opportunity to comment on the proposed final report for the *Protecting Victoria's Coastal Assets* follow-up audit.

The protection of Victoria's coastal assets is a responsibility shared across a number of government agencies, including Parks Victoria, local councils and Committees of Management (CoMs), with over 54 entities responsible for managing coastal protection assets and a selection of these were involved in the original audit in 2018. DELWP's role is to oversee the management of more than 1,500 of these assets, and as the lead agency for developing statewide policy for coastal planning and management.

DELWP welcomes the Victorian Auditor-General's Office (VAGO) follow-up audit into the implementation of recommendations made in the review of *Protecting Victoria's Coastal Assets 2018*, and has been pleased to provide your office with evidence in support of the considerable progress made to implement and acquit all of the recommendations made.

Since the *Protecting Victoria's Coastal Assets 2018* audit, DELWP has greatly improved its understanding of coastal hazards in Victoria through monitoring, provided enhanced levels of support for coastal managers through the *Marine and Coastal Policy 2020*, and strengthened its implementation of asset management practices across the coastal protection asset portfolio informed by a statewide assessment of condition and risk.

I would like to clarify that while DELWP concurs with much of VAGO's commentary on progress made against the recommendations, it does not agree with VAGO's assessment of achievements made against Recommendation 3 which was rated as 'In Progress'.

DELWP believes it has satisfied the requirements of the recommendation as it has transitioned away from a 'fix-on-fail' approach to coastal asset management by developing a Strategic Asset Management Plan in 2022 to forecast investment and to identify priorities based on asset condition and risk. This has been integrated into DELWP's coastal asset planning processes, with multiple projects, including a study funded through an agreement with Warrnambool City Council, directly informed by this risk-based process. DELWP is also developing an engagement approach to share this condition and risk data with coastal managers before 30 June 2023, which will provide them with information from expert engineers about the risks at each site and a treatment plan to mitigate these risks.

I would also like to note that DELWP is well underway with implementing the agreed actions in response to Recommendation 2, which both DELWP and VAGO have assessed as 'In Progress'. The *Marine and Coastal Policy 2020* guides coastal managers to plan and manage marine and coastal

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areas, in accordance with the guiding principles and objectives of the Marine and Coastal Act 2018. It provides direction to coastal Crown land managers on how to integrate marine and coastal planning and management by using planning tools, such as Coastal and Marine Management Plans (CMMPs), enabling DELWP to evaluate how land managers implement their plans with consistency against the Policy. Notably, a priority activity (4.1) of the *Marine and Coastal Strategy 2022* is to support the preparation, review and implementation of CMMPs. Verification processes are currently underway to acquit this recommendation before December 2022, and in doing so close out all recommendations from the original 2018 audit.

If you would like more information about this matter, please call Colleen White, Regional Director Barwon South West, DELWP, on 0400 909 977 or email colleen.white@delwp.vic.gov.au.

Thank you again for your audit follow-up report.

Yours sincerely



John Bradley
Secretary

11 / 08 / 2022

APPENDIX B

Acronyms, abbreviations and glossary

Acronyms

AMAF	Asset Management Accountability Framework
CAMS	Coastal Asset Management System
CMMP	Coastal and Marine Management Plan
CoM	Committee of Management
CPA	coastal protection asset
DELWP	Department of Environment, Land, Water and Planning
SAMP	Strategic Asset Management Plan 2021–2041
VAGO	Victorian Auditor-General's Office
VCMP	Victorian Coastal Monitoring Program

Abbreviations

The Act	<i>Marine and Coastal Act 2018</i>
The Policy	Marine and Coastal Policy 2020
The Strategy	Marine and Coastal Strategy 2022

Glossary

Reasonable assurance	We achieve reasonable assurance by obtaining and verifying direct evidence from a variety of internal and external sources about an agency's performance. This enables us to express an opinion or draw a conclusion against an audit objective with a high level of assurance. We call these audit engagements. See our assurance services fact sheet for more information.
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Glossary

Limited assurance	We obtain less assurance when we rely primarily on an agency's representations and other evidence generated by that agency. However, we aim to have enough confidence in our conclusion for it to be meaningful. We call these types of engagements assurance reviews and typically express our opinions in negative terms. For example, that nothing has come to our attention to indicate there is a problem. See our assurance services fact sheet for more information.
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APPENDIX C

Scope of this review

Objective

To determine whether the actions taken by DELWP since our 2018 engagement, *Protecting Victoria's Coastal Assets*, have addressed our recommendations.

Who we reviewed

Its key responsibilities

DELWP

DELWP is responsible for the development of statewide policy and provision of guidance for coastal planning and management. DELWP also appoints coastal managers and oversees their performance in accordance with policy and guidance. DELWP and delegated land managers oversee the performance of coastal protection assets—including groynes, seawalls, rock revetments and beaches—ensuring both their community and amenity value and their effectiveness in protecting other coastal assets and infrastructure.

What we examined

We assessed whether DELWP, between 2018 and 2022, has effectively actioned the recommendations from our 2018 audit *Protecting Victoria's Coastal Assets*.

How we assessed performance

To form our conclusion against our objective we used the used the following line of inquiry and associated evaluation criteria:

Line of inquiry	Criteria
Has DELWP addressed the performance issues we identified in the 2018 report?	1. Has DELWP improved its knowledge of coastal protection assets in relation to number, location, condition and ownership?
	2. Has DELWP improved its understanding of coastal hazards and developed a framework that ensures risks to coastal protection assets are monitored and addressed?
	3. Has DELWP improved its oversight, governance and resourcing of coastal managers?

Our methods

As part of the review, we considered whether DELWP has:

- addressed performance issues relating to the recommendations
- taken timely action to address recommendations
- put plans in place to address incomplete recommendations
- monitored their actions for review and impact.

Our review procedures included asking DELWP to provide evidence and attestation to our questions about its:

- coastal protection assets data and management
- knowledge about coastal hazards and management of the risks they pose to coastal protection assets
- oversight, governance and resourcing of coastal managers.

We conducted our review in accordance with the *Audit Act 1994* and ASAE 3500 *Performance Engagements* to obtain limited assurance to provide a basis for our conclusion.

We complied with the independence and other relevant ethical requirements related to assurance engagements.

We also provided a copy of the report to the Department of Premier and Cabinet and the Department of Treasury and Finance.

Cost and time

The full cost of the review and preparation of this report was \$270,000. The duration of the review was 6 months from initiation to tabling.

APPENDIX D

Summary of DELWP's attestations on its progress in addressing our 2018 audit recommendations

Our 2018 audit *Protecting Victoria's Coastal Assets* audited several agencies, including DELWP, that represent coastal managers of different types and sizes.

We made 5 out of the 6 recommendations to DELWP.

DELWP accepted all 5 recommendations. Figure D1 outlines a summary of:

- our recommendations
- DELWP's latest updated actions, as provided in its yearly attestations about progress made against these recommendations.

FIGURE D1: **Summary of VAGO recommendations and DELWP's responses**

Recommendation 1

Improve its knowledge of coastal hazards and its oversight of coastal asset management across the state by:

- compiling and maintaining a statewide inventory of state, regional and locally significant coastal assets and their condition using consistent ratings
- supporting and overseeing committees of management to align their asset management practices with key elements of Victoria's Asset Management Accountability Framework and their risk management practices with AS/NZS ISO 31000:2009 Risk management—Principles and guidelines
- addressing gaps in coastal hazard data and knowledge of risks to coastal assets, and communicating this information and any tools developed to coastal managers.

DELWP's progress and response

Complete (2021)

DELWP has completed the development of its coastal assets data management system (CAMS). The scoping phase of the project (preferred IT, attributes and functionality) was completed in March 2019 and became fully operational in March 2021. Field engineering inspections for all individual coastal protection structures are underway and approximately 60% complete (823 inspection). The inspections assess the integrity of the structures and their suitability to mitigate against current and future inundation projections. To date, about 30% of the structures have been found to be in poor to very poor condition. Each structure is also valued to provide information to Valuer-General Victoria.

Recommendation 1

DELWP has also developed a risk-based decision-making framework that provides a risk rating for each structure to inform priorities for maintenance or redesign investment.

DELWP collaborated with the Victorian Managed Insurance Authority and delivered a Pilot workshop in Coastal Asset and Risk Management for developing a) Asset Inventory practices aligning with the Victorian Asset Management Accountability Framework (VAMAF) and, b) Developed risk registers complying to DELWP's Best Practice Guidelines and ISO31000. The outcomes of the Pilot workshop informed a series of Asset Management capability building workshops that were delivered statewide for Committees of Management. The workshops focussed on the VAMAF, the new Marine and Coastal Policy, highlighted examples of foreshore management including climate change adaptation, and cultural heritage responsibilities for asset management.

Recommendation 2

Strengthen oversight of Victoria's coastal managers, by extending and adequately resourcing its oversight role to cover the management of all public coastal areas and:

- clarifying the coastal asset management roles and responsibilities of the Department of Environment, Land, Water and Planning, and committees of management under the *Crown Land (Reserves) Act 1978*, the functions and the performance measures they will be held accountable for, and holding them accountable
- providing guidance to support coastal managers' decisions about where and when it is appropriate to use different climate change response options—protect, adapt, relocate or decide not to renew assets—and additional support on coastal hazard and risk assessment to those managers with limited capability and/or resources.

DELWP's progress and response

In progress (2022 update)

The Marine and Coastal Policy now guides ongoing planning, management and decision making by DELWP and delegated land managers. Coastal and Marine Management Plans, prepared by delegated land managers, are required to be consistent with the Policy and these plans (prepared under the *Marine and Coastal Act 2018*) including actions to support and build capacity of asset managers in understanding their roles and responsibilities for coastal asset management.

Amendment VC171 to the Victoria Planning Provisions was gazetted in September 2021. The Amendment changes the Victoria Planning Provisions and all planning schemes to implement the Marine and Coastal Policy (DELWP 2020), support coastal hazard and risk planning and sea level rise adaptation and update policy references. DELWP also developed sector-based Adaptation Actions Plans, including the Built Environment Adaptation Action Plan, which will support whole-of-government responses to climate change. Community consultation on the plan was undertaken during 2021, tabled in Parliament in February 2022 and publicly released.

Work on this recommendation has all been completed, internal (to DELWP) verification processes are currently underway to close out this recommendation.

In progress (2021)

A statewide Marine and Coastal Policy was released in March 2020 and covers the management of all public coastal areas. It provides clarity on the roles and responsibilities for coastal asset management. It also provides guidance to support coastal managers' decisions about climate change response options. A Marine and Coastal Strategy is being developed and will include actions to support implementation of the policy, including actions to support and build capacity of asset managers in understanding their roles and responsibilities for coastal asset management. Performance measures will be linked to reporting on progress on implementing the Strategy.

The review of the governance arrangements for the Great Ocean Road coast and parks has been completed with the public release of the:

- Community View Report
- Great Ocean Road Taskforce Co-Chair Final Report with 26 recommendations on reforms to the governance arrangements
- Great Ocean Road Action Plan—the Victorian Government response outlining delivery of all 26 recommendations through 18 actions. Subsequently the *Great Ocean Road and Environs Protection Act 2020* and the Great Ocean Road Coast and Parks Authority have been established.

Recommendation 2

DELWP (Planning) has prepared Amendment VC171 to the Victoria Planning Provisions (pending Minister for Planning approval and gazettal). The amendment will implement the Victorian Government's new Marine and Coastal Policy 2020 and update coastal climate change-related policy and overlay provisions to further clarify state policy on planning for coastal climate change. DELWP is also developing the Built Environment Adaptation Action Plan, which will support whole of government responses to climate change. Community consultation on the plan will be undertaken in mid-2021.

Recommendation 3

Develop a sustainable funding model to guide the effective resourcing of coastal managers, including:

- developing a coast-wide understanding of the cost and skills required to manage and maintain significant coastal assets to the levels of service needed to support their function
- appointing the most appropriate skilled and resourced coastal manager under the *Crown Land (Reserves) Act 1978*
- implementing the coastal accounting framework once developed and requiring coastal committees of management to adhere to it.

DELWP's progress and response

Complete (2022 updates)

The Future Foreshores project included the development of future management options. A feasibility assessment of the preferred options was undertaken in 2021, concluding with a recommended approach for building an effective and sustainable management model for the pilot regions' Crown foreshore reserves. The lessons from this pilot are transferable to future assessments of the effectiveness and sustainability of committees of management arrangements at other Crown foreshore reserves and more broadly for reserves set aside for other purposes.

In progress (2021)

A coast-wide understanding of the cost associated with the management and planning of coastal assets and land was completed through the Financing the Coast Project delivered in August 2019. The Marine and Coastal Policy 2020 sets out a process for identifying funding needs and future demands for management of marine and coastal Crown land. The Policy also includes guidance on co-investment arrangements, accounting and reporting, and fees and charges for activities on marine and coastal Crown land. The Marine and Coastal Strategy (currently in development) will provide for actions to progress sustainable funding models to guide the effective resourcing of coastal managers.

The Future Foreshores project has completed a review of Committees of Management within the 3 pilot coastal compartments on the Mornington Peninsula and City of Casey, including their accountabilities and responsibilities alongside their capacity, skills and resourcing. The project has completed current state analyses and developed future management options. A stakeholder reference group further examined management options and governance arrangements on the scale of a coastal compartment and took into account the new Marine and Coastal Policy 2020 and Committee of Management Outcomes Framework. Delays in engagement occurred due to COVID-19 restrictions and online workshops were held between October and December 2020.

Recommendation 4

Address the gaps in their asset management practices against Victoria's Asset Management Accountability Framework requirements and guidance and strategically target their asset funding, including, where relevant:

- identifying all the assets they are responsible for
- using information on asset risks from coastal inundation and erosion hazards to help target their asset management priorities and funding decisions, in conjunction with other defined prioritisation criteria.

DELWP's progress and response

Complete (2019)

Action 1 DELWP now has a coastal asset database that supports monitoring and maintenance scheduling of coastal protection structures. An ongoing project officer has been appointed to manage the curation of data, coordinate staff training needs and manage IT contract and support needs.

Recommendation 4

Action 2: This action has led to the production of new and consistent guidance materials for the management of assets, and a transparent risk-based approach to investment in asset management.

Action 3: This action has provided new evidence-based information to coastal managers of erosion hazards and the physical processes driving those hazards. This now facilitates more focussed decision-making for coastal asset investment. Greater focus is now on areas subjected to the highest risk to coastal hazards.

Recommendation 5

Assess the risks that coastal inundation and erosion hazards pose to coastal assets, using robust risk assessment practices that consistently apply AS/NZS ISO 31000:2009, including:

- documenting the considerations, assessments, analysis and decisions that their assessments involve
- using available information to regularly review risks and monitor changes in risk ratings over time
- introducing triggers and monitoring information into their asset management and/or climate change activities as appropriate, to identify when to implement adaptation measures or revise their risk treatment approaches.

DELWP's progress and response

Complete (2022 updates)

A statewide coastal hazard assessment project was completed in 2017 to enable assessment of erosion and inundation risk to the Victorian coast. The reporting includes a risk framework for coastal assessment. A new Coastal Protection Asset Database was also established in 2018 and implemented in 2019.

In 2017, the Victorian Coastal Monitoring Program was implemented with focus on monitoring coastal locations of greatest immediate risk to erosion. A comprehensive evaluation report of the first 5 years of the program was completed in August 2021. This report details how DELWP now monitors change and applies to coastal infrastructure and hazard assessment projects across Victoria.

In addition, support to coastal land managers has been strengthened through data and information products guided by the Marine and Coastal Policy 2020 and the findings from the Victorian Coastal Monitoring Program, which have been shared and made accessible.

An independent Risk Assessment Process report, prepared in July 2021, outlines the process and methodology for DELWP to undertake a risk assessment of Coastal Protection Structures (CPS). Guidance is provided for a) conducting risk assessment process that is ISO-compliant and consistent with DELWP's Risk Management Guidelines, and b) developing treatment plan, including evaluation of options, for the CPS. Using this process DELWP can identify which CPS are highest priority for future attention and management.

Use of the ISO risk standard ensures that the process for prioritisation is robust and takes account of all relevant matters for consideration. The ISO risk standard also provides a mechanism for identifying relevant treatment measures to address risks that are considered unacceptable.

A DELWP CPS Risk Assessment Tool has also been developed and is being used to assess risk relating to CPS's. The tool provides a link to Coastal Inspection guidelines and provides detailed instructions to users on how to complete a risk assessment.

In progress (2021)

The Marine and Coastal Policy 2020 is complete. It provides guidance and support to coastal land managers on assessing climate change risks from coastal inundation and erosion hazards across their coastal asset portfolios. This includes guidance for climate change adaptation outlined in Chapter 6 of the policy and clarity on roles and responsibilities outlined in Chapter 13.

DELWP has completed work to build capacity and expertise in DELWP and partner agencies to provide ongoing advisory services, capacity building and expertise (under the Marine and Coastal Act 2018) to coastal land managers on coastal erosion and flooding hazards. This included:

1. Implementing the Victorian Coastal Monitoring Program (VCMP) with findings being shared with coastal land managers through provision of data, modelled outputs and technical advice. The program is also communicated to stakeholders through the VCMP Story Map website; and
2. Developing data tools and systems, including the CoastKit knowledge portal that provide information on coastal hazard drivers, shoreline morpho dynamics and erosion dynamics at 50 m intervals along Victoria's coastline.

Recommendation 5

DELWP will continue to progress the statewide process to consistently apply AS/NZS ISO 31000:2009 and better document the considerations, assessments, analysis and decisions as part of risk assessment processes in the management of coastal assets by 30 November 2022.

Source: VAGO, based on DELWP's attestations.

Auditor-General's reports tabled during 2022–23

Report title

Results of 2021 Audits: Technical and Further Education Institutes (2022–23: 1)	July 2022
Results of 2021 Audits: Universities (2022–23: 1)	July 2022

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