

Understanding Victoria's Contaminated Land

March 2023

Independent assurance report to Parliament
2022–23:16

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Understanding Victoria's Contaminated Land

Independent assurance report to Parliament

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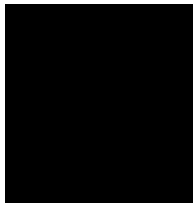
The Hon Shaun Leane MLC
President
Legislative Council
Parliament House
Melbourne

The Hon Maree Edwards MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of the *Audit Act 1994*, I transmit my report *Understanding Victoria's Contaminated Land*.

Yours faithfully



Andrew Greaves
Auditor-General
23 March 2023

The Victorian Auditor-General's Office (VAGO) acknowledges the Traditional Custodians of the lands and waters throughout Victoria. We pay our respects to Aboriginal and Torres Strait Islander communities, their continuing culture, and to Elders past and present.

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Review snapshot

What we examined

We assessed if the Department of Energy, Environment and Climate Action (DEECA) (formerly the Department of Environment, Land, Water and Planning) and the Environment Protection Authority Victoria's (EPA) publicly available contaminated land data is accurate, current and fit for purpose.

Why this is important

Contaminated land can significantly affect our health and environment.

The government and community need to know where it is so they can:

- plan how to use and develop land
- manage and address contamination risks.

Following a 2016 inquiry, the government committed to developing a public database of potentially contaminated sites.

In response, DEECA launched Victoria Unearthed (VU) in partnership with EPA in 2019.

What we concluded

VU fulfils the inquiry's recommendation to create a statewide database of potentially contaminated sites.

However, VU is not meeting its full potential to provide accurate, current and fit-for-purpose data about contaminated land.

This is because DEECA and EPA have not:

- evaluated if it continues to meet users' needs
- kept all VU datasets complete and up to date.

What we recommended

We made 2 recommendations to DEECA and 1 to EPA.

They relate to evaluating VU and sharing information to improve its user experience.

[→ Full recommendations](#)

Key facts

Victoria Unearthed



is Victoria's first statewide database for contaminated land data



has 7 datasets on potentially contaminated sites across Victoria



has data from different sources, including EPA

Source: VAGO.

Our recommendations

We made 2 recommendations to the Department of Energy, Environment and Climate Action and 1 recommendation to the Environment Protection Authority Victoria about evaluating Victoria Unearthed and communicating about its data quality. The relevant agencies have accepted these recommendations.

Key issues and corresponding recommendations			Agency response(s)
Issue: Evaluating Victoria Unearthed			
Department of Energy, Environment and Climate Action	1	Evaluates Victoria Unearthed to: <ul style="list-style-type: none">• assess if it is fit for purpose and meets users' needs• identify areas for improvement (see Section 2).	Accepted
Issue: Communicating Victoria Unearthed's data quality			
Department of Energy, Environment and Climate Action	2	Makes data quality statements on each Victoria Unearthed dataset available to users (see Section 3).	Accepted
Environment Protection Authority Victoria	3	Works with the Department of Energy, Environment and Climate Action to make data quality statements on each Victoria Unearthed dataset available to users (see Section 3).	Accepted

What we found

This section summarises our key findings. The chapters detail our complete findings, including supporting evidence.

When reaching our conclusions, we consulted with the audited agencies and considered their views. The agencies' full responses are in Appendix A.

From 1 January 2023, the former Department of Environment, Land, Water and Planning changed to the Department of Energy, Environment and Climate Action (DEECA). We refer to DEECA throughout this report for clarity and simplicity.

Review context The government and community need to know where contaminated land is so they can make informed decisions about it. For example, about developing land for sensitive uses like building new schools.

The 2016 *Independent Inquiry into the Environment Protection Authority* (the Inquiry) found:

- the Environment Protection Authority Victoria (EPA) had no comprehensive information on contaminated land in Victoria
- existing data on past land use was ad hoc and not publicly accessible
- businesses and the community needed better information on potential contamination risks to inform their decisions.

The Inquiry recommended the government 'develop a comprehensive statewide database of sites that pose a high risk to the community because of their past use'. In response, the government committed to developing a public database providing consistent and easily accessible, state-wide site history information to assist with the identification of potentially contaminated sites.

DEECA and EPA developed Victoria Unearthed (VU) to fulfil this commitment. They launched it in March 2019.

In this review we assessed:

- how DEECA and EPA make sure VU is fit for its intended purpose
- if VU's data complies with the Victorian Government's *Data Quality Information Management Framework Standard* (the Standard).

Our key findings

1	VU has useful data but DEECA and EPA have not evaluated it to make sure it meets its intended purpose. They have also not fully addressed gaps to make sure its data is up to date.
2	DEECA and EPA comply with the Standard's minimum requirements, but they have not shared all the relevant information about VU's data quality with users.

Key finding 1: VU has useful data but DEECA and EPA have not evaluated it and fully addressed data gaps

What VU does VU fulfils the Inquiry's recommendation to make a statewide database of potentially contaminated sites.

It is also the first Victorian platform to combine relevant datasets and present them on a map. This makes it easier for users to:

- navigate complex data
 - determine if a site is potentially contaminated.
-

Evaluating VU DEECA and EPA designed VU based on a comprehensive understanding of potential users' needs. DEECA has continued to collect feedback from users about VU and is responsive to users' questions.

But it has not formally evaluated if the platform achieves its intended purpose.

As a result, DEECA does not know if VU is reaching its full potential to be a comprehensive, reliable and user-friendly source of information.

Keeping data up to date Since July 2021 DEECA and EPA have not kept all of VU's datasets up to date.

This is largely because EPA changed its data management system in 2021 to reflect its new legislation. DEECA also changed its data system.

The 2 systems could not easily send and receive data to upload to VU.

Project governance One reason DEECA and EPA have been slow to address VU's data gaps is because their formal governance arrangements wound down shortly after they launched it.

VU's project steering group marked the project as complete in 2019. This:

- reduced DEECA's and EPA's oversight of VU
- reduced communication between DEECA and EPA about VU.

Additionally, DEECA and EPA re-prioritised funding for other reform projects that came out of the Inquiry.

Key finding 2: DEECA and EPA comply with the Standard but have not shared all information about VU's data quality with users

Compliance with the Standard DEECA and EPA comply with the Standard's minimum requirements because they have:

- assessed VU's critical datasets against the data quality dimensions, such as accuracy and consistency, to make sure they are fit for purpose
 - a data quality statement for each dataset that outlines known quality issues
 - a data quality management plan for each dataset to address quality issues
 - appointed accountable officers to manage data quality.
-

**Making data
quality
statements
available to
users**

VU's website has important information about its data quality.

But DEECA and EPA have not shared their data quality statements with VU users. This means users cannot access the comprehensive information in these statements to make fully informed decisions about using VU's data.

There is other information about VU's data quality at Data.Vic, which is a public portal for government data. But DEECA and EPA do not give users clear instructions on how to access this.

1.

Review context

The government and community need to know where contaminated land is. The Inquiry recommended the government make a comprehensive public database to help people plan how to use land and manage contamination risks.

Contaminated land and its impact

How land becomes contaminated

Land can become contaminated when liquid or solid waste enters the soil or groundwater. This can happen if a site was previously used for industrial, commercial or intensive agricultural activities, especially in the past when there was little understanding about the impact of pollution. Land can also become contaminated if a person or business dumps hazardous waste or uses it to unsafely store harmful products.

Impact on health and the environment

Not managing or cleaning up a contaminated site can pose significant health and environmental risks. It can harm people, animals and plants that come in contact with it. If contamination is not managed, it can also spread beyond a site's boundaries. For example, contaminated soil can pollute local waterways.

Protecting people and the environment

Environment Protection Authority Victoria

EPA is an independent statutory authority. It operates under the *Environment Protection Act 2017*. The Act outlines EPA's obligation to protect human health and the environment from pollution and waste. The *Environment Protection Act 1970* governed EPA before the new Act came in on 1 July 2021.

Assessing and zoning land

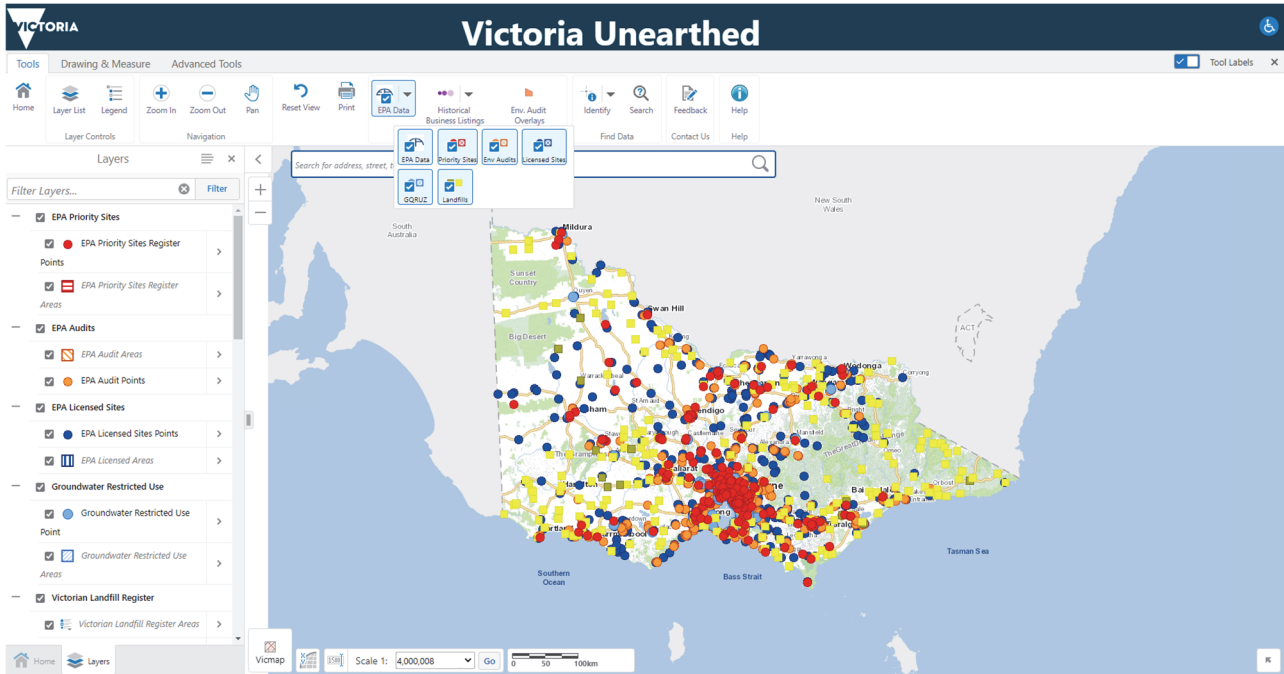
The Victorian planning system requires an environmental audit to confirm whether potentially contaminated land is suitable for a sensitive use, such as for a school or playground. Environmental audits are used (most often by a local council) to determine how land can be used. Environmental audits must consider a site's historical use. The information in VU can assist with this.

Contaminated land data in Victoria

Victoria Unearthed

DEECA launched VU in March 2019. EPA provides most of VU's data. DEECA publishes the data and manages VU's website. VU uses spatial data to display information as an interactive map, which Figure 1 shows.

Figure 1: VU's interactive map



Note: This image shows a VU map with all EPA layers turned on.
Source: DEECA.

VU's datasets

VU has 7 datasets, which Figure 2 lists.

These datasets have information on potentially contaminated sites across Victoria.

VU also has other Victorian Government information about planning and property. For example, planning zones and overlays.

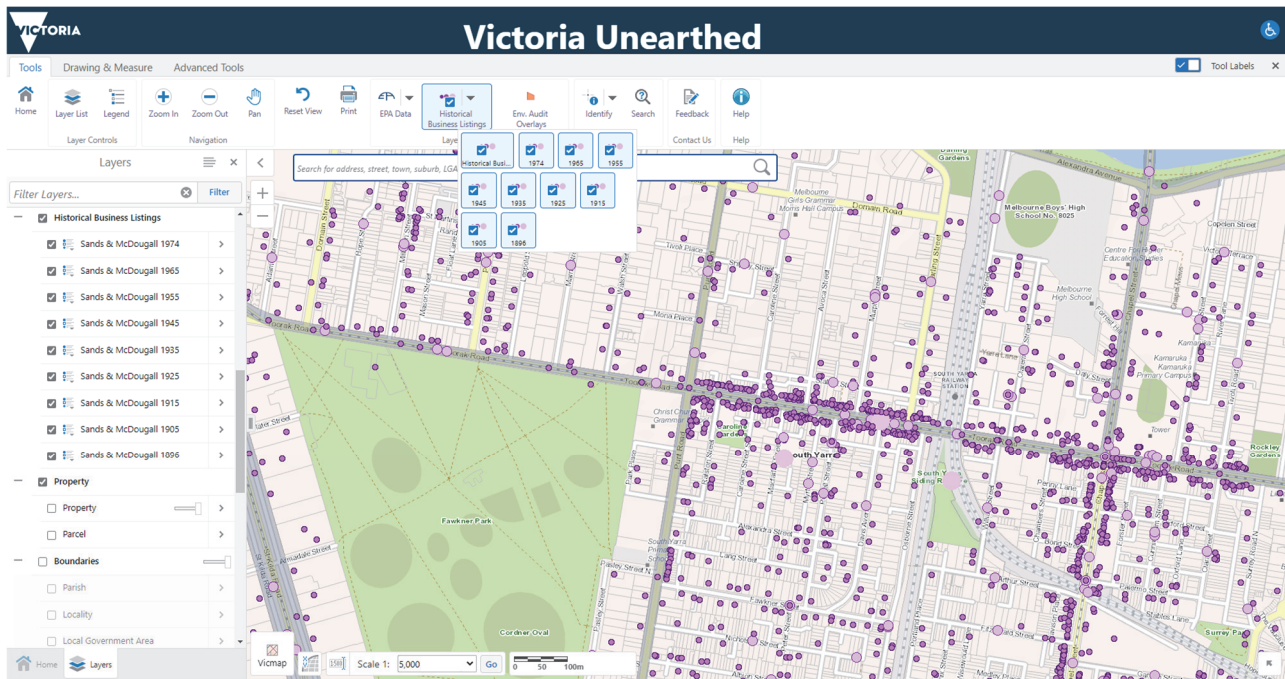
Figure 2: VU's datasets

Dataset	Source	Context and description
Priority Sites Register	EPA	Sites where EPA has issued a notice to manage contamination. Typically, these are sites where land or groundwater contamination presents an unacceptable risk to human health or to the environment.
EPA Licenced Sites	EPA	Sites licensed by EPA based on activities that can pose a high risk to the environment and human health. Licence conditions help to control these risks.
EPA Environmental Audits	EPA	Sites with completed environmental audits. A complete environmental audit does not mean a site is contaminated.
Groundwater Quality Restricted Use Zone	EPA	Audited sites with residual groundwater contamination. This is often due to past industrial activity.
Victorian Landfill Register	EPA	Landfill sites, which can have waste from houses, construction and other industries, including asbestos. Landfill sites need to be carefully managed, even when they are closed. For this reason the register contains locations of current and historical landfills.
Historical Business Listings	DEECA	Sites that have been historically used for business activities, which may increase their risk of contamination. This data was sourced from the Sands and McDougall business directories (old phone books), which the State Library Victoria holds.
Environmental Audit Overlays	Department of Transport and Planning	Contaminated or potentially contaminated sites. If a site has an environmental audit overlay it needs to be audited before it can be used for a sensitive purpose, such as houses, a school or a kindergarten.

Source: VAGO, based on VU's website.

Figure 3 shows an example of VU's Historical Business Listings dataset.

Figure 3: An example of VU's Historical Business Listings dataset



Source: DEECA.

VU users

VU is a public database. But DEECA and EPA told us most VU users are professionals who work for organisations like EPA and local governments or as environmental consultants and auditors.

Independent inquiry into EPA

What the Inquiry looked at

In 2015, the Minister for Environment, Climate Change and Water appointed a ministerial advisory committee to do the Inquiry. It began that same year.

The Inquiry considered how to protect public health and the environment for future generations while ensuring sustainability and job growth. It assessed EPA's role, powers, governance funding and tools.

The committee finished the Inquiry in 2016. The government responded to it in 2017.

The Inquiry's recommendation

The Inquiry recommended the government 'develop a comprehensive statewide database of sites that pose a high risk to the community because of their past use'.

This is because:

The Inquiry found ...	A central database would address this by...
existing data on sites' past uses and environmental audits was informal and not publicly accessible.	<ul style="list-style-type: none">bringing together data held by different agenciesallowing the community and technical experts to find information on potentially contaminated sites.
responsible agencies did not always target their regulatory actions or monitor compliance.	helping agencies manage or clean up contaminated and potentially contaminated sites.
Victoria's planning system required developers and councils to do 'unnecessary' audits, which led to extra costs and time delays.	helping them focus audits on sites that are identified as contaminated or potentially contaminated.

The government's response to the Inquiry

In response to the Inquiry, the government committed to creating a statewide database to publicly share:

- existing data on contaminated land from different government agencies
- information about potentially contaminated sites' past uses
- information about sites that have been environmentally audited and any actions to address issues
- guidance materials on how to interpret the information.

VU's governance

In August 2017 DEECA established a project steering group to oversee the VU project and assess if it met the Inquiry's recommendation.

Executives and management from both DEECA and EPA were in the group.

DEECA led the VU project in partnership with EPA.

The Victorian Government's data quality requirements

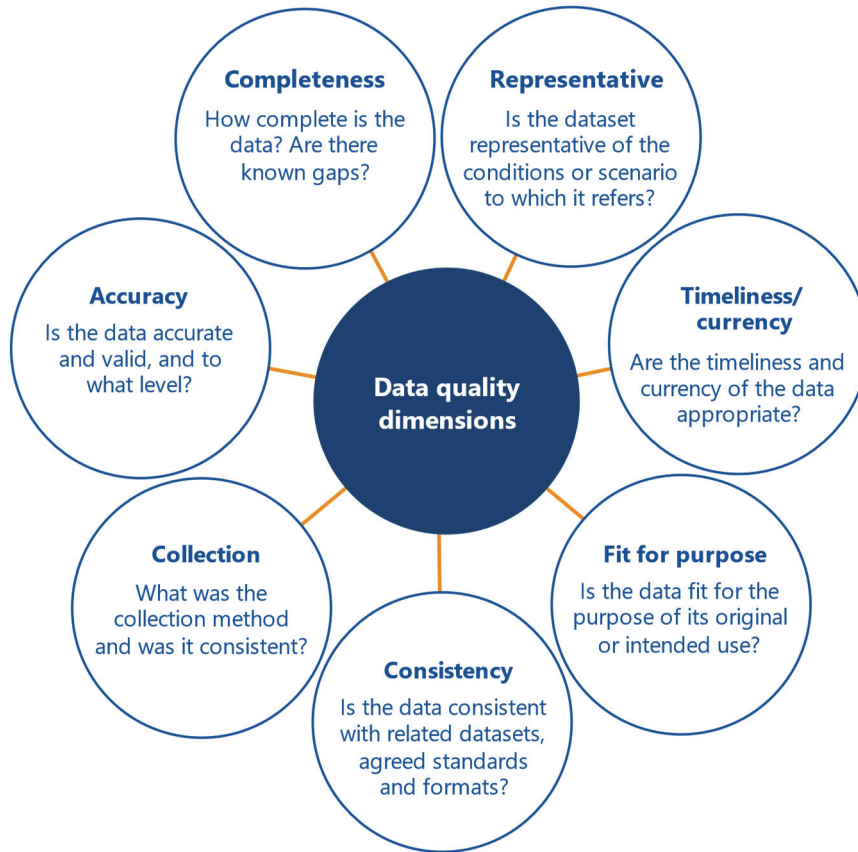
VU's data quality requirements

The Standard applies to all departments and Victoria Police. The *Data Quality Guideline Information Management Framework* (the Guideline) gives more information about the Standard.

The Guideline gives departments advice on how to assess, maintain and improve the quality of their data.

It outlines 7 dimensions to measure data quality, which Figure 4 shows.

Figure 4: Data quality dimensions



Source: VAGO, based on the Guideline.

EPA does not need to follow the Standard because it is not a department. But DEECA must make sure third-party data providers, including EPA, meet equivalent standards.

DEECA and EPA have a memorandum of understanding and data framework for VU. These documents outline the data quality expectations for each agency. These expectations align with the Standard's requirements.

2.

Fulfilling VU's intended purpose

VU fulfils the Inquiry's recommendation to create a statewide database of potentially contaminated sites. But DEECA has not evaluated VU to make sure it reaches its full potential as a reliable and user-friendly source of information.

VU has useful data but it is not presented as a comprehensive database

VU data

In line with the Inquiry's recommendation, VU combines data from different government agencies on potentially contaminated sites.

VU's 7 datasets inform users about:

- EPA's enforcement activities, licences and audits, which indicate what sites might be contaminated
- what sites are at risk of contamination due to how they were used in the past.

VU is the first Victorian platform to combine these datasets and present them on a map. This makes it easier for users to:

- navigate complex data
- determine if a site is potentially contaminated.

DEECA's disclaimer about VU

VU's website has a disclaimer that describes its data as unreliable and potentially inaccurate. DEECA based the disclaimer on legal advice it got in 2018.

This legally protects the government and VU users. But it tells users that VU may not be a reliable database of potentially contaminated sites.

The disclaimer says ...	This suggests to users that ...
data in VU is 'limited, incomplete and may be inaccurate'.	they cannot rely on VU to make informed decisions.
the government does not 'check if VU's information is accurate'.	
VU is a 'starting point for enquiries' and users should make their own decisions about information by visiting linked sources.	they need to use other sources to check information. The 'ad hoc' and 'piecemeal' nature of accessing contaminated land data was one of the issues the Inquiry's recommendation wanted to address.

DEECA and EPA understood users' needs when designing VU but have not evaluated VU

Designing VU DEECA and EPA designed VU based on a comprehensive understanding of potential users' needs.

Two years before they launched VU, DEECA and EPA:

- got external consultants to design a user experience testing program
- ran workshops and focus groups with potential users, including experts, professionals and members of the community
- assessed if available information on contaminated land met users' needs and expectations
- got technical and professional users to test a prototype of the platform to identify areas for improvement.

This work helped DEECA and EPA make sure VU met users' needs when they launched it.

Evaluating VU DEECA gives individual VU users the opportunity to:

- submit feedback about issues
- do an online survey.

DEECA and EPA have fixed data errors and improved data quality through this feedback.

But DEECA has not evaluated VU since it launched in early 2019. This means DEECA is missing the opportunity to understand if VU is fit for purpose.

DEECA initially outlined 2 phases for the VU project:

- phase 1: create and launch VU
- phase 2: review VU to understand if it is fit for purpose and easy to use.

To date, DEECA has not done the phase 2 review.

End-of-project governance In its final meeting in October 2019 VU's project steering group noted that DEECA needed to do a 'more extensive' evaluation to assess if VU is:

- informing the community about potential contamination risks
- helping individuals, the government and councils make informed decisions about developing sites.

To date, DEECA has not done this evaluation.

Despite this, the project steering group marked the VU project as complete at the October 2019 meeting because it fulfilled the government's commitment to provide a publicly accessible database.

Following the meeting, DEECA:

- moved VU to business as usual, which involves maintaining VU but not improving it
- re-prioritised VU funding for other critical reform projects.

As a result, the VU team did not have the funding or resources to complete the reviews and evaluations they had planned.

Future plans to evaluate and improve VU

DEECA acknowledges it needs to evaluate VU. It plans to improve it in 2023–24. It told us it is conducting a broader review of contaminated land in Victoria. This will consider proposed improvements to VU.

Not all VU datasets are complete and up to date

Changes to data management systems

DEECA and EPA have been slow to update EPA's datasets to reflect the new *Environment Protection Act 2017*. This is largely because EPA and DEECA started updating their data management systems in 2021. The 2 systems could not easily send and receive data to upload to VU.

As a result ...	This ...
VU does not have data on environmental audits and new licensed and priority sites after July 2021.	means not all VU data is up to date.
VU's website redirects users to EPA's website to access new data, which is in a list.	means users cannot access information in one place, which the Inquiry recommended.
VU does not have up-to-date spatial data for all its datasets.	may reduce VU's scope and functionality.

Addressing the risk of out-of-date data

At the project steering group's final meeting in October 2019, EPA said there was a risk that VU's data would be out of date when the new *Environment Protection Act 2017* came in.

DEECA and EPA did not address this risk until 2022 because:

- EPA had re-prioritised its resources to other projects that came out of the Inquiry, which involved higher-risk operational or regulatory activities
 - DEECA and EPA moved VU to business as usual and closed the steering group in October 2019, which reduced their communication about VU
 - EPA did not formally communicate with DEECA until April 2021 about its new data management system not being able to send data for DEECA to upload to VU from July 2021.
-

Plans to address data quality issues

In 2022 DEECA gave EPA extra funding to update EPA's data systems to:

- address data quality issues
- be able to supply up-to-date spatial data.

EPA tested its system and DEECA's data management system. It did technical work to make sure its system could directly send DEECA updated data.

EPA also made its datasets more consistent across its old and new platforms. This is because its old platform aligned with the former *Environment Protection Act 1970*.

EPA planned to complete this work by 30 June 2022. But it completed it in October 2022. The delay was partly because DEECA's new data management system was not ready for testing.

3.

Complying with the government's data quality requirements

DEECA and EPA comply with the Standard's minimum requirements. But they need to share more comprehensive information about VU's data quality with its users.

DEECA and EPA comply with the Standard's minimum requirements

The Standard's requirements

DEECA and EPA meet the Standard's minimum requirements to:

- assess critical datasets against the data quality dimensions to make sure they are fit for purpose
- have a data quality statement that outlines known data quality issues
- have a data quality management plan to address data quality issues
- have accountable officers to manage data quality.

Additionally, DEECA made its own data framework in 2018 before the Standard came out later that year. It did this to outline its quality expectations for the agencies who supply VU's data.

This shows DEECA's commitment to data quality. However, DEECA does not fully comply with this framework yet because of the evaluation issues we discuss in Chapter 2.

Data quality statements

The Guideline tells departments:

- what they should include in a data quality statement
- how they should use the statement to communicate with users about data quality.

As Figure 5 shows, DEECA's and EPA's data quality statements only partially comply with the Guideline because they are not available to VU users.

VU's website has information about each dataset. But it is not as detailed as their data quality statements.

As a result, there is a risk users may find it difficult to make informed decisions about using VU's data.

Figure 5: Our assessment of VU's data quality statements against the Guideline

Criteria	Compliance	Our assessment of issues
Summarises known characteristics that may affect a data asset's quality	Yes	NA
Highlights a data asset's strengths and weaknesses to help users determine if it is fit for their intended purpose	Yes	NA
Forms part of a disclaimer around using a data asset	Partial	VU's disclaimer does not reflect the detailed information in its data quality statements. For example, the disclaimer says data in VU may be inaccurate. But EPA's data quality statement for Groundwater Quality Restricted Use Zone says the dataset has a very high level of accuracy.
Is discoverable to users to help them interpret and use data	Partial	DEECA and EPA have not published their data quality statements online for users to access. There is other information about VU's data quality at Data.Vic, which is a public portal for government data. But DEECA and EPA do not give users clear instructions on how to access this.
Appoints data custodians to ensure statements are complete and up to date	Yes	DEECA is the data custodian for VU. It makes sure it and EPA produce data quality statements, or equivalent information, for VU's datasets.
Records the status of statements in the department's information asset register	Yes	NA
Defines a data asset's quality within the department's information asset register or data management system	Yes	NA

Source: VAGO, based on the Guideline.

Data quality management plans

The Guideline says a data quality management plan should:

- assess a dataset against the data quality dimensions
- include plans to address known issues.

Under the Standard, DEECA is responsible for making sure each VU dataset has a data quality management plan because it 'owns' the platform.

Five out of VU's 7 datasets have a data quality management plan.

DEECA does not have a plan for its Historical Business Listings dataset. But it told us it understands the dataset's limitations.

EPA did not have formal data quality management plans until 2022. But it had equivalent documentation that showed a good understanding of its datasets' quality and limitations.

Data governance

DEECA and EPA meet the Standard's requirement to have an accountable custodian for each VU dataset.

However, as we discuss in Chapter 2, VU's project governance ended in October 2019. This limited EPA and DEECA's communication about data quality risks.

Since March 2022 DEECA has funded EPA to:

- complete a range of data supply activities
- improve the compatibility of EPA's and DEECA's data management systems.

As a result, DEECA and EPA have improved how they oversee and manage VU's data quality.

Appendices

[Appendix A: Submissions and comments](#)

[Appendix B: Abbreviations, acronyms and glossary](#)

[Appendix C: Review scope and method](#)

Appendix A:

Submissions and comments

We have consulted with DEECA and EPA and we considered their views when reaching our review conclusions. As required by the *Audit Act 1994*, we gave a draft copy of this report, or relevant extracts, to those agencies and asked for their submissions and comments.

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

Responses received

Agency	Page
Department of Energy, Environment and Climate Action	A-2
Environment Protection Authority Victoria	A-4

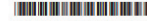


Department of Energy, Environment
and Climate Action

PO Box 500, East Melbourne,
Victoria 8002 Australia

Mr Andrew Greaves
Auditor-General
Victorian Auditor-General's Office
Level 31, 35 Collins Street
MELBOURNE VIC 3000

Ref: SEC015908



Dear Mr Greaves

**PROPOSED PERFORMANCE AUDIT REPORT - UNDERSTANDING VICTORIA'S
CONTAMINATED LAND**

Thank you for your letter of 3 March 2023, providing the Department of Energy, Environment and Climate Action (DEECA) with the opportunity to comment on the proposed report for the limited assurance engagement 'Understanding Victoria's Contaminated Land'.

Please find enclosed DEECA's response to the recommendations in the report and the actions DEECA proposes to take, including expected completion dates. DEECA welcomes the two recommendations made to the department and the actions in response are part of DEECA's forward work plan.

In line with the report's recommendations, DEECA will conduct an evaluation of Victoria Unearthed (VU) to assess if it is fit for purpose and meets users' needs and to identify areas for improvement. DEECA will also work with the Environment Protection Authority Victoria to make data quality statements easily accessible and available to end users of VU.

Thank you again for your audit report. I appreciate the professional and diligent way this limited assurance review has been conducted.

If you require further information, please contact Eve Graham, Director Environment Protection, DEECA, at [REDACTED].

Yours sincerely




Matt Lowe
Acting Secretary

Encl.

Any personal information about you or a third party in your correspondence will be protected under the provisions of the *Privacy and Data Protection Act 2014*. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorized by law. Enquiries about access to information about you held by the Department should be directed to foi_unit@delwp.vic.gov.au or FOI Unit, Department of Energy, Environment and Climate Action, PO Box 500, East Melbourne, Victoria 8002.



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Understanding Victoria’s Contaminated Land VAGO Limited Assurance Audit

DEECA’s Management Action Plan

Recommendations	Agreed Action	Completion Date
<p>Recommendation #1</p> <p>DEECA evaluates Victoria Unearthed to:</p> <ul style="list-style-type: none"> • assess if it is fit for purpose and meets users' needs • identify areas for improvement. 	<p>Accepted</p> <p>DEECA accepts this recommendation and will commit to an evaluation of Victoria Unearthed.</p> <p>The evaluation will provide an independent report on whether Victoria Unearthed is fit for purpose, meets users' needs, and will identify areas for improvement.</p>	<p>1 December 2023</p>
<p>Recommendation #2</p> <p>Makes data quality statements on each Victoria Unearthed dataset available to users.</p>	<p>Accepted</p> <p>DEECA accepts this recommendation and will work with EPA to make data quality statements easily accessible and available to users.</p>	<p>30 June 2023</p>



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EPA ref: C1383

Andrew Greaves
Auditor-General
Victorian Auditor-General's Office

via email: [REDACTED]

Dear Andrew

Proposed report - Understanding Victoria's Contaminated Land

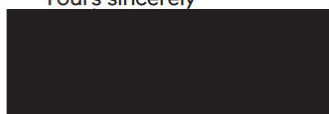
Thank you for your letter of 3 March 2023 about the proposed report of the independent assurance review *Understanding Victoria's Contaminated Land*. Environment Protection Authority Victoria (EPA) welcomes the scrutiny of the review process and the opportunity it provides to learn and improve our performance.

EPA accepts the recommendation that it work with the Department of Energy, Environment and Climate Action to make data quality statements on each Victoria Uearthed dataset available to users. The action to complete and publish these data quality statements will be completed by 30 June 2023.

I acknowledge the consideration and acquittal of our comments on the provisional report and more broadly, the constructive engagement EPA has experienced through the audit.

If you would like any further information, please contact Matt d'Abbs, Chief Quality Officer by email to [REDACTED] or by phone to [REDACTED].

Yours sincerely



Lee Miezijs
Chief Executive Officer

16 / 03 / 2023

epa.vic.gov.au
Environment Protection Authority Victoria
GPO Box 4395, Melbourne VIC 3001
1300 372 842



Appendix B: Abbreviations, acronyms and glossary

Abbreviations We use the following abbreviations in this report:

Abbreviation

the Guideline	<i>Data Quality Guideline Information Management Framework</i>
the Inquiry	<i>Independent Inquiry into the Environment Protection Authority</i>
the Standard	<i>Data Quality Information Management Framework Standard</i>

Acronyms We use the following acronyms in this report:

Acronym

DEECA	Department of Energy, Environment and Climate Action
EPA	Environment Protection Authority Victoria
VAGO	Victorian Auditor-General's Office
VU	Victoria Unearthed

Glossary

This glossary includes an explanation of the types of engagements we perform:

Term

Reasonable assurance	<p>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.</p> <p>See our assurance services fact sheet for more information.</p>
Limited assurance	<p>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.</p> <p>See our assurance services fact sheet for more information.</p>

Appendix C:

Review scope and method

Scope of this review

Who we examined

We examined the following agencies:

Agency	Their key responsibilities
DEECA	Publishing data to VU and managing the website
EPA	Collecting and providing most of VU's datasets

Our review objective

To determine if DEECA (formerly the Department of Environment, Land, Water and Planning) and EPA's publicly available contaminated land data in Victoria is accurate, current and fit for purpose.

What we examined

We examined if the government's actions to improve how it collects, collates and makes contaminated land data accessible have addressed known gaps and performance issues.

We focused on VU, which is the government's first contaminated land database.

We chose to do this as a limited assurance engagement because in our pre-planning we assessed the risk of finding significant issues as low.

Conducting this review

Assessing performance

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

Line of inquiry	Criteria
1. Does DEECA and EPA ensure the datasets that inform VU comply with the Victorian Data Quality Standard and Protective Data Security Framework?	1.1 There is a data quality statement or equivalent process in place for the datasets used in VU.
	1.2 There is a data quality management plan or equivalent in place for the datasets used in VU.
	1.3 There is a clear understanding of roles and responsibilities for each of the datasets used in VU (the owner, delegated owner, custodian and administrator of the data).
	1.4 There is a security risk profile assessment in place for the datasets that inform VU.
	1.5 There is a protective data security plan for the datasets that inform VU.
2. Is VU fit for purpose?	2.1 VU is accessible and provides appropriate information for the user to easily understand the contamination status of a site.

Our methods

As part of the review we:

- reviewed the Standard and Guideline
 - analysed DEECA's and EPA's project documentation for VU
 - assessed DEECA's and EPA's processes and procedures for VU
 - reviewed DEECA's and EPA's data quality processes and documentation
 - reviewed VU's website
 - interviewed key staff.
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Compliance

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

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

Cost and time

The full cost of the review and preparation of this report was \$250,000.

The duration of the review was 6 months from initiation to tabling.

Auditor-General's reports tabled during 2022–23

Report title	Tabled
Results of 2021 Audits: Technical and Further Education Institutes (2022–23: 1)	July 2022
<i>Results of 2021 Audits: Universities</i> (2022–23: 2)	July 2022
<i>Follow-up of Protecting Victoria's Coastal Assets</i> (2022–23: 3)	August 2022
<i>The Effectiveness of Victoria Police's Staff Allocation</i> (2022–23: 4)	September 2022
<i>Quality of Major Transport Infrastructure Projects Business Cases</i> (2022–23: 5)	September 2022
<i>Major Projects Performance Reporting 2022</i> (2022–23: 6)	September 2022
<i>Quality of Child Protection Data</i> (2022–23: 7)	September 2022
<i>Follow-up of Maintaining the Mental Health of Child Protection Practitioners</i> (2022–23: 8)	September 2022
<i>Regulating Victoria's Native Forests</i> (2022–23: 9)	October 2022
<i>Victoria's Alcohol and Other Drug Treatment Data</i> (2022–23: 10)	October 2022
<i>Auditor-General's Report on the Annual Financial Report of the State of Victoria: 2021–22</i> (2022–23: 11)	October 2022
<i>Regulating Private Pool and Spa Safety</i> (2022–23: 12)	February 2023
<i>Results of 2021–22 Audits: Local Government</i> (2022–23: 13)	February 2023
<i>Maintaining Railway Assets Across Metropolitan Melbourne</i> (2022–23: 14)	March 2023
<i>Fair Presentation of Service Delivery Performance 2022</i> (2022–23: 15)	March 2023
<i>Understanding Victoria's Contaminated Land</i> (2022–23: 16)	March 2023

All reports are available for download in PDF and HTML format on our website at <https://www.audit.vic.gov.au>

Our role and contact details

The Auditor-General's role

For information about the Auditor-General's role and VAGO's work, please see our online fact sheet [About VAGO](#).

Our assurance services

Our online fact sheet [Our assurance services](#) details the nature and levels of assurance that we provide to Parliament and public sector agencies through our work program.

Contact details

Victorian Auditor-General's Office
Level 31, 35 Collins Street
Melbourne Vic 3000
AUSTRALIA

Phone +61 3 8601 7000

Email enquiries@audit.vic.gov.au
