7.1.4 LANDFILL GAS RISK ASSESSMENTS UPDATES

Responsible Manager:	Catherine Sherwin, Manager City Planning
Responsible Director:	Peter Panagakos, Director City Development

RECOMMENDATION

That Council

1. **Will continue to apply the relevant landfill gas conditions, where relevant, as per the EPA Guidelines noting that EPA on 14 August 2024 published the new Separation Distance and Landfill Buffer Guidelines.**
2. **Does not proceed with establishing accurate and appropriate landfill buffer areas around former landfill sites through further exploration and assessment as resolved at the Council meeting of 28 March 2023 for the reasons detailed in this report.**
3. **Notes that an annual report will be prepared and an update on each former landfill site (or group of sites) and includes a collation of the peer reviews over the 12 month period which identifies any key findings, or issues identified and that this annual report will continue to build up data not just about the former landfill sites but the sites within the default buffer area to establish a picture of the way the rehabilitation process of the landfill is occurring and the extent to which the risks of landfill gas are dissipating over time and possibly over distance from the former landfill site.**

INTRODUCTION

The purpose of this report is to give an update on the revised proposed approach from that presented at the Council Meeting of 28 March 2023 with regard to closed landfills and the planning system.

The report outlines an update on how the landfill gas planning permit conditions applied, where relevant, have been received and that we proposed to no longer proceed with the options outlined in the report of 28 March 2023. That being, work to investigate reducing the landfill buffers set out in the EPA BPEM guidelines so that appropriate buffer distances are provided based on the actual level of assessed risk for each of the closed landfills within the municipality as opposed to the arbitrary requirements set by the EPA.

The report recommends that we continue to apply the landfill gas risk assessment's as per the EPA BPEM guidelines.

COUNCIL PLAN STRATEGIC OBJECTIVES

Sustainable City
Ensure an economically, socially, and environmentally sustainable municipality.

Good Governance
Ensure a financially, socially and environmentally sustainable organisation.
Maintain the highest standards of good governance.

BACKGROUND

In late 2022 Council met with the EPA to discuss a process for reduction of the default buffers. The EPA did not have a clear process that it endorsed and it recommended engagement of a peer reviewer with environmental audit accreditation to overview the development of a process for reduction of the default buffers.

At its 28 March 2023 meeting, officers presented Council with an overview of relevant closed landfill gas requirements set by the EPA and the impacts for development proposed within close proximity to closed landfills (within 200 or 500 metres) located within the City of Monash. The report outlined how Council is responding to and meeting these requirements, the importance of complying with these requirements and future steps to reduce and refine the buffer areas (including their possible deletion) so that the risk is managed and there is less impact on future developments.

At that meeting, Council resolved:

That Council:

1. *Notes Council will engage the services of EHS Support to undertake landfill gas risk assessments of sites adjacent and nearby to all closed landfill sites in order to assist in determining appropriate site-specific buffer distances and planning requirements based on the actual level of assessed risk. This work will include, but is not limited to:*
   - *a risk assessment based on the age, size and fill type of the landfill, and that considers design and operational measures; and*
   - *evaluation demonstrating the environment would be protected and amenity not adversely affected.*

2. *Notes Council will engage the services of Nick Simmons (previously EPA's Principal Landfill Expert) at Australian Environmental Auditors to peer review the work done by EHS Support in the first instance and make appropriate recommendations with regard to appropriate buffer distances based on the actual level of assessed risk as opposed to the arbitrary requirements set by the EPA. Further notes that this is stage 1 of the assessment work.*

3. *Notes that it may be necessary following discussion with the EPA for officers to engage the services of an EPA-appointed auditor to peer review the work done by EHS Support and Nick Simmons. Further notes that this would be stage 2 of the assessment works (if required).*

4. *Endorses the approach recommended in this resolution aimed at establishing accurate and appropriate landfill buffer areas around former landfill sites (if required), and that these should be based on actual assessment of the associated risk as opposed to adopting the arbitrary buffer distances identified by the EPA.*

5. *Notes that until this work is completed and agreed to by the EPA, Council will continue to require land fill gas assessments, or certificates of environmental audit (as may be relevant) for affected developments, consistent with the EPA BEPM guidelines.*

6. *Makes available $100,000 in the current budget and $500,000 in its 2023/24 budget to undertake this work – Stage 1 as identified in point 2 of this recommendation.*

7. *Notes that the budget allocation identified in point 6 above is an estimate. The total cost (stage 1) of the work will be known when fee proposals for the work are sought and returned. If the fee proposals for stage 1 exceed the estimated costs, or if further work (stage 2) is required, the revised cost(s) will be presented to Council for consideration.*

8. *Notes that officers will present reports to a future Council meeting on this work, its recommendations and outcomes of the work identified.*

As per the resolution, officers:

- Liaised with EHS Support to prepare a fee proposal to undertake Landfill Gas Risk Assessments (LFGRA) of sites adjacent and nearby to all closed landfill sites in order to assist in determining appropriate site-specific buffer distances and planning requirements based on the actual level of assessed risk.
- Liaised with Nick Simmons (previously EPA Principal Landfill Expert) and the approved environmental auditor at his firm to peer review the work to be undertaken by EHS Support in the first instance, and make appropriate recommendations with regard to appropriate buffer distances based on the actual level of assessed risk as opposed to the arbitrary requirements set by the EPA.

It has taken time for officers with the assistance of experts to review all the issues and to consider what could be done to attempt to reduce buffers and if this work would achieve the desired outcome. Further, there was also advantage to placing conditions on planning permits and receiving Landfill Gas Assessments so as to understand if there were, in reality, landfill gas issues outside of the landfill areas that may be affecting surrounding residential land. To date, no such (or very limited in the case of 1 site) evidence has been found.

What became evident during the lengthy exploration and discussion to agree on the scope of works required to be undertaken by EHS Support for Nick Simmons to peer review was far wider than initially discussed and anticipated. Ultimately, Nick Simmons determined that as a minimum every single former landfill site within the buffers would need their own landfill gas assessment undertaken and that some sites, depending on their scoring would require an audit.

The difficulty, amongst other matters with the above is the extent of time to undertake the review across all the landfills, significant cost, monitoring being needed over a significant period of time and the inability of the EPA to provide clear direction and assistance in the process ultimately meaning that the work may not meet their requirements to enable a consideration of reduced landfill buffers. Ultimately, there is significant time and cost where an outcome of whether Council could reduce or remove some of the landfill buffers is at best uncertain. In essence all this work could be done and there could be no change at all.

<u>Council Experience with Applying Default Buffers</u>

A review of our experience to date with applying the default buffers and applying relevant conditions when required as per Publication 1642 has found that there has been little if any resistance to the conditions. In limited circumstances where a condition requiring a landfill gas assessment has been challenged at VCAT as part of a broader application for review, the

conditions have been upheld and supported by VCAT and included on permits where VCAT has directed that one issue.

During this time, we have also observed:

- A sampling of reports and peer reviews on behalf of council seems to generally suggest that methane levels are under problematic levels as defined by Council's appointed expert, that the work undertaken by the initial consultant for the permit applicant is generally sound, and that low levels of risk are identified.
- Of the reports provided to date (which relate to both the higher priority and lower priority sites) only one has required further investigation, monitoring or additional works/changes to proposed built form.
- Since we have been applying the relevant conditions on permits (1 September 2022) we have had approximately 50 planning permits issued requiring a landfill gas risk assessment report.

NEW GUIDELINES

On 14 August 2024, the EPA published new Separation Distance and Landfill Buffer Guidelines which apply from 14 August 2024 and which replace Publication 1642 which Council previously used as the basis for its assessment of planning permit applications. The new Guidelines do not appear to make material changes to either the buffer distances identified nor the assessment process provided by the previous guidance contained in Publication 1642.

DISCUSSION

Having now had the benefit of nearly 2 years experience with applying EPA Publication 1642 and with the benefit of the scoping work undertaken to date between EHS-Support and Envaud, it is timely for Council to consider next steps. In this regard, it seems that these 2 courses of action are available for Council are:

- Option 1 – continue down the path of working with EHS-Support and Envaud as peer reviewer/auditor to seek to define a methodology to move to bespoke buffers and away from the default buffers prescribed under the Landfill Buffer Guideline, August 2014 (formerly Publication 1642) – noting there are differences that need to be resolved between the two organisations as to the methodology, further noting the lack of certain direction from EPA. There remains an uncertainty of outcome as to whether Council could reduce or remove some of the landfill buffers is at best uncertain. In essence all this work could be done and there could be no change at all. This may be a long, expensive and protracted exercise to even get to a single bespoke buffer let alone dealing with all of the identified landfills in this way.
- Option 2 - continue applying the Landfill Buffer Guidelines, August 2014 (formerly Publication 1642) and the default buffer arrangement as Council is currently doing given the positive outcomes thus far experienced, and continue to monitor and report back to Council as required, having regard to recommendation 4, 5 and 6 of this report in particular.

In having assessed and explored the issue further, it seems logical and more certain to continue with Option 2, particularly having regard to the factors outlined earlier in this report related to

timing, cost and in particular the uncertainty of a different outcome being some buffers being reduced or removed.

Over time, Option 2 will provide Council with a level of information about the way closed landfills are performing including relative to adjacent sites. Historically there is little evidence of gas migration, this continuing collation of data will assist in identifying any new risk should it arise, as well as providing information about the rehabilitation process having run its course over time. This data may also assist Council in any considerations with permits that were issued by Council after Publication 1642 was introduced in 2017.

It is also noted that ongoing landfill gas monitoring is being carried out at the 5 higher priority sites. Where an elevated risk is identified, Council is advised and measures are taken to mitigate the risk.

It is anticipated that David Ife (EHS support) and his team (or equivalent landfill expert team engaged by Council) will continue to monitor, evaluate and report on management of former landfill sites. In addition, it is also anticipated that Council will continue to engage the same landfill experts to undertake peer reviews of Landfill Gas Risk Assessments conducted on behalf of permit applicants for private land within the default buffer of the former landfill sites.

It is recommended that these two pieces of work are integrated so that when the annual report on each former landfill site (or group of sites) is collated by the landfill experts for provision to Council, in addition to that information, the landfill experts also collate a list of the sites the subject of the landfill gas risk assessments for planning permit applications that have been reviewed by the peer reviewers over that 12 month period which identifies any key findings, or issues identified. In that way Council will be able to build up data not just about the former landfill sites but the sites within the default buffer area. Over time, particularly in those areas where there is significant development activity, this continued monitoring of the former landfill sites and areas in the buffer will provide a picture of the way the rehabilitation process of the landfill is occurring and the extent to which the risks of landfill gas are dissipating over time and possibly over distance from the former landfill site. At some point that information may be such that the landfill experts are effectively able to provide advice about the reduction of risk to the point where further landfill gas risk assessments may not be necessary or warranted.

In the 28 March 2023 Council report, we outlined that a Landfill Gas Risk Assessment Report for a planning application may cost in the range of $15k to $20k whereas we have since found the range is broader with figures quoted recently as $3 to $15k (noting this could increase in cost due to various site specific reasons). At the time the thinking was if we could follow a sensible methodology to reduce, and in some instances even remove the buffers, that we would provide significant cost savings for residents given approximately 12,400 properties are currently located within the EPA set default-buffer areas. It must also not be forgotten that whilst Council provides information to landowners when they are developing land, the requirements of the EPA guidelines relate only to planning applications, not building permits and there is no requirement for any form of assessment where there is an existing dwelling understanding that these former landfills closed many years before the current publication was introduced by the EPA. We also note that the changes to the planning scheme to reduce planning permit triggers, means that there are even

less properties that need a planning permit e.g. for the construction of a single dwelling on a lot less than 500 square metres, this figure is now 300 square metres.

Furthermore, it should be pointed out that we could undertake the exercise as outlined in Option 1 and could find ourselves in a different legislative environment. For instance, the EPA released the Landfill Buffer Guidelines on 14 August 2024 with no transitional provisions with the replaced "Publication 1642" which is what guides and directs the buffer distances. Whilst the comparison between the two documents did not make material changes to the buffer areas and assessment criteria, open landfills we cannot be assured that future legislative changes do not then make the work we do defunct. Again, it is considered prudent to leave the status quo in place and wait and see if there are any further changes and consider any impacts and processes at that time.

FINANCIAL IMPLICATIONS

There are no financial implications for Council in continuing with Option 2 beyond those currently being experienced and covered within the operational budget.

Pursuing Option 1 will leave Council with significant costs that cannot as yet all be known, including for monitoring and review as well the possibility of audits needing to be undertaken understanding that the scope proposed was far wider than initially discussed and anticipated.

POLICY IMPLICATIONS

There are no policy implications to this report.

CONSULTATION

Community consultation was not required.

SOCIAL IMPLICATIONS

There are no social implications to this report.

HUMAN RIGHTS CONSIDERATIONS

There are no human rights implications to this report.

GENDER IMPACT ASSESSMENT

A GIA was not completed because this agenda item is not a 'policy', 'program' or 'service'.

CONCLUSION

As outlined, the methodology for reducing buffers will be more complicated and costly than initially expected and may not result in any changes to buffers. Given the relatively low number of permits containing the condition and the fact that no other council has successfully reduced or

removed their buffers, it is recommended that Council maintains the status quo and does not at this time proceed with any further work and continues to apply the EPA guidelines as it has been doing.

ATTACHMENT LIST

Nil