

From: s22
To: s22
Cc: s22
Subject: RE: New Information Letter [SEC=OFFICIAL]
Date: Monday, 10 August 2020 2:11:04 PM
Attachments: [image001.gif](#)

Thanks s22

Can you please draft a Phase 2 obligations letter outlining that the Department does not consider that the info provided rules out significant impacts to MNES, in particular GGF, and suggest it would be prudent to undertake a detailed self-assessment in relation to that species, and submit a referral if required.

Thanks,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments | s22

s22

Department of Agriculture, Water and the Environment
Assessments (Vic and Tas) and Post Approvals Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
awe.gov.au

From: s22
Sent: Monday, 10 August 2020 1:09 PM
To: s22
Cc: s22
s22
Subject: RE: New Information Letter [SEC=OFFICIAL]

Hi s22

Maddingley Brown Coal Pty Ltd referred the second letter sent from the Department to s47F to Nature Advisory, MBC's consultant for EPBC-related matters.

Nature Advisory undertook a review of MBC's obligations under the EPBC Act, with the completed report being sent on 4 August 2020.

Nature Advisory have determined that no flora species, Threatened Ecological Communities or Ramsar wetlands are likely to be significantly impacted by the proposed action.

They did consider four fauna species "Likely to occur" based on the EPBC PMST (10km):

- Fork-tailed Swift
- Swift Parrot
- White-throated Needle-tail
- Growling Grass Frog (GGF)

I agree with Nature Advisory's assessment of the Fork-tailed Swift, Swift Parrot and White-throated Needletail.

However, for the GGF, they have stated that the species has been recorded in Parwan Creek (located on the southern boundary of Parwan Creek) and adjacent dams. Nature Advisory have stated that based on the significant impact guidelines for the Vulnerable GGF, and that the proposed action will not occur within 200 metres of Parwan Creek, a significant impact to the GGF is unlikely. As I understand the presented information, no targeted surveys have been conducted for the GGF and no documented evidence has been provided to show how the proposed action doesn't significantly impact the GGF (such as a criteria table). As a suggestion, perhaps the Department could request information that further explains how MBC will not have a significant impact on the GGF, rather than agreeing with their brief explanation. There is probably not enough cause to request targeted surveys of GGF to be undertaken, but providing further detail on how Nature Advisory came to their conclusion, particularly as it is specifically a desktop assessment, may be helpful.

MBC have advised that if the Department has other relevant information which should be taken into account regarding this matter, to advise them immediately. This review only involved a desktop review of existing information.

Kind regards,

s22

s22

Assessment Officer | Victoria and Tasmania Assessments | s22

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au

From: s22

Sent: Monday, 10 August 2020 12:04 PM

To: s22

Cc: s22

s22

Subject: RE: New Information Letter [SEC=OFFICIAL]

Thanks s22

Can you please review and see if we agree with the assessment.

Happy to discuss,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments | s22

s22

Department of Agriculture, Water and the Environment
Assessments (Vic and Tas) and Post Approvals Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
awe.gov.au

From: EPBC.VicTas <EPBC.VicTas@environment.gov.au>

Sent: Monday, 10 August 2020 11:12 AM

To: s22

Cc: s22

s22

Subject: FW: New Information Letter [SEC=OFFICIAL]

Good morning s22

For appropriate action, I have saved this email to SPIRE.

Please CC the Vic Tas inbox (if required).

Kind regards,

s22

s22

Assessment Officer | Victoria and Tasmania Assessments s22

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au

From: s47F

Sent: Friday, 7 August 2020 2:23 PM

To: EPBC.VicTas <EPBC.VicTas@environment.gov.au>

Cc: s47F

Subject: RE: New Information Letter [SEC=OFFICIAL]

Dear s22

In response to your letter dated 30 June 2020, please find attached letter and accompanying assessment report.

s47F



s47F

11 TILLEYS ROAD, MADDINGLEY, VICTORIA 3340
P.O. BOX 376, BACCHUS MARSH, VICTORIA 3340

From: EPBC.VicTas <EPBC.VicTas@awe.gov.au>
Sent: Wednesday, 1 July 2020 12:12 PM
To: s47F
Cc: 'EPBC.VicTas@awe.gov.au' <EPBC.VicTas@awe.gov.au>
Subject: New Information Letter [SEC=OFFICIAL]

Good afternoon s47F

Please find attached correspondence from the Department of Agriculture, Water and the Environment regarding new information received in relation to proposed activities in Maddingley, Victoria.

Kind regards,

Victoria and Tasmania Assessments Team

Victoria and Tasmania Assessments

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601
awe.gov.au

From: s22
To: s22
Subject: Maddingley Brown Coal - update [SEC=OFFICIAL]
Date: Wednesday, 22 July 2020 4:54:04 PM

Hi s22

s22 received an enquiry from our media team re Maddingley Brown Coal so called s47F at MBC to confirm if the action has commenced. s47F said that it has not commenced as they are still waiting on their state/local approval. If they do get the approval it is likely to be in a few weeks, with spoil dumping then commencing on October. He confirmed that they do not intend to refer the action under the EPBC Act as they do not believe that it will impact on MNES.

s22 has re-sent the second letter we wrote to them as s47F didn't recall seeing it at the time. s22 mentioned that the intent of the letter is so that they are aware of the concerns that have been expressed to us; we do not have enough information at this point to have a view on whether the action requires referral.

Can you please save this email to spire for a record – thanks

s22

s22

A/g Assistant Director | Victoria and Tasmania Assessments

s22

Environment Approvals Division

Department of Agriculture, Water and the Environment

GPO Box 787

Canberra ACT 2601



**THE HON SUSSAN LEY MP
MINISTER FOR THE ENVIRONMENT
MEMBER FOR FARRER**

MC20-006855

The Hon Catherine King MP
Member for Ballarat
PO Box 719
BALLARAT VIC 3350

12 JUN 2020

Dear Ms King *Catherine*

Thank you for your email of 19 May 2020 concerning a proposal to dispose of spoil from the West Gate Tunnel Project in the Maddingley Brown Coal mine, and the potential application of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

As you are aware, the EPBC Act is Australia's national environmental law which protects and conserves our environment and heritage. This includes threatened plant and animal species, and wetlands of international importance, among others.

Under the EPBC Act, it is the responsibility of a person who proposes to take an action that is likely to have a significant impact on a matter of national environmental significance to refer their proposal for assessment and approval under the EPBC Act. Substantial penalties apply to a person who takes such an action without approval.

The Department of Agriculture, Water and the Environment has advised that it will make enquiries based on the information you have provided, to ensure compliance with the requirements of the EPBC Act.

Thank you for bringing your concerns to the Government's attention.

Yours sincerely

Sussan Ley
SUSSAN LEY



s47F

Environmental Manager
Maddingley Brown Coal Pty Ltd
PO Box 376
BACCHUS MARSH VIC 3340

s47F

Dear s47F

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
**Disposal of contaminated soil from the West Gate Tunnel Project at Maddingley
Brown Coal Mine**

Following from my previous letter of 28 May 2020, I am writing in relation to new information received by the Department regarding a proposal by Maddingley Brown Coal Pty Ltd (MBC) to dispose of potentially contaminated soil from the West Gate Tunnel Project at the Maddingley Brown Coal Mine.

The Department notes that MBC does not intend to refer the proposal to the Department and is aware of their obligations under the EPBC Act. Please note that unless a project is referred, the Department cannot guarantee a project does not require approval under the EPBC Act. The responsibility for deciding to refer a project to comply with the EPBC Act lies with the person taking the action. Accordingly, the Department is providing the below additional information as it appears relevant to the considerations of whether to refer the project.

The Department understands that the proposed action was due to commence on Tuesday 16 June 2020. The Department would appreciate confirmation regarding the commencement date of the proposed action.

Information received by the Department alleges that the proposed action is occurring adjacent to the Maddingley Brown Coal Mine landfill zone in an area of high ecological value, and that only a small portion of this area is licensed for disposal of potentially contaminated soil. The Department has also been made aware of allegations regarding potential impacts from the proposed action on nationally listed species and ecological communities, particularly the vulnerable Growling Grass Frog *Litoria raniformis*, the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site, and listed migratory bird species which use nearby water bodies and surrounding areas. According to information provided to the Department, *L. raniformis* is known to occur within 300 metres of the proposed action area and is known to occur along nearby Parwan Creek.

Information received by the Department emphasises that per- and polyfluoroalkyl substances (PFAS) are highly soluble in water and readily travel in aquatic systems, with diffusion through liners not yet fully understood. The information discusses the importance of the PFAS National Environmental Management Plan (PFAS NEMP) regarding MBC's proposed action and alleges that MBC is operating contrary to the guidelines set out by the

PFAS NEMP. The Commonwealth implements the PFAS NEMP 2.0, which sets out requirements for storage, re-use and disposal. The NEMP is available online at <http://www.environment.gov.au/protection/publications/pfas-nemp-2>.

If this project commences without a decision under the EPBC Act, MBC carry all associated legal risks. As previously stated, substantial penalties may apply to a person who takes an action in contravention of the requirements of the EPBC Act. The Department actively monitors compliance with the EPBC Act. The Department's Compliance Policy (www.environment.gov.au/about-us/publications/compliance-policy) allows for a range of mechanisms to address contraventions of the EPBC Act. The Department considers the circumstances of each matter on a case-by-case basis to determine the most appropriate response.

If you have any questions about this matter please call or email the contact officer, s22 s22, on s22 or by email s22.

Yours sincerely

s22

s22

Acting Director

Victoria and Tasmania Assessments Section

30 June 2020

From: s22
To: s22
Cc: s22
Subject: RE: Second Letter to Maddingley Brown Coal Pty Ltd [SEC=OFFICIAL]
Date: Tuesday, 30 June 2020 7:25:50 PM
Attachments: [VIC-Maddingley-Coal Mine- Second letter to MBC-signed.pdf](#)

Hi s22 and s22

Thanks for your input on this- see attached for your information the signed letter which will be sent out tomorrow.

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
awe.gov.au

From: s22
Sent: Tuesday, 30 June 2020 10:56 AM
To: s22
s22
Cc: s22
s22
Subject: RE: Second Letter to Maddingley Brown Coal Pty Ltd [SEC=OFFICIAL]

Hi s22

Please find attached some suggestions.

Happy to chat about them.

Cheers

s22

From: s22
Sent: Tuesday, 30 June 2020 10:21 AM
To: s22
s22
Cc: s22
s22
Subject: RE: Second Letter to Maddingley Brown Coal Pty Ltd [SEC=OFFICIAL]

Yes, apologies, I am just about finished – 10 minutes.

Cheers

s22

From: s22
Sent: Friday, 26 June 2020 8:33 AM
To: s22
s22
Cc: s22
s22
Subject: FW: Second Letter to Maddingley Brown Coal Pty Ltd [SEC=OFFICIAL]

Hi s22 and s22

Following on from the standard words we developed to respond to correspondence in relation to this matter, we have drafted a letter to the proponent to make them aware of allegations received by the Department so that they may be fully informed in undertaking a self-assessment relating to their EPBC Act responsibilities. These allegations include consideration of PFAS management and the NEMP, so we have conveyed those too. We would appreciate your thoughts on the way we have conveyed those in the letter, before we send it.

Please see the link [here](#) for the second letter to Maddingley Brown Coal Pty Ltd.

For reference, correspondence from the Moorabool Environment Group to the Minister for the Environment can be found [here](#).

Any thoughts today or Monday would be great, but please let me know if that won't be possible.

Kind regards,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
awe.gov.au

From: s22
To: s22
Cc: s22
Subject: RE: Second Letter to Maddingley Brown Coal Pty Ltd [SEC=OFFICIAL]
Date: Friday, 26 June 2020 10:22:34 AM

Many thanks for this s22 and thanks for checking with us.

I will come back to you with suggestions by Monday. On a quick scan I would perhaps suggest putting the punchline upfront rather than at the end simply because there is a fair bit of information and it's not always clear where it is going until the end.

The PFAS NEMP sets out nationally consistent guidance and standards but it doesn't have regulatory force except through jurisdictional laws or the Commonwealth (via EPBC). So I might tinker just a bit with the language on the NEMP. Many thanks again for involving us – the matter is relevant and of interest to us.

I seem to recall seeing a Melbourne airport approval where we asked them where they were going to put PFAS contaminated soil, and they indicated a quarry right next to *L. raniformis* habitat. I might fossick that out to see what happened in the end.

Cheers

s22

s22

Director | Chemicals Policy and Advice Section |
Australian Government Department of Agriculture, Water and the Environment |

s22

Please note that I do not work on Monday afternoons

The Department acknowledges the traditional owners of country throughout Australia and their continuing connection to land, sea and community. We pay our respects to them and their cultures and to their elders both past and present.

From: s22
Sent: Friday, 26 June 2020 8:33 AM
To: s22
s22
Cc: s22
s22
Subject: FW: Second Letter to Maddingley Brown Coal Pty Ltd [SEC=OFFICIAL]

Hi s22 and s22

Following on from the standard words we developed to respond to correspondence in relation to this matter, we have drafted a letter to the proponent to make them aware of allegations received by the Department so that they may be fully informed in undertaking a self-assessment relating to their EPBC Act responsibilities. These allegations include consideration of PFAS management and the NEMP, so we have conveyed those too. We would appreciate your thoughts on the way we have conveyed those in the letter, before we send it.

Please see the link [here](#) for the second letter to Maddingley Brown Coal Pty Ltd.

For reference, correspondence from the Moorabool Environment Group to the Minister for the Environment can be found [here](#).

Any thoughts today or Monday would be great, but please let me know if that won't be possible.

Kind regards,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22
To: [DLO Ley](#)
Cc: s22
s22 [Andrew McNee](#)
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Date: Tuesday, 16 June 2020 4:52:18 PM

Hi s22

Words below cleared by Andrew McNee:

The Minister is aware of a proposal by Maddingley Brown Coal Pty Ltd to dispose of spoil from the West Gate Tunnel Project to Maddingley Brown Coal Mine near Bacchus Marsh.

Under the *Environment Protection and Biodiversity Conservation Act 1999* (the Act), it is the responsibility of a person proposing to take an action to refer it for assessment and approval under the Act. Only those actions likely to have significant impacts on matters of national environmental significance must be referred under the Act. Substantial penalties may apply to a person who takes such an action without approval. Matters of national environmental significance include listed threatened species and ecological communities and wetlands of international importance, among others.

The Department has written to Maddingley Brown Coal, and will continue to engage with them in relation to any obligations they may have under national environmental law.

Outside of matters protected under the Act, the regulation of potentially contaminated material, including spoil and other construction wastes, is a matter for the Victorian Government.

Happy to discuss,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment

Assessments & Governance Branch | Environment Approvals Division

John Gorton Building, King Edward Terrace, Parkes, ACT

GPO Box 858, Canberra ACT 2601

awe.gov.au

From: DLO Ley <DLOLey@environment.gov.au>

Sent: Friday, June 12, 2020 6:28:02 PM

To: s22

Cc: DLO Ley <DLOLey@environment.gov.au>; s22

s22

s22

Andrew McNee

<Andrew.McNee@environment.gov.au>

Subject: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22

We are receiving the below correspondence regarding the proposed site for PFAS-contaminated soil from Westgate Tunnel Project.

Could you please coordinate with EAD and provide the office with a set of standard words on Monday 15 June 2020?

Please let me know if you need any further information or to discuss timeframes.

Many Thanks

s22

Departmental Liaison Officer | Office of the Hon Sussan Ley MP
Minister for the Environment

s22

From: s47F

Sent: Friday, 12 June 2020 4:44 PM

To: Minister Ley <Minister.Ley@environment.gov.au>

Subject: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

The Hon. Sussan Ley MP

Minister for the Environment

[Email: minister.ley@environment.gov.au](mailto:minister.ley@environment.gov.au)

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Maddingley community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision. We have also been informed that despite no approvals or permits being issued, or a decision being made by Minister Wynne, that the toxic soil diggings currently beside the West Gate Tunnel Project is to be moved to MBC this Monday morning, 16th June 2020.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal. Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass

Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

Additional EPBC-listed species and threatened ecological communities are listed within a 1km buffer zone of the site. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted.

The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN , 2018).

The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently

change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species. Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning's awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely

s47F

s47F

s47F

From: s22
To: [Anthony McGregor](#) s22
Cc: s22 [Andrew McNee](#)
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Date: Tuesday, 16 June 2020 9:05:05 AM
Attachments: [image001.jpg](#)
[image003.jpg](#)

Thanks Anthony. s22 Give me a ring if there's anything you want to chat about.

s22

From: Anthony McGregor
Sent: Tuesday, 16 June 2020 9:01 AM
To: s22
Cc: s22 [Andrew McNee](#) s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Hi s22

A few suggestions in red below.

Happy to discuss.

Anthony

Anthony McGregor

Assistant Secretary| Chemicals Management Branch

Environment Protection Division

Department of Agriculture, Water and the Environment

s22

awe.gov.au



From: s22
Sent: Tuesday, 16 June 2020 8:33 AM
To: s22 [Anthony McGregor](#)
<Anthony.McGregor@environment.gov.au>
Cc: s22
s22
[Andrew McNee](#) <Andrew.McNee@environment.gov.au>; s22
s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Hi s22 and Anthony,
This was due back yesterday but I have confirmed with s22 that this morning is OK. If possible can you please review/clear the below by 10:30am today?
Myself or s22 are happy to discuss.

Thanks!

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment

Assessments & Governance Branch | Environment Approvals Division

John Gorton Building, King Edward Terrace, Parkes, ACT

GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22

Sent: Monday, 15 June 2020 4:25 PM

To: s22; Anthony McGregor

<Anthony.McGregor@environment.gov.au>

Cc: s22

s22

s22

Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22 Anthony,

Turns out I was wrong again – s22 just sent on some draft text. The body of a suggested e-mail is set out below. Can you please cast your eye over it and let me know if you have any suggestions:

The Minister is aware of a proposal by Maddingley Brown Coal Pty Ltd to dispose of ~~potentially per- and poly-fluoroalkyl substances (PFAS) contaminated~~ spoil from the West Gate Tunnel Project in Melbourne to Maddingley Brown Coal Mine near Bacchus Marsh.

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC the Act), it is the responsibility of a person proposing to take an action to refer ~~the action it~~ for assessment and approval under the Act if required. Only those actions likely to have significant impacts on matters of national environmental significance must be referred under the Act. Substantial penalties may apply to a person who takes such an action without approval. Matters of national environmental significance include listed threatened species and ecological communities; and wetlands of international importance, among others. The Department has written to Maddingley Brown Coal, and will continue to engage with them in relation to their [potential?] obligations under national environmental law.

Outside of matters protected under the Act, the Regulation of the management of of potentially contaminated material, including spoil and other construction wastes, is a matter for the Victorian Government.

Yours,

s22

s22

Chemicals Policy and Advice Section s22

Department of Agriculture, Water and the Environment

John Gorton Building (1BS.223)

PARKES ACT 2600

s22

AWE sig block 2



From: s22

Sent: Monday, 15 June 2020 4:06 PM

To: s22

Cc: s22

s22

Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22

As discussed, words below for your review:

The Minister is aware of a proposal by Maddingley Brown Coal Pty Ltd to dispose of potentially per- and poly- fluoroalkyl substances (PFAS) contaminated spoil from the West Gate Tunnel Project in Melbourne to Maddingley Brown Coal Mine near Bacchus Marsh.

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), it is the responsibility of a person proposing to take an action to refer the action for assessment and approval under the Act if required. Only those actions likely to have significant impacts on matters of national environmental significance must be referred under the Act. Substantial penalties may apply to a person who takes such an action without approval. Matters of national environmental significance include listed threatened species and ecological communities, and wetlands of international importance, among others.

The Department has written to Maddingley Brown Coal, and will continue to engage with them in relation to their obligations under national environmental law.

Regulation of the management of contaminated waste is a matter for the Victorian Government.

From: s22

Sent: Monday, 15 June 2020 2:17 PM

To: Andrew McNee <Andrew.McNee@environment.gov.au>

Cc: s22

s22

s22

s22

Subject: FW: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi Andrew,

For your clearance back to s22 - due today. I have run it past s22 in Chemicals Policy and Advice Section, but his input has not been cleared.

Happy to discuss,

s22

Background:

- On 19 May 2020, the Hon Catherine King MP, Federal Member for Ballarat, wrote to Minister Ley in relation to a proposal by Maddingley Brown Coal Pty Ltd to dispose of potentially per- and poly- fluoroalkyl substances (PFAS) contaminated spoil from the West Gate Tunnel Project in Melbourne to Maddingley Brown Coal Mine near Bacchus Marsh.
- The Department wrote to Maddingley Brown Coal by letter on 29 May 2020, outlining their obligations under the *Environment Protection and Biodiversity Conservation Act 1999*

(EPBC Act).

- On 29 May 2020, in response to this letter, the Department received a call from a representative of Maddingley Brown Coal advising the Department that they have considered their obligations under the EPBC Act and do not intend to submit a referral for the proposal.
- Further information received as part of a campaign in opposition of the proposal alleges that the nationally listed vulnerable Growling Grass Frog is likely to occur at the site. The Department will make further enquiries and continue to liaise with Maddingley Brown Coal in relation to its obligations.
- The management of contamination, including PFAS, in waste is regulated by the Victorian Government.

Talking points:

- It is the responsibility of a person proposing to take an action that is likely to significantly impact a matter of national environmental significance to refer the proposal for assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999*. Substantial penalties may apply to a person who takes such an action without approval.
- The Department has written to Maddingley Brown Coal to advise them that they should consider whether they have responsibilities under national environmental law.
- The regulation of contaminated waste is a matter for the Victorian Government.

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
awe.gov.au

From: DLO Ley <DLOLey@environment.gov.au>

Sent: Friday, June 12, 2020 6:28:02 PM

To: s22

Cc: DLO Ley <DLOLey@environment.gov.au>; Anthony McGregor <Anthony.McGregor@environment.gov.au>; s22

s22 Andrew McNee

<Andrew.McNee@environment.gov.au>

Subject: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22

We are receiving the below correspondence regarding the proposed site for PFAS-contaminated soil from Westgate Tunnel Project.

Could you please coordinate with EAD and provide the office with a set of standard words on Monday 15 June 2020?

Please let me know if you need any further information or to discuss timeframes.

Many Thanks

s22

Departmental Liaison Officer | Office of the Hon Sussan Ley MP

Minister for the Environment

s22

From: s47F

Sent: Friday, 12 June 2020 4:44 PM

To: Minister Ley <Minister.Ley@environment.gov.au>

Subject: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

The Hon. Sussan Ley MP

Minister for the Environment

[Email: minister.ley@environment.gov.au](mailto:minister.ley@environment.gov.au)

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Maddingley community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision. We have also been informed that despite no approvals or permits being issued, or a decision being made by Minister Wynne, that the toxic soil diggings currently beside the West Gate Tunnel Project is to be moved to MBC this Monday morning, 16th June 2020.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal. Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into

waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

Additional EPBC-listed species and threatened ecological communities are listed within a 1km buffer zone of the site. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted.

The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN , 2018).

The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a

review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species. Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning's awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely

s47F

s47F

s47F

From: s22
To: s22
Cc: s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Date: Monday, 15 June 2020 12:03:52 PM

Sorry this time with TPs

Background:

- On 19 May 2020, the Hon Catherine King MP, Federal Member for Ballarat, wrote to Minister Ley in relation to a proposal by Maddingley Brown Coal Pty Ltd to dispose of potentially contaminated spoil from the West Gate Tunnel Project in Melbourne to Maddingley Brown Coal Mine near Bacchus Marsh.
- The Department wrote to Maddingley Brown Coal by letter on 29 May 2020, outlining their obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- On 29 May 2020 In response to this letter, the Department received a call from a representative advising the Department that they have considered their obligations under the EPBC Act and do not intend to refer.
- Further information received as part of a campaign in opposition of the proposal alleges that the nationally listed vulnerable Growling Grass Frog is likely to occur at the site. The Department will make further enquiries and liaise further with Maddingley Brown Coal in relation to its obligations.
- The management of contamination, including PFAS, in waste is regulated by the Victorian Government.

Talking points:

- It is the responsibility of a person proposing to take an action that is likely to significantly impact a matter of national environmental significance to refer the proposal for assessment and approval under the *Environment Protection and Biodiversity Conservation Act 1999*. Substantial penalties may apply to a person who takes such an action without approval.
- The Department has written to Maddingley Brown Coal to advise them that they should consider whether they have responsibilities under national environmental law.
- The regulation of disposal of contaminated waste is a matter for the Victorian Government.

From: s22
Sent: Monday, 15 June 2020 11:58 AM
To: s22
Cc: s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22

Can you let me know if there's anything else- perhaps in relation to the NEMP.

- On 19 May 2020, the Hon Catherine King MP, Federal Member for Ballarat, wrote to Minister Ley in relation to a proposal by Maddingley Brown Coal Pty Ltd to dispose of potentially contaminated spoil from the West Gate Tunnel Project in Melbourne to Maddingley Brown Coal Mine near Bacchus Marsh.
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- The management of contamination, including PFAS, in waste is regulated by the Victorian Government.

I'll give you a call now to discuss.

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: DLO Ley <DLOLey@environment.gov.au>

Sent: Friday, June 12, 2020 6:28:02 PM

To: s22

Cc: DLO Ley <DLOLey@environment.gov.au>; Anthony McGregor <Anthony.McGregor@environment.gov.au>; s22

s22 Andrew McNee <Andrew.McNee@environment.gov.au>

Subject: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22

We are receiving the below correspondence regarding the proposed site for PFAS-contaminated soil from Westgate Tunnel Project.

Could you please coordinate with EAD and provide the office with a set of standard words on Monday 15 June 2020?

Please let me know if you need any further information or to discuss timeframes.

Many Thanks

s22

**Departmental Liaison Officer | Office of the Hon Sussan Ley MP
Minister for the Environment**

s22

From: s47F

Sent: Friday, 12 June 2020 4:44 PM

To: Minister Ley <Minister.Ley@environment.gov.au>

Subject: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

The Hon. Sussan Ley MP
Minister for the Environment

[Email: minister.ley@environment.gov.au](mailto:minister.ley@environment.gov.au)

Dear Minister Ley,

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the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely

s47F

s47F

s47F

From: s22
To: s22
Cc: s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Date: Monday, 15 June 2020 10:43:08 AM

Thanks s22, I'm having a look now. Can you also review the corro- it appears to suggest Growling Grass Frogs occur at the site. We'll probably need to write to them again to advise them.

From: s22
Sent: Monday, 15 June 2020 10:13 AM
To: s22
Cc: s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Good morning s22
Please see attached standard words in regards to Maddingley Brown Coal's proposed storage of PFAS-contaminated soil from the West Gate Tunnel Project.
Kind regards,
s22
Assessment Officer | Victoria and Tasmania Assessments s22

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au

From: s22
Sent: Friday, 12 June 2020 7:34 PM
To: s22
Cc: s22
s22
Subject: FW: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]
Hi s22
Something for first thing Monday- can you please put together some dot points (up to 5 or 6 points) including the standard lines about EPBC Act obligations and what we've done to date. Nicola- we've provided corro to the proponent of this proposal to advise them of their obligations under the EPBC Act and they have advised that they do not intend to refer. We haven't undertaken any assessment ourselves of the likelihood of impacts, nor in relation to PFAS management generally. Happy to discuss on Monday.
Kind Regards,
s22
s22
Co-Director (Acting) | Victoria & Tasmania Assessments s22
s22
Department of Agriculture, Water and the Environment

Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
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From: DLO Ley <DLOLey@environment.gov.au>

Sent: Friday, June 12, 2020 6:28:02 PM

To: s22

Cc: DLO Ley <DLOLey@environment.gov.au>; Anthony McGregor <Anthony.McGregor@environment.gov.au>; s22

s22 Andrew McNee

<Andrew.McNee@environment.gov.au>

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Please let me know if you need any further information or to discuss timeframes.

Many Thanks

s22

**Departmental Liaison Officer | Office of the Hon Sussan Ley MP
Minister for the Environment**

s22

From: s47F

Sent: Friday, 12 June 2020 4:44 PM

To: Minister Ley <Minister.Ley@environment.gov.au>

Subject: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

The Hon. Sussan Ley MP

Minister for the Environment

[Email: minister.ley@environment.gov.au](mailto:minister.ley@environment.gov.au)

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

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at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

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contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region, 2019* [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species. Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely

s47F

s47F

s47F

From: s22
To: s22
Subject: RE: For review / signature: Maddingley Brown Coal letter [SEC=OFFICIAL]
Date: Friday, 19 June 2020 5:48:31 PM

I think that's fine- but we need to be clear that we are referring to allegations received- not our own assessment. We don't know anything about the proposal. I've put some comments in for s22 to consider on Monday.

From: s22
Sent: Friday, 19 June 2020 11:53 AM
To: s22
Subject: For review / signature: Maddingley Brown Coal letter [SEC=OFFICIAL]

Hi s22

Revised letter to Maddingley Brown Coal for your review [here](#).

The revised PFAS NEMP (2020) has not yet been endorsed by Victoria and is therefore not being implemented in that state. The advice I have quoted in the letter re disposal of PFAS is consistent between the original NEMP (2018; relevant in Vic) and the 2020 version. The link I have provided in the letter leads to a page where both versions are available, as I am not sure if/when Vic plans to endorse the 2020 version. Please let me know if you'd like me to change this to refer to the 2018 version only.

Cheers

s22

From: s22
Sent: Thursday, 18 June 2020 10:18 PM
To: s22
Cc: s22
Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Good evening s22 ,

Please see the SPIRE link to the Maddingley Brown Coal Pty Ltd letter for your review [here](#).

I mentioned the NEMP (2018) as that was the NEMP referred to in the correspondence, while I also referred to the NEMP (2020) as it has the latest available regulations to refer to.

I attempted to refer to all the allegations mentioned in the campaign correspondence in the attached letter.

Kind regards,

s22

Assessment Officer | Victoria and Tasmania Assessments s22

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au

From: s22

Sent: Thursday, 18 June 2020 3:24 PM

To: s22

Cc: s22

Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hey s22 - see comment in the letter

From: s22

Sent: Thursday, 18 June 2020 1:30 PM

To: s22

Cc: s22

Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22,

Please see the SPIRE link for the relevant document [here](#).

Kind regards,

s22

Assessment Officer | Victoria and Tasmania Assessments s22

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au

From: s22

Sent: Thursday, 18 June 2020 1:24 PM

To: s22

Cc: s22

Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Can I have a SPIRE link please

From: s22

Sent: Thursday, 18 June 2020 1:15 PM

To: s22

Cc: s22

Subject: RE: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Good afternoon s22

Please see attached draft letter to the proponent regarding the allegations made in the campaign correspondence.

Thank you,

s22

Assessment Officer | Victoria and Tasmania Assessments s22

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au

From: s22

Sent: Tuesday, 16 June 2020 10:07 AM

To: s22

s22

Subject: FW: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22 and s22

Can we have a letter ready to go to the proponent this week in relation to the allegations in the campaign corro?

Happy to discuss,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments | s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22

Sent: Tuesday, 16 June 2020 9:50 AM

To: Andrew McNee <Andrew.McNee@environment.gov.au>

Cc: s22

s22

s22

s22 Anthony McGregor

<Anthony.McGregor@environment.gov.au> s22

s22

Subject: FW: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi Andrew,

For your clearance back to s22 The words below include input from Anthony McGregor and s22

The Minister is aware of a proposal by Maddingley Brown Coal Pty Ltd to dispose of spoil from the West Gate Tunnel Project to Maddingley Brown Coal Mine near Bacchus Marsh.

Under the *Environment Protection and Biodiversity Conservation Act 1999* (the Act), it is the responsibility of a person proposing to take an action to refer it for assessment and approval under the Act. Only those actions likely to have significant impacts on matters of national environmental significance must be referred under the Act. Substantial penalties may apply to a person who takes such an action without approval. Matters of national environmental significance include listed threatened species and ecological communities and wetlands of international importance, among others.

The Department has written to Maddingley Brown Coal, and will continue to engage with them in relation to any obligations they may have under national environmental law.

Outside of matters protected under the Act, the regulation of potentially contaminated material, including spoil and other construction wastes, is a matter for the Victorian Government.

Happy to discuss,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments | s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: DLO Ley <DLOLey@environment.gov.au>

Sent: Friday, June 12, 2020 6:28:02 PM

To: s22

Cc: DLO Ley <DLOLey@environment.gov.au>; Anthony McGregor <Anthony.McGregor@environment.gov.au>, s22

s22 Andrew McNee

<Andrew.McNee@environment.gov.au>

Subject: Request for standard words - proposed site for PFAS-contaminated soil from Westgate Tunnel Project - due Monday 15 June 2020 [SEC=OFFICIAL]

Hi s22

We are receiving the below correspondence regarding the proposed site for PFAS-contaminated soil from Westgate Tunnel Project.

Could you please coordinate with EAD and provide the office with a set of standard words on Monday 15 June 2020?

Please let me know if you need any further information or to discuss timeframes.

Many Thanks

s22

**Departmental Liaison Officer | Office of the Hon Sussan Ley MP
Minister for the Environment**

s22

From: s47F

Sent: Friday, 12 June 2020 4:44 PM

To: Minister Ley <Minister.Ley@environment.gov.au>

Subject: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

The Hon. Sussan Ley MP

Minister for the Environment

[Email: minister.ley@environment.gov.au](mailto:minister.ley@environment.gov.au)

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Maddingley community to express my deep

concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision. We have also been informed that despite no approvals or permits being issued, or a decision being made by Minister Wynne, that the toxic soil diggings currently beside the West Gate Tunnel Project is to be moved to MBC this Monday morning, 16th June 2020.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal. Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas. Additional EPBC-listed species and threatened ecological communities are listed within a 1km buffer zone of the site. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted. The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN , 2018).

The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species. Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely

s47F

s47F

s47F

From: s22
To: [Compliance](#); [Director Compliance](#)
Subject: Maddingley Brown Coal - soil dumping from west gate tunnel may have commenced [SEC=OFFICIAL]
Date: Thursday, 18 June 2020 1:48:00 PM

Hi all,

We have been receiving some reports regarding the potential dumping of PFAS-contaminated soil from the West Gate Tunnel project at the Maddingley Brown Coal (MBC) mine site. We have written to MBC outlining how the EPBC Act may apply to this proposal (particularly in relation to downstream Ramsar impacts). MBC responded that they do not intend to refer the action.

I have since seen an article indicating that soil dumping may have commenced at the MBC mine (<https://www.powerfballarat.com.au/news/local-news/99912-dumping-begins-at-maddingley-coal-site>), though it is not clear what the trucks contained. MBC have denied that West Gate Tunnel spoil would be arriving on site this week (<https://mooraboolonline.com.au/2020/06/12/whistleblower-toxic-soil-coming-to-bacchus-marsh-monday/>).

We will be writing to MBC again seeking confirmation as to whether the action has commenced and will let you know if they have started the action.

Thanks

s22

s22

A/g Assistant Director | Victoria and Tasmania Assessments

s22

Environment Approvals Division

Department of Agriculture, Water and the Environment

GPO Box 787

Canberra ACT 2601

From: s22
To: s22
Cc: s22
Subject: FW: West Gate Tunnel spoil disposal at Maddingley Coal Mine [SEC=OFFICIAL:Sensitive]
Date: Monday, 25 May 2020 8:00:05 AM

Hi s22,

Can you please save this as an incoming third party report and draft an obligations letter to the owner of Maddingly Brown Coal.

Thanks!

s22

s22

Assistant Director | Victoria & Tasmania Assessments s22
Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22

Sent: Friday, 22 May 2020 2:30 PM

To: s47F

Cc: s22

Subject: West Gate Tunnel spoil disposal at Maddingley Coal Mine [SEC=OFFICIAL:Sensitive]

Hi s47F and s47F

Below is the corro we are looking into. On face value I think is a proposal that may need to consider its obligations under the EPBC Act. What we don't know however is who is proposing it, and what the West Gate Tunnel proposal is.

We've had a couple of not-controlled action decisions for West Gate proposals including 2007/3356 and 2015/7620. The action in 2015/7620 includes:

The construction of tunnels would also involve the extraction, treatment and disposal of groundwater and the management of excavated material. It is anticipated that trucks carting excavated material would directly access the arterial road and freeway network from work sites. Excess material would need to be carted to off-site locations. Options for reuse and disposal would be investigated. The appointed contractor would enter into a commercial arrangement for the delivery and disposal of excavated material at the time of construction, for example refilling of former and current quarries. Excavated material would be submitted to regular contaminant testing to ensure suitability for disposal. All material, including any contaminated soils generated by the works, would be managed in accordance with the Environment Protection Act 1970.

Are you able to confirm who we would need to be writing to in order to provide information about potential EPBC Act obligations, and if you're aware of exactly what proposal the spoil is coming from?

I write regarding Maddingley Brown Coal's proposal to act as a spoil disposal facility for the Victorian Government's West Gate Tunnel Project and potential triggers of the EPBC Act.

As you may be aware, this proposal will see a significant quantity of PFAS-contaminated soil from this major tunnel project transported for storage at a brown coal mine near Bacchus Marsh, in my electorate of Ballarat.

This project has encountered significant community opposition.

Through this ongoing process, it has been raised with me that the proximity of the

proposed storage location to the Parwan River could potentially impact upon the endangered growling grass frog, which has been known to breed in the area. As such, it has been suggested that this project may trigger the Commonwealth EPBC Act. As this matter has been referred to the Victorian Minister of Planning under section 20(4) of the Planning and Environment Act (Vic), I would appreciate any information that could be provided on this matter as quickly as possible.

Happy to discuss!

s22

s22

Assistant Director | Victoria & Tasmania Assessments s22

Department of Agriculture, Water and the Environment

Assessments & Governance Branch | Environment Approvals Division

John Gorton Building, King Edward Terrace, Parkes, ACT

GPO Box 858, Canberra ACT 2601

awe.gov.au



Australian Government
**Department of Agriculture,
Water and the Environment**

MC20-010491

s47F

Acting President
Moorabool Environment Group

s47F

Dear s47F

Thank you for your correspondence to the Minister for the Environment, the Hon Sussan Ley MP, concerning disposal of soil from the West Gate Tunnel Project at the Maddingley Brown Coal Mine. Your letter has been passed on to the Department of Agriculture, Water and the Environment to reply.

As you are aware, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage matters of national environmental significance, including nationally and internationally important flora, fauna, ecological communities and heritage places, among others. Actions that have, or are likely to have, a significant impact on nationally protected matters require approval from the Australian Government Minister for the Environment. Not all actions affecting matters protected by the EPBC Act will have a significant impact and require approval.

It is the responsibility of the person proposing to take an action to make a referral under the EPBC Act, if one is required. The Department has contacted Maddingley Brown Coal Pty Ltd (MBC) to ensure that they are aware of their obligations under the EPBC Act. The Department has also informed MBC of the per- and polyfluoroalkyl substances National Environmental Management Plan, which sets out guidance for storage, re-use and disposal of PFAS contaminated substances.

The Department takes non-compliance with the EPBC Act seriously. Where information is available to indicate a specific action has commenced and is resulting in a significant impact on a matter of national environmental significance, this information can be provided to the Department's Office of Compliance at compliance@environment.gov.au.

Thank you again for bringing your concerns to the Government's attention.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Declan O'Connor-Cox'.

Declan O'Connor-Cox
A/g Assistant Secretary
Assessments (Victoria, Tasmania) and Post Approvals

14 August 2020

Third-party Report Form

This form is to be used by assessment officers when a third party (not an individual associated with undertaking or planning the action) calls or emails the Department to report potential impacts on matters protected under the EPBC Act.

ACTIONING OFFICER:

Name: s22	Phone: s22	Section: Victoria and Tasmania Assessments
-----------	------------	---

DETAILS

What is the action/impact?	Disposal of contaminated soil from the West Gate Tunnel Project at Maddingley Brown Coal Mine
----------------------------	---

Where is the action/impact occurring/proposed?	11 Tilleys Rd, Maddingley VIC 3340
--	------------------------------------

Who is proposing/taking the action?	Maddingley Brown Coal Pty. Ltd.
-------------------------------------	---------------------------------

When is the action/impact proposed?	Unknown – future action
-------------------------------------	-------------------------

Who is the person making the report?	The Hon MP Catherine King, Federal Member of Ballarat, Catherine.King.MP@aph.gov.au
--------------------------------------	--

INITIAL SCREENING

Is the reported action/impact relevant to the EPBC Act?	Yes
---	-----

If so, what are the relevant protected matters?

Port Phillip Bay (Western Shoreline) and Bellarine Peninsula (20-30km upstream)

Has the reported action/impact already been referred?	No
---	----

Has the reported action/impact already commenced?	No
---	----

FURTHER CONSIDERATION (IF REQUIRED)

What protected matters may be potentially impacted?	Port Phillip Bay (Western Shoreline) and Bellarine Peninsula (20-30km upstream)
---	---

Could the impacts be significant?

There is insufficient detail on the proposal to understand the full scope of potential impacts, however based on the information available potential impacts could occur to the Ramsar site through contamination of water, particularly from PFAS.

ACTION TAKEN:

Obligations letter to be sent to Maddingley Brown Coal Pty. Ltd.



[REDACTED]
Environmental Manager
Maddingley Brown Coal Pty Ltd
PO Box 376
Bacchus Marsh VIC 3340
[REDACTED]

Dear [REDACTED]

Environment Protection and Biodiversity Conservation Act 1999
**Disposal of contaminated soil from the West Gate Tunnel Project at Maddingley
Brown Coal Mine**

I am writing to provide you with information about the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). I understand that Maddingley Brown Coal Pty Ltd is considering the disposal of potentially contaminated soil from the West Gate Tunnel Project at the Maddingley Brown Coal Mine. I am writing to explain how the EPBC Act could apply to this proposal.

The EPBC Act is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage the environment, including nationally and internationally important flora, fauna, ecological communities and heritage places, among others. Under the EPBC Act, actions that have, or are likely to have, a significant impact on nationally protected matters require approval from the Australian Government Minister for Environment. Based on the available information regarding the location and nature of the proposed action, nationally protected matters considered relevant to the proposed action include the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site, a wetland of international importance.

For your convenience, I have enclosed a Protected Matters Report for the proposal site. The report lists a number of protected matters that may occur in the area for your consideration. Please note that the enclosed report is based on the limited information available to the Department at this time and may not reflect the true extent of protected matters that may be impacted by the proposed action. You may wish to run your own Protected Matters Report on the Department's website at <http://www.environment.gov.au/epbc/protected-matters-search-tool>.

A person proposing to take an action that is likely to have a significant impact on a matter of national environmental significance must refer their proposal for assessment and approval under the EPBC Act. Substantial penalties apply to a person who takes such an action without approval.

Not all actions affecting matters protected by the EPBC Act will have a significant impact and require approval. Guidelines for determining whether the impact of an action is likely to be significant are available from the Department's website at <http://www.environment.gov.au/epbc/policy-statements>.

These Guidelines are designed to help you decide whether you need to refer your proposal to the Department. If the question of significance is unclear, you can refer your proposal for a decision whether or not approval is needed.

Instructions for submitting a referral through the Department's online services, together with further information on the EPBC Act, is available on the Department's website at <http://www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process>.

Please call or email the contact officer, [REDACTED], on [REDACTED], or by email [REDACTED] within 28 days of the date of this letter to advise whether or not you intend to refer your proposal.

You may also wish to arrange a pre-referral meeting. Further information is available at <http://www.environment.gov.au/epbc/publications/pre-referral-meeting-guidance>. Alternatively, if you would like further information about the referral process, you may contact the Referrals Gateway on 02 6274 2496.

Yours sincerely

[REDACTED]

[REDACTED]

Acting Director
Victoria and Tasmania Assessments Section

18 May 2020

Att. Protected Matters Search Tool report

From: s22
To: s22
Cc: s22
Subject: RE: s22 - For signature - Maddingley Brown Coal Mine obligations letter [SEC=OFFICIAL]
Date: Friday, 29 May 2020 11:59:01 AM

Hi s22,

I just took a call from s47F from Maddingley Brown Coal s47F in response to the obligations letter – he advised that they have considered their obligations and do not intend to refer. I said I would make a file note of the call as their response to the letter and that we would call him if we received information that gave us cause for concern in relation to the impacts of the proposal.

Please file this email in SPIRE.

Kind Regards,

s22

s47F

Co-Director (Acting) | Victoria & Tasmania Assessments s47F

s47F

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22
Sent: Thursday, 28 May 2020 3:44 PM
To: s22
Cc: s22
Subject: RE: s22 - For signature - Maddingley Brown Coal Mine obligations letter [SEC=OFFICIAL]
Hi s22 and s22

Thanks for this, please find signed letter attached for sending and filing as per the 3rd party report process.

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22
Sent: Thursday, 28 May 2020 3:24 PM
To: s22
Subject: s22 - For signature - Maddingley Brown Coal Mine obligations letter [SEC=OFFICIAL]
Hello s22

For your consideration and decision:

Decision: Third Party Report

Project Name: Disposal of contaminated soil from the West Gate Tunnel Project at Maddingley Brown Coal Mine

Due date of decision: There is no statutory timeframe for this decision.

Decision package:

Links in SPIRE below:

[VIC-Maddingley-Coal Mine-Email from s47F](#)

[VIC-Maddingley-Coal Mine-ERT 1km](#)

[VIC-Maddingley-Coal Mine-Letter to s47F](#)

[VIC-Maddingley-Coal Mine-Third party report](#)

Thanks

s22

From: s22

Sent: Tuesday, 26 May 2020 4:08 PM

To: s22

Cc: s22

s22

Subject: RE: s22 for signature: Third party report - Storage of PFAS-contaminated soil from the Victorian Government's West Gate Tunnel Project at Maddingley Brown Coal Mine

[SEC=OFFICIAL]

Hi s22 and s22

See comments in the letter- generally it looks fine, but I'm not sure we're writing to the right person.

Thanks,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment

Assessments & Governance Branch | Environment Approvals Division

John Gorton Building, King Edward Terrace, Parkes, ACT

GPO Box 858, Canberra ACT 2601

awe.gov.au

From: s22

Sent: Tuesday, 26 May 2020 1:43 PM

To: s22

Cc: s22

s22

Subject: s22 for signature: Third party report - Storage of PFAS-contaminated soil from the Victorian Government's West Gate Tunnel Project at Maddingley Brown Coal Mine

[SEC=OFFICIAL]

Hello s22

For your consideration and decision:

Decision: Third Party Report

Project Name: Storage of PFAS-contaminated soil from the Victorian Government's West Gate Tunnel Project at Maddingley Brown Coal Mine.

Due date of decision: There is no statutory timeframe for this decision.

Decision package:

Links in SPIRE below:

[VIC-Maddingley-Coal Mine-Email from s47F](#)

[VIC-Maddingley-Coal Mine-ERT 1km](#)

[VIC-Maddingley-Coal Mine-Letter to s47F](#)

[VIC-Maddingley-Coal Mine-Third party report](#)

Thanks

s22

From: noreply@minister.ag.govcms.gov.au on behalf of [Ministers](#)
To: [yourenvminister](#)
Subject: MC20-007130 EPBC-listed Species - Westgate Tunnel Project _EAD
Date: Thursday, 14 May 2020 1:09:10 AM
Attachments: [FederalEnvironmentMinister_reWGT-MBC_EPBC_Fauna_MEG_13May2020.pdf](#)

New feedback has been submitted from the Minister for Agriculture Water and the Environment website.

The details provided are:

Title:

Dr

Name:

§47F

Organisation:

Moorabool Environment Group Inc.

Email:

§47F

Phone:

§47F

Address:

Subject:

URGENT: EPBC-listed Species - Westgate Tunnel Project PFAS site

Message:

Please find attached an urgent letter for Minister Ley re EPBC-listed species and matters likely to be significantly impacted by proposed site for PFAS-contaminated spoil from Westgate Tunnel Project.

Submission id: 567

Submission date/time: Thu, 2020-05-14 01:08



Moorabool Environment Group Inc.
PO Box 545
Bacchus Marsh VIC 3340
Email: s47F
Phone: s47F

Wednesday 13th May 2020

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600

Dear Minister Ley,

Re: URGENT: EPBC-listed species may be ignored in decision about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

We are writing to inform you that the Westgate Tunnel Project (partnership involving Victorian Government) is proposing to dump Per- and polyfluoroalkyl substances (PFAS)-contaminated spoil at a site that could impact on EPBC-listed species, threatened ecological communities and a Ramsar wetland of international significance. The site is known as Maddingley Brown Coal, although it should be noted that the proposed site is NOT part of Maddingley Brown Coal's mine/landfill area, as described further below (see also Appendix A).

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. We have written to Minister Wynne about these EPBC-listed species and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as we have not received a reply from Minister Wynne as yet.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal.

Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

Additional EPBC-listed species (n = 33) and threatened ecological communities (n = 4) listed within a 1km buffer zone of the site are outlined in Appendices B and C. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted through, for example:

- Disturbance of habitat on site, including both overwintering and breeding habitat, e.g. through excavation, clearing of vegetation, sediment runoff, noise;
- Disturbance of habitat off site, e.g. through effects downstream of the site;
- PFAS contamination of habitat on site, e.g. through leaching of PFAS into waterbodies / watercourses on site;
- PFAS contamination of habitat off site, e.g. through PFAS leachate travelling offsite and into Parwan Creek, Star Dam, Little Lucifer Dam, Werribee River, etc. via watercourses or aquifers;
- Direct bioaccumulation of PFAS in species, via absorption, ingestion, etc.
- Biomagnification (and subsequent bioaccumulation) of PFAS in species food-chains, by consumption of animals or plants exposed to PFAS.

The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NEMP, 2018).

The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

Additional notes about PFAS-associated risks relevant to this proposed site:

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus leaching remains a risk even where current best practice is followed. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). These impacts could lead to further decline in species already critically endangered,

endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. We assert that these warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

About Moorabool Environment Group:

Moorabool Environment Group is the key environmental group in the Bacchus Marsh/Maddingley and Moorabool Shire area. The group is a not-for-profit association, which includes community members, environmental specialists, scientists and others with environmental and local expertise. Moorabool Environment Group has extensive knowledge of threatened, protected and other species in this area, and of Maddingley Brown Coal's history of operation.

We value our local community, and have found that responsible stewardship of our Shire's natural environment benefits local businesses, economic growth and mental and physical health of our citizens. The main industries of our Shire are farming (primarily fruit and vegetables, in addition to livestock) and tourism (especially market garden visitors and wildlife enthusiasts). Both of these industries rely on healthy ecosystems and waterways.

Summary:

In summary, Maddingley Brown Coal has tendered to Transurban to receive and process PFAS-contaminated spoil (mix of soil and water) from the Westgate Tunnel Project. Maddingley Brown Coal is a favoured site in this tender process. Maddingley Brown Coal have formally requested a Planning Scheme intervention and amendment by the Victorian Minister for Planning to allow them to receive and process this spoil in an area previously unused for mining or landfill. The proposed site retains ecological value, and is intimately connected with important waterways, waterbodies, aquifers and other aquatic systems. The proposal is likely to have significant impact on matters of national environmental significance, including EPBC-listed species and ecological communities. There is also an EPBC-listed wetland of international importance that could be impacted. In particular, Growling Grass Frogs are known to occur adjacent to the site, and highly likely to occur on the site itself. EPBC-listed birds also use associated waterbodies and areas.

We are unsure whether the Victorian Minister for Environment is aware of these EPBC-listed species and related issues, especially given the pressure the Victorian Government is under to make a hasty decision regarding sites for the contaminated spoil.

We therefore hope you are able to raise the Victorian Minister for Planning's awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Please do not hesitate to contact us if you have any questions.

Yours sincerely,

s47F

Secretary

Moorabool Environment Group

s47F

President

Moorabool Environment Group

Moorabool Environment Group Inc. acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.

**APPENDIX A:
LOCATION OF PROPOSED SITE & RELATION TO KNOWN & POTENTIAL GROWLING GRASS FROG HABITAT**

Location of proposed site:

Orange = Proposed site for receiving, testing, de-watering and processing PFAS contaminated spoil

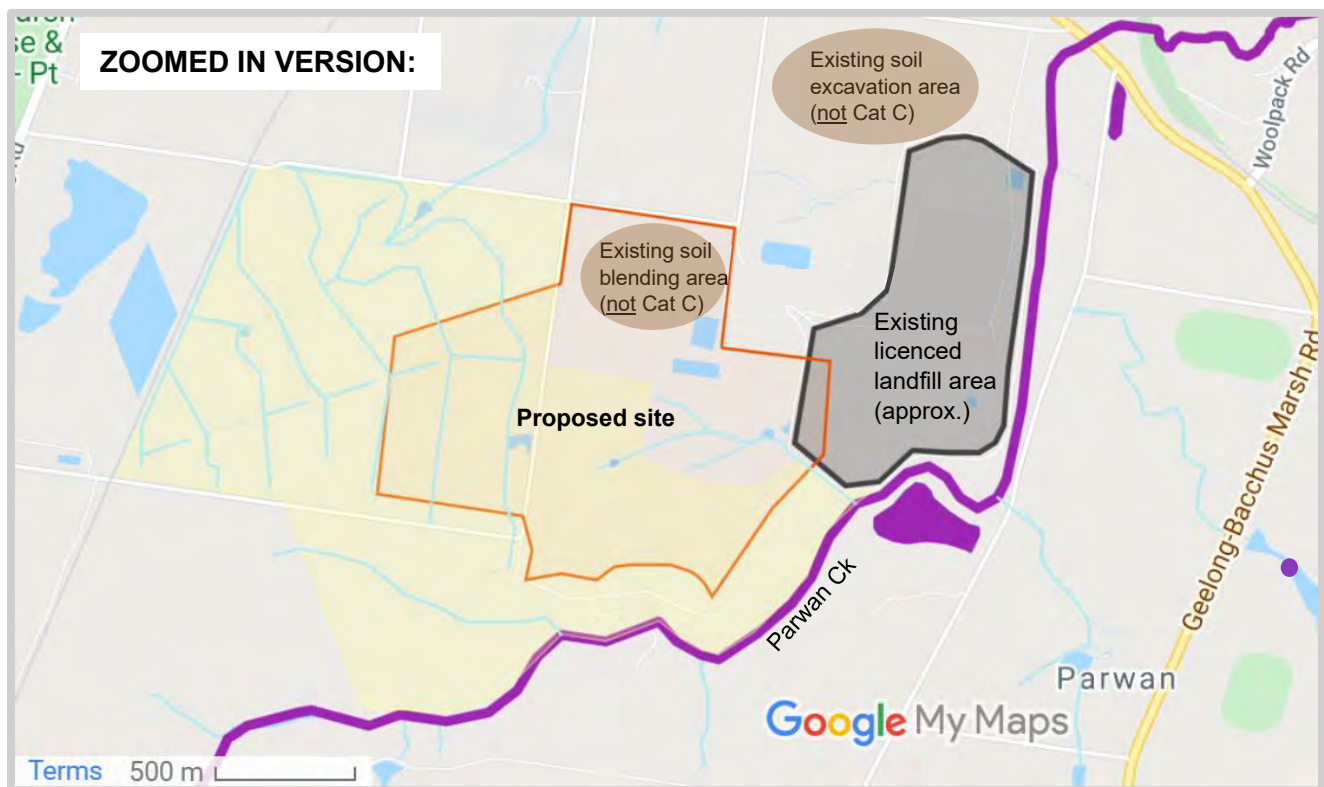
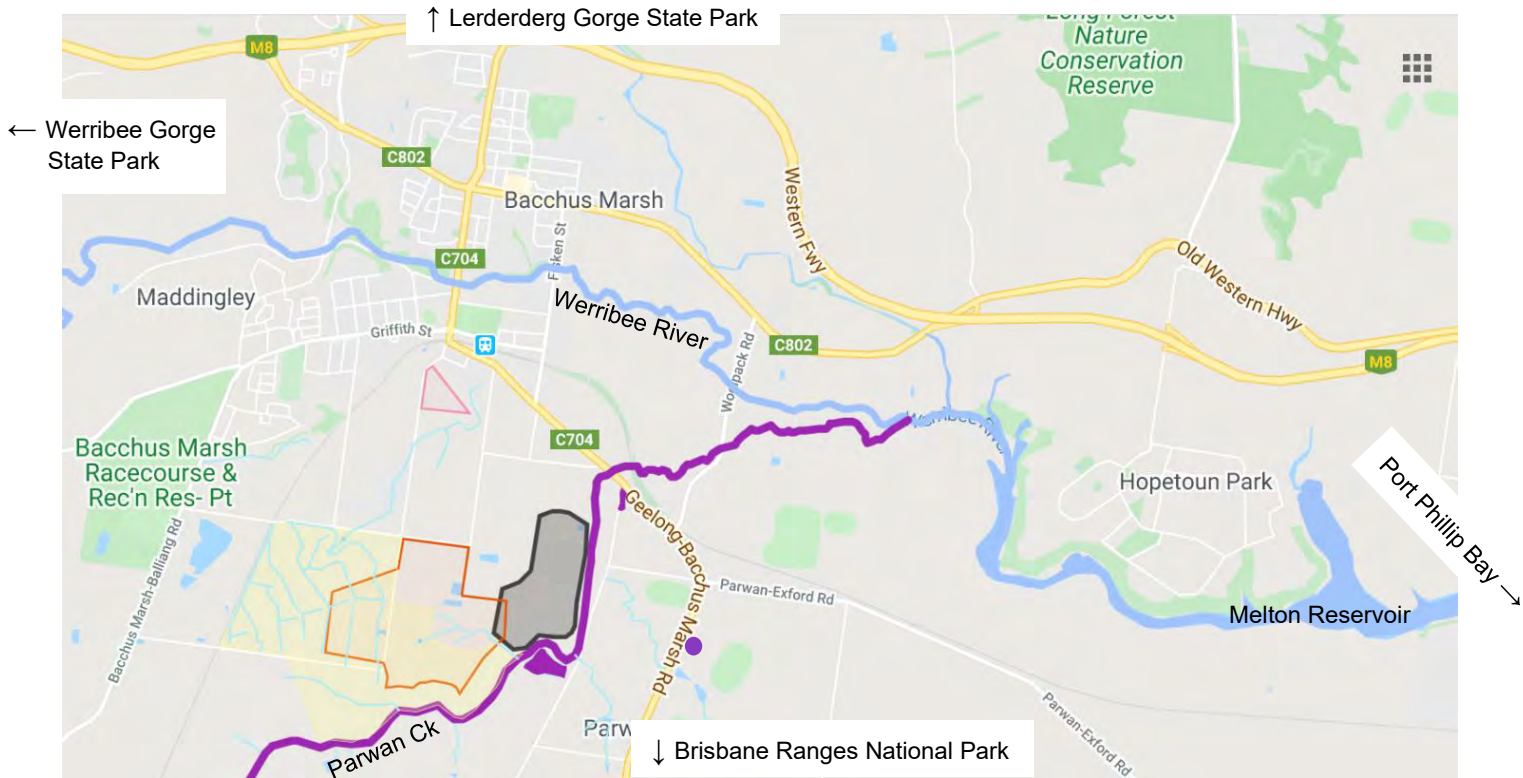
Black = Existing Maddingley Brown Coal landfill area

Purple = Waterbodies known to contain Growling Grass Frogs (other waterbodies are in blue)

Yellow = Areas likely to contain Growling Grass Frogs (on or near proposed site)

Pink = Bacchus Marsh Grammar School

(See additional notes overleaf)



Notes relating to Appendix A:

- Boundaries of proposed site shown are approximate and based on information provided by Maddingley Brown Coal on a brief community information sheet about the project.
- Boundaries of existing landfill site are approximate. Actual licenced landfill area may be smaller than shown.
- Only the area in black (existing landfill) is licenced to receive Category C waste/soils. The proposed site is NOT licenced to receive Category C waste/soils.
- Much of the proposed site was previously used for farming or as a buffer zone. The proposed site area has NOT been previously used for mining or landfilling. Some of the site retains high ecological value.
- Surface water on the proposed site includes both natural and human-made waterbodies/watercourses (shown in blue). Both types can be suitable for habitat Growling Grass Frogs.
- Growling Grass Frogs overwinter in soil, vegetation, rocky areas, ground crevices etc. Excavating or laying materials over soil or vegetated areas near Growling Grass Frog habitat could disturb or kill the frogs.
- Potential Growling Grass Frog habitat may also extend to other parts of the proposed site, however the most likely areas on and near the site have been highlighted.
- The presence of Growling Grass Frogs should be assessed in late Spring or Summer, during their breeding season (as this is when their mating calls occur).
- Full surveys of the areas highlighted in yellow are needed before any planning amendments are made or works are carried out. Surveys should also include other threatened and protected fauna, flora and ecological communities known or likely to occur in the area (see Appendices B and C).

**APPENDIX B:
LISTS OF THREATENED, NEAR-THREATENED & OTHER PROTECTED FAUNA WITHIN VICINITY
OF THE PROPOSED SITE**

These lists have been divided into:

B.1 Records obtained from EPBC Protected Matters Search Tool

Protected matters (fauna only) within 1km buffer zone of the proposed soil processing site.

B.2 Records obtained from the Victorian Biodiversity Atlas (VBA)

Observations of threatened EPBC-listed fauna recorded within 500m to 5km buffer zones of the proposed soil processing site, since 2000 (listed by buffer zone).

Each list begins on a new page (beginning overleaf).

There is some overlap between lists, which has been noted where relevant.

Each listing indicates, where relevant:

- Federal conservation status or main type of protected matter (under the *EPBC Act 1999*);
- Latest year of observation recorded in the VBA;
- Closest observation recorded in the VBA.

Important notes:

The lists below are likely to under-estimate the presence of threatened species on and near the proposed site, for the following reasons:

- Sensitive records exist for the area which may not be publicly available;
- Very few species-specific surveys have been undertaken on MBC's property or areas immediately adjacent;
- Observations by community members are often not recorded in the VBA;
- Additional reasons which we are happy to discuss by telephone.

Species/habitat known to occur on or within 1 km radius of site

B1.1 Growling Grass Frog, Southern Bell Frog (*Litoria raniformis*) (Frog)

Vulnerable

(See also VBA records within 500m to 5km – List B.2)

B1.2 White-throated Needletail (*Hirundapus caudacutus*) (Bird)

Vulnerable; Listed Migratory Species

(See also VBA records within 4km – List B.2)

B1.3 Satin Flycatcher (*Myiagra cyanoleuca*) (Bird)

Listed Migratory Species

Species/habitat likely to occur on or within 1 km radius of site:

B1.4 Golden Sun Moth (*Synemon plana*) (Insect)

Critically Endangered

(See also VBA records within 2.5km – List B.2)

B1.5 Plains-wanderer (*Pedionomus torquatus*) (Bird)

Critically Endangered

B1.6 Australian Painted Snipe (*Rostratula australis* / *Rostratula benghalensis (sensu lato)*) (Bird)

Endangered; Listed Marine Species

B1.7 Swift Parrot (*Lathamus discolor*) (Bird)

Critically Endangered; Listed Marine Species

(See also VBA records within 4km – List B.2)

B1.8 Australasian Bittern (*Botaurus poiciloptilus*) (Bird)

Endangered

B1.9 Grey-headed Flying-fox (*Pteropus poliocephalus*) (Mammal)

Vulnerable

B1.10 Eastern Dwarf Galaxias, Dwarf Galaxias (*Galaxiella pusilla*) (Fish)

Vulnerable

B1.11 Painted Honeyeater (*Grantiella picta*) (Bird)

Vulnerable

B1.12 Striped Legless Lizard, Striped Snake-lizard (*Delma impar*) (Reptile)

Vulnerable

B1.13 Great Egret, White Egret (*Ardea alba*) (Bird)

Listed Marine Species

(See also VBA records within 3.5km – List B.2)

B1.14 White-bellied Sea-Eagle (*Haliaeetus leucogaster*) (Bird)

Listed Marine Species

(See also VBA records within 4.5km – List B.2)

B1.15 Black-eared Cuckoo (*Chrysococcyx osculans*) (Bird)

Listed Marine Species

(See also VBA records within 2km – List B.2)

List B.1 continued...

B1.16 Black-faced Monarch (*Monarcha melanopsis*) (Bird)

Listed Migratory Species

B1.17 Common Greenshank, Greenshank (*Tringa nebularia*) (Bird)

Listed Migratory Species

B1.18 Fork-tailed Swift (*Apus pacificus*) (Bird)

Listed Migratory Species

B1.19 Rufous Fantail (*Rhipidura rufifrons*) (Bird)

Listed Migratory Species

Species/habitat may to occur on or within 1 km radius of site:

B1.20 Regent Honeyeater (*Anthochaera phrygia*) (Bird)

Critically Endangered

B1.21 Curlew Sandpiper (*Calidris ferruginea*) (Bird)

Critically Endangered; Listed Migratory Species

B1.22 Eastern Curlew, Far Eastern Curlew (*Numenius madagascariensis*) (Bird)

Critically Endangered; Listed Migratory Species

B1.23 Spot-tailed Quoll, Tiger Quoll (southeastern mainland population) (*Dasyurus maculatus maculatus*) (SE mainland population) (Mammal)

Endangered

B1.24 Grassland Earless Dragon (*Tympanocryptis pinguicollis*) (Reptile)

Endangered

B1.25 Australian Grayling (*Prototroctes maraena*) (Fish)

Vulnerable

B1.26 Latham's Snipe, Japanese Snipe (*Gallinago hardwickii*) (Bird)

Listed Migratory Species

B1.27 Cattle Egret (*Ardea ibis*) (Bird)

Listed Marine Species

B1.28 Common Sandpiper (*Actitis hypoleucos*) (Bird)

Listed Migratory Species

B1.29 Osprey (*Pandion haliaetus*) (Bird)

Listed Migratory Species

B1.30 Pectoral Sandpiper (*Calidris melanotos*) (Bird)

Listed Migratory Species

B1.31 Rainbow Bee-eater (*Merops ornatus*) (Bird)

Listed Marine Species

B1.32 Sharp-tailed Sandpiper (*Calidris acuminata*) (Bird)

Listed Migratory Species

B1.33 Yellow Wagtail (*Motacilla flava*) (Bird)

Listed Migratory Species

LIST B.2: VBA OBSERVATIONS OF EPBC-LISTED FAUNA WITHIN 500m TO 5km BUFFER ZONE OF PROPOSED SITE (SINCE 2000)

Occurs less than 500 m from site

B2.1 Growling Grass Frog, Southern Bell Frog (*Litoria raniformis*) (Frog)

EPBC: Vulnerable (See List B.2 below – EPBC Protected Fauna)

VBA: 2018 / approx. 300 metres

Also likely to occur in waterbodies on site – this has not been assessed.

Occurs within 2 km of site:

B2.2 Black-eared Cuckoo (*Chrysococcyx osculans*) (Bird)

Victoria: Near Threatened (Victorian Advisory List)

EPBC: Listed Marine Species (See List A.2 below – EPBC Protected Fauna)

VBA: 2018

Occurs within 3 km of site:

B2.3 Golden Sun Moth (*Synemon plana*) (Insect)

EPBC: Critically Endangered (See List A.2 below – EPBC Protected Fauna)

VBA: 2012 / 2.5km

Occurs within 4 km of site:

B2.4 Swift Parrot (*Lathamus discolor*) (Bird)

EPBC: Critically Endangered; Listed Marine Species (See List B.2 below – EPBC Protected Fauna)

VBA: 2006 / 4km

B2.5 Great Egret, White Egret (*Ardea alba*) (Bird)

EPBC: Listed Marine Species (See List B.2 below – EPBC Protected Fauna)

VBA: 2018 / 3.5km

B2.6 White-throated Needletail (*Hirundapus caudacutus*) (Bird)

EPBC: Vulnerable; Listed Migratory Species (See List B.2 below – EPBC Protected Fauna)

VBA: 2014 / 4km

Occurs within 5 km of site:

B2.7 White-bellied Sea-Eagle (*Haliaeetus leucogaster*) (Bird)

EPBC: Listed Marine Species (See List A.2 below – EPBC Protected Fauna)

VBA: 2018 / 4.5km

**APPENDIX C:
LISTS OF THREATENED ECOLOGICAL COMMUNITIES & VEGETATION CLASSES
WITHIN VICINITY OF PROPOSED SITE**

These lists have been divided into:

C.1 Records obtained from EPBC Protected Matters Search Tool

Protected matters (Threatened ecological communities) within 1km buffer zone of the proposed site.

C.2 Records obtained from NatureKit (DELWP, Victoria)

Ecological Vegetation Classes (EVCs) on proposed site and within 1km buffer zone of site.

LIST C.1: THREATENED ECOLOGICAL COMMUNITIES ON OR WITHIN 1 KM BUFFER ZONE OF SITE

Known to occur on or within 1 km radius of site:

C2.1 Grassy Eucalypt Woodland of the Victorian Volcanic Plain

Victoria: Endangered (see Grassy Woodland EVC listings above)

EPBC: Critically Endangered

Likely to occur on or within 1 km radius of site:

C2.2 Natural Temperate Grassland of the Victorian Volcanic Plain

Victoria: Endangered (see Plains Grassland of Victorian Volcanic Plain EVC listing above)

EPBC: Critically Endangered

May occur on site or within 1 km radius of site:

C2.3 White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

EPBC: Critically Endangered

C2.4 Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia

EPBC: Endangered

LIST C.2: THREATENED ECOLOGICAL VEGETATION CLASSES (EVCs) ON OR WITHIN 1 KM BUFFER ZONE OF SITE

Occurs on site:

C1.1 Plains Grassy Woodland of Victorian Volcanic Plain (EVC no. 55)

Victoria: Endangered

(see also EPBC listing - Grassy Eucalypt Woodland of the Victorian Volcanic Plain)

C1.2 Plains Grassland of Victorian Volcanic Plain (EVC no. 132)

Victoria: Endangered

Occurs within 1 km radius of site:

C1.3 Creekline Grassy Woodland of Victorian Volcanic Plain (EVC no. 68)

Victoria: Endangered

C1.4 Red Gum Swamp of Victorian Volcanic Plain (EVC no. 292)

Victoria: Endangered

From: [DLO Ley](#)
To: [MinisterialCorrespondence](#)
Cc: [DLO Ley](#)
Subject: MC20-011610 (Moorabool Environment Group Inc, Valpied) - EPBC-listed species may be ignored in decision about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal) - EAD (link AWE MC20-010491)
Date: Thursday, 30 July 2020 11:42:02 AM
Attachments: [FederalEnvironmentMinister_reWGT-MBC_EPBC Fauna_MEG_13May2020.pdf](#)

Please register for AA

From: Ley, Sussan (MP)
Sent: Sunday, 12 July 2020 9:44 AM
To: DLO Ley
Subject: FW: URGENT: EPBC: Maddingley Brown Coal - PFAS (followup from Catherine King MP's letter)
From: MEG Moorabool Environment Group s47F
Sent: Monday, 6 July 2020 11:54 PM
To: Ley, Sussan (MP) <Sussan.Ley.MP@aph.gov.au>
Subject: URGENT: EPBC: Maddingley Brown Coal - PFAS (followup from Catherine King MP's letter)

Dear Minister Ley,

Thank you for your reply to our local member, Catherine King MP, who wrote to you regarding concerns that Maddingley Brown Coal's (MBC's) proposal/preparations to receive PFAS-contaminated spoil should have been referred through the EPBC Act.

Moorabool Environment Group Inc. are currently compiling additional evidence supporting that this referral should have occurred, and will forward this to you and your office as soon as possible (over the next couple of days). Please also see attached previous letter dated 13th May 2020.

The EPBC-listed species of particular concern is the Growling Grass Frog (*Litoria raniformis*), as important populations for this species occur immediately adjacent to the proposed site, downstream of the site, and is highly likely to occur on the site. Other species protected under the EPBC Act also occur in the immediate area.

Parwan Creek, immediately adjacent to the site, contains important source-populations for breeding, dispersal and recovery of the Growling Grass Frog.

Parwan Creek is highly likely to become contaminated with PFAS leachate if PFAS-contaminated spoil is accepted at the site, given the close proximity of the site, watercourses on the site, and other features of the proposal.

Even low levels of PFAS (at the lowest level of detection) can bioaccumulate to toxic levels for frogs and other fauna.

The proposed site has never been previously used for this purpose, or for any other landfilling or heavy industrial activities. Some of the site was used for farming up until recently. It is important to note that the proposed site is NOT part of Maddingley Brown Coal's existing landfill or old mine area. It is a new site (over 100 hectares).

We will provide further details in the coming days, including locations of *Litoria raniformis* and other EPBC-listed species in the area, and likely impact of MBC's actions on these species.

Yours sincerely,

s47F

Acting President

Moorabool Environment Group Inc.

Email: s47F

Phone: s47F

We acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.

From: [DLO Ley](#)
To: [MinisterialCorrespondence](#)
Cc: [DLO Ley](#)
Subject: MC20-011459 (Lane) - concerns about the Westgate Tunnel project - EPD (AWE link MC20-008310)
Date: Thursday, 23 July 2020 2:17:43 PM

Please register for info.

Referred from Minister Pitt's office.

For Official Use Only

From: noreply@ministerag.govcms.gov.au [<mailto:noreply@ministerag.govcms.gov.au>]
Sent: Wednesday, 17 June 2020 11:21 AM
To: DLO Resources <DLOResources@industry.gov.au>
Subject: Feedback received - Keith Pitt feedback - ID:848
New feedback has been submitted from the Minister for Agriculture, Water and the Environment website.

The details provided are:

Name:

s47F

Email:

s47F

Phone:

s47F

Subject:

REQUEST FOR URGENT INTERVENTION - risk to Victorian waterways - decision imminent

Message:

Dear Mr Pitt

I would like to lodge a formal complaint against the Victorian Labor government in relation to their project, the Westgate Tunnel. Daniel Andrews has made no secret that he wants the project to push ahead, regardless of the strong opposition of the residents of Bacchus Marsh, where the 1.5 million tons of category C PFAS contaminated soil is planned to be dumped.

Now, he will try to pass the responsibility onto Transurban who are overseeing the project, however, we dispute that on the grounds that public funding has been used to part fund the project and the Andrews government, Richard Wynne in particular, have the authority to bring the project to a halt. We have also uncovered multiple conflicts of interest linked to Dan Andrews and his government in relation to the project. (Please refer attached)

Our objection is based on a number of points:

- Both Jacinta Allan and Transurban have publicly stated that the soil is only 'expected' to contain low levels. There were leaked reports of testing results that state there are in fact high levels in some areas and also the detection of Category A and B contaminants. On a project this size, 'expected' is not good enough, they should only be dealing in facts.
- The preferred site to accept this spoil is Maddingley Brown Coal, a facility with a permit to receive no more than 500 tons of category C contaminated soil. They have overridden the local council and have not fully consulted the residents of the town and requested that Richard Wynne change the planning so that they may attain a license to receive the spoil.
- Maddingley Brown Coal have repeatedly been found to be in breach of operating standards that are part of their license agreement. These breaches are easily found on their last number of EPA audit reports. The most concerning is that of leaching, whereby the cells containing the material become compromised and leak the contaminated matter. This is their past record.
- The residents are quite understandably horrified and under immense stress at the prospect of these excessive amounts of contaminants being trusted with a company with such a disregard for safety and environmental impacts.
- The site is especially unsuitable when you take into consideration the following:
 - Bacchus Marsh Grammar School (2,000 students) is only 440 metres from the site.

- The Parwan Creek runs alongside the perimeter of the site, which then runs into the Werribee River - this not only irrigates a large proportion of Victoria's fresh produce farmland, it is a sensitive habitat for a number of endangered wildlife including the Growling Grass Frog. Surveillance of the banks of the creek have consistently shown an abundance of littering that has come from the site (We have photo evidence should you like it). Should the PFAS leach into the water system and irrigate the fresh produce, that has the potential to poison not only Victorian's, but the whole of Australia. These crops are distributed by Coles nationwide.
- The town of Bacchus Marsh is home to the last remaining Avenue of Canadian Elms in the world, a tribute to the wartime veterans, the heritage listed Avenue of Honour. This is the intended route for the estimated 460 truck movements per day - the traffic in the town is currently at an almost unmanageable level, with the addition of these truck movements the town will become totally congested.
- The plan that is being put forward for approval is for all of the spoil to be delivered to Maddingley Brown Coal. It will be stored in bays UNCOVERED, open to the elements to dry out for 3 weeks whilst it is being tested. If Category A or B material is found, it will be removed and taken to a suitable facility. Here lies the problems with this plan - the site is situated on an elevated plain, it is extremely windy through there and any of the uncovered material, let's say potentially asbestos, will be carried by dust clouds (we also have photographic evidence of this already happening) over to the school and over the crops, waterways and town. We have been steamrolled with this project and it's secretive and underhanded management, and to now learn that the final report examining the potential health effects resulting from per and poly-fluoroalkyl substances (PFAS) exposure will be delayed until mid 2021 has added a new level of stress to the town. We have only recently learnt of the devastating affects of PFAS in other communities in Australia; Williamstown, Fiskville, St Albans. HOW, knowing this, can the government allow a project that was initiated by them and part publicly funded, allow this to go ahead when there are so many points against it. We, the residents of Bacchus Marsh call on you to intervene and put a stop to this potential National health disaster.

We are holding an online protest tomorrow.

<https://facebook.com/events/s/bacchus-marsh-says-no-to-toxic/252752182625193/?ti=ia>

Submission id: 848

Submission date/time: Wed, 2020-06-17 11:20

From: [Farrer Electorate \(S. Ley, MP\)](#)
To: [MinisterialCorrespondence](#)
Subject: MC20-011024 (Connor) - concerns around PFA contamination - EPD
Date: Monday, 13 July 2020 4:19:22 PM

From: Sussan Ley
Sent: Monday, 13 July 2020 4:17 PM
To: Farrer Electorate (S. Ley, MP) ; meri@itgenius.com
Subject: SUSSANLEY.COM - s47F - PFA contamination

Contact from Website

First Name: s47F

Surname: s47F

Email Address: s47F

Phone Number: s47F

Address: s47F

Suburb: s47F

State: s47F

Postcode: s47F

Preferred Contact Method: Any

Subject: PFA contamination

Message:

Files: (see attached)

Hon Minister,

I am writing on behalf of the Bacchus Marsh, Sunbury and Bulla communities with Victoria and seek your guidance in preventing the Andrews Government from (a) Rewriting the EPA Act without community involvement; (b) Using The COVID Pandemic to rush through the Amendments without due process; (c) Authorising illegal dumping of toxic soils and other contaminants at the aforementioned Town tips; and finally, removing the legal rights of persons who may develop life threatening diseases associated with the dumped PFA's.

I understand this mis justice is a State matter, but may you please consider the communities' objection to these unconstitutional happenings.

Thank you and kind regards,

s47F
s47F

From: §47F
To: [Minister Ley](#)
Subject: MC20-010814 §47F - toxic dump at Bacchus Marsh - EPD
Date: Sunday, 14 June 2020 9:37:55 PM
Attachments: [Federal Minister for Environment.docx](#)

Dear Ms Ley,

Attached letter detailing our reasons for objecting to the dumping of toxic waste in close proximity to Bacchus Marsh where schools, farms, residents and wild life could be adversely affected

Regards,

§47F
§47F
§47F
Tel: §47F
Mob: §47F
Email: §47F

Confidentiality Warning: The contents of this e-mail and any accompanying documentation are confidential and any use thereof in whatever form by anyone other than the recipient is strictly prohibited.

s47F

14th June, 2020

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Bacchus marsh community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision.

We have also been informed that despite no approvals or permits being issued, or a decision being made by Minister Wynne, that the toxic soil diggings currently beside the West Gate Tunnel Project is to be moved to MBC this Monday morning, 16th June 2020.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal.

Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge

habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

Additional EPBC-listed species and threatened ecological communities are listed within a 1km buffer zone of the site. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted.

The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN , 2018).

The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated**

spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region, 2019* [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species.

Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely,

s47F

From: s47F
To: [Minister Ley](#)
Subject: MC20-010809 (Watson) - toxic dump at Bacchus Marsh - EPD
Date: Sunday, 14 June 2020 4:45:30 PM

s47F

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Bacchus Marsh and Greater Victorian community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision.

We have also been informed that despite no approvals or permits being issued, or a decision being made by Minister Wynne, that the toxic soil diggings currently beside the West Gate Tunnel Project is to be moved to MBC this Monday morning, 15th June 2020.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley

Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal.

Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

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The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species.

Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely,

s47F

From: s47F
To: EPBC.VicTas
Cc: s47F
Subject: RE: New Information Letter [SEC=OFFICIAL]
Date: Friday, 7 August 2020 2:22:49 PM
Attachments: [image001.gif](#)
[200807 MBC Letter EPBC Act Westgate Tunnel Project.pdf](#)
[20.08.04 Report 19266 \(4.0\) EPBC Act.pdf](#)

Dear s22

In response to your letter dated 30 June 2020, please find attached letter and accompanying assessment report.

s47F
ENVIRONMENTAL MANAGER



s47F

s47F

11 TILLEYS ROAD, MADDINGLEY, VICTORIA 3340
P.O. BOX 376, BACCHUS MARSH, VICTORIA 3340

From: EPBC.VicTas

Sent: Wednesday, 1 July 2020 12:12 PM

To: s47F

Cc: 'EPBC.VicTas@awe.gov.au'

Subject: New Information Letter [SEC=OFFICIAL]

Good afternoon s47F

Please find attached correspondence from the Department of Agriculture, Water and the Environment regarding new information received in relation to proposed activities in Maddingley, Victoria.

Kind regards,

Victoria and Tasmania Assessments Team

Victoria and Tasmania Assessments

Department of Agriculture, Water and the Environment
Assessments and Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 787, Canberra, ACT, 2601

awe.gov.au



MADDINGLEY

BROWN COAL

Landfill & Resource Recovery Operations

7 August 2020

s22

Acting Director
Victoria and Tasmania Assessments Section
Department of Agriculture, Water and the Environment
GPO Box 858 Canberra ACT 2601

Dear s22,

Responsibilities under the EPBC Act and proposed management of West Gate Tunnel Spoil at Maddingley Spoil Processing Facility.

Thank you for your letter of 30 June 2020.

We referred your letter to our Nature Advisory, our expert consultant for EPBC Act matters.

Our consultant's report dated 4 August 2020 is attached for your consideration. As you will see, our consultant has confirmed its previous advice that the proposed development is unlikely to result in a significant impact on any EPBC Act listed matter and consequently, the project does not require a Referral under the Act. As a result, and given the established State significance of the West Gate Tunnel Project to the State of Victoria, we do not propose to refer the matter.

If, however you have other relevant information which should be taken into account regarding this matter, please advise us immediately.

Regarding your advice concerning "Information received by the Department", we advise that the construction and operation of the proposed spoil processing facility will be subject to a specific approval from the Environment Protection Authority, Victoria (EPAV) and the Minister For Planning (Victoria). Those approvals are currently pending. Regarding PFAS, we can assure you that the management of PFAS is a matter well understood by EPAV and will be comprehensively addressed in the necessary approvals.

Please let us know if we can further assist.

Regards,

s47F

s47F

Environmental Manager
Maddingley Brown Coal

MADDINGLEY BROWN COAL Pty Ltd
ABN 63 604 564 597
11 TILLEYS ROAD
BACCHUS MARSH, VICTORIA 3340
Postal Address: P.O. BOX 376
BACCHUS MARSH, VICTORIA 3340

www.maddingleybrowncol.com.au

Phone (03) 5367 3211
Facsimile (03) 5367 1892

A part of the
Calleja Group of Companies





4th August 2020

Maddingley Brown Coal Pty Ltd
PO Box 376
BACCHUS MARSH VIC 3340

Attention: s47F (Environmental Manager)
By email – s47F

Dear s47F,

**RE: PART 11 TILLEYS ROAD, MADDINGLEY, VICTORIA
DISPOSAL OF CONTAMINATED SOIL FROM WESTGATE TUNNEL PROJECT
OBLIGATIONS UNDER THE EPBC ACT
NATURE ADVISORY PROJECT 19266.6**

Introduction

Thank-you for engaging Nature Advisory to undertake a review of your obligations under the EPBC Act in regards to the acceptance of potentially contaminated soil from the Westgate Tunnel Project onto a landfill site at Part 11 Tilley's Road, Maddingley, Victoria.

In 2019, Maddingley Brown Coal Pty Ltd engaged Nature Advisory to undertake a fauna & flora assessment of a proposed contaminated soil processing facility (the proposed action). The assessment addressed all EPBC Act relevant matters (flora, fauna, and ecological communities) found likely to occur within a 10km radius of the site at that time. The 2019 assessment concluded the proposed action was unlikely to significantly impact any matter listed under the EPBC Act. However, since that time records of Growling Grass Frog have been added to the searched databases.

On 28th May 2020 the Commonwealth Department of Agriculture, Water and the Environment (DAWE) issued a letter explaining how the EPBC Act could apply to the proposed action. Specifically, DAWE highlighted the potential for the proposed action to significantly impact the EPBC Act-listed Growling Grass Frog, Port Phillip Bay and Bellarine Peninsula Ramsar site and listed migratory birds that use the Ramsar site and adjacent water bodies.

This investigation was commissioned to address these matters using currently available and updated information.

PFAS Management Statement

The proposed contaminated soil processing facility will process PFAS contaminated soil from the Westgate Tunnel Project. Maddingley Brown Coal Pty Ltd has informed Nature Advisory that the proposed management PFAS is currently being assessed by Environment Protection Authority Victoria (EPAV). Detailed consideration of PFAS management is outside the scope of works of this engagement and outside the area of expertise of Nature Advisory.

Previous 2019 Assessment

A detailed fauna and flora assessment of Part 11 Tilley's Road, Maddingley, Victoria (the study area) was undertaken in 2019 by Nature Advisory. The 2019 assessment involved both a desktop review of existing information and a site survey whereby the study area was assessed on foot by a team of botanists and zoologists.

The 2019 assessment concluded the proposed action was unlikely to significantly impact any matter listed under the EPBC Act.

Current 2020 Assessment

Method

The current 2020 assessment involved only a desktop review of existing information.

A review of existing flora and fauna species records and information about the potential occurrence of listed matters obtained from an area termed the 'search region', defined here as an area with a radius of ten kilometres from the approximate centre point of the study area (coordinates: latitude 37° 42'44.24"S and longitude 144° 26'7.13"E).

A list of the flora and fauna species recorded in the search region was obtained from the Victorian Biodiversity Atlas (VBA), a database administered by DELWP (DELWP 2020).

The online EPBC Act Protected Matters Search Tool (DEE 2020) was consulted to determine whether nationally listed species or communities potentially occurred in the search region based on habitat modelling.

Flora species

An analysis of the likelihood of occurrence of EPBC Act-listed flora species was undertaken. This identified that there were records for 15 listed species within the search region. No listed species were recorded during the 2019 site survey. The site was found to be highly disturbed. It is concluded that no such flora species are likely to be present due to the highly disturbed nature of the habitat. As such, EPBC Act-listed flora species are unlikely to be significantly impacted by the proposed action.

Fauna species

The review of existing information, including VBA records (DELWP 2020) and the results of the EPBC Protected Matters Search Tool (DEE 2020), indicated that within the search region there were records of, or there occurred potential suitable habitat for, 32 fauna species listed under the Commonwealth EPBC Act. The likelihood of occurrence of these species in the study area was assessed. This analysis of potential occurrence of listed fauna species excluded:

- Marine fauna given that the study area is inland; and
- Migratory oceanic bird species (such as albatrosses and petrels) and migratory shorebirds given that the study area is inland.

Species considered 'likely to occur' are those that have a very high chance of being in the study area given the existence of numerous records in the search region and suitable habitat in the study area. Using the precautionary approach, species considered to have the 'potential to occur' are those for which suitable habitat existed, but recent records are scarce. This analysis indicates that four listed fauna species are likely to occur or have the potential to occur. These species were:

- Fork-tailed Swift (Migratory under the EPBC Act);
- Swift Parrot (Critically Endangered under the EPBC Act);
- White-throated Needletail (Vulnerable and Migratory under the EPBC Act); and
- Growling Grass Frog (Vulnerable under the EPBC Act).

The following analysis identifies the susceptibility of listed fauna species which may utilise the study area. This analysis includes consideration of the factors below.

- The mobility of the species.
- The availability and extent of other suitable habitat in the region and the degree to which each species may rely on habitat in the study area.

One listed migratory bird species (excluding oceanic species and shorebirds) has the potential to occur in the study area. The susceptibility of this and the rest of the listed species to possible impacts from any development in the study area is discussed below.

- **White-throated Needletail** (EPBC Act: Vulnerable, Migratory)

The White-throated Needletail is an aerial bird species that spends most of its life on the wing. This species is often observed in south-eastern Australia in the summer, flying ahead of storm fronts, feeding on flying insects. Given the aerial nature of this species, it is considered unlikely that any development in the study area would impact White-throated Needletail.

- **Fork-tailed Swift** (Migratory under the EPBC Act).

The species can occur in wet sclerophyll forest but mainly prefers open forest or plains. It is almost exclusively aerial and feeds up to hundreds of metres above the ground, but can feed among open forest canopy. Given the aerial behaviour of the species, it is unlikely that it will be impacted.

- **Swift Parrot** (Critically Endangered under the EPBC Act; Listed under the FFG Act).

Prefers a select range of eucalypts in Victoria, including Yellow Gum, Grey Box, White Box, Red Ironbark and Yellow Box, as well as River Red-gum when this species supports abundant 'lerp'. Breeds in Tasmania and migrates to the mainland of Australia for the autumn, winter and early spring months. Occurrence of this species on the mainland can substantially change from year to year depending on food availability, giving potential for this species to occur almost anywhere throughout its range. As food source trees within the study area are not affected by the development, the species is considered unlikely to be impacted.

- **Growling Grass Frog** (Vulnerable under the EPBC Act)

This frog species inhabits permanent, still or slow flowing water with fringing and emergent vegetation in streams, swamps, lagoons and artificial wetlands such as farm dams and abandoned quarries. This species has been recorded in Parwan Creek (which is located on the southern boundary of the study area) and adjacent dams. Based on the significant impact guidelines for the vulnerable Growling Grass Frog (DEWHA 2010), and given that the proposed action will not occur within 200 metres of Parwan Creek, there is unlikely to be any significant impact on this species.

Listed Ecological Communities

The EPBC Protected Matters Search Tool (DEE 2020) indicated that five ecological communities listed under the EPBC Act had the potential to occur in the search region (Table). None of these were found to occur within the study area during 2019 field assessment, and therefore they are unlikely to be present currently.

Table 1: EPBC Act listed ecological communities and likelihood of occurrence in the study area

Ecological Community	EPBC Status	Occurrence in the study area
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	CE	Lack of native ground vegetation – Does not occur in the study area

Ecological Community	EPBC Status	Occurrence in the study area
Grey Box (<i>Eucalyptus microcarpa</i>) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	EN	Area highly devoid of understorey species diversity – Does not occur in the study area
Natural Temperate Grassland of the Victorian Volcanic Plain	CE	Does not occur in the study area
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	CE	Does not occur in the study area
White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland	CE	Does not occur in the study area

Notes: EPBC = status under the EPBC Act (CE = Critically Endangered; EN = Endangered; VU = Vulnerable).

Based on an assessment of native vegetation in the study area against published descriptions and condition thresholds for these communities, none of the above listed communities are likely to occur in the study area. As such, none are likely to be impacted.

Wetlands of International Importance (Ramsar)

- **Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar site.**

The online EPBC Act Protected Matters Search Tool (DEE 2020) flags the Port Phillip Bay and Bellarine Peninsula Ramsar site as relevant although it is some 40km from the site of the proposed action.

It is important to note that the proposed action involves removing PFAS contaminated soil from a site in very close proximity (2-3 km) to this listed Ramsar wetland and transporting it some 40km inland and well away from the Ramsar wetland.

However, Parwan Creek — which is adjacent to the landfill site — feeds directly into Werribee River which flows into the Ramsar site 30km further downstream. DAWE has raised the concern over the potential impact to this Ramsar site due to the nature of PFAS and their effect in aquatic ecosystems. Several species of listed migratory shorebirds that rely on these ecosystems could be affected if PFAS was present in the water. Certainly, adequate management of any contaminated soil is required to avoid any potential threats to this site. However, it is anticipated that the proposed action will not impact this Ramsar



wetland as the proposed management of PFAS will be strictly regulated by EPAV. As such, the Ramsar site or migratory shorebirds are unlikely to be impacted.

Detailed consideration of PFAS management is outside the scope of works of this engagement and outside the area of expertise of Nature Advisory.

Regulatory implications

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) protects a number of threatened species and ecological communities that are considered to be of national conservation significance. The Matters of National Environmental Significant document outlines the criteria for significant impact on critically endangered and endangered ecological communities. Any significant impacts on these values require the approval of the Australian Minister for the Environment.

Where there is a possibility of a significant impact on such values, a Referral under the EPBC Act is required. The Minister will decide whether the project will be a 'controlled action' under the EPBC Act, in which case it cannot be undertaken without the approval of the Minister. This approval depends on a further assessment and approval process.

Based on the relevant guidelines, the proposed development is unlikely to result in a significant impact on any EPBC Act-listed matter including Growling Grass Frog, Port Phillip Bay and Bellarine Peninsula Ramsar site or any listed migratory shorebirds.

Given the above findings, the project does not require a Referral under the EPBC Act. However, it is recommended that this letter – which can be referred to as Report 19266 (4.0) – be provided to DAWE for their information.

We hope the above information is useful. Please do not hesitate to call me should you wish to discuss this further.

Yours sincerely,

s47F

Nature Advisory Pty Ltd

s47F [@natureadvisory.com.au](mailto:s47F@natureadvisory.com.au)

References

Department of Environment, Land, Water and Planning (DELWP) 2020, *Victorian Biodiversity Atlas 3.2.5*, Department of Environment, Land, Water and Planning, East Melbourne, Victoria, viewed 29th July 2020, < <https://vba.dse.vic.gov.au>>.

Department of the Environment (DoE) 2013, *Matters of National Environmental Significance, Significant impact guidelines 1.1*, Department of the Environment, Canberra.

Department of the Environment and Energy (DEE) 2020, EPBC Act Protected Matters Search Tool, Department of the Environment, Canberra, viewed 29th July 2020.



Australian Government
**Department of Agriculture,
Water and the Environment**

s47F

Environmental Manager
Maddingley Brown Coal Pty Ltd
PO Box 376
BACCHUS MARSH VIC 3340

s47F

Dear s47F

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)
Disposal of contaminated soil from the West Gate Tunnel Project at Maddingley Brown Coal Mine

Thank you for your correspondence sent on 7 August 2020 regarding a proposal by Maddingley Brown Coal Pty Ltd (MBC) to dispose of potentially contaminated soil from the West Gate Tunnel Project at the Maddingley Brown Coal Mine.

The Department notes that the provided desktop assessment relating to some aspects of the proposed action has concluded that significant impacts to matters of national environmental significance are not likely to occur as a result of the proposed action. The Department considers it would be prudent for MBC to undertake a detailed self-assessment in relation to MNES potentially impacted by the proposed action, and submit a referral if required.

If this project commences without a decision under the EPBC Act, MBC are responsible for all associated legal risks. The Department actively monitors compliance with the EPBC Act. The Department's Compliance Policy (www.environment.gov.au/about-us/publications/compliance-policy) allows for a range of mechanisms to address contraventions of the EPBC Act. The Department considers the circumstances of each matter on a case-by-case basis to determine the most appropriate response.

Should you wish to arrange a pre-referral meeting please see <http://www.environment.gov.au/epbc/publications/pre-referral-meeting-guidance>. Alternatively, if you would like further information about the referral process, you may contact the Referrals Gateway on 02 6274 2496 between 11am and 4pm, weekdays (Canberra time).

Instructions for submitting a referral (if required) through the Department's online services, together with further information on the EPBC Act, is available on the Department's website at <http://www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process>.

If you have any questions about this matter please call or email the contact officer, s22 s22 , on s22 or by email s22

Yours sincerely

s22

Acting Director
Victoria and Tasmania Assessments Section
August 2020

From: s22
To: s22
Subject: FW: MC20-006855 MINISTER REPLY - VIP - potential triggers of the EPBC Act - EAD [SEC=OFFICIAL]
Date: Thursday, 17 September 2020 4:23:30 PM

From: s22
Sent: Wednesday, 20 May 2020 4:12 PM
To: s22
s22
Subject: RE: MC20-006855 MINISTER REPLY - VIP - potential triggers of the EPBC Act - EAD [SEC=OFFICIAL]

Hmm I'm happy to ask s22 to draft a "we'll look into it" reply, but it sounds confusing... the mine is right on the Werribee River upstream of the Ramsar site so we'd care about PFAS. But we don't know the action creating the spoil- for example the West Gate City Link (2015/7620) was an NCA and the referral said the following. Does that mean this action is covered by an NCA?

The construction of tunnels would also involve the extraction, treatment and disposal of groundwater and the management of excavated material. It is anticipated that trucks carting excavated material would directly access the arterial road and freeway network from work sites. Excess material would need to be carted to off-site locations. Options for reuse and disposal would be investigated. The appointed contractor would enter into a commercial arrangement for the delivery and disposal of excavated material at the time of construction, for example refilling of former and current quarries. Excavated material would be submitted to regular contaminant testing to ensure suitability for disposal. All material, including any contaminated soils generated by the works, would be managed in accordance with the Environment Protection Act 1970.

From: s22
Sent: Wednesday, 20 May 2020 3:51 PM
To: s22
Subject: FW: MC20-006855 MINISTER REPLY - VIP - potential triggers of the EPBC Act - EAD [SEC=OFFICIAL]

This just came in via PDMS.
VIP response.

Who's got space?

s22

From: DLO Ley <DLOLey@environment.gov.au>
Sent: Tuesday, 19 May 2020 12:49 PM
To: MinisterialCorrespondence <MinisterialCorrespondence@environment.gov.au>
Cc: DLO Ley <DLOLey@environment.gov.au>
Subject: MC20-006855 MINISTER REPLY - VIP - potential triggers of the EPBC Act - EAD

Please register for min reply

From: King, Catherine (MP)
Sent: Tuesday, 19 May 2020 12:09 PM
To: Minister Ley
Subject: RE: potential triggers of the EPBC Act.

Hon Sussan Ley MP
Minister for the Environment
Minister.Ley@environment.gov.au

Dear Minister,

I write regarding Maddingley Brown Coal's proposal to act as a spoil disposal facility for the Victorian Government's West Gate Tunnel Project and potential triggers of the EPBC Act.

As you may be aware, this proposal will see a significant quantity of PFAS-contaminated soil from this major tunnel project transported for storage at a brown coal mine near Bacchus Marsh, in my electorate of Ballarat.

This project has encountered significant community opposition.

Through this ongoing process, it has been raised with me that the proximity of the proposed storage location to the Parwan River could potentially impact upon the endangered growling grass frog, which has been known to breed in the area. As such, it has been suggested that this project may trigger the Commonwealth EPBC Act.

As this matter has been referred to the Victorian Minister of Planning under section 20(4) of the *Planning and Environment Act* (Vic), I would appreciate any information that could be provided on this matter as quickly as possible.

Yours sincerely

Catherine King
Federal Member for Ballarat

From: [DLO Evans](#)
To: [MinisterialCorrespondence](#)
Cc: [EPD Coords](#); [DLO Ley](#); [DLO Evans](#)
Subject: MC20-013085 MINISTER REPLY - (s47F) - PFAS toxic soil (from the Westgate Tunnel project in Melbourne) into Maddingly Brown Coal (MBC) in Bacchus Marsh - EPD (AWE link MC20-012621)
Date: Tuesday, 25 August 2020 4:49:19 PM

Hi Min Corro team,

Please register in PDMS as a **ministerial reply** for AM Evans.

Recommending assignment to EPD Coords team in the first instance.

With thanks,

s22

s22

Departmental Liaison Officer | Office of the Hon Trevor Evans MP
Assistant Minister for Waste Reduction and Environmental Management

s22 DLOEvans@awe.gov.au

From: s47F
Sent: Sunday, 16 August 2020 6:49 PM
To: Ley, Sussan (MP) <Sussan.Ley.MP@aph.gov.au>
Subject: Bacchus Marsh says NO to Toxic Soil !!!!!!!
Importance: High

Dear Minister,

My name is s47F and my wife s47F (as parents of two girls s47F and s47F) are writing to you as an act of desperation.

The issue is the deeply concerning proposal to dump 1,500,000 tonnes of PFAS toxic soil (from the Westgate Tunnel project in Melbourne) into Maddingly Brown Coal (MBC) in Bacchus Marsh.

Brief background:

Toxic soil is 200 - 2000 times the acceptable legal limit and 21 times the acceptable limit for any landfill, and it would be dumped 500m from the Bacchus Marsh Grammar school (of which our girls attend) and into a community of 20,000 people.

The poisoning of Victoria's food bowl (and much of this food is also distributed around Australia) would result as this toxic soil could leach into water systems (Parwan creek runs through MBC) and into Werribee river.

PFAS accumulates in human and animal cells and leafy greens and has proven to lead to testicular cancer, kidney cancer, ovarian and prostate cancer, lower infant birth weights, thyroid disruption, liver malfunction, and many more conditions (and death).

If this ultimately went ahead it would mean the following:

- # 2000 kids in direct close proximity to the most toxic chemicals in the world
- # 20000 Bacchus Marsh residents affected economically, health-wise, and already affected socially by the stress of this proposal
- # Farms and farmland affected economically, an eco-disaster in the making
- # Loss of jobs and revenue because without farms this community will struggle to survive, and a lot of businesses evolving around them
- # HUGE social burden, no jobs, and in the current economy I would think twice if you want unemployment to rise.
- # The poisoning of Victoria's food bowl (much is also distributed around Aust)
- # Houses, land, and farms will be worthless, so HUGE economic burden for Bacchus March Residents
- # No more agritourism from Melbourne and surrounding towns, so huge loss of people traffic that was feeding the Bacchus Marsh economy for years
- # The burden for the Victorian government when lawsuits will follow for compensation
- # The burden for the health system when cancer cases start, not straight away but they will start...
- # ECO disaster that will cost much more in the long run

This proposal bears striking similarities to two communities on either side of the world (Aust and USA) which both have been heavily polluted by PFAS chemicals. In USA 21 Tartan High School (Minnesota) students have been diagnosed with cancer within 10 years of graduation. In Aust (Williamstown, Newcastle), 39 people who lived along the same road have battled cancer in the last 15 years.

Are you looking into the issue/proposal as a matter of urgency?

- as the Victorian state government refuses to provide the people with any information/consultation/documentation and choosing the interests of companies over the health of the people they are meant to represent
- further, very concerning, is how the state government is changing the law (without parliament sittings) which will allow them to legally justify dumping toxic soil straight into a community. For example, the EPA rules on PFAS have been changed to allow schools, homes, and health services to be only 200m from soil processing sites instead of the previous 500m.
- finally, Vic minister Lily D'Ambrosio signed a "consultation certificate" on 17/6/20 that "NO SECTOR OF THE PUBLIC WERE IDENTIFIED ON WHICH A SIGNIFICANT ECONOMIC OR SOCIAL BURDEN MAY BE IMPOSED". This is VERY interesting!

We need your support with this, as who in their right mind would poison a perfectly healthy ecosystem in this day and age !!!!! ??????

Toxic soil should not be dumped into ANY community, I think you would agree?

What can you do to help us?

Awaiting your response to this urgent matter.

Regards,

s47F

From: [DLO Ley](#)
To: [MinisterialCorrespondence](#)
Cc: [DLO Ley](#)
Subject: MC20-013373 (Moorabool Environment Group Inc., Valpied) - Maddingley PFAS-spoil facility likely to impact EPBC matters - EAD (AWE link MC20-010491)
Date: Tuesday, 25 August 2020 7:47:40 PM
Attachments: [AWE MBC-PFAS EPBC MEG 20July2020.pdf](#)

Please register for info

From: Ley, Sussan (MP) <Sussan.Ley.MP@aph.gov.au>
Sent: Monday, 20 July 2020 7:35 PM
To: DLOLey@awe.gov.au
Subject: FW: URGENT: Maddingley PFAS-spoil facility likely to impact EPBC matters

From: MEG Moorabool Environment Group <[s47F](#)>
Sent: Monday, 20 July 2020 4:03 PM
To: compliance@environment.gov.au
Cc: King, Catherine (MP) <Catherine.King.MP@aph.gov.au>; Ley, Sussan (MP) <Sussan.Ley.MP@aph.gov.au>; Steele-John, Jordon (Senator) <Senator.Steele-John@aph.gov.au>; [s47F](#) Rice, Janet (Senator) <Senator.Rice@aph.gov.au>; [s47F](#)
[s47F](#) Di Natale, Richard (Senator) <Senator.DiNatale@aph.gov.au>; Beverley McArthur <beverley.mcarthur@parliament.vic.gov.au>; [s47F](#)
tim.smith@parliament.vic.gov.au; richard.riordan@parliament.vic.gov.au;
[s47F](#)

Subject: Fwd: URGENT: Maddingley PFAS-spoil facility likely to impact EPBC matters

Dear EPBC Compliance Team,
(cc Minister Sussan Ley and other stakeholders)

Please find attached an updated version of the URGENT documentation we sent your department regarding likely significant impacts of MBC's proposal and current actions on EPBC-listed matters, including Growling Grass Frogs (*Litoria raniformis*). We are sending this updated version in response to our call to the Department's compliance team today, in which we were told the urgent documentation we sent last week was not received or processed, despite us receiving an automated acknowledgment of receipt.

Please note that the significant impacts do not just involve PFAS - they also involve habitat removal and disturbance. The impacted population of Growling Grass Frogs meet all Commonwealth of Australia criteria for being an important population (see attached).

EPA Victoria has told us to refer our concerns about this non-compliance with the EPBC Act to your department. We urge you to investigate this matter thoroughly.

The HHERA which MBC contracted in relation to this matter was conducted by people who do not have qualifications or experience in ecology, PFAS management or related areas. Their methods have previously been rejected in the court of law. Further details are available upon

request.

It is extremely frustrating that the previous correspondence about this matter that we sent to compliance@environment.gov.au (sent Tuesday 14th July) was not registered and processed, given the urgency of this situation. We received an automated acknowledgement of receipt of the email, which we will forward to you. This issue of not receiving emails also needs to be investigated, as it means your department is likely to be missing essential correspondence.

Moorabool Environment Group Inc. has a direct and immediate interest in MBC's current actions and proposed actions. Since 2009 as an incorporated association, and before that as an unincorporated association, Moorabool Environment Group Inc. has been directly involved with monitoring and addressing environmental damage MBC have wilfully caused in the past, has worked extensively with waterways and threatened species protection in the area, and has worked with other environmental protection matters throughout the relevant shire (Moorabool Shire). We have extensive knowledge of threatened species in the area and potential impacts. We have consulted extensively with ecologists, PFAS experts, environmental planning experts and others on this matter. As key stakeholders with a direct and immediate interest we request proper consultation and procedural fairness in this matter.

Sincerely,

s47F

Moorabool Environment Group Inc.

----- Forwarded message -----

From: **MEG Moorabool Environment Group** s47F

Date: Tue, Jul 14, 2020 at 5:04 AM

Subject: URGENT: Maddingley PFAS-spoil facility likely to impact EPBC matters

To: <compliance@environment.gov.au>

Cc: <sussan.ley.mp@aph.gov.au>

Dear Department of Agriculture, Water and the Environment,

The Hon. Sussan Ley MP has initiated investigations into EPBC-matters impacted by Maddingley Brown Coal's plans and preparations to build a large-scale PFAS-contaminated spoil facility at Gullines Road, Maddingley, Victoria. The site is not part of their mining or landfill area.

Urgent details about this proposal and significant impacts on EPBC-protected species are attached.

The company has already begun works to prepare to receive the PFAS-contaminated spoil next to a creek containing Growling Grass Frogs (EPBC-listed threatened species). They have not referred their actions for referral under the EPBC Act 1999, and do not have any Environment Management Plan in place.

There are also additional EPBC-listed threatened and migratory species highly likely to be significantly impacted by these actions.

We have been advised by ecological consultants that the actions should have been referred for assessment under the EPBC Act. We urge you to carefully and thoroughly investigate this matter, as the company has engaged in environmentally destructive activities in the past.

Yours sincerely,

s47F

on behalf of

Moorabool Environment Group Inc.

Email: s47F

Phone: s47F

We acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.



Moorabool Environment Group Inc.
PO Box 545
Bacchus Marsh VIC 3340
Email: s47F
Phone: s47F

Monday 20th July 2020

EPBC Compliance
Department of Agriculture, Water and the Environment (AWE)
GPO Box 858
Canberra ACT 2601

Dear AWE compliance team,

Re: URGENT: Maddingley Brown Coal's PFAS-spoil processing facility: Actions likely to significantly impact EPBC-listed matters of national environmental significance.

This letter contains updated attachments, given our previous letter (dated 13/7, send 14/7) was not processed.

Please note that EPA Victoria have directly told us that the EPBC-listed matters of national environment significance raised in this letter and attachments are matters for the FEDERAL Department of AWE. When we raise these EPBC-listed matters with EPA Victoria, they tell us to refer these matters to you. There is nothing in the EPBC Act 1999 to say that matters involving PFAS are exempt from assessment under the EPBC Act 1999.

Also, the likely significant impacts do not just relate to PFAS. There are additional likely impacts on habitat, including removal of seasonal watercourses in which Growling Grass Frogs are very likely to be present.

We refer to the Hon. Sussan Ley MP's letter to the Hon. Catherine King MP on 12th June 2020 concerning Maddingley Brown Coal's (MBC's) proposal and preparations to receive and process PFAS-contaminated spoil at a new site (not part of their mine/landfill), and relevance to the EPBC Act 1999. We are writing to provide further important information on this matter, and advocate that referral under the EPBC Act should have occurred. We (Moorabool Environment Group) have long been involved in protecting threatened and migratory species in the area surrounding and adjacent to the proposed site, and have insight into MBC's proposal and likely significant impacts on EPBC-listed matters.

MBC have submitted a planning request and began preparation works to receive and process approx. 1.5 million cubic metres PFAS-contaminated slurry/spoil at a 130 hectare site not previously used for this purpose, nor for any other heavy industrial activities (Gullines Road, Maddingley, Victoria). Important: this site is **not** part of MBC's mine or landfilling area. MBC plans to undertake these actions as part of establishing a large-scale contaminated spoil processing facility, beside Parwan Creek. These actions are likely to have significant impacts on matters of national environmental significance, however the actions have not been referred for assessment under the Environment Protection and Biodiversity Conservation Act, 1999.

Of particular concern, important source-populations of Growling Grass Frog (*Litoria raniformis*) occur immediately beside the site and may also occur on site. Aquatic pathways (watercourses and aquifers) on the site connect to Parwan Creek and neighbouring waterbodies containing Growling Grass Frogs. There is a real chance PFAS and other toxicants will leach from the spoil processing and storage activities, into these habitats. Research shows that even very low levels of PFAS can negatively impact amphibian breeding cycles and development, thus putting these important populations of Growling Grass Frogs at risk of decline. EPBC-listed bird species which use waterbodies and prey on aquatic species are also likely to be impacted. These impacts are described in Attachment B.

The PFAS-contaminated spoil which MBC is proposing to accept and process contains PFAS and heavy metals from industrial activities and firefighting foam previously used where the West Gate Tunnel is going to be built. There are other, more appropriate sites which have tendered to receive the spoil (i.e. sites that do not contain watercourses and that are not likely to impact matters of national environmental significance). As MBC have not yet been awarded the tender, they are not yet part of the West Gate Tunnel Project. We have received legal advice that **MBC cannot claim exemption from requirements of the EPBC Act 1999.**

MBC's proposed actions meet the following criteria for referral under the EPBC Act 1999:

1/ These are new actions for which preparations began in early 2020, and which have not previously been undertaken at the site. The site has not previously been used for landfilling, mining, processing of contaminated soil, or other heavy industrial activities. **See Attachment A.**

2/ There are matters of national environmental significance located in the area of the proposed action, including onsite, adjacent to site, and downstream of the site. **See Attachment B.**

- Listed threatened fauna (within 1km): 17
- Migratory bird species (within 1km): 14
- Marine bird species (within 1km): 21
- Threatened flora (within 1km): 10
- Listed threatened ecological communities (within 1km): 4
- Wetland of international significance (Ramsar): 1 (site is approx. 40km upstream of wetland)

3/ There is potential for impacts, including both direct and indirect impacts, on these matters of national environmental significance. **See Attachment C.**

- There is a real possibility that MBC's proposed actions will negatively impact habitat, breeding cycle and development of Growling Grass Frogs decreasing the size of an important Growling Grass Frog population, and survival and recovery of this species in the region.
- Negative impacts on other EPBC-listed matters are also likely.
- There is also high potential for facilitated impacts. If MBC receive this PFAS-contaminated spoil, it will set a precedent for receiving further PFAS-contaminated spoil.

4/ The impacts on matters of national environmental significance are likely to be significant impacts. **Attachment C.**

- Significant source-populations of Growling Grass Frogs are likely to be impacted and reduced. These "Parwan Creek" populations are essential for the recovery and survival of the species. The populations in Parwan Creek and surrounds are protected from chytrid fungus due to natural salinity of Parwan Creek, and have also been protected from industry and urban development.
- Impacts are likely to be widespread and permanent, given PFAS travel long distances in waterways, bioaccumulate in the environment, and are persistent (i.e. do not readily break down, or if they do, they break down into other polluting substances).

5/ The proposed measures to reduce impacts are not certain enough to reduce the level of impact below the 'significant impact' threshold. Inappropriate site selection has been undertaken, given the nature of the action. **See Attachment D.**

- The proposed measures are not part of best practice for managing PFAS-contaminated spoil. For example, the spoil will be held in open bays for 21 days while being tested, increasing risk of leaching. The cells currently being built for containment of the spoil are only 200m - 250m from Parwan Creek proper, and sit on the edge of the ravine down to Parwan Creek. Performance of cell liners in relation to containing PFAS leachate is not yet fully understood. PFAS are likely to outlast any currently available cell liners.

6/ The precautionary principle also applies to these actions.

- There is still some scientific uncertainty about the impacts of PFASs, especially on Australian fauna and flora species. Research on other species suggests that the impacts may be worse than initially expected, and can occur at extremely low levels of PFASs concentration – e.g. levels that are at the lowest level of detection.
- There is also scientific uncertainty about how to best manage PFASs, although the science clearly shows high risks associated with storing PFASs-contaminated spoil in landfill.
- What is known, is that the impacts of PFASs are irreversible, and can be serious, in ways which lead to permanent species decline. Thus, the precautionary principle is applicable to MBC's plan to receive and process PFASs-contaminated spoil at this site.

MBC have a track record of extremely poor environmental management, and failing to implement proper stormwater and leachate management practices at their current site (see EPA Victoria Audits, CARMS No. 64662). It is absolutely imperative that their proposal be referred for assessment under the EPBC Act 1999. Failure to do so will have catastrophic consequences for multiple EPBC-listed fauna near the site, and likely to occur on the site itself. The flow-on effects will be serious.

We implore you to take action on the matters we have very clearly set out in the attached.

Please do not hesitate to contact us on the details above if your Department requires any further information. We have also forwarded this information to Minister Ley. We respectfully request a response to this letter and attachments.

Please consider this letter and its attachments to be a formal complaint from Moorabool Environment Group Inc. that MBC have breached the EPBC Act 1999.

Yours sincerely,

s47F

Acting President

On behalf of Moorabool Environment Group Inc.

Moorabool Environment Group Inc. acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.



**Growling Grass Frogs (*Litoria raniformis*) in Parwan Creek (waterway likely to be impacted by MBC's actions).
Photos by s47F, 2017-2018.**

ATTACHMENT A: LOCATION AND FEATURES OF PROPOSED SITE FOR RECEIVING PFAS-CONTAMINATED SPOIL

The area in which MBC are proposing to receive and processing PFAS-contaminated spoil has not been previously used for this purpose, nor has it been used for mining, landfill or other heavy industrial activities.

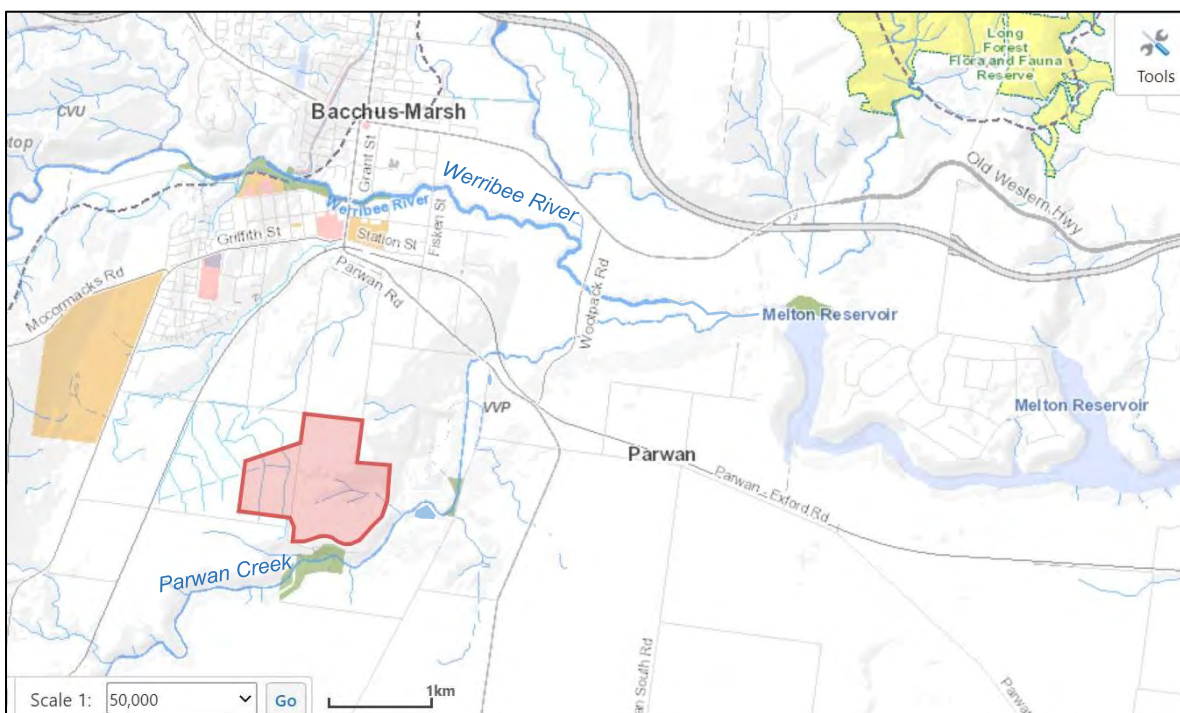
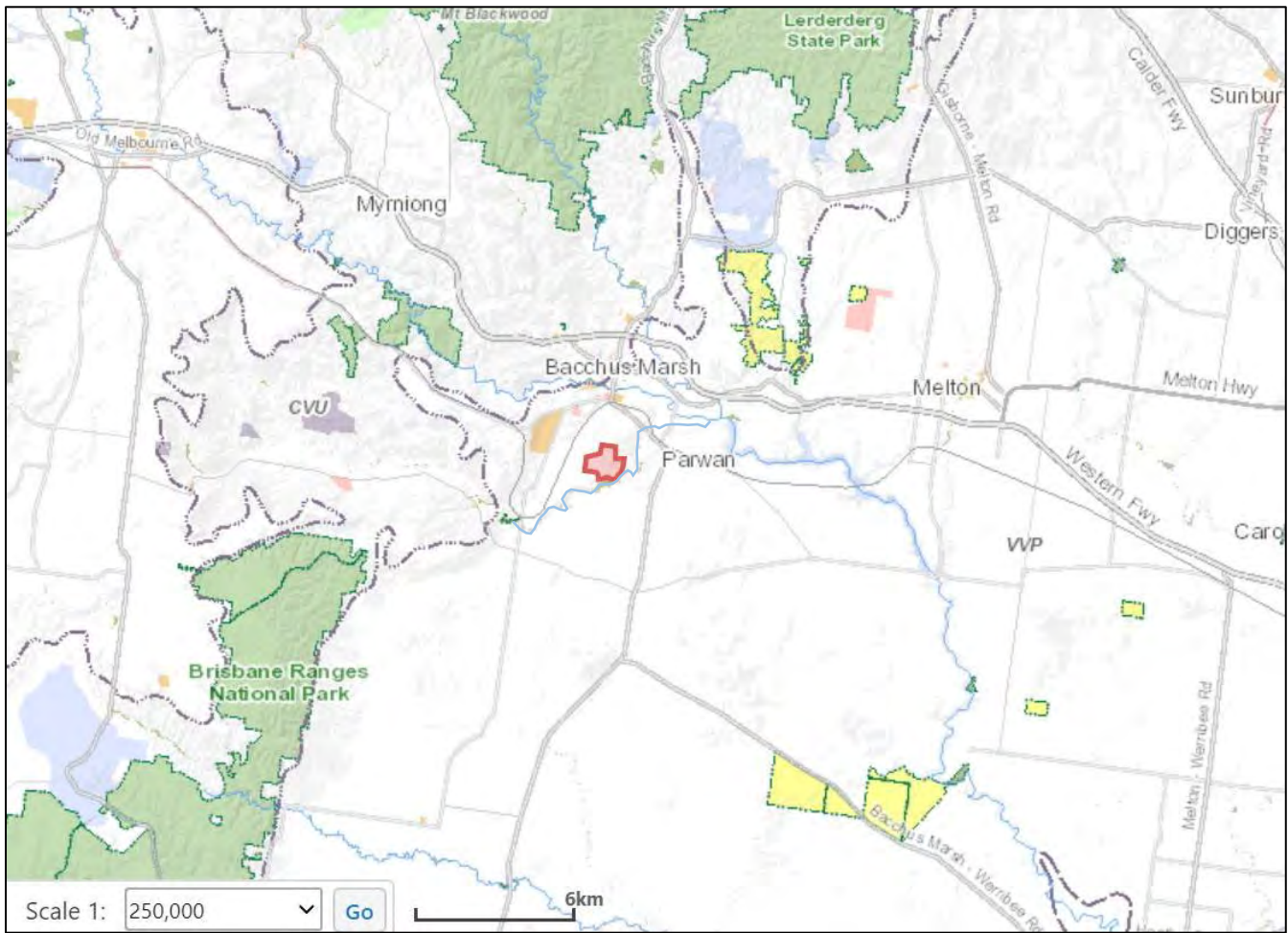


Figure A.1. Location of proposed site, Gullines Road, Maddingley, Victoria 3340
Red polygon with dark red border = Site of proposed PFAS-spoil processing facility
Green, orange, and yellow areas = Parks and reserves

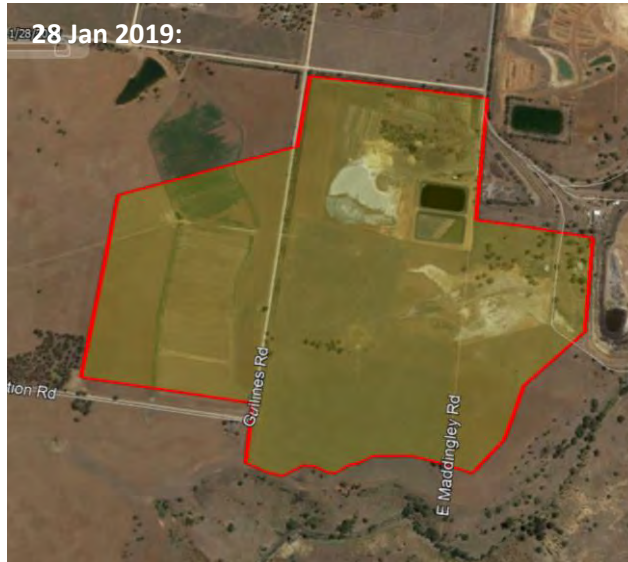


Figure A.2. Satellite images of proposed site: a) 6 July 2006; b) 28 Jan 2019 (compare with Figure A.3 below)

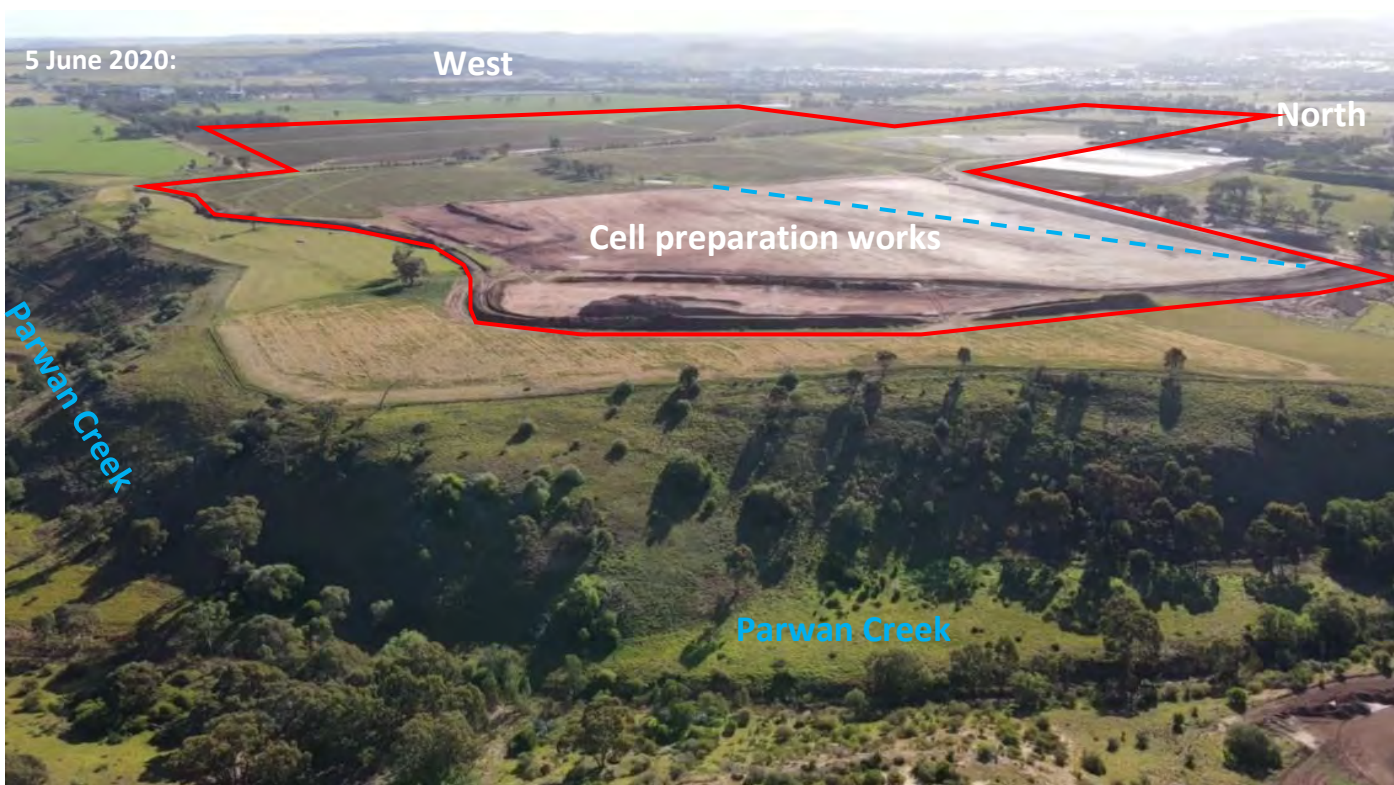


Figure A.3. 5th June 2020: Aerial image of proposed site, and preparation works for contaminated spoil cells. Image is facing north-west. Works are in south-east section of site.

- Red solid line = Site boundary. Additional works are planned for all parts of this site (construction of bays, cells, etc.). See Figure D.1, Attachment D for further details.
- - - Dotted blue line = former seasonal watercourse that has been removed (approximate location). This watercourse connects with a dam containing Growling Grass Frogs (*Litoria raniformis*).

ATTACHMENT B: MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE IN THE AREA

Table B.1. Fauna listed under the EPBC Act which are known, likely or may occur in 1km of the site. Species highlighted in blue use aquatic environments or prey on aquatic species.

Scientific Name	Common Name	EPBC Status	Observ.	1km Presence		
				K	L	M
<i>Litoria raniformis</i>	Growling Grass Frog	V	< 500m	*		
<i>Apus pacificus</i>	Fork-tailed Swift	Mi, Ma	< 1.5km		*	
<i>Ardea ibis</i>	Cattle Egret	Ma	< 2km			*
<i>Chrysococcyx osculans</i>	Black-eared Cuckoo	Ma	< 2km		*	
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Ma	< 2km		*	
<i>Merops ornatus</i>	Rainbow Bee-eater	Ma	< 2km			*
<i>Synemon plana</i>	Golden Sun Moth	CE	< 2.5km		*	
<i>Ardea alba</i>	Great Egret, White Egret	Ma	< 3.5km		*	
<i>Gallinago hardwickii</i>	Latham's Snipe	Mi, Ma	< 3.5km			*
<i>Hirundapus caudacutus</i>	White-throated Needletail	V, Mi, Ma	< 3.5km	*		
<i>Rhipidura rufifrons</i>	Rufous Fantail	Mi, Ma	< 3.5km		*	
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	Mi, Ma	< 4 km	*		
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	< 4.5km		*	
<i>Delma impar</i>	Striped Legless Lizard	V	< 5km		*	
<i>Lathamus discolor</i>	Swift Parrot	CE, Ma	< 5km		*	
<i>Actitis hypoleucos</i>	Common Sandpiper	Mi, Ma				*
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE				*
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E			*	
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Mi, Ma				*
<i>Calidris ferruginea</i>	Curlew Sandpiper	CE, Mi, Ma				*
<i>Calidris melanotos</i>	Pectoral Sandpiper	Mi, Ma				*
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll	E				*
<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias	V			*	
<i>Grantiella picta</i>	Painted Honeyeater	V			*	
<i>Monarcha melanopsis</i>	Black-faced Monarch	Mi, Ma			*	
<i>Motacilla flava</i>	Yellow Wagtail	Mi, Ma				*
<i>Numenius madagascariensis</i>	Eastern Curlew	CE, Mi, Ma				*
<i>Pandion haliaetus</i>	Osprey	Mi, Ma				*
<i>Pedionomus torquatus</i>	Plains-wanderer	CE			*	
<i>Prototroctes maraena</i>	Australian Grayling	V				*
<i>Rostratula australis / Rostratula benghalensis</i> (sensu lato)	Australian Painted Snipe	E, Ma			*	
<i>Tringa nebularia</i>	Greenshank	Mi, Ma			*	
<i>Tympanocryptis pinguicolla</i>	Grassland Earless Dragon	E				*

Status: CE = Critically endangered; E = Endangered; V = Vulnerable; Mi = Migratory; Ma = Marine

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Highlighted in blue = Use aquatic environments or prey on aquatic species.

Table B.2. Flora listed under the EPBC Act, which are known, likely or may occur in 1km of the site.

Scientific Name	Common Name	EPBC Status	Observ.	1km Presence		
				K	L	M
Amphibromus fluitans	River Swamp Wallaby-grass	V				*
Dianella amoena	Matted Flax-lily	E				*
Dodonaea procumbens	Trailing Hop-bush	V				*
Glycine latrobeana	Clover Glycine	V			*	
Lachnagrostis adamsonii	Adamson's Blown-grass	E				*
Leucochrysum albicans var. tricolor	Hoary Sunray	E			*	
Pimelea spinescens subsp. spinescens	Plains Rice-flower, Spiny Rice-flower	CE	< 2km		*	
Prasophyllum frenchii	Maroon Leek-orchid	E			*	
Rutidosis leptorrhynchoides	Button Wrinklewort	E			*	
Senecio macrocarpus	Large-fruit Fireweed, Large-fruit Groundsel	V			*	
Diuris basaltica	Small Golden Moths	E	< 5km			
Diuris fragrantissima	Sunshine Diuris	E	< 5km			

Status: CE = Critically endangered; E = Endangered; V = Vulnerable

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Table B.3. Ecological communities listed under the EPBC Act, which are known, likely or may occur in 1km of the site.

Name	EPBC Status	Observ.	1km Presence		
			K	L	M
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	CE	< 200m	*		
Natural Temperate Grassland of the Victorian Volcanic Plain	CE			*	
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	E				*
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CE				*

Status: CE = Critically endangered; E = Endangered; V = Vulnerable

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Table B4. Ramsar wetland of international significance downstream of site

Name	Distance from site
Port Phillip Bay (western shoreline) and Bellarine Peninsula	Approx. 35 - 40 km downstream (via Werribee River)

ATTACHMENT C: SIGNIFICANT IMPACTS ON KEY MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Impacts on some key threatened and migratory/marine species are likely to be significant. The most notable of these are impacts on Growling Grass Frog (*Litoria raniformis*) as described below (C.1). Impacts are also likely to be significant for listed threatened/migratory/marine birds which use waterways for foraging and other activities (C.2). Potential for significant impacts on a Ramsar wetland of international significance downstream from the site also need to be considered (C.3).

C.1 GROWLING GRASS FROG (*Litoria raniformis*) - LIKELY SIGNIFICANT IMPACTS

C.1.1 Presence of Growling Grass Frogs in the area:

There are important populations of Growling Grass Frog (*Litoria raniformis*) adjacent to the site, downstream of the site, and likely to occur on the site itself (see Figure C.1). Nearby waterbodies where Growling Grass Frogs are confirmed to occur include:

- Parwan Creek (immediately adjacent to site)
- Star Dam (immediately adjacent to site)
- Little Lucifer Dam (approx. 1.2km downstream of site, close to Parwan Creek)
- Werribee River (approx. 2.5km downstream of site; Parwan Creek flows into Werribee River)

The site contains waterbodies, including a seasonal tributary to Parwan Creek, which are also likely to contain Growling Grass Frogs, given the extremely close proximity to known Growling Grass Frog populations.

C.1.2 Importance of Growling Grass Frog populations in the area:

Parwan Creek is known by herpetologists and ecologists as an important waterway supporting important source-populations of Growling Grass Frog in the region. Parwan Creek is a refuge habitat for Growling Grass Frogs, as its natural salinity protects frogs from chytrid fungus (a fungus that has severely impacted other Growling Grass Frog populations around Australia). There are no other industries or urban developments along Parwan Creek, other than non-intensive farming.

There is suitable movement habitat which these important “Parwan Creek area” populations of Growling Grass Frogs can use to interact and colonise existing and newly available waterbodies and habitat in the area. Parwan Creek is connected with numerous waterbodies, including Werribee River. There are also numerous waterbody regeneration projects underway in the region, and the “Parwan Creek area” populations will be essential for re-colonising these waterbodies.

The populations of Growling Grass Frogs along Parwan Creek and adjacent waterbodies are large and consistent. Hence Parwan Creek and its neighbouring waterbodies are essential habitat for breeding, dispersal and recovery of the Growling Grass Frog in Victoria. Protecting each population ‘pocket’ along this waterway and associated waterbodies is also important for genetic diversity of Growling Grass Frogs breeding in and dispersing from this area.

Please note that the impacted populations of Growling Grass Frogs meet Commonwealth of Australia guidelines for being important populations, e.g.:

“As such, any viable population is considered to be an important population for the persistence and recovery of the growling grass frog. For this species, a viable population is one which is not isolated from other populations or water bodies, such that it has the opportunity to interact with other nearby populations or has the ability to establish new populations when water bodies fill and become available.” (Significant impact guidelines for the vulnerable growling grass frog (*Litoria raniformis*), Commonwealth of Australia, 2009, p.4).

C.1.3 Likely significant impact of the actions on these important populations:

There is a real possibility that MBC's proposed actions will...

- Lead to a long-term decrease in the size of these important populations of Growling Grass Frogs, via negative effects PFAS have on amphibian breeding, gene expression, hormonal expression, metamorphosis and growth (see "How PFAS impact frogs" below).
- Adversely affect habitat critical to survival of these populations, e.g. through contamination of these waterways and waterbodies with PFASs leachate.
- Disrupt the breeding cycle of these important populations, e.g. through impacts of PFASs on eggs, tadpoles and normal development; see further details below.
- Increase risk of disease and developmental issues, e.g. through negative impacts of PFASs on immune system function.
- Interfere with recovery of Growling Grass Frog species in the surrounding region, given the Parwan Creek-Werribee River populations likely to be impacted are important source populations for breeding and dispersal.

C.1.4 How PFAS (including low levels) impact frogs:

- Developmental delays [1, 2]
- Reduced growth [1, 3]
- Delayed metamorphosis (i.e. from tadpole to adult stage) [2, 3]
- Altered gene expression, e.g. negatively impacting hormonal function and metamorphosis [4]. This has been shown to occur at low PFAS concentrations (e.g. 0.1 ug/L).
- Other impacts on breeding and development likely to lead to species decline [2].

Note: Some of these effects occur at very low PFAS concentrations, especially disruptions in hormonal functioning and gene expression. In fact, low PFAS concentrations sometimes have stronger negative impact than high levels, due to an inverted-U relationship between exposure level and effects [4].

Please note that impacts are also not limited to PFAS. Additional impacts include habitat disturbance, including removal of seasonal watercourses and drainage lines in which Growling Grass Frogs are highly likely to be present.

C.1.5 Why Growling Grass Frogs are particularly susceptible to impacts of PFAS:

Behaviour of PFAS in aquatic systems (waterways, etc.) -

- PFAS readily dissolve, travel and persist in aquatic systems [5].
- PFAS bioaccumulate (build up) in aquatic systems, and in animal systems. Thus, even very low levels (e.g. levels at the lower limit of detection) can build up in fauna that live in or use aquatic systems [5].

Growling Grass Frogs have high exposure to soluble pollutants in aquatic habitats -

- Growling Grass Frog tadpoles live in water, and adult frogs depend on water and moist areas.
- Tadpoles have permeable skin and breathe via gills. This increases opportunity for uptake of PFAS [2].
- Adults also have thin, permeable skin, through which moisture containing PFAS can transfer [2].
- Therefore, uptake of PFAS can occur through absorption, respiration, ingestion of aquatic prey and direct ingestion of contaminated water.
- Amphibians have shown rapid uptake and bioaccumulation of PFAS. Research suggests this uptake and bioaccumulation may be more rapid than for other taxa (e.g. fish) [2].

PFAS are endocrine disruptors, and frog development depends on a healthy hormonal systems -

- E.g. Development during aquatic stage is reliant on hormone-regulated changes, which can be disturbed by endocrine disruptors such as PFAS [4].

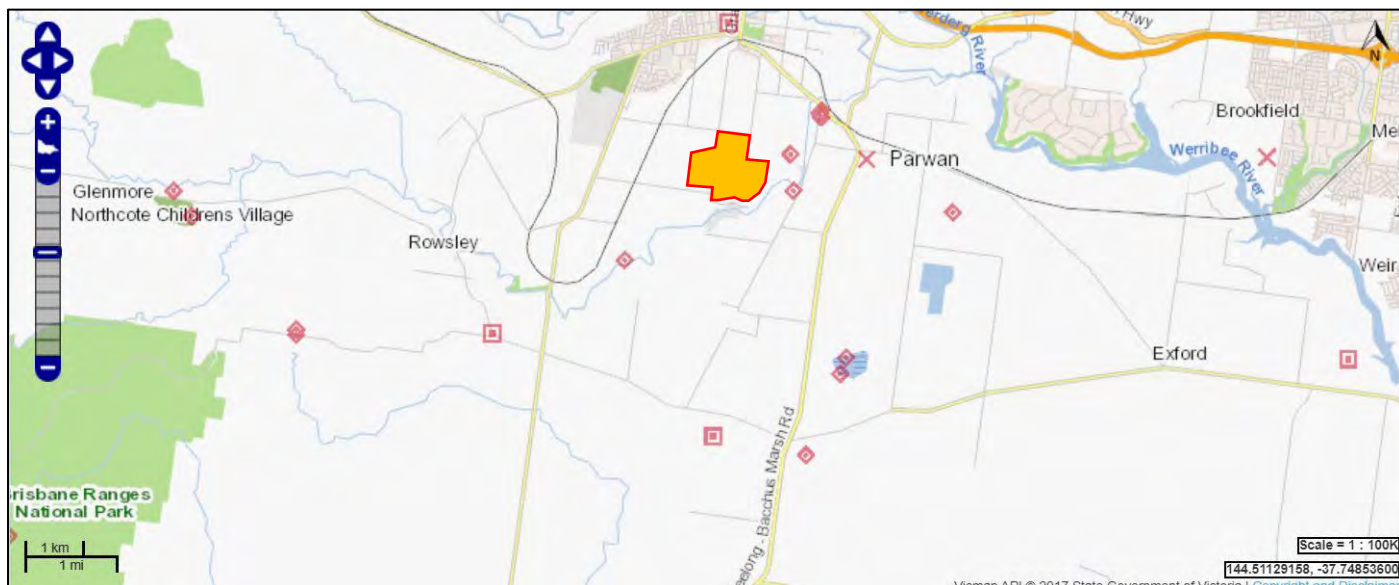


Figure C.1. VBA records of Growling Grass Frog (*Litoria raniformis*) along Parwan Creek and nearby areas.

Orange polygon (red border) = Proposed site for receiving and processing 1.5 million cubic metres of PFAS-contaminated spoil.

Red markers = Verified Growling Grass Frog observations recorded in Victorian Biodiversity Atlas.

Accuracy: **◇** <= 100m; **■** > 500m <= 1000m; **×** > 2500m <= 5000m.

Most recent observations recorded = December 2018.

Note: We are currently collecting additional evidence on likely significant impacts on Growling Grass Frog which we will forward to the Department of Agriculture, Water and the Environment shortly.

C.2 LISTED MIGRATORY/MARINE BIRDS - LIKELY SIGNIFICANT IMPACTS

C.2.1 Presence of EPBC-listed Migratory and Marine birds in the area:

There are multiple threatened, migratory and marine birds in the area, which are listed under the EPBC Act 1999. See Figure C.2 for a map of key observations of these birds in the area. The area provides important habitat for these species due to:

- Presence of multiple, intersecting waterways and waterbodies in the area, which provide food and habitat.
- Presence of small waterbodies on the site itself and adjacent to the site, which provide food and habitat.
- Being an important corridor for movement of birdlife between Brisbane Ranges National Park (south-west of site), Werribee Gorge State Park (north-west of site), Lerderderg Gorge State Park (north of site), Long Forest Nature Conservation Reserve (north-east of site), Melton Reservoir (east of site), Peppertree Park (north of site).
- Being an important corridor for movement of birdlife from Port Phillip Bay (35km south-east) to the above waterways, parks and reserves.
- Being an area with low urban density and high food availability (e.g. fish, amphibians, crustaceans), which forms part of the flight path and foraging/resting grounds for these bird species.

Bird species of particular concern in the area (due to food or habitat preferences) include: White-bellied Sea-Eagle (*Haliaeetus leucogaster*), Cattle Egret (*Ardea ibis*), Great Egret (*Ardea alba*), Osprey (*Pandion haliaetus*), Australian Painted Snipe (*Rostratula australis* / *Rostratula benghalensis (sensu lato)*), Latham's Snipe (*Gallinago hardwickii*), Common Sandpiper (*Actitis hypoleucos*), Curlew Sandpiper (*Calidris ferruginea*), Pectoral Sandpiper (*Calidris melanotos*), Sharp-tailed Sandpiper (*Calidris acuminata*), Eastern Curlew (*Numenius madagascariensis*), Greenshank (*Tringa nebularia*). See Table B.1 for EPBC status of each of these species.

C.2.2 Significance of EPBC-listed Migratory and Marine birds in the area:

Given the above features, the area is important habitat for breeding, genetic diversity, dispersal and recovery of these protected bird species. The birds which use this area are also likely to be part of the populations using National and State Parks nearby, and possibly the Ramsar wetland downstream. Thus impacts on listed birds in the area are also highly likely to impact populations in surrounding areas.

C.2.3 Likely impact of the actions on these significant populations:

There is a real possibility that MBC's proposed actions will...

- Adversely affect food sources on which these species rely, especially those species which are carnivorous / omnivorous. These impacts would be two-fold: 1/ PFAS contamination of the aquatic prey or vegetation, leading to biomagnification of PFAS in the food chain, and thus biomagnification of PFAS in the bodies of birds consuming aquatic prey or vegetation. 2/ Eventual decline of aquatic prey or vegetation, through impacts of PFAS, leading to lower availability of these food sources.
- Adversely affect habitat critical to survival of these populations, e.g. through contamination of waterways and waterbodies with PFASs leachate.
- Disrupt the breeding cycle of these important populations, e.g. through impacts of PFASs on eggs and normal development; see further details below.
- Increase risk of disease and developmental issues, e.g. through negative impacts of PFASs on immune system function.
- Lead to a long-term decrease in the size of important populations of these listed bird species, via the above impacts.
- Interfere with recovery of these listed bird species, given the above impacts, and the way these species use the area.

C.2.4 How PFAS (including low levels) impact birds:

- Decreased weight gain in females during reproduction. This can occur at PFAS levels much lower than current avian toxicity reference values [6].
- Negative impacts on egg development [7, 8]
- Decreased embryo mass [7].
- Reduced hatching success [8]. This can occur at extremely low PFAS concentrations, much lower than current avian toxicity reference values [6, 9].
- Reduced imprinting of chicks [8]. This would reduce chick survival, as survival is dependent on imprinting on parent/s.
- Neurobehavioural abnormalities [8].
- Altered gene expression, e.g. negatively impacting thyroid and immune function [7, 10]
- Impaired immune function [10, 11]
- Other impacts on breeding and development likely to lead to species decline.

Note: Some of these effects occur at PFAS concentrations much lower than current avian toxicity reference values, especially disruptions in hatching success [6, 9].

C.2.5 Why migratory and marine bird species are particularly susceptible to impacts of PFAS:

- Many of these listed bird species eat aquatic prey and/or vegetation. Aquatic prey and vegetation are especially prone to PFAS uptake and bioaccumulation. PFAS then biomagnifies through each trophic level of the food chain. Therefore, birds which forage or hunt in aquatic environments are especially susceptible to both biomagnification and bioaccumulation of PFAS, such that level low level of PFAS can easily lead to high levels in these species.
- Birds which use waterways and waterbodies for foraging, hunting or habitat can also intake PFAS-contaminated water through drinking, preening, and other activities.
- Repeated intake of PFAS-contaminated water, vegetation or prey leads to bioaccumulation, as PFAS builds up in tissues.
- PFAS are passed from adult females to eggs.

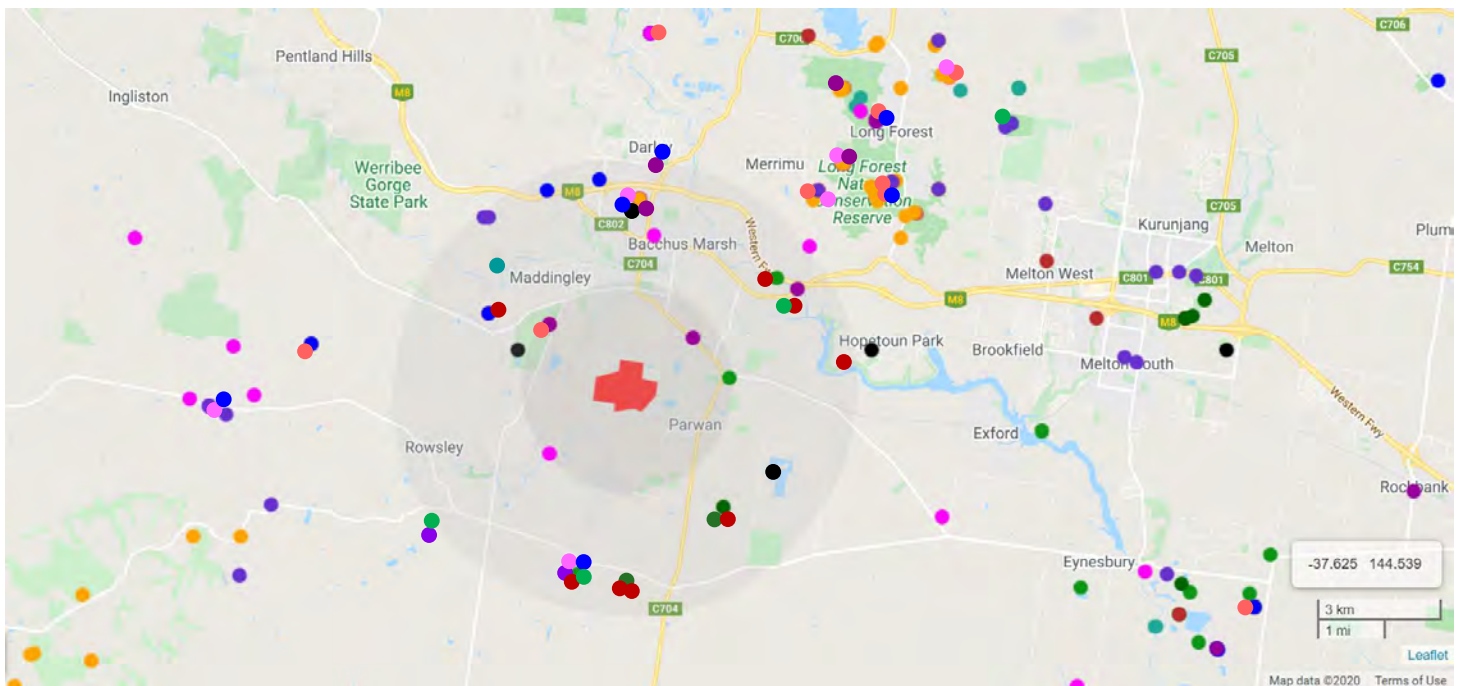


Figure C.2. Observations of EPBC-listed threatened, migratory and marine bird species (ALA and VBA > 1990). **Red polygon** = Site location; **Inner grey circle** = 2km radius (approx.); **Outer grey circle** = 5km radius (approx.)

● **White-bellied Sea-Eagle** ● **Cattle Egret** ● **Great Egret** ● **Latham's Snipe** ● **Swift Parrot** ● **Black-eared Cuckoo**
● **White-throated Needletail** ● **Rainbow Bee-eater** ● **Fork-tailed swift** ● **Satin Flycatcher** ● **Rufous Fantail**

ATTACHMENT D: ACTIONS & RISKS ASSOCIATED WITH MBC'S PROPOSED PFAS-CONTAMINATED SPOIL PROCESSING FACILITY

D.1 About the PFAS-contaminated spoil the site is preparing to receive and process:

- The spoil will come from areas previously contaminated through industrial activities and firefighting foam (e.g. near Coode Island).
- Spoil will arrive as a paste/slurry composed of soil and water.
- Amount of spoil will be around 1.5 million cubic metres.
- Concentrations of PFAS in the spoil will not be known until the spoil arrives on site.
- Concentrations of PFAS in the spoil are 'expected' to be up to 0.7ug/L, however bore test results from where the soil is originating suggest levels may be **substantially higher**. Concentrations in water extracted during de-watering may be higher. The expected PFAS concentrations exceed Australian ecological water quality guideline values for sensitive fauna, and **exceed scientifically accepted reference levels** for amphibians and avian species.
- The spoil will also contain other contaminants such as heavy metals.

D.2 About processing of the spoil:

- MBC have removed a watercourse highly likely to contain Growling Grass Frogs while preparing cells to receive this spoil. This watercourse is connected with Parwan Creek and immediately beside confirmed Growling Grass Frog observations.
- MBC are planning to remove drainage lines on the west side of the proposed site (west of Gullines Road). These drainage lines are also likely to contain Growling Grass Frogs, given the prevalence of Growling Grass Frogs in the immediate vicinity.
- Proposed site plan is shown in Figure D.1. Preparations of south-east cells on the plan has already begun.
- The PFASs-contaminated spoil will be held in open bays for around 21 days while being tested. This is not best practice, and increases the risk of PFASs and other contaminants leaching. Exact levels of PFASs-contamination will not be known until after this open bay storage period.
- A dewatering process will be used to draw out PFAS-contaminated water from the spoil, separating the water from the soil. It is anticipated that most of the PFAS will be dissolved in, and remain with, the water. Holding PFASs in an aquatic state substantially increases the risks of leaching, and the pathways through which that leachate could enter the surrounding environment, impacting on matters of national environmental significance.
- MBC plan to use the PFAS-contaminated water for dust suppression of the remaining soil (see Figure D.2). It is unclear how this system would work, as more detailed technical information has been withheld from community consultation.
- It appears that eventual disposal of the PFAS-contaminated water would be via sewage discharge, although further clarification is required to confirm this.
- After testing, Category C PFASs-contaminated spoil will be transferred to and stored in containment cells which are currently being built approx. 250m from Parwan Creek. Gradient of the land runs down to Parwan Creek.
- It appears that MBC plan to mix the (Category C?) dried PFAS-contaminated soil with clean-fill, for reuse.

D.3 Risks associated with storing, processing and reusing PFAS-contaminated spoil:

- PFAS are human-made, persistent organic pollutants which can remain indefinitely in the environment, building up over time through bioaccumulation [5].
- PFAS are environmental toxicants which can negatively impact reproductive, developmental, immune and other functioning of animals. Amphibians and birds seem especially vulnerable to impacts of PFAS.
- For some types of PFAS (e.g. PFOS) these toxic effects can occur at extremely low concentrations. The level at which toxic effects occur is often close to the level of detection (i.e. if any PFAS at all shows up in testing, it could be enough to cause toxic effects for some species, especially amphibian and bird species) [5].
- PFAS are highly soluble and persistent in aquatic media, and readily travel long distances in aquatic systems [5].

- PFAS bioaccumulate in the environment and in plant and animal systems (protein tissues, liver, etc.) [5].
- PFAS biomagnify in each level of the food chain. This means low levels can lead to high levels in predator species such as birds of prey (e.g. White-bellied Sea Eagle) [5].
- Biomagnification and bioaccumulation together have a synergistic effect, whereby low levels of PFAS can lead to exceptionally high levels in predator species which repeatedly forage and use PFAS-contaminated waterbodies.
- The properties of PFAS make them especially prone to leaching, and especially difficult to contain [5]. This is especially true of PFAS-contaminated paste, slurry or water.
- The spoil will contain additional industrial contaminants, which could interact with the PFAS contaminants.

D.4 Measures used to contain PFAS-contaminated spoil and water and not certain enough to reduce the level of impact below the ‘significant impact’ threshold:

There has been no attempt at avoidance

- The proposed site and area contains seasonal watercourses, aquifers which feed surface water, and multiple pathways through which EPBC-listed matters of national environmental significance can be impacted. Scientific evidence and international and Australian guidelines strongly discourage storing and processing PFAS-contaminated spoil at sites with these features, even where PFAS concentrations are low [5].
- There are alternative, more appropriate sites for receiving and processing this PFAS-contaminated spoil (i.e. sites that don’t contain watercourses and where actions would not have significant impact on EPBC-matters).
- There are also alternative activities in which MBC could invest which are more appropriate for the sensitive area in which this site is placed.
- The most appropriate management strategy in the case of this PFAS-contaminated spoil would be to avoid receiving the spoil at the site in the first place. However, MBC have pushed ahead with large scale preparations for receiving this spoil.

There are currently no certain or reliably effective options available for mitigating impacts of these actions:

- Leaching of PFASs from containment cells remains a risk even when best practice is followed [5]. The lifespan of cell liners is shorter than the lifespan of PFAS, making leaching almost inevitable over time.
- No well-established methods yet exist for removing PFAS from the environment once it leaches.

MBC’s proposal does not even meet current minimum standards for attempting to minimise or mitigate impacts of these actions:

- Normally minimisation measures would involve placing PFAS-spoil containment cells as far away as possible from waterways and waterbodies. Instead MBC are building these cells between a waterbody on site and an adjacent waterway. The cell area used to have a seasonal waterway/gully running through it which has now been excavated.
- PFAS-contaminated spoil will be held in open bays on site for approx. 21 days while being tested. This is a high risk proposal which does not demonstrate awareness of mitigation strategies needed.
- As outlined above, it appears the plan is use the PFAS-contaminated water (leachate) for dust suppression and possibly to eventually dispose of it via sewer. Accidental PFAS leaching to sewage systems is already a problem in Australia, and increases pathways through which PFAS can enter the environment and affect wildlife. Deliberately disposing of PFAS-contaminated leachate via sewer is a high risk proposal.
- MBC have received advice from a consultancy company which does not appear to have credentials or expertise in PFAS risk management. This company has completed risk assessments for MBC’s proposed actions which we believe are highly inadequate. We can provide further information upon request.

It should be noted that MBC have failed to implement mitigation requirements identified in EPA Victoria audits of their current site (11 Tilleys Road, Maddingley) from at least 2012 to present (see EPA Victoria Audits, CARMS No. 64662). They are currently non-compliant with important EPA licence conditions for their current site. This

demonstrates an ongoing unwillingness to undertake even basic measures to protect matters of environmental significance.



Figure D.1. Plans of the proposed site, displayed at a stakeholder information session held by MBC's lobbyist group. *Top image* = general plan; *Bottom image* = details of storage bay and containment cell positions.

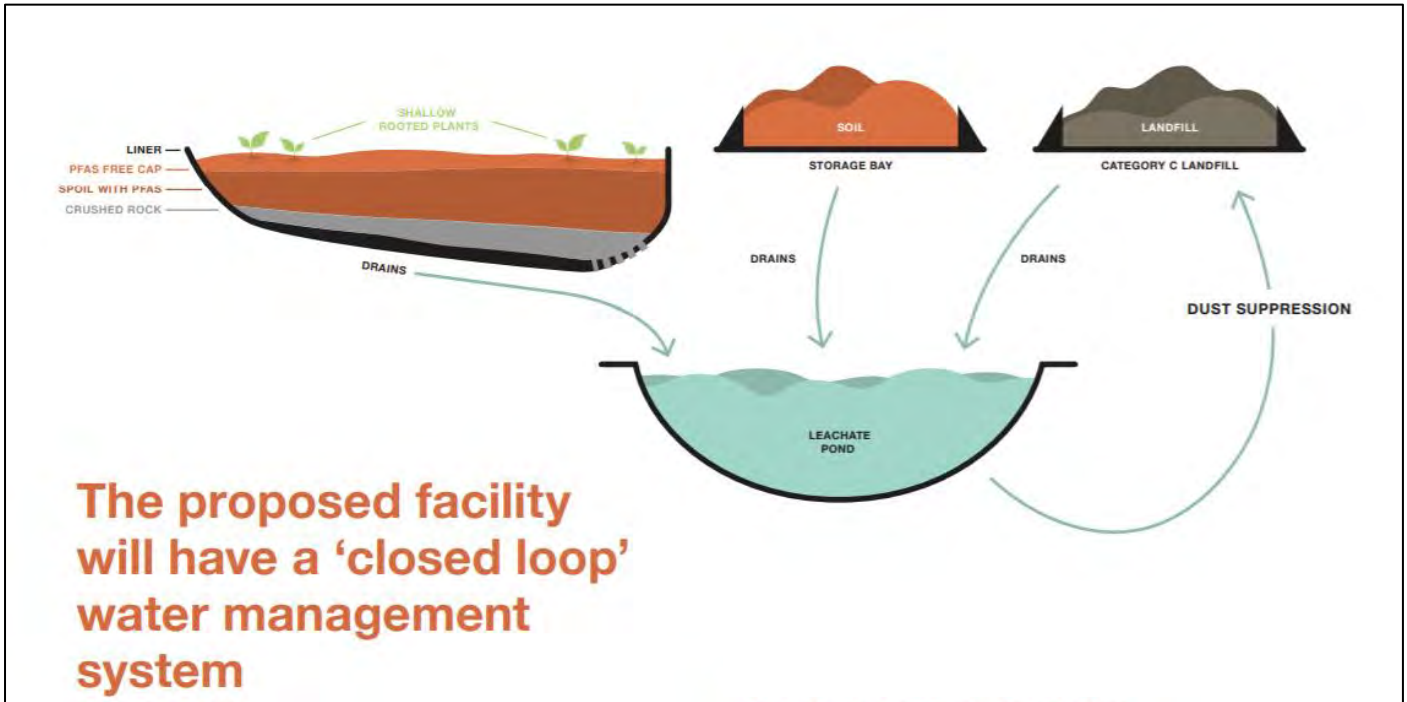


Figure D.2. Diagram from MBC information sheet on the PFAS-contaminated spoil processing facility, showing use of PFAS-contaminated leachate for suppression of dust, including dust from soil held in open bays.

Reference:

https://static1.squarespace.com/static/5d799dae673b785e1d5520ca/t/5e5de44ed10fed5651bccf4a/1583211603425/MBC_Coal_Factsheet_WATER.pdf

REFERENCES

PLEASE NOTE: This is just a small sample of peer-reviewed, scientific references available.

There is strong scientific consensus that PFAS impact wildlife, ESPECIALLY amphibians, waterbirds and birds of prey, even at exceptionally low levels. Likely impacts of the actions detailed above also extend beyond PFAS-related impacts.

Further references are available upon request, and we can also connect you with experts in these fields.

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4. Cheng, Y., et al., *Thyroid disruption effects of environmental level perfluorooctane sulfonates (PFOS) in *Xenopus laevis**. Ecotoxicology, 2011. **20**: p. 2069-2078.
5. Heads of EPA Australia and New Zealand, *PFAS National Environmental Management Plan Version 2.0*. 2020, Canberra, Australia: Commonwealth of Australia.
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7. Cassone, C.G., et al., *In ovo effects of perfluorohexane sulfonate and perfluorohexanoate on pipping success, development, mRNA expression, and thyroid hormone levels in chicken embryos*. Neurotoxicology and Teratology, 2010. **32**: p. 182-186.
8. Pinkas, A., et al., *Neurobehavioral teratogenicity of perfluorinated alkyls in an avian model*. Neurotoxicology and Teratology, 2010. **32**(182-186).
9. Custer, C.M., et al., *Exposure and effects of perfluoroalkyl compounds on tree swallows nesting at Lake Johanna in east central Minnesota, USA*. Reproductive Toxicology, 2012. **33**: p. 556-562.
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11. Hansena, E., et al., *A novel use of the leukocyte coping capacity assay to assess the immunomodulatory effects of organohalogenated contaminants in avian wildlife*. Environment International, 2020. **142**(105861): p. 1-8.

From: [Andrew McNee](#)
To: s22
Cc: [Media](#); s22
Subject: RE: Media enquiry PFAS West Gate Freeway s47F The Age [SEC=OFFICIAL]
Date: Wednesday, 22 July 2020 5:36:56 PM

Hi s22

Cleared words below with one minor change highlighted.

Thanks, Andrew

The Minister is aware of a proposal by Maddingley Brown Coal Pty Ltd to dispose of spoil from the West Gate Tunnel Project to Maddingley Brown Coal Mine near Bacchus Marsh.

Under the Environment Protection and Biodiversity Conservation Act 1999 (the Act), it is the responsibility of a person proposing to take an action to refer it for assessment and approval under the Act. Only those actions likely to have significant impacts on matters of national environmental significance must be referred under the Act. Substantial penalties may apply to a person who takes such an action without approval. Matters of national environmental significance include listed threatened species and ecological communities and wetlands of international importance, among others.

The Department has written to Maddingley Brown Coal **following allegations that the proposal should require approval under the EPBC Act**, and will continue to engage with them in relation to any obligations they may have under national environmental law.

Outside of matters protected under the Act, the regulation of potentially contaminated material, including spoil and other construction wastes, is a matter for the Victorian Government.

From: s22
Sent: Wednesday, 22 July 2020 4:29 PM
To: Andrew McNee <Andrew.McNee@environment.gov.au>
Cc: Media <media@environment.gov.au>; s22
s22
s22
Subject: RE: Media enquiry PFAS West Gate Freeway s47F The Age [SEC=OFFICIAL]

Hi Andrew,
The below TPs previously provided are still current, and would be a suitable response to the media enquiry. I have added the red text to respond to the query about why we are looking into this issue.

For your clearance please – happy to discuss,

s22

s22

Co-Director (Acting) | Victoria & Tasmania Assessments s22

s22

Department of Agriculture, Water and the Environment
Assessments & Governance Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
GPO Box 858, Canberra ACT 2601
awe.gov.au

From: Media <media@environment.gov.au>

Sent: Wednesday, 22 July 2020 4:07 PM

To: Media <media@environment.gov.au>; s22

s22

Cc: Andrew McNee <Andrew.McNee@environment.gov.au>

Subject: RE: Media enquiry PFAS West Gate Freeway s47F The Age [SEC=OFFICIAL]

Hi s22

s22 from the MO said these are the current TPs she has on this topic, if it helps.

The Minister is aware of a proposal by Maddingley Brown Coal Pty Ltd to dispose of spoil from the West Gate Tunnel Project to Maddingley Brown Coal Mine near Bacchus Marsh.

Under the Environment Protection and Biodiversity Conservation Act 1999 (the Act), it is the responsibility of a person proposing to take an action to refer it for assessment and approval under the Act. Only those actions likely to have significant impacts on matters of national environmental significance must be referred under the Act. Substantial penalties may apply to a person who takes such an action without approval. Matters of national environmental significance include listed threatened species and ecological communities and wetlands of international importance, among others.

The Department has written to Maddingley Brown Coal **following allegations that the proposal is likely to require approval under the EPBC Act**, and will continue to engage with them in relation to any obligations they may have under national environmental law.

Outside of matters protected under the Act, the regulation of potentially contaminated material, including spoil and other construction wastes, is a matter for the Victorian Government.

Regards

s22

Media Team

Communication and Media Branch
Corporate and Business Division
Department of Agriculture, Water and the Environment

GPO Box 787, CANBERRA ACT 2601

s22

s22

From: Media <media@environment.gov.au>

Sent: Wednesday, 22 July 2020 3:54 PM

To: s22

s22

Cc: Andrew McNee <Andrew.McNee@environment.gov.au>; Media <media@environment.gov.au>

Subject: Media enquiry PFAS West Gate Freeway s47F The Age [SEC=OFFICIAL]

Hi s22 and s22

We have an enquiry via the MO from The Age relating to “a letter from Sussan Ley indicating that she is investigating the impact of the dumping of PFAS soil at Maddingley Brown Coal from the West Gate Freeway on the growling grass frogs”.

Is this one you can help with? Great if we're able to get back to the MO today, but if not let us know.

Regards

s22

Media Team

Communication and Media Branch

Corporate and Business Division

Department of Agriculture, Water and the Environment

GPO Box 787, CANBERRA ACT 2601

s47F

From: s22

Sent: Wednesday, 22 July 2020 3:33 PM

To: Media <media@environment.gov.au>

Cc: s22

s22

Subject: Fwd: West Gate Freeway

Hi can you look at this for me please

Regards

s22

Begin forwarded message:

From: s47F
Date: 22 July 2020 at 3:30:03 pm AEST
To: s22
Subject: West Gate Freeway
Reply-To: s47F

Hi s22

I have seen a letter from Sussan Ley indicating that she is investigating the impact of the dumping of PFAS soil at Maddingley Brown Coal from the West Gate Freeway on the growling grass frogs.

Can you confirm this?

Has a formal investigation been launched or is this yet to occur? If it is, when is this likely to be initiated?

Why are you looking into this issue?

Can you please get back to me by 1pm tomorrow.

Thanks

--

s47F
Journalist
The Age

717 Bourke Street, Docklands, 3008

Phone: s47F

Mobile: s47F

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From: noreply@ministerag.govcms.gov.au on behalf of [Ministers](#)
To: [yourenvminister](#)
Subject: MC20-009156 dumping of soil in Victoria from the West Gate Tunnel Project-EAD
Date: Saturday, 13 June 2020 11:06:58 AM

New feedback has been submitted from the Minister for Agriculture Water and the Environment website.

The details provided are:

Title:

Mr

Name:

§47F

Organisation:

Email:

§47F

Phone:

§47F

Address:

§47F

Subject:

Australians being poisoned through the dumping of toxic soil in Victoria.

Message:

Could you please look into the dumping of soil in Victoria from the West Gate Tunnel Project.

The proposed dump site in Bacchus Marsh has to be just about the most inappropriate site possible to dump this soil which is heavily contaminated with some of the worst toxins ever.

The agricultural land downstream from the waterway which runs through the dump site provides irrigated fruit and vegetables that feed people Australia wide.

Test report documents provided to the people of Bacchus Marsh show levels of toxins like PFAS in the soil at thousands of times the safe level. These are toxins that are impossible to contain at the proposed dump site and will certainly leach into our waterways with devastating results.

The Multinational companies contracted to build the West Gate Tunnel appear to be pulling the strings of Dan Andrews and the other Victorian Labor Party ministers who are intent on recklessly going ahead with their plan no matter the consequences.

This traitorous action is intolerable, and I implore you to do everything in your power to put a stop to it.

Submission id: 806

Submission date/time: Sat, 2020-06-13 11:06

From: noreply@minister.ag.govcms.gov.au on behalf of [Ministers](#)
To: yourenvminister
Subject: MC20-010491 (Moorabool Environment Group, Valpied) - PFAS-spoil facility likely to impact EPBC matters - EPD
Date: Tuesday, 14 July 2020 4:39:27 AM
Attachments: [LeyMP_MBC-PFAS_EPBC_MEG_13July2020.pdf](#)

New feedback has been submitted from the Minister for Agriculture Water and the Environment website.

The details provided are:

Title:

Dr

Name:

Jodie Valpied

Organisation:

§47F

Email:

§47F

Phone:

§47F

Address:

Subject:

URGENT: Maddingley PFAS-spoil facility likely to impact EPBC matters

Message:

Dear Minister Ley,

Please find attached urgent correspondence regarding your Department's investigation into EPBC-matters likely to be impacted by Maddingley Brown Coal's PFAS-contaminated spoil processing facility.

We respectfully request acknowledgement of this correspondence, and a response in due course.

Yours sincerely,

§47F

on behalf of

Moorabool Environment Group Inc.

Email: §47F

Phone: §47F

Submission id: 1111

Submission date/time: Tue, 2020-07-14 04:38



Moorabool Environment Group Inc.
PO Box 545
Bacchus Marsh VIC 3340
Email: s47F
Phone: s47F

Monday 13th July 2020

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600

Dear Minister Ley,

Re: URGENT: Maddingley Brown Coal's PFAS-spoil processing facility: Actions likely to significantly impact EPBC-listed matters of national environmental significance.

We refer to your letter to the Hon. Catherine King MP on 12th June 2020 concerning Maddingley Brown Coal's (MBC's) proposal and preparations to receive and process PFAS-contaminated spoil at a new site (not part of their mine/landfill), and relevance to the EPBC Act 1999. We are writing to provide further important information on this matter, and advocate that referral under the EPBC Act should have occurred. We (Moorabool Environment Group) have long been involved in protecting threatened and migratory species in the area surrounding and adjacent to the proposed site, and have insight into MBC's proposal and likely significant impacts on EPBC-listed matters.

As you will be aware, MBC have submitted a planning request and began preparation works to receive and process approx. 1.5 million cubic metres PFAS-contaminated slurry/spoil at a 130 hectare site not previously used for this purpose, nor for any other heavy industrial activities (Gullines Road, Maddingley, Victoria). Important: this site is **not** part of MBC's mine or landfilling area. MBC plans to undertake these actions as part of establishing a large-scale contaminated spoil processing facility, beside Parwan Creek. These actions are likely to have significant impacts on matters of national environmental significance, however the actions have not been referred for assessment under the Environment Protection and Biodiversity Conservation Act, 1999.

Of particular concern, important source-populations of Growling Grass Frog (*Litoria raniformis*) occur immediately beside the site and may also occur on site. Aquatic pathways (watercourses and aquifers) on the site connect to Parwan Creek and neighbouring waterbodies containing Growling Grass Frogs. There is a real chance PFAS and other toxicants will leach from the spoil processing and storage activities, into these habitats. Research shows that even very low levels of PFAS can negatively impact amphibian breeding cycles and development, thus putting these important populations of Growling Grass Frogs at risk of decline. EPBC-listed bird species which use waterbodies and prey on aquatic species are also likely to be impacted. These impacts are described in Attachment B.

The PFAS-contaminated spoil which MBC is proposing to accept and process contains PFAS and heavy metals from industrial activities and firefighting foam previously used where the West Gate Tunnel is going to be built. There are other, more appropriate sites which have tendered to receive the spoil (i.e. sites that do not contain watercourses and that are not likely to impact matters of national environmental significance). As MBC have not yet been awarded the tender, they are not yet part of the West Gate Tunnel Project. We have received legal advice that **MBC cannot claim exemption from requirements of the EPBC Act 1999.**

MBC's proposed actions meet the following criteria for referral under the EPBC Act 1999:

1/ These are new actions for which preparations began in early 2020, and which have not previously been undertaken at the site. The site has not previously been used for landfilling, mining, processing of contaminated soil, or other heavy industrial activities. **See Attachment A.**

2/ There are matters of national environmental significance located in the area of the proposed action, including onsite, adjacent to site, and downstream of the site. **See Attachment B.**

- Listed threatened fauna (within 1km): 17
- Migratory bird species (within 1km): 14
- Marine bird species (within 1km): 21
- Threatened flora (within 1km): 10
- Listed threatened ecological communities (within 1km): 4
- Wetland of international significance (Ramsar): 1 (site is approx. 40km upstream of wetland)

3/ There is potential for impacts, including both direct and indirect impacts, on these matters of national environmental significance. **See Attachment C.**

- There is a real possibility that MBC's proposed actions will negatively impact habitat, breeding cycle and development of Growling Grass Frogs decreasing the size of an important Growling Grass Frog population, and survival and recovery of this species in the region.
- Negative impacts on other EPBC-listed matters are also likely.
- There is also high potential for facilitated impacts. If MBC receive this PFAS-contaminated spoil, it will set a precedent for receiving further PFAS-contaminated spoil.

4/ The impacts on matters of national environmental significance are likely to be significant impacts. **Attachment C.**

- Significant source-populations of Growling Grass Frogs are likely to be impacted and reduced. These populations are important for the recovery and survival of the species.
- Impacts are likely to be widespread and permanent, given PFAS travel long distances in waterways, bioaccumulate in the environment, and are persistent (i.e. do not readily break down, or if they do, they break down into other polluting substances).

5/ The proposed measures to reduce impacts are not certain enough to reduce the level of impact below the 'significant impact' threshold. Inappropriate site selection has been undertaken, given the nature of the action. **See Attachment D.**

- The proposed measures are not part of best practice for managing PFAS-contaminated spoil. For example, the spoil will be held in open bays for 21 days while being tested, increasing risk of leaching. The cells currently being built for containment of the spoil are only 200m - 250m from Parwan Creek proper, and sit on the edge of the ravine down to Parwan Creek. Performance of cell liners in relation to containing PFAS leachate is not yet fully understood. PFAS are likely to outlast any currently available cell liners.

6/ The precautionary principle also applies to these actions.

- There is still some scientific uncertainty about the impacts of PFASs, especially on Australian fauna and flora species. Research on other species suggests that the impacts may be worse than initially expected, and can occur at extremely low levels of PFASs concentration – e.g. levels that are at the lowest level of detection.
- There is also scientific uncertainty about how to best manage PFASs, although the science clearly shows high risks associated with storing PFASs-contaminated spoil in landfill.
- What is known, is that the impacts of PFASs are irreversible, and can be serious, in ways which lead to permanent species decline. Thus, the precautionary principle is applicable to MBC's plan to receive and process PFASs-contaminated spoil at this site.

MBC have a track record of extremely poor environmental management, and failing to implement proper stormwater and leachate management practices at their current site (see EPA Victoria Audits, CARMS No. 64662). It is absolutely imperative that their proposal be referred for assessment under the EPBC Act 1999. Failure to do so will have catastrophic consequences for multiple EPBC-listed fauna near the site, and likely to occur on the site itself. The flow-on effects will be serious.

We implore you to ensure that the Department of Agriculture, Water and the Environment take action on the matters we have very clearly set out in the attached.

Please do not hesitate to contact us on the details above if you or your Department require any further information. We will also forward this letter and attachments to your Department. We respectfully request a response to this letter.

Yours sincerely,

s47F
Acting President
On behalf of Moorabool Environment Group

Moorabool Environment Group Inc. acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.



**White-bellied Sea-eagle (Haliaeetus leucogaster) flying near MBC's proposed PFAS-spoil processing site.
Photographed by s47F and s47F, 27 May 2020.**

ATTACHMENT A: LOCATION AND FEATURES OF PROPOSED SITE FOR RECEIVING PFAS-CONTAMINATED SPOIL

The area in which MBC are proposing to receive and processing PFAS-contaminated spoil has not been previously used for this purpose, nor has it been used for mining, landfill or other heavy industrial activities.

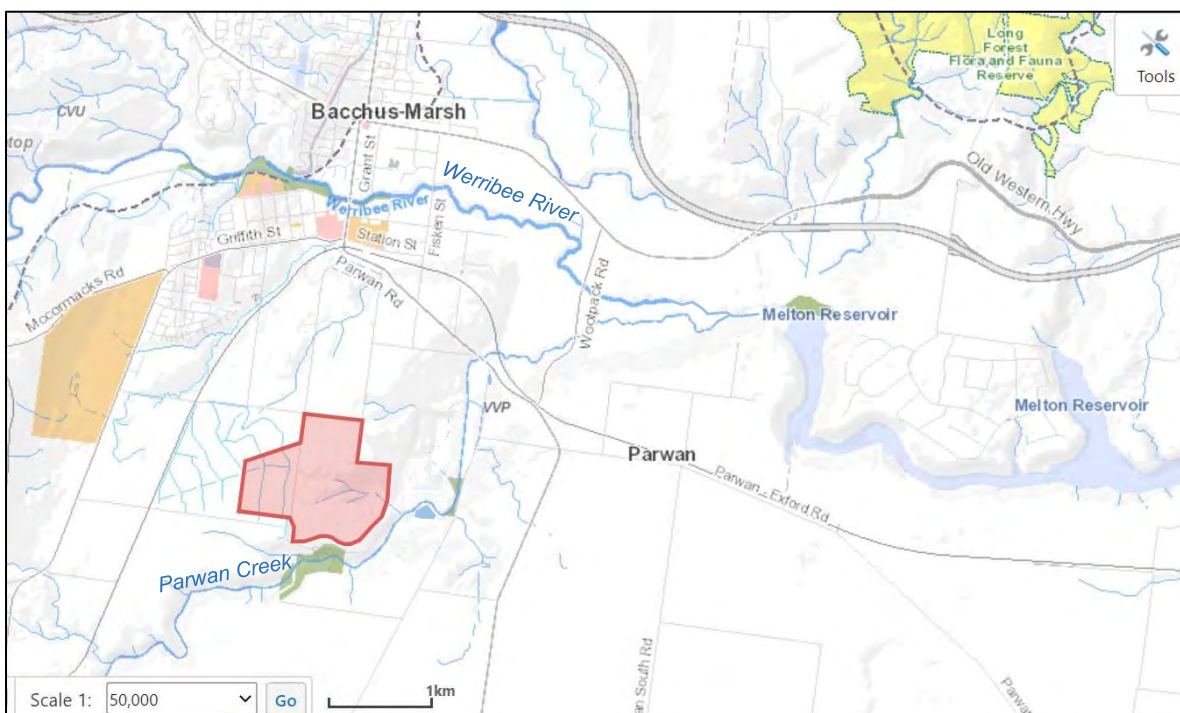
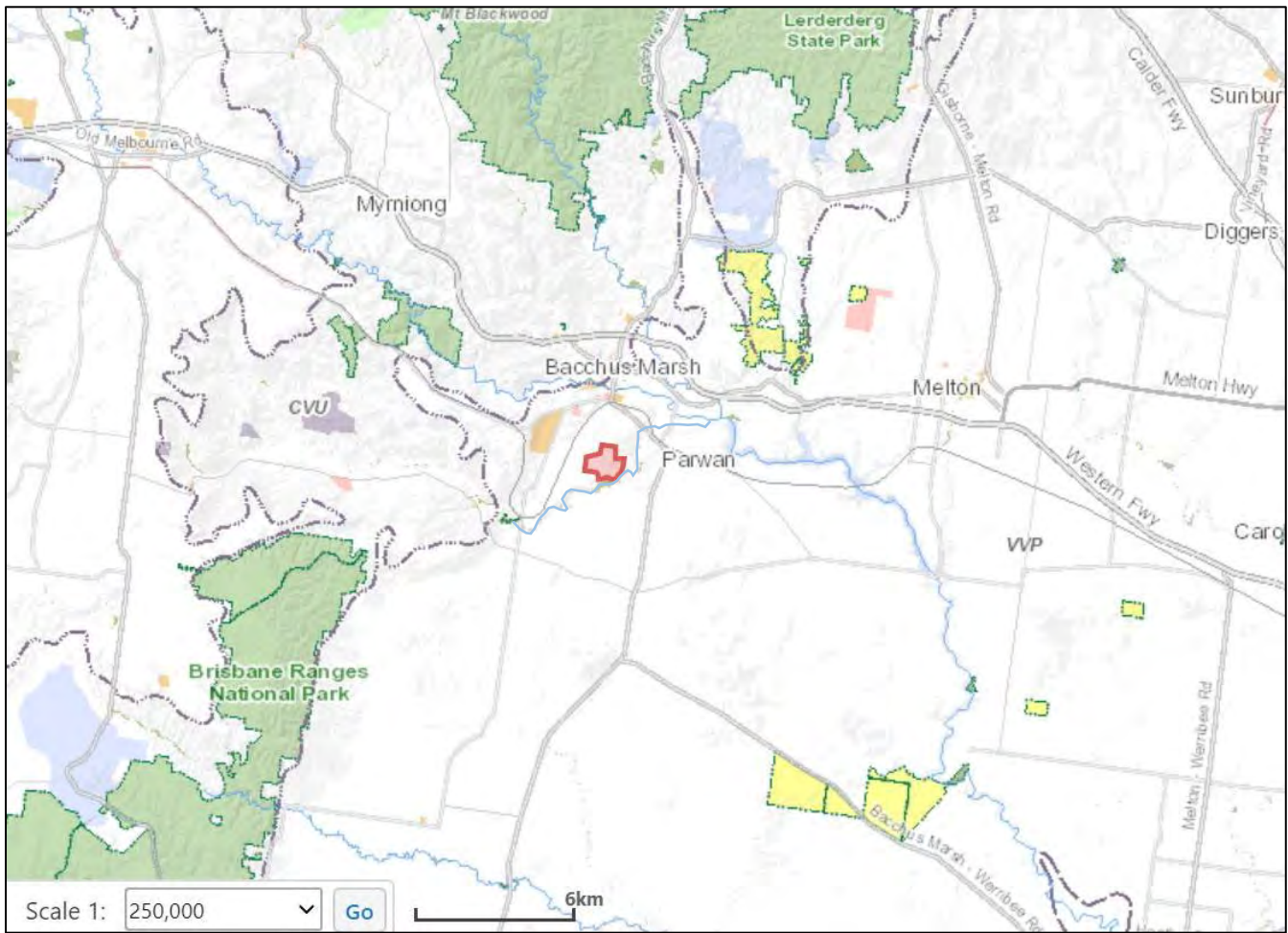


Figure A.1. Location of proposed site, Gullines Road, Maddingley, Victoria 3340

Red polygon with dark red border = Site of proposed PFAS-spoil processing facility

Green, orange, and yellow areas = Parks and reserves

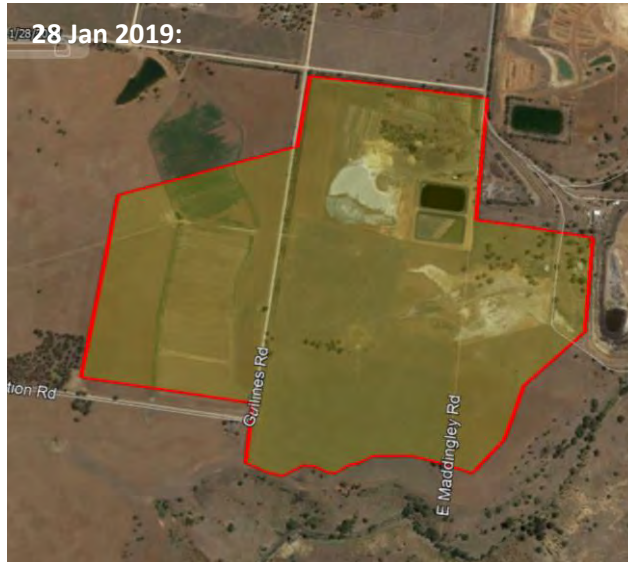


Figure A.2. Satellite images of proposed site: a) 6 July 2006; b) 28 Jan 2019 (compare with Figure A.3 below)

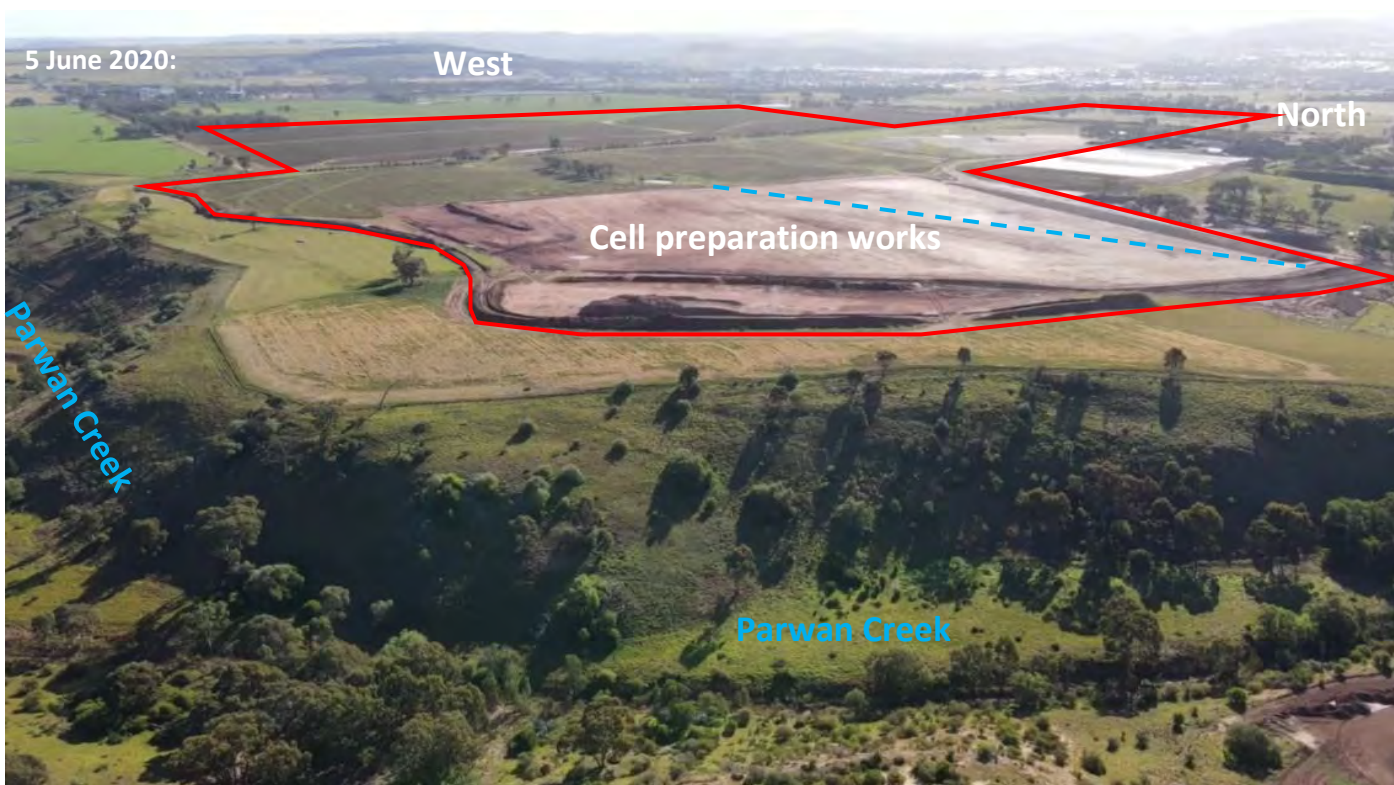


Figure A.3. 5th June 2020: Aerial image of proposed site, and preparation works for contaminated spoil cells. Image is facing north-west. Works are in south-east section of site.

- Red solid line = Site boundary. Additional works are planned for all parts of this site (construction of bays, cells, etc.). See Figure D.1, Attachment D for further details.
- - - Dotted blue line = former seasonal watercourse that has been removed (approximate location). This watercourse connects with a dam containing Growling Grass Frogs (*Litoria raniformis*).

ATTACHMENT B: MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE IN THE AREA

Table B.1. Fauna listed under the EPBC Act which are known, likely or may occur in 1km of the site. Species highlighted in blue use aquatic environments or prey on aquatic species.

Scientific Name	Common Name	EPBC Status	Observ.	1km Presence		
				K	L	M
<i>Litoria raniformis</i>	Growling Grass Frog	V	< 500m	*		
<i>Apus pacificus</i>	Fork-tailed Swift	Mi, Ma	< 1.5km		*	
<i>Ardea ibis</i>	Cattle Egret	Ma	< 2km			*
<i>Chrysococcyx osculans</i>	Black-eared Cuckoo	Ma	< 2km		*	
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Ma	< 2km		*	
<i>Merops ornatus</i>	Rainbow Bee-eater	Ma	< 2km			*
<i>Synemon plana</i>	Golden Sun Moth	CE	< 2.5km		*	
<i>Ardea alba</i>	Great Egret, White Egret	Ma	< 3.5km		*	
<i>Gallinago hardwickii</i>	Latham's Snipe	Mi, Ma	< 3.5km			*
<i>Hirundapus caudacutus</i>	White-throated Needletail	V, Mi, Ma	< 3.5km	*		
<i>Rhipidura rufifrons</i>	Rufous Fantail	Mi, Ma	< 3.5km		*	
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	Mi, Ma	< 4 km	*		
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	< 4.5km		*	
<i>Delma impar</i>	Striped Legless Lizard	V	< 5km		*	
<i>Lathamus discolor</i>	Swift Parrot	CE, Ma	< 5km		*	
<i>Actitis hypoleucos</i>	Common Sandpiper	Mi, Ma				*
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE				*
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E			*	
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Mi, Ma				*
<i>Calidris ferruginea</i>	Curlew Sandpiper	CE, Mi, Ma				*
<i>Calidris melanotos</i>	Pectoral Sandpiper	Mi, Ma				*
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll	E				*
<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias	V			*	
<i>Grantiella picta</i>	Painted Honeyeater	V			*	
<i>Monarcha melanopsis</i>	Black-faced Monarch	Mi, Ma			*	
<i>Motacilla flava</i>	Yellow Wagtail	Mi, Ma				*
<i>Numenius madagascariensis</i>	Eastern Curlew	CE, Mi, Ma				*
<i>Pandion haliaetus</i>	Osprey	Mi, Ma				*
<i>Pedionomus torquatus</i>	Plains-wanderer	CE			*	
<i>Prototroctes maraena</i>	Australian Grayling	V				*
<i>Rostratula australis / Rostratula benghalensis</i> (sensu lato)	Australian Painted Snipe	E, Ma			*	
<i>Tringa nebularia</i>	Greenshank	Mi, Ma			*	
<i>Tympanocryptis pinguicolla</i>	Grassland Earless Dragon	E				*

Status: CE = Critically endangered; E = Endangered; V = Vulnerable; Mi = Migratory; Ma = Marine

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Highlighted in blue = Use aquatic environments or prey on aquatic species.

Table B.2. Flora listed under the EPBC Act, which are known, likely or may occur in 1km of the site.

Scientific Name	Common Name	EPBC Status	Observ.	1km Presence		
				K	L	M
Amphibromus fluitans	River Swamp Wallaby-grass	V				*
Dianella amoena	Matted Flax-lily	E				*
Dodonaea procumbens	Trailing Hop-bush	V				*
Glycine latrobeana	Clover Glycine	V			*	
Lachnagrostis adamsonii	Adamson's Blown-grass	E				*
Leucochrysum albicans var. tricolor	Hoary Sunray	E			*	
Pimelea spinescens subsp. spinescens	Plains Rice-flower, Spiny Rice-flower	CE	< 2km		*	
Prasophyllum frenchii	Maroon Leek-orchid	E			*	
Rutidosis leptorrhynchoides	Button Wrinklewort	E			*	
Senecio macrocarpus	Large-fruit Fireweed, Large-fruit Groundsel	V			*	
Diuris basaltica	Small Golden Moths	E	< 5km			
Diuris fragrantissima	Sunshine Diuris	E	< 5km			

Status: CE = Critically endangered; E = Endangered; V = Vulnerable

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Table B.3. Ecological communities listed under the EPBC Act, which are known, likely or may occur in 1km of the site.

Name	EPBC Status	Observ.	1km Presence		
			K	L	M
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	CE	< 200m	*		
Natural Temperate Grassland of the Victorian Volcanic Plain	CE			*	
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	E				*
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CE				*

Status: CE = Critically endangered; E = Endangered; V = Vulnerable

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Table B4. Ramsar wetland of international significance downstream of site

Name	Distance from site
Port Phillip Bay (western shoreline) and Bellarine Peninsula	Approx. 35 - 40 km downstream (via Werribee River)

ATTACHMENT C: SIGNIFICANT IMPACTS ON KEY MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Impacts on some key threatened and migratory/marine species are likely to be significant. The most notable of these are impacts on Growling Grass Frog (*Litoria raniformis*) as described below (C.1). Impacts are also likely to be significant for listed threatened/migratory/marine birds which use waterways for foraging and other activities (C.2). Potential for significant impacts on a Ramsar wetland of international significance downstream from the site also need to be considered (C.3).

C.1 GROWLING GRASS FROG (*Litoria raniformis*) - LIKELY SIGNIFICANT IMPACTS

C.1.1 Presence of Growling Grass Frogs in the area:

There are important populations of Growling Grass Frog (*Litoria raniformis*) adjacent to the site, downstream of the site, and likely to occur on the site itself (see Figure C.1). Nearby waterbodies where Growling Grass Frogs are confirmed to occur include:

- Parwan Creek (immediately adjacent to site)
- Star Dam (immediately adjacent to site)
- Little Lucifer Dam (approx. 1.2km downstream of site, close to Parwan Creek)
- Werribee River (approx. 2.5km downstream of site; Parwan Creek flows into Werribee River)

The site contains waterbodies, including a seasonal tributary to Parwan Creek, which are also likely to contain Growling Grass Frogs, given the extremely close proximity to known Growling Grass Frog populations.

C.1.2 Significance of Growling Grass Frog populations in the area:

Parwan Creek is known by herpetologists and ecologists as an important waterway supporting significant source-populations of Growling Grass Frog in the region. Hence Parwan Creek and its neighbouring waterbodies are essential habitat for breeding, dispersal and recovery of the Growling Grass Frog in Victoria. Protecting each population ‘pocket’ along this waterway and associated waterbodies is also important for genetic diversity of Growling Grass Frogs breeding in and dispersing from this area.

C.1.3 Likely impact of the actions on these significant populations:

There is a real possibility that MBC’s proposed actions will...

- Lead to a long-term decrease in the size of these important populations of Growling Grass Frogs, via negative effects PFAS have on amphibian breeding, gene expression, hormonal expression, metamorphosis and growth (see “How PFAS impact frogs” below).
- Adversely affect habitat critical to survival of these populations, e.g. through contamination of these waterways and waterbodies with PFASs leachate.
- Disrupt the breeding cycle of these important populations, e.g. through impacts of PFASs on eggs, tadpoles and normal development; see further details below.
- Increase risk of disease and developmental issues, e.g. through negative impacts of PFASs on immune system function.
- Interfere with recovery of Growling Grass Frog species in the surrounding region, given the Parwan Creek-Werribee River populations likely to be impacted are important source populations for breeding and dispersal.

C.1.4 How PFAS (including low levels) impact frogs:

- Developmental delays [1, 2]
- Reduced growth [1, 3]
- Delayed metamorphosis (i.e. from tadpole to adult stage) [2, 3]
- Altered gene expression, e.g. negatively impacting hormonal function and metamorphosis [4]. This has been shown to occur at low PFAS concentrations (e.g. 0.1 ug/L).
- Other impacts on breeding and development likely to lead to species decline [2].

Note: Some of these effects occur at very low PFAS concentrations, especially disruptions in hormonal functioning and gene expression. In fact, low PFAS concentrations sometimes have stronger negative impact than high levels, due to an inverted-U relationship between exposure level and effects [4].

C.1.5 Why Growling Grass Frogs are particularly susceptible to impacts of PFAS:

Behaviour of PFAS in aquatic systems (waterways, etc.) -

- PFAS readily dissolve, travel and persist in aquatic systems [5].
- PFAS bioaccumulate (build up) in aquatic systems, and in animal systems. Thus, even very low levels (e.g. levels at the lower limit of detection) can build up in fauna that live in or use aquatic systems [5].

Growling Grass Frogs have high exposure to soluble pollutants in aquatic habitats -

- Growling Grass Frog tadpoles live in water, and adult frogs depend on water and moist areas.
- Tadpoles have permeable skin and breathe via gills. This increases opportunity for uptake of PFAS [2].
- Adults also have thin, permeable skin, through which moisture containing PFAS can transfer [2].
- Therefore, uptake of PFAS can occur through absorption, respiration, ingestion of aquatic prey and direct ingestion of contaminated water.
- Amphibians have shown rapid uptake and bioaccumulation of PFAS. Research suggests this uptake and bioaccumulation may be more rapid than for other taxa (e.g. fish) [2].

PFAS are endocrine disruptors, and frog development depends on a healthy hormonal systems -

- E.g. Development during aquatic stage is reliant on hormone-regulated changes, which can be disturbed by endocrine disruptors such as PFAS [4].

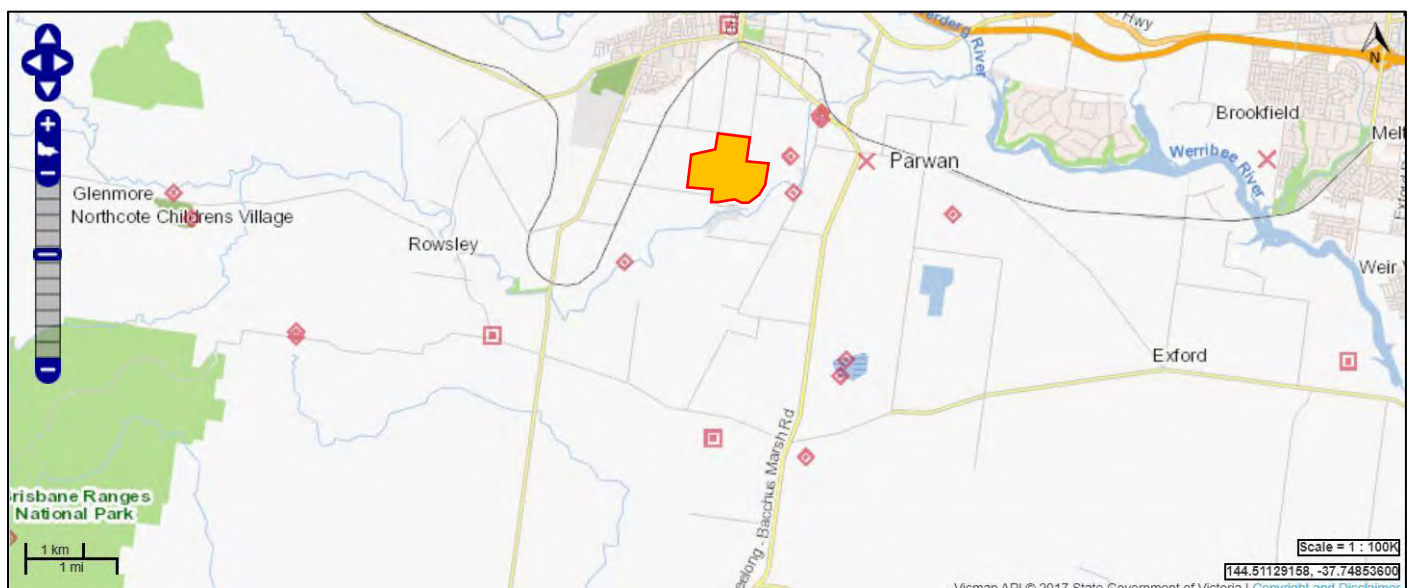


Figure C.1. VBA records of Growling Grass Frog (*Litoria raniformis*) along Parwan Creek and nearby areas.

Orange polygon (red border) = Proposed site for receiving and processing 1.5 million cubic metres of PFAS-contaminated spoil.

Red markers = Verified Growling Grass Frog observations recorded in Victorian Biodiversity Atlas.

Accuracy: \diamond $\leq 100\text{m}$; \square $> 500\text{m} \leq 1000\text{m}$; \times $> 2500\text{m} \leq 5000\text{m}$.

Most recent observations recorded = December 2018.

C.2 LISTED MIGRATORY/MARINE BIRDS - LIKELY SIGNIFICANT IMPACTS

C.2.1 Presence of EPBC-listed Migratory and Marine birds in the area:

There are multiple threatened, migratory and marine birds in the area, which are listed under the EPBC Act 1999. See Figure C.2 for a map of key observations of these birds in the area. The area provides important habitat for these species due to:

- Presence of multiple, intersecting waterways and waterbodies in the area, which provide food and habitat.
- Presence of small waterbodies on the site itself and adjacent to the site, which provide food and habitat.
- Being an important corridor for movement of birdlife between Brisbane Ranges National Park (south-west of site), Werribee Gorge State Park (north-west of site), Lerderderg Gorge State Park (north of site), Long Forest Nature Conservation Reserve (north-east of site), Melton Reservoir (east of site), Peppertree Park (north of site).
- Being an important corridor for movement of birdlife from Port Phillip Bay (35km south-east) to the above waterways, parks and reserves.
- Being an area with low urban density and high food availability (e.g. fish, amphibians, crustaceans), which forms part of the flight path and foraging/resting grounds for these bird species.

Bird species of particular concern in the area (due to food or habitat preferences) include: White-bellied Sea-Eagle (*Haliaeetus leucogaster*), Cattle Egret (*Ardea ibis*), Great Egret (*Ardea alba*), Osprey (*Pandion haliaetus*), Australian Painted Snipe (*Rostratula australis* / *Rostratula benghalensis (sensu lato)*), Latham's Snipe (*Gallinago hardwickii*), Common Sandpiper (*Actitis hypoleucos*), Curlew Sandpiper (*Calidris ferruginea*), Pectoral Sandpiper (*Calidris melanotos*), Sharp-tailed Sandpiper (*Calidris acuminata*), Eastern Curlew (*Numenius madagascariensis*), Greenshank (*Tringa nebularia*). See Table B.1 for EPBC status of each of these species.

C.2.2 Significance of EPBC-listed Migratory and Marine birds in the area:

Given the above features, the area is important habitat for breeding, genetic diversity, dispersal and recovery of these protected bird species. The birds which use this area are also likely to be part of the populations using National and State Parks nearby, and possibly the Ramsar wetland downstream. Thus impacts on listed birds in the area are also highly likely to impact populations in surrounding areas.

C.2.3 Likely impact of the actions on these significant populations:

There is a real possibility that MBC's proposed actions will...

- Adversely affect food sources on which these species rely, especially those species which are carnivorous / omnivorous. These impacts would be two-fold: 1/ PFAS contamination of the aquatic prey or vegetation, leading to biomagnification of PFAS in the food chain, and thus biomagnification of PFAS in the bodies of birds consuming aquatic prey or vegetation. 2/ Eventual decline of aquatic prey or vegetation, through impacts of PFAS, leading to lower availability of these food sources.
- Adversely affect habitat critical to survival of these populations, e.g. through contamination of waterways and waterbodies with PFASs leachate.
- Disrupt the breeding cycle of these important populations, e.g. through impacts of PFASs on eggs and normal development; see further details below.
- Increase risk of disease and developmental issues, e.g. through negative impacts of PFASs on immune system function.
- Lead to a long-term decrease in the size of important populations of these listed bird species, via the above impacts.
- Interfere with recovery of these listed bird species, given the above impacts, and the way these species use the area.

C.2.4 How PFAS (including low levels) impact birds:

- Decreased weight gain in females during reproduction. This can occur at PFAS levels much lower than current avian toxicity reference values [6].
- Negative impacts on egg development [7, 8]
- Decreased embryo mass [7].
- Reduced hatching success [8]. This can occur at extremely low PFAS concentrations, much lower than current avian toxicity reference values [6, 9].
- Reduced imprinting of chicks [8]. This would reduce chick survival, as survival is dependent on imprinting on parent/s.
- Neurobehavioural abnormalities [8].
- Altered gene expression, e.g. negatively impacting thyroid and immune function [7, 10]
- Impaired immune function [10, 11]
- Other impacts on breeding and development likely to lead to species decline.

Note: Some of these effects occur at PFAS concentrations much lower than current avian toxicity reference values, especially disruptions in hatching success [6, 9].

C.2.5 Why migratory and marine bird species are particularly susceptible to impacts of PFAS:

- Many of these listed bird species eat aquatic prey and/or vegetation. Aquatic prey and vegetation are especially prone to PFAS uptake and bioaccumulation. PFAS then biomagnifies through each trophic level of the food chain. Therefore, birds which forage or hunt in aquatic environments are especially susceptible to both biomagnification and bioaccumulation of PFAS, such that level low level of PFAS can easily lead to high levels in these species.
- Birds which use waterways and waterbodies for foraging, hunting or habitat can also intake PFAS-contaminated water through drinking, preening, and other activities.
- Repeated intake of PFAS-contaminated water, vegetation or prey leads to bioaccumulation, as PFAS builds up in tissues.
- PFAS are passed from adult females to eggs.

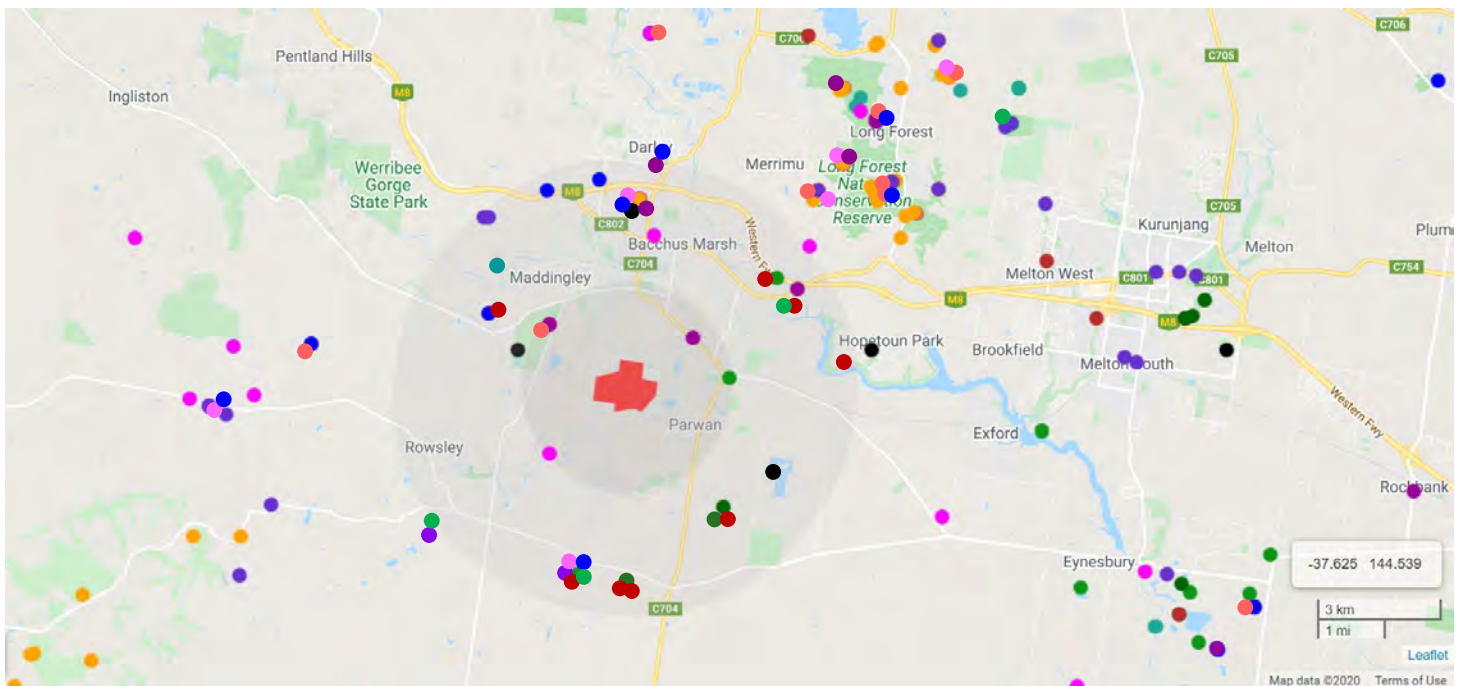


Figure C.2. Observations of EPBC-listed threatened, migratory and marine bird species (ALA and VBA > 1990). **Red polygon** = Site location; **Inner grey circle** = 2km radius (approx.); **Outer grey circle** = 5km radius (approx.)

- **White-bellied Sea-Eagle** • **Cattle Egret** • **Great Egret** • **Latham's Snipe** • **Swift Parrot** • **Black-eared Cuckoo**
- **White-throated Needletail** • **Rainbow Bee-eater** • **Fork-tailed swift** • **Satin Flycatcher** • **Rufous Fantail**

ATTACHMENT D: ACTIONS & RISKS ASSOCIATED WITH MBC'S PROPOSED PFAS-CONTAMINATED SPOIL PROCESSING FACILITY

D.1 About the PFAS-contaminated spoil the site is preparing to receive and process:

- The spoil will come from areas previously contaminated through industrial activities and firefighting foam (e.g. near Coode Island).
- Spoil will arrive as a paste/slurry composed of soil and water.
- Amount of spoil will be around 1.5 million cubic metres.
- Concentrations of PFAS in the spoil will not be known until the spoil arrives on site.
- Concentrations of PFAS in the spoil are 'expected' to be up to 0.7ug/L, however bore test results from where the soil is originating suggest levels may be **substantially higher**. Concentrations in water extracted during de-watering may be higher. The expected PFAS concentrations exceed Australian ecological water quality guideline values for sensitive fauna, and **exceed scientifically accepted reference levels** for amphibians and avian species.
- The spoil will also contain other contaminants such as heavy metals.

D.2 About processing of the spoil:

- Proposed site plan is shown in Figure D.1. Preparations of south-east cells on the plan has already begun.
- The PFASs-contaminated spoil will be held in open bays for around 21 days while being tested. This is not best practice, and increases the risk of PFASs and other contaminants leaching. Exact levels of PFASs-contamination will not be known until after this open bay storage period.
- A dewatering process will be used to draw out PFAS-contaminated water from the spoil, separating the water from the soil. It is anticipated that most of the PFAS will be dissolved in, and remain with, the water. Holding PFASs in an aquatic state substantially increases the risks of leaching, and the pathways through which that leachate could enter the surrounding environment, impacting on matters of national environmental significance.
- MBC plan to use the PFAS-contaminated water for dust suppression of the remaining soil (see Figure D.2). It is unclear how this system would work, as more detailed technical information has been withheld from community consultation.
- It appears that eventual disposal of the PFAS-contaminated water would be via sewage discharge, although further clarification is required to confirm this.
- After testing, Category C PFASs-contaminated spoil will be transferred to and stored in containment cells which are currently being built approx. 250m from Parwan Creek. Gradient of the land runs down to Parwan Creek.
- It appears that MBC plan to mix the (Category C?) dried PFAS-contaminated soil with clean-fill, for reuse.

D.3 Risks associated with storing, processing and reusing PFAS-contaminated spoil:

- PFAS are human-made, persistent organic pollutants which can remain indefinitely in the environment, building up over time through bioaccumulation [5].
- PFAS are environmental toxicants which can negatively impact reproductive, developmental, immune and other functioning of animals. Amphibians and birds seem especially vulnerable to impacts of PFAS.
- For some types of PFAS (e.g. PFOS) these toxic effects can occur at extremely low concentrations. The level at which toxic effects occur is often close to the level of detection (i.e. if any PFAS at all shows up in testing, it could be enough to cause toxic effects for some species, especially amphibian and bird species) [5].
- PFAS are highly soluble and persistent in aquatic media, and readily travel long distances in aquatic systems [5].
- PFAS bioaccumulate in the environment and in plant and animal systems (protein tissues, liver, etc.) [5].
- PFAS biomagnify in each level of the food chain. This means low levels can lead to high levels in predator species such as birds of prey (e.g. White-bellied Sea Eagle) [5].
- Biomagnification and bioaccumulation together have a synergistic effect, whereby low levels of PFAS can lead to exceptionally high levels in predator species which repeatedly forage and use PFAS-contaminated waterbodies.

- The properties of PFAS make them especially prone to leaching, and especially difficult to contain [5]. This is especially true of PFAS-contaminated paste, slurry or water.
- The spoil will contain additional industrial contaminants, which could interact with the PFAS contaminants.

D.4 Measures used to contain PFAS-contaminated spoil and water and not certain enough to reduce the level of impact below the ‘significant impact’ threshold:

There has been no attempt at avoidance

- The proposed site and area contains seasonal watercourses, aquifers which feed surface water, and multiple pathways through which EPBC-listed matters of national environmental significance can be impacted. Scientific evidence and international and Australian guidelines strongly discourage storing and processing PFAS-contaminated spoil at sites with these features, even where PFAS concentrations are low [5].
- There are alternative, more appropriate sites for receiving and processing this PFAS-contaminated spoil (i.e. sites that don’t contain watercourses and where actions would not have significant impact on EPBC-matters).
- There are also alternative activities in which MBC could invest which are more appropriate for the sensitive area in which this site is placed.
- The most appropriate management strategy in the case of this PFAS-contaminated spoil would be to avoid receiving the spoil at the site in the first place. However, MBC have pushed ahead with large scale preparations for receiving this spoil.

There are currently no certain or reliably effective options available for mitigating impacts of these actions:

- Leaching of PFASs from containment cells remains a risk even when best practice is followed [5]. The lifespan of cell liners is shorter than the lifespan of PFAS, making leaching almost inevitable over time.
- No well-established methods yet exist for removing PFAS from the environment once it leaches.

MBC’s proposal does not even meet current minimum standards for attempting to minimise or mitigate impacts of these actions:

- Normally minimisation measures would involve placing PFAS-spoil containment cells as far away as possible from waterways and waterbodies. Instead MBC are building these cells between a waterbody on site and an adjacent waterway. The cell area used to have a seasonal waterway/gully running through it which has now been excavated.
- PFAS-contaminated spoil will be held in open bays on site for approx. 21 days while being tested. This is a high risk proposal which does not demonstrate awareness of mitigation strategies needed.
- As outlined above, it appears the plan is use the PFAS-contaminated water (leachate) for dust suppression and possibly to eventually dispose of it via sewer. Accidental PFAS leaching to sewage systems is already a problem in Australia, and increases pathways through which PFAS can enter the environment and affect wildlife. Deliberately disposing of PFAS-contaminated leachate via sewer is a high risk proposal.
- MBC have received advice from a consultancy company which does not appear to have credentials or expertise in PFAS risk management. This company has completed risk assessments for MBC’s proposed actions which we believe are highly inadequate. We can provide further information upon request.

It should be noted that MBC have repeatedly failed to implement mitigation requirements identified in EPA Victoria audits of their current site (11 Tilleys Road, Maddingley) from at least 2012 to present (see EPA Victoria Audits, CARMS No. 64662). They are currently non-compliant with important EPA licence conditions for their current site. This demonstrates an ongoing unwillingness to undertake even basic measures to protect matters of environmental significance.



Figure D.1. Plans of the proposed site, displayed at a stakeholder information session held by MBC’s lobbyist group. **Top image** = general plan; **Bottom image** = details of storage bay and containment cell positions.

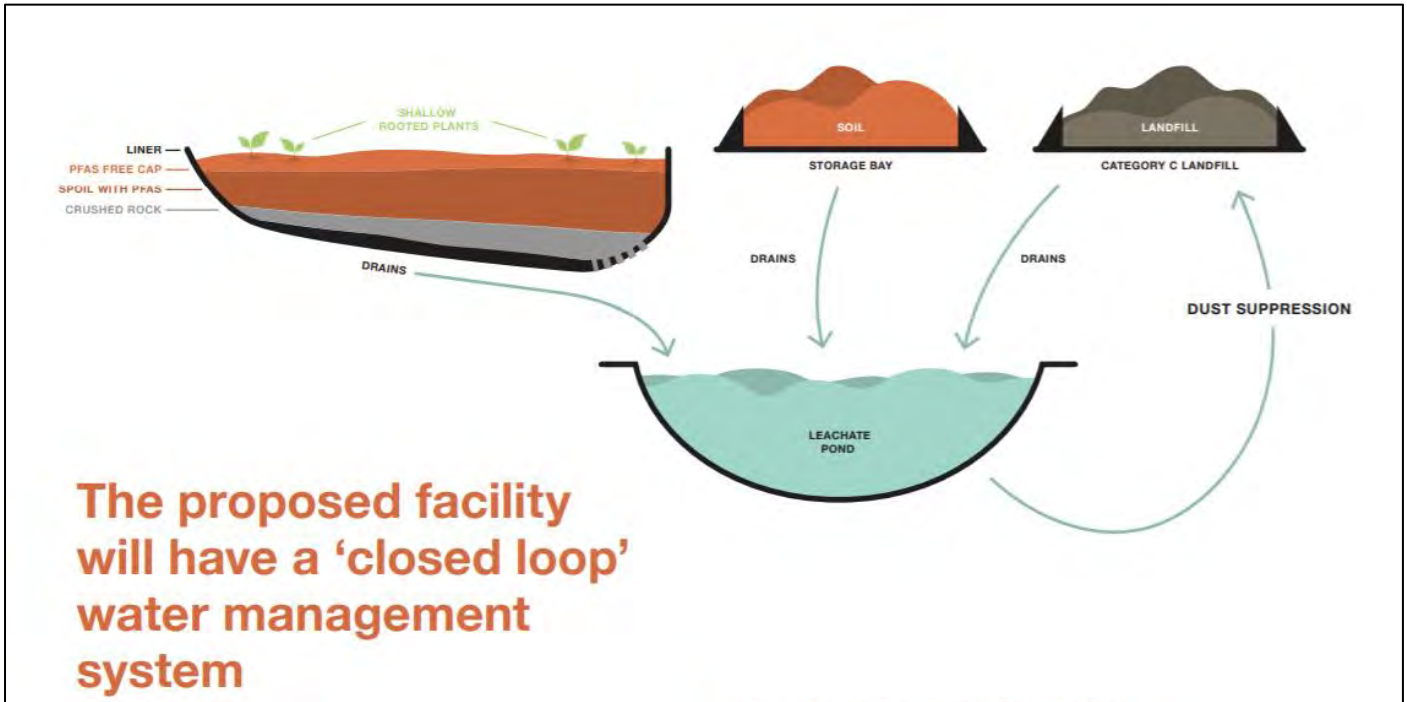


Figure D.2. Diagram from MBC information sheet on the PFAS-contaminated spoil processing facility, showing use of PFAS-contaminated leachate for suppression of dust, including dust from soil held in open bays.

Reference:

https://static1.squarespace.com/static/5d799dae673b785e1d5520ca/t/5e5de44ed10fed5651bccf4a/1583211603425/MBC_Coal_Factsheet_WATER.pdf

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Further references are available upon request.

s47F
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The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated soil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Bacchus Marsh community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated soil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated soil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision.

We have also been informed that despite no approvals or permits being issued, or a decision being made by Minister Wynne, that the toxic soil diggings currently beside the West Gate Tunnel Project is to be moved to MBC this Monday morning, 16th June 2020.

The site of concern is adjacent to Maddingley Brown Coal's current operations. It is owned by trucking company, Calleja Group, and registered under the same name as Maddingley Brown Coal. The proposed site area has been previously used for some farming and as a buffer zone (see Appendix A). It contains some relatively undisturbed areas of high ecological value. It is NOT part of the pre-existing coal mine/landfill area operated by Maddingley Brown Coal.

Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge

habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

Additional EPBC-listed species and threatened ecological communities are listed within a 1km buffer zone of the site. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted.

The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN , 2018).

The company proposing to receive PFAS-contaminated soil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated soil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated soil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated**

soil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species.

Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely,

s47F

From: s47F
To: [Minister Ley](#)
Subject: MC20-015251 s47F - Threat to EPBC listed Species occurring this Monday as West Gate Tunnel Spoil heads for Bacchus Marsh - EPD
Date: Friday, 12 June 2020 1:46:04 PM

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

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Writer

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The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

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Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge

habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

Additional EPBC-listed species and threatened ecological communities are listed within a 1km buffer zone of the site. Many of these species are likely to either forage on site or within close vicinity to the site, e.g. along waterways adjacent to the site. Some of the fauna species are wetlands birds or other birds which use aquatic systems, and are therefore highly susceptible to the biomagnifying and bioaccumulative effects of PFAS. EPBC-listed species which use the site or associated waterways could be negatively impacted.

The proposed site is part of the catchment area for an EPBC-listed Ramsar wetland of international significance. There are small watercourses on the site which are connected with Parwan Creek, which in turn flows into Werribee River around 2.5km downstream. The Lower Werribee Formation Aquifer and Fyansford Formation Aquifer sit close to the surface at the proposed site, and interact with surface waters in the area. The Port Phillip Bay (Western Shoreline) wetland begins around 30km downstream of the Parwan Creek-Werribee River confluence. This of concern, given PFAS can travel 10s of kilometres in waterways, is highly persistent in the environment, and can permanently change the ecological character of wetlands (PFAS NATIONAL ENVIRONMENTAL MANAGEMENT PLAN , 2018).

The company proposing to receive PFAS-contaminated soil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated soil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated soil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

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soil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

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Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely,

s47F

From: s47F
To: [Minister Ley](#)
Subject: MC20-015253 (Allen) - PFAS waste to Bacchus Marsh - EPD
Date: Friday, 12 June 2020 3:52:00 PM

s47F
s47F

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Bacchus Marsh community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated spoil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision.

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Presence of the EPBC-listed Growling Grass Frog has been recently confirmed around 300m from the proposed site, and is known to occur along Parwan Creek, immediately adjacent to the site. It is the expert opinion of experienced Herpetologists, ecologists and others that Growling Grass Frogs are highly likely to be present on the proposed site, and to use this site as an important refuge habitat. The site contains small waterbodies, seasonal water courses, channels and gullies which provide ideal habitat for Growling Grass Frogs. The site also contains areas which could be used by Growling Grass Frogs during winter, including rocky areas, ground crevices and vegetated areas. Groundwater and surface water on the proposed site also feeds into waterbodies/waterways that contain Growling Grass Frogs in adjacent areas.

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The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are certainly not a company that should be trusted to store, dewater and

process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

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Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely 

From: s47F
To: [Minister Ley](#)
Subject: MC20-015255 s47F - Toxic Soil Dumping in Bacchus Marsh - EPD
Date: Friday, 12 June 2020 3:53:22 PM
Attachments: [Toxic Soil Dumping in Bacchus Marsh.docx](#)

Dear Minister

Please find attached letter regarding proposed Toxic Soil Dumping in Bacchus Marsh. Your urgent intervention in this matter would be appreciated. The lives of our community and Victoria are in peril if this dumping goes ahead.

Yours sincerely,

s47F

s47F
s47F
s47F

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated soil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Bacchus Marsh community to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated soil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

A Planning Scheme amendment request in relation to this proposal is currently being assessed by the Victorian Minister for Planning, The Hon. Richard Wynne. Our local environment group, Moorabool environment Group has written to Minister Wynne about these EPBC-listed species at the site and associated obligations under the EPBC Act 1999. However, we are unsure whether he has taken note of these issues, as they have not received a reply from Minister Wynne.

The Victorian Government is currently under a large amount of pressure to approve locations to process PFAS-contaminated soil from the Westgate Tunnel Project, due to lack of forward planning on their behalf. We are therefore concerned that the need for referral under the EPBC Act may be overlooked by Victorian Ministers and other parties involved in this decision.

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The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

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Yours sincerely,

s47F

From: s47F
To: [Minister Ley](#)
Subject: MC20-015259 s47F - Growling Grass Frog threatened by dumping of PFAS contaminated soil at Bacchus Marsh - EPD
Date: Friday, 12 June 2020 4:24:31 PM

s47F

s47F

s47F

The Hon. Sussan Ley MP
Minister for the Environment
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600
Email: minister.ley@environment.gov.au

Dear Minister Ley,

Re: URGENT: EPBC-listed species are being ignored in decisions about proposed site for PFAS-contaminated spoil from Westgate Tunnel Project (Maddingley Brown Coal)

I am writing to you as a concerned member of the Bacchus Marsh community for 43 years to express my deep concerns regarding Maddingley Brown Coal's (MBC) bid to receive contaminated spoil from the Westgate Tunnel Project within a new area which is NOT part of Maddingley Brown Coal's mine/landfill area, and is close to the community of Bacchus Marsh and surrounding farmland and waterways.

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The company proposing to receive PFAS-contaminated spoil from the Westgate Tunnel Project has a very poor environmental track record, including failure to adequately manage leachate and discharge from their current operations (see EPA Victoria Audit Reports, 2013 to 2020, CARMS no. 64662). They have repeatedly failed to fully implement EPA audit recommendations related to leachate management and water discharge, and the March 2020 audit states they are non-compliant with a number of related EPA licence conditions. They are

certainly not a company that should be trusted to store, dewater and process 1.2 million cubic metres of PFAS-contaminated spoil, as would be the case if their proposal to receive this spoil is accepted by the Victorian Government.

The PFAS NEMP (2018) discourages processing of PFAS contaminated soils or water in areas close to natural aquatic systems. These warnings are even more pertinent given the large range of threatened and protected species which use waterways and waterbodies connected with the site.

PFAS are highly soluble in water and readily travel in aquatic systems. Diffusion of PFAS through liners is not yet fully understood (PFAS NEMP, 2018, p. 29), and thus **leaching remains a risk even where current best practice is followed**. The PFAS NEMP (2018) strongly discourages storage and processing of PFAS contaminated spoil in sites containing waterbodies/waterways and important aquifers. With regard to the current proposal, exact level of PFAS in the contaminated spoil (soil-water mix) would not be known until around 21 days after arrival on the proposed site. We have been informed at stakeholder briefings that the spoil would remain in open bays during that time.

PFAS bioaccumulate in plant and animal systems and biomagnify in food chains (even where the original PFAS uptake was via a plant system). Therefore, **even if levels of PFAS in the contaminated spoil or extracted water are below acceptable levels for human consumption, biomagnification in food chains means these could become unacceptably high in native fauna**. As stated in the PFAS NEMP, “A water concentration of PFAS below an LOR of 0.001 µg/L does not mean that there is minimal risk to aquatic ecosystems...” (p. 19). PFAS can permanently change the ecological character of wetlands and waterways, through adverse effects on fauna, flora and ecological systems important to these aquatic systems.

PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research shows that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region*, 2019 [relevant internationally]). **These impacts could lead to further decline in species** already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements which are present in the area. The impact of varying levels of PFAS on Australian fauna is not yet fully known (PFAS NEMP, 2018), and, given the sensitivity of many Australian fauna, may be even greater than for other species.

Given the imminent threat to this area near our town, I hope you are able to raise the Victorian Minister for Planning’s awareness of these issues, and advocate for this decision to be referred for full assessment under the EPBC Act, rejected

outright, or passed on to the Moorabool Shire Council (the more appropriate planning authority which has been bypassed in the process thus far).

Yours sincerely,

s47F

Sent from my iPad

From: s22
To: [Compliance](#)
Subject: INC13938/Maddingly Brown Coal/Correspondence from Bacchus Marsh Grammar [SEC=UNCLASSIFIED]
Date: Monday, 7 September 2020 1:53:37 PM
Attachments: [image001.png](#)
[Correspondence to DAWE 4 September 2020.pdf](#)
[Fauna Flora Schedule.pdf](#)
[2020.07.24 - Ltr to Company Secretary - Maddingly Brown Coal Pty Ltd.pdf](#)
Importance: High

Hi Compliance,

We received this correspondence via the Media Team.

Would this type of inquiry sit within the compliance area?

Kind regards,

s22

Import Support Officer | Client Contact Group - Canberra | Assessment and Client Contact
Branch | Biosecurity Operations Division
Phone: s22

From: Media s22
Sent: Monday, 7 September 2020 11:50 AM
To: CIU Mail s22
Cc: Media s22 s22 s22
Subject: FW: Correspondence from s47F [SEC=UNCLASSIFIED]
Importance: High

Hi CIU

Could you please direct this correspondence to the appropriate area of the Department?

Many thanks,

s22

From: Ag Media s22
Sent: Monday, 7 September 2020 11:43 AM
To: Media s22
Subject: FW: Correspondence from s47F [SEC=UNCLASSIFIED]
Importance: High

Hi team

We're not sure where this question would be best directed. Somewhere in EPRD or EAD?

Would you be happy to forward it to the appropriate place please?

Thanks, s22

From: Ag Media s22
Sent: Friday, 4 September 2020 4:05 PM
To: Parliamentary Liaison Services - Agriculture s22
Cc: Ag Media s22 ; s22
Subject: FW: Correspondence from Bacchus Marsh Grammar [SEC=UNCLASSIFIED]
Importance: High

Hi team

Please see below email and attached correspondence which was sent to us by s47F

Forwarding on to you as It looks like one for departmental corro.

Let me know if there are any issues.

Cheers

s22

s22

| Media

Agriculture & water inquiries: s22
Environment inquiries: s22

Department of Agriculture, Water and the Environment
Communication and Media Branch
Corporate and Business Division
John Gorton Building, Barton ACT 2600 Australia
GPO Box 858 Canberra ACT 2601 Australia

awe.gov.au

From: s47F
Sent: Friday, 4 September 2020 3:46 PM
To: Ag Media s22
Cc: s47F
Subject: Correspondence from s47F [SEC=UNCLASSIFIED]
Importance: High

URGENT – Compliance with the Environmental Protection and Biodiversity Conservation Act 1999 (the Act)

Please find attached correspondence .

Kind regards

s47F

s47F



s47F [Redacted]

s47F [Redacted]
s47F [Redacted]

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4 September 2020

Department of Agriculture, Water and the Environment (DAWE)
By Email: media@agriculture.gov.au

URGENT - Compliance with the Environment Protection and Biodiversity Conservation Act 1999 (the Act)

Dear Sir/Madam

We are writing to you regarding an application made by Maddingley Brown Coal (MBC), a landfill operator in Bacchus Marsh, to receive and manage contaminated spoil from the Westgate Tunnel Project (WGTP) at its landfill site in Maddingley. The spoil will potentially contain PFAS, heavy metals, dieldrin and other toxins.

As we hope you are aware, MBC has commenced preparation works on site in anticipation of its application being successful.

Bacchus Marsh Grammar (School) is one of the closest properties to the MBC site and, therefore, one of the users most affected by any significant change in current activities at the site.

In addition, the School understands there are also matters of national environmental significance located either at, or in close proximity to the site. These include numerous threatened flora and fauna including protected migratory birds and amphibians.

The School wrote to MBC on 29 July 2020 outlining the basis upon which we believe its preparation activities are potentially **in breach of its obligations under the Act** (refer attached letter). The School received a letter of response from MBC, via its solicitors Merrylees Legal, on 25 August 2020. In this letter we were advised that your Department has already been in contact with MBC to raise concerns as to the nature of MBC's activities and its obligations under the Act.

However, disturbingly, rather than identify that MBC's activities are likely to have an impact of environmental significance, requiring the matter to be referred to the Minister for assessment under the Act, we understand MBC were given an opportunity to procure a second environmental report in an attempt to address the specific concerns raised by DAWE and or third parties.



We are concerned that the requirements under the Act and corresponding regulations are being ignored and by dint of same, there is a denial of natural justice.

More specifically, if the government and/or DAWE have enough cause for concern based on the preliminary report commissioned by MBC, such that your Department has:

- 1) had need to correspond at least **twice** with MBC, and
- 2) required the latter's environmental expert to conduct a further investigation and report (which we understand is still being considered by your Department);

then it appears there is some prospect that the threshold test of MBC's proposed works and receipt of the relevant spoil are **likely to have a significant impact** on relevant categories referred to in the Act, such that referral to the Minister is required in accordance with the Act.

This appears to us to be abundantly clear when the Department's concerns are viewed together with concerns already brought to DAWE's attention by federal and state representatives (e.g. the Federal Environment Minister Susan Ley MP and the Federal Member for Ballarat, Catherine King MP) and community organisations and members (such as the Moorabool Environment Group and possibly others).

Therefore, the obvious question is, why has the matter not been referred to the Department and dealt with in accordance with the Act?

MBC's letter of response is of particular concern, due to the emergence of evidence of what seems to be a "side conversation" occurring between MBC and your Department, particularly about whether or not the proposed action is likely to have a significant impact upon one, or some, of the specified categories (under the Act) and whether the action needs to be referred to the Minister under the Act.

We submit that it is not appropriate for DAWE to have these conversations with MBC whereby MBC is presumably given an unofficial opportunity to refute the alleged significant impacts brought to DAWE's attention by third parties. This is neither adequate nor fair, as DAWE is only considering the response of experts engaged by MBC (the main proponent with a vested interest in the outcome). This gives rise to a perception, and arguably fact, of bias and denial of natural justice.

Rather, we respectfully require that this matter **must** be brought within the realms of the referral process of the Act which would bring the issues into the public domain and allow an informed public response.

In summary, it is our position that:

1. The Act does not require an **actual** significant impact only a **likely** one, at which point referral to the Minister is required;
2. The risk that MBC's activities are likely to have an impact of environmental significance has been established and put to DAWE by multiple parties to date including credible environmental sources, such as Moorabool Environment Group;
3. As such, it is clear that MBC's activities objectively satisfy the threshold test of **likely to have a significant impact** on relevant categories referred to in the Act, thereby triggering a requirement for the matter to be referred to the Department for assessment and public consultation;
4. Affording MBC an opportunity to correspond with DAWE about this matter privately, bypasses the legislative requirements of the Act and gives rise to concerns regarding transparency and collusion. It amounts to a de facto referral for the purpose of DAWE assessing if the impact is significant or not, but without compliance with the requirements of the Act being met. We submit DAWE does not have authority to allow such a bypass of the legislative requirement.

Given the above, we respectfully request that the matter now be referred to the Minister for departmental consideration, pursuant to the Act, thereby, opening up the matter to greater transparency and wider public input, as should have always been the case.

Given the Environment Protection Authority's recent approval of MBC's application in this matter, time is of the essence in this matter. Therefore, we request DAWE's written response to our above concerns and confirmation of the referral, at your earliest convenience and at the latest **on or before the 11 September 2020**.

We also put DAWE on notice that if we do not hear from you by this date and or the Department's response is not satisfactory, we will be liaising with our legal advisors to consider all steps available to us including any legal proceedings or action that may be required.

We would be pleased for an opportunity to speak with you in detail regarding the issues raised, should you consider it appropriate. Please contact me on s47F s47F or email me at s47F to arrange a time to do so.

Yours sincerely,

s47F

s47F

Principal

Fauna and Flora listed under the EPBC Act

FAUNA			
Growling Grass Frog	Fork-tailed Swift	Cattle Egret	Black-eared Cuckoo
White-bellied Sea-Eagle	Rainbow Bee-eater	Golden Sun Moth	Great Egret, White Egret
Latham's Snipe	White-throated Needletail	Rufous Fantail	Satin Flycatcher
Grey-headed Flying-fox	Striped Legless Lizard	Swift Parrot	Common Sandpiper
Regent Honeyeater	Australasian Bittern	Sharp-tailed Sandpiper	Curlew Sandpiper
Pectoral Sandpiper	Spot-tailed Quoll	Eastern Dwarf Galaxias	Painted Honeyeater
Black-faced Monarch	Yellow Wagtail	Eastern Curlew	Osprey
Plains-wanderer	Australian Grayling	Australian Painted Snipe	Greenshank
Grassland Earless Dragon			

FLORA			
River Swamp Wallaby-grass	Matted Flax-lily	Trailing Hop-bush	Clover Glycine
Adamson's Blown-grass	Hoary Sunray	Plains Rice-flower, Spiny Rice-flower	Maroon Leek-orchid
Button Wrinklewort	Large-fruit Fireweed, Large- fruit Groundsel	Small Golden Moths	Sunshine Diuris

29 July 2020

The Company Secretary
s47F
Maddingley Brown Coal Pty Ltd
20 Baldwin Road
Altona North, 3025

Our ref: JAQ:2075990

Email: s47F

Dear Sir/Madam

Compliance with the Environment Protection and Biodiversity Conservation Act 1999

We act on behalf of Bacchus Marsh Grammar School (**BMG**).

1. Our client is aware that Maddingley Brown Coal Pty Ltd (**MBC**) has requested the Environment Protection Authority (**EPA**) to allow MBC to bring contaminated spoil potentially containing PFAS, heavy metals, dieldrin and other toxins, from the Westgate Tunnel Project (**WGTP**) onto its landfill site at Maddingley.
2. We also understand that:
 - (a) it is anticipated the spoil to be brought onto the site may have levels of toxicity greater than Category C currently allowed under the relevant planning permit and/or EPA licence;
 - (b) all spoil brought onto the site from the WGTP will only be tested once on site so as to determine its toxicity and presumably MBC will seek to comply with its EPA licence conditions, planning permit, common law and statutory obligations including the recently enacted Environment Protection (Management of Tunnel Boring Machines Spoil) Regulations 2020 (**Regulations**);
 - (c) in accordance with the Regulations, if any spoil does not meet the specifications it will be removed and deposited at a site licenced to accept the relevant type of spoil.
3. Our client is situated in close proximity to the landfill site and is affected by MBC's proposed expansion of activities.
4. In addition to its close proximity, BMG is also aware that there are matters of national environmental significance located either at, or in close proximity to the site, and these include numerous:
 - (a) threatened flora and fauna;

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- (b) numerous protected migratory and marine species, including amphibians and birds.

These species, flora and fauna are set out in more detail in the annexure attached to this letter.

- 5. As you may be aware, there is potential for significant and adverse impact upon the relevant species, flora and fauna outlined, which are of national environmental significance. We outline some examples of such impacts below:
 - (a) There is a real likelihood that your proposed actions will potentially and significantly harm the habitat and development of the Growling Grass Frog, which is a threatened species.
 - (i) More specifically we are aware that Parwan Creek, which is immediately adjacent to the site, is known by herpetologists and ecologists as an important waterway supporting significant source-populations of Growling Grass Frog in the region.
 - (ii) Parwan Creek and its neighbouring waterbodies are an essential habitat for breeding, dispersal and recovery of the Growling Grass Frog in Victoria. Protecting each population 'pocket' along this waterway and associated waterbodies is also important for genetic diversity of Growling Grass Frogs breeding in and dispersing from this area.
 - (b) As listed in the attached annexure there are also multiple threatened, migratory and marine birds in the area, which are listed under the EPBC Act 1999.
 - (i) Our client shares the concerns expressed by others that the actions of MBC will adversely affect food sources on which these species rely, especially those species which are carnivorous / omnivorous. These impacts will be two-fold:
 - (A) PFAS contamination of the aquatic prey or vegetation, leading to bio magnification of PFAS and other toxins including dieldrin and other heavy metals in the food chain, and thus bio magnification of PFAS and other toxins in the bodies of birds consuming aquatic prey or vegetation.
 - (B) Eventual decline of aquatic prey or vegetation, through impacts of PFAS, leading to lower availability of these food sources.
 - (ii) There is also the potential that MBC's actions will adversely:
 - (A) affect habitat critical to survival of these populations, e.g. through contamination of waterways and waterbodies with PFASs leachate;
 - (B) disrupt the breeding cycle of these important populations;
 - (C) increase risk of disease and developmental issues; and
 - (D) lead to a long-term decrease in the size of important populations of these listed bird species.

6. We note the above matters are given by way of example only and are not intended to be an exhaustive list.
7. In summary, we consider that it is clear that MBC is **not exempt** from the obligations imposed under the Act with regard to its proposed activities to receive spoil from the WGTP. Therefore, we advise that MBC must comply with the requirements of the Act and take all necessary steps, such as potentially obtaining a declaration from the Federal Minister, to ensure that it is and remains compliant. In the absence of such a declaration it would seem that MBC would be in breach of the Act which we note has criminal penalties that can be prosecuted in appropriate cases.
8. Given the above, we request your detailed response which:
 - (a) confirms that MBC is taking all steps necessary to comply with the Act, including an application to the Minister; and
 - (b) provides a detailed outline of all steps being taken in relation to each of the threatened species, flora and fauna outlined in the annexure of this letter.
9. We look forward to a response from you by no later than **7 August 2020**.
10. In the event that we do not receive a response from you, or we receive an unsatisfactory response, our client will consider all options available to it under the Act and or at law.

Yours faithfully



Johnathan Quilty | Partner
Accredited Specialist Commercial Litigation
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s47F

From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Subject: Maddingley Brown Coal - Urgent compliance concern re EPBC Act
Date: Tuesday, 10 March 2020 5:09:14 PM
Attachments: [MBC_Growling Grass Frogs_Report.pdf](#)

Dear Compliance Team,

Thank you for our recent phone conversation.

We are writing to notify of a possible compliance issue regarding ***Maddingley Brown Coal, 11 Tilleys Road, Maddingley 3340***. (Located within Moorabool Shire Council).

Maddingley Brown Coal operate a commercial landfill operation at an old brown coal mine site. We believe there has never been any assessment of this site in relation to the EBPC Act, even though there are endangered species and other native fauna and flora on the site, and affected by the site.

Species and sensitive areas in and near the site:

- There are confirmed records of an endangered species, *Litoria raniformis* (Growling Grass Frog) found on and near the Maddingley Brown Coal site.
- There are also other native species of plants and animals both on the Maddingley Brown Coal site and in areas affected by the site. These include Platypus and Rakali. Soon I will send through a list of additional native flora and fauna found near the Maddingley Brown Coal site.
- To our knowledge, a full assessment of other species on the full site or affected by the site has never been undertaken. A survey for *Litoria raniformis* was undertaken in relation to a small part of the site – Little Lucifer Dam (see attached).
- There are other waterways and dams on the site which we believe have not been assessed.
- Parwan Creek runs through the site, and then into the Werribee River / Melton Reservoir. The site is part of the Werribee River catchment.
- Werribee River is approx. 1.4km from the site. Confluence of Parwan Creek with the Werribee River is approx. 2.8km from the site. Although Parwan Creek has sometimes been in summer, it currently contains water.
- The Werribee River contains Platypus and Rakali, in addition to other native fauna and fauna. This includes sections of the Werribee River that could be affected by Maddingley Brown Coal's activities.
- The affected sections of the Werribee River are used to irrigate vegetable and fruit crops for human consumption.
- There is an environmental overlay over part of the site (ESO-2, Moorabool Shire Council).
- The site also contains areas of Aboriginal Cultural / Heritage Significance.

Activities carried out on the site which could have an impact on the environment:

- The company stores and re-uses industrial waste, including Category C contaminated waste. This waste includes contaminated soil, shredder floc, industrial hard waste and waste containing small amounts of PFAS.
- The company is currently piling soil immediately next to Parwan Creek, between Parwan Creek and Cummings Road. This is possibly Category C contaminated soil, but we are unsure. I have attached a distant image of this,

but will send through a clearer image later.

- The company channels stormwater from the site into Parwan Creek (see image attached).

Evidence of current environmental impact from activities on the site:

- Hard waste from the site is currently polluting Parwan Creek (photos to follow). When it rains this waste is pushed further downstream, toward the Werribee River.
- The site has a long history of emitting dust into the environment, from their soil-related operations (photos to follow).
- Materials and stormwater from the site could contain PFAS and heavy metal contamination, however we have been unable to get independent testing results on this at this stage.
- There are no sediment barriers or other precautions being used to stop soil that is being piled beside Parwan Creek from entering the creek.

We are very concerned about the impact of current Maddingley Brown Coal operations on fauna and flora, and the surrounding environment. Their activities and location ***seem to be of relevance to the EPBC Act***, however to our knowledge ***none of their planning permits or other permissions have been referred for assessment relating to the EPBC Act.*** We believe this may constitute a breach of the Act.

Maddingley Brown Coal's request to receive large volumes of PFAS contaminated soil:

- Maddingley Brown Coal have also submitted a request to the Victorian Planning Minister to intervene in and amend their current Planning Permit, to allow them to receive and re-used PFAS contaminated soil from the Westgate Tunnel Project. They are in the tender process with Transurban, and this Thursday will submit a formal tender to receive this soil.
- Level of toxicity of the soil could range from Category A to Category C (extreme contamination to low contamination). Soil will be tested at the Maddingley Brown Coal site, and will be stored open for 21 days until test results are known. Any Category A or C soil will then be separated and removed from the site – however it will have been stored in the open for 21 days until then. This information comes directly from Maddingley Brown Coal, via a stakeholder briefing they were required by Transurban to hold with Stakeholders.
- It appears that Maddingley Brown Coal may be already undertaking works in preparation to receive this contaminated soil, however we cannot confirm this.

PFAS is extremely soluble in water, and moves easily and long distances in waterways. It bioaccumulates in systems, especially aquatic systems. Even small levels of PFAS can result in high contamination when it enters waterways, especially when large volumes of PFAS contaminated materials are being dealt with.

We are therefore very concerned about Maddingley Brown Coal's current and future operations, and the impact of these on the surrounding ecosystems.

This is an urgent matter for two key reasons:

1. The dirt being piled beside Parwan Creek could contain PFAS, and the creek could contain endangered species (given proximity to confirmed records of these species).
2. Maddingley Brown Coal are currently preparing to receive even larger volumes of PFAS contaminated soil, which could include very high levels of PFAS contamination.

Please let me know if you require further information regarding the above. I will send through photo evidence and a list of other species soon.

We look forward to your response in this matter.

Sincerely,

s47F

Secretary
Moorabool Environment Group

Email: s47F

Phone: s47F



Draft Report

Little Lucifer Dam Growling Grass Frog Survey

Maddingly Brown Coal

24 January 2019

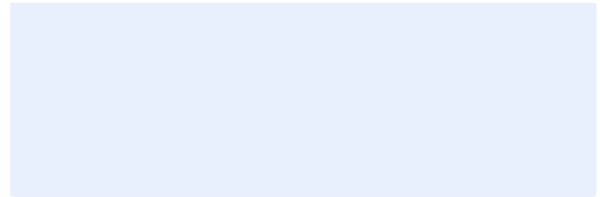


Document Status

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v01	Draft Report	s47F	s47F	15/1/2018
v02	2 nd Draft Report	s47F	s47F	24/1/2018

Project Details

Project Name Little Lucifer Dam Growling Grass Frog Survey
Client Maddingly Brown Coal
Client Project Manager s47F
Water Technology Project Manager s47F
Water Technology Project Director s47F
Authors s47F
Document Number 5552-04_R01v02_Little_Lucifer_GGF.docx



Cover Photo: View looking south east across Little Lucifer Dam (s47F), 31/5/18)

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1 INTRODUCTION

1.1 Background and Scope

Maddingly Brown Coal engaged Water Technology to undertake a Growling Grass Frog (*Litoria raniformis*) survey at the Little Lucifer Dam, Cummings Road, Maddingly. There is a proposal to use the dam (old coal pit) for Potential Acid Sulphate Soil (PASS) disposal, infilling to a depth of 2m prior to rehabilitation of the site, including frog habitat enhancement.

Moorabool Shire Council indicated in an email to the proponent dated Thursday 28 June 2018, that they 'require further information from you in the form of an ecological study which details the investigations that have been undertaken to determine that no threatened species will be impacted by your proposal'. The focus of that email and this proposal is to identify the potential presence of Growling Grass Frogs (GGF) at the site, and to determine if the proposed works will impact this threatened species.

This report details the findings of the GGF survey undertaken in December 2018, identifies the potential impacts from filling Little Lucifer Dam with PASS and provides impact mitigation options. This survey's primary purpose was to determine presence or absence of GGFs at the Little Lucifer Dam Site.

1.2 Project Area

Little Lucifer Dam is located on the corner of the Geelong - Bacchus Marsh Road and Cummings Road Maddingly (Figure 1-1).



FIGURE 1-1 PROJECT AREA LOCATION

5552-04_R01v02_Little_Lucifer_GGF.docx



The Dam is almost rectangular in shape and is approximately 170 metres long (north south) and 40 metres wide (east west). Having been an old coal pit, the sides of the dam are steep and the depth is unknown but is potentially >10 metres deep. The dam is ground water fed and is known to permanently hold water.



2 GROWLING GRASS FROG

The Growling Grass Frog, *Litoria raniformis*, is also known as the Southern Bell Frog, Green and Golden Frog or Warty Bell Frog. The following sub-sections provide a brief summary of its distribution, conservation status, ecology, habitat requirements and threatening processes for the frog.

2.1 Distribution

The Growling Grass Frog was once widespread and abundant. However, its decline appears to have been ubiquitous across its distribution during the latter half of last century (Mahony 1999, Heard et al. 2010). The species is known to occur across south-eastern Australia (with the exception of the Alps and drier Mallee/desert country) with its distribution described as a widespread but both distribution and populations have declined quite suddenly from about 1990 and it is now uncommon and threatened. The decline is likely to have been caused by a synergy of threatening processes (e.g. habitat destruction, fragmentation and alteration, drought and pathogens).

The Growling Grass Frog has been reported to exist within the Little Lucifer Dam, with the population potentially translocated from other pits in the past.

2.2 Conservation Status

The Growling Grass Frog is listed as 'endangered' on the IUCN Red List 2009, and 'vulnerable' under the Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act 1999. The species was listed as a threatened species under the Victorian Flora and Fauna Guarantee Act 1988 in 2001 and declared 'endangered' in 2002 due to a significant decline across much of its range (SWIFFT 2018).

2.3 Growling Grass Frog Ecology

The Growling Grass Frog's key ecological requirements are as follows (from DEWHA 2009):

- Dependent on aquatic habitats, and appropriate hydrological regimes, for breeding and dispersal:
 - Permanent or seasonally flooded water bodies used for breeding. In semi-arid NSW, seasonal flooding of wetland systems necessary for breeding to occur.
 - Breeding usually occurs in still or slow moving water.
 - Tadpoles have an aquatic period which can vary between two and 15 months.
 - Aquatic vegetation provides microhabitats for foraging and shelter for both frogs and tadpoles. Loss or degradation of aquatic habitat and/or disruption to hydrological regimes can lead to population declines and local extinctions.
 - Aquatic eggs and larvae may also be vulnerable to fish predators, particularly mosquito fish, redfin and carp.
 - Susceptible to the waterborne fungal pathogen *Batrachochytrium dendrobatidis* which causes the disease chytridiomycosis (Chytrid Fungus).
 - Because of their semi-permeable skin, growling grass frogs may be susceptible to pollutants such as those found in biocides (that is, herbicides, pesticides etc.) or from surface runoff.
- Dependent on terrestrial habitat for foraging, shelter and local movement:
 - Adult frogs move across open ground (for example grasslands) to access local foraging resources and breeding sites.



- Terrestrial vegetation, fallen logs and ground debris surrounding water bodies provide essential shelter and hibernation (over-wintering) sites for adult frogs.
- Movement between breeding sites (water bodies) is crucial, allowing temporal variation in habitat use and/or recolonisation of sites following local extinction, and maintains genetic diversity.

2.4 Habitat Requirements

The species is dependent on a matrix of aquatic and terrestrial habitat for breeding, foraging, shelter and dispersal, and typically occurs in landscapes with both permanent and seasonally flooded water bodies (DEWHA 2009).

Growling Grass Frogs require permanent or seasonally flooded water bodies for breeding activities and to promote recruitment. Larvae (tadpoles) require between two and 15 months to metamorphose into adult frogs. Aquatic vegetation provides microhabitats for foraging and shelter for both frogs and larvae. Loss or degradation of aquatic habitat and/or disruption to hydrological regimes can lead to population declines and local extinctions. Aquatic eggs and larvae may also be vulnerable to fish predators, particularly Mosquito fish *Gambusia holbrookii*, Redfin *Perca fluviatilis* and European carp *Cyprinus carpio*.

Adult frogs move across open ground (for example grasslands/drainage lines) to access local foraging resources and breeding sites. Terrestrial vegetation, fallen logs and ground debris surrounding water bodies provide essential shelter and hibernation (over-wintering) sites for adult frogs. To facilitate movement between breeding sites, water bodies are crucial, allowing temporal variation in habitat use and/or recolonisation of sites following local extinction, and maintains genetic diversity.



3 FIELD SURVEY

3.1 Survey Hygiene

The decline of amphibian populations has been implicated with a waterborne fungal pathogen Chytridiomycete fungi, often causing deaths with up to 100% mortality in some populations. This agent is commonly known as the amphibian or frog Chytrid Fungus and is responsible for the disease Chytridiomycosis. Assessor footwear was cleaned with diluted bleach solution/disinfectant prior to and after site visits to reduce the risk of infection and spread of amphibian diseases, in particular Chytrid Fungus.

3.2 Field Survey Timing and Weather Conditions

Little Lucifer Dam was assessed on the evenings of Wednesday 5th and Thursday 6th December 2018. The surveys had been delayed throughout November due to the lack of suitably warm evening temperatures. Rainfall was infrequent prior to assessment with records from Accuweather (www.accuweather.com/en/au/) showing 1mm of precipitation fell on the 2nd December, 3 days prior to the assessment. Prior to that, 31mm fell between 20th -23rd November but the temperature was too cold for GGF surveys with maximums reaching 27°C but overnight minimums as low as 9°C.

The weather conditions on the evenings of assessment were as follows:

- Wednesday evening 5th December 2018, 7:15pm – 8:45pm, 21°C, light SW winds.
- Thursday evening 6th December 2018, 9:30pm – 10:45pm, 29°C, light to moderate NW winds.

On both evenings the assessment was conducted over approximately 90 minutes. The site was assessed over two consecutive nights when the temperatures were at or above 21°C and the winds were light to moderate. The first evening was assessed in the period leading up to dark, the temperatures were lower and the wind was lighter than the second night. The second night was considerably warmer and the assessment was undertaken after dark. The Growling Grass Frogs were not immediately heard calling on either night but responded to mimic calls.

3.3 Field Survey Location

Little Lucifer Dam is relatively small (approximately 170m x 40m) and could be circumnavigated during daylight hours. However, the steep sides and disturbed nature of the site meant that circumnavigating in the darkness was unsafe. Hence, on the first night the Dam was circumnavigated early during surveying, however the second night was assessed from the eastern and southern sides due to the lack of visibility. The survey was conducted from the top of the dam bank except at the southern end where assessors could safely survey at the toe near the waters edge. It is not thought that this limited the survey in any way.

3.4 Field Survey Methods

During the nocturnal surveys, spotlighting and Growling Grass Frog call playback were used to detect Growling Grass Frogs potentially occurring within the area. Call playback involved the use of a male Growling Grass Frog's recorded voice and the assessors mimic call. These were generally carried out using the following method:

- Prior to entering the study site, boots were sprayed with a disinfectant to control potential Chytrid Fungus spread.
- The site was traversed/circumnavigated quietly and carefully using headlamps or torches to navigate (when dark), however these were switched off during the waiting/listening/recording period as light can suppress calling.



- Pre-recorded calls of Growling Grass Frogs were used to stimulate calling via a blue-tooth speaker with calls saved to the assessor's smart phone. The assessor's voice was also used in mimicry to trigger male calls.
- The calls were used in short spells then listening occurred before a repeat of the calls was made. Where there was an absence of calls this was repeated several times from different parts of the site.
- Call playback surveys for Growling Grass Frogs was undertaken for up to 90 minutes using a combination of playback, listening and searching with spotlight (looking for eye shine).
- All species observed were recorded with the location of calls noted.
- Potential Growling Grass Frog habitats were observed and recorded.

3.5 Little Lucifer Dam Habitats

As identified in Section 2.4 Habitat Preferences, Growling Grass Frogs ideally prefer the following habitats:

- A matrix of aquatic and terrestrial habitats.
- Permanent or seasonally flooded water bodies.
- Aquatic vegetation, ideally submerged and emergent.
- Terrestrial vegetation (ideally tussocky vegetation with open ground between), fallen logs and debris (for basking and cover).
- Suitable terrestrial habitats to allow movement between breeding sites.

Little Lucifer Dam provides a number of appropriate habitats characteristics including permanent water, emergent vegetation and terrestrial debris. Approximately 70% of the dam margins is fringed by emergent vegetation, dominated by Common Reed (*Phragmites australis*). Emergent reeds provide cover from predators and areas for breeding. The margins with reed cover were therefore targeted during field surveys. The surrounding terrestrial margins are mostly very steep and are not ideal for the species as they prefer gentle slopes. However, the margins have a lot of debris (rocks rubble and urban waste) that provides some cover and basking locations. Although the site offers appropriate habitats, the steepness of banks and lack of other known populations in the vicinity may limit the long term ability of the site in maintaining a genetically diverse population.

3.6 Field Survey Results

Four Growling Grass Frogs (GGFs) were heard calling during both evenings of survey. Two GGFs were first heard within the Common Reed at the south eastern edge of the dam whilst mimicking calls from the southern end. Following this, two additional GGFs responded to mimicked calls on the western side of the dam. Three of the four frogs were heard in approximately the same location the following night. One frog was heard calling from the northern end of the dam on the second night, while only one frog was responding from the south eastern edge. Figure 3-1 shows the approximate location of Growling Grass Frogs on the first night of assessment.



FIGURE 3-1 APPROXIMATE LOCATION OF GROWLING GRASS FROGS HEARD ON THE FIRST NIGHT 5/12/18

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Figure 3-2 shows the plan location of the frog responses on the first night (yellow circles) and the second night (pink circles). It is not known if the frog calling from the northern end had moved from the eastern edge where it was heard the previous night. What can be confirmed is that at least four male Growling Grass Frogs were present at the time of survey.

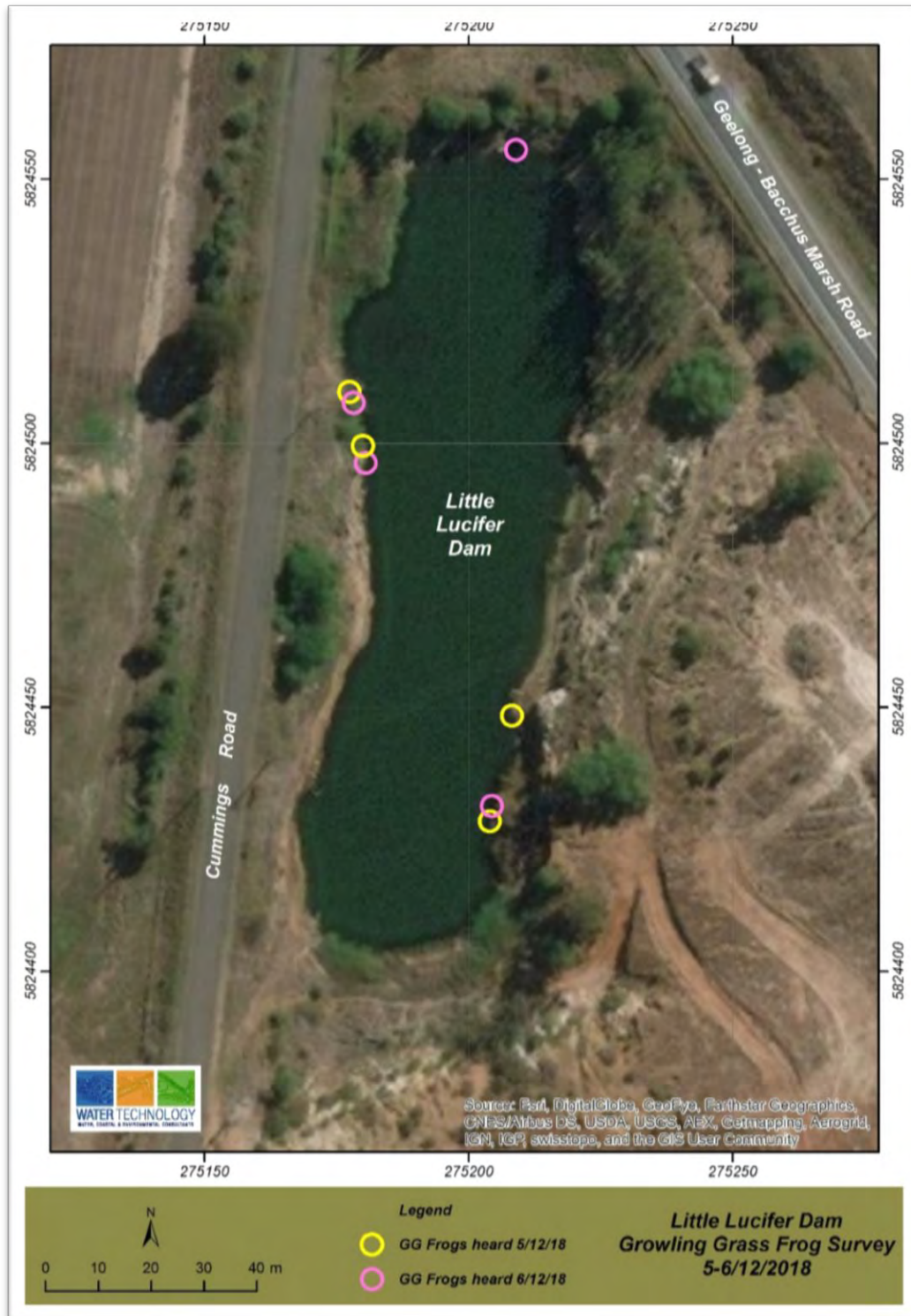


FIGURE 3-2 GROWLING GRASS FROG LOCATIONS

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4 SUMMARY OF SURVEY FINDINGS

A small but presumably healthy population of Growling Grass Frogs was identified within the Little Lucifer Dam containing open water, emergent aquatic vegetation and piles of rubble at the water's edge. The steep sided edges of the water body are generally not preferred by this species but the southern end provides a more viable entrance and exit location.

An explanation for their presence is that they may have been the result of translocation that had historically occurred from another pit that was previously decommissioned. Whether the current GGF's moved or were placed within the water body can only be postulated. However, given their presence and calling (when triggered) by males to attract a mating partner suggests the location may be suitable for reproduction. If reproduction is successful, dispersal of immature GGF's poses some obstacles such as the generally steep banks, roadways (Cummings Road and Bacchus Marsh-Geelong Road) and a large distance to a viable corridor for movement. The Parwan Creek is situated approximately 200m west of Cummings Road but currently dry and occasionally flows. The paddock to the west of Cummings Road did have a drainage line but this too was dry. Both provide little refuge at the time of assessment.



5 POTENTIAL IMPACTS OF DAM FILLING AND MITIGATION OPTIONS

It is understood that there is a proposal to fill Little Lucifer Dam with Potential Acid Sulphate Soils (PASS) to a level that remains below the permanent water level (ground water level). Remaining below water level ensures that these soils will not oxidise and turn acidic. However, during the dumping and settling of PASS within the dam, the chemicals and solids within the soil are likely to enter the water column even if only temporarily. The nature or potential pollutants and suspended solids is unknown and therefore a precautionary approach should be implemented. Following the settling of the PASS in the bed of the dam, it is proposed to enhance the habitats for Growling Grass Frogs within and surrounding the dam.

Due to the unknown nature of potential pollutants, exclusion of frogs from these areas, provision of adjacent alternate refuges, or translocation to another site, may be required. Some options for further consideration include:

- Seeking approval for the potential capture and translocation of GGFs to another site.
- Bunding off the northern end of the dam (dumping is proposed from the southern end) to provide refuge from the PASS dumping. It is unknown if the frogs will recognise the water quality differences and move to, or remain within, the bunded area.
- Installing an impervious curtain within the water column to limit movement of PASS to the northern end of the dam.

5.1 Water Quality Targets for Growling Grass Frog Wetlands

To maintain habitat conditions in a wetland, the aim should be to contain or minimise gross pollutants and filter out suspended solids, excess nutrients, heavy metals and chemical pollutants. The long-term aim should be to meet water quality target values for Growling Grass Frog wetlands as identified in DELWP 2017. Those water quality target values are indicated in Table 5-1.

TABLE 5-1 WATER QUALITY TARGET VALUES FOR GROWLING GRASS FROG WETLANDS (DELWP 2017)

Water quality parameter	Target value
Gross pollutants	To be determined
Dissolved Oxygen (mg/L)	To be determined
Total Nitrogen (mg/L)	< 1.0 (maximum from SEPP Waters of Victoria 2001) – to be confirmed
Ammonia (mg/L)	< 0.01 (N-1) as NH ₄ ⁺ (ANZECC 2000)
Total Phosphorous (mg/L)	< 0.1 (maximum from SEPP Waters of Victoria 2001) – to be confirmed
Chlorine (mg/L)	To be determined
pH	6.0 - 8.5 (SEPP Waters of Victoria 2001)
E. coli (orgs/100 ml)	Primary Contact < 150 Secondary Contact < 1000
Organic toxicants	There numerous organic toxicants ranging from straight hydrocarbons to various pesticides containing organic compounds. For endocrine disruption compounds like oestradiol (synthetic oestrogen) there are no ranges or triggers under SEPP or ANZECC guidelines
Metals	Minimise soluble and total metals
Salinity (µS/cm)	Moderately saline, up to 5000 µS/cm (Heard <i>et al.</i> 2014). Salinity can have negative effects on both the probability and intensity of chytrid infections (Heard <i>et al.</i> 2014). However, if salinity is too high, it is detrimental to frogs and tadpoles and will limit vegetation growth.
Turbidity (NTU's)	< 40

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6 ENVIRONMENTAL PROTECTION AND BIODIVERSITY CONSERVATION (EPBC) ACT 1999 CONSIDERATIONS

Growing Grass Frogs are Listed under the Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Act (1999). The process of determining whether there will be impact on the population is central to the requirements of an EPBC referral to the Federal Government (DEWHA) document EPBC Act Policy Statement 3.14 Nationally Threatened Species and Ecological Communities Significant impact guidelines for the vulnerable growing grass frog (*Litoria raniformis*) February 2009.

According to the above-mentioned guidelines:

- Under the EPBC Act an action will require approval from the federal environment minister if the action has, will have, or is likely to have a 'significant impact' on a matter of national environmental significance.
- A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.
- If you think that your action may have a significant impact on a matter of national environmental significance, or if you are unsure, you should refer the action to the federal environment minister. The minister will make a decision within 20 business days on whether approval is required under the EPBC Act. Substantial penalties apply for taking an action that has, will have or is likely to have a significant impact without approval.
- Determining whether the proposed construction will have a significant impact needs an assessment based on the degree of disturbance that is likely to occur to Little Lucifer Dam. Significant impact thresholds tend to consider the ecological element and impact threshold as described in Table 6-1.



TABLE 6-1 SIGNIFICANT IMPACT THRESHOLDS FOR THE SPECIES: GROWLING GRASS FROG (FROM DEWHA 2009)

Ecological element affected	Impact threshold	Comment
<p>Habitat degradation in an area supporting an important population</p>	<ul style="list-style-type: none"> • Permanent removal or degradation of terrestrial habitat (for example between ponds, drainage lines or other temporary/permanent habitat) within 200 metres of a water body in temperate regions, or 350 m of a water body in semi-arid regions, that results in the loss of dispersal or overwintering opportunities for an important population. • Alteration of aquatic vegetation diversity or structure that leads to a decrease in habitat quality. • Alteration to wetland hydrology, diversity and structure (for example any changes to timing, duration or frequency of flood events) that leads to a decrease in habitat quality. <p>Introduction of predatory fish and/or disease agents.</p>	<p>Habitat is a connected area that supports one or more key ecological functions for this species. These functions may include, but are not limited to: foraging, breeding, dispersal, shelter.</p> <p>Any action that results in the degradation of habitat such that the recruitment, survival or dispersal rates of an important population are lowered may have a significant impact on the species.</p> <p>Habitat quality increases with:</p> <ul style="list-style-type: none"> • increasing wetland area, • water permanence, and • aquatic vegetation cover. <p>Habitat quality decreases with:</p> <ul style="list-style-type: none"> • the degree of development in the terrestrial zone (that is, roads, buildings etc) and <p>the presence of predatory fish.</p>
<p>Isolation and fragmentation of populations</p>	<ul style="list-style-type: none"> • Net reduction in the number and/or diversity of water bodies available to an important population. • Removal or alteration of available terrestrial or aquatic habitat corridors (including alteration of connectivity during flood events). • Construction of physical barriers to movement between water bodies, such as roads or buildings. 	<p>Habitat connectivity could be provided by a linear water body (for example a creekline) or by suitable terrestrial habitat between waterbodies. Individuals may use a range of terrestrial and aquatic habitats as movement corridors between water bodies, including floodways or grassy fields.</p> <p>Any isolation of water bodies, through destruction of habitat, or creation of a barrier such that movement or migration between waterbodies is less likely could have a significant impact on the species.</p>

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7 REFERENCES

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SWIFFT 2018, State Wide Integrated Flora and Fauna Teams website, accessed 19 December 2018, https://www.swifft.net.au/cb_pages/sp_growling_grass_frog.php



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From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Cc: sussan.ley.mp@aph.gov.au
Subject: INC13938/Allegation 1/Maddingley PFAS-spoil facility likely to impact EPBC matters
Date: Tuesday, 14 July 2020 5:05:20 AM
Attachments: [AWE MBC-PFAS EPBC MEG 13July2020.pdf](#)

Dear Department of Agriculture, Water and the Environment,

The Hon. Sussan Ley MP has initiated investigations into EPBC-matters impacted by Maddingley Brown Coal's plans and preparations to build a large-scale PFAS-contaminated spoil facility at Gullines Road, Maddingley, Victoria. The site is not part of their mining or landfill area.

Urgent details about this proposal and significant impacts on EPBC-protected species are attached.

The company has already begun works to prepare to receive the PFAS-contaminated spoil next to a creek containing Growling Grass Frogs (EPBC-listed threatened species). They have not referred their actions for referral under the EPBC Act 1999, and do not have any Environment Management Plan in place.

There are also additional EPBC-listed threatened and migratory species highly likely to be significantly impacted by these actions.

We have been advised by ecological consultants that the actions should have been referred for assessment under the EPBC Act. We urge you to carefully and thoroughly investigate this matter, as the company has engaged in environmentally destructive activities in the past.

Yours sincerely,

s47F

on behalf of

Moorabool Environment Group Inc.

Email: s47F

Phone: s47F

We acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.



Moorabool Environment Group Inc.
PO Box 545
Bacchus Marsh VIC 3340
Email: s47F
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Monday 13th July 2020

EPBC Compliance
Department of Agriculture, Water and the Environment (AWE)
GPO Box 858
Canberra ACT 2601

Dear AWE team,

Re: URGENT: Maddingley Brown Coal's PFAS-spoil processing facility: Actions likely to significantly impact EPBC-listed matters of national environmental significance.

We refer to the Hon. Sussan Ley MP's letter to the Hon. Catherine King MP on 12th June 2020 concerning Maddingley Brown Coal's (MBC's) proposal and preparations to receive and process PFAS-contaminated spoil at a new site (not part of their mine/landfill), and relevance to the EPBC Act 1999. We are writing to provide further important information on this matter, and advocate that referral under the EPBC Act should have occurred. We (Moorabool Environment Group) have long been involved in protecting threatened and migratory species in the area surrounding and adjacent to the proposed site, and have insight into MBC's proposal and likely significant impacts on EPBC-listed matters.

MBC have submitted a planning request and began preparation works to receive and process approx. 1.5 million cubic metres PFAS-contaminated slurry/spoil at a 130 hectare site not previously used for this purpose, nor for any other heavy industrial activities (Gullines Road, Maddingley, Victoria). Important: this site is **not** part of MBC's mine or landfilling area. MBC plans to undertake these actions as part of establishing a large-scale contaminated spoil processing facility, beside Parwan Creek. These actions are likely to have significant impacts on matters of national environmental significance, however the actions have not been referred for assessment under the Environment Protection and Biodiversity Conservation Act, 1999.

Of particular concern, important source-populations of Growling Grass Frog (*Litoria raniformis*) occur immediately beside the site and may also occur on site. Aquatic pathways (watercourses and aquifers) on the site connect to Parwan Creek and neighbouring waterbodies containing Growling Grass Frogs. There is a real chance PFAS and other toxicants will leach from the spoil processing and storage activities, into these habitats. Research shows that even very low levels of PFAS can negatively impact amphibian breeding cycles and development, thus putting these important populations of Growling Grass Frogs at risk of decline. EPBC-listed bird species which use waterbodies and prey on aquatic species are also likely to be impacted. These impacts are described in Attachment B.

The PFAS-contaminated spoil which MBC is proposing to accept and process contains PFAS and heavy metals from industrial activities and firefighting foam previously used where the West Gate Tunnel is going to be built. There are other, more appropriate sites which have tendered to receive the spoil (i.e. sites that do not contain watercourses and that are not likely to impact matters of national environmental significance). As MBC have not yet been awarded the tender, they are not yet part of the West Gate Tunnel Project. We have received legal advice that **MBC cannot claim exemption from requirements of the EPBC Act 1999.**

MBC's proposed actions meet the following criteria for referral under the EPBC Act 1999:

1/ These are new actions for which preparations began in early 2020, and which have not previously been undertaken at the site. The site has not previously been used for landfilling, mining, processing of contaminated soil, or other heavy industrial activities. **See Attachment A.**

2/ There are matters of national environmental significance located in the area of the proposed action, including onsite, adjacent to site, and downstream of the site. **See Attachment B.**

- Listed threatened fauna (within 1km): 17
- Migratory bird species (within 1km): 14
- Marine bird species (within 1km): 21
- Threatened flora (within 1km): 10
- Listed threatened ecological communities (within 1km): 4
- Wetland of international significance (Ramsar): 1 (site is approx. 40km upstream of wetland)

3/ There is potential for impacts, including both direct and indirect impacts, on these matters of national environmental significance. **See Attachment C.**

- There is a real possibility that MBC's proposed actions will negatively impact habitat, breeding cycle and development of Growling Grass Frogs decreasing the size of an important Growling Grass Frog population, and survival and recovery of this species in the region.
- Negative impacts on other EPBC-listed matters are also likely.
- There is also high potential for facilitated impacts. If MBC receive this PFAS-contaminated spoil, it will set a precedent for receiving further PFAS-contaminated spoil.

4/ The impacts on matters of national environmental significance are likely to be significant impacts. **Attachment C.**

- Significant source-populations of Growling Grass Frogs are likely to be impacted and reduced. These populations are important for the recovery and survival of the species.
- Impacts are likely to be widespread and permanent, given PFAS travel long distances in waterways, bioaccumulate in the environment, and are persistent (i.e. do not readily break down, or if they do, they break down into other polluting substances).

5/ The proposed measures to reduce impacts are not certain enough to reduce the level of impact below the 'significant impact' threshold. Inappropriate site selection has been undertaken, given the nature of the action. **See Attachment D.**

- The proposed measures are not part of best practice for managing PFAS-contaminated spoil. For example, the spoil will be held in open bays for 21 days while being tested, increasing risk of leaching. The cells currently being built for containment of the spoil are only 200m - 250m from Parwan Creek proper, and sit on the edge of the ravine down to Parwan Creek. Performance of cell liners in relation to containing PFAS leachate is not yet fully understood. PFAS are likely to outlast any currently available cell liners.

6/ The precautionary principle also applies to these actions.

- There is still some scientific uncertainty about the impacts of PFASs, especially on Australian fauna and flora species. Research on other species suggests that the impacts may be worse than initially expected, and can occur at extremely low levels of PFASs concentration – e.g. levels that are at the lowest level of detection.
- There is also scientific uncertainty about how to best manage PFASs, although the science clearly shows high risks associated with storing PFASs-contaminated spoil in landfill.
- What is known, is that the impacts of PFASs are irreversible, and can be serious, in ways which lead to permanent species decline. Thus, the precautionary principle is applicable to MBC's plan to receive and process PFASs-contaminated spoil at this site.

MBC have a track record of extremely poor environmental management, and failing to implement proper stormwater and leachate management practices at their current site (see EPA Victoria Audits, CARMS No. 64662). It is absolutely imperative that their proposal be referred for assessment under the EPBC Act 1999. Failure to do so will have catastrophic consequences for multiple EPBC-listed fauna near the site, and likely to occur on the site itself. The flow-on effects will be serious.

We implore you to take action on the matters we have very clearly set out in the attached.

Please do not hesitate to contact us on the details above if you or your Department require any further information. We have also forwarded this information to Minister Ley. We respectfully request a response to this letter and attachments.

Yours sincerely,

§47F

Acting President

On behalf of Moorabool Environment Group

Moorabool Environment Group Inc. acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.



White-bellied Sea-eagle (Haliaeetus leucogater) flying near MBC's proposed PFAS-spoil processing site.

Photographed by §47F and §47F, 27 May 2020.

ATTACHMENT A: LOCATION AND FEATURES OF PROPOSED SITE FOR RECEIVING PFAS-CONTAMINATED SPOIL

The area in which MBC are proposing to receive and processing PFAS-contaminated spoil has not been previously used for this purpose, nor has it been used for mining, landfill or other heavy industrial activities.

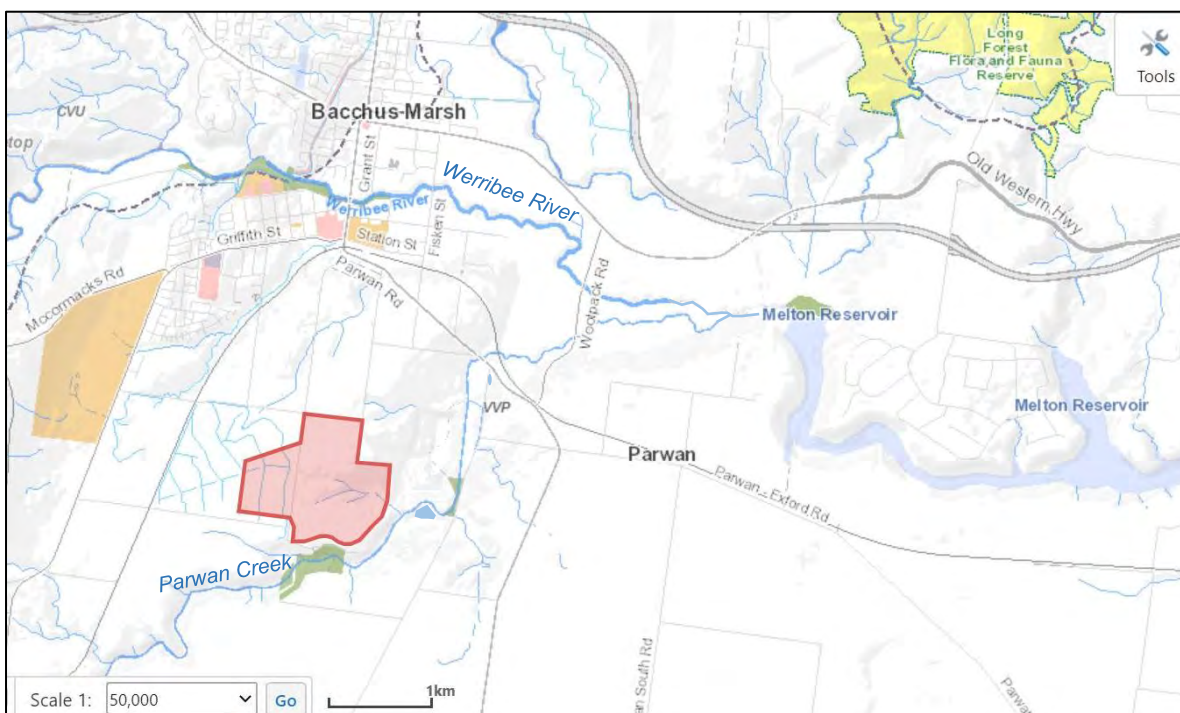
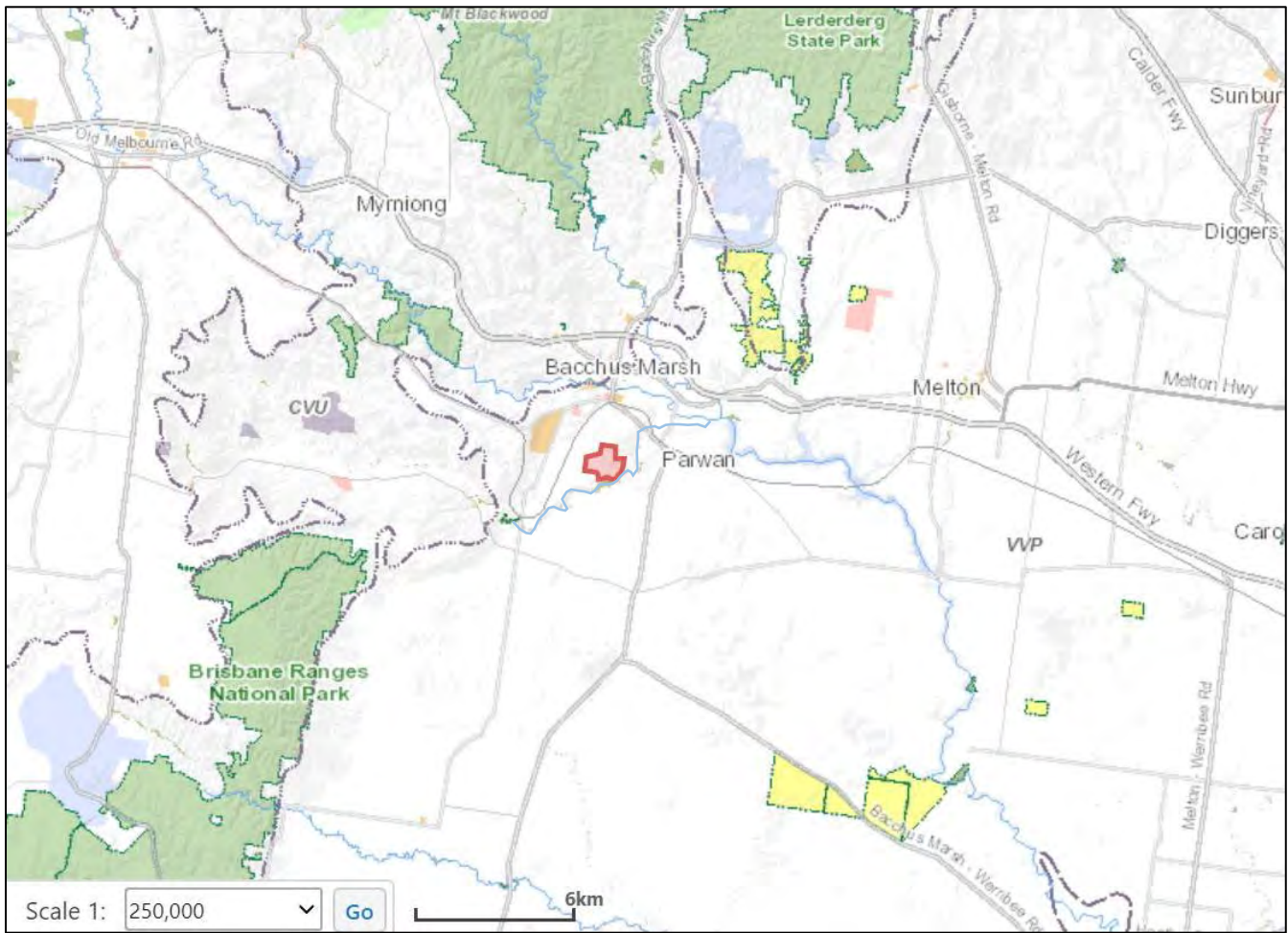


Figure A.1. Location of proposed site, Gullines Road, Maddingley, Victoria 3340

Red polygon with dark red border = Site of proposed PFAS-spoil processing facility

Green, orange, and yellow areas = Parks and reserves

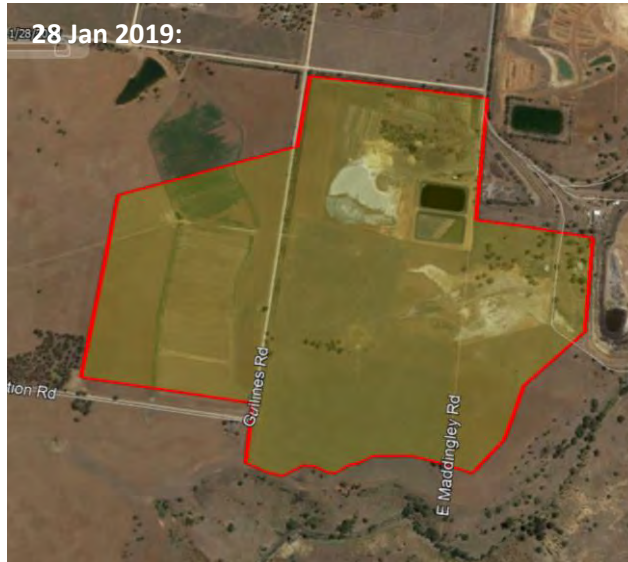


Figure A.2. Satellite images of proposed site: a) 6 July 2006; b) 28 Jan 2019 (compare with Figure A.3 below)

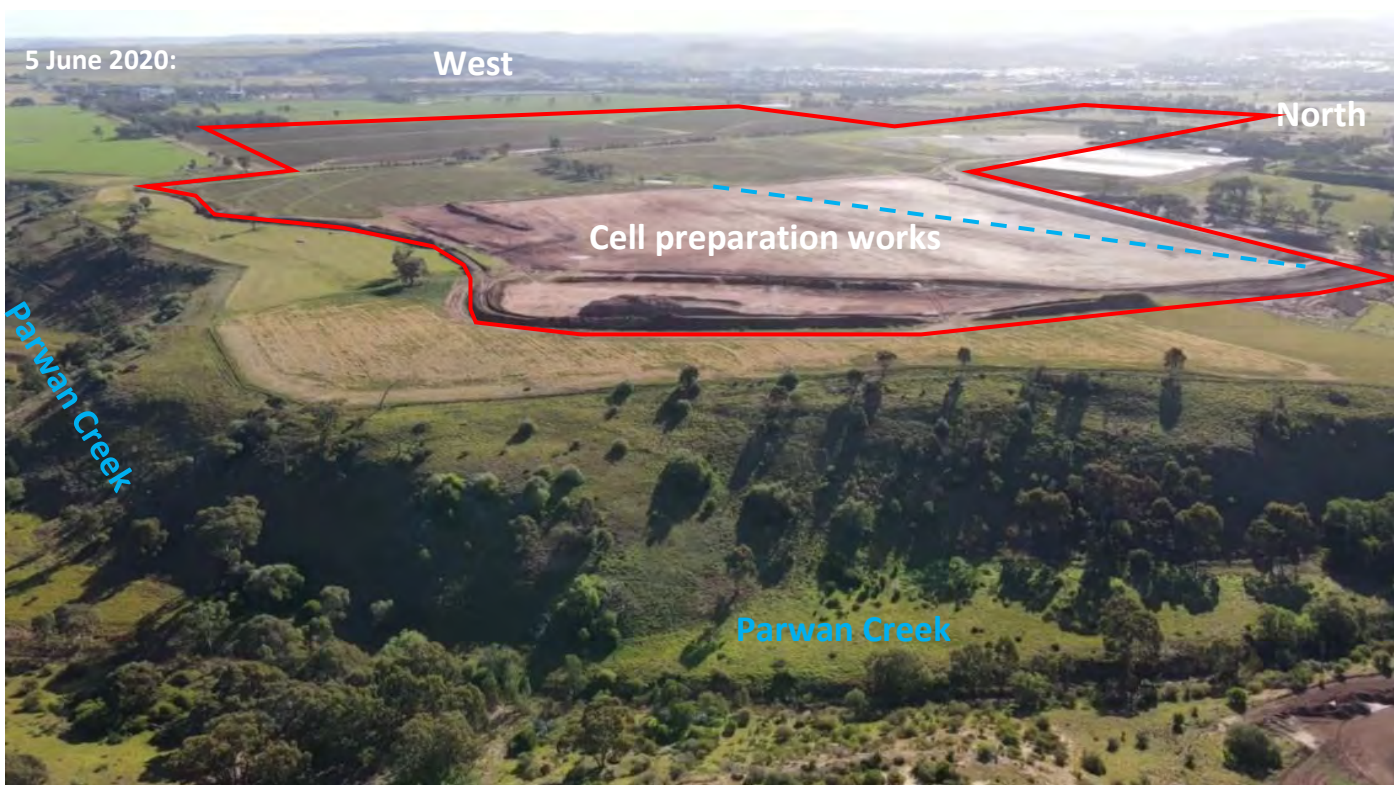


Figure A.3. 5th June 2020: Aerial image of proposed site, and preparation works for contaminated spoil cells. Image is facing north-west. Works are in south-east section of site.

- Red solid line = Site boundary. Additional works are planned for all parts of this site (construction of bays, cells, etc.). See Figure D.1, Attachment D for further details.
- - - Dotted blue line = former seasonal watercourse that has been removed (approximate location). This watercourse connects with a dam containing Growling Grass Frogs (*Litoria raniformis*).

ATTACHMENT B: MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE IN THE AREA

Table B.1. Fauna listed under the EPBC Act which are known, likely or may occur in 1km of the site. Species highlighted in blue use aquatic environments or prey on aquatic species.

Scientific Name	Common Name	EPBC Status	Observ.	1km Presence		
				K	L	M
<i>Litoria raniformis</i>	Growling Grass Frog	V	< 500m	*		
<i>Apus pacificus</i>	Fork-tailed Swift	Mi, Ma	< 1.5km		*	
<i>Ardea ibis</i>	Cattle Egret	Ma	< 2km			*
<i>Chrysococcyx osculans</i>	Black-eared Cuckoo	Ma	< 2km		*	
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Ma	< 2km		*	
<i>Merops ornatus</i>	Rainbow Bee-eater	Ma	< 2km			*
<i>Synemon plana</i>	Golden Sun Moth	CE	< 2.5km		*	
<i>Ardea alba</i>	Great Egret, White Egret	Ma	< 3.5km		*	
<i>Gallinago hardwickii</i>	Latham's Snipe	Mi, Ma	< 3.5km			*
<i>Hirundapus caudacutus</i>	White-throated Needletail	V, Mi, Ma	< 3.5km	*		
<i>Rhipidura rufifrons</i>	Rufous Fantail	Mi, Ma	< 3.5km		*	
<i>Myiagra cyanoleuca</i>	Satin Flycatcher	Mi, Ma	< 4 km	*		
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	< 4.5km		*	
<i>Delma impar</i>	Striped Legless Lizard	V	< 5km		*	
<i>Lathamus discolor</i>	Swift Parrot	CE, Ma	< 5km		*	
<i>Actitis hypoleucos</i>	Common Sandpiper	Mi, Ma				*
<i>Anthochaera phrygia</i>	Regent Honeyeater	CE				*
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E			*	
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Mi, Ma				*
<i>Calidris ferruginea</i>	Curlew Sandpiper	CE, Mi, Ma				*
<i>Calidris melanotos</i>	Pectoral Sandpiper	Mi, Ma				*
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll	E				*
<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias	V			*	
<i>Grantiella picta</i>	Painted Honeyeater	V			*	
<i>Monarcha melanopsis</i>	Black-faced Monarch	Mi, Ma			*	
<i>Motacilla flava</i>	Yellow Wagtail	Mi, Ma				*
<i>Numenius madagascariensis</i>	Eastern Curlew	CE, Mi, Ma				*
<i>Pandion haliaetus</i>	Osprey	Mi, Ma				*
<i>Pedionomus torquatus</i>	Plains-wanderer	CE			*	
<i>Prototroctes maraena</i>	Australian Grayling	V				*
<i>Rostratula australis / Rostratula benghalensis</i> (sensu lato)	Australian Painted Snipe	E, Ma			*	
<i>Tringa nebularia</i>	Greenshank	Mi, Ma			*	
<i>Tympanocryptis pinguicolla</i>	Grassland Earless Dragon	E				*

Status: CE = Critically endangered; E = Endangered; V = Vulnerable; Mi = Migratory; Ma = Marine

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Highlighted in blue = Use aquatic environments or prey on aquatic species.

Table B.2. Flora listed under the EPBC Act, which are known, likely or may occur in 1km of the site.

Scientific Name	Common Name	EPBC Status	Observ.	1km Presence		
				K	L	M
Amphibromus fluitans	River Swamp Wallaby-grass	V				*
Dianella amoena	Matted Flax-lily	E				*
Dodonaea procumbens	Trailing Hop-bush	V				*
Glycine latrobeana	Clover Glycine	V			*	
Lachnagrostis adamsonii	Adamson's Blown-grass	E				*
Leucochrysum albicans var. tricolor	Hoary Sunray	E			*	
Pimelea spinescens subsp. spinescens	Plains Rice-flower, Spiny Rice-flower	CE	< 2km		*	
Prasophyllum frenchii	Maroon Leek-orchid	E			*	
Rutidosis leptorrhynchoides	Button Wrinklewort	E			*	
Senecio macrocarpus	Large-fruit Fireweed, Large-fruit Groundsel	V			*	
Diuris basaltica	Small Golden Moths	E	< 5km			
Diuris fragrantissima	Sunshine Diuris	E	< 5km			

Status: CE = Critically endangered; E = Endangered; V = Vulnerable

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Table B.3. Ecological communities listed under the EPBC Act, which are known, likely or may occur in 1km of the site.

Name	EPBC Status	Observ.	1km Presence		
			K	L	M
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	CE	< 200m	*		
Natural Temperate Grassland of the Victorian Volcanic Plain	CE			*	
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	E				*
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	CE				*

Status: CE = Critically endangered; E = Endangered; V = Vulnerable

Observ. = Observed within 5km buffer zone of site (nearest contemporary observation is listed, based on Victorian Biodiversity Atlas and Atlas of Living Australia records)

K = Species or species habitat known to occur within **1km** of site (EPBC database)

L = Species or species habitat likely to occur within **1km** of site (EPBC database)

M = Species or species habitat may occur within **1km** of site (EPBC database)

Table B4. Ramsar wetland of international significance downstream of site

Name	Distance from site
Port Phillip Bay (western shoreline) and Bellarine Peninsula	Approx. 35 - 40 km downstream (via Werribee River)

ATTACHMENT C: SIGNIFICANT IMPACTS ON KEY MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Impacts on some key threatened and migratory/marine species are likely to be significant. The most notable of these are impacts on Growling Grass Frog (*Litoria raniformis*) as described below (C.1). Impacts are also likely to be significant for listed threatened/migratory/marine birds which use waterways for foraging and other activities (C.2). Potential for significant impacts on a Ramsar wetland of international significance downstream from the site also need to be considered (C.3).

C.1 GROWLING GRASS FROG (*Litoria raniformis*) - LIKELY SIGNIFICANT IMPACTS

C.1.1 Presence of Growling Grass Frogs in the area:

There are important populations of Growling Grass Frog (*Litoria raniformis*) adjacent to the site, downstream of the site, and likely to occur on the site itself (see Figure C.1). Nearby waterbodies where Growling Grass Frogs are confirmed to occur include:

- Parwan Creek (immediately adjacent to site)
- Star Dam (immediately adjacent to site)
- Little Lucifer Dam (approx. 1.2km downstream of site, close to Parwan Creek)
- Werribee River (approx. 2.5km downstream of site; Parwan Creek flows into Werribee River)

The site contains waterbodies, including a seasonal tributary to Parwan Creek, which are also likely to contain Growling Grass Frogs, given the extremely close proximity to known Growling Grass Frog populations.

C.1.2 Significance of Growling Grass Frog populations in the area:

Parwan Creek is known by herpetologists and ecologists as an important waterway supporting significant source-populations of Growling Grass Frog in the region. Hence Parwan Creek and its neighbouring waterbodies are essential habitat for breeding, dispersal and recovery of the Growling Grass Frog in Victoria. Protecting each population ‘pocket’ along this waterway and associated waterbodies is also important for genetic diversity of Growling Grass Frogs breeding in and dispersing from this area.

C.1.3 Likely impact of the actions on these significant populations:

There is a real possibility that MBC’s proposed actions will...

- Lead to a long-term decrease in the size of these important populations of Growling Grass Frogs, via negative effects PFAS have on amphibian breeding, gene expression, hormonal expression, metamorphosis and growth (see “How PFAS impact frogs” below).
- Adversely affect habitat critical to survival of these populations, e.g. through contamination of these waterways and waterbodies with PFASs leachate.
- Disrupt the breeding cycle of these important populations, e.g. through impacts of PFASs on eggs, tadpoles and normal development; see further details below.
- Increase risk of disease and developmental issues, e.g. through negative impacts of PFASs on immune system function.
- Interfere with recovery of Growling Grass Frog species in the surrounding region, given the Parwan Creek-Werribee River populations likely to be impacted are important source populations for breeding and dispersal.

C.1.4 How PFAS (including low levels) impact frogs:

- Developmental delays [1, 2]
- Reduced growth [1, 3]
- Delayed metamorphosis (i.e. from tadpole to adult stage) [2, 3]
- Altered gene expression, e.g. negatively impacting hormonal function and metamorphosis [4]. This has been shown to occur at low PFAS concentrations (e.g. 0.1 ug/L).
- Other impacts on breeding and development likely to lead to species decline [2].

Note: Some of these effects occur at very low PFAS concentrations, especially disruptions in hormonal functioning and gene expression. In fact, low PFAS concentrations sometimes have stronger negative impact than high levels, due to an inverted-U relationship between exposure level and effects [4].

C.1.5 Why Growling Grass Frogs are particularly susceptible to impacts of PFAS:

Behaviour of PFAS in aquatic systems (waterways, etc.) -

- PFAS readily dissolve, travel and persist in aquatic systems [5].
- PFAS bioaccumulate (build up) in aquatic systems, and in animal systems. Thus, even very low levels (e.g. levels at the lower limit of detection) can build up in fauna that live in or use aquatic systems [5].

Growling Grass Frogs have high exposure to soluble pollutants in aquatic habitats -

- Growling Grass Frog tadpoles live in water, and adult frogs depend on water and moist areas.
- Tadpoles have permeable skin and breathe via gills. This increases opportunity for uptake of PFAS [2].
- Adults also have thin, permeable skin, through which moisture containing PFAS can transfer [2].
- Therefore, uptake of PFAS can occur through absorption, respiration, ingestion of aquatic prey and direct ingestion of contaminated water.
- Amphibians have shown rapid uptake and bioaccumulation of PFAS. Research suggests this uptake and bioaccumulation may be more rapid than for other taxa (e.g. fish) [2].

PFAS are endocrine disruptors, and frog development depends on a healthy hormonal systems -

- E.g. Development during aquatic stage is reliant on hormone-regulated changes, which can be disturbed by endocrine disruptors such as PFAS [4].

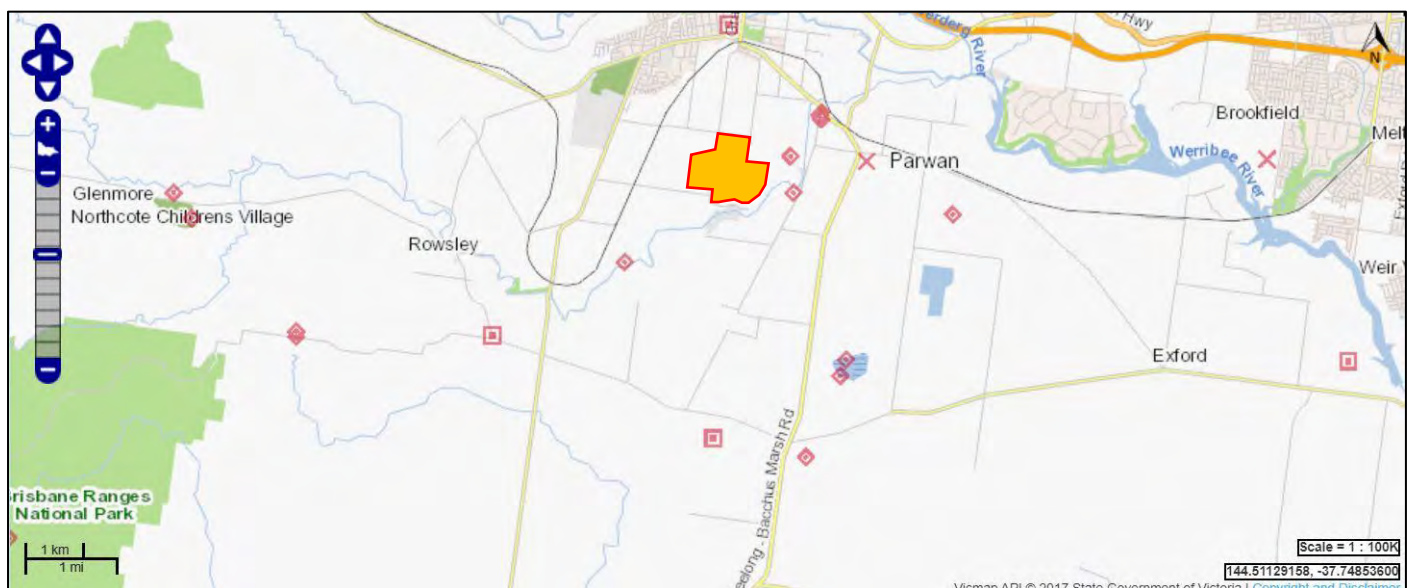


Figure C.1. VBA records of Growling Grass Frog (*Litoria raniformis*) along Parwan Creek and nearby areas.

Orange polygon (red border) = Proposed site for receiving and processing 1.5 million cubic metres of PFAS-contaminated spoil.

Red markers = Verified Growling Grass Frog observations recorded in Victorian Biodiversity Atlas.

Accuracy: \diamond $\leq 100\text{m}$; \square $> 500\text{m} \leq 1000\text{m}$; \times $> 2500\text{m} \leq 5000\text{m}$.

Most recent observations recorded = December 2018.

C.2 LISTED MIGRATORY/MARINE BIRDS - LIKELY SIGNIFICANT IMPACTS

C.2.1 Presence of EPBC-listed Migratory and Marine birds in the area:

There are multiple threatened, migratory and marine birds in the area, which are listed under the EPBC Act 1999. See Figure C.2 for a map of key observations of these birds in the area. The area provides important habitat for these species due to:

- Presence of multiple, intersecting waterways and waterbodies in the area, which provide food and habitat.
- Presence of small waterbodies on the site itself and adjacent to the site, which provide food and habitat.
- Being an important corridor for movement of birdlife between Brisbane Ranges National Park (south-west of site), Werribee Gorge State Park (north-west of site), Lerderderg Gorge State Park (north of site), Long Forest Nature Conservation Reserve (north-east of site), Melton Reservoir (east of site), Peppertree Park (north of site).
- Being an important corridor for movement of birdlife from Port Phillip Bay (35km south-east) to the above waterways, parks and reserves.
- Being an area with low urban density and high food availability (e.g. fish, amphibians, crustaceans), which forms part of the flight path and foraging/resting grounds for these bird species.

Bird species of particular concern in the area (due to food or habitat preferences) include: White-bellied Sea-Eagle (*Haliaeetus leucogaster*), Cattle Egret (*Ardea ibis*), Great Egret (*Ardea alba*), Osprey (*Pandion haliaetus*), Australian Painted Snipe (*Rostratula australis* / *Rostratula benghalensis (sensu lato)*), Latham's Snipe (*Gallinago hardwickii*), Common Sandpiper (*Actitis hypoleucos*), Curlew Sandpiper (*Calidris ferruginea*), Pectoral Sandpiper (*Calidris melanotos*), Sharp-tailed Sandpiper (*Calidris acuminata*), Eastern Curlew (*Numenius madagascariensis*), Greenshank (*Tringa nebularia*). See Table B.1 for EPBC status of each of these species.

C.2.2 Significance of EPBC-listed Migratory and Marine birds in the area:

Given the above features, the area is important habitat for breeding, genetic diversity, dispersal and recovery of these protected bird species. The birds which use this area are also likely to be part of the populations using National and State Parks nearby, and possibly the Ramsar wetland downstream. Thus impacts on listed birds in the area are also highly likely to impact populations in surrounding areas.

C.2.3 Likely impact of the actions on these significant populations:

There is a real possibility that MBC's proposed actions will...

- Adversely affect food sources on which these species rely, especially those species which are carnivorous / omnivorous. These impacts would be two-fold: 1/ PFAS contamination of the aquatic prey or vegetation, leading to biomagnification of PFAS in the food chain, and thus biomagnification of PFAS in the bodies of birds consuming aquatic prey or vegetation. 2/ Eventual decline of aquatic prey or vegetation, through impacts of PFAS, leading to lower availability of these food sources.
- Adversely affect habitat critical to survival of these populations, e.g. through contamination of waterways and waterbodies with PFASs leachate.
- Disrupt the breeding cycle of these important populations, e.g. through impacts of PFASs on eggs and normal development; see further details below.
- Increase risk of disease and developmental issues, e.g. through negative impacts of PFASs on immune system function.
- Lead to a long-term decrease in the size of important populations of these listed bird species, via the above impacts.
- Interfere with recovery of these listed bird species, given the above impacts, and the way these species use the area.

C.2.4 How PFAS (including low levels) impact birds:

- Decreased weight gain in females during reproduction. This can occur at PFAS levels much lower than current avian toxicity reference values [6].
- Negative impacts on egg development [7, 8]
- Decreased embryo mass [7].
- Reduced hatching success [8]. This can occur at extremely low PFAS concentrations, much lower than current avian toxicity reference values [6, 9].
- Reduced imprinting of chicks [8]. This would reduce chick survival, as survival is dependent on imprinting on parent/s.
- Neurobehavioural abnormalities [8].
- Altered gene expression, e.g. negatively impacting thyroid and immune function [7, 10]
- Impaired immune function [10, 11]
- Other impacts on breeding and development likely to lead to species decline.

Note: Some of these effects occur at PFAS concentrations much lower than current avian toxicity reference values, especially disruptions in hatching success [6, 9].

C.2.5 Why migratory and marine bird species are particularly susceptible to impacts of PFAS:

- Many of these listed bird species eat aquatic prey and/or vegetation. Aquatic prey and vegetation are especially prone to PFAS uptake and bioaccumulation. PFAS then biomagnifies through each trophic level of the food chain. Therefore, birds which forage or hunt in aquatic environments are especially susceptible to both biomagnification and bioaccumulation of PFAS, such that level low level of PFAS can easily lead to high levels in these species.
- Birds which use waterways and waterbodies for foraging, hunting or habitat can also intake PFAS-contaminated water through drinking, preening, and other activities.
- Repeated intake of PFAS-contaminated water, vegetation or prey leads to bioaccumulation, as PFAS builds up in tissues.
- PFAS are passed from adult females to eggs.

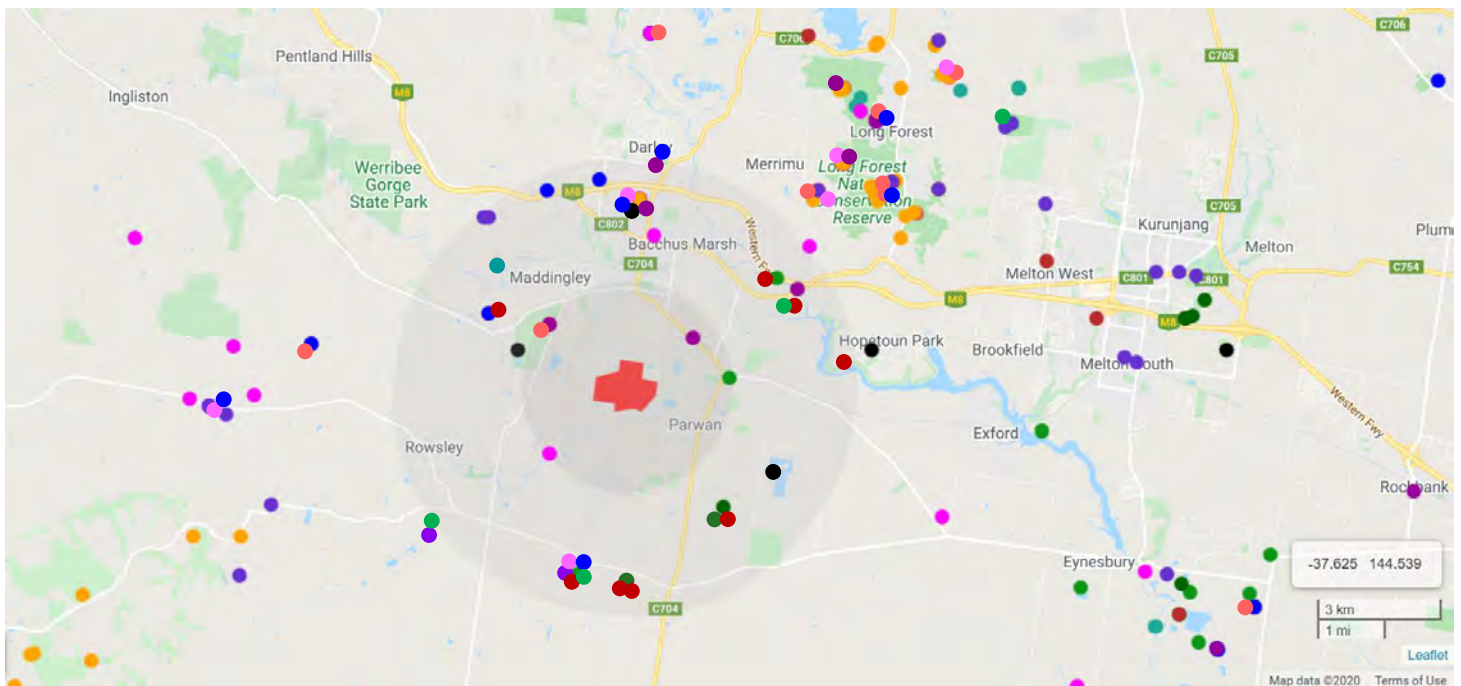


Figure C.2. Observations of EPBC-listed threatened, migratory and marine bird species (ALA and VBA > 1990). **Red polygon** = Site location; **Inner grey circle** = 2km radius (approx.); **Outer grey circle** = 5km radius (approx.)

- **White-bellied Sea-Eagle** • **Cattle Egret** • **Great Egret** • **Latham's Snipe** • **Swift Parrot** • **Black-eared Cuckoo**
- **White-throated Needletail** • **Rainbow Bee-eater** • **Fork-tailed swift** • **Satin Flycatcher** • **Rufous Fantail**

ATTACHMENT D: ACTIONS & RISKS ASSOCIATED WITH MBC'S PROPOSED PFAS-CONTAMINATED SPOIL PROCESSING FACILITY

D.1 About the PFAS-contaminated spoil the site is preparing to receive and process:

- The spoil will come from areas previously contaminated through industrial activities and firefighting foam (e.g. near Coode Island).
- Spoil will arrive as a paste/slurry composed of soil and water.
- Amount of spoil will be around 1.5 million cubic metres.
- Concentrations of PFAS in the spoil will not be known until the spoil arrives on site.
- Concentrations of PFAS in the spoil are 'expected' to be up to 0.7ug/L, however bore test results from where the soil is originating suggest levels may be **substantially higher**. Concentrations in water extracted during de-watering may be higher. The expected PFAS concentrations exceed Australian ecological water quality guideline values for sensitive fauna, and **exceed scientifically accepted reference levels** for amphibians and avian species.
- The spoil will also contain other contaminants such as heavy metals.

D.2 About processing of the spoil:

- Proposed site plan is shown in Figure D.1. Preparations of south-east cells on the plan has already begun.
- The PFASs-contaminated spoil will be held in open bays for around 21 days while being tested. This is not best practice, and increases the risk of PFASs and other contaminants leaching. Exact levels of PFASs-contamination will not be known until after this open bay storage period.
- A dewatering process will be used to draw out PFAS-contaminated water from the spoil, separating the water from the soil. It is anticipated that most of the PFAS will be dissolved in, and remain with, the water. Holding PFASs in an aquatic state substantially increases the risks of leaching, and the pathways through which that leachate could enter the surrounding environment, impacting on matters of national environmental significance.
- MBC plan to use the PFAS-contaminated water for dust suppression of the remaining soil (see Figure D.2). It is unclear how this system would work, as more detailed technical information has been withheld from community consultation.
- It appears that eventual disposal of the PFAS-contaminated water would be via sewage discharge, although further clarification is required to confirm this.
- After testing, Category C PFASs-contaminated spoil will be transferred to and stored in containment cells which are currently being built approx. 250m from Parwan Creek. Gradient of the land runs down to Parwan Creek.
- It appears that MBC plan to mix the (Category C?) dried PFAS-contaminated soil with clean-fill, for reuse.

D.3 Risks associated with storing, processing and reusing PFAS-contaminated spoil:

- PFAS are human-made, persistent organic pollutants which can remain indefinitely in the environment, building up over time through bioaccumulation [5].
- PFAS are environmental toxicants which can negatively impact reproductive, developmental, immune and other functioning of animals. Amphibians and birds seem especially vulnerable to impacts of PFAS.
- For some types of PFAS (e.g. PFOS) these toxic effects can occur at extremely low concentrations. The level at which toxic effects occur is often close to the level of detection (i.e. if any PFAS at all shows up in testing, it could be enough to cause toxic effects for some species, especially amphibian and bird species) [5].
- PFAS are highly soluble and persistent in aquatic media, and readily travel long distances in aquatic systems [5].
- PFAS bioaccumulate in the environment and in plant and animal systems (protein tissues, liver, etc.) [5].
- PFAS biomagnify in each level of the food chain. This means low levels can lead to high levels in predator species such as birds of prey (e.g. White-bellied Sea Eagle) [5].
- Biomagnification and bioaccumulation together have a synergistic effect, whereby low levels of PFAS can lead to exceptionally high levels in predator species which repeatedly forage and use PFAS-contaminated waterbodies.

- The properties of PFAS make them especially prone to leaching, and especially difficult to contain [5]. This is especially true of PFAS-contaminated paste, slurry or water.
- The spoil will contain additional industrial contaminants, which could interact with the PFAS contaminants.

D.4 Measures used to contain PFAS-contaminated spoil and water and not certain enough to reduce the level of impact below the ‘significant impact’ threshold:

There has been no attempt at avoidance

- The proposed site and area contains seasonal watercourses, aquifers which feed surface water, and multiple pathways through which EPBC-listed matters of national environmental significance can be impacted. Scientific evidence and international and Australian guidelines strongly discourage storing and processing PFAS-contaminated spoil at sites with these features, even where PFAS concentrations are low [5].
- There are alternative, more appropriate sites for receiving and processing this PFAS-contaminated spoil (i.e. sites that don’t contain watercourses and where actions would not have significant impact on EPBC-matters).
- There are also alternative activities in which MBC could invest which are more appropriate for the sensitive area in which this site is placed.
- The most appropriate management strategy in the case of this PFAS-contaminated spoil would be to avoid receiving the spoil at the site in the first place. However, MBC have pushed ahead with large scale preparations for receiving this spoil.

There are currently no certain or reliably effective options available for mitigating impacts of these actions:

- Leaching of PFASs from containment cells remains a risk even when best practice is followed [5]. The lifespan of cell liners is shorter than the lifespan of PFAS, making leaching almost inevitable over time.
- No well-established methods yet exist for removing PFAS from the environment once it leaches.

MBC’s proposal does not even meet current minimum standards for attempting to minimise or mitigate impacts of these actions:

- Normally minimisation measures would involve placing PFAS-spoil containment cells as far away as possible from waterways and waterbodies. Instead MBC are building these cells between a waterbody on site and an adjacent waterway. The cell area used to have a seasonal waterway/gully running through it which has now been excavated.
- PFAS-contaminated spoil will be held in open bays on site for approx. 21 days while being tested. This is a high risk proposal which does not demonstrate awareness of mitigation strategies needed.
- As outlined above, it appears the plan is use the PFAS-contaminated water (leachate) for dust suppression and possibly to eventually dispose of it via sewer. Accidental PFAS leaching to sewage systems is already a problem in Australia, and increases pathways through which PFAS can enter the environment and affect wildlife. Deliberately disposing of PFAS-contaminated leachate via sewer is a high risk proposal.
- MBC have received advice from a consultancy company which does not appear to have credentials or expertise in PFAS risk management. This company has completed risk assessments for MBC’s proposed actions which we believe are highly inadequate. We can provide further information upon request.

It should be noted that MBC have repeatedly failed to implement mitigation requirements identified in EPA Victoria audits of their current site (11 Tilleys Road, Maddingley) from at least 2012 to present (see EPA Victoria Audits, CARMS No. 64662). They are currently non-compliant with important EPA licence conditions for their current site. This demonstrates an ongoing unwillingness to undertake even basic measures to protect matters of environmental significance.



Figure D.1. Plans of the proposed site, displayed at a stakeholder information session held by MBC’s lobbyist group. **Top image** = general plan; **Bottom image** = details of storage bay and containment cell positions.

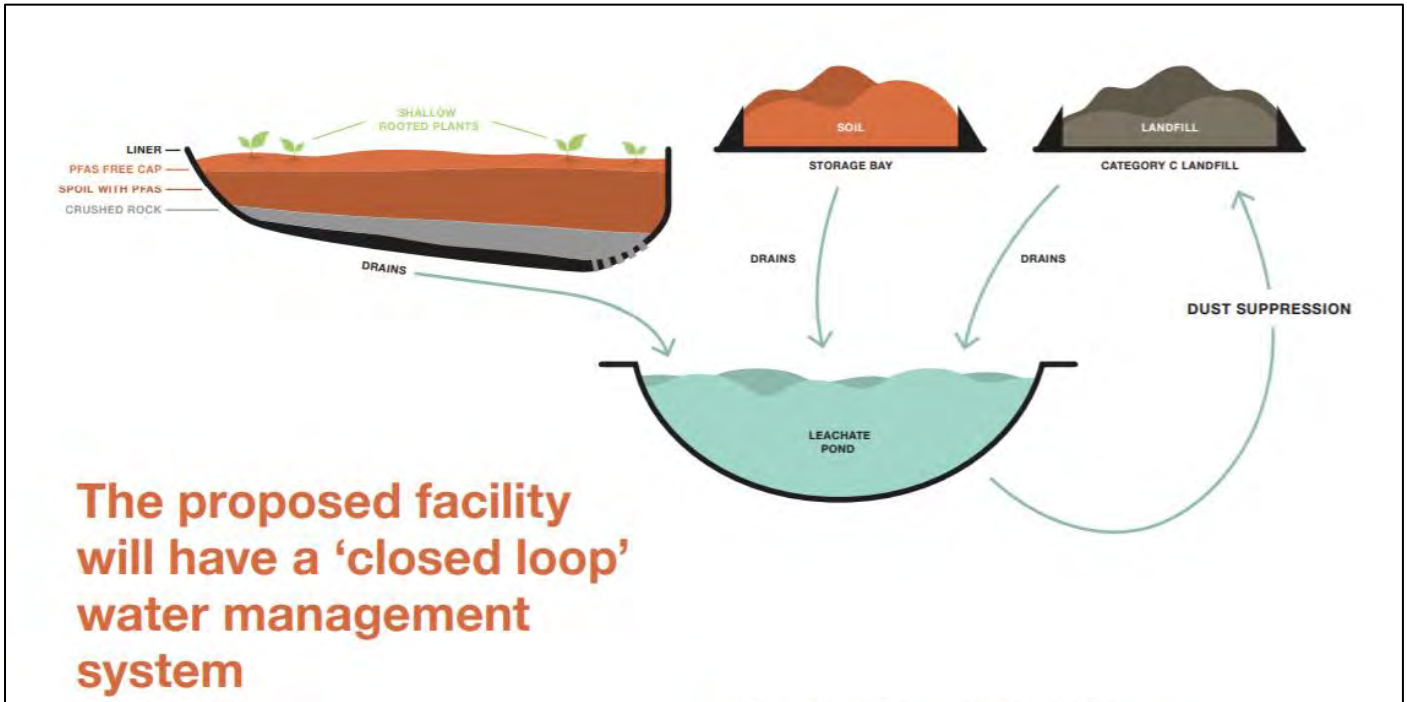


Figure D.2. Diagram from MBC information sheet on the PFAS-contaminated spoil processing facility, showing use of PFAS-contaminated leachate for suppression of dust, including dust from soil held in open bays.

Reference:

https://static1.squarespace.com/static/5d799dae673b785e1d5520ca/t/5e5de44ed10fed5651bccf4a/1583211603425/MBC_Coal_Factsheet_WATER.pdf

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Further references are available upon request.

From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Subject: INC13938/Appendix to allegation 1/ Maddingley PFAS-spoil facility likely to impact EPBC matters
Date: Tuesday, 14 July 2020 5:24:02 AM
Attachments: [EPBC DatabaseReport MBC PFASarea 1km buffer 4May2020.pdf](#)

P.S. Please also find attached Appendix: EPBC database report for 1km buffer of the site.

On Tue, Jul 14, 2020 at 5:04 AM MEG Moorabool Environment Group

s47F > wrote:

Dear Department of Agriculture, Water and the Environment,

The Hon. Sussan Ley MP has initiated investigations into EPBC-matters impacted by Maddingley Brown Coal's plans and preparations to build a large-scale PFAS-contaminated spoil facility at Gullines Road, Maddingley, Victoria. The site is not part of their mining or landfill area.

Urgent details about this proposal and significant impacts on EPBC-protected species are attached.

The company has already begun works to prepare to receive the PFAS-contaminated spoil next to a creek containing Growling Grass Frogs (EPBC-listed threatened species). They have not referred their actions for referral under the EPBC Act 1999, and do not have any Environment Management Plan in place.

There are also additional EPBC-listed threatened and migratory species highly likely to be significantly impacted by these actions.

We have been advised by ecological consultants that the actions should have been referred for assessment under the EPBC Act. We urge you to carefully and thoroughly investigate this matter, as the company has engaged in environmentally destructive activities in the past.

Yours sincerely,

s47F

on behalf of
Moorabool Environment Group Inc.

Email: s47F

Phone: s47F

We acknowledge the Wurundjeri and Wadawurrung people as the Traditional Custodians of the land and waters on which we work, and pay respect to their Elders past, present and emerging.



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 04/05/20 18:55:58

[Summary](#)

[Details](#)

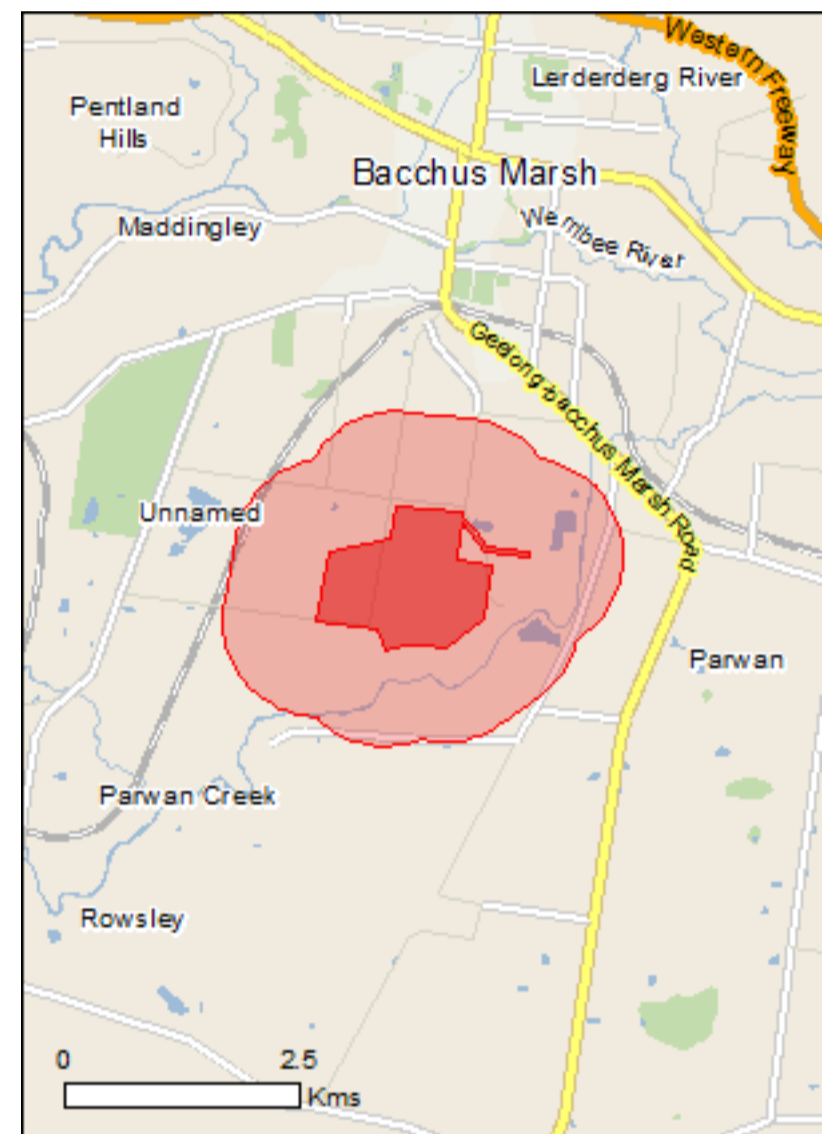
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

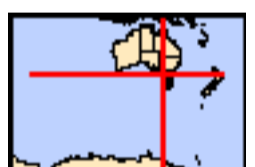
[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)

[Buffer: 1.0Km](#)



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	27
Listed Migratory Species:	14

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	21
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	1
Invasive Species:	36
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Port phillip bay (western shoreline) and bellarine peninsula	20 - 30km upstream

Listed Threatened Ecological Communities

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Grassy Eucalypt Woodland of the Victorian Volcanic Plain	Critically Endangered	Community known to occur within area
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community may occur within area
Natural Temperate Grassland of the Victorian Volcanic Plain	Critically Endangered	Community likely to occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species

Name	Status	Type of Presence
Fish		
Galaxiella pusilla Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area
Frogs		
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat known to occur within area
Insects		
Synemon plana Golden Sun Moth [25234]	Critically Endangered	Species or species habitat likely to occur within area
Mammals		
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Plants		
Amphibromus fluitans River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat may occur within area
Dodonaea procumbens Trailing Hop-bush [12149]	Vulnerable	Species or species habitat may occur within area
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area
Lachnagrostis adamsonii Adamson's Blown-grass, Adamson's Blowngrass [76211]	Endangered	Species or species habitat may occur within area
Leucochrysum albicans var. tricolor Hoary Sunray, Grassland Paper-daisy [56204]	Endangered	Species or species habitat likely to occur within area
Pimelea spinescens subsp. spinescens Plains Rice-flower, Spiny Rice-flower, Prickly Pimelea [21980]	Critically Endangered	Species or species habitat likely to occur within area
Prasophyllum frenchii Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid [9704]	Endangered	Species or species habitat likely to occur within area
Rutidosia leptorrhynchoides Button Wrinklewort [7384]	Endangered	Species or species habitat likely to occur within area
Senecio macrocarpus Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		

Name	Status	Type of Presence
Delma impar Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat likely to occur within area
Tympanocryptis pinguicolla Grassland Earless Dragon [66727]	Endangered	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat likely to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans		
Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor		
Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis		
Black-faced Monarch [609]		Species or species habitat likely to occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur

Name	Threatened	Type of Presence within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Extra Information

Regional Forest Agreements [\[Resource Information \]](#)

Note that all areas with completed RFAs have been included.

Name	State
West Victoria RFA	Victoria

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
<i>Pycnonotus jocosus</i> Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
<i>Streptopelia chinensis</i> Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
<i>Sturnus vulgaris</i> Common Starling [389]		Species or species habitat likely to occur within area
<i>Turdus merula</i> Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
<i>Turdus philomelos</i> Song Thrush [597]		Species or species habitat likely to occur within area
Mammals		
<i>Canis lupus familiaris</i> Domestic Dog [82654]		Species or species habitat likely to occur within area
<i>Capra hircus</i> Goat [2]		Species or species habitat likely to occur within area
<i>Felis catus</i> Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<i>Lepus capensis</i> Brown Hare [127]		Species or species habitat likely to occur within area
<i>Mus musculus</i> House Mouse [120]		Species or species habitat likely to occur within area
<i>Oryctolagus cuniculus</i> Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<i>Rattus norvegicus</i> Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
<i>Rattus rattus</i> Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
<i>Vulpes vulpes</i> Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
<i>Asparagus asparagoides</i> Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
<i>Austrocyllindropuntia</i> spp. Prickly Pears [85132]		Species or species habitat likely to occur within area
<i>Cenchrus ciliaris</i> Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
<i>Chrysanthemoides monilifera</i> Bitou Bush, Boneseed [18983]		Species or species habitat may occur within

Name	Status	Type of Presence area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-37.702727 144.435333,-37.702727 144.435247,-37.703066 144.435247,-37.705171 144.437564,-37.705714 144.441513,-37.706122 144.441513,-37.705647 144.437221,-37.703541 144.435161,-37.704492 144.435075,-37.70619 144.434818,-37.706597 144.438079,-37.710739 144.437307,-37.712912 144.433616,-37.712641 144.43147,-37.712776 144.429925,-37.713184 144.42778,-37.712505 144.427694,-37.711554 144.427093,-37.710875 144.421342,-37.705714 144.422544,-37.704764 144.42838,-37.702183 144.428895,-37.702727 144.435333

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- [-Natural history museums of Australia](#)
- [-Museum Victoria](#)
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- [-South Australian Museum](#)
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- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
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- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- [-Other groups and individuals](#)

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us](#) page.

From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Subject: Re: Maddingley Brown Coal - Urgent compliance concern re EPBC Act
Date: Wednesday, 11 March 2020 4:09:27 PM
Attachments: [Species affected by activities of Maddingley Brown Coal_10Mar2020.xlsx](#)

Dear Compliance Team,

Following on from my previous email re (probable) non-compliance of Maddingley Brown Coal actions with EPBC Act, please find below / attached:

- Excel file containing details of **listed species in areas affected by Maddingley Brown Coal's actions**, extracted from Victorian Biodiversity Atlas (Excel file attached), and from report regarding Growling Grass frogs on MBC site.

- **List of endangered, vulnerable, rare and threatened species found within 5km** (and closer) of the site, **within the past 5 years**.

I will also send photos of Maddingley Brown Coal's actions, and environmental damage, shortly (I am currently preparing them).

Please note that I have not yet extracted species sightings from Atlas of Living Australia or other databases, so there are likely to be other relevant observations not listed (as the VBA is often not comprehensive).

Endangered, vulnerable, rare and threatened species found within 5km (and closer) of the site, within the past 5 years (see attached for further details)...

ON SITE

Endangered:

- *Litoria raniformis* (Growling Grass Frog); latest obs. 6/12/2018

Vulnerable:

- *Aythya australis* (Hardhead); latest obs. 29/10/2015

WITHIN 1KM

Vulnerable:

- *Falco subniger* (Black Falcon); latest obs. 31/03/2019

Rare:

- *Atriplex pseudocampanulata* (Mealy Saltbush); latest obs. 21/12/2016

WITHIN 2KM

Endangered:

- *Allocasuarina luehmannii* (Buloke); latest obs. 22/03/2018

Vulnerable:

- *Accipiter novaehollandiae* (Grey Goshawk); latest obs. 19/04/2019

- *Pyrrholaemus sagittatus* (Speckled Warbler); latest obs. 30/07/2019

- *Dianella longifolia* var. *grandis* (Flax-lily); latest obs. 14/10/2016

- *Eucalyptus leucoxylon* subsp. *connata* (Melbourne Yellow-gum); latest obs. 7/06/2018

Rare:

- *Rhagodia parabolica* (Fragrant Saltbush); latest obs. 13/12/2018

Near threatened:

- *Ornithorhynchus anatinus* (Platypus); latest obs. 24/11/2019

WITHIN 5KM

Endangered:

- *Lathamus discolor* (Swift Parrot); latest obs. 18/06/2017

- *Oxyura australis* (Blue-billed Duck); latest obs. 21/02/2019

Vulnerable:

- *Ardea alba* (Great Egret); latest obs. 27/06/2018
- *Biziura lobata* (Musk Duck); latest obs. 21/02/2019
- *Haliaeetus leucogaster* (White-bellied Sea-Eagle); latest obs. 16/05/2018
- *Hirundapus caudacutus* (White-throated Needletail); latest obs. 22/02/2018
- *Spatula rhynchotis* (Australasian Shoveler); latest obs. 21/02/2019
- *Acacia rostriformis* (Bacchus Marsh Wattle); latest obs. 17/12/2016

Rare:

- *Pimelea hewardiana* (Forked Rice-flower); latest obs. 7/05/2018

Near threatened:

- *Anseranas semipalmata* (Magpie Goose); latest obs. 27/07/2019
- *Chrysococcyx osculans* (Black-eared Cuckoo); latest obs. 24/10/2018
- *Circus assimilis* (Spotted Harrier); latest obs. 8/03/2019
- *Climacteris picumnus* (Brown Treecreeper); latest obs. 12/05/2019
- *Stagonopleura guttata* (Diamond Firetail); latest obs. 12/05/2019

Sincerely,

s47F

Secretary
Moorabool Environment Group

Email: s47F
Phone: s47F

On Tue, Mar 10, 2020 at 5:08 PM MEG Moorabool Environment Group

<s47F> wrote:

Dear Compliance Team,

Thank you for our recent phone conversation.

We are writing to notify of a possible compliance issue regarding **Maddingley Brown Coal, 11 Tilleys Road, Maddingley 3340**. (Located within Moorabool Shire Council).

Maddingley Brown Coal operate a commercial landfill operation at an old brown coal mine site. We believe there has never been any assessment of this site in relation to the EBPC Act, even though there are endangered species and other native fauna and flora on the site, and affected by the site.

Species and sensitive areas in and near the site:

- There are confirmed records of an endangered species, *Litoria raniformis* (Growling Grass Frog) found on and near the Maddingley Brown Coal site.
- There are also other native species of plants and animals both on the Maddingley Brown Coal site and in areas affected by the site. These include Platypus and Rakali. Soon I will send through a list of additional native flora and fauna found near the Maddingley Brown Coal site.
- To our knowledge, a full assessment of other species on the full site or affected by the site has never been undertaken. A survey for *Litoria raniformis* was undertaken in relation to a small part of the site – Little

Lucifer Dam (see attached).

- There are other waterways and dams on the site which we believe have not been assessed.
- Parwan Creek runs through the site, and then into the Werribee River / Melton Reservoir. The site is part of the Werribee River catchment.
- Werribee River is approx. 1.4km from the site. Confluence of Parwan Creek with the Werribee River is approx. 2.8km from the site. Although Parwan Creek has sometimes been in summer, it currently contains water.
- The Werribee River contains Platypus and Rakali, in addition to other native fauna and flora. This includes sections of the Werribee River that could be affected by Maddingley Brown Coal's activities.
- The affected sections of the Werribee River are used to irrigate vegetable and fruit crops for human consumption.
- There is an environmental overlay over part of the site (ESO-2, Moorabool Shire Council).
- The site also contains areas of Aboriginal Cultural / Heritage Significance.

Activities carried out on the site which could have an impact on the environment:

- The company stores and re-uses industrial waste, including Category C contaminated waste. This waste includes contaminated soil, shredder floc, industrial hard waste and waste containing small amounts of PFAS.
- The company is currently piling soil immediately next to Parwan Creek, between Parwan Creek and Cummings Road. This is possibly Category C contaminated soil, but we are unsure. I have attached a distant image of this, but will send through a clearer image later.
- The company channels stormwater from the site into Parwan Creek (see image attached).

Evidence of current environmental impact from activities on the site:

- Hard waste from the site is currently polluting Parwan Creek (photos to follow). When it rains this waste is pushed further downstream, toward the Werribee River.
- The site has a long history of emitting dust into the environment, from their soil-related operations (photos to follow).
- Materials and stormwater from the site could contain PFAS and heavy metal contamination, however we have been unable to get independent testing results on this at this stage.
- There are no sediment barriers or other precautions being used to stop soil that is being piled beside Parwan Creek from entering the creek.

We are very concerned about the impact of current Maddingley Brown Coal operations on fauna and flora, and the surrounding environment. Their activities and location seem to be of relevance to the EPBC Act, however to our knowledge none of their planning permits or other permissions have been referred for assessment relating to the EPBC Act. We believe this may constitute a breach of the Act.

Maddingley Brown Coal's request to receive large volumes of PFAS contaminated soil:

- Maddingley Brown Coal have also submitted a request to the Victorian Planning Minister to intervene in and amend their current Planning Permit, to allow them to receive and re-used PFAS contaminated soil from the Westgate Tunnel Project. They are in the tender process with Transurban, and this Thursday will submit a formal tender to receive this soil.
- Level of toxicity of the soil could range from Category A to Category C (extreme contamination to low contamination). Soil will be tested at the Maddingley Brown Coal site, and will be stored open for 21 days until test results are known. Any Category A or C soil will then be separated and removed from the site – however it will have been stored in the open for 21 days until then. This information comes directly from Maddingley Brown Coal, via a stakeholder briefing they were required by Transurban to hold with Stakeholders.
- It appears that Maddingley Brown Coal may be already undertaking works in preparation to receive this contaminated soil, however we cannot confirm this.

PFAS is extremely soluble in water, and moves easily and long distances in waterways. It bioaccumulates in systems, especially aquatic systems. Even small levels of PFAS can result in high contamination when it enters waterways, especially when large volumes of PFAS contaminated materials are being dealt with.

We are therefore very concerned about Maddingley Brown Coal's current and future operations, and the impact of these on the surrounding ecosystems.

This is an urgent matter for two key reasons:

1. The dirt being piled beside Parwan Creek could contain PFAS, and the creek could contain endangered species (given proximity to confirmed records of these species).
2. Maddingley Brown Coal are currently preparing to receive even larger volumes of PFAS contaminated soil, which could include very high levels of PFAS contamination.

Please let me know if you require further information regarding the above. I will send through photo evidence and a list of other species soon.

We look forward to your response in this matter.

Sincerely,

s47F

Secretary
Moorabool Environment Group

s47F

Taxon ID	Scientific Name	Common Name	Victorian Advisory
13207	<i>Litoria raniformis</i>	Growling Grass Frog	Endangered
501258	<i>Eucalyptus camaldulensis</i>	River Red-gum	
10238	<i>Falco subniger</i>	Black Falcon	Vulnerable
10215	<i>Aythya australis</i>	Hardhead	Vulnerable
504533	<i>Pimelea curviflora</i> var. aff. su	Curved Rice-flower	Poorly known
500330	<i>Atriplex pseudocampanulata</i>	Mealy Saltbush	Rare
5136	<i>Ornithorhynchus anatinus</i>	Platypus	
503984	<i>Austrostipa exilis</i>	Heath Spear-grass	Rare
504823	<i>Pimelea spinescens</i> subsp. sp	Spiny Rice-flower	Endangered
502929	<i>Rhagodia parabolica</i>	Fragrant Saltbush	Rare
10504	<i>Pyrrholaemus sagittatus</i>	Speckled Warbler	Vulnerable
500678	<i>Allocasuarina luehmannii</i>	Buloke	Endangered
504484	<i>Eucalyptus leucoxydon</i> subsp	Melbourne Yellow-gum	Vulnerable
505560	<i>Dianella longifolia</i> var. grand	Flax-lily	Vulnerable
504974	<i>Sclerolaena muricata</i> var. m	Black Roly-poly	Poorly known
10220	<i>Accipiter novaehollandiae</i>	Grey Goshawk	Vulnerable
11280	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable
15021	<i>Synemon plana</i>	Golden Sun Moth	Critically endangered
60555	<i>Climacteris picumnus</i>	Brown Treecreeper	Near threatened
505136	<i>Acacia rostriformis</i>	Bacchus Marsh Wattle	Vulnerable
10652	<i>Stagonopleura guttata</i>	Diamond Firetail	Near threatened
10217	<i>Biziura lobata</i>	Musk Duck	Vulnerable
10212	<i>Spatula rhynchotis</i>	Australasian Shoveler	Vulnerable
10218	<i>Circus assimilis</i>	Spotted Harrier	Near threatened
502275	<i>Nicotiana suaveolens</i>	Austral Tobacco	Rare
903268	<i>Ardea alba</i>	Great Egret	Vulnerable
10334	<i>Hirundapus caudacutus</i>	White-throated Needletail	Vulnerable
501473	<i>Diuris basaltica</i>	Small Golden Moths	Endangered
10309	<i>Lathamus discolor</i>	Swift Parrot	Endangered
10181	<i>Platalea regia</i>	Royal Spoonbill	Near threatened
10192	<i>Nycticorax caledonicus</i>	Nankeen Night-Heron	Near threatened
10216	<i>Oxyura australis</i>	Blue-billed Duck	Endangered
505549	<i>Convolvulus angustissimus</i> s	Slender Bindweed	Poorly known
10168	<i>Gallinago hardwickii</i>	Latham's Snipe	Near threatened
502096	<i>Maireana aphylla</i>	Leafless Bluebush	Poorly known
10099	<i>Phalacrocorax varius</i>	Pied Cormorant	Near threatened
10214	<i>Stictonetta naevosa</i>	Freckled Duck	Endangered
504658	<i>Podolepis linearifolia</i>	Basalt Podolepis	Endangered
10341	<i>Chrysococcyx osculans</i>	Black-eared Cuckoo	Near threatened
11017	<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	Vulnerable
500598	<i>Calotis lappulacea</i>	Yellow Burr-daisy	Rare
5134	<i>Chelodina longicollis</i>	Eastern Snake-necked Turtle	Data deficient
502057	<i>Lotus australis</i> var. australis	Austral Trefoil	Poorly known
505041	<i>Pterostylis conferta</i>	Leprechaun Greenhood	Endangered
501551	<i>Grevillea steiglitziana</i>	Brisbane Range Grevillea	Rare
502522	<i>Pimelea hewardiana</i>	Forked Rice-flower	Rare
10226	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Vulnerable
507308	<i>Acacia aspera</i> subsp. parvice	Rough Wattle	Rare
504425	<i>Desmodium varians</i>	Slender Tick-trefoil	Poorly known

503570	<i>Westringia glabra</i>	Violet Westringia	Rare
10199	<i>Anseranas semipalmata</i>	Maggie Goose	Near threatened
10185	<i>Egretta garzetta</i>	Little Egret	Endangered
501908	<i>Lepidium pseudohyssopifolium</i>	Native Peppercross	Poorly known
10178	<i>Plegadis falcinellus</i>	Glossy Ibis	Near threatened
10170	<i>Rostratula australis</i>	Australian Painted-snipe	Critically endangered
11072	<i>Sminthopsis crassicaudata</i>	Fat-tailed Dunnart	Near threatened
503455	<i>Tripogonella loliiformis</i>	Rye Beetle-grass	Rare
10018	<i>Turnix velox</i>	Little Button-quail	Near threatened
2928	<i>Archaeophylax canarus</i>	Caddisfly	Data deficient
10197	<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered
500593	<i>Calotis anthemoides</i>	Cut-leaf Burr-daisy	
10319	<i>Ceyx azureus</i>	Azure Kingfisher	Near threatened
10110	<i>Chlidonias hybrida</i>	Whiskered Tern	Near threatened
502776	<i>Cullen tenax</i>	Tough Scurf-pea	Endangered
504414	<i>Diuris fragrantissima</i>	Sunshine Diuris	Endangered
502240	<i>Myoporum montanum</i>	Waterbush	Rare
504130	<i>Olearia minor</i>	Satin Daisy-bush	Rare
507820	<i>Paspalidium flavidum</i>	Yellow Watercrown Grass	Endangered
10050	<i>Porzana pusilla</i>	Baillon's Crake	Vulnerable
503940	<i>Pterostylis bicolor</i>	Black-tip Greenhood	Poorly known
502825	<i>Ptilotus erubescens</i>	Hairy Tails	Vulnerable
507580	<i>Eucalyptus baueriana</i> subsp.	Werribee Blue-box	Endangered
502821	<i>Pterostylis truncata</i>	Brittle Greenhood	Endangered
502760	<i>Pseudanthus orbicularis</i>	Tangled Pseudanthus	Rare
10246	<i>Ninox connivens</i>	Barking Owl	Endangered
10419	<i>Oreoica gutturalis</i>	Crested Bellbird	Near threatened
503268	<i>Austrostipa breviglumis</i>	Cane Spear-grass	Rare
10498	<i>Calamanthus pyrrhopygius</i>	Chestnut-rumped Heathwren	Vulnerable
10385	<i>Melanodryas cucullata</i>	Hooded Robin	Near threatened
505096	<i>Alternanthera</i> sp. 1 (Plains)	Plains Joyweed	Poorly known
10248	<i>Ninox strenua</i>	Powerful Owl	Vulnerable
503104	<i>Senecio cunninghamii</i> var. cu	Branching Groundsel	Rare
10112	<i>Hydroprogne caspia</i>	Caspian Tern	Near threatened
502746	<i>Prostanthera nivea</i> var. nive	Snowy Mint-bush	Rare
13117	<i>Pseudophryne bibronii</i>	Brown Toadlet	Endangered
501518	<i>Goodia medicaginea</i>	Western Golden-tip	Rare
505478	<i>Leionema lamprophyllum</i> sub	Shiny Leionema	Rare
10020	<i>Pedionomus torquatus</i>	Plains-wanderer	Critically endangered
500217	<i>Amyema linophylla</i> subsp. o	Buloke Mistletoe	Vulnerable
10001	<i>Dromaius novaehollandiae</i>	Emu	Near threatened
10031	<i>Geopelia cuneata</i>	Diamond Dove	Near threatened
502145	<i>Melaleuca armillaris</i> subsp. s	Giant Honey-myrtle	Rare
15011	<i>Myrmecia</i> sp. 17	Bullant	Vulnerable
504869	<i>Poa amplexicaulis</i>	Red-sheath Tussock-grass	Rare
11280	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable
503615	<i>Roepera billardierei</i>	Coast Twin-leaf	Rare
11061	<i>Sminthopsis murina murina</i>	Common Dunnart	Vulnerable
10176	<i>Ardeotis australis</i>	Australian Bustard	Critically endangered
505214	<i>Boronia anemonifolia</i> subsp.	Goldfield Boronia	Rare

10174	<i>Burhinus grallarius</i>	Bush Stone-curlew	Endangered
10436	<i>Cinclosoma punctatum</i>	Spotted Quail-thrush	Near threatened
501295	<i>Corymbia maculata</i>	Spotted Gum	Vulnerable
10111	<i>Gelochelidon macrotarsa</i>	Australian Gull-billed Tern	Endangered
501456	<i>Glycine latrobeana</i>	Clover Glycine	Vulnerable
501550	<i>Grevillea rosmarinifolia</i>	Rosemary Grevillea	All infraspecific taxa
10045	<i>Lewinia pectoralis</i>	Lewin's Rail	Vulnerable
502129	<i>Marsilea mutica</i>	Smooth Nardoo	Poorly known
504489	<i>Philotheca angustifolia</i> subsp	Narrow-leaf Wax-flower	Vulnerable
10277	<i>Polytelis swainsonii</i>	Superb Parrot	Endangered
10443	<i>Pomatostomus temporalis</i>	Grey-crowned Babbler	Endangered
502682	<i>Poranthera corymbosa</i>	Clustered Poranthera	Rare
502739	<i>Prostanthera decussata</i>	Dense Mint-bush	Rare
10019	<i>Turnix pyrrhothorax</i>	Red-chested Button-quail	Vulnerable
12283	<i>Varanus varius</i>	Lace Monitor	Endangered

Conservation	Discipline	Reference site	Nearest buffer zone s	On site - Count
VU en L	Terrestrial fauna, Ac	MBC (Maddingley Brown Coal)	On site	5
X	Flora	MBC (Maddingley Brown Coal)	1km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	1km	
vu	Terrestrial fauna	MBC (Maddingley Brown Coal)	On site	1
k	Flora	MBC (Maddingley Brown Coal)	1km	
r #	Flora	MBC (Maddingley Brown Coal)	1km	
N	Terrestrial fauna, Ac	MBC (Maddingley Brown Coal)	2km	
r	Flora	MBC (Maddingley Brown Coal)	2km	
CR en L	Flora	MBC (Maddingley Brown Coal)	2km	
r #	Flora	MBC (Maddingley Brown Coal)	2km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	2km	
en L	Flora	MBC (Maddingley Brown Coal)	2km	
vu X	Flora	MBC (Maddingley Brown Coal)	2km	
vu	Flora	MBC (Maddingley Brown Coal)	2km	
k	Flora	MBC (Maddingley Brown Coal)	2km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	2km	
VU vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	2km	
CR cr L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
vu L	Flora	MBC (Maddingley Brown Coal)	5km	
nt L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
vu	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
vu	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
vu L	Terrestrial fauna, Ac	MBC (Maddingley Brown Coal)	5km	
VU vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
EN en L	Flora	MBC (Maddingley Brown Coal)	5km	
CR en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
k	Flora	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
k	Flora	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
en	Flora	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
dd	Aquatic fauna, Terre	MBC (Maddingley Brown Coal)	5km	
k	Flora	MBC (Maddingley Brown Coal)	5km	
en L	Flora	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
k	Flora	MBC (Maddingley Brown Coal)	5km	

r	Flora	MBC (Maddingley Brown Coal)	5km	
nt L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
k	Flora	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
EN cr L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
dd L	Aquatic invertebrate	MBC (Maddingley Brown Coal)	5km	
EN en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
L	Flora	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
en L	Flora	MBC (Maddingley Brown Coal)	5km	
EN en L	Flora	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
r	Flora	MBC (Maddingley Brown Coal)	5km	
en *	Flora	MBC (Maddingley Brown Coal)	5km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	5km	
k	Flora	MBC (Maddingley Brown Coal)	5km	
vu L	Flora	MBC (Maddingley Brown Coal)	5km	
en	Flora	MBC (Maddingley Brown Coal)	10km	
en L	Flora	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
nt L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
nt L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
k	Flora	MBC (Maddingley Brown Coal)	10km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
nt L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r #	Flora	MBC (Maddingley Brown Coal)	10km	
en L	Terrestrial fauna, Aq	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
CR cr L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
vu	Flora	MBC (Maddingley Brown Coal)	10km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
nt L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r #	Flora	MBC (Maddingley Brown Coal)	10km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
VU vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
vu	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
cr L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	

en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
nt	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
vu #	Flora	MBC (Maddingley Brown Coal)	10km	
en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
VU vu L	Flora	MBC (Maddingley Brown Coal)	10km	
P #	Flora	MBC (Maddingley Brown Coal)	10km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
k #	Flora	MBC (Maddingley Brown Coal)	10km	
vu	Flora	MBC (Maddingley Brown Coal)	10km	
VU en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
en L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
r	Flora	MBC (Maddingley Brown Coal)	10km	
vu L	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	
en	Terrestrial fauna	MBC (Maddingley Brown Coal)	10km	

1km - Count	2km - Count	5km - Count	10km - Count	Last Record	Source 1
6	8	13	26	6/12/2018	Victorian Biodiversity Atlas
2	3	19	35	22/03/2018	Victorian Biodiversity Atlas
1	2	21	36	31/03/2019	Victorian Biodiversity Atlas
1	1	10	27	29/10/2015	Victorian Biodiversity Atlas
1	1	2	3	25/11/2001	Victorian Biodiversity Atlas
1	1	2	2	21/12/2016	Victorian Biodiversity Atlas
	6	8	15	24/11/2019	Victorian Biodiversity Atlas
	2	4	18	11/12/2009	Victorian Biodiversity Atlas
	2	3	5	19/06/2003	Victorian Biodiversity Atlas
	1	35	634	13/12/2018	Victorian Biodiversity Atlas
	1	17	190	30/07/2019	Victorian Biodiversity Atlas
	1	12	19	22/03/2018	Victorian Biodiversity Atlas
	1	6	62	7/06/2018	Victorian Biodiversity Atlas
	1	6	6	14/10/2016	Victorian Biodiversity Atlas
	1	2	10	6/02/2018	Victorian Biodiversity Atlas
	1	2	2	19/04/2019	Victorian Biodiversity Atlas
	1	1		1/03/1943	Victorian Biodiversity Atlas
		274	691	7/12/2012	Victorian Biodiversity Atlas
		24	198	12/05/2019	Victorian Biodiversity Atlas
		23	275	17/12/2016	Victorian Biodiversity Atlas
		13	127	12/05/2019	Victorian Biodiversity Atlas
		11	33	21/02/2019	Victorian Biodiversity Atlas
		10	17	21/02/2019	Victorian Biodiversity Atlas
		9	15	8/03/2019	Victorian Biodiversity Atlas
		8	60	7/08/2013	Victorian Biodiversity Atlas
		8	16	27/06/2018	Victorian Biodiversity Atlas
		6	18	22/02/2018	Victorian Biodiversity Atlas
		6	6	7/10/2011	Victorian Biodiversity Atlas
		5	15	18/06/2017	Victorian Biodiversity Atlas
		5	8	30/12/2005	Victorian Biodiversity Atlas
		4	14	30/12/2005	Victorian Biodiversity Atlas
		4	9	21/02/2019	Victorian Biodiversity Atlas
		4	6	12/02/2018	Victorian Biodiversity Atlas
		3	8	6/01/2008	Victorian Biodiversity Atlas
		3	7	22/07/2006	Victorian Biodiversity Atlas
		3	5	11/03/2003	Victorian Biodiversity Atlas
		3	5	28/02/2006	Victorian Biodiversity Atlas
		3	3	28/10/2000	Victorian Biodiversity Atlas
		2	16	24/10/2018	Victorian Biodiversity Atlas
		2	7	5/03/1988	Victorian Biodiversity Atlas
		2	6	30/09/2001	Victorian Biodiversity Atlas
		2	2	12/06/2012	Victorian Biodiversity Atlas
		2	2	5/11/1903	Victorian Biodiversity Atlas
		2	2	8/10/1996	Victorian Biodiversity Atlas
		1	74	14/11/2011	Victorian Biodiversity Atlas
		1	16	7/05/2018	Victorian Biodiversity Atlas
		1	10	16/05/2018	Victorian Biodiversity Atlas
		1	6	14/11/2011	Victorian Biodiversity Atlas
		1	3	12/02/2018	Victorian Biodiversity Atlas

		1	3	1/10/1980	Victorian Biodiversity Atlas
		1	2	27/07/2019	Victorian Biodiversity Atlas
		1	2	29/03/1990	Victorian Biodiversity Atlas
		1	2	25/02/2008	Victorian Biodiversity Atlas
		1	2	28/10/1986	Victorian Biodiversity Atlas
		1	2	18/11/1989	Victorian Biodiversity Atlas
		1	2	4/04/2011	Victorian Biodiversity Atlas
		1	2	27/08/2008	Victorian Biodiversity Atlas
		1	2	4/03/2011	Victorian Biodiversity Atlas
		1	1	25/11/1982	Victorian Biodiversity Atlas
		1	1	1/01/1970	Victorian Biodiversity Atlas
		1	1	17/10/1984	Victorian Biodiversity Atlas
		1	1	17/06/1988	Victorian Biodiversity Atlas
		1	1	25/11/1987	Victorian Biodiversity Atlas
		1	1	1/1/1853	Victorian Biodiversity Atlas
		1	1	01/01/1770	Victorian Biodiversity Atlas
		1	1	01/01/1853	Victorian Biodiversity Atlas
		1	1	21/09/1929	Victorian Biodiversity Atlas
		1	1	4/03/1927	Victorian Biodiversity Atlas
		1	1	25/11/1987	Victorian Biodiversity Atlas
		1	1	19/10/1996	Victorian Biodiversity Atlas
		1	1	17/10/1984	Victorian Biodiversity Atlas
			310	7/05/2018	Victorian Biodiversity Atlas
			81	17/07/2013	Victorian Biodiversity Atlas
			25	14/11/2011	Victorian Biodiversity Atlas
			23	5/10/2002	Victorian Biodiversity Atlas
			19	10/01/2003	Victorian Biodiversity Atlas
			17	7/05/2018	Victorian Biodiversity Atlas
			8	17/09/2018	Victorian Biodiversity Atlas
			8	3/03/1999	Victorian Biodiversity Atlas
			7	6/02/2018	Victorian Biodiversity Atlas
			7	1/06/2011	Victorian Biodiversity Atlas
			6	25/02/2008	Victorian Biodiversity Atlas
			5	25/12/2013	Victorian Biodiversity Atlas
			5	27/09/2011	Victorian Biodiversity Atlas
			5	5/12/1990	Victorian Biodiversity Atlas
			3	19/10/2008	Victorian Biodiversity Atlas
			3	8/08/1991	Victorian Biodiversity Atlas
			3	1/01/1988	Victorian Biodiversity Atlas
			2	19/03/2010	Victorian Biodiversity Atlas
			2	24/03/2017	Victorian Biodiversity Atlas
			2	5/05/1905	Victorian Biodiversity Atlas
			2	7/05/2018	Victorian Biodiversity Atlas
			2	13/06/2009	Victorian Biodiversity Atlas
			2	6/04/2011	Victorian Biodiversity Atlas
			2	1/01/1968	Victorian Biodiversity Atlas
			2	19/10/2008	Victorian Biodiversity Atlas
			2	1/10/1984	Victorian Biodiversity Atlas
			1	31/12/1911	Victorian Biodiversity Atlas
			1	1/01/1917	Victorian Biodiversity Atlas

			1	01/01/1880	Victorian Biodiversity Atlas
			1	21/01/1988	Victorian Biodiversity Atlas
			1	8/11/2010	Victorian Biodiversity Atlas
			1	7/01/1986	Victorian Biodiversity Atlas
			1	6/01/1992	Victorian Biodiversity Atlas
			1	01/08/1850	Victorian Biodiversity Atlas
			1	01/01/1880	Victorian Biodiversity Atlas
			1	22/11/2000	Victorian Biodiversity Atlas
			1	1/01/1987	Victorian Biodiversity Atlas
			1	01/01/1881	Victorian Biodiversity Atlas
			1	01/01/1880	Victorian Biodiversity Atlas
			1	2/10/1977	Victorian Biodiversity Atlas
			1	1/10/1980	Victorian Biodiversity Atlas
			1	12/02/1897	Victorian Biodiversity Atlas
			1	1/01/1968	Victorian Biodiversity Atlas

—

Taxon ID	Scientific Name	Common Name	Victorian Advisory
903268	Ardea alba	Great Egret	Vulnerable
10652	Stagonopleura guttata	Diamond Firetail	Near threatened
502929	Rhagodia parabolica	Fragrant Saltbush	Rare
60555	Climacteris picumnus	Brown Treecreeper	Near threatened
10215	Aythya australis	Hardhead	Vulnerable
502275	Nicotiana suaveolens	Austral Tobacco	Rare
501473	Diuris basaltica	Small Golden Moths	Endangered
4874	Macquaria australasica	Macquarie Perch	Endangered
501258	Eucalyptus camaldulensis	River Red-gum	
500678	Allocasuarina luehmannii	Buloke	Endangered
10226	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable
10216	Oxyura australis	Blue-billed Duck	Endangered
10218	Circus assimilis	Spotted Harrier	Near threatened
10099	Phalacrocorax varius	Pied Cormorant	Near threatened
10181	Platalea regia	Royal Spoonbill	Near threatened
505560	Dianella longifolia var. grand	Flax-lily	Vulnerable
13207	Litoria raniformis	Growling Grass Frog	Endangered
13207	Litoria raniformis	Growling Grass Frog	Endangered
10186	Ardea intermedia plumifera	Plumed Egret	Endangered
10192	Nycticorax caledonicus	Nankeen Night-Heron	Near threatened
10212	Spatula rhynchotis	Australasian Shoveler	Vulnerable
5134	Chelodina longicollis	Eastern Snake-necked Turtle	Data deficient
10334	Hirundapus caudacutus	White-throated Needletail	Vulnerable
10309	Lathamus discolor	Swift Parrot	Endangered
10246	Ninox connivens	Barking Owl	Endangered
10248	Ninox strenua	Powerful Owl	Vulnerable
5136	Ornithorhynchus anatinus	Platypus	
11017	Phascogale tapoatafa	Brush-tailed Phascogale	Vulnerable
505041	Pterostylis conferta	Leprechaun Greenhood	Endangered
503455	Tripogonella loliiformis	Rye Beetle-grass	Rare
10214	Stictonetta naevosa	Freckled Duck	Endangered
10385	Melanodryas cucullata	Hooded Robin	Near threatened
503984	Austrostipa exilis	Heath Spear-grass	Rare
10018	Turnix velox	Little Button-quail	Near threatened
505136	Acacia rostriformis	Bacchus Marsh Wattle	Vulnerable
505096	Alternanthera sp. 1 (Plains)	Plains Joyweed	Poorly known
10174	Burhinus grallarius	Bush Stone-curlew	Endangered
10319	Ceyx azureus	Azure Kingfisher	Near threatened
10341	Chrysococcyx osculans	Black-eared Cuckoo	Near threatened
507580	Eucalyptus baueriana subsp.	Werribee Blue-box	Endangered
10045	Lewinia pectoralis	Lewin's Rail	Vulnerable
10419	Oreoica gutturalis	Crested Bellbird	Near threatened
10020	Pedionomus torquatus	Plains-wanderer	Critically endangered
10178	Plegadis falcinellus	Glossy Ibis	Near threatened
10443	Pomatostomus temporalis	Grey-crowned Babbler	Endangered
503940	Pterostylis bicolor	Black-tip Greenhood	Poorly known
10504	Pyrrholaemus sagittatus	Speckled Warbler	Vulnerable
10217	Biziura lobata	Musk Duck	Vulnerable
15021	Synemon plana	Golden Sun Moth	Critically endangered

Conservation	Discipline	Reference site	Nearest by	1km - Cou	2km - Cou
vu L	Terrestrial fauna, Ac	Melton Reservoir	1km	14	16
nt L	Terrestrial fauna	Melton Reservoir	1km	11	20
r #	Flora	Melton Reservoir	1km	11	17
nt	Terrestrial fauna	Melton Reservoir	1km	9	16
vu	Terrestrial fauna	Melton Reservoir	1km	6	30
r	Flora	Melton Reservoir	1km	6	7
EN en L	Flora	Melton Reservoir	1km	6	6
EN en L	Aquatic fauna, Aquat	Melton Reservoir	1km	6	6
X	Flora	Melton Reservoir	1km	5	13
en L	Flora	Melton Reservoir	1km	5	12
vu L	Terrestrial fauna	Melton Reservoir	1km	5	12
en L	Terrestrial fauna	Melton Reservoir	1km	4	21
nt	Terrestrial fauna	Melton Reservoir	1km	4	5
nt	Terrestrial fauna	Melton Reservoir	1km	3	8
nt	Terrestrial fauna	Melton Reservoir	1km	3	5
vu	Flora	Melton Reservoir	1km	3	4
VU en L	Terrestrial fauna, Ac	Melton Reservoir	1km	3	4
VU en L	Terrestrial fauna, Ac	Melton Reservoir	1km	3	4
en L	Terrestrial fauna	Melton Reservoir	1km	3	3
nt	Terrestrial fauna	Melton Reservoir	1km	3	3
vu	Terrestrial fauna	Melton Reservoir	1km	2	26
dd	Aquatic fauna, Terre	Melton Reservoir	1km	2	3
VU vu L	Terrestrial fauna	Melton Reservoir	1km	2	2
CR en L	Terrestrial fauna	Melton Reservoir	1km	2	2
en L	Terrestrial fauna	Melton Reservoir	1km	2	2
vu L	Terrestrial fauna	Melton Reservoir	1km	2	2
N	Terrestrial fauna, Aqu	Melton Reservoir	1km	2	2
vu L	Terrestrial fauna	Melton Reservoir	1km	2	2
en L	Flora	Melton Reservoir	1km	2	2
r	Flora	Melton Reservoir	1km	2	2
en L	Terrestrial fauna	Melton Reservoir	1km	1	6
nt L	Terrestrial fauna	Melton Reservoir	1km	1	3
r	Flora	Melton Reservoir	1km	1	2
nt	Terrestrial fauna	Melton Reservoir	1km	1	2
vu L	Flora	Melton Reservoir	1km	1	1
k	Flora	Melton Reservoir	1km	1	1
en L	Terrestrial fauna	Melton Reservoir	1km	1	1
nt	Terrestrial fauna	Melton Reservoir	1km	1	1
nt	Terrestrial fauna	Melton Reservoir	1km	1	1
en	Flora	Melton Reservoir	1km	1	1
vu L	Terrestrial fauna	Melton Reservoir	1km	1	1
nt L	Terrestrial fauna	Melton Reservoir	1km	1	1
CR cr L	Terrestrial fauna	Melton Reservoir	1km	1	1
nt	Terrestrial fauna	Melton Reservoir	1km	1	1
en L	Terrestrial fauna	Melton Reservoir	1km	1	1
k	Flora	Melton Reservoir	1km	1	1
vu L	Terrestrial fauna	Melton Reservoir	1km	1	1
vu	Terrestrial fauna	Melton Reservoir	2km		24
CR cr L	Terrestrial fauna	Melton Reservoir	2km		13

Last Record	Source 1
27/06/2018	Victorian Biodiversity Atlas
25/05/2013	Victorian Biodiversity Atlas
3/11/2016	Victorian Biodiversity Atlas
25/05/2013	Victorian Biodiversity Atlas
17/02/2019	Victorian Biodiversity Atlas
1/12/2011	Victorian Biodiversity Atlas
7/10/2011	Victorian Biodiversity Atlas
1/11/1926	Victorian Biodiversity Atlas
29/05/2018	Victorian Biodiversity Atlas
2/12/2009	Victorian Biodiversity Atlas
19/11/2017	Victorian Biodiversity Atlas
10/02/2019	Victorian Biodiversity Atlas
12/04/2015	Victorian Biodiversity Atlas
17/02/2019	Victorian Biodiversity Atlas
28/02/2006	Victorian Biodiversity Atlas
14/10/2016	Victorian Biodiversity Atlas
24/11/2011	Victorian Biodiversity Atlas
24/11/2011	Victorian Biodiversity Atlas
1/01/1980	Victorian Biodiversity Atlas
6/02/1988	Victorian Biodiversity Atlas
17/02/2019	Victorian Biodiversity Atlas
12/06/2012	Victorian Biodiversity Atlas
1/05/1971	Victorian Biodiversity Atlas
1/05/1971	Victorian Biodiversity Atlas
1/05/1971	Victorian Biodiversity Atlas
29/07/1972	Victorian Biodiversity Atlas
9/05/2006	Victorian Biodiversity Atlas
1/11/1984	Victorian Biodiversity Atlas
8/10/1996	Victorian Biodiversity Atlas
27/08/2008	Victorian Biodiversity Atlas
20/05/2018	Victorian Biodiversity Atlas
3/03/1999	Victorian Biodiversity Atlas
26/10/2006	Victorian Biodiversity Atlas
4/03/2011	Victorian Biodiversity Atlas
21/02/2007	Victorian Biodiversity Atlas
1/12/2009	Victorian Biodiversity Atlas
01/01/1880	Victorian Biodiversity Atlas
17/06/1988	Victorian Biodiversity Atlas
01/01/1880	Victorian Biodiversity Atlas
25/03/2005	Victorian Biodiversity Atlas
01/01/1880	Victorian Biodiversity Atlas
1/05/1971	Victorian Biodiversity Atlas
01/01/1880	Victorian Biodiversity Atlas
1/10/1986	Victorian Biodiversity Atlas
01/01/1880	Victorian Biodiversity Atlas
19/10/1996	Victorian Biodiversity Atlas
13/06/2007	Victorian Biodiversity Atlas
18/11/2018	Victorian Biodiversity Atlas
8/01/2014	Victorian Biodiversity Atlas

Key**Red font = Observed in last 2 years****Dark orange font = Observed in last 5 years****Light orange font = Observed in last 10 years****Site****Other name/s**Maddingley Brown Coal (MBC), incl. part of Parwan
Creek inside MBC boundary

Maddingley Soil Processing Facility

Parwan Creek - downstream of MBC

N/A

Melton Reservoir

Werribee River (Melton Reservoir section)

Location	How site boundaries entered into VBA
11 Tilley's Road, Maddingley	Polygon
From edge of MBC site to confluence with Werribee River	Line
From Parwan Creek confluence to Geigs Road, Exford	Line

Details

Brown coal mine and landfill site; Accepts and reuses Category C contaminated waste; Uses leachate to spray soil; Channels stormwater into Parwan Creek; Evidence of pollution of Parwan Creek, especially relating to hard waste; High dust volumes emitted into surrounding air.

This only includes section of Parwan Creek downstream of MBC site.

High ecological and human value. Used for crop irrigation, fishing, recreational boating, etc.

From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Subject: Re: Maddingley Brown Coal - Urgent compliance concern re EPBC Act
Date: Wednesday, 11 March 2020 4:09:27 PM
Attachments: [Species affected by activities of Maddingley Brown Coal_10Mar2020.xlsx](#)

Dear Compliance Team,

Following on from my previous email re (probable) non-compliance of Maddingley Brown Coal actions with EPBC Act, please find below / attached:

- Excel file containing details of **listed species in areas affected by Maddingley Brown Coal's actions**, extracted from Victorian Biodiversity Atlas (Excel file attached), and from report regarding Growling Grass frogs on MBC site.

- **List of endangered, vulnerable, rare and threatened species found within 5km** (and closer) of the site, **within the past 5 years**.

I will also send photos of Maddingley Brown Coal's actions, and environmental damage, shortly (I am currently preparing them).

Please note that I have not yet extracted species sightings from Atlas of Living Australia or other databases, so there are likely to be other relevant observations not listed (as the VBA is often not comprehensive).

Endangered, vulnerable, rare and threatened species found within 5km (and closer) of the site, within the past 5 years (see attached for further details)...

ON SITE

Endangered:

- *Litoria raniformis* (Growling Grass Frog); latest obs. 6/12/2018

Vulnerable:

- *Aythya australis* (Hardhead); latest obs. 29/10/2015

WITHIN 1KM

Vulnerable:

- *Falco subniger* (Black Falcon); latest obs. 31/03/2019

Rare:

- *Atriplex pseudocampanulata* (Mealy Saltbush); latest obs. 21/12/2016

WITHIN 2KM

Endangered:

- *Allocasuarina luehmannii* (Buloke); latest obs. 22/03/2018

Vulnerable:

- *Accipiter novaehollandiae* (Grey Goshawk); latest obs. 19/04/2019

- *Pyrrholaemus sagittatus* (Speckled Warbler); latest obs. 30/07/2019

- *Dianella longifolia* var. *grandis* (Flax-lily); latest obs. 14/10/2016

- *Eucalyptus leucoxylon* subsp. *connata* (Melbourne Yellow-gum); latest obs. 7/06/2018

Rare:

- *Rhagodia parabolica* (Fragrant Saltbush); latest obs. 13/12/2018

Near threatened:

- *Ornithorhynchus anatinus* (Platypus); latest obs. 24/11/2019

WITHIN 5KM

Endangered:

- *Lathamus discolor* (Swift Parrot); latest obs. 18/06/2017

- Oxyura australis (Blue-billed Duck); latest obs. 21/02/2019

Vulnerable:

- Ardea alba (Great Egret); latest obs. 27/06/2018
- Biziura lobata (Musk Duck); latest obs. 21/02/2019
- Haliaeetus leucogaster (White-bellied Sea-Eagle); latest obs. 16/05/2018
- Hirundapus caudacutus (White-throated Needletail); latest obs. 22/02/2018
- Spatula rhynchotis (Australasian Shoveler); latest obs. 21/02/2019
- Acacia rostriformis (Bacchus Marsh Wattle); latest obs. 17/12/2016

Rare:

- Pimelea hewardiana (Forked Rice-flower); latest obs. 7/05/2018

Near threatened:

- Anseranas semipalmata (Magpie Goose); latest obs. 27/07/2019
- Chrysococcyx osculans (Black-eared Cuckoo); latest obs. 24/10/2018
- Circus assimilis (Spotted Harrier); latest obs. 8/03/2019
- Climacteris picumnus (Brown Treecreeper); latest obs. 12/05/2019
- Stagonopleura guttata (Diamond Firetail); latest obs. 12/05/2019

Sincerely,

s47F

Secretary
Moorabool Environment Group

Email: s47F
Phone: s47F

On Tue, Mar 10, 2020 at 5:08 PM MEG Moorabool Environment Group

s47F wrote:

Dear Compliance Team,

Thank you for our recent phone conversation.

We are writing to notify of a possible compliance issue regarding **Maddingley Brown Coal, 11 Tilleys Road, Maddingley 3340**. (Located within Moorabool Shire Council).

Maddingley Brown Coal operate a commercial landfill operation at an old brown coal mine site. We believe there has never been any assessment of this site in relation to the EBPC Act, even though there are endangered species and other native fauna and flora on the site, and affected by the site.

Species and sensitive areas in and near the site:

- There are confirmed records of an endangered species, Litoria raniformis (Growling Grass Frog) found on and near the Maddingley Brown Coal site.
- There are also other native species of plants and animals both on the Maddingley Brown Coal site and in areas affected by the site. These include Platypus and Rakali. Soon I will send through a list of additional native flora and fauna found near the Maddingley Brown Coal site.
- To our knowledge, a full assessment of other species on the full site or affected by the site has never been undertaken. A survey for Litoria raniformis was undertaken in relation to a small part of the site – Little

Lucifer Dam (see attached).

- There are other waterways and dams on the site which we believe have not been assessed.
- Parwan Creek runs through the site, and then into the Werribee River / Melton Reservoir. The site is part of the Werribee River catchment.
- Werribee River is approx. 1.4km from the site. Confluence of Parwan Creek with the Werribee River is approx. 2.8km from the site. Although Parwan Creek has sometimes been in summer, it currently contains water.
- The Werribee River contains Platypus and Rakali, in addition to other native fauna and flora. This includes sections of the Werribee River that could be affected by Maddingley Brown Coal's activities.
- The affected sections of the Werribee River are used to irrigate vegetable and fruit crops for human consumption.
- There is an environmental overlay over part of the site (ESO-2, Moorabool Shire Council).
- The site also contains areas of Aboriginal Cultural / Heritage Significance.

Activities carried out on the site which could have an impact on the environment:

- The company stores and re-uses industrial waste, including Category C contaminated waste. This waste includes contaminated soil, shredder floc, industrial hard waste and waste containing small amounts of PFAS.
- The company is currently piling soil immediately next to Parwan Creek, between Parwan Creek and Cummings Road. This is possibly Category C contaminated soil, but we are unsure. I have attached a distant image of this, but will send through a clearer image later.
- The company channels stormwater from the site into Parwan Creek (see image attached).

Evidence of current environmental impact from activities on the site:

- Hard waste from the site is currently polluting Parwan Creek (photos to follow). When it rains this waste is pushed further downstream, toward the Werribee River.
- The site has a long history of emitting dust into the environment, from their soil-related operations (photos to follow).
- Materials and stormwater from the site could contain PFAS and heavy metal contamination, however we have been unable to get independent testing results on this at this stage.
- There are no sediment barriers or other precautions being used to stop soil that is being piled beside Parwan Creek from entering the creek.

We are very concerned about the impact of current Maddingley Brown Coal operations on fauna and flora, and the surrounding environment. Their activities and location seem to be of relevance to the EPBC Act, however to our knowledge none of their planning permits or other permissions have been referred for assessment relating to the EPBC Act. We believe this may constitute a breach of the Act.

Maddingley Brown Coal's request to receive large volumes of PFAS contaminated soil:

- Maddingley Brown Coal have also submitted a request to the Victorian Planning Minister to intervene in and amend their current Planning Permit, to allow them to receive and re-used PFAS contaminated soil from the Westgate Tunnel Project. They are in the tender process with Transurban, and this Thursday will submit a formal tender to receive this soil.
- Level of toxicity of the soil could range from Category A to Category C (extreme contamination to low contamination). Soil will be tested at the Maddingley Brown Coal site, and will be stored open for 21 days until test results are known. Any Category A or C soil will then be separated and removed from the site – however it will have been stored in the open for 21 days until then. This information comes directly from Maddingley Brown Coal, via a stakeholder briefing they were required by Transurban to hold with Stakeholders.
- It appears that Maddingley Brown Coal may be already undertaking works in preparation to receive this contaminated soil, however we cannot confirm this.

PFAS is extremely soluble in water, and moves easily and long distances in waterways. It bioaccumulates in systems, especially aquatic systems. Even small levels of PFAS can result in high contamination when it enters waterways, especially when large volumes of PFAS contaminated materials are being dealt with.

We are therefore very concerned about Maddingley Brown Coal's current and future operations, and the impact of these on the surrounding ecosystems.

This is an urgent matter for two key reasons:

1. The dirt being piled beside Parwan Creek could contain PFAS, and the creek could contain endangered species (given proximity to confirmed records of these species).
2. Maddingley Brown Coal are currently preparing to receive even larger volumes of PFAS contaminated soil, which could include very high levels of PFAS contamination.

Please let me know if you require further information regarding the above. I will send through photo evidence and a list of other species soon.

We look forward to your response in this matter.

Sincerely,

s47F

Secretary
Moorabool Environment Group

Email: s47F
Phone: s47F

**PHOTO EVIDENCE OF ACTIONS UNDERTAKEN AND ENVIRONMENTAL EFFECTS CAUSED BY
MADDINGLEY BROWN COAL (MBC)**

Compiled 12th March 2020

Actions undertaken by Maddingley Brown Coal (MBC):

- MBC is both a **mining and an industrial landfill** operation, and the site encompasses waterways.
- MBC accepts, landfills and processes **industrial waste**, including **Category C contaminated waste**.
- MBC also extract remaining **brown coal** from the mine, and reuse it for various products.
- They use leachate from their operations to attempt to suppress dust from the soil, even though the EPA (Vic) has advised against use of leachate for this purpose. However, often they do not use any dust suppression methods.
- **Parwan Creek runs through the Maddingley Brown coal site**. MBC is currently undertaking actions (piling of waste soil) approx. 1m to 2m from Parwan Creek (immediately beside the creek) with no buffer zones or protective measures in place. MBC's other large-scale operations are located approx. 30m to 40m from Parwan Creek, in some cases closer.
- Places of **Aboriginal Heritage Significance** are also located within the site and adjacent to the site, especially along Parwan Creek.

Photos of MBC actions are below. **Full-sized images and further photos can be accessed under relevant folders at:**
https://drive.google.com/open?id=1FP92GT5n_HK4Pc5xyO3scrklEwJWf4Ix

Please note all photos were taken from public land.



Parwan Creek



Parwan Creek

Parwan Creek



Soil is being piled directly beside Parwan Creek by MBC. Soil contains bits of hard waste, which looks like construction waste. We are unsure whether this is contaminated soil.

Parwan Creek currently contains water, and Growling Grass frogs have been found in Parwan Creek and a dam 200m from Parwan Creek.

This area is also used by a wide variety of species, including migratory birds and threatened species.

Parwan Creek



Observable environmental impact of MBC's actions:

Directly observable environmental impact of MBC's actions include:

- Pollution of Parwan Creek with industrial hard waste (e.g. construction waste). It is possible this waste could be contaminated with PFAS and/or heavy metals, given MBC accept and process materials contaminated with these (at Category C level). The hard waste poses a risk to wildlife, including threatened species and migratory birds, through potential entanglement, ingestion, suffocation, leaching of any contaminants into the water, and other risks.
- Pollution of surrounding air, environment and properties with high levels of dust, which again may be contaminated with PFAS or heavy metals, given MBC process soil containing these contaminants.
- Pollution of surrounding air and environment with smoke from fires within the site.
- Piping stormwater from the site toward the banks of Parwan Creek.
- There are likely to be other less easily observable effects on the environment and surrounding ecosystems (e.g. toxins leaching into the creek, which are not easily or adequately measured, and impacts on migratory birds). There are threatened and endangered species present both on site, and within close proximity, including migratory birds. However potential impact of MBC's actions on these species has never been fully assessed.

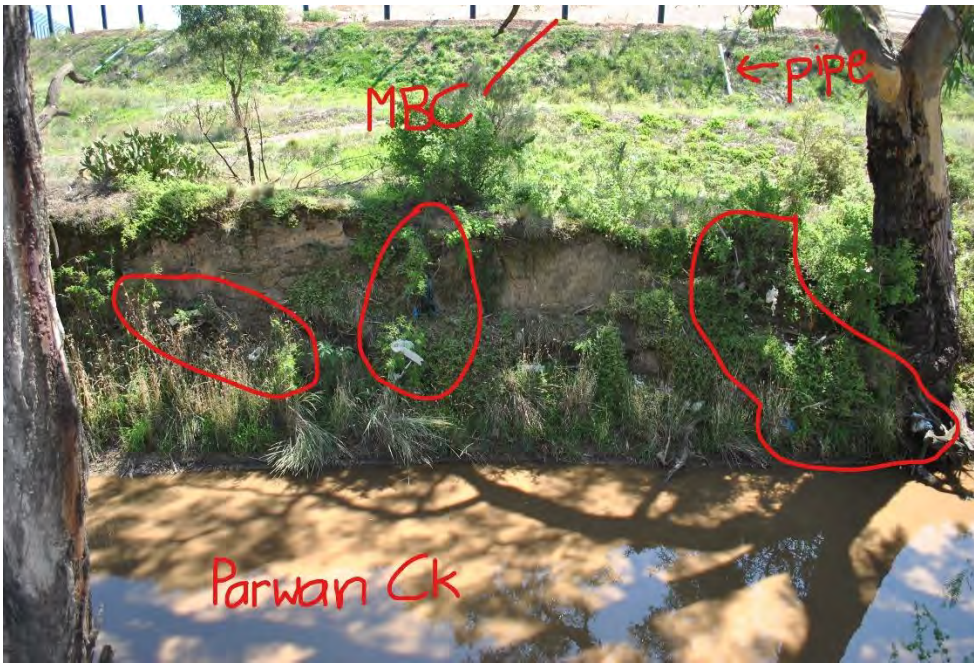
Photos of MBC actions causing negative environmental impact are below. Full-sized images and further photos can be accessed under relevant folders at: https://drive.google.com/open?id=1FP92GT5n_HK4Pc5xyO3scrklEwJWf4Ix

1/ Construction waste emitted from MBC, strewn along banks of Parwan Creek, and in the creek itself. Some waste has been washed further downstream by recent rains.





Parwan Creek



Parwan Creek



2/ Dust emitted from MBC. Includes brown dust and black dust. As MBC receives Category C contaminated soil, the dust may contain particles of PFAS and/or heavy metals.



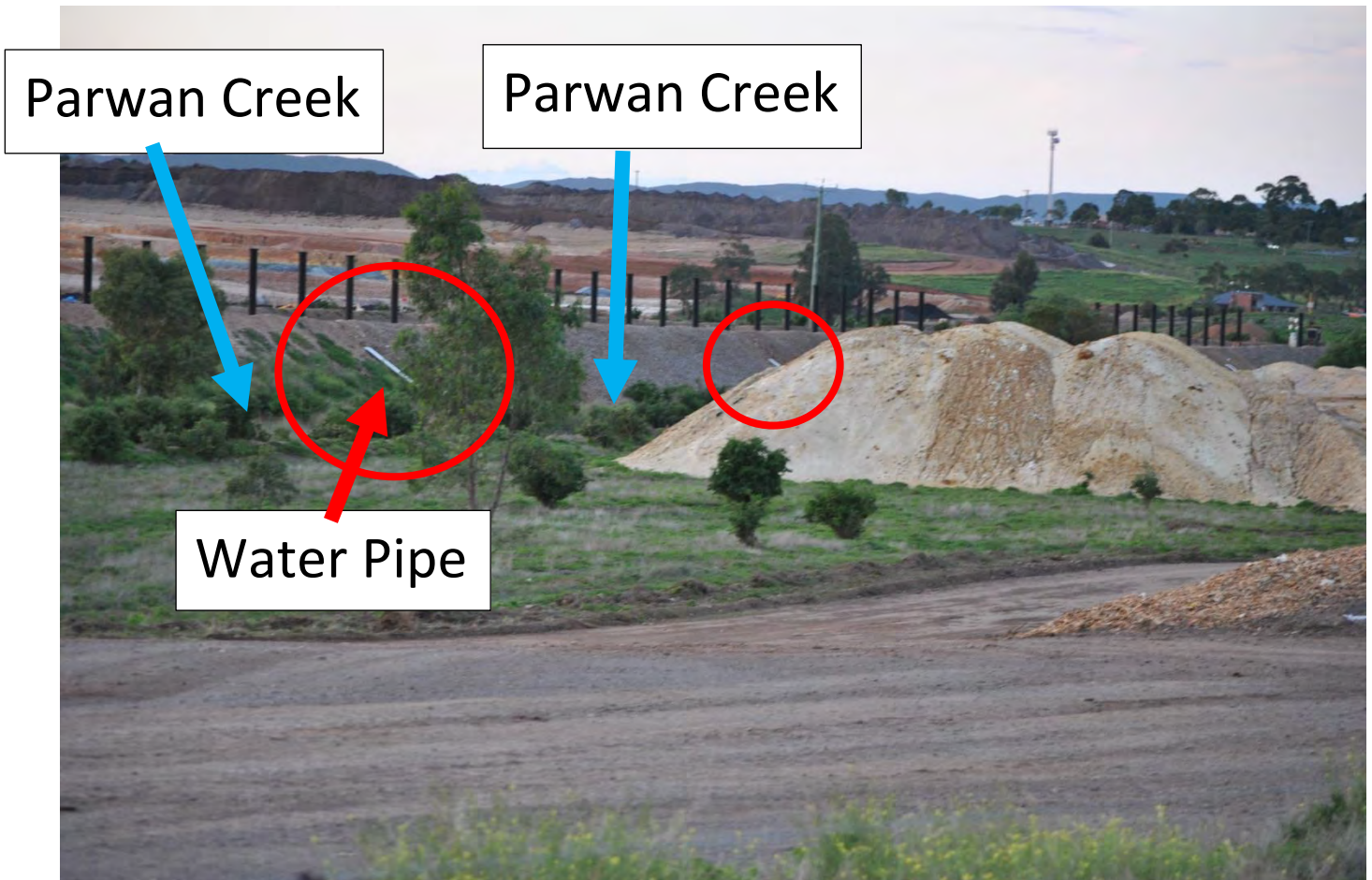


3/ Smoke emitted from MBC site, causing smoke haze throughout surrounding area:



Parwan Creek

4/ Pipes channelling stormwater etc. toward Parwan Creek:



Parwan Creek

Parwan Creek

Water Pipe

From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Subject: Re: Maddingley Brown Coal - Urgent compliance concern re EPBC Act
Date: Tuesday, 17 March 2020 3:15:29 PM
Attachments: [MBC_New activities & new areas since 2000_16Mar2020.pdf](#)

Dear EPBC compliance team,

As requested, please find attached details of Maddingley Brown Coal's expanded area and activities since the year 2000.

Since 2000, Maddingley Brown Coal have expanded their area of operation by more than half, including areas previous unused (or used for farming etc.). They have also engaged in some new actions / activities, which could have significant impact on matters of national environmental significance.

There may be additional actions not on the list, as some of the information available on Maddingley Brown Coal's planning permit applications etc. is incomplete.

The EPA have raised concerns about contaminated leachate coming from both new (post-2000) and old operations into Parwan Creek and underlying aquifers, but they do not seem to have taken any clear action regarding this.

If you need the EPA CARMS number for looking up audits of some areas of Maddingley Brown Coal is: 64662

But please be aware that around half of the area currently being used by Maddingley Brown Coal was NOT part of the old coal mine, and some of the areas used are not covered in EPA reports.

I can assure the investigation team that if they look into Maddingley Brown Coal well (beyond the surface documentation), they will find some very serious issues relevant to the Act. Maddingley Brown Coal have been very good at trying to hide their 'true' activities, and the environmental impacts, even filing their EPA audit reports under incorrect municipalities.

Please let me know if you require further information. I am finding out as much as I can, and will send you anything additional I find. I hope what I have now sent will be enough to triage the case for investigation.

Many thanks,

s47F

Secretary
Moorabool Environment Group

Email: s47F
Phone: s47F

On Thu, Mar 12, 2020 at 2:31 PM MEG Moorabool Environment Group

s47F wrote:

Dear EPBC Compliance team,

Following on from my two previous emails, please find attached photos of Maddingley Brown Coal's activities, and observable impact on a waterway that is habitat for endangered and threatened species, used by migratory birds, a place of Aboriginal Heritage significance, a catchment for water used to irrigate food for human consumption, part of the catchment for a Ramsar listed Wetland (at the mouth of the Werribee River).

The site contains PFAS, and given PFAS can travel very long distances in waterways and bioaccumulate, this is of serious, urgent concern.

We urge for this issue to be passed on to the relevant Compliance assessment team, as a matter of urgency.

We will be collating the information we have sent to you into a formal document, which will also be used to raise awareness of this issue with relevant Federal and State Ministers and departments.

We believe we have provided you with enough information to triage this formal complaint, however we will also send through any additional information.

Please let me know if you need any clarification or require further information.

Sincerely,

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On Wed, Mar 11, 2020 at 4:09 PM MEG Moorabool Environment Group

s47F wrote:

Dear Compliance Team,

Following on from my previous email re (probable) non-compliance of Maddingley Brown Coal actions with EPBC Act, please find below / attached:

- Excel file containing details of **listed species in areas affected by Maddingley Brown Coal's actions**, extracted from Victorian Biodiversity Atlas (Excel file attached), and from report regarding Growling Grass frogs on MBC site.
- **List of endangered, vulnerable, rare and threatened species found within 5km** (and closer) of the site, **within the past 5 years**.

I will also send photos of Maddingley Brown Coal's actions, and environmental damage, shortly (I am currently preparing them).

Please note that I have not yet extracted species sightings from Atlas of Living Australia or other databases, so there are likely to be other relevant observations not

listed (as the VBA is often not comprehensive).

Endangered, vulnerable, rare and threatened species found within 5km (and closer) of the site, within the past 5 years (see attached for further details)...

ON SITE

Endangered:

- *Litoria raniformis* (Growling Grass Frog); latest obs. 6/12/2018

Vulnerable:

- *Aythya australis* (Hardhead); latest obs. 29/10/2015

WITHIN 1KM

Vulnerable:

- *Falco subniger* (Black Falcon); latest obs. 31/03/2019

Rare:

- *Atriplex pseudocampanulata* (Mealy Saltbush); latest obs. 21/12/2016

WITHIN 2KM

Endangered:

- *Allocasuarina luehmannii* (Buloke); latest obs. 22/03/2018

Vulnerable:

- *Accipiter novaehollandiae* (Grey Goshawk); latest obs. 19/04/2019

- *Pyrrholaemus sagittatus* (Speckled Warbler); latest obs. 30/07/2019

- *Dianella longifolia* var. *grandis* (Flax-lily); latest obs. 14/10/2016

- *Eucalyptus leucoxylon* subsp. *connata* (Melbourne Yellow-gum); latest obs. 7/06/2018

Rare:

- *Rhagodia parabolica* (Fragrant Saltbush); latest obs. 13/12/2018

Near threatened:

- *Ornithorhynchus anatinus* (Platypus); latest obs. 24/11/2019

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Endangered:

- *Lathamus discolor* (Swift Parrot); latest obs. 18/06/2017

- *Oxyura australis* (Blue-billed Duck); latest obs. 21/02/2019

Vulnerable:

- *Ardea alba* (Great Egret); latest obs. 27/06/2018

- *Biziura lobata* (Musk Duck); latest obs. 21/02/2019

- *Haliaeetus leucogaster* (White-bellied Sea-Eagle); latest obs. 16/05/2018

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- *Climacteris picumnus* (Brown Tree-creeper); latest obs. 12/05/2019

- *Stagonopleura guttata* (Diamond Fire-tail); latest obs. 12/05/2019

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On Tue, Mar 10, 2020 at 5:08 PM MEG Moorabool Environment Group
s47F wrote:

Dear Compliance Team,

Thank you for our recent phone conversation.

We are writing to notify of a possible compliance issue regarding
Maddingley Brown Coal, 11 Tilleys Road, Maddingley 3340. (Located within Moorabool Shire Council).

Maddingley Brown Coal operate a commercial landfill operation at an old brown coal mine site. We believe there has never been any assessment of this site in relation to the EBPC Act, even though there are endangered species and other native fauna and flora on the site, and affected by the site.

Species and sensitive areas in and near the site:

- There are confirmed records of an endangered species, *Litoria raniformis* (Growling Grass Frog) found on and near the Maddingley Brown Coal site.
- There are also other native species of plants and animals both on the Maddingley Brown Coal site and in areas affected by the site. These include Platypus and Rakali. Soon I will send through a list of additional native flora and fauna found near the Maddingley Brown Coal site.
- To our knowledge, a full assessment of other species on the full site or affected by the site has never been undertaken. A survey for *Litoria raniformis* was undertaken in relation to a small part of the site – Little Lucifer Dam (see attached).
- There are other waterways and dams on the site which we believe have not been assessed.
- Parwan Creek runs through the site, and then into the Werribee River / Melton Reservoir. The site is part of the Werribee River catchment.
- Werribee River is approx. 1.4km from the site. Confluence of Parwan Creek with the Werribee River is approx. 2.8km from the site. Although Parwan Creek has sometimes been in summer, it currently contains water.
- The Werribee River contains Platypus and Rakali, in addition to other native fauna and flora. This includes sections of the Werribee River that could be affected by Maddingley Brown Coal's activities.
- The affected sections of the Werribee River are used to irrigate vegetable and fruit crops for human consumption.
- There is an environmental overlay over part of the site (ESO-2, Moorabool Shire Council).
- The site also contains areas of Aboriginal Cultural / Heritage Significance.

Activities carried out on the site which could have an impact on the environment:

- The company stores and re-uses industrial waste, including Category C contaminated waste. This waste includes contaminated soil, shredder floc, industrial hard waste and waste containing small amounts of PFAS.
- The company is currently piling soil immediately next to Parwan Creek, between Parwan Creek and Cummings Road. This is possibly Category C contaminated soil, but we are unsure. I have attached a distant image of this, but will send through a clearer image later.
- The company channels stormwater from the site into Parwan Creek (see image attached).

Evidence of current environmental impact from activities on the site:

- Hard waste from the site is currently polluting Parwan Creek (photos to follow). When it rains this waste is pushed further downstream, toward the Werribee River.
- The site has a long history of emitting dust into the environment, from their soil-related operations (photos to follow).
- Materials and stormwater from the site could contain PFAS and heavy metal contamination, however we have been unable to get independent testing results on this at this stage.
- There are no sediment barriers or other precautions being used to stop soil that is being piled beside Parwan Creek from entering the creek.

We are very concerned about the impact of current Maddingley Brown Coal operations on fauna and flora, and the surrounding environment. Their activities and location seem to be of relevance to the EPBC Act, however to our knowledge none of their planning permits or other permissions have been referred for assessment relating to the EPBC Act. We believe this may constitute a breach of the Act.

Maddingley Brown Coal's request to receive large volumes of PFAS contaminated soil:

- Maddingley Brown Coal have also submitted a request to the Victorian Planning Minister to intervene in and amend their current Planning Permit, to allow them to receive and re-used PFAS contaminated soil from the Westgate Tunnel Project. They are in the tender process with Transurban, and this Thursday will submit a formal tender to receive this soil.
- Level of toxicity of the soil could range from Category A to Category C (extreme contamination to low contamination). Soil will be tested at the Maddingley Brown Coal site, and will be stored open for 21 days until test results are known. Any Category A or C soil will then be separated and removed from the site – however it will have been stored in the open for 21 days until then. This information comes directly from Maddingley Brown Coal, via a stakeholder briefing they were required by Transurban to hold with Stakeholders.
- It appears that Maddingley Brown Coal may be already undertaking

works in preparation to receive this contaminated soil, however we cannot confirm this.

PFAS is extremely soluble in water, and moves easily and long distances in waterways. It bioaccumulates in systems, especially aquatic systems. Even small levels of PFAS can result in high contamination when it enters waterways, especially when large volumes of PFAS contaminated materials are being dealt with.

We are therefore very concerned about Maddingley Brown Coal's current and future operations, and the impact of these on the surrounding ecosystems.

This is an urgent matter for two key reasons:

1. The dirt being piled beside Parwan Creek could contain PFAS, and the creek could contain endangered species (given proximity to confirmed records of these species).
2. Maddingley Brown Coal are currently preparing to receive even larger volumes of PFAS contaminated soil, which could include very high levels of PFAS contamination.

Please let me know if you require further information regarding the above. I will send through photo evidence and a list of other species soon.

We look forward to your response in this matter.

Sincerely,

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Secretary
Moorabool Environment Group

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Changes in type of activity and extension of area of activity by Maddingley Brown Coal since 2000

(Compiled by Moorabool Environment Group, 16th March 2020, based on information we can access; 3 pages)

As described further below, since 2000, Maddingley Brown Coal has (1) undertaken new actions and (2) more than **doubled** their area of operation. Figure 1 presents Google Earth satellite imagery from 2002 and 2018, showing sizable increase in areas of operation. Figure 2 highlights the most relevant areas, and brief details of each area are outlined in Table 1 (colours used in Figure 2 correspond to those in Table 1).

Two areas in which new works were undertaken had vulnerable species recorded directly on that area (in a waterbody) before works began. These were *Litoria raniformis* (Growling Grass Frog) in Star Dam [area outlined in yellow, Figure 2] and *Aythya australis* (Hardhead Duck) in small waterbody / dam in area outlined in purple (Figure 2).

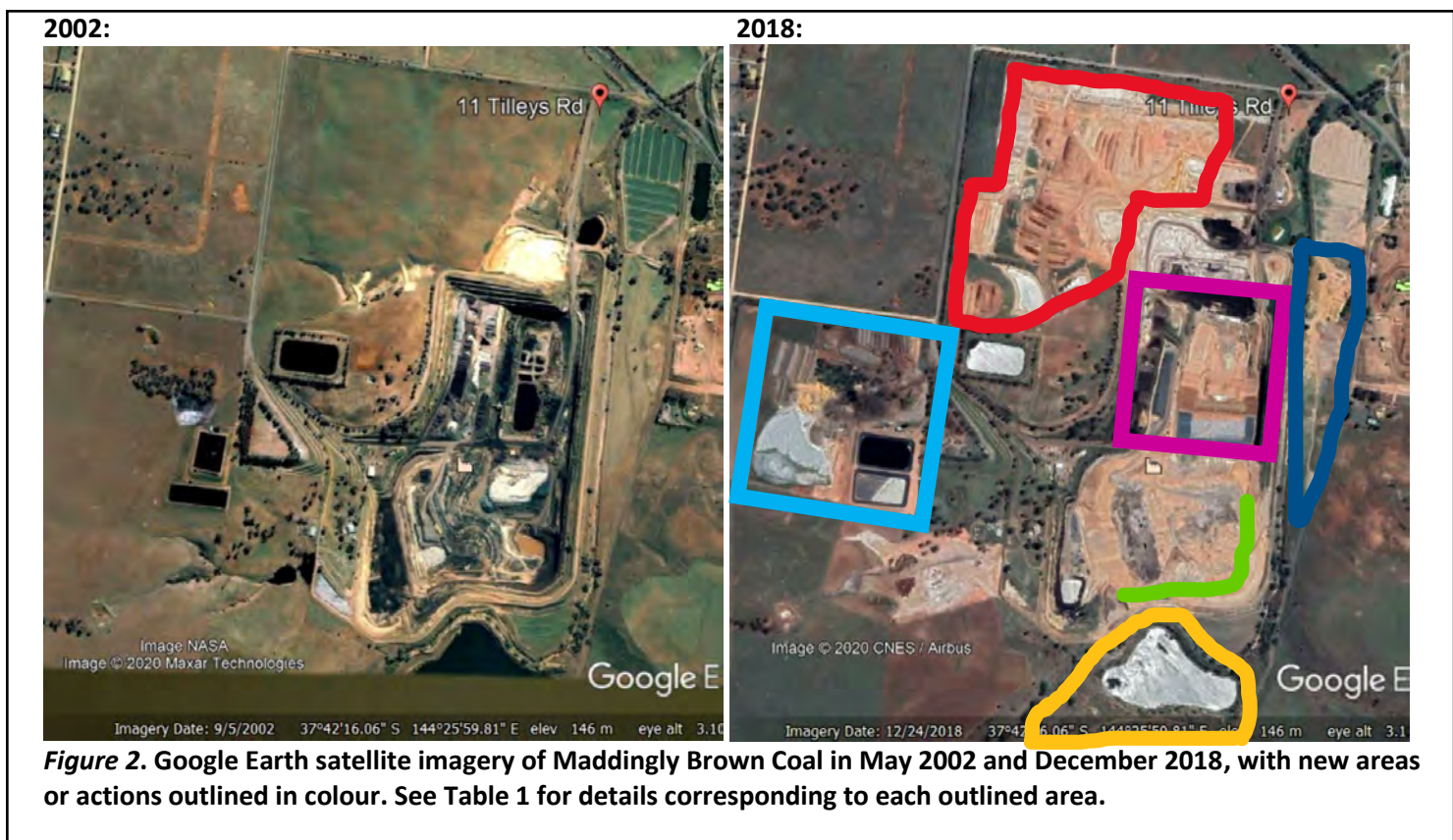
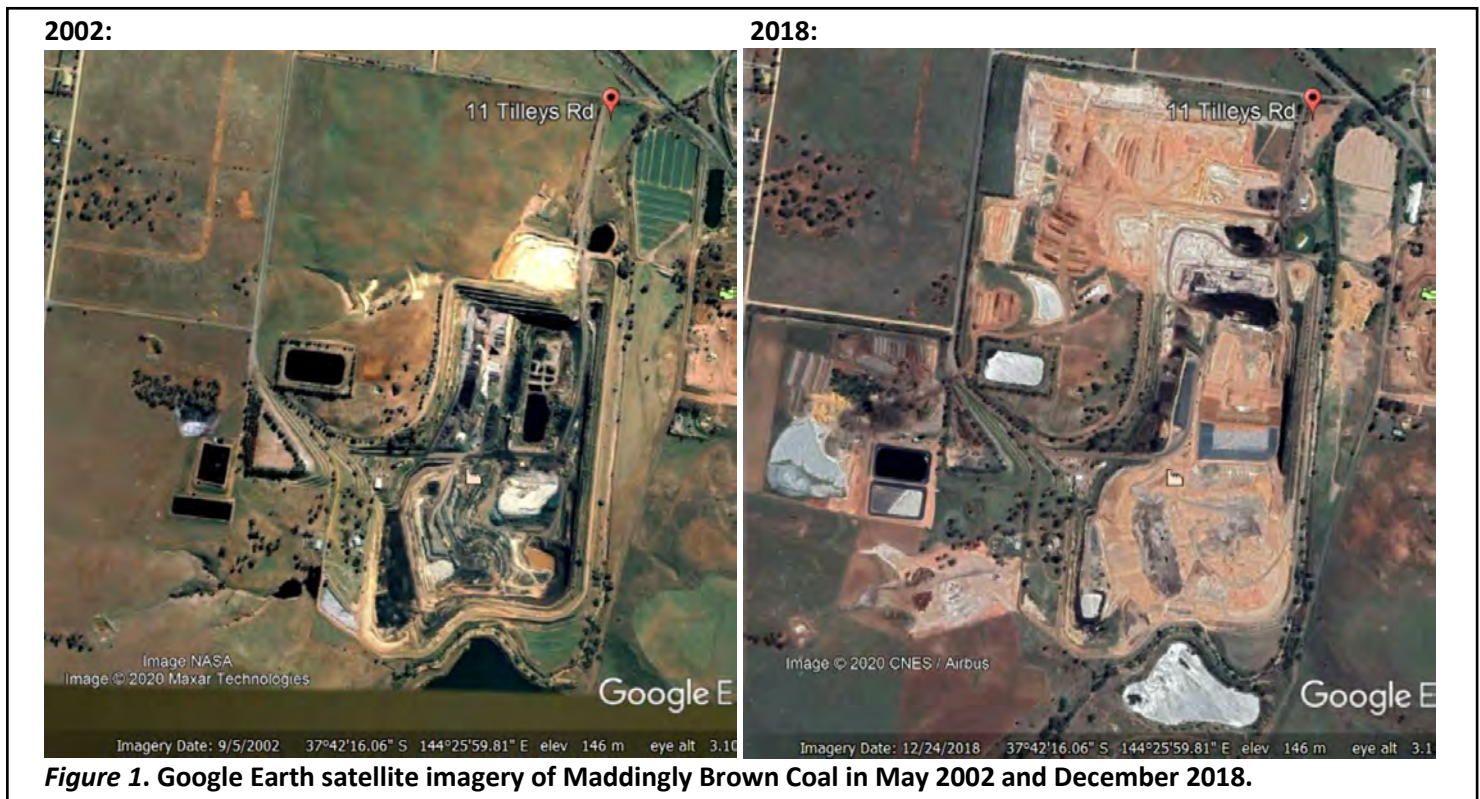


Table 1. New actions or areas undertaken by Maddingley Brown Coal, from 2000 onwards. See Figure 2 (2018 image) for corresponding, colour-coded areas.

Colour code on map	Approx. size	New action or new area	Year
N/A		<i>New action: Discharge of water into waterway</i> <u>Actions:</u> New permit / works to discharge groundwater from the site to Parwan Creek.	2000
Green		<i>New action: Construction of firewall using contaminated soil (most likely containing PFAS)</i> <u>Actions:</u> * A new firewall was constructed using Category C contaminated soil. As Maddingley Brown Coal process PFAS contaminated soil, the firewall may contain PFAS. * Concerns were raised by Western Region Environment Centre about contaminants leaching from the firewall into Parwan Creek. We are unsure whether this was ever followed up on by authorities. <u>Distance from Parwan Creek:</u> Approx. 60m	2008
Red	38.5 hectares	<i>New area: North / north-west (area not previously used)</i> <u>Actions:</u> * Establishment of new extraction area. Materials being extracted include sand, soil and possibly other materials. * Area is sprayed with leachate from other operations on site. Leachate could possibly contain PFAS , as PFAS is contained in areas leachate is collected from. <u>Distance from Parwan Creek:</u> Approx. 150m at closest point.	2011 (approx.)
Purple	> 13 hectares	<i>New use of existing area: Using contaminated waste to landfill area</i> <u>Actions:</u> * Establishment of new landfill area, including landfilling of Category C contaminated waste (began 2011/2012). PFAS is one of the contaminants in the waste. * Filling of waterhole / dam in the area (around 2016). <u>Distance from Parwan Creek:</u> Approx. 40m to 60m <u>Vulnerable species on immediate site:</u> <i>Aythya australis</i> (Hardhead duck); This species was observed in waterhole/dam in this area in Oct 2015; the dam was filled in with landfill around 2016.	2011/2012 2016
Light blue		<i>New area: West (area not previously used for mining etc.)</i> <u>Actions:</u> * Extraction or other activities * Installation of new leachate dam <u>Distance from Parwan Creek:</u> Approx 1000m	2015/2016
Yellow	> 17 hectares	<i>New area: 181 Cummings Road / Star Dam (new land acquired 2017)</i> <u>Actions:</u> * Dumping of acid sulphate soil into Star Dam. * Building ramps and other works to enable tipping acid sulphate soil into Star Dam. <u>Site distance from Parwan Creek:</u> Zero metres (Parwan Creek forms north and west boundary of site). <u>Star Dam distance from Parwan Creek:</u> 20m at its nearest point. <u>Endangered species on immediate site:</u> <i>Litoria raniformis</i> (Growling Grass Frog) in Star Dam. Species reported to Maddingley Brown Coal and Moorabool Shire Council in January 2019, before planning permit was granted.	2019
Dark blue	7.9 hectares	<i>New area: East bank of Parwan Creek (area not previously used)</i>	2013 (approx.)

	<p><u>Actions:</u></p> <ul style="list-style-type: none"> * Piling of soil, sand and other materials beside Parwan Creek. * In 2020 addition piling of soil containing debris directly on the banks of Parwan Creek commenced, with no protective barriers in place. * It is possible this soil may contain PFAS, as Maddingley Brown Coal processes PFAS contaminated soil. <p><u>Distance from Parwan Creek:</u> 1m (approx. – possibly less) at nearest point.</p>	2020
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We have compiled the above information based on information we have access to at this time. There is a lot of information being withheld from our group and the community.

It is extremely clear that the operations of Maddingley Brown Coal have extended substantially since 2000, both in nature and area. The area of the original coal mine (no longer really in use) was around 63 hectares. The area now actively used by Maddingley Brown Coal for landfilling, composting, extraction and other operations is over 137 hectares. Planning Permits have been sought and often obtained by Maddingley Brown Coal for these new actions and areas, without being referred to EPBC or EES processes.

Any works undertaken by Maddingley Brown Coal are highly likely to involve exposure of the environment to PFAS contaminants, as Maddingley Brown Coal have been receiving and processing PFAS contaminated soil and other waste. We strongly believe, based on reliable reports from community members, that additional contaminants would be found on site, from post-2000 activities, and that these are likely to exceed Category C levels.

We have been told from a reliable source that some of the deep drilling and testing the EPA was supposed to conduct on site post-2000 has not been conducted. We are currently looking into this, however further investigation is difficult as our group is run by volunteers with limited time and resources.

We also note that some community members who have called for better environmental oversight of Maddingley Brown Coal have received death threats and threats of other harm from people closely associated with the company. We believe Maddingley Brown Coal have known for many years that they are doing the wrong thing, and causing environmental damage, however they have tried to bully anyone who called them to account. Further information can be provided on request.

In summary, Maddingley Brown Coal has more than doubled their area of operation since 2000. New activities undertaken into piping water from the site into Parwan Creek and infilling a dam containing Growling Grassfrog with acid sulphate soils. The dam is also immediately beside Parwan Creek. Since 2000, Maddingley Brown Coal have also expanded their landfill and composting operations, and built a firewall beside Parwan Creek, using contaminated soil to build the firewall (likely to include PFAS contamination). They are now planning to receive and reuse even larger volumes of PFAS contaminated soil.

As per previous correspondence, Parwan Creek feeds is an important part of the catchment for a Ramsar listed Wetland. There are numerous vulnerable species within close proximity to the Maddingley Brown Coal site, and some on site. There are also endangered ecological communities (e.g. Grassy Eucalypt Woodland of the Victorian Volcanic Plain) that could be affected by actions of the site.

From: [MEG Moorabool Environment Group](#)
To: [Compliance](#)
Subject: Re: Maddingley Brown Coal - Urgent compliance concern re EPBC Act
Date: Friday, 20 March 2020 3:00:51 AM
Attachments: [Summary of EPBC matters relating to MBC_byMEG_20Mar2020.pdf](#)

Dear EPBC Compliance Team,

Moorabool Environment Group Inc. have now put together a more comprehensive report outlining why we believe actions started by Maddingley Brown Coal from 2000 onwards should have been referred through the EPBC process (but were not). Please see attached.

Sections of the report are as follows:

1. Section 1 gives a summary, which is expanded on in later sections.
2. Section 2 gives some background about location, operations and poor past environmental and track record of Maddingley Brown Coal. This is included for context and because poor environmental track record and community concerns about environmental impact would normally be taken into account by the Minister for Environment when assessing a referral through the EPBC Act.
3. Section 3 outlines actions begun by Maddingley Brown Coal from 2000 onwards, and why we are concerned about impact of these actions of matters of national environmental significance.
4. Section 4 outlines matters of national environmental significance likely to be significantly impacted by Maddingley Brown Coal's post-2000 actions, including lists of threatened species, threatened ecological communities, protected migratory species, and a Ramsar wetland. These lists now only include EPBC listed species / matters, whereas the previous list I provided also included Victorian listed species.

We have been advised by several ecologists and environmental scientists that some (new) actions undertaken by Maddingley Brown Coal post-2000 should have been referred through the EPBC process - that is why we have brought these issues to your attention. All of these ecologists and environmental scientists have worked very closely with EPBC processes, and believe the matters we have raised are highly relevant to these processes.

Maddingley Brown Coal is becoming an increasingly large operation, with increasing large scope for negative environmental impact. As I have mentioned, even more information is likely to come to light about the far-reaching, negative environmental impact of Maddingley Brown Coal's recent operations. Legal proceedings regarding Maddingley Brown Coal's operations are likely at some stage (HIGHLY CONFIDENTIAL). Media attention is also highly likely in the near future (there is a documentary about the situation currently being filmed by a major media group - again highly confidential information). It is important that Maddingley Brown Coal's past and current obligations under the EPBC Act are fully investigated - not fobbed off on surface assumptions.

We hope the investigation team will give these matters proper consideration.

Many thanks,

s47F

on behalf of Moorabool Environment Group Inc.

On Tue, Mar 17, 2020 at 3:15 PM MEG Moorabool Environment Group

s47F

wrote:

| Dear EPBC compliance team,

As requested, please find attached details of Maddingley Brown Coal's expanded area and activities since the year 2000.

Since 2000, Maddingley Brown Coal have expanded their area of operation by more than half, including areas previous unused (or used for farming etc.). They have also engaged in some new actions / activities, which could have significant impact on matters of national environmental significance.

There may be additional actions not on the list, as some of the information available on Maddingley Brown Coal's planning permit applications etc. is incomplete.

The EPA have raised concerns about contaminated leachate coming from both new (post-2000) and old operations into Parwan Creek and underlying aquifers, but they do not seem to have taken any clear action regarding this.

If you need the EPA CARMS number for looking up audits of some areas of Maddingley Brown Coal is: 64662

But please be aware that around half of the area currently being used by Maddingley Brown Coal was NOT part of the old coal mine, and some of the areas used are not covered in EPA reports.

I can assure the investigation team that if they look into Maddingley Brown Coal well (beyond the surface documentation), they will find some very serious issues relevant to the Act. Maddingley Brown Coal have been very good at trying to hide their 'true' activities, and the environmental impacts, even filing their EPA audit reports under incorrect municipalities.

Please let me know if you require further information. I am finding out as much as I can, and will send you anything additional I find. I hope what I have now sent will be enough to triage the case for investigation.

Many thanks,

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We urge for this issue to be passed on to the relevant Compliance assessment team, as a matter of urgency.

We will be collating the information we have sent to you into a formal document, which will also be used to raise awareness of this issue with relevant Federal and State Ministers and departments.

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- There are also other native species of plants and animals both on the Maddingley Brown Coal site and in areas affected by the site. These include Platypus and Rakali. Soon I will send through a list of additional native flora and fauna found near the Maddingley Brown Coal site.
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Maddingley Brown Coal's request to receive large volumes of PFAS contaminated soil:

- Maddingley Brown Coal have also submitted a request to the Victorian Planning Minister to intervene in and amend their current Planning Permit, to allow them to receive and re-used PFAS contaminated soil from the Westgate Tunnel Project. They are in the tender process with Transurban, and this Thursday will submit a formal tender to receive this soil.
- Level of toxicity of the soil could range from Category A to Category C (extreme contamination to low contamination). Soil will be tested at the Maddingley Brown Coal site, and will be stored open for 21 days until test results are known. Any Category A or C soil will then be separated and removed from the site – however it will have been stored in the open for 21 days until then. This information comes directly from Maddingley Brown Coal, via a stakeholder briefing they were required by Transurban to hold with Stakeholders.
- It appears that Maddingley Brown Coal may be already undertaking works in preparation to receive this contaminated soil, however we cannot confirm this.

PFAS is extremely soluble in water, and moves easily and long distances

in waterways. It bioaccumulates in systems, especially aquatic systems. Even small levels of PFAS can result in high contamination when it enters waterways, especially when large volumes of PFAS contaminated materials are being dealt with.

We are therefore very concerned about Maddingley Brown Coal's current and future operations, and the impact of these on the surrounding ecosystems.

This is an urgent matter for two key reasons:

1. The dirt being piled beside Parwan Creek could contain PFAS, and the creek could contain endangered species (given proximity to confirmed records of these species).
2. Maddingley Brown Coal are currently preparing to receive even larger volumes of PFAS contaminated soil, which could include very high levels of PFAS contamination.

Please let me know if you require further information regarding the above. I will send through photo evidence and a list of other species soon.

We look forward to your response in this matter.

Sincerely,

s47F

Secretary
Moorabool Environment Group

Email:
Phone

s47F

POTENTIAL BREACHES OF EPBC ACT 1999 BY MADDINGLEY BROWN COAL
Moorabool Environment Group Inc. (MEG), 20th March 2020

This CONFIDENTIAL report has been prepared by MEG, based on best information currently available to us.

1. OVERALL SUMMARY

Maddingley Brown Coal (MBC) receives, landfills and stores high volumes of PFAS contaminated materials, including contaminated soil. This includes processing and landfilling the soil in new areas where PFAS-related operations were not conducted pre-2000. The soil and other materials also contain other contaminants, such as heavy metals and acid sulphates.

New actions have been undertaken by MBC since 2000, and the site's area of operation has more than doubled in that time (from approx. 63 hectares to more than 137 hectares). See Section 3 for further details. New actions and expansions undertaken since 2000 are likely to have long-lasting, irreversible, large-scale impact on matters of national environmental significance. This is especially the case given (1) the MBC site contains a waterway and two major aquifers in the catchment for Port Phillip Bay; (2) PFAS readily travels long distances via waterways and aquifers, and bioaccumulates irreversibly in related systems, fauna and flora.

The MBC site, and areas affected by the MBC site (e.g. in close proximity and downstream) contain numerous critically endangered, endangered and vulnerable fauna, flora and ecological communities protected under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 (see Section 4). Areas affected by MBC's actions (i.e. in close proximity) also contain migratory birds protected under international agreements and under the EPBC Act. The MBC site is within an important catchment area for a Ramsar wetland of international significance (via its connection with Werribee River and two major, wide ranging aquifers), and thus actions undertaken on this site, especially those involving PFAS leachate, are likely to have a significant impact on this wetland (see Section 4).

Post-2000 actions and expansions undertaken by MBC have never been referred for assessment under the EPBC Act, nor under the Victorian Environmental Effects Act (EEA) 1978. There has not been any comprehensive assessment of environmental impacts of actions undertaken by MBC, including new actions and expansions post-2000.

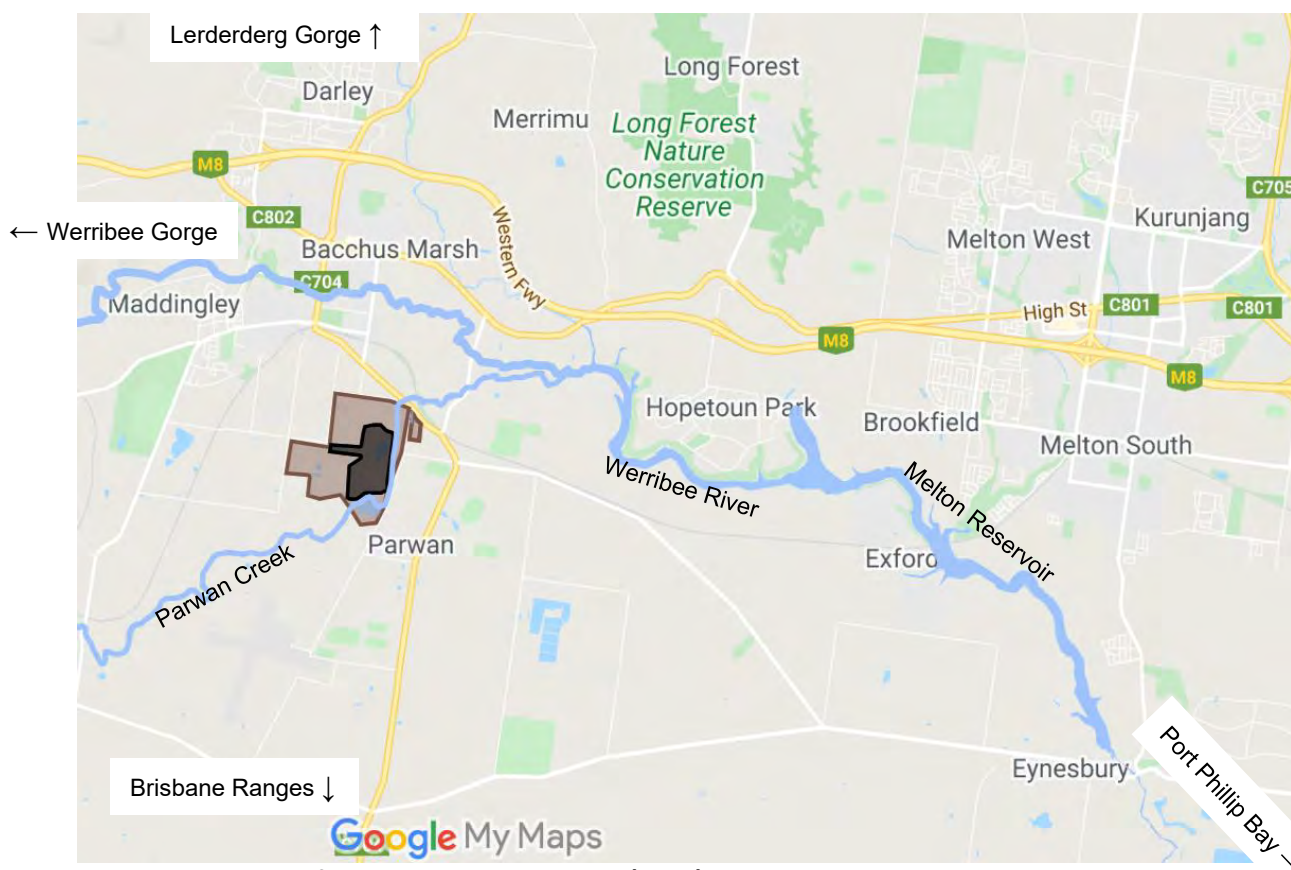


Figure 1. Location of Maddingley Brown Coal (MBC)

Note. **Black** = Pre-2000 site of MBC operations; **Brown** = Post-2000 site of MBC operations.

2. BACKGROUND

2.1 SITE LOCATION & FEATURES

MBC is located on the south side of the Bacchus Marsh township (in the town's suburb of Maddingley; see Figure 1). Bacchus Marsh sits in a fertile valley, around 60km from each of Melbourne, Ballarat and Geelong CBDs. Bacchus Marsh is known for its natural features and biodiversity, with Werribee Gorge State Park immediately to the west, Lerderderg Gorge State Park immediately to the north, Long Forest Nature Conservation Reserve to the north-east, Melton Reservoir to the east, and Brisbane Ranges National Park not far to the south. It is located within the Volcanic Plains of Victoria, home to many critically endangered ecological communities. Numerous waterways run through Bacchus Marsh, including the Werribee River, which is a major river leading into the Ramsar listed wetland area of Port Phillip Bay. The natural features and waterways of Bacchus Marsh make it an extremely popular area for a wide range of species, including critically endangered, endangered and vulnerable species, especially along Werribee River and its tributaries (e.g. Parwan Creek).

MBC itself is around 450m from the nearest school, 300m from the nearest market garden area, 600m from suburban housing, and 900m from the Bacchus Marsh train station. Immediate neighbours of MBC primarily include hobby farmers and other small-hold residential properties and family farms. The MBC site contains important waterways and aquifers. The main waterway running through MBC is Parwan Creek, which joins with the Werribee River around 2.5km downstream. Werribee River becomes Melton Reservoir in that area. The two aquifers under MBC are the Lower Werribee Formation Aquifer and Fyansford Formation Aquifer. The Lower Werribee Formation Aquifer is the most widespread lower aquifer in the Port Phillip and Western Port region. It occurs close to the surface in the Bacchus Marsh area, and close to the surface at the MBC site. Groundwater from the Lower Werribee Formation Aquifer interacts strongly with surface water in the Bacchus Marsh area. Hence, any PFAS leaching from MBC into the Lower Werribee Formation Aquifer is likely to find its way into Werribee River, and eventually Port Phillip Bay. The Fyansford Formation Aquifer also feeds into Port Phillip Bay.

Werribee River and Melton Reservoir are used to irrigate food crops, as is groundwater from aquifers under MBC. Parwan Creek, Werribee River and Melton Reservoir are home to a diverse range of fauna, flora and ecological communities, including many protected under the EPBC Act (see Section 4, further on). The ecological value of these waterways is exceptionally high in most areas, despite some erosion and other stressors in some areas. The Werribee River feeds into a Ramsar wetland of international importance, approx. 20 to 30km from the MBC site. Parwan Creek is sometimes dry in some places, but nonetheless supports a range of threatened ecological communities and species. It currently contains water, and it flows during wet weather. Parwan Creek has also flooded in the past, including within the MBC site.

2.2 OVERVIEW OF MBC'S CURRENT OPERATIONS

MBC engages in landfilling, materials excavation, composting, and waste disposal activities, primary involving large volumes of Category C contaminated soil and industrial waste. This includes soil and waste contaminated with PFAS, acid sulfate and heavy metals. There have been suggestions from numerous sources (e.g. people who have previously worked on site) over the past decade, that the real levels of contamination in materials currently received on site exceed Category C, however there has not been sufficient testing by authorities or others to verify this. Either way, even low levels of PFAS (i.e. levels contained in Category C materials) can cause extreme, irreversible environmental damage, especially if it leaches into waterways. PFAS travels readily in aquatic media, and is both a bioaccumulant and a biomagnifier.

Although some of MBC's operations take place on an old coal mine site, the type and area of operations have increased substantially (more than doubled) since the year 2000 (see Section 3). In other words, more than half of the areas currently being used for MBC's operations were NOT part of the original coal mine pre 2000. Some areas had previously been used for farming or other uses. There are remnants of native vegetation, including threatened ecological communities, on this land. Some of MBC's current land was acquired by MBC post-2000. New actions undertaken by MBC since 2000 include (but are not limited to): discharging water from their site into Parwan Creek, backfilling a dam containing Growling Grass Frogs with acid sulphate soil, using contaminated leachate to suppress weeds in an area where runoff can enter Parwan Creek, and building a large firewall beside Parwan Creek using contaminated soil. New activities have also begun for which no known permit has been given.

2.3 MBC'S POOR ENVIRONMENTAL AND COMMUNITY TRACK RECORD

2.3.1 Poor environmental management and noncompliance with environmental laws

Prior environmental performance and compliance is relevant to decisions under the EPBC Act, even where this relates to activities that began before the year 2000. MBC has more than a two-decade history of poor environmental management and breaches of their EPA and Planning Permit conditions. During that time they have been, and still are, owned and run by the Calleja Group, who also run a trucking company. EPA audits have repeatedly shown leaching and discharge from multiple operations and areas of the MBC site resulting in contamination of Parwan Creek, Lower Werribee Formation Aquifer and Fyansford Formation Aquifer. Very little has been done to rectify these issues, and the issues tend to continue from one audit to the next. The EPA has issued MBC with numerous fines for breaches, however these breaches have continued.

Community members and groups have raised a large number of concerns about the environmental management of MBC, every year, over the past 20 plus years. Concerns include pollution of Parwan Creek with industrial hard waste (Figure 2), pollution of the surrounding area with dust (which is likely to be contaminated; Figure 2), and leaching of contaminants into bores and waterways. These concerns have been submitted to Moorabool Shire Council, the EPA, Melbourne Water and other authorities. Again, there have been very few changes in response to these concerns. One change was installation of a litter fence, which was mandated after extensive campaigning by the local community. Industrial hard waste continues to enter Parwan Creek and surrounding properties despite this fence. This extremely poor environmental track record raises severe concerns about MBC's ability to mitigate impacts of complex substances such as PFAS, acid sulphates and heavy metals on matters of environmental significance.

2.3.2 High degree of community concern about the actions, and environmental impacts of the actions

The highest level of community concern has been raised regarding MBC's new actions and areas from 2000 onwards. For example, there were strong community objections to MBC discharging water from their site into Parwan Creek, due to high concerns about environmental impacts of these actions. Environment groups were opposed to MBC using contaminated soil to build a firewall beside Parwan Creek, due to high-level concerns about contaminants from the firewall leaching into Parwan Creek and moving downstream to the Werribee River. Community members and community groups strongly opposed expansion of MBC's operations to new areas in 2011, again due to high-level concerns about impacts on environmental matters, including threatened species and ecological communities, migratory birds, and the internationally important wetland downstream. Despite these strong, well articulated, well researched, ongoing community concerns regarding impacts of MBC's post-2000 actions on matters of both national and state environmental significance, none of these actions have been referred for assessment under EPBC or EEA processes. We believe there have also been no proper environmental assessment undertaken that would satisfy requirements of any reciprocal processes under the EPBC Act.

2.3.3 MBC's lack of consultation with indigenous persons or groups affected by actions

The post-2000 actions and expansions undertaken by MBC impact areas of cultural significance to First Nations people, including areas on site along Parwan Creek (included in Planning Overlays). However, there has never been any consultation with indigenous persons or groups affected by these actions (to our knowledge, and the knowledge of First Nations organisations and groups with which we have consulted). Again, this is extremely poor practice.



Figure 2. Visible emissions from Maddingley Brown Coal site recorded by local residents: 1) Dust impacting surrounding area (20th March 2020); 2) & 3) Construction waste into Parwan Creek (third photo is from overhead).

3. NEW ACTIONS UNDERTAKEN BY MBC SINCE 2000, WHICH ARE LIKELY TO HAVE SIGNIFICANT IMPACT ON MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

The EPBC Act 1999 only applies to new actions undertaken or new areas of operation since the year 2000. MBC have undertaken numerous new actions and expanded to new areas since the Act came into effect, and these new actions are likely to have significant impact on matters of national environmental significance (as outlined in Section 4).

New actions undertaken and new areas of operation are outlined in Table 1. Colour coding in this table corresponds to that used to outline new operations/areas in Figure 3. Figure 4 shows the same Google Earth satellite imagery for 2002 versus 2018, but without the outlining.

3.1 NEW AREAS & ACTIONS FROM 2000 ONWARDS

Details of new areas and actions undertaken by MBC from 2000 onwards are given in Table 1 and Figure 3, and summarised below.

3.1.1 New areas of operation

New areas of operation include areas to the north, west and south of the original coal mine (Table 1, Figure 3). The area used by MBC pre-2000 was approx. 63 hectares (the same area as the old coal mine). Since 2000, the area actively used by MBC has expanded to over 137 hectares, including acquisition of some new land. Some of these new areas include threatened species and ecological communities protected under the EPBC Act. Due to the presence of waterways and aquifers, new actions and areas also impact other areas containing additional threatened species, ecological communities, migratory birds and a Ramsar wetland (see Section 4).

3.1.2 New actions undertaken

As shown in Table 1, new actions undertaken include:

- discharging (contaminated) groundwater from the site into Parwan Creek (2000)
- dumping acid sulphate soil (also highly likely to contain PFAS) into a dam containing threatened species and which is immediately beside Parwan Creek (2019-2020)
- using contaminated soil (deliberately) to build a firewall beside Parwan Creek despite objections from environmental organisations (2008)
- spraying large volumes of contaminated leachate on new extraction areas to suppress weeds (leachate runoff will then enter aquifers and Parwan Creek) (approx. 2011)
- piling contaminated soil along the east bank of Parwan Creek, to build a wall/barrier for which they have no Planning Permit (2020).

All of these new actions are highly likely to impact waterways and aquifers on site, contributing to leaching of PFAS and other contaminants into the environment, with implications for matters of national environmental significance, outlined further on (Section 4).

3.2 KEY ISSUES LIKELY TO HAVE SIGNIFICANT IMPACT ON ENVIRONMENTAL MATTERS OF NATIONAL SIGNIFICANCE

As described earlier, MBC deals with PFAS contaminated soil and materials on site, as well as soil and industrial waste containing other contaminants such as acid sulphates and heavy metals. Since 2000, MBC have been piping water from their PFAS contaminated site into Parwan Creek, and have undertaken other activities likely to result in PFAS leaching into Parwan Creek and two major aquifers. Audits have shown that leachate and water from MBC is resulting in pollution of Parwan Creek and aquifers (e.g. increasing salinity), however, to our knowledge, the presence of PFAS in this leachate and water has not been tested. It is highly likely that the leachate and water contains PFAS, given MBC's current operations and inadequate systems.

It is highly likely that PFAS contaminated soil was only received on site after 2000, as this is when MBC's works began to expand substantially, however information on this has not been forthcoming as yet. Either way, post-2000 actions have PFAS-related consequences for matters of national environmental significance, described in the next section.

Since 2019, acid sulphate soil which is also highly likely to contain PFAS has been dumped into a dam known to contain *Litoria raniformis* (Growling Grass Frog). The dam is immediately beside Parwan Creek. To our knowledge there is no monitoring in place to assess levels of PFAS in the dam or in Parwan Creek, nor effects of PFAS or acid sulphate soil on threatened species. There are also no contingency measures in place should PFAS or acid sulphate escape from the dam into Parwan Creek. This poses an unacceptably high level of risk to local waterways and biodiversity.

3.3 LACK OF REFERRAL OR ADEQUATE ASSESSMENT OF THESE ACTIONS

These new actions and areas have not been referred through the EPBC process, nor through the Victorian EES process, despite numerous groups and community members raising concerns about high likelihood of impact on matters of national environmental significance. Numerous complaints have been submitted to the EPA Victoria about negative environmental impact of these actions, however little to no actions has been taken. We know from reliable sources that the EPA has not undertaken all drilling and testing that was supposed to be undertaken as part of licensing for some of these actions. Furthermore, for some new actions, no licence or planning permit has been given (i.e. current building of a barrier on the east bank of Parwan Creek, using potentially contaminated soil).

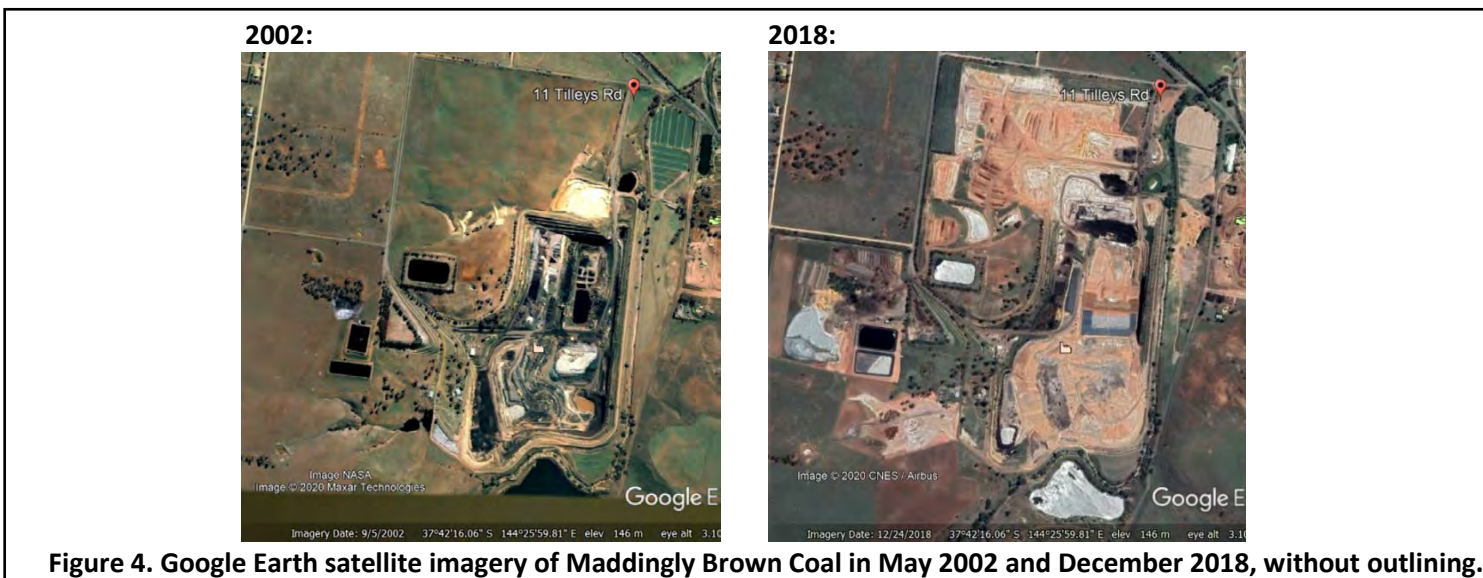
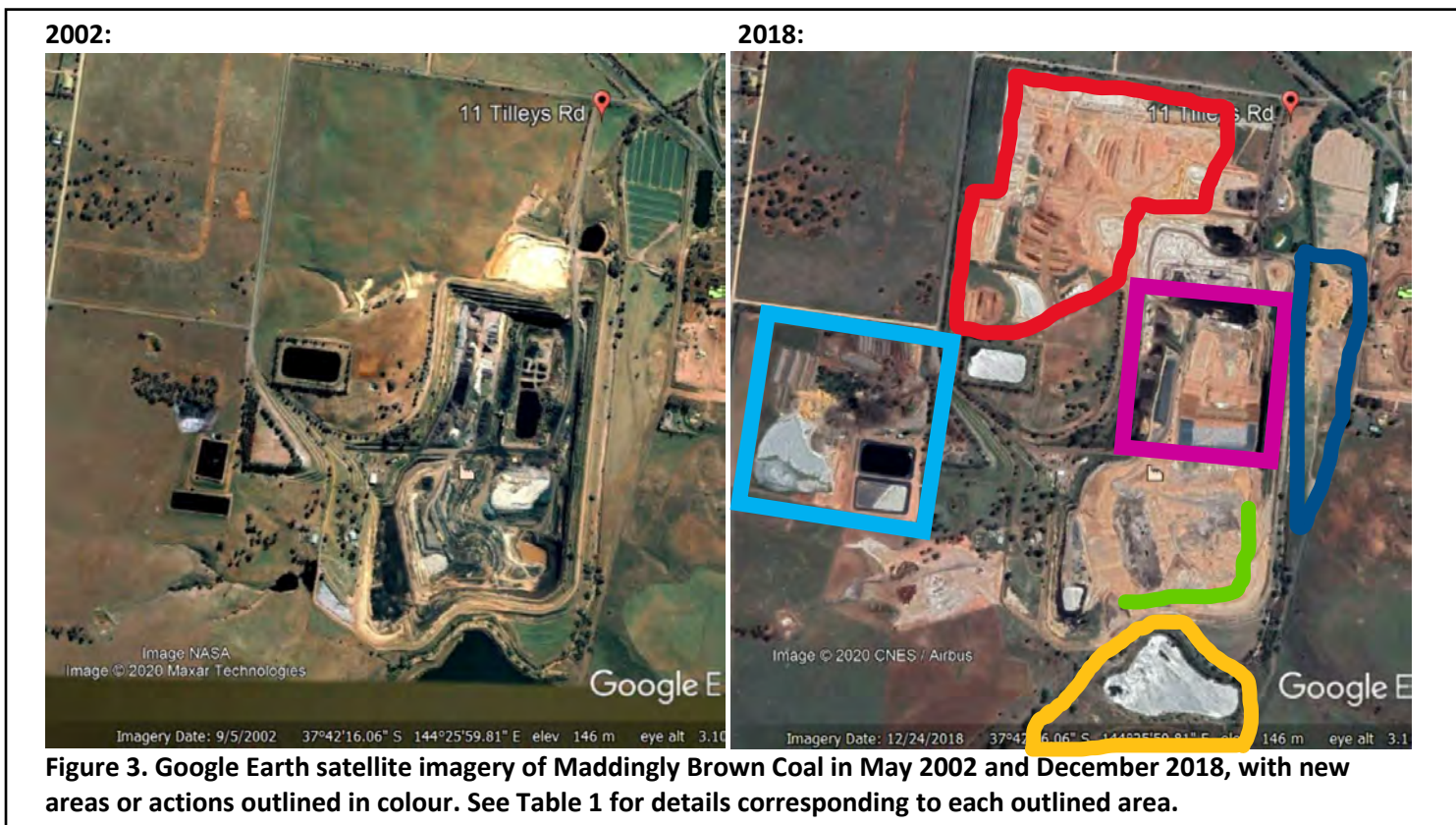


Table 1. New actions or areas undertaken by Maddingley Brown Coal, from 2000 onwards. See Figure 2 (2018 image) for corresponding, colour-coded areas.

Colour code on map	Approx. size (hectares)	New action or new area	Year
N/A		<i>New action: Discharge of water into waterway</i> <u>Actions:</u> Discharging groundwater from the site to Parwan Creek.	2000
Green		<i>New action: Construction of firewall using contaminated soil (most likely containing PFAS)</i> <u>Actions:</u> * A new firewall was constructed using Category C contaminated soil. As MBC process PFAS contaminated soil, the firewall is likely to contain PFAS. * Concerns were raised by Western Region Environment Centre about contaminants leaching from the firewall into Parwan Creek. We are unsure whether this was ever followed up on by authorities. <u>Distance from Parwan Creek:</u> Approx. 60m	2008
Red	38.5 ha	<i>New area: North / north-west (area not previously used)</i> <u>Actions:</u> * Establishment of new extraction area. Materials being extracted include sand, soil and possibly other materials. * Area is sprayed with leachate from other operations on site. The leachate is likely to contain PFAS , as PFAS is contained in areas leachate is collected from. <u>Distance from Parwan Creek:</u> Approx. 150m at closest point.	2011 (approx.)
Purple	> 13 ha	<i>New use of existing area: Using contaminated waste to landfill area</i> <u>Actions:</u> * Establishment of new landfill area, including landfilling of Cat. C contaminated waste (began 2011/2012). PFAS is one of the contaminants in the waste. * Filling of waterhole / dam in the area (around 2016). <u>Distance from Parwan Creek:</u> Approx. 40m to 60m <u>Vulnerable species on immediate site:</u> <i>Aythya australis</i> (Hardhead duck) which is listed in Victoria (not EPBC); This species was observed in waterhole/dam in this area in Oct 2015; the dam was filled in with landfill around 2016.	2011/2012 & 2016
Light blue		<i>New area: West (area not previously used for mining etc.)</i> <u>Actions:</u> * Extraction or other activities * Installation of new leachate dam <u>Distance from Parwan Creek:</u> Approx 1000m	2015/2016
Yellow	> 17 ha	<i>New area: 181 Cummings Road / Star Dam (new land acquired 2017)</i> <u>Actions:</u> * Dumping of acid sulphate soil into Star Dam. * Building ramps and other works to enable tipping acid sulphate soil into Star Dam. <u>Site distance from Parwan Creek:</u> Zero metres (Parwan Creek forms north and west boundary of site). <u>Star Dam distance from Parwan Creek:</u> 20m at its nearest point. <u>Endangered species on immediate site:</u> <i>Litoria raniformis</i> (Growling Grass Frog) in Star Dam. Species reported to MBC and Moorabool Shire Council in January 2019, before planning permit was granted.	2019
Dark blue	7.9 ha	<i>New area: East bank of Parwan Creek (area not previously used)</i> <u>Actions:</u> * 2013 - Piling of soil, sand and other materials beside Parwan Creek. * 2020 - Building barrier on east bank of Parwan Creek using soil which is possibly PFAS contaminated. MBC have no known planning permit or other permits for this. * It is possible this soil may contain PFAS, as MBC processes PFAS contaminated soil. <u>Distance from Parwan Creek:</u> 1m (approx. – possibly less) at nearest point.	2013 (approx.) & 2020

4. MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE, WHICH THE ABOVE ACTIONS ARE LIKELY TO HAVE SIGNIFICANT IMPACT UPON

The new actions undertaken by MBC since 2000 are likely to have a **significant impact on following matters of national environmental significance protected under the EPBC Act:**

- Listed threatened species and ecological communities
- Migratory species protected under international agreements
- Wetlands of international importance (Ramsar Wetlands)

The relevance of each of these matters to MBC's new actions post-2000 is outlined further below.

4.1 KEY WAYS IN WHICH POST-2000 ACTIONS OF MBC ARE LIKELY TO HAVE SIGNIFICANT IMPACTS ON THE ABOVE MATTERS

4.1.1 How PFAS and acid sulphate soils from MBC could significantly adversely impact matters of national environmental significance

Of key concern regarding impact on these matters is that MBC's new post-2000 actions are likely to lead to contaminated leachate and runoff entering water systems used by threatened species, threatened ecological communities, protected migratory birds and Ramsar wetlands. These contaminants include PFAS and heavy metals. They also include acid sulphates, in the likely event that acid sulphates dumped in Star Dam are disturbed by flooding or other activities.

PFAS bioaccumulates in aquatic systems, plants and animals. Thus, even small levels can do a great deal of damage, especially over time (*PFAS National Environmental Management Plan [NEMP], 2018*). PFAS is toxic to many animals, including fish, birds and mammals. Peer-reviewed, scientific research has shown that PFAS can impact gene expression across several systems, reduce number of eggs laid, reduce hatching success, reduce body size, and alter sex ratio of offspring (for a review, see *The Science and Policy of PFASs in the Great Lakes Region, 2019* [relevant internationally]). These impacts could lead to further decline in species already critically endangered, endangered or vulnerable. These impacts also pose an unacceptable risk to migratory birds protected under international agreements. Exposing these birds to known, unnecessary sources of PFAS would be blatantly irresponsible under these agreements. PFAS are taken up by plants, and the effects on these plants are not yet fully known. What is known is that animals who eat these plants can retain the PFAS consumed indefinitely, and that PFAS will build up in their systems (*PFAS NEMP, 2018*). As flora and fauna in ecological communities have a symbiotic relationship, where each rely on the other, exposure of this flora or fauna to PFAS could have a significant, negative impact on threatened ecological communities. PFAS contamination would permanently change the ecological character of wetlands, through adverse effects on fauna, flora and ecological systems important to these wetlands.

Another concern is that acid sulphate soils with which Star Dam is being infilled (2019 onwards) could be disturbed through flooding or other actions. This could lead to Star Dam or Parwan Creek (immediately adjacent to Star Dam) experiencing increased acidity, which would result in the death of Growling Grass Frogs in Star Dam, Parwan Creek, and other waterbodies fed by Parwan Creek. It is likely that Growling Grass Frogs in Star Dam have already deceased due to this action. Star Dam and Parwan Creek waters are known to interact during heavy rains, and Parwan Creek has flooded significantly in past years, encompassing Star Dam in these floods. There are large populations of Growling Grass Frogs in the area that could be significantly impacted by increased acidity. Acidification of Star Dam, Parwan Creek, underlying aquifers and associated waterbodies would also impact threatened ecological communities who rely on these water systems. For example, acidic water would kill flora that live in these communities, especially large trees who will uptake the water through root systems. Acidification of these water systems would also reduce foraging opportunities for threatened and protected birds who frequent the area.

4.1.2 The irreversible, long-term, large-scale nature of these adverse impacts

It is highly likely that PFAS will leach, or have already leached, from MBC's actions, including operations and areas begun from 2000 onwards. PFAS do not break down in the environment. Instead they bioaccumulate, leading to greater and greater levels in waterways, groundwater, ecosystems and wildlife using those systems, as leaching occurs. There currently are no known effective strategies or technologies available to remediate the impacts of PFAS contamination (*PFAS NEMP*, 2018). In other words, once PFAS is present in a system, it will essentially stay there forever, and its impacts will last indefinitely. Aquatic systems are particularly vulnerable to the perpetual impacts of PFAS (*PFAS NEMP*, 2018). PFAS cause irreversible damage in aquatic systems, including reduction in biodiversity and harm to wildlife who use the water or eat aquatic prey. As PFAS never break down, and cannot be removed from the environment, this harm will continue in an ongoing manner.

PFAS easily and quickly travels long distances in both waterways and aquifers (*PFAS NEMP*, 2018). The substances can travel tens of kilometres from the original source. Two important aquifers sit under MBC: Lower Werribee Formation Aquifer and Fyansford Formation Aquifer. The Lower Werribee Formation Aquifer is the most widespread lower aquifer in the Port Phillip and Western Port region. It occurs close to the surface in the Bacchus Marsh area, and close to the surface at the MBC site. Groundwater from the Lower Werribee Formation Aquifer interacts strongly with surface water in the Bacchus Marsh area. Hence, any PFAS leaching from MBC into the Lower Werribee Formation Aquifer is likely to find its way into Werribee River, and eventually Port Phillip Bay. The Fyansford Formation Aquifer also feeds into Port Phillip Bay.

4.2 LISTED THREATENED SPECIES LIKELY TO BE IMPACTED BY MBC'S POST-2000 ACTIONS

4.2.1 Summary and important considerations

The actions of MBC are highly likely to have a significant impact on a wide range of EPBC listed threatened species. One of these species (*Litoria raniformis*; Growling Grass Frog) is known to occur on site, including in an area used by MBC to dump contaminated waste. An additional six EPBC listed threatened species have been observed or are known to occur within close proximity to the site (see list below). These include the Golden Sun Moth, Swift Parrot and White-throated Needletail. Further, 12 EPBC listed threatened species (7 fauna; 5 flora) are *likely* to occur within a 1km radius of MBC, and 10 (6 fauna, 4 flora) *may* additionally occur within this 1km radius.

It should be noted that the EPBC Act applies to all areas affected by relevant actions, not just the immediate site on which those actions take place. Therefore, areas downstream of MBC also need to be taken into account. These include the remainder of Parwan Creek, and areas of Werribee River downstream of the Parwan Creek confluence, as well as areas affected by aquifers under the MBC site (Lower Werribee Formation Aquifer and Fyansford Formation Aquifer). This is especially the case given MBC deals with PFAS contaminated material. As described above, PFAS can travel exceptionally long distances in aquatic systems, and even small levels can lead to high level contamination of these systems, due to bioaccumulation (*PFAS NEMP*, 2018).

It should also be noted that many species occurring on site would not be observed or recorded on relevant databases, as the public do not have access to this site. People trying to observe wildlife or ecological communities near the site (on public land) have often been asked by MBC's security guards to leave (despite being on public land), and their number plates have been recorded. Some people who have attempted to report threatened species occurring on site to relevant authorities have received very serious threats of harm from people connected with MBC (HIGHLY CONFIDENTIAL). When *Litoria raniformis* (Growling Grass Frogs) were found by MBC on site in 2018 and 2019, these were not reported to the Victorian Biodiversity Atlas or any other relevant databases (to our knowledge), which in our view is an extremely strange omission. Therefore, the list below is likely to underrepresent the number and variety of threatened species that use the MBC site and surrounding areas.

4.2.2 EPBC Listed Threatened Species

Listings have been obtained from the EPBC database. Sighting records have been obtained from the Victorian Biodiversity Atlas (as at 18th March 2020).

Occurs on site:

Litoria raniformis (Growling Grass Frog); Sightings in 5km radius = 26; Latest ob. 6/12/2018

Known to occur in area (1km buffer) and/or observed in area (5km buffer):

Hirundapus caudacutus (White-throated Needle-tail); Sightings = 6; Latest ob. 22/02/2018

Chrysococcyx osculans (Black-eared Cuckoo); Sightings = 2; Latest ob. 24/10/2018

Lathamus discolor (Swift Parrot); Sightings = 5; Latest ob. 18/06/2017

Synemon plana (Golden Sun Moth); Sightings = 274; Latest ob. 7/12/2012

Diuris basaltica (Small Golden Moths); Sightings = 6; Latest ob. 7/10/2011

Pimelea spinescens subsp. spinescens (Spiny Rice-flower); Sightings = 3; Latest ob. 19/06/2003

Likely to occur within area (1km buffer):

Botaurus poiciloptilus (Australasian Bittern)

Grantiella picta (Painted Honeyeater)

Pedionomus torquatus (Plains-wanderer)

Rostratula australis (Australian Painted Snipe)

Pteropus poliocephalus (Grey-headed Flying-fox)

Delma impar (Striped Legless Lizard)

Galaxiella pusilla (Eastern Dwarf Galaxias, Dwarf Galaxias)

Glycine latrobeana (Clover Glycine, Purple Clover)

Leucochrysum albicans var. tricolor (Hoary Sunray, Grassland Paper-daisy)

Prasophyllum frenchii (Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, Swamp Leek-orchid)

Rutidosis leptorrhynchoides (Button Wrinklewort)

Senecio macrocarpus (Large-fruit Fireweed, Large-fruit Groundsel)

May occur within area (1km buffer):

Anthochaera Phrygia (Regent Honeyeater)

Calidris ferruginea (Curlew Sandpiper)

Numenius madagascariensis (Eastern Curlew, Far Eastern Curlew)

Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll

Tympanocryptis pinguicollis (Grassland Earless Dragon)

Prototroctes maraena (Australian Grayling)

Amphibromus fluitans (River Swamp Wallaby-grass, Floating Swamp Wallaby-grass)

Dianella amoena (Matted Flax-lily)

Dodonaea procumbens (Trailing Hop-bush)

Lachnagrostis adamsonii (Adamson's Blown-grass, Adamson's Blowngrass)

4.3 LISTED THREATENED ECOLOGICAL COMMUNITIES LIKELY TO BE IMPACTED BY MBC'S POST-2000 ACTIONS

Listings have been obtained from the EPBC database. Additional information has been obtained from the DELWP NatureKit database and local records.

4.3.1 Summary and important considerations

Although some parts of the site were previously cleared for farming or mining, there are a substantial number of areas on site that retain high ecological value, or did retain this value until post-2000 works. Biodiversity values on many parts of the site are as high as 100 (highest value possible), especially those containing waterways and gullies. Many riparian and other creek-side areas of Parwan Creek retain very high biodiversity (both fauna and flora), despite some erosion along some (but not all) parts of the creek. There is photographic, observational and modelling evidence of listed threatened ecological communities occurring both on the MBC site and within close vicinity of the site (see list below).

As outlined above, it should also be noted that the EPBC Act applies to all areas affected by relevant actions, not just the immediate site on which those actions take place. Therefore, areas downstream of MBC also need to be taken into account. These include the remainder of Parwan Creek, and areas of Werribee River downstream of the Parwan Creek confluence, as well as areas affected by aquifers under the MBC site (Lower Werribee Formation Aquifer and Fyansford Formation Aquifer). This is especially the case given MBC deals with PFAS contaminated material. PFAS can travel exceptionally long distances in aquatic systems, and even small levels can lead to high level contamination of these systems, due to bioaccumulation.

4.3.2 EPBC Listed Ecological Communities

Occurs on site:

Grassy Eucalypt Woodland of the Victorian Volcanic Plain

Likely to occur on site and within 1km buffer (evidence suggests it DOES occur on site and in area):

Natural Temperate Grassland of the Victorian Volcanic Plain

May occur within 1km buffer:

Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia

White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

4.3.3 Additional information from Victorian government databases

Strategic biodiversity values on site (see Figure 4):

Strategic biodiversity values on site range from 20 (yellow) to 100 (dark green; exceptionally high).

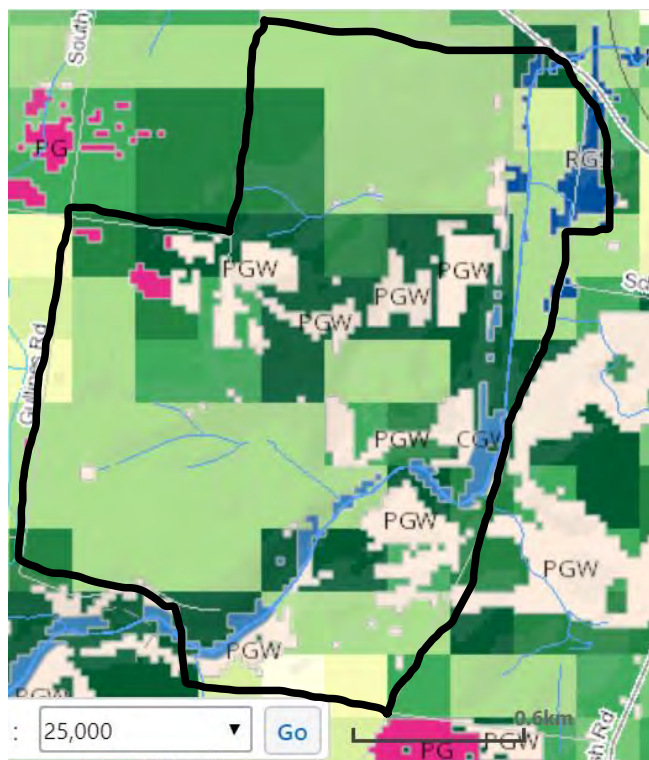
Ecological Vegetation Classes on site (see Figure 4):

Plains Grassy woodland [includes Grassy Eucalypt Woodland of Victorian Volcanic Plain]

Creek Grassy Woodland [may include Grassy Eucalypt Woodland of Victorian Volcanic Plain]

Plains Grassland [includes Natural Temperate Grassland of the Victorian Volcanic Plain]

River Gum Swamp



Note. Approx. MBC site (current) is outlined in black; Darker green = higher biodiversity values; PGW = Plains Grassy woodland; CGY = Creek Grassy Woodland; PG = Plains Grassland; RGS = River Gum Swamp.

Figure 4. Strategic biodiversity values and ecological vegetation classes on and near Maddingley Brown Coal site. Obtained from DELWP NatureKit database, 18 March 2020.



Figure 5. Examples of ecological value on the MBC site (including Creek Grassy Woodland, grassy woodland and grassy plains flora - *Glycine Clandestina* and *Wahlenbergia* growing in a grassy woodland area).

Note. Although these particular individual flora are not threatened, many of the ecological communities they belong to on site are. The first two photos are on site, but were taken from public land. The river red gum in the first photo is one of many very old red gums along Parwan Creek in the MBC site, many of which form small strands surrounded by indigenous flora, or are growing in riparian zones subject to flooding (i.e. they form part of River Gum Swamps). The second photo shows vegetation along Parwan Creek in the area immediately beside Star Dam – this vegetation will be impacted (probably killed) if acid sulphate is disturbed and escapes from Star Dam into Parwan Creek. The last two photos were taken in a publicly accessible patch of grassy woodland immediately across the creek from MBC. This patch of grassy woodland is similar to patches found on the MBC site, especially near Parwan Creek and natural gully areas.

These photos show that the MBC site still retains high biodiversity and ecological value in some parts, especially new areas MBC has begun exploiting post-2000.

4.4 MIGRATORY SPECIES PROTECTED UNDER INTERNATIONAL AGREEMENTS LIKELY TO BE IMPACTED BY MBC'S POST-2000 ACTIONS

4.4.1 Summary and important considerations

The migratory species below are protected under international agreements, and under the EPBC Act. Migratory birds may visit the MBC site for foraging and for access to waterbodies on the site. They visit the Parwan Creek and Werribee River for feeding, nesting and other activities. Birds are particularly susceptible to the effects of PFAS and other contaminants which bioaccumulate in the food chain. MBC has already been found to be leaching contaminated water into waterways and aquifers on site, and the full extent and effects of this contamination has never been investigated. Levels of PFAS leaching from MBC have not been tested to our knowledge, and the effects on birds and other wildlife has not been tested.

Again we note that it is not enough to only consider wildlife found on the immediate MBC site. Actions occurring on the site, including those starting after 2000 and in new areas since 2000, will have downstream effects on all areas into which Parwan Creek, Lower Werribee Formation Aquifer and Fyansford Formation Aquifer feed. MBC accepts and processes PFAS contaminated materials, including PFAS contaminated soil. PFAS travels exceptionally long distances, and even low levels of PFAS can result in high environmental damage, including effects on migratory birds. The migratory birds listed below are only those within the vicinity of MBC. A large number of additional migratory

birds are recorded in downstream areas likely to be impacted by MBC activities, including a Ramsar listed wetland protected by the EPBC Act.

Also, presence of migratory species in the MBC area is likely to be underestimated, for reasons outlined under “Listed Threatened Species” above.

4.4.2 Protected Migratory Species

Listings have been obtained from the EPBC database. Sighting records have been obtained from the Victorian Biodiversity Atlas (as at 18th March 2020).

Known to occur in area (1km buffer) and/or observed in area (5km buffer):

Hirundapus caudacutus (White-throated Needletail); Sightings = 6; Latest ob. 22/02/2018

Ardea alba (Great Egret); Sightings = 8; Latest ob. 27/06/2018

Haliaeetus leucogaster (White-bellied Sea-Eagle); Sightings = 1 (+); Latest ob. 16/05/2018

Gallinago hardwickii (Latham's Snipe); Sightings = 3; Latest ob. 6/01/2008

Rostratula australis (Australian Painted-snipe); Sightings = 1; Latest ob. 18/11/1989

Myiagra cyanoleuca (Satin Flycatcher); Species or species habitat known to occur within area

Likely to occur within area (1km buffer):

Apus pacificus (Fork-tailed Swift)

Monarcha melanopsis (Black-faced Monarch)

Rhipidura rufifrons (Rufous Fantail)

Tringa nebularia (Common Greenshank, Greenshank)

May occur within area (1km buffer):

Motacilla flava (Yellow Wagtail) Species or species habitat may occur within area

Actitis hypoleucos (Common Sandpiper) Species or species habitat may occur within area

Calidris acuminata (Sharp-tailed Sandpiper) Species or species habitat may occur within area

Calidris ferruginea (Curlew Sandpiper)

Calidris melanotos (Pectoral Sandpiper)

Gallinago hardwickii (Latham's Snipe, Japanese Snipe)

Numenius madagascariensis (Eastern Curlew, Far Eastern Curlew)

Pandion haliaetus (Osprey)

4.5 WETLAND OF INTERNATIONAL IMPORTANCE (RAMSAR WETLAND) LIKELY TO BE IMPACTED BY MBC'S POST-2000 ACTIONS

4.5.1 Summary and important considerations

The MBC site is within an important catchment area for a Ramsar wetland of international importance, protected under the EPBC Act: *Port Phillip Bay (western shoreline) and Bellarine Peninsula*. Parwan Creek runs through the MBC site, and then into the Werribee River, which, at its mouth, becomes part of the Ramsar wetland. The EPBC database lists the distance from MBC to the EPBC listed wetland as 20 to 30km. As PFAS has been known to travel more than this distance, over a relatively short amount of time, PFAS leached from MBC operations, including post-2000 actions and areas, could easily spread to this Ramsar listed wetland.

MBC is currently leaching contaminated water into Parwan Creek and aquifers that feed into the Werribee River catchment. It is not known whether this leachate contains PFAS – it seems highly likely that it would, given MBC currently receive and process PFAS contaminated soil. No assessment of potential impact on Parwan Creek, Werribee River or Port Phillip Bay (western shoreline) has ever been conducted. When PFAS enters aquatic systems and wetland, it bioaccumulates, and remains there indefinitely. There is currently no adequate technology available for removing PFAS from wetlands that have become contaminated.

4.5.2 Ramsar Wetland of International Importance

Port Phillip Bay (Western Shoreline) and Bellarine Peninsula: 20 - 30km downstream of MBC site

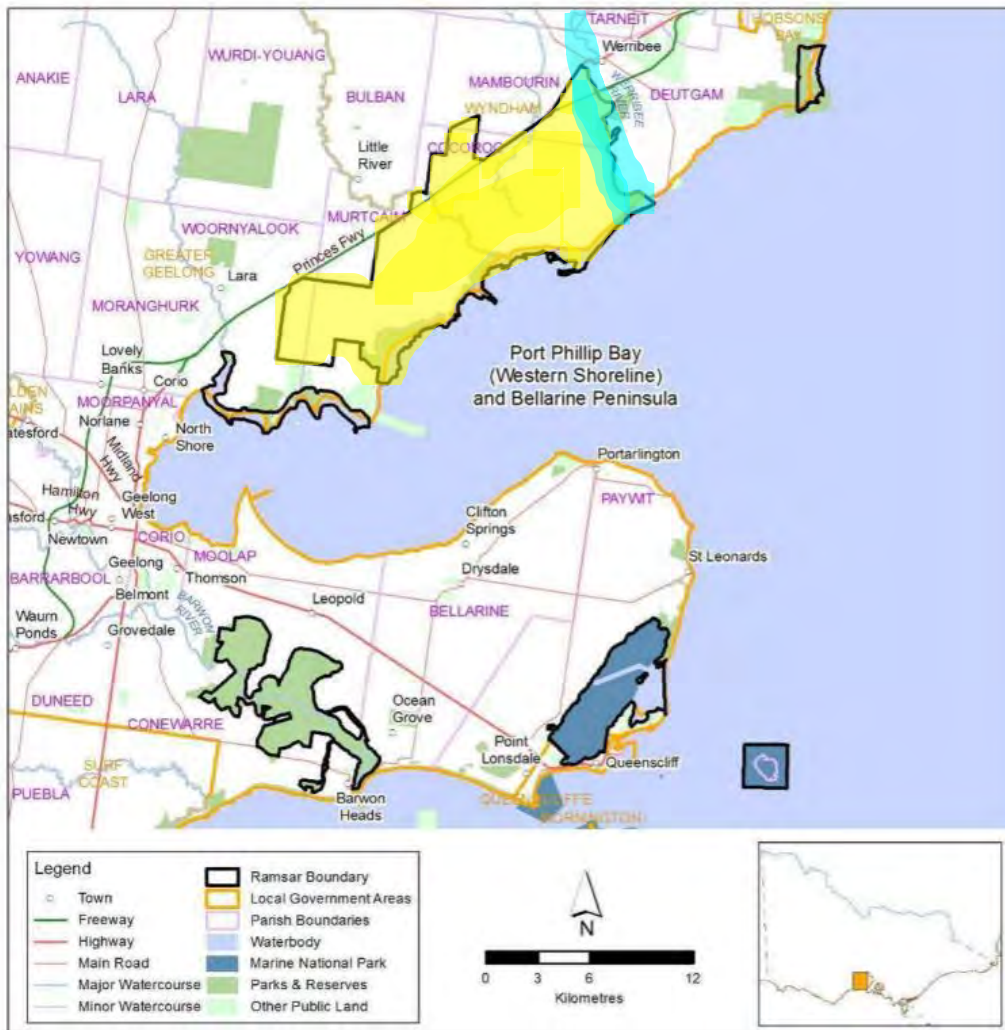


Figure 6. Port Phillip Bay (Western Shoreline) and Bellarine Peninsular Ramsar Site location, from DEPI (2013), p.3.

Note. Additions to map are as follows: Relevant Ramsar area is highlighted in yellow; Werribee River area is highlighted in bright blue. Please note that aquifers underlying MBC also feed into this area, both directly and indirectly via various aquatic systems.