



ACT
Government

Chief Minister, Treasury and
Economic Development

Freedom of Information Publication Coversheet

The following information is provided pursuant to section 28 of the *Freedom of Information Act 2016*.

FOI Reference: CMTEDDFOI 2023-192

Information to be published	Status
1. Access application	Published
2. Decision notice	Published
3. Documents and schedule	Published
4. Additional information identified	No
5. Fees	N/A
6. Processing time (in working days)	30
7. Decision made by Ombudsman	N/A
8. Additional information identified by Ombudsman	N/A
9. Decision made by ACAT	N/A
10. Additional information identified by ACAT	N/A

From: [REDACTED]
To: [CMTEDD FOI](#)
Subject: Freedom of Information Request re form reference code GNP56X44
Date: Tuesday, 30 May 2023 11:35:42 PM
Attachments: [licence certified copy.pdf](#)
[worksafe.pdf](#)

[You don't often get email from [REDACTED] Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

To whom it may concern,

I [REDACTED] do hereby request under the ACT Freedom of Information Act 2016: any and all documents (draft or final), emails (sent or received), file notes, minutes, reports, internal reports, policies, applicable rules, directions, written requests, phone logs, handwritten notes, any correspondence with the ACT Education Directorate or ACT Health or any external consultant or other party, or any other records, relating to the processing or consideration of my complaint (attached), Submitted online on 19/04/2023 to Worksafe ACT using the "Report a Workplace Concern or Issue form", about indoor air quality at Telopea Park School, and for which I received as acknowledgement: "Your form reference code is: *GNP56X44 *"

I specifically also request any items relating to any possible decision not to investigate this report, and any document, policy or agreement (formal or otherwise) upon which such a decision did, does or might depend.

The documents may be sent by email to [REDACTED]
Paper documents may be sent to:

[REDACTED]

Since I am requesting documents possibly containing my own personal information, pursuant to requirements I have attached evidence of my identity in the form of a scan of a certified copy of my current Australian driver's license.

Sincerely
[REDACTED]



ACT
Government

Chief Minister, Treasury and
Economic Development

Our ref: CMTEDDFOI 2023-192



FREEDOM OF INFORMATION REQUEST

I refer to your application under section 30 of the *Freedom of Information Act 2016* (the Act), received by the Chief Minister, Treasury and Economic Development Directorate (CMTEDD) on 30 May 2023.

Specifically, you are seeking: *"... any and all documents (draft or final), emails (sent or received), file notes, minutes, reports, internal reports, policies, applicable rules, directions, written requests, phone logs, handwritten notes, any correspondence with the ACT Education Directorate or ACT Health or any external consultant or other party, or any other records, relating to the processing or consideration of my complaint (attached), Submitted online on 19/04/2023 to WorkSafe ACT using the "Report a Workplace Concern or Issue form", about indoor air quality at Telopea Park School, and for which I received as acknowledgement: "Your form reference code is: *GNP56X44 *"*

I specifically also request any items relating to any possible decision not to investigate this report, and any document, policy or agreement (formal or otherwise) upon which such a decision did, does or might depend."

Authority

As an appointed Information Officer under section 18 of the Act, I am authorised to make a decision on access or amendment to government information in the possession or control of CMTEDD.

Timeframes

In accordance with section 40 of the Act, CMTEDD was required to provide a decision on your access application by 12 July 2023.

Decision on access

Searches were completed for relevant documents and 15 documents were identified that fall within the scope of your request.

I have included as **Attachment A** to this decision the schedule of relevant documents. This provides a description of the documents that fall within the scope of your request and the access decision for those documents.

I have decided to grant access in full to nine documents and partial access to six of documents.

My access decisions are detailed further in the following statement of reasons and the documents released to you are provided as **Attachment B** to this letter.

In accordance with section 54(2) of the Act a statement of reasons outlining my decisions is below.

Statement of Reasons

In reaching my access decisions, I have taken the following into account:

- the Act;
- the content of the documents that fall within the scope of your request;
- the *Human Rights Act 2004*.

Exemption claimed

Information that would, on balance, be contrary to the public interest to disclose under the test set out in section 17 of the Act

Public Interest

The Act has a presumption in favour of disclosure. As a decision maker I am required to decide where, on balance, public interests lies. As part of this process I must consider factors favouring disclosure and non-disclosure.

In *Hogan v Hinch* (2011) 243 CLR 506, [31] French CJ stated that when ‘used in a statute, the term [public interest] derives its content from “the subject matter and the scope and purpose” of the enactment in which it appears’. Section 17(1) of the Act sets out the test, to be applied to determine whether disclosure of information would be contrary to the public interest. These factors are found in subsection 17(2) and Schedule 2 of the Act.

Taking into consideration the information contained in the documents found to be within the scope of your request, I have identified that the following public interest factors are relevant to determine if release of the information contained within these documents is within the ‘public interest’.

Factors favouring disclosure in the public interest (Schedule 2.1):

(a) disclosure of the information could reasonably be expected to do any of the following:

(ii) contribute to positive and informed debate on important issues or matters of public interest;

(xi) reveal environmental or health risks or measures relating to public health and safety.

The issue of air quality in schools is something that would reasonably be of interest to members of the ACT community. The measures taken when a potential issue with air quality is identified is also of reasonable interest to the public. I have placed significant weight on these factors and note that the release of this information is clearly within the public interest to release.

Factors favouring nondisclosure in the public interest (Schedule 2.2):

- (a) *disclosure of the information could reasonably be expected to do any of the following:*
- (ii) *prejudice the protection of an individual's right to privacy or any other right under the Human Rights Act 2004.*

Having reviewed the information, I consider that the protection of an individual's right to privacy, is a significant factor. Release of information concerning individuals working within the ACT Public Service is generally not considered to prejudice the protection of an individual's right to privacy. However, where mobile phone numbers may be used for home and work purposes, this information is redacted, as it could or would reasonably be expected to prejudice an individual's right to privacy under the *Human Rights Act 2004*.

Considering the type of information to be withheld from release, I am satisfied that the factors in favour of release can still be met while protecting the personal information of the individuals involved. I therefore weight the factor for non-disclosure more highly than the factor in favour of release in this instance.

Having applied the test outlined in section 17 of the Act and deciding that release of personal information contained in the documents is not in the public interest to release, I have chosen to redact this specific information in accordance with section 50(2). Noting the pro-disclosure intent of the Act, I am satisfied that redacting only the information that I believe is not in the public interest to release will ensure that the intent of the Act is met and will provide you with access to the majority of the information held by CMTEDD within the scope of your request.

Charges

Processing charges are not applicable for this request because the number of pages to be released to you is below the charging threshold of 50 pages.

Online publishing – Disclosure Log

Under section 28 of the Act, CMTEDD maintains an online record of access applications called a disclosure log. Your original access application, my decision and documents released to you in response to your access application will be published on the CMTEDD disclosure log after 3 days after the date of my decision. Your personal contact details will not be published.

You may view CMTEDD disclosure log at <https://www.cmtedd.act.gov.au/functions/foi>.

Ombudsman Review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in CMTEDD disclosure log, or a longer period allowed by the Ombudsman.

We recommend using this form [Applying for an Ombudsman Review](#) to ensure you provide all of the required information. Alternatively, you may write to the Ombudsman at:

The ACT Ombudsman
GPO Box 442
CANBERRA ACT 2601

Via email: actfoi@ombudsman.gov.au

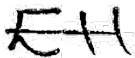
ACT Civil and Administrative Tribunal (ACAT) Review

Under section 84 of the Act, if a decision is made under section 82(1) on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision. Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal
GPO Box 370
Canberra City ACT 2601
Telephone: (02) 6207 1740
<http://www.acat.act.gov.au/>

Should you have any queries in relation to your request please contact me by telephone on 6207 7754 or email CMTEDDFOI@act.gov.au.

Yours sincerely



Emma Hotham
Information Officer
Information Access Team
Chief Minister, Treasury and Economic Development Directorate

12 July 2023



ACT
Government

Chief Minister, Treasury and
Economic Development

FREEDOM OF INFORMATION REQUEST SCHEDULE

WHAT ARE THE PARAMETERS OF THE REQUEST

Reference NO.

Any and all documents (draft or final), emails (sent or received), file notes, minutes, reports, internal reports, policies, applicable rules, directions, written requests, phone logs, handwritten notes, any correspondence with the ACT Education Directorate or ACT Health or any external consultant or other party, or any other records, relating to the processing or consideration of my complaint, submitted online on 19/04/2023 to WorkSafe ACT using the "Report a Workplace Concern or Issue form", about indoor air quality at Telopea Park School. I specifically also request any items relating to any possible decision not to investigate this report, and any document, policy or agreement (formal or otherwise) upon which such a decision did, does or might depend.

CMTEDDFOI 2023-192

Ref No	Page number	Description	Date	Status	Reason for Exemption	Online Release Status
1	1	Meeting request	8 May 2023	Full Release		Yes
2	2-3	Email trail – ACT Education Telopea Park School	8 May 2023	Partial Release	Sch 2 s2.2 (a)(ii)	Yes
3	4-8	Email with attachments – TPS Feedback posters	15 May 2023	Partial Release	Sch 2 s2.2 (a)(ii)	Yes
4	9-13	Email trail – TPS poor air quality complaint	16 May 2023	Full Release		Yes
5	14-15	Inspector notes	8 May 2023	Full Release		Yes
6	16-17	Email trail	8 May 2023	Partial Release	Sch 2 s2.2 (a)(ii)	Yes
7	18-22	Email trail	31 May 2023	Partial Release	Sch 2 s2.2 (a)(ii)	Yes
8	23-25	Email trail	16 May 2023	Full Release		Yes
9	26-30	Email trail	31 May 2023	Partial Release	Sch 2 s2.2 (a)(ii)	Yes
10	31-32	Email trail	16 May 2023	Full Release		Yes
11	33-37	Email trail	31 May 2023	Full Release		Yes
12	38	Email to applicant	15 May 2023	Full Release		Yes

13	39-43	Smartform lodgement and attachments	19 Apr 2023	Full Release		Yes
14	44-45	Email trail	12 May 2023	Partial Release	Sch 2 s2.2 (a)(ii)	Yes
15	46-47	Email to applicant	31 May 2023	Full Release		Yes
Total No of Docs						
15						

From: "Shepherd, Jackii"
Sent: 08/05/2023 10:02 AM
To: "Selfe, Sophie" <Sophie.Selfe@act.gov.au>
Subject: Accepted: Telopea Park discussion

From: "Heard, Jonathan" <Jonathan.Heard@worksafe.act.gov.au>
Sent: 08/05/2023 8:59 AM
To: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Cc: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Subject: FW: ACT education Telopea Park School

OFFICIAL

Good morning Andrew,

Noting your availability for work, I have the below case which is in a bit of a backlog unfortunately. Could you have a look into the case and put together a proposed response and/or plan to address the concerns? If a visit is required (noting the sensitivities of sending inspectors to a school and the likelihood of external attention) I will coordinate with Jackii to find you someone to take with you.

If you think a response via e-mail is sufficient, please put together a draft for me to review and send off once we are agreed.

If you have any questions please reach out, otherwise I will pass along some more priorities soon.

Kind regards,

Jon

Jon Heard | Assistant Director, Occupational Hygiene
Phone: 02 6207 0164 | Mobile: Sch 2.2(a)(ii) | EMAIL: jonathan.heard@worksafe.act.gov.au

Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601



ACT
Government

I acknowledge the traditional custodians of the ACT the Ngunnawal people, and their continuing connection to land and community. I pay my respect to them, and to the Elders both past and present.

From: Grant, DanielleG <DanielleG.Grant@worksafe.act.gov.au>
Sent: Monday, 24 April 2023 11:58 AM
To: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
Subject: ACT education Telopea Park School

Hi Jono

WORKSAFEACT

I originally gave this case to Jodie (she hadn't even looked at it) and then I read through the compliant and decided it is better off with DS. The complaint centres around hazardous levels of CO2 in classrooms. The parent alleges inappropriate ventilation and air quality. He has written a letter with reports from a CO2 monitor he has sent to school with his child. Reportedly the CO2 levels are often exceeding the exposure standard. I could look through the exposure standards but it's going to take me longer and I figure you guys are more up to speed with this stuff.

SF Case 00309913

Thanks

Danielle Grant | Assistant Director | Senior Inspector
General Inspectorate Team | Strategy, Compliance and Enforcement
E: danielleg.grant@worksafe.act.gov.au
M: Sch 2.2(a)(ii)

Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

WORKSAFEACT



IMPORTANT

This email, any attachment and the information and material contained in them, is for the use of the intended recipient. The intended recipient must not review, forward, disclose, distribute or make any other use of the email, any attachment or the information or material in them. This email is not intended to constitute or provide financial or legal advice and you must not rely or act on the information or material in the email or any attachment for those purposes. If you are not the intended recipient please notify us.

From: "Shepherd, Jackii"
Sent: 15/05/2023 9:36 AM
To: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Cc: "Heard, Jonathan" <Jonathan.Heard@worksafe.act.gov.au>
Subject: FW: Telopea Park - WorkSafe
Attachments: TPS feedback posters.pdf

OFFICIAL

Hi Andrew,

Please find below information about the Telopea Park complaint. I have made some tweaks to your response email to reflect this 😊

Thanks heaps,

J

Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

Online: [Education Directorate Contact Form](#) (via Access Canberra)

Phone: [+61 2 6205 5429](tel:+61262055429)

You can also raise your concern with ACT Health as it relates to COVID-19 infection risk, you can find contact details here : [Contact Us - COVID-19](#)

From: Farrington, Shannon <Shannon.Farrington@act.gov.au>
Sent: Friday, 12 May 2023 4:53 PM
To: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Subject: Telopea Park - WorkSafe

OFFICIAL

Dear Jackii

I have received this through Sophie and Pen so I don't know the exact conversation you had with Sophie on Monday but she gave me the gist.

Pen manages all of our WorkSafe responses, so she has a really good understanding of the Act. She mentioned your concern is around whether we follow our procedures for complaints management communication and consultation, and not about the CO2 levels at the school.

In relation to your enquiry about a complaint WorkSafe ACT has received regarding Telopea Park School, please find below information to address this matter.

The school became aware of a parent's interest in CO2 levels around September 2022. At that time, an executive teacher communicated with the parent via telephone and then the parent sent a follow up email subsequent to that call. In the follow up email the parent offered to provide a CO2 monitor to the school for trial. On 7 November 2022, the principal emailed the parent as a result of the parent's feedback via the school's parent feedback form. Resolution of any query lodged via the school's parent feedback form is managed by one of the Telopea Park School executive staff. The parent was advised in that email that CO2 monitors had been provided to the school by the Education Directorate. On 9 November 2022, the parent replied to the principal's email and offered some suggestions that the school could consider in relation to CO2 monitors. No further response was requested by the parent at that time. The parent also acknowledges progress at the school in relation to ventilation.

Although this wasn't lodged as a formal complaint we have followed our dispute resolution procedures informally.

I trust that this information satisfies your request. If not please do not hesitate to contact myself or Pen.

Kind regards

Shannon Farrington | Senior Director - Work Health and Safety, Early Intervention and Wellbeing

Phone: [Sch 2.2\(a\)\(ii\)](#) | Email: shannon.farrington@act.gov.au

Safe @ School | Education | ACT Government

51 Fremantle Drive, Stirling, ACT 2611 | GPO Box 158 Canberra ACT 2601 | www.act.gov.au

www.education.act.gov.au | [Facebook](#) | [Twitter](#) | [Instagram](#) | [LinkedIn](#) | [Google+](#)



I acknowledge the traditional custodians of the lands and waters where we live and work, and pay my respects to elders past, present and future.

From: Selfe, Sophie <ophie.Selfe@act.gov.au>

Sent: Tuesday, 9 May 2023 11:14 AM

To: Hucker, Penelope <Penelope.Hucker@act.gov.au>

Cc: Farrington, Shannon <Shannon.Farrington@act.gov.au>

Subject: Telopea Park - WorkSafe

OFFICIAL

Hi Pen,

Thank you for the assistance in addressing this matter.

Jackii Shepherd contacted me yesterday and advised that WorkSafe has received a complaint regarding Telopea Park School. The complainant had sent their child to school with a carbon dioxide monitor in their pocket and has provided those readings to WorkSafe. Jackie explained that as an occupational hygienist she was not concerned by the carbon dioxide numbers cited by the parent. She advise that she assumed that the Directorate was aware of the issue as the complainant had also provided WorkSafe with a letter from the school requesting parents to not send their children to school with detectors.

Jackii has requested an update by the end of the week that indicates the parents complaint has been managed in accordance with our internal processes so that she may go back to the complainant and advise them that they are aware of the Directorate actions in this matter and that this is the proper channel to progress their concerns.

Thanks again, Pen.

Kind regards,
Soph

Sophie Selfe | Director - Work Health and Safety, Early Intervention and Wellbeing

Phone: 02 6207 0290 | Mobile: [Sch 2.2\(a\)\(ii\)](#) | Email: sophie.selfe@act.gov.au

Safe @ School | Education | ACT Government

www.education.act.gov.au | [Facebook](#) | [Twitter](#) | [LinkedIn](#) | [Google+](#)

WE WANT

YOUR

FEEDBACK

Use the link
or the QR
code below
to provide us
feedback

<https://forms.office.com/r/ZXsVCsx91K>



TELOPEA PARK SCHOOL

LYCEE FRANCO-AUSTRALIEN DE CANBERRA



<https://forms.office.com/r/ZXsVCsx91K>

Please use the QR code or link above to provide feedback
or report an issue at Telopea Park School

From: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Sent: 16/05/2023 12:06 PM
To: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Cc: "Heard, Jonathan" <Jonathan.Heard@worksafe.act.gov.au>
Subject: FW: Telopea Park School poor air quality complaint
Attachments: worksafe.pdf

OFFICIAL

Gid day Jackii,

Please advise

Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil Construction Inspectorate
P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner GPO Box 158 Canberra ACT 2601

-----Original Message-----

From: [REDACTED]
Sent: Tuesday, May 16, 2023 12:02 PM
To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Cc: Kurt.Huehl@worksafe.act.gov.au; HPS <HPS@act.gov.au>
Subject: Re: Telopea Park School poor air quality complaint

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Andrew,

Unfortunately my complaint has not been resolved and I am asking you to investigate the poor indoor air quality measured at my child's school.

You sent as an attachment the school's feedback posters. I did fill out the feedback form using the URL and QR code on that poster, on 25/09/2022, in which I pointed out that the school had not been following its Winter Air Quality Plan, but it did not result in a satisfactory response.

In response to me filling in the feedback form, I received an email from the Principal, Jason Holmes, on 7/11/2022, in which he says:

"I can confirm that we have received a stock of CO2 monitors for the school along with instructions on their effective use from the Education Directorate."

... and ...

"I think the Education Directorate's provision of CO2 monitors shows a positive attitude towards air quality in schools and we will be asking for more CO2 monitors to be provided so we can distribute them more widely."

The CO2 monitors provided to the school by the Directorate appeared to be of the same type subject to Worksafe ACT Improvement Notice

N-0000004598 issued by Kurt Kuehl, which stated that "... I have formed the reasonable belief that the monitors supplied by the ACT Education Directorate are not an effective control and, unless a review into the control is undertaken, the Directorate has breached section 19 of the Work Health and Safety Act 2011...."

(You may also recall that this is the same principal who previously, on learning that I had measured poor CO2 levels in the classroom, asked whether he could or should ask me not to send the CO2 monitor, and how to refuse my offer of a CO2 monitor.)

Furthermore, my child informs me that the CO2 monitors supplied by the directorate were only in use for at most a few weeks before they stopped being used, during which time their alarms indicating poor air quality went off repeatedly, and I suspect that they have been disposed of as e-waste as (I am told by a teacher) they were at some other schools.

All of this happened before I made my complaint to you, and I made the complaint because neither the school nor the directorate were making any progress in resolving the problem. In my complaint, attached, I show that the CO2 levels measured by a high quality monitor (Aranet4) are still much higher than the thresholds to take action as specified by Safe Work Australia in: <https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19>

The important point, which I think ought to drive your decision-making, is that the air quality in the classrooms is still very poor, and the staff and students are still at unnecessarily increased risk of infection from various airborne diseases, (as well as probably even suffering some cognitive impairment at the worst times).

If you are refusing to investigate the air quality in the classrooms at Telopea Park School, (which I believe is still unsafe), then I would like you to state this clearly and give your reasons.

Upon your suggestion, I have copied ACT Health on this email, as you rightly point out it does relate to COVID-19 infection risk, amongst other harmful effects of poor ventilation.

Kind Regards,


On 15/05/2023 2:21 pm, Woolgar, Andrew wrote:

> OFFICIAL

>

> Gid day 

>

> Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

>

> WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

>

> Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

> Online: Education Directorate Contact

> Form<<https://www.accesscanberra.act.gov.au/s/services/education-feedback>

> ck> (via Access Canberra)

> Phone: +61 2 6205 5429<tel:+61262055429>

>

> You can also raise your concern with ACT Health as it relates to

> COVID-19 infection risk, you can find contact details here : Contact

> Us - COVID-19<<https://www.covid19.act.gov.au/contact-us>>

>

> Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil

> Construction Inspectorate

> P: 02 620 73989 | E:

> andrew.woolgar@worksafe.act.gov.au<mailto:andrew.woolgar@worksafe.act.

> gov.au> Office of the Work Health and Safety Commissioner GPO Box 158

> Canberra ACT 2601 [cid:image001.jpg@01D98737.D1962790]

>

>

>

>

>

> -----
 > - This email, and any attachments, may be confidential and also

> privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

> -----

> -

>

To Whom it may concern:

I would like to bring to your attention the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School, in violation of the school's duties as described by Safe Work Australia in their guidance document:

<https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19> .

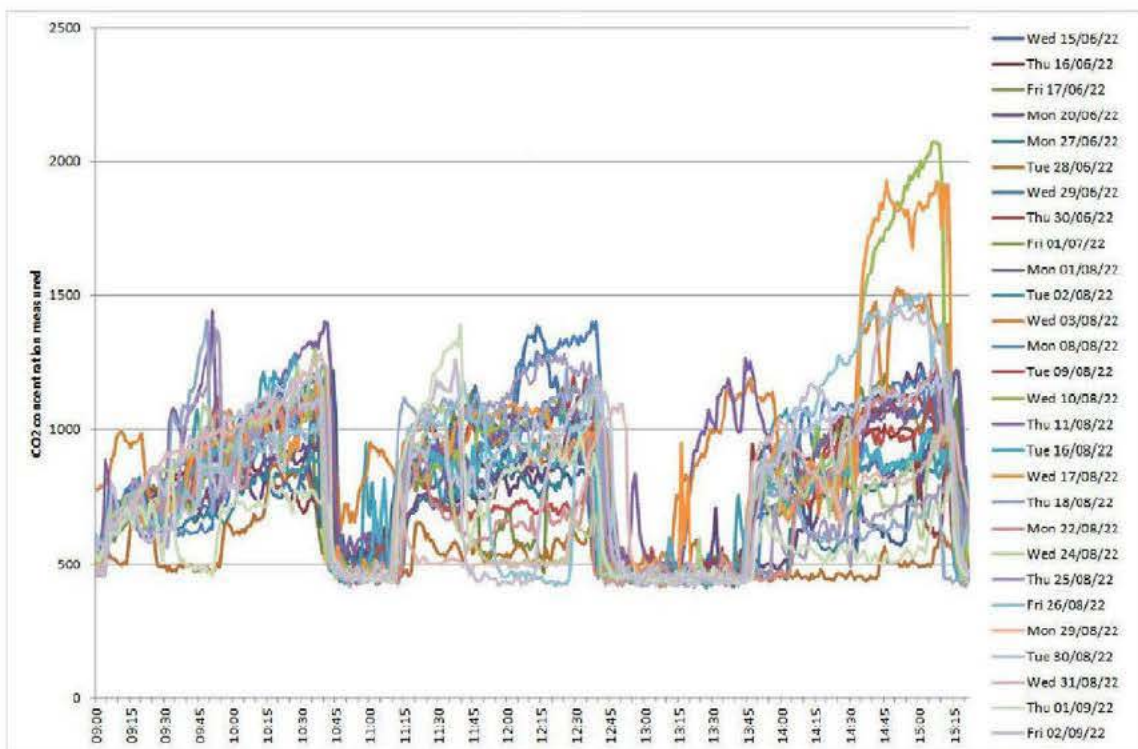


Figure 1: CO₂ readings experienced by a Year 1 student at Telopea Park School in 2022

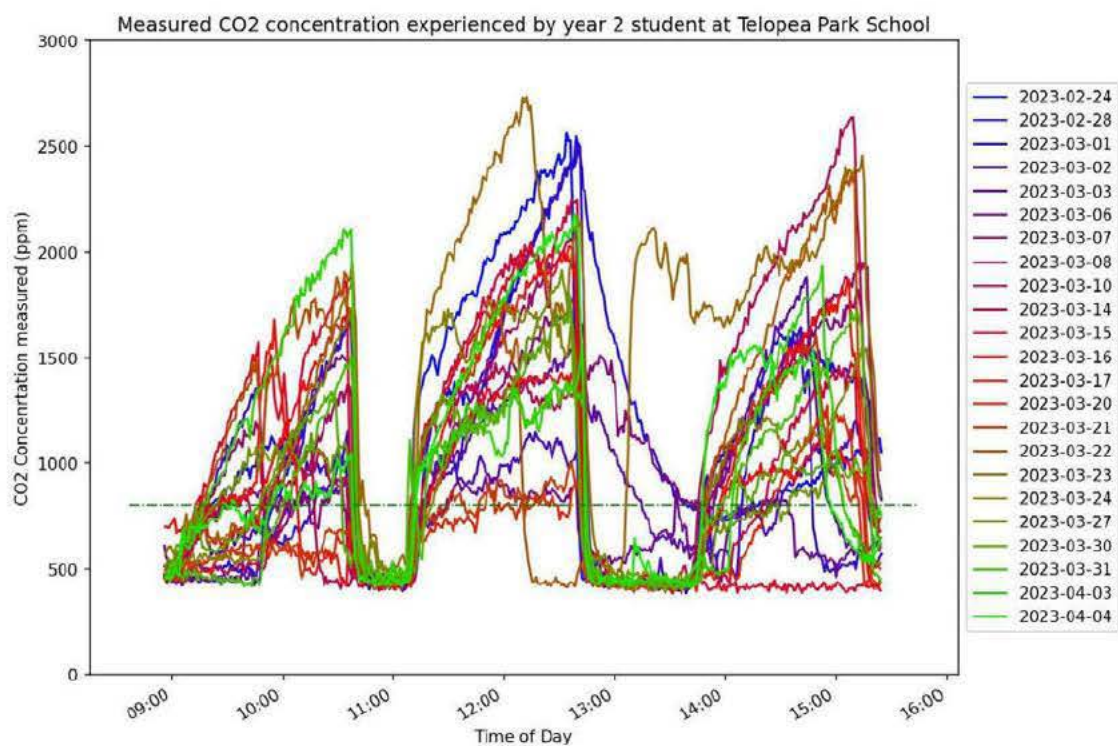


Figure 2: CO₂ readings experienced by a Year 2 student at Telopea Park School in 2023

Having sent a CO₂ monitor to the school with my child, I now know that the CO₂ concentration in some “naturally ventilated” classrooms usually exceeds 1500ppm on most days, and sometimes exceeds 2500ppm, and this is all due to accumulated exhaled breath, as there are no other sources of CO₂ in the rooms. They do not have any air purifiers in the classrooms and the wearing of masks in the school is very rare, so there is nothing in place to reduce infection risk below that which would be expected for these poor CO₂ readings.

I have brought the hazardous poor air quality to the attention of the school on numerous occasions including providing them with detailed measurements of the CO₂ concentration and suggestions for how to improve the air quality, but there has been no significant action, and the ventilation of the classrooms is not significantly better than it would have been pre-2019. Their verbal responses were dismissive, and they would not make a written response until I demanded one under a Freedom of Information request, which revealed that the principal's first response was to enquire whether he could or should prevent me from measuring the poor air quality:

OFFICIAL

Good afternoon,

I'm seeking advice as to whether I can (or should) ask a parent to not send their child with a CO2 monitor and how the staff member can reply to say thank you for the kind offer but that they won't be accepting the offer of the CO2 monitor?

(You can read this email trail on the ACT Education disclosure log under the entry EDU_2022_039 https://www.education.act.gov.au/about-us/freedom_of_information/disclosure-log/nocache and there is further relevant documentation under the disclosure EDU_2022_034).

The school was subsequently given some poor quality CO₂ monitors by the Education Directorate around the 7th November 2022, (the same type that was the subject of Worksafe ACT Improvement Notice N-0000004598), - I believe these all have the defect that when the alarm sounds due to detecting bad air quality, pressing the button to silence the alarm twice instead of once causes the monitor enter calibration mode that should only be used outdoors, and it re-calibrates itself such that the current poor air quality will from that point onwards produce the reading for excellent outdoor air. The CO₂ monitor in my child's classroom was used for about a week, during which time the alarm for bad air quality went off repeatedly, and the following weeks I am told the screen was all black, probably indicating that it was turned off or not plugged in. The one in another classroom also disappeared. When I have asked for windows to be opened, sometimes they do open a window slightly for a few days (maybe resulting in CO₂ readings more like 1600ppm) but they often do not keep doing beyond a few days even when the weather is pleasant, and it seems likely that they would not open windows when it is cold or hot outside, which combined with the Directorate's ban on accepting air purifiers makes the classrooms quite unsafe.

It is clear that the Education Directorate is aware of the high infection risk – they even wrote to parents on 6/4/2023 warning in advance of the expectation of consequent staff absences. It is a pity that they are not pursuing the option of operating a safe workplace instead:



Dear parents and carers,

As we approach the end of term 1, 2023 I am pleased that we have been able to have a more usual start to the school year after the disruption caused by COVID-19 during the 2020, 2021 and 2022 school years.

However, looking ahead into term 2 with winter approaching, we are expecting to see a higher number of staff away due to seasonal illness and COVID-19.

There may be times in the coming months where unexpected staff absences, and the

From the School's [Winter Indoor Air Quality Plan](#) and [Summer Indoor Air Quality Plan](#), it is clear that they do understand how to reduce infection risk in their buildings. From the measured CO₂ readings, it is clear that they are not doing it.

I have several suggestions for enforcement action that Worksafe ACT could take in order to make the school a safer environment for teachers and students, however given that the Education Directorate, the school management and many of the teaching staff have demonstrated a lack of motivation, and even an unwillingness to take any ongoing actions to improve air quality and infection risk, I think that continued and ongoing monitoring by an external organisation (such as Worksafe ACT) is essential, and that any inspections must be unannounced.

If the Directorate or school continues to insist that they will not allow air purifiers and will rely entirely on opening windows, then you could order the installation of some remotely accessible CO₂ monitors such as Aranet4 Pro with an internet gateway, with a dashboard located at Worksafe ACT to check on compliance. It would be desirable to have one in each so-called "naturally ventilated" classroom (which would cost on the order of \$25 per student but should last several years) but in order to bring about improvement at the earliest opportunity, you could also start with just a few and move them around the school during unannounced visits. Personally I think that there are genuine concerns that opening windows right next to the students can make them cold, and I think that the Education Directorate implicitly intends that this will be solved by simply ceasing to open the windows (without providing any other air quality improvements). As a partial solution, I think it would make sense to order the school to remove the screws fastening shut the many windows that are higher up than the occupants, which could provide ventilation without a draught blowing right at any student, (and obviously check that any required safety devices are in place to prevent these windows opening wide enough for children to fall out).

Air purifiers are another way that the infection risk could be lowered without making students cold, however based on the disclosures I received under Freedom of Information requests, I am concerned that the Education Directorate does not understand the operation of these devices, does not believe that they are capable of removing infectious aerosols, and is likely to choose devices (such as the Dyson models they acquired for bushfire smoke) with much too low Clean Air Delivery Rate (CADR) to provide a significant improvement in safety. Several reputable organisations (including the WHO) recommend providing a minimum of 10 litres per second per student of clean air. If air purifiers are installed but just a token number or too small a model, with insufficient Clean Air Delivery Rate, then this should not be a reason to ignore the very high CO₂ readings in the classroom.

In Victoria where schools do have air purifiers of a suitable model (Samsung AX90), there is a big problem with them being left turned off, unplugged or set to a low fan speed that does not provide the required clean air delivery rate. On the highest fan speed some air purifiers are quite noisy, so the best solution would be to provide a larger number and/or larger size of air purifier than the bare minimum, so that the required CADR can be achieved even on a quiet fan setting. There is an excellent summary of the available models with CADR for various fan speeds [here](#). I think that air purifiers are only going to be an effective solution if there is an auditable mechanism to verify that they are, (and continue to be) switched on at the required setting in the required location. Initially I suggest visiting the school unannounced, so that the actual usage of any air purifiers can be verified if they are being relied upon as a control measure, and the CO₂ readings verified otherwise. Perhaps the Wi-Fi facility of the Samsung air purifiers could be used for verifying that they are being used, though there may be issues with getting them to connect to an appropriate Wi-Fi network.

Please feel free to contact me for more information regarding this report.

Kind regards,


[Redacted]

[Redacted]

Sophie Seife
3:30pm via teams. Telopea
- by end of week.

8 May 2023

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

From: "Shepherd, Jackii"
Sent: 08/05/2023 12:28 PM
To: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>; "Heard, Jonathan" <Jonathan.Heard@worksafe.act.gov.au>
Subject: RE: Draft example wording to be emailed to complainant

OFFICIAL

hello 😊

I am chatting with Sophie Selfe at 330 – let me just check if we can add something further before we send?

J

From: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Sent: Monday, 8 May 2023 11:57 AM
To: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
Cc: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Subject: Draft example wording to be emailed to complainant

OFFICIAL

Gid day Jon,

Draft example wording to be emailed to complainant:

Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulations 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

Due to your complaint is related to possible high infection risk from COVID-19 due to poor ventilation within classrooms which is under the authorisation of ACT Health, you should forward your complaint to the ACBusinessTeam@act.gov.au or gather further information from <https://www.act.gov.au/business>.

Please contact WorkSafe ACT if you require further information.

I look forward to your comments

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate
P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

WORKSAFEACT

From: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Sent: 08/05/2023 3:36 PM
To: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Subject: RE: Draft example wording to be emailed to complainant

OFFICIAL

OK

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate
P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

WORKSAFEACT

From: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Sent: Monday, May 8, 2023 3:36 PM
To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>; Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
Subject: RE: Draft example wording to be emailed to complainant

OFFICIAL

Hi Andrew and Jon

I have requested confirmation from the ACT ED that this complaint has been reported and handled within their established processes.

Please hold until we have that information.

Ta,
Jax

Jackii Shepherd
Senior Director, Specialist Operations, Capability and Communications
Phone: 02 6205 4654 | [Sch 2.2\(a\)\(ii\)](#) | EMAIL: jackii.shepherd@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

WORKSAFEACT



From: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Sent: Monday, 8 May 2023 11:57 AM
To: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
Cc: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Subject: Draft example wording to be emailed to complainant

OFFICIAL

Gid day Jon,

Draft example wording to be emailed to complainant:

Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulations 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

Due to your complaint is related to possible high infection risk from COVID-19 due to poor ventilation within classrooms which is under the authorisation of ACT Health, you should forward your complaint to the ACBusinessTeam@act.gov.au or gather further information from <https://www.act.gov.au/business>.

Please contact WorkSafe ACT if you require further information.

I look forward to your comments

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate
P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

WORKSAFEACT

From: "Nicholas, Andrew" <Andrew.Nicholas@worksafe.act.gov.au>
Sent: 31/05/2023 11:14 AM
To: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Cc: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint

OFFICIAL

Hi Jax

I will send the response

Andrew Nicholas | Inspector – Occupational Hygiene & Civil Construction Team
P: 02 6207 0346 | M: [Sch 2.2\(a\)\(ii\)](#) | E: andrew.nicholas@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601 | www.worksafe.act.gov.au

WORKSAFEACT



From: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Sent: Wednesday, 31 May 2023 11:13 AM
To: Nicholas, Andrew <Andrew.Nicholas@worksafe.act.gov.au>
Cc: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint

OFFICIAL

Hello Andrew

Thank you for referring this complaint. I am happy for you to respond to the complainant with this email.

I have reviewed the complaint and information provided.

I have relied on the following to inform my recommendation:

- There are no established and mandatory indoor air quality standards in Australia.
- CO2 is not on the list of ambient air quality standards as listed by the National Environment Protection Measures (NEPM).
- CO2 is not considered to be a significant indoor air pollutant by the Australian Institute of Occupational Hygienists (AIOH) as per the Principles of Occupational Hygiene (3rd edition, 2019). However, it is noted that external air quality can significantly impact indoor air quality and notes a ventilation indicator of <800 ppm for commercial buildings
- In a workplace, the Work Health and Safety laws reference the Workplace Exposure Standards for Airborne Contaminants. However, these standards are set based on assumptions for adults and a working schedule of 8 hours per day, 40 hours per week and 5 out of 7 working days. This Standard is also set for human health endpoints that are not infectious diseases.

- The Australian Building Codes Board (ABCB) publishes a handbook on indoor air quality that provides guidance on verification methods as relevant for the National Construction Code. This includes CO₂ as an indicator for the control of body odour, not infectious diseases.
- During the COVID-19 pandemic, there was limited research published that reported using CO₂ as a proxy for an increased risk of infection, with the Australian Health Protection Principal Committee (AHPPC) advising that improved ventilation may limit the spread of certain respiratory diseases, such as COVID-19, in indoor environments.
- The UK Health and Safety Executive (HSE) recommend a consistent indoor air quality of 800 ppm for CO₂ and implementing increased ventilation measures where results are consistently measured above 1500 ppm. Again, this is based on a risk of infection via an airborne route of exposure.

The Figures provided by the complainant of CO₂ readings of two students at Telopea Park do not provide information about:

- what monitor was used
- where the monitor was placed
- how long the measurement period was
- daily schedule or record of indoor/outdoor activities
- the maintenance or calibration details of the monitor
- the size of the space that the measurements correspond
- how many people and/or children were present within the indoor space
- whether the mechanical ventilation rate was at a standard outlined by the ABCB.

The lack of this information means that measurements provided in the Figures is not robust and cannot be considered a true and accurate representation of exposure. Adding to this, ambient air (outdoor) CO₂ varies generally between 300 and 500 ppm, it appears that the monitor has been adjusted at a minimum level that may not be reflective of actual ambient air levels. Again, resulting in the peak levels not necessarily being accurate.

Indoor pollutant concentrations vary substantially within a building over the day as the activities of those within in it fluctuate. It is considered normal for CO₂ levels to increase as people arrive and may not reach steady state levels, depending on the activities and numbers of people within the space. There are peaks and troughs provided in the Figures that could be attributed to a build up of CO₂ during indoor activities with breaks assumed to be outside activities. If applying workplace exposure standards, none of the peaks appear near action levels of half the Short-Term Exposure Limit (30,000 ppm). Without the raw data, an accurate TWA cannot be calculated, but it also appears that on average (assuming an eight hour exposure period) the TWA (5,000 ppm) is not reached.

There are only guidelines available for indoor air quality for CO₂, no mandatory standards to compare to. Most reference an average of 850 ppm (assuming a baseline ambient CO₂ level of 350 to 400 ppm) and a guidance value of an average of 1500 ppm to review and improve ventilation. However, as previously noted, these values are not recommended based on risk of COVID-19 infection, but instead as an indicator of ventilation.

The CO₂ measurements provided do not lead me to a decision that the indoor air quality is a risk to the health of workers or others at the workplace in this instance. There is no information available to link the CO₂ levels provided by the complainant to increased infection incidence at the school, nor any other adverse human health effects.

- Noting the complainants statement that the only CO₂ source is accumulated breath from the people and/or children in the room, it does appear that CO₂ measurement increase over time but do not exceed the workplace exposure standards and there is no clear data to discount outdoor air influences.
- As there is no mandatory limit for CO₂ for the purpose of preventing or minimising infection risk, I have nothing to compare to. I note the Australian Health Protection Principal Committee (AHPPC) state that ventilation is only an potential additional control measure within the hierarchy of controls and cannot replace other infection prevention and control measures. Other elimination and management measures have been implemented at both an ACT Community level (including masks, vaccination and isolation measures) and by the school itself (for example, COVIDSafe plans, hand and respiratory hygiene). The AHPPC identify schools as possible high-risk indoor environments, and expand this to communicate that different settings require different considerations and controls for infection prevention.
- Under the WHS laws, the PCBU must eliminate or minimise the risk of infection from biological hazards. I understand that the Education Directorate has been providing the schools within its responsibility with the appropriate measures to take in relation to COVID-19 infection risk, in line with both the WHS laws and the Public Health Declarations.

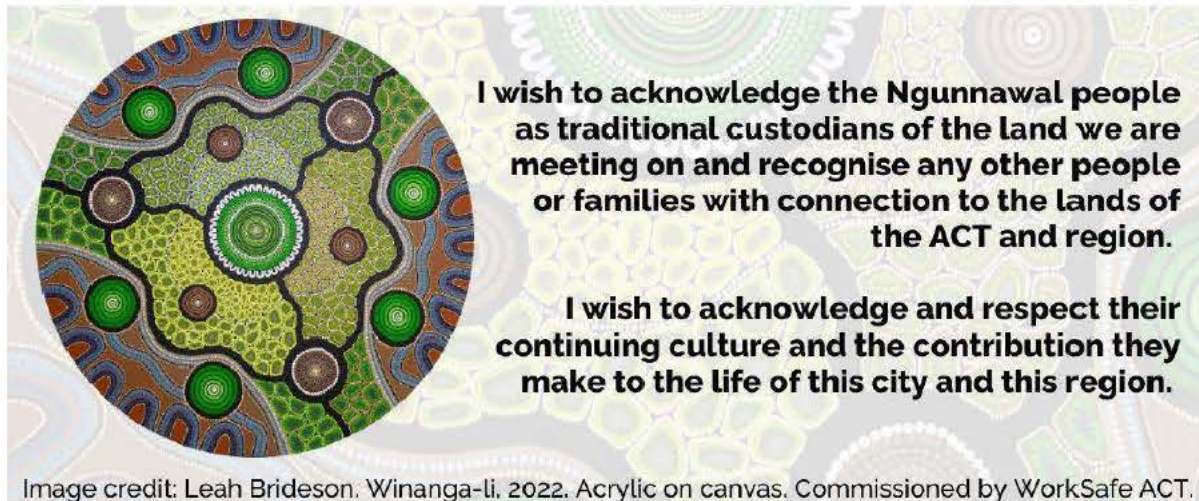
- I note that the Education Directorate and the individual school in question have the appropriate channels for raising complaints and I understand that measures have been taken by both in relation to this complaint.

Based on this, I recommend referring the complainant to ACT Health for their views. I do not recommend a workplace visit at this time.

Kind regards,

Jackii Shepherd
FAIOH MACTRA MFAMANZ
 Specialist Operations

Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601



-----Original Message-----

From: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
 Sent: Tuesday, 16 May 2023 12:06 PM
 To: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
 Cc: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
 Subject: FW: Telopea Park School poor air quality complaint

OFFICIAL

Gid day Jackii,

Please advise

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate
 P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
 Office of the Work Health and Safety Commissioner GPO Box 158 Canberra ACT 2601

-----Original Message-----

From: [REDACTED]
Sent: Tuesday, May 16, 2023 12:02 PM
To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Cc: Kurt.Huehl@worksafe.act.gov.au; HPS <HPS@act.gov.au>
Subject: Re: Telopea Park School poor air quality complaint

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Andrew,

Unfortunately my complaint has not been resolved and I am asking you to investigate the poor indoor air quality measured at my child's school.

You sent as an attachment the school's feedback posters. I did fill out the feedback form using the URL and QR code on that poster, on 25/09/2022, in which I pointed out that the school had not been following its Winter Air Quality Plan, but it did not result in a satisfactory response.

In response to me filling in the feedback form, I received an email from the Principal, Jason Holmes, on 7/11/2022, in which he says:

"I can confirm that we have received a stock of CO2 monitors for the school along with instructions on their effective use from the Education Directorate."

... and ...

"I think the Education Directorate's provision of CO2 monitors shows a positive attitude towards air quality in schools and we will be asking for more CO2 monitors to be provided so we can distribute them more widely."

The CO2 monitors provided to the school by the Directorate appeared to be of the same type subject to Worksafe ACT Improvement Notice

N-0000004598 issued by Kurt Kuehl, which stated that "... I have formed the reasonable belief that the monitors supplied by the ACT Education Directorate are not an effective control and, unless a review into the control is undertaken, the Directorate has breached section 19 of the Work Health and Safety Act 2011..."

(You may also recall that this is the same principal who previously, on learning that I had measured poor CO2 levels in the classroom, asked whether he could or should ask me not to send the CO2 monitor, and how to refuse my offer of a CO2 monitor.)

Furthermore, my child informs me that the CO2 monitors supplied by the directorate were only in use for at most a few weeks before they stopped being used, during which time their alarms indicating poor air quality went off repeatedly, and I suspect that they have been disposed of as e-waste as (I am told by a teacher) they were at some other schools.

All of this happened before I made my complaint to you, and I made the complaint because neither the school nor the directorate were making any progress in resolving the problem. In my complaint, attached, I show that the CO2 levels measured by a high quality monitor (Aranet4) are still much higher than the thresholds to take action as specified by Safe Work Australia in:

<https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19>

The important point, which I think ought to drive your decision-making, is that the air quality in the classrooms is still very poor, and the staff and students are still at unnecessarily increased risk of infection from various airborne diseases, (as well as probably even suffering some cognitive impairment at the worst times).

If you are refusing to investigate the air quality in the classrooms at Telopea Park School, (which I believe is still unsafe), then I would like you to state this clearly and give your reasons.

Upon your suggestion, I have copied ACT Health on this email, as you rightly point out it does relate to COVID-19 infection risk, amongst other harmful effects of poor ventilation.

Kind Regards,
 [REDACTED]

On 15/05/2023 2:21 pm, Woolgar, Andrew wrote:

> OFFICIAL

>

> Gid day [REDACTED]

>

> Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

>

> WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

>

> Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

> Online: Education Directorate Contact

> Form<<https://www.accesscanberra.act.gov.au/s/services/education-feedba>

> ck> (via Access Canberra)

> Phone: +61 2 6205 5429<<tel:+61262055429>>

>

> You can also raise your concern with ACT Health as it relates to

> COVID-19 infection risk, you can find contact details here : Contact

> Us - COVID-19<<https://www.covid19.act.gov.au/contact-us>>

>

> Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil

> Construction Inspectorate

> P: 02 620 73989 | E:

> andrew.woolgar@worksafe.act.gov.au<<mailto:andrew.woolgar@worksafe.act.gov.au>

> gov.au> Office of the Work Health and Safety Commissioner GPO Box 158

> Canberra ACT 2601 [[cid:image001.jpg@01D98737.D1962790](#)]

>

>

>

>

>

> -----
 > - This email, and any attachments, may be confidential and also

> privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

> -----

> -

>

From: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Sent: 16/05/2023 3:14 PM
To: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Cc: "Heard, Jonathan" <Jonathan.Heard@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint

OFFICIAL

Gid day Jackii,

This complaint is SF case 00309913. There is a lot of information in this complaint

Improvement Notice N-0000004598 was to ACT Education: Dickson College but in SF (Case 00194901) it was initially 'Approve' and then re-submitted and has been 'rejected'

It seems this first approved Improvement Notice was emailed.

I can not see if the Improvement Notice was complied with as all I can see is 'Rejected'

It seems an FOI request revealed this Improvement Notice

There is another Improvement Notice (N-0000004526) which seems the same as Improvement Notice N-0000004598 which was complied with.

I hope this was helpful, please contact me if you require further information.

Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil Construction Inspectorate
P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

-----Original Message-----

From: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Sent: Tuesday, May 16, 2023 1:54 PM
To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Cc: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint

OFFICIAL

so.

the Notice from Kurt was A) for Telopea Park and B) was complied with?

-----Original Message-----

From: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Sent: Tuesday, 16 May 2023 12:06 PM
To: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Cc: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
Subject: FW: Telopea Park School poor air quality complaint

OFFICIAL

Gid day Jackii,

Please advise

Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil Construction Inspectorate

P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner GPO Box 158 Canberra ACT 2601

-----Original Message-----

From: [REDACTED]
Sent: Tuesday, May 16, 2023 12:02 PM
To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Cc: Kurt.Huehl@worksafe.act.gov.au; HPS <HPS@act.gov.au>
Subject: Re: Telopea Park School poor air quality complaint

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Andrew,

Unfortunately my complaint has not been resolved and I am asking you to investigate the poor indoor air quality measured at my child's school.

You sent as an attachment the school's feedback posters. I did fill out the feedback form using the URL and QR code on that poster, on 25/09/2022, in which I pointed out that the school had not been following its Winter Air Quality Plan, but it did not result in a satisfactory response.

In response to me filling in the feedback form, I received an email from the Principal, Jason Holmes, on 7/11/2022, in which he says:

"I can confirm that we have received a stock of CO2 monitors for the school along with instructions on their effective use from the Education Directorate."

... and ...

"I think the Education Directorate's provision of CO2 monitors shows a positive attitude towards air quality in schools and we will be asking for more CO2 monitors to be provided so we can distribute them more widely."

The CO2 monitors provided to the school by the Directorate appeared to be of the same type subject to Worksafe ACT Improvement Notice

N-0000004598 issued by Kurt Kuehl, which stated that "... I have formed the reasonable belief that the monitors supplied by the ACT Education Directorate are not an effective control and, unless a review into the control is undertaken, the Directorate has breached section 19 of the Work Health and Safety Act 2011...."

(You may also recall that this is the same principal who previously, on learning that I had measured poor CO2 levels in the classroom, asked whether he could or should ask me not to send the CO2 monitor, and how to refuse my offer of a CO2 monitor.)

Furthermore, my child informs me that the CO2 monitors supplied by the directorate were only in use for at most a few weeks before they stopped being used, during which time their alarms indicating poor air quality went off repeatedly, and I suspect that they have been disposed of as e-waste as (I am told by a teacher) they were at some other schools.

All of this happened before I made my complaint to you, and I made the complaint because neither the school nor the directorate were making any progress in resolving the problem. In my complaint, attached, I show that the CO2 levels measured by a high quality monitor (Aranet4) are still much higher than the thresholds to take action as specified by Safe Work Australia in: <https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19>

The important point, which I think ought to drive your decision-making, is that the air quality in the classrooms is still very poor, and the staff and students are still at unnecessarily increased risk of infection from various airborne diseases, (as well as probably even suffering some cognitive impairment at the worst times).

If you are refusing to investigate the air quality in the classrooms at Telopea Park School, (which I believe is still unsafe), then I would like you to state this clearly and give your reasons.

Upon your suggestion, I have copied ACT Health on this email, as you rightly point out it does relate to COVID-19 infection risk, amongst other harmful effects of poor ventilation.

Kind Regards,
[REDACTED]

On 15/05/2023 2:21 pm, Woolgar, Andrew wrote:

> OFFICIAL

>

> Gid day [REDACTED]

>

> Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

>

> WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

>

> Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

> Online: Education Directorate Contact

> Form<<https://www.accesscanberra.act.gov.au/s/services/education-feedba>

> ck> (via Access Canberra)

> Phone: +61 2 6205 5429<tel:+61262055429>

>

> You can also raise your concern with ACT Health as it relates to

> COVID-19 infection risk, you can find contact details here : Contact

> Us - COVID-19<<https://www.covid19.act.gov.au/contact-us>>

>

> Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil

> Construction Inspectorate

> P: 02 620 73989 | E:

> andrew.woolgar@worksafe.act.gov.au<mailto:andrew.woolgar@worksafe.act.

> gov.au> Office of the Work Health and Safety Commissioner GPO Box 158

> Canberra ACT 2601 [cid:image001.jpg@01D98737.D1962790]

>

>

>

>

>

> -----

> - This email, and any attachments, may be confidential and also

> privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

> -----

>

>

>

From: "Nicholas, Andrew" <Andrew.Nicholas@worksafe.act.gov.au>
Sent: 31/05/2023 11:49 AM
To: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Cc: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint

OFFICIAL

Jax

Sent, filed and case closed

Andrew Nicholas | Inspector – Occupational Hygiene & Civil Construction Team
P: 02 6207 0346 | M: [Sch 2.2\(a\)\(ii\)](#) | E: andrew.nicholas@worksafe.act.gov.au
Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601 | www.worksafe.act.gov.au

WORKSAFEACT



From: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
Sent: Wednesday, 31 May 2023 11:13 AM
To: Nicholas, Andrew <Andrew.Nicholas@worksafe.act.gov.au>
Cc: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint

OFFICIAL

Hello Andrew

Thank you for referring this complaint. I am happy for you to respond to the complainant with this email.

I have reviewed the complaint and information provided.

I have relied on the following to inform my recommendation:

- There are no established and mandatory indoor air quality standards in Australia.
- CO2 is not on the list of ambient air quality standards as listed by the National Environment Protection Measures (NEPM).
- CO2 is not considered to be a significant indoor air pollutant by the Australian Institute of Occupational Hygienists (AIOH) as per the Principles of Occupational Hygiene (3rd edition, 2019). However, it is noted that external air quality can significantly impact indoor air quality and notes a ventilation indicator of <800 ppm for commercial buildings
- In a workplace, the Work Health and Safety laws reference the Workplace Exposure Standards for Airborne Contaminants. However, these standards are set based on assumptions for adults and a working schedule of 8 hours per day, 40 hours per week and 5 out of 7 working days. This Standard is also set for human health endpoints that are not infectious diseases.

- The Australian Building Codes Board (ABCB) publishes a handbook on indoor air quality that provides guidance on verification methods as relevant for the National Construction Code. This includes CO₂ as an indicator for the control of body odour, not infectious diseases.
- During the COVID-19 pandemic, there was limited research published that reported using CO₂ as a proxy for an increased risk of infection, with the Australian Health Protection Principal Committee (AHPPC) advising that improved ventilation may limit the spread of certain respiratory diseases, such as COVID-19, in indoor environments.
- The UK Health and Safety Executive (HSE) recommend a consistent indoor air quality of 800 ppm for CO₂ and implementing increased ventilation measures where results are consistently measured above 1500 ppm. Again, this is based on a risk of infection via an airborne route of exposure.

The Figures provided by the complainant of CO₂ readings of two students at Telopea Park do not provide information about:

- what monitor was used
- where the monitor was placed
- how long the measurement period was
- daily schedule or record of indoor/outdoor activities
- the maintenance or calibration details of the monitor
- the size of the space that the measurements correspond
- how many people and/or children were present within the indoor space
- whether the mechanical ventilation rate was at a standard outlined by the ABCB.

The lack of this information means that measurements provided in the Figures is not robust and cannot be considered a true and accurate representation of exposure. Adding to this, ambient air (outdoor) CO₂ varies generally between 300 and 500 ppm, it appears that the monitor has been adjusted at a minimum level that may not be reflective of actual ambient air levels. Again, resulting in the peak levels not necessarily being accurate.

Indoor pollutant concentrations vary substantially within a building over the day as the activities of those within in it fluctuate. It is considered normal for CO₂ levels to increase as people arrive and may not reach steady state levels, depending on the activities and numbers of people within the space. There are peaks and troughs provided in the Figures that could be attributed to a build up of CO₂ during indoor activities with breaks assumed to be outside activities. If applying workplace exposure standards, none of the peaks appear near action levels of half the Short-Term Exposure Limit (30,000 ppm). Without the raw data, an accurate TWA cannot be calculated, but it also appears that on average (assuming an eight hour exposure period) the TWA (5,000 ppm) is not reached.

There are only guidelines available for indoor air quality for CO₂, no mandatory standards to compare to. Most reference an average of 850 ppm (assuming a baseline ambient CO₂ level of 350 to 400 ppm) and a guidance value of an average of 1500 ppm to review and improve ventilation. However, as previously noted, these values are not recommended based on risk of COVID-19 infection, but instead as an indicator of ventilation.

The CO₂ measurements provided do not lead me to a decision that the indoor air quality is a risk to the health of workers or others at the workplace in this instance. There is no information available to link the CO₂ levels provided by the complainant to increased infection incidence at the school, nor any other adverse human health effects.

- Noting the complainants statement that the only CO₂ source is accumulated breath from the people and/or children in the room, it does appear that CO₂ measurement increase over time but do not exceed the workplace exposure standards and there is no clear data to discount outdoor air influences.
- As there is no mandatory limit for CO₂ for the purpose of preventing or minimising infection risk, I have nothing to compare to. I note the Australian Health Protection Principal Committee (AHPPC) state that ventilation is only an potential additional control measure within the hierarchy of controls and cannot replace other infection prevention and control measures. Other elimination and management measures have been implemented at both an ACT Community level (including masks, vaccination and isolation measures) and by the school itself (for example, COVIDSafe plans, hand and respiratory hygiene). The AHPPC identify schools as possible high-risk indoor environments, and expand this to communicate that different settings require different considerations and controls for infection prevention.
- Under the WHS laws, the PCBU must eliminate or minimise the risk of infection from biological hazards. I understand that the Education Directorate has been providing the schools within its responsibility with the appropriate measures to take in relation to COVID-19 infection risk, in line with both the WHS laws and the Public Health Declarations.

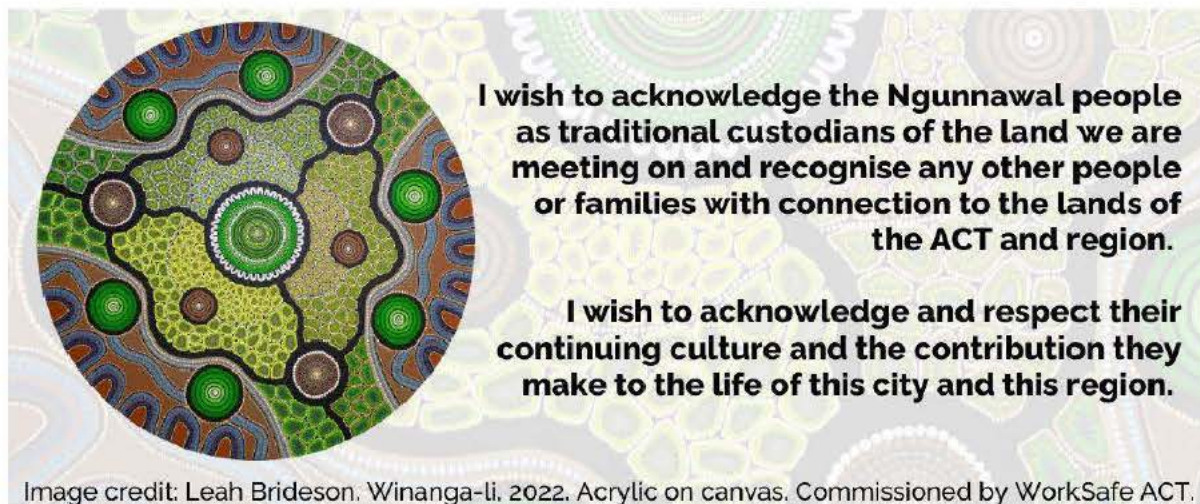
- I note that the Education Directorate and the individual school in question have the appropriate channels for raising complaints and I understand that measures have been taken by both in relation to this complaint.

Based on this, I recommend referring the complainant to ACT Health for their views. I do not recommend a workplace visit at this time.

Kind regards,

Jackii Shepherd
FAIOH MACTRA MFAMANZ
 Specialist Operations

Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601



-----Original Message-----

From: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>

Sent: Tuesday, 16 May 2023 12:06 PM

To: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>

Cc: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>

Subject: FW: Telopea Park School poor air quality complaint

OFFICIAL

Gid day Jackii,

Please advise

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate

P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au

Office of the Work Health and Safety Commissioner GPO Box 158 Canberra ACT 2601

-----Original Message-----

From: [REDACTED]
Sent: Tuesday, May 16, 2023 12:02 PM
To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
Cc: Kurt.Huehl@worksafe.act.gov.au; HPS <HPS@act.gov.au>
Subject: Re: Telopea Park School poor air quality complaint

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Dear Andrew,

Unfortunately my complaint has not been resolved and I am asking you to investigate the poor indoor air quality measured at my child's school.

You sent as an attachment the school's feedback posters. I did fill out the feedback form using the URL and QR code on that poster, on 25/09/2022, in which I pointed out that the school had not been following its Winter Air Quality Plan, but it did not result in a satisfactory response.

In response to me filling in the feedback form, I received an email from the Principal, Jason Holmes, on 7/11/2022, in which he says:

"I can confirm that we have received a stock of CO2 monitors for the school along with instructions on their effective use from the Education Directorate."

... and ...

"I think the Education Directorate's provision of CO2 monitors shows a positive attitude towards air quality in schools and we will be asking for more CO2 monitors to be provided so we can distribute them more widely."

The CO2 monitors provided to the school by the Directorate appeared to be of the same type subject to Worksafe ACT Improvement Notice

N-0000004598 issued by Kurt Kuehl, which stated that "... I have formed the reasonable belief that the monitors supplied by the ACT Education Directorate are not an effective control and, unless a review into the control is undertaken, the Directorate has breached section 19 of the Work Health and Safety Act 2011..."

(You may also recall that this is the same principal who previously, on learning that I had measured poor CO2 levels in the classroom, asked whether he could or should ask me not to send the CO2 monitor, and how to refuse my offer of a CO2 monitor.)

Furthermore, my child informs me that the CO2 monitors supplied by the directorate were only in use for at most a few weeks before they stopped being used, during which time their alarms indicating poor air quality went off repeatedly, and I suspect that they have been disposed of as e-waste as (I am told by a teacher) they were at some other schools.

All of this happened before I made my complaint to you, and I made the complaint because neither the school nor the directorate were making any progress in resolving the problem. In my complaint, attached, I show that the CO2 levels measured by a high quality monitor (Aranet4) are still much higher than the thresholds to take action as specified by Safe Work Australia in:

<https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19>

The important point, which I think ought to drive your decision-making, is that the air quality in the classrooms is still very poor, and the staff and students are still at unnecessarily increased risk of infection from various airborne diseases, (as well as probably even suffering some cognitive impairment at the worst times).

If you are refusing to investigate the air quality in the classrooms at Telopea Park School, (which I believe is still unsafe), then I would like you to state this clearly and give your reasons.

Upon your suggestion, I have copied ACT Health on this email, as you rightly point out it does relate to COVID-19 infection risk, amongst other harmful effects of poor ventilation.

Kind Regards,
 [REDACTED]

On 15/05/2023 2:21 pm, Woolgar, Andrew wrote:

> OFFICIAL

>

> Gid day [REDACTED]

>

> Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

>

> WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

>

> Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

> Online: Education Directorate Contact

> Form<<https://www.accesscanberra.act.gov.au/s/services/education-feedba>

> ck> (via Access Canberra)

> Phone: +61 2 6205 5429<<tel:+61262055429>>

>

> You can also raise your concern with ACT Health as it relates to

> COVID-19 infection risk, you can find contact details here : Contact

> Us - COVID-19<<https://www.covid19.act.gov.au/contact-us>>

>

> Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil

> Construction Inspectorate

> P: 02 620 73989 | E:

> andrew.woolgar@worksafe.act.gov.au<<mailto:andrew.woolgar@worksafe.act.gov.au>

> gov.au> Office of the Work Health and Safety Commissioner GPO Box 158

> Canberra ACT 2601 [[cid:image001.jpg@01D98737.D1962790](#)]

>

>

>

>

>

> -----
 > - This email, and any attachments, may be confidential and also

> privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

> -----

> -

>

From: [REDACTED]
Sent: 16/05/2023 12:08 PM
To: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Cc: "Kuehl, Kurt" <Kurt.Kuehl@worksafe.act.gov.au>; "HPS" <HPS@act.gov.au>
Subject: Re: Telopea Park School poor air quality complaint
Attachments: worksafe.pdf

[You don't often get email from [REDACTED] Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important<<http://www.act.gov.au/emailsecurity>>

Apologies, resending as I misspelled Kurt Kuehl's email address.

Dear Andrew,

Unfortunately my complaint has not been resolved and I am asking you to investigate the poor indoor air quality measured at my child's school.

You sent as an attachment the school's feedback posters. I did fill out the feedback form using the URL and QR code on that poster, on 25/09/2022, in which I pointed out that the school had not been following its Winter Air Quality Plan, but it did not result in a satisfactory response.

In response to me filling in the feedback form, I received an email from the Principal, Jason Holmes, on 7/11/2022, in which he says:

"I can confirm that we have received a stock of CO2 monitors for the school along with instructions on their effective use from the Education Directorate."

... and ...

"I think the Education Directorate's provision of CO2 monitors shows a positive attitude towards air quality in schools and we will be asking for more CO2 monitors to be provided so we can distribute them more widely."

The CO2 monitors provided to the school by the Directorate appeared to be of the same type subject to Worksafe ACT Improvement Notice N-000004598 issued by Kurt Kuehl, which stated that "... I have formed the reasonable belief that the monitors supplied by the ACT Education Directorate are not an effective control and, unless a review into the control is undertaken, the Directorate has breached section 19 of the Work Health and Safety Act 2011..."

(You may also recall that this is the same principal who previously, on learning that I had measured poor CO2 levels in the classroom, asked whether he could or should ask me not to send the CO2 monitor, and how to refuse my offer of a CO2 monitor.)

Furthermore, my child informs me that the CO2 monitors supplied by the directorate were only in use for at most a few weeks before they stopped being used, during which time their alarms indicating poor air quality went off repeatedly, and I suspect that they have been disposed of as e-waste as (I am told by a teacher) they were at some other schools.

All of this happened before I made my complaint to you, and I made the complaint because neither the school nor the directorate were making any progress in resolving the problem. In my complaint, attached, I show that the CO2 levels measured by a high quality monitor (Aranet4) are still much higher than the thresholds to take action as specified by Safe Work Australia in:

<https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19>

The important point, which I think ought to drive your decision-making, is that the air quality in the classrooms is still very poor, and the staff and students are still at unnecessarily increased risk of infection from various airborne diseases, (as well as probably even suffering some cognitive impairment at the worst times).

If you are refusing to investigate the air quality in the classrooms at Telopea Park School, (which I believe is still unsafe), then I would like you to state this clearly and give your reasons.


Upon your suggestion, I have copied ACT Health on this email, as you rightly point out it does relate to COVID-19 infection risk, amongst other harmful effects of poor ventilation.

Kind Regards,


On 15/05/2023 2:21 pm, Woolgar, Andrew wrote:

> OFFICIAL

>

> Gid day 

>

> Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

>

> WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

>

> Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

> Online: Education Directorate Contact Form<<https://www.accesscanberra.act.gov.au/s/services/education-feedback>> (via Access Canberra)

> Phone: +61 2 6205 5429<tel:+61262055429>

>

> You can also raise your concern with ACT Health as it relates to COVID-19 infection risk, you can find contact details here : Contact Us - COVID-19<<https://www.covid19.act.gov.au/contact-us>>

>

> Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil Construction Inspectorate

> P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au<mailto:andrew.woolgar@worksafe.act.gov.au>

> Office of the Work Health and Safety Commissioner

> GPO Box 158 Canberra ACT 2601

> [cid:image001.jpg@01D98737.D1962790]

>

>

>

>

> -----

> This email, and any attachments, may be confidential and also privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

> -----

>

From: "Shepherd, Jackii"
Sent: 31/05/2023 11:12 AM
To: "Nicholas, Andrew" <Andrew.Nicholas@worksafe.act.gov.au>
Cc: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Bcc: "Heard, Jonathan" <Jonathan.Heard@worksafe.act.gov.au>
Subject: RE: Telopea Park School poor air quality complaint
Attachments: worksafe.pdf

OFFICIAL

Hello Andrew

Thank you for referring this complaint. I am happy for you to respond to the complainant with this email.

I have reviewed the complaint and information provided.

I have relied on the following to inform my recommendation:

- There are no established and mandatory indoor air quality standards in Australia.
- CO2 is not on the list of ambient air quality standards as listed by the National Environment Protection Measures (NEPM).
- CO2 is not considered to be a significant indoor air pollutant by the Australian Institute of Occupational Hygienists (AIOH) as per the Principles of Occupational Hygiene (3rd edition, 2019). However, it is noted that external air quality can significantly impact indoor air quality and notes a ventilation indicator of <800 ppm for commercial buildings
- In a workplace, the Work Health and Safety laws reference the Workplace Exposure Standards for Airborne Contaminants. However, these standards are set based on assumptions for adults and a working schedule of 8 hours per day, 40 hours per week and 5 out of 7 working days. This Standard is also set for human health endpoints that are not infectious diseases.
- The Australian Building Codes Board (ABCB) publishes a handbook on indoor air quality that provides guidance on verification methods as relevant for the National Construction Code. This includes CO2 as an indicator for the control of body odour, not infectious diseases.
- During the COVID-19 pandemic, there was limited research published that reported using CO2 as a proxy for an increased risk of infection, with the Australian Health Protection Principal Committee (AHPPC) advising that improved ventilation may limit the spread of certain respiratory diseases, such as COVID-19, in indoor environments.
- The UK Health and Safety Executive (HSE) recommend a consistent indoor air quality of 800 ppm for CO2 and implementing increased ventilation measures where results are consistently measured above 1500 ppm. Again, this is based on a risk of infection via an airborne route of exposure.

The Figures provided by the complainant of CO2 readings of two students at Telopea Park do not provide information about:

- what monitor was used
- where the monitor was placed
- how long the measurement period was
- daily schedule or record of indoor/outdoor activities
- the maintenance or calibration details of the monitor
- the size of the space that the measurements correspond
- how many people and/or children were present within the indoor space
- whether the mechanical ventilation rate was at a standard outlined by the ABCB.

The lack of this information means that measurements provided in the Figures is not robust and cannot be considered a true and accurate representation of exposure. Adding to this, ambient air (outdoor) CO2 varies generally between 300 and 500 ppm, it appears that the monitor has been adjusted at a minimum level that may not be reflective of actual ambient air levels. Again, resulting in the peak levels not necessarily being accurate.

Indoor pollutant concentrations vary substantially within a building over the day as the activities of those within in it fluctuate. It is considered normal for CO2 levels to increase as people arrive and may not reach steady state levels,

depending on the activities and numbers of people within the space. There are peaks and troughs provided in the Figures that could be attributed to a build up of CO₂ during indoor activities with breaks assumed to be outside activities. If applying workplace exposure standards, none of the peaks appear near action levels of half the Short-Term Exposure Limit (30,000 ppm). Without the raw data, an accurate TWA cannot be calculated, but it also appears that on average (assuming an eight hour exposure period) the TWA (5,000 ppm) is not reached.

There are only guidelines available for indoor air quality for CO₂, no mandatory standards to compare to. Most reference an average of 850 ppm (assuming a baseline ambient Co₂ level of 350 to 400 ppm) and a guidance value of an average of 1500 ppm to review and improve ventilation. However, as previously noted, these values are not recommended based on risk of COVID-19 infection, but instead as an indicator of ventilation.

The CO₂ measurements provided do not lead me to a decision that the indoor air quality is a risk to the health of workers or others at the workplace in this instance. There is no information available to link the CO₂ levels provided by the complainant to increased infection incidence at the school, nor any other adverse human health effects.

- Noting the complainants statement that the only CO₂ source is accumulated breath from the people and/or children in the room, it does appear that CO₂ measurement increase over time but do not exceed the workplace exposure standards and there is no clear data to discount outdoor air influences.
- As there is no mandatory limit for Co₂ for the purpose of preventing or minimising infection risk, I have nothing to compare to. I note the Australian Health Protection Principal Committee (AHPPC) state that ventilation is only an potential additional control measure within the hierarchy of controls and cannot replace other infection prevention and control measures. Other elimination and management measures have been implemented at both an ACT Community level (including masks, vaccination and isolation measures) and by the school itself (for example, COVIDSafe plans, hand and respiratory hygiene). The AHPPC identify schools as possible high-risk indoor environments, and expand this to communicate that different settings require different considerations and controls for infection prevention.
- Under the WHS laws, the PCBU must eliminate or minimise the risk of infection from biological hazards. I understand that the Education Directorate has been providing the schools within its responsibility with the appropriate measures to take in relation to COVID-19 infection risk, in line with both the WHS laws and the Public Health Declarations.
- I note that the Education Directorate and the individual school in question have the appropriate channels for raising complaints and I understand that measures have been taken by both in relation to this complaint.

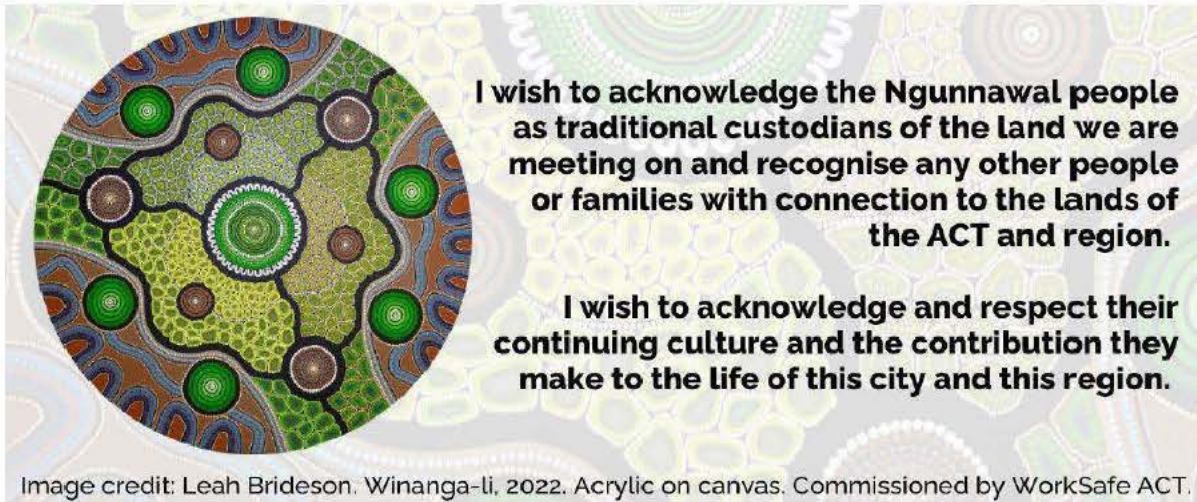
Based on this, I recommend referring the complainant to ACT Health for their views. I do not recommend a workplace visit at this time.

Kind regards,

Jackii Shepherd
FAIOH MACTRA MFAMANZ
Specialist Operations

Office of the Work Health and Safety Commissioner
GPO Box 158 Canberra ACT 2601

WORKSAFEACT



-----Original Message-----

From: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
 Sent: Tuesday, 16 May 2023 12:06 PM
 To: Shepherd, Jackii <Jackii.Shepherd@worksafe.act.gov.au>
 Cc: Heard, Jonathan <Jonathan.Heard@worksafe.act.gov.au>
 Subject: FW: Telopea Park School poor air quality complaint

OFFICIAL

Gid day Jackii,

Please advise

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate
 P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au
 Office of the Work Health and Safety Commissioner GPO Box 158 Canberra ACT 2601

-----Original Message-----

From: [REDACTED]
 Sent: Tuesday, May 16, 2023 12:02 PM
 To: Woolgar, Andrew <Andrew.Woolgar@worksafe.act.gov.au>
 Cc: Kurt.Huehl@worksafe.act.gov.au; HPS <HPS@act.gov.au>
 Subject: Re: Telopea Park School poor air quality complaint

Caution: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe. Learn why this is important <<http://www.act.gov.au/emailsecurity>>

Dear Andrew,

Unfortunately my complaint has not been resolved and I am asking you to investigate the poor indoor air quality measured at my child's school.

You sent as an attachment the school's feedback posters. I did fill out the feedback form using the URL and QR code on that poster, on 25/09/2022, in which I pointed out that the school had not been following its Winter Air Quality Plan, but it did not result in a satisfactory response.

In response to me filling in the feedback form, I received an email from the Principal, Jason Holmes, on 7/11/2022, in which he says:

"I can confirm that we have received a stock of CO2 monitors for the school along with instructions on their effective use from the Education Directorate."

... and ...

"I think the Education Directorate's provision of CO2 monitors shows a positive attitude towards air quality in schools and we will be asking for more CO2 monitors to be provided so we can distribute them more widely."

The CO2 monitors provided to the school by the Directorate appeared to be of the same type subject to Worksafe ACT Improvement Notice

N-0000004598 issued by Kurt Kuehl, which stated that "... I have formed the reasonable belief that the monitors supplied by the ACT Education Directorate are not an effective control and, unless a review into the control is undertaken, the Directorate has breached section 19 of the Work Health and Safety Act 2011..."

(You may also recall that this is the same principal who previously, on learning that I had measured poor CO2 levels in the classroom, asked whether he could or should ask me not to send the CO2 monitor, and how to refuse my offer of a CO2 monitor.)

Furthermore, my child informs me that the CO2 monitors supplied by the directorate were only in use for at most a few weeks before they stopped being used, during which time their alarms indicating poor air quality went off repeatedly, and I suspect that they have been disposed of as e-waste as (I am told by a teacher) they were at some other schools.

All of this happened before I made my complaint to you, and I made the complaint because neither the school nor the directorate were making any progress in resolving the problem. In my complaint, attached, I show that the CO2 levels measured by a high quality monitor (Aranet4) are still much higher than the thresholds to take action as specified by Safe Work Australia in:

<https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19>

The important point, which I think ought to drive your decision-making, is that the air quality in the classrooms is still very poor, and the staff and students are still at unnecessarily increased risk of infection from various airborne diseases, (as well as probably even suffering some cognitive impairment at the worst times).

If you are refusing to investigate the air quality in the classrooms at Telopea Park School, (which I believe is still unsafe), then I would like you to state this clearly and give your reasons.

Upon your suggestion, I have copied ACT Health on this email, as you rightly point out it does relate to COVID-19 infection risk, amongst other harmful effects of poor ventilation.

Kind Regards,

██████████

On 15/05/2023 2:21 pm, Woolgar, Andrew wrote:

> OFFICIAL

>

> Gid day ██████████

>

> Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

>

> WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

>

> Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

> Online: Education Directorate Contact

> Form<<https://www.accesscanberra.act.gov.au/s/services/education-feedback>

> ck> (via Access Canberra)

> Phone: +61 2 6205 5429<<tel:+61262055429>>

>

> You can also raise your concern with ACT Health as it relates to

> COVID-19 infection risk, you can find contact details here : Contact

> Us - COVID-19<<https://www.covid19.act.gov.au/contact-us>>

>

> Andrew J WOOLGAR | Inspector - Occupational Hygiene and Civil

> Construction Inspectorate

> P: 02 620 73989 | E:

> andrew.woolgar@worksafe.act.gov.au<<mailto:andrew.woolgar@worksafe.act.gov.au>

> gov.au> Office of the Work Health and Safety Commissioner GPO Box 158

> Canberra ACT 2601 [[cid:image001.jpg@01D98737.D1962790](#)]

>

>

>

>

>

> -----
> - This email, and any attachments, may be confidential and also

> privileged. If you are not the intended recipient, please notify the sender and delete all copies of this transmission along with any attachments immediately. You should not copy or use it for any purpose, nor disclose its contents to any other person.

> -----

> -

>

From: "Woolgar, Andrew"
Sent: 15/05/2023 2:21 PM
To: [REDACTED]
Subject: re: Telopea Park School poor air quality complaint
Attachments: TPS feedback posters.pdf

OFFICIAL

Gid day [REDACTED]

Thank you for submitting your complaint on the 19 April 2023 in regard to the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School.

WorkSafe ACT take all complaints seriously and this complaint was triaged against the legislative requirements set out by the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011 to ensure workers and others are not exposed to preventable risks that may result in death, injury or illness in a workplace.

Based on the information you have provided, it appears that your complaint has been received and processed through the appropriate channels at Telopea Park School. If you feel your complaint has not been suitably resolved, I recommend that you follow up with the ACT Education Directorate:

Online: [Education Directorate Contact Form](#) (via Access Canberra)

Phone: [+61 2 6205 5429](tel:+61262055429)

You can also raise your concern with ACT Health as it relates to COVID-19 infection risk, you can find contact details here : [Contact Us - COVID-19](#)

Andrew J WOOLGAR | Inspector – Occupational Hygiene and Civil Construction Inspectorate

P: 02 620 73989 | E: andrew.woolgar@worksafe.act.gov.au

Office of the Work Health and Safety Commissioner

GPO Box 158 Canberra ACT 2601

WORKSAFEACT

From: "smartforms@act.gov.au" <smartforms@act.gov.au>
Sent: 19/04/2023 12:26 AM
To: "WorkSafe" <WorkSafe@worksafe.act.gov.au>
Subject: Report a Workplace Concern or Issue, GNP56X44, Workplace health and safety complaint
[SEC=UNCLASSIFIED, DLM=Sensitive: Personal]
Attachments: GNP56X44.pdf, worksafe.pdf
Categories: Baylee

Report a Workplace Concern or Issue

Form data summary

WorkSafe category	Workplace health and safety complaint
Workplace name	Telopea Park School
Reference code	GNP56X44

For issues or questions relating to SmartForms please contact the Payment Services Integration Team on *5 4607 or email smartforms.admin@act.gov.au.



Report a Workplace Concern or Issue - Submission confirmation

Your submission has been successful. Please keep a copy of this receipt for your records.

Date and time

Reference code

19 Apr 2023 12:25:57 AM

GNP56X44

WorkSafe ACT

PO Box 158
Canberra ACT 2601

Phone: 13 22 81
Email: worksafe@act.gov.au

Report a Workplace Concern or Issue

Concern/issue details

If this matter is a notifiable incident in accordance with sections 35 to 39 of the *Work Health and Safety Act 2011* and the *Work Health and Safety Regulations 2011* please complete the Notifiable Incident Report form (https://www.worksafe.act.gov.au/__data/assets/pdf_file/0006/1807314/Notifiable-Incident-Report-Form-.pdf).

WorkSafe category *

Workplace health and safety complaint

Workplace name *

Telopea Park School

Please provide any additional information that may assist WorkSafe ACT in resolving your issue or answering your enquiry (for example: what, when, what you thought was wrong, who was involved) *

Please see the attached PDF of this report for a more readable version of the same text, with some images added. 42

To Whom it may concern:

I would like to bring to your attention the unnecessarily high infection risk due to ongoing frequent occurrence of hazardous poor air quality in the classrooms at Telopea Park School, in violation of the school's duties as described by Safe Work Australia in their guidance document: <https://covid19.swa.gov.au/doc/improving-ventilation-indoor-workplaces-covid-19> .

Having sent a CO2 monitor to the school with my child, I now know that the CO2 concentration in some "naturally ventilated" classrooms usually exceeds 1500 ppm on most days, and sometimes exceeds 2500 ppm, and this is all due to accumulated exhaled breath, as there are no other sources of CO2 in the rooms. They do not have any air purifiers in the classrooms and the wearing of masks in the school is very rare, so there is nothing in place to reduce infection risk below that which would be expected for these poor CO2 readings.

I have brought the hazardous poor air quality to the attention of the school on numerous occasions including providing them with detailed measurements of the CO2 concentration and suggestions for how to improve the air quality, but there has been no significant action, and the ventilation of the classrooms is not significantly better than it would have been pre-2019. Their verbal responses were dismissive, and they would not make a written response until I demanded one under a Freedom of Information request, which revealed that the principal's first response was to enquire whether he could or should prevent me from measuring the poor air quality:

(You can read this email trail on the ACT Education disclosure log under the entry EDU_2022_039 https://www.education.act.gov.au/about-us/freedom_of_information/disclosure-log/_nocache and there is further relevant documentation under the disclosure EDU_2022_034).

The school was subsequently given some poor quality CO2 monitors by the Education Directorate around the 7th November 2022, (the same type that was the subject of Worksafe ACT Improvement Notice N-0000004598), - I believe these all have the defect that when the alarm sounds due to detecting bad air quality, pressing the button to silence the alarm twice instead of once causes the monitor enter calibration mode that should only be used outdoors, and it re-calibrates itself such that the current poor air quality will from that point onwards produce the reading for excellent outdoor air. The CO2 monitor in my child's classroom was used for about a week, during which time the alarm for bad air quality went off repeatedly, and the following weeks I am told the screen was all black, probably indicating that it was turned off or not plugged in. The one in another classroom also disappeared. When I have asked for windows to be opened, sometimes they do open a window slightly for a few days (maybe resulting in CO2 readings more like 1600 ppm) but they often do not keep doing beyond a few days even when the weather is pleasant, and it seems likely that they would not open windows when it is cold or hot outside, which combined with the Directorate's ban on accepting air purifiers makes the classrooms quite unsafe.

It is clear that the Education Directorate is aware of the high infection risk - they even wrote to parents on 6/4/2023 warning in advance of the expectation of consequent staff absences. It is a pity that they are not pursuing the option of operating a safe workplace instead:

From the School's Winter Indoor Air Quality Plan

https://web.archive.org/web/20220923071619/https://www.telopea.act.edu.au/__data/assets/pdf_file/0007/542761/IAQ_-_Telopea_Park_School_Winter_Plan_v1.0.pdf and Summer Indoor Air Quality Plan https://www.cms1.ed.act.edu.au/__data/assets/pdf_file/0003/551136/School_Summer_Indoor_Air_Quality_Plan.pdf, it is clear that they do understand how to reduce infection risk in their buildings. From the measured CO2 readings, it is clear that they are not doing it.

I have several suggestions for enforcement action that Worksafe ACT could take in order to make the school a safer environment for teachers and students, however given that the Education Directorate, the school management and many of the teaching staff have demonstrated a lack of motivation, and even an unwillingness to take any ongoing actions to improve air quality and infection risk, I think that continued and ongoing monitoring by an external organisation (such as Worksafe ACT) is essential, and that any inspections must be unannounced.

If the Directorate or school continues to insist that they will not allow air purifiers and will rely entirely on opening windows, then you could order the installation of some remotely accessible CO2 monitors such as Aranet4 Pro with an internet gateway, with a dashboard located at Worksafe ACT to check on compliance. It would be desirable to have one in each so-called "naturally ventilated" classroom (which would cost on the order of \$25 per student but should last several years) but in order to bring about improvement at the earliest opportunity, you could also start with just a few and move them around the school during unannounced visits. Personally I think that there are genuine concerns that opening windows right next to the students can make them cold, and I think that the Education Directorate implicitly intends that this will be solved by simply ceasing to open the windows (without providing any other air quality improvements). As a partial solution, I think it would make sense to order the school to remove the screws fastening shut the many windows that are higher up than the occupants, which could provide ventilation without a draught blowing right at any student, (and obviously check that any required safety devices are in place to prevent these windows opening wide enough for children to fall out).

Air purifiers are another way that the infection risk could be lowered without making students cold, however based on the disclosures I received under Freedom of Information requests, I am concerned that the Education Directorate does not understand the operation of these devices, does not believe that they are capable of removing infectious aerosols, and is likely to choose devices (such as the Dyson models they acquired for bushfire smoke) with much too low Clean Air Delivery Rate (CADR) to provide a significant improvement in safety. Several reputable organisations (including the WHO) recommend providing a minimum of 10 Litres per second per student of clean air. If air purifiers are installed but just a token number or too small a model, with insufficient Clean Air Delivery Rate, then this should not be a

reason to ignore the very high CO2 readings in the classroom.

In Victoria where schools do have air purifiers of a suitable model (Samsung AX90), there is a big ⁴³ problem with them being left turned off, unplugged or set to a low fan speed that does not provide the required clean air delivery rate. On the highest fan speed some air purifiers are quite noisy, so the best solution would be to provide a larger number and/or larger size of air purifier than the bare minimum, so that the required CADR can be achieved even on a quiet fan setting. There is an excellent summary of the available models with CADR for various fan speeds here https://docs.google.com/spreadsheets/d/17j6FZwvqHRFkGoH5996u5JdR7tk4_7fNuTxAK7kc4Fk/edit#gid=0 . I think that air purifiers are only going to be an effective solution if there is an auditable mechanism to verify that they are, (and continue to be) switched on at the required setting in the required location. Initially I suggest visiting the school unannounced, so that the actual usage of any air purifiers can be verified if they are being relied upon as a control measure, and the CO2 readings verified otherwise. Perhaps the Wi-Fi facility of the Samsung air purifiers could be used for verifying that they are being used, though there may be issues with getting them to connect to an appropriate Wi-Fi network.

Please feel free to contact me for more information regarding this report.

Kind regards,

[Redacted]

Attach an image or other information to support your report or enquiry

[worksafe.pdf](#)

Workplace address (if known)

Enter the address or search/mark the location on the map

Address line 1

Telopea Park School, New South Wales Crescent

Address line 2

Suburb

BARTON

State

ACT

Postcode

2600

Your contact information

Submit anonymously

Title Given name *

[Redacted] [Redacted]

Family name *

[Redacted]

Provide an email address and/or phone number: *

Phone number

[Redacted]

Email

[Redacted]

Would you like to receive a response? *

Yes No

Preferred contact method *

Phone Email

From: "Farrington, Shannon" <Shannon.Farrington@act.gov.au>
Sent: 12/05/2023 4:53 PM
To: "Shepherd, Jackii" <Jackii.Shepherd@worksafe.act.gov.au>
Subject: Telopea Park - WorkSafe
Attachments: TPS feedback posters.pdf

OFFICIAL

Dear Jackii

I have received this through Sophie and Pen so I don't know the exact conversation you had with Sophie on Monday but she gave me the gist.

Pen manages all of our WorkSafe responses, so she has a really good understanding of the Act. She mentioned your concern is around whether we follow our procedures for complaints management communication and consultation, and not about the CO2 levels at the school.

In relation to your enquiry about a complaint WorkSafe ACT has received regarding Telopea Park School, please find below information to address this matter.

The school became aware of a parent's interest in CO2 levels around September 2022. At that time, an executive teacher communicated with the parent via telephone and then the parent sent a follow up email subsequent to that call. In the follow up email the parent offered to provide a CO2 monitor to the school for trial. On 7 November 2022, the principal emailed the parent as a result of the parent's feedback via the school's parent feedback form. Resolution of any query lodged via the school's parent feedback form is managed by one of the Telopea Park School executive staff. The parent was advised in that email that CO2 monitors had been provided to the school by the Education Directorate. On 9 November 2022, the parent replied to the principal's email and offered some suggestions that the school could consider in relation to CO2 monitors. No further response was requested by the parent at that time. The parent also acknowledges progress at the school in relation to ventilation.

Although this wasn't lodged as a formal complaint we have followed our dispute resolution procedures informally.

I trust that this information satisfies your request. If not please do not hesitate to contact myself or Pen.

Kind regards

Shannon Farrington | Senior Director - Work Health and Safety, Early Intervention and Wellbeing

Phone: [Sch 2.2\(a\)\(ii\)](#) | Email: shannon.farrington@act.gov.au

Safe @ School | Education | ACT Government

51 Fremantle Drive, Stirling, ACT 2611 | GPO Box 158 Canberra ACT 2601 | www.act.gov.au

www.education.act.gov.au | [Facebook](#) | [Twitter](#) | [Instagram](#) | [LinkedIn](#) | [Google+](#)



I acknowledge the traditional custodians of the lands and waters where we live and work, and pay my respects to elders past, present and future.

From: Selfe, Sophie <[Sophie.Selfe@act.gov.au](mailto:Selfe.Sophie@act.gov.au)>
Sent: Tuesday, 9 May 2023 11:14 AM
To: Hucker, Penelope <Penelope.Hucker@act.gov.au>

Cc: Farrington, Shannon <Shannon.Farrington@act.gov.au>

Subject: Telopea Park - WorkSafe

OFFICIAL

Hi Pen,

Thank you for the assistance in addressing this matter.

Jackii Shepherd contacted me yesterday and advised that WorkSafe has received a complaint regarding Telopea Park School. The complainant had sent their child to school with a carbon dioxide monitor in their pocket and has provided those readings to WorkSafe. Jackie explained that as an occupational hygienist she was not concerned by the carbon dioxide numbers cited by the parent. She advised that she assumed that the Directorate was aware of the issue as the complainant had also provided WorkSafe with a letter from the school requesting parents to not send their children to school with detectors.

Jackii has requested an update by the end of the week that indicates the parents complaint has been managed in accordance with our internal processes so that she may go back to the complainant and advise them that they are aware of the Directorate actions in this matter and that this is the proper channel to progress their concerns.

For further context, Jackii further explained that she understood the enormous amount of work that the Education Directorate have been doing in the work health safety space and that they are triage complaints with this in mind and seeking to refer matters back to the Directorate for management where appropriate.

Thanks again, Pen.

Kind regards,

Soph

Sophie Selfe | Director - Work Health and Safety, Early Intervention and Wellbeing

Phone: 02 6207 0290 | Mobile: [Sch 2.2\(a\)\(ii\)](#) | Email: sophie.selfe@act.gov.au

Safe @ School | Education | ACT Government

www.education.act.gov.au | [Facebook](#) | [Twitter](#) | [LinkedIn](#) | [Google+](#)

From: "Nicholas, Andrew"
Sent: 31/05/2023 11:29 AM
To: [REDACTED]
Bcc: "Woolgar, Andrew" <Andrew.Woolgar@worksafe.act.gov.au>
Subject: WorkSafe ACT response to the concerns you have raised

UNOFFICIAL

Good Morning [REDACTED]

I have reviewed the complaint and information provided.

I have relied on the following to inform my recommendation:

- There are no established and mandatory indoor air quality standards in Australia.
- CO₂ is not on the list of ambient air quality standards as listed by the National Environment Protection Measures (NEPM).
- CO₂ is not considered to be a significant indoor air pollutant by the Australian Institute of Occupational Hygienists (AIOH) as per the Principles of Occupational Hygiene (3rd edition, 2019). However, it is noted that external air quality can significantly impact indoor air quality and notes a ventilation indicator of <800 ppm for commercial buildings
- In a workplace, the Work Health and Safety laws reference the Workplace Exposure Standards for Airborne Contaminants. However, these standards are set based on assumptions for adults and a working schedule of 8 hours per day, 40 hours per week and 5 out of 7 working days. This Standard is also set for human health endpoints that are not infectious diseases.
- The Australian Building Codes Board (ABCB) publishes a handbook on indoor air quality that provides guidance on verification methods as relevant for the National Construction Code. This includes CO₂ as an indicator for the control of body odour, not infectious diseases.
- During the COVID-19 pandemic, there was limited research published that reported using CO₂ as a proxy for an increased risk of infection, with the Australian Health Protection Principal Committee (AHPPC) advising that improved ventilation may limit the spread of certain respiratory diseases, such as COVID-19, in indoor environments.
- The UK Health and Safety Executive (HSE) recommend a consistent indoor air quality of 800 ppm for CO₂ and implementing increased ventilation measures where results are consistently measured above 1500 ppm. Again, this is based on a risk of infection via an airborne route of exposure.

The Figures provided by the complainant of CO₂ readings of two students at Telopea Park do not provide information about:

- what monitor was used
- where the monitor was placed
- how long the measurement period was
- daily schedule or record of indoor/outdoor activities
- the maintenance or calibration details of the monitor
- the size of the space that the measurements correspond
- how many people and/or children were present within the indoor space
- whether the mechanical ventilation rate was at a standard outlined by the ABCB.

The lack of this information means that measurements provided in the Figures is not robust and cannot be considered a true and accurate representation of exposure. Adding to this, ambient air (outdoor) CO₂ varies generally between 300 and 500 ppm, it appears that the monitor has been adjusted at a minimum level that may not be reflective of actual ambient air levels. Again, resulting in the peak levels not necessarily being accurate.

Indoor pollutant concentrations vary substantially within a building over the day as the activities of those within in it fluctuate. It is considered normal for CO₂ levels to increase as people arrive and may not reach steady state levels, depending on the activities and numbers of people within the space. There are peaks and troughs provided in the Figures that could be attributed to a build up of CO₂ during indoor activities with breaks assumed to be outside activities. If applying workplace exposure standards, none of the peaks appear near action levels of half the Short-

Term Exposure Limit (30,000 ppm). Without the raw data, an accurate TWA cannot be calculated, but it also appears that on average (assuming an eight hour exposure period) the TWA (5,000 ppm) is not reached.

There are only guidelines available for indoor air quality for CO₂, no mandatory standards to compare to. Most reference an average of 850 ppm (assuming a baseline ambient Co₂ level of 350 to 400 ppm) and a guidance value of an average of 1500 ppm to review and improve ventilation. However, as previously noted, these values are not recommended based on risk of COVID-19 infection, but instead as an indicator of ventilation.

The CO₂ measurements provided do not lead me to a decision that the indoor air quality is a risk to the health of workers or others at the workplace in this instance. There is no information available to link the CO₂ levels provided by the complainant to increased infection incidence at the school, nor any other adverse human health effects.

- Noting the complainants statement that the only CO₂ source is accumulated breath from the people and/or children in the room, it does appear that CO₂ measurement increase over time but do not exceed the workplace exposure standards and there is no clear data to discount outdoor air influences.
- As there is no mandatory limit for Co₂ for the purpose of preventing or minimising infection risk, I have nothing to compare to. I note the Australian Health Protection Principal Committee (AHPPC) state that ventilation is only an potential additional control measure within the hierarchy of controls and cannot replace other infection prevention and control measures. Other elimination and management measures have been implemented at both an ACT Community level (including masks, vaccination and isolation measures) and by the school itself (for example, COVIDSafe plans, hand and respiratory hygiene). The AHPPC identify schools as possible high-risk indoor environments, and expand this to communicate that different settings require different considerations and controls for infection prevention.
- Under the WHS laws, the PCBU must eliminate or minimise the risk of infection from biological hazards. I understand that the Education Directorate has been providing the schools within its responsibility with the appropriate measures to take in relation to COVID-19 infection risk, in line with both the WHS laws and the Public Health Declarations.
- I note that the Education Directorate and the individual school in question have the appropriate channels for raising complaints and I understand that measures have been taken by both in relation to this complaint.

Based on this, I recommend referring the complainant to ACT Health for their views. I do not recommend a workplace visit at this time.

Kind regards,

Jackii Shepherd
FAIOH MACTRA MFAMANZ
 Specialist Operations

Thanks

Andrew Nicholas | Inspector – Occupational Hygiene & Civil Construction Team
 P: 02 6207 0346 | M: [Sch 2.2\(a\)\(ii\)](tel:0412 222 222) | E: andrew.nicholas@worksafe.act.gov.au
 Office of the Work Health and Safety Commissioner
 GPO Box 158 Canberra ACT 2601 | www.worksafe.act.gov.au

WORKSAFEACT

