

Flint, Katrina

From: Yapp, Phillip
Sent: Thursday, 5 May 2022 9:50 AM
To: Parkinson, Andrew; Ryan, JohnW
Cc: Flint, Katrina; Graham, Cathy
Subject: RE: CO2 monitors bulk purchase
Attachments: Re: Giralang Primary School - IOT POC

Hi Andrew

I've spent some time investigating other options and talking to suppliers, these are the findings so far:

- (Recommended) HEVAC H8 CO2 Monitor - [REDACTED] incl GST. Lowest cost device that has a confirmed NDIR sensor which is more accurate, appropriate CO2 alarms, available, and comes with a USB charger.
- Aranet4 CO2 monitor - [REDACTED] incl GST - [Aranet4 HOME CO2 sensor | CO2 Radical](#) . These Aranet4 units are typically what we've seen in news articles, AIRAH publications etc. Total cost would be [REDACTED]
- Kaiterra SenseEdge IAQ Monitor - [REDACTED] [Sensedge Air Quality Monitor - Built for WELL V2 & RESET \(kaiterra.com\)](#). High end device we've trialed at one site.
- Kaiterra SenseEdge Mini - [REDACTED] each [Sensedge Mini Air Quality Monitor - Built for WELL V2 & RESET \(kaiterra.com\)](#) High end device without display, view through phone app.
- Nube IO Wireless Monitors - [REDACTED] plus GST (attached email). Mid-range device, can connect wirelessly to a LoRaWAN wireless BMS (at additional cost).
- EBay monitors - [REDACTED] questionable sellers and ability to find numbers. The cheaper units appear to have non NDIR sensors and sense via VOC monitor which is inaccurate and lower longevity from what I've read. Also don't come with a USB charger.

Cheers

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
 Infrastructure and Capital Works | Education | ACT Government
 Level 4 220 London Circuit | GPO Box 158 Canberra ACT 2601 | www.det.act.gov.au

From: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Sent: Thursday, 5 May 2022 9:21 AM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>
Cc: Flint, Katrina <Katrina.Flint@act.gov.au>; Graham, Cathy <Cathy.Graham@act.gov.au>
Subject: Re: CO2 monitors bulk purchase

OFFICIAL

I support a single select for this given the urgency of the need. We do still need to evaluate value for money

Andrew Parkinson
 Education Directorate | ACT Government
 Phone 02 6205 4593 | Mobile 0478 301 085

From: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Sent: Thursday, May 5, 2022 9:19:18 AM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>

Cc: Flint, Katrina <Katrina.Flint@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>; Graham, Cathy <Cathy.Graham@act.gov.au>

Subject: FW: CO2 monitors bulk purchase

Hi John

ACTPG have advised they would have to go to tender for purchase of 1000 CO2 monitors, as it's estimated at ~\$80,000 and over the \$25k threshold. This isn't great for our provision of monitors to schools in line with our IAQ Plans. As such I've drafted a single select PPM for you to review and Andrew to sign off.

The Option 1 unmodified H8 units below with tech data attached, are fit-for-purpose, good value and most importantly available ex stock. The thresholds in this unit are <800ppm Green light, 800-1200 light green flashing, 1200-1600 orange flashing, 1600+ red flashing, >2000ppm all colours flash plus audible alarm, so align with OzSAGE advice and our IAQ Plans.

I've asked [redacted] for a formal quote today.

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

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From: [redacted] >
Sent: Wednesday, 4 May 2022 2:14 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Subject: RE: CO2 monitors bulk purchase

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HI PHIL as per our phone conversation , and discussions ive had with the factory in china.
The options are :

1. The original co2 monitor un modified is available ex stock and can be despatched in a few days. Visual colour indication ring operates over the range of 400 to 2000 with buzzer alarm sounding at levels over 2000ppm.
2. The modified version we have the factory make for us ..visual colour level indication ring operates from 400 to 1000 ppm & buzzer sounding at 1000ppm & buzzer **is also mutable**. Despatch from China is 2 weeks
3. Modified version as above but buzzer disabled. Dispatch from china is 2 weeks.

In all cases delivery from china could take 4 weeks to arrive once despatched based on previous deliveries in recent times.



HSMO-DQ

MULTI-OUTPUT ROOM SENSOR/ CO2 CONTROLLER c/w TEMPERATURE, HUMIDITY & CO2 OUTPUTS

(Can be programmed for a preset CO2 output control range ie 700-1000ppm for 0-10v output, allowing direct connection & control of EC fans or damper motors for local zone CO2 control without the need of a separate control module). CO2 uses a self calibrating algorithm making this sensor maintenance free over its life time of upto 25 years.

<https://hevac.com.au/store/index.php?route=product/category&path=22>

Regards



HEVAC
Control Agencies

From: Yapp, Phillip <Phillip.Yapp@act.gov.au>

Sent: Wednesday, 4 May 2022 11:18 AM

To: sales@hevac.com.au

Cc: CMTEDD ACTPG HVAC Services <ACTPGHVAC@act.gov.au>; Flint, Katrina <Katrina.Flint@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>

Subject: CO2 monitors bulk purchase

Hi Nick

I spoke to Lisa this morning, hoping you can give me a call/email to discuss the potential purchase of 1,000 CO2 monitors for providing to schools. We recently discussed these, and we purchased 60 units through Capital Boilers which we've started sending to some schools as a trial.

We would like to see if we can get a price, availability and lead time for provision of 1,000 CO2 monitors in black, with the associated USB charger. However we would require the units to come without the audible alarm at 1,000ppm, and without additional instructions/advice around CO2 as we will be issuing that to schools ourselves.

If you can get in touch ASAP regarding this, that would be great.

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

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Infrastructure and Capital Works | Education | ACT Government

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Flint, Katrina

From: [REDACTED]
Sent: Tuesday, 25 January 2022 3:15 PM
To: Yapp, Phillip
Cc: Ulla Cady; Tom Fyfe
Subject: Re: Giralang Primary School - IOT POC
Attachments: Indoor Ambience Monitoring Sensor - Datasheet.pdf

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.

Hi Phil.

I figured that [REDACTED] was a busy man.

We do now have a CO2 sensor with a visual display that also provides a realistic CO2 display (Bad, Fair, Good , Excellent)

They are a wall mount battery operated Lora WAN sensor that we found from talking to other providers that have been doing work with schools in Canada and the UK.

The data sheets are attached. They will be able to be added to the current gateway and also added as bacnet points to the BMS. \$443.00 plus GST each



On Tue, Jan 25, 2022 at 1:53 PM Yapp, Phillip <Phillip.Yapp@act.gov.au> wrote:

Thanks [REDACTED]

That makes sense, I've left a message for [REDACTED] to call me back and I'll see if I can get the install done ASAP. We do have [REDACTED] doing a lot with the rush to get back to school and set up ventilation controls/reporting across the portfolio..

On another note, wondering if you have any wireless CO2 sensors (temp, occ, lux would be great too) that have a display for ppm? We're working through a lot of indoor air quality plans at the moment, and finding a lot of sites where the only option is to open windows. OK now but in winter this will be an issue. Would be great if we could expand these systems to archive the data, but have a display so teachers could actively open/close windows until we can get more permanent solutions in place.

Cheers

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

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From: [REDACTED]
Sent: Tuesday, 25 January 2022 1:43 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: [REDACTED]
Subject: Re: Giralang Primary School - IOT POC

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.

Hi Phil.

Thanks for getting back to me.

I have been trying to call [REDACTED] to see where [REDACTED] is at with the installation.

Unfortunately when I was on site we found that the school was in a 4G dead zone and there was no remote access.

I was able to carry out a single penetration inspection and found that all sensors will be within range within the agreed installation position with the technician that I met on site.

Because we could not gain remote access the agreement was that a service technician would attend site once installed and assist with the sensor validation and bacnet connection.

On Tue, Jan 25, 2022 at 1:30 PM Yapp, Phillip <Phillip.Yapp@act.gov.au> wrote:

Hi [REDACTED]

Hope you're well. A couple of things, I completely missed this invoice at the end of last year, and had not seen it come through our online system. I've logged it today so and will sign off as soon as it's registered. My sincere apologies for this, [REDACTED].

With future invoices, if they can be sent to APINVOICES@act.gov.au with me copied in they will go into the finance system automatically for my sign off.

On the Giralang project, I spoke to [REDACTED] yesterday and [REDACTED] mentioned [REDACTED] waiting for a different aerial for coverage of the school or something similar? Do you know if there's anything from your end [REDACTED] waiting on here?

Cheers

Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au

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From: [REDACTED]
Sent: Tuesday, 21 December 2021 3:09 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: [REDACTED]
Subject: Re: Giralang Primary School - IOT POC

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.

Hi Phillip.

Please see a Dec progress claim attached for Giralang Primary School.

Remaining works are to attend site to assist with the commissioning of the installation once notified.

Please let me know if you have any questions.

On Sat, Dec 18, 2021 at 8:56 AM [REDACTED] wrote:

Hi Phillip.

Just touching base about the installation of the CO2 sensors at Giralang Primary School.

Do you know when the sensors are planned to be installed? I haven't heard anything since our site visit.

I was also planning to invoice this project since we have built the hardware some time ago.

Is it ok for us to invoice the project now?

The only remaining works we may have to to attend site to assist with any commissioning if the internet connection is not established.

On Thu, Dec 2, 2021 at 2:43 PM <[REDACTED]> wrote:

Afternoon All

We can be on site 9am as have a few other jobs. We will need device MAC address to send to SSICT.

Kind Regards,

[REDACTED]

[REDACTED]

[REDACTED]

From: Yapp, Phillip <Phillip.Yapp@act.gov.au>

Sent: Thursday, 2 December 2021 2:10 PM

To: [REDACTED]

Subject: RE: Giralang Primary School - IOT POC

Thanks [REDACTED]

I've called the school and the Business Manager, Wendy Morschel will be on site to meet you and [REDACTED] at 7am tomorrow. The school number is 6142 2630 and address Atalumba Close, Giralang ACT 2617.

She did say that you would need to do a quick induction on site, and provide a copy of your public liability. She also mentioned submission of a COVID safe plan, however I think we can use the existing work order [REDACTED] have for the BMS controller installation and you could work to [REDACTED] as a supplier/commissioner in this instance if that works for you both.

Really exciting to see this go forward. I'd like to be able to make it to site but [REDACTED] [REDACTED]. Hopefully catch you if you come down again [REDACTED] I'd say we'll probably roll a few more of these projects out.

Cheers

Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au

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From: [REDACTED]
Sent: Thursday, 2 December 2021 1:59 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: [REDACTED]
Subject: Re: Giralang Primary School - IOT POC

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.

Hi [REDACTED]

Just confirming that I will be on site at Giralang Primary school tomorrow morning at 7am with the CO2 sensors and gateway to carry out the wireless signal penetration testing and hand over the hardware for installation.

I anticipate that the signal testing will take 1 hr with an [REDACTED] technician.

I am leaving [REDACTED] so that I can be on site by 7am.

On Thu, Dec 2, 2021 at 9:21 AM [REDACTED] wrote:

Thanks Phil

On Thu, 2 Dec 2021 at 7:42 am, Yapp, Phillip <Phillip.Yapp@act.gov.au> wrote:

Hi [REDACTED]

Sorry yesterday was a bit flat out. I'll confirm with the school asap this morning but I definitely don't see it being an issue. Will confirm shortly.

Cheers

Phil

Get [Outlook for Android](#)

From: [REDACTED]
Sent: Wednesday, December 1, 2021 9:14:28 AM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: [REDACTED]

Subject: Re: Giralang Primary School - IOT POC

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.

Hi Phillip,

[REDACTED] and I had a discussion yesterday about the installation and range testing of the Edge gateway at Giralang Primary School.

Is it possible that we would be able to gain access to Giralang Primary School at 7am on Friday morning 3rd Dec for 2hrs to carry out the Wireless penetration testing of the gateway location?

At the same time I can deliver all of the hardware to [REDACTED] for the installation

On Wed, Nov 24, 2021 at 1:03 PM [REDACTED] wrote:

Thanks Phillip

If we could please set up the team meeting in the PM on Friday that would be great.

On Wed, Nov 24, 2021 at 10:40 AM Yapp, Phillip <Phillip.Yapp@act.gov.au> wrote:

[REDACTED]

Sorry for the delay in getting back. We've approved the BMS controller installation today, so hopefully that can go ahead next week. I'll set up a teams meeting for Friday with you, [REDACTED] and the [REDACTED] vendor to talk implementation.

Cheers

Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au

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From: [REDACTED]
Sent: Wednesday, 17 November 2021 11:54 AM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: [REDACTED]
Subject: Re: Giralang Primary School - IOT POC

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Hi Phillip,

Just touching base to follow up on the CO2 installation at Giralang Primary School.

Are you still waiting for the new BMS to be installed?

On Wed, Nov 10, 2021 at 3:30 PM [REDACTED] > wrote:

Hi Phillip,

Thanks for getting back to us.

I also appreciate the value in the answers to our questions.

I am available on Tue next week to organise a teams meeting if that works for everyone else?

On Wed, Nov 10, 2021 at 10:58 AM Yapp, Phillip <Phillip.Yapp@act.gov.au> wrote:

Hi [REDACTED]

Apologies for the late reply, I've [REDACTED] and have had another busy week of ventilation.

I've probably picked one of the few sites we don't have a BACNET BMS on site, there's a very old Johnson Controls system throughout. However we will be getting a Reliable Controls BACNET controller installed in the next week or so, it fits in with our long term Reliable Control BMS deployment across the whole portfolio. Giralang showed up as a site we had little visibility on, and had some issues with classrooms apparently with poor ventilation, so the project will definitely be worthwhile.

I've put together some sensor locations I think would work, up to 32. I'll confirm the zoning of the AHUs so we can name the sensors according to the HVAC systems.

And if it works with you, I can organise a quick teams meeting with [REDACTED] (BMS provider) and discuss connection and site inductions. Maybe Monday/Tuesday next week?

Cheers

Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au

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From: [REDACTED]
Sent: Tuesday, 2 November 2021 8:17 AM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: [REDACTED]
Subject: Giralang Primary School - IOT POC

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.

Good Morning Phil.

My name is [REDACTED], I am working with [REDACTED] on the deployment and installation of the CO2 sensing project at Giralang Primary School.

I was hoping that I might be able to get a bit of information out of you in regards to the minor details of the project.

Can you please let me know:

1. Do you know the location of the BMS central controller on site?
A new BMS controller will most likely be installed in the main boiler plant room. TBC by end of this week.
2. Can you please advise the sensor locations and sensor naming convention. ie GPC_CO2_1.07 GIRP_AHU-"X".01.
We will try and line up with the AHUs. I'll get this information over to the map by end of this week.
3. BMS IP address if available?
TBC once we put the new BMS controller in.
4. Incumbent BMS contractor contact details?

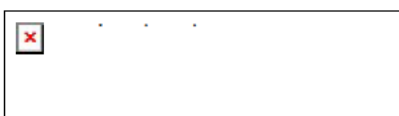


5. Site induction details?
TBC later this week.

Will talk soon. Thanks.

--

Regards,



Chief Operating Officer

E: [REDACTED]

W: <https://nube-io.com>

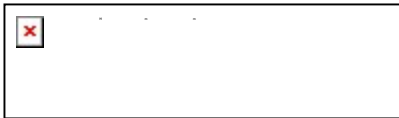
P: + [REDACTED]

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--

Regards,

[REDACTED]



[REDACTED]

[REDACTED]

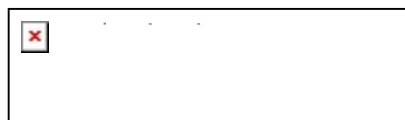
W: <https://nube-io.com>

P: [REDACTED]

--

Regards,

[Redacted]



[Redacted]

[Redacted]

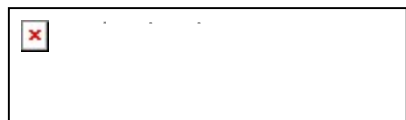
W: <https://nube-io.com>

P: [Redacted]

--

Regards,

[Redacted]



[Redacted]

[Redacted]

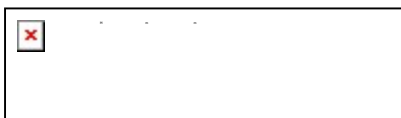
W: <https://nube-io.com>

P: + [Redacted]

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Regards,

[REDACTED]



[REDACTED]

[REDACTED]

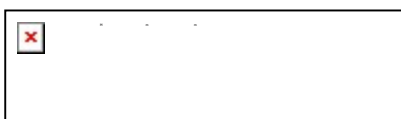
W: <https://nube-io.com>

P: + [REDACTED]

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Regards,

[REDACTED]



C [REDACTED]

E: [REDACTED]

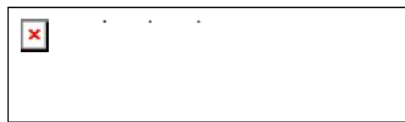
W: <https://nube-io.com>

P: + [REDACTED]

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Regards,

[REDACTED]



[REDACTED]

E: [REDACTED]

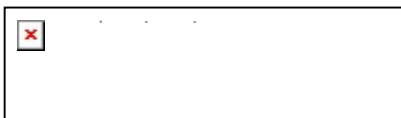
W: <https://nube-io.com>

P: + [REDACTED]

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Regards,

[REDACTED]



[Redacted text]

[Redacted text]

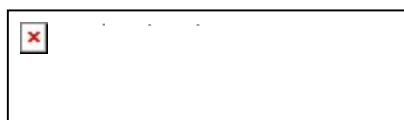
W: <https://nube-io.com>

P: + [Redacted text]

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Regards,

[Redacted text]



[Redacted text]

[Redacted text]

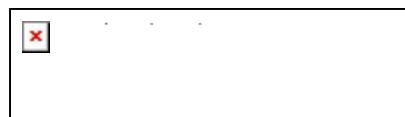
W: <https://nube-io.com>

[Redacted text]

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Regards,

[Redacted]



[Redacted]

[Redacted]

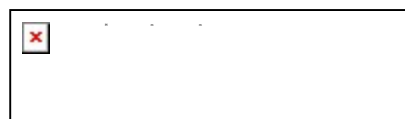
W: <https://nube-io.com>

P: + [Redacted]

--

Regards,

[Redacted]



[Redacted]

W: <https://nube-io.com>

[Redacted]

Indoor Ambience Monitoring Sensor

The N307-915 models are a compact indoor ambience monitoring sensor for measurement of temperature, humidity, light, CO2 concentration, HCHO/O3 level, TVOC, barometric pressure, PM2.5, PM10 and motion. The data will be shown on the screen in real-time, which helps to measure the indoor environment and comfort. The N307-915 models are widely used for offices, stores, classrooms, hospitals, etc.

Sensor data is transmitted using LoRaWAN® technology. Combining Nube iO LoRaWAN® gateway and Nube iO IoT Cloud, users can manage all sensor data remotely and visually.



Features

- Integrated with multiple sensors like humidity, temperature, CO2, light, barometric pressure, PM2.5, PM10, etc.
- Multiple display modes and clear emoticon to easily understand the comfort levels via screen
- Support batteries or DC power supply
- Equipped with traffic light indicator and buzzer to indicate device status and threshold alarms
- Able to store locally more than 18, 000 records of 512 KB in total
- Compliant with standard LoRaWAN® gateways and network servers

Specifications

Model	N307-915
Wireless Transmission	
Technology	LoRaWAN®
Frequency	AU915
Tx Power	16dBm(868MHz)/22dBm(915MHz)/19dBm(470MHz)
Sensitivity	-137dBm @300bps
Work Mode	OTAA/ABP Class A
Sensors - Temperature	
Range	-40°C - 85°C
Accuracy	± 1°C
Resolution	0.1°C
Sensors - Humidity	
Range	0% - 100% RH
Accuracy	± 3%
Resolution	0.5% RH

Sensors - PIR	
Detection Area	80 ° Horizontal, 55 ° Vertical
Detection Range	5 m
Status	Vacant/Occupied
Sensors - Light	
Range	0-60000 Lux (Determine as 6 levels, 0-5)
Sensors - TVOC	
Range	0-500 (IAQ Index)
Accuracy	±15 %
Sensors - Barometric Pressure	
Range	300 - 1100 hPa (-40°C - 85°C)
Accuracy	±0.6 hPa
Resolution	0.1 hPa
Sensors - Carbon Dioxide (CO2)	
Range	400 - 5000 ppm
Accuracy	± (30 ppm or + 3 % of reading)
Resolution	1 ppm

Display & Configuration	
Display	4.2-inch Black & White E-Ink Screen
Button	1 × Power Button + 1 × Reset Button
LED & Buzzer	1 × Traffic Light Status Indicator + 1 × Buzzer
Configuration	Mobile App via NFC or PC software via NFC or USB Type-C port
Physical Characteristics	
Power Supply	4 × 2700 mAh ER14505 Li-SOCI2 Replaceable Batteries or Type-C Port
Battery Life	Around 3 Years
Operating Temperature	-20°C - 60°C (E-Ink Screen: 0°C - 40°C)
Relative Humidity	10% - 90% (non-condensing)
Ingress Protection	IP30
Dimension	100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in)
Installation	3M Tape Mounting, Wall Screw Mounting, 86 Box Mounting

Flint, Katrina

From: Parkinson, Andrew
Sent: Tuesday, 10 May 2022 2:16 PM
To: Yapp, Phillip; Ryan, JohnW
Cc: Flint, Katrina; Graham, Cathy; ICW EBM Office
Subject: Re: CO2 monitors bulk purchase
Attachments: PPM - CO2 Monitor Bulk Purchase Single Select.pdf

OFFICIAL

Hi all

signed PPM attached - please go ahead.

Andrew Parkinson | Executive Branch Manager
Infrastructure & Capital Works | Education Directorate | **ACT Government**
Phone 02 6205 4593 | **Mobile 0478 301 085**
220 London Circuit, Civic | www.act.gov.au

Dhawura nguna, dhawura Ngunnawal

From: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Sent: Thursday, 5 May 2022 09:19
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>
Cc: Flint, Katrina <Katrina.Flint@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>; Graham, Cathy <Cathy.Graham@act.gov.au>
Subject: FW: CO2 monitors bulk purchase

Hi John

ACTPG have advised they would have to go to tender for purchase of 1000 CO2 monitors, as it's estimated at ~\$80,000 and over the \$25k threshold. This isn't great for our provision of monitors to schools in line with our IAQ Plans. As such I've drafted a single select PPM for you to review and Andrew to sign off.

The Option 1 unmodified H8 units below with tech data attached, are fit-for-purpose, good value and most importantly available ex stock. The thresholds in this unit are <800ppm Green light, 800-1200 light green flashing, 1200-1600 orange flashing, 1600+ red flashing, >2000ppm all colours flash plus audible alarm, so align with OzSAGE advice and our IAQ Plans.

I've asked [REDACTED] for a formal quote today.

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
Infrastructure and Capital Works | Education | ACT Government

Sent: Wednesday, 4 May 2022 2:14 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Subject: RE: CO2 monitors bulk purchase

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](#)

Hi PHIL as per our phone conversation , and discussions ive had with the factory in china.
The options are :

1. The original co2 monitor un modified is available ex stock and can be despatched in a few days. Visual colour indication ring operates over the range of 400 to 2000 with buzzer alarm sounding at levels over 2000ppm.
2. The modified version we have the factory make for us ..visual colour level indication ring operates from 400 to 1000 ppm & buzzer sounding at 1000ppm & buzzer is also mutable. Despatch from China is 2 weeks
3. Modified version as above but buzzer disabled. Dispatch from china is 2 weeks.

In all cases delivery from china could take 4 weeks to arrive once despatched based on previous deliveries in recent times.



HSMO-DQ

MULTI-OUTPUT ROOM SENSOR/ [CO2 CONTROLLER](#) c/w TEMPERATURE, HUMIDITY & CO2 OUTPUTS

(Can be programmed for a preset CO2 output control range ie 700-1000ppm for 0-10v output, allowing direct connection & control of EC fans or damper motors for local zone CO2 control without the need of a separate control module). CO2 uses a self calibrating algorithm making this sensor maintenance free over its life time of upto 25 years.

<https://hevac.com.au/store/index.php?route=product/category&path=22>

Regards



From: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Sent: Wednesday, 4 May 2022 11:18 AM
To: sales@hevac.com.au
Cc: CMTEDD ACTPG HVAC Services <ACTPGHVAC@act.gov.au>; Flint, Katrina <Katrina.Flint@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>
Subject: CO2 monitors bulk purchase

Hi Nick

I spoke to Lisa this morning, hoping you can give me a call/email to discuss the potential purchase of 1,000 CO2 monitors for providing to schools. We recently discussed these, and we purchased 60 units through Capital Boilers which we've started sending to some schools as a trial.

We would like to see if we can get a price, availability and lead time for provision of 1,000 CO2 monitors in black, with the associated USB charger. However we would require the units to come without the audible alarm at 1,000ppm, and without additional instructions/advice around CO2 as we will be issuing that to schools ourselves.

If you can get in touch ASAP regarding this, that would be great.

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
Infrastructure and Capital Works | Education | ACT Government
Level 4 220 London Circuit | GPO Box 158 Canberra ACT 2601 | www.det.act.gov.au

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Procurement Plan Minute

PROCUREMENT OVERVIEW	
To	Mr Andrew Parkinson Branch Manager Infrastructure and Capital Works Branch
Name of Project	<i>Purchase of one thousand (1000) portable CO2 monitors</i>
Purpose	To seek your approval to engage <i>HEVAC Control Agencies Pty Ltd</i> for the supply of 1,000 portable CO2 sensors. This will allow schools to proactively manage ventilation and thermal comfort in line with the Winter Indoor Air Quality Plans and Fact Sheet on Winter Operation of Naturally Ventilated Spaces.
Estimated value (\$, excl GST)	\$80,000.
Timing/urgency	<ul style="list-style-type: none"> The purchase is required as soon as possible to allow a safe return to school with colder weather There is currently no ability for teachers to balance classroom ventilation and
Tender Number	Not applicable
Is Government Procurement Board sign off required?	No, as the estimated value of the procurement is below the monetary threshold for Government Procurement Board review (\$5,000,000.00).
Is ACT Government Solicitor (ACTGS) consultation required?	Not applicable
SME Opportunities Statement – Goods and Services only	Not applicable
Objective or scope of works or services to be provided	Provision of portable CO2 monitors is essential to manage ventilation and thermal comfort across the school portfolio. Approximately 1,110 teaching spaces have
Type	Supply.
Funding	COVID-19 Indoor Air Quality.
Consultation (including pretender)	Project Officers have sought information on availability and cost of a number of CO2 monitors that are appropriate for the project. No other monitors were found at a reasonable price, from a reputable supplier, that met the requirements in line with the Winter Indoor Air Quality Plans developed for schools.

PROCUREMENT RISK	
Risk	<ul style="list-style-type: none"> Seeking quotations from other suppliers on a short timeframe risks delaying supply of CO2 monitors to schools, affecting their ability to implement the winter control strategies identified in their IAQ Plans. Project Officers have researched many CO2 monitors and have been unable to find any other comparable monitors for the price point which meet Education's requirements around NDIR sensors, CO2 level thresholds, and appropriate alarm setpoints that align with our Winter IAQ Plans. ACTPG recently provided sixty (60) trial CO2 monitors purchased through <i>HEVAC Control Agencies</i> with those monitors performing well

PROCUREMENT METHODOLOGY	
Description of the procurement method to be used	"Single Select". The engagement of <i>HEVAC Control Agencies Pty Ltd</i> will meet the needs of the individual project within the tight timeframes required.
Evaluation	The quotation submitted by <i>HEVAC Control Agencies Pty Ltd</i> has been assessed Asset Strategies and they have determined the proposal does provide Value for Money to the Territory.
Is this suitable to be a Social Procurement?	No.

EVALUATION TEAM			
Name	Phillip Yapp	John Ryan	Katrina Flint
Position	Assistant Director, Asset Strategies and Sustainability	Director, Asset Strategies	Project Officer, Asset Strategies and Sustainability
Agency	Education Directorate	Education Directorate	Education Directorate
Statement on team composition	Evaluation team is comprised of staff with relevant experience in Indoor Air Quality and technical capability in reviewing proposed CO2 monitors.		


CONTRACT MANAGEMENT	
Number of contracts	One (1).
Contract management	Asset Strategies.
Period of contract(s)	1 weeks.


AUSTRALIAN FREE TRADE AGREEMENTS (FTAs)	
Does the AUSFTA / Australia-Chile FTA apply?	No, as the estimated value of the procurement is below the monetary threshold for the application of the tendering procedures mandated by the FTAs (\$551,000.00 for goods and services).

AUSTRALIAN GOVERNMENT FUNDING	
Is there Australian Government funding attached to the procurement?	No.

EXEMPTIONS	
Exemption	<p>Exemption from the Quotation and Tender Threshold at Part 2, Section 6 of the <i>Government Procurement 2007</i> ("the Regulation") is sought. This exemption can be granted in accordance with Part 2, Section 10 of the Regulation, which states:</p> <p>(1) <i>The responsible Director-General for a territory entity may, in writing, exempt the entity from a requirement mentioned in section 6 or section 9 for a procurement proposal.</i></p> <p>(2) <i>However, the responsible Director-General may exempt the entity only if satisfied, on reasonable grounds, that the benefit of the exemption outweighs the benefit of compliance with the requirement.</i></p> <p>The Director-General has partially delegated this function to the Executive Branch Manager – Infrastructure and Capital Works, Education Directorate up to a value of up to \$200,000 including GST.</p>
Reason for Exemption	<p>Engagement of <i>HEVAC Control Agencies Pty Ltd</i> is requested for exemption based on:</p> <ul style="list-style-type: none"> Urgent need to provide portable CO2 monitors to schools to implement their Winter IAQ Plans. Units are ex stock and available for immediate delivery. Project Officers have been unable to find any other suitable CO2 monitors that have NDIR sensors, CO2 thresholds and alarms that align with Directorate’s advice on CO2 levels in classrooms, at a reasonable price point. (\$84 per sensor vs ~\$400-1000 per sensor) Previous experience providing sixty (60) CO2 monitors through ACT Property Group. The supplier is a reputable HVAC Controls supplier and has discussed various options with the manufacturer on our behalf.

AGENCY ENDORSEMENT			
Name	Phil Yapp	Phone Number	6207 9190
Position	Assistant Director, Asset Strategies and Sustainability		

AGENCY ENDORSEMENT			
Signature		Date	05/05/2022

DELEGATE APPROVAL			
Name	Andrew Parkinson		
Position	Executive Branch Manager		
Statement	this procurement method.		
Signature		Date	<i>05/27</i>

✓

Flint, Katrina

From: Stewart, EII on behalf of ICW EBM Office
Sent: Friday, 13 May 2022 11:03 AM
To: [REDACTED]
Cc: ICW EBM Office
Subject: LETTER: Air purification units in ACT public schools
Attachments: ICW EBM LETTER - [REDACTED] - air purification in ACT public schools.PDF

OFFICIAL

OFFICIAL

Good morning

Please find attached letter from Andrew Parkinson, Executive Branch Manager, Infrastructure & Capital Works, Education Directorate

Thank you

EII

ICW EBM Office

Education | ACT Government

icwebmoffice@act.gov.au

Level 4, 220 London Circ, Canberra City ACT 2601 | GPO Box 158 Canberra ACT 2601

www.education.act.gov.au



The Education Directorate acknowledges the Ngunnawal Peoples as the Traditional Custodians of the ACT and region upon which we live and work



Dear [REDACTED]

Thank you for your letter of 4 May 2022 to the Director-General, Ms Katy Haire, regarding air purification units in ACT public schools. Ms Haire has asked me to respond as the Infrastructure and Capital Works Branch has responsibility for this area of school infrastructure.

The ACT Education Directorate has implemented a multi-layered approach to reduce the risk of COVID-19 transmission in school settings, including vaccination, physical distancing, good hygiene, cleaning and mask use. The ACT Government has also committed \$5.2 million to improved indoor air quality in ACT public schools as part of the ACT Government's COVID-19 Pathway Forward.

Safe Work Australia and the Australian Health Protection Principal Committee (AHPCC) advise air purification units and HEPA filters can be useful in spaces where ventilation is measured to be inadequate. Fortunately ACT public schools do not have many rooms without enough ventilation and any that do are typically not teaching spaces.

The Education Directorate continues to be guided by ACT Health, the ACT Chief Health Officer and the AHPCC advice and the evolving evidence on the specific benefits of air purifying devices in addition to other public health measures in a school setting. The routine use of air purifiers in schools is not supported at this time.

For future reference, I have listed several links below which outline the process required to work with the ACT Government:

<https://www.procurement.act.gov.au/supplying-to-act-government/goods-and-services-suppliers>

https://www.procurement.act.gov.au/_data/assets/pdf_file/0009/1959174/A-Guide-for-businesses-supplying-to-the-ACT-Government.pdf

<https://www.procurement.act.gov.au/supplying-to-act-government/future-procurement-opportunities>

Yours sincerely



Executive Branch Manager
Infrastructure & Capital Works

13 May 2022

Bowden, Julia

From: Dunn, Katie
Sent: Monday, 16 May 2022 5:38 PM
To: DDGEDUoffice
Subject: FW: Urgent request from MO
Attachments: FACTSHEET - IAQ Winter Ventilation.pdf

Follow Up Flag: Follow up
Flag Status: Completed

OFFICIAL

FYI

Kind Regards,
Katie

Katie Dunn | Senior Director COVID Management Team

T: 0420 662 993 | E: katie.dunn@act.gov.au

Covid Management Team | ACT Education | ACT Government

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

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From: Dunn, Katie
Sent: Monday, 16 May 2022 3:31 PM
To: Simmons, Jane <Jane.Simmons@act.gov.au>
Cc: EDUCOVID <EDUCOVID@act.gov.au>
Subject: FW: Urgent request from MO

OFFICIAL

Hi Jane – please see below as requested, which Andrew has provided in response to your query:

1. Advice re Hepa filters

Safe Work Australia and the AHPPC advise air purification units and HEPA filters can be useful in spaces where ventilation is measured to be inadequate. Fortunately ACT public schools do not have many rooms without enough ventilation and these rooms are typically not teaching spaces. Air purifiers received during the 2019-20 bushfires have been allocated where required across ACT public schools.

We use CO2 monitors to measure that the ventilation is adequate in the spaces with a mix of sensors linked to Building Management Systems controlling HVAC and portable CO2 monitors in naturally ventilated spaces.

2. Who provided our expert advice for our IAQ plans – the external consultant advice

Northrop Consulting Engineers undertook the review of the Indoor Air Quality Framework developed in house based on advice from OzSage, WHO, AIRAH (industry body), SafeWork Australia and AHPPC.

3. A copy of the fact sheet on how to use CO2 filters etc

The fact sheet is attached.

Kind Regards,
Katie

Katie Dunn | Senior Director COVID Management Team

T: 0420 662 993 | E: katie.dunn@act.gov.au

Covid Management Team | ACT Education | ACT Government

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

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From: Simmons, Jane <Jane.Simmons@act.gov.au>

Sent: Monday, 16 May 2022 1:54 PM

To: Dunn, Katie <Katie.Dunn@act.gov.au>; EDUCOVID <EDUCOVID@act.gov.au>

Cc: DDGEDUoffice <DDGEDUoffice@act.gov.au>

Subject: Urgent request from MO

Hi

Following from MINSET can I have the following details.

1. Advice re Hepa filters
2. Who provided our expert advice for our IAQ plans – the external consultant advice
3. A copy of the fact sheet on how to use CO2 filters etc

I will need by COB please to provide to the MO

Jane

Jane Simmons PSM | Deputy Director-General **Education Directorate** | ACT Government

T: +61 481057310 | E: jane.simmons@act.gov.au

GPO [Box 158 Canberra ACT 2601](#) | www.education.act.gov.au

INDOOR AIR QUALITY – WINTER VENTILATION

USE OF NATURAL VENTILATION FOR IMPROVING INDOOR AIR QUALITY DURING WINTER FACTSHEET

RECORD 84



<p>Topic:</p>	<p>Use of natural ventilation for improving indoor air quality during winter</p>
<p>Relevant sector:</p>	<p>All Schools</p>
<p>Background:</p>	<p>ACT Health has advised that schools optimise fresh air circulation as one of the controls to reduce the risk of COVID-19 transmission in schools.</p> <p>The risk of COVID-19 transmission is higher in crowded and poorly ventilated spaces where people spend long periods of time together in close proximity. Good ventilation is one part of a suite of controls to minimise transmission in schools, like vaccination, physical distancing, student cohorting, good hygiene, cleaning and mask use.</p> <p>Indoor Air Quality Plans have been developed for every school and have a map that identifies the type of ventilation in each learning and teaching space that have ventilation provided by either natural or mechanical means. Natural ventilation is provided either by operable windows or louvres, while mechanical ventilation is provided by the school’s heating, ventilation and air conditioning (HVAC) systems.</p> <p>This fact sheet provides guidance on how to operate naturally ventilated spaces and balance the use of windows and louvres to provide ventilation, in balance with thermal comfort in winter.</p>
<p>Advice:</p>	<p>Where Indoor Air Quality Maps identify teaching and learning spaces that rely on natural ventilation via windows or louvres, consideration will need to be given to balancing ventilation and thermal comfort during colder weather.</p> <p>In these naturally ventilated spaces, schools can use of portable CO₂ monitors to provide an indication of the ventilation in the classroom. A CO₂ concentration of <800ppm is considered an indicator of good indoor air quality.</p> <ul style="list-style-type: none"> • <800ppm: Low Relative Risk - windows/louvres may be closed or cracked slightly open to balance thermal comfort • 800-1500ppm: Moderate Relative Risk - partially open closed windows to increase ventilation

INDOOR AIR QUALITY – WINTER VENTILATION

USE OF NATURAL VENTILATION FOR IMPROVING INDOOR AIR QUALITY DURING WINTER FACTSHEET

RECORD 84



	<ul style="list-style-type: none"> • >1500ppm: High Relative Risk - windows should be fully opened to increase ventilation <p>CO2 monitors should be placed at breathing level in a visible location away from fresh air inlets (e.g. open windows) and not within 1m of a student or teacher.</p> <p>Where schools do not have access to CO₂ monitors in the classroom, consider opening windows for short durations throughout the day to balance ventilation and thermal comfort. This could be for a period of time per hour (e.g. 10 minutes), when the space begins to feel stuffy, or when thermal comfort conditions allow.</p>
<p>Heath Advice:</p>	<p>This advice has been developed in line with guidance from the Chief Health Officer, World Health Organisation, Safe Work Australia, OzSAGE and the Australian Institute of Refrigeration, Air-conditioning and Heating (AIRAH).</p>
<p>Support or further advice:</p>	<p>For further advice, schools can contact their ICW Network Officer or email ACT.Education@act.gov.au</p>

From: [Martinez, Catherine](#) on behalf of [EDU, EGMBSG](#)
To: [Matthews, David](#)
Cc: [EDU, EGMBSG](#)
Subject: FW: FOR CLEARANCE/SIGNATURE: RETURNED FROM MO - FILE2022/404 - Air Quality in Schools and Shade Sails - [REDACTED]
Date: Thursday, 19 May 2022 12:12:00 PM
Attachments: [GOVERNMENT & STAKEHOLDER RELATIONS - Partnerships & Collaboration - MIN CORRO - Air Quality in Schools and Shade Sails - \[REDACTED\] - 2022.tr5](#)
[FOR ACTION FILE2022404 - MIN CORRO Air Quality in Schools and shade sails - \[REDACTED\].msg](#)
[EDU RESPONSE FILE2022 404.DOCX](#)

OFFICIAL

Good morning David

Please find attached EDU response returned form the MO for your clearance and signature.

Regards
Catherine

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Thursday, 19 May 2022 9:26 AM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FW: FOR CLEARANCE/SIGNATURE: RETURNED FROM MO - FILE2022/404 - Air Quality in Schools and Shade Sails - [REDACTED]

OFFICIAL

OFFICIAL

Good morning

EDU response letter (REC22/62070) for EGM clearance/signature please – update not required

Date due to EGMBS	25 May 2022
-------------------	-------------

Thank you
Ell

From: Ryan, JohnW <JohnW.Ryan@act.gov.au>
Sent: Tuesday, 17 May 2022 16:25
To: ICW EBM Office <ICWEBMOffice@act.gov.au>; Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Subject: RE: RETURNED FROM MO - FILE2022/404 - Air Quality in Schools and Shade Sails - [REDACTED]

OFFICIAL

Hi Ell,

I have reviewed the response and it does not require updating.

Cheers

John

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Tuesday, 17 May 2022 11:46 AM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>; Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Subject: FW: RETURNED FROM MO - FILE2022/404 - Air Quality in Schools and Shade Sails - Liz [REDACTED]

OFFICIAL

Hi John & Phil

Please review the EDU response letter (attached and in TRIM), update if required and return for clearance by Tue 24 May

If no updates are required I will return directly to EGMBMS

*FYI a new protocol to reduce MO workload means that most correspondence received (except from other MLAs, top tier stakeholders etc) will now be responded to by the Directorate (EGM for us). There is a slightly longer turnaround time for Directorate responses (15 business days instead of 10)

Thank you
Ell

From: Evans, JacintaG <JacintaG.Evans@act.gov.au> **On Behalf Of** EDUMCR
Sent: Tuesday, 17 May 2022 10:21 AM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>
Cc: EDU, EGMBMS <EGMBMSG.EDU@act.gov.au>; EDUMCR <EDUMCR@act.gov.au>; Page, Vicki <Vicki.Page@act.gov.au>
Subject: RETURNED FROM MO - FILE2022/404 - Air Quality in Schools and Shade Sails - [REDACTED]

OFFICIAL

Good Morning,

Please see attached correspondence returned from MO for an EDU response.

Title/Question	Air Quality in Schools and Shade Sails - [REDACTED]
Action	<ol style="list-style-type: none"> 1. Review letter (REC22/62070) for accuracy and update as required 2. Arrange EBM clearance if updated (current content has been cleared previously) 3. Progress to EGMBS for clearance, signing and sending
Responsibility	ICW
Response type	Directorate
TRIM	FILE2022/404
Date due to EGMBS	25 May 2022
Clearance	Please refer to the Executive Clearance Protocol document for appropriate clearance levels/drop copy requirements: here
Comment	Please contact edumcr@act.gov.au if you have any questions.

Warm Regards,

Jacinta Grace Evans (*she/her*) | Ministerial Liaison Officer

Phone: Microsoft Teams Email: jacintag.evans@act.gov.au

Ministerial and Corporate Reporting | Communication, Engagement and Government Service Branch | Education Directorate | ACT Government

From: [Metherell, Skye](#) on behalf of [Education DLO](#)
To: [ICW EBM Office](#)
Cc: [EDUMCR](#); [EDU, EGMSG](#)
Subject: FOR ACTION: FILE2022/404 - MIN CORRO : Air Quality in Schools and shade sails - [REDACTED]
Date: Tuesday, 18 January 2022 3:02:00 PM
Attachments: [image001.jpg](#)
[image002.png](#)

OFFICIAL

Good Morning,

Please see below constituent enquiry requiring response. Please review the below table to provide the appropriate response type and note the due dates.

Title/Question	MIN CORRO: Air Quality in Schools and shade sails - [REDACTED]
Action	Please prepare a Ministerial response to the below correspondence
Responsibility	ICW
Response type	Ministerial response
TRIM	FILE2022/404
Date due to EGM	2.2.2022
Date Due to MO	3.2.2022
Clearance	Please refer to the Executive Clearance Protocol document for appropriate clearance levels/drop copy requirements: here
Comment	Please contact EDUDLO@act.gov.au if you have questions.

If you have any queries please don't hesitate to ask.

Kind Regards,

Skye Metherell | Directorate Liaison Officer

Ministerial & Commonwealth Relations | **Education Directorate** | ACT Government

T: 6213 3313 | E: skye.metherell@act.gov.au

Level , 220 Northbourne Avenue Braddon | GPO Box 158, Canberra, ACT 2601 |



From: BERRY <BERRY@act.gov.au>
Sent: Tuesday, 18 January 2022 9:22 AM
To: Education DLO <EDUDLO@act.gov.au>
Cc: Hobbs, Rebecca <Rebecca.Hobbs@act.gov.au>
Subject: FW: Contact my Minister - Correspondence: 150122 - 1931575 - [REDACTED]

Hi Skye,

Please see below/ attached correspondence related to Education. For appropriate action please.

Thank you,

Harini

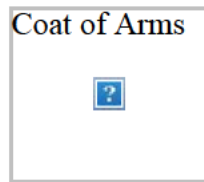
From: minister@act.gov.au <minister@act.gov.au>

Sent: Saturday, 15 January 2022 8:13 PM

To: BERRY <BERRY@act.gov.au>

Subject: Contact my Minister - Correspondence: 150122 - 1931575 - [REDACTED]

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.



Yvette Berry, MLA

The following correspondence has been submitted via the Contact my Minister website.

The constituent has indicated that they would like a response to their correspondence.

Air quality in schools

Dear Minister Berry I am asking that more is done to improve air quality in our schools. I am [REDACTED]. I am aware of the air quality audit that has been done on schools - but there is limited information about the audit on the schools' websites and there is a huge reliance on opening windows as the only measure to improve air quality. With the highly infectious omicron variant this is not enough. I'm sharing this resource from the CDC in USA - it is a great overview of ventilation in schools. I cannot find a similar resource from Australia (but USA is ahead in the pandemic and seeing a lot infection in kids) <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/ventilation.html> HEPA filters are a relatively expensive initial cost, but can be added to the whole school system with filter insets, or units purchased for use in classrooms. I have a portable HEPA filter in [REDACTED] since the start of the pandemic. There is early evidence from the UK that air filtration is reducing childhood cases of Covid. The added bonus with any of these measures is that it reduces risk from any airborne disease (influenza, cold viruses etc) as well as COVID. It would also be an opportune time to invest in more shade sails for schools for outdoor learning. Thank you for putting the health of our kids at the top of the agenda, [REDACTED]

Correspondence Reference # 150122 - 1931575

Submission date: 15 Jan 2022 8:12pm

Contact Information

[REDACTED]
Email: [REDACTED]
Phone: [REDACTED]
Postcode: [REDACTED]



Dear 

Thank you for your letter of 15 January 2022 about the actions being undertaken to maximise the safety of students and staff as they return to school. The Minister has referred your correspondence to the Education Directorate for response and I apologise for the late reply.

The ACT Government is dedicated to the safe return of students to onsite learning in accordance with COVID-19 health advice. All learning spaces across the ACT public school network have been assessed to ensure adequate ventilation. Schools have been provided with a site-specific Indoor Air Quality Plan, which outlines the ventilation provided to each classroom, actions to be undertaken by the school and works implemented over the summer break.

In line with expert advice, ventilation is being maximised by opening windows in classrooms; programming ventilation systems to introduce additional fresh air and operate for longer hours; and turning on exhaust fans in rest rooms. All windows have been checked and made operable where required to provide ventilation.

A number of schools were fitted with CO₂ sensors to monitor indoor air quality prior to COVID-19. There is a program to expand the network of CO₂ monitors to additional schools to enhance remote monitoring and management capability.

UV-C light units have been installed in air conditioning systems at priority sites including preschools and spaces where mechanical ventilation is limited. UV-C light has been used extensively in health settings to inactivate viruses and bacteria as they pass the light unit. Units have been selected that do not produce ozone to ensure the safety of students.

Winter ventilation is currently being scoped for sites where ventilation is predominantly via opening of windows. Solutions include Heat and Energy Recovery Ventilation units which allow fresh air to be provided with windows closed and enhance the energy efficiency of existing heating systems.

As part of the COVID-19 Supports in Schools, the ACT Government announced an additional \$3 million to install shade structures in ACT public schools to provide sheltered outdoor learning spaces. The design of outdoor learning spaces is supported by advice from the

Environmentally Sustainable Development team to include vegetation to provide passive cooling and amenity.

It is important to note that the ACT Government's infrastructure response is part of a broad suite of controls to reduce the risk of COVID-19 transmission in school settings including vaccination, physical distancing, good hygiene, cleaning, mask use and rapid antigen testing.

Thank you for your interest in the work being undertaken in schools to maximise the safety of students and staff.

Yours sincerely

David Matthews
Executive Group Manager
Business Services
Education Directorate
.....May 2022

From: [Steele, Peter](#) on behalf of [EDU, EGMBSG](#)
To: [Matthews, David](#)
Cc: [EDU, EGMBSG](#)
Subject: FW: FOR CLEARANCE: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]
Date: Monday, 23 May 2022 4:44:00 PM
Attachments: [GOVERNMENT & STAKEHOLDER RELATIONS - Customer Service - MIN CORRO - School Ventilation Plans - \[REDACTED\] - 2022.tr5](#)
[FOR ACTION MIN CORRO - School ventilation plans - \[REDACTED\].msg](#)
[EDU RESPONSE FILE2022_398.DOCX](#)

OFFICIAL

Good afternoon David,

The attached correspondence has been drafted for your approval.

Pete

Peter Steele
ACT EDU - 0423 390 998

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Monday, 23 May 2022 3:35 PM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FOR CLEARANCE: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

OFFICIAL

Good afternoon

EDU response letter in TRIM (REC22/61260) for clearance/signature please:

Date due to EGMBS	25 May 2022
-------------------	-------------

Thanks
 Ell

From: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Sent: Monday, 23 May 2022 3:32 PM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: Fw: REMINDER FOR CLEARANCE: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

cleared to EGM

Andrew Parkinson | Executive Branch Manager

Infrastructure & Capital Works | Education Directorate | **ACT Government**

Phone 02 6205 4593 | **Mobile 0478 301 085**

220 London Circuit, Civic | www.act.gov.au

Dhawura nguna, dhawura Ngunnawal

From: Stewart, Ell <Ell.Stewart@act.gov.au> on behalf of ICW EBM Office <ICWEBMOffice@act.gov.au>

Sent: Monday, 23 May 2022 13:59

To: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>

Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>

Subject: REMINDER FOR CLEARANCE: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

Reminder for this one too please

thanks

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office

Sent: Thursday, 19 May 2022 9:15 AM

To: Ryan, JohnW <JohnW.Ryan@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>

Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>

Subject: FOR CLEARANCE: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

thanks John

Andrew, updated EDU response letter in TRIM for clearance by Mon please

Thanks, Ell

From: Ryan, JohnW <JohnW.Ryan@act.gov.au>
Sent: Wednesday, 18 May 2022 2:43 PM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>; Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Subject: RE: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

Hi Ell,

Letter updated as requested.

Cheers

John

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Monday, 16 May 2022 4:34 PM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>; Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Subject: FW: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

Hi Phil & John

Please review the EDU response letter attached and in TRIM for currency and return for clearance by **TUE 24 MAY**

Thank you
Ell

From: Evans, JacintaG <JacintaG.Evans@act.gov.au> **On Behalf Of** EDUMCR
Sent: Monday, 16 May 2022 3:12 PM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>; EDU, EGMB SG <EGMBSG.EDU@act.gov.au>
Cc: EDUMCR <EDUMCR@act.gov.au>; Page, Vicki <Vicki.Page@act.gov.au>
Subject: RETURNED FROM MO - FILE2022/398 - School Ventilation Plans - [REDACTED]

OFFICIAL

Good Afternoon,

Please see attached correspondence returned from MO for an EDU response.

Title/Question	School Ventilation Plans - [REDACTED]
Action	<ol style="list-style-type: none"> 1. Review letter (REC22/61260) for accuracy and update as required 2. Arrange EBM clearance if updated (current content has been cleared previously) 3. Progress to EGMBs for clearance, signing and sending
Responsibility	ICW
Response type	Directorate
TRIM	FILE2022/398
Date due to EGMBs	25 May 2022
Clearance	Please refer to the Executive Clearance Protocol document for appropriate clearance levels/drop copy requirements: here
Comment	Please contact edumcr@act.gov.au if you have any questions.

Kind Regards,

Jacinta Grace Evans (*she/her*) | Ministerial Liaison Officer

Phone: Microsoft Teams Email: jacintag.evans@act.gov.au

Ministerial and Corporate Reporting | Communication, Engagement and Government Service Branch | Education Directorate | ACT Government



Dear 

Thank you for your letter of 16 January 2022 requesting information on actions taken to improve ventilation in schools. The Minister has referred your correspondence to the Education Directorate for response and I apologise for the late reply.

The ACT Government is dedicated to ensuring students have returned safely to onsite learning in accordance with COVID-19 health advice. Prior to the return of students to on campus learning in 2021, all learning spaces across the ACT public school network were assessed to ensure adequate ventilation. All schools have been provided with a site-specific Indoor Air Quality Plan, which outlines the ventilation provided to each classroom, actions to be undertaken by the school and works implemented.

In line with expert advice, ventilation is being maximised by opening windows in classrooms; programming ventilation systems to introduce additional fresh air and operate for longer hours; and turning on exhaust fans in rest rooms. All windows have been checked and made operable where required to provide ventilation.

A number of schools were fitted with CO₂ sensors prior to COVID-19 to monitor indoor air quality. There is also a program to expand the network of CO₂ monitors across ACT schools to enhance monitoring and management capability.

UV-C light units have been installed in air conditioning systems at priority sites, including preschools. UV-C light has been used extensively in health settings to inactivate viruses and bacteria as they pass the light unit. Units have been selected that do not produce ozone to ensure the safety of students.

Air purifiers received by the ACT Government during the 2019-20 bushfires have been allocated where required across ACT public schools. The deployment of the air purifiers is only recommended for spaces considered to have inadequate ventilation, which is only a limited number of spaces in schools and these rooms are typically not teaching spaces.

Schools have been issued with updated Indoor Air Quality Plans for winter operation, which include guidance on using portable CO₂ monitors to balance ventilation and thermal comfort in spaces relying on operable windows.

It is important to note that the infrastructure response is part of a broad suite of controls to reduce the risk of COVID-19 transmission in school settings including vaccination, physical distancing, good hygiene, cleaning, mask use and rapid antigen testing.

Further advice on the way that the Education Directorate is responding to the pandemic, including the latest version of the *ACT public schools COVID-19 management plan* is available on the Education website - <https://www.education.act.gov.au/public-school-life/covid-school-arrangements>.

Thank you for your interest in the work being undertaken in schools to maximise the safety of students and staff.

Yours sincerely

David Matthews
Executive Group Manager
Business Services Group
Education Directorate
.....May 2022

Portfolio/s: Education and Youth Affairs

VENTILATION IN SCHOOLS

Talking Points

- Improving air quality in ACT public schools is a priority to enable onsite learning and teaching in accordance with COVID-19 Health Advice.
- Ventilation is one component of a multilayered approach that has been implemented to prevent transmission of COVID-19 in schools and the
- Every school has its own Indoor Air Quality Plan which lists actions undertaken by EDU (e.g. HVAC systems change) and actions for schools to undertake each day to improve air quality. These plans were first provided in October 2021 as part of the return to on campus learning and can be found on each schools' website.
- All Indoor Air Quality Plans have been updated in preparation for **winter** and provided to all schools in **May 2022**.
- Solutions for improving ventilation during winter include: supplementary mechanical ventilation such as Heat and Energy Recovery Ventilation units (HRV and ERV), and the use of CO₂ monitors.
- CO₂ monitors can assist in ensuring adequate ventilation is provided from windows while retaining thermal comfort conditions in winter by ensuring that windows are only opened when required. The Directorate has ordered 1,160 portable CO₂ monitors which will be provided to schools.
- Actions to improve indoor air quality are being prioritised at preschools due to the potential vulnerability of this cohort.
- EDU will continue to be guided by ACT Health and AHPPC advice and the evolving evidence on the specific benefit of these devices in addition to other public health measures in a school setting.
- The routine use of portable **HEPA filters** is not supported at this time, as the evidence for the additional public health benefit of these units over other public health measures and maximising fresh air is currently limited.

Key Information

- The CHO, AHPPC, World Health Organisation and Safe Work Australia recommend ensuring fresh air ventilation is optimised in all settings, including through adjusting mechanical systems to increase fresh (external) air supply and reduce air recirculation, and use of natural ventilation such as opening windows and doors.
- EDU has developed an Indoor Air Quality (IAQ) framework to assess the IAQ of all public schools commencing with ACT public colleges. All public school learning areas have been assessed under the IAQ framework, including around 3,500 learning spaces.
- Higher energy bills were experienced across sites with mechanical ventilation over the summer period. Gas bills are expected to increase over the winter period.

Cleared as complete and accurate: 26/05/2022
Cleared for public release by: Executive Group Manager
Contact Officer name: Andrew Parkinson
Lead Directorate: Education
TRIM Ref: FOL22/1175

- EDU is monitoring air quality in learning spaces to achieve the best ventilation for ACT public schools while managing energy costs and thermal comfort.

Background Information

- To support schools to prepare for return to on campus learning following lockdown in 2021, the ACT Government allocated budget funding **to support essential supplies** such as masks and hand sanitiser, improved ventilation and additional relief teacher hours. **\$5.2 million of this funding was allocated to improve ventilation** in ACT public schools. This includes building works, CO₂ monitoring, and changes to outdoor air introduced by heating, ventilation, and air conditioning (HVAC) systems.
- ACT public schools are very well placed as there has been an extensive program of work underway to improve school ventilation since the 2019-2020 bushfires.
- In early 2020, **400 Dyson air purifiers** were distributed to all public schools (88 at the time) for use in classrooms and other spaces to provide relief from smoke effects. These air purifiers have a HEPA filter contained within the unit. Filters require active management and replacement to ensure they don't have unintended consequences such as spreading mould spores.
- EDU has been progressively upgrading building controls in 81 schools to improve remote management of the Heating, Ventilation and Cooling (HVAC) systems.
- In 2018, EDU commenced a program of installing CO₂ sensors in schools (CO₂ sensors provide a proxy for ventilation). To date CO₂ sensors with remote monitoring and management systems have been installed across 65 of the 90 ACT public schools. This will mean 73 per cent of schools will have CO₂ sensors to monitor and manage indoor air quality.

From: [Matthews, David](#)
To: [EDU, EGMSG](#)
Subject: FW: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD
Date: Thursday, 26 May 2022 5:05:27 PM
Attachments: [05_1-2 and 7-9 June 2022.tr5](#)
[image001.png](#)
[image002.png](#)
[09_Ventilation in Schools in response to COVID-19.DOCX](#)

OFFICIAL


Approved.

Dave Matthews

From: Steele, Peter <Peter.Steele@act.gov.au> **On Behalf Of** EDU, EGMSG
Sent: Thursday, 26 May 2022 4:29 PM
To: Matthews, David <David.Matthews@act.gov.au>
Cc: EDU, EGMSG <EGMSG.EDU@act.gov.au>
Subject: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

Updated as discussed for clearance -

- 
- Ventilation in Schools - has had content reduced and re-prioritised

From: Matthews, David <David.Matthews@act.gov.au>
Sent: Thursday, 26 May 2022 3:55 PM
To: Steele, Peter <Peter.Steele@act.gov.au>
Subject: FW: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

From: Steele, Peter <Peter.Steele@act.gov.au> **On Behalf Of** EDU, EGMSG
Sent: Wednesday, 25 May 2022 5:51 PM
To: Matthews, David <David.Matthews@act.gov.au>
Cc: EDU, EGMSG <EGMSG.EDU@act.gov.au>
Subject: FW: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

Good afternoon,

The attached Assembly Briefs have been updated and cleared by EBM's for your clearance.

Pete

Peter Steele
ACT EDU - 0423 390 998

From: Stewart, Eil <Eil.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Tuesday, 24 May 2022 3:19 PM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; EDU Cabinet Liaison Officer <EDUCabinet@act.gov.au>
Subject: FW: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

OFFICIAL

Good afternoon

Assembly briefs in TRIM for EGM clearance please:

Brief
09. Ventilation in Schools in response to COVID-19 – ICW updated

Date due to EGM BSG	COB 25 Wednesday, May 2022
Date Due to MO	Midday Friday, 27 May 2022

Thank you
 Eil

From: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Sent: Tuesday, 24 May 2022 2:48 PM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: Fw: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

cleared to EGM

Andrew Parkinson | Executive Branch Manager

Infrastructure & Capital Works | Education Directorate | **ACT Government**

Phone 02 6205 4593 | **Mobile 0478 301 085**

220 London Circuit, Civic | www.act.gov.au

Dhawura nguna, dhawura Ngunnawal

From: Stewart, EII <EII.Stewart@act.gov.au> on behalf of ICW EBM Office <ICWEBMOffice@act.gov.au>
Sent: Tuesday, 24 May 2022 13:22
To: Blom, Dylan <Dylan.Blom@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FOR CLEARANCE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

Thanks Dylan

Andrew, assembly briefs in TRIM for clearance as soon as possible please:

Brief
09. Ventilation in Schools in response to COVID-19 – updated by AS

Thanks
EII

From: Blom, Dylan <Dylan.Blom@act.gov.au>
Sent: Tuesday, 24 May 2022 12:16 PM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>
Cc: Patel, Pal <Pal.Patel@act.gov.au>
Subject: RE: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

Dylan Blom | Senior Director, Major Projects
 Infrastructure and Capital Works | **Education** | ACT Government
 Mobile: 0466 313 607 | Email: dylan.blom@act.gov.au

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



We acknowledge the traditional custodians of the lands and waters where we live and learn, and pay our respects to elders past, present, and future.

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Monday, 16 May 2022 3:53 PM
To: Ryan, JohnW <JohnW.Ryan@act.gov.au>; Yapp, Phillip <Phillip.Yapp@act.gov.au>; Blom, Dylan <Dylan.Blom@act.gov.au>; Patel, Pal <Pal.Patel@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Subject: FW: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

Hi all

Please update the assembly briefs (if required) in track changes on the templates in TRIM for clearance by **4PM TUE 24 MAY**:

Brief	Team
09. Ventilation in Schools in response to COVID-19	ESD/AS



Thanks all
Ell

From: Nott, Georgia <Georgia.Nott@act.gov.au> **On Behalf Of** EDU Cabinet Liaison Officer
Sent: Monday, 16 May 2022 2:12 PM
To: EDU, EBM P&P <ebmpp.edu@act.gov.au>; Ackland, Daniel <Daniel.Ackland@act.gov.au>; ICW EBM Office <ICWEBMOffice@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>; CFO EDU Office <CFOEDUOffice@act.gov.au>; Turnbull, Ian <ian.Turnbull@act.gov.au>
Cc: School Operations <SchoolOperations@act.gov.au>; Laurent, Kristen <Kristen.Laurent@act.gov.au>; EDU, EGMSG <EGMSG.EDU@act.gov.au>; EDU Cabinet Liaison Officer <EDUCabinet@act.gov.au>; EGMSloffic <EGMSloffic@act.gov.au>
Subject: FOR ACTION: Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week) - BSD

OFFICIAL

Good afternoon

Please see below and attached for action.

Title/Question	Assembly Briefs for Sitting Period 1-2 and 7-9 June 2022 (double sitting week)
Action	<ol style="list-style-type: none"> 1. Update Assembly Briefs as required 2. If no are updates required, please email educabinet@act.gov.au and we will complete action tree/notes
Responsibility	<p>P&P: 01, 02, 03, 06, 07, 08, and 10 (input will be required from @School Operations for brief 01 – please work together)</p> <p>ICW: 09 and 11 (input will be required from @Laurent, Kristen for brief 11 as the SERBIR – please work together)</p> <p>SF&P: 12</p>
Response type	Assembly Brief
TRIM	FOL22/1175
Date due to EGM BSG	COB 25 Wednesday, May 2022
Date Due to MO	Midday Friday, 27 May 2022
Clearance	Please refer to the Executive Clearance Protocol document for appropriate clearance levels/drop copy requirements: here
Comment	<ul style="list-style-type: none"> • Please note, the Index and various briefs have had comments added in track changes with suggested specific edits from EGM, CEGS – please address these • @EDU, EGMBSG – Please allow sufficient clearance time in the diary so these are <u>returned to us by COB 26 May</u> for collation/provision to MO. • Please note: TRIM Action Trees will be established by COB today. • Please contact educabinet@act.gov.au if you have any questions.

Kind regards –

Georgia Nott | Assembly Liaison Officer | Ministerial & Corporate Reporting

Communications, Engagement and Government Support | Education | ACT Government

GPO Box 158 Canberra ACT 2601

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



Portfolio/s: Education and Youth Affairs

VENTILATION IN SCHOOLS

Talking Points

- Improving air quality in ACT public schools is a priority to enable onsite learning and teaching in accordance with COVID-19 Health Advice.
- Ventilation is one component of a multilayered approach that has been implemented to prevent transmission of COVID-19 in schools and the
- Every school has its own Indoor Air Quality Plan which lists actions undertaken by EDU (e.g. HVAC systems change) and actions for schools to undertake each day to improve air quality. These plans were first provided in October 2021 as part of the return to on campus learning and can be found on each schools' website.
- All Indoor Air Quality Plans have been updated in preparation for **winter** and provided to all schools in **May 2022**.
- Solutions for improving ventilation during winter include: supplementary mechanical ventilation such as Heat and Energy Recovery Ventilation units (HRV and ERV), and the use of CO₂ monitors.
- CO₂ monitors can assist in ensuring adequate ventilation is provided from windows while retaining thermal comfort conditions in winter by ensuring that windows are only opened when required. The Directorate has ordered 1,160 portable CO₂ monitors which will be provided to schools.
- Actions to improve indoor air quality are being prioritised at preschools due to the potential vulnerability of this cohort.
- EDU will continue to be guided by ACT Health and AHPPC advice and the evolving evidence on the specific benefit of these devices in addition to other public health measures in a school setting.
- The routine use of portable **HEPA filters** is not supported at this time, as the evidence for the additional public health benefit of these units over other public health measures and maximising fresh air is currently limited.

Key Information

- The CHO, AHPPC, World Health Organisation and Safe Work Australia recommend ensuring fresh air ventilation is optimised in all settings, including through adjusting mechanical systems to increase fresh (external) air supply and reduce air recirculation, and use of natural ventilation such as opening windows and doors.
- EDU has developed an Indoor Air Quality (IAQ) framework to assess the IAQ of all public schools commencing with ACT public colleges. All public school learning areas have been assessed under the IAQ framework, including around 3,500 learning spaces.
- Higher energy bills were experienced across sites with mechanical ventilation over the summer period. Gas bills are expected to increase over the winter period.

Cleared as complete and accurate: 27/05/2022
Cleared for public release by: Executive Group Manager
Contact Officer name: Andrew Parkinson
Lead Directorate: Education
TRIM Ref: FOL22/1175

- EDU is monitoring air quality in learning spaces to achieve the best ventilation for ACT public schools while managing energy costs and thermal comfort.

Background Information

- To support schools to prepare for return to on campus learning following lockdown in 2021, the ACT Government allocated budget funding **to support essential supplies** such as masks and hand sanitiser, improved ventilation and additional relief teacher hours. **\$5.2 million of this funding was allocated to improve ventilation** in ACT public schools. This includes building works, CO₂ monitoring, and changes to outdoor air introduced by heating, ventilation, and air conditioning (HVAC) systems.
- ACT public schools are very well placed as there has been an extensive program of work underway to improve school ventilation since the 2019-2020 bushfires.
- In early 2020, **400 Dyson air purifiers** were distributed to all public schools (88 at the time) for use in classrooms and other spaces to provide relief from smoke effects. These air purifiers have a HEPA filter contained within the unit. Filters require active management and replacement to ensure they don't have unintended consequences such as spreading mould spores.
- EDU has been progressively upgrading building controls in 81 schools to improve remote management of the Heating, Ventilation and Cooling (HVAC) systems.
- In 2018, EDU commenced a program of installing CO₂ sensors in schools (CO₂ sensors provide a proxy for ventilation). To date CO₂ sensors with remote monitoring and management systems have been installed across 65 of the 90 ACT public schools. This will mean 73 per cent of schools will have CO₂ sensors to monitor and manage indoor air quality.



COVID Safety: CO₂ Monitor

In order to optimise COVID-19 safety in ACT schools and help maintain a high level of indoor air quality, this classroom contains a CO₂ monitor to indicate the level of ventilation in the room (pictured above). Natural ventilation via manually opening windows or louvres is required to reduce the risk of COVID transmission so this fact sheet should be used a guide to operate the monitor and help maintain a safe and thermally comfortable learning space.

Installation

This portable CO₂ monitor should be placed at desk height in a visible location away from fresh air inlets (e.g. open windows) and not within 1m of a student or teacher. As the batteries in these monitors need to be recharged, wall mounting is not recommended.

Operation

The monitors are supplied with a USB-C cable, which is similar to the cables used to charge most mobile phones. Monitors should be plugged in regularly to ensure the battery is charged.

To turn on the monitor press the power button for three seconds. Once the monitor is on it will constantly display the CO₂ concentration in the air.

What do the readings mean?

- Less than 800ppm: **Low Relative Risk** - A CO₂ concentration of <800ppm is considered an indicator of good indoor air quality.
- 800-1500ppm: **Moderate Relative Risk** – At this level of concentration windows should be at least partially opened to increase ventilation
- Higher than 1500ppm: **High Relative Risk** - windows should be fully opened to increase ventilation

Once levels have reduced below 800ppm, windows can be closed or left slightly open to restore thermal comfort.

Contact for further information

For further information about the CO₂ monitors or to report a fault, please contact the Business Manager or Principal at your school.

From: [Martinez, Catherine](#) on behalf of [EDU, EGMBSG](#)
To: [Matthews, David](#)
Cc: [EDU, EGMBSG](#)
Subject: FW: UPDATED FOR CLEARANCE: SUB22/7803 - Dickson College addressing ventilation concerns
Date: Monday, 20 June 2022 11:57:00 AM
Attachments: [image002.png](#)
[Ventilation Concerns - motion.tr5](#)
[SUB227803 EGMBG LETTER Dickson College ventilation concerns AEU.DOTX](#)

OFFICIAL

From: Pilicic, Courtney <Courtney.Pilicic@act.gov.au> **On Behalf Of** EDU, EGMBSG
Sent: Monday, 20 June 2022 10:39 AM
To: Ackland, Daniel <Daniel.Ackland@act.gov.au>; Matthews, David <David.Matthews@act.gov.au>
Subject: FW: UPDATED FOR CLEARANCE: SUB22/7803 - Dickson College addressing ventilation concerns

OFFICIAL

From: Attridge, Vanessa <VanessaS.Attridge@act.gov.au>
Sent: Friday, 13 May 2022 10:50 AM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Subject: FW: UPDATED FOR CLEARANCE: SUB22/7803 - Dickson College addressing ventilation concerns

OFFICIAL

Good morning,

I haven't progressed the draft corroattached as there was an unfunded commitment included & at the time [REDACTED] (AE) had indicated [REDACTED] comfort with EDU resolving this matter directly, in which case the reply may not been needed.

However I understand the issues remain live. Suggest flagging this as an open matter in the EGMBSG inbox in case it needs further formal response next week.

Many thanks,

Nessa

From: Martinez, Catherine <Catherine.Martinez@act.gov.au> **On Behalf Of** EDU, EGMBSG
Sent: Tuesday, 3 May 2022 9:52 AM
To: Attridge, Vanessa <VanessaS.Attridge@act.gov.au>
Cc: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Subject: FW: UPDATED FOR CLEARANCE: SUB22/7803 - Dickson College addressing ventilation

concerns

OFFICIAL

Good morning Nessa

Please find attached for your clearance.

Regards
Catherine

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Monday, 2 May 2022 2:36 PM
To: EDU, EGMB SG <EGMBSG.EDU@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: UPDATED FOR CLEARANCE: SUB22/7803 - Dickson College addressing ventilation concerns

OFFICIAL

Hi Catherine

Letter is updated following the visit today

Thanks
Ell

From: Martinez, Catherine <Catherine.Martinez@act.gov.au> **On Behalf Of** EDU, EGMB SG
Sent: Friday, 29 April 2022 4:23 PM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FW: FOR CLEARANCE: SUB22/7803 - Addressing ventilation concerns

From: Attridge, Vanessa <VanessaS.Attridge@act.gov.au>
Sent: Friday, 29 April 2022 4:22 PM
To: EDU, EGMB SG <EGMBSG.EDU@act.gov.au>
Subject: RE: FOR CLEARANCE: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Thanks Catherine,

Great that ICW have been so proactive with this response. Andrew is visiting the school on Monday so I think we should ask them to include that in the response noting the concerns are also about monitoring and managing cool temperatures as well as ventilation.

Many thanks,

Nessa

From: Martinez, Catherine <Catherine.Martinez@act.gov.au> **On Behalf Of** EDU, EGMBSG
Sent: Friday, 29 April 2022 4:01 PM
To: Attridge, Vanessa <VanessaS.Attridge@act.gov.au>
Cc: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Subject: FW: FOR CLEARANCE: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Good afternoon Nessa

Please find attached TRIM link for your clearance.

Regards
Catherine

From: Stewart, Eil <Eil.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Friday, 29 April 2022 9:34 AM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: FW: FOR SIGNATURE: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

OFFICIAL

Good morning

Letter in TRIM for EGM signature please – due by 12pm today

Thanks
Eil

From: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Sent: Friday, 29 April 2022 9:27 AM
To: ICW EBM Office <ICWEBMOffice@act.gov.au>
Cc: Ryan, JohnW <JohnW.Ryan@act.gov.au>
Subject: Fw: FOR CLEARANCE: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

thanks all

cleared to EGM

Andrew Parkinson | Executive Branch Manager

Infrastructure & Capital Works | Education Directorate | **ACT Government**

Phone 02 6205 4593 | **Mobile 0478 301 085**

220 London Circuit, Civic | www.act.gov.au

Dhawura nguna, dhawura Ngunnawal

From: Stewart, EII <EII.Stewart@act.gov.au> on behalf of ICW EBM Office <ICWEBMOffice@act.gov.au>

Sent: Friday, 29 April 2022 09:08

To: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>

Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>

Subject: FOR CLEARANCE: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Thanks John

Andrew, please clear the letter in TRIM by 12pm today for EGM

Thanks

EII

From: Ryan, JohnW <JohnW.Ryan@act.gov.au>

Sent: Thursday, 28 April 2022 5:08 PM

To: ICW EBM Office <ICWEBMOffice@act.gov.au>; Yapp, Phillip <Phillip.Yapp@act.gov.au>

Cc: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>

Subject: RE: FOR ACTION: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Hi all,

I've drafted a response in TRIM for review by Andrew.

Cheers

John

From: Stewart, Ell <Ell.Stewart@act.gov.au> **On Behalf Of** ICW EBM Office
Sent: Thursday, 28 April 2022 1:07 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>
Subject: RE: FOR ACTION: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

OFFICIAL

Hi Phil

FYI Andrew is now meeting with DC principal on Mon am and the letter is due back to EGM Office by 12pm Fri

There is also a letter template in TRIM and attached

Ell

From: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Sent: Tuesday, 26 April 2022 3:47 PM
To: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: RE: FOR ACTION: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Hi Andrew

We can start working on this, but yes the IAQP should address much of this.

With the scale going up to 5,000ppm, this is typical of CO2 sensors that have a standard range of 400-5000ppm. The units we have so far have the same range just don't show the full scale at all times.

Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
Infrastructure and Capital Works | Education | ACT Government
Level 4 220 London Circuit | GPO Box 158 Canberra ACT 2601 | www.det.act.gov.au

From: Parkinson, Andrew <Andrew.Parkinson@act.gov.au>
Sent: Tuesday, 26 April 2022 2:41 PM

To: Yapp, Phillip <Phillip.Yapp@act.gov.au>; Ryan, JohnW <JohnW.Ryan@act.gov.au>
Cc: ICW EBM Office <ICWEBMOffice@act.gov.au>
Subject: Fw: FOR ACTION: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Phil / John

we'll need to prepare a written response to this dickson college issue but I expect it'll be that we've prepared an updated IAQP for winter that provides guidance about how to manage naturally ventilated rooms.

Note the date of the motion (19/03/22) and the CO2 scale that goes all the way to 5000 PPM.

Andrew Parkinson | Executive Branch Manager

Infrastructure & Capital Works | Education Directorate | **ACT Government**

Phone 02 6205 4593 | **Mobile 0478 301 085**

220 London Circuit, Civic | www.act.gov.au

Dhawura nguna, dhawura Ngunnawal

From: Pilicic, Courtney <Courtney.Pilicic@act.gov.au> on behalf of EDU, EGMBSG <EGMBSG.EDU@act.gov.au>

Sent: Saturday, 23 April 2022 11:42

To: ICW EBM Office <ICWEBMOffice@act.gov.au>; Parkinson, Andrew <Andrew.Parkinson@act.gov.au>

Cc: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>

Subject: FOR ACTION: SUB22/7803 - Addressing ventilation concerns

OFFICIAL

Good morning Andrew and ICW,

Please see below AEU sub branch motion regarding ventilation concerns at Dickson College for your action as below:

1. Prepare a written response to the AEU addressing the below concerns for EGMBSG
2. Consider a site visit as suggested by AEU.

Due by midday Friday, 29 April.

Kind regards,
Courtney

From: Attridge, Vanessa <VanessaS.Attridge@act.gov.au>
Sent: Friday, 22 April 2022 2:24 PM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Subject: FW: Addressing ventilation concerns

OFFICIAL

Hi Courtney,

Could you please task ICW with a written response and also to consider a site visit as suggested by Angela.

Kind regards,

Nessa

From: Attridge, Vanessa
Sent: Friday, 22 April 2022 2:23 PM
To: [REDACTED]
Cc: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Subject: RE: Addressing ventilation concerns

OFFICIAL

Hi [REDACTED]

Thank you for sharing a copy of this concern from Dickson College – we will consider the issues and respond.

Kind regards,

Nessa

Vanessa Attridge | a/g Executive Group Manager
02 6205 3502 | vanessas.attridge@act.gov.au
Business Services Group | Education | ACT Government
www.education.act.gov.au

From: [REDACTED]
Sent: Friday, 22 April 2022 2:15 PM

To: Attridge, Vanessa <VanessaS.Attridge@act.gov.au>

Subject: Addressing ventilation concerns

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.

Hi Vanessa

Just got an out of office email reply from Dave. I've copied the email below. Can you assist?

Cheers



Hi Dave

I think it will be in our joint interests if Andrew Parkinson or a member of his team venture out to Dickson College next week to hold discussions about ventilation concerns.

As you know I was satisfied with the response you and Andrew gave at last week's stakeholder meeting to the questions I raised in relation to ventilation.

However, having talked that through with other colleagues, the strong advice is it may not be enough for the Dickson sub-branch.

By way of context, I've copied below the original correspondence from the sub-branch that led to my questions last week.

Happy to provide further information.

Thanks



Just a quick note to pass along the motion passed by the Dickson College subbranch. We are concerned about the lack of planning as temperatures drop and COVID case numbers are still high. Dickson College relies on open windows for ventilation, and currently our rooms are dropping below 18 degrees. Next week we expect this to be a significant problem from Wednesday when wet weather and low temperatures combine. Already we are battling as teachers and students close windows, this will get worse. We don't believe we should have to make a choice between the health of our school community and a comfortable learning space.

We acknowledge that the Extreme Temperature policy requires rooms be above 17 degrees – but what is our course of action when – like now – they drop below that? I have a CO2 monitor that records the temperature, but not all teachers do. Do we need to go and buy thermometers? We would love some advice on how to prepare for the cold weather, how to support our teachers and for any advice on how we can communicate with parents the situation in our school. Is this an issue facing many schools and therefore parents could be warned through a media campaign as we did for

the campaign on overly hot classrooms several years ago?

I've attached the motion below, and have included a snap of my office at the moment!

Members of the Dickson College Subbranch have significant concerns about the implementation of COVID safety in our school and in the Territory for Term 2. We ask that the ACT AEU

1 Seek advice from the Directorate on heating and extreme temperature policy in classrooms where ventilation and airflow is based upon open windows

2. Support the subbranch in ensuring a safe workplace, and inviting learning space, for all members of our school community.

Presented: [REDACTED]

Seconded: [REDACTED]

19.03.2022



In unity

[Redacted]
Australian Education Union – ACT Branch
Level 1, 71 Leichhardt Street, Kingston ACT 2604
PO Box 3042, Manuka ACT 2603
Ph: (02) 6272 7900 | Mob: [Redacted]



The Australian Education Union acknowledges the traditional owners of country throughout

Australia and recognises their continuing connection to land, waters and community. We pay our respects to them and their cultures, and to elders both past and present.


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Australian Education Union



Dear 

Thank you for your email of  about indoor air quality at Dickson College, I appreciate you getting in touch to bring the concerns of Dickson College Sub Branch to our attention.

The Education Directorate is currently developing winter indoor air quality plans for all ACT public schools. These plans will provide information on actions being implemented to maintain indoor air quality as part of the suite of measures to minimise the spread of COVID-19 within schools.

To assist schools to determine when to open windows, consideration is being given to providing carbon dioxide monitors for each school. Once the CO₂ levels pass threshold values, it is recommended that staff open windows to introduce fresh air. Once the levels have reduced, windows can be closed to retain thermal comfort levels. A fact sheet will be provided to schools outlining this process.

In addition to this, as we head into cooler weather in the coming months, the controls for the heating system will be reviewed and set so that temperature set points are achieved early in the day in time for when school commences.

The Executive Branch Manager Infrastructure and Capital Works Branch met with the Principal and Business Manager at Dickson College on 2 May 2022 to discuss indoor air quality and monitoring and managing cool temperatures. I understand there was positive feedback provided about this discussion.

Yours sincerely

Vanessa Attridge
A/g Executive Group Manager
Business Services Group
Education Directorate

4 May 2022

From: [Matthews, David](#)
To: [REDACTED]
Cc: [Kinsman, Paula \(ACTEDU\)](#); [REDACTED] [EDU, EGMBSG](#)
Subject: RE: Letter from Minister Berry
Date: Wednesday, 29 June 2022 2:54:20 PM

OFFICIAL: Sensitive

Hello [REDACTED]

[REDACTED]

The Directorate consulted with the Indoor Air Quality Team, the Team has been responsible for reviewing thermal comfort and air quality across all schools in the ACT as part of the Directorate's COVID-19 response. The fans do provide improved thermal comfort to building occupants and have the added benefit of purifying the air. Stratification fans have been delivered to school halls across the ACT where mechanical ventilation is not installed.

There is currently no commitment or funding available to deliver mechanical heating, cooling and ventilation system at Campbell Primary School's Hall. The Directorate undertook a consultant informed design for a mechanical system upgrade to the Campbell Primary School's Hall as part of the design process for the school modernisation. The design remains available future use should additional funding at some stage in the future.

[REDACTED]

I trust that the school community is making great use of its new infrastructure and I wish you and all other Campbell Primary School families a restful and connected school holiday period.

Regards

Dave Matthews
Executive Group Manager, Business Services
Education Directorate | ACT Government

From: [REDACTED]
Sent: Thursday, 23 June 2022 9:53 AM
To: Matthews, David <David.Matthews@act.gov.au>
Cc: Kinsman, Paula (ACTEDU) <Paula.Kinsman@ed.act.edu.au>; [REDACTED]
[REDACTED]; EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Subject: RE: Letter from Minister Berry

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Hi again David

Also, I have given further thought to your comment below regarding the installation of stratification fans. It is my understanding that stratification fans were already planned at the school to assist with air quality as part of the school's COVID19 response. Having now investigated what stratification fans are, I don't think any reasonable person would consider that they would sufficiently improve thermal comfort of the school hall, particularly given its current age, roof quality and general dilapidated condition dramatically reducing its general thermal performance. Also, as you know Minister Berry's letter to me committed that "The Directorate will engage consultants to review and investigate options to improve the heating and cooling for the school hall and will continue to keep the school community informed on timelines and progress."

In this regard, could you please confirm that consultants were engaged as per this commitment and provide information on what options were considered to improve heating and cooling in the hall, and why it was considered no action was required and/or what further steps you intend to take in this area to address Minister Berry's commitment to parents?

Kind regards

From: Matthews, David <David.Matthews@act.gov.au>
Sent: Friday, 10 June 2022 2:48 PM
To: [REDACTED] Blom, Dylan <Dylan.Blom@act.gov.au>
Cc: [REDACTED] Kinsman, Paula (ACTEDU) <Paula.Kinsman@ed.act.edu.au>; EDU, EGMBSG <>
Subject: RE: Letter from Minister Berry

OFFICIAL: Sensitive

[REDACTED]

Thank you for your email and acknowledgement of the significant work undertaken to complete the modernisation project by Term 2.

[REDACTED]

[REDACTED]

As part of the roll out of the air quality program, four destratification fans with air purification have been installed in the Campbell Primary School hall. These highly efficient units improve thermal comfort while the in-built air purification system cleans the air to improve indoor air quality in the space. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Regards

Dave Matthews
Executive Group Manager, Business Services
Education Directorate | ACT Government

From: [REDACTED]
Sent: Friday, 3 June 2022 11:31 AM
To: Matthews, David <David.Matthews@act.gov.au>; Blom, Dylan <Dylan.Blom@act.gov.au>
Cc: [REDACTED] Kinsman, Paula (ACTEDU) <Paula.Kinsman@ed.act.edu.au>
Subject: FW: Letter from Minister Berry

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Hi David and Dylan

As I'm sure you are aware, attached is the final letter we received from Minister Berry's office last month.

I would like to acknowledge the work of your team to get the building ready for the start of term

2. It was clear that it was a lot of work from all involved to make it happen.



Kind regards,



From: BERRY <BERRY@act.gov.au>
Sent: Tuesday, 26 April 2022 10:56 AM
To: [Redacted]
Subject: Letter from Minister Berry

Dear [Redacted]

Please find attached a letter from Minister Berry,

Kind regards,
Thomas Rosser | Adviser
Phone: +61 2 6205 2898 | Email: thomas.rosser@act.gov.au

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.

Shaw, Leanne

From: Yapp, Phillip
Sent: Wednesday, 29 June 2022 7:50 PM
To: [REDACTED]
Subject: RE: CO2 monitor purchase
Attachments: EDU Purchase Order - IAQ 21-22.391 - HEVAC Control Agencies Pty Ltd.pdf

Hi [REDACTED]

So sorry I think I forgot to send you the completed purchase order with so much going on, please find attached. Can you please advise on updated delivery date for these?

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
Infrastructure and Capital Works | Education | ACT Government
Level 4 220 London Circuit | GPO Box 158 Canberra ACT 2601 | www.det.act.gov.au

From: [REDACTED]
Sent: Monday, 20 June 2022 4:13 PM
To: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Subject: RE: CO2 monitor purchase

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Hi Phil,

Hope you're well mate.

We will soon be placing another order for CO2 monitors and just wondering where you are at regarding the attached quotation as we could add your monitors onto the order?

[REDACTED]

[REDACTED]

HEVAC CONTROLS
www.hevac.com.au

From: [REDACTED]
Sent: Wednesday, 15 June 2022 1:17 PM
To: 'Yapp, Phillip' <Phillip.Yapp@act.gov.au>
Subject: RE: CO2 monitor purchase

Hi Phil,

Please find quote attached.

The price remains the same as per the previous purchase. Hevac are absorbing the shipping fee which has increased exponentially.

Lead time would be approx. 4 weeks allowing for goods to arrive at Hevac.



[HEVAC CONTROLS](http://www.hevac.com.au)
www.hevac.com.au

From: Yapp, Phillip <Phillip.Yapp@act.gov.au>
Sent: Wednesday, 15 June 2022 11:35 AM
To: [REDACTED]
Subject: FW: CO2 monitor purchase

Hi [REDACTED]

Hoping we can look at a purchase of another:

- 250 CO2 monitors
- 280 USB chargers
- Freight

Are you please able to provide a quote and advise on timeframe for this?

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
Infrastructure and Capital Works | Education | ACT Government
Level 4 220 London Circuit | GPO Box 158 Canberra ACT 2601 | www.det.act.gov.au

From: Yapp, Phillip
Sent: Monday, 6 June 2022 3:48 PM
To: [REDACTED]
Subject: CO2 monitor purchase

Hi [REDACTED]

Hope you're well, wondering if you would be able to provide a quote for another 250 of the H8 CO2 monitors with the standard alarm at 2000ppm, as per the most recent order, plus USB chargers. If you can also advise on delivery times, noting we would complete testing ourselves, that would be great. Not sure if the testing ourselves would affect the unit price at all?

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies, Sustainability and Environment

Phone: +61 2 6207 9190 | M: 0435 655 176 | Email: phillip.yapp@act.gov.au
Infrastructure and Capital Works | Education | ACT Government
Level 4 220 London Circuit | GPO Box 158 Canberra ACT 2601 | www.det.act.gov.au

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Purchase Order

Date:	17/06/2022
Purchase Order No:	IAQ21-22/391

Requesting Section Buyer: **Education Directorate – Infrastructure and Capital Works**

Vender Supplier Name: HEVAC Control Agencies Pty Ltd
 Address: Unit 7, 54 Howleys Road, Notting Hills VIC 3168

Contact Name: [REDACTED] Contact Number: [REDACTED]

Ship to Location (if applicable) or work site: Delivery to agreed location in the ACT

Short description of goods/services: Supply of CO2 Monitors (Please reference Purchase Order number when invoicing the Directorate)

Price Fixed Variable Quotes Attached Yes No Delivery Required by
 Freight FIS FOB Confirming Order Yes No / /

Line No	Description	Qty	Unit	Unit Price	Total
	OS H8-B - CO2 Monitor Black	250			
	LP M8861B - 2.1A USB Wall Charger	280			
	Freight	1			
					Total ex GST \$18,330.00
					GST 10% \$1,833.00
					TOTAL inc GST \$20,163.00

Requesting Officer: Phil Yapp Signature: [REDACTED]
 Contact No: 02 6207 9190 Date: 17/06/2022

Delivery Address: Hedley Beare Centre for Teaching, 51 Fremantle Drive Stirling ACT 2911

Line No	Account Flex field	Line No	Account Flex field	Line No	Account Flex field

Name and Title of Approving Officer (Signatory confirms holding delegation to expend funds)
Cathy Graham, A/g Assistant Director

Signature: [REDACTED]
 Date: 17/06/2022

From: [Steele, Peter](#) on behalf of [EDU, EGMBSG](#)
To: [Matthews, David](#)
Cc: [EDU, EGMBSG](#)
Subject: FOR CLEARANCE: Minister Brief 22-23 COVID
Date: Thursday, 30 June 2022 3:47:00 PM
Attachments: [Minister Brief 22-23 COVID -CFO Cleared.docx](#)
[RE For Review Minister Brief 22-23 COVID.msg](#)
Importance: High

OFFICIAL

Afternoon Dave,

Attached for your clearance is the requested DG Brief on 22-23 COVID costs, cleared by CFO.

As noted – will be lodged in TRIM after your approval (TRIM is currently down as well).

Pete

Peter Steele
ACT EDU - 0423 390 998

From: Turnbull, Ian <ian.Turnbull@act.gov.au>
Sent: Thursday, 30 June 2022 3:21 PM
To: EDU, EGMBSG <EGMBSG.EDU@act.gov.au>
Cc: CFO EDU Office <CFOEDUOffice@act.gov.au>; Christensen, Karina <Karina.Christensen@act.gov.au>
Subject: FOR CLEARANCE: Minister Brief 22-23 COVID
Importance: High

OFFICIAL

Hi Team

Please see attached the CFO cleared brief on COVID Funding for 22-23. Once David has cleared the document we will upload into TRIM (Sarah is [REDACTED]) and progress. For info - The brief was also provided to the COVID-19 Management Team for their review with their approval attached.

Any questions please let me know.

Ian

From: Christensen, Karina <Karina.Christensen@act.gov.au>
Sent: Thursday, 30 June 2022 2:54 PM
To: Turnbull, Ian <ian.Turnbull@act.gov.au>; CFO EDU Office <CFOEDUOffice@act.gov.au>
Subject: RE: For Review: Minister Brief 22-23 COVID
Importance: High

OFFICIAL

Ian

Please see attached the revised COVID-19 Brief which takes into account your comments and suggested changes.

The brief was also provided to the COVID-19 Management Team for their review with their approval attached.

Kind Regards,

Karina Christensen | Senior Director, Internal Budgets and Reporting |
Strategic Finance and Procurement | Education | ACT Government
P: (02) 6207 1053 | E: Karina.Christensen@act.gov.au | M: 220 London Circuit, Canberra City
www.education.act.gov.au | [Facebook](#) | [Twitter](#) | [Pinterest](#) | [LinkedIn](#) | [Google+](#)



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From: Turnbull, Ian <Ian.Turnbull@act.gov.au>
Sent: Wednesday, 29 June 2022 4:12 PM
To: Christensen, Karina <Karina.Christensen@act.gov.au>; CFO EDU Office <CFOEDUOffice@act.gov.au>
Subject: RE: For Review: Minister Brief 22-23 COVID

OFFICIAL

Hi Karina

Please see marked up changes / comments – happy to discuss.

Ian

From: Christensen, Karina <Karina.Christensen@act.gov.au>
Sent: Tuesday, 28 June 2022 3:07 PM
To: Turnbull, Ian <Ian.Turnbull@act.gov.au>; CFO EDU Office <CFOEDUOffice@act.gov.au>
Subject: For Review: Minister Brief 22-23 COVID
Importance: High

OFFICIAL

Afternoon Ian

Please find attached the draft Minister Brief on the COVID-19 financial impact for 2022-23. It would be appreciated if you could please review and provide any comments/amendments prior to it going to David for EBM clearance.

Kind Regards,

Karina Christensen | Senior Director, Internal Budgets and Reporting |
Strategic Finance and Procurement | Education | ACT Government
P: (02) 6207 1053 | E: Karina.Christensen@act.gov.au | M: 220 London Circuit, Canberra City
www.education.act.gov.au | [Facebook](#) | [Twitter](#) | [Pinterest](#) | [LinkedIn](#) | [Google+](#)





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Education Directorate

UNCLASSIFIED

To: Minister for Education and Early Childhood
DevelopmentTracking No.: [Click here to enter text.](#)**Date:** <date completed by the action officer>**CC:** [Click here to enter text.](#)**From:** Director-General**Subject:** COVID-19 Costs for 2022/23**Critical Date:** [Click or tap to enter a date.](#) <Indicate the date in **bold** by which the brief must be signed>**Critical Reason:** [Click here to enter text.](#)**Recommendations**

That you:

1. Agree for the Directorate to continue specific COVID-19 expenditure in 2022-23 at an estimated cost of approximately \$12.394m for:
 - a. 
 - b. Enhanced ventilation (increased electricity and gas) \$0.200m;
 - c. 

Agreed / Not Agreed / Please Discuss

2. Note that discussions with ACT Treasury have commenced to identify potential funding mechanisms for Directorate COVID-19 costs in 2022-23.

Noted / Please Discuss
Agreed / Not Agreed / Please Discuss

...../...../.....

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Executive Feedback

Background

3. The COVID-19 Response Fund will cease on 30 June 2022.

Issues

4. Whilst COVID-19 restrictions have been eased in the ACT, in particular the Public Health Order settings for Education, the financial impact of COVID-19 to the Education Directorate remains.
5. The COVID-19 Response fund was the key funding source for the Directorate's costs in 2021-22. This funding mechanism ceases on 30 June 2022, leaving any future costs unfunded and a cost pressure to the Directorate.
6. COVID-19 costs of approximately \$12.394m¹ are estimated to be incurred in 2022-23:

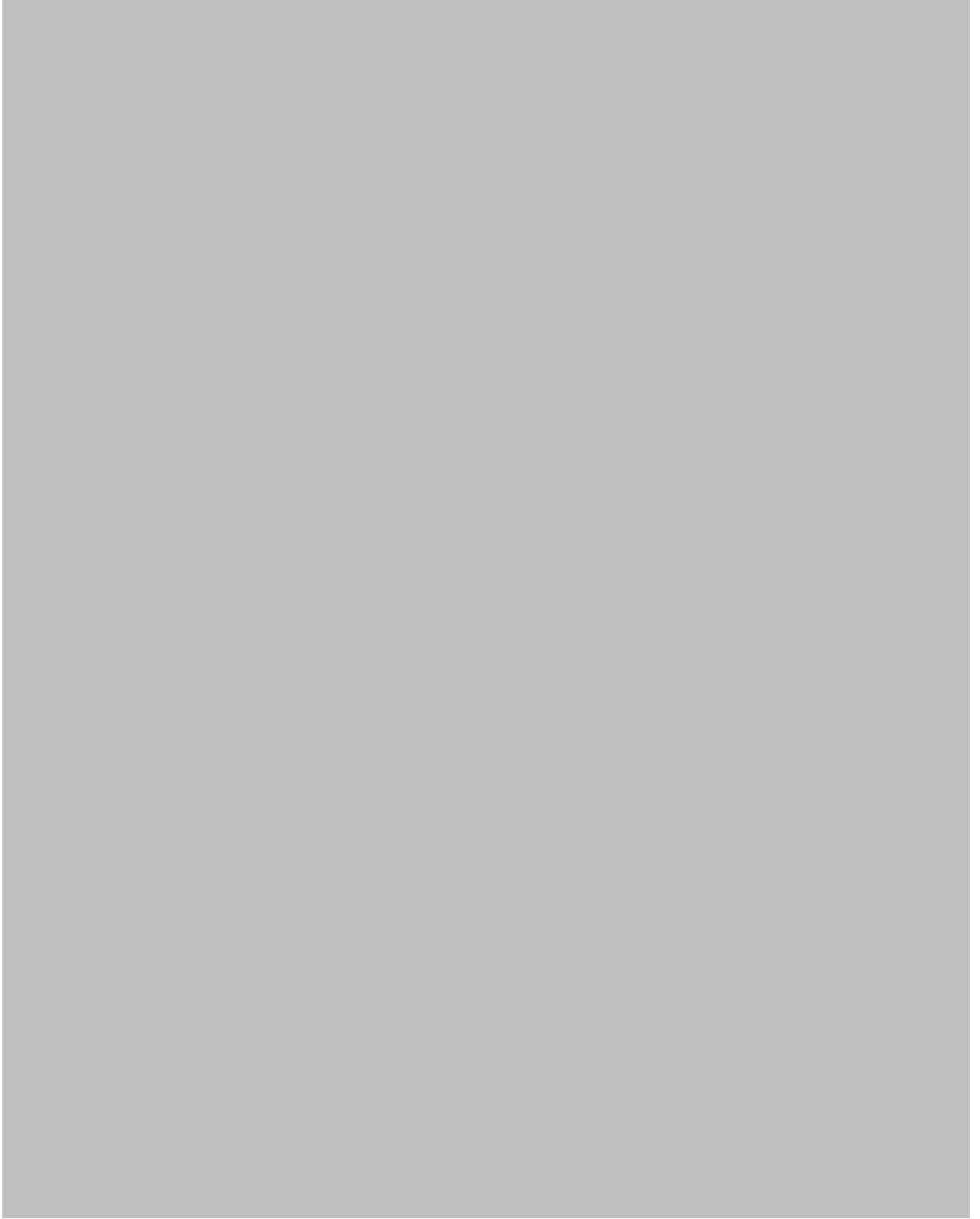
¹ The estimate is based on 12 months of expenditure throughout the 2022-23 financial year.

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b. Enhanced ventilation (increased electricity and gas) \$0.200m

It is anticipated that electricity and gas consumption at schools will remain higher with schools mitigating COVID-19 transition through increased ventilation whilst heating and cooling systems are running. Additionally, there is an inherent increase in usage from the upgrade and capital ventilation projects being undertaken.



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7. The Directorate has identified three items previously funded through COVID-19 funding in 2021-22 which will become business as usual expenditure and may be able to be absorbed into the Directorate's base funding without resulting in significant cost pressures in 2022-23:



- c. Ventilation maintenance. Continued maintenance program incorporated into annual repairs and maintenance budget.



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Benefits/Sensitivities

20. The identified continued support outlined in the Brief, if endorsed, would allow for the safety of students and staff for on campus teaching and learning.

Communications, media and engagement implications

21. There is continued community interest and media attention surrounding the safety of students and teachers within the Education setting. Maintaining COVID-19 support in 2022-23 would be favourably received.

Signatory Name: David Matthews Phone: x70384

Action Officer: Karina Christensen Phone: x71053

Attachments

Attachment	TRIM No	Title
Attachment A		COVID-19 Financial Analysis

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COVID-19 COST CATEGORY	2021-22		2022-23	Comments
	Approved Funding	Total claims	Estimate	
Enhanced ventilation (maintenance)	600	600	-	Ventilation maintenance will continue to be undertaken as part of normal R&M work
Enhanced ventilation (increased electricity)	435	103	200	Anticipate costs to increased with windows open for ventilation whilst heaters and airconditioners still running. Previously only claimed electricity but have added gas.
TOTAL	17,303	14,160	12,394	
			3,099	Potential cost per term

UNCLASSIFIED

From: [Elton, Kathryn](#)
To: [Christensen, Karina](#)
Cc: [EDUCOVID](#)
Subject: RE: For Review: Minister Brief 22-23 COVID
Date: Wednesday, 29 June 2022 7:18:47 PM
Attachments: [image001.png](#)

OFFICIAL

Hi Karina

I don't have the original information Katie provided to you so I cannot comment from that perspective. The brief reads well. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Thanks so much, Kathryn

From: Power, Meg <Meg.Power@act.gov.au> **On Behalf Of** EDUCOVID
Sent: Tuesday, 28 June 2022 4:05 PM
To: Elton, Kathryn <Kathryn.Elton@act.gov.au>
Cc: Dunn, Katie <Katie.Dunn@act.gov.au>; EDUCOVID <EDUCOVID@act.gov.au>
Subject: FW: For Review: Minister Brief 22-23 COVID
Importance: High

OFFICIAL

Hi Kathryn, can you please review this in place of Katie?

Thanks

Meg Power | Assistant Director COVID Management Team
T: (02) 6207 8767 | E: Meg.Power@act.gov.au
Covid Management Team | Education | ACT Government
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[REDACTED]

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From: Christensen, Karina <Karina.Christensen@act.gov.au>
Sent: Tuesday, 28 June 2022 3:36 PM
To: EDUCOVID <EDUCOVID@act.gov.au>
Cc: Dunn, Katie <Katie.Dunn@act.gov.au>; Turnbull, Ian <Ian.Turnbull@act.gov.au>
Subject: FW: For Review: Minister Brief 22-23 COVID
Importance: High

OFFICIAL

Hi Katie

Please see attached the draft Minister Brief on the COVID-19 financial impact for 2022-23 that I have forwarded to Ian for review. I would also greatly appreciate your input into the review of the brief prior to it going to David and Jane for clearance.

Kind Regards,

Karina Christensen | Senior Director, Internal Budgets and Reporting |
Strategic Finance and Procurement | Education | ACT Government
P: (02) 6207 1053 | E: Karina.Christensen@act.gov.au | M: 220 London Circuit, Canberra City
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From: Christensen, Karina
Sent: Tuesday, 28 June 2022 3:07 PM
To: Turnbull, Ian <Ian.Turnbull@act.gov.au>; CFO EDU Office <CFOEDUOffice@act.gov.au>
Subject: For Review: Minister Brief 22-23 COVID
Importance: High

OFFICIAL

Afternoon Ian

Please find attached the draft Minister Brief on the COVID-19 financial impact for 2022-23. It would be appreciated if you could please review and provide any comments/amendments prior to it going to David for EBM clearance.

Kind Regards,

Karina Christensen | Senior Director, Internal Budgets and Reporting |
Strategic Finance and Procurement | Education | ACT Government
P: (02) 6207 1053 | E: Karina.Christensen@act.gov.au | M: 220 London Circuit, Canberra City
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From: [Graham_Cathy](#)
To: [Ya_Phil](#)
Cc: [Flint_Katrina](#)
Subject: RE: IAQ - Tech Rentals cert fied CO2 monitor
Date: Tuesday, 5 July 2022, 12:43:51 PM

OFFICIAL

Hi Phil

IAQ reference number below

IAQ-21-22/396	All Schools	99999	General	Phil Yapp	05/07/2022	Canberra Air Conditioning Services	HVAC	CO2	Rental of CO2 Monitors recommended by Echelon 2 Weeks for \$ GST Shipping Return cost for shipping to Sydney Plus CACS management	\$ 803.00
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Thanks
Cathy

From: Yapp Phillip <Phillip.Yapp@act.gov.au>
Sent: Tuesday, 5 July 2022 12:30 PM
To: [Graham_Cathy](#) <Cathy.Graham@act.gov.au>
Cc: Vincent Wayne <Wayne.Vincent@act.gov.au>; Anderson Damien <Damien.Anderson@act.gov.au>; Flint Katrina <Katrina.Flint@act.gov.au>
Subject: IAQ - Tech Rentals cert fied CO2 monitor

H

As discussed can you please arrange the hire of this calibrated CO2 monitor from tech rentals for 2 weeks recommended by I've discussed with and they've put a unit aside. If you can please arrange ASAP and advise when it gets in that would be great. I'll need to attend Narrabundah College so I can pick up from Fyshwick when required.

[TSLO-TRAK IAQ Monitor CO2 CO Temperature & Humidity Logger](#)

[Redacted]

@Graham_Cathy can you please raise an IAQ job # for this and I'll arrange an order to go out.

Cheers
Phil

Phil Yapp | Assistant Director – Asset Strategies Sustainability and Environment

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