# Auckland Council | COVID-19 Risk Assessment

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#### 1. Approach

- 1.1. The risk assessment is being undertaken in line with the risk assessment process outlined in Auckland Council Health, Safety and Wellbeing Corporate Standard 3: Risk Assessment (corporate standard 3<sup>1</sup>). It also considers guidance issued by WorkSafe NZ and incorporates that advice into the approach taken.
- 1.2. The approach that Auckland Council has established for health and safety risk is aligned with ISO31000, the international standard for risk management, and it is not intended or appropriate to design a separate risk framework to assess and evaluate any specific risks.
- The approach will include an assessment of the inherent risk associated with COVID-19, an evaluation of the effectiveness of existing controls and their impact on current residual risk, and the potential risk impact from the use of vaccines.
- 1.4. The scope of this review is an assessment of the risk associated with COVID-19 infection for any of Auckland Council's staff and volunteers, contractors and suppliers, elected members and for members of the community who attend public meetings. This version of the risk assessment also consolidates several risk assessments undertaken, to ensure consistency and ease for future reviews.
- 1.5. Furthermore, there is an acknowledgement that where Auckland Council places a risk on an individual of infection that risk is then carried forward to pose a risk to that persons colleagues, whanau and social networks.
- 1.6. Peer review has been undertaken by senior H&S professionals within Council, and expert public health advice<sup>2</sup> has been received to validate any health-based considerations.

#### 2. Context of risk assessment

2.1. Auckland Council has a commitment to the health, safety and wellbeing of our staff, and the people of Auckland. This is summed up in Our Charter which declares that we put the health, safety and wellbeing of our people and the people of Auckland

 <sup>&</sup>lt;sup>1</sup> https://aklcouncil.sharepoint.com/sites/wellbeing-and-safety/SitePages/corporatestandards.aspx
 <sup>2</sup> Health advice received from:

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<sup>2.</sup> Professor Rod Jackson, Professor of Epimiology – University of Auckland. BHSc, MbChB, Dip Obs, Dip Com Hlth, MHSc, PhD.

<sup>3.</sup> Dr Lavinia Perumal, Public Health Medicine Specialist. BHB, MbChb, MPH

first. Our bottom line is that we never compromise our health, safety and wellbeing at work<sup>3</sup>.

- 2.2. We have a duty of care in the Health and Safety at Work Act 2015 to take every reasonably practicable step to eliminate, or otherwise minimise, any risks to our workers<sup>4</sup>. This duty extends to those people who may be exposed as a result of interacting with Auckland Council workers, or within our workplaces. Auckland Council continually assesses these risks and this includes the risk that is posed by COVID-19 in the workplace.
- 2.3. Our elected members are officers as defined within the Health and Safety at Work Act 2015. Elected members (while not an employee, contractor, or volunteer) also carry out work in our workplaces in their role as elected members of the Governing Body or local boards and so they may also be considered to be workers under the Health and Safety at Work Act 2015.
- 2.4. While this risk assessment was initially written within the context of a Delta outbreak, Tāmaki Makaurau is currently experiencing an ongoing outbreak of the Omicron variant of COVID-19 in the community. At the time of authoring, there are a number of cases occurring daily, with new daily case numbers currently in the 15,000 20,000 range<sup>5</sup>, and while a "peak" may be experienced soon in Auckland, there may be a long tail of infections due to the virus continuing to circulate around New Zealand.
- 2.5. New Zealand has moved away from an elimination strategy, towards one of minimisation and protection using the Covid Protection Framework (often referred to as the traffic light system). While New Zealand is currently in the "Red" setting of the framework, there is an expectation of ongoing transmission with restrictions now eased from previous Alert Levels. It is likely that COVID-19 variants will continue to arise for some time, and the reduction of the number of infections and health impacts will be managed predominantly through the use of vaccinations<sup>6</sup> alongside other public health measures.
- 2.6. Vaccination rollout using Pfizer, AstraZeneca and Novavax vaccines is continuing across New Zealand and Auckland now has a vaccination rate of over 96% for first dose and over 94% for the second dose<sup>7</sup>. Vaccines are now available for 5-12 year olds, and 54% of eligible children have received at least one dose. A programme to provide a booster dose has also commenced, and over 73% of those eligible have received this. Note that this current vaccination rate is considered to be the environmental context for the risk assessment, and infections and deaths are occurring within this context. While vaccinations been determined to be a required risk control for Auckland Council, for the purposes of determining ongoing

<sup>&</sup>lt;sup>3</sup> https://aklcouncil.sharepoint.com/sites/policies/SitePages/look-after-safety-wellbeing.aspx

<sup>&</sup>lt;sup>4</sup> Workers as defined by the Health and Safety at Work Act 2015 includes employees, contractors, most volunteers and some others who do work for Auckland Council.

 <sup>&</sup>lt;sup>5</sup> https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-current-cases
 <sup>6</sup> Prime Ministers speech 22 October 2021, COVID-19 Protection Framework announcement -

https://www.beehive.govt.nz/speech/covid-19-protection-framework

<sup>&</sup>lt;sup>7</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-vaccine-data

requirements for vaccination, they are considered a "proposed control" for the purposes of assessment.

2.7. The purpose of this risk assessment is to determine the current risk associated with COVID-19, and to assess the effectiveness of control mechanisms, including the use of vaccination as a workplace control, on reducing risk to a level that is deemed acceptable, or as low as reasonably practicable.

#### 3. Inherent risk description

- 3.1. The inherent risk calculation is based on the risk of infection if no control measures are applied. The purpose of this is to understand the "uncontrolled" risk of COVID-19, noting that if controls are not applied or successful this would be the risk posed to our workers.
- 3.2. Within the Auckland Council HSW Framework, risk is considered to be a function of the potential *consequences* of an event, compared to the *likelihood* of that event occurring (not the likelihood of the consequence).
- 3.3. While not described within the risk framework, the likelihood of infection (the event, within the context of a virus) is established by looking at the probability of infection if exposed (the infectiousness), and the degree of exposure to the risk that exists.
- 3.4. Where consequence or likelihood has multiple levels at which it may reasonably be rated, the accepted practice is to select the highest of those ratings. This ensures that low probability/high consequence risks (critical risks) can be appropriately assessed and managed, with the understanding that the high consequence may be experienced at any time, however are not seen often enough as to generate trends.

#### 4. Assessment of Consequence

- 4.1. The assessment of consequence of potential harm considers that the established range of consequences from COVID-19 infection is broad, and while the majority of those infected can have mild or asymptomatic experience of illness, there is a reasonably foreseeable and demonstrated potential for some of those infected to succumb to the virus or associated complications. These deaths can occur in the absence of pre-existing conditions, and have occurred with otherwise fit and healthy individuals. In the statistics noted, this is *with* the application of controls, and therefore without controls the mortality rate for COVID-19 would arguably be much higher.
- 4.2. While Omicron does appear to result in less serious illness as often as Delta did, the data has not been adjusted for vaccination status, and the rate of infection is resulting in far more infections in a much shorter period of time. Globally, the evidence suggests that this means more people being hospitalised and this can degrade the capacity of the health system to prevent death<sup>8</sup>. In New Zealand at this

<sup>&</sup>lt;sup>8</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-advice-public/about-covid-19/covid-19-about-omicron-variant

point in time, this is not yet the case – and the health system in New Zealand is coping with the current rate of hospitalisations.

- 4.3. A US study (pre-print) has shown that compared with Delta, patients with Omicron had 53% reduced risk of hospitalisation, 74% reduced risk of ICU admission and 91% reduced risk of death.<sup>9</sup>
- 4.4. A UK report found that the risk of hospitalisation decreased by 40% in patients with Omicron compared with Delta variant and that the risk of death was 60% lower as well.<sup>10</sup>
- 4.5. At a population level however, as Omicron is more transmissible, the greater number of cases can result in a greater number of hospitalisations<sup>11</sup> (and affected staff being unable to work) and potentially overwhelm the ability of the health system to provide appropriate care when needed.
- 4.6. In New Zealand, out of 471,225 cases, 164 individuals (0.03%) have been established to have died as a result of infection, with most cases and deaths occurring during the Omicron outbreak. The other cases are either active, or have since recovered<sup>12</sup>.
- 4.7. Globally there have been approximately 464,809,000 recorded cases of COVID-19, and 6,062,000 deaths (1.3%)<sup>13</sup>.
- 4.8. In the United States of America (as an example of an industrialised nation with significant case data available) 1.2% of all known cases have died as a result of their infection<sup>14</sup>.
- 4.9. With Omicron, there is also a higher degree to which there are significant consequences relating to business continuity, and the ability of Auckland Council to deliver particular services to the community. As an example waste collection, regulatory responsibilities, and public safety may all be impacted if a team was to be infected or be otherwise required to isolate. The consequences associated with business continuity may be considered significant and, while secondary to health and safety consequences, still requires Auckland Council to take steps to prevent interruption to those services.
- 4.10. Aside from the risk of death, there is a risk for some people of developing the longterm illness commonly referred to as "long COVID". Long COVID is a collection of symptoms that can last for days, weeks, or months and can range from mild to

<sup>&</sup>lt;sup>9</sup> Clinical outcomes among patients infected with Omicron (B.1.1.529) SARS-CoV-2 variant in southern California. Joseph A. Lewnard, Vennis X. Hong, Manish M. Patel, Rebecca Kahn, Marc Lipsitch, Sara Y. Tartof medRxiv 2022.01.11.22269045; doi: <u>https://doi.org/10.1101/2022.01.11.22269045</u> (preprint and has not been peer-reviewed)

<sup>&</sup>lt;sup>10</sup> UK Health Security Agency. SARS-CoV-2 variants of concern and variants under investigation in England. Technical briefing 36. 11 February 2022. Avail:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/1056487 /Technical-Briefing-36-22.02.22.pdf (accessed 16/03/2022)

<sup>&</sup>lt;sup>11</sup> Coronavirus (COVID-19) Hospitalizations. Avail: <u>https://ourworldindata.org/covid-hospitalizations</u> (accessed 16/03/2022)

 <sup>&</sup>lt;sup>12</sup> https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-current-cases
 20 March 2022

<sup>13</sup> https://covid19.who.int/ - 20 March 2022

<sup>&</sup>lt;sup>14</sup> https://covid.cdc.gov- 20 March 2022

disabling. This disease appears to be more common among people with more severe initial symptoms but can also affect those who initially had mild or moderate COVID-19. This includes young adults with no pre-existing medical conditions. Long COVID is seen in all age groups, including children<sup>15</sup>.

- 4.11. Long COVID is not well understood at this time, and research is ongoing into this disease, however internationally it appears that between 10-20% of cases experience a range of symptoms for more than 5 to 12 weeks after initial diagnosis<sup>16</sup>.
- 4.12. While death is still a possible outcome, as seen in the evidence overseas, it appears to be less likely with Omicron, however it is unknown what effect vaccination rates have had on this as the data has not been adjusted<sup>17</sup>. Serious illness is still a reasonably foreseeable outcome however (assuming no controls in place), and with long COVID being seen to be a reasonably predictable outcome, the potential consequences with Omicron reduces to *4. Major*. Business continuity risk becomes greater due to isolation timeframes and infection rates, and the risk consequences for this would also fall into the category of *4. Major*.
- 4.13. The range of reasonable consequence ratings is therefore *1. Insignificant* through to *4. Major* (see appendix 1: Risk Matrix Settings Table).
- 4.14. As detailed in paragraph 3.4, the highest reasonable rating is selected where there is a range of options that are reasonable, therefore the consequence of potential harm for COVID-19 infection is **4. Major.**
- 4.15. It is also considered that the health consequences associated with COVID-19 does not vary based *solely* on the tasks being undertaken, and although there are some tasks that are conducted by particular demographics which may have more susceptibility to COVID-19 (due to socio-economic or comorbidity factors), this consequence rating is suitable for use across all Auckland Council's roles, activities and sites.

#### 5. Assessment of Probability

5.1. The Omicron variant of COVID-19 is described by the New Zealand Ministry of Health as being a highly infectious mutation of the virus, more so than Delta was. It is predicted that case numbers may double every 2-4 days<sup>18</sup> once the outbreak has established. It has been described as "highly transmissible" as it has more mutations than other strains, which also makes it better at evading the protection given by vaccines and the immune system.

<sup>&</sup>lt;sup>15</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-advice-public/long-covid

<sup>&</sup>lt;sup>16</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-advice-public/about-covid-19/long-covid

<sup>&</sup>lt;sup>17</sup> https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---1-february-2022

<sup>&</sup>lt;sup>18</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-advice-public/about-covid-19/covid-19-about-omicron-variant

- 5.2. The  $R_0$  (basic reproduction number) is an indication of how many susceptible (unvaccinated, uninfected) people a single person with COVID19 infection will themselves go on to infect, i.e. a proxy figure for transmission. Omicron is 4.2 times more transmissible than Delta (which has an  $R_0$  of 5).<sup>19</sup> This means that one person with Delta could infect five others, but one person with Omicron could infect approximately 20 others. To put this in comparison, measles which has historically long been regarded as one of the most infectious diseases in the world has an  $R_0$  of 16 and influenza has an  $R_0$  of between 1 and  $2^{20}$ .
- 5.3. Its secondary attack rate (number of cases that develop after the index/primary case) within households is moderately higher in Omicron compared with Delta. A Norwegian study of 31,220 households showed that the secondary attack rate was 25% when the index case had the Omicron variant compared with 19% if it was Delta.<sup>21</sup>
- 5.4. The probability of infection occurring when directly exposed to someone carrying the COVID-19 virus can vary, but there is evidence to show that in the absence of other controls, there is a high probability of becoming infected when directly exposed to someone who has COVID-19 without any controls in place<sup>22</sup>.
- 5.5. On this basis, it is reasonably foreseeable that if a person is exposed to COVID-19 without any controls in place there is a **high probability** of infection as a result.

#### 6. Assessment of Exposure

- 6.1. The degree to which a person is exposed to COVID-19 is the determining factor as to whether a person will become infected, and therefore be prone to the consequences associated with the virus. When examining WorkSafe NZ guidance on risk assessments<sup>23</sup>, the risk factors described by the regulator relate specifically to whether a person will be exposed, and if exposed, how quickly might the contact tracing identify that they have been exposed.
- 6.2. For the purposes of this assessment, exposure will be rated as either high, medium, low or nil and then combined with the probability of infection calculation to determine the likelihood rating.

<sup>&</sup>lt;sup>19</sup> Nishiura, H., Ito, K., Anzai, A., Kobayashi, T., Piantham, C., & Rodríguez-Morales, A. J. (2021). Relative Reproduction Number of SARS-CoV-2 Omicron (B.1.1.529) Compared with Delta Variant in South Africa. Journal of clinical medicine, 11(1), 30. <u>https://doi.org/10.3390/jcm11010030</u>

<sup>&</sup>lt;sup>20</sup>https://www.who.int/influenza/resources/research/research\_agenda\_influenza\_stream\_2\_limiting\_spread. pdf

 <sup>&</sup>lt;sup>21</sup> Jørgensen SB, Nygård K, Kacelnik O, Telle K. Secondary Attack Rates for Omicron and Delta Variants of SARS-CoV-2 in Norwegian Households. JAMA. Published online March 07, 2022. doi:10.1001/jama.2022.3780
 <sup>22</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-

advice-public/about-covid-19/covid-19-about-omicron-variant

<sup>&</sup>lt;sup>23</sup> https://www.worksafe.govt.nz/managing-health-and-safety/novel-coronavirus-covid/how-to-decide-whatwork-requires-a-vaccinated-employee/. *Note: While the issued guidance can assist in undertaking an assessment, if a PCBU has an existing methodology for assessment of risk, and it meets the same standard of robustness as guidance provided, then the PCBU may utilise its own risk assessment process as a reasonable alternative. In this case, WorkSafe guidance has assisted in the determination criteria for exposure.* 

- 6.3. New Zealand is currently utilising a COVID Protection Framework approach, which attempts to slow the spread of COVID-19 rather than removing community transmission. There is an understanding within a suppression strategy that COVID-19 may still circulate within the community, and is predicated on other effective controls (such as vaccination) being in place to reduce the risk. With community transmission remaining for the foreseeable future, there is a higher degree of exposure possible particularly in Auckland.
- 6.4. When considering exposure, it is important to consider the degree to which various groups may be exposed to COVID-19, and the degree to which those persons expose *others* to the virus. As Auckland Council's duties under the Health and Safety at Work Act 2015 extend to others in our workplaces, or those who are impacted by our operations, it is appropriate to consider the level of risk to those communities as well.
- 6.5. The WorkSafe guidance refers to a number of example questions relating to exposure, where the risk is seen to be framed around:
  - a) The number of people the employee comes into contact with when carrying out work.
  - b) The degree to which employees carrying out the tasks are in proximity to other people, and for how long.
  - c) Whether there is a higher risk of infection and transmission within the work environment, compared to the non-work environment.
  - d) The level of interaction with people who are not known to the employee.
- 6.6. Auckland Council has a significant number of roles and activities, with 7127 staff undertaking 1800 role types, however all roles can be placed into one or more of the following broad categories. While impractical to assess each role individually, it is reasonably practicable to assess the risk of these categories to determine exposure as a proxy for a role-by-role based assessment and subsequently, the level of risk posed to those workers:
  - a) Office-based staff without public-facing roles.
  - b) Staff who have public-facing roles.
  - c) Staff with roles that mean they spend most of their time outside.
  - d) Staff who work with children under 5, or other vulnerable members of the community.
- 6.7. Office-based staff who do not have public-facing roles work for long periods in indoor environments where there is limited interaction with the public, however there is regular and prolonged interaction expected within the office between a potentially large number of other co-workers and teams, including individuals or teams who are undertaking work outside of the office and need to undertake certain tasks within the office. This exposure is more likely in enclosed spaces, or in locations where people eat or talk, such as kitchen spaces and lunch spaces. It is seen with other respiratory illnesses (such as colds or influenza) that these spread easily through office environments, and so it is reasonable to assume that the spread of

COVID-19 would be similar if controls were not introduced. There is also the potential for any of any of these workers to be infected outside the workplace, and arrive at work prior to a test and diagnosis, and then transmit the virus to others.

- 6.8. Public-facing staff undertake a range of tasks in environments that may be either indoor or outdoor, some within the control of Auckland Council, and some that are not. There are a number of activities which may require our workers to interact in close proximity with others from across every community within Auckland. Wherever there is interaction with the public, there is opportunity for COVID-19 to spread to our staff, or from our staff into the community.
- 6.9. Staff working outdoors undertake work where the environment is not conducive to the spread of COVID-19 due to the impact of wind and sunlight, however there is a low degree of residual exposure that can be accompanied with working alongside others. These workers will also spend time indoors with others from time-to-time, for example in break rooms, offices and vehicles.
- 6.10. For staff working with children under 5, or other vulnerable members of the community, there is potential for harmful exposure in both directions, and the consequences may be more direct for these persons. Staff working with children will be working in close proximity to a part of the population in which there is no current option for vaccination meaning that there is a higher degree of exposure if these children are infected with COVID-19. There is also a risk of exposure for those children, and to others who may be vulnerable, where a staff member may have a COVID-19 infection. Those members of the community may be exposed to COVID-19 as a result of an interaction with a staff member who may be infected, and our duty of care extends to these members of the community
- 6.11. Auckland Council also has a number of Elected Members, including the Mayor, Councillors, and Local Board Members.
- 6.12. The workplaces that these elected members work in are varied and can include Auckland House (135 Albert Street, Auckland), Auckland Town Hall, Local Board offices, CCO offices and worksites, hub and spoke venues, community venues, parks, or in the community in public and private settings. Within these environments, elected members spend time meeting with staff, and members of the public (including business owners, public, and interest groups). There are also a number of meetings where the community may be in attendance.
- 6.13. Our elected members spend time in a range of indoor environments where there is limited interaction with the public, however there is regular and prolonged interaction expected within the office between a potentially large number of others, including employees of Auckland Council and teams, including individuals or teams who are undertaking work outside of the office and need to undertake certain tasks within the office. This exposure is more likely in enclosed spaces, or in locations where people eat or talk, such as kitchen spaces and lunch spaces. It is seen with other respiratory illnesses (such as colds or influenza) that these spread easily through office environments, and so it is reasonable to assume that the spread of COVID-19 would be similar if controls were not introduced. There is also the potential for anyone in these environments to be infected outside the workplace,

and arrive at work prior to a test and diagnosis, and then transmit the virus to others.

- 6.14. When undertaking public-facing activities, elected members will undertake work in a range of tasks in environments that may be either indoor or outdoor, some within the control of Auckland Council, and some that are not. There are a number of activities which may require our elected members to interact in close proximity with others from across every community within Auckland. Wherever there is interaction with the public, there is opportunity for COVID-19 to spread to our elected members, and then on to staff, or from our elected members into the community.
- 6.15. When undertaking activities outdoors, the environment is not conducive to the spread of COVID19 due to the impact of wind and sunlight, however there is a low degree of residual exposure that can be accompanied with working alongside others.
- 6.16. Members of the public who may be attending public meetings may also be spending significant amounts of time in an indoor environment where there is interaction with a number of others, including elected members, and other members of the public. It is unlikely that everyone in the space will be known to each other, and physical distancing may not always be possible. There is potential for members of the public to be infected by other persons in attendance, as well as the potential for them to infect others if they have the disease.
- 6.17. For contractors and suppliers, there are several groups that need to be considered for their council-related exposure levels, based on the degree of control and influence that Auckland Council has over their work:
  - a) Those who undertake work inside council-controlled indoor facilities, alongside staff or members of the public. These contractors have a similar level of exposure as staff, and ratings so should be applied as per the equivalent staff exposure assessment;
  - b) Those undertaking work under the direct control and influence of council e.g. supervised by council staff directing how works or services are being performed. These contractors have a similar level of exposure as staff, and ratings so should be applied as per the equivalent staff exposure assessment;
  - c) Those who are undertaking works or services on behalf of council, and interacting with the public with the appearance of being council staff;
  - d) Contractors or suppliers undertaking work in council-controlled outdoor facilities where there is an undetermined or varied level of interaction with the public, or with council staff
  - e) Those undertaking work in non-council-controlled sites where there is an undetermined or varied level of interaction with the public or with council staff
  - f) Contractors or suppliers undertaking work in their own sites; and
  - g) Those undertaking work other than defined above, where there is minimal to no interaction with council staff or public, and no entry into council-controlled indoor sites.

Group	Contact with others	Degree of proximity	Comparable Risk	Contact with those who are not known	Level of Community Transmission	Exposure Rating
Office-based staff	Medium	High	Medium	Low	High	Medium
Public-facing staff	High	Medium	High	High	High	High
Staff working outside	Low	Low	Medium	Medium	High	Medium
Staff working with vulnerable persons	High	High	High	High	High	High
Elected Members	High	High	Medium	High	High	High
Public attending public meetings	Medium	High	Medium	High	High	Medium
Contractors in council- controlled indoor facilities	Medium	High	Medium	Low	High	Medium
Contractors under direct control and influence	High	Medium	High	High	High	High
Contractors working with public on behalf of council	High	Medium	High	High	High	High
Contractors working in outdoor council-controlled sites		R	tisk Assessmen	t Required by (	Contractor	
Contractors working in non- council-controlled sites with staff or public	Risk Assessment Required by Contractor					
Contractors working in their own sites	Not controlled or influenced by Council. Decision to be made by Contractor					
Contractors working with no interaction with council staff or public	Not	controlled or i	nfluenced by C	Council. Decisio	n to be made b	y Contractor

#### 7. Determination of likelihood

- 7.1. As detailed previously, the likelihood of infection is directly related to the probability of infection from an exposure to COVID-19, alongside the level of exposure that a person has to the virus via others who may have the illness. This is assessed using an assumption of *no current or proposed controls being in place* (such as PPE, hygiene, physical distancing or vaccination).
- 7.2. For each of the role categories defined earlier, the following likelihood ratings have been established against the criteria in Corporate Standard 3:

Group	Probability of Infection	Exposure Rating	Likelihood		
Office-based staff	High	Medium	4. Likely		
Public-facing staff	High	High	5. Almost Certain		
Staff working outside	High	Medium	4. Likely		
Staff working with vulnerable persons	High	High	5. Almost Certain		
Elected Members	High	High	5. Almost Certain		
Public attending public meetings	High	Medium	4. Likely		
Contractors in council-controlled indoor facilities	High	Medium	4. Likely		
Contractors under direct control and influence	High	High	5. Almost Certain		
Contractors working with public on behalf of council	High	High	5. Almost Certain		
Contractors working in outdoor council-controlled sites	To be determined by Contractor				
Contractors working in non- council-controlled sites with staff or public	To be determined by Contractor				

#### 8. Inherent risk score range

8.1. Inherent risk level is determined by looking at the likelihood and consequence of infection without any prevention or mitigation in place, and plots these on a matrix as shown below (*Corporate Standard 3*):

	Risk Matrix							
	5 Extreme	Medium	High	High	Critical	Critical		
nces	4 Major	Medium	Medium	High	High	Critical		
Consequences	3 Moderate	Low	Medium	Medium	High	High		
Cons	2 Minor	Low	Low	Medium	Medium	Medium		
	1 Insignificant	Low	Low	Low	Medium	Medium		
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost Certain		
	Likelihood							

8.2. As the consequences have been determined to be **MAJOR**, and the range of likelihood is between **LIKELY** and **ALMOST CERTAIN** for all roles within Auckland Council, the range for inherent risk is between **HIGH** and **CRITICAL**.

#### 9. Risk tolerance

- 9.1. Corporate Standard 3 identifies the current level of tolerance for risk at Auckland Council in relation to the level of risk rating, and the required actions to be undertaken to reduce the risk further – or whether a level of risk may be tolerated at the current level of control (where further controls are not reasonably practicable).
- 9.2. The acceptance of a level of risk is consistent with modern safety practice and reflects that risk must be managed to a level that is "As Low As Reasonably Practicable". This acknowledges that there is a degree to which risk can't be lowered further without an unacceptably high cost in relation to effort or cost.
- 9.3. The risk identified for those where the risk is CRITICAL has been deemed to be **Unacceptable**, and further controls must be introduced to lower the risk before that work can be recommenced.
- 9.4. The risk identified for those where the risk is HIGH is deemed to be **Unacceptable**, and further controls must be introduced to lower the risk before that work can be recommenced
- 9.5. The uncontrolled risk associated with COVID-19 in our workplace is at a level that is not tolerated at Auckland Council, and no work should be taken unless controls have been implemented.

#### 10. Impact of existing controls

- 10.1. There are currently a broad range of controls already in place to prevent infection, and these are associated with particular levels within the established hierarchy of control from the lowest level of effectiveness through to the highest:
  - a) PPE Control: The use of face masks.

#### Effectiveness: partially effective

These work by reducing the spread of viral particles from person-to-person by capturing droplets and aerosols that would normally be expelled through breathing, talking, coughing or sneezing. There are varying degrees of effectiveness, depending on the material being used, the fit, and whether these are worn correctly. It has been regularly observed by the author that proper use of face coverings is not always the case. Where masks are not fitted properly, or worn in the correct way (covering the mouth and nose at all times) they are not an effective barrier for viruses. Face coverings (such as scarfs, t-shirts, or buffs) are not permitted to be used in place of face masks.

N95 or surgical masks are better than reusable cloth masks (particularly for aerosols), but must be replaced more often and can become ineffective when they become moist (either from the environment or from the humidity of exhaled breath). Masks work by reducing the probability that viral particles will be passed from person-to-person, however there has still been infection between persons who are masked due to the limitations and issues raised above and so are not to be considered infallible as a control measure.

The US Institute for Health Metrics and Evaluation (IMHE) modelling indicates that Omicron transmission is only reduced by 10% where masks are used by 80% of the population, if those measures are not in place when the spread of Omicron starts<sup>24</sup>. As mask use was widespread when the NZ Omicron outbreak commenced, it is likely that the protective factor associated with masks is likely to be higher, but not complete.

b) Administrative Control: Physical distancing.

## Effectiveness: partially effective

Physical distancing of at least one metre within the workplace, and 2 metres between people in public works by reducing the opportunity for viral particles to pass from one person to another and is effective for transmission by droplet, however aerosol transmission of Omicron has reduced the effectiveness of this control. It is heavily reliant on people "following the rules", and has been shown to be a challenging control to manage due to a number of factors (including incidental breaches and the lack of visual cues to remind people of what 2 metres looks like in different environments).

c) Administrative Control: Screening and Monitoring.

Effectiveness: partially effective

<sup>&</sup>lt;sup>24</sup> https://covid19.healthdata.org

This control involves requiring staff and others to not come into the office when ill, use contact tracing apps to regularly scan QR codes when entering or moving around buildings, and having resources available to quickly identify, track and isolate positive cases. These controls are prone to failure as they are either behaviourally driven, or require the application of those correct behaviours to drive them (for tracking as an example).

Screening also includes the use of Rapid Antigen Tests, which may be used as a surveillance tool where appropriate. These are described as a health monitoring tool as they do not reduce the likelihood of infection to the individual involved, and do not impact on the potential consequences. In plain terms, while Rapid Antigen Tests can identify whether someone is infected when they enter a building, they don't prevent infection while in the building.

As a result, RAT does not have a significant impact on the risk score and does not have the same risk reduction properties as a control such as vaccination.

There are potential benefits to using COVID-19 testing as an additional measure however, as it may help to prevent a larger outbreak within a workplace where an infected individual might be identified and isolated prior to infecting others.

Rapid Antigen Tests (RAT) are now available in NZ for screening and surveillance testing. They are less accurate than a PCR test<sup>25</sup>, and are generally more effective at detecting proteins from the virus when the individual has higher viral counts associated with active infection. This is the period when a person may be most infectious. As such, they need to be conducted much more regularly to be an effective tool (every 2-3 days is suggested) and are suitable as a screening method for particular environments where risks are higher or where business continuity depends on identifying breakthrough infections quickly to isolate exposed individuals.

d) Administrative Control: Hygiene

## Effectiveness: partially effective

Practicing good sneeze and cough hygiene and the regular use of handwashing and/or hand sanitiser helps to remove viral particles which may have been deposited on hands, which is particularly important when touching the face, eating, or adjusting masks. This is highly dependent on a number of factors, including the type of soap or sanitiser being used, the method and duration of handwashing, and whether individuals remember to clean their hands prior to touching the face etc. Rules have also been put in place in relation to staying home if sick, and this relies on people following this requirement – however when applied correctly can reduce the potential exposure to COVID-19. This particular control relies heavily on behaviours which may be impacted subconsciously, so is not an effective control in isolation and requires a number of other controls to be in place to create defence in depth. The aerosol nature of virus transmission also limits the effectiveness of this control.

#### e) Engineering Control: Workplace Design

<sup>&</sup>lt;sup>25</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-health-advice-public/assessment-and-testing-covid-19/how-covid-19-testing-works

#### Effectiveness: partially effective

Design factors such as ventilation systems and air circulation can reduce the level of exposure if designed correctly with COVID-19 transmission in mind. Many buildings occupied or entered by Auckland Council staff will not have been designed in a way that provides adequate protection, however some buildings (such as 135 Albert Street) have a level of air changes and ventilation which exceeds American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) standards and provides an equivalent degree of protection to the use of an N95 face mask. This is reliant on other controls, such as physical distancing and hygiene being in place and only reduces exposure so far.

#### f) Isolation Control: Working from home

#### Effectiveness: effective

This control has been used extensively in New Zealand to reduce the level of exposure to COVID-19. It works by removing people from situations and environments whereby they may be infected. It is effective for work-related exposure for those who are able to work from home during periods of lockdown, however it should be noted that there are potential exposure events that may occur outside the home, when staff access essential services. These exposure events are outside the influence and control of Auckland Council so are not considered as part of this assessment. Working from home is an effective short-term control (it was used as part of lockdown measures to reduce exposure), however is unlikely to be effective long-term due to potential wellbeing, cultural and productivity challenges associated with being isolated from work colleagues. The vast majority of employees, contractors and elected members will need to work onsite at some point in order to effectively undertake their duties and therefore the control itself becomes unreasonable.

10.2. Each of these controls works by reducing the likelihood of infection, either by impacting the probability of infection, or by decreasing the level of exposure. Due to the way these controls work, they do not reduce the potential consequences of COVID-19. The overall effect of these controls is small, but effective enough to reduce likelihood from the inherent levels.

10.3. For each role, it is expected that the rating of likelihood may be reduced to a range between **3. Possible** and **4. Likely** based on the role categories described earlier. There is no change to consequence due to the lack of any control that impacts on the seriousness of the illness if COVID-19 is acquired.

Group	Updated Probability of Infection	Exposure Rating	Likelihood		
Office-based staff	Medium	Medium	3. Possible		
Public-facing staff	Medium	High	4. Likely		
Staff working outside	Medium	Medium	3. Possible		
Staff working with vulnerable persons	Medium	High	4. Likely		
Elected Members	Medium	High	4. Likely		
Public attending public meetings	Medium	Medium	3. Possible		
Contractors in council-controlled indoor facilities	Medium	Medium	3. Possible		
Contractors under direct control and influence	Medium	High	4. Likely		
Contractors working with public on behalf of council	Medium	High	4. Likely		
Contractors working in outdoor council-controlled sites	To be determined by Contractor				
Contractors working in non- council-controlled sites with staff or public	To be determined by Contractor				

10.4. As this risk assessment is used to determine the potential risk benefits of vaccination, it considers the application of vaccinations as a "proposed" control, and the effectiveness of this as a control measure will be assessed separately.

#### 11. Current residual risk scores

11.1. Based on a revised likelihood score for Auckland Council roles of either Possible or Likely, and with an Extreme consequence still reasonably foreseeable using these controls, the residual risk score remains at **HIGH** for all groups.

	Risk Matrix							
Consequences	5 Extreme	Medium	High	High	Critical	Critical		
	4 Major	Medium	Medium	High	High	Critical		
	3 Moderate	Low	Medium	Medium	High	High		
Cons	2 Minor	Low	Low	Medium	Medium	Medium		
	1 Insignificant	Low	Low	Low	Medium	Medium		
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost Certain		
	Likelihood							

11.2. This **HIGH** rating is still outside of the level deemed acceptable for Auckland Council (see Appendix 3: Risk Tolerance Table), and requires further controls to be implemented.

#### 12. Impact of vaccination

- 12.1. According to the Ministry of Health<sup>26</sup>, being fully vaccinated (currently described as all doses of an approved vaccine) is designed to provide protection in three ways. The first is by minimising the likelihood of infection, and the second is that it reduces the seriousness of illness if infected. The third way it provides protection is that it helps is to reduce the likelihood of transmission by reducing the symptomatic period in which a person is infectious. The ability to eliminate the spread of COVID-19 is not currently a feature of any vaccines available at this time.
- 12.2. The effectiveness of two doses of the Pfizer vaccine<sup>27</sup> provides 65-70% protection against symptomatic illness due to Omicron, however this drops to 10% after 20 weeks. The booster then increases this to 65% to 75%<sup>28</sup>.
- 12.3. Two doses of the Pfizer vaccine provides 72% protection against hospitalisation or severe illness due to Omicron infection, for the first 6 months. It then falls to approximately 52%. A booster dose increases this protection to 88%<sup>29</sup>.

<sup>&</sup>lt;sup>26</sup> https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-vaccines

<sup>&</sup>lt;sup>27</sup> Data for Novavax and AstraZeneca vaccines is still being investigated.

<sup>&</sup>lt;sup>28</sup>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/104532
9/Vaccine\_surveillance\_report\_week\_1\_2022.pdf

<sup>&</sup>lt;sup>29</sup>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/104532
9/Vaccine\_surveillance\_report\_week\_1\_2022.pdf

- 12.4. It is clear that there is still potential for infection to occur regardless of vaccination, however it is much less likely for serious hospitalisation to be required and more unlikely for an infected person to pass away as a result of their infection.
- 12.5. A recent New England Journal of Medicine study compared 'double vaccinated' individuals against individuals who were 'double vaccinated <u>and</u> had received a *booster*' as well.<sup>30</sup> It found that compared with people who had not received a booster, those who had also received a booster had a 77% reduction in incidence of severe, critical or fatal COVID-19 disease. However, there was only a 50% reduction in incidence of developing symptomatic omicron disease in the group that had received a booster. This shows that whilst booster vaccinations are highly effective in preventing hospitalisations and death from omicron disease, it is not as effective in preventing the development of symptomatic omicron infection.
- 12.6. It is currently uncertain as to how long the booster remains effective as immunity does wane over time and further studies are currently being completed
- 12.7. There are a small number of people for whom vaccination is contraindicated, and it is likely that there may be a very small number of these people within Auckland Council. Exemption processes are currently in place through the Ministry of Health, based on a specific set of criteria. Due to the very small numbers it is considered that the risk impact of having these persons in the workplace is small where a valid exemption is held, and public health measures continue to be adhered to.
- 12.8. There are a handful of serious side-effects that can occur as a result of vaccination, and MedSafe data shows a 0.02% incidence of serious side effects, which is significantly lower than the risks associated with COVID-19. Most serious side-effects have been treatable, with only 2 deaths directly related to the 10+ million doses administered to date in NZ<sup>31</sup>. As an example of the risk difference between COVID-19 and vaccination, the risk of pericarditis and myocarditis occurring with an individual is nine times higher where someone becomes ill with COVID-19 than it is with the vaccine<sup>32</sup>.
- 12.9. As a substitution-based control it is somewhat effective in reducing the likelihood of infection, but significantly, it protects against the consequences of that infection. It is the only current control available that reduces the reasonably expected consequences that exist with COVID-19.

<sup>&</sup>lt;sup>30</sup> Abu-Raddad LJ et al. Effect of mRNA Vaccine Boosters against SARS-CoV-2 Omicron Infection in Qatar. New England Journal of Medicine, March 9, 2022. Avail: <u>https://www.nejm.org/doi/full/10.1056/NEJMoa2200797</u> (accessed 16/03/2022)

<sup>&</sup>lt;sup>31</sup> https://www.medsafe.govt.nz/COVID-19/safety-report-41.asp

<sup>&</sup>lt;sup>32</sup> Interview with Dr Alexandra Muthu, 10 November 2021

#### 13. Proposed residual risk scores – two doses, no booster

- 13.1. As detailed earlier, being fully vaccinated (not including boosters) has only a small impact on the probability of Omicron infection and the consequences of that infection.
- 13.2. The range of consequences remains between 1. Insignificant and 4. Major, acknowledging that the effectiveness of a two-dose course of all vaccines reduces over time. The rating remains at 4. Major for consequence.
- 13.3. While there is a limited statistical reduction in the likelihood of infection, it is insufficient to reduce the rating to the next category of likelihood, and therefore the rating remains **3. Possible** to **4. Likely**.
- 13.4. The residual risk with all controls, including 2 doses of a vaccination, for workers is set out below:

	Risk Matrix							
	5 Extreme	Medium	High	High	Critical	Critical		
nces	4 Major	Medium	Medium	High	High	Critical		
Consequences	3 Moderate	Low	Medium	Medium	High	High		
Cons	2 Minor	Low	Low	Medium	Medium	Medium		
	1 Insignificant	Low	Low	Low	Medium	Medium		
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost Certain		
	Likelihood							

13.5. A **HIGH** residual risk as indicated in this assessment shows no significant risk reduction potential for a 2 dose vaccination, where a booster dose has not been provided.

#### 14. Proposed residual risk scores – three doses (including booster)

- 14.1. The range of consequences reduces due to the impact of the booster shot, as serious illness becomes much more unlikely. The new consequence rating falls between 1. Insignificant and 3. Moderate, acknowledging that there may still be some vaccinated people for whom their illness will require a number of days off work to recover, however this should (except in very rare circumstances) not require more than 30 days off work. It is even less reasonably foreseeable that death may result from infection. The rating is therefore set at 3. Moderate for consequence.
- 14.2. Combining the current controls listed previously with the additional effects of being fully vaccinated (with the booster), when used together the likelihood of infection is reduced to **3. Possible**. Whilst previous analysis shows a range of ratings within this assessment, with Omicron still able to rapidly spread throughout vaccinated populations, it is not reasonable to lower this rating to "Unlikely" at this time.

	Risk Matrix							
	5 Extreme	Medium	High	High	Critical	Critical		
nces	4 Major	Medium	Medium	High	High	Critical		
Consequences	3 Moderate	Low	Medium	Medium	High	High		
Cons	2 Minor	Low	Low	Medium	Medium	Medium		
	1 Insignificant	Low	Low	Low	Medium	Medium		
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost Certain		
	Likelihood							

14.3. A **MEDIUM** residual risk as indicated in this assessment shows a risk reduction potential for a 3 dose vaccination which includes boosters.

#### 15. Summary

- 15.1. This risk assessment shows an impact on risk reduction associated with the use of a 3-dose vaccination alongside other controls. It also shows that 2 doses of the vaccine, received more than 3 months ago, does not materially reduce the risk associated with COVID-19 in the workplace.
- 15.2. It is therefore recommended that Auckland Council consider whether to implement a requirement for full vaccination, including boosters, to be demonstrated for all those listed within this risk assessment in order for them to enter the environments described. Without the third booster dose of the vaccination the lowest risk level available, even for those outdoors, is **HIGH** due to the consequences associated with COVID-19. Fully vaccinated workers allows for a reduction in those consequences,

and a further reduction in likelihood when combined with all other current controls in place.

- 15.3. As commentary indicates that NZ has passed the peak infection, it is also recommended that this risk assessment is reviewed when the COVID-19 Protection Framework settings are changed. If the Omicron outbreak declines and case numbers are low, the inherent risk associated with COVID-19 would subsequently reduce due to the limited exposure in the community, and the likelihood of contracting COVID-19 being much lower. It is possible that the inherent risk will drop to **MEDIUM** at that time, however this may be temporary due to continued waning of vaccine effectiveness, or the emergence of new variants of concern.
- 15.4. A lower level of risk may continue to be achievable using an alternative method, namely using isolation to restrict workers to their home to undertake work. In this way, it would be rare for that person to be infected during the course of their work however this will not be a sustainable method of working in the long-term, and there are a large number of roles across Auckland Council where this is not possible due to the nature of their work. It should also be noted that there are other H&S and business risks associated with long-term or permanent working from home arrangements and these risks should be determined and assessed prior to making any decision relating to allowing this to be permitted.

## Appendix 1: Risk Matrix Settings

Risk Matrix Settings					
	Likelihood	Consequence			
1 Rare	Highly unlikely, but may occur in exceptional circumstances	1 Insignificant	Injury requires first aid treatment or pain and discomfort requiring intervention, e.g. workstation assessment.		
2 Unlikely	Not expected, but some possibility it could occur at some time	2 Minor	Injury or illness requires medical treatment or other registered practitioner.		
3 Possible	Might occur at some time – similar occurrences are known to have happened	3 Moderate	Injury or illness results in time lost from work for one day/shift or more. Notice is issued by regulator or Health and Safety Representative.		
4 Likely	Will probably occur at some time in most circumstances	4 Major	Injury or illness results in 30 days lost time, or a permanent disability. Organisational breaches law resulting in prosecution and penalties.		
5 Almost Certain	Expected to occur in most circumstances	5 Extreme	One or more fatalities. Considerable penalties and prosecutions, multiple lawsuits and prison terms.		

## Appendix 2: Risk Matrix

	Risk Matrix							
	5 Extreme	Medium	High	High	Critical	Critical		
nces	4 Major	Medium	Medium	High	High	Critical		
Consequences	3 Moderate	Low	Medium	Medium	High	High		
Cons	2 Minor	Low	Low	Medium	Medium	Medium		
	1 Insignificant	Low	Low	Low	Medium	Medium		
		1 Rare	2 Unlikely	3 Possible	4 Likely	5 Almost Certain		
	Likelihood							

## Appendix 3: Risk Tolerance table

Risk Tolerance and Actions						
Risk Rating	Risk Tolerance	Approval	Actions/Mitigations	Monitoring Review		
Low	Tolerable risk with current controls measures	Trained staff member	Proceed and monitor if there are no other potential control measures that may be practicable to reduce the risk further. Monitor to ensure the effectiveness taking corrective action where necessary.	Annually or when activity/action changes.		
Medium	Risk can be tolerated in exceptional circumstances	People leader	Review risk assessment and introduce further controls to reduce risk to acceptable level. People leader to sign off. Controls to be actively monitored to ensure effectiveness.	Quarterly or when activity/action changes.		
High	Undesirable risk	Department head	Stop task and reassess activity immediately. Control measures are in place to lower risk to acceptable level. Detailed risk assessment with further controls to be approved by the head of department. Controls to be actively monitored to ensure effectiveness.	Monthly or when activity/action changes.		
Critical	Unacceptable risk	Executive Leadership Team	Stop task and reassess activity immediately. Detailed risk assessment with further controls to be developed. Activity can only resume when <b>approved</b> by ELT under advice from the Corporate Health, Safety and Wellbeing team. Control measures to be actively monitored to ensure effectiveness.	Monthly or when activity/action changes		