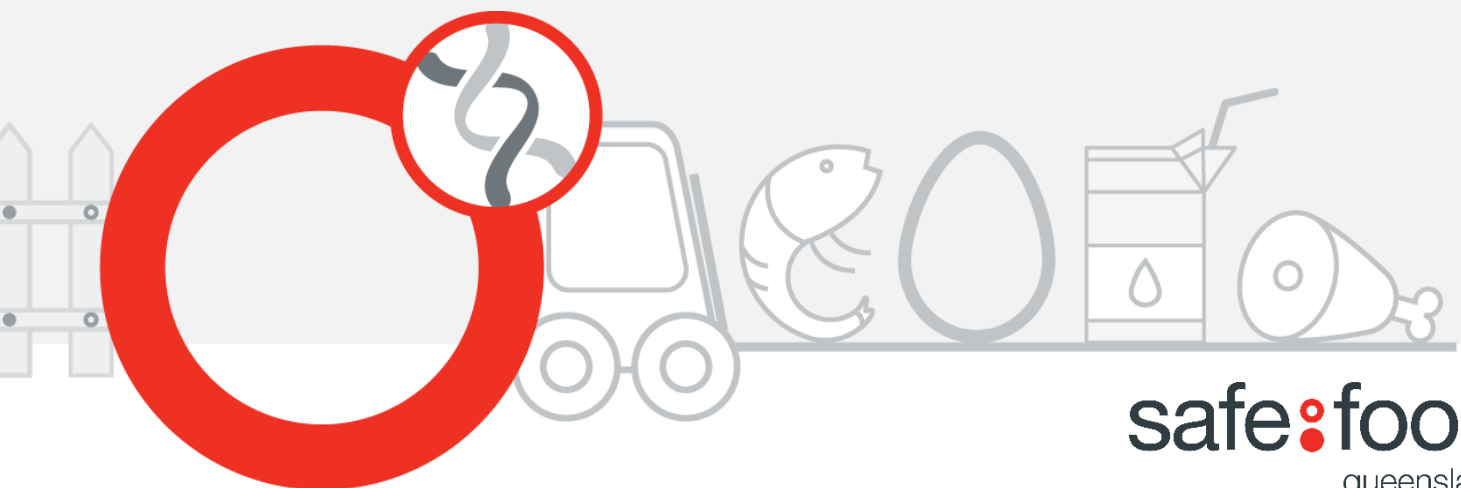


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# Queensland Agriculture Coordination Group – Workplace Health and Safety Working Group

## Guideline for Reducing Workforce Impacts related to COVID-19





## Background

[Coronaviruses](#) are a family of viruses that usually cause respiratory illness. They include viruses that cause the common cold and more serious illnesses such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).

The coronavirus SARS-CoV-2 that causes COVID-19 is at least as contagious as the common cold, however there is little immunity in the community. This, as well as its potential severity means that the pandemic will have a significant impact on a number of businesses. Therefore, it is important to ensure that the best science-based risk mitigation steps are put in place by businesses to limit the likelihood of a staff member with COVID-19 impacting significantly on their operations.

## Introduction

This guideline has been prepared to assist food and fibre production and processing businesses, and the industries in which they operate, to understand the risks of COVID-19 to their workforce, and to describe the measures that can be implemented when any of these risks are realised.

The guideline:

- provides clear definitions of the different categories for workers exposed to COVID-19
- provides guidance on how to estimate the risk from each of those workers
- outlines mitigating actions that can be implemented in the event of a workers being exposed to COVID-19 and the proactive measures that should be taken to protect the workforce and manage the risk into the future and can be used to inform risk assessment decisions.

In many instances, businesses will already be applying good hygienic practises (GHP) workforce management and good manufacturing practises (GMP) to manage other risks. These activities will be beneficial in reducing the impact that a COVID-19 positive worker may have in the workplace.

This guideline should be used in conjunction with the *Checklist for Reducing Workforce Impact from COVID-19*. Due to the rapidly evolving situation regarding the pandemic, this guideline and the checklist will be reviewed on a regular basis.

These measures are intended to be applied in a complimentary manner and not as stand-alone interventions.



## Definitions\*

\*See the contact categories section over page for definitions of “confirmed case”, “close contact” and “casual contact”.

**Enclosed space:** *TBD as per agreed statement when provided.* The use of the term “enclosed space” is widely referenced however in the context of the horticultural and agricultural sectors that term will rarely reflect the working environment.

When considering the application of the term “enclosed space”, consideration needs to be applied to the physical size of the space, the staff density and the control, if any, of air flow and staff movements, in combination with other risk mitigation activities.

As an example, the enclosed space may be 20 m<sup>2</sup>, 200 m<sup>2</sup> or 2000 m<sup>2</sup> and the impact of a confirmed COVID-19 case in each of these examples is different.

In some businesses, the workspace is either open or partially enclosed and where this is the case, the impact of a confirmed COVID-19 case on fellow workers will be reduced although all other available control measures should continue to be applied.

**Quarantine:** Separates and restricts the movement of people who are exposed to a contagious disease to see if they become sick. These people may have been exposed to a disease and do not know it, or they may have the disease but do not show symptoms.<sup>1,2</sup>

**Isolation:** Separates sick people (e.g. confirmed or suspected COVID-19 cases) with a contagious disease from people who are not sick.<sup>2,3</sup>

**Personal Protective Equipment (PPE):** In the context of this guideline, PPE means clothing or equipment designed to limit the spread of infective droplets and exposure of people to those droplets.



## Contact categories

Table 1 below provides the definitions of contact categories and the outcome (i.e. actions) relevant for each category.

**Table 1:** COVID-19 case contact definitions and outcomes

Criteria	Outcome
<p><b>Confirmed case</b> A person who tests positive to a validated test</p>	<p>After seeking medical attention, the person must remain <a href="#">isolated</a> until health authorities inform them it is safe for them to return to their usual activities.</p>
<p><b>Close contact</b> A <a href="#">close contact</a> is defined as someone who:</p> <ul style="list-style-type: none"> <li>• has had more than 15 minutes of face-to-face contact (in any setting) with a person with confirmed COVID-19 (including in the 24 hours before their symptoms appeared)</li> <li>• has shared an enclosed space (e.g. office or sealed room) with a person with confirmed COVID-19 for more than 2 hours (including in the 24 hours before their symptoms appeared).</li> </ul>	<p>Workers who may have been in close contact with a confirmed case of coronavirus, are required to <a href="#">self-quarantine</a> for <a href="#">14 days</a>.</p> <p>Self-quarantine means staying at home, in a <a href="#">hotel room</a> or provided accommodation, and not leaving for the period required to quarantine. Only people who usually live in the household should be in the home. Do not allow visitors into the home.</p>
<p><b>Casual contact</b> A casual contact is someone who has been in the same general area as a person who has tested positive for COVID-19 while infectious. You are a casual contact if:</p> <ul style="list-style-type: none"> <li>• You have had less than 15 minutes face-to-face contact (in any setting) with a confirmed case (including in the 24 hours before their symptoms appeared)</li> <li>• You have shared an enclosed space with a confirmed case for less than 2 hours (including in the 24 hours before their symptoms appeared)</li> </ul>	<p>Casual contacts do not need to be excluded from work while well.</p>



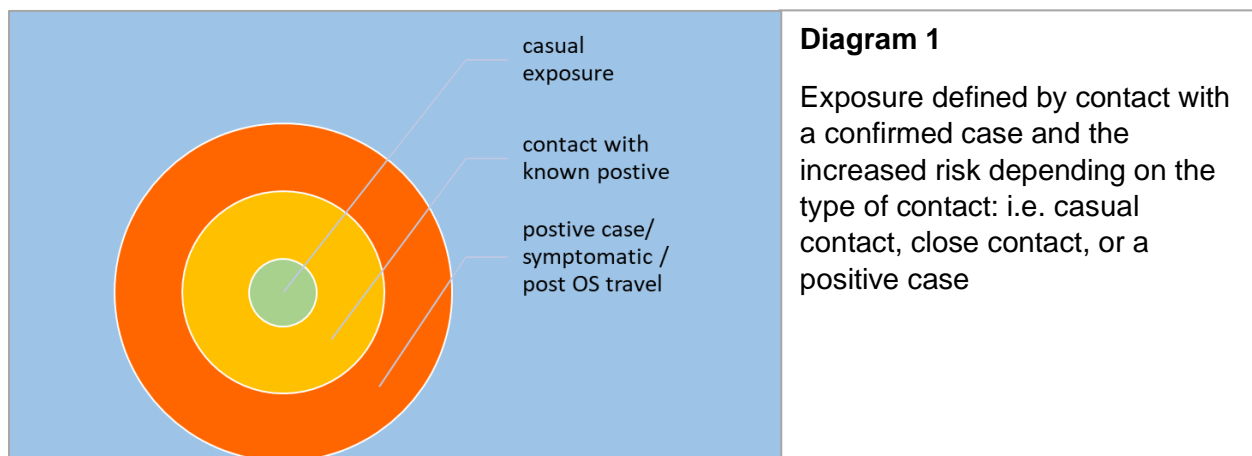
## Transmission and social distancing

COVID-19 is most likely to spread from person-to-person through:

- Close contact with a person while they are infectious. This includes the 24 hours before their symptoms appear. Some individuals who are infectious may not exhibit any symptoms or the symptoms could be very mild.
- Close contact with a person with a confirmed infection by droplets, through normal speaking, coughing or sneezing.
- Touching objects or surfaces (such as door handles or tables) contaminated from droplets from an infected person and then touching your mouth or face.

In the context of this guide the recommendations for [social distancing](#) include:

- 1) Reduce the contact with the community by only leaving your place of residence when necessary. In this context, it means that workers should attend work and comply with all current government regulations and directives regarding other activities that may be non-essential.
- 2) Reduce the size of meetings to meet the current requirements for one person per 4 m<sup>2</sup>. This includes staff meetings, training sessions, lunch breaks, shift cohorts and shift triage.
- 3) Keeping a distance of 1.5 metres between people whenever possible This should be considered in the context of team meetings; workstations; production lines; picking rotations; smoking areas; lunch, break and change rooms.
- 4) Minimising physical contact – no handshakes, or other physical contact except between family members.





## Risk-based decisions

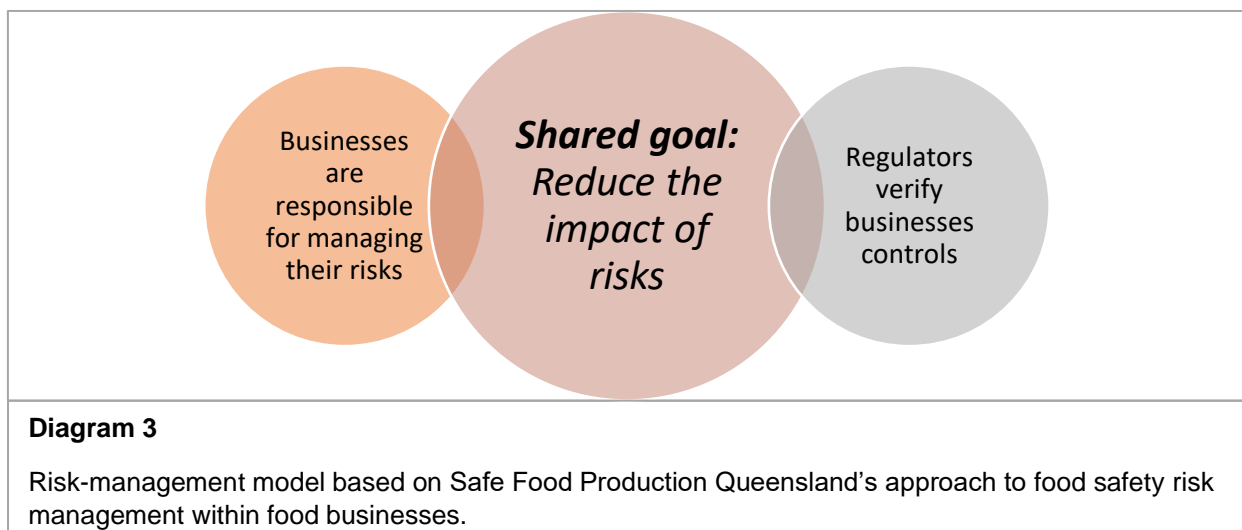
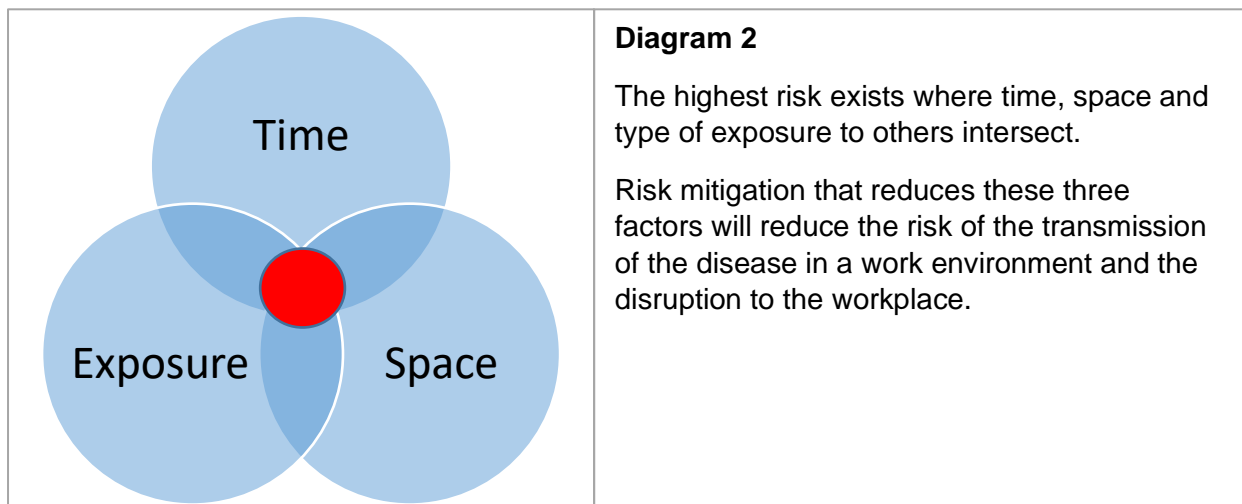
In the absence of clear criteria to inform risk-based decisions regarding work force isolation, the principles currently below to mitigate community risk may be applied.

- 1) Withdrawal of confirmed positive cases from social/ business situations to provide health care and reduce community risk
- 2) Withdrawal of close contact individuals to investigate infection status and reduce risk until infection status is confirmed or isolation period is completed (currently 14 days)
- 3) Monitoring the health of other individuals to reduce risk within the workforce

The impact of these individuals on workforce situations can best be characterised by considering the type of exposure, the time period of the exposure (how long) and how close the workers were when the contact took place.

Individuals can be considered as higher and lower risk and the actions taken will be dictated by the severity of risk. Once the type and duration of contact has been determined, action can be identified and taken.

It is important to note that all food businesses are responsible for managing their risks and working to reduce the impact of those risks. In order to reduce those risks a business will need to address a number of impact mitigation measures which are detailed in the next section.





## Measures to reduce the impact of COVID-19 on your workforce

Many of the measures below should already be implemented by food businesses to control known food-borne and biosecurity risks. Being able to demonstrate how hygienic and social distancing measures are implemented will assist in mitigating the impacts of confirmed COVID-19 cases within the workforce. This may also reduce the number of staff who may need to be removed from the normal workstream. Documentation also provides a body of evidence to inform any discussions with the health department regarding isolation or deployment of individuals within a business's workforce.

### Health & Hygiene

- Strict adherence to good manufacturing and hygienic procedures, with an increased focus on effective cleaning routines, contact surfaces, equipment, tools and facilities.
  - increased surveillance of hygiene effectiveness
  - review to ensure sufficient access to hand washing and hygiene stations
  - cleaning and sanitising of food production environment and equipment, particularly high-contact areas including lunchrooms, smoking areas and bathrooms
- Appropriate use and disposal of personal protective equipment.
- Ensure a “fit for work” policy is in place to prevent site access by staff who may place the business at risk.
- The systems used to facilitate compliance with existing requirements of [Standard 3.2.2](#) of the Food Standards Code should support the above measures.
- Other measures that may be implemented include documented and recorded COVID-19 training, a recorded health check prior to work and the wearing of specifically approved PPE (e.g. change of clothes to coveralls) for site entry.

### Space

- Maximise distance between employees, especially where close contact is not necessary.
  - Where possible maintain social distancing however where distancing is not possible for all employees, identify worker cohorts where close contact will occur and segregate worker cohorts by time or space based on close-contact likelihood. This includes during work activities as well as during meal breaks, smoking breaks, travel, accommodation and work-place socialisation. Maintaining social distancing in the absence of effective hygiene practices may not prevent the spread of this virus, especially in common areas of the workplace such as change rooms, lunchrooms and other amenities. Food facilities must be vigilant in their hygiene practices, including frequent and proper hand-washing and routine cleaning of all surfaces. Workers should adhere to community guidance for [social distancing](#) outside of work to support these measures
- Minimise rotation or movement of staff through different work areas to keep close contacts to a known network including meal and smoke breaks . (this will assist with internal contact tracing).
- Where feasible, splitting teams or units into smaller groups will reduce the number of workers impacted if a case of COVID-19 occurs in a team.
- Stagger or increase time between shifts to minimise unnecessary interactions between workgroups and eliminate bottlenecks (e.g. anterooms or carparks). Gaps between shifts can also provide a window for cleaning between work cohorts.
- Restriction of face-to-face meetings



### Awareness

- Educating staff on the process that will be followed if they need to be excluded from work as result of being identified as a confirmed case or close contact, as well as the process for returning to work. This may include discussion of job security or leave arrangements. The aim is to encourage staff self-reporting of suspected illness.
- Managers to identify workers with symptoms of illness (particularly respiratory) for exclusion from work.
- Distribution of information from authoritative sources to heighten staff awareness of the importance on implementing controls to prevent COVID-19 spread.

The business will also need to consider their action when a staff member or the health department advise that a positive detection has occurred (Table 1).

This, will include, where relevant:

- Transport from the site to appropriate accommodation or health facility.
- Contact tracing of potentially impacted staff. This must be done while maintaining strict confidentiality for all staff impacted.
- Increased hygiene and cleaning of surfaces, equipment and break rooms, toilets and hygiene stations which may have been used or accessed by the staff member while infectious.
- Where accommodation is provided by the business, the review of any other staff that share the accommodation and the potential for quarantining of impacted staff in that accommodation if required.
- Interstate residents who are required to cross the Queensland border for work are to comply with the Queensland Government [restriction exemptions](#).
- Any actions based on Health department advice.

### Workforce recruitment

If you're a producer, COVID-19 may impact your ability to source harvesting and production workers. Many businesses have relied on a regular pattern of seasonal workers and a stable, permanent workforce for many seasons, but there are other ways to recruit:

- Use the Harvest Trail online facility at <https://jobsearch.gov.au/harvest>
- Lodge vacancies directly onto jobsearch.gov.au or register your business on the Jobactive website to post positions for free <https://jobsearch.gov.au/employers/registration?workflowId=490f074b-e958-4cb9-82a0-cd50800bb2c1>
- Contact a licensed Labour Hire service provider <https://www.labourhire.qld.gov.au/>
- If you need additional advice on these services, you can contact your local agriculture workforce officer here <https://bit.ly/2Uk8KEA>





## The importance of hand hygiene and cleaning in preventing transmission of respiratory infections.

A number of studies have demonstrated the importance of hand hygiene and cleaning in preventing transmission of respiratory infections that are transmitted by droplet spread. It is expected that hand hygiene and cleaning will also be effective in reducing the risk of transmission of SARS-CoV-2. For example, a study by White and colleagues<sup>4</sup> found that the promotion of hand hygiene (regular handwashing and the use of hand sanitiser) together with increased cleaning of surfaces, particularly door handles, counters, taps, etc, reduced the risk of respiratory illness by up to 40% among students living in the dormitory. This is a substantial effect and shows how important hand hygiene and cleaning is in preventing spread of respiratory infections.

The World Health Organisation advises that thoroughly cleaning environmental surfaces with water and detergent and applying commonly used disinfectants (such as sodium hypochlorite) are effective and sufficient procedures<sup>5</sup>. Other researchers have shown that similar coronaviruses (MERS-CoV and SARS-CoV) can be efficiently inactivated by surface disinfection procedures with 62-71% ethanol, 0.5% hydrogen peroxide or 0.1% sodium hypochlorite within 1 minute<sup>6</sup>.

Due to the nature of SARS-CoV-2, soap and normal household detergents can be used for cleaning hands and surfaces. It is important to also use mechanical cleaning, rather than just relying on the application of a detergent solution onto the surface. Workers living in dormitories can be rostered on to clean common surfaces at various times in the day/evening to ensure that this is done regularly in a cost-effective manner.

As such, it is appropriate for food businesses to continue to consistently and correctly clean and sanitise food preparation environments (particularly those surfaces that people regularly touch e.g. door-handles) in accordance with their food safety program.



## Advice on the use of face masks in the workplace

Whilst the use of PPE is appropriate in many food businesses for controlling foodborne risks and animal diseases, the Department of Health [does not recommend](#) the use of PPE (face masks) in workplaces in order to prevent the spread of SARS-CoV-2. This is for the following reasons:

1. There is limited evidence that the use of face masks (surgical masks) will reduce the risk of acquiring the infection from others. Their main benefit appears to be that it reduces the likelihood of people touching their faces. However, they need to be changed regularly and people need to be instructed in how to use them to be effective in reducing the risk of infection.
  - There is some evidence that the masks can become contaminated with respiratory viruses and therefore still pose a risk for infection, particularly if they are not changed regularly.
  - Masks accumulate moisture and particles from the air and they become less effective as a result. Hence, they need to be changed regularly.
2. Health care workers are most at risk of acquiring SARS-CoV-2 because they have continued contact people who are potentially infected.
3. Face masks can be uncomfortable to wear, particularly over long periods and constant rearrangement of the masks can reduce their effectiveness and increase the likelihood of wearer's hand becoming contaminated.
4. P2 masks must also be fitted in order to be effective in reducing the risk of respiratory infections. These should be reserved for health care workers treating people with respiratory illnesses during high risk procedures . They need to be replaced regularly in order to remain effective and in addition, are uncomfortable to wear, and if fitted correctly can make it difficult to breathe. There is currently limited supply of these masks .
5. If face masks of either type are to be used, they need to be disposed of hygienically as is the case for other PPE.



## Horticultural environment scenarios

These scenarios are intended to act as an illustration of the processes, implications and consideration of type of exposure, time, space, role or activity in the business and then defines the type of impact and likely actions required.

Farm A produces baby spinach for bagged salad mixes. Farm A also processes and packs this product in a facility on-farm.

### Scenario 1

Bill works on the packing line at Farm A. Yesterday, Bill attended work and spent his day at his workstation which is 1 meter away from two co-workers (Jason and Jill) on the packing line. Max also works in the packing facility on a 6-hour shift with Bill but does not work in close proximity to Bill. He does not have close contact or share lunch with Bill. Bill lives off-site with his family.

- Bill tested positive for COVID-19. He is required to seek medical attention and be excluded from the business until advised by medical professionals.
- Jason and Jill do not have any symptoms of COVID-19 but have been working in proximity (less than 1.5 meters distance) to Bill and are required to self-quarantine.\*
- Whilst Max did not work near Bill, he spent longer than two hours inside an enclosed space\*\* with Bill, therefore he must self-quarantine.\*
- The farm director, Angela, does not work in the packing facility. Angela dropped in for a 20-minute face-to-face discussion with Bill whilst visiting the farm. Angela will also be required to self-quarantine.

### Scenario 2

Henry works at Farm A, harvesting baby spinach from the field. Henry visited the local supermarket to collect his groceries. There were few people present at the time and Henry maintained a 1.5 m distance during his shopping expedition and at the counter. Henry does not know if he crossed paths or was exposed to another shopper and contact tracing indicates that the likelihood is low. Henry should continue to monitor his health but at this there is no need for Henry or any of his immediate co-workers to self-quarantine at this stage.

### Scenario 3

Chelsea also works at Farm A and lives in dormitory on Farm A with some of her colleagues. Chelsea dropped groceries at her elderly mother's house yesterday and spent one hour there. Chelsea since found out that her mother has tested positive for COVID-19. Chelsea must self-quarantine for 14 days from her last contact with her mother. Chelsea must self-quarantine in a room on her own for that period and not share a bathroom, eating utensils or any other equipment with other residents. If this is not possible, she may need to relocate. If she becomes unwell during that period, Chelsea must contact a doctor immediately. The best option for managing risk would be to remove Chelsea or her colleagues from the dormitory for the duration of the self-quarantine. All hygiene practises should be increased during this time, including bathrooms, kitchen and utensils. (Action if Chelsea progresses from a suspect to confirmed case would need to be further evaluated based on Health Dept advice.) Note that her colleagues do not need to isolate if Chelsea stays well.



## Risk descriptions

Case 1 – Bill – high risk, positive case, off site at the time of confirmation,

Case 2 – Henry – low risk, incidental potential exposure

Case 3 – Chelsea – moderate risk

Case 4 – Jason and Jill – moderate risk \*

Case 5 – Max – moderate risk

Case 6 – Angela – low risk

Case 7 – Chelsea’s mother – high risk

Case 8 – Chelsea’s house mates – low risk (this would change if Chelsea showed symptoms or returned a positive test)

\* The risk descriptions above apply where no control mechanisms have been implemented to mitigate the risk . In the absence of any controls , the business will be unlikely to be able to reduce its work force loss where workers are in close contact . Where the afore mentioned controls have been implemented, there is opportunity to reduce impact and work force reduction.

\*\*When considering the application of the term “enclosed space”, consideration needs to be applied to the physical size of the space, the staff density and the control, if any, of air flow and staff movements, in combination with other risk mitigation activities.

As an example, the enclosed space may be 20 m<sup>2</sup> , 200 m<sup>2</sup> or 2000 m<sup>2</sup> and the impact of a confirmed COVID-19 case in each of these examples is will differ .

## Livestock environment scenarios

These scenarios are intended to act as an illustration of the processes , implications and consideration of type of exposure, time, space, role or activity in the business and then defines the type of impact and likely actions required.

Company B is a meat processing facility with an onsite abattoir

### Scenario 4

Xian Zu works as a carcass trimmer and is the shift manager . Yesterday, Xian Zu attended work within a large temperature-controlled processing floor to spend his day at his workstation which is 1 meter away from two co-workers (Juanita and Jethro )) on the line. Mike also works in the facility on a 6-hour shift with Xian Zu and works at a workstation more than 1.5 metre from Xian Zu. He does not have close contact or share lunch with Xian Zu , who lives off-site with his family.

- Xian – Zu tested positive for COVID-19 and is required to follow the directions and advice of Queensland Health medical and public health unit staff. He will be required to be excluded from the business until advised by Queensland Health .
- Jethro and Juanita do not have any symptoms of COVID-19 but have been working in close contact –( face to face contact for more than 15 mins , and less than 1.5 meters distance for more than 2 hrs ) to Xian Zu. Both Jethro and Juanita are required to monitor for symptoms and self-quarantine.\* As Jethro lives with his pregnant wife he is sleeping in the



spare room and maintaining physical separation and diligent personal hygiene so the kitchen and shared areas are not contaminated ( they don't share the remote control, has his own eating utensils and is cleaning these thoroughly with soap and hot water between kitchen

- Whilst Mike did not work near Xian Zu , he spent longer than two hours inside an enclosed space \*\* with Xian Zu, therefore he must self-quarantine.\*
- The local pest control representative ,Andrew needed to speak to Xian Zu as he manages the shift when the treatment was scheduled. Andrew dropped in for a 20-minute face-to-face discussion with Xian Zu in the small meeting room at the site ( 2.5 metre sq. )Andrew will also be required to self-quarantine.

### Scenario 5

Hansie who lives in his own accommodation and who works at the Company B meat works is not employed on the trimming line . He filled up his petrol tank at the local service station . There were few people present at the time and Hansie maintained a 1.5 m distance during his stop at the servo and at the counter. Hansie used hand sanitiser after filling his tank and again before he got into his car . Hansie does not know if he crossed paths or was exposed to another member of the local community, John. John was unaware that he had COVID 19 until he went to the doctor with symptoms . Queensland Health contact tracing indicates that the likelihood of Hansie and John being at the service station at the same time is low . Hansie should continue to monitor his health but at this time there is no need for Hansie or any of his immediate co-workers to self-quarantine at this stage.

### Scenario 6

Por also works at Company B although she works in administration and she lives in dormitory provided by Company B with some of her colleagues. Por had a physio appointment with Suzette at Suzettes clinic .The session lasted for an hour. Por has been notified that she has been in contact with an infected individual ( Suzette has tested positive for COVID-19.) Por must self-quarantine and monitor for symptoms for 14 days after the contact occurred ,Por needs to stay in a room on her own for that period and not share a bathroom, eating utensils or any other equipment with other residents. If this is not possible, she may need to relocate, or her colleagues may need to find other accommodation . If she becomes unwell during that period, Por must contact a doctor immediately. The best option for managing risk would be to set-up work from home arrangements and remove Por or her colleagues from the dormitory for the duration of the self-quarantine period . All hygiene practises should be increased during this time, including bathrooms, kitchen and utensils. (Action if Por progresses from a suspect to confirmed case would need to be further evaluated based on Health Dept advice.) Note that her colleagues do not need to self-quarantine unless Por becomes ill or is tested and returns a positive result .

### Risk descriptions

Case 1 – Xian Zu – high risk, positive case, off site at the time of confirmation,

Case 2 – Hansie – low risk, incidental potential exposure

Case 3 –Por – moderate risk

Case 4 – Jethro and Juanita – moderate risk \*

Case 5 – Mike – moderate risk

Case 6 – Andrew – low risk



Case 7 – Suzette – high risk

Case 8 – Por's s house mates – low risk (this would change if Por showed symptoms or returned a positive test)

\* The risk descriptions above apply where no control mechanisms have been implemented to mitigate the risk . In the absence of any controls , the business will be unlikely to be able to reduce its work force loss where workers are in close contact . Where the afore mentioned controls have been implemented, there is opportunity to reduce impact and work force reduction.

\*\*When considering the application of the term “enclosed space”, consideration needs to be applied to the physical size of the space, the staff density and the control, if any, of air flow and staff movements, in combination with other risk mitigation activities.

As an example, the enclosed space may be 20 m<sup>2</sup> , 200 m<sup>2</sup> or 2000 m<sup>2</sup> and the impact of a confirmed COVID-19 case in each of these examples will differ .



## References

- <sup>1</sup> Queensland Government 2020. “Self-quarantine — coronavirus (COVID-19)” [online]. The State of Queensland. Published 21 March 2020. Accessed 3 April 2020: [www.qld.gov.au/health/conditions/health-alerts/coronavirus-covid-19/take-action/self-quarantine](http://www.qld.gov.au/health/conditions/health-alerts/coronavirus-covid-19/take-action/self-quarantine)
- <sup>2</sup> HHS Headquarters 2020. “What is the difference between isolation and quarantine?” [online]. U.S. Department of Health & Human Services. Published 26 March 2020. Accessed 3 April 2020: [www.hhs.gov/answers/public-health-and-safety/what-is-the-difference-between-isolation-and-quarantine/index.html](http://www.hhs.gov/answers/public-health-and-safety/what-is-the-difference-between-isolation-and-quarantine/index.html)
- <sup>3</sup> Department of Health 2020. “Home isolation guidance when unwell (suspected or confirmed cases)” [online]. Australian Government. Published 6 March 2020. Accessed 3 April 2020: [www.health.gov.au/sites/default/files/documents/2020/03/coronavirus-covid-19-information-about-home-isolation-when-unwell-suspected-or-confirmed-cases\\_0.pdf](http://www.health.gov.au/sites/default/files/documents/2020/03/coronavirus-covid-19-information-about-home-isolation-when-unwell-suspected-or-confirmed-cases_0.pdf)
- <sup>4</sup> White C., Kolble R., Carlson R., Lipson N., Dolan M., Ali Y. and Cline M. 2003. “The effect of hand hygiene on illness rate among students in university residence halls”. American Journal of Infection Control 31:364-370.
- <sup>5</sup> World Health Organisation (WHO). “Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected – Interim guidance” [online]. WHO. Published 25 January 2020c. Accessed 13 March 2020: [who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](http://who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125)
- <sup>6</sup> Kampf G., Todt D., Pfaender S. and Steinmann E. 2020. “Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents”. Journal of Hospital Infection 104: 246-251. doi.org/10.1016/j.jhin.2020.01.022