

Executive Summary

COVID-19 has posed unprecedented challenges to the construction industry around the world. Building is an inherently hands-on activity, which requires people to be on site, working collectively. With some exceptions, construction is generally not considered an essential service, and has therefore been stopped in many locations. In some places, sites are already going back to work; in others, we are poised to restart under difficult and unprecedented conditions. How can we begin to manage construction processes, while keeping people safe and also minimizing lost productivity? This document is our first attempt to answer that question.

As leaders on construction projects, our responsibility is to safeguard the health and wellbeing of those on our sites and those affected by our work. The construction industry can play a major role in the economic recovery. To do so, we must demonstrate that sites can re-open and continue building without jeopardizing worker or community safety.

This document was developed in the context of the Rwandan construction industry. A key characteristic of the industry in Rwanda is a particularly large workforce on job sites due to reliance on manual labor over mechanization. It is important to recognize that there can be a lot of variability in construction sites and project delivery situations, and best practices may need to be adjusted to suit imperfect real world circumstances. These guidelines are a first attempt to understand how best practices may be applied in our particular context. We have developed them for use on our own sites, and will be testing, reviewing, and revising them over the coming weeks and months.

We have addressed key issues related to infection control including: **Physical distancing, personal hygiene, cleaning and disinfection, supervision and enforcement, and community education**. The aim of this document is to explore how these principles may best be applied in practice. As we become more informed by on-the-ground experience in the coming weeks and months, this document will be updated to reflect what we learn.

Introduction

Construction sites operating during the COVID-19 pandemic need to ensure they are protecting their workforce and minimizing the spread of infection as a matter of global public health. These guidelines are intended to serve as recommendations for third party contractors and protocols for construction sites under the supervision of MASS Design Group. All contractors and staff must comply with the latest Government of Rwanda and WHO advice and/or direction on the prevention of spread of coronavirus at all times, which may be updated with more frequency than this document and should be regularly consulted.

If an activity cannot be undertaken safely, whether due to a lack of suitably qualified personnel or supporting resources required to provide a safe system of work, or because of restrictions imposed by infection control requirements, it should not take place.

We have addressed key issues related to infection control including: raising awareness, physical distancing, personal hygiene, cleaning, disinfection, supervision, and enforcement.

Purpose and Use of this Document

This document is intended for use by project leadership, including Site Managers, Health, Safety & Welfare Officers (HSW), and others in a position of leadership or influence on the construction site. Project leadership should use this document as a guide to develop written, project specific plans for operations during this period.

It is expected that project leaders will then train others, including Team Leads, Foremen, and Site Engineers, to conduct the works safely and in a manner consistent with infection control requirements.

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Section Overview

<p>1.0 Raising Awareness</p>	<p>Includes guidance on training, symptomatic person response, and community health. This section should be used by project leadership and HSW officers to develop training materials and other educational sessions for the site workers.</p>
<p>2.0 Site Access</p>	<p>Includes guidance on commuting protocols, site entry and exit sequences, and screening/testing procedures. This section should be used by project leadership and HSW officers to establish protocols for shift start/finish times.</p>
<p>3.0 Physical Distancing</p>	<p>Detailed recommendations around physical (or social) distancing, how to best apply those requirements to task planning and site organization. This section should be used by project leadership and HSW officers to establish protocols for work procedures on site, inform project schedules, and develop training sessions for foreman and site engineers. The content of this section should also be disseminated to the general workers for awareness via toolbox talks, posters or other similar means.</p>
<p>4.0 Personal Hygiene</p>	<p>Includes recommended practices for handwashing, Personal Protective Equipment (PPE), site welfare facilities, and water and food provisions. This section should be used by project leadership and HSW officers to plan for additional required facilities or equipment on site, order and maintain supplies of PPE and other necessary products. The content of this section should also be disseminated to the entire project team for awareness via toolbox talks, posters, or other similar means.</p>
<p>5.0 Cleaning and Disinfection</p>	<p>Includes recommendations and procedures in line with guidance on limiting infection through highly contacted surfaces or objects. This extends from surfaces, to equipment, to construction materials themselves. This section should be used by project leadership and HSW officers to plan for additional required facilities or equipment on site and to develop training sessions for foreman and site engineers. The content of this section should also be disseminated to the entire project team for awareness via toolbox talks, posters, or other similar means.</p>
<p>6.0 Planning and Implementation</p>	<p>Includes recommendations for effective planning and implementation of the guidelines and protocols contained within this document. This includes risk assessment and mitigation as well as task planning and site organization. This section should be used by project leadership and HSW officers to plan how to effectively implement the guidelines and protocols contained within this document.</p>
<p>7.0 Supervision and Enforcement</p>	<p>Includes recommendations to support the effective use of these protocols and how to continuously improve and enforce them. This section should be used by the project leadership (contractors and consultants) and HSW officers to support them in their effort to fairly and unbiasedly enforce these guidelines.</p>
<p>8.0 Additional Resources</p>	<p>Contains additional resources from governmental, public health, and industry specific sources. Organized by source and location, the links can be used to add more detail or context to the information contained herein.</p>
<p>9.0 Roles and Responsibility</p>	<p>Contains a description of each person's role and responsibilities in contributing to the successful implementation of these guidelines as well as a checklist for each role which can be used regularly to ensure that all protocols are being followed.</p>

1.0 Raising Awareness

Best practice in health and safety has long demonstrated that people are more likely to comply with requirements if the reasons behind them are understood. Raising awareness of the risks from COVID-19 and training personnel to take appropriate precautions are vital steps in combating onsite transmission.

This section covers the fundamentals of training, symptomatic person response, and mental health support. In recognition of the potential for infections being passed between the construction site and the surrounding community, guidance is also given on community engagement and keeping the family safe.

1.1 Training

Ensure that anyone entering the site is informed of the general characteristics of COVID-19, focusing on why precautions are needed and why the illness should be considered as a serious threat.

- Symptoms and the conditions that put an individual at higher risk
 - Worldwide status - e.g. number of cases, number of deaths
 - Situation in Rwanda
 - Responsibilities of the individual to their colleagues, family & community
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Provide a series of printed posters throughout the site explaining symptoms and response protocol.

Provide information on precautions that should be taken, including:

- Physical Distancing
 - Personal Hygiene
 - Personal Protective Equipment
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Hold daily briefing sessions to be in small groups of team size - refer to Section 6.4 to provide updates and reminders on health and safety protocol

1.2 What to do if someone has symptoms

Each employee is responsible for self-certifying prior to shift if they:

- Have experienced symptoms within the past 24 hours.
 - Have had "close contact" with an individual diagnosed with COVID-19.
 - Have been asked to self-isolate or quarantine by their doctor or a local public health official.
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If a worker develops a high temperature or a persistent cough while at work, they should:

- Return home immediately.
 - If in Rwanda, self-report via 114 hotline and follow MoH advice.
 - Avoid touching anything.
 - Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow.
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Employees must then follow the guidance on self-isolation and not return to work until their period of self-isolation has been completed.

Provide MoH access to records of teams, crews, and work-zones if requested to facilitate contact tracing if required.

Contractor to carry out risk assessment considering infected cases and risk to overall workforce health with active site.

1.3 What you can do at home

Talk to your family about the risks, see Section 8.0 for guidance/posters.

Practice good personal hygiene, especially hand washing.

Make sure family members are following government guidelines - guma murugo!

1.4 Community Engagement

Communicate to workers about a responsibility for their own health and for the health of their families and communities.

Engage with communities, local partners, and other stakeholders to help prepare and protect individuals, families and the public's health during early response to COVID-19. Communication to workers about COVID-19 updated preventive measures in the community.

Workers should know who they will inform at work if there's a COVID-19 case in the neighbourhood.

1.5 Mental Health

Contractor should consider additional support for mental health and psychological well-being during COVID-19 outbreak.

- Toolbox talk focusing on stress management, depression, and suicide prevention. Resources are available from the [Construction Industry Alliance for Suicide Prevention](#).
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Prevent and address the social stigma surrounding those who have been infected.

Maintain privacy of all workers during screening, testing, reporting, etc.

2.0 Site Access

Access to site must be controlled in order to limit the risk of infection being brought in from outside. Reducing numbers of personnel to only those who are essential for works to continue will also make it easier to maintain physical distancing (Section 3.0) and hygiene protocols (Sections 4.0 and 5.0).

2.1 Travel to Site

Transport to site needs to be in line with the latest government & police guidelines.

Where not prevented by legal restrictions, the following should be considered:

- Wherever possible people should travel to site alone using their own transport.
 - Where personal transport is not possible, avoid public transport/motos and try to taxi or carpool while minimizing the number of people in the car (e.g., one person per row of seats).
 - If hiring a driver, drivers should remain in their vehicles if possible. If leaving the vehicle, the driver must wash or sanitise hands.
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2.2 Reduce Non-Essential Presence

Stop all non-essential visitors and vendors. Issue specific guidance for deliveries:

- Drivers should remain in their vehicles, if the load will allow it. If required to unload goods or materials themselves, they must wash or clean their hands before unloading.
 - Consider developing an electronic signature system with suppliers to reduce physical interaction, for example email or WhatsApp.
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Review method statements and reconsider construction processes with a view to completing works with as few people as possible, resulting in an overall reduction in the number of people on site, refer to.

2.3 Site Entry/Exit

Monitor site access points to enable physical distancing. Site leadership may need to consider changing the number of access points - either increasing to reduce congestion or decreasing to enable monitoring and consider staggering start time to avoid congestion.

Security personnel to have a list of approved visitors. Daily attendance log of all workers and visitors must be kept and retained for at least 4 weeks. The log must include the name, phone number, and home address of all workers and visitors.

Observe all social distancing, hygiene, and sanitation protocols.

It is recommended that construction workers are not allowed to leave the site during working hours and are therefore provided with all essential items e.g. food (Section 4.7).

2.4 Testing and screening at site

Ensure public health information is accessible by workers (e.g. posters in local languages) to inform of systems and expected protocols.

Screening is out of public view to respect privacy and results are kept private.

Anyone who meets one of the following criteria should be turned away from site:

- Has a high temperature or a new persistent cough.
 - Is a vulnerable person (by virtue of their age, underlying health condition, clinical condition, or are pregnant).
 - Is living with someone in self-isolation or a vulnerable person.
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Temperatures shall be checked by infrared thermometer before entering site, The checker must have a mask, eye protection (or full face shield), and gloves.

3.0 Physical Distancing

Global authorities recommend that a minimum of one to two meters distance between individuals be maintained at all times to limit the risk of COVID-19 transmission. This document considers 2m (two meter) minimum to be the appropriate standard. It is recommended that construction sites establish this as a minimum requirement for all work activities, break times, and when travelling to and from site. This section provides practical recommendations for maintaining physical distance on a working construction site.

3.1 Physical Distancing Norms

Keep a 2m distance between individuals at all times. This includes during work activities, commuting to the site, and during breaks.

3.2 Task planning to minimize interaction

Review and revise all Method Statements for work deemed at risk to transmission of disease. Criteria to be considered in Method Statement review:

- Potential Impacts of Physical Distancing Recommendations
 - Tool and equipment communal use transitioning to individual use
 - Need for frequent hygiene and disinfection work stoppages
 - Any alterations to work practices, processes, or tasks organization should be considered in the Hierarchy of Control to best limit potential disease spread:
 1. Elimination (can we completely eliminate the task?)
 2. Substitution (can we substitute the task for something else? E.g. instead of mixing concrete on site, have ready-mix delivered.)
 3. Engineering Controls, refer to Section 6.2
 4. Administrative Controls, refer to Section 6.2
 5. Safe Work Practices
 6. Personal Protective Equipment (PPE)
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Enforce physical distancing through task organization, for example:

- Marking 2m distance physically around key points.
 - Limit interaction between people wherever possible, especially porters, laborers, and cleaning staff.
 - Diagrams around specific tasks (e.g. reinforcement fixing, masonry, concrete pouring). **Refer to Appendix A.**
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3.3 Common areas

Reconfigure designated break areas so that people can sit 2m apart, limit number of people per area according to team or crew size.

Arrange for lunch breaks to be taken in shifts and/or organise enough sheltered areas for appropriate social distancing to be possible.

3.4 Use of tools and equipment

Limit sharing of tools and any multi-user devices (iPads, radios, etc.)

Limit exchange of paper documents on site: all workers that require drawings should be provided with their own drawings. Consider lamination where possible.

Tools

- Small tools: Not shared. Workers will have individual tools and have dedicated areas for storage.
 1. If small tools are stored on site they should be stored in small teams/trades and/or by activity.
 - Large tools: Should be used only in a defined 'path' that is limited to prevent transmission.
 1. For example, wheelbarrow moves between point A and B, but does not enter the zone of either area.
 2. Only utilized by select teams, monitored/recorded daily.
 3. Depending on use and frequency, should be disinfected more frequently.
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Equipment and Plant

- To be operated by the minimum number of workers to safely perform task wherever feasible.
 - Consider dedicating equipment and plant to site zones to prevent further transmission.
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4.0 Personal Hygiene

The World Health Organisation recommends enhanced personal hygiene to prevent transmission of COVID-19. It can be difficult to ensure and enforce such measures on a construction site, owing to the physical nature of the work. It is therefore essential that the Contractor plans the site and the works so that all personnel have access to basic precautions such as handwashing facilities and personal protective equipment. This section also gives guidance on essential welfare provision such as toilets, drinking water and food.

4.1 Provisions Checklist

Before beginning work on site, all necessary PPE and access to disinfectant must be available to everyone on site. Create a checklist to be used daily to ensure these measures are in place.

4.2 Hygiene Protocols

Wash hands frequently with soap and running water. Dry hands with single-use paper towels.

Clean and disinfect chairs, tables, and other communal surfaces.

Do not share tools or accessories (including iPad, laptops, cell phones).

Limit the exchange of paper documents (encourage electronic communication). Laminate where possible to increase longevity and allow for disinfection.

4.3 Personal Protective Equipment (PPE) Requirements

In addition to all reasonable efforts to eliminate risks to the worker, PPE should be employed to further reduce risks.

Eye Protection, gloves, and masks should be worn at all times on construction sites by all parties as a COVID-19 protection measure, not just those who would typically require it for their work tasks.

- The type of glove worn should be appropriate to the task. If gloves are not typically required for the task, then any type of glove is acceptable, including latex, non sterile, or disposable gloves.
- Masks may make it more difficult to work. Safe work times should be determined based on the intensity of the task being performed and the overall health of the worker.
- Eye Protection, gloves, and masks should be disposed of after each use, unless of a reusable type, in which case they should be sanitized daily.
 1. Instruct workers to wash hands after removing gloves.
 2. Proper techniques for putting on and removing masks can be found here.

All workers should receive instruction on how to properly put on and remove PPE and on sanitation of PPE.

To ensure proper sanitization, the contractor should ensure access to adequate PPE.

- Disposable PPE should only be used once. Reusable PPE should be properly sanitized between uses.
 - Sanitization procedures should follow manufacturer recommendations.
 - Hard hats and vests should be sanitized regularly. Manual or machine washing should be used where appropriate.
 - Proper waste receptacles should be available at key locations for disposal of PPE.
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PPE should not be shared between workers unless it has received a proper sanitization.

4.4 Hand Wash Stations

Distributed throughout the site/work area in common areas such that workers can wash hands frequently without significant loss of work time.

- Hand washing stations should have soap and running water.
 - It is important to provide a means of hand drying as germs can be transferred more easily to and from wet hands. Suggest providing single-use paper towels. Avoid shared towels.
 - Equip with a waste receptacle.
 - Handwashing stations should be foot pedal operated.
 - Provide proper handwashing diagram guidelines at each sink.
 - Alternatively, alcohol-based hand sanitizer can be used (ensuring it contains at least 60% alcohol).
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A system for notification of low supplies should be implemented without the need for close human contact.

Optional: Utilize shoe sanitation tubs (non-bleach sanitizer solution) prior to entering/leaving job site, but only if the replenishing of sanitation tubs can be well-managed.

4.5 Toilets

Implement one-in one-out controls.

Ensure hand washing is available at all toilets.

Review number of people per toilet. Depending on site specifics, consider adding additional facilities to limit the number of people using any single location.

4.6 Drinking water

Drinking water shall be provided, as required by law, and in a way that complies with all social distancing, hygiene, and cleaning and disinfection protocols.

- E.g. individual bottles, assigned personal vessels, foot operated dispenser, etc.
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4.7 Food

Eliminate non-essential communal items such as coffee pots.

All food should be served in individual containers prepared and packaged with infectious disease prevention controls in place .

The contractor should provide meals to workers to minimize interaction with outside parties. Consider having food:

- Delivered by a vendor in individual containers.
- Cooked on site and distributed in individual containers.

5.0 Cleaning and disinfection

5.1 General Procedures

The World Health Organization states that touching contaminated surfaces is one of the main transmission routes for COVID-19. Additional cleaning and disinfection of surfaces and shared items such as tools is therefore very important for risk reduction on construction sites. This section provides guidance on cleaning requirements and frequency, as well as recommendations for dealing with shared equipment.

All frequently touched surfaces, or those with potential for exposure should be frequently cleaned.

- Disinfect tables, seating, or any other surfaces (if there are any) after each group leaves area.
- Door knobs and frames, counters or work surfaces, washing stations, water stations, toilet facilities, etc.
- Special attention should be paid to non-porous surfaces, where droplets can remain active for up to 72 hours.
- Suggested frequency of cleaning is at least twice daily or between shifts, or more often where the number of users is high.

Toilets to be cleaned frequently.

- Particular attention paid to soap dispensers, door locks, and flush handles. Cleaning frequency to be discussed, taking into consideration the number of users. Suggestions include hourly or after each shift.

Waste - utilise foot pedal operated waste receptacles. Personnel responsible for removing waste must wear full PPE & use hand washing practices.

Ensure sufficient cleaning staff are available to maintain cleaning frequencies as described.

5.2 Tools and equipment

If tools must be shared, they should be cleaned between each use/user.

- For tools that are not sensitive to water, a bucket of water mixed with bleach (30:1 ratio minimum) can be used to dunk and sanitize the piece. Towels can be available for drying to prevent rust.
- For tools that are sensitive to water (i.e. electric power tools or similar), disinfecting wipes can be used. If not available washable cloth towels soaked in water bleach mixture can be used (Note: these should be treated as single use and thoroughly washed before re-use).
- For larger tools (ladders, wheelbarrows, scaffolding, etc), spraying a water/bleach mixture can also be used to disinfect. The solution must sit undisturbed on the surface for 5 minutes to kill all the germs.

For heavy equipment and fleet vehicles (including Fiori Mixers, Bobcats, HDPE welders, etc) surfaces and high contact areas should also be regularly disinfected at least once per shift or whenever the driver changes.

1. Be sure to include steering wheel, gear shift, instrument panels, etc.
2. Replace cabin air filters if you suspect they have been exposed or compromised by sick employees.
3. Must be fully disinfected before and after any required maintenance.

The contractor should determine the best means of enforcing this (i.e. after each use, before each use, or by a person/party dedicated for sanitization).

5.3 Construction materials

Due to the nature of most construction activities, it may be difficult, impractical, or damaging to disinfect construction materials. The contractor should review the possibility for this as part of each task's Method Statement to determine where disinfecting procedures could be applied.

Spray or wipe materials where possible with disinfecting solution. To limit damage, this should be done first as a test and results observed.

Disinfecting of materials should be considered where multiple handling is required, and can be introduced between natural steps in the process.

6.0 Planning and Implementation

Health and safety on construction sites can be difficult to control. Clear procedures for supervision of the workforce will improve chances of successfully reducing the risks from COVID-19.

This section covers administrative measures such as risk assessments, site zoning, reporting and works scheduling which the Contractor can adopt to improve workforce compliance with the new safety procedures.

6.1 Risk Assessments

Risk assessments are required for all tasks - but especially tasks for which physical distancing requirements would be difficult to meet.

In addition to assessments by task, risk assessment are also to be carried out at project level:

- Identify activities that are essential to continue.
- Identify activities that can be halted/delayed.
- Identify staff that are at greater risk, or staff who have concerns with continuing work.
- Define conditions under which the project will need to stop and potential impacts that may arise from that stoppage.

Review the clear chain of communication within staff (especially HSW). This should include communication with all stakeholders (owner, supervisor, subcontractors, etc).

6.2 Risk Mitigation

Implement engineering controls such as:

- Installation of physical barriers between workers.
- Use of mechanical or plant transportation in lieu of manual methods.
 1. Limit or avoid 2-man lift operations. Use forklifts, telehandlers, or similar equipment where possible.
 2. Consider moving/transporting less material per trip and increasing trip count to allow for a single person to accomplish tasks.

Installation/implementation of ventilation in enclosed or confined areas. This is an effective means of controlling hazardous exposures and could be comprised of any of the following:

1. Ductwork
2. Fans
3. Air Cleaning Device used in conjunction with items A and B
4. Other means of increased airflow and exhaust from the space

Implement administrative controls such as:

- Rescheduling or delaying non-essential tasks/work.
- Limiting workers numbers per shift.
- On larger sites introduce staggered start and finish times to reduce congestion and contact at all times.
- Stagger work areas to increase distance and limit potential for group mixing.

6.3 Zoning the Site

Develop a zoning map for the site and establish groups of workers for each zone.

Each zone should have a defined crew per trade to limit movement across site. Wherever possible, do not 'stack' trades.

Zone-based color cards (e.g. yellow, green, and blue each representing different zones) could be disseminated to every worker to help to control the number of people moving between zones and aid in personnel management on site.

Ensure means of welfare, hand-washing, and disinfection present in each zone.

6.4 Groups

The following hierarchy of group size may be used to plan activities appropriately, depending on the size of the site.

- Individuals
 - Buddies (2-3): May be appropriate group size for vehicular travel.
 - Team (5-10): Appropriate size for toolbox talks, eating in shifts etc.
 - Crew (10-30): Recommended maximum number of people for each HSW representative.
 - Shift (30+): Maximum number of people on site at any given time.
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Assign dedicated HSE Representatives per crew to enforce recommendations and monitor progress. This could be any or all of the following:

1. One HSE rep per zone/crew per activity
 2. One HSE rep per 20 people
 3. Defined exactly in Risk Assessment completed by Contractor
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Any typical meetings (Toolbox Talks, etc) to continue at a team level while maintaining social distancing of 2m or more.

Ensure space for anyone on site to report concerns candidly, and encourage people to speak up. May be face to face communication, or for example a virtual suggestion box through a dedicated SIM to receive SMS, or similar.

Keep daily records of assigned teams, crews, and work zones to facilitate contact tracing if required.

6.5 Schedule of Works

Contractor to provide a clear schedule of works and required inspections. This should be updated on a weekly basis with daily check-ins regarding pending works.

- Site Supervisor or Consultant to agree if the site inspection is required (considering importance of the task, time critical nature, and risks if the works continue without inspection).
 - Contractor will need to be proactive in arranging the required inspections by a supervisor or 3rd party where access to the site may not be as regular.
 - Work happening in each zone (activity and estimated number of workers per activity).
 - Procurement, exemptions or authorizations, workforce limitations, or other gating items that could pose schedule impacts (short term and long term).
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Anticipate resources needed for each day for each zone. Wherever possible, materials (mostly consumable) are to be pre-located in the zone where the activity is scheduled to take place the following day. Materials stored or moved from zone to zone should be disinfected consistent with Section 3.0.

6.6 Additional Reporting by the Contractor

Contractor to send daily email for quick review of the day's activities and progress in accordance with the planned schedule, both to:

- Monitor Health and Safety (H&S) and Quality Assurance/Quality Control (QA/QC.)
 - Report any person with COVID-19 symptoms and any cue that can indicate potential presence of COVID-19 infection or potential spread. Refer to Section 6.0 for more information.
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Contractor to supplement weekly report to include:

- General H&S data (number of workers employed, incidents occurred, general site conditions, key H&S & QA actions taken over the course of the week).
- Update on the COVID-19 measures in place during the week.
- Difficulties that may have been met with regards to infection control (what worked versus what did not) for review and adjustment.
- Key aspects to look out for in the upcoming week.

6.7 Meetings

Do not hold, or participate in site-wide meetings, stand-downs, celebrations, or meals.

Reduce physical meetings, and use video conferencing wherever possible.

Limit meetings to less than 10 people, hold all meetings outside, with attendees all stand 2m apart (draw 2m spaced dots on ground).

6.8 Fire evacuation procedures

Review fire evacuation procedures. Consideration must be given to how quickly the site can be evacuated whilst maintaining social distancing, and how to maintain distance at a muster point.

7.0 Supervision and Enforcement

7.1 Evaluation

Based on risk assessment and risk mitigation (sections 6.1 and 6.2) the activities should be continuously evaluated to determine if the mitigation techniques are working effectively.

Consider:

- Daily reviews with anyone responsible for implementing protocols including construction supervisor.
 - Go / no go decision meetings at key points when staffing numbers are going to be increased or a new activity will be undertaken.
 - See the [COVID site visit decision process](#)
 - Establish process for receiving feedback and adapting protocols based on feedback.
 - Seek input from independent or 3rd parties (supervisor or others).
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7.2 Empowerment

Ensure that the fore(wo)men, site engineers, HSW personnel, supervisors, and leadership are empowered to access adequate resources, and implement necessary changes, without further approval, to enforce the preventative measures in this document.

- No one should be reprimanded or punished for raising concerns about safety.
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7.3 Enforcement

If any person, team, or crew continually disregards the protocols and regulations despite being advised of how to conduct themselves in compliance with them consider taking the following actions:

- Ask the individual or group why they are violating the protocols. If there is a legitimate reason, the protocols or tasks should be adapted to ensure that compliance is reasonably achievable.
 - For individuals, implement a three strikes program - after three strikes the person is suspended from working on site until the risk has subsided.
 - For groups, change the people who are responsible for monitoring and enforcing the protocols.
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7.4 Behaviour of Supervisor

Provisions Checklist

- Utilize a checklist to ensure all necessary equipment and resources are available. See Section 9.0: Roles and Responsibilities.
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Limit time spent on site to essential tasks only by considering what tasks are critical and require physical presence.

Document the behaviour from a safe distance and submit report to contractor's health and safety officer.

Ensure that your involvement does not interfere or inhibit the contractor from implementing protocols.

If there is a perceived risk to personal safety, vacate the site/zone.

8.0 Additional Resources

The situation surrounding COVID-19 is rapidly changing. In light of our own experiences, we have developed the content here, heavily informed by our colleagues across the construction industry and in public health. Linked below are a variety of sources that should be checked regularly as the situation evolves. We have included a broad range of contexts to help contractors, supervisors, architects, and engineers respond to their particular situations and conditions.

8.1 Government of Rwanda

- [Ministry of Health](#): Most up-to-date information on the situation in Rwanda
 - [Rwanda Biomedical Center](#): Specific guidance for infection control in Rwanda
 - [Hospital Contact Information by Geography](#)
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[8.2 World Health Organization](#): Global guidance on infection control. In depth and detailed procedures for disinfection, symptomatic response.

[8.3 Centers for Disease Control \(USA\)](#): American government guidance, includes helpful guidance on PPE and symptomatic response.

- [PPE Guidance](#)
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[8.4 Scottish Government](#): Comprehensive guidelines specific to the construction industry.

[8.5 Workplace Denmark](#): Comprehensive guidelines specific to the construction industry.

[8.6 HSE UK](#): Comprehensive guidelines specific to the construction industry.

[8.7 Association of General Contractors \(ACG\)](#): Varied guidelines focused on the construction industry. Includes general national/statewide guidance and specific contractor COVID-19 response plans.

[8.8 State of Massachusetts \(USA\)](#): General guidelines specific to the construction industry.

[8.9 OSHA](#): Extremely detailed and comprehensive guidance on workplace safety, in general and specific to construction sites.

- [Guidance on Preparing Workplaces for COVID-19](#)
 - [Strategies to Optimize the Supply of PPE and Equipment](#)
 - [Respiratory Protection eTool](#)
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8.10 For examples of posters and graphic guidance to develop for your site or office:

- [Rwanda Biomedical Center](#) (via WHO)
- [Office of the Prime Minister of Rwanda Notice on COVID-19](#) (kinyarwanda version)
- [World Health Organization](#)
- Centers for Disease Control
 - [Stop the Spread of Germs](#)
 - [Symptoms of Coronavirus](#)
 - [Prevent the spread of COVID-19 if you are sick](#)
 - [What You Can do if You are at Higher Risk of Severe Illness from COVID-19](#)
 - [10 things you can do to manage your COVID-19 symptoms at home](#)

9.0 Roles and Responsibilities

Worker

- Skilled or unskilled workers, for example masons, carpenters, electricians, welders, porters, cleaners.
 - May work alone or in small teams.
 - May be employed directly by the main Contractor, or by a sub-contractor.
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Team Leader

- Responsible for a small group of workers, usually performing a defined task or trade. For example, supervising masons working on walling for a single small building or section of a larger building.
 - Typically responsible for up to X workers.
-

Foreman

Responsible for technical supervision of sections of the works. May supervise a defined trade or may be responsible for an area of the site.

Site Engineer

Responsible for technical implementation and potentially management tasks such as scheduling and procurement, for the whole or part of the works.

HSW Officer

Responsible for ensuring the health, safety and welfare of workers and the general public. Works with Site Manager, Foremen, Workers and other key technical staff (for example Site Engineers) to identify risks resulting from the works, and to define and implement measures to eliminate or reduce those risks. Also responsible for monitoring health and safety conditions on site.

Site Manager

- Responsible for the overall management of the site, including resource management, procurement, work scheduling and quality control. Ultimately responsible for all health, safety and welfare issues.
 - May delegate elements of administration (for example writing risk assessments and method statements) but retains ultimate responsibility.
-

Site Supervisor

An external party, typically an Architect or Engineer, responsible for technical oversight of the works. Under Rwandan law, the Site Supervisor holds significant responsibilities for quality control and health and safety during construction.

Team Lead / Foreman / Site Engineer

Name

Week Start Date

You are responsible for the safety and wellbeing of your team and other teams on the site.

Key daily responsibilities

Day	1	2	3	4	5	6	7
Ensure that all workers have PPE as required. (Section 4.3)							
1. All workers require MASK, EYE PROTECTION, and GLOVES.	<input type="checkbox"/>						
2. Ensure that PPE is in good condition.	<input type="checkbox"/>						
3. Ensure that PPE has been cleaned / sanitised if necessary.	<input type="checkbox"/>						
4. Make sure your team knows how to use the PPE safely. Ask for more training if necessary.	<input type="checkbox"/>						
Ensure that hand washing facilities are available. (Section 4.2 & 4.4)							
1. Make sure there is sufficient supply of soap, running water, and single use towels.	<input type="checkbox"/>						
2. Ensure that workers are encouraged to wash their hands regularly, particularly before eating or drinking.	<input type="checkbox"/>						
Ensure that workers maintain 2m distance from each other at all times. (Section 3.0)							
1. Organise the work space so that it is easy to maintain distance. For example defined zones for each worker, or one-way systems for delivery of materials.	<input type="checkbox"/>						
2. Use physical barriers or markers on the ground where possible.	<input type="checkbox"/>						
3. Regularly remind workers the importance of keeping their distance.	<input type="checkbox"/>						
4. If it is not possible for workers to maintain distance because of the way the task is being performed, speak to the Foreman or Site Manager.	<input type="checkbox"/>						
Ensure that the team has enough tools that they don't need to share, or that tools can be sanitised between users. (Section 5.2)							
Continue to monitor team behaviour during welfare breaks.							
1. Ensure 2m distance is maintained.	<input type="checkbox"/>						
2. Ensure drinking vessels, plates and utensils are not shared.	<input type="checkbox"/>						
If an individual repeatedly violates protocol, report the violation to the HSW Officer or Site Manager.							
If you suspect an individual on your team has COVID-19 symptoms, immediately isolate them and inform the HSW Officer or Site Manager.							

Health, Safety & Welfare Officer

Page 1 of 2

Name

Week Start Date

You are responsible for the health, safety, and welfare of everyone on the site as well as the general public who may be impacted by the works.

Key responsibilities before site re-opens

Set up for health checks at the beginning of each day.

1. Screened area to maintain workforce privacy
2. Sufficient infrared thermometers
3. Register / log for record keeping
4. PPE for person(s) doing the checks (mask, eye protection, disposable gloves)
5. Area for queuing marked out with 2m spacing

Ensure sufficient PPE is available for all workers in addition to that usually required by the task: mask, eye protection, gloves

Develop protocols for storing and cleaning PPE to minimise cross-contamination.

Set up sufficient hand washing stations at convenient locations around the site. Make sure a regular supply of running water, soap and single use towels is available.

Ensure sufficient cleaning materials and disinfectants are available.

Risk assessments

1. Work with Site Manager / Site Engineers / Foremen to risk assess each task, thinking specifically about infection control requirements.
2. Ensure that other typical construction risks are not increased as a result of changed working methods or reduced workforce numbers.
3. Ensure that risk assessments and any changes to working methods are documented and shared with the relevant teams.

Site organisation

1. Work with Site Manager / Site Engineers / Foremen to set up walking routes and workflows to minimise close contact between personnel: physical barriers, markings on the ground, one way systems, designated areas for outdoor meetings

Welfare

1. Ensure that communal areas (canteens, rest areas etc) are set up such that people can maintain 2m distance.
2. Provide 2m markers for areas where people may queue (e.g. to get food).
3. Ensure handwashing is available at all communal areas.
4. Ensure that sufficient toilets are available for the workforce.
5. Ensure that cleaning staff are available to clean all communal and welfare areas regularly (at least once per shift, preferably more often).

Prepare for training sessions

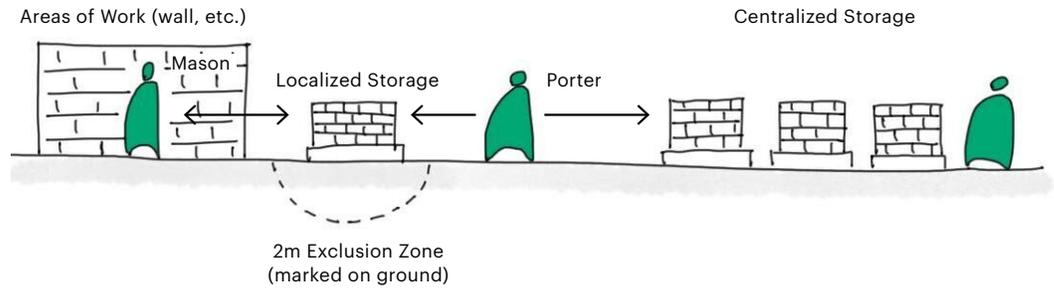
1. Site induction for all personnel, focussing on the risks from COVID-19 and the necessary changes to working practices
2. Task-specific briefings
3. Training on how to keep family and community safe
4. All training sessions to be held in the open air in groups of no more than 10 people

Prepare site signage / posters

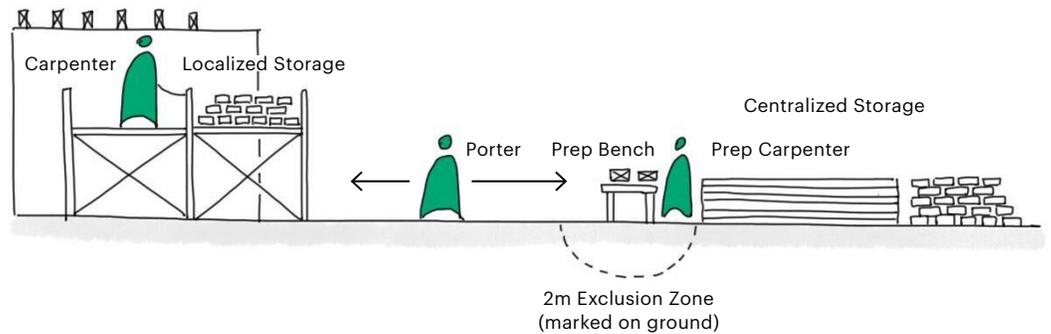
Appendix A

Task Specific Social Distancing Diagrams

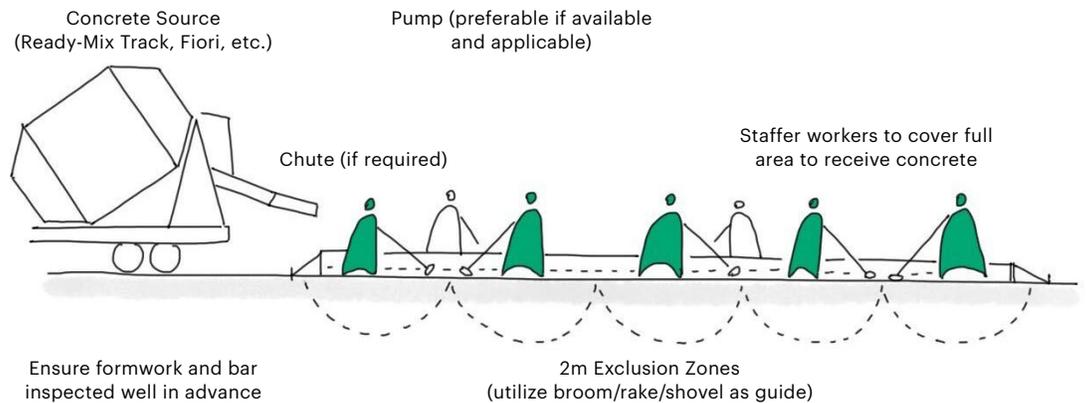
A.1 Masonry



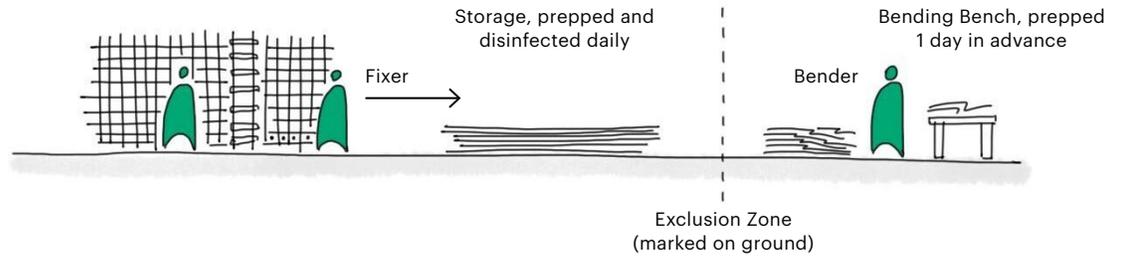
A.2 Carpentry



A.3 Concrete Placements



A.4 Reinforcing Fixing Works



A.5 Formwork and Scaffolding Construction

Pending, See A.2 Carpentry Works for similar workflows

A.6 Finishing Works (e.g. Plastering, Tile, etc.)

