**WELL Health Safety Rating**

**Promote Health and Wellness**



|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Value/description** | **Unit** | **Comments** |
| Building name | Campus 6.3 |   |   |
| Adrress | Bucharest, 6P, Bd. Iuliu Maniu  |   |   |
| Occupancy permit year | 2020 | 2020 |   |
| LEED certification version | v. 3.0 |   |  |
| LEED certification level | Platinum |   | To be obtained in 2021 |
| WELL certification version | v.1.0 |  |  |
| WELL certification level | Gold |   | To be obtained in 2021 |
| No of above ground floors | 11 | - |   |
| No of underground floors | 2 | - |   |
| Gross Area | 19955.58 | m2 |   |
| GBA | 214800.19 | ft |   |

**Material Scope**

The present material is provided to allow occupants to familiarize themselves with and benefit from WELL Health Safety Rating features that are achieved/implemented by the project:

* Support Handwashing
* Reduce Surface Contact
* Cleaning plan
* Emergency Preparedness Plan
* Business Continuity Plan
* Plan for Health and Safety Re-Entry
* Emergency resources
* Assess Ventilation
* Assess and Maintain Air Treatment Systems
* Develop Legionella Management Plan
* Monitor Air and Water Quality
* Manage Mold and Moisture

**Support Handwashing Feature**

The project provides, at minimum, the following in all sinks where handwashing is expected (e.g., bathrooms, break rooms, food prep and wellness rooms):

* Fragrance-free liquid hand soap dispensed through Dispensers with detachable and closed containers for soap refill. Soap containers must be washed and disinfected when emptied, before refilling.
* For hand drying Paper towels are provided
* Signage displaying steps for proper hand washing.

**Reduce Surface Contact Feature**

High-touch surfaces are the frequently touched surfaces that they belong to among others. These surfaces require more frequent and thorough sanitization. The building’s cleaning protocols lists these surfaces within the project and incorporate the correct cleaning instructions accordingly.

List of high-touch surfaces:

* Non-porous: Tabletops, Doorknobs, Elevator buttons, Telephones, Public digital devices and, keyboards, Light switches, Chairs, Bathroom handles and fixtures, Countertops in bathrooms, Toilet handles and lids, Bathtubs and shower walls and floor, Interior shower and bath surfaces, Kitchen handles and fixtures, Countertops in kitchens,
* Non-disposable medical devices, Bed railing, Serving trays and bed tables
* Porous: Rugs, Upholstered furniture covers, Fabric curtains, Towels, Bedding: linens, pillow cases and comforter

Solutions that are implemented:

|  |  |  |
| --- | --- | --- |
|  | ROLES |  |
| Regular user (Tenant, Property Manager) | Visitor | Hardware in the building |
| Touch point: |  |  |
| Parking |  |  |
| Entrance | 1. Entrance via license plate recognition2. Entrance via Virtual Card | 1. Entrance via license plate recognition | 1. Plate recognition camera2. QR access point reader |
| Common spaces |  |  |
| Lobby | 1. Passing speed gates with virtual card2. WIFI with building's practicalities3. Contactless hand sanitization4. Temperature detection5. Secure social distancing through reception panels | 1. Passing speed gates with QR Code2. Contactless hand sanitization3. Temperature detection4. Contactless registration for visitors at reception5. Secure social distancing through reception panels | 1. QR access point reader2. Thermal scanning tablet3. Masc detection tablet4. Digital scanning temperature device5. Contactless hand sanitizer dispenser6. Virtual reception7. Plexiglass panel at the reception |
| Lift panels | 1. Self-disinfecting foil at elevators | 1. Self-disinfecting foil at elevators | 1. Self-disinfecting foil at elevators |
| Exit from the office | 1. Exit Button usage | 1. Exit Button usage |  |
|  |  |  |  |
| Office |  |  |
| WIFI | 1. Free wi-fi | 1. Connection details given in invitation |  |
| Services/ Amenities |  |  |
| Public Building WIFI | 1. Free WIFI + building practicalities | 1. Free WIFI + building practicalities |  |
| Courier | 1. Reception packages from couriers near the building2. Having “contact” with couriers near the building | 1. Reception packages from couriers near the building2. Having “contact” with couriers near the building | 1. Easybox lockers for couriers2. Outside dedicated area for couriers |

Inventory for the building consists in:

* Common areas:
	+ lobbies and reception;
	+ toilets - 36
* High touch surfaces:
	+ door handles
	+ elevator buttons
	+ faucets
	+ soap dispensers
	+ flushing buttons
	+ check-in tablet at reception

All surfaces that are highly used/touched by building users (doors, elevator panels) are protected with self-disinfecting covers. The turnstiles (speed gates) are being controlled by body scan temperature cameras that detect the mask wearing and body temperature - one can access the speed gates without touching the equipment (includes short range card readers). Receptionist remotely opens gates for visitors

**Cleaning Plan Feature (Cleaning and Sanitization Procedures)**

**Scope**

This Cleaning Plan: Cleaning and Sanitization Procedures addresses environmental best practices for cleaning the interior of the Campus 6.3 project. Specifically, it addresses topics like: handwashing support, surface contact reduction, cleaning practices improvement and preferred cleaning products selection.

**Goals**

The goal of this Cleaning Plan: Cleaning and Sanitization Procedures is to ensure support of hygienic hand washing practices for all individuals, reduce the amount of hand contact on high-touch surfaces, provide effective cleaning by establishing adequate cleaning protocols and practices, minimize potential health effects to occupants by selecting less hazardous products.

**Overview**

COVID-19 and many other infectious diseases are spread primarily through close contact with an infected person via respiratory droplets. However, it is known that coronaviruses and noroviruses, among other pathogens, can survive on surfaces infected by droplets. For instance, research suggests that the SARS-CoV-2 virus can remain airborne for up to three hours and on some surfaces for up to 72 hours. Several outbreak investigations have supported the potential of fomites (i.e., infected surfaces) to cause viral diseases. Similarly, pathogenic bacteria such as Salmonella can be transmitted through contaminated surfaces and hands, which may particularly trigger disease in children, as they are more likely to touch surfaces such as toilets. Maintaining good cleaning protocols can support organizational resilience by helping reduce the risk of infection. Similarly, hand washing promotion is an effective way to reduce the spread of infectious diseases and to confer individual resilience. Soap has been found to be more effective than hand sanitizer in community settings.

While sanitization is critical, especially during an infectious disease crisis, commercial cleaning products may contain ingredients suspected to be hazardous to human health and the environment. Cleaning product ingredients may contain vapours or gasses that irritate the nose, eyes, throat and lungs and can cause or trigger asthma attacks. As a result, frequent use of household cleaning sprays is suspected to be a risk factor for adult asthma. Low-hazard cleaning products and cleaning practices reduce impacts in indoor air quality and in the health of those performing these duties, while protecting occupants, as well.

The plan has multiple sections that covers topics such as:

* Responsible parties and frequency of cleaning
* High-touch surfaces
* Record keeping and occupant feedback
* Personal protection equipment (PPE)
* Handling and storage of cleaning chemicals
* Support handwashing
* Cleaning products
* Cleaning equipment
* Hard-floor and carpet maintenance
* Entryway systems
* Use of chemical concentrates and dilution systems
* Staffing and training

**Emergency Preparedness Plan Feature**

**Overview**

Emergency preparedness and resilience plans are critical to ensuring that organizations are equipped to immediately confront a crisis, as well as to recover successfully from it. Can help organizations be better prepared to handle unforeseen events, minimize occupant confusion and improve coordination and safety during emergency situations.

Robust emergency preparedness and response measures can also slow the spread of infectious disease and minimize secondary mortality. Additionally, creating plans to support business continuity, remote work readiness and project re-entry after extended remote periods helps maintain business resilience and individual well-being during and after longer-lasting emergencies

An annual inventory and maintenance of building emergency response resources and operations capabilities is in place.

A list of specialized personnel and the emergency management plan is reviewed and updated (as needed) on an annual basis and is easily accessible to all regular building occupants through Property Management representative.

Communications about the emergency management plan and related resources, including guidance by General Inspectorate for Emergency Situations and/or Directorate of Public Health, are provided annually (at minimum), to employees during new employee onboarding and during an emergency event.

The plan has multiple sections that covers topics such as:

* Types of emergencies
* Evacuation plan
* Coordinator role
* Risk assessment
* Procedures (overview, procedure and tools):
	+ Flood
	+ Wildfire
	+ Earthquake
	+ Heatwave
	+ Acute medical case
	+ Infectious disease
	+ Civil unrest
	+ Active shooter/terrorism
* Drill
* Emergency communication
* Responsible matrix/communication flow
* Emergency equipment
* Typical floorplan with marked evacuation routes

**Business Continuity Plan Feature**

A Business Continuity Plan is required to ensure that essential functions of the building and organization are able to continue their function without critical financial loss.

Disaster, pandemic and other business interruption can cause financial consequences and the relevant staff of the building shall prepare a plan in order to keep the condition safe and secure.

**Overview**

Effect of COVID-19 has presented an unforeseen challenge to all owners, property managers, facility managers, investors and other stakeholders who want to manage the buildings safely and securely during this crisis. Business continuity planning is critical to help manage business disruption, restore business operations, minimize risk to employees and mitigate financial loss when emergencies occur. Establishing organizational remote work readiness can help operations run smoothly and support employee well-being and productivity when an emergency makes remote work imperative. Business Continuity Plan is a tool for the Property and Facility management company to prepare own company to provide continuous operation of the building and help for the building users to preserve their business continuity. Business Continuity Plan consist of two big part as the “Building and Infrastructure” and requirements of the Property, Facility, Cleaning and Security staff on site.

**Building and Infrastructure**

Property and Facility management shall prepare the building as resilient as possible. PM and FM shall support the tenant’s business and provide work environment where the valid Risk assessment arranges the necessary measurement in case of any disaster.

The Plan for Re-Entry is the key document to prepare the building safe condition in case of pandemic. However PM, FM, Cleaning and Security shall provide Risk Assessment for other category related to business interruption.

**Building related Risk Assessment**

Risk assessment shall be updated by all building staff in every quarter, based on the present company and list of members.

**Business Impact Analysis**

The management of the building staff has to create a “Business Continuity Team” which shall create a Business Impact Analysis, where have to be considered about the timing of the business disruption, operational impact and their financial quantitative consequences. Business Impact Analysis shall be upgrade quarterly by representatives of different staff.

The following business disruption have to be evaluated:

* Physical damage to a building buildings
* Damage to or breakdown of mechanical and electrical equipment
* Restricted access to a site or building
* Interruption of the supply chain including failure of a supplier or disruption of transportation of goods from the supplier.
* Utility outage (e.g., electrical power outage)
* Damage to, loss or corruption of information technology including servers, computers, operating systems
* Absenteeism of essential employees-pandemic

**Recover Strategy**

According to the Risk Analysis and Business Impact Analysis recover strategy shall be implement recover strategy in order of importance and high operational impact.

BCT team shall prepare recover strategy considering among others the following:

* Working in shift or deputyship
* Upgrade the Business Interruption Insurance
* Upgrade Terrorism Insurance
* Upgrade Property Insurance
* Continuous training for the staff
* Upgrade the 3rd party preventive maintenance contracts
* Upgrade the Utility Contracts
* Purchase spare parts for the life safety systems
* Purchase hygienic materials for at least one month ahead
* Prepare the building for pandemic
* Secure the public utilities
* Operate the building according to the occupancy
* Prepare contract for 3rd party as a backup solution

**Testing and Exercise**

Tests should be conducted to validate that business continuity recovery strategies will work. Tests should also be conducted to verify that systems and equipment perform as designed. Tests can take several forms, including the following:

* Life safety systems
* Fire safety systems
* Emergency lighting test
* Control of energy consumption
* Monitor based commissioning of the building according to the measured value
* Component control
* Health and safety test for the employees focused on the special conditions like pandemic
* Evacuation test
* Lesson learnt workshop
* identify resource requirements, capability gaps, strengths, areas for improvement, and potential best practices

**Remote work readiness assessment**

Remote work readiness can be defined as the level of preparedness of an organization and its employees to go remote. It considers the resources and skills required by employees to perform at optimal levels while working remotely.

Transitioning to a remote work setting has presented a few challenges for employees across all levels, like:

* Support & Supervision
* Communication & Collaboration
* Social Isolation
* Access to Technology

Remote work readiness assessment can be found as Appendix, to the Plan.

**Plan for Health and Safety Re-Entry Feature**

The plan has multiple sections that covers topics such as:

* Consultancy with the building occupants
* Information Part of Re-Entry document
* Risk assessment and evaluation of the present situation
* Table of the Risk assessment
* Responsibility
* Building preparation-HVAC
* Building preparation-week current systems
* Building preparation- other systems
* Work force engagement-PM-FM staff
* Social distances and hygienic -good practices
* Cleaning procedure for common areas
* Summary

**Consultancy with the building occupants**

Due to the situation of the COVID 19 the owner/ property manager are consulting with the tenants before and in the re-entry to convince all measuring documents are aware by them and they needs are accepted in the new version of The House Rules.

There are discussion about the Re-Entry plan, detailed discussion about the security, cleaning/disinfection of the building issue in case of some people infected by COVID 19, number of employee of the tenants, special need by the tenants, post-delivery using of the elevators, keeping the social distance.

Representatives of the tenants shall be confirmed by the information via mail.

As a supporting phase of re-entry based on the Business Continuity Plan the PM has to create remote work readiness assessment in order to provide flexible schedule for all direct staff.

**Information Part of Re-Entry document**

Owner/Property manager is responsible to follow the local government regulations about the COVID 19 or other pandemic situation. In case of necessary the local authority will be informed about based on their needs.

Risk assessment and evaluation of the present situation

To assess and evaluate any sources of information especially the local legislation in case of emergency situation like pandemic considering GDPR as well

Creating plan for the disinfection of the buildings and equipment, update the present cleaning plan, upgrade the security requirement together with the safe access to the building, provide certified PPE-s at the reception desk in case of someone has not and place disinfectants at the main entrance

Communicate to relevant stakeholders about the current situation and action above and provide solution for their premises

Implement plans to reach the overall objectives and update them

**Table of the Risk assessment**

Risk assessment is very project related and all projects have to update based on the local legislation, regulation and the building quality and characteristic

**Responsibility**

Responsibility matrix is designed.

**Building preparation-HVAC**

The extent of preparations needed might differ depending on how long a building has been fully or partially closed, and the level of maintenance carried out while the building was out of operation. Local authorities’ guidelines and insurance companies’ advice should be followed before reopening a building.

* Heating System
	+ Changing/cleaning all filters in fan-coils or cleaning the radiators
	+ Check the pressure in the systems
	+ Check the district heating central/Cleaning the condenser at the heat pumps
	+ Approved function test based on the commissioning report
* Cooling systems
	+ Changing/cleaning all filters in fan-coils or cleaning the chilled beam
	+ Check the pressure in the systems
	+ Check the chillers/refrigerant/heat pumps
	+ Approved function test based on the commissioning report
* Air handling units
	+ Legionella test
	+ Cleaning of the cooling and heating coils and the heat exchangers
	+ Check the belt of the heat exchanger
	+ Check all BMS related equipment
	+ Approved function test based on the commissioning report
* Water and Sewage system
	+ Water test
	+ Cleaning of the sewage system
	+ Legionella test of the water system
	+ Disinfection of all flow, flush fixtures and dispensers
	+ Special cleaning of the water blocks

**Building preparation-week current systems**

* Card Access control system/CbS
	+ Update all permits and prepare for back log for the future
	+ Upgrade the tenants list, based on the tenant’s documentation
	+ Prepare for the visitor card like card vending machine
	+ Approved function test based on the commissioning report
* Fire safety system
	+ Preventive maintenance before re-entry
	+ Check ﬁre fighting system/central
	+ Check ﬁre alarm systems, monitors
	+ Checking emergency exits and escape routes
	+ function test for fire doors
* CCTV system
	+ Preventive maintenance before re-entry
	+ Check the monitors, cameras and all equipment

**Building preparation- other systems**

Check list:

* Check the elevators function and stickers
* Cleaning of the elevators focusing of the high touch surfaces
* Check revolving door, entrance doors
* Check all of the access to the tenants area
* Check garage entrance door

Work force engagement-PM-FM staff

* Working with shift
	+ As far as possible shift patters has to be introduced between property manager, facility manager and technicians
	+ Area of the building dependent shift has to be introduced minimum one technician and PM or FM may work together keeping the social distance from each other.
	+ Wearing of PPE is obligatory as face mask the minimum requirement
* Outbreak of COVID-19
	+ COVID-19 outbreak plan shall be prepare: emergency replacement of PM,FM and technicians
	+ Tenants shall report the infection to the PM and PM shall disinfect the area where the infected tenant were present.
	+ Tenants shall close co-operation to the Property Management/Owner in case of someone was abroad in the last 14 days, there was direct contact to person who was abroad in the last 14 days or there are some cases in their employees have COVID-19 visible symptoms.
* Communication
	+ Conduct demonstrations and training to introduce new skills to staff
	+ Consider using a wide range of communication channels: Teams, Skype, Email portals, text messages, video, virtual live events, posters/digital displays
	+ Training and communication focus:
		- How the organization and/or the building owner is following government guidelines and reiterate those guidelines for reopening workspaces
		- Suggestions for commute alternatives
		- Overview of what to expect when returning employees arrive
		- New entrance protocols for employees and visitors
		- Sanitization requirements
		- Changes to the work environment including shifts work
		- Modifications to internal and external meeting protocols,
		- Access to the visitors

**Social distances and hygienic - good practices**

Facility management company prepared social distance stickers by 1,5 m distance for all area which are using the tenants, visitors, PM and FM staff, subcontractors at the common area, or non-leased spaces like elevators, garage, mechanical plants.

Examples for good practices implemented:

* Social distance stickers
* Thermal scanning tablets
* Protection mask detection tablets
* Masks and gloves designated bins
* Elevators self-disinfecting foil
* Reception plexiglass panel for social distance
* Contactless registration for visitors
* Digital thermometer
* Contactless sanitizer
* Dedicated area for couriers

**Cleaning procedure for common areas**

PM company has to approve the cleaning protocols mady by the cleaning company based on the local legislation and international cleaning protocol about the COVID-19 situation

* Cleaning company has to identify and consider hands-free alternatives to high-touch surfaces like:
	+ Lift buttons, control panel,
	+ Handles
	+ Phones,
	+ Digital devices and keyboards,
	+ Light switches,
	+ Chairs,
	+ Handrails in the washbasin, fixed fittings,
	+ Washbasin counter,
	+ Toilet boards and handrails,
	+ Shower walls and floor,
	+ Shower interior,
	+ Kitchen handles and fittings,
* Cleaning company shall update the, cleaning schedule for high touch surfaces area
* Based on the final risk assessment FM company has to manage disinfection at all necessary area
* Conduct maintenance and updates to HVAC and building facilities by, for example, increasing ventilation and installing high-efficiency air filters.
* The project provides, at minimum, the following in all sinks where handwashing is expected (e.g., bathrooms, break rooms, food prep and wellness rooms)
* Dispensers with detachable and closed containers for soap refill. Soap containers must be washed and disinfected when emptied, before refilling.
* Using paper towels or hand drier with HEPA filters
* Using proper signage displaying steps for proper hand washing minimum 30 second
* Increase cleaning practices:
	+ Extend frequencies of the cleaning
	+ Record keeping practices for cleaning and disinfection activities.
	+ PPE requirements for general cleaning and specialized tasks
	+ Color-coding for reusable and disposable cleaning cloths.
	+ On-site availability of current Safety Data Sheets (SDS) of cleaning and disinfection products,
	+ Training is delivered to all relevant personnel including building management, building operators and contracted cleaning staff, on an annual basis.

**Summary**

Before reopening any physical workplaces for employees, workplace’s and building risks shall be reduced in order the feel safe and secure in the building.

Initial actions shall be introduce which are connected to the physical part like the building and social part like the communication to the workforces to eliminate the anxiety of the employees and creating risk free environment.

The building’s stakeholders, especially the property and facility manager led by the owner shall responsible for the RE-ENTRY Plan.

All measurement above shall kept and updated according to the building characteristic and special requirements preserve the business continuity and provide safe building for the tenants and direct staff.

**Emergency Resources Feature**

**Overview**

Provide resources, personnel and training to help organizations, families and individuals respond to diverse emergency situations.

**Scope**

Valid for all spaces.

**Building statement about promoting of emergency resources**

Posters

All relevant information of emergency procedures including containment and response strategies are published and available for all tenants on strategic places of the building such as:

* Lobby, floors, elevators, application

These procedures are defined for:

* infectious disease outbreaks,
* Evacuation during fire or earthquake or any other natural disaster,
* Personal threat.

Emergency system

Building has emergency notification system with auditory and visual indicators of emergency

(e.g., public address systems, flashing lights).

AED and first aid kit

At least one first aid kit is located per floor. AEDs is accessible to any occupant within 3-4 minutes and adoption of routine maintenance and testing schedule. The locations of building AEDs are identified through posters, signs or other forms of communication other than on the AED itself.

Allergy first aid

Undesignated epinephrine auto-injectors for food allergy emergencies are available. Rides subsidized by at least 50% to destination of need for emergency situations (e.g., urgent medical needs, personal or family emergency), including from home to work as needed (e.g., during public transit shutdown).

Subsidized rides

Rides subsidized by at least 50% to destination of need for emergency situations (e.g., urgent medical needs, personal or family emergency), including from home to work as needed (e.g., during public transit shutdown).

Other emergency sources

Recommended emergency supplies include: water, food, both a battery-powered radio and a NOAA weather radio with an alert function, extra batteries, a flashlight, first aid kit, whistle, wrench or pliers to turn off utilities, filter mask, plastic sheeting and duct tape in the event of airborne chemical hazards and moist towelettes, garbage bags and plastic ties for personal sanitation.

**Building statement about providing of emergency training and personnel**

Appropriate emergency training and personnel is provided by:

* Emergency response from the security company and firefighters for medical emergencies, including at least one certified medical professional with a first aid certificate per shift (e.g., Emergency Medical Technician, paramedic) present within the building during regular business hours.
* Biannual availability to regular building occupants of a certified training course evacuation exercises (except during the pandemic period, when crowds are not allowed).

**Assess Ventilation Feature**

Building has been designed to ensure high quality indoor environment. Buildings ventilation system is designed without recirculation. Air supplied to premises is 100% fresh outdoor air. Amount of fresh air supplied per person is ca. 49m3/h to ensure CO2 removal and limitation of potential cross infection (it equals to almost double local legal requirement).

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter/issue | Value/description | Units | Comments |
| Designed = operational outdoor air rate - Building | 121875 | m3/h |  |
| Maximum outdoor air rate - Building | 135125 | m3/h | often 90-95% used |
| Current airflow per person | 49.32 | (m3/h)/pers |  |
| Legal requirement - airflow of fresh air per person | 25 | (m3/h)/pers |  |
| Recirculation in ventilation system | 0 | % |  |
| Extent to which current system can oeprate without recirculating air | 100 | % |  |

Building is equipped with BMS system that is capable of adjusting amount of air supplied based on settings and schedules. Setting is assumed to provide 49m3/h per person that reflects building ventilation capacity. Building is not yet inhabited. Schedule will be set to ensure 100% before working hours start and operate until after working hours, depending on tenants requirements (anticipated 6am-8pm). It ensures limitation of cross infection, reasonable energy consumption and good thermal comfort in the same time. There is no need identified to increase ventilation rates. System will be operated to ensure continuous ventilation of occupied spaces. No additional adjustments are planned. Maintenance will be conducted in line with producers and design requirements

**Assess and Maintain Air Treatment Systems Feature**

List of Air Handling Units

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Name | Area it serves | Recirculation | Nominal airflow | Preliminary filter | Fine filter | UV type (if used) |
| 1 | AHU 2.1 | 1st-10th floor office | 0% | 49500 m³/h | M6 | F8 | N/A |
| 2 | AHU 2.2 | 1st-10th floor office | 0% | 75075 m³/h | M6 | F8 | N/A |
| 3 | AHU 2.3 | Lobby spaces | 0% | 18910 m³/h | M6 | F8 | N/A |
| 4 | VIN 01 | Mega Image groundfloor | 0% | 3550 m³/h | N/A | F5 | N/A |
| 5 | VIN 02 | Mega Image groundfloor | 0% | 3650 m³/h | N/A | F5 | N/A |
| 6 | VIN 03 | Mega Image groundfloor | 0% | 3650 m³/h | N/A | F5 | N/A |

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| 6 | VIN 03 | Mega Image groundfloor | 0% | 3650 m³/h | N/A | F5 | N/A |

No standalone cleaning unit is used.

**Air Treatment Assessment**

Building does not use any recirculation in the system. All systems are designed to operate 100% fresh outdoor air (49m3/h per person). No recirculation is designed. Filtration system is designed to meet LEED and WELL requirements for indoor air quality. Filters that we use are in line with ASHRAE and REHVA COVID prevention guidelines. Systems are not designed to utilize UVGI lamps.

As all systems operate 100% fresh air there is no need to implement higher class filters neither UVGI equipment in Air Handling Units.

**Device Maintenance**

Maintenance will be executed in line with producers requirements and reported to WELL online platform. It is confirmed by property management agreement.

**Develop Legionella Management Plan Feature**

**Risk of infection**

The risk of infection from a water system is dependent on a number of factors, including:

* Presence of one or more multiplication factors that allow legionellae to grow from low to high numbers such as the water temperatures, low flow rates and/or low turnover (stagnation) and the presence of certain materials, such as natural rubbers, some sealants and certain plastics, which may serve as a nutritional source within the system the possibility that aerosols may be formed and released within part of the water system.
* The concentration of legionellae in the aerosol and the size of the aerosol particles; the risk increases the higher the concentration of bacteria and the smaller the size of particle smaller particles are more dangerous.
* The duration of exposure may also have some influence.

**Buildings systems and Legionella presence**

The optimum temperature for multiplication of L. pneumophila in the laboratory is between 32 oC and 2 oC. The bacteria can survive at higher temperatures, but the survival time decreases from a few hours at 50 oC to a few minutes at 60 oC; at 70 oC the organism is killed virtually instantaneously. Below 37 oC the multiplication rate decreases, and it can be considered insignificant below 20 oC. The organisms can survive in a dormant state at much lower temperatures, and will return to active multiplication whenever more favorable temperatures occur. Legionellae have been found in water systems with a wide range of pH values.



Conditions for Legionella growth according to CIBSE TM 13

**Legionella management plan**

Building Facility Management company will assign technical person to control water systems including hot water systems and other devices with where water is recirculated or aerosolized.

All recommendations and requirements regard prevention of Legionella development presented in local legal requirements are to be followed.

All recommendations and requirements regard prevention of Legionella development presented in the building design are to be followed.

Assigned person will follow-up on hazards inventory and execute control measures based on Table 1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Type** | **System name + what it serves.** | **Hazard analysis of water assets within the project boundary** | **List of monitoring actions** | **A list of critical control points** |
| 1. | Domestic hot water system | 1st floor hot water module - prepares HW for the gym 2x1000l storage tank | Water is heated in semi instantaneous way. Water temperature in the storage tanks is maintained above 60°C, there is no risk of Legionella development. | Annual cleaning and disinfection.Monthly rinsing. | Storage tanks |
| 2. | Cooling towers/water sprayed air cooled systems | N/A | N/A | N/A | N/A |
| 3. | Decorative fountain | N/A | N/A | N/A | N/A |
| 4. | Air humidification | N/A | N/A | N/A | N/A |
| 5. | Other devices | N/A | N/A | N/A | N/A |

HW at office floors is provided using instantaneous local electric heaters with no storage.

In order to prevent development of Legionella in hot water systems periodic control and sanitation should be executed. It is recommended to follow CIBSE 13TM Guidelines – Minimising the risk of Legionnaires disease.

**Implement Legionella Management Plan**

Implementation of Legionella Management Plan and all relevant results will be reported to WELL online platform annually. It is confirmed by property management agreement.

**Monitor Air and Water Quality Feature**

**Monitor Air Parameters**

Non-leasable spaces consist of more than 2.5% of project area. Execution of air parameters monitoring and data reports disclosure will be ensured by Property/Facility Management based on property management agreement.

**Assess Chemical and Biological Water Quality**

Non-leasable spaces consist of more than 2.5% of project area. Execution of water quality assessment and data reports disclosure will be ensured by Property/Facility Management based on property management agreement.

**Manage Mold and Moisture Feature**

**Manage Moisture**

Moisture Management will be confirmed by presentation of Policy/Operations schedule for building facility management. It is confirmed by property management agreement.

**Inspect for Leaks and Mold**

Results of inspection will be uploaded annually to WELL digital platform. It is confirmed by property management agreement.