

# **CHILL DIVISION**

Site Design Guidelines for Cultivation  
Facility  
(Location security only)

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# Introduction

These Site Design Principals have been developed to work in tandem with the Chill Division Security Procedures for Cultivation Facility, as well as the Chill Division Cultivation SOPs. For example the Site Location and first 3 chapters in total are mirrored across the Site Design Guidelines and the Security Procedure documents, due to the key relevance for both aspects.

Although the regulations are flexible, and provide opportunities for indoor, outdoor and also glasshouse cultivation, only indoor cultivation can reliably and consistently meet NZMQS microbial standards, and as such is the focus for this document. These guidelines are designed to work with either a shed fit-out on a semi-rural property, or the hiring of an industrial warehouse in an urban setting. The intention is for the cultivation of high-potency THC dominant flower, for final sale as a dried-flower product.

The design of a Cultivation Facility can greatly impact staff ability to perform their job well. When intentionally designed, it will not only ensure that odor is not an issue for any nearby neighbors / businesses, but will ensure any cannabis materials remain safe and secure. It will also have the added benefit of greater overall efficiency, such as maximizing the efficacy of CO2 injection, insulation to ensure A/C runs optimally, and that minimal air-exchanges are necessary.

When careful thought and consideration is given to the design, a facility owner will find that up to 50% of a facilities' total floorplan can be dedicated to flowering canopy-space. An optimized room will also allow for easy walking access to all parts of the plants, seamless drainage, consistent control of environment VPD, and provide for a reliable cultivation experience.

Throughout this document there are many recommendations and suggestions, but a decent portion of these can be customized and tailored to suit your individual needs, preferences and budget. For example, although we recommend specific models of security camera that utilizes motion-detection, if you were to lease a warehouse that already has security cameras you may instead opt to supplement them with PIR sensors rather than replacing the existing cameras.

Those customizations are recommended using Home Assistant. Despite the name, it is an incredibly powerful, open, and customizable automation platform that integrates with all the common items a master grower could need to power their garden.

Most importantly, this document is designed to ensure a greater understanding of what is likely to be "reasonable" precautions, and explain those expectations as you design your facility. Further details will naturally need to be provided to the Medicinal Cannabis Agency as part of the application process. However, where these guidelines have been followed, then your facility will likely exceed the minimum requirements set out by the Agency and aid in a successful application.

All phrasing in this document follows [RFC 2119](#), and familiarity is assumed.

# Building security requirements

These procedures will aid in selecting a premise for lease to cultivate in, along with ensuring that the appropriate amendments to the facility are made to ensure the safety of cannabis. When searching for a lease, a facility owner should be mindful of the amount of time the lease is likely to last, and so seeking a 4-5 year lease term, with 2+2 ROR (Right of Refusal) is often desirable. If a facility owner is seeking to have 50-60sqm of canopy space, a 160-200sqm warehouse lease is likely going to be sufficient.

The Landlord of this warehouse will have to provide a letter to the Medicinal Cannabis Agency stating their approval of your undertakings at the location, so it pays to be up-front with them, and engage a regulatory consulting expert who can assist with ensuring a successful lease.

It is also worth noting that in instances where some of these guidelines are unable to be followed, the totality of the security arrangements will be assessed by the Medicinal Cannabis Agency, and there may be flexibility in some instances. However, the assumption of oneself being the exception to the rule is not an optimal place to start, but rather a place whereby a regulatory consultant may be able to offer ways to make a location suitable even if it does not match 100% of the criteria from the outset.

## 1. Location

- 1.1. The premise must not be within 120m of any residential properties.
  - 1.1.1. The premise should ideally have at least a 150-200m radius around the facility location whereby there are no other residential properties, unless the house is that of the owner of the cultivation facility or similar.
- 1.2. The premise should not be within 200m of a school, kura, kindergarten, preschool, highschool, or other place of education.
- 1.3. The premise should ideally be in a built-up industrial area.
  - 1.3.1. A commercial area may be considered but is not recommended due to the possibility of elevated foot-traffic from pedestrians and the general-public.
- 1.4. Rural residential properties may be considered as a suitable location for a cultivation facility, such as a greenfield site, but with the expectation that cultivation will take place indoors.

- 1.4.1. Any site must still ensure there is at least 120m from the location of the desired cultivation facility building, and any neighbouring residential homes.
- 1.5. The building may be adjacent to other industrial units in a “light industrial complex” type of situation.
  - 1.5.1. Thick concrete walls or other secure framing should be in-place between the units.
- 1.6. Where a standalone unit is sought for cultivation, such as a shed or individual warehouse, there must be two barriers to entry at all times to any room where cannabis materials will be held. As such a fence / gate may be used as one of these barriers, however it must be able to stand on its own merit and should be a suitable distance from the premise.
- 1.7. Consideration should also be given to the layout of any pre-existing warehouses, as certain rooms may be unsuitable for use for cultivation aspects due to existing doors / walkways within the facility.
  - 1.7.1. This often includes a “lunchroom” on the externally facing wall which also has an adjacent roller door. Due to the roller door being a single barrier to entry, although there may be two doors any personnel would normally enter through via the lunchroom, additional internal barriers to entry would need to be considered

## 2. General security principals

The majority of these requirements will be fit-out requirements that the facility owner will have to implement, and are unlikely to be available in any pre-existing setup.

- 2.1. There should be no external signage, logos, emblems or markings anywhere on-site that relates to the company, or the nature of the business being conducted on-site
  - 2.1.1. If required as part of body corporate signage etc, a decoy name should be used, or that of a separate / unrelated business.
- 2.2. Generic and unidentifiable alarm / security stickers are permitted for the purpose of deterring diversion attempts / unauthorized access.

- 2.3. PINs are not to be written down anywhere, nor any identifying marks made on the key fobs that would pertain to the company (such as name or address) or any other such references to the site / location.
- 2.4. Keys are not recommended for physical access to any locations of the site due to easy cloning and copying. Where no other alternative is available (such as for a gate / fence), keys may be used and should be marked as **“DO NOT COPY”**.
  - 2.4.1. For any padlocks, a tumbler-PIN lock should be utilized if no other alternatives can be used, instead of a key-based lock.
- 2.5. Access to any area of the site which may contain cannabis biomass must employ a method of *2-factor authentication* (Two separate factors of authorization) in order to reach any room where cannabis materials may be. This means one door may require a fingerprint whereas another requires a PIN.
- 2.6. 2-factor authentication methods may include but are not limited to a combination of a PIN + fingerprint, PIN + key fob, fingerprint + key fob, PIN + NFC authentication method or other similar security arrangement. This ensures that should a Key Fob / cellphone be lost, stolen, or go missing, its use would not permit any unauthorized access to the site.
- 2.7. An alarm must sound in the event the external personnel doors remain open for a period of more than 60 seconds. A siren will sound inside the facility acting as a deterrent to any attempted diversion, should a break-in be attempted.
  - 2.7.1. Responsible Persons will also be automatically notified electronically of the security breach so that security footage can be reviewed and appropriate remedial actions can be taken including calling of the Police if required.
- 2.8. Ensure that unauthorized individuals, including guests and other personnel, are unable to view the entry of the PIN code on any keypad.
- 2.9. Ensure that unauthorized individuals are unable to gain access to the cultivation facility by tailing authorized personnel through a closing door.
- 2.10. Personal belongings should be left off-site where possible, such as in your

vehicle. Any bags or other items taken into the secure areas may be searched before you exit the building.

- 2.11. The site shall be operated in a manner such that smell does not escape to bother nearby neighbours or businesses. This may involve operating the facility at a **negative pressure** and / or **carbon filtration** for any venting of air.
  - 2.11.1. HEPA / MERV filtration is not an acceptable method of odour control, as the filters are only designed capture dust and other particulate matter, and only carbon filtration is acceptable for scrubbing odour.
- 2.12. To further combat odour escaping, all rooms where cannabis materials are held should be sealed with a silicon-based beading (Such as Sikaflex AT-Facade) along any gaps in wall-panels, joins, edges, skirting boards, and around drainages. This will minimize odour escape while also maximizing CO2 injection efficiency.
- 2.13. Similarly, doors to those rooms should also be fitted with an edge / automatic door bottom sealer, such as Ravenseal RP10Si frame-seal / RP8Si door bottom automatic sealer, to prevent further odour escaping or CO2 leaking.
- 2.14. Air inside any rooms where cannabis materials will be held should also be internally scrubbed with a carbon filter in order to remove as much odour as possible.
- 2.15. Documents such as SOPs, Floorplan etc shall always include a version number. This may be in the form of Semantic Versioning (Major.Minor.Patch) format, or as described in ISO 8601.

### 3. Physical Security Arrangements

- 3.1. If there is a fence acting as a barrier to entry, it must be sufficiently far from the other barrier to entry (such as building exterior) that it is able to stand on its own merit as a defense mechanism.
  - 3.1.1. The fence should be of sturdy construction, such that it would stand up to a ram attempt from a vehicle.
  - 3.1.2. The fence should be of a climb-proof construction, e.g. flat-faced wooden planks vertically aligned with a minimal gap between them, or vertical metal bars, but not of diamond-mesh that can be used as a hand / foot grip.

- 3.1.3. The fence must not be able to be jimmied up from the bottom, such as with a spade or crowbar. This is especially important if it is a metal fence that doesn't have a thick and solid bottom.
- 3.1.4. The fence must be of a decent height such that it is unable to be leaped over, with a minimum of 1.8m but ideally 2m+
- 3.1.5. The fence must not be an excessive height off the ground such that somebody could slip underneath it, such as 120mm or less.
- 3.1.6. Any gate must be able to automatically swing shut and re-lock
- 3.1.7. Gate access must also follow the same access control as the rest of the facility, and as such maglocks are usually recommended.
- 3.2. All windows on any ground floor should be barred or boarded with plywood such that in the event of an unauthorized person attempting to gain entry to the site, they would still be unable to do so.
- 3.3. If the roller door does not have an external bollard, (e.g. there is an internal bollard), then any externally accessible roller doors must be latched internally in such a way to prevent jimmying open from the outside, such as with a crowbar.
  - 3.3.1. This may be in the form of an internal latch, or maglocks appropriately spaced along the length of the roller door.
- 3.4. All roller doors must also have some form of additional internal or external barrier, such as a bollard or ram-arm.
- 3.5. If there are external glass doors, these must also be barred internally.
- 3.6. All external doors, as well as any internal doors to rooms that may contain cannabis materials, must have an automatic closing mechanism installed.
- 3.7. All external doors, as well as any internal doors to rooms that may contain cannabis materials, must have an automatic locking mechanism.
  - 3.7.1. Doors with locks must relock immediately upon closing.
- 3.8. All PIN locks automatically lock the keypad after a maximum of 5 incorrect attempts in a row, and do not unlock for a period of 3 minutes to deter any brute force attempts.



- 3.9. Locks must remain operational at all times. A battery UPS must remain in place to maintain the things such as mains-powered maglocks in the event of a power failure.
- 3.9.1. All digital locks shall have an expected battery life of 12+ months, with the intent that even at critical battery levels they will remain operational for a period of no less than 1 week. This is to ensure that in the event of a fire / power outage the locks will always permit staff to exit the facility.
- 3.10. If there is any skylight, it must be frosted such that if work is being undertaken on the roof (e.g. Bodycorp repainting a roof) they are unable to see inside and ascertain the undertakings within.
- 3.10.1. Skylights should be painted entirely where possible, to avoid light bleed, especially in cultivation rooms where photosensitive plants may be.
- 3.10.2. If possible, a fake secondary ceiling should be constructed on the inside, both as an odor control measure, allowing for insulation, and further obscuring the room contents.