Harvest of Hope Packshed Proposal

Seth Gottlich, Nicola Smit, Anna Stelzner Bachelor of Architectural Studies 2- University of Cape Town 2016



The UCT Knowledge Co-op facilitated this collaborative project.

See <u>http://www.knowledgeco-op.uct.ac.za</u> or Contact us at <u>barbara.schmid@uct.ac.za</u> / 021 – 650 4415

This report is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike license:

http://creativecommons.org/licenses/by-nc-sa/2.5/za/deed.en

Environment and Services 2 | Pack Shed Make Over | Harvest of Hope

Seth Gottlich | Nicola Smit | Anna Stelzner

Our group's given task is to maximize the space and efficiency of the kitchen, storeroom and pack shed facility used for vegetable processing by Harvest of Hope. Our proposed changes will hopefully be considered and utilized by Harvest of Hope as a means of improving the operational transitioning while simultaneously maximizing efficiency of the pack shed. When undergoing the design modification, our group viewed the pack shed as an integral component in the overall production line of the company. With this in mind, our implementations have the possibility to transcend the physical boundaries of the pack shed, transposing themselves by reducing the wastage of produce and time thusly allowing for the deliverance of a greater amount of food, allowing the organization to positively affect more lives.

Our design includes a reorganization of the pack shed whilst also proposing for minor improvements and alterations to be added as a means of addressing the current problems that the building is experiencing.

Our first addressed issue concerns the plan modifications with the aim of improving the sanitary conditions of the shed. We are proposing introducing changing rooms near the entrance of the shed. These separate male/female changing rooms will have toilet facilities as well as lockers for each worker and their implementation will serve as a threshold for the workers before entering the pack shed itself. Furthering the concept of the sanitary threshold, we propose to introduce a sanitation area that must be accessed by all workers before access into the processing area. Head covers as well as plastic gloves/hand sanitation will be provided in the sanitation areas before one can enter the processing area. As far as possible, aluminium should be used in the cleaning areas so as to maximize the potential of the sanitation room.

Concerning the processing area itself, we propose to move the trucks and cars that currently inhibit the space to exterior parking spaces on the east of the building. The current situation is not only unhygienic by also spatially wasteful and we suggest that a pergola be constructed under the delivery vehicles can park and offload their produce even in rainy conditions without compromising the health and sanitation of the produce.

The exterior offload area will lead directly into the interior storage room through the pre-existing shutter door on the east façade. This storage room will lead directly into both a demarcated area for cold storage as well as the processing room with the aim of reducing the movement of produce within the site and thusly improving the overall efficiency. In terms of cold storage, we are proposing portioning off a secure $20m^2$ area for cold storage that is adjacent to both the processing area and storage facility for ease of access.

Within the processing room a demarcated weighing area will be created in the south east corner of the shed, allowing for an ease of distribution as it is closer to the dispatch side. Additional plug points will need to be installed as there are no plug-points currently in this area of the shed. Leading on from the weighing area, food will be moved throughout the space with the aid of non-automated rollers. This will simplify the process as well as speeding it up considerably. These

rollers will not be electric for the sake of safety. Washing will occupy the northern wall of the shed. Although the produce is not currently being washed, we are keeping the washing facilities that are currently there in hope that in future, when the organization will grow, such facilities might still be useful.

While the aforementioned addresses the pivotal organizational issues within the shed, minor additional changes are still required. In terms of the broken windows, ambient temperature concerns as well as pest control, we propose that in a two phase system, the first phase would be to replace the broken windows on the northern façade with double glazed steel framed windows. This solution is multifunctional as it will improve the ambient temperature of the space through a reduction in heat loss and it will also serve to create a tighter building envelope, deterring pests. Once the completion of the first phase, a secondary phase is recommended whereby all windows of the shed of replaced with double glazed panes of glass. No electric fly killers will be thusly be required due to the improvement of the window situation within the shed.

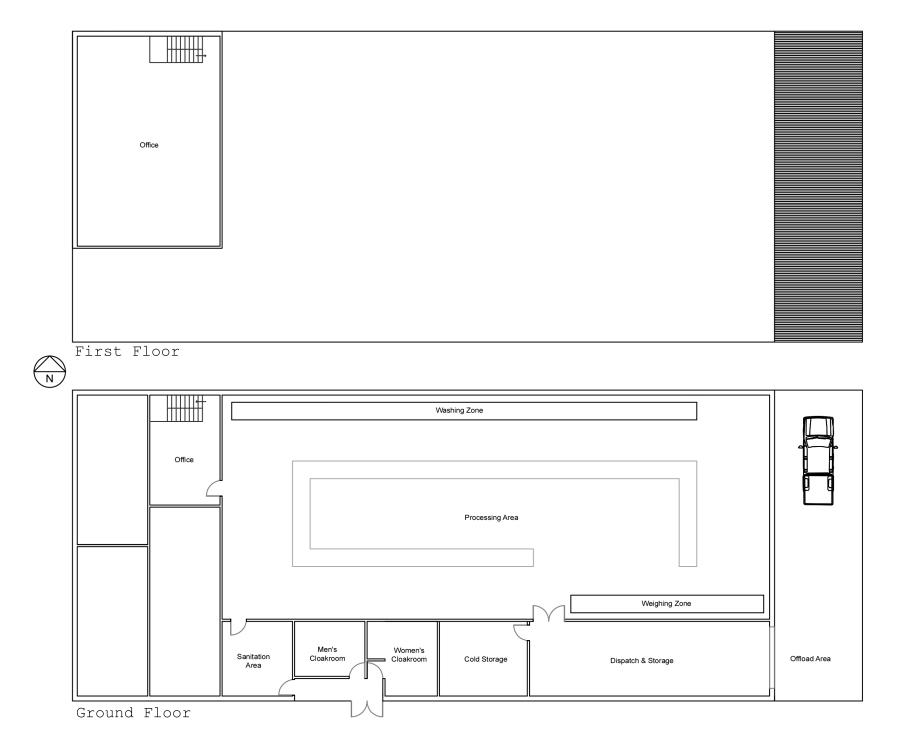
Security will be improved by the introduction of intermediary spaces such as the sanitation room and storage facility so that no direct access to the processing area is available. Workers would enter through a single door and proceed to change before moving through the sanitation rooms. On the dispatch side the storage facility, growers would potentially have a key into the storage facility but not the processing area, therefore limiting access to the processing area to only the few people that work there. The issue of pedestrian access and food safety will be simultaneously limited by the aforementioned security measures. The current issue of the need for door screens is also avoided due to our intervention of intermediary spaces between the exterior and the interior.

The issue of the unscreened lights will be addressed and screened with the aid of tack lighting as a means to diffuse light, generating an equitable amount of luminescence throughout the space. This can be attached to the underside of the roof trusses.

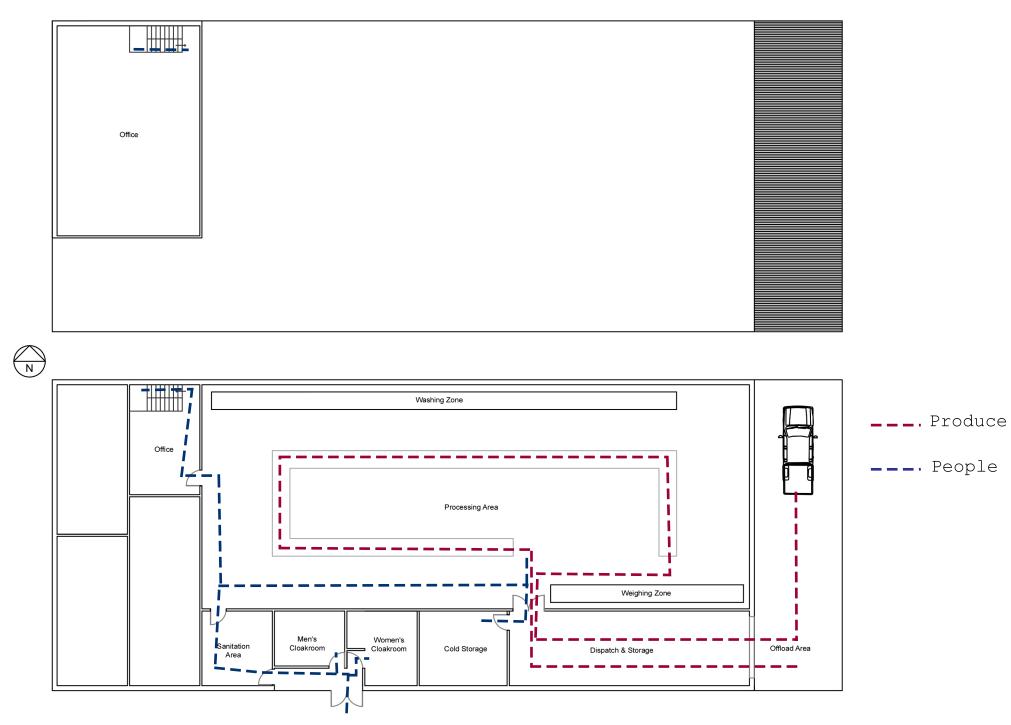
Zoning within the produce processing area will be introduced as to simplify the processing process. These zones will be demarcated by painted areas on the floor for clarity and to eliminate confusion.

A further recommendation is for the wooden crates to be changed. We propose to replace all wooden cates with plastic crates so as to not jeopardize food safety. These can be washed easily and reused. The new crates can also be numbered and coloured as to better sort the different produce by grade as well as keeping track of batches from different places. Lastly the due to the shed's northern orientation Photovoltaic panels can be installed on the north facing side of the roof so as to improve the sustainability of the organization.

We hope that the aforementioned propositions are helpful as a means to maximize the efficiency of operations while simultaneously improving sanitary conditions of the pack shed.



Harvest of Hope | Plan | Anna Stelzner, Seth Gottlich & Nicola Smit



Harvest of Hope | Circulation



Harvest of Hope | Zones