Reblocking:
A Partnership Guide

A handbook to support the reblocking of informal settlements through a multiple stakeholder effort

Produced by:

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with support from the Community Organisation Resource Centre (CORC)

WPI

C·O·R·C
COMMUNITY ORGANISATION RESOURCE CENTRE

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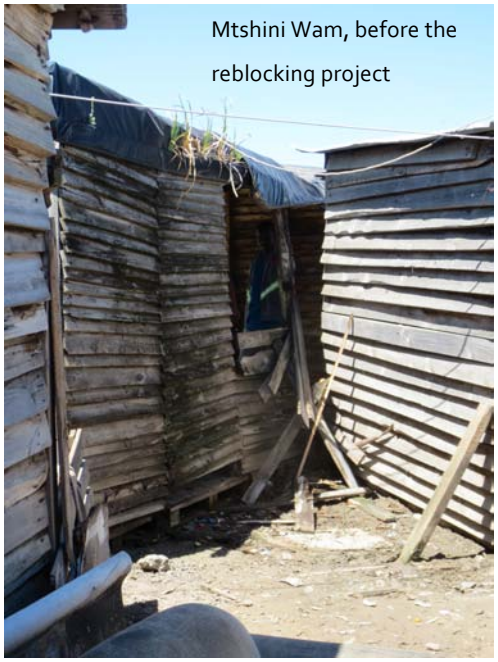
Introduction

A reblocked cluster in the Mtshini Wam informal settlement, Cape Town

This guidebook provides initial guidance to any interested party in developing and implementing a reblocking project. It is mainly focused on partnerships between communities, CORC and Municipal governments so that they have clear ideas of the steps to take and the questions that need discussion. This is by no means an all-encompassing document, and we encourage its users to use it as a first step in the process. They can discuss details we have found important to address during reblocking, but should not limit discussions to the ideas we present. Additionally, we provide an Appendix with useful documents for many steps of the reblocking project. It is our hope that is document will be editied by

In This Section

What is Reblocking?



Mtshini Wam, before the reblocking project

Reblocking is when a shack settlement is rearranged in clusters instead of the improvised order that occurs as these settlements grow. Each cluster has its shacks facing each other, forming a common courtyard for the cluster with a single entrance.

Why Should We Reblock?	Effective Use of Space	Structure Integrity	Community Safety	Land Security
	○ Allows for the rebuilding and reorganising of shacks ○ Space is created for communal use ○ Allows for safer living conditions without greywater pools	○ Materials on the outside of the shack are fire resistant ○ Fires do not easily spread from shack to shack ○ Allows for easy access to emergency vehicles	○ Doors facing each other allows for increased safety ○ Does not allow spaces for people to hide within the cluster ○ Residents are more aware of what is happening in their cluster ○ Increased sense of community ○ Access of police vehicles	○ Organisation shows community's desire for recognition ○ Can lead to collaboration with NGO's and governments ○ Investment in infrastructure can lead to land tenure agreements.

A New Approach

Reblocking is a new concept in the upgrading of informal settlements. Unlike traditional social housing projects, reblocking occurs on site and does not relocate communities to areas where economic opportunities may not be as available. By keeping the community together, residents are empowered to look for their own solutions to challenges. The economic capabilities of the community, however, make this process one where many other stakeholder must be involved. Because of this, new communication lines have to be created between communities, government agencies and NGO's.

Key Goals

- Empower community to organise and plan major projects.
  This creates a proactive community that seeks change instead of waiting for it.
- Change community mind-set towards the government. The goal is to collaborate, not to demand.
  Collaboration can initially be slow, but collaboration permits lasting results that satisfy all parties.
- Change government view of community from a paternalistic role to a collaborator role.
- Improve quality of life of the community by creating open spaces, safer structures, services, and land tenure.

Key Stakeholders

The stakeholders for this process include the community, the Municipality, CORC, and other informal communities.

Community: The group that wants to improve its quality of life, needs to organise, determine its needs and creates saving schemes to to financially support the process.

Municipality: The government that is committed to supply its residents with a dignified living space. This commitment involves logistical, economic, legal and political support.

Community Organisation Resource Centre (CORC): The NGO that is willing to support an informal settlement in its upgrading process. Can provide technical and organisational support for the process.

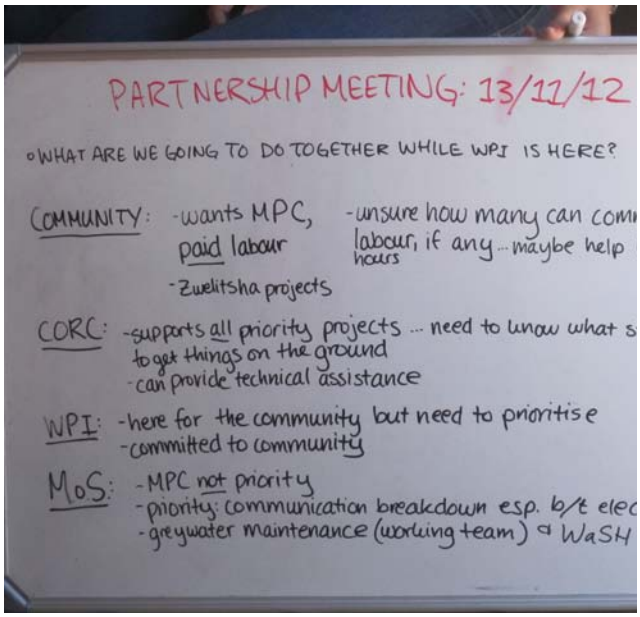
Other Informal Settlements: Processes in other settlements are key sources for ideas that may help the process of the settlement that wishes to be reblocked.

Informal Settlement Network (ISN): This shack dweller group is crucial in initiating the mobilisation of the community and assisting in developing a strong leadership in the process.

Key Challenges

- Creating clusters with open spaces in densely populated areas with little extra space.
- Accurately measuring areas of homes and common spaces in rough terrain with little knowledge of the process.
- Maintaining constant and open communication between the community and other stakeholders.
- Agreeing on responsibilities each stakeholder has for the process.
- Creating a process for determining accountability so that all stakeholders remain active and effective.

Establishing Good Communication



In This Section

- Making a Facebook or Twitter Page
- Organising Information
- Online Sharing
- Meetings
- Other Important Tools

The following section shows several tools that can be used to help facilitate good communication between all partners.

Should We Make a Facebook or Twitter Page?

Advantages:

- Allows all stakeholders to present what they are focusing on during each phase of the process.
- Keeps community fully aware of the progress in the project. Facebook pages can show the settlement exactly what is going on.
- Can show pictures, events, and documents to a big audience
- Generates a space for community input

Disadvantages:

- It is unclear if internet access is widespread enough in an informal settlement to actually be an effective update tool for the general community.
- It requires a proactive group to maintain the pages updated and active.
- It is time consuming to upload pictures and organize page.

See "Setup Facebook Pages" guide

Organising Information

Reblocking will generate a lot of documents, reports and critical information from shack dwellers. It is of great importance to keep all this information organised and accessible to all members of the partnership. Duplicates and digital copies of the most important documents are required to ensure that the process is successful. How this will be achieved is up to the partnership, but it is crucial that a system is put in before too much information is collected. Below you can find some examples of ways to do this.

Online Sharing

The internet is an incredibly powerful tool for sharing working documents and important information during the whole process. There are difficulties, however, with using the internet that must be discussed by the partnership. These difficulties include:

Who will pay for the internet connection? Monthly or prepaid costs of connectivity must be agreed upon. Will the community consolidate their resources to fund an internet connection? If not, who will pay for it?

How often should internet be used? If the partnership is investing in internet collaboration, good use of it must occur. The partners need to regularly send updates to everyone and be sure to actively check all the collaboration tools used for new documents.

How will the community learn to use online tools? The partnership must discuss how stakeholders with no previous experience will learn how to use online tools. It is likely that time during the early stages of the reblocking process will have to be used for computer and internet training.

Which tools to use? There are many ways to share information online, so determining which to use is crucial to be as effective in the reblocking process. **In the sidebars, there are a few examples of tools that can be great assets for online collaboration.**

Setting up a Facebook Account

1. Go to WWW.facebook.com
2. Enter in your information on the home screen

Create a Dropbox Folder

Dropbox is a tool that permits collaborators to keep all digital copies of created documents in a single place. This allows all stakeholders to view the most updated documents as they are posted. Pictures, documents and other types of files can be shared.

Setting Up a Dropbox Account

1. Go to WWW.Dropbox.com
2. Select "Create an account"
3. Fill in the appropriate fields with your name, email address, and create a password
4. Select "Create an Account"
5. Install the Dropbox program

Other Important Tools

Calendars

Setting up calendars is a great way to push the project forward. If the members of the partnership set up an overall calendar they can all refer to, it will be clear who has to do certain tasks. Fixing deadlines in the calendar can be useful to create accountability throughout the reblocking process.

The most important part of this calendar discussion is to commit to it. The partnership must agree to keep the calendar up-dated and to do the best effort to stick to the dead-lines and compromises set up in the calendar.

Whiteboards

Collaboration is crucial in reblocking. Having spaces to brainstorm, sketch diagrams and meeting progress that is visible to everyone is very important. Whiteboards or large paper can be used for this purpose.

Distribute List of All Partners and their Contact Information

A detailed cast of characters will help all partners to understand each stakeholder's role in the reblocking process. Having important contact numbers and email information will allow for easy flow of information to the people that need to use it.
See Sample Contact list.

Meetings

Meeting in person is an integral part of the reblocking process. To be successful, the partnership needs to be constantly in action. Meetings can be used as a way to get all of the stakeholders together. The following needs to be agreed upon by the partners in order to make these meetings useful:

Post a meeting schedule in the community and stakeholder offices

A meeting schedule can be arranged between the partners and all of them must commit to follow the schedules as closely as possible. This meeting schedule can be revised as the reblocking process advances. The schedule needs to be placed in visible locations so everybody knows when meetings will occur and can plan accordingly.

Simple Meeting Minutes

This skill of keeping meeting minutes should be used by all members of the partnership. A very important aspect of keeping minutes is to maintain a single location with all the minutes so that anybody can quickly access them. Ideally, typed minutes should be shared with all stakeholders, but hand written minutes are also useful. Dropbox is a good place to keep all meeting minutes organised and catalogued.
See Minute Taking guide and Sample Minutes document for more information

Using Meeting Agendas

Agendas are important tools to set up for every meeting. This is especially true for partnership meetings where everybody should use their time as effectively as possible. Agendas achieve several important points:

- Show the attendants what is to be covered during the meeting
- Help keep meeting focused on the most important topics
- Serve as a standard to determine if meeting achieved all desired goals
- Determine protocols for making/changing/missing meetings

Enumeration

In This Section

What is Enumeration?

Enumeration is the process of collecting information from each shack in the settlement. This is done by going door to door and asking specific questions from each family. These questions range from information regarding the family and their education to information concerning their living environment.

Tasks

This is what each partner has to do for enumeration

Community	CORC/ISN	Municipality
Gather several enumerators to work on the settlement	Train leadership and enumerators on how to conduct process	Support community throughout the process
Keep proper organisation of all the data collected	Assist in consolidating and compiling the collected data	
Organise settlement with shack numbers and sectional divisions		

Why Enumerate?

The process of enumerating the settlement allows for important information about the people living there and their needs to be collected. This information gives all partners an idea of the population and what issues need to be addressed. For reblocking, this information identifies how many people live in the different sections that would be reblocked in addition to services that would need to be improved in these sections.

How to Conduct the Enumeration?

The enumeration process requires an organiser, enumerators from the community and exchange enumerators from other communities. Together they can agree on which information is to be obtained from residents and from that a questionnaire is compiled and all enumerators must learn how to complete it effectively. After that a programme is determined which provides the detail of which areas will be surveyed when and by whom. There should also be an independent reviewer, such as an ISN executive member who has not been involved in the process, or possibly by a partner such as a municipal official, to ensure that the process makes sense.

When the survey is complete it needs to be compiled into a Settlement Profile, which is a formal document that summarises all the important information about the residents, the state of the built environment and the quality of the services provided to the settlement. This Profile can be given to partners to demonstrate how well-informed and organised the community is and the nature of the challenges that it faces.

The other document that can be extracted from the survey is a list of all the residents, with their ID numbers where available and the location of their dwelling. The municipality should be persuaded to accept this as a valid database, which will help to improve the security of tenure of residents.

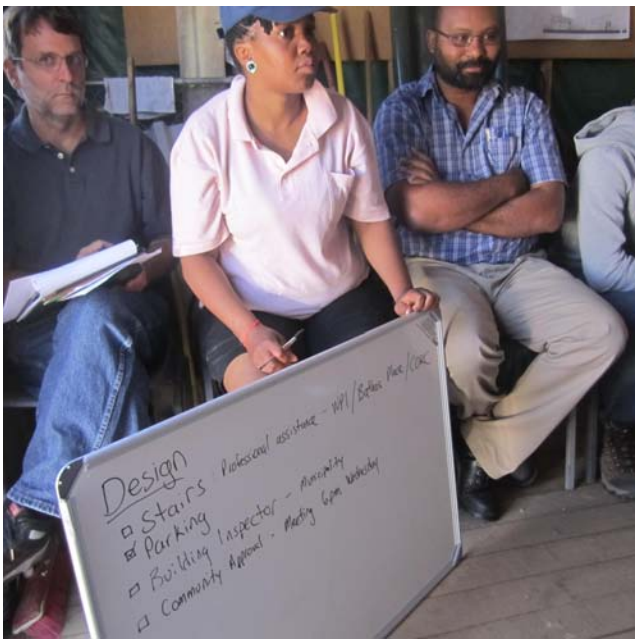
Questions to ask

Questions that are asked during the enumeration process range from how many people live in a shack to their levels of education. Some example questions include:

- Do the residents have IDs?
- Do the children have birth certificates?
- What is the distance from the shack and different services? (toilets, taps, ect…)
- Are the residents of the shack on a housing wait list?
- Are they employed?
- How long have they lived in the settlement?

See Example Enumeration Form for some more enumeration questions.

Getting Started: First Partnership Meeting



In This Section

- Partnership Roles
- Determining Goals fo Initial Meetings

The community, the Municipality and CORC have to discuss their expectations and available resources in a very clear and honest way. Clear goals that the partnership wants to achieve have to be discussed. This way, they can be planned in detail in future meetings. Additionally, clear roles have to be determined for every partner in various situations.

Partnership Roles:

It is crucial for the partnership to determine what the most important roles are for each stakeholder. In this table some ideas are presented, but it is important that the partnership discusses this matter in detail.

Community Leadership	CORC	Municipality
Voice community sentiments	Support community with design and mapping	Facilitate permits and other legal documents
Relay important information to community	Assist in developing reporting tools for all partners	Arrange for services (electricity, water, sewer)
Provide detailed information of the settlement	Arrange community exchanges (with ISN assistance)	Procure funding for settlement infrastructure
Maintain momentum within community	Facilitate relationship between all stakeholders	Arrange for professional engineers, technicians and contractors for construction and materials
Determine support needed from other partners		

Determining Goals of Initial Meetings

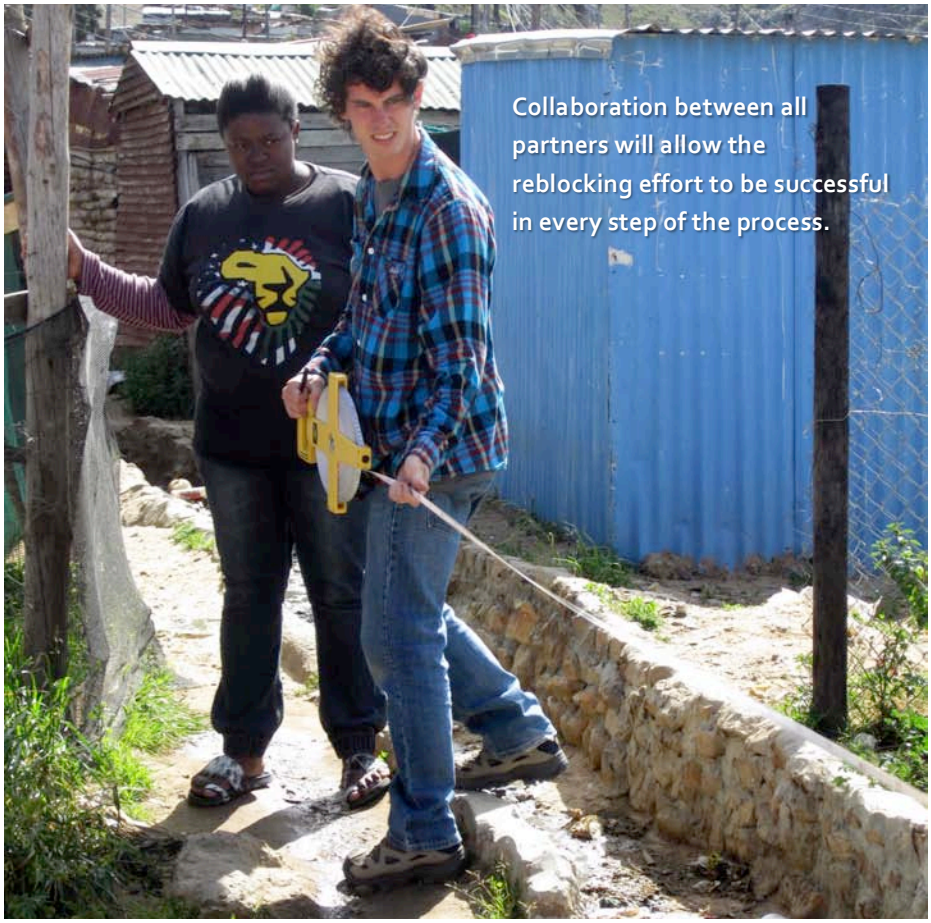
During the first meetings it is important to find the main priorities of each partner for community development. In this case it is particularly important to listen to the community itself, usually represented by a community leadership. *If not yet developed, a thorough enumeration process should be planned prior to any specific upgrading being done, see* **Enumeration Section** *of this guidebook.* Once that is completed, a few questions that are important to consider for this are:

- **What is the long-term vision for the settlement?**
- **What are the most immediate problems that need to be addressed in the community?**
- **What is the status of public infrastructure such as electricity, water and sanitation facilities?**
- **What types of upgrading projects could be supported by municipal funding?**

Once those goals are listed, the partnership must develope specific plans to achieve the desired upgrades:

- **How does the community start a saving scheme?**
- **How will projects be developed?**
- **Will small committees be used to plan each project?**
- **Who will be part of those committees?**
- **How will community feedback be taken into account?**
- **What technical assistance is needed for each project?**
- **What permits and legal documentation is needed?**
- **Who will fund the project?**
- **What is required to obtain those funds (proposals, reports and designs)?**

Area Mapping



Collaboration between all partners will allow the reblocking effort to be successful in every step of the process.

In This Section

This section includes guides on how to measure and draw out a cluster. They provide information for all stakeholders to forward the planning aspects of reblocking. The tasks table above provides a brief summary on what each stakeholder must do to complete this step. The section below explains in more detail several aspects of the area mapping process.

Tasks

This is what each partner has to do for area mapping

Community	CORC/ISN	Municipality
Measure the dimensions of the cluster	Provide technical support for map drawings of cluster	Get professional support for land mapping & surveying
Determine what services are needed for the new cluster	Help train the community on how to accurately map out areas	Provide maps and details about current infrastructure in area
Determine new shack sizes		

Area Mapping

The next step of the reblocking process is evaluating the land that the reblocked cluster will be on. There are two main categories of what needs to be done. The first category consists of tasks that can be accomplished by the working group:

- Measuring the dimensions of the cluster
- Evaluating the services for the cluster.

While measuring the dimensions for the cluster it is important that this task is performed by multiple members of the working group and that several measurements are taken. This will allow for more accurate data to be collected. For more information on measuring the dimensions of the cluster see **How to Measure a Cluster**.

The other task that should be accomplished is to identify what services, such as toilets and taps, are currently provided by the municipality and what services need to be included within the reblocked cluster. Having the community determine what is needed for the cluster will allow the appropriate partners to make these implementations.

The second category of work that needs to be done for area mapping includes tasks that should be accomplished by a professional. This category includes tasks such as:

- Surveying the land
- Determining the integrity of the land
- Determining the boundaries of the cluster

In order for these tasks to be accomplished accurately they should be done by a professional. All partners should discuss this topic at length so that they agree on who should do the work, when they should work and how they would get paid.

How to Measure a Cluster

1. Have at least two people to measure
2. Identify land marks to measure to and from
3. Begin to measure the sides of the cluster
4. Hold the tape measure on one corner of the cluster
5. Hold the other corner tight against the end of the side
6. Record the measurement
7. Repeat for all sides
8. Record the general shape of the cluster
9. Measure the distance of landmarks from the sides
10. Create a diagram of the cluster layout

Key Tools & Equipment

I. Measuring Tape (10m)
II. Calculator
III. Area Table Sheet
IV. Cluster Data Sheet

Measuring a Shack Versus a Cluster

Similarities:

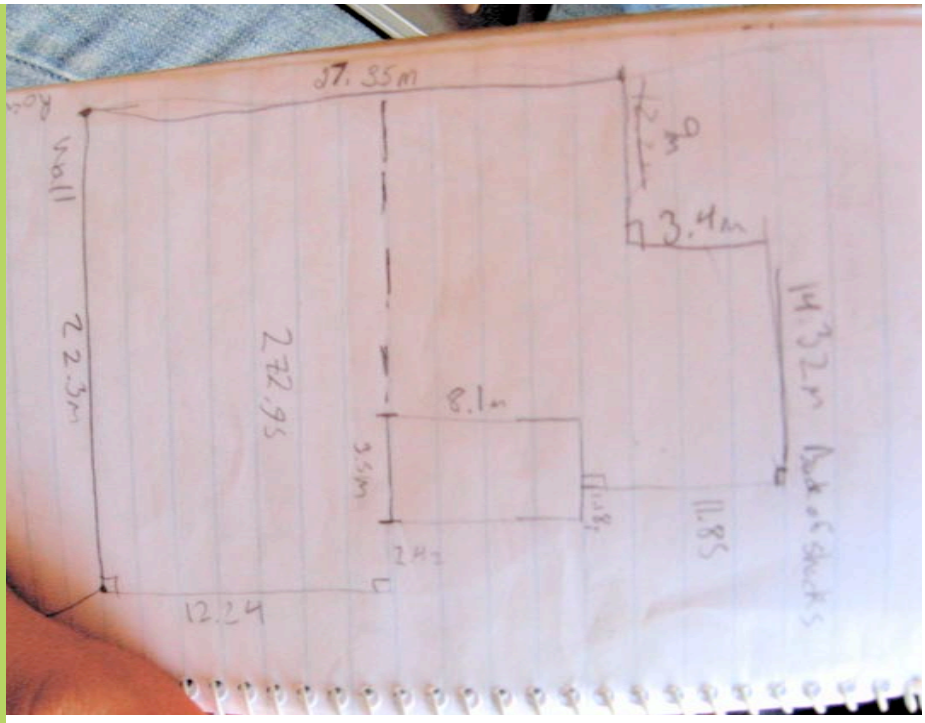
- Two people should be performing the measurement
- Tape measure should be tight and straight between the two points being measured

Differences:

- Cluster should have all sides measured, shack only needs two sides measured
- Shack area is only being recorded, cluster area and shape is recorded
- Landmark location is needed for cluster measurements

Landmarks/ Reference Points

I. Toilets
II. Taps
III. Poles
IV. Roads
V. Channels



How To Draw Out the Measured Cluster

To create an accurate drawing of the measured cluster it is best to create a rough picture of the cluster layout while measurements are being taken. This picture should include the lengths and angles of the sides in addition to landmarks. Landmarks are important to display on the cluster diagram so that shacks are not planned to be built on a structure. Important structures to include are:

- Toilets and Taps
- Poles (for lights and electricity)

Creating this drawing in a computer will help ensure that the scale is accurate. This will allow for a cluster design that is more likely to be properly implemented.

Like taking measurements, these drawings should be created by different people and then compared. When it comes to making and recording measurements it is easy for mistakes to be made. Having multiple people work on these drawing will help ensure their accuracy.

Detailing a Cluster

In This Section

- Determining Group to Reblock
- Detail the Cluster
- How to Measure a Shack

Before shacks are torn down, the people moving to the cluster have to be identified and detailed. During reblocking, a particular order for the shacks to be torn down and built is needed. It is important that each cluster is fully committed to the process both financially and in spirit.

Tasks

This is what each partner has to do for detailing clusters.

Community	CORC/ISN	Municipality
Measure the dimensions of the cluster	Provide technical support for map drawings	Get professional support for land mapping & surveying
Determine what services are needed for the new cluster	Help train the community on how to accurately map out areas	Provide maps and details about current infrastructure in area
Determine new shack sizes		

Who is Ready for Reblocking?

Since the reasons for reblocking in each section will be different, it is important to keep many things in mind. The questions below may be able to help with determining if a section is ready to be reblocked:

What part of the community has the commitment to start reblocking?

Not all areas of the settlement will have the heart and passion to push through the reblocking process. The process takes time and dedication to achieve results.

What terrains are available?

Determining where shacks can be moved is crucial to see if it is possible for the reblocking to be done.

How much has the group accumulated in savings?

The upgraded shacks cost a significant amount of money. Understanding how much money the community has available is important to know what cluster can be reblocked first.

How informed are they?

The most important aspect of reblocking is to have the affected people well-informed. Keeping a transparent and constant relationship throughout the process is crucial to ensuring that reblocking will succeed.

Determining the Group to Reblock

Before detailed plans can be made for the reblocking process the community and other partners must choose a section to reblock. The reasons for reblocking may vary depending on the section of the settlement. **For example, in 2012, Langrug's F section was designated to be the first section reblocked because of two main reasons:**

1. *F section is in the middle of the settlement, so others in the settlement to easily see how the process looks like.*
2. *This section was the most ready for change. The people living in this cluster are willing to commit, contribute, and change.*

Questions to ask a shack owner

Here are examples of questions that are important to ask cluster members

- What is your name?
- Are you the owner of this shack?
- If not, who do you rent from?
- How many people live in your home?
- Do you have electricity?
- Is the electricity under your name?
- Are you aware of what reblocking is?
- Have you started saving for the reblocking project?

How To Measure a Shack

1. Talk to the homeowner, or current resident, and explain what you will be doing
2. With the help of the current resident take the end of the tape measure and place it against one corner of the shack
3. Take the other end of the tape measure and put it on the other corner of the side
4. Make sure that the tape measure is level and is pulled tight
5. Have the person with the end of the tape measure record this measurement
6. Now repeat this process for the other length of wall
7. Record this measurement
8. Multiply the two lengths of walls together to get the area of the shack (The area can also be found by using the table below)
9. Let the current resident see this calculation so that they are aware of the area of their home

Detail the Cluster

One of the more important steps for moving forward with reblocking is getting detailed information on the shacks within the cluster that is being reblocked. This information includes both information on the shacks themselves and the people living in them. The first information that should be gathered should be general information on the physical cluster.

Key Questions:

How many families will be reblocked?
What shack sizes are present?
What shack sizes will be seen in the reblocked cluster?
What area will the cluster be in? (See Area Mapping Section)

Once these important details are sorted out, detailed information should be gathered on the residents of the shacks. This information should include:

The number of residents living in the shack

Who owns the shack (resident or someone else)

If they have electricity or not

If the electricity box is in their name or not

The electricity box number

This information should be collected by talking with the shack residents so that they are involved with the process. For an example data collection sheet see **Order Form**. After the information on the families has been collected it is important to get accurate measurements of all of the shacks. These measurements should be collected with the shack resident so that they are fully aware of the area of their homes. **For an explanation for measuring a shack see How to Measure a Shack.**

Produce Reblocking Plan

In This Section

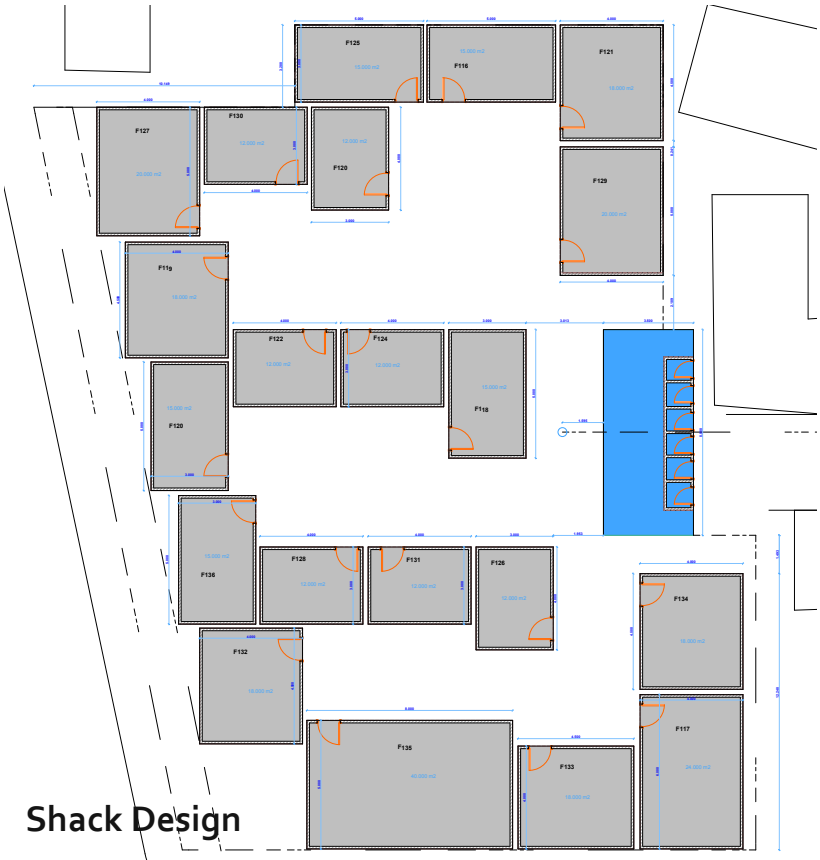
- Shack Design
- Cluster Layout
- Cost Breakdown

This section explains some of the important considerations for the shack designs, cluster layout and the cost breakdown for the reblocking plan.

Tasks

This is what each partner has to do for the reblocking plan

Community	CORC/ISN	Municipality
Agree on shack sizes and design	Aid community with technical design	Provide technical support for the design of the shack
Determine cluster layout that works for the community	Aid community with the design of the cluster layout and shack design	
Develop cost breakdown for the materials		



Shack Design

The next step in the reblocking process is to determine the design of shacks. These designs will be determined by the wanted shack sizes. While designing these shacks it is important to consider the limitations of wood and zinc sheet sizes. Taking the materials into consideration will also allow for a more cost efficient design. It is also important to keep in mind what dimensions will allow families to best utilise the space available. To make sure that the designs will be structurally sound they should be checked by multiple people from the different partners. For an example shack design see **20m² Shack Design.**

Cluster Layout

Once the cluster has been identified, information on the families has been gathered, and details on the area of the cluster and the shacks have been determined then it is time to design a layout for the reblocked shacks. This is a process that should be done with the community's input. These designs should also be formed while keeping the following in mind:

- The location of the facilities for the cluster
- The sizes of the shacks
- The location of the grey water channels
- How flood water would be controlled
- The distances between shacks
- The size of the courtyards
- Priority for certain people to be reblocked (elderly or the sick)

It is also important to keep in mind that these designs should be made with representatives from the community. Since these clusters will be family homes it is important that the residents are comfortable with the reblocked design. For an

Cost Breakdown

In order to determine what each partner is contributing to the reblocking process it is important to know both the total cost of the project in addition to the cost per shack. For this the cost of unit expenses needs to be known. Some of these expenses include:

- Materials
- General Labour
- Machinery/tools
- Professional Labour

For a detailed description of how to obtain a cost breakdown see **How to Do a Cost Analysis**. Once the cost analysis is complete it important to put these figures into a form that all partners can have. Some examples of this would to have a written document for partners like the municipality and posters for the community.

How To Get a Percentage

To get the percentage for a cost you take the total cost and multiply it by the percentage that is wanted, and then you divide that by 100.

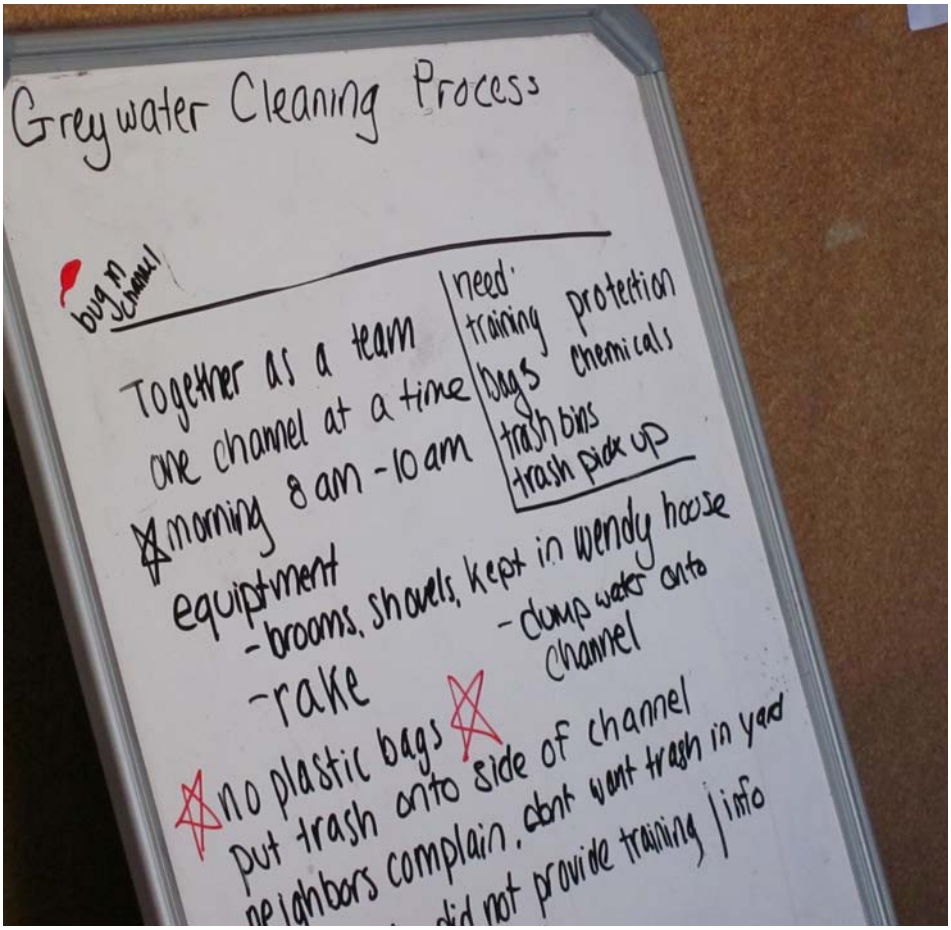
For example:

Total = R 66320

Percentage = 20%

20% of Total = R 66320 x 20 = R 1326407

Logistics



In This Section

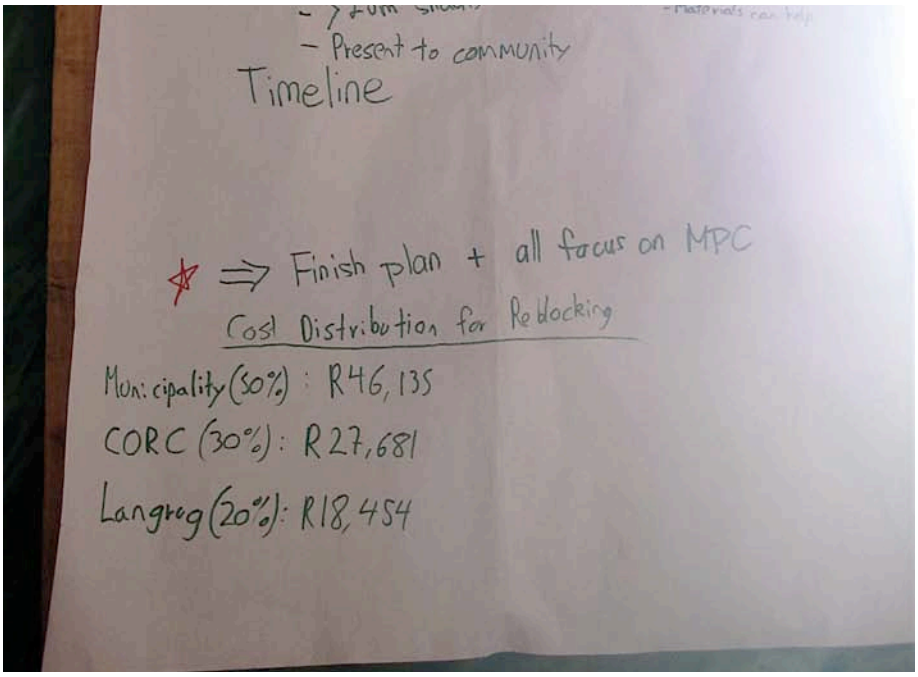
- General Planning
- Agree on Project Plan
- Develop a Cost Share Agreement
- Developing a Timeframe

As the planning process progresses, many specific considerations have to be taken into account. These include things like specific funding, temporary shelter and timeframe considerations. This section details a few of these as examples of the things the partnership must discuss throughout the reblocking process.

Tasks

This is what each partner has to do to make the reblocking plan

Community	ISN/CORC	Municipality
Determine where the reblocked families will stay during demolition and construction	Support community in developing timeframes	Agree to a financial contribution to project
Determine the financial contribution the cluster will give for the project	Determine requirements for CUFF funding	



General Planning

Before the reblocking process can be finalised, we need the following:

A timeframe for the project

The first thing is to have a schedule outlined for the project. While timeframes will undoubtedly change during the course of the project, having estimated times established will help with keeping the process moving at a decent pace. While making a schedule, using realistic time estimations is key to making a schedule that can be followed.

Temporary shelter for the reblocked families

The next thing that needs to be determined is where the families that are being reblocked will stay while their houses are being built. The solution to this temporary shelter will most likely change with every section. It is especially important to discuss with the families what they are most comfortable with. While some families will want to stay with family and friends, others may need an alternate place to stay.

A written description of the plan

A final step is to make sure that all of the information for the reblocking process, including data sheets, drawings and the description of the process, is in a written format. This will allow organisations like the municipality and NGOs to more easily aid in the implementation of the reblocking.

Develop a Cost Share Agreement (See sidebar)

Agree upon Project Plan

The last step before implementation of the reblocking process is to simply make sure that everyone is on the same page. This should be done through an in-person meeting where all partners are present. The cost share agreement and timeline are particularly important to discuss at this meeting. All partners should also be aware of what materials and time dedications they will be contributing for the project. While having the funding for the materials is very important it is also important for all partners to be contributing items such as:

Material transport

Labour

Expertise where available

While all partners should have been kept informed throughout the planning process and be on board with the plans that are in place, if a partner does not agree with a certain aspect it is important to try and stay flexible. Being able to compromise about the plan will allow all of the partners to be actively involved and remain a part of the project as it moves toward the implementation phase.

Develop a Cost Share Agreement

Once all partners have familiarized themselves with the reblocking plan , design and cost, it is important for all partners to develop a cost share agreement. This will allow all partners to begin saving for the project. Things to consider while determining each partners contribution may include:

- Whether all partners be contributing for the entire project or just certain aspects (for example: only contributing to the top structure of the shack)
- What is the maximum size shack that all partners will contribute towards

Once the cost share agreement has been determined it would be good to create a finalized agreement so that all partners are aware of their responsibilities and are held accountable

Developing a Timeframe

Consider the following when producing a reblocking timeframe:

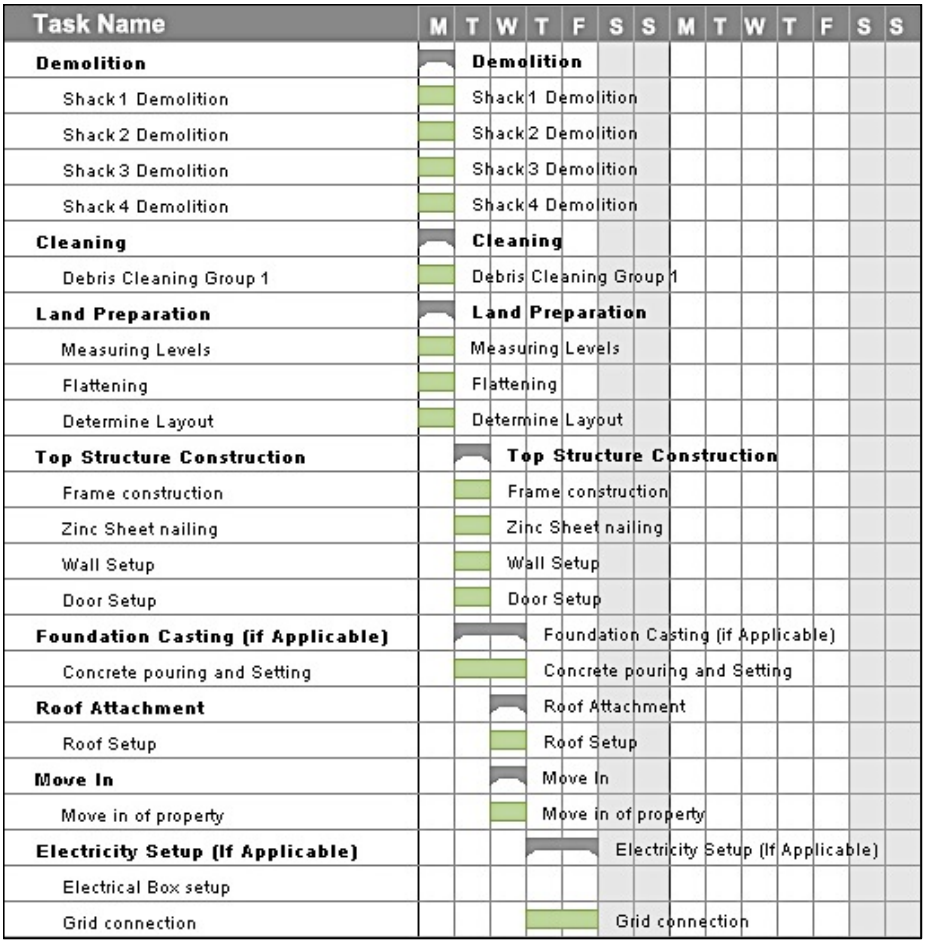
- Material delivery times
- How long it takes to demolish a shack
- How long it takes to make and dry the foundation
- How long it takes to build the new shack structure.

See **Timeframe Example** for ideas on developing a timeframe.

Appendix

Reblocking Rollout Plausible Timeframe

Below we present an estimate on the start of the reblocking of Cluster 1 in F-Section. The timeframe has been developed in a day-by-day format, with the shack demolition, area clean up and land preparation being done in the first day of work. The second day of work consists of the shack construction and if applicable, the foundation casting. The third day consists of rooftop building, attachment and move in of tenants. General procedures required for each step of the process are shown below, with each main step of the process. It is worth noting that the 4-shack demolition is a placeholder example for the process.



Daily Break Down for Reblocking Process Per Shack

Hour Block	Day 1	Day 2	Day 3
8:00-9:00am	Demolition	Shack Build	Roof Build
9:00-10:00am	Demolition	Shack Build	Roof Build
10:00-11:00am	Cleaning	Shack Build	Roof Attachment
11:00-12:00pm	Cleaning	Shack Build	Move In
12:00-1:00pm	Lunch Break	Lunch break	Move In
1:00-2:00pm	Land Prep	Foundation Cast	Move In
2:00-3:00pm	Land Prep	Foundation Cast	Electrical Connection
3:00-4:00pm	Land Prep	Foundation Cast	Electrical Connection
4:00-5:00pm	Land Prep	Foundation Cast	Electrical Connection

With the experience of community members in previous relocations and general shack building, this 3-day time frame has been developed as an educated estimate of the time to construct the shacks. It is likely that these times will change due to complex terrain or shack construction speed. Weather conditions might also play an important factor in altering the process timeframe. The electrical connections are placed in the last day to show the next step of the process, but it is not vital for the electricity to be connected on that day. Many of the current shacks do not have electricity, so their connections are to be discussed in more detail later. On the left, each day is broken up into 1-hour blocks to detail what each part of the working day will be spent on.

How To Do A Cost Analysis

1. Measure the area of the first cluster, see **How to Measure a Cluster** (#)
2. Finalize the design of the project

Figure 1: Example of a Shack Design

3. Break the design down into its components

Figure 2: Example of Shack Break Down

4. Form a list of materials

Figure 3: Example structure break down

5. Research materials cost
6. Organize the costs for each material per unit

Material	Quantity	Cost Per Unit (R)	Total (R)
3m Wood	9	13	117
2.4m Wood	27	10.5	283.5
Zinc (Build It)	24	66.95	1606.8
Zinc (Safintra)	24	100.32	2407.68
Zinc Roof (Build It)	8	111.95	895.6
Zinc Roof (Safintra)	8	167.2	1337.6
Roofing Nails 100ct	3	38.95	116.85
6inch Nails 1kg	3	21.95	65.85

Table 1: Cost Break Down For 20m² Shacks (4m x 5m)

7. Decide what services will be needed

Figure4: Example of services

8. Research how much these services will cost
9. Calculate the total cost for the project

Total Cost Per Shack Size			
Shack Size (m^2)	# of Shacks	Total (Build It)	Total (Safintra)
9	4	9045.444	12425.1792
12	3	8045.379	11064.3156
15	5	15547.89	21622.608
18	5	17048.985	23740.386
20	2	7035.168	9868.9344
24	1	3979.626	5573.6196
39	1	5617.863	7976.694
Reblock Total		**66320.355**	**92271.7368**

10. Break the cost down into the different contributions from each partner

To get the percentage for each partner you take the total cost and multiply it by the percentage, and then you divide that by 100.
For example:
Total = 66320.36
Percentage = 20%
20% of Total = 66320.36 x 20 =1326407
1326407/100 = R 13264.07

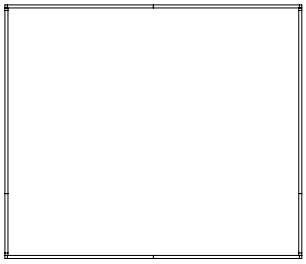
Cluster 1 Total Cost and Distribution				
Supplier	**Total**	**Municipality (50%)**	**CORC (30%)**	**Langrug (20%)**
Build It	66320.36	33160.18	19896.11	13264.07
Safintra	92271.74	46135.87	27681.52	18454.35

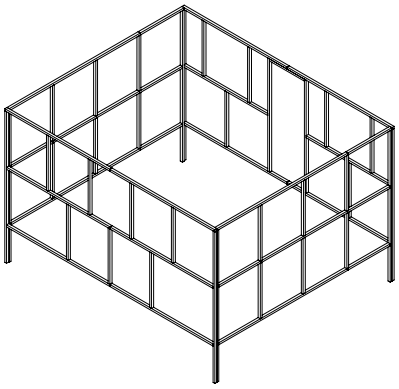
Area Calculator Sheet

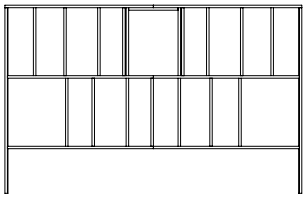
Side 1 / Side 2

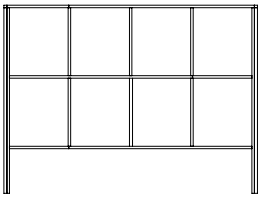
	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20
2.00	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20	7.60	8.00	8.40	8.80	9.20	9.60	10.00	10.40	10.80	11.20	11.60	28.80	30.72
2.20	4.40	4.84	5.28	10.56	6.16	6.60	7.04	7.48	5.28	8.36	8.80	9.24	9.68	10.12	10.56	11.00	11.44	11.88	12.32	12.76	31.68	33.79
2.40	4.80	5.28	5.76	11.52	6.72	7.20	7.68	8.16	5.76	9.12	9.60	10.08	10.56	11.04	11.52	12.00	12.48	12.96	13.44	13.92	34.56	36.86
2.60	5.20	5.72	6.24	12.48	7.28	7.80	8.32	8.84	6.24	9.88	10.40	10.92	11.44	11.96	12.48	13.00	13.52	14.04	14.56	15.08	37.44	39.94
2.80	5.60	6.16	6.72	13.44	7.84	8.40	8.96	9.52	6.72	10.64	11.20	11.76	12.32	12.88	13.44	14.00	14.56	15.12	15.68	16.24	40.32	43.01
3.00	6.00	6.60	7.20	14.40	8.40	9.00	9.60	10.20	7.20	11.40	12.00	12.60	13.20	13.80	14.40	15.00	15.60	16.20	16.80	17.40	43.20	46.08
3.20	6.40	7.04	7.68	15.36	8.96	9.60	10.24	10.88	7.68	12.16	12.80	13.44	14.08	14.72	15.36	16.00	16.64	17.28	17.92	18.56	46.08	49.15
3.40	6.80	7.48	8.16	16.32	9.52	10.20	10.88	11.56	8.16	12.92	13.60	14.28	14.96	15.64	16.32	17.00	17.68	18.36	19.04	19.72	48.96	52.22
3.60	7.20	7.92	8.64	17.28	10.08	10.80	11.52	12.24	8.64	13.68	14.40	15.12	15.84	16.56	17.28	18.00	18.72	19.44	20.16	20.88	51.84	55.30
3.80	7.60	8.36	9.12	18.24	10.64	11.40	12.16	12.92	9.12	14.44	15.20	15.96	16.72	17.48	18.24	19.00	19.76	20.52	21.28	22.04	54.72	58.37
4.00	8.00	8.80	9.60	19.20	11.20	12.00	12.80	13.60	9.60	15.20	16.00	16.80	17.60	18.40	19.20	20.00	20.80	21.60	22.40	23.20	57.60	61.44
4.20	8.40	9.24	10.08	20.16	11.76	12.60	13.44	14.28	10.08	15.96	16.80	17.64	18.48	19.32	20.16	21.00	21.84	22.68	23.52	24.36	60.48	64.51
4.40	8.80	9.68	10.56	21.12	12.32	13.20	14.08	14.96	10.56	16.72	17.60	18.48	19.36	20.24	21.12	22.00	22.88	23.76	24.64	25.52	63.36	67.58
4.60	9.20	10.12	11.04	22.08	12.88	13.80	14.72	15.64	11.04	17.48	18.40	19.32	20.24	21.16	22.08	23.00	23.92	24.84	25.76	26.68	66.24	70.66
4.80	9.60	10.56	11.52	23.04	13.44	14.40	15.36	16.32	11.52	18.24	19.20	20.16	21.12	22.08	23.04	24.00	24.96	25.92	26.88	27.84	69.12	73.73
5.00	10.00	11.00	12.00	24.00	14.00	15.00	16.00	17.00	12.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	72.00	76.80
5.20	10.40	11.44	12.48	24.96	14.56	15.60	16.64	17.68	12.48	19.76	20.80	21.84	22.88	23.92	24.96	26.00	27.04	28.08	29.12	30.16	74.88	79.87
5.40	10.80	11.88	12.96	25.92	15.12	16.20	17.28	18.36	12.96	20.52	21.60	22.68	23.76	24.84	25.92	27.00	28.08	29.16	30.24	31.32	77.76	82.94
5.60	11.20	12.32	13.44	26.88	15.68	16.80	17.92	19.04	13.44	21.28	22.40	23.52	24.64	25.76	26.88	28.00	29.12	30.24	31.36	32.48	80.64	86.02
5.80	11.60	12.76	13.92	27.84	16.24	17.40	18.56	19.72	13.92	22.04	23.20	24.36	25.52	26.68	27.84	29.00	30.16	31.32	32.48	33.64	83.52	89.09
6.00	12.00	13.20	14.40	28.80	16.80	18.00	19.20	20.40	14.40	22.80	24.00	25.20	26.40	27.60	28.80	30.00	31.20	32.40	33.60	34.80	86.40	92.16
6.20	12.40	13.64	14.88	29.76	17.36	18.60	19.84	21.08	14.88	23.56	24.80	26.04	27.28	28.52	29.76	31.00	32.24	33.48	34.72	35.96	89.28	95.23
6.40	12.80	14.08	15.36	30.72	17.92	19.20	20.48	21.76	15.36	24.32	25.60	26.88	28.16	29.44	30.72	32.00	33.28	34.56	35.84	37.12	92.16	98.30
6.60	13.20	14.52	15.84	31.68	18.48	19.80	21.12	22.44	15.84	25.08	26.40	27.72	29.04	30.36	31.68	33.00	34.32	35.64	36.96	38.28	95.04	101.38
6.80	13.60	14.96	16.32	32.64	19.04	20.40	21.76	23.12	16.32	25.84	27.20	28.56	29.92	31.28	32.64	34.00	35.36	36.72	38.08	39.44	97.92	104.45
7.00	14.00	15.40	16.80	33.60	19.60	21.00	22.40	23.80	16.80	26.60	28.00	29.40	30.80	32.20	33.60	35.00	36.40	37.80	39.20	40.60	100.80	107.52
7.20	14.40	15.84	17.28	34.56	20.16	21.60	23.04	24.48	17.28	27.36	28.80	30.24	31.68	33.12	34.56	36.00	37.44	38.88	40.32	41.76	103.68	110.59
7.40	14.80	16.28	17.76	35.52	20.72	22.20	23.68	25.16	17.76	28.12	29.60	31.08	32.56	34.04	35.52	37.00	38.48	39.96	41.44	42.92	106.56	113.66
7.60	15.20	16.72	18.24	36.48	21.28	22.80	24.32	25.84	18.24	28.88	30.40	31.92	33.44	34.96	36.48	38.00	39.52	41.04	42.56	44.08	109.44	116.74
7.80	15.60	17.16	18.72	37.44	21.84	23.40	24.96	26.52	18.72	29.64	31.20	32.76	34.32	35.88	37.44	39.00	40.56	42.12	43.68	45.24	112.32	119.81
8.00	16.00	17.60	19.20	38.40	22.40	24.00	25.60	27.20	19.20	30.40	32.00	33.60	35.20	36.80	38.40	40.00	41.60	43.20	44.80	46.40	115.20	122.88

20m² Shack Design Sample









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