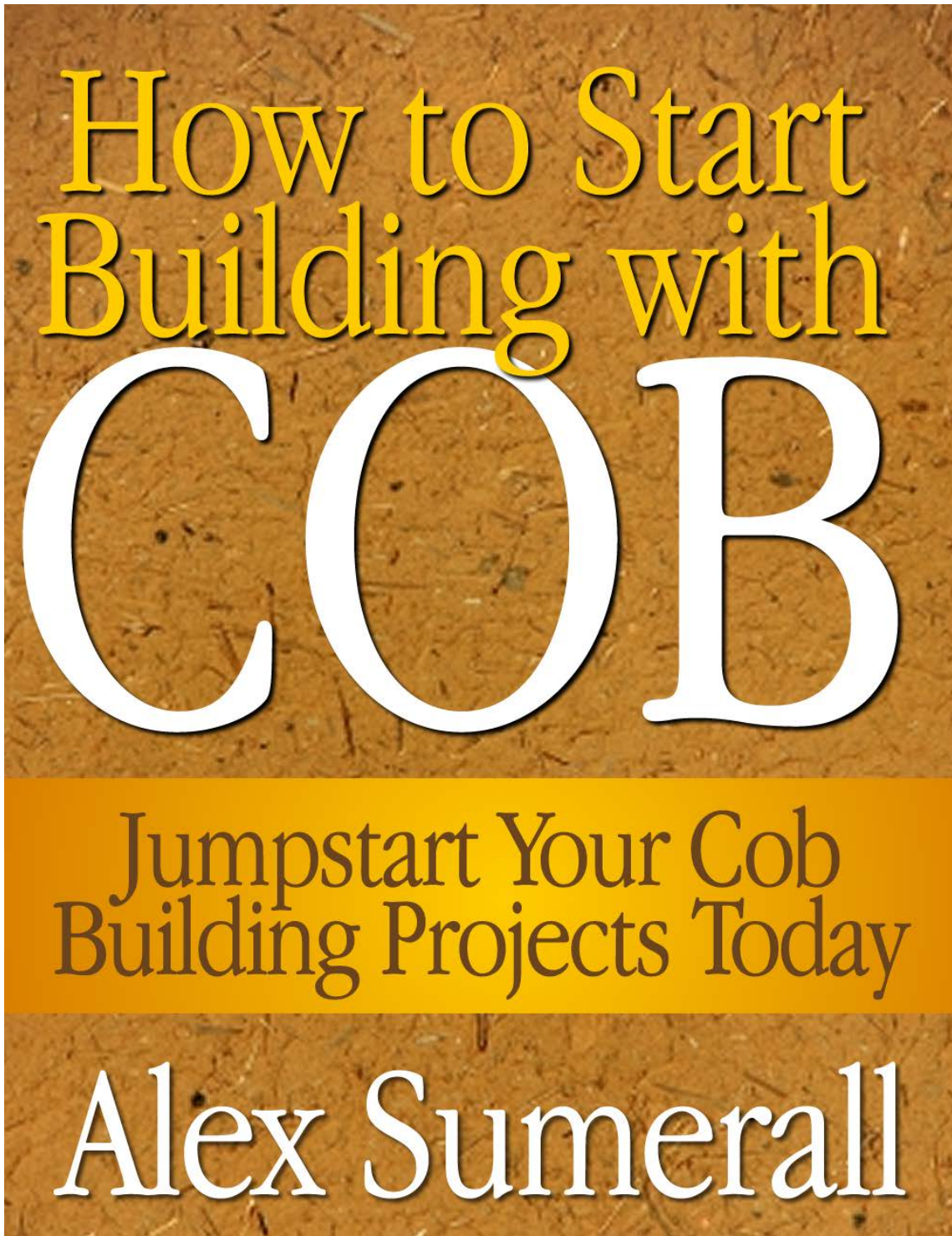


# How to Start Building with Cob

Jumpstart Your Cob Building Projects Today



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## About the Author

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Hi! I'm Alexander Sumerall. I'm a Natural Builder with a vision to take the remarkable building materials of our past and meld them into our modern, conventional building systems. Due to their inherently beneficial properties, I'm a huge proponent of earth-based building materials, such as: cob, rammed earth, and adobe.



After studying accounting in college and then working in advertising and marketing for a number of years, I decided that I needed to follow my passion in life. I started the company, This Cob House, back in 2011 to educate and promote Natural Building and earthen construction techniques to people around the world.

Today, we're reaching tens of thousands of people globally with our information on these natural building techniques, and we're working to bring these methods of building to the mainstream.

Every day I am grateful for what has been bestowed on me with my work. I get to do what I love doing and I get to help people to realize their dreams of having a healthy, environmentally-friendly home.

I've always enjoyed using my hands to build things. I started from a young age building things like Legos, sand castles, and forts. My Dad taught me a lot of building skills and passed on to me what he had learned as a builder and a handyman.

Now as an adult, I'm demonstrating and promoting natural building materials that are more sustainable, energy-efficient, healthy, and environmentally-friendly than our conventional products on the markets. I believe there is going to be a huge change in the way that we build our homes and buildings in the near future.

As the owner of This Cob House, LLC, my goal is to provide you with valuable and actionable information and a roadmap to help you build your own cob home and other cob constructions.

## **So Why Cob and Natural Building?**

Many people are bringing back the ancient arts of building with earth and natural, local resources. As people have begun to look for more "Green", sustainable, or ecological alternatives there has been a growing demand for these types of natural constructions.

I am using materials directly from the earth, they are not processed, they are local, and they are healthy for you and your family. I am going beyond the "Green" standards of building.

By using an earthen material called "Cob", I am building structures that literally breathe and possess a character of their own. Cob is an amazingly functional material and is very pleasing to live with.

# What is Cob?

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Cob is a building material made out of clay-rich soil, aggregate, fiber, and water that is pliable and can be sculpted into walls for buildings. Many people are familiar with a similar building material called “adobe”, which has similarities, but cob does not use bricks or forms as adobe does. Cob is more of a free-form material, and to build with cob is more like sculpting than it is building. Cob has been used and tested for thousands of years all over the world, and has proven to be a very viable building material.

Until recently, cob has been virtually unknown to people in modernized places. About twenty years ago, there were no cob builders in North America. But since the 1980s there has been a revival in cob building as the interest has risen in sustainability and the use of local resources. People all over the world are now learning and reviving this ancient building technique.

This revival is coming at a very opportune time as well. As materials and resources become more scarce, prices are rising and construction is becoming more expensive. Cob and other natural building materials are offering great alternatives to these expensive industrially produced materials. They are generally far less expensive and the materials are normally much more available.

Cob offers answers and solutions to many of the problems that ail our buildings today, and people are very excited and enthusiastic about building homes out of cob. Cob is making a comeback and its even gaining popularity in regions where it doesn't have a past history. Building with cob is not about returning to the past. It's about moving forward to a more sustainable, healthier, and wiser future for building.

## How to Make Cob – Tarp Method

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There are many ways to mix cob. One of the most common and regularly-practiced techniques is called the “tarp method” of cob mixing.

This is one of the most basic and most practical ways of making cob. It is said to have been developed in 1994 by a cobber in North America named Becky Bee.

This can be done by yourself or with one other person. You will need a large tarp and 4 or 5 five gallon buckets. This process can be done solo, but is best done with two people.

1. Get all of your materials close to your building site. Sand, clay subsoil, straw, water, tarp, and buckets.
2. Lay out your tarp on a flat space. This is where you'll be mixing.
3. Put your dry ingredients (clay subsoil and sand) in the middle of your tarp in a pile. Your ratio will always differ depending on where your materials come from. You will probably need to experiment with the first few batches to determine how much clay and sand are needed for a good mix.

Here are some common ratios:

Sand	Clay
2	1
2	2
3	1

4. Now you want to mix the dry materials together on the tarp. Have each person grab two corners of the tarp and both people walk forward to the center of the mix, folding the tarp in half. The dry material should be together in the center of the tarp. Put the tarp back in its starting position and lay it out flat on the ground again. Go to the other end of the tarp and repeat the process of turning the dry materials over. Do this 3-4 times or until the dry materials are mixed thoroughly. Put the dry ingredients back to the center and lay the tarp flat again.



5. Pile up your dry ingredients in the middle of your tarp and dig out a small crater. It will look like a tiny volcano. Add a little bit of water into the volcano crater. Its always best to add too little water than too much! It is a whole lot easier to add more water than to try and fix adding too much. You will have to first experiment to determine how much water you will need in your mix. Sometimes a standard ratio of five parts dry ingredients to one part water will be good. But you can't always stick to this standard. You very well might need more or less. You'll figure out how much water to put through experience. Remember not to add too much water though. It might be easier to mix, but it will not hold up as well when you start building and will slump sometimes. A wet mix of cob can also crack more as it dries. However, if you do add too much water you can either leave the batch to dry out in the sun, add more straw to soak up some excess water, or add more dry ingredients.
6. Use your feet to push the outsides of the dry material into the center of the crater filled with water. Once you cover the water, start stomping on the pile. You can do it by yourself or with others depending on how much room there is on the tarp. Twist your heels into the mixture for the best mixing. You can



also jog or dance on top of it as a mixing technique! The goal is to make sure that all the dry materials are mixed together well and that all the clay and sand are smeared together thoroughly.



7. Next, you will pull the corners of your tarp to fold the mix on top of itself again. Stomp the mix some more, and repeat this a few times until the mix flattens out like a pancake on the tarp. You can add some water to your mix if its hard to get mixed thoroughly together. Just add little bits at a time though. Eventually your whole mix should be forming into what some people call a "burrito" shape when you roll the tarp back and forth. Once it takes this shape you have a good indicator that your cob mix is almost done. At this point you are ready to add straw into the mixture.





8. Stomp on top of the burrito of cob mixture until its flattened again. Take some handfuls of straw and sprinkle it over the flattened mix. Again start to stomp the cob mixture until all of the straw has been covered and smeared with cob. Use the tarp to gather the mix up and turn it over again. Stomp



some more until flat. Add more straw and repeat the process. There is no exact amount of straw to use, but one good ratio that people tend to use is one part compressed straw to five parts of dry ingredients. Keep repeating the process until all of the straw is thoroughly distributed and mixed into the cob. You've just made cob!









# Beginner Cob Projects

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Lots of people envision building their own cob house or cottage one day. Some people hire an experienced cob builder, but most of the time they build it themselves.

Building with cob is so much easier than modern conventional building. If you can build a sand castle then you can build a cob house! Well, okay... It's not that easy, but you get the point I think.

Anyway, we all need to start learning somewhere. Here are a few cob projects to get you started. This is what I tell people to do when they don't know where to begin.

Stop feeling intimidated about building something you've never done before. Just find your motivation and the will to move your thought into action, and I guarantee that you will surprise yourself at what you can create and achieve.

There is no specific order to do these projects in, and you don't have to do them all. They all rely upon the same basic concepts and skills. Just choose the one that sounds best for you.

## Cob Oven

Building a cob oven is a great idea for a first project using cob. There are some more technical details that have to be paid attention to compared to the other projects that are listed below, but there is far less cob that has to be mixed overall.

Building a cob oven will let you get your hands dirty by learning how to make cob, a rubble trench foundation, and a stem wall. These are the same three components of any cob wall that would be used for a cob house.

With a cob oven you will also learn how to make insulation mixes, oven mud, and natural plaster (either lime plaster or earthen plaster).

## Cob Bench

A cob bench is a great starter project for new cob builders. Imagine building a couch out of cob. You can build as big or as small as you want it though, and you can mold it however you want it to look like.

Building a cob bench will teach you the basics of cob building. You will learn how to make cob, how to make a rubble trench foundation, how to build a stem wall, and how to finish with plaster.

If you can build a cob bench then you can easily build a cob wall for a house. The same concepts apply.



## Cob Garden Wall

A garden wall is a good project to begin cobbing with too. You will learn how to dig and construct a rubble trench foundation, set a stem wall foundation, mix and apply cob, and to finish with natural plaster. You can also add roofing onto the top of the wall if you want. This is recommended in wet climates.





A cob garden wall can be as long and as high as you want it to be. There are all kinds of places that you could build one. Spruce up your garden or your yard with one.

## **Cob Dog House or Play House**

Another good project you may want to start with is a cob dog house or cob playhouse for children. This project is more advanced than the other ones I listed, but it's definitely doable if you're motivated to take the extra steps.

The concepts from the other projects apply here once again.

For this project you will experience:

- How to make cob and build walls
- How to make a rubble trench
- How to make a stem wall foundation
- How to finish with natural plaster
- How to add windows and doors
- How to construct and attach a roof

## Want to Learn More? Get Over 9 Hours of Video Lessons

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One of the first recommendations that I make to anyone who is interested in building a cob house is to **get some training**. Whether you will be physically building the house yourself or having someone else do the construction, knowing the details of cob building will guarantee you a **better design** and **fewer mistakes** along the way. And in building, mistakes cost you a lot of money and time so they are best to be avoided when possible.

I recommend that people get as much training and understanding as possible before taking on a large building project. Its best to take a comprehensive cob workshop and any additional Natural Building workshops to supplement the experience.

However, I also understand that getting training can be difficult for a lot of reasons. Most people who want to take cob workshops and get the skills they need to design and build their own cob house tend to run into **three main problems**.

- Workshops are **too expensive** and not affordable for the value gained
- **Not enough time** available, and no time to be away from work
- Workshops are **too far away** and the travel time and costs add to the burden

These three things are preventing a lot of interested people from participating in cob workshops, but I'm going to give you my solution to these problems right here and right now.

I've created an exclusive online classroom where you can log in and have a virtual workshop learning experience from the comfort and convenience of your own home. You will receive **over 9 hours of video lessons** included with this course. The program is self-study and you can learn at your own pace without any stress of travel or deadlines.



If you enjoyed reading this book and you want to take your learning to the next step, then I recommend joining our online cob workshop classroom.

[Click here to learn more.](#)

Everything that you have read about in this book will be covered in detail in the video course as well as many more great topics to further your understanding of cob and Natural Building.

**You will learn all of these fundamentals of building cob homes:**

- Introduction to Cob and Natural Building
- Selecting a Building Site
- Designing Your Cob House
- Thermal Mass and Insulation
- Passive Solar Design
- Passive Cooling
- Hybrid Building Systems
- Cob Ingredients – Soil, Sand, and Straw
- Testing and Selecting Soil
- Site Preparation
- Foundations – Basic Principles
- Rubble Trench Foundations
- How to Make Cob – Tarp Method
- Analyzing Cob Test Bricks
- Mixing Cob with a Tractor
- Cob Mixing – Problem and Solution
- Building Cob Walls – Properties and Dynamics
- Building Cob Walls – The 4 Step Method
- Windows and Doors
- Roofing
- Natural Finishes
- Installing Utility Lines – Electricity and Water

**And you will get all of these other interesting lessons in the course:**

- How to Build a Traditional Stone Foundation
- How to Square Your Site For Building (Using The Pythagorean Theorem)
- Tools to Build a Cob House
- Stone Masonry Tools and How to Collect Stones
- How to Lay Out a Round Foundation
- How to Build Cob Archways
- Building Codes and Permitting
- How to Build On a Timetable

- How to Trim Cob Walls
- How to Make and Apply Earthen Plaster
- How to Integrate Cob and Straw Bale Walls
- How to Place and Brace Door & Window Frames
- Building Multiple Story Cob Buildings
- How to Attach Roofing to Cob Walls
- How to Host Your Own Cob Workshop
- Plaster and Finishing Tools
- Introduction to 3D Design with SketchUp
- How to Perform a Cob Toss
- Earth Building Materials Overview
- Introduction to Living Roofs
- Straw Alternatives and Mechanized Cob Mixing
- Concrete Bond Beams
- How to Mix and Apply Lime Plaster
- How to Mix and Apply Tadelakt (Moroccan Waterproof Finish)
- How to Protect a Cob House From Moisture
- How to Do a Basement For a Cob House
- How to Build the Roof Before the Cob Walls
- How to Find and Work with Architects and Subcontractors
- Natural Builder's Property Purchase Checklist

The online course has been made **very affordable** and **convenient** for you to enjoy and experience. Take the next step in your cob building education today.

[Click here now to get all the course details.](#)

Happy Cobbing!

*Alexander Sumerall*

*Owner/Founder*

*This Cob House, LLC*