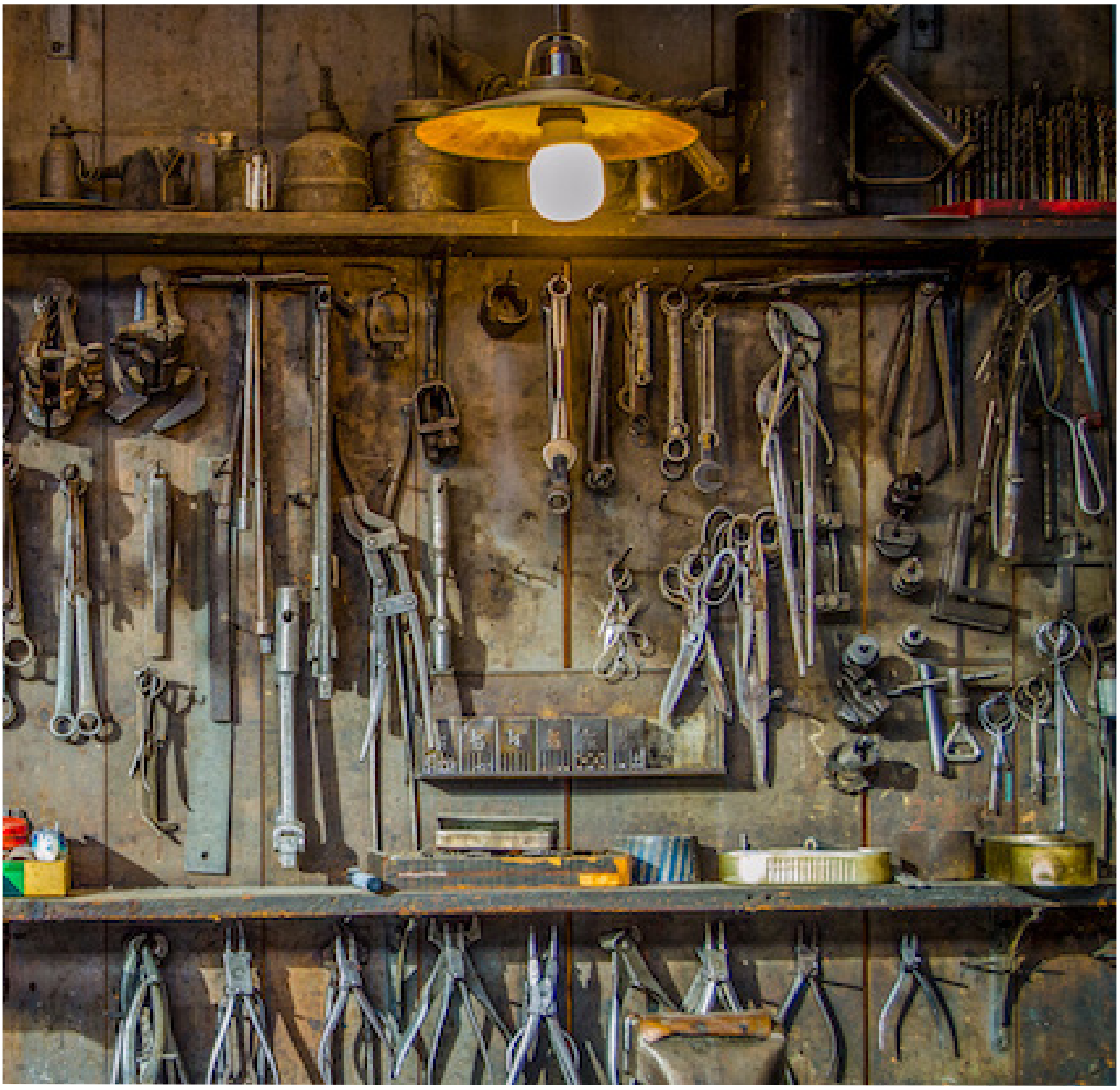
HOW TO TURN YOUR SHED INTO A WORKSHOP



A free guide from

WALTONS
EST. 1878

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*Even this **£184.95**, compact 6' x 4' wooden shed can be converted into a workshop.*

*For **£599.95**, you can have 100 square feet of space and double-door access with a 10' x 10' shed.*

Whatever shed you convert, follow this guide to make your workshop your perfect space.

SUMMARY

Whatever you'll use your workshop for, make sure it's damp-free, warm, well-organised and secure.

Having a dedicated workshop at home is the dream of many a hobbyist and professional alike, and with this guide you can make it a reality.

A garden shed is the ideal place for a workshop. With a solid base, damp-proofing, power and heating, the garden shed can be transformed into a safe, warm and dry workshop fit for any metalworker, carpenter, mechanic or tinkerer.

Details follow, but first here's a summary of our step-by-step guide to converting an existing or new garden shed into your own fully-equipped workshop:

Sheds for converting to workshops don't come much better than this Waltons 20' x 10' shed for ***£949.95****.*

1. Start planning. Create two lists: one detailing what you will **Use** your workshop for; the other listing your subsequent **Requirements**.
2. Plan your workshop's layout and size, based on your requirements, budget and available space.
3. Assess the state of any current shed and the site you want to use.
4. Make a job list showing who will do what and when, including what work, eg, plumbing and electricity, needs professional help.
5. Start the conversion with damp-proofing.
6. Insulate walls, floor, and ceiling. Cover with ply, plasterboard or tongue and groove.
7. Install electricity via mains, solar or wind power.
8. Install lighting, choosing from fluorescent, halogen, LED or lamps.
9. Install heating, choosing from tube heaters, under floor, portable radiators, convection heaters and wood stoves.
10. Connect your shed to the internet via WiFi, mobile tethering, or powerline adapters.
11. Connect to running water via the mains or a water butt.
12. Make your shed secure.
13. Install your chosen storage. Then move in equipment and tools.
14. Decorate to your personal taste.

PLANNING

Planning is the most important phase of converting your shed into a workshop.

1) Uses and Requirements

First decide what you want to use your workshop for and what those uses mean you'll need.
Make two lists, one each for:

- **Uses** - what you will do in your shed.
- **Requirements** - what those uses require.

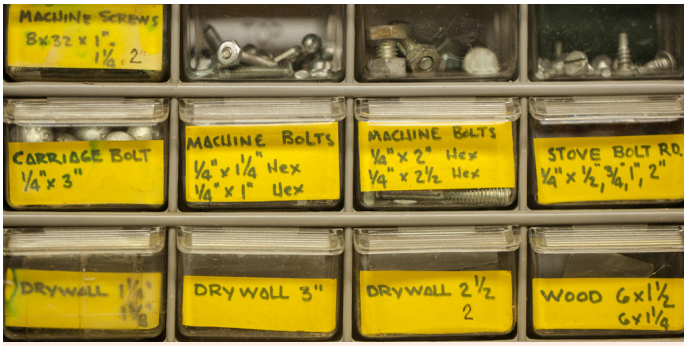
For example, if you plan to use your workshop for painting or treating materials with chemicals, then you require ventilation. So, either windows that open, or a ventilation fan or shaft.

Once you've finished your list of Uses, consider the following things for your Requirements:

- Furniture, storage and accessories
- Utilities
- Design
- Base
- Position
- Access
- Ventilation
- Aspect

Some advice on each of those follows.

Furniture, storage, and accessories



Efficient storage is essential to make the most of the space in a small shed workshop.

Once you know what you're going to use your workshop for, your related requirements can easily follow. For example, if you're a woodworker and you want to finish and dry your projects (a Use) then you need a separate, dust-free area to do so (a Requirement).

If you're going to rebuild scooters (Use), then you'll need a strong workbench of a certain size (Requirement). You'll also need storage space (Requirement) for the matching tools and accessories, including any equipment needed to hold and lift the engines.

PLANNING CONTINUED

Think about how you'll use the space. What kind of seating do you need to work? Do you also want a separate chair to relax in? A fridge for food and drinks? Don't be afraid of adding too much during early planning, as you can drop anything you like when you're working on your layout.

Once you've listed all your required furniture, tools and storage devices, ask yourself (and list the answers):

- How and where do you want to store everything?
- How might the items on your Requirements list affect each other?

For example, should your workbench be near your tools and the window? Do you want power sockets at the level of your workbench and on the side of your dominant hand so you can easily reach them? E.g. to the right of your work area if you are right-handed.

Utilities

Electricity must be installed by a professional with cables laid in a 50cm deep trough.

Electricity and heating are likely to be workshop necessities. Calculate how many power sockets you'll need, allowing for electric heaters and free standing lamps.

Do you want exterior power sockets? Welding and angle grinding will be a fire risk indoors so you'll need an outdoor covered hard standing and might want external power sockets for that.

What kind of lighting will your work require?

Will you need internet access, water or even gas?

See more on these utilities in the Conversion section below.

Design

Considering the weight and requirements of a workshop and its equipment, a wooden shed is likely your best choice. With a wooden shed, you can install a strong concrete base and thoroughly insulate and weather-proof it for long-term use. Also, it's easy to make alterations, for example, adding extra windows, or enlarging doors.

Plastic sheds are durable, but only suitable if your work will be as lightweight as the shed.

Metal sheds are strong, but prone to condensation which could harm your tools and be uncomfortable to work in.

Wooden sheds can have overlap or tongue and groove cladding. Overlap is cheaper, but tongue and groove tends to be sturdier, and be more weather-resistant. For more detail on different types of wooden sheds see the main Waltons range.

If you need plenty of shelving space, consider opting for an apex shed. Its peaked roof gives you more height, and they look great.

But if you're going to position your shed in a narrow space, or against a fence or building, consider a pent shed, which has a slanted roof. Just make sure to leave enough room to move around it for construction, maintenance and damp protection.

If you need access into the shed for large equipment or materials then you'll likely want double doors. Similarly, check you have all access you need through your property to the shed.

PLANNING CONTINUED

Shed base

A stable strong workbench needs a matching strong, flat concrete base under the floor it sits on.

Heavy duty work and hefty equipment like lathes and milling machines need a perfectly level floor and a strong, full concrete base.

Position

Make sure your shed's position allows your required access, light and space for digging foundations.

Where do you have space for a shed in your garden? What's the largest size shed that will fit and your budget can afford? Allow for at least an extra two inches to dig for the base. Take this size to the following layout stage.

Take a look around the proposed location.

Are there any trees that could inhibit light or access now or in the future? Is there anything that might obstruct natural light, like a fence or overhanging branches?

Keep enough space between the shed and any walls, fences or vegetation to let air pass through and reduce damp inside.

The further away from your main house the more peaceful your workshop. But it will cost more to lay cables for electricity and connect other utilities. And if you need an Internet connection, you might lose your house's WiFi connection and need a new and more expensive way to get online.

Ventilation

Ventilation can help avoid damp and stop any toxic fumes from your work harming you.

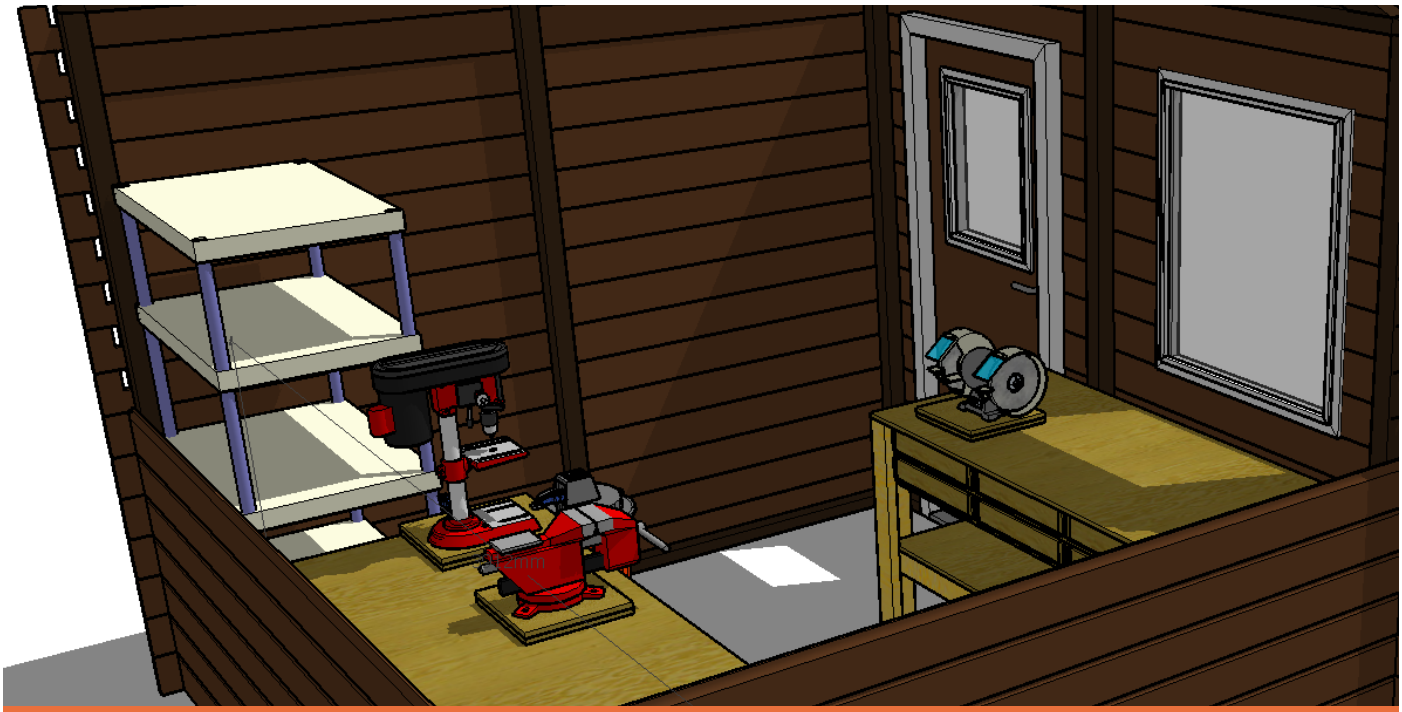
To help keep damp at bay you'll want some form of permanent or trickle ventilation. If working with paints or solvent-based products, you'll need extra ventilation, or at the very least, windows that open.

If the storage and shelving on the walls mean those windows are too small, consider installing a skylight or an extractor fan.

Aspect

Decide what direction you want your workshop, doors and any windows to face. Think about how to get the most of the type of light you want.

While south-facing windows offer direct sunlight, indirect light from the north casts fewer shadows, making it easier to see what you're doing. This is why artists' studios face north. Also, think about the view both from the shed and from your home.



You can plan your workshop's layout with free online tools like Sketchup, used to create this image

2) Plan Layout and Size

Now plan your workshop's layout, working with your list of Requirements.

Plan both where everything goes and, most importantly, what size shed you need. Here are three different methods to help:

- **Paper**. Go analogue with scale drawings of different size sheds and cut-out workbenches, shelves, furniture, etc.
- **Google Drawings**. Use Google's free software to create those scale versions of different sheds and wanted contents.
- **Room Planning Software**. There are plenty of free online room planners that let you set room size, create and position scale furniture and equipment. Try Floor Planner or Sketchup (used to create the example layouts below), which also offer the options of working in 2D and 3D views.

As well as trying different size sheds, you can also experiment with moving windows, doors, and even rooms (if you're planning to build some).

Be sure to leave yourself enough room to move around and work.

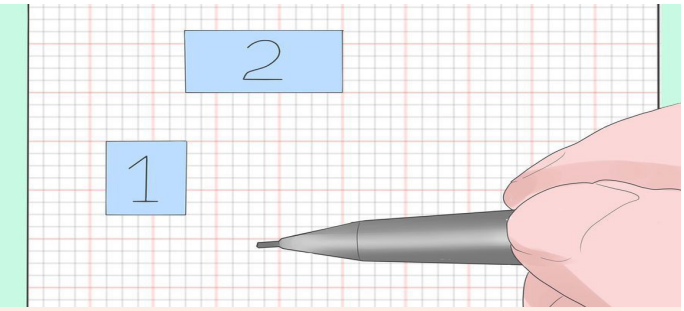
If your Requirements don't fit in a chosen shed size, then trim that list or try with a bigger shed.

PLANNING PERMISSION

If a new shed is over a certain size you may require planning permission. Check with your local Planning Authority what that size is.

Over the next few pages are three example workshop layouts (made with Sketchup) for these size sheds:

- Small (6ft x 4ft)
- Medium (10ft x10ft)
- Large (16ft x10ft)

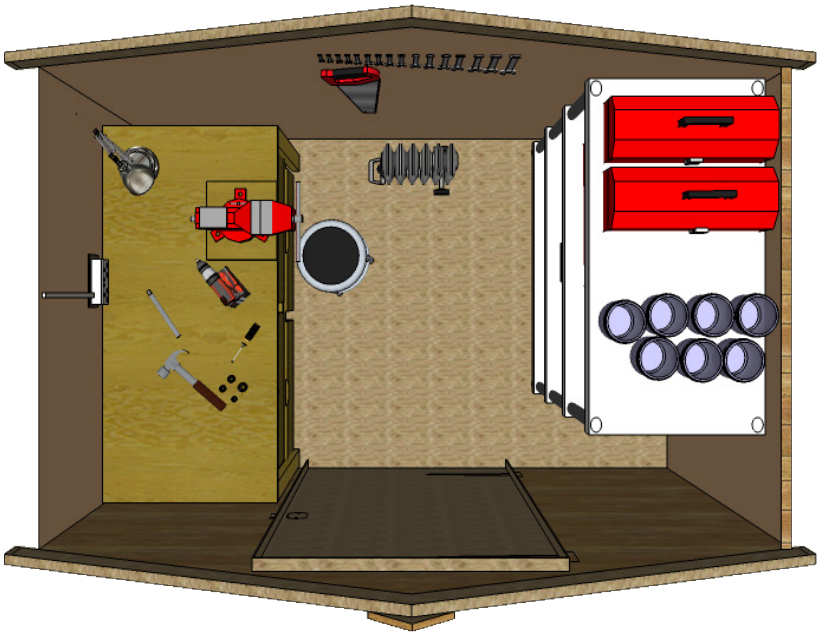


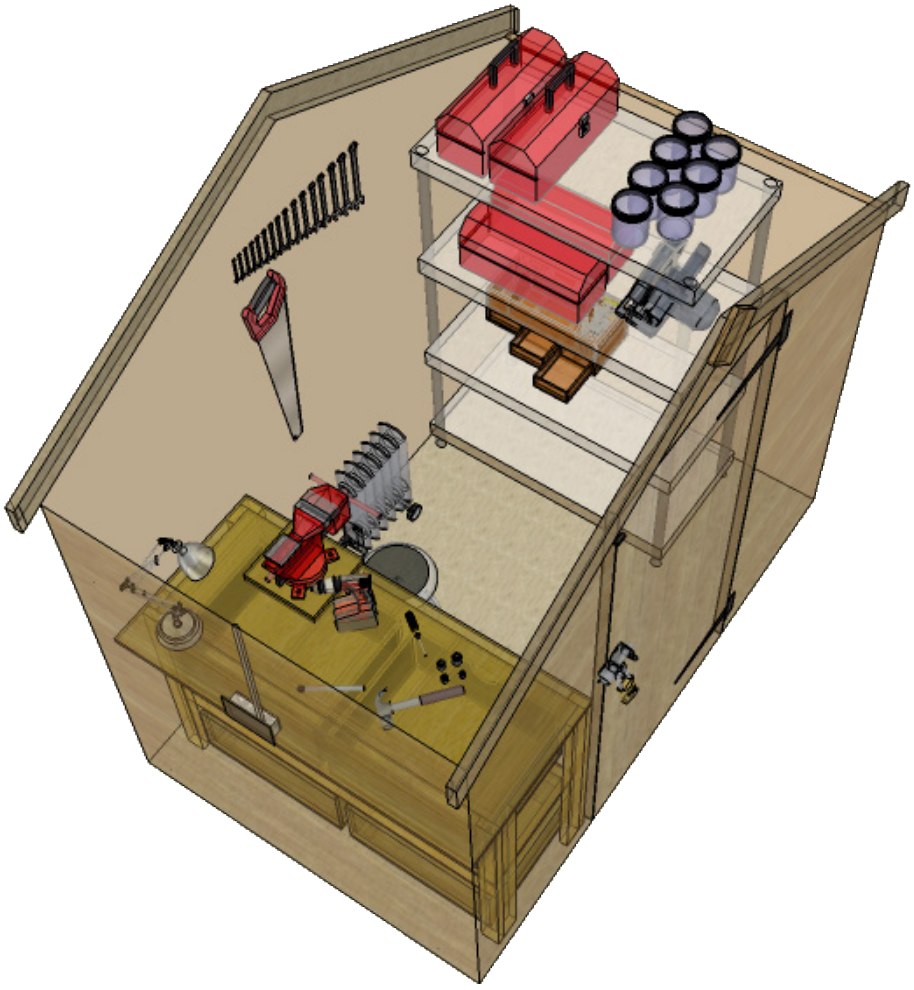
You can plan your layout on paper with a scaled drawings and cut outs. Image: Wikiphoto, CC license

1. Small

6ft x 4ft Workshop

Even a small 6'x4' shed provides enough space for a workbench, heater and shelving for storage.

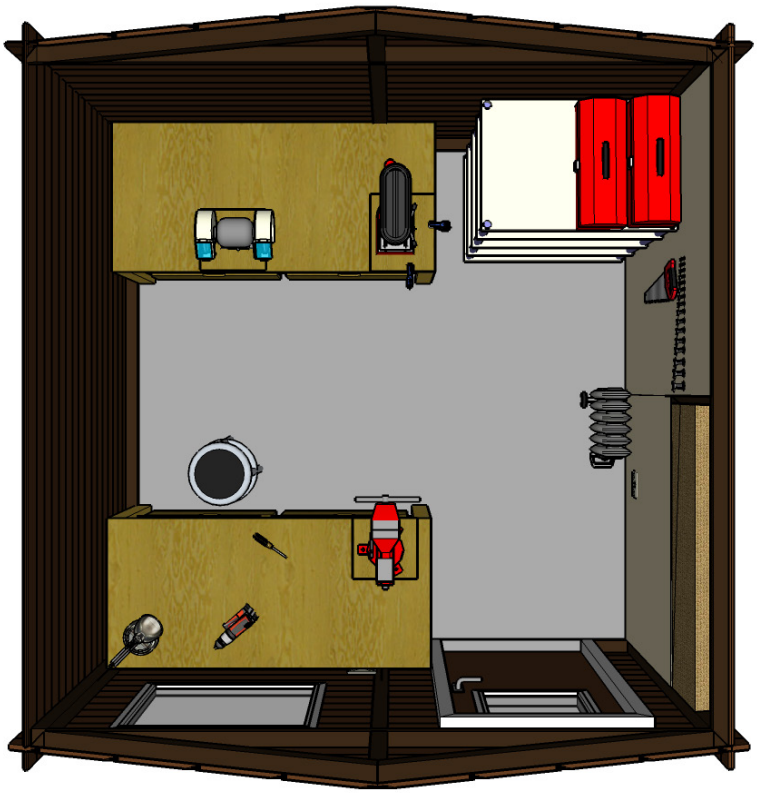




2. Medium

10ft x 10ft workshop

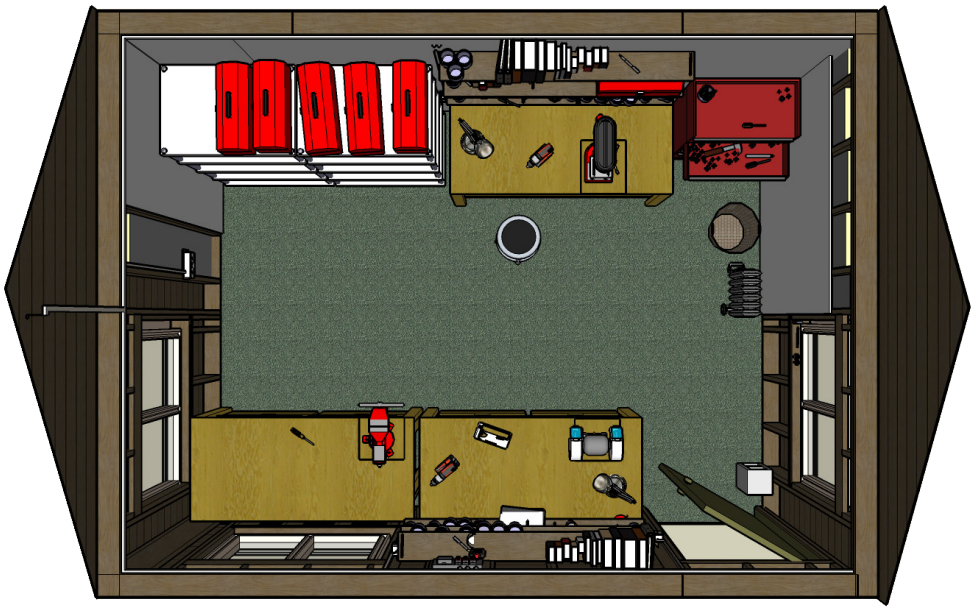
A 10' x 10' workshop allows you to have two workbenches, as shown here, more storage or luxuries like a fridge and furniture to relax on.

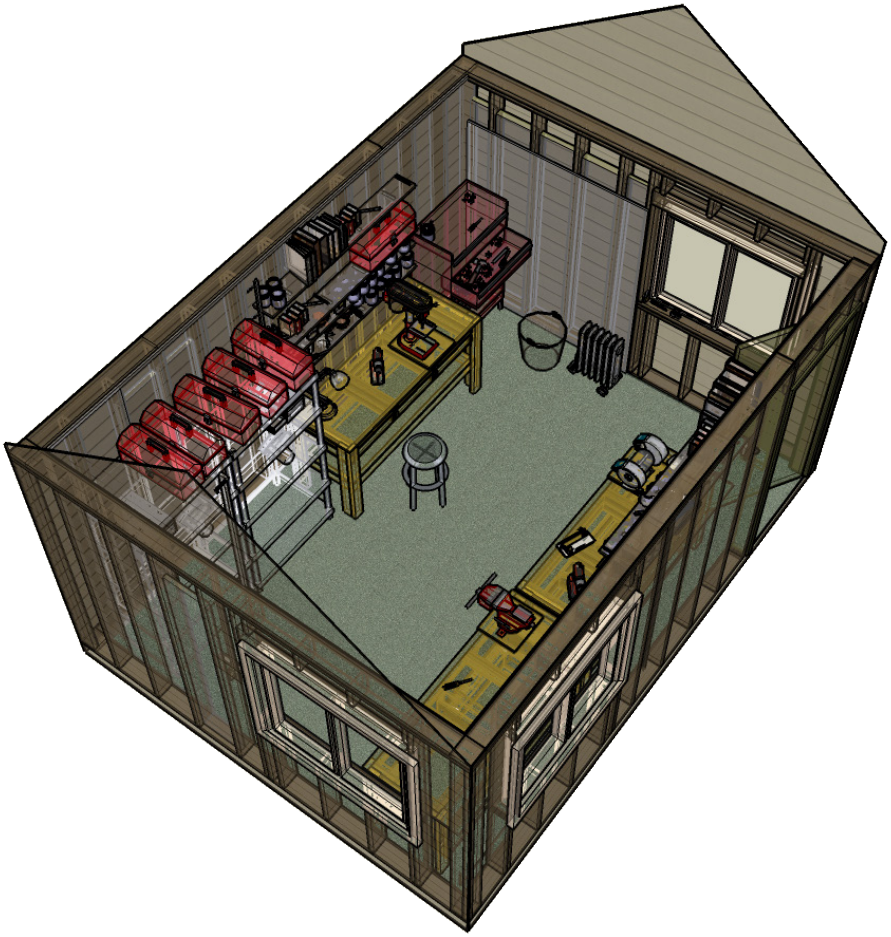


3. Large

16ft x 10ft workshop

In this layout, with an enormous 160 square ft, we've kept lots of space for moving around three workbenches and oodles of storage.





3) Assess the State of your Shed

If converting an existing shed, deal with all maintenance issues before starting

Now you know exactly what type and size of shed you want, it's time to find out whether any existing shed you have is up to the job.

Empty your shed. Check for damage, rotten wood, water ingress and subsidence.
Do the windows and doors work properly?
Is the roofing felt intact? Is every join watertight and secure?

If you're keeping the shed, then deal with all the maintenance issues before your conversion.

What are any existing foundations like?
A gravel or timber base may not be strong enough for a workshop, and will more than likely need to be replaced with a concrete floor.

If you think you're going to have to move your shed, then take a good look at your possible new site. To be really sure your base will be stable, you can consult a builder but you should be able to DIY.

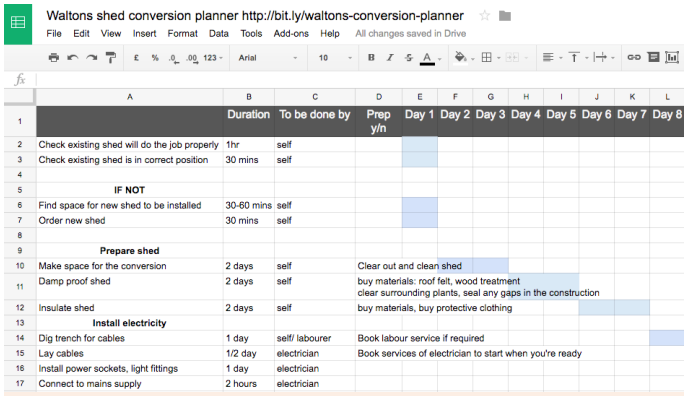
Ideally, it will be on level ground. This will save you a considerable amount of work. But if a slight slope is unavoidable, you can use timber and bricks to shore up one side. Or cut into the slope, building a retaining wall at the back.

4) Make a Job List

Now it's time for some project management. If you don't have access to or experience using project management tools, here's a simple DIY version:

- Create a spreadsheet and write a list of every job that needs doing. You'll have at least one job for each of your Requirements.
- Add columns for:
  - How long each job might take.
  - Who's doing the job. E.g. you, a professional.
- Put the jobs in the rough order that you think they need to be done.
- Add and label columns for:
  - Preparation
  - Day 1 (conversion starts), day 2, day 3, etc, up to however many you need.
- For each job, shade the cells of the days you'll work on it.
- Jobs that need doing before work on the shed starts should be marked as such in the 'prep' column. Eg, 'Buy new shed'.
- When you know the date that work will start, swap for 'day 1' and 'day 2' etc.

You can now track progress, make sure supplies for particular jobs are available on time, and book the electrician and plumber for the right days. There's an example of such a spreadsheet planner at http://bit.ly/waltons-conversion-planner that you can copy and use.


Waltons shed conversion planner http://bit.ly/waltons-conversion-planner

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	A	B	C	D	E	F	G	H	I	J	K	L
1		Duration	To be done by	Prep y/n	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8
2	Check existing shed will do the job properly	1hr	self									
3	Check existing shed is in correct position	30 mins	self									
4												
5	**IF NOT**											
6	Find space for new shed to be installed	30-60 mins	self									
7	Order new shed	30 mins	self									
8												
9	**Prepare shed**											
10	Make space for the conversion	2 days	self	Clear out and clean shed								
11	Damp proof shed	2 days	self	buy materials: roof felt, wood treatment clear surrounding plants, seal any gaps in the construction								
12	Insulate shed	2 days	self	buy materials, buy protective clothing								
13	**Install electricity**											
14	Dig trench for cables	1 day	self/ labourer	Book labour service if required								
15	Lay cables	1/2 day	electrician	Book services of electrician to start when you're ready								
16	Install power sockets, light fittings	1 day	electrician									
17	Connect to mains supply	2 hours	electrician									

You can project manage your conversion in a DIY Google spreadsheet

CONVERTING

Check the state of your shed's roofing felt and fix any problems before starting your conversion

5) Damp-proofing

Damp, which leads to mould, is your shed's enemy. It's primarily caused by leaks, bad ventilation, poor air circulation, rising damp and condensation (when the air cools below the 'dew point' and the moisture it contains forms into water drops).

Consider these simple measures to help prevent damp:

- Make sure air can circulate around the outside of your shed. Cut back vegetation as required.
- Fix all leaks in the roof and walls.
- Install a damp-proof membrane if you have a solid concrete base
- Insulate walls, floor and roof.
- Apply an insulating vapour barrier (or
- breathable membrane) to walls.
- Install permanent and trickle ventilation so air can circulate.
- Keep furniture away from outside walls as much as possible.
- Apply wood preservative.
- Install heating (see below for more details).

If damp remains a problem, use a dehumidifier.

6) Insulation

Foam insulation boards can be expensive but highly thermally efficient in walls and floors.

Insulating your shed will help keep your workshop warm and protected against damp.

It can provide some soundproofing as well. This is useful if you'll be working with loud machinery that could disturb family or neighbours.

Try to insulate the walls, floor, and ceiling. Cover your insulation with ply, plasterboard or tongue and groove.

CONVERTING CONTINUED

Here are some of your options for insulating your shed:

Walls Here are your options:

- Foil-coated bubble wrap or 'bubble foil' might be the cheapest and simplest form of insulation but it's best avoided. Its insulation abilities are low and the reflective qualities of the foil can only work if it's air-facing, which it wont be. Move on...
- Glass and mineral wool (also known as fibreglass or rockwool respectively) comes in rolls, offers good thermal insulation and soundproofing. When installing, cover your eyes, mouth and nose properly, and wear gloves.
- Foam insulation boards, eg, from Kingspan and Celotex, are expensive, but highly thermally efficient. They can be used for floors or walls. Each board must be cut to size to allow for sockets and wiring.

Floor. Foam insulation boards are good, but if you're renovating an existing shed, a breathable membrane topped with a rug or a carpet off-cut is an affordable make-do measure.

Ceiling. Here are two options:

- Natural and sustainable insulation, like sheep's wool or hemp, is flexible and easy to install. It's are also breathable which can help prevent damp.
- Glass and mineral wool, as suggested for walls.

Be sure to leave a gap between the insulation and the roof to let air circulate and moisture escape.

7) Electricity

If connecting to the mains, your shed will get its own fusebox. Always use a qualified electrician.

It's best to leave installing electricity to a registered professional. Even if you're confident of your skills, you'll still need to get your work signed off by a pro for your insurance to be valid.

Help your electrician by having the following ready:

- Fuse box location.
- Number and location of required power sockets, inside and out.
- A list of the equipment you'll be running.
- A clear path for a trench for the mains cable from your house to the shed.

You'll need a 50cm deep trench from your house to the shed to run the wiring required for mains electricity.

If your electricity needs are light, you could consider solar or wind power which could save money. For example, if you're setting up a jewellery or carpentry workshop that relies largely on hand-crafting, rather than heavy machinery.

Power from the sun and wind is less reliable than mains electricity of course, especially during the winter months when you need light the most. The answer is a storage battery, a charge controller and (if you need 240V) an inverter. They'll need some space so make sure you have it spare. For more help on going off-grid, see: http://bit.ly/WALTONSoffgrid.

Good lighting is essential for a workshop. A flourescent strip is energy efficient and cheap to run.

8) Lighting

The right lighting will help you work in the evening and on dull days. Choose from:

- **Fluorescent overheads.** Useful if you want bright light spread across your whole workshop. Also fairly cheap and and energy efficient.
- **Halogen.** Bright, good for detailed and delicate projects as they work well with spotlights and moving track lights, which can be redirected.
- **LED lighting**. Versatile, cheap to run, and essential for a 12V system. A popular choice for those working on machinery.
- **Lamps.** Cheap and flexible, but take up floor or bench space and might not be bright enough.

9) Heating

Properly heating your workshop will ensure that it's a comfortable place to work into the night and year-round. It will also help stop your tools and equipment from degrading or rusting from damp.

If your shed is well-insulated, it shouldn't cost too much to keep the space above the dew point, the point at which moisture condenses on cool surfaces.

Heating your workshop can be easy and cost-efficient. Either install permanent heating in your shed, or use heaters that can be moved around.

A 12 volt LED lighting system works well with wind or solar driven power.

Halogen heaters are cheap and efficient to run.

To get the internet in your workshop, try your house wifi and tethering on your mobile before installing a new network.

Here are several heating options to consider:

- **Tube heater.** Thin, tube-like heaters that are simply plugged into a wall socket. Take up little space, safe and cheap to run.
- **Underfloor heating.** Maintains a steady temperature evenly across a shed. Often requires less energy than standalone heaters, but is more expensive to install. Any maintenance issues may require the floor to be pulled up.
- **Electric heater or portable radiator:** Safe, and good for a quick blast of heat, but they are not efficient. The heat may not extend to all parts of the workshop leaving some areas (and equipment) at risk of damp.
- **Electric radiator.** Safe, convenient and cheap to run, especially with a thermostat. However, they are wall-mounted and so take up precious space.
- **Halogen heater.** Cheap to run, and highly efficient heating. Can be placed wherever there's a power supply within reach.
- **Electric convection heater.** Either freestanding or wall-mounted, cost-effective to install and maintain. Can feature thermostats and timers (like any plug in heater).
- **Wood stove.** Needs a qualified professional to install. Thorough fireproofing of the surrounding area and flue and vent will raise costs. Needs a lot of space, but is a great source of heat. Can be carbon-neutral.

Avoid portable gas or paraffin heaters. They give out a lot of heat but can also cause moisture problems, making the windows and walls stream with condensation.

10) Internet

Here are some different ways to connect your workshop to the internet:

- **Home WiFi** if the signal is strong enough. The further you are from the house, the weaker the signal will become.
- **Tether** your mobile phone to your laptop, which then uses your mobile's signal and data.
- **WiFi Extender** to boost an existing WiFi signal and extend its reach up to 30 metres.
- **Powerline Adapter** to create a secondary network, built on your home's existing network. This works via your home's mains electric circuits, and needs your mains electricity to extend to your workshop. Once set up, an adapter plugged into a socket in your shed is the source of the new WiFi signal.

11) Water

If you need running water, before committing to a mains supply consider using a water butt.

Piping water to your workshop is relatively straightforward and you have two ways of doing it:

- The mains and new water pipes.
- A water butt and guttering.

If you're using mains water, you'll need to dig a trench to the shed to lay the water pipes. They need to be installed below the frost line and, where they surface, be properly insulated from the cold. A plumber will advise but as a guide, service pipes need to be dug to a minimum depth of 75cm.

While similar to the trench needed for the electrical wiring, the two must be separate and at a distance from each other. The waste water pipe can run in the same trench as the mains water pipe.

If you don't want to install plumbing, and don't want drinking water, then consider using a water butt instead. Some simple plastic guttering can collect the water from the roof of your shed. It's easy to install, and many water butts come as a kit with a base, tap assembly and downpipe diverter included.

12) Security

Protect your workshop, your tools and your shed with sturdy locks and windows to prevent theft.

Leaving your tools and equipment in a shed at the bottom of the garden could make you a target for thieves. No shed will be 100% secure, but the following measures will keep your valuables safe from most thieves:

- **Garden.** Make the garden difficult to get into and most opportunistic thieves will be put off.
- **Windows.** Laminated glass won't smash if someone hits it with a hammer or brick. Smaller, or no, windows mean less can be seen.
- **Hide.** Curtains or blinds hide your valuables and help avoid opportunistic break-ins. Put tools in hidden secure boxes; lock bikes to metal rings fixed to the floor.
- **Door.** A standard shed door is no match for a determined burglar. Consider a more secure framed door which allows a mortice or Yale lock. You might reinforce the door with sheet metal, especially the area behind the lock.
- **Lock.** Rim locks are more secure than a hasp and staple or pad bolt. Beware: using many locks can signal the presence of valuables.
- **Bolts.** Coach bolts with rounded heads make it hard for thieves to unscrew hasp and staples, lock pads and door hinges.
- **Alarm.** Wire your workshop into your home burglar alarm, or install an independent system.
- **Security lights.** Motion-sensitive, bright outdoor lights can put off would-be thieves and help you in the dark.

Lastly, make sure your shed contents are insured.

13) Storage

Avoid clutter by making sure you have enough storage for tools and materials.

Smart storage will both make work easier and minimise the size of shed you need. Here are some storage ideas to consider:

- Shelves on walls and in corners.
- Overhead storage racks.
- Wall hooks. Keep your most frequently used tools close to hand.
- Hooks on the ends of shelf units, cupboards, and your workstations.
- Wall-mounted pegboards. Can hold individual tools and shelves.
- Pegboard slides. Slide out vertically from under your desk or workbench.
- Magnetic toolbar. Works well for small items like drill bits, nails, and screws, as well as bigger tools.
- Large lockable cupboard. Can keep expensive or dangerous tools out of sight and reach. Wall mount to create space underneath, e.g. for a radiator.
- Clear, stackable plastic storage boxes. Cheap, flexible, keep everything dry, while also allowing you to see what's in each box.

14) Decoration

Protect the outside of your shed by decorating with wood-preserving paint.

A coat of white paint inside is a good starting point for decorating a workshop, as it makes it easier to see your work and reflects the light, making the most of your lighting. But make sure the outside is also protected with a couple of coats of wood treatment or paint.

On the walls, hang pictures that inspire you, whether they're professional diagrams or movie posters. For a practical decoration, consider a bulletin board or whiteboard, both ideal for notes, reminders and working out ideas.

If you'll be standing up for a long time then install anti-fatigue mats. Or consider using a rug (or carpet remnant), which will double as both decoration and an added layer of floor insulation.

Get high quality tongue and groove with this 10x8 ft 'Tradesman' Double Door Apex Wooden Shed at **£589.95**.

MORE HELP

Make sure you have everything you need to complete your conversion before you start.

You should now be able to tackle the conversion of a new or existing shed into a workshop.

Be sure to use professionals or electricity and plumbing to make sure your project conforms to building regulations.

Resources

Find more help with your conversion here:

Waltons help pages
Waltons blog

And join us on social media:

For new sheds

Visit waltons.co.uk if your existing shed isn't up to your conversion or you want a new shed.

Prices shown are correct at time of publication. For latest prices visit waltons.co.uk.

Any modification to a new Waltons shed can void your warranty.

Pressure-treated wood like on this 10' x 7' from Waltons **(£549.95)** *needs no yearly maintenance.*

This large 15' x 10' workshop **(£749.95)** *has double doors and three windows for maximum natural light.*