

Accessory dwelling units have gained in popularity for a few reasons over the last decade, and most of them have to do with increasing rental income or living space. While both of these things are advantageous, what about the environmental aspect?

As American cities and towns experience housing crunches, ADU's can help increase density while also making use of existing land space, and fewer materials.

This allows more people to bike, take transit, and support local communities, making eco-friendly ADU's a game changer for many American households, not to mention easing easing financial instability of both the homeowner and prospective tenant.

Let's take a look at what kind of ADU's there are out there, how they can bring more sustainable options to the housing market, and whether they might be right for you.

Types of ADUs

ADU stands for accessory dwelling unit, and includes any kind of secondary housing built on the existing single-family lot. That means there are many different types of ADUs, as well as terminology, so we'll go over the most common examples.

A new, detached ADU may also be referred to as a granny flat, laneway house, or backyard cottage. These are quite popular if you have the space and budget to build a completely new structure. There are even companies that specialize in building these kinds of ADUs off-site.

Garages are often converted into ADUs and turned into similar in-law suites or accessory apartments where either the garage is completely gutted, or an apartment is built over top so that the homeowner can still use it for car and other storage.

Additions or "bump-outs" are ADUs that are attached to the primary home so that square footage is increased. These will always be new builds, and can be added to the side of buildings, or on top, depending on what space is available and if permits allow.

Basement ADUs are also quite popular as the space is generally cheaper and easier to renovate than a garage, and they offer more square footage. Often a separate entrance is added to the side of the house, but if you already have one, the conversion is a no-brainer.

Primary or internal ADUs make use of the square footage already available in the home, and convert some of the extra space into another apartment, also known as “duplexing” a house. This includes basement apartments, as well as turning an attic or second floor into a separate living space.

Common ADU Features

Most ADU’s will be smaller than an average home. However, some basements or second floors can optimize the home’s square footage so that space isn’t too tight. Garage conversions, and additions usually have to take on the design savvy of a tiny home build, and make better use of limited space.

The main reason is because ADU’s must have all of the same necessities that a home does. This includes a kitchen, bathroom, dedicated sleeping space and living area, and separate entrance from the main home.

Kitchens must have a working stove, countertop, sink, and other basic requirements, and bathrooms must have a shower, toilet, and sink.

While the bedroom and living space can be combined and kitchen and bathrooms may be smaller than average, the units must be self-contained with all the essentials of modern life.

There are, however, many informal ADUs that do not follow the guidelines or were built illegally (without a permit). These informal units aren’t necessarily bad places to live, but sometimes they fall short of meeting these requirements (a hot plate instead of a stove is one example).

Some municipalities crack down more than others on the illegal apartments, but as it stands, these informal ADUs make up around 10-20 percent of urban housing that already exists, making them another type of ADU that could be renovated properly and turned into a legal dwelling.

ADU Benefits

The way people work has changed drastically over the last couple of years and many businesses continue to allow remote or flexible positions. With less need for commuting, or even a car, an ADU can be an excellent place to live for a single person who doesn't need a lot of space and can live anywhere they choose.

For homeowners, creating an ADU provides many benefits, namely an increase in rental income. An initial investment of \$75,000 could see a return on investment (or ROI) in three and half years if rented out at \$1800/ month.

While not everyone has this amount saved up (and some ADUs will cost even more to build), homeowners can finance them in a few different ways. Some people opt to use home equity loans, HELOCs, take cash out when refinancing, or get a bank loan.

Since this kind of investment ends up increasing property value, most people opt to use their home equity, which makes sense in the long run.

ADUs also offer flexibility for growing and aging families. Older parents can move in, or young adults can have somewhere to live while they attend school or start jobs.

Another option is for a single person or couple to move into the ADU and rent out the larger part of the house, as some people are finding that three or four-bedroom homes are too much space for just them.

Of course, at any time the ADU can be switched from being used as passive income to suit family needs or merely turn back into an extra office, guest suite, or hobby space.

How ADUs Create Sustainability

The biggest way that ADUs can help create sustainable living options is by reducing the need for new infrastructure and construction. Many cities are struggling to create housing options for growing populations which leads to urban sprawl and increasing house prices.



The largest growing American household demographic is 1-2 people, which is putting a lot of strain on the single-family housing market. Most homebuyers don't need large homes anymore, but residential homes weren't built for 1-2 people, they were built for a larger nuclear family.

ADUs help ease this demand.

The construction of ADUs also uses less energy, and thus has a smaller carbon footprint than the standard newly built single-family home. A new, detached ADU like a backyard cottage is about 40 percent smaller and therefore uses less materials while utilizing land that's already cleared.

ADUs can often fit into residential neighborhoods without impacting their character, easing the implications of gentrification that other new housing projects don't take into consideration. This can help support local communities and reduce an individual's carbon footprint, which has a positive impact on the environment.

Eco-Friendly ADU Builds

New construction may be the most environmentally friendly option for ADU builds, but it really depends on the site.

A complete rebuild can focus on using sustainable materials, and install eco-friendly options like solar panels, rain catchments, and composting toilets making them essentially off-grid housing.

New builds can also utilize natural heating and cooling features in their design. Using the shade of trees and positioning windows to face the sun are just two ways that design plays an important role in creating an eco-friendly ADU.

Using space that already exists has its benefits, though, as there may be less materials needed to create the apartment.

If exterior wall already exist, and an open floor plan is available, materials are limited to merely the finishing items like flooring, trim, paint, furnishings, and appliances.

Turning a home into a duplex, or creating a basement suite can also utilize the home's existing plumbing and electrical systems.

However, a legal apartment must have its own water meter, and controlled heating and cooling system.

Any ADU can install low-flow plumbing features and Energy Star appliances, use low VOC or recycled paint, and source FSC-certified lumber for construction.

ADU Zoning Regulations

Before you get excited about building an ADU, make sure it's legal in your jurisdiction. While most are allowed as long as proper building permits are obtained, some may be denied by HOAs, or merely restricted by zoning codes.

That doesn't mean that other types of structures aren't allowed, so do your homework, and ask the right questions before you start breaking ground and ordering materials. Just know that any habitable space being built must obtain a permit—most of the time.

There are some situations where permits can be skipped. California has made it a lot easier to construct ADUs, and if the building meets certain requirements, you won't need county or state permission to start building. One of the main requirements is that the structure be less than 800 square feet.

Make sure you know the different between the types of ADUs you are interested in as well. Duplexing a house means certain fire codes also have to be met. That includes adding extra drywall between levels where the ceiling meets the floor, making sure you have proper egress windows, and installing separate water and gas meters, to name a few.

If you are planning on tearing down a garage to re-build an ADU, some codes require the same footprint for the new build, meaning you won't be able to build anything bigger. Sometimes this only pertains to the width and length, so adding a second story might be an option.

Getting to know your local building code and how it affects different ADU builds can help you make a decision when it comes to budget and planning, and save you from any future headaches.

Can You DIY an ADU?

The easy answer is yes, anyone with a little bit of construction experience can renovate or build an ADU on their property. In fact, sometimes you don't even need experience, but rather sheer will and determination.

It's not something to take on lightly, though, as the process involves a lot of planning and organizing. You may need to obtain plans from an architect, or you may be able to design the building yourself. Either way, it must get approval.

Hiring a general contractor is often helpful if you don't have the time to make the project your full-time job. GCs will organize the various trades so that construction goes smoothly and according to budget.

It's not that this job can't be done by the homeowner, but it's a lot more extensive than making a few calls: you're building another small house, essentially.

While DIY-ing the whole project will definitely save you money (if not time), any mistakes can be costly. Inspections must be done at certain junctures (after framing, plumbing, insulation, etcetera), and failing them can hold up work.

Off-Site and Modular ADUs

As popularity rises, companies that specifically design and build ADU's are growing.

Modular, pre-fabricated, or “pre-fab” ADUs can be more cost-effective for those looking for detached new builds, as these companies have figured out ways to streamline the process.

You can save about \$300-\$500/ sqft with a pre-fab build when compared to an on-site build, as things like engineering, architect, and inspection costs are eliminated, and you won't have to worry about on-site delays. You won't need a general contractor to organize the trades, and weather conditions won't be a concern.

These modular homes can also be more environmentally-friendly, as less materials are wasted in the streamlined process, and less carbon is used for transportation. There will also be less noise and waste as building is off-site.

That said, modular ADUs mean less control over the design, and no room for DIY. While you may be able to work with a company, often you'll be conceding to their vision. Also, you'll need to have a way to get the ADU on site. If your home has space for this, great. Otherwise, you'll be renting a small crane to lift the ADU in place.

At the moment, large cities are paving the way for utilizing the economic and environmental benefits of ADUs by reducing the red tape and making the process easier. Portland, Oregon is leading the way as one of the best cities to build an ADU, but Austin and Seattle aren't far behind.

The entire state of California has made it much easier to build an ADU by taking away development and impact fees, reducing setback requirements, and easing parking restrictions among other things, but you still need to check the city's restrictions. Escondido may be harder than San Francisco to obtain a permit.

Hopefully, legislation will be streamlined in cities across the country so that building ADUs becomes less complicated for homeowners and contractors. Once they are seen as a positive way to infill much needed housing options, these eco-friendly ADUs can be a game changer for many American households.