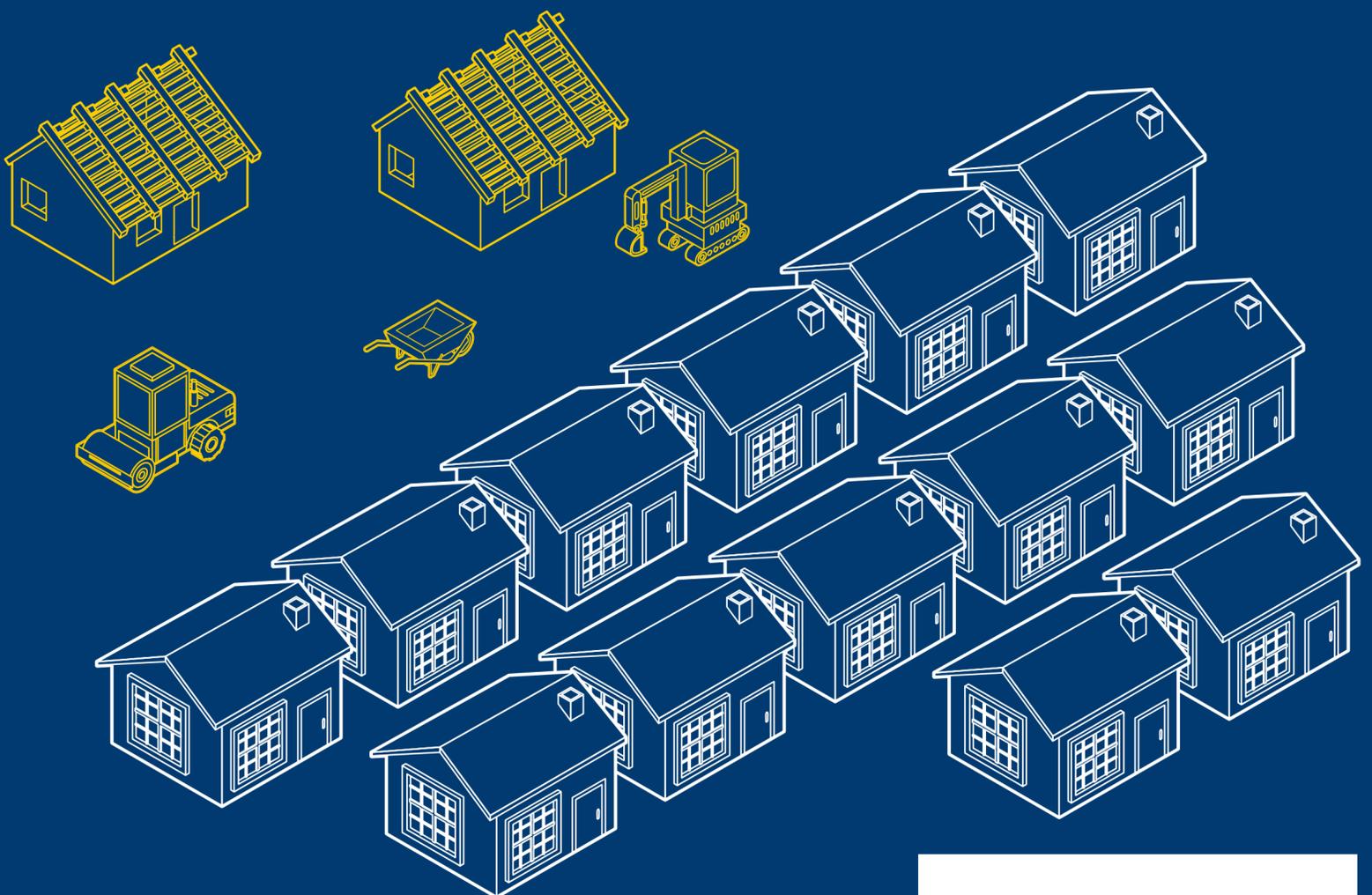


YOUR QUICK GUIDE TO BUILDING REG CHANGES

**BY JEWSON
AND BUILD
AVIATOR**



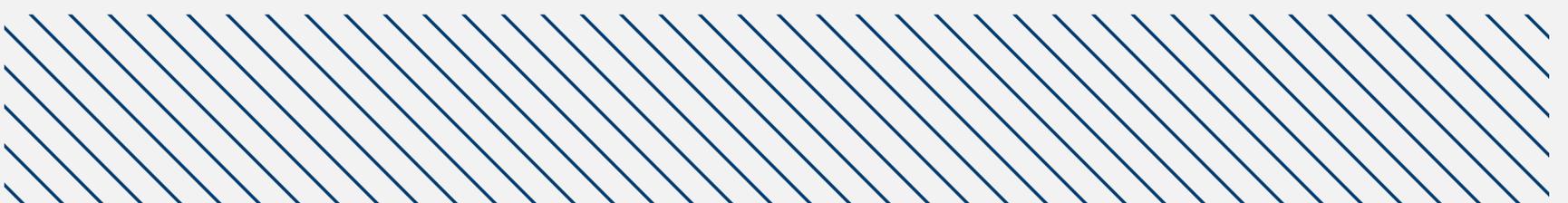
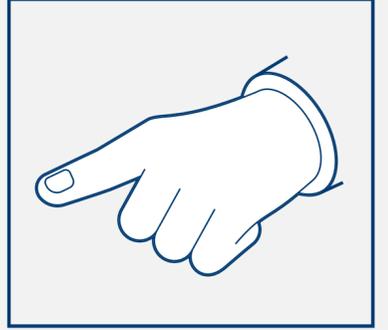
**SCROLL
DOWN**



JEWSON

CONTENTS

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TO EACH SECTION**



WHAT'S CHANGED AND WHY?

WELL, JUST WHEN YOU THOUGHT YOU KNEW YOUR BUILDING REGS, THE GOVERNMENT HAS ONLY GONE AND ANNOUNCED SOME MAJOR UPDATES.

Wholesale changes to approved documents Part L and F as well as new document Part O were all released in June 2022, and if you're a tradesperson or a self-builder in England, these are already likely to be affecting your projects and there is more to come.

PART L **LOOKING AT ENERGY EFFICIENCY**

PART F **ALL ABOUT VENTILATION**

PART O **PREVENTING OVERHEATING**

Through this handy guide we'll give you an overview of what's happened and why, as well as some helpful info that will point you in the right direction and clear up any confusion.

So, what do you need to know?

Let's start with why these updates have been made. It's not just to add more complicated red tape and stress to your lives. Crucially, this all comes down to sustainability and protecting our planet by ensuring we are all Making Better Homes.

The Government, specifically the Department for Levelling Up, Housing and Communities, has introduced these updates to help us meet the UK's Net Zero target by 2050.

They're being referred to as a stepping stone on the way towards the introduction of the Future Homes Standard in 2025. The key changes mainly relate to heating and power in homes across England, but Scotland and Wales also have similar updates coming into effect. In the UK, heating and powering homes accounts

for around 40% of the country's entire energy usage, so any improvements we can make here could massively shrink our carbon footprint.

If you haven't heard of the Future Homes Standard already, you will soon enough. It's going to be a game-changer for the way we build residential properties in England. This plan aims to ensure that all new homes will have 75%–80% fewer carbon emissions than those delivered in 2019. Existing homes and some retrofit projects will also be subject to higher standards.

As we've already mentioned, these updates to the regs are getting us ready for much bigger changes coming in 2025, requiring a 30% reduction in carbon emissions in new dwellings and a 27% reduction in existing ones.

This is why you need to get to grips with them as soon as possible and make sure you're in the know.

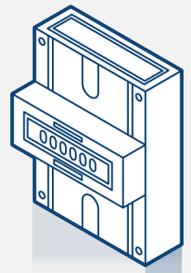
SCROLL DOWN FOR SOME OF THE KEY UPDATES...

LOOKING AT THE MAIN CHANGES

FIRSTLY, IT'S IMPORTANT TO NOTE THAT THESE UPDATES APPLY TO NEW BUILDS, EXISTING HOMES, EXTENSIONS AND NON-DOMESTIC PROJECTS. CRUCIALLY, ANY PROJECT BEING SUBMITTED TO BUILDING CONTROL WILL NOW NEED TO MEET THESE NEW STANDARDS.



PART L THE ONE ABOUT ENERGY EFFICIENCY



THIS IS PROBABLY THE MOST SIGNIFICANT PART OF THE UPDATES.

The document is no longer split into two sections, further solidifying the governments drive to improve existing buildings. It now covers both newly built homes, extensions, renovations and change of use buildings within one document.

The energy efficiency of new homes will now be assessed under a new Standard Assessment Procedure (SAP) calculation, known as SAP10. This will need to happen twice, once at the design stage, and once when built.

Previously, this would have been done using SAP 2012, but SAP10 sets greater requirements when it comes to CO₂ reduction, aiming for an improvement of 31% compared to previous standards.

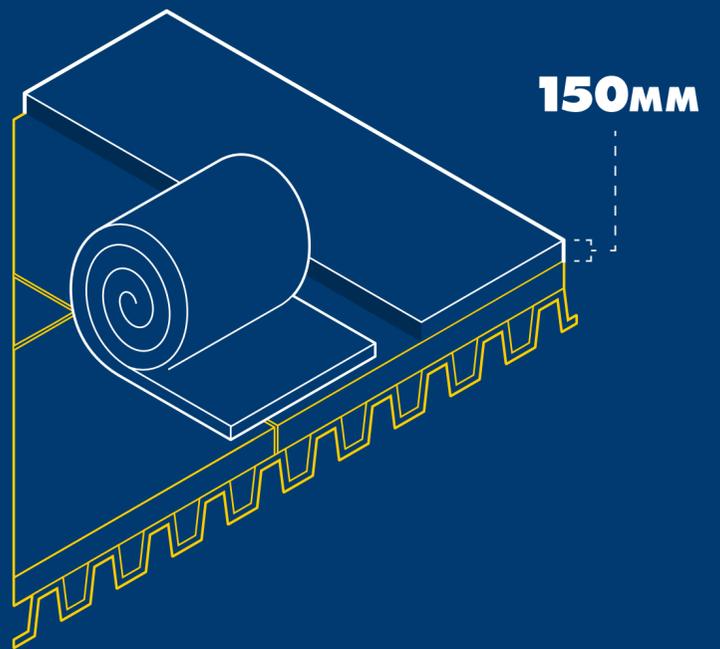
There are two figures which SAP10 measures – the Dwelling Emission Rate (DER) and the Target Emission Rate (TER). It's these which will determine whether a new dwelling passes or fails this part of the assessment.

These figures can be improved by making changes to the building fabric in line with new minimum fabric efficiency standards - using better insulation and more efficient windows and doors, in line with new minimum fabric efficiency standards. The new regs also favour renewable and low-carbon energy sources, like heat pumps and solar panels.



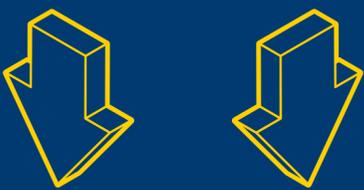
INSULATION KEY CHANGES

ONE MAJOR CHANGE FOR NEW BUILDS IS THAT INSULATION IN CAVITY WALLS, BELOW GROUND LEVEL AND BETWEEN CEILING RAFTERS AND FLOOR INSULATION NOW NEEDS TO HAVE A MINIMUM THICKNESS OF 150MM. PREVIOUSLY, THIS WAS 100MM. ALTERNATIVELY, HIGH PERFORMING INSULATIONS CAN BE USED TO REDUCE THE CAVITY SIZE.

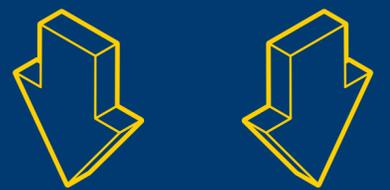


In sloping ceilings, you'll need to use 150mm insulation between rafters and 50mm underneath. For horizontal ceilings, you'll still need to use 400mm mineral/glass wool products.

Thankfully, the manufacturers we work with at Jewson offer 150mm insulation ranges and accompanying wall-ties. See below for our recommended products.

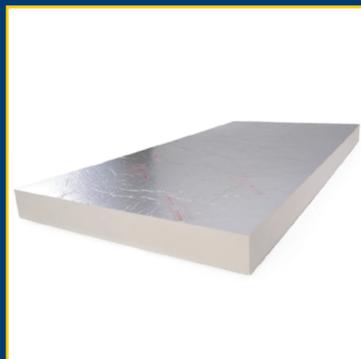


PART L COMPLIANT PRODUCTS



150MM ISOVER CWS32 FOR CAVITY WALLS

Replaces 100mm
CWS32 150mm



150MM CELOTEX XR4150 PIR INSULATION

Replaces 100mm
XR4100 for between
rafters and for flooring
insulation (above and
below slab)



275MM ANCON RT2 WALL TIES

Replaces 225mm Ancon
RT2 Wall Ties



CATNIC CAVITY WALL LINTEL

Replaces 100mm Catnic
Cavity Wall Lintel

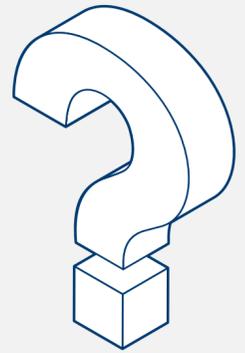


BUT WHAT ABOUT INSULATION IN RENOVATIONS?

WHEN YOU'RE COMPLETING A RENOVATION PROJECT, ASK YOURSELF THESE QUESTIONS...

ARE YOU...

- replacing more than half of a surface element like a wall, floor or roof?
- providing a new layer by dry lining an internal surface?
- replacing an existing layer through the stripping down of an element to expose structural components?
- replacing the waterproof membrane on a flat roof?
- providing new cavity wall insulation?

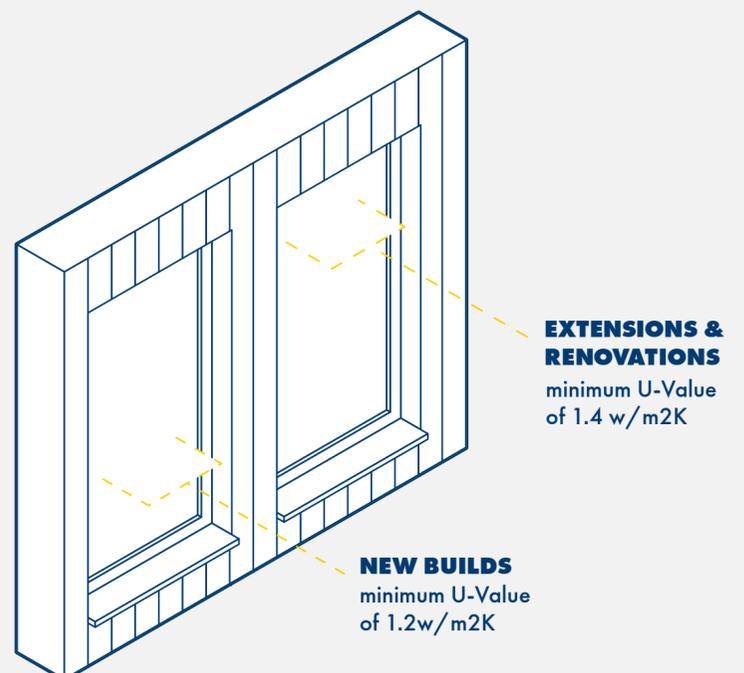


IF THE ANSWER IS YES, THEN YOU'LL NEED TO MAKE SURE THAT...

- floor insulation has a minimum thickness of 100mm (previously 75mm)
- horizontal ceiling insulation has a minimum thickness of 300mm (previously 270mm)
- insulation in a sloping ceiling is 150mm between rafters and 30mm underneath

WINDOW WISDOM

According to the new regs, windows in new builds need to have a minimum U-Value of 1.2w/m²K. For renovation and extension projects, they'll need to be 1.4 w/m²K – this figure was previously 1.6.



REMEMBERING RENEWABLES

SOLAR PANELS AREN'T A NEW TECHNOLOGY BUT NOW THE PART L REGULATIONS REQUIRE MORE RENEWABLE FORMS OF POWER, THEY'RE REALLY STARTING TO SHINE.

One of the best ways to pass the SAP10 measures and ensure compliance with Part L and even the Future Homes Standard is to make use of solar PV on both new build and existing properties.

Solar panels are an increasingly attractive product for today's homeowners and most housebuilders. Many of your customers will already be aware of their benefits which is why solar PV is in huge demand, and likely to become even more so in the run up to 2025.

There are a few things you should know about using solar PV when looking at the recent changes to the building regs. Firstly, if your new build project has a traditional gas heating system or an electric boiler, then solar panels have to be installed.

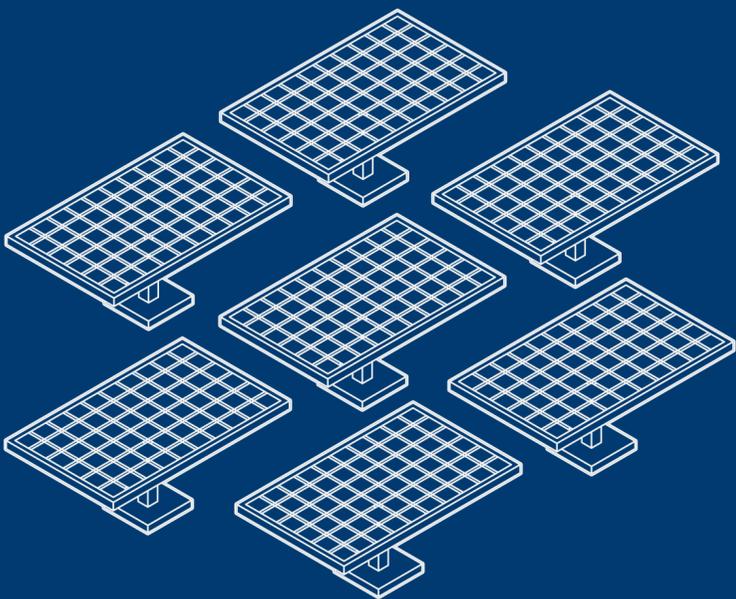
Otherwise, these homes will need to make use of a ground or air source heating system so it can meet the SAP10 requirements.

Don't worry if you haven't done much previous work around these products, the latest solar panels are made to be super easy to install and maintain, and are highly efficient.

At Jewson, we supply a range of solar PV, whether it's in-roof, on-roof or ground-mounted panels you're looking for, all of which are available through our Making Better Homes range. We use a combination of these products across many of our branches to help reduce our own carbon footprint.

Statistics suggest that a solar PV system can increase property value by £1800 plus £330 per year in reduced running costs. They last on average around 25 years, so they're a fantastic investment.

We also love talking about our ground and air source heating systems, working with our suppliers Worcester Bosch, Kensa and Grant Engineering.



PART L AND WASTEWATER HEAT RECOVERY

A BIG CHANGE INCLUDED IN THE UPDATED REGULATIONS IS THAT WASTEWATER HEAT RECOVERY SYSTEMS ARE RECOMMENDED TO BE USED IN ANY NEW BUILD PROJECTS.

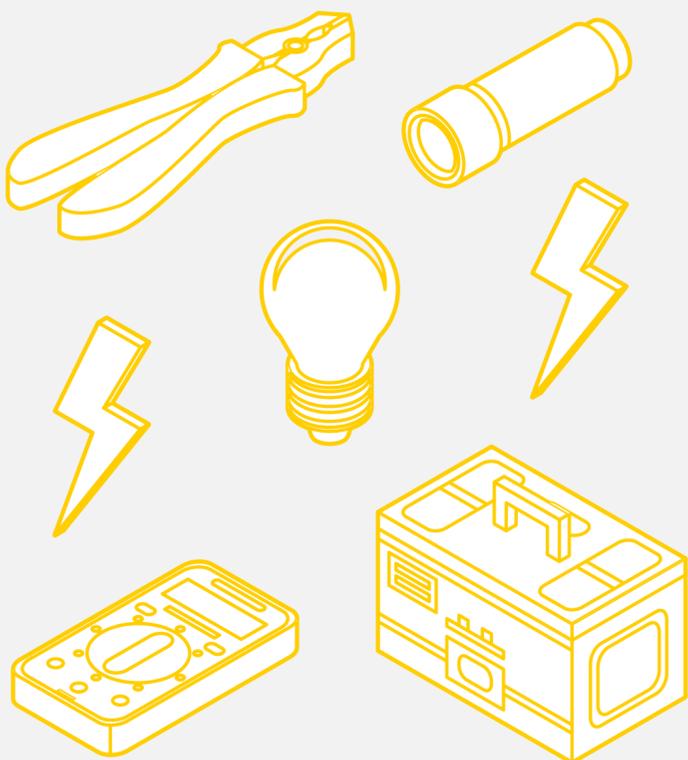


This is a big step forward for saving your customers money on their heating bills. Although these are relatively straightforward systems to install, they can result in huge gains, potentially converting around 60% of the heat lost down the drain into heat for new water.

Bear in mind that showers, including those over baths, should always be connected to the wastewater heat recovery system.



PART L AND LIGHTING



If you're a sparkie, then you'll need to know about the changes in relation to lighting. As of June 2022, you'll need to send your full lighting designs to Building Control before the work starts.

You'll also need to account for how efficient the lights are by measuring the amount of light produced (per Watt of energy). For fixed lighting you'll need to ensure that there are 185 lumens per m² of total floor area and that each lamp has a minimum efficiency of 80 lumens per watt.

IMPROVING VENTILATION PART F

Making sure there's sufficient ventilation in a property is an important part of sustainable building and creating energy efficient homes, but it's also crucial for improving wellbeing for end users.

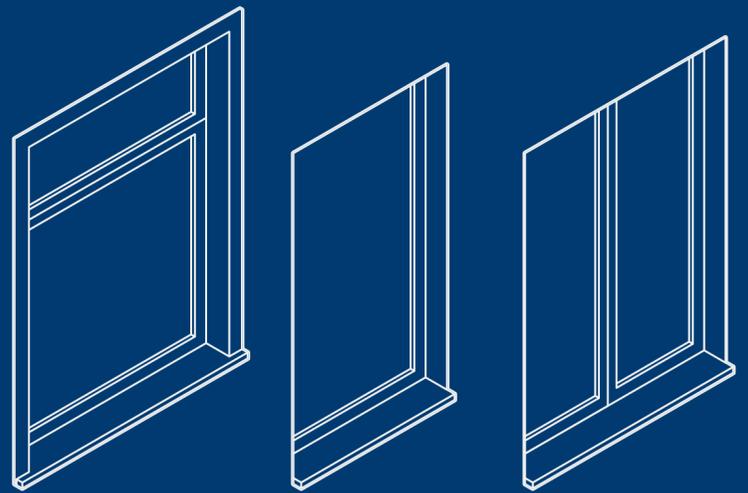
There must be an adequate level of extract ventilation from wet rooms, and a level of whole dwelling ventilation to supply fresh air either mechanically, or through background ventilators.

A lot of fans may achieve Part F requirements, but that's without any ducting attached to them.

Vents always need to be tested in situ in an installed state. You'll then need to ensure you have a valid commissioning certificate to supply to Building Control.

If you're working on an older house, it might not have good enough ventilation fans installed. If you haven't got an existing commissioning certificate available to hand, then you'll need to get the system evaluated again to make sure you're hitting the mark. This may mean installing or replacing the existing ventilation system.

WHEN ANY IMPROVEMENTS, EXTENSIONS OR RENOVATIONS ARE DONE TO A BUILDING, YOU WILL HAVE TO PROVE THAT THE VENTILATION IS NO WORSE THAN BEFORE THE WORKS BEGAN.



At the same time, there's a recommendation that all replacement windows are fitted with trickle vents unless there is an alternative form of ventilation, such as air bricks or whole house Mechanical Ventilation with Heat Recovery (MVHR).

MVHR is a great way to ventilate a property with better energy efficiency and less heat loss, compared to conventional non-MVHR home

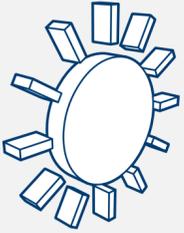
ventilation systems. These systems are compact and can be retrofitted into conventional masonry – even in relatively old buildings – or built into the masonry of new build properties.

Including an MVHR unit in new builds helps to ensure better circulation of air inside the property, which not only improves indoor air quality, but can also reduce the risk of condensation damp forming in parts of the property with poor circulation.



PREVENTING OVERHEATING

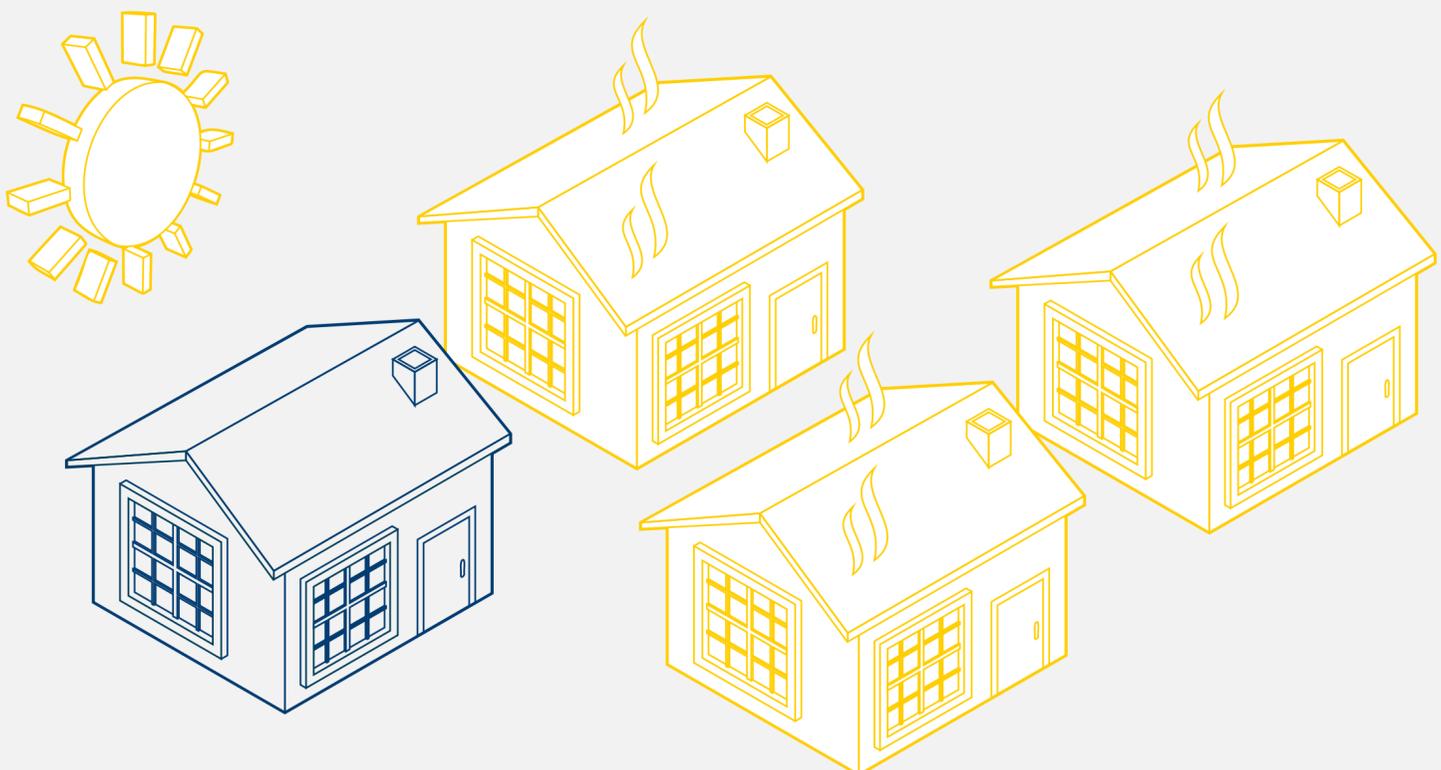
PART O



WITH ALL THE EFFICIENCY IMPROVEMENTS EXPECTED OVER THE NEXT FEW YEARS, HOMES ARE GOING TO BE KEPT AS COZY AND WARM AS POSSIBLE. BUT WE DON'T WANT THEM TO GET TOO HOT. PART O OF THE REGS HAS BEEN ADDED TO HELP PREVENT OVERHEATING IN BUILDINGS.

This requires that each of the rooms in a home needs to be evaluated in terms of the risk of overheating, and there needs to be an adequate means of cooling included to ensure occupants don't get too hot. Conservatories and rooms with large glass windows are most at risk.

At Jewson we've partnered with Dales Eaves, one of the UK's leading shading specialists, to deliver a complementary product range for tradespeople to use which will help them meet Part O on their projects.



FREQUENTLY ASKED QUESTIONS



WHAT'S A U-VALUE?

A U-Value is the rate of transfer of heat through a structure. The units of measurement are W/m^2K . The better insulated a structure is, the lower the U-Value will be.

HOW MUCH SOLAR PV SHOULD I USE TO MEET THE NEW REGULATIONS?

For houses the Kw per PV you get from your solar PV needs to be 40% of the ground floor area / 6.5. For example, for a floor area of $100m^2$, the amount of PV would be $6.15kWp$ $((100 * 0.4) / 6.5)$.

HOW DO I KNOW IF I'M REPLACING 50% OF THE SURFACE AREA OF A FABRIC ELEMENT?

WHAT IF I'VE STARTED MY PROJECT ALREADY AND NOT ADHERED TO THE RECENT UPDATES?

Don't worry, there's a short grace period. If a Part L 2013 notice has been submitted by June 2022, the transitional arrangements mean customers will have until 15th June 2023 to begin work. This is applied on a dwelling-by-dwelling basis rather than a whole site. Any projects where work has not started by June 2023 would then need to be constructed to the new Part L regulations.



HOW CAN I MAKE SURE I'M USING THE CORRECT MATERIALS AND SUPPLYING CORRECT QUOTES FOR MY CUSTOMERS?

Our Build Aviator team are here to help at every stage of the build process, from product specifications, procurement, to assisting with a smooth process through the updated regulations and ensuring you can get Building Control sign off on your project.

WHERE CAN I GO FOR MORE INFORMATION ABOUT RENEWABLE PRODUCTS?

We know you might need a helping hand as you get to grips with all of this, so we're doing our best to support you through this transition with an improved. Making Better Homes product range. Featuring the latest innovations in lower carbon materials, air quality, thermal and acoustic performance, these products will help you maximise quality, efficiency and profit while building comfortable, sustainable spaces your customers will love.



**IMPORTANT
UPDATE!**

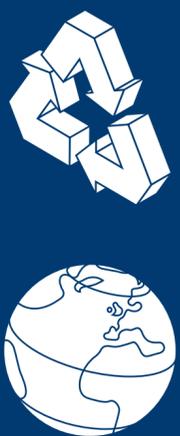


TALKING TO CUSTOMERS ABOUT THESE CHANGES

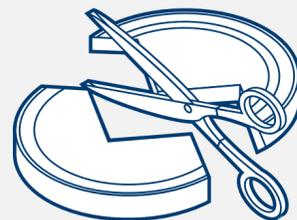
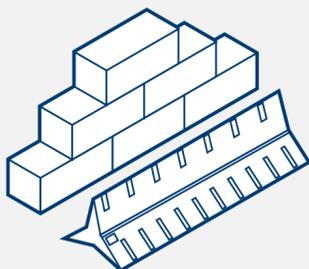
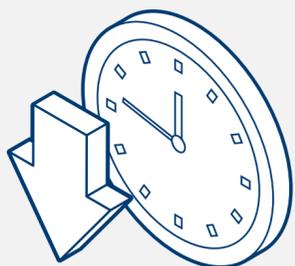
WITH THESE UPDATES TO BUILDING REGULATIONS, YOUR CUSTOMERS MAY BE CONFUSED AND UNSURE WHY THEIR PROJECTS ARE COSTING MORE THAN THEY THOUGHT THEY WOULD

After all, technology and products designed to boost efficiency will often require an increased level of upfront investment.

Whether it's installing thicker insulation, solar panels or a wastewater heat recovery system, you'll need to reassure them that building more sustainably isn't just about ensuring their homes are up to code. These investments will offer significant returns in the long-term when it comes to utility bills. They will also ensure that their homes are more attractive when it comes to selling them.



HOW JEWSON CAN HELP



**BUILD
AVIATOR**



Do you need help costing up a project? Build Aviator puts you at the heart of every project, whether building to meet minimum regulations or achieving an increased level of comfort and energy efficiency. Through our services, guidance and support, we can help you to save time, build intelligently, reduce risks and make you more competitive for every job.

**MAKING
BETTER HOMES**



USEFUL RESOURCES

