

warm|shell

Interior Wall Insulation  
Architects Details

Warmshell © 2021



# Introduction

Warmshell Internal has been designed to significantly improve the thermal performance and comfort of your property and can be used in almost any internal situation. It is particularly well-suited to historic and hard to heat homes, irrespective of whether they are brick, masonry or timber frame. Warmshell Internal is fitted to the inside of the external walls of a building.

It comprises of three key components:

1. Warmshell Board Adhesive
2. Warmshell Woodfibre Boards
3. Lime Green Solo plaster

Warmshell Internal is a practical solution when fitting insulation to the outside of your property isn't an option due to poor access around the outside of the property, because you don't own the whole property, or because you can't change the look of the building, for example if you live in a conservation area, or your home is part of a terrace. With Warmshell Internal, there is no need to hire scaffolding, negotiate access with neighbours, or think about external finishes – because everything's done from inside the building.

Ensuring that an insulation system 'works' with your existing property is essential. All walls see fluctuations in levels of moisture from sources inside [cooking, washing and, drying cloths] and

outside. It is important internal wall insulation allows the wall to dry out in two directions, to the inside and to the outside. This ensures that moisture does not build up in the wall and damage the building or affect the health of the occupants. Warmshell Internal is a highly breathable system that ensures moisture does not build up to unsafe levels in the wall. Unlike some insulation solutions Warmshell Internal does not contain formaldehyde, biocides, or VOCs. By sandwiching the insulation between two layers of lime – Warmshell Board Adhesive on the back and the Lime Green Solo on the front – mould growth and rot are inhibited. Even better, lime is naturally anti-bacterial, killing and sterilising as it is applied without using persistent toxic additives.

It is also worth knowing that the woodfibre insulation, used in Warmshell Internal, has a negative Global Warming Potential (GWP) as it locks up carbon instead of releasing it.

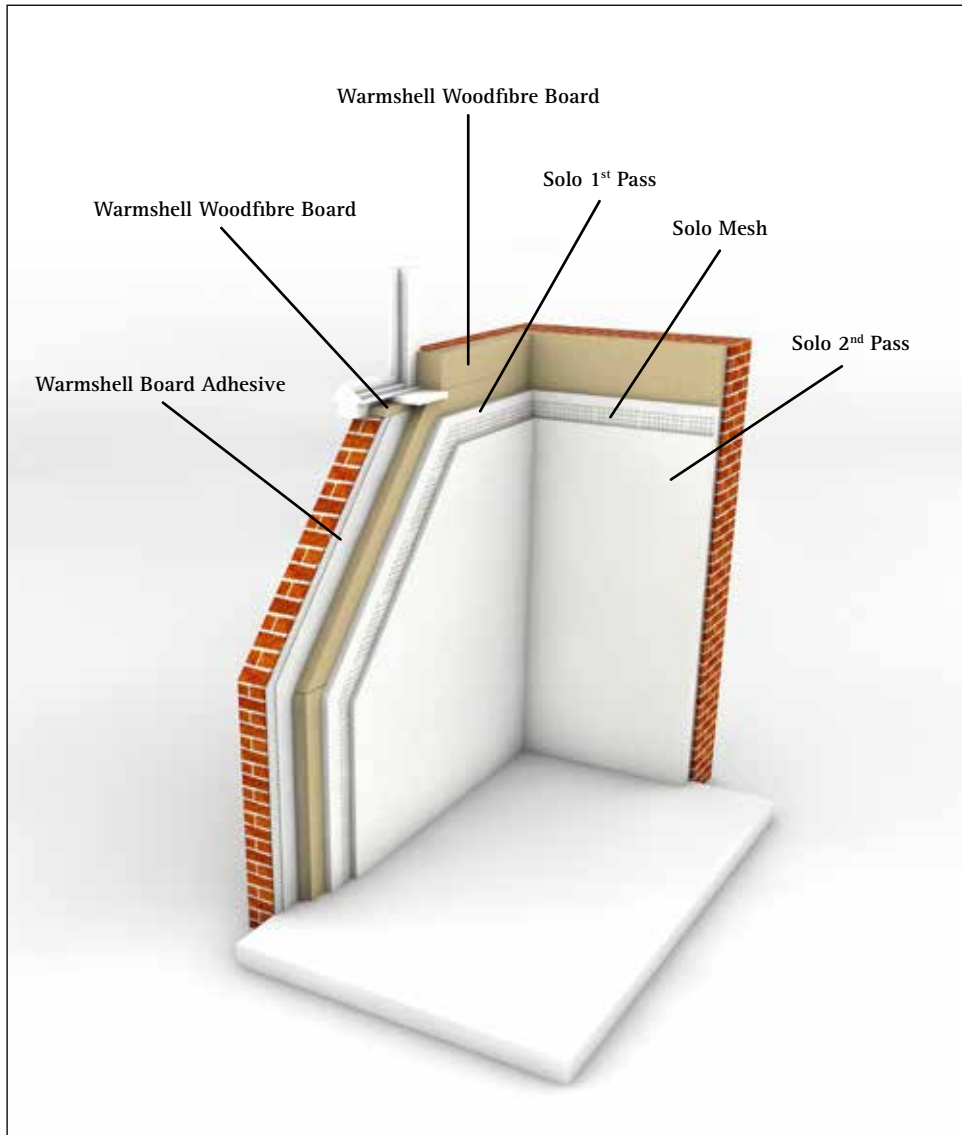


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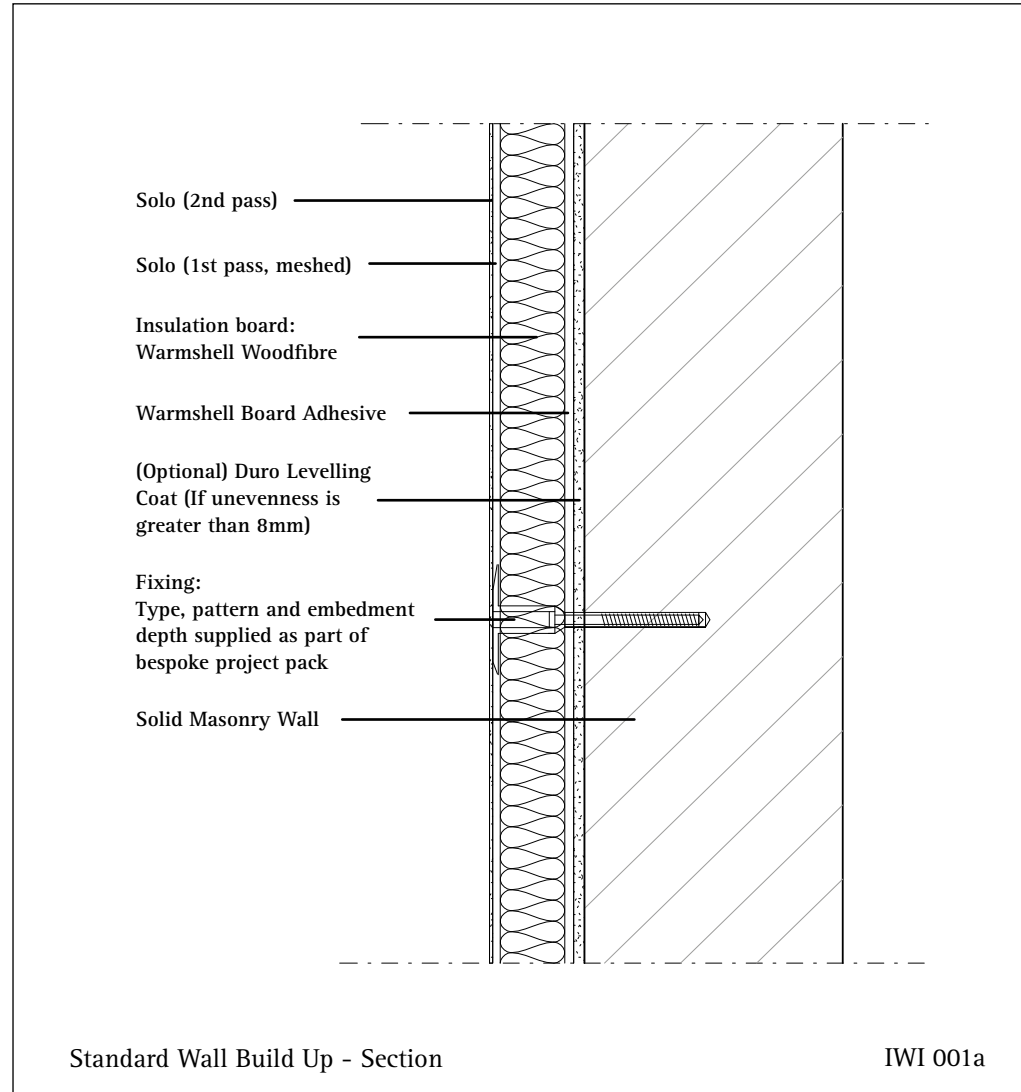
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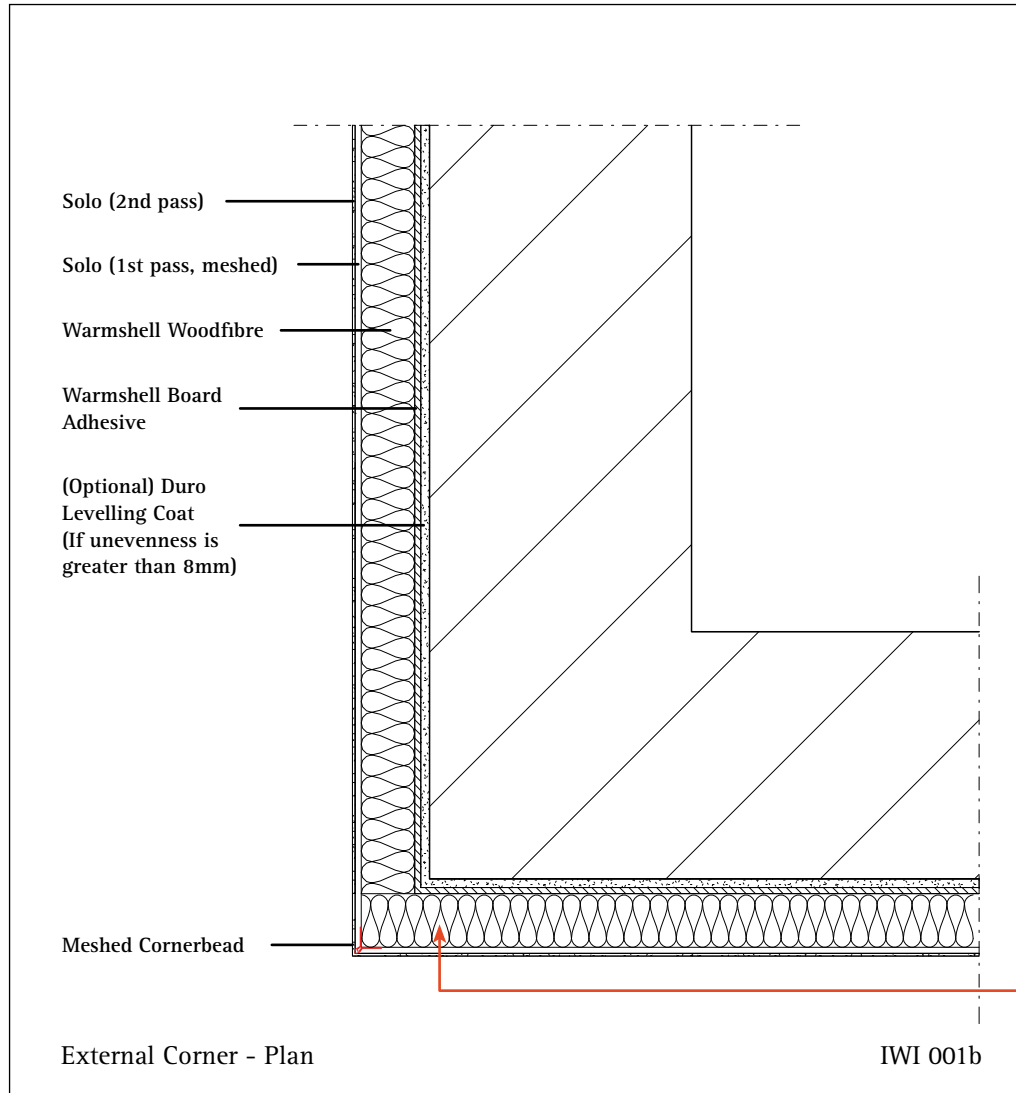


# 3D Image



It is essential, when fitting any IWI system, that there are no gaps between the insulation and the substrate.



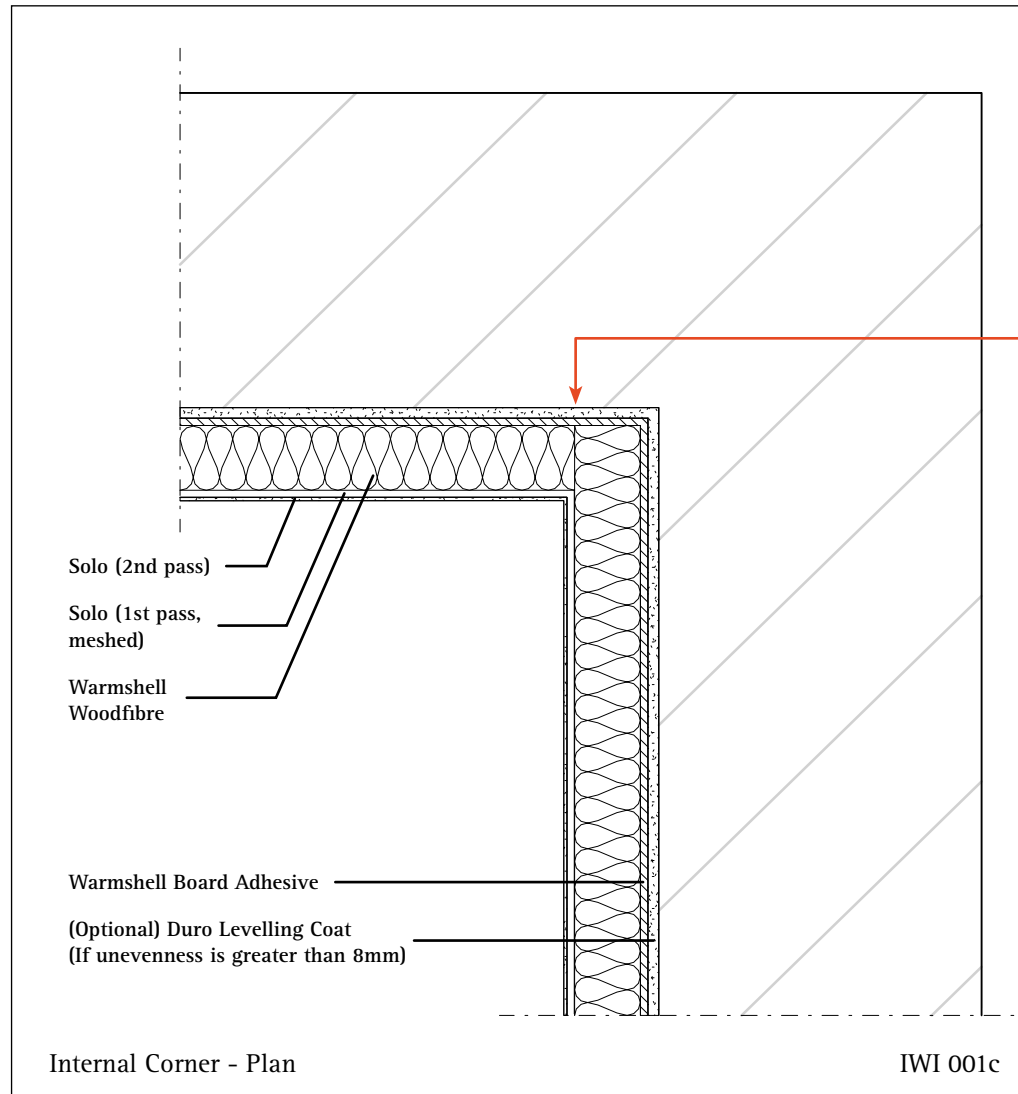


Ensure that external corners are tightly butt jointed as they do not benefit from the board's tongue and groove.

# Architectural Details - With Notes

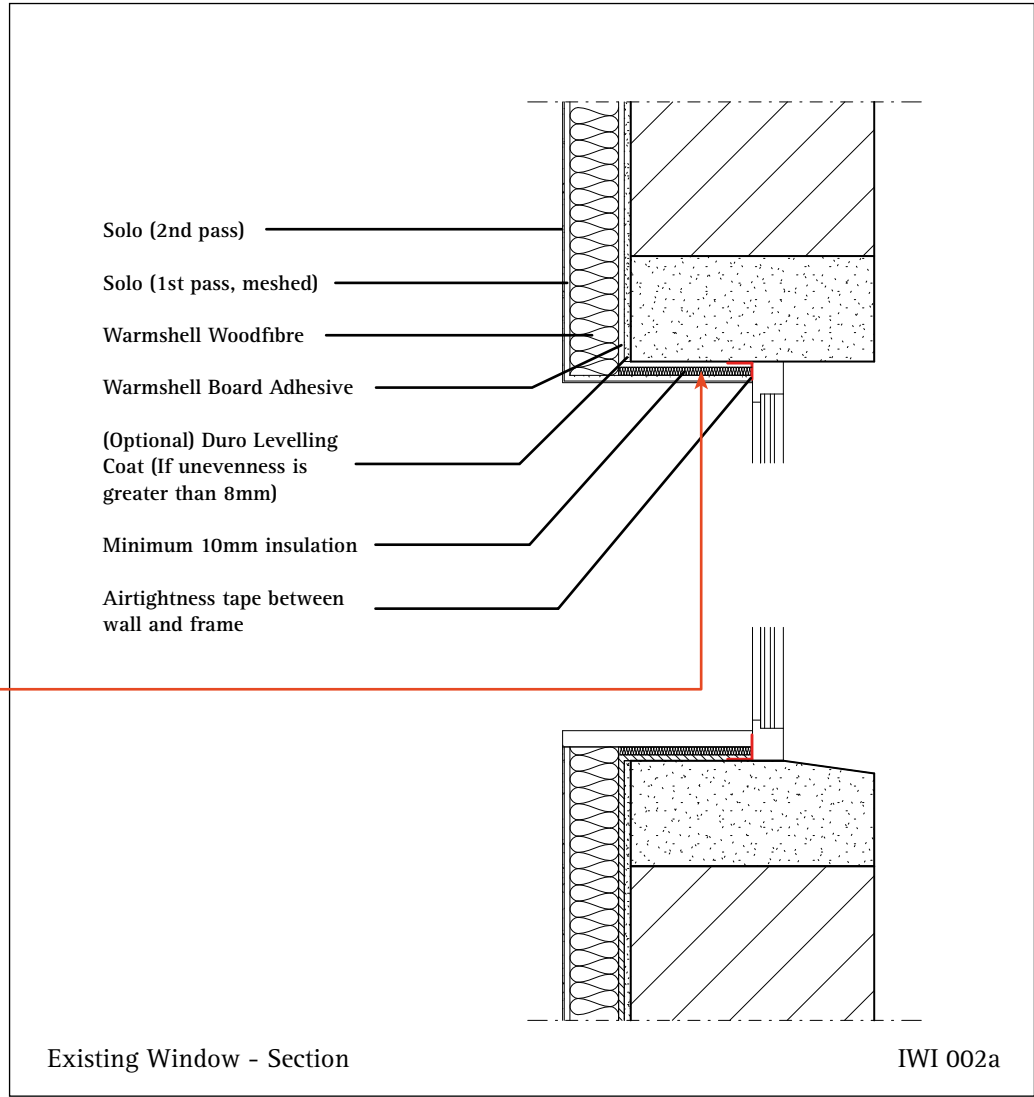
Drawing Title  
Internal Corner - Plan

Drawing No.  
IWI 001c



Ensure that internal corners are tightly butt jointed as they do not benefit from the board's tongue and groove.

It is vital that some insulation is fitted to the window reveals to prevent the formation of condensation on the internal surface and subsequent mould growth.

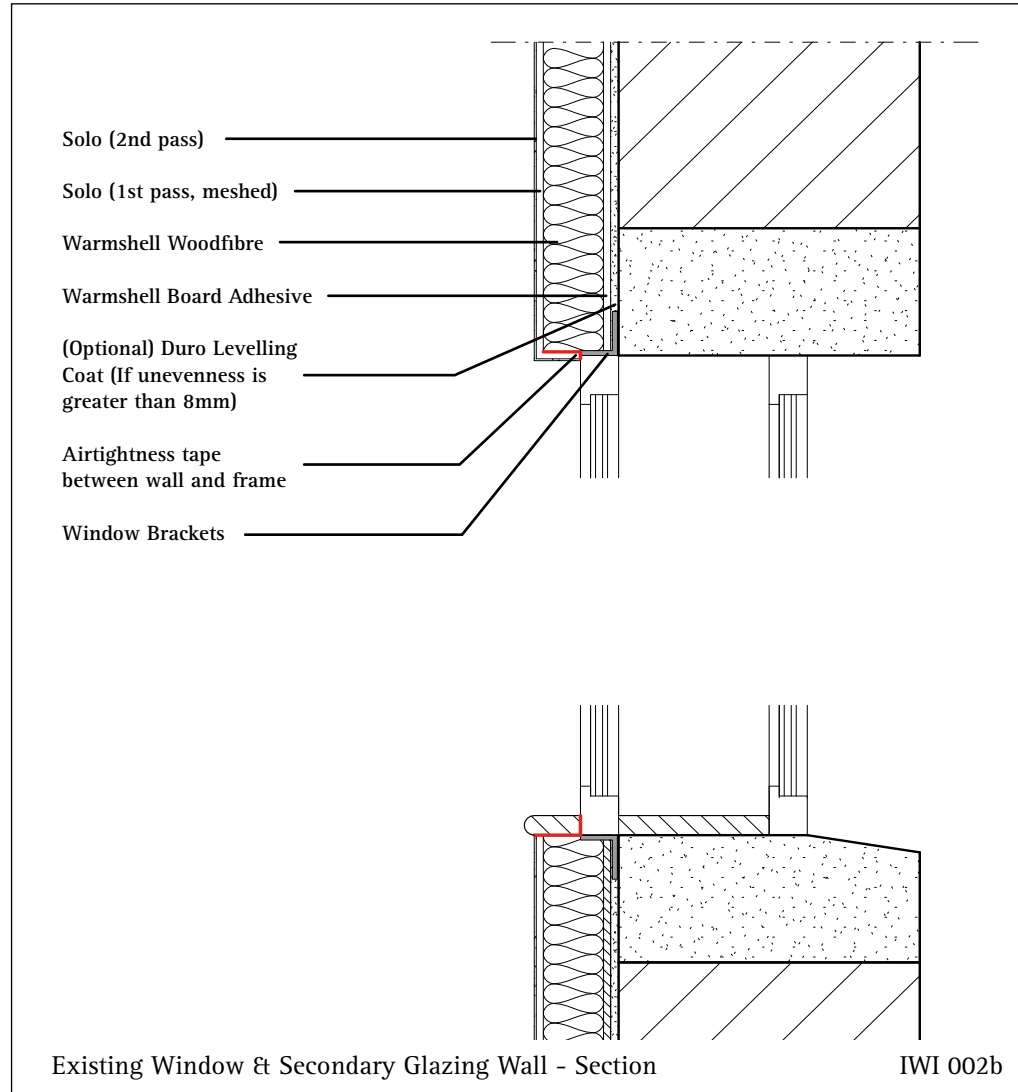


It is important to remember by fitting internal insulation there is less heat getting into the wall. This makes the wall, including any exposed uninsulated surface, colder than before and more likely to result in the formation of condensation on the exposed surface.

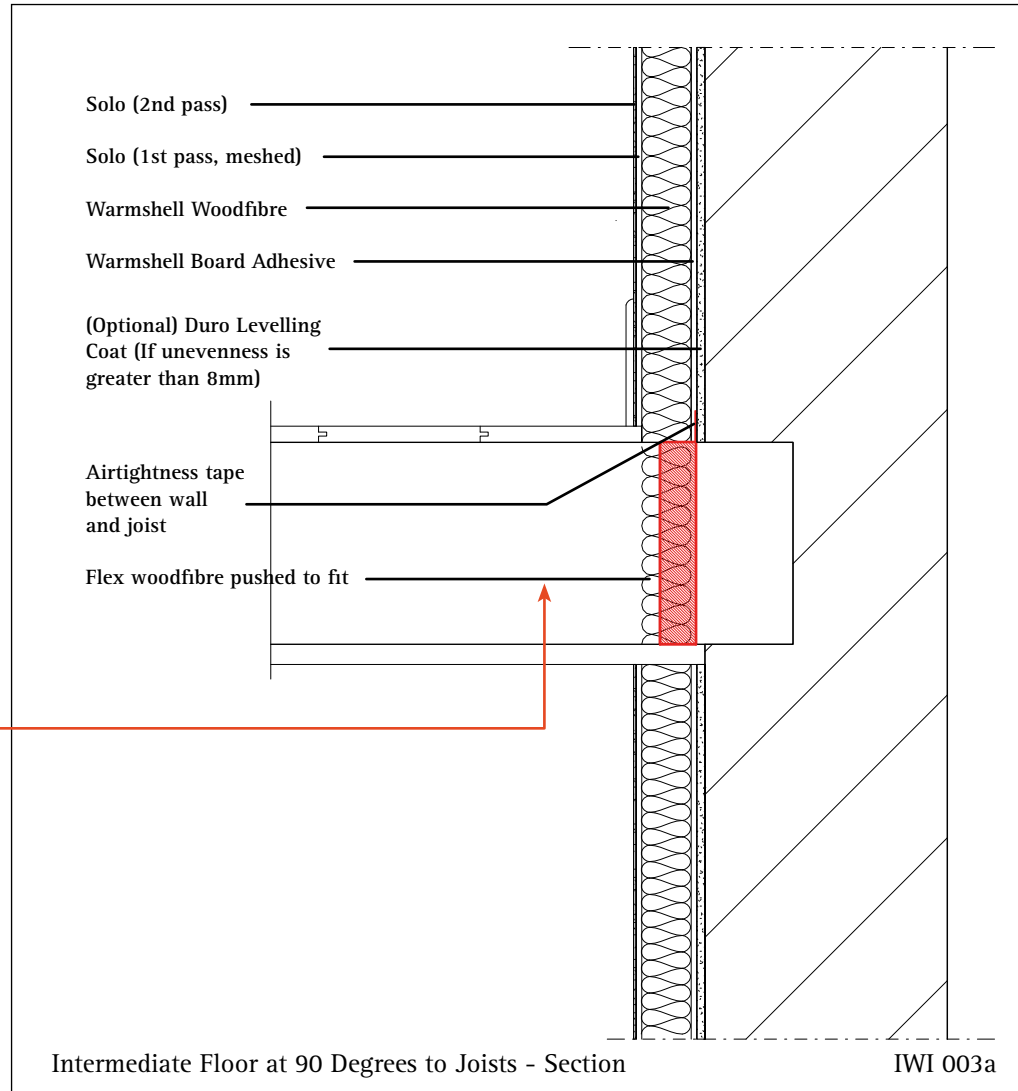


# Architectural Details - With Notes

Where possible new secondary glazing fitted in line with the internal wall insulation significantly reduces thermal bridging.

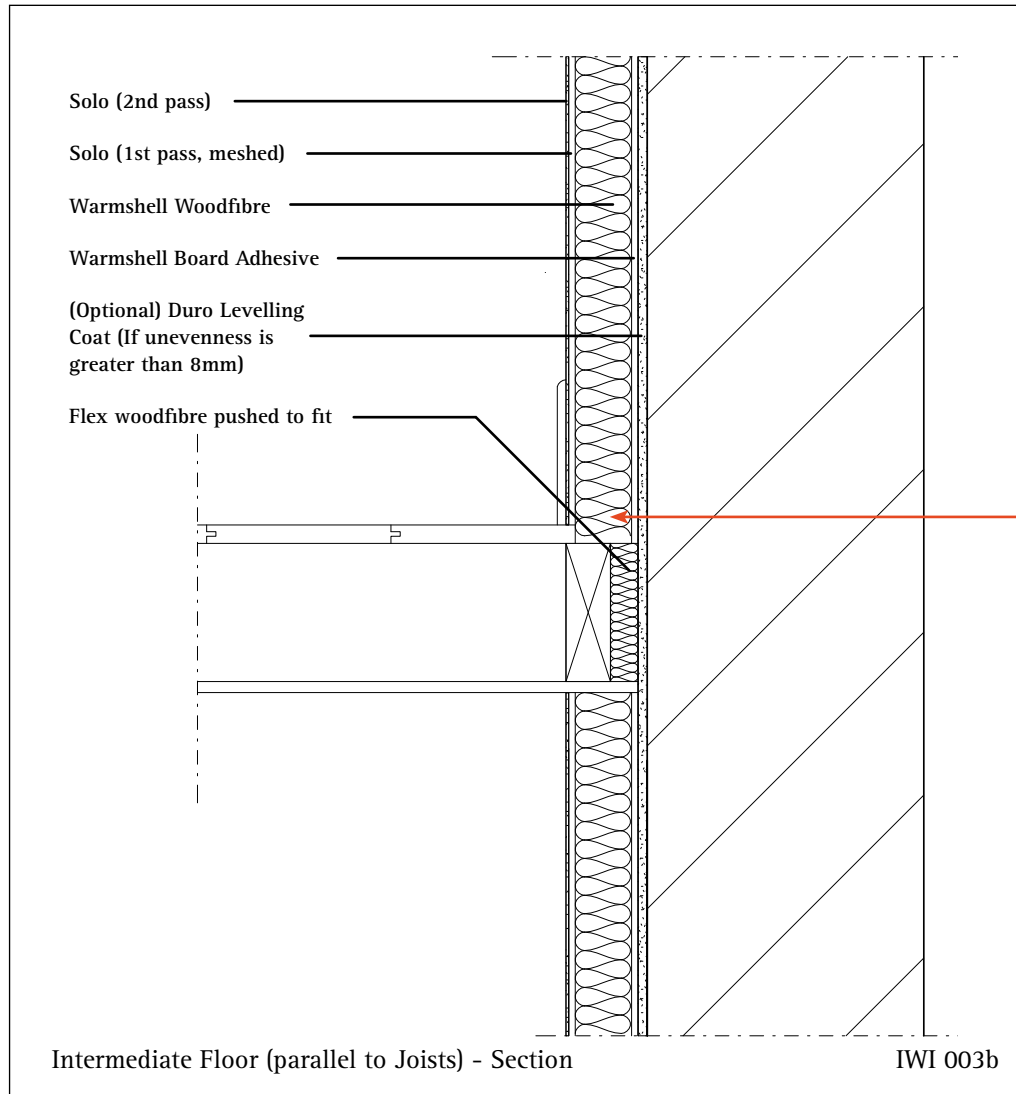


# Architectural Details - With Notes



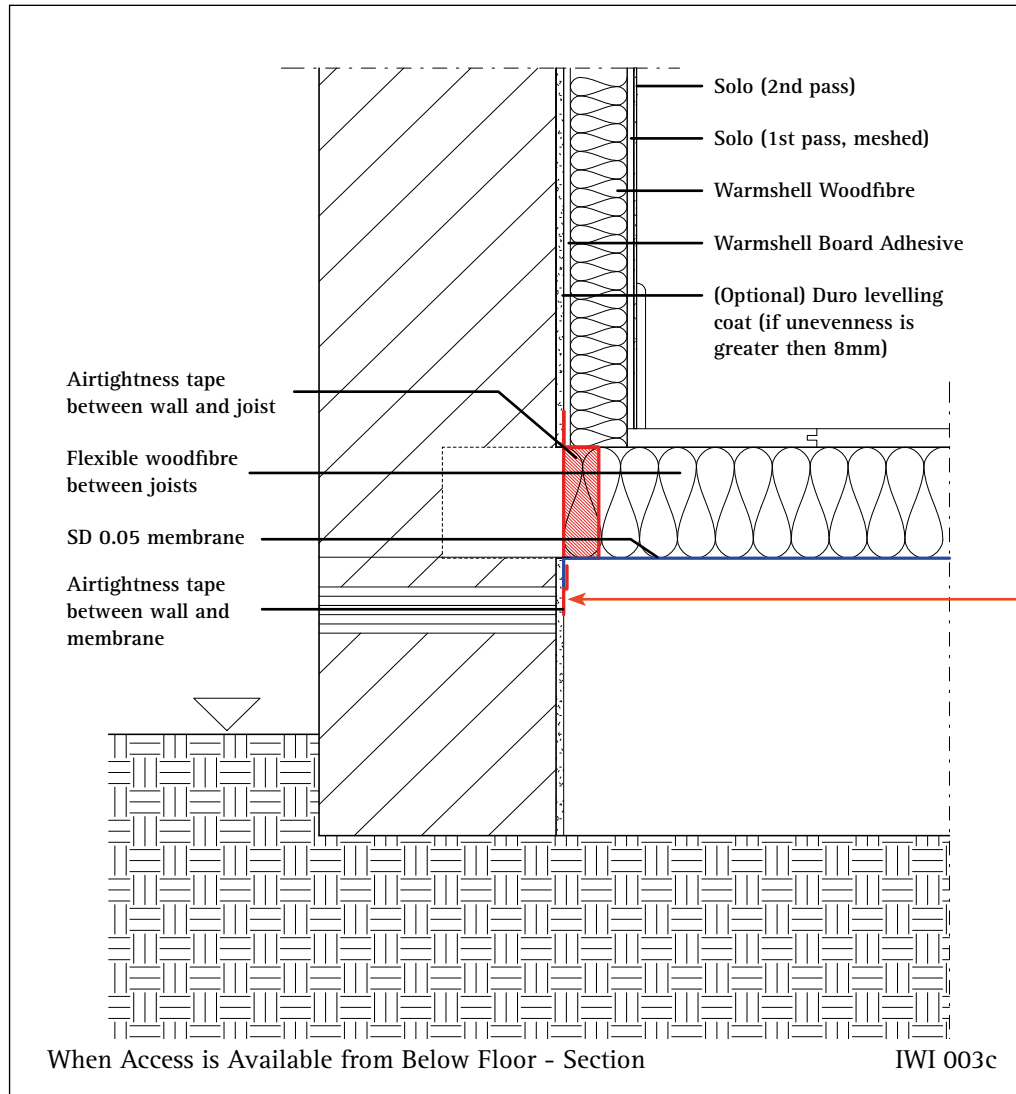
It is very important to insulate between the floor void. If this is not done the final thermal performance of the building will be significantly worse than predicted.

It is very important to achieve good levels of airtightness around the joists, either with airtightness tapes, or with Solo plaster, before installing the insulation. This will also ensure the long term integrity of the joist ends by stopping humid air from inside the building condensing at the end of the joist, where it sits in the cold wall, and causing it to rot.



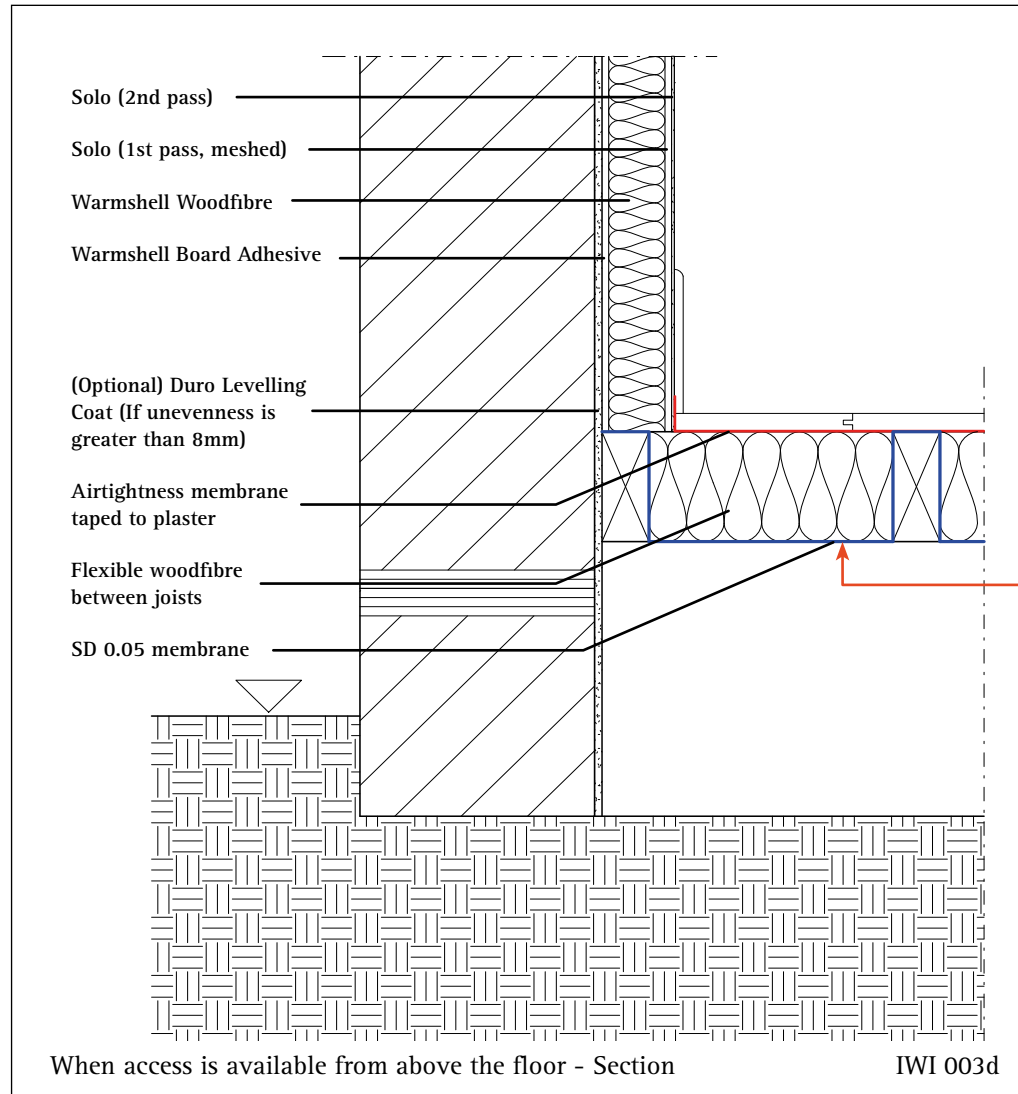
Floorboard cut back to accept full depth of Warmshell Woodfibre.

# Architectural Details - With Notes



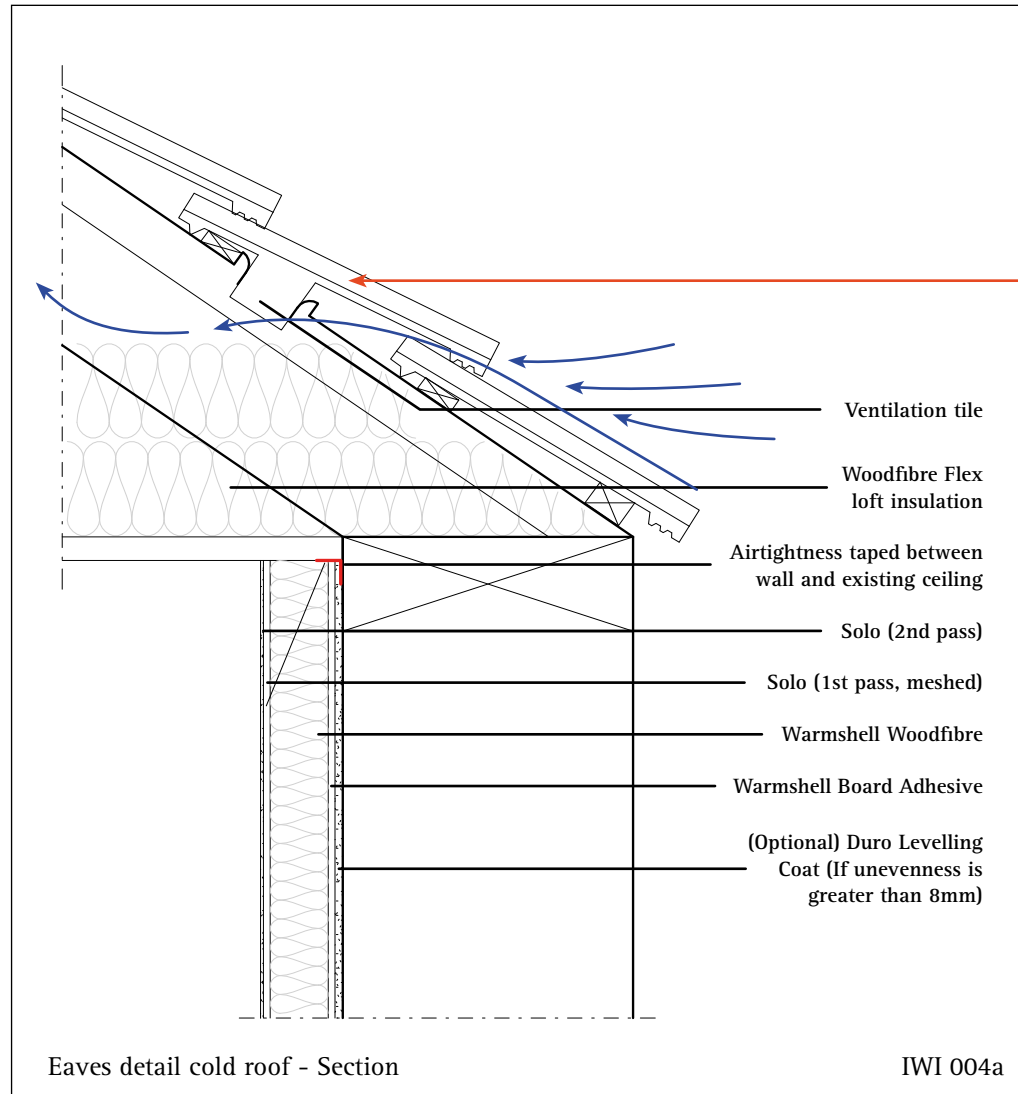
Ensure membrane is fully taped around the perimeter.

# Architectural Details - With Notes



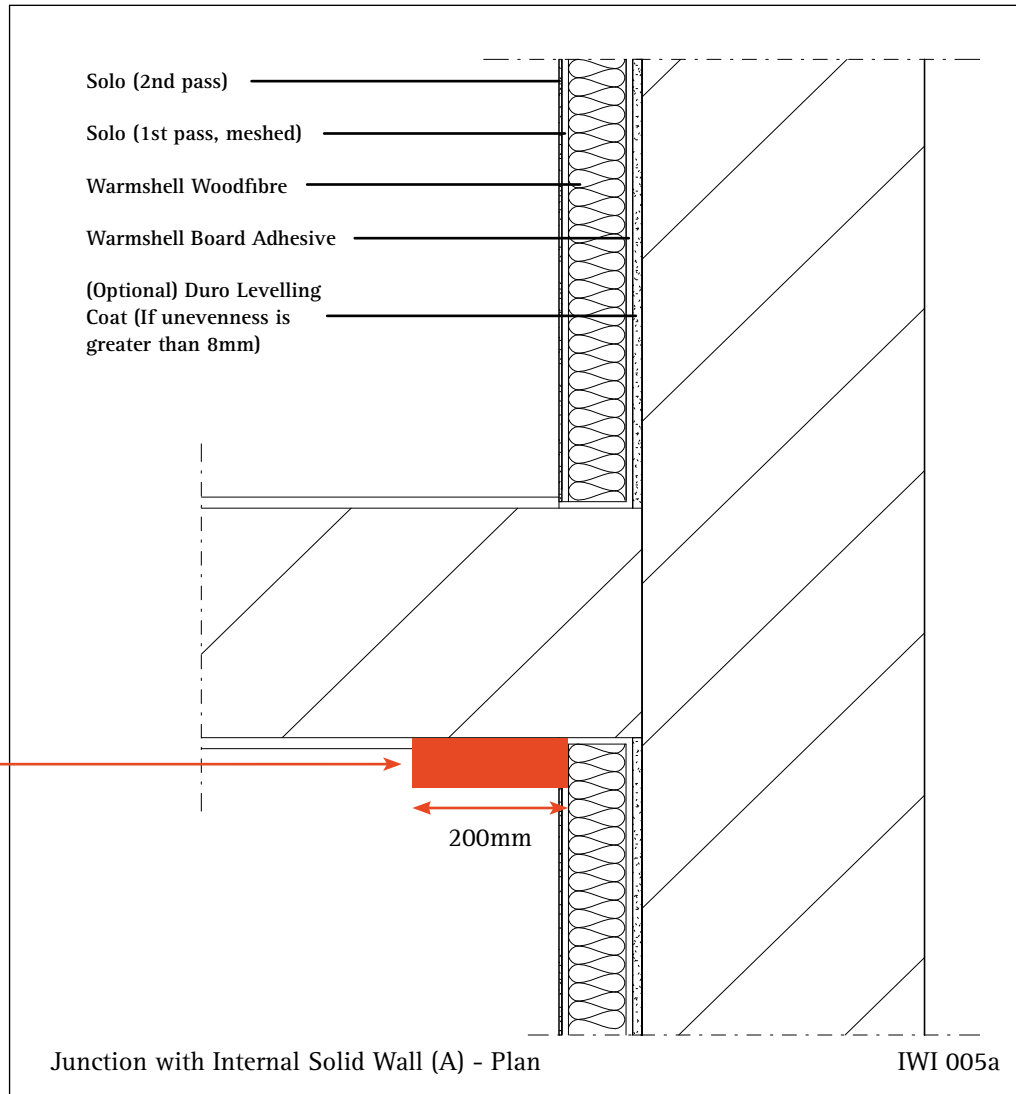
Eaves details are numerous, but the key principles to follow for IWI in conjunction with cold roof insulation are;

- Loft insulation to be as close to IWI insulation as possible.
- Loft insulation to extend as far as possible into the eaves, WITHOUT blocking ventilation into the cold roof space, to minimise thermal bridging.



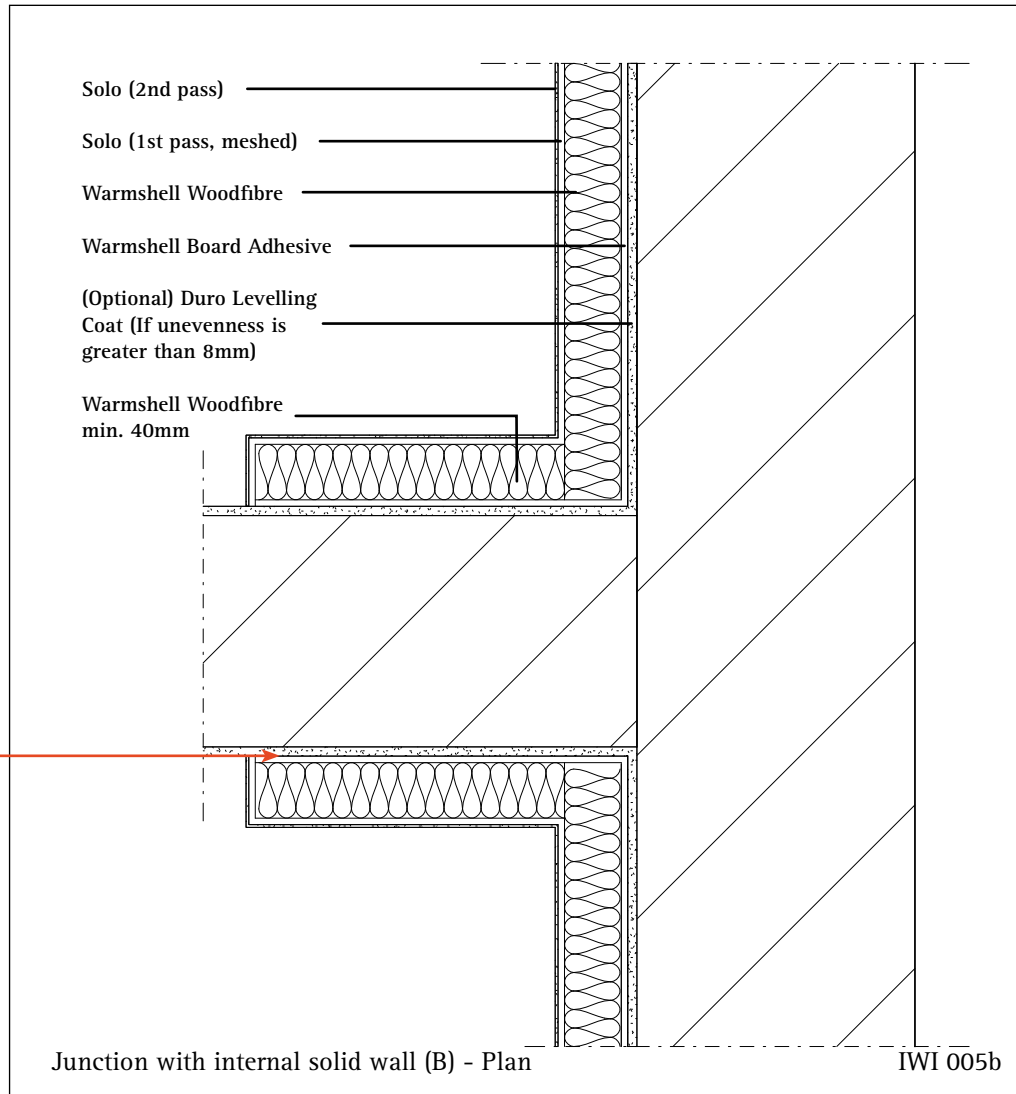
Ensure adequate ventilation is able to enter the cold roof space.

If the main insulation thickness is greater than 60mm then it is important to install approximately 200mm (See IWI 005b) of insulation on the return wall in order to eliminate the risk of cold spots and mould growth.

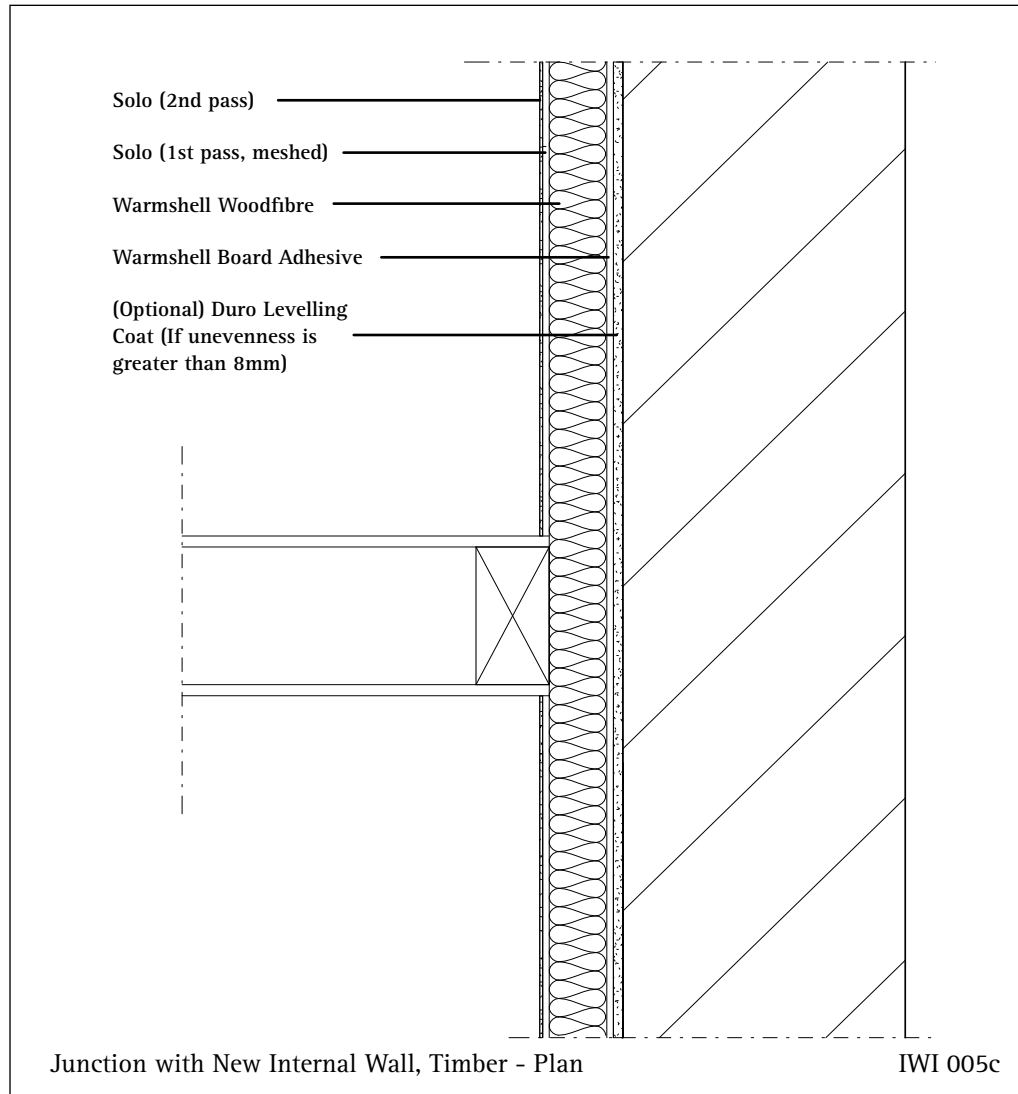


# Architectural Details - With Notes

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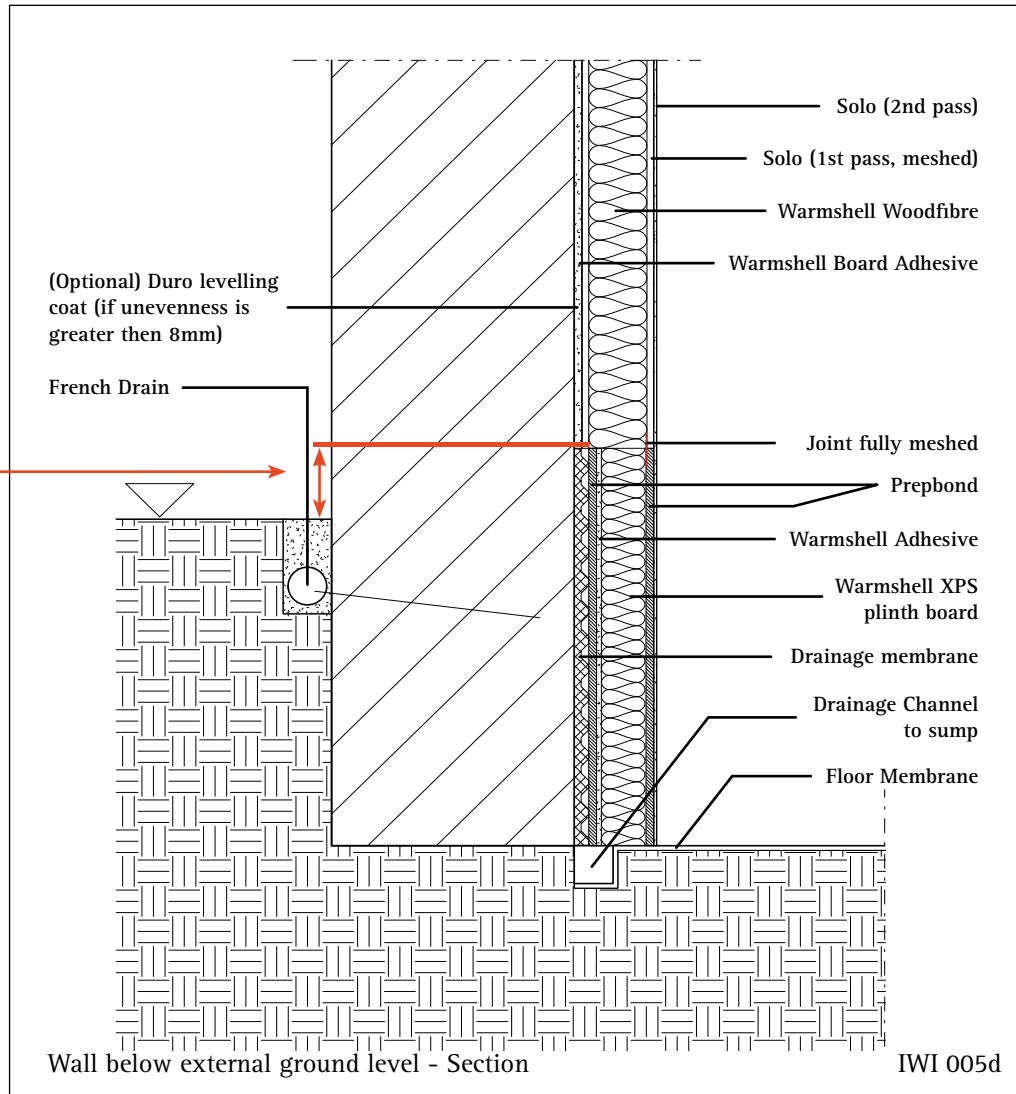
# Architectural Details - With Notes

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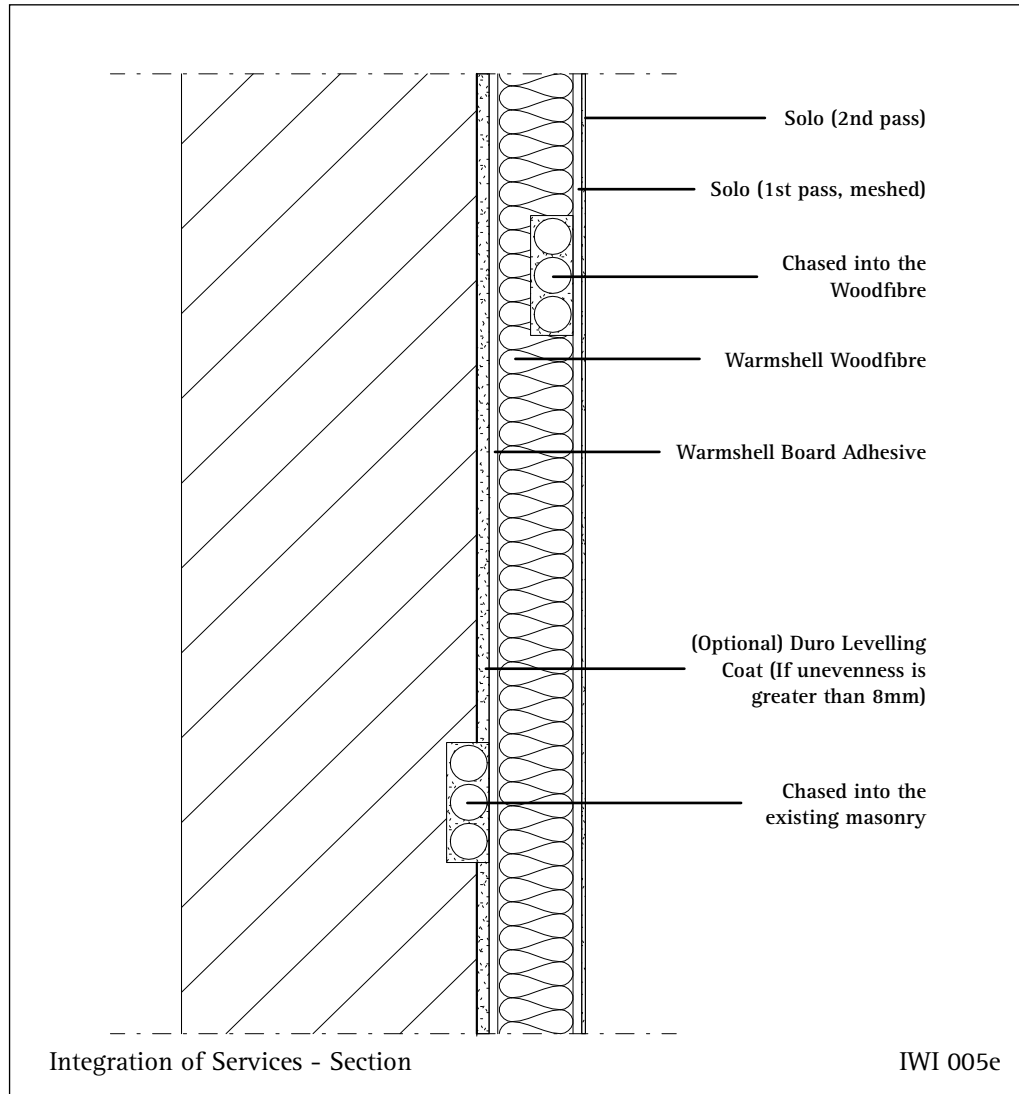
Drawing Title  
Wall below external ground level - Section

Drawing No.  
IWI 005d

Warmshell XPS should finish  
150mm above external  
ground level.



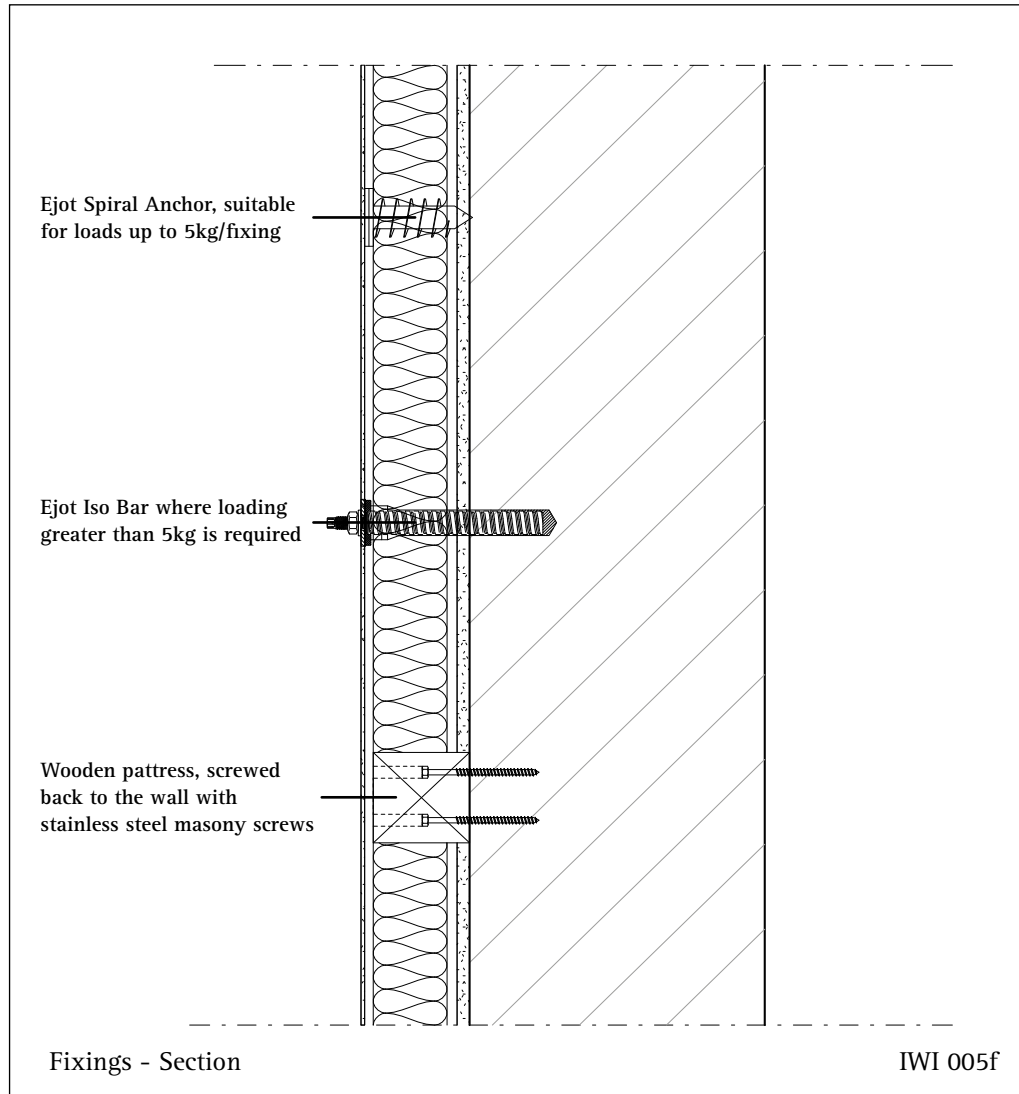
Where possible fit services on walls internal to the structure. If this is not possible services can be chased out into either the board surface or into the substrate wall. If the latter it is vital that the any voids around the services are fully filled in with either Duro or Solo plasters.



Integration of Services - Section

IWI 005e

Ensure that the stainless steel wall fixings are countersunk a minimum of 15mm into the wooden pattress, from its outer surface. Also ensure that the gap above the fixing is fully filled with either a polystyrene plug or silicon, to ensure there is a thermal break.



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