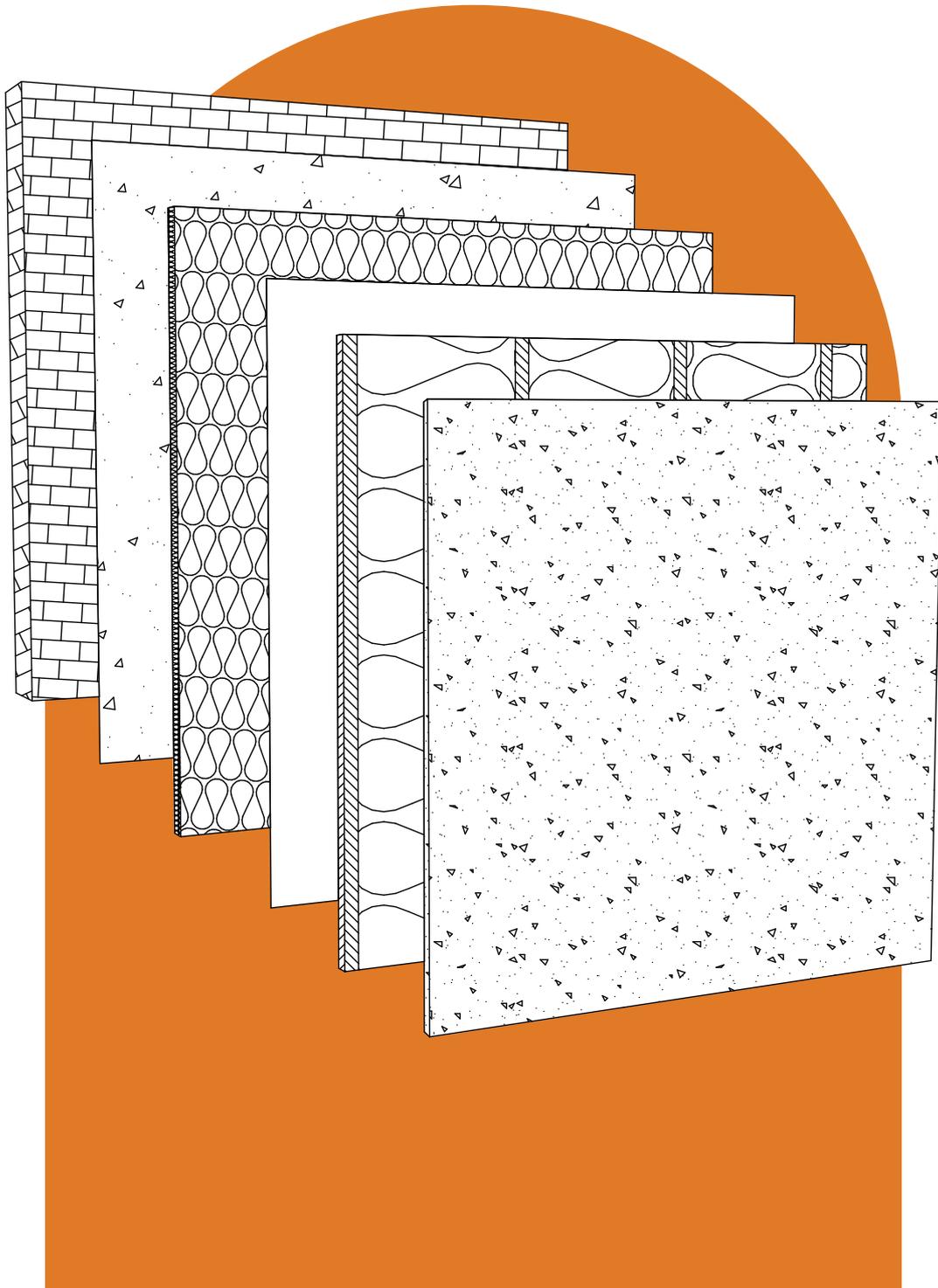


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NatureWall

Architectural Details



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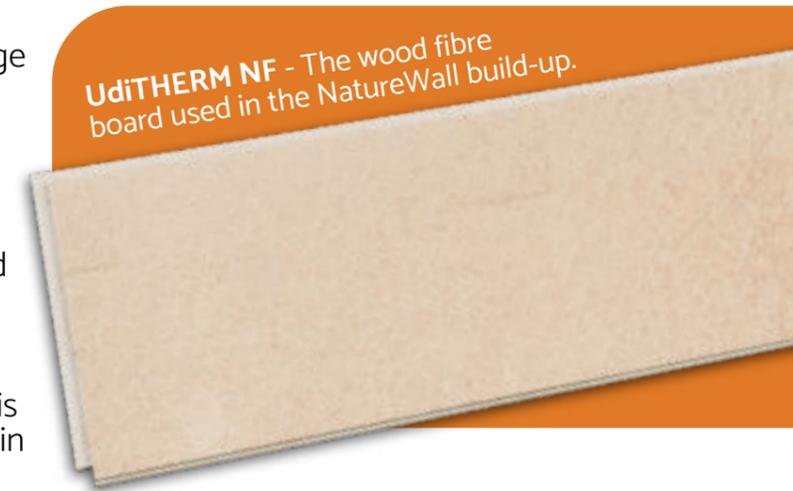
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Introduction

The NatureWall Internal Wall Insulation (IWI) system is designed to line the interior of your masonry building and dramatically improve the thermal comfort of the interior space.

The system utilises natural wood fibre insulation, well known for its ability to manage moisture and prevent issues with interstitial condensation and mould growth. Combined with the wood fibre is an airtightness membrane to ensure high levels of air tightness, a service zone to allow cabling or pipework to easily be installed and the speed and simplicity of plasterboard as the wall finish. To avoid designers having to become experts in IWI, we take on the moisture risk calculations to ensure that the specification is suitable for the building and for the location in which it is to be installed.

UdiTHERM NF - The wood fibre board used in the NatureWall build-up.



Xella Multipor - Mineral Insulation Boards

Location, orientation, wall construction, surface finishes and target U-values are different for every project and so it is important to assess each individually. Once the Site Assessment checklist has been supplied to us, we can carry out detailed hygrothermal software analysis of the different elevations of the project and determine the most suitable specification. This ensures issues with a build up of moisture within the walls and associated ill-health, are avoided.

Through the use of the software analysis we can also determine whether existing plasters can be retained. Cement plasters are often removed, damaging the masonry underneath, in the mistaken assumption that it is not breathable or will somehow damage the building. Utilising existing plasters not only prevents considerable waste and mess, but also avoids the installation of more high embodied carbon plasters such as lime plasters. NatureWall IWI helps reduce your carbon emissions by reducing your heat loss and by locking carbon, in the form of wood fibre, into your building.



NatureWall Model - A stepped back example of the nature wall system.

These architectural details should be viewed alongside the following documents:-

- 1) NatureWall - Site Assessment Checklist and Guide
- 2) The NatureWall training course on the Fibres Academy training platform
- 3) NatureWall - Care & Maintenance Guide

Nature Wall Specification

NBS Style Specification for NatureWall Internal Wall Insulation System Using Wood Fibre Insulation with Plasterboard Finish.

1.0 Section Reference:

CO4/110 NatureWall Internal Wall Insulation - Wood Fibre with Plasterboard Finish.

2.0 Work Description:

Installation of internal wall insulation using wood fibre insulation boards (UdiTHERM) with a plasterboard finish, providing enhanced thermal performance while maintaining breathability for masonry walls. Suitable for pre-1945 solid brick buildings and those requiring breathable construction materials.

3.0 System Performance:

- Thermal performance (U-value requirements):
- Walls to achieve a U-value of $\leq 0.7 \text{ W/m}^2\text{K}$ as per Building Regulations for existing buildings, with typical achievable U-values listed as follows based on insulation thickness:

Wood fibre board thickness	Batten depth, filled with SteicoFlex insulation	U-value achieved
40mm	25mm	0.46 W/m2K
40mm	38mm	0.39 W/m2K
40mm	50mm	0.36 W/m2K
60mm	25mm	0.38 W/m2K
60mm	38mm	0.34 W/m2K
60mm	50mm	0.31 W/m2K
60mm	63mm	0.29 W/m2K

4.0 Materials:

4.1 Insulation Materials:

Wood Fibre Insulation Boards:

- UdiTHERM wood fibre insulation boards.
- Board size and thickness as recommended per U-value requirements.

Flexible Wood Fibre Insulation:

- SteicoFlex O36 for insulation between battens.

Mineral Insulation Boards:

- Multipor mineral insulation boards for moisture-sensitive areas (e.g., wall base close to ground level).

4.2 Fixings & Tapes:

Insulation Fixings:

- Fischer Termoz SXRL fixings for securing insulation boards to masonry.

Membranes:

- Ampatex Variano vapour control membrane or Ampatex LDA 0.02 vapour permeable membrane.

Battens:

- Timber battens (38-63mm depth) fixed to masonry with Fischer DuoExpand fixings.

Airtightness Tapes:

- Ampacoll Komprimax joint sealing tape.
- Ampacoll Fenax plasterable airtightness tape for penetrations.
- Ampacoll INT for laps and joints in membranes.

4.3 Plasterboard:

- 12mm standard plasterboard or suitable alternatives as recommended.

5.0 Preparatory Work:

5.1 Surface Preparation:

- Remove existing gypsum plaster and other unsuitable finishes.
- Clean and level walls using Baunit Viton Fein plaster (5-10mm thickness) for bare masonry if required.
- In cases where wall base is at external ground level, apply Multipor mineral insulation boards with hydraulic lime plaster (Baunit RK39) to match wall levels.

6.0 Installation Process:

6.1 Fixing of Insulation Boards:

- Lay wood fibre boards in a staggered "brick" pattern.
- Apply Fischer Termoz fixings to secure boards to masonry.
- Cut boards to fit around window/door openings, allowing overhangs for precision trimming.

6.2 Airtightness Membrane:

- Install Ampatex membrane, ensuring all overlaps are taped with Ampacoll INT airtightness tape.
- Seal penetrations and corners with Ampacoll Fenax tapes as specified.

6.3 Batten Installation:

- Install timber battens at 600mm centres, using Fischer DuoExpand fixings.
- Fill batten voids with SteicoFlex insulation to specified depths.

6.4 Plasterboard Installation:

- Fix 12mm plasterboard to battens, avoiding damage to the membrane.
- Use construction adhesive for fixing plasterboard to window/door reveals or plaster directly onto reveal boards where necessary.

7.0 Finishing and Junctions:

- Internal Wall Junctions: Use reveal boards (minimum 500mm) with adhesive or full bed bonding methods for airtightness at internal partitions.
- Final Finish: Skim coat with breathable plaster and ensure the use of breathable paints (acrylic, non-vinyl) for all finished surfaces.

8.0 Compliance:

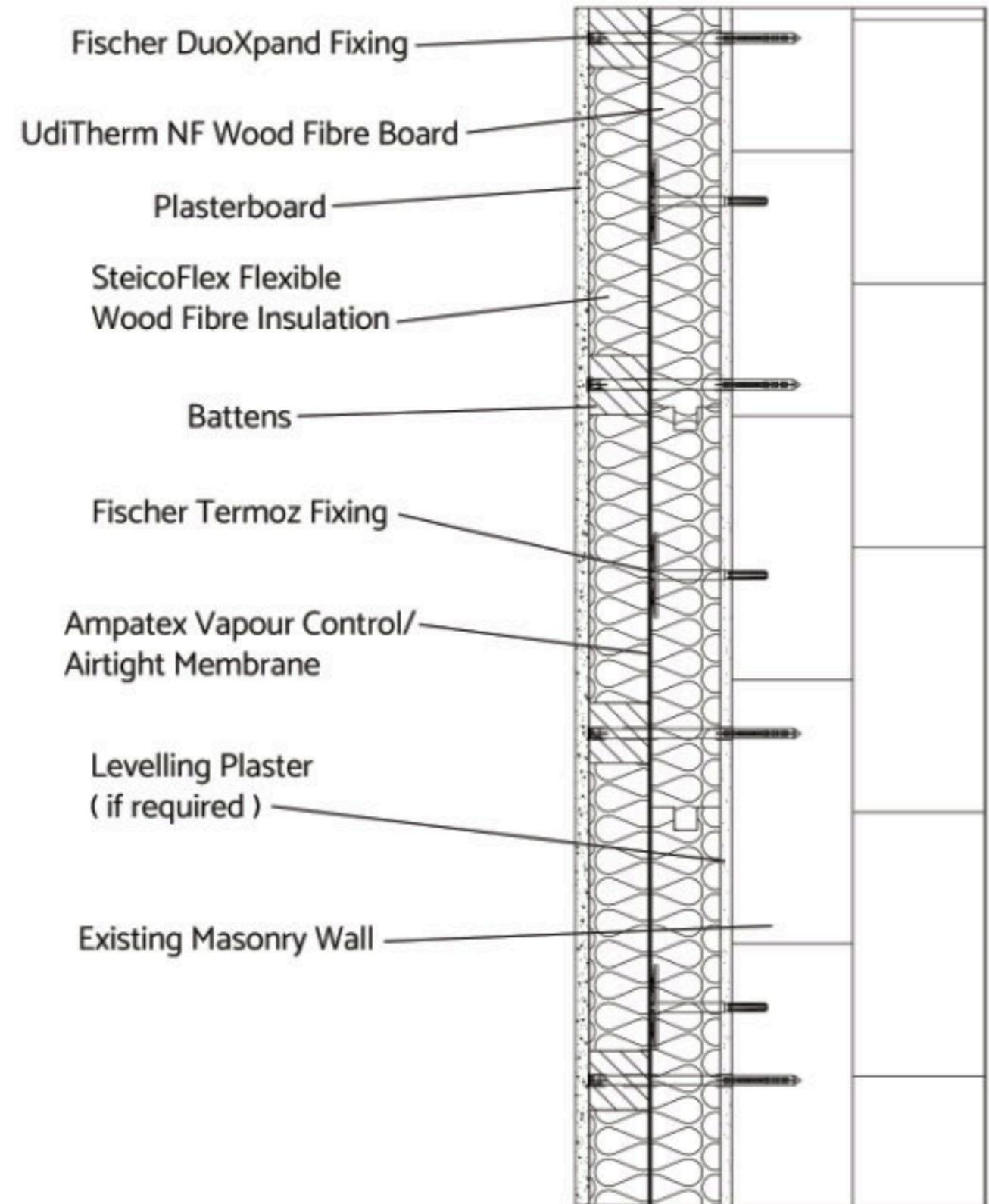
- All works to comply with Building Regulations regarding insulation and thermal performance.
- Ensure all materials are used in accordance with manufacturer's guidelines and installation instructions.

9.0 Testing and Quality Assurance:

- Hygrothermal simulation must be completed to verify suitability.
- Thermal Testing: Verify U-values using suitable software simulations.
- Airtightness Testing: Inspect and test airtightness performance of the system, particularly around penetrations and junctions.

This structured NBS style specification details the components, materials, installation process, and performance requirements necessary for the successful installation of the internal wall insulation system using wood fibre insulation and a plasterboard finish.

Nature Wall 3D Model



Rotate, zoom, and examine the full build-up in 360°. Scan this QR code to explore the model in your browser.

Nature Wall
 Standard Wall Build Up
 Plan View

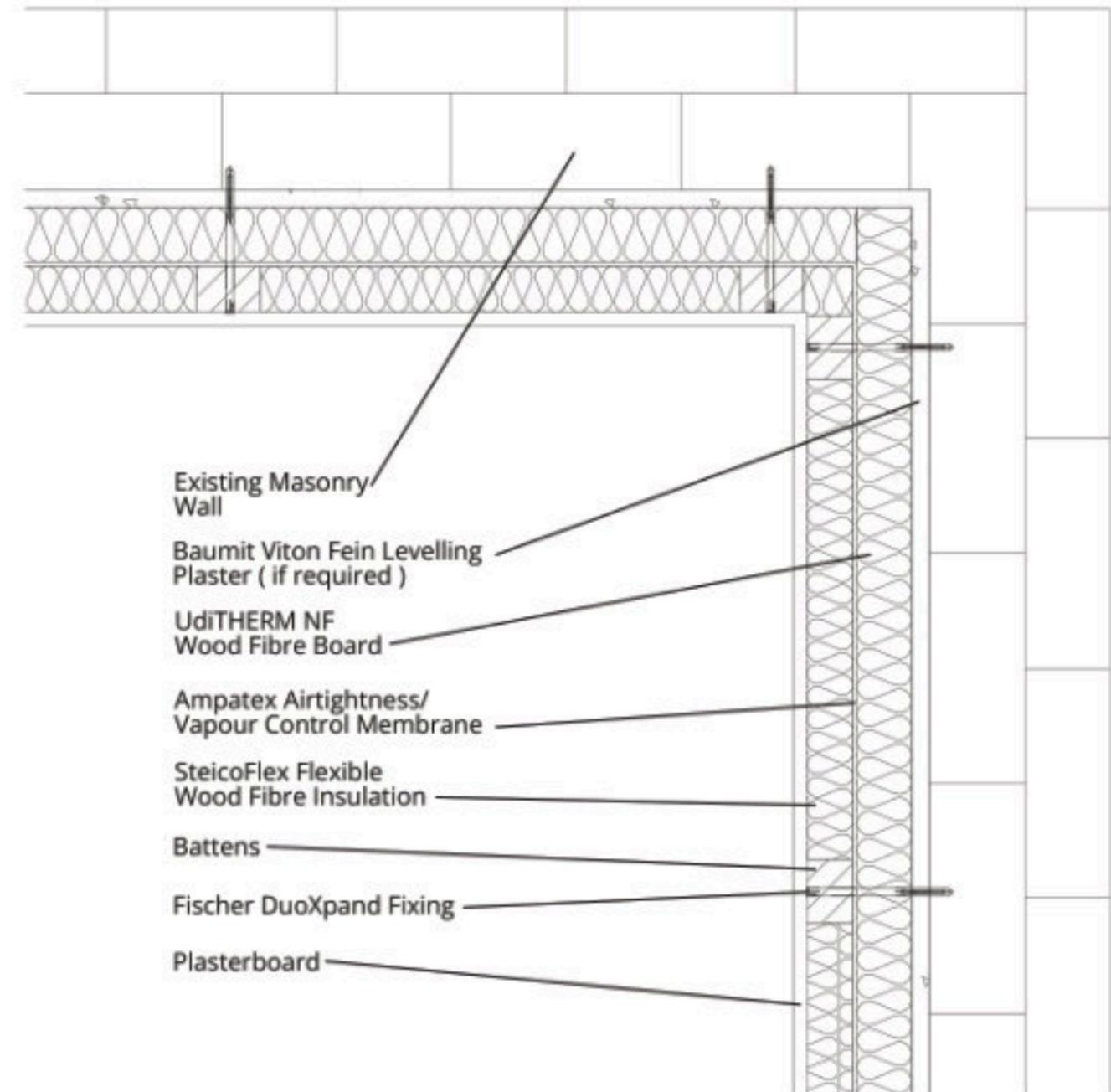
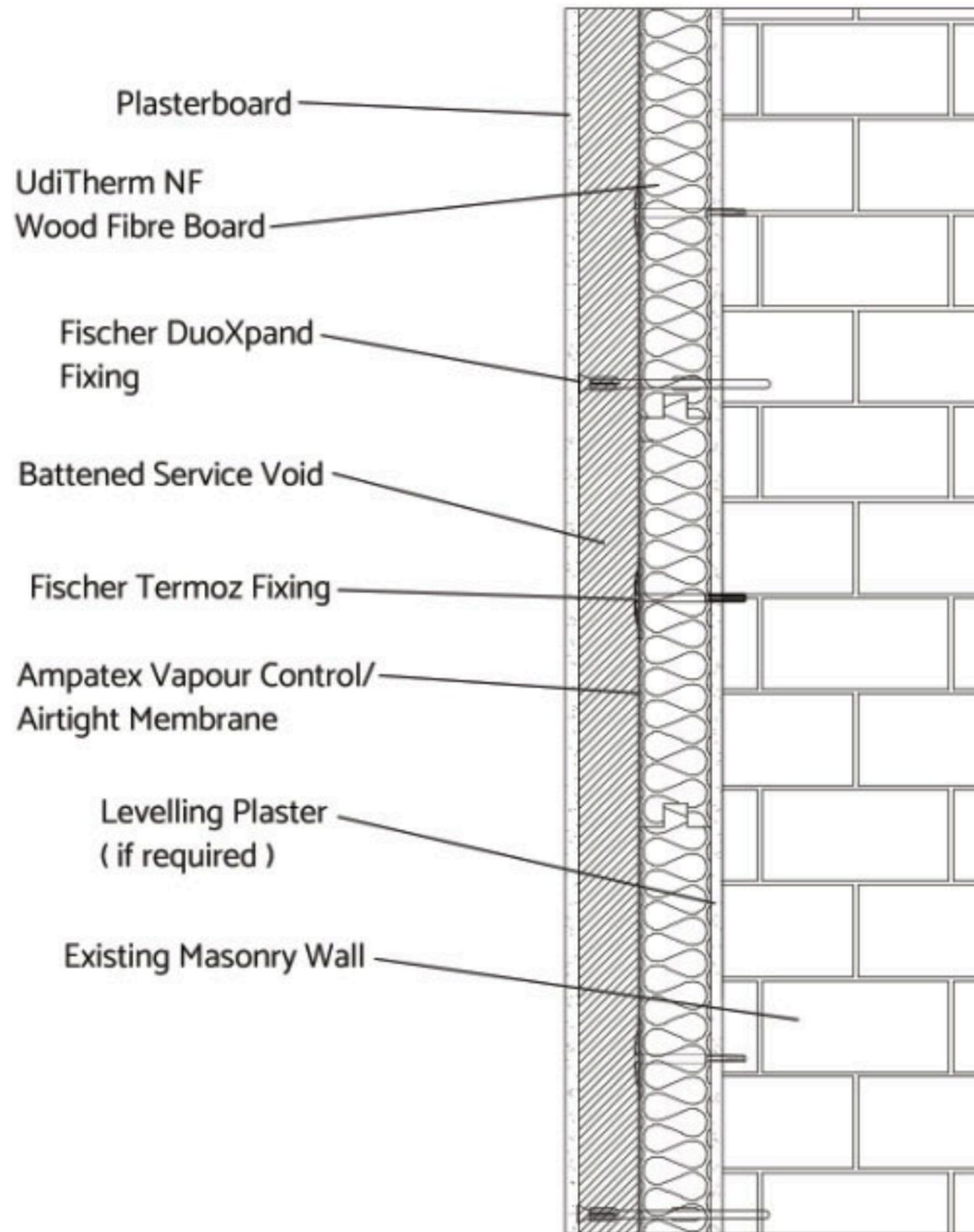
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Nature Wall
Standard Wall Build Up
Section View

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Nature Wall
Internal Corner Detail
Plan View

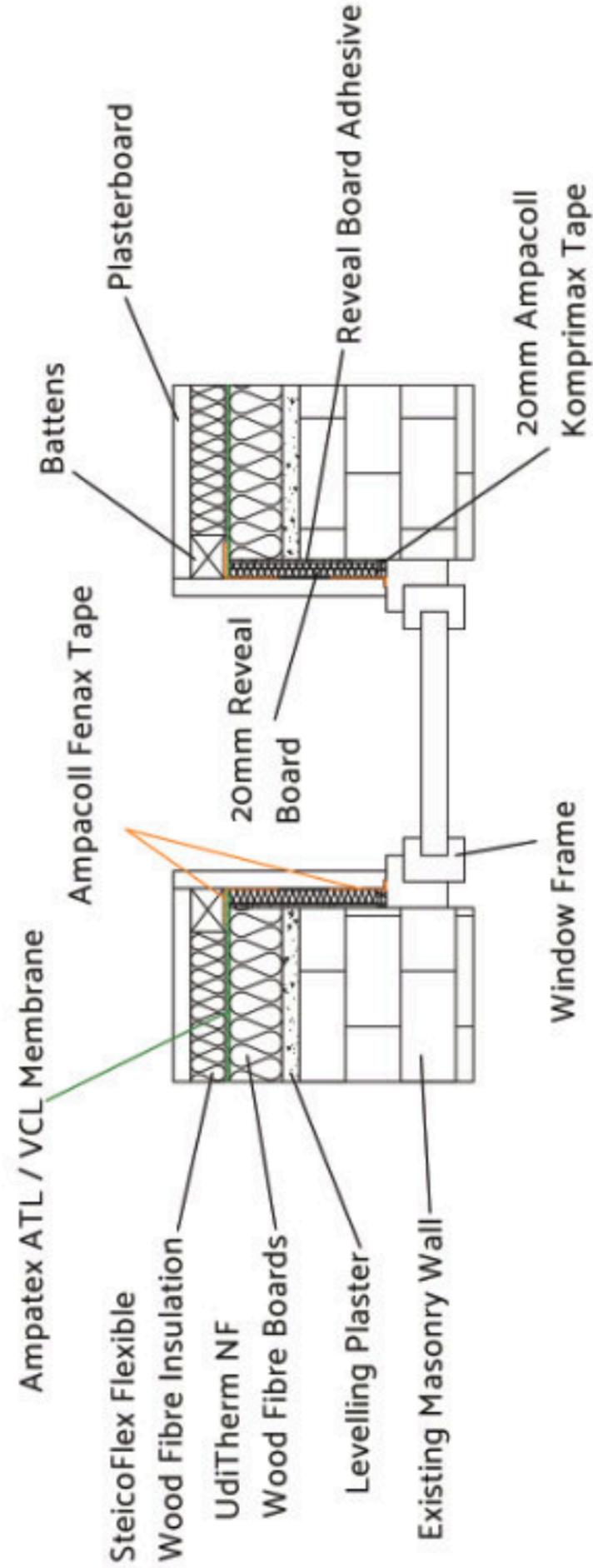
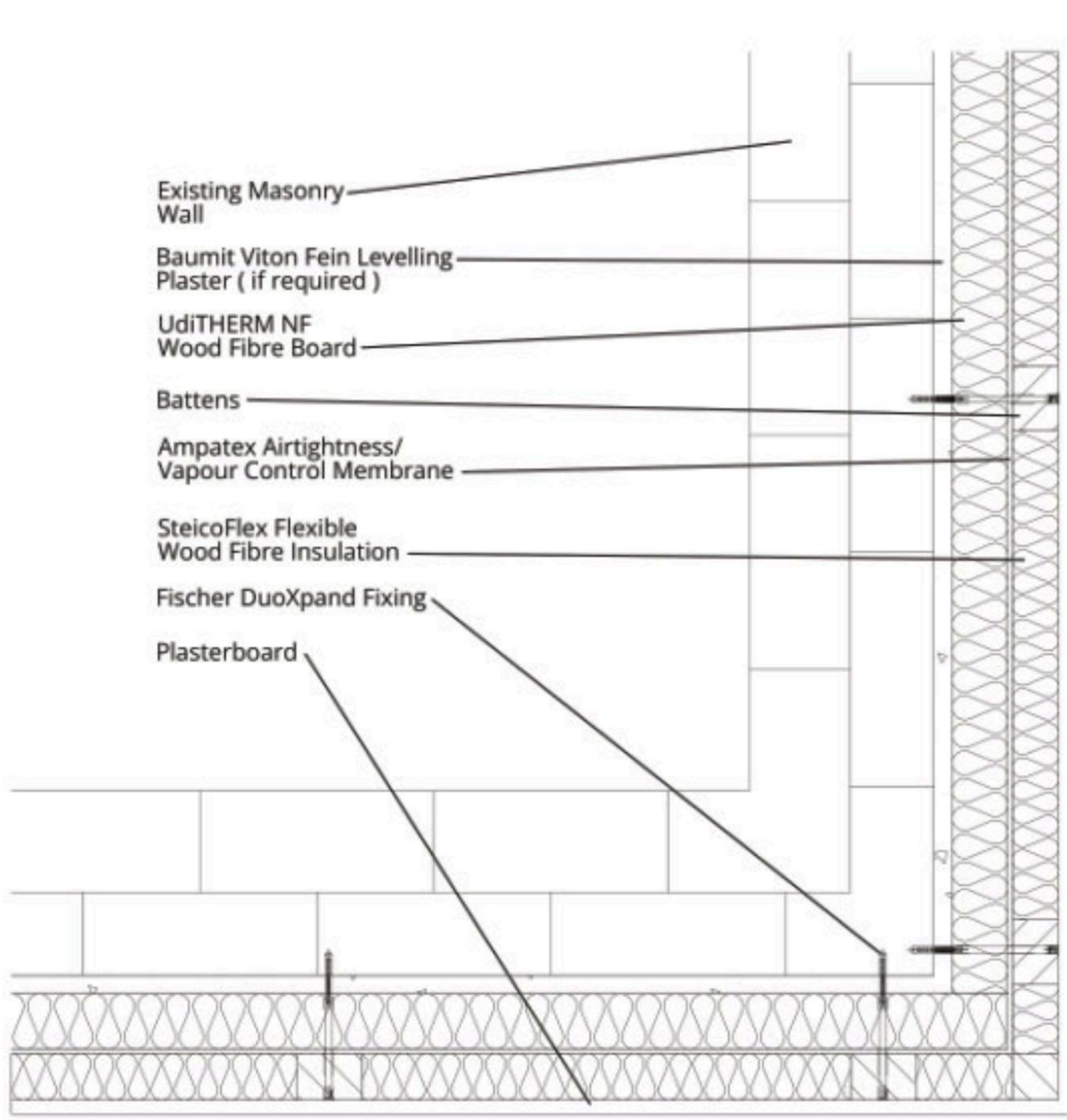
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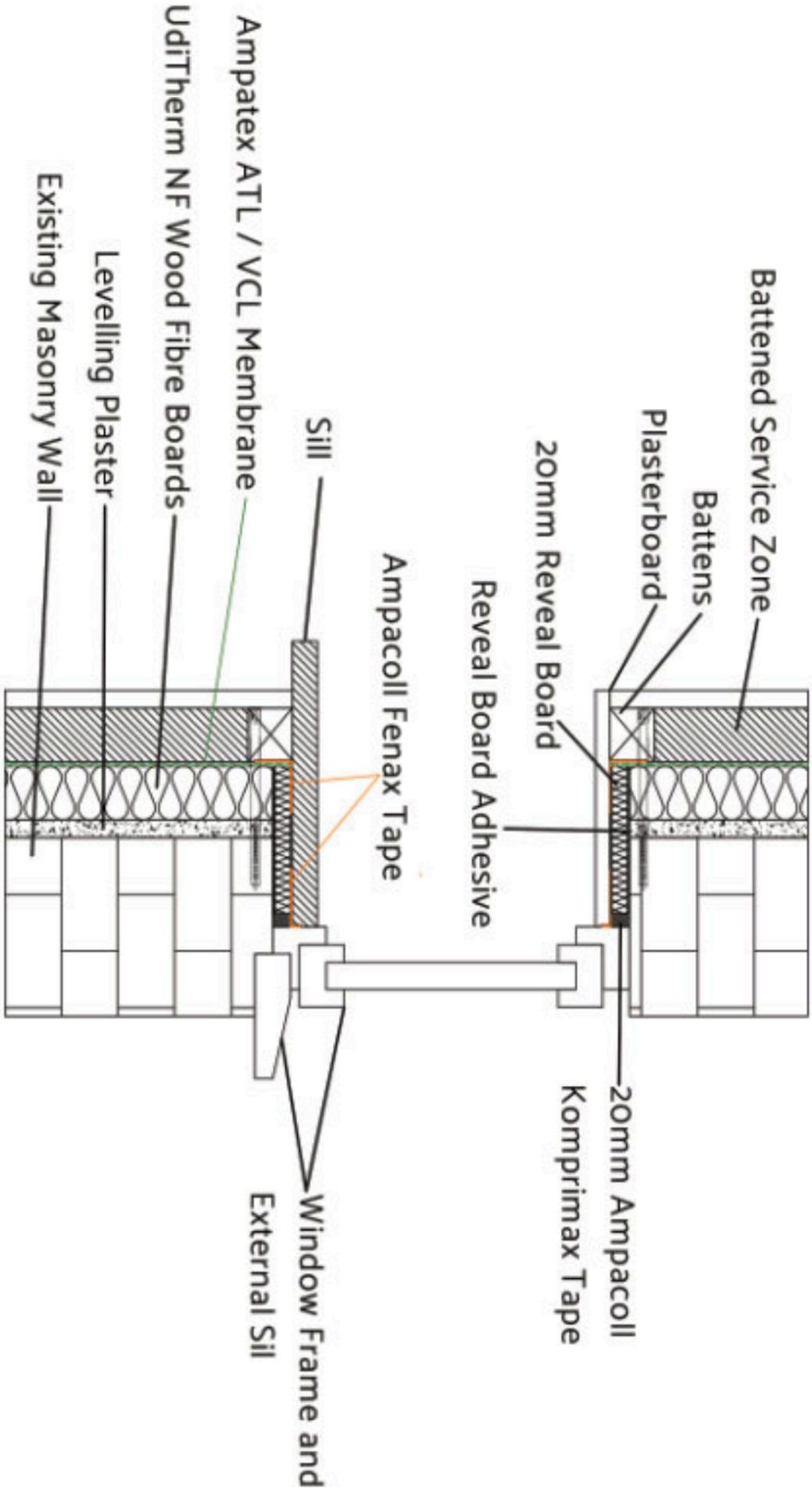
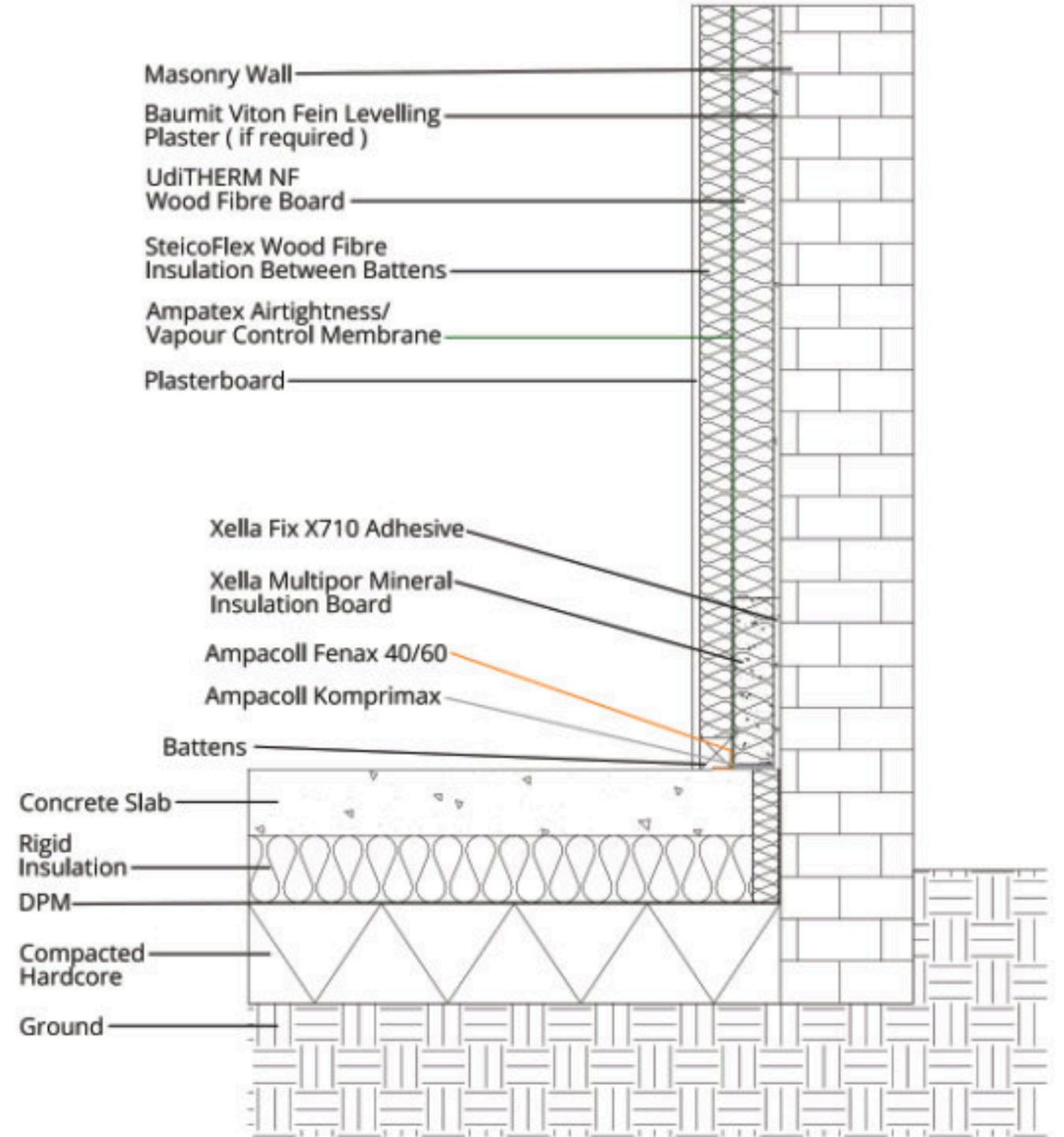
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Nature Wall
 External Corner Detail
 Plan View

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Nature Wall
Window Reveal Detail
Section View

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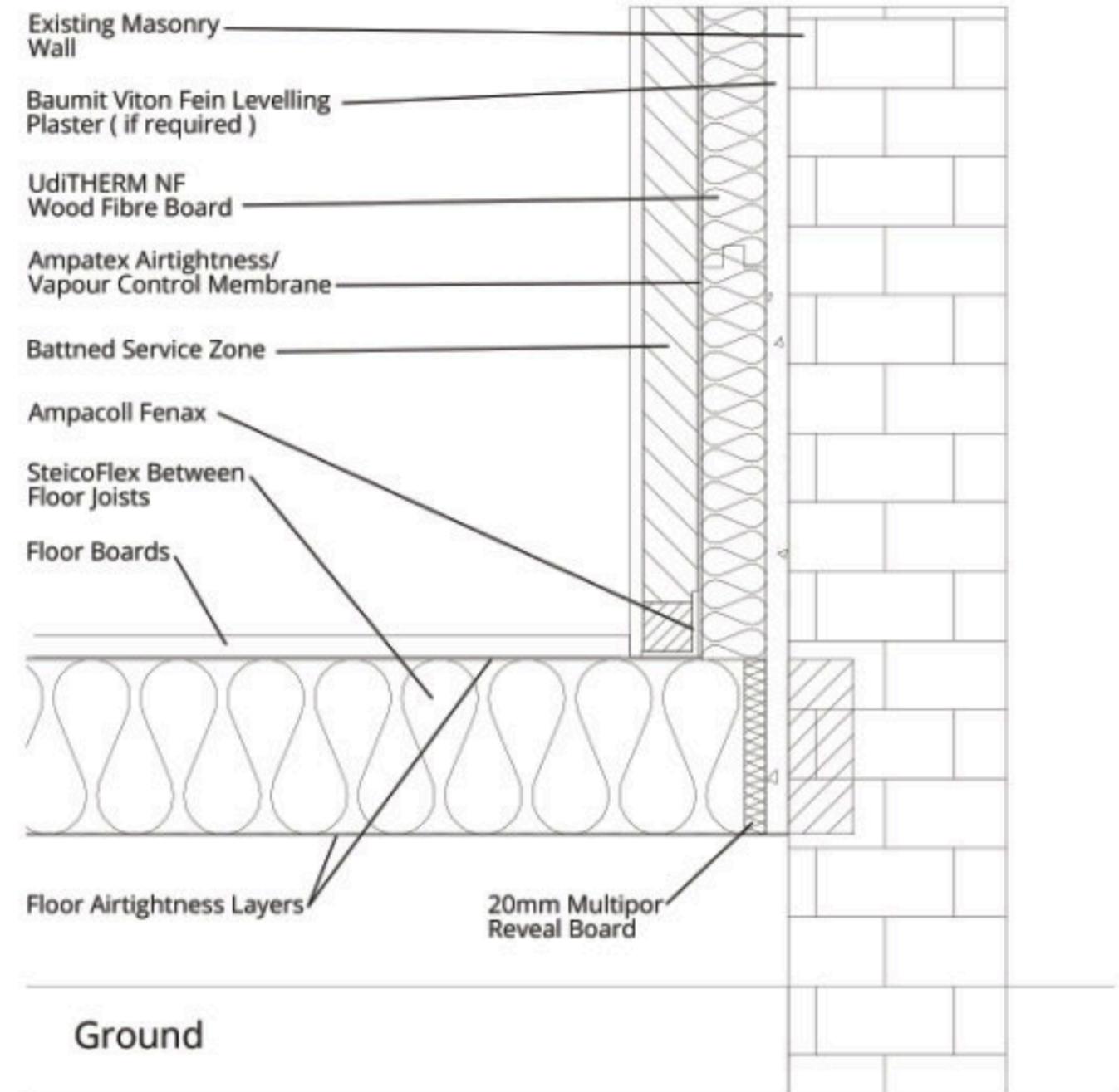
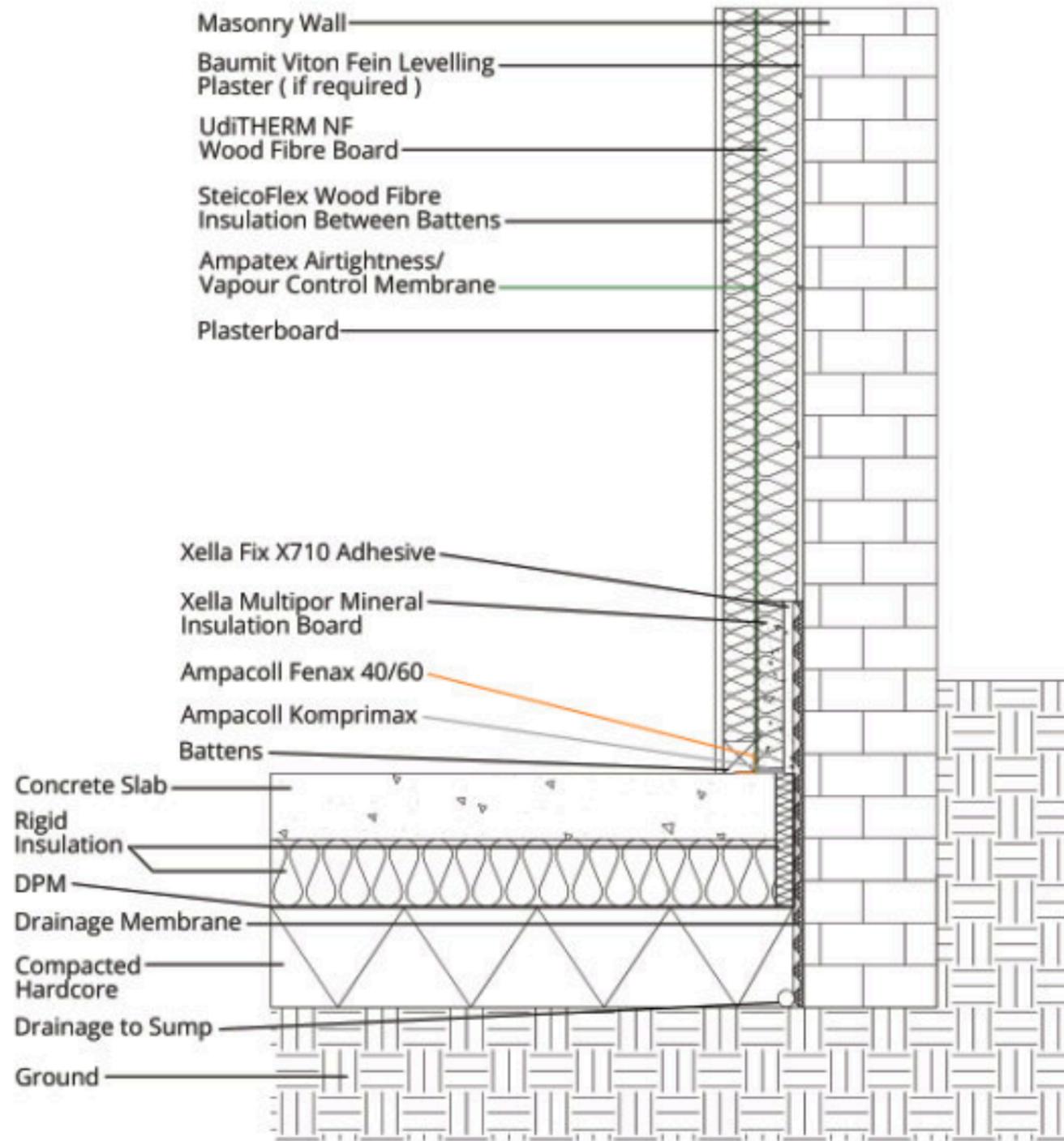
Nature Wall
Solid Floor Detail
Section View

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Solid Floor Detail - Wall
Below External Ground Level
Section View

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Nature Wall

Suspended Floor Detail
Section View

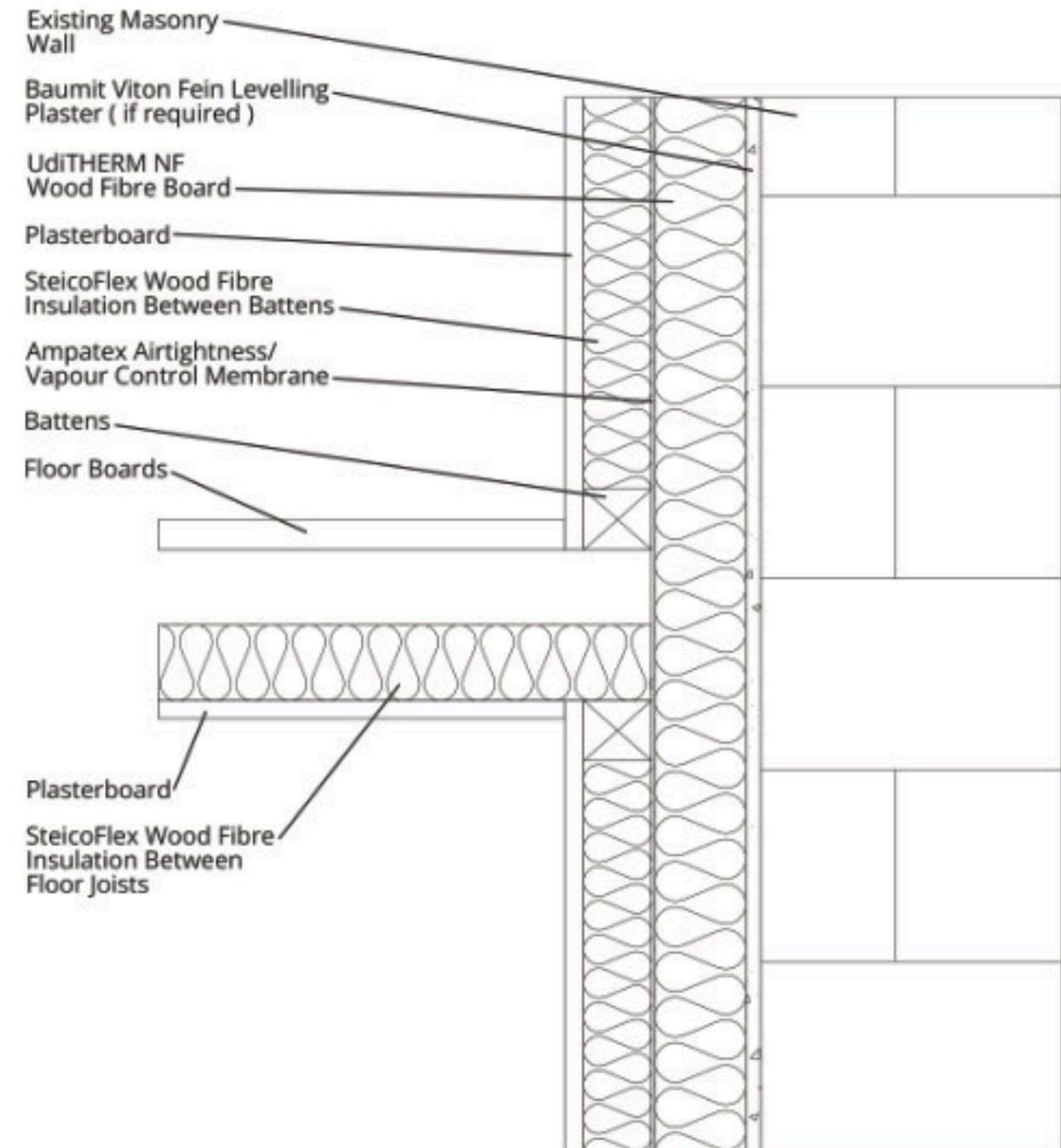
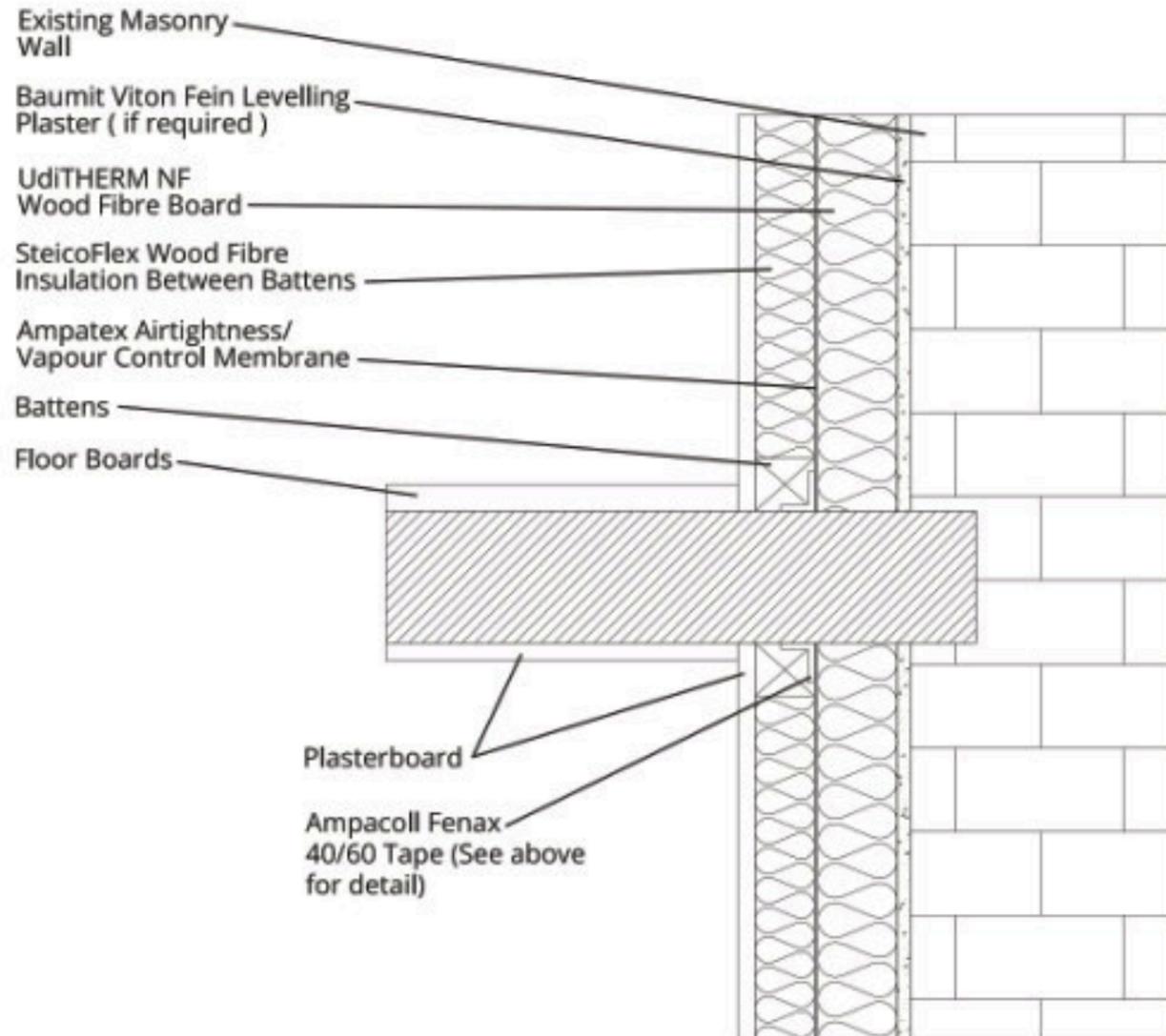
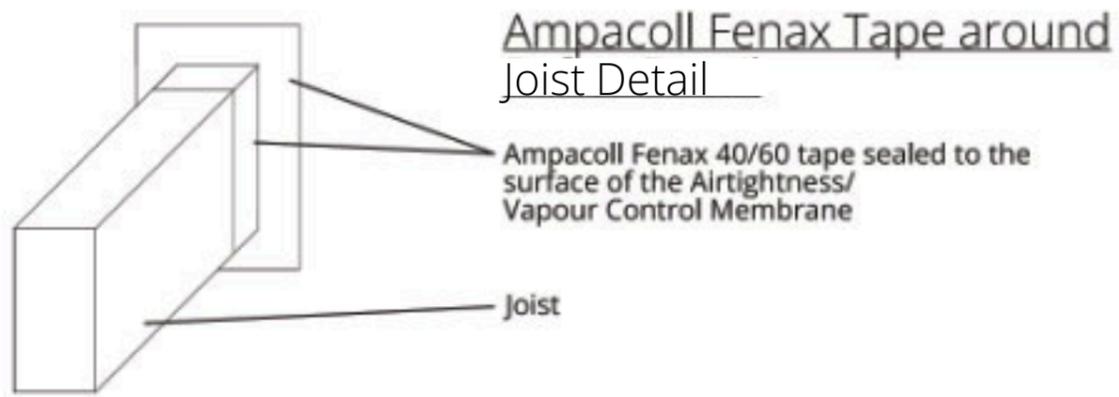
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Nature Wall
First Floor Detail
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First Floor Detail - Between
Rafters
Section View

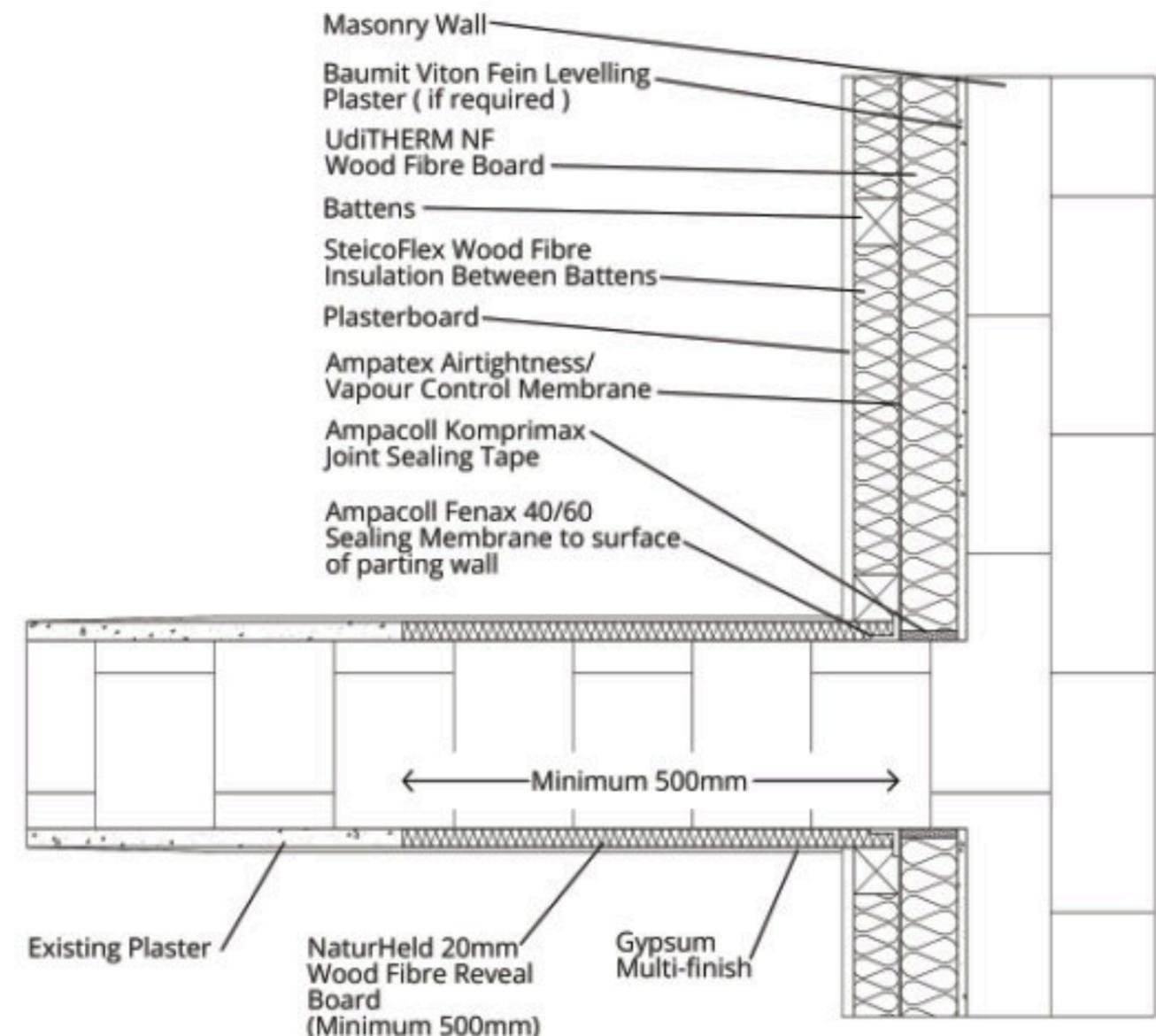
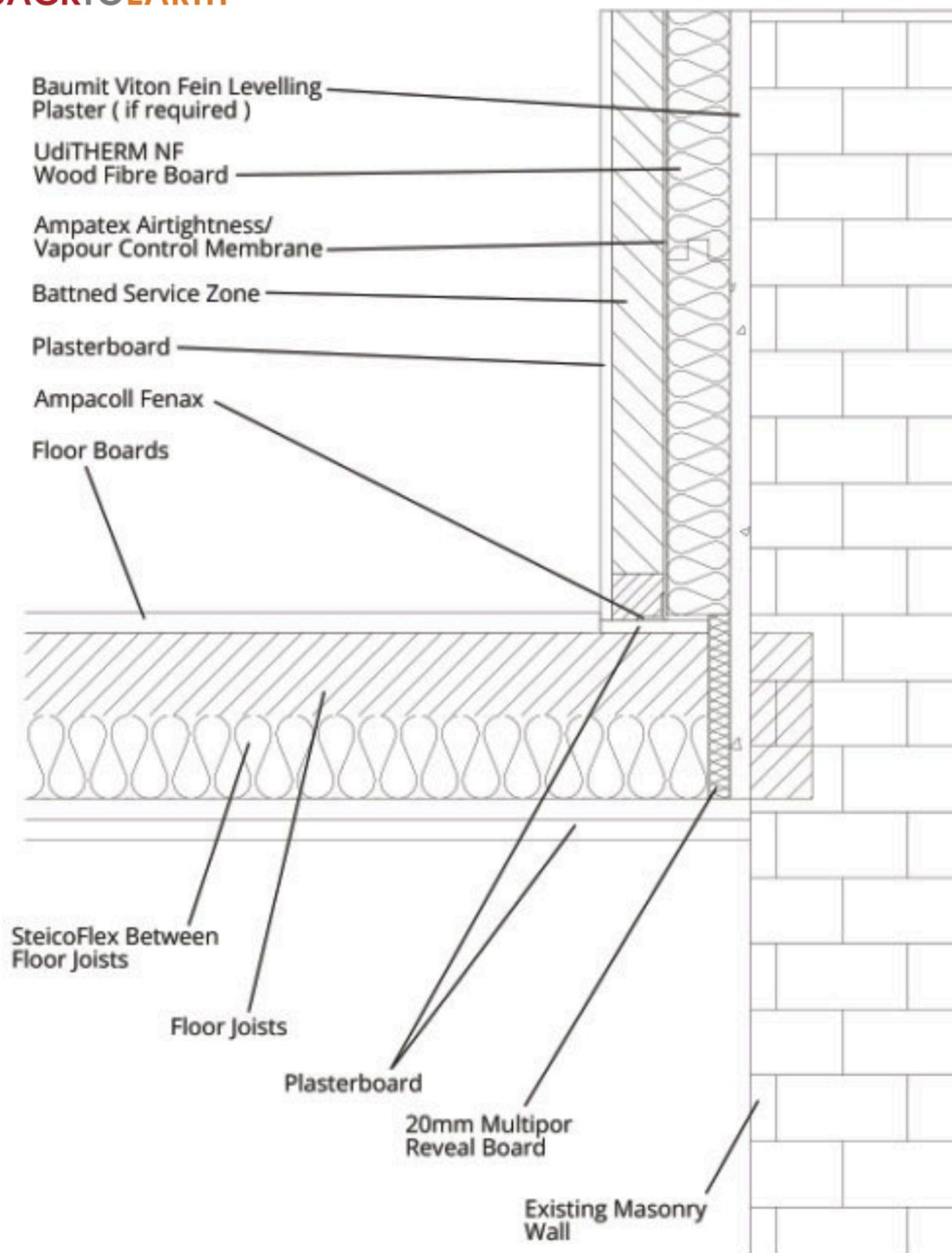
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Party Floor Detail
Section View

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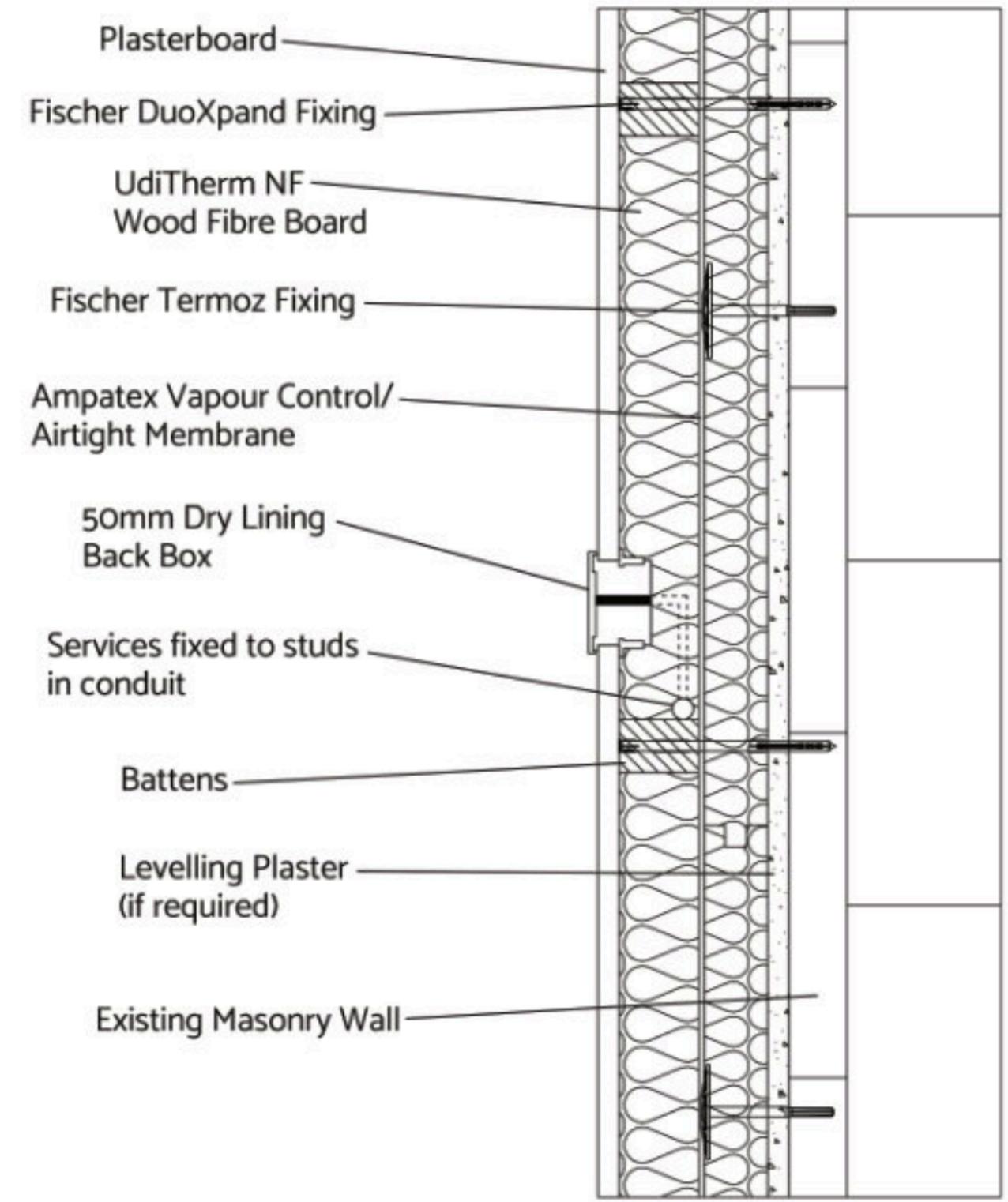
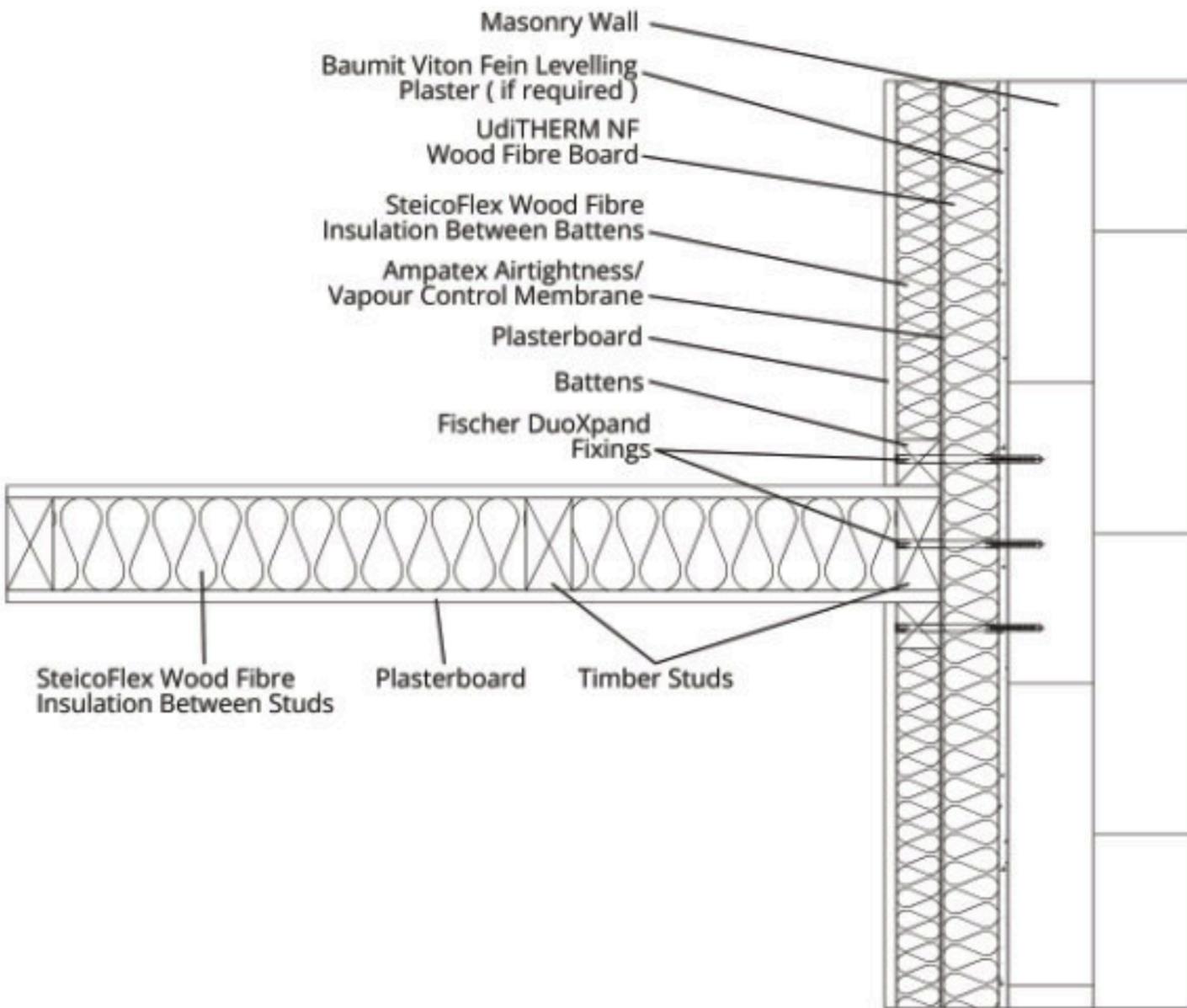
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Nature Wall
Internal Wall Junction -
Solid Wall
Plan View

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Internal Wall Junction - Stud Wall
Plan View

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Nature Wall

Services Detailing
Plan View

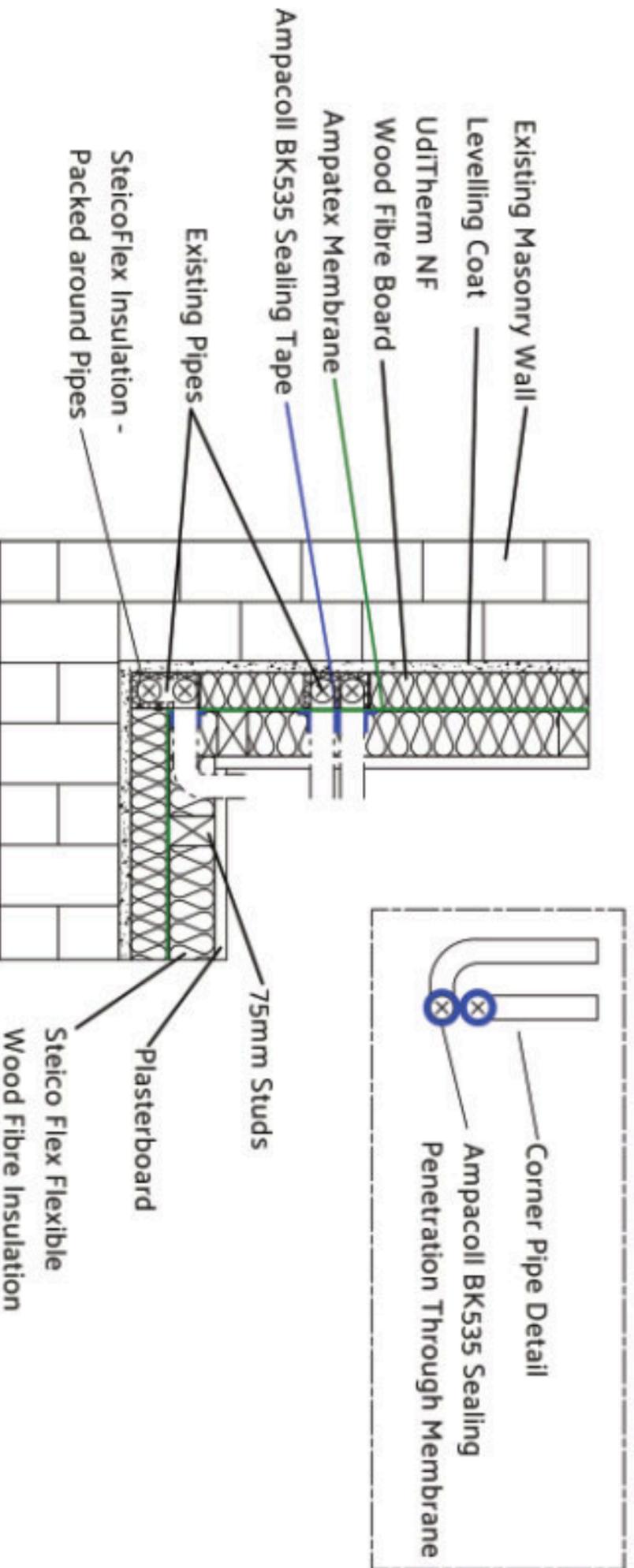
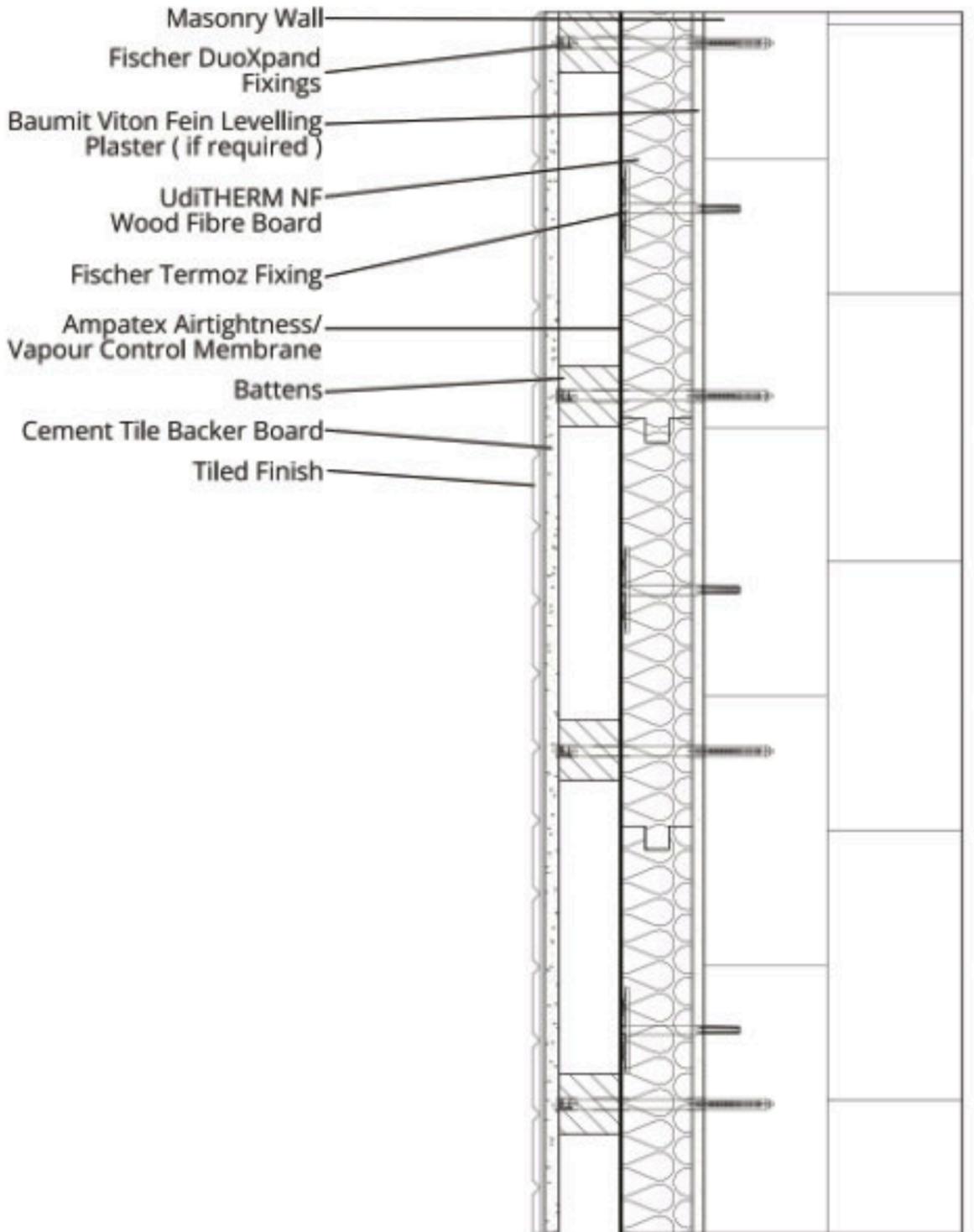
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Nature Wall
Pipe Detailing
Plan View

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Bathroom Detail
Plan View

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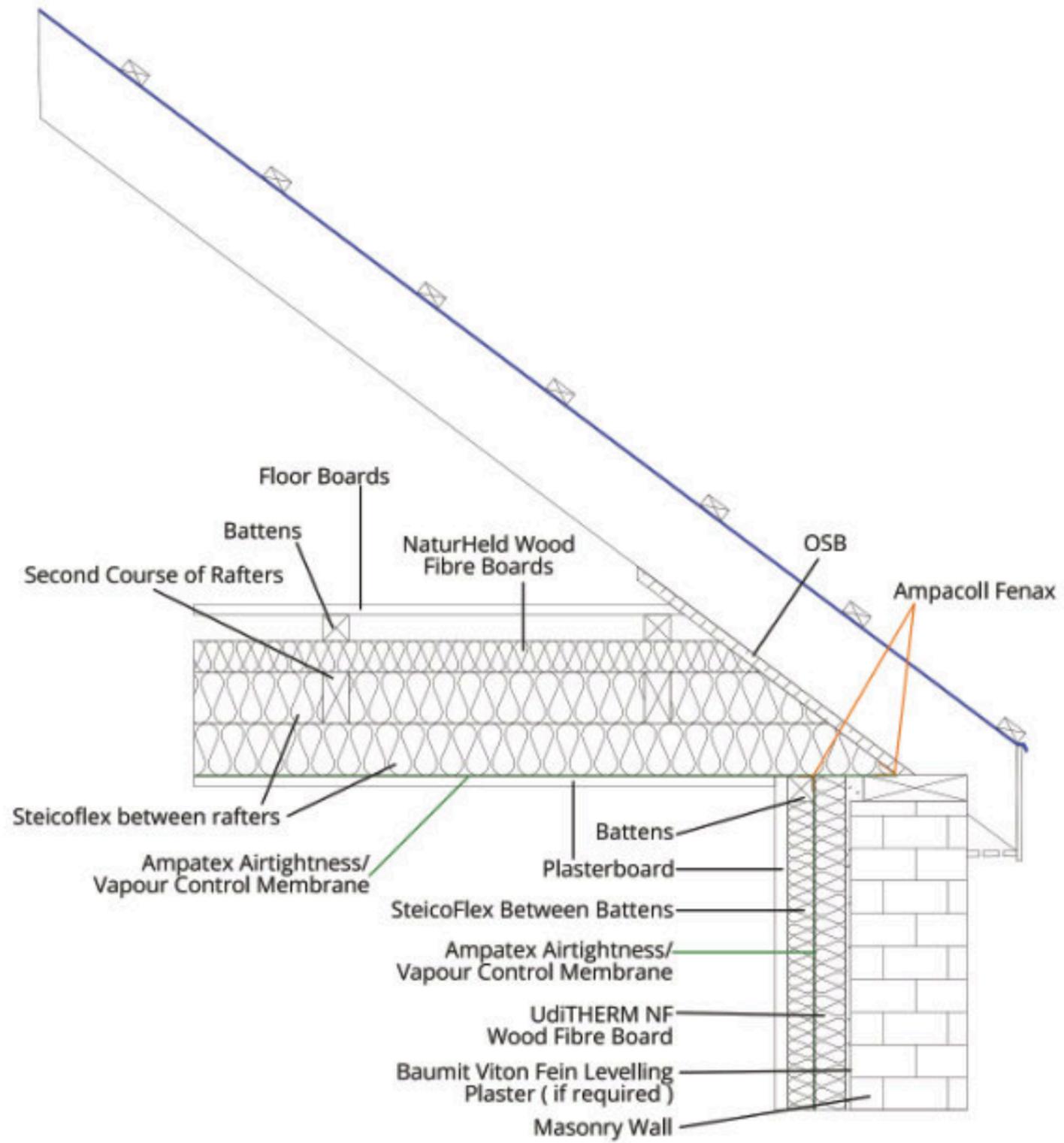
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Nature Wall
Wall - Loft Junction
Section View

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