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HARO Flooring's Solution to Changes to NZ Building Code E3 AS1 (Nov 2021)

Relating to Timber Flooring in Wet areas(Kitchens,
Laundries, Toilets/Powder Rooms)

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HARO Flooring's Solution to Changes to NZ Building Code E3 AS1 (Nov 2021)

HARO Flooring has been independently assessed by NZWTA and the positive reports are available on request, showing HARO Flooring is fully compliant as an Alternative solution under the E3 Code

Relating to Timber Flooring in Wet areas (Kitchens, Laundries, Toilets/Powder Rooms)

There were changes to the NZ Building Code that came into effect on 5 November 2021 for all Building Consent applications that specify timber flooring in wet areas identified as containing sanitary fixtures and appliances such as kitchens, toilets and laundries.

Firstly, please note that this change does not include timber flooring in other areas of a residential dwelling such as living, dining, hallways, entrance, stairways, bedrooms etc.

Secondly, HARO Flooring New Zealand has the information and documentation required (see below) to gain compliance so that HARO

Engineered Timber Flooring can be specified as an "Alternative Solution" in these areas.

We recommend that all building projects being submitted to Council from 5 November 2021 onwards that include HARO Timber flooring (Parquet 4000 Series Engineered Flooring (Plaza, Plank 1-Strip, Longstrip) include the following documents:

1. [Alternative Solution for E3](#)
2. [HARO Flooring Installation Instructions](#)

These documents will satisfy the NZBC E3 requirements and will alleviate the need for time-consuming RFI s from Council.



HARO Engineered Timber Flooring
Smoked Oak Universal
Plank 1-Strip PLAZA



HARO Engineered Timber Flooring
Oak Invisible Sauvage
Plank 1-Strip PLAZA



HARO Flooring New Zealand - Alternative Solution For E3

For the use of HARO Flooring's Timber Parquet 4000/2500 Series Engineered Flooring (Plaza, Plank 1-Strip and Longstrip formats) for single dwelling residential houses, detached units/apartments and stand-alone buildings, and kitchens in multi-dwelling buildings.

HARO Timber Parquet 4000/2500 Series Engineered Flooring once installed and maintained in accordance with all guidelines supplied, will comply with the new E3 NZ Building Code clauses, and this compliance meets all HARO Flooring obligations under the NZ Building Act 2004 clauses s14G(2) and with the ATFA Engineered Flooring Industry Standard (2018).

Clauses E3.3.3 and E3.3.5

"Other floor finishes may also be capable of satisfying the performance for impervious and easily cleaned, if installed in a manner that prevents gaps or cracks within the finish and at any parts of its perimeter that are exposed to water splash, and/or if the surface is sealed with a suitable durable coating."

Accordingly, for compliance to be met, HARO Flooring NZ (HARO) recommends that the following points be followed and noted in the supply and installation of the HARO Timber Parquet 4000/2500 Series Engineered Flooring:

1. Engineered Timber be suitably sealed with an impervious durable coating.

All HARO timber floors are factory-finished in Germany with a minimum of 9 durable finishing coats applied.

All HARO Timber Parquet 4000/2500 Series Engineered Flooring installed in areas with sanitary fixtures and sanitary appliances ('wet areas') are finished with a full polyurethane finish to give them full compliance as an Alternative Solution for E3. Refer to [HARO Flooring Installation Instructions](#).

HARO timber floors and polyurethane finishes have a global in-service history of over 50 years in kitchens and laundries, in both residential and commercial applications.

HARO Timber Parquet 4000/2500 Series Engineered Flooring has an in-service history in New Zealand and Australia-wide of over 20 years for installations in kitchens, laundries and WC's ('wet areas').

2. The [HARO Flooring Installation Instructions](#) require that gaps and or cracks are eliminated around any parts of the perimeter that are exposed to water splash.

As per 3.11 of E3/AS1 all perimeters that are within 1.5m of all/any sanitary fixtures and sanitary appliances are to be sealed with an appropriate acrylic-based flexible joint filler.

3. Installation method that will prevent gaps or cracks.

The [HARO Flooring Installation Instructions](#) require an acrylic-based flexible joint filler to ALL JOINTS (both long ends and ends of planks) in all areas adjacent to sanitary fixtures and sanitary appliances. Where the impervious HARO proprietary locking system "Top Connect" is altered in any way to facilitate the installation, a waterproof PVA adhesive must be used to secure these lengths of the planks and/or the short ends. We recommend a PVA adhesive that complies with the durability as specified in D3.

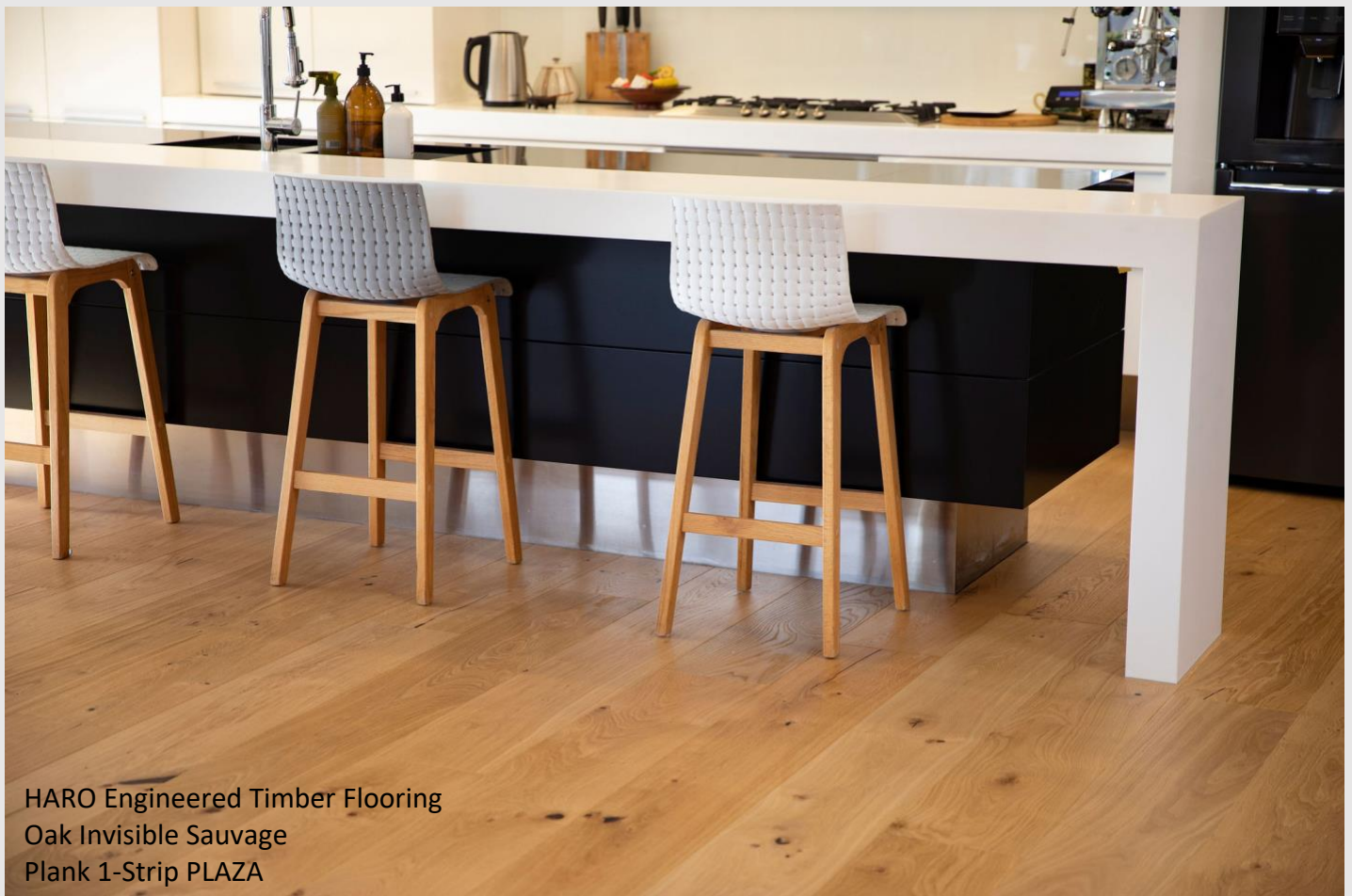
4. All "wet areas" including kitchens, laundries, and WC's, must have a premium wet area membrane/VBS vapour Barrier applied to the substrate prior to the installation of the HARO timber floor.

5. All HARO Timber Parquet 4000/2500 Series Engineered Flooring is factory finished in Germany and has a Manufacturer's Warranty for use in kitchens, laundries and WC's. This Warranty and the Technical Data is available on our website and can be downloaded for further supporting evidence.

6. HARO Timber Parquet 4000/2500 Series Engineered Flooring is very easily cleaned, and all cleaning and maintenance instructions are supplied together with our Clean and Green eco-friendly products.

Clause E3.3.6

For the Installation of HARO Timber Parquet 4000/2500 Series Engineered Flooring as an Alternative Solution in 'wet areas' where there are sanitary fixtures and/or sanitary appliances, HARO requires that Timber flooring be installed using the glued down direct stick method OR a floating installation over an existing substrate. If floating installation, the HARO Eco Underlay with integrated moisture barrier must be used. The direct stick or the floating installation including the above E3.3.3 and E3.3.5 with the requirement of all gaps and cracks be filled with acrylic-based flexible joint fillers, will ensure that the HARO Timber Parquet 4000/2500 Series Engineered Flooring is an acceptable Alternative Solution for E3 and will prevent all or any water splashes from penetration.



HARO Engineered Timber Flooring
Oak Invisible Sauvage
Plank 1-Strip PLAZA



Installation Instruction for Fully Glue Down & Floating Installation HARO parquet Top Connect

Suitable subfloors:

- Cement floors (CT)
- Anhydrite or anhydrite cast floors
- Mastic asphalt floors (AS)
- V100 (E1)-particle board or similar

Approved adhesive:

Adhesive type according to TRGS 610: HARO Flexible Glue – without any primer

Note: The TRGS 610 Technical Rules for Hazardous Substances stipulate the use of solvent-free adhesives whenever the product and the installation conditions on site permit their use.

Subfloor testing and preparation:

The subfloor must be tested before laying according to the German standards VOB, Part C, DIN 18,365 "Flooring Works" and DIN 18,356 "Parquet Works". The subfloor must be dry, absorbent clean and even, compressions and tension-proof and free of cracks. Make sure the subfloor has been cleaned thoroughly from oil, grease, wax, paint, plaster, dust and other deleterious substances that may prevent or reduce adhesion.

Newly laid cement and anhydrite floors subfloors usually do not require additional subfloor preparation.

Anhydrite cast floors must be sanded or brushed and then vacuumed before installing the floor covering.

Difficult subfloors, such as old mastic asphalt floors very absorbent or sandy cement floors, ceramic floors, etc... require special subfloor preparation to ensure a proper substrate for laying. In this case, prepare the subfloor with appropriate filler or compound according to manufacturer's specifications.

Mastic asphalt floors have to be prepared with a self levelling compound.

1.Moisture check:

The subfloor must be checked in a workmanlike manner by using a suitable measuring instrument (CM meter) in order to verify compliance with the required limit moisture content for laying the floor covering.

Limit moisture content:	Without underfloor heating	With underfloor heating
Cement or poured cement floors	2.0 CM (weight)%	1.8 CM (weight)%
Anhydrite or anhydrite cast floors	0.5 CM (weight)%	0.3 CM (weight)%

Please, observe the preparatory measures which you find on our website and in the "installation over Underfloor Heating" section of Laying Instructions enclosed with the cartons. Prior to installation, a signed Record of Preparatory Subfloor Heat-Up Phase must be submitted by the client.

2.Testing for evenness (DIN 18202):

If necessary, level the subfloor with appropriate filler or compound according to manufacturer's specifications. Levelling the subfloor requires the use of special primers. Do not remove subfloor edge insulation until levelling and priming has been completed.

3.Surface strength:

The surface strength of the subfloor is tested with the scratch test and the hammer impact test (low-strain method)

4.Daily joints in the subfloor (pseudo-joints or predetermined breaking points):

These joints must be locked in a workmanlike manner prior to installing the floor covering. DO NOT close any expansion joints in the subfloor.

Glue-down installation:

1. Do not glue down if floor temperature is below 17°C. Avoid air humidity levels above 70% in the room (such as in a new build). If necessary, heat the room and ventilate it thoroughly.
2. For installation in 'wet' areas containing sanitary fixtures or sanitary appliances (kitchens, laundries and WC's) it is recommended that point 1-4 (E3.3.3 and E3.3.5 of the NZ Building Code) outlined in our document [Alternative Solutions for E3](#) be followed.
3. For Installation in 'wet' areas containing sanitary fixtures or sanitary appliances (kitchens, laundries and WC's) it is a requirement that prior

to installation of the flooring, a suitable and premium wet area membrane/VBS moisture barrier be applied to the substrate.

4. Installation of HARO floors with the fully sealed "Permadrur" or "naturaDur" surfaces, require no post installation treatment. Immediately following installation of HARO floors with a "naturaLin plus" surface it is mandatory to apply a full coat of HARO Aqua Oil or a HARO recommended floor sealant in all areas applicable as specified in [Alternative Solutions for E3.](#)

Adhesive storage HARO Flexible glue:

Store in a cool, dry place; shelf life 9 months when stored in unopened original container. After opening, cover the adhesive in the container with plastic film.

Coverage:

- Approx. 1000 to 1200g/m² of HARO Flexible Glue depending on the absorbing power of the subfloor.
- Hamberger Special Spreader L

It is a must to follow the instructions of the adhesive manufacturer.

General notes on glue-down installation:

- This high-grade product should not be stored in new constructions due to building-related residual moisture and increased air humidity levels.
- Do not open the cartons prior to installation; wrap any remaining boards in plastic foil when installation will be interrupted for a long period.
- Apply the adhesive with the Hamberger Special Spreader L (at first only apply the amount of adhesive needed to install one row). The open time of the adhesive is about 20-30 minutes at 20°C.
- Align the boards of the first row with the tongue side parallel to the wall and fix them in place with spacers. Snap a chalk line when you need to cover long distances. This ensure that the boards are exactly parallel to the wall. Press the boards firmly into the wet adhesive to achieve good transfer.
- You can start the second with the leftover piece from the first row, provided that you offset the end joints of adjoining rows by at least 40cm. when you join the boards, do not press against the edges (on the long and short sides). If necessary, use the tapping block to gently tap the boards together at the long side for a crackfree installation. Do not use force. At transitions to other floors coverings or door frames as well as to ceramic borders around fireplaces, you can insert special transition mouldings into the adhesive bed. Leave an expansion gap of at least 5mm in the transition moulding.
- Wait about 48 hours after installation before subjecting the parquet floor to traffic and load.

Indoor climate:

In order to maintain the quality and beauty of your HARO parquet, but also for you own personal well-being, an indoor climate of approx.. 30-60% relative air humidity must maintain with a room temperature of 20°C (68°F). to keep the air humidity constant, especially during the heating season, we recommend using an electrical air humidifier. This will prevent any extreme drying out the floor. Air humidifiers should be switched on right from the beginning of the heating season.

Installation Instruction for Floating Installation of HARO Laminate Top Connect

All HARO Laminate floors floated in "wet" areas (kitchens, laundries, WC's) must be installed on a HARO 2mm eco Underlay (with fully integrated moisture protection barriers).

As per our Timber glued-down installation procedure, the following must be adhered to at installation:

- a. the PVA glueing of any compromised locking joint to facilitate installation.
- b. flexible, acrylic based joints fillers on all exposed edges 1.5m away from any sanitary fixtures.
- c. flexible, acrylic-based joint filler in any exposed gaps or cracks.