

# Linea™ Weatherboard Cavity Fix

## Linea™ 护墙板 空腔结构安装法

Technical Specification  
June 2023 New Zealand  
技术规范说明手册  
2023年6月 新西兰







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**Ask James Hardie™**

邮箱：[literaturefeedback@jameshardie.co.nz](mailto:literaturefeedback@jameshardie.co.nz)

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When specifying or installing Hardie™ fibre cement products, ensure that you have the current manual. Additional installation information, warranties and warnings are available at [www.jameshardie.co.nz](http://www.jameshardie.co.nz) or **Ask James Hardie™ on 0800 808 868.**

当具体说明或安装Hardie™ 纤维水泥产品时，请确保您使用的是现行版本手册。更多安装、质保和提醒信息请见 [www.jameshardie.co.nz](http://www.jameshardie.co.nz) 或致电**0800 808 868**垂询**James Hardie™**。

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# 1 Product Overview

## 产品概况

### 1.1 Product Information 产品信息

Linea™ Weatherboard is an external cladding.

Linea™ 护墙板是一种外部墙板系统。

Linea™ Weatherboard is a 16mm thick, pre-primed bevel back fibre cement weatherboard. The bottom front edge of Linea™ Weatherboard is chamfered. It has tongue and groove ends for jointing and is classified as lightweight wall cladding for use in residential and light commercial buildings using timber or lightweight steel framed external walls. Linea™ Weatherboard is available in 150mm and 180mm widths.

Linea™ 护墙板厚度为16mm，是一种预涂底漆的斜背式纤维水泥护墙板。Linea™ 护墙板的底部前端为倒角设计。通过榫槽末端进行连接，类别为轻质外墙板，一般用于住宅和轻型商业建筑的外墙，或轻质钢结构的建筑外墙。Linea™ 护墙板共有150mm和180mm两种宽度。

James Hardie also has available:

James Hardie还提供以下产品:

- Hardie™ Axent™ Trim is a 19mm thick, pre-primed fibre cement product available in two widths. For use as decorative trims around openings and external corners.

Hardie™ Axent™ Trim饰板，为19mm厚的预涂底漆纤维水泥板，共有两种宽度选择。用于装饰开口周边和外部边角。

For fixing to a steel frame. Ask James Hardie™ on 0800 808 868 for specific requirements. Or refer to the Cladding to Steel Framing Technical Supplement by James Hardie about the installation of Linea™ Weatherboard to steel frame.

如需安装在钢结构上，请致电0800 808 868垂询Ask James Hardie™ 了解具体要求。或者参考 James Hardie 钢结构墙板安装技术补充说明了解Linea™ 护墙板在钢结构上的安装信息。

Table 1 表1

Linea™ Weatherboard and Hardie™ Axent™ Trim sizes Linea™ 护墙板和Hardie™ Axent™ Trim 饰板尺寸							Coverage Information 覆盖信息		
Product 产品	Code 编号	Length (mm) 长度	Width (mm) 宽度	Thickness (mm) 厚度	End details 末端形状	Effective cover (mm) 有效覆盖长度	No. of planks/ metre height 板数/一米高 (approx. 近似值)	Mass kg/lineal m 重量公斤/线性米 (approx. at EMC平衡 含水率下的近似值)	Mass kg/m <sup>2</sup> 重量公斤/平方米 (approx. at EMC平衡含水 率下的近似值)
Linea™ Weatherboard 150 Linea™ 护墙板 150	402533	4200	150	16	T & G 榫槽	120	8.3	3.1	24.93
Linea™ Weatherboard 180 Linea™ 护墙板 180	401847	4200	180	16	T & G 榫槽	150	6.7	3.57	23.92
Hardie™ Axent™ Trim Hardie™ Axent™ 饰板	405260	3000	45	19	Square 方形	N/A	N/A	1.1	N/A
Hardie™ Axent™ Trim Hardie™ Axent™ 饰板	405257	3000	70	19	Square 方形	N/A	N/A	1.6	N/A
Hardie™ Axent™ Trim Hardie™ Axent™ 饰板	405258	3000	89	19	Square 方形	N/A	N/A	2	N/A

The effective thickness of finished Linea™ Weatherboard on the wall at the lap is approximately 33 to 35mm  
在外墙安装完成后，Linea™ 护墙板的有效厚度大约为33-35mm。

All dimensions and masses provided are approximate only and are subject to manufacturing tolerances.

以上所有尺寸及重量为近似值，生产过程中产生误差是正常现象。

Linea™ Weatherboard is categorised as a Light Weight Wall Cladding as described in the NZS 3604.

Linea™ 护墙板在NZS 3604规范分类中属于轻质外墙板。

## 1.2 Manufacturing and Classification 制造工艺及分类

The manufacturing process of Linea™ Weatherboard by James Hardie is ISO 9001 Certified.

James Hardie制造Linea™ 护墙板的过程经ISO 9001认证。

Linea™ Weatherboard is an advanced lightweight cement composite cladding manufactured using a basic composition of Portland cement, ground sand, cellulose fibre, water and proprietary additives. The product is easily identified by the name 'Linea' printed on the back.

Linea™ 护墙板是一种先进的轻质合成水泥板，制造原料主要为波特兰水泥、沙子、纤维和水。本板材可以通过其背面印刷的“Linea”字样进行识别。

Hardie™ Axent™ Trim is an advanced lightweight cement composite cladding manufactured using a basic composition of Portland cement, ground sand, cellulose fibre, water and proprietary additives. The trims come pre-sealed on all sides, ready for paint.

Hardie™ Axent™ Trim 饰板是一种先进的轻质合成水泥板，制造原料主要为波特兰水泥、沙子、纤维、水和专利添加剂。饰板的所有表面都已预先密封，可直接涂漆。

Linea™ Weatherboard is manufactured in Australia to the Australian/New Zealand Standard AS/NZS 2908.2 'Cellulose-Cement Products' (ISO 8336 'Fibre-Cement Flat Sheet').

Linea™ 护墙板的制造均满足澳大利亚/新西兰标准 AS/NZS 2908.2 ‘纤维水泥产品’ (ISO 8336 ‘Fibre-Cement Flat Sheet’) 的要求。

Linea™ Weatherboard is classified Type A, Category 2 in accordance with AS/NZS 2908.2 “Cellulose-Cement Products”.

在标准AS/NZS 2908.2 “纤维水泥产品”中，Linea™ 护墙板被分类为A型2类 (Type A, Category 2)

For Safety Data Sheets (SDS) visit [www.jameshardie.co.nz](http://www.jameshardie.co.nz) and view them in the technical literature section or Ask James Hardie™ on **0800 808 868**.

请访问网站[www.jameshardie.co.nz](http://www.jameshardie.co.nz)获取技术文档目录下的安全数据表 (Safety Data Sheets, SDS)，或者致电**0800 808 868**垂询Ask James Hardie™。

## 1.3 Components and Accessories 产品组件及配件

Table 2 表2

Accessories/tools supplied by James Hardie   由James Hardie提供的配件/工具			
Accessories 配件	Description 产品描述	Size (mm) 尺寸	Code 编号
	<b>External corner soaker 90° for Linea™ Weatherboard 180mm</b> Linea™ 180mm 护墙板使用的90°阳角防漏嵌条 • Aluminium 铝制	200 long 长	<b>301186</b>



	<b>External corner soaker 135° for Linea™ Weatherboard 180mm</b> <b>Linea™ 180mm 护墙板使用的135°阳角防漏嵌条</b> • Aluminium 铝制	200 long 长	<b>301178</b>
	<b>External corner soaker 90° for Linea™ Weatherboard 150mm</b> <b>Linea™ 150mm 护墙板使用的90°阳角防漏嵌条</b> • Aluminium 铝制	170 long 长	<b>302820</b>
	<b>External Slimline Box Corner Mould</b> <b>超薄箱型阳角覆膜</b> Etched primed aluminium extrusion used to create external corner 经过蚀刻的铝材，用于制造阳角	2700 long 长 4000 long 长	<b>301195</b> <b>305809</b>
	<b>Linea™ 35mm Cavity Closer</b> <b>Linea™ 35mm 空腔封条</b>	3000 long 长	<b>306035</b>
	<b>Internal 'W' Mould 90° 'W'型90°阴角覆膜</b> Etched primed aluminium extrusion used to create 90° internal corner 经过蚀刻的铝材，用于制造90°阴角	2700 long 长 4000 long 长	<b>301184</b> <b>305807</b>
	<b>Internal 'W' Mould 135° 'W'型135°阴角覆膜</b> Etched primed aluminium extrusion used to create 135° internal corner 经过蚀刻的铝材，用于制造135°阴角	2700 long 长	<b>301183</b>
	<b>Hardie™ Corner Under Flashing 50 x 50mm</b> PVC moulding used as under flashing for internal and external corners 用于阴角和阳角防水板下方的PVC覆膜	3000 long 长	<b>303745</b>
	<b>Hardie™ Flex Galvanised nail - 5kg</b> <b>Hardie™ Flex 镀锌钉 - 5kg</b>	60 x 3.15mm	<b>302784</b>
	<b>Hardie™ Flex Stainless steel nail - 5kg</b> <b>Hardie™ Flex 不锈钢钉 - 5kg</b>	60 x 3.15mm	<b>302782</b>
	<b>Hardie™ Blade Saw Blade</b> <b>Hardie™ Blade 锯片</b> Diamond tip fibre cement circular saw blade. Spacers not included 纤维水泥切割圆锯片，金刚石刀头，不含垫片	4 tooth 齿 - 184mm	<b>300660</b>
	<b>Hardie™ Blade Saw Blade</b> <b>Hardie™ Blade 锯片</b> Diamond tip fibre cement circular saw blade. Spacers not included 纤维水泥切割圆锯片，金刚石刀头，不含垫片	6 tooth 齿 - 254mm	<b>303375</b>
	<b>Gecko Gauge™</b> This easy to use tool gauges and supports the weatherboard for a one person install. 单人安装时用于测量和支撑护墙板的工具。		<b>305941</b>

Table 3 表3


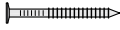


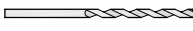



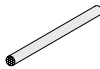



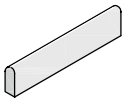



Accessories not supplied by James Hardie   非 James Hardie 提供的配件			
<p>James Hardie recommends the following products for use in conjunction with its Linea™ Weatherboard. James Hardie does not supply these products. There may also be some other accessories required depending upon the application. Please contact component manufacturer for information on their warranties and further information on their products.</p> <p>James Hardie建议在连接Linea™ 护墙板时使用以下产品。James Hardie不提供这些产品。此外，根据应用不同，可能还会用到其他配件。请咨询配件制造商关于连接产品的相关信息和质保条款。</p>			
Accessories 配件	Description 产品描述	Size (mm) 尺寸	Material/appearance 材料/外观
	<b>Flexible Underlay 弹性隔层</b> To comply with Table 23 of E2/AS1 需根据表23中E2/AS1的要求安装		
	<b>D head or Roundrive Nail</b> <b>D形头钉或环纹螺丝钉</b> Gun nail for concealed fixing Linea™ Weatherboard. 使用钉枪对Linea™ 护墙板进行隐藏式安装	60 x 2.87mm 75 x 3.06mm	Hot Dip Galvanised/ Stainless Steel 热浸镀锌/不锈钢
	<b>Hardie™ Flex Hot Dip Galv. Nails</b> <b>Hardie™ Flex 热浸镀锌钉</b> For concealed fixing by hand nail 使用手钉进行隐藏式安装	60 x 3.15mm 75 x 3.15mm	Hot Dip Galvanised/ Stainless Steel 热浸镀锌/不锈钢
	<b>Jolt Head Nail for face fixing Linea™ Weatherboard</b> 使用蓬头钉正面安装Linea™ 护墙板	75 x 3.15mm 90 x 3.55mm	Hot Dip Galvanised/ Stainless Steel 热浸镀锌/不锈钢
	<b>Titanium Coated High Speed Drill Bit.</b> 钛合金涂层高速钻头 For pre-drilling prior to face fixing with jolt head. 使用蓬头钉正面安装时需预先钻孔。	3.0mm 3.5mm	
	<b>Brad Nail 曲头钉</b> To tie boards together 用于将板材连接在一起	32mm	
	<b>Joint sealant 密封胶</b> Paintable flexible sealants are recommended for filling the joints. Refer to Section 7.2 for information. 推荐使用可喷漆的软性密封胶进行填充。参考7.2章的信息。	Tube 管装	Sika®, Bostik® or similar Holdfast® Sika®, Bostik® 或类似的 Holdfast®
	<b>CRC® ADOS® Builders Fill</b> <b>CRC® ADOS® 填充剂</b> Two part exterior grade fill to finish over jolt head nails. 双组分外墙级填充剂，用于填充蓬头钉的钉孔。		
	<b>PEF Rod</b> <b>PEF 棒</b>	Polyethylene foam 聚乙烯发泡	Sika® or similar Sika®或类似材料

Table 3 contd. 表3 续

Accessories not supplied by James Hardie   非James Hardie提供的配件			
Accessories 配件	Description 产品描述	Size (mm) 尺寸	Material/appearance 材料/外观
	<p><b>Flexible tape 弹性胶带</b></p> <p>A flexible self-adhesive tape used in preparation of a window. Refer to the Window installation section in this manual for more information. 用于安装窗户时使用的弹性自黏胶带，参考本手册窗户安装部分获取更多详细信息。</p>	Proprietary tape to adhere to flexible underlay 粘在弹性隔层上的专利胶带	Tyvek®, Marshall Innovations or similar Tyvek®, Marshall Innovations或相似材料
	<p><b>Flashing Material 防水板材料</b></p> <p>as per Table 20, 'E2/AS1' 按照表20, 'E2/AS1' 要求使用</p>		Flashing Fabricator 防水板制造商
Dimension to suit 尺寸需适配 	<p><b>Planted Sill 嵌入式窗台</b></p>		H3.1 minimum Treated Timber Timber Merchant or cut on site 经过H3.1级别热处理的木材或现场切割
	<p><b>Timber Scriber 木制狗牙</b></p> <p>To scribe beside window, site cut to suit. 在窗户周围划线, 现场进行切割。</p>	As required 根据需求	H3.1 minimum Treated Timber Timber Merchant or cut on site 经过H3.1级别热处理的木材或现场切割
	<p><b>Fibre Cement Cutting Blade 纤维水泥切割锯片</b></p> <p>Diamond tip 305mm diameter circular saw blade to fit drop saw. 直径305mm的金刚石圆锯片，在落锯上使用。</p>	305mm	Diamond Tipped 金刚石刀头
	<p><b>Cavity Closer - aluminium 空腔封条 - 铝制</b></p> <p>Used in walls taller than 10m for inter-tenancy fire separation. 用于墙高超过10m情况的内部火势蔓延防控</p>		
	<p>Primers. Dulux® 1-Step Prep, Resene® Quick Dry etc. 底漆。Dulux® 1-Step Prep, Resene® Quick Dry等</p>		



# 2 Application and Scope 应用与范围

## 2.1 Application 应用

This specification includes the installation of Linea™ Weatherboard cavity construction where risk matrix is 13 or more and must be read in conjunction with the current CodeMark Certificate and BRANZ Appraisal. This installation method can also be used for buildings where the risk matrix score is 0 - 12 if desired.

本规范包括风险分数为13或者更高时，使用空腔结构安装Linea™ 护墙板的要求，并需结合现行的CodeMark认证以及BRANZ认证。如有需求，本安装方法也可以应用在风险分数为0 - 12的建筑上。

This document is intended for use by architects, designers, specifiers or builders who are involved in specifying Linea™ Weatherboard. The document also serves the purpose of an installation manual for this product.

本文件旨在供建筑师、设计师、工程监管者和工人等可能涉及Linea™ 护墙板使用的人士参阅。本文档也可作为产品安装说明书使用。

For use of Linea™ Weatherboard outside this published scope, the architect, designer or engineer must undertake specific design. For advice on designs outside the scope of this specification, Ask James Hardie on 0800 808 868.

若Linea™ 护墙板应用于超出所述使用范围的其它用途，则建筑师、设计师或工程师必须进行相应的具体设计。若想就超出本规范范围的设计得到更多建议，请致电0800 808 868垂询Ask James Hardie。

Refer to the Linea™ Weatherboard Direct Fixed Technical Specification when installing Linea™ Weatherboard without a cavity.

如果不使用空腔结构安装Linea™ 护墙板，请参考《Linea™ 护墙板直接安装法技术规范》。

## 2.2 Scope 应用范围

Linea™ Weatherboard cavity construction is suitable for use in timber framed buildings that fall within the scope limitations of the New Zealand Building Code (NZBC) Acceptable Solution E2/AS1, Paragraph 1.1.

Linea™ 护墙板空腔结构适用于木框架建筑，这些建筑必须符合 New Zealand Building Code (NZBC) 合格方案E2/AS1中第1.1部分规定的范围。

Linea™ Weatherboard cavity construction is also suitable for use in specific engineering design projects (SED) subject to a wind pressure of 3.2kPa (ULS) maximum for building heights upto 25m.

Linea™ 护墙板空腔结构也适用在经过特殊工程设计（SED）且最大风压3.2kPa (ULS)，高度不超过25m的建筑项目中。

## 2.3 Limitations 限制

- Linea™ Weatherboard cladding must not be used on curved wall applications  
Linea™ 护墙板不能安装在弯曲的墙面上
- Linea™ Weatherboard cladding must not be installed vertically or angled  
Linea™ 护墙板不能进行垂直或者带有倾角地安装
- The minimum ground clearances specified must be maintained  
必须遵守规范中的最小离地间隙
- Timber window joinery/recessed openings is subject to an alternative design by the designer  
在木窗结合处或者凹进的开口处安装，请按照设计师的具体设计方案

- Maximum SLS inter-story seismic deflections up to span/180 when used in specific design buildings (SED) buildings above 10m height. To accommodate higher inter-story drifts, a deflection should be used.

在经过特殊工程设计且高度超过10米的建筑中，可承受的最大层间地震挠度为 span/180。如需适应更高的层间偏移，则使用挠曲。

## 2.4 Details 详图

Various typical Linea™ Weatherboard details are provided within this document. In addition to these, the construction details with HomeRAB™ Pre-Cladding/RAB™ Board have also been developed and are available on our website. These details are available in dwg, dxf, jpg and pdf file format and can be downloaded at [www.jameshardie.co.nz](http://www.jameshardie.co.nz).

本技术规范提供了各种应用Linea™ 护墙板安装工程详图。更多工程详图包括HomeRAB™ 预置垫层/RAB™ 板已发布在我们的网站。请在我们的网站[www.jameshardie.co.nz](http://www.jameshardie.co.nz)下载dwg、dxf、jpg及pdf格式的工程详图。

All dimensions shown are in millimetres unless noted otherwise.

除特殊标明外，详图中所有尺寸默认单位为毫米。

# 3 Compliance 合规

## 3.1 NZBC Compliance NZBC合规

When installed in accordance with the conditions of CodeMark number GM-CM30018 Linea™ Weatherboard complies with all relevant requirements of the NZBC. Please refer to [www.building.govt.nz](http://www.building.govt.nz) or [jameshardie.co.nz](http://jameshardie.co.nz) for a copy of the certificate.

当在CodeMark编号GM-CM30018规定的条件下安装Linea™ 护墙板时符合NZBC的相关要求。请访问[www.building.govt.nz](http://www.building.govt.nz)或[jameshardie.co.nz](http://jameshardie.co.nz) 获取证书副本。



Linea™ Weatherboard cavity fixed cladding also has a BRANZ Appraisal number 447 (2020) available at [www.branz.co.nz](http://www.branz.co.nz) or [www.jameshardie.co.nz](http://www.jameshardie.co.nz).

Linea™ 护墙空板空腔结构安装法还获得了BRANZ认证编号447（2010）证书。详情请查询[www.branz.co.nz](http://www.branz.co.nz)或[www.jameshardie.co.nz](http://www.jameshardie.co.nz)。



# 4 Design 设计

## 4.1 Responsibility 责任

The specifier or other party responsible for the project must ensure that the information and details in this specification are appropriate for the intended application and that additional detailing is performed for specific design or any areas that fall outside the scope of this technical specification.

项目监管者或者项目其他责任方必须确保实际项目中的信息和详图与本规范一致，如有超出本规范的应用必须经过具体的工程设计。

All New Zealand Standards referenced in this manual are current edition and must be complied with.

所有本手册中涉及的新西兰标准均为现行版本，必须严格遵守。

### Specifier 项目监管方

If you are a specifier or other responsible party for a project ensure that the information in this document is appropriate for the application you are planning and that you undertake specific design and detailing for areas which fall outside the scope of these specifications.

如果您是建筑项目的监管者或其他责任方，请确保您所计划的用途与本文件中所陈述的信息一致，如有超出所述用途的部分，请确保加以具体的工程设计并提供设计详图。

### Installer 项目施工方

If you are an installer ensure that you follow the design, moisture management principles, associated figures and material selection provided by the designer and this technical specification by James Hardie.. All the details provided in this document must be read in conjunction with the project specification.

如果您是建筑项目的施工者，请确保遵循设计师及这本James Hardie技术规范中的规定，包括项目设计、湿度控制方案、相关数值及物料选择等方面的规定。本文件中提供的所有详图都务必结合施工项目本身的详图使用。

**James Hardie conducts stringent quality checks to ensure that any product manufactured falls within our quality spectrum. It is the responsibility of the builder to ensure that the product meets their aesthetic expectations before installation. James Hardie will not be responsible for rectifying obvious aesthetic surface variations following installation. James Hardie will only offer a replacement product if the Linea™ Weatherboard supplied is found to be out of its manufacturing specification.**

**James Hardie一直采用严格的质量检测标准，确保所有产品满足质量要求。在安装前，施工方有责任确保产品满足其审美标准。一旦安装开始，James Hardie不负责修正由此造成的任何明显的美学偏差问题。James Hardie只在Linea™ 护墙板产品不符合制造参数的情况下提供更换服务。**

## 4.2 Clearances 离地间隙

The clearance between the bottom edge of cladding and the paved/unpaved ground must comply with section 9.1.3 of E2/AS1. On the roofs and decks the minimum clearance must be 50mm. These clearances must be maintained throughout the life of the building.

板材底部边缘与铺装/非铺装地面之间所留出的间隙，必须遵守E2/AS1中9.1.3条款。在屋顶和露台，最小间隙要保证为50mm，并在整个建筑使用周期中始终保持。

Linea™ Weatherboard must overhang the bottom plate on a concrete slab by a minimum of 50mm as required by the NZBC Acceptable Solution, E2/AS1 Table 18.

根据NZBC合格方案E2/AS1表18中的要求，Linea™ 护墙板必须距离混凝土楼板至少50mm。

The site on which the building is situated must comply with the NZBC Acceptable Solution E1/AS1 'Surface Water'.

建筑项目的所在地必须遵守NZBC合格方案E1/AS1中“地表水”的要求。

Do not install cladding such that it may remain in contact with water or ground, refer to figures in section 9 of this manual.

安装时板材不能与水面或者地面接触。详情请参考本手册第9章。

## 4.3 Structure 结构

### 4.3.1 Timber Framing 木框架结构

Timber framing must be in accordance with NZS 3604 (Timber-framed buildings) or designed as for specific engineering design (SED) in accordance with NZS 3603 and AS/NZS 1170 where specific engineering design is required, the framing stiffness must be equivalent to or more than the framing provisions of NZS 3604.

木框架必须符合NZS 3604（木结构建筑）的要求，或者经过特殊工程设计（SED）并符合NZS 3603和AS/NZS 1170的要求。框架刚性必须至少达到NZS 3604中的相关标准。

The stud spacing must not exceed 600mm centres maximum for buildings within the scope of NZS 3604 and 400mm centres maximum for wind pressures more than 1.5kPa (ULS).

根据NZS 3604规定的建筑范围，墙筋的中心最大间距不能超过600mm，如果风压超过1.5kPa (ULS)则中心最大间距不能超过400mm。

For timber frame walls longer than 12m, it is best practice to allow for construction joints to accommodate movements generated due to timber shrinkage or deflections.

对于长度超过12m的木框架，最好采用工程连接件来解决木材因收缩和形变产生的位移。

### 4.3.2 Durability 耐久性

Timber framing must be treated to a minimum H1.2 treatment requirements and comply with Acceptable Solution B2/AS1 'Durability' of the NZBC. For further timber treatment information refer to the NZS 3602 (Timber and Wood-Based Products for use in Buildings) for minimum timber treatment selection and treatment requirements. Framing must be protected from moisture at sites in accordance with the recommendations of framing manufacturers. Refer to the NZS 3602 for information about the allowable moisture content in timber framing.

木框架必须经过最少为H1.2级别的热处理，并满足NZBC中合格方案B2/AS1部分关于耐久性的要求。更多关于木材处理的信息，请参考NZS 3602（建筑中木材及木质产品的使用）。在施工现场，木框架需要根据生产商的建议进行防潮保护。请参考NZS 3602中关于木框架防潮保护的相关信息。

## 4.4 Structural Bracing 结构支撑

Bracing can be achieved by using HomeRAB™ Pre-Cladding or RAB™ Board installed direct to framing instead of a flexible underlay or by using the Villaboard™ Lining bracing system on the internal face.

通过使用HomeRAB™ 预置垫层或者RAB™ 板替代弹性隔层直接安装在木框架上，或在内墙墙面上使用Villaboard™ 内衬支撑系统，都可以起到结构支撑的作用。

## 4.5 Energy Efficiency 隔热能效

External walls constructed as per this technical specification, using Linea™ Weatherboard cladding must use suitable bulk insulation to meet the minimum thermal insulation requirements as per Clause H1/AS1 'Energy Efficiency' of the NZBC.

根据本技术规范，外墙采用Linea™ 护墙板时，必须使用适合的保温材料以达到NZBC方案中H1/AS1部分“隔热能效”中对墙体保温的最低要求。



## 4.6 Fire Rated Walls 墙体耐火等级

External walls with Linea™ Weatherboard cavity fix construction method can achieve fire resistance ratings up to 60/60/60 when constructed in accordance with the Fire and Acoustic Design Manual by James Hardie. Linea™ Weatherboard must be face fixed for fire rated applications.

根据James Hardie《消防与隔音设计手册》，外部墙体使用Linea™护墙板空腔结构安装法时可以达到60/60/60的耐火等级。Linea™护墙板必须正面安装以达到耐火性能。

Refer to the Fire and Acoustic Design Manual by James Hardie for further information about fire rated systems.

获取更多信息请参考James Hardie《消防与隔音设计手册》。

## 4.7 Control of External Fire Spread 外部火势蔓延的防控

Linea™ Weatherboard material is classified as 'Type-A' when tested to the requirements of Appendix C7.1.1 of C/AS1 and C/AS2 of NZBC and is suitable for use where 'Non Combustible Material' or ' Limited Combustibility Material' is required for use in buildings located anywhere in relation to the relevant boundary for building within the scope of C/AS1 or C/AS2.

Linea™护墙板材料在NZBC C/AS1和C/AS2附录C7.1.1的要求进行测试时，被分类为“A型（Type-A）”材料，适用于需要“非可燃材料”或“有限可燃性材料”的建筑，并且适用于C/AS1或C/AS2范围内与相关边界位置的任何建筑。

- Where the upper floors contain sleeping uses or other property as per C/AS2, a horizontal flashed joint must be provided to block the top of lower cavity at each floor or intervals of no greater than 3.5m vertical height. Refer to Figure 38 & 39.

根据C/AS2规定，如果上层楼层用于睡眠或其他用途，必须设置水平防水接缝，以在每层楼或不超过3.5米的垂直高度间隔处封堵下层空腔顶部。请参考图38和图39。

- On buildings greater than 10m in height a RAB™ Board must be used.  
对于高度大于10米的建筑物，必须使用RAB™板。

## 4.8 Alpine Regions 高寒地区

In regions subject to freeze/thaw conditions, Linea™ Weatherboard must not be in direct contact with snow or ice build up for extended periods, e.g. external walls in alpine regions subject to snow drifts over winter.

在经常出现冰冻/融化状况的地区，Linea™护墙板不得长时间直接接触冰雪。例如：在冬天可能出现堆雪现象的高寒地区，外墙必须受到遮蔽保护。

The Linea™ Weatherboard has been tested in accordance with AS/NZS 2908.2 Clause 8.2.3.

Linea™护墙板符合AS/NZS 2908.2中条款8.2.3的测试要求。

# 5 Safe Working Practices

## 安全施工守则

### WARNING - DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA

警告 - 切勿吸入粉尘，请仅在通风良好的环境下进行切割

**Hardie™ fibre cement products contain sand, a source of respirable crystalline silica may cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product.**

**Hardie™ 纤维水泥产品含有沙子，沙子中的可吸入结晶硅尘可能会导致癌症。如果吸入产品产生的粉尘，可能会损害肺部和呼吸系统，长期或反复吸入粉尘会导致肺部和呼吸系统损伤。**

Intact fibre cement products are not expected to result in any adverse toxic effects. The hazard associated with fibre cement arises from the respirable crystalline silica present in dust generated by activities such as cutting, rebating, drilling, routing, sawing, crushing, or otherwise abrading fibre cement, and when cleaning up, disposing of or moving dust.

完整的纤维水泥产品预期不会对人体造成有毒害的影响。与纤维水泥相关的有害物质是在切割、打磨、钻孔、铣削、锯切、压碎或其他方式研磨纤维水泥时，以及清理、处理或移动时产生的含有可吸入结晶二氧化硅的粉尘引起的。

When doing any of these activities in a manner that generates dust, follow James Hardie instructions and best practices to reduce or limit the release of dust.

在进行以上活动时，请遵循James Hardie的指导及安全施工守则，以降低及限制粉尘的散播。

If using a dust mask or respirator, use an AS/NZS1716 P1 filter and refer to Australian/New Zealand Standard 1715:2009 Selection, Use and Maintenance of Respiratory Protective Equipment for more extensive guidance and more options for selecting respirators for workplaces. For further information, refer to our installation instructions and Safety Data Sheets available at [www.jameshardie.co.nz](http://www.jameshardie.co.nz).

如使用防尘面罩或呼吸器，请使用AS/NZS1716 P1滤芯，并参见《澳大利亚/新西兰1715:2009标准 - 选择，使用和维护呼吸防护设备》的全面指导及其提供的更丰富的作业用呼吸器选择。欲知更多信息，请查看[www.jameshardie.co.nz](http://www.jameshardie.co.nz)参见我们的安装说明及安全数据表。

### FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

未能遵守我们的警告、安全数据表和安装说明可能会导致严重的人身伤害或死亡

#### Crystalline Silica is

##### 结晶二氧化硅是

- Commonly known as sand or quartz 俗称沙子或石英
- Found in many building products e.g. concrete, bricks, grout, wallboard, ceramic tiles, and all fibre cement materials 存在于众多建筑产品中，例如混凝土、砖、水泥浆、墙板、瓷砖和所有纤维水泥材料

#### Why is Crystalline Silica a health hazard?

##### 为什么结晶二氧化硅会危害健康？

- Silica can be breathed deep into the lungs when present in the air as a very fine (respirable) dust 二氧化硅以极细（可吸入的）的粉尘形式存在于空气中时，可深吸到肺部

- Exposure to silica dust without taking the appropriate safety measures to minimise the amount being breathed in, can lead to a potentially fatal lung disease – silicosis – and has also been linked with other diseases including cancer. Some studies suggest that smoking may increase these risks  
接触二氧化硅粉尘而未采取适当的安全措施以最大程度地减少吸入量，可能会导致致命的肺部疾病—矽肺病，并且还与其他疾病有关。一些研究表明，吸烟可能会增加这些风险
- The most hazardous dust is the dust you cannot see!  
危害最大的粉尘是你看不见的粉尘！

### When is Crystalline Silica a health hazard?

#### 结晶二氧化硅在何种情况下会危害健康？

- It's dangerous to health if safety protocols to control dust are not followed when cutting, drilling or rebating a product containing crystalline silica and when cleaning up  
在切割、钻孔、打磨或清理含有结晶二氧化硅的产品时，如不遵守控制粉尘的安全守则，会危害健康
- Products containing silica are harmless if intact (e.g. an un-cut sheet of wall board)  
含硅的产品在完整的情况下是无害的（比如，未切割的墙板）

### Avoid breathing in crystalline silica dust 避免吸入结晶二氧化硅粉尘

#### Safe working practices 安全施工守则

- ✗ NEVER use a power saw indoors or in a poorly ventilated area 切勿在室内或通风不佳的区域使用电锯
- ✗ NEVER dry sweep 切勿干扫
- ✓ ALWAYS use M Class or higher vacuum or damp down dust before sweeping up  
始终使用M级或更高级别的吸尘器，或在清扫之前沾湿粉尘
- ✗ NEVER use grinders 切勿使用研磨机
- ✓ ALWAYS use a dust reducing circular saw equipped with a sawblade specifically designed to minimise dust creation when cutting fibre cement – preferably a sawblade that carries the Hardie™ Blade name or one with at least equivalent performance – connected to an M Class or higher vacuum  
始终使用降尘圆锯，圆锯装有专为切割纤维水泥设计的可减少粉尘产生的锯片 – 最好是带有Hardie™ Blade商标的锯片或者至少具有同等功能 – 并与M级或更高级别的吸尘器相连接
- ✓ Before cutting warn others in the area to avoid dust 在切割之前，警示他人离开周围区域
- ✓ ALWAYS follow tool manufacturers' safety recommendations 始终遵循工具生产商的安全建议
- ✓ ALWAYS expose only the minimum required depth of blade for the thickness of fibre cement to be cut  
根据需要切割的纤维水泥板的厚度，始终仅露出所需最小的刀片深度
- ✓ ALWAYS wear a properly-fitted, approved dust mask or respirator P1 or higher in accordance with applicable government regulations and manufacturer instructions  
始终根据适用的政府法规和制造商指导佩戴合适的、经过批准的P1或更高级别的防尘面罩或呼吸器
- ✓ Consider rotating personnel across cutting tasks to further limit respirable silica exposures.  
考虑轮换人员进行切割，进一步限制对可吸入二氧化硅的接触

#### When cutting 切割时

- ✓ Work outdoors only 仅在户外作业
- ✓ Make sure you work in a well ventilated area 确保你的作业环境通风良好
- ✓ Position cutting station so wind will blow dust away from yourself and others in the working area  
妥善放置切割工作台，便于风将粉尘吹离你和工作区域内的其他人

- ✓ Rotate employees across cutting task over duration of shift  
安排工作人员轮值进行切割任务
- ✓ Cut products with a Hardie™ Blade Saw Blade (or equivalent) and a dust reducing circular saw connected to a M Class or higher vacuum  
使用Hardie™ Blade锯片（或具有同等功能的锯片）切割产品，采用降尘圆锯连接M级或更高级别的吸尘器
- ✓ When sawing, sanding, rebating, drilling or machining fibre cement products, always:  
在锯切、砂磨、打磨、钻孔或加工纤维水泥产品时，请始终：
  - Wear your P1 or higher (correctly fitted in accordance with manufacturers' instructions), ask others to do the same.  
佩戴P1或更高级别的防护面罩或呼吸器（根据制造商指导正确佩戴），并要求他人也这样做。
  - Keep persons on site at least 2 metres and as far as practicable away from the cutting station while the saw is in operation 让施工现场的人在锯切过程中尽可能远离切割工作台或至少保持2米距离
  - If you are not clean shaven, then use a powered air respirator with a loose fitting head top  
如果您留有胡子，请佩戴带有宽松头戴式面罩的电动送风呼吸器
  - Wear safety glasses 佩戴安全镜
  - Wear hearing protection 佩戴护听器
- ✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum 确保清洁，但切勿干扫。始终用水管冲洗或用湿抹布清洁，又或使用M级或更高级别的吸尘器

**If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.**

**如果您仍然担心暴露风险，或未遵循上述做法，应始终咨询合格的工业卫生师，或联系James Hardie获取更多信息。**



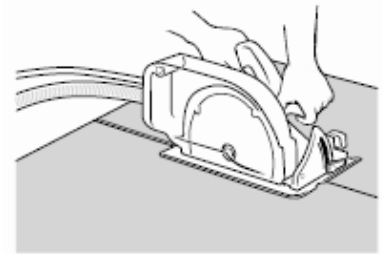
## Working Instructions 作业说明

### Hardie™ Blade Saw Blade

#### Hardie™ Blade 锯片

The Hardie™ Blade Saw Blade used with a dust-reducing saw is ideal for fast, clean cutting of Hardie™ fibre cement products. A dust-reducing saw uses a dust collector connected to a M Class or higher vacuum. When sawing, clamp a straight edge to the sheet as a guide and run the saw base plate along the straight edge when making the cut.

Hardie™ Blade 锯片与降尘圆锯一起使用，可以快速干净的切割Hardie™ 纤维水泥产品。降尘圆锯配有粉尘收集器，可与M级或更高级别的吸尘器连接。锯切时，请将直线边缘夹在板上作为导向，并让锯齿底部板沿直线进行切割。



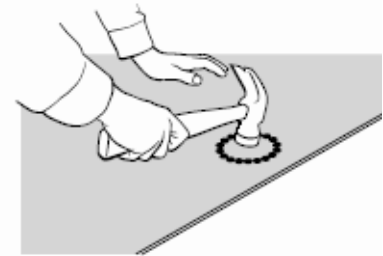
### Hole-Forming 成孔

#### For smooth clean cut circular holes:

##### 形成平滑整齐的圆孔：

- Mark the centre of the hole on the sheet 在板上标记孔的中心
- Pre-drill a 'pilot' hole 预钻一个孔
- Using the pilot hole as a guide, cut the hole to the appropriate diameter with a hole saw fitted to a heavy duty electric drill

在该预钻孔的基础上，使用配在重型电钻上的孔钻，钻出所需直径的孔



#### For irregular holes:

##### 不规则孔：

- Small rectangular or circular holes can be cut by drilling a series of small holes around the perimeter of the hole then tapping out the waste piece from the sheet face  
如需钻出小的长方形或圆形孔，可在周边钻一系列的小孔，然后从表面将多余部分敲打掉
- Tap carefully to avoid damage to sheets, ensuring that the sheet edges are properly supported  
谨慎敲打，以防破坏板材，确保板材周边都有良好支撑

## 5.1 Storage and Delivery 储存和运送

Keeping products and people safe 保证产品和人员的安全

### Off loading 卸载

- ✓ Hardie™ fibre cement products should be off-loaded carefully by hand or by forklift  
Hardie™ 纤维水泥产品须用手或叉车小心卸载
- ✓ Hardie™ fibre cement products should not be rolled or dumped off a truck during the delivery to the jobsite  
Hardie™ 纤维水泥产品不应在运输至作业现场的过程中滚下或倾倒

### Storage 存储

Hardie™ fibre cement products should be stored:

Hardie™ 纤维水泥产品的储存一定要：

- ✓ In their original packaging  
储存至原包装

- ✓ Under cover where possible or otherwise protected with a waterproof covering to keep products dry  
尽可能储存在有遮盖的地方或用防水层保护，保持产品干燥
- ✓ Off the ground – either on a pallet or adequately supported on timber or other spacers  
不直接放在地面上——应放置在货板上或有充分支撑的木料和其他垫板上
- ✓ Flat so as to minimise bending  
尽可能平放以减少弯曲

Hardie™ fibre cement products must not be stored:

Hardie™ 纤维水泥产品的储存一定不要：

- ✗ Directly on the ground  
直接放置在地上
- ✗ In the open air exposed to the elements  
暴露在空气中，接触到化学元素

**James Hardie is not responsible for damage due to improper storage and handling.**

如因储存或处理不当导致损坏，James Hardie概不負責。

## 5.2 Tips for Safe and Easy Handling of Linea™ Weatherboard

### 轻松安全搬运Linea™ 护墙板的技巧

- ✗ Do not lift planked products flat and in the middle  
请勿从中间平抬板材产品
- ✓ Carry the products on the edge  
抬起产品的边缘处
- ✓ If only one person is carrying the product, hold it in the middle and spread arms apart to better support the product  
仅一人作业时，托住中部并展开双臂以更好的支撑产品
- ✓ If two people are carrying the plank, hold it near each end and on edge  
当两人作业搬运板材时，则从两端和边缘处抬起
- ✓ Exercise care when handling weatherboard products to avoid damaging the edges/corners  
对板材产品，须轻拿轻放，避免损坏边角处

# 6 Installation 安装

The horizontal lap between the two Linea™ Weatherboard must be 30mm minimum. In certain scenarios you may require to creep up the lap, this must not exceed 33mm.

当水平安装Linea™ 护墙板时，两块板之间交叠部分不可少于30mm。在特殊情况下，最大的交叠尺寸不能超过33mm。

Linea™ Weatherboard must be kept dry whilst in storage prior to and during fixing. Site cut ends that are exposed such as slimline box corners, internal corners etc. and any sanded patches on the boards surface must be primed prior to installation. Dust and loose material must be removed before priming.

Linea™ 护墙板在储存直到安装的过程中均需保持干燥。现场切割的暴露表面如超薄箱角、阴角及用砂纸打磨的板材表面都必须在安装前涂上底漆。在涂底漆之前，必须将灰尘及杂质全部清除干净。

## 6.1 Fastener 紧固件

### 6.1.1 Fastener – Size and Method 紧固件—尺寸及安装方法

Linea™ Weatherboard must be fixed to timber with the types of nails specified in Tables 4 and 5, in accordance with the following requirements:

Linea™ 护墙板须直接安装在木框架结构上，安装过程请使用表4和5中的钉子类型，并满足以下要求：

- Linea™ Weatherboard can either be face/exposed fixed or concealed fixed  
Linea™ 护墙板可以采用表面/暴露式安装法或者隐藏式安装法
- Linea™ Weatherboard must be fixed into studs at maximum 600mm centres. Fixing centres to coincide with stud spacing, refer to figures in section 9 of this manual  
Linea™ 护墙板必须直接安装在墙筋上并保证最大中心安装距离为600mm，安装中心位置要与墙筋间距重合。请参考本手册第9章的参数要求
- All concealed nails must be driven flush with the board surface  
所有暗钉必须与板面齐平
- When concealed fixing Linea™ Weatherboard, nails must be driven under the lap of boards, except at all corners and vertical edges of openings where Linea™ Weatherboard must be face fixed, refer to figures in section 9 of this manual  
当使用隐藏式安装法安装Linea™ 护墙板时，所有的钉子都必须钉入板材平面下，除了各转角及垂直边缘等必须采用表面安装的地方，请参考本手册第9章
- Nails must be fixed 25mm from the end of the board when hand nailing. For gun nailing refer to Section 6.1.2  
当使用手工钉护墙板时必须保证钉子距离板材底部25mm。如果使用钉枪请参考第6.1.2章节
- When using concealed fixing method, any gaps that may appear under the lap due to site conditions can be minimised by fixing a jolt head nail through the lap as per the exposed nailing method. Refer to figures in section 9 of this manual  
当使用隐藏式安装法时，可以参照暴露式安装法，通过安装蓬头钉尽可能减小由于安装现场条件造成的板材间隙。请参考本手册第9章
- When using concealed fixing method, Linea™ Weatherboard may be tied together by face fixing through the lap using a 32mm brad nail if desired.  
当使用隐藏式安装法时，如有需要，Linea™ 护墙板可以通过搭接处使用32mm曲头钉正面固定。
- When face fixing Linea™ Weatherboard, the upper board must be pre-drilled before fixing with a jolt head nail  
当使用表面安装法安装Linea™ 护墙板时，上层板材需在使用蓬头钉安装前预先钻孔

**Table 4 表4**

Wind pressure (kPa) 风压	Underlay 隔层	Fixing method 安装方法	Fixing type 固定类型	Instructions 说明
Up to 1.5 (up to and including VH Wind Zone) 最高1.5 (小于或属于VH风区)	Flexible underlay 弹性隔层	Concealed nailing 隐藏式安装法	60 x 3.15mm Hardie™ Flex nail or a 60 x 2.87mm D/round head gun nail 60 x 3.15mm Hardie™ Flex钉或60 x 2.87mm D型/环纹射钉	Finish flush with the board surface. 保证钉头与板面齐平。
		Face nailing 表面式安装法	75 x 3.15mm jolt head nails 75 x 3.15mm 蓬头钉	Hot-dipped galvanised/stainless steel jolt head nail with pre-drilling through the top weatherboard. Use a 3mm drill bit. 热浸镀锌/不锈钢蓬头钉。使用3mm钻头在最上层护墙板预先钻孔。
	Rigid air barrier 刚性密封板	Concealed nailing 隐藏式安装法	75 x 3.15mm Hardie™ Flex nail or a 75 x 3.06mm D/round head gun nail 75 x 3.15mm Hardie™ Flex钉或75 x 3.06mm D型/环纹射钉	Finish flush with the board surface. 保证钉头与板面齐平。
		Face nailing 表面式安装法	90 x 3.55mm jolt head nails 90 x 3.55mm 蓬头钉	Hot-dipped galvanised/stainless steel jolt head nail with pre-drilling through the top weatherboard. Use a 3.5mm drill bit. 热浸镀锌/不锈钢蓬头钉。使用3.5mm钻头在最上层护墙板预先钻孔。
1.5 to 2.5 (EH Wind Zone and SED projects) 1.5 至 2.5 (EH风区和SED项目)	RAB™ Board RAB™ 板	Face nailing 表面式安装法	90 x 3.55mm jolt head nail 90 x 3.55mm 蓬头钉	Hot-dipped galvanised/stainless steel jolt head nail with pre-drilling through the top weatherboard. Use a 3.5mm drill bit. 热浸镀锌/不锈钢蓬头钉。使用3.5mm钻头在最上层护墙板预先钻孔。

**Table 5 表5**

Nail requirements for Hardie™ Axent™ Trim   安装Hardie™ Axent™ Trim 饰板时对钉子的要求	
Single thickness 单层厚度	60mm jolt head nails. 60mm 蓬头钉。 If fixing over Linea™ Weatherboard use 75 x 3.15mm jolt head nails through a pre-drilled hole, using a 3mm drill bit. 如果安装在Linea™ 护墙板上, 需要使用75 x 3.15mm蓬头钉, 并在安装前预先使用3mm钻头钻孔。
Single thickness plus packer 单层厚度加封隔	If fixing over Linea™ Weatherboard use 75 x 3.15mm jolt head nails through a pre-drilled hole, using a 3mm drill bit. 如果安装在Linea™ 护墙板上, 需要使用75 x 3.15mm蓬头钉, 并在安装前预先使用3mm钻头钻孔。 When fixing to timber support use 60mm jolt head nails. 如果安装在木框架上, 需使用60mm蓬头钉。

For fire rated wall applications the Linea™ Weatherboard must be face fixed. For more information Ask James Hardie on 0800 808 868.

为了达到耐火级别墙体的要求, Linea™ 护墙板必须正面安装。获取更多信息请致电0800 808 868垂询Ask James Hardie。



### 6.1.2 Gun Nailing 使用钉枪安装

Linea™ Weatherboard can be gun nailed with a D-Head or RoundDrive nail when concealed fixing method is used.

当使用隐藏式安装法安装Linea™ 护墙板时，可以使用D头钉或环形螺纹钉通过钉枪安装。

- Nails must be no closer than 50mm from the ends of boards when gun nailing is used, double studs will be required.  
当使用钉枪安装时，入钉位置离板材终端不能小于50mm，需要使用双墙筋。
- Be minimum length and nearest gauge as per Table 4.  
根据表4选择长度最小和直径最近的钉子。
- Be finished flush with surface of board.  
入钉后，保证钉头与板面齐平。

### 6.1.3 Fastener Durability 紧固件耐久性

Fasteners must meet the minimum durability requirements of the NZBC. Refer to Table 6 for fixing materials requirements to be used in relation to the exposure conditions.

紧固件必须符合NZBC关于耐久性的最低要求。请参考表6中对于室外暴露环境下的固件材质的要求。

Table 6 表6

Exposure conditions and nail selection prescribed by NZS 3604 NZS 3604对室外暴露环境的定义及对钉子选用的要求		
Zone 区域	Application 应用	
D (sea spray) and geothermal hot spots D区（海雾）和地热区	General 通用	Stainless steel 304/316
	Fire 耐火	不锈钢 304/316
*C and B *C区和B区	General 通用	Hot dip galvanised**
	Fire 耐火	热浸镀锌**

\* Zone C areas where local knowledge dictates that increased durability is required, appropriate selection shall be made. Microclimatic conditions as detailed in NZS 3604, Paragraph 4.2.4 require SED.

\*C区是指根据对该地域情况的考察，有必要使用更高耐久性的产品的地区，因而应当慎重选材。如果建筑坐落于NZS 3604中第4.2.4段中列出的那些微气候区域，则需要进行特殊工程设计（SED）。

\*\*Hot dip galvanised must comply with AS/NZS 4680.

\*\*热浸镀锌材料必须满足AS/NZS 4680要求。

Also refer to the NZBC Acceptable Solution E2/AS1 Table 20 and 21 for information regarding the selection of suitable fixing materials and their compatibility with other materials.

另请参阅NZBC合格方案（NZBC Acceptable Solution）“E2/AS1款”的表20和21，了解如何选择适当的固件材料及与其它材料的兼容性等信息。

## 6.2 Framing 框架

Framing to be in accordance with the NZS 3604. The following must be provided for fixing Linea™ Weatherboard:

框架必须满足NZS 3604的要求。在安装Linea™ 护墙板时，框架需要满足以下条件：

- Studs at 600mm centres maximum for all wind speed zones up to and including very high (VH)  
所有风区包括最大（VH）风区，墙筋最大中心间距为600mm
- Studs at 400mm centres maximum for wind pressures more than 1.5 kPa (ULS)  
风压大于1.5 kPa（ULS）的区域，墙筋最大中心间距400mm
- Double studs are required at internal corners  
阴角需要设置双墙筋
- Extra packers may be required at external corners  
阳角可能需要额外封隔
- Extra studs are required for aluminium internal corner sections  
铝制阴角位置需要设置额外墙筋

### 6.2.1 Specific Engineering Design (SED) 特殊工程设计（SED）

For EH wind zone and specific engineering design projects the timber framing is required to be designed in accordance with NZS 3603 and AS/NZS 1170. The minimum framing sizes and layout must comply with this specification:

在EH风区和特殊工程设计项目中，木框架必须满足NZS 3603和AS/NZS 1170的要求。框架最小尺寸和布局必须符合以下标准：

- Stud spacing 400mm centres maximum  
墙筋最大中心间距400mm
- Nog spacing 1200mm centres maximum  
木钉最大中心间距1200mm
- Double studs are required at internal corners  
阴角需要设置双墙筋
- Extra packers may be required at external corners  
阳角可能需要额外封隔
- Extra studs are required for aluminium internal corner sections  
铝制阴角位置需要设置额外墙筋

### 6.2.2 Gable Ends 山墙端

In case of gable end trusses sitting on top plates of the external wall frame, the frame size must be in accordance with truss design and specification supplied by the frame and truss manufacturer/supplier supported by independent design producer statement.

如果位于山墙一侧的桁架处于外墙框架的上托板上，那么框架尺寸必须符合由框架和桁架制造商/供应商提供的桁架设计和规格，并且桁架制造商/生产商有独立设计建筑商声明文件支持。

### 6.2.3 Tolerances 可允许误差

In order to achieve an acceptable wall finish, it is imperative that framing is straight and true. Framing tolerances must comply with the requirements of NZS 3604 and the manufacturer's specifications. All framing must be made flush. The visual aspects of the finished cladding can differ between two different sites or the builders installing the product. It is recommended that you also refer to a building guidance document published by MBIE to understand an acceptable level of tolerances allowed in building materials and workmanship. [www.building.govt.nz](http://www.building.govt.nz) Guide to tolerances, materials and workmanship in new residential construction 2015

为了达到可接受的墙面效果，请务必保证框架平直。框架的误差必须符合NZS 3604和制造商规格的要求。所有的框架都必须齐平。成品外墙板的视觉效果可能因不同地点或安装产品的建筑工人而有所不同。建议参考MBIE发布的建筑指导文件，以了解建筑材料和工艺允许的误差范围。请访问[www.building.govt.nz](http://www.building.govt.nz)，查阅《2015年新住宅建筑中的误差、材料和工艺指南》。

## 6.3 Flexible Underlay or HomeRAB™ Pre-Cladding

### 弹性隔层或HomeRAB™ 预置垫层

Flexible underlay or HomeRAB™ Pre-Cladding must be provided to comply with the requirements of E2/AS1 up to and including very high wind zone.

弹性隔层或HomeRAB™ 预置垫层必须满足E2/AS1中包括极高风压区的要求。

Walls which are not lined on the inside face (e.g. garage walls or gable ends) must include a rigid sheathing or an air barrier behind the cladding. HomeRAB™ Pre-Cladding is suitable for use as an air barrier and must be installed in accordance with the HomeRAB™ Pre-Cladding and RAB™ Board Installation Manual.

建筑中未列出的内侧表面（例如车库墙或者山墙）必须在墙面后安装刚性隔层或者密封板。HomeRAB™ 预置垫层非常适合作为密封板使用，在安装时要遵守《HomeRAB™ 预置垫层和RAB™ 板安装手册》的要求。

## 6.4 Intermediate Support 中间支撑

Where studs are at 600mm centres an intermediate means of restraining the flexible underlay and insulation from bulging into the cavity must be installed. An acceptable method to achieve this is using one of the following:

在墙筋中心间距为600mm的位置，需要采用中间支撑的方法约束弹性隔层或者保温材料凸出到空腔结构中。可以采用以下一种合格安装方法：

- Intermediate cavity batten between the studs; or  
相邻墙筋在中间位置使用空腔板条；或者
- 75mm galvanised mesh; or  
75mm镀锌铁丝网；或者
- Polypropylene tape at 300mm centres fixed horizontally and drawn taut.  
在中心间距300mm位置水平安装聚丙烯胶带并拉紧。

No intermediate supports are required:

不需要中间支撑的情况：

- Where studs are at maximum 400mm centres; or  
墙筋最大中心间距为400mm的位置；或者
- When rigid sheathings instead of flexible underlays are used.  
当使用刚性隔板替代弹性隔层时。

## 6.5 Rigid Air Barrier 刚性密封板

In EH wind zone or for specific design wind zone, a rigid air barrier i.e. RAB™ Board, must be used instead of flexible underlay.

在EH风区或者经过特殊工程设计的风区，必须使用刚性密封板，即RAB™ 板替代弹性隔层。

For buildings more than 10m, RAB™ Board must be used. To achieve the temporary weathertightness using HomeRAB™ Pre-Cladding and RAB™ Board, windows/doors need to be installed with required flashing tapes and seals etc. Refer to HomeRAB™ Pre-Cladding and RAB™ Board Installation Manual for information regarding its installation and to achieve temporary weathertightness.

对于超过10米高的建筑，必须使用RAB™板。为了使用HomeRAB™预置垫层和RAB™板实现临时的防水性，窗户/门需要使用必要的防水胶带和密封等。有关其安装和实现临时防水性的详细信息，请参见《HomeRAB™预置垫层和RAB™板安装手册》。

## 6.6 Vent Strip 排气带

Linea™ 35mm cavity closer vent strip must be installed at the bottom of all walls constructed using the drained and ventilated for cavity construction method. Linea™ 35mm cavity closer vent strip has an opening area of 1000mm<sup>2</sup>/m length. It is important that the openings in the vent strip are kept clear and unobstructed to allow free drainage and ventilation of cavities. Alternate cavity closer can be used ensuring compliance of E2 and may need to be used with a cant strip.

Linea™ 35mm 空腔封条排气带（uPVC）必须采用空腔结构安装法安装在所有墙体底部，以达到排水和通风效果。Linea™ 35mm 空腔封条排气带开口面积为1000mm<sup>2</sup>/m长。保证排气带开口位置没有任何阻挡非常重要，有利于空腔结构的排水和通风。空腔封条可以满足E2合规要求，同时可能需要安装嵌条。

## 6.7 Cavity Battens 空腔板条

The cavity battens provide airspace between the frame and cladding and are considered a “packer” only in this specification.

空腔板条可以在建筑框架和墙板之间提供一定的空间，仅在本规范中可以被视为封隔器。

The timber battens must be minimum H3.1 treated to comply with the durability requirements of B2/AS1.

木板条必须至少经过H3.1级别热处理并满足B2/AS1中关于耐久性的要求。

Cavity battens must comply with E2/AS1 and:

空腔板条必须满足E2/AS1的要求并且符合以下要求：

- Be minimum 18mm thick  
至少18mm厚
- Be minimum 45mm wide  
至少45mm宽
- Until claddings are fixed the battens need only to be tacked to framing with 40 x 2.8mm nails at 800mm centres maximum (batten fixing is required temporarily to keep them straight on the wall during construction)  
直到墙体固定好，板条只需要使用40 x 2.8mm钉子安装在中心最大间距为800mm的框架上（在墙体施工的过程中需要将板条临时安装在墙体上确保所有板条垂直）

## 6.8 Joints 连接

### 6.8.1 Jointing 连接方式

The ends of Linea™ Weatherboard are jointed off-stud by means of a tongue and groove joint. Tongue and groove joints may be located centrally between studs but no closer than 100mm from the edge of a stud. The joints must be staggered by 600mm minimum. Flexible sealant must be applied to the front of tongue before pushing into the groove at the time of installation. From a visual perspective, the joint line will be visible and must not be hard filled.

Linea™护墙板的板边通过榫槽结构连接，并需错开墙筋位置。榫槽连接处可以位于两个墙筋之间，但距离墙筋边缘至少100mm。不同交错接口之间至少600mm。安装时要在连接处使用弹性密封胶密封。从视觉角度上，接缝会始终可见并且不能硬填充。

### 6.8.2 Drainage Joint 排水连接

After every two floors a horizontal drainage joint flashing is required, refer to Figure 29 in section 9 of this manual.  
每两层需要设置一个水平的排水连接防水板，请参考本手册第9章图29。

### 6.8.3 External Corner Joint 阳角连接

There are a number of options to select from when detailing external corners:

阳角连接有以下选择：

- 90° corner soaker in aluminium  
铝制90°防漏嵌条
- 135° corner soaker 180mm aluminium  
180mm铝制135°防漏嵌条
- Aluminium boxed corners  
铝制箱角
- Box corners using Hardie™ Axent™ Trim  
使用Hardie™ Axent™ Trim 饰板的箱角
- Mitred corners to weatherboards  
采用护墙板直接斜接边角

Refer to figures in section 9 of this manual.

请参考本手册第9章。

### 6.8.4 Internal Corner Joint 阴角连接

There are a number of options to select from when detailing internal corners:

阴角连接有以下选择：

- 90° or 135° Aluminium W-mould  
90°或135°铝制W形覆膜
- Scribed corner  
划线角

Refer to figures in section 9 of this manual.

请参考本手册第9章。

## 6.9 Junctions and Penetrations 连接和穿透

All windows and doors must be detailed as per the requirements of this specification. James Hardie has developed the window details for Linea™ Weatherboard which meet the performance requirements of E2 'External Moisture', an approved document of the NZBC, refer to figures in section 9 of this manual.

所有门窗必须根据本规范的要求进行细节处理。James Hardie开发了针对Linea™ 护墙板的窗户安装详图，该示例符合NZBC核准文件中E2部分——外部湿度控制的要求，请参阅本手册第9章图示。

# 7 Finishes 表面处理

Protective coating of Linea™ Weatherboard is required in order to meet the durability requirements of the NZBC.

Linea™ 护墙板的保护涂层需要达到NZBC中耐久性的相关要求。

## 7.1 Preparation and Priming 准备工作和底漆处理

The Linea™ Weatherboard must be dry before painting. Punch and fill all exposed jolt head nails a maximum of 2mm below the surface. Fill the hole with an exterior grade 2 part builders fill, eg CRC® ADOS® Builders Fill, allow to cure and sand using 60 grit sand paper smooth ready for painting. Prime any sanded patch on board surface or the site cut edges that will be exposed.

Linea™ 护墙板在上漆之前必须保持干燥。所有暴露在外面的钉子必须砸进表面不超过2mm深度。钉孔需填充强化填充剂，如CRC® ADOS® Builders Fill填充剂，等其硬化后用60号砂纸打磨光滑，为上漆做准备。所有砂纸打磨表面以及现场切割的会暴露在外面的边缘都需要涂底漆。

It is not recommended to seal gap under the lap of weatherboards as it helps in circulation of air behind the weatherboard cladding. However if sealing of the gaps is undertaken, the product warranty still applies.

不建议密封护墙板下部的空隙，空隙有助于护墙板后面的空气流动。但如果已经密封了空隙，产品的质保依然有效。

## 7.2 Sealants 密封胶

All sealants must demonstrate the ability to meet the relevant requirements of the NZBC. Application and use of sealants must comply with manufacturer's instructions. Sealants, if coated, must be compatible with the paint system.

所使用密封胶的性能必须达到NZBC的相关要求。密封胶的使用必须遵守生产商的规范。如果需要在密封胶表面上漆，必须采用兼容的油漆。

## 7.3 Painting 涂漆

All Linea™ Weatherboards are pre-primed on their face and bottom edge with a factory applied acrylic base coat.

所有Linea™ 护墙板已经在表面及底部边缘预涂丙烯底漆。

Linea™ Weatherboard must be painted within 90 days of installation. Dark coloured paints can be used, i.e. there is no restriction on the Light Reflectance Value (LRV) of paint to be applied. All exposed faces, including the top edges under the sills and bottom edges of Linea™ Weatherboard and accessories must be finished with an exterior paint system.

Linea™ 护墙板必须在安装完90天内涂漆。可以采用深色油漆，对于油漆的光线反射值（LRV）没有限制。所有暴露的表面，包括窗台下面的边缘和Linea™ 护墙板的底部边缘以及各种配件都必须根据所选油漆进行表面处理。

For best aesthetic results a low sheen paint is recommended.

为了达到最好的视觉效果，推荐采用低光泽油漆。

The dark colours in certain environments may fade quicker. Special paints/coatings are required in certain harsh environments.

深色油漆在一定的环境中可能会随着时间逐渐褪色。在一些恶劣的环境中需要使用特殊的油漆或涂层。

Paint selection and the preparation required is dependent on paint chosen. Refer to the paint manufacturer for information before starting painting.

对于油漆的选择和准备工作的具体要求，要根据具体油漆类型而定。在开始涂漆之前请参考油漆生产商的相关信息。



# 8 Care and Maintenance

## 保养及维护

The extent and nature of maintenance will depend on the geographical location and exposure of the building. It is the responsibility of the specifier to determine normal maintenance requirements to comply with the NZBC Acceptable Solution B2/AS1. As a guide, it is recommended that basic normal maintenance tasks shall include but not be limited to:

维护的范围和性质根据建筑所在地理位置和暴露情况而定。工程监管方有责任根据NZBC合格方案B2/AS1制定具体的维护方案。建议采取以下的基本维护方案，但不限于此：

- Washing down exterior surfaces every 6-12 months using low pressure water and a brush, and every 3-4 months in extreme coastal conditions or sea spray zones. Do not use a water blaster to wash down the cladding. Refer to your paint manufacturer for washing down requirements.  
每6-12个月用低压水或者刷子清洗外表面，如果是极端的海岸地区及海浪区域，则应该每3-4个月清洗一次。不要使用高压水枪清洗墙板。请参阅油漆制造商的清洗要求。
- Re-coating exterior protective finishes. Always refer to your paint manufacturer for re-coating requirements  
重新涂覆外部保护层时，请始终参阅油漆制造商的重新涂覆要求
- Maintaining the exterior envelope and connections including junctions, penetrations, flashings and sealants  
维护外部围护结构和连接处，包括接缝处、穿透墙体处、防水板和涂有密封胶的位置
- Cleaning out gutters, blocked pipes and overflow pipes as required  
根据需求清理雨槽、下水管和溢流管
- Pruning back vegetation close to or touching the building as well as ensuring the NZBC ground clearance requirements are maintained especially where gardens are concerned  
根据NZBC关于接地间隙的要求修剪建筑周边植被，尤其要关注花园植被的修剪
- The clearances between the bottom edge of Linea™ Weatherboard and the finished/unfinished ground must always be maintained  
始终确保Linea™ 护墙板底部边缘与铺装/非铺装地面保持适当间隙
- Stainless steel soakers used in extreme coastal conditions or in sea spray zones may show some signs of 'tea staining'. It is an aesthetic issue and to minimise staining soaker must be washed/polished frequently  
在极端沿海地区及涌潮区，不锈钢防漏嵌条可能会出现“茶渍”现象，可以通过经常清洗和抛光解决美观问题

# 9 Details Section Index

## 工程详图索引

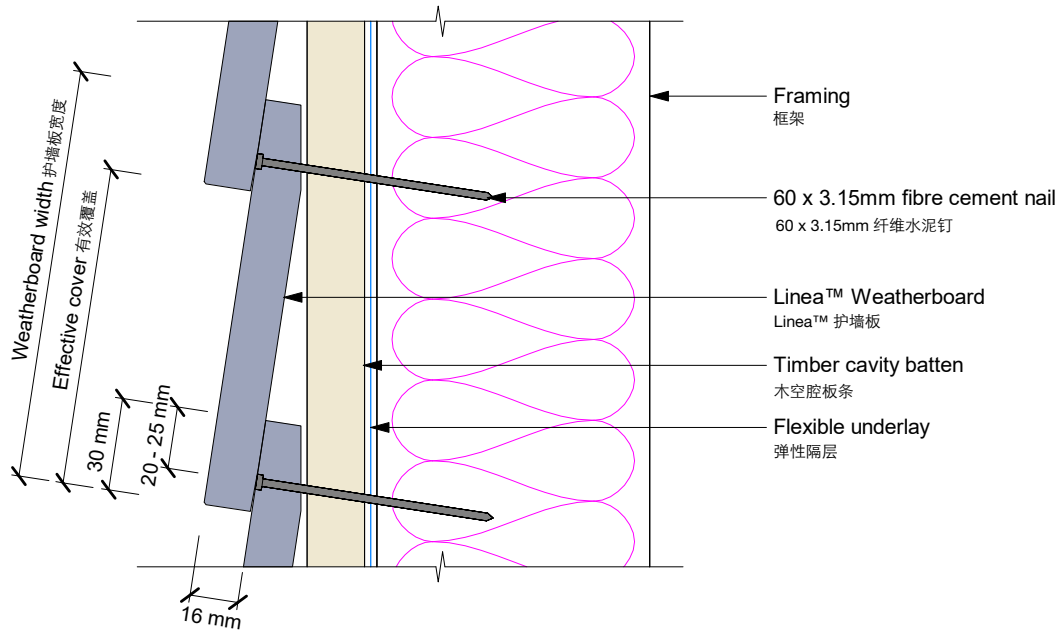
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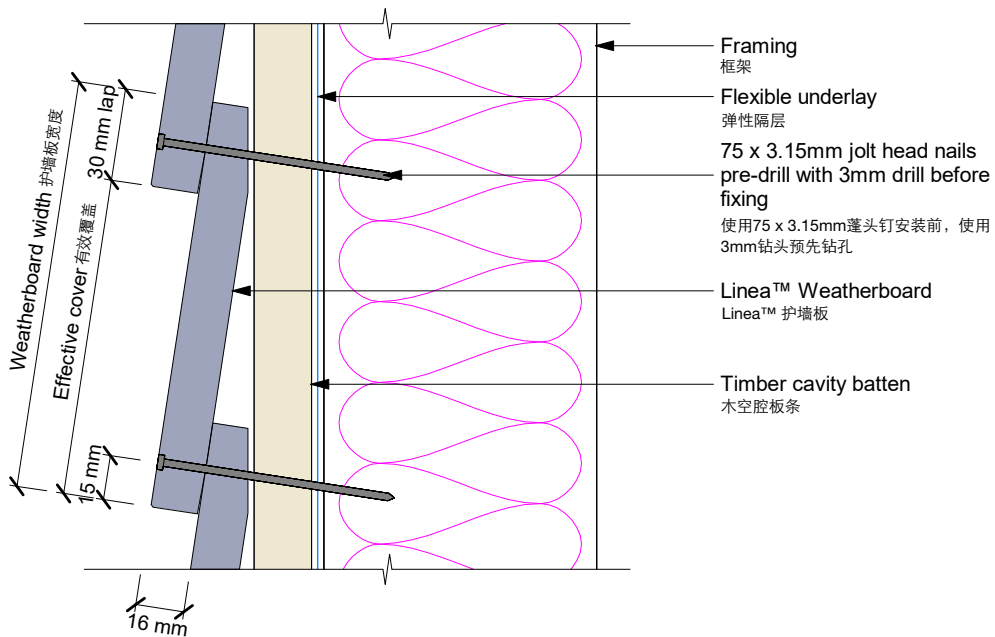
Figure 1: Weatherboard fixing | 图 1: 护墙板安装方法



**Concealed Nailing**  
**隐藏式安装法**

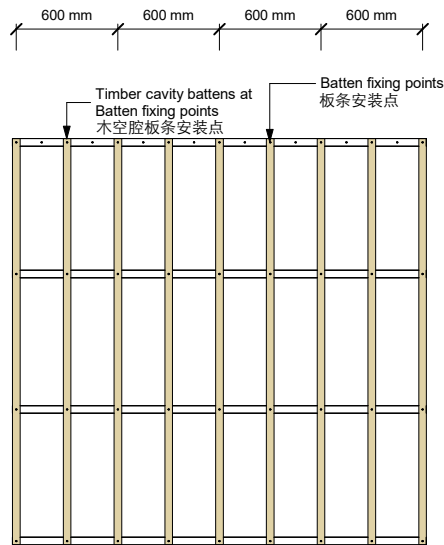
Linea™ Weatherboards to be face fixed at corners and down window and door openings using jolt head nails at 90° to face, punch 2mm below surface and fill. Refer to fixing table 4

Linea™ 护墙板采用正面安装在转角，窗户和门等开口处使用蓬头钉90°正面安装，钉子砸入板面2mm以下并填充。参考表4安装。



**Face/Exposed Nailing**  
**表面/暴露式安装法**

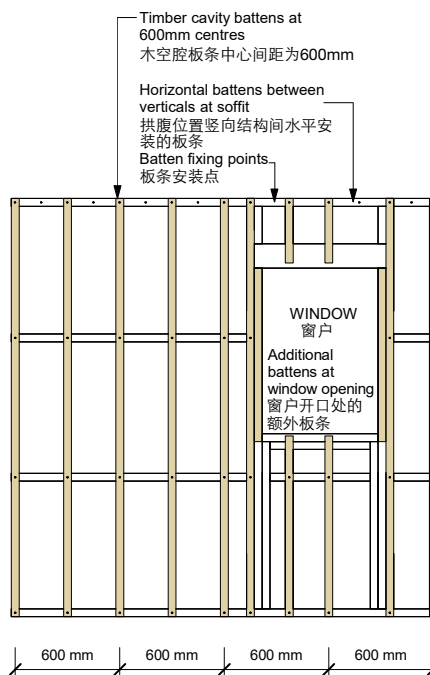
Figure 2: Batten fixing | 图 2: 板条安装方法



The intermediate support for insulation between the studs could be a timber cavity batten, polypropylene tape or 75 mm galvanised wire mesh. Refer to E2/AS1 Paragraph 9.1.8.5 Polypropylene tape must be fixed horizontally and drawn taut at 300 mm centres.

墙筋之间用于隔热的中间支撑可以使用木空腔板条、聚丙烯胶带或者75 mm镀锌铁丝网。请参考E2/AS1段落9.1.8.5的内容，聚丙烯胶带必须水平安装在中心间距300 mm的位置并拉紧。

Figure 3: Batten layout at window opening | 图 3: 窗户开口处的板条布局



-The intermediate support for insulation between the studs could be a timber cavity batten, polypropylene tape or 75 mm galvanised wire mesh. Refer to E2/AS1 Paragraph 9.1.8.5 Polypropylene tape must be fixed horizontally and drawn taut at 300 mm centres.

- 墙筋之间用于隔热的中间支撑可以使用木空腔板条、聚丙烯胶带或者75 mm镀锌铁丝网。请参考E2/AS1段落9.1.8.5的内容，聚丙烯胶带必须水平安装在中心间距300 mm的位置并拉紧。

Figure 4: Foundation detail | 图 4: 地基详图

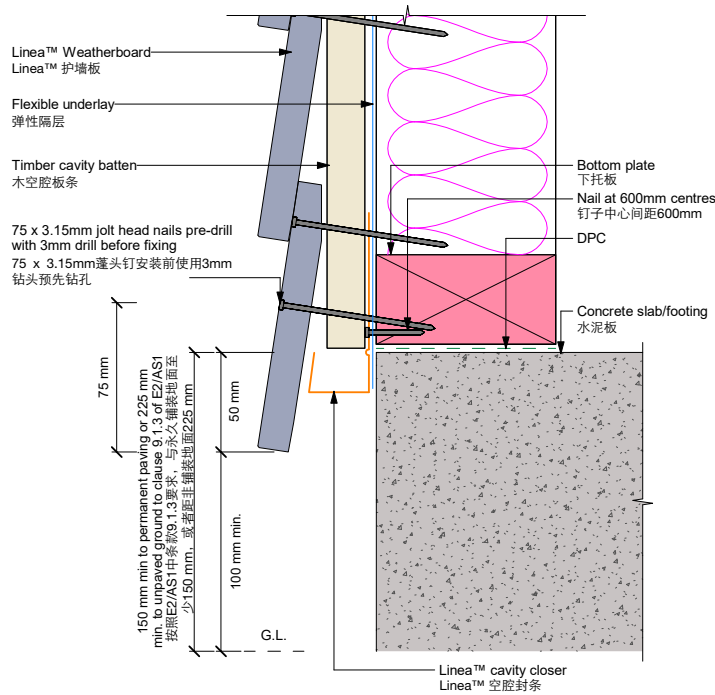


Figure 5: Enclosed Deck | 图 5: 封闭式露台

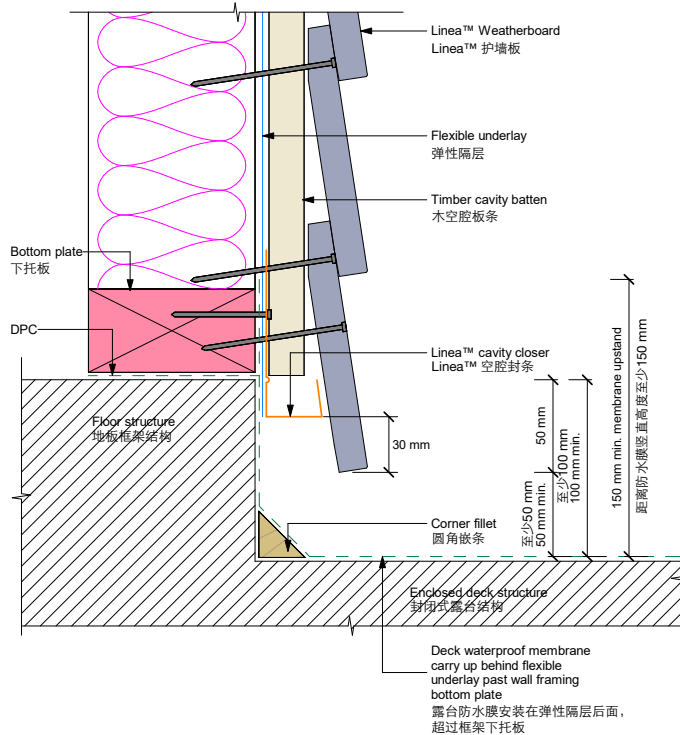




Figure 6: Jointing off stud | 图 6: 远离墙筋连接

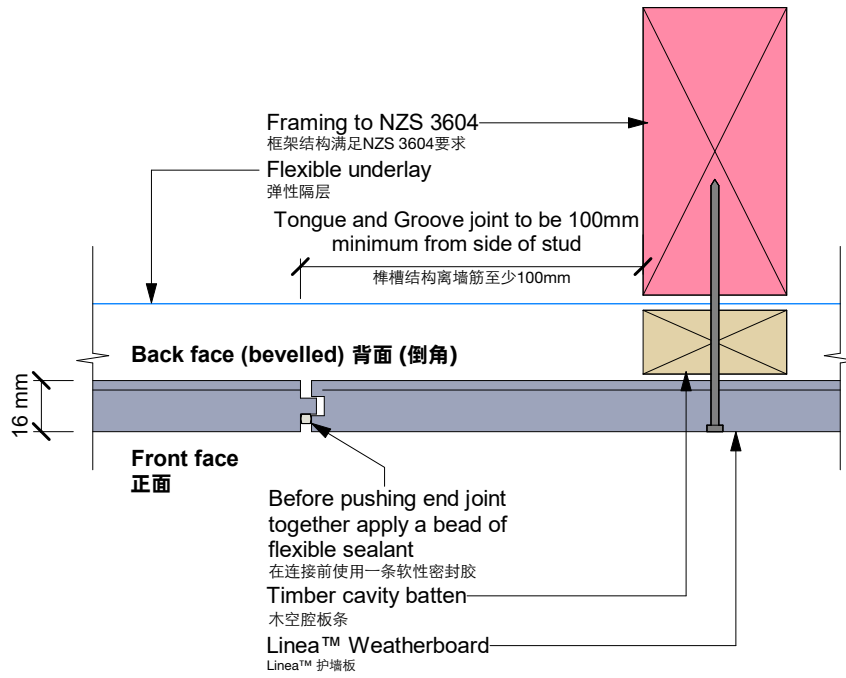


Figure 7: External corner soaker | 图 7: 阳角防漏嵌条

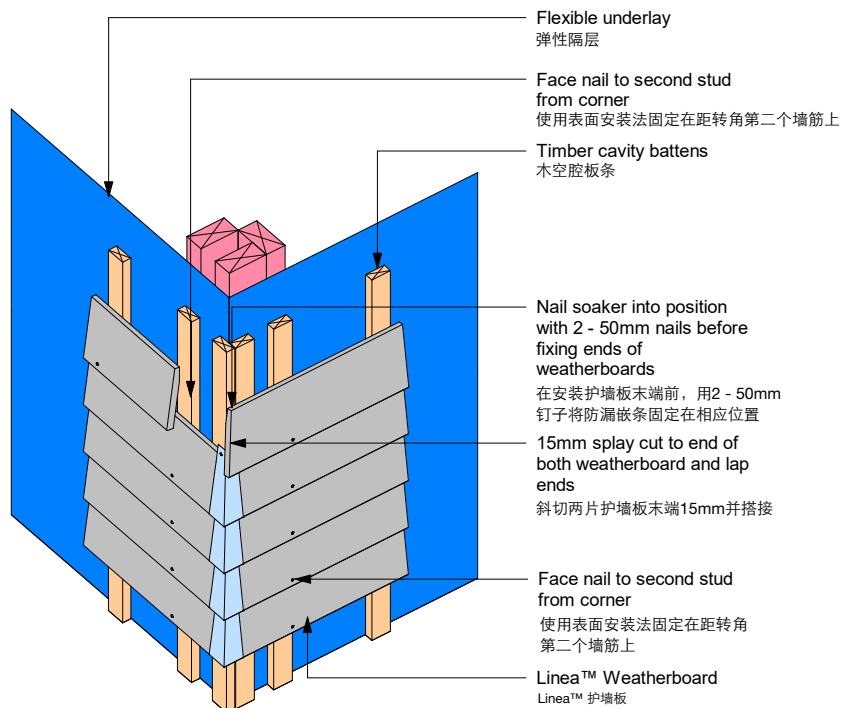


Figure 8: Aluminium box corner | 图 8: 铝制箱角

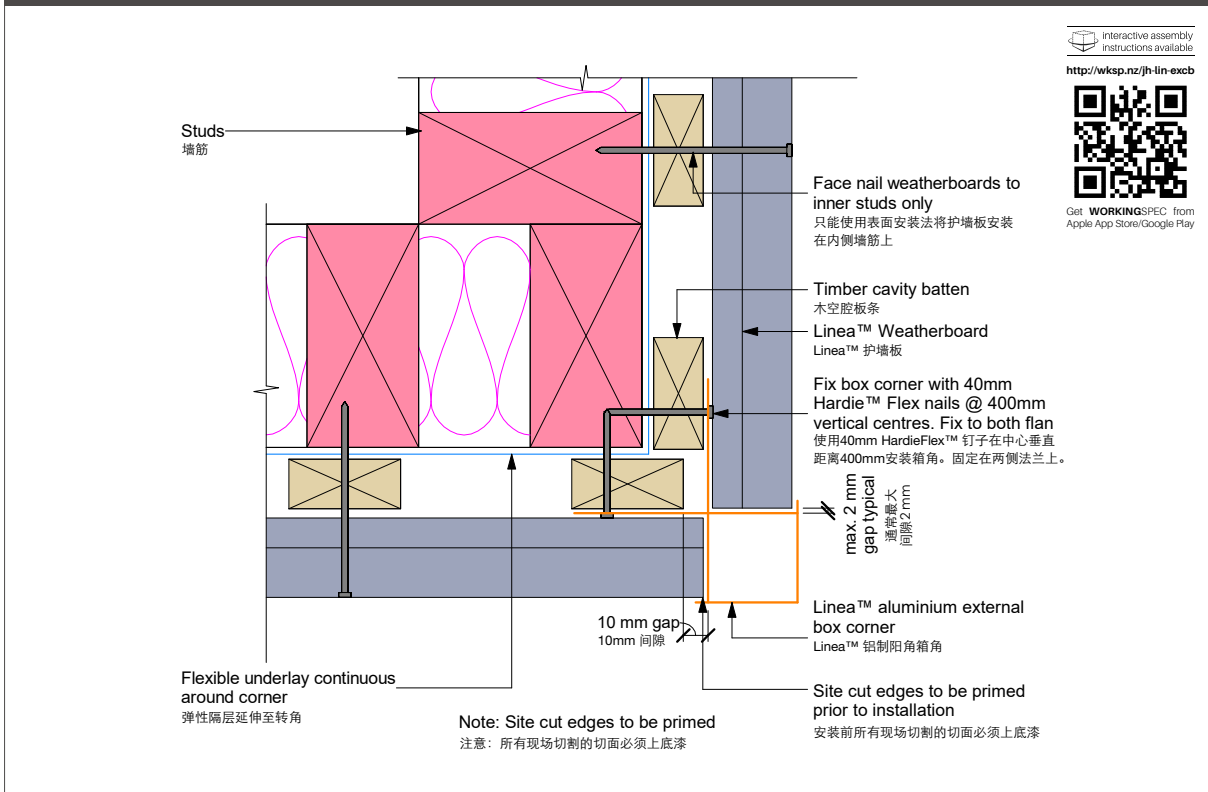


Figure 9: Boxed corner | 图 9: 箱角

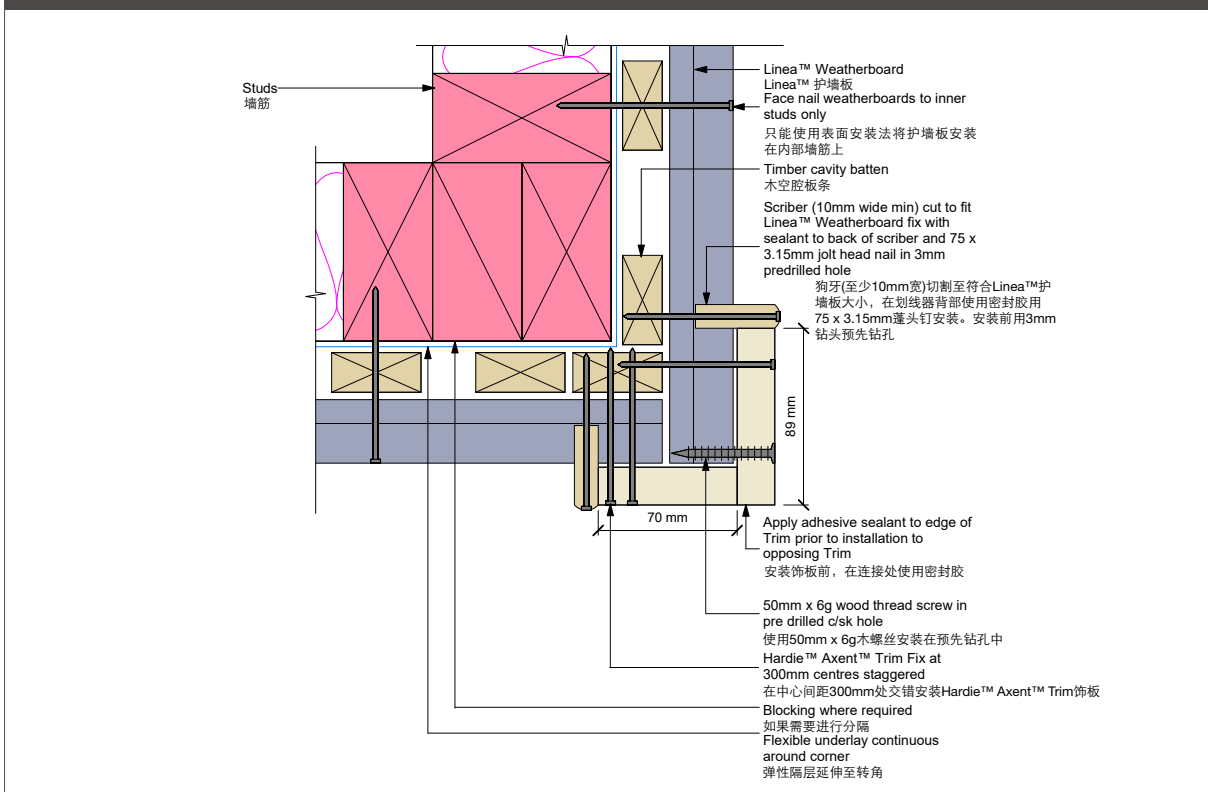
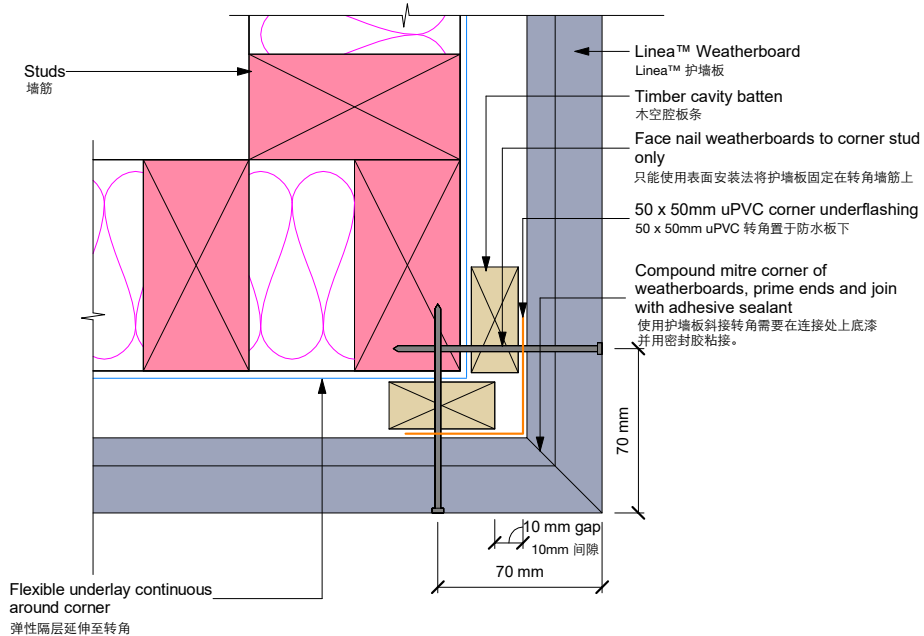


Figure 10: Mitre corner | 图 10: 斜接边角



Note: Adhesive sealant must be used on the full end face of both weatherboards. Push lightly together

注意：两块护墙板连接处全部表面都需要使用密封胶并轻轻按在一起。

Figure 11: Internal 90° aluminium 'W' mould corner | 图 11: 铝制 'W' 形90°阴角覆膜转角

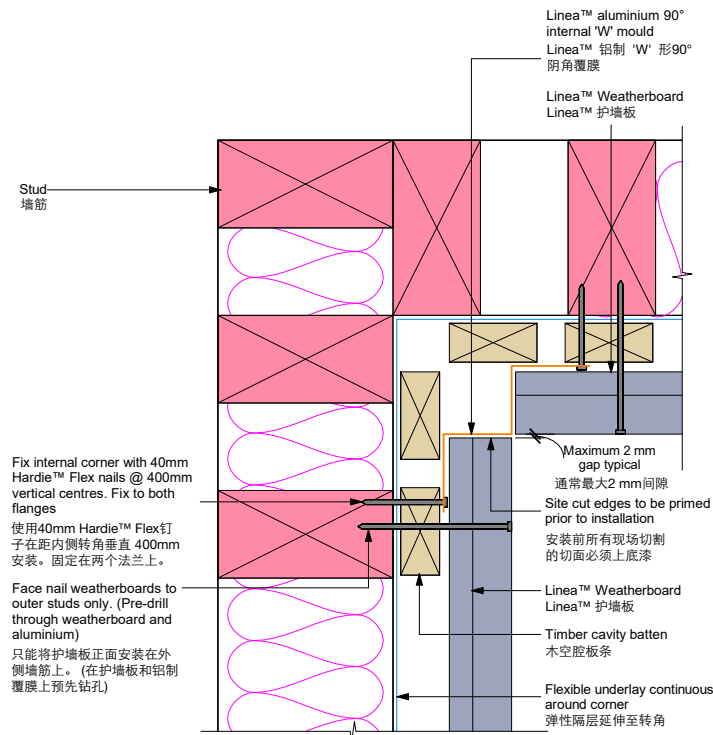


Figure 12: Internal 135 ° aluminium 'W' mould corner | 图 12: 铝制 'W' 形135 °阴角覆膜转角

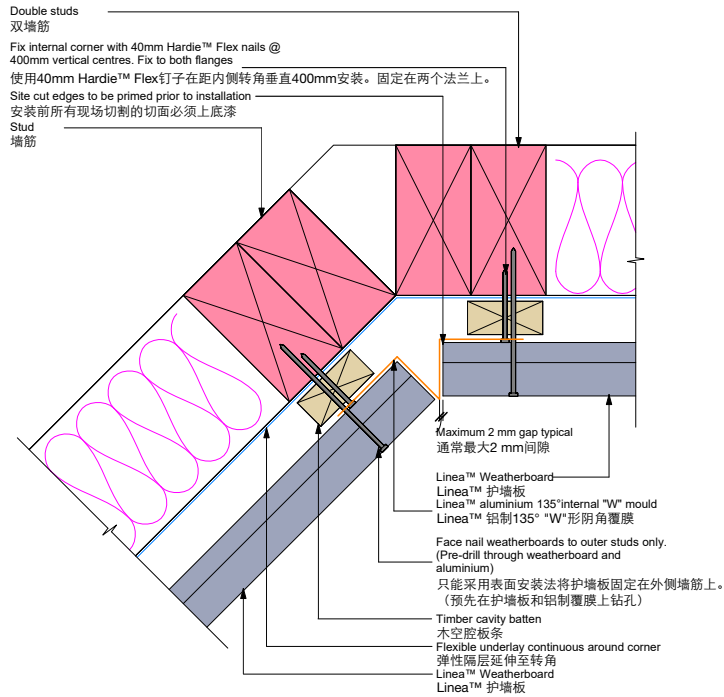


Figure 13: Internal corner joint flashing | 图 13: 阴角连接防水

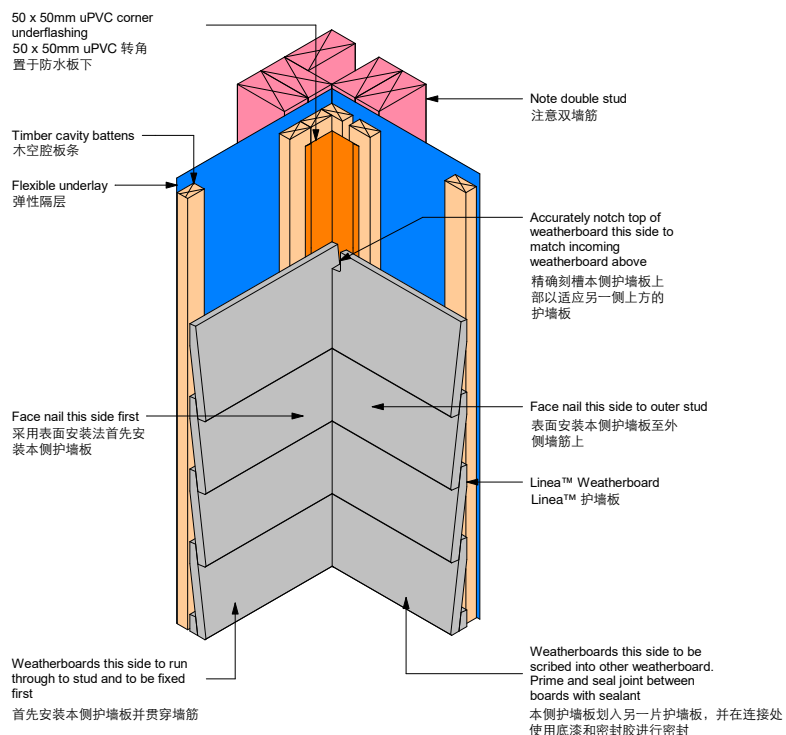


Figure 14: Wall to soffit junction 'X' | 图 14: 墙体与拱腹的 'X' 形连接

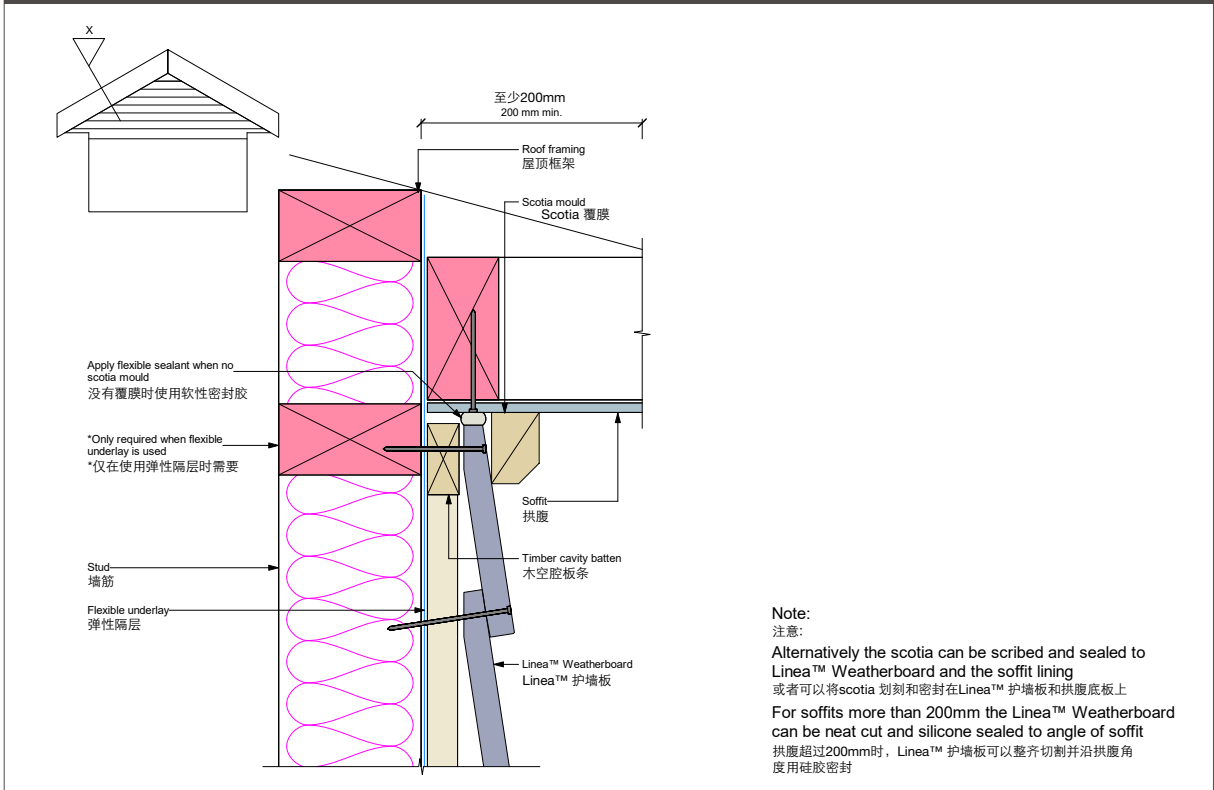


Figure 15: Nil soffit detail | 图 15: 无拱腹详图

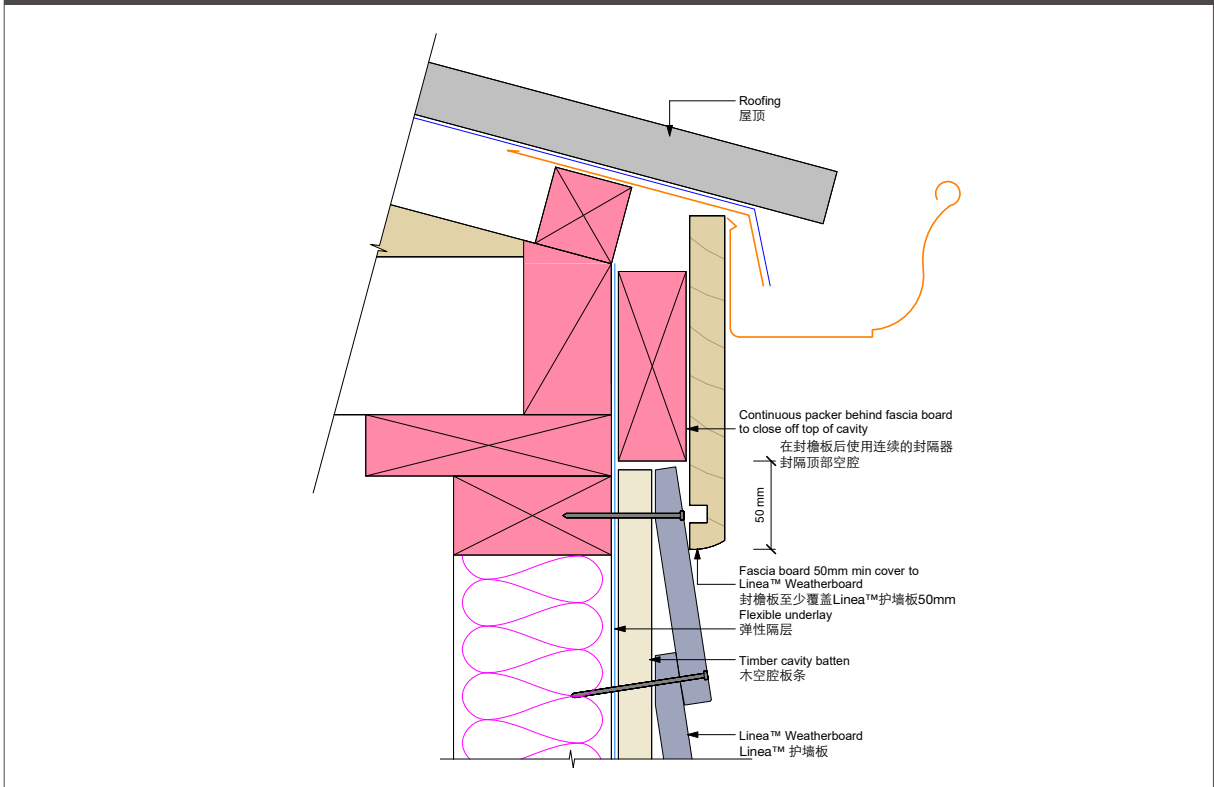
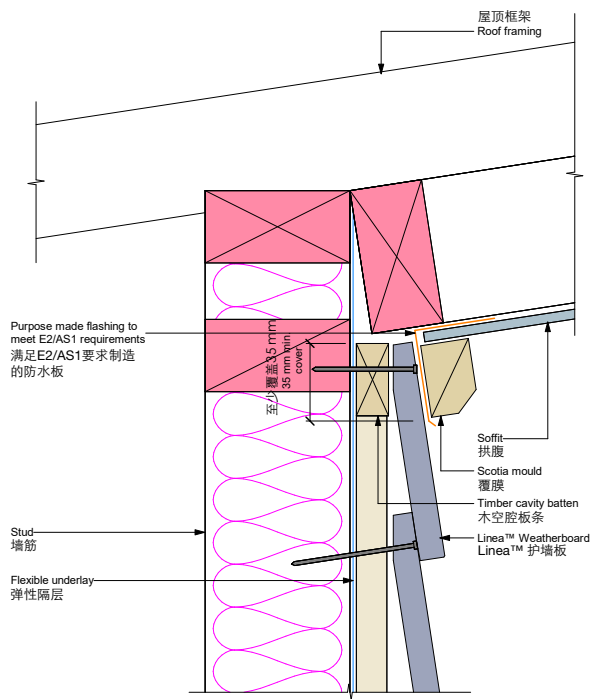


Figure 16: Sloping soffit and wall junction | 图 16: 倾斜拱腹与墙体连接



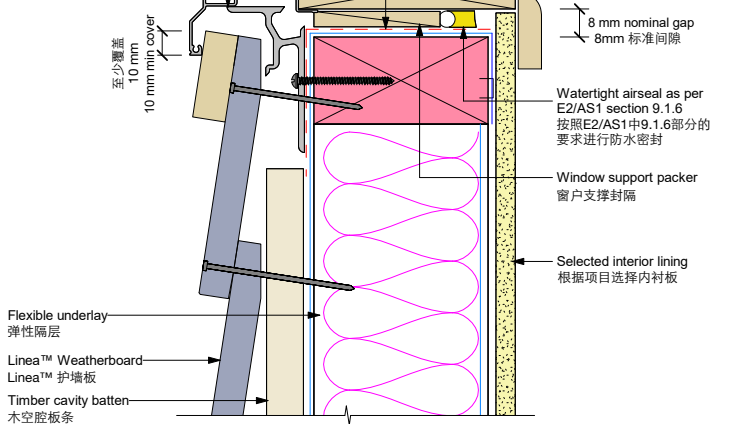
Note: Site cut edges to be primed  
 注意: 所有现场切割的切面必须上底漆

Figure 17: Window and door sill | 图 17: 窗户和门槛



Window frame (refer to window manufacturer for method of support and fixing)  
 窗户框架 (请参考窗户制造商关于支撑和安装的方法)  
 Window support as supplied by window manufacturer  
 窗户支撑需要遵守制造商的要求

For flashing tape detail refer to Figures 72 and 90 of the NZBC clause E2/AS1  
 关于防水胶带详情, 请参考NZBC条款E2/AS1图72和90



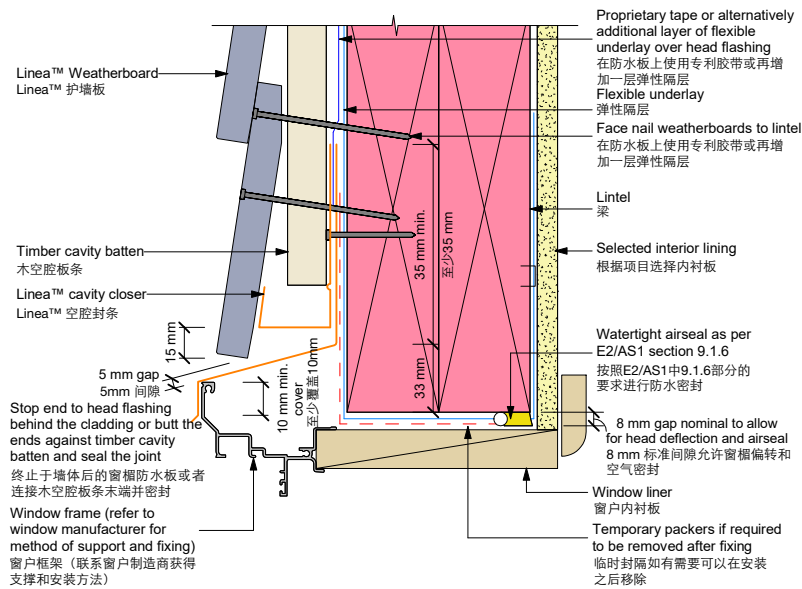
General notes for materials selection  
 材料选择的建议

1. Flexible underlay must comply with acceptable solution E2/AS1  
 弹性隔层必须遵守合格方案E2/AS1
2. Flashing tape must have proven compatibility with the selected flexible underlay and other materials with which it comes into contact  
 防水胶带必须与弹性隔层或者其他接触材料相兼容

Refer to the manufacturer or supplier for technical information for these materials  
 请参考制造商或者供应商获取材料的技术信息



Figure 18: Window head | 图 18: 窗楣



Note:

注意:

- Sealant must be installed between head flashing and window flange in VH and EH wind zones and SED pressures  
在VH和EH风区及SED风压区中，窗楣防水板和窗框法兰之间必须使用密封胶
- Alternatively, the head flashings can be formed with stop ends as per E2/AS1  
可以根据E2/AS1的要求，使用窗楣防水板形成末端
- Refer to Figure 22 for sealing end battens to head flashing  
参考图22有关板条末端至窗楣防水板的密封要求
- Site cut edges to be primed  
所有现场切割的切面必须上底漆

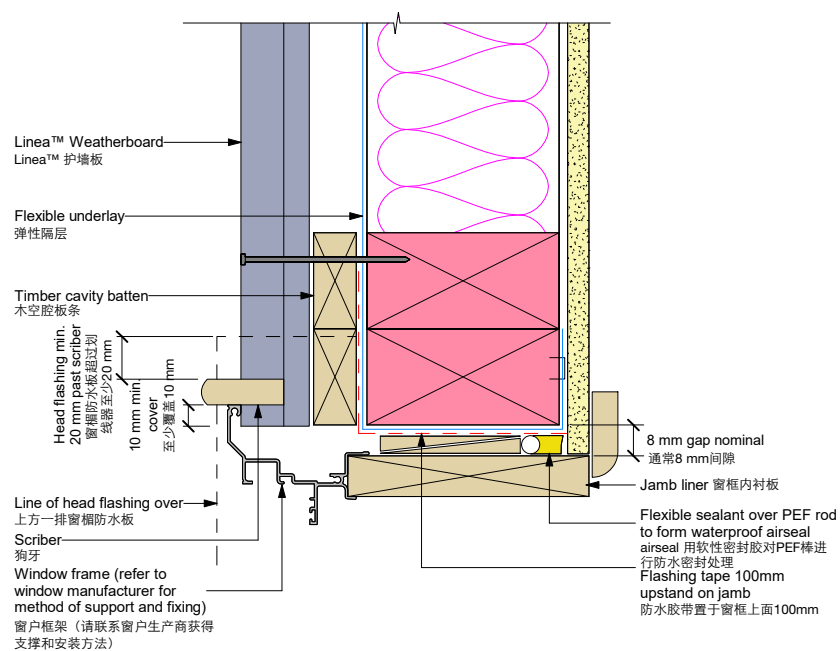
interactive assembly instructions available

<http://wksp.nz/jh-lin-win>



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Figure 19: Window jamb | 图 19: 窗框



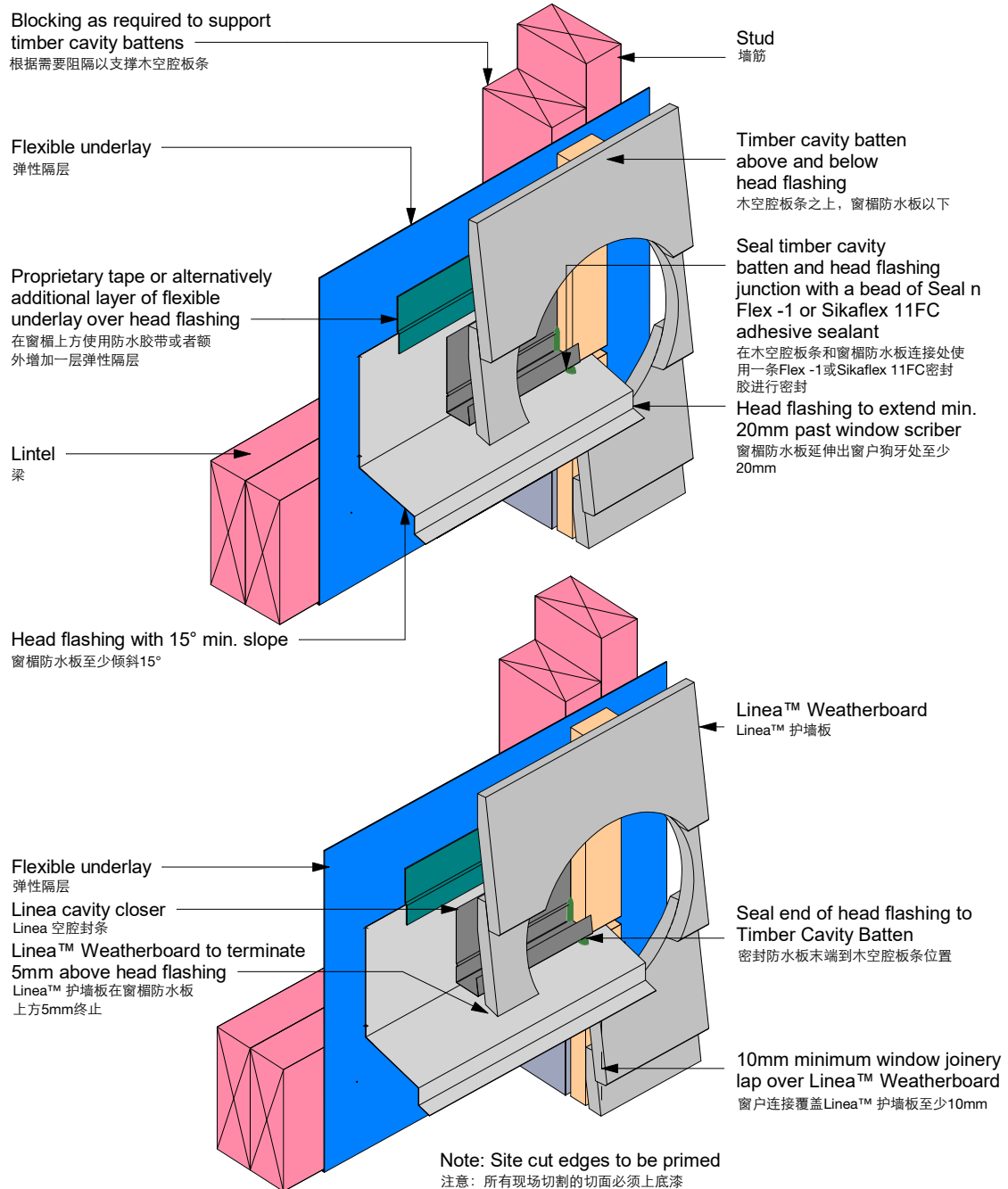
interactive assembly instructions available

<http://wksp.nz/jh-lin-win>



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Figure 20: Window head stop end | 图 20: 窗楣末端



interactive assembly instructions available

<http://wksp.nz/jh-lin-win>



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Figure 21: Window sill with facing | 图 21: 带有饰面的窗台

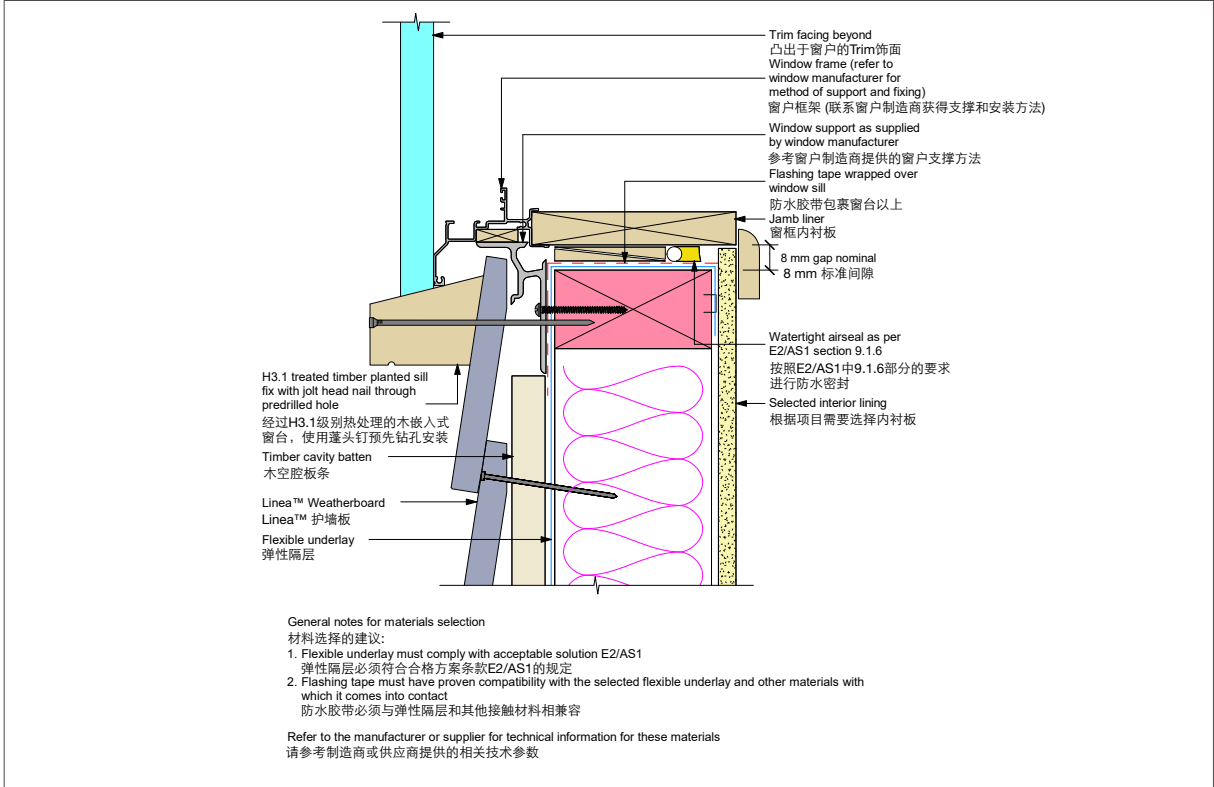


Figure 22: Window head with facings | 图 22: 带有饰面的窗楣

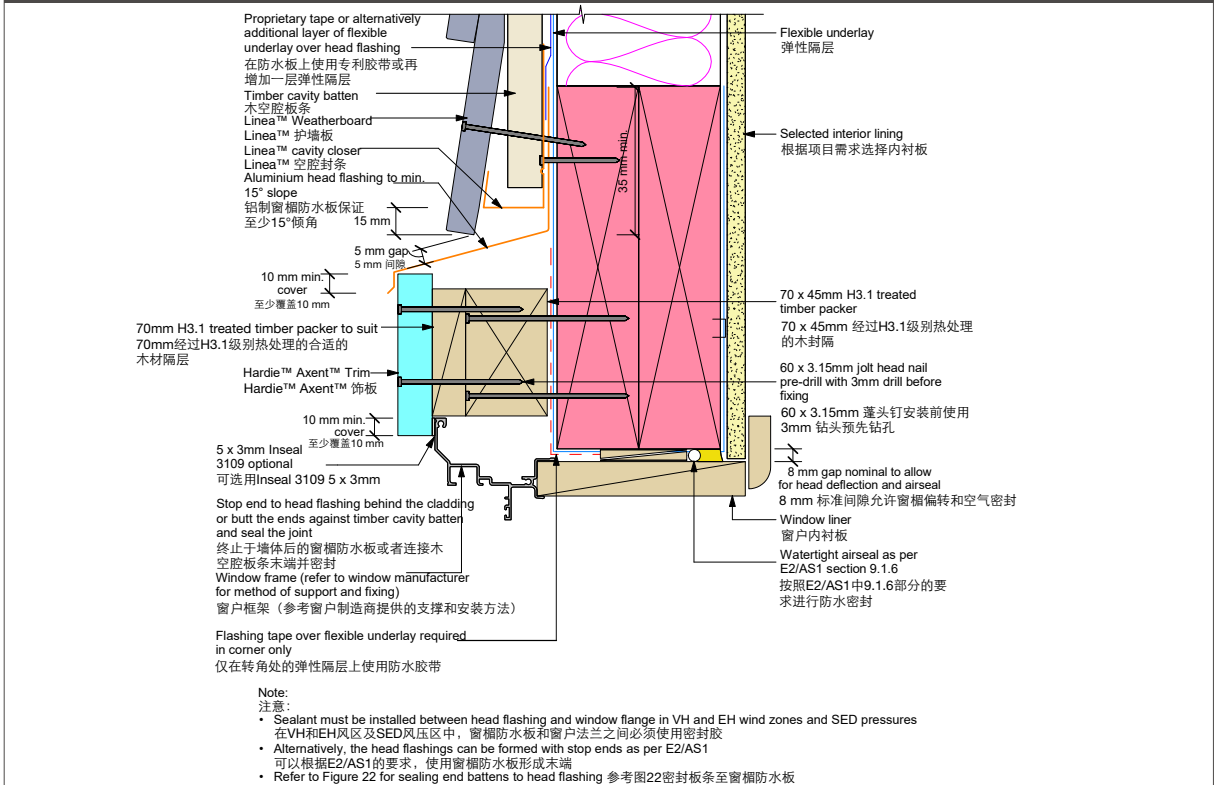


Figure 23: Window jamb with facings | 图 23: 带有饰面的窗框

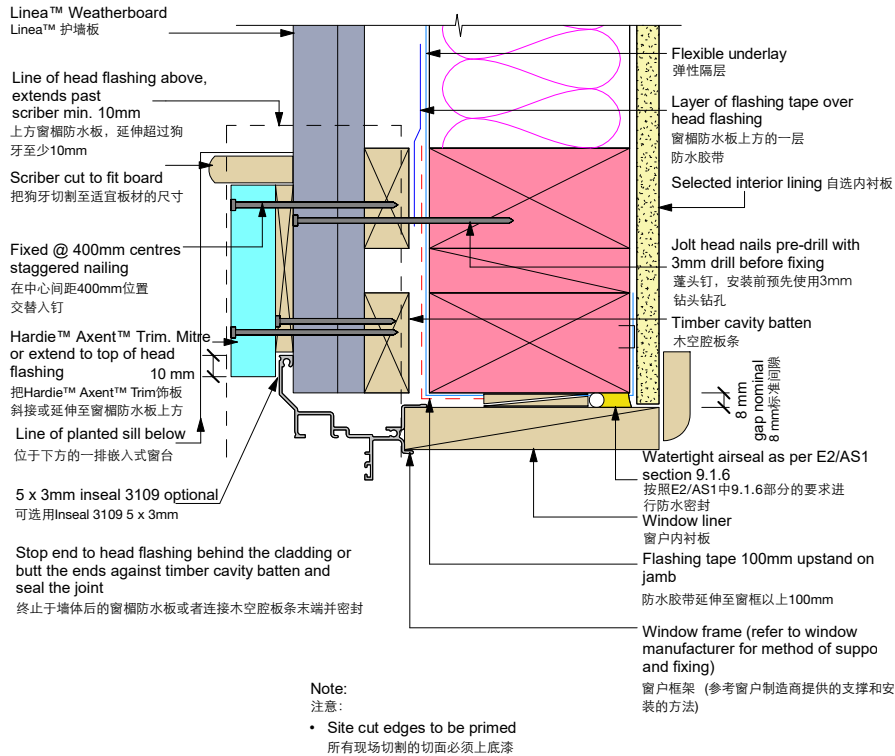
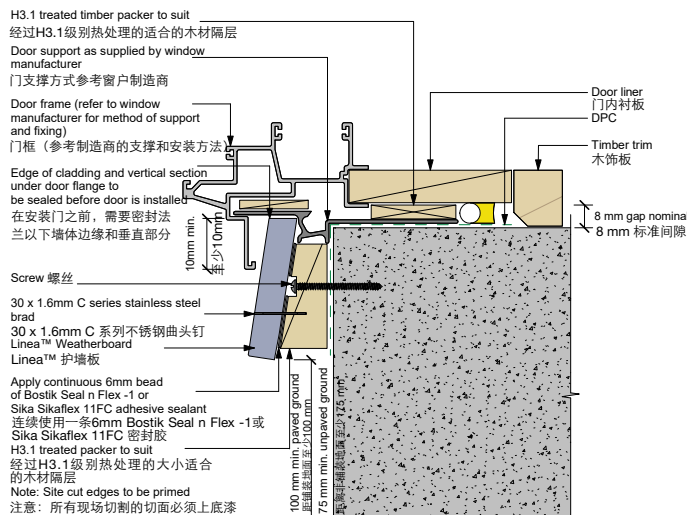


Figure 24: Door sill support detail | 图 24: 门槛支撑详图



Refer to the manufacturer or supplier for technical information for these materials  
请参考制造商或者供应商获取材料的技术信息

General notes for materials selection  
请参考制造商或者供应商获取材料的技术信息

1. Flexible underlay must comply with acceptable solution E2/AS1  
弹性隔层必须符合合格方案E2/AS1的要求
2. Flashing tape must have proven compatibility with the selected flexible underlay and other materials with which it comes into contact.  
防水胶带必须与弹性隔层和其他接触材料相兼容
3. Linea™ Weatherboard to have sealed butt joint over batten at each corner of opening  
Linea™ 护墙板在每个板条上方的转角开口处都需要密封

Figure 25: Pipe penetration | 图 25: 管道穿透

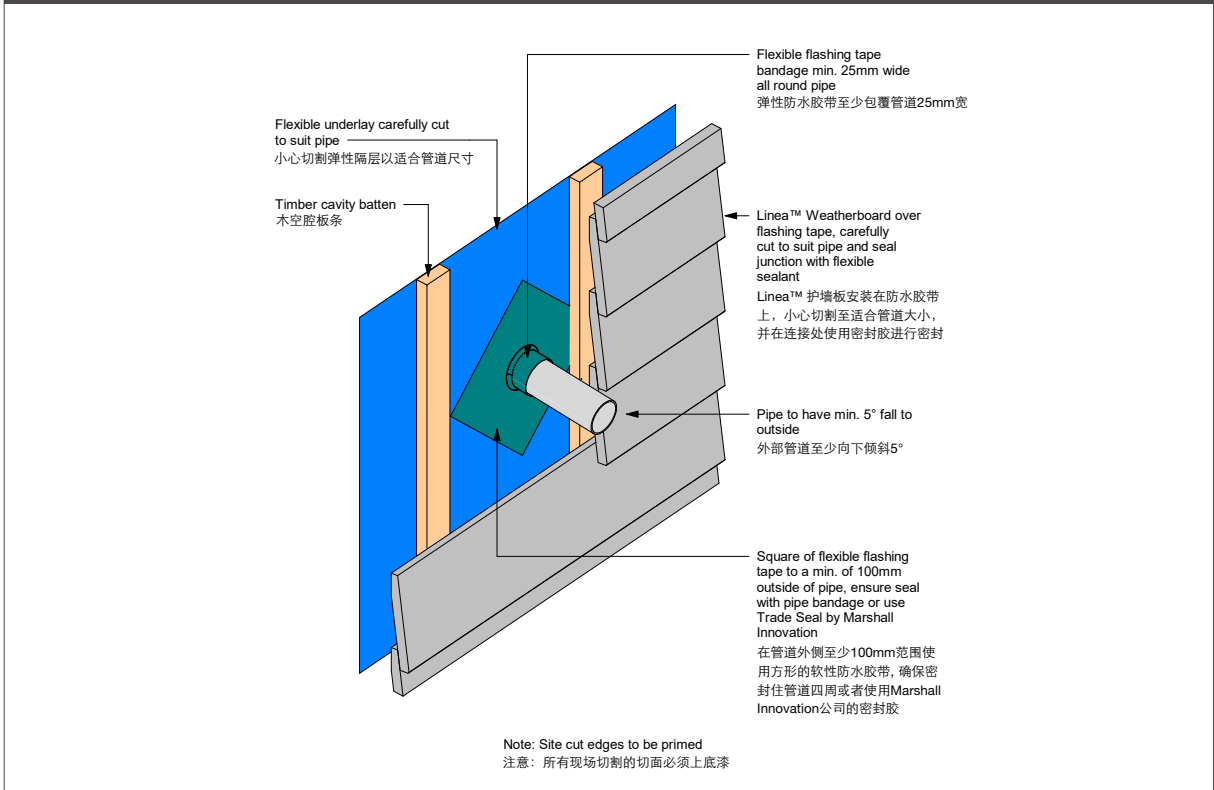


Figure 26: Continous cladding over joist | 图 26: 龙骨上的连续墙体

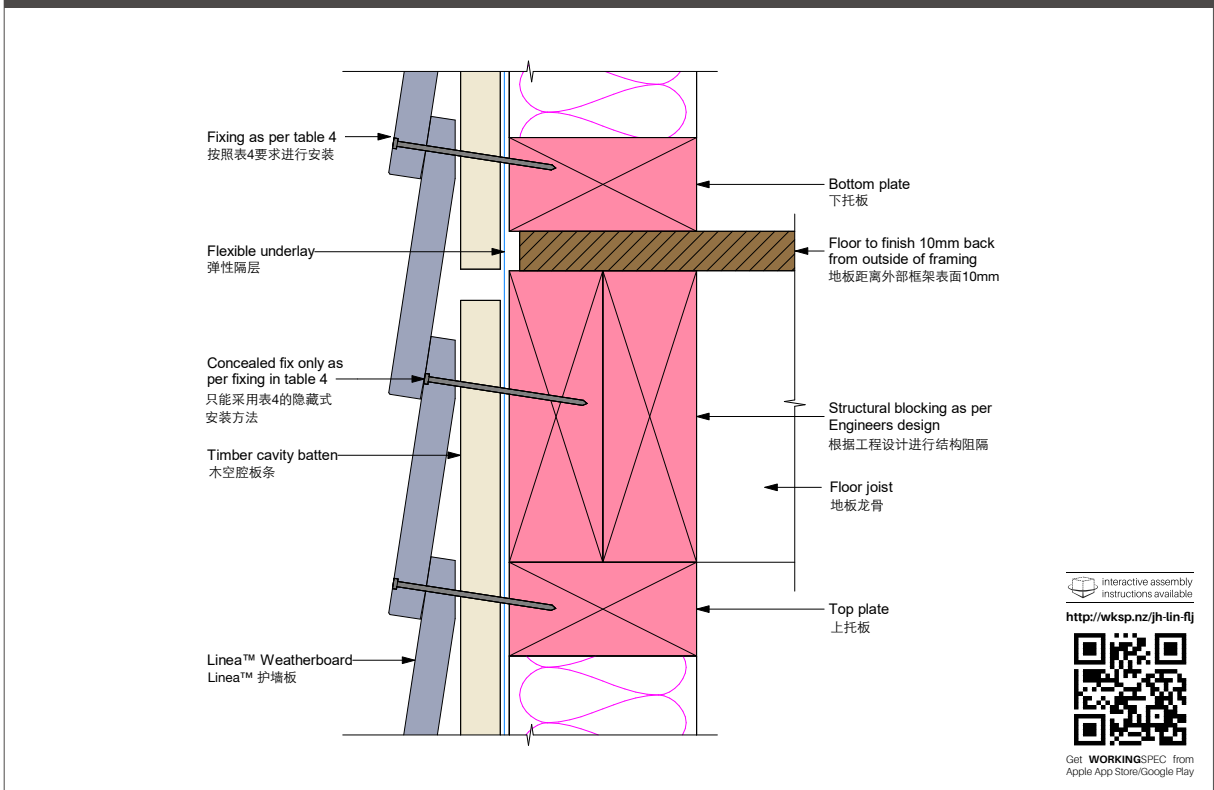
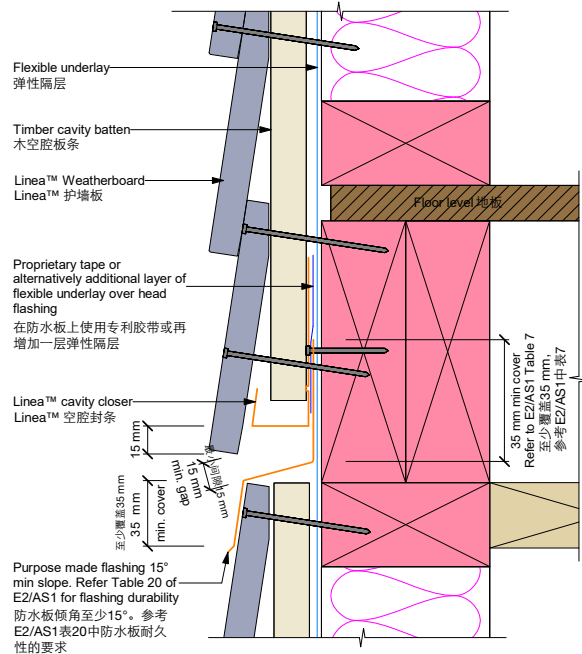


Figure 27: Drained flashing joint at floor level | 图 27: 房屋一层排水防水板的连接



Note:  
注意:  
This detail is required to limit cavities to a maximum of 2 stories or 7 metres. Refer E2/AS1 clause 9.1.9.4.  
本详图中需要限制空腔板条最大应用为两层建筑或者7米。参考E2/AS1中条款9.1.9.4。

Figure 28: Timber deck junction | 图 28: 木露台连接

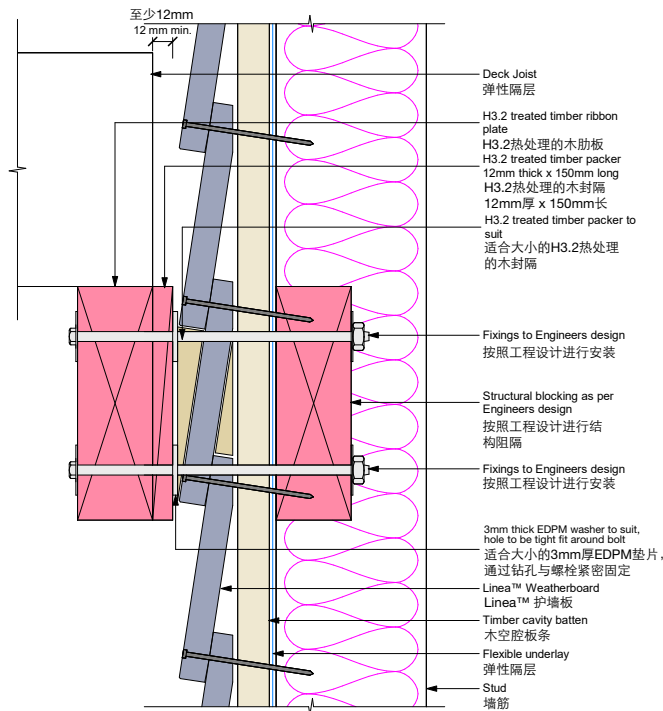




Figure 29: One piece apron flashing joint | 图 29: 一体式烟囱防水连接

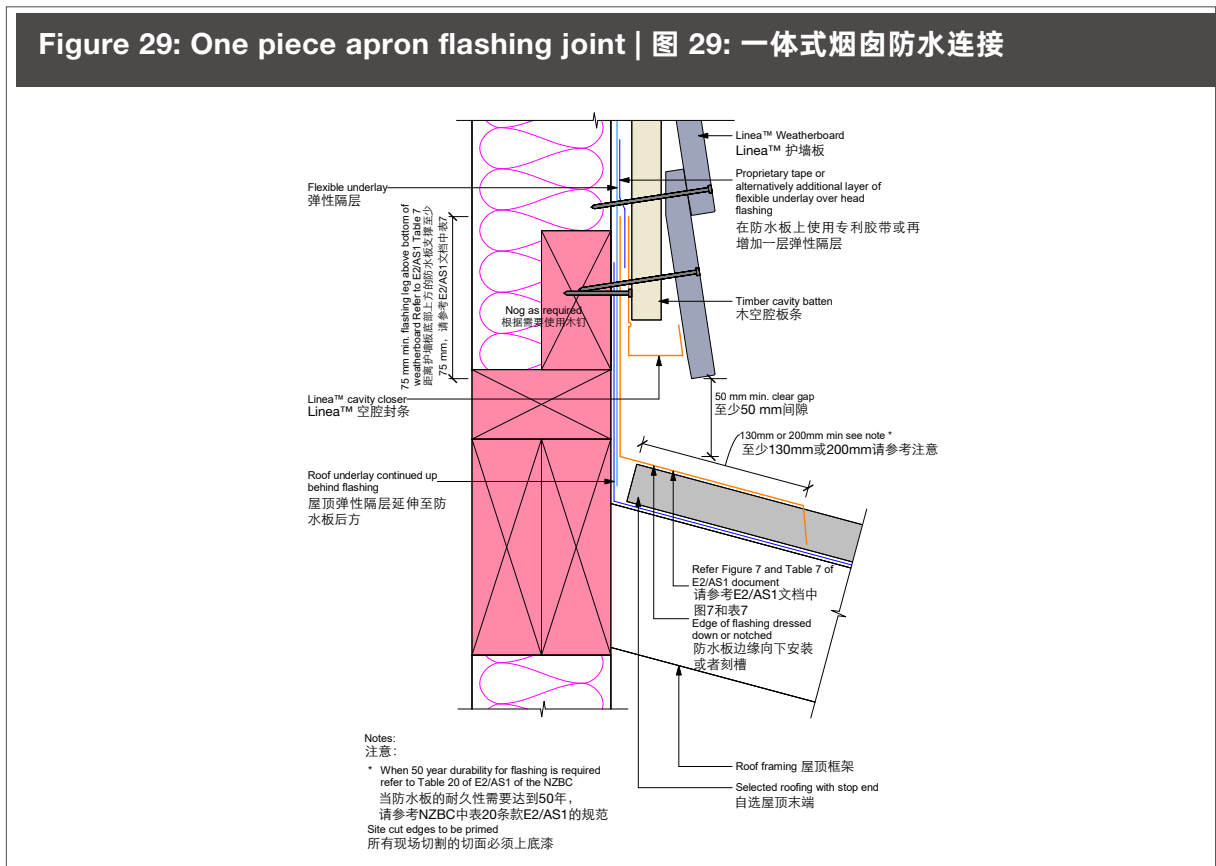


Figure 30: Roof to wall junction detail | 图 30: 屋顶与墙体连接详图

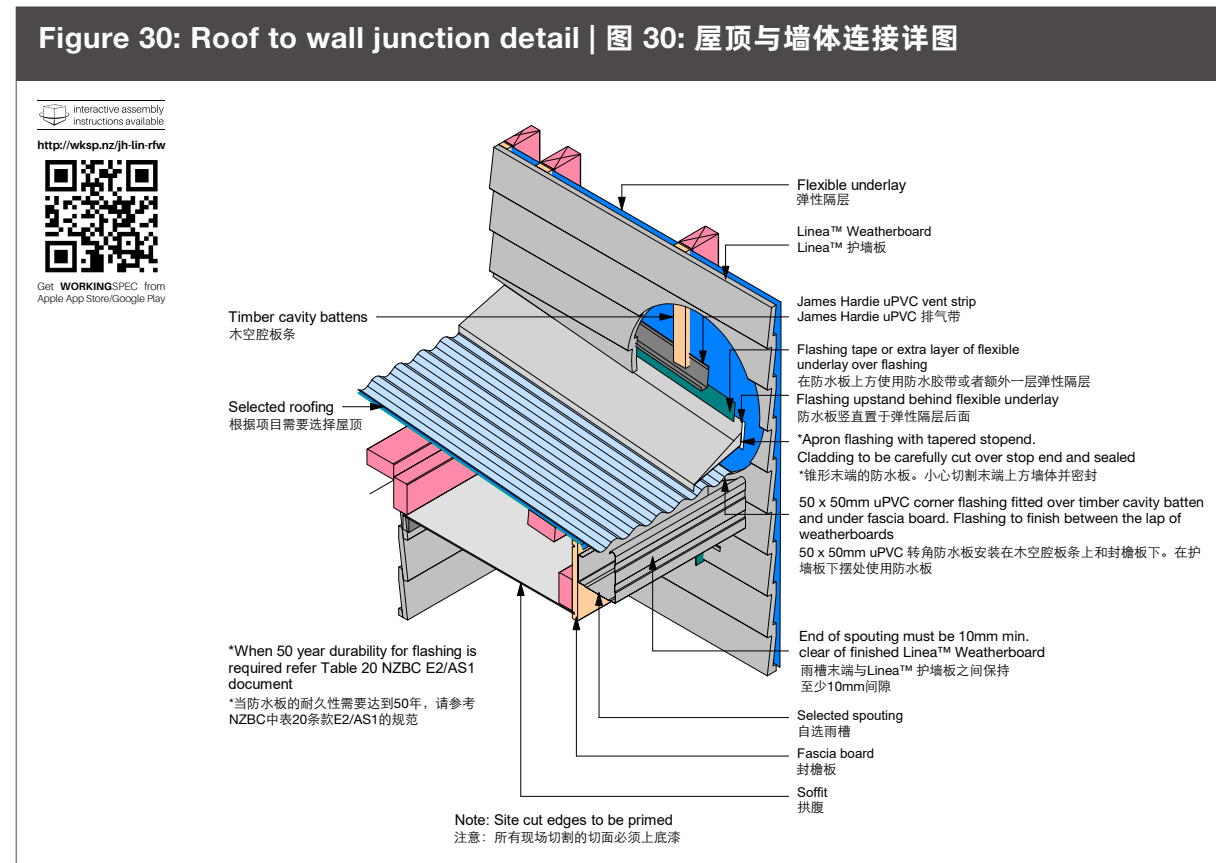


Figure 31: Parapet flashing | 图 31: 矮墙防水

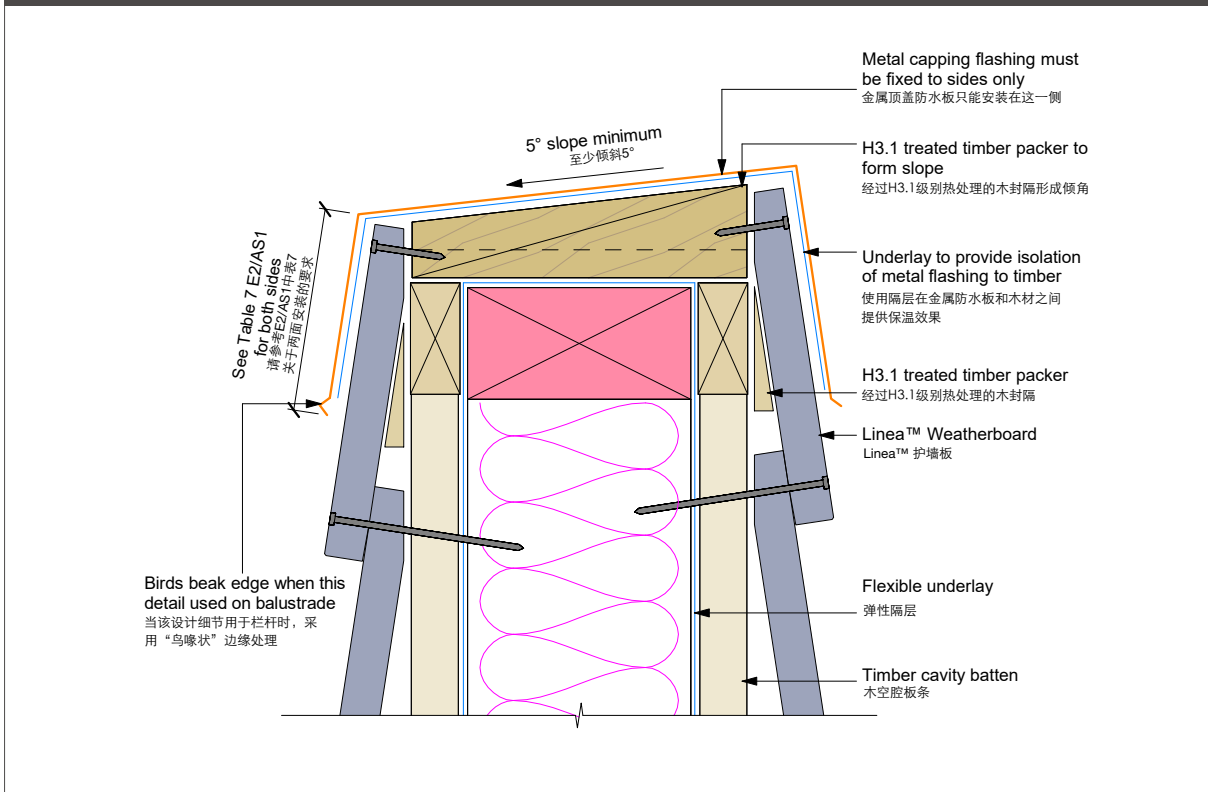


Figure 32: Enclosed deck balustrade to wall | 图 32: 封闭露台栏杆到墙体

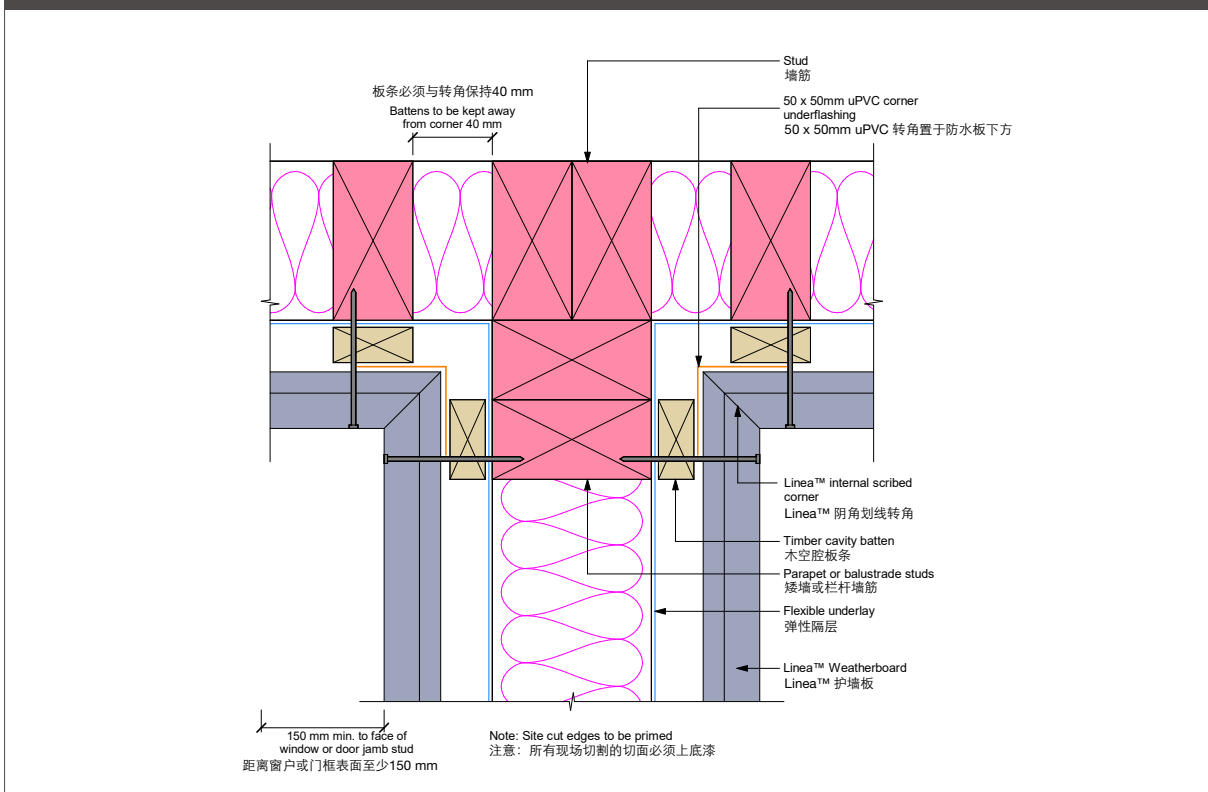


Figure 33: Enclosed balustrade to wall | 图 33: 封闭栏杆到墙体

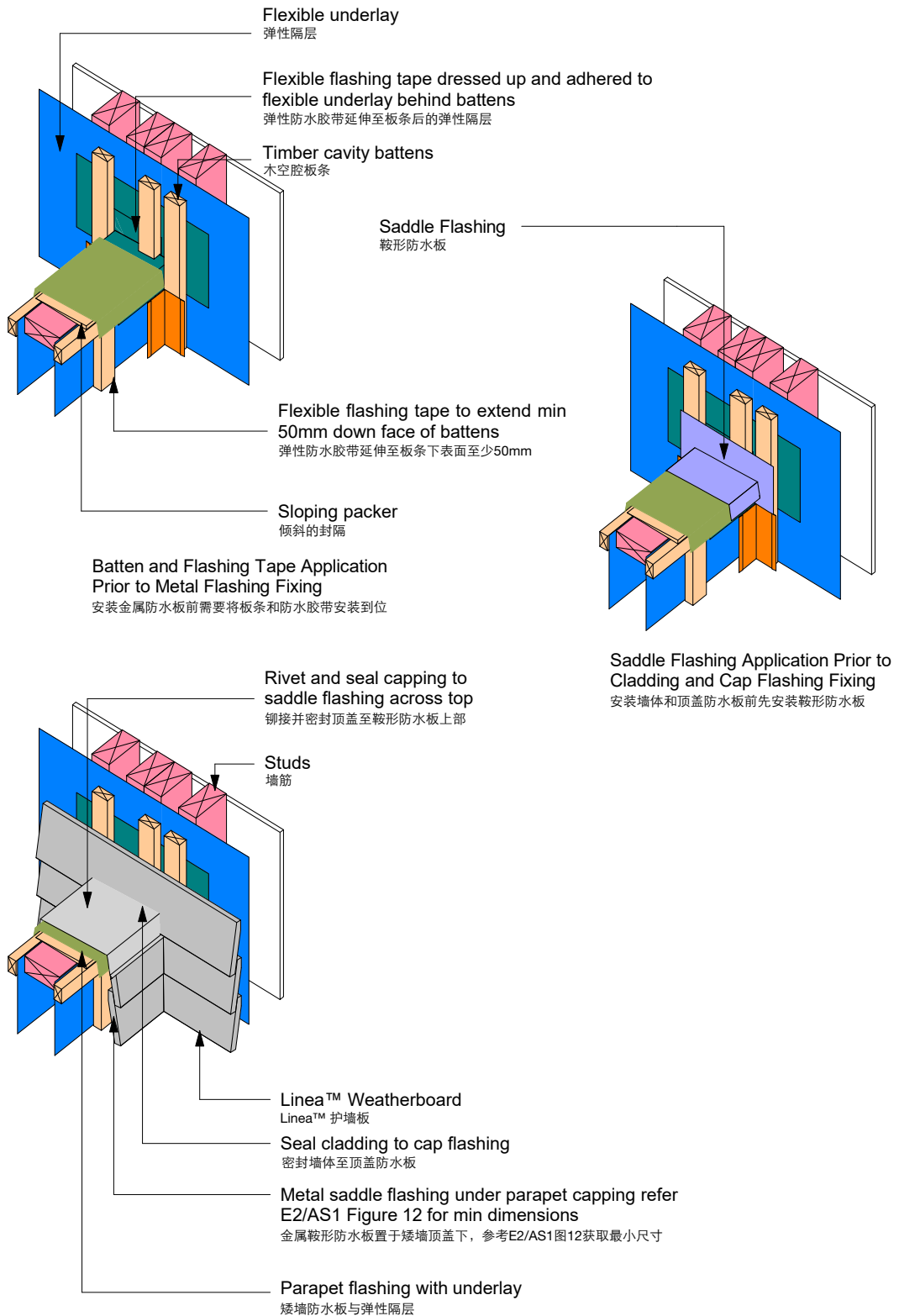
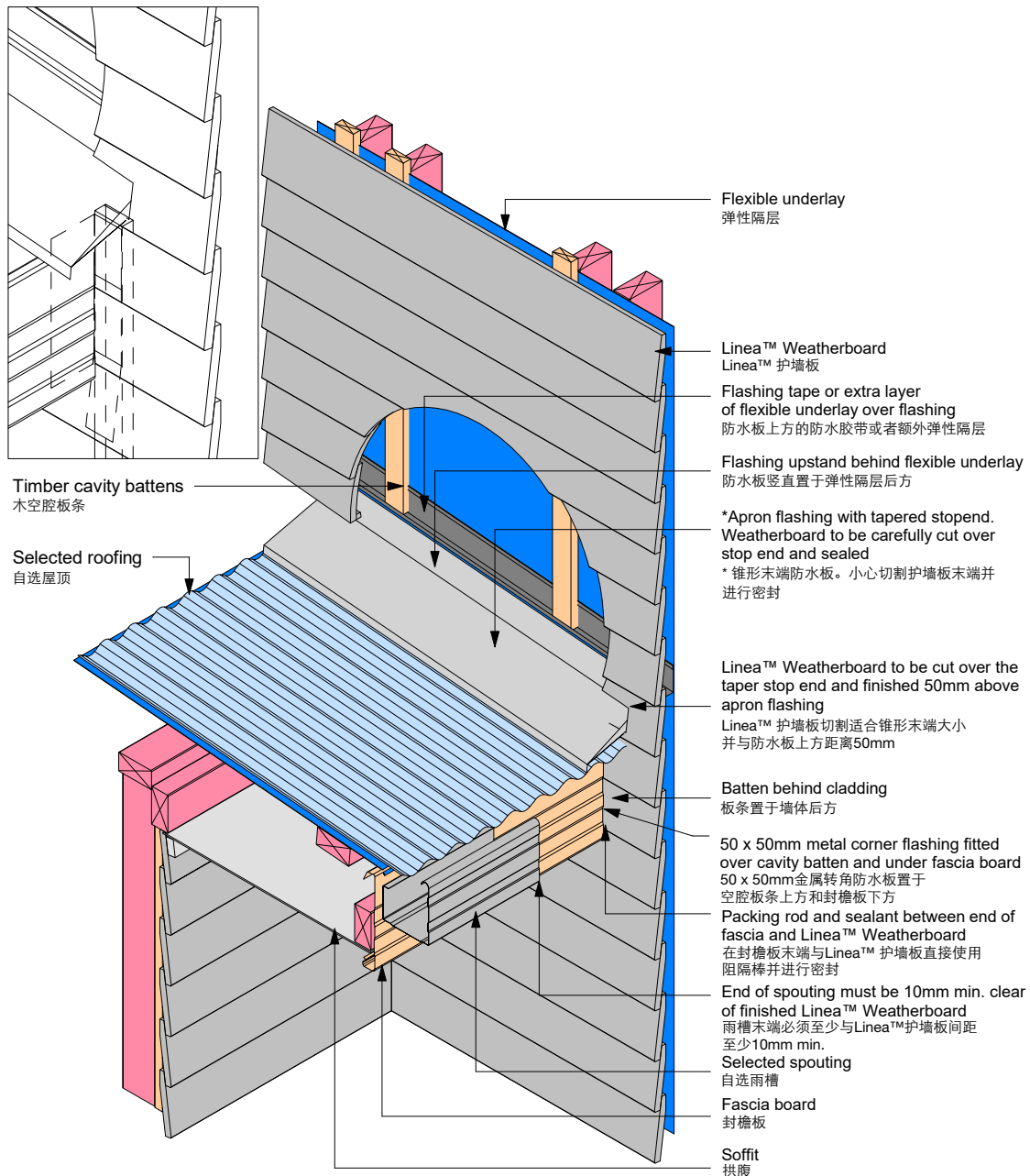


Figure 34: Junction Linea™ Weatherboard and fascia board | 图 34: 护墙板和封檐板的连接

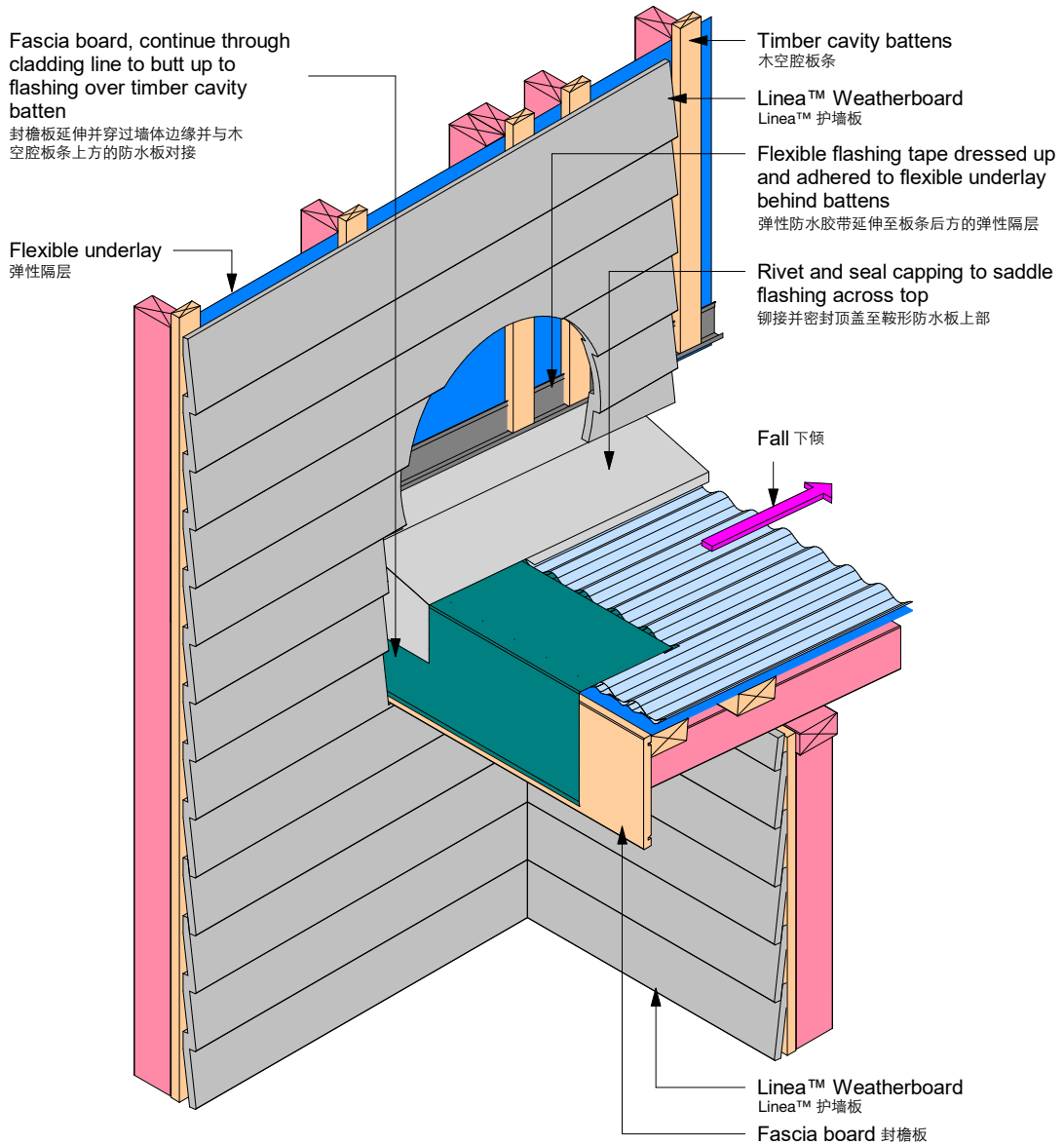


\*When 50 year durability for flashing is required refer Table 20 NZBC E2/AS1 document

\*需要防水板达到50年耐久性参考NZBC E2/AS1文档中 表20

Note: Site cut edges to be primed  
注意: 所有现场切割的切面必须上底漆

Figure 35: Enclosed roof to wall intersection | 图 35: 封闭屋顶与墙体连接



50mm wide flashing welded to apron flashing  
50mm宽防水板焊接到烟囱防水板上

Back flashing  
防水板背部

50 x 50mm corner flashing  
50 x 50mm 转角防水板

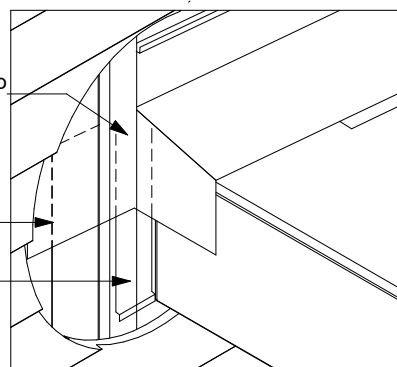


Figure 36: Garage door head | 图 36: 车库门楣

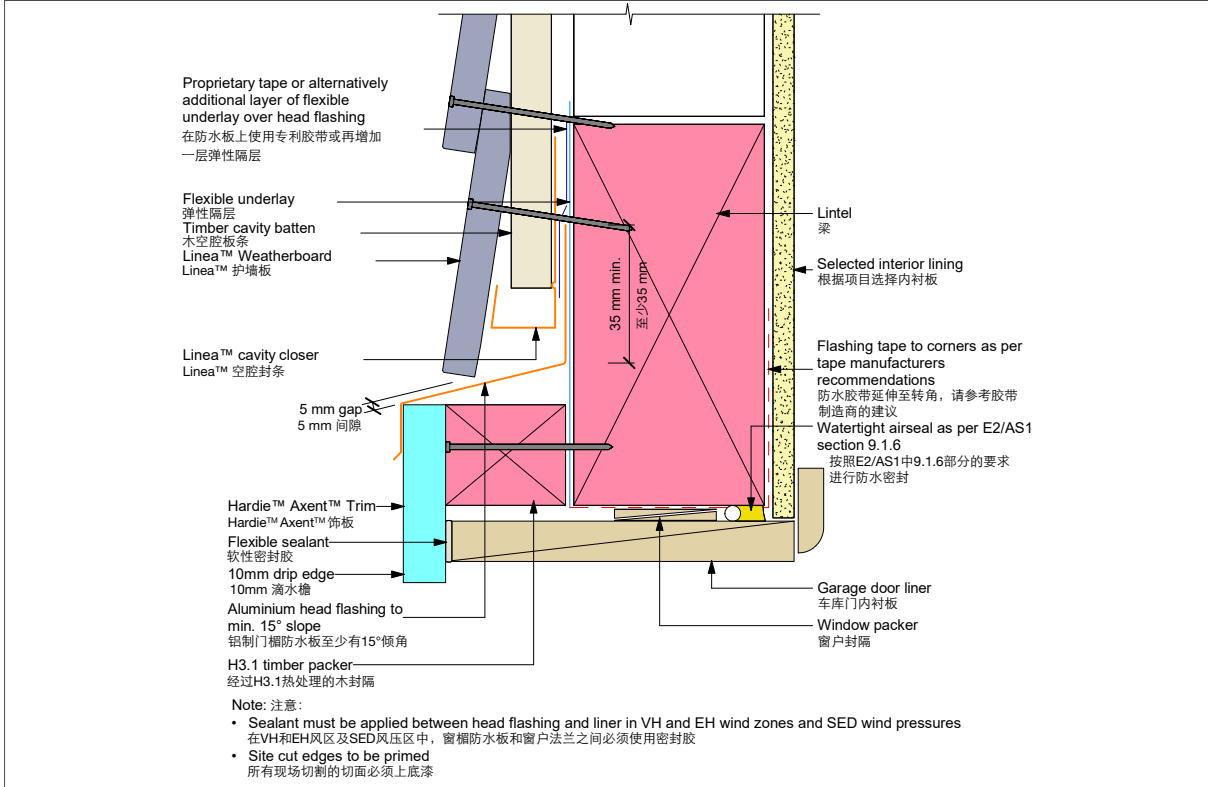


Figure 37: Garage door jamb | 图 37: 车库门框

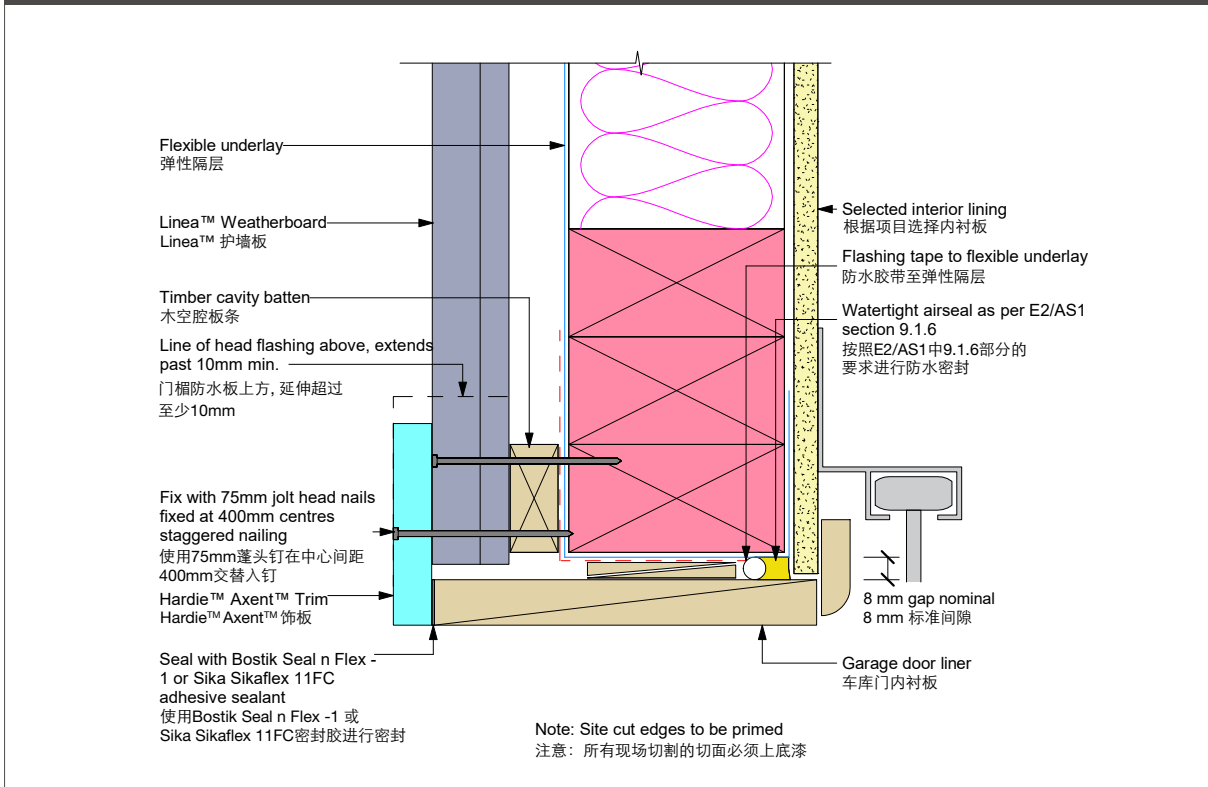


Figure 38: Framing setout building height over 10m | 图 38: 超过10m建筑的框架布局

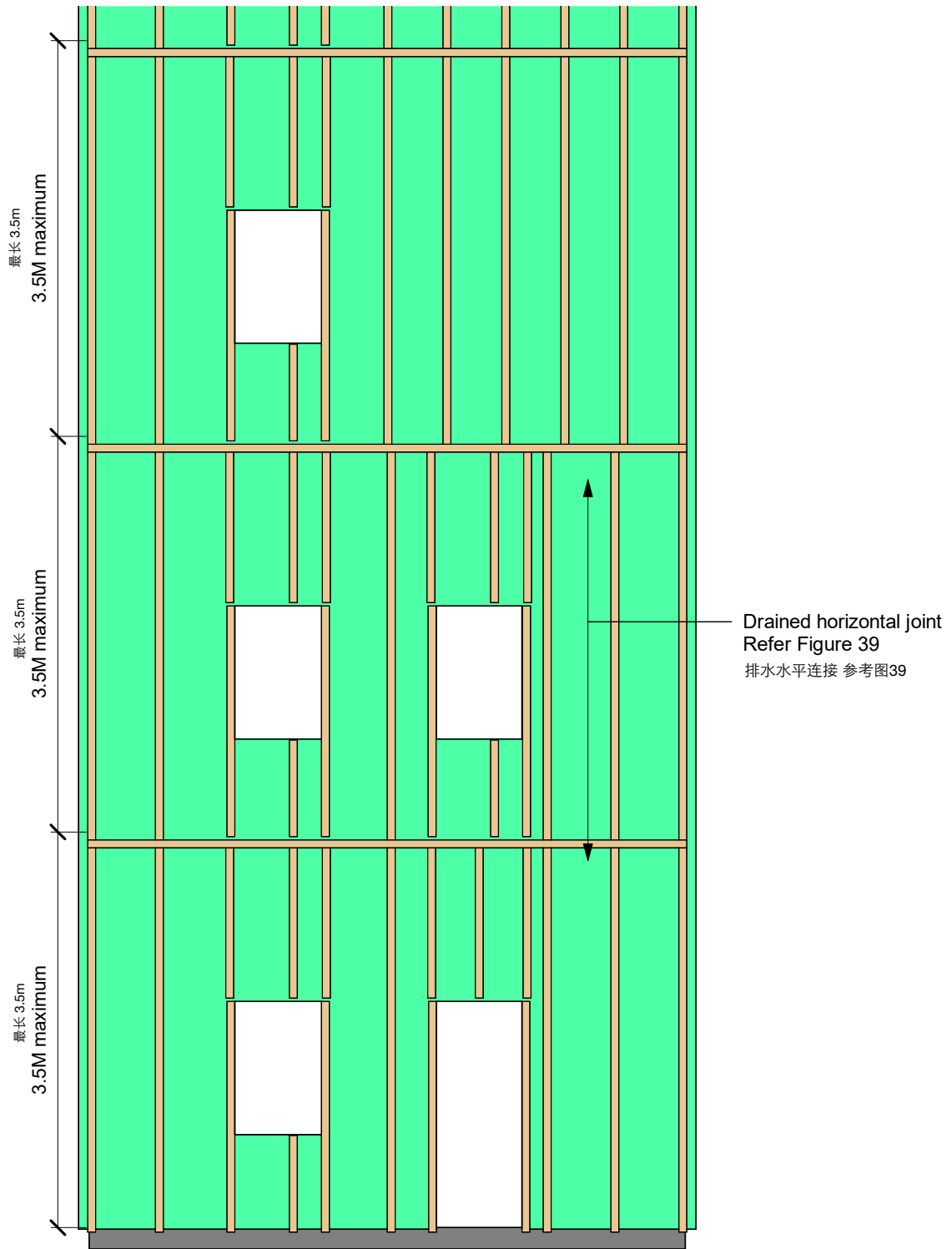
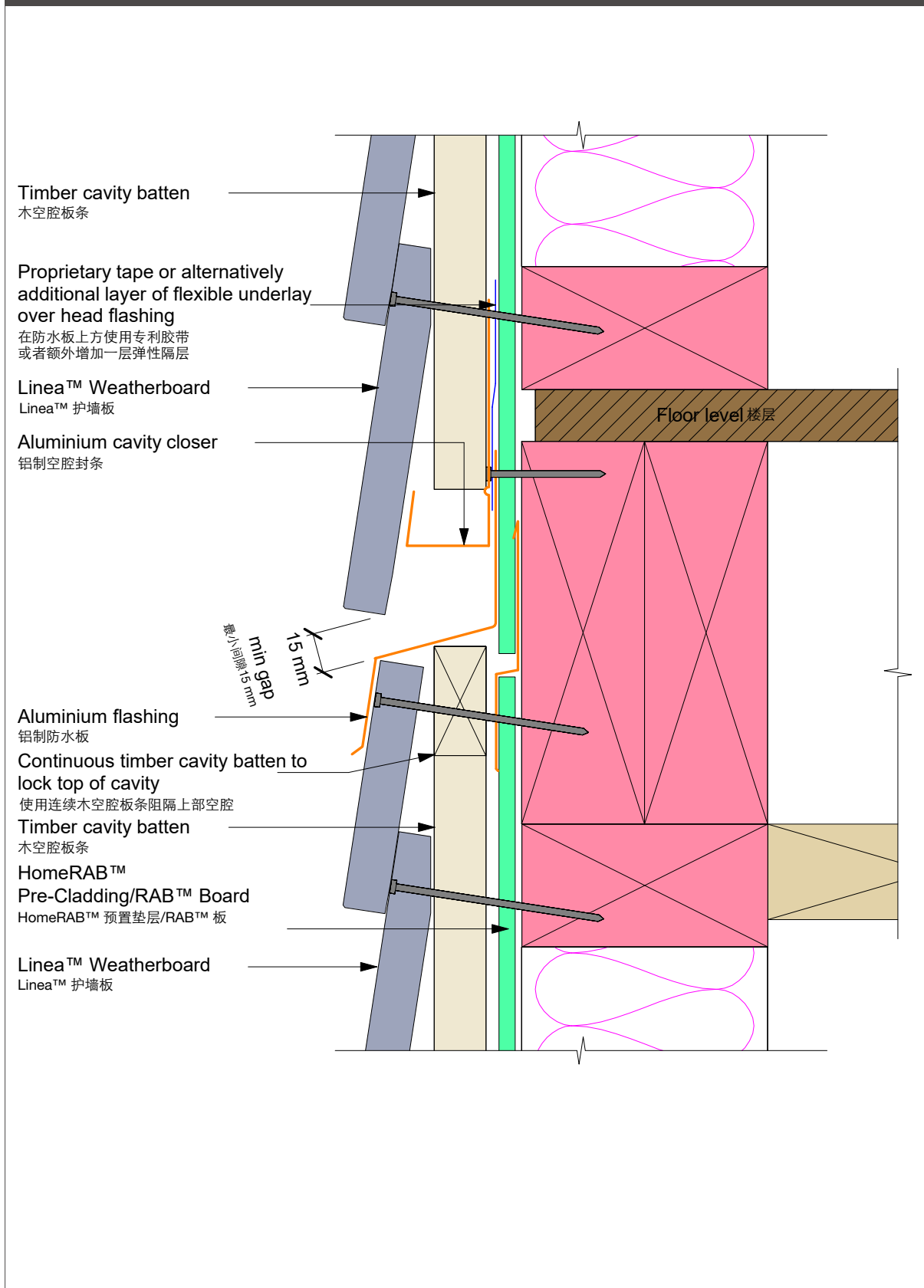




Figure 39: Intertenancy vertical fire separation | 图 39: 内部垂直耐火分隔



## Product Warranty 产品质保

NEW ZEALAND | Effective August 2024  
新西兰 | 版：2024年8月起生效

This warranty is given by James Hardie New Zealand Limited (“James Hardie”, “we”, “its” and “us”).

本质量保证由James Hardie新西兰有限公司（简称“James Hardie”、“我们”和“其”）

In this warranty:

在此质量保证中：

- **“Consumer”** has the meaning given to it in the Consumer Guarantees Act;

“消费者”指根据《消费者保护法》定义的含义；

- **“Product”** refers to the item listed below:

“产品”指下述产品：

Linea™ Weatherboard

Linea™ 护墙板

- **“Technical Literature”** means the Product specific installation guide published by James Hardie at the time of installation of the product (copies of the current installation instructions are available at jameshardie.co.nz or by calling Ask James Hardie™ on 0800 808 868); and

“技术手册”指在产品安装时James Hardie发布的特定产品安装说明（当前安装说明的副本可在 jameshardie.co.nz 查阅或通过拨打0800 808 868联系Ask James Hardie获取）；以及

- **“Warranty Period”** means twenty five (25) years.

“质保期”指二十五（25）年

## Warranty 质量保证

1. Subject to the conditions and limitations set out below, we warrant that for the Warranty Period from the date of purchase, the Product will be free from defects due to defective factory workmanship or materials.

在下述条件和限制的基础上，我们保证自购买之日起的保修期内，产品不会出现由于做工或材料问题导致的产品缺陷。

2. James Hardie further warrants that for a period of 25 years from the date of purchase of the Product that any associated accessories supplied by us will be free from defects due to defective factory workmanship or materials.

James Hardie进一步保证，自产品购买之日起25年内，我们提供的任何相关配件不会因做工或材料问题而产生缺陷。

3. James Hardie warrants that at the time of manufacture the Product will comply with AS/NZS 2908.2:2000 Cellulose-cement products - Flat sheet.

James Hardie保证，在制造时，产品将符合AS/NZS 2908.2:2000“纤维水泥产品”的标准。

4. This warranty is not transferable and is only provided to and may only be relied upon by:

本保修不可转让，仅适用于以下人员：

(a) the first purchaser of the Product or accessory from James Hardie; and

从James Hardie处首次购买产品或配件的买方；以及

(b) the last purchaser of the Product or accessory prior to installation.

安装前最后一次购买产品或配件的买方。

5. If a breach of this warranty occurs, we will (at our option) either: supply replacement Product or accessory; rectify the affected Product or accessory; or pay for the reasonable and substantiated cost of the replacement or rectification of the affected Product or accessory.

如果发生本质保条款的违约，我们将（根据我们的选择）提供替换产品或配件；修复受影响的产品或配件；或支付替换或修复受影响产品或配件的合理且已证实的费用。

## Warranty Conditions

### 质保条件

6. You may only claim under this warranty if:

您只能在以下情况下根据此质保提出索赔：

- (a) the Product was installed and maintained strictly in accordance with the Technical Literature including the components or products specified or recommended in the Technical Literature; and

产品的安装和维护严格按照技术手册的要求进行，包括技术手册中规定或推荐的组件或产品；

- (b) other products applied to or used in conjunction with the Product are applied or installed and maintained strictly in accordance with the relevant manufacturer's instructions and good trade practice; and

其他与产品一起使用或应用的产品必须严格按照相关制造商的说明和良好的行业规范进行安装和维护；

- (c) the Product is used in an application designed and constructed in strict compliance with all relevant provisions of the New Zealand Building Code (“NZBC”), applicable laws, regulations and standards; and

产品的使用必须符合所有相关的新西兰建筑规范 (“NZBC”)、适用的法律、法规和标准，并在严格遵守这些规定的前提下进行设计和建造；

- (d) we are given reasonable opportunity to inspect the Product **before** any attempt is made to repair or remove the Product once it has been installed; and

产品安装后，在做任何修理或移除产品的尝试之前，我们应有合理的机会对产品进行检查；

- (e) the requirements for bringing a claim under the warranty as set out in clause 8 are complied with.

按照第8条规定的要求提出保修索赔。

7. Subject to clauses 10 and 11:

在遵守第10条和第11条的前提下：

- (a) to the fullest extent permitted by law, we exclude all:

在法律允许的最大范围内，我们排除以下内容：

- (i) other warranties, conditions, liabilities and obligations which may otherwise apply in respect of the purchase or use of the Product and/or its Technical Literature, other than those specified in this warranty; and

除本质保中明确规定的以外，可能适用于产品购买或使用及其技术手册的其他质保、条件、责任和义务；以及

- (ii) liability for any loss or damage (whether direct or indirect) including property damage or personal injury, consequential loss, economic loss or loss of profits, the purchase or use of the Product and/or its Technical Literature whether arising in contract, tort (including negligence), statute or equity.

对任何损失或损害（无论是直接的还是间接的）包

括财产损失或人身伤害、后果性损失、经济损失或利润损失，因产品及其技术手册的购买或使用而产生的，不论是基于合同、侵权（包括过失）、法令或衡平法。

- (b) if or to the extent that it is not permitted by law to so limit our liability as set out in clause 7(a), then to the fullest extent permitted by law, we limit our liability at our option to:

如果或在法律不允许按照第7(a)条规定限制我们的责任的情况下，那么在法律允许的最大范围内，我们选择以下方式限制我们的责任：

- (i) the replacement of the Product or accessory or the supply of equivalent Product or accessory;

更换产品或配件，或提供同等的产品或配件；

- (ii) the repair of the Product or accessory;

修理产品或配件；

- (iii) the payment of the reasonable and substantiated cost of replacing the Product or accessory, or of acquiring equivalent Product or accessory; or

支付更换产品或配件的合理和有据的费用，或获取同等产品或配件的费用；或

- (iv) the payment of the reasonable and substantiated cost of having the Product or accessory repaired;

支付修理产品或配件的合理和有据的费用；

- (c) this warranty does not cover defects which are not due to defective factory workmanship or materials, including but not limited to damage or defects caused by or arising from or attributable to:

本保修不包括因非做工或材料缺陷引起的缺陷或损坏，包括但不限于以下原因或情形：

- (i) use of the Product in applications not recommended by us or in accordance with the Technical Literature;

将产品用于我们不建议的应用或不符合技术手册要求的应用；

- (ii) the Product being subjected to abnormal treatment including impact, abrasion or mechanical action;

产品受到异常处理，包括冲击、摩擦或机械作用；

- (iii) surface marking, scratches or stains arising during or after the installation of the Product;

在安装过程中或安装后产生的表面标记、划痕或污渍；

- (iv) poor workmanship or installation, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached;

施工质量差、安装不当、设计或细节差、沉降或结构移动和/或产品附着材料的移动；

- (v) incorrect design of the structure;

结构设计错误；

- (vi) acts of God including but not limited to earthquakes, fire, cyclones, floods or other severe weather conditions or unusual climatic conditions;

- 不可抗力事件，包括但不限于地震、火灾、气流、洪水或其他严重天气条件或异常气候条件；
- (vii) efflorescence, normal wear and tear, growth of mould, mildew, fungi, bacteria, or any organism on any Product surfaces or Product (whether on the exposed or unexposed surfaces);

盐霜、正常磨损、霉菌、霉斑、真菌、细菌或任何有机物在产品表面或产品上的生长（无论是在暴露面还是未暴露面）。

- (viii) contact with chemicals such as solvents, detergents and pollutants, or exposure to a harsh chemical environment or an excessively salty environment;

接触化学物质，如溶剂、清洁剂和污染物，或暴露在恶劣的化学环境或过度盐分的环境中；

- (ix) use of adhesive tapes, sealants or mastics on the Product, or recoating of the surface of the Product outside of the recommended maintenance guidelines in the Technical Literature; or

在产品上使用胶带、密封剂或密封胶，或在不符合技术手册中推荐的维护指南的情况下对产品表面进行重新涂层；或

- (x) failure of third party coating systems, including but not limited to sealers and paints; and

第三方涂层系统的失效，包括但不限于密封剂和油漆；或

- (xi) **this warranty does not cover** any variation in the look of the Product including but not limited to: any variation in colour or surface pattern; any variation between different batches of the Product; or any variation against any sample material provided. The architect/builder/installer must ensure **prior to specification** that variation in look between items of Product is acceptable and ensure that each item of Product meets all aesthetic requirements **prior to installation**. Subject to the terms of this warranty, after installation of the Product, **we are not liable** for claims arising from aesthetic variations or defects if such variations or defects were, or would upon reasonable inspection have been, **apparent prior to installation**.

本保修不涵盖产品外观的任何变化，包括但不限于：颜色或表面图案的任何变化；不同批次产品之间的任何差异；或与提供的样品材料之间的任何差异。建筑师、建造者、安装者必须在规范之前确保产品外观之间的差异是可以接受的，并确保每件产品在安装前满足所有美学要求。根据本保修条款，产品安装后，如果外观变化或缺陷在安装前显而易见或通过合理检查可以察觉，我们不对因外观变化或缺陷引起的索赔负责。

## Making a Claim Under Warranty 质保索赔

If you are the property owner and did not purchase the product yourself, and you believe you have any issue with James Hardie product installed at your home, in the first instance you should contact the builder who purchased and installed the product. If you purchased the product yourself, you can make a claim under this warranty as detailed below.

如果您是房主但并未自行购买该产品，并且您认为James Hardie安装在您家中的产品存在任何问题，首先您应联系购买并安装该产品的建筑商。如果您是自行购买该产品的，您可以按照以下详细说明提出保修索赔。

8. In order to make a claim under this warranty, you must provide the following information in writing to us using the contact details below within 30 days after the alleged defect would have become reasonably apparent or, if the defect was reasonably apparent prior to installation, then the claim must be made prior to installation:

如需提出保修索赔，您必须在发现或应合理发现该缺陷后30天内，或在缺陷于安装前已合理显现时，在安装前提出索赔，并通过以下联系信息以书面形式向我们提供以下信息：

- (a) proof of purchase;  
购买证明；
- (b) description of the defect and the issue;  
缺陷和问题的描述；
- (c) photographs of the defect; and  
缺陷的照片；以及
- (d) your contact details.  
您的联系信息。

9. Subject to New Zealand Consumer Law, you must bear any expenses you incur as a result of claiming under this warranty, except where you are entitled to recover such expenses under the New Zealand Consumer Law, in which case we will bear or otherwise reasonably compensate you for such expenses. All claims for such expenses are to be notified to us in writing within 21 days from the later of: when you make a claim under this warranty; or when we notify you that we, acting reasonably, accept responsibility for these expenses.

根据新西兰消费者法，您必须承担因保修索赔而产生的任何费用，除非您有权根据新西兰消费者法收回此类费用，在这种情况下，我们将承担或以其他方式合理补偿您此类费用。所有此类费用的索赔必须在以下情况后的21天内以书面形式通知我们：您提出保修索赔之日或我们通知您我们合理地承担此类费用之日，以较晚者为准。

## New Zealand Consumer Law 新西兰消费者法

10. If you acquire the Product or accessories manufactured or supplied by us as a Consumer, that Product or accessories may come with guarantees that cannot be excluded under the Consumer Guarantees Act. If so, and we are a supplier, you are entitled to a replacement or refund for a failure of a substantial character or a failure that cannot be remedied, and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality or fail to meet some other guarantee and can be remedied and the failure is not of a substantial character. Where we or a related entity are the manufacturer, then you will have the rights set out in the Consumer Guarantees Act if the goods do not comply with this warranty or the consumer guarantees under the Consumer Guarantees Act.

如果您作为消费者购买了我們生产或供应的产品或配件，该产品或配件可能会附带《消费者保护法》下不可排除的保证。如果是这样，作为供应商的我們，您有权在出现重大缺陷或无法修复的缺陷时，获得更换或退款，并对其他合理可预见的损失或损害进行赔偿。如果产品未能达到可接受的质量标准或未能满足其他保证要求，并且该缺陷可以修复且不属于重大缺陷，您也有权要求修理或更换商品。如果我們或相关实体是生产商，您将依据《消费者保护法》的规定享有权利，如果商品未符合本保修条款或《消费者保护法》下的消费者担保。

11. Other than as lawfully excluded or limited by the other terms of this warranty, any rights a Consumer may have under this warranty are in addition to other rights and remedies of a Consumer under a law in relation to the goods to which this warranty relates. Nothing in this warranty shall exclude or modify any legal rights a purchaser and/or Consumer may have under the Consumer Guarantees Act, Fair Trading Act or otherwise which cannot be excluded or modified at law.

除非根据本保修的其他条款合法排除或限制，否则消费者在本保修下的任何权利均为消费者在法律上对相关商品享有的其他权利和补救措施的补充。本保修中的任何内容均不得排除或修改购买者和/或消费者在《消费者保护法》、《公平交易法》或其他法律下享有的任何法律权利，这些权利在法律上不可被排除或修改。

## Disclaimer 免责声明

The recommendations in James Hardie's literature are based on good building practice but are not an exhaustive statement of all relevant information. Further, as the successful performance of the relevant system depends on numerous factors outside the control of James Hardie (e.g. quality of workmanship and design) James Hardie shall not be liable for the recommendations made

in that Technical Literature and the performance of the relevant system, including its suitability for any purpose or ability to satisfy the relevant provisions of the NZBC, laws, regulations and standards. It is the responsibility of the building designer to ensure that the details and recommendations provided in the relevant James Hardie Technical Literature are suitable for the intended project and that specific design is conducted where appropriate.

James Hardie手册中的建议基于良好的建筑实践，但并非所有相关信息的详尽陈述。此外，由于相关系统的成功性能取决于众多James Hardie无法控制的因素（例如工艺质量和设计），James Hardie对该技术手册中的建议以及相关系统的性能，包括其适用性或是否符合NZBC、法律、法规和标准的要求，不承担任何责任。建筑设计师有责任确保James Hardie相关技术手册中提供的细节和建议适用于预期项目，并在适当情况下进行具体设计。

## Our Contact Details 我们的联系方式

**James Hardie New Zealand Limited**

**James Hardie 新西兰有限公司**

**Address:** 1 O'Rorke Road, Penrose, Auckland, 1061

**地址:** 1 O'Rorke Road, Penrose, Auckland, 1061

**Postal address:** PO Box 12070, Penrose, Auckland 1642

**邮政地址:** PO Box 12070, Penrose, Auckland 1642

**Telephone:** "Ask James Hardie™" on 0800 808 86

**电话:** "Ask James Hardie™" on 0800 808 8688

**Website:** [www.jameshardie.co.nz](http://www.jameshardie.co.nz)

**网站:** [www.jameshardie.co.nz](http://www.jameshardie.co.nz)

**Email:** [info@jameshardie.co.nz](mailto:info@jameshardie.co.nz)

**邮件:** [info@jameshardie.co.nz](mailto:info@jameshardie.co.nz)





**Ask James Hardie™ | Call 0800 808 868 | jameshardie.co.nz**  
咨询 James Hardie™ 请拨打 0800 808 868, 或登录网站 jameshardie.co.nz



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