Stria™ CLADDING | JH™

jameshardie.co.nz

CLD 空心结构板条

技术规范

2019年8月 新西兰





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1 Product Overview
产品概况

1.1 Product Information
产品信息

Stria™ Cladding is an external cladding system.
Stria™ 外墙板是一种外部墙板系统。

This specification is for use for the horizontal installation of Stria Cladding installed to CLD™ Structural Cavity Batten.
本规范用于Stria™ 外墙板横向安装于CLD™空心结构板条。

Stria Cladding installed to CLD Structural Cavity Battens as per this specification gives a panelised appearance on building facades. Stria Cladding can be fixed to either timber or lightweight steel-framed external walls. A wide range of colours can be used varying from light to dark. Stria Cladding is available in 405mm wide x 4200mm lengths and is 14mm thick.
当安装完成后，建筑外表面会呈现板材镶嵌的效果。同时，Stria™外墙板也可安装在实木框架或者轻质钢结构外墙上。本产品拥有从浅色至深色的多种选择，尺寸为405mm宽×4200mm长，厚度为14mm。

Table 1 | 表1

Stria Cladding information | Stria外墙板相关信息					
Product 产品	**Description 描述**	**Size 尺寸 (mm)**			**Code 编号**
		Thickness 厚度	**Length 长度**	**Width 宽度**	
	**Stria Cladding** **Stria 外墙板** A 14mm profiled panel for expressed jointed residential facades. Factory sealed on all six sides. Each panel has a manila white colour primer applied on its face, which accepts a wide range of paint finishes. 一种14mm厚的特制形状板材，用于快速铺砌住宅房屋的外表面。出厂时六个面均涂有密封层。每块板材的正面预涂了白色底漆，该油漆可以广泛地与多种其它涂料叠加。	14	4200	405	**404263**

Note: All dimensions and masses provided are approximate only and subject to manufacturing tolerances. Stria Cladding has a mass of 16kg/m² at EMC. Stria Cladding is defined as a Light Weight Wall Cladding (not exceeding 30kg/m²) as per NZS 3604.
注意:此处提供的所有尺寸和重量仅为约数，可能会在生产过程中产生误差。Stria外墙板的重量为每平米16kg。根据NZS3604，Stria外墙板属于轻质外墙材料——未超过每平米30kg。

1.2 Manufacturing and Classification
制造工艺及分类

Stria Cladding is an advanced lightweight cement composite cladding manufactured using a basic composition of Portland cement, ground sand, cellulose fibre and water. The product is easily identified by the name 'Stria Cladding' printed on the back of the panels.
Stria外墙板是一种先进的的轻质复合水泥外墙板，采用波兰水泥、地表沙、植物纤维和水制作而成。产品背面会印刷“Stria Cladding”字样便于识别。

CLD Structural Cavity Batten is manufactured using a low density fibre cement formulation. The basic composition is Portland cement, ground sand, cellulose fibre, water and proprietary additives. The battens are factory sealed on all sides.
CLD空心结构板条是用低密度纤维水泥配方制造而成。它的基本成分为波兰水泥、地表沙、植物纤维、水及专利添加剂。

这些板材在出厂时对所有表面均进行了密封处理。

Stria Cladding and CLD Structural Cavity Batten products are manufactured to Australian/New Zealand Standard AS/NZS 2908.2 'Cellulose-Cement Products' (ISO 8336 'Fibre-Cement Flat Sheet').
Stria外墙板和CLD空心结构板条的制造符合澳洲／新西兰AS/NZS 2908.2 “纤维水泥产品”标准的要求。(ISO 8336 ‘纤维水泥板’)

Stria Cladding is classified Type A, Category 2 in accordance with AS/NZS 2908.2 "Cellulose-Cement Products".
根据澳洲／新西兰 AS/NZS 2908.2 “纤维水泥产品的标准”，Stria外墙板属于目录2中的A类产品。

For Safety Data Sheets (SDS) visit **www.jameshardie.co.nz** or Ask James Hardie on **0800 808 868**.
查看产品安全单（SDS），请访问www.jameshardie.co.nz 或拨打0800 808 868咨询。

1.3 Storage and Handling
产品储存及搬运

Stria Cladding must be laid flat on a smooth level surface. Edges and corners must be protected from chipping.
Stria外墙板在储存中必须平放于光滑水平表面。确保所有边角不被碰撞摩擦。

To ensure optimum performance, store panels under cover and keep dry prior to fixing. If the panels become wet, allow them to dry thoroughly before fixing.
为确保最佳完工效果，外墙板应置于有遮蔽、干燥的地方储存。如果外墙板受潮，请在安装前彻底干燥。

Do not carry panels or CLD Structural Cavity Battens on the flat, carry in the vertical position to avoid excessive bending.
搬运外墙板或CLD空心结构板条时请勿采用水平方式，应将其竖直搬运，避免重力弯曲导致的变形。

1.3.1 Storage and Delivery 储存及运输

Keeping products and people safe.
作业过程中保证产品及人员安全

Off loading 卸货时

- ✓ James Hardie products should be off-loaded carefully by hand or by forklift
  请用人工或者叉车小心装卸产品
- ✓ James Hardie products should not be rolled or dumped off a truck during the delivery to the jobsite
  请勿在卸载过程中卷曲或者倾倒产品

Storage 储存

James Hardie products should be stored:
储存本公司产品时应保证:

- ✓ In their original packaging
  采用原始包装
- ✓ Under cover where possible or otherwise protected with a waterproof covering to keep products dry
  尽可能室内储存或者用防水材料覆盖以保证产品干燥
- ✓ Off the ground – either on a pallet or adequately supported on timber or other spacers
  离地存放--置于木质托盘或其他类似物品上
- ✓ Flat so as to minimise bending
  水平存放尽可能减小弯曲

James Hardie products must not be stored:
储存本公司产品时禁止:

- ✗ Directly on the ground
  直接放置于地面
- ✗ In the open air exposed to the elements
  直接暴露在空气中

1.3.2 Tips For Safe And Easy Handling Weatherboard products

简单安全的搬运方法

✗ Do not lift planked products flat and in the middle
请不要水平搬运平板类产品，请不要手持产品中间搬运。

✓ Carry the products on the edge
搬运时抓住产品边缘

✓ If only one person is carrying the product, hold it in the middle and spread arms apart to better support the product
如果一个人搬运，将产品放在中间并分开手臂以更好地支撑产品

✓ If two people are carrying the plank, hold it near each end and on edge
如果两个人搬运，分别抓住两头的边缘部分

✓ Exercise care when handling weatherboard products to avoid damaging the edges/corners
在搬运过程中请小心产品的边角损伤

Sheet products 片状产品的搬运方法

✓ Carry with two people
请两个人一同搬运

✓ Hold near each end and on edge
分别抓住产品两头边缘

✓ Exercise care when handling sheet products to avoid damaging the edges/corners
小心边角损伤

James Hardie is not responsible for damage due to improper storage and handling.
本公司对于不当储存和搬运造成的损伤不承担任何责任

1.4 Components and accessories
产品组件及配件

Table 2 | 表2

Accessories/tools supplied by James Hardie	James Hardie提供的配件和工具		
Accessories 配件	**Description 产品描述**	**Size/Quantity 尺寸/数量**	**Code 产品编号**
	**CLD Structural Cavity Batten** CLD 空心结构板条 19mm thick fibre cement cavity batten installed over rigid air barrier or a flexible underlay. Stria Cladding is fixed to the battens. 19mm厚的纤维水泥板条，安装在James Hardie刚性密封板或弹性隔层之上。Stria外墙板可安装在此板条上。	19mm x 70mm, 2450mm long长 Pack of 96 battens 每包装96片	**403870**
	**Internal Corner Flashing** 阴角防水板 Anodised aluminium extrusion used to create internal corners. 经过阳极电镀处理的铝制覆膜，用于房屋阴角。	3000mm long长	**304871**
	**External Corner Flashing** 阳角防水板 Anodised aluminium extrusion used to create external corners. 经过阳极电镀处理的铝制覆膜，用于房屋阳角。	3000mm long长	**304872**
	**Stria Cladding External Box Corner** Stria外墙板阳角箱角 Anodised aluminium extrusion with wings used to create external corners. 经过阳极电镀处理的铝制覆膜，用于阳角。	2700mm long长 4000mm long长	**305824** **305823**
	**Aluminium Window Jamb Flashing** 铝制窗框防水板 Aluminium moulding used beside window opening to end butt the Stria Cladding. 在窗户开口处用于尾接Stria外墙板的铝制连接件。	3000mm long长	**305430**
	**Stria Aluminium Cavity Closure** Stria铝制空心腔封口 Aluminium moulding used as vermin proofing. 用于防止虫鸟进入的铝制配件。	3000mm long长	**305431**
	**JH 9mm Panel Aluminium External Box Corner** JH 9mm面板铝制阳角箱角 A box corner mould to form the external joints. 9mm etch primed. 用于完成外部连接的阳角箱角配件，带9mm蚀刻并上有底漆。	2450mm long长 2750mm long长 3000mm long长 4000mm long长	**304509** **304510** **305150** **305808**
	**uPVC Vent Strip** uPVC排气带 PVC moulding used as vermin proofing. 用于防止害虫和鸟类进入。	3000mm long长	**302490**

Table 2 cont. | 表2续...

Accessories/tools supplied by James Hardie	James Hardie提供的配件和工具		
Accessories 配件	**Description 产品描述**	**Size/Quantity 尺寸/数量**	**Code 产品编号**
	**Trimline Horizontal Jointer 横向接缝连接件** A jointer to cover the butt joint of Stria trimline joint flashing. 用于覆盖Stria接缝连接防水板尾部。	Each 每个	**305871**
	**Stria Aluminium Trimline Joint Flashing Stria 铝制接缝防水板** Etch prime aluminium extrusion used behind cladding of vertical joints. 铝制挤压成型产品，用于外墙板纵向接缝处的底层。	3000mm long 长	**305827**
	**Vertical Joint Flashing 纵向连接防水板** Etch prime aluminium extrusion used behind cladding of vertical joints. 铝制挤压成型产品，用于外墙板纵向接缝处的底层。	3000mm long 长	**305507**
	**Trimline External Corner Jointer 阳角接缝连接件** Joins trimline joint flashing at an external corner. 用于连接阳角接缝防水板。	Each 每个	**305870**
	**Trimline Internal Corner Jointer 阴角接缝连接件** Joins trimline joint flashing at an internal corner. 用于连接阴角接缝防水板。	Each 每个	**305872**
Tools 工具			
	**HardieBlade™ Saw Blade HardieBlade™ 锯片** Diamond tip 184mm diameter fibre cement circular saw blade. Spacers not included. 直径184mm金刚石刀头纤维水泥切割圆锯片，不含垫片。	Each 每个	**300660**

Table 3 | 表3

Accessories/tools not supplied by James Hardie | 不由James Hardie出售的配件／工具

James Hardie recommends the following products for use in conjunction with Stria Cladding and James Hardie rigid air barrier. James Hardie does not supply these products and does not provide a warranty for their use. Please contact component manufacturer for information on their warranties and further information on their products.

James Hardie推荐以下产品同Stria外墙板及James Hardie刚性密封板搭配使用。James Hardie不售卖这些产品，因而也不提供使用这些产品的任何质保。欲得到关于产品质保及更多详细信息，请联系相应的供应商。

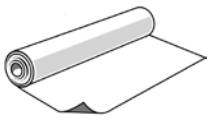
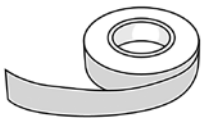
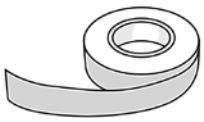
Product 产品	Description 描述
	**Flexible Underlay** **弹性隔层** Must comply with Table 23 of E2/AS1. 必须根据E2/AS1中表23的要求进行安装。
	**Flexible Window Opening Flashing Tape** **窗口用防水胶带** A flexible self-adhesive tape used in preparation of a window. Refer to the window installation section in this manual for more information. e.g. Marshall Innovations: 0800 776 9727 | 3M: 0800 474 787 一种有弹力的粘性胶带，用于做安装玻璃前的准备工作。请参阅本手册关于玻璃安装的章节获取更多信息。例如： Marshall Innovations: 0800 776 9727 | 3M: 0800 474 787
	**Adhesive Sealant** **黏性密封胶** Sikaflex 11FC Polyurethane adhesive sealant manufactured by Sika for applying between the panels and battens. Refer to section 6 for more information. SIKA 0800 SIKANZ. 'Seal N Flex-1' Polyurethane adhesive sealant manufactured by BOSTIK for applying between the panels and battens. Refer to section 7 for more information. BOSTIK: AKL: (09) 579 6253, WGTN: (04) 567 5119, CHCH: (03) 366 2583. 由Sika制造的Sikaflex 11FC 聚氨酯黏性密封胶，用于外墙板和板条之间。详细信息请参阅本手册第6部分SIKA 0800 SIKANZ。 由BOSTIK生产的'Seal N Flex-1'聚氨酯黏性密封胶，用于外墙板和板条之间。详细信息请参阅本手册第7部分 BOSTIK: AKL: (09) 579 6253, WGTN: (04) 567 5119, CHCH: (03) 366 2583.
	**Flexible Sealant** **软性密封胶** Required to seal the vertical joints. Bostik Seal N Flex-1, Sikaflex AT Facade, Sikaflex MS or similar. 用于密封纵向连接件，例如 Bostik Seal N Flex-1, Sikaflex AT Facade, Sikaflex MS或其他相似产品。
	**30 x 1.6mm C Series Brad Nails** **30 x 1.6mm C 系列Brad 钉子** 304SS brad nails used to install Stria Cladding to the James Hardie CLD Structural Cavity Batten. Used in a straight bradder. Paslode: (09) 477 3000 用于将Stria外墙板安装到James Hardie CLD空心结构板条上。 使用直钉法。 Paslode: (09) 477 3000

Table 3 cont. | 表3续...

Accessories/tools not supplied by James Hardie | 不由James Hardie出售的配件／工具	
	**65 x 2.87mm RounDrive Ring Shank Nail** **65 x 2.87mm环纹螺丝钉** For fixing CLD Structural Cavity Battens to the framing. Paslode: (09) 477 3000 用于将CLD空心结构板条安装在框架上。 Paslode: (09) 477 3000
	**200mm wide Polypropylene DPC Tape** **200mm宽的聚丙烯胶带** Product used over flexible underlay at external and internal corners. 用于粘贴在弹性隔层的阳角和阴角处

2 Application and Scope
应用与范围

2.1 Application 应用

Stria Cladding can be fixed to either timber or lightweight steel-framed external walls.
Stria外墙板可以安装在实木框架或者轻质钢结构外墙上。

For fixing to a steel frame. Ask James Hardie on **0800 808 868** for specific requirements. Or refer to the James Hardie Steel Frame Technical Specification about the installation of Stria Cladding to steel frame.
如果需要安装在钢结构上，请致电0800 808 868获取具体要求。或者参考James Hardie钢结构安装规范了解具体信息。

If you are a specifier
如果您是项目监管者

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.
或者您是项目的其他责任方，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。

If you are an installer
如果您是项目施工方

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 James Hardie Technical Specification. All the details provided in this document must be read in conjunction with the project specification.
请确保遵循设计师及这本 James Hardie 技术规范中的规定，这些规定包括项目设计、湿度控制方案、相关数值及物料选择方面的规定。本手册中的所有详图都应结合工程本身的规范说明进行解读。

Make sure your information is up to date
确保您的信息是最新的

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

当您需要讲解或安装 James Hardie 的产品时，请确保您手头拥有最新的技术手册。

如果您需要更多关于安装、质保及施工安全提醒等方面的信息,请登录www.jameshardie.co.nz网站，或拨打0800808868电话，向Ask James Hardie咨询。

2.2 Scope 应用范围

This specification covers the installation of Stria Cladding within the following scope:
本规范涉及Stria外墙板安装的范围如下：

- The Stria Cladding must be installed horizontally.
  Stria外墙板必须横向安装。
- An external wall structure that complies with the Building Code or for an existing building, where the designer and/or installer has established that the external wall is suitable for the intended building work.
  建筑外墙结构必须遵守建筑规范，对于已有建筑，设计师或施工方必须确保外墙适合安装工作。
- In wind zones up to and including Extra High, or to a designed wind pressure of 2.5kPa (ULS) regardless of the building height. In wind zones greater than Very High a rigid air barrier must be used.
  建筑所在区域风压不超过2.5kPa(ULS)，不管建筑高度均可使用。当区域风压超过极高标准时必须使用刚性密封板。
- A drained horizontal flashing break must be installed at intervals of no greater than 3.5m vertical height where the following applies;
  - on buildings with building height greater than 10m, and
  - where upper floors contain sleeping uses or other property

  当建筑高度超过10m，并且上层建筑内包括睡眠区域或其他属性，垂直高度不超过3.5m的间隙内必须安装排水横向防水板。
- On buildings greater than 10m in building height a RAB™ Board must be used.
  当建筑高度超过10m必须使用RAB板。
- On buildings of any proximity to a relevant boundary. Within 1m of a relevant boundary a RAB™ Board must be used
  当建筑与其他相关边界距离不足1m时，必须使用RAB板。

Note: Refer to Stria Cladding Timber Cavity Batten technical specifications when fixing to timber cavity battens or where installing Stria Cladding vertically.
注意: 当竖向安装 Stria 外墙板于实木空心板条时，请参考James Hardie 的Stria外墙板实木空心板条安装技术规范。

2.3 Details 详图

Various Stria Cladding construction details using a flexible underlay are provided within this document. In addition to these, the construction details with RAB Board have also been developed and are available on our website. The construction details are available in dwg, dxf, jpg and pdf file format and can be downloaded at **www.jameshardie.co.nz**.
这本安装规范提供了各种应用弹性隔层的Stria外墙板安装工程详图。我们在网站上新增了应用RAB板的工程详图。请在我们的网站www.jameshardie.co.nz下载dwg、dxf、jpg及pdf格式的工程详图。

Note: All dimensions shown are in millimetres unless noted otherwise.
注意: 除特殊标明外，详图中所有尺寸默认单位为毫米。

2.4 Specific Design 特殊设计

For use of the Stria Cladding on specific design projects, the designer, architect or engineer must ensure that all clauses of NZBC have been considered and a specific design has been undertaken for the areas which fall outside the scope of this literature.
如要将Stria外墙板应用于超出本文档所述使用范围的其它用途，则建筑师、设计师或工程师必须确保该应用符合NZBC的相关条款规定，并进行相应的具体设计。

3 Compliance 合规

3.1 NZBC Compliance NZBC合规

If installed in accordance with the conditions of CodeMark number GM-CM30109 Stria Cladding complies with all relevant requirements of the NZBC. Please refer to www.building.govt.nz for a copy of the certificate.

Stria外墙板在遵循GM-CM30109条件下安装，满足NZBC所有相关要求，请参考网站www.building.govt.nz获取证书的拷贝。

CODEMARK™
GM-CM30109

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. For applications outside the scope of this literature and details, which are not provided herein, the architect, designer or engineer must undertake specific design and it should be ensured that the intent of their design meets the requirements of the NZBC.

施工监管方或其他责任方必须确保所计划的用途与本文件中所陈述的信息及详图一致，并对额外增加的或特殊设计的部分加以额外详细说明及提供详图。如有超出本施工规范的描述及详图之外的用途，则建筑师、设计师或工程师必须进行具体的工程设计，并确保所有设计符合新西兰建筑规范的要求。

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

本手册中引用的所有“新西兰标准”都指现行版本，须严格遵守。

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 aesthetic requirements before installation. James Hardie will not be responsible for rectifying obvious aesthetic surface variations following installation.

James Hardie 执行严格的质量检验程序，以确保每一个出厂产品都符合我们的质量要求。在安装前，确认产品符合客户的审美要求是施工者的责任。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。

4.2 Site and Foundation 施工现场及地基

The site on which the building is situated must comply with E1/AS1 Surface Water Clause of the NZBC. Foundations design must comply with relevant regulations, standards and meet the requirements of the NZBC. The grade of adjacent finished ground must slope away from the building to avoid any possibility of water accumulation.

建筑所在的位置必须符合NZBC关于E1/AS1条款“地表水”部分的要求。地基的设计必须符合各种相关规定、标准，并符合NZBC的要求。与房屋相连接的铺装地面，必须由建筑起向下倾斜，以避免造成积水。

4.3 Clearances 离地间隙

The clearance between the bottom edge of the cladding and the paved/unpaved ground must comply with section 9.1.3 of E2/AS1. The finished floor level must also comply with these requirements. These clearances must be maintained throughout the life of the building.
外墙板下缘与已铺/未铺地面的间隙必须符合NZBC合格方案E2/AS1部分第9.1.3条中的相应规定。已竣工地板的高度也必须符合以上规定。在建筑的整个生命周期内，这个间隙的标准必须一直保持。

Stria Cladding must overhang the bottom plate by a minimum of 50mm as required by E2/AS1.
根据NZBC中E2/AS1部分的规定，Stria外墙板必须用于建筑物水泥主墙板的外层，并与水泥墙板保持至少50mm的距离。

Stria Cladding must maintain a minimum clearance of 100mm from paved ground, and 175mm from unpaved ground.
Stria外墙板下缘必须与已铺地面保持至少100mm的距离，与未铺地面保持至少175mm的距离。

On the roofs and decks, the minimum clearance must be 50mm.
当用于屋顶及露台时，最小间隙为50mm。

Do not install external cladding such that it may remain in contact with water or ground, refer to Figures 3 and 4.
不要将外墙板安装在可能持续接触到水或地面的地方，参见图3和图4。

4.4 Moisture Management 湿度管理

It is the responsibility of the specifier to identify moisture related risks associated with any particular building design.
识别任何由特殊建筑设计而产生的湿度风险是施工监管方的责任。

Wall construction design must effectively manage moisture, considering both interior and exterior environments of the building, particularly in buildings that have a higher risk of wind driven rain penetration. The buildings should also be ventilated sufficiently to control moisture accumulation due to condensation especially in artificially cooled/heated buildings.
墙体结构的设计必须通过考量室内外的环境因素而有效控制室内湿度，特别是那些由于风向原因而容易灌入雨水的建筑。同时建筑应当充分通风，以减少由于水汽凝结而产生的湿气聚集，对于那些经常使用人工制冷或制热的建筑尤其需要注意。

Walls shall include those provisions as required by External Moisture Clause E2/AS1 of the NZBC. In addition, all wall openings, penetrations, junctions, connections, window sills, heads and jambs must incorporate appropriate flashings for waterproofing. The other materials, components and installation methods used to manage moisture in external walls, must comply with the requirements of relevant standards and the NZBC. For further guidance on designing for weather tightness, refer to BRANZ Ltd. and the Ministry of Business, Innovation and Employment updates on the following websites respectively, **www.branz.co.nz** and **www.building.govt.nz**.

墙体结构需要符合NZBC合格方案第E2/AS1中湿气控制部分的相关规定。另外，所有的不封闭墙体、被穿透墙体、墙体接缝、墙体连接，及窗台、窗楣和窗户边框处，都必须安装合适的防水板用于隔离湿气。墙体外侧的其他用于控制室内湿度的材料、部件及其安装方式，都须要符合NZBC的相关标准要求。欲了解更多有关防雨防潮设计的信息，请到www.branz.co.nz参阅新西兰建筑研究协会(BRANZ)的资料更新，或到www.building.govt.nz参阅新西兰商业创新与就业部（MBIE)提供的最新信息。

In addition, the following issues must also be considered:
同时，也必须考虑以下问题：

- Sealant must be installed where detailed in this literature.
  在本规范中说明要使用密封剂处，请务必使用。
- Where the walls are higher than two storeys, it is necessary to provide a horizontal flashing after two floors to drain the cavity.
  当墙体高度高于两个楼层时，需要在第二层处安装一块水平的防水板，以便将墙体夹层的湿气排出室外。
- The installation of smoke chimneys, pipe penetrations and other fixtures etc. must not track moisture into the wall or restrict the drainage of moisture to the exterior.
  当安装烟囱、烟道及其它固定设施时，不能将湿气引入墙体，或阻碍湿气被排出室外。

4.5 Structure 结构

4.5.1 Timber Framing 木框架结构

Timber framing must be in accordance with NZS 3604 (Timber Framed Buildings) or designed as per specific engineering design. 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.

木框架结构建筑物必须符合NZS3604标准的“木框架结构建筑”部分的规定，或按照某套具体的工程设计而建。对于实木框架墙长度超过12m的，应根据木材收缩或形变，设置工程连接件保证一定的位移量。

4.5.2 Wind Pressures 风压

Stria Cladding is suitable for use in all New Zealand wind zones up to and including EH as defined in NZS 3604. Stria Cladding can also be used for specific engineering design projects up to wind pressures of 2.5kPa ULS.

Stria外墙板可适用于新西兰境内的符合NZS 3604定义的所有EH及以下级别风区。同时也可适用于风压不超 2.5kPa（ULS）的特殊工程设计项目。

4.6 Structural Bracing 结构支撑

Stria Cladding installed as per this specification has not been tested and therefore cannot be used to achieve any structural bracing. However, bracing can be achieved by using RAB Board installed direct to framing instead of a flexible underlay or by using Villaboard™ Lining bracing system on the internal face.

按照本规范进行安装的Stria外墙板无法达到任何结构支撑的功能。但是，通过用 James Hardie 的RAB板替代常规的软性隔层，或在内墙墙面上使用Villaboard™ 内衬支撑系统，都可以达到支撑的效果 。

4.7 Energy Efficiency 隔热能效

External walls constructed as per this technical specification using Stria Cladding and bulk insulation, where the area of glazing is 30% or less of the total wall area, complies with the insulation requirements for walls in NZBC Acceptable Solution H1/AS1 (Energy Efficiency Clause H1). To meet thermal insulation requirements for the construction, the bulk insulation as specified in Table 4 must be used. This insulation may be substituted with insulations having higher R-values. The thermal insulation of a wall changes when the size or spacing of timber framing is increased or decreased. The calculation used in Table 4 is based on a timber framing size 90 x 45mm and using an internal lining material such as Villaboard Lining or a 10mm plasterboard.

按照本技术手册的说明安装了Stria外墙板并装有主体保温层的墙体，只要外表面玻璃面积不超过所有墙体总面积的30%，则符合NZBC方案中H1/AS1部分第H1条‘隔热能效’中对墙体保温的要求。为达到建筑物隔热要求，必须按照表4的规定为墙体安装主体保温层。隔热层可使用热阻更高的隔热材料。墙体的隔热效果会受到木框架厚度及间距的增减，或墙筋间距大小的影响 。表4是基于木框架尺寸90 x 45mm，内墙材料为James Hardie的Vila板或10mm石膏板。

Table 4 | 表4 Insulation capability 保温性能

Climate zone 气候区	R-Value requirement 建筑物热阻指数要求	Minimum cavity insulation infill requirement 隔热层最小热阻要求
1 和 2	1.9 m^2 °C/W	R2.0*
3	2.0 m^2 °C/W	R2.2*

Total construction R-Value depends on the insulation material used and the framing ratio. The insulation material R-Values specified in this table are for studs spaced at 600mm centres and nogs spaced at 800mm centres.

一个建筑物的总热阻指数是由所选用的隔热层材料和建筑框架结构共同决定的。上表中所列出的隔热层材料热阻值基于前提下得出的：墙筋中心间距600mm，木钉中心间距800mm。

*To achieve higher R-Values of construction the wall insulation material must be replaced with an insulation material having higher R-Values to suit the requirements.

*为了达到更高的建筑物热阻级别，则需要选用热阻更高的隔热层材料来替换上述材料。

For further guidance on insulation requirement refer to the current edition of ‘House Insulation Guide’ published by BRANZ.

更多关于隔热层的指导信息，请参阅BRANZ出版的最新版本《住房隔热层指南》（House Insulation Guide）

4.8 Fire Rated Walls 墙面耐火等级

A fire rating of up to 60 minutes can be achieved when using RAB Board in lieu of a flexible underlay and installing Stria Cladding as per this specification. Refer to the James Hardie Fire and Acoustic Design Manual for further guidance on achieving fire ratings.
按照本规范的指导，用RAB板代替弹性隔层安装Stria外墙板可达到阻燃60分钟的耐火等级。请参靠《James Hardie防火与隔音设计手册》获得相关达到耐火等级的信息。

4.9 Control Of External Fire Spread 外部火势蔓延的防控

External spread of fire (clause C3.5 and C3.7) apply where:
外部火势蔓延概念（条款C3.5和条款C3.7）适用于：

- Building height is greater than 10m and upper floors have sleeping uses or are different property (C3.5), and
  建筑高度超过10m同时上层建筑包含睡眠区域或其他用途（条款C3.5）
- Where the building is located within 1m of a relevant boundary (C3.7)
  建筑位于相关边界1m范围之内（条款C3.7）

Refer to Table 5.1 of Section 5.4 of C/AS1 Amendment 4 for group SH or Table 5.5 of Section 5.8.1 of C/AS2 1st edition 2019 for the other risk groups to identify the external fire spread safety requirement applicable to the exterior surface finishes.
请参考表5.1中章节5.4 条款C/AS1或者表 5.5中2019年第一版章节5.8.1条款C/AS2，获取其他不同外表面火势蔓延的风险因素和安全要求。

For the situations where 'no requirement' is listed, Stria Cladding system installed in conjunction with CLD Structural Cavity Battens over a flexible underlay as per the details of this technical specification complies.
对于使用软性隔层安装于CLD空心结构板条的Stria外墙板系统，可以满足没有特定要求的情况。

For the other situations, Stria Cladding in conjunction with CLD Structural Cavity Battens over RAB Board fixed into timber frame with R2.2 fibreglass/James Hardie Mineral Insulation complies. For the complete set of construction details for Stria Cladding and CLD Structural Cavity Batten over RAB Board, refer to www.jameshardie.co.nz.
对于使用RAB板安装于CLD空心结构板条的Stria外墙板系统，如果采用R2.2玻璃纤维或者James Hardie矿物保温层依旧可以满足要求。请参考网站www.jameshardie.co.nz获得完整工程详图。

In addition, for buildings over 10m in height, the external wall cavity must be blocked off either at each floor level or at heights no more than 3.5m to prevent fire spread within the cavity. Refer to Figures 38 and 39 for the horizontal fire separation joint construction details.
对于高度超过 10m 的建筑或者每层之间不超过3.5m，为了阻止火势蔓延，需要对每一层行阻隔。请参考图38和39的工程详图。

4.10 Alpine Regions 高寒地区

In regions subject to freeze/thaw conditions, Stria Cladding, RAB Board and CLD Structural Cavity Battens must not be in direct contact with snow or ice build up for extended periods, e.g. external walls in alpine regions must be protected where snowdrifts over winter are expected.
对于经常出现冰冻/融化状况的地区，Stria外墙板、RAB板及CLD空心结构板条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。

These products have been tested in accordance with AS/NZS 2908.2 Clause 8.2.3.
以上产品符合AS/NZS2908.2中8.2.3部分的测试要求。

5 Safe Working Practices
安全操作守则

5.1 Stay Healthy When Working With Building Products Containing Crystalline Silic
当建筑产品中含有结晶二氧化硅应谨慎操作保证健康

Crystalline Silica

What is it? Why and when is it a health hazard?
结晶二氧化硅是什么，为什么有害?

Crystalline Silica is

Commonly known as sand or quartz. Found in many building products e.g. concrete, bricks, grout, wallboard, ceramic tiles, and all fibre cement materials.
结晶二氧化硅通常就是沙子或石英，广泛存在于建筑产品比如混凝土、砖、水泥浆、墙板、瓷砖和所有纤维水泥材料。

Why is Crystalline Silica a health hazard?

Silica can be breathed deep into the lungs when present in the air as a very fine (respirable) dust.
当我们呼吸时，空气中的结晶二氧化硅粉尘会吸入到肺部深处。

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.
如果不采取适当的安全措施尽可能减少吸入，就会导致潜在的致命肺病如矽肺病，并与其他包括癌症在内的疾病有联系。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!
最危险的灰尘是你看不见的灰尘!

When is Crystalline Silica a health hazard?
何时结晶二氧化硅会造成健康危害?

It's dangerous to health if safety protocols to control dust are not followed when cutting, drilling or rebating a product containing crystalline silica.
在切割、钻孔或开槽含有结晶二氧化硅的产品时，如果不遵守安全措施以控制粉尘，则对健康非常危险。

Products containing silica are harmless if intact (e.g. an un-cut sheet of wall board).
含有二氧化硅的产品如果完好的话是完全无害的（例如未切割的墙板）。

Failure to adhere to our warnings, safety data sheets and installation instructions when working with James Hardie products may lead to serious personal injury or death.
如果无视我们的警告，不遵守安全数据表和安装说明进行操作，可能导致严重人身伤害甚至死亡。

5.2 Avoid Breathing In Crystalline Silica Dust!
避免吸入结晶二氧化硅粉尘

Safe working practices
安全操作指南

✕ **NEVER** use a power saw indoors or in a poorly ventilated area
禁止在通风不良的区域使用电锯

✕ **NEVER** dry sweep
禁止干扫

✓ **ALWAYS** use M Class extractor unit as a minimum and always hose down with water/wet wipe for clean up
始终至少使用M级通风设备并在潮湿的状态进行清扫

✕ **NEVER** use grinders
禁止使用研磨机

✓ **ALWAYS** use a circular sawblade specifically designed to minimise dust creation when cutting fibre cement – preferably a sawblade that carries the HardieBlade™ logo or one with at least equivalent performance
始终使用专门设计的圆形锯片来减少切割纤维水泥时产生的灰尘 - 最好是带有HardieBlade™徽标的锯片或至少具有相同性能的锯片

✓ **ALWAYS** follow tool manufacturers' safety recommendations
始终遵守工具制造商的安全建议

✓ **ALWAYS** expose only the minimum required depth of blade for the thickness of fibre cement to be cut
在切割纤维水泥时， **始终**根据水泥厚度尽可能减小锯片的暴露高度

✓ **ALWAYS** wear an approved properly-fitted, approved dust mask (P1 or P2) or respirator
始终佩戴合适的P1或P2级别的面罩或呼吸器

Use one of the following methods based on the required cutting rate:
请基于需要的切割等级选择切割方法：

Best 最佳方法

- HardieKnife™
- Hand guillotine 手动铡刀
- Fibreshear 纤维水泥剪

Better 次优方法

Dust reducing circular saw equipped with HardieBlade™ Saw Blade and M Class extractor unit.
配有HardieBlade™ 锯片及M级吸尘设备的低尘锯。

Good 一般方法

Dust reducing circular saw with HardieBlade™ Saw Blade.
配有HardieBlade™ 锯片的低尘圆锯。

Working outdoors 当在室外操作时

✓ Make sure you work in a well ventilated area
确保你在通风良好的地点操作

✓ Position cutting station so wind will blow dust away from yourself and others in the working area
根据风向确定切割操作的位置和朝向，以便风将粉尘吹离你自己及工作区域内的其他人员

✓ Cut products with either a HardieKnife™ or fibre cement shears or, when not feasible, use a HardieBlade™ Saw Blade (or equivalent) and a dust-reducing circular saw attached to a M Class extractor unit
使用Hardie切割刀或纤维水泥剪进行切割。或者当无法使用此法时，使用HardieBlade™锯片（或同等产品）和配有M级别吸尘设备的低尘圆锯

✓ When sawing, sanding, rebating, drilling or machining fibre cement products, always:
当对纤维水泥产品进行抛光、磨砂、钻孔或其他机器作业时，请始终：

- Wear your P1 or P2 mask (correctly fitted in accordance with manufacturers' instructions) and when others are close by, ask them to do the same
始终佩戴P1或P2级别防尘面罩（根据制造商的指导正确佩戴），当其它人靠近时，让他们也同样佩戴
- If you are not clean shaven, then use a powered air respirator with a loose fitting head top
如果你的脸没有刮净胡须，则使用头顶宽松佩戴的电动呼吸机
- Wear safety glasses

佩戴安全眼镜

- Wear hearing protection
  佩戴听力保护设备
- When others are close by, ask them to do the same
  当其它人靠近时，让他们佩戴同样的设备

Working indoors 当在室内操作时

✕ NEVER cut using a circular saw indoors
禁止在室内使用圆锯

✓ Position cutting station in a well ventilated area
将切割工作台放置在通风良好的位置

✓ Cut ONLY using a HardieKnife™, hand guillotine or fibreshears (manual, electric or pneumatic)
仅使用HardieKnife™、手动铡刀或（手动、电动或气动的）纤维水泥剪进行切割

✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class extractor unit
确保对施工现场打扫干净，但永远不要在干燥环境下打扫。始终用水管冲洗令粉尘沉降、用湿布擦拭，或者使用M级别的吸尘设备

If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist.

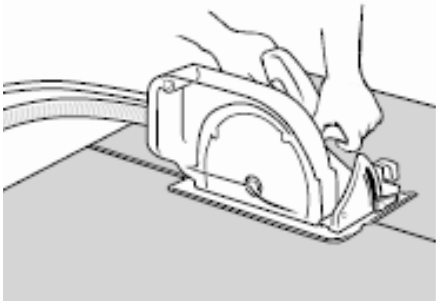
如果您依然担心自己接触粉尘的级别，或您无法按照上述指导进行操作，请咨询有资质的工业卫生专家。

Working Instructions 操作指南

Refer to Recommended Safe Working Practices before starting any cutting or machining of product.
在开始任何切割或对材料的机器作业之前，请参考以上"推荐的安全施工操作"。

HardieBlade™ Saw Blade 锯片

The HardieBlade™ Saw Blade used with a dust-reducing saw is idealfor fast, clean cutting of James Hardie fibre cement products. A dust-reducing saw uses a dust deflector or a dust collector connected to a vacuum system. 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.
HardieBlade™锯片与低尘电锯组合使用，是能够快速、干净地切割 James Hardie 纤维水泥产品的理想选择。低尘电锯有一个连接到吸尘装置的粉尘导流器或粉尘收集器。进行切割操作时，请在板材上固定一个直尺作为基准,然后沿着直尺的直线边缘移动电锯基座进行切割。



Hole-Forming 打孔

For smooth clean cut circular holes:
要打出平滑整齐的圆孔：



- Mark the centre of the hole on the sheet
  在板材上画出圆孔的圆心。
- Pre-drill a 'pilot' hole
  先在圆周上钻一个小孔 (引导孔)。
- 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
  以该孔为基准，用装在重型电钻上的圆孔锯片，锯出适当直径的圆孔。

For irregular holes 切割不规则孔：

- 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

要切割出小型的矩形或圆形孔，可先沿着圆周或矩形边缘钻出一串小孔，然后从板材正面敲掉不需要的部分，即可实现。

- Tap carefully to avoid damage to sheets, ensuring that the sheet edges are properly supported

  请小心敲击，以免破坏板面，确保敲击过程中孔边缘的板面得到一定的支撑。

6 Installation 安装

Stria Cladding is installed horizontally using the cavity construction method as per the details and information published in this document. Stria Cladding panels are 405mm wide and are installed with a 25mm nominal lap over the panel below. Considering the installation and machining tolerances, the effective cover for Stria Cladding can vary between 380 to 382mm.

根据本资料中的详图和信息，请使用空心工程方法水平安装Stria外墙板。板材为405mm宽，安装时在板材下方留出25mm的额定距离。考虑到安装及机械误差，Stria外墙板有效覆盖长度为380mm-382mm。

Stria Cladding and CLD Structural Cavity Battens must be kept under cover whilst in storage or at sites and they must be dry at the time of their installation. All site cut panel edges must be sealed with Dulux 1 Step, Resene Quick Dry, Taubmans Underproof Acrylic Primer Undercoat or similar sealer compatible with the finish coat before installation.

Stria外墙板储存在仓库中及施工现场都必须覆盖，并在安装前保持干燥。所有在施工现场切割过的板材边缘，需于安装前在切割面涂上 Dulux 1 Step, Resene Quick Dry, Taubmans Underproof Acrylic Primer Undercoat，或其它类似的可与板材上的底漆兼容的密封涂料。

Stria Cladding must be fully supported and fixed into CLD Structural Cavity Battens. Ensure that cladding is hard against the battens to avoid drumminess. To achieve best asthetic results it is recommended to position the vertical jointer by the corner of openings or coinciding with the centre line of openings. This technical specification only covers the horizontal installation of Stria Cladding on CLD Structural Cavity Battens. See the Stria Cladding technical manual for vertical installation on timber cavity batten.

Stria外墙板必须安装在CLD空心结构板条上，并得到足够的承重支撑。请确保外墙板紧密地固定在板条上以避免鼓胀不稳。为了达到最好的视觉效果，建议将纵向连接件置于开口的边角处，或者将连接件与开口的中线置于一条直线。本技术手册仅涵盖Stria外墙板横向安装在CLD空心结构板条的方法。如需竖向安装，请查阅Stria外墙板技术手册。

6.1 Fastener 紧固件

6.1.1 Fastener – Size and Layout
紧固件--尺寸和布局

CLD Structural Cavity Batten must be fixed to the studs with fasteners as per Table 5. The fasteners must be driven at a minimum distance of 50mm from the batten ends.

CLD空心结构板条必须使用紧固件安装在墙筋上，如表5所示。紧固件固定位置应离两头保证最少50mm。

Table 5 | 表5

Fixing type 安装类型	Wind pressure 风压 (kPa)	CLD Structural Cavity Batten spacing Max. CLD空心结构板材最大间距 (mm)	Fixing centres 中心安装间距 (mm)
65 x 2.8mm RounDrive ring shank nail to timber frame 规格为65 x 2.8mm 环纹螺丝钉安装在实木框架上	Up to 1.5 (up to and including VH) 1.5以下（包括VH风区）	600 or 400 as per framing spacing 600 或 400，根据框架间距	250
	1.5 to 2.5 1.5 至 2.5	400 as per framing spacing	200

- For fastener durability information, refer to Clause 6.1.3 of this document

  关于紧固件耐久性的相关信息，请参考本手册6.1.3.

- CLD Structural Cavity Battens less than 400mm in length must have fixings at maximum 150mm centres

  当CLD空心结构板条长度小于400mm时，必须保证中心安装长度不超过150mm。

For other fixing options Ask James Hardie on **0800 808 868**.

其它可选的安装方法，请拨打0800 808 868咨询James Hardie。

6.1.2 Fastening Method – T-Head Nails with Adhesive
紧固方法 - T头钉子加黏合剂

The combination of stainless steel straight T-head nails and an adhesive sealant provides a fast and efficient panel installation method. Use minimum of three nails per stud for each panel, refer to Figure 1. Use Paslode 30 x 1.6mm C Series Stainless Steel Brad Nails only.

不锈钢T头钉子加黏性密封胶的组合，是了一种快速有效的外墙板固定方法。至少在每块板的每个墙筋上需使用3个钉子。参考图1。仅可使用30 x 1.6mm的C系列不锈钢Brad钉子。

Apply a 6mm thick continuous bead of Bostik 'Seal n Flex 1' or Sika 'Sikaflex 11FC' adhesive sealant to the face of the CLD Structural Cavity Batten prior to fixing Stria Cladding. Only apply adhesive sealant to the CLD Structural Cavity Battens to suit each panel as the Stria Cladding is installed on the wall.

安装Stria外墙板前，请在CLD空心结构板条的表面上涂上6mm宽的连续不断的一条Bostik‘Seal n Flex 1’或Sika‘Sikaflex 11FC’ 黏性密封胶。在CLD空心结构板条上涂黏性密封胶时需契合即将安装的外墙板。

It is a good practice to set the brad nail gun to fire 2-3mm proud of the panel surface keeping a consistent pressure on the panel while fixing. Let the adhesive sealant go off for approximately 2 hours whilst continuing work on the next section of wall. Come back later and hammer the nails flush with cladding surface. The edge distance required for fixing T-head brad nails is 12mm, refer to Figure 7 or Figure 8.

安装墙板时，请使用射钉枪在板面上施加均匀持续的力。使用黏性密封胶后，需要等待2小时左右干燥。干燥后，用锤子将钉子敲至与外墙板面齐平。固定T头钉子与墙板的边缘距离为12mm。参考图7和图8。

6.1.3 Fastener Durability
紧固件耐久性

Fasteners used to fix CLD Structural Cavity Batten must meet the minimum durability requirements of the NZBC. NZS 3604 specifies the requirements for fixing material to be used in relation to exposure conditions and are summarised in Table 6.

用于安装CLD空心结构板条的紧固件必须符合NZBC最低耐久性的要求。NZS 3604详细规定了用于室外暴露环境下的安装材质的要求，汇总在表6。

Fasteners must be fully compatible with all other materials that they are to be in contact with to ensure the durability and integrity of assembly. For steel framing ensure that the fasteners used are compatible with steel framing. Contact fastener manufacturers for more information.

固件必须与其所能接触到的所有其它材料完全兼容，以保证整个组装的完整性和耐久性。对于钢结构框架，请确保固件与钢框架兼容。请联系固件生产商，获取更多信息。

Table 6 Exposure conditions and nail selection prescribed by NZS 3604

表6 标准NZS3604中对室外暴露环境及钉子选择的要求

Zone 区域	Application 应用	
D (Sea Spray)* D区	General 通用	Stainless Steel 304/316 304/316不锈钢
	Fire 防火	
	Bracing 支撑	
C and B and Geothermal hot spots C区B区及地热活跃区	General 通用	Hot Dip Galvanised** 热浸镀锌
	Fire 防火	
	Bracing 支撑	

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

在C区的一些区域，根据当地经验应选择耐久性更高的产品。如果建筑坐落于NZS3604中第4.2.4段中列出的微气候区域，则需要进行特殊工程设计。

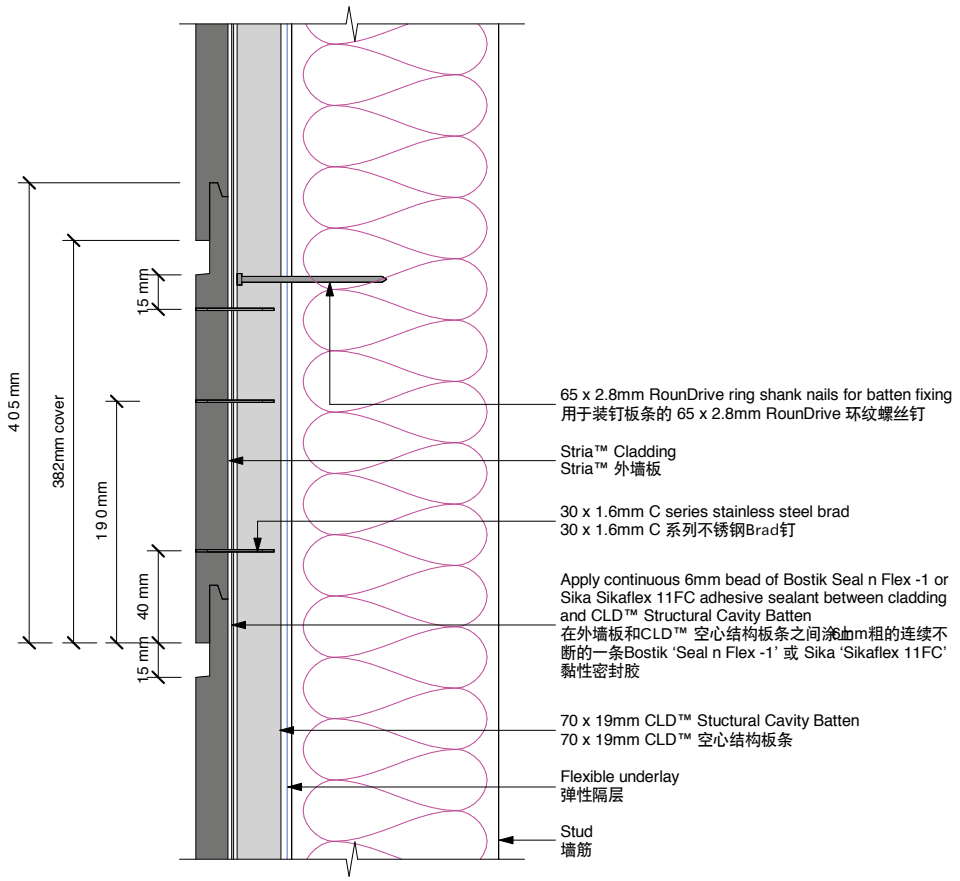
** Hot dip galvanised must comply with AS/NZS 4680.

热浸镀锌材料需要满足AS/NZS4680的要求。

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.

请参阅“NZBC合格方案（NZBC AcceptableSolution）中‘E2/AS1款’的表20和21，了解选择适合的固件材质及与其他材质的兼容性等信息。

Figure 1: Fixing detail | 图1: 安装详图



6.2 Framing 框架

Stria Cladding can be fixed either to a timber-frame or steel-frame.
Stria外墙板可以安装在实木框架或钢结构框架上。

For fixing to a steel frame. Ask James Hardie on **0800 808 868** for specific requirements.
如需在钢结构框架上安装，请拨打0800 808 868，询问具体要求。

6.2.1 Dimensions 尺寸

A 45 x 90mm minimum framing size is required.
框架尺寸需至少为45 x 90mm。

6.2.2 Structural Grade 木材等级

Minimum timber grade must be in accordance with timber grades specified in NZS 3604.
建筑物所使用的木材等级必须符合NZS 3604中的规定。

6.2.3 Durability 耐久性

The external framing timber must be treated to a minimum H1.2 treatment. Higher treatment levels may be used but check for the compatibility of treatment chemicals with other materials. Refer to NZBC Acceptable Solution B2/AS1 Durability for further information about the durability requirements.
房屋框架所用的木材必须经过化学处理，至少达到H1.2的处理程度。更高的处理程度同样可行，但请事先确保该化学处理剂与建筑中的其它材料兼容。更多关于耐久性要求的详细信息，请参阅NZBC合格方案B2/AS1部分。

For timber treatment and allowable moisture content information refer to NZS 3602 (Timber and Wood-Based Products for use in Buildings) and NZS 3640 (Chemical Preservation of Round Sawn Timber) for minimum timber treatment selection and treatment requirements. Also refer to framing manufacturer's literature for further guidance on timber selection. Framing must be protected

from moisture at sites in accordance with the framing manufacturer recommendations.
有关木材处理及木材含水量的可接受范围的信息，请参阅NZS3602 – 建筑用途的木材及木质产品以及NZS 3640 – 圆形锯木的化学防腐，查看木材处理程度最低限值及处理规范的信息。另请参阅木框架生产商所提供的说明材料，获得关于选择木材的进一步指导。在施工现场，必须按照生产商的建议对木框架材料进行防潮保护。

Note: Refer to NZS 3602 for information about the allowable moisture content in timber framing.
注意: 请参阅NZS 3602，获得有关木材湿度范围的信息。

6.2.4 Special Framing Requirements
特殊框架要求

The following are special framing requirements for both timber and steel framing:
以下是对木结构和钢结构框架同样适用的特殊框架要求:

- Double studs are required at internal corners, refer to Figure 2
  房屋阴角处需要使用双墙筋，参见图2
- Extra packers maybe required at external corners
  房屋阳角需要额外封隔

6.2.5 Tolerances 可允许误差

In order to achieve the required performance and an acceptable wall finish, it is imperative that framing is straight and true. Framing tolerances shall comply with Table 2.1 of NZS 3604 and the manufacturer's specifications. All framing shall be made flush.
为了完工后达到理想效果和符合标准的外墙，框架必须保证水平和竖直。框架的误差必须符合 NZS 3604 中表2.1的要求和框架生产商的说明。所有的框架都必须齐平。

6.2.6 Frame Construction 框架结构

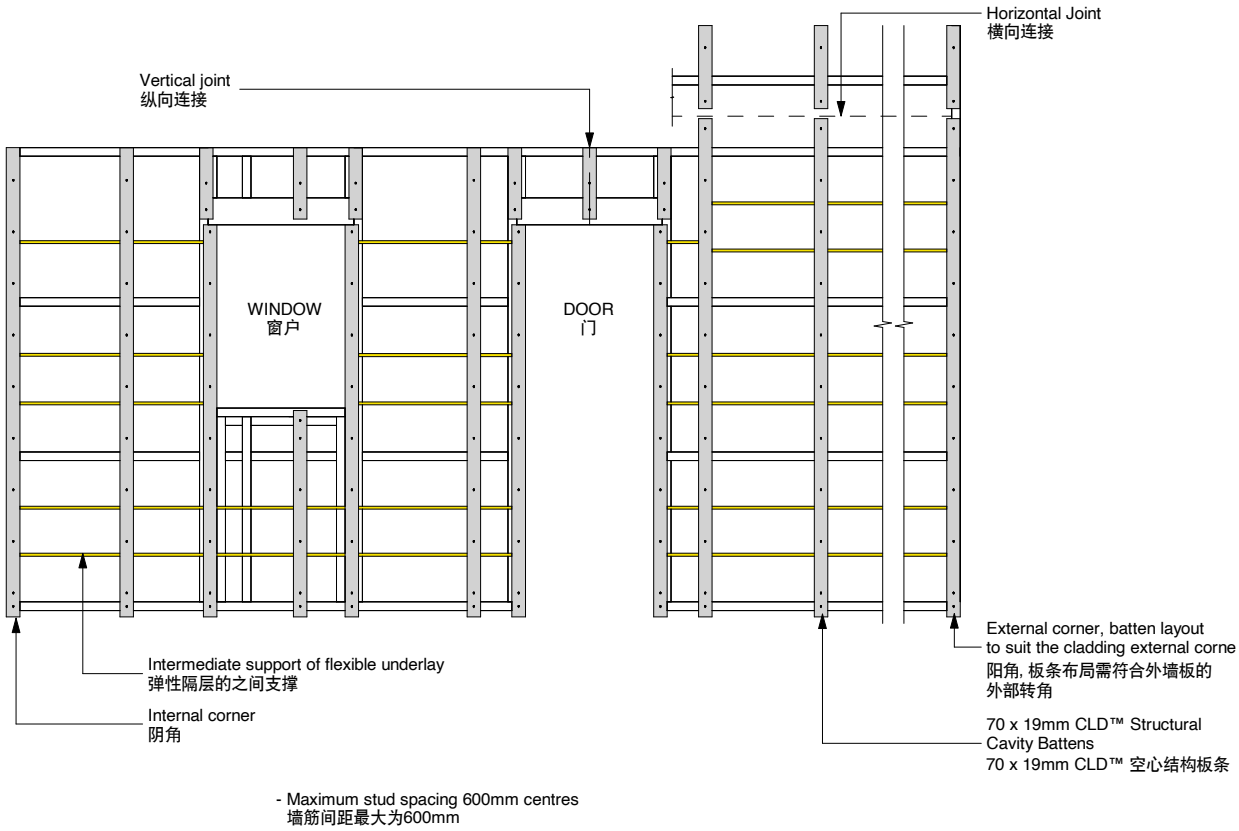
Use of timber framing must be in accordance with NZS 3604, specific engineering design (SED) and the framing manufacturer's instructions. The framing must be rigid and not rely on the cladding for stability. Timber framing minimum sizes and its set-out must comply with NZS 3604 and as specified in this technical specification.
实木框架的使用必须遵守NZS3604标准的规定以及生产厂商的具体说明。框架必须是刚性定型的，且不能倚靠外墙板的支撑。实木框架的最小尺寸和布局都必须符合NZS3604标准的规定并遵照本技术手册的说明。

The following framing is required:
木框架的要求如下:

- Studs provided at 600mm centres maximum
  墙筋中心距离不得大于600mm
- Nogs provided at 800mm centres maximum
  木钉中心距离不得大于800mm
- When RAB Board/HomeRAB Pre-Cladding is used the nogs may be omitted if desired
  当使用RAB板或HomeRAB预制垫层可以省略使用木钉
- An extra stud is required in internal corners
  房屋阴角处需要额外多安装一根墙筋

In case of gable end trusses sitting on top plates of 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.
如果山墙桁架位于外墙框架的上托板上，那么框架结构的尺寸必须符合制造商/供应商提供的桁架的设计及规范，并具有独立设计制作人声明。

Figure 2: Framing set out | 图2: 框架布局



6.3 Flexible Underlay or HomeRAB Pre-Cladding
弹性隔层和HomeRAB预置垫层

Flexible underlay or a rigid air barrier such as HomeRAB™ Pre-Cladding must be provided as per the requirements of External Moisture Clause E2 of the NZBC. The flexible underlay selected for use must comply with Table 23 of E2/AS1.

根据NZBC方案E2/AS1中E2部分“外部湿度”条款的要求，必须铺设弹性隔层或刚性密封板比如HomeRAB预置垫层。弹性隔层的选择必须遵照方案E2/AS1中表23的要求。

The flexible underlay must be fixed in accordance with section 9.1.7 E2/AS1 and underlay manufacturer's recommendations.

弹性隔层必须根据E2/AS1中9.1.7部分的要求以及弹性隔层生产商的建议来安装。

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 which complies with Table 23 of E2/AS1. HomeRAB Pre-Cladding complies with these requirements and is suitable for use in this situation. It must be installed in accordance with James Hardie Rigid Air Barriers installation manual.

对于无内衬面的墙体，例如车库墙或山墙，必须在外墙板的内层安装一层刚性隔板或刚性密封板，以符合NZBC合格方案E2/AS1部分表23的要求。 HomeRAB预置隔层符合以上规范，且适用于以上情况。安装遵守《James Hardie刚性密封板安装手册》的要求。

6.4 Intermediate Support of Flexible Underlays
弹性隔层的中间支撑

Where studs are at 600mm centres an intermediate means of restraining the flexible underlay and insulation from bulging into the cavity shall be installed. An acceptable method to achieve this is using a:
当墙筋的中心间距达到600mm时，为了防止弹性隔层和保温棉向空心方向鼓胀，需要采用以下一种的方法进行中间支撑安装:

- 75mm galvanised mesh
  使用 75mm 的镀锌丝网
- Polypropylene tape at 300mm centres fixed horizontally and drawn taut
  使用300mm的聚丙烯胶带横向固定并拉紧

No intermediate supports are required:
以下情况无需中间支撑:

- Studs are spaced at maximum 400mm centres
  墙筋间距不超过400mm
- Rigid air barriers instead of flexible underlay are used
  使用刚性密封板代替弹性隔层

6.5 EH/SED Wind zone
EH或SED风区

With EH wind zone or for specific design wind zone, a rigid air barrier must be used instead of flexible underlay as per E2/AS1 clause 9.1.7.2 e.g. RAB Board.
在EH风区或需特殊设计的风区，根据E2/AS1 方案中条款9.1.7.2，必须采用刚性密封板代替弹性隔层，比如采用RAB板。

To achieve the temporary weathertightness using James Hardie rigid air barriers, windows/doors need to be temporarily installed. Refer to James Hardie Rigid Air Barriers installation manual for information regarding its installation and to achieve temporary weathertightness.
在安装James Hardie刚性密封板时，为了达到临时的防风防雨要求，需要将门窗进行临时安装。请参考《James Hardie刚性密封板安装手册》获得相关的安装信息。

6.6 Flashings 防水板

All wall openings, penetrations, intersections, connections, window sills, heads and jambs must be flashed prior to Stria Cladding installation. Refer to moisture management requirements in Clause 4.4. The flexible underlay/rigid air barrier must be appropriately incorporated with penetration and junction flashings using flashing tapes. Materials must be lapped in such a way that water tracks down to the exterior on the face of flexible underlay or rigid air barrier. James Hardie will assume no responsibility for water infiltration within the wall due to poor installation of flashings or flexible underlay.
所有的不封闭墙体、被穿透墙体、墙体接缝、墙体连接、窗台、窗楣和窗户边框处，都必须在安装Stria外墙板前进行防水处理。请参阅本手册4.4部分关于湿度管理的要求。必须使用防水胶带保证弹性隔层／刚性密封板妥善地与墙体穿透处和连接处的防水板相接合。不同材料间的重合处必须搭接良好，保证水流是沿着弹性隔层或刚性密封板的外表面向下流。James Hardie对于错误安装防水板或弹性隔层所导致的墙体渗水不承担任何责任。

The selected flashing materials must comply with the durability requirements of the NZBC. For information refer to Table 20 of E2/AS1.
防水材料的选择必须符合NZBC方案中对于耐久性的要求。请参考E2/AS1部分表20。

When using James Hardie rigid air barriers the entire framing around openings must be sealed with a flashing tape. The tape must be finished over the face of the rigid air barrier. Refer to James Hardie Rigid Air Barriers installation manual for further information.
当使用James Hardie刚性密封板时，整个墙体开口处的所有木框架结构必须用防水胶带封好。胶带必须覆盖到刚性密封板的外表面。更多信息请参见James Hardie刚性密封板安装手册。

6.7 Cavity Closure/Vent Strip
空心腔开口/通风带

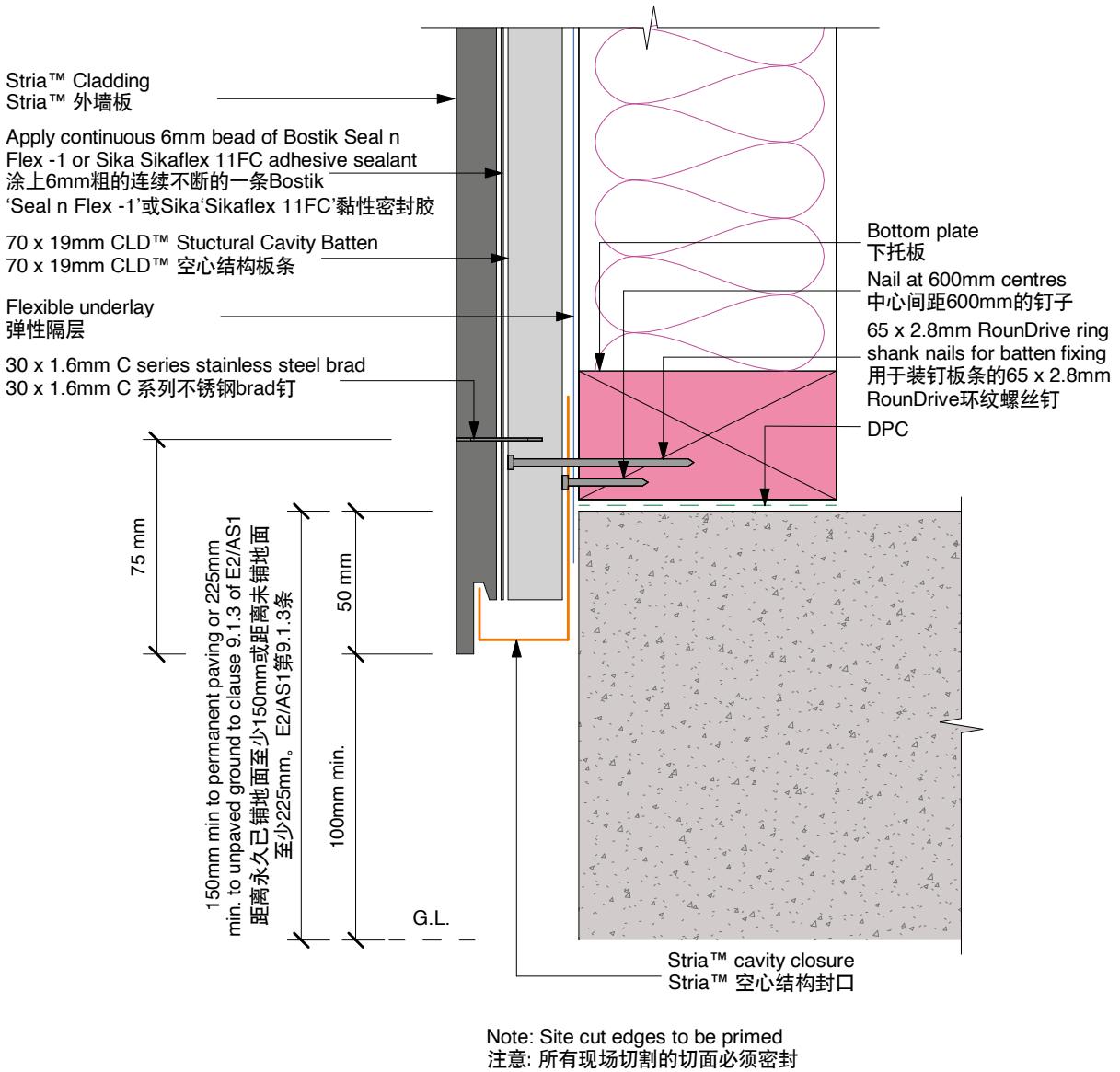
The James Hardie Stria Aluminium Cavity Closure or uPVC cavity vent strip must be installed at the bottom of all walls constructed using the drained and ventilated cavity construction method.

必须在所有墙体的底部安装James Hardie Stria铝制空心封口或uPVC空心通风带，以保证空心腔结构的排水和通风。

It is important that the openings in the cavity closure/vent strip are kept clear and unobstructed to allow free drainage and ventilation of cavities. James Hardie cavity closure/vent strip has an opening area of 1000mm²/m length.

为了保证空心腔有效排水和通风，保持通风口开口处无遮挡、无堵塞非常重要。James Hardie空心开口／通风带的开口面积为1000mm每延米。

Figure 3: Foundation detail - Option 1 | 图3: 地基详图 - 方案1



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 4: Foundation detail – Option 2 | 图4: 地基详图 - 方案2

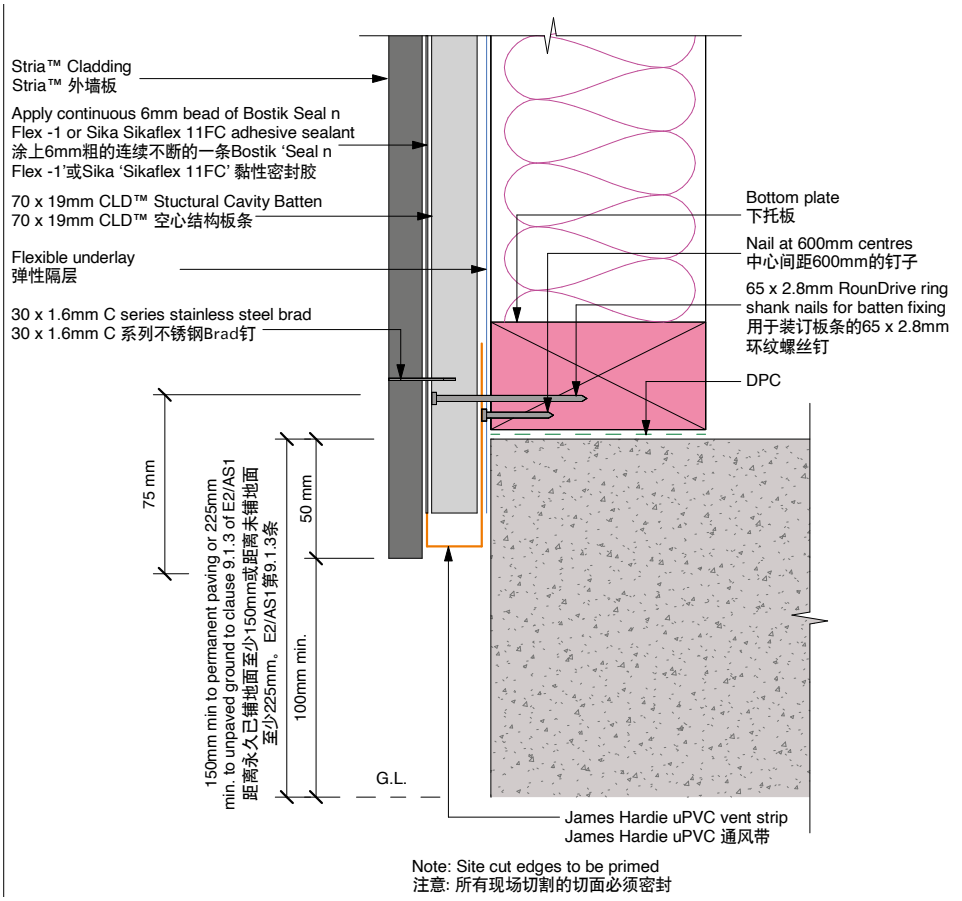
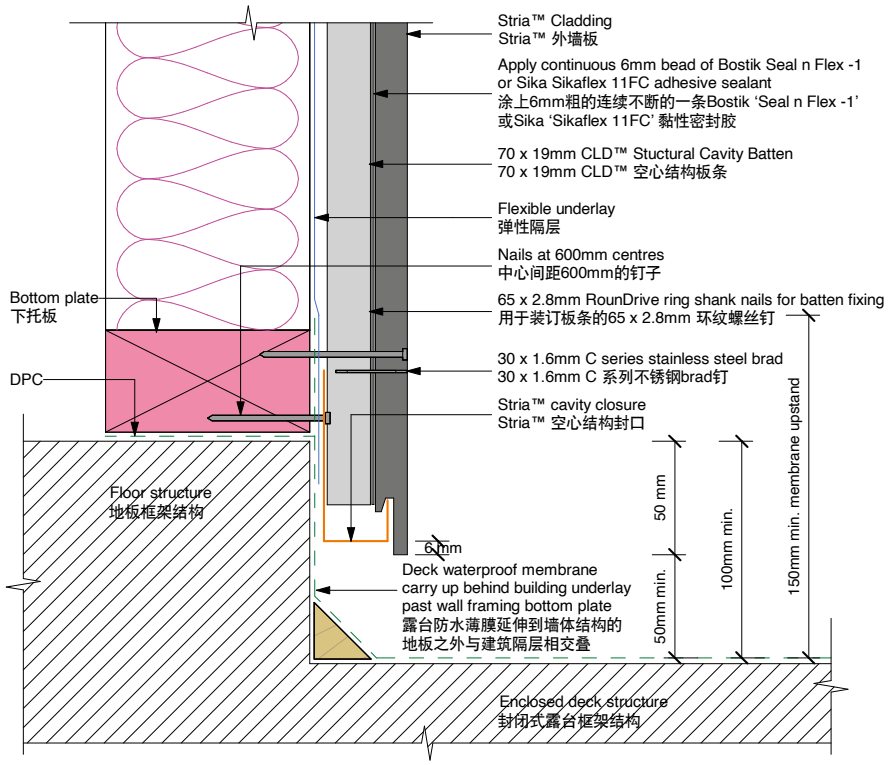


Figure 5: Enclosed deck | 图5: 封闭式露台



6.8 CLD Structural Cavity Battens CLD空心结构板条

The CLD Structural Cavity Battens are suitable to have Stria Cladding fixed into them. The battens are 2450mm long, 70mm wide and 19mm thick and are fully sealed on all faces.

CLD空心结构板条适用于Stria外墙板安装其上。板条尺寸为2450mm长、70mm宽、19mm厚，所有表面均经过密封处理。

CLD Structural Cavity Batten must be fixed to the studs over flexible underlay or rigid air barrier. The battens are run continuously over the studs but they must have a gap at the floor joist level to allow for structural shrinkage and deflection in joists, refer to Figure 27 and 29.

CLD空心结构板条必须通过弹性隔层或者刚性密封板安装在墙筋上。板条需连续不断地安装在墙筋上，但安装时必须在每层地板龙骨层留有一个空隙，以便为龙骨的收缩变形留出余地。详见图27和29。

The CLD Structural Cavity Batten can also be butt jointed over the studs within the floor height. The batten ends must be cut between 20°- 45° and be installed to deflect the moisture to exterior. The ends must be sealed and butted using an adhesive sealant in the joint, refer to Figure 6.

CLD空心结构板条也可以尾接的方式安装在地板高度的墙筋上。板条的末端必须切割成20° — 45°角的斜面，安装时将湿气导至外部。切割后的末端必须使用密封胶，并将涂有黏性密封胶的末端安装在连接处，参见图6。

The minimum framing width required to fix CLD Structural Cavity Batten is 45mm, refer to Figure 7. All site cut ends of CLD Structural Cavity Battens must be sealed on site with Dulux Acraprime 501/1 sealer or Resene Quick Dry before installation. Refer to Table 5 for CLD Structural Cavity Batten spacing and fixing size and fixing centres.

安装CLD空心结构板条的屋体框架宽度最小为45mm，参见图7。所有在施工现场切割的板材末端，必须在安装前使用Dulux Acraprime 501/1或Resene Quick Dry密封。关于CLD空心结构板条的间距、安装尺寸和中心间距，请参阅表5 。

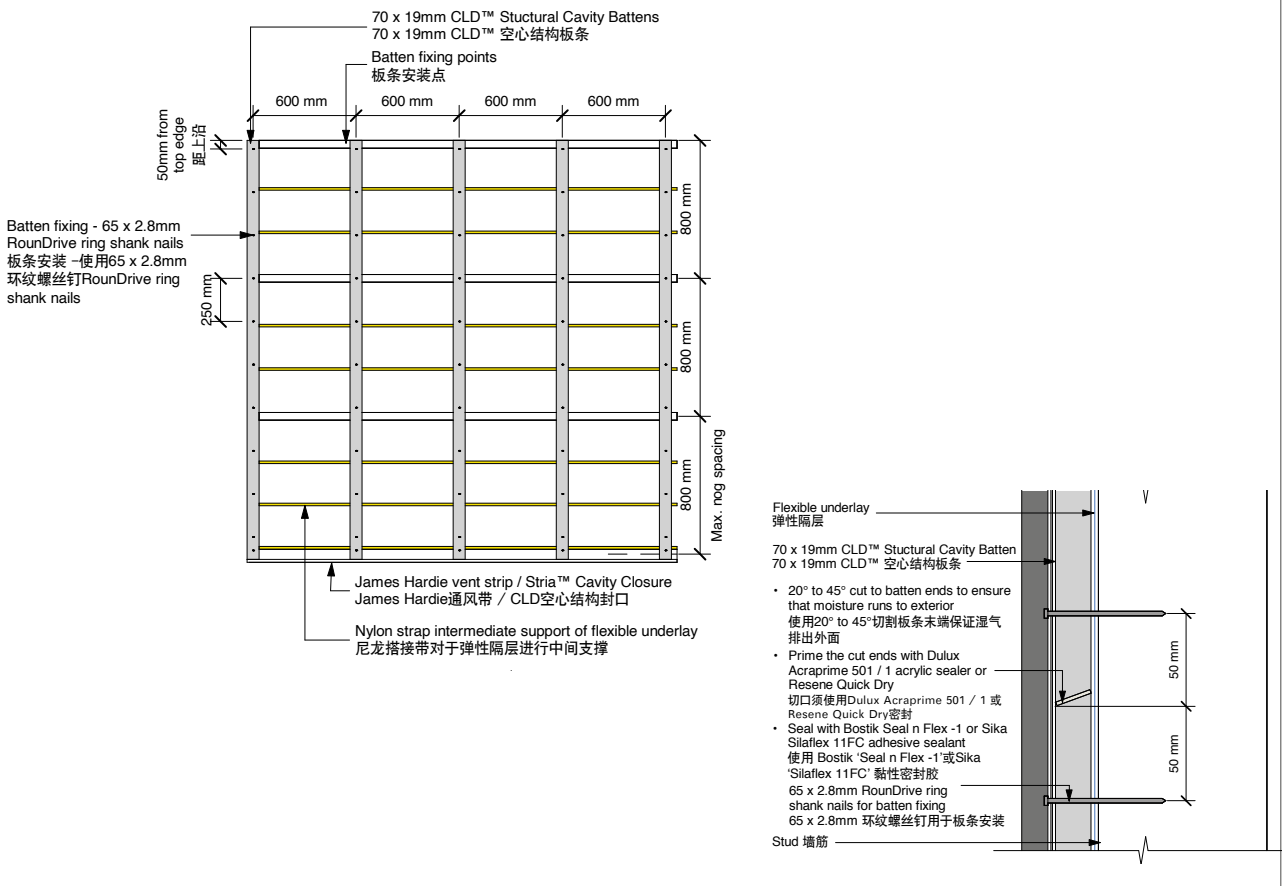
The designer must ensure that the CLD Strutural Cavity Battens are not used in situations where design wind pressures are above 2.5kPa (ULS).

设计师必须确保CLD空心结构板条不被用于设计风压大于2.5kPa (ULS) 的情况。

CLD Structural Cavity Battens must not be used to a length smaller than 300mm.

CLD空心结构板条使用长度不能小于300mm。

Figure 6: Batten fixing set out | 图6: 板条安装布局图



6.9 Joints 连接

6.9.1 Vertical Joint 纵向连接

Stria Cladding can be jointed using a vertical joint flashing, refer to Figures 7 and 8.
Stria外墙板可以采用纵向连接防水板进行连接。详见图7和8

6.9.2 Horizontal Joint 横向连接

Stria Cladding panels are horizontally ship lapped over the panel below as per Figure 1. There is a minimum 25mm lap between the two panels. Ensure that Stria Cladding panels are securely interlocked before nailing. Stria Cladding can run continuous over floor joists without any horizontal joint when LVL timber floor joists, refer to Figure 28.
Stria外墙板可以横向搭叠进行连接，如图1。两块板之间的搭叠长度最小为25mm。在入钉前，应确保外墙板之间搭扣锁住。Stria外墙板可以连续不断地水平铺于地板龙骨上，而无需任何水平连接防水板，前提是龙骨材质为单板层积材木质龙骨。参见图28。

When an engineered joist or LVL joist is not used, a movement joint must be formed at floor joist, refer to Figure 27 or 29.
当使用的不是工程龙骨或单板层积材龙骨时，移动接缝必须在地板龙骨上详见图27或29。

6.9.3 Drainage Joint 排水处连接

After every two floors a horizontal drainage joint flashing is required, refer to Figure 29.
每两层楼需安装一块横向排水接缝防水板，参见图29。

Jointing Details 连接详图

Figure 7: Vertical jointing option | 图7: 纵向连接可选方案

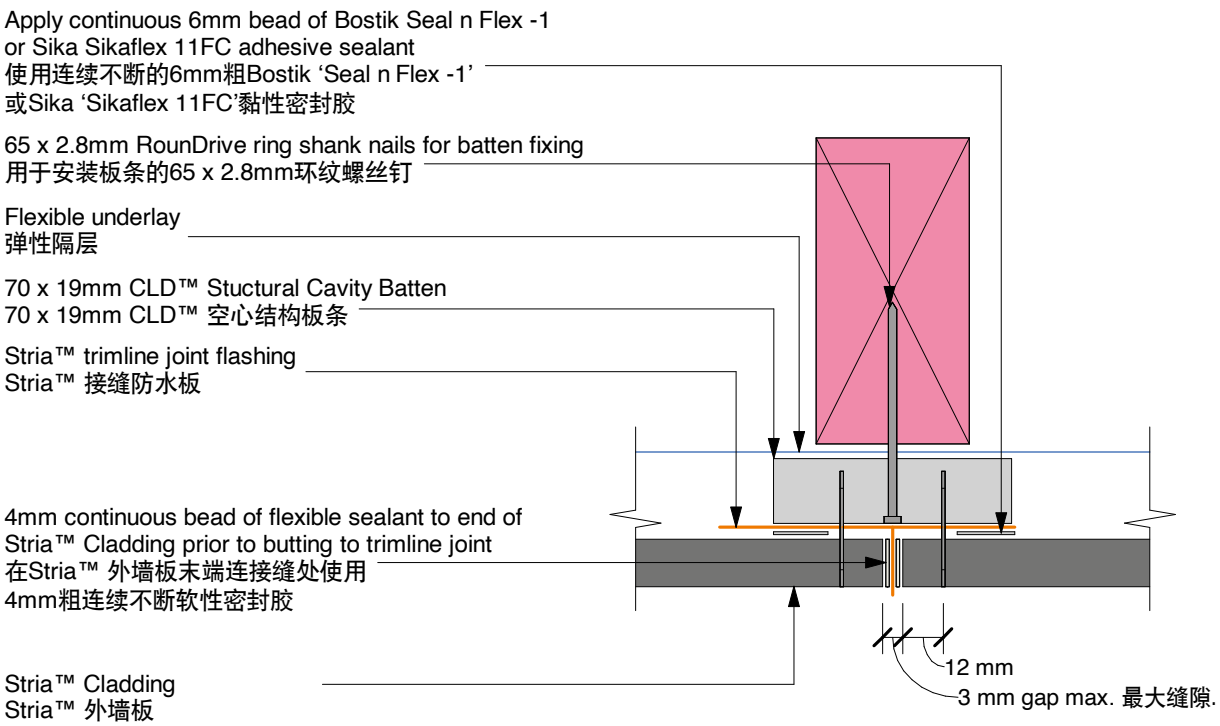
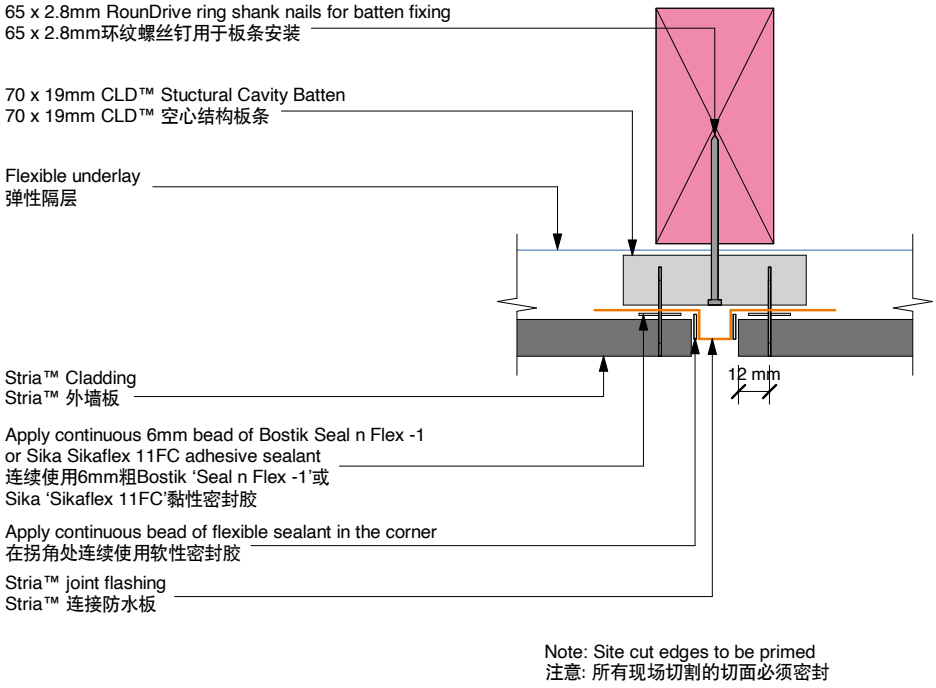


Figure 8: Vertical jointing option | 图8: 纵向连接可选方案



6.9.4 External Corner Joint 阳角连接

An external box corner flashing is used to fix the external corners, refer to Figures 9, 10 and 11. **Note:** Fix all vertical mouldings at 400mm centres both sides.

在阳角处需安装阳角箱角防水板，参见图9、10和11。**备注：**将所有垂直线条固定在距两侧400mm位置

Figure 9: External aluminium box corner option 1 | 图9: 铝制阳角箱角方案1

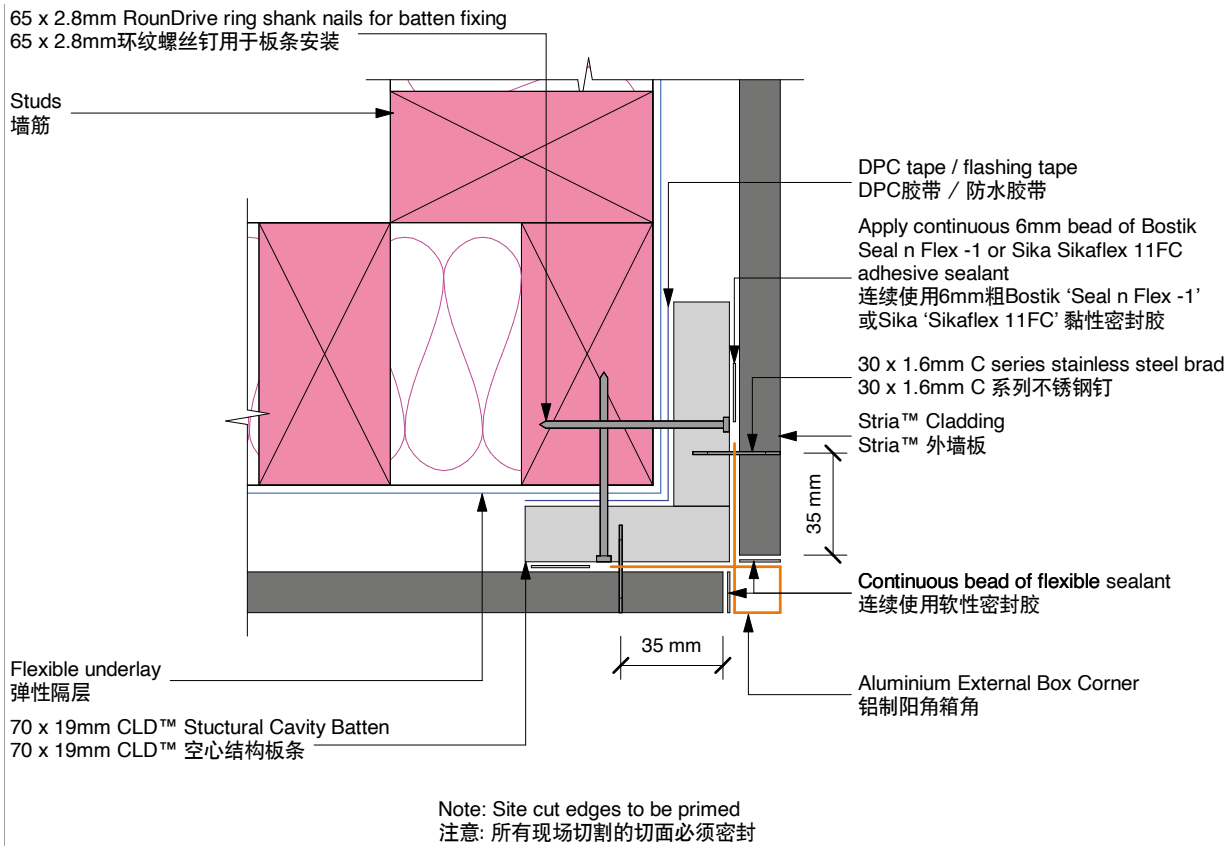
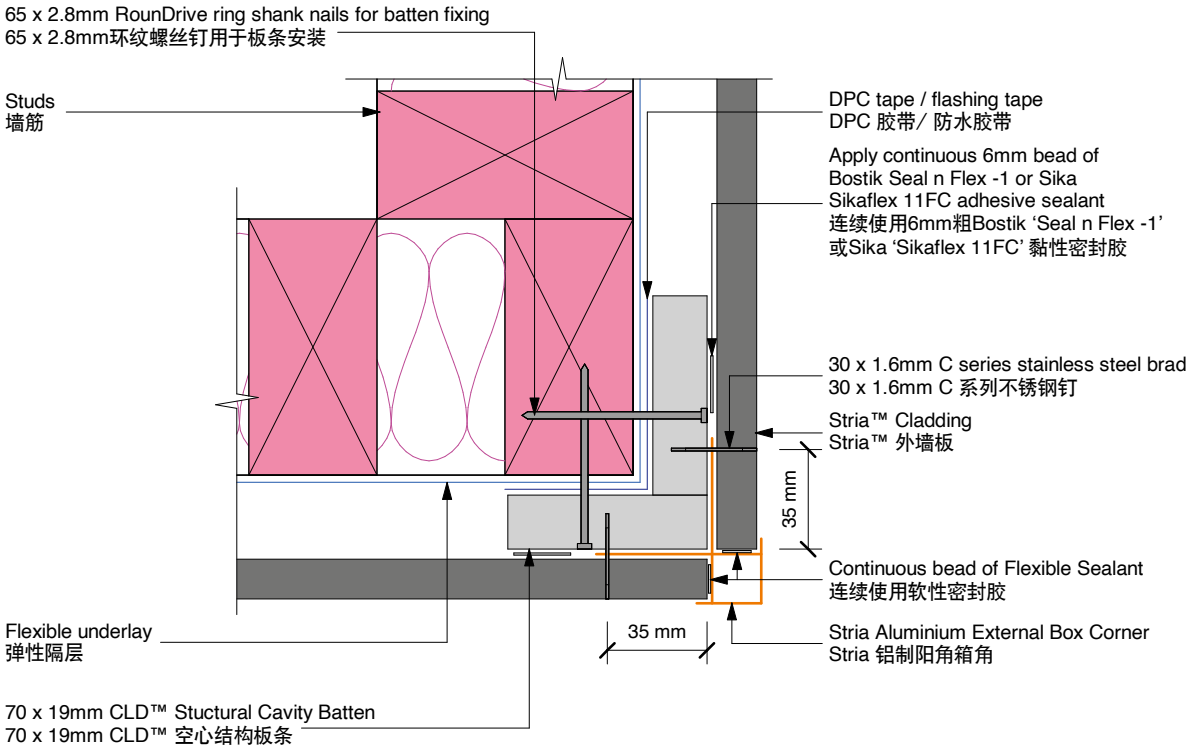
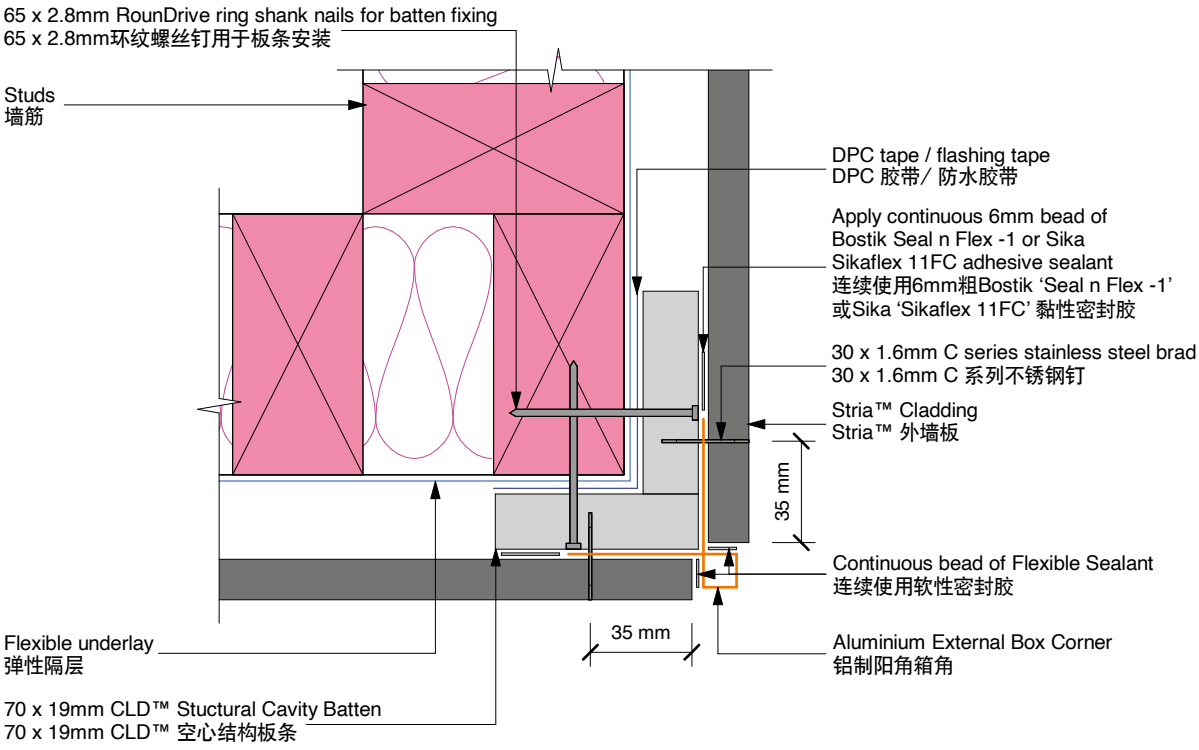


Figure 10: External aluminium box corner with wings | 图10: 带侧翼的铝制阳角箱角



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 11: External aluminium box corner negative detail | 图11: 铝制阳角箱角详图角

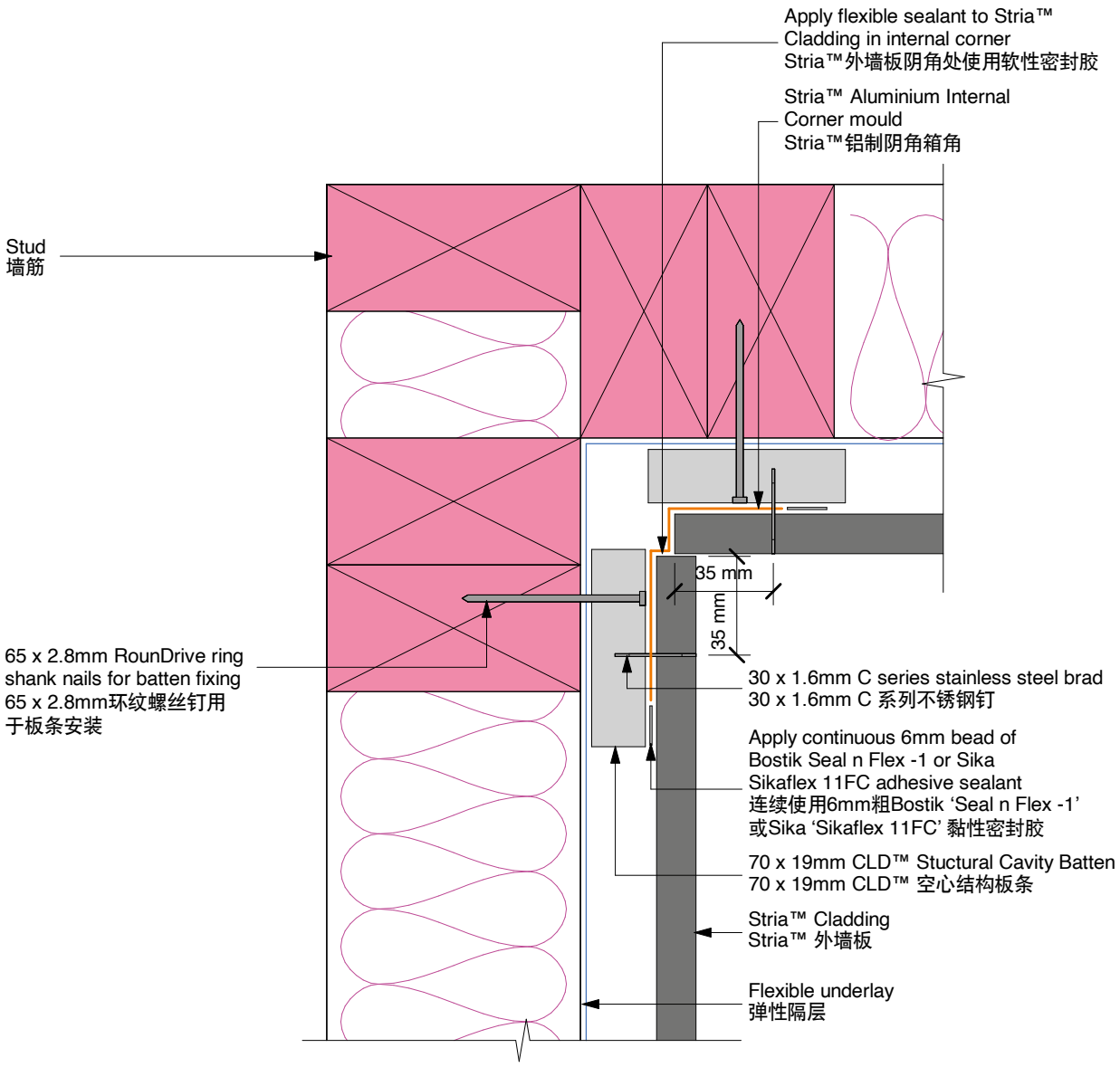


Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

6.9.5 Internal Corner Joint 阴角连接

An internal corner flashing is to be used to form an internal corner joint, refer below.
在阴角处需安装阴角防水板，参见以下。

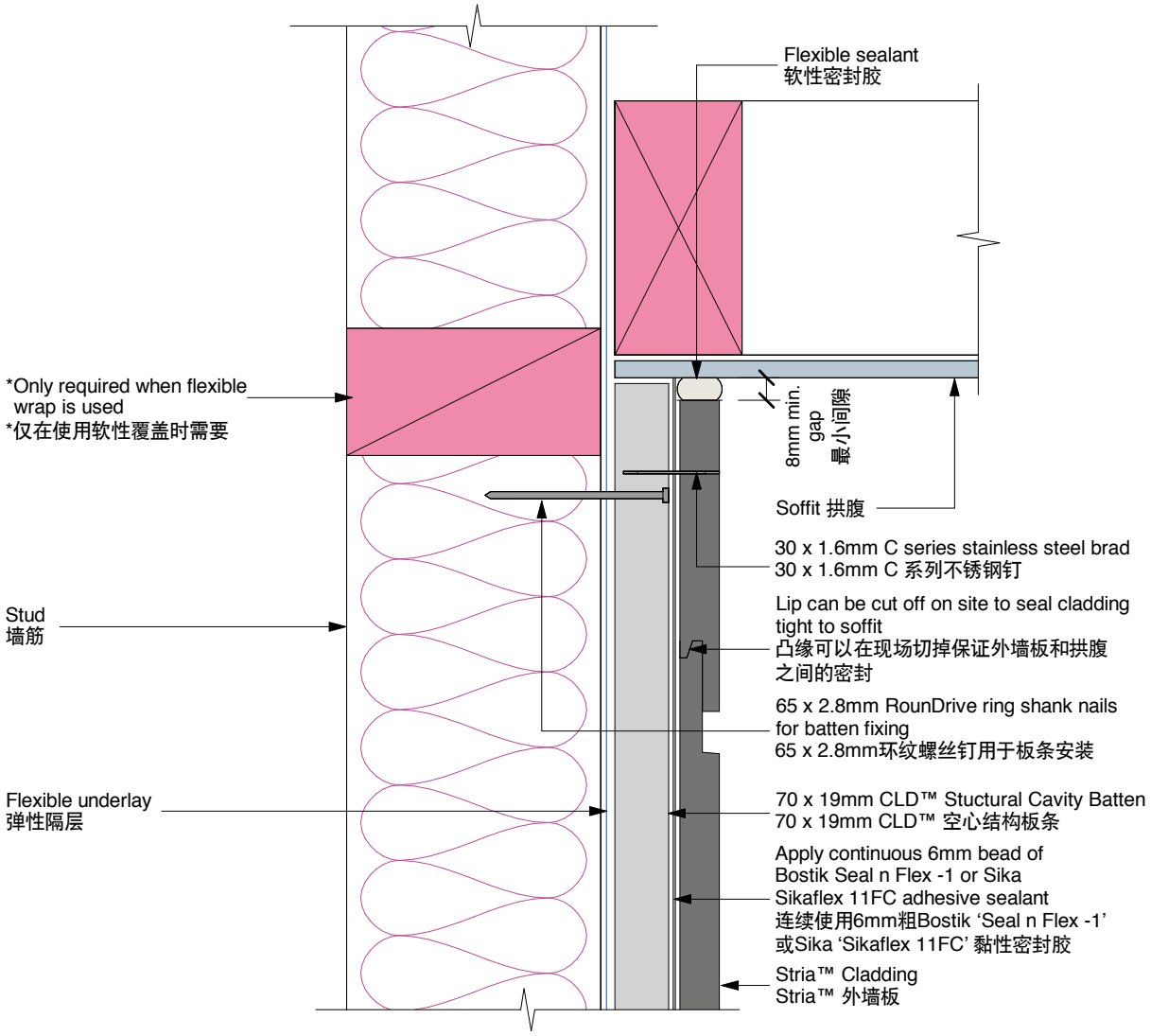
Figure 12: Internal aluminium corner | 图12: 铝制阴角



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Note: All joint mouldings to be fixed at 400mm centres both sides.
注意: 以两边皆为400mm的中心间距纵向安装

Figure 13: Soffit detail | 图13: 拱腹详图



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 14: Nil soffit detail | 图14: 零拱腹详图

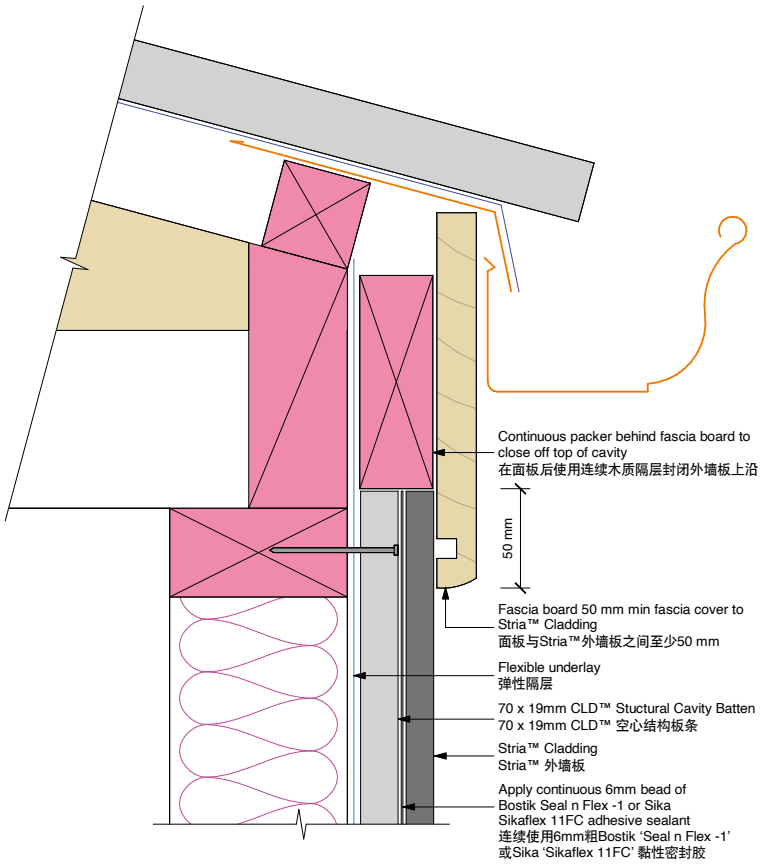


Figure 15: Soffit detail top ventilation | 图15: 拱腹顶部通风详图

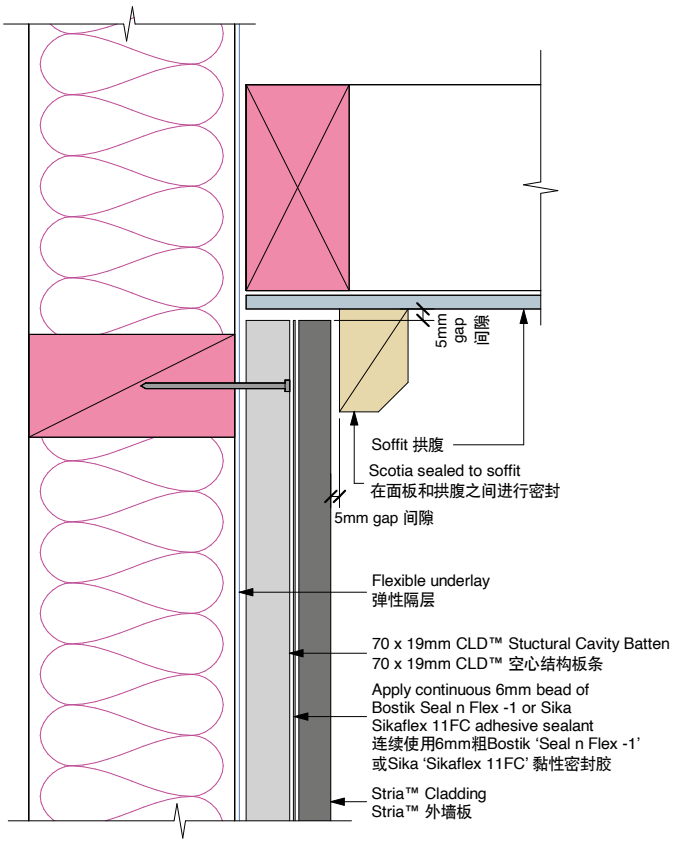
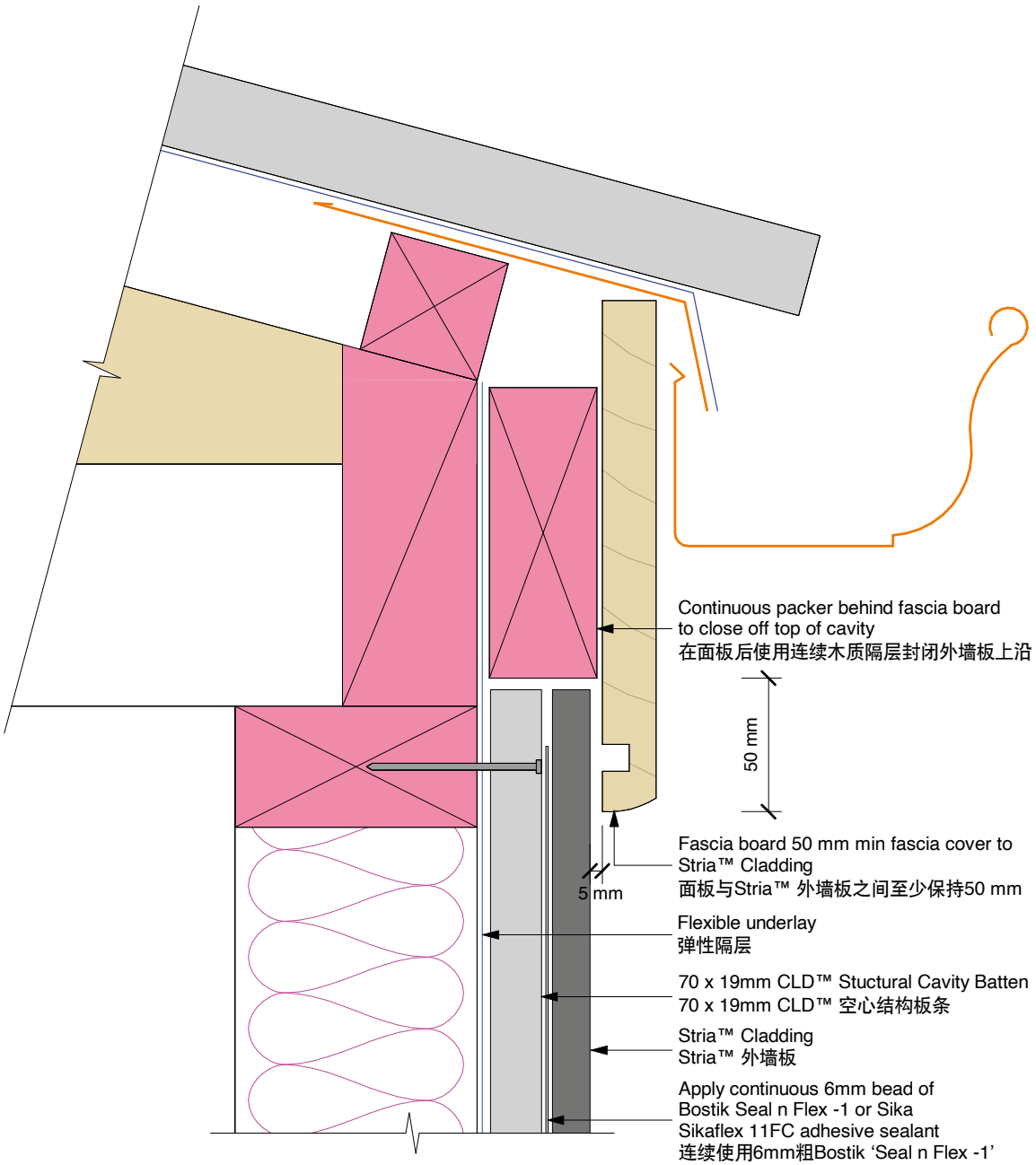


Figure 16: Nil soffit detail top ventilation | 图16: 零拱腹顶部通风详图



6.10 Junctions and Penetrations 连接和渗透

Refer to Clause 4.4 of this specification for moisture management requirements. All windows and doors must be detailed as per the requirements of this specification. James Hardie has developed the window details for Stria Cladding which meet the requirements of E2 External Moisture, an approved document of the NZBC, refer to Figures 17 to 25.

参阅本规范第4.4部分关于湿度控制的要求。所有门窗必须根据本规范的要求进行细化处理。James Hardie 开发了针对Stria外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。详见图17至25。

Window Details 窗户详图

Figure 17: Window sill | 图17: 窗台

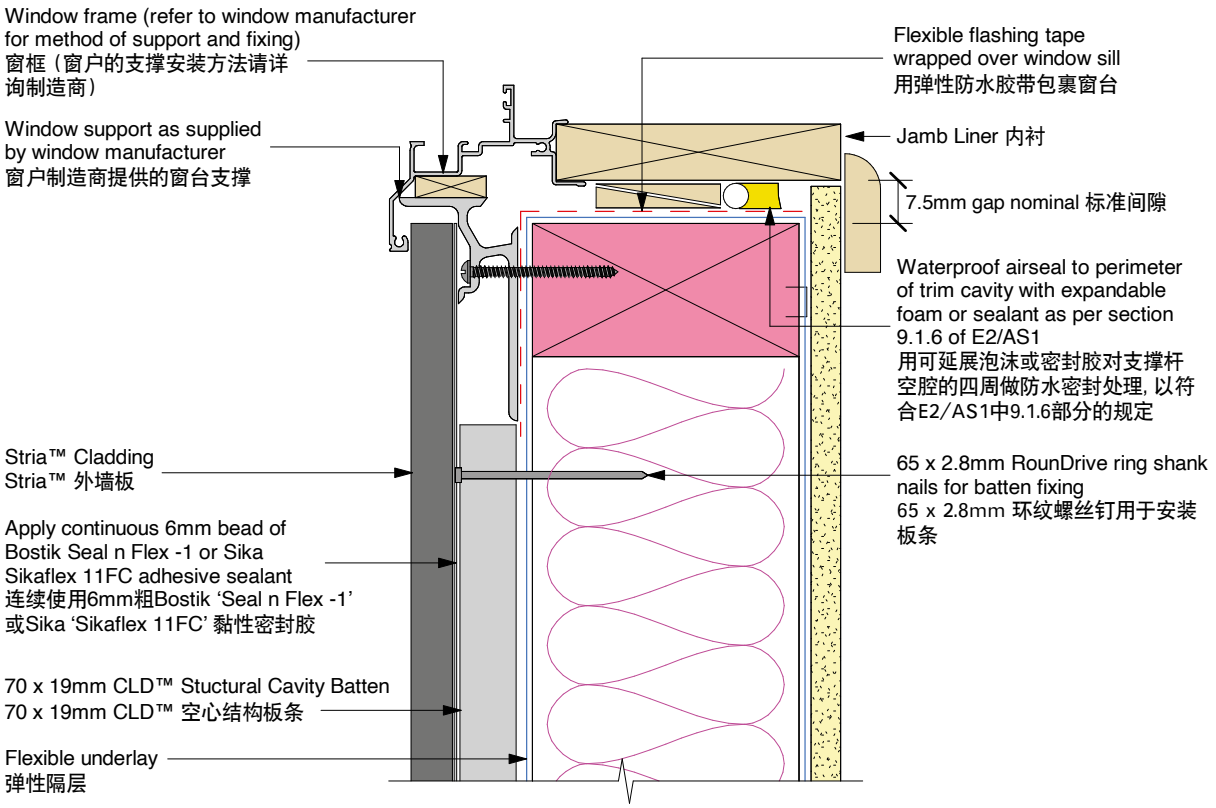
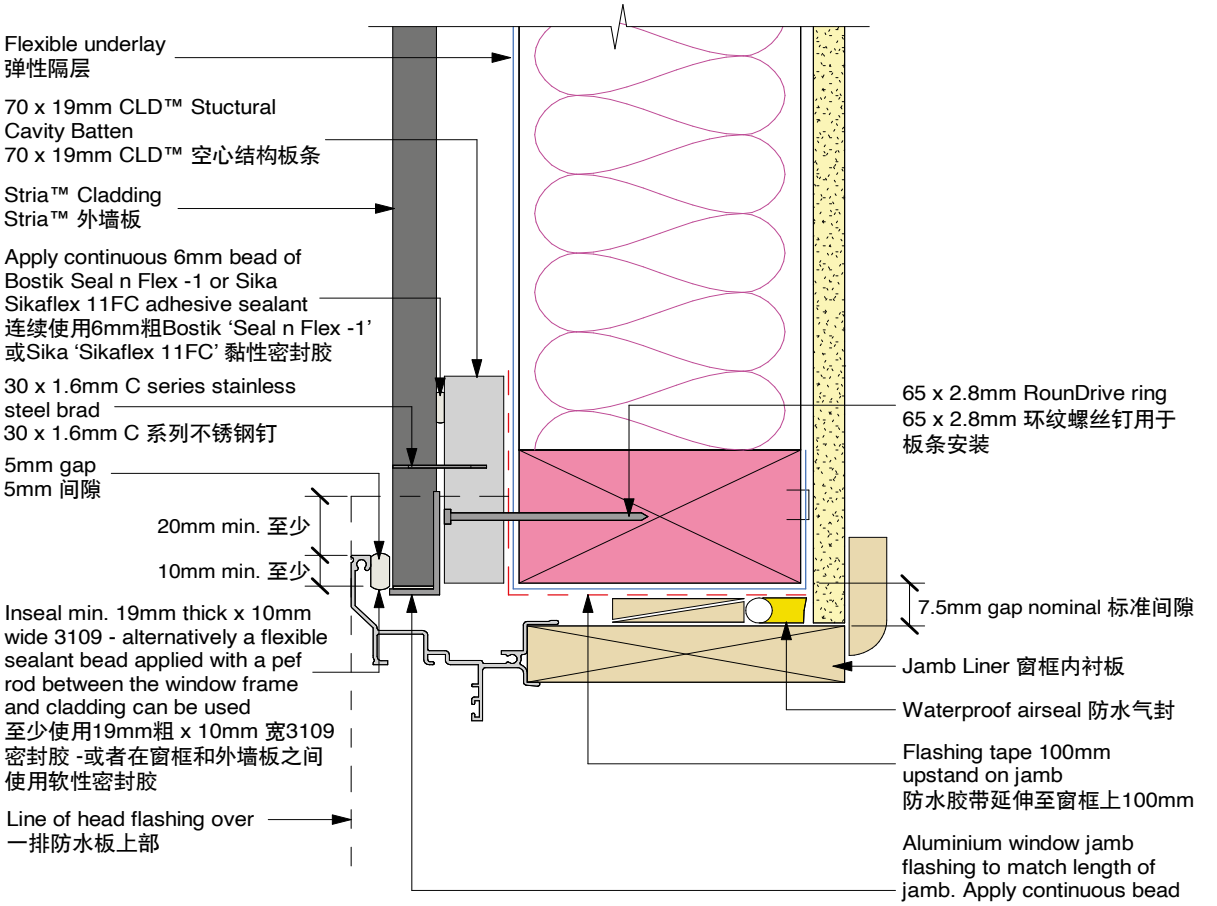
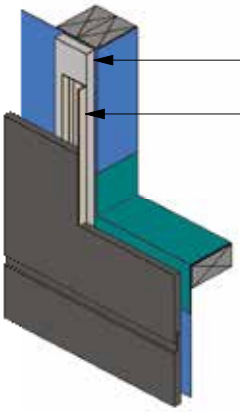


Figure 18: Window jamb | 图18: 窗框



Note: When James Hardie rigid air barriers are used flashing tape to be applied to the entire window opening
注意：当使用James Hardie刚性密封板时，必须在全窗开口区配合使用防水胶带。



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 19: Window head with full cladding across head flashing
图19: 四周环绕着外墙板并贯穿防水板的窗楣

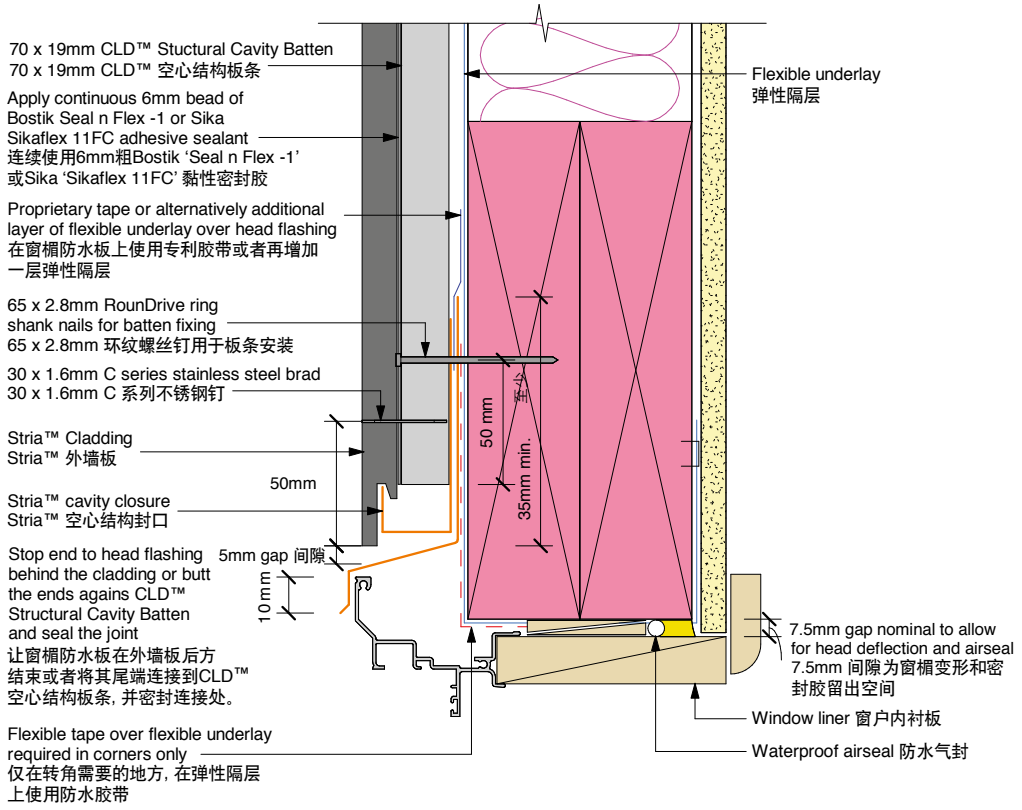
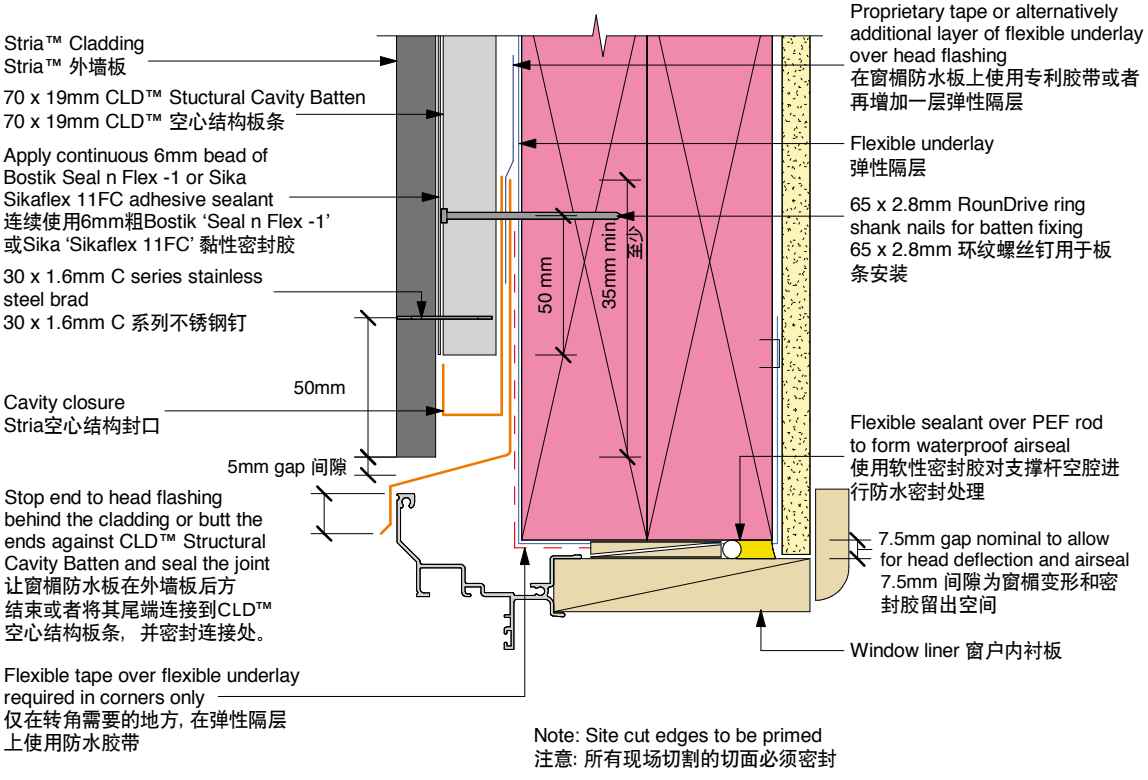
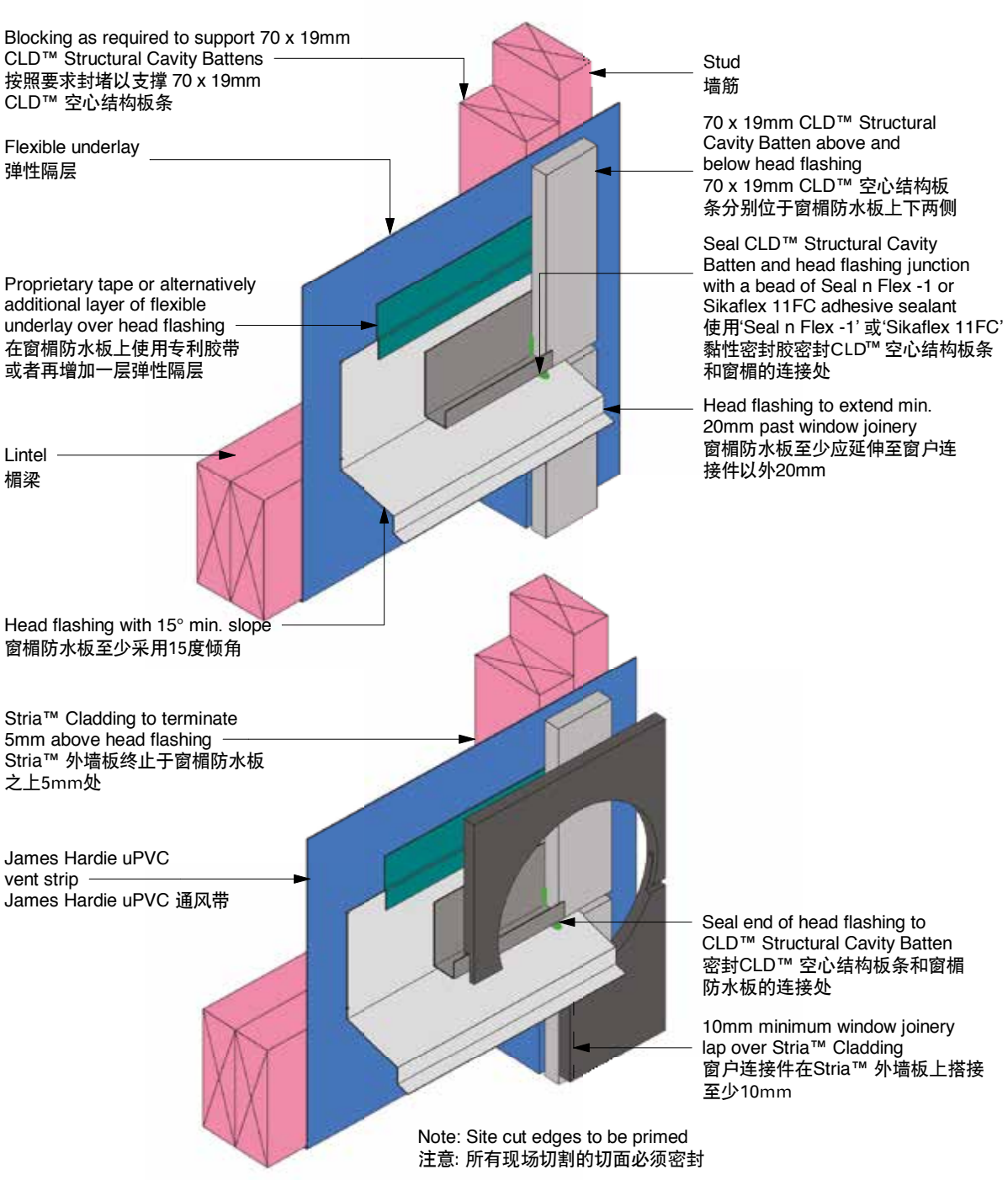


Figure 20: Window head with cladding cut around head flashing
图20: 窗楣——外墙板在窗楣防水板处经过切割



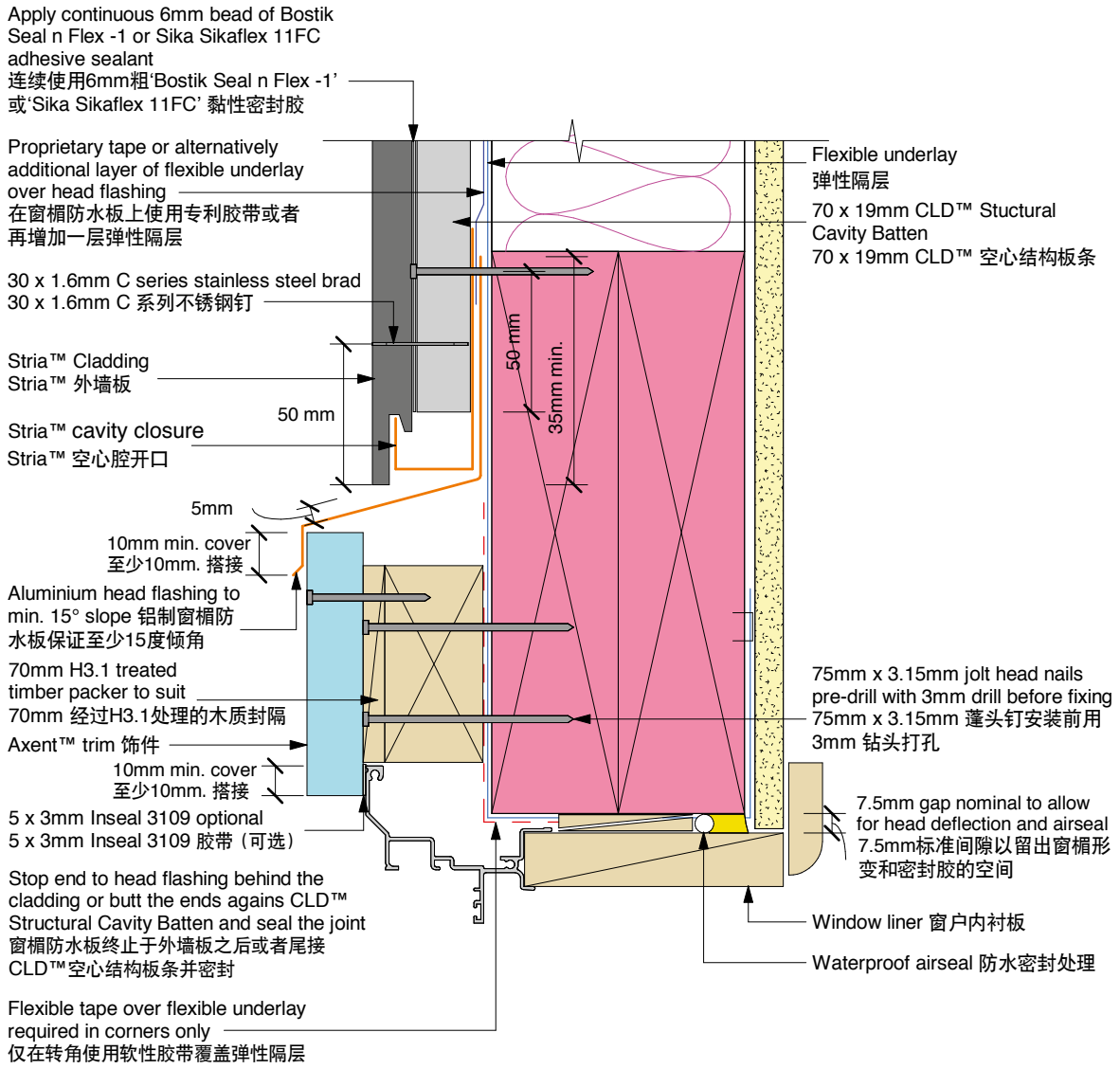
Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 21: Window head stop end
图21: 窗楣末端



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

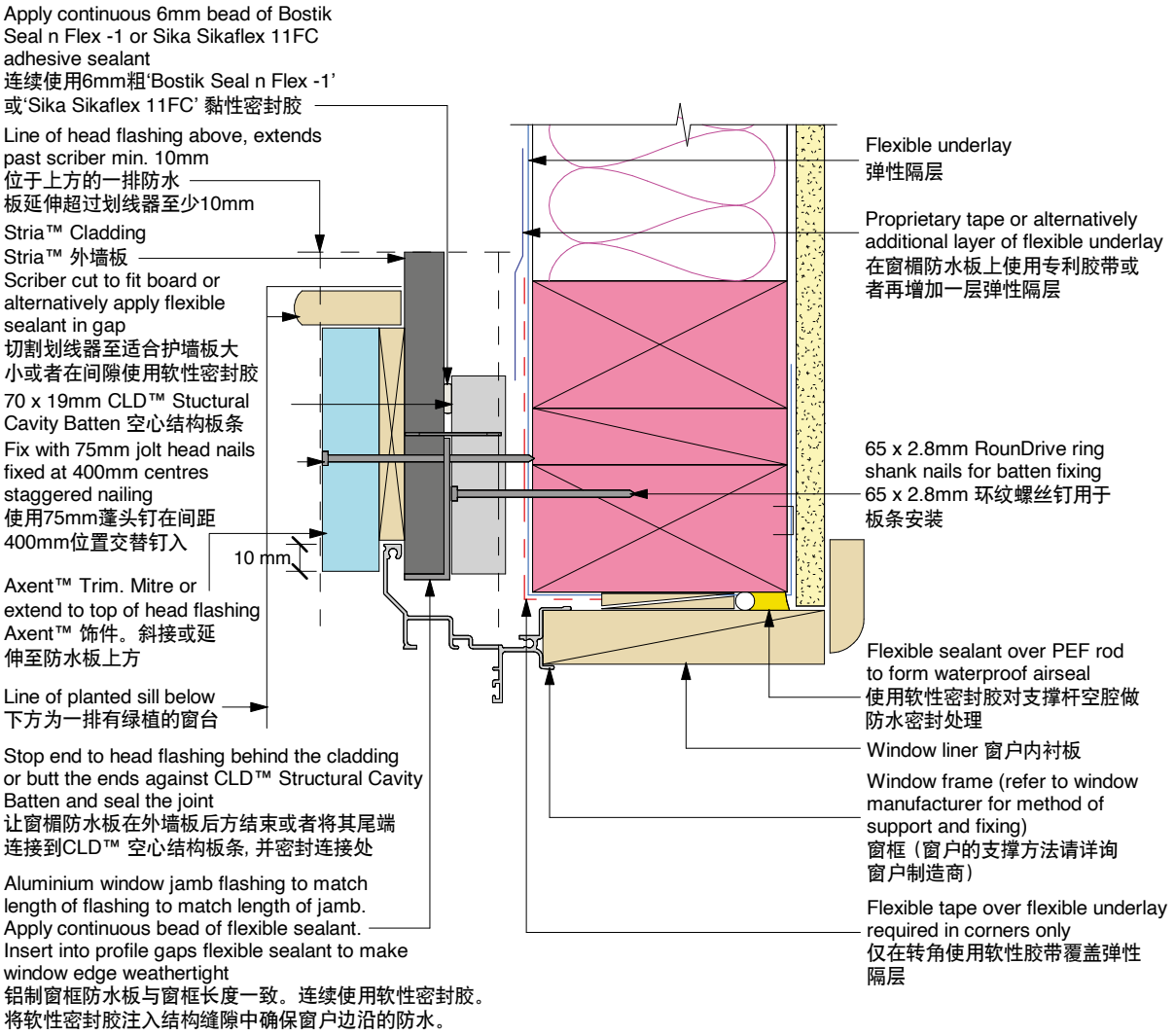
Figure 22: Window head with facings | 图22: 带有装饰面的窗楣



Note 注意:

- When James Hardie rigid air barrier is used flashing tape to be applied to the entire window opening
- 当使用James Hardie刚性密封板时, 必须在全窗开口区配合使用防水胶带
- Sealant must be installed between head flashing and window flange VH and EH wind zones and SED pressures
- 在VH和EH风区以及特殊设计项目中, 必须在窗楣防水板和窗户边缘中使用密封胶
- Alternatively, the head flashings can be formed with stop ends as per E2/AS1
- 根据E2/AS1的规定, 窗楣防水板也可用断面替代

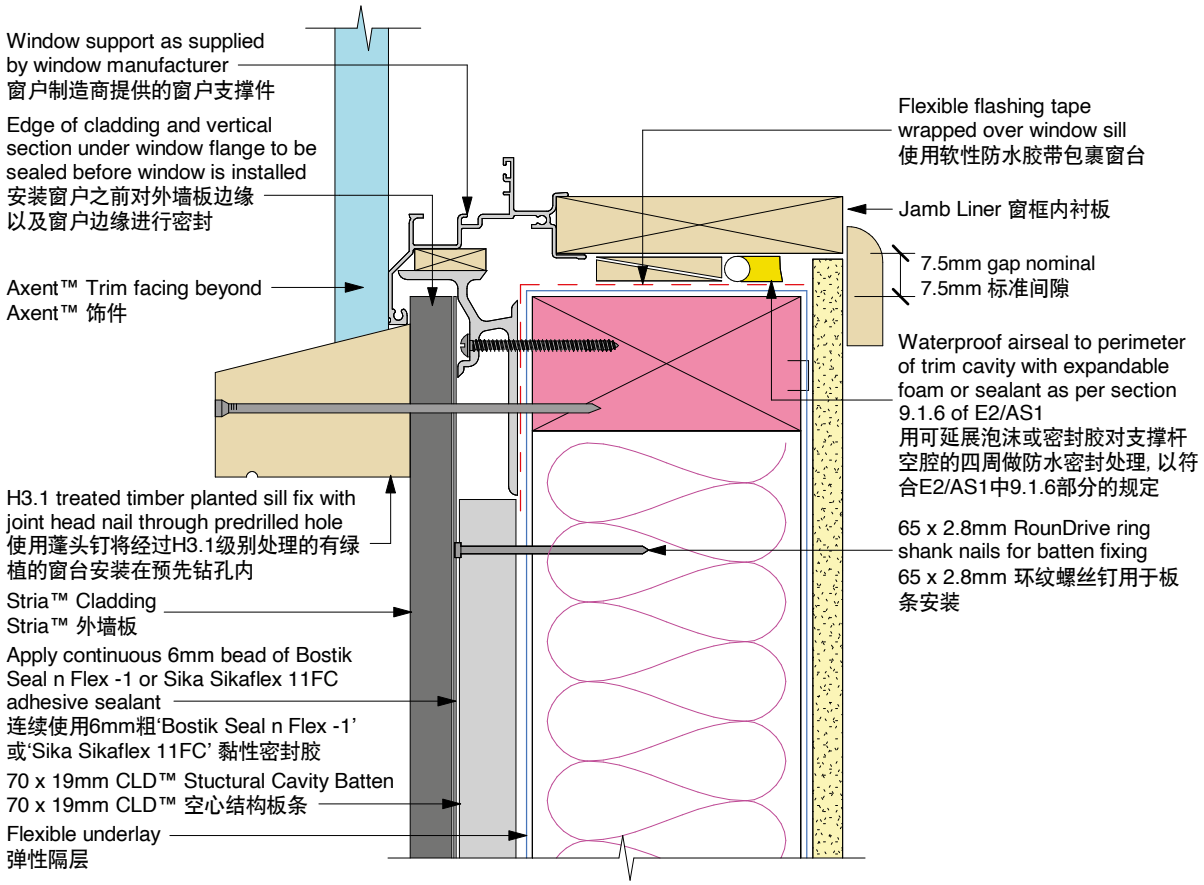
Figure 23: Window jamb with facing | 图23: 带有装饰面的窗框



Note 注意:

- When James Hardie rigid air barrier is used flashing tape to be applied to the entire window opening
- 当使用James Hardie刚性密封板时, 必须在全窗开口区配合使用防水胶带
- Site cut edges to be primed
- 所有现场切割的切面必须密封

Figure 24: Window sill with facing | 图24: 装有饰板的窗台

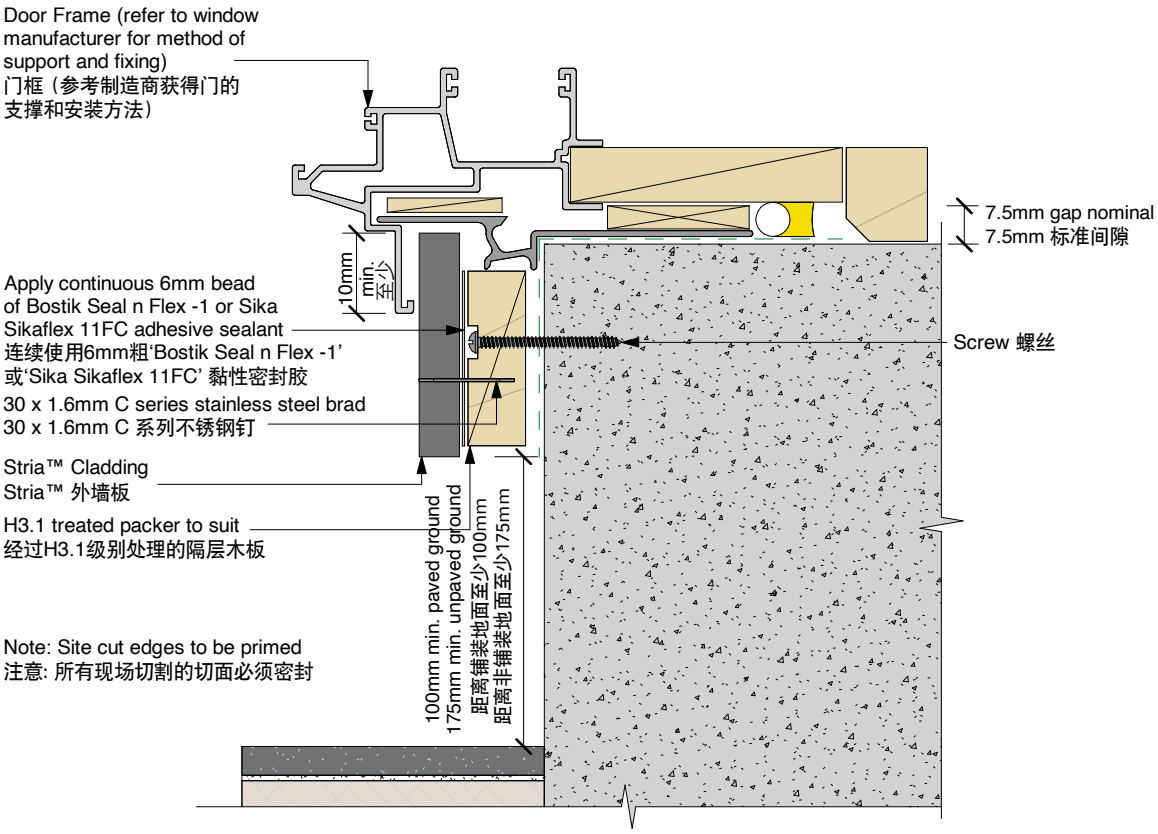


General notes for materials selection:
关于材料选择的常规注意:

1. Flashing materials must be selected based on environmental exposure, refer to NZS 3604 and Table 20 of NZBC E2/AS1
   防水材料必须基于所处的环境来选择, 详情请参阅NZS 3604和NZBC条款E2/AS1, 表20。
2. Flexible underlay must comply with acceptable solution E2/AS1
   弹性隔层必须符合合格方案条款E2/AS1的规定。
3. Flashing tape must have proven compatibility with the selected flexible underlay and other materials with which it comes into contact
   防水胶带必须与所选的弹性隔层或其它相互接触的材料兼容。
4. When James Hardie rigid air barriers are used flashing tape to be applied to the entire opening
   当使用James Hardie刚性密封板时, 其所有暴露区域均需使用防水胶带。

Refer to the manufacturer or supplier for technical information for these materials.
详询制造商或者供应商获得相关材料的技术信息。

Figure 25: Door sill support detail | 图25: 门框支撑详图

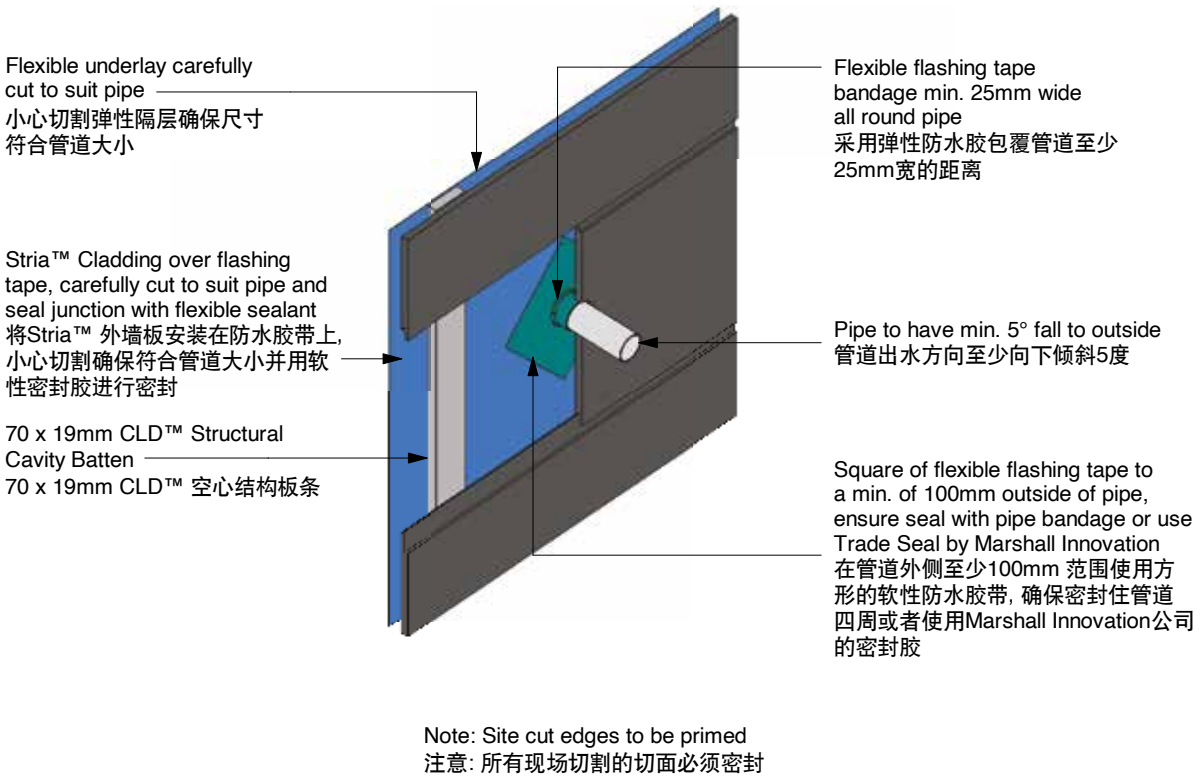


Refer to the manufacturer or supplier for technical information for these materials
详询制造商或者供应商获得相关材料的技术信息

General notes for materials selection:
关于材料选择的常规注意:

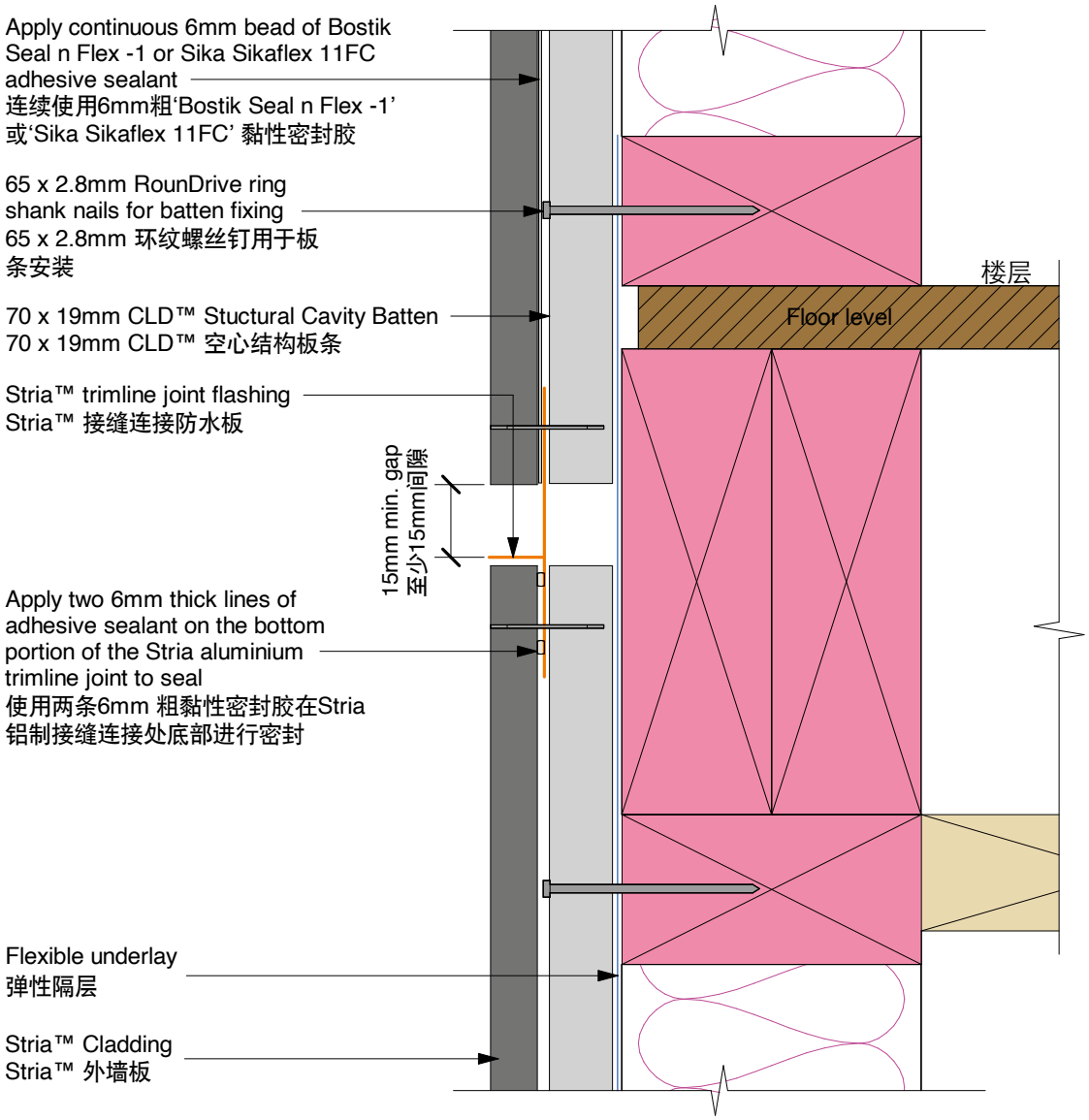
1. Flashing materials must be selected based on environmental exposure, refer to NZS 3604 and Table 20 of NZBC E2/AS1
   防水材料必须基于所处的环境来选择, 详情请参阅NZS 3604和NZBC条款E2/AS1, 表20。
2. Flexible underlay must comply with acceptable solution E2/AS1
   弹性隔层必须符合合格方案条款E2/AS1的规定。
3. Flashing tape must have proven compatibility with the selected flexible underlay and other materials with which it comes into contact
   防水胶带必须与所选的弹性隔层或其它相互接触的材料兼容。
4. When James Hardie rigid air barriers are used flashing tape to be applied to the entire opening
   当使用James Hardie刚性密封板时, 其所有暴露区域均需使用防水胶带。

Figure 26: Pipe penetration | 图26: 管道穿透



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 27: Trimline joint flashing at floor level | 图27: 一楼接缝连接防水板



STEP 1 第一步:
- Check architects plans for the type of flashing to be used
  查看建筑工程师的设计，找出适用的防水板类型

STEP 2 第二步:
- Check fixing centres and edge distances
  查看安装中心距离和边缘距离

STEP 3 第三步:
- When 50 year durability is required refer Table 20 E2/AS1
  如果需要50年以上的耐久度, 则需参阅20 E2/AS1中的表20

STEP 4 第四步:
- The flashing to be placed in the centre of the floor joists. Do not fix cavity battens or cladding into floor joist
  请在地板龙骨的中心位置装防水板。请勿将空心结构板条或外墙板安装在地板龙骨上。

Notes 注意:
- Take care to ensure continuous seal is formed between panel and the trimline joint
  在面板和接缝连接之间务必确保连续密封
- Trimline horizontal Jointer will be required over the butt joint of the Stria aluminium trimline joint
  横向接缝连接件需要搭接在Stria铝制接缝尾部
- Site cut edges to be primed
  所有现场切割的切面必须密封

Figure 28: Continuous cladding over joist at floor level
图28: 一楼位于龙骨上的连续外墙板

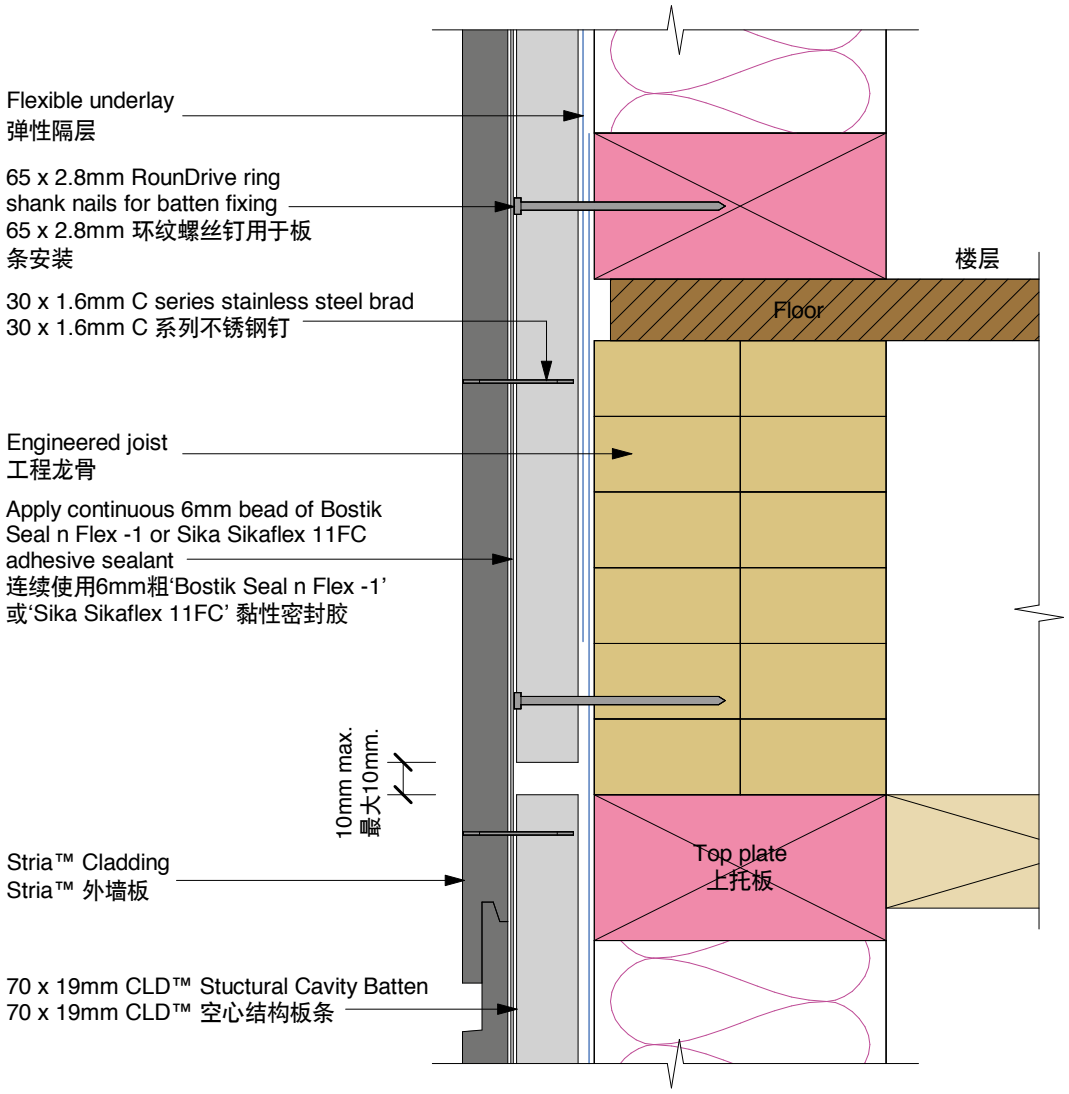
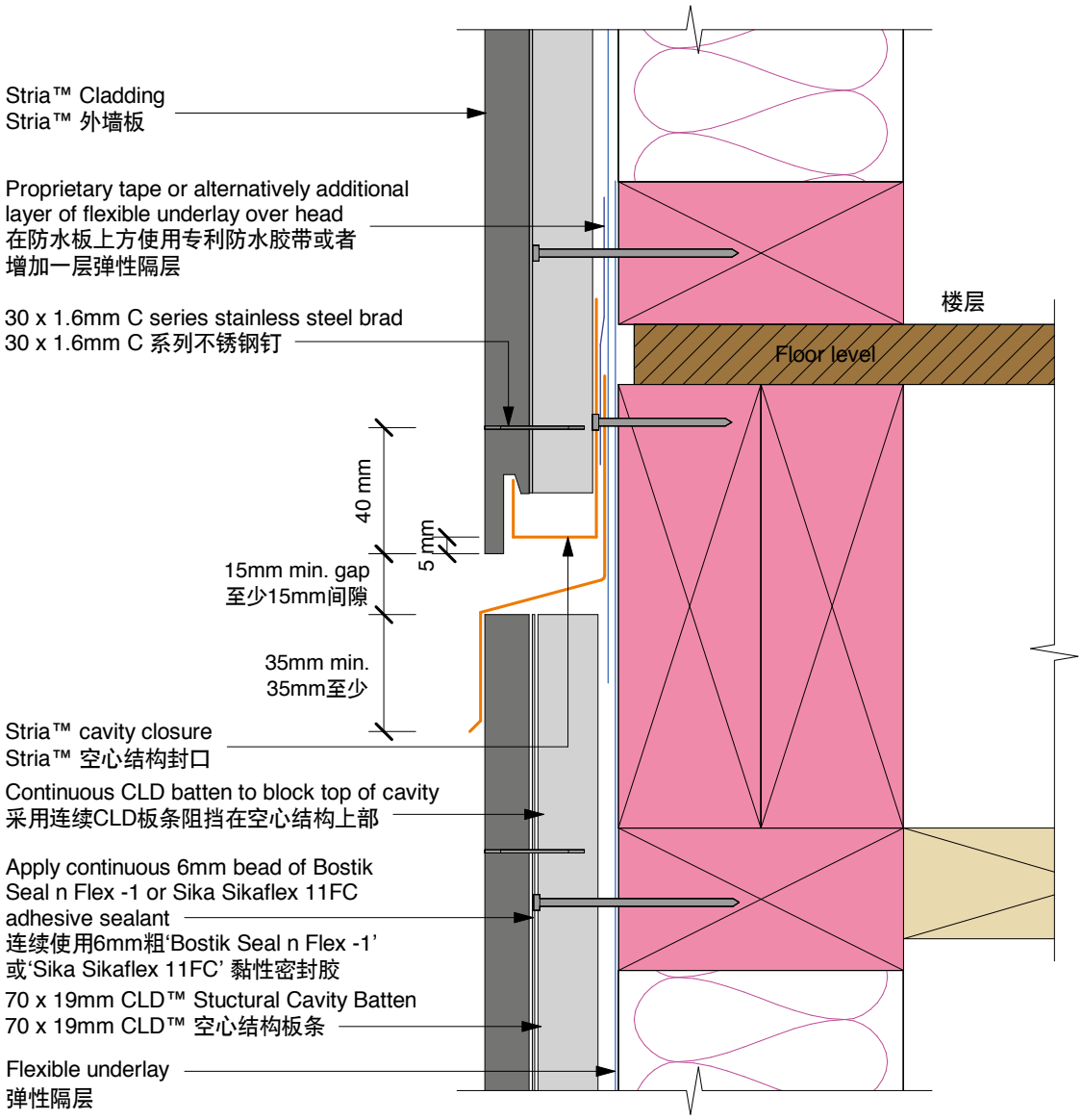


Figure 29: Drained flashing joint at floor level | 图29: 一楼的排水接缝防水板



STEP 1 第一步:
- Check architects plans for the type of flashing to be used
  查看建筑工程师的设计，找出适用的防水板类型

STEP 2 第二步:
- Check fixing centres and edge distances
  查看安装中心距离和边缘距离
- If top fixings are to be hidden by the Z flashing they will need to be fixed and sealed
  如果顶部的安装会被z形防水板挡住, 则应当先完成顶部安装并密封, 而后再安装z形防水板。
- Cut edges need to be primed
  所有现场切割的切面必须密封

STEP 3 第三步:
- When 50 year durability is required refer Table 20 E2/AS1
  如果需要50年以上的耐久度, 则需参阅 E2/AS1中的表20

STEP 4 第四步:
- The flashing to be placed in the centre of the floor joists. Do not fix CLD™ Structural cavity battens or cladding into floor joists
  请在地板龙骨的中心位置装防水板。请勿将CLD™ 空心结构板条或外墙板安装在地板龙骨上。

Figure 30: Trimline joint flashing at external corner
图30: 阳角处的接缝连接防水板

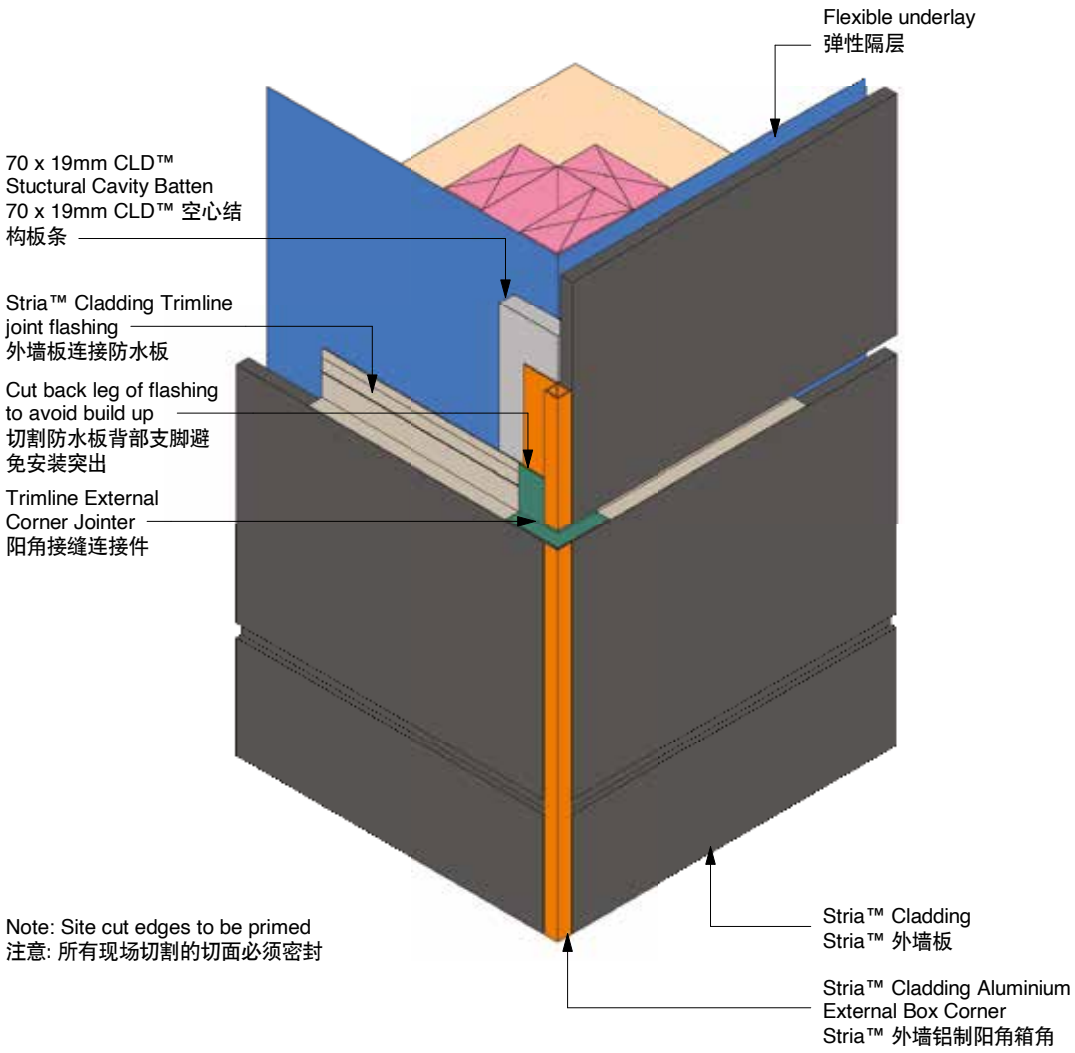
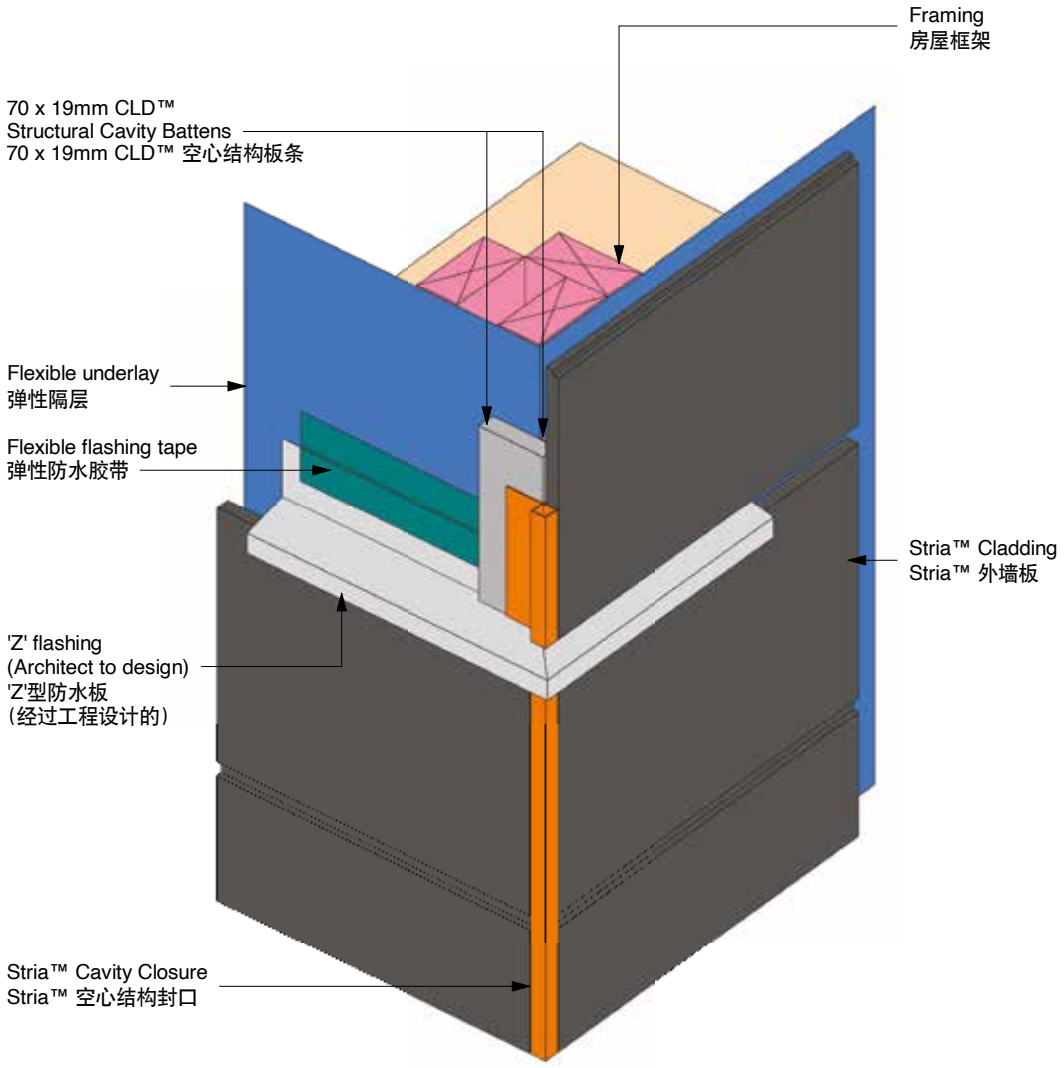
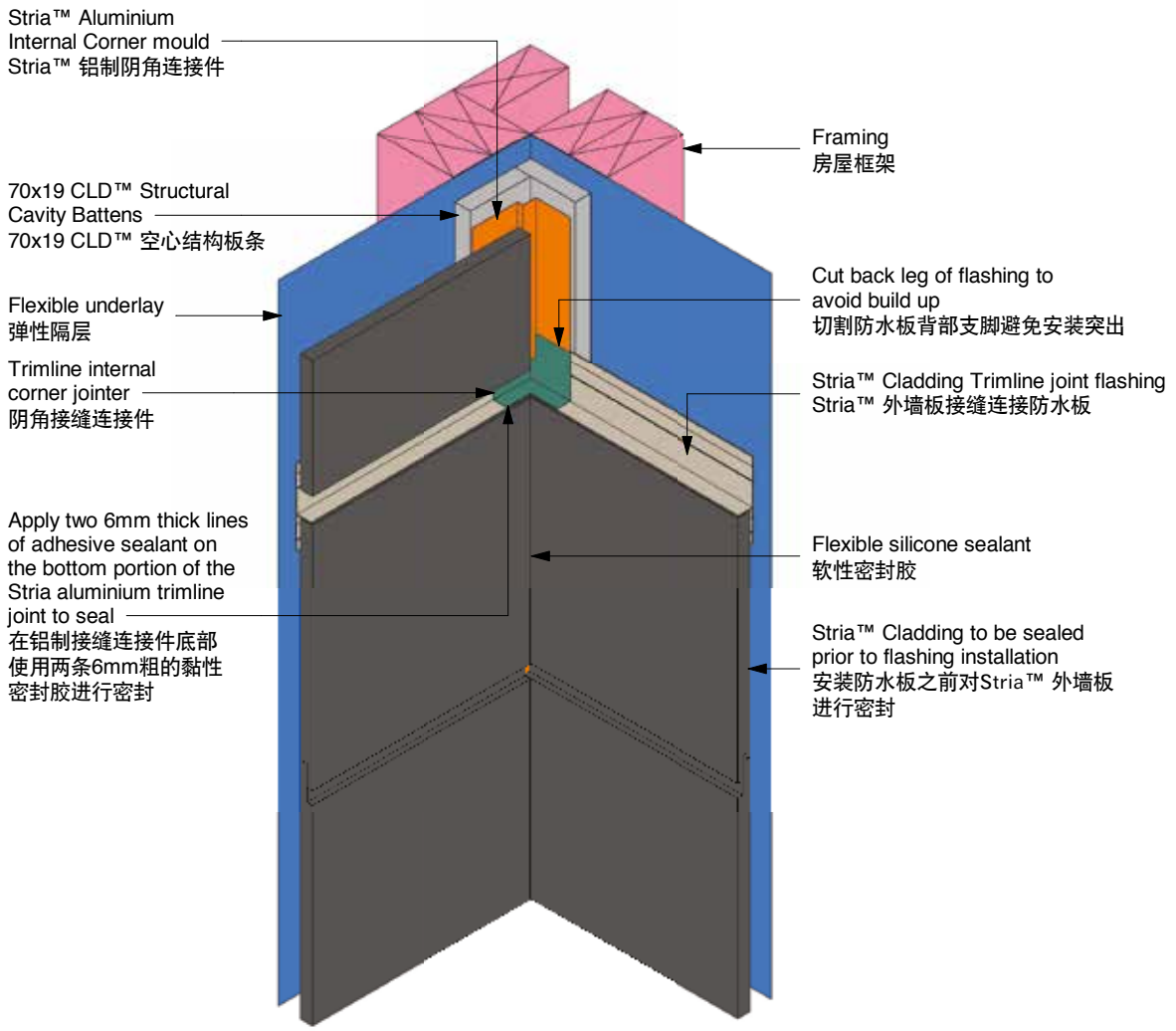


Figure 31: Drained flashing at external corner
图31: 阳角处排水防水板



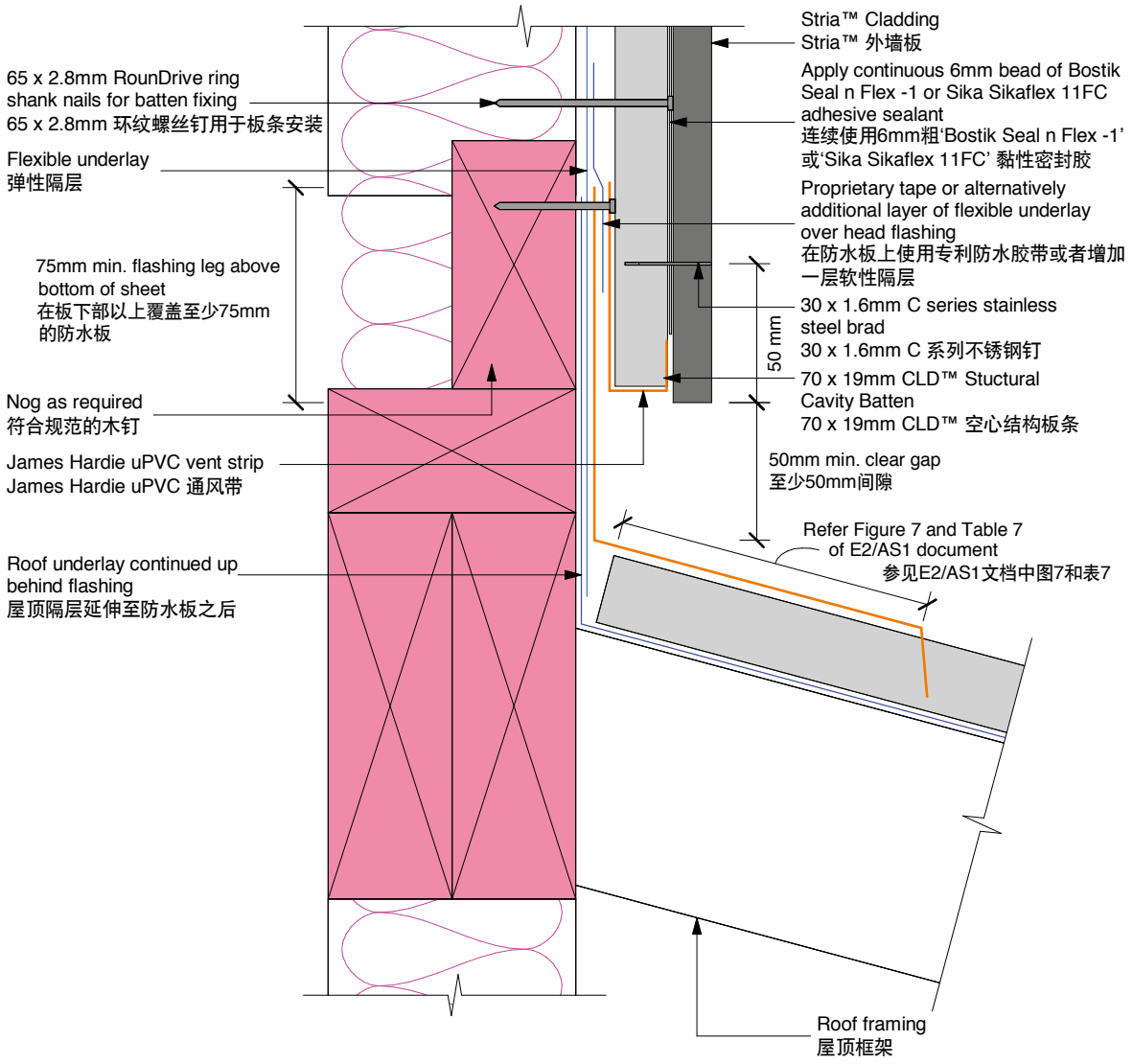
Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 32: Trimline joint flashing at internal corner
图32: 阴角的接缝连接防水板



Flashing Details 防水板详图

Figure 33: Apron flashing detail | 图33: 烟囱防水板详图



Notes 注意:

- When 50 year durability for flashing is required refer to Table 20 NZBC E2/AS1 document
  如果需要50年以上的耐久性, 则必须参见E2/AS1中的表20。
- Site cut edges to be primed
  所有现场切割的切面必须密封

Figure 34: Parapet flashing | 图34: 矮墙防水

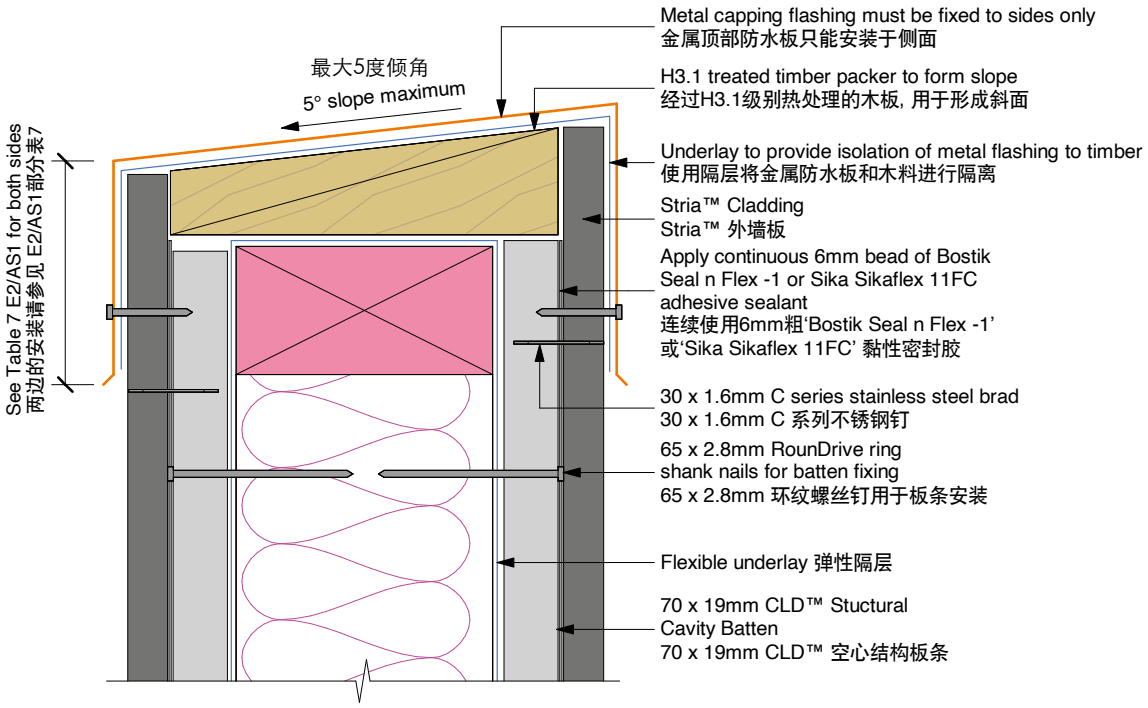
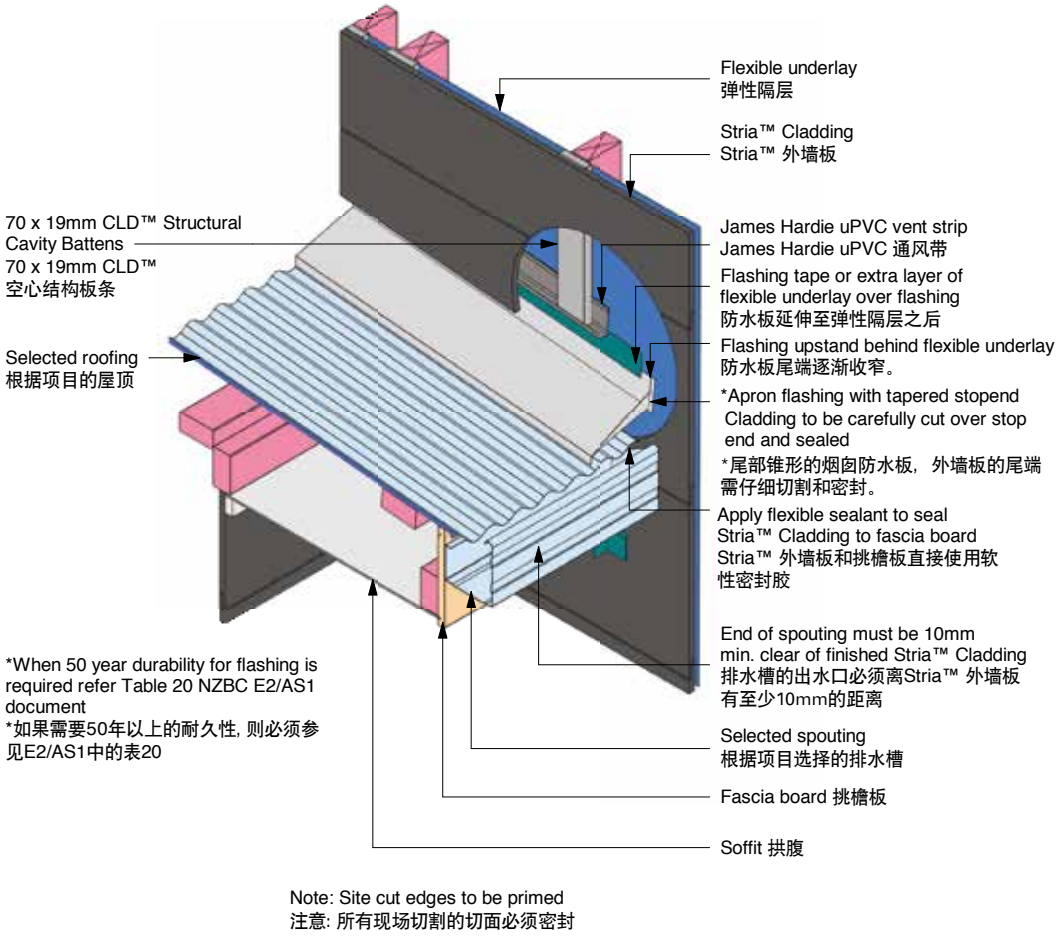


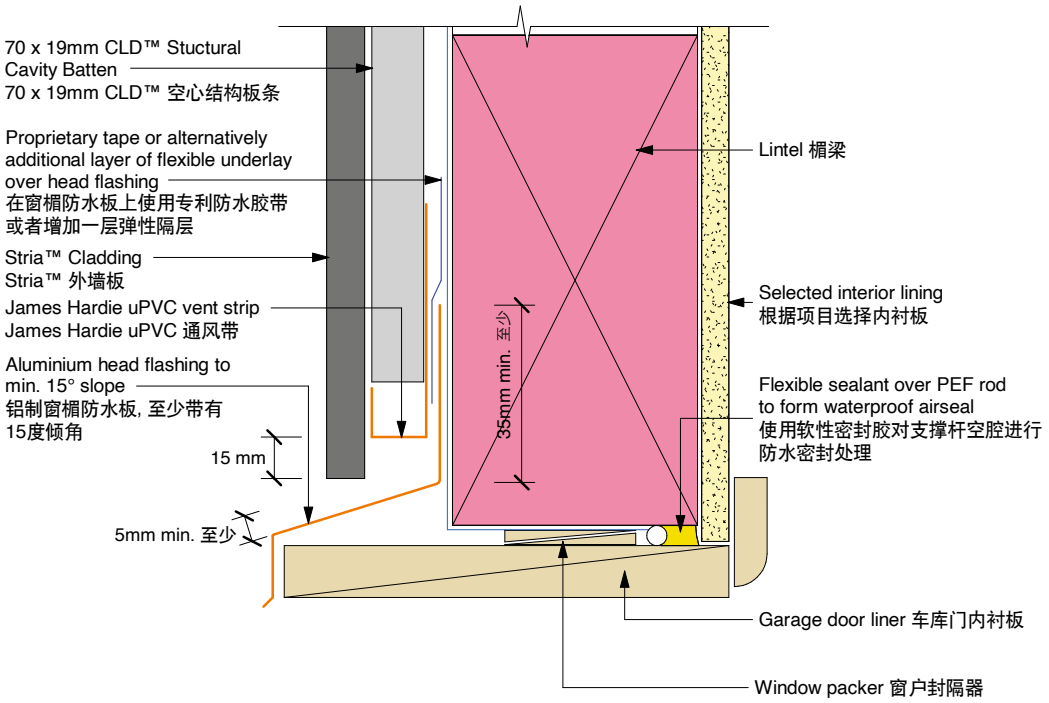
Figure 35: Roof to wall junction detail | 图35: 屋顶与墙连接的详图



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

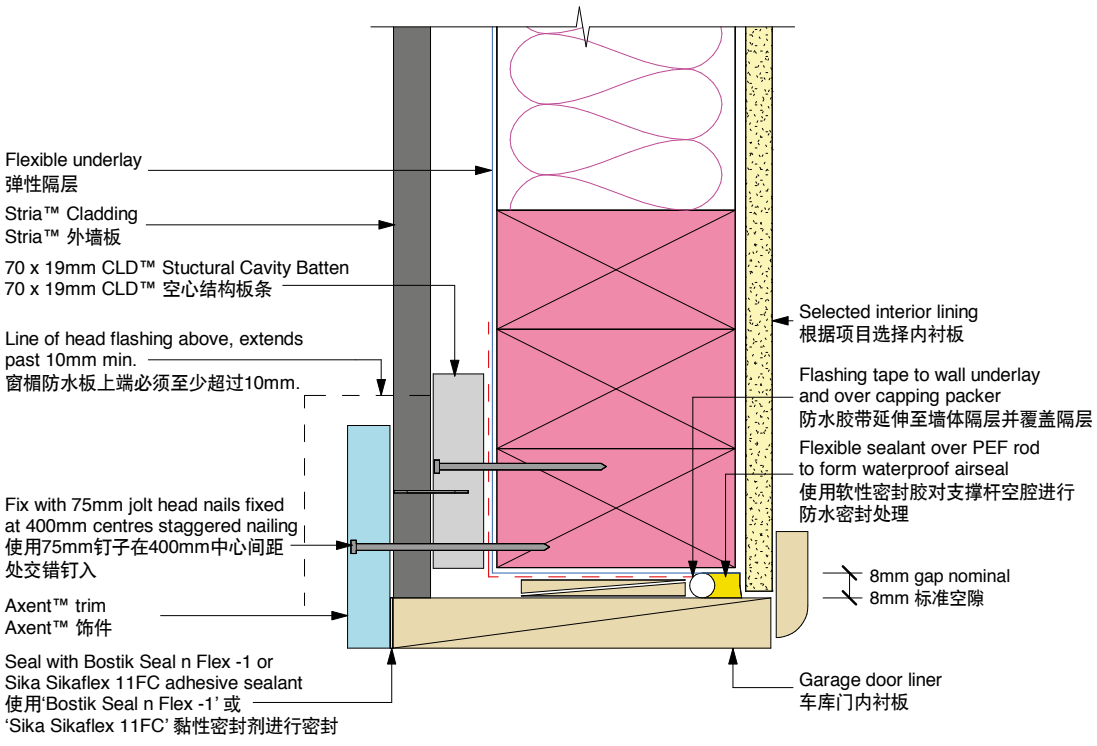
查看仪表箱详情，请访问 **www.jameshardie.co.nz**，或致电 Ask James Hardie **0800 808 868** 垂询。

Figure 36: Garage head | 图36: 车库门楣



- Sealant must be applied between head flashing and trim in VH and EH wind zones and SED wind pressures
  在VH和EH风区以及特殊设计项目中, 窗楣防水板与饰件之间必须使用密封胶
- Site cut edges to be primed
  现场切割边缘必须密封

Figure 37: Garage jamb | 图37: 车库门框



Note: Site cut edges to be primed
注意: 所有现场切割的切面必须密封

Figure 38: Cavity batten setout building height over 10m
图38: 超过10m建筑的空心结构板条布局

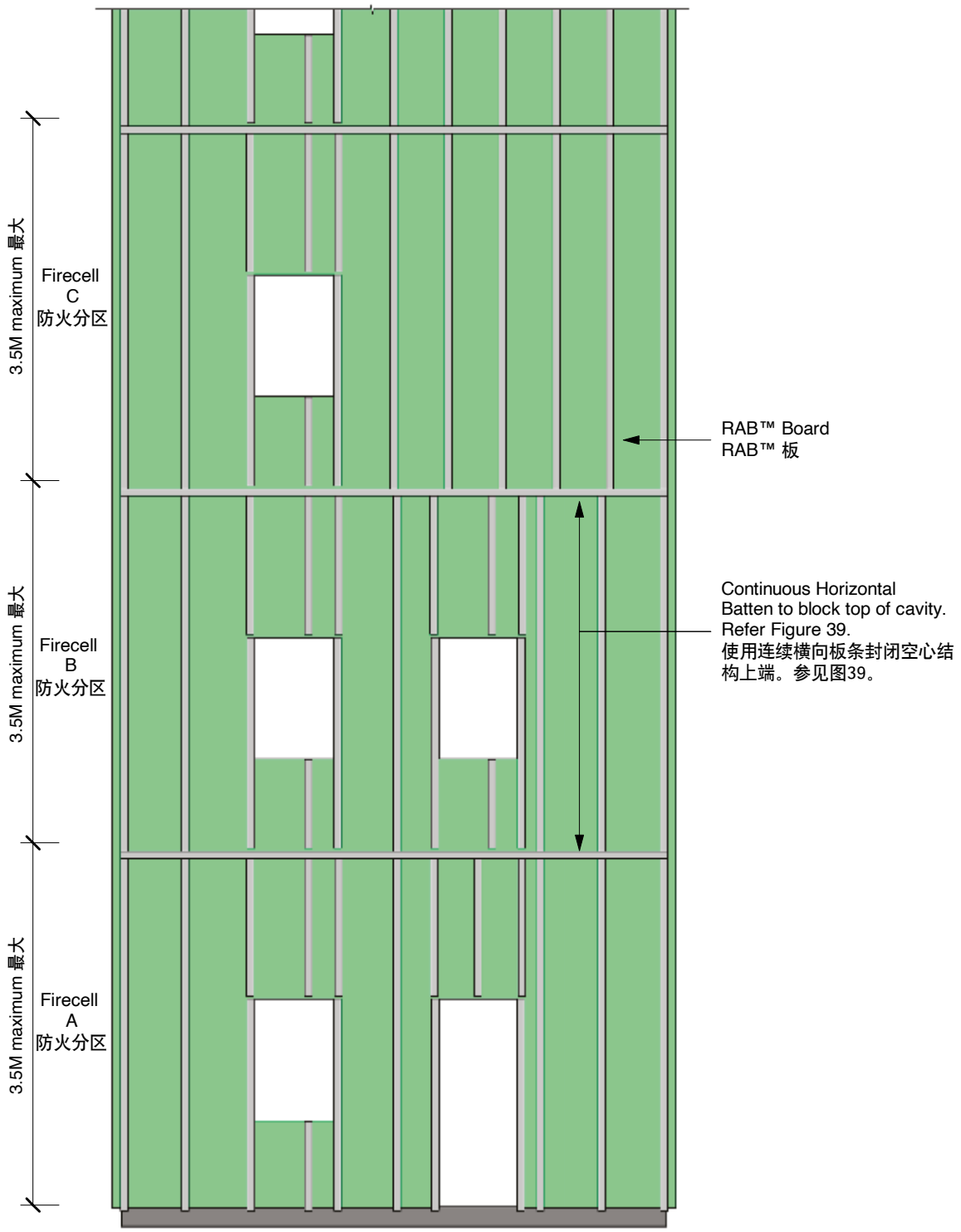
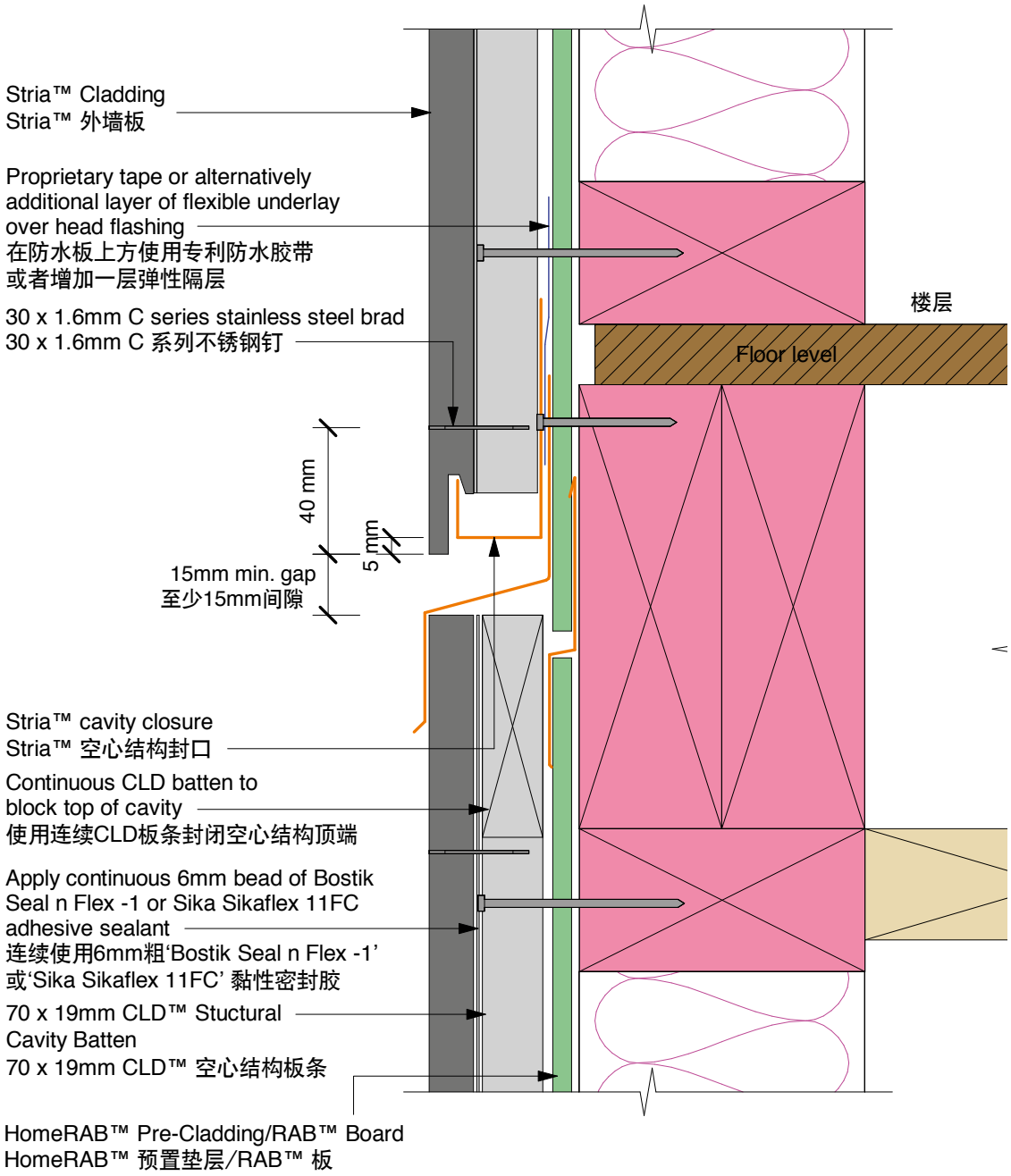


Figure 39: Inter-tenancy fire separation | 图39: 建筑内部防火分区



For all meter box details please visit at **www.jameshardie.co.nz** or Ask James Hardie on 0800 808 868.
查看所有仪表盒信息，请访问 **www.jameshardie.co.nz** 或拨打 0800 808 868 咨询。

7 Finishes 表面处理

7.1 Preparation 准备工作

Where panels are fixed with brad nails, the nail heads must be finished flush with panel surface. The nail heads can be skimmed over with an exterior grade two part builders fill, if required. The skimmed area must be primed prior to painting.

当用平头钉安装面板时，钉头必须与面板齐平。有需要时，钉头处需使用工程强化填充剂，且此区域需要在喷漆前涂底漆。

7.2 Painting 涂漆

Stria Cladding is pre-primed and is suitable for site applied acrylic paints. In order to seal cut edges or sanded patches, Dulux 1 Step, Resene Quick Dry, Taubmans Underproof Acrylic Primer Undercoat or a similar product should be applied. The primer should be compatible with the paint to be used.

Stria外墙板已经预涂底漆，并且适用于项目现场使用丙烯涂料。为了保证切割面或砂纸抛光面的密封性，应使用 Dulux 1 Step, Resene Quick Dry, Taubmans Underproof Acrylic Primer Undercoat 丙烯酸底漆或者其他类似产品。同时应保证使用的底漆与面漆兼容。

Painting of Stria Cladding is mandatory to meet the durability requirements of the NZBC and 15 year James Hardie product warranty. Stria Cladding must be dry and free of any dust or grime before painting. The panels must be painted within 90 days of their installation. There is no restriction on the LRV of paint to be applied on the Stria Cladding. For the best aesthetic results a low sheen paint is recommended.

为了达到NZBC以及James Hardie产品15年质保要求，所有Stria外墙板必须上漆。上漆前请务必保证外墙板干燥和清洁。上漆必须保证在安装完成90天之内。对于Stria外墙板所涂漆的LRV值没有要求。为了最好的视觉效果，建议选择低光泽的油漆。

James Hardie recommends a minimum of two coats of exterior grade acrylic paint. Follow the paint manufacturer's recommendations to prepare the surface and to adequately cover and conceal the panel fixings.

James Hardie 建议至少涂两层外用级别的丙烯酸涂料。请参考油漆制造商的要求来预处理板材表面和充分隐藏固件／钉孔。

7.3 Flexible Sealant 软性密封胶

Sealant used must comply with the relevant requirements of the NZBC. Their application and usage must be in accordance with the manufacturer's instructions. Check with the sealant manufacturer prior to coating over sealant. Some sealant manufacturers do not recommend coating over their product.

密封胶的使用必须遵照NZBC的相关要求。密封胶的使用必须遵循制造商的规定。在密封剂上刷漆之前，请先与密封剂制造商确认。有些密封剂的制造商并不建议在其产品之上刷漆。

8 Care and Maintenance
保养及维护

The extent and nature of maintenance required will depend on the geographical location and exposure of the building. It is the responsibility of the specifier to determine normal maintenance requirements to maintain the effectiveness of the cladding.
请根据建筑的地理位置和暴露程度选择相应的维护范围。工程监管方有责任制定日常的维护要求，以确保外墙有效发挥正常功能。

As a guide, it is recommended that the basic normal maintenance tasks shall include, but not be limited to:
我们建议应采取以下基本的维护方案，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
  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
- Re-coating exterior protective finishes. Always refer to your paint manufacturer for re-coating requirements
  根据油漆制造商的要求重新粉刷保护涂层
- Regular inspection and repair if necessary of the cladding joints, sealants, nail head fillers
  定期检查及维修外墙板连接件、密封胶及钉头填充剂
- Cleaning out gutters, down pipes and overflow pipes as required
  根据需求清理雨槽、下水管和溢流管
- Pruning back vegetation which is 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，尤其是涉及到花园时
- The clearance between the bottom edge of the Stria Cladding and the finished/unfinished ground must always be maintained
  始终确保Stria外墙板底部边缘与铺装或非铺装地面保持适当间隙

*Do not use a water blaster to wash down the cladding. Refer to your paint manufacturer for washing down requirements.
*请勿使用水枪冲刷外墙板。请参考油漆制造商的要求进行清洗。

Product Warranty
产品质保

James Hardie New Zealand Limited ("James Hardie") warrants for a period of 15 years from the date of purchase that the Stria™ Cladding and CLD™ Structural Cavity Batten (the "Product"), will be free from defects due to defective factory workmanship or materials and, subject to compliance with the conditions below, will be resistant to cracking, rotting, fire and damage from termite attacks to the extent set out in James Hardie's relevant published literature current at the time of installation. James Hardie warrants for a period of 15 years from the date of purchase that the accessories supplied by James Hardie will be free from defects due to defective factory workmanship or materials.

James Hardie新西兰有限公司 (简称 "James Hardie") 保证Stria外墙板及CLD空心结构板条 (简称 "产品") 在客户购买之日起的15年内，不会出现由于不合格工艺及材料问题所导致的产品缺陷。在满足以下质保条件的情况下，其防裂、耐腐蚀、耐火、防白蚁咬噬的性能会达到安装当时James Hardie所发布的最新相关文献中所声明的程度。James Hardie 担保，由 James Hardie 所售卖的配件在购买之日起的15年内不会出现由于不合格做工或材料问题所导致的损坏。

Nothing in this document shall exclude or modify any legal rights a customer may have under the Consumer Guarantees Act or otherwise which cannot be excluded or modified at law.

本文件中的任何内容都不能剥夺或削弱消费者保护法 (Consumer Guarantees Act) 所规定的任何消费者合法权利，因其是无法被剥夺或削弱的。

CONDITIONS OF WARRANTY 质保条件:

The warranty is strictly subject to the following conditions:

本质保严格受到以下条件限制:

a) James Hardie will not be liable for breach of warranty unless the claimant provides proof of purchase and makes a written claim either within 30 days after the 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;

索赔者必须提供购买凭证，且在产品缺陷被发现之日起的30天内递交书面的投诉声明，否则 James Hardie 将不承担任何违约责任。如果产品在安装前发现明显缺陷，则消费者必须在安装前递交投诉；

b) this warranty is not transferable;

本质保不可转移；

c) the Product must be installed and maintained strictly in accordance with the relevant James Hardie literature current at the time of installation and must be installed in conjunction with the components or products specified in the literature. Further, all other products, including coating and jointing systems, applied to or used in conjunction with the Product must be applied or installed and maintained strictly in accordance with the relevant manufacturer's instructions and good trade practice;

James Hardie 的产品必须按照安装当时相关说明文件进行安装和维护，且必须按照说明文件中的要求选择配套使用的产品。同时其他所有相关产品之上，包括涂料和固件连接系统，都必须严格按照相应制造商的说明进行使用；

d) the project must be designed and constructed in strict compliance with all relevant provisions of the current New Zealand Building Code ("NZBC"), regulations and standards;

工程的设计和施工必须严格遵守现行版新西兰建筑规范（NZBC）的各项相关条例、规定及标准；

e) the claimant's sole remedy for breach of warranty is (at James Hardie's option) that James Hardie will either supply replacement product, rectify the affected product or pay for the cost of the replacement or rectification of the affected product;

如果违约成立，索赔方所获得的唯一补偿 (由James Hardie 选择) 为:James Hardie将为消费者替换合格的产品，修复有缺陷的产品，或赔偿替换产品或修复产品所产生的费用；

f) James Hardie will not be liable for any losses or damages (whether direct or indirect) including property damage or personal injury, consequential loss, economic loss or loss of profits, arising in contract or negligence or howsoever arising. Without limiting the foregoing James Hardie will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect design of the structure, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to the Product, normal wear and tear, growth of mould, mildew, fungi, bacteria, or any organism on any Product surface or Product (whether on the exposed or unexposed surfaces);
James Hardie不对由合同、个人疏忽或其他原因引起的任何（直接或间接的）损失或损坏负责，包括财产损坏或人身伤害、间接性损失、经济损失或利润损失。在不改变或限制上述条件的前提下，James Hardie 也不对任何由于以下原因所导致的损失、破坏或故障承担责任：不合格的施工工艺、不合格的设计或详图 、地表沉降或结构性移动/或该产品所附着物的移动、错误的房屋结构设计、不可抗因素（包括但不限于地震、龙卷风、洪水或其它恶劣气候条件或罕见天气等）、风化或产品的涂漆/涂料性能不佳、正常磨损与消耗、 产品表面或产品本身（不管在暴露面还是内部）发霉、真菌生长、细菌或其它微生物生长等导致的损害和缺陷;

g) all warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by law;
在法律许可的范围内，所有除本质保所包含条款之外的其他保证、条件、责任和义务都不在承诺范围之内;

h) if meeting a claim under this warranty involves re-coating of Products, there may be slight colour differences between the original and replacement Products due to the effects of weathering and variations in materials over time.
如果依据本保证书提出的某项索赔成立，而赔偿内容涉及到重新喷涂某产品，则由于天气或不同时段材料差异的原因，替换产品和原产品之间可能存在色差。

Disclaimer: The recommendations in James Hardie's literature are based on good building practice, but are not an exhaustive statement of all relevant information and are subject to conditions (c), (d), (f) and (g) above. James Hardie has tested the performance of the Stria™ Cladding and CLD™ Structural Cavity Batten when installed in accordance with the Stria™ Cladding and CLD™ Structural Cavity Batten technical specification, in accordance with the standards and verification methods required by the NZBC and those test results demonstrate the product complies with the performance criteria established by the NZBC. However, 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 its literature and the performance of the relevant system, including its suitability for any purpose or ability to satisfy the relevant provisions of the NZBC, regulations and standards, as it is the responsibility of the building designer to ensure that the details and recommendations provided in the relevant James Hardie installation manual are suitable for the intended project and that specific design is conducted where appropriate.

免责声明: James Hardie 文件中的建议是基于良好的施工操作的前提下提出的，但并不能穷尽所有相关的信息，且受到上述 (c), (d), (f) 和 (g) 条款的限制。JAMES HARDIE 对按照《Stria™ 外墙板和CLD™ 空心结构板条技术规范》安装的Stria™外墙板和 CLD™空心结构板条的性能进行了测试，测试时使用NZBC提出的各种标准及验证方法。测试结果证明，该产品符合NZBC制定的性能指标规定。然而，整个施工系统的成功有赖于很多 JAMES HARDIE 无法控制的因素（如施工工艺和设计质量）。JAMES HARDIE 将不对其文件中的建议及其在实际运用中的性能负责，包括产品是否适用于特定的使用目的，是否符合NZBC及其他相关规定和标准等。因为建筑设计师有责任确保 James Hardie 安装手册中提供的详图和建议适合该项目的需求，并确保在需要时提供特殊设计。

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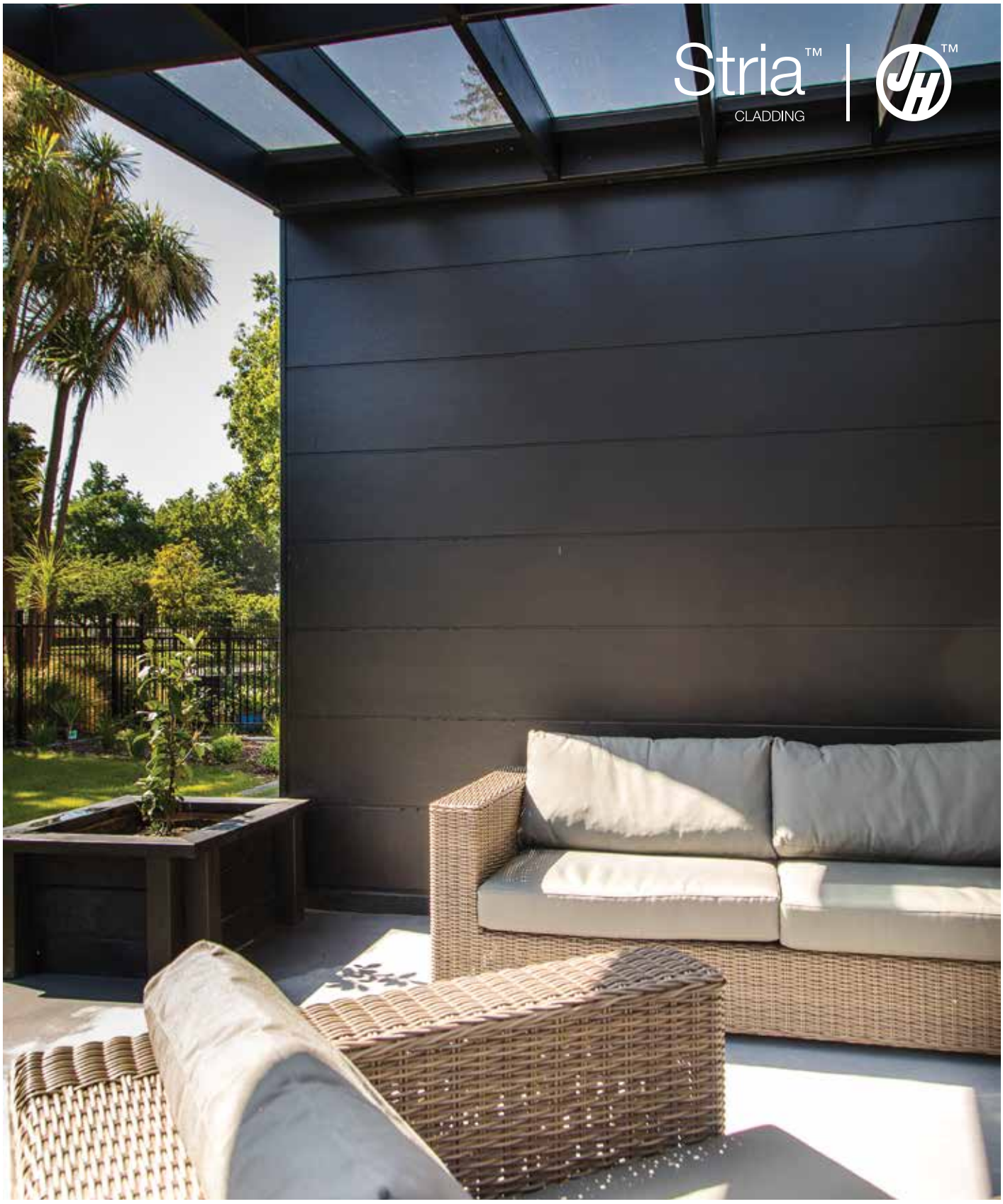
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