



KOROK®

INTERTENANCY TERRACED HOUSING SYSTEMS

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KOROK 





KOROK®

INTERTENANCY TERRACED HOUSING SYSTEMS



SECURE, QUIET, FLEXIBLE.

Multi-unit construction projects, such as town houses, call for well-tested technology that's simple to install. KOROK® Intertency Wall Systems offer the benefits of proven fire and acoustic performance, with the security of a solid wall design.



BRANZ Appraised
Appraisal No.1059 [2019]



BRANZ Appraised
Appraisal No.559 [2020]

SECURE

KOROK® panels consist of a steel shell filled with aerated concrete. Having a solid wall provides peace of mind to occupants in the knowledge that they are physically separated from neighbouring dwellings.

QUIET

KOROK® panels offer superior mass over traditional timber and plasterboard or equivalent systems resulting in enhanced sound attenuation, particularly in the more invasive lower frequencies. This means that residents are comfortable in their own space without the intrusion of noise from other dwellings.

FLEXIBLE

Because KOROK® panels provide all the fire protection you need, you can run electrical and plumbing services on the intertenancy wall, without the need for special penetration seals around each pipe or light switch. This allows you the flexibility of placing a TV and kitchen where you want, without compromising the fire and acoustic resistance of the intertenancy wall.

CONTENTS

Acoustic Performance.....	1
Fire Performance	1
100% Reusable, Minimum Waste	1
What is KOROK® Intertency Wall?.....	2
Benefits	3
How the System Works.....	3
West Auckland Fire.....	4
Purpose.....	5
Use Only the Current Specification	5
Beware of Substitutions.....	5
Scope of Use	5
Definitions	5

STRUCTURAL 6

Maximum Permissible Height	6
Mid-wall Horizontal Joints	6
Support Bracket Separation.....	6
Framing.....	7
Fire Performance	7
Acoustic Performance	7
Security	8
Plasterboard Fixing Instructions.....	8
Cantilevered Intertency Walls and Roof Eaves	8

KOROK® TERRACED HOUSING INTERTENCY SYSTEMS 9

Table 1 - Systems Summary Table	9
KIT01 - 60/60/60	11
KIT01A - 60/60/30	12
KIT04 - 60/60/60	13
KIT06 - 120/120/120	14
KIT06A - 120/120/60	15
KIT09 - 120/120/60	16
Transport	17
Handling and Storage.....	17
On Site Handling and Storage	17
Cleaning	17
Strippable Film.....	17
Cutting of KOROK® Panels	17
Penetrations	17
Installation.....	17

INSTALLATION INFORMATION 17

TERRACED HOUSING INTERTENCY SYSTEMS INSTALLATION 18

Head Track Protection	22
Table 2 - Screw Placement Wall Panels	24
Final Check.....	25

TERRACED HOUSING INTERTENCY SYSTEMS TYPICAL CONSTRUCTION DETAILS 26

KOROK® Roof Intersection	26
KOROK® Roof Intersection	27
KOROK® Roof Intersection	28
KOROK® Roof Intersection	29
KOROK® Roof Intersection	30
KOROK® Floor & Midspan Intersection.....	31
KOROK® Floor & Midspan Intersection.....	32
KOROK® Step Footing Section	33
KOROK® Clad Wall Intersection Solid Block	34
KOROK® Wall Projection at External Timber Frame Wall	35
KOROK® External Corner Solid Blocking	36
KOROK® Clad Wall Corner Intersection.....	37
KOROK® Clad Wall Intersection Solid Block	38
KOROK® Staggered Mid Span Horizontal Joint.....	39
KOROK® Cantilever Panel Section.....	40
KOROK® Cantilever Panel Section.....	41
KOROK® Eaves Detail	42

TABLE 3 - KOROK® INTERTENCY TERRACED HOUSING WALLS WITH CANTILEVER PANEL SECTION 43

TABLE 4 - KOROK® FASTENERS SPACING 44

PANEL PROPERTIES 45

KOROK® Panels	45
Loading Combinations	45
General Design Notes	45
Standards.....	45

KOROK® COMPONENTS SUMMARY 46

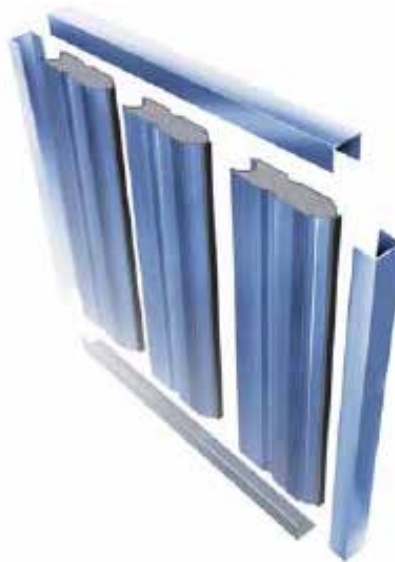
AMENDMENTS 47

SUSTAINABILITY 48

KOROK® TERRACED HOUSING INTERTENANCY SYSTEMS

SUPERIOR FIRE AND ACOUSTIC PERFORMANCE

- BRANZ appraised
- Roll formed galvanised steel or colour steel outer shell
- Lightweight with an aerated concrete core
- Fire ratings up to 120/120/120
- Acoustic ratings up to STC 69
- Panels interlock with clip-together simplicity for rapid installation
- Can be dismantled and reassembled to accommodate changing requirements
- Are installed vertically



When acoustic and fire regulations demand a high performance, no-risk solution, KOROK® will exceed New Zealand Building Code requirements for internal and external non-load bearing walls simply and cost effectively.

Exceptionally strong yet lightweight, the interlocking panels can be easily erected by a small crew, making KOROK® much faster to install than conventional wall systems.

Construction using KOROK® allows a building to be made weather resistant much earlier in the construction cycle, allowing internal work and finishing to be started sooner.

ACOUSTIC PERFORMANCE

KOROK®'s inherent mass and interlocking design gives it outstanding acoustic reduction properties making it highly suitable in buildings where acoustic performance is critical, such as cinemas, lecture theatres, apartments, recording studios and industrial/commercial intertenancy situations.

The unique interlocking design eliminates the risk of sound "leaks" between panels, and makes installation faster and more simple than traditional systems.

FIRE PERFORMANCE

KOROK® delivers proven two-way fire resistance over a long period of time. KOROK® has been tested and appraised by the Building Research Association of New Zealand (BRANZ).

FRR ratings are based on the KOROK® panel wall. The cavity and linings contribute to the STC rating but are not relevant to the stated FRR.

100% REUSABLE, MINIMUM WASTE

KOROK® is manufactured in New Zealand and offers unique benefits in terms of sustainability and environmental performance:

- Walls can be reused by simply dismantling the panels and reinstalling them in another location.
- The raw components (steel and concrete) are 100% recyclable.
- Panels are custom manufactured to size, minimising waste at the factory and on the construction site.
- DECLARE - KOROK® has Declare Certification for our panels, the most accessed sustainability certification in the building industry <https://living-future.org/declare-products/korok>. See page 48.

KOROK® TERRACED HOUSING INTERTENANCY SYSTEMS

Multi-unit construction projects, such as town houses, and high density apartments, call for well-tested technology that's simple to install. KOROK® Intertency systems offer the benefits of proven fire and acoustic performance, and the security of a solid wall design.

The KOROK® Intertency system utilises KOROK®'s revolutionary clip-together technology. This makes it simple for construction teams to erect walls within tight time frames. Furthermore, the installation of KOROK® Intertency panels isn't weather dependent.

KOROK®'s continuing investment in systems, to meet ever changing building trends, means the KOROK® Intertency systems have been developed to keep pace with market requirements. KOROK® Intertency systems provide:

- Compliance with New Zealand Building Code (NZBC) Clause G6 'Protection from Noise'.
- Framing is designed to satisfy the requirements of Part B of the NZBC. The KOROK® Intertency systems have been designed to provide FRR (as tested) and meet the requirements of C/ASx, section 4.3 (structural stability during fire) and complies with Part C of the NZBC.

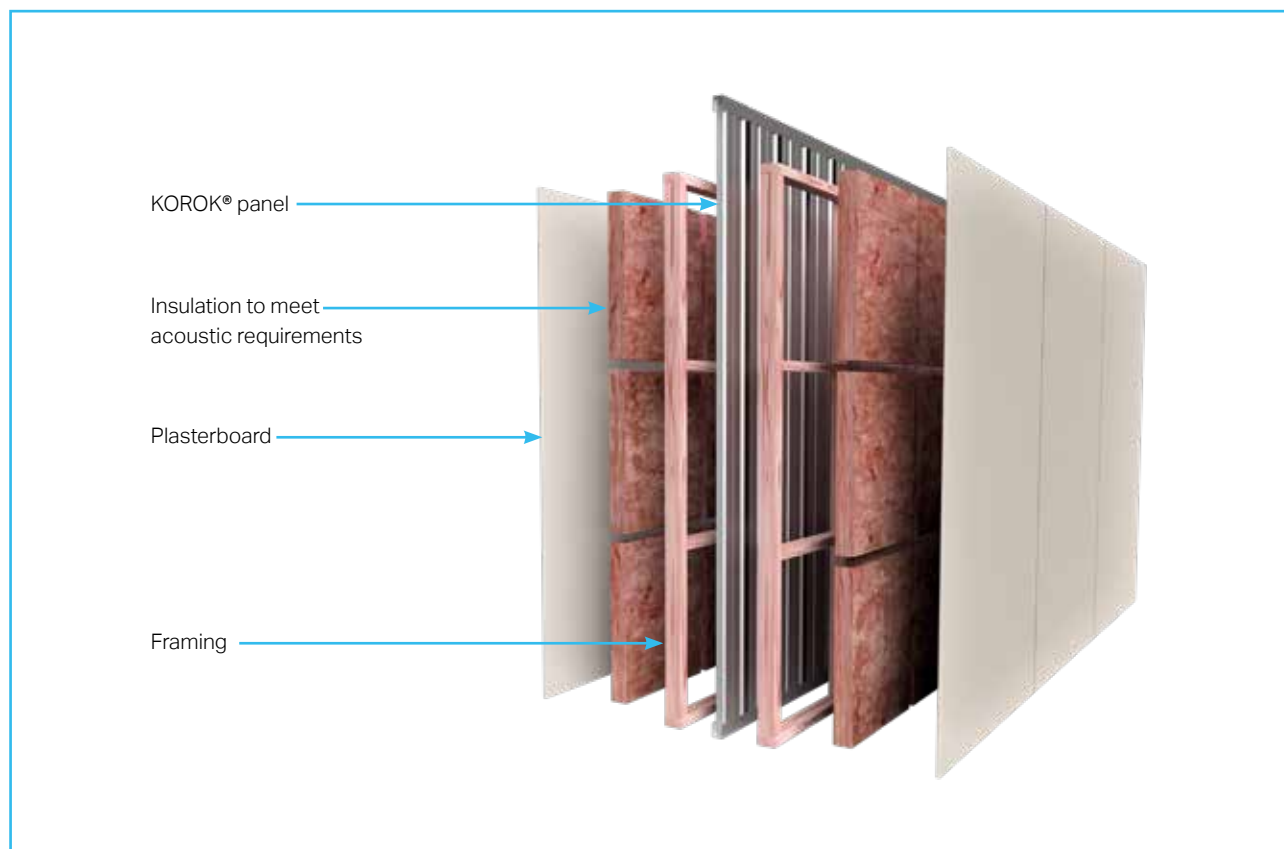
- Compliance with Building Code of Australia (BCA) requirements for 'discontinuous construction' supported in BCA Illustrated.
- The acoustic performance of the KOROK® Intertency system exceeds the minimum requirements of the NZBC to provide superior combined fire, acoustic and security wall systems.
- Cost-effective configuration to achieve up to 120/120/120 Fire Resistance Rating (FRR).
- Services penetrations through KOROK® panels are allowed in the roof space.

WHAT IS KOROK® INTERTENANCY WALL?

The KOROK® Intertency systems incorporate a KOROK® panel between double stud walls with insulation in both framing cavities and plasterboard internal linings.

The fire-resistant KOROK® panels are held in position by KOROK® aluminium brackets fixed to the wall framing.

KOROK® Intertency walls have been designed for installation by builders following accepted construction methodologies.



KOROK® TERRACED HOUSING INTERTENANCY SYSTEMS

KOROK® Intertency wall systems achieve up to 120/120/120 Fire Resistance Rating (FRR) and achieve a minimum acoustic control rating of STC 63.

This manual covers both timber framed and steel framed KOROK® Intertency wall systems.

BENEFITS

- KOROK® lightweight concrete and steel panels form a secure intertenancy wall.
- Little or no need for scaffolding.
- The clip together simplicity makes for rapid construction.
- KOROK® Intertency wall is not adversely affected by weather.
- Internal wall linings are installed, once the building is closed in.
- Service penetrations, such as pipes, power points, distribution boards, light fittings and switches are easily included within the partition.
- Is lightweight reducing the need for additional foundations.

HOW THE SYSTEM WORKS

Conventional-framed wall systems rely on the internal linings for fire-resistance. The KOROK® Intertency wall systems locate the main fire barrier between frames and is designed to protect the structure on the side opposite the fire.

KOROK® aluminium brackets attach the KOROK® Intertency wall panels to both frames. The aluminium brackets on the fire side melt, allowing the structure on the fire side to detach without causing damage, leaving the KOROK® fire barrier supported by aluminium brackets connected to framing on the non-fire side.



BEFORE FIRE - KOROK® aluminium brackets are fixed to framing both sides of KOROK® fire barrier.



DURING FIRE - KOROK® aluminium brackets on the fire side melt.



AFTER FIRE - The adjoining occupancy is protected by KOROK® Intertency wall.

KOROK® TERRACED HOUSING INTERTENANCY SYSTEMS

WEST AUCKLAND FIRE

A massive blaze ripped through the unoccupied three-storey building at 3:55am. Sixteen fire crews helped extinguish the huge fire. A local resident said, "It was scary, it was quite close. It was just going straight up." She also said while the event was horrible, it was "good to know" the fire walls worked in the midst of high-density housing.



Photograph credit: Angela Nash



For terraced housing, the KOROK® panels are held in position with KOROK® aluminium brackets within the frame cavity. In the unfortunate event of a fire, the brackets are designed to melt on the fire side and to remain intact on the non-fire side, which in turn supports the KOROK® panel fire barrier.

INTRODUCTION

PURPOSE

KOROK® provide intertenancy systems that physically separate spaces, providing secure divisional walls and intertenancy sound and fire transmission resistance.

KOROK® supplies separate systems for residential and apartment intertenancy walls. Please ensure that the system selected is identified as being appropriate for the location it is being installed in.

USE ONLY THE CURRENT SPECIFICATION

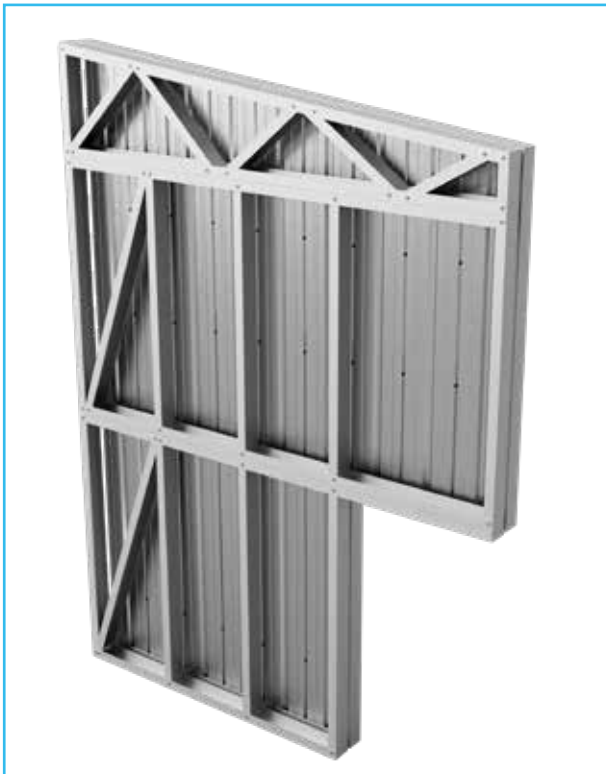
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BEWARE OF SUBSTITUTIONS

All KOROK® systems have been designed and tested to ensure they are suitable for New Zealand conditions and provide specific resistance to fire and acoustic transmission.

As such, only tested KOROK® panels and components can be used in the construction of each KOROK® system, ensuring that the finished wall will meet its performance specification



SCOPE OF USE

New Zealand Building Code (NZBC) compliance

The NZBC sets out both the legal minimum sound transmission between tenancies (Clause G6) and minimum levels of fire resistance (Clauses C3 and C6). The KOROK® Intertenancy Systems Manual provides guidance on the specification and construction of systems that will both meet and exceed those minimum levels. However, designers must consider the comfort of occupants when selecting a system that will satisfy the occupants' expectations when using the space rather than the minimum required by law.

NZBC Clause B1 – Structure

The KOROK® Systems meet the requirements for loads arising from self-weight, earthquake, wind, impact and creep and shrinkage.

NZBC Clause B2 – Durability

Under normal conditions of dry internal use, KOROK® Intertenancy Systems have a serviceable life in excess of 50 years and satisfy the requirements of NZBC Clause B2 – Durability.

NZBC Clause C3 - Fire affecting areas beyond the source

KOROK® Intertenancy Systems can be used to provide passive fire protection in accordance with the requirements of NZBC Clause 3 – Spread of fire

NZBC Clause C6 - Structural Stability

Compliance with (NZBC) Clause C6 'Structural Stability'.

In order to satisfy the requirements of the New Zealand Building Code (clause 6) relating to "structural stability" designers must ensure that KOROK® elements are supported by primary elements that have at least the same fire rating as the KOROK® system that is used.

Where the primary elements supporting the KOROK® system are outside the fire cell, there is no requirement to apply the same FRR as the KOROK® system.

Notwithstanding, post fire stability requirements of the NZBC must also be satisfied.

NZBC Clause G6 – Airborne and Impact Sound

KOROK® Intertenancy Systems, both meet and exceed the minimum requirements outlined in NZBC Clause G6. Consideration must be given to both the minimum requirements and the comfort of occupants.

DEFINITIONS

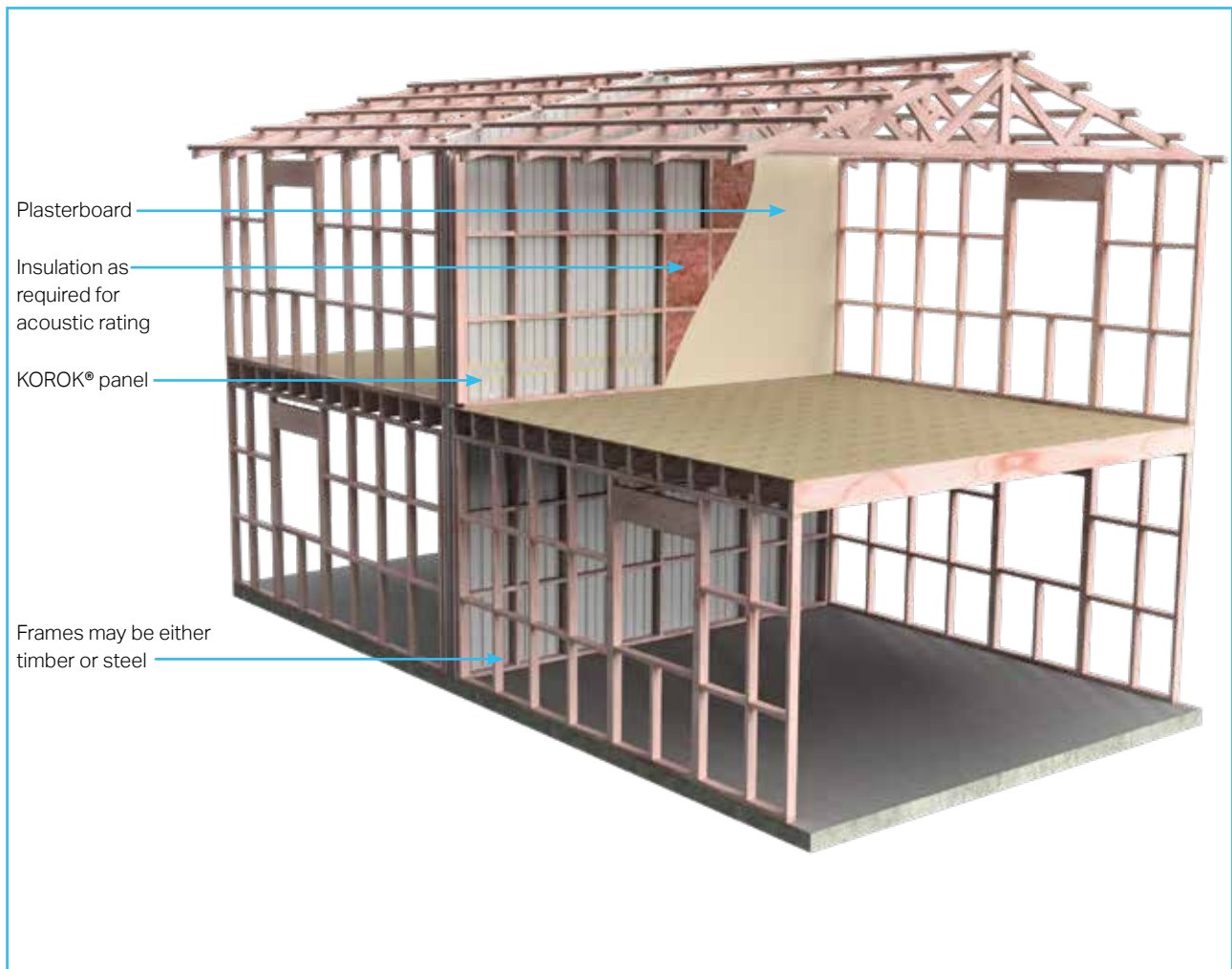
STC

Sound Transmission Class rates the airborne sound transmission loss through building elements such as walls and ceilings. The minimum requirement for residential intertenancy is STC 55.

FRR

Fire Resistance Rating is derived from a laboratory furnace test which gives a value in minutes for Structural adequacy, Integrity, and Insulation. Depending on design, all three may not be relevant to the building element.

DESIGN CONSIDERATIONS



STRUCTURAL

MAXIMUM PERMISSIBLE HEIGHT

The total height of the central KOROK® panel in the KOROK® Intertency Wall must not exceed 14.0 metres. For walls constructed above 12.0 metres in height, KOROK® 78 mm panels must be used.

For walls incorporating an unsupported cantilever see Table 3.

MID-WALL HORIZONTAL JOINTS

Mid-wall joints are incorporated into the KOROK® wall to satisfy installation sequences. These mid-wall joints may be staggered. Introducing back-to-back C-tracks stiffens the wall. Maximum wall heights and bracket separation are to be maintained.

SUPPORT BRACKET SEPARATION

KOROK® aluminium brackets are fixed into the panel and spaced at no more than 3000 mm vertically and 600 mm horizontally. KOROK® aluminium brackets are required within 1500mm of horizontal mid-wall joints.

DESIGN CONSIDERATIONS

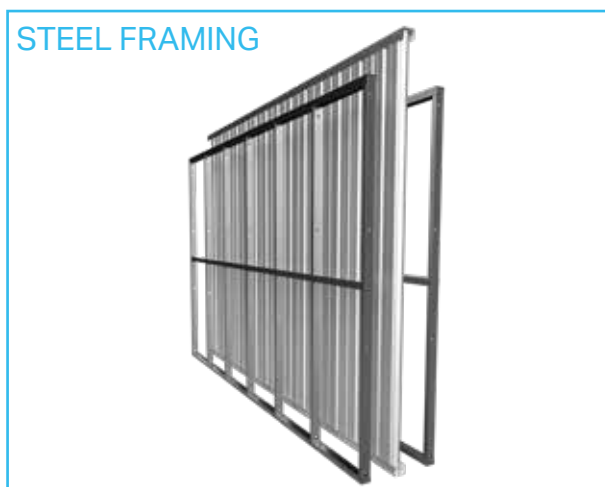
FRAMING

Frames may be either timber or steel and must be designed to meet the requirements of NZBC Part B.

Timber frames designed as per AS 1720 and/or 1684 (Australia) or NZS 3603 and/or NZS 3604 (New Zealand), or

Steel frames designed as per AS/NZS 4600 or AS 3623 (Australia) or NZS 3404 (New Zealand).

Either structure designed to the above standards demonstrates compliance with the National Construction Code (Australia) and New Zealand Building Code (New Zealand) and shall have the ability to support the lateral loads of the KOROK® Intertenancy Terraced Housing Wall, which might be imposed in the event of the supporting building frame being demolished on the fire side.



FIRE PERFORMANCE

KOROK® Intertenancy Systems provide a range of Fire Resistance Ratings (FRR) (as outlined in the Systems Summary Tables). In the case of a fire, the wall frame on the non-fire side of the KOROK® Intertenancy wall maintains structural adequacy and provides lateral stability.

As the primary fire barrier, the KOROK® panels are located in the cavity between the frames. The system permits easy inclusion of services such as water and waste pipes, electrical and communications cables, as long as the KOROK® panels are not penetrated. Fire rated service penetrations are allowed through KOROK® panels in the roof space.

The FRR of the KOROK® intertenancy system relies on the KOROK® panel wall and not on the performance of the plasterboard linings or the cavity. Although penetrations through the plasterboard linings do not affect the FRR of the KOROK® Intertenancy system, penetrations may affect acoustic performance (see ACOUSTIC PERFORMANCE below).

To maintain the FRR of the KOROK® Intertenancy System use only the specified KOROK® aluminium brackets to attach the KOROK® panels to framing members. The KOROK® aluminium bracket is designed to melt in the event of a fire, which allows the framing members on the fire side to fall away, protecting the adjoining dwellings.

ACOUSTIC PERFORMANCE

The KOROK® Intertenancy System has been independently tested to ensure compliance with the NZBC requirements for multi-unit residential construction.

KOROK® Intertenancy System provides superior flexibility for designers allowing for the placement of services on intertenancy walls with minimal loss of acoustic performance.

Service pipes must not be in contact with the KOROK® panels. Penetrations through the plasterboard linings are permitted, these may be placed back-to-back and include:

- Residential electrical distribution boards
- Residential GPOs
- Data, communications or electrical cables
- Copper, galvanised steel, or plastic water or waste water pipes of up to 50mm nominal diameter
- Baths and shower bases
- Wall mounted cabinets or vanities

DESIGN CONSIDERATIONS

ACOUSTIC PERFORMANCE (CONT.)



KOROK® Intertenancy Systems have been tested with back to back Electrical Distribution Boards, 2 each General Purpose Outlets and 2 each 50 mm round penetrations within the plasterboard linings for the loss of 1 STC rating.

Proprietary fire stopping is required for any penetration through the KOROK® panel.

Where specific acoustic performance is required, KOROK® can provide a number of proven penetration designs or assist with specific design.

SECURITY

Having KOROK® panels within the separating cavity provides peace of mind for occupants in the knowledge they are securely separated from neighbouring dwellings.

PLASTERBOARD FIXING INSTRUCTIONS

All plasterboard linings must be fixed in accordance with the manufacturers fixing instructions.

CANTILEVERED INTERTENANCY WALLS AND ROOF EAVES

Terraced housing designs often call for cantilevered eaves, floors and walls. KOROK® provides solutions for those configurations.

See Table 3 for cantilevered KOROK® span charts.



KOROK® TERRACED HOUSING INTERTENANCY SYSTEMS

TABLE 1 - SYSTEMS SUMMARY TABLE

These systems are described in detail in the following pages.

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY	PAGE
KIT01	64	60/60/60	288mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.	11
KIT01 modified	63	60/60/60	282mm	90mm steel or timber frame each side	Minimum 80mm overall between the framing Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.	
KIT01A	64	60/60/30	288mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing. Framing not to touch KOROK® panel	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ .	12
KIT04	69	60/60/60	294mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 13mm GIB Noiseline® or equivalent each side. Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.	13
KIT06	65	120/120/120	315mm	90mm steel or timber frame each side	Minimum 108mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.	14
KIT06A	65	120/120/60	315mm	90mm steel or timber frame each side	Minimum 108mm overall between the framing. Framing not to touch KOROK® panel	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ .	15
KIT09	69	120/120/60	321mm	90mm steel or timber frame each side	Minimum 113mm overall between the framing. Framing not to touch KOROK® panel	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 13mm GIB Noiseline® or equivalent one side + 1 layer 13mm GIB Aqualine® or equivalent (wet) or 13mm GIB Noiseline® or equivalent (dry) other side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ .	16

*Nominal thickness

KOROK® TERRACED HOUSING INTERTENANCY SYSTEMS

TABLE 1 - SYSTEM SUMMARY TABLES (CONT.)

For further information on the following systems, please contact us at KOROK® on 0800 773 777 or info@korok.com.

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT02	66	60/60/60	288mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent one side + 1 layer 10mm GIB Noiseline® or equivalent the other Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.
KIT03	67	60/60/60	288mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB Noiseline® or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.
KIT05	66	60/60/60	294mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 13mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.
KIT07	66	120/120/120	315mm	90mm steel or timber frame each side	Minimum 113mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent one side + 1 x 10mm GIB Noiseline® or equivalent other side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.
KIT08	67	120/120/120	315mm	90mm steel or timber frame each side	Minimum 113mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 10mm GIB Noiseline® or equivalent one side + 1 layer 10mm GIB Aqualine® or equivalent (wet) or 10mm GIB Noiseline® or equivalent (dry) other side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.
KIT10	67	120/120/120	321mm	90mm steel or timber frame each side	Minimum 113mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 78mm panels (400Kg/m ³ density) + 1 layer 13mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.

*Nominal thickness

FIRE RESISTANCE RATING (FRR) FRR ratings are based on the KOROK® panel wall. The cavity and linings contribute to the STC rating but are not relevant to the stated FRR.

SOUND TRANSMISSION CLASS (STC) In applications where reduced cavities are required between framing, please contact KOROK® for technical assistance. Reduced cavities will not impact the Fire Resistance Ratings however they may impact the STC performance.

KIT01 - 60/60/60

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT01	64	60/60/60	288mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.
KIT01 modified	63	60/60/60	282mm	90mm steel or timber frame each side	Minimum 80mm overall between the framing Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.

*Nominal thickness

KOROK® PANEL KOROK® 51mm panels are located in KOROK® C-track 60mm high x 51mm wide x 1.15B.M.T. KOROK® panels must not exceed 12 metres in height.

FRAMING Frames must be designed to meet the requirements of NZBC Part B and consider the loading imposed on them by the KOROK® wall.

Cavity must be 86mm overall. Framing not to touch KOROK® panel or fire flashing.

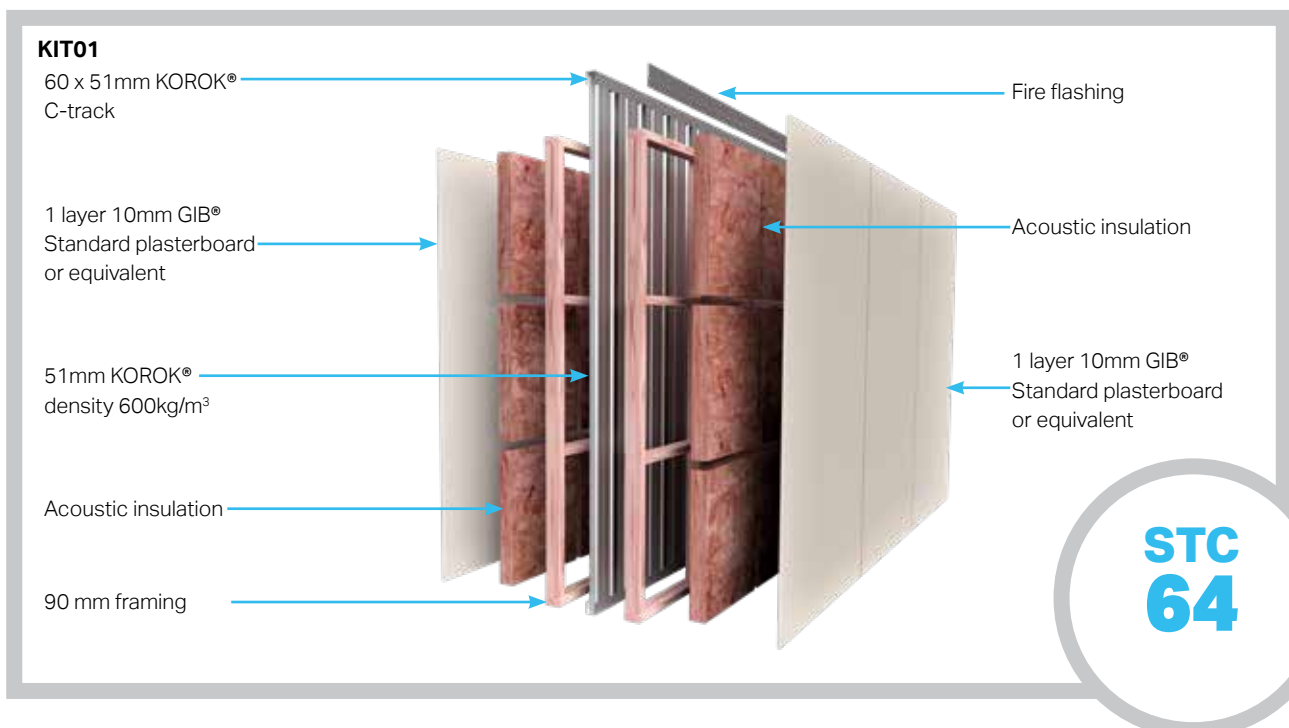
ACOUSTIC INSULATION Acoustic insulation can be either glass wool or semi-rigid polyester designed to be friction fitted into the wall cavity. The insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m³ or equivalent.

SUPPORT BRACKETS KOROK® aluminium brackets are fixed to the panel and framing. Refer to the installation section of this manual for bracket spacing.

LINING Frames are lined with 1 layer of 10mm GIB® Standard plasterboard or equivalent each side of the wall. Joints must occur over framing.

Plasterboard linings are installed to the manufacturer's specification.

SEALANT Beads of fire rated sealant are required around the perimeter of the KOROK® system. Refer to the installation section of this manual for more information on sealant application, and to the KOROK® Components Summary for approved sealants.



KIT01A - 60/60/30

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT01A	64	60/60/30	288mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing Framing not to touch KOROK® panel	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ .

*Nominal thickness

KOROK® PANEL

KOROK® 51mm panels are located in KOROK® C-track 60mm high x 51mm wide x 1.15B.M.T. KOROK® panels must not exceed 12 metres in height.

FRAMING

Frames must be designed to meet the requirements of NZBC Part B and consider the loading imposed on them by the KOROK® wall.

Cavity must be 86mm overall. Framing not to touch KOROK® panel.

ACOUSTIC INSULATION

Acoustic insulation can be either glass wool or semi-rigid polyester designed to be friction fitted into the wall cavity. The insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m³ or equivalent.

SUPPORT BRACKETS

KOROK® aluminium brackets are fixed to the panel and framing. Refer to the installation section of this manual for bracket spacing.

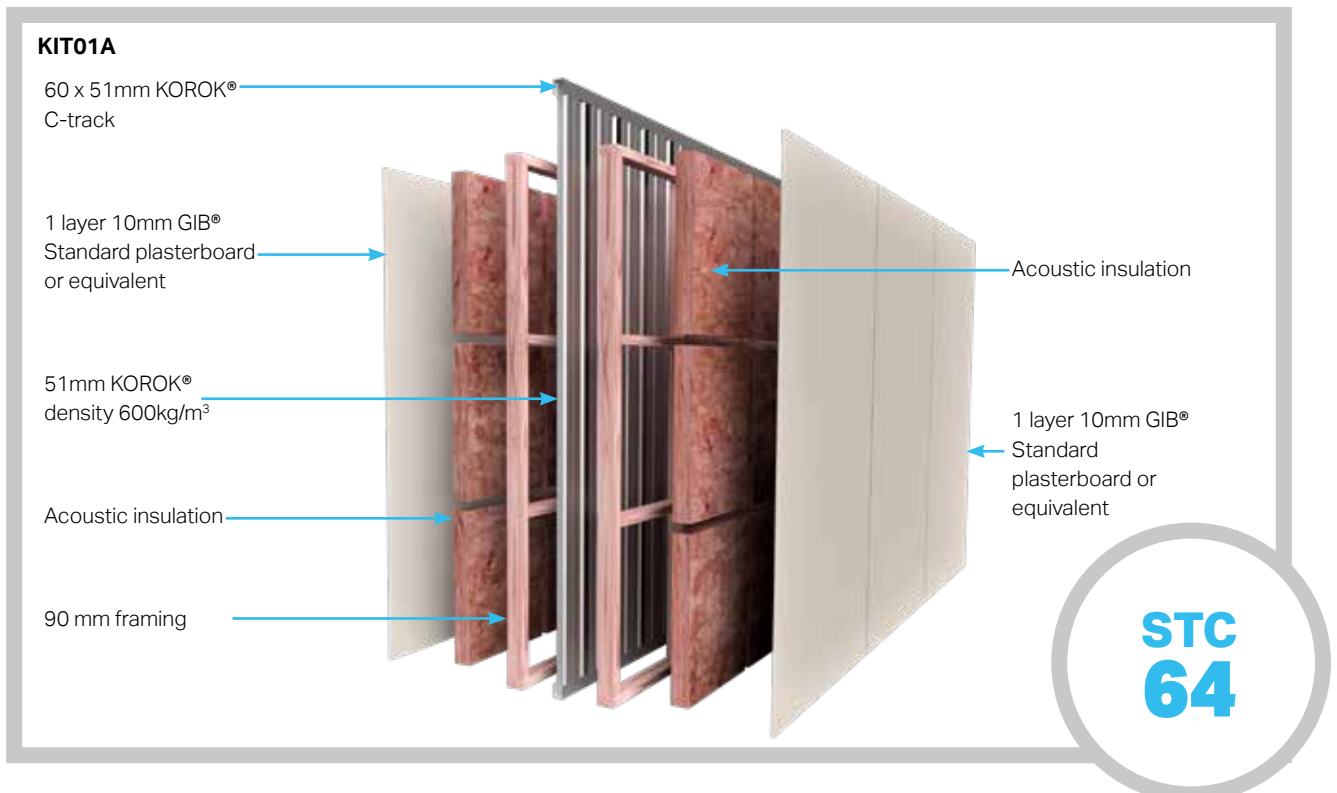
LINING

Frames are lined with 1 layer of 10mm GIB® Standard plasterboard or equivalent each side of the wall. Joints must occur over framing.

Plasterboard linings are installed to the manufacturer's specification.

SEALANT

Beads of fire rated sealant are required around the perimeter of the KOROK® system. Refer to the installation section of this manual for more information on sealant application, and to the KOROK® Components Summary for approved sealants.



KIT04 - 60/60/60

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT04	69	60/60/60	294mm	90mm steel or timber frame each side	Minimum 86mm overall between the framing Framing not to touch KOROK® panel or fire flashing	KOROK® 51mm panels (600 Kg/m ³ density) + 1 layer 13mm GIB Noiseline® or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.

*Nominal thickness

KOROK® PANEL

KOROK® 51mm panels are located in KOROK® C-track 60mm high x 51mm wide x 1.15B.M.T. KOROK® panels must not exceed 12 metres in height.

FRAMING

Frames must be designed to meet the requirements of NZBC Part B and consider the loading imposed on them by the KOROK® wall.

Cavity must be 86mm overall. Framing not to touch KOROK® panel or fire flashing.

ACOUSTIC INSULATION

Acoustic insulation can be either glass wool or semi-rigid polyester designed to be friction fitted into the wall cavity. The insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m³ or equivalent.

SUPPORT BRACKETS

KOROK® aluminium brackets are fixed to the panel and framing. Refer to the installation section of this manual for bracket spacing.

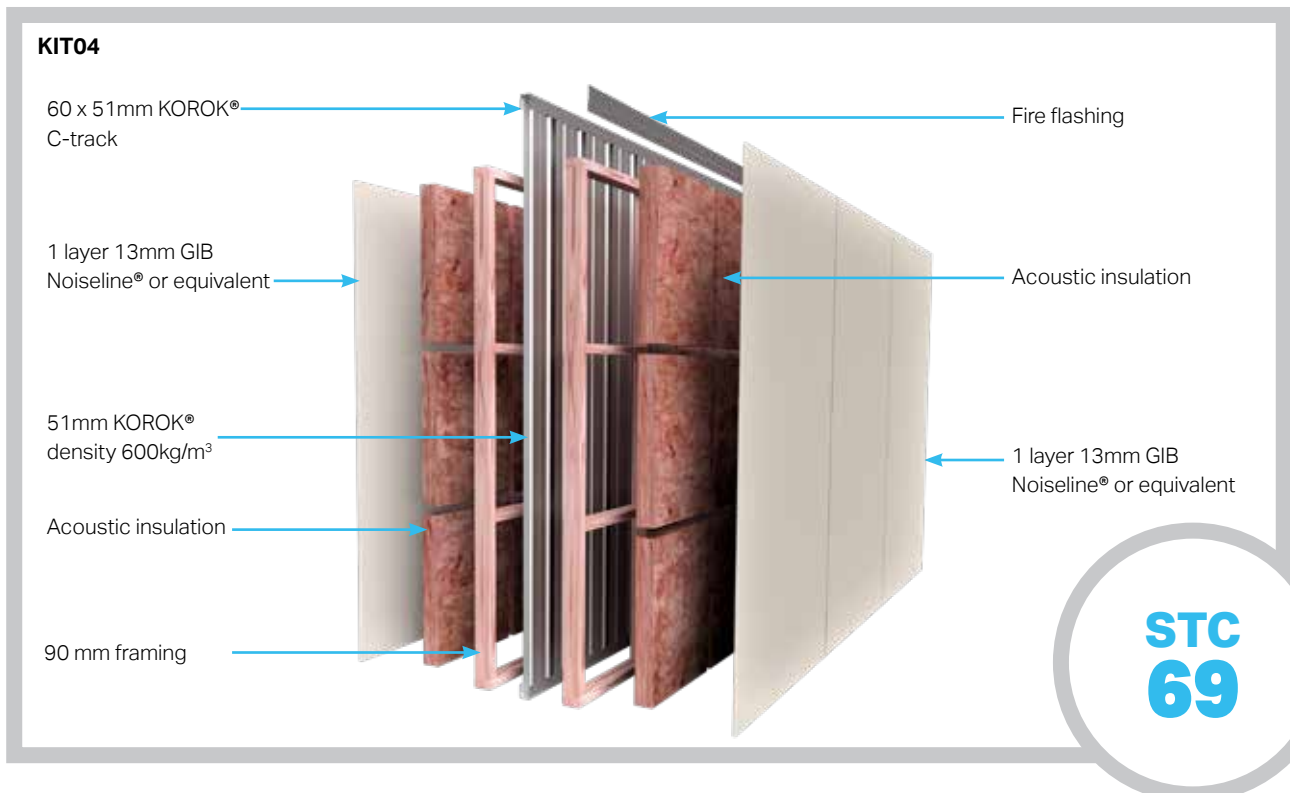
LINING

Frames are lined with 1 layer of 13mm GIB Noiseline® or equivalent each side of the wall. Joints must occur over framing.

Plasterboard linings are installed to the manufacturer's specification.

SEALANT

Beads of fire rated sealant are required around the perimeter of the KOROK® system. Refer to the installation section of this manual for more information on sealant application, and to the KOROK® Components Summary for approved sealants.



KIT06 - 120/120/120

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT06	65	120/120/120	315mm	90mm steel or timber frame each side	Minimum 108mm overall between the framing. Framing not to touch KOROK® panel or fire flashing	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ . KOROK® metal fire flashing is installed to the top C-track. KOROK® metal KIT flashing is installed to horizontal joints.

*Nominal thickness

KOROK® PANEL

KOROK® 78mm panels are located in KOROK® C-track 60mm high x 80mm wide x 1.15B.M.T. KOROK® panels must not exceed 14 metres in height.

FRAMING

Frames must be designed to meet the requirements of the NZBC Part B, taking into consideration the load imposed on them by the KOROK® wall.

Cavity must be 113mm overall. Framing not to touch KOROK® panel or fire flashing.

ACOUSTIC INSULATION

Acoustic insulation can be either glass wool or semi-rigid polyester designed to be friction fitted into the wall cavity. The insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m³ or equivalent.

SUPPORT BRACKETS

KOROK® aluminium brackets are fixed to the panel and framing. Refer to the installation section of this manual for bracket spacing.

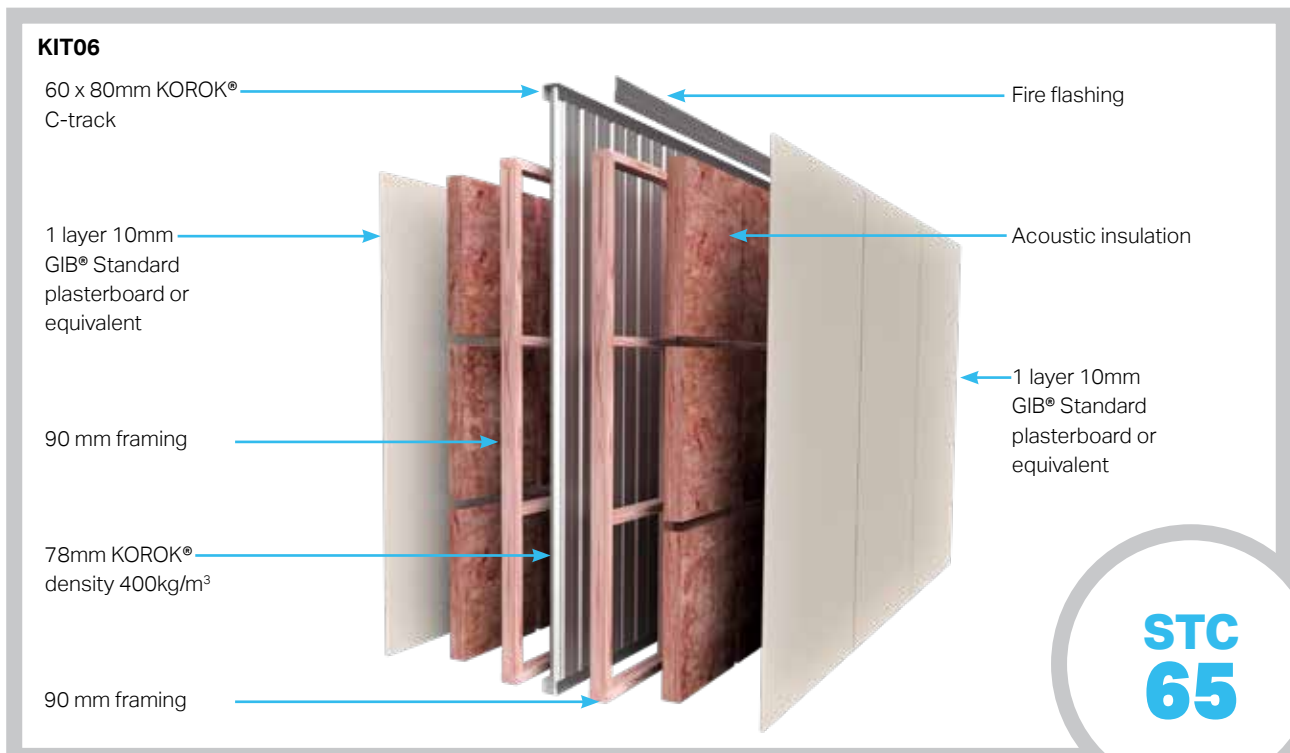
LINING

Frames are lined with 1 layer of 10mm GIB® Standard plasterboard or equivalent each side of the wall. Joints must occur over framing.

Plasterboard linings are installed to the manufacturer's specification.

SEALANT

Beads of fire rated sealant are required around the perimeter of the KOROK® system. Refer to the installation section of this manual for more information on sealant application, and to the KOROK® Components Summary for approved sealants.



KIT06A - 120/120/60

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT06A	65	120/120/60	315mm	90mm steel or timber frame each side	Minimum 108mm overall between the framing. Framing not to touch KOROK® panel	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 10mm GIB® Standard plasterboard or equivalent each side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ .

*Nominal thickness

KOROK® PANEL

KOROK® 78mm panels are located in KOROK® C-track 60mm high x 80mm wide x 1.15B.M.T. KOROK® panels must not exceed 14 metres in height.

FRAMING

Frames must be designed to meet the requirements of NZBC Part B and consider the loading imposed on them by the KOROK® wall.

Cavity must be 113mm overall. Framing not to touch KOROK® panel.

ACOUSTIC INSULATION

Acoustic insulation can be either glass wool or semi-rigid polyester designed to be friction fitted into the wall cavity. The insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m³ or equivalent.

SUPPORT BRACKETS

KOROK® aluminium brackets are fixed to the panel and framing. Refer to the installation section of this manual for bracket spacing.

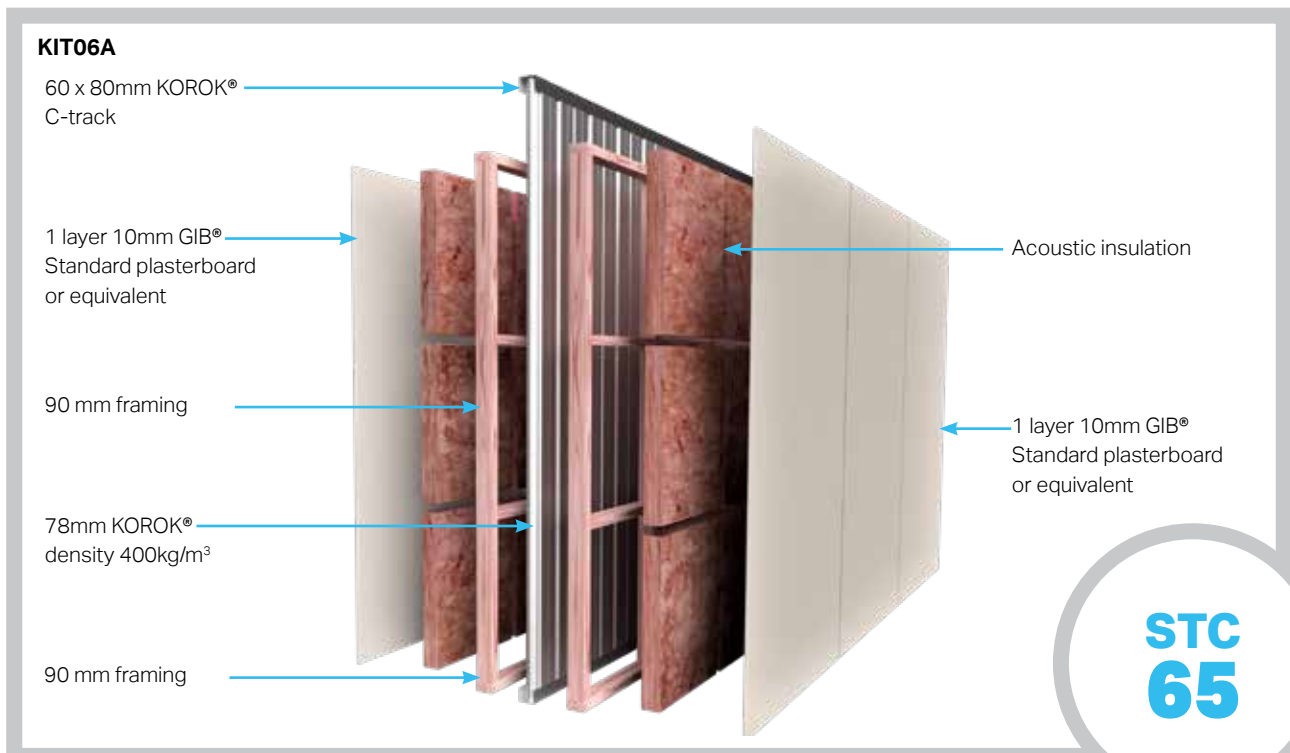
LINING

Frames are lined with 1 layer of 10mm GIB® Standard plasterboard or equivalent each side of the wall. Joints must occur over framing.

Plasterboard linings are installed to the manufacturer's specification.

SEALANT

Beads of fire rated sealant are required around the perimeter of the KOROK® system. Refer to the installation section of this manual for more information on sealant application, and to the KOROK® Components Summary for approved sealants.



KIT09 - 120/120/60

SPEC. CODE	STC	FRR	WALL THICKNESS*	FRAME	CAVITY	SYSTEM SUMMARY
KIT09	69	120/120/60	321mm	90mm steel or timber frame each side	Minimum 113mm overall between the framing. Framing not to touch KOROK® panel	KOROK® 78mm panels (400 Kg/m ³ density) + 1 layer 13mm GIB Noiseline® or equivalent one side + 1 layer 13mm GIB Aqualine® or equivalent(wet) or 13mm GIB Noiseline® or equivalent ((dry) other side Acoustic insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m ³ .

*Nominal thickness

KOROK® PANEL

KOROK® 78mm panels are located in KOROK® C-track 60mm high x 80mm wide x 1.15B.M.T. KOROK® panels must not exceed 14 metres in height.

FRAMING

Frames must be designed to meet the requirements of NZBC Part B and consider the loading imposed on them by the KOROK® wall.

Cavity must be 113mm overall. Framing not to touch KOROK® panel.

SUPPORT BRACKETS

KOROK® aluminium brackets are fixed to the panel and framing. Refer to the installation section of this manual for bracket spacing.

ACOUSTIC INSULATION

Acoustic insulation can be either glass wool or semi-rigid polyester designed to be friction fitted into the wall cavity. The insulation must be a minimum 90mm thick and have a minimum density of 12 Kg/m³ or equivalent.

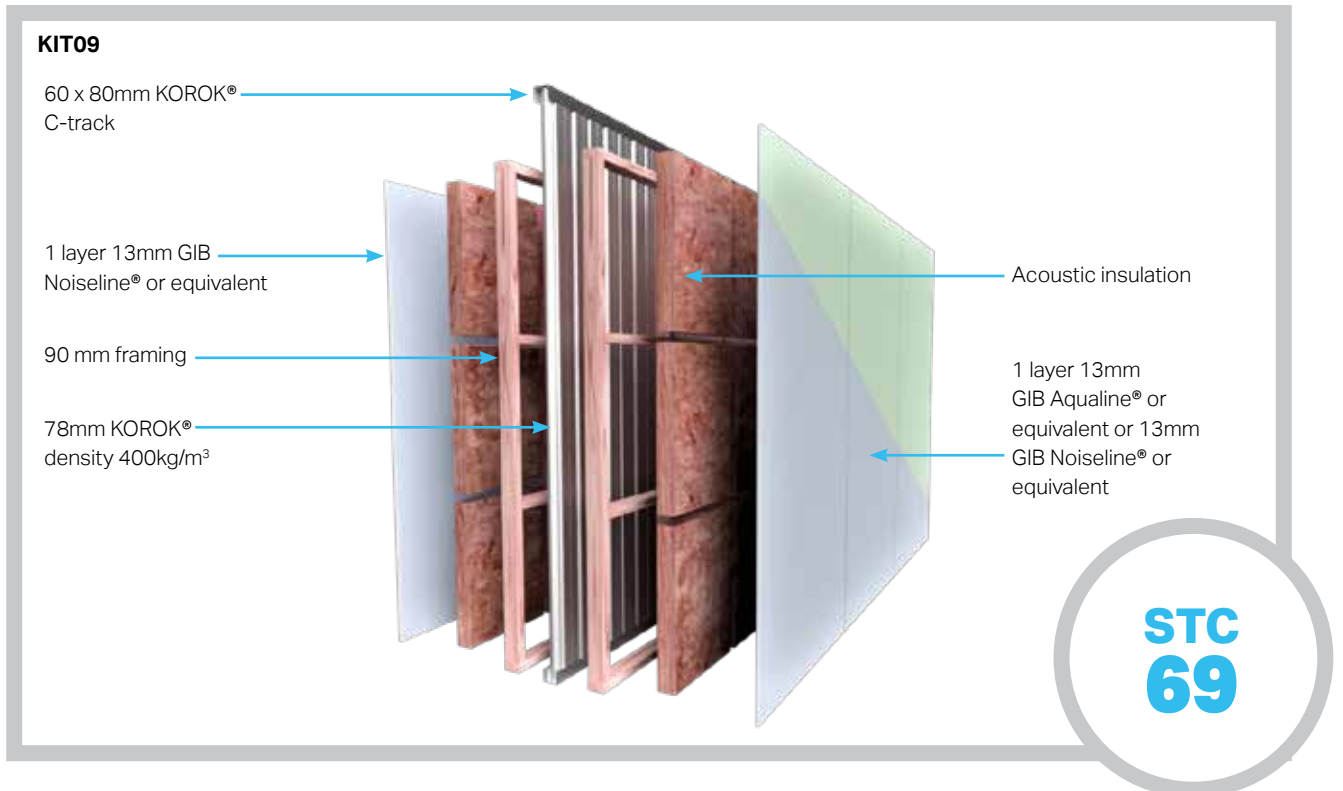
LINING

Frames are lined with 1 layer of 13mm GIB Noiseline® or equivalent on one side and one layer of 13mm GIB Aqualine® or equivalent (wet) or 13mm GIB Noiseline® or equivalent (dry) each side of the wall. Joints must occur over framing.

Plasterboard linings are installed to the manufacturer's specification.

SEALANT

Beads of fire rated sealant are required around the perimeter of the KOROK® system. Refer to the installation section of this manual for more information on sealant application, and to the KOROK® Components Summary for approved sealants.



INSTALLATION INFORMATION

TRANSPORT

Generally the lengths of KOROK® are delivered to site by long trailers and articulated trucks. Therefore access to and on building sites must be adequate to accommodate these types of vehicles.

Off loading and site storage or craning onto site is the responsibility of the client and suitable arrangements must be made prior to delivery.

KOROK® products are packed and protected against damage during delivery but care must be exercised during unloading.

Lengths must be adequately supported during unloading and where packs are broken and panels lifted by hand, care must be taken not to slide or drag the panel and scrape the finished surfaces of the product.

HANDLING AND STORAGE

KOROK® panels must be stored under clean, dry and ventilated conditions.

Where it is necessary for KOROK® Panels to be stored on-site they must be placed away from the building operations, if possible, in the order in which they will be fixed.

Storage must provide a firm and dry base, protected from the weather, accidental damage and moisture.

The panels must be stored on bearers no more than 2000mm apart. Stack heights are limited to 8 pallets.

Adequate cover must be provided and water must not lie on or between the panel surfaces, which will cause staining and degradation of the surface coatings.

If pallets become wet the KOROK® panels must without delay be separated, wiped with a clean cloth and stacked so that the circulation of air will complete the drying process.

ON SITE HANDLING AND STORAGE

Handle KOROK® panels carefully prior to installation. Avoid knocks, bumps and scratches, which may lead to maintenance issues later.

Store KOROK® panels on site flat or in their pallets and ensure that KOROK® panels are dry prior to installation.

CLEANING

At the completion of the job and at the finish of each day's work, it is essential that the completed area be thoroughly cleaned of all swarf, rivet stems, nails, drillings and screws, etc. normally associated with the installation of metal panels.

STRIPPABLE FILM

KOROK® panels may be coated with a plastic film to provide protection during handling and transportation. This film has a very short life when exposed to exterior conditions and must be removed immediately after installation.

It must not be left lying in the sun or at the site for more than a few hours. Failure to remove the film will lead to difficulties later with its removal.

CUTTING OF KOROK® PANELS

It's recommended that KOROK® panels are cut using a radial saw with dust removal system. Hot swarf must not be allowed to contact pre-painted or galvanized sheet material. Any grinding, welding or drillings carried out above the wall level must be done with the panels appropriately covered to avoid swarf contact.

Failure to do so will result in unsightly staining of the surface as the metal particles rust or oxidise.

PENETRATIONS

Where penetrations through KOROK® panels are required, the use of a grinder, sabre saw or hole saw to remove the steel shell is ideal. The aerated concrete is easily removed.

Any gaps in, or services that penetrate through, fire-rated construction are to be fire-rated using certified proprietary systems such as fire collars, fire wraps, intumescent systems, etc. The system(s) are to be installed to the specification of the manufacturer of the chosen product(s).

KOROK® panels must be earthed where electrical equipment or unsheathed cables may come into contact with the steel shell.

<https://korok.com/systems/korok-penetrations/>

INSTALLATION

Specific design advice must be sought where KOROK® is to be subject to point loads or other distributed loading other than wind.

Ensure connections between KOROK® panels are properly made.

Ensure connections of KOROK® panels to the structure are adequate.

TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

Installation of the KOROK® Intertency Systems requires the attachment of the KOROK® panels to framing members using KOROK® aluminium brackets. The framing is set out to allow for the required clearances on both sides of the KOROK® Intertency wall.

After the framing on one side of the KOROK® Intertency wall is completed, the KOROK® Intertency wall is installed and attached with KOROK® aluminium brackets.

1 Place a bead of fire rated sealant between the floor and C-track on the centre line of the KOROK® wall position.

Refer the KOROK® Components Summary for approved sealants (page 46).

2 Fix the C-track at maximum centres of 400mm with approved anchors. Place fire rated sealant in the internal corner of the C-track.

When setting out the C-track ensure there is enough clearance from the wall frame giving consideration to any KOROK® KIT flashings.

If the surrounding surface is uneven or if you are not sure you have a good seal, add another bead of fire rated sealant along the C-track floor junction.

Refer the KOROK® Components Summary for approved anchors (page 46).

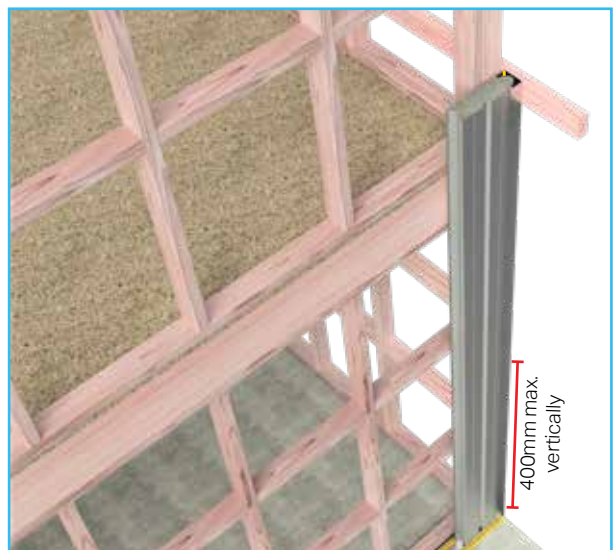
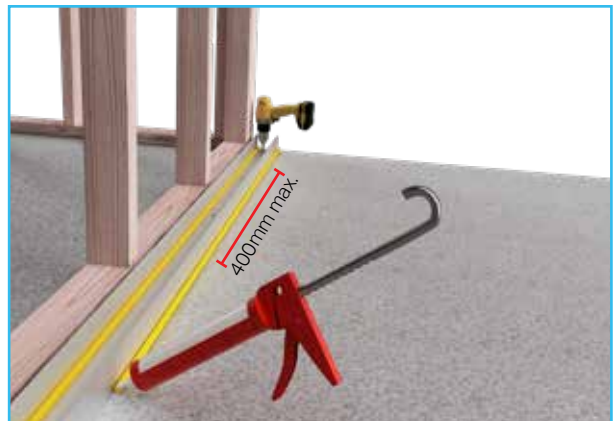
3 Fix a C-track to the outside of the first panel using 10g x 16mm Wafer Tek screws at 400mm centres one side, prior to installing. Place fire rated sealant in the internal corner of the vertical C-track.

You may brace the C-track temporarily by screwing timber blocks to the frame to assist with setting the first panel flush and plumb.

Place the first panel vertically into the floor C-track. The first panel is to be flush to the outside of the framing.

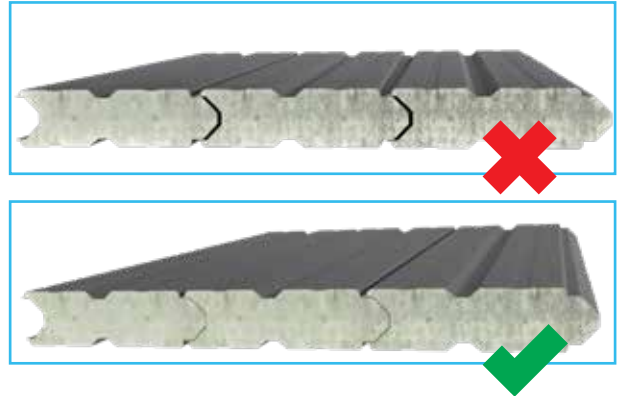
When the framing on the second side is completed the KOROK® aluminium brackets are installed on that side. The sequence of construction must be planned to accommodate the progressive erection of the KOROK® panels.

The KOROK® panels can also be installed after both the wall frames have already been erected. However, this will not be as efficient.

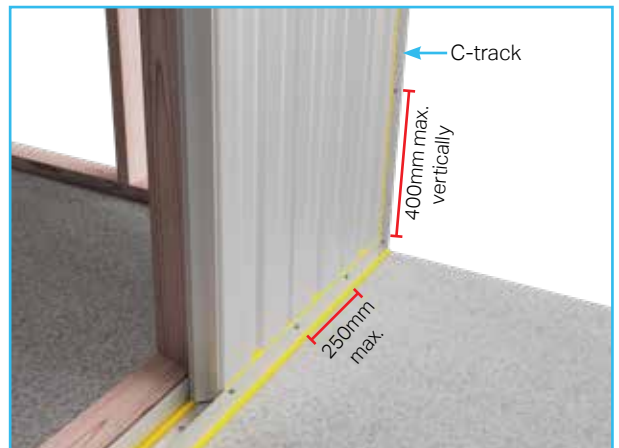


TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

4 Continue placing panels into position, ensuring the tongue and groove are fully locked.



5 Screw off the bottom C-track with 10g x 16mm Wafer Tek screws at 250mm centres one side.



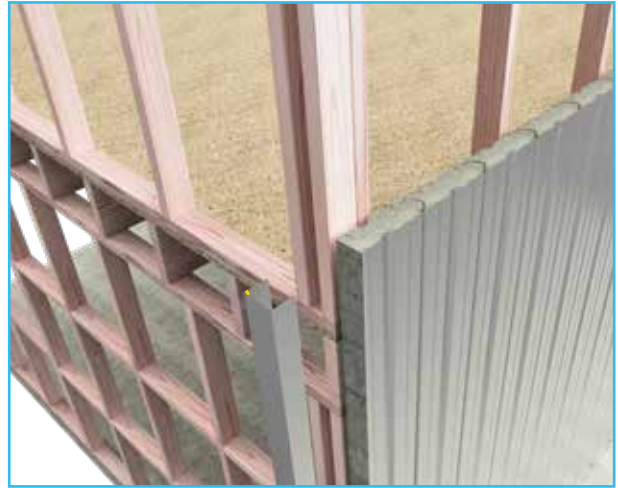
6 After every second panel is installed, fix the KOROK® aluminium brackets into the panel joint using 2 each Hex Head Type 17 14g x 35mm screws, and into the framing using 1 each Hex Head Type 17 14g x 35mm screws at no more than 3.0 metres above floor level. KOROK® aluminium brackets can be located in the studs, plates or the noggins.

If a stud is in the way of the panel joint, install the KOROK® aluminium bracket to the panel face nearest the joint. KOROK® aluminium brackets have a maximum horizontal spacing of 600 mm.

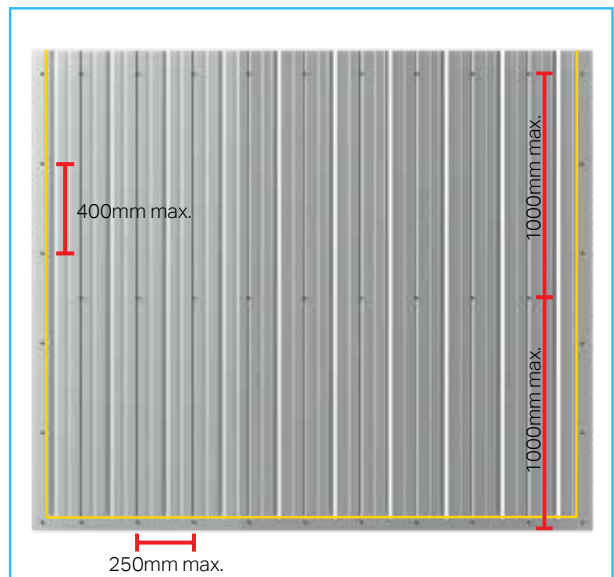


TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

7 Cut the last panel to fit the wall length and place C-track on the cut panel and screw off with 10g x 16mm Wafer Tek screws at 400mm centres one side. Place fire rated sealant in the internal corner of the vertical C-track. Screw off the bottom C-track with 10g x 16mm Wafer Tek screws at 250mm centres one side.



8 Ensure the wall is screwed off at each panel joint on one side at 1000mm centres vertically with 10g x 16mm Wafer Tek screws. The horizontal bottom C-track are screwed off to the KOROK® panel with 10g x 16mm Wafer Tek screws at 250mm centres one side. Ensure all C-track/panel junctions have been sealed with fire rated sealant.



9 Place a bead of fire rated sealant into the internal corner of the C-track. Fit the C-track to the top of the panels hard down and screw to panels with 10g x 16mm Wafer Tek screws at 250 mm centres one side.

Fix the remaining rows of KOROK® aluminium brackets to the frame and panel joint at 500 mm horizontal centres and 3.0 metres vertically into the panel.

If a stud is in the way of the panel joint, install the KOROK® aluminium bracket to the panel face nearest the joint. KOROK® aluminium brackets have a maximum horizontal spacing of 600 mm.

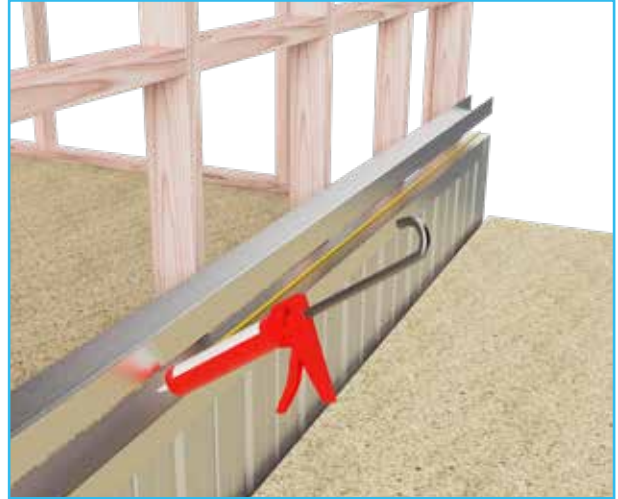
There must be a row of KOROK® aluminium brackets within 1500 mm of any mid-wall horizontal joint.



TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

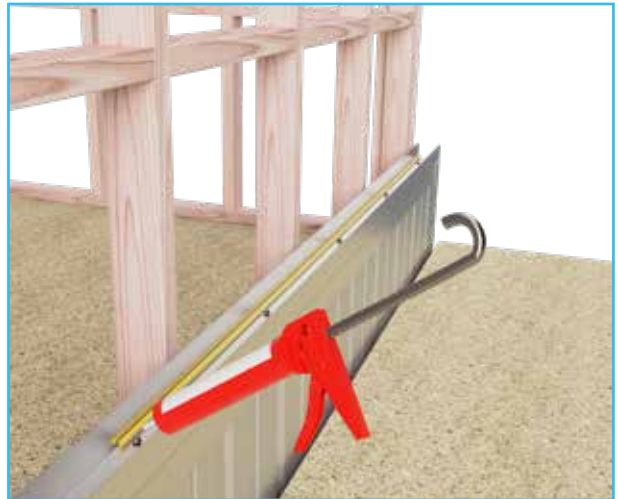
10 Place a bead of fire rated sealant on top of the C-track.

Place the second C-track directly on top and fix with Hex Head SDS 14g x 22mm screws at 400mm centres.



11 Place bead of fire sealant into the internal corner of the top C-track.

Cut the KOROK® panels to rake and height so the panels finish flush with the truss top chord.



12 Fix the vertical C-track to the first panel using 10g x 16mm Wafer Tek screws at 400mm centres one side, prior to installing. Place fire rated sealant in the internal corner of the vertical C-track.

Place the first two panels in position and fix with a KOROK® aluminium bracket no more than 3.0 metres vertically from the previous row of brackets.

You may use a temporary brace.



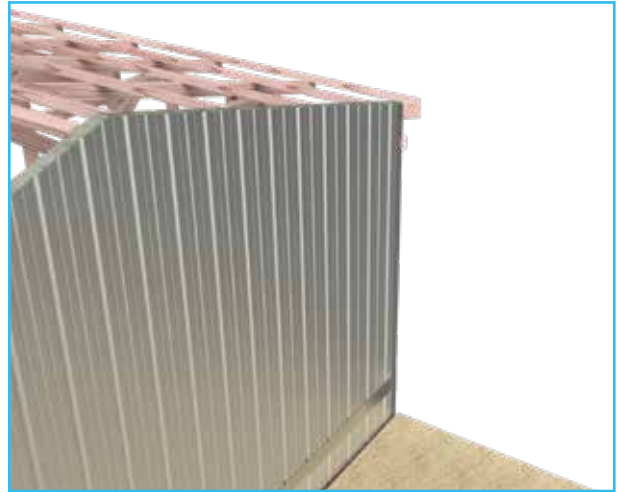
TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

13 Continue placing the KOROK® panels.

As you progress, fix the panels to the framing with KOROK® aluminium brackets at 500mm horizontal centres into the panel joints and no more than 3.0 metres vertically from the previous row of KOROK® aluminium brackets.

If a stud is in the way of the panel joint, install the KOROK® aluminium bracket to the panel face nearest the joint. KOROK® aluminium brackets have a maximum horizontal spacing of 600 mm.

Fix the vertical C-track to the last KOROK® panel using 10g x 16mm Wafer Tek screws at 400mm centres one side. Place fire rated sealant in the internal corner of the vertical C-track. Screw off the bottom C-track with 10g x 16mm Wafer Tek screws at 250mm centres one side.

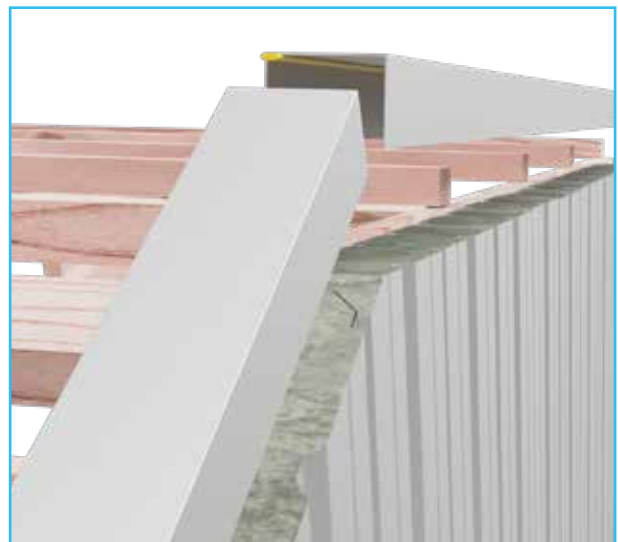


14 Place a bead of fire sealant into the internal corner of the top C-track.

Place the top C-track hard down on top of KOROK® panels and fix off with 10g x 16mm Wafer Tek screws at 250mm centres one side.

Fix the KOROK® aluminium brackets to timber framing and panels at 500mm horizontal centres with Hex Head Type 17 14g x 35mm screws. Ensure wall is straight and true.

Ensure all C-track/panel junctions have been sealed with fire rated sealant.



HEAD TRACK PROTECTION

Check if the system you are installing requires head track protection. This applies to KIT 51mm 60/60/60 and KIT 78mm, 120/120/120 systems.

15 Install a KOROK® Fire flashing at the top C-track. The KOROK® Fire flashing is fixed to the panels at 250mm centres using 10g x 16mm Wafer Tek screws.

Place a bead of fire sealant around the perimeter of the KOROK® Fire flashing and over any joints.



TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

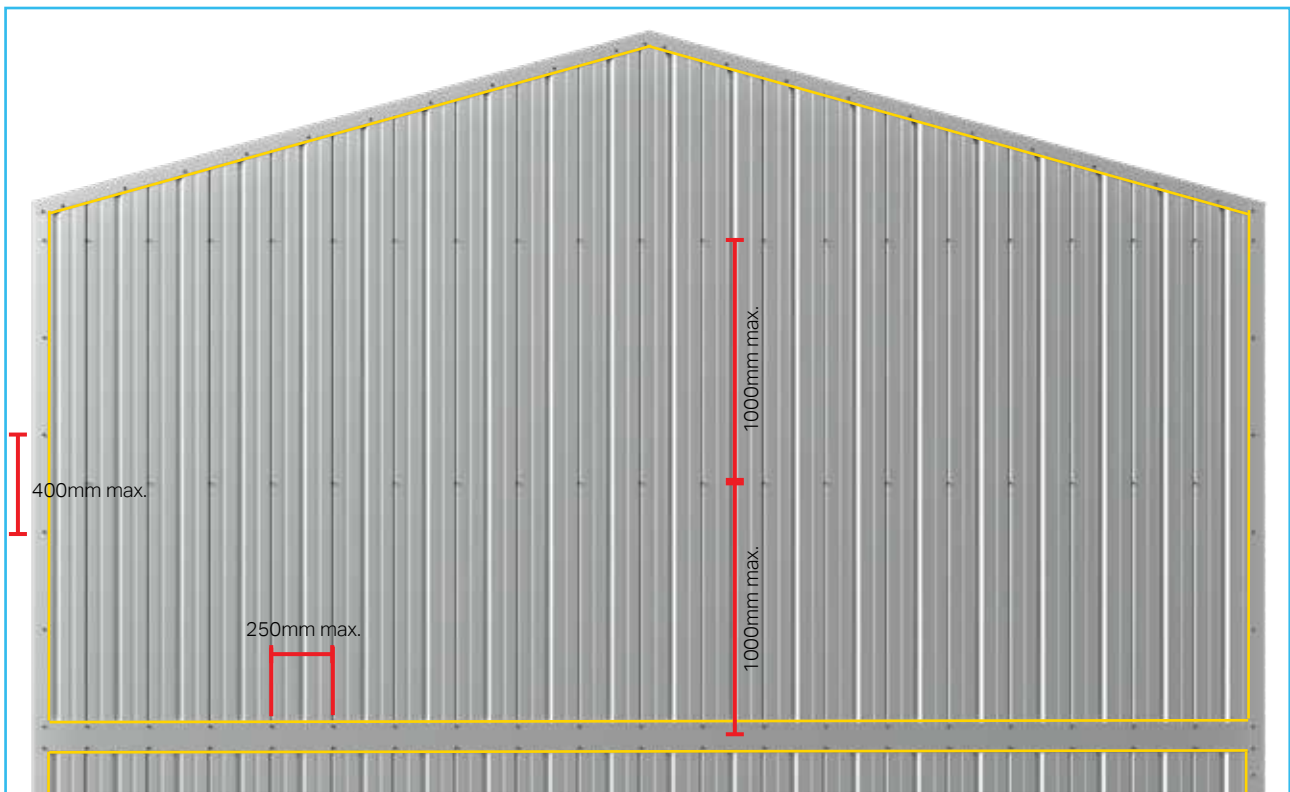
16 Install a KOROK® KIT flashing over the mid-wall joint fixed at 250mm centres top and bottom using 10g x 16mm Wafer Tek screws.

Apply a bead of fire sealant along both flashing edges.

This applies to KIT 51mm 60/60/60 and KIT 78mm 120/120/120 systems.



17 Ensure the wall is screwed off at each panel joint on one side at 1000mm centres vertically with 10g x 16mm Wafer Tek screws. The horizontal bottom and mid-wall C-track is screwed off to the KOROK® panel with 10g x 16mm Wafer Tek screws at 250mm centres one side.



Ensure all C-track/panel junctions have been sealed with fire rated sealant.

TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

TABLE 2 - SCREW PLACEMENT WALL PANELS

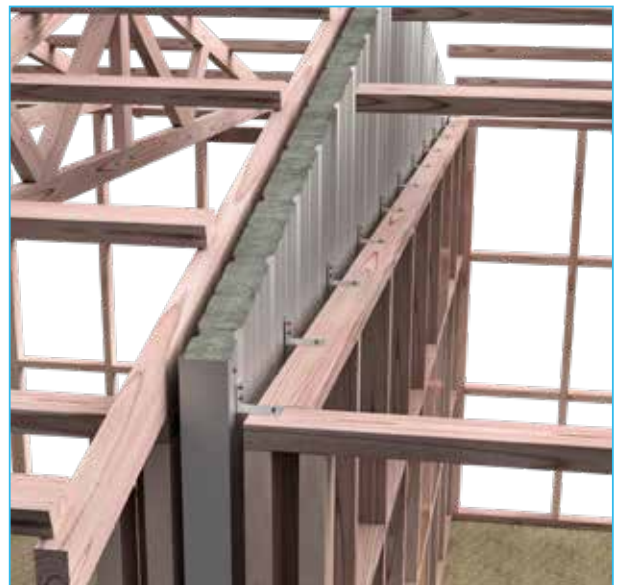
Panels are fixed together at every panel joint at the vertical centres.

Panel Thickness (mm)	Panel Orientation	Max. Wall Height (m)	Panel to Panel Max. Centres (mm)	Sides	KOROK® Wall System or similar	Notes:
51	Vertical	12	1000	One	KIT01 to KIT05	10g - 16 x 16mm Wafer Tek
78	Vertical	14	1000	One	KIT06 to KIT10	10g - 16 x 16mm Wafer Tek

18 Once the framing on the second side is completed, fix KOROK® aluminium brackets into the panel joints at 500mm horizontal centres and a maximum of 3.0 metre centres vertically.

If a stud is in the way of the panel joint, install the KOROK® aluminium bracket to the panel face nearest the joint. KOROK® aluminium brackets have a maximum horizontal spacing of 600 mm.

Ensure all KOROK® aluminium brackets are in place **both sides** and fixed correctly.



19 Friction fit mineral wool or ceramic fibre (minimum density 60kg/m³) into the void to cover the width of the wall.



TERRACED HOUSING INTERTENANCY SYSTEMS INSTALLATION

20 Once the top chord on the second side is completed, fix KOROK® aluminium brackets into the panel joints at 500mm horizontal centres and a maximum of 3.0 metre centres vertically.

If a stud is in the way of the panel joint, install the KOROK® aluminium bracket to the panel face nearest the joint. KOROK® aluminium brackets have a maximum horizontal spacing of 600 mm.



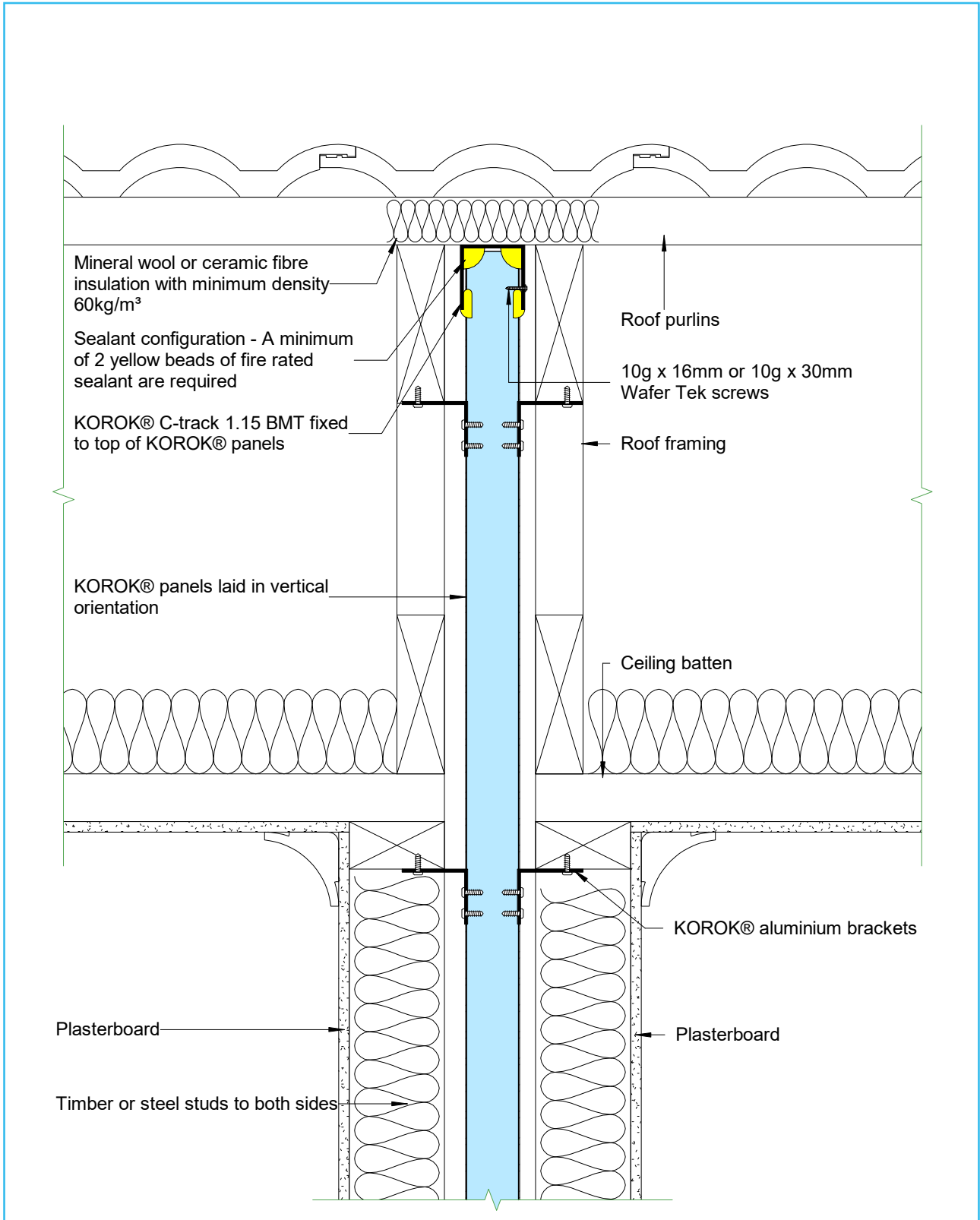
FINAL CHECK

At the completion of the job and at the finish of each day's work, it is essential that the completed area be thoroughly cleaned of all swarf, rivet stems, nails, drillings and screws etc. normally associated with the installation of metal KOROK® panels. Remove any remaining strippable film, check all fixings are correctly installed, all fire and acoustic sealant is applied correctly.

TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® ROOF INTERSECTION

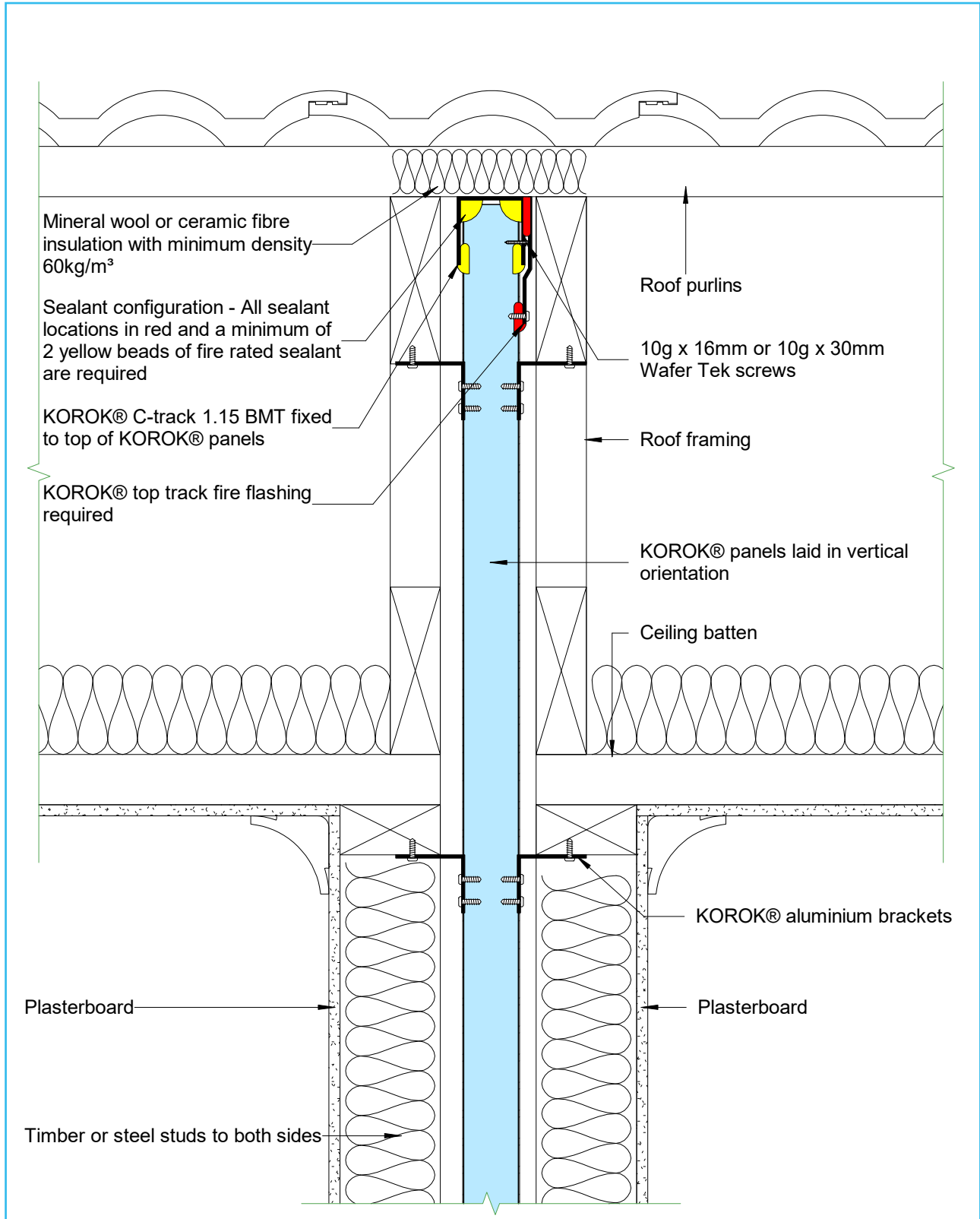
51MM 60/60/30 78MM 120/120/60



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® ROOF INTERSECTION

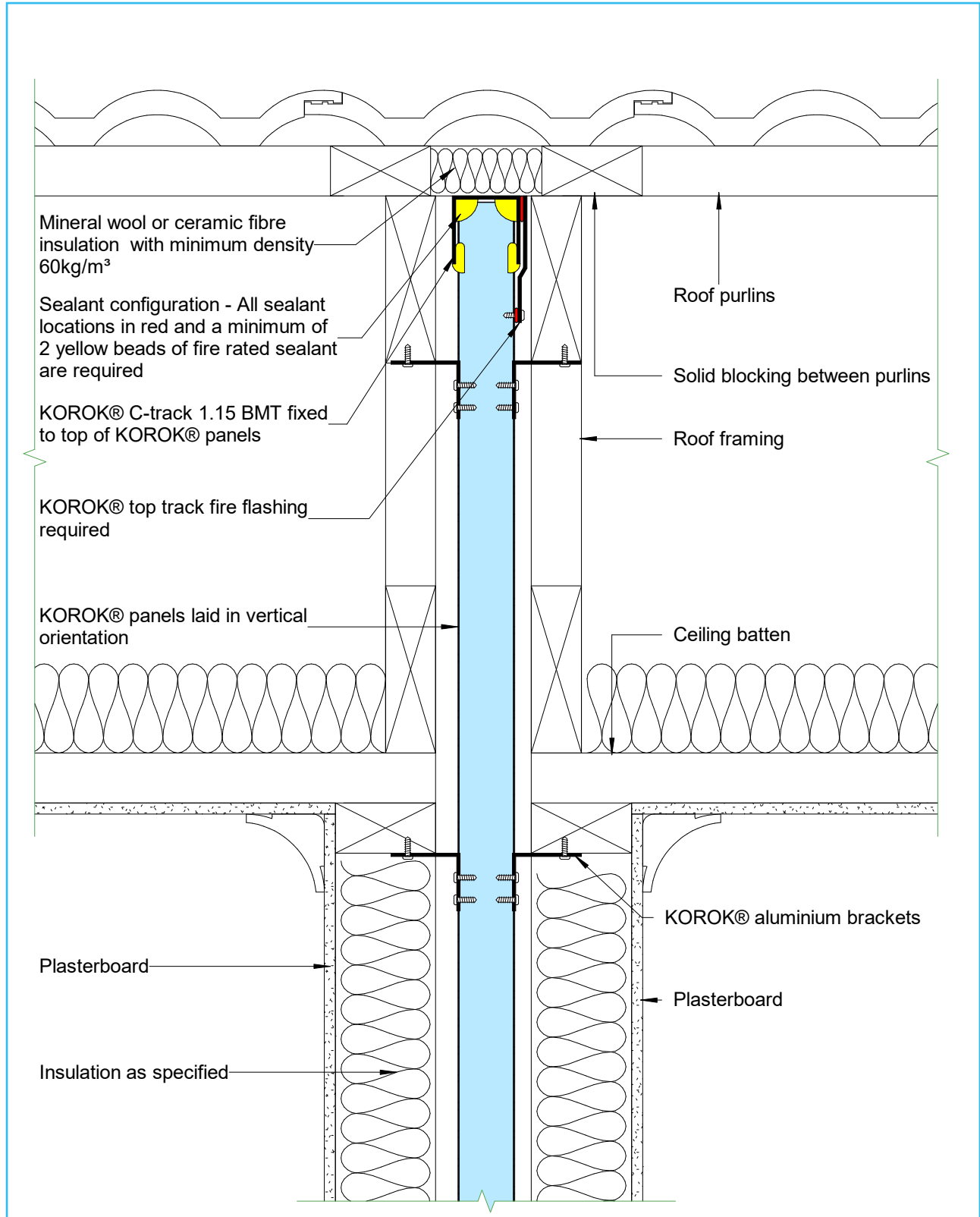
51MM 60/60/60 78MM 120/120/120



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® ROOF INTERSECTION

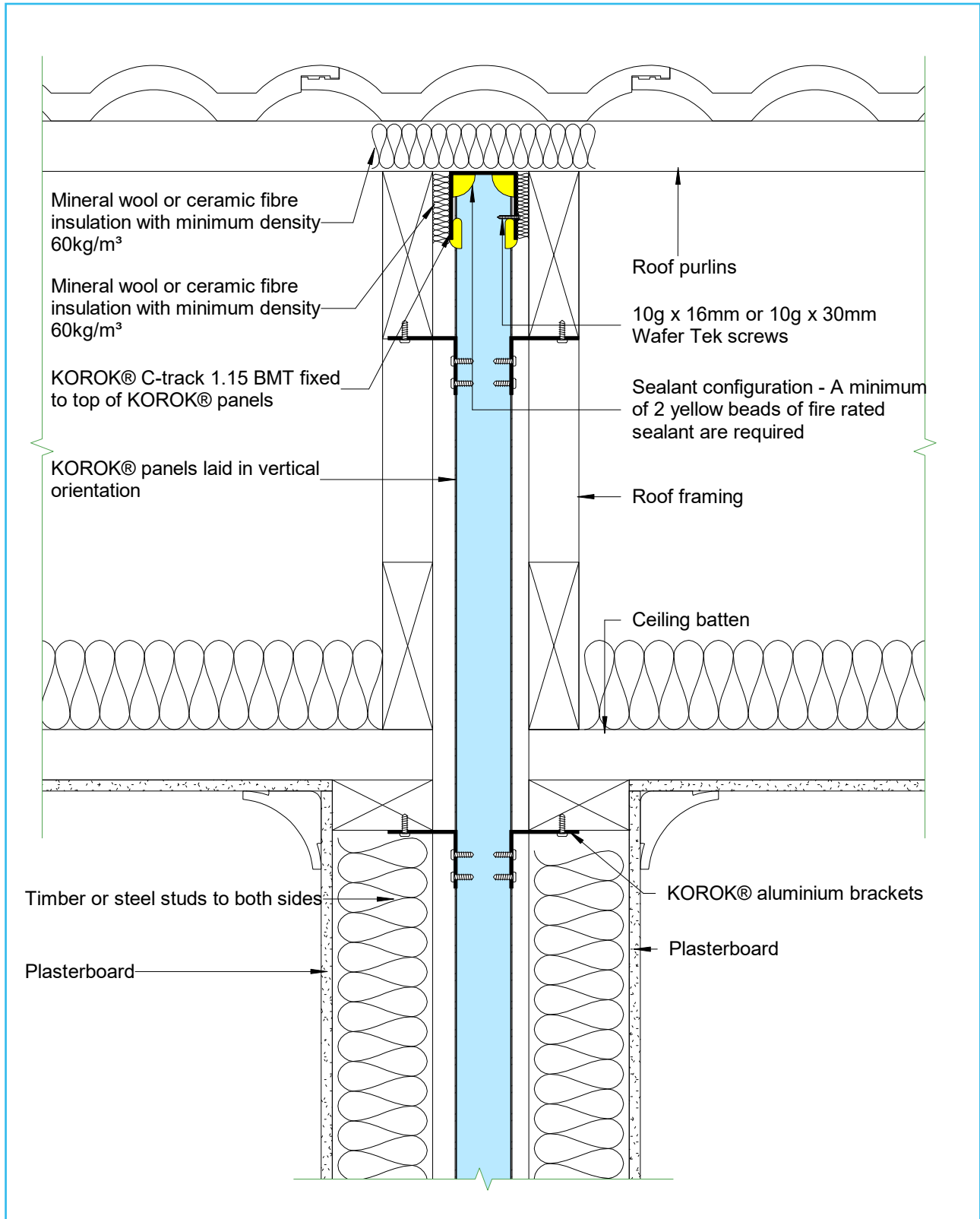
51MM 60/60/60 78MM 120/120/120



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® ROOF INTERSECTION

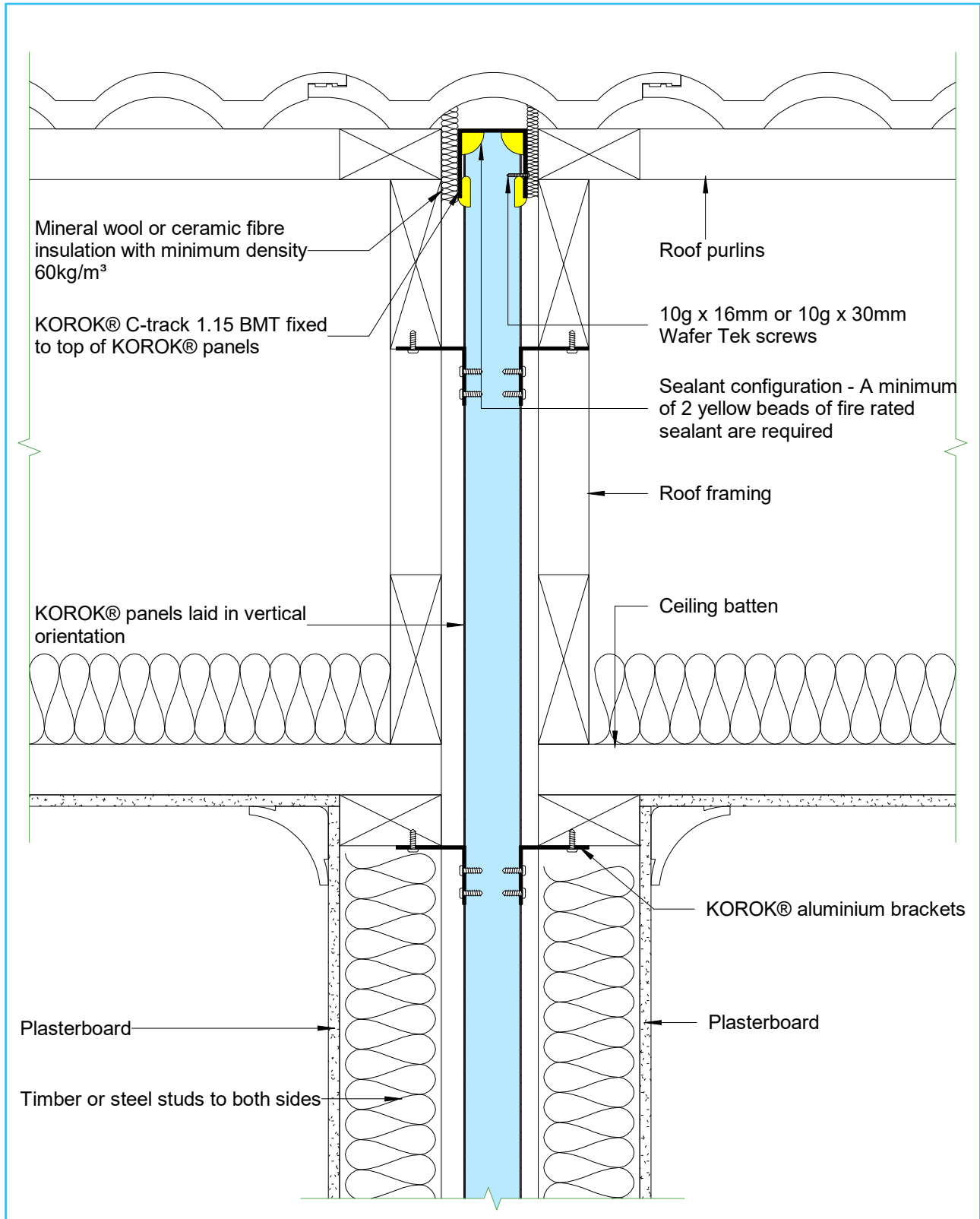
51MM 60/60/60 78MM 120/120/120



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® ROOF INTERSECTION

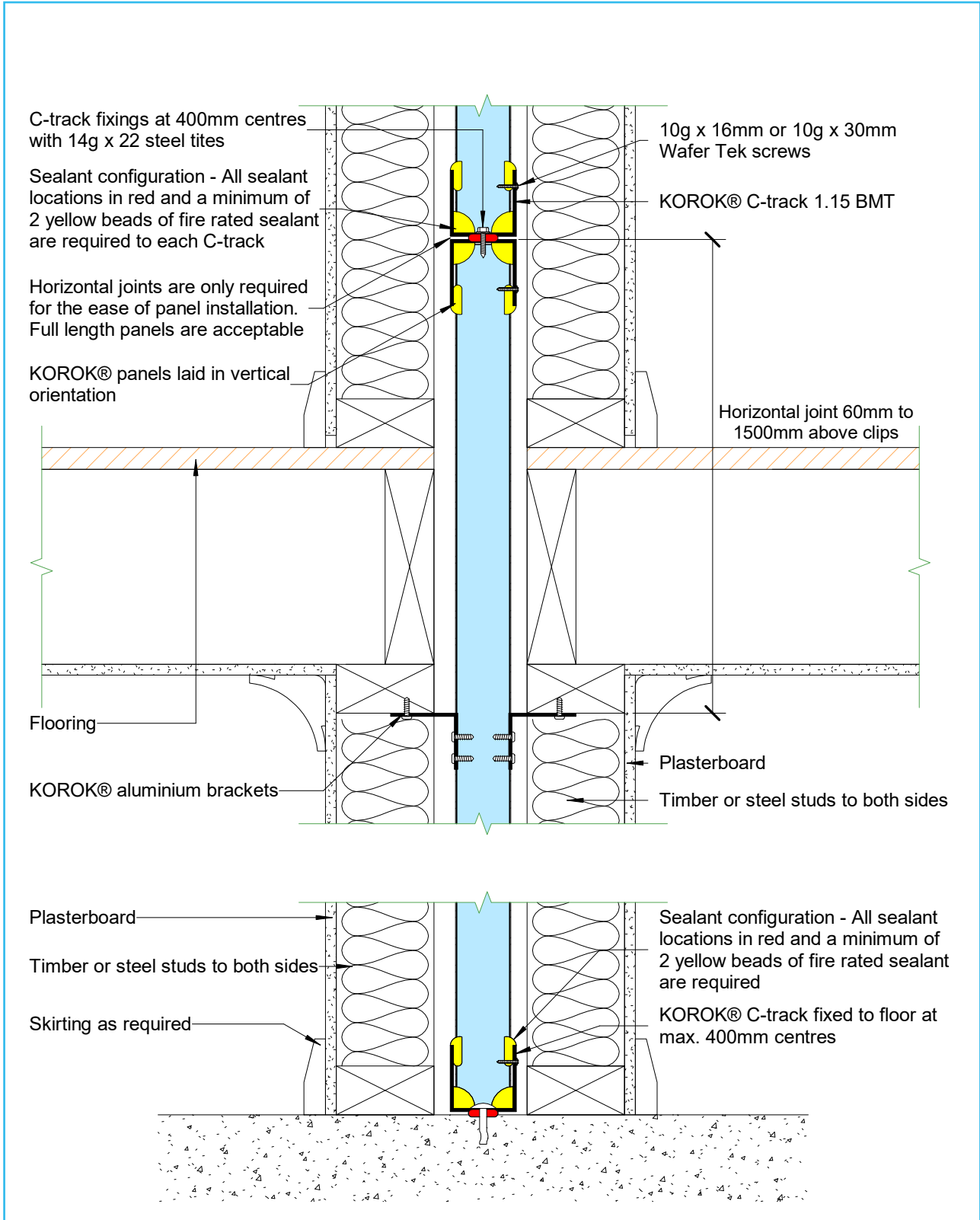
51MM 60/60/60 78MM 120/120/120



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® FLOOR & MIDSPAN INTERSECTION

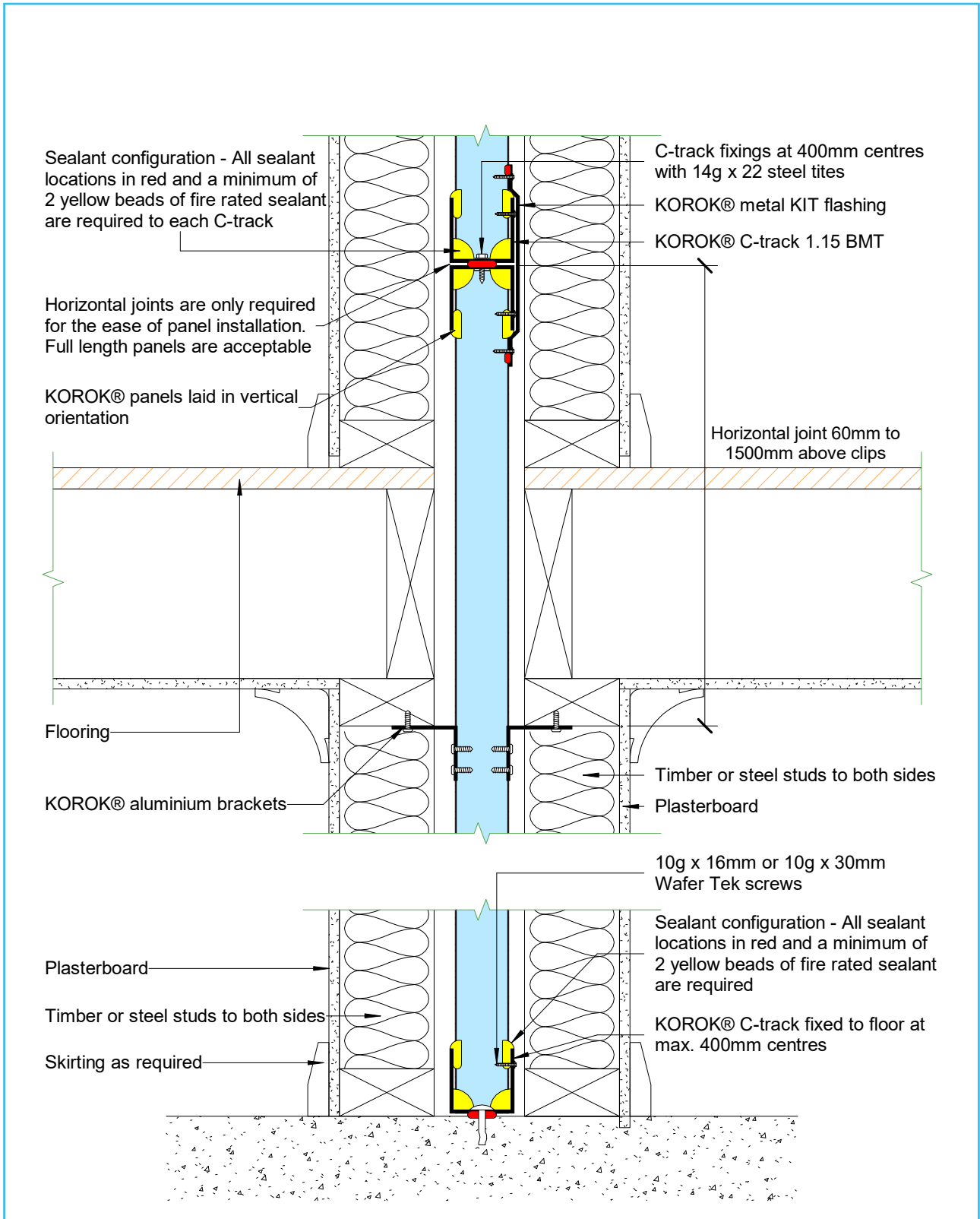
51MM 60/60/30 78MM 120/120/60



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

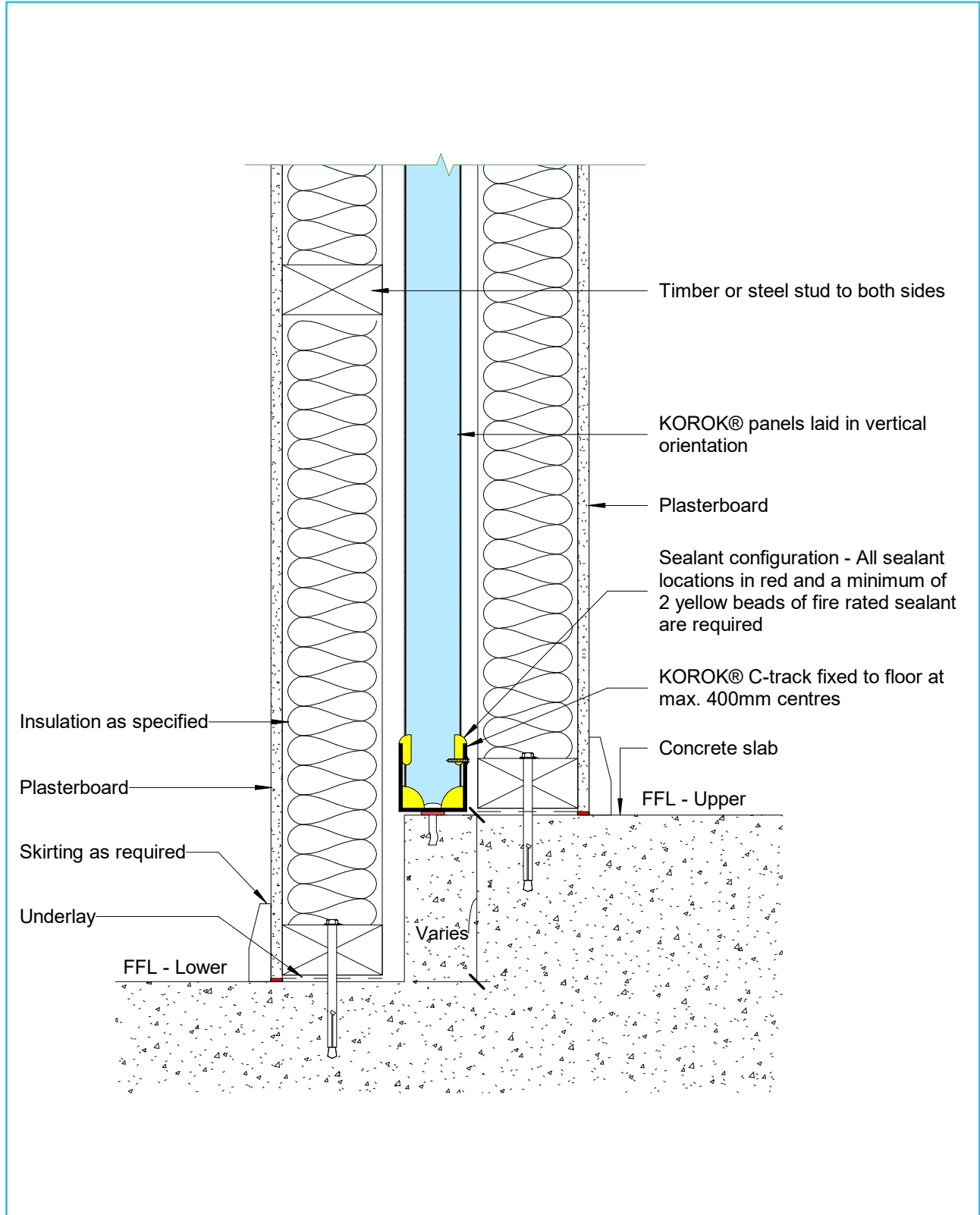
KOROK® FLOOR & MIDSPAN INTERSECTION

51MM 60/60/60 78MM 120/120/120



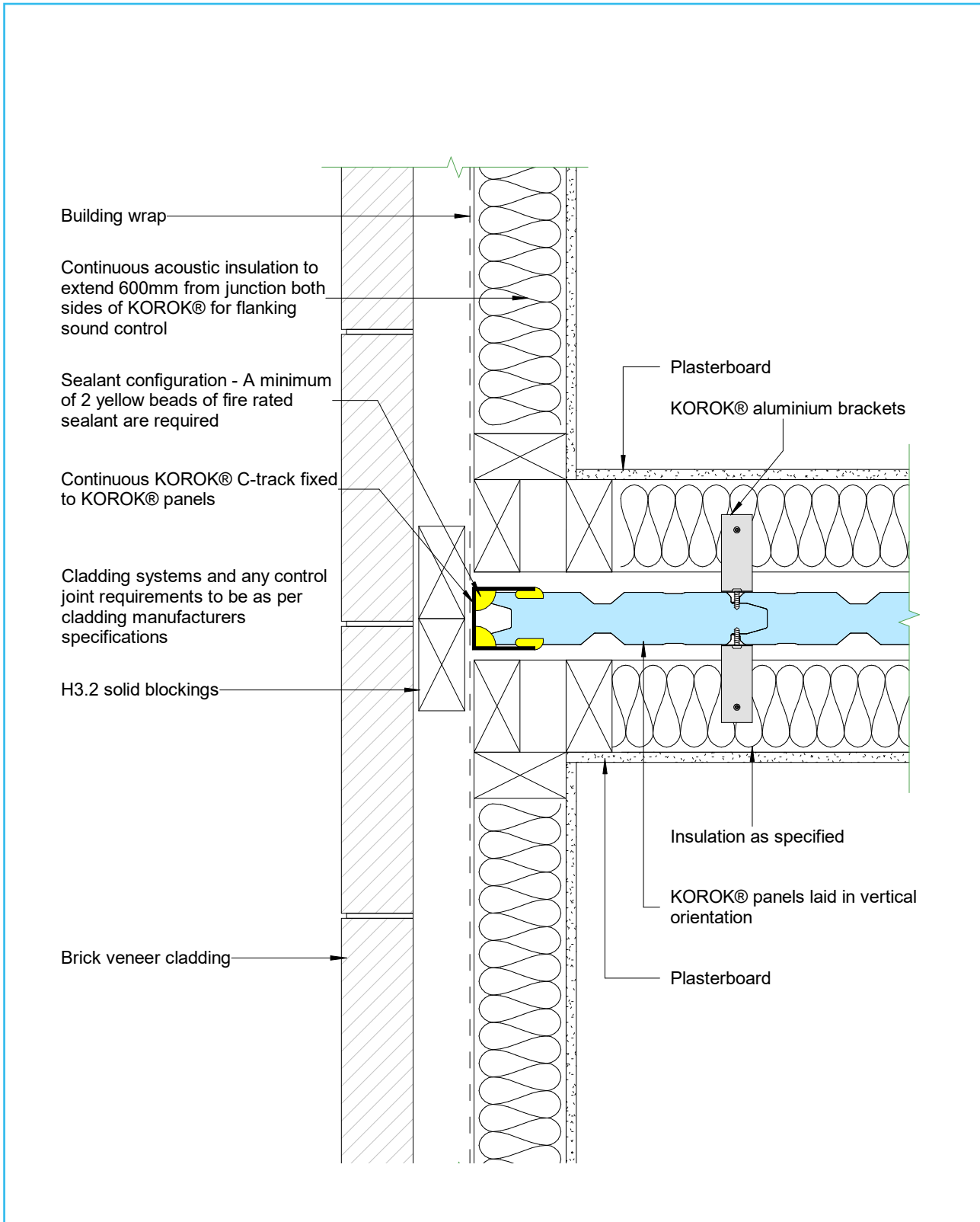
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® STEP FOOTING SECTION



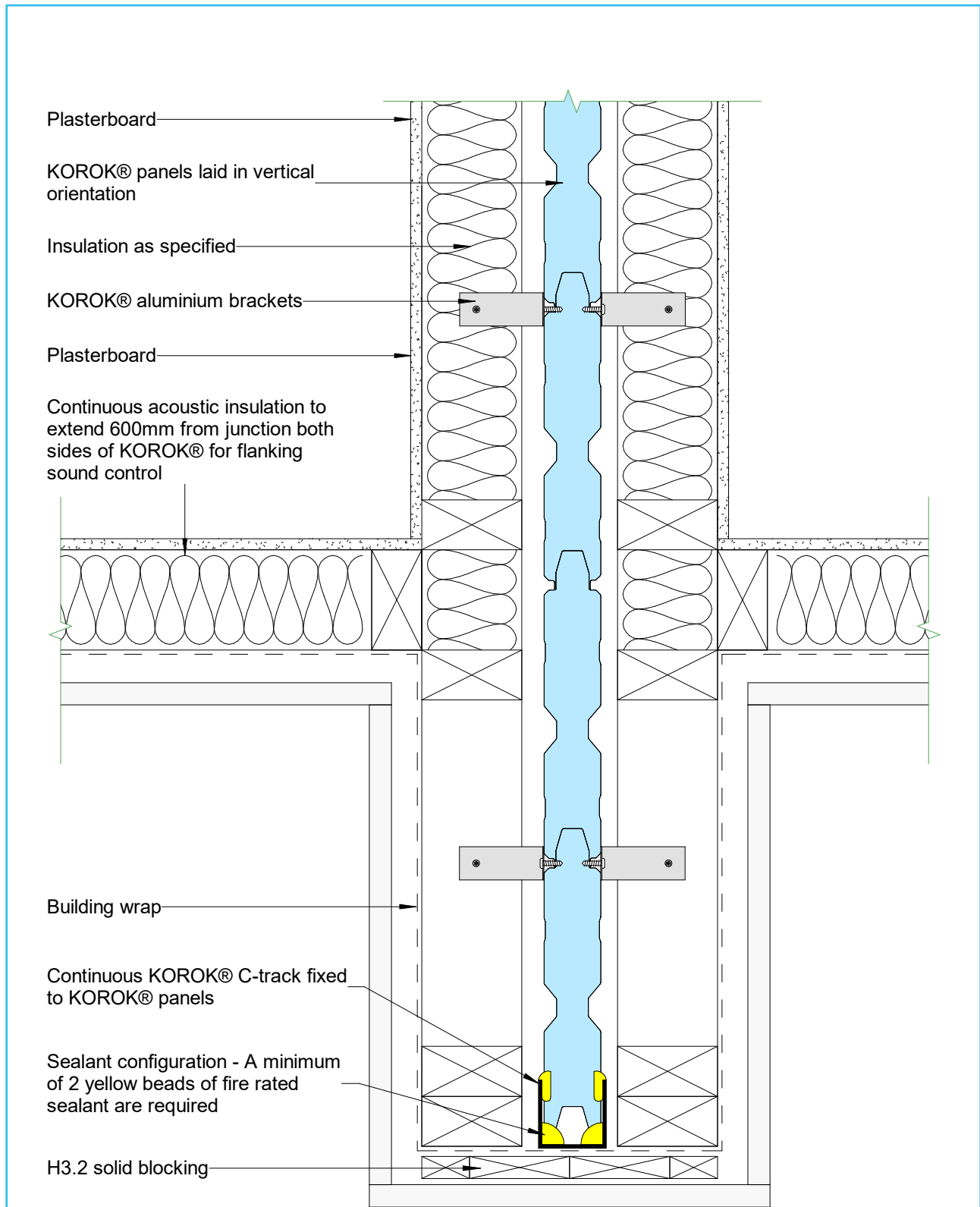
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® CLAD WALL INTERSECTION SOLID BLOCK



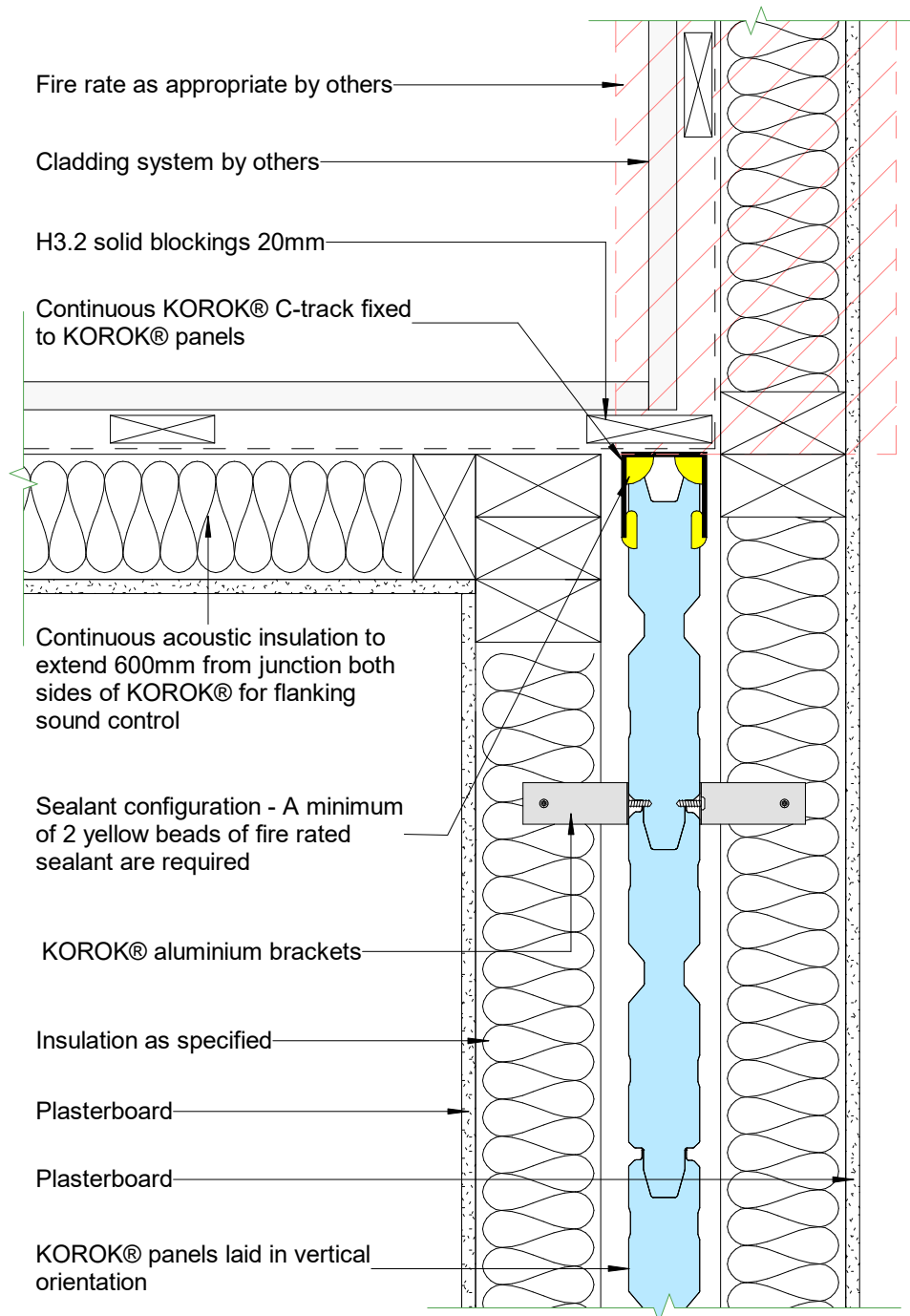
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® WALL PROJECTION AT EXTERNAL TIMBER FRAME WALL



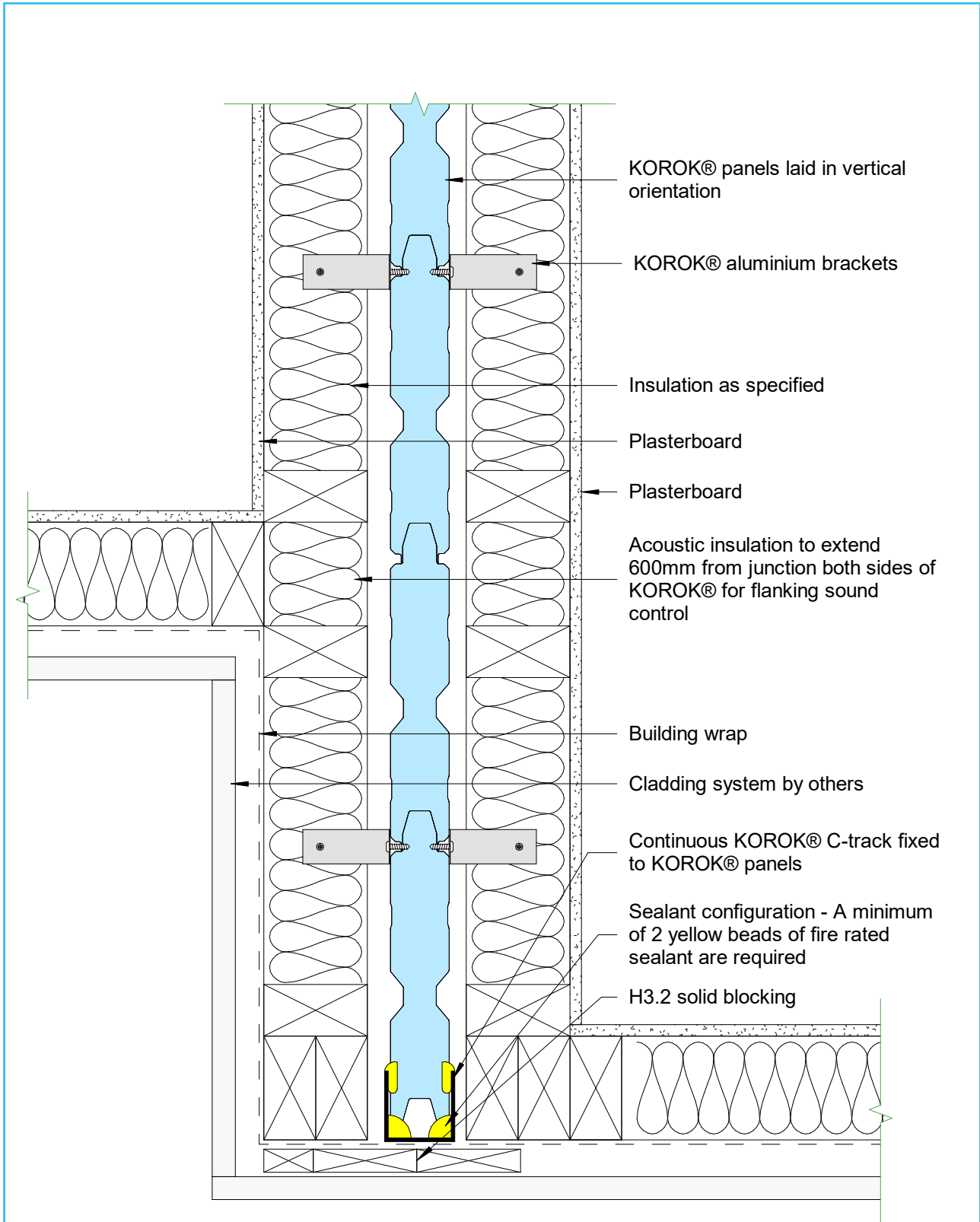
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® EXTERNAL CORNER SOLID BLOCKING



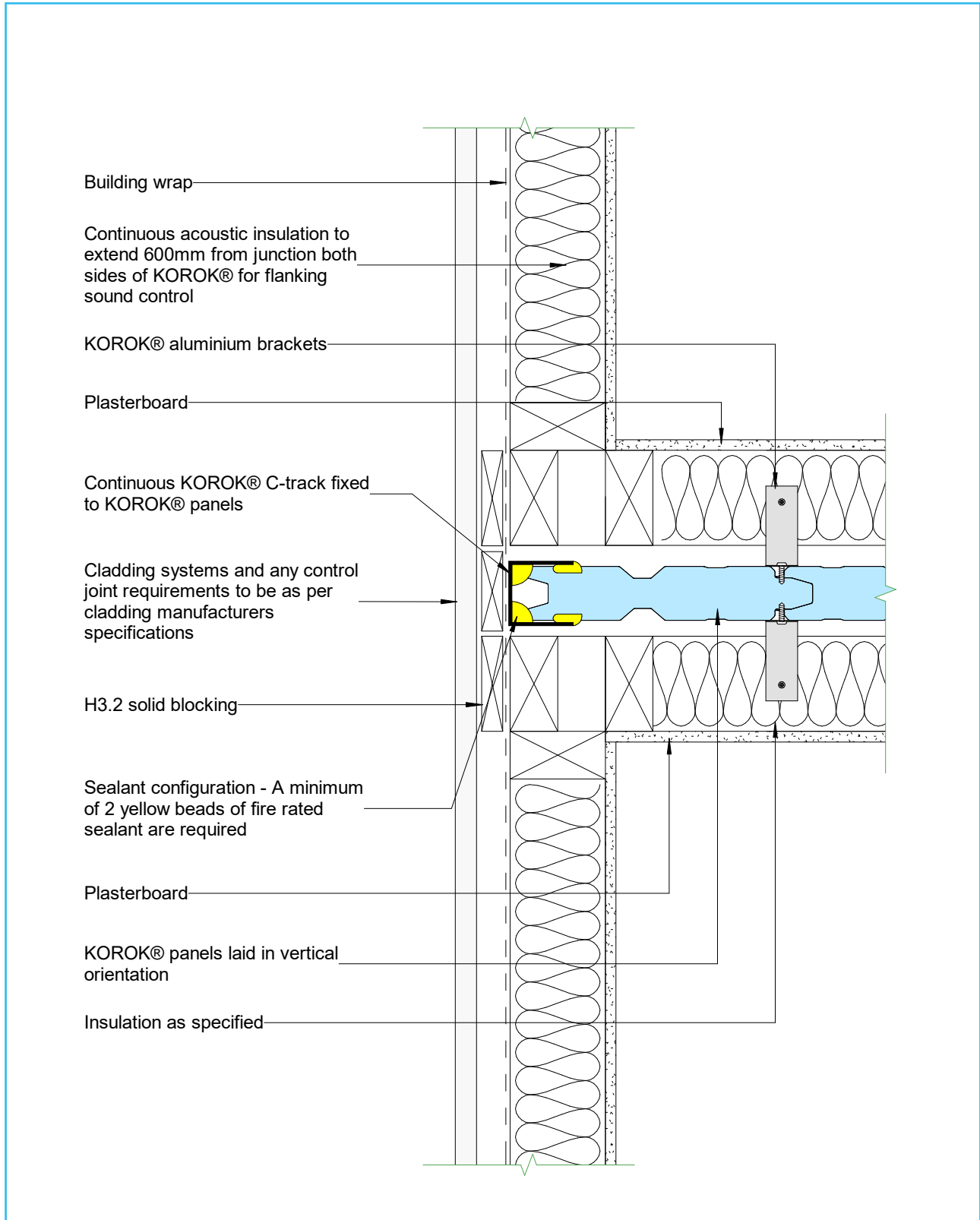
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® CLAD WALL CORNER INTERSECTION



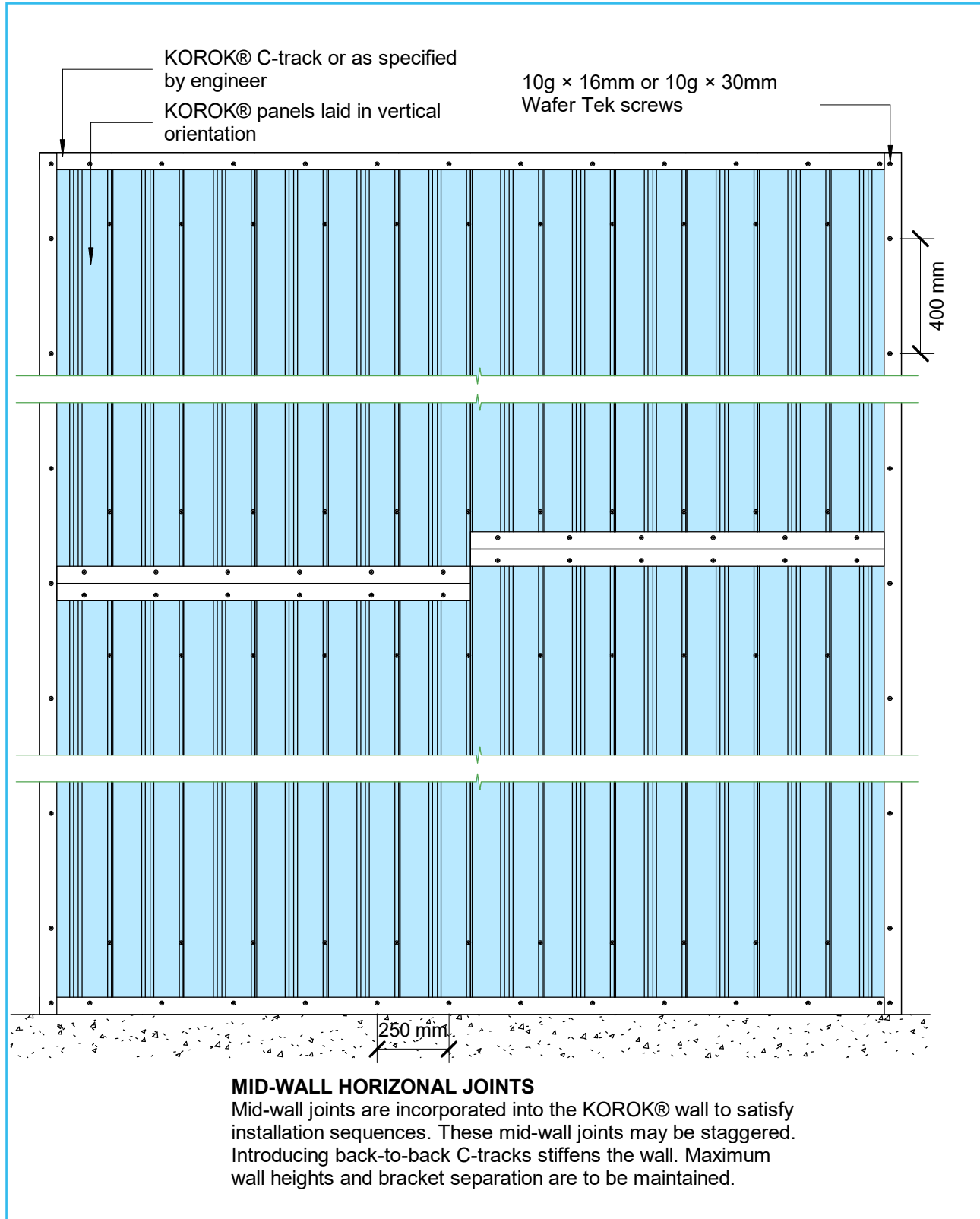
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® CLAD WALL INTERSECTION SOLID BLOCK



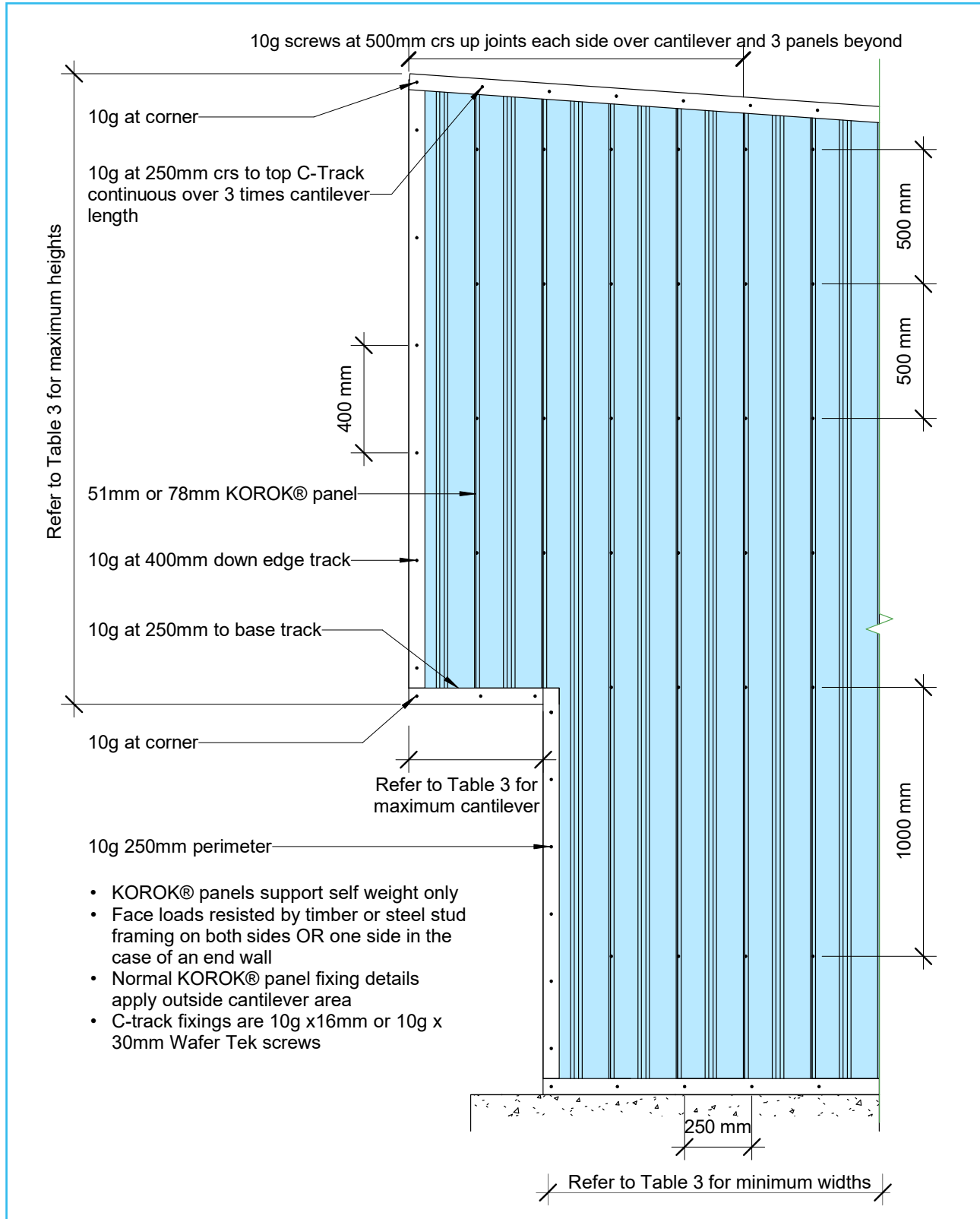
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® STAGGERED MID SPAN HORIZONTAL JOINT



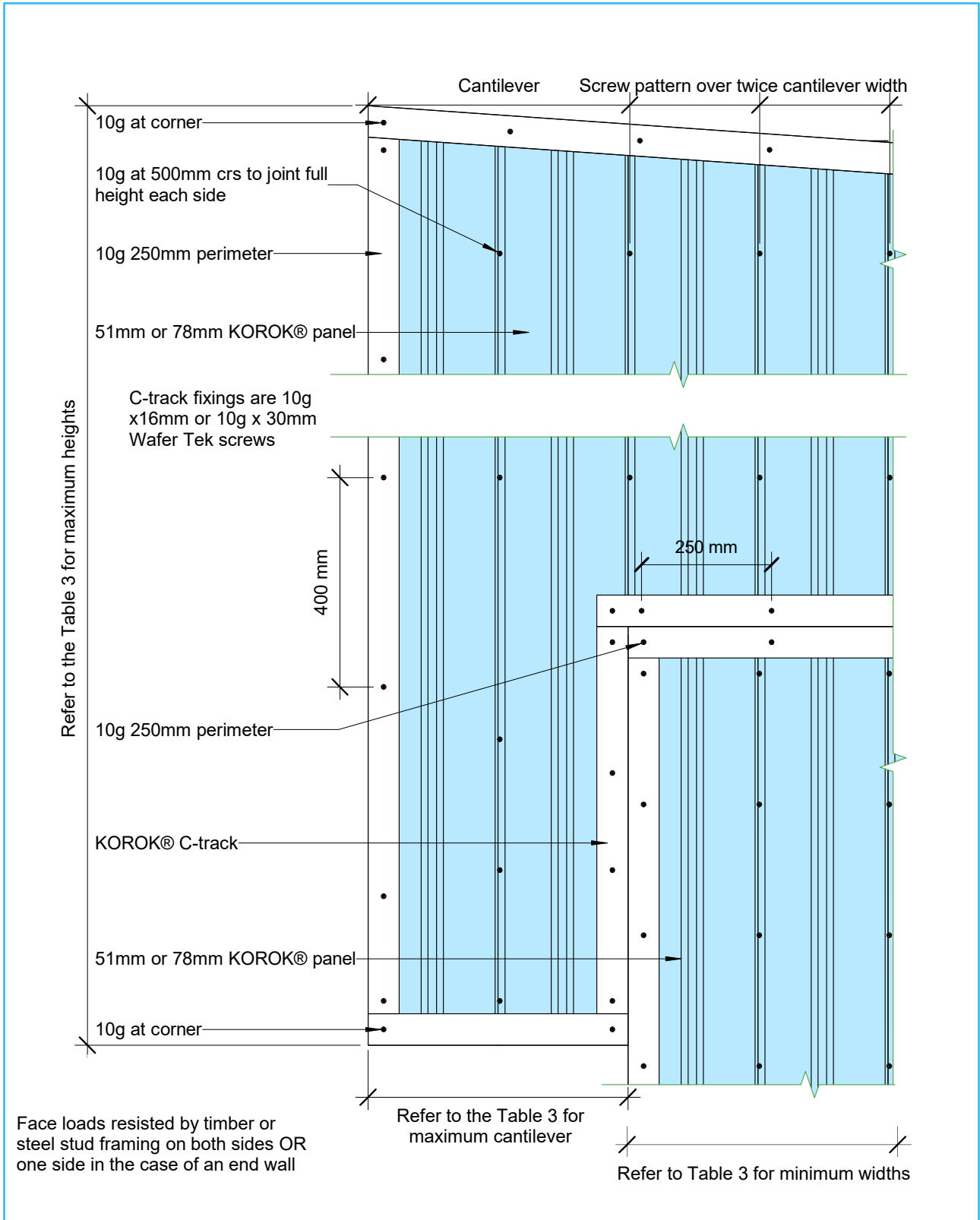
TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® CANTILEVER PANEL SECTION



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® CANTILEVER PANEL SECTION



TERRACED HOUSING INTERTENANCY SYSTEMS TYPICAL CONSTRUCTION DETAILS

KOROK® EAVES DETAIL

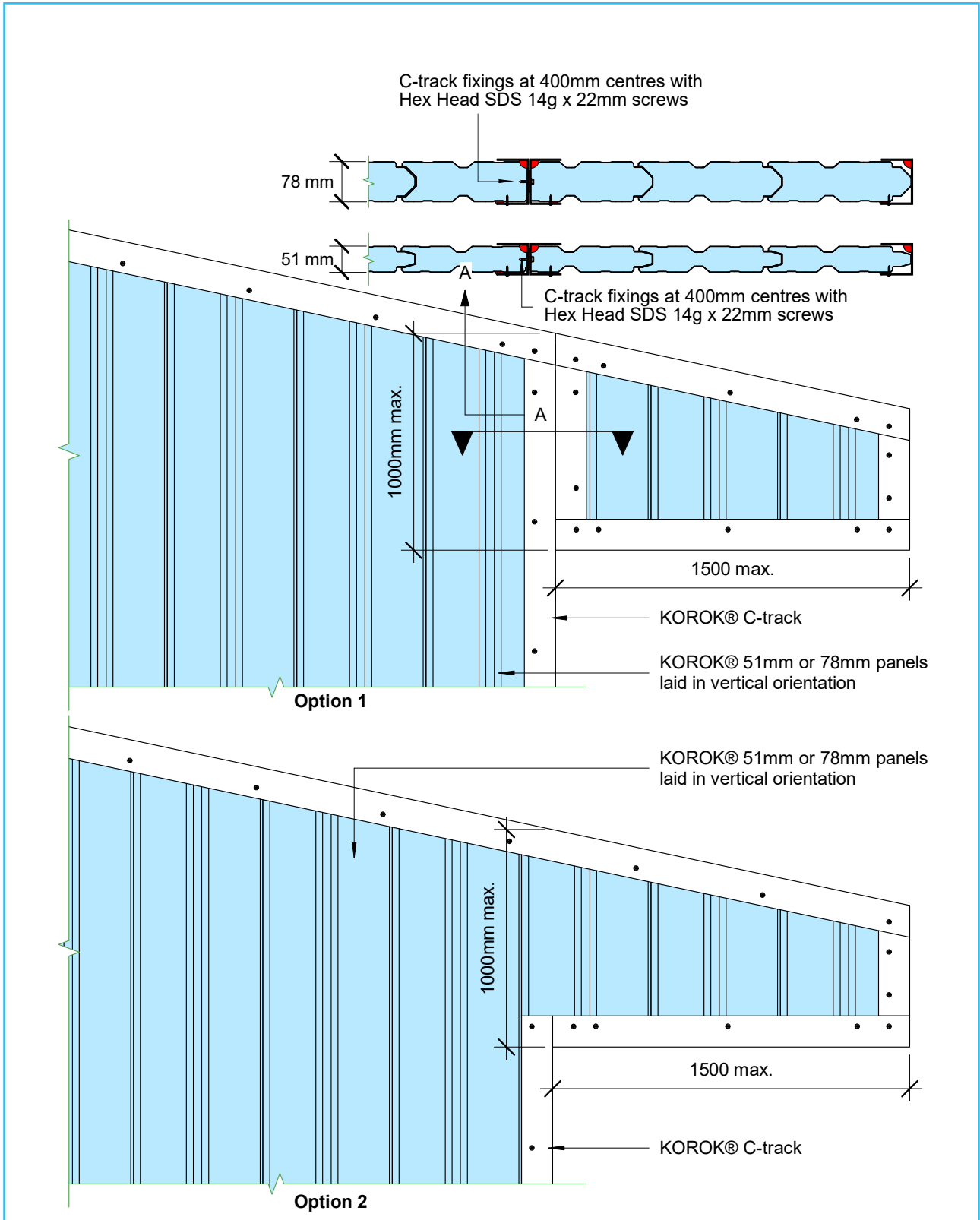


TABLE 3 - KOROK® INTERTENANCY TERRACED HOUSING WALLS WITH CANTILEVER PANEL SECTION

Table 3 - Assessment summary for KOROK® Intertenancy Terraced Housing Wall with horizontal cantilever segments.

PANEL	CANTILEVER WIDTH (M)	CANTILEVER HEIGHT (M)	MINIMUM WIDTH OF THE WALL AT BOTTOM (M)	MAXIMUM WALL HEIGHT	FRR	REFERENCE DRAWING
51 mm	1.00	3.6	2.0	9.0 m	60/60/60	Page 40 and 41
	0.75	3.9	2.0			
	0.50	4.2	1.5			
	0.25	4.5	1.0			
78 mm	1.00	4.0	2.0	10.5 m	120/120/120	Page 40 and 41
	0.75	4.4	2.0			
	0.50	4.8	1.5			
	0.25	5.0	1.0			
78 mm	1.00	4.5	2.0	10.5 m	60/60/60	Page 40 and 41
	0.75	4.8	2.0			
	0.50	5.0	1.5			
	0.25	5.5	1.0			

TABLE 4 - KOROK® FASTENERS SPACING

Use	KOROK® Wall System or similar	Panel Thickness (mm)	Panel Orientation	Maximum Wall Height (m)	Maximum Vertical Span	Panel to Panel Maximum centres (mm)	Sides	Wafer Tek Screw	Panel Perpendicular to C-track (mm)	Panel Face or Joint	Sides of C-track	Wafer Tek Screw	Notes:
Intertency - Terraced Housing	KIT01 to KIT5	51	Vertical	12 m	3m between KOROK® aluminium brackets	1000	One	10-16	250	Face	One	10-16	See flashing details for FRR
Intertency - Terraced Housing	KIT06 to KIT10	78	Vertical	14 m	3m between KOROK® aluminium brackets	1000	One	10-16	250	Face	One	10-16	See flashing details for FRR

NOTES

- For C-track running parallel to the panels, 10g x 16mm Wafer Tek screw fixings at 400mm centres are used one side.

PANEL PROPERTIES

KOROK® PANELS

KOROK® panels are roll-formed from zinc-coated steel strips. The steel from which the shells are manufactured conforms to AS1397: 2011.

Steel shells have a base metal thickness of 0.4 mm B.M.T. with a Z275 zinc coating. These panels have an aerated concrete core and weigh nominally 10.2 kg per lineal metre.

KOROK® panels have 250 mm coverage when installed.

LOADING COMBINATIONS

All loading combinations are in accordance with AS/NZS 1170.0:2002.

GENERAL DESIGN NOTES

The designs specified in this manual have been carried out in accordance with AS/NZS1170 and laboratory testing carried out by BRANZ Limited.

The tables and charts are prepared for the use of KOROK® in wall applications i.e. floor systems cannot be modelled from the safe load tables in this manual. Interpolation of the tables is acceptable.

STANDARDS

NZS 2589.1-2017 A1

Gypsum Linings in residential and light commercial construction.

AS/NZS 1170.0-2002 A4

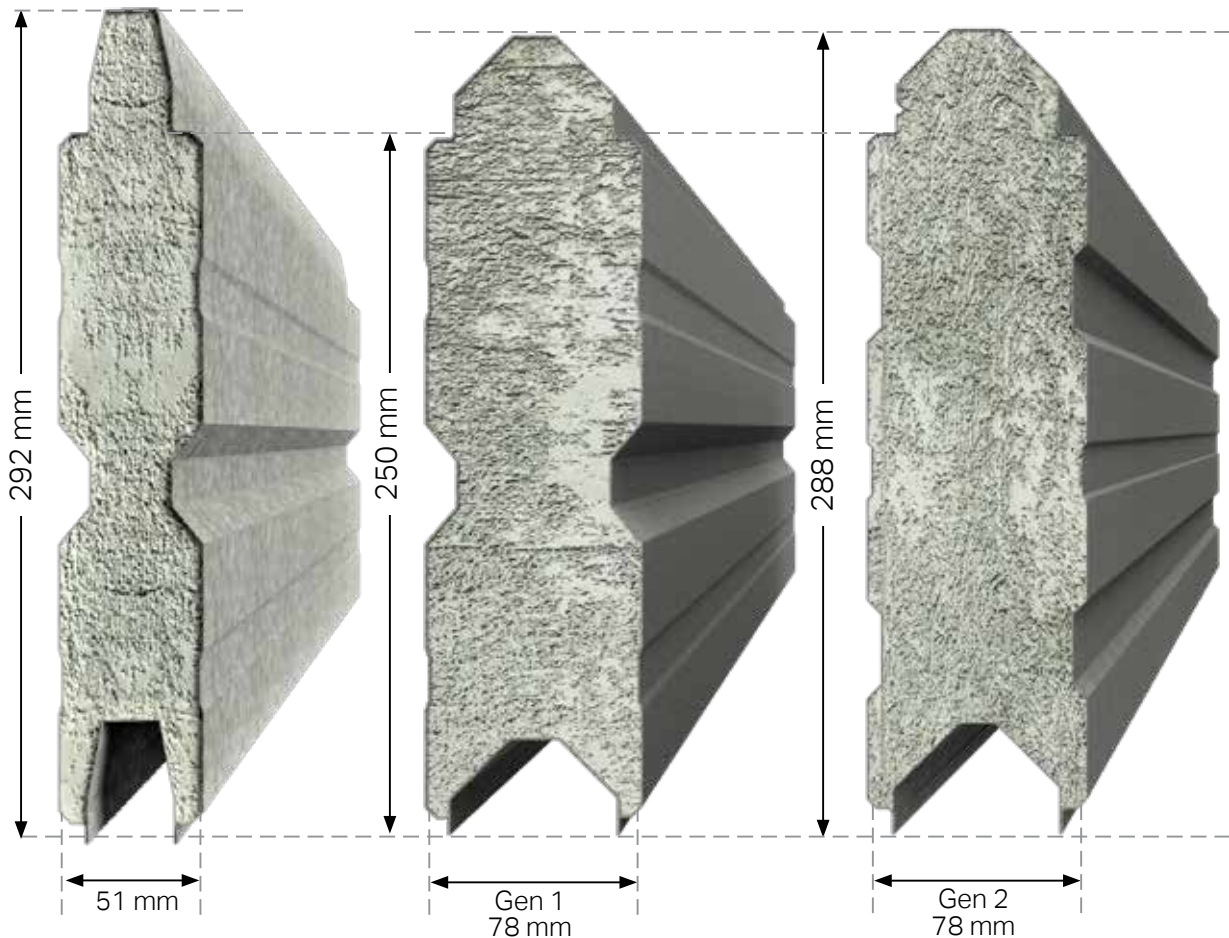
Structural design actions. Part 0: General Principles.

AS 4072.1-2005

Components for the protection of openings in fire-resistant separating elements.

AS 1530.4-2014

Methods for fire tests on building materials, components and structures.



KOROK® COMPONENTS SUMMARY

Product Image	Item Description
	KOROK® C-track 60 x 51 x 60mm 1.15B.M.T.
	KOROK® C-track 60 x 80 x 60mm 1.15B.M.T.
	KOROK® J-track 70 x 51 x 60mm 1.15B.M.T.
	KOROK® J-track 70 x 80 x 60mm 1.15B.M.T.
	KOROK® panel 51mm wide 250mm cover 600kg/m³ density
	KOROK® panel 78mm wide 250mm cover 400kg/m³ density
	KOROK® GEN 2 panel 78 mm wide 250 mm cover 400 kg/m³ density (Galvanised)
	Hilti DBZ 6/4.5 x 32mm
	6.5 x 32 Rawl Mushroom spikes
	Hilti HUS3-P 6 Concrete screw anchor

Product Image	Item Description
	Hilti HUS3-H 6 Concrete screw anchor
	Wafer Tek 10g - 16 x 16mm Class 3 Wafer Tek 10g - 16 x 30mm Class 3
	Sikaflex-400 Fire Rated Sealant Hilti CP606 PROMASEAL®-A
	Hex Head Type 17 14g x 35mm
	Hex Head SDS 14g x 22mm
	Aluminium bracket 75 x 50 x 40 x 3mm
	KOROK® KIT flashing
	KOROK® fire flashing
	KOROK® Angle

AMENDMENTS

REFERENCE	AMENDMENT	PAGES
KIT01 Modified	Minimum overall CAVITY between the framing has reduced from 113mm to 108mm.	12
KIT06 & KIT06A	Minimum overall CAVITY between the framing has reduced from 113mm to 108mm.	11,16,17
KIT06 & KIT06A	STC rating has improved from 63 to 65.	13,16,17
Cantilevers & eaves	Cantilevers and eaves are now included in this manual	12

COMMENTARY

Previous manual **KOROK Intertenancy Terraced Housing Systems Manual v43**.

KOROK® is always seeking to improve our offering to customers. We have an ongoing programme of testing.

KOROK® responds to customer needs by publishing comprehensive, up to date information.

SUSTAINABILITY

KOROK® is a high performance product with minimal impact on the planet

KOROK® is made to order, ensuring minimal on-site waste

KOROK® is fully re-usable

KOROK® is fully recyclable

KOROK® is manufactured in NZ

Declare.

KOROK panel
KOROK Building Systems NZ Ltd

Final Assembly: Hamilton, New Zealand
Life Expectancy: 50 Year(s)
End of Life Options: Salvageable/Reusable in its Entirety; Recyclable (100%)

Ingredients:

Inner Core: Portland Cement; Water; Fly Ash; Washed Fine Sand; Anionic Detergent Blend (0.01%); Nonionic Surfactant; Polypropylene Filaments; **Outer Steel Shell:** Low Carbon Steel; Antimony; Zinc

LBC Temp Exception RL-004b - Proprietary Ingredients in Declare

Living Building Challenge Criteria: Compliant

I-13 Red List:

- LBC Red List Free % Disclosed: 99.99% at 100ppm
- LBC Red List Approved VOC Content: Not Applicable
- Declared

I-10 Interior Performance: Not Applicable
I-14 Responsible Sourcing: Not Applicable

KOR-0001
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