



Customer Service

Freephone: 0800 521 050
Freefax: 0800 521 205
Email: cservice@knauf.co.uk

Technical Service

Tel: 01795 416 259

Literature

Tel: 08700 613 700

Website

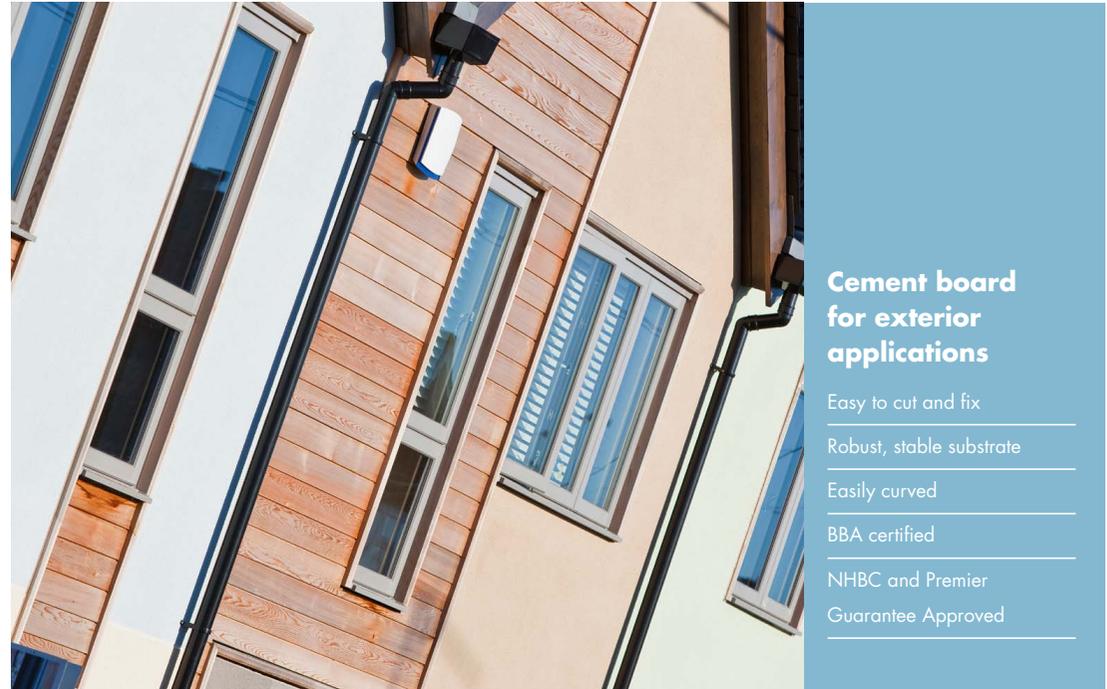
www.knaufdrywall.co.uk

Knauf Drywall
Kemsley Fields Business Park
Sittingbourne
Kent ME10 3HW
Tel: 01795 424 499
Fax: 01795 416 261

**Knauf Drywall
Factory Locations**

Ridham Dock
Sittingbourne
Kent

Queens Road
Immingham
N.E. Lincolnshire



**Cement board
for exterior
applications**

Easy to cut and fix

Robust, stable substrate

Easily curved

BBA certified

NHBC and Premier

Guarantee Approved

Knauf Aquapanel Exterior
The ideal render carrier board

AQUAPANEL®

© Copyright Knauf Drywall 2011

The information given in this publication is believed to be current and accurate as at the date of publication, but no warranty, express or implied is given. Updates will not be automatically issued.



Build for the world we live in



Fast closure of exterior walls

Taped and jointed walls can be left unfinished for up to 6 months

Easy to cut and fix – simply score and snap, no pre-drilling

Non-organic, mould resistant, robust and stable substrate

Easily curved down to 1 metre radius

Lighter and faster than traditional brick and block façade construction

Fast, simple, economical closure of exterior walls and ceiling soffits

This guide will assist you with the specification of Knauf Aquapanel Exterior – the ideal render carrier board.

Features, benefits, product data and design details are targeted towards helping you find the best solution for your exterior project.

Contents	Page
Introduction	2
Knauf Aquapanel Exterior Overview	4
Knauf Aquapanel Exterior System	6
Installation Procedure	8
Application Details	10
Exterior Soffit Linings	16
Products and Accessories	18
Support	20
Technical Services	20
Supporting Online Tools	20
Project Profile	22
Cedar Gate	23

Dry Construction with Knauf Aquapanel Exterior Systems

Dry construction is already the preferred method for many offsite and onsite projects due to the benefits it brings in reduced timescales, lightweight exterior walling, consistency and improved health and safety.

Knauf Aquapanel Exterior Systems take these benefits to the next stage.

Knauf Aquapanel Exterior Cement Boards provide a solid, dry base that can withstand the extreme weathering effects of wind, rain and snow.

It is an ideal substrate for directly applied render finishes and can be used for exterior walls in ventilated systems, exterior ceilings and soffits.

Once taped and jointed, Knauf Aquapanel Exterior can be left unfinished for up to six months, making use of the smallest windows of opportunity to completely close the external envelope, maximising the efficiency of the project schedule.

Knauf Aquapanel Exterior is easily curved, allowing for striking architectural features to be formed. It is also ideal for creating exterior soffits and the illusion of an internal ceiling continuing through the façade to the outside of the building.

Exterior cladding

Knauf Aquapanel Exterior is ideal for use on timber frame, timber battens and metal framed structures. It is mechanically fixed to the timber/steel framework and the system build up is then suitable to receive a render, paint or further exterior cladding finishes, such as slip bricks or tiles.

Knauf Aquapanel Exterior provides a fast, high quality and extremely economical alternative to traditional methods of construction.

Exterior ceilings and soffits

Creating seamless exterior ceilings and soffits with Knauf Aquapanel Exterior is simple. It is mechanically fixed to exterior grade steelwork and provides a smooth finish for further decoration.

Knauf Aquapanel Exterior provides an internal ceiling look to the outside of a building in a fast, high quality and extremely economical manner, and its simplicity allows internal ceiling contractors to carry out similar practice for exterior work.



BBA Certified

The Knauf Aquapanel Exterior System has been rigorously tested and certified by the BBA, for use as a ventilated exterior wall panel system on timber frame and steel frame buildings.

The BBA certification process also confirms that the Knauf Aquapanel Exterior System is accepted by NHBC, Premier Guarantee and LABC.

As part of the BBA Certification, the Knauf Aquapanel Exterior System has been assessed for:

- Compliance with building regulations within the UK
- Strength and stability: impact testing
- Behaviour in relation to fire: Knauf Aquapanel Exterior Cement Board has been tested to EN 13501 and gained an A1 rating
- Weather tightness: the system resists the passage of moisture from the ground and from weather
- Durability: the system will have a service life in excess of 30 years

The BBA Certificate also covers:

- Independently verified technical specification, including review of production and quality standards
- Design considerations: a review of the standard installation details
- Installation guidance: basic installation instructions
- Information in relation to Construction (Design and Management) Regulations 2007

For more information, refer to BBA Certificate Number 09/4633 at www.bbacerts.co.uk or contact Knauf Drywall Technical Services.

Extract from BBA Certificate No. 09/4633:

NHBC Standards 2008:

"The NHBC accepts the use of the Knauf Aquapanel External System when installed and used in accordance with this Certificate, in relation to NHBC Standards, Part 6 Curtain Walling and Cladding, Chapters 6.2 External timber framed walls and 6.10 Light steel framed walls and floors."

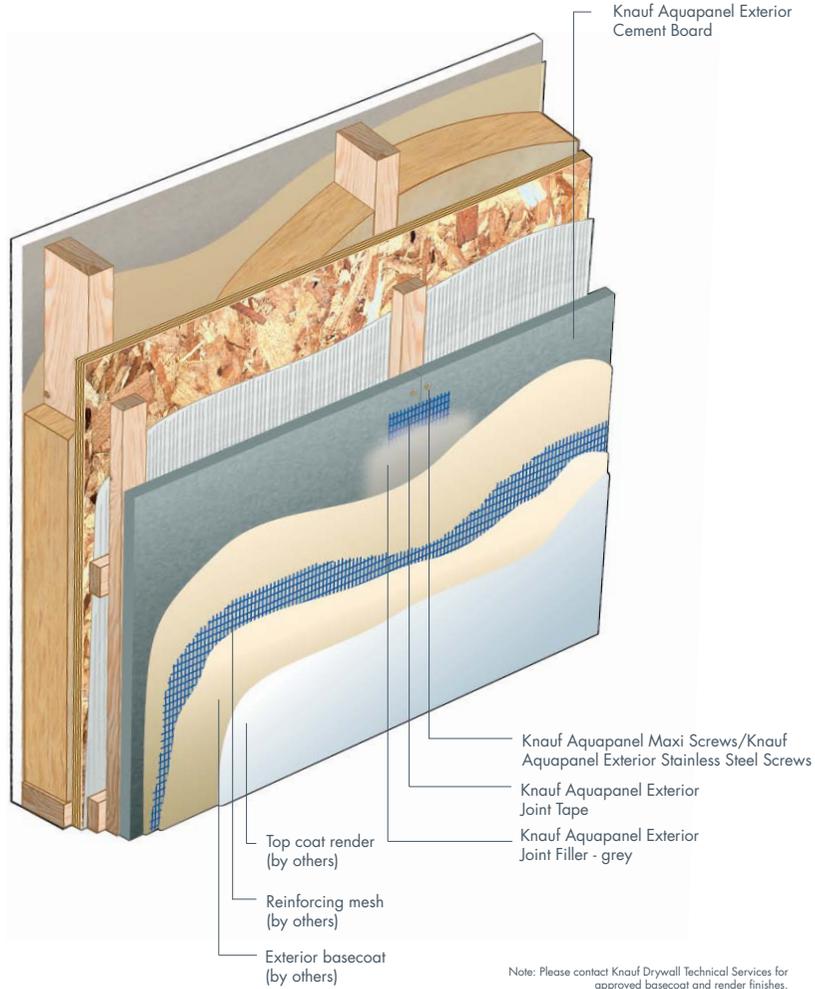
LABC and Premier Guarantee Approval:

LABC and Premier Guarantee – two of the leading structural warranty providers in the UK – both approve the use of the Knauf Aquapanel Exterior System under their warranted building systems.



Knauf Aquapanel Exterior System

Knauf Aquapanel Exterior Cement Board is used as part of an exterior system for use on timber frame, timber battens and metal framed structures. The system provides a fast, high quality and extremely economical alternative to traditional methods of construction.



Installation Procedure

Knauf Aquapanel Exterior Cement Boards are designed to be simple and fast to install. Knauf Drywall Technical Services are on hand should you have any questions or unusual situations to deal with.

Preparation

1 Use a knife to score the Knauf Aquapanel Exterior on one side so that the mesh is cut. Snap the scored edge and cut through the mesh on the rear side.

For sharp-edged cuts, for example exterior edges, use a hand-held circular saw with a dust extractor or a pendulum jigsaw. To make cut-outs for wiring and pipes, use a jigsaw or keyhole saw.

The diameter of the opening should be approximately 10mm greater than the diameter of the pipe. The remaining gap can be closed with a suitable sealant or sealing strip.

Knauf Aquapanel Exterior can be curved to a radius of 3 metres with a full board or to a 1 metre radius having cut the board into 300mm strips. Bend the Knauf Aquapanel Exterior panel prior to installation. The fine cracks that occur on the board surface will not cause any loss of performance to the final system when finished to a basecoat level.

Fixing Board

2 Apply Knauf Aquapanel Exterior horizontally to members at maximum 600mm centres. Ensure there is a gap of 3-5mm between the boards and that the members are central behind both boards.

When fitting Knauf Aquapanel Exterior, ensure that the vertical joints are centrally aligned to the board below.

When fitting Knauf Aquapanel Exterior around windows and doors ensure that no vertical joints coincide at window and door corners as this may allow moisture ingress.

Use Knauf Aquapanel Maxi Screws to fix the boards to metal members.

Use Knauf Aquapanel Exterior Stainless Steel Screws to fix the boards to the timber members.

Screws should be at least 15mm in from the edge of the Knauf Aquapanel Exterior and spaced at maximum 250mm centres.

Screws should not be over tightened.

Taping and Jointing

3,4 Immediately after installing the Knauf Aquapanel Exterior, protect the framework from weathering by filling all the joints with Knauf Aquapanel Exterior Joint Filler – Grey. Use the Knauf Aquapanel Exterior Joint Filler – Grey to fill the gaps between the board and then spread it over the face of the board ready to take the tape. Immediately embed Knauf Aquapanel Exterior Joint Tape (10cm) or Knauf Aquapanel Exterior Reinforcing

Tape – as specified, centred over all of the joints. Scrape the excess Knauf Aquapanel Exterior Joint Filler – Grey from the Knauf Aquapanel Exterior Tape leaving it just covered.

Cover the screw heads with Knauf Aquapanel Exterior Joint Filler – Grey.

Corners are protected by applying exterior basecoat, then embedding a corner profile in a similar way to the joint tape.

Reinforce window and door corners with extra pieces of reinforcing mesh, cut to size 50 x 30cm, embedded into exterior basecoat as per corner profiles.

Finishing

Refer to installation instructions from the selected/specified render supplier, alternatively:

5,6,7 Cover the entire wall with basecoat to a depth of approximately 5mm.

Using a tile adhesive trowel create a notched layer of basecoat with notch depth of approx 8mm. Return the removed basecoat to the bucket to be reused later.

Embed reinforcing mesh over the entire surface. Overlap the reinforcing mesh by 100mm at edges. Apply a thin coat of basecoat over the mesh and notches just covering the mesh and creating a smooth finish. The finished layer should be approximately 5-7mm thick and the reinforcing mesh should be in the top third of the finished surface. Before continuing with the next steps, allow the basecoat to fully dry.

Exterior Render

8 Render must be applied in accordance with BS EN 13914-4:2005, Code of Practice for External Rendering.

Fully mix the renders before applying them to ensure that the colour is true right through. Apply the chosen exterior finish to each wall area.

The scaffold around the finished wall must be covered to protect from rain or weathering until the finish is fully dry.

Knauf Drywall Training Courses

We offer a range of comprehensive training courses at our purpose built training schools to ensure the installer is fully up to speed with the latest techniques and regulations.

Contact 01795 416 122 or visit www.knaufdrywall.co.uk/training



Scoring Knauf Aquapanel Exterior Cement Board with a knife.



Fixing the boards to the background members.



Embedding Knauf Aquapanel Exterior Joint Tape.



Covering screw heads with Knauf Aquapanel Exterior Joint Filler - Grey.



Applying notches within basecoat.



Applying reinforcing mesh.



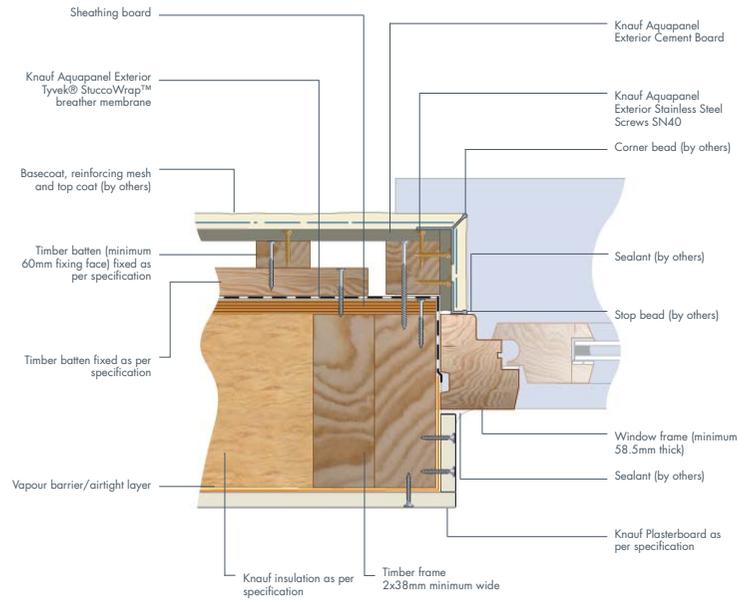
Covering mesh with basecoat.



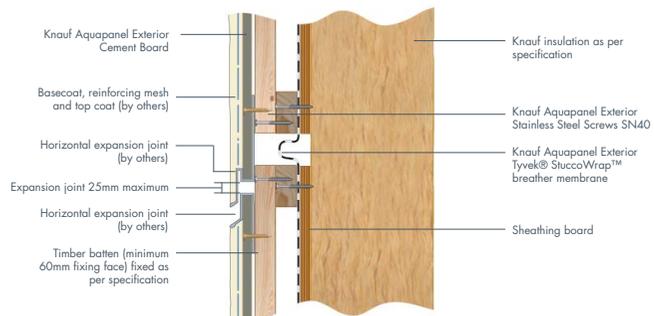
Applying finish.

Application Details

Window Jamb – Ventilated Wooden Frame



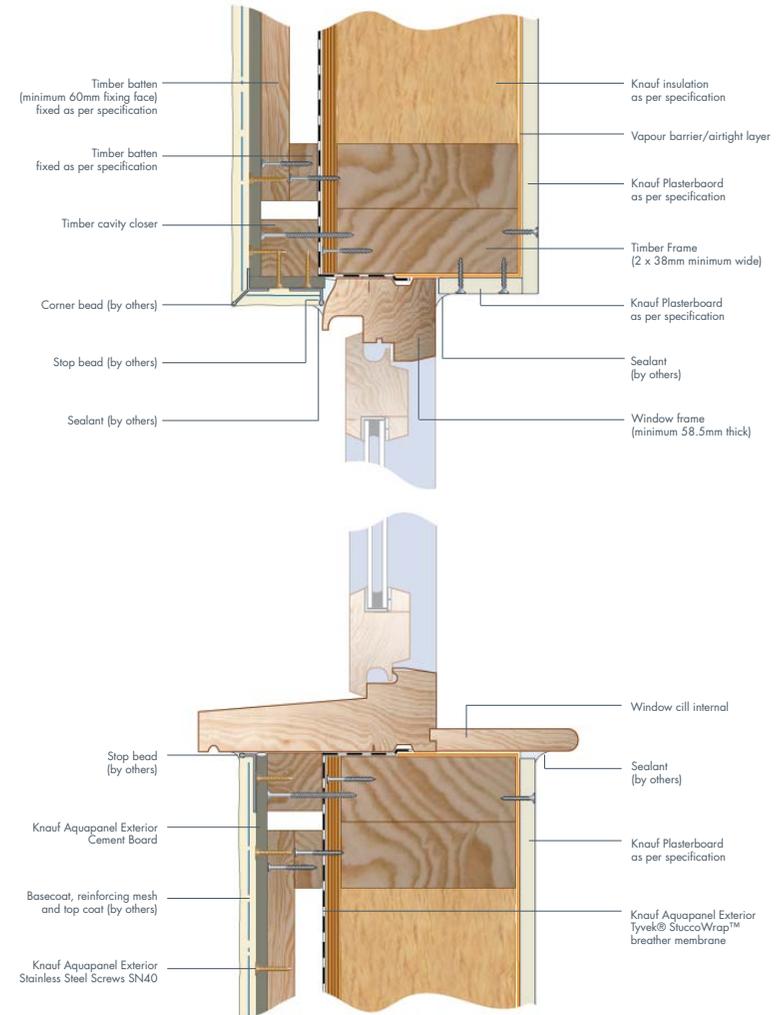
Horizontal Expansion Joint



Note: Horizontal and vertical movement joints required at 15m spans (maximum) or to match movement joints in the substrate behind

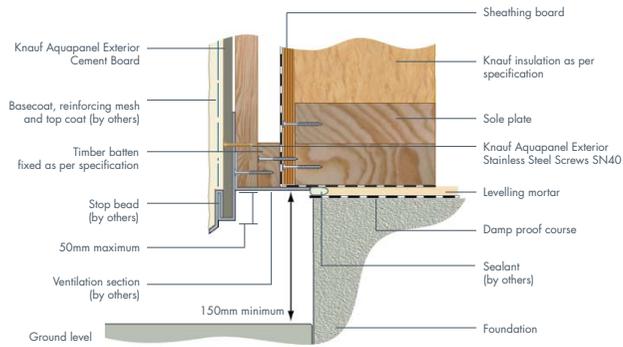
Application Details

Window Reveal (Upper and Lower) – Ventilated Wooden Frame

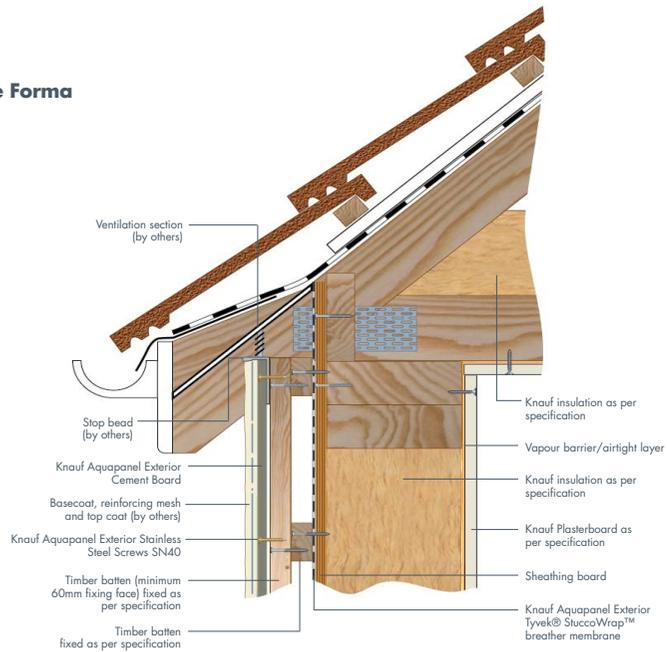


Application Details

Base Formation

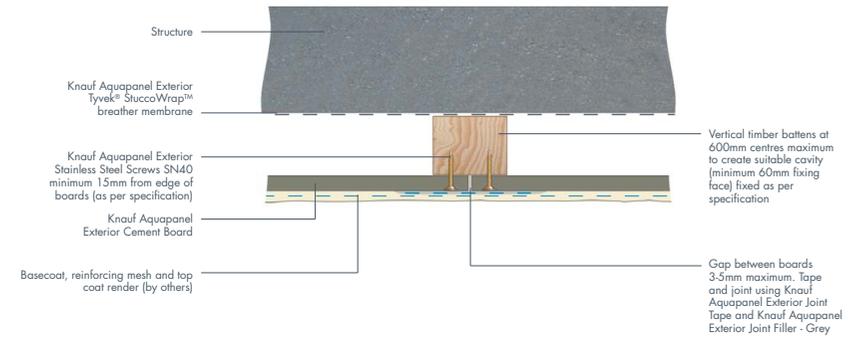


Eave Forma

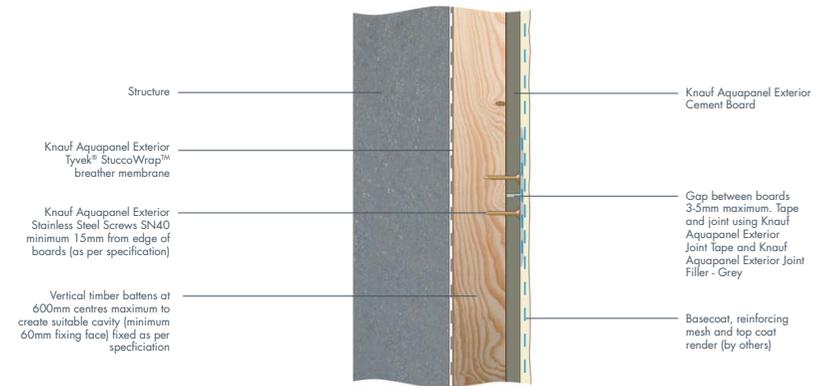


Fixing Details

Vertical Fixing Joint

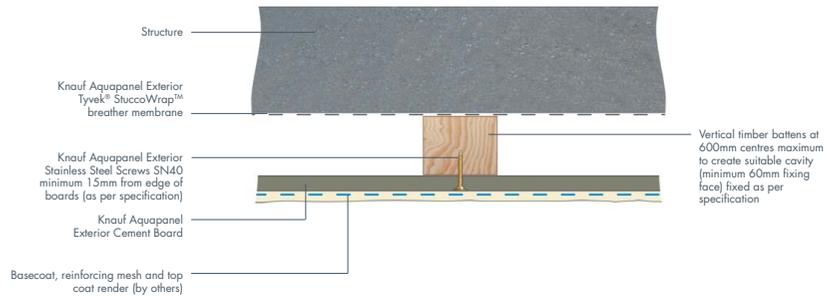


Horizontal Fixing Joint



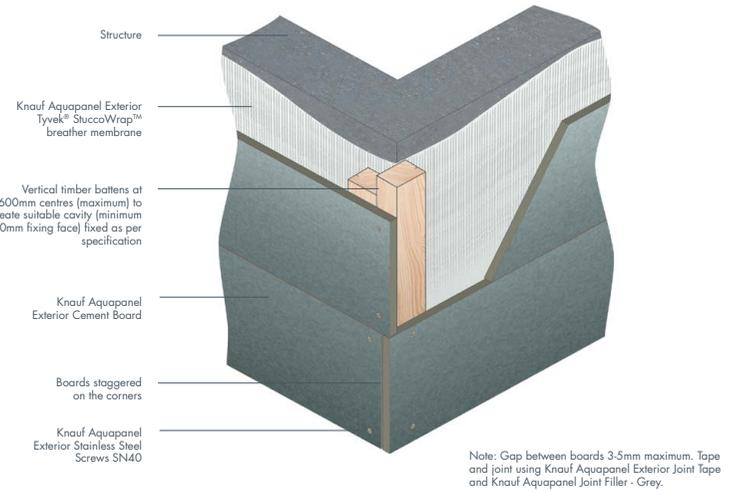
Fixing Details

Intermediate Fixing Detail

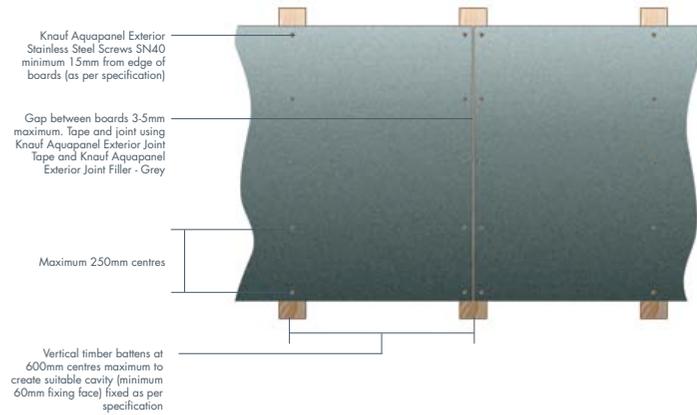


Fixing Details

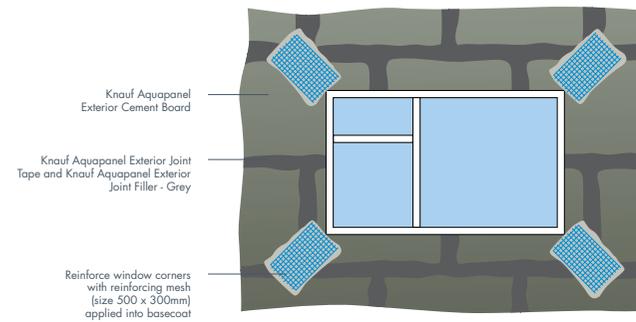
Corner Boards Staggering Detail



Fixing Spacing Detail



Window Ventilation and Reinforcing Detail



Exterior Soffit Linings

Knauf Aquapanel Exterior Cement Board technology is revolutionising the way buildings are designed and constructed across Europe.

Knauf Aquapanel Exterior Cement Boards solve the problem of external soffit linings. Designed to be used externally, they are freeze-thaw cycle tested and have been proven in tough European and Scandinavian climates.

Knauf Aquapanel Exterior Soffit Linings

Knauf Aquapanel Exterior can be used in semi-exposed environments to create a seamless exterior ceiling, concealing unsightly soffits and services. Installed in the same manner as plasterboard, Knauf Aquapanel Exterior does not require any specialist skills from the contractor.

Extremely strong and freeze-thaw resistant, Knauf Aquapanel Exterior is an aggregated Portland cement building panel with polymer coated glass fibre mesh embedded in both surfaces. Developed for use in exposed exterior situations as a ceiling and wall panel, Knauf Aquapanel Exterior is a proven, quality alternative to traditional building materials.

As a completely dry solution, Knauf Aquapanel Exterior is fast to install, being mechanically fixed to exterior grade steelwork, quickly providing a smooth finish to receive an exterior paint as required.

Design freedom

Knauf Aquapanel Exterior doesn't just provide an internal ceiling look to the outside of a building, it can also be curved and shaped to form aesthetic external soffit features. Knauf Aquapanel Exterior is particularly well suited for applications where an architect wants to create the effect of a ceiling 'flowing through' a glazed external wall.

Proven in harsh climates

Knauf Aquapanel Exterior is inherently resistant to water, so there is no swelling or loss of stability even when wet. It is resistant to weathering, mould and changes of temperature, and have a proven freeze-thaw cycle. It has excellent impact resistance, is safe and hygienic. You can specify Knauf Aquapanel Exterior comfortable in the knowledge that it has been successfully installed externally throughout Europe and Scandinavia, from Norway to Greece.

Strength and versatility

Knauf Aquapanel Exterior is the perfect product to create strong, aesthetically pleasing ceilings to exposed balconies, canopies or multi-storey car parks.

Knauf Aquapanel Exterior is suited to any building environment from residential to commercial and institutional.

Once installed, with joints and screwheads filled, Knauf Aquapanel Exterior can be left for up to six months before finishing, and easily resists wind tunnel effects in open buildings such as car parks.

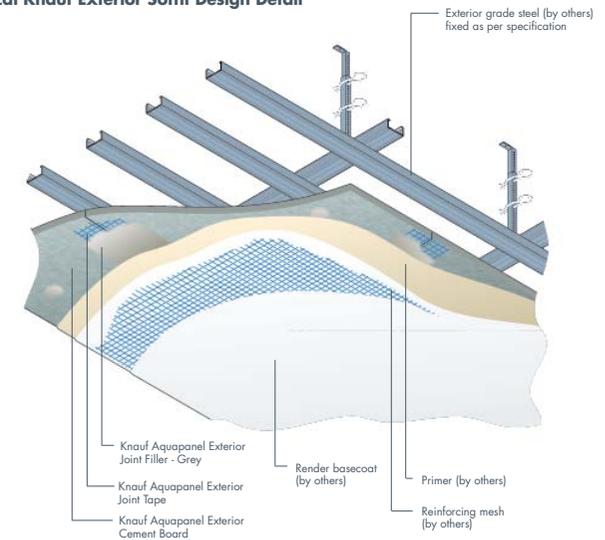
Aquapanel Exterior can be quickly cut to shape using the score and snap technique with no special tools or techniques needed. Compared to traditional exterior systems, Knauf Aquapanel Exterior reduces working time and installation costs.

Other Knauf Aquapanel systems

- Wet Area Partitions
- Tiled Floor Linings
- Exterior Cladding

For further information call 08700 613 700 or visit www.knaufdrywall.co.uk

Typical Knauf Exterior Soffit Design Detail



Note: movement joints are required at 1.5m spans (maximum) or to match movement joints in the substrate behind

Knauf Aquapanel Exterior Boards and Accessories

Knauf Aquapanel Exterior Cement Board

Knauf Aquapanel Exterior is a tough cement board for exterior use with a Portland cement and aggregate core and coated glass fibre mesh embedded in the back and front surfaces. Ends are square cut and edges are reinforced and finished smoothly.



Dimensions (mm)			Article No	Pallet Details		
Thickness	Width	Length		Boards	m ²	Tonnes (Approx.)
12.5	900	1200	670 60 620	50	54	0.87
		2400	670 60 629	25	54	0.87

Knauf Aquapanel Maxi Screws (SN)

Corrosion protected screws for fixing Knauf Aquapanel Cement Board to light gauge steel profiles (up to 0.7mm) as part of Knauf Aquapanel Interior and Exterior systems. They have a needle point and countersunk heads.



Dimensions (mm)			Article No	Carton Details	
Length	Diameter			Items per Carton	Kg (Approx.)
25	4.2		000 87 319	1000	1.8
39	4.2		000 53 500	500	2.0
55	4.2		000 95 644	250	2.0

Knauf Aquapanel Exterior Maxi Screws (SB)

Aquapanel Exterior Maxi Screws have been specially developed for fixing Knauf Aquapanel Exterior onto heavy gauge steel profiles (0.8mm - 2.0mm) as part of the Knauf Aquapanel Exterior system. They have a drill point and countersunk heads.



Dimensions (mm)			Article No	Carton Details	
Length	Diameter			Items per Carton	Kg (Approx.)
25	4.2		000 94 730	250	1.5

Knauf Aquapanel Exterior Stainless Steel Screws (SN)

40mm stainless steel screws specially developed for fixing Knauf Aquapanel Exterior to timber substructures.



Dimensions (mm)			Article No	Carton Details	
Length	Diameter			Items per Carton	Kg (Approx.)
40	4		000 87 197	250	0.7

Knauf Aquapanel Exterior Joint Filler - Grey

Knauf Aquapanel Exterior Joint Filler - Grey is a cement-based material for filling joints and embedding Knauf Aquapanel Exterior Joint Tapes and Knauf Aquapanel Exterior Reinforcing Mesh as part of the Aquapanel Exterior system.



Bag Size		Article No	Pallet Details	
Kg			Bags	Tonnes (Approx.)
20		001 31 094	48	1.0

Knauf Aquapanel Exterior Boards and Accessories

Knauf Aquapanel Exterior Joint Tape

Knauf Aquapanel Exterior Joint Tape is a 100mm wide, glass fibre tape with an alkaline-resistant coating. It is embedded into Knauf Aquapanel Exterior Joint Filler to reinforce exterior joints as part of the Aquapanel Exterior system.



Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
50	100	000 49 373	12	4

Knauf Aquapanel Exterior Reinforcing Tape

Knauf Aquapanel Exterior Reinforcing Tape is a 330mm wide meshed glass fabric. It is embedded in Knauf Aquapanel Exterior Joint Filler to reinforce exterior joints where paint or alternative finishes are to be applied on top of the basecoat, as part of the Aquapanel Exterior system.



Roll Size		Article No	Carton Details	
Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
50	330	000 59 051	12	10

Knauf Aquapanel Exterior Tyvek® StuccoWrap™

Knauf Aquapanel Exterior Tyvek® StuccoWrap™ is a special climatic membrane to be used as a water barrier from the outside to the inside, and allows vapour diffusion from the inside to the outside. It is used in water managed (directly applied) systems, installed as a water-carrying layer directly behind the board as part of the Knauf Aquapanel Exterior system.



Roll Size (m)		Article No	Pallet Details	
Length	Width		Rolls per Pallet	Kg (Approx.)
75	1.5	000 58 548	16	0.8

Support

Quality

The Knauf Group is one of the largest drywall manufacturers in the World with a group turnover in excess of €2.5billion. Still privately owned, with our head office in Germany, we pride ourselves on the quality of our products and our commitment to staff and customers – not shareholders. Knauf Drywall manufacture in the UK to EN 520, BS 1191 and BS EN ISO 9000 using advanced production facilities.

Our sites are ISO 14001 certified for environmental management.

Performance

Our systems use Knauf materials throughout – board, metal, insulation, plaster and accessories. All are manufactured to strict British and European Standards and are thoroughly independently tested together as complete, warranted systems. Fire, acoustic, robustness, longevity, and structural performance are all tested for the relevant application. Full details can be found online.

Project and Specification Managers

Our national team of Project & Specification Managers (PSMs) can provide help and support throughout the duration of your project. They are often involved with the entire supply chain from the distributor through to the client, speeding up the flow of information and spotting and eliminating likely issues. Our PSMs are all highly skilled and technically qualified, and specialise in bespoke design and value engineering large projects.

Call 01795 416 259 to find out more

The Technical Services Team

Our office based Technical Support Officers (TSOs) work hand in hand with our PSM team, providing design back-up and a quick response to all your technical enquiries. Our TSOs are all technically qualified and enjoy comprehensive and ongoing training. Our commitment to investing in people has resulted in a large number of TSOs going on to become PSMs in the field, and the two teams have an excellent working relationship – enhancing the level of service you can expect from us.

Call 01795 416 259 for technical advice

Supporting Online Tools

Knauf Drywall website

Our award-winning website is an invaluable tool and features CAD downloads, interactive tools, system information and much more.

www.knaufdrywall.co.uk

The Manual online

The online partner to this document quickly gives you the information you need on our products and systems, wherever you are.

manual.knaufdrywall.co.uk

Knauf Drywall Partition Specifier

How would you like to specify and value engineer all the drywall partitions on your project, complete with paperwork in a few minutes?

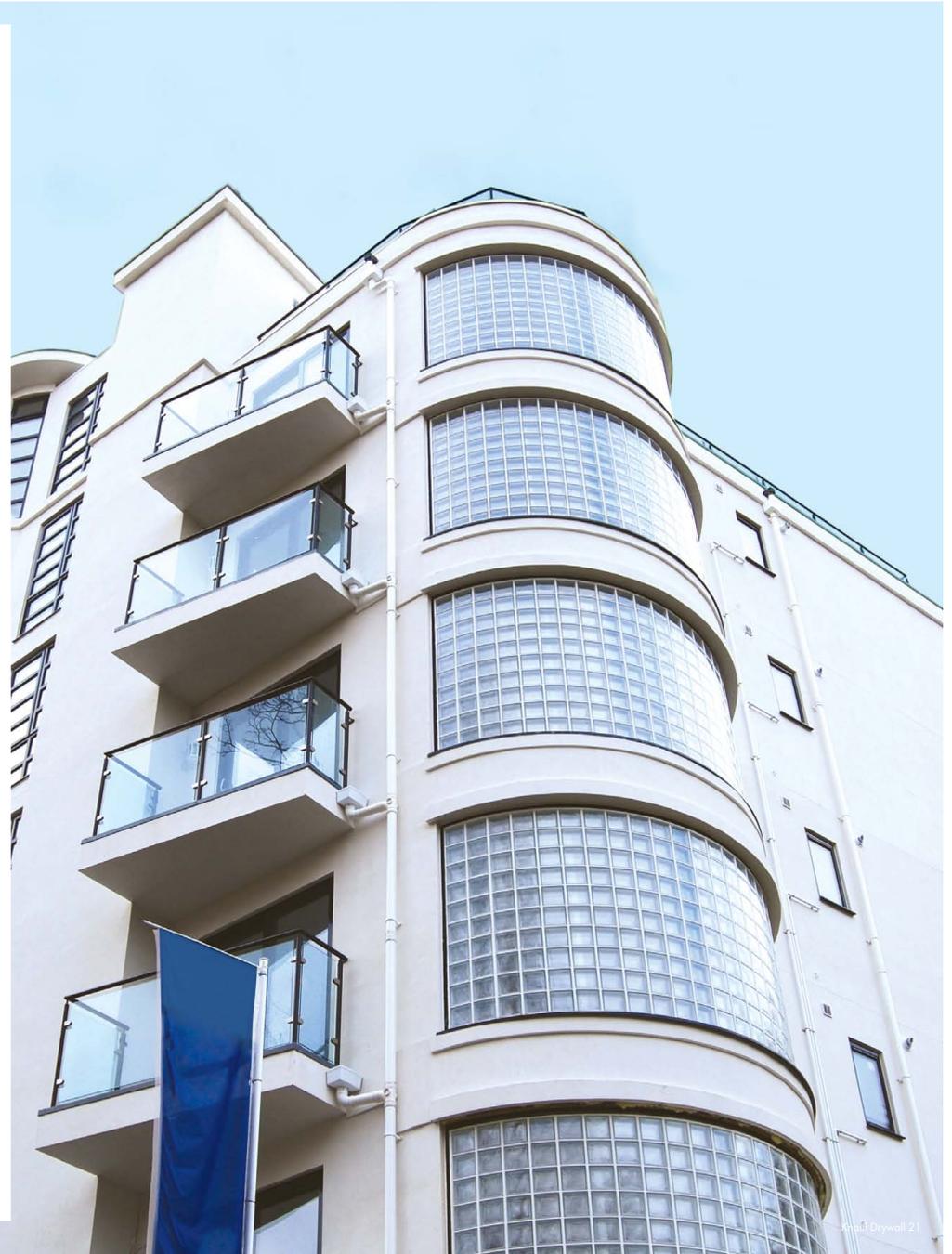
Our online Partition Specifier does exactly that – and it's totally free for you to use. Just part of the service. Try it and our other online tools at www.knaufdrywall.co.uk – you won't be disappointed.

partitionspecifier.knaufdrywall.co.uk

BB93 Calculator

Makes specifying for schools easy. Simply choose the source and receiving rooms and enter the required data in the spaces provided.

manual.knaufdrywall.co.uk





Case Study: Cedar Gate

Knauf Aquapanel Exterior was used at the Cedar Gate twelve home development in Hampshire's New Forest, helping it to win the coveted Premier Guarantee Award for Medium Development of the Year.

The award-winning development of timber-frame houses at Cedar Gate features 650m² of rendered surfaces and a further 600m² of timber cladding. The project managers, MPR Projects, needed a product with proven performance quality that could quickly weather-proof the building envelopes as well as being versatile enough to handle both the render and timber cladding finishes.

Knauf Aquapanel Exterior's BBA certification means that it is approved by Premier Guarantee. This third-party accreditation gave peace of mind to the client, according to Nick Cuffe, Construction Director at MPR Projects:

"It was the first time we had used Knauf Aquapanel Exterior and the installation went very smoothly. We received excellent support from Knauf Drywall during the design process and on site and would certainly consider using the product again on similar projects".

The Cedar Gate development was completed in just 35 weeks thanks in part to the fast installation of Knauf Aquapanel Exterior. The simple score and snap technique meant that there was no need for time-consuming processing methods or special tools, so Knauf Aquapanel Exterior was fitted quickly and safely, allowing render and timber cladding to be applied earlier in the programme. The contractors, Dorset Dry Lining (DDL), were clearly impressed.

"We found it easier to handle and to fix than the exterior boards we had used previously. The technical help from Knauf Drywall was brilliant too."

James Cooper, Dorset Dry Lining

The Premier Guarantee Excellence Awards recognise the best new developments in the country and winners are chosen entirely on their quality and workmanship after an exhaustive three-month judging process.



Project Data

Site

Cedar Gate, Ringwood

Developers

Zelda Investments

Project Managers

MPR Projects

Cladding Contractors

Dorset Dry Lining