

Building your home with Alumasc Water Management Solutions



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# **About Alumasc Water Management Solutions**

For almost 90 years, Alumasc has been promoting the efficient use, retention, recycling and disposal of water. Under the Alumasc Water Management Solutions (AWMS) banner, customers benefit from a complete package of rainwater and drainage products that control the flow of rainwater throughout the entire building envelope; all supported by our unrivalled technical teams.

These well-respected solutions are delivered via established brands Alumasc Rainwater; Harmer Building Drainage; Wade Building Drainage and Gatic Civil Drainage & Access Covers. Together with the Skyline Architectural Aluminium range, they form the foundation of AWMS and present an unrivalled range of products and expertise.

The AWMS project portfolio includes hundreds of high-profile schemes throughout the UK: Canary Wharf, St Pancras Station, The Royal Albert

Hall and Alder Hey Children's Hospital are just a few to have benefitted from AWMS installations.

"Our aim is to focus on high quality, environmentally responsible building products within the construction industry in order to deliver first-class customer service, technical support, long-term solutions and lasting relationships."

HARMER

WADE BUILDING DRAINAGE

GATIC

# About Alumasc Rainwater and Skyline Architectural Aluminium

Alumasc Rainwater is the UK's market leader of aluminium, cast iron and steel gutters and downpipes. A complete range, including integrated Skyline Architectural Aluminium is available to suit both contemporary and traditional architecture. Our unique range of profiles, BBA approved powder coated finishes and made-to-order options, are designed and manufactured to the highest standard for strength, long life and durability.



# **Quality and Sustainability**

In addition to complying with environmental legislation, Alumasc is committed to developing its own measures to limit the adverse effects of its activities on the environment. To this end, Alumasc operates an environmental policy that fully integrates all aspects of company activities. We proudly hold the London Stock Exchange Green Economy Mark, which is awarded to companies generating 50% or more of their total annual revenues from products and services that contribute to the global green economy.

#### QUALITY

Alumasc operates a quality management system which is independently audited to ISO 9001: 2015.

#### **SUSTAINABILITY**

Alumasc actively pursues sustainability in the full range of products it offers and, with its partners and its suppliers, is committed to putting consideration for the built and wider environment at the core of all aspects of current business and future development.

Alumasc's manufacturing sites are audited to the ISO 14001:2004 Environmental Management Standard.

#### **BREEAM STANDARDS**

The BREEAM points system promotes the use of materials with a proven sustainable message and allows designers to differentiate between products with true ecological credentials and those not achieving the benchmark.

Aluminium Rainwater goods and Skyline Architectural Aluminium systems are part of the range of high scoring Alumasc solutions. Promotion of these responsibly sourced materials brings clarity to the specification process thus achieving the desired effect of minimising the environmental impact of the construction process.

#### BRITISH BOARD OF AGRÉMENT CERTIFICATE (BBA)

Certificate No. 86/1671 for aluminium rainwater systems and for the polyester powder coating process of our aluminium rainwater goods.

#### STANDARDS

All products manufactured at Alumasc are tested and certified to the appropriate BS and EN standards.

















## **Aluminium Rainwater Solutions**

Aluminium Rainwater Systems are BBA accredited and suitable for traditional and modern buildings. The range includes cast, pressed and extruded systems with a variety of gutter and downpipe profiles.

Heritage Cast Aluminium is a range of traditionalprofiles, fittings and accessories in cast aluminium. Designed to provide all the key architectural features appropriate to traditionally designed buildings either new build or refurbishment, in a lightweight fully finished product.

The Contemporary Aluminium Range, a premium, high-performance rainwater range features the Aqualine and AX extruded aluminium gutter systems, GX pressed aluminium gutter system, Flushjoint extruded aluminium pipe system, Swaged aluminium pipe system and Guardian extruded aluminium security pipe system.

*In-house, BBA approved* powder coating facilities

#### Colour range

Alumasc Aluminium Rainwater systems are available in plain mill finish or polyester powder coating manufactured from a BBA approved process.

The standard aluminium RAL colour range includes 28

colours to choose from, these are produced with a 30% gloss finish unless otherwise stated.

We can offer any additional BS or RAL colour to order, including anodic colours and stone effect finishes.



Colours are reproduced for general guidance only. For exact colour and finish references, please contact Alumasc for colour swatch samples and for further information. \*Also Available in a textured finish.







Available Downpipes										
			SWAGED							
(I)	Circular	0	63mm (2.5") RW1 75mm (3") RW2 100mm (4") RW3 150mm (6") RW60	0	63mm dia CP25 75mm dia CP30 100mm dia CP40 150mm dia CP60	0	63mm (2.5") SW25 75mm (3") SW30 100mm (6") SW40			
Pipe	Square		75 x 75mm (3 x 3") RW33 100 x 100mm (4 x 4") RW44		75 x 75mm CP33 100 x 100mm CP44					
	Rectangular		100 x 75mm (4 x 3") RW43		100 x 75mm CP43					









# **Stamford Yard**

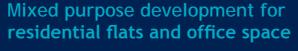


Cast Aluminium **Guttering System** 

125mm Half Round Gutter, 75mm Downpipe



BLACK/TXT Black Textured



The building was a restoration project. Alumasc Cast Aluminium Guttering System was specified and used to keep its heritage appearance.





#### **Home Renovation**

This was the renovation of an existing 19th century farmhouse. This beautiful building is situated in a prominent conservation area, so the right product was essential. Heritage Cast Aluminium Gutter & Downpipes were specified in RAL9017 Black, which suited the property's traditional appearance perfectly.









Heritage Cast Aluminium Half Round 125mm guttering and 76mm circular downpipe

Chicklade Farm



Traffic Black





Powys



"As well as the instant improvement in 'kerb appeal', the interior walls upstairs will also stay dry, allowing us to finally decorate the bedrooms. The paths around the house will also stay dry, which is safer for the family to walk on, and we're preventing long-term damage to the foundations too."

Mrs A. Jones, Owner

# Gutter Replacement in Residential House

This 3-bed detached home in Powys was in dire need of replacement gutters. The plastic system was faded, cracked and just not up to the job. The 5×4" Moulded Cast Aluminium guttering is a deeper profile with greater capacity for the intense rainfall often experienced in this Mid-Wales location.

The factory applied Polyester Powder Coating (PPC) has a life expectancy of at least 15 years in heavily polluted areas and 20 years elsewhere, which extends the life of the product beyond 40 years.



5×4" Moulded Ogee Cast Aluminium Guttering system







**Hales Road** 



113mm Beaded Half Round Cast Aluminium and Square Eared Downpipes



RAL 1013M **Oyster White** 



## Stunning restoration

This was a new build extension and garage attached to the main property, carried out at the same time as some minor refurbishments to the main house. The existing PVCu gutter system was replaced which helped restore this beautiful 1930's Edwardian house near Cheltenham to its former glory.

The client chose to install the system himself and found the product easy to work with, and is very pleased with the result.



#### Farmhouse

The textured black aluminium gutters and downpipes were used to provide the appearance of cast iron on the renovated Farmhouse.









Heritage Aluminium **Guttering System** 

Lower Lodge Farm

113mm Gutter and 75mm Downpipe



Black Textured





# The Bungalow



"My chosen system would need to withstand the rigours of regular horizontal driving rain, but we also wanted a stylish product which would complement the contemporary feel we've achieved with the refurb. I have been supplying Alumasc products for years and knew that their Heritage Cast Aluminium system would be the perfect choice. Not only is the marine-grade aluminium fully fit for purpose for decades to come in this coastal setting, but the jet-black finish, which beautifully mimics the look of cast iron, has created a bold contrast against the natural slate and brilliant-white render." - Mr Prosser, Owner

#### **Residential Renovation**

The property was a single-storey 1970s' bungalow, nestled on the Pembrokeshire coast in West Wales. The construction comprised three additional extension buildings which had been added over subsequent decades, each with its own rainwater system - the result was, in the owner's own words, 'disjointed and unattractive'.

The construction team have breathed new life into the tired residence, transforming it inside and out. Natural exposed stone forms the centrepiece of the property's construction, whilst the extension buildings have been finished in fresh white render. Beautiful natural slate roof tiles have been installed across the entire property, so the chosen rainwater system not only needed to perform well, but also had to draw these elements together seamlessly, to create a cohesive visual appearance.









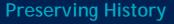
Heritage Cast
Aluminium system



BLACK/TXT Black Textured Slipper Lane



Heritage Cast Aluminium 125mm Victorian Ogee Guttering and 63mm



This house on Slipper Lane is in a conservation area. The property owner, who was renovating the property himself, wanted a gutter and downpipe system that would remain sympathetic to the aesthetics of surrounding properties. Heritage Cast Aluminium was the obvious choice due to its traditional features, including cast collared downpipes and 6ft gutter lengths.



#### **New Build Home Renovation**

On this project, the customer was well researched, knowledgeable and clear in his requirements for the metal rainwater goods that he intended to use.

He had a vision of a bold design for his new build home.

After conversations with the technical team, his requirements evolved, and additional items were specified. These included simple-to-install parapet wall capping, for a modern finish in keeping with the bold architectural design, and Alumasc's new aluminium door canopy for the side door - a design that combines contemporary good looks with functionality.

Because of the coastal location, a marinegrade powder coating was recommended.









Box Gutter and Square Downpipes, Aluminium Canopy, Coping



RAL 7024 Graphite Grey

Salcombe





## **Aluminium Architectural Solutions**



The connection between roof and walls at the eaves is one of the most crucial facets of building design — both functionally and aesthetically. Skyline Architectural Aluminium offers vibrant and dramatic engineered solutions at this critical interface, perfectly suited to a wide range of building types across the private residential, commercial and public sectors.





In-house, BBA approved powder coating facilities

## Colour range

Alumasc Aluminium Skyline systems are available in plain mill finish or polyester powder coating manufactured from a BBA approved process.

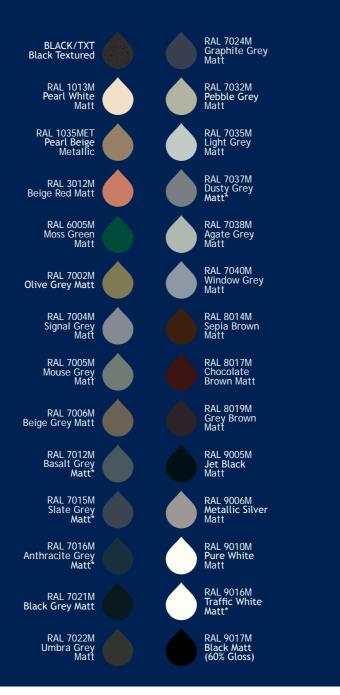
The standard aluminium RAL colour range includes 28

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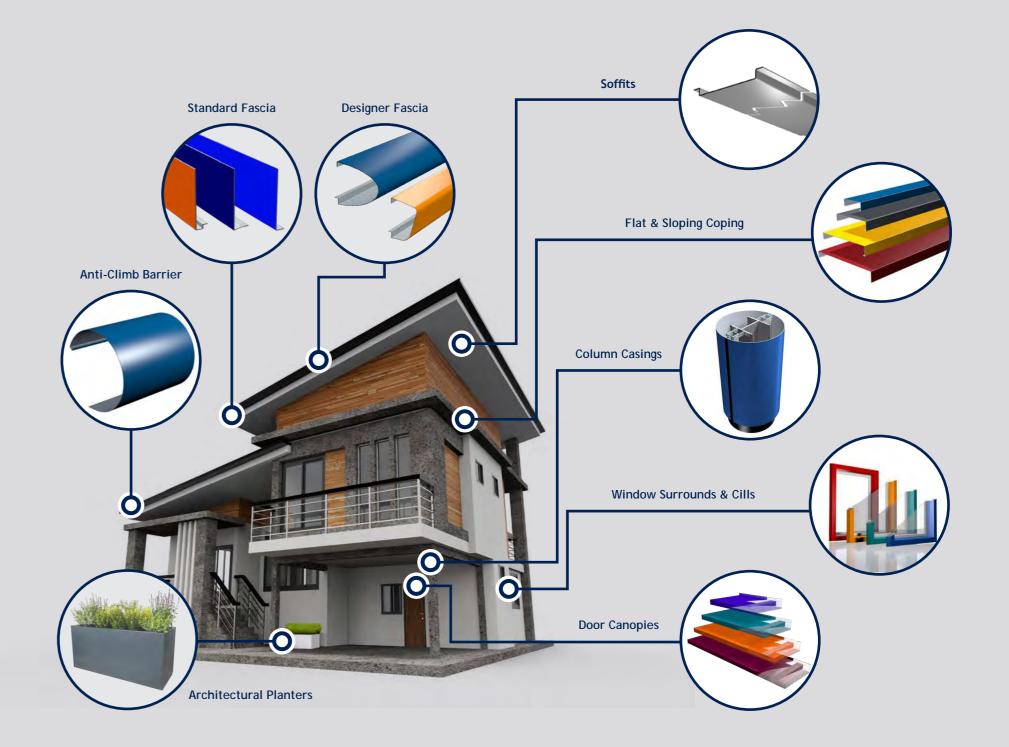
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The Lodge



Skyline Window Surrounds, Copings and Fascias







## **Contemporary Build**

Skyline Window Surrounds, Coping and Fascia were specified for the development to deliver a streamlined and comtemporary look.



## Contemporary Self build

This was a self build project, very contemporary with green roof systems, designed to keep as much surface water on the property as possible.









Skyline Coping

RAL 7030M Stone Grey

Infinity Steel Gutter System

Chew Magna

RAL 7037 Dusty Grey

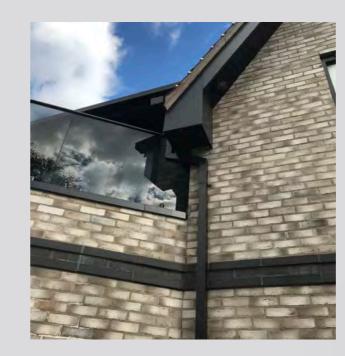


# **Dukeries Homes**



# Private development

The owner wanted a product that would stand the test of time and be relatively low maintenance. He was very pleased with the box ends, and dormer surrounds and covers.



Bespoke and standard sized Skyline Coping, Fascia, Soffit

Other products: Rainwater Box Ends and Dormer Cladding



RAL 9005M Deep Black Matt







**Dukeries Home** 



windows



RAL 7016M Anthracite Grey



## Residential development

Bespoke Window Surrounds were alternative to site-made plastic facia and trims.

One of the main drivers was easier installation; no framing out behind the window surrounds with a more aesthetically pleasing finish.



## Contemporary Build - Eco House

The Skyline range was used to give the house a contemporary look that the owner desired.







Skyline Coping SL66 and SL30

Octagon Park



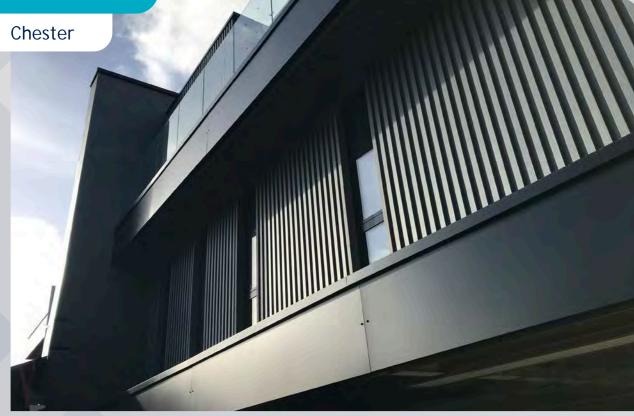
RAL 7015M Slate Grey

Window Surrounds Bespoke to suit



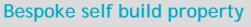


Brookside





RAL 7016M Anthracite Grey



This project required detailed technical support. Everything on the house was bespoke and made-to-measure to suit the house. Our Skyline team provided a concept to completion service and supported the house builder and architect all the way through the development.



## Residential houses and flats

Skyline Window Surrounds and Canopies were specified for the development to deliver a streamlined and contemporary look.







200mm wide Window Surrounds, BS160 Canopies



RAL 7016M Anthracite Grey







26

St Albin



# Self Build Property

Copings in various sizes, bespoke Fascias, special Hoppers and Flushjoint Downpipes work together to help deliver the vision of the house owner.



Copings in various sizes and bespoke Fascia system

Other products: Special Hoppers with Flushjoint Downpipe



Special Black







# Novus



Bespoke Window Surrounds

**A** RAL 7016M Anthracite Grey



## Houses and residential flats

Bespoke Skyline Window Surrounds were the first choice for the development given their flexibility for customisation on site and an easier installation with a more aesthetically pleasing finish.



#### **Residential Extension**

We successfully helped design a bespoke solution to fit the roof and match the colour of door and windows to achieve a clean visual contemporary look.





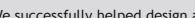
Bespoke Skyline Fascia and Soffits

2023 Renovation

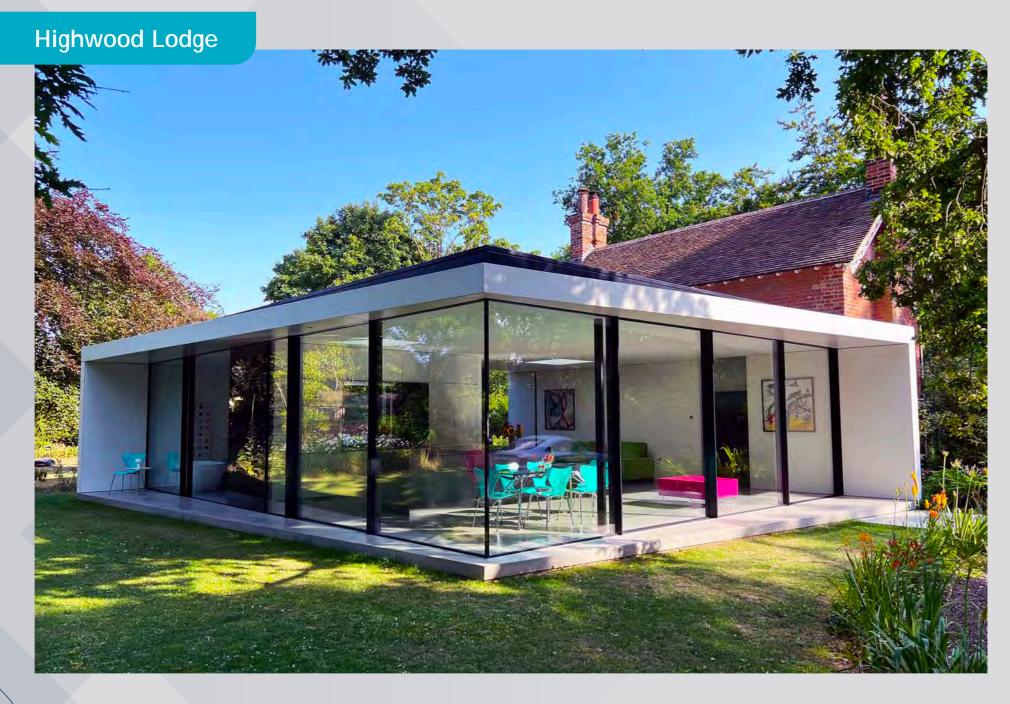
Other products: 75mm Flushjoint Downpipe



A RAL 7016M Anthracite Grey







#### **Residential Renovation**

Highwood Lodge is now once again a beautiful 1860's traditional red-brick cottage, but in 2013, it had been ravaged by ivy; rendered invisible and forgotten.

Skyline fascias, soffits and vertical cladding panels were used to create the stunning minimalist modern-build attached to the charming Victorian cottage. It was essential that the materials allowed the designer to realise their artistic vision, and Skyline offered the flexibility needed to meet the project's complex bespoke requirements. Another significant consideration was that the design left no place to hide in terms of quality and finish. The clean lines and angular appearance presented a surfeit of elaborate detailing and junctions that demanded precision.







"My aim was to create a space that maintained the delicate balance of old and new, whilst presenting a visual abstract within the landscape. Traditional architecture can be quite forgiving, in that certain elements can be used to cover or disguise other areas which may not appear perfect. But the abstract nature I wanted to achieve with the new extension left every finish, every seam, completely exposed. Different elements needed to meet and align within tolerances of  $\pm$  1mm, which presented quite a challenge for all concerned." - Mr Scott, Owner and Architect

Skyline fascias, soffits and vertical cladding panels



RAL 9010 Pure White



**Graphite Black** 

Beaulieu Park



Skyline Aluminium Window Surrounds, Copings, Canopies, Fascia, architectural feature cladding and corner post details



RAL 7016M Anthracite Grey



RAL 7023M Concrete Grey



## **New Housing Development**

The owner of this new housing development highlighted a requirement for 'inspirational architecture', making Skyline Architectural Aluminium the perfect choice.

For this unique project, bespoke window pods, copings, canopies, corner posts, fascia and architectural feature cladding were all carefully tailored to each individual house type and plot. One of the most unique elements of the design specification included a self-supporting, lightweight door canopy, which was jointly developed by Alumasc and their approved installer. Skyline Architectural Aluminium is the ideal solution for use on varied rooflines and architectural designed interfaces, with standard and fully bespoke designs available.



#### Home Renovation

This complex of three individual luxury homes required three different tailored designs for the balconies, terraces, soffits, fascia and coping for the eaves. Skyline's unique manufacturing capabilities and design flexibility made it the clear choice.

The product was recommended to the project manager by his builders' merchant. He comments: "The project was a simple exercise. The products were manufactured and delivered in good time and the support and service we received convinced us we had made the right choice. It was our first project with Alumasc Skyline, but we have completed several more since."







Bespoke Skyline Soffits, Fascia, Cladding and Canopy

**Luxury Jersey Homes** 



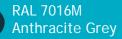
RAL 7016M Anthracite Grey

Pear Close



Skyline Architectural Aluminium window surrounds, GX Joggle **Box Gutter and** Flashjoint Downpipes







## **New Housing Innovation**

A plot of new houses near Coventry proved to be the first specification of a brand-new product being developed by Alumasc's Skyline Architectural Aluminium team.

The main contractors originally approached Alumasc for a sleek gutter and downpipe solution, for which GX Joggle Box Gutter and Flushjoint downpipes were specified. But as discussions developed, Alumasc's expertise in bespoke solutions also resulted in the very first use of the new Skyline Architectural Aluminium window surrounds. This complete product package gave a premium finish to the homes, increasing their overall value and ensuring reliable watertightness for years to come.



## **Unique Property Transformation**

A unique property has undergone a complex conversion using a package of products from Alumasc's Rainwater and Skyline Architectural Aluminium ranges.

The focus was the unusual A-frame which presented roof profiles extending down to ground level. This required the bespoke specification of Skyline fascia, soffits, copings and a rare chimney capping, whilst AX and Swaged downpipes completed the property's rainwater system.

> "Once we'd met Alumasc on site to discuss the intentions, it was clear that our vision could be achieved. Keeping every element with one company made it so much easier, which is why we chose Alumasc."

Skyline Coping, Fascia, Soffits, AX **Gutter and Swaged Downpipes** 



RAL 7016 Anthracite Grey



RAL 9016 Traffic White

Bespoke RAL 2504015M



Northamptonshire









# **Cast Iron Rainwater Solutions**



Alumasc Rainwater Systems in cast iron, combine modern engineering and high-performance materials, to offer unrivalled choices and solutions for designers associated with fast track new build or refurbishment projects.

The standard range features the Apex Heritage System, available with four gutter and three downpipe profiles, complete with fittings and accessories ranging from extended bracketry to hopper heads.

No standard product range can hope to satisfy all the stylistic options for new build, nor address the challenges of exact replacement for refurbishment and restoration.

Apex Heritage Cast Iron Made to Order option is specifically designed to meet these needs.

# Colour range

The system is available in a range of 8 standard colour options in a high quality two-pack epoxy primer and

topcoat finish. It is also available in a factory primed finish. Other BS and RAL colours are available on request.



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		Al	PEX HERITAGE (Cast Iron)
	Half Round	)	100mm (4") 113mm (4.5") 125mm (5") 150mm (6")
Gutter	Beaded Half Round	)	113mm (4.5") 125mm (5")
ng	Victorian Ogee	1	113mm (4.5") 125mm (5")
	Moulded	لرا	100 x 75mm (4 x 3") 125 x 100mm (5 x 4") 150 x 100mm (6 x 4")
Pipe	Circular	0	63mm (2.5") 75mm (3") 100mm (4") Length 1.83m (6') 0.9m (3')
	Square		75 x 75mm (3 x 3") 100 x 100mm (4 x 4") Length 1.83m (6') 0.9m (3')
	Rectangular		100 x 75mm (4 x 3") 125 x 100mm (5 x 4") 150 x 100mm (6 x 4") Length 1.83m (6') 0.9m (3')



RAL 5010M Flower Blue

RAL 6005M Moss Green





























Appleby Lodge



Large rectangluar hoppers, 100mm Cast Iron Eared Downpipes



Painted BS12B29
Midnight Green



Appleby Lodge is believed to be Manchester's first Moderne apartment block and was Grade II listed in March 2003. Alumasc's Cast Iron guttering proved the most suitable for the refurbishment of its rainwater system.



## **Elegance Meets Durability**

Made of a mix of fine Ashlar and rubble stone masonry, with a stone tiled roof, this elegant Georgian house was undergoing a major refurbishment.

The challenge was to match brand new cast iron with historical components creating an Cast Iron Gutters and Downpipes were will stand the test of time.







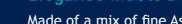


41/2" Cast iron Half Round Gutters with 3" Round Downpipes



Supplied primed and finished in heritage cream paint on site to match existing gutters and downpipes

Manor House



authentic-looking rainwater system. Alumasc supplied to create a system for the client that





#### Coach House

Formerly the ancestral home of English Aristocracy, Lydiard House Conference Centre is set in 260 acres of 18th-century parkland with an ornamental lake, just minutes from the M4.

By the beginning of the 21st century, the park was in need of substantial works to conserve its heritage value.

The half-round gutters and round Cast Iron downpipes are beautifully in keeping with the style of the period while offering the consistent quality and durability of a modern manufacturing process.

The components were supplied in a primer coating and painted on-site in a matching grey.



4½" Half Round Cast Iron Gutters with 2½" Round Cast Iron Downpipes

Supplied in primer coat (primed) for onsite painting







# Steel Rainwater Solutions



Alumasc Infinity Steel is a lightweight, contemporary, eco-friendly and cost-effective alternative to plastic gutters, without the risk of shrinking, leaking or colour fading. The gutter is available in a choice of four widths in the popular Half Round profile along with a connecting round downpipe system.







## Colour range

Alumasc Infinity steel is available in a plain galvanised finish or in a highly durable and attractive polyester pre-coated black, anthracite grey or grey aluminium finish. Additional colours are available on request.

Colours are reproduced for general guidance only. For exact colour and finish references, please contact Alumasc for colour swatch samples and for further information. \*Also Available in a textured finish.

		Gutter Profile & Sizes			
Steel	Round Gutter	<u></u>	100 x 70mm HRS40 125 x 80mm HRS50 150 x 90mm HRS60		
	Circular Downpipe	0	80mm (3.5") SRW1 100mm (4") SRW2		
Quartz Zinc	Half Round Gutter	$\sim$	100 x 70mm HRS40 125 x 80mm HRS50		
Su.O Sii	Circular Downpipe	0	80mm (3½") SRW1		
Copper	Round Gutter	<b>√</b>	100 x 70mm HRS40 125 x 80mm HRS50 150 x 90mm HRS60		
	Circular Downpipe	0	80mm (3½") SRW1 100mm (4") SRW2		

## **Steel Colour Finishes**









RAL 9005M Black













RAL 8014M Sepia Brown







# Quartz Zinc & Copper











Bath



Home Improvement

The Dusty Grey guttering and fascia/soffit systems were specified to match the dormer bungalow's newly replaced window frames.

The old fascia and soffit boards were made from asbestos so needed to be carefully removed. They were replaced with 25mm thick, treated softwood to be clad with the Dusty Grey coated Galvanised Steel Fascia & Soffit. The matching gutters and downpipes were then installed.

The transformation from outdated and tiredlooking dormer bungalow into a beautiful family home fit for modern living was really impressive. The light weight and easy installation of Infinity Galvanised Steel Fascia & Soffit system made it a great choice.



115mm Half Round Guttering 80mm Round Downpipes

Other Products: Classic L Profile Fascia 260mm x 3mtrs

Soffit 210mm x 3mtrs

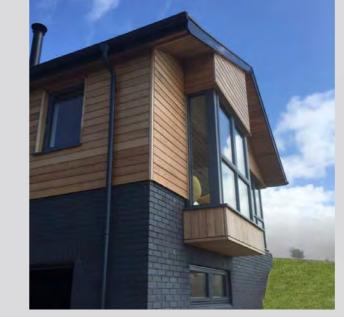
RAL 7037M Dusty Grey



#### Self Build

For this new build in West Wales, the Galvanised Steel, colour coated in Anthracite Grey, was chosen for the rainwater system. This complemented the Anthracite Grey aluminium window frames and brickwork, and provided a contrast to the wood cladding.

The 125mm deep half-round profile Galvanised Steel gutters from Infinity are ideal for this area of the UK, which is prone to sometimes high and often intense rainfall. Meanwhile, the stability of Galvanised Steel ensures negligible expansion in the summer which in dark coloured uPVC gutters leads to stress and subsequent leaks at the joints.







125mm Galvanised Steel Half-Round **Gutters with 80mm Round Downpipes** 



RAL 7016M Anthracite Grey



## The Education House



115mm Half-Round, Gutters with 80mm Round Downpipes



Uncoated **Galvanised Steel** 





#### Self Build

The samples supplied by Alumasc, helped the owner to understand how the window frames (in Grey Yellow RAL 7034), cladding, render, and roof tiles could work together to change the character of the house.

"Choosing rainwater goods is often one of those decisions that gets overlooked during the early design phase, but it has a major visual impact on the finished home."

Infinity Galvanised Steel offered durability, minimal maintenance and an attractive aesthetic.

Installation was straightforward, as steel is lightweight, easy to handle, and uses rubberlined connections for water-tightness, so requires no messy silicone.



## Where Elegance Meets Sustainability

A development of beautiful homes and a luxurious boutique hotel all designed, specified and built to an exceptional standard, on the former site of Langham Glass.

This is a technically advanced 21st century home - with 'eco-home' levels of thermal and acoustic insulation, and low energy lighting housed inside a charming traditional shell. It also boasts a great location in a picturesque North Norfolk village within an area of outstanding natural beauty.

Infinity Galvanised Steel range was chosen for its stylish design, high capacity flow/ drainage, 15-year product warranty, and for being 100% recyclable at end of life.







150mm Half-Round, Black Galvanised Steel Gutters with 80mm Round Downpipes



Deep Black Matt

# Norfolk

The Langham

Surrey



## **Renovation Project**

This house in Surrey was renovated with 115mm half-round gutters and 80mm round downpipes.

Copper is often overlooked for rainwater systems in the UK. This is, in part, due to its fairly low use in the UK in the past. Copper has been much more widely used in other countries and has a proven track record of longevity; almost the most durable of all materials. Even when exposed to harsh marine environments or used to run off from wood shingles, copper performs incredibly well. Copper is not only durable but also offers a stunning aesthetic choice that just cannot be matched by other materials. Consumers looking at the long-term impact on the environment recognise that it makes sense to install something that won't need replacing for in excess of 50 years.



115mm Half Round Gopper Gutters 80mm Round Copper Downpipes

REAL Copper





# **Conningbrook Lakes**

Kent

Infinity Steel Gutter and Downpipes







## **Stylish Housing Development**

This modern housing development featured many properties with stainless steel balconies, which made Infinity stainless steel gutters and downpipes the natural choice.

The developer needed to ensure the rainwater system maintained the overall aesthetic of each property, so Infinity was approved for its simplicity and the benefits it presented. Steel is 100% recyclable and Infinity's environmental credentials were an important factor in the decision-making process. The system was supplied and installed by Alumasc's approved installer in its original galvanised steel finish, providing a sleek, modern appearance. The installer commented: "This beautiful new development deserves nothing less than the best."





#### Self Build Refurb

This £1.5 million self build refurb project posed two challenges for the rainwater system. The new gutters and downpipes not only needed to be installed carefully in between six dormer windows, but the system also needed to create a truly stunning finish to this showstopping home.

The owner had Alumasc's lightweight Infinity Steel rainwater system recommended to him by his materials supplier. He comments: "Infinity Steel gutters and downpipes provided the perfect finish to the project. There were a few challenges but with help from Alumasc we came up with a stylish and cost-effective solution."





**Oundle House** 







Galvanised



52

## **Stowford Mill**



Infinity Steel **Guttering System** 



Galvanised Steel



## **Industrial Site Expansion**

One of SW England's oldest historic industrial sites has been expanded to include an eight-acre community of contemporary new homes. Alumasc has supplied guttering and downpipes on all 31 of the new properties.

Infinity Steel gutters and downpipes were specified to provide eco-friendly, discreet and resilient water management that will last. The most important part of the project was to keep the best of the stunning architectural heritage already there, whilst finding innovative ways to incorporate the latest modern building design. The use of Alumasc Rainwater Systems helped to bridge the gap between the historic and the modern.



## **Timeless Beauty Restored**

A 200-year old stone cottage on the Turvey House country estate in Bedfordshire has been enhanced with Infinity - the highperformance steel rainwater system from Alumasc Rainwater. The project involved replacing plastic guttering and downpipes fitted in the 1960s when plastic was seen as an economical substitute for cast iron. Ashley, the owner and developer is passionate about using metal rainwater products: "We don't use plastic. It might be cheaper, but it doesn't last half as well as aluminium, steel or cast iron - and it certainly doesn't look as good. Also, metal is recyclable, so it's better for the environment."

The black steel pipework has a similar aesthetic to the cast iron that would have been used when the property was originally built, so it looks perfect.









Infinity Steel Gutter and Downpipes



RAL 9005M



Priors Hall



# Contemporary Build

35 dwellings have been fitted with the Infinity Steel Gutters and Downpipes. Galvanised Steel was used to achieve a contemporary appearance.











# Benefits of Metal Rainwater and Architectural Systems

#### Sustainability

The great thing about guttering that lasts for years, is the long-term environmental benefit. Aluminium, cast iron and steel are 100% recyclable, and therefore should not be disposed of in landfill.

## Durability

Inherent corrosion resistance coupled with a primed and a painted finish ensures that cast iron components will need minimal maintenance during the lifetime of the rainwater installation.

Aluminium is more lightweight, versatile and rust-proof, yet also long-lasting. Mixed with small amounts of other metal to form an alloy, aluminium can provide the strength of steel at only one third of the weight.

When steel is galvanised, it can become even more resistant to corrosion, meaning that your guttering can stand withstand a lot of wear and tear.

#### Aesthetic and long-lasting

Metal guttering can certainly enhance your building exterior whether it is contemporary or heritage style. A beauty and appearance that cannot be matched by lookalike uPVC. UV rays do not affect metal guttering, so they won't colour fade or compromise the integrity of the system. With plenty of finishes, including extruded, cast and pressed aluminium ranges, metal guttering can look fantastic; especially when combined with architectural aluminium such as fascias and soffits, which can be colour matched for a full metal roofline.

## Temperature-resistant

Metal guttering and architectural systems are resistant to thermal flex, which causes joint failure and materials to crack, hence a successful installation of a metal system ensures no leakage throughout its entire lifetime.

#### Fire rated system

All products manufactured at Alumasc are tested to the fire rating requirement as per Building Safety Act 2022 and Building Regulations re use of combustible materials. has been tested in accordance with the protocols defined by BS476 and products certified to EN13501-1.



	uPVC Steel		Aluminium	Cast Iron
Cost	<b>②</b>	<b>(6)</b>	<b>6</b>	<b>6</b>
Recylability	Not	Fully	Fully	Fully
Installation difficulty	Low	Low	Medium	High
Warranty	10 Years	15 Years	N/A	N/A
Life expectancy (rural/suburban areas)	12-15 Years	20-35 Years	45+ Years	50+ Years
Ongoing maintenance	Medium	Low	Low	Medium
UV resistance	Low	High	High	High
Thermal resistance	Low	High	High	High
Colours made-to-order	N/A generally	Yes	Yes	Yes
Contemporary style	Low	High	High	Low
Conservation character authenticity	Low	Low	High	High

# **Frequently Asked Questions**

## How long should my gutters last?

Metal gutter systems are exceptionally strong and durable, they have low thermal movement compared to plastic and are therefore less susceptible to damage through changing temperatures.

Regular, annual maintenance and cleaning of leaves or debris is recommended to ensure continued long-term performance.

## Are metal systems easy to fit?

Most metal systems are pretty straightforward to install, once the setting out of the levels and outlet positions are known then the guttering itself is easy to fit. Some of the traditional systems require a little more care, especially when working on older buildings where the building itself may not be true of level.

#### I don't have a fascia board on my property how would I fix my gutter?

You can use either a top or side rafter bracket, Most situations can be overcome using a which of these will be suitable depends on how much access you have to rafters. We also offer rise and fall brackets - a stake is bedded between the brickwork with a support bracket measurements. Just send us a photo or drawing with alterable height so you can incorporate a fall should you wish.

#### How many downpipes should my gutters have?

Each roof area will need at least one downpipe, if replacing an existing system then it is common practice to keep the existing downpipe positions, another determining factor is the amount of drain gulleys at ground level which normally correspond to the downpipe positions. If you are uncertain about accommodate this, for steel it is common to the capacity of the gutter and number of downpipes then contact our customer service team who can help run a flow calculation for your project.

#### What if I need a special fitting which is not shown in your range?

combination of standard items to make up pieces on site, but it is common on older properties to need special items to suit specific and we can source specially made items to match existing or awkward detailing.

#### The fascia overhangs the wall by 350mm, how do I fix my downpipes otherwise they won't fall in line with the wall?

It is not uncommon to have large soffit overhangs, standard fittings (commonly referred to as offsets or swan-necks) are available in most of the systems to use two bends to make up the offset.

#### What happens with ice and snow build-up during winter?

Snow build-up can be problematic to all gutter systems, gutters fitted above the rake of the roofline are more vulnerable to sliding snow, whilst lower fitted gutters are generally less susceptible to damage. The bracketry type can also be a major factor, with some systems - such as rise and fall brackets - being much more exposed. There is no right or wrong solution, and if you are in an area which is susceptible to snow then you should make adequate provision for snow guards and make your installer aware of this.

#### What if I have difficulty in fitting your guttering?

Installation instructions are sent with each delivery and we also have installation guides available online. If you prefer to speak to someone then one of our experienced customer service team is available between the hours of 8am and 5pm Monday to Friday.

#### When do I need to choose cast iron?

If yours is a listed building you will have to replace like for like. In other cases, it is often up to your conservation office whether you will have to install cast iron or whether cast aluminium can be used.

#### Why are there so many metal systems to choose from?

The metal systems offer a range of styles and choices to suit most budgets and project requirements. Heritage systems in cast iron and cast aluminium are generally used for conservation, whereas the more modern extruded aluminium and galvanised steel systems are used for new build and replacing of plastic guttering.



# Rainwater System Design

Alumasc Technical Services is a fully experienced team of rainwater specialists who use the latest CAD technology and calculation tools to provide an unrivalled support service to architects, designers and contractors.

Alumasc Rainwater Drainage Design Service

Alumasc Technical Services use a dedicated design platform in conjunction with the requirements of BS EN 12056:2000: Gravity drainage systems inside buildings - Part 3, to calculate the most appropriate Alumasc rainwater system to suit project requirements.

The gutter flow software automatically checks the capacity of downpipes used and suggests the minimum size downpipe for the specific application.

Calculation Criteria

Calculation of the most efficient drainage solution takes into consideration the following criteria:

- Catchment area
- Local rainfall intensity
- Building life and safety factor
- Size and flow rate of gutters
- · Frequency and size of outlets and downpipes

#### Sizing of Gutters and Downpipes

The level of rainfall any given roof drainage system should be able to cope with is based on the position of the gutter, the potential use of the building and its projected lifespan. All true eaves gutters (external) are designed using a 1-year storm event. This is generally accepted because overflow from an external eaves gutter will fall clear of the building, which is not normally a problem. Any gutter which is classed as internal, even if it is at the eaves, should be designed for an intensity based on the building life and a suitable factor of safety.

This factor will vary from 1.5 for conventional buildings to 4.5 for very important structures. For most buildings a 60-year life and safety factor of 1.5 would be the most suitable (90-year protection life).

All the parameters of flow calculations cannot be captured using a single formula. The guide below provides a basic method for calculating flow requirements. For accurate project-specific specification advice on rainwater flow calculations, contact Alumasc Technical Services.

Step 1 Geographical Location and Rainfall Intensity Maps

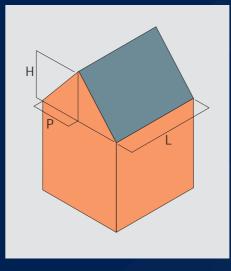


BS EN 12056-3: 2000 contains maps showing rainfall intensity in litres/second per m2 for 1-, 5-, 50- and 500-year storms of 2-minute duration.

(All external gutters designed for 1-year event).

Step 2

Calculating Catchment Area



 $= (P+H/2) \times L$ 

CA = Catchment area in square metres

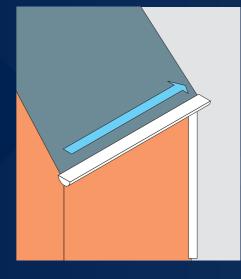
= Horizontal distance between eaves and ridge

= Height of roof

= Length of eaves

## Step 3

Frequency and Positioning of Outlets/Downpipes



Calculate the number of outlets per run.

#### Step 4

Calculate Flow Requirements

Overall Rainfall:

Catchment Area (CA) x Rainfall Intensity (RI) = Overall Rainfall

Flow Rate Per Outlet:

Overall Rainfall (OR) + Number of Outlets = Flow Rate Per Outlet

Choose Gutter/Outlets according to published Flow Rate capacities

#### Note:

Depending on building type, a safety factor should be allowed for the sizing of internal gutters. Contact Alumasc Technical Services for further information.

#### **Technical Support**

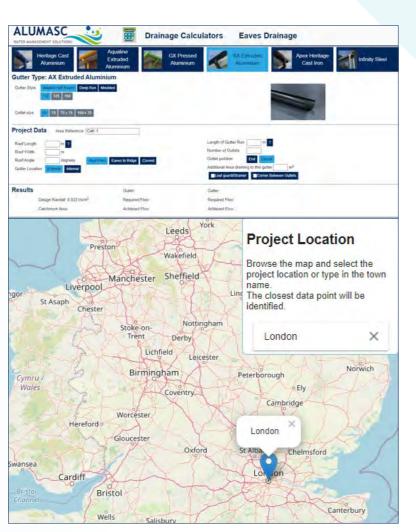
Alumasc Water Management Solutions' leading Drainage Calculator allows architects, specifiers and building engineers to design and quantify all of their rainwater drainage requirements using this dedicated platform. Access our NEW Drainage Calculator at: www.alumascwms.co.uk/knowledge/drainage-calculator/

# **Drainage Calculator**

Architects and building services engineers can now design and quantify all of their rainwater drainage requirements using Alumasc's dedicated free drainage calculation software.

## **Key Features**

- Eaves drainage gutter sizing and pipe calculator, for cast and contemporary gutter types
- New rainfall map allowing customer to define exact location for rainfall data
- Ability to import FEH data sets for client's personal use
- Online login with ability to save progress and return at a later date, from any device and any location
- No installation required, just an internet connection
- "Practise" feature allowing engineers, architects and contractors to share and view calculations with their colleagues
- Regular updates and new features
- Links to NBS Specification, detailed drawings and help pages
- Contact Us gives customer the correct point of contact for the brand
- Export to PDF and Excel Calculation Document provides a printout of the calculation and product selection





Scan the QR code and register for full access.



# **Gutter Flow Rates**

All flow rates quoted on this page are shown in litres per second. Gutter capacities are based on BS EN 12056-3:2000, assuming a maximum distance of 50 x gutter depth, from high point to outlet. Longer gutters or gutters with corners exceeding 10° will have a reduced capacity. For further information contact Alumasc Technical Services.

#### **Cast Aluminium**

Cutton Bonno	Duckle	Cina (mm)	Pipe Outlet Diameter (mm)				Pipe Outlet Size (mm)		
Gutter Range	Profile	Size (mm)	63	75	100	75 x 75	100 x 75	100 x 100	
Heritage	Half Round	100	1.14	1.24		1.24	1.24		
		113	1.14	1.62		1.62	1.62		
		125	1.24	2.08		2.08	2.08		
	Beaded Half Round	113	1.62	1.62		1.62	1.62		
		125	1.77	1.90		2.08	2.08		
	Beaded Deep Run	113 x 75	1.77	1.90		2.10	3.06		
	Victorian Ogee	100	1.32	1.32		1.32	1.32		
		113	1.35	1.82		1.82	1.82		
		125	1.35	2.12		2.10	2.34		
	Moulded	100 x 75	1.40	1.64		2.10	2.44		
		125 x 100	1.52	1.97	3.81	2.10	4.62	4.62	
		150 x 100	2.42	2.84	3.81	2.10	4.65	5.12	
		200 x 150	0.99	1.71	3.81	2.10	3.63	5.41	
		1			1			12 B	

## Contemporary Aluminium

Cutton Donno	Profile	Size (mm)	Pipe Oι	ıtlet Diamet	er (mm)	Pipe Outlet Size (mm)		
Gutter Range			63	75	100	75 x 75	100 x 75	100 x 100
Aqualine	Half Round	100 x 50	0.99	1.12		1.12	1.12	
		120 x 60	0.99	1.71		1.86	1.86	
		150 x 75	0.99	1.71	3.44	2.10	3.44	3.44
	Deep Run	110 x 85	0.99	1.71	2.88	2.10	2.88	2.88
	Modern	100 x 85	0.99	1.71		2.10	2.38	
		150 x 120	0.99	1.71	3.81	2.10	3.63	5.41
	Moulded	140 x 100	0.99	1.71		2.10	3.52	
		160 x 100	0.99	1.71	3.81	2.10	3.63	4.38
	Box	120 x 80	1.39	2.08	2.72	2.38	3.32	3.72
		140 x 100	1.55	2.32	4.21	2.66	4.02	5.32
		160 x 100	1.55	2.33	4.26	2.67	4.04	5.39
GX	Joggle	100 x 75	1.32	1.95		2.28		
		125 x 100	1.52	2.31	4.14	2.64	3.99	5.23
		150 x 100	1.52	2.31	4.14	2.64	3.99	5.23
		150 x 150	1.89	2.83	5.16	3.24	4.89	6.59
		200 x 150	1.89	2.83	5.16	3.24	4.89	6.59
	Smooth	120 x 75	1.32	1.93		2.27	2.87	
		140 x 100	1.52	2.28	3.99	2.61	3.95	5.04
		170 x 125	1.73	2.59	4.73	2.97	4.48	6.04
		175 x 150	1.90	2.84	5.20	3.26	4.92	6.63
		225 x 150	1.88	2.82	5.15	3.23	4.88	6.57
	Moulded	113 x 75	0.99	1.71		2.10		
		140 x 100	0.99	1.71	3.81	2.10	3.63	5.41
		160 x 100	0.99	1.71	3.81	2.10	3.63	5.41
		175 x 150	0.99	1.71	3.81	2.10	3.63	5.41
		200 x 150	0.99	1.71	3.81	2.10	3.63	5.41

Rainwater Pipe Flow Rates Note: The capacity of a rainwater system is usually dependent upon the capacity of the gutter outlet or flat roof outlet rather than the rainwater pipe. Please refer to BS EN 12056-3:2000, Section 6, Table 8, for capacities of vertical rainwater pipes.

# **Gutter Flow Rates Cont.**

All Flow Rates quoted on this page are shown in litres per second. Gutter capacities are based on BS EN 12056-3:2000, assuming a maximum distance of 50 x gutter depth, from high point to outlet. Longer gutters or gutters with corners exceeding 10° will have a reduced capacity. For further information contact Alumasc Technical Services.

#### Cast Iron

Cuttor Dongs	Duafila	Si ()	Pipe O	utlet Diamet	er (mm)	Pipe Outlet Size (mm)		
Gutter Range	Profile	Size (mm)	63	75	100	75 x 75	100 x 75	100 x 100
Apex Heritage	Half Round	100	1.19	1.22				
		113	1.19	1.62				
		125	1.19	1.62	2.06			
		152	1.19	1.64	3.14			
	Beaded Half Round	113	1.19	1.62				
		125	1.19	1.97	2.06			
	Victorian Ogee	113	1.24	1.80				
		125	1.24	1.97	2.32			
	Moulded	100 x 75	1.09	1.64		2.24	2.24	
		125 x 100	1.09	1.64	3.21	2.17	3.17	
		150 x 100	1.09	1.64	3.21	2.17	3.17	4.43

Alumasc Water Management Solutions										
Al	uminium Downpipe	es	(	Cast Iron Downpipe	S		Steel Downpipes			
Nominal Size	Internal Diameter	Flow Rate	Nominal Size	Internal Diameter	Flow Rate	Nominal Size	Internal Diameter	Flow Rat		
63mm	60.5mm	2.8 l/s	63mm	57mm	2.39 l/s	80mm	79mm	5.7 l/s		
75mm	74mm	4.8 l/s	75mm	70mm	4.14 l/s	100mm	99mm	10.43 l/		
75x75mm	68x68mm	5.28 l/s	75x75mm	69x69mm	5.49 l/s					
100x75mm	98x72mm	9.28 l/s	100x75mm	95x69mm	8.42 l/s					
100mm	98.5mm	10.29 l/s	100mm	95mm	9.34 l/s					
100x100mm	97x97mm	13.63 l/s	100x100mm	95x95mm	12.89 l/s					
150mm	147mm	29.93 l/s	125x100mm	121x95mm	17.8 l/s					
			150x100mm	146x95mm	17.8 l/s					

All external rainwater downpipe flowrates calculated in accordance with BS EN 12056-3:2000



# **Building Safety and Fire Classification**

Understanding product fire classifications within the construction industry is crucial for compliance with current legislation and to ensure products are suitable for their application.

With recent changes in legislation regarding the installation of products into the building envelope, such as BS 8579:2020 and the Building Safety Act 2022, identifying the combustibility of a product is a key factor in its specification. Products being installed should not provide a medium for spread of fire, nor should they propagate fire downwards by means of falling droplets or debris; ultimately, they should minimise the risk to the building and its occupants.

#### **Building Safety Act 2022**

The Act enforces compliance to Building Regulations restricting the use of combustible materials in the construction of buildings over 11m and reinforces the personal responsibility of all parties involved in the construction process.

#### **UK Fire Classification**

The polyester powder coating used by AWMS has been tested in accordance with the protocols defined by BS476: Fire Tests on Building Materials & Structures. The Parts of BS476 applicable to PPC are:

- Part 6: This gives the Fire Propagation Index which is a measure of contribution to fire growth.
- Part 7: This is a method of measuring flame spread along a surface. The AWMS PPC achieves a Fire Propagation Index of <12 and a sub-index rating <6 (Part6) and a Class1 Rating for flame spread (Part7). Under UK Building Regulations Fire Safety Approved Document B, these results meet the criteria for the highest safety performance level, Class 0.

#### **EU Fire Classification**

Fire testing and reports issued by external independent accredited laboratories certify that our range of PPC products are classified in the agreement with European Norm EN13501-1 as: A2L-s1, d0 This means: A2L - Noncombustible - no contribution to fire; s1 - Lowest level for smoke emissions; d0 - Lowest level for flaming droplet/particles.



# **NBS Specification**

In collaboration with NBS Source, Alumasc products are listed on the NBS library to allow architects and specifiers quick and easy access to the correct product specification and respective clauses. The table below lists applicable clauses for each of the Rainwater products; some products fall into one or more categories and will vary by application.



			Uniclass	CAWS		
Product Range	Classification	Uniclass Code	Title	CAWS Code	Title	
Aluminium Gutters	Primary	Pr_65_50_35_06	Aluminium Eaves Gutters	R10/11	Aluminium Gutters	
	Additional			R10/311	Aluminium Gutters	
Aluminium Downpipes	Primary	Pr_65_52_03_04	Aluminium Rainwater Pipes and Fittings	R10/30	Aluminium Pipework	
	Additional			R10/370	Aluminium Pipework	
Cast Iron Gutters	Primary	Pr_65_50_35_11	Cast Iron Eaves Gutters	R10/12	Cast Iron Gutters	
	Additional			R10/315	Cast Iron Gutters	
Cast Iron Downpipes	Primary	Pr_65_52_03_11	Cast Iron Rainwater Pipes and Fittings	R10/380	Cast Iron Pipework - spigot and socket	
	Additional					
Steel Gutters	Primary	Pr_65_50_35_29	Galvanised Steel Combined Fascias Soffits and Gutters	R10/311	Steel Gutters	
	Additional					
Steel Downpipes	Primary	Pr_65_50_35_29	Galvanised Steel Combined Fascias Soffits and Gutters	R10/370	Steel Pipework	
	Additional					



#### **Aluminium Example**

Manufacturer: Alumasc Water Management Solutions, Station Road, Burton Latimer, Kettering, Northants NN15 5JP. 01536 383810.

Email: info@alumascwms.co.uk

Product reference: Use product name and product code e.g., Heritage Cast Aluminium Rainwater System

Material/grade: Made from LM2 and LM6 grades of Aluminium alloy to BS EN 1559:1997, BS EN 1676:1997 and BS EN 1706:1998

Extruded from 6063 T6 alloy to to BS 1474:1972 Made from aluminium sheet to BS EN515:1993

Size/Profile: Standard sizes and profiles

Finish/Colour: Polyester powder coated to BS EN 12206-1:2004 as per architect's requirements. Coating to have BBA certificate

Accessories: Corners, angles, closer pieces, as required to architects design

Other requirements: Main structure and support carrier and fixation by others, contractor to site cut/trim as required and level and line through

Method of jointing: Refer to individual range installation guide

**Method of support/fixing:** Refer to individual range installation guide

#### **Cast Iron Example**

Manufacturer: Alumasc Water Management Solutions, Station Road, Burton Latimer, Kettering, Northants NN15 5JP. 01536 383810.

Email: info@alumascwms.co.uk

Product reference: Use product name and product code e.g., Apex Heritage Cast Iron Rainwater System

Material/grade: Complies with BS 460:2002
Cast Iron Rainwater Goods

**Size/Profile:** Standard sizes and profiles
Finish/Colour: Apex certified painted finish

Accessories: Corners, angles, closer pieces, as required to architects design

Other requirements: Main structure and support carrier and fixation by others, contractor to site cut/trim as required and level and line through

Method of jointing: Refer to individual range installation guide

**Method of support/fixing:** Refer to individual range installation guide

#### **Steel Example**

Manufacturer: Alumasc Water Management Solutions, Station Road, Burton Latimer, Kettering, Northants NN15 5JP. 01536 383810.

Email: info@alumascwms.co.uk

Product reference: Use product name and product code e.g., Infinity Steel Rainwater System

Material/grade: Made from Mild Steel

Size/Profile: Standard sizes and profiles

Finish/Colour: Galvanised or polyester powder coated to BS EN 12206-1:2004

Accessories: Corners, angles, closer pieces, as required to architects design

Other requirements: Main structure and support carrier and fixation by others, contractor to site cut/trim as required and level and line through

Method of jointing: Refer to individual range installation guide

**Method of support/fixing:** Refer to individual range installation guide

# **General Specification Advice**

General specification clauses for Alumasc rainwater systems are provided below. For project specific specification advice, contact Alumasc Technical Services.

#### **EXECUTION CLAUSES** 600 PREPARATION, ENSURE:

- Below ground drainage is ready to receive rainwater or that the discharge can be dispersed by approved means to prevent damage or disfigurement of the building fabric.
- Any specified painting of surfaces which will be concealed or inaccessible is completed.

#### **605 INSTALLATION GENERALLY:**

- Install pipework/gutters to ensure the complete discharge of rainwater from the building without leaking.
- Obtain all components for each type of pipework/guttering from the same manufacturer unless specified otherwise.
- Provide access fittings and rodding eyes as necessary in convenient locations to permit adequate cleaning and testing of pipework.
- Avoid contact between dissimilar metals and other materials which would result in electrolytic corrosion.
- Do not bend plastics or galvanised steel pipes.
- Adequately protect pipework/gutters from damage and distortion during construction. Fit purpose made temporary caps to prevent ingress of debris. Fit all access covers, cleaning eyes and blanking plates as the work proceeds.

 Where not specified otherwise use plated. sherardised, galvanised or nonferrous fastenings, suitable for the purpose and background, and compatible with the material being fixed.

#### 610 FIXING AND JOINTING GUTTERS:

- Fix securely at specified centres and at all joints in gutters, with additional brackets near angles and outlets.
- Provide for thermal and building movement when fixing and jointing, and ensure that clearances are not reduced as fixing proceeds.
- Seal as specified to make watertight.
- Spread jointing compound evenly over jointing face of socket.
- For gutters with bolted joints, tighten joints in the gutter sole before any other bolts. Fit suitable washers and spacers to prevent overtightening, unless specified otherwise.
- Tighten fixing to squeeze out some compound
- Remove surplus, squeezed out compound and neatly clean off.
- Ensure that roofing underlay is dressed into

#### 615 SETTING OUT EAVES GUTTERS - TO FALLS

• Set out to a true line and even gradient to ensure no ponding or backfall. Position high

- points of gutters as close as practical to the roof and low points not more than 50mm below the
- Position outlets to align with connections to below ground drainage, unless shown otherwise on drawings.

#### 630 RAINWATER OUTLETS, ENSURE THAT:

- Outlets are securely fixed before connecting pipework.
- Junctions between outlets and pipework can accommodate all movement in the structure and pipework.

#### 435 FIXING PIPEWORK:

- Fix securely at specified centres plumb and/or true to line.
- Make changes in direction of pipe runs only where shown on drawings unless otherwise approved.
- Fix branches and low gradient sections with uniform and adequate falls to drain efficiently.
- Fix externally socketed pipes/fittings with sockets facing upstream.
- Provide additional supports as necessary to support junctions and changes in direction.
- Fix every length of pipe at or close below the socket collar or coupling.
- Provide a load bearing support for vertical pipes

at not less than every storey level. Tighten fixings as the work proceeds so that every storey is self supporting and undue weight is not imposed on fixings at the base of the pipe.

- Isolate from structure where passing through walls or floors and sleeve pipes as specified in Section P31.
- Provide for thermal and building movement when fixing and jointing, and ensure that clearances are not reduced as fixing proceeds.
- Fix expansion joint pipe sockets rigidly to the building and elsewhere use fixings that allow the pipe to slide.

#### 650 JOINTING PIPEWORK/GUTTERS:

- Joint using materials, fittings and techniques which will make effective and durable connections.
- Joint differing pipework/gutter systems with adaptors recommended by manufacturer(s).
- Cut ends of pipes to be clean and square with burrs and swarf removed. Chamfer pipe ends before inserting into ring seal sockets.
- Ensure that jointing or mating surfaces are clean, and where necessary lubricated, immediately before assembly.
- Form junctions using fittings intended for the purpose ensuring that jointing material does not project into bore of pipes, fittings and
- Remove surplus flux/solvent/cement/sealant from joints.

#### 675 COATED PIPEWORK/GUTTERS:

 Make good to coatings after cutting and any other damage or recoat, as recommended by the manufacturer.

#### 685 IDENTIFICATION OF INTERNAL RAINWATER 905 INTERNAL PIPEWORK TEST - ENGLAND, PIPEWORK:

• To BS 1710 using self-adhesive bands or identification clips located at junctions, at both sides of each slab, bulkhead and wall penetration, and elsewhere as directed.

#### 690 ELECTRICAL CONTINUITY:

 Use clips or suitable standard couplings supplied for the purpose by pipework manufacturer to ensure electrical continuity at all joints in metal pipes with flexible couplings and which are to be earth bonded.

#### 700 ACCESS FOR TESTING AND MAINTENANCE:

- Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance.
- Position access fittings and rodding eyes so that they are not obstructed by other pipework, framing, etc.

#### COMPLETION CLAUSES 900 TESTING GENERALLY:

- Inform the contractor administrator sufficiently in advance to give him a reasonable opportunity to observe tests.
- Check that all sections of installation are free from obstruction and debris before testing.
- Provide clean water, assistance and apparatus for testing as required.
- Carry out tests as specified. After testing, locate and remedy all defects without delay and retest as instructed.
- Keep a record of all tests and provide a copy of each to the contractor administrator.

# WALES AND NORTHERN IRELAND:

- Temporarily seal open ends of pipework with
- Connect a 'U' tube water gauge and air pump to the pipework via a plug.
- Pump air into pipework until gauge registers 38mm.
- Allow a period for temperature stabilisation. after which the pressure of 38mm is to be maintained without loss for not less than 3 minutes.

#### 906 INTERNAL PIPEWORK TEST- SCOTLAND

 Standard - To BSEN12056-3:2000, National Annex NG

#### 910 GUTTER TEST:

 Block all outlets, fill gutters to overflow level and after 5 minutes closely inspect for leakage.

#### 915 MAINTENANCE INSTRUCTIONS

• At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation including full details of the recommended inspection, cleaning and repair procedures.

#### 920 IMMEDIATELY BEFORE HANDOVER:

- Remove construction rubbish and debris from all roofs and gutters. Where possible, sweep and remove fine dust which may enter rainwater systems. Do not sweep or flush dust or debris into the rainwater system.
- Remove swarf, debris and temporary caps from the entire rainwater installation.
- Ensure that all access covers, rodding eyes, outlet gratings, etc., are secured complete with all fixings.

# **Technical and Customer Service**

With specialist knowledge across the water management cycle, we offer a full technical and support service as standard for all projects. Our 'Concept to Completion' process is underpinned by a solid company infrastructure which offers the following:

- national brand-specific sales team and regional support network
- in-house technical team
- design team to fulfil bespoke design requirements
- rainwater and drainage calculations and on-site surveys
- take-off and estimations
- three UK manufacturing plants
- in-house, BBA approved powder coating facilities
- unrivalled dedicated UK technical and after-sales support
- a network of approved suppliers and recommended installers covering the UK & Ireland

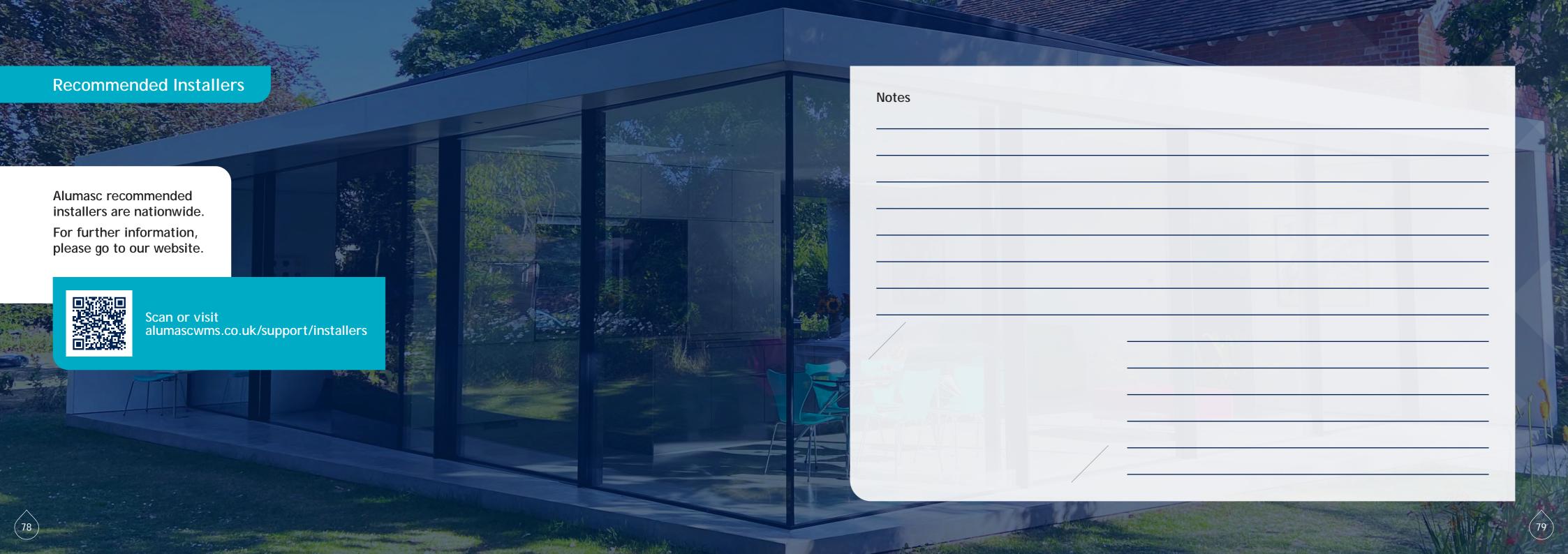
#### **Online Calculator**

Our leading Drainage Calculator allows architects, specifiers and engineers to design and quantify all their Rainwater Drainage requirements.

- category 2 and 3 Flat Roof Drainage linked to local rainfall data
- eaves drainage gutter sizing and pipe calculator, for cast and contemporary gutter types
- ability to import FEH data sets for client's personal use
- no installation required, just an internet connection
- share and view calculations with their colleagues
- links to NBS Specification, detailed drawings and help pages

"Full support throughout our concept to completion process"





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