



27th February 2024

123 – 125 Liverpool Road, Manchester. Listed Building Methodology. Condition 9 - Rainwater goods

This note seeks discharge of Condition 9 of the consent (Listed Building Consent reference 137547/LO/2023 for the replacement of rainwater goods.

Heritage Architecture Ltd have reviewed the proposed design, details and installation to ensure that good conservation practice is being followed.

Although the use of cast aluminium will not visually alter the aesthetic of traditional cast iron to any great level, it has been decided to replace all rainwater goods with traditional cast iron.

The existing 1820s timber barge boards to No. 125 are in a good condition and will be retained in-situ following redecoration. The bargeboards to No. 123 all date to the c1980s and thus will be replaced with bargeboards matching the original design of the adjacent No. 125.

General heritage methodology

Care should be taken to remove existing cast iron elements from the building's façade and barge boards without causing damage to the masonry/timberwork, by unscrewing brackets where this is feasible.

Following the preparation of the surviving original timber barge boards to 125 Liverpool Road and the refitting of matching barge boards to 123, all elements will be decorated in the chosen colour. Following decoration, the new cast iron guttering and downpipes will be installed.

New fixings to brackets will aim to use mortar joints where this is possible, with the number of fixings being at the minimum needed. Following the fitting of new cast iron elements, the exposed screw ends will be decorated black to match the colour of the new cast iron rainwater goods.

It is considered that the submitted details and manufacturers technical information for the proposed rainwater goods comprises an appropriate level of detail and that the approach proposed would not have a damaging impact upon the listed building, and discharge of Condition 9 is therefore sought

General principles

- All works should be performed by a contractor with proven experience with the material substrates affected.
- Prior to commencement of any works, the appointed contractor/operative must receive an induction on the heritage significance and sensitivity of the building and made aware of the implications of the listed status of the building prior to undertaking any works to ensure that the works do not result in any damage or loss of important fabric outside of the agreed scope.

- The submitted Heritage Statement by SLHA must be provided for operatives' perusal before any works commence.
- All works shall be completed in the most careful manner preventing unnecessary destruction of adjacent surfaces and materials where applicable.
- All operatives must be made aware that only elements that form part of their works should be removed/alterd. Any necessary removal outside of these works must be checked by the project manager and heritage advisor before commencing.
- Prior to the commencement of any works all operatives will be inducted and trained in the careful removal of relevant building elements to ensure no unnecessary/accidental damage is caused to retained fabric and features of the building.
- When removing building fabric/fixtures/fitting/elements from the listed building, care must always be taken for careful removal in order to not damage surrounding historic fabric.
- All work to be performed in the building should be executed in a professional manner so as to cause minimum disturbance to remaining historic features and building materials.
- The contractor will remain responsible for the work executed and for the application of this methodology.
- Any damage occasioned at any time is to be completely repaired to the Heritage Advisor's/LPA's satisfaction.
- Ensure, once any works are completed, that any areas exposed left are protected from wind and weatherproofed to prevent further degrading of existing fabric.

Lee Hutchings BSc (Hons) Associate Heritage Consultant

For and on behalf of Heritage Architecture Ltd.



**Method Statement and Risk Assessment for
The installation of Aluminium/Cast Iron RWG'S
To
Liverpool Road, Manchester
For Domis Construction**

**Method and Risk Assessments prepared Craig Verling
Of Roof Drainage Systems Ltd.**

Date: 16th February 2024



Contractor	ROOF DRAINAGE SYSTEMS LTD
Client	DOMIS
Site	LIVERPOOL ROAD
Description of Task	Installation of Aluminium and Cast Iron RWG's
Date	JAN 2024

Key Initial Risks	Item	Residual Risk
High	Objects falling from height onto others	Low (toeboards)
Medium	Dust and debris from drilling	Low (PPE)
High	Fall from heights	Low (control by others)
High	Traffic	Low (control by others)
High	Third parties	Low (control by others)
Low	Manual handling	Low
High	Cuts and Abrasions	Low

Working Method

1. Task to be performed only when the working areas are sufficiently clear of any other trades to allow safe access and a safe working area clear of obstructions. No work will take place if any other trade creating a high risk of falling objects are working directly above. In such cases, the principal contractor will be asked to resolve the situation.
2. Works to be accessed by means of independent scaffolding and ladders for short term works for install of RWP's.
3. Site toilet/welfare areas and first aid to be provided by the client.
4. All operatives and contractors requiring access to the site must be in possession of, and wear, head protection, safety boots, high visibility clothing, (and protective gloves when required) on this project. When working with mineral fibres and if dust is created, dust masks must be worn. Ear protection is mandatory on this project for all operations with noise levels exceeding 80dB (A).
5. All operatives to receive a health and safety induction, from Domis site management on arrival at LOCK 90 office M1 5LW before any work commences. CSCS cards and any other training cards to be presented at this point.
6. Deliver materials to working areas. Materials which are relatively light can be carried up to working level. Alternatively, mechanical means may be employed to load out heavier or more awkward items to upper area if applicable/available.
7. For the installation details please refer to the fitting sheets on page 3. **Please pay particular attention to the Heritage Methodology on page 4 and all operatives must co-operate fully with this statement.**
8. All teams will undergo an in-house review of the project prior to attending site with the installation's manager, during which the method statement will be read and signed by the operatives once fully understood. All operatives are reminded that the final page of risk assessments is to be used for any task/situation that deviates from that originally planned and must be completed accordingly.
9. Works to be inspected by Roof Drainage Systems Ltd Installation Manager during the contract period.

ROOF DRAINAGE SYSTEMS LTD INSTALLATION GUIDE FOR ALUMINIUM AND CAST GUTTER.

Direct fixed to fascia board.

Check the material/substrate being fitted to, is adequate and securely fixed, if you feel in any doubt refer to site agent or Roof Drainage Systems office.

If there is a lighting conductor or any obstructions consult with the site agent – do not remove.

Direct Fix: Fixings in every hole provided approx. 600mm centres using L38W16 – 5.5x38mm Hex Head Self Drilling Screw.

Gutter to be installed level of aesthetics.

If fascia brackets are used: Fascia Brackets fixed at 600mm centres to timber fascia using 5x40mm classic screw. Extra brackets available for corners, outlets and end caps. Ensure the spread of brackets is correct and aesthetically pleasing.

When fitting end caps and running outlets follow same instruction when fitting jointers.

Refer to Silicone Guide.

When cutting gutter lengths on site ensure PPE is worn i.e. goggles and gloves. Ensure gutter is on a firm level and appropriate surface to make sure product does not get scratched.

Measure twice – cut once.

Once measured length, measure gutter, mark it, use square, square line around gutter, cut using cordless battery jigsaw. *Please be aware off cuts are expensive and are to be utilised using additional jointing collars.*

End cap to protrude past slate by 25mm.

Outlets: Ensure outlets are positioned over the gullies using a string line – plum/bob. If gullies are not installed refer to site.

Clean down whilst progressing the job – ensuring all finger marks are removed. Clean down all cuts with a file to form safe edge.

PPE: Hard hat, Hi Viz waistcoat, gloves, safety goggles must be worn. Ear protection and safety mask if needed i.e. cutting.

LISTED BUILDING METHODOLOGY

- All works should be performed by a contractor with proven experience with the material substrates affected.
- Prior to commencement of any works, the appointed contractor/operative must receive an induction on the heritage significance and sensitivity of the building to ensure that the works do not result in any damage or loss of important fabric. All personnel, and any persons working in this building, should also receive a heritage induction and made aware of the implications of the listed status of the building prior to undertaking any works.
- The submitted Heritage Statement by SLHA must be provided for operatives' perusal before any works commence.
- All works shall be completed in the most careful manner preventing unnecessary destruction of adjacent surfaces and materials where applicable.
- All operatives must be made aware that only elements that form part of their works should be removed/altered. Any necessary removal outside of these works must be checked by the project manager and heritage advisor before commencing. Important Notes
- Prior to the commencement of any works all operatives will be inducted and trained in the careful removal of elements to ensure no unnecessary/accidental damage is caused to retained fabric and features of the building.
- All work to be performed in the building should be executed in a professional manner so as to cause minimum disturbance to remaining historic features and building materials.
- Any damage occasioned at any time is to be completely repaired to the Heritage Advisor's/LPA's satisfaction.
- The contractor will remain responsible for the work executed and for the application of this methodology.
- When removing building fabric/fixtures/fitting/elements from the listed building, care must always be taken for careful removal in order to not damage surrounding historic fabric.
- Workmanship shall be in accordance with all current British Standards Codes of Practice BS 7913 – Guide to Principles of the Conservation of Historic Buildings, and the British Standards BS 8000 workmanship series. • Ensure, once any works are completed, that any areas exposed left are protected from wind and weatherproofed to prevent further degrading of existing fabric.

ROOF DRAINAGE SYSTEMS LTD INSTALLATION GUIDE FOR CAST IRON RAINWATER PIPES

Pipes fixed to masonry.

Check the material you are fixing to be substantial and capable of receiving your fixing, if you feel there is any doubt refer to site agent or Roof Drainage office.

If there is a lighting conductor or any obstructions consult with the site agent – do not remove.

102X102 Secret Fix Aluminium Pipe: - always start at the top and work down – establish the position of the pipe.

Fixings: - Brickwork M5x57 Steel Tapcon Screw Zinc & Blue (£7.93/100 – NHS 6/40 = £7.90/200)

Unless materials are too hard i.e. Accrington Brick – NHS 6x40

Timber cladding – M5x57 Steel Tapcon Screw Zinc & Blue (L38 5.5x38mm Hex Head Self Drilling Steel Screw £6.60/100).

Render M5x57 Steel Tapcon Screw Zinc & Blue

Steel: H55W16 – 5.5x55mm Hex Head Self Drilling Screw – if 10mm plus use tec gun.

When cutting Pipe lengths on site ensure PPE is worn i.e. goggle and gloves. Ensure pipe is on a firm level and appropriate surface to make sure product does not get scratched.

Measure twice – Cut once.

Once measured length, measure pipe, mark it, square it, square line around pipe, cut using cordless battery jigsaw. *Please be aware off cuts are expensive and are utilised using additional jointing collars.*

Clean down whilst progressing job – ensuring all finger marks are removed. Clean down all cuts with a file to form safe edge.

PPE: Hard hat, Hi Viz waistcoat, gloves, safety goggles must be worn. Ear protection and face mask if needed i.e. cutting.

NAME OF PROJECT

LIVERPOOL ROAD, MANCHESTER.

Management responsible for Project:

Contracts Manager:

Craig Verling

Install Team:

Michael Smith and Corey Williams

Our methods of reporting accidents is

First to site agents & then to Roof Drainage Systems

Responsible Person

Craig Verling

Telephone number

0161 367 1230

We acknowledge our responsibility to provide all necessary protective clothing and equipment to carry out the Sub-Contract works including First Aid provisions

YES

We ensure that our method statement is circulated to all involved associated personnel and understood

YES

Supplementary information or requirement

COSHH attached.

Roof Drainage Systems Ltd/Method Statement

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024	
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)
Location	MANCHESTER				Other employees	(2)
Activity/Item	Contract employees/site visitors				Third parties	(3)
Hazard and Risk	Persons affected	Risk (H/M/L)	Risk Reduction Precautions			Residual Risk
Contract (and Subcontractor’s) Employees Risk of accident due to unfamiliarity with site hazards	1,2	M	All operatives on site will be recruited on the basis of task competence and safety awareness. Site personnel be given an induction by the principal contractor prior to task commencement by the on-site rules and safe working procedures. Also, site supervisor to induct operatives on working methods and risks of specific tasks involved. All persons to be updated on site hazards via toolbox talks. All personnel must work to these method statements at all times. Any alterations to agreed working methods only after approval from the site supervisor.			L
Site visitors Risk of accident due to unfamiliarity with site hazards	3	M	To be accompanied at ALL TIMES and provided with the required personal protective equipment.			L

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024	
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)
Location	MANCHESTER				Other employees	(2)
Activity /Item	Other persons and activities/ Site Tidiness				Third parties	(3)
Hazard and Risk	Persons affected	Risk (H,M,L)	Risk reduction precautions			Residual Risk
Working Around Other Contractors/Employees/Third Parties Risk of severe damage /injury to/by other contractors and/or their plant and equipment	1,2,3	M	Effective pre-planning with the Principal Contractor must ensure adequate warning signs and segregations arrangements to keep third parties away from the working area and/or times to conduct work when there will be minimal interference from third parties. Third parties, including site employees and delivery/collection traffic will be accessing the buildings and using routes proximate to where work will take place. It is essential to take full regard of the activities of others. If it is felt that contract work creates a hazard to others, then work should be immediately ceased until either the hazardous conditions caused, or the third parties can be removed from the vicinity. If necessary, a change in the plan of work should be made, if adequate segregation is not possible. In the event of any third party creating a hazardous situation for site employees and contractors, work should cease immediately, and the Site Supervisor informed accordingly so that he can take the appropriate action to remove or minimise the hazard. All persons should note that, in any doubt as to whether their work presents a risk to third parties or that they feel that a third party's activity are putting them at risk, they must stop work immediately and consult with the Site Supervisor.			M (Third parties will be in the vicinity but must be kept away from the immediate working location and areas immediately above the working areas there is a risk of falling objects).
Site Tidiness Risk of fire, slips and trips from combustible waste and general debris	1,2	M	Always keep the work area and the especially access ways and entrances/exits clear and free from all types of debris, trailing cables, materials and waste. Working materials and tools must be removed if the person using them leaves the job at any time. Care should be taken by all operatives and supervisors when planning each task to minimise the number of obstructions for both the operative performing task and others who maybe affected by the task. Site Supervisor to monitor on a regular basis. Any obstruction created by third parties or other contractors should be reported to the Principal Contractor who will arrange for their removal.			L

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024	
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)
Location	MANCHESTER				Other Employees	(2)
Activity/Item	Manual Handling				Third Parties	(3)
Hazard and Risk	Persons affected	Risk (H/M/L)	Risk Reduction Precautions			Residual Risk
Manual Handling Risk of strains, musculo-skeletal injuries	1	M	<p>Main risks are in the lifting of materials between levels at height. In the main, items are lightweight and present no difficulty, apart from the intrinsic sharpness of the metal edges. Gloves must therefore be worn at all times.</p> <p>Avoid individuals lifting any load heavier than 25kg. or large or bulky items. Larger loads should be moved mechanically or by employing an adequate number of suitable persons to share the task and allow each person to lift a manageable load safely.</p> <p>Ensure access ways are clear, so that persons moving heavy objects cannot trip or fall.</p> <p>When lifting or moving materials, use mechanical means wherever possible. When lifting and depositing loads, ensure that the load is manageable and, if necessary, ask for help if load is heavy and bulky.</p> <p>Where unloading or loading a distance from the work areas, mechanical means or rough terrain fork truck (depending on the item(s) involved) should be used to bring the materials to the working areas.</p> <p>Be aware of all factors that influence safe handling, including adverse weather, obstructions, difficult access and others in the way.</p>			L

Roof Drainage Systems Ltd/Method Statement

Organisation	ROOF DRAINAGE SYSTEMS LTD		Date	FEBRUARY 2024
Site	LIVERPOOL ROAD		Persons affected	Task operative
Location	MANCHESTER			Other employees
Activity /Item	Access for Working at Height: Mechanical Elevated Working Platforms			Third parties
Hazard and Risk	Persons Affected	Risk (H,M,L)	Risk Reduction Precautions	
Hydraulic Access Platform (Single Boom/Scissor Lift) Risk of falls, entrapment, equipment failure or instability	1,2	H	<p>Operators should be trained and competent for the use of any mobile access equipment with copies of training certificates held on site. Operators must follow the manufacturer’s instructions with regards to checking the following are in place and working within prescribed limits before use:</p> <ul style="list-style-type: none">• Outriggers, screw jacks and stabilisers• Wind loadings• Tyre pressures <p>Plant and machinery statutory test and examination certificates to be held on site. This includes hand-over and weekly inspections to verify scaffolding as safe for use.</p> <p>Safe working load should be marked on the equipment and never exceeded during operation.</p> <p>Ensure working platform is suitably guarded with rails and perimeter toeboard to prevent falls from height and falling objects. Always clear the surrounding area below, to prevent persons being hit by any falling objects.</p> <p>Operatives should only access working platform when lift platform is fully lowered. Always lower work platform fully before moving the platform to another location.</p> <p>Suitable barriers and warning signs to be erected to keep other contractors or third parties away from the risk of falling objects. If working over an access route, ensure third parties are protected e.g. by a covered walkway.</p> <p>Ensure persons at base are clear of the working area at base to avoid trapping in the boom mechanism.</p> <p>Keep equipment on firm solid ground and away from unprotected edges on floor. If necessary, use lifts fitted with stabilisers to ensure greater stability.</p> <p>Harnesses, attached to the lift basket or other load bearing structure at, should be worn at all times when working from <u>single-boom</u> mobile elevated platforms. Should an operative be thrown or fall from the basket then the rescue plan will be to lower the basket from the ground controls and call for emergency medical assistance immediately.</p> <p>Do not locate in doorways etc. Where other vehicles or pedestrians require access.</p>	

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024		
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)	
Location	MANCHESTER				Other Employees	(2)	
Activity/Item	Access For Working At Height: Risk Of Falls From Height				Third Parties	(3)	
Hazard and Risk	Persons Affected	Risk (H,M,L)	Risk Reduction Precautions				Residual Risk
Access For Working At Height Risk of falls	1,2	H	<p>The duty when managing work above ground or floor level is to reduce the risks of working at height to the lowest practicable level. This extends to the following areas: -</p> <ul style="list-style-type: none">• Eradicating or minimising risks of working at height (both during construction and designing out risks for future maintenance tasks).• Eradicating or reducing the risks for persons accessing areas at height to the lowest practicable level, by specifying aids to assist with the securing of temporary access equipment.• Reducing the actual heights of levels requiring to be accessed to a minimum, through original design and by choice of work equipment.• Minimising the numbers of people undertaking high level work to the lowest practicable safe level, and minimising the actual time spent at height.• Using the hierarchy of control approach to risk assessment to assess the risks and to select the safest practicable means for accessing any required task at high level.• Undertaking site specific risks assessments where any special considerations apply for working above floor level.• Formulating safe systems of work for undertaking all high-level tasks, and ensuring that the appropriate personnel are adequately trained, equipped and competent to undertake those tasks. <p>The Company should seek to avoid high level working wherever possible. If work at height cannot be avoided, then a rigid barrier edge protection around all edges of areas where persons could incur a serious injury, should they fall, (including temporary access platforms) should be the priority measure.</p> <p>Ref: Work at Height Regulations 2005 and HSG 33.</p>				L (High level working cannot be eradicated but full scaffold will be provided and checked by the Principal Contractor).

Roof Drainage Systems Ltd/Method Statement

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024	
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)
Location	MANCHESTER				Other employees	(2)
Activity /Item	Access For Working At Height: Step Ladders/Ladders				Third parties	(3)
Hazard and Risk	Persons Affected	Risk (H,M,L)	Risk Reduction Precautions			
Ladders and Steps Risk of falls, collapse, falling objects, falls from height.	1,2	H	<p>Ladders must only be used for short duration work in any one location. They should not be used where safer practical alternatives can be selected for access when working at height.</p> <p>Ladders and steps must be free from defect. Regular checks should be made on their condition.</p> <p>Ladders must be properly always secured (i.e., tied onto a secure structure so that they cannot move). Regular checks should be made on securing fastenings.</p> <p>A ladder should extend 1.05 metres past it's stepping-off point and be positioned at a gradient of 1 in 4.</p> <p>Each supervisor will make sure a regular check on ladders and steps for split stiles and damaged or missing rungs. If defective, DO NOT USE and either replace it or report it to Site Supervisor immediately.</p> <p>All ladders and steps must be sited on firm, level ground.</p> <p>Ladders should be properly secured at the top or footed by a second person. Steps should be properly extended and locked in place.</p> <p>Only one person should be on a ladder or steps at any one time.</p> <p>Ladders must be long enough for the job, maintaining at least three rungs above the rung on which the user stands. Steps must be tall enough to allow an operative to access the work area without over-reaching.</p> <p>Users must face the ladder or steps and maintain a firm grip when ascending/descending.</p>			

Roof Drainage Systems Ltd/Method Statement

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024		
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)	
Location	MANCHESTER				Other employees	(2)	
Activity /Item	Contaminated Surfaces/Man Made Mineral Fibres/Waste Removal				Third parties	(3)	
Hazard and Risk	Persons Affected	Risk (H,M,L)	Risk Reduction Precautions				Residual Risk
Contaminated Surfaces Health Risk	1	L	To overcome harmful effects of any contaminants on the ground or existing surfaces the following should apply:- <ul style="list-style-type: none">Minimise contact between operatives and contaminated area.Required PPE to protect operatives includes protective overalls and gloves. Eye and respiratory protection will be worn if dust is created.Thorough washing and cleaning procedures should be followed for operatives, equipment, and plant. See HSE guidance booklet HS (G)66 for details				L
Man-Made Mineral Fibre Health risk: The fibres are a respiratory hazard as well as being a skin irritant.	1	L	Man-made mineral fibre is utilised in rolls. The mineral is ‘rolled out’ in the open air and dropped into the cavity behind the fascia’s. Used in this way, risks of fibre release affecting operatives or others in the vicinity is minimal. Operatives will avoid breaking up mineral fibre sections, wherever possible. As a general precaution, overalls, gloves and a respirator or mask should be used when working with MMMF. Cover areas of bare skin and wash thoroughly at the end of each working shift or before meal breaks.				L
Waste Removal Environmental risk/risk of fire from combustible materials left on site	1,2,3	M	Carry waste down from high levels (smaller items to be carried in bags) and place into a skip to avoid dust and scattered debris. Larger items may be lowered by hoist or mechanical means. All materials disposed of from site will be removed by the Principal Contractor in accordance with the requirements of environmental protection legislation, by licensed waste disposal contractor, to a licensed waste disposal site. Waste removal should be frequent to prevent the buildup of site debris. Skips will be located and managed by the Principal Contractor.				L

Roof Drainage Systems Ltd/Method Statement

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024	
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)
Location	MANCHESTER				Other employees	(2)
Activity /Item	Noise				Third parties	(3)
Hazard and Risk	Persons Affected	Risk (H,M,L)	Risk Reduction Precautions			Residual Risk
Noise Risk of noise – induced hearing loss	1,2	M	All noisy operations should be carried out when third parties are removed from nearby work locations to an area where they will not be exposed to excessive levels of noise. Operatives working with noisy equipment should wear hearing protection as indicated by warning symbols on the plant instruction panel. Contractor to perform noise assessments on plant operations to determine hearing protection requirements. Hearing protection is available to all working with noise levels greater than a measurement of 80 LPD(A) and mandatory for all working in noise levels greater than 85 LPD(A)			L

Roof Drainage Systems Ltd/Method Statement

Organisation	ROOF DRAINAGE SYSTEMS LTD			Date	FEBRUARY 2024		
Site	LIVERPOOL ROAD			Persons affected	Task operative	(1)	
Location	MANCHESTER				Other employees	(2)	
Activity /Item	Use of Portable Tools				Third parties	(3)	
Hazard and Risk	Persons Affected	Risk (H,M,L)	Risk Reduction Precautions				Residual Risk
Hand and Power Tools Electrocution risk.	1	H	All tools are either 110v or battery powered. Regular PAT inspections to be carried out by a competent person to ensure portable electrical equipment remains in good condition. Records to be available showing these inspections. Battery powered equipment to be used, where practicable, to avoid the need of cables, and to minimise voltages. Prevent continuous usage of power drills or saws to prevent risks from hand-arm vibration.				L
Dust and Flying Debris Risk to Health and impact to eyes.	1	H	Some dust may be created during certain tasks such as drilling and cutting. Where this occurs, the task location should be isolated to protect third parties from the effects of the dust. Operatives to wear eye protection, plus respirators if dust is created. All persons in the vicinity who could be exposed to dust must wear appropriate overalls, gloves, dust masks and eye protection.				L
Powered saws Risk of entrapment, hand-arm vibration or flying fragments of material.	1,2	H	Only trained and appointed persons to use specialist equipment such as powered saws. Eye protection to be worn, plus respirators if dust is created. Minimise usage time to prevent risks from hand-arm vibration (on this project usage will only be intermittent). Guards should always be fitted correctly on the machine prior to use. Tools should be used only for short periods before taking a break, as advised by manufacturer's vibration level data.				L

COSHH HAZARD & RISK ASSESSMENT SHEET**No.: 1****SUBSTANCE/PRODUCT NAME AND DESCRIPTION:****EVERBUILD BUILDING PRODUCTS
GENERAL PURPOSE SILICONE GPS/123GPS-ALL COL**

Silicone Sealer

HAZARDOUS CONTENT	LTEL	STEL	COMMENTS	CLASSIFICATION
Methyl Triacetoxysilane 1-10% Petroleum Distillates 1-10%	10 ppm	15ppm		Irritant

HOW IS SUBSTANCE SUPPLIED, USED?

Supplied in cartridge form. Applied in small amounts by cartridge tool to seal gutters and pipes in the open air.

ASSESMENT OF RISK, AND PRECAUTIONS TO BE TAKEN

Irritating to eyes and mild irritant to the skin
 Mild irritation to the throat if inhaled
 Vapours in sufficient concentration could cause drowsiness if used in an airless atmosphere

Assessment of risk in normal use is minimal as it would be used in small quantity injected via a cartridge tool and would be applied in open spaces. However users should ensure good personal hygiene and should wash hands after using. Do not eat, drink or smoke when using.

FIRST AID INFORMATION AND EMERGENCY ACTIONS

EYES – wash with copious amounts of water
 SKIN – wash off with soap and water
 INHALATION – remove to fresh air (inhalation in sufficient quantity to affect the user is unlikely in normal use)
 INGESTION – seek medical advice (ingestion in sufficient quantity to affect the user is unlikely in normal use)

DO NOT ALLOW TO ENTER THE SEWAGE/DRAINAGE SYSTEM (spillage in sufficient quantity to affect the environment is unlikely in normal use).

SIGNED



DATE.....16.02.24.....

NB: if the product is being used in a manner different from the way described above, a separate risk assessment will be needed.

I HAVE RECEIVED INDUCTION, READ AND UNDERSTOOD THE METHOD

STATEMENT FOR JOB.....

I ACKNOWLEDGE THAT ALL PLANT & PPE DESCRIBED IN THE METHOD STATEMENT
WILL USED AS INSTRUCTED.

SIGNED.....

TEAM LEADER.....

DATE.....

SIGNED.....

NAME.....

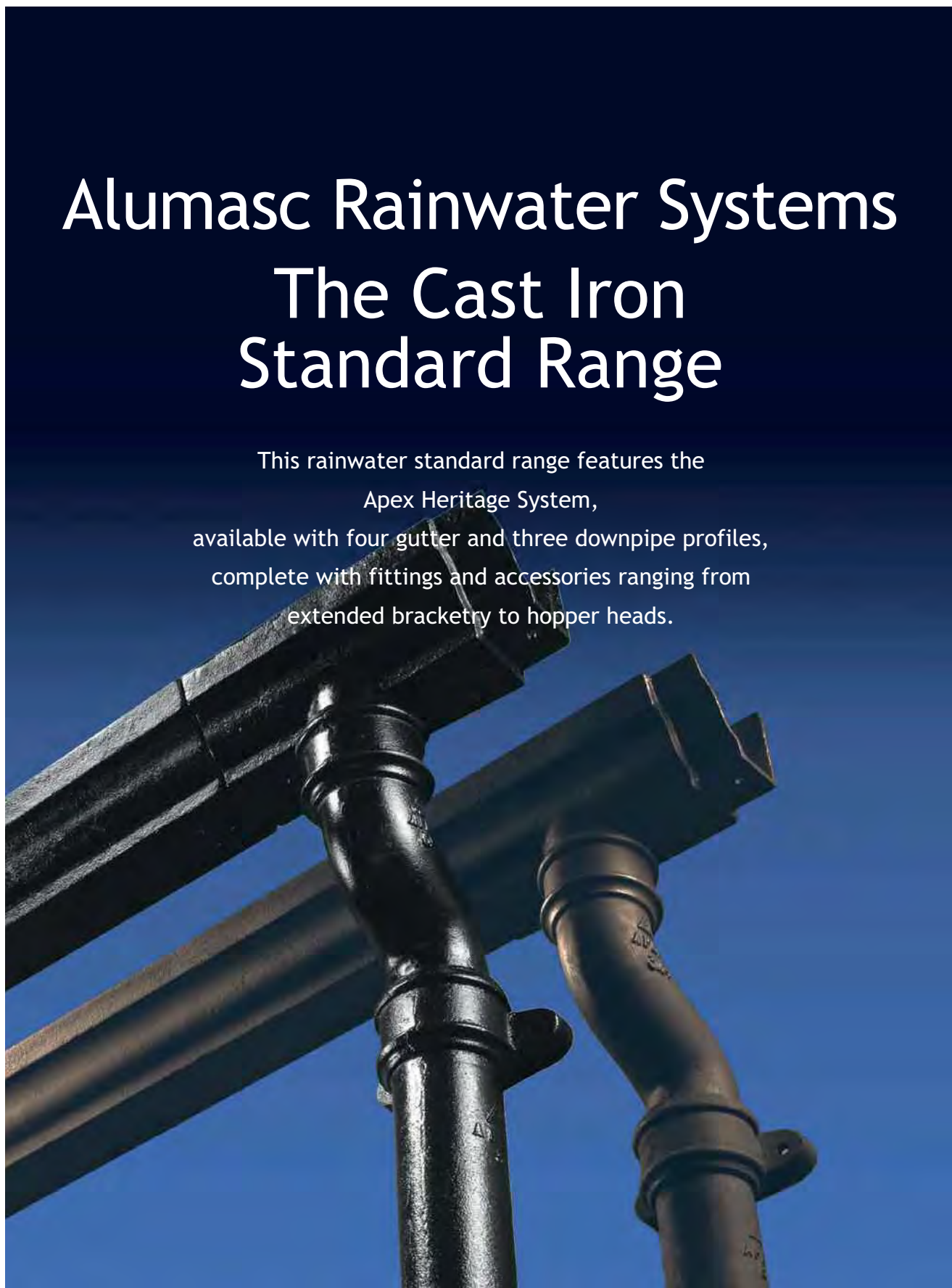
DATE.....

PLEASE USE THE SPACE BELOW IF YOU WOULD LIKE TO RAISE ANY NECESSARY POINTS:-

Alumasc Rainwater Systems

The Cast Iron Standard Range

This rainwater 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.



Standard Cast Iron Rainwater Range - Introduction



Apex Heritage Cast Iron is a complete range of traditional sand cast gutters, downpipes and fittings combined with a made to order capability to suit any new, refurbished or restored building projects.



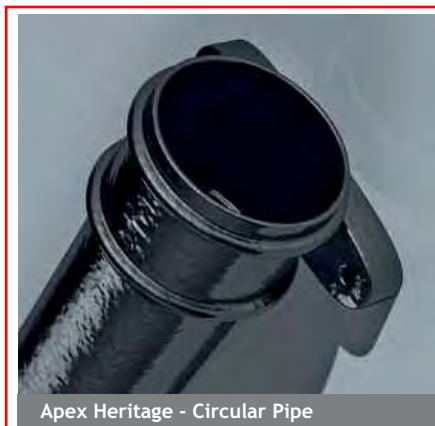
Apex Heritage Rainwater Systems - Standard Range Product Summary



Apex Heritage - Half Round Gutter



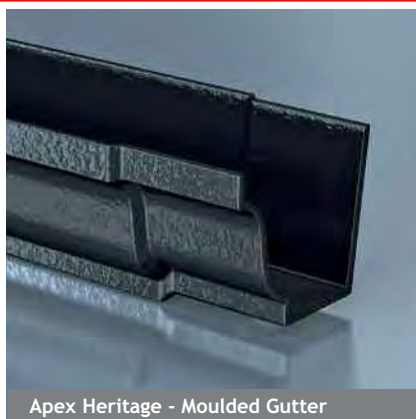
Apex Heritage - Beaded Half Round Gutter



Apex Heritage - Circular Pipe



Apex Heritage - Victorian Ogee Gutter



Apex Heritage - Moulded Gutter



Apex Heritage - Square Pipe



Apex Heritage - Rectangular Pipe

Apex Heritage Rainwater Systems - Standard Range Product Summary



Apex Heritage is a comprehensive range of traditional gutter profiles, round, square and rectangular pipes and all associated fittings and accessories. Designed to provide all the essential architectural features appropriate to traditionally designed buildings, the Apex Heritage range is also fully in tune with modern fast track building contracts.

Applications

- Suited to traditional craft based contracts
- Closely replicates historic styles
- For both flush and projecting eaves applications

Features & Performance

- 4 gutter profiles and 3 downpipe profiles available in a choice of sizes
- Downpipes available in 0.9m (3ft) and 1.83m (6ft) lengths
- Extremely strong, durable and vandal resistant
- Dimensionally accurate and stable
- Life expectancy in excess of 40 years
- Cast iron is 100% recyclable

Colours & Finishes

- A high quality two-pack epoxy primer and top coat painted finish
- Now available in a range of 8 standard RAL colour options with other RAL colours available to special order
- 'Factory Certified' Paint finish
- Also available in a factory primed one coat of protective oxide primer



Factory-applied oxide primer

Manufacture

- Authentic sand castings combining traditional manufacture with modern quality control standards
- A comprehensive standard range complemented with master patterns for a wide range of gutter profiles, downpipes and accessories, which can be manufactured to order.
- Complies with BS 460:2002 Cast Iron Rainwater Goods

Installation & Fixing

- Gutters are wet sealed with bolted joints, with a range of fixing options
- For Half Round gutters the Hydrostrip EDPM rubber seal is recommended for faster and cleaner solution to gutter jointing
- Gutters should be supported at 900mm centres either on brackets or for ogee, moulded and box types, by direct screw fixing through the back of the gutter
- Downpipes should be fixed back to the wall at 1.83 (6ft) centres through eared sockets or via separate earbels and holderbats
- Minimal maintenance requirements



Pre-finished painted black

Gutter Profiles & Sizes



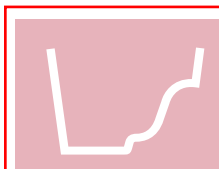
Half Round
100mm (4")
113mm (4.5")
125mm (5")
150mm (6")



Beaded Half Round
113mm (4.5)
125mm (5")

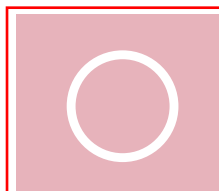


Victorian Ogee
113mm (4.5")
125mm (5")



Moulded
100 x 75mm (4 x 3")
125 x 100mm (5 x 4")
150 x 100mm (6 x 4")

Pipe Profiles & Sizes



Circular Pipe
63mm (2.5")
75mm (3")
100mm (4")
Length
1.83m (6')
0.9m (3')



Square Pipe
75 x 75mm (3 x 3")
100 x 100mm (4 x 4")
Length
1.83m (6')
0.9m (3')



Rectangular Pipe
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')

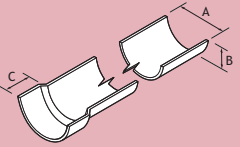
Apex Heritage - Half Round Gutters and Fittings



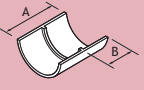
Apex Heritage Half Round socketed cast iron gutters are available in 4 sizes. A traditional profile with the unmistakable character and appearance of sand cast iron. There is a range of fittings and fixings as illustrated.

Note: All dimensions shown are in mm unless shown otherwise.
Gutter sizes shown are nominal.

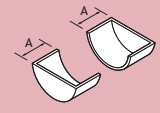
Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	100 (4")	1830mm	102	51	44	4	8.0	HG40/6FT
	113 (4.5")	1830mm	114	57	44	4	10.5	HG45/6FT
	125 (5")	1830mm	127	63	44	4	11.5	HG50/6FT
	150 (6")	1830mm	150	75	44	4	13.5	HG60/6FT
Note: T = Thickness (nominal +/- 1mm)								

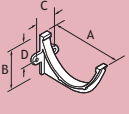
Union Clips

	Gutter Size	A	B	Product Code
	100	98	44	HG40/UC
	113	98	44	HG45/UC
	125	98	44	HG50/UC
	150	95	44	HG60/UC

Stop Ends

	Gutter Size	Type	A	Product Code
	100	External	51	HG40/SE/E
	113	"	51	HG45/SE/E
	125	"	51	HG50/SE/E
	150	"	51	HG60/SE/E
	100	Internal	45	HG40/SE/I
	113	"	45	HG45/SE/I
	125	"	45	HG50/SE/I
	150	"	45	HG60/SE/I

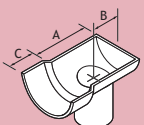
Fascia Brackets

	Gutter Size	A	B	C	D	Product Code
	100	127	65	38	35	HG40/FB/CI
	113	140	70	38	40	HG45/FB/CI
	125	155	85	38	45	HG50/FB/CI
	150	190	120	30	90	HG60/FB/CI

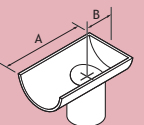
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Half Round Gutters and Fittings

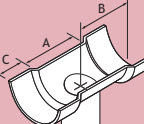
Drop End Outlet - with Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	100	63 dia	125	64	44	HG40/DE/25/E
	113	63 dia	125	64	44	HG45/DE/25/E
	125	63 dia	125	64	44	HG50/DE/25/E
	100	76 dia	125	64	44	HG40/DE/30/E
	113	76 dia	125	64	44	HG45/DE/30/E
	125	76 dia	125	64	44	HG50/DE/30/E

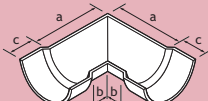
Drop End Outlet - with Spigot

	Gutter Size	Pipe Size	A	B	Product Code
	100	63 dia	172	64	HG40/DE/25/I
	113	63 dia	172	64	HG45/DE/25/I
	125	63 dia	172	64	HG50/DE/25/I
	100	76 dia	172	64	HG40/DE/30/I
	113	76 dia	172	64	HG45/DE/30/I
	125	76 dia	172	64	HG50/DE/30/I

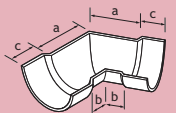
Running Outlet - with Double Spigot Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	100	63 dia	156	121	44	HG40/RO/25
	113	63 dia	156	121	44	HG45/RO/25
	125	63 dia	156	121	44	HG50/RO/25
	100	75 dia	156	121	44	HG40/RO/30
	113	75 dia	156	121	44	HG45/RO/30
	125	75 dia	156	121	44	HG50/RO/30
	150	75 dia	156	121	44	HG60/RO/30
	125	100 dia	156	121	44	HG50/RO/40
	150	100 dia	156	121	44	HG60/RO/40

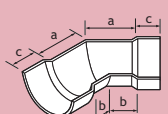
90° Angles Combined

	Gutter Size	Type	A	B	C	Product Code
	100	Internal/External	190	79	44	HG40/A/90
	113	Internal/External	200	79	44	HG45/A/90
	125	Internal/External	209	79	44	HG50/A/90
	150	Internal/External	235	79	44	HG60/A/90

120° Angles Combined

	Gutter Size	Type	A	B	C	Product Code
	100	Internal/External	124	79	44	HG40/A/120
	113	Internal/External	124	76	44	HG45/A/120
	125	Internal/External	136	79	44	HG50/A/120
	150	Internal/External	140	75	44	HG60/A/120

135° Angles Combined

	Gutter Size	Type	A	B	C	Product Code
	100	Internal/External	124	79	44	HG40/A/135
	113	Internal/External	124	76	44	HG45/A/135
	125	Internal/External	137	79	44	HG50/A/135
	150	Internal/External	128	75	44	HG60/A/135

Note: Products are available with an oxide primed coating or with a certified factory painted finish.

Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

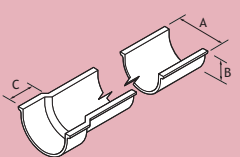
Apex Heritage - Beaded Half Round Gutters and Fittings



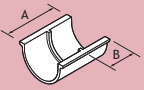
Apex Heritage Beaded Half Round socketed cast iron gutters, in 2 sizes, incorporate a pronounced feature bead on both lips. This adds character and definition to the gutter edge in a true sand cast product. Fittings and fixings are also available as illustrated.

Note: All dimensions shown are in mm unless shown otherwise.
Gutter sizes shown are nominal.

Gutters

	Gutter Size	Gutter Length	A	B	C	T	Weight (kg)	Product Code
	113 (4.5")	1830mm	114	57	44	4	11	BG45/6FT
	125 (5")	1830mm	127	63	44	4	12.5	BG50/6FT
Note: T = Thickness (nominal +/- 1mm)								

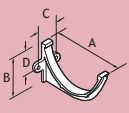
Union Clips

	Gutter Size	A	B	Product Code
	113	78	44	BG45/UC
	125	78	44	BG50/UC

Stop Ends

	Gutter Size	Type	A	Product Code
	113	External	51	BG45/SE/E
	125	"	51	BG50/SE/E
	113	Internal	45	BG45/SE/I
	125	"	45	BG50/SE/I

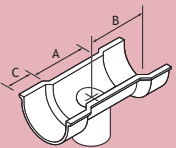
Fascia Brackets

	Gutter Size	A	B	C	D	Product Code
	113	155	97	25	75	BG45/FB/CI
	125	160	115	32	87	BG50/FB/CI

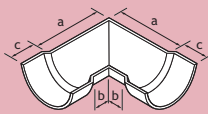
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Beaded Half Round Gutters and Fittings

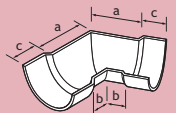
Running Outlet - with Double Spigot Socket

	Gutter Size	Pipe Size	A	B	C	Product Code
	113	63 dia	156	121	44	BG45/RO/25
	125	63 dia	156	121	44	BG50/RO/25
	113	75 dia	156	121	44	BG45/RO/30
	125	75 dia	156	121	44	BG50/RO/30
	125	100 dia	156	121	44	BG50/RO/40

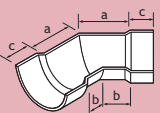
90° Angles Combined

	Gutter Size	Type	A	B	C	Product Code
	113	Internal/External	206	70	44	BG45/A/90
	125	Internal/External	116	70	44	BG50/A/90

120° Angles Combined

	Gutter Size	Type	A	B	C	Product Code
	113	Internal/External	130	76	44	BG45/A/120
	125	Internal/External	140	79	44	BG50/A/120

135° Angles Combined

	Gutter Size	Type	A	B	C	Product Code
	113	Internal/External	130	76	44	BG45/A/135
	125	Internal/External	140	79	44	BG50/A/135

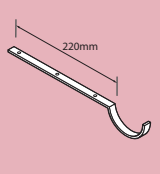
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Cast Iron Bracketry

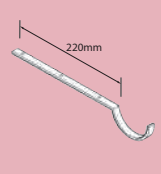
Alumasc can provide traditional style Bracketry for all its standard Apex Heritage gutter profiles. Where building detailing dictates, Alumasc can provide bespoke Bracketry to meet individual project requirements.

Traditional 'Old' Style Gutter Brackets

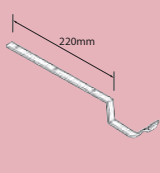
Top Fix Rafter Arm - Half Round

	Gutter Size	Product Code
	100	HG40/RB/TF
	113	HG45/RB/TF
	125	HG50/RB/TF
	150	HG60/RB/TF

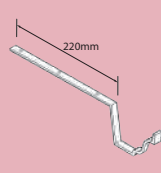
Top Fix Rafter Arm - Beaded Half Round

	Gutter Size	Product Code
	113	BG45/RB/TF
	125	BG50/RB/TF

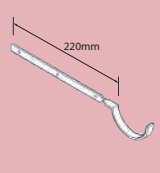
Top Fix Rafter Arm - Victorian Ogee

	Gutter Size	Product Code
	113	OG45/RB/TF
	125	OG50/RB/TF

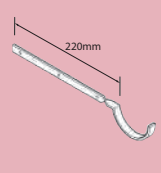
Top Fix Rafter Arm - Moulded

	Gutter Size	Product Code
	100 x 75	MG43/RB/TF
	125 x 100	MG54/RB/TF
	150 x 100	MG64/RB/TF

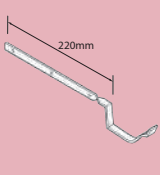
Side Fix Rafter Arm - Half Round

	Gutter Size	Product Code
	100	HG40/RB/SF
	113	HG45/RB/SF
	125	HG50/RB/SF
	152	HG60/RB/SF

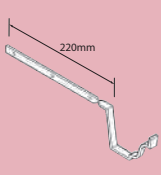
Side Fix Rafter Arm - Beaded Half Round/Deep Run

	Gutter Size	Product Code
	113	BG45/RB/SF
	125	BG50/RB/SF

Side Fix Rafter Arm - Victorian Ogee

	Gutter Size	Product Code
	113	OG45/RB/SF
	125	OG50/RB/SF

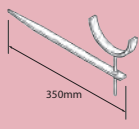
Side Fix Rafter Arm - Moulded

	Gutter Size	Product Code
	100 x 75	MG43/RB/SF
	125 x 100	MG54/RB/SF
	150 x 100	MG64/RB/SF

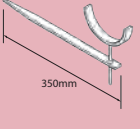
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Cast Iron Bracketry

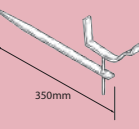
Drive in Rise & Fall - Half Round

	Gutter Size	Product Code
	100	HG40/R&F/GS
	113	HG45/R&F/GS
	125	HG50/R&F/GS
	150	HG60/R&F/GS

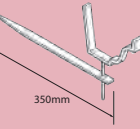
Drive in Rise & Fall - Beaded Half Round

	Gutter Size	Product Code
	113	BG45/R&F/GS
	125	BG50/R&F/GS

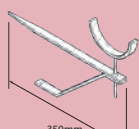
Drive in Rise & Fall - Victorian Ogee

	Gutter Size	Product Code
	113	OG45/R&F/GS
	125	OG50/R&F/GS

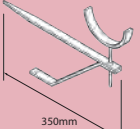
Drive in Rise & Fall - Moulded

	Gutter Size	Product Code
	100 x 75	MG43/R&F/GS
	125 x 100	MG54/R&F/GS
	150 x 100	MG64/R&F/GS

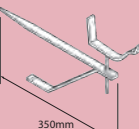
Drive in Rise & Fall with 330mm Stay - Half Round

	Gutter Size	Product Code
	100	HG40/R&F/WS
	113	HG45/R&F/WS
	125	HG50/R&F/WS
	150	HG60/R&F/WS

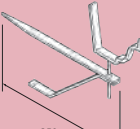
Drive in Rise & Fall with 330mm Stay - Beaded Half Round

	Gutter Size	Product Code
	113	BG45/R&F/WS
	125	BG50/R&F/WS

Drive in Rise & Fall with 330mm Stay - Victorian Ogee

	Gutter Size	Product Code
	113	OG45/R&F/WS
	125	OG50/R&F/WS

Drive in Rise & Fall with 330mm Stay - Moulded

	Gutter Size	Product Code
	100 x 75	MG43/R&F/WS
	125 x 100	MG54/R&F/WS
	150 x 100	MG64/R&F/WS



Bespoke Bracketry

Alumasc can design and manufacture a variety of Bracketry solutions for gutters and pipes to create an integrated system solution. Such detailing can often be used to support fascia and soffit configurations.

Ornate holderbats and earbells can be detailed to provide a unique, distinguished appearance to a rainwater stack.

Where standard fitting dimensions do not suit the project's requirements, Alumasc can fabricate its gutter and pipe Bracketry systems to accommodate building design.

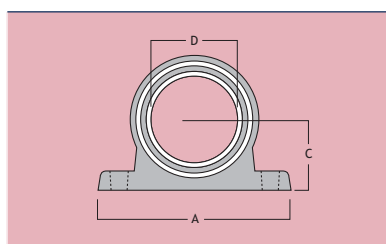
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Circular Pipes and Fittings

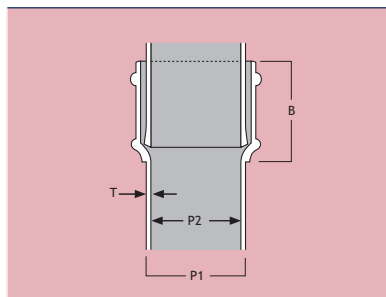


A range of traditional cast iron socketed round rainwater pipes in a choice of 3 pipe diameters and 2 pipe lengths. There is a comprehensive range of cast iron fittings, and traditional holderbat and earbelt fixings. Cast iron rainwater hopper heads are also available to suit.

Note: All dimensions shown are in mm unless shown otherwise.
Pipe sizes shown are nominal.



Sockets (Nominal)	63	75	100
A Width of flange	146	162	191
B Depth of socket	63.5	63.5	63.5
C Distance of centre to wall	48	54	67
D Internal dia	73	90	111



Pipes (Nominal)	63	75	100
P1 External dia	63.5	82.5	108
P2 Internal dia	57	70	95
T Thickness	3	3	3

Notes:

- If bends with ears are required, add one of the following suffixes to the Product Code according to its intended use:

- front bend /FE
- back bend /BE
- lefthand bend /LE
- righthand bend /RE

- If plinth offsets with ears are required, add suffix PE to the Product Code.

- Swan-necks can also be used as side offsets. If side offsets with ears are required, add one of the following suffixes to the Product Code according to its intended use:

- lefthand side offset /LE
- righthand side offset /RE

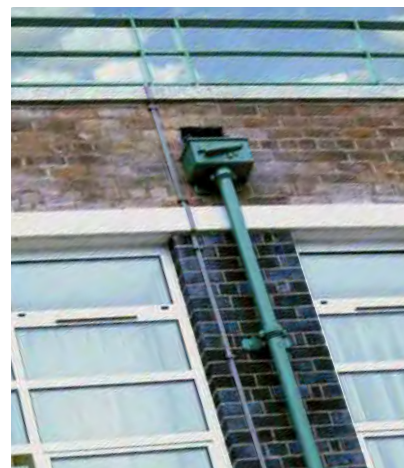
- Shoes can also be used as side shoes. If side shoes with ears are required, add one of the following suffixes to the Product Code according to its intended use:

- lefthand side shoe /LE
- righthand side shoe /RE

- If shoes with ears are required, add suffix E to the Product Code.

- If ears are required on single branches or diminishing pieces, please contact Alumasc Technical Services department for further details.

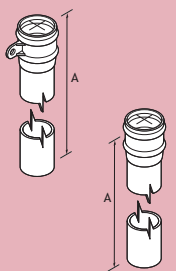
- Should projections other than those shown be required for plinth offsets or swan-necks, please contact Alumasc Technical Services for further details.



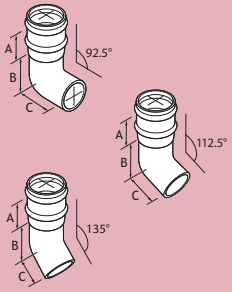
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Circular Pipes and Fittings

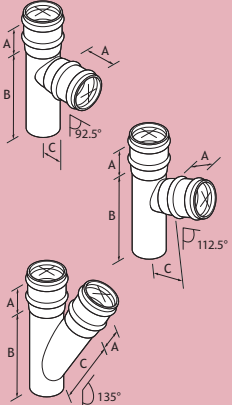
Pipes - With and Without Ears

	Pipe Size	A	Product Code
	63 dia	915	P25/3FT
	75 dia	915	P30/3FT
	100 dia	915	P40/3FT
	63 dia	1830	P25/6FT
	75 dia	1830	P30/6FT
	100 dia	1830	P40/6FT
Note: The codes given above are for pipes with ears. For pipes without ears suffix codes with /NE			

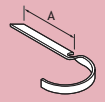
Bends

	Pipe Size	Bend	A	B	C	Product Code
	63 dia	92.5 Degree	63	76	140	P25/B/92
	75 dia	"	63	83	146	P30/B/92
	100 dia	"	63	95	159	P40/B/92
	63 dia	112.5 Degree	63	57	121	P25/B/112
	75 dia	"	63	60	124	P30/B/112
	100 dia	"	63	70	133	P40/B/112
	63 dia	135 Degree	63	44	108	P25/B/135
	75 dia	"	63	48	111	P30/B/135
	100 dia	"	63	51	114	P40/B/135
Note: If bends with ears are required, add one of the following suffixes to the Product Code: Front Bend /FE Back Bend /BE Left Hand Bend /LE Right Hand Bend /RE.						

Branches

	Pipe Size	Branches	A	B	C	Product Code
	63 dia	92.5 Degree	63	210	79	P25/BR/92
	75 dia	"	63	229	79	P30/BR/92
	100 dia	"	63	267	98	P40/BR/92
	63 dia	112.5 Degree	63	210	79	P25/BR/112
	75 dia	"	63	229	89	P30/BR/112
	100 dia	"	63	267	108	P40/BR/112
	63 dia	135 Degree	63	210	108	P25/BR/135
	75 dia	"	63	229	124	P30/BR/135
	100 dia	"	63	267	152	P40/BR/135
Note: If ears are required on single branches contact Alumasc Technical Services.						

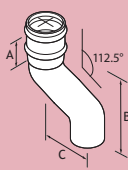
Drive in Pipe Support

	Pipe Size	A	Product Code
	63 dia	300	P25/HF
	75 dia	300	P30/HF
	100 dia	300	P40/HF

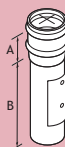
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Circular Pipes and Fittings

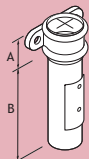
Side Offsets, Plinth Offsets and Swan Necks

	Pipe Size	Branches	A	B	C	Product Code
	63 dia	112.5 Degree	63	190	76	P25/OF/03
	63 dia	"	63	210	114	P25/OF/04
	63 dia	"	63	225	152	P25/OF/06
	63 dia	"	63	257	229	P25/OF/09
	63 dia	"	63	289	306	P25/OF/12
	63 dia	"	63	321	381	P25/OF/15
	63 dia	"	63	352	457	P25/OF/18
	75 dia	112.5 Degree	63	200	76	P30/OF/03
	75 dia	"	63	216	114	P30/OF/04
	75 dia	"	63	232	152	P30/OF/06
	75 dia	"	63	264	229	P30/OF/09
	75 dia	"	63	295	306	P30/OF/12
	75 dia	"	63	327	381	P30/OF/15
	75 dia	"	63	359	457	P30/OF/18
	100 dia	112.5 Degree	63	219	76	P40/OF/03
	100 dia	"	63	235	114	P40/OF/04
	100 dia	"	63	248	152	P40/OF/06
	100 dia	"	63	279	229	P40/OF/09
	100 dia	"	63	311	306	P40/OF/12
	100 dia	"	63	343	381	P40/OF/15
	100 dia	"	63	375	457	P40/OF/18
Note: If offsets with ears are required, add one of the following suffixes to the Product Code: Left Hand Side Offset /LE Right Hand Side Offset /RE. Other sizes are available on request.						

Access Pipes - Without Ears

	Pipe Size	A	B	Product Code
	63 dia	63	343	P25/AP/NE
	75 dia	63	343	P30/AP/NE
	100 dia	63	343	P40/AP/NE

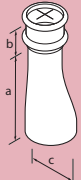
Access Pipes - With Ears

	Pipe Size	A	B	Product Code
	63 dia	63	343	P25/AP
	75 dia	63	343	P30/AP
	100 dia	63	343	P40/AP

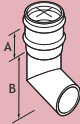
Note: Products are available with an oxide primed coating or with a certified factory painted finish.
 Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Apex Heritage - Circular Pipes and Fittings

Diminishing Pieces

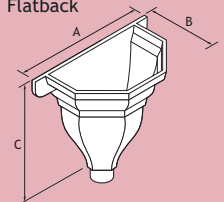
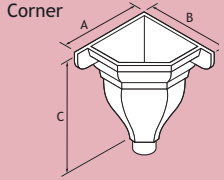
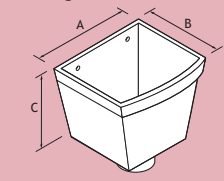
	Pipe Size	A	B	C	Product Code
	100 dia	140	63	63	P40/DIM/25
	100 dia	140	63	76	P40/DIM/30

Shoes

	Pipe Size	Type	A	B	C	Product Code
	63 dia	Regular	63	102	-	P25/SH
	75 dia	"	63	114	-	P35/SH
	100 dia	"	63	143	-	P40/SH
	63 dia	Anti-splash	63	159	149	P25/SH/A
	75 dia	"	63	175	171	P35/SH/A
	100 dia	"	63	197	206	P40/SH/A

Note: If shoes are required add /E to the Product Code.
Shoes used as side shoes for a left hand side shoe with ears add /LE. For a right hand side shoe add /RE.

Rainwater Heads

  	Pipe Size	Type	A	B	C	Product Code
	63 dia	Flatback	298	190	210	HH/001/25F
	75 dia	"	298	190	210	HH/001/30F
	100 dia	"	337	229	241	HH/001/40F
	63 dia	Corner	210	210	210	HH/001/25C
	75 dia	"	210	210	210	HH/001/30C
	100 dia	"	235	235	241	HH/001/40C
	63 dia	Small Rectangular	254	178	178	HH/002/25
	75 dia	"	254	178	178	HH/002/30
	100 dia	"	254	178	178	HH/002/40
	63 dia	Large Rectangular	305	250	250	HH/003/25
	75 dia	"	305	250	250	HH/003/30
	100 dia	"	305	254	203	HH/003/40

Note: Products are available with an oxide primed coating or with a certified factory painted finish.
Product Codes in the tables refer to primed products. For Painted products add the suffix /PA to the Product Code reference.

Alumasc Rainwater Systems Cast Iron Range Installation Procedures

Preparatory requirements and installation
methods for the
Apex Heritage gutter and pipe system.

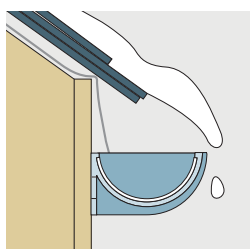


Cast Iron Rainwater Installation - Introduction

For safe and satisfactory installation of Alumasc rainwater systems, the following good practice guidelines should be reviewed before installation commences. Where unusual or special conditions arise contact Alumasc Technical Services for assistance.

General Preparation and Good Practice

Securely fixed fascia boards must be painted and capable of supporting a fully loaded gutter. Check fascia for straightness and whether shims will be necessary to align brackets without creating stress at gutter joints. Where fascia boards are not being used Alumasc provide top and side fix rafter arm brackets as well as masonry drive-in brackets.



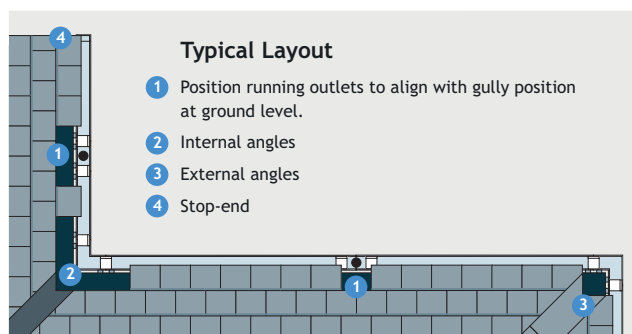
Fix brackets so as to position the gutter centrally and as close below the roof edge as possible, taking into consideration locality and roof slope finish.

If there is a risk of sliding snow, adjust the bracket positions to prevent snow hitting the front of the gutter. Extra fixings, brackets and snowboards should be considered where appropriate.

Where high winds are expected, a small bead of sealant must be applied between gutter and brackets a flexible adhesive. An occasional screw, fixed through a slot in the back of the gutter and into the fascia may be preferred, at a minimum of two per length.

Alumasc advise that the designer and contractor satisfy themselves that the application is suitable.

Setting Out



After setting out angles and outlets, fit gutters and brackets according to installation procedures for the specific rainwater system being used, as detailed in this brochure.

Cutting and Drilling

Cast iron can be cut and drilled on site with regular metalworking tools. Pencil cut lines and apply masking tape either side of cut line to protect against accidental saw damage.

Testing

Allow sufficient time for sealant joints to fully cure. Check all bracket and gutter fixings are secure and plug outlets. Fill up to overflow level (but not beyond). Allow 5 minutes before inspecting all joints for leaks.

Health and Safety

Always refer to current Health and Safety legislation, safe systems of work and the relevant material safety data sheets.

Factory-primed System Components

Alumasc supplies cast iron products factory primed with one coat of protective red oxide primer. This primer will give protection against corrosion during transportation and short-term undercover storage, and will provide a suitable surface for final painting. On-site handling and painting are the responsibility of the contractor, and particular environmental considerations should be taken into account when choosing the paint system for final finishing.

Further Protection on Site

Alumasc recommends that on site a further priming coat be applied, followed by 1 undercoat and 2 gloss coats of an alkyd paint system. All individual elements should receive the first of the gloss coats before fixing, and finished with the final gloss coat after the installation is complete. All exposed surfaces must be treated in this way. It is advisable to take the paint finish inside collars and within the ends of rainwater pipes to avoid the possibility of rust staining.

Care & Maintenance, Storage & Handling

Routine Inspection

Regularly clean out rainwater heads and gutters and ensure that downpipes are clear at all times. Check that joints and fixings are secure by periodic inspection, not less than twice a year, and preferably at the beginning of Autumn and again at the end of Winter. When inspecting an installation, even when well fixed, ladders should not be rested against the gutters.

Repainting

The final paint finish on factory-primed cast iron must be maintained to give the longest service life. A well applied paint system might be expected to last from 5 to 7 years on cast iron without further attention. Regular inspection is recommended.

It is recommended that pre-finished cast iron is maintained as above. It is important that any installation damage to the coating is repaired with the appropriate touch-up paint. Any cut pieces exposing bare metal must be coated with primer and top coat.

Other Maintenance Operations

When cleaning adjacent surfaces, cast iron should be protected against all acids and concentrated alkalis.

Storage and Handling

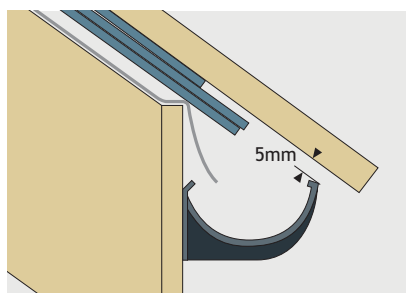
Pre-finished coated rainwater gutters and pipes must be handled with care to prevent scratches and dents. Materials should be stored on a level surface or racking, preferably under secure cover. Uneven fading or water marks on coated and mill finish surfaces may occur if water enters protective packing or goods are stored exposed to sunlight.

Primed goods will have manufacturing blemishes such as grinding and fettling marks, welding will be visible on fabricated items. It is recommended primed material is painted on-site.

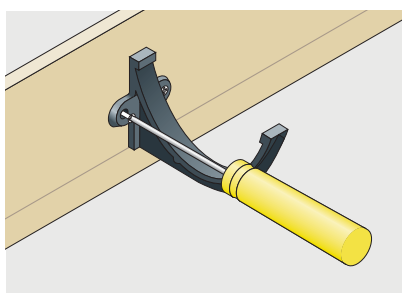
Store seals and sealants under cover and make secure and separate provision for solvents. Dispose of packing materials responsibly.

Installation - Apex Heritage Gutters

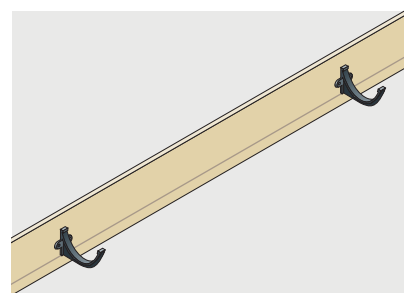
Apex Heritage gutters are available in a choice of four profiles with a range of brackets to accommodate all types of eaves condition. Each profile range can be connected to cast iron pipework systems in either round, square or rectangular. Assembly and installation of each profile range must be considered individually, although general aspects of preparation are common to them all as shown below.



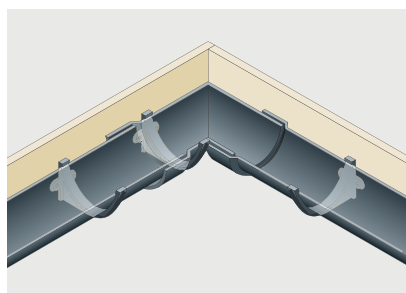
1. Using a straight edge or ruler, shim gutter brackets with 5mm clearance so that the last roof tile or slate will align with the mid point of the gutter.



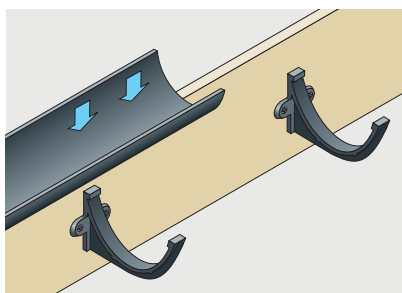
2. Generally, position brackets at 915mm centres allowing additional brackets on either side of where gutter joints will occur.



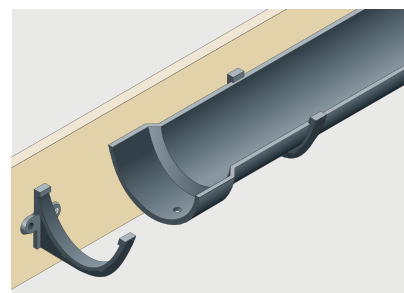
3. Use a string line to set out brackets to a fall of 1:600 to 1:350 (max) or if not possible, level.



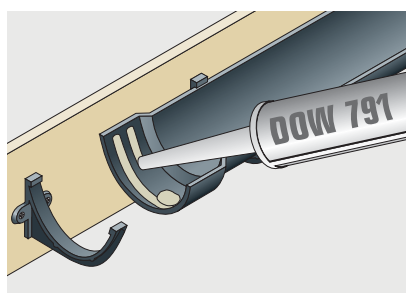
4. Plumb line outlets with gullies at ground level. Position angles, allowing an additional bracket adjacent to the joint with the gutter length.



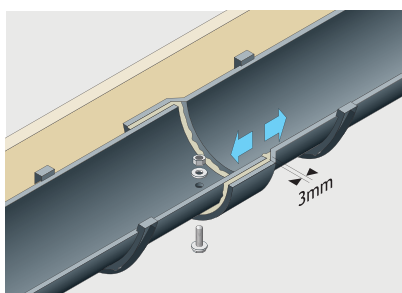
5. Lower the gutter onto the brackets ensuring sufficient clearance for the gutter joint. Clip gutter into bracket.



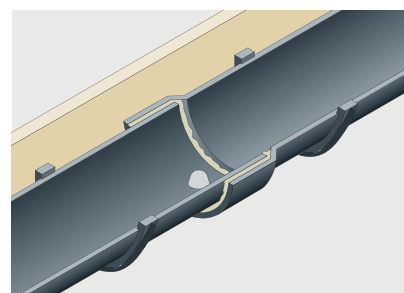
6. Cast gutters overlap at the joint with a spigot and socket. Thoroughly clean and degrease the ends that must be jointed.



7. Apply two 6mm beads of DOW 791 silicone sealant either side of, and around the fixing hole.



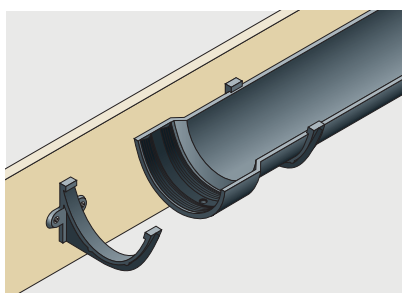
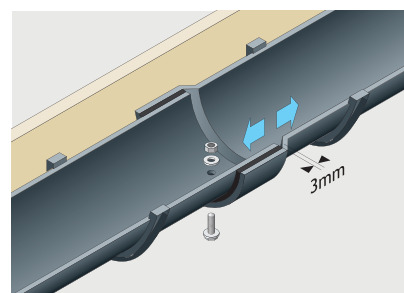
8. Insert the spigot end of the gutter allowing a 3mm expansion gap. Secure joint using bright zinc plated, mild steel M6 x 25mm nut, bolt and washer provided. (Bolt head preferably to underside).



9. Finally, cone-off the exposed bolt stud and nut inside the gutter with a generous application of silicone sealant. Tool off excess silicone around the joint and from external surfaces.

Hydrostrip Alternative Sealing Method

For half round gutters only (nominal sizes 100, 115 and 125mm – 150mm), the unique Alumasc Hydrostrip system is recommended. The Hydrostrip system comprises preformed rubber seals that are quick and easy to install, and totally reliable. Hydrostrip offers a faster and cleaner solution to gutter jointing than traditional mastic jointing sealants.

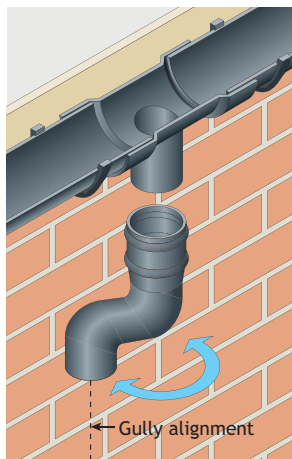


Installation - Apex Heritage Rainwater Pipes

Apex Heritage traditional rainwater pipes have cast pipe sockets either with ears for wall fixing or without for use with holderbats. Installation is generally from the eaves downward.

Saw cuts must be square and free from dents and burrs. A light application of silicone sealant must be applied to both surfaces to ensure a waterproof seal.

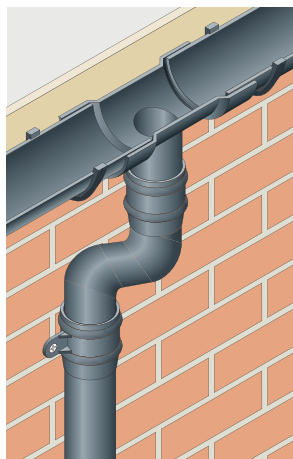
Pipe Alignment



Where square or rectangular pipes are being installed and offsets are required, alignment between the gutter outlet and gully must be exact.

Round pipe systems are more flexible to install and offsets can be adjusted and “swung” into alignment with the gully position.

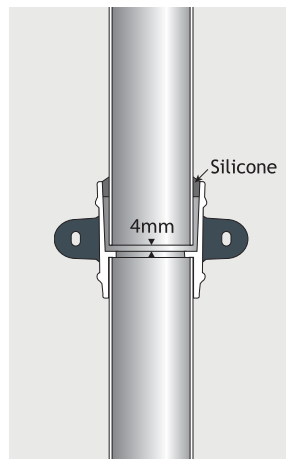
Outlets and Offsets



Commence installation from the gutter outlet by fitting offsets.

Check vertical plumb line positioning and seal spigot and socket joints using DOW 791 silicone sealant.

Pipe Jointing and Fixing



Seal with DOW 791 silicone sealant.

Fix to wall at 2m centres using No12 x 50mm screws. Eared sockets have elongated fixing holes to permit the use of pipe nails.

Tools Required

- String or plumb line
- Tape measure
- Drill
- File
- Masonry bit
- Wall fixing (e.g raw plug)
- Cleaning rags
- Marker pen
- Solvent cleaner
- Posi and plain screwdriver
- Paintbrush
- Hacksaw
- Masking tape
- Mastic gun
- Spirit level
- Protective gloves
- Adjustable spanner

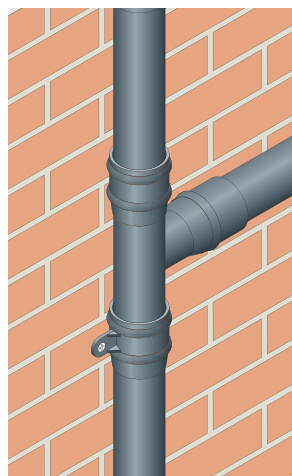
General Installation Sequence

- Complete installation of gutters; alternatively, locate rainwater heads
- Position offsets, bends and branches
- Fit pipes and brackets
- Fit plinth offsets
- Fit access doors and shoes

Sealant

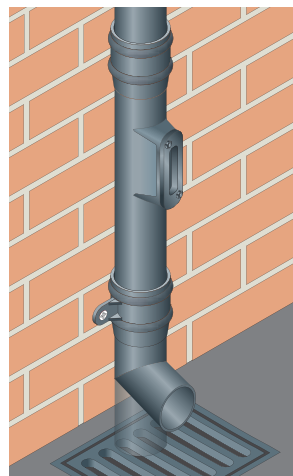
For durable all weather seals and best results, Alumasc recommend the use of DOW 791 silicone sealant.

Bends and Branches



Bends and branches are secured into the pipe socket.

Shoes and Access Pipes

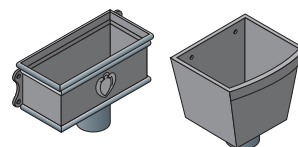


At ground level rainwater pipes can terminate with a shoe for free discharge over a gully or be directly connected into the gully.

In the case of direct connections it is recommended that an access pipe fitting is included within 750mm of ground level.

Rainwater Heads

Fix to masonry through external lugs or preformed holes in back.



Alumasc Rainwater Systems Cast Iron Range Supplementary Information

Essential background information to ensure that an appropriate
and correct cast iron rainwater system is installed.

Accessories

Touch Up Paint

RAL Code	Description	Size	Product Code
	RAL 3009 Oxide Red	125ml	TUPCI/RAL3009/125
	RAL 3020 Traffic Red	125ml	TUPCI/RAL3020/125
	RAL 5010 Flower Blue	125ml	TUPCI/RAL5010/125
	RAL 6005 Moss Green	125ml	TUPCI/RAL6005/125
	RAL 7016 Anthracite Grey	125ml	TUPCI/RAL7016/125
	RAL 8015 Chestnut Brown	125ml	TUPCI/RAL8015/125
	RAL 9005 Black	125ml	TUPCI/RAL9005/125
	RAL 9016 White	125ml	TUPCI/RAL9016/125

Note: The colours reproduced on this page are for general guidance only.

Hydrostrip Sealing System

The Hydrostrip system comprises preformed rubber sealing strips that are quick and easy to install.

Hydrostrip is supplied complete with screws, nuts and installation instructions in kits containing 20 jointing sets. Hydrostrip is not suited for use with Beaded Half Round gutters.

With Hydrostrip, joints can be made in damp conditions and can be overpainted immediately.

For half round gutters only.



Silicone Sealant

	Type	Colour	Size	Product Code
	Dow Corning 797	White	310ml Cartridge	SS991558
	Dow Corning 797	Grey	310ml Cartridge	SS991559
	Dow Corning 797	Bronze	310ml Cartridge	SS991560
	Dow Corning 797	Black	310ml Cartridge	SS991561
	Dow Corning 797	Limestone	310ml Cartridge	SS991562

Fixings

	Type	Size	Notes	Product Code
	Nut/Bolt/Washer	M6 x 25mm	Bright zinc plated mild steel	NBW 630310
	3" Pipe Nail	M8 x 75mm	Bright zinc plated mild steel	NAIL30
	4" Pipe Nail	M8 x 100mm	Bright zinc plated mild steel	NAIL40
	3" Coach Screw	M8 x 75mm	Hardened steel zinc plated	COACH30
	4" Coach Screw	M8 x 100mm	Hardened steel zinc plated	COACH40
	Coach Screw Cap	M8 dia	Black plastic	COACHCAP
	Countersunk woodscrew	No.12 x 1.5"	To fix rafter arms to GX Brackets	ZNBW969041
	Roundhead woodscrew	No.12 x 1.5" with Washer	To fix Apex Heritage Fascia Brackets or for 'direct fix' Gutter range	NBW 630362
	Roundhead woodscrew	No.12 x 2" with Washer	To fix pipe sockets with ears or pipe clips	NBW 630361

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.

The Alumasc Rainwater Drainage Design Service

Alumasc Technical Services use dedicated design software 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.

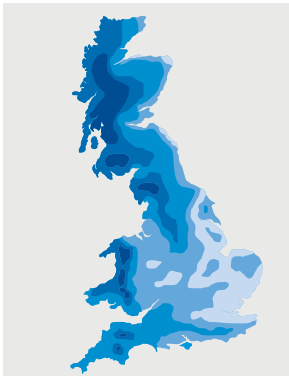
The gutter flow software automatically checks the capacity of downpipes used and suggests the minimum size to which downpipes can be sized. Contact Alumasc for further information.

Sizing of Gutters and Downpipes

The level of rainfall a given roof drainage system should 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 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.

Step 1

Geographical Location and Rainfall Intensity Maps

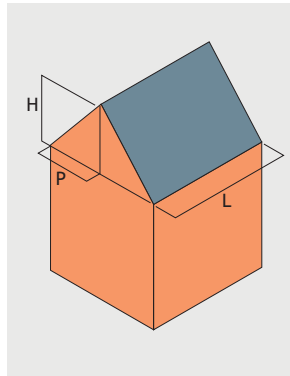


BS EN 12056-3: 2000 contains maps showing rainfall intensity in litres/second per m² for 1, 5, 50 and 500 year storms of 2 minute duration.

(All external gutters designed for 1 year event).

Step 2

Calculating Catchment Area



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

CA = Catchment area in square metres

P = Horizontal distance between eaves and ridge

H = Height of roof

L = Length of eaves

Calculation Criteria

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

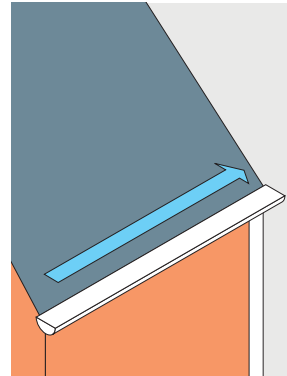
- Catchment area
- Local rainfall intensity
- Building life and safety factor
- Size and flow rate of gutters
- Frequency and size of outlets and downpipes

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 3

Frequency and Positioning of Outlets/Downpipes



Calculate the number of outlets per run.

Step 4

Calculate Flow Requirements

Overall Rainfall

$$\text{Catchment Area (CA)} \times \text{Rainfall Intensity (RI)} = \text{Overall Rainfall (OR)}$$

Flow Rate Per Outlet

$$\text{Overall Rainfall (OR)} \div \text{Number of Outlets} = \text{Flow Rate Per Outlet}$$

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's new Drainage Design Calculators are available as a download from the Alumasc Rainwater website.

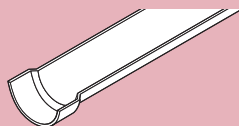
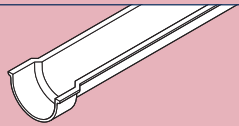
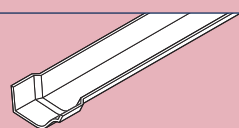
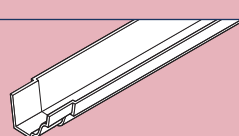
www.alumascrainwater.co.uk

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.

Rainwater Gutter Flow Rates (l/s)

Rainwater Gutter Flow Rates (l/s)			Pipe outlet Diameter (mm)			Pipe outlet size (mm)		
	Profile	Size (mm)	63	75	100	75 x 75	100 x 75	100 x 100
	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

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.

NBS Specification

A typical NBS Specification for Alumasc cast iron gutters and downpipes is provided below. A full range of NBS specifications are available via Alumasc's online NBS Specification Builder at www.alumascrainwater.co.uk. For project specific specification advice, contact Alumasc Technical Services.

NBSPlus

R10 Rainwater Drainage Systems

GENERAL

- Gravity Rainwater Drainage System.
- Rainwater outlets, gutters, pipework and accessories as per detail sections below.

SYSTEM PERFORMANCE

- Design Standard: To BS EN 12056-3:2000, clauses 3-7 and National Annexes.
- Collection and Distribution of Rainwater: Complete, and without leakage or noise nuisance.
- Design Parameters: Design rate of rainfall as per BS EN 12056-3:2000, National Annex NB.2 - Category 1

PRODUCTS (TYPICAL SPECIFICATION)

APEX HERITAGE CAST IRON HALF ROUND BEADED GUTTER (113mm)

315 APEX HERITAGE CAST IRON GUTTERS

Gutters and fittings to: BS 8530 (formerly BS 2997)
Manufacturer: Alumasc Exterior Building Products Ltd
White House Works, Bold Road, Sutton, St Helens, Merseyside WA9 4JG.
Tel: 01744 648400, Fax: 01744 648401, Email: info@alumasc-exterior.co.uk

Reference: Apex Heritage cast iron rainwater system
Profile: Half Round Beaded
Size: 113mm
Outlet Size: 75mm
Type/grade: Made from LM2 and LM6 grades of Aluminium alloy to BSEN1559:1997, BSEN 1676:1997 and BSEN 1706:1998
Finish: Painted Finish
Colour: RAL 3020 233 Traffic Red

Jointing: Gutter lengths or fittings are overlapped at the joint with a spigot and socket. Slots are provided for fixing using M6 mushroom head aluminium screws with nuts and washers. Seal evenly across the joints with Dow Corning 791.

Fixing: Fascia bracket fixed at 915mm centres and at each fitting using number 12x38mm round head twin thread screws and washers bright zinc plated.

PRODUCTS (TYPICAL SPECIFICATION)

APEX HERITAGE CAST IRON DOWNPIPE (75mm diameter)

380 APEX HERITAGE CAST IRON PIPEWORK FOR EXTERNAL USE:

Pipes, fittings and accessories to: BS 2997
Manufacturer: As above

Reference: Apex Heritage cast iron downpipe system
Size: 75mm diameter
Type/grade: 6063 TF alloy
Finish: Painted Finish
Colour: RAL 3020 233 Traffic Red

Fixing: Pipe clip fixed at maximum 2.0m centres. Plug and screw to wall with number 12 x 50mm round head twin thread screws and washers bright zinc plated to BS 1706:1960 Class ZN3. Seal internal spigot joints with Dow Corning 791 silicone sealant allowing for a 3-4 mm vertical thermal movement gap.

Accessories: Bends, Branches, Access Pipes, Offsets, Shoes, Rainwater Heads, Pipe Clips



NBS Specification Builder	
Select System	Cast Iron Rainwater Systems
Product Type	Apex Heritage Gutters & Downpipes
Gutter Profile	Half Round Beaded
Gutter Size (mm)	113
Downpipe Size (mm) (Flow rate in l/s)	75 (1.62 l/s)
Material Finish	Painted Finish
Colour	RAL 3020 233 Traffic Red

Create Alumasc Rainwater System NBS specifications by selecting the required product range, profile, size and finish by visiting:

www.alumascrainwater.co.uk

General Specification Advice

General specification clauses for aluminium 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 galvanized 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, sherardized, galvanized 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 gutter.

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 50 mm below the roof.
- 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 appliances.
- 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 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.

905 INTERNAL PIPEWORK TEST - ENGLAND, WALES AND NORTHERN IRELAND:

- Temporarily seal open ends of pipework with plugs.
- Connect a 'U' tube water gauge and air pump to the pipework via a plug.
- Pump air into pipework until gauge registers 38 mm.
- Allow a period for temperature stabilization, after which the pressure of 38 mm 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:

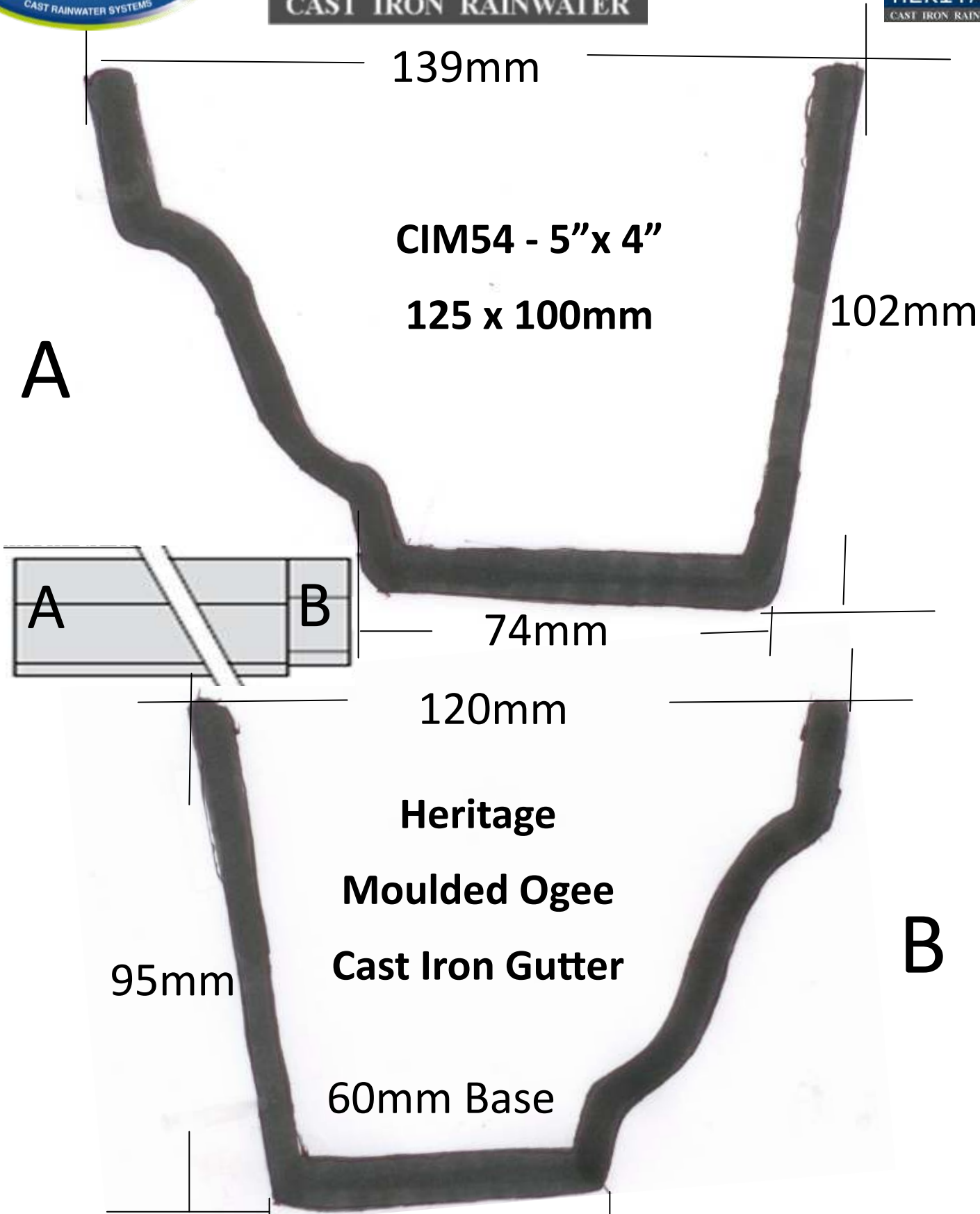
- Block all outlets, fill gutters to overflow level and after 5 minutes closely inspect for leakage.

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.

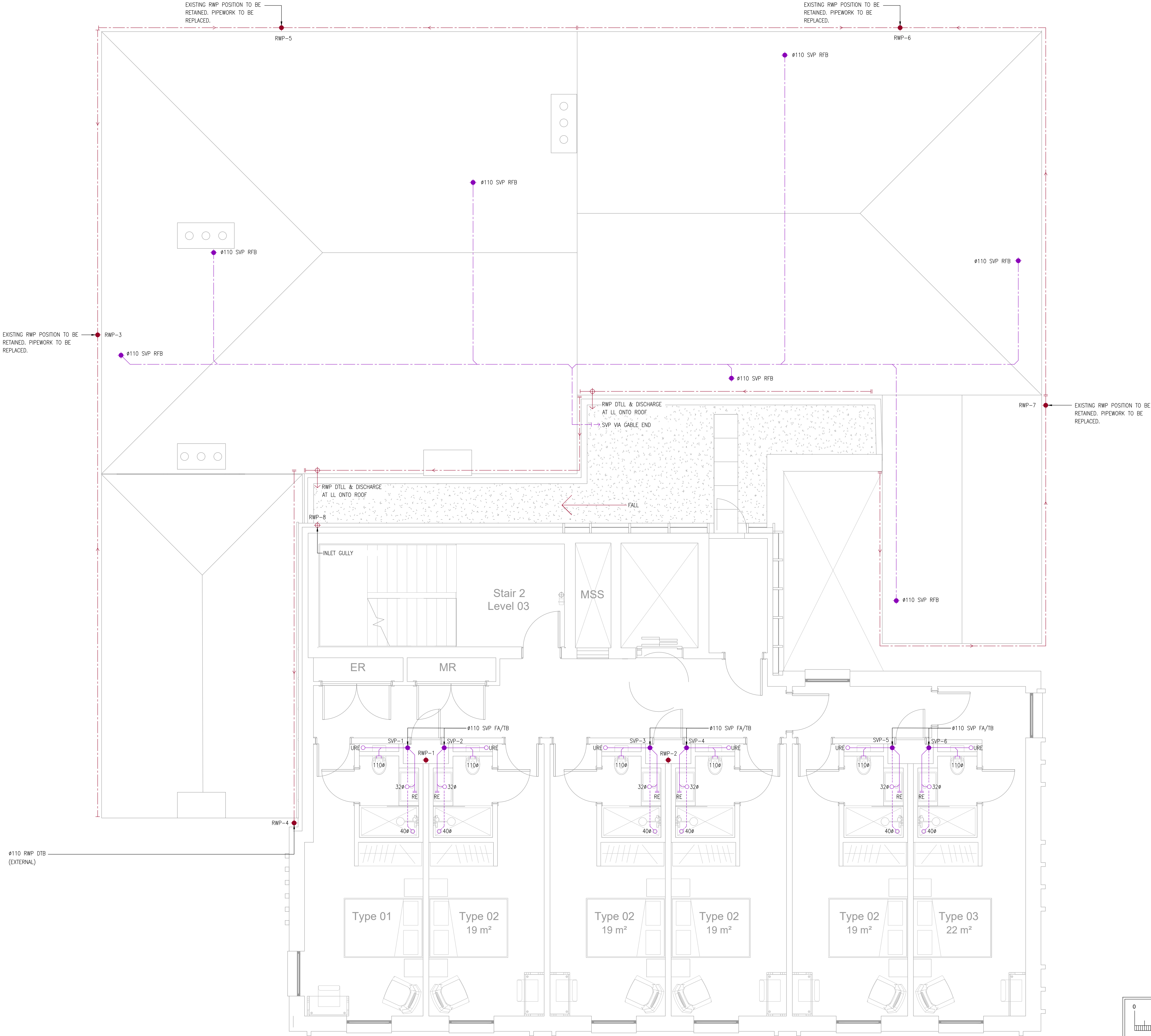
920 IMMEDIATELY BEFORE HANDOVER:

- 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.



Although all effort has been made to ensure this profile is accurate, we cannot guarantee that once printed, this will fully represent The exact measurements of the product, this is due to printers and other computer equipment enlarging or reducing this image.





- Ⓒ PROTECTED BY UK COPYRIGHT LAW
DO NOT SCALE OFF THIS DRAWING
- DESIGNERS RISK ASSESSMENT
Under section 11, 18 - Construction (Design and Management) Regulations 2015
- SAFETY, HEALTH & ENVIRONMENTAL INFORMATION
There are no significant, unusual or location specific risks which are not obvious to a competent contractor or likely to be difficult to manage
- NOTES
1.

ALL EQUIPMENT AND THE INSTALLATION SHALL COMPLY WITH BS EN 12056.
2.

ALL WC OVERFLOW SHALL BE INTEGRAL i.e. OVERFLOW INTO PAN.
3.

ALL CONNECTIONS FROM SINKS, WHBs AND URINALS SHALL BE VIA 75mm DEEP TRAP.
4.

WCs SHALL CONNECT TO HEADERS VIA SWEPT TEES.
5.

OVAL ACCESS POINTS SHALL BE INSTALLED AT LOW LEVEL ON SOIL VENT PIPES ABOVE LOWEST FLOOD LEVEL.
6.

ALL HORIZONTAL PIPEWORK AND BRANCHES SHALL BE PVC TO BS4545 14/5255 SOLVENT WELDED.
7.

ALL VENTING MUST EITHER BE TO ATMOSPHERE OR BY THE USE OF AAVs SUBJECT TO BUILDING CONTROL APPROVAL.
8.

CROSSFLOW MUST BE PREVENTED AT BRANCH CONNECTIONS.
9.

PENETRATION BY SANITARY PIPEWORK MUST BE SUITABLY FIRE STOPPED TO PROVIDE COMPARTMENTATION, AS BUILDING REGULATIONS 1991 (PART B 3(2)) SCHEDULE 1 FIREBRAKE INTUMESCENT SLEEVE OR SIMILAR MUST MEET THE HIGHEST FIRE STOPPING REQUIREMENT TO BUILDING CONTROL.
10.

PIPES MUST BE ADEQUATELY SUPPORTED WHEN INSTALLED BOTH VERTICALLY AND HORIZONTALLY TO FALLS.
11.

UNDER NO CIRCUMSTANCES SHOULD PIPES OF A LARGE DIAMETER BE CONNECTED TO A PIPE OF A SMALLER DIAMETER IN THE DIRECTION OF FLOW.
12.

THE CORRECT ADAPTORS AND COUPLINGS MUST BE UTILISED WHERE DISSIMILAR PIPE MATERIALS MEET.
13.

SANITATION PIPEWORK MUST COMPLY WITH PART H OF BUILDING REGULATIONS

ABOVE GROUND DRAINAGE LEGEND	
SYMBOL	REFERENCE
	WASTE PIPEWORK IN CEILING VOID
	WASTE PIPEWORK AT HIGH LEVEL
	WASTE PIPEWORK AT LOW LEVEL
	WASTE PIPEWORK UNDER FLOOR
	PIPE VERTICAL FALL/RISE
	PIPE BREAK/CONTINUATION
	DRAINAGE STACK
	FLOOR GULLY
	RODDING EYE/ACCESS POINT
	DRAINAGE CONNECTION FROM SINK/WHB/BATH/ETC
	DRAINAGE CONNECTION FROM WC
	DIRECTION OF FLOW & GRADIENT

-	P01	PRELIMINARY ISSUE	CF	BD	13.01.23
STA	REV	DESCRIPTION	DES	CHD	DATE

PURPOSE OF ISSUE

PRELIMINARY ISSUE

NOVO

Integration Ltd

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West Yorkshire, LS18 4TJ
t: +44(0)113 2577300 e: novocad@novo.eu.com

CLIENT

DOMIS

PROJECT

LIVERPOOL ROAD
MANCHESTER

TITLE

MECHANICAL SERVICES
ABOVE GROUND DRAINAGE
THIRD FLOOR

SCALE	1:50	ORIGINAL SIZE	A1	DATE	JAN '23
DRAWN	CF	DESIGNED	CF	CHECKED	BD

PROJECT | ORIGINATOR | ZONE | LEVEL | TYPE | ROLE | CLASS | NUMBER

P1824-NOV-XX-03-DR-M-5201

REVISION

P01

ABOVE GROUND DRAINAGE





