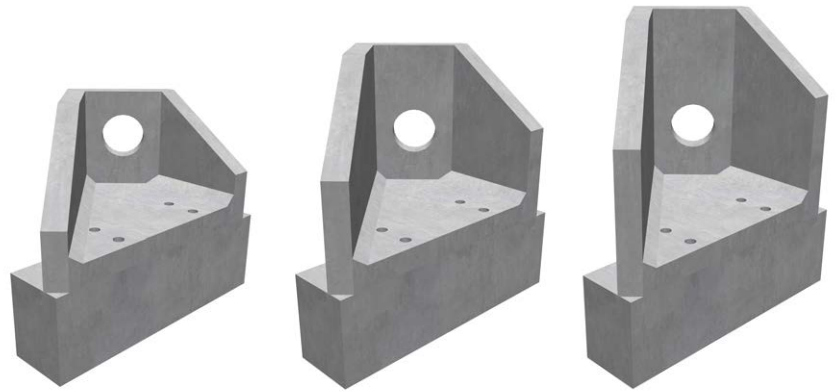


AH4C LH Headwall Range

Up to 300mm Pipework
600mm - 950mm Backwall Height

The AH4C Headwall is a two part Pcc Headwall that allows water to discharge at a 45 Deg. angle, the Environment Agency's preferred method when discharging into a watercourse. The AH4C headwall fully meets the Environment Agency's 'Standard rules SR2015 No 27 – Constructing an outfall pipe of 300mm diameter through a headwall into a main river' & Exempt flood risk activities: environmental permits section FRA12 'Outfall pipes less than 300mm diameter through a headwall'.

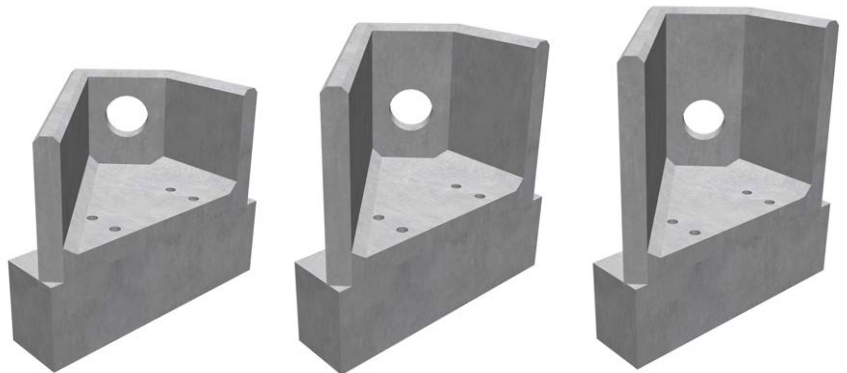
The AH4C is available with three different back wall heights and three different toe depths for Twin Wall or Clay Pipes up to & including 300mm ID. Having a separate toe makes it easier to handle and more importantly ensures the foundation around the toe and beneath the Headwall structure can be well compacted.



AH4CA LH
600mm Backwall

AH4CB LH
800mm Backwall

AH4CC LH
950mm Backwall

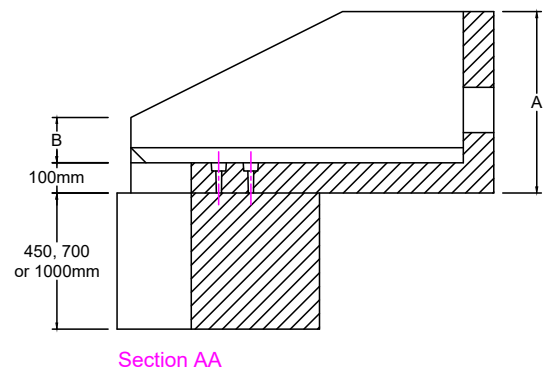
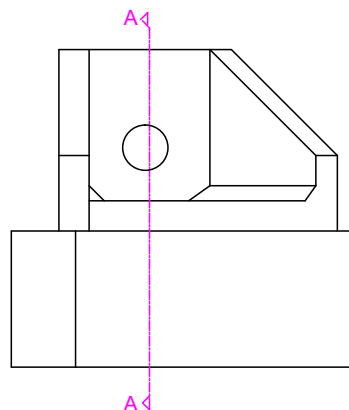
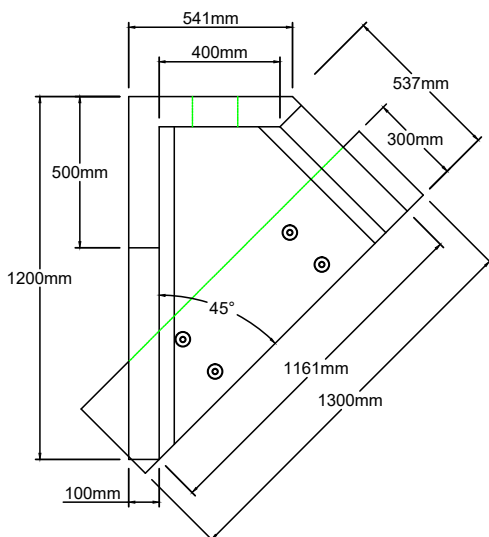


AH4CD LH
600mm Backwall

AH4CE LH
800mm Backwall

AH4CF LH
950mm Backwall

Headwall	Max Pipe Opening Plastic/Clay	A	B	Approx Weight kg	Weight with toe kg		
					450mm	700mm	1000mm
AH4CA LH	300	600	150	375	795	1030	1310
AH4CB LH	300	800	350	475	895	1130	1410
AH4CC LH	300	950	500	550	970	1205	1485
AH4CD LH	300	600	500	428	795	1030	1310
AH4CE LH	300	800	700	530	895	1130	1410
AH4CF LH	300	950	850	608	970	1205	1485

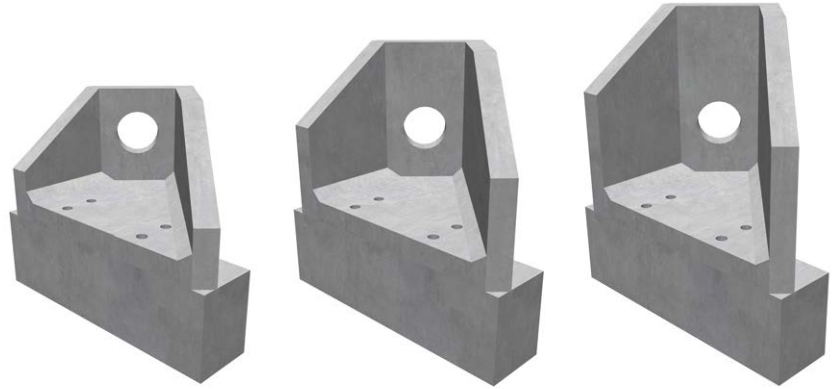


AH4C RH Headwall Range

Up to 300mm Pipework
600mm - 950mm Backwall Height

The AH4C Headwall is a two part Pcc Headwall that allows water to discharge at a 45 Deg. angle, the Environment Agency's preferred method when discharging into a watercourse. The AH4C headwall fully meets the Environment Agency's 'Standard rules SR2015 No 27 – Constructing an outfall pipe of 300mm diameter through a headwall into a main river' & Exempt flood risk activities: environmental permits section FRA12 'Outfall pipes less than 300mm diameter through a headwall'.

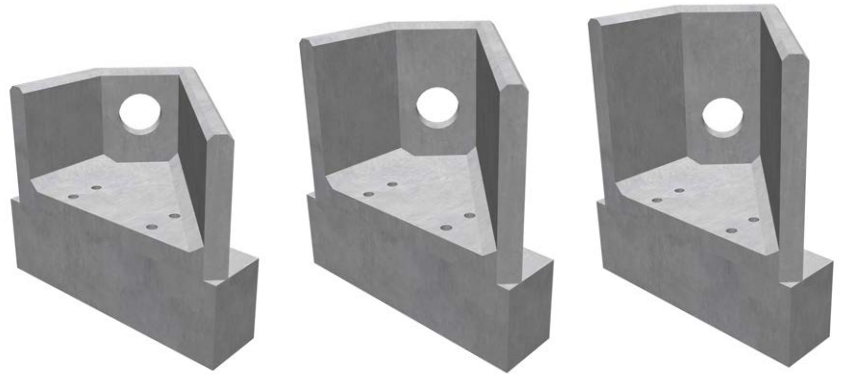
The AH4C is available with three different back wall heights and three different toe depths for Twin Wall or Clay Pipes up to & including 300mm ID. Having a separate toe makes it easier to handle and more importantly ensures the foundation around the toe and beneath the Headwall structure can be well compacted.



AH4CA RH
600mm Backwall

AH4CB RH
800mm Backwall

AH4CC RH
950mm Backwall

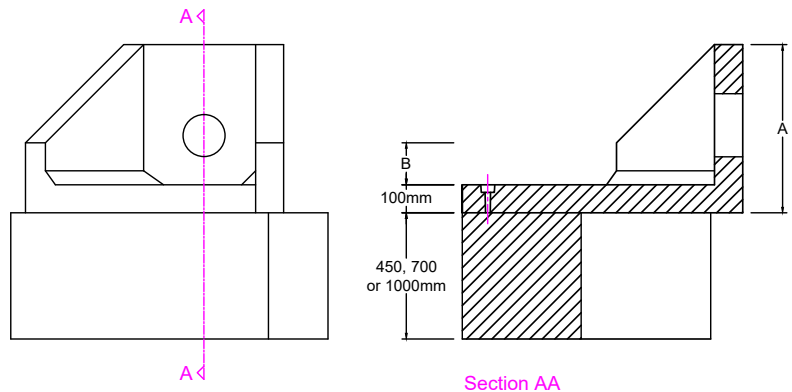
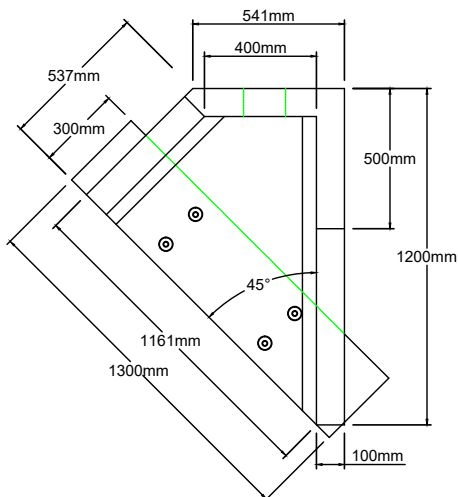


AH4CD RH
600mm Backwall

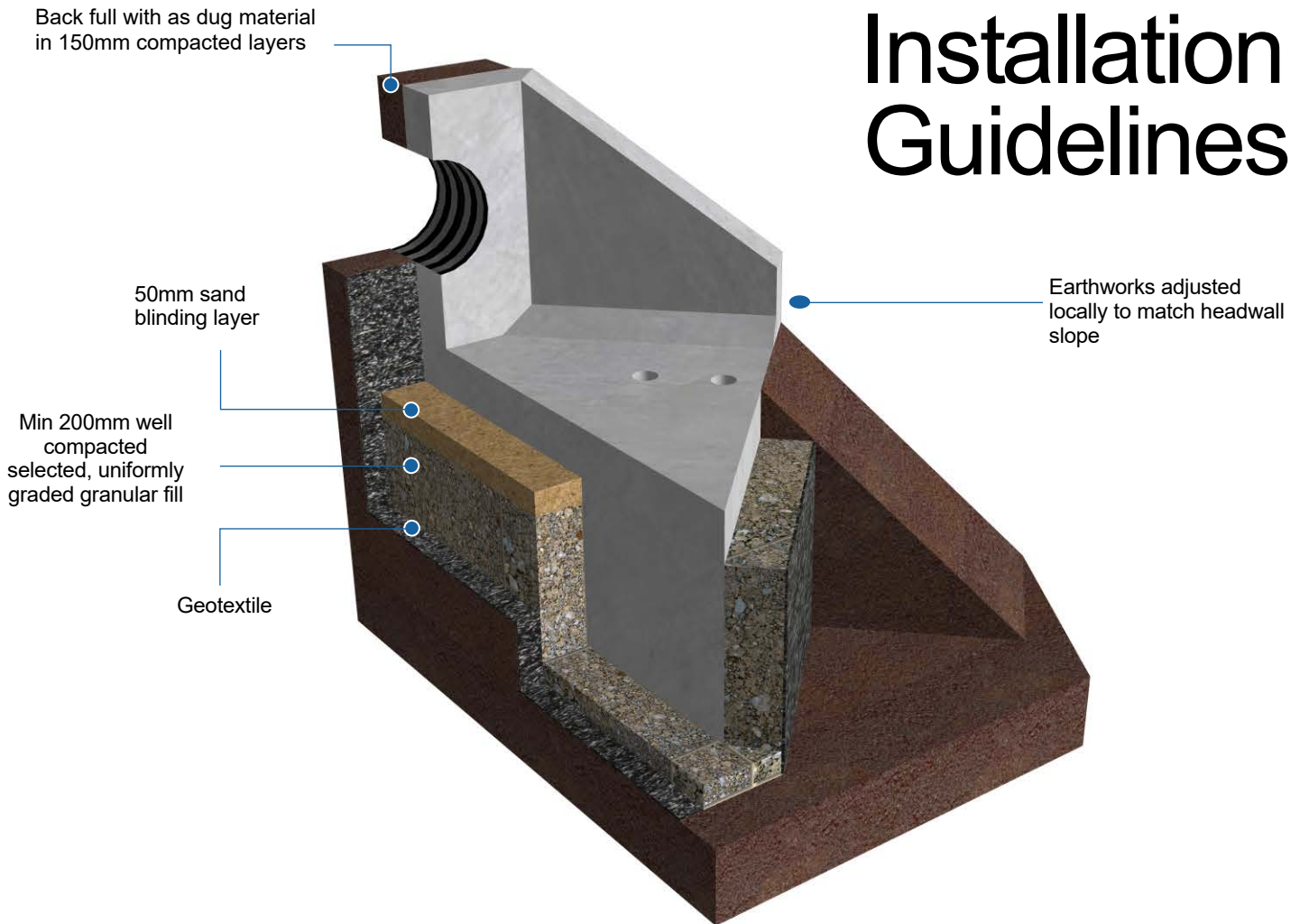
AH4CE RH
800mm Backwall

AH4CF RH
950mm Backwall

Headwall	Max Pipe Opening Plastic/Clay	A	B	Approx Weight kg	Weight with toe kg		
					450mm	700mm	1000mm
AH4CA RH	300	600	150	375	795	1030	1310
AH4CB RH	300	800	350	475	895	1130	1410
AH4CC RH	300	950	500	550	970	1205	1485
AH4CD RH	300	600	500	428	795	1030	1310
AH4CE RH	300	800	700	530	895	1130	1410
AH4CF RH	300	950	850	608	970	1205	1485



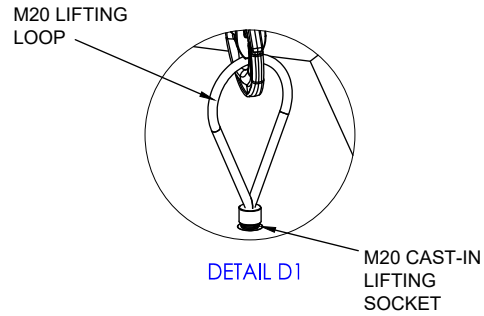
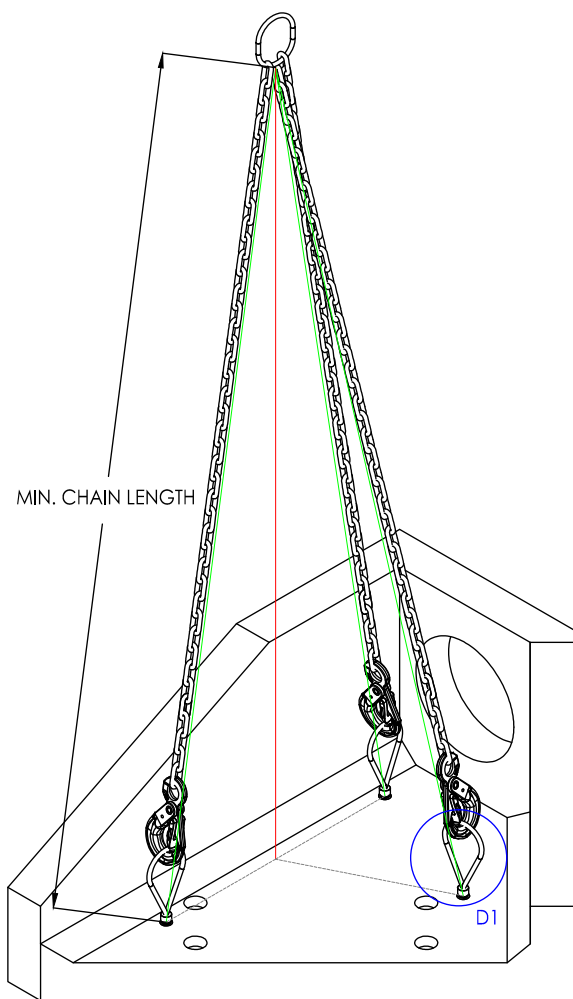
Installation Guidelines



- 1 Ensure that first or last spigot/butt or socket/butt pipe that is to be fitted to the Headwall is in position and free from backfill.
- 2 Dig out the bank of the watercourse to take the size of the headwall making sure that the Headwall will not protrude into the path of the water flow. The angle of the excavation to the rear of the Headwall should be roughly the same as the existing bank profile.
- 3 Dig out sufficient size trench to take the toe along the front of the foundation.
- 4 Line toe foundation with Geotextile then place selected, uniformly graded granular fill in the base and compact well. Lift Toe into position and level then fill around the toe with selected, uniformly graded granular fill and compact well. Insert supplied threaded rod into the sockets cast into the top of the toe.
- 5 Line the base of the rest of excavation with Geotextile then place a minimum bed of 150mm Class 6A* Selected Well Graded Granular Material on the base & compact well, especially around the back of the toe, then a 50mm blinding layer of sharp sand. Lift Headwall into position, over the end of the pipe & locate over threaded rod protruding from the toe and level. Place washer over threaded rod in recess in Headwall apron and tighten nut. Fill recess with high strength non-shrink grout.
- 6 The pipe should be flush with the front of the back wall if fitting grating or flap valve, or protruding by 50mm if not.
- 7 Shim the pipe until it is central within the opening then fill void with sand cement mortar or high strength non-shrink grout.
- 8 If flap valve or grating is supplied, this will need to be removed before the pipe is inserted and sealed into place. Then reinstall using stainless steel fixing bolts into cast in sockets. (When bolting flap valves against headwall, use a good quality sealant but do not over tighten bolts or distortion may occur resulting in the valve not seating correctly).
- 9 Backfill pipe section first then backfill all around Headwall with as dug material. Make good at front of toe with as dug material ensuring river bank is returned to its original profile. It may be necessary to provide protection in front of the toe, please refer to engineers' recommendation

*Manual of Contract Documents for Highway Works: Volume 1 (MCHW1), Specification for Highway Works, Series 600 (Nov 09)

AH4C Headwall Lifting Guide



RD20 Threaded Lifting Loop
Safe Working Load: 2000kg each

Manufactured from zinc plated steel wire rope with a precision bright steel threaded portion. Threaded lifting loops are ideally suited to axial lifting procedures but can be used up to and including angled lifts of 30 degrees.

Use and Operation

The threaded lifting loop must be fully threaded into the lifting socket prior to commencing a lifting operation. It is imperative that the two mating surfaces are parallel to each other.

Althon Precast Concrete AH4C Headwall Safety Sheet

Althon Limited manufacture pre-cast concrete AH4C Headwalls using :-

6 - 14mm aggregate · 0/4mm Sharp sand · Portland cement BS EN 197-1- Cem 1 52.5 · Cryso Fluid Premia 205 Varit Superplasticiser When units have been manufactured and cured they are in a chemically inert state. But the following information should be considered.

- It is advisable to wear toe cap safety footwear when handling any concrete products. Please refer to your company Safety Policy for specific details on manual handling.
- When cutting with masonry grinding discs or drilling with masonry drill bits it is necessary to wear eye protection and a dust mask. It is also recommended to wear ear protection during either of these two processes.
- Due to some units having sharp edges it is advisable to wear protective gloves when handling Althon products.
- When fitting or removing some of the larger accessories it is necessary to use a mechanical system to prevent risk of back injury.

Maintenance of AH4C Headwalls

With respect to the maintenance of any exposed surfaces of concrete components, only routine (Annual) cleaning may be necessary with a Power Washer and possibly some mild detergent to any exposed surfaces to maintain appearance; however all sites are unique and environmental impact of cleaning should be taken into account. Where cleaning is required and environmental conditions prevent mild detergent, using clean water and a power washer/stiff brush should suffice. Concrete units are often expected to "weather" and some coverage will help them to blend into their environment.

If damage to the structure of any pre-cast concrete components occurs we recommend their replacement not repair. If there is minor damage to corners during their normal life by grass cutting equipment etc. then repair with an epoxy compound such as 'Mason Mate 0868PR380 Polyester Resin'.

To dispose of any Pre-Cast concrete components the preferred method is to recycle the material by crushing and grading, but if the quantity is too small to be cost effective then disposal in conventional landfill is acceptable as all the concrete components are inert with regard to having any environmental impact.

Maintenance of Galvanised Grates & Handrails.

Annual/bi-annual visual checks are basic recommendations. If gratings are in a water course subject to a higher level of debris/weed, then more regular checks may be required. Clearing of debris/weeds from the grate will ensure no disruption to the flow, or backing up of the water course. Handrails should also only require a visual inspection – annually or at the same time as the headwall & grates.