Lathamgrate architectural grates, grids and frames

BRGPL-4S Solid Brass Trench Grate alongside a resort pool.

ALPGL-6S Aluminium Trench Grate being used in a ventilation application.

ALGLS-8S Aluminium Trench Grate with trench liner and block ends forming an enclosed trough.

HDGLS-6S Heavy Duty Aluminium Grate in a residential driveway application.

BRGNS-8S Solid Brass Trench Grate site segmented to create curve, this product could have been supplied factory curved if required.

ALGLS-8S Aluminium Trench Grate with liner and block ends in a residential application.

ALGPL-4S Aluminium Trench Grate in a residential application.
Lathamgrate™ Architectural Grates and Frames

Designed and Engineered for Ultimate Performance

The Lathamgrate™ aluminium and brass trench gratings and frames are an economical, functional and attractive solution to exterior and interior drainage and ventilation issues.

The serrated texture, provides a dynamic yet contemporary appearance that compliments today’s and tomorrow’s architectural designs. Unlike conventional grating, the serrated 6.5mm T’s offer increased pedestrian safety and the narrow 6.5mm spacings ensure the best performance with high heeled traffic. The systems also offer tremendous flow rates for air and water meaning they are suitable for drainage or ventilation applications.

Most of the Lathamgrate™ range is available for trench widths up 300mm wide as standard. Widths indicated in this catalogue are a guide only and Latham can custom manufacture systems to varying widths. All Latham Aluminium and Brass Grates have undergone Slip Rating Tests in accordance with AS/NZ 4586:2004. Details can be found on page 24.

General information

Lathamgrate™ Series aluminium and brass serrated top trench grates and frames offer many benefits over similar products fabricated from steel, cast iron or plastic. Aluminium Gratings are light weight, attractive and tough.

The grating bars are 6.5mm wide and are spaced at 13mm centres. This combined with the serrated surface helps provide pedestrian safety. The closely spaced bearing bars conceal the hidden welds that hold the systems together, and give them rigidity, whilst the narrow 6.5mm spacing reduces the possibility of high heels being caught between the bars. The closely spaced T’s also mean that less debris, such as leaves etc., will get into the drainage system, thus reducing the opportunity for blockages.

All of the Lathamgrate™ Series listed in this publication carry load class rating information in accordance with AS 3996-2006. It should be noted however that the Standard refers to an excessively large load area in comparison to the size of these grates and as such the load circle in a number of cases comes into contact with the surrounding floor finish, which will give an unrealistic result for the test. Based on this realisation Lathams have listed these systems to what we feel are more acceptable classifications, rather than the tested outcomes which indicate that the systems will carry far heavier loads than they have been designed and engineered for.

In general, the Lathamgrate™ systems are designed for pedestrian applications and as such comply with Class A of AS 3996-2006. Some grates can be supplied for household and light duty commercial driveway type traffic and will comply with AS 3996-2006 Class B and C. See the heavy duty range on page 20.

Testing- The Lathamgrate™ Longitudinal Series have been tested in accordance with AS/NZS 4586:2004 Slip Resistant Classification of New Pedestrian Surface Materials. Details of these results can be found on page 24.

Finishes- As standard the Lathamgrate™ systems are supplied in mill finish aluminium or brass. On request aluminium grates can be anodised after manufacture and other finishes can be considered like patination or chroming. Contact Latham Australia or your local Latham representative to discuss your requirements further.

Where grates and frames are to be installed in direct sunlight special consideration should be given to the thermal coefficient of linear expansion of the metal, which is about 0.25mm per lineal metre of metal per 10°C in temperature change in the metal (thermal coefficient of linear expansion for aluminium and brass is quite similar). All grates will be manufactured slightly under frame size to allow for fitting and removal. When grates are being installed in a long continuous run we recommend that 3-5mm gaps be left between each length.

A 3 metre grate section subject to a 50°C surface temperature change from the middle of winter to the middle of summer would be expected to expand over the 3 metre length by approximately 3.75mm. Consideration should be given particularly in external applications.
The ALGLS Series serrated top aluminium trench grates are designed predominantly for pedestrian applications. They are commonly used in office building entrances, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, showrooms, arenas, stadiums, exhibition and convention centres etc.

The ALGLS Series consists of a frame that can be supplied with or without an integrated galvanised trench liner, making the frame and liner (if supplied) a permanent part of the floor, whilst the individual grating sections will drop into the frame, ensuring easy removal for access and cleaning. The ALGLS Series Grates and Frames can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T’s are available for the grates, frames and trench liners if required.

On request, the system is also available with block ends for the frames and trench liners. When the trench liner is used and factory fabricated block ends installed, the system will be an enclosed trough. Latham can also supply hidden locking mechanisms for the ALGLS Series Grate and/or welded spigots on the trench liner if required. See pages 22-23 for further details.

The BRGLS Series serrated top solid brass trench grates are designed predominantly for pedestrian applications. They are commonly used in office building entrances, homes, parks, recreational harbour or beach foreshores, casinos, convention centres, exhibition centres, schools, hospitals, hotels etc.

The BRGLS Series serrated top solid brass trench grates are designed for recessed applications and should be installed to finish flush with the surrounding floor finishes. The BRGLS Series have folded 3mm brass trench liners with an overall depth of 56mm. The grate is raised off the base of the trench by 19mm high x 15mm wide welded flanges fixed to the bearing cross supports, allowing for clear water flow under the grate structure. The trench frames are supplied with welded brass strap anchors at approximately 350mm centres (fixings by others). The solid brass self-supporting trench liner is supplied in lengths of 1800mm, complete with joining flanges for running longer lengths. The grate insert sections will be supplied in custom lengths to 4000mm and simply drop in position.

If required, factory manufactured fully welded angles and T’s are available for the grates and liners. The system is also available with block ends for the frame and trench. When the trench liner is used and factory fabricated block ends installed, the system will be an enclosed trough. Latham can supply the BRGLS Series with welded spigots for the trench liner. See pages 22-23 for further details.
The ALGPL Series serrated top aluminium trench grates are predominantly suitable for pedestrian applications such as residential and commercial towers, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, car showrooms, exhibition centres, arenas and stadiums etc.

The ALGPL Series are removable solid grate units. They are designed to sit on a formed step or trench base and have an overall depth of 60mm. Alternatively, they can sit on levelling rods in the slab, but they must be fully supported at the ends to ensure they do not lift when traffic passes over a joint in an extended run. They carry seamless welded cross supports at approximately 300mm centres. The grates can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T's are available. See pages 22-23 for further details.

The BRGPL Series serrated top solid brass trench grates are predominantly suitable for pedestrian applications, such as residential and commercial towers, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, showrooms, arenas and stadiums etc.

The BRGPL Series are removable solid grate units. They are designed to sit on a formed step or trench base and have an overall depth of 50mm. Alternatively, they can sit on levelling rods in the slab, but they must be fully supported at the ends to ensure they do not lift when traffic passes over a joint. They carry seamless welded cross supports at approximately 300mm centres. The grates can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T's are available. See pages 22-23 for further details.
The ALGNS Series serrated top aluminium trench grates are for pedestrian applications. They are commonly used in office building entrances, home, parks, recreational harbour or beach foreshores, casinos, convention centres, exhibition centres, schools, hospitals, hotels etc. They are designed to sit over a preformed trench and require a 36mm deep x 25mm wide bearing platform on each side of the trench. The 3mm narrow view aluminium frame is mechanically fixed to the bearing platforms and the edge of the frame and grate should finish level with the surrounding floor finish. The ALGNS Series are used in a range of applications both internally and externally.

The ALGNS Series is supplied with the frame that is set on a preformed bearing platforms. The grates will simply drop into the frame making for easy removal for access and cleaning. The material can be supplied in custom lengths to 4000mm for the grate inserts whilst the aluminium angle frame can be supplied in lengths to 3600mm and factory manufactured fully welded angles and T’s are available as well as hidden locking mechanisms. The system is also available with end frame surrounds. See pages 22-23 for further details.

The BRGNS Series serrated top solid brass trench grates are for pedestrian applications. They are commonly used in office building entrances, home, parks, recreational harbour or beach foreshores, casinos, convention centres, exhibition centres, schools, hospitals, hotels etc. They are designed to sit over a preformed trench and require a 36mm deep x 25mm wide bearing platform on each side of the trench. The 3mm narrow view brass frame is mechanically fixed to the bearing platforms and the edge of the frame and grate should finish level with the surrounding floor finish. The BRGNS Series are used in a range of applications both internally and externally.

The BRGNS Series is supplied with the frame that is set on a preformed bearing platforms. The grates will simply drop into the frame making for easy removal for access and cleaning. The material can be supplied in custom lengths to 4000mm for the grate inserts whilst the aluminium angle frame can be supplied in lengths to 3600mm. Factory manufactured fully welded angles and T’s are available as well as hidden locking mechanisms. The system is also available with end frame surrounds. See pages 22-23 for further details.
ALGRS Series aluminium serrated top trench grate

The ALGRS Series aluminium trench grates are designed for surface mounted pedestrian applications. They are commonly used in office building entrances, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, showrooms, arenas and stadiums etc. They are also commonly used for ventilation applications, such as floor AC vent covers or as access covers to floor under deck areas that require aesthetically pleasing and trafficable solutions.

The ALGRS Series is supplied as a complete drop in unit system. It is self-supporting on the surround frames, making for easy removal for access and cleaning. The material can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T’s are available for the surface mounted grate if required. The system is also available with end frame surrounds. See pages 22-23 for further details.

BRGRS Series solid brass serrated top trench grate

The BRGRS Series solid brass serrated top trench grates are designed for surface mounted pedestrian applications. They are commonly used in office building entrances, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, showrooms, arenas and stadiums etc. They are also commonly used for ventilation applications, such as floor AC vent covers or as access covers to floor under deck areas that require aesthetically pleasing and trafficable solutions.

The BRGRS Series is supplied as a complete drop in unit system. It is self-supporting on the surround frames, making for easy removal for access and cleaning. The material can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T’s are available for the surface mounted grate if required. The system is also available with end frame surrounds. See pages 22-23 for further details.
The ALGLSX Series serrated top cross longitudinal aluminium trench grates are designed for pedestrian applications. They are commonly used in office building entrances, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, residential and commercial towers, showrooms, arenas and stadiums etc.

The ALGLSX Series consists of a frame that can be supplied with or without an integrated galvanised trench liner, making the frame and liner (if supplied) a permanent part of the floor. The individual grating sections, which are supplied in 1000mm lengths, will drop into the frame, making for easy removal for access and cleaning. Factory manufactured fully welded angles and T's are available for the grates liners if required, but not available for the grate insert in the ALGLSX Series. The system is also available with block ends for the frame and trench on request. When the trench liner is used and factory fabricated block ends installed, the system will be an enclosed trough. Latham can also supply hidden locking mechanisms for the ALGLSX Series if required and welded spigots can also be supplied on the trench liner if required. See pages 22-23 for further details. Care should be taken when handling the ALGLSX grate inserts as these can easily be bent when not in their frames.

The ALPAN Series tile inlay aluminium trench grates are designed for pedestrian applications. They are commonly used in office building entrances, homes, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, residential and commercial office towers, showrooms, arenas and stadiums etc.

The ALPAN Series tile inlay aluminium trench grates are designed to accommodate a stone or tile flooring inlay. The series is available with 3mm pan inlay widths of 100mm, 150mm and 200mm. The pan sits over the formed concrete trench and there is a 32mm wide grate on either side of the pan. The pan depth is 37mm. The grated pan insert is supported on welded integrated cross supports at approximately 250mm centres. The entire system sits in a custom fabricated T frame with an overall depth of 60mm. The ALPAN Series is supplied in custom lengths to 2400mm. Factory manufactured fully welded angles and T's are available for the ALPAN Series if required. The system is also available with welded frame ends and hidden locking mechanisms. See pages 22-23 for further details.
The Latham Grate range has now been extended to incorporate the ALBATH and BRBATH Series which are specifically designed for bathroom applications. The ALBATH Series incorporates fully sealed aluminium trench liners with block ends, whilst the BRBATH Series has solid brass trench liners with block ends. These series are available as standard off the shelf units in the lengths and width detailed below, or in custom lengths. As standard the external trough depth is 50mm which is usually suitable to a floor finish set down in a bathroom. Other depths are available on request.

The systems can be supplied with or without a metal spigot of the same material extending to a depth of 100mm below the base of the trench liner for site cutting to suit. See pages 22-23 for further details.

Finishes - As standard the grates and liners are mill finish aluminium or brass depending on the model selected. On request and for an additional charge the aluminium and brass units can be supplied with a chromed finish or the aluminium sections can be supplied in clear anodised finish.

Stock standard units are available for the ALBATH-3S, ALBATH-4S in lengths of 1200mm, whilst stock standard units are available for the BRBATH-3S and BRBATH-4S in lengths of 900mm. Custom lengths can be manufactured on request.

### ALBATH Bathroom Series

![ALBATH Bathroom Series](image_url)

**ALBATH & BRBATH Bathroom Series serrated top trench grate**

<table>
<thead>
<tr>
<th>Aluminium Serrated Top</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Unabated Clear Flow at Support</th>
<th>Class Classification as per AS 3996</th>
<th>Number of 6.5mm Serrated T’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBATH-2S</td>
<td>16mm</td>
<td>56mm</td>
<td>50mm</td>
<td>16mm x 15mm</td>
<td>A</td>
<td>3</td>
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<tr>
<td>ALBATH-3S</td>
<td>36mm</td>
<td>76mm</td>
<td>50mm</td>
<td>36mm x 15mm</td>
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<tr>
<td>ALBATH-4S</td>
<td>61mm</td>
<td>101mm</td>
<td>50mm</td>
<td>61mm x 15mm</td>
<td>A</td>
<td>7</td>
</tr>
<tr>
<td>ALBATH-6S</td>
<td>111mm</td>
<td>151mm</td>
<td>50mm</td>
<td>111mm x 15mm</td>
<td>A</td>
<td>11</td>
</tr>
</tbody>
</table>

### BRBATH Bathroom Series

![BRBATH Bathroom Series](image_url)

**Brass Serrated Top**

<table>
<thead>
<tr>
<th>Brass Serrated Top</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Unabated Clear Flow at Support</th>
<th>Class Classification as per AS 3996</th>
<th>Number of 6.5mm Serrated T’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRBATH-2S</td>
<td>16mm</td>
<td>56mm</td>
<td>50mm</td>
<td>16mm x 15mm</td>
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<td>36mm</td>
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<td>5</td>
</tr>
<tr>
<td>BRBATH-4S</td>
<td>61mm</td>
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</tr>
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<td>BRBATH-6S</td>
<td>111mm</td>
<td>151mm</td>
<td>50mm</td>
<td>111mm x 15mm</td>
<td>A</td>
<td>11</td>
</tr>
</tbody>
</table>
Latham Entry Mats, Grates, Grids & Frames

**HDGPL Heavy Duty Series aluminium serrated top trench grate**

HDGPL Series serrated top aluminium trench grates are suitable for vehicular traffic in light duty applications, such as residential driveways, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, car showrooms, arenas and stadiums etc. They are specifically designed for car and light commercial traffic and, although not considered suitable for public roadway applications, they will accommodate heavier traffic on irregular occasions, such as occasional access for emergency vehicles etc.

Whilst the HDGPL is designed for somewhat heavier applications than the standard Lathamgrate™ range. This range has slightly closer spaced cross supports at a maximum of 200mm centres and the cross support is of heavier construction, although this is unnoticeable when the grates are in application.

The HDGPL Series are removable solid grate units. They are designed to sit on a formed step or trench base and have an overall depth of 60mm. The grates can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T's are available. See pages 22-23 for further details.

**HDGLS Heavy Duty Series aluminium serrated top trench grate**

HDGLS Series serrated top aluminium trench grates are suitable for vehicular traffic in light duty applications, such as residential driveways, parks, recreational harbour or beach foreshores, schools, hospitals, hotels, car showrooms, arenas and stadiums etc. They are specifically designed for car and light commercial traffic and although not considered suitable for public roadway applications, they will accommodate heavier traffic on irregular occasions, such as occasional access for emergency vehicles etc. The HDGLS is designed for somewhat heavier applications than the standard Lathamgrate™ range. This range has slightly closer spaced cross supports at a maximum of 200mm centres and the cross support is of heavier construction, although this is unnoticeable when the grates are in application.

The HDGLS Series consists of a frame that can be supplied with or without an integrated galvanised trench liner, making the frame and liner (if supplied) a permanent part of the floor. The individual grating sections will drop into the frame, making for easy removal for access and cleaning. The material can be supplied in custom lengths to 4000mm and factory manufactured fully welded angles and T's are available for the grates and liners if required. The system is also available with block ends for the frame and trench if required. When the trench liner is used and factory fabricated block ends installed, the system will be an enclosed trough. Latham can also supply hidden locking mechanisms for the HDGLS Series if required and welded spigots can also be supplied on the trench liner if required. See pages 22-23 for further details.

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### Aluminium Serrated Top B Open Flow Area per lineal metre of grate (cm²)

<table>
<thead>
<tr>
<th>Class Classification as per AS 3996</th>
<th>Number Of 6.5mm Serrated T's, per metre</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>6mm</td>
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<tr>
<td>C</td>
<td>8</td>
</tr>
<tr>
<td>D</td>
<td>10</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HDGPL-3S 75mm 360 C 4</th>
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</thead>
<tbody>
<tr>
<td>HDGPL-4S 100mm 480 C 6</td>
</tr>
<tr>
<td>HDGPL-5S 125mm 600 C 8</td>
</tr>
<tr>
<td>HDGPL-6S 150mm 720 B 10</td>
</tr>
<tr>
<td>HDGPL-8S 200mm 960 B 14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HDGLS-3S 55mm 85mm 240 C 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDGLS-4S 80mm 110mm 480 C 7</td>
</tr>
<tr>
<td>HDGLS-5S 105mm 135mm 600 B 9</td>
</tr>
<tr>
<td>HDGLS-6S 130mm 165mm 720 B 11</td>
</tr>
</tbody>
</table>
Lathamgrate architectural grates, grids and frames

ALGLS Series installed in a hotel resort pool application.

ALGPL Series installed on a base steel support system, which allows the overall width of the grate insert to be wider than the 298mm, here the grate inserts are side by side.

ALGLS Series installed in a modern terrazzo floor in an outdoor entertainment area.

HDGLS Series installed in a residential driveway application.

ALGLS Series in a hotel resort pool application.

ALBATH Series in a residential bathroom application.

ALGLS Series installed in a modern terrazzo floor in an outdoor entertainment area.
Curved fabrications

Several Lathamgrate™ profiles are suitable for curving. In the aluminium range these include the following series; ALGPL, ALGNS and when the trench liner is not required the ALGLS Series can also be curved. In the brass range, only the BRGPL and BRGNS series are suitable for curving. Curving involves the side sections and the centre T’s being rolled to the required curve before the systems are welded together. Depending on the grate series selected, the grates can be rolled to a radius as tight as 900mm. Please contact Latham Australia or your Latham Australia representative to discuss your application further.

T’s, L’s, Angles and Crossovers

All Lathamgrate™ profiles with the exception of the ALGLSX Series can be supplied with factory fabricated and fully welded T’s, L’s, Angles and Crossovers. Systems that carry a trench liner can also have this fabricated accordingly.
A number of the Lathamgrate™ Series can be supplied with frame surround ends and block ends. This is when the external edge frame is carried around the end of the grate.

This solution is most commonly considered with the ALGRS, BRGRS, HDGLS, ALGLS, BRGLS, ALGNS and BLGNS Series grates.

This option finishes the grates off nicely, and reduces the possibility of trips when surface mounted grates are installed (ALGRS and BRGRS), and where traffic can approach from multiple directions.

A number of the Lathamgrate™ Profiles can be supplied with block ends. The ALBATH and BRBATH Bathroom Series Grates and Liners are supplied with block ends as standard. This results in a removable grate from the aluminium or brass liner which forms the trough.

Similarly the ALGLS, ALGLSX and HDGLS Series with galvanised liner and the BRGLS Series with brass liner also can be supplied with block ends to suit the overall required length, once again resulting in a trough.

The following Lathamgrate™ ranges can be supplied with hidden locking mechanism, ALGLS, ALGNS, BRGNS, ALGLSX, ALPAN and HDGLS. As an alternative the ALGRS and BRGRS can be fixed through the side flanges. This option reduces the chance of someone accessing or stealing the grates. Depending on the profile selected, this would consist of an aluminium or brass plate about 25mm x 12mm being welded to the underside of the grate with a locking bar that is screw fixed through the top of the grate. When the locking bar is tightened the grate insert will be held in place. The ALGRS and BRGRS surface mounted series can be site fixed through the side flanges to reduce the likelihood of theft.

On request grates with trench liners can have a factory welded spigot welded into the liner in an appropriate location. The spigot size is dependent on the trench width.
**Dry slip resistant testing**

Latham Australia Pty Ltd has had independent testing carried out by a NATA approved laboratory in Accordance with AS/NZS 4586:2004 Slip Resistance Classification of new pedestrian surface materials - Appendix B.

The established results are detailed as follows:

**Latham Serrated Top Aluminium Grates**
- Mean Dynamic Coefficient of Friction: 0.65
- Classification according to Appendix B: F

**Latham Serrated Top Brass Grates**
- Mean Dynamic Coefficient of Friction: 0.75
- Classification according to Appendix B: F

**Wet slip resistant testing**

Latham Australia Pty Ltd has had independent testing carried out by a NATA approved laboratory in Accordance with AS/NZS 4586-2004 Slip Resistance Classification of new pedestrian surface materials - Appendix A.

The established results are detailed as follows:

**Latham Serrated Top Aluminium Grates**
- Mean British Pendulum Number: 60
- Classification according to Appendix A: V

**Latham Serrated Top Brass Grates**
- Mean British Pendulum Number: 55
- Classification according to Appendix A: V

**Wet Dry Classifications from above results**

The established results are detailed as follows:

**Latham Serrated Top Aluminium Grates**
- Classification according to Appendix A & B: VF

**Latham Serrated Top Brass Grates**
- Classification according to Appendix A & B: VF


A copy of the full test results is available by contacting Latham Australia.

**Custom grate and grid mat details**

Latham are happy to discuss custom applications that you may have, including wall systems, ventilation applications and curved applications. Contact your Latham representative to discuss any applications.
Lathamgrate architectural grates, grids and frames

ALGLS-12S in a pool application.

ALGLS Series in a pool application.

See description below.

Australian War Memorial, Hyde Park Corner, London. Brass grates specially patinated to appear aged. Photo above: Grate segmented to create curve. This product could have been supplied factory curved on request.