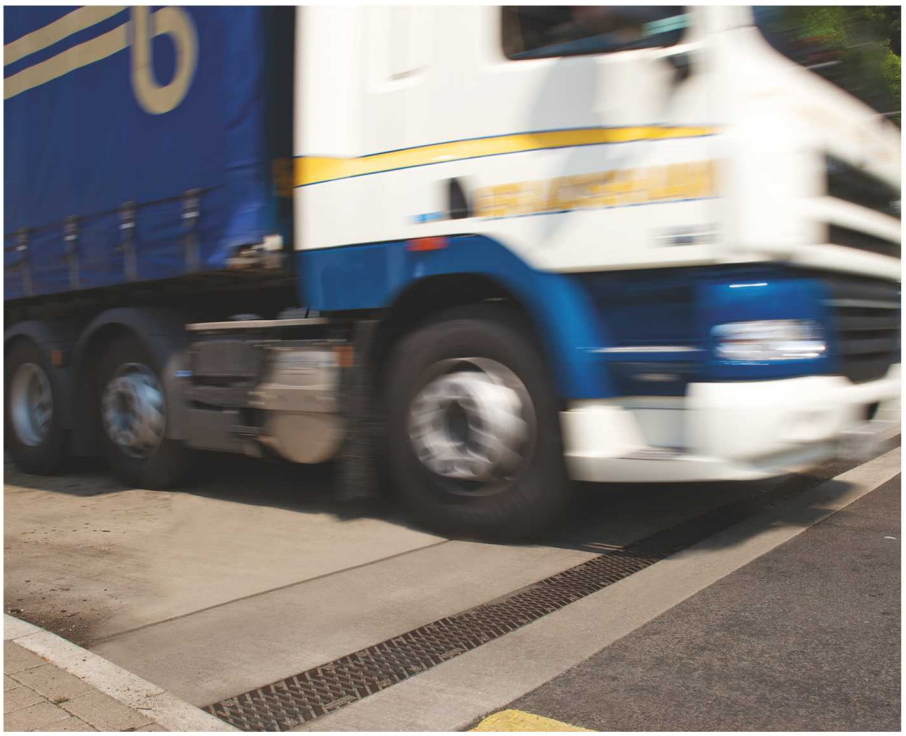
Marshalls
Civils & Drainage

Cleaning and maintenance

CHANNEL DRAINAGE WITH GRATINGS



Cleaning and maintenance

CHANNEL DRAINAGE WITH GRATINGS

Periodic maintenance should be carried out on all drainage systems to ensure long term performance is preserved.

The frequency of any inspections and maintenance operations will be dictated by the environment they're installed and the product used, typically no less often than once per year, factoring in annual fluctuations such as leaves falling during autumn.

A proactive maintenance regime will ensure:

- Hydraulic capacity is retained close to the newly installed maximum
- Structural defects are captured and rectified early before they propagate
- Any silt accumulated in the channel is likely to be less well established and therefore easier and quicker to clean through

DESIGN

When specifying the channel drainage product to be used, consider the hydraulic capacity of the system compared with the required peak flow, based on the maximum rainfall intensity anticipated plus allowance for climate change where appropriate.

To allow for some silt accumulation within channels between maintenance activities, it's often prudent to design with a maximum 90% capacity. Self-cleansing velocities are often sought in drainage design, typically for pipework.We quote full flow velocities for all our products within our flow tables. Intermediate silt traps are typically recommended at a maximum of 100m centres but should be positioned according to the individual runs gradient, silt load and capacity.

HEALTH & SAFETY

Appropriate health and safety requirements should be considered whenever carrying out maintenance works, always wearing appropriate Personal Protective Equipment. Works should be appropriately planned taking into account the environment, risks and potential for injury for both the workforce and general public.

Appropriate thought should be given to:

- Danger caused by moving vehicles in the area of work
- Potential danger to pedestrians and vehicles from access cover lids which have been opened
- The danger of sharp objects in the debris which is being removed

ACCESS

Grated systems allow access along the entire run and therefore a more flexible approach to maintenance can be used. For these products, cleaning through jetting operations and rodding can be used or if preferred, each grating can be removed and a trowel used to dig out any silt accumulated within the channels.

INSPECT

Prior to any works, the surrounding area and drainage runs should be inspected to ensure the scope of planned works is appropriate given the condition of the drainage run.

CLEAN & DISPOSE

Before cleaning of the main channel drainage run is started, ensure that any blockages within the grating slots are cleaned through into the channel using a pressure washer or similar. Silt traps and outfalls should be emptied using a suction hose.

Once this is complete, cover over the gratings for the length of channel to be cleaned using boards or tarpaulin to ensure debris is contained within the drain area while jetting works is carried out. Alternatively, a barrier that moves with the jetter can be used providing it fully contains the debris being flushed from the channels in a safe manner.

Jetting can now be carried out, feeding the jetter from the outfall working upstream through the run.

A suction hose should be run simultaneously with the jetting operations to empty the outfall as the silt is disturbed. Jetting should be carried out at 100-150 bar for typical applications, repeating as necessary. Any debris trapped on the pavement by the boards / tarpaulin should be cleaned away and disposed of in an appropriate manner.

Once cleaning works are completed, the gratings should be re-installed ensuring they are secured to the recommended torque (as per Marshalls installation guidelines).

The channel drainage outfalls will typically discharge via pipework into the downstream drainage network which will require its own maintenance regime, the effectiveness of the downstream network will impact on the ability of the channel drainage runs to operate at their full capacity.

Channel drainage systems are typically laid 3-5mm below the surrounding pavement level to allow for settlement of the pavement and encourage positive drainage of the pavement. Where the pavement has settled beyond this, the area should be rectified and made good to protect the side of the channel drainage system and maintain positive run-off into the gratings.

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The guidance contained within this brochure covers the cleaning and maintenance of channel drainage products. We accept no liability for any injury or loss caused by activities based on the advice given.

All systems should be thoroughly cleaned when installation is completed.