



Edge Restraints

Introduction

Edging or edge restraints are an important part of any surfacing project. They provide stability and containment of the new surface and base, to form a barrier from the surrounding landscaping. Careful consideration should be given to not only the aesthetic aspect, but also the structural requirements of the project. There are a variety of options, each with their merits and disadvantages and it is the job of the contractor to determine the correct edging to be used.

Common Types of Edging

The most common types of edging for surfacing projects fall into 4 main groups:

- Kerbs
- Walls
- Setts/Cobbles/Pavers
- Metal Edging

Walls

Sometimes existing ground levels on a project will dictate that a wall must be constructed to meet the lateral load bearing requirements needed. Advice should be taken from a structural engineer on the specification of wall needed for the project. Most commonly constructed of block or brick, but natural stone or gabion baskets can be used if they meet the specification provided by the structural engineer. To provide a better aesthetic, walls can be rendered, painted, or clad in a range of materials including resin bound!



Kerbs

The most common kerb options are 150mm x 50mm edging kerbs, and come in flat top, bullnose, and full round varieties. They are also available in larger, heavy-duty road and drop kerbs, along with block paving key kerbs. These are laid on a continuous bed of concrete (minimum 70mm depth) and are haunched on both sides with the same bedding material, ideally at the time of laying so it cures as one unit. Although there are more aesthetic options available, due to the depth, edging kerbs will provide a permanent, functional, and stable edge restraint that will provide the stability and containment of not only the surface layers, but also the sub-base.

Setts/Cobbles/Pavers

These are typically 100mm or under in depth (most commonly manufactured at 50mm depth). There are a wide variety of choices from natural stone setts and cobbles, to manufactured block paving and drive setts. These are generally accepted as the most desirable edging choice. Due to their shallow profile they might not be suitable for some projects where different ground levels are present. One way of overcoming this is to use an edging kerb as the perimeter edge, with a cobble or sett laid against the inside edge of the kerb. A good bond to the bedding is very important when laying shallow edging, so an SBR slurry or proprietary bonding mortar should be applied to the underside of the paving as they are laid onto the bedding material, creating a solid bond between paver and bed.





Metal Edging

Metal edging is a versatile option and gives a crisp and low-profile aesthetic. Most commonly provided in steel or aluminium in an L-shape profile. Vehicle specification versions are usually a minimum of 150mm in depth and have ground pins to secure or can be laid in concrete to create a stable and robust edging. Alternatively a smaller depth precise to the resin bound depth can be used at 15-22mm as edging.



Installation Tips



For best results when getting ready to lay your chosen edgings, a geotextile membrane should be laid on the entirety of the excavated area and then the edgings laid on top of the membrane. This not only provides the benefit of creating an anchor for the membrane to work correctly, but also decouples the edging from the ground reducing the risk of ground heave pulling the edgings away from the surface in prolonged dry spells.

Levels should be taken to ensure constant gradients and falls, string lines, laser or similar should be used as a guide when laying. Your edgings will dictate all the finished levels, and an undesirable hump, dip or kink can spoil the appearance of the whole project.

As mentioned above, **having a slurry bridge bond between shallow format edging**, and bedding material is vital for long

term stability. A correctly bonded 50mm paver or sett becomes one unit with the bedding creating an edge restraint of a minimum of 150mm of depth.

Metal edging is easily laid by connecting several lengths together before laying. A belt and braces method for laying would be to use the supplied ground anchor pins along with a concrete bedding and haunch, ensuring a robust restraint.

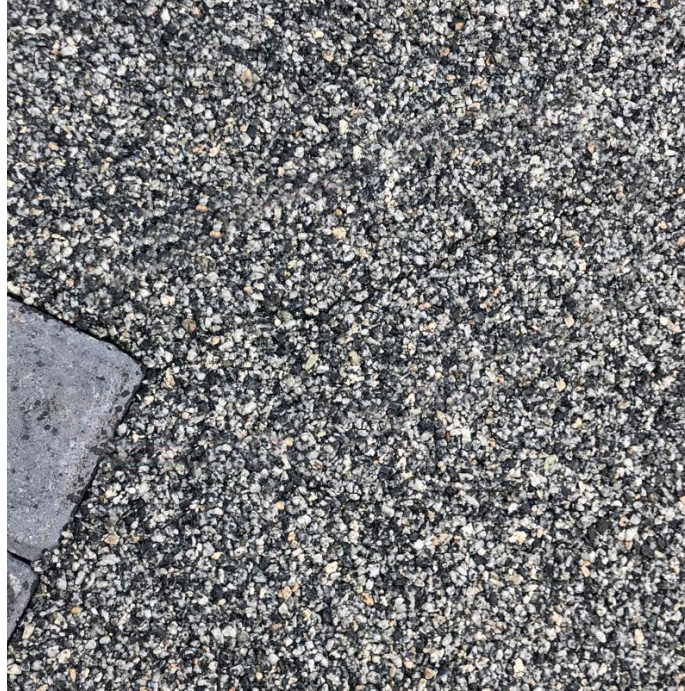
Edge Cracking

If the depth of the base is not sufficient this will cause cracking of your resin bound surfacing, particularly affecting the edge areas if too shallow. Our recommended base build ups have all the information you will need for sub base depths, types and requirements.

For example, we recommend a minimum of 70mm asphalt if using this as your base course for vehicular traffic. It is important to make sure the full depth of the base course goes from edge to edge. In the example of 70mm of asphalt, this would mean every area of the base is a minimum of 70mm, edge to edge.

An unsuitable base or edge are the number one causes of cracking for resin bound surfacing.

The depth of the base course must be correct as well as leaving enough depth for the Resin Bound Surfacing which will require as standard 15mm for pedestrians or 18mm for vehicular traffic. If the above advice is not followed, then a gap can appear between edge to resin bound from a lack of depth, it is often referred to as the resin bound shrinking away from the edge but is actually a form of crack.



If your edge is also not solid or appropriate it can cause reentrant cracking and gaps caused from the edging. This is because the resin bound surfacing is not adequately supported, causing pressure or movement and inevitably a crack. This information sheet talks in detail about each type of suitable edging and tips on how to install these but if you have an alternative edge you are considering then please get in touch with the technical team for their advice.

We have recommended base build ups for Asphalt, Concrete, Resimac, Podium Decks, amongst other bases. To note, our Resimac Base Build up also reduces the risk of cracking significantly due to it's no dig system, extra flexibility and increased strength, this build up is highly recommended.

In the event of cracking in your project then please get in touch with our technical team and refer to our Crack Repair Advice Sheet. This includes tips on how to prevent cracks from forming in the first place.

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