

Carriage and pavement patterns

Sustrans Community Toolkit

Creating unusual or interesting patterns on the carriageway can be really effective at reducing the speed of passing traffic, as well as adding to the character and feel of your street, to make it feel really unique and special. Patterns are something that you can get involved in designing yourselves, and depending on the material used, they can look great for years with minimal maintenance.

You will need permission before implementing any carriage way or pavement patterns, see the information below to prepare you for what may be involved. It's still something that is very unusual and considered 'wacky' by most local authorities, however, it's gaining momentum and some local authorities are embracing communities trying new things and doing things for themselves.

It's always helpful to have examples of other people that have done this already (and more importantly other local authorities that have allowed it), so that you can help to reassure any fears your highways team may have. Some examples for references you can use are included within this document.

But most of all, have fun, it is a brilliantly fun and creative way of making a statement on your street, it's a great way of bringing people together, and both adults and children can help come up with designs! There's no right or wrong, so get your creative juices flowing and see what ideas you come up with.

Materials

There are several different materials you could use, some ideas are outlined below.

Thermoplastics

These are created as 'sheets' of hard plastic which are then heated up to melt into place on the carriageway, where they cool and harden. They can come in all sorts of colours, and can be cut to any shape you want! Depending on the size, they may be cut and laid in sections placed together). They are regularly used on carriageways for line markings and floor signs, so are usually designed with the necessary skid resistance properties for on-highway (check with your manufacturer). We have had experience of using Roadcraft Thermoplastics for some of our projects (for example Ashton Gate Primary school in Bristol), but there are many other suppliers you could choose.

Thermoplastics usually require a good quality road surface to go down, or they will not last as long. This often involves scraping and relaying the tarmac in the area to be covered (done by your local authority or their chosen

contractors). This can be an added cost, but will ensure the lifetime of the product is maximised.

Hard wearing (highway standard) paint

This is a cheaper way of producing a pattern, but will require a refresh after a few years to re-brighten the pattern. It is often something you can apply yourselves (with the necessary PPE equipment and masks) depending on your local authority.

You will need to check that the skid resistance is adequate for your local authority highways team, but manufacturers should be able to supply you with this information. We have had experience of using Adbruf paint for a project in Oxford (Beech Croft Road), but there are many other suppliers available.

Applying additional skid resistance and reflectivity

Many manufacturers can also provide products for additional skid resistance in the form of glass beads, some of which also create a reflective surface for car headlights to make them more visible at night. You usually apply these at the same time as your road markings, as a top-coat, whilst the surface is still wet.

There are a lot of manufacturers of these sorts of products, for one example see Adbruf's website or contact them for more information:

<http://www.adbruf.com/products/retrolux-ballotini-glass-beads-for-road-marking.htm>

Temporary markings

You could even try out the idea of a pattern using temporary paint! It's a great way of showing people what can be done, and how it might look, before you make things permanent!

There are a number of suppliers who supply temporary paint, but you will need to check with your highways team if they are happy with this. Again, it is likely they will ask you to supply them with the skid resistance characteristics of whatever product you are using. One way of getting around this would be to use something very temporary and trial it during a road closure, before washing it off at the end before reopening the street to traffic.

We have had experience of using Ecos Organic 'temporary pavement paint' (with mixed results depending on the weather and paint dilution!), and chalk spray paint, but there are many suppliers and types you could choose. If you are in a rural area/close to a watercourse, you may need to use something non-toxic (such as the organic or chalk paints), and even ask permission from the Environment Agency if you're not sure.

Seeking permission from your local authority

You will need permission from your local authority to create a pattern on your carriageway or pavement, as they are (usually) legally responsible for those areas (unless you are on an 'unadopted' street). You might start by contacting

your highway team, you will also likely need to discuss your ideas with the maintenance team too.

There are a lot of obstacles that can threaten your chance of success with this, so it's helpful to know a few of the basics so you can answer questions, these are covered below and in the section 'highway liability and common concerns'.

They will usually want several pieces of information from you:

- Location on your street (a map that details the precise location is usually necessary).
- A plan showing the size and style of the design, that also shows/notes that you are working around any existing road markings, usually with an offset so your design does not touch any of the road markings.
- Materials (including skid resistance values (SRV/PSV) and potentially also reflectivity value .
- Evidence of community support/demand.
- Budget (i.e. that you have some money to pay for it, or that you are asking them for funding if there are pots available).
- If you are planning to install/paint it yourselves, you will need to apply for a relevant road closure, and the highways team may want you to supply a Risk Assessment and a Method Statement for how you intend to do the work. You can find examples of both of these online.
- Maintenance plan (it will be easiest for them if you are willing to sort out long term maintenance, and potentially fund it, e.g. an annual clean/biannual paint refresh, etc. paid for from your Residents Association/Community Partnership budget). You will need to detail that you will apply for road closures to carry out any maintenance yourselves.
- If you are using something like thermoplastics, or they insist in installing it themselves, you might offer to pay for their time to install it, or to use their framework contractors to install it. This will reassure them that the job will be done to a standard they accept.
- The more you can do to make it as easy as possible for your local authority, the more chances you have of them agreeing to an unusual request.

Skid resistance

You will need to know the skid resistance characteristics of any products you are planning on using (measured on wet surfaces, most commonly in 'PSV': polished stone value, or 'SRV': skid resistance value). Most suppliers will have this information to hand, so check with your local authority what value they require and check your chosen product is appropriate.

If it is not, consider changing your material. You could also add glass beads to your product to bring it up to standard, such as glass beads from Adbruf which

have been tested (to meet British Standard BS EN 1423) and have specification sheets you can send your local authority for confirmation: <http://www.adbruf.com/products/product-types/glass-beads/>

Maintenance

It is most likely that your local authority will not be able/willing to pay for the maintenance of your markings. Depending on the material, you may be able to refresh/maintain it yourselves (or pay for a contractor to do so).

If your local authority is happy for you to do some of the maintenance yourselves, you will want to produce a Maintenance Plan and Risk Assessment for the maintenance (they do not need to be onerous, the simpler the better!). There are often concerns around this regarding adoption liability so you may want to offer to do it 'informally' so that they are not expecting you to take any liability for the markings, but that you are offering to ensure they stay in good condition.

You will find that utility companies will not replace your pattern when they dig up parts of the road to install/maintain their utilities. Although they are obliged to replace 'like' with 'like', (and you could see if your local authority could store some spare thermoplastic markings for them to use in this event), it is most likely that you will need to reinstall it yourselves, so do be prepared for this.

Sustrans is the charity making it easier for people to walk and cycle. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Join us on our journey. www.sustrans.org.uk

© Sustrans July 2018
Registered Charity No. 326550 (England and Wales) SC039263 (Scotland)
VAT Registration No. 416740656