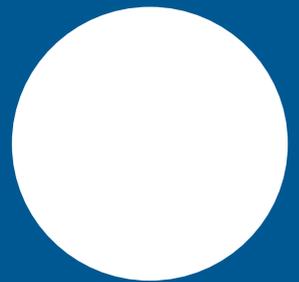


Traffic calming

with Lüft recycling systems



Lüft Recycling Systems

Sustainable product development for the design of effective traffic calming measures

With its plastic recycling systems, Lüft has been in the market for effective traffic calming since the end of the 1980s. Thanks to our years of experience, we have been able to continuously improve, expand and perfect the recycling systems – which is what we are still doing today.

Lüft has a comprehensive range of products that, either singly or in combination, are being used to effectively combat the day-to-day problems caused by ever-increasing traffic. What is more, this is being done with all the benefits offered by recycled plastic, a material made from secondary plastics:

- Environmentally sustainable
- UV and frost-resistant
- Robust with a long service life
- Maintenance-free
- Economical



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Lüft provides a modular system
of components offering
variable solutions for traffic
calming measures with
the following benefits:
Material made from
recycled plastics
Individual colour selection
Simple installation and dismantling
More safety through visibility



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- Safe road crossing
- Separation of opposing streams of traffic
- For speed reduction

Lüft island systems

With our variable modular island system, you can construct temporary or permanent traffic islands with widths from 800 mm to 2.50 m and above.

Traffic islands are generally delimited areas in the carriageway that cannot be driven over. They can be designed in a variety of ways, depending on their purpose and location.

Using a starter element and the appropriate rectangular element, it is possible to construct a wide range of variants of any length. You can benefit from the numerous possible applications of our island elements, which include crossing aids, lane dividers, central islands, side build-outs and many more.

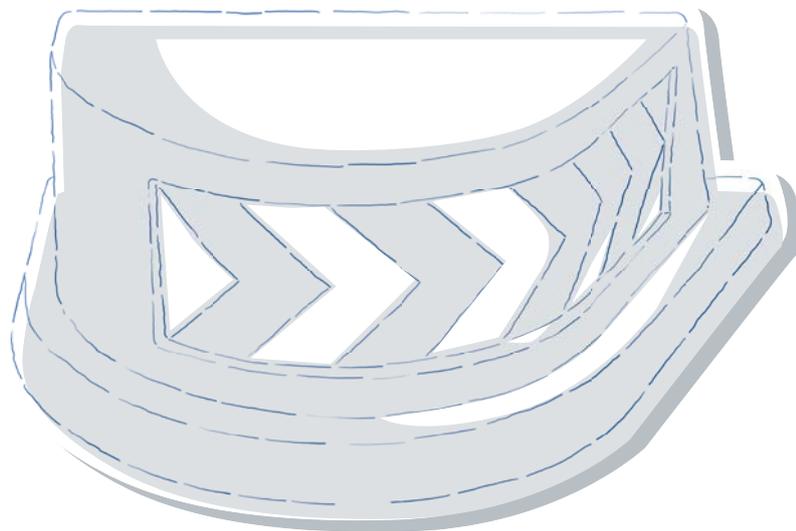
Lüft traffic islands are supported on the outside edge, thus allowing the incorporation of cross-falls and any irregularities in the carriageway.

Every Lüft island is bolted into the subsoil with four pre-installed ground anchors. Installing the elements is a simple matter that does not require any special tools or heavy equipment and can be carried out while the road remains open to traffic.



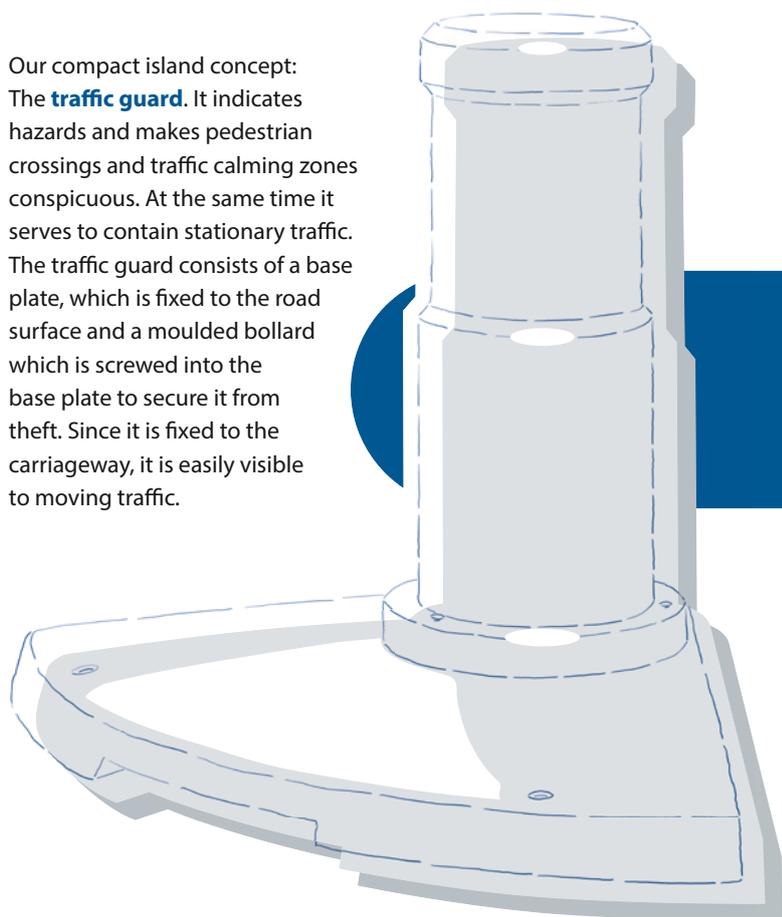
Suitable signage can be fixed directly to the element. A galvanised steel **clamping sleeve** is provided to mount a 60 mm dia signpost.

V2A **ground anchors** secure the Lüft systems against lateral movement. The anchors are supplied pre-installed which simplifies installation on site.



The **warning cap**, a plastic hollow body, gives the traffic island more height, forcing drivers to pay more attention and to drive carefully. Assembly is by simply sliding the unit on to the base. The warning cap is available in two sizes.

Our compact island concept: The **traffic guard**. It indicates hazards and makes pedestrian crossings and traffic calming zones conspicuous. At the same time it serves to contain stationary traffic. The traffic guard consists of a base plate, which is fixed to the road surface and a moulded bollard which is screwed into the base plate to secure it from theft. Since it is fixed to the carriageway, it is easily visible to moving traffic.



Pedestrian islands should have a minimum width of 1.60 m (length of a pushchair/pram), but preferably 2.00 – 2.50 m (length of a bicycle). Extract from HAV [Guidance for Installing Road Signs and Traffic Signals]

Traffic island as crossing aid

Traffic island types 1 and 2, quarter element and rectangular element, width 2.50 m

Signage: Warning column combination
VZ 222-20 dia 600 mm, warning column 160 x 800 mm



Lane dividers are extended traffic islands used on short stretches to separate traffic streams from one another. Extract from the BAST website [Federal Highway Research Institute]

Traffic island as lane divider

Traffic island types 1 and 2, round and rectangular element, width: 1.00 m

Signage: Warning column combination
VZ 222-20 dia 420 mm, warning column 160 x 550 mm



Traffic island as double-sided road narrowing (build-out)

Calming island type 1, passing on the left, type 2, passing on the right, and type 3, rectangular element, width: 800 mm

Starter element signage VZ 222-10 dia 600 mm combined with VZ 605-10 1000 x 250 mm and left-pointing warning cap



Traffic island with side narrowing

Calming island type 1, passing on the left and type 3, rectangular element, width: 800 mm

Signage: VZ 605-10/-20 1000 x 250 mm, double-sided



Deflector island type 1, passing on the left, width: 1.60 m

Red and white reflective edge

Signage: Traffic sign combination

VZ 222-10 dia 600 mm, VZ 605-10 1000 x 250 mm



Central traffic island

2x type 2 calming islands, passing on the right, plus type 3 rectangular element, width: 800 mm

Signage: Traffic sign combination

VZ 222-20 dia 420 mm, VZ 605-20 50/250 mm visually reinforced by a warning cap pointing right

Traffic guards as double-sided narrowing (pinch point/choke)

Base plate and moulded bollard dia 300 and 350 mm

The bollards are made from solid material. If the traffic guards are to support signage, the bollard is manufactured with a pre-drilled hole to receive the clamping sleeve.



- Separation of opposing streams of traffic
- Traffic management
- Improving road safety

Lüft traffic guide systems

The solid modular elements of the guide system are available in two lengths and two heights: The **guide element** with a height of 500 mm and the **lane delineator** with a height of 250 mm, each available in 1000 mm and 750 mm lengths.

The elements slot together and can be anchored to the carriageway through the base to prevent theft. The guide systems are made from solid material. The system is complemented by starter and end elements in the form of droppers. The guide system is particularly stable due to the special push-in connection and profile and can be flexibly constructed in sweeping elegant curves or extremely tight radii, depending on the location.

Guide systems can be used independently or as a supplement to traffic management systems. The guide system is used for directing traffic in the form of confinements (side build-outs), island solutions or roundabouts. The simple assembly of the guide system enables a rapid implementation of the traffic management measure.

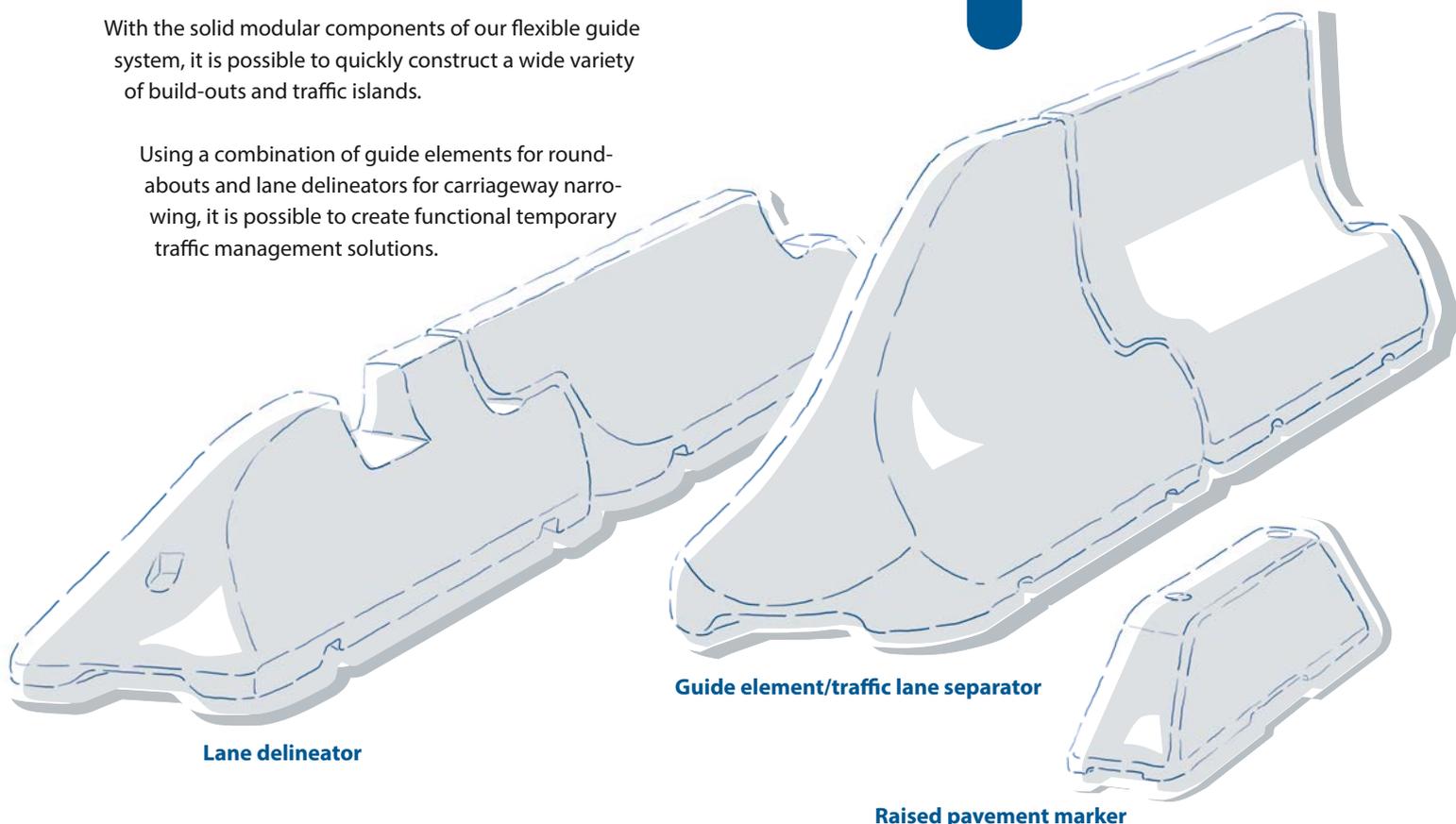
With the solid modular components of our flexible guide system, it is possible to quickly construct a wide variety of build-outs and traffic islands.

Using a combination of guide elements for roundabouts and lane delineators for carriageway narrowing, it is possible to create functional temporary traffic management solutions.

The Frankfurt Hat **raised pavement** marker and lane delineator (750 mm long and 150 mm high) is our sustainable product development for the protection of pedestrians and cyclists in the inner city area.

Unauthorised or inconsiderate driving and parking on pavements and cycle paths are thereby prevented.

With a width of 120 mm, it fits perfectly on the existing kerb and is screwed into the substrate with two special ground anchors.



Lane delineator

Guide element/traffic lane separator

Raised pavement marker

There is generally found to be a decline in accidents when road junctions are converted into roundabouts. Extract from RAST 06 [Guidelines for Urban Road Design]

Traffic guide systems for roundabouts

Guide element, height 500 mm, roundabout centre island
Guide separator, height 250 mm, used to provide lateral lane guidance



Guide systems as road narrowing device

Lane separator, height 250 mm, length 1.00 m + 750 mm starter and modules constructed to radius



Guide systems as lane separators

Wall element, height 500 mm, length 1.00 m, starter and end element
Additional equipment: Side reflectors for better visibility at night



Guide systems signage

Flexible reflective warning sign, 500 x 125 mm, pointing left or right, the perfect signage for the wall element. The retaining shoe is protected by being located in the pocket recessed into the separator element.
Tube mount, galvanised steel, tube diameter 60 mm for traffic separator and lane delineator
Signage suggestion: VZ 605, 500 x 250 mm for flexible attachment of signage



Guidance systems – Additional equipment

A specially designed fixing system allows the installation not only of customised signage, but also the mounting of handrails, fences and safety barriers.



Guidance systems – Lane delineator

Frankfurt Hat, height 150 mm, length 750 mm, clear demarcation between carriageway, cycle path or footpath

- Construction of plantable roundabout islands
- Design of junctions
- Construction of a wide variety of islands and lane dividers

Lüft plantable traffic islands

The plantable system with moulded units made from recycled plastic brings colourful solutions into the otherwise grey world of road traffic. The four different profiles of **planter retaining sections** are freely interchangeable, and when they are laid out with base plates enable the creation of all kinds of traffic islands as lane dividers, carriageway edging or as a roundabout. The modular concept ensures the creation of varied geometries to suit local conditions. When filled with the type of planting used on green roofs, the planted islands are virtually maintenance-free.

The creative possibilities in the identification and choice of plants are almost limitless. The plantable islands enable you to directly add natural, colourful and green features to the street scene in a sustainable way. Acceptance of the traffic calming measure is automatically increased merely by its attractive appearance.

The **planter retainer sections** rest on feet, the inboard base plates have a studded profile allowing surface water to flow through unhindered. The major advantage of the system is that the road drainage does not have to be altered, which enables a shorter installation time and less impact on traffic.



Retaining sections and base plates

The central island is structurally designed and can be delimited by a circular marking (Z. 295 wide stripe).
Extract from StVO [Road Traffic Regulations]

Plantable roundabout

Planter section **type 1**, length 1.00 m, height 500 mm
The Type 2 planter retainer section (length 500 mm) is used where the radius is < 11.50 m.



Plantable island as crossing aid

Planter retainer section **type 2**, length 500 mm
Type 3 radius block and **type 4**, 90° corner
Safe combination of planter sections and guide elements



Plantable island as single-sided road narrowing

Planter sections **types 2 and 4**
Yellow-coated planter section as design element



Plantable island as double-sided narrowing (pinch point)

Planter sections **types 1 and 4**
Dual function: Significant narrowing of carriageway, enhanced safety for pedestrian crossing



Plantable island as lane divider

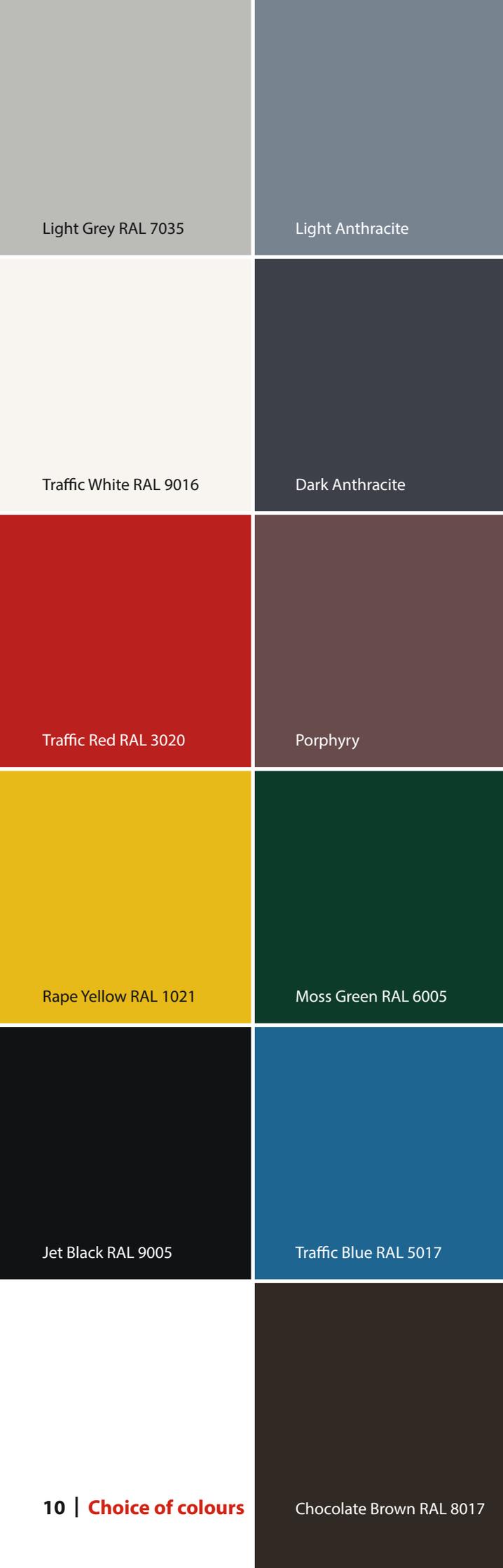
Planter sections **types 1, 2 and 4**
Plantable island adapted to local conditions



Plantable island with special dimensions

It is possible to construct practically any preferred island shape, thus perfectly adapting to local conditions and road traffic planning requirements.





Light Grey RAL 7035

Light Anthracite

Traffic White RAL 9016

Dark Anthracite

Traffic Red RAL 3020

Porphyry

Rape Yellow RAL 1021

Moss Green RAL 6005

Jet Black RAL 9005

Traffic Blue RAL 5017

10 | **Choice of colours**

Chocolate Brown RAL 8017

Individual colour selection

The manufacturing colour of recycled plastic is various shades of grey. The elements are colour coated to improve visibility and safety according to the order.

Lüft elements consist of 100% solid recycled plastic. Variations in the colour and dimensions may occur. Despite meticulous final inspection, typical production differences in the surface characteristics are sometimes unavoidable.

The coating of the Lüft elements is applied by the sustainable and very durable flame spraying process. For our recycled elements, we use a plastic powder that combines with the base material in a durable and extremely resilient way.

The standard surface colour of Lüft islands is Light Anthracite and the edge is coated in white reflective beads.

The straight sections of the guide system and planter sections are also coated in reflective beads.

Select your surface colour to suit the local conditions.

If requested, we can also supply the recycled elements with **reflectors** for better visibility at night.

Simple installation

Lüft elements are significantly lighter than concrete. That has significant benefits for transport costs, but even more for ease of installation. Most of the components can be installed by hand; as an option, the large island elements can be supplied with a lifting eye so that they can be installed on site in exactly the right place using a light crane.

All Lüft traffic products have their bearing surface on the outside edge, thus allowing irregularities in the carriageway to be taken up, as determined by the system. A safe bearing surface is achieved through the self-weight of the elements.

The recycled plastic elements are laid on the substrate, aligned and anchored against lateral movement. If needed, the elements can be dismantled equally quickly. The road surface remains largely intact.

The elements have recesses on their undersides, so that surface water can flow through them unhindered. Lüft products made from recycled plastics can be mechanically processed and if necessary, can be locally modified to adapt to the particular site conditions.



More safety through visibility

Glass ball reflector

360° reflection, 50 mm dia, 100 mm available as option

Material: Hardened glass

Use: Integrated in Lüft recycled plastic systems for **passive reflection**



Lüft LED reflector

360° reflection, 50 mm dia

Material: Plastic with integral solar cell

Use: Integrated in Lüft recycled plastic systems for **active reflection**



Lüft LED marker stud

120 x 110 x 20 mm, cast aluminium

Use: For traffic safety reasons we recommend marking all installed Lüft systems.

LED marker studs support marking and provide additional safety benefits.



Concepts Solutions Innovations

Traffic calming

- Recycled plastics systems
- Development – Manufacture – Distribution
- Consultancy and professional installation

Noise protection

- Green recycling wall made from recycled plastics
- Stonewall gabion wall
- Traditional noise protection

Signage

- Traffic signage
- Delivery – Installation – Construction supervision
- Competent service from a single source

Online shop

- Traffic engineering
- Parking space design
- www.lueft-shop.de

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