ACO EV Power Channel

Providing cross pavement transitions for electric vehicle cables

Cross pavement EV Cable management

What is ACO's EV Power Channel range?

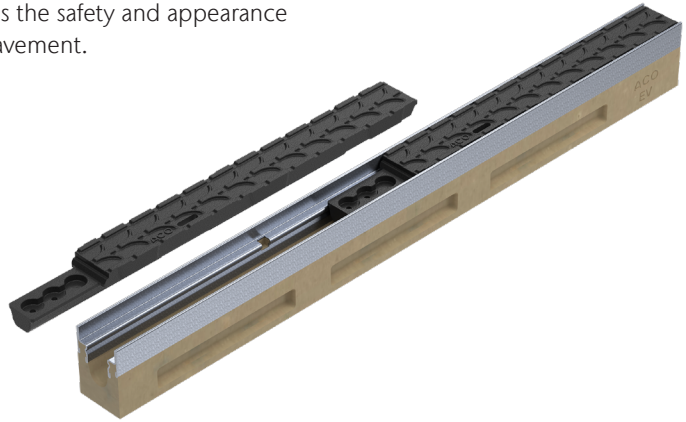
The ACO EV Power Channel range offers a safe and visually appealing solution for routing electric vehicle charging cables across public pavements and footpaths.

Designed specifically to minimise risk to pedestrians, the channel enables EV charging cables to cross pedestrian areas safely, without creating trip hazards. The system is engineered for frequent, everyday use; its connectable covers can be easily lifted using a dedicated lifting tool, providing clear access to the cable when required.

Once in place, the covers can be securely refitted by applying light foot pressure, restoring a flush, even surface that maintains the safety and appearance of the pavement.

Cross-Pavement EV Cable Management

The EV Power Channel can be installed with either a half-battered or bullnose kerb profile, ensuring seamless integration with existing street kerb lines. This design allows the EV charging cable to exit the channel on the road side, preventing obstructions on the footpath and maintaining unobstructed pedestrian access.

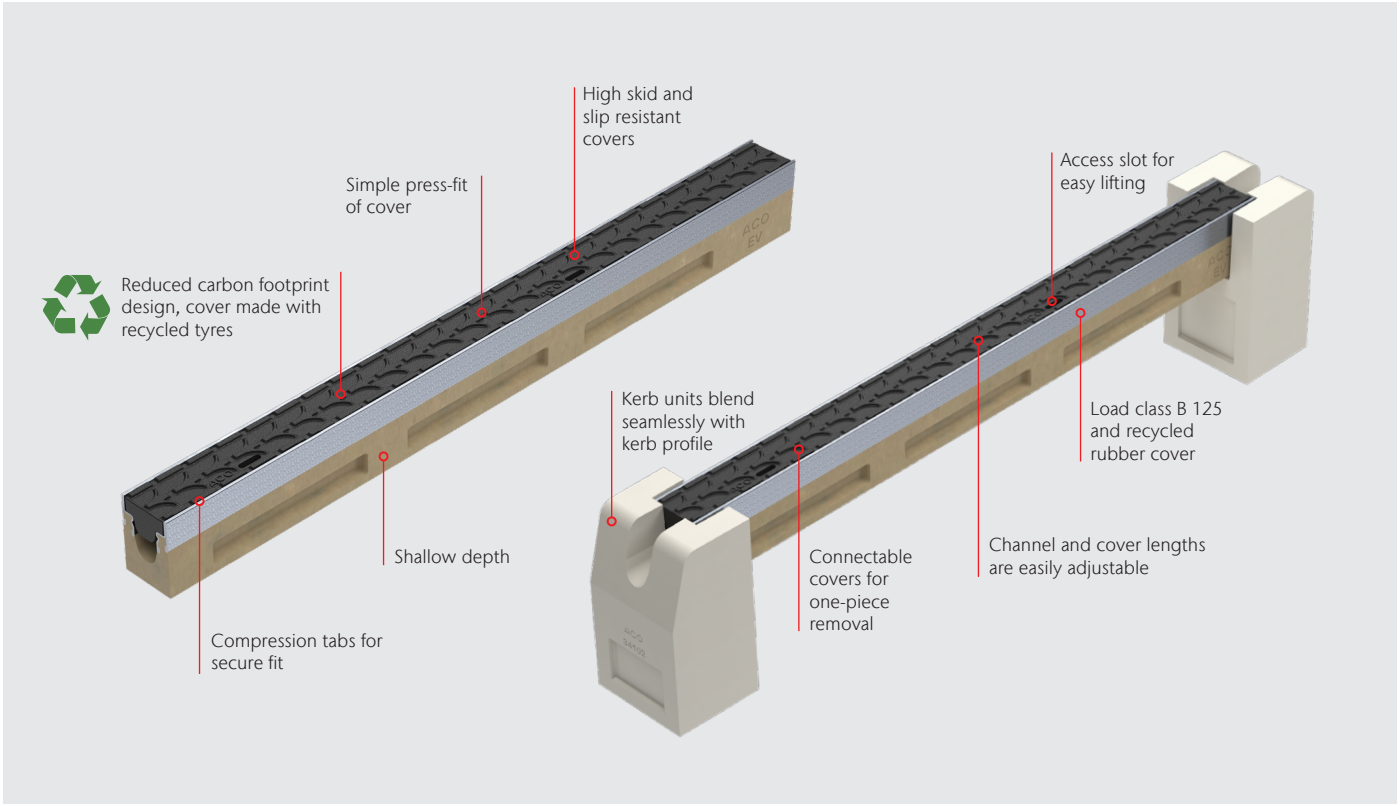


Why choose EV Power Channel

The ACO EV Power channel is manufactured from ACO's high strength polymer concrete which offers greater durability when compared to traditional plastic. The properties of the material allow virtually no water absorption giving protection against frost and freeze-thaw cycles, thus maintaining the long term performance of the unit.

The recycled rubber cover can be lifted as one piece, using a dedicated lifting tool, allowing safe removal from a standing position. Lightweight for ease of handling, the cover features side tabs to ensure a secure and precise fit within the channel.

Installation is quick and straightforward, with kerb units available and designed to maintain a consistent kerb profile along the street. Kerb units are available in both half-battered and bullnose profiles.




EV Cover Connection


Kerb System


Half Battered End Unit

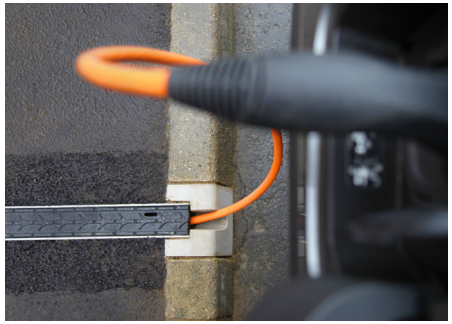

Bullnose End Unit

System benefits

- Shallow install height and minimal install requirements make installation quick and simple
- Kerbs available in half battered and bullnose to suit residential kerb profiles for seamless install
- Durable and long term performance
- Channels/covers can be cut to required length
- Easily replaceable covers
- Connectable covers create onepiece lifting
- Straightforward maintenance
- Additional space within channel to accommodate accidental debris entry without affecting function
- Tested and achieves Load class B 125, suitable for pavements
- 100% recyclable*

* Metal components are recyclable. Cover recyclable at recycling centres which process used tires, Polymer channel can be collected, processed and returned for re-use as a raw material.

EV Power Channel Features



Pattern and one-piece design

The EV Power Channel cover features a raised, tyre-tread-inspired surface pattern, reflecting the product's sustainable manufacture from recycled car tyres.

Manufactured from a lightweight yet flexible material, the cover is designed as a continuous unit, allowing it to be lifted and reinstalled as a single piece. The underside of the cover is weighted, enabling the cover to be easily pressed into its correct position and maintained flush with the surrounding surface.

Push-lock fitting

Secure cover installation is essential for safety and ease of use. To support regular operation by residents, the locking mechanism is integrated directly into the cover design rather than requiring additional fixings or secondary steps.

The ACO EV Power Channel incorporates a push-lock fitting system, achieved through precise tolerances between the channel body and integrated cover tabs, ensuring a secure and reliable fit once installed.

Skid and Slip

Cross-pavement EV cable channels should comply with skid and slip guidance as defined in EN 1433. This standard specifies surface up-stands in the range of 2–6 mm, covering between 10–70% of the total surface area.

These raised elements provide essential grip for pedestrian footwear, particularly in wet conditions, helping to reduce the risk of slips and falls. As pedestrian movement across pavements is not limited to a single direction, skid resistance should be assessed across all likely directions of travel.

The ACO EV Power Channel has been tested in perpendicular, longitudinal, and diagonal directions and delivers good skid and slip performance across all three orientations.

No Bend Cable Install

The channels enables EV charging cables to be installed and removed without bending fully. Using a dedicated lifting tool, the cover can be operated from a standing position, improving accessibility and avoiding contact with wet or contaminated pavement surfaces.

Kerb Finish

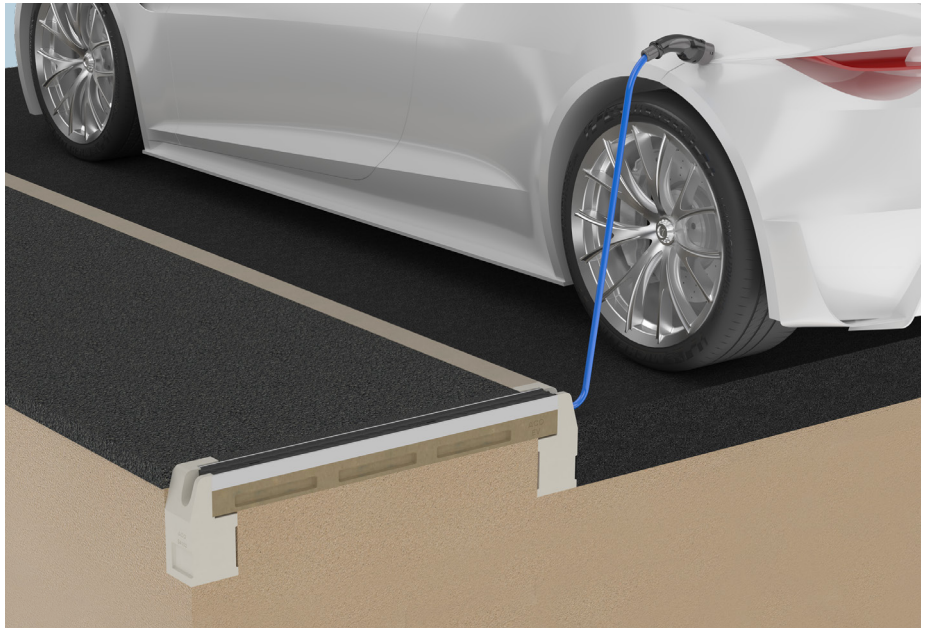
ACO's channel design is the only product on the UK market which has addressed the issue of re-instating the kerb profile.

Two profiles are available, half battered and bull nose. They can be bought as a pair and interchanged at either the road-side or resident side of the install depending on the profile required.

The half batter and bull nose kerb units specifically reinforce/protect the end of the channel at the kerb line, ensuring longer term performance/durability.

Quick and Easy Install

ACO's installation detail uses standard quick-set mortar and cold-lay asphalt, with no specialist materials or complex installation requirements. This simplifies installation while supporting consistent, compliant results for contractors.



Strength and Durability

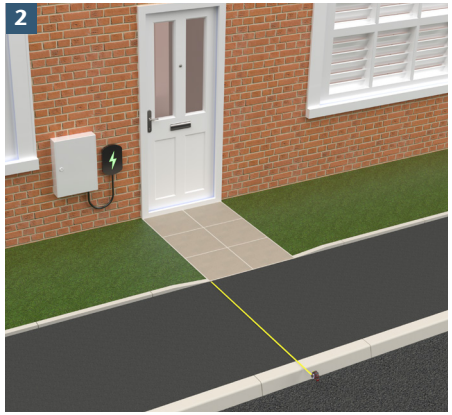
ACO EV Power Channels are manufactured from ACO's proven polymer concrete and edge rail technology, used in UK products such as MultiDrain for over 35 years.

The channel is designed to achieve Load Class B 125, meeting the requirements for pavement installations. Our quality standards combined with ACO's long-standing expertise in channel design, delivers reliable, high-quality performance.

Installation detail

Installations of cross footpath channels in public areas, need approval by local authorities (County/city councils) and Highways authorities.

Determine the best location for the channel, refering to government/electrical guidance.



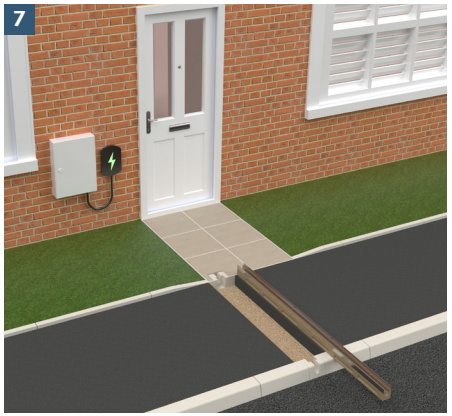
Measure the width of the pavement from resident to road (to the vertical of the HB kerbs).*

Mark out the cut lines, ensuring a straight line. The width of the cut should be 270mm. Using a disk cutter cut the asphalt layer, and remove with a hammer drill the in-fill to ~120mm (refer to installation details).

Mark the width of the kerb end units central to the cut lines.

Use a disc cutter to cut the kerb, and hammer drill to remove to 255mm deep. Inspect the base of the trench and compact if necessary.

Dry fit the front and back kerb ensuring a staight fit.



Align the channel in the installation and mark the length of channel that needs to be cut.

Cut the last channel to length (if the last channel will be less than 15cm consider cutting two channels equal amounts to avoid a small channel at the end).

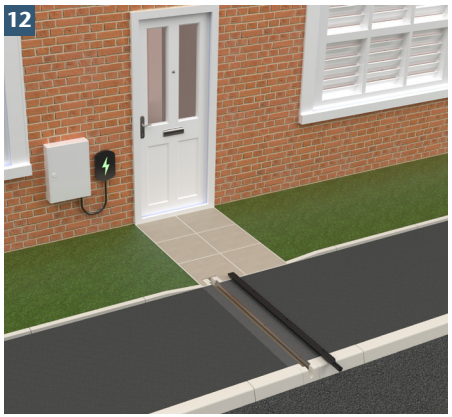
*The required length of channels is slightly less than this measurement as the channel sits within the end units by 50mm. The channel should line up with the residents property line (ie the kerb will straddle over the property line, or sit within it).

Scan the QR code to view the installation video

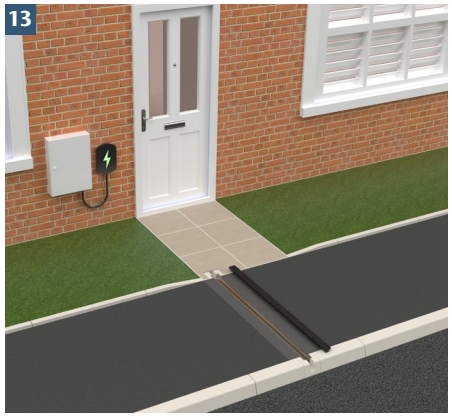
Lay the endcaps and channels on a bed of dry post mix, Heidelberg fast set postfix (or similar).

Prepare wet post mix and install channels and end units to the depth as shown in the installation details.

When the mix is firm to touch spray edges with Ultra crete Bitumen cold joint sealer and tack coat (avoiding spraying the top surface for a neat finish).

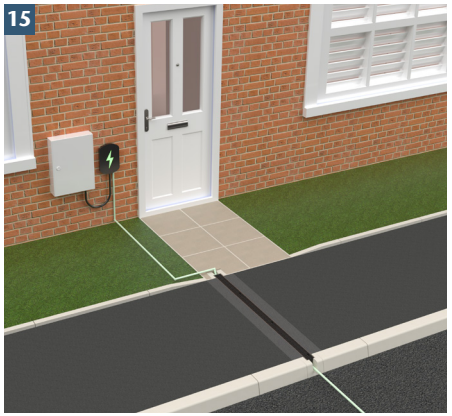


Use Ultra Crete Tough Patch Pothole repair (Dark Grey) for asphalt surfaces. Overfilling and compacting, to create a 0-3mm edge above the channel as per the install details.**



For a tidy finish we suggest applying a mortar mix around the end units.

Press together the recycled rubber covers male to female, and insert two bolts into the holes, hand tighten the bolts with an allen key, do not over tighten.



Align the covers within the channel, and mark the excess that needs to be cut off, ensuring the male end is removed (avoid cutting through the join of two covers, or the slot features). Carefully cut with a handsaw. Install cover and press flat into the channel.

- Simple cost effective installation
- Professional finished look of kerb units
- Cost effective and easy to use install materials
- Re-useable channel/rail off-cuts for the next installation
- Polymer concrete expands at the same rate as surrounding material – increasing longevity and performance

** Asphalt must be firmly compacted with vibration plate.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pod POINT

Installation detail continued

Ground conditions

The long term performance of a channel installation to sustain vertical and lateral loads depends upon:

A) Ground conditions
B) Stability of the adjacent pavement
C) A durable concrete bed and surround

The recommended installation detail may require the minimum dimensions to be revised to achieve site specific load class requirements.

Cutting and jointing

Shorter channel lengths are formed by cutting the channels to the required length and butting them together with an appropriate sealant if specified (e.g. Sikaflex 11FC or similar).

Best practice and workmanship

ACO can give guidance with respect to the most suitable methods of installation the EV Power channel products.

EV Power channels should be installed using acceptable levels of workmanship and according to the National Code of Practice (UK: BS8000: Part 14: 1989) in keeping with EN 1433:2002 (Drainage channels for vehicular and pedestrian areas).

For further information please contact our Design Services Team (technical@aco.co.uk) or the ACO website **www.aco.co.uk**

Technical guidance for install

The Office for Zero Emission Vehicles published their guidance on 'Cross-Pavement Solutions for Charging Electric Vehicles'. Cross-pavement solutions for charging electric vehicles: *www.gov.uk*

Cross-Footway solutions for electric vehicle infrastructure Considerations for London Boroughs - July 2025: *www.londoncouncils.gov.uk/news-and-press-releases/2025/electric-vehicle-revolution-hits-pavement-new-guidance-tackles-trip*

Energy Saving Trust offers online information for local authorities: *energysavingtrust.org.uk/advice/cross-pavement-charging-solutions/*

Local Government Technical Advisers Group (LFTAG) in it's report on EV charging on the public highway: *www.lgtag.com/news/lgtag-publishes-its-updated-residential-ev-charging-guidance/*

Guidance from your local council should be sourced - but as a general guidance

"The resident must ensure that at least one of the following electrical safety measures are installed at the property:
A modern PME (Protective Multiple Earth) compatible EV charger with an 'O-PEN' protection device. The council will need to see an electrical safety certificate, provided by the charger installer. The Licensee will also need to carry out periodic electrical safety inspections on the EV charger equipment to comply with BS 7671.
An 'earth rod' within the property boundaries. This is because many UK properties have a PME system which do not necessarily provide adequate protection when a charging cable is run from a home into the public domain where earth voltages may differ. The council will need to see a letter or email from an electrician to confirm the installation."

Source: Cross-footway solutions for electric vehicle infrastructure –considerations for London Boroughs

Channel will not be installed within 2.5m of an electrical installation on the footway.

The information provided here is for general guidance and informational purposes only. While we endeavor to keep the information up to date and correct, it may not reflect the most recent developments. Users should verify any information from government guidance before relying on it.

Vandalism

The EV Power channel has a flexible recycled rubber cover. Which has no intrinsic scrap value, which deters thieves.

The covers are a light weight slightly flexible material (recycled tyre rubber). They are not brittle and not prone to damage from vandalism impact.

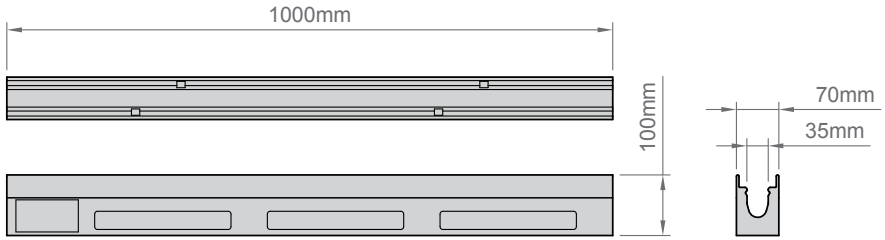
Channels/kerbs are embedded in the surrounding installation due to deep anchors, making it impossible to manually lift or vandalise the channels.

Note: Installation can only be conducted by authorised contractors in accordance with authority guidelines and safety standards, installation by residents/non-approved contractors is prohibited.

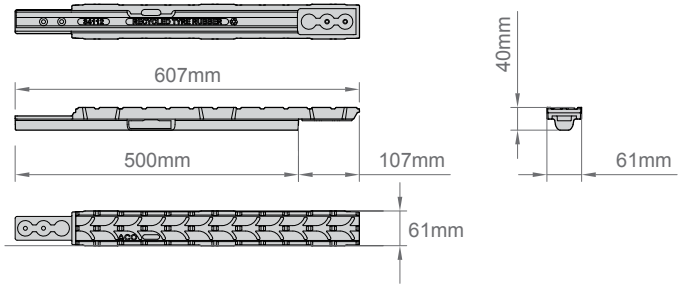
Technical details

Product Code	Description	Length [mm]	Width [mm]	Depth [mm]	Invert Depth [mm]	Weight [kg]
ACO EV Power Channel						
34104	ACO EV Power Channel galvanised rail, 1000mm	1000	70	100	70	9.0
34112	ACO EV Power Channel cover black 500mm	500	61.5	21	n/a	0.9
34110	ACO EV Power Channel HB & BN start/end units*	150**	126**	255**	n/a	8.7/9.1
34121	ACO M6 Bolts SS, bag of 30 (fifteen cover connections)	30	n/a	n/a	n/a	0.2
1367	Drainlock grating lifting tool	400	150	6	n/a	0.2

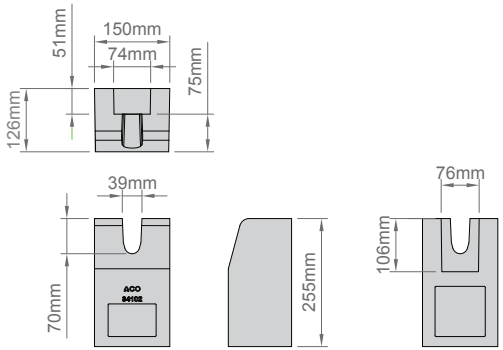
EV Power Channel galvanised rail



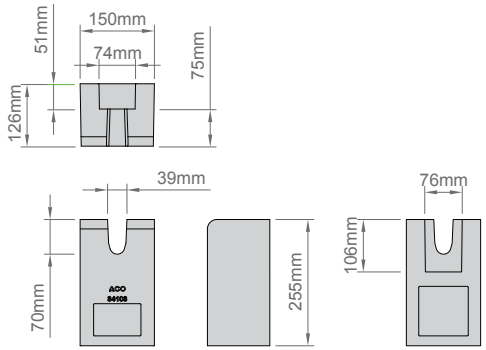
EV Power Channel cover black



EV Power Channel half-battered end unit



EV Power Channel bullnose end unit



Note: Two covers are required per 1m of channel. Stainless Steel 304 railed channels are available by special order (lead times apply), please enquire.

* Two units, interchangeable with either end of channel run to suit kerb profile ** Size per unit

Materials and maintenance

In some areas EV users without off-street parking have been converting their front gardens into driveways. The installation of cross-pavement solutions can prevent the need for doing so, protecting urban green spaces.

Material

Polymer concrete

- **Chemical resistant**
  High resistance to dilute acids and alkalis and is unaffected by road salt, fuel, and other commonly encountered chemicals. Further details of the chemical resisance can be obtained from the ACO Water Management Design Services team
- **Resistance to freeze and thaw**
- **Temperature resistance**
  Not exceeding 80°C

Steel rail

- **Corrosion resistant**
  Galvanised steel has a zinc coating which provides high resistance to corrosion
- **Proven robust design**
  Rails have been used within ACO channels for over 40 years in the UK, and have proven robust performance
- **Bonded construction**
  Rails are bonded within the polymer concrete during the manufacturing phase
- **Recycled content**
  Typically steel products contain 25-33% recycled steel

Rubber cover

- **Recycled rubber**
  Rubber crumb is 100% used tire recycled content
- **100% recyclable**
  Recycled at recycling centres which process used tires
- **UV stable**
  Covers are made from recycled rubber and the material is very UV stable
- **Carbon footprint**
  The ACO EV Power channel cover is manufactured with recycled rubber, which has 84% less embedded carbon than virgin synthetic SBR rubber. The process for manufacturing the rubber covers and incorporating recycled material results reduces the energy consumed, as there is a 70% energy saving with the manufacture of recycled tyre rubber compared to virgin rubber. (Source: WRI and ETRMA).
- **Resistance to freeze and thaw**
- **Temperature resistance**
  -20 / + 70 degrees C
- **Skid and slip**
  High skid and slip resistance in three directions of travel

Maintenance

Maintenance

- Design promotes water to drain off the cover
- Any water that enters the channel will drain to the roadside
- Debris can be easily swept out of the channel
- Rails can be completely cleaned, i.e. debris and stones can easily be removed compared to hinged systems

Replacement covers

- Covers can be easily replaced without any costly remediation of the channel
- Replacement covers available from ACO's e-commerce site. Quick and easy replacement for customers rather than needing to go through the council
- No moveable parts improving durability and reducing maintenance

Channel durability

- B 125, which is the requirement for pavements under BS EN 1433
- Over 40 years proven performance of the polymer channel with steel rails
- No moveable parts giving superior durability compared to integral hinged designs

Specification clause

The cross footpath system shall be ACO EV Power Channel as supplied by ACO Technologies plc; all materials and components within the scope of this cross footpath system shall be obtained from this manufacturer.

The system shall be of 70mm external width, manufactured in polymer concrete, ACO's sustainable high strength material with cast-in galvanised steel edge rails.

The channels shall be installed with manufacturer's recycled rubber cover, with side securing tabs.

The system shall be installed in accordance with the manufacturer's printed instructions, and the work carried out in accordance with recognised good practice. Standards of workmanship shall generally be as specified in **BS EN 752** and **BS 8000:Part 14:1989**.

General information

ACO products are subject to weight and dimensional tolerances. The weights and dimensions shown in this document are for guidance purposes only. ACO products are made from naturally occurring materials and may be subject to variations in colour, texture and marking. These aesthetic variations do not affect the performance or functionality of our Goods. The appearance of products shown in our company documentation are for illustration purposes only.

Conformity

The EV Power channel has been tested in accordance with footways as per guidance, and the channel has an equivalent load class rating of B 125. Which, when installed according to our installation details, will withstand the loading of light commercial vehicles that may ride on the pavement.

ACO EV Power channel is manufactured in our UK factory in Shefford under a quality and compliance framework that ensures consistent performance, safety, and adherence to UK and EU regulations. This framework is supported by internationally recognized standards, independent testing, and full traceability across the production process.

Quality Management and ISO Compliance

ACO Technologies plc operates under a certified Integrated Management System, including:

- BS EN ISO 9001:2015 Quality Management
- BS EN ISO 14001:2015 Environmental Management
- BS ISO 45001:2018 Occupational Health & Safety
- BS PAS 99:2012 Integrated Management System

Liability and Guarantee

ACO is the manufacturer/supplier of the EV Power channel, and this unit is covered by our standard terms and agreements. They are covered by our standard guarantee (details can be found at the back of our Civils and Infrastructure Product guide, or can be found at the end of any or our quotes).

Any licensing or permetting will be controled by the descression of the council or authorised body and will be between themselves and the resident only.

Councils have taken different approaches to licensing. One example is Norfolk County Council, where permission is granted:

- Applicants need to provide an electrical safety certificate for their property and confirm that a RCD is installed.
- It is given to an individual but there is not a restriction on other residents using the trailing cable.
- Legal advice has indicated that liability sits with the resident and their insurer.
- This is a time conditional permission

The Office for Zero Emission Vehicles published their guidance on 'Cross-Pavement Solutions for Charging Electric Vehicles'.

This document goes into further details about ownership models. The EV Power Channel would fall under Model 1 -Local authority owned.

'The local authority owns the cross-pavement solution and is responsible for installation and maintenance. The resident will then pay an up-front one-off fee or an ongoing subscription to use it.'

Source: Cross-pavement solutions for charging electric vehicles - GOV.UK

It will be the resident's responsibility as the licensee to ensure that the cable is laid completely flat within the footway channel whilst it is being used. Except when the charger cable is being inserted or removed, the lid of the footway channel must be always laid flat to prevent potential trip hazards on the footway

Usually the Licensee will have to indemnify the council against any claim for injury, damage, loss or thirdparty claim in respect of the on-going use of the footway channel (this is usually covered as part of the insurance for an EV).

Note: When using these guidelines, always refer to the relevant official website for the latest approved document, as content may be updated periodically.

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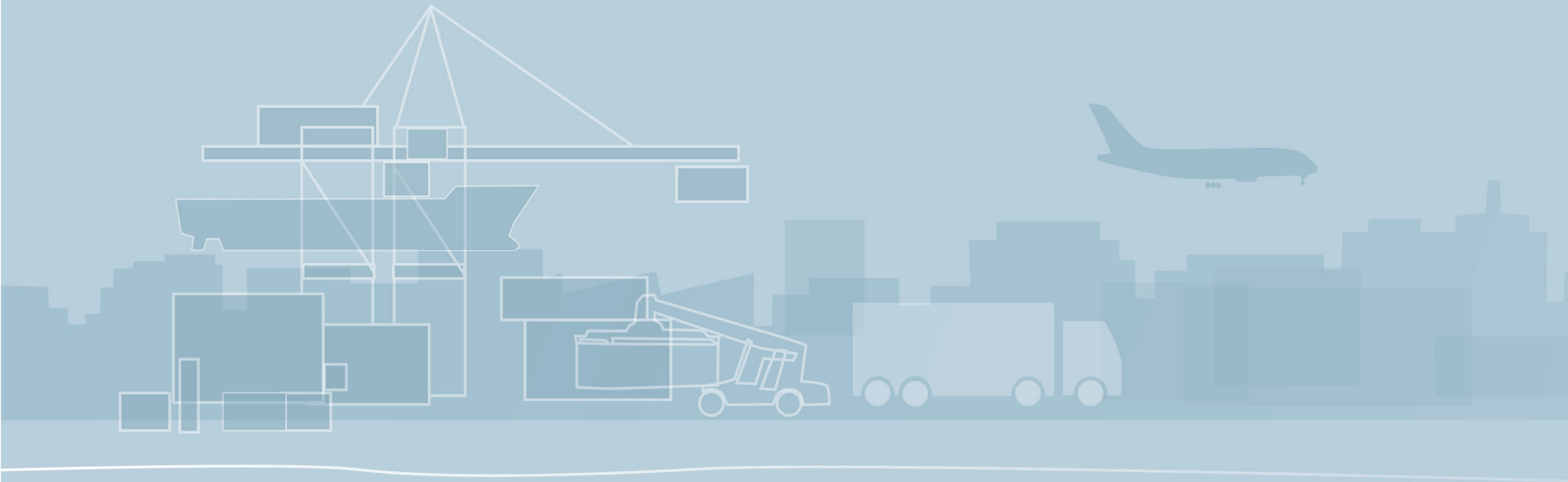

Every product from ACO Water Management supports the ACO WaterCycle

ACO Water Management

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