

**Renault  
Group**



**Charging station for customers**

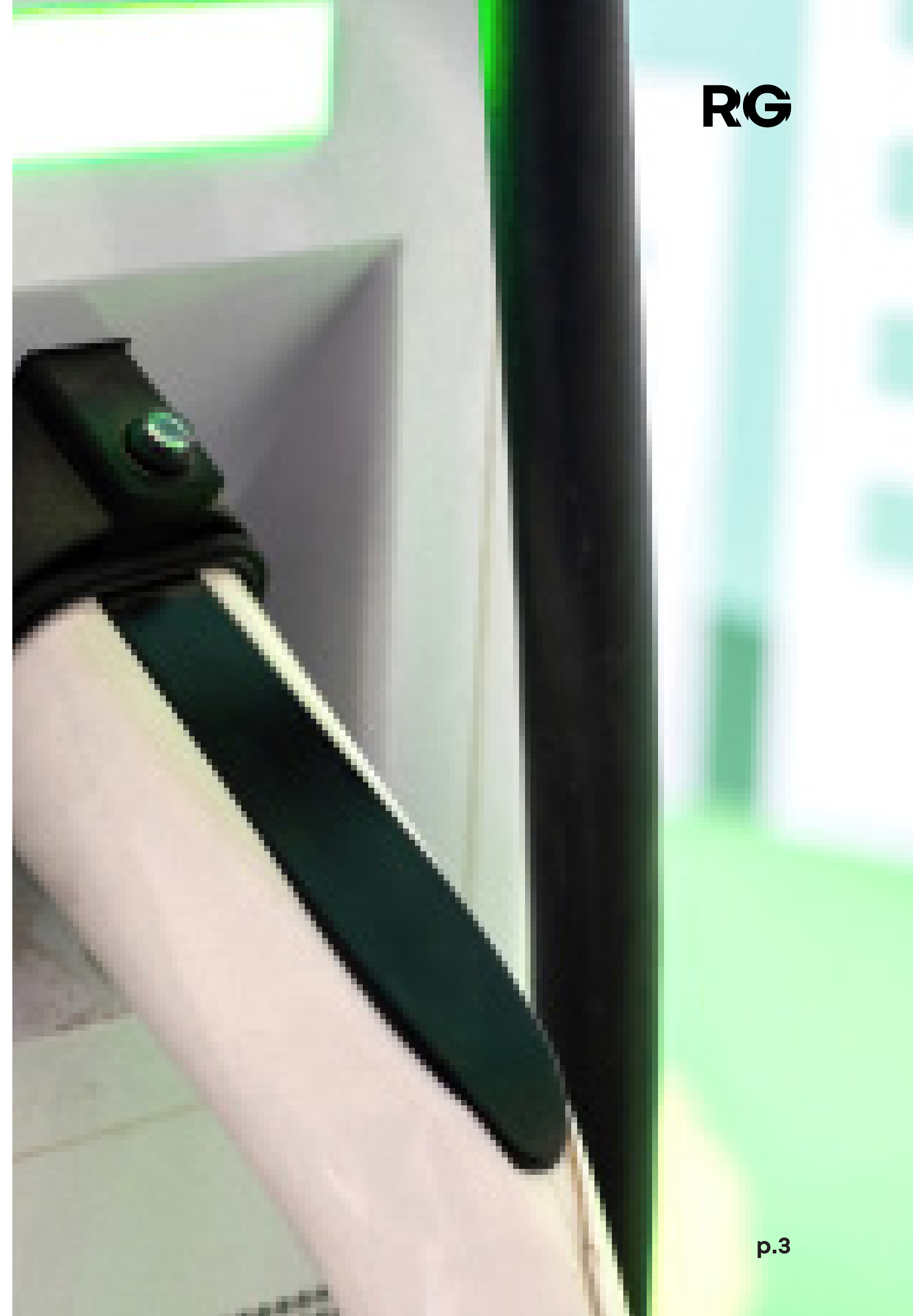
JULY 2023 - V6.e

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# 01

## General principles



## 01.1 - Preamble

Developments in the market for plug-in hybrid and 100% electric vehicles are driving new activity in the sales network.

In order to provide a service in line with customer expectations, the Renault network is **providing 24/7 access to an easy-to-access recharging offer - of at least 22 kW (AC or DC), connected with a payment solution - for customers.**

The charging station can be located inside or outside the site, depending on road access, customer flows, the proximity of technical areas or the power supply network. Depending on the location of the site, access to the charging station may be free or secure.

It is advisable to consider all solutions that guarantee permanent access to the recharging station for customers, including anticipation.

changes in capacity, in order to rationalise the investment required (works and organisation of parking spaces).



## 01.2 - The recharging station for customers

A Renault dealership must have at least one charging point accessible 24 hours a day, 7 days a week (\*), connected and monitored remotely with a payment solution and with a minimum output of 22 kWh AC or DC, in compliance with the E-Tech Guide available on Renault Net.

(\* The obligation to have access 24 hours a day and 7 days a week may be waived, but this exception may only apply in the cases listed below, and subject to prior validation by Renault:

- Local regulations or local authority bans.
- Technical incompatibility or clear safety risks.
- If the total installation costs (charging point + fittings) associated with setting up 24/7 access to the charging point generate costs that are more than 2.5 times the costs of average national market installation costs for an equivalent recharging point due to local constraints.

### Scope of application:

- Website selling new vehicles.
- After-sales site.

Implementation can be pooled with other work (such as Care Service 24/7) to optimise costs.

Mobilize Power Solution's local teams are at your disposal for any studies you may have on the installation of a recharging point.



Example of a 22kW charging point  
non-contractual image

# 01.3 - Recharging station requirements for customers

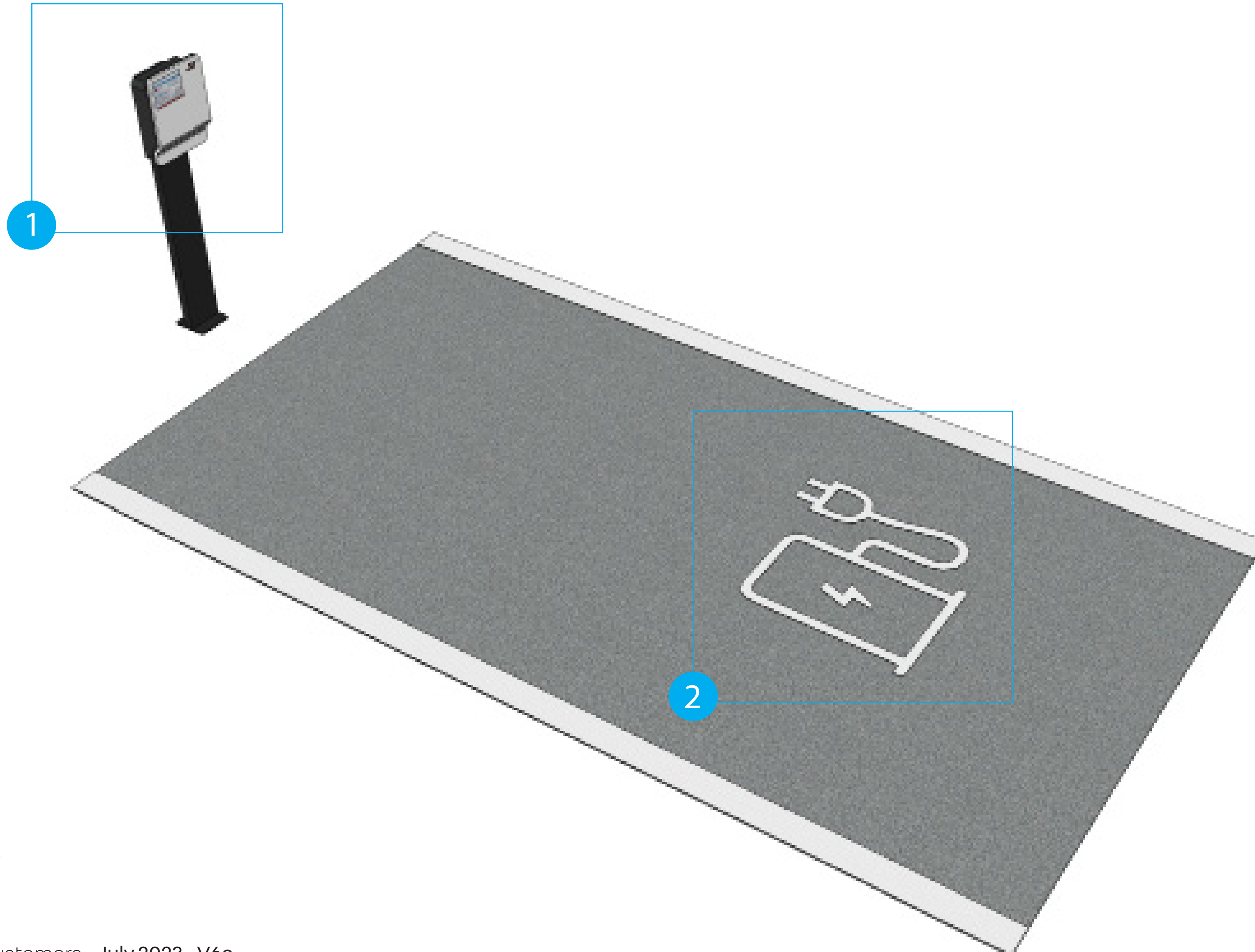
	Off-site charging station	Charging station inside the site
Dedicated to customers	●	●
Accessible 24 hours a day, 7 days a week	●	○
Minimum power of 22kW AC or DC	●	●
Identifiable and signposted	●	●
Accessible (at least unlockable via Mobilize Charge Pass)	●	●
Connected	●	●
With payment solution	●	●
Remotely monitored	●	○
Recharging Renault Group vehicles	●	●

● required  
○ optional

## 01.4 - The recharging point

Minimum requirements:

1. 22kW terminal\*
2. road markings



\*Example of a 22kW charging point  
non-contractual image

## 01.5 - Road markings

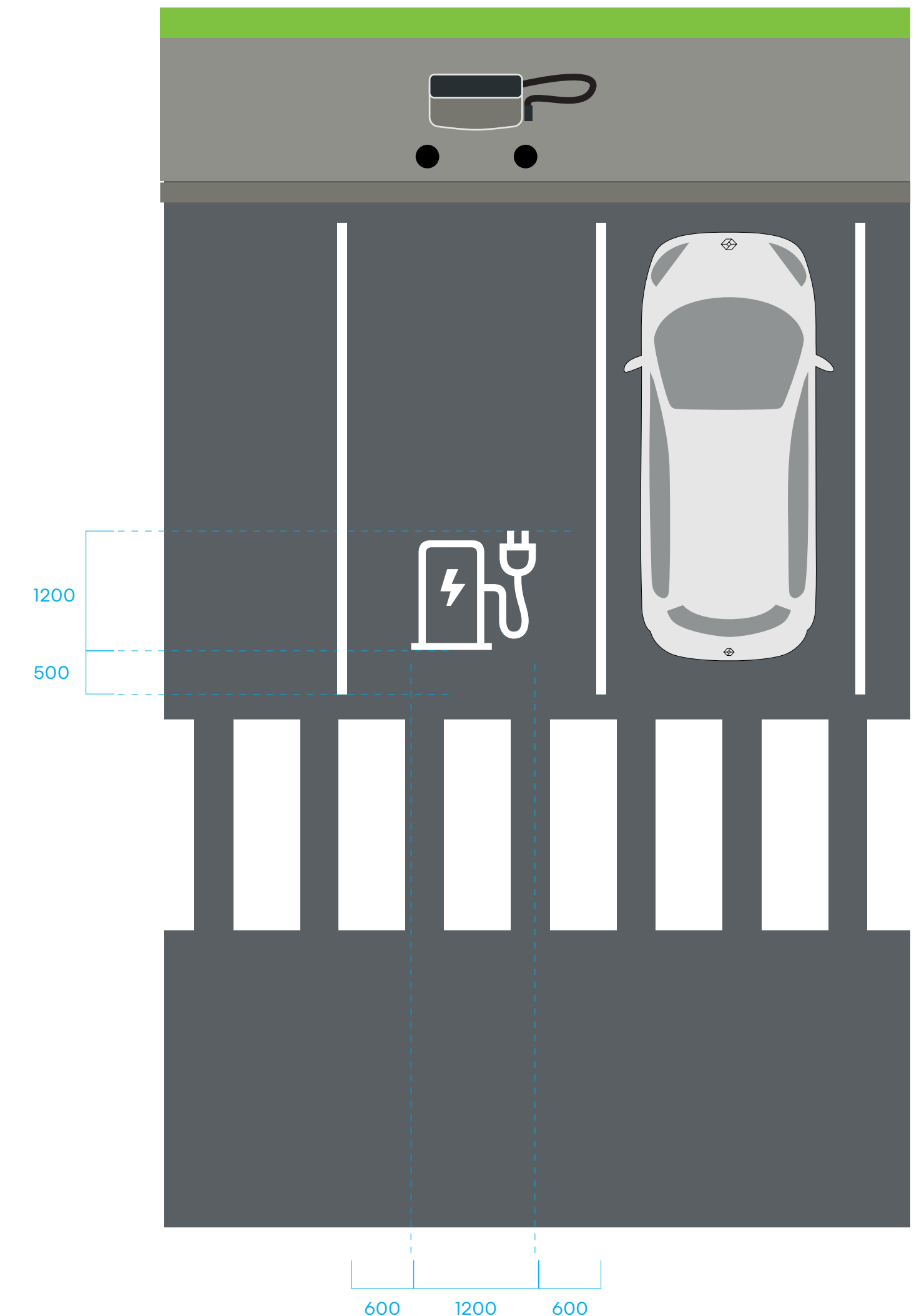
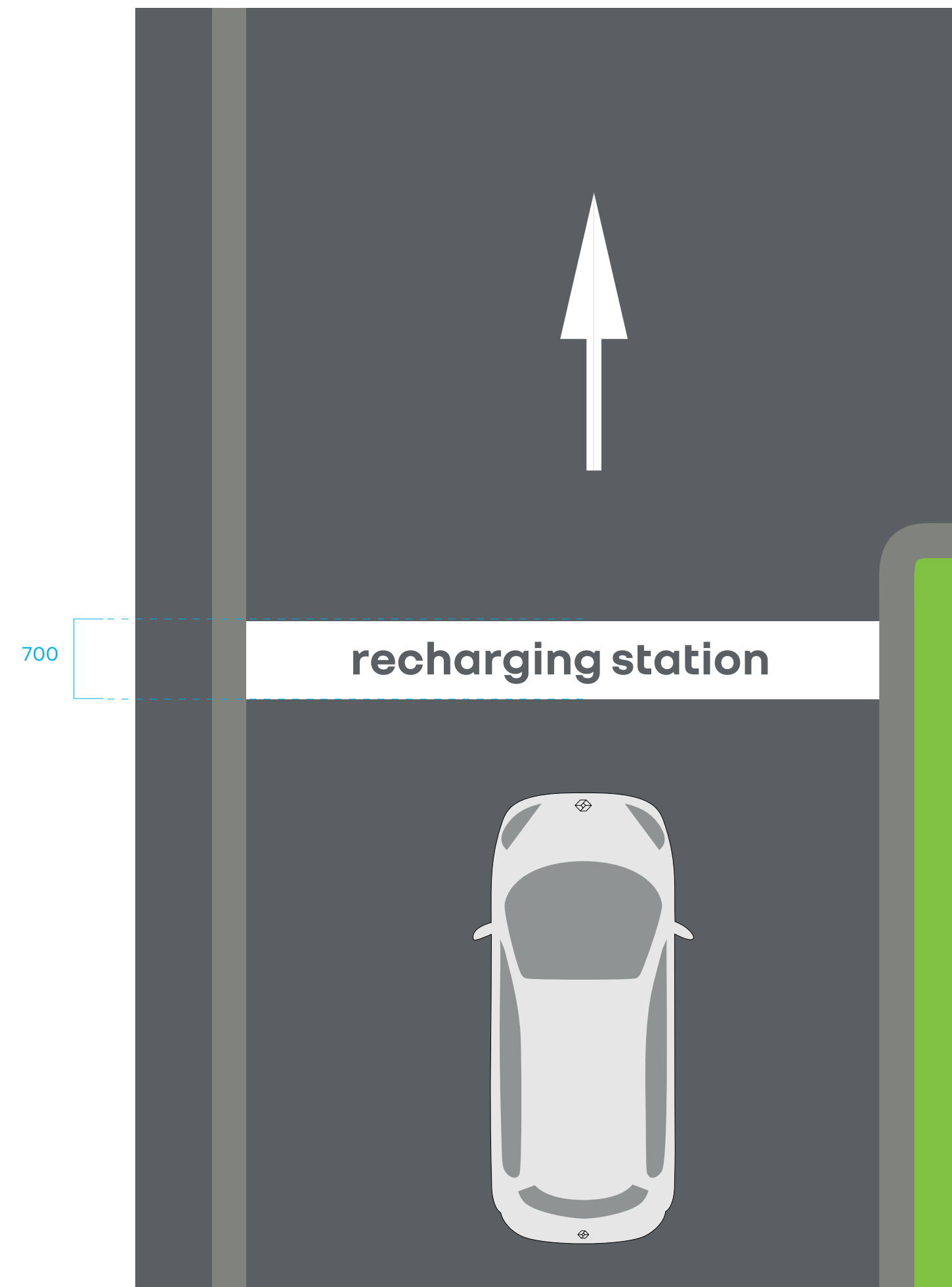
### Marking at the entrance to the charging station

The marking is stencilled or overprinted in grey epoxy RAL 7021 on a white RAL 9003 background.

### Marking the recharging area

the recharging area is identified by the recharging pictogram available from Renault Group Brandhub <https://www.brandhub.groupe.renault.com/brands/renault-group/core-elements-1/icons-maps>

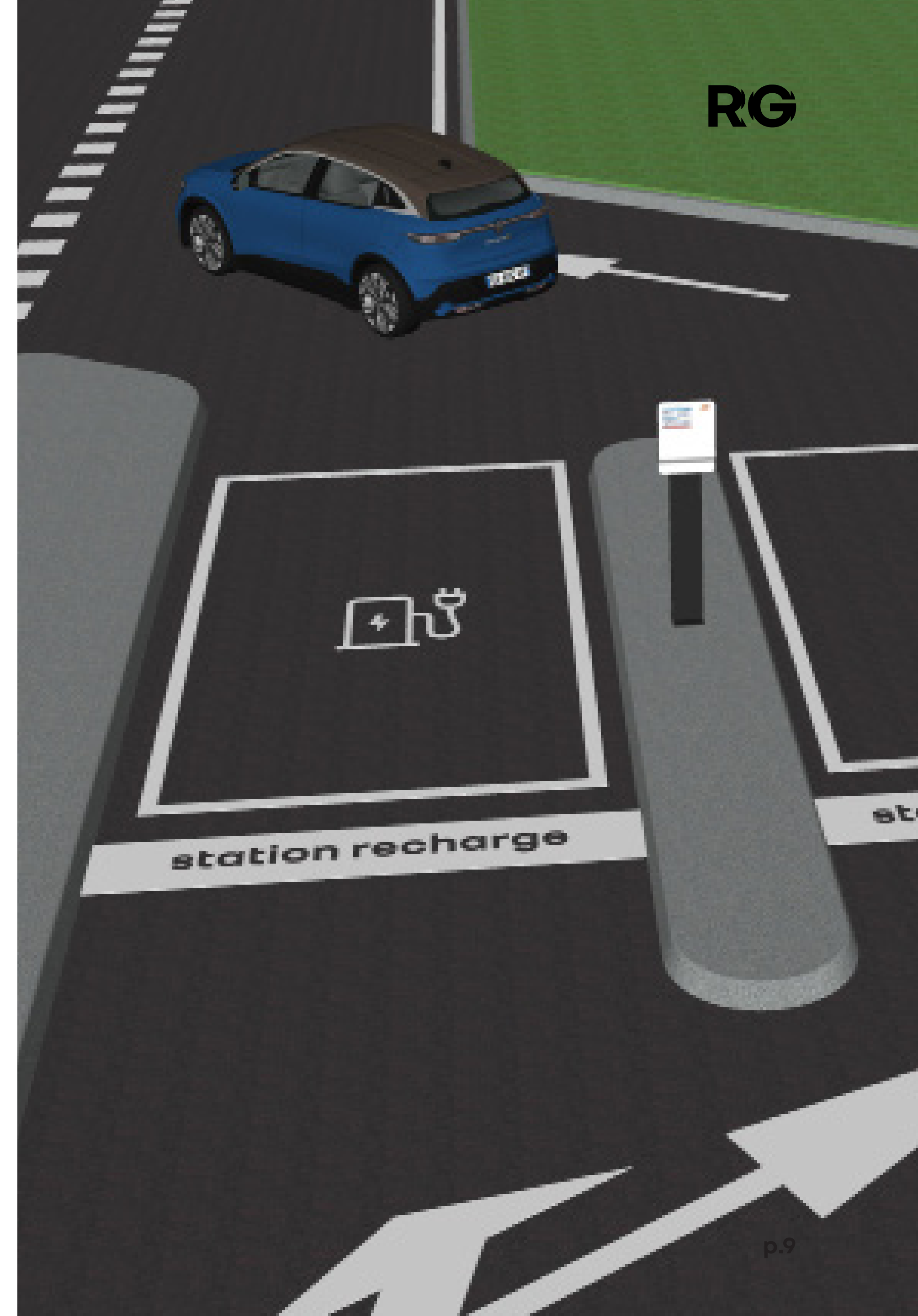
The pictogram is in white epoxy RAL 9003.



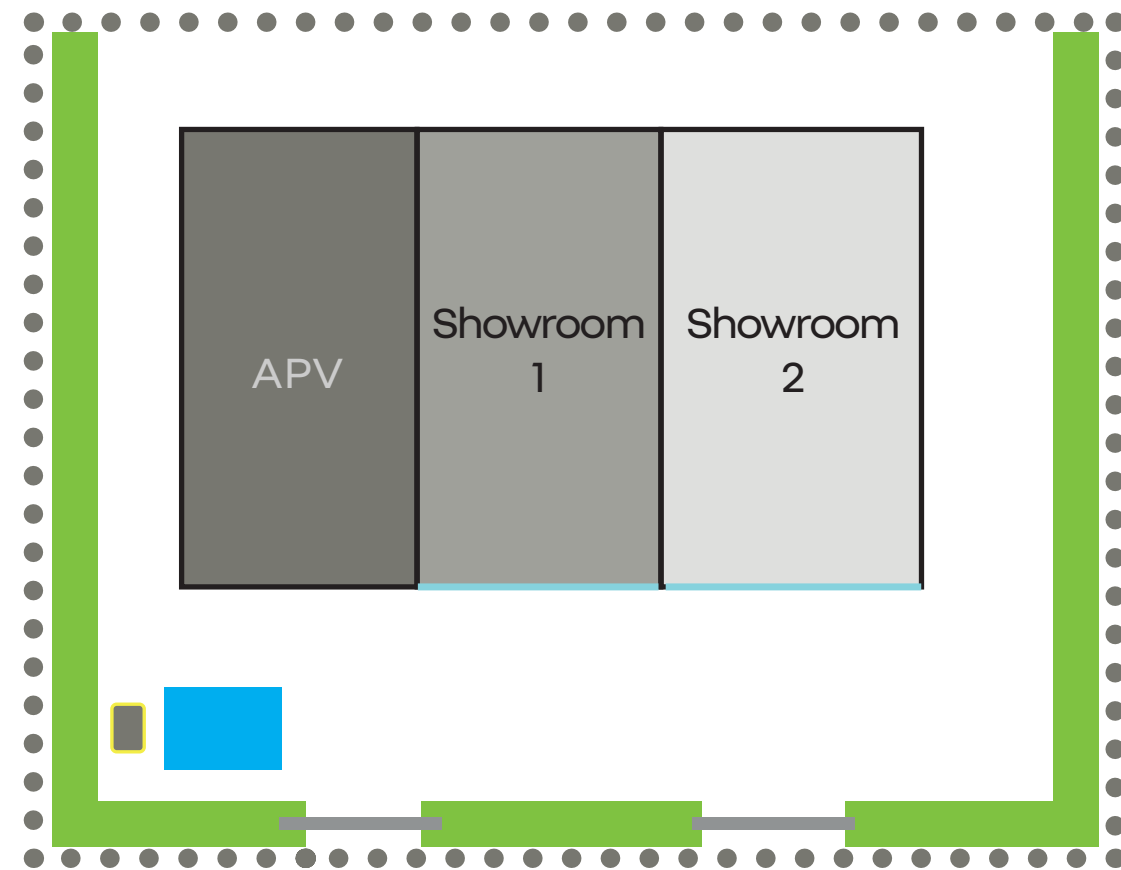


# 02

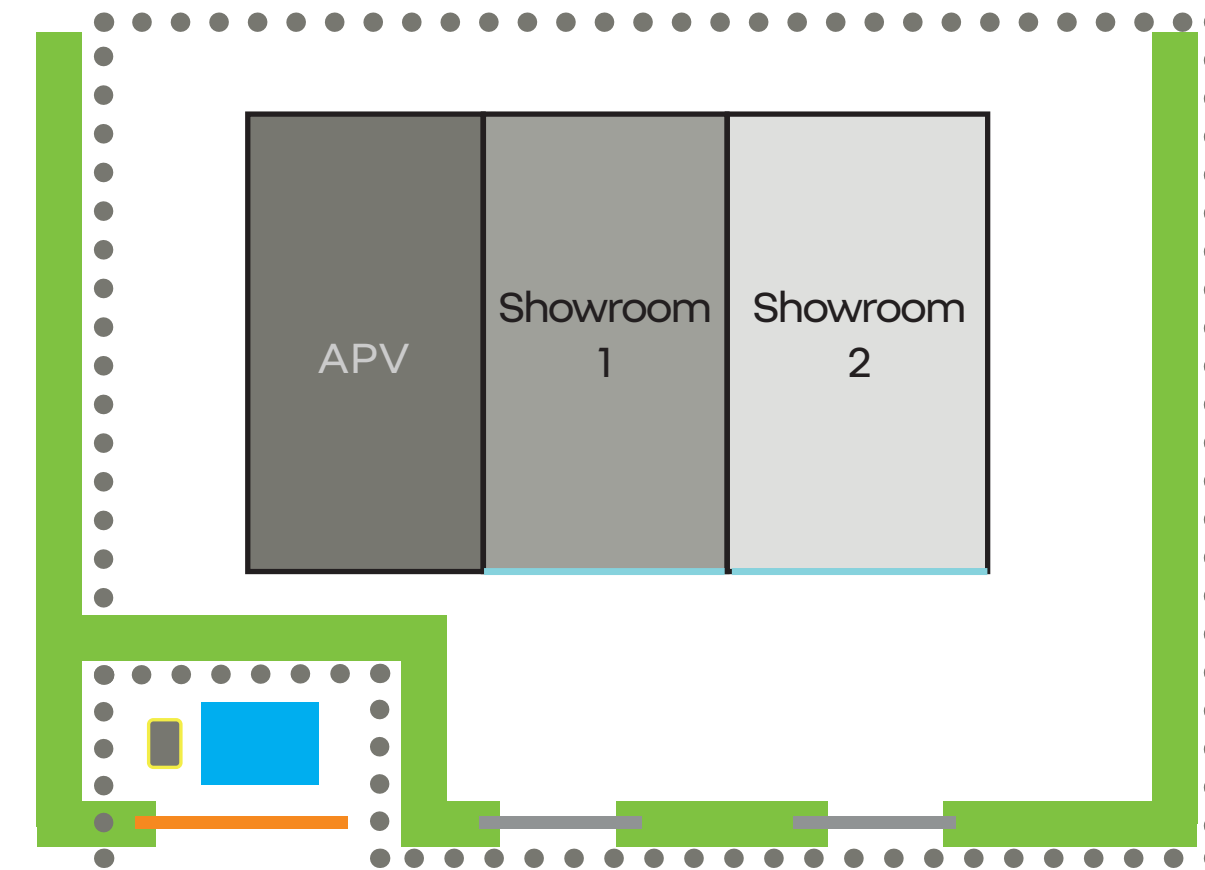
## Location principle for the recharging station



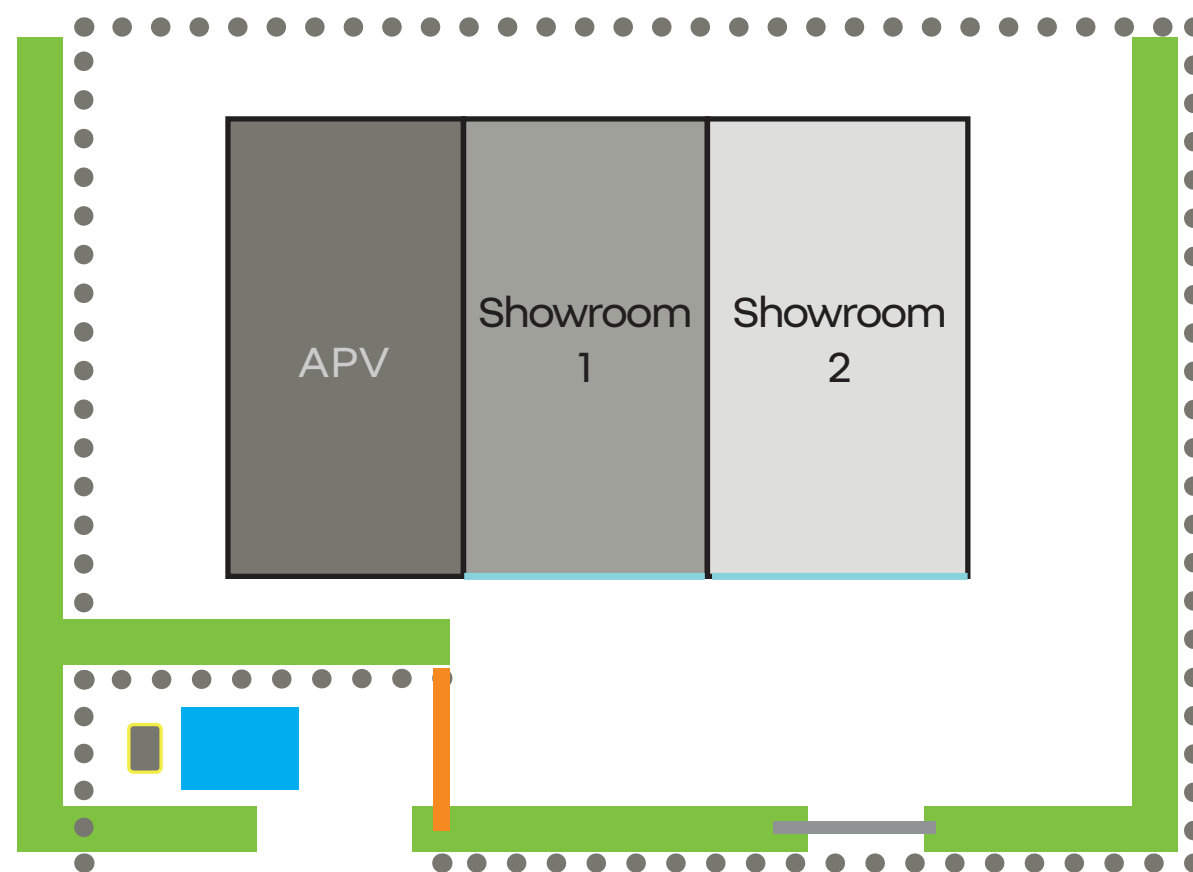
## 02.1 - Customer charging station location principle



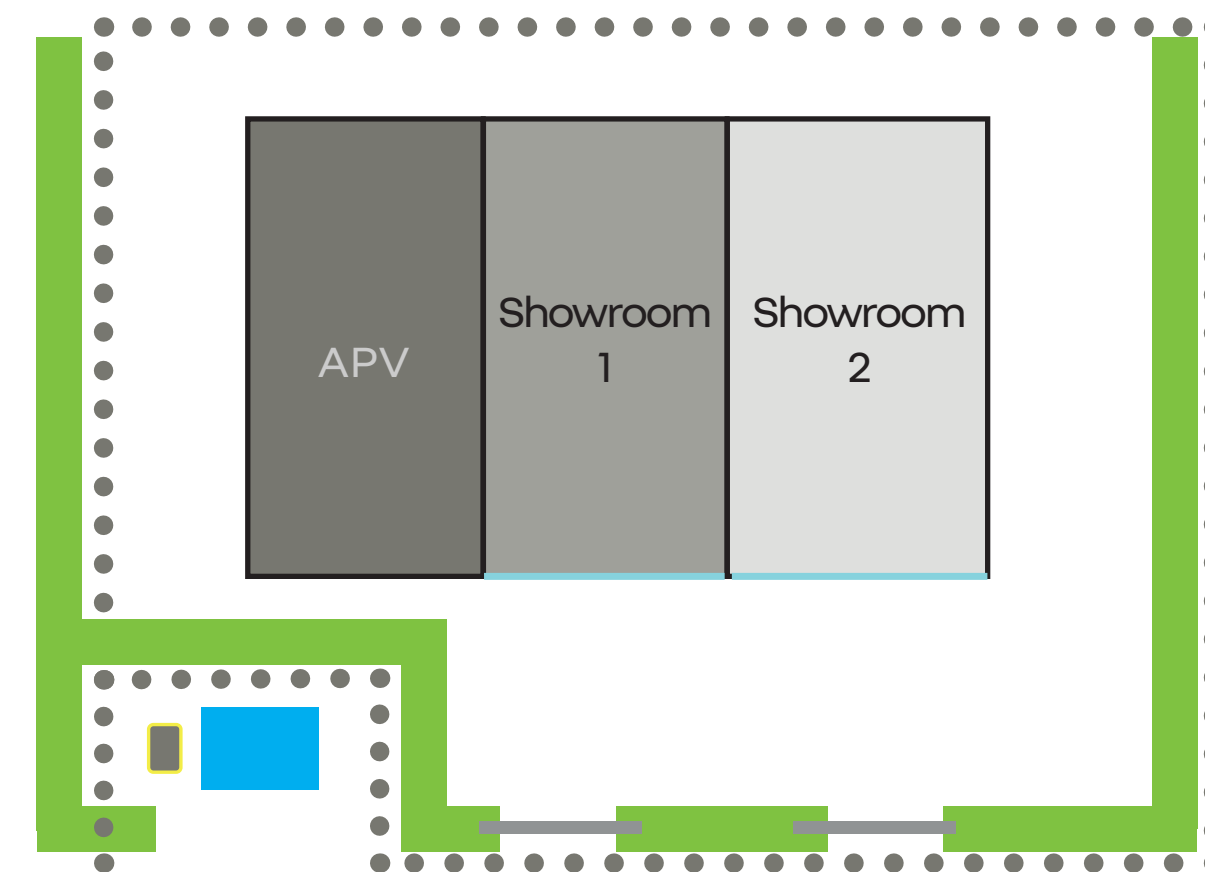
- Charging station
- Inside the concession
- Access to dealership opening hours



- Charging station
- Outside the concession
- 24/7 access
- Secure entrance



- Charging station
- Inside the concession
- Access to opening hours
- Secure entrance



- Charging station
- Outside the concession
- Free access 24/7

## 02.2.1 - Operation of the off-site customer recharging station

### Principle

the charging station is accessible to users of electrified vehicles.

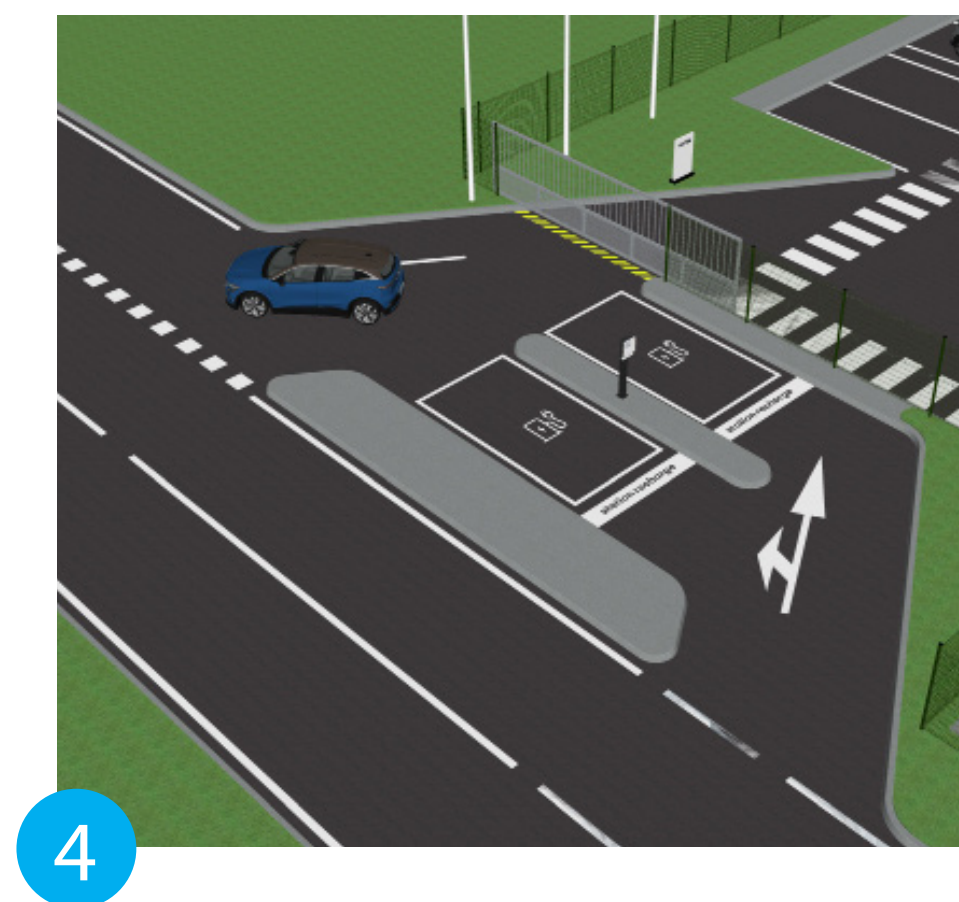
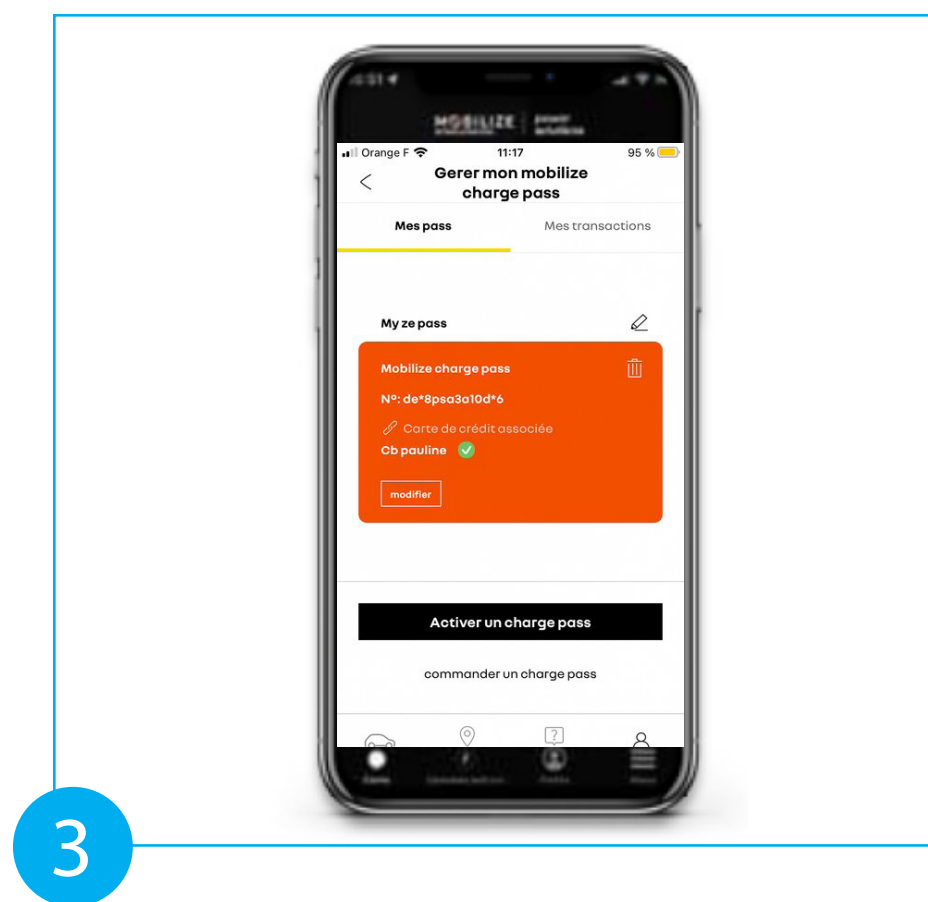
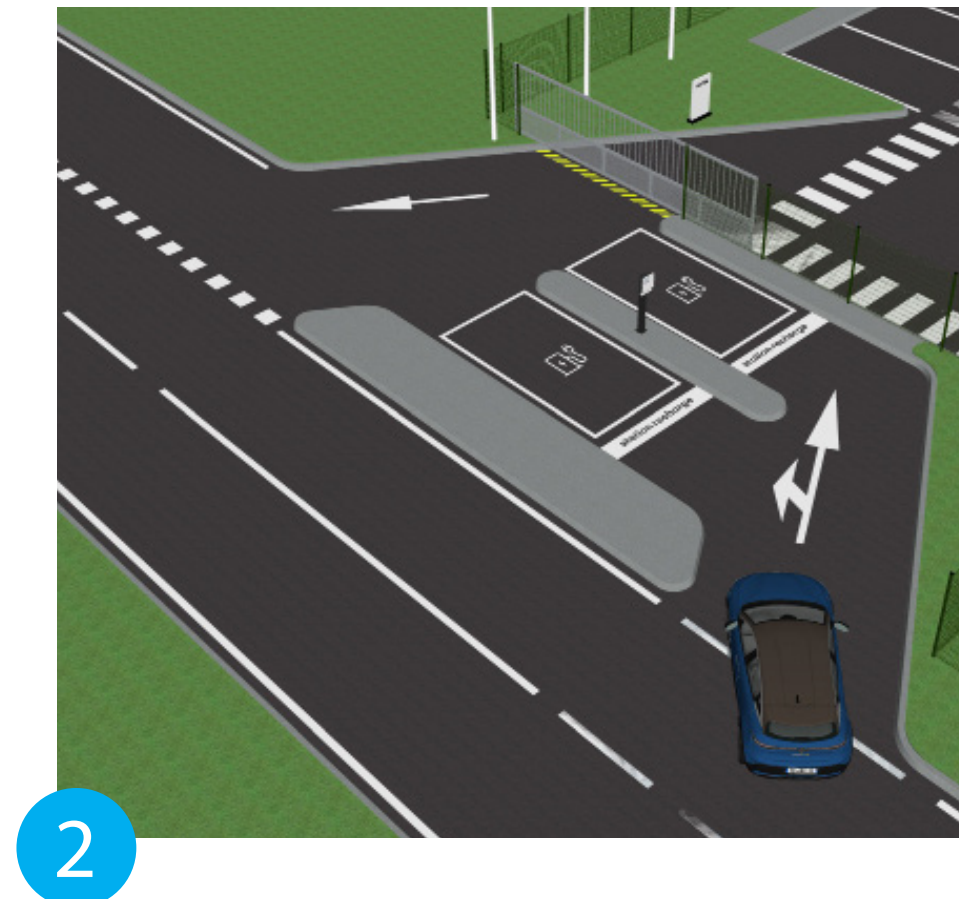
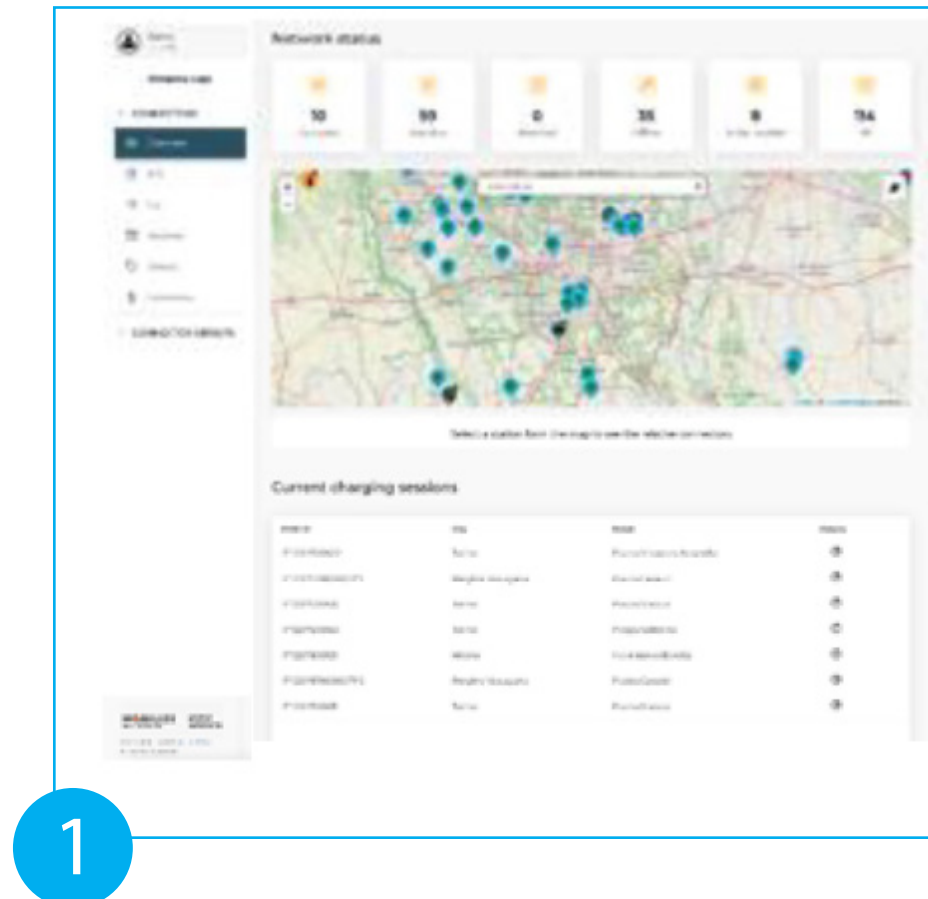
We recommend that you use a dedicated application to check the availability of a recharging point.

The transaction is carried out using a subscription card or the application dedicated to the service.

Access to the zone can be made secure: a mobile barrier opens as the vehicle approaches, using number plate recognition, a QR Code or a digicode, allowing customers to park in the recharging area.

### Procedure for accessing the charging station

1. Availability check, via the MyRenault or MyDacia application.
2. Arrival at the station - where applicable: opening of the secure zone.
3. Unlock the charging point with the Charge Pass, then start charging the vehicle.
4. Departure from the station.



## 02.2.2 - Off-site customer recharging station

### Principle

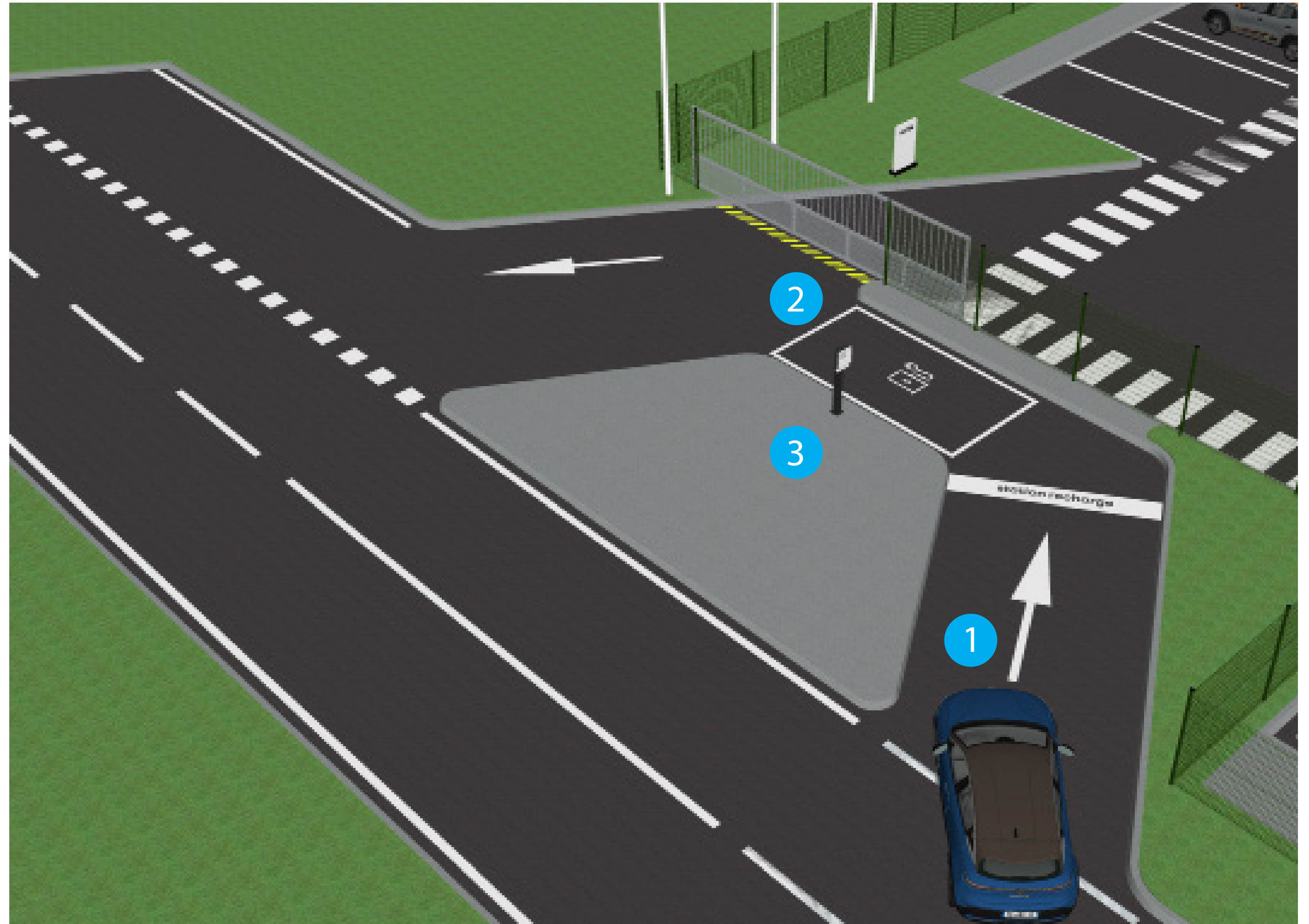
For technical reasons, the charging station should preferably be located outside the dealership, close to the areas of the dealership dedicated to after-sales activities. It must be easily identifiable from the road. This area can accommodate 1 to 2 vehicles.

This area can be sheltered by a canopy

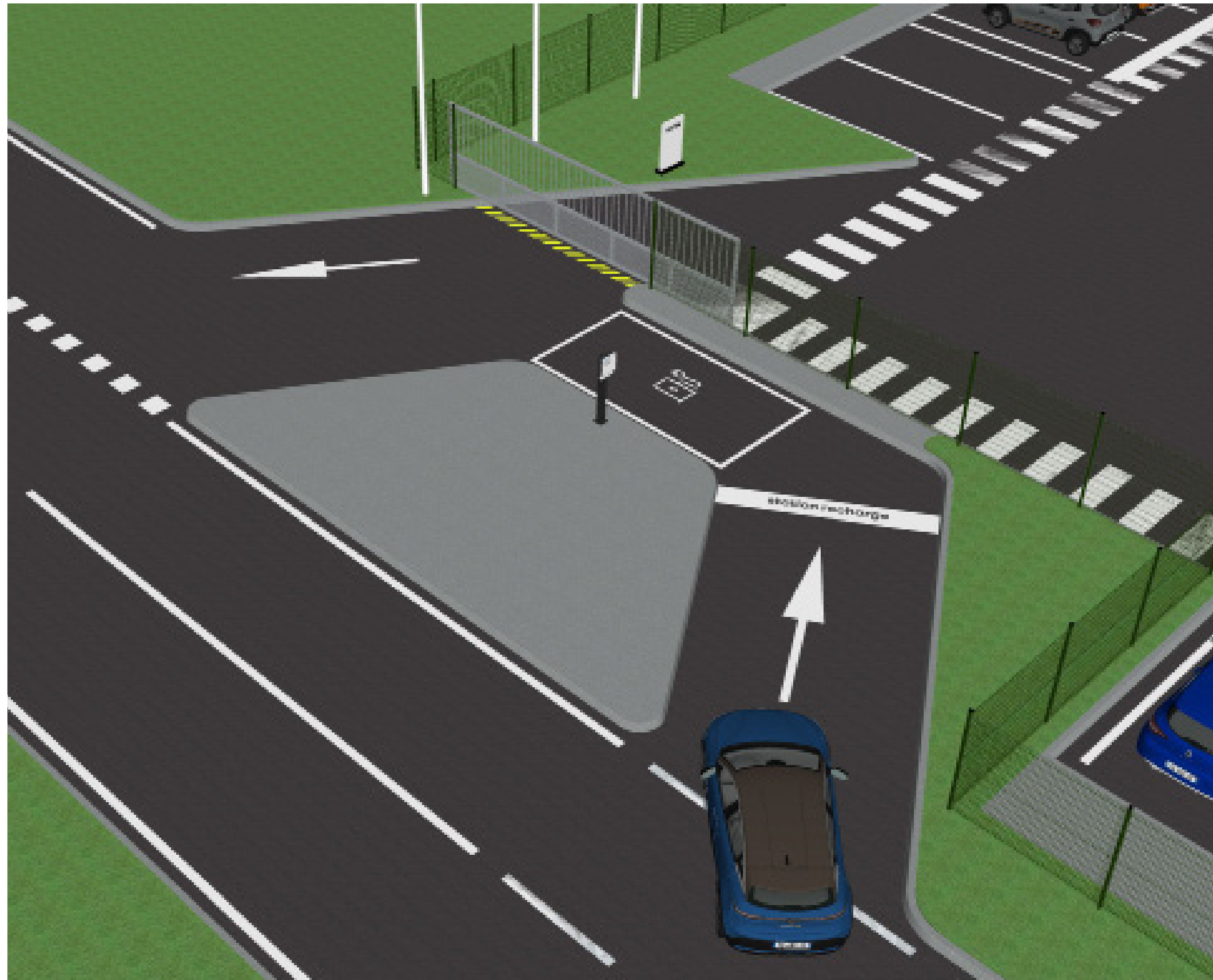
It is preferable to use the dedicated application to check the availability of a charging point.

### Legend

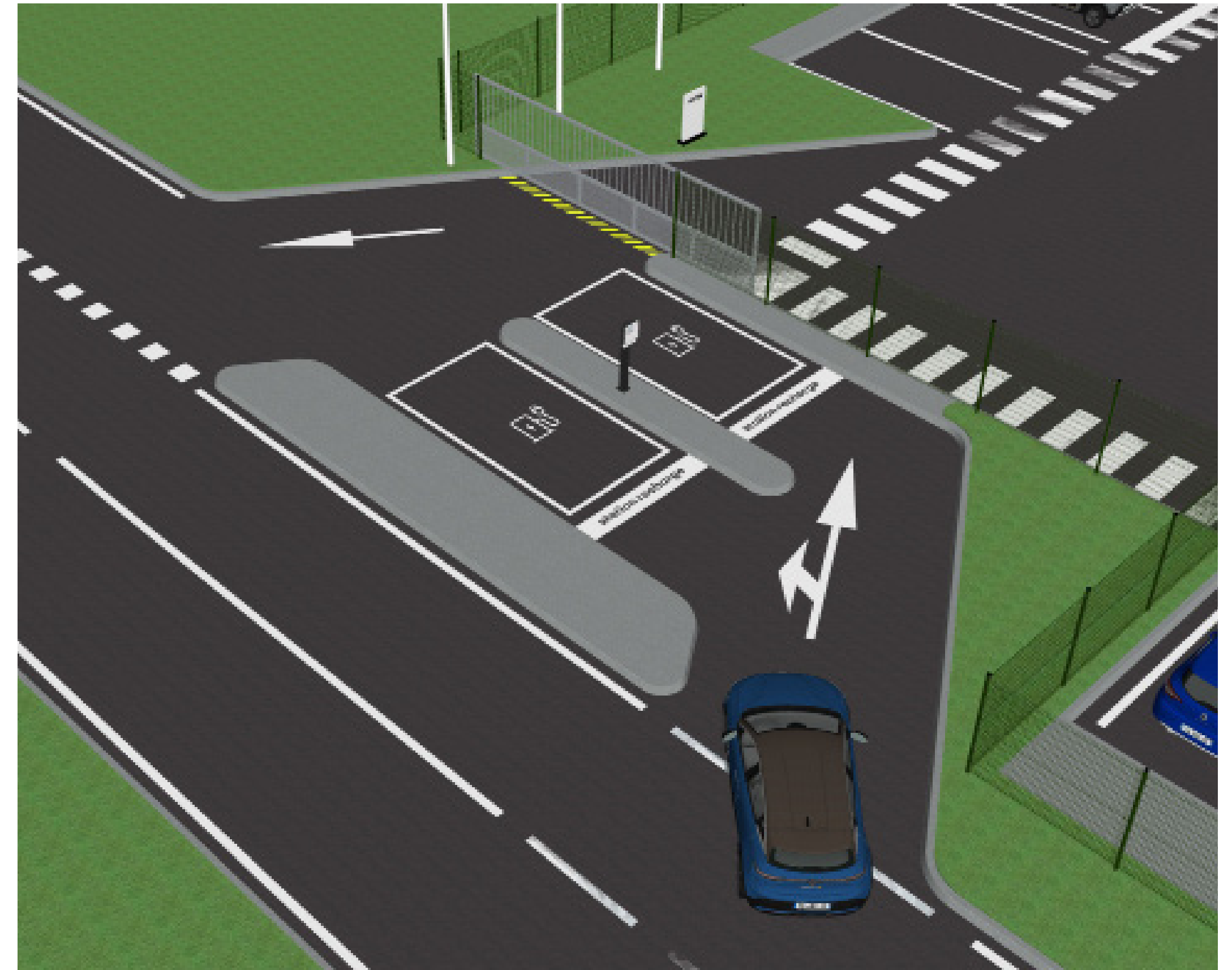
1. Entrance to the zone  
can be secured by an automatic barrier (plate recognition / QR code / digicode, etc.).
2. Floor markings.
3. 22kW recharging point.



### 02.2.3 - Possible off-site customer charging station configurations



1 recharging point  
122kW terminal  
1 space



1 recharging point  
122kW terminal  
2 spaces

## 02.3.1 - Operation of the customer charging station on the site

### Principle

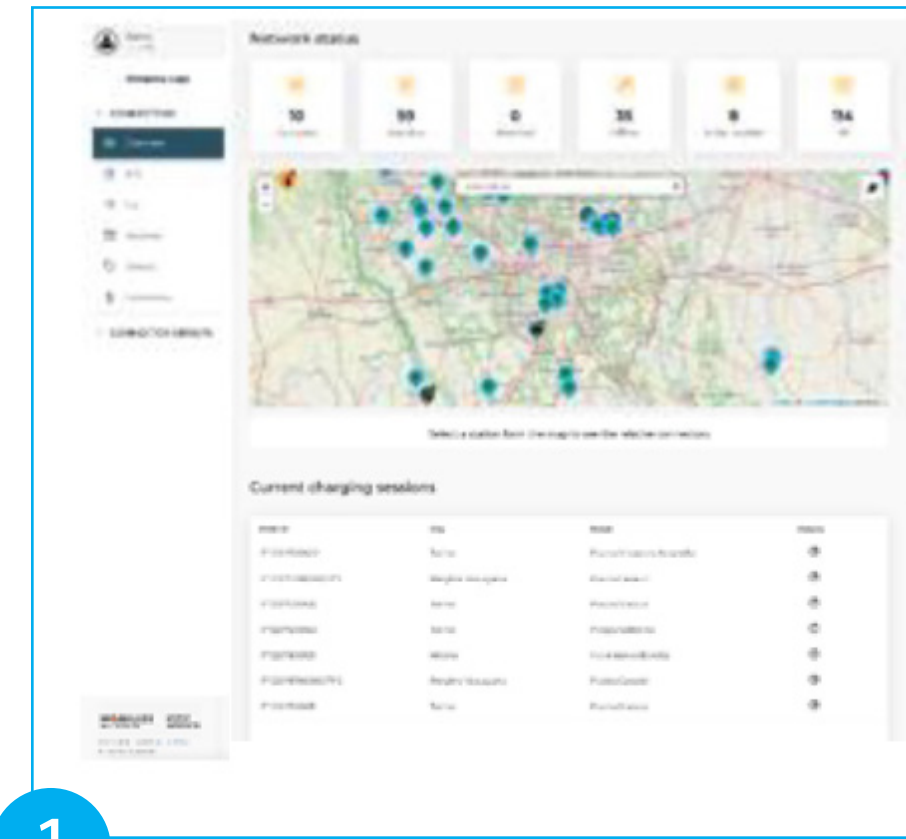
The recharging station is accessible to users of electrified vehicles inside the dealership and during the dealership's opening hours (or extended hours if applicable).

We recommend that you use a dedicated application to check the availability of a recharging point.

The transaction is carried out using a subscription card or the application dedicated to the service.

### Procedure for accessing the Charging Station

1. Availability check, via the MyRenault or MyDacia application.
2. Arrival at the station.
3. Unlock the charging point with the Charge Pass, then start charging the vehicle.
4. Departure from the station.



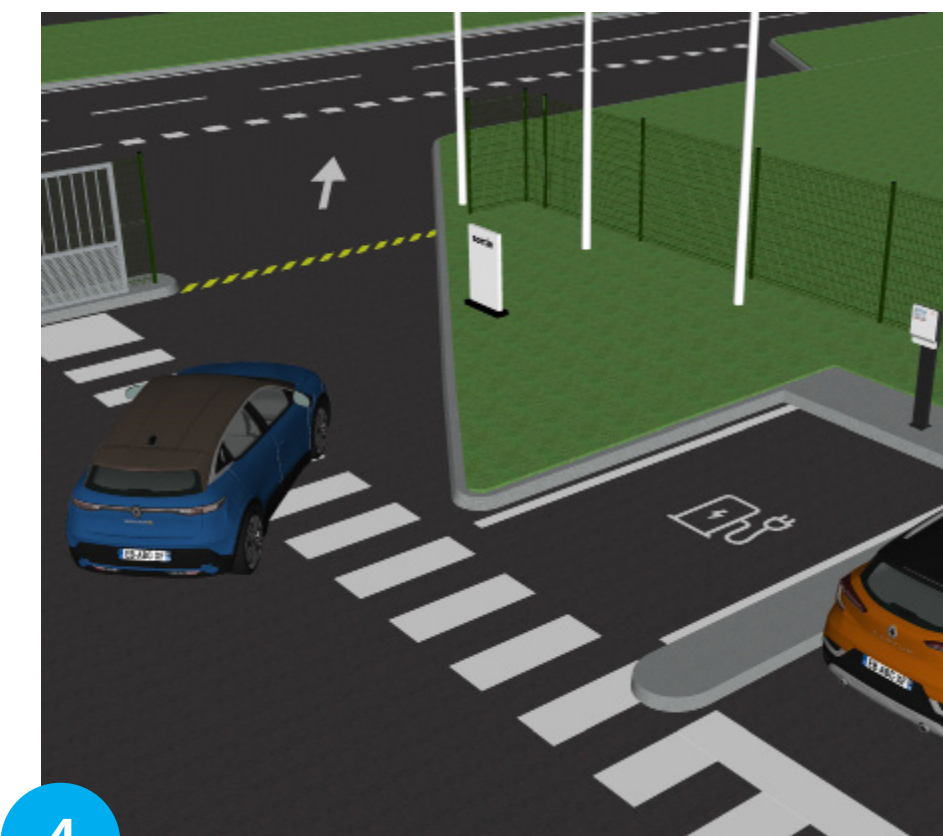
1



2



3



4

## 02.3.2 - Customer recharging station on the site

### Principle

This recharging station is located in the dealership and is accessible during the site's opening hours (and extended hours).

This area can accommodate 1 or 2 vehicles and can be sheltered by a canopy (optional).

### Location recommendation

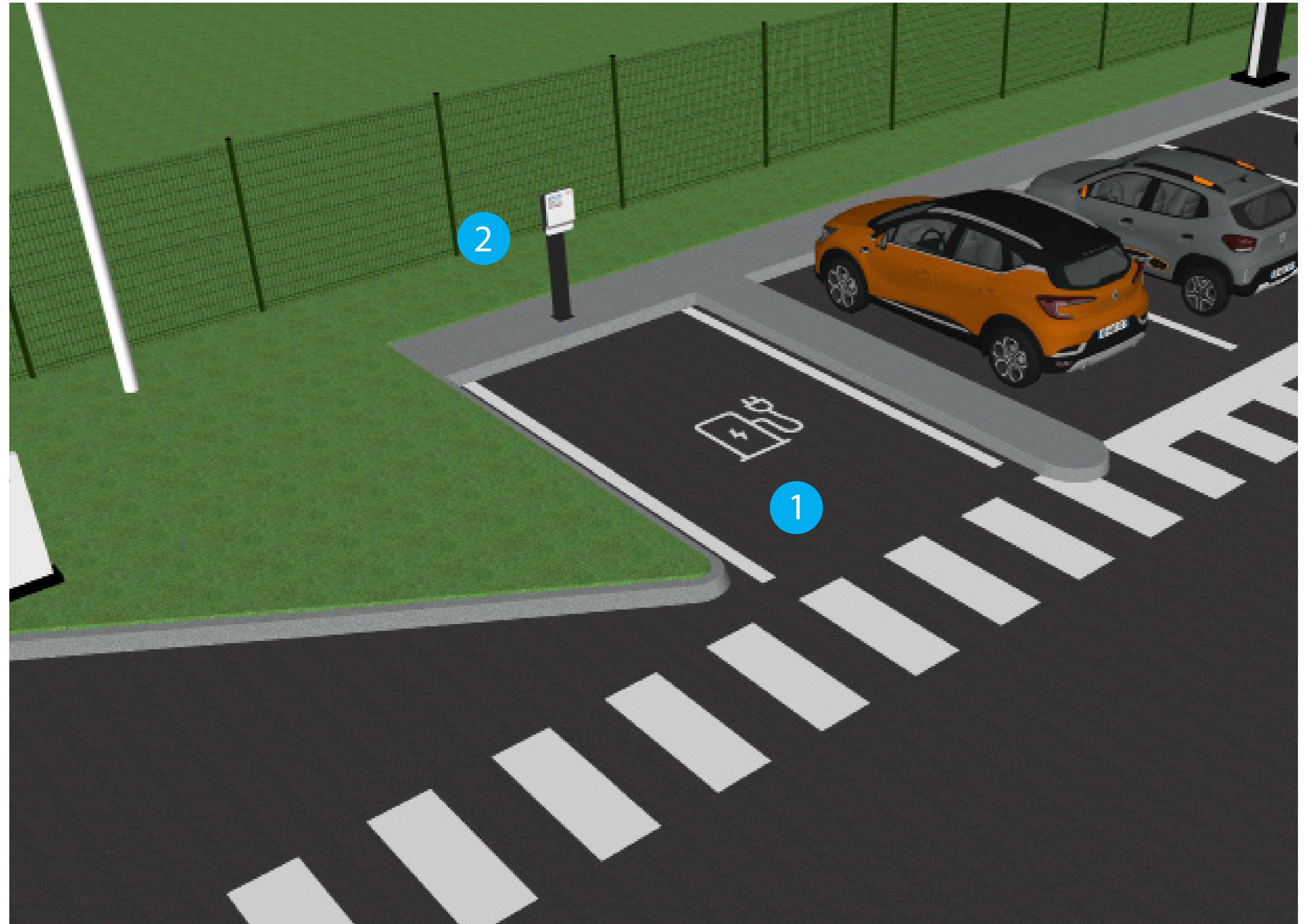
The recharging car park is located close to the areas of the dealership dedicated to after-sales activities (Care Service) or Share.

The recharging area must be easily identifiable and accessible to customers, and must not impede traffic flow in the dealership.

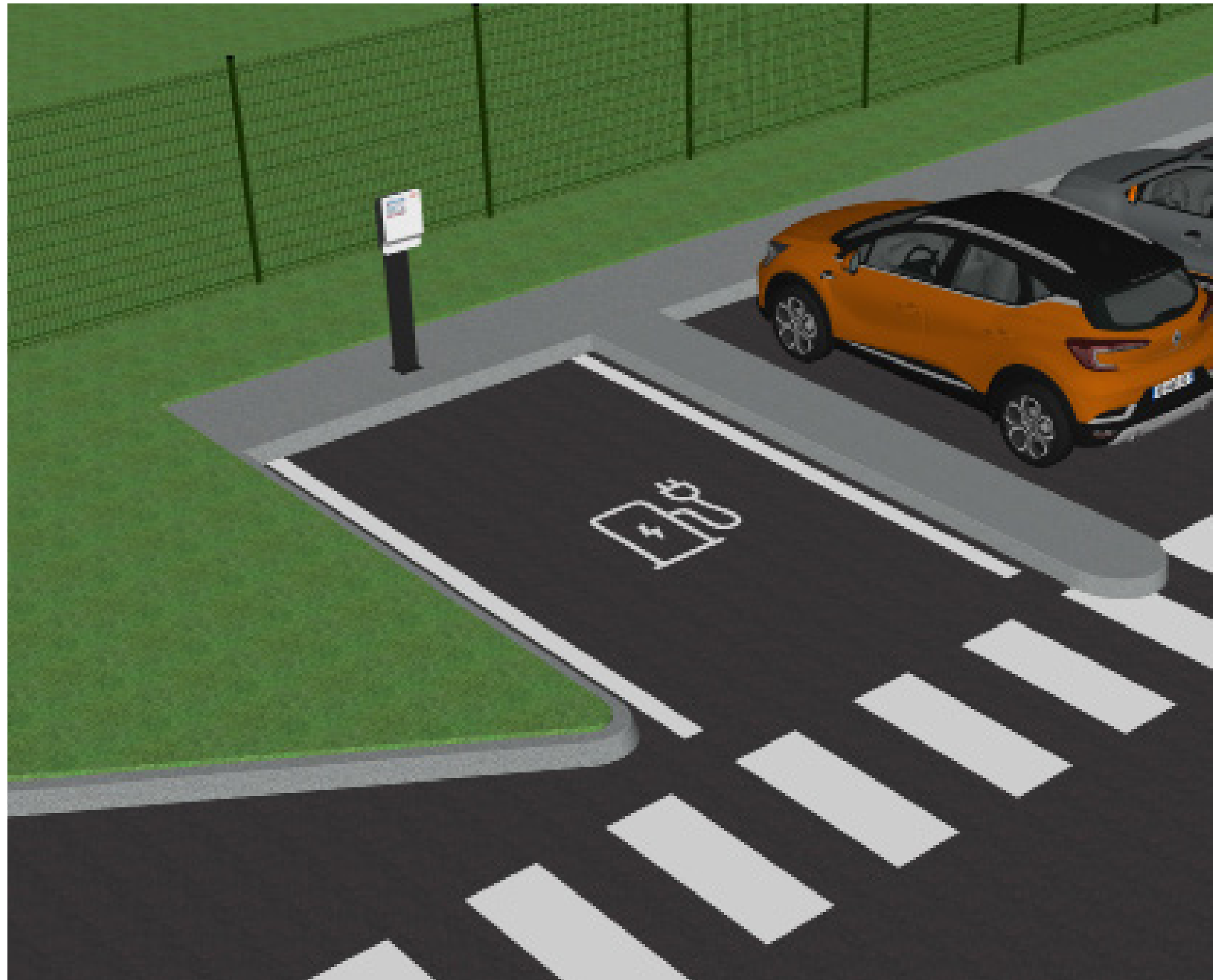
**Do not locate** the recharging area at the rear of the concession or in an area that is difficult to access or identify.

### Legend

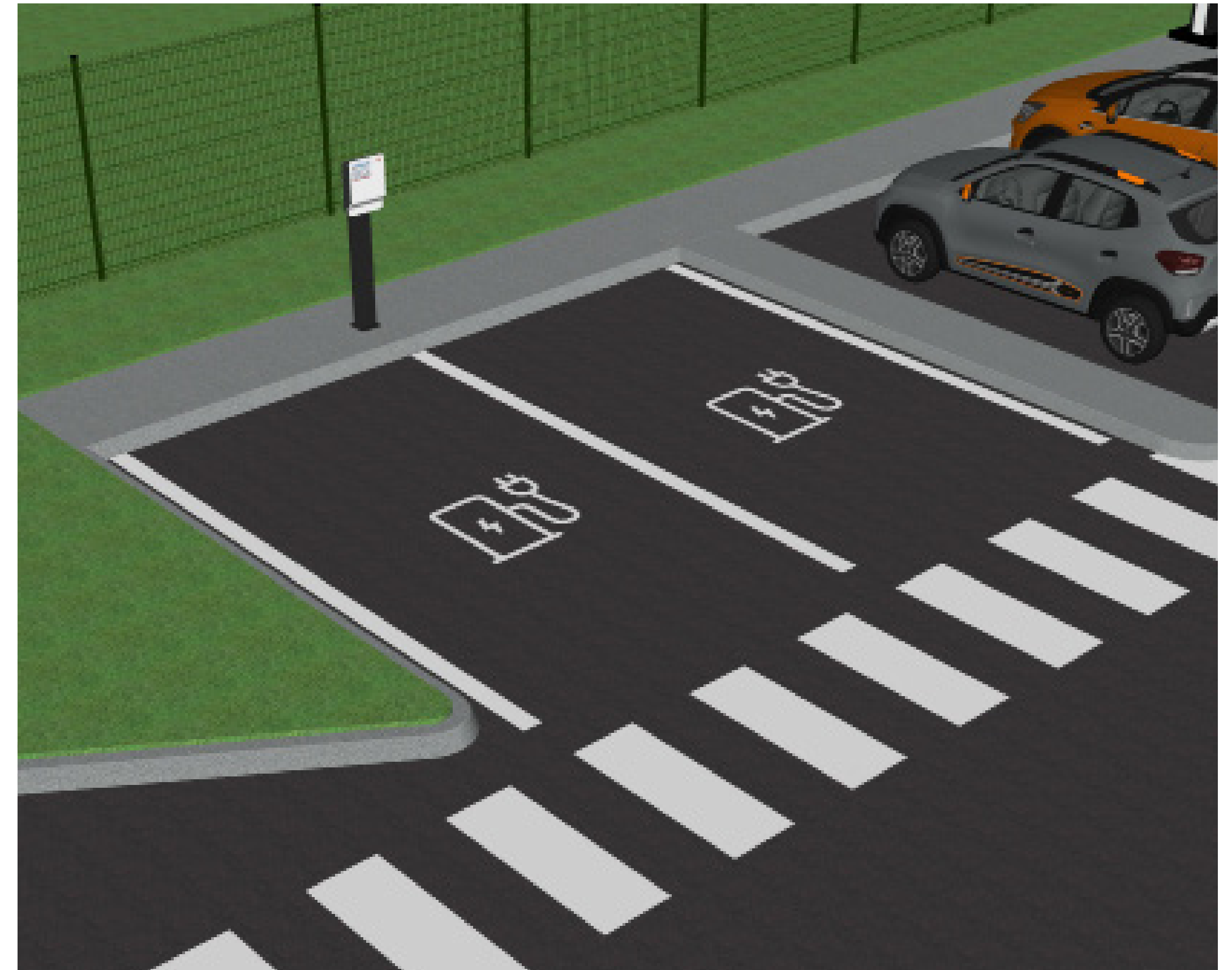
1. Floor marking.
2. 22kW recharging point.



### 02.3.3 - Possible customer charging station configurations within the site



1 recharging point  
122kW terminal  
1 space



1 recharging point  
122kW terminal  
2 spaces



# 03

## Other locations and options



### 03.1 - Other layout principles

#### Principle

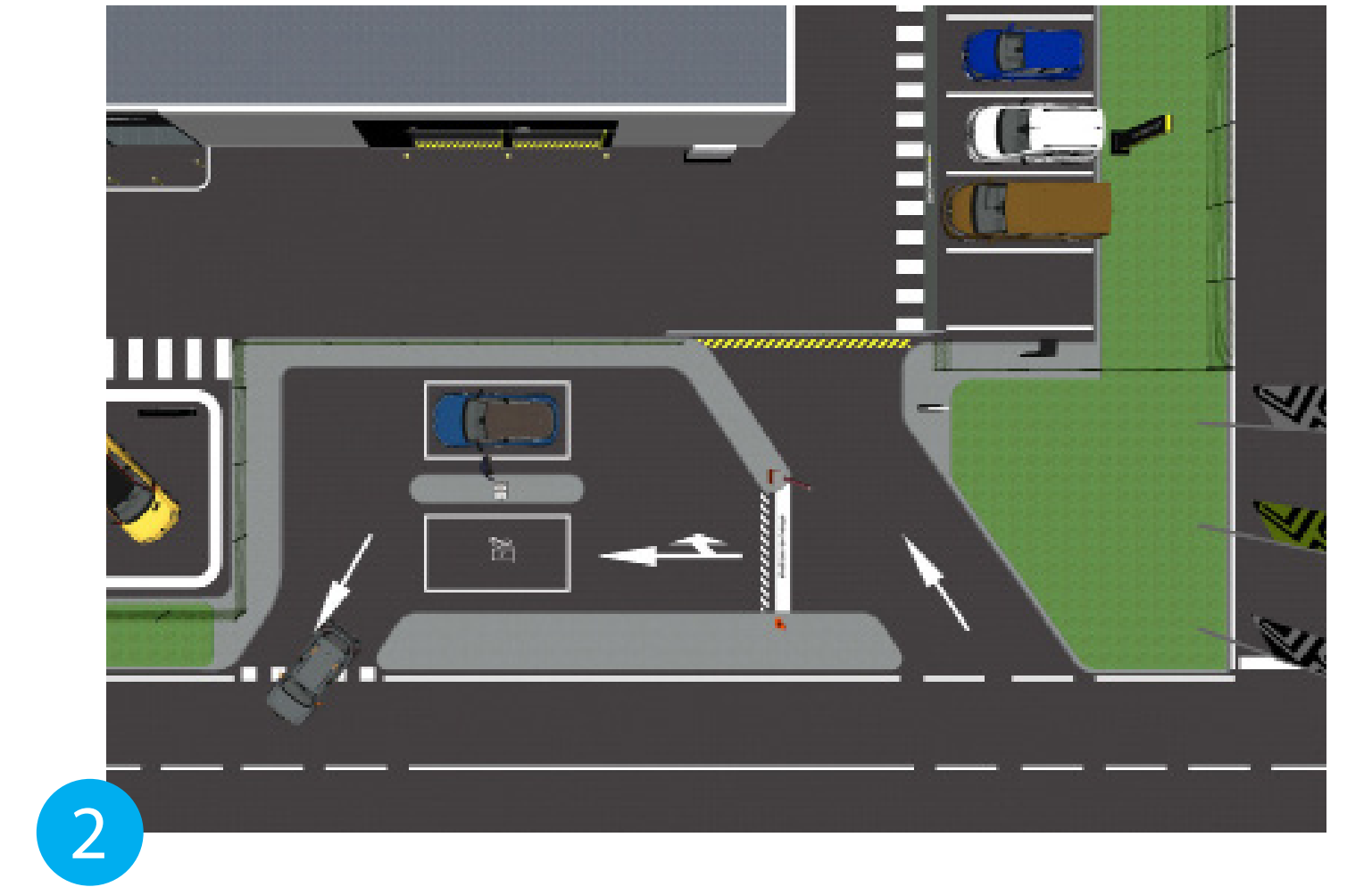
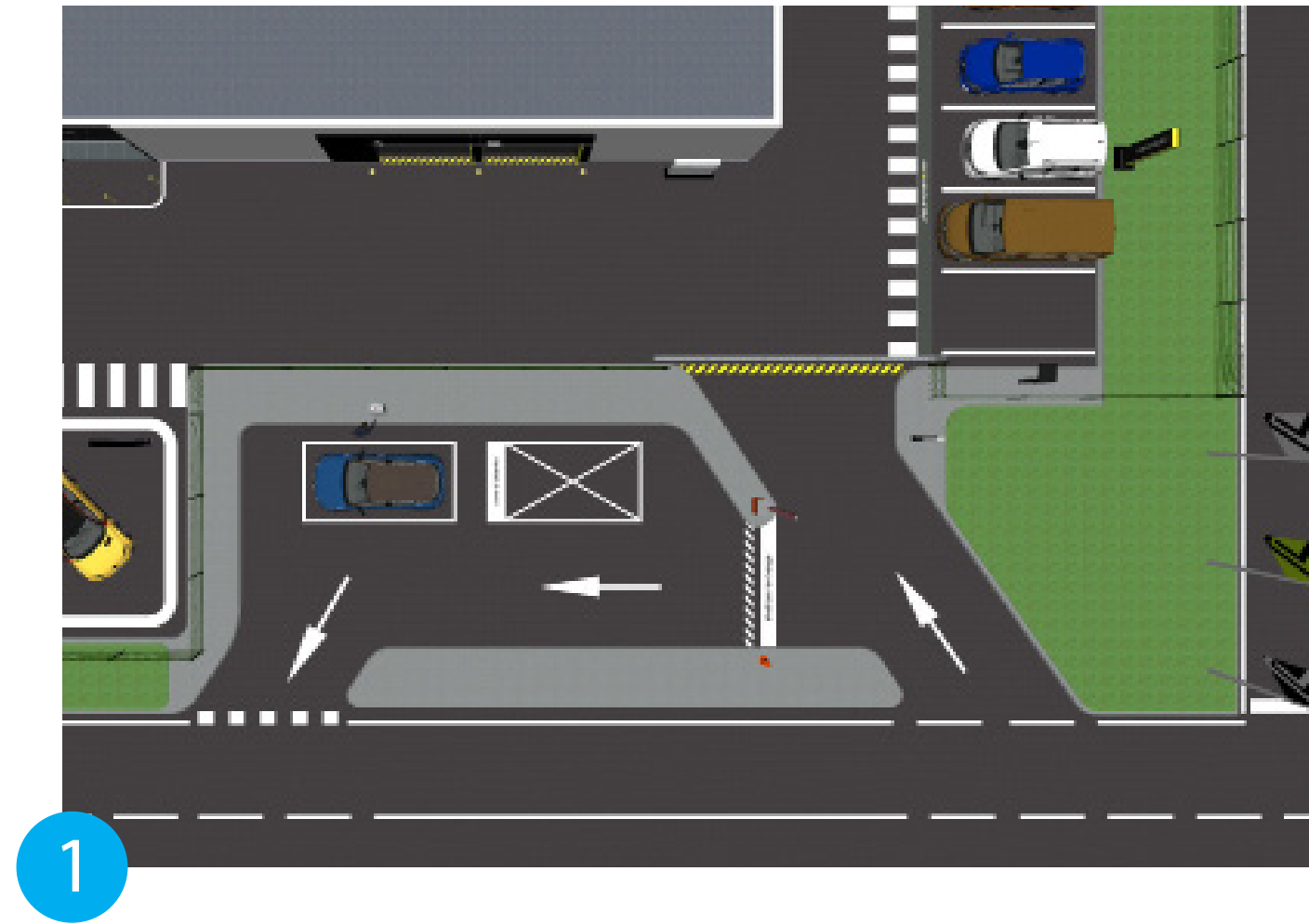
The charging station is isolated from the rest of the site to allow access outside the concession's opening hours.

#### Access

Whatever the number of terminals available, access is either restricted or free.

#### Legend

- 1. 1x recharging point - 1 space - secure access.
- 2. 1x charging point - 2 spaces - secure access.
- 3. 5x recharging points - secure access.
- 4. 6 charging points - free access.



## 03.2 - Optional components

### Principle

the charging zone is equipped with certain components that are optional, depending on the configuration and the proximity of other services.

(1) : care service or Drop the key

(2) : Mobilize Share, Fast charge...

● required

○ optional

	22kW terminal	Floor markings	Protection or stop	Secure access
Standalone indoor zone	●	●	○	○
Indoor zone shared with other 24/7 <sup>(1)</sup> services	●	●	○	○
Standalone outdoor zone	●	●	○	○
Outdoor zone shared with other 24/7 <sup>(2)</sup> services	●	●	○	○

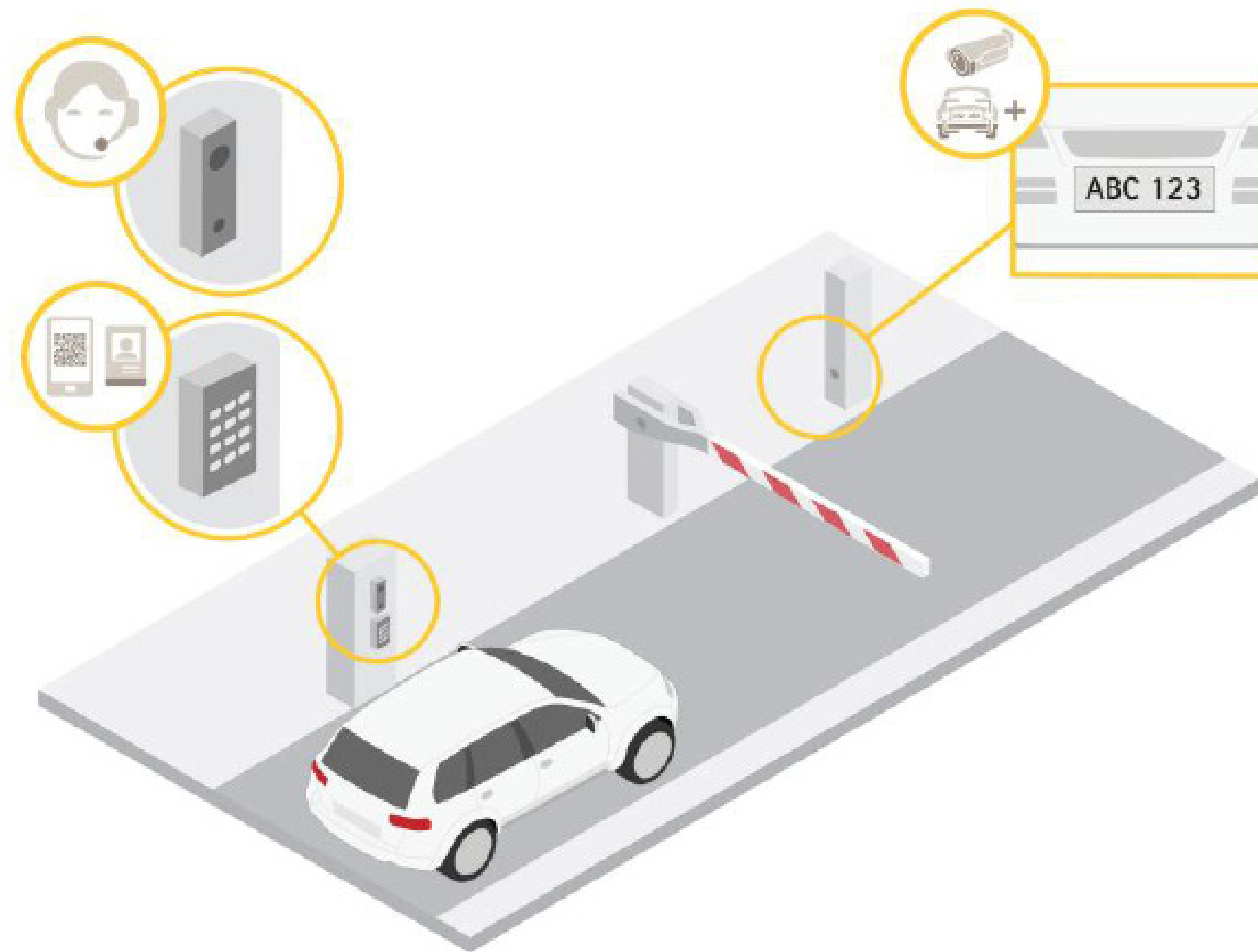
### 03.3 - The secure access option

#### Principle

Access to the area can be secured by a mobile barrier or bollard that opens when the vehicle approaches:

- by number plate recognition,
- by presenting a barcode or QR code,
- by keypad,
- by communication with an operator...

Get in touch with your local Renault contacts to identify the most appropriate solutions



Example of access



Another example with retractable bollard

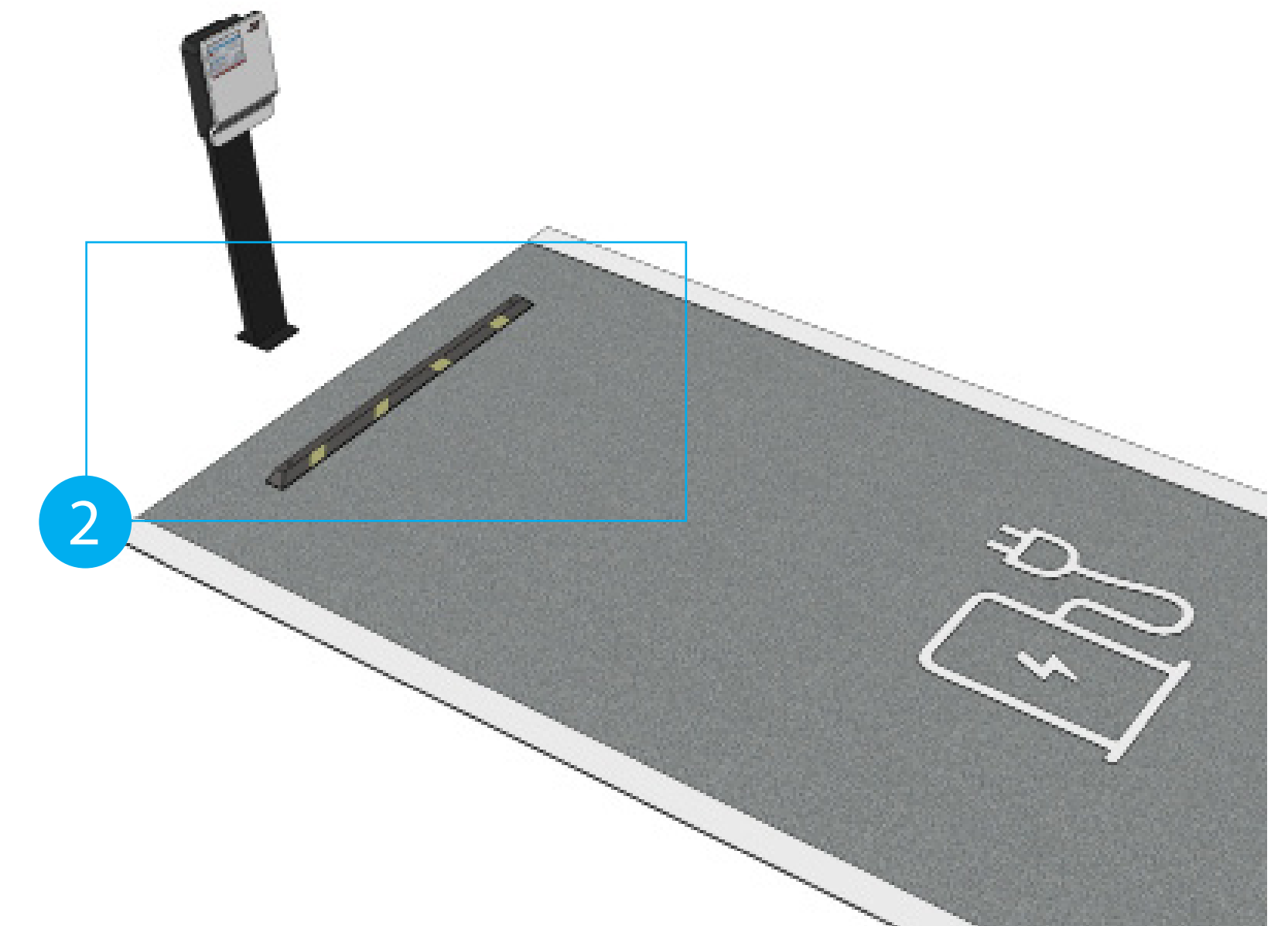
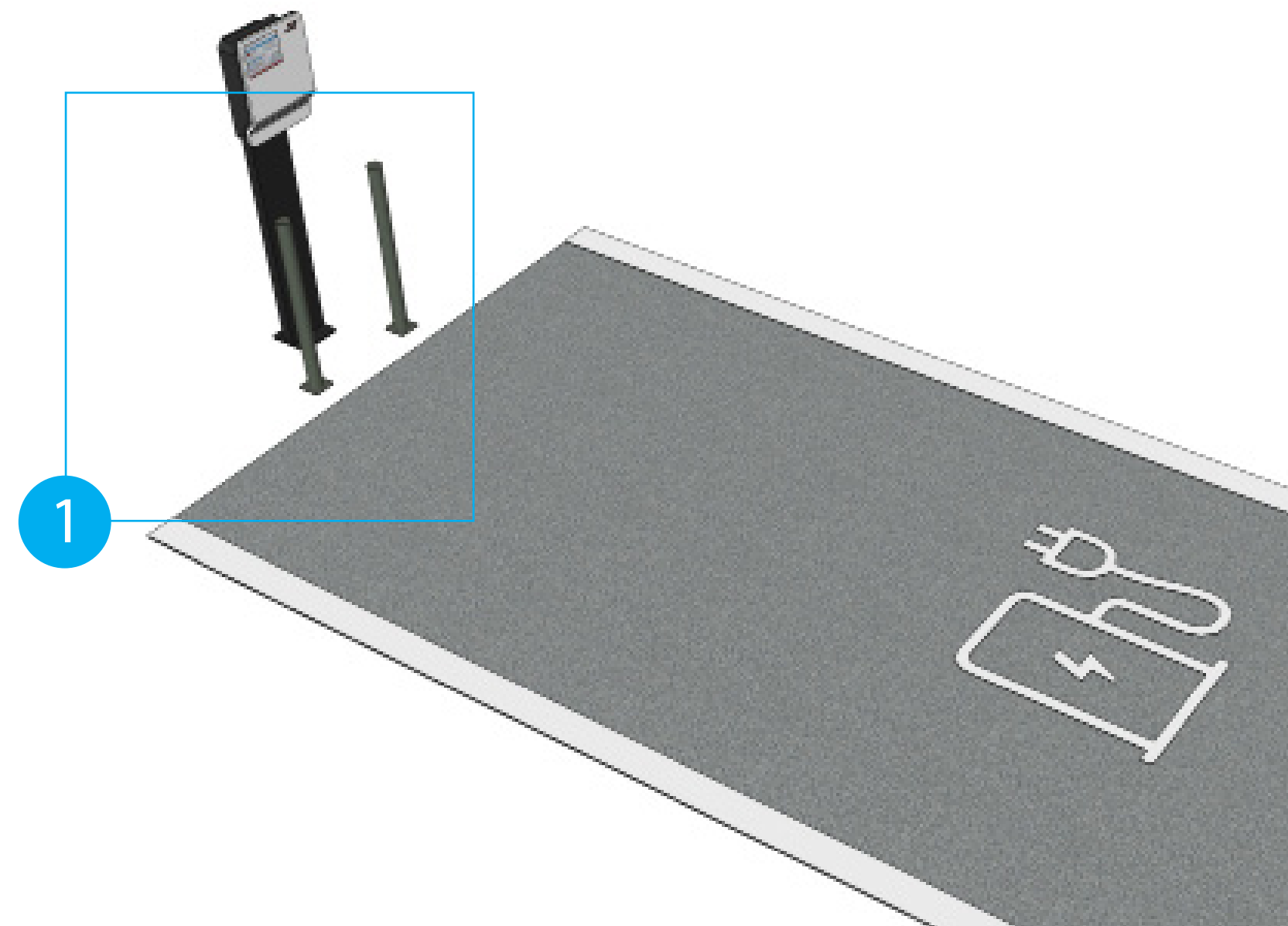
\*Examples of solutions  
non-contractual images

### 03.4 - Option: bollard protection

#### Principle

If the charging point is not located on a high enough kerb or is too close to the vehicle being charged, it is advisable to install a protective device to prevent accidental damage to the equipment.

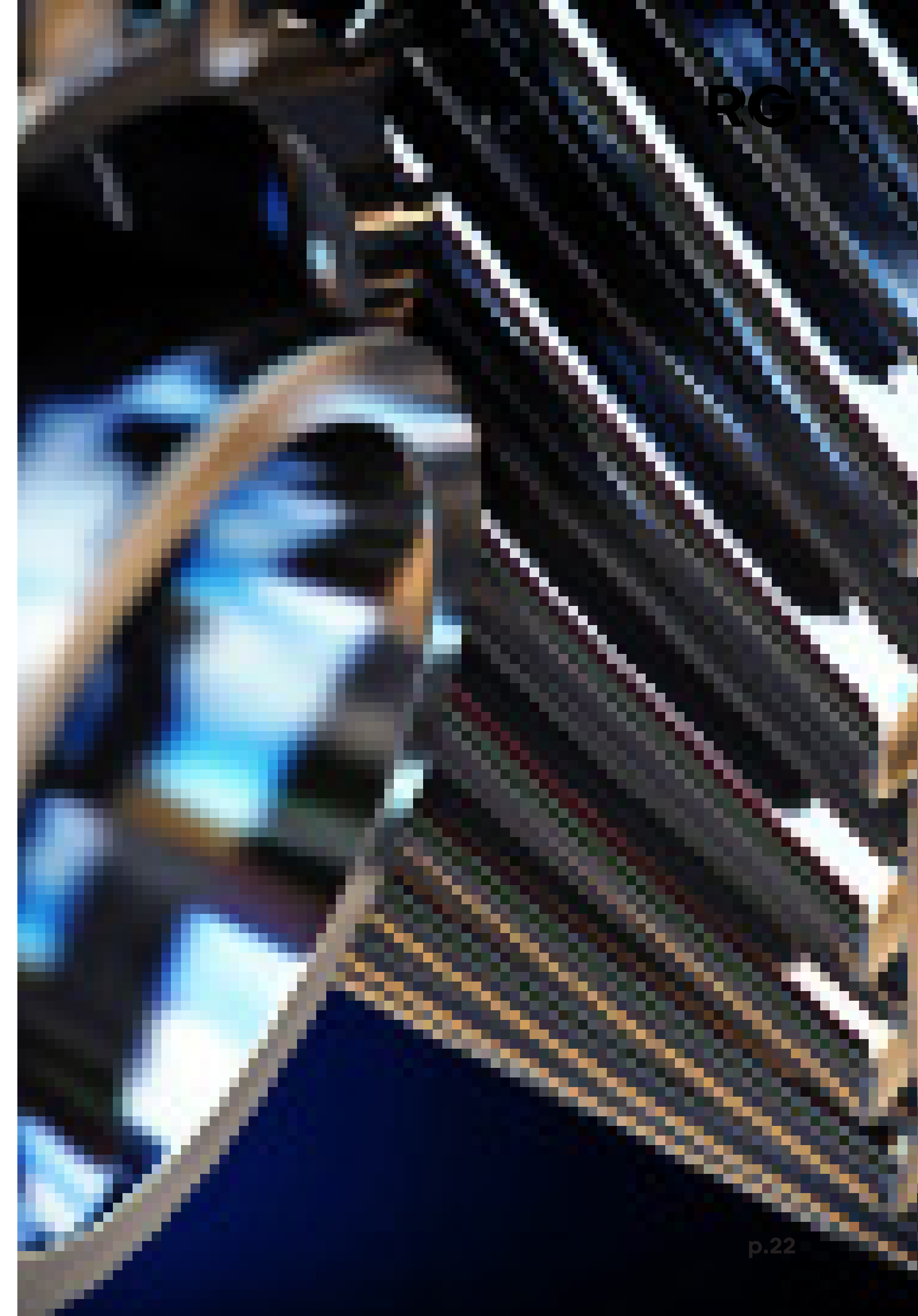
- 1. two defence posts
- 2. a rubber wheel stop



\*Examples of solutions  
non-contractual images

# 04

## Technical specifications



## General technical specifications - 1

### 1.1 PREAMBLE

Renault Group expects all those involved in the «Renault Group Store» programme to fulfil their obligation to achieve results in accordance with the requirements of the Technical Specifications. The general rules and specificities listed below are to be considered as the minimum to be observed, to be implemented to obtain the expected result.

### 1.2 THE SAFETY OF PEOPLE AND PROPERTY

The supplier must demonstrate that it has analysed the risks associated with its services and that its staff and any subcontractors have received sufficient training. Strict compliance with legislation on the safety and protection of workers is required.

### 1.3 RESPECT FOR THE ENVIRONMENT

Preference will be given to materials and means of implementation that reduce environmental pollution (recyclable materials, energy-saving technologies, toxicity of materials and products used, etc.).

The supplier must demonstrate that it has the various administrative authorisations (operating permits, environmental permits) required to manufacture the various items of equipment and that it complies with the operating conditions imposed by legislation in force or by the specific operating conditions of the countries concerned.

A global approach such as ISO 14001 is recommended.

### 1.4 QUALITY

The supplier will need to demonstrate that it works to ISO 9000 quality assurance standards, with formal certification being particularly recommended.

The supplier will enclose with his offer a specific Quality Plan to assure Renault Group of his ability to supply finished products and spare parts that comply with the contractual requirements, within the deadlines set. He will ask his manufacturing subcontractors to act in the same way.

The procedures applied must allow:

- To ensure that parts and products purchased, manufactured and supplied are not used or delivered until they have been inspected and found to be in conformity.

- Procedures must be put in place to identify the causes of any non-conformities and to provide sustainable solutions that can be applied across the board to remedy the situation and prevent any recurrence.

These operations will be recorded on appropriate documents and approved by Renault Group before being generalised.

- Using indicators (incidents, complaints, etc.), controls and audits, monitor changes in the quality of products and installation services.

This monitoring should lead to preventive or corrective action, which must be approved by Renault Group before being applied.

### 1.5 RESPECT FOR MESSAGES AND COLOURS

Visuals must comply with the formal images in this document.

All colours have a 40% satin finish unless otherwise specified. Particular attention must be paid to colour matching.

Tolerances on the L.a.b. must be respected.

### 2.1.1 GENERAL TECHNICAL STANDARDS

The design and construction standards to be followed will be, at the very least, those imposed by the Eurocode standards.

The regulations governing the dimensions of structures in force in each country must be complied with, taking climatic conditions into account.

The following performance obligations are required:

- Under their own weight, the equipment must appear perfectly horizontal and vertical.

- Parallelism between the separate elements must be respected.

- Under the effect of a normal wind (see NV65 and NF EN1991-1-4 (Eurocode 1)), the permissible deflection between the fixing and the point furthest away from the fixing (dimension «d») shall not exceed  $d/100$ .

## General technical specifications - 2

### 2.1.2 WEATHER CONDITIONS

The wind loads to be taken into account when designing structures are those set out in the Eurocode 1 rules (EN 1991-1-3): zone 4 (28 m/s), roughness IIIb, force coefficient equal to 1.80.

Any structure located in an unfavourable geographical area with regard to this load case will have to be specially designed to comply with the standards in force.

### 2.1.3 BUILDING REGULATIONS

#### 2.1.3.1 ALUMINIUM STRUCTURES

Design and calculation rules for aluminium alloy structures - DTU latest edition (currently July 1976). Standard applicable to the construction of structures: NF EN 1090-2 and Eurocode 9.

#### 2.1.3.2 STEEL STRUCTURES

Design rules for steel structures CM 66 - latest edition.

Standard applicable to the design of structures: EN 1093 and Eurocode 3.

#### 2.1.3.3 CONCRETE FLOORS

The foundations will be of the «weight» type with minimum reinforcement. The concrete to be used must be a CPA dosed at 400 kg/m<sup>3</sup> (s' 28=300 bars - s28=25 bars).

#### 2.1.3.4 CALCULATING PLASTIC ELEMENTS

Adapt the CM 66 rules by using a safety factor of 2 on the stresses.

### 2.1.4 MATERIALS

#### 2.1.4.1 GENERAL

The materials used will all be first choice and suitable for the use for which they were intended. They will be installed taking into account the rules of the trade inherent in the profession and in compliance with the standards and regulations in force in France and in the countries for which they are intended.

The materials used must be free of any defects likely to compromise the durability of the works. The equipment must be easy to clean, maintain and service.

The materials will be able to withstand severe climatic conditions such as rain, snow, hail, condensation, dust and salt spray.

It should operate between -20 and +80°C.

#### 2.1.4.2 STEEL

The steels will be either «hot-finished» in accordance with NF EN 10210 or «cold-finished» in accordance with NF EN 10219-1 and 2. The quality of the steels will be mentioned on the execution drawings and it goes without saying that the mechanical properties of the different types of steel will be taken into account for the stability calculations.

All components will be manufactured under covered cover.

After machining, welding, drilling, notching, .... The components will be prepared before the anti-corrosion treatment: brushing of welds, careful deburring, cleaning, shot blasting and sand blasting.

The anti-corrosion treatment will be carried out by hot-dip galvanising at a minimum of 80 µm and should ensure failure-free protection for the minimum duration of the ten-year guarantee.

No machining may be carried out after the parts have been treated for corrosion.

All screws and hardware (including hinges) will be made of 18/10 stainless steel (NFE 25.033).



## General technical specifications - 3

### 2.1.4.3 ALUMINIUM

The reference standard is NF EN 573-1. Parts forming part of a load-bearing structure should be chosen from the «6000» series. For parts that do not form part of a load-bearing structure, the «1000» series is acceptable.

Alloys can be welded.

The parts will be carefully deburred and the welds brushed before any protection.

The visible parts of the equipment will be treated with paint following a «Qualicoat» type procedure.

### 2.1.4.4 PMMA

Le PMMA répondra au minimum aux caractéristiques suivantes :

	Flat parts with machining «cast» PMMA	Flat parts without machining «extruded» PMMA
· Opal white (values for a 3mm thick)		
· Tensile strength	> 75 MPa	70 MPa
· Flexural strength	> 130 MPa	120 MPa
· Flexural modulus	> 3250 MPa	3000 MPa
· Impact resistance CHARPY smooth	> 12 MPa	10 MPa
· Expansion	< 1 mm/1 m/10°C	1 mm/1 m/10°C
· Light transmission	> 50 %	33 %

The thermoformed faces will be made of extruded PMMA in a diffusing white colour in compliance with the manufacturer's sheet heating parameters.

When PMMA parts are more than 100 cm high, they must be suspended at the top by a glued PMMA strip.

The thickness of the sheets should be calculated in accordance with the tensile strength standards set out above.

### 2.1.4.5 POLYCARBONATE

The polycarbonate must have at least the following characteristics:

- Appearance: colourless
- Density: 1,2 g/cm<sup>3</sup>
- Tensile strength: 60 MPa
- Expansion: 0,7 mm/1 m/10° C
- Light transmission: 90%

### 2.1.4.6 EXPANDED FOAM

The following characteristics must be respected:

- Material: White PVC 9010
- Density: > 50 g/cm<sup>3</sup>
- UV-stabilised: 14 MPa
- Shore hardness: D > 75
- Expansion: < 1 mm/1 m/10° C

### 2.1.4.7 PAINT

Painted parts must have an even appearance over their entire surface. Defects such as pores, cracks, dust grains, paint runs or ripples are not tolerated.

Samples of painted raw parts will be tested and accepted by Renault Group, after undergoing the following tests with a certified body:

- Colour after a LAB test using the MINOLTA 508 D colorimeter with illuminant D65 and observer at 10° including specular component (tolerances in CIELAB space are L +/- 1, a +/-1.5, b +/- 1.5).
- Gloss at 40°: after a test in accordance with standard NF T 30064.

## General technical specifications - 4

- Gloss at 60°: after a test in accordance with standard NF T 30064.
- Adhesion: resistance to squaring.

Classification 1, according to P UW 150 1. Standard NF T 30038

- Colour fastness:  
QUV according to NF T 30036 after 200 hours of exposure.

Samples of each of the components will be supplied to Renault Group on request, in order to control.

### 2.1.5 ELECTRICAL EQUIPMENT

Assemblies with electrical equipment must comply with the European Union's «essential safety requirements». To this end, the supplier will draw up a certificate (for each type of equipment) which must clearly state the conformity of the assemblies and therefore of the components:

- safety requirements and the protection of users and all other persons (Directive 73/23/EEC with no lower voltage threshold)
- electromagnetic compatibility requirements (Directive 89/336/EEC).

The nameplate on each piece of equipment must bear the CE mark indicating compliance with these requirements.

The regulations governing low-voltage signs in force in each country must be complied with.

In addition, the following requirements must be met:

The electrical equipment will comply with current standards in the NFC 15-100, NFC 20-010 and NFC 20-030 series, NFC 71, NFC 32 for France and the international standard IEC 60364.

This applies in particular to :

- First category electrical installations and sign installations low-voltage lighting.
- The fire behaviour of electrical equipment and the degree of protection provided by enclosures,
- Flexible and rigid low-voltage cables.

In addition, the equipment will comply with deworming regulations in residential areas and will therefore be delivered dewormed.

#### 2.1.5.1 IP PROTECTION INDEX

The degree of protection of all electrical equipment will be at least IP 44-D.

#### 2.1.5.2 PROTECTION AGAINST ELECTRIC SHOCK

All the equipment will be «class 1».

#### 2.1.5.3 FIXINGS

The converters will be placed in areas not subject to water stagnation. Cables and sheaths will be fixed to the structures every 50 cm.

#### 2.1.5.4 CABLE PASSAGES

Any cable or sheath passing through a metal part must be secured by a cable gland. A watertight IP44 plastic junction box will be provided at the entrance to each assembly. This box will be fitted with a 5-input connection pin that can accommodate 4 mm. All junction boxes will be labelled P1+P2+P3+T+N.

#### 2.1.5.5 LEDs

The white LEDs used will have the following characteristics:

## General technical specifications - 5

- Service life: 50,000 hours with an initial flux loss of 50% at the end of the period.
- Minimum guarantee 5 years for operation of 10 hours/day with a maximum flux loss of 20%
- LED operating temperature: -20°C and +50°C.
- Minimum protection rating: IP 67
- The LEDs used must comply with international standards IEC 62504 TS Ed.1, IEC 61231, IEC 62560 Ed 1, IEC 62031 LED module safety, IEC 61347-2-13 LED control gear.

### 2.1.5.6 CONVERTERS

The LED power supply converters will have the following characteristics:

- Wide supply voltage range (100 to 300 volts)
- Reversible protection against temperature rise and overload
- Short-circuit protection with automatic restart
- Minimum protection rating: IP 67
- Operation in accordance with : EN 55015, EN 61000-3-2, EN 61547, EN 61558-2-17

### 2.1.6 SCREWS AND HARDWARE

All the screws and hardware used are made of stainless steel (non-magnetizable).

Aluminium pop rivets are accepted as long as the steel pins are systematically removed.

For welding, the wires and electrodes comply with NF 81.830.

### 2.1.7 ANCHORS AND FIXINGS

The skirting boards of all equipment must be completely removable without having to remove any other part of the assembly. The skirting boards must hide the plates or fixings. The plates must be easily accessible when the skirting boards are removed.

For each of the assemblies requiring a foundation block or fixing to a third-party structure, the teacher will supply the necessary fasteners and the conditions for calculating them (wind conditions and calculation methods).

### 2.1.8 IDENTIFICATION PLATE

Each finished product will be marked with a metal identification plate on its structure and will include at least the following information:

- Ensign's name
- Product code and batch
- The month and year of manufacture
- CE marking, if luminous.

### 2.1.9 STORAGE

Finished products will be stored in a dry, ventilated room. Access to the Renault Group controllers will be possible at all times.

## 2.2. GUARANTEES

Suppliers undertake to guarantee their products in accordance with the following conditions:

- 2-year guarantee on installation against defects and faulty workmanship,
- 5-year guarantee on electrical equipment including LEDs and converters,
- 5-year guarantee on adhesives,
- 5-year guarantee on digital prints (UV protection),
- 5-year guarantee on sheets painted in the workshop,
- 5-year warranty on chrome rhombuses,
- 10-year guarantee on pre-painted sheet and profiles by aluminium,
- 10-year guarantee on internal structures,
- 10-year guarantee on PMMA acrylic faces.



Thank you