

ANCHORING OUTDOOR FURNITURE

HAZARD



RAINFALL AND
FLOODS



COASTAL
DYNAMICS



STORMS AND
STRONG WINDS

IMPLEMENTATION STEP



CONSTRUCTION



RENOVATION



BUILDING IN
OPERATION



TERRITORY

AREA OF ACTION



OUTDOORS

COST



low medium high

LEVEL OF SKILL



Outdoor furniture is the term used to describe all furnishings and equipment designed for use outdoors. The term encompasses both street furniture and furniture for private outdoor spaces. Street furniture refers to all items of equipment and furnishings in public spaces in an urban area (benches, bus shelters, etc.), while outdoor furniture refers specifically to those intended for outdoor use (garden tables, patio chairs, etc.), whether public or private.

IMPACTS

Outdoor furniture that is not firmly anchored to the ground is vulnerable to extreme weather conditions. Items can be torn off and carried away by the force of currents or winds, particularly during floods, submersions or storms. Serious **human damage** (injury or death) and **material damage** (damage to vehicles, buildings, etc.) can be caused by these violently displaced items. **Damage to networks and infrastructures**, which can trigger a series of cascading effects and general disorganisation, also creates a risk for the community.

All this damage can delay the return to normal and compromise an area's resilience. Anchoring street furniture is part of a wider crisis management anticipation strategy, as it can also protect networks by ensuring that objects don't **disrupt operations** (ripped-out cables, objects blocking the road, etc.), or even bring them to **a halt** (telecommunications, energy supply networks, etc.). In addition, the deterioration or disappearance of signs can cause orientation difficulties for both individuals and emergency services.

INSTALLATION GUIDE

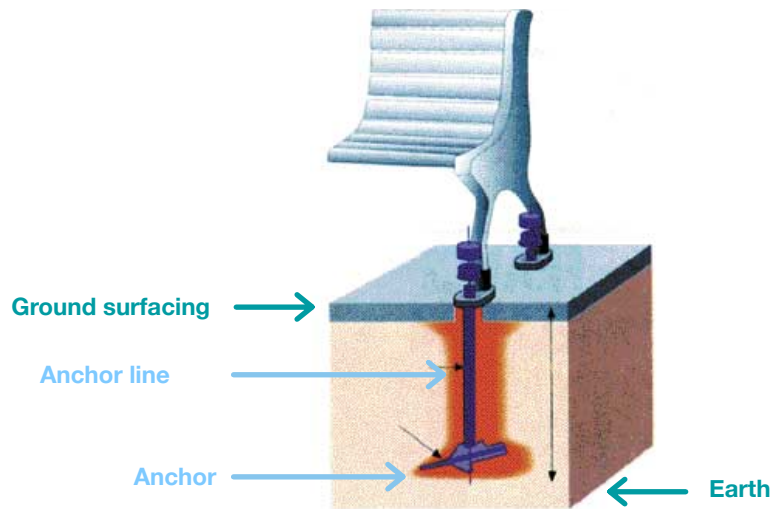
Securing outdoor furniture is a preventive measure that can be implemented both at local authority level by local councils, and at building level, where care will also be taken to reduce the wind load on building equipment. This can be combined with safety procedures for removable outdoor furniture.

There are three main types of fixtures for outdoor furniture:

- **Concrete or mortar:** this involves digging a hole at each point where the furniture is to be anchored and then filling the hole with concrete or mortar. This anchoring method takes several hours.
- **Drilling:** this involves drilling into the ground to insert a rod with an anchor fixed at the end. The furniture is held securely by the compression of the soil between the anchor at the bottom and the foot of the equipment. This method allows the street furniture to be fixed in just a few minutes, without damaging the existing surface.
- **Screwing:** this involves screwing a fixing device directly into the ground without using concrete or drilling. This method is also quick and doesn't damage the existing surface.



ILLUSTRATION OF FIXING A BENCH BY DRILLING



Source : Technicontact

WEAK POINTS AND STRONG POINTS

- ⊖ Fixing outdoor furniture attaches it permanently to the ground. A prior in-depth analysis of real needs and uses is essential to avoid making unnecessary costly investments. The planning and design of fixed outdoor furniture elements must prevent any negative impact on mobility and the social use of public space.
- ⊕ This system also **protects against deliberate or involuntary damage** caused by human activity.

! MALADAPTATION

Holes dug to stabilise outdoor furniture can have a **negative impact on the environment and local biodiversity**. Digging damages the top layer of soil, which is home to micro-organisms that are essential to soil health; it disrupts soil structure, which can lead to water absorption problems and flooding; it alters the chemical composition of the soil and disrupts the natural habitats of plant and animal species. In addition, the installation of barriers or fences to secure furniture creates obstacles for wildlife, hindering their natural movements and affecting their migration, reproduction and foraging behaviour. To minimise these negative consequences, environmentally friendly practices are essential when installing outdoor furniture, taking into account the local fauna, flora and soil, and using appropriate methods and materials to preserve the surrounding ecosystems.

MONITORING INDICATORS



MONITOR MY ACTIONS FOR CLIMATE CHANGE ADAPTATION

+/- : Quantitative indicator

★ : Qualitative indicator

| INDICATORS OF MEANS | INTERPRETATION |
|-----------------------------------------------------------|-----------------------------------------------------------|
| +/- Percentage of outdoor furniture fixed to the plot (%) | ▶ To be maximised in keeping with the use of public space |

| | |
|-------------------------------------------------------------------------------|-------------------|
| +/- Percentage of removable outdoor furniture subject to safety protocols (%) | ▶ To be maximised |
|-------------------------------------------------------------------------------|-------------------|

| INDICATORS OF RESULTS | INTERPRETATION |
|-----------------------------------------------------------------------------------------------------------------|-------------------|
| +/- Number of items of outdoor equipment swept away during severe weather events | ▶ To be minimised |
| +/- Financial, material and/or human damage caused by outdoor equipment swept away during severe weather events | ▶ To be minimised |

FIND OUT MORE

Bayo's, [Foundation solutions for the installation of street furniture](#)

Le Moniteur (2000), [Des fondations sans béton pour mobilier urbain](#)

Weber, [Sceller le mobilier urbain](#)

