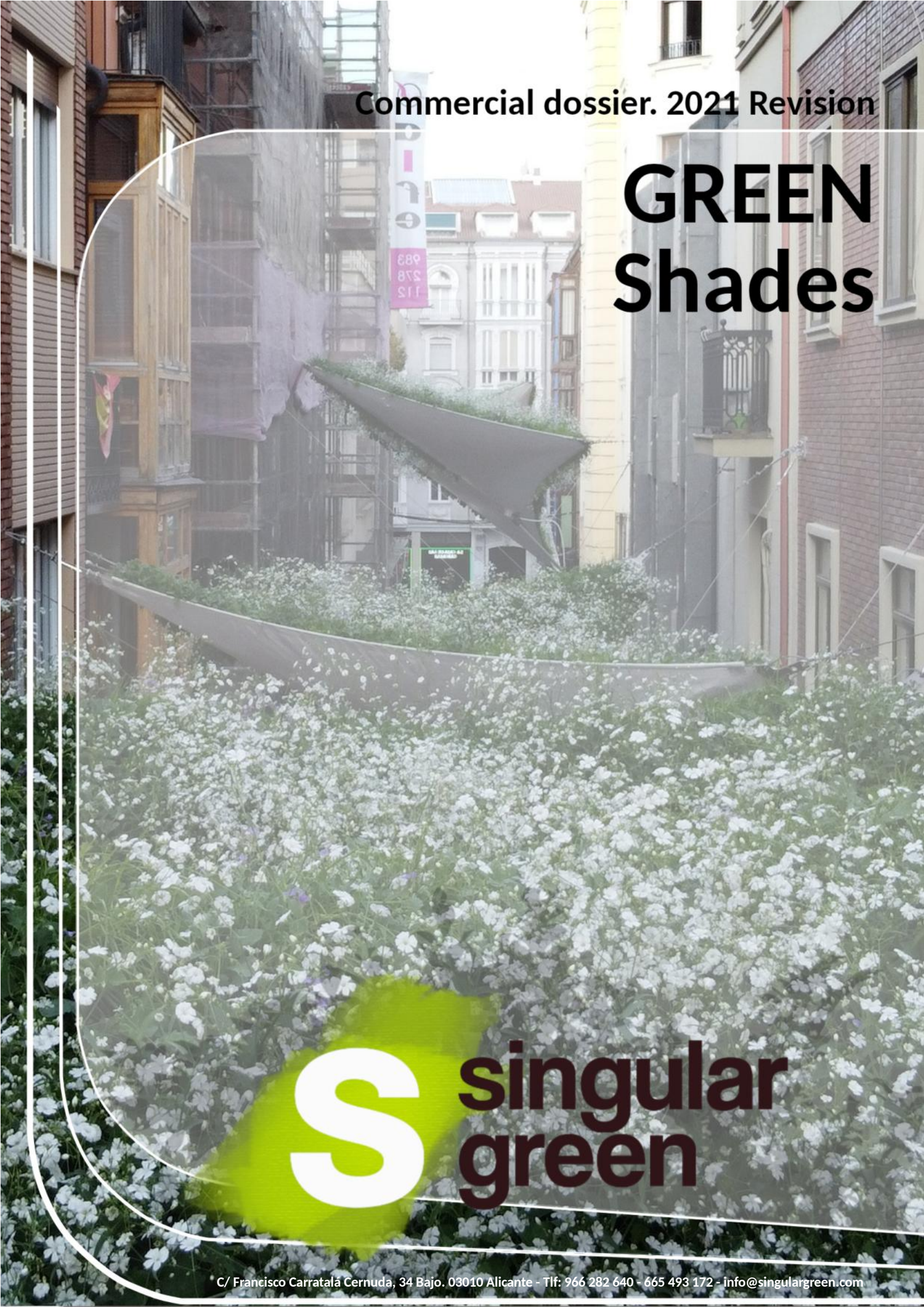
Commercial dossier. 2021 Revision

GREEN Shades



singular green

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What do we do?

Our goal is the **integration of vegetation** in buildings as a way to improve the quality of life, both at a private and urban level.

How do we do it?

Our systems offer **multiple possibilities** for the integration of vegetation: very lightweight hydroponic systems, where irrigation is a fundamental part, or mixed and substrate systems, heavier but less dependent on irrigation.

In any of our systems, water consumption is optimized to avoid waste and achieve the greatest sustainability. Furthermore, from an ecological point of view, they **reduce environmental pollution**, and from a comfort point of view, they **improve the thermal and acoustic insulation** of buildings.

SingularGreen offers from comprehensive advice on the type of proposal and the plant species that best suit your project, to the complete execution of the project.

How can we help you?

SingularGreen group
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What is a vegetal canopy?

Green Shades is the first system worldwide that allows the installation of vegetal canopies, that is, tensile sails covered with vegetation, opening up a new range of possibilities for urban landscaping and the air conditioning of spaces covered by tensile structures. The spaces and projects created reduce the temperature both in their surroundings and under the canopy. Thanks to the evapotranspiration produced by the vegetal system, the sails act as green air conditioners with a cooling power of 112 frigories/m2. Inside the cities, where heat is a problem, *Green Shades* is an optimal solution in shopping streets, terraces and squares.

The composition and the species are optimised for the absorption of NO_X and CO_2, contributing to the improvement of air quality in our cities. The lightness and ease of installation allows placement in streets where, due to lack of space or difficulty of intervention, trees or other types of vegetation cannot be allocated.

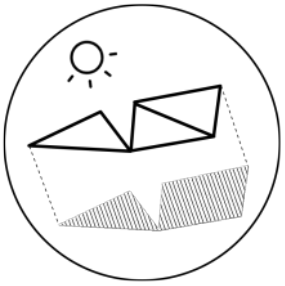
The **main benefits** of the system are:

REDUCTION OF ENVIRONMENTAL POLLUTION

1m² of vegetated area generates the oxygen required by a person throughout the year, and filters harmful gases, improving the air quality of the environments where it is installed.

TEMPERATURE AND HUMIDITY REGULATION

Through the evapotranspiration process of the plants, it generates a decrease in the temperature of the environment and contributes to the regulation of humidity. It also reduces noise pollution through the absorption of waves by the substrate and the reflection on the vegetation.



CREATION OF SHADED URBAN SPACES

It generates shadows for the enjoyment of the public space by users in places with high sun exposure, creating spaces of dimensions and shape adaptable to each project, and also protected from the rain.

BETTER USE OF URBAN SPACES

It allows vegetation to be introduced into urban areas, while keeping the public space free for users to walk through. In this way, the revitalisation of deteriorated urban spaces or those that are difficult to exploit is achieved.

Your *Green Shades* project

Green Shades is a versatile system that adapts to the different shapes and sizes of sails, thanks to the **LeafSkin projected system** [1]. The most common options are listed below, but for each project the specific conditions of the site will be studied.

STRUCTURES ANCHORED TO FACADES

With a preliminary study of each facade, the anchors are designed to meet the structural and regulatory requirements. It is ideal for the introduction of vegetation in commercial streets and public spaces in historic centres, providing shaded areas that, simultaneously, improve the air quality in the city.

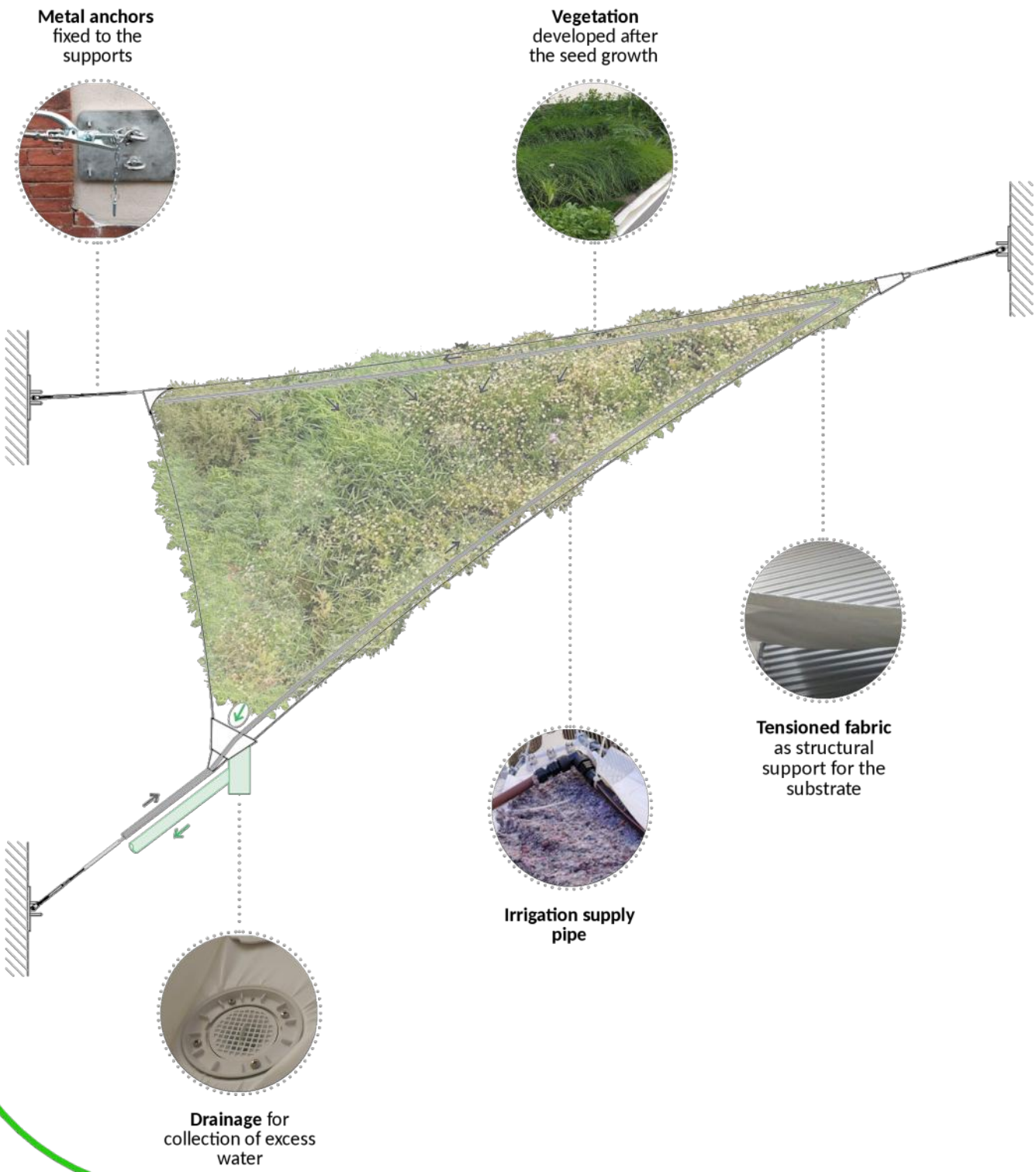
SUPPORTS DESIGN

When there are no facades near the space to be vegetated, or it is not possible to anchor to them, a structure of its own can be designed, using supports, tensioned fabrics and anchors. The advantage of this case is that it allows greater flexibility in terms of design, and any space can be vegetated.

[1] In the **LeafSkin system dossier** you will find all the information about the projected vegetation process.

System operation and components

The water supply and drainage are integrated in one of the three corners of the sail. The irrigation tube is led to the highest side, from where the water falls by gravity soaking all the substrate. This is a hydroponic system that provides fertilizer during the watering, keeping the vegetation in perfect condition. The exeded water is collected at the lowest point.



Installation process

Preparation of the sails by placing the geotextile substrate on the fabric, which already has the tensioned cables and anchors in its structure.

Preparation of the achorages on the facades or masts where they will be placed.

Anchoring of the three corners to the supports, tensioning the structure completely.

Connection of the irrigation system to the water supply intake.

Connection of the drainage to the lowest point of the canopy to collect excess water.

Projection of the seed mixture over the geotextile, for the subsequent growth of the plant species.

After five months the canopy is completely covered.

Photo gallery

Green Shades installed in Santa Maria Street, Valladolid

Why you should prefer SingularGreen

LIGHTWEIGHT SYSTEMS

In each project we study the different possibilities, choosing systems with the greatest lightness, adapted to the structural requirements of the support.

REMOTE CONTROL SYSTEM

Installation of the latest technology in remote control systems, with a quick and efficient system of failure alerts.

GUARANTEE

SingularGreen plant installations offer a 10 year guarantee of the systeam, and a 2 year guarantee of the plants.

TECHNICAL ADVICE

SingularGreen provides technical assistance during the development of the installation and afterwards, with the aim of achieving a perfect installation and start-up .

PROJECTS ADAPTED TO THE SITE

SingularGreen carries out an exhaustive study of the conditioning factors of each project, proposing the best option for each context.

OPTIMISATION OF THE CONSUMPTION

By providing a water recirculation system, the demand for irrigation is reduced.

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