



2 MARCH 2022 – ON LINE

ALICIA VILLAZÁN CABERO
VALLADOLID CITY COUNCIL



URBAN GREENUP WEBINARS RENATURING INTERVENTIONS


Ayuntamiento de
Valladolid

valladoli+D
adelante AGENCIA DE INNOVACIÓN
Y DESARROLLO ECONÓMICO
DE VALLADOLID

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AGENDA

- RENATURING CYCLE LANE
- PLANTING NEW 2,350 TREES
- URBAN CARBON SINK
- GREEN RESTING AREAS
- URBAN ORCHARDS



RENATURING INTERVENTIONS IN VALLADOLID

7

PLANTING NEW 2,350 TREES

42

Table 4: Interventions included in each Valladolid Sub-Demo

33	RE-NATURING URBANIZATION	WATER INTERVENTIONS	SINGULAR GI	9 NON TECHNICAL INTERVENTIONS
Sub-Demo A	VAc1- New green cycle lane VAc2- Planting 1,000 trees VAc3- Tree shady places VAc6- 3 Green Resting areas	VAc8- SUDs for green bike lane	VAc15 - Cycle-pedestrian green paths VAc16- Smarts soils as substrate VAc19- Natural pollinator's mod. VAc22 - Green Noise Barriers.	Common non-technical interventions: VAc37, 38, 39, 40, 41 & 42
Sub-Demo B	RENATURING CYCLE LANE & GREEN RESTING AREAS VAc4- Shade and cooling trees		VAc17- Smarts soils as substrate. VAc20- Compacted Pollinator's mods. VAc23 - Green Noise Barriers. VAc24 - Vertical mobile garden. VAc25 - Green Façade. VAc26 - Electro wetland Roof. VAc27 - Green Covering Shelter. VAc28 - Green Roof. VAc29 - Green Shady Structures. VAc30 - Urban Garden Bio-Filter.	Common non-technical interventions: VAc37, 38, 39, 40, 41 & VAc42 SMART SOIL
Sub-Demo C	VAc5- 250 trees to re-naturing parking VAc7- Urban Carbon Sink	VAc9- SUDs (re-naturing parking) VAc13- Nat. wastewater Plant VAc10- Rain gardens VAc12- Green filter area VAc11- Floodable Park VAc14- Parking Green Pavement	VAc18 - Smarts soils as substrate VAc19, 21-Natural pollinator's mod. VAc20 - Compacted Pollinator's mod. VAc31 - Urban orchards VAc32 - Community composting. VAc33 - Small-scale urban livestock.	VAc34: Educational path in VAc13 VAc35: Educational path in VAc11 VAc36 - Urban Farming Educational activities. Common non-technical interventions: VAc37, 38, 39, 40, 41 & VAc42

URBAN CARBON SINK

URBAN ORCHARDS



RENATURING CYCLE LANE

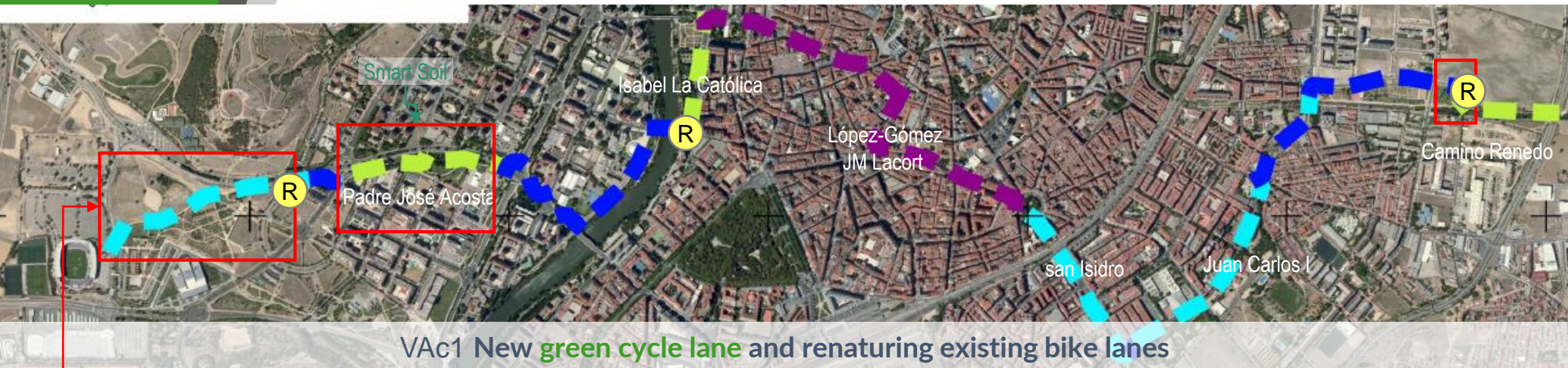
Green corridor: New cycle lane interconnected



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RENATURING CYCLE LANE: GREEN CORRIDOR

- *New green cycle lane implemented in Valladolid by the City Council from 2017-2021.*
- *URBAN GreenUP budget: Intervention in the West and East of the Green corridor.*
- *Green corridor: 8 km of renatured cycle lane from West to East*



URBAN GreenUP investment

New cycle lane: 0.90 km

Renaturing: 0.6 km

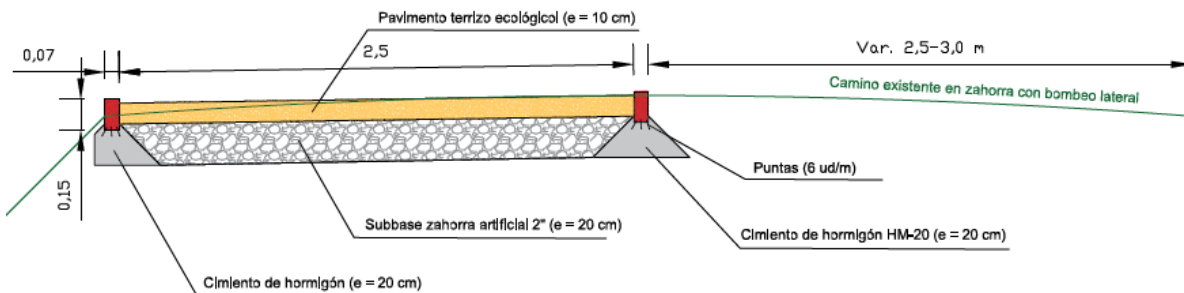
Green corridor 8 km

City of Valladolid:

New cycle lane: 3.06 km

Renaturing: 4.91 km

- Existente: tipos carril-bici y acera-bici
- Existente: vías compartidas, ciclo-vía
- Nuevo: senda-bici (segregado o no-segregado)
- Nuevo: tipos carril-bici y acera-bici
- Nuevo: vías compartidas, ciclo-vía



RENATURING CYCLE LANE: GREEN CORRIDOR

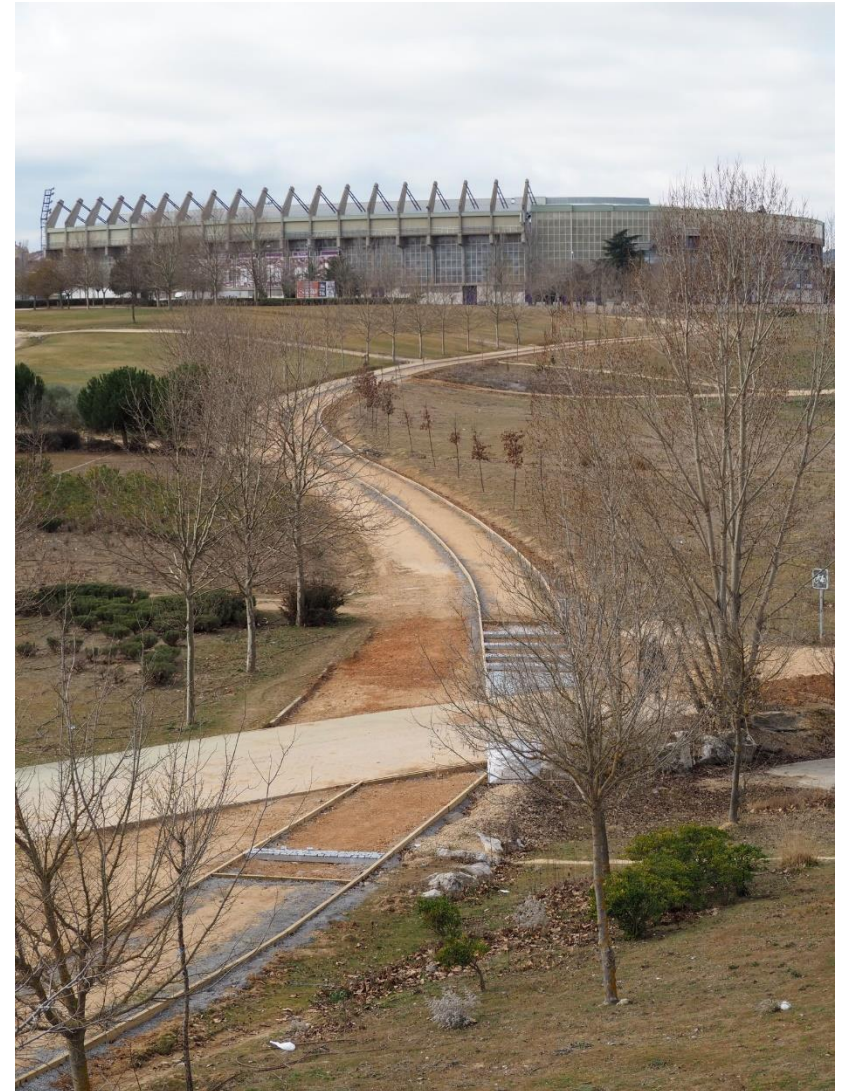
- *Green corridor: 8 km of renatured cycle lane from West to East*
(**ON WORKS**_march 2022)



East of the Green Corridor (cycle lane) in the Carbon sink
(Feb 2022)



West of the Green Corridor
(cycle lane) in the Football Std
(Feb 2022)



West of the Green Corridor (cycle lane) in the Football Std (Feb 2022)



PLANTING NEW TREES

• *Arboreal interventions*

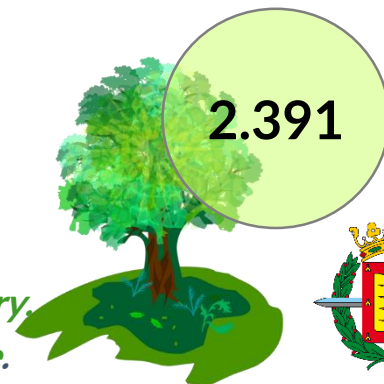


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ARBOREAL INTERVENTIONS

- There have been bought **2,391** new trees.
- 100% trees are **almost planted** (Spring campaign).
- Supplied trees are temporarily stored in the **municipal nursery**.
- The plantation is managed by the **Parks and Gardens Service**.



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NBS GROUP	CODE	INTERVENTION	LOCATION
TREE INTERVENTIONS (2.350)	VAc2	Planting 1,000 trees	A.- Green corridor
	VAc3	Tree shady places (500 trees)	A.- Green corridor
	VAc4	Shade and cooling trees (600 trees)	B.- City Center
	VAc5	Re-naturing parking trees (250)	C.- Football Std car parking

TREES PURCHASE		PLANTATION	N° TREES	%.
Phase I	Nov/Dec-19	Jan-20	584	25%
Phase II	Mar/Apr-20	May/Oct-20	837	60%
Phase III	Jun-20	Jun-20	10	65%
Phase IV	Oct-20	Nov 20 - Apr 21	60	100%
			2.391	



The early spring in Valladolid 2020 prevented the planting of more trees since March 2020.

- **Procedure** Municipal Supply Contracts with local garden nurseries.



PLANTING 1,000 TREES

- *Green areas available along the **Green Corridor***



Green Corridor W-EURBAN GreenUP in Valladolid



Connection with the Green corridor

Trees in Santos-Pilarica (VAc2)



New developments

Trees in Santos Pilarica – east (VAc2)



Reinforcement of recreational areas

Trees in Fuente El Sol (VAc2)



Squares renovation

Trees in LAVA square (VAc2)



Streets and roads renovation

Trees in Segovia Avenue (VAc2)



WEST TREE SHADY PLACES



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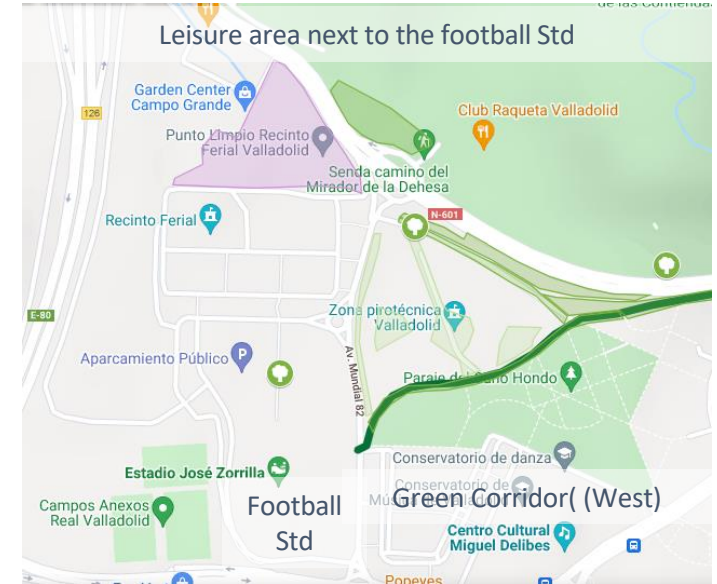
- 500 trees in leisure area next to Football Stadium (*West*)



Trees in Las Contendas park parking (VAc3)



Trees in leisure area – west (VAc3)



Trees in Recycling station area (VAc3)

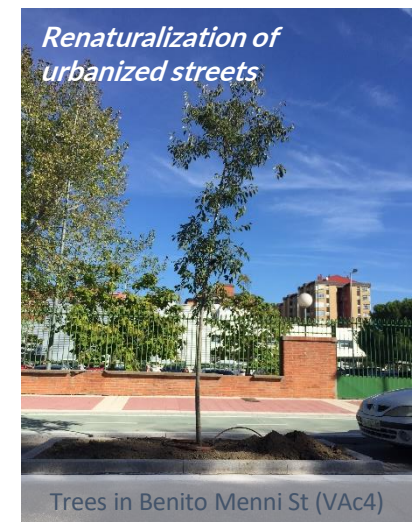


Trees in leisure area – Villa del Prado (VAc3)

VAc3

CITY CENTER SHADE AND COOLING TREES

- 600 trees in City Centre



RENATURING TREES IN STADIUM AREA

- 250 trees in the proximity of the Football Stadium
- Beginning of the *Green corridor* of URBAN GreenUP

Zorrilla Football Stadium



Trees in football Stadium area (VAc5)

Zorrilla Football Stadium



Trees in Caño Hondo road (VAc5)

New cycle lane



Trees in access to the football stadium (VAc5)



Trees in Villa del Prado park (VAc5)



URBAN CARBON SINK

• *Santos-Pilarica neighbourhood*



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URBAN CARBON SINK

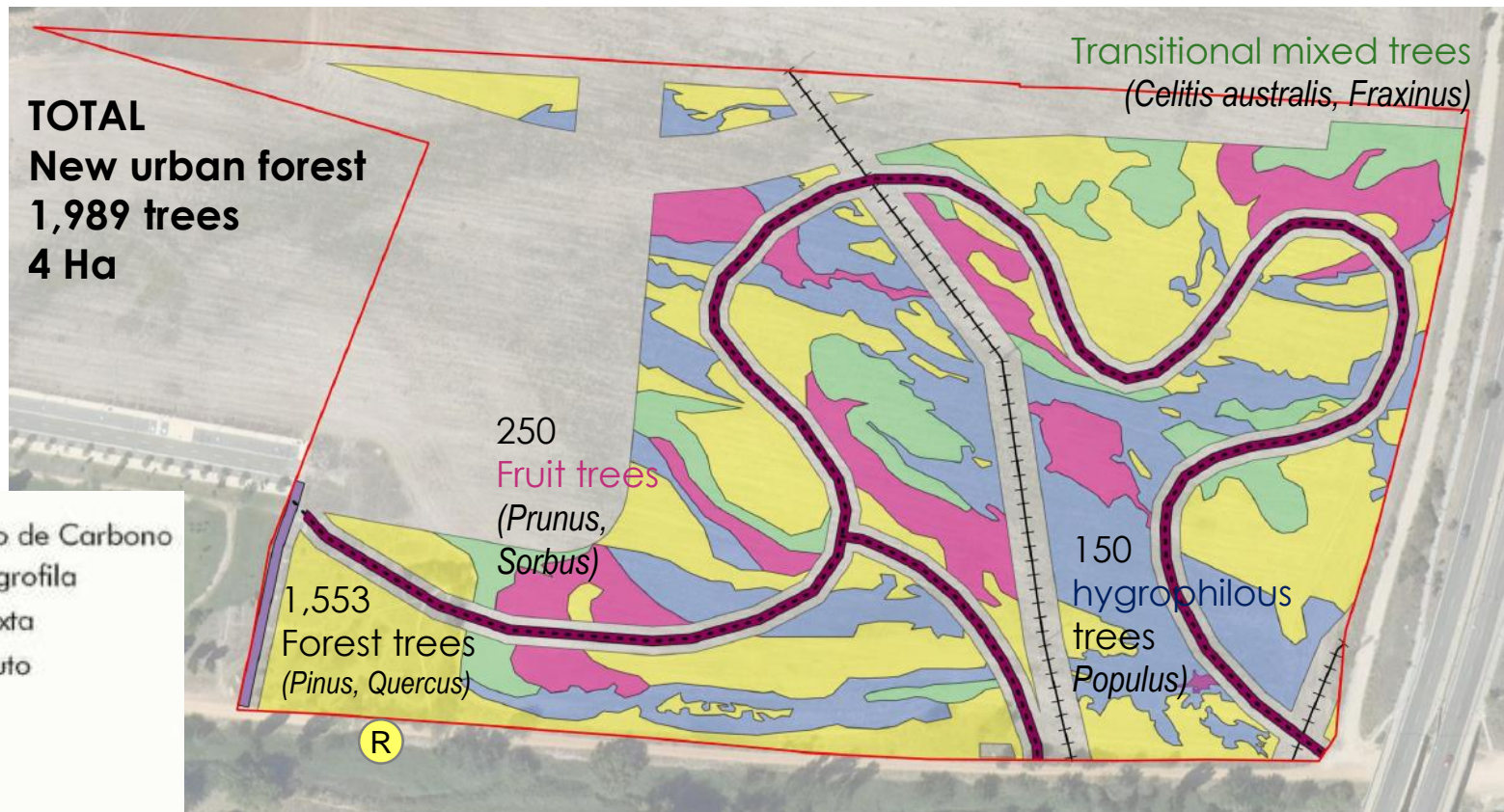


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- Surface of municipal **4,000 m²** with more than **2,000 new trees**
- Four forest matrices of trees: hygrophilous, fruit, mixed and forest.
- Educational path, resting areas, pollinator's modules.
- Registered as **CO₂ Absorption Project** at the Spanish Office for Climate Change, OECC.
- **Smart soil** as substrate (NOx)

Asimilable a FLOODABLE AREA, Freshen occasionally flooded. A2			
Diversificación Matriz forestal TIPO 1. HIGROFILA	Plantas/ha	Superficie (m ²)	Planta (lot)
Especies	Porcentaje		
<i>Populus nigra</i>	50	5564,435	83
<i>Populus alba</i>	50	5564,435	83
SUBTOTAL	100	11128,87	166
Asimilable a URBAN CARBON SINK			
Diversificación Matriz forestal TIPO 2. PRODUCTORA DE FRUTO	Plantas/ha	Superficie (m ²)	Planta (lot)
Especies	Porcentaje		
<i>Sorbus domestica</i>	25	1438	34
<i>Prunus dulcis</i>	25	1438	34
<i>Fernus spinosa</i>	20	1151	29
<i>Crotaegus monogyna</i>	20	1151	29
<i>Rhamnus alaternus</i>	5	286	7
<i>Cornus sanguinea</i>	5	286	7
SUBTOTAL	100	5466	144
Asimilable a URBAN CARBON SINK			
Diversificación Matriz forestal TIPO 3. MIXTO DE TRANSICIÓN	Plantas/ha	Superficie (m ²)	Planta (lot)
Especies	Porcentaje		
<i>Celtis australis</i>	60	3016	74
<i>Ulmus minor "sessilis"</i>	5	251	6
<i>Fraxinus angustifolia</i>	30	1508	38
<i>Lagotis regia</i>	5	251	6
SUBTOTAL	100	5026	126
Asimilable a URBAN CARBON SINK. B1 y B2			
MATRIZ FORESTAL	Plantas/ha	Superficie (m ²)	Planta (lot)
Especies	Porcentaje		
<i>Pinus pinaster</i>	75	14554	1164
<i>Quercus faginea</i>	10	1941	155
<i>Quercus ilex ssp. ballota</i>	5	970	78
<i>Juniperus thurifera</i>	5	970	78
<i>Pinus pinaster ssp. mesolepis</i>	5	970	78
SUBTOTAL	100	19405,79	1555

TOTAL
New urban forest
1,989 trees
4 Ha



Plantaciones Sumidero Urbano de Carbono

- Diversificación Tipo 1. Higrofila
- Diversificación Tipo 3. Mixta
- Diversificación Tipo 2. Fruto
- Matriz forestal
- Senda interpretativa
- Corredor verde
- Líneas Eléctricas



URBAN CARBON SINK & SMART SOIL



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- *Urban woodland of 2,000 new trees in 4 Ha public plot.*

La Esgueva river
entrance in the city



End of the Green Corridor
(Vereda Los Santos road)

Santos-Pilarica
neighborhood



SMART SOIL AS SUBSTRATE

Smart Soil

10% Biochar



Urban carbon sink plot in Santos-Pilarica



Smart soil as substrate in the carbon sink



Urban carbon sink plot in Santos-Pilarica



- Technical-economic specifications delivered by CARTIF Technology center
- Smart soil = special substrate with Biochar and made up by subproducts.
- Local supplier -> Progressive purchase for the NbS -> **Total: 1,155 m3 delivered**

Distribution	Volume [m³]
Trees (Green corridor and Stadium)	490
Green corridor	210
Pollinator's mod.	175
Urban carbon sink	280
SUDs (green parking pavement)	220
	1.375 m³

1st-2nd supply delivered on 2020:
490 m³ for Tree planting

3rd supply delivered on 2021:
665 m³ for Green corridor NbS



Framework Agreement of Suppliers for the City of Valladolid

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Composition		Charateristics	
By-products	90-95%	Texture	Sandy Franc - Slimy Franc
		C/N ratio	> 12
Biochar	5-10%	Organic	> 4%
		pH	6,5-7,5

10% Biochar



Soil quality analysis

[illegible][illegible]

Smart soil in Valladolid

Smart soil in EMUPA headquarters (supplier, Valladolid)

URBAN CARBON SINK & EDUCATIONAL PATH

- *Urban woodland of 2,000 new trees in 4 Ha public plot.*
- *Educational path to disseminate and engage citizens.*



Educational path in the Urban carbon sink (March 2022)



New cycle lane in the Urban Carbon Sink Park (March 2022)



Educational path & Smart soil in the Urban carbon sink (March 2022)



GREEN RESTING AREAS

- *Three areas along the Green Corridor*

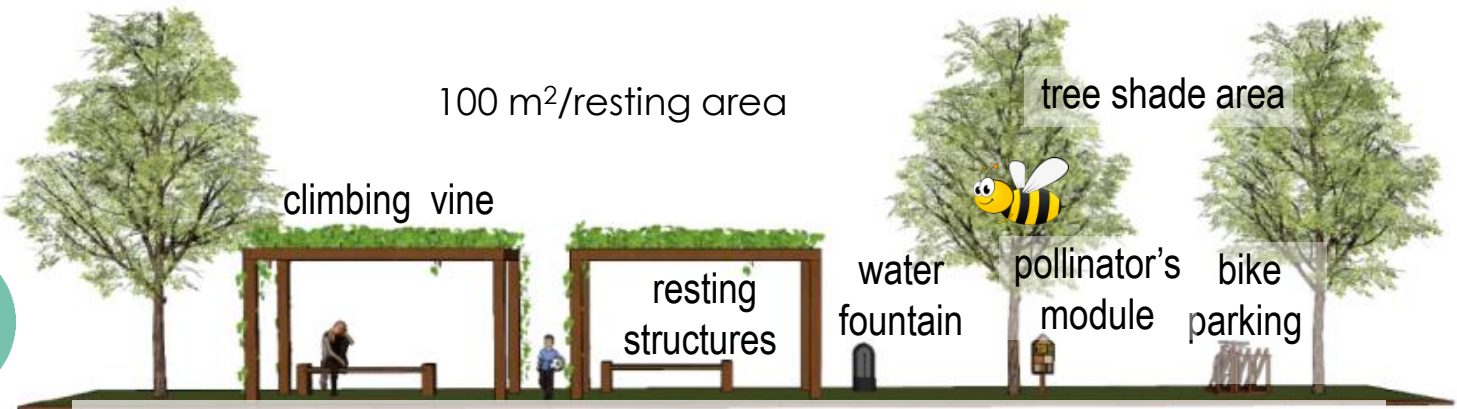
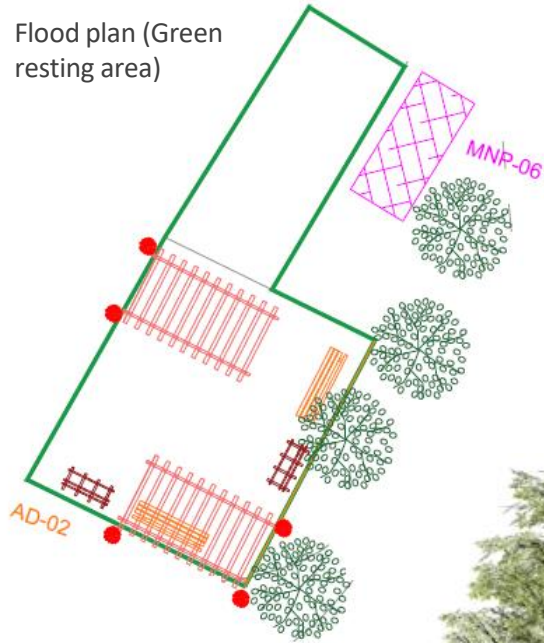


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THREE GREEN RESTING AREAS

- Surface of approx. **100 m²** / each area
- Elements: a tree shade area, a small pollinator module, a bike parking, resting structures (benches/wooden walkway) and a water fountain.

Flood plan (Green resting area)



VAc6 Three Green resting areas



URBAN ORCHARDS

- *Improvements (drop irrigation, shadow places)*
- *Community composting facilities*



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VAc31 Urban orchards improvements

Automatic drop irrigation system



Drop irrigation system in municipal orchard Valle de Arán (July 2020)



MUNICIPAL COMMITMENT

- Improvements in the municipal orchards financed at **100% municipal budget**.
- Improvements in the municipal orchards will continue in the four gardens.

Shadow places





VAc32 Community Composting facilities

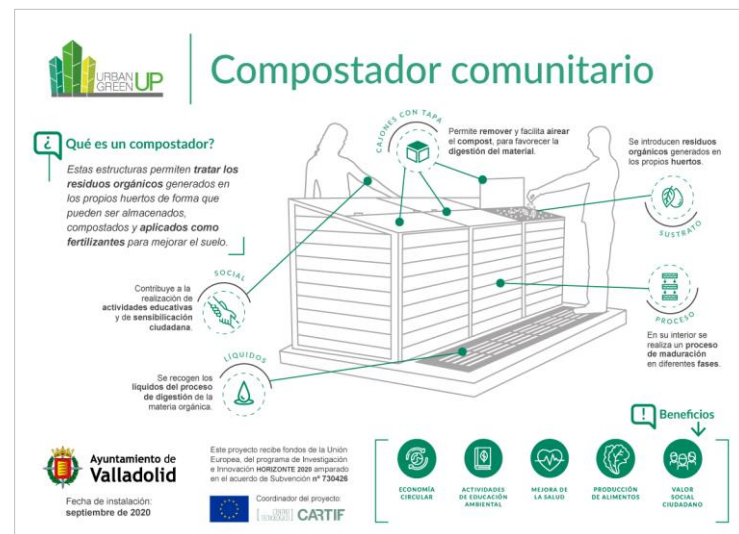
- *Composters in 4 municipal orchards (September 2020)*



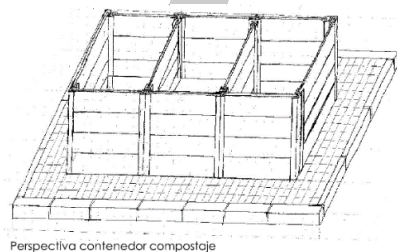
EX-ANTE: Community composting
in Santos-Pilarica orchard
(to be improved)



EX-ANTE: Individual composting
in Parque Alameda orchard



Sign



Perspectiva contenedor compostaje

MUNICIPAL COMMITMENT

- Composting facilities will be implemented in the 4 urban orchards



Composting facility (Parque Alameda, September 2020)



Composting facility (Santos-Pilarica, September 2020)



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THANK YOU FOR YOUR ATTENTION

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WP2 VALLADOLID DEMONSTRATION TEAM



Fundación Centro de las Nuevas Tecnologías del Agua - CENTA
CONSEJERÍA DE AGRICULTURA, GANADERÍA,
PESCA Y DESARROLLO SOSTENIBLE



LUDWIGSBURG