Drafting of the project for the repair and improvement of a fluvial path on the river Tenes in Lliçà d'Amunt

PROJECT SCOPE

The project area follows the River Tenes on both sides, up to a distance of 100 m on each side. The northern limit of the project area is the district of Can Sabater, where the municipality of Santa Eulàlia de Ronçana begins, and the southern limit is the municipality of Lliçà de Vall, close to the Can Dunyó pond.

PROJECT BACKGROUND

This project seeks to create a route that is parallel to the Tenes River, easily accessible to bicycles and pedestrians, organizing the space and the different paths in the area.

The Tenes River has its source in Sant Quirze Safaja in the Sauva Negra and, after crossing the most mountainous section, it reaches Sant Miquel del Fai, where it forms the great Tenes waterfall. It then crosses the municipalities of Bigues i Riells, Santa Eulàlia de Ronçana, Lliçà d'Amunt, Lliçà de Vall and Parets del Vallès. It collects the waters of torrents such as the Merdanç or the Caganell and, in Montmeló, and it flows into the Besòs, along with the Riera Seca that comes from Palaudàries.

PROJECT GOALS

The main objective of the project is the creation of a transitable route for both pedestrians and bicycles linked to the River Tenes as it flows through Lliçà d'Amunt. This objective has the following purposes:

- Repair of the current paths and opening of new sections to achieve a continuous route from north to south of the municipality, including the management of runoff and crossings in the river and its tributaries.
- Digitalization of the route according to the requirements of the FEEC, in case the route is legalized.
- Unification of existing signage, including the route described in this project.
- Ecological improvement of the area, taking advantage of the actions linked to the arrangement of the path and promoting a diversification of habitats.
- Planning future management by drawing up a maintenance plan
- Improvement of the landscape and social use of the space, with actions aimed at the overall improvement of the area; mitigation of the visual impact of the surrounding urbanized area on the river, in those cases where it becomes a conflict or that can be improved; and creation of viewpoints or leisure areas from the fluvial path to the river, among others.

STUDY METHODOLOGY

For the drafting of the project, first of all, the main route of the river Tenes path was defined as the river flows through the municipality of Lliçà d'Amunt. The definition of this route has been made taking into account the indications and requirements of the Lliçà d'Amunt municipality, as well as the study of published road layouts.

Afterwards, a division by sections of the route was made, taking into account current and project characteristics, in order to carry out exhaustive field work, in which the following aspects were evaluated:
- State of the road and assessment of the actions necessary for the improvements.
- Feasibility of the route.
- Detection of the nearest points of interest.
- Definition of the points where the signace implementacion is needed.

Once the evaluation of field actions has been made, these have been properly defined with the corresponding measurements in order to be able to make an executive economic evaluation.

In addition to the actions aimed to improving the path, signage has also been taken into account. In this case, a generic model of signposting has been defined, as well as the locations where some indications would be necessary.

Proposed route

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DEFINED MODEL ACTIONS

The proposed actions are described for each single area based on the type of intervention to be carried out in more generic terms, taking into consideration particular technical characteristics. Subsequently, the problems and measurements corresponding to each especific location are described by sections. Specific signposting actions are also included in the project.

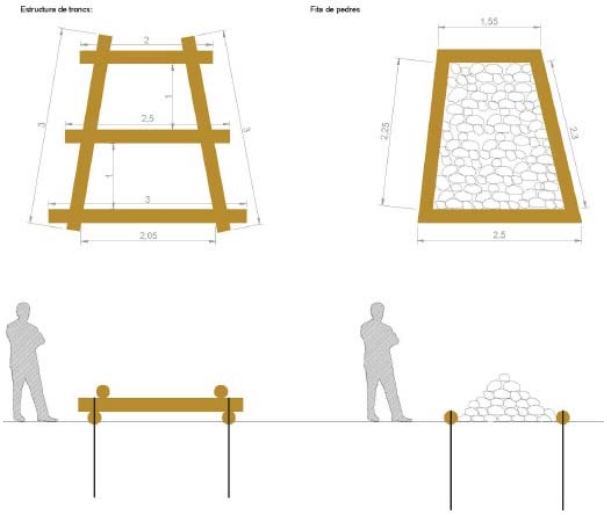
Elimination of impacts:
- Waste removal
- Mechanical cane removal (*Arundo donax*)

Actions on the route and the ground of the path:
- Earthworks
- Manual expansion and improvement of the path (different widths)
- Improvement of the path surface (with or without material input)
- Manual path clearing
- Mechanical path clearing (different widths)
- Drainage (mechanical and manual)
- Drainage ditch
- Stone passage
- Wooden footbridge
- Gaià staircase model

Social use regulation actions:
- Wooden kerb
- Wooden posts (unpeeled chestnut)
- Wooden fence
- Stone wall
- Stone block bench
- Street furniture
- Trapezoidal stone structure
- Trapezoidal log structure

Environmental improvement actions:
- Land ploughing and sowing (possible contribution of vegetal soil)
- Sowing
- Plantation
- Creation of a refuge for the fauna

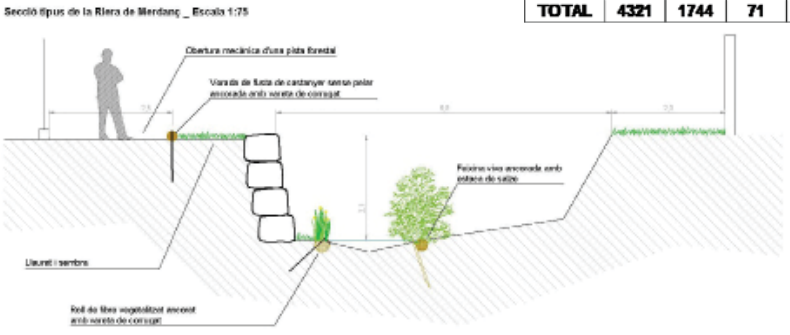
Landscape bioengineering actions:
- Coconut net
- Fascine (live and dry branch)
- Vegetable roll
- Palisade
- Simple log cribwall

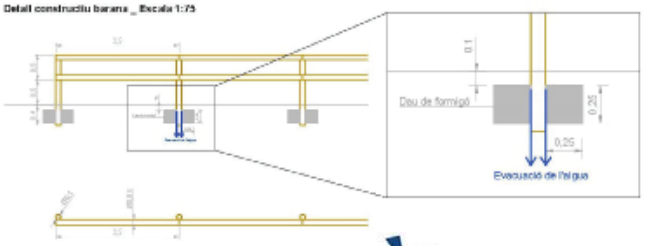


Constructive details

Tram	Longitud (m)	Longitud traçat arranjat/obert (m)	Total actuacions	Número d'actuacions						Gestió espècies		Tipologia d'ús	
				Arranjament traçat	Passos i creuaments	Punts singulars/conflictius	Senyalització	Millora ambiental i paisatgística	Millora Connectivitat	Annex II: canya americana	Annex III: estipa mexicana	Vianants	Bicicletes
TRAM 1	352	205	11	2	-	1	1	2	5	892,5	-	X	X
TRAM 2	147,5	100	5	3	1	-	-	1	-	453	-	X	X
TRAM 3	144	140	4	3	-	-	-	1	-	197,5	-	X	X
TRAM 4	319	0	2	-	-	-	1	-	1	3257	-	X	X
TRAM 5	451	442	5	2	1	1	1	-	-	2899	-	X	X
TRAM 6	801,5	20	8	4	-	-	1	-	3	4586,5	-	X	X
TRAM 7	333	0	3	-	1	1	1	-	-	1344,5	-	X	X
TRAM 8	224	224	9	3	-	5	1	-	-	290	-	X	
TRAM 9	120	0	9	1	1	1	-	-	6	851	184	X	
TRAM 10	203	203	3	2	-	-	-	1	-	474,5	2459	X	X
TRAM 11	98	0	0	-	-	-	-	-	-	-	-	X	X
TRAM 12	119	0	1	-	-	-	1	-	-	2258,5	-	X	X
TRAM 13	427	410	8	5	2	-		1	-	3402	6082	X	
TRAM 14	582	0	3	1		1	1		-	7183,5	1248	X	X
TOTAL	4321	1744	71	26	6	10	8	6	15	28090	9973	14	11

Pathway data by sections





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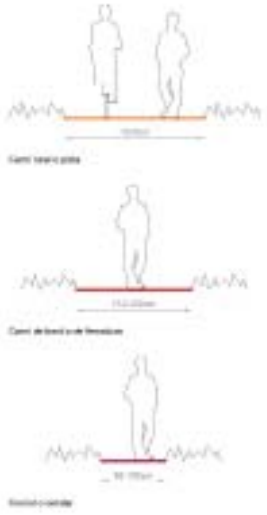

Path typology

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