

# Break up! - radical urban transformation in Munich's pedestrian zone

## Urban nature ,Remaster'

### Creating a climate adaptive oasis in innercity with designed urban nature

The study and analysis of Munich's pedestrian zone reveals the need for examining existing open space from a contemporary perspective, with more emphasis on sustainability, enhancement of urban environment for pedestrian comfort, promotion of more ecologically viable surfaces and plant diversity.

Pavements will be unpaved to increase planting area; more trees will be planted to provide shade and comfort, with fast and slow lanes separated for fluid circulation and corridors opened for good accessibility to the shops on both sides of the street. Experimental planting will be the highlight of the project - to utilize the potential of urban spontaneous vegetation to create a more sustainable urban planting approach. Spontaneous vegetation colonizes planting areas naturally and undergoes the process of natural selection and succession, making it a more climate adaptive alternative to the conventional street greening.

### OUR MAIN CONCEPT IDEAS



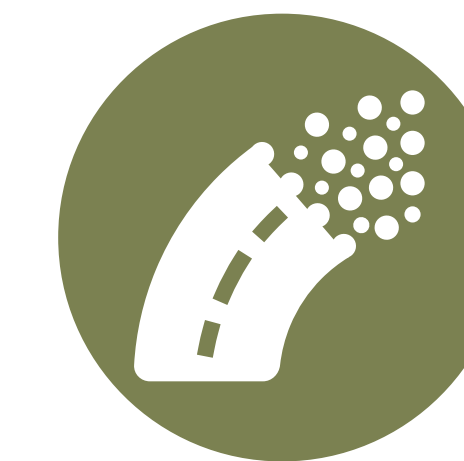
Increasing number + diversity of trees



Letting spontaneous vegetation grow 'Natural Succession'



Creating experimental fields



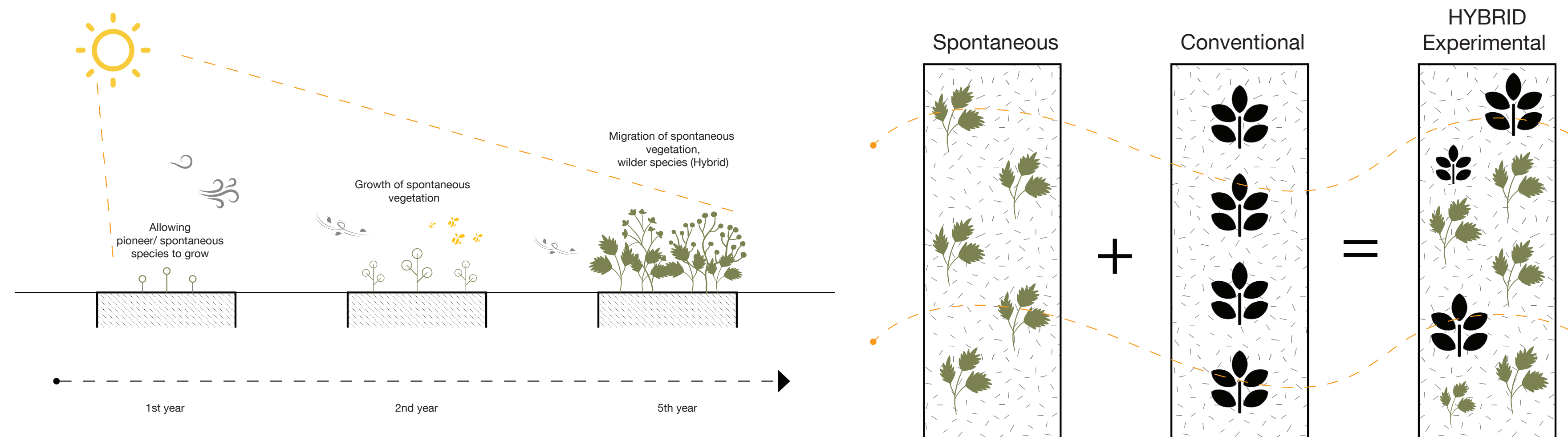
Unpaving+ car free zone in Tal



Quality of stay



Black plan of Munich's old town

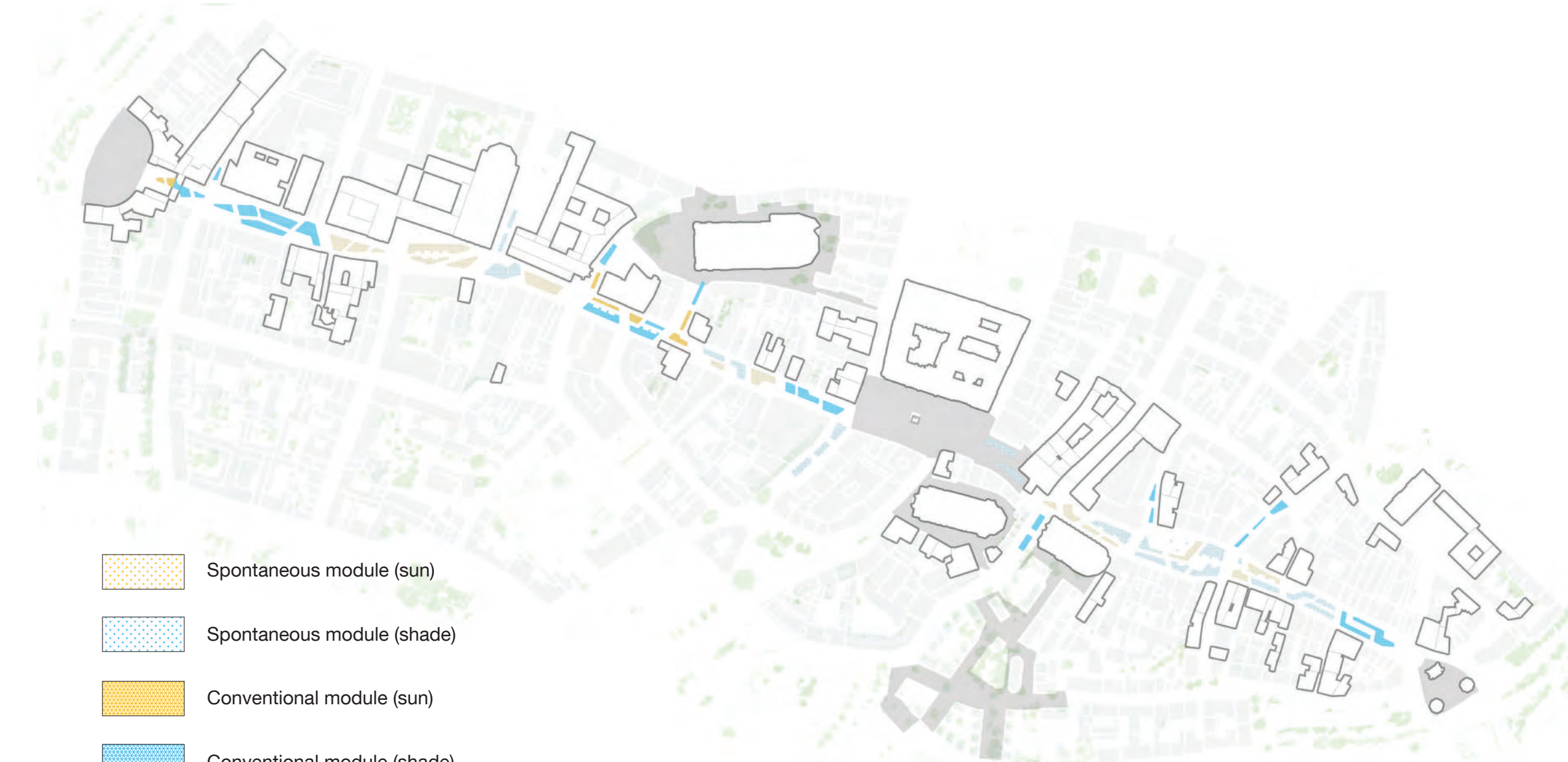


Growth of Spontaneous vegetation

Migration of spontaneous vegetation to cultivated modules



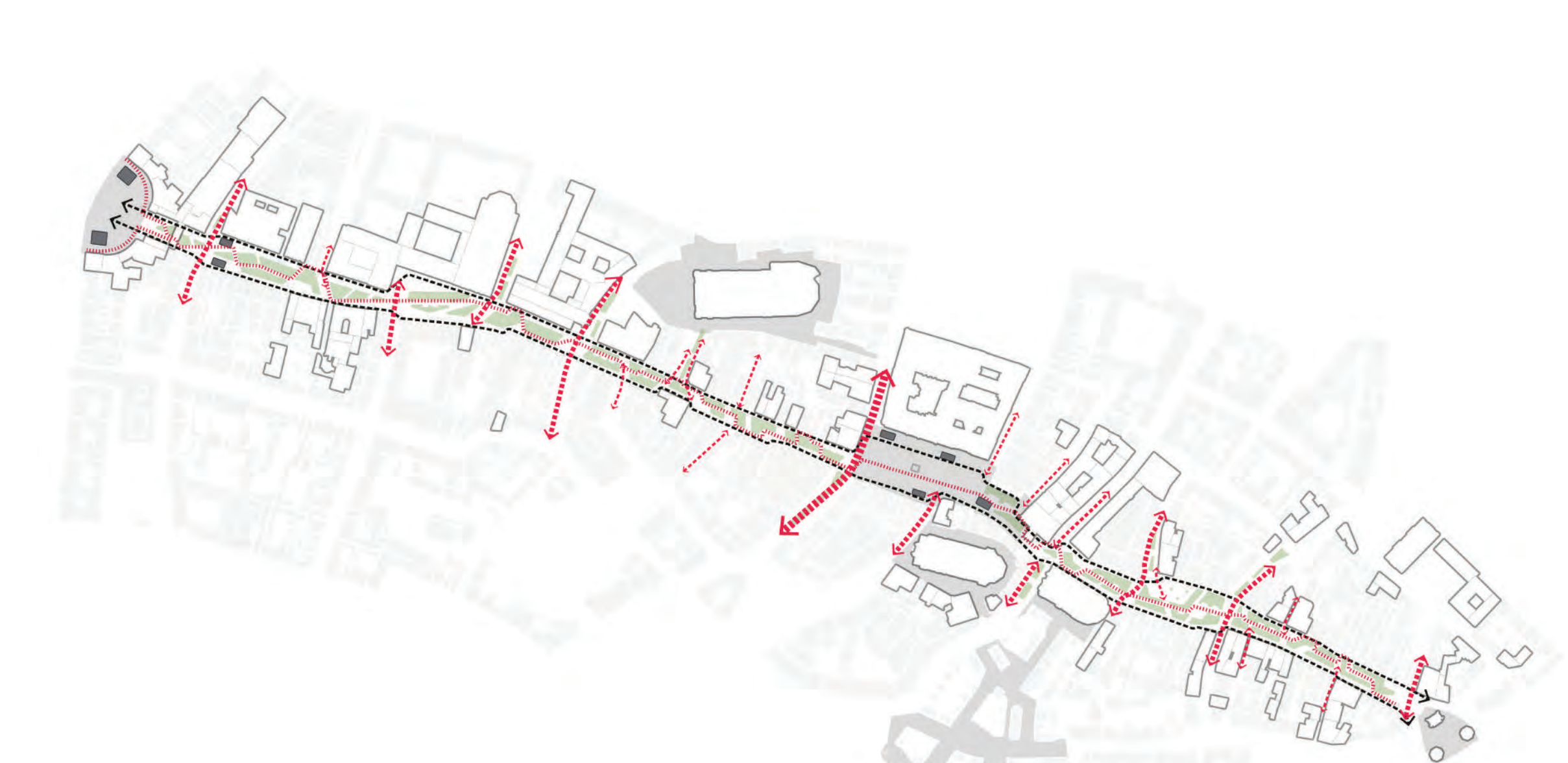
Proposed greenery map (on grade)



Proposed greenery module map (on grade)



Existing monuments, protected facades and proposed trees map

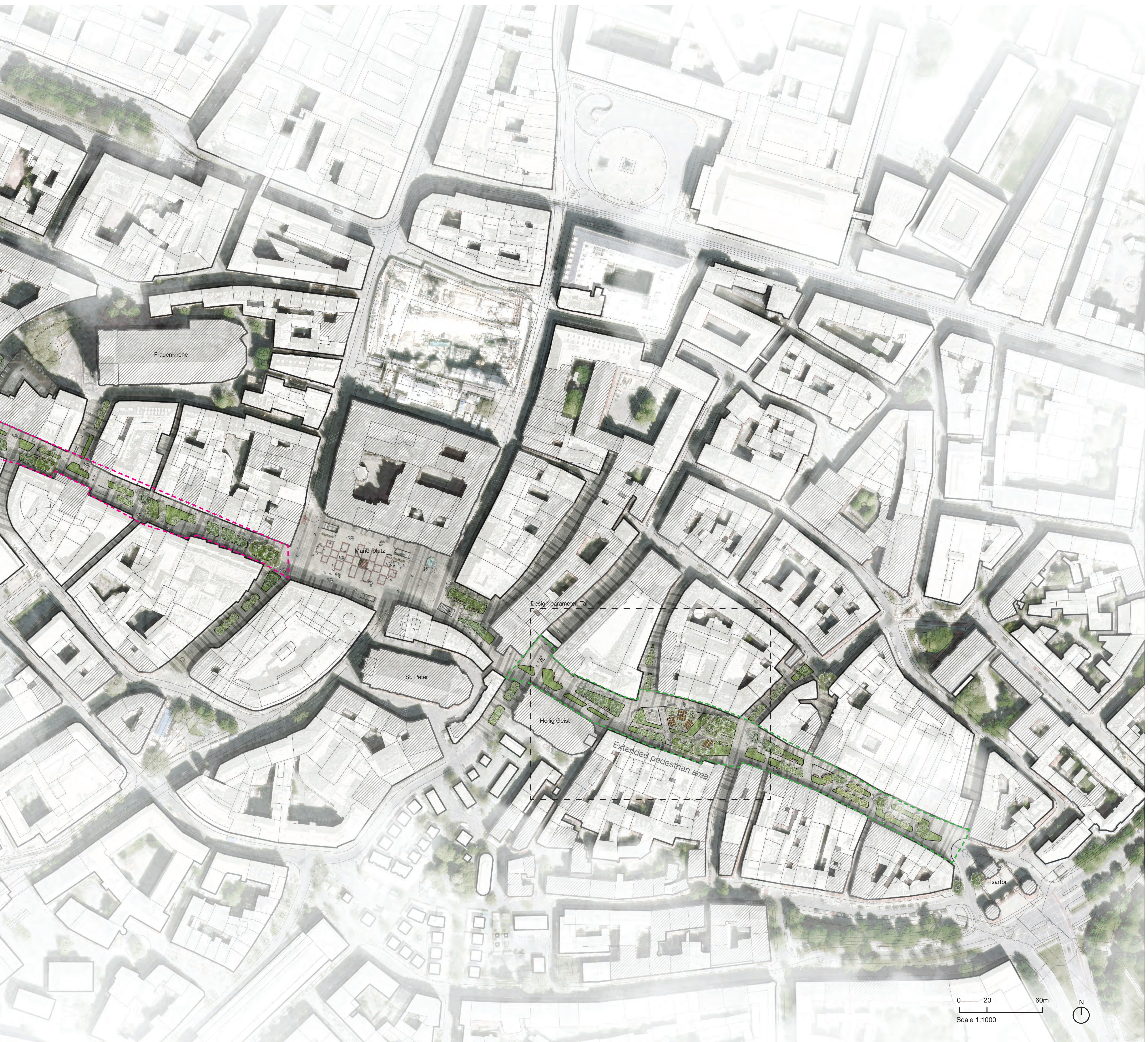


Proposed circulation and connectivity map



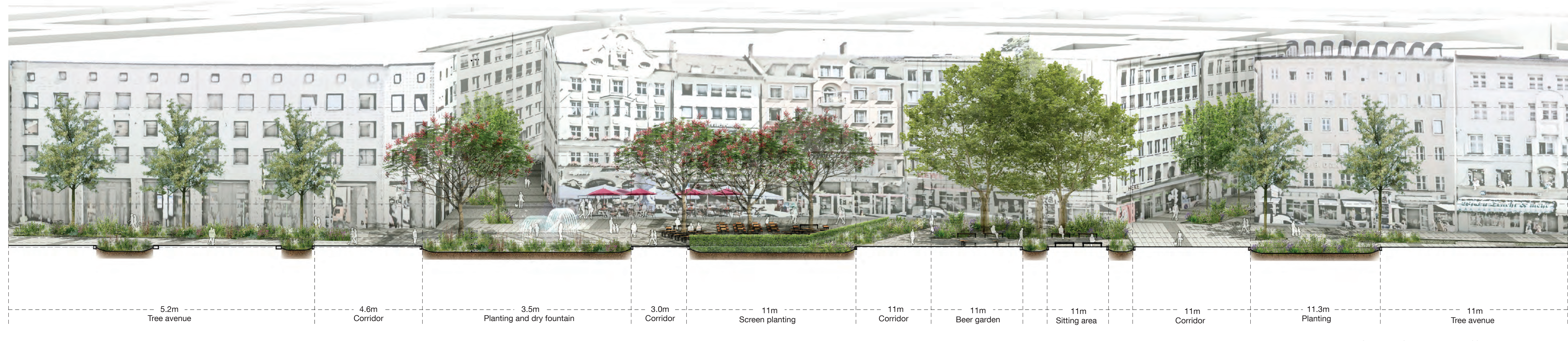


Tal area visualisation





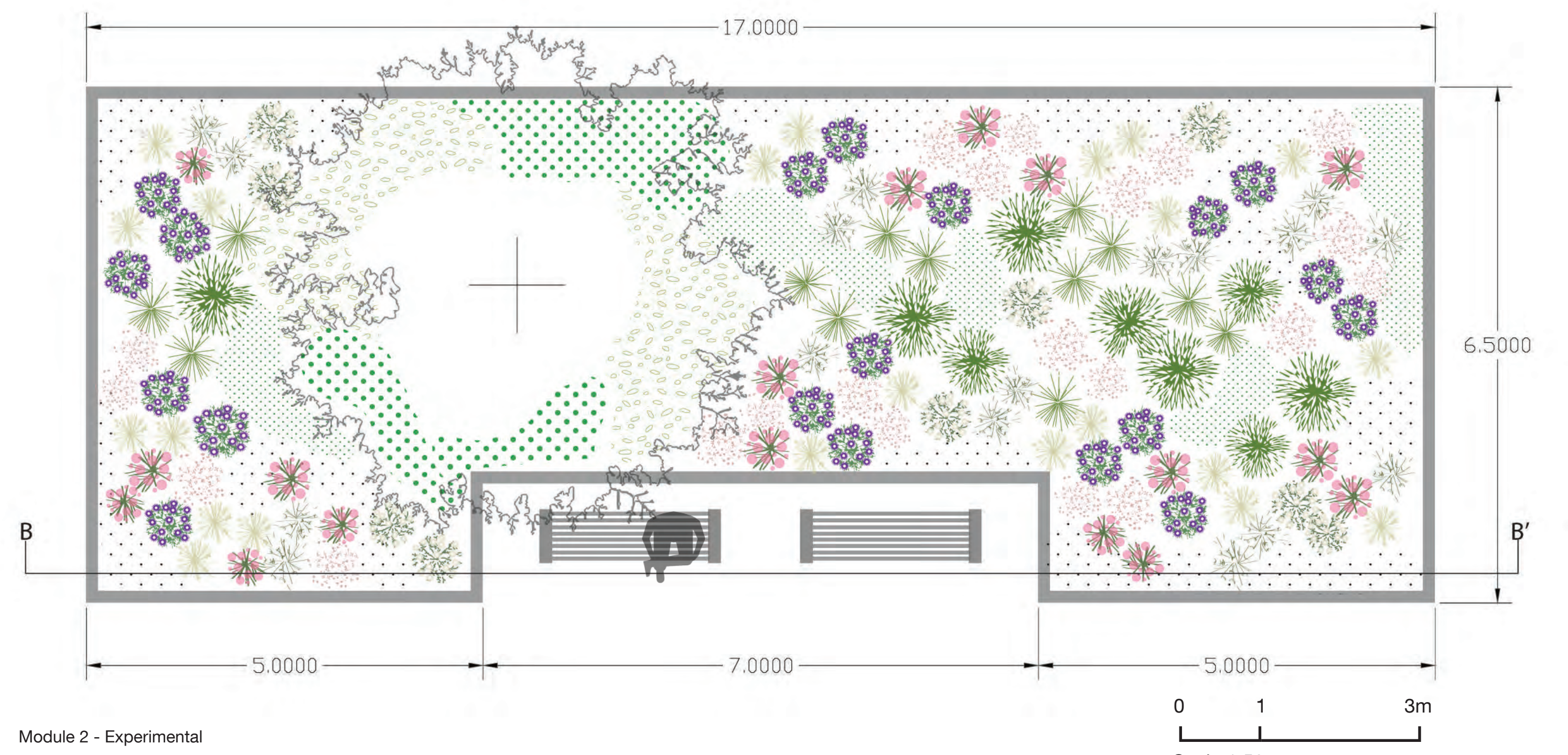
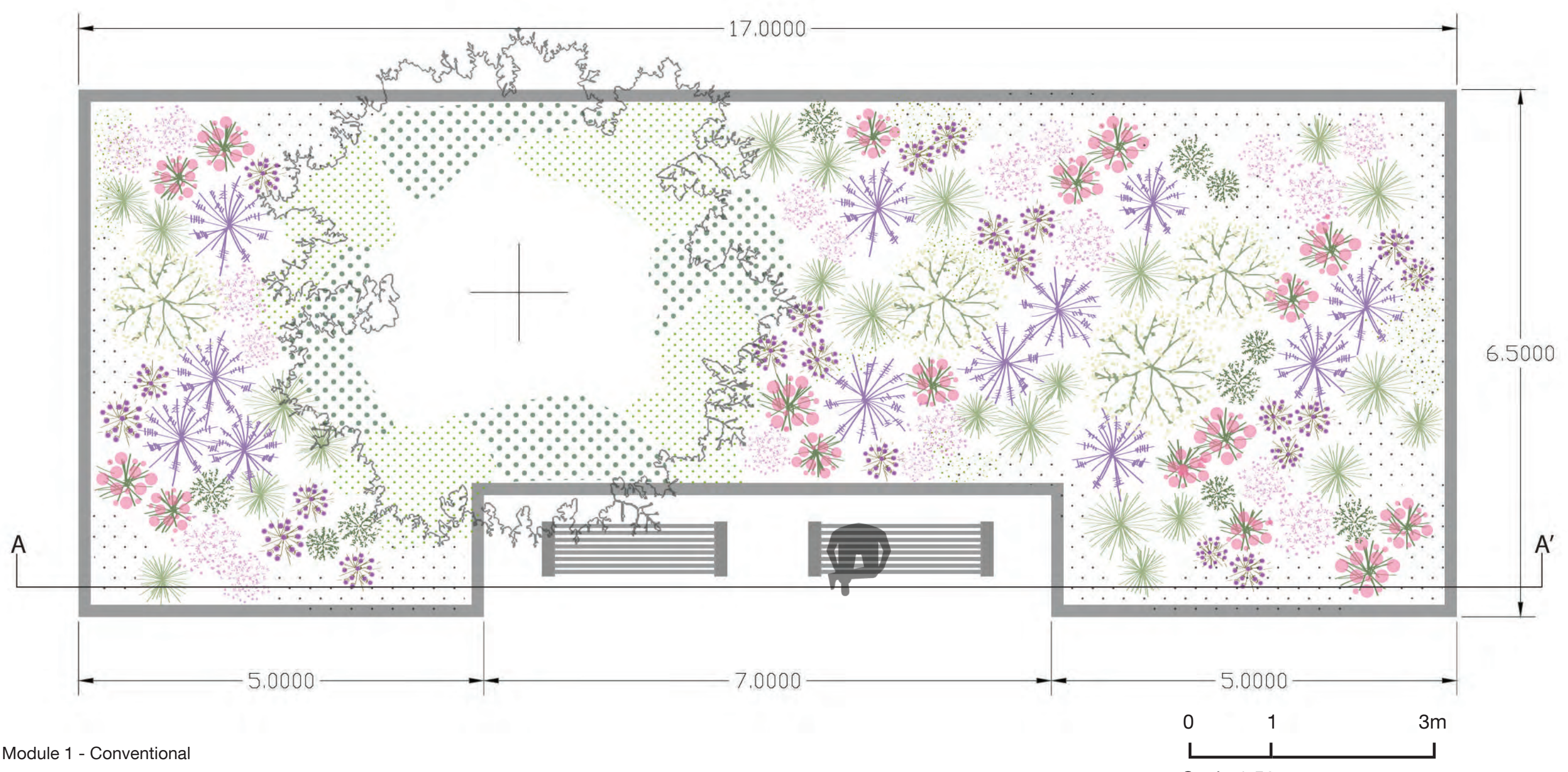
Tal area plan



Section A-A'

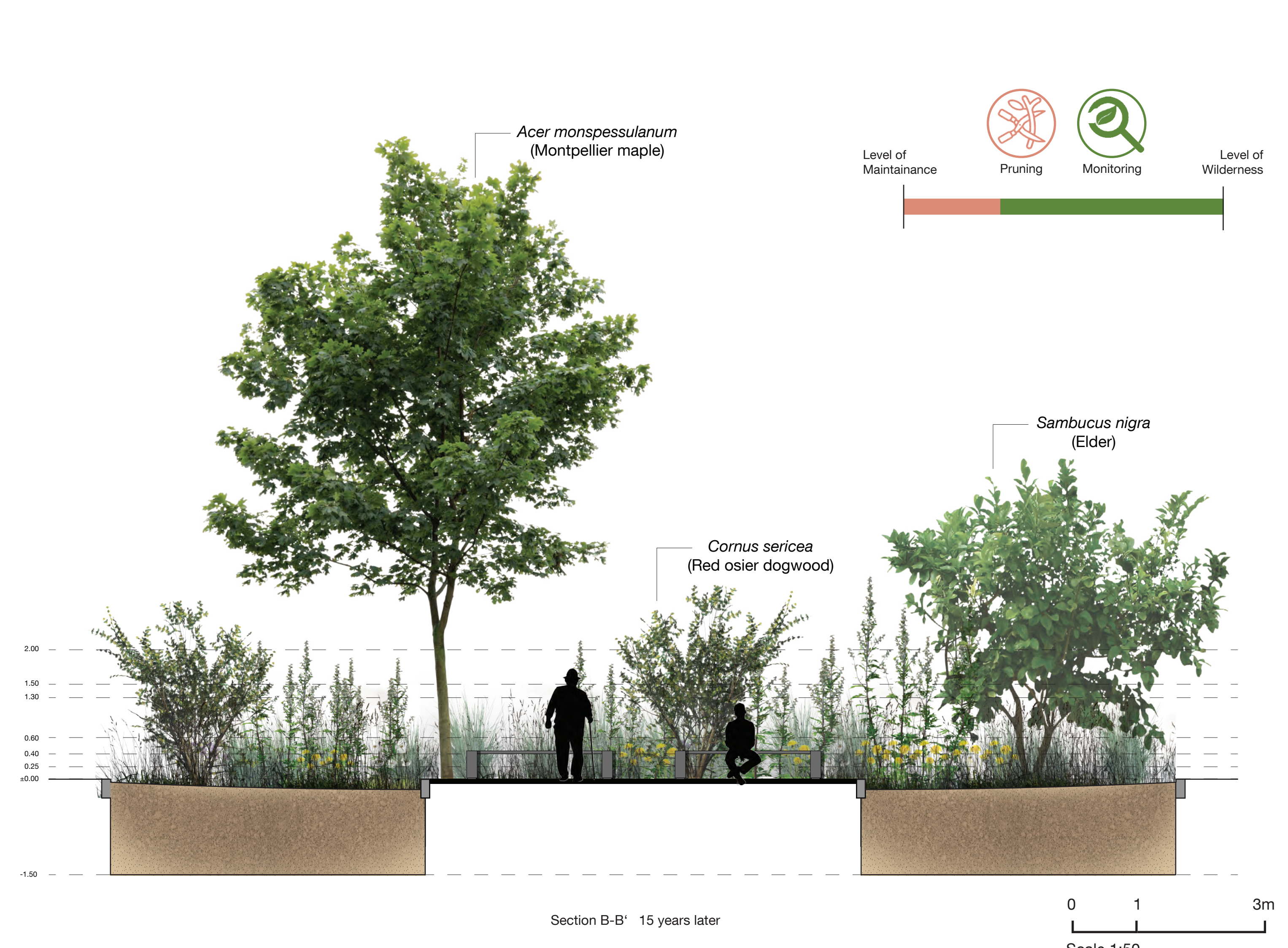
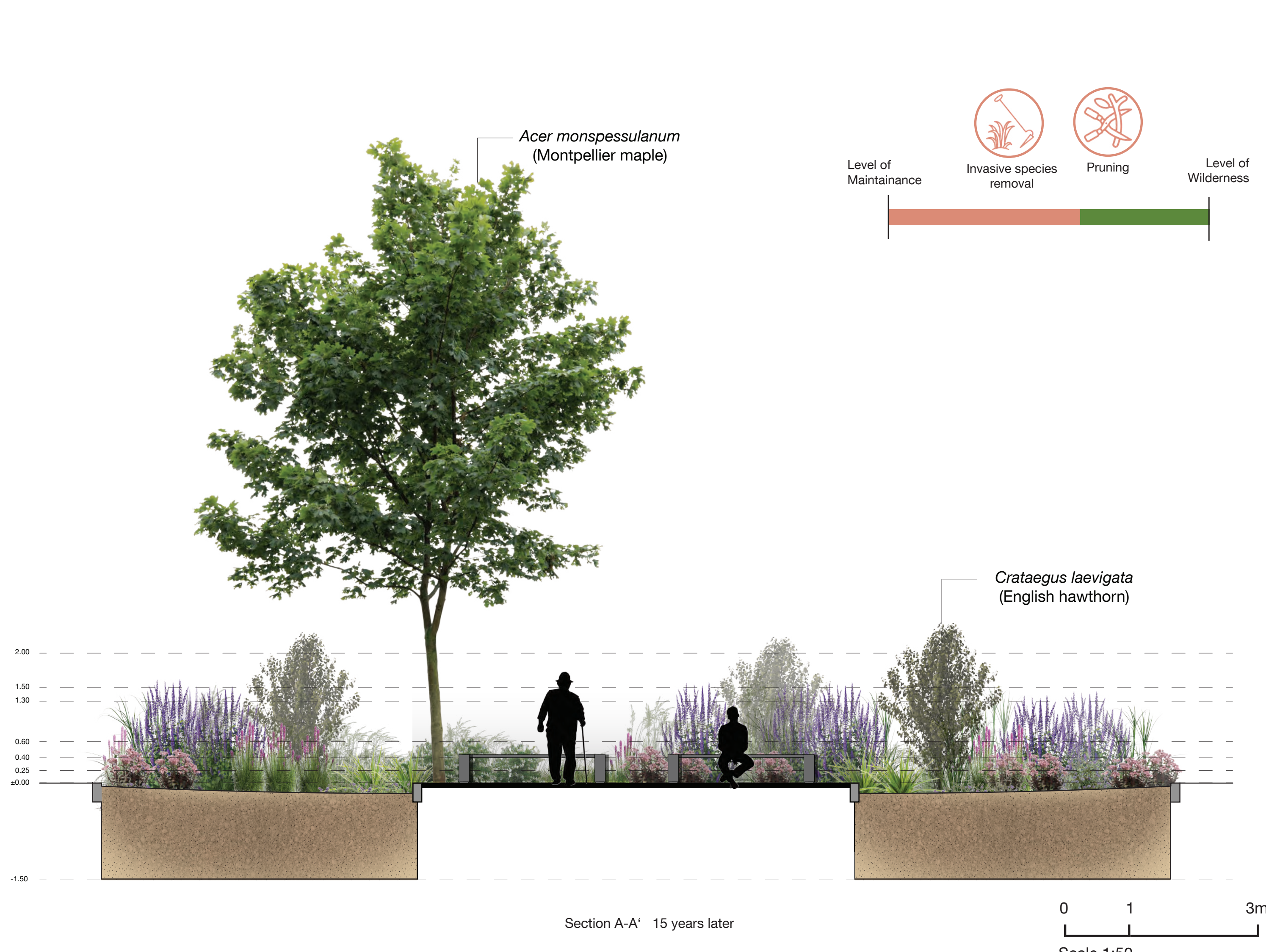
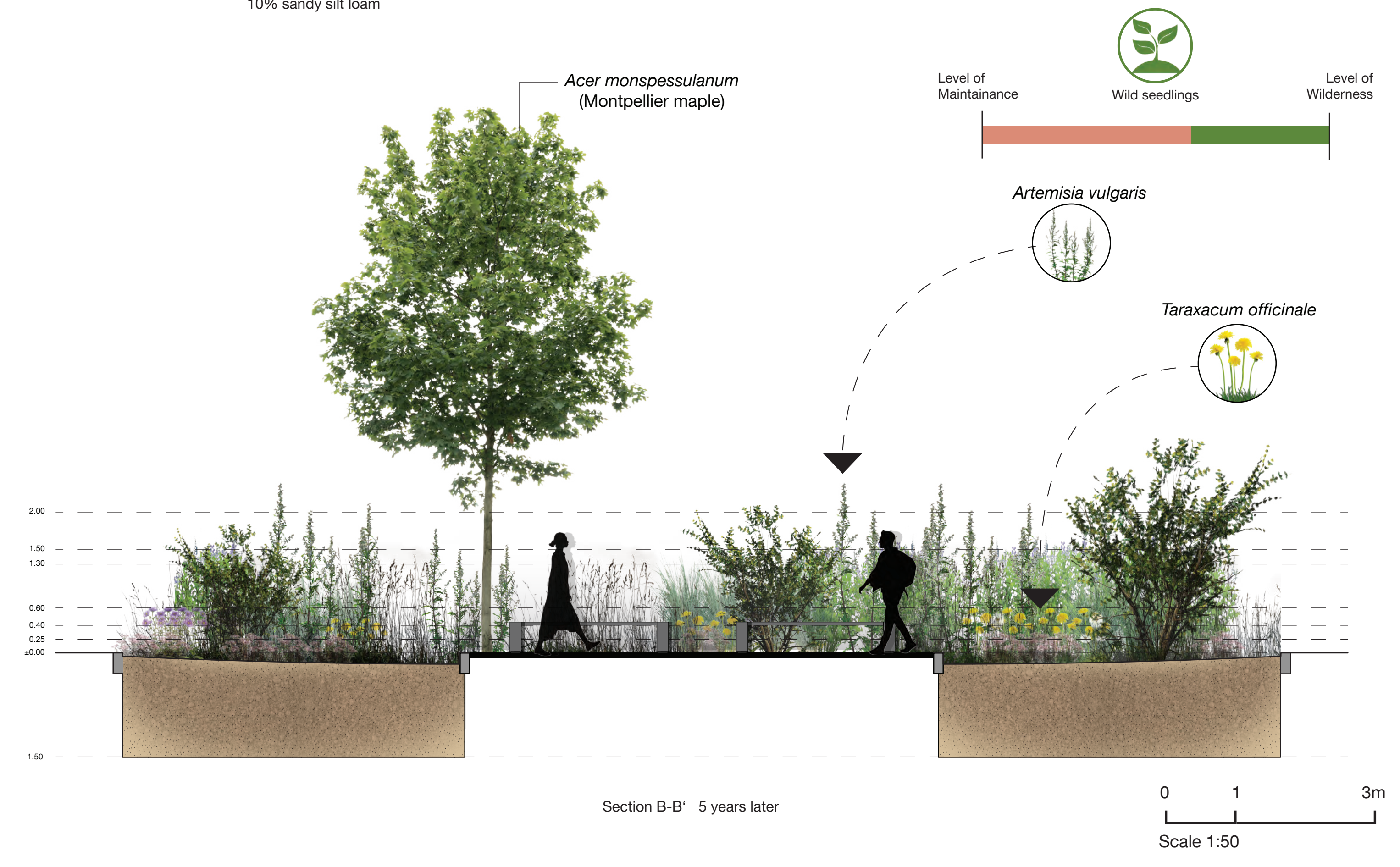
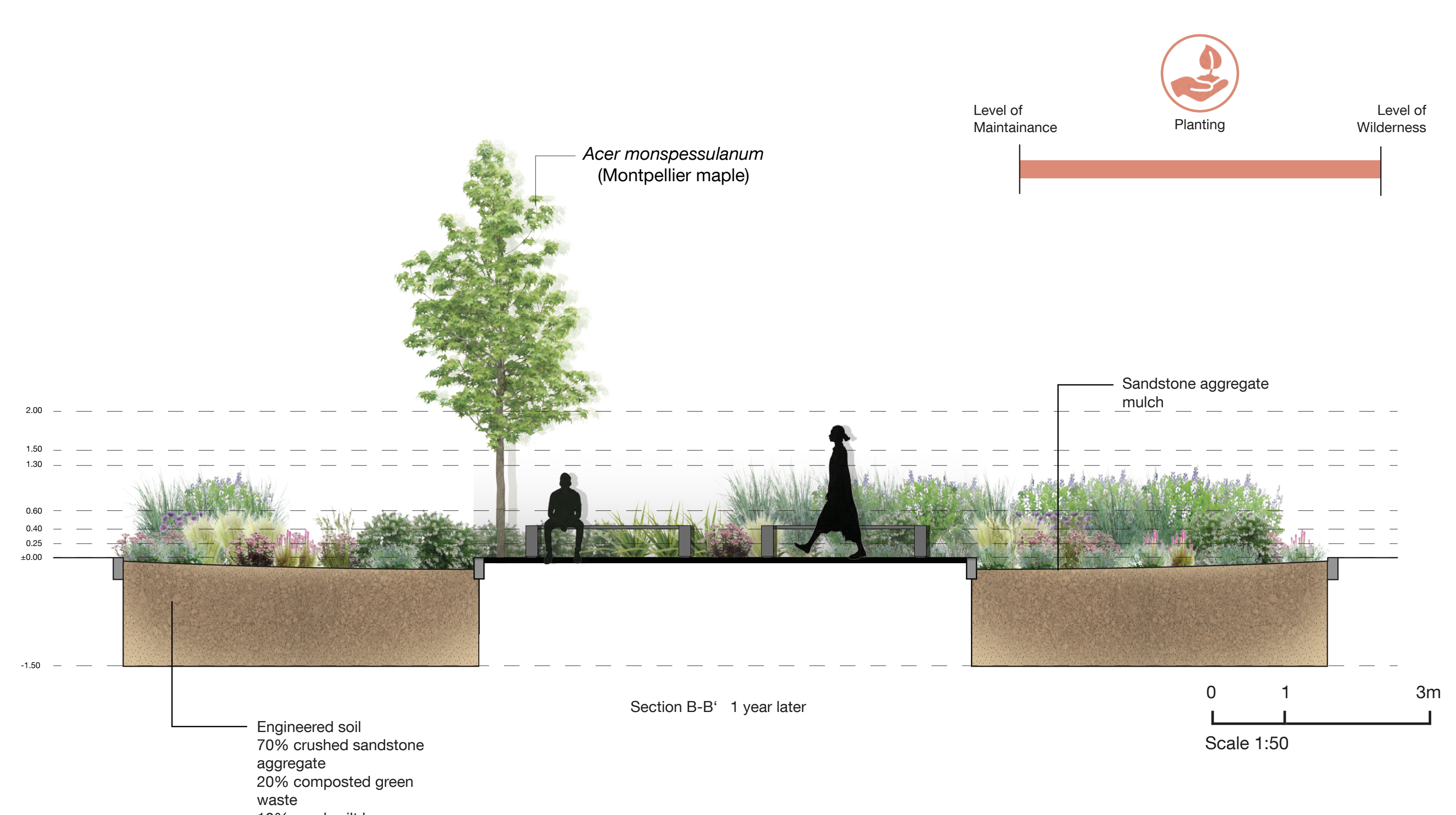
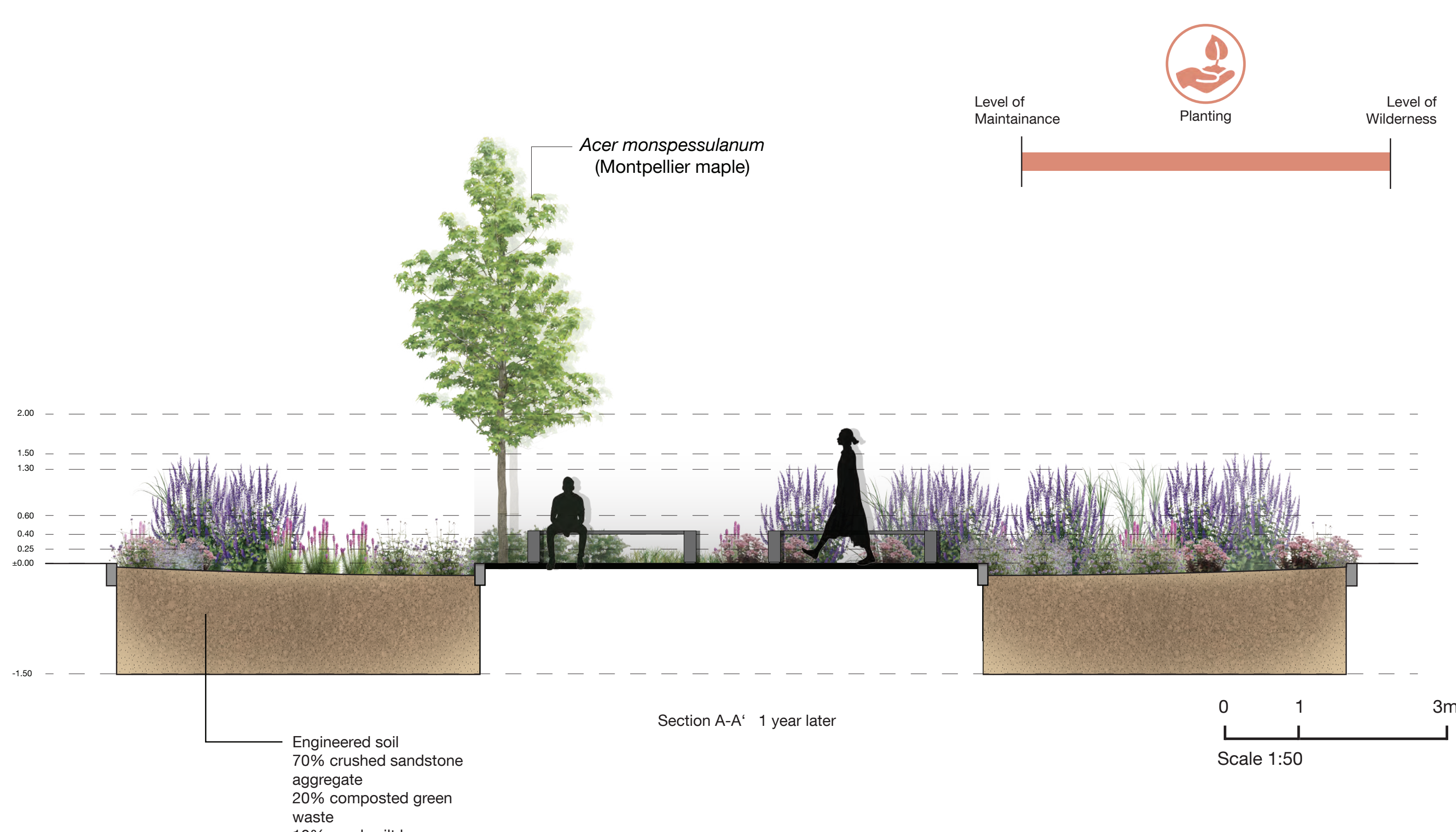


Section B-B'



- |   |  |   |
|---|--|---|
| <p><b>Frame 1</b><br/>Crataegus laevigata<br/>180-260 cm, 1 St./m<sup>2</sup><br/>300-500 cm<br/>V-VI</p> <p><b>Frame 2</b><br/>Perovskia atriplicifolia, Blue Spire® 100<br/>cm, 1 St./m<sup>2</sup><br/>100-150 cm<br/>VIII-IX</p> <p><b>Lead 1</b><br/>Liatris spicata<br/>25 cm, 16 St./m<sup>2</sup><br/>30-80 cm<br/>VII-IX</p> <p><b>Lead 2</b><br/>Sedum telephium<br/>35 cm, 8 pieces/m<sup>2</sup><br/>30-40 cm<br/>VII-X</p> | <p><b>Accompany 1</b><br/>Dianthus carthusianorum<br/>30 cm, 11 St./m<sup>2</sup><br/>30-50 cm<br/>VI-IX</p> <p><b>Accompany 2</b><br/>Calamintha nepeta<br/>35 cm, 8 St./m<sup>2</sup><br/>30-50 cm<br/>VI-IX</p> <p><b>Accompany 3</b><br/>Achillea umbellata<br/>35 cm, 8 St./m<sup>2</sup><br/>10-15 cm<br/>VI-VII</p> | <p><b>Filler 1</b><br/>Sesleria autumnalis<br/>35 cm<br/>8 St./m<sup>2</sup><br/>30-50 cm<br/>VI-IX</p> <p><b>Filler 2</b><br/>Geranium sylvaticum, Album®<br/>40 cm, 8 St./m<sup>2</sup><br/>50-60 cm<br/>V-VI, IX</p> <p><b>Filler 3</b><br/>Epimedium pubigerum<br/>25 cm, 16 St./m<sup>2</sup><br/>20 cm<br/>IV-V</p> |
|---|--|---|

- |  |  |   |
|--|--|---|
| <p><b>Frame 1</b><br/>Baptisia australis<br/>60-80 cm, 8 St./m<sup>2</sup><br/>150 cm<br/>VI-VII</p> <p><b>Frame 2</b><br/>Panicum virgatum<br/>30-50 cm, 8 St./m<sup>2</sup><br/>150 cm<br/>VI-IX</p> <p><b>Lead 1</b><br/>Aster novae-angliae, Purple Dome®<br/>50cm, 1 St./m<sup>2</sup><br/>60 cm<br/>IX-X</p> <p><b>Lead 2</b><br/>Sedum telephium<br/>35 cm, 8 pieces/m<sup>2</sup><br/>30-40 cm<br/>VII-X</p> | <p><b>Accompany 1</b><br/>Pycnanthemum tenuifolium<br/>50 cm, 4 St./m<sup>2</sup><br/>60 cm<br/>VI-X</p> <p><b>Accompany 2</b><br/>Nassella tenuissima<br/>30 cm, 1 St./m<sup>2</sup><br/>30-50 cm<br/>VI-IX</p> <p><b>Accompany 3</b><br/>Stipa capillata<br/>30 cm, 11 St./m<sup>2</sup><br/>30-50 cm<br/>VI-IX</p> <p><b>Accompany 4</b><br/>Stachys monnieri, Rosea®<br/>40 cm, 3-4 St./m<sup>2</sup><br/>50 cm<br/>VII-VIII</p> | <p><b>Filler 1</b><br/>Linum perenne<br/>30 cm<br/>30-60 cm<br/>VI-VIII</p> <p><b>Filler 2</b><br/>Centauria jacea<br/>40 cm, 8 St./m<sup>2</sup><br/>60 cm<br/>VI-IX</p> <p><b>Filler 3</b><br/>Luzula sylvatica<br/>35 cm, 8 St./m<sup>2</sup><br/>20 cm-40 cm<br/>V-VI</p> <p><b>Filler 3</b><br/>Geranium sylvaticum, Album®<br/>40 cm, 8 St./m<sup>2</sup><br/>50-60 cm<br/>V-VI, IX</p> |
|--|--|---|

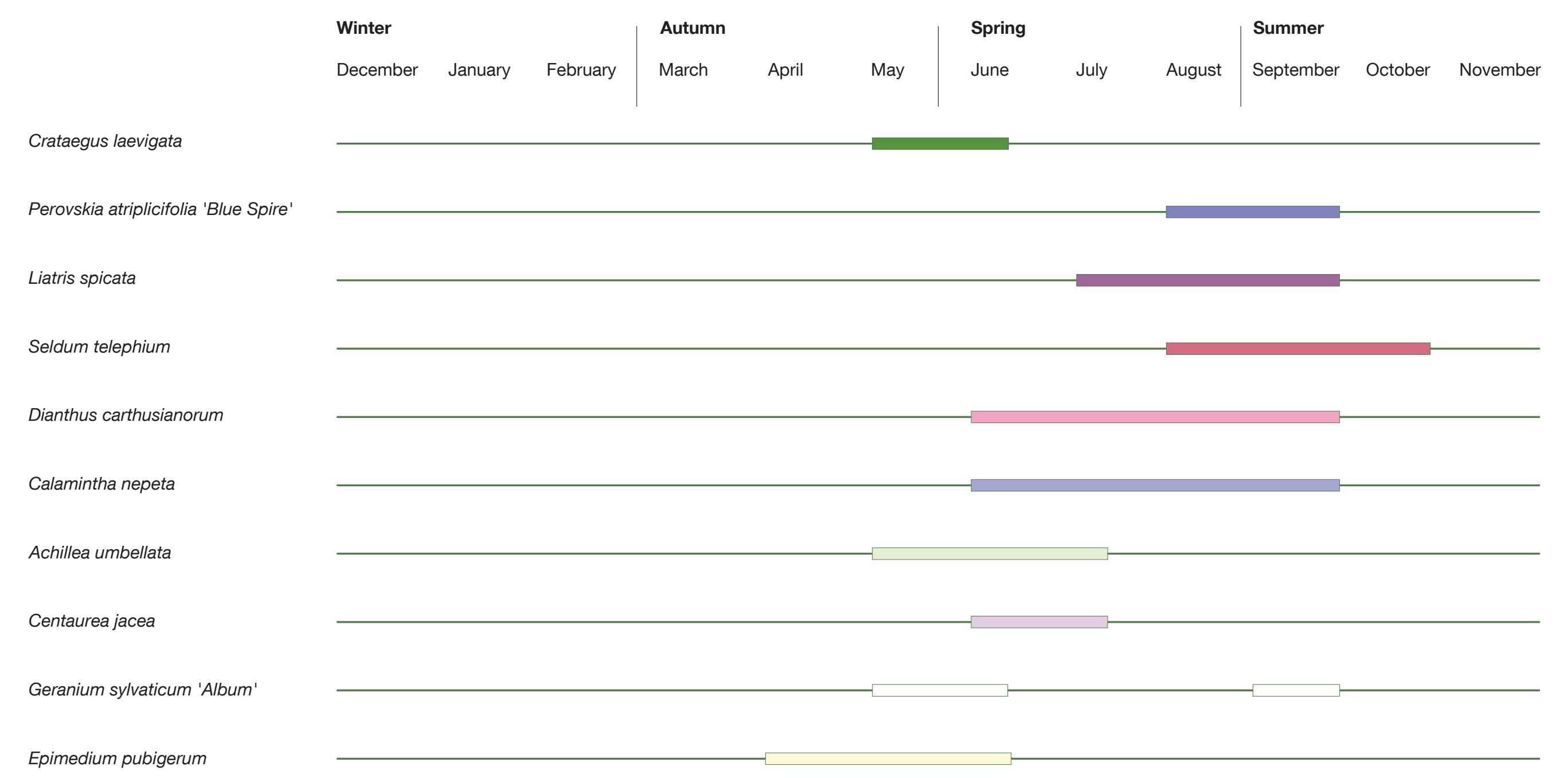
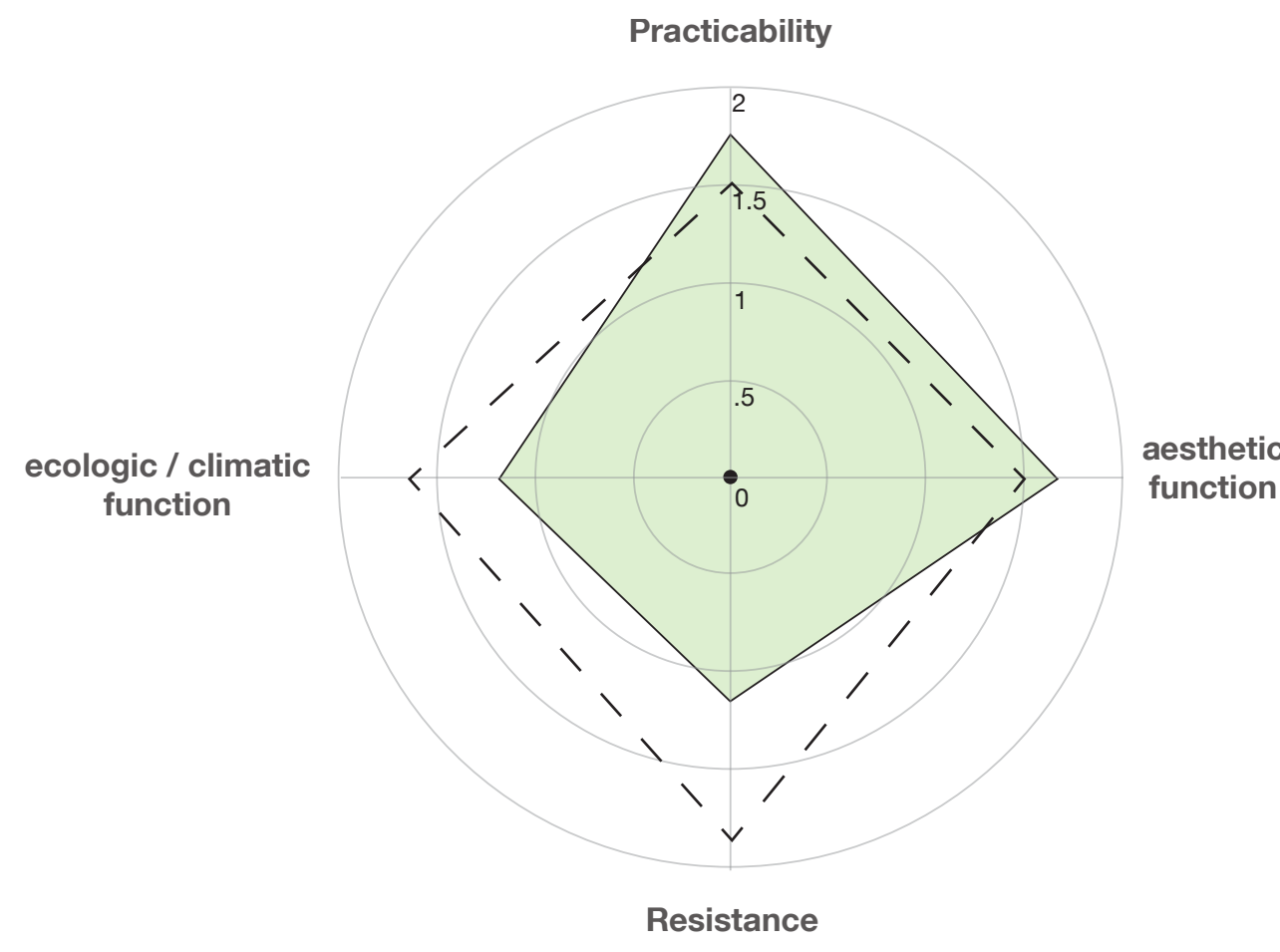


### 1.1 Reference evaluation

In order to determine the rating of the reference examples in a uniform and comprehensible way, all examples are rated according to the following key:

- 0 = does not apply
- 1 = partially applicable
- 2 = fully applicable

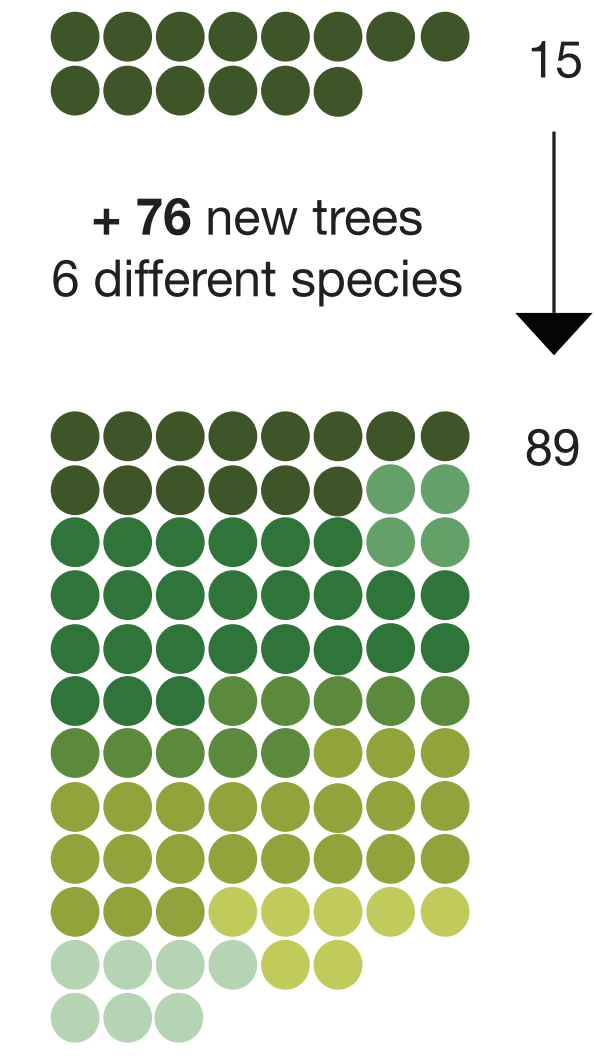
To determine the overall score of a characteristic, the total score of the indicators is divided by the number of indicators.



Characteristic	Indicators	Score
1) Practicability	1.1 the planting can be produced in a effort-effective way	2
	1.2 the planting can be maintained at low cost and /or ressources	2
	1.3 the planting has a high life span expectancy	2
	1.4 the planting has no „disturbing“ impact to the surrounding	1
	<b>overall score</b>	<b>1.75</b>
2) Aesthetic function	2.1 the planting is space creating	2
	2.2 the planting grows / provides it's qualities fast	2
	2.3 the planting has sensory effects (decorative / fragrant / acoustic)	1
	<b>overall score</b>	<b>1.7</b>
3) Ecologic / climatic function	3.1 the planting provides important biotope functions	2
	3.2 the planting provides a lot of shading / cooling	1
	3.3 the planting provides ecological engineering services	1
	<b>overall score</b>	<b>1.3</b>
4) Resistance	4.1 the planting is resistant to extreme climatic conditions	2
	4.2 the planting is resistant to substance input, parasites or diseases	1
	4.3 the planting is resistant to mechanical influences	1
	<b>overall score</b>	<b>1.3</b>

Evaluation chart

Blooming calendar of the convetional module



New tree species used in the project



0 30 90m  
Scale 1:1500  
BAF: 0.09

0 30 90m  
Scale 1:1500  
BAF: 0.23

- 01 sealed surfaces
- 02 partially sealed surfaces
- 03 semi-open surface
- 07 surfaces with vegetation, unconnected to the soil below, large substrate thickness
- 08 surfaces with vegetation, unconnected to the soil below, very large substrate thickness

01 sealed surfaces	before 7194 m <sup>2</sup> - 17% of the total area after 1223 m <sup>2</sup> - 2,9% of the total area
02 partially sealed surfaces	before 32845 m <sup>2</sup> - 77% of the total area after 31123 m <sup>2</sup> - 73% of the total area
03 semi-open surface	before 1355 m <sup>2</sup> - 3.2% of the total area after 2387 m <sup>2</sup> - 5.6% of the total area
07 surfaces with vegetation, unconnected to the soil below, large substrate thickness	before 0 m <sup>2</sup> - 0% of the total area after 693 m <sup>2</sup> - 1.6% of the total area
08 surfaces with vegetation, unconnected to the soil below, very large substrate thickness	before 0 m <sup>2</sup> - 0% of the total area after 6173 m <sup>2</sup> - 14% of the total area