

# OUTPUT FACT SHEET

Pilot action in Trnava: Restoration of neglected natural park for sports and recreation zone - investment A.T3.5

Version 2

Project index number and acronym	CE89 LUMAT
Lead partner	City of Trnava PP8
Output number and title	O.T.3.1 Pilot Actions for Integrated Environmental Management in FUAs
Investment number and title (if applicable)	A.I2.1 Restoration of neglected natural park for sports and recreation zone in location Štrky - investment
Responsible partner (PP name and number)	City of Trnava PP8
Project website	<a href="https://www.interreg-central.eu/Content.Node/LUMAT.html">https://www.interreg-central.eu/Content.Node/LUMAT.html</a>
Delivery date	7/2019

Summary description of the pilot action (including investment, if applicable) explaining its experimental nature and demonstration character

The Pilot Action in Trnava (A.T3.5) is represented by A.I2.1 investment activity Restoration of neglected natural park for sports and recreation zone in location Štrky which aim was to secure overall rehabilitation of long term abandoned and contaminated area of this “green brownfield”. The Štrky area is located on the north edge of the Trnava cadastral area on the area of almost 30 thousand m<sup>2</sup> and for several decades it had been unkept and unmaintained as well as contaminated by wild dumps of small construction and municipal waste. Moreover, intensive agriculture, transport, industry and building up activities belong to further negative factors intensively stressing and degrading this area since seventies of the last century.

Originally this area belonged to so called “hard floodplain forests” composed mainly of ash, elm and oak trees, however, due to this intensive agriculture and building up majority of original floodplain forests had been deforested and changed into arable land. This deforestation had considerably contributed to overall deterioration of this biocentre of local importance and to slow spread of invasive and flight wood species.

- Within this investment activity the Štrky area was completely cleaned up from these burdens and within preparatory terrain works prepared for construction of the investment dominant part, which is a water surface. In line with the realisation project documentation and the indicators given in the approved project AF, the water surface of a length of 62 m, a width of 29 m and of the overall area of 3 375 m<sup>2</sup> was constructed. The source of the water is underground water from the bottom gravel layer and its circulation is secured by installed technical devices, such as water well and pump, discharge pipeline and soothing shaft. A two small artificial hills called “sunny hills” were made from earth left over after water basin deepening, serving for relax, sun catching and leisure activities of future visitors.
- Another key component of the Trnava Pilot Action is vegetation and greenery within which 120 pcs. of young broadleaved trees were planted (e.g. Fraxinus excelsior, Quercus robur, Tilia cordate) and 835 pcs. of water and marshy vegetation were planted in 2 lagoons of the water surface (e.g. Iris pseudacorus, Typha angustifolia, Butomus umbelatus). Moreover, 2,5 kg of meadow seeds were seeded right to the water surface and also 60 kg of parking mixture seeds were seeded on the plots farther from the water surface. Altogether 3 000 m<sup>2</sup> of the area were seeded by grass and meadow seeds, however, to see the grass grown up need some time after the pilot investment completion.
- Furthermore, a network of unpaved footpaths made from milled gravel and wooden chips was created, starting from three entrances to the area, leading to the water surface and joining main footpath rounding around the water surface. In principle, inner footpaths are made from milled gravel and outer footpaths lining peripheral parts of the Štrky area are made from wooden chips. Wooden chips used for pavements creation were made from ill and invasive trees cut down within preparatory terrain works and initial cleaning of the area - this way a natural “waste” was effectively reused. Within the whole area, in some places, adjacent directly to pavements, so called “insect houses” were placed. Total length of unpaved footpath after realisation is 1 101 m.
- Within the Štrky pilot investment several types of small architecture and mobiliary were installed at the site: wooden benches with seat back placed around the water surface and on the gravel footpaths as well as wooden benches without seat back placed around the circular stone grill. Near this grill under the wooden resting shelter a table with two other wooden benches without seat back were placed. Close to the wooden resting shelter one wooden stand for bikes was placed and the whole area was equipped with dustbins with small shelter. Moreover, various kinds of wooden boxes for birds and bats were installed at selected trees. An exact placement of these boxes was determined on the basis of ornithological survey, made directly at the site by authorised expert. All mobiliary was produced as certified and tailor-made, with simple and natural design, made of wood (acacia logs) so that the natural-like appearance of the whole area was emphasized.
- And finally, public lighting and low voltage electricity distribution network was realised within the Štrky pilot investment, composing mainly of 5 pcs. of 6 m high steel mast, where parking lights with LED bulbs were used. Also, distributor and ground cable electricity distribution network were constructed, serving not only for lighting but also for other electricity devices, e.g. electric motors of water pumps and all

technical devices for the water surface. All devices installed at the site were tested by authorised revision technician and were approved for operation as safe and able to put in operation.

Firstly, the Štrky pilot investment secured overall clean up of this area, removing old burdens - wild waste dumps and thick underbrush of original but also invasive and flight trees and bushes, out of which many were already damaged or ill. Such cleaned up area provided a basis for the overall change of the Štrky area for natural, safe and open up space, offering possibilities for sports, leisure and relax activities of broad public of the Trnava City and the Trnava FUA inhabitants in semi-natural environment. Moreover, from environmental point of view, this pilot investment benefited to bringing back an original natural value and ecological stability to this biocenter of local importance and to their strengthening. Also, pilot investment implementation provided an important impulse towards establishment of continuous and proper maintenance and care for the Štrky area, which had been absenting there for quite a long time.

Nowadays in Slovakia many municipalities or public authorities face significant problems with brownfields or greenfields restoration. Here the Štrky pilot investment could provide a real pilot example of change of completely neglected and unkept area into an attractive and semi-natural spot sustainable from environmental but also functional point of view. Although every brownfield/greenfield is self-specific, the Štrky area could be perceived as an interesting experiment replicable also in other cases. Here the Trnava City can transfer its experiences and lessons learned from the whole process starting from the pilot investment designing, planning and approving through its implementation, commissioning and maintenance.

#### NUTS region(s) concerned by the pilot action (relevant NUTS level)

NUTS 0: Slovak Republic, NUTS 1: Slovakia, NUTS 2: SK02 Western Slovakia, NUTS 3: SK021 Trnava Region

#### Investment costs (EUR), if applicable

- The total contracted price for the project documentation development: **19 900 EUR** consisting of the following main parts:
  - Development of the project documentation for spatial decision issue including geodetic fixation and hydrogeologic survey: 4 500 EUR
  - Development of the realization project documentation for building permit issue: 15 000 EUR
  - Expert author's supervision: 400 EUR
- Total contracted price for the pilot investment implementation: **301 620,39 EUR** including all main pilot investment components:
  - Water surface development: 172 772,96 EUR
  - Vegetation and greenery: 56 199,01 EUR
  - Unpaved footpath network: 17 397,77 EUR
  - Small architecture and mobiliary: 17 931,36 EUR
  - Public lighting and low voltage electricity distribution network: 20 598,62 EUR
  - Maintenance of vegetation and greenery during the 1. year of the project sustainability: 16 720,67 EUR (it is not part of the pilot investment co financed from the LUMAT project budget, it will be financed from the Trnava City own sources).
- The extra expenditures (expenditures out of the total contracted price): 46 293,92 EUR
- The approved budget for the Štrky pilot investment: **93 196,19 EUR**, ERDF contribution: **79 216,76 EUR**

## Expected impact and benefits of the pilot action for the concerned territory and target groups and leverage of additional funds (if applicable)

In line with the above given, the overall clean up of the Štrky area from illegal dumpsites as well as from ill, invasive and damaged trees and bushes represents the first direct positive impact reached by the pilot investment implementation. Furthermore, construction of all planned infrastructure (i.e. water surface with all technical equipment, vegetation and greenery, network of unpaved footpaths, small architecture and mobiliary and public lighting with low voltage electricity distribution network) represents another direct positive impact of the pilot investment implementation. These are the direct, physical, positive changes at the site.

Accordingly, these direct, physical, changes at the site enabled opening of the Štrky area for the Trnava City and the Trnava FUA inhabitants, offering possibilities for sports, leisure and relax activities in semi-natural environment. Moreover, from environmental point of view, this pilot investment benefited to renewing an original natural value and ecological stability to this biocenter of local importance and to their strengthening. Also, pilot investment implementation provided an important impulse towards establishment of continuous and proper maintenance and care for the Štrky area, which had been absenting there for quite a long time. These are positive benefits, which, however, could be seen and evaluated within mid term perspective.

Within longer time perspective mainly due to the constructed water surface and newly planted vegetation and greenery the Trnava City expects also positive influence on the microclimatic conditions of the Štrky site itself as well as of the Trnava City, helping to adapt on the negative climate change effects and to cooling and humidifying the city and its closest environment.

Regarding the target groups concerned by the Štrky pilot investment, here is also anticipated a positive impact on broad public of the city and of the Trnava FUA within longer time perspective. However, the City of Trnava should actively contribute to development of sustainable attitude of local community and visitors of the Štrky area by both carrying out high quality maintenance at the site on one hand and on the other by organizing various kinds of events (educational, sporting, cultural, etc.) so that local community and visitors will step by steps acquire familiar attitude towards this area, including not only appreciation, but also protection and behavior full of respect and responsibility.

For illustration below there is given a glimpse on original state of the Štrky area in 11/2018 before the pilot investment implementation:





## Sustainability of the pilot action results and transferability to other territories and stakeholders.

**The land on which the Štrky pilot investment** was implemented **is owned by the Trnava City**, which is also an **owner of the whole infrastructure**, what is a **basic precondition of ensuring the pilot investment sustainability**.

Based on the concluded Contract for Works between the Trnava City and the supplier **maintenance of vegetation and greenery in the Štrky site during the 1. year of operational phase** (the project sustainability) will be under the supplier's responsibility (company Swietelsky-Slovakia, spol. s r.o., Bratislava, Slovakia). Under this maintenance the supplier will be responsible for the overall maintenance of newly planted trees, grass and meadow coppices as well as for maintenance of water and marshy vegetation. The supplier will execute this maintenance technically, and the Trnava City will cover it financially.

**After this 1. year maintenance**, the Štrky area will be completely maintained by the Administration of Sporting and Cultural Facilities, the Trnava City Office "daughter" organisation, which is responsible for maintenance of other city's sporting and cultural facilities in Trnava. However, during the 1. year of operational phase this administration will be responsible also for maintenance of everything apart from the vegetation and greenery and will carry out all necessary repairs or replacements. The Trnava City will cover all expenses related to the overall operation and maintenance from its own sources. Here all the details, responsibilities and workflows between the city and the administration should be specified after the pilot site commissioning. In order to protect safety and proper order also a possibility to have supervised the whole area by the Trnava City Police might be considered.

As mentioned above, nowadays many Slovak municipalities/public authorities face problems with greenfields/brownfields restoration on one hand as well as problems with a lack of natural or semi-natural areas suitable for public recreation and leisure activities. Although every brownfield/greenfield has its own characteristics, the **Štrky pilot investment could serve as an interesting pilot example and inspiration for other Slovak municipalities** to alter their greenfield/brownfields into natural/semi-natural places, with renewed ecological stability and environmental value suitable also for broad public usage. Likewise, the Štrky pilot investment is specific across the whole process, starting from the basic design, development of the project documentation, obtaining all necessary permits, procuring the construction works supplier and the implementation itself including technical investor's supervision, lessons learned from all these stages could be very valuable for other territories or stakeholders.

For illustration, below there is given a broader view on the Štrky area before its completion in 5/2019:



## Lessons learned and added value of transnational cooperation of the pilot action implementation (including investment, if applicable)

Upon the Štrky pilot investment completion related “lessons learned” could basically refer to the preparatory and implementation phase. Although “lessons learned” from the operational phase will probably be the most important - as the operational phase will be the longest and will reflect the quality of construction on one hand and the behavior / attitude of the local community on the other - these could be reported by the end of this phase or after some time of the site operation.

Regarding the preparatory phase, including mainly elaboration of the project documentation for spatial decision and realization project documentation for building permit issue the Trnava City learned that, as much as possible attention should be paid to preciseness of the technical details in order to avoid unexpected situations during implementation phase leading to “extra works” and extra (additional) expenditures. For example, in case of the Štrky pilot investment almost double amount of earth had to be excavated during the water surface deepening, what led both to extra works and additional expenditures as well as to further consequences related to correct placement of this extra earth and to the overall terrain adjustments. There could be found more technical lessons learned and recommendations for other municipalities or public authorities interested in or facing an issue of similar greenfield restoration. And as mentioned above, experiences from the operational phase related to maintenance as well as to the work with local community could be exchanged after some time of the operational phase.

What relates to the added value of transnational cooperation within the LUMAT project implementation it should be stressed that the Štrky pilot investment design and all the planning, approving and procuring procedures and related obstacles had been presented and discussed within the regular meetings of the project partnership. During such discussions project partners, where possible and relevant, had been exchanging their experiences from restoration of their greenfields/brownfields. This way the LUMAT project partnership provided valuable knowledge, assistance and added value to the Trnava City before the Štrky pilot investment implementation. And accordingly, after the pilot investment implementation and also during the project sustainability period the Trnava City may provide valuable technical, expert and processing experiences and lessons learned which could be - through the project partnership contacts - transferred to other municipalities and public authorities in other Central Europe regions.

For illustration below there is given a view on the gravel pavement, mobiliary and an “insect house”- residual of felled down ill tree serving as a “house” and source of food for insect and small animals - 5/2019.



Contribution to/ compliance with:

- relevant regulatory requirements
- sustainable development - environmental effects. In case of risk of negative effects, mitigation measures introduced
- horizontal principles such as equal opportunities and non-discrimination

The overall process of the Štrky pilot investment implementation was realized in accordance with the relevant Slovak legislation, technical norms and related specific requirements, such as:

- Accordance with the valid Spatial Plan of the Trnava City (2015), where the Štrky area has been defined as a natural forest park and a biocenter of local importance.
- Regarding the planning process, approval procedures, public procurement and the implementation phase the pilot investment implementation was realized in accordance with:
  - Law No. 50/76 Coll. (Construction Law) and related Regulation of the Slovak Ministry of Environment No. 453/2000 Coll. and the Regulation No. 532/2002 Coll.
  - All related Slovak technical norms (STN), European norms (EN) and general technical requirements for construction
  - Law No. 343/2018 Coll. on public procurement (public procurement law)
  - Law No. 245/1998 Coll. on public works (public works law)
  - Law No. 314/2014 Coll. which amends Law No. 24/2006 Coll. on environmental impact assessment (EIA law)
  - Law No. 543/2002 Coll. on nature and landscape protection including also NATURA 2000 assessment
  - Law No. 364/2004 Coll. on waters (water law)
  - Spatial decision, which is an approval issued by the respective Construction Authority declaring initial approval with pilot investment implementation
  - Building permit which is an approval by the same Construction Authority declaring direct approval with construction works at the pilot investment site
  - Decision on consent to the water surface development issued by the Trnava District Office declaring an approval the water surface development
- Regarding sustainable development, the Štrky pilot investment by the nature of the site restoration itself positively contributed to sustainable and environmentally friendly development in the Trnava FUA. As already mentioned overall clean up of the area from illegal waste dumps as well as from ill, damaged and invasive trees and bushes directly and considerably contributed to improvement of micro-environment at the site. Moreover, by ensuring high quality maintenance at the restored site, the Trnava City will safeguard sustainable usage and protection of its environmental value. With regard to possible negative effects of the site restoration, there should not appear any, however, on the contrary, positive effects are expected especially with regard to contribution to the climate change adaptation and to cooling and humidifying micro-climate due to the constructed water surface and newly planted vegetation and greenery.
- Regarding horizontal principles such as non-discrimination and equal opportunities, it should be emphasized that the Štrky site after restoration will not be paled, i.e. open and permanently free access to the site will be ensured. On one hand, for the Trnava City it means more demanding and careful maintenance of the site, but on the other it safeguards compliance with the above given horizontal principles and with the city effort to influencing local community positively, towards responsible and respectful behavior not only at the site, but also in the city and generally, in the nature elsewhere.

References to relevant deliverables (e.g. pilot action report, studies), investment factsheet and web-links

If applicable, additional documentation, pictures or images to be provided as annex



The **Pilot Action in Trnava (A.T3.5)** represented by the **Štrky pilot investment (A.I2.1) Restoration of neglected natural park for sports and recreation zone in location Štrky** is directly related to the project deliverable **D.T3.5.1**, which represents technical project documentation for the Štrky restoration, i.e. project documentation for spatial decision issue (PD DÚR), the realization project documentation for building permit issue (RPD) and the expert author's supervision (OAD). Moreover, this pilot action and pilot investment is also linked to the project deliverable **D.T3.5.2** which contains detailed technical description and data on the pilot site after its restoration.

The Trnava pilot action and the Trnava pilot investment is also linked to the project deliverable **D.T3.8.1** which apart from the pilot investment realization summary describes also lessons learned, recommendations for other local authorities and involvement of target groups during the preparatory and implementation stages and pictures of the site before and after the pilot action completion.

Also, it is worth to mention **a feasibility study** "Trnava - forest park Štrky - rehabilitation of area and its change for sport and recreation place" which was elaborated within **CircUse project in 2013**. This study verified and evaluated environmental, ecological, and planning potential of the Štrky area and designed overall revitalisation concept together with concept of spatial arrangement and functional usage of this area. This study served as a background conceptual document for elaboration of the above given project documentation for spatial decision issue and the realization project documentation for building permit issue. This way the CircUse project played an important role in the Štrky pilot investment implementation within the LUMAT CE89 project.

Below there are given pictures illustrating the process of the Trnava pilot action, i.e. pilot investment implementation and a state after the investment completion:



A view on the Štrky pilot investment site after its clean up - 3/2019





Within the overall clean up of the pilot site also ill and damaged trees were felled down - 3/2019



Excavation of the water surface basin in 3 - 4/2019





Initial stage of the water surface development, on the left side a water well could be seen - 4/2019



The water surface almost finished - 5/2019





The water surface already finished - a view on one of its two lagoons with planted water and marshy vegetation - 7/2019



A view on the small relax zone - wooden resting shelter with a table and benches, together with dustbin and a circular stone grill - 6/2019





A broader view on the bench with a backrest (mobiliary), unpaved gravel pavement, newly planted broadleaved trees and farther also on the wooden resting shelter with the circular stone grill - 6/2019



A view on the column of public lighting and on the wooden chips pavement - 6/2019





An obligatory INTERREG Central Europe 2014-2020 branding - a permanent plaque of significant size installed at the pilot investment site after its completion - 7/2019



An obligatory INTERREG Central Europe 2014-2020 branding - a temporary billboard installed at the pilot investment site during the construction works together with the obligatory city table.