



Innovative small-scale BGI for storm water management in the inner city

Swales and Rain Gardens

14 Swales and rain gardens – biological installations enabling infiltration of rainwater into groundwater or its use for plant growth. They manage excess rainwater, most often accompanying other installations of "small" BZIs, such as Climaponds, Climaboxes or green sheds. The basins are planted with a variety of vegetation from grass, through garden plants to trees.

Locations:

Public Kindergarten No. 16 - at Climapond,

Bema Square - Swales with damming elements (3 pcs.)

Public Kindergarten No. 11 - at Climapond (Cascade Rain Garden)

Primary School No. 33 - Tree trench

Jagielloński Square - at the green shelters of bus stops (2 pcs.),

XI High School - with wooden and metal ClimaBox (2 pcs.),

Nursing Home Nad Potokiem - at the wooden and metal ClimaBox (2 pcs.),

Veteran of Struggle and Labor Welfare Home - at brick ClimaBox (2 pcs.),



Swale built in the Public Kindergarten No. 16 in Radom



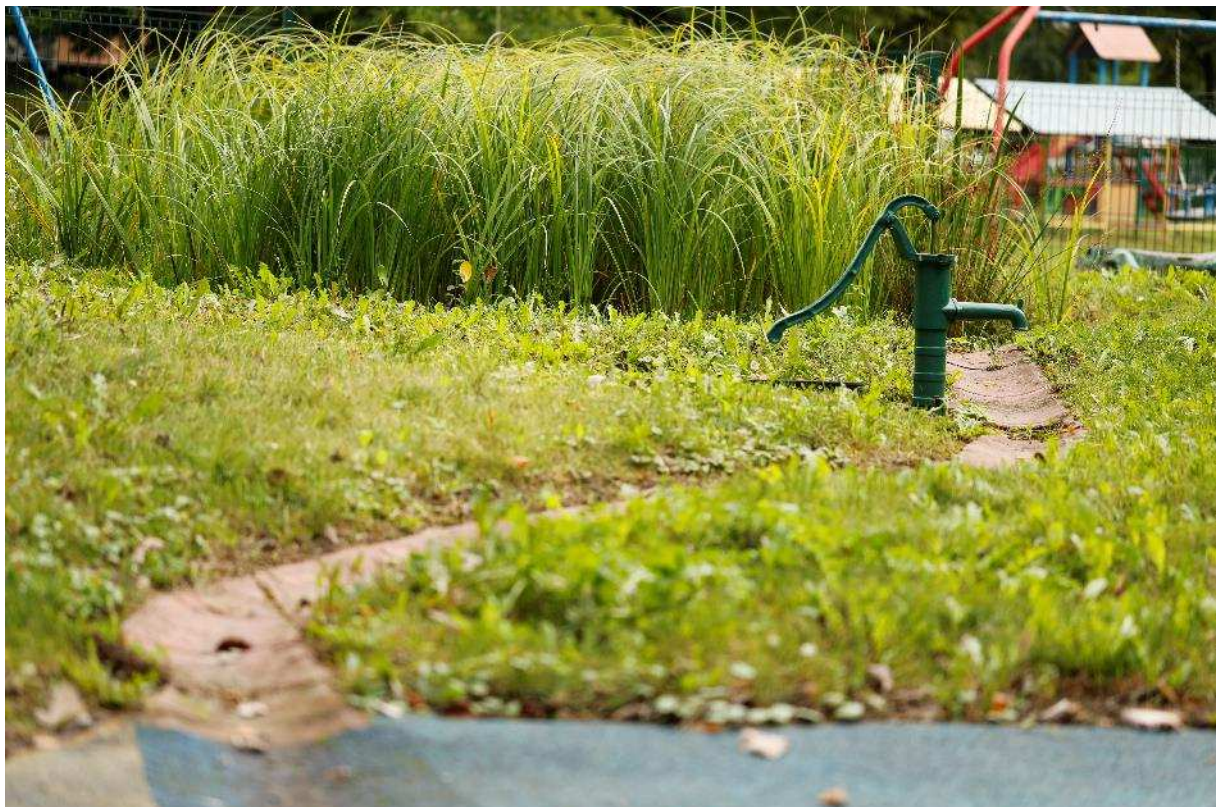
Picture 1 Appearance of the place after completion of works - Swale as the final element of the water management system (on the right side from the water square)



Photo 2 Appearance of the place after completion of works - Emergency overflow in the middle of the basin



Picture 3 Appearance of the place after completion of works - Swale



Picture 3 Appearance of the place after completion of works - water supply to the Swale



Swales built in the area of Placu Bema - Swales with damming elements (3 pcs.)



Before



Picture1 site before the construction



Picture2 site before the construction

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Picture3 site before the execution of works



Picture4 site before the construction

After

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Picture5 Appearance of the site after the construction- Absorbent Swales - gabions



Picture6 Appearance of the site after the construction- Absorbent Swales - gabions



Picture7 site after the construction- Absorbent Swales - gabions



Picture8 Appearance of the site after Works Swales and tree plantings



Picture9 Appearance of the site after the construction - Swales - tree plantings and land development



Picture10 area after the construction - Swales - house for insects



Picture11 area after the construction - Swales - elements of small architecture



Picture12 area after the construction - Swales - elements of small architecture



Picture13 site after the construction- Absorbent Swales



Picture14 area after the construction - Swales - house for insects and tree plantings



Picture15 Appearance of the site after the construction- Absorbent Swales



Picture16 Appearance of the site after the construction- Swales - tree plantings



Picture17 Appearance of the site after the construction- Swales - tree plantings



Picture18 area after the construction– Swales – elements of small architecture



Rain garden "Cascade" built in the Public Kindergarten No. 11 in Radom

Before



Picture19



Picture 2 - Pre-construction site

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Photosie 3 Appearance of the site before construction



Picture20

After

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Picture21 Appearance of the site after construction – Rain garden



Picture22 Appearance of the site after construction – Rain Garden



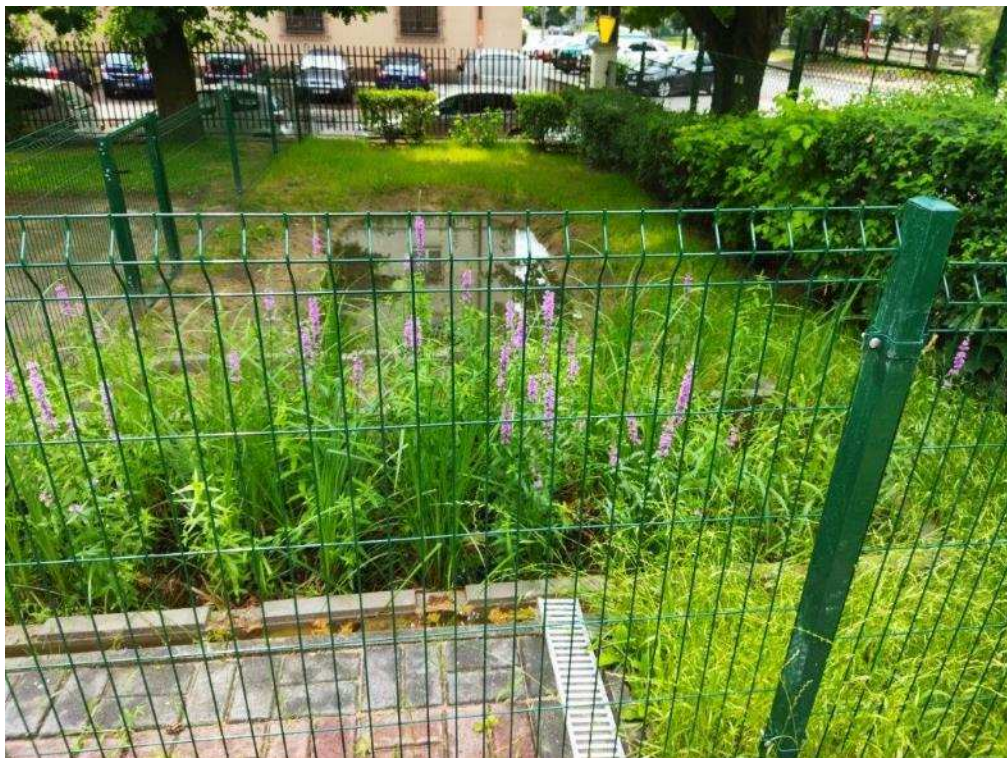
Picture23 after construction – Rain Garden



Picture24 Appearance of the site after construction – Rain garden



Photo 25 Teren after construction – information boards



Picture26 Appearance of the site after construction – Rain garden + fence



Picture 27 Appearance of the site after construction – information boards

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Tree trench built on the premises of Primary School No. 33 in Radom

before



Picture28 area before the construction- Basins with a row of trees



Picture29 Appearance of the area before the construction- Basins with a row of trees



Picture30 area before the construction- Basins with a row of trees



Picture31 area before the construction- Basins with a row of trees

After

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Picture 5 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 6 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 6 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 7 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 8 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 9 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 10 Appearance of the area after the construction- Swale with a row of trees - plantings of plants + dry streams



Picture 11 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture



Picture 12 Appearance of the area after the construction- Swale with a row of trees + elements of small architecture - information boards



Picture 13 Appearance of the area after the construction- Swale with a row of trees - emergency overflow + plantings



Picture 14 Appearance of the site after the construction- the effect of biodiversity



Picture 15 Appearance of the site after the construction- the effect of biodiversity



Photo 16 Appearance of the site after the construction- the effect of biodiversity



Photo 17 Appearance of the site after the construction- the effect of biodiversity



A Tree trench and a Rain garden built at the green bus shelters on Jagiellonian Square in Radom

After



Picture32 Appearance of the area after the construction- Tree trench



Picture 2 Appearance of the area after the construction- Tree trench



Picture 3 Appearance of the area after the construction- Tree trench



Picture 4 Appearance of the area after the construction- Tree trench



Picture 5 Appearance of the area after the construction- Tree trench



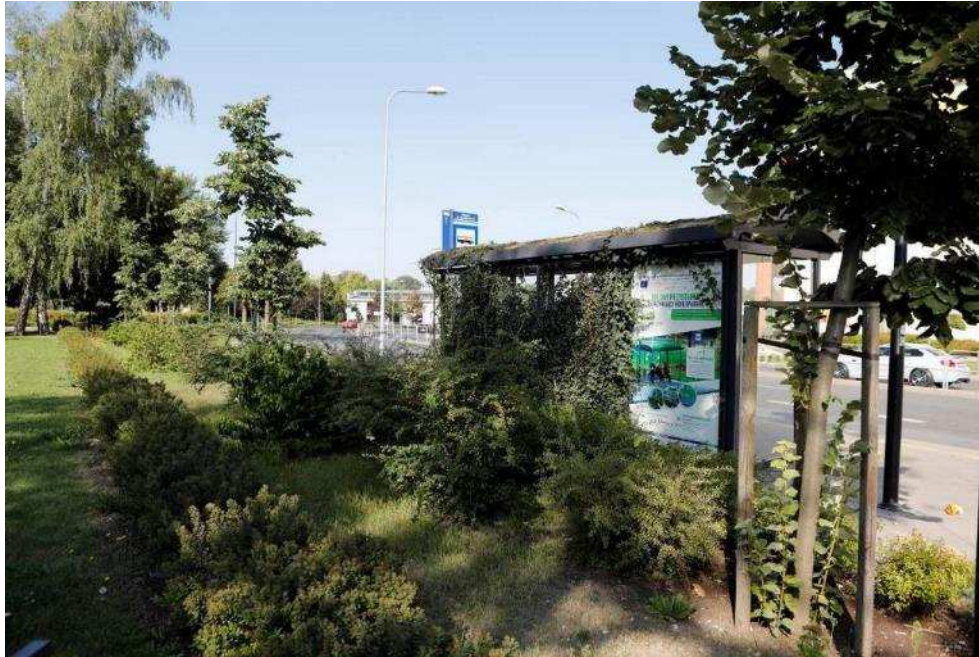
Picture 6 Appearance of the area after the construction- Tree trench



Picture 7 Appearance of the area after the construction- Rain garden in the basin behind the carport



Picture 8 Appearance of the area after the construction- Rain garden in the basin behind the shelter



Picture 9 Appearance of the area after the construction- Rain garden in the basin behind the shelter



Photo330 Appearance of the site after the construction- Rain garden in the basin behind the shelter



Photo 134 Appearance of the site after the construction- Rain garden in the basin behind the shelter



Photo352 Appearance of the site after the construction- Rain garden in the basin behind the shelter



Picture 13 Appearance of the site after the construction– the effect of biodiversity



Picture 14 The Appearance of the site after the construction- the effect of biodiversity



Swales (2 pcs.) built at brick Climaboxes in the Social Care Home of the Veteran of Labor Struggle at Wyścigowa Street in Radom

Before



Picture36 area before the construction- Swale



Picture37 area before the construction- Swale



Picture38 area before the construction- Swale

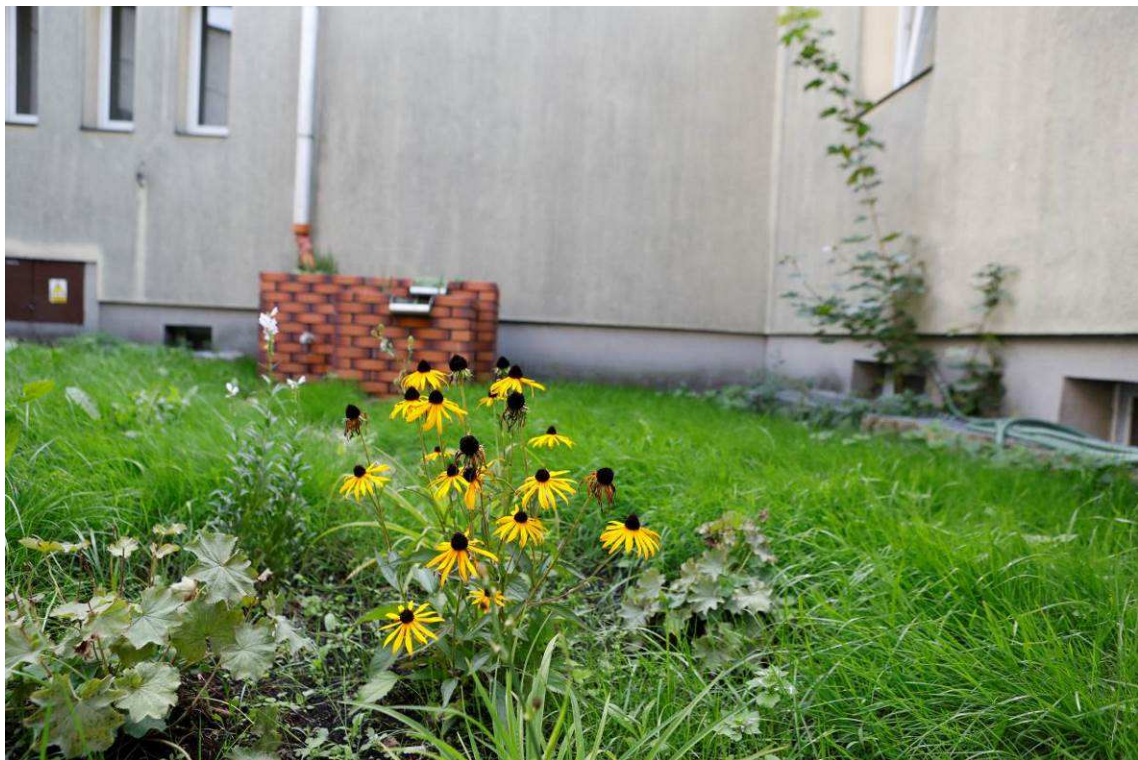


Picture39 area before the construction- Swale

After



Picture40 Appearance of the area after the construction- Swale



Picture 6 Appearance of the area after the construction- Swale



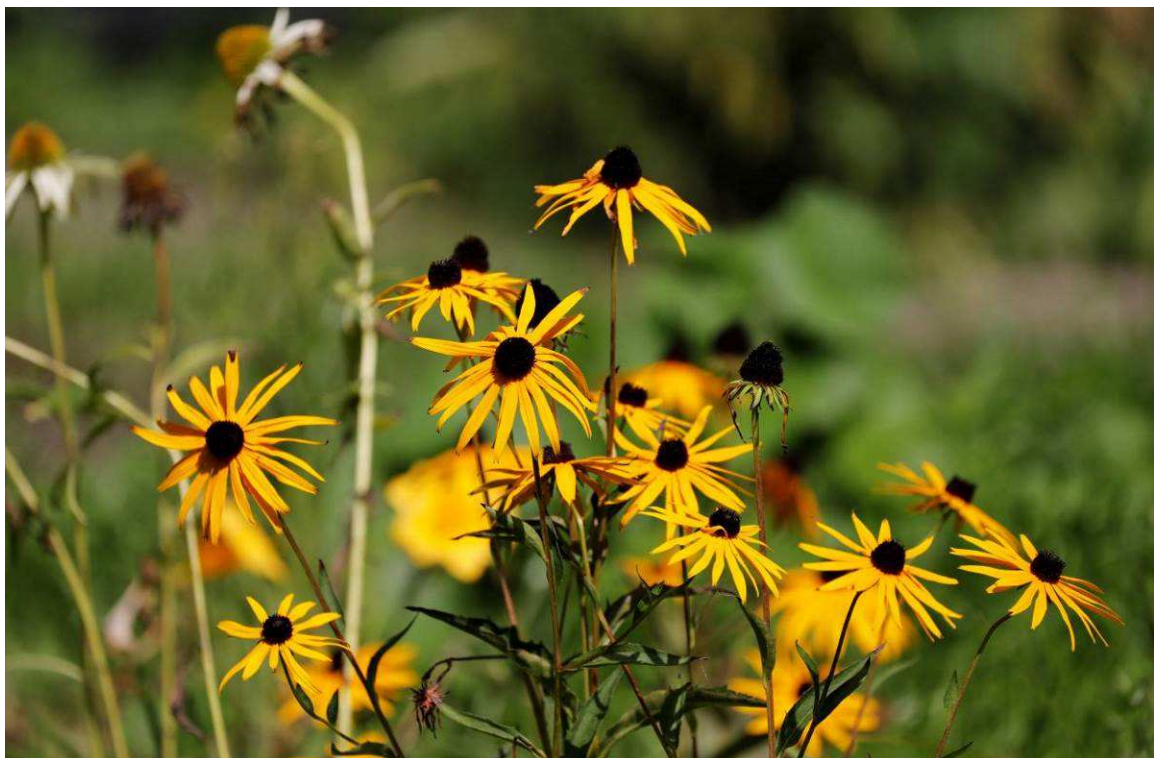
Picture 7 Appearance of the area after the construction- Swale



Photo 8 **Appearance of the** site after the construction- the effect of biodiversity



Picture 9 Appearance of the site after the construction- the effect of biodiversity



Picture 10 **Appearance of the** site after the construction- the effect of biodiversity



Swales (2 pcs.) built at wooden and metal Climaboxes in the Social Care Home Nad Potokiem at Struga Street in Radom

Before



Picture41 area before the construction- Swale



Picture42 area before the construction- Swale

After

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Picture43 area after the construction- Swale



Picture44 Appearance of the area after the construction- Swale



Picture 5 Appearance of the area after the construction- Swale



Picture 6 Appearance of the area after the construction- Swale



Picture 7 Appearance of the area after the construction- Swale + house for insects



Picture 8 Appearance of the area after the construction- Swale - water supply by dry stream



Picture 9 Appearance of the site after the construction– the effect of biodiversity



Picture 10 Appearance of the site after the construction- the effect of biodiversity



Picture 11 Appearance of the site after the construction- Swale

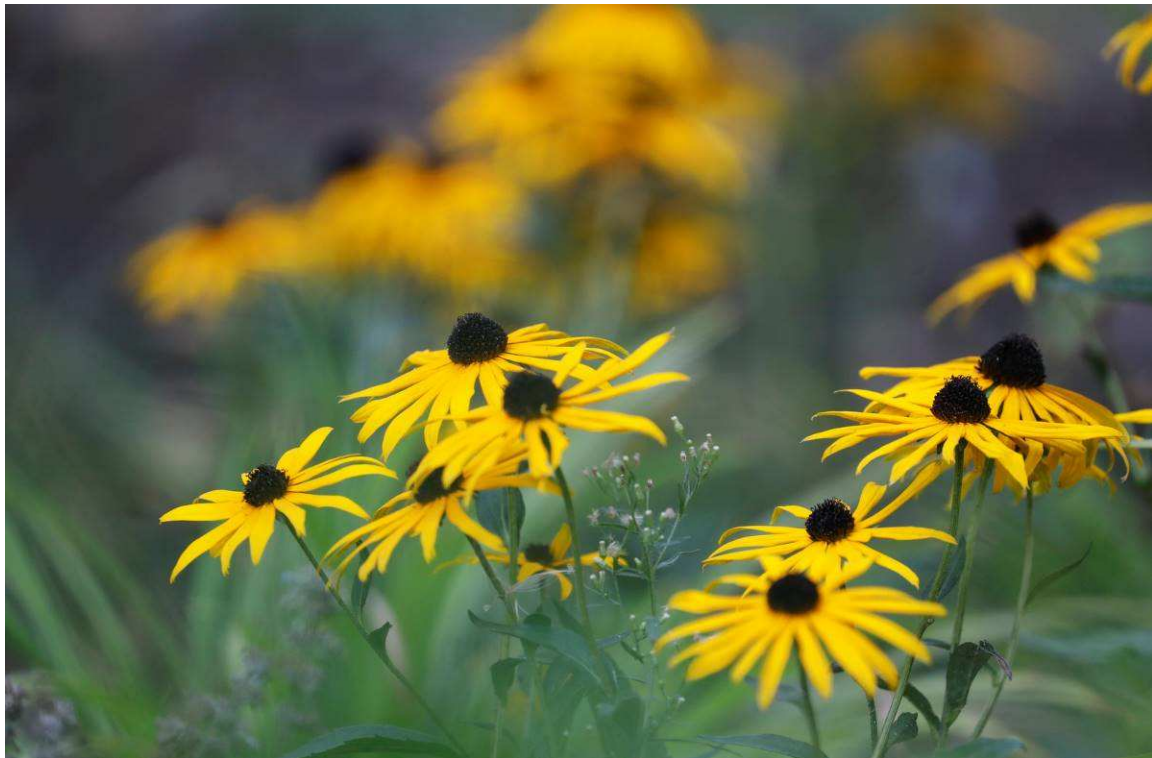
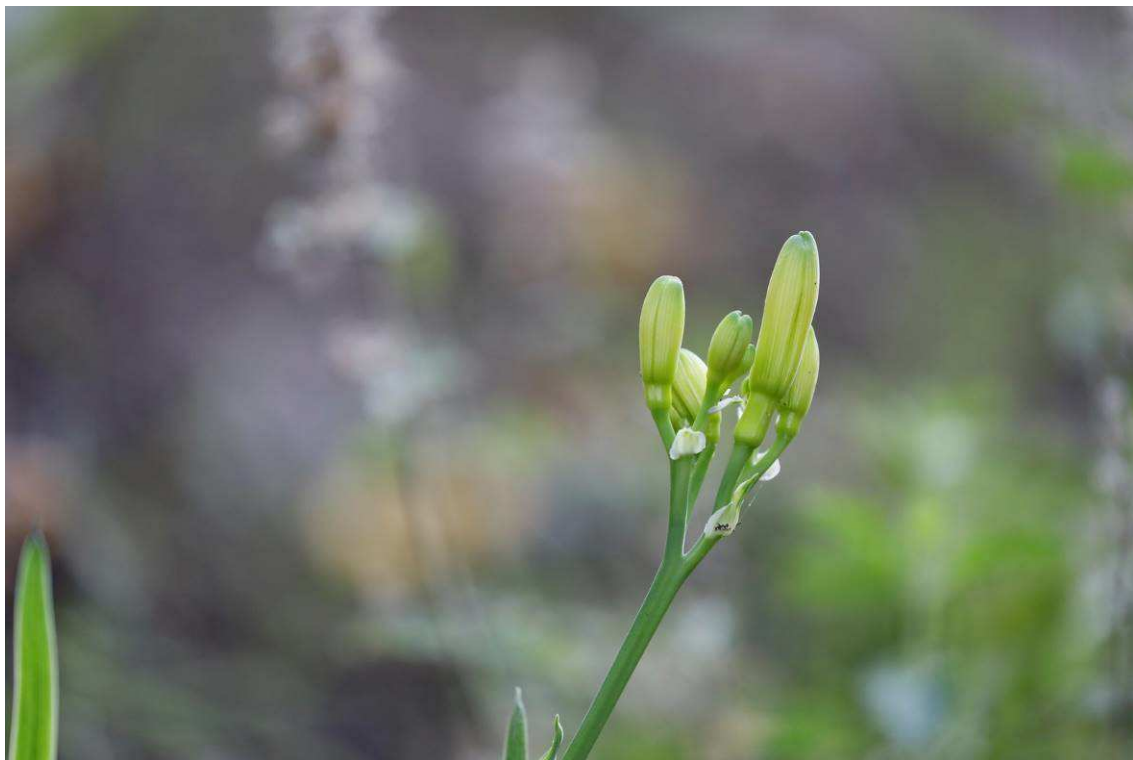


Photo 12 Appearance of the site after the construction- the effect of biodiversity

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Photo 13 Appearance of the site after the construction- the effect of biodiversity



Picture 14 Appearance of the site after the construction- the effect of biodiversity



Picture 15 Appearance of the site after the construction- the effect of biodiversity



Picture 16 Appearance of the site after the execution of works - Swale



Picture 17 Appearance of the site after the construction- Swale



Picture 18 Appearance of the area after the construction- Swale



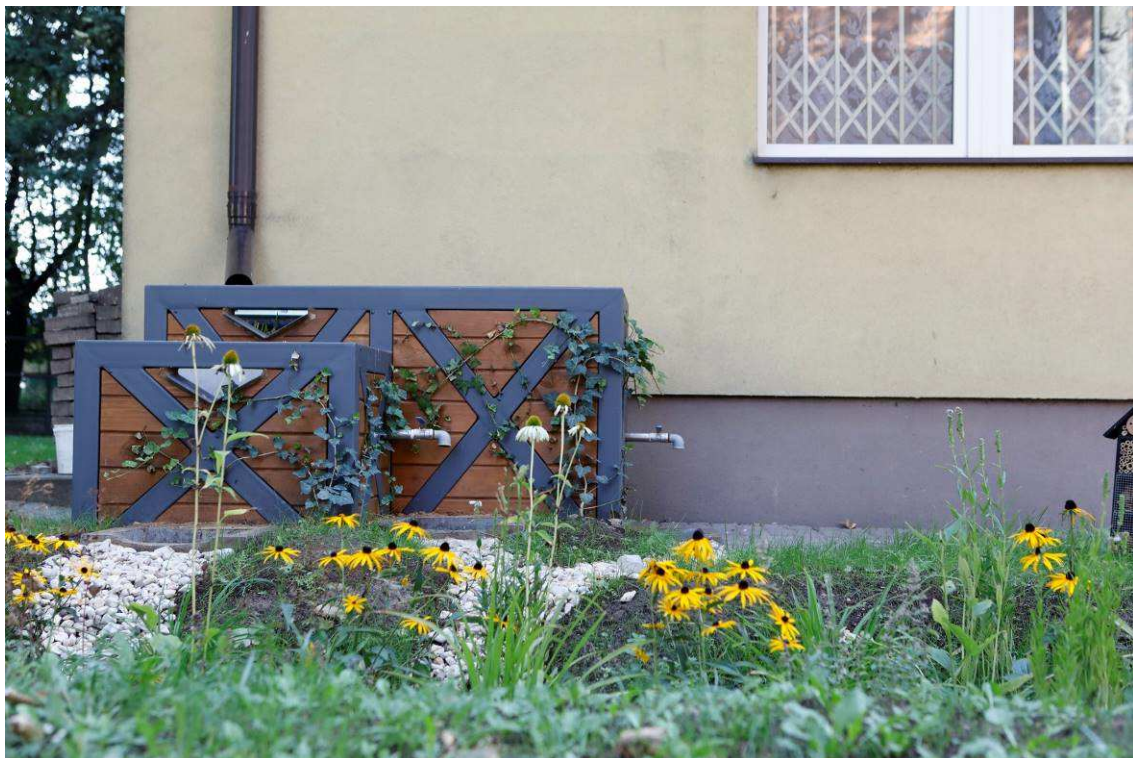
Photo 19 Appearance of the site after the construction- the effect of biodiversity



Picture 20 Appearance of the area after the construction- Swale



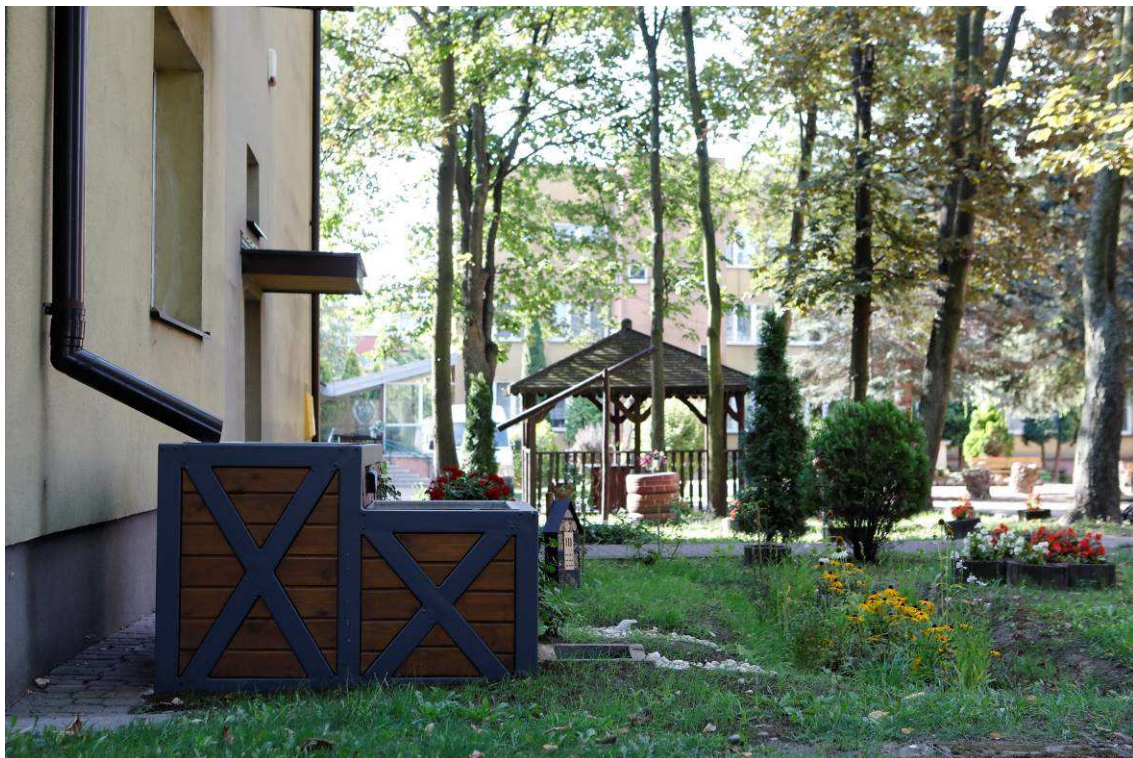
Picture 21 Appearance of the area after the construction- Swale



Picture 22 Appearance of the area after the construction- Swale



Picture 23 Appearance of the site after the construction- Climabox + Swale



Picture 24 Appearance of the site after the construction- Climabox + Swale



Picture 25 Appearance of the site after the construction- Climabox + Swale + house for insects



Swales (2 pcs.) built next to wooden and metal Climaboxes in the XI Stanisław Staszic High School in Radom



Before



Picture45 area before the construction- Swale

After

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Picture 2 Appearance of the area after the construction- Climabox + Swale



Picture 3 Appearance of the area after the construction- Climabox + Swale

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Picture 4 Appearance of the area after the construction- Climabox + Swale



Picture 5 Appearance of the site after the construction- Climabox + house for insects

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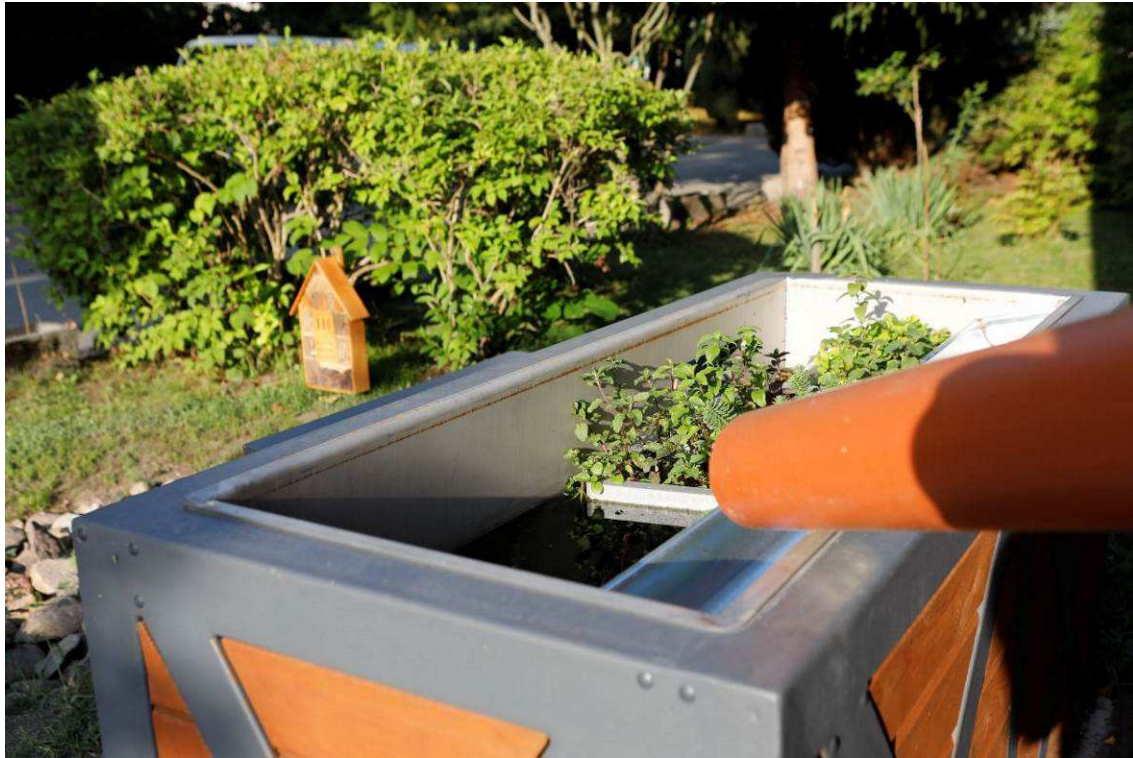
Picture 6 Appearance of the area after the construction- Climabox + Swale



Picture 7 Appearance of the site after the construction- Climabox + Swale

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Picture 8 **Appearance of the** area after the construction- Climabox + Swale

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Picture 9 **Appearance of the** area after the construction- Climabox + Swale



Picture 10 Appearance of the site after the construction- Climabox + Swale

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