

SUPPLEMENTAL MATERIALS

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Valuing the Multiple Benefits of Blue-Green Infrastructure for a Swedish Case Study: Contrasting the Economic Assessment Tools BEST and TEEB

Frieder Hamann, Godecke-Tobias Blecken, Richard M. Ashley,
and Maria Viklander

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6 ***A: Benefit categories in B&ST and TEEB***

7 **Supplementary Table S1 Categories and screening questions used to select monetised benefit categories for**
 8 **assessment in B&ST (based on the B&ST technical guidance, cf. CIRIA 2016)**

| Benefit category | Question |
|---------------------------------|---|
| Air quality | Will the scheme significantly change the level of air pollution? |
| Amenity | Will the scheme change the attractiveness or desirability of the place? |
| Biodiversity and ecology | Will the scheme lead to a change in habitats for plants and animals? |
| Building temperature | Will the scheme change the potential for high temperatures in summer and cold temperatures in winter? |
| Carbon sequestration | Will the scheme change the amount of carbon in the atmosphere? |
| Education | Will the scheme lead to greater awareness of water and surface water management? |
| Enabling development | Will the scheme reduce demands on sewerage systems providing headroom for growth or development? |
| Flooding | Will the scheme change the impact of flooding? |
| Groundwater recharge | Will the drainage / SuDS also increase infiltration into the ground? |
| Health | Will the drainage / SuDS also contribute to the health and wellbeing of local residents? |
| Pumping Wastewater | Will the scheme change the demands on pumping stations? |
| Rainwater harvesting | Will the scheme harvest water so that it can be put to other uses? |
| Recreation | Will the scheme change the facilities available for recreation and leisure? |
| Treating wastewater | Will the scheme change the demands on sewage treatment works? |
| Water quality | Will the scheme change the water quality of rivers, lakes or the sea? |

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 12 **Supplementary Table S2 Categories and screening questions used to select non-monetised benefit categories**
 for 13 **assessment in B&ST (based on the B&ST technical guidance, cf. CIRIA 2016)**

| Benefit category | Question |
|-------------------------|--|
| Crime | Will the scheme change the local environment and thereby contribute to a reduction in crime? |
| Economic growth | Will the scheme unlock barriers to economic growth or provide new employment and business opportunities? |
| Tourism | Will the scheme contribute to increased tourism in the area? |
| Traffic calming | Will the scheme enable traffic calming measures to be introduced? |

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 17 **Supplementary Table S3 Categories and sub-categories for assessment in the TEEB-urban**
 tool 18 **(cf. <https://www.teebstad.nl/>)**

| Benefit category | Sub-categories |
|-------------------------------|--|
| Health | A greener environment; Improved air quality |
| Energy | Saving energy through windshelter; Saving energy through insulation (green roofs) |
| Value of property | Property price increase for existing homes; property price increase for new homes |
| Recreation and leisure | More leisure due to new or improved green space; More profit for businesses due to more attractive environment |
| Social cohesion | Improved social cohesion |
| Water management | Reduced flood risk; Lower sewage treatment costs due to less stormwater in combined sewer system |

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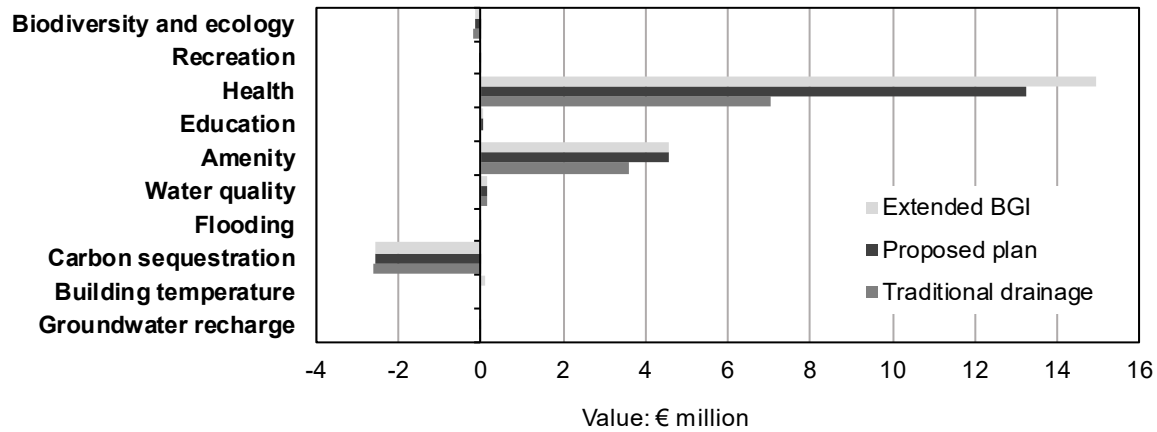
21 ***B: Results with the Forest baseline as reference***

22 **Supplementary Table S4 Distribution of the benefits and disbenefits obtained with B&ST and TEEB for the**
 23 **three development options (**proportion of the total benefits (positive values) or disbenefits (negative values)**
 24 **in %)**

| Benefit category | Value (traditional drainage): € (%)** | | Value (proposed plan): € (%)** | | Value (extended BGI): € (%)** | |
|--------------------------|--|--------------|---------------------------------------|--------------|--------------------------------------|--------------|
| B&ST | | | | | | |
| Groundwater recharge | - 7 000 | (- 0.1) | - 7 000 | (< - 0.1) | - 7 000 | (< - 0.1) |
| Building temperature | 0 | (0) | 0 | (0) | 99 000 | (0.6) |
| Carbon sequestration | - 2 593 000 | (- 32.5) | - 2 576 000 | (- 16.9) | - 2 545 000 | (- 14.9) |
| Flooding | - 11 000 | (- 0.1) | - 11 000 | (- 0.1) | 0 | (0) |
| Water quality | 136 000 | (1.7) | 167 000 | (1.1) | 167 000 | (1.0) |
| Amenity | 3 596 000 | (45.1) | 4 574 000 | (30.0) | 4 583 000 | (26.8) |
| Education | 0 | (0) | 3 000 | (< - 0.1) | 3 000 | (< - 0.1) |
| Health | 7 053 000 | (88.5) | 13 267 000 | (86.9) | 14 947 000 | (87.4) |
| Recreation | - 21 000 | (- 0.3) | - 21 000 | (- 0.1) | - 21 000 | (- 0.1) |
| Biodiversity and ecology | - 181 000 | (- 2.3) | - 133 000 | (- 0.9) | - 132 000 | (- 0.8) |
| Total | 7 973 000 | (100) | 15 263 000 | (100) | 17 094 000 | (100) |
| TEEB | | | | | | |
| Energy | 27 000 | (0.1) | 63 000 | (0.3) | 168 000 | (0.7) |
| Value of homes | 20 690 000 | (97.3) | 21 192 000 | (92.9) | 21 192 000 | (91.0) |
| Health | - 1 980 000 | (- 9.3) | - 1 708 000 | (- 7.5) | - 1 339 000 | (- 5.8) |
| Recreation | - 206 000 | (- 1.0) | - 206 000 | (- 0.9) | - 206 000 | (- 0.9) |
| Social cohesion | 2 733 000 | (12.9) | 3 462 000 | (15.2) | 3 462 000 | (15.0) |
| Total | 21 264 000 | (100) | 22 803 000 | (100) | 23 277 000 | (100) |

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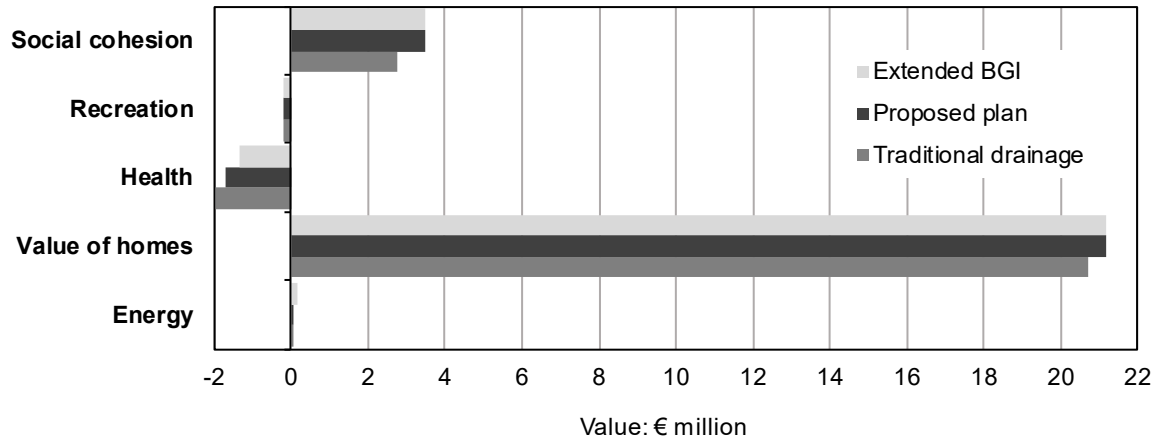
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28 **Supplementary Figure S1 Distribution of the benefits for the three options using B&ST**

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31 **Supplementary Figure S2 Distribution of the benefits for the three options using TEEB**

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33 ***C: Reference***

34 CIRIA. 2016. "BeST (Benefits of SuDs Tool) Technical Guidance
 35 Release Version 3." CIRIA, London, UK W045c RP993. 2016.
 36 <https://www.susdrain.org/resources/best.html>.