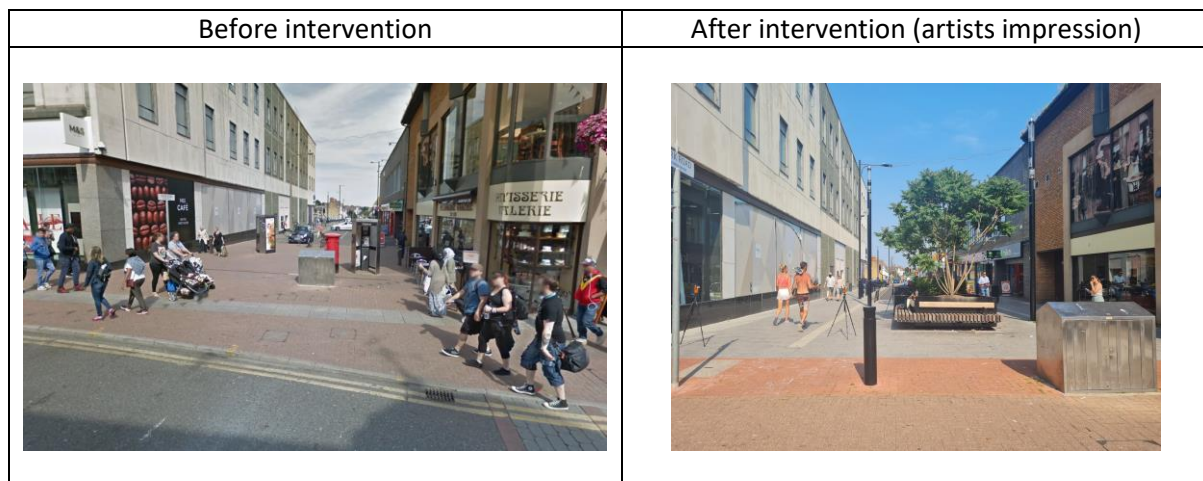




## Reducing heat stress in a busy city centre, part of an integrated development scheme Southend York Road

### Summary

- **Location:** A side public access point to entre Southend High Street, with disability parking and loading docks next to the small courtyard.
- **Problem:** A lack of greening/planting in access points in High Street, including this courtyard in York Road. Space was not utilised to its full potential and was close to idling vehicles.
- **Result:** Through the Town-centre Redevelopment Improvement Project (TRIP), the pedestrian area has been enlarged with the disabled and loading bays moved further away to create a safer space. Additionally, three above-ground planters with established trees have been introduced to the courtyard with benches attached to them, offering a cooler and more relaxed resting environment for visitors. New lighter colour paving was used to help tackle the urban heat island effect.



### Location

Southend is located 40 miles east of London on the north side of the Thames Estuary. It is one of the most densely populated urban areas in East of England with a population of 180,000 and is one of the 'driest place in the UK'. As a seaside resort with over 6 million visitors/year, Southend must identify how it can reduce exposure to heat stress and implement solutions to benefit public health for residents and visitors.

### Site Description

The Cool Towns pilot location is in the main High Street shopping area, which is fully paved with little green and have high footfall of approximated 28,000 daily users accessing the area. A loading bay and disabled parking were located directly next to the small courtyard with idling vehicles contributing to the increased temperature and air pollution in the area. Our greening intervention was delivered at the enlarged courtyard as a means of cooling and other co-benefits, such as air quality and mental health improvement.

### The decision-making journey

The potential to enhance design by introducing more greening elements in existing regeneration projects made it easier to gain approval from senior management and stakeholders than delivering a standalone project using Cool Towns budget alone. The Highways and Transport engineers and manager were closely involved in finalising the design of this public space. The internal approval process, carried out by senior management, to agree the final design and all the interventions, was completed and approval granted mid-2020.

### Implementation – problems encountered

The implementation phase of the project has encountered little problem as project funding/procurement/planning permission were all approved in advance as part of the Southend regeneration scheme (TRIP). Underground utilities were constraints, and the green infrastructure features selected were determined by the need to respect these.

**Indicative costs:** please note that costs have been rounded and, while accurate at the time of implementation, can only be used as an indication of cost.

| <b>Capital Cost</b>  | <b>€</b>      | <b>£=1.15€</b> |
|--|---------------|----------------|
| e.g Green roof installation  |               |                |
| Supply 12No. Laurus nobilis and 16No. Rosmarinus prostratus        | 1,244         | 1,080          |
| TRIPs Supply & Installation of trees by Civic Tree’s               | 5,974         | 5,185          |
| Planting costs   | 2,743         | 2,381          |
| Streetlife – Supply of Planters/Benches                            | 38,457        | 33,385         |
| <b>Total</b>   | <b>48,430</b> | <b>42,032</b>  |
| Civil engineering works done on York Road for TRIP (approximation) |               |                |
| <b>Total</b>   | <b>20,700</b> | <b>18,000</b>  |

| <b>Maintenance Costs</b>  | <b>€</b> | <b>£=1.15€</b> |
|---|----------|----------------|
| Cost of planting maintenance is part of the town centre maintenance budget – 5% of total budget |          |                |

| <b>Suggestions raised during the public consultation:</b>   | <b>Reactions after completion</b>  |
|---|--|
| <ul style="list-style-type: none"> <li>• More greening in town</li> <li>• Not enough benches to sit and rest – street furniture</li> <li>• Better use of public space – change of current layout, reallocation/reduction of road space, increase pedestrian space</li> <li>• Wayfinding – improve signage and wayfinding in Town Centre</li> <li>• Walking and cycling – improving walking and cycling facilities</li> <li>• Improving public safety</li> </ul> | <ul style="list-style-type: none"> <li>• Love the new trees and plants in town</li> <li>• Pleased to see the taxi rank has been moved further away from the pedestrian pavements</li> <li>• The new benches with planters are great for resting after a long shopping spree</li> </ul> |

**Reflection: what went well/what could have gone better?**

- The stakeholder engagement exercise done for S-CATS was extremely useful as it has helped us to identify issues in the town centre area, as well as ideas and potential solutions for addressing these issues.
- The introduction of greenery in the project was very well received by the local stakeholders, which has given us confidence in using this pilot project as example for further planning re climate adaptation in Southend

| MEASURE OF SUCCESS   | EVIDENCE  |
|--|---|
| reduction of PET value (baseline vs result values, comparison with reference point)  | Planter with Sumac tree 9.52°C  |
| size of the area (m2) with improved heat resilience (the total area that benefits from the measures approximate this by using the same approach used for the initial estimation in the application form) | +/- 10,000m2  |
| number of daily users benefitting from the intervention (if relevant/available: are there specific times of day or the year when there is heavy use?)  | 28,000  |
| co-benefits achieved (e.g. biodiversity, pollution reduction, economic benefits, influence on property value, long-term savings, aesthetic improvement, psychological impact etc.)                       | Biodiversity, air quality, economic benefits for eatery and restaurants, aesthetic improvement, mental health |

**Technical and financial specifications**

Green Blue Urban ArborFlow SuDS tree pit systems:

<https://greenblue.com/gb/solutions/stormwater-management/>

Planters with Seating: <https://www.streetlife.nl/en/products/roughready-hug-tub>

**References**

Southend TRIP project: <https://www.southend.gov.uk/better-southend/town-centre-redevelopment-improvement-project-trip>