Climate Impact Assessment

ST -5617-25

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St Levan Flood Relief Scheme

Project details

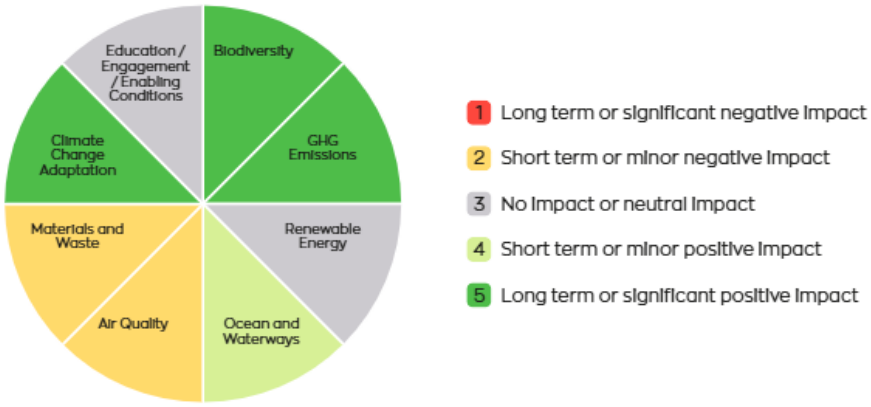
Assessment author

Anna Baldock, Pete Mugford, Flemy-Mariya Inikkal-Raphy

Project summary

St Levan Park SuDS Scheme to provide surface water storage and improve the facilities in the park

Summary of assessment



There will be positive long-term impacts for: Biodiversity, GHG Emissions and Climate Change Adaptations. There will be limited positive impact for Oceans and Waterways.

There will be short-term negative impacts for: Air Quality and Materials and Waste. This is through the construction phase of the project. After this, there will be either no or neutral impact for Materials and Waste, and for Air Quality there will be a longer-term positive impact due to improvements in greenspace. For Air Quality, this score is dependent on mitigation being in place to dampen down and control dust created throughout the construction of the SuDS scheme. For Materials and Waste, this score is dependent on South West Water separating surface water upstream to reduce the amount of treated combined sewage, any granite kerbs that have been removed being used elsewhere, and the reuse of materials on-site.

There will be no or neutral impact for Renewable Energy and Education/Engagement/Enabling Conditions. There are no elements of renewable energy in the scheme and for Education/Engagement/Enabling Conditions there will be a raised path to make the park more accessible when flooding occurs and the Building Resilience in Communities team will continue to work in the St Levan area (until at least 2027).

Assessment scores

Biodiversity

Score

(5) Long lasting or extensive positive impact

Score justification

Existing park is amenity grassland. Biodiversity will be marginally increased through more diverse planting, rain gardens, and potential rain garden build-outs

GHG Emissions

Score

(5) Long lasting or extensive positive impact

Score justification

Separation of surface water and reduction in flooding in habited areas will also reduce greenhouse gas emissions as there will be less energy used in processing waste water and cleaning up and rebuilding after flooding events have damaged property.
The inclusion of rain gardens may lead to to improved carbon absorption through their planting.

Renewable Energy

Score

(3) No impact or neutral impact

Score justification

There are no renewable energy elements to the project.

Ocean and Waterways

Score

(4) Short term or limited positive impact

Score justification

Additional filtration of water. No overall improvement of the waterway because no waterway exists.

There will be fewer combined sewer overflow spills entering the surface water drainage system (these are discharged into the River Tamar)

Air Quality

Score

(2) Short term or limited negative impact

Score justification

During construction there could be a short term negative impact on air quality. There will be an increase in the number of vehicle journeys (including HGVs) made throughout the construction.
There will be an overall longer-term improvement in air quality due to increased and more diverse vegetation planted as part of the scheme.

Mitigatory measures applied:

Construction methods will seek to dampen down and control dust created.

Materials and Waste

Score

(2) Short term or limited negative impact

Score justification

During construction the project will create waste and require transportation of materials. This will be managed by a Site Waste Management plan.

Mitigatory measures applied:

Following on from the scheme, SWW will separate out surface water upstream which will reduce the amount of treated combined sewage. If granite kerbs are removed, they will be reused in these works or elsewhere. We have the option of reusing excavated materials on-site so that they are not transported off-site. The materials are not contaminated so they may be suitable to be reused in the landscaped areas.

Climate Change Adaptation

Score

(5) Long lasting or extensive positive impact

Score justification

As surface water will be stored the effects of climate change such as flooding will be reduced in the future. This aims to increase resilience to flooding for the local area within Plymouth. For this scheme the number of properties with
decreased flooding potential is 53 (1:30 flood event), 113 (1:100 flood event)

Education / Engagement / Enabling Conditions

Score

(3) No impact or neutral impact

Score justification

There will be a raised path through the park - making walking more accessible during flooding.
The project is also supported by the Building resilience in Communities Team who are working with St Levan residents to help them be better prepared, for flooding, act promptly during a flood and recover quickly after a flood event. It will be a better public space, so the score could increase as the design develops.