Civic Centre Redevelopment

Project details

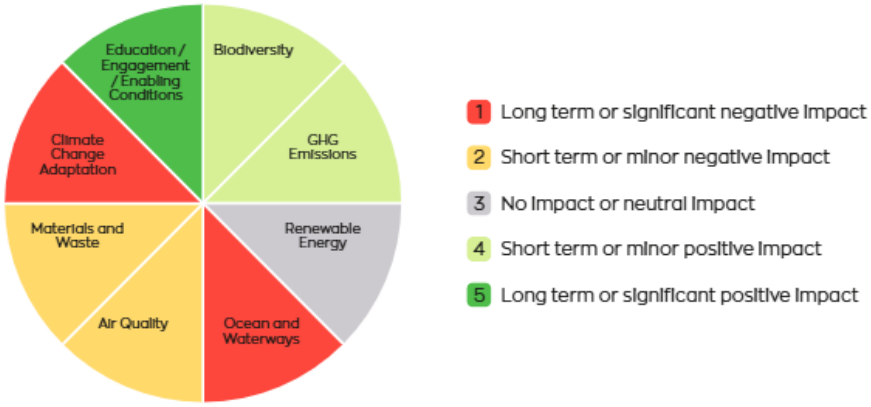
Assessment author

Sheila Nethercott

Project summary

The redevelopment of the Civic Centre Building, Armada Way into a mix of education and residential use. Includes the conversion of the tower into ca 144 residential units, and conversion of the podium and basement into a new skills hub for City College Plymouth.
The scheme includes demolition, alterations to the elevations including new cladding, and new public realm.

Summary of assessment



The Civic Centre regeneration project aims to refurbish and re-use the existing building. The concrete structure will be retained along with its embodied carbon and this will have a much lesser negative impact on the environment than demolition and re-building. Both the residential and college areas will be connected to the proposed District Heating Network to reduce the need for fossil fuels. There will also be no parking provided in the scheme to encourage the use of active and public transport. Construction activities will have a short term negative impact and contractors will be encouraged to employ methods with the least negative environmental impact. The assessment has highlighted potential issues with flooding and these will be addressed through a robust design process.

Assessment scores

Biodiversity

Score

(4) Short term or limited positive impact

Score justification

The site is of very limited ecological value, an Ecological Mitigation and Enhancement Strategy was produced by Spalding Associates (Environmental) Ltd. in 2019 and concluded that there will be an increase in biodiversity at the site. The majority of the habitat areas will be retained and enhanced post-construction. The one exception being the loss of a small 199 m2 area of poor-quality amenity grassland. However if the proposed planting recommendations are adopted, biodiversity value will be increased post-construction.
The pre-construction biodiversity score for this site is 6.15. The post-construction biodiversity score for this site is 8.89. This represents a positive change in biodiversity of +2.74.

Mitigatory measures applied:

Wildflower lawn
Containerised trees and pollinator planting areas
Introduced shrubs
Pollinator hedge
Bird boxes and enhancements (4 x species and Peregrine-specific)
Bat roosting provisions

GHG Emissions

Score

(4) Short term or limited positive impact

Score justification

The development of the Civic Centre will retain the existing structure and the embodied carbon within the structure. Demolition and construction activities will require material deliveries and waste removals to be transported by road. There will be a one off increase in greenhouse gas emissions during the construction phase, however, no parking provision is provided in the building for college attendees or residents. Long term this will encourage the use of public and active transport. Long term operational emissions will be low as the heating will be supplied from the district heat network.

Mitigatory measures applied:

The contractors will be challenged to employ methods with the least environmental impact.

Renewable Energy

Score

(3) No impact or neutral impact

Score justification

It is planned to connect both the residential and educational parts of the building to the proposed district heat network avoiding any reliance on fossil fuels, and benefitting from surplus waste heat. The use of PV will be explored in the design phase, however, it is unlikely the PV will meet the full energy demand.

Ocean and Waterways

Score

(1) Long lasting or severe negative impact

Score justification

The site is located in a Critical Drainage Area where the Environment Agency considers the existing drainage to be at or close to capacity. In addition, the site is located in an area identified in the PFRA Review as being at significant risk from local flooding. Surface water flood risk mapping provided by the Environment Agency indicates the site is at a low risk of surface water flooding from a 1% AEP (1 in 100 year return period) flood event. Mapping shows the basement entrance has the potential to flood up to 0.6m deep during a 1 in 100 year return period (1% AEP) flood event. The redevelopment of the Civic Centre will increase the need for water to be treated as sewerage and the drainage strategy will need to be carefully considered to minimise the impact.

Mitigatory measures applied:

Full consideration will be made during the design phase on how foul and surface water can be disposed of without increasing the risk of sewer flooding and pollution of the water environment.

Air Quality

Score

(2) Short term or limited negative impact

Score justification

The location is highly accessible to nearby amenities and workplaces in the city centre and parking will not be included within the building basement. Measures to reduce the impact on air quality during the construction phase will be considered and implemented.

Mitigatory measures applied:

No parking provision in the building.

Materials and Waste

Score

(2) Short term or limited negative impact

Score justification

The demolition work and construction activities will generate waste. Construction waste management is highly regulated and this will be managed and monitored carefully.

Mitigatory measures applied:

The design of the Civic Centre development has been amended to reduce the extent of demolition of the 1970's additions to the building. The project as a whole is to refurbish and redevelop the building which will have a much lesser impact than the full demolition of the structure.

Climate Change Adaptation

Score

(1) Long lasting or severe negative impact

Score justification

The proposed increase in residential dwellings effectively reduces the capacity of the downstream combined sewer

to receive surface water, potentially increasing flood risk to properties downstream.

Mitigatory measures applied:

The current proposed drainage is sized to accommodate the 100 year + 40% storm event with oversized pipes and orifice flow control to restrict flows to less than the existing discharge rates to provide a betterment to the existing downstream infrastructure. This design is to be further developed and options to discharge surface water to a future surface water drainage corridor will be assessed. Permeable paving will be used where possible to reduce the impact on the existing sewer network.

Education / Engagement / Enabling Conditions

Score

(5) Long lasting or extensive positive impact

Score justification

A main aim of the project is to provide a city centre campus for City College Plymouth. This campus is intended to be a
'blue-green skills hub' to educate and increase local skills in marine engineering and environmental management. Long term the project will encourage residents and students of the college to adopt climate friendly behaviours particularly in the use of active and public transport.

Mitigatory measures applied:

No parking provision in the building