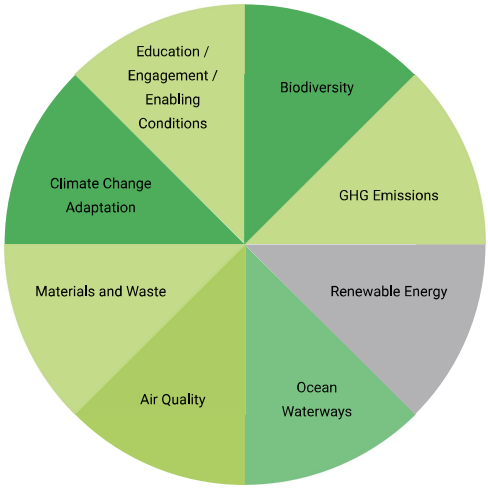
Armada Way - Cabinet Report FINAL



Assessment ID: ARM212

Assessment Author: Helen Trenerry

Assessment Initial Summary:

Regeneration of Armada Way

Assessment Final Summary:

Nature is at the heart of the new scheme and climate impact has been considered throughout the design process. The scheme aims to achieve a biodiversity net gain of 20% with a variety of trees and a range of habitats, shrubs, wildflowers and reed beds as well as bug hotels and bird boxes. Existing materials will be recycled as much as possible. The two key drivers of the scheme are the installation of a SuDS and the principle of using water wisely, and the promotion of active travel with a new cycle path to cater for cyclists of all abilities. The additional power required for the ornamental water feature will come from solar panels to help make the scheme more carbon neutral. The benefits offered by the scheme are long-term, reaching beyond 2030.

Biodiversity Score: 5

Biodiversity Score Justification: Nature is at the heart of this scheme. It aims to achieve a biodiversity net gain of 20% meaning that it will positively support wildlife in the city centre. It is proposed that there will be a total of 202 trees in the scheme - 49 more than were there before. All the trees planted will be at a height of 3.5-8m.The trees will be a diverse mix of UK native and ornamental trees avoiding a monoculture. The species have been selected for their resilience to disease and climate change. They are also less likely to suffer in future from stress and sporadic growth from the base of the trunk and will be planted in high quality root infrastructure allowing for the future cultural requirements and growth. In addition to the trees and shrubs, the underplanting, which in the main will be drought resistant and highly floriferous will provide pollen and nectar for wildlife as well as homes and wildflowers will be planted to encourage pollinators like bees. Bug hotels and bird boxes will also be installed throughout to encourage wildlife. Reed beds will provide natural filtration for the water being recirculated from the drainage system so that chemicals don't have to be used. This water will maintain the trees in addition to filling the shallow stream running down the scheme. Short-term negative impacts of the scheme include the immediate removal of tree canopy when the trees were felled in March 2023, until the new trees are planted.The long lasting and positive impacts offered by the scheme are deemed to outweigh the short-term negative impact of temporary loss of tree canopy to create an overall score that is a long lasting and extensive positive impact.

Biodiversity Score Mitigate: No

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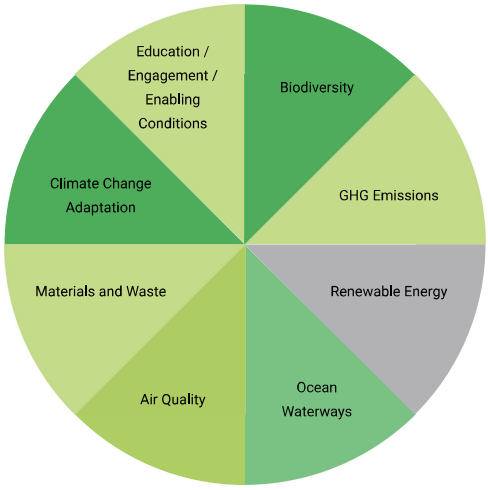

GHG Emissions Score: 4

GHG Emissions Score Justification: The project will create a one-off increase in greenhouse gas emissions during the construction phase through soil disturbance, the laying of granite as a hard landscape material and the use of construction vehicles and machinery onsite as well as the transportation of materials.However, materials have been selected for durability and longevity, which will reduce the need for replacement and ongoing maintenance with associated embedded carbon. These valuable materials can be recycled over time. The scheme will also recycle existing natural and man-made materials into the new project (soil, slabs and curbs) saving significant quantities of greenhouse gases in relation to transport and product manufacture.There will be a longer-term energy requirement for the running of the new rill which requires pumps in order to operate as well as the new lighting. However, the scheme includes the installation of solar panels and battery storage to offset the additional energy requirements and the installed lighting will be a highly energy efficient LED lighting system. The mature trees have been removed from Armada Way and will be replaced by an increased quantity of younger, healthier semi-mature trees (an additional 49 trees) specified to thrive in an urban environment, which will ultimately sequester more carbon in the long term. One of the driving factors of the scheme is to promote active travel through walking and cycling as an alternative to car use, thereby reducing greenhouse gas emissions in the long term. We anticipate this scheme after implementation would typically generate a combined total number of cycle movements of around 400 per day.

GHG Emissions Score Mitigate: No

Renewable Energy Score: 3

Renewable Energy Score Justification: The scheme will require energy in order to run the combined SuDS and ornamental water feature. However, the scheme includes installation of solar panels and battery storage to offset the additional energy needed to power the water feature.The existing street lighting scheme is being replaced with an LED street lighting system which is more efficient than the old scheme. The spread of light is greatly improved.

Renewable Energy Score Mitigate: No

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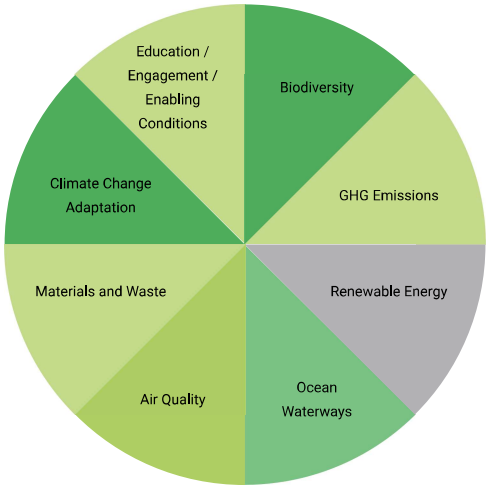

Ocean and Waterways Score: 5

Ocean and Waterways Score Justification: The scheme will deliver a sustainable urban drainage system (SuDS) to manage all the surface water which falls on Armada Way. This will involve the use of rain gardens and underground storage tanks which will fill with rainwater after being filtered through natural reed beds. The water will be recirculated around Armada Way through an ornamental stream which will run along the length of the proposed scheme. The water will be used to irrigate the trees. Through this process, the clean rainwater will be prevented from entering the combined sewer and therefore avoids the need for the water company to treat it in its sewage treatment plants. It also takes out significant quantities of water from the combined system which at times of high rainfall can cause the system to overflow and damage to the quality of bathing waters.The system, therefore, is more climate resilient and uses water wisely which will be beneficial at times of extreme weather events.The SuDS will primarily be powered by gravity and as such fails safe in all events. The ornamental rill is powered by solar energy via pumps using battery storage. This system delivers a long lasting and extensive positive impact as it reduces maintenance and watering costs by retaining rainwater to water the trees; it reduces the likelihood of foul water ending up in our catchment watercourses and eventually in the Sound; and reduces flood risk for our city centre.

Ocean and Waterways Score Mitigate: No

Ocean and Waterways Revised Score Justification: The scheme will deliver a sustainable urban drainage system (SuDS) to manage all the surface water which falls on Armada Way. This will involve the use of rain gardens and underground storage tanks which will fill with rainwater after being filtered through natural reed beds. The water will be recirculated around Armada Way through an ornamental stream which will run along the length of the proposed scheme. The water will be used to irrigate the trees. Through this process, the clean rainwater will be prevented from entering the combined sewer and therefore avoids the need for the water company to treat it in its sewage treatment plants. It also takes out significant quantities of water from the combined system which at times of high rainfall can cause the system to overflow and damage to the quality of bathing waters.The system, therefore, is more climate resilient and uses water wisely which will be beneficial at times of extreme weather events.The SuDS will primarily be powered by gravity and as such fails safe in all events. The ornamental rill is powered by solar energy via pumps using battery storage. This system delivers a long lasting and extensive positive impact as it reduces maintenance and watering costs by retaining rainwater to water the trees; it reduces the likelihood of foul water ending up in our catchment

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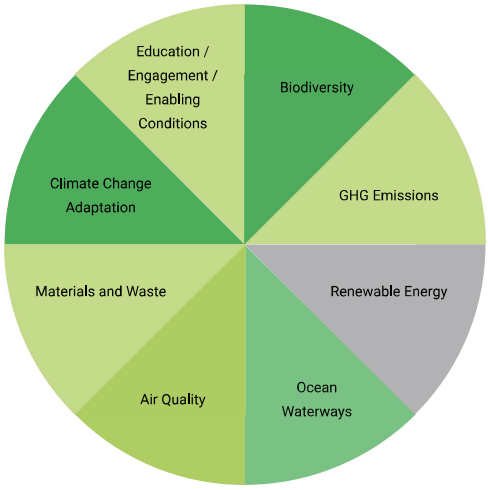

watercourses and eventually in the Sound; and reduces flood risk for our city centre.

Air Quality Score: 4

Air Quality Score Justification: The scheme increases the amount of green space by over 600sqm. It includes a total of 202 trees, 49 more than were there previously, as well as more beneficial greenery including underplanting, wildflower meadows and reedbeds to encourage wildlife generally and pollinators. One of the driving factors of the regime is to promote active travel through walking and cycling, thereby reducing greenhouse gas emissions through the alternative use of cars and improving air quality in the long term. We anticipate this scheme after implementation would typically generate a combined total number of cycle movements of around 400 per day.

Air Quality Score Mitigate: No

Materials and Waste Score: 4

Materials and Waste Score Justification: There will be a short-term negative impact during the construction phase due to waste that is generated and materials that are taken up.However, materials have been selected for durability and longevity, which will reduce the need for replacement and ongoing maintenance with associated embedded carbon. These valuable materials can be recycled over time. The scheme will also recycle existing natural and man-made materials into the new project, saving significant quantities of greenhouse gases in relation to transport and product manufacture.The scheme will deliver a SuDS which uses clean rainwater wisely and avoids it being used as waste water which has significant benefits.There will be a comprehensive construction and waste management plan.The scheme includes like for like recycling infrastructure.

Materials and Waste Score Mitigate: No

Climate Change Adaptation Score: 5

Climate Change Adaptation Score Justification: The scheme will deliver a sustainable urban

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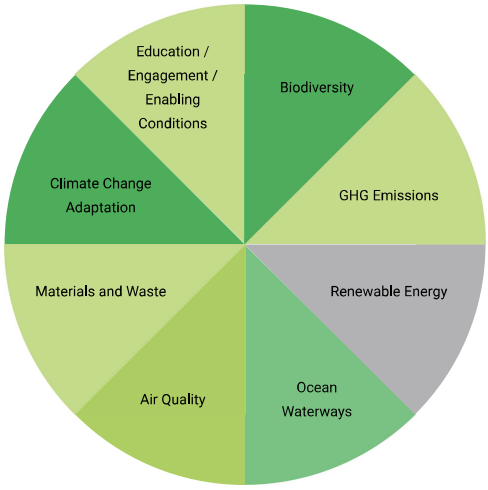

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Climate Change Adaptation Score Mitigate: No

Climate Change Adaptation Revised Score Justification: The scheme will deliver a sustainable urban drainage system (SuDS) to manage all the surface water which falls on Armada Way. This will involve the use of rain gardens and underground storage tanks which will fill with rainwater after being filtered through natural reed beds. The water will be recirculated around Armada Way through an ornamental stream which will run along the length of the proposed scheme. The water will be used to irrigate the trees. Through this process, the clean rainwater will be prevented from entering the combined sewer and therefore avoids the need for the water company to treat it in its sewage treatment plants. It also takes out significant quantities of water from the combined system which at times of high rainfall can cause the system to overflow and damage to the quality of bathing waters.The system, therefore, is more climate resilient and uses water wisely which will be beneficial at times of extreme weather events.The SuDS will primarily be powered by gravity and as such fails safe in all events. The ornamental rill

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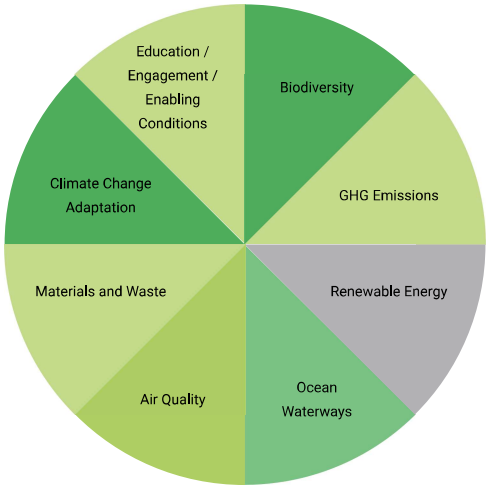

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Education / Engagement / Enabling Conditions Score: 4

Education / Engagement / Enabling Conditions Score Justification: There are opportunities within the scheme for interpretation to explain the benefits to the public and impart positive messaging to the public, promoting the use of PVs, SuDS, bio-diversity gain, use of recycled materials, the functioning of the ornamental rill, using water wisely including irrigation, the future installation of district heating and other future-proofing, infrastructure delivered by the scheme which helps to make it more carbon neutral.We are engaging with the University of Plymouth to analyse the effectiveness of the climate emergency provisions that the scheme provides in terms of SuDS and there are opportunities for engagement with local schools throughout the construction and delivery process.One of the driving factors of the regime is to promote active travel through walking and cycling, thereby reducing greenhouse gas emissions through the use of cars in the long term. There will be extensive engagement around behaviours linked to the conflicts between these different modes of travel.

Education / Engagement / Enabling Conditions Score Mitigate: No

Wheel Key

- Long lasting or severe negative impact
- Short term or limited negative impact
- No impact or neutral impact
- Short term or limited positive impact
- Long lasting or extensive positive impact