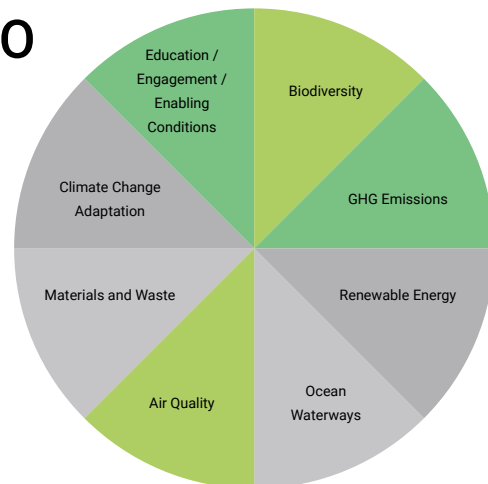


DEPARTMENT FOR TRANSPORT ZERO EMISSION BUS REGIONAL AREAS SCHEME (ZEBRA 2) FINAL



Assessment ID: DEP204

Assessment Author: Rosemary Starr

Assessment Initial Summary:

Plymouth City Council are leading a bid to the Department for Transport's Zero Emission Bus Regional Areas Scheme, in partnership with Plymouth Citybus and Cornwall Council. If successful the bid will see the introduction of up to 50 zero emission, electric, double decker buses on routes operating in Plymouth and the Rame Peninsula as well as the necessary associated electric charging infrastructure at the Plymouth Citybus depot, Milehouse. The acquisition of the electric buses will not only enhance the routes which they will operate on but will also allow the redeployment of buses currently operating on routes which will be electrified to other services in Plymouth and South-east Cornwall, thereby modernising the entire Plymouth Citybus fleet operating in the Plymouth Travel to Work Area. This assessment relates to the impact of the introduction of electric buses in Plymouth, on the assumption that the bid is successful.

Assessment Final Summary:

The introduction of up to 50 zero emission, electric, double decker buses on routes operating in Plymouth and the Rame Peninsula as well as the necessary associated electric charging infrastructure will have a positive climate impact, particularly with regard to reducing greenhouse gas emissions and providing education and enabling conditions to encourage positive climate change behaviours amongst others. No adverse climate change impacts are expected from this project.

Biodiversity Score: 4

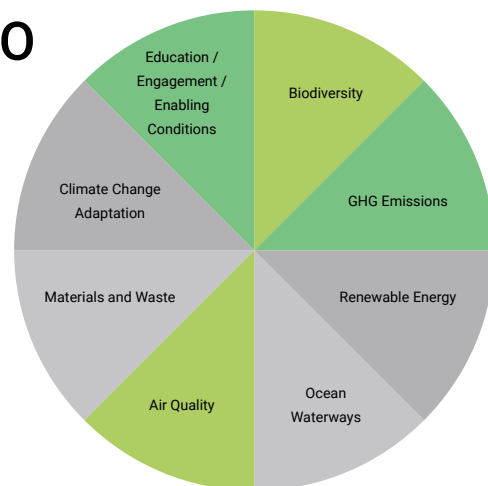
Biodiversity Score Justification: It is expected that there will be a beneficial noise impact from the introduction of electric buses. This is because electric vehicles generate lower levels of noise compared to their internal combustion engine equivalents. However, the positive impact is limited because the buses will still be operating on the highway where the majority of vehicles will not be electric.

Biodiversity Score Mitigate: No

GHG Emissions Score: 5

GHG Emissions Score Justification: If successful, the bid will see the introduction of up to 50 zero emission, electric, double decker buses on routes operating either wholly within, or to or

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from Plymouth. The Department for Transport require the buses to operate within the area to which funding was awarded for a minimum of five years. However, it's expected that the buses will actually serve Plymouth for much longer. Each vehicle has a lifespan of circa 18 years. Furthermore, not only will the new electric vehicles reduce carbon emissions, the emissions from diesel buses operating on other routes in the Plymouth Travel to Work Area will also improve through the cascade or more modern, efficient, buses from the routes being electrified, onto other services.

GHG Emissions Score Mitigate: No

Renewable Energy Score: 3

Renewable Energy Score Justification: This project has no impact on renewal energy provision.

Renewable Energy Score Mitigate: No

Ocean and Waterways Score: 3

Ocean and Waterways Score Justification: This project has no impact on the Ocean or Waterways.

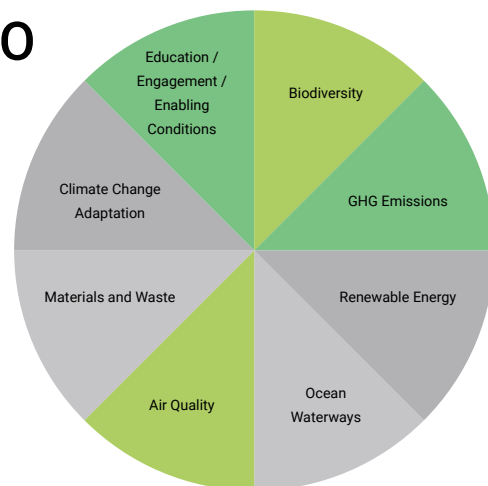
Ocean and Waterways Score Mitigate: No

Ocean and Waterways Revised Score Justification: This project has no impact on the Ocean or Waterways.

Air Quality Score: 4

Air Quality Score Justification: The electric buses, funded through the ZEBRA 2 project, were our bid to be successful will help to improve local air quality. They will be deployed on routes within Plymouth's declared air quality management area and are expected to achieve reductions in NOx and PM pollutants, when compared to their internal combustion engine equivalents. Furthermore, the buses are expected to achieve modal shift, away from the private car, due to the introduction of modern buses (a priority for Plymouth bus passengers, as identified in the 2023 Bus Service

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Improvement Plan) which will also deliver air quality benefits.

Air Quality Score Mitigate: No

Materials and Waste Score: 3

Materials and Waste Score Justification: This project is expected to neither increase or decrease waste volumes in the city. The electric vehicle infrastructure required to support the electric buses will be installed at the Plymouth Citybus depot; repurposing part of the site so that it is fit for purpose for electric vehicles.

Materials and Waste Score Mitigate: No

Climate Change Adaptation Score: 3

Climate Change Adaptation Score Justification: This project has the potential to reduced the urban heat island effect, due to a switch from internal combustion engines to electric propulsion for up to 50 buses. However, due to the number of electric buses, compared to the volume of traffic on Plymouth's roads the effect is expected to be minimal and hence has not been scored.

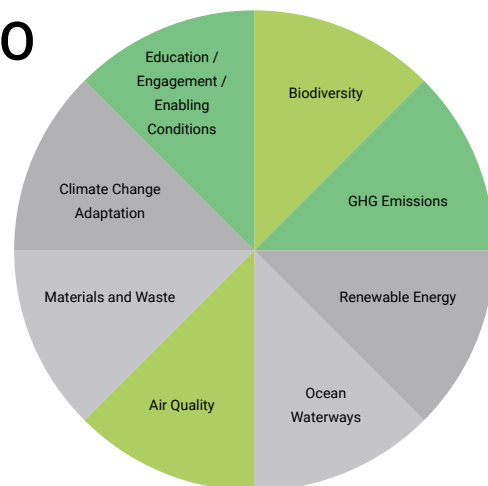
Climate Change Adaptation Score Mitigate: No

Climate Change Adaptation Revised Score Justification: This project has the potential to reduced the urban heat island effect, due to a switch from internal combustion engines to electric propulsion for up to 50 buses. However, due to the number of electric buses, compared to the volume of traffic on Plymouth's roads the effect is expected to be minimal and hence has not been scored.

Education / Engagement / Enabling Conditions Score: 5

Education / Engagement / Enabling Conditions Score Justification: If successful the bid will allow Plymouth to showcase the benefits of electric buses. The bid team are also hoping to be able to provide practical educational opportunities for electric vehicles and, as a minimum, the project will result in the Citybus engineering teams being upskilled in maintaining electric

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vehicles; knowledge which they're happy to share with others. The project will also increase the capacity of residents and businesses to adopt climate friendly behaviours. For residents, this will be achieved through operating modern buses in Plymouth which are expected to prompt modal shift. For businesses, this will be through future proofing the electric vehicle charging infrastructure to allow other organisations to potentially utilise the infrastructure as well, supporting their transition to greener fleets.

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