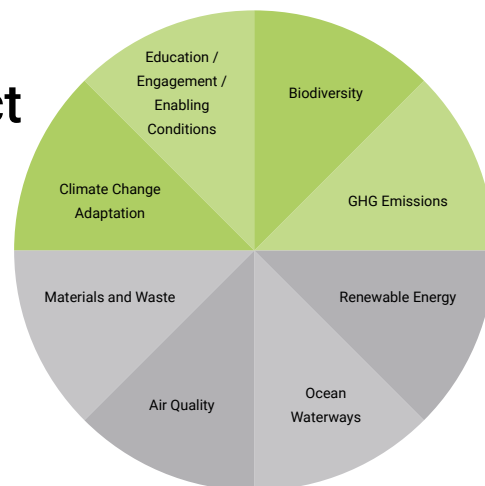


Woolwell to The George Transport Improvement Scheme: Carbon Impact Assessment FINAL



Assessment ID: W00388

Assessment Author: Leana Hannon

Assessment Initial Summary:

The Woolwell to The George (WTTG) Transport Improvement Scheme will alleviate congestion between Woolwell and The George Junction on the A386 Tavistock Road and unlock significant residential development in the north of Plymouth. The scheme will deliver:

- Dedicated walking and cycling facilities
- A new signalised junction at Woolwell Crescent
- Upgrade of Woolwell Roundabout to a signalised junction
- Increased capacity on the A386 Tavistock Road by providing dual carriageway from Woolwell Roundabout to The George P&R
- Increased parking capacity at The George P&R

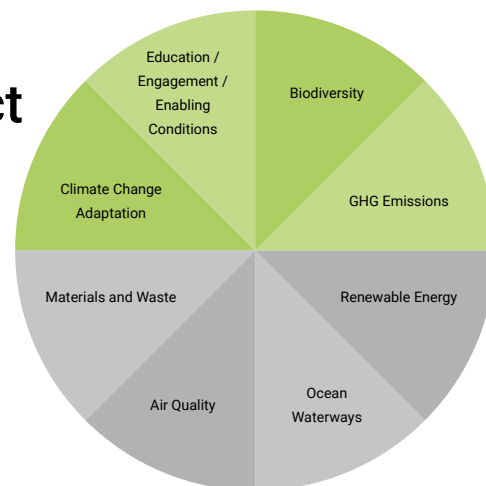
Assessment Final Summary:

The Woolwell to The George scheme is a strategically important project, specifically identified in the Joint Local Plan. It directly unlocks significant residential development at Woolwell as well as improving access to existing key industrial, technical, business and medical sites on the northern corridor.

The project will reduce congestion, improve journey times, promote walking, cycling and use of public transport, improve network resilience and accessibility. Integral to the scheme is high quality walking and cycling facilities including new and improved crossings to break down the A386 as a barrier to movement and also includes LTN1/20 compliant segregated cycleways. The scheme also includes the expansion of The George Park and Ride by 100 spaces and also includes the installation of electric charging bays and improved access for buses. The scheme is truly multi-modal and designed to encourage greater travel choice and sustainable travel options to encourage people to switch from car based travel to more active and sustainable forms.

Tackling climate change represents a major challenge for the delivery of future growth and operation of the transport network. Providing significant walking and cycling infrastructure on Plymouth's northern corridor, as part of the Woolwell to the George Scheme, is a specific action within the Climate Emergency Action Plan.

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Without delivery of the Scheme, the performance of the transport network on the Northern Corridor will further deteriorate across all modes.

Delivery of the scheme will be supported by the development and delivery of a Construction Environmental Management Plan

(CEMP) to ensure delivery of the project in accordance with best practice. The CEMP and other project documents such as the Site Waste Management Plan will identify key mitigation to be implemented throughout construction.

The nature of construction projects such as WTTG, means that the impact on some outputs such as materials and waste, air quality are considered to be neutral.

Biodiversity Score: 4

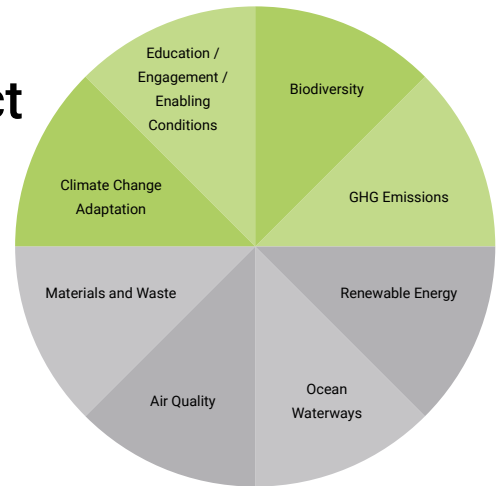
Biodiversity Score Justification: The scheme is not located within close proximity of any designated international or nationally protected sites and will not directly impact upon the conservation status of any designated site for nature conservation purposes. The dominant habitat of the site is hardstanding due to the current highway and associated infrastructure and the habitat is of negligible ecological value. Any measures identified in the Preliminary Environmental Assessments (and subsequent reports) will be incorporated within the Construction Environmental Management Plan (CEMP). In line with PCC's requirements, the scheme will deliver 10% biodiversity net gain (BNG).

Biodiversity Score Mitigate: No

GHG Emissions Score: 4

GHG Emissions Score Justification: The nature of construction work means that there is likely to be a short term negative impact on greenhouse gas emissions. Longer term, the scheme will deliver a more efficient highway network by reducing congestion and supporting a shift to sustainable modes. Whilst the scheme does provide increased capacity to not only relieve congestion now as well as accommodate future demand anticipated by the WUE, the road itself is not considered to generate significant increases in volumes of traffic as there are no

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alternative routes in this area of the City which may cause people to re-route or induce suppressed demand. Additional growth in trips will be derived from the proposed new developments which will be subject to their own CIA and checks through the planning system. The scheme will help to lower GHG emissions by significantly reducing existing congestion which not only causes increased emissions but also affects the reliability of bus services and timetabled information affecting people's confidence in the services offered. Integral to the scheme is high quality walking and cycling facilities including new and improved crossings to break down the A386 as a barrier to movement and also includes LTN1/20 compliant segregated cycleways. The scheme also includes the expansion of The George Park and Ride by 100 spaces and also includes the installation of electric charging bays and improved access for buses. The scheme is truly multi-modal and designed to encourage greater travel choice and sustainable travel options to encourage people to switch from car based travel to more active and sustainable forms. Modelling following the Department for Transport's prescribed WebTag methodology shows that the Scheme will reduce carbon emissions by 36,000 tonnes across the 60 year appraisal period.

GHG Emissions Score Mitigate: No

Renewable Energy Score: 3

Renewable Energy Score Justification: It is not considered that the WTTG scheme will have any direct impact on renewable energy.

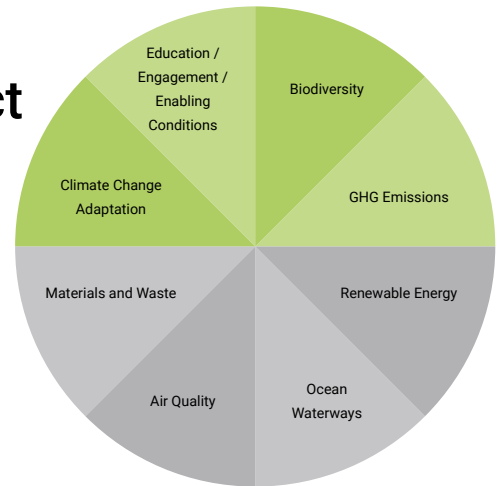
Renewable Energy Score Mitigate: No

Ocean and Waterways Score: 3

Ocean and Waterways Score Justification: Surface water run-off discharge to sewers will be appropriately restricted (in line with national and LLFA guidance) to ensure flood risk is not increased. A Construction Environmental Management Plan will detail best practice measures and mitigation to limit the risk of contamination of water resources.

Ocean and Waterways Score Mitigate: No

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Air Quality Score: 3

Air Quality Score Justification: The scheme will help to improve local air quality by significantly reducing existing congestion which not only causes increased emissions but also affects the reliability of bus services and timetabled information affecting people's confidence in the services offered. Integral to the scheme is high quality walking and cycling facilities including new and improved crossings to break down the A386 as a barrier to movement and also includes LTN1/20 compliant segregated cycleways. The scheme also includes the expansion of The George Park and Ride by 100 spaces and also includes the installation of electric charging bays and improved access for buses. The scheme is truly multi-modal and designed to encourage greater travel choice and sustainable travel options to encourage people to switch from car based travel to more active and sustainable forms. An Air Quality Assessment has been undertaken for the WTTG scheme. The results show that the annual mean pollutant concentrations are well below the respective AQS objectives at all receptors modelled, with and without the scheme. There may be some short term temporary impacts on air-quality during the construction process but these will be offset by the longer term benefits the scheme will bring.

Air Quality Score Mitigate: No

Materials and Waste Score: 3

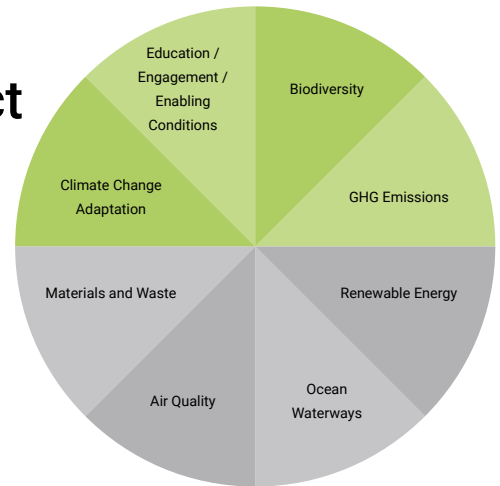
Materials and Waste Score Justification: Best practice waste management techniques will be adopted throughout construction. A Site Waste Management Plan (SWMP) will ensure that the principles of the waste management hierarchy (i.e. reduce, reuse, recycle) will be adopted. The reuse of site won materials will be prioritised and retained where possible. A Construction Environmental Management Plan (CEMP) will also support scheme delivery.

Materials and Waste Score Mitigate: No

Climate Change Adaptation Score: 4

Climate Change Adaptation Score Justification: A Flood Risk Assessment has been prepared in accordance with the National Planning Policy Framework (NPPF), the accompanying Planning Practice Guidance include planning policy concerning development and flood risk in areas of

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England. It has also considered regional and local planning policy. The site is in Flood Zone 1, low probability of flooding from fluvial and tidal sources. The scheme is classed as essential infrastructure and is part within the Plymouth Critical Drainage Area. Surface water runoff has been assessed for on and offsite flood risk taking into account the current drainage provisions, the predicted impacts of climate change and the implications of the proposed works on existing drainage networks. The existing drainage system is not only sub-standards but in places non-existing meaning the scheme will provide significant resilience against climate change and localised flooding. The drainage has been designed up to the critical 100 year event plus a 40% climate change factor. Infiltration is not expected to be viable for this site, an attenuation strategy has been developed including above ground SuDS features. Drainage proposals include repairing or replacing existing damaged sewers as necessary. New attenuation in the form of underground tanks and SuDS rain gardens/ponds are proposed. Where possible, existing surface water drainage runs will be reused and connected to. Damaged or insufficiently sized existing drainage will be replaced and upsized accordingly.

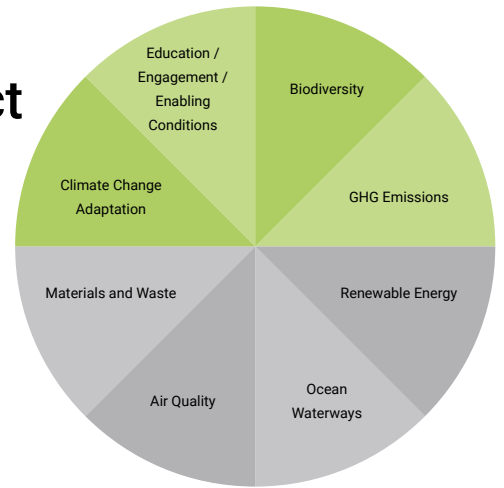
Climate Change Adaptation Score Mitigate: No

Education / Engagement / Enabling Conditions Score: 4

Education / Engagement / Enabling Conditions Score Justification: The WTTG Scheme delivers a significant improvement in walking and cycling facilities on a key section of Plymouth's Strategic Cycle Network and will provide a link to significant new development at Woolwell. The scheme will be complimented by other interventions offered by Strategic Planning & Infrastructure such as Personalised Travel Planning through Plymotion. This will be undertaken following completion of the scheme in order to educate residents and commuters of the new sustainable measures included within the scheme and how to access them. This will also be encouraged during the construction. Without delivery of the scheme, the performance of the transport network on the Northern Corridor will further deteriorate across all modes. Currently the P&R site is at capacity, meaning further growth in sustainable travel into the city centre from the P&R is constrained.

Education / Engagement / Enabling Conditions Score Mitigate: No

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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