



Department  
for Transport



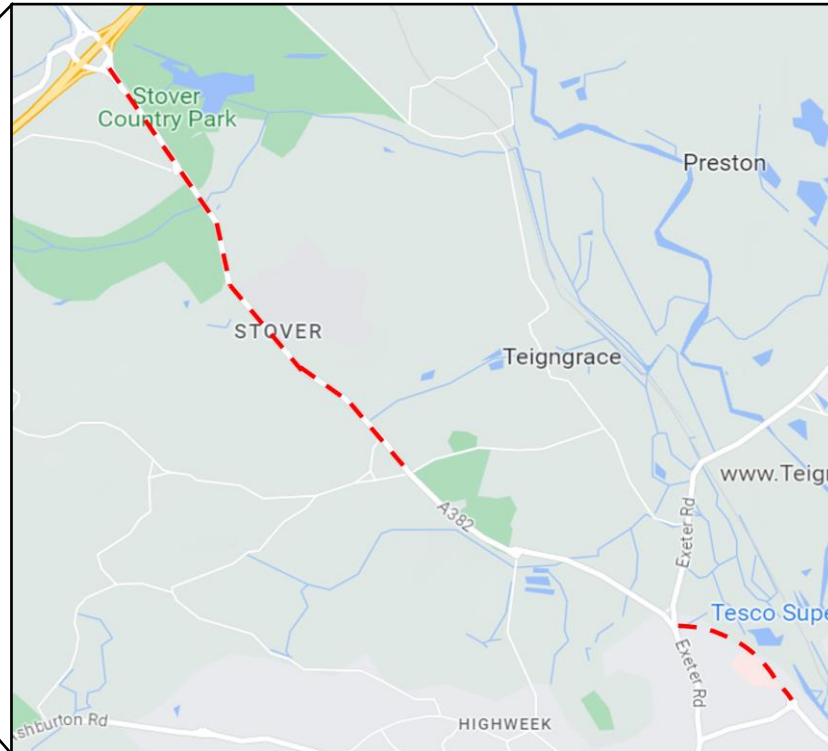
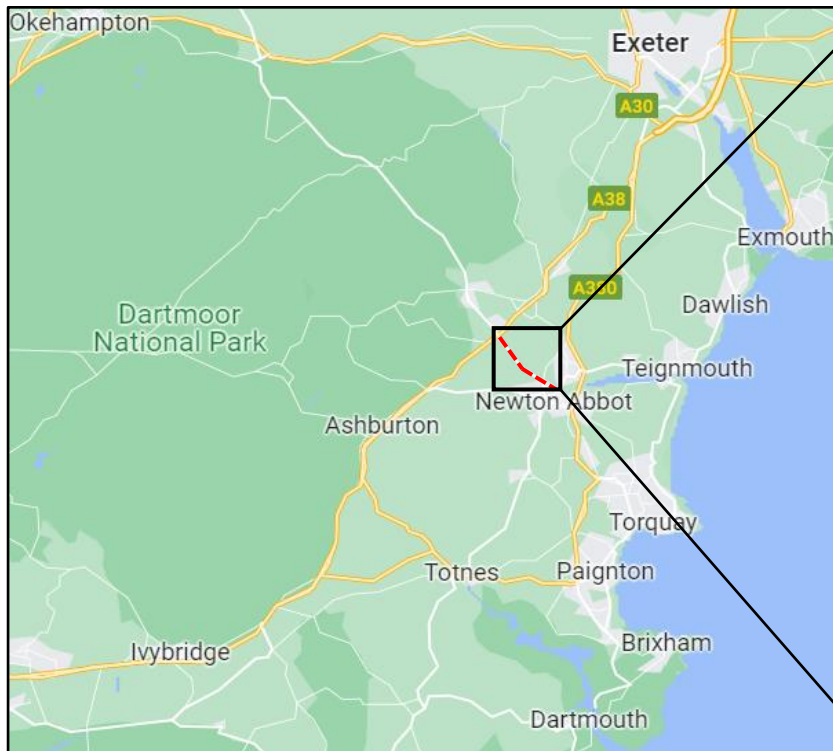
# A382 Carbon Negative Road

A Presentation on Devon's Live Lab



University  
of Exeter

# Overview of Scheme



Improvements along 2.5 km stretch between Drumbridges and Forches Cross

New 0.4 km Jetty Marsh Link Road

3 new roundabouts

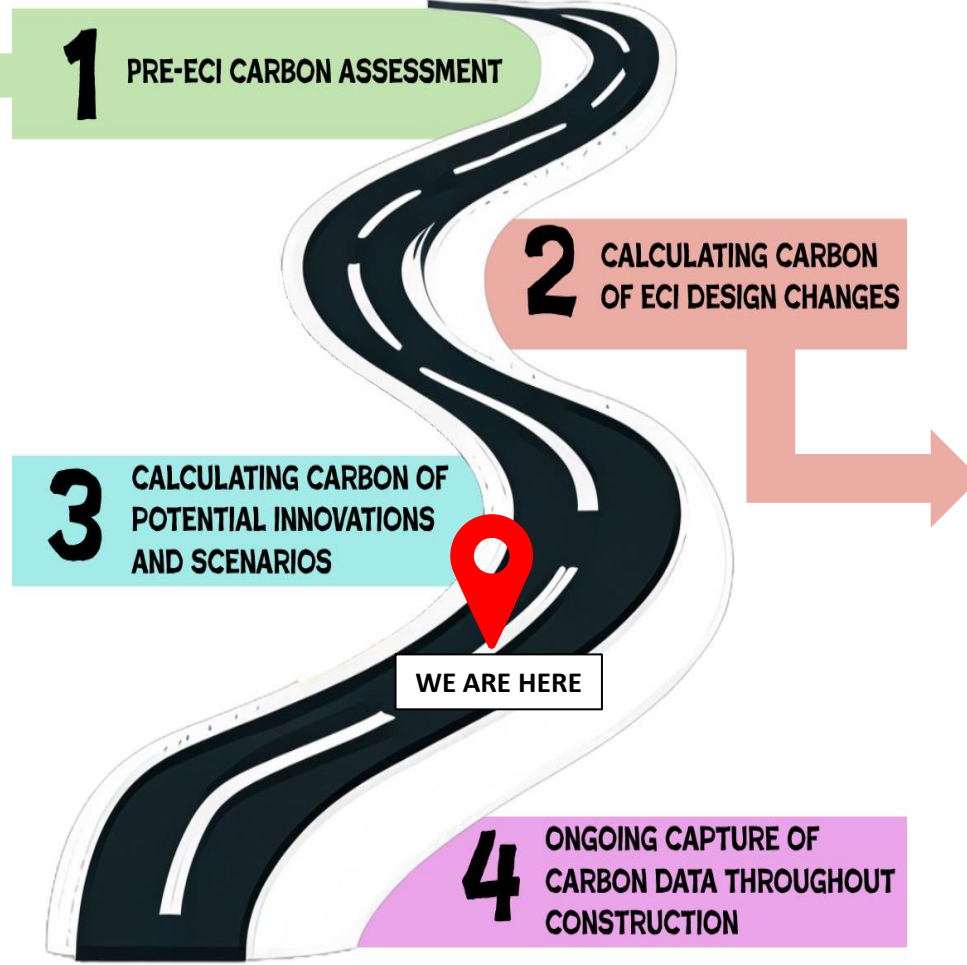
New bridge and culverts

Drainage improvements

Approximately 3 km of new shared-use pathway



# Road to Carbon Negative



Design Choice	BAU Approach	Our New Approach	Carbon Saving (tCO2e)
Carriageway width	10 metres wide	8.3 metres wide	~ 249
Kerbing	Kerbs both sides	Removed where drainage and shared-use path allow	~ 38
Forches Cross	Shared use bridge	Bridge removed and replaced with parallel crossing	~ 208
Earthworks	Substantial earthworks/embankments throughout	Vertical alignment amended to reduce earthworks	TBC
Traffic management	Keep traffic running along route throughout	Discussions with contractor on options for closures and study of the effects	TBC
Bat protection	2 metre bat culvert	Removed and replaced with bat hop-over	~ 18





# Innovations Overview



**TREE TRANSLOCATION**

**SAWMILL PROCUREMENT FOR RE-USE OF SITE-WON TIMBER**

**VOLUMETRIC CONCRETE MIXERS ON SITE**

**CREATION OF BIOCHAR**

**BEHAVIOURAL CHANGE APPLICATION**

**ENHANCED MINERAL WEATHERING**

**MYCORRHIZAL FUNGI PELLETS**

**APPROVED INNOVATIONS**

Devon County Council | MILESTONE INFRASTRUCTURE

**LOW CARBON ASPHALT**

**'LIVING' ACOUSTIC BARRIERS**

**LOW CARBON CONCRETE**

**CARBON NEGATIVE WELFARE UNITS**

**CARBON NEGATIVE AGGREGATES**

**LOW CARBON TRANSPORT FOR OPERATORS**

**ALTERNATIVE FUELS**

**RE-USE OF SOILS**

**UPCOMING INNOVATIONS**

Devon County Council | MILESTONE INFRASTRUCTURE



# Project Timeline



Planning permission awarded

2017



Devon County Council declares a climate emergency

2019



Scoping options – decision to pursue two-stage ECI

2021

Contract awarded to Milestone Infrastructure



Jan 2022



Live Labs 2 'Dragons Den' pitch

Oct 2022



Works commence on site subject to funding

May 2024



Vegetation clearance and tree translocation begins on site

Jan 2024



Pre-ECI carbon baseline established

Jul 2023

Live Labs 2 business case submitted

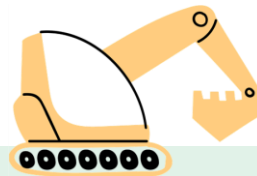


Apr 2023



Biochar production on site

Summer 2024



Construction completed on the scheme

Spring 2026



End of 3-year Live Labs 2 programme

Spring 2026



5-year extended monitoring and evaluation period

2026-2031

# Lessons Learned



Importance of language and communicating effectively when discussing carbon and carbon reduction



Challenge of commercial aspects regarding carbon reduction and innovation



Shining a light on the carbon of traditional business-as-usual approaches



Discovering a lot of individuals and companies who are passionate about reducing carbon and willing to collaborate with us to achieve that





Department  
for Transport



# A382 Carbon Negative Road

Thank You



University  
of Exeter