

“Let Chard Breathe & Prosper”

A

Short proposal by

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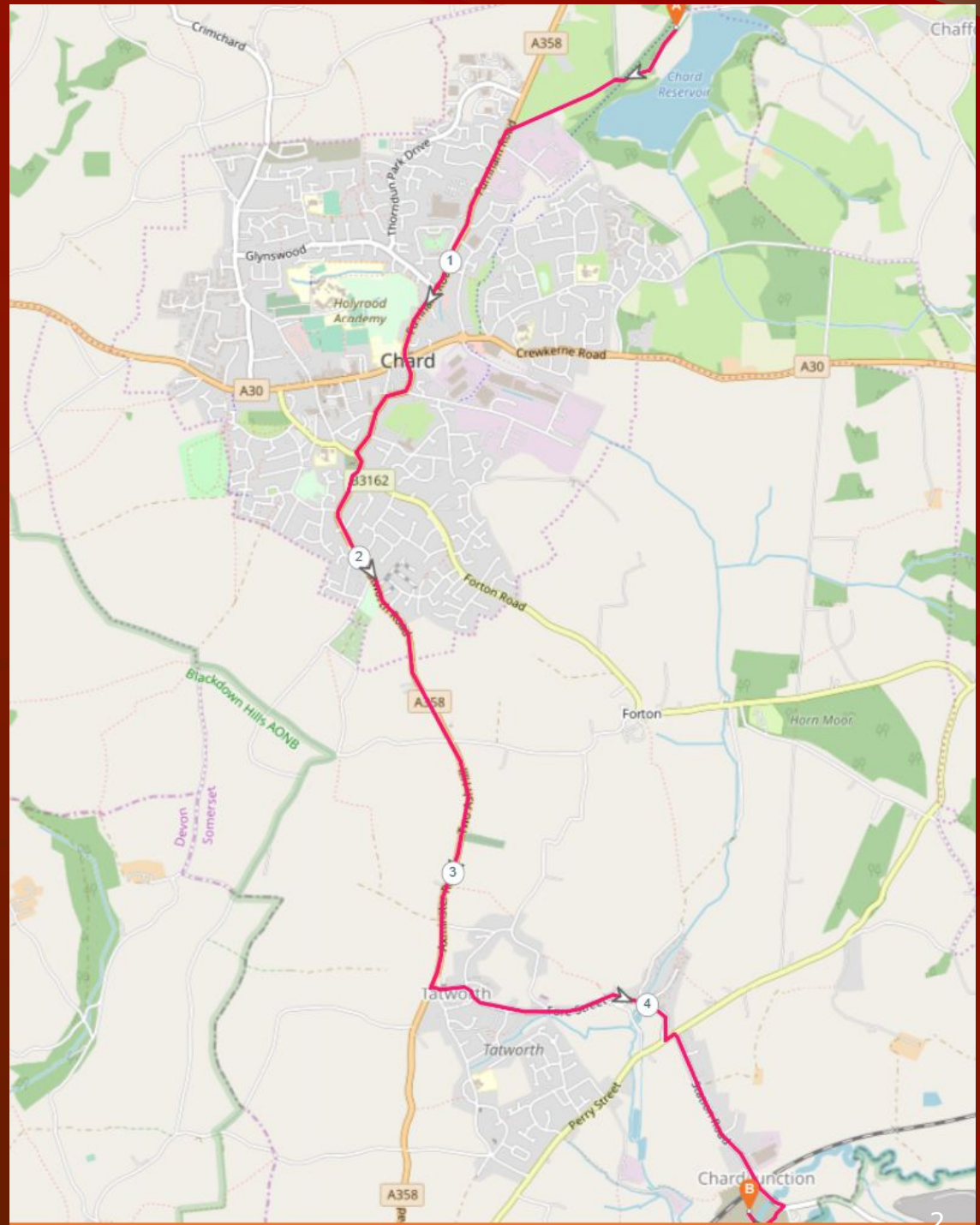
Technical Advisor.

Map 1
Chard Reservoir (P+R)
to
Chard Railway Junction P+R

The Route 4.922 Miles

(A study updated from a
Restore Your Railways Project)

22/09/23

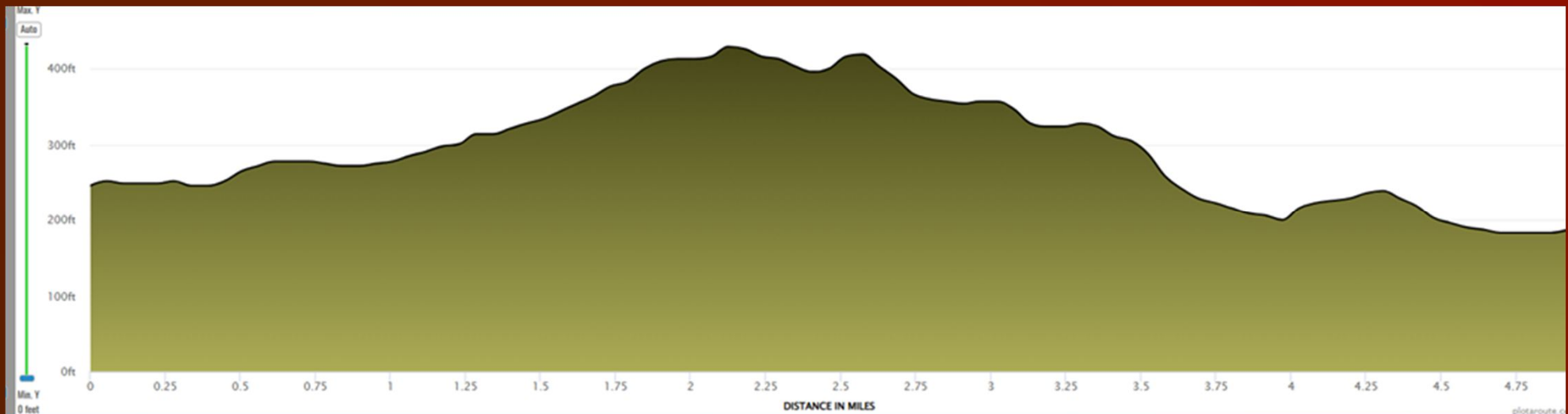


Map 2 The Route: Details

ROUTE STATISTICS		CUSTOM LABELS		CATEGORISED CLIMBS	
Distance	4.922 miles	Ascent/Descent (Raw)	272 feet / 331 feet		
Ascent Filter ⓘ	5 m [-] [•]	Ascent/Descent (Filtered)	223 feet / 282 feet		
Lowest Point ✎	183 feet (at 4.70 miles)	Highest Point ✎	429 feet (at 2.13 miles)		
Uphill	2.13 miles (43.2%)	Downhill	2.07 miles (42.0%)		
Flat	0.73 miles (14.8%)	Height Gain	246 feet		
Steepest Uphill ✎	+5.6% (at 1.79 miles)	Steepest Downhill ✎	-10.0% (at 3.52 miles)		
Longest Uphill ✎	1.23 miles (at 0.89 miles)	Longest Downhill ✎	0.67 miles (at 3.30 miles)		

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Map 3 Gradient Profile



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Map 4 The Route: Central Area



Chard Eastern Development Area

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Chard Eastern Development Area

The Persimmon site is part of the Chard Eastern Development Area (CEDA), which is identified in the South Somerset Local Plan to deliver at least 2,700 new homes, along with 17 hectares of employment land and two new primary schools.

In addition to creating new homes, the proposed plans are also working to lower the amount of toxic air that is produced within the area. A new roundabout is set to be built on Tatworth road specifically to help limit the amount of traffic congestion.

In view of the NEE (Particulates) and the forth coming Climate Change Laws,

We challenge !

the claim made by a spokesperson for Walsingham Planning, who is representing the developer, said: 'The design and layout of the homes and the proposed distributor road have been amended with the number of homes to the south of the site reduced, combined with an improvement to the green infrastructure network provided along the relief road.

'This 'green link' is formed by a separated path for shared use by pedestrians and cyclists. The location of public open space has been repositioned to connect with the proposed development adjacent to the site to the northwest.'

Urban Transport Corridor Pollution

There are two main Transport Corridor Pollutants (UTC).

Tailpipe emissions

Road, Tyre & Brake Dust (NEE)

(Often Known as the "Oslo Effect")

Urban Transport Corridor Pollution

AIR QUALITY EXPERT GROUP

Non-Exhaust Emissions (NEE) from Road Traffic



Prepared for:

Department for Environment, Food and Rural Affairs;

Scottish Government; Welsh Government;

Department of the Environment in Northern Ireland

July 2019

Urban Transport Corridor Pollution

Non-Exhaust Emissions (NEE)

Each time a tyre rotates, it loses a layer of rubber about a billionth of a metre thick.

This works out to about four million million, million carbon atoms lost with each rotation.



A busy road with 25,000 vehicles travelling on it each day will generate around nine kilograms of tyre dust alone per kilometre.

Urban Transport Corridor Pollution

Non-Exhaust Emissions (NEE)

Health Costs



153,000 respiratory deaths,
mainly young & old *British Thoracic Report*

*Figures show between 25% - 40% of
deaths due to "Tail Pipe emissions"
(38,250 – 61,100 deaths) UK Government*

*Trams & TramTrain will help
prevent
Death on the Pavement
"Oslo Effect"*

To burn carbon and road grind is to pollute. Is this where it will all end?

Urban Transport Corridor Pollution

Non-Exhaust Emissions (NEE)

A PCV produces 21.2mg of PM10 per km from tyres and 51.0 mg of PM from **Brakes**, total 72.2mg (approx.)

72.2mg x 10000 PCV produces 7.22 tonnes per km (approx.)

These figures do not include road surface wear and are estimated at between + 30% especially where there are pot holes (grinding effect)

All this material contributes to the air suspension swirl

There are no minimum safe amounts

Urban Transport Corridor Pollution

Non-Exhaust Emissions (NEE)

Vehicle tyres, brakes, air suspensions and road surface wear are now bigger contributor to particulate matter (PM's) in the air than vehicle exhaust systems

NEE PM10 have increased from 29% in 2000 to 73% in 2016, (2.75% per annum)

NEE PM2.5 have increased from 26% in 2000 to 60% in 2016 (2.125% per annum)

NEE PMs Road Dust Suspension and downwind plume not included

Affects roadside buildings inside up to 25 miles

There are no minimum safe amounts

Data from the UK national Atmospheric Emissions Inventory (NAEI)

Urban Transport Corridor Pollution

Non-Exhaust Emissions (NEE)

An urban car produces 8.7 mg of PM10 per km from tyres and 11.7 mg of PM from **Brakes**, total 20.4mg per km (approx.)

20.4mg x 10000 cars produces 2.04 tonnes per km (approx.)

An *LGV produces 47.1 mg of PM10 per km from **Tyres** and 51.0 mg of PM from **Brakes** total 98.1mg (approx.). * PCVs create more, see slide 9

98.1mg x 10000 LGV produces 9.10 tonnes per km (approx.)

All this PM material contributes to the air suspension swirl

There are no minimum safe amounts

Why Trams?

mg PM ₁₀ / km		Tyre	Brake
Cars	Urban	8.7	11.7
	Rural	6.8	5.5
	Motorway	5.8	1.4
LGVs	Urban	13.8	18.2
	Rural	10.7	8.6
	Motorway	9.2	2.1
Rigid HGVs	Urban	20.7	51.0
	Rural	17.4	27.1
	Motorway	14.0	8.4
Artic HGVs	Urban	47.1	51.0
	Rural	38.2	27.1
	Motorway	31.5	8.4
Buses	Urban	21.2	53.6
	Rural	17.4	27.1
	Motorway	14.0	8.4
Motorcycles	Urban	3.7	5.8
	Rural	2.9	2.8
	Motorway	2.5	0.7

+

mg PM ₁₀ / km	Road abrasion
Cars	7.5
LGVs	7.5
HGVs	38.0
Buses	38.0
Motorcycles	3.0

+

Vehicle Aggregate types	Total urban PM10/Kms
Cars (urban)	27.9
Trucks	127.1
Buses	112.8
M/cycle	12.5

=



There are no minimum safe amounts

“Let Chard Breathe and Prosper”

Why Trams ?

Environmental Air Quality improvements.

In the period just before Covid – 19, Manchester Metrolink carried 67.5 million pax on 120 vehicles with a modal switch of 28% removing approximately 89,780 journeys

A growing and more productive city and inter urban economy.

Economic development and regeneration.

Modal switch & traffic reduction, current bus lines are failing significantly

Integrated transport across South Somerset and District.

Better value for the “Public Purse”

Tram use increased by 23%, carrying 212 Million,

Modal switch from roads @ 28%, 59.36 million less journeys

Why Trams ?

The Tram Network will :-

Improve non car access and connectivity to the two main North/South, East/West Transport poverty corridors

Provide a greater service frequency i.e., 4-8 trams per hour,

Additional passengers on the "heavy rail corridors" thus providing significant savings

Provide an alternative low-cost flexible "Rail" corridor initiative across South Somerset & District and a low cost affordable & sustainable rail link.

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"Let Chard Breathe and Prosper"

Why Trams ?

Trams encourage linear growth rather than railway station only growth

Bringing more measurable benefits to rail passengers;

Achieving wider economic and social objectives of regeneration, employment, inclusion, and accessibility in the communities served by tram rails;

Ensuring that all steel-on-steel rail contributes to a sustainable development across the common transport corridors

Be fully accessible to all residents and visitors including those with reduced mobility to all Tram and shared Bus stops, Public Transport Pathways (PTP)

Be mindful that we have an ageing population, and the network will be fully accessible, easy to understand and use

Successfully supply the last/first mile door to door connectivity to any planned Rail upgrades

Why Trams ?

The Tram Network will provide access to :-

Employment including industrial and logistics sites

New housing developments including denser housing with minimum parking spaces.

Provision of cleaner air to schools and hospitals

Sports & leisure including several stadia

Heritage and tourism.

A " Rochdale Pattern" of transit behaviour, "Hop on, Hop Off" supporting the 15-minute neighbourhood concept and increase town centre retail footfall.

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"Let Chard Breathe and Prosper"

T1 & 2 Urban Transport Corridor Solution

Benefit of Trams



Tram & TramTrain ticks all the boxes

No tail pipe emissions
Reduces the immediate pollution

Reduces death on the pavement, No
"Oslo Effect"

Year on year savings to health costs

Release funding for other health
projects etc.,

Increases the ambience of Chard
town streets

Improves liveability of the immediate
& surrounding area

Attracts retail plus footfalls

Tram Urban Transport Corridor Solution

Costing example Warrington

For the current price of the Bypass Link Road at (2018) estimate of £212 Million, this could have bought approximately, (excluding the indirect health and social costs)

***21.2km of tram in South Somerset**

***(From £10 Million per Track Kilometre Inc. depot etc., UKTram)**

Extracts from Warrington's

fourth Local Transport Plan (LTP4) adopted in December 2019.

The total cost of the ZEBRA Project over 17 years is £50,650,000 from WBC

Expected ZEBRA Grant £21,442,500 from Government

Economic Case:

working life of Zebra Buses is 10-12 years so a new fleet will be required every 10-12 years

New zero emission fleet excludes NEE (Particulates)

Approximately 145 people will die annually in South Somerset are expected to die prematurely from poor air quality.

Non-Exhaust Emissions (NEE)

Because of the high dust detritus with animal transport, many first generation tramways had a nocturnal "Water Tram". This washed away the suspension material created into the sewers
Part of a Public Health Program



"Let Chard Breathe and Prosper"

There are no minimum safe amounts!

Tram Urban Transport Corridor Solution

Next Step

A Pre-Feasibility study £10k-£15K

The above can be used as a specification document

Quotes from Tram Vehicle Manufactures, Track Suppliers

Who will Champion project?

Our Outline tram proposals sometimes meet with this response!



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Sadly, Some Politicians, Leaders of the Authorities XXX, Cllrs XXX etc., are too busy to see the tram advantages just like Hastings 1066!

(Often, they are fighting transport pollution with a NEE based solution by promoting a TramBus type which will kill many Citizens, young and old and is recorded for posterity on this site, instead of being Statesmen.

22/09/23

22



***Will Tramcar use in City and Town
Urban Transport in the near future make this a Sunrise
or a Sunset for Tramways and Urban living?***

***Doing Nothing is not an Option !
Getting it wrong is unforgiveable.***

– its your world !

Apollo June 1996

Thank You



*Any
Questions ?*