Strawberry Line

Technical Briefing Note

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Sedgemoor
Creating Opportunity

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Table of Contents

Executive Summary

Report Background

This technical briefing note was commissioned by Sedgemoor District Council and is equivalent to RIBA Stage 0 "Shaping the Brief". The aim of the briefing note was to refresh understanding of the priorities of the Strawberry Line, and re-assess its potential in light of new guidance *"Cycling Infrastructure Design LTN 1/20"* issued by the Department for Transport (2020), and recent transport strategies "*Gear Change: A bold vision for walking and cycling"* (DfT, 2020) and *"Decarbonising Transport: a better, greener Britain"* (DfT, 2021). The briefing note was developed through desktop assessment and a "Strawberry Line Inspiration Workshop" and feedback meeting with 15 local stakeholders.

The Strawberry Line as a World Class Flagship for Rural Walking and Cycling

The main finding of this report is that the Strawberry Line extension from Cheddar to Wells has potential to become a world class walking and cycling flagship. There is scope to respond to multi-layered user demand improving connectivity for local commuter, school, shopping and recreational journeys between Cheddar and Wells. Equally, a high quality route would add value for tourism as a destination experience in itself whilst connecting visitor sites of international interest such as Cheddar Gorge and Wells Cathedral to the existing section and train station in Yatton – a key public transport connection. Upgrading the quality and maintenance of the existing section is key to unlocking the full potential of the Strawberry Line extension as a walking, cycling and economic regeneration corridor.

In light of economic, transport and climate priorities, the Strawberry Line extension should aim to achieve modal shift of up to 5000 car journeys from the A371, which currently carries 10,302 vehicles per day. The distance range between Cheddar to Wells is 8 miles (12 km), within core distance range for cycling for transport. This range can be made more accessible to everyone by designing for ecycling and integrating attractive public transport choices that support walking and cycling. A gold standard design principle should be adopted to facilitate everyday walking and cycling for everyone and futureproofs for ecycles.

Mobility Hubs & "Active" Interfaces with Public Transport

National data and engagement with the stakeholder group revealed demand for a higher service level for public transport, supporting the concept of more dynamic "active travel" interfaces with public transport. Mobility hubs are a concept that acknowledge that in a rural setting many people will be depended on a car for part of their journey. A mobility hub could be a place to park a car, cycle or scooter, and pick up a rental cycle, ecycle or escooter to access the Strawberry Line, or to connect to public transport services. The mobility hubs could operate on a zero-carbon financing model with economic activities such as services, start-up hubs, local produce stalls and other micro-enterprise opportunities.

"Active" interfaces with public transport includes the introduction of active flexi carriages on buses and trains which supports being able to take bikes, wheelchairs, pushchairs, shopping, luggage and all the everyday items needed to be able to leave the car at home. "Bikes on buses" is an approach widely used in Alpine regions to vitalise green tourism. There is an opportunity to understand better public transport service level as improved frequency and evening services, but also improved choices and options for integrating walking and cycling as part of everyday and tourism journeys. The big picture includes extending the Strawberry Line to Frome so that with Yatton there is a train station at each end.

Wider Project Impacts

In May 2019, UK government declared a climate and biodiversity emergency, and currently has committed to law to the world's most ambitious targets for carbon reduction[1]. As **passenger cars are the single largest contributor to the UK's carbon footprint**[2], investment in rural transport networks which deliver walking and cycling as the first choice for local and tourism journeys is key to delivering climate targets. **An integrated understanding of this is important in a rural economy like Somerset with an ageing population and low health resilience across generations.** Delivering world class walking and cycling has potential to revitalise local economy, improve connectivity for residents and visitors alike, and contribute to a healthier, greener and more attractive Somerset to live in, work and visit.

Local Policy Context

Improvements to and extension of the Strawberry Line, as well as improvements to and extension to pedestrian links across Axbridge, Cheddar and Draycott (Yeo Valley) are identified as specific schemes to be prioritised in Policy C5 Transport in the Sedgemoor Local Plan 2011-2032 Adopted Version, p.74[3].

Key Recommendations for Progression

1. Extend the Strawberry Line from Cheddar to Wells:
    a. Develop the Strawberry Line as an active economic corridor, a destination in itself as well as a rural transport service.
    b. Adopt gold standard design principle for high capacity walking and cycling which future-proof for everday uptake of ecycling and inclusive cycles.
    c. Explore two alignment options on the historic trackbed (Option A) or alternately using a cycle priority approach on the droves and other rural lanes (Option B). Seek opportunities to widen to achieve the gold standard.
    d. Develop a phased delivery plan, which identifies high impact "quick wins" which contribute to overall connectivity and quality.

2. Develop "active" public transport interfaces which enable walking and cycling:
    a. Explore the concept of mobility hubs along route including a main hub in Cheddar, with alignment options on the Strawberry Line (Option C) or on the A371 (Option D).
    b. Identify walking and cycling improvements (e.g. crossings) to the A371 as well as access routes to Strawberry Line.

3. Undertake improvement works on existing Strawberry Line from Cheddar to Yatton:
    a. Upgrade road danger hotspots including the Shute Shelve A38 crossing, and A371 crossings to and from Axbridge.
    b. Improve walking and cycling connectivity within Cheddar and Axbridge.
    c. Review critical pinchpoints.

4. Secure dedicated maintenance programme and budget for existing Strawberry Line, and the extension to Wells, and other future extensions westwards to Clevedon and eastwards to the train station in Frome.

[1] https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035
[2] Department for Transport (2020) Decarbonising Transport: Setting the Challenge.
[3] https://www.sedgemoor.gov.uk/LocalPlan

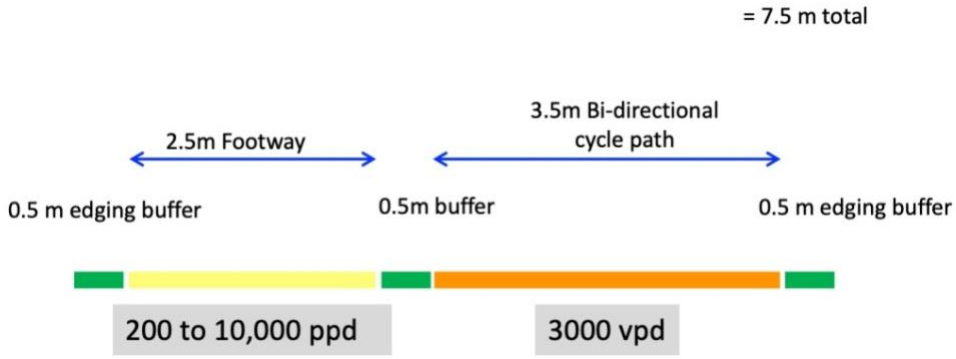

Figure 1 ***Gold standard design principle for high capacity walking and cycling.***

Figure 2 ***Inspiration for a regionally sensitive "mobility hub" which could be upgraded with secure parking, ecycle/escooter rentals, and service or micro-enterprise opportunities.*** *© Hello Sandwich.*

1 Background

1.1 The Strawberry Line Context

The existing Strawberry Line is a highly popular family friendly route which is mostly traffic free on a relatively flat gradient. The route is part of the National Cycling Network 26, and currently runs from Yatton train station to Cheddar with a length of approximately 11 miles (17 kilometres) as a multi-user path. The route runs along the historic track bed of the Cheddar Valley Line, which became locally known as the Strawberry Line due to the local strawberry produce carried. The historic trainline ran from Witham to Wells and Wells to Yatton, the last of which has been partially converted to the Strawberry Line. Train services were discontinued in 1963.

The Strawberry Line has multiple stakeholders in Cheddar, Axbridge, Winscombe, Draycott, Westbury and beyond who have spent decades in dedication to maintaining and improving the existing Strawberry Line, with a vision to extending the Strawberry Line eastwards from Cheddar to Wells and beyond, and westwards from Yatton to Clevedon. The Strawberry Line forms part of the "Somerset Circle Project". "The Mendip Books Book 4: Strawberry Line from Cheddar to Draycott" outlines routing and design concepts.

Figure 3 ***Vision for the Somerset Circle showing the Strawberry Line, with trains stations added.***

The Strawberry Line extension would run in parallel to the A371, and have potential to upgrade transport service level to more dynamically connect sites of international tourism interest with local commuter, shopping, school journeys and recreational opportunities. Tourism highlights include Cheddar Gorge, Wells Cathedral, Glastonbury, and the Frome Independent Market. In addition to better connectivity between the market towns, access to train stations is important for commuter and tourism journeys to/from Bristol and Bath.

- → **Tourism**
- → **Local recreational and social journeys**
- → **Commuter journeys**
- → **School journeys**

1.2 Stakeholder Engagement

A "Strawberry Line Inspiration Workshop" was held with Strawberry Line stakeholders in July 2021 to explore the potential for the Strawberry Line and some of its current limitations. A total of 15 people attended, with representation from Cheddar, Axbridge, and Mendip.

A number of key traffic-related issues were identified which are currently negatively impacting the Strawberry Line:

- Dangerous crossings and lack of crossings
- Pinchpoints, barriers and narrow sections.
- Lack of onwards connectivity to Draycott and Wells and beyond.
- Lack of maintenance and investment funding.

In the Inspiration Workshop stakeholders outlined Blue Sky Visions:

a. Connect Cheddar to Wells, with first stage connection to Draycott, and potential for wider connectivity to Wells, and beyond.
b. Integrate mobility hubs such as "Strawberry Hubs" which facilitate mobility diversity including older people, bike service, and park&move.
c. A regular maintenance and investment programme.
d. Improve existing route including dangerous crossings (e.g. A371 to and from Axbridge) and pinch points (e.g. Bristol Water Depot, Travis Perkins) to maintain inclusive design standards through-out.
e. Layers of use: local journeys (including school runs, social journeys to Wells), local recreation, as well as day and holiday visitor destination.
f. Include community in developing actions, with connect to transport needs of wider communities.
g. Make Somerset the county for welcoming walking & cycling.
h. Make the Strawberry Line a destination as much as a route.

The stakeholder group provided more detail and granularity about the route use. For example, school travel patterns with children travelling to school along the A371 route westwards from Draycott to/from Cheddar, and eastwards from Westbury to/from Wells. There was also desire for social journeys, for example being able to leave the car in Cheddar, and make a social journey to Wells. Ownership of the droves is likely linked to maintenance, and there may be historic rights of way. Road improvements to Cheddar Gorge align strongly with the Strawberry Line, and should be coordinated particularly in regards to a potential mobility hub.

To achieve this full connectivity will require collaboration across districts:

- North Somerset District (Yatton to Winscombe Hill)
- Sedgemoor District (Winscombe Hill to just before Draycott)
- Mendip District (Draycott to Wells and beyond to Shepton Mallet and Frome)
- North Somerset District (Yatton to Clevedon)

Overall, the stakeholder engagement supported an overall ambition to:

→ Extend the Strawberry Line from Cheddar to Wells
→ Road safety and quality improvements to existing Strawberry Line
→ Regular maintenance of Strawberry Line and extensions
→ Upgrade public transport provision with mobility hubs and "active" carriages

There was also a strong desire for immediate improvements.

1.3 Transport Potential & Wider Connectivity

Somerset is highly car dependent with 73% of journeys made by car[4]. Walking and cycling levels are similar to the national average at 21% and 1% respectively, with public transport use at 4% notably lower than the national average of 11%. **Most car journeys in Somerset are short with 24% of car journeys less than two miles (walking distance), and 57% of car journeys less than 5 miles (cycling distance)[5] showing high potential for modal shift.** This trend is robust in a rural/urban sensitivity analysis which shows that for rural residents in Somerset 18% of car journeys are < 2miles and 55% of car journeys are < 5miles, while for urban residents 34% of car journeys are < 2miles and 66 % of car journeys are < 5miles[6]. Overall, 91% of car journeys in Somerset fall within core bus travel range of 25 miles. This indicates that **the interface with public transport is an important complimentary measure to walking and cycling, particularly in a rural setting like Somerset.**

Figure 4 ***Tthe modal shift potential for walking and cycling in Somerset is high.***

The communities adjacent to the Strawberry Line including Axbridge, Cheddar, Draycott, Westbury-sub-Mendip and Easton are poorly served by public transport. The 126 bus service runs to Cheddar from Weston-super-Mare which is the closest mainline train station - journey time is 55 mins on an hourly service. This same bus continues on to/from Wells with a journey time approx. 30 mins, and the last service runs at 6pm westbound from Wells and at about 8pm eastbound from Axbridge. There is no operational train station at Wells. As such the overall public transport connectivity is poor for both residents and visitors, and unsatisfactory given the international importance of Cheddar Gorge, Wells Cathedral and Glastonbury which lie in remarkable proximity to one another.

[4] Department for Transport (2021) National Travel Survey, Table NTS0308b_EDIT for Somerset, 2019 data.
[5] Ibid.
[6] Ibid, Rural/Urban split.

The distance potential between the market towns lies within core cycling design range, for example from Cheddar to Wells is 8 miles (12 km). This range is supported by best practice for rural networks in the Netherlands which are designed specifically from 10-20km with an aim to replace car journeys for commuter and local trips[7]. A potential total from the train station in Yatton to the train station in Frome is 42 miles (67 km), which is an attractive distance for a great day of recreational cycling. The A371 which runs from Cheddar to Wells, in parallel to the Strawberry Line had an annual average daily flow of 10,302 vehicles in 2019[8]. To deliver modal shift for everyday journeys, the Strawberry Line design standard should accommodate this high potential mode shift capacity for walking and cycling, and underpin this with appealing and convenient public transport options.

Start point	Destination	Distance in miles (km)
Yatton (train station)	Cheddar	11 miles (17 km)
Yatton (train station)	Clevedon	4 miles (6 km)
Yatton (train station)	Frome (train station)	42 mile (67 km)
Cheddar	Wells	8 miles (12 km)
Cheddar	Frome	31 miles (50 km)
Wells	Shepton Mallet	5 miles (7.5 km)
Wells	Glastonbury	6 miles (10 km)
Shepton Mallet	Midsomer Norton / Radstock	11 miles (17 km)
Midsomer Norton / Radstock	Frome (train station)	7 miles (11 km)

Table 5 ***Cyclable distance potential between market towns. Data source: GoogleMaps***

1.4 Mobility hubs

What is a mobility hub? A jazzed up name for a bus stop?! Or the next generation train station?! The mobility hub concept recognises that in a rural setting many people will need to use a car to access either the Strawberry Line and/or a public transport services. The mobility hub could "activate" this interface – providing safe, secure parking for cars, cycles and scooters. It could offer connectivity to an improved public transport service, and also connectivity to the Strawberry Line with options for ecycling or escooter rental. This is fundamental to unlocking appealing choices such as being able to cycling in one way, and taking public transport back - e.g. with heavy shopping, or with a change in the weather. The mobility hubs could operate on a zero-carbon finance model, and provide better rural access to services such as health, tourism, or council services, as well as micro-enterprise opportunities such as fruit 'n veg stall or start-up hubs.

→ Ecycle / escooter hire
→ Safe and secure parking for cycles, scooters and cars
→ Public transport connections with Real Time Information
→ Services and/or micro-enterprise opportunities
→ Attractive for tourists and local users alike

[7] https://www.snelfietsroutesgelderland.nl/arnhemnijmegencycling/Vision-and-policy.html
[8] Department for Transport (2020) Manual count points, Site number: 18417. Available at: https://roadtraffic.dft.gov.uk/manualcountpoints/18417

Figure 6 ***Regionally sensitive "mobility hubs", which could be enhanced with ecycling/escooter parking, and active public transport, and micro-enterprise opportunities.*** *© Hello Sandwich.*

Figures 7 ***Landscape sensitive car parking using green facading, or vertical stacking system to limit the required footprint.*** *Left © Jakob Green Facades. Right © Parkmatic*

1.5 Active, Flexi Carriages on Buses and Trains

The engagement workshop held with local stakeholders confirmed the need for a higher public transport service level, which is strongly supported by national data. A Somerset-specific analysis of the National Travel Survey data shows that current public transport uptake in Somerset of 4% is well below the national average of 11%. This is also well below the potential for public transport in Somerset based on distance potential which is 30% modal share[9].

Inspiration from rural settings which place economic value on enabling an active walking and cycling interfaces with public transport as a **green** include Bike-Buses operated by Border Buse[10], the UK's first active travel carriages on the Highland Explorer[11] in Scotland, wide-spread use of active flexi-carriages on trains in Switzerland[12] and Alpine southern Germany[13], as well as bus services in the Alps[14]. To enable someone to choose to leave their car at home, active flexi carriages are designed to accommodate wheelchairs, pushchairs, cycles, adapted cycles, luggage, dogs and all the other sundry needed to leave the car at home.

Figures 8 ***Bikes on buses in the Borders Scotland, and bike trailers on buses in the Austrian Alps.*** *Left © Alexander Dennis. Right © REGIO Bregenzerwald/ VMOBILE.*

Figures 9 ***Active flexi train carriages are good for wheelchairs, pushchairs, cycles and all the things you need for an everyday adventure*** *Left © Chris Roberts SBB. Right © SBB.*

[9] Frome LCWIP (2021) Modal share model based on distance potential. Internal working draft at present.
[10] https://ecf.com/news-and-events/news/buses-combining-cycling-and-public-transport-scotland
[11] https://www.scotrail.co.uk/scotrail-highland-explorer
[12] https://www.sbb.ch/en/timetable/travel-advice/bicycles/take-your-bike-with-you.html
[13] https://www.bwegt.de/ihr-nahverkehr/service/fahrrad-services/fahrradmitnahme-in-zuegen
[14] https://www.bregenzerwald.at/radbus-und-bahntransport/

1.6 Designing for Ecycling and Inclusive Cycling as Standard

A suite of recent studies conducted by the University of Bristol has found that **ecycling has clinical health benefits for both vulnerable people with health conditions as well as for the general population**[15]. A pilot study in Bristol conducted with participants with type 2 diabetes reported mean journey of 7.5 km (SD 4.2km) or 26.6 minutes (SD = 12.6 minute)[16]. This distance range is in line with the national average in England with 82% of cycling trips under 8 km (5 miles)[17], indicating that ecycling enables more vulnerable users to cycle transport distances. This finding was reflected in an international scoping review of ecycling for transport where most studies reported mean daily distances between 3 km and 11.5 km[18]. This same scoping study identified uptake across different age groups. This is reflected in detailed transport statistics from the Netherlands that show that while ecycles are most popular with older people, there is increasing uptake in ages 12 to 49 and ages 50 to 64[19].

Given that Somerset has an ageing population with 24% of the population aged 65 or older, ecycling could be a gamechanger. E-cycling can also enable more diverse cycle-types such family e-bikes to transport multiple children, e-trikes which add stability and space for shopping or a dog, or e-cargo bike micro-freight services such as the "Parcels not Pollution" programme launched by Hammersmith & Fulham with currently 1000 deliveries per day[20] . Designing for e-cycling impacts design standards as it requires in-lane speed differential, enabling someone faster to overtake someone slower. Ecycling also increases the importance of segregation between walking and cycling, as an ecyclist poses both perceived and absolute danger to pedestrians.

Figures 10 ***Ecycling can open up everyday cycling for a wider range of people, and support distance ranges relevant in a rural setting.*** *Right © WhatIf Architects*

→ Ecycling has clinical health benefits
→ Ecycling supports cycling for more vulnerable and older people
→ Ecycling supports distance ranges relevant to Somerset
→ Ecycling impacts design standards increasing the importance of segregation

[15] Bourne et al. (2018) Health benefits of electrically-assisted cycling: a systematic review.
[16] Cooper et al.(2018) Potential of electric bicycles to improve health of people with Type 2 diabetes: a feasibility study.
[17] Department for Transport (2021) National Travel Survey 2019, Table NTS0308b.
[18] Bourne et al. (2020) The impact of e-cycling on travel behaviour: A scoping review.
[19] Netherlands Institute for Transport Policy Analysis (KiM) (2018) Cycling Facts.
[20] https://www.lbhf.gov.uk/articles/news/2020/03/hf-s-eco-cargo-bike-delivery-service-hits-1000-parcels

2 Option Scoping

Based on a modal shift aspiration in line with both economic regeneration, transport, health and climate action ambitions, two main alignment options were identified: Option A - on the historic track bed, and Option B - alternately on a new alignment using a cycle priority approach. In addition to this, two further approaches for upgrading public transport interfaces were identified: Option C – on the Strawberry Line, and Option D - on the A371. Table 11 below provides an overview and trade-off of these four options.

Routing Option	Strengths	Weakness	Risks	Mitigation/ Opportunities
A - Existing Strawberry Line trackbed	Existing historic infrastructure e.g. bridges. Relative proximity to A371 (200 to 600m) for access to/from villages, and (future) public transport connections.	Building encroachments along track bed, pinch points and blockages.	Landowner agreements can delay project progress and/or limit width. Historic infrastructure may be costly to futureproof.	Where required, offset new alignment gaining desirable width.
B - New alignment using cycle priority on droves and other lanes	Existing droves in relatively close proximity to Strawberry trackbed. 600 – 900 m to A371. Highly scenic route through countryside.	The droves are historic, from 3.5 m to 6 m lane width, some raised, potential for widening may be limited. New infrastructure may be required, e.g. new bridge over Cheddar Yeo. No obvious route east of Westbury-sub-Mendip to Wells.	There are no PRoW on the droves, and they are privately owned, and used for animal/farm vehicles. The droves are reported to be regularly used by the public.	Widening the droves could be an opportunity to improve flood resilience.
C – Mobility hubs/PT on Strawberry Line	High connectivity with walking and cycling, exceptional tourism and transport value.	Microrail could run on cycle path, requires wider overall dimensions, lessens cycling experience.	Limitations of dimensions of historic bridges, albeit these pinchpoints can be managed with priority approaches.	Strawberry Hubs could offer “park & ride” and micro-commercial and/or service access opportunities.
D – Mobility hubs/PT on A371	High connectivity local communities, with high potential walking and cycling connectivity and excellent tourism and transport value.	Requires improved crossings and potentially traffic calming on A371. Micro-rail/PT would be vulnerable to A371 congestion.	Time delay to deliver road crossing improvements, although this is desirable in all options.	Strawberry Hubs could offer “park & ride” and micro-commercial and/or service access opportunities.

Table 11 ***Trade-Off Matrix of main design approaches to Strawberry Line extension.***

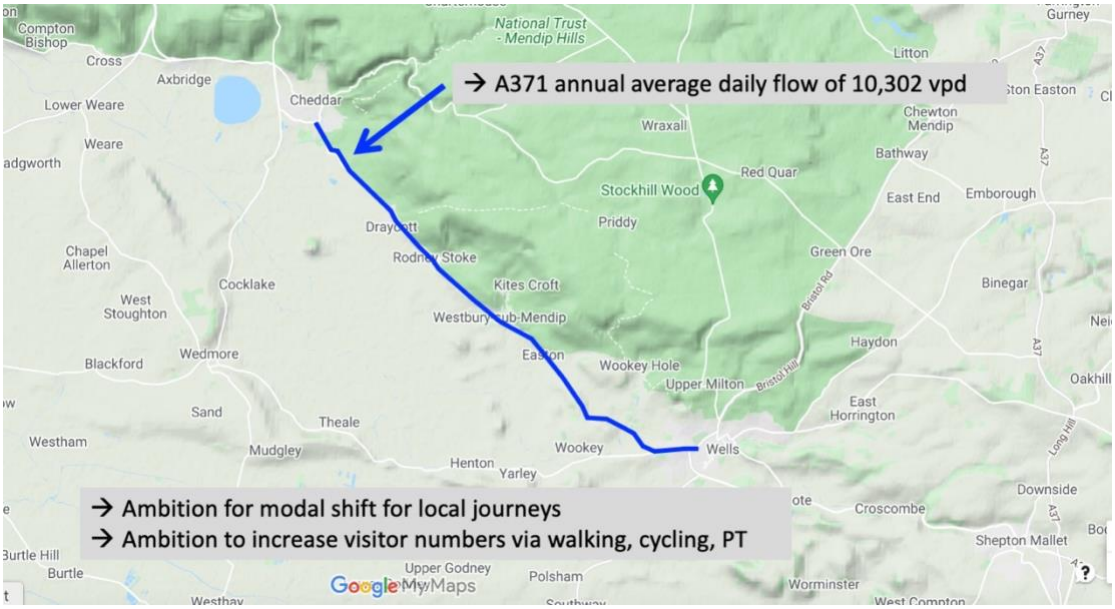

Table 12 ***Overarching aim to deliver modal shift for everyday and tourism car journeys.*** *Base map © googlemaps*

Designing for car modal shift for both everyday and tourism journeys, and embedding ecycling and inclusive cycling as standard has implications for the overall desirable width of the route. As previously described, segregation between walking and cycling is essential to future proof for the uptake of ecycling, as well as to provide an experience level in line with the wider tourism value of the Strawberry Line between Cheddar and Wells. The gold standard widths shown in Figure 13 below are supported by best practice from European case studies and design standards (see Section 3), as well as the new guidance "Cycling Infrastructure Design LTN 1/20" issued by the Department for Transport (2020). Pinchpoints will occur where it will not possible to deliver the gold standard width, but these can be resolved using priority and other creative approaches. Overall, this will result in a world class walking and cycling route.

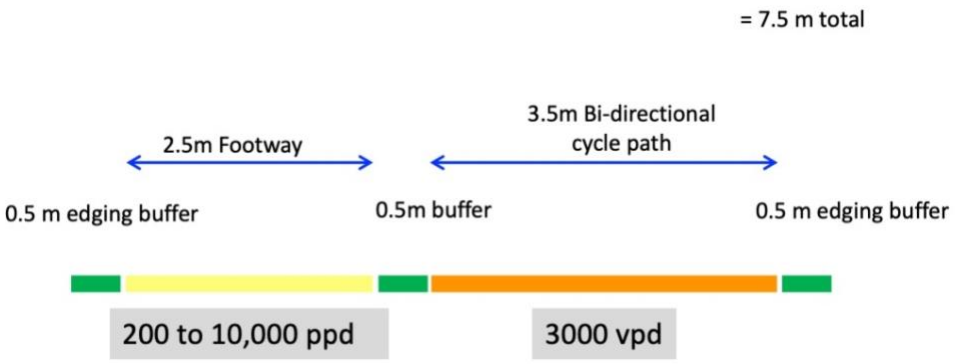

Figure 13 ***Gold standard design principle for high capacity walking and cycling.***

2.1 Option A – Extension on existing historic track bed

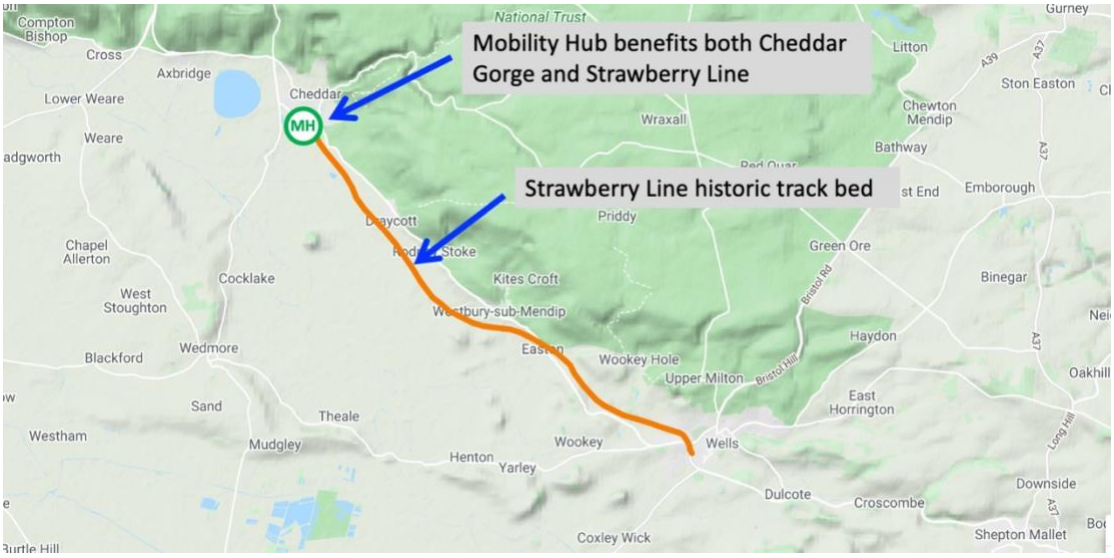

Table 14 **Option A – Strawberry Line extension on historic track bed. Note: Location of mobility hub is indicative only.** Base map © googlemaps

Description: The Strawberry Line would follow the historic track bed. Seeking a wider width alignment would be beneficial to enable the wider gold standard design principle, not just where there are built encroachments onto the track bed.

Gamechangers:

- A mobility hub / park & move in Cheddar would benefit both Cheddar Gorge and the Strawberry Line. This would serve tourists and residents alike, including residents of surrounding parishes and villages.
- Gold standard design principle for high capacity walking and cycling.

2.2 Option B – Cycle priority approach on existing droves and other lanes

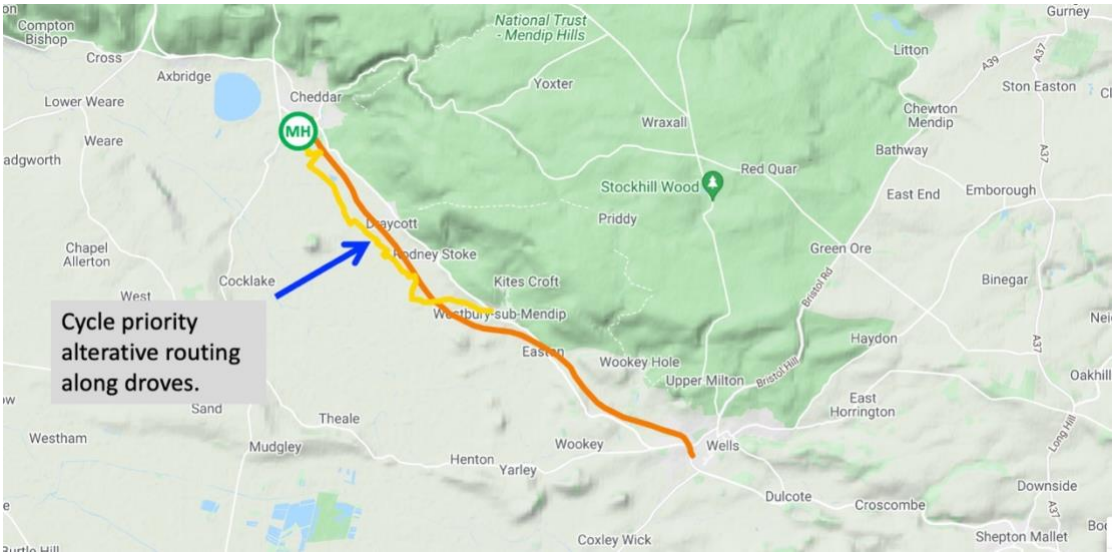

Table 15 **Option B – Strawberry Line extension using cycle priority on droves. Note: Location of mobility hub is indicative only.** Base map © googlemaps

Description: The Strawberry Line would follow the historic droves from Cheddar to Westbury-sub-Mendip, from there re-joining the historic track bed. Where there are built encroachments which can not be rectified, a new alignment could be sought which better enables a wider, gold standard width.

Gamechangers:

- A mobility hub / park & move in Cheddar would benefit both Cheddar Gorge and the Strawberry Line. This would benefit both tourists and residents, including residents of surrounding parishes and villages.
- Gold standard design principle for high capacity walking and cycling.

2.3 Option C – Mobility hubs/public transport on the Strawberry Line

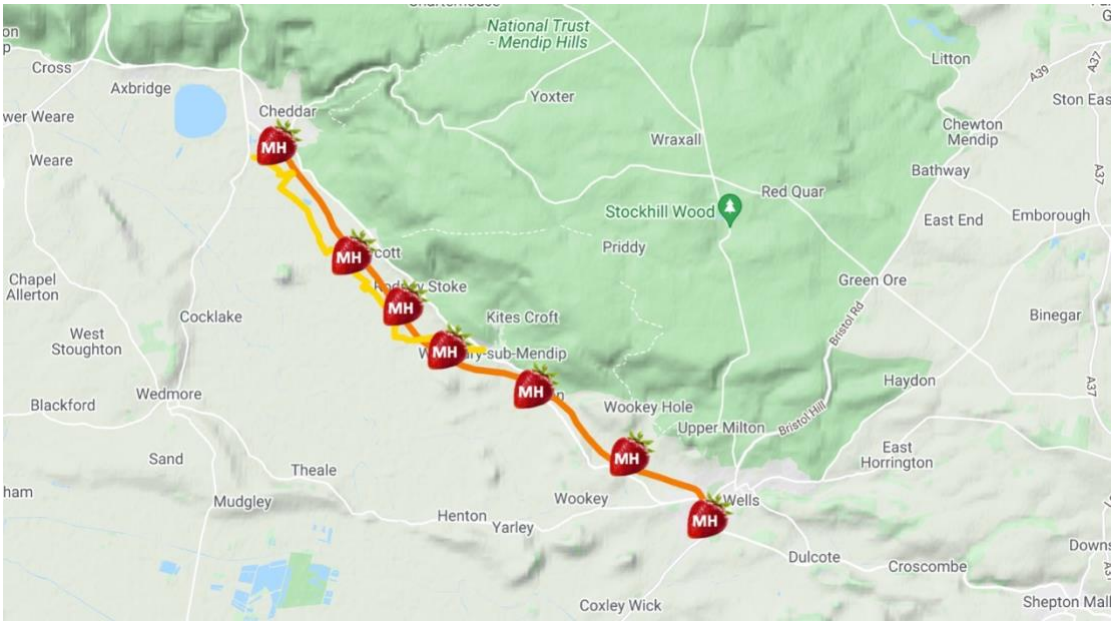

Table 16 **Option C – Mobility hubs / public transport located on the Strawberry Line. Note: location of mobility hubs indicative only.** Base map © googlemaps

Description: Mobility hubs would be located on the Strawberry Line itself, with a public transport service such as micro rail also running on the Strawberry Line.

Gamechangers:

- Mobility hubs along the length of the Strawberry Line. A main hub could be located in Cheddar in light of the Cheddar Gorge, with smaller hubs sited at key connection points to villages along the route.
- Gold standard design principle for high capacity walking and cycling.

2.4 Option D – Mobility hubs/public transport on the A371

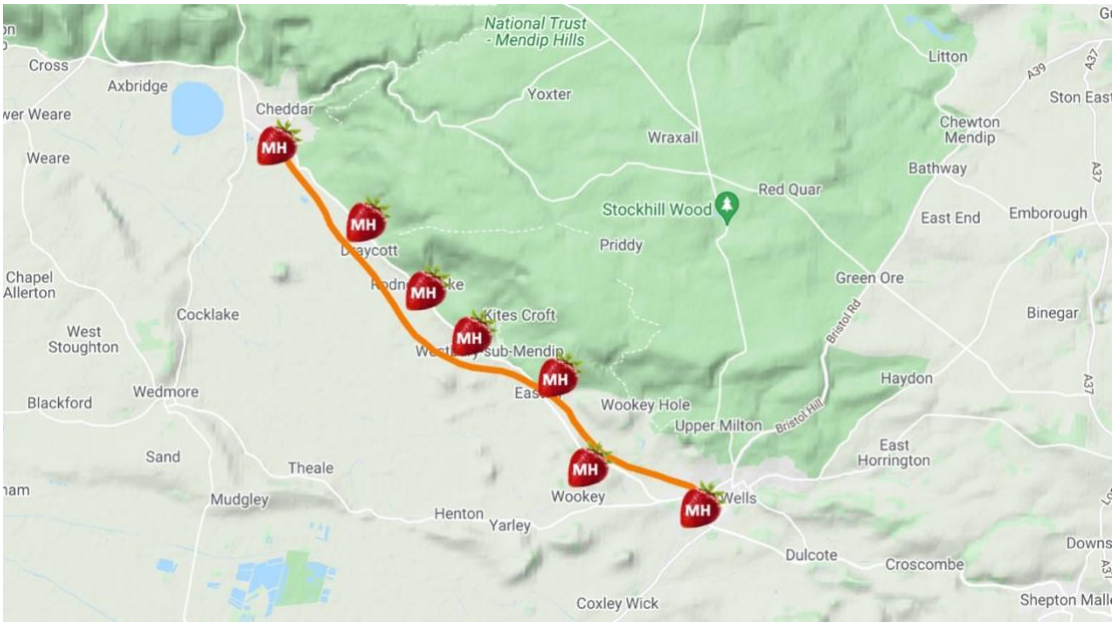

Table 17 **Option D – Mobility hubs / public transport located on the A371. Note: Location of mobility hubs indicative only.** Base map © googlemaps

Description: Mobility hubs would be located on the A371, with upgrade "active" interfaces with public transport such as bikes on buses, and active flexi carriages on buses.

Gamechangers:

- Mobility hubs along the A371 with connectors to the Strawberry Line. A main hub could be located in Cheddar in light of the Cheddar Gorge, with smaller hubs sited at villages along the route.
- Gold standard design principle for high capacity walking and cycling.
- Active flexi buses or bikes on buses.

2.5 Road Safety Hot Spots & Quick Wins

A number of high priority road safety hotspots on the existing route were identified in the stakeholder engagement and through desktop analysis. These include:

- Shute Shelve crossing A38
- A371 crossings at Axbridge west and east

The first of these, the Shute Shelve crossing falls within the A38 Major Road Network improvement works remit. Given the desired gold standard design and the family friendly character of the Strawberry Line, a semi-submerged tunnel would provide a preferable solution to the A38 crossing. There is clearly also broad scope for improvements to the pedestrian environment and cycling access to both Axbridge and Cheddar, as well as pinchpoints along the Strawberry Line. However, it is suggested that quick wins are identified as part of the next project phase to ensure that these contribute to an overall project connectivity and design intentions.

3 Best Practice Case References

To provide reference for what is possible and what the wider socio-economic benefits linked to walking and cycling transport approaches in rural settings, the following international case studies provide points of reference and inspiration:

3.1 RS1 – 101km Peri-Rural Walking and Cycling Route

The RS1 is a high capacity peri-rural network designed to replace 50,000 car journeys per day[21]. The route is a 101km east-west route, designed to connect train stations, workplaces, tourism, shopping, study and recreational destinations such as football stadiums across the county of Nordrhein-Westfalen. The RS1 route demonstrates a high capacity design standard with segregation between walking and cycling which future-proofs for the uptake of ecycling. The route design standards include the use of a drainage channel to segregate walking and cycling, and side drainage along the route. The walking lane surface treatment is nature-based using a compacted gravel aggregate which visually softens the wider dimensions reducing the visual impact.

Figure 18 ***The RS1, an example of high capacity walking and cycling in the Ruhr Valley, Germany*** *©Schulte*

3.2 Bodensee Cycle Path in the Five Country Corner

The Bodensee Cycle Path runs around the shores of Lake Constance with a total distance of 260km. The route was develop and co-financed through flood resilience measures, and in collaboration between the five countries Switzerland, Austrian, Baden, Wurttemberg and Bavaria. The Bodensee Cycle path attracts 220,000 cycle tourist each year, and aims to cater for families and older cyclists as well as weekend tourists from nearby cities like Stuttgart

[21] https://www.rvr.ruhr/themen/mobilitaet/radschnellwege-ruhr/

and Zurich. The regional train service runs “active-flexi carriages” which make it easy and fun to take cycles, luggage and friends along to get there, or to take interesting day trips as part of a Bodensee Cycle Path holiday[22].

Figure 19 ***The Bodensee Cycle Path connects small market towns and villages*** *© Bodensee Tourismus*

3.3 Dutch Fast Cycle Networks

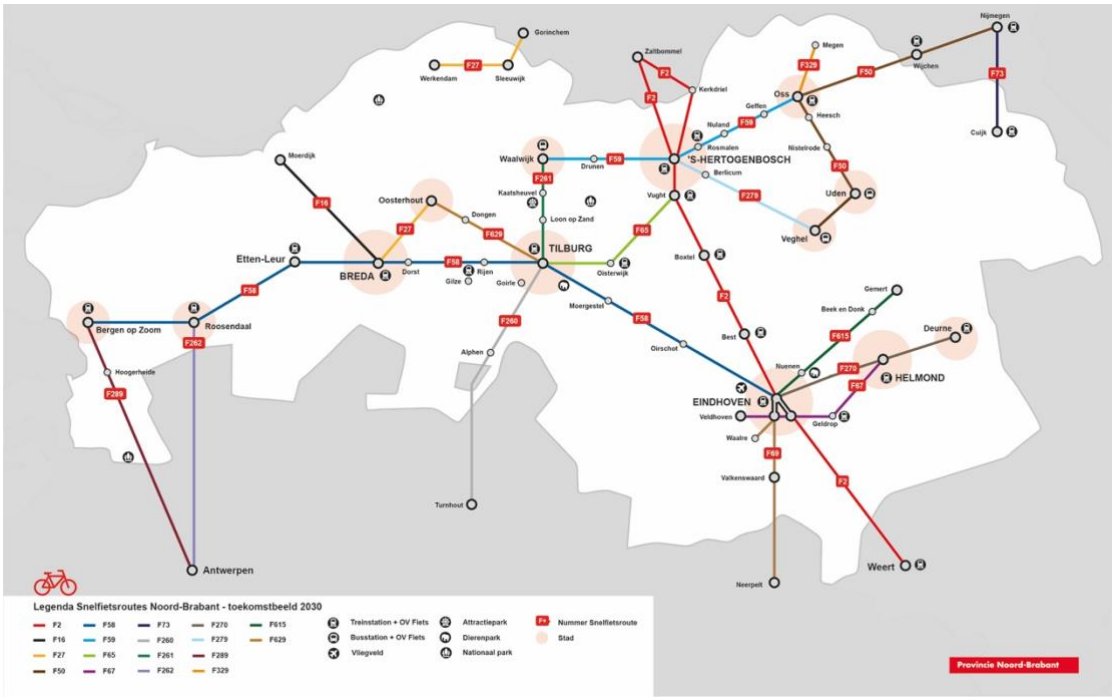

Figure 20 ***Fast Cycle Route Network for the County of Nord-Brabant showing connectivity with public transport nodes*** *© Noord-Brabant.*

The Dutch Fast Network is an approach to specifically design and upgrade cycle paths to deliver modal shift from car to cycling for every day journeys to deliver health and carbon

[22] https://www.bwegt.de/ihr-nahverkehr/service/fahrrad-services/fahrradmitnahme-in-zuegen

benefits[23]. Each county in the Netherlands is developing their own network, with emphasis on high quality design standards such as extra width, safe junctions, designing for ecycling and better lighting[24]. The routes seek a high level of connectivity with public transport interchanges such as train and bus stations. The Fast Cycle Network aims to cater for core distance ranges of 10 to 20km while adding mobility choices[25].

3.4 Bregenzerwald Rural Economic Regeneration

The Bregenzerwald is an alpine region in western Austria which has pioneered innovative ways of working with its main local resource of wood to drive economic regeneration. This has extended from leading in wood-to-energy technologies, and architectural and structural innovations in wood. In a creative leap, this was extended to a competition to design rural bus stops in wood, which have become visitor destinations in themselves and accessible with the attractive bikes on buses service offering a fun green tourism experience.

Figure 21 ***A regionally sensitive bus stop which has become a visitor destination*** *© A. Bereuter*

Figure 22 ***Bikes on buses in the Bregenzerwald*** *© REGIO Bregenzerwald*

[23] https://www.snelfietsroutesgelderland.nl/Netwerk-van-snelle-fietsroutes
[24] https://www.provincie-utrecht.nl/onderwerpen/mobiliteit/fiets/snelfietsroutes
[25] https://www.vlotveiligfietsen.nl/

4 Supporting Information

4.1 Historic Railway Alignment

The current gap in east-west train connectivity across Somerset is illustrated in the map below showing current mainline trainlines in 2021. This east-west connection was filled by the historic trainlines Witham to Wells and Wells to Yatton, the last of which has partially be converted to the Strawberry Line.

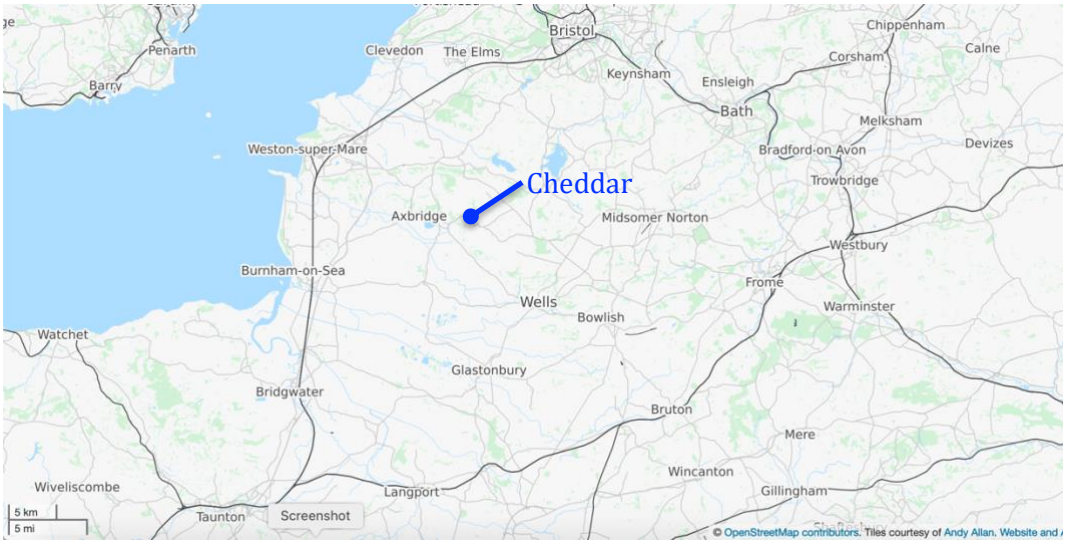

Figure 23 ***Map of current mainline trainlines showing lack of East -West connectivity.*** *©OpenStreetMaps*

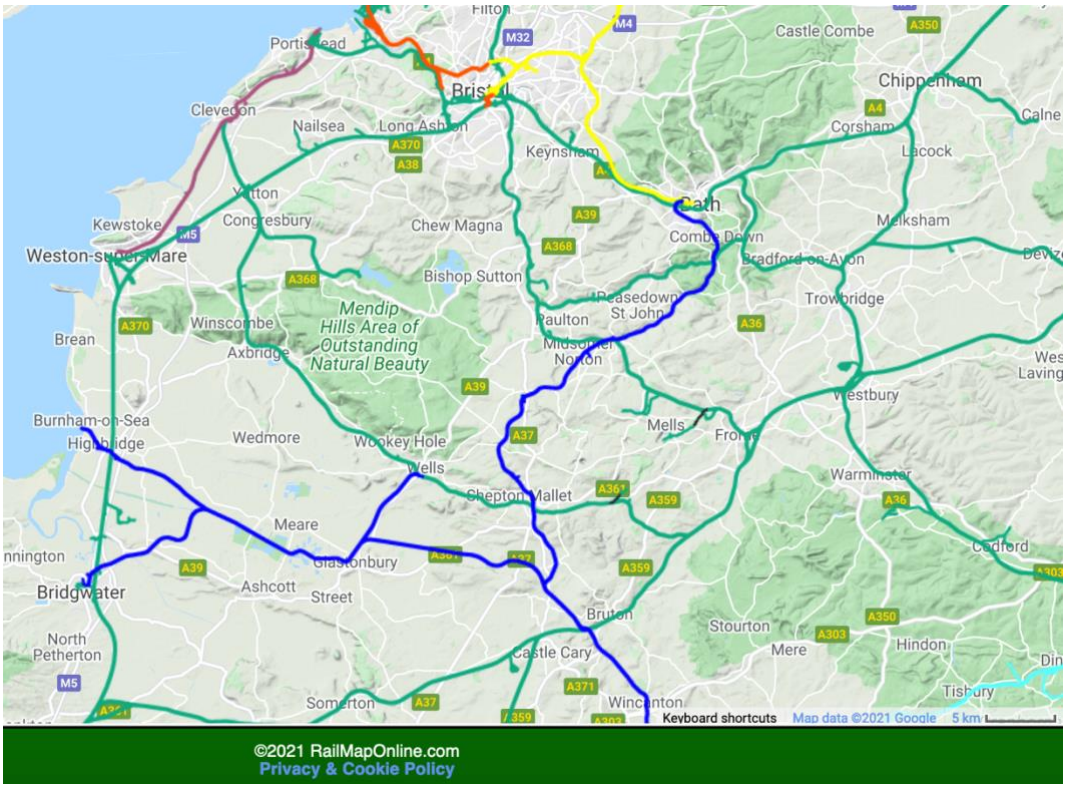

Figure 24 ***Map of historic railway lines across Somerset showing east -west connectivity which the Strawberry Line provided up to its discontinuation in 1963.*** *©RailMapOnline.com*

4.2 Flood Risk

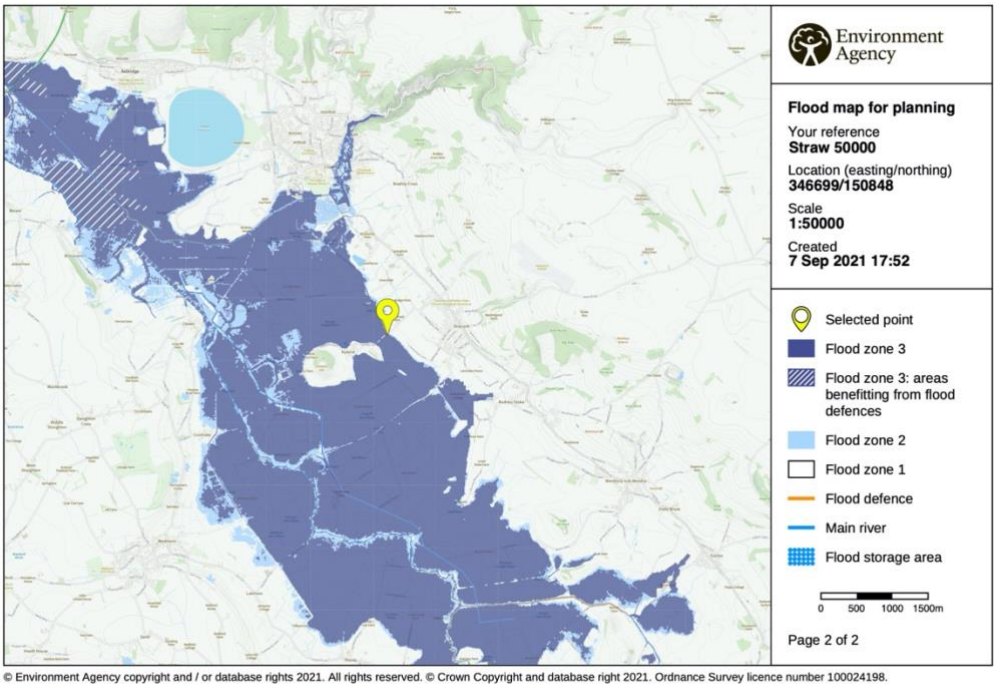

Figure 25 ***Flood risk map showing how Cheddar Moor Drove matches the line of the flood zone.*** *©Environment Agency*

The map above shows that the Strawberry Line runs in close proximity to areas of high flood risk. The line of Flood Zone 3 shown runs roughly along the alignment of the droves, which may possibly have had a historic flood barrier role. The map indicates points where this flood barrier may be breached. As such, options to extend the Strawberry Line using the droves could create an opportunity to upgrade flood resilience.

4.3 Physical Activity as an Intergenerational Priority

Somerset's population is ageing, with 24% of the population aged 65 or older[26]. Only 38% of older people meet the Chief Medical Officers' recommendation for being active[27], with about half of older people (48%) "inactive"[28], defined moving less than 30 minutes per week – that's less than 5 minutes per day. This lack of movement in daily life is recognised as being as dangerous as smoking. This vulnerability is mirrored in young people, with **half of children in Somerset (51%) not meeting national recommendations for being active**[29]. Walking and cycling for local transports journeys is well established as the best way to integrate physical activity into daily life. Active, everyday living is an urgent priority for the health and wellbeing of older people in Somerset now, and for younger people who are the older people of the future.

[26] Somerset Intelligence (2021) Population Estimates Age Breakdowns, Data for Mendip 2019.
[27] Public Health England (2021) Public Health Outcomes Framework. C10 percentage of physically active children and young people data for 2019/2020. 49.4% meeting guidelines.
[28] Public Health England (2021) Physical activity levels among adults in England 2015
[29] Public Health England (2021) Public Health Outcomes Framework. C10 percentage of physically active children and young people data for 2019/2020. 49.4% meeting guidelines.