# Barnstaple with Bideford and Northam LCWIP Steering group update

## Cycling and walking routes

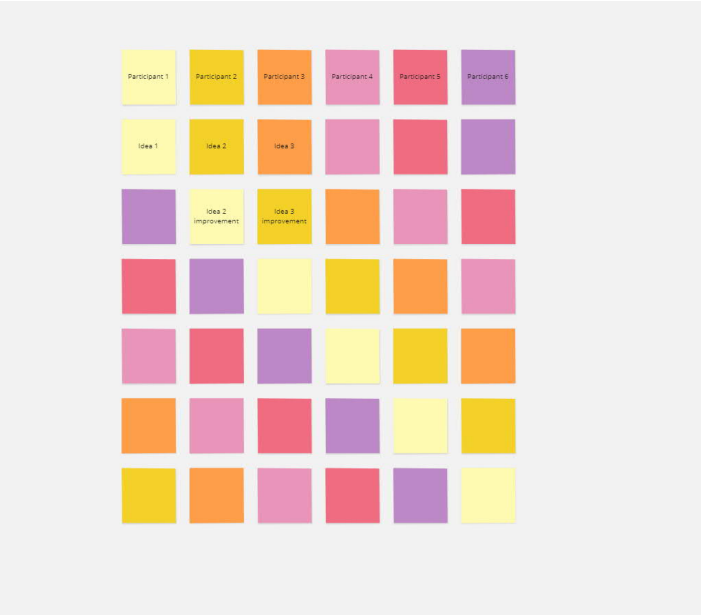
December 17th 2021

# WSP AND OUR ROLE IN THE LCWIP

- WSP is a consultancy company – covering planning, environment, engineering in the UK and abroad
- Today's WSP attendees are Josh Mullen and Matt Jopp, both working in the transport planning discipline
- WSP was appointed as Devon County Council's partner to deliver Transportation and Engineering Professional services in 2020
- Requested to undertake the Local Cycling & Walking Infrastructure Plan (LCWIP) for Barnstaple with Bideford and Northam in Mid 2021

# STRUCTURE OF TODAYS PRESENTATION

- The structure of the LCWIP
- Data gathered for guiding decisions
- Progress on the network planning for cycling
- Approach to walking routes
- Next steps
- Input/interactivity via Miro (interactive whiteboard)



# LCWIP PROCESS

**Stage 1: Determine the scope**

**Stage 2: Gathering information**

**Stage 3: Network planning for cycling**

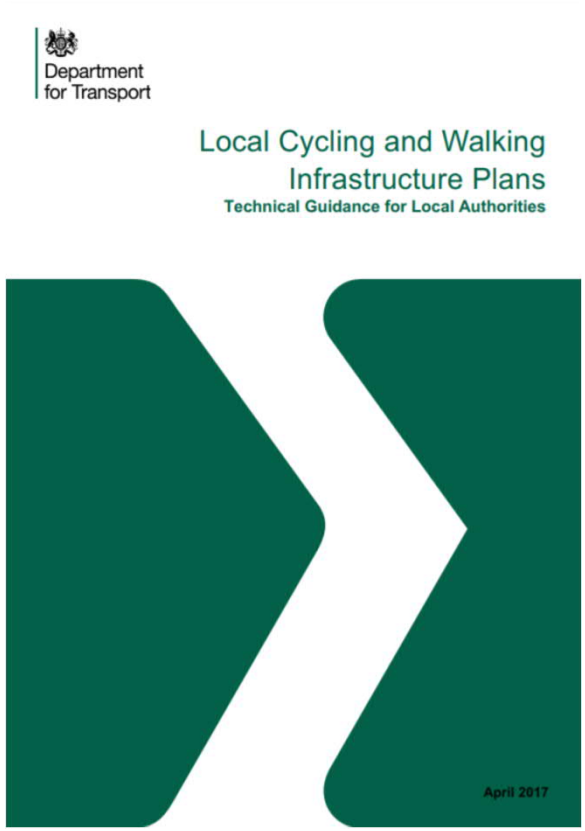
**Stage 4: Network planning for walking**

**Stage 5: Prioritising improvements**

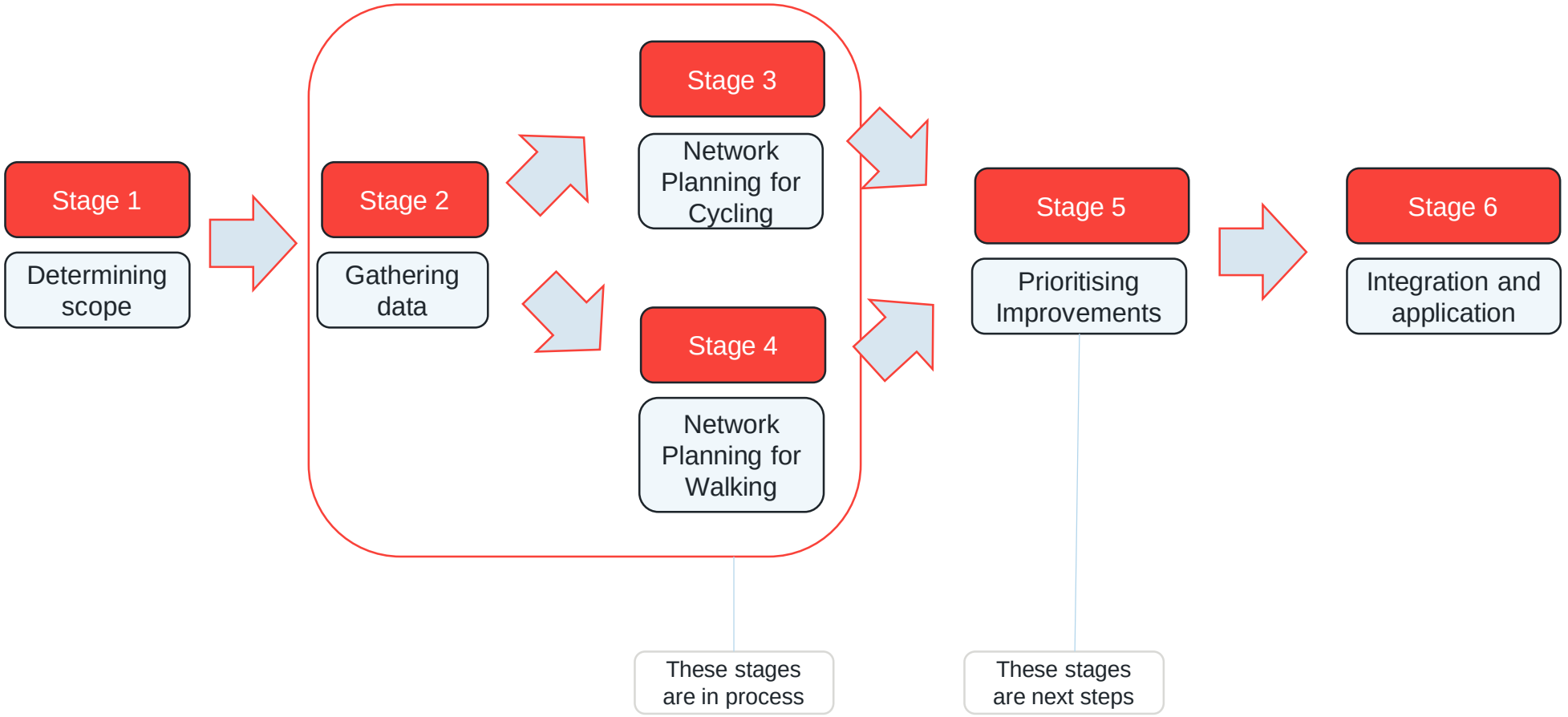
**Stage 6: Integration and application**

“While the preparation of LCWIPs is non-mandatory, LAs who have plans will be well placed to make the case for future investment” – LCWIP Technical Guidance

“Active Travel England’s assessment of an authority’s performance on active travel will influence the funding it receives for other forms of transport”



# LCWIP PROCESS



# STAGE 1 - GEOGRAPHICAL EXTENT

**Geographical Scope**

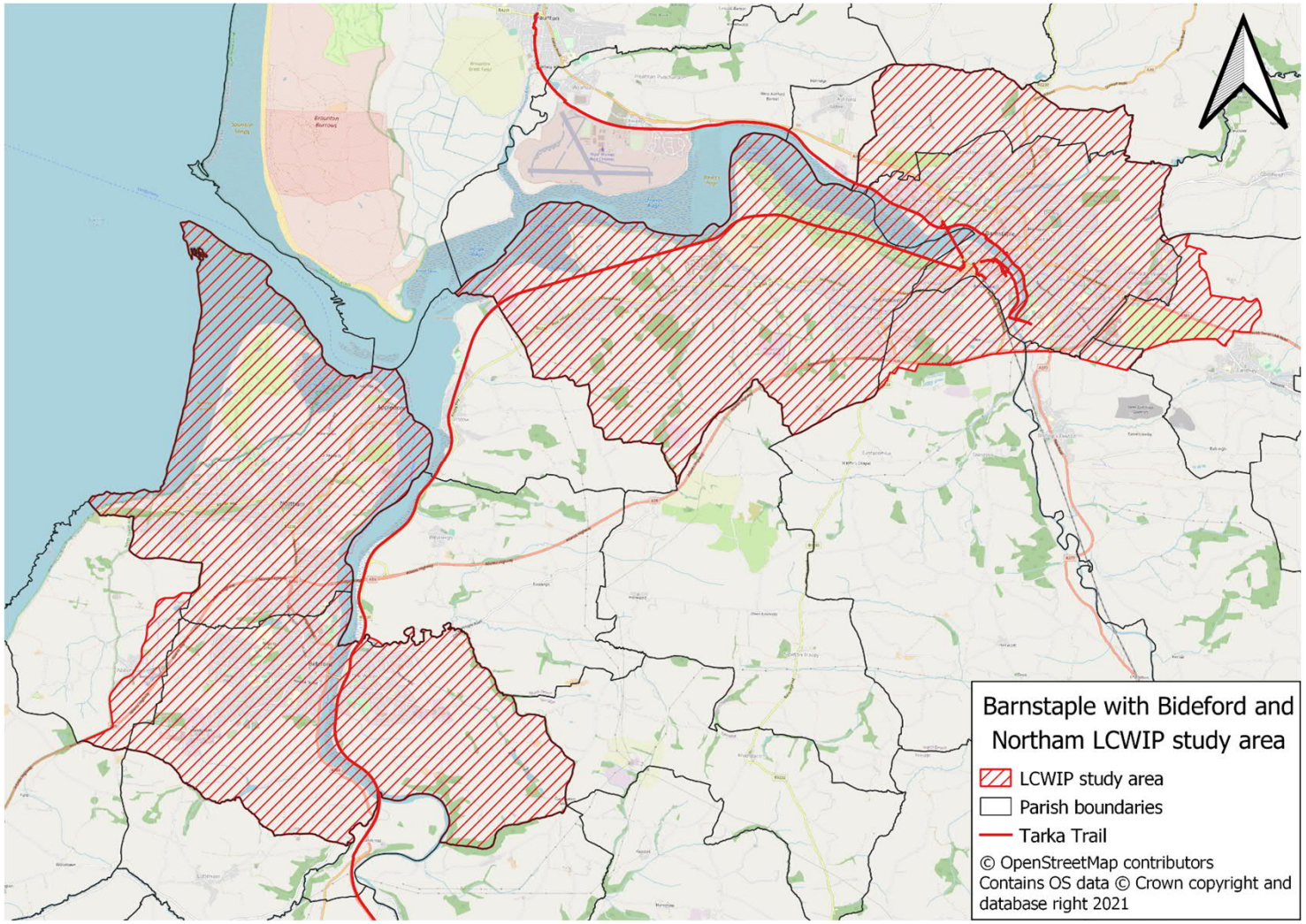
- LCWIP will be focussed on journeys within the core parishes, along with key sites allocated within the Local Plan
- LCWIP will refer to key recreational routes but will not focus on them
  - The Tarka Trail is not being directly considered for improvements due to it's existing high quality nature, however links will be considered where applicable

**Scale**

- The LCWIP will focus on a strategic network only at this stage – connecting to key destinations, key locations, improving key routes
- The LCWIP will identify indicative connections from key surrounding settlements

**A phased approach to LCWIP**

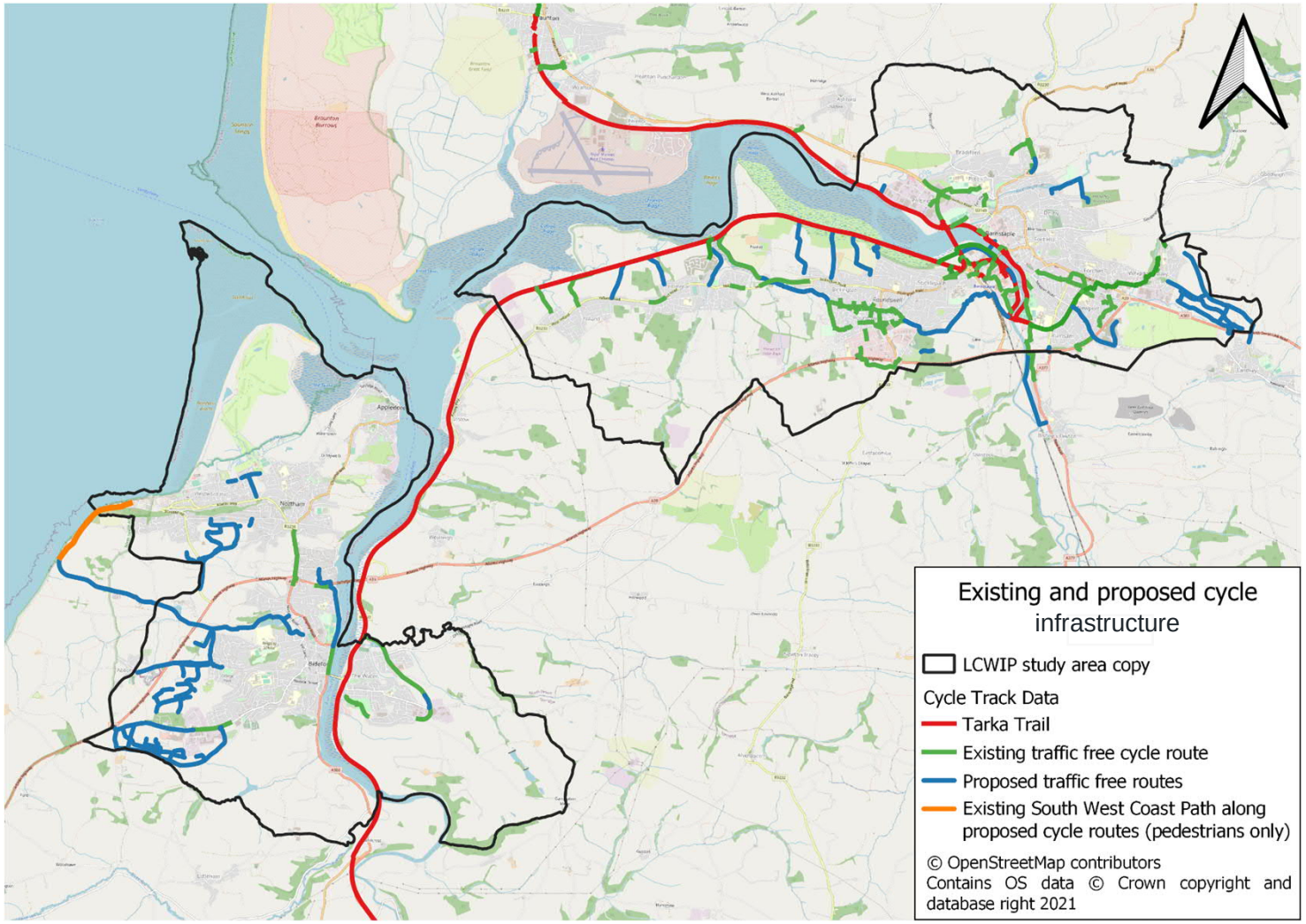
- Intention is that the LCWIP will be developed over time, with additional routes added in future iterations of the plan



# STAGE 2 - GATHERING INFORMATION

## Review of the existing and currently proposed cycle infrastructure

- While there are high quality, traffic free routes along the old railway lines (Tarka Trail, Newport link), there are significant gaps in the network
- Bideford and Northam lack existing cycle infrastructure towards the town centres
- While upcoming developments are expected to contribute to the cycle networks, there is still the need for onward links towards wider destinations
- Key physical barriers include the main traffic corridors, the rivers Taw and Torridge, and the hilly topography



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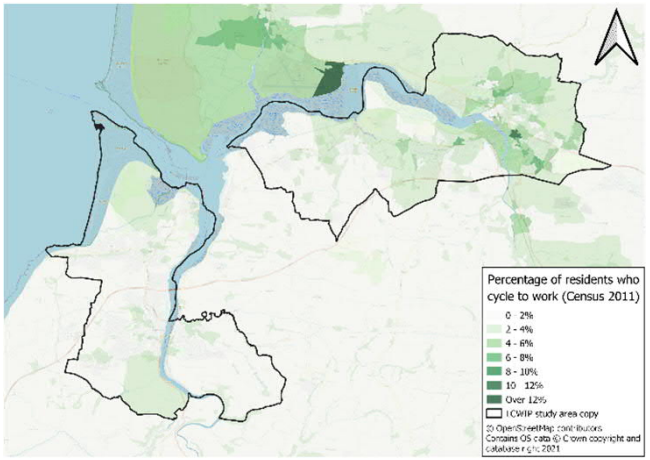
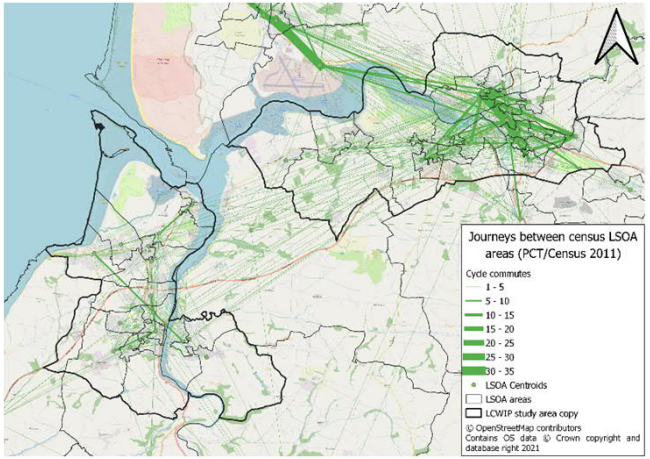
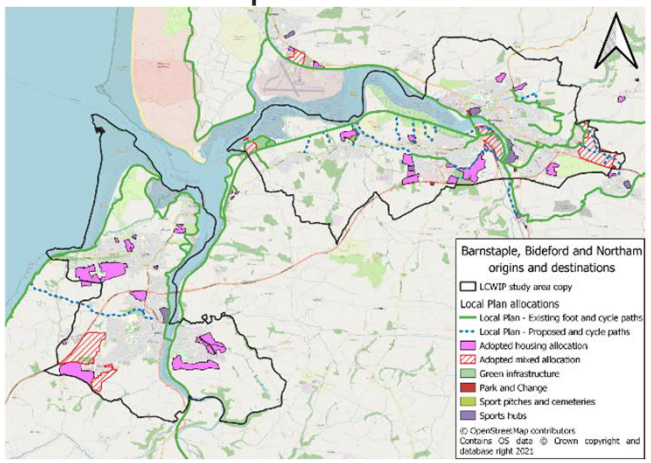


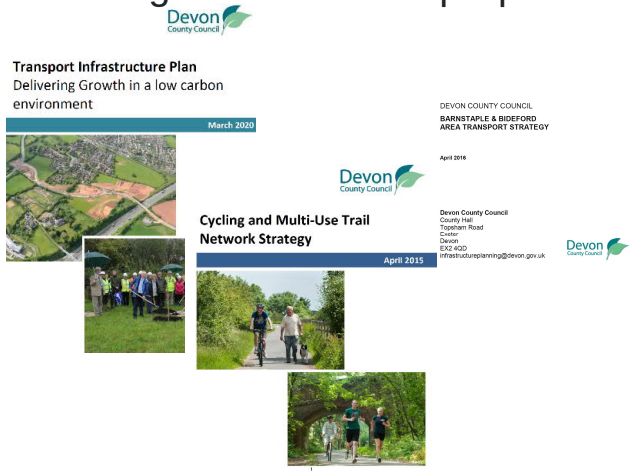

Census commute data




Local plan allocations



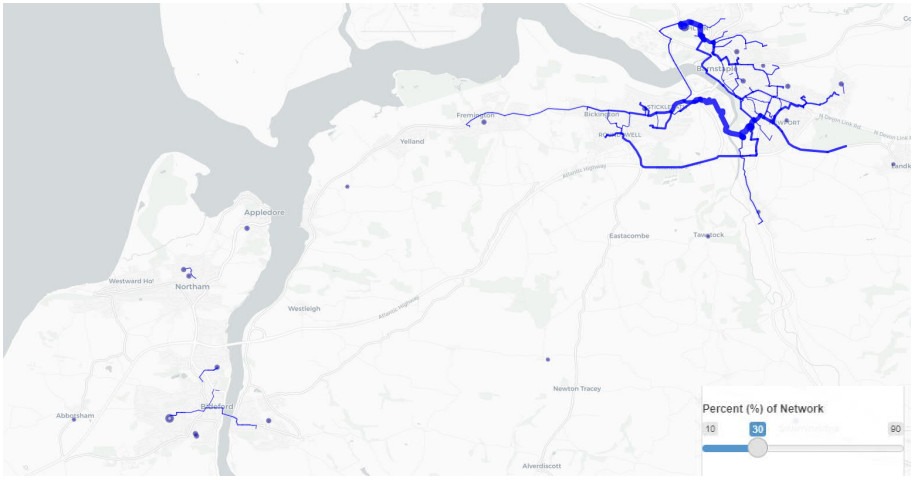

Existing infrastructure proposals



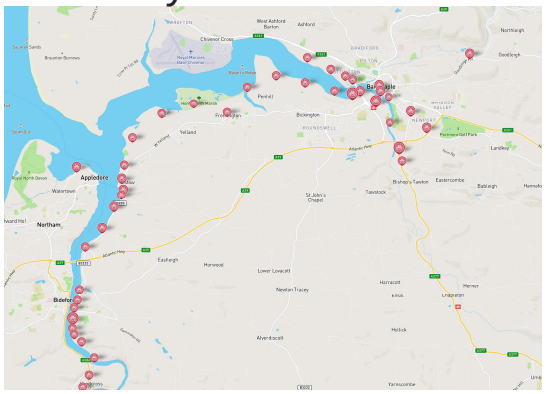
# STAGE 2 - GATHERING INFORMATION

Propensity to Cycle Tool – Census commuting

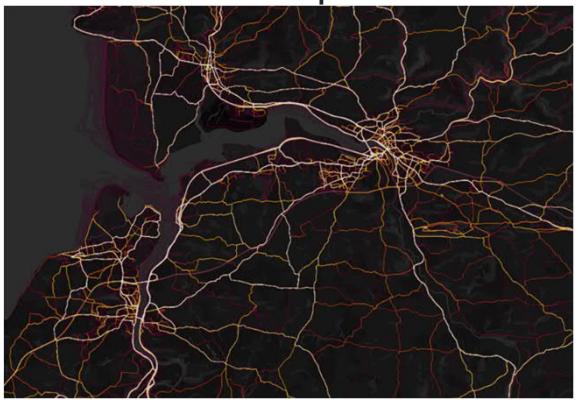

Propensity to Cycle Tool – School census cycling




WidenMyPath.com

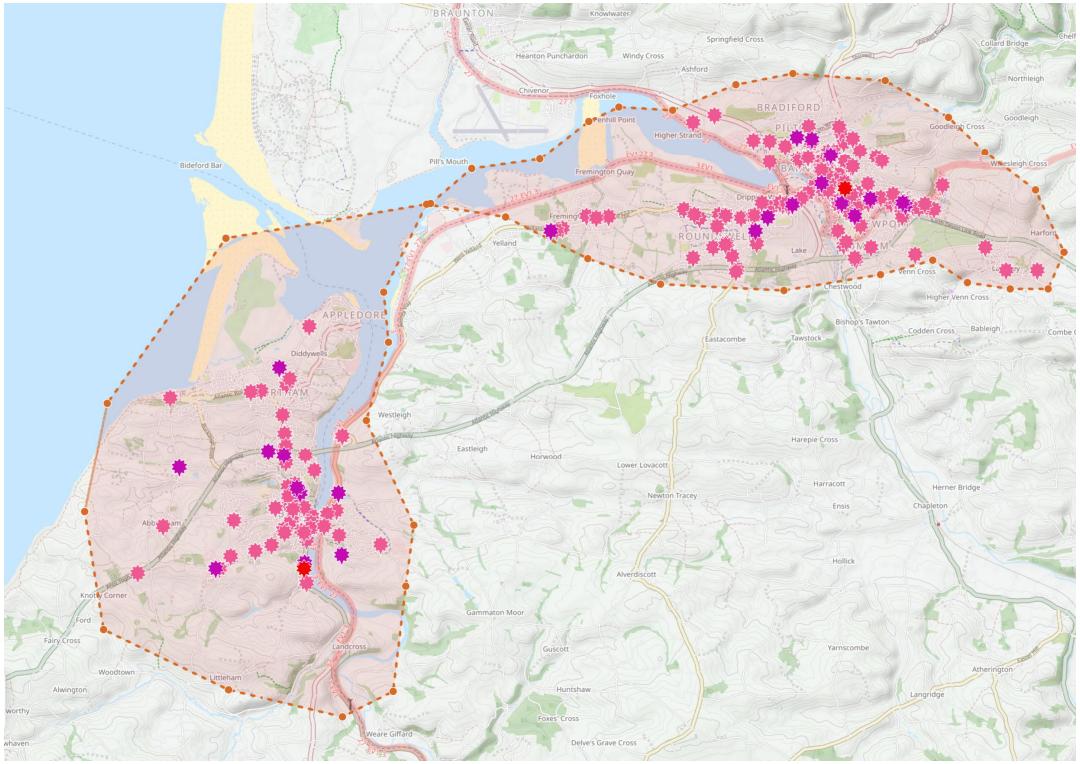



Strava heatmap

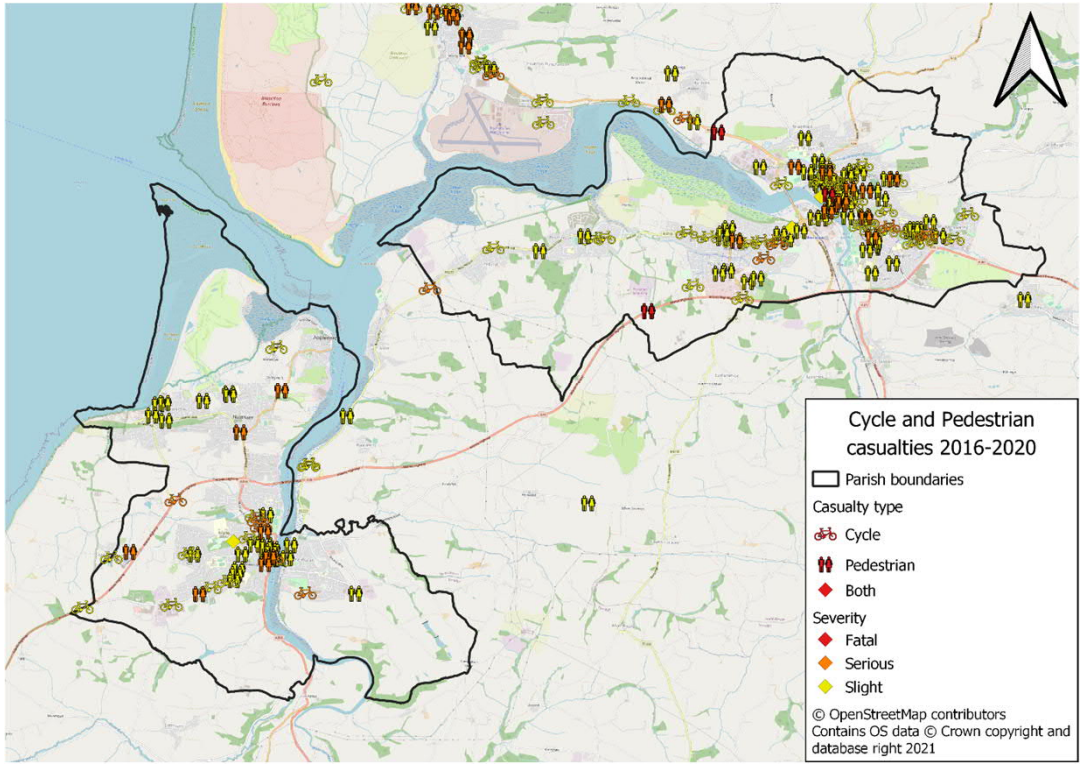


# STAGE 2 - GATHERING INFORMATION

Long-term (2005-2020) cycling casualty data

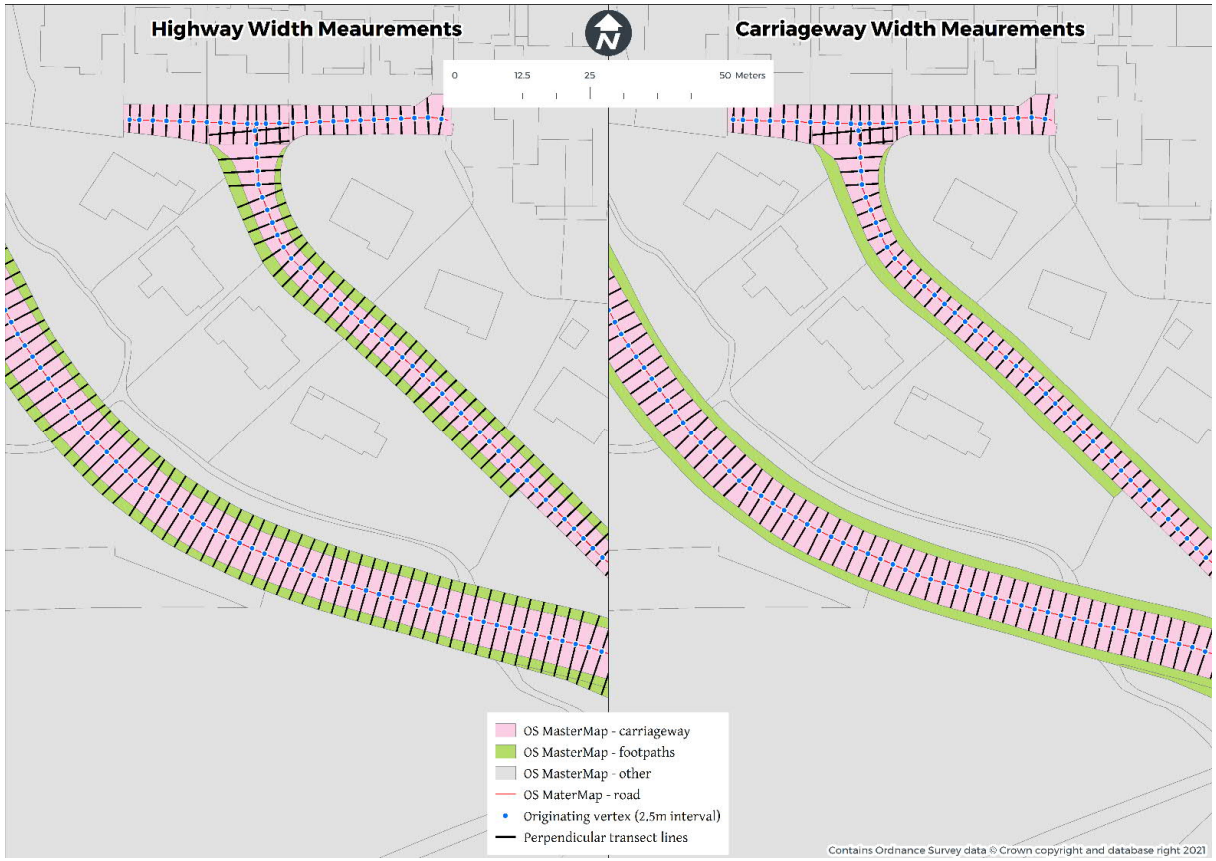



5 year (2016-2020) cycling and pedestrian casualties



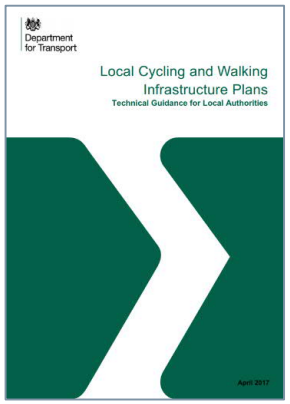
# STAGE 2 - GATHERING INFORMATION

Available road width analysis



# STAGE 3 – NETWORK PLANNING FOR CYCLING

## Process




Step A: Identify origins and destinations

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Step B: Connect origins and destinations with straight lines (desire lines)

↓

Step C: Identify strategic cycling corridors

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Step D: Prioritise a selection of strategic cycle corridors to take forward for further development

↓

Step E: Map prioritised primary cycling corridors to most direct existing routes

↓

Step F: Undertake cycle route audits

↓ ↑

Step G: Identify key improvements

The technical guidance outlines the process for network planning for cycling.

Guidance directs that cycle network planning should start with straight line connections (desire lines) which are mapped to roads later in the process.

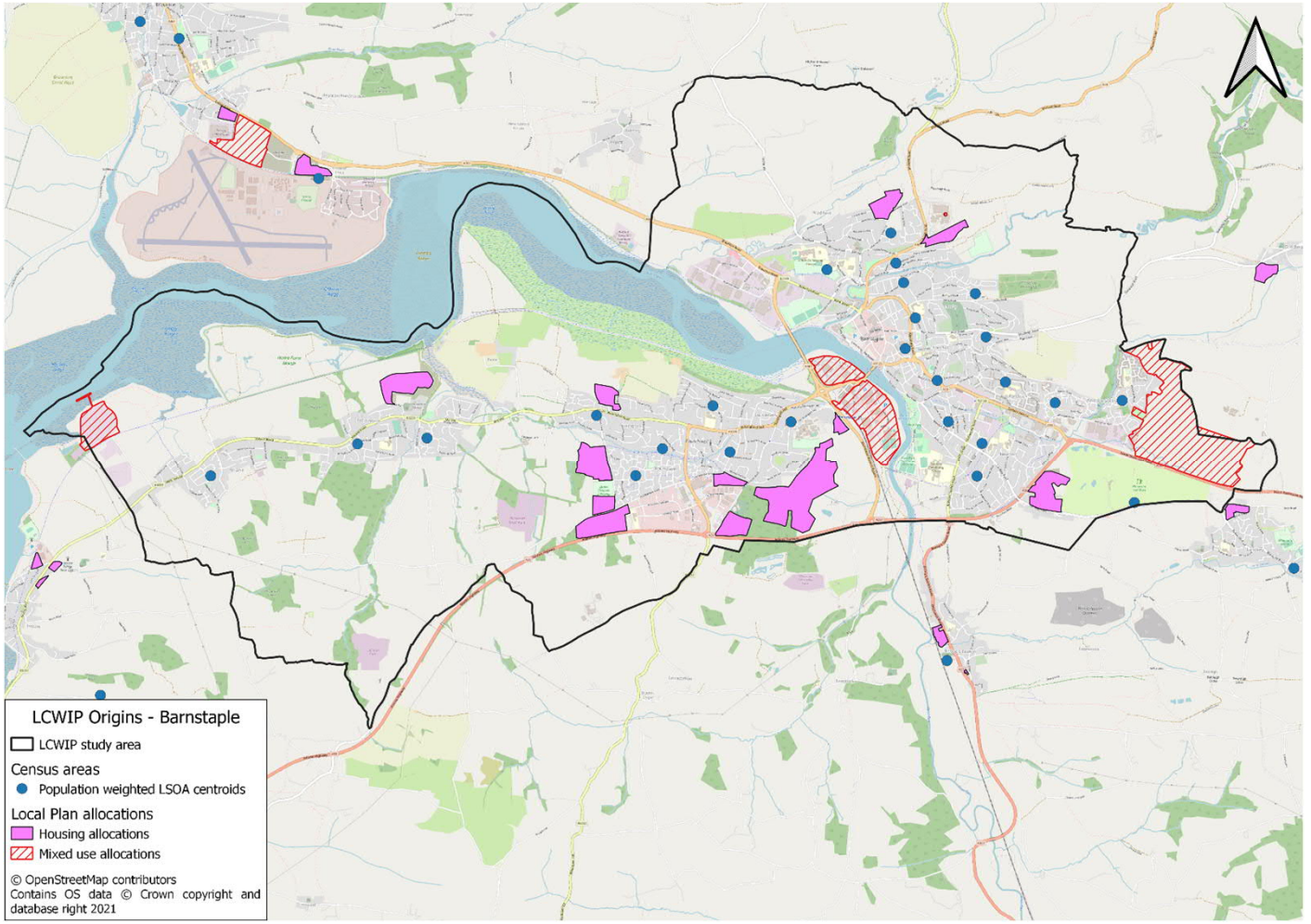
This is to ensure that, wherever possible, there is a focus on providing the most direct cycle routes.

For this iteration of the LCWIP, a selected number of corridors will be taken forward. Other corridors can be developed as resources allow.

# STAGE 3 STEP A – JOURNEY ORIGINS IN BARNSTAPLE

## Identifying journey origins

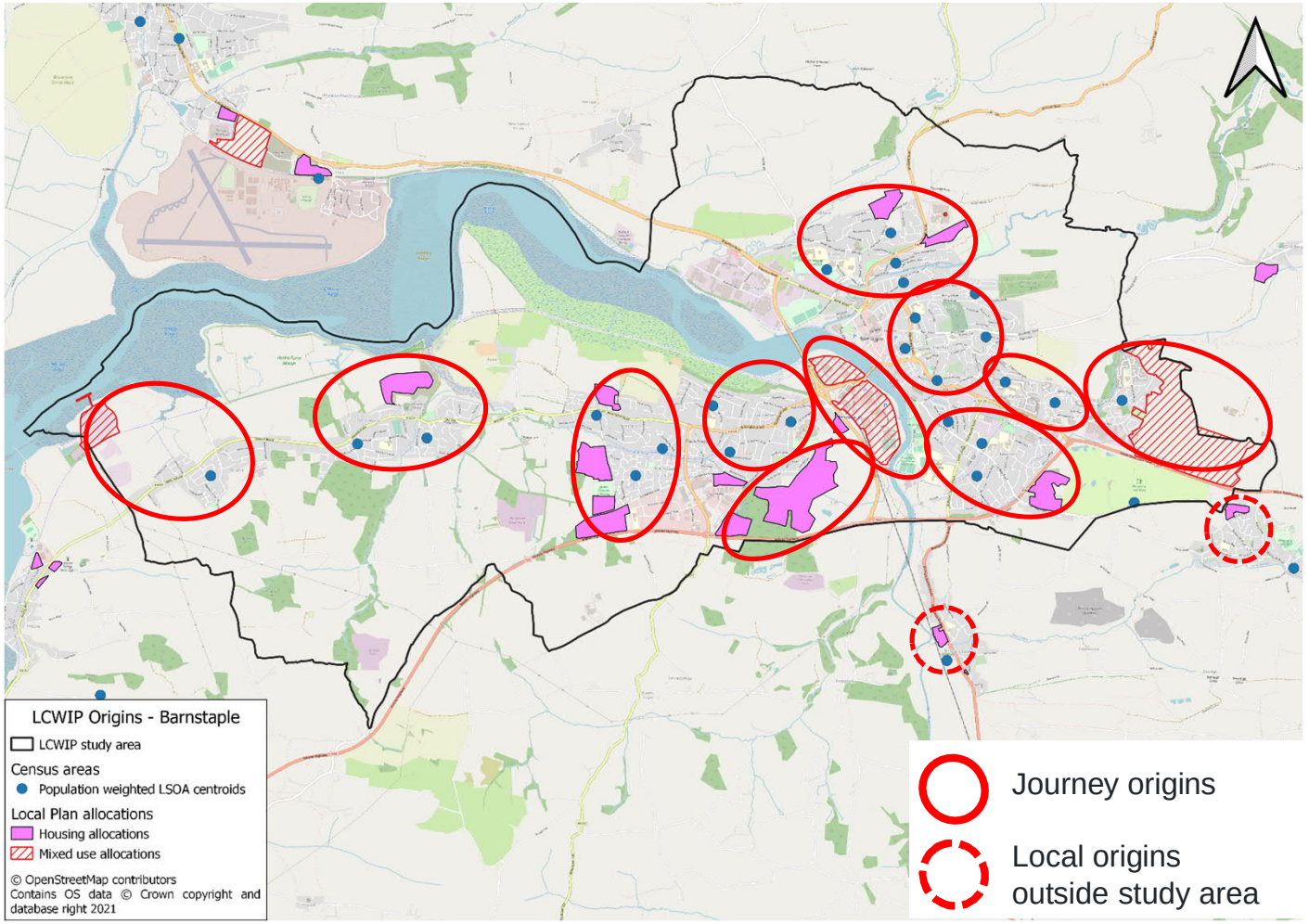
- Followed Department for Transport guidance
- Based on existing and future residential areas
- Future development sites are as allocated in the existing local plan – these are the sites likely being developed in the coming decade
- Lower layer census output areas (LSOAs) used to represent existing residential neighbourhoods, these are created by Office for National Statistics (ONS)
- Single points (known as population-weighted centroids – available as a dataset from ONS) used to represent the origin of cycling trips within each output area



# STAGE 3 STEP A – CLUSTERING ORIGINS IN BARNSTAPLE

## Clustering journey origins

- LCWIP guidance suggests that origin points close to each other are clustered together to simplify analysis
- Many of these clusters are existing residential areas, with some distinct areas comprising of allocated land within the Local Plan
- Some origins just outside of the study area (Landkey and Bishops Tawton) have been highlighted, as these will contribute to some cyclable journeys into the study area



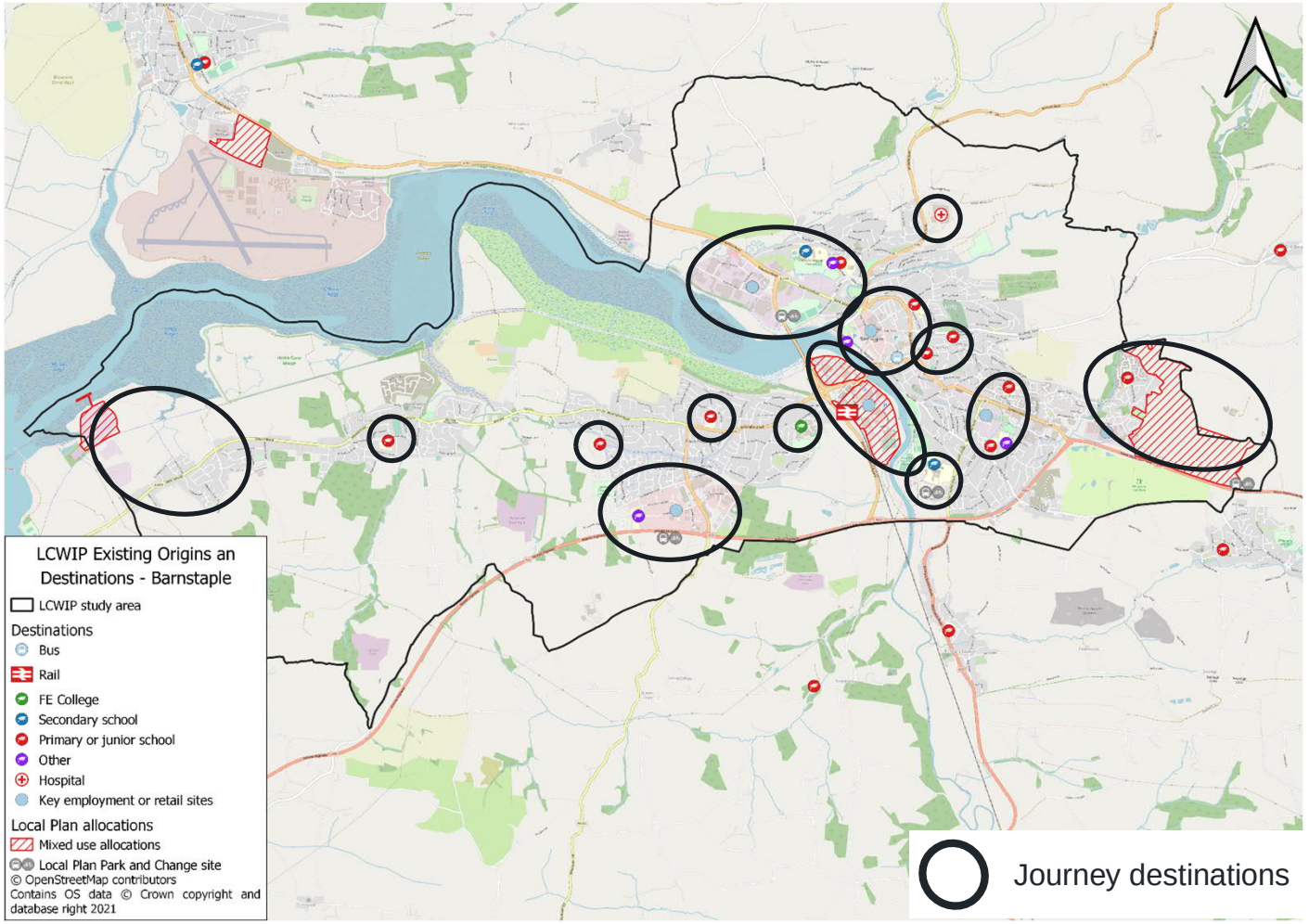
# STAGE 3 STEP A – CLUSTERING DESTINATIONS IN BARNSTAPLE

## Identifying journey destinations

- A similar approach is taken for key destinations within the study area
- Only the most significant trip generators are considered – this includes
  - Key employment and retail areas
  - Town centres
  - Transport hubs
  - Education facilities
  - Hospitals
- Mixed use allocation sites as set out in the Local Plan are also being considered as destinations

## Clustering journey destinations

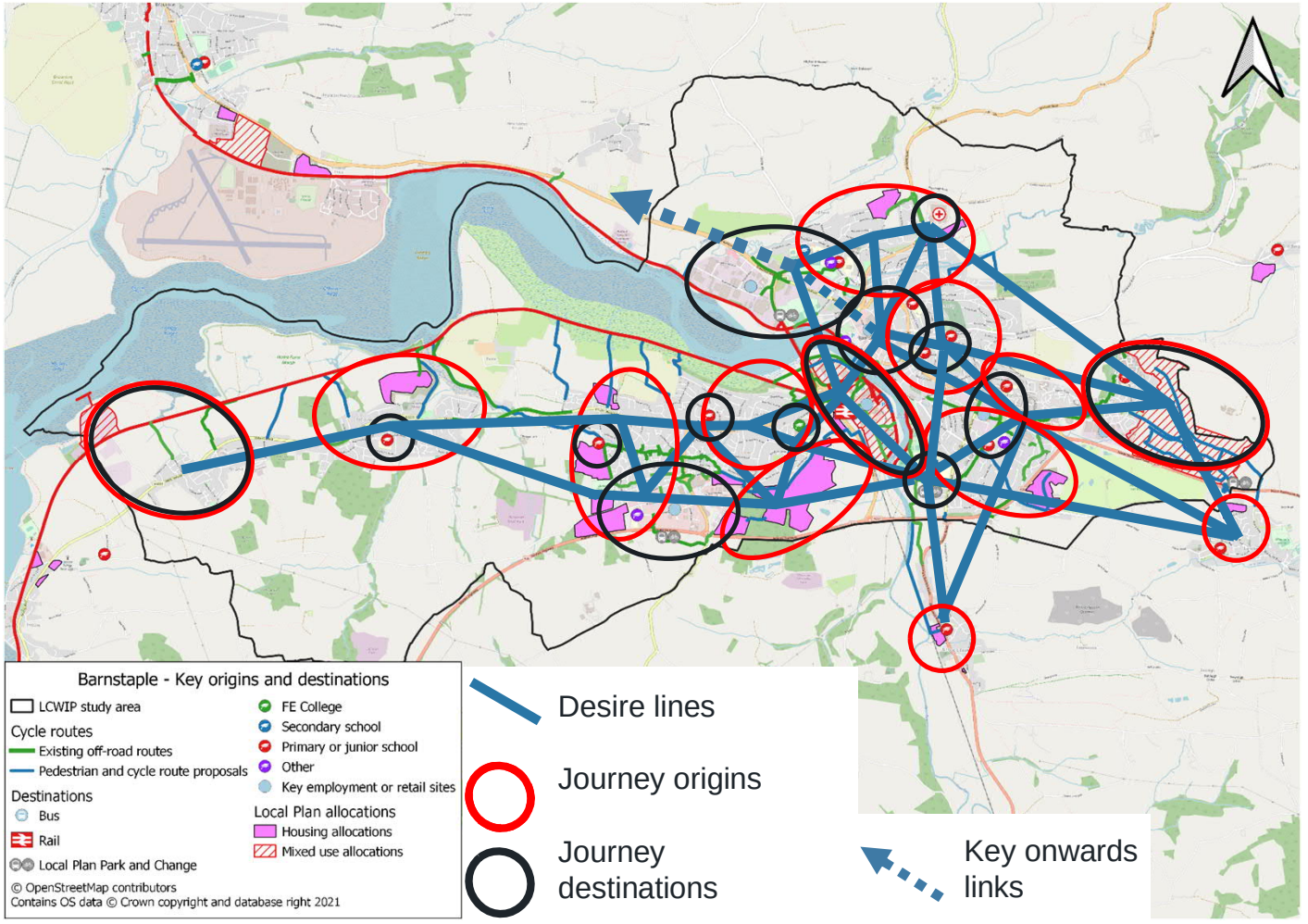
- As with the journey origins, destinations are alco clustered to allow for easier analysis



# STAGE 3 STEP B – DESIRE LINES IN BARNSTAPLE

## Connecting origins and destinations with straight lines

- Now that significant journey origins and destinations have been mapped and clustered, we can consider them together
- The next stage is to create straight desire lines are plotted between them to provide indicative links
- At this stage, these do not need to link to existing roads or cycle routes
- Using existing data and knowledge of future origins/destinations, desire lines are prioritised to help determine the routes to audit



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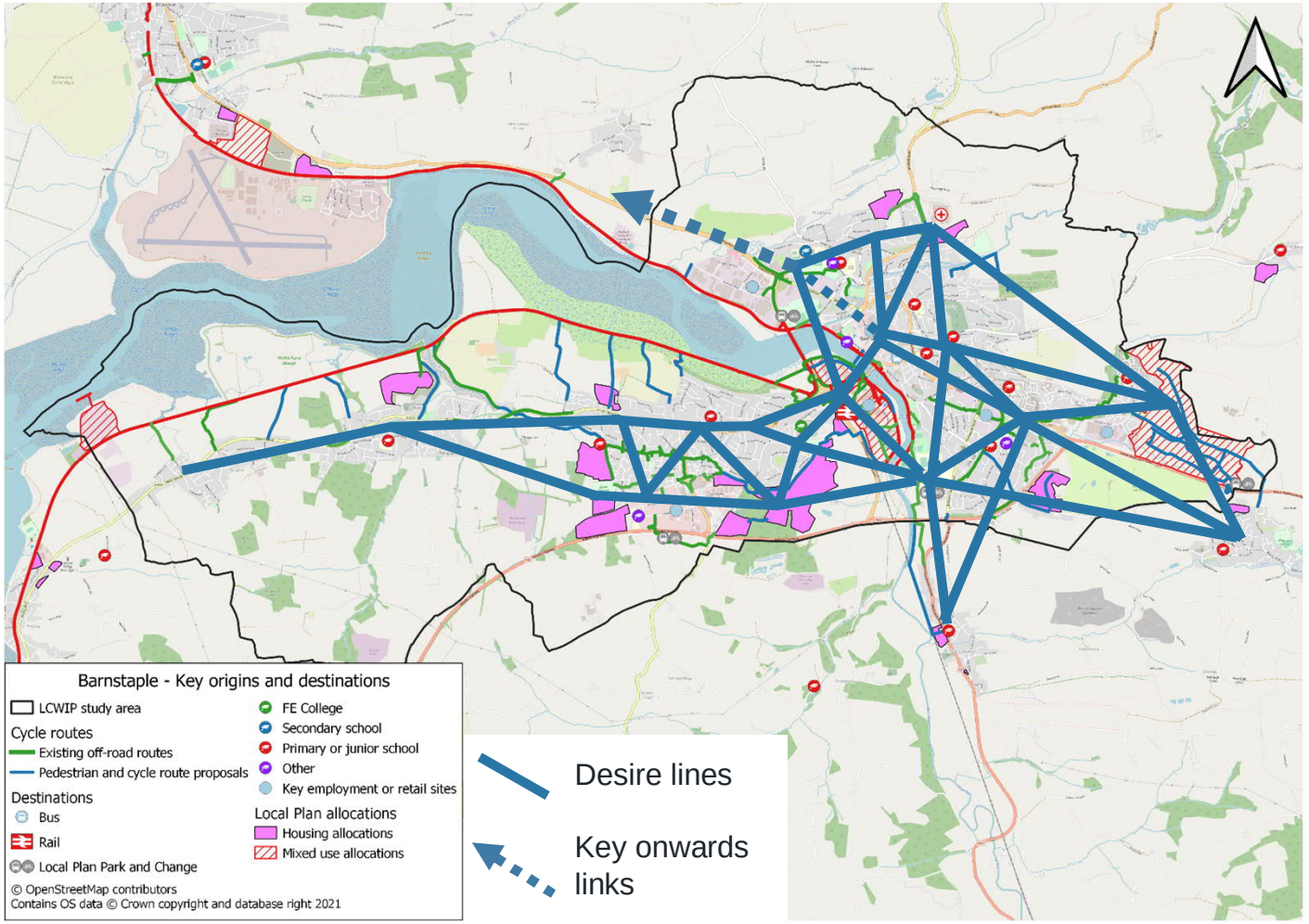


# STAGE 3 STEPS C & D – IDENTIFY AND PRIORITISE A SELECTION OF STRATEGIC CYCLE CORRIDORS TO PROGRESS - BARNSTAPLE

## Identifying routes with existing high-quality infrastructure

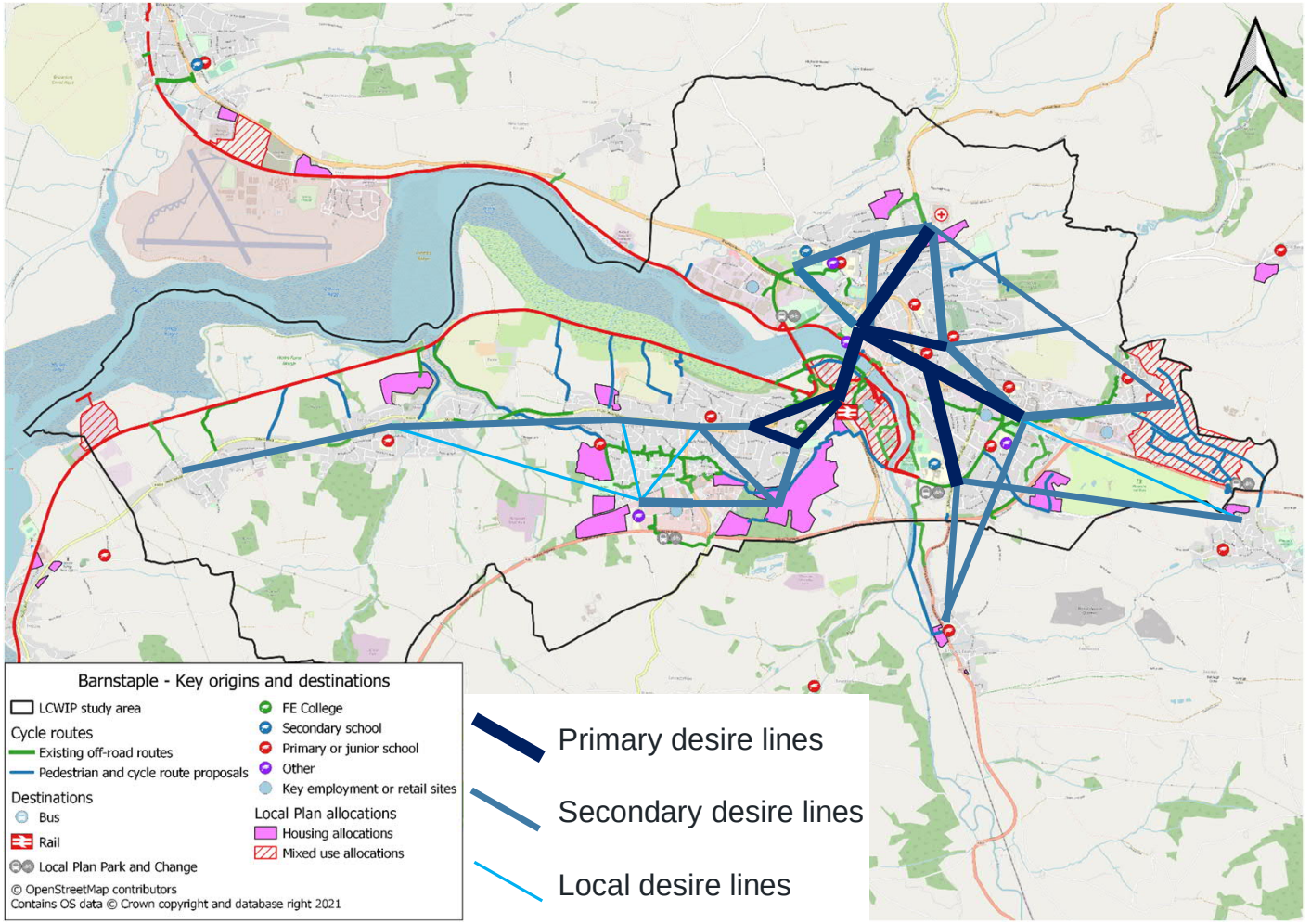
- Routes with existing or proposed high quality cycle routes have been removed, as these require less immediate intervention to support existing and future cycle demand

## Prioritising routes – census data

- Routes with high levels of cycling demand have been identified using PCT and census data

## Determining routes to progress

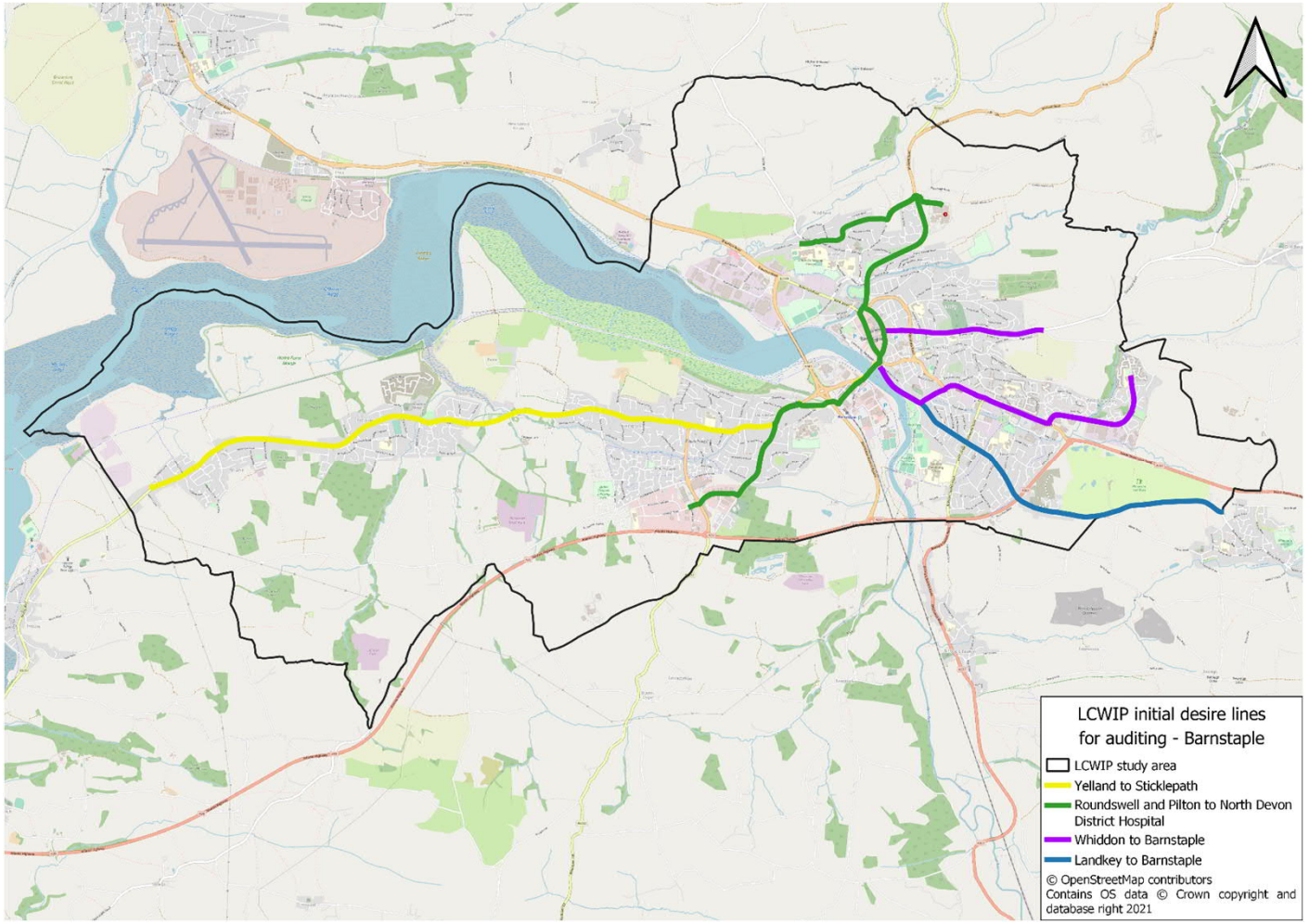
- Routes along the top priority desire lines are identified
- Other routes, while not being progressed under the LCWIP, still form a key network to be progressed at a later point



# STAGE 3 STEP E - MAP PRIORITISED PRIMARY CYCLING CORRIDORS TO MOST DIRECT EXISTING ROUTES – BARNSTAPLE

## Converting desire lines into routes for auditing

- Before the route auditing starts, the final step is to translate the straight lines into routes which follow the road network
- Origins and destinations were analysed within the clusters to determine suitable start and end points
- The initial routes to audit are the most direct routes along the desire lines



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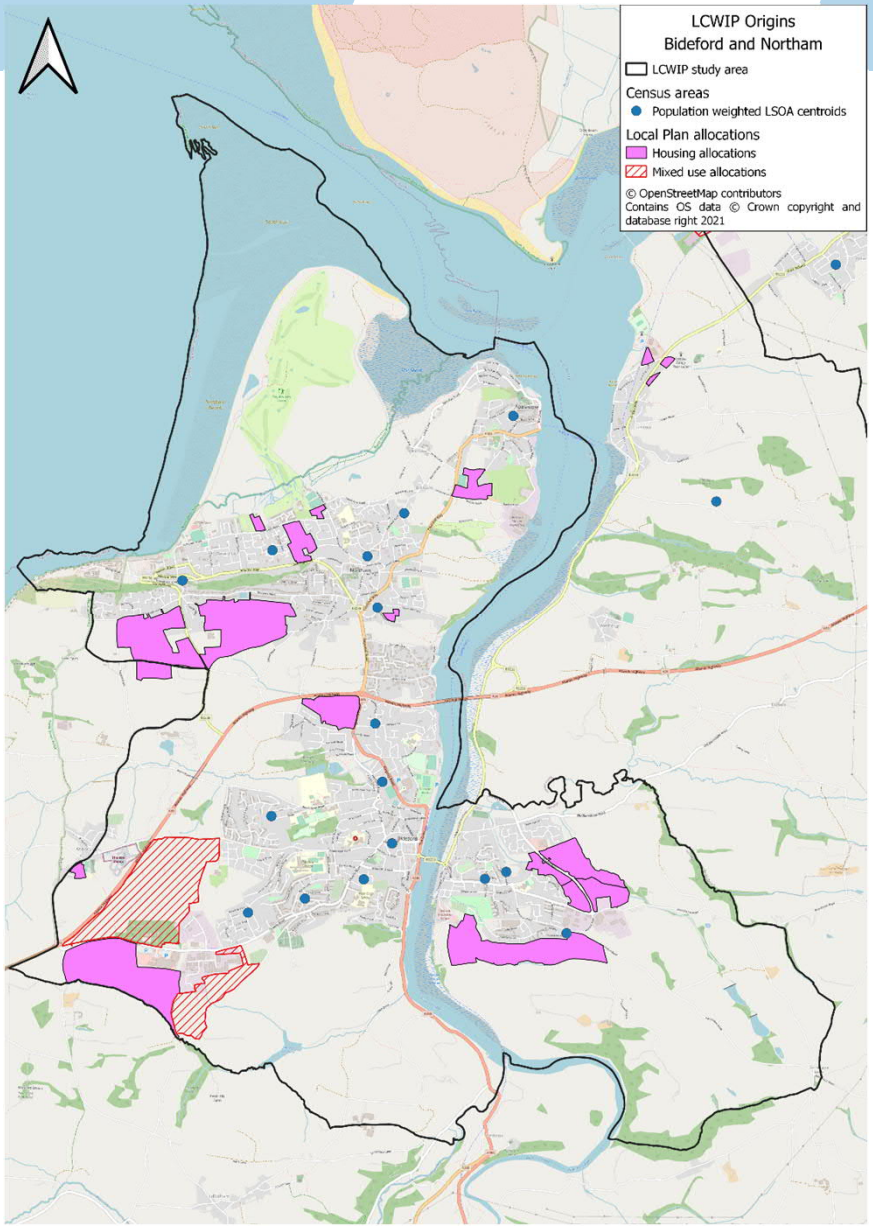

# STAGE 3 STEP A – CLUSTERING ORIGINS IN BIDEFORD AND NORTHAM

## Identifying journey destinations

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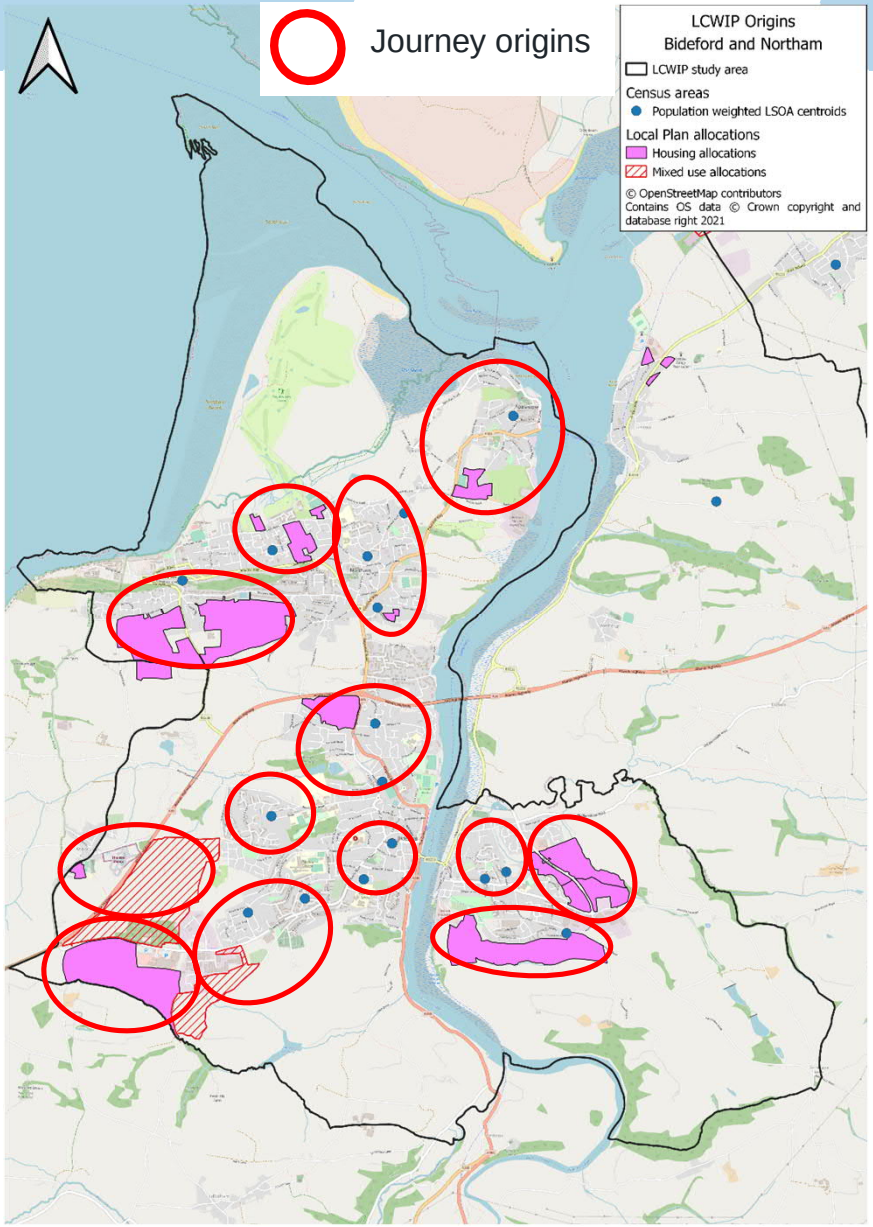
- Mixed use allocation sites as set out in the Local Plan are also being considered as destinations

## Clustering journey destinations

- As with the journey origins, destinations are also clustered to allow for easier analysis



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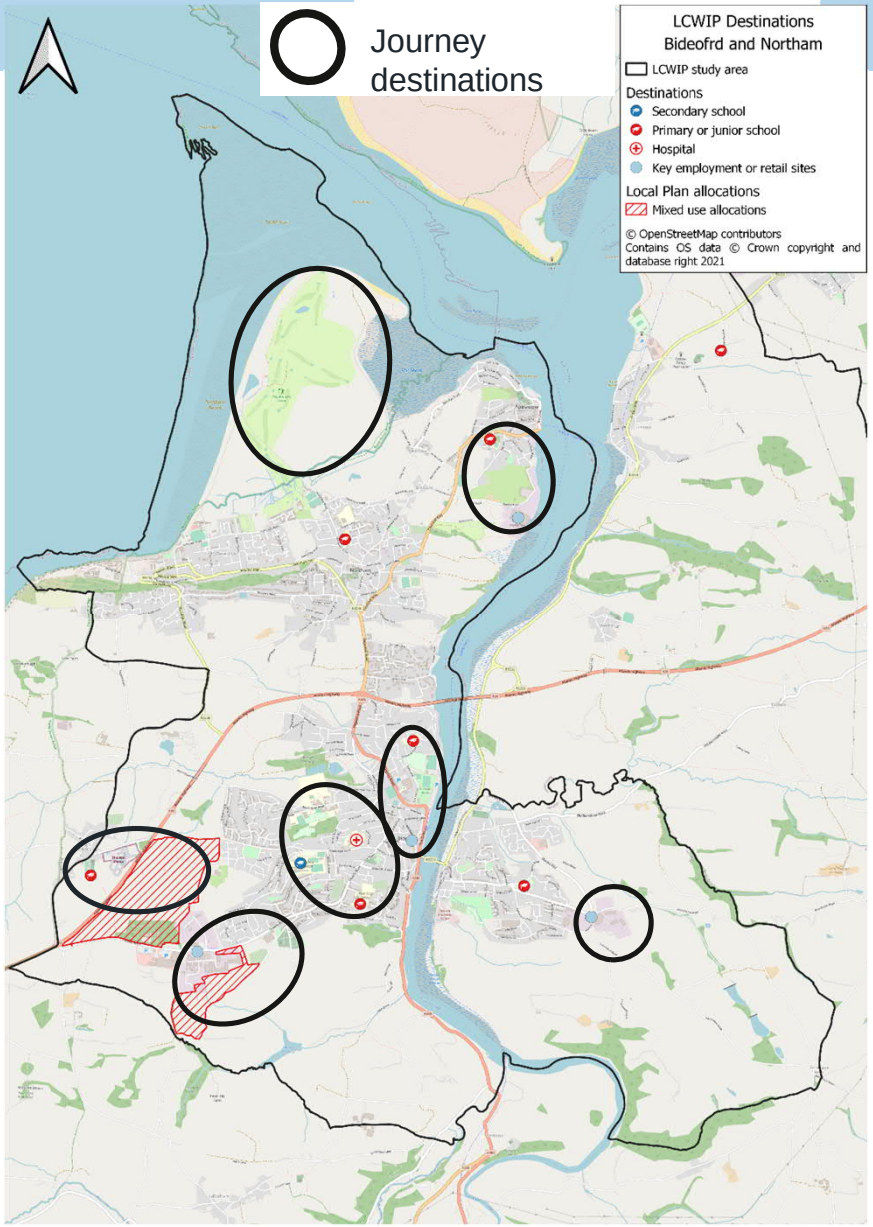

# STAGE 3 STEP B – DESIRE LINES IN BIDEFORD AND NORTHAM

## Connecting origins and destinations with straight lines

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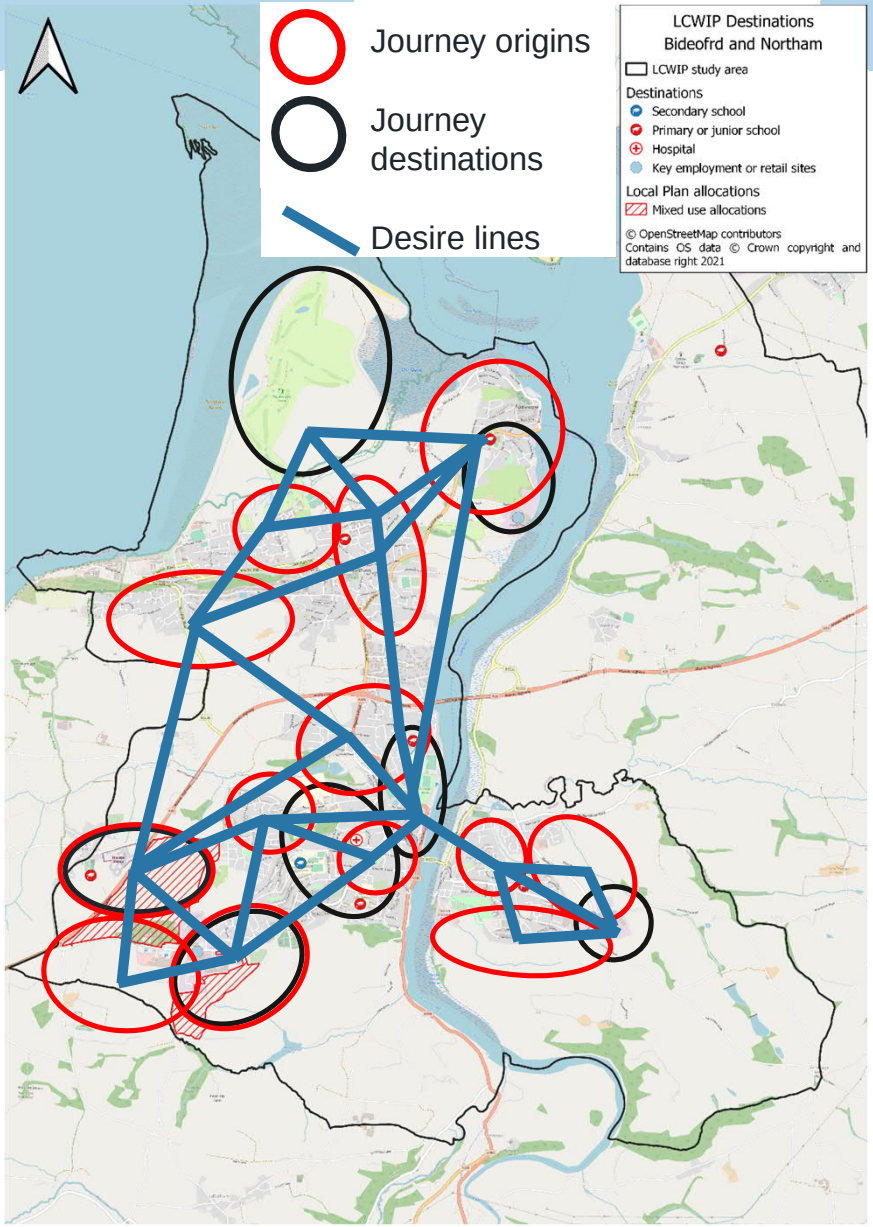

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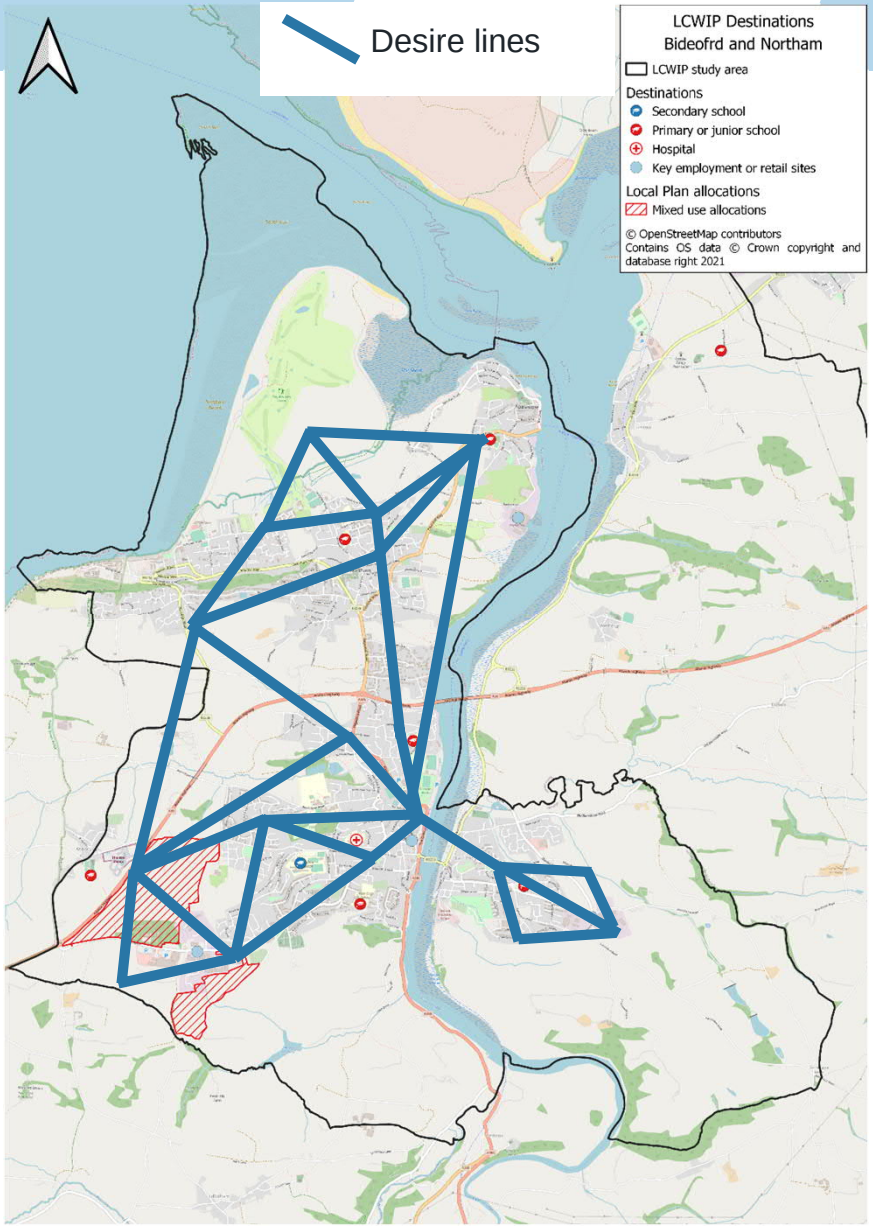

# STAGE 3 STEPS C & D – IDENTIFY AND PRIORITISE A SELECTION OF STRATEGIC CYCLE CORRIDORS TO PROGRESS IN BIDEFORD AND NORTHAM

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## Prioritising routes – census data

- Routes with high levels of cycling demand have been identified using PCT and census data

## Determining routes to progress

- Routes along the top priority desire lines are identified
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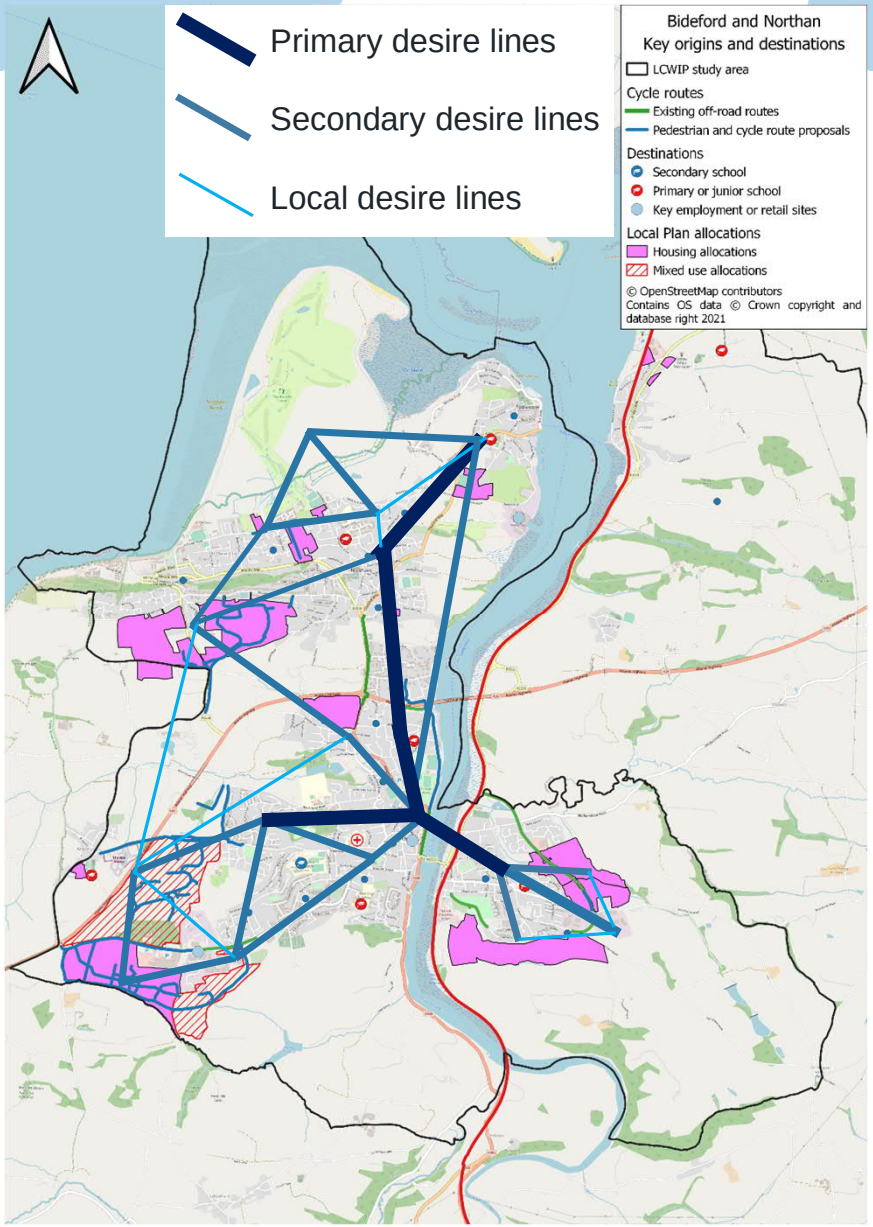

# STAGE 3 STEP E - MAP PRIORITISED PRIMARY CYCLING CORRIDORS TO MOST DIRECT EXISTING ROUTES – BIDEFORD AND NORTHAM

## Converting desire lines into routes for auditing

- Before the route auditing starts, the final step is to translate the straight lines into routes which follow the road network
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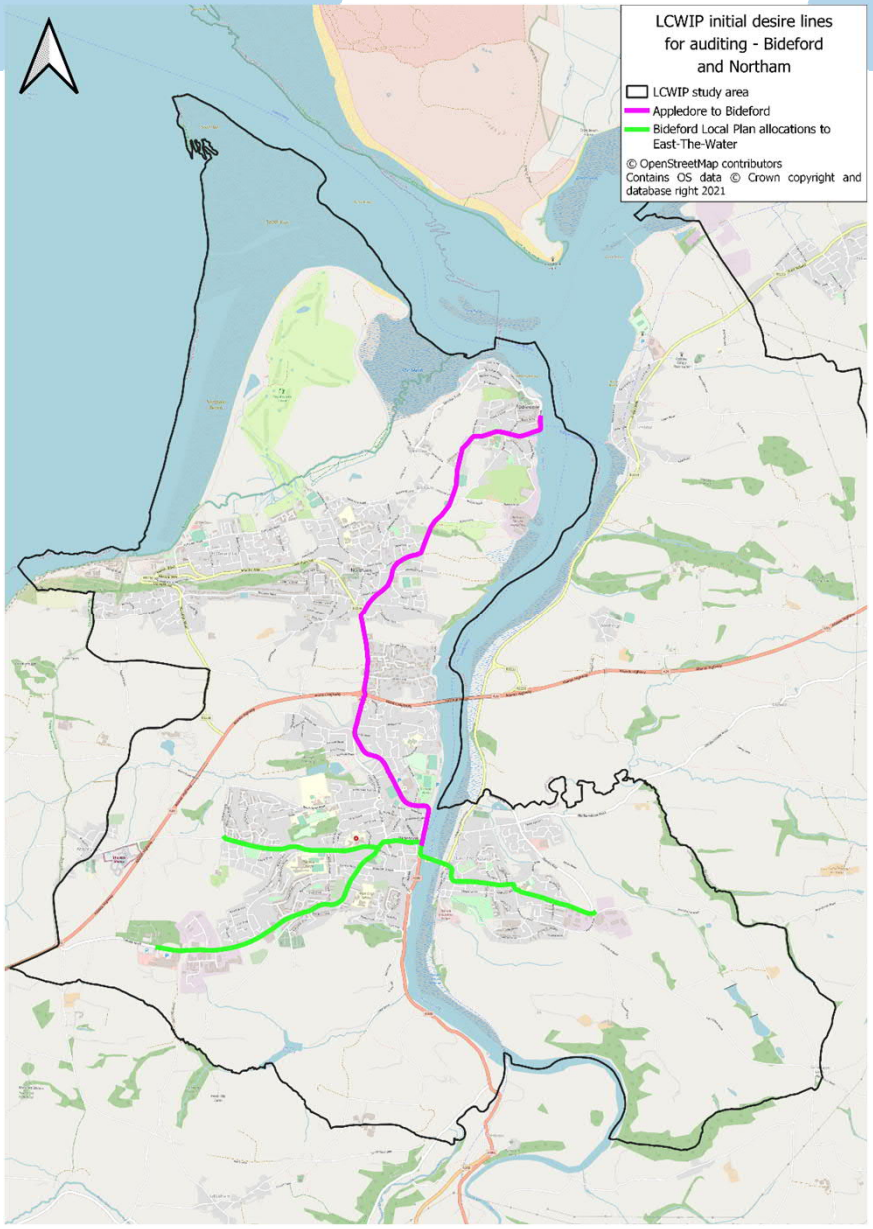
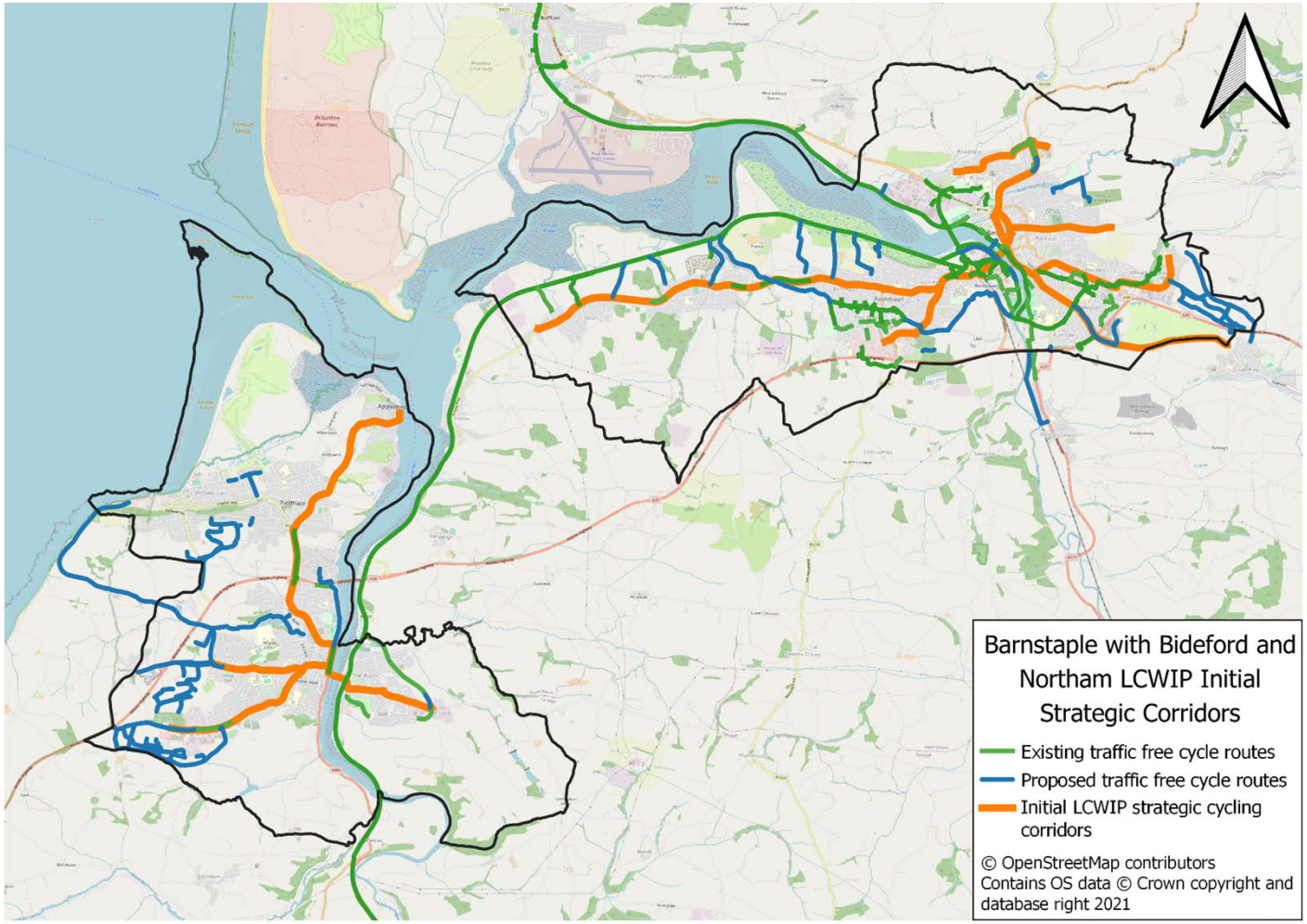


# STAGE 3 STEP E - MAP PRIORITISED PRIMARY CYCLING CORRIDORS TO MOST DIRECT EXISTING ROUTE

## Creating a coherent cycling network

- The initial six strategic cycle corridors complement the existing and proposed network
- The majority of proposed strategic corridors are along routes with no or limited existing provision
- Existing traffic free cycle routes along the strategic corridors will also be assessed, with improvements suggested where necessary



# STAGE 3 STEP F: ROUTE SELECTION TOOL PROCESS

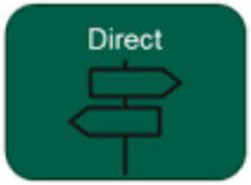
5 Criteria

The existing routes, as well as the possible routes following improvements, are assessed against the below criteria. If the improved route still scores too low, alternative alignments along the poor scoring sections are chosen to audit.

- Directness
  - The closer the distance is to the most direct car distance the better
- Gradient
  - Maximum gradients are considered
  - Prolonged gradients also affect the score
- Safety
  - On/off road, traffic speeds and flows
  - Lighting and surveillance
- Comfort
  - Available space, one- or two-way path
  - Pedestrian flows (on shared use)
  - On/off road, traffic speeds and flows
- Connections
  - How many links are there to either join or leave the route?

# STAGE 3 STEP G: DESIGN PRINCIPLES


The network must be **coherent**, linking key origins and destinations




**Direct** and fast routes, following desire lines and avoiding unnecessary detours.


Must be **safe** and also improve the feeling of how safe the environment is.

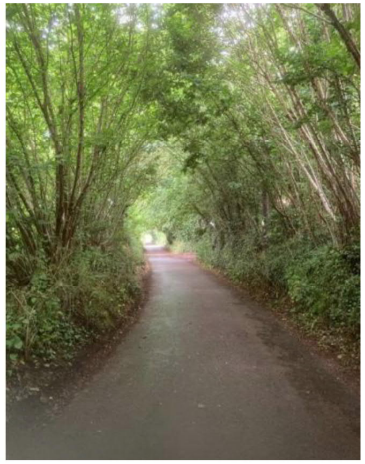

**Comfortable** smooth surfaces, with minimal stopping and starting, avoiding steep gradients.


**Attractive** routes creating pleasurable routes and experiences.

# STAGE 3 STEP G: EXAMPLES OF INTERVENTIONS

Protected cycle route

Continuous side road crossing



Green lane


Low traffic street

“Tiger” crossing

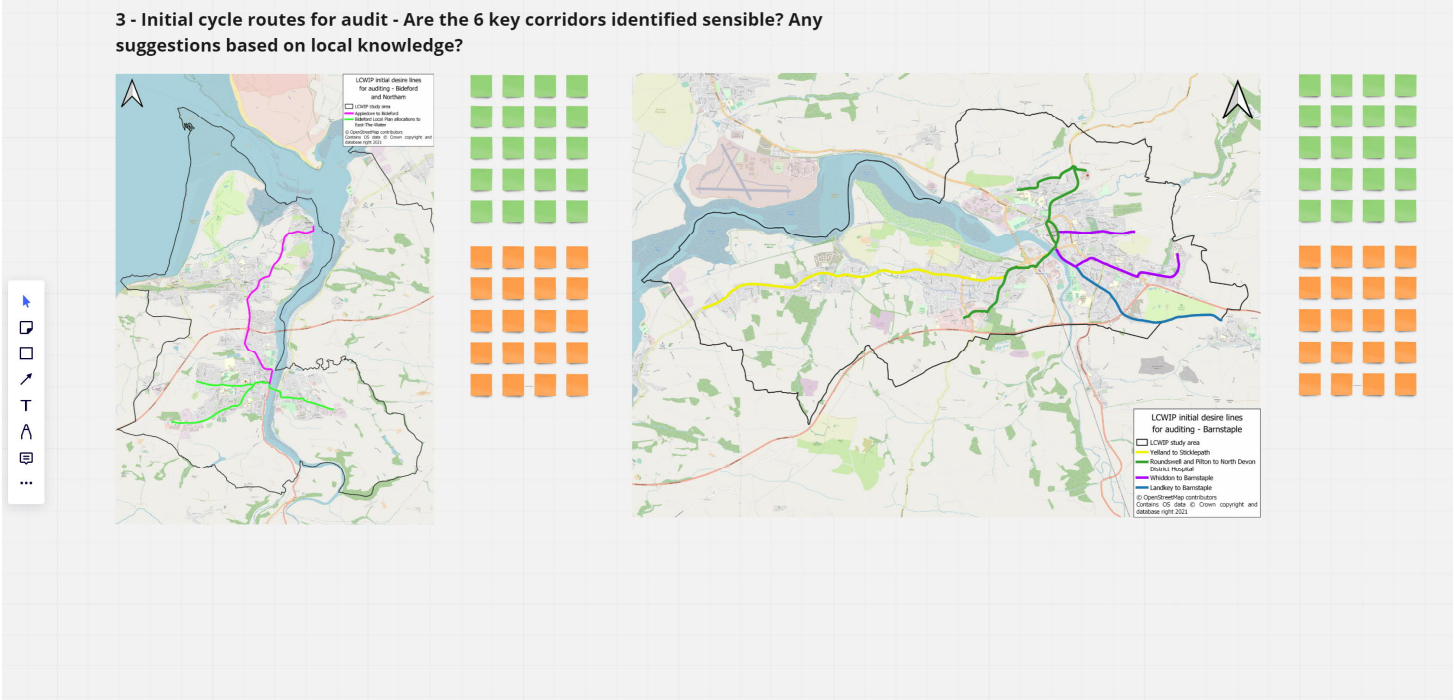
Shared use path

# STAGE 3 – STEERING GROUP INPUT

## Miro exercise – following the presentation

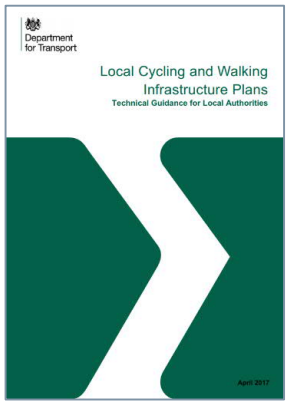
Miro is a chance to provide your opinions on the identified walking routes, as well as provide your local knowledge to highlight issues you're aware of along the routes.

A link will be sent around along with the slides following the presentation and will remain open to allow some time for comments to be added.



# STAGE 4 – NETWORK PLANNING FOR WALKING

## Process




Step A: Identify origins and destinations

Step B: Define core walking zone/s

Step C: Identify key walking routes

Step D: Prioritise a selection of key walking routes to take forward for further development

Step E: Undertake walking route audits

Step F: Identify key improvements

The technical guidance outlines the process for network planning for cycling.

The process for walking network planning works with routes rather than straight lines. The guidance notes that *'in most places a comprehensive network, which accommodates most pedestrian trips, already exists. Although routes may exist, people may be deterred from using them due to severance issues, such as the need to cross roads, or because the facilities are poorly designed or maintained.'*

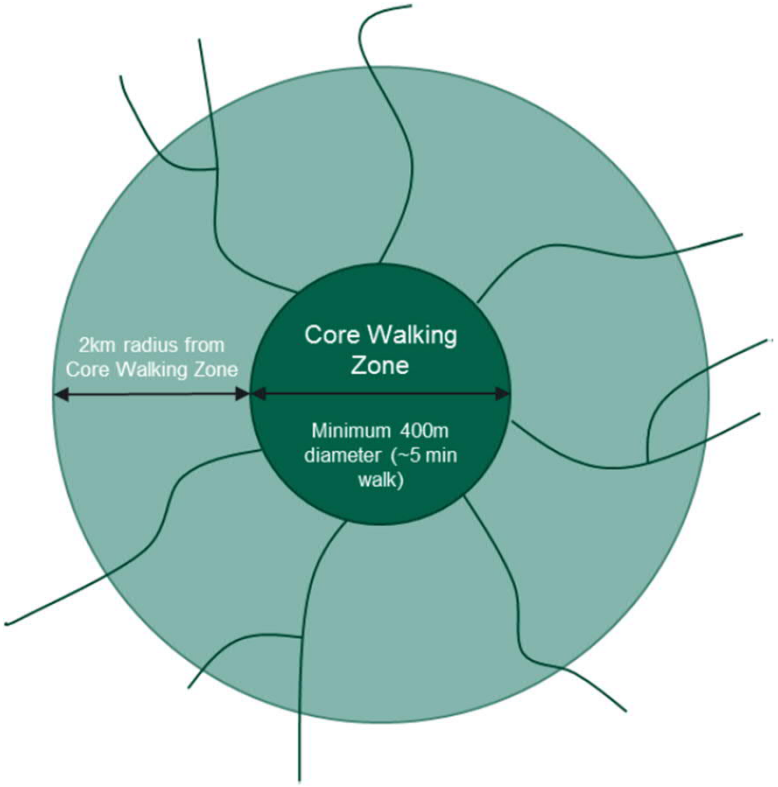
For this iteration of the LCWIP, a selected number of corridors will be taken forward. Other corridors can be developed as resources allow.

# STAGE 4 – NETWORK PLANNING FOR WALKING

Purpose = identifying key areas and routes for improvement

Guidance uses following terminology:

- Core Walking Zones: ‘normally consist of a number of walking trip generators that are located close together - such as a town centre or business parks…within CWZ all of the pedestrian infrastructure should be deemed to be important’
- Key Walking Routes – important pedestrian routes connecting to Core Walking Zones

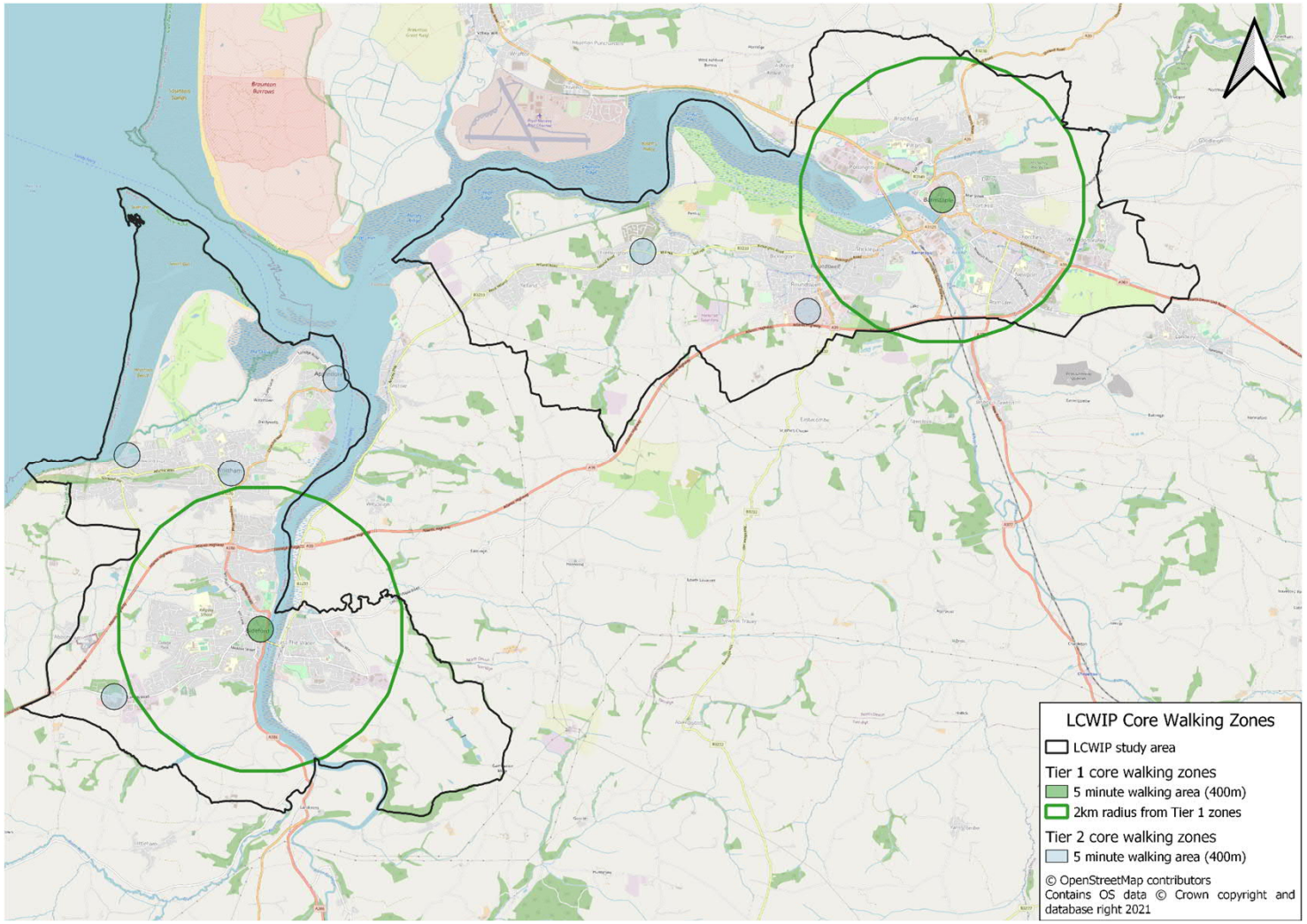


# STAGE 4 STEP B – DEFINING CORE WALKING ZONES

## Identifying core walking zones

Core walking zones have been identified based on areas with local destinations. They have been classed into two groups, being:

- Tier 1 Core Walking Zones – larger town centres
  - Barnstaple
  - Bideford
- Tier 2 CWZs – community centres and other higher footfall destinations
  - Northam
  - Appledore
  - Fremington
  - Roundswell
  - Atlantic Village
  - Westward Ho



# STAGE 4 STEP C – IDENTIFY KEY WALKING ROUTES

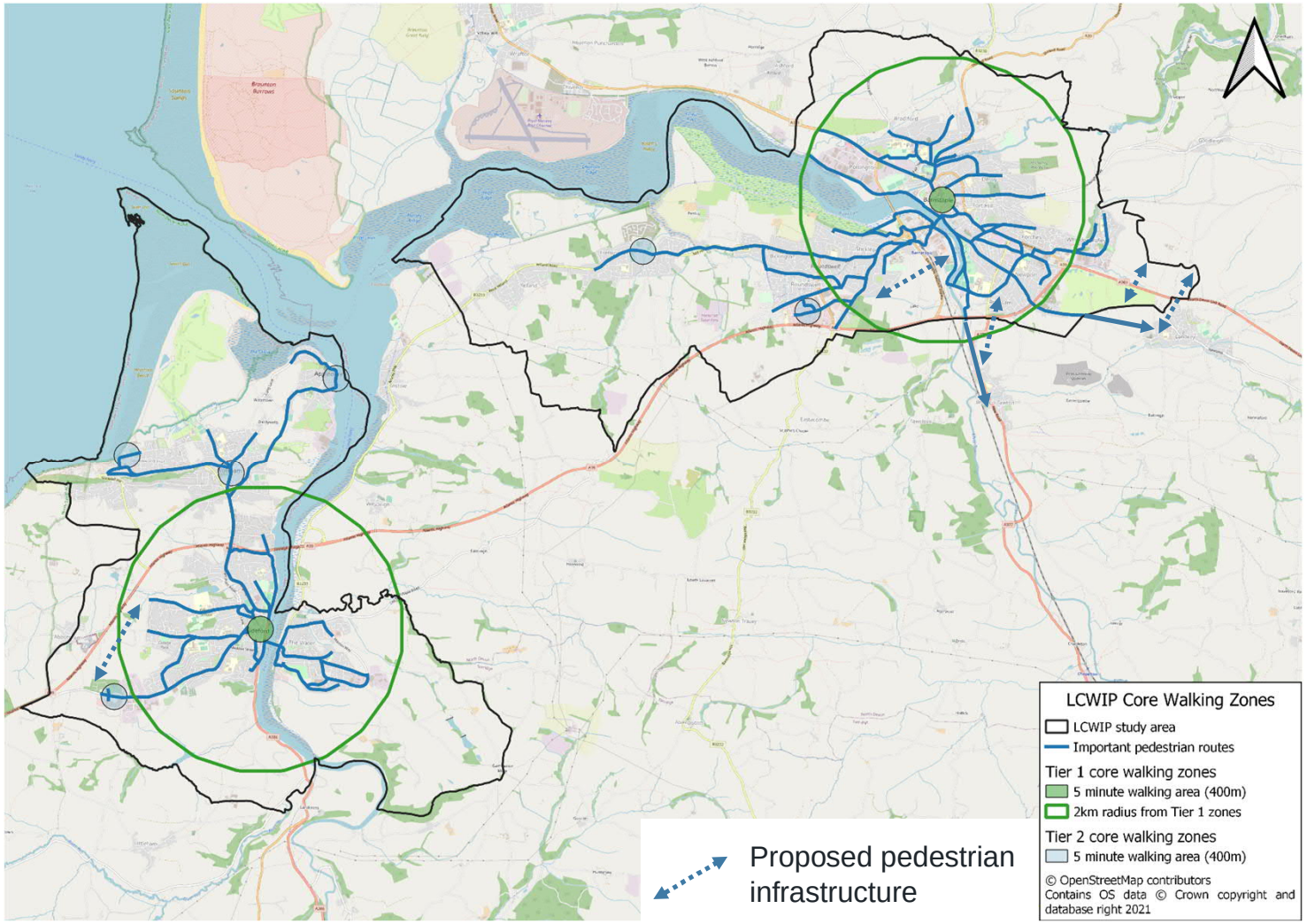
## Identifying walking routes

With the core walking zones identified, key walking routes have been identified.

For the Tier 1 (Town centre) walking zones, the key walking routes serving the cenrtes up to a 2km distance have been considered. These primarily follow key road coridors and existing footpaths.

Key routes that extend beyond these, especially when linking to other waking zones, have also been shown

For Tier 2 walking zones, the key routes have been shown to only go as far as urban extents, as these are likely to see more localized footfall



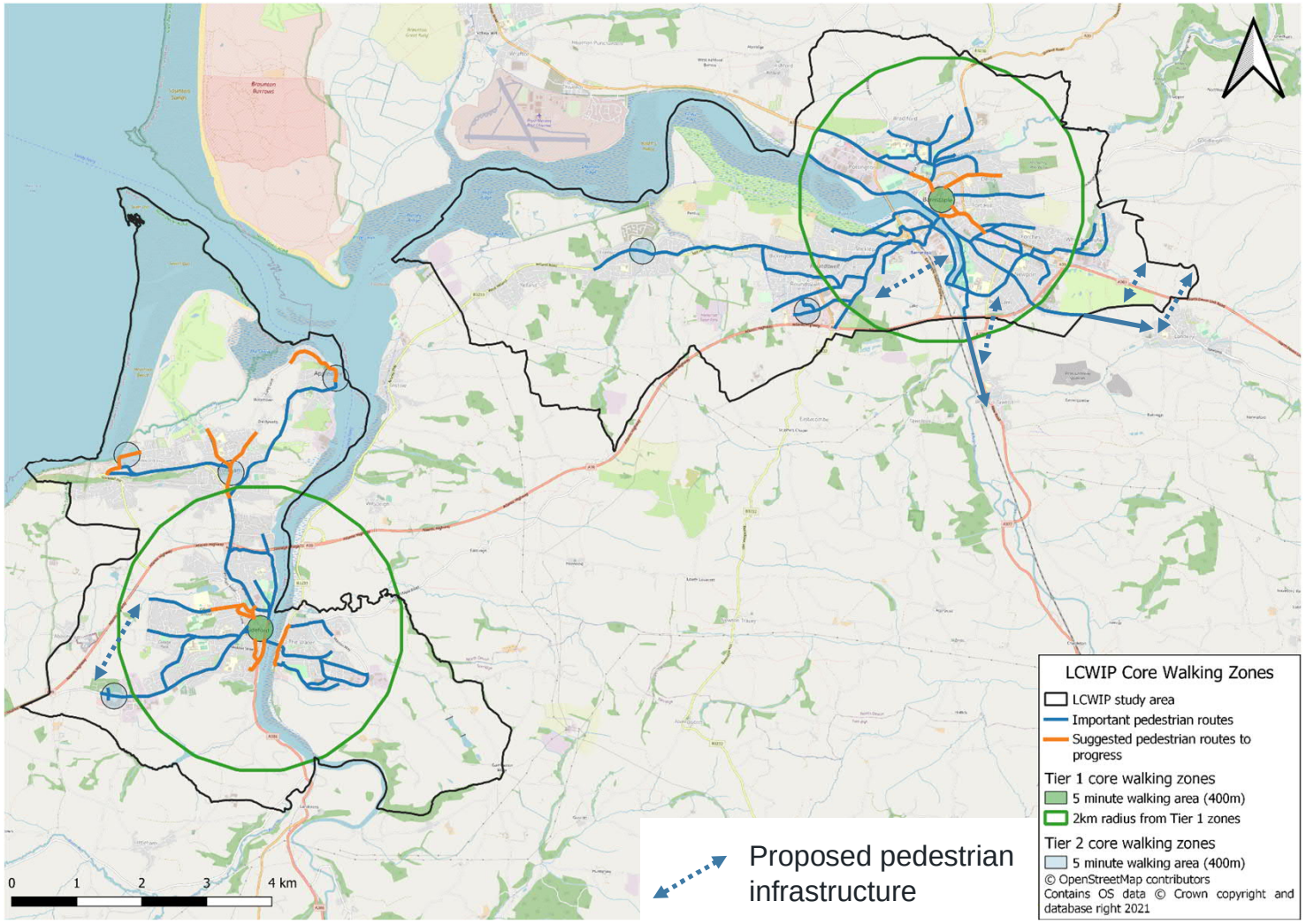
# STAGE 4 STEP D – PRIORITISING ROUTES TO TAKE FORWARD AND FURTHER DEVELOP

## Prioritising routes

Many of the key corridors follow the proposed primary cycling corridors as set out in Stage 3, and so will be audited and improved as part of that process.

An exercise identifying housing density around the study area was undertaken to determine which other routes leading into the identified core walking zones are likely to see the highest footfall. These routes are highlighted in orange below.

Routes which coincide with the previously identified strategic cycle routes are also being audited already for cycle improvements, and so are likely to provide improvements for pedestrians.



# STAGE 4 STEP D – PRIORITISING ROUTES TO TAKE FORWARD AND FURTHER DEVELOP

- We will be taking forward a selected number of routes for this LCWIP iteration
- This is due to the nature of the follow-on tasks (auditing routes + creating schedule of improvements), which can be data-heavy / time-intensive
- Additional routes can be assessed in future iterations of the LCWIP– the LCWIP is a live document

## Alternative approaches to shortlisting key walking routes for assessment

- Input from the steering group
  - Are there any key routes which you feel should be included?
  - Why are these routes important? E.g key links to employment, school, transport
  - What are the key issues along the routes?

- Prioritising the already identified walking routes based on a set of criteria, including:
  - Population density along the route – how many households are served per km or route
  - Barriers to crossing – where are there limited crossings and access points along key corridors
  - Avoiding duplicating improvements along the strategic cycling corridors – these are already being audited
  - Local Plan allocations – which routes could be assessed by developers as part of the planning application process
  - Any other factors which should be considered?

# YOUR VIEWS

## Any General Questions?

- Is the methodology clear?
- Any questions about the process of the LCWIP?

## Interactive Session (Miro)

We would also like your views about the following topics:

- Priority cycling corridors – Are the 6 key corridors identified sensible? Any suggestions based on local knowledge?
- Walking route prioritisation criteria – which routes should be shortlisted for further development in this iteration of the LCWIP and why?

The Miro board can be found at https://miro.com/app/board/uXjVObql4OI=/

# THANK YOU