

# **Cranbrook Masterplan: Transport and movement strategy addendum**

Prepared by East Devon District Council | 2019



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# 1. Introduction

## 1.1 Introduction

This addendum to the transport and movement strategy for Cranbrook advances the themes described in that document to take account of:

- the changes to the design of the masterplan for Cranbrook following consultation responses,
- research and initiatives resulting from the Cranbrook Healthy New Town programme,
- updates to the approach taken by Devon County Council to transport strategy in the area within which Cranbrook sits.

The Transport and Movement Strategy and its addendum form part of a suite of active documents that will influence outcomes at Cranbrook including The Cranbrook Plan Development Plan Document and the Health and Wellbeing Strategy for Cranbrook. These documents demonstrate the multi-sector, multi-agency approach necessary to deliver successful outcomes for Cranbrook and the diverse range of disciplines this involves.

## 1.2 Purpose

Transport is a supporting function. People need to travel to work and carry out their day-to-day activity with ease, without really noticing that transport is an activity or purpose in its own right. The purpose of the transport and movement strategy is to facilitate the good economic, social and environmental function of Cranbrook, where possible on foot, cycle or public transport, while enabling car use travel to be as efficient and sustainable as possible.

Transport remains the single greatest source of Greenhouse Gas (GHG) emissions in the UK making it necessary that we reduce the amount we travel and decarbonise our means of transport. The easiest, most accessible and sustainable mode of travel is on foot if destinations are within easy reach. Settlements designed and masterplanned with pedestrians and cyclists as the predominant road users have a better chance of being sustainable and resilient. However, walking must be integrated safely with other transport modes though design priority is for active or sustainable forms to take precedence.

## 1.3 Aims of this document

The draft Exeter Transport Strategy aims for at least 50% of trips to be on foot or bike by 2033. Although many trips that start in Cranbrook will go to Exeter it is not thought practical to hold the same aim for Cranbrook as a greater proportion of journeys are to commute out of town. The central aims for the transport strategy for Cranbrook will therefore be:

- The majority of all trips being taken on foot, bike or public transport by 2033, setting the physical framework for this proportion to continue rising thereafter
- Take people to their destinations in the most direct and sustainable way
- Where cars are used their routes are efficient but safe for all road users
- Active and public transport routes and infrastructure are well integrated with each other and destinations in and around Cranbrook
- The design of streets and spaces encourages cycling and walking by being safe and attractive
- Reduce the speed and volume of motor vehicles at Cranbrook

# 2. Policy context and background review

## 2.1 Policy context

### 2.1.1 National Planning Policy Framework (NPPF, revised 2019)

The 2018 and 2019 revisions to the NPPF brought clarifications and changes in emphasis that underscore some of the priorities within the transport and movement strategy, particularly around designing for health and wellbeing and sustainable transport.

Chapter 8 of the NPPF (2019) promotes healthy and safe communities, stating that places resulting from planning policies and decisions should promote social interaction, be safe and accessible and 'enable and support healthy lifestyles especially where this would address identified local health and wellbeing needs'(p.27, NPPF 2019). For Cranbrook this means that movement networks should be designed to encourage easy pedestrian and cycle access; streets should be designed as social environments that encourage active and continued use of public areas; street networks should be legible so pedestrians and cyclists feel safe and secure.

Addressing local health and wellbeing needs at Cranbrook with this Transport and Movement strategy will be covered in the review of updated evidence.

### 2.1.2 Cranbrook Development Plan Document

The Cranbrook DPD developed alongside the masterplan for Cranbrook taking account of evidence and consultation responses as these have become available. The objectives for the document remain unchanged. However, the masterplan and policies were updated to reflect evidence and consultation responses. In particular, the policy includes reference to the Healthy Streets Approach used by Transport for London (TfL) in 2014 to address transport strategy and street design from a holistic point of view. The Healthy Streets approach has been included within the Cranbrook Development Plan Document as part of its proposed planning policy strategy to address health and wellbeing.

The Healthy Streets Approach is based around 10 principles that aim to make streets attractive, safe, social environments for people of all ages and walks of life. The design measures that determine whether or not streets fulfil the principles go far beyond transport infrastructure and include good urban, landscape, architectural design, good town planning decision making and good street management.

## This Document's Aims:

- The majority of all trips to be taken on foot, bike or public transport by 2033
- Take people to their destinations in the most direct and sustainable way
- Where cars are used they should give priority to pedestrians and cyclists
- Active and public transport routes and infrastructure are well integrated with each other and destinations in and around Cranbrook
- The design of streets and spaces encourages cycling and walking by being safe and attractive
- Reduce the speed and volume of motor vehicles at Cranbrook

## 2.2 Background review

### 2.2.1 Draft Exeter Transport Strategy (2019)

Although not an adopted document, the draft Exeter Transport Strategy indicates the way in which transport strategy is likely to evolve at Cranbrook's nearest and largest neighbour over the next decade. It sets as its target that at least 50% of journeys within Exeter will be taken on foot or bike.

Traffic congestion in Exeter remains a problem with it being rated the slowest city in the UK as a result (Inrix, 2017). However, Exeter has been successful in encouraging residents to use sustainable transport the majority of journeys starting in the city being by sustainable means.

The Honiton Road into Exeter is currently a bottleneck to bus services given its physical restrictions. Proposals for improvements to this corridor into Exeter that could improve bus journey times and service frequencies are currently being investigated.

Alongside the bus improvements the strategy reiterates the aim to increase train service frequency at Cranbrook to every 30 minutes.

### 2.2.2 Moor Lane Roundabout improvements

Improvement works to the roundabout will take place during 2019-2020, removing this constraint to the

delivery of the number of homes required at Cranbrook.

### 2.2.3 Rail capacity improvements

Cranbrook has its own station and direct connections to Exeter and London Waterloo, but the line is single track for much of its length, limiting the numbers of services at Cranbrook to one every hour in either direction. Increasing the service frequency at Cranbrook would make train significantly more attractive and make a meaningful difference to peak-time traffic.

Discussions are ongoing on building a passing loop to enable services at Cranbrook to increase to at least every half hour. The arguments to provide this loop go beyond service intervals and are of regional and national interest in improving resilience to the rail network into the Devon and Cornwall peninsula.

### 2.2.4 Second rail station

Discussions are still ongoing about whether or not a second station is built at Cranbrook, east of the town centre, accessed by vehicles from Southbrook lane. This second station would improve access to rail services from the eastern part of Cranbrook and would be closer to the town centre. A road link from this proposed station directly to the town centre is not possible as it would need to cross an area of floodplain. However, a direct walking and cycling link would go some way to towards enabling this station to help support the town centre.

### 2.2.5 Rail crossing improvements

The railway forms a physical barrier to connections to Cranbrook from the north. Within the masterplan area there are three road crossings; the Station Road Bridge to the west, Crannaford Crossing by the town centre, and Southbrook Lane to the east. All these crossings are narrow, with Southbrook lane being single track. Only the Crannaford Crossing offers a realistic near-term opportunity for improvement.

The evidence from Space Syntax strongly suggests that it is important for the future success of Cranbrook, particularly its town centre, to maintain and potentially upgrade the Crannaford Crossing to allow people to travel north / south through Cranbrook to neighbouring Broadclyst and Rockbeare and beyond.

The Space Syntax report predicts that as Cranbrook grows the Station Road bridge will see an increase in use. Improvements to the integration of pedestrians and cyclists use alongside increased vehicles would help this become an attractive and safe option for sustainable travel to Broadclyst and other areas north of Cranbrook for those in the western end of the new town.

The Southbrook Lane does not have a great deal of movement through it and there would not be a great increase with the growth of Cranbrook. From the evidence there is no reason to improve or upgrade this route across the railway

**Figure 3.1**

The Healthy Street principles by Lucy Saunders for Transport for London guide the design of streets and spaces in London to make them more attractive, inclusive and better for the health and wellbeing of everyone.  
(Transport for London, 2017)

**Figure 3.2**

The principles from the 2015 Active Design document by David Lock Associates for Sport England. This supports the Sport England strategy to encourage people to lead more active everyday lives, not just through sport.  
(Sport England, 2015)

## The Ten Principles of Active Design:

### **1. Activity for all**

Neighbourhoods, facilities and open spaces should be accessible to all users and should support sport and physical activity across all ages.

*Enabling those who want to be active, whilst encouraging those who are inactive to become active.*

### **2. Walkable communities**

Homes, schools, shops, community facilities, workplaces, open spaces and sports facilities should be within easy reach of each other.

*Creating the conditions for active travel between all locations.*

### **3. Connected walking & cycling routes**

All destinations should be connected by a direct, legible and integrated network of walking and cycling routes. Routes must be safe, well lit, overlooked, welcoming, well-maintained, durable and clearly signposted. Active travel (walking and cycling) should be prioritised over other modes of transport.

*Prioritising active travel through safe, integrated walking and cycling routes.*

### **4. Co-location of community facilities**

The co-location and concentration of retail, community and associated uses to support linked trips should be promoted. A mix of land uses and activities should be promoted that avoid the uniform zoning of large areas to single uses.

*Creating multiple reasons to visit a destination, minimising the number and length of trips and increasing the awareness and convenience of opportunities to participate in sport and physical activity.*

### **5. Network of multifunctional open space**

A network of multifunctional open space should be created across all communities to support a range of activities including sport, recreation and play plus other landscape features including Sustainable Drainage Systems (SuDS), woodland, wildlife habitat and productive landscapes (allotments, orchards). Facilities for sport, recreation and play should be of an appropriate scale and positioned in prominent locations.

*Providing multifunctional spaces opens up opportunities for sport and physical activity and has numerous wider benefits.*

### **6. High quality streets and spaces**

Flexible and durable high quality streets and public spaces should be promoted, employing high quality durable materials, street furniture and signage.

*Well designed streets and spaces support and sustain a broader variety of users and community activities.*

### **7. Appropriate infrastructure**

Supporting infrastructure to enable sport and physical activity to take place should be provided across all contexts including workplaces, sports facilities and public space, to facilitate all forms of activity.

*Providing and facilitating access to facilities and other infrastructure to enable all members of society to take part in sport and physical activity.*

### **8. Active buildings**

The internal and external layout, design and use of buildings should promote opportunities for physical activity.

*Providing opportunities for activity inside and around buildings.*

### **9. Management, maintenance, monitoring & evaluation**

The management, long-term maintenance and viability of sports facilities and public spaces should be considered in their design. Monitoring and evaluation should be used to assess the success of Active Design initiatives and to inform future directions to maximise activity outcomes from design interventions.

*A high standard of management, maintenance, monitoring and evaluation is essential to ensure the long-term desired functionality of all spaces.*

### **10. Activity promotion & local champions**

Promoting the importance of participation in sport and physical activity as a means of improving health and wellbeing should be supported. Health promotion measures and local champions should be supported to inspire participation in sport and physical activity across neighbourhoods, workplaces and facilities.

*Physical measures need to be matched by community and stakeholder ambition, leadership and engagement.*

# 3. Evidence

## 3.1 Cranbrook Healthy New Town

The Cranbrook Healthy New Town programme commissioned research from Space Syntax and the Devon Public Health data analyst team. This research first assessed the performance of the masterplan against Health and Wellbeing criteria, and second looked at how urban form affects health and wellbeing outcomes.

### 3.1.1 Space Syntax Stage 1

The report assessed the masterplan for its direct effect on health and wellbeing, such as the probability of it encouraging walking and cycling, and the indirect effects termed 'the Wider Determinants of Ill-health' in Sir Michael Marmot's report into health inequalities in England (Marmot, 2010). In particular the report looked at the way in which the design of the masterplan would affect social, cultural and economic activity at Cranbrook and therefore the ability of the masterplan to support jobs, retail and entertainment and the ability to form strong relationships within the community.

The evidence suggests challenges to the town centre functioning to its full potential as routes to it within the town are limited. The report also recommends

strengthening east west links throughout the town and avoiding cul-de-sac arrangements to increase connections and route legibility to the town centre.

Space Syntax modelled the impact of closing the rail crossings at Station Road, Crannaford Crossing and Southbrook lane. In each case they found that there was a significant increase in traffic at the remaining crossings while closing the Crannaford Crossing significantly reduces numbers of people travelling to the town centre. The Crannaford lane itself, when linked to the London Road by the completed MLR through Cranbrook, will form an important new north-south link for communities at Broadclyst, Rockbeare and beyond. Their recommendation was to retain and enhance all crossings to provide network resilience, attract people to the town centre and improve connections where existing north-south links are so constrained.

### 3.1.2 Space Syntax Stage 2

Testing the masterplan layout for its efficiency, connectedness enabled recommendations on the distribution of facilities and infrastructure to maximise accessibility to residents and visitors. Space Syntax used a model weighted to reflect the impact of different land uses in and around Cranbrook. This showed significant increase to levels of traffic on Station Road

and the Crannaford Lane as a result of movement to the neighbourhood centres, town centre and employment areas. This reinforced the recommendation to maintain and upgrade these crossings. In contrast, Southbrook lane is predicted to have a very low level of use and upgrading the lane would make little difference to overall network performance.

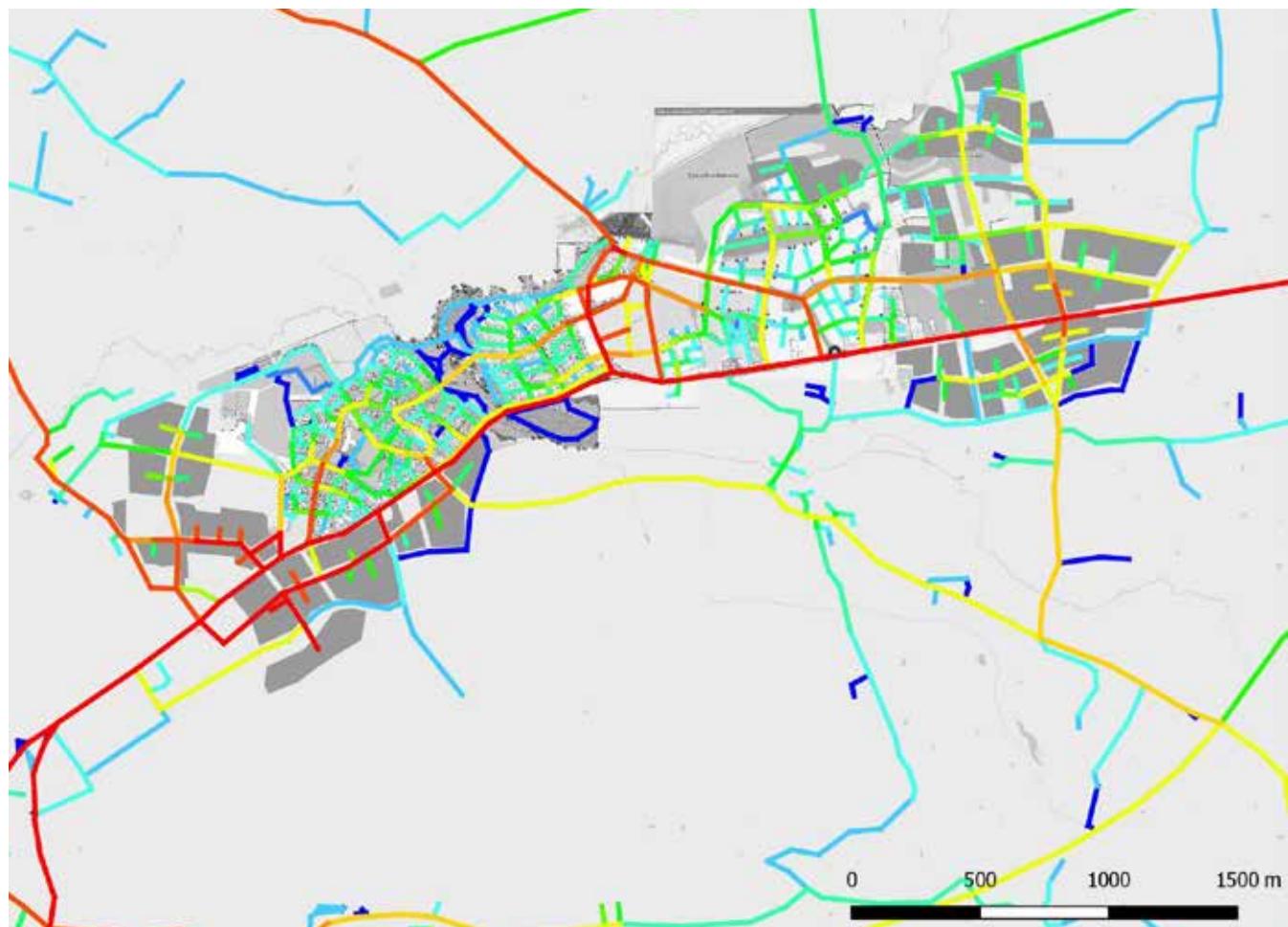
### 3.1.3 Public Health Devon

Public Health Devon collaborated with Space Syntax to understand the interaction between urban form and health outcomes by combining health data aggregated to Lower Super Output Area (LSOA) level with other datasets within the Space Syntax Model.

The results indicate that the suburban form typically seen in modern developments accelerates the development of frailty among residents. Obesity and social isolation, which both carry significant health risks, are strongly linked to this development form. The factors setting these areas apart are their relatively low density, separation of homes from other land uses, streets and urban design that prioritise car movement and lack of legibility with frequent changes of direction and indirect routes to shops and other facilities.

### 3.1.4 Sport England Pilot

Exeter and Cranbrook together form one of twelve Sport England Delivery Pilots that aim to increase the amount of activity in people's lives. The Exeter and Cranbrook pilot is developing a strategy that focusses on systemic change in the approach taken by public sector organisations to ensure they help to create the right environment to encourage more active lives. This, in part, follows the 2015 Sport England Active Design document and the ten principles within it, shown on Page 4 above, which are similar to the Healthy Streets principles but take a wider view than the street itself and address masterplanning principles that help encourage people to walk and cycle.



**Figure 3.3**

The Space Syntax analysis shows the increased use of Station Road and Crannaford Lane as Cranbrook grows.  
Predicted levels of use are colour coded with Red being the highest and Dark Blue the lowest.



# 4. Movement frameworks

## 4.1 Road network

The network of streets and roads at Cranbrook needs to provide direct and legible connections to where people want to go both within and beyond Cranbrook. The network needs to be resilient so that efficient movement can continue should anything untoward or unexpected happen, including traffic diverted from the A30 along the B3174, London Road.

### 4.1.1 Links around Cranbrook

Railway crossings north of Cranbrook are limited to the Station Road bridge, Crannaford Crossing and the Southbrook Lane. All are constrained but only the Crannaford Crossing has any realistic chance of upgrade in the near future. The Space Syntax reports (2017, 2018) make clear the importance of keeping these crossings open and wherever possible to upgrade them, especially the Crannaford Crossing.

Exeter airport and the A30 form barriers to connections south of Cranbrook. Existing connections are either indirect and potentially congested, such as junction 29 of the M5, or are through narrow lanes running through Rockbeare or Frog Lane to Clyst St. Mary. The report points to these lanes having an important role

connecting communities north and south of Cranbrook. They will also provide cycling routes to destinations such as Killerton Estate or Ashclyst Forest and the schools at both Broadclyst and Cranbrook. As such these lanes would benefit from improvement to enable the increased volume of cyclists and motor-vehicles to co-exist safely.

### 4.1.2 Network within Cranbrook

Constraints to east-west movement within Cranbrook, such as the country park and green lanes, were noted in the 2017 Transport and Movement strategy. The Space Syntax report showed the impact that this could have, particularly by restricting movement to the town centre.

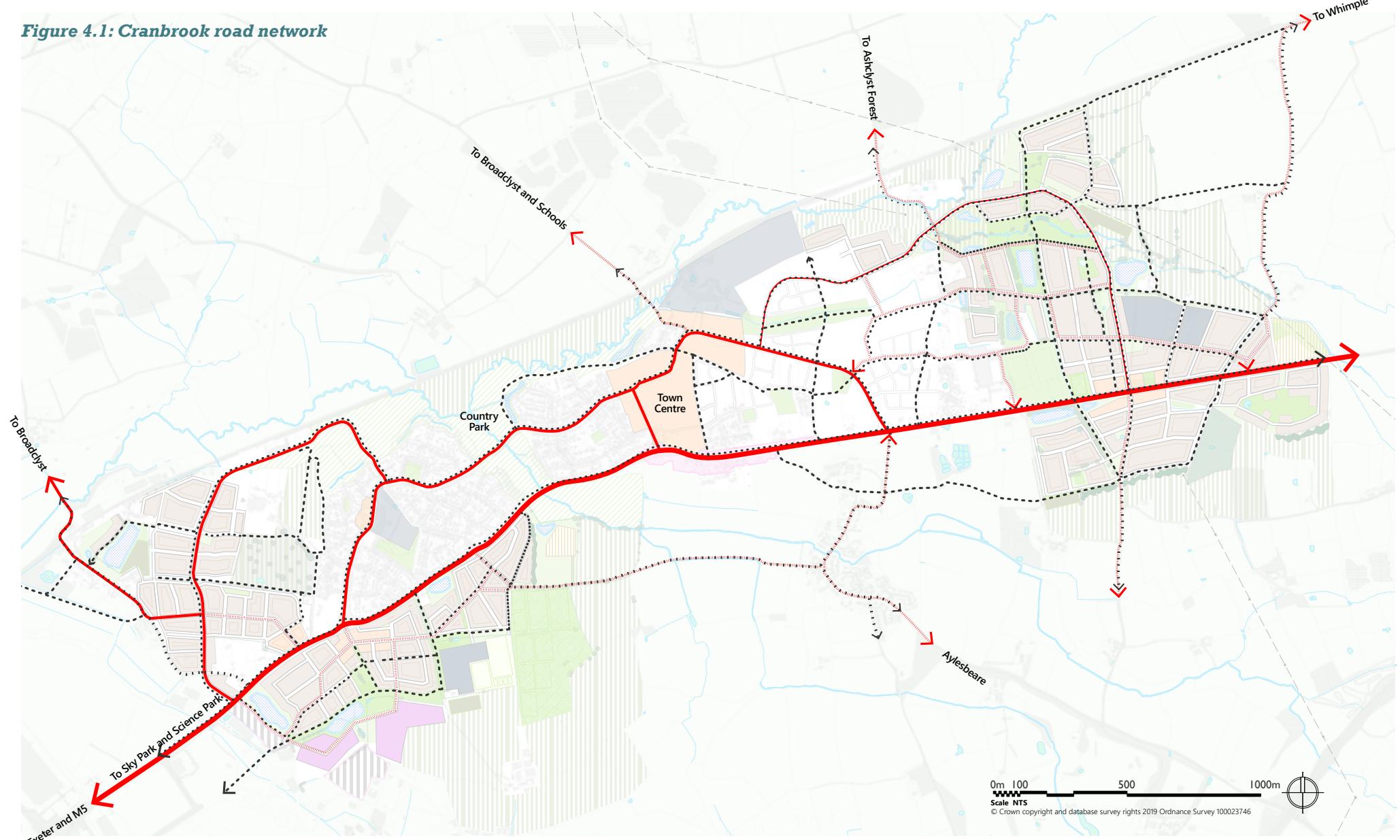
The revised masterplan strengthens east-west links from the existing outline permission into the expansion areas. It is important to the future of the town centre and the wellbeing of residents, that these links are made so the direct, legible routes are possible that encourage people to use facilities in their own town. Without them, people will be more likely to use other town centres, including Exeter, reducing the commercial appeal of Cranbrook itself.

### Key

- Primary vehicle route
- Secondary vehicle route
- Dedicated cycle path in road corridor
- Cycle route sharing road space
- Pedestrian / cycle route away from road
- Cranbrook railway station
- Proposed second station
- School
- Town or neighbourhood centre
- Employment area



Figure 4.1. East-west movement on the road network within the existing Cranbrook permission is restricted to the main local route alone. Movement to the north and south is constrained by the railway and the airport.

**Figure 4.1: Cranbrook road network**

### 4.1.3 Filtered permeability

'Filtered permeability' aims to restrict car use by putting barriers to cars on certain roads while allowing pedestrians and cyclists to pass through.

There is some debate about the effects of filtered permeability in creating safe places. There is less danger to pedestrians and cyclists from cars where cars are restricted, but reducing the passive surveillance from people in cars can leave pedestrians and cyclists feeling more vulnerable to crime. A second concern is that it forces motor vehicles to take longer journeys and concentrates traffic on particular roads, increasing the risk of accidents, noise and pollution often in areas where people tend to be concentrated. It can also reduce the resilience of the road network to incidents by restricting alternative routes. Including filtered permeability within the network should therefore be designed with care to minimise negative consequences.

### 4.1.4 London Road

Figure 4.2 shows destinations in relation to the London Road and where expected pedestrian desire lines interact with it. Where they do, crossing points and public realm improvements are needed to provide a safe environment that encourages people to walk and cycle to destinations within their town.

The London Road was historically a trunk road so has been designed for high traffic volumes and relatively high speeds. As development takes place in Treasbeare and Grange it will become part of the urban space

within Cranbrook and the design must change to it being a place for people using Healthy Street principles and guidance, particularly where it runs through town and neighbourhood centres.

The road will still act as a transport corridor through Cranbrook to Exeter, the motorway and beyond so any new design must resolve a complex brief that allows pedestrians and cyclists to take priority in an attractive and safe environment while buses can operate along it unrestricted by traffic.

The current speed limit on the London Road through Cranbrook masterplan area is 60mph at its eastern end reducing to 40mph from the eastern sports pitches through to its western extent. To bring the road into line with the rest of Cranbrook and to create a safer environment for all users, the speed limit should be reduced to 30mph between the eastern and western entry points to the town with a design speed of 20mph using high-quality public realm around the neighbourhood and town centre areas where there will be active frontage. This is expected to have a number of benefits, including:

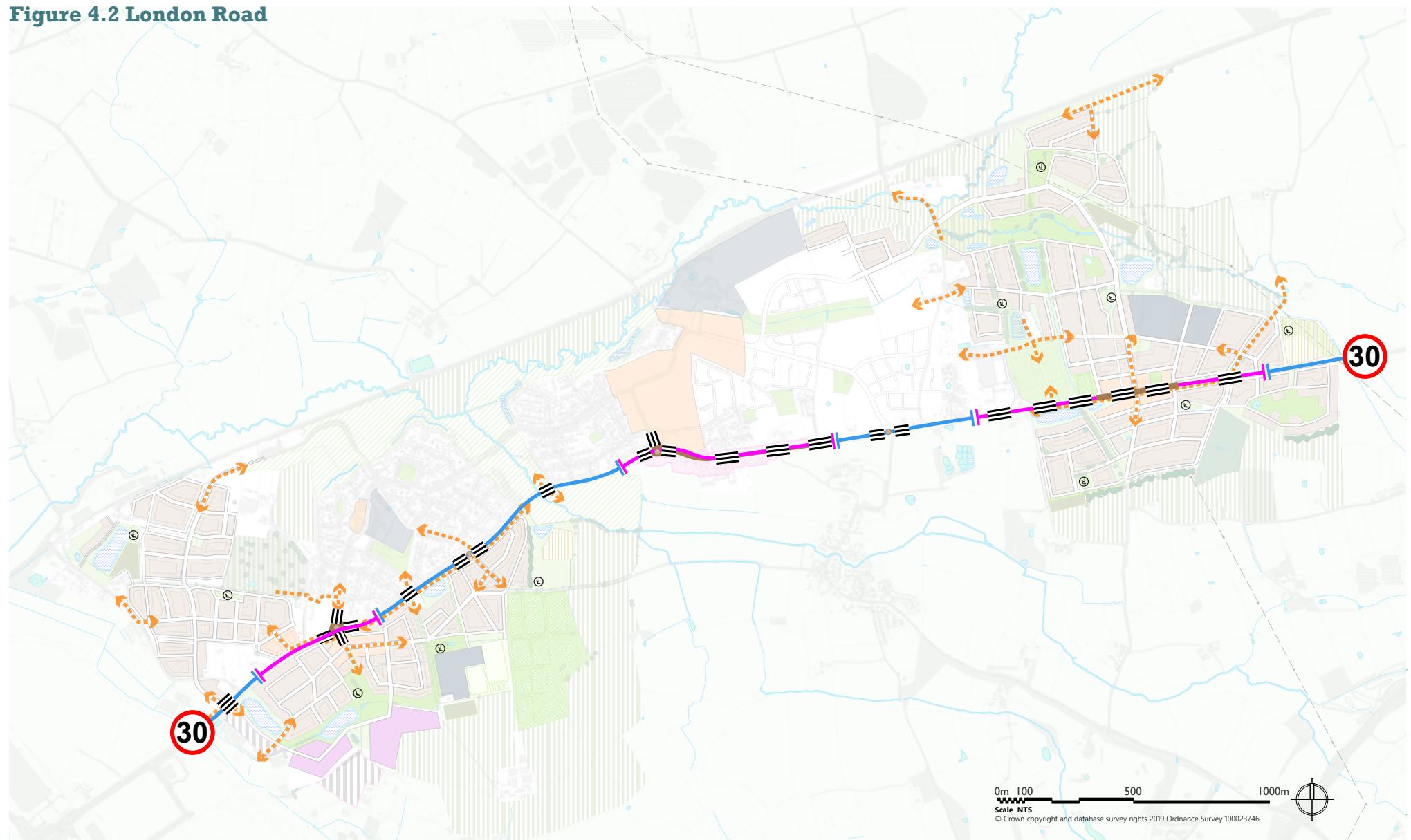
- **Maintaining a consistent speed limit for all roads in Cranbrook,**
- **Reducing the design speed of the road to smooth traffic flow, reduce bunching and congestion**
- **Create a safer environment for pedestrians, cyclists and drivers**
- **Create a more attractive urban environment**

#### Key

	London Road 30mph limit
	London Road 20mph design speed
	Desire lines
	Proposed crossing point
	New pedestrian priority urban space with high quality public realm
	Cranbrook railway station
	Proposed second station
	Play area
	School
	Town or neighbourhood centre
	Employment area



**Figure 4.2.** Expected desire lines in relation to the London Road show a number of places where people are likely to cross or spend time. Commercial areas, town and neighbourhood centres will see active frontages and the road perform as an active and attractive social environment. In these areas urban realm improvements should be designed to achieve a 20mph design speed for the road.

**Figure 4.2 London Road**

- Remove the need to use signalised crossings

Reducing the design speed and designing public realm to slow and calm traffic the London Road should continue to be able to handle occasional high traffic volumes by smoothing the flow and maintaining a consistent average speed. The redesign of the crossroads in Poynton, by Hamilton Baillie associates, is a good example of a 16-20mph design speed combined with good road and urban design reducing congestion while still handling 27,000 daily vehicle movements. The design also uses informal crossings allowing pedestrians to cross the road at will with the design reducing accidents by nearly 70%.

## 4.2 Cycling and walking

### 4.2.1 Streets for walking and talking

Although we think it normal that streets are designed to prioritise vehicles above people, it has only been since the early 20th century that this has been the case after lobbying from the car industry made the pedestrian the problem (Norton 2011). This has reduced people's willingness to walk and reduced people's social circle as streets become barriers rather than places that connect.

The design of roads and streets within the Cranbrook expansion areas should make them part of the urban space, not just a means of getting from A to B and their design must move away from spaces that are dominated by cars to places where people take priority. Their design must allow them to function as social

spaces and be safe for all users, of all ages and all abilities on foot, on bikes and in motor vehicles.

The Healthy Streets approach, developed for Transport for London (TfL 2017), reprioritises streets and spaces away from vehicle use to being places in which people can both move and socialise. This approach should be followed in the design of all streets and spaces in Cranbrook as it expands, including the London Road.

Walking is the most accessible form of transport. It is not regarded as unsafe but pedestrians are categorised as vulnerable road users and are around 13 times more likely to be killed or seriously injured per mile travelled than a driver (DfT 2018), with cars being the main cause of pedestrian deaths and injuries. Children are over-represented in these statistics but habitually walking and using the street as a space to socialise at this early stage in life will help establish a more healthy, rounded lifestyle as they become adults. Making streets safe for children effectively makes them safer and more attractive for everyone, including the elderly and infirm.

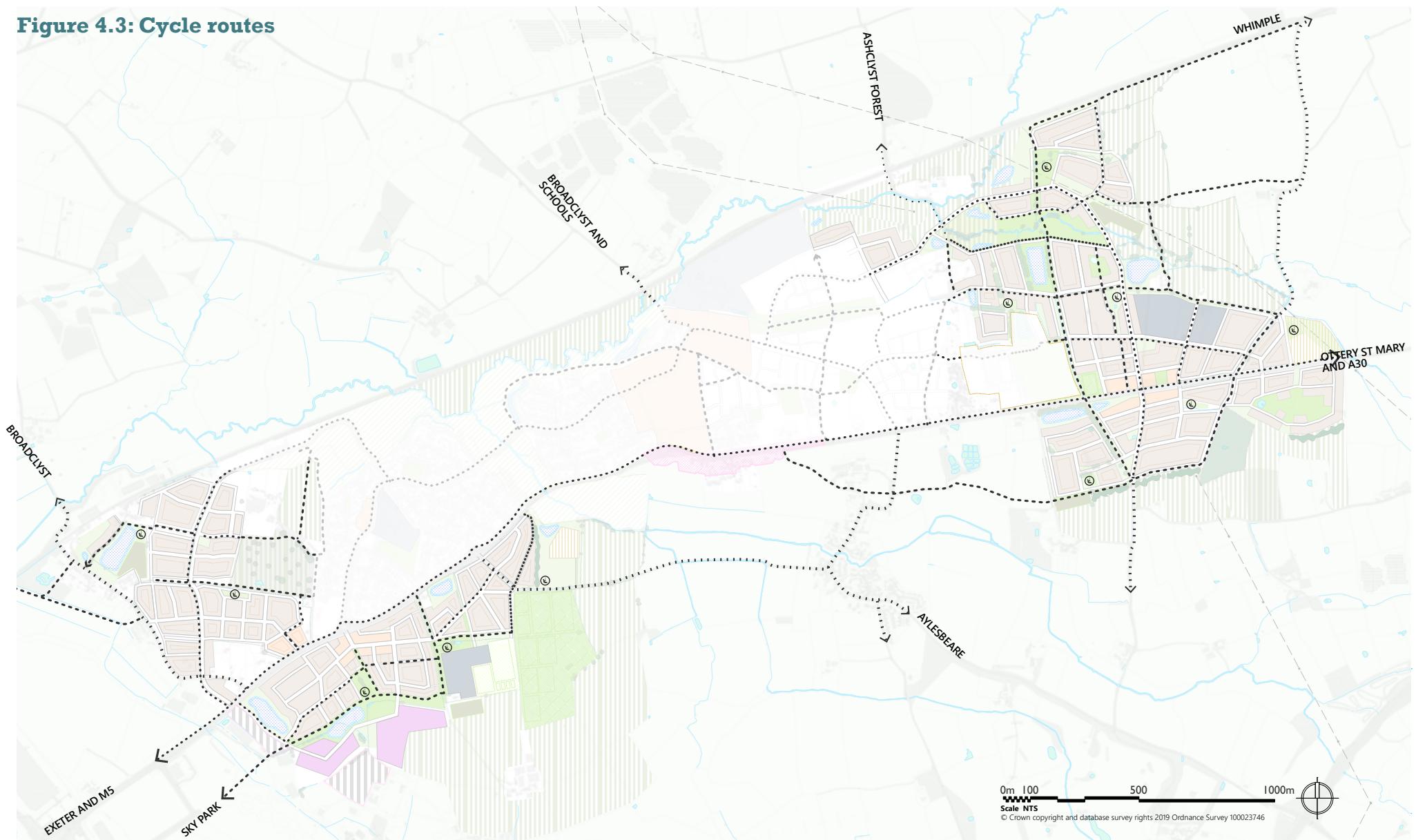
Encouraging people to walk rather than use a car for journeys within Cranbrook needs more than just good street design and legible routes. Mothers with children, the elderly and infirm need places to stop and rest making attractive, safe, sheltered seating an important requirement along routes people are likely to take. To create inclusive street environments the Department for Transport (DfT 2005) recommends a maximum distance between seating in 'commonly used pedestrian areas'

### Key

---	Pedestrian / cycle path away from road
....	Cycle route along 'quiet lane'
....	Pedestrian / cycle route along road corridor
●	Cycle routes within existing Outline Planning Permission
○	Play area
■	School
□	Town or neighbourhood centre
■	Employment area



**Figure 4.3.** There is still a relatively high proportion of the transport network that is dedicated to cycling and walking. All dedicated routes should be designed to have good overlooking to reduce the fear of crime and encourage use.

**Figure 4.3: Cycle routes**

of 50m. Public toilets, cafe's and shelter all increase the level of outdoor activity in older people and the amount of time they spend outdoors and socialising in the urban environment (IDGO 2012).

### 4.2.3 Cycling

Apart from not owning a bicycle, safety is persistently quoted as the main reason people do not to cycle. Although the health benefits outweigh the risks by between 13 and 415 times (Cycling UK 2018), people's concern has some basis in statistics that show cyclists are around 28 times more likely to be killed or seriously injured than a car driver per mile travelled (DfT 2018). The UK lags behind most of Europe in reducing numbers of those killed or seriously injured while cycling and it is notable that cycling is the UK's least favourite mode of transport. The design of roads must change so that anyone using a bicycle feels safe if the necessary move to more active travel is to take place.

Space Syntax research in new towns showed that they tend to have lower levels of cycling and walking than established towns, especially outside their centres where often extensive networks of dedicated walking and cycle routes away from vehicle traffic are underused. The reasons why this might be they were often not the most direct route, and being separated from the main flow of people reduced passive surveillance on cycle paths making users feel more vulnerable to crime. Their recommendation is for roads and streets to be where the majority of people walk and cycle and for them to be designed so people of all ages and abilities feel

safe and secure doing so. This follows Devon County Council advice and statutory guidance (Department for Transport 2012).

Addressing the above dedicated walking and cycle routes should be provided, giving the most direct route to main destinations, should be well overlooked and without sharp changes in direction (Raford et al. 2007). Research into what would encourage young people to cycle suggests that for cycle paths along road corridors the physical separation from vehicles, tidiness of the street environment and whether others are cycling with them are all important factors. In design terms this suggests that cycle paths must have some form of physical barrier, such as a curb, as a minimum with a planted barrier being most favoured (Verhoeven et al., (2017). See also Highways England IAN 195/16 (2016)).

Cycle routes that are not direct should be designed as recreational routes where families with young children can safely practice and get used to using bicycles as an enjoyable and safe means of transport.

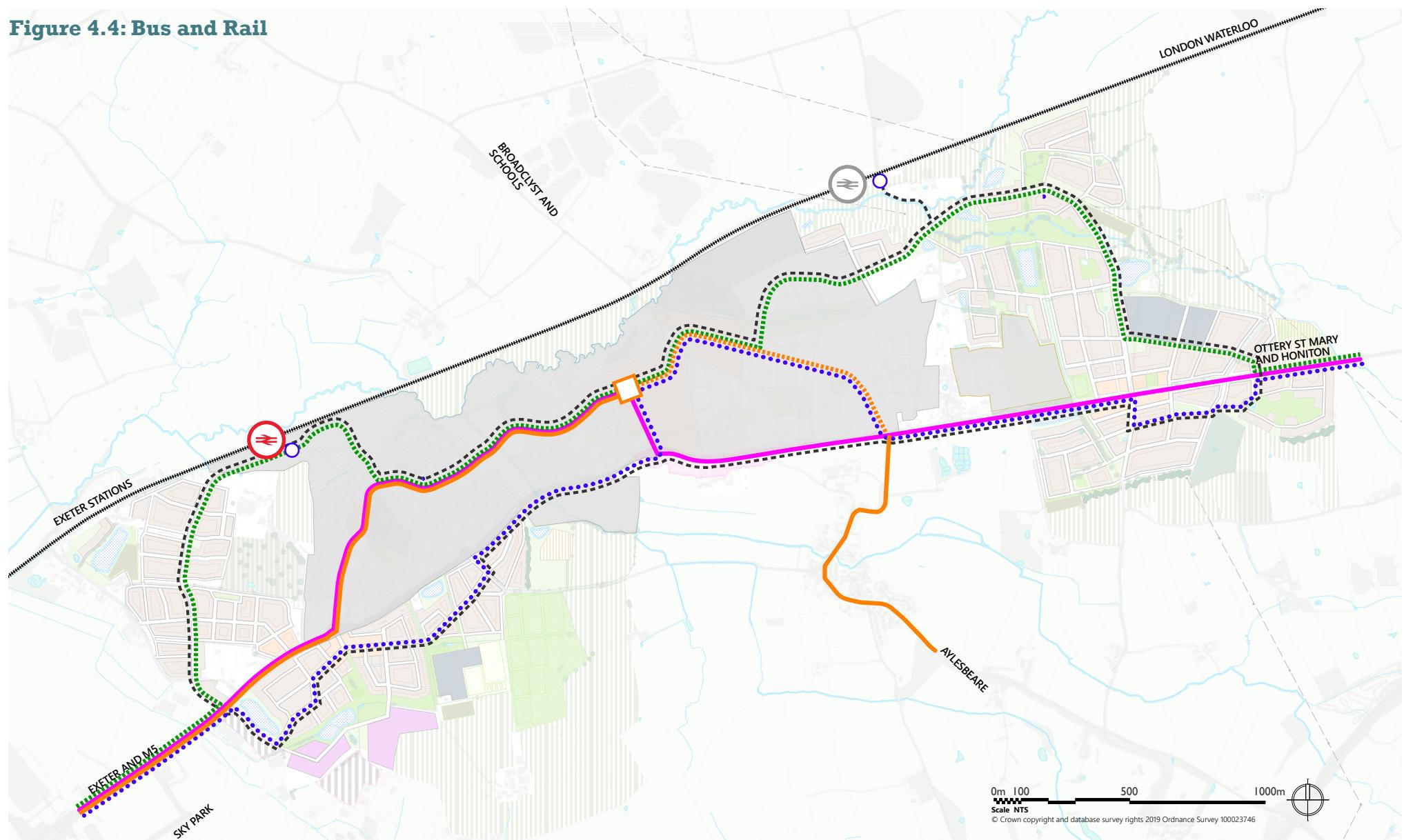
A number of on-road 'quiet lane' cycle routes will take people to destinations around Cranbrook such as the Ashclyst Forest and Killerton Estate. Most of these lanes do not currently have much traffic on them but this will inevitably increase as Cranbrook grows. Upgrading these lanes to be more cycle friendly would help as many are narrow and as vehicle numbers increase it will reduce their attractiveness to cyclists, particularly the families that these lanes aim to attract.

### Key

- Bus - Route 4 to Axminster
- Bus - Route 4A to Honiton
- ... Bus - Route 4A - Future route to Honiton
- ... Bus - Proposed route 4B to Ottery St. Mary
- ... Bus - Proposed route 4C through Treasebeare and Grange to Honiton
- ... Bus - Proposed local loop around Cranbrook
- Bus interchange
- Public transport interchange
- .... Railway
- ✖ Existing railway station
- ✖ Proposed railway station
- School
- Neighbourhood or town centre
- Employment area



Figure 4.4 shows proposed bus routes through Cranbrook, including a dedicated loop service that distributes people to locations around Cranbrook including all residential areas and bus and train links.

**Figure 4.4: Bus and Rail**

## 4.3 Bus and train

When measured in 2016, buses and trains took 11% of journeys in Cranbrook. This is a far higher proportion than comparable communities in the Exeter commuter area and is closer to the figures seen in larger conurbations such as Exeter, suggesting that Cranbrook residents are keen to use alternatives to the car.

### 4.3.1 Bus

Buses are the cheapest and most versatile public transport option, able to go anywhere a road is wide enough and with a timetable only restricted by the availability of buses or drivers.

As part of the developing Exeter Transport Strategy, Devon County Council and Exeter City Council are exploring ways to improve access for busses on the Honiton Road corridor into Exeter. The design of the London Road at Cranbrook should allow for the potential for bus to provide regular, direct and efficient services to central Exeter that are relatively immune to congestion, including when traffic from the A30 is redirected along the London Road.

It would be helpful for routes through Cranbrook to connect to the train stations and co-ordinate with train timetables to enable efficient journeys by public transport. As Cranbrook expands there will be a number of different potential routes to bring all areas within easy walking distance of a bus stop. As with the 2017 movement strategy, a local loop may be the most

efficient way to enable a good bus service frequency to all areas of the town though this may not be run by the regional operator, given the limited population it would serve. The loop could take on the role of linking stations to bus routes as all the proposed routes within this document will be subject to agreement with the bus operators as development progresses.

### 4.3.2 Train

Trains are currently limited to an hourly service as this section of the Exeter to Waterloo railway line is single track. However, it is well used and discussions are ongoing to provide a passing loop on the line that would enable at least double the service frequency.

Research into rail passengers shows that the majority come from within 1km of a station with a marked drop-off in users further away. Without a second station the majority of Cranbrook residents would be further than 1km from a station making distance a likely disincentive to rail use. To address this, the proposed second station would place a high proportion of the population at Cranbrook within 800m radius of a train station.

Uncertainty over whether or not this station will be delivered mean that alternative means of bringing people to rail services should be explored alongside other public transport solutions. These could include co-ordination of timetables with bus services bringing people from more distant parts of Cranbrook, or providing more attractive, secure cycle storage for end-to-end sustainable journeys.

# Key points

## Road network

- 1** All rail crossings at Cranbrook should be maintained. The Crannaford Crossing and Station Road bridge both should be upgraded where possible to be safer and more attractive for pedestrians and cyclists
- 2** Good east west links should be set up from all parts of Cranbrook to the town centre
- 3** Filtered permeability should be well designed to prevent unintended negative consequences
- 4** London Road to have a 30mph limit and crossings both where desire lines meet the road and where there will be active frontages
- 5** Where there is active frontage the design speed of the London Road should be 20mph
- 6** London Road should be redesigned based on Manual for Streets and Healthy Streets design principles, incorporating cycle lanes throughout and bus lanes where possible
- 7** The lanes from Crannaford Crossing to Broadclyst, and those through Rockbeare should be upgraded to allow cyclists to use them safely

## Cycling and walking

- 8** Design streets using Healthy Streets guidance
- 9** Design streets for children and the elderly
- 10** Seating and other public facilities need to be provided at regular intervals
- 11** Cycle paths running along roads must be physically separated from traffic, preferably with planting
- 12** Cycle paths not along roads must be designed and located to have good passive surveillance

## Buses and Trains

- 13** Bus and train timetables need to co-ordinate with each other
- 14** A bus loop around Cranbrook may serve peripheral areas and the stations more effectively than separate routes
- 15** A new passing loop on the railway is necessary to improve service frequency and network resilience

# 5. Expansion areas

## 5.1 Introduction

The design of the expansion masterplan encourages walking and cycling by placing jobs, shops and services within walking and cycling distance of homes while trying to ensure that routes to them are as direct, attractive and legible as possible.

Desire lines have been plotted across each of the expansion areas, linking people with the main destinations that they would want to walk or cycle to. These have been used to locate crossing points and other road infrastructure.

## 5.2 Bluehayes and Treasbeare

The Bluehayes area sits to the west of the existing outline permission for Cranbrook between Station Road to the west and Bluehayes lane to the east.

### 5.2.1 Main road entry

The revised masterplan and movement strategy provides a direct link from the existing railway station to the Treasbeare area at a new junction with the London Road, taking traffic from Station Road. This reduces the traffic at the junction within the mixed use area Bluehayes which could potentially be made pedestrian and cycle only.

### 5.2.2 London Road

Up to the existing roundabout into Cranbrook, the London road running between the Bluehayes and Treasbeare areas feels and functions as a high capacity, relatively high speed route prioritising vehicle movement. Once development takes place either side of it in Bluehayes and Treasbeare the road should take on the same pedestrian prioritisation as the existing road network within Cranbrook, especially the Main Local Route, given the significant numbers of

pedestrians expected to walk along and across the road to get to services such as jobs and schools.

Although development on the Treasbeare side along this section of the road is largely separated from it by an embankment the nature of the London Road must change to become welcoming and safe to pedestrians and cyclists. The desire lines (figure 5.1) show that the majority of people will be walking along the London Road and crossing at the existing roundabout, taking the most efficient route to the neighbourhood centre, school, sports pitches and employment area to the south, and the Younghayes neighbourhood centre, school and station to the north. This suggests that upgrade work to this roundabout to include access into Treasbeare needs to create an urban space that is designed around high levels of pedestrian movement.

On the southern, Treasbeare side, the embankment means the London Road will not be accessible to people along much of its length without steps or ramps being built.

With services and infrastructure located as proposed in the masterplan the desire-lines for pedestrians and cyclists mean that the nature of the London road should change with the priority being for people walking and

cycling. The desire-lines also show that there is little need for a pedestrian bridge to clear the embankment on the Treasbeare side. Instead, investment should be made to redesign the junction at the existing western roundabout into Cranbrook to become an urban space enabling people to cross safely within the new 20mph zone. A further crossing is needed by the district heating plant to enable people to cross to go to the employment area.

Key issues and points for Bluehayes and Treasbeare are show in in the table and Figure 5.1 on pages 22 and 23.

## 5.3 Cobdens and Grange

### 5.3.1 Main road entry

The 2019 Cranbrook masterplan has been amended from that used in the Preferred Options consultation to remove development from the area covered by the Rockbeare Green Wedge strategy (Strategy 8) in the East Devon Local Plan 2013 - 2031. To maintain housing numbers, development has been pushed further east making the built up area for Cranbrook now start next to Bodley Bridge on the London Road.

### 5.3.2 London Road

The design of Cranbrook places the neighbourhood centre for the eastern expansion areas of Cobdens and Grange close to the entrance to the town. This section of the road through to the town centre is largely straight with a design speed of 60mph though it falls to a 40mph speed limit at the Gribble Lane. Coming into a built up area and new neighbourhood centre both the speed limit and the design speed of the road must be reduced for it to be a safe and welcoming area.

The expected desire lines for Cobdens and Grange areas (figure 5.2) are generated by the neighbourhood

centre, nearby sports pitches, proposed train station, the school and SANGS that is in both areas.

Key issues and points for Cobdens and Grange are show in in the table and Figure 5.2 on pages 24 and 25.

## Key points (figure 5.1)

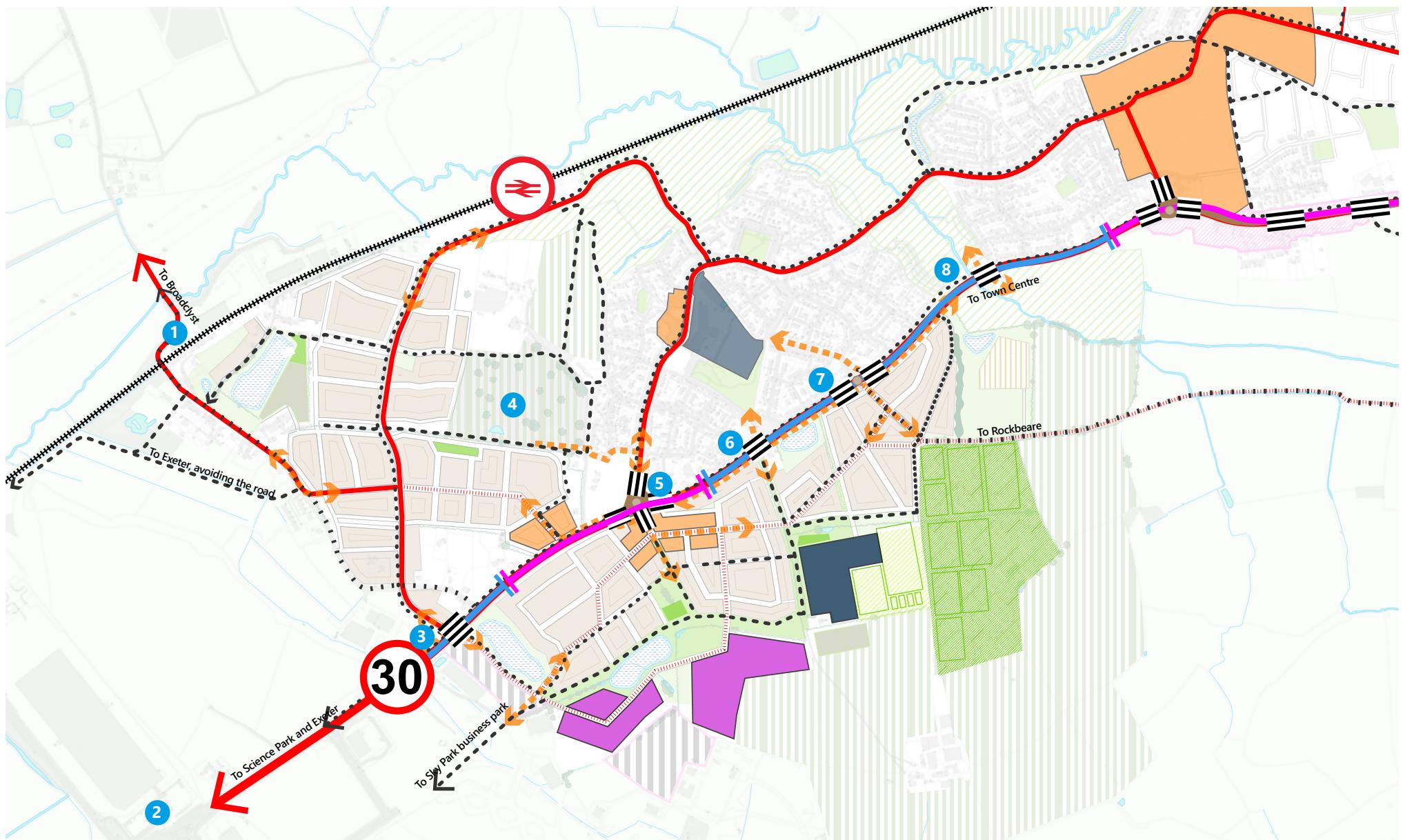
- 1 A predicted increase in traffic means that the Station road bridge would benefit from an upgrade to improve its alignment and provide space for cyclists and pedestrians.
- 2 The junction at the entrance to the Exeter Logistic Park forms a bottleneck to traffic from Cranbrook to Exeter. This is currently under discussion between developers, EDDC and DCC to find a resolution.
- 3 The proposed junction is located so that it does not conflict with the existing entry roundabout to Cranbrook.
- 4 Pedestrian access through the open green spaces in Bluehayes into the existing Country Park is critical to enabling this to function as Suitable Alternative Natural Green Space (SANGS).
- 5 The existing western roundabout into Cranbrook will need to be upgraded to allow access to Treasbeare. This entry point to Treasbeare is also the neighbourhood centre and the natural crossing point across the London Road. This roundabout should be designed as an urban space in which motor vehicles, pedestrians and cyclists can safely co-exist.
- 6 This new crossing forms part of a new pedestrian / cycle link enabling access to the primary school in Younghayes and the proposed primary school and sports pitches in Treasbeare.
- 7 The existing roundabout will need to have an additional arm to allow better access to Parson's Lane to Rockbeare Village and the Treasbeare expansion area. The design will need to cater for significant pedestrian and cycle movement as people cross to shops and services in both areas.
- 8 The crossing point between the two sides of the existing Country Park has poor visibility and will likely need to be signalled as a result.

**Figure 5.1: Treasbeare and Bluehayes**



**Figure 5.1.** The Bluehayes and Treasbeare expansion areas will create a new entry point to Cranbrook. The London Road at this point will need to be designed to ensure drivers and other road users are aware that they are entering a low speed urban area where pedestrians and cyclists share the road space and have the priority.





## Key points (figure 5.2)

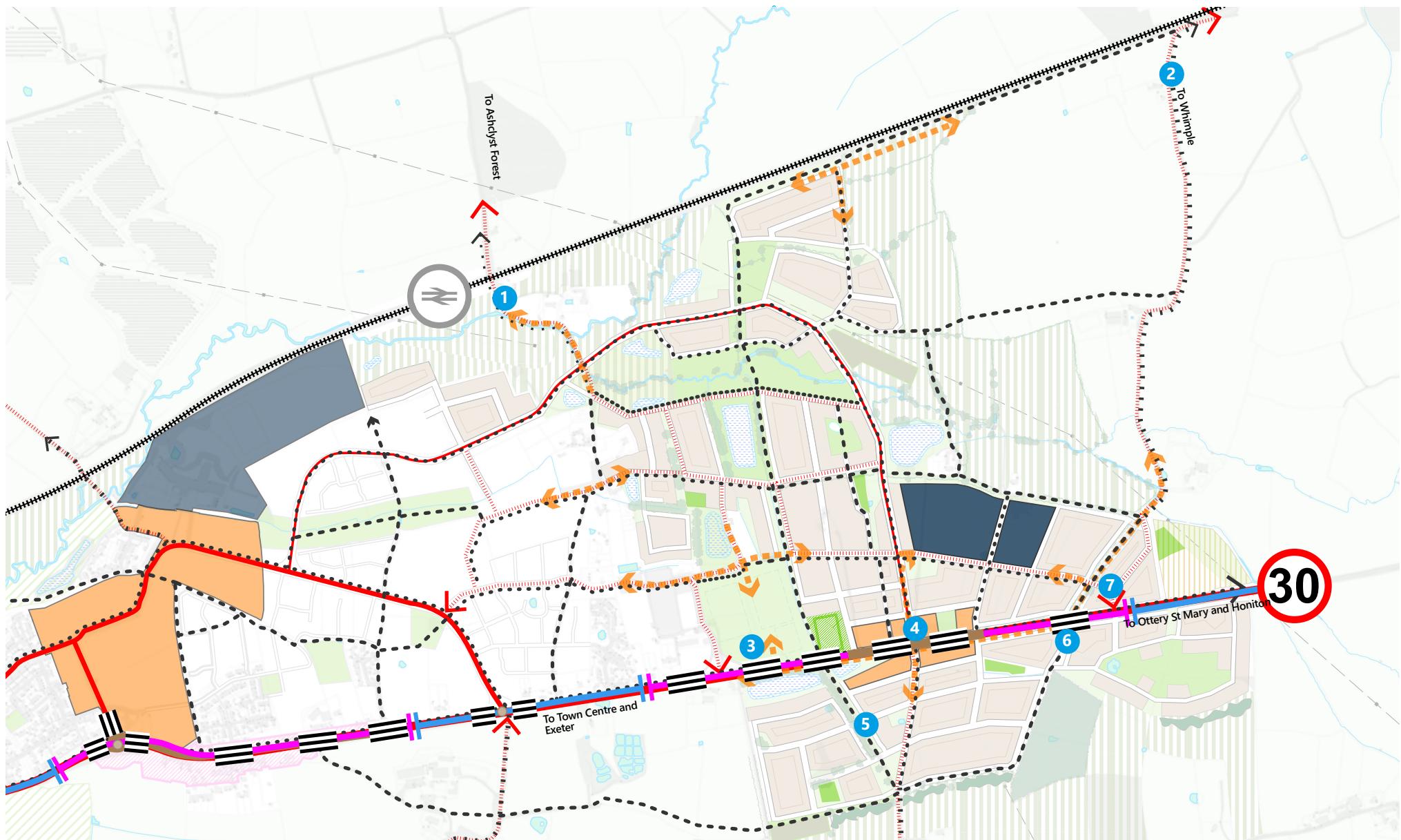
- 1 The proposed second station will be designed to cater for people arriving on foot, by bike or bus rather than car given lack of space for parking and the narrowness of the Southbrook Lane
- 2 Cobdens Lane is a narrow lane that could become an attractive cycle route to Whimple
- 3 The eastern sports pitches are immediately west of the expansion areas and will need their own crossing points
- 4 The neighbourhood centre serves both expansion areas and will benefit from passing trade on the London Road. This will need to be carefully designed to calm traffic and enable this centre to thrive as a hub for the community
- 5 Gribble Lane will be closed to motor vehicles where it passes through the Grange area and will be a dedicated pedestrian and cycle route. A new vehicle route will enable a direct connection across the London Road into the Cobdens.
- 6 A new pedestrian cycle link across the London Road will enable access to routes between the SANGS areas and to Whimple
- 7 The current access to Cobdens Lane is poor. A new junction is needed to provide better visibility and capacity, maintaining this important link to Whimple

**Figure 5.2: Cobdens and Grange**



**Figure 5.2.** The Cobdens and Grange expansion areas will create the new Eastern entry point to Cranbrook. The neighbourhood centre is shared by both areas on either side of the The London Road. A low design speed and good urban design will be needed to create a safe and welcoming environment for pedestrians and cyclists.





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