

# Berwick upon Tweed Sustainable Travel Audit

Developing a programme of works for active travel in the Town Centre

January 2015



# 1 Town Centre Audit

## Introduction

Facilities for pedestrian and cycling were recorded within the town centre boundary in order to inform future improvements to the area. This section begins with key observations regarding Berwick, followed by the issues that affect the primary retail and town centre streets.

The location and format of key pedestrian and cycling infrastructure was recorded, including: drop kerbs, ramps, hand rails, stairs, foot/cycle bridges, underpasses, sub-standard lengths of footway, pedestrian refuges, zebra crossings, Puffin crossings, Toucan crossing, shared paths, cycle routes (off and on road), advisory cycle lanes, cycle parking, pedestrian/cycling signage, obstructive street furniture, pedestrian areas/zones. Full details of the audit and photo index are included at the end of this report.



An interactive map showing locations and features of the audit, as well as recommendations that follow in this report is available at: <http://tinyurl.com/BerwickTravelAudit>

## 1.1 Castlegate

The street connects the north of Berwick to Marygate and the primary retail area to the South East via Berwick's train station. A number of existing independent shops and restaurants line Castlegate alongside flats and residencies, though this street is noticeably quieter than Marygate in terms of footfall.

The average annual daily flow (AADF) on the street is between 12,400 and 14,800 vehicle per day. This is a considerable flow of traffic considering a population of just 13,265 and highlights the extent of visitors and residents passing through the town centre.

Footway widths are generally suitable at 3.2m and 2.2m on the South and North sides respectively. The single carriageway however is particularly wide at 13m to 11.4m (West and East). Parking bays along the street are frequently used. The perception of users on foot and bike is that vehicle speed is relatively low but in large volumes and frequently congested throughout the day (including weekends), meaning that crossing the street can be particularly hindered.

## 1.2 Marygate

Marygate is the only street in Berwick that can boast reasonable public space allocation, with essentially a widened footway that stretches from the town hall to the junction with Golden Square (A1167). Vehicle access is still allowed on Marygate which restricts pedestrian movement in this busy shopping area. Taxi, loading and disabled parking bays are allocated but defining these bays

requires a large amount of bollards. There is ample planting and seating on the street that is frequently used throughout the day

Policy M41 pointed out consideration as early as 1992 to introduce a one way system at the junction of Lower Marygate and the A1167. A decision was suspended on the grounds that visitors unfamiliar with the town may be discouraged from accessing the town centre. It is highly recommended that the safety and convenience of visitors on foot should be considered over complete vehicle access.

Traffic levels on Royal Tweed Bridge that is linked to Marygate via Golden Square indicate between 14,000 and 17,000 vehicles per day (AADF) highlighting the extent of traffic that pass through this main thoroughfare. Footfall is high on Marygate, calculated at 171 persons per 10 minutes on a Market Day, dropping to 116 on a Non Market Day. Both values are higher than the National Small Towns (122/90) and North East Small Towns (154/115).

Marygate performs as the focal point of the town with its busy shops, central location and architectural landscape. Hence, improvements should be developed to create a meaningful 'destination' on the street and for the town itself.

### 1.3 Bridge Street



Bridge Street is a characterful street made up of a diverse range of boutique and independent shops, cafes and restaurants. Permeability on Bridge St is good, with a number of side streets that allow access onto Marygate, 'The Maltings' to the north and parts of the town wall to the south. However, footway widths are less than 2m (1.1min; 1.9m max) along its length.

Two-way vehicle traffic creates a particularly uncomfortable environment for pedestrians and cyclists due to the scale of the street and it is common to see people stepping into the carriageway to pass slower users, prams, signage, bins and other street items. Hence, overall accessibility is very poor on Bridge Street specifically the access to the street at

either end of the road at:

- The transition onto Berwick bridge.
- Hide Hill/ Sandgate/ Bridge St corner- high perception of danger and large distances to cross on foot (including Sandgate).

Bridge St is considered to be somewhat cut-off from the rest of Berwick for these reasons.

### 1.4 Hide Hill

There is less retail density on Hide Hill, with a larger proportion of service businesses such as banks, estate agents and restaurants. The



street is built on a higher gradient and a short climb for users on foot, which presents views to the town wall in the south and beyond.

Due to its wide carriageway, low vehicle speeds, lack of road marking and parking along its length, the street resembles a car park that is a busy traffic space for large portions of the working day. Footway widths are not adequate for this type of street and shop frontages are blocked by parked cars. Furthermore, the many side streets (Silver St, Woolmarket and Sandgate) break up the continuity of the footway.

The corner that adjoins Hide Hill to Sandgate and Bridge Street is a serious pinch point for vulnerable users as a proportion of users must first cross Sandgate and avoid vehicles that are continuing down the hill (onto Sandgate). This does not create a welcoming entrance to Bridge St and the businesses along the way, as well as Quay walls and the Quayside, both of which are very poorly served on foot and as such often overlooked by visitors to the town.

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## 2 Network and Street Development

### Introduction

Berwick is a busy shopping town set in an historical backdrop. Rather than propose a combination of new cycle specific routes and improvements to the carriageway, an ambitious set of improvements is required to restore the character of this town that is marred by large volumes of cars that dominate the streetscape and restrict the movement of shoppers, residents and tourists on foot. This is compounded by narrow footways in many areas of the town centre between shops and busy roads that put pedestrians in close proximity to moving traffic.

In reality, the independent shops and businesses in the town centre are in some way competing with two relatively new retail centres to the North and South in Tweedmouth. Berwick Town Centre has been incrementally adapted to allow complete access for vehicles. In many ways this must be addressed in order to offer a different experience for visitors to the Town that allows users on foot or bike to freely explore its historical, attractive and diverse context that cannot be found at the out-of-town retail park.

This chapter outlines proposals that include:

- Town 'Gateways' public space allocation improvements at Castle Tce/ North Rd and Bridge End/ Main St/ Union Brae onto Berwick Bridge;
- Castlegate and North Rd two way hybrid cycle track to Marygate for improved access to schools, train station, town centre and residential areas to the north;
- Marygate public square and shared space;
- Bridge Street shared space area;
- Berwick Bridge pedestrianisation.

The restriction of vehicles in these areas would also allow/ require the junctions at the entrance to Royal Tweed Bridge to be simplified. Filtered permeability is the principle followed in many European towns in order to restrain car use and Berwick has many existing features that enable it to be easily adapted for improved access on foot. Vehicle access into town is superficially 'tapered' with routes highlighted to main car parks around the outside of the town centre and some side streets for access to shops and homes, rather than serve as a main road through town. Car parks themselves should be reorganised to improve safety and appearance of these areas, as well as maximise existing space.

The following observations were key in developing the recommendations for this report:

- A distinct lack of public space, parks and public realm within the town centre boundary, which would normally be core to a historical town.
- Marygate and Castlegate divide the town due to lack and quality of crossings as well as high volume, low speed traffic.
- Hazardous pinch points at footways at a number of corners and streets, such as lower Marygate and Bridge St.
- An easy circular route through the town centre encourages and endorses car use and convenience for motorists.
- The Town wall and other off road routes are obscured from view and should be highlighted wherever practical.

- The stretch of road from the Castlegate tunnel and entrance to the ‘Cooperative’ car park and two subsequent roundabouts towards Marygate cause a considerable impasse for pedestrians and blockage for vehicles.

## **Speed Reduction**

Establishing a town-wide 20mph speed limit in Berwick would be highly recommended for making safer streets in addition to the physical measures. This speed limit should encompass the residential areas that surround and lead into the town centre. In areas where shared space measures are to be implemented, the street design itself should encourage drivers to travel at walking speeds.

The safety benefits of 20mph are well established: recent Department for Transport road casualty data show significantly lower casualty rates on 20mph roads and a 2009 study of London speed limits found that the introduction of 20mph zones was associated with a 42% reduction in road casualties. The benefits of 20mph reach beyond road safety, increasing social interaction, physical activity and improved air quality and noise levels.

## **2.1 Town Centre Gateways**

Gateway areas and features are an effective method of creating a welcoming entrance into a town that serves to create an appealing public space that encourages visitors on foot or bike. Interventions usually comprise of junction redesigns, landscaping features, trees and planters, public seating, artwork and improvements to lighting.

### **Berwick Bridge Gateway**

Following the removal of vehicle access on Berwick Bridge (see 2.4, below) the junction at Bridge End, Main Street and Union Brae at Tweedmouth should be redesigned to provide a large public space and pedestrian gateway into the town from the south and west. This could also include a reasonable space for car and coach parking that could be reallocated from existing highway that would no longer be necessary. This entrance from the south-west would help to encourage more footfall on Bridge St which would be the first port of call by visitors on foot or bike from this part of town, as well as providing a safe route into town for cyclists from Tweedmouth, Spittal and further afield.

### **North Road/ Coronation Park Gateway**

A second gateway would be recommended at the entrance to the Castlegate railway bridge, where visitors arriving from the North (as well as the station) are currently greeted by a lacklustre entrance to the town (further improvements to the bridge are described in 0 Bridge Street). This new public space scheme would coincide with the revitalisation of Coronation Park on the north/ west side of the bridge and town centre and help create a safer, more attractive link to the park from the town. The NCN passes the entrance to this park and proposed gateway, which is considered to be a dangerous area for cycling and on foot due to the width of the junctions that encourage higher vehicle speeds. Hence, soft landscaping and trees would be included in the design to provide continuity from the open space to the north into the newly renovated park to the south.

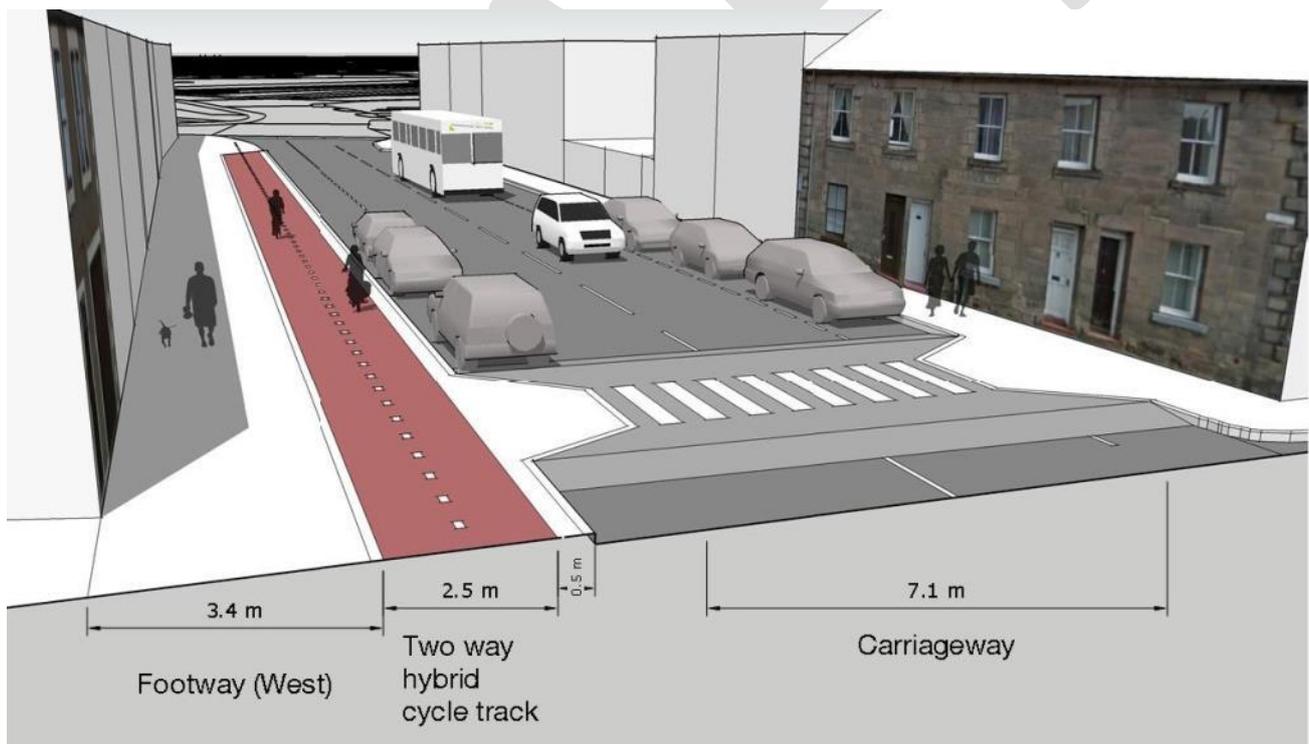
## 2.2 Castlegate

Following current conditions cycle specific infrastructure is required on this street, as it suffers from high congestion that can impede cyclists as well as restricting pedestrian movement across it. The average annual daily flow (AADF) on the street is just over 13000 vehicles per day.

A two way 2.5- 3m hybrid cycle track along the length of Castlegate on the West side of the street would provide an efficient and safe route into town for cyclists (see Figure 9, below). Parallel parking along the street could be retained on either side from Tweed St to Railway St and protect the hybrid lane users from the carriageway. Parking would be broken up intermittently with builds outs and zebra crossings to allow pedestrians across the road.

Effectively the hybrid cycle lanes on North Rd would require the removal of the two mini roundabouts at Northumberland Ave and Railway St. These roundabouts are poor environments for cyclists and pedestrians alike that can deter less confident users. Hybrid lanes would allow excellent access to and from the Railway station, school and holiday park that create a significant amount of important trips to the area. A transition from one way tracks to a two way track immediately south of Railway St/ High Greens will be needed but could be introduced at a crossing point.

Tracks would enable crossing points along the street, which could be broken up with planters and trees on the median as well as build outs in the parking bays every 10-20m to break up the parking bays and create a number of shorter crossing points.



## 2.3 Marygate

This important shopping street lies in the heart of Berwick and should characterise the town as a thriving, welcoming destination for visitors. Restricting vehicle movement along Marygate is vital for allowing complete freedom of movement and safety for pedestrians, as well as providing a more attractive environment for all users. A shared space environment may also be considered if continuous access is required to The Maltings, to create a one way vehicle route along West St and Eastern Ln.



Figure 5: Pedestrianised space enables a variety of leisure and cultural activities to take place.

A town square and pedestrianised space on Marygate would create a focal point in the town. This would also enable some of the businesses to use the space adjacent to their shops or restaurants.

A landscape feature with integrated seating would be well placed on Marygate, to create an exciting space that in some way reflects the identity and history of Berwick. The design should take into consideration Berwick Market or other public events, or even future events.

## 2.4 Berwick Bridge

The need to protect this ancient bridge is as crucial as creating a safe and welcoming entrance to Bridge Street, the Quayside and the south of the town. Despite previous considerations to create a one way with cycle contra flow on the bridge, the width of the bridge is not sufficient for use as a safe and comfortable route into town. It would not be recommended to introduce a cycle contra flow on the bridge, as a width of 4.3m is required to allow cars and bikes to pass safely at 20mph. In order to accommodate this, footways widths would have to be reduced to 0.6m each side. Widths are currently 1.4 and 1.2m wide on each side respectively and are already uncomfortable and inadequate for pedestrians and visitors into Berwick.



Figure 6: Elvet Bridge (Durham) pedestrianised street and bridge.

Hence, prohibiting vehicles on this street would be highly recommended for improving pedestrian access and entirely justified considering the proximity to Royal Tweed Bridge to the north. This would also significantly reduce the amount of traffic on Bridge St that use the street as a thoroughfare to the bridge heading south.

Vehicle access onto the bridge should be removed and ideally a level surface created across the length of the bridge. Two options could be considered for a new layout:

1. A shared space surface on the bridge would be consistent with new street layouts recommended for other streets. Soft landscaping such as benches and planters could be strategically placed to create resting places and viewing areas at the abutments, for example.

2. A median two-way cycle lane could be accommodated using a coloured treatment, infrequent cycle marking and signage at the entrances to keep the bridge itself free of signage but indicate how the bridge should be used by cyclists and pedestrians.

Improved lighting on the bridge with sympathetic, architectural columns down the centre of the bridge to highlight the structure and route, as well as providing some segregation (if required).

The combination of improvements on Berwick Bridge as well as a shared space on Bridge St would allow some improvement to the entrance to the Quayside area. This would welcome more visitors to this hidden area of the town that is poorly accessed.



**Figure 7: Visualisation of Berwick Bridge improvements**

The improvements to this area of Berwick could be trialled for limited period of time (2 weeks- 1 year) in order to test the long term impact of the design and traffic management concerns.

## **2.5 Bridge Street**

A shared space environment on Bridge Street would be an ideal upgrade for this unique shopping street. Vehicle access would still be allowed for accessing the shops and residences on the street but essentially traffic volumes would have been reduced following the closure of Berwick Bridge to vehicle traffic.

## **2.6 Hide Hill**

Vehicle access would still be needed on Hide Hill but the wide street would allow a number of improvements. A widened footway on the west side would continue past Bridge to improve this route and link the shopping streets. Rearranging the parking bays on the east side would serve to realign the through road but maximise public space.

## 2.7 Local Corridors

Outside the town centre, Highfields to the north and Tweedmouth to the south-west are large residential areas within walking distance to the town centre.

### Highfields and North Rd

Ample road widths, wide footways and grass verges along the North Rd would allow for a significant redesign to provide two way hybrid cycle tracks into the town centre that will continue onto Castlegate. The route is well used by school children arriving to schools in the town, as well as local journeys. Quiet access roads into residential areas are relatively frequent along the street which would enable continuous cycle tracks with priority crossings.

At the south of North Rd road widths are narrower without footways on the West side. A grass verge would be replaced by cycle track.

The junction with Castle Tce should be redesigned to simplify this junction and reduce vehicle exit/ entry speeds along this existing cycle route (see also 2.1 Town Centre Gateways, above). Pedestrian crossing facilities should also be provided here to improve access in this space.



The Bridge itself could be improved with the removal of the existing guard railing and trief kerb that blight the entry into the town. Pending a structural review, cycling provision would be continued across and adjoin the roundabout at Northumberland Ave. Hybrid lanes or segregated footways would be lined with planters to separate from the carriageway, visually narrow the road and provide some traffic calming.

### Tweedmouth and Main St

Main St and Northumberland Rd are main roads that are particularly unpopular with cyclists due to the road widths and volumes of traffic that are heading towards the retail parks in this area. Large hatched areas run down the centre of the street would allow for a reallocation of space and mandatory cycle lanes up to Union Brae from the Swan Centre (sports centre). At this point, users would join the existing cycle provision on the shared footway towards Royal Tweed Bridge or head east towards Berwick Bridge along Union Brae.

### Berwick Holiday Park Link

Data collected from AMT-I suggests that 48% of shoppers in the town centre were classed as tourists (originate from a postcode more than 30 mins drive away) while a second source suggests that 51% of these 'staying visitors' were in static caravans (Millers, 2013). Hence, it could be argued that up to a quarter of visitors to the town centre are based in the various campsites spread across Berwick, the largest of which lies approximately 0.5 miles to the North of the town- Berwick Holiday Park.

An existing footpath follows the boundary of Magdalene fields Golf Course from the Holiday Park entrance to The Barracks



Parade, via an underpass in the Ramparts. This is an attractive, traffic free route that should be upgraded to create a more inviting and cohesive route to maximise potential users. The shared surface should be upgraded and widened to accommodate cyclists. Low level street lights should mark the route, or alternatively, integrated path solar lights are a cost effective solution that also does not create excessive light pollution. Signage at either end of the route should include walking and cycling times to destination.

## 2.8 Berwick Ramparts

The ramparts town wall is currently a popular tourist route around the town centre but also serves as a traffic free, alternative route for accessing many parts of the town. It is understood that much of the Ramparts and Barracks are owned and operated by English Heritage therefore further investigation and negotiation will be needed before any improvements could be made along the ramparts.

Footpath widths are currently not adequate in some places while two parallel routes exist in other places. At certain parts of the ramparts there is a hazardous sheer drop of 5-10m which should be considered for future improvements.

The following improvements would be recommended to improve the town walls for access on bike:

1. **Access:** gateway removal and replacement with bollards. Improved ramps and signage at Berwick Barracks, Bank Hill and Ness St. (Regardless of ownership complications with English Heritage, other access improvements should be considered including cycle parking and route signage).
2. **Route signage** and way-finding: consider NCN signage and maps along the route, in line with new destination signage outlined in 2.11, below.
3. **Route widening** and marking: parts of the existing footway should be widened to minimum 3m wherever possible and converted to a shared use path, with clear road markings (rather than signage) to instruct the use.

## 2.9 Highfields off-road path

An existing path from Highfields to Northumberland Ave at the north of town could be developed to provide a safe, continuous and traffic free route from Highfields directly into town. Further investigation will be needed regarding land ownership and the feasibility of widening or modifying this section of path through the golf course. The following improvements are necessary to create a continuous route:

1. Magdalene Dr path entrance: footpath entrance at the end of the bridge (over main railway line) should be widened to a minimum of 3m. Timber gateposts and bollards should direct users onto the new path but draw their attention to the adjacent golf course and hazards of crossing near to its path.
2. Golf course path widening and resurfacing. The start of the path lies close between 10<sup>th</sup> hole green and 11<sup>th</sup> hole tee area but at some distance from at least two other greens. Hence, there is some risk of golf balls colliding with users on the path, therefore barriers may need to be built, using fencing or ideally landscaping.

## 2.10 Artwork and Cycle Tourism



Figure 10: Place-making encourages cycle tourism- The Coast to Coast (C2C) signage at Whitehaven

Installing artwork along cycle routes are an effective way of highlighting routes and attracting visitors to local routes. It would be highly recommended to emphasise both the Coast and Castles (NCN 1), Pennine Cycleway (NCN 68) and Sandstone Way that pass through or terminate at Berwick upon Tweed. The town is a key destination for these routes and a significant piece of artwork would celebrate this fact, as well as serve as a destination for cyclists and visitors. 'The Anchors' have been installed at the Quayside in Berwick, which are integrated into signposts but are a somewhat lacklustre celebration of the routes.

Generally, visitors along the 200 mile Coasts and Castles route travel from South to North to finish in Edinburgh. Berwick forms a crossroads in the route where an alternative route can be made that continues along the coast, rather than continue inland via the Scottish Borders. A Coast and Castles related artwork would be most suitable as a wayward marker at a significant, public location.

The 355 mile Pennine Cycleway is also a noteworthy recipient of signage artwork as the route terminates or passes through the town. Marygate, the Quayside or the Ramparts at Bank Hill are all suitable locations for such a location, including benches and cycle parking to enhance the public spaces as well as marking the end of the route.

## 2.11 Cycle Parking

One of the barriers to residents and visitors accessing local towns by bike are a lack of convenient and safe cycle parking. Small and frequent bike stands in visible locations can encourage people to cycle that would normally use other modes of transport.

Cyclists generally want to park as close to their destination as possible, not only for convenience but for security concerns of leaving a locked bike unattended. Fortunately, cycle parking is very space efficient and requires little or no maintenance costs when compared to typical vehicle parking. In order to reinforce the transport hierarchy, cycle parking should be sited as close as possible to the final destination or main access of buildings. Experience suggests that where this is not the case cyclists are likely to 'fly park' in locations that are convenient to them.

Berwick is adequately served by cycle parking, with cycle stands at five locations across town (see Figure 11). However, many of the locations are poorly sited such that they are not visible to most users, particularly Walkergate, Berwick Train Station and The Maltings car park. New locations have been chosen to create an extensive network of convenient cycle parking around the town. Locations have been assigned as 'primary' (green) for multiple bikes or 'secondary' (red) for single bikes (see Annex 5 for examples of cycle parking solutions). Primary locations have been chosen at key locations, schools and entry points into the town (eg Berwick Bridge end). Other locations have been chosen for convenient locations around the town centre to serve individual shops and destinations.

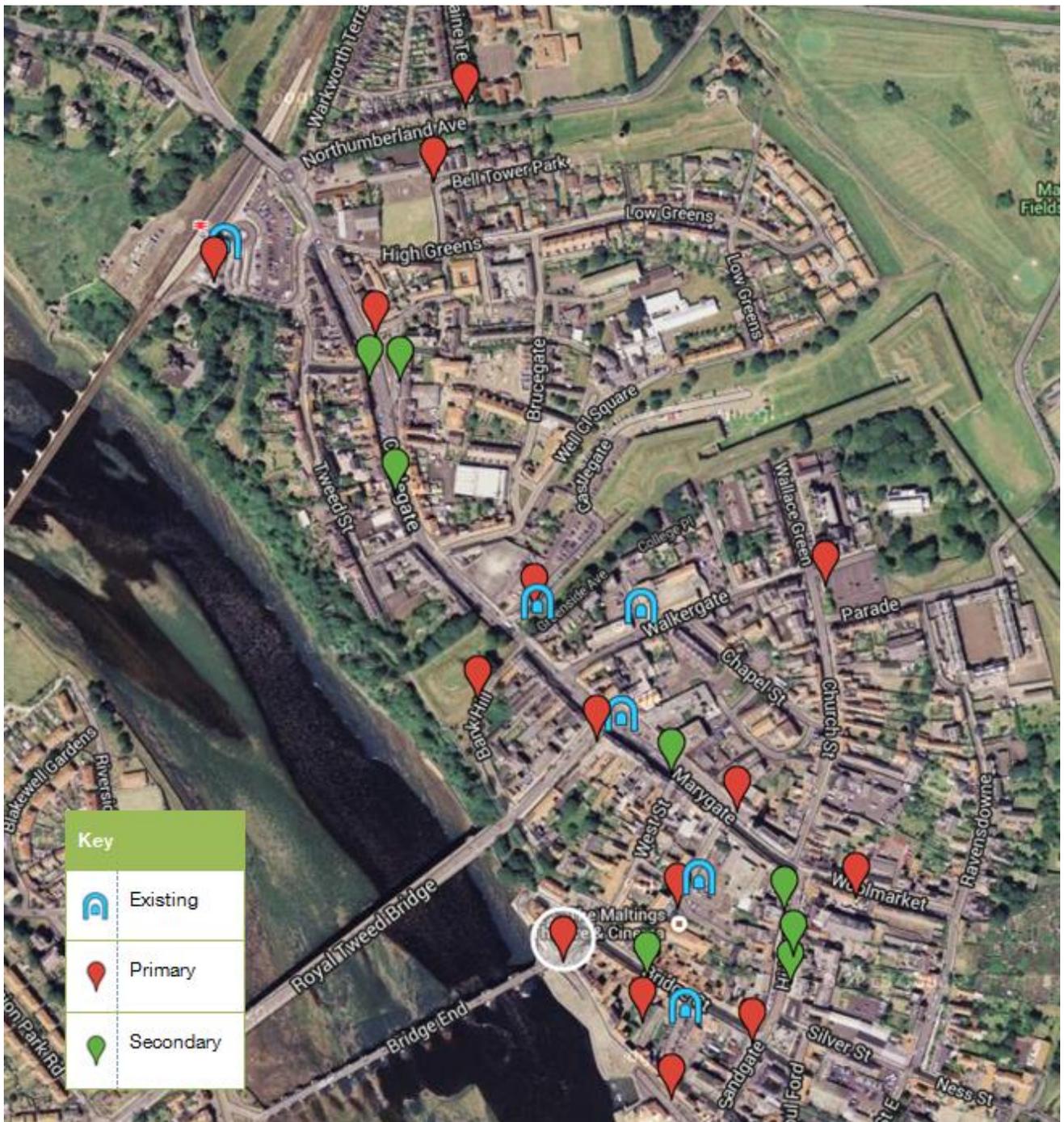


Figure 11: New and existing cycle parking locations.

## 2.12 General Improvements and Upgrades



### 2.12.1 Signage

Current signage in Berwick is adequate and a well-marked Lowry tour of the town takes many visitors around some of the quieter areas of the town centre, particularly around Berwick ramparts. Cycle and walking route signage is not only an important feature for way-finding, but serves to encourage and reassure users of safe and continuous routes. A new signage scheme with consistent and clear signage is an important aspect of signage design. As with other towns and cities, Berwick contains a range of signage and information boards at transport hubs, public spaces and visitor attractions. It is highly recommended that new signage is commissioned that integrates cycle and walking route signage, visitor attractions and key public transport services.

### 2.12.2 Green Streets

An urban cycle network should ideally be developed based on a grid width of 250m using a combination and variety of cycling provision. Berwick town centre contains a mix of commercial units (shops and offices) as well as a large number of residential homes or flats. Green Streets are small areas of soft landscaping and plants that are integrated into typical roads or footways. Rather than introducing more areas of concrete or paved surfaces, natural 'parklets' are grown to encourage biodiversity and reduce rainwater run-off, hence they are often used in areas that are prone to localised flooding or ponding.



Figure 13: Palace St landscaping- maximises green spaces in dense residential areas.

Berwick-upon-Tweed contains many hidden charms behind tightly packed streets and the ancient town wall that intertwines the town. Grassed areas such as the example on Palace St should be highlighted wherever possible, using flower beds, benches and even playground equipment. Furthermore, reallocation of road space could maximise the space available for parklets and green space.

## 2.13 Network Development Summary

### 2.13.1 Major Developments

	Ref	Scheme	Description
Priority ⇌	(4.1)	Berwick Bridge and Bridge St street trial	Street closure trial on Berwick Bridge and access only on Bridge St Street furniture and planting.
	4.1	Berwick Bridge Gateway	Public square redesign Car and coach parking Landscaping and street furniture items.
	4.5	Bridge St	Shared space treatment: footway and kerb removal, surface treatment and paved crossings at side roads.
	4.1	North Road/ Coronation Park Gateway	Footway widening and junction redesign Landscaping features.
	4.3	Marygate improvements	Shared space treatment: continuation of paved area; public space features.
	4.6	Hide Hill	Footway widening and minor street redesign Bridge St entry features.
	4.2	Castlegate Hybrid tracks	Construction of 2 way cycle track 3no raised table crossings Junction redesign.
	4.11.1	Integrated Signage	Town centre way-finding Walking and cycling routes Public transport information

## 2.13.2 Further Improvements

	Ref		Description
← Priority ⇒	4.7	Holiday Park link	Signage and route modifications
	4.7	Tweedmouth/ Main St cycle lanes	1.5m cycle lanes, modifications of existing road markings
	4.8	Town wall access	Replacement of gates with architecturally sensitive bollards at up to 6 locations.
	4.1, 4.10	Destination artwork	Commission and installation of commemorative route artwork.

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