Design

South Gloucestershire Council
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A432 Proposed Improvements

Design summary

To provide improved facilities for buses and people walking, cycling and wheeling, we are proposing the following:

- **A two-way cycle track alongside a separate footway** at some sections of the A432**.**
- **One-way stepped cycle tracks on both sides on the road with separate footways in Coalpit Heath**.
- **Shared use paths** have been proposed where there is insufficient space to provide a separate footway and cycle track.
- **New or upgraded crossings** to allow safe access to the new walking, wheeling and cycling facilities and to improve access to bus stops.
- **Bus infrastructure improvements.**
- **Junction improvements** to improve safety for all users.
- **Reduction in speed limit at Station Road from 30mph to 20mph.**

Further details are provided in the following sections:

Bus infrastructure improvements

We are proposing to extend the existing southbound bus lane that begins south of Ruffet Road junction by approximately 80metres south to end at the Cuckoo Lane junction.

Improved bus stop facilities are proposed along the A432 to meet a consistent standard for accessibility by providing raised kerbs. Other improvements such as information provision and bus shelters will be provided where feasible. In many cases, existing bus shelters will be retained, for example, the existing stone-built bus shelter for the southbound bus stop located at the Down Road/Ruffet Road junction.

The removal of bus stop laybys, and replacement with bus shelters, at the following bus stops has been proposed to improve journey time for buses.

- Northbound bus stop north of Cuckoo Lane
- Southbound bus stop at Park Lane junction
- Southbound bus stop near Bell Road/Southview Crescent junction (St Saviour's Church)
- Eastbound bus stop east of Nibley Lane

In some cases, it may be necessary to relocate some bus stops to enable these improvements or to improve accessibility to users. The following bus stops will be upgraded and relocated:

- Southbound bus stop north of Cuckoo Lane relocated approximately 100m south.
- Northbound bus stop located south of Ruffet Road relocated slightly north to the Ruffet Road junction.
- Southbound bus stop south of Station Road (Coalpit Heath) relocated north of the junction.
- Southbound bus stop located south of Rose Oak Lane relocated north of the junction.
- Northbound bus stop located north of Church Road junction to be relocated approximately 60metres north.
- Westbound bus stop at Nibley Lane north junction to be relocated approximately 40 metres east (away from the junction) and the existing bus layby to be replaced by a footway.
- Eastbound bus stop east of Westleigh Close relocated slightly east to provide space for a new signal-controlled crossing.
- Eastbound bus stop located east of Longs Drive relocated west of Longs Drive to provide space for a cycle track and separated footway.

Bus stop bypasses have been proposed along the A432 where cycle tracks approach a bus stop. A bus stop bypass is where a protected cycle track is routed behind a bus shelter or passenger boarding area at a bus stop. This separates people using the footway and cycle track and those waiting/alighting from buses therefore improving safety. Zebra crossings are provided at bus stop bypasses to allow pedestrians to safely cross the cycle track and access the bus shelter. Bus stop bypasses have been proposed at the following locations.

- Northbound and southbound bus stops near Station Road (Coalpit Heath)
- Northbound and southbound bus stops north of Beesmoor junction near St. Saviour's church.
- Northbound and southbound bus stops located near Heathcote Drive/Rose Oak Lane
- Northbound and southbound bus stops near Church Road junction
- Eastbound bus stop east of Nibley Lane
- Eastbound bus stop east of Westleigh Close
- Eastbound bus stop west of Longs Drive
- Eastbound bus stop east of Mow Barton

<u>Walking, cycling and wheeling improvements.</u>

We are proposing to provide a protected cycle facility along the A432. This consists of a two-way cycle track on some sections of the road and one-way cycle tracks in Coalpit Heath alongside separate footways. Shared use paths have been proposed where there is inadequate space to provide a separate cycle track and footway. The shared use paths have been designed according to guidance where a minimum width of 3metres has been maintained to provide adequate space for all users.

The proposed shared use path/two-way cycle track with separate footway is located on the eastern side of the A432 from Wick Wick roundabout to Coalpit Heath. The two-way cycle track transitions to one-way cycle tracks on both sides of the road in Coalpit Heath where it continues north to tie in with the existing one-way cycle tracks north of Coalpit Heath, thereafter transitioning to a two-way cycle track at Nibley Lane junction that runs up to the Westerleigh Road/B&Q roundabout in Yate. New or improved high quality crossings have been proposed at key locations to provide connectivity and improve safety for people walking, cycling and wheeling. Details on the stand-alone crossings provided along the route are shown in Table 1.

The proposed cycling, walking and wheeling facilities have been designed to meet the standards set out in the Cycle Infrastructure Design guidance (LTN1/20). In some sections of the A432, the hatched central reserve will be removed to provide space for the proposed cycle track/shared use path. Traffic lane widths will be maintained at a minimum of 3metres wide. The two-way cycle track will be 3metres wide except for Station Road where the cycle track will be 2.5metres wide due to space constraints. A 0.5-1metre separator has been proposed between the carriageway and the cycle track to enhance safety of users. The one-way cycle track will have a varying with of 1.5-2 metres. The cycleway will be separated from the footway by a demarcation kerb, therefore separating cyclists' movements from pedestrians. At locations where pedestrians need to cross the cycleway, a zebra crossing has been proposed to provide safety. For example, at bus stop bypasses where pedestrians need to safely cross the cycle track to access the bus shelter.

The proposed one-way cycle tracks in Coalpit Heath will be stepped cycle tracks. These are cycle tracks that are raised above the carriageway but sit below the level of the footway. They are space efficient, allowing the provision of cycle tracks within Coalpit Heath. We are proposing to use coloured surfacing along the stepped cycle tracks to improve visibility of the cycle tracks at night and in foggy conditions, this will improve safety of users.

Station Road is an important gateway into Yate, as well as being home to a diverse range of businesses and popular community facilities. We are proposing to reduce the speed limit within this section from 30mph to 20mph to make it easier for people to access businesses by walking, cycling, wheeling and by public transport.

We have proposed the following crossing types along the A432 and side roads:

Crossing type	Description
Puffin crossing	This is a stand-alone signal-controlled pedestrian crossing.
Parallel crossing	This consists of a zebra crossing alongside a separate cycle crossing. This type of crossing gives pedestrians and cyclists priority, improving their safety.
Signalised parallel crossing	This is a signal-controlled crossing where pedestrians and cyclists are separated.
Toucan crossing	This is a signal-controlled crossing shared between pedestrians and cyclists with no separation between them. A shared use path is suitable on either side of these crossings to avoid conflict among users.

Pegasus crossing	This is a signalised pedestrian crossing with special consideration for horse riders.
Uncontrolled crossing	This is a crossing without traffic signals, stop signs, or other forms of traffic control.

We have detailed the type, location and benefits of the proposed crossing improvements along the A432 in Table 1.

Table 1: Proposed crossing improvements along the A432

Crossing no.	Crossing location	Drawing No.	Crossing type	Existing, New, Upgraded	Reason for crossing
1	North of Cuckoo Lane	16	Toucan crossing	Upgraded	Provide access to bus stops, shared use path and Cuckoo Lane.
2	Between Ruffet Road and Down Road junctions with A432	17	Combined Toucan and Pegasus crossing	Upgraded	Provide access to Down Road/Ruffet Road, the shared use path and bus stops.
3	South of Park Lane junction	18	Puffin crossing	Upgraded	Provide access to Park Lane, bus stops, Huckford Lane and the burger layby.
4	North of rail viaduct	19	Signalised parallel crossing	Upgraded	This crossing allows for the transition of the two-way cycle track to one way cycle track on both sides of the carriageway.
5	North of Station Road	19	Signalised parallel crossing	Upgraded	This crossing provides access to Station Road and the bus stops located nearby.
6	North of Bell Road/Southview Crescent	20	Puffin crossing	Upgraded	Provide access to residences on both sides of the carriageway and bus stops.
7	South of Church Lane	20	Uncontrolled	Removed	Signal controlled crossings have been provided north of Bell Road/ Southview Crescent and north of Woodend Road. These crossings adequately serve the area removing the need for the existing uncontrolled crossing.
8	North of Woodend Road	20	Puffin crossing	Existing	The existing crossing will be retained to provide access to the Coalpit Heath Village Hall and Bar Social Club.
9	South of Rose Oak Lane	20	Puffin crossing	Upgraded	Provide access to bus stops and residences.
10	North of Woodside Road (Sainsbury's)	20	Signalised parallel crossing	Upgraded	This crossing allows pedestrians and cyclists to access Woodside Road by providing a parallel crossing and a short section of a two-way cycle track at Woodside Road.

Crossing no.	Crossing location	Drawing No.	Crossing type	Existing, New, Upgraded	Reason for crossing
11	South of Church Road	20	Signalised parallel crossing	Upgraded	Provides access to Church Road and bus stops.
12	East of Nibley Lane	21	Signalised parallel crossing	Upgraded	This crossing allows for the transition of the one-way cycle track to a two-way cycle track. It also provides access to bus stops.
13	East of Westleigh Close	69	Puffin crossing	New	Provide access to the bus stops and Yate Railway station.
14	East of Eggshill Lane	70	Puffin crossing	Existing	Provide access to residences and businesses such as Tesco.

Junction improvements

We are proposing to provide continuous crossings at most of the locations where the proposed cycling and walking facilities cross side roads and accesses.

We propose junction improvements at the following major junctions.

Ruffet Road/Down Road junction

New and upgraded crossings have been proposed at this junction including a new raised parallel crossing on Ruffet Road, a signal-controlled crossing for pedestrians, cyclists and equestrians at Down Road (to replace the existing uncontrolled crossing) and a similar signal-controlled crossing for pedestrians, cycles and equestrians across the A432. Holding areas for horses and their riders have been provided for at both sides of the proposed signal-controlled crossings. The left-turn lane to Ruffet Road will be converted to a shared use path.

Park Lane junction

We are proposing to provide a signal-controlled pedestrian crossing at this location to provide access to Park Lane, bus stops and the Burger layby.

Beesmoor Road junction

A cyclops junction has been proposed at this junction. This type of junction is designed to enhance safety for pedestrians and cyclists by separating their movement from motor vehicles. This separation is achieved by providing separate pedestrian and cyclist facilities that encircle the junction. At Beesmoor Road junction this includes providing signalised parallel crossings at all arms of the junction. An all-red phase will be maintained at the junction where traffic signals on all arms of the junction will be red for motorists allowing pedestrians and cyclists to cross.

Church Road junction

We are proposing to reduce the radius of this junction, therefore making the turns tighter to reduce traffic speed, making it safer for pedestrians and cyclists when crossing the road. Additionally, we propose upgrading the existing uncontrolled crossing at the Church Road arm to a parallel crossing. A signalised parallel crossing is also proposed at the junction to provide access to the bus stop, cycle track and footway adjacent to the southbound traffic lane.

Nibley Lane junction

The proposed improvements at the Nibley Lane junction include the provision of raised crossings at Nibley Lane north and south. The right turn traffic lanes will be maintained at this junction. The existing bus stop at the junction has been relocated slightly east to provide sufficient space for the signalised parallel crossing across the A432. This crossing allows the transition from a one-way cycle track two a two-way cycle track while also providing access to the westbound bus stop and Nibley Lane.

Culvert Avenue Roundabout

We are proposing to upgrade the uncontrolled crossing east of the Culvert Avenue roundabout to a signal-controlled pedestrian crossing to improve safety for pedestrians at this crossing.

Stover Road junction

We are proposing to reduce the radius of this junction, therefore making the turns tighter to reduce traffic speed, making it safer for pedestrians and cyclists when crossing the road. The tightening of the junction also allows for the provision of a signalised parallel crossing at Stover Road that can be crossed at one go as opposed to the existing pedestrian crossing where pedestrians cross at four stages therefore increasing their journey time.

North Road

We are proposing to remove the right-turn lane to North Road to provide space for a separate cycle track and footway. This results in the removal of the right-turn movement to allow the junction to function optimally. The signal-controlled pedestrian crossing at North Road will be upgraded to a signalised parallel crossing.

Longs Drive

We are proposing to remove the left turn slip lane at Longs Drive and the existing bus layby east of the junction to provide space for a cycle track and footway. A signalised parallel crossing is proposed to connect the two-way cycle track and footway on either side of the road and provide a safe crossing for users.

Cranleigh Court Road

A signalised parallel crossing has been proposed at Cranleigh Court Road. This will involve re-locating the existing memorial to the opposite side of the junction, where there is more space for those wishing to pay their respects at this site.