

Sherriffhall Stage 2 Options assessment, Sustrans Scotland Comments

We have assessed the options using [Cycling by Design](#)¹. Transport Scotland requires consultants and contractors working on trunk road projects to follow the guidance within Cycling by Design.

In terms of the [Hierarchy of measures](#), we agree that off-carriageway facilities need to be provided for walking, cycling and other non-motorised users as part of the redesign, given the speed and volume of traffic at Sheriffhall roundabout.

We understand that manual counts undertaken at have Sheriffhall roundabout found very low levels of walking and cycling through the junction. We feel this is a reflection of the very poor provision for these modes of transport at the site currently. We feel demand for walking and cycling is suppressed by current conditions, therefore it is important that new paths are included across and around the junction linking all the roads leading to/from it (with the exception of the A720, on which cycling and walking are prohibited). This will enable people to make local journeys across the junction on foot and by bike, reducing the severance caused by the A720. There are many potential active travel journeys which require a safe crossing of Sheriffhall roundabout. For example major employment sites at Edinburgh Bioquarter and Royal Infirmary are only 4 miles from Dalkeith. This is a practical distance for most people to cycle, if conditions for cycling were improved at and around Sheriffhall roundabout.

We have assessed the 3 options presented (A, B and C) against the five [Core Design Principles](#) in Cycling by Design; safety, coherence, directness, comfort and attractiveness (see table below). Many of these design principles will also help make maximise the usefulness of the paths for people walking and for other non-motorised users.

Core Design Principles	Option A	Option B	Option C
Coherence: routes should be continuous linking origins and destinations and easy to navigate.	Paths connects the 4 roads leading to/from the junction	Paths connects the 4 roads leading to/from the junction	Paths connects the 4 roads leading to/from the junction.
Directness: routes should be as direct as possible and minimise delays at crossings and junctions.	Links across the junction are relatively direct, however links around either side are less so. Most journeys across the junction will involve crossing at least 4 carriageways, which will cause significant delay	Links across the junction are very indirect. Most journeys will involve crossing multiple carriageways, causing delays. Links around the junction however are more direct than for option A or C.	Links across the junction are relatively direct, however links around the around either side of the junction are less so. Only one at-grade road crossing, so delays will be minimised in this option.

¹ Please note, Cycling by Design is currently being revised and the latest version should be referred to for guidance.

<p>Comfort: surfaces /routes should be smooth, uninterrupted of adequate width and with gentle gradients. They should avoid the need for complex manoeuvres.</p>	<p>Paths likely to be relatively flat, however interruptions to paths at junctions reduces comfort</p>	<p>Paths likely to be relatively flat, however interruptions to paths at junctions reduces comfort</p>	<p>Requires height gain to cross the junction using a bridge, however there is space available to make ramps of gentle gradient and avoid the need for complex manoeuvres.</p>
<p>Attractiveness: routes should make cycling an attractive option. Lighting, personal security, aesthetics, environmental quality and noise should all be considered</p>	<p>Paths are adjacent to the roads, therefore likely to be well lit, however will expose users to noise and air pollution. This option is likely to be best in terms of providing a feeling of personal security 24/7, as all paths are overlooked by the adjacent roads.</p>	<p>Paths adjacent to the roundabout, likely to be well lit, however will expose users to noise and air pollution. Remote nature of paths and underpass west of junction likely to make users feel insecure and deter use. Underpasses are generally poor for personal security.</p>	<p>Paths are away from the road, minimising exposure to noise and air pollution. Potential for them to pass through attractive greenspace. However users may feel insecure as most of the paths are not overlooked and this option includes an underpass.</p>
<p>Safety: infrastructure should minimise actual and perceived dangers for users.</p>	<p>Multiple at-grade crossings of main roads increases risk of collisions between path users and motor vehicles, even more so if signalised crossings are not provided. All paths are overlooked, likely to increase users feelings of personal security</p>	<p>Multiple crossings of main roads increases risk of collisions between path users and motor vehicles, even more so if signalised crossings are not provided. Underpass and remote nature of some paths is poor for personal security. The underpass route is so indirect people may walk under the bridge around the roundabout, putting themselves at increased risk!</p>	<p>At-grade crossings of main roads are minimised by inclusion of a bridge and underpass, reducing risk of collisions between path users and motor vehicles compared with other options. However users may feel insecure as most of the paths are not overlooked and this option includes an underpass.</p>

Considering these design principles, **we feel strongly that option C is the best for active travel** (walking, cycling and non-motorised users). This is primarily because it is the most direct in terms of both distance and time and also likely to be the safest option for users. Option C is also likely to be the most attractive for users, albeit steps must be taken to make sure that user's feelings of personal security are maximised.

The main problem with option A is the multiple at-grade crossings which, even if they are made safe through signalisation, will introduce excessive delays making it less likely people will make journeys on foot and by bike through the area.

Option B is the least good as paths are indirect both in distance and time and still requires multiple at-grade road crossings.

Even though we consider option C is the best outline design, it is still important that the following are included in the detailed design to create the best facilities for walking and cycling:

- More direct paths around the junction should be provided (linking Old Dalkeith Road with Millerhill Road and linking the 2 roads south of the junction)
- Given the relatively remote nature of some of the paths, steps must be taken to make sure that user's feelings of personal security maximised.
- Long straighter ramps should be provided either side of the bridge, on the desire lines, in preference to "zig-zag" arrangements which are less user-friendly
- A signalised crossing is necessary across Millerhill Road
- Care is especially needed in the design of the underpass, which should be as wide and welcoming as possible, and users should be able to see all the way through from each side.
- The opportunity should be taken to improve biodiversity on land around the paths, which will also make the paths more attractive to users, though not at the expense of personal security.
- It is important that the paths are well maintained, especially given they are away from the main road

Sustrans Scotland are keen to discuss the designs of active travel infrastructure in the Sheriffhall project with AECOM and Transport Scotland, as it progresses towards construction.

Finally, for reference here are two examples of provision for active travel at grade-separated junctions near to Sheriffhall.

- 1) Quite good provision in the form of a bridge over the M9 at Newbridge:

<https://goo.gl/maps/KhYHBRayKen>

- 2) Very poor provision in the form of shared use paths around the A720 Straiton junction with uncontrolled crossings, including one of an on-ramp to the A720:

<https://goo.gl/maps/ydHo87XvduB2>