

Meadows to George Street: Concept Design

Response from Spokes – the Lothian Cycle Campaign, July 2019

This response considers the concept designs and FAQ published at <https://meadowstogeorgestreet.info/>

Summary

Spokes are very excited to see progress on the Meadows to George Street (M2GS) project. As noted in our response¹ to the initial consultation in 2018, M2GS fills a critical gap in Edinburgh's cycle network – linking cycle routes converging at the Meadows with the City Centre West East Link (CCWEL) at George Street, which in turn provides onwards connection to Picardy Place and Leith. There is also potential for extension down Dundas Street to provide a high quality link to the North Edinburgh Path Network, which would open up traffic free cycling to, from, and around the city centre for a huge number of cyclists.

While there are still details to be considered, these concept designs mostly live up to our expectations and we believe that they can be refined to deliver the high quality and safe cycle route needed to plug this important gap. Furthermore, we believe that the changes proposed will substantially improve the public realm and transform a corridor dominated today by traffic and parking to one that prioritises people and place, ultimately becoming a destination in its own right. We therefore hope to see the project progress as quickly as possible.

Review of key priorities

Our previous response identified four key priorities for this project:

1. A high quality north-south cycle route that is safe and attractive for cyclists of all ages and abilities
2. Substantial reduction or elimination of general traffic
3. Significant reallocation of road space to promote walking, cycling, and placemaking
4. Well designed, straightforward connections to both current and future cycle routes

We start by assessing the concept designs against these key priorities.

1) High quality north-south cycle route that is safe and attractive for all ages and abilities

Safe and attractive for all ages and abilities

First and foremost, we are very relieved to see a segregated cycleway provided along the entire length of the route. Spokes believe that segregated cycleways are the only way to provide truly safe cycling for all ages and abilities, particularly on routes like this one where there are also buses and delivery vehicles.

While we strongly endorse the full length cycleway, we have concerns about cyclist safety on the section at The Mound. The downhill, right-hand turn risks northbound cyclists colliding with southbound cyclists, particularly given poor sightlines caused by the fence here, and we discuss this in more detail later.

¹ <http://www.spokes.org.uk/wp-content/uploads/2018/08/1807-Spokes-response-Meadows-to-George-Street-...>

High quality

To be considered “high quality” we believe that a route must be direct, consistent, easy-to-navigate, and built to cater for future demand. We are pleased that the proposed cycleway is a consistent width and style throughout (in contrast to some other recent projects) and as such delivers on most of these requirements.

However, we note that 3m width is the desirable minimum for two-way flows up to 300 cycles per hour² and Spokes’ traffic counts at Forrest Road *already* show peak two-way flows of over 300 cycles per hour³. We’re therefore concerned that continued modal shift and the rise of family/cargo bikes will push the cycleway beyond satisfactory operation and ask the project team to look at opportunities for widening it.

Overall, we believe that the concept designs will deliver a high quality north-south cycle route that is safe and attractive for all ages and abilities, though The Mound still needs further attention with regard to safety, and additional cycleway width is desirable to accommodate growing demand.

2) Substantial reduction or elimination of general traffic

We very much welcome the closure of Bank Street to general traffic. This closure will stop M2GS from being a through route for general traffic, reducing air pollution and promoting a calmer, better place for people. Moreover, the reduced traffic flow frees up space to provide the cycleways and widened footways that are integral to this project.

However, we’re disappointed that this restriction doesn’t extend to The Mound. We’re nervous that leaving The Mound open will lead to rat-running via Market Street, something that cannot be tolerated given Market Street’s role of providing a link to the station and to the New Waverley development. More generally, we want to know what measures will be taken to avoid traffic displacement affecting cyclists on other routes.

To the south, we’re pleased to see the pedestrianisation of Forrest Road. Done well, this will bridge the Meadows and the city centre and create a beautiful space that will enhance the cafes and restaurants on this street, in addition to its role as a cycle route.

Overall, the concept designs clearly propose substantial reduction or elimination of general traffic, though we believe they could be more ambitious by also restricting The Mound to general traffic. We also want to see measures to protect cyclists on diversionary routes for general traffic.

3) Significant reallocation of road space to promote walking, cycling, and placemaking

We are pleased that carriageway width has been reduced across most of the route and there is clearly a huge improvement in conditions for pedestrians, cyclists, and people simply lingering. We note that the maximum carriageway width at all points is now one lane in each direction, which still provides suitable width for public transport and essential vehicle access.

There is one road though where carriageway width is largely unchanged: The Mound. As above, we question whether the project has been sufficiently ambitious here given The Mound’s iconic status at the heart of the city centre.

Overall, the concept designs do indeed reallocate significant road space to promote walking, cycling, and placemaking, with the exception of The Mound.

² Table 6.2 of https://www.transport.gov.scot/media/14173/cycling_by_design_2010_rev_1_june_2011_.pdf

³ See May 2019 at <http://www.spokes.org.uk/documents/papers-documents/spokes-traffic-counts/>

4) Well designed, straightforward connections to both current and future cycle routes

Although every project needs to draw a boundary somewhere, M2GS will only be successful as a cycle route if it provides links to surrounding cycle routes. Although we want to understand more details of the proposed junctions, the designs do indeed look like they can provide good connections to the Meadows, Chambers Street, Market Street, and George Street.

However there are three important connections that are less clearly catered for:

- ★ **Dundas Street:** We understand that detailed design of the Hanover/Dundas/George Street junction will be undertaken in conjunction with the George Street and First New Town (GNT) programme. This junction redesign must support future continuation of the cycleway down Dundas Street.
- ★ **Teviot Place:** We note that a “cycle connection to Teviot Square [sic] is to be investigated”. This must be an integral part of the project given that this street will be redesigned during the project. A cycleway here fulfils existing demand evidenced by those who cycle along the pavement today and provides an important link to Potterrow, the University, and onto the Bridges.
- ★ **Princes Street:** It's unclear from the designs whether cyclists on the cycleway will be able to turn onto Princes Street and vice versa. We see this as critical to improving cycle access to this important street.

Overall, the concept designs can provide well designed, straightforward connections to both current and future cycle routes, though we'd like more details on the proposed junctions. We also call for commitments to a cycleway on Teviot Place and provision for a Dundas Street extension.

General comments

In addition to the points above, we make the following observations about the route as a whole.

Cycleway type

There has been much discussion amongst the cycling community about the pros and cons of the proposed bi-directional cycleway along the east side of the route, and the pros and cons of other options like unidirectional cycleways along each side. In general, Spokes favour a presumption of unidirectional cycleways as these are more intuitive, particularly at junctions and when transitioning from on-carriageway to segregated sections. There is significant disappointment from some of our members about the lack of unidirectional cycleways in this project.

With that said, we recognise that there are benefits to the proposed bidirectional cycleway, and we like that it avoids conflict with the loading bays and café areas on the west side of George IV Bridge and facilitates easier access to Chambers Street and Market Street. We also note that the bi-directional cycleway will fit in with the wider cycle network in this area, particularly the proposed bi-directional cycleway along George Street, the bi-directional cycleways under construction at Picardy Place, and indeed the existing off-road paths along Leamington Walk and Middle Meadow Walk (where cyclists use the east side of a split path, similar in feel to a bi-directional cycleway). As proposed, a cyclist will be able to travel on a consistent style of facility all the way from Bruntsfield to Elm Row, which we see as a benefit in terms of route coherency.

However, as noted above, the bidirectional cycleway also comes with a safety risk at the steep corner on The Mound, and to a lesser extent the one on Bank Street as well. If a bi-directional cycleway is progressed then we want to see clear details of mitigations for these risks.

Cycleway delineation

We're pleased that the cross-sections show a 60mm chamfered kerb used to delineate the cycleway and footway. The height difference reinforces the cycleway/footway boundary for the benefit of both pedestrians and cyclists, while the chamfered edge provides an option to ride close to the edge of the cycleway (e.g. when busy or overtaking) without risk of hitting a full height kerb.

We're aware that there are ongoing discussions about how best to deploy this design in a manner that is sensitive to visually impaired pedestrians and wheelchair users and we remain happy to engage further about this. Nonetheless, we remain convinced that some level difference is important. Although Spokes have received much positive feedback about the cycleways introduced on Leith Walk, the most consistent negative feedback we have heard is that the lack of a level difference results in greater pedestrian encroachment on the cycleway and a feeling that cyclists are riding on the footway.

Signalling

There are several things we want to see with regard to signals in future detailed designs:

- ★ **Access to/from all side roads:** To ensure that journeys by bike are direct and convenient, it's important that each signalised junction affords cyclists the opportunity to turn on/off the cycleway from all side roads.
- ★ **Split crossings:** Given the high levels of expected cyclists and pedestrians, it's important that they are split on each crossing rather than being forced into shared space on approach to the crossing (the recently installed toucan at Greenside Row being an example of how *not* to do it).
- ★ **Dedicated cycle phases:** We strongly advocate for dedicated cycle phases on a busy cycle route like this one. These help reduce conflicts with pedestrians and eliminate the risk of vehicles left-hooking cyclists continuing along the cycleway at junctions.

Floating bus-stops

Spokes remain supportive of floating bus stops as a way of incorporating bus stops on streets with segregated cycleways. We note their successful introduction in several UK cities as well as internationally.

The exact design of any floating bus stop is critical to its safe and effective operation⁴. This includes not just the location of mini-zebras to access the floating bus stop but also the shelter design and location of street furniture to help guide pedestrians to safe crossing points. We also repeat our previous calls to replace advertising panels with glass to improve sightlines – safety must take precedence over advertising revenue.

⁴ TfGM's review is well worth a read: <https://www.manchesterfoe.org.uk/blog/2016/09/27/oxford-road-trial-bus-stop-...>

Detailed route review

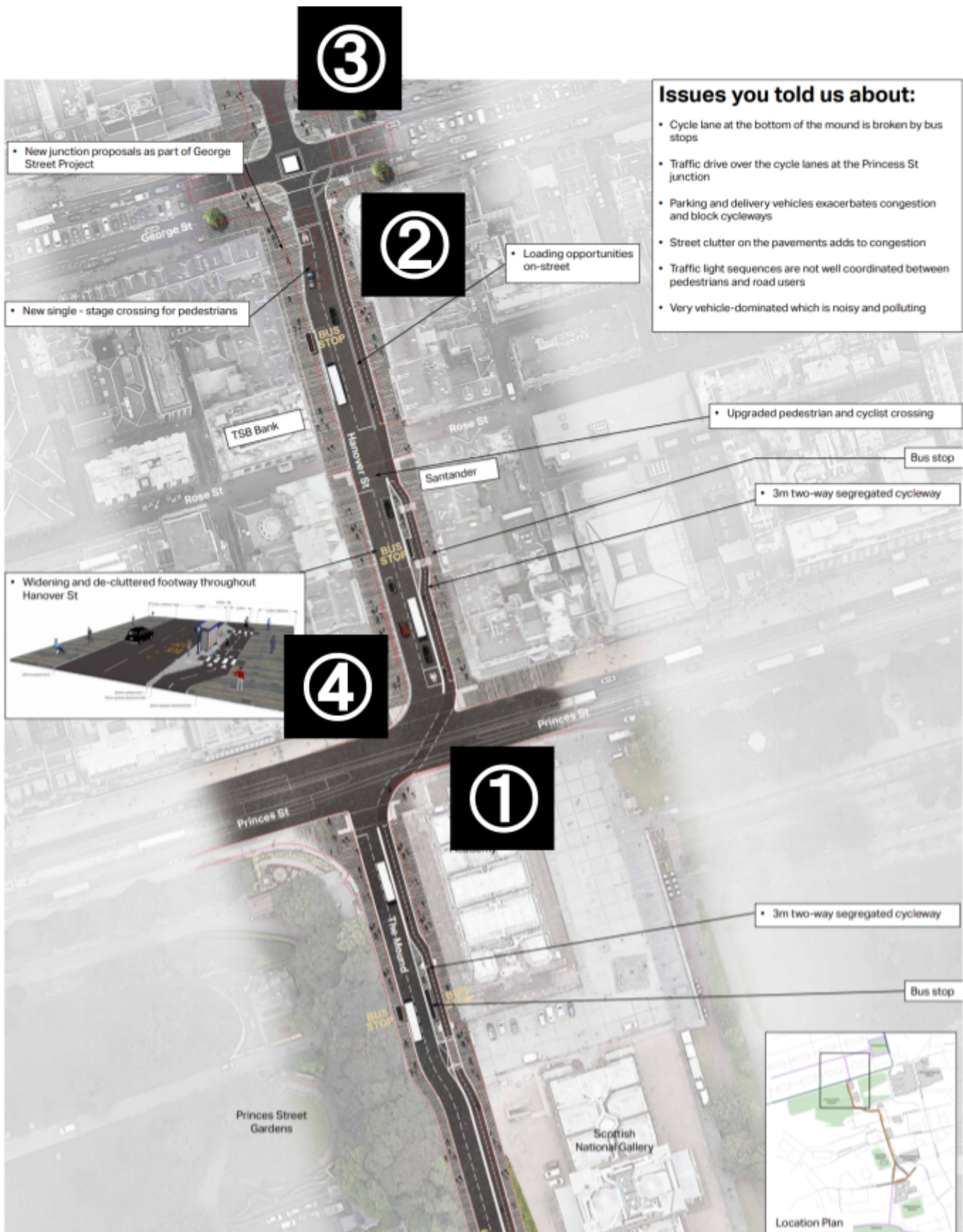
We'd like to thank the project team for providing drawings that combine photo realism with details of markings and surfacing. These are easy-to-understand while still showing details and we hope that future projects will also use this style. We review each drawing over the next few pages.

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Hanover Street / Princes Street

1. **Tram crossing:** The tram tracks remain a source of anxiety for many cyclists and continue to result in crashes⁵. It is unclear that the designs proposed provide a suitably safe angle for crossing of the tram tracks at Princes Street. A dedicated cycle phase is essential as this will allow cyclists to tackle the tracks at their own pace without pressure from traffic, and moreover avoids northbound cyclists facing southbound traffic head-on. However, even with a dedicated cycle phase there will still be risk and we suggest that the team consider this location very carefully, including options like switching the cycleway to the west side of Hanover Street to reduce the crossing angle, or using unidirectional cycleways.
2. **Interface with George Street:** We trust that there will be a direct, easy link to the cycleway on the south-side of George Street (as proposed by the GNT project). This should facilitate turns in all directions, including turns onto the eastbound carriageway for cyclists who have a destination on the north-side of George Street (e.g. the Standard Life office). We also hope that the left turn from the George Street cycleway into the Hanover Street cycleway will be free-flowing without need for cyclists to wait at signals (except during pedestrian phases).
3. **Future-proofing to Dundas Street:** As noted earlier, we see a continuation down Dundas Street as an important future project that will link the city centre to the North Edinburgh Path Network at Canonmills. We hope it will be progressed soon as part of the City Mobility Plan, and as such we request that the M2GS and/or GNT project extend the Hanover Street cycleway north to Queen Street to make this continuation easier. In the short term, an extension to Queen Street would provide immediate benefit to southbound cyclists forced to share with busy traffic on the challenging up-hill approach to the George Street junction.
4. **Allow turns to/from Princes Street:** We believe it's important that every junction should enable cyclists to make all possible turns in order to make cycle journeys direct and therefore attractive. The Princes Street junction is notable today for banning all turns in and out, including for cyclists (except the left from The Mound into Princes Street). We trust that this project will remedy this situation and help improve cycle accessibility to and from Princes Street.

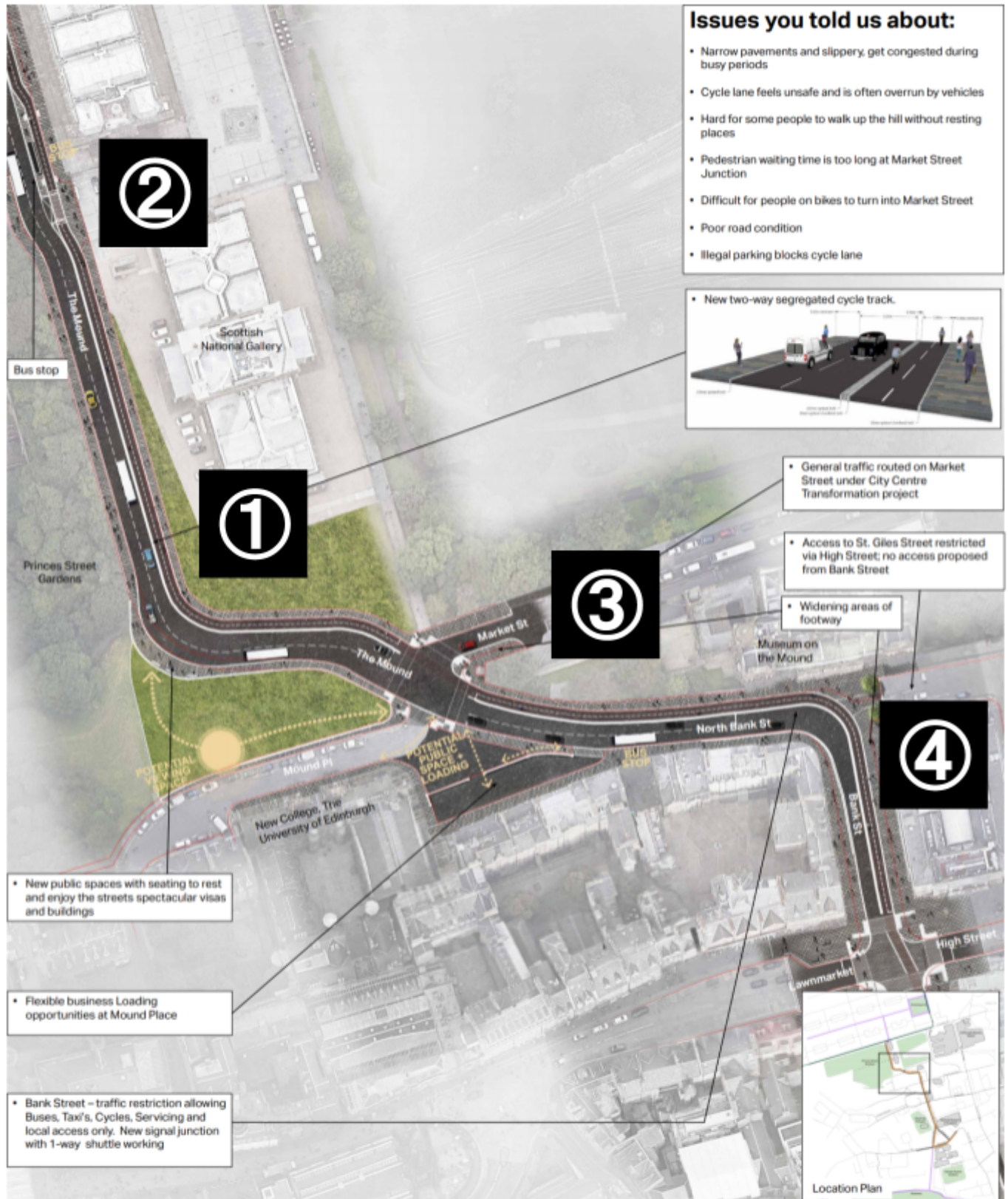
⁵ Details of tram related crashes at <http://www.spokes.org.uk/documents/public-transport/tram/>



The Mound and Bank Street

1. **Collision risk on fast corners:** We are concerned about the potential for collisions at the corner on The Mound, and to a lesser extent the corner on Bank Street. At The Mound in particular, the corner is steep, but also wide enough that some downhill cyclists will take it at high speed. There are especially poor sightlines at this corner due to the fence⁶, resulting in a real risk of a downhill cyclist colliding with a slow moving uphill one. Additional cycleway width would help mitigate this, though we recognise that both The Mound and Bank Street corners have width constraints. The only way to make these corners fully safe is to segregate north and southbound cyclists using unidirectional cycleways on this section.
2. **Design of bus stop at the foot of The Mound:** We draw specific attention to this floating bus stop as one where the design will be crucial from a safety perspective. We note that the bus stop is positioned north of the raised table for vehicle access to The Mound Precinct, which should reduce the speed of northbound cyclists coming down The Mound before they reach the bus stop. This same raised table should also have a suitably steep slope on the vehicle approaches to ensure that they give way to cyclists on the cycleway.
3. **Market Street:** The plans omit the cycle lane and ASL at the top of Market Street on approach to its junction with The Mound. It's important that these are retained as there is often queueing traffic on the approach and the cycle lane and ASL enable cyclists to get to a safe position at the front of the queue. Indeed, an early release signal for cyclists would be extremely valuable to provide a head-start on such a steep, uphill start. We also want to know what mitigations will be used to protect cyclists on Market Street from traffic displacement if The Mound is kept open to general traffic.
4. **St Giles Street:** The annotation on the plans says that "no access [is] proposed from Bank Street", while the diagram still shows what looks like a kerb so that vehicles can cross a continuous footway. We hope that no access really does mean no access either from Bank Street or to Bank Street. Allowing access from Bank Street causes a serious risk to cyclists on the cycleway. Allowing access to Bank Street would force the junction to be signalised, and in so doing force cyclists to wait through another junction.

⁶ <https://goo.gl/maps/HQRNT3Scx1TErP6a8>



George IV Bridge

The artists impressions for this area are particularly exciting and if they are realised – along with traffic reduction – we believe that George IV Bridge really will be transformed into a great place to be!

1. **Is 1.8m buffer necessary?** We understand that this buffer provides space for taxi drop-off and elements like cycle parking, but 1.8m still seems surprisingly large. We suggest that at least some of this is re-allocated to cycleway given our notes earlier about the need to accommodate increased cycle flows in future. However, we do support provision of cycle parking on any buffer and we see this as important to enable cyclists to park easily and walk across the road to destinations on the west side without needing to cross the carriageway on their bike.
2. **Access to/from Victoria Street:** We're disappointed that cycle access to/from Victoria Street appears to be completely missing. This route facilitates Grassmarket to New Town cyclists (and vice versa). Additionally, Victoria Street is a destination in its own right with restaurants and shops that must be cycle accessible.

Issues you told us about:

- Crossing the top of Candlemaker Row is difficult and feels unsafe
- Road or cycle lanes are narrow and not continuous
- Conflicts between cycling and traffic
- Pavements are too narrow, cluttered and get very congested in busy periods and at visitor points
- Streets feel traffic dominated
- Tour buses and coaches hinder safe/enjoyable use of Candlemaker Row

Restricted Loading

- Victoria Street restricted access for servicing only and removal of general traffic under City Centre Transformation project

2

- 3m wide two-way cycletrack on east side of George IV Bridge
- Offers better opportunity to improve pedestrian and public spaces on west-side with areas of higher demand. (Including Greyfriars Bobby)
- All crossing points controlled and safe
- Reduces conflict with pedestrians and bus stops – by positioning on single side only
- Main loading activity on west side
- New and improved crossings at High Street for pedestrians and bicycles

- George IV Bridge access maintained for all traffic, however, through movement for general traffic restricted at High Street / Bank Street to Buses, Taxi's, Cycles, Servicing and local access only

Restricted Loading



- Improved crossings at High Street

- Widened and de-cluttered footways on George IV Br. With space to linger and spend time.
- Carriageway width 6.5m to allow easier crossing for pedestrians.



1

Bus stop

- Proposed pedestrian lift under City Centre Transformation Project



Restricted Loading

- New signalised junction with pedestrian crossing

Forrest Road and Teviot triangle

Again, the designs for this section are very exciting and will rejuvenate an area dominated by traffic today.

1. **Chambers Street junction design:** This junction is very close to the crossing to/from Forrest Road and so it's important that signal timings are coordinated to avoid cyclists getting stopped twice. Indeed, we'd welcome a coordinated greenwave for cyclists along the entire route. Additionally, the junction should provide a left-turn bypass to enable cyclists from Chambers Street to turn left into the cycleway without needing to wait for the signals – this is a very common cycle route and today cyclists simply have to give way, so we shouldn't make this junction worse for them. Finally, there should be cycle parking near this junction so that families heading for the museum can exit the cycleway directly to cycle parking, avoiding them being forced onto a busy carriageway for a short distance along Chambers Street.
2. **Access from Candlemaker Row to/from Forrest Road:** It's not clear from the plans how southbound cyclists from Candlemaker Row get to Forrest Road. Similarly, it looks like northbound cyclists are unfortunately forced to join the carriageway and we challenge the project team to improve upon this.
3. **Forrest Road cycleway:** We strongly welcome the pedestrianisation of Forrest Road. It's important that markings clarify that northbound cyclists can use the main area of carriageway rather than thinking that they are restricted to the narrower lane on the east side that is actually intended for contraflow, southbound cyclists.
4. **Teviot Place cycleway:** As noted earlier, we believe a cycleway on Teviot Place must be provided by this project when Teviot Place is reconfigured. In addition to providing access to Potterrow, the University, and through to the Bridges, this also ensures safe cycling north from Bristo Square given the lack of cycle facilities on Bristo Place northbound. This cycleway can also tie in to the University's wider plans to redevelop this area and those of the Edinburgh City Centre Transformation.

Issues you told us about:

- Crossing of Teviot Place on bike and foot is confusing, difficult and unsafe
- Not enough space for all users of the street, particularly around Greyfriars Bobby
- On-road cycle lane doesn't feel safe between traffic.
- Streets and pavements are too cluttered
- Streets feel dominated by traffic
- The trees on Forrest Road are valued by people
- Loading for businesses is important to retain, including vehicular access to University of Edinburgh maintenance stores and the National Museum of Scotland via Bristo Port
- Vehicles frequently block the cycle lane

- Loading opportunities for Candlemaker Row Businesses on:
 - Merchant Street
 - Candlemaker Row (between Merchant St & Cowgate); and
 - Forrest Road

- Candlemaker Row: Buses and Cycles only

- Widened footways and improved public space on southern section of Candlemaker Row

- New areas of high quality public space at Greyfriars Bobby and Bedlam Church

- Restricted Loading

- Forrest Road – Pedestrian Priority Street with segregated cycle track



- Forrest Road: Local access and restricted loading only - via 5m wide cycle track area with flexible areas offset for stationary vehicles.

- Restricted Loading

- New single stage crossing for pedestrians and bicycles at Middle Meadow Walk.

