

Corridor 2: Leith to Portobello – Context, Problems & Opportunities

Corridor Overview

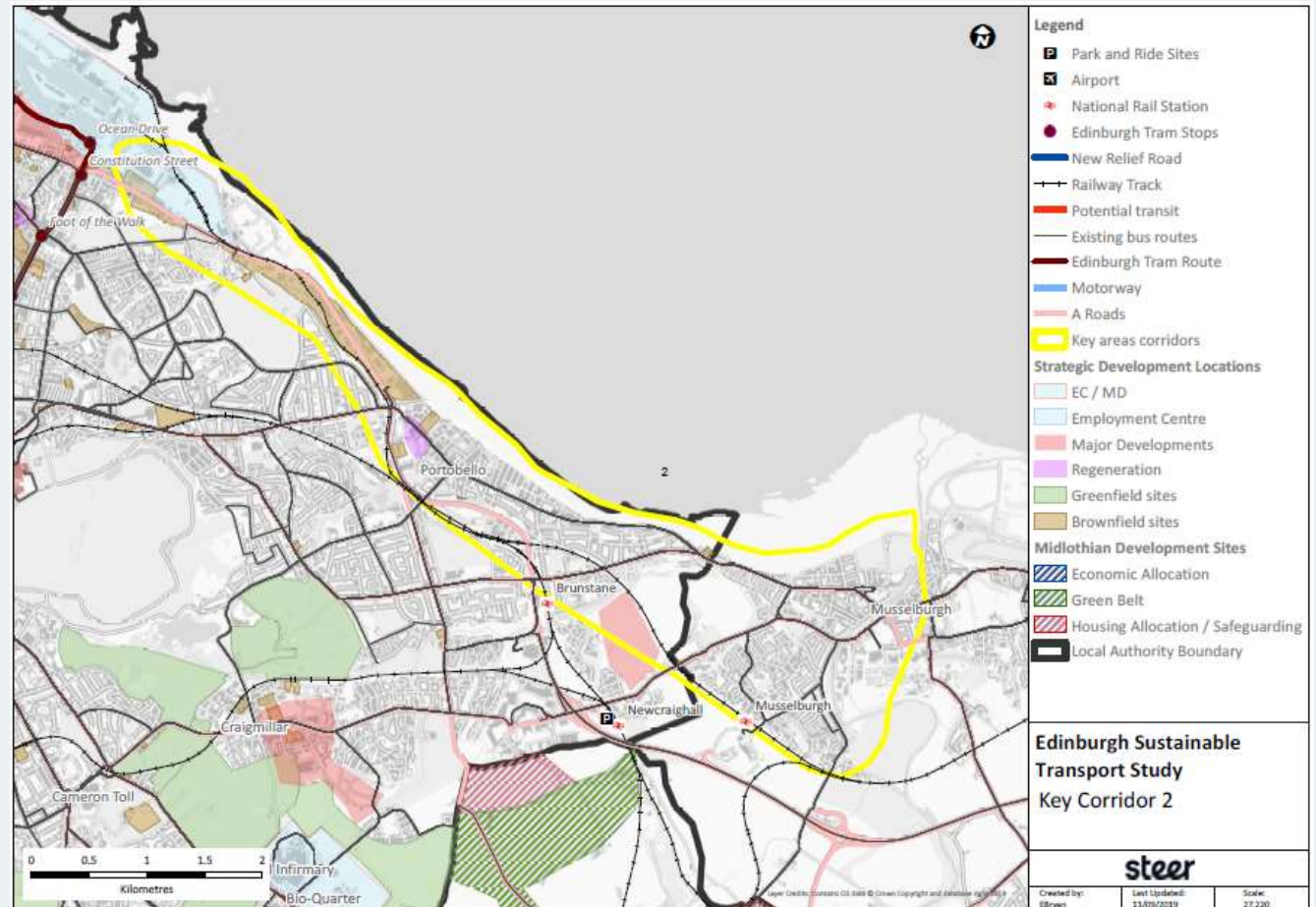
- A corridor that extends the Leith development areas along the coast

Problems

- Relatively poor public transport accessibility in parts of corridor

Opportunities

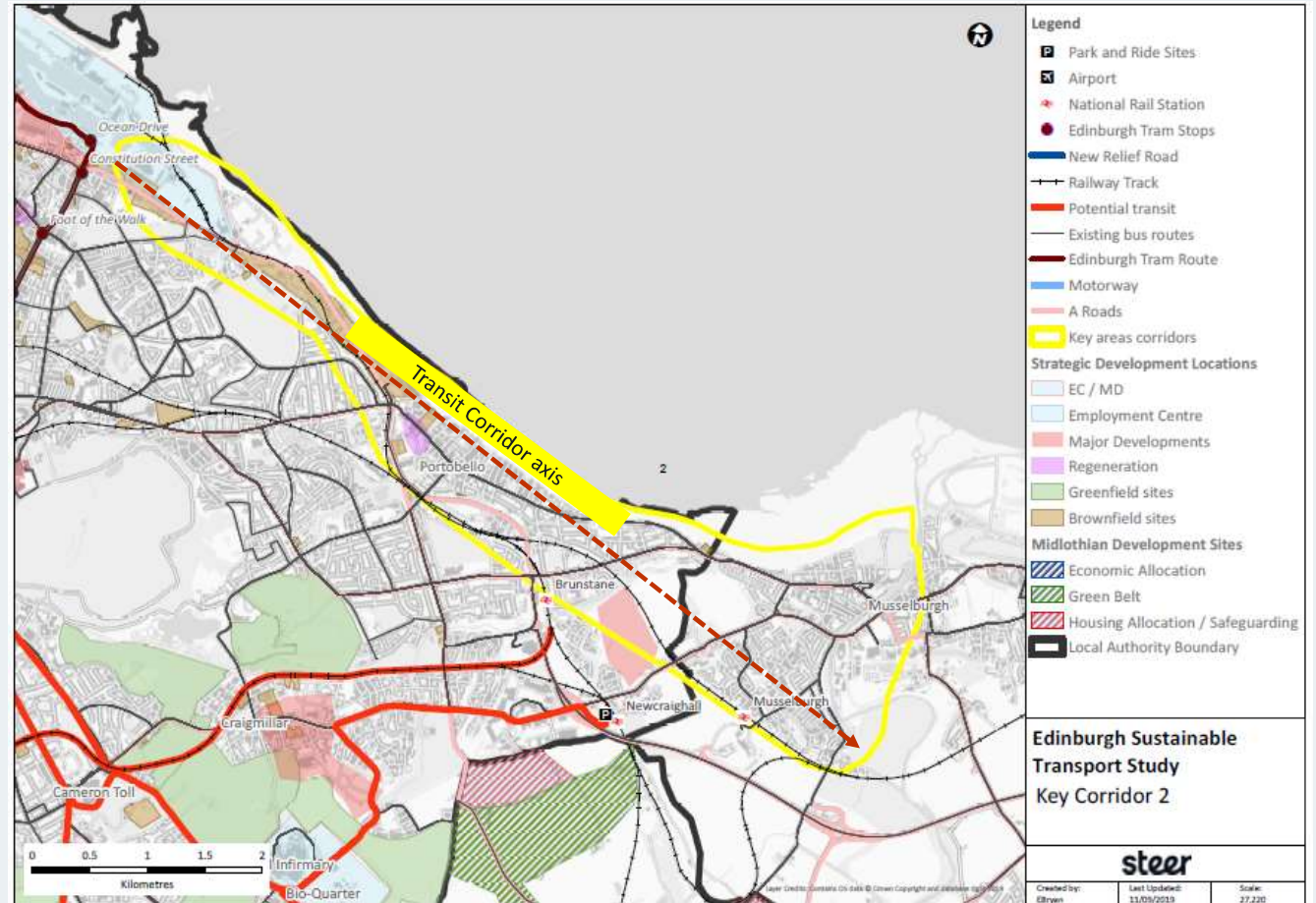
- Brownfield development west of Portobello
- Potential to link in to planned Newhaven tram route around Leith
- Attractive corridor for enhanced active travel links



Corridor 2: Leith to Portobello – Transit Options (*illustrative – not drawn*)

Issues in Developing Transit Option

- Transit route to Portobello High Street:
 - Shared running; high frontage activity; Numerous side roads
- Narrow linear corridor bounded by the coast and road and rail corridors
 - Limited catchment & serves limited amount of development
- Tram link to the Newhaven extension
 - journey time and reliability advantages eroded due to shared running / indirect routing
- Significant brownfield development could be served by the western end of the corridor
 - No major greenfield sites would be served



Corridor 2: Leith to Portobello – Emerging Conclusions

Overall Conclusion

- The corridor is not a priority for consideration of major transit enhancement (i.e. tram), as it does not have the underlying demand (current or future) or to offer a competitive / attractive alternative (in terms of journey time) for key movements towards / via the city centre.
- The corridor does serve existing demand, has development potential and there is potential to improve the quality of provision for both bus and active modes.

Commentary on Transport Options

- The corridor does not have the fundamental requirements that support the development of a tram / transit corridor in terms of its demand catchment (current and potential), route constraints and indirect routing to the city centre and (by extension) other major destinations.

Transport priorities for the corridor should focus on:

- Provision of an attractive and coherent active travel / cycle route along the axis if Corridor 2.
- Enhanced bus provision along the axis if Corridor 2.
- Consideration of enhanced bus provision on the established (and faster and more direct) routes from the key centres in corridor 2 (Portobello and Musselburgh) and the city centre.
- Specific consideration of public transport enhancements that support the development of the major brownfield development opportunities to the north-eastern end of the corridor.

Corridor 2: Leith to Portobello – Emerging Conclusions

Commentary on Active Travel

- Strong potential corridor – attractive route serving destination and also leisure route. There is an existing CEC quiet route. Potential to create an active travel corridor, linking in with bus and tram at the Foot of the Walk.

Commentary on Development Implications

- The corridor includes major brownfield redevelopment opportunities in the north-western half of the corridor.
- Transport accessibility is relatively poor in this section as radial connectivity (bus) to the city centre is stronger around Leith and Portobello.
- The development area could be supported either through increase bus provision and / or, once Trams to Newhaven is complete, by bus feeders into Leith.

Corridor 4: City Centre to Easter Bush/Straiton – Context, Problems & Opportunities

Corridor Overview

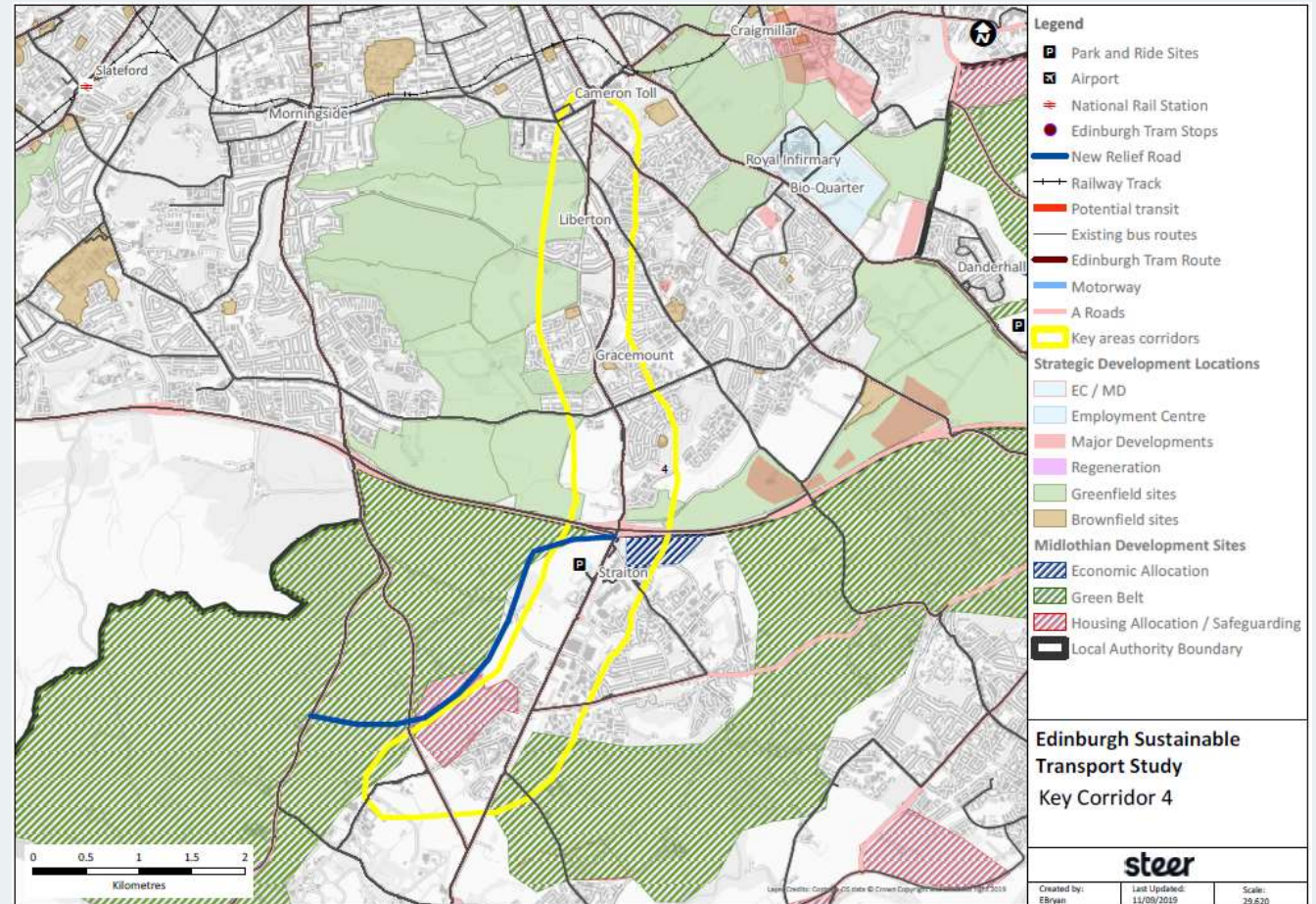
- A variant of Corridor 3 focused on growth corridor to the south towards Straiton and Penicuik

Problems

- Problems as per Corridor 3 for A7 City Centre to Cameron Toll

Opportunities

- Strong existing catchments
- Potential convenient ‘anchor’ at Straiton P&R
- Corridor sharing with new A701 Link Road (environmental and cost advantages)?
- Greenfield “wedge” opportunity for transit-led development (but note gradient constraint)



Corridor 4: City Centre to Easter Bush/Straiton – Transit Options)

Corridor Options

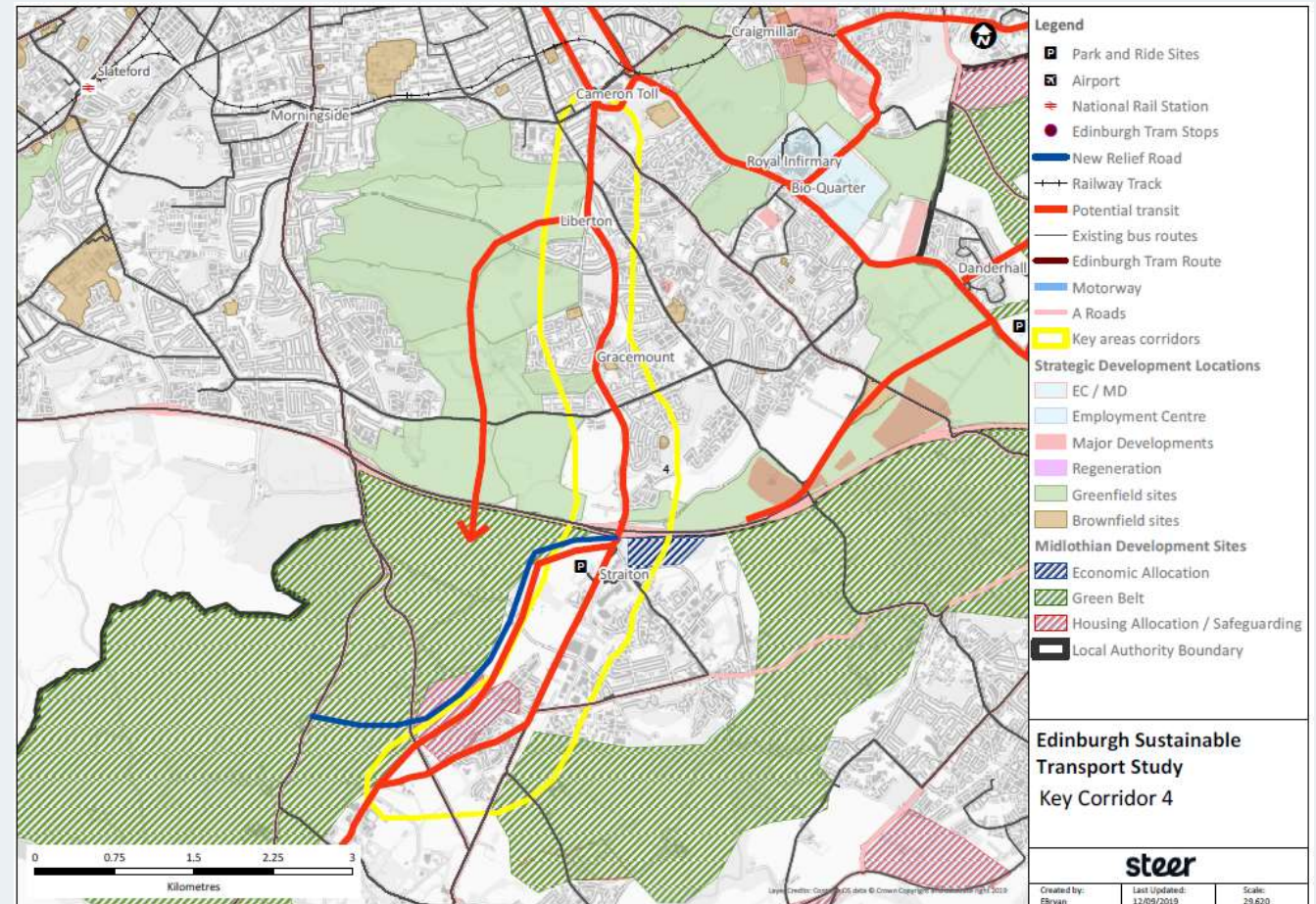
- Existing corridor Burdiehouse Rd to potential ‘anchor’ at Straiton P&R
- Greenfield “wedge” option
- South of by-pass, potential to utilise A701 Link Road (environmental and cost advantages)?

Constraints

- Gradients in the vicinity of Liberton at the limit of on-street tram operation
- Non-transport constraints preclude “Greenfield Wedge” option
- Crossing Edinburgh Bypass

Emerging thinking

- Effectively an either / or (or neither) choice for tram on Corridors 3 vs 4.
- Corridor 3 stronger on feasibility and demand
- Points towards bus based solutions?



Corridor 4: City Centre to Straiton – Emerging Conclusions

Overall Conclusion

- Transport enhancement options for Corridor 4 would be bus based.

Commentary on Transport Options

- The focus of transport options would be on enhancing the existing corridor to serve the established demand.
- Tram would not be considered for this corridor, given the stronger tram potential of Corridor 3.
- If Corridor 3 developed as BRT potential to integrate with Corridor 4.

Commentary on Active Travel

- Limited active travel provision. Liberton Brae is steep and the topography makes cycling less attractive.

Commentary on Development Implications

- The long-list of Greenfield sites form a 'wedge' which could be developed along a new transit (bus-based) spine.
- However, our understanding is that other Greenfield site assessment criteria limit the development potential of this as a 'corridor'.
- Sites to the immediate west as of the corridor (i.e. build-out from the existing urban development) could readily be served by the existing route.
- Increased development within Corridor 4 would increase overall demand levels and therefore reinforce the need to consider how public transport capacity across corridors 3 and 4 can be increased to accommodate future growth.

Corridor 5: City Sub – Context, Problems and Opportunities

Overview

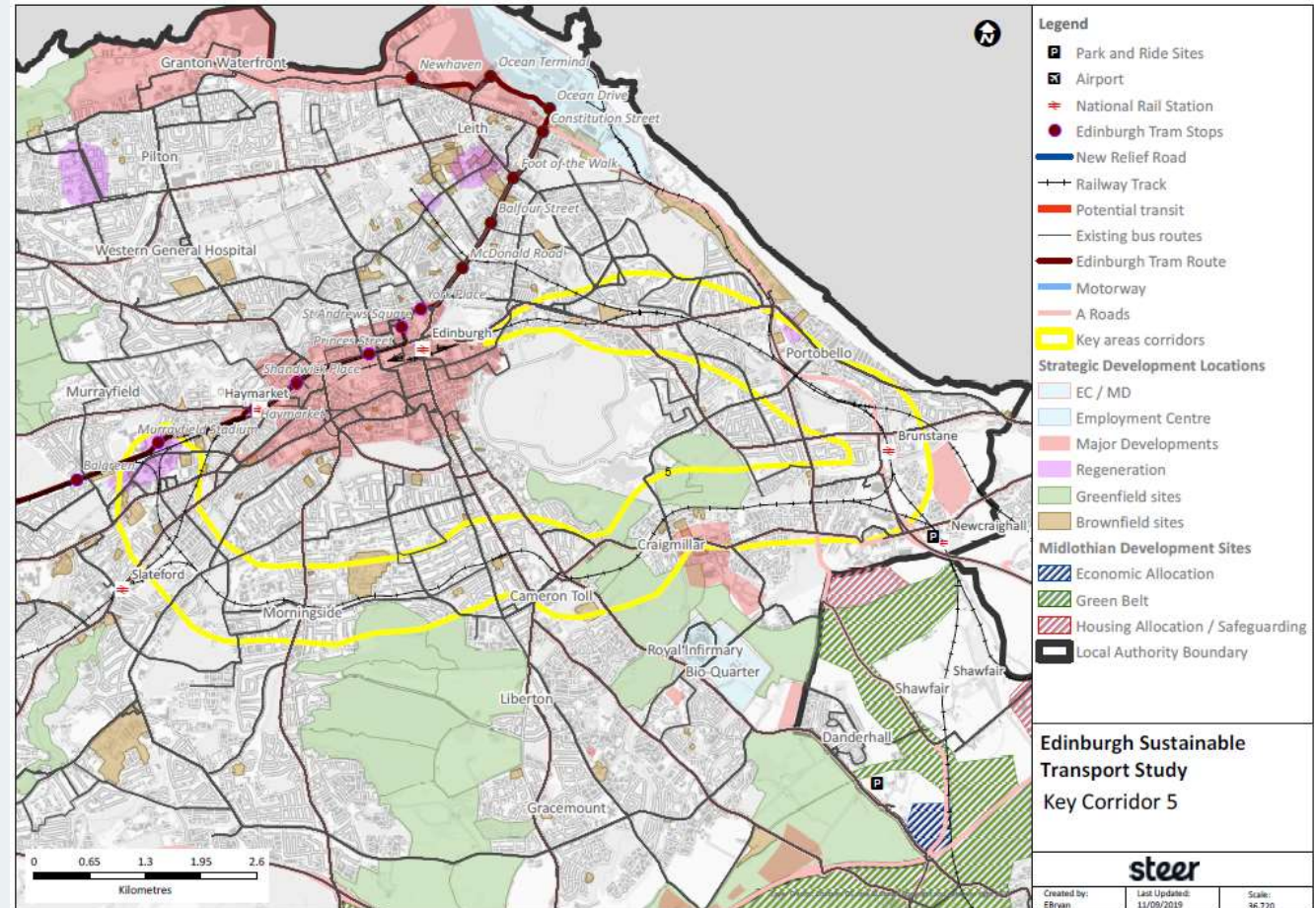
- South Suburban Railway Line
- Route once provided for ‘inner orbital’ passenger service

Problems

- Orbital public transport movements not well catered for, given radial nature of network.

Opportunities

- Corridor notionally attractive in that it could, if deliverable and viable, provide for orbital movements via a fully segregation rail / transit alignment.
- This could serve orbital movements better and relieve capacity on inner sections.



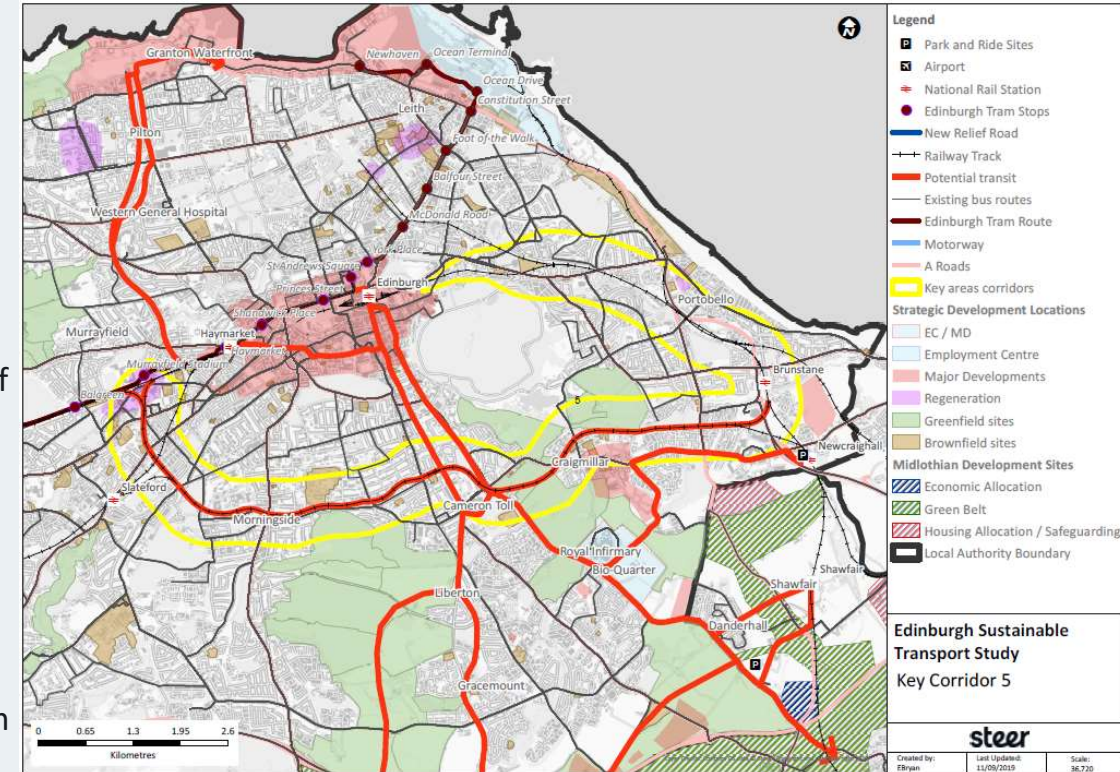
Corridor 5: City Sub – Transit Options

Corridor Options

- To reinstate passenger services on the south-sub.
- Rail and Tram-Train both suggested previously.

Constraints

- Inter-running with strategic freight route means that 'metro' level of service could not be provided
- Inability to access city centre limits demand potential. Rail option unfeasible due to constraints at Waverley / Haymarket. Tram-train mooted as alternative to overcome this – but city centre tram network similarly constrained.
- In either case, relief of city centre constraints better utilised supporting service enhancements in other corridors (e.g. other tram extensions or rail service enhancement on capacity constrained corridors).
- Tram-train cost and deliverability very uncertain. Myriad issues re overhead line, signaling, track compatibility, platforms, level access.
- Previous studies have suggested business case is weak



Discussion

- No clear option that is both attractive (demand perspective) and feasible.

Corridors 5: City-Sub - Emerging Conclusions

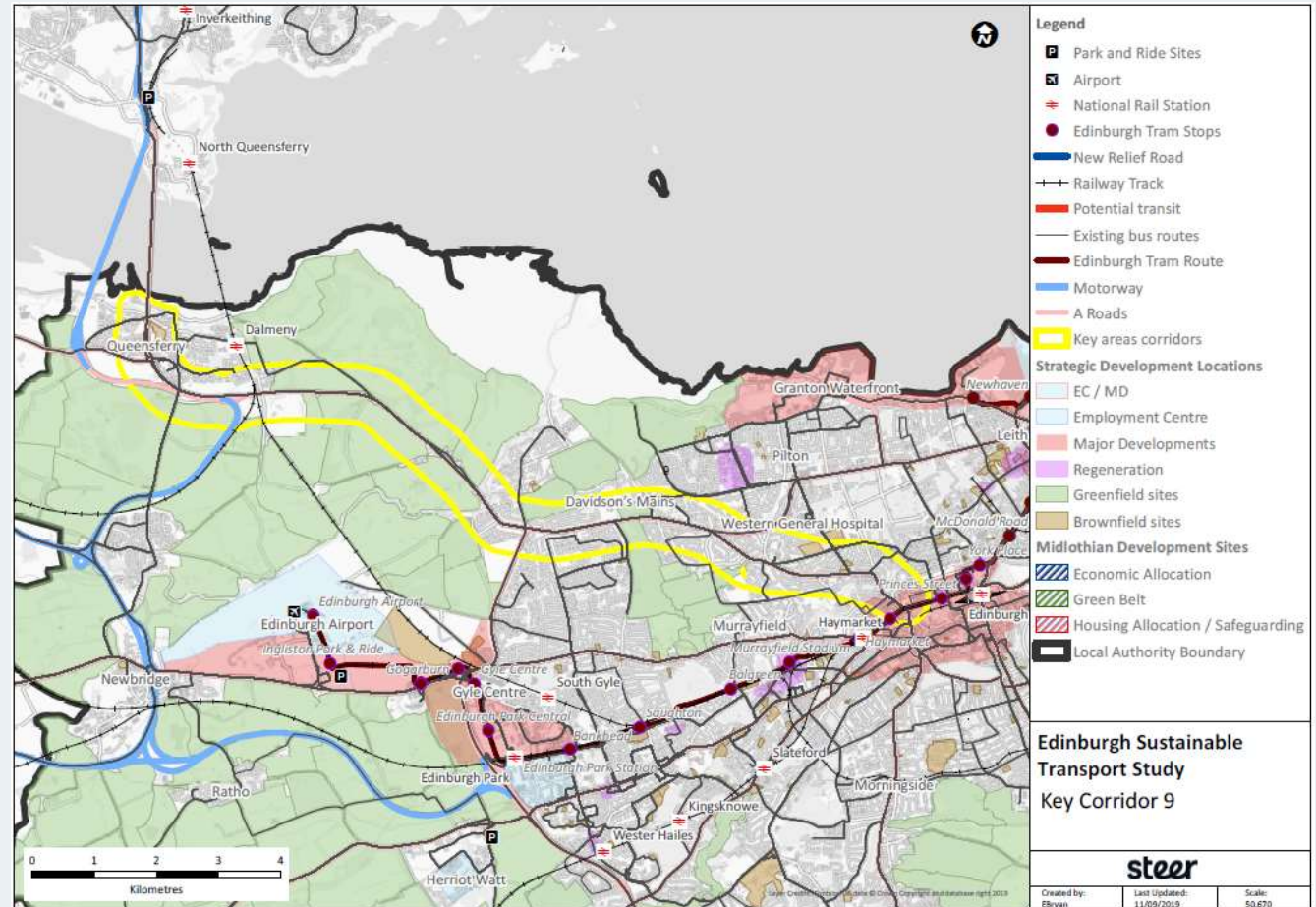
Overall Conclusion

- There are fundamental feasibility issues that mean that the use of south-sub for a transit / metro type service is likely to be undeliverable and unviable.
- Given the above, the recommendation is that this should not be a priority for further consideration.

Corridor 9: City Centre to Queensferry – Context

Corridor Overview

- Major strategic route to Fife and the north of Scotland
- A90 is busiest arterial route in Edinburgh (in terms of general traffic) carrying twice the volume of the A8
- Poor journey time reliability - corridor susceptible to major delays as a result of accidents and roadworks
- Major growth in South Fife with many residents travelling to Edinburgh for work
- Development sites already allocated in Queensferry and Kirkliston



Corridor 9: City Centre to Queensferry – Problems and Opportunities

Problems

- High traffic levels and congestion result in poor bus reliability
- Focus on A90 capacity results in adjacent communities (Barnton, Blackhall, etc) having poor access to the road network with long side road delays
- Relatively poor service by Lothian Buses, strong Stagecoach service but connectivity focused on city centre; very poor links from Fife to north and west Edinburgh
- A90 bus lanes would reduce general traffic capacity to a point where approach queues would be so long as to negate any benefit
- Queensferry St bus stop capacity limits service expansion

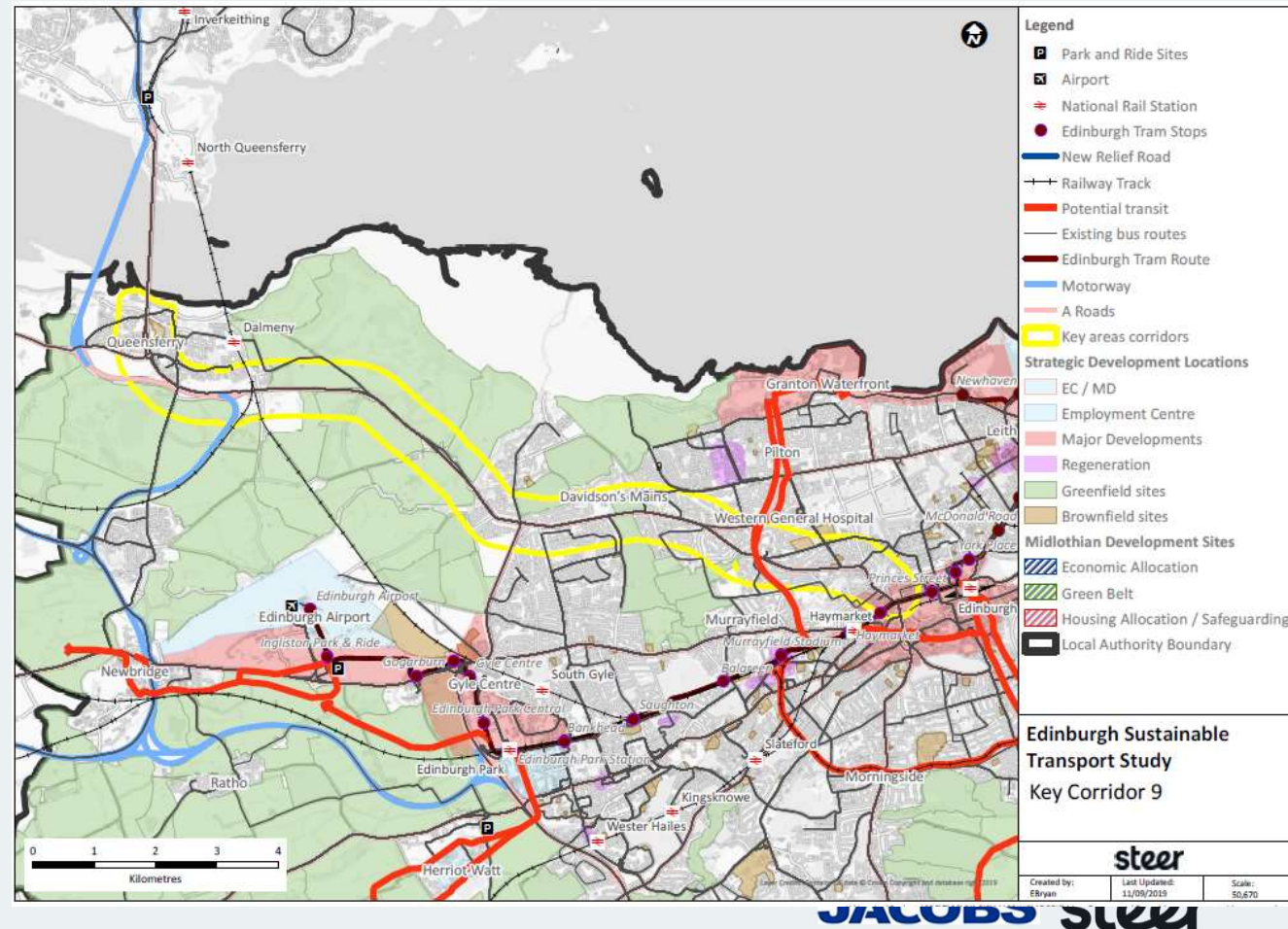
Opportunities

- Opportunity to increase rail capacity from Fife limited – STPR2 focus on bus and even ferry
- Existing P&R sites at Ferrytoll and Halbeath perform extremely well and could / need to be expanded
- Targeted bus priority improvements at Blackhall junction and other locations

Corridor 9: City Centre to Queensferry – Transit Options

Corridor Options

- Bus based solution rather than tram or BRT
- Needs buy-in from operators, including improved connectivity between Fife and North Edinburgh and better local service provision (strengthening of Route 41 and new services to support greenfield expansion)



Corridor 9: City Centre to Bio Queensferry - Emerging Conclusions

Overall Conclusion

- Major strategic route to Fife and the north of Scotland
- Major intervention required to improve public transport capacity and reliability
- Consider through STPR2

Commentary on Transport Options

- Public transport will remain bus focused
- Existing inbound bus priority on A90 towards Barnton junction but no further bus priority inside city
- Major delays, particularly outbound in evening period
- Key arterial route to the north. Significant delays are made even worse during the summer months and festival periods.
- Local residents split on the benefits of improved bus priority on Queensferry Road. Existing local service provision is poor (Lothian 41 and Lothian Country 43).
- Bus lanes are likely to increase bus delays on the approaches to the lanes, negating any reliability benefit

- Bus lanes will significantly reduce general traffic capacity. Local connectivity may be therefore reduced rather than improved if bus lanes are implemented
- Any bus priority should be implemented with an operator commitment to improve services.

Commentary on Active Travel

- Recently completed segregated cycle route between Queensferry and Roseburn
- Roseburn / CCWEL will complete direct largely segregated link to city centre

Corridor 9: City Centre to Bio Queensferry - Emerging Conclusions

Commentary on Development Implications

- Existing green belt with high landscape value
- Difficult to provide public transport connectivity to new development. Limited existing local services to extend. Regional routes will not wish to divert from A90
- Development pressure at Craigiehall (former Army HQ). Park & Ride site proposed at this location but:
 - site is located too close to the city, and
 - there are no obvious public transport routes which could serve the facility
- Major development will continue in south Fife – e.g. Dunfermline East and West increasing public transport demand

Next Steps

Additional work needed to help inform STPR2. This needs to consider:

- the need for additional Park & Ride capacity at existing and potential new sites
- how to make best use of the public transport capacity provided by the Forth Road Bridge
- how to increase public transport capacity and reliability along the A90 and Telford Road
- how to improve public transport access and capacity through Queensferry Street to and from the city centre
- how to improve public transport accessibility to north and west Edinburgh, both of which are poorly served from the A90 catchment

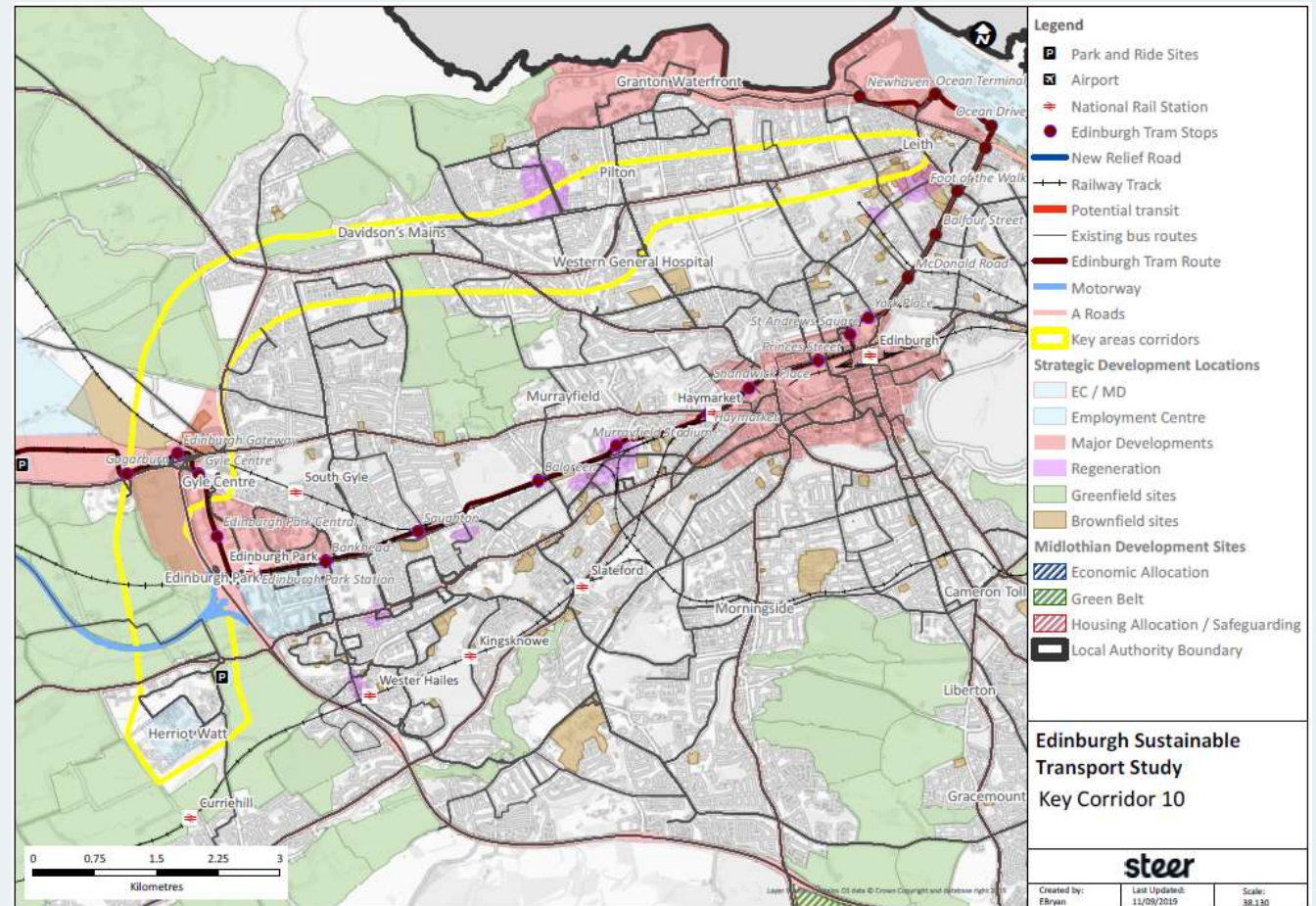
Corridor 10: West Edinburgh North/South Link - Context

Corridor Overview

- Major growth corridor currently poorly served by public transport
- High levels of general traffic congestion
- Investment in tram and Gateway station but benefits not fully realised

Planned and Potential Growth

- Edinburgh Park completion
- Cammo and West Craigs residential
- IBG
- Crosswinds



Corridor 10: West Edinburgh North/South Link – Problems & Opportunities

Problems

- Very high levels of congestion; Barnton, Maybury and Gogar are three of the busiest junctions in Edinburgh - significant peak period congestion
- Poor public transport access to Gateway Station
- Limited opportunity for further public transport priority on existing roads
- Unrestricted parking makes public transport provision difficult
- Crosswind runway a historic barrier but now removed

Opportunities

- Major development growth – largest opportunity for commercial (employment) development in Edinburgh
- High potential demand for public transport – with developers willing to limit parking capacity (supported by future CPZ)
- North / south bus corridor may need to be a green field route to provide competitive journey times
- New bridge over Fife railway line would enable improved interchange with rail and bus at Gateway Station
- Redevelopment of Gyle shopping centre could deliver improved interchange

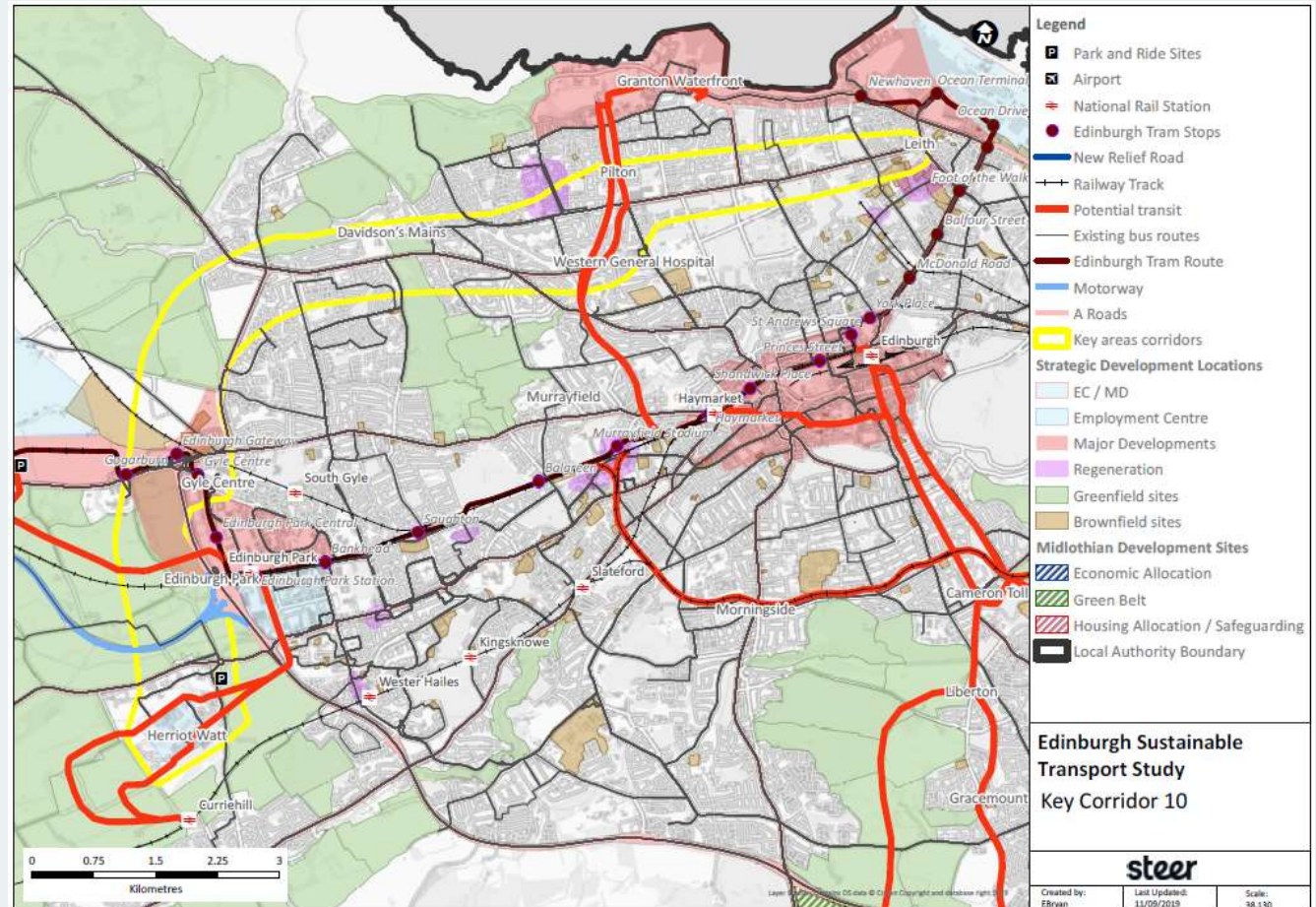
Corridor 10: West Edinburgh North/South Link – Transit Options

Corridor Options

- Bus based opportunity connecting with tram and heavy rail

Issues

- High levels of private sector investment - potentially transformational
- But existing road network a major constraint
- No existing bus service to strengthen – will require early support
- Major up-front investment in public transport infrastructure but no guarantee that it will be used?



Corridor 10: West Edinburgh North/South Link - Emerging Conclusions

Overall Conclusion

- West Edinburgh a key area for expansion. Includes nationally important sites, close to airport
- Major investment already made in tram and Gateway station
- Investment in bus and active travel can improve access to this infrastructure

Commentary on Transport Options

- Further public transport will be bus focused, improving north south connectivity between Granton and Heriot-Watt
- Bus access to Edinburgh Gateway station needs to be improved. Consideration of a new public transport bridge across the Fife railway line providing connectivity to West Craigs and Maybury road, and improved access from Gogar roundabout, in conjunction with a new airport link road

- Access to Edinburgh Park extremely congested at peak times, reducing the attractiveness of bus
- Further bus priority required in order to mitigate against high levels of general traffic congestion through Maybury / Gogar and at Barnton
- Major investment in bus infrastructure would need to be supported by a commitment from bus operators to use the facilities
- Potential to make Gyle or Gateway stops key bus / tram interchanges
- Existing bypass is a barrier to east / west movement, west of Edinburgh Park. Possibility to calm A720 north of Hermiston and make A8 a local distributor – but this would require major investment in the bypass
- Possible connection to new tram extension at Heriot-Watt and wider development associated with Corridor 8

Corridor 10: West Edinburgh North/South Link - Emerging Conclusions

Commentary on Active Travel

- Active travel improvements proposed on Maybury Road, also a new link across Fife railway to Edinburgh Gateway
- Existing facilities on A8 and Queensferry Road but major junctions at Barnton Maybury and Gogar a barrier
- Potential to improve quiet routes through Edinburgh Park and towards Heriot-Watt University

Commentary on Development Implications

- Major mixed use developments proposed, including: Edinburgh Park Phase 2, IBG1 & 2, Crosswinds
- Major residential sites in LDP include Cammo and West Craigs; East of Milburn Tower still not decided
- Airport growth and development in West Lothian will add further transport demand
- General developer acceptance that parking restraint will be required. A new CPZ is proposed which will help encourage bus, rail and active travel demand

Next Steps

Existing modelling indicates north to west movements are underserved by public transport

- Further work required to understand size of current and future market
- Public transport market served either by bus via Telford / Queensferry Road or tram via Haymarket
- Work with developers and bus operators to identify existing opportunities and network constraints
- Identify potential further mitigation on top of that already identified in WETA