

- TfGB knows that the government funding for this scheme cannot be reallocated to rail.
- BUT this scheme is flawed and needs to be improved and costs reduced to make it financially viable.
- The scheme does not currently comply with planning policy to promote integrated transport: it does no more than abutt with, and undermine existing bus services and only integrates with rail at a dead end spur to Parkway.
- When NFHP was conceived it did not take account of existing bus services. The route is wrong in several areas. Compare the MetroBus proposal with the integrated options in the TfGB map.
- TfGB's scheme incorporates existing bus services, promotes a rail bus interchange at Bedminster (and potentially at Ashley Hill) and integrates three MetroBus through routes at Parkway.
- The consultation process, just arms length box-ticking, gave no opportunity for TfGB to discuss these more effective and very much cheaper options until this moment.
- **The Emmerson's Green route** is largely worthwhile, except that it should be merged with redesigned existing services to optimise on passenger numbers) and of course it should also continue direct from Parkway via Gypsy Patch Lane and Hayes Way to provide the direct route to Cribbs.
- **Elsewhere** significant changes will be required to make NFHP integrated to comply with policy, and financially viable.
- **In the south MetroBus** should incorporate services 75 and 76, so both run two-way via Hartcliffe Way direct to Hengrove Park bus interchange, and thence two-way via their existing routes serving the communities there, back to Bedminster. This is achieved by redesigning the NFHP MetroBus route to take a more direct route northwards from HP, by turning westwards into Whitchurch Lane, direct towards Hartcliffe Way. The route should run the whole length of Hartcliffe Way. Currently it will turn eastwards, from HP, travelling away from the centre of Bristol: the proposers' own data predicts **increased journey times** to/from from significant destinations such as SBSA and the new hospital of up to 10%. Evidence confirms potential patients and students are already deterred by the lengthy journey there.
- TfGB's alternative, actually integrating the 75 & 76 route into the scheme reduces the need for new MetroBus vehicles. Incidentally the proposed 90 route using the long way round route to serve Filwood Park and Inns Court could still operate, but without the costly infrastructure. An express **75** and **76** directly along the full length of Hartcliffe Way would provide the fastest route towards Bristol city centre from the Hengrove Park destinations, with the added benefit that it would also speed up 75 & 76 journeys from the rest of the Southern Fringes, via William Jessop Way to Hengrove Park.
- The proposed route northbound at Bedminster should go via Dalby Avenue (as the southbound route already does) to form an interchange with new MetroWest rail services in conjunction with the redevelopment of St Catherine's Place to promote pedestrian access to East Street.
- **IF there is a case for a buses half way up the M32** then **bus only slip roads** directly to/from Stoke Lane would promote services to UWE that are direct. Please see Plan and Table of DfT compliance prepared by UWE transport professors. The expensive and elaborate

junction works and bus bridge at **M32 / Stoke Lane** are explicable only as pre-works for the cancelled Park & Ride.

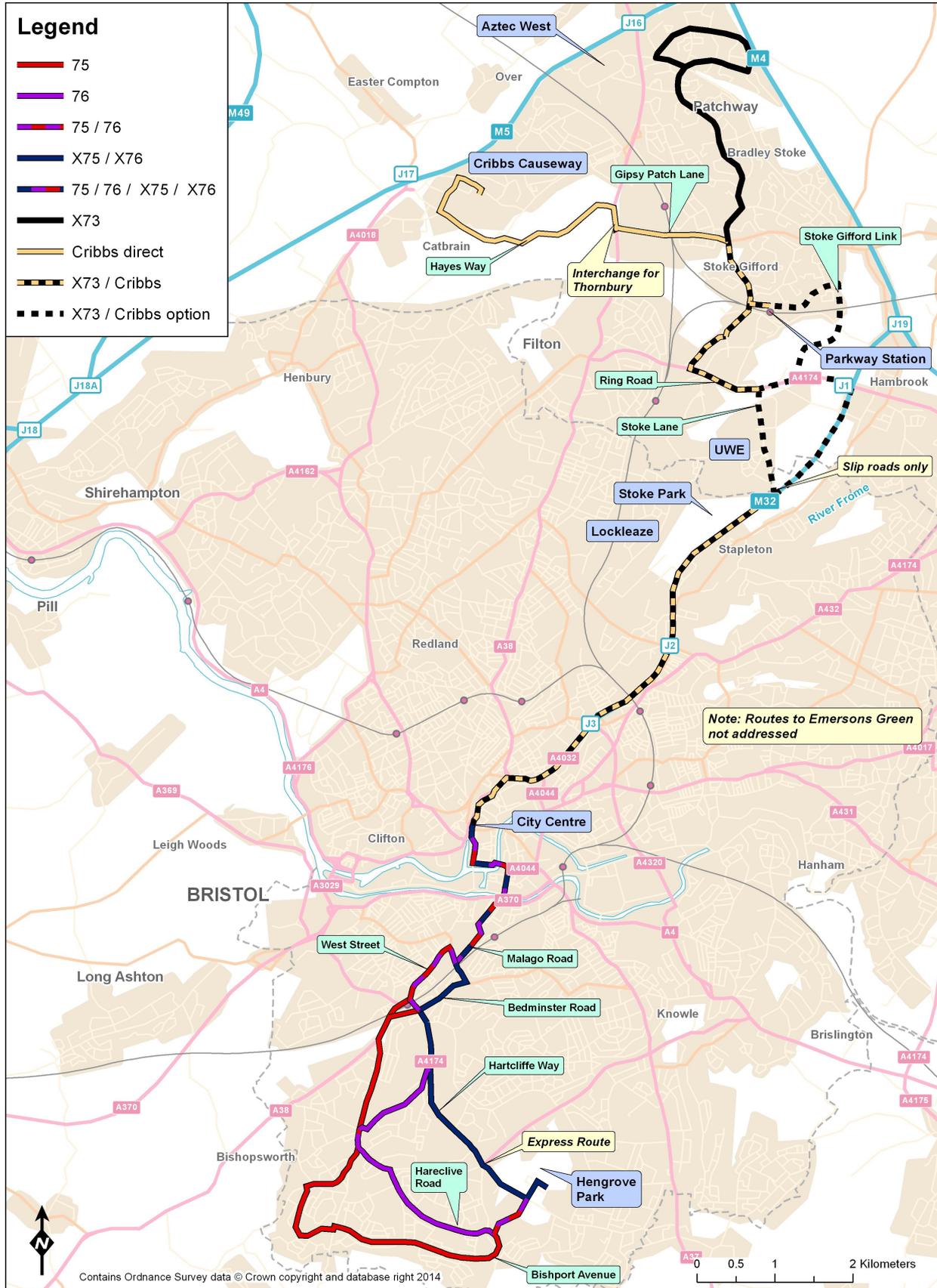
- Another exciting alternative is a bus priority route to UWE using the new **Romney Avenue bus link**, from the M32 at Eastgate, through a much-needed remodelled Eastgate interchange along bus lanes on Muller Road to Shaldon Road & Romney Av. Bus priority measures on Muller Road could impede motorists, but prioritising buses over cars complies with policy and modal shift. This route integrates at the UWE bus hub, whereas the proposers' scheme bypasses it. It would also integrate with a reopened Ashley Hill station. Bus priority on Muller Road would also enhance the orbital links to Southmead Hospital.
- **Across the northern fringes**, a rapid service needs to run direct to/from Cribbs Causeway via **Parkway station** and Hayes Way. (The current proposals see the ludicrous sight of 'rapid' buses from Cribbs Causeway bound for the Centre of Bristol heading North on A38 at Patchway in the opposite direction!) There is no case for routing an express service to Cribbs via Aztec West, duplicating the 73 bus route there.
- The separate direct spur from Parkway station could serve Aztec West using the existing x73 route.
- MetroBus is designed with little integration with the bus network though the word "integrated" is mentioned as spin to give that impression.
- This unintegrated scheme can be redesigned to better serve the needs of the people of Bristol and actually promote passenger growth and modal shift at reduced cost.

Martin Garrett, Gavin Smith, on behalf of Transport for Greater Bristol. Aug 2014

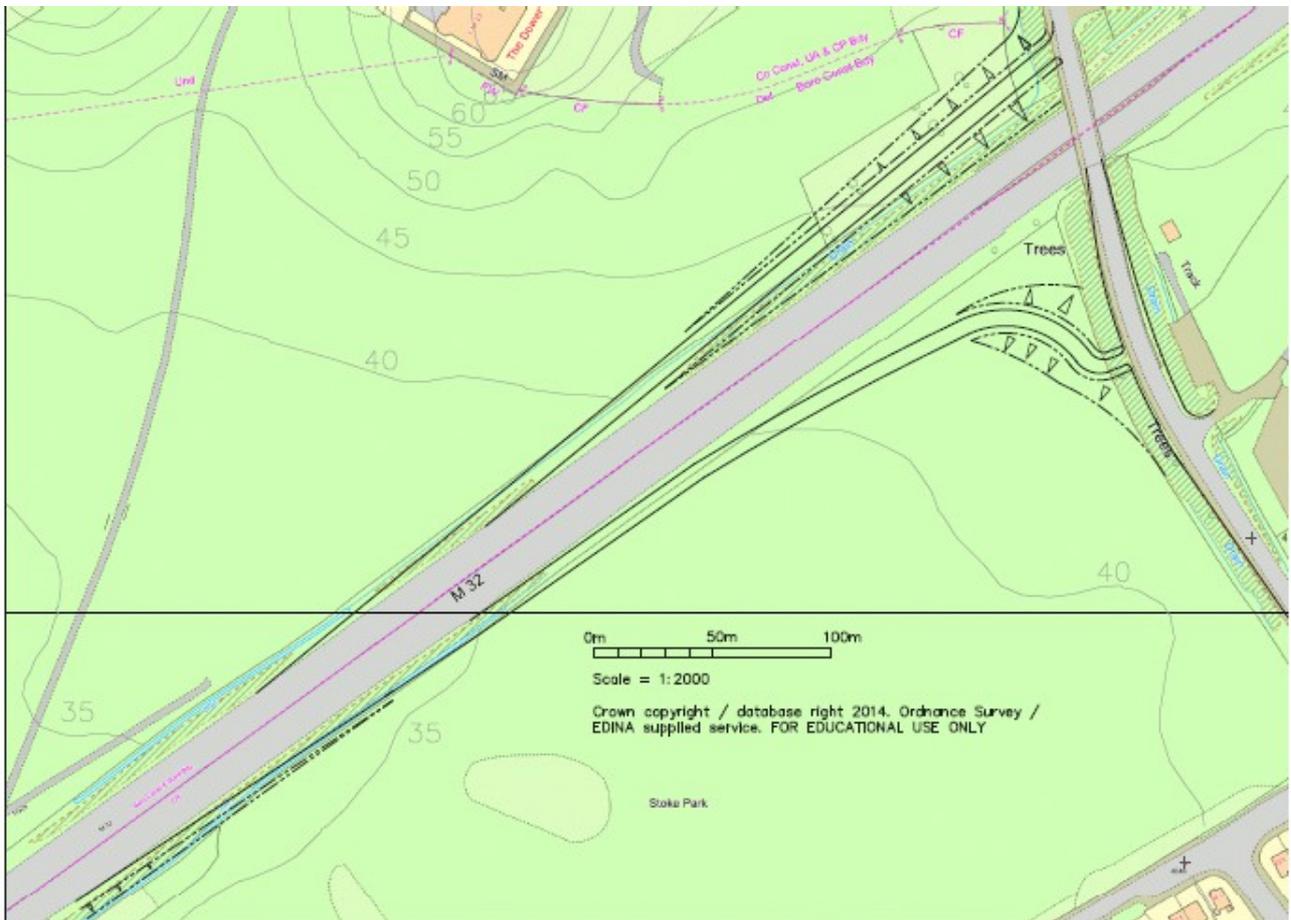
Appendices:

- TfGB possible options map
- Stoke Lane - South facing on-slips drawing
- Design assumptions for Metrobus South West facing on- and off-ramps on the M32 at Stoke Lane, Bristol

TFGB Possible Options



Stoke Lane Metrobus South facing on-slips



Design assumptions for Metrobus South West facing on- and off-ramps on the M32 at Stoke Lane, Bristol

The following assumptions drawn from the Design Manual for Roads and Bridges have been made for the design of South facing on- and off-ramps connecting Stoke Lane to the M32.

Parameter	TA or TD / Vol.Sect.Part	Para / Table	Assumption	Output
Design Speed	TD22 / 6.2.1	Table 4/1	Mainline Rural 120kph	70 kph
Stopping sight distance	TD22 / 6.2.1 and TD9 / 6.1.1	Para 2.57 and Table 3	As for an MSA, stopping sight distance may be one step below design speed	70m
Horizontal curvature	TD22 / 6/2/1 and TD 9 / 6.1.1	Para 2.57 and Table 3	As for an MSA, horizontal curvature may be one step below design speed. Assume 5% superelevation	255m
Maximum vertical grade on slip road	TD22 / 6.2.1	Para 4.7		6%
Merge. Length of entry taper / nose ratio / nose length	TD22 / 6.2.1	Table 4/3		205m / 1:40 / 115m
Diverge. Length of exit taper / nose ratio / nose length	TD22 / 6.2.1	Table 4/4		170m / 1:15 / 80m
Merge. Near straight length upstream of nose on merge	TD22 / 6.2.1	Para 2.34	Minimum, same as nose length	115m
Diverge. Near straight length downstream of nose on diverge	TD22 / 6.2.1	Para 2.46	Minimum, same as nose length	80m
Width	TD22 / 6.2.1	Table 3/1a	Merge MG1C and diverge DG1C Single lane with hard shoulder	Verge 1.5m / hardshoulder 3.3m / lane 3.7m / hardstrip 0.7m / verge 2.3m
Taper for right turn pocket for on-slip	TD42 / 6.2.6	Table 7/3	70 kph design speed	1:20
Direct Taper length for right turn pocket for on-slip (dimension 'e' in Fig 7/4)	TD42 / 6.2.6	Table 7/4	70 kph design speed	15m
Turning length for right turn pocket (dimensions 'a' and 'b' in Fig 7/4)	TD42 / 6.2.6	Para 7.32 and 7.33	N/A	10m