

7 Conclusions



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7.1 Summary and Conclusions

This study has consisted of a strategic level assessment of a range of public transport options, to serve the eastern corridor of Plymouth. Options considered have ranged from conventional bus services to Light Rapid Transit, also incorporating different routing alternatives. The modelling and feasibility assessments have identified that a Bus Rapid Transit (BRT) service should be introduced, operating from a Park and Ride site at Deep Lane on the A38, through Sherford New Community and Plymstock Quarry into the city centre.

The recommended package would consist of a Park and Ride site at Deep Lane, a virtual segregated busway through Sherford to Haye Road, a fully segregated busway along the disused rail line north of the A379 to Plymstock Quarry and then operating on carriageway with enhanced bus priority from Laira Bridge to the city centre.

Considerable stakeholder discussions have focused on the specific operating characteristics of bus services within Sherford, with options including an on-carriageway services operating within a 20mph speed limit, to a fully segregated route with a 50mph speed limit. The balance that is required involves the trade off between the increased demand generated by faster journey times of a segregated route, against the public perception and possible preference of an on-carriageway option. This study could not include a detailed assessment of possible layouts, but did incorporate sensitivity tests of demand under different bus speed constraints. From this, a virtual segregated route, with 'green phasing' priority, possible through central bus lanes, represents a workable option, providing that a suitable average operating speed can be achieved (approximately 30mph). The precise nature of this service can only be determined following the completion of the Sherford Masterplanning and Transport Assessment activities.

The operation of BRT vehicles is recommended because of the enhanced vehicle quality and performance, and also because of the forecast increased demand such services would generate. Additional bus priority is recommended on the A379 on the approach to key junctions, including a bus gate at the approaches to Laira Bridge. The recommended re-working of highway and bus networks to the west of Laira Bridge should be considered in light of further detailed options assessments presently being undertaken in a separate commission. All outputs promote the movement of buses, generating quicker and more reliable journey times.

The costs and benefits of the recommended package have been estimated using Sherford to city centre trips, and therefore represent an under estimate of total benefits. In a scenario where much of the infrastructure investment costs are borne through developer contributions, the BCR is 2.5, further supporting the progression of the package to major scheme funding bid. The benefits have been estimated as £36.3m with costs of £14.5m. Should all costs (£26.3m) be considered within the assessment, a BCR figure of 1.4 is produced. The wider costs and benefits associated with the recommended package include enhanced bus services to Plympton and Plymstock, and increases in car journey times between the same two locations and the city centre.

There remain a number of areas of detailed assessment that were outside the scope of this strategy study, and which should therefore be incorporated within the recommended major scheme submission. These include the detailed working and access arrangements of both the Sherford and Plymstock Quarry developments, particularly in the vicinity of Laira Bridge. The detailed engineering design of a segregated busway between Haye Road and Plymstock Quarry should be progressed, including full site visits and environmental assessments. The timescale for such activities are, in part, dependent on the developer's implementation programmes, and the importance of securing appropriate contributions. Further assessments are also required to consider the impacts, and specific design, of demand management measures, to support investment in public transport.

Overall, the recommended package of measures represents a sustainable and cost effective approach to meeting the future travel demands and need of the eastern corridor in the medium to long term. The recommended BRT also represents a step change in bus service provision.