

10. Major Schemes

Summary

- 8 major schemes in the Regional Funding Allocation list.
- £68m Greater Bristol Bus Network Bid.
- £65m Bath Package.
- Future Major Scheme Bids for Weston Package, Bus Rapid Transit and South Bristol Ring Road.

10.1 Context

10.1.1 Chapter 3 of this plan sets out the transport problems we face at present and the barrier this creates to regeneration and continued economic growth. If these are combined with the anticipated growth put forward in the emerging Regional Spatial Strategy then, without significant investment, up to one hundred thousand new homes will push the transport system past breaking point.

10.1.2 As set out in Chapter 4, the GBSTS final report recognises and demonstrates the need for significant investment in our area. A total package of funding in excess of £1 billion is identified in the final report. A large proportion of this investment is required in the next 10 years to tackle existing problems, let alone growth. This chapter translates the transport recommendations of GBSTS into a development programme for Major Schemes, i.e. those costing over £5m and supplementing the schemes and measures funded from the integrated transport and maintenance block allocations (go to Chapter 11).

10.1.3 In developing the Major Scheme investment programme we have considered all bids in a step-by-step way to ensure best use of resources and maximum value for money. Investment is directly linked to tackling the Shared Priorities and supporting regeneration and economic growth. Developing major schemes requires considerable resources

from the four Councils and contains the risk of failure associated with any bidding process.

10.1.4 In the first instance, we will aim to make best use of the existing highway network to ensure that the maximum capacity possible is achieved to benefit all road users. In making best use of the current network, we need to deliver improvements to the public transport network in order to get the basics right. A bid was submitted to the Government in July 2005 for the Greater Bristol Bus Network Major Scheme and a bid for the Bath Package Major Scheme will be submitted this year. We have learnt from best practice in preparing these bids and intend to draw on experiences from elsewhere in the delivery of these important strategic schemes.

10.1.5 These Major Scheme bids represent “making best use” in that the proposals are focused on the existing highway network and will address basic deficiencies in the bus networks due to past under-investment. The level of support received during the consultation process emphasises the importance of these bids to those living and working in the area. Section 10.3 sets out the development programme for future Major Schemes.



Bus lane in Parson Street, Bedminster

10.2 Funding

The Regional Funding Allocation (RFA) Process

10.2.1 Each region is given an annual allocation from which the Major Scheme programmes are funded. In the South West the region receives around £80m a year at present. Historically our area has not received significant funding for Major Schemes apart from the A4174 Avon Ring Road.

10.2.2 In recent years it has become apparent, across the whole country, that pressures on Major Scheme funding continue to grow. There have been concerns in Government that schemes are considered on a 'first come, first served' basis and not within the context of the Government's transport strategy.

10.2.3 To assist with its decision-making process the Government announced in 2005 a new system of Regional Funding Allocations (RFA) prioritisation. This process asks the Regional Assembly to consider all the potential Major Schemes being considered for the next 10 years by local authorities and national agencies and score them against the priorities identified below. The aim is to achieve a list of 'regional priorities' that would be recommended to Government as the preferred schemes for funding in the South West.

10.2.4 The priorities for investment of the Transport RFA funding set out by the Regional Assembly are:

- Promoting more **sustainable patterns of transport**.
- **Supporting development and economic activity in the strategically significant towns and cities** through improved public transport, demand management, and selectively providing for new roads.
- **Improving the reliability and resilience of inter and intra-regional connectivity** through a second

strategic road route into the region from London (along the A303/A358), on regionally significant transport corridors and on other transport corridors.

- Tackling **access to jobs and delivery of services in rural areas**.
- Delivering against **DFT/ Regional 'shared priorities'**.

10.2.5 The regional prioritisation process has resulted in an agreed priority list of schemes approved by the Regional Assembly on 27th January 2006. The list is also supported by GOSW and the South West Regional Development Agency. In total 8 Major Schemes in the JLTP area are identified in the list. Further schemes are included on 'reserve' lists, recognised as having potential, and will be considered for future inclusion subject to technical appraisal work. The schemes are identified in Table 10.1 at the end of this Chapter.

10.2.6 Given the relative lack of Major Scheme investment in our area these Regional Assembly recommendations represent a major breakthrough. The RFA process endorses the JLTP strategy and the case for investment in this area as the economic hub of the South West region.

10.2.7 Developing and submitting these bids to the timetable set out in Table 10.1 will be a challenging task and require considerable resources. However the RFA endorsement gives us confidence that if the technical case is right then the funding for the schemes will be made available.

10.2.8 Apart from the schemes included in the initial RFA process it is important that we recognise that there are other schemes that will be needed in this area. Many have been identified in the final GBSTS report and further work will be required before these schemes can be considered for future revisions of the RFA. In Table 10.1 we have indicated when it is likely that further development work will take place on these schemes.

Developer Contributions and Other Funding Sources

- 10.2.9 In keeping with DfT guidance all Major Schemes will lever in financial contributions from other sources. The Greater Bristol Bus Network Major Scheme, for example, has a 38% local contribution to the total £68m scheme cost.
- 10.2.10 For bids that enable significant development linked to the spatial strategy the four Councils will seek funding from developers once planning agreements are in place. There is one scheme, however, that we expect to be fully funded by developers, the North Fringe Package (go to paragraph 10.6.23).
- 10.2.11 In addition to Major Scheme funding sources we will continue to explore other opportunities to secure funding for major transport schemes linked to regeneration and growth initiatives such as the New Growth Points Fund. Further information on this is contained in Chapter 11.

10.3 Major Scheme Development Programme

- 10.3.1 Table 10.1 sets out the schemes proposed for development and submission to the DfT during the next 5 years and outlines those for development in subsequent LTP periods. The list is split into those that are already sufficiently developed for the Regional Assembly to have identified them as priorities and those that require further work before submitting into the RFA process. The list also contains the TIF bid (go to 5.4.19- 25) and the developer funded North Fringe Package.
- 10.3.2 A commentary on the bids is in the following sections. Detailed information is included on the Greater Bristol Bus Network and Bath Package bids, reflecting the progress made on these. Outline descriptions are made on the remaining bids. Further details will be available as the bids are developed.

10.4 Greater Bristol Bus Network

- 10.4.1 Bus services are the backbone of the public transport network in the area. They currently carry over a million people a week. No other form of transport can provide a mass alternative to the car on this scale in the short to medium term. Recent investment in the bus network by the Councils and the operators has demonstrated that significant growth can be achieved. To date, due to limited resources, this investment has been made on the basis of individual corridors.
- 10.4.2 There is evidence elsewhere in the country, for example in Coventry and Cambridge, that significant investment in a short time period can achieve levels of passenger growth well over and above that achievable through incremental investment.
- 10.4.3 The Greater Bristol Bus Network Major Scheme builds on these principles with the intention of accelerating the speed of delivery of schemes to ensure a first class bus service for all main routes in the next 5 years. The bid focuses on bus priority measures on 10 corridors (go to Figure 10.1) in partnership with the major bus operator First. These ten corridors in turn serve 37 showcase bus routes.
- 10.4.4 The package includes:
- More bus lanes and improvements to traffic junctions to give buses priority over other traffic;
 - Ticketing improvements to speed up boarding and make buses easier to use;
 - Real time information on major bus stops with information available on the internet and potentially via mobile phones;
 - Modern new low-floor buses with enhanced bus stops to allow easy access and new shelters;
 - Higher standards of driver training and customer services;

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- Enforcement of bus priority measures including new powers to use cameras to enforce bus lanes;
- Bus information made available in new formats to public and businesses, including mailing to households;
- Improvements for walking, cycling and road safety linked to these improvements.

10.4.5 The concept of this bid is to create a comprehensive, integrated transport system that will:

- Provide fast and reliable bus journey times along major corridors to compete effectively with the private car;
- Enable passengers to make a range of cross-Bristol and other journeys without the need for interchange;
- Produce greatly enhanced standards

of passenger comfort;

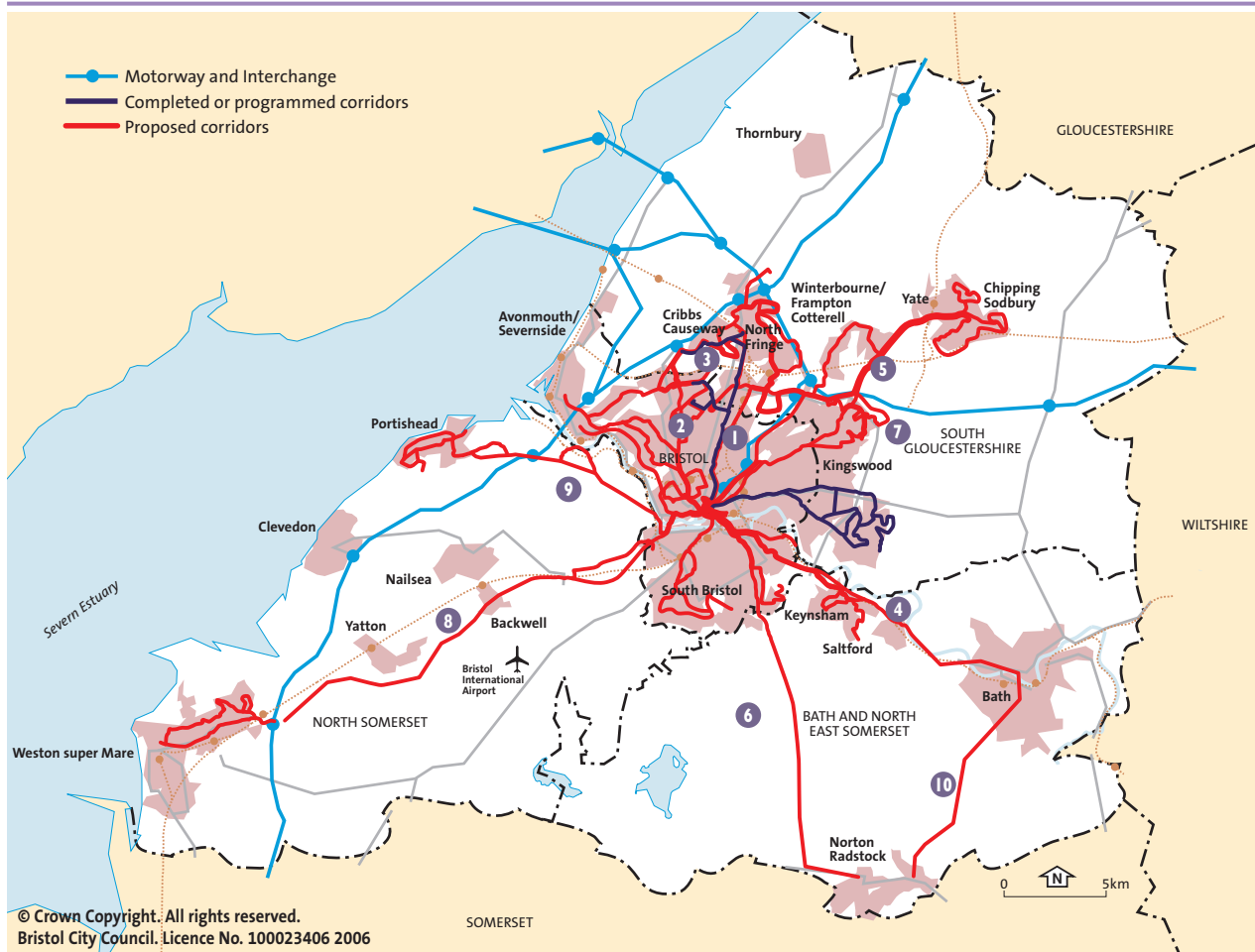
- Achieve greater service levels for a range of key destinations ;
- Connect efficiently with rail and coach services.

10.4.6 The size of the scheme also gives the major operator the business confidence to provide significant additional investment



Waiting for a bus at the new bus & coach station

Figure 10.1: Greater Bristol Bus Network Key Corridors



10. Major Schemes

in vehicles with up to several hundred new or improved vehicles added to the fleet. By working together in partnership we believe we can deliver growth in bus use to a scale that has not been witnessed for decades.

10.4.7 The logic of the approach is therefore simple: to provide a top quality bus system - a fast, reliable network of services with modern vehicles and well trained staff that encourages more people to use it, thereby reducing car journeys, leading to improvements in congestion, air quality, safety and accessibility.

10.4.8 The Greater Bristol Bus Network Major Scheme envisages investment of £68m. Of the investment, £20m will come from operators, £6m from developer contributions and the remaining £42m from Government. The bid provides a strong benefits: cost ratio of 3.53 demonstrating the benefits to public transport users whilst at the same time causing no change, or wherever possible benefits, to car users. The benefits include improved journey times for bus users and also some car drivers through better use of road space and the introduction of HOV lanes. Improvements at critical junctions also deliver road safety benefits to be gained through reduced accidents. Opportunities for incorporating walking and cycling have been maximised. Investment in 10 corridors will allow extra benefits such as increased interchange opportunities, development of cross-city links and positive improvements to punctuality and reliability, all contributing to reduced congestion across the network.

10.4.9 The scheme is far more than just encouraging modal shift for commuting trips but rather a vision for a network that serves all types of movements for employment, leisure, health and tourism. By developing the main network corridors that link the principal urban areas of Bristol, Bath and Weston-super-Mare and the key towns as well, we can channel services through areas of congestion to serve key locations. The advantage of a

bus-based approach is that the vehicles can then branch out to serve retail, business and residential areas using the less congested elements of the highway network. The network also provides important linkages to longer distance cross-boundary services, for example between Bristol and Wells; and Bristol and Chepstow.

10.4.10 All the corridors that go beyond the built-up areas are vital for non-car access to the surrounding countryside for urban residents as well acting as commuter, shopping and leisure routes for inwards trips to the urban centres. The bid contained letters of support from a wide range of stakeholders and regular meetings are being held with neighbouring authorities to ensure that measures that could benefit these services beyond the boundaries of the JLTP area are considered and built into their LTPs.

10.4.11 The scheme has the support of the Regional Assembly and is identified as a key priority for the South West in the RFA advice given to Government in January 2006. The overall strategy of the JLTP focussing on this bid is recognised in “Delivering the Regional Transport Strategy – Investment Priorities for the South West” (September 2004) which identifies the “Development of a major public transport system to reduce reliance on the use of cars and reduce congestion and pollution and improve safety” as a priority for the area.

10.4.12 The scheme also supports the emerging Regional Spatial Strategy. Areas that have experienced rapid growth in housing and employment have not seen the public transport network expand at the same pace. The Greater Bristol Bus Network Scheme will begin to address this imbalance as well as ensure that new areas of development are more adequately served. During the period of this JLTP there will be significant development in areas such as Emersons Green North, Filton Northfield, South

Bristol, Weston-super-Mare, Portishead and Western Riverside in Bath: these locations would all be served by the enhanced network.

- 10.4.13 In the context of Government targets for achieving public transport growth in the South West, the JLTP area is critically important as it carries about one third of all the bus passengers in the region. Without increases in bus patronage in Greater Bristol it is unlikely that the South West will achieve the regional target.
- 10.4.14 Initial assessments identified measures within those corridors where there are opportunities to provide cost effective measures to address congestion and support the development of the bus network. Further assessments were completed on the engineering feasibility of the proposed measures before outline appraisals were completed to ensure that benefits were maximised through bringing together the different corridors. The final network is shown in Figure 10.1 and the characteristics of the 10 corridors are described below.

Corridor 1 – M32

- 10.4.15 This corridor is one of the most congested in the area and one of the major contributors of poor air quality. The M32 carries express services from areas to the north of Bristol and from Wales. It connects the employment, shopping, health and leisure facilities in central Bristol with towns such as Yate, Chipping Sodbury, the new development around Emersons Green and Filton/ Harry Stoke. The corridor is also vital for movements outbound from Bristol to these surrounding areas and also for longer distance trips for both work and leisure. In terms of employment, combined with Corridor 7, it will start to provide realistic public transport alternatives to the expanding employment opportunities in the North Fringe.
- 10.4.16 Buses suffer from unreliable and relatively slow journey times in the peaks. There is a large potential to attract new bus users on this corridor and provide fast and

efficient express bus services both in and out of the city to provide an attractive service for work and leisure trips.

Corridor 2 – A4018 Bristol to Cribbs Causeway

- 10.4.17 This corridor serves dense residential districts north of central Bristol, as well as Bristol University, Park Street and Clifton Down shopping centres. North of the Downs the bus routes split to serve Sea Mills and Lawrence Weston to the west and Southmead and Henbury to the north. Some of these areas suffer from significant deprivation. These routes also serve a number of large secondary schools. Routes that serve the northern end of the corridor connect with Cribbs Causeway regional shopping centre. This shopping centre has a high proportion of people accessing it by private car resulting in very significant congestion and poor reliability of bus services. The corridor also has an important role in serving recreational and leisure attractions such as Bristol Zoo and areas of natural beauty such as the Blaise Estate.

Corridor 3 – Bristol to Cribbs Causeway via Parkway and North Fringe

- 10.4.18 This route serves a large number of very popular destinations including central Bristol, the employment areas to the north of Bristol (MoD, AXA Sun Life, Aztec West), Bristol Parkway station and Cribbs Causeway shopping centre as well as a significant number of residential communities, including Bradley Stoke. The route follows the southern part of the A38 showcase bus route and links to Bristol Temple Meads station.
- 10.4.19 Many of the destinations along the route are highly congested resulting in considerable delays to bus services. The proposed measures will improve reliability and reduce journey times.

Corridor 4 – A4 Bristol to Bath

- 10.4.20 This route connects Bristol and Bath, two Principal Urban Areas, as well as the

intermediate communities of Keynsham and Saltford. It also passes Bristol Temple Meads station providing significant opportunities for interchange between rail and other bus services. In Bath the route runs very close to the Western Riverside regeneration area. The route suffers from high levels of congestion in both Bristol and Bath. The route between Brislington and central Bristol already has bus priority but there remain a number of locations that slow bus journeys down substantially. The route is important for both local trips and as a key tourist route. The route also has two park and ride sites, one at Brislington serving Bristol and another at Newbridge serving Bath.

Corridor 5 – A432 Bristol to Yate

10.4.21 This route is an important commuter route serving Yate, the new development at Emersons Green, the existing residential areas to the north east of central Bristol and Stapleton Road shopping centre and railway station. The innermost section links with the improvements being delivered as part of the A420 showcase route.

Corridor 6 – A37 Bristol to Norton- Radstock

10.4.22 This route serves residential areas in south east Bristol, as well as Broadwalk shopping centre and Hengrove Secondary School. Some of the areas it serves suffer from high levels of deprivation. This route could also provide fast access to the Hengrove Park development site, one of the largest regeneration sites in the area. It then continues to Norton- Radstock, also serving intermediate villages. The corridor runs south to connect towns in Somerset and link with bus improvements in that county.

Corridor 7 – Avon Ring Road

10.4.23 The A4174 Avon Ring Road serves the northern and eastern edge of Bristol and is dual carriageway for most of its length. After the M4/M5 and M32 Motorways it is the most heavily used road in the JLTP

area and is frequently congested. The bus services are poorly developed though there is a gradual increase in the number of express services. It serves the important employment and development sites around Filton and Harry Stoke and links to the new development at Emersons Green. There are major opportunities for the development of new and improved services and significant developer funding is available. Measures on this corridor will support services on both the A432 and M32 corridors as well as providing opportunities for improved express services between central Bristol and Emersons Green, Bradley Stoke and the North Fringe.

Corridor 8 – A370 Bristol to Weston-super-Mare

10.4.24 The route links the two principal urban areas of Bristol and Weston-super-Mare while also serving a number of intermediate villages with connections to Nailsea and Clevedon. Peak period journey times are nearly twice as long as those in the off-peak due to significant congestion at a number of locations along the route. Within Bristol it also serves the new Harbourside development and would take advantage of existing priority measures along Hotwells Road. The Long Ashton park and ride site is also served by this corridor.



Bristol to Weston-super-Mare by bus

10.4.25 This route is vital for tourism and leisure, not only as access to the coastal resort of Weston-super-Mare but also as vital access to villages and attractive rural areas along this corridor.

Corridor 9 – A369 Bristol to Portishead

10.4.26 This corridor links Portishead with Bristol. Increasing congestion along the route, particularly around Junction 19 of the M5, and major housing development and job growth in Portishead mean that faster and more reliable journeys are required. This route connects with the A370 in Cumberland Basin and also serves Harbourside and Hotwells Road. Portishead is already experiencing rapid growth and some further 4,000 houses are planned. Ensuring high quality public transport access to and from the area will be vital to ensure that this development is as sustainable as possible.

Corridor 10 – A367 Bath to Norton- Radstock

10.4.27 This corridor links Bath, Peasedown St. John and Norton- Radstock. Congestion is a problem at both ends of the route and the hilly terrain adds to journey times. A park and ride serves Bath at Odd Down.

10.5 Bath Package

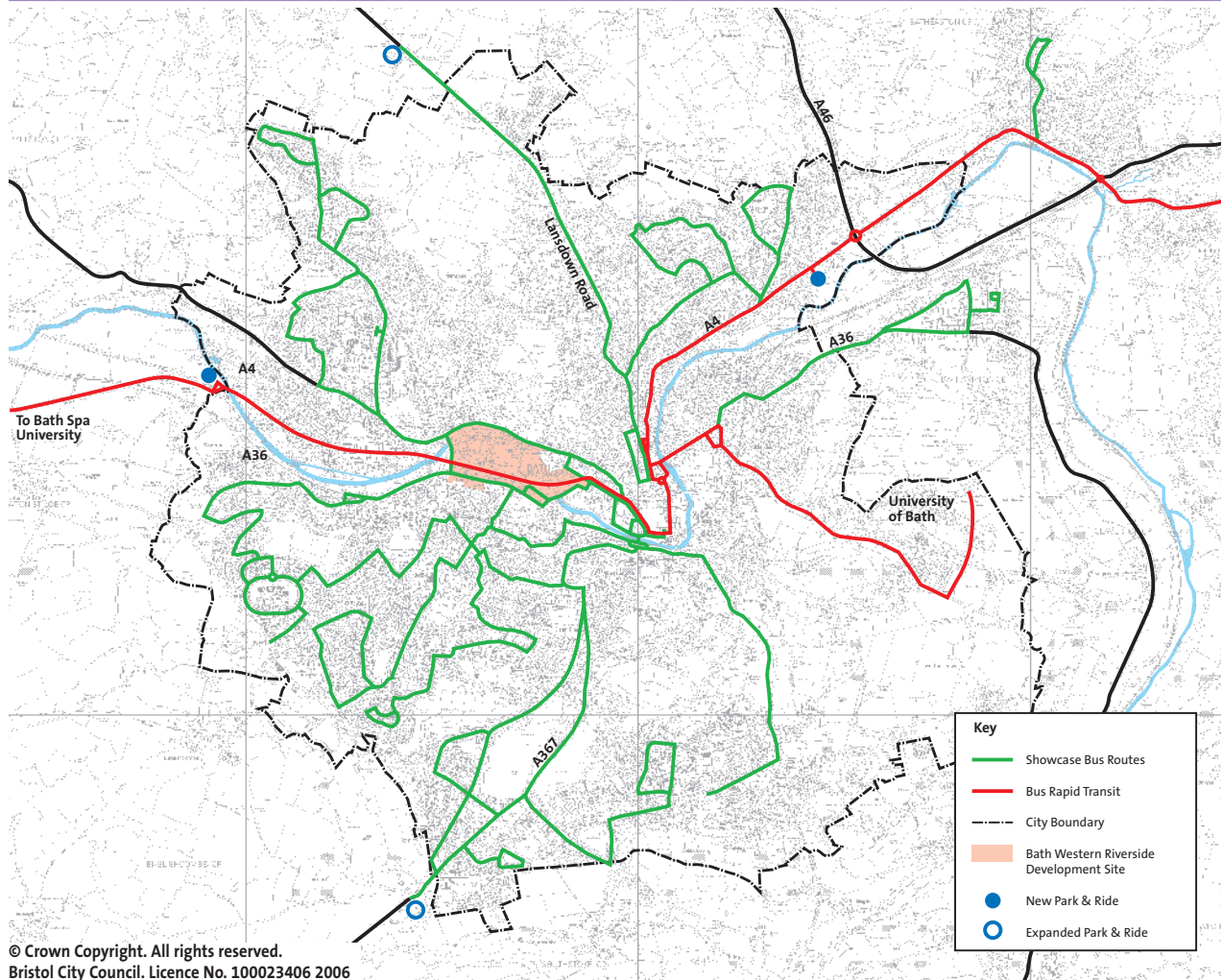
10.5.1 In 2003 The Government Office of the South West commissioned a study into travel between Bristol and Bath and the South Coast. Alongside this a separate report was produced into the transport challenges faced by the City of Bath and in particular those relating to the convergence of the A36 and A46 inside Bath. The study recommended that a number of topics be investigated further with a view to submitting an Integrated Transport Package Bid for Bath. An earlier Major Schemes bid submitted in July 2001 had been judged premature given the commitment to complete the Bristol/Bath to the South Coast Study.



Park and ride in Bath

- 10.5.2 In addition, the World Heritage Site Management Plan, which has been presented to UNESCO, commits Bath and North East Somerset Council to a series of actions based around themes that include conservation, physical access and visitor management. Substantial transport and environmental improvements are needed in line with this plan, to protect the unique environment while allowing business and tourism to thrive. The Bath Package makes a positive contribution to addressing these by contributing to improving air quality, the quality of the public realm and by helping visitors experience the city without causing further degradation of the environment that increased car borne tourism would bring.
- 10.5.3 A successful Major Scheme Bid, alongside investment from bus operators and developers, will bring the financial resources required to deliver a package of measures to increase trips by public transport, walking and cycling, reduce reliance on the private car and reduce the harmful impact of lorries.
- 10.5.4 Many of the elements that make up the package have been selected on the basis of the contribution they make to improving the reliability and attractiveness of public transport. They jointly address the specific transport Shared Priorities of congestion and air quality, both within the AQMA and within the central Clear Zone area. These are issues of increasing concern given the

Figure 10.2 - Bath Package



World Heritage status of the city and the responsibilities that are thus conferred on the local authority. The proposals also contribute significantly to the other Shared Priorities of safety and accessibility.

10.5.5 The Bath Package (go to Figure 10.2) therefore sets out to improve the alternatives to the use of the private car by providing a modern, integrated and easy-to-use public transport system. The overall aims of the Bath Package are:

- To create a high quality public transport system to ensure that attractive alternatives exist to the use of the private car
- To reduce congestion and improve air quality
- To improve accessibility
- To secure environmental improvements

- To create an effective and efficient transport system that will facilitate Bath Western Riverside and other future developments

10.5.6 The scheme has been developed through technical assessment and stakeholder and public consultation and comprises the following:

- Showcase bus routes
- Bus based Rapid Transit
- New and expanded park and ride sites
- Travel information systems
- City centre pedestrian improvements and delivery management
- HGV restrictions with permits for access
- Rossiter Road traffic management and environmental scheme

10.5.7 The package of measures identified is estimated to cost around £65m. Investment by operators and contributions from development are expected to fund in excess of 20% of the overall cost, with the remainder being sought through this Major Scheme bid. Benefits include improved journey time and cost savings for new and existing users of bus, rapid transit and park and ride. The package addresses congestion, and therefore brings journey time savings for other traffic on the highway network.

10.5.8 As with the Greater Bristol Bus Network Major Scheme, this proposal is intended to achieve growth in public transport passengers well above that achievable through incremental investment. By timing showcase bus investment across the local network and park and ride expansion to coincide with development of the bus rapid transit facility, there will be added benefits achieved. The emphasis on a modern, integrated transport network that serves all types of travel demand would be reinforced. Marketing campaigns will encourage transfer to public transport, and provide the opportunity to constrain traffic growth.

10.5.9 The size of the scheme also gives the major local public transport operator the business confidence to provide additional investment in the area, in particular vehicles for the bus rapid transit scheme together with all depot, maintenance and operational costs.

10.5.10 An umbrella partnership will cement commitment by the Councils to deliver the package of measures that support modal shift to public transport, and by First to reciprocate with provision of the required service levels. Underneath this umbrella partnership a Statutory Quality Partnership (SQP) is being developed with First, open to other operators as required, which will apply to the bus rapid transit. This SQP will specify the Councils' commitment to the provision of infrastructure in order to offer reduced run times and improve run time reliability,

and provide real time information and off vehicle ticketing. First will provide high quality vehicles and a high level of passenger service consistent with the aspirations of bus rapid transit.

Showcase Bus Routes

10.5.11 The main local operator First have already demonstrated their commitment to the area with investment in a complete fleet of new buses for Bath. Alongside this, considerable private sector investment from the Southgate shopping centre redevelopment will deliver the new bus station in central Bath providing a modern transport interchange with Bath Spa railway station within the next two years. This provides the context for significant public sector investment in public transport infrastructure. Bus usage in Bath has grown over the past three years and this provides a strong basis for future growth.

10.5.12 The scheme will include significant improvements to bus routes throughout the city, providing quicker and more reliable journeys and making buses an attractive alternative for more people. Showcase bus routes will feature:

- Bus priority measures to improve bus journey time reliability
- Real time passenger information on bus stops with information available on the internet and potentially via mobile phones
- Enhanced bus stops to allow easy access and new shelters
- City centre changes to accommodate bus priority

10.5.13 The priority local routes link residential areas to the city centre, employment, education and health care:

- Showcase standards are now proposed for services 14 (Royal United Hospital), 10 (Southdown), 5 (Twerton), 6/7 (Larkhall and Fairfield Park), 2/4 (Lansdown, Bathampton and Coombe Down) and 16/17 (Weston, Whiteway, Oldfield Park and Kingsway)

10. Major Schemes

- Route 13 (Fox Hill and St Martin's Hospital to city centre and Batheaston/ Bathford) already benefits from a number of priority measures implemented over the first LTP period but will benefit from the implementation of real time information.

10.5.14 The Bath Package public consultation responses indicate strong support (87%) for investment in the quality and reliability of bus services. 58% of respondents said they would be likely or very likely to use buses more, if such improvements were to be made.

Bus Rapid Transit

10.5.15 This system will provide state-of-the-art public transport in Bath. It will replace conventional buses on the busiest routes with latest-technology vehicles featuring improved levels of comfort, ease of use, information and reliability. It will bring many of the benefits of modern tram systems, but at an affordable cost. The system will achieve a high degree of priority at traffic signals to ensure journey time reliability. It will also have the flexibility to allow for future expansion.

10.5.16 The construction of a busway along a disused railway line will provide a segregated route from the new park and ride at Newbridge to the city centre, passing through the Bath Western Riverside regeneration area and Green Park. It will continue to the historic core of the city, from where two routes will extend eastwards; one to Bath University, and the other along the A4 London Road to Batheaston and Bathford and the new park and ride site at Lambridge. The route to Newbridge would extend westwards to Bath Spa University.

10.5.17 Part of the disused railway route is currently used by pedestrians and cyclist following Route 4 of the National Cycle Network. They would be accommodated alongside the busway, and the route extended eastwards into Bath Western Riverside, providing an improvement to the existing pedestrian and cycle network.

The route is safeguarded in the Bath and North East Somerset Local Plan

New and Expanded Park and Ride

10.5.18 The scheme will provide a new 800-space park and ride site on the east of the city at Lambridge. This will serve traffic from the A46 and M4 motorway and the A4 and the west Wiltshire towns. Capacity will also be increased at the existing sites at Lansdown to the north of Bath, and at Odd Down to the south.

10.5.19 A new, larger park and ride is proposed at Newbridge in association with the Rapid Transit scheme described above. This will provide up to 1500 spaces, significantly increasing long stay parking capacity for traffic from the west. Rapid transit vehicles would link the park and ride to the city centre, with a conventional bus park and ride service running from the existing site to the Royal United Hospital.

Pedestrianisation and Pedestrian Safety

10.5.20 Changes are proposed which will reduce traffic delays in central Bath during the day, ensuring that public transport can be given the necessary priority to improve reliability. By its nature this element of the scheme will help to reduce vehicle emissions and improve the quality and safety of the pedestrian environment.

10.5.21 Access to High Street and Grand Parade would be restricted to buses, taxis and cyclists during "bus gate" hours (10.00am – 6.00pm), combined with a pedestrian/public realm improvement scheme for the High Street. This builds on the existing "Bus gate" (go to Box 5B in Chapter 5) and will allow better enforcement in addition to the powers provided in the Traffic Management Act enabling a substantial improvement in the facilities for bus passengers and pedestrians in this significant public space. Reclaiming this area for pedestrians and bus users will build on the increase in bus usage through the showcase bus route improvements.

10.5.22 Restricting traffic on the Cheap Street/Westgate Street/Upper Borough Walls loop will improve pedestrian movement and safety in these streets and along the main shopping spine and key tourist areas. Pedestrians already treat this area as though they have priority, however the accident record shows that this concept is not clear to motorists. Access to the Mineral Hospital and disabled parking would be provided via Quiet Street and Barton Street.

10.5.23 Restrictions to deliveries in the central area are proposed during times of high pedestrian activity, subject to detailed consultation with the Chamber of Commerce, retailers and other businesses affected. A freight consolidation centre for Bath would provide a more efficient means of managing deliveries to this restricted area, building on the experience of the Broadmead pilot scheme in Bristol. Initial studies indicate such a facility could be financially viable in Bath.

10.5.24 Changes are proposed in St James' Parade, with a two-way bus lane between the Corn Street junction and Dorchester Street. Ambury would be changed to one-way (southbound), allowing a more direct route from Avon Street car park to Churchill Bridge. Pedestrian movement will be improved from the new Southgate Centre and transport interchange through to Avon Street car park, Green Park and Bath Western Riverside.

Information Systems

10.5.25 Access to good information is vital for making sustainable travel choices so the package will include specific information for all travellers whether by foot, cycle, public transport, motorcycle, car or lorry:

- For pedestrians the Legible City concept pioneered in Bristol will be introduced to Bath. This will ensure that Bath's customers, tourists and shoppers will be encouraged to walk to make the most of their visit. Fully accessible routes will be developed and promoted to improve inclusion.

- The showcase routes will provide real-time information at bus stops augmented with displays at the Southgate transport interchange and within the new shopping centre.
- The scheme will provide variable message signs to advise drivers of incidents and delays, encourage use of park and ride and inform drivers about availability of spaces in city centre car parks. The information gathered by the urban traffic control and the bus location systems will be used to provide real-time information on the condition of the road network to encourage motorists to avoid congested areas.
- Information for HGV drivers will concentrate on two specific areas; firstly managing city centre deliveries to outside the main pedestrian times and routes; and secondly a wider signing strategy to ensure that through HGV traffic and essential local traffic is directed to appropriate routes.

Lorry Management Scheme

10.5.26 A lorry management scheme is proposed to restrict HGV through movement in Bath, whilst still allowing access for deliveries to the city:

- Appropriate main roads through the city would be designated as lorry routes, i.e. A36 Lower Bristol Road, Pulteney Road, Warminster Road, Bathwick Street, A4 London Road and A367 Wellsway. All other roads would be restricted other than for direct access to premises.
- There is a strong desire to remove lorries that do not have business in the city. In particular this would help improve air quality and traffic flow on London Road and Bathwick Street. The restriction would take the form of a weight limit on Warminster Road. A permit scheme would provide exemptions for lorries needing access to the city.

A36 Rossiter Road/Claverton Street

10.5.27 As part of the lorry management plan, it is important to provide for efficient movement for those lorries that need to travel in the city, and thus minimise their environmental impact. The A36 currently carries lorries in the westbound direction through Widcombe Parade, causing disruption and environmental problems in this local centre and shopping street. It is proposed to make the parallel Rossiter Road two-way, to remove all through traffic from Widcombe Parade. This will support the local economy and ensure essential facilities remain viable and thus accessible for this edge-of-centre community.

10.6 Further Major Schemes

10.6.1 Table 10.1 sets the work programme for Major Scheme development and a brief description of each bid is included below. All the bids require significant development work for us to understand their costs, impacts and benefits and develop robust business cases in keeping with the Government's appraisal guidelines. Dates shown in Table 10.1 are provisional and subject to review as development work continues.

10.6.2 It is recognised that there is likely to be strong interest in these bids as they are developed. As part of the development of these bids we will actively engage both the public and stakeholders to ensure the schemes submitted to Government have the strongest possible case for approval.

South Bristol Ring Road Phases 1 and 2

10.6.3 Roads in and around South Bristol, in particular the A370, Winterstoke Road and Parson Street gyratory, are already some of the most congested in the South West. Critical to dealing with traffic growth and supporting regeneration will be improved orbital access in South Bristol. GBSTS sees the scheme as delivering benefits across the whole area with a 6% reduction in vehicle delays and 9% increase in public

transport use following its implementation. GBSTS recommends the phased implementation of the South Bristol Ring Road from the A4 at Hicks Gate to the A370 at Ashton Vale.

10.6.4 Phase 1 links the A38 and A370. The route identified in GBSTS would leave the A38 near Kings Head Lane and join the A370 just south of the Long Ashton park and ride site. Phase 2 links the A38 to the large Hengrove Park development.

10.6.5 As part of any development work for phases 1 and 2 an appraisal of options for the full route from A370 to A4 Hicks Gate will be undertaken. At this stage it is recognised that alignments for any part of the route are indicative and subject to further detailed investigation as part of the Major Scheme development process.

Bus Rapid Transit Phase 1 - Hengrove/ North Fringe

10.6.6 Bus Rapid Transit is seen as a key part of the GBSTS strategy. This first phase was identified in GBSTS as a key corridor linking areas of deprivation and growth in South Bristol with the city centre and the North Fringe. The northern part of the route will serve existing and new residential areas, large employment, educational and retail destinations. Development of this route will be vital to tackling existing transport problems, let alone those caused by further growth.

Weston-super-Mare Package Phase 1 (including Worle interchange)

10.6.7 The Weston-super-Mare Package is about enabling sustainable development. Weston-super-Mare suffers from 'out commuting' and the RSS is seeking to get sustainable growth that encourages people to both live and work in the town. The package will have large elements of developer funding but public sector finance will be vital to deliver key elements, including Worle Station interchange. GBSTS identifies the potential to develop Worle into a full multi-modal station combining rail, local

bus, coach and Bristol International Airport links, together with park and ride and cycling facilities.

Bus Rapid Transit Phase 2 - Bristol International Airport/ Ashton Vale/Emersons Green

- 10.6.8 This route would serve an expanded airport, central Bristol and potential urban extensions foreseen in the RSS to the south west and north east of Bristol. Detailed alignment would need to be developed during the bid preparation stage but this corridor has the potential for high demand and achieving significant transfer from private car trips.

Bus Rapid Transit Phase 3 - Bath to Cribbs Causeway

- 10.6.9 This route will build on the schemes currently in the Bath Package. The route will link Bath with Bristol City Centre and the Cribbs Causeway regional shopping centre via the north of Bristol. GBSTS demonstrates a strong case for this route as part of an area wide network of Bus Rapid Transit Routes.

Transport Innovation Fund Bid

- 10.6.10 Chapter 5 describes the funding of £1.5m that we have been awarded by DfT to assist with development of a full Transport Innovation Fund bid. The development work for this bid will be vital in understanding what package of measures will help reduce the impacts of existing and future congestion. Based on the guidance for full TIF bids it is anticipated that a bid could be prepared and submitted during 2007. Public consultation would take place on any full TIF bid and the submission would be subject to political approval.

Callington Road Link

- 10.6.11 The historic layout of the A4/West Town Lane/Callington Road junction leads to long traffic queues and delays, often throughout the day as well as during peak hours. The Callington Road Link would provide vital access from the A4320 St

Philips Causeway to Callington Road. This route should remove significant traffic pressures from the Brislington Hill/West Town Lane junction and improve both bus and car journey times along the A4 towards both Bristol and Bath.

Weston-super-Mare Package Phase 2 (including Banwell Bypass)

- 10.6.12 Linked with longer term development further measures will be required to ensure sustainable growth in the Weston-super-Mare area. This will include further measures to protect some of the settlements in the surrounding area, in particular the Banwell bypass.

A38 - A370 (Barrow Gurney Bypass)

- 10.6.13 Traffic generated by existing passenger levels at Bristol International Airport (BIA) already has significant adverse impacts on the surrounding communities. Barrow Gurney in particular suffers from traffic using the village as a short cut for access to the airport and to avoid the Parson Street gyratory in Bristol. We believe that this scheme will deliver both local and strategic benefits.

W-S-M - BIA - South Bristol

- 10.6.14 This route would improve connectivity between large areas of North Somerset and Bristol, BIA and the M5. The scheme though is about far more than access to BIA and would provide economic growth and regeneration benefits to both Bristol and Weston-super-Mare. Initial results as part of GBSTS demonstrate the strong potential for this route and further development work is recommended as part of the longer term strategy.

Relocation of Junc 21 (M5)

- 10.6.15 There are currently congestion problems at junction 21 of the M5. In GBSTS these are forecast to get much worse by 2031 with the anticipated development proposals in the Weston-super-Mare area. There are two alternatives that involve creation of a new junction to the south of the existing one with either complete, or

partial, closure of the existing junction to motorway traffic. Further work will be required to establish which is the most appropriate option.

South Bristol Ring Road Phase 3 - Hengrove to A4174 Avon Ring Road

10.6.16 As set out in 10.6.3 to 10.6.5 this would be the third phase of the South Bristol Ring Road and delivered in the medium/long term. As part of the development of the first two phases an appraisal of the full route will be undertaken. Detailed route alignments, however, for this phase will not be undertaken until the Major Scheme bid for phases 1 and 2 has been prepared and consulted on.

A36 -A46 Link

10.6.17 The link between the A36 and A46 to the east of Bath was examined within the Bristol/ Bath to South Coast Study which recommended that further work should be undertaken by the local authority in order to take the scheme forward. The scheme is included in the longer term strategy in the GBSTS report.

Second Avonmouth Crossing

10.6.18 In the longer term, GBSTS identifies the potential benefits of a second crossing. This route would have benefits for public transport and local vehicles trips and potentially provide a vital strategic diversion when accidents or congestion on the existing M5 impact adversely on traffic movements.

Heavy Rail

10.6.19 GBSTS recognises the potential for improvements to heavy rail. Whilst the operation and running of rail services is outside our control we foresee funding bids being needed, in partnership with the train operating companies, Network Rail and the DfT to progress development of the network.

Stoke Gifford Bypass

10.6.20 GBSTS reports that this would provide vital relief to the A38 and local roads in the North Fringe of Bristol as well as some relief to the M4 and M5, with particular benefits for the key junctions at M4 J19 and M5 J16. It is recommended that this scheme is developed as part of the longer term strategy.

Temple Cloud/ Clutton Bypass

10.6.21 Existing traffic problems on the A37 corridor have major impacts on local communities. Future growth in traffic will require mitigation measures to protect these communities. The Temple Cloud/ Clutton bypass will be investigated as a potential scheme.

Light Rapid Transit

10.6.22 Whilst Government guidance stresses that, in the short term, public transport solutions should be bus-based we recognise that the longer term vision for the JLTP area must contain high profile public transport schemes. To meet the longer term needs of the area and facilitate the potential housing and employment growth set out in the RSS we believe it is essential to devise a future LRT network.

North Fringe Transport Package

10.6.23 The Bristol North Fringe and Emersons Green are major locations for housing and employment development. The 'North Fringe Development Major Scheme (Transport Matters)' is a comprehensive transport package designed by South Gloucestershire Council to address the transport infrastructure demand arising from this development. A total of £18.4m of developer funding is expected (go to Box 11B).

Table 10.1 - Major Schemes Development Programme

	2005	2006	2007	2008	2009	2010	2011	2011/12 - 2015/16
Regional and sub-regional priorities (RFA) for funding to 2016								
Greater Bristol Bus Network	●							
Bath Public Transport Package		●						
South Bristol Ring Road Phase 1 - A38 - A370				●				
Bus Rapid Transit phase 1 - Hengrove/ North Fringe				●				
Weston-super-Mare Package Phase 1 (including Worle interchange)				●				
Bus Rapid Transit Phase 2 - BIA/Ashton Vale/Emersons Green				●				
South Bristol Ring Road Phase 2 - Hengrove to A38						●		
Bus Rapid Transit Phase 3 - Bath to Cribbs Causeway							●	
Transport Innovation Fund Bid								
			●					
Regional and sub-regional priorities requiring further work								
Callington Road Link						●		
Weston-super-Mare Package Phase 2 (including Banwell Bypass)							●	
A38 - A370 (Barrow Gurney bypass)							●	
W-S-M - BIA - South Bristol								●
Relocation of Junc 21 (M5)								●
South Bristol Ring Road Phase 3 -Hengrove to A4174 Avon Ring Road								●
A36 -A46 Link								●
Second Avonmouth Crossing								●
Heavy Rail								●
Stoke Gifford Bypass								●
Sub-regional priorities requiring further work								
Temple Cloud/Clutton Bypass								●
Light Rapid Transit								●
Development Funded Major Scheme Packages								
North Fringe Transport Package								

Key

- Intended year of submission of Major Scheme Bid
- Potential year of Major Scheme Bid Submission subject to further development work
- Potential year for Transport Innovation Fund bid submission subject to further development work
- Construction Period