APPENDIX 3

Value for Money Assessment: Benefit-Cost Ratio

Rationale for Intervention

Bromsgrove has poor walking and cycling infrastructure. Specifically, walking and cycling links between key attractors such as the newly reconstructed Rail Station with increasing patronage, an attractive town centre, key employment destinations, residential clusters, public parks and schools. This poor connectivity results in exceptionally low mode share for sustainable modes and its ability to grow, which will continue to contribute towards congestion. This congestion is also reflected in the designation of an AQMA in the centre of Bromsgrove.

Status-quo will result in persisting congestion in and around Bromsgrove leading to poor Air Quality, severance and poor accessibility. Equally, depressed levels of sustainable active travel modes within Bromsgrove will continue which further accentuates congestion.

Furthermore, the new rail station will increase the number of services through the planned electrification programme. As such, this can be a key driver for growth in sustainable travel modes to across Bromsgrove and the wider area. Failure to deliver the targeted sustainable modes based investments targeted will result in poor sustainable mode infrastructure and car biased travel behaviour. This will also accentuate congestion around central Bromsgrove.

As a result, Bromsgrove is in need of a package of investments to bring about a step change in the sustainable travel patterns, particularly for shorter trips.

The NPIF funded Bromsgrove LTP4 scheme provide the desired solution. In particular, the scheme will promote walking and cycling across the town through a comprehensive series of improvements, including new links, crossings and resurfacing, as highlighted in the scheme's location plan in Appendix 1.

Scope of Value for Money Assessment

This appendix presents additional detail on the value for money assessment prepared for the scheme. It presents the present value of benefits (PVB) associated with growth in active mode trips. The monetary benefits are compared against the present value of costs (PVC) outlined below, to calculate a benefit cost ratio which demonstrates the scheme's value for money.

Scheme Benefits

DfT's Active Mode Toolkits were prepared for two journey purposes: commuting and education. Table 1 presents the individual and combined PVB associated with growth in active mode use across these journey purposes, estimating an aggregate PVB of £19.5m. More detail on the assumptions underpinning these estimates is contained in Appendix 2.

PVB by Journey Purpose	PVB (£ '000s)
Commuting	12,603.82
Education	6,885.18
Aggregate PVB	**19,489.00**

TABLE 1: AGGREGATE PRESENT VALUE OF BENEFITS (2010 PRICES AND VALUES)

Scheme Costs

The total cost associated with delivering the scheme is expected to amount to £4.9m (2017 outturn costs), as listed in Table 2. The total level of investment covers ten individual elements that comprise the Bromsgrove LTP 4 active mode schemes, as outlined below.

Scheme Element	Value (£)
1 NCN North	279,000
2 Route 1	128,000
3 NCN South	210,000
4 The Oakalls and Finstall	78,000
5 Central Railway Station links	260,000
6 Aston Fields	510,000
7 Southern Railway Station links	2,316,000
8 Charford	260,000
9 Western link	781,000
10 Signage improvements	75,000
Total	4,897,000

TABLE 2: SCHEME COSTS (2017 OUTTURN COSTS)

The scheme costs were incorporated into the DfT's Active Mode Toolkit, based on the following assumptions:

- 15% optimism bias, in line with DfT's standard values for Stage 2 of scheme development (Table 7 of TAG Unit A1.2). Stage 2 designation is considered appropriate as the scheme is already promoted as part of Worcestershire's Local Transport Plan 4.
- Use of 3.5% discount rate in line with HM Treasury's Green Book, over the 20-year appraisal period defined in Appendix 2.
- Discounting to 2010 prices and value.
- Investment across 2018 and 2019, with 50% of expenditure occurring in each year.

Based on this specification, the PVC for total scheme costs is estimated at £4.3m (2010 prices and values).

Value for Money Assessment

Comparing the scheme's PVB against PVC reveals a benefit cost ratio (BCR) of 4.5, as demonstrated in Table 4. This presents very high value for money for public sector investment.

Value for Money Metric	Value (£ '000s)
PVB	19,489.00
PVC	4325.14
BCR	4.51

TABLE 4: VALUE FOR MONEY METRICS (2010 PRICES AND VALUES)

Sensitivity Tests

Three sensitivity tests have been developed to assess the impact of small changes in key elements of the value for money assessment:

- Sensitivity Test 1: 20% increase in costs;
- Sensitivity Test 2: 20% reduction in benefits (e.g. as a result of delayed construction programme);
- Sensitivity Test 3: 20% increase in costs and 20% reduction in benefits.

The sensitivity test results presented in Table 5 demonstrate that even where scheme costs are higher than expected and/or scheme benefits are lower than expected, the scheme will still deliver high value for money for public sector investment.

Sensitivity Test	PVB (£ '000s)	PVC (£ '000s)	BCR
1: 20% increase in costs	19,489.00	5,190.17	3.75
2: 20% reduction in benefits	15,591.20	4,325.14	3.60
3: 20% increase in costs and 20% reduction in benefits	15,591.20	5,190.17	3.00

TABLE 5: SENSITIVITY TEST VALUE FOR MONEY ASSESSMENTS (2010 PRICES AND VALUES)