

# Report of the Strategic Director of Place to the meeting of the Regeneration and Environment Overview & Scrutiny Committee to be held on 28 September 2021

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**Subject: Transport Delivery Plan Performance Report 2019-20.**

## **Summary Statement:**

This report updates the committee on the outcome of the delivery programme for the Highways and Transportation teams' capital work programmes during the 2019/20 financial year.

An indication of the forward programme of capital works is also provided against emerging and existing funding streams and Council priorities including details of any funding bids which have been submitted.

## **EQUALITY & DIVERSITY:**

The public sector equality duty in s149 of the Equalities Act applies to the Council in the exercise of its functions. Those functions will include most, if not all, of the proposals and other measures referred to in this report. The duty is to "have due regard to the need to (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited under [the 2010 Act], (b) advance equality of opportunity between persons who share relevant protected characteristics and persons who do not share it.". In summary, this includes the need to remove or minimise disadvantages suffered by persons that are connected to that relevant protected characteristic and taking steps to meet the needs of persons who do not share it and encouraging persons who share a relevant protected characteristic to take account of disabled person's disabilities and makes it clear that compliance with the duties 'may involve treating some persons more favourably than others'.

It is evidence that all of the schemes and proposals referred to in this report have the potential to impact on persons who share one of more of the relevant protected characteristics. Some of these were identified in the Integrated Sustainability Assessment undertaken on LTP3 as identified in the report to Executive on 18 March 2011 – Transport Delivery Plan 2011/12 (paragraphs 9.1.2 to 9.1.7)

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Jason Longhurst  
Strategic Director of Place

Report Contact: John Davis  
Team Leader Local Plan  
Phone:  
Email: [john.davis@bradford.gov.uk](mailto:john.davis@bradford.gov.uk)

## **Portfolio:**

Regeneration, Planning & Transport

## **Overview & Scrutiny Area:**

Regeneration and Environment

## **1. SUMMARY**

- 1.1 This report updates the committee on the outcome of the delivery programme for the Highways and Transportation teams' capital work programmes during the 2019/20 financial year.
- 1.2 An indication of the forward programme of capital works is also provided against emerging and existing funding streams and Council priorities including details of any funding bids which have been submitted.

## **2. BACKGROUND**

- 2.1 Over the past 18 months Covid19 has had a significant impact on the service delivery of the Transportation and Highways function which has adversely and manifestly affected its delivery of its capital works programmes for 2019/20. The service has had to rapidly re-deploy staff to support the Council's response to the pandemic both in terms of supporting establishment of Covid19 testing centres and subsequently vaccination sites as well as setting up social distancing measures in the city, town and village centres of the district, as part of the Reopening the High Street Safely initiative. The announcement of funding for Active and Sustainable Transport schemes by the Department for Transport early in the 2020/21 financial year required a major programme of interventions to be developed and constructed by September 2020. This was supplemented by the announcement of a second tranche funding call later that year.
- 2.2 Throughout the lockdowns of 2020 construction sites which were already open remained operational albeit with reduced productivity as site staff observed appropriate social distancing. Supply of materials to sites has become an increasing challenge with contractors having to source materials from further afield than normal as local supplies dwindled predominantly affecting the supply of concrete and steel products.

## **3. OTHER CONSIDERATIONS**

- 3.1 Despite having to deal with the impacts of the pandemic the service has continued, albeit at a reduced level, to progress its capital works programmes during 2019/20. In addition to the Local Transport Plan and the West Yorkshire+ Transport Fund programmes the service has also commenced development of the portfolio of schemes in the £89m Transforming Cities Fund as well as delivering a range of walking and cycling interventions as part of the Government's Active and Sustainable transport agenda. A summary of these programmes is set out below, with further details of particular projects under these programmes provided in the related appendices.

### **Transforming Cities Fund (Appendix 1)**

- 3.2 The Council were indicatively awarded funding of £89m from the Transforming Cities Fund to deliver an ambitious programme of four inter-related schemes for Bradford city centre following a successful bidding process undertaken by the Combined Authority to the Department for Transport. The four schemes comprising Bradford's element of the TCF programme are:

- a) Bradford Interchange Station Access;
- b) Bradford City Centre Cycling and Walking Improvements;
- c) South Bradford Park and Ride & Bus Expressway; and
- d) West Bradford Cycle Superhighway Extension.

3.3 Delivery of this portfolio of schemes is on a challenging accelerated timescale due to the funding conditions of the TCF. Despite the impact of the pandemic nationally on councils who are delivering schemes under this programme the government's expectation is that schemes will be completed by March 2023.

### **West Yorkshire+ Transport Fund (Appendix 2)**

3.4 The first scheme in the Council's West Yorkshire+ Transport Fund (WY+TF) programme, widening of the A650 Hard Ings Road, Keighley commenced on site immediately prior to the pandemic and the introduction of the first lock-down. Working closely with the appointed contractor, the site managed to continue delivery, observing social-distancing requirements, throughout the first and subsequent lockdowns and was opened to traffic only slightly later than planned.

3.5 Other schemes within this programme include:

- a) Harrogate Road / New Line junction;
- b) Bradford to Shipley Route Improvement Scheme;
- c) South East Bradford Access Road;
- d) A650 Tong Street Improvements;
- e) Bradford Interchange Station Gateway;
- f) Bradford Forster Square Station Gateway;
- g) Corridor Improvement Programme – Gt Horton Road / Horton Grange Road junction improvement;
- h) Corridor Improvement Programme – Thornton Road / Toller Lane junction improvement; and
- i) Corridor Improvement Programme 2 – Cutler Heights / Dick Lane.

3.6 The start of construction on the second WY+TF project (Harrogate Road / New Line junction improvement) was impacted by the pandemic which delayed the start on site which was originally planned during the 2019/20 financial year.

3.7 In addition to the above named schemes there are a number of other Transport Fund schemes which have either been delivered or supported by the service which impact on Bradford's transport network. These schemes are either being managed by WYCA or led by other district Councils on behalf of Bradford and include:

- a) UTMC Computer system upgrade - which migrated all UTC and UTMC computer systems into the cloud across West Yorkshire establishing for the first time a common database solution across West Yorkshire;
- b) Traffic Signal Upgrades – A £600,000 investment in the Council's traffic signal asset removing life expired installations across the district; and
- c) A641 Corridor Improvement Scheme – A major corridor improvement programme to bring bus, cycling and walking improvements between Huddersfield and Bradford through Brighouse led by Calderdale MBC.

### **Active Travel Fund (ATF Tranche 1 and 2) (Appendix 3)**

3.8 As part of the Government's response to the pandemic two tranches of funding were announced nationally for active travel schemes at short notice. In response to these announcements the service was successful in securing funding of circa £2.5m for Bradford across both tranches. The schemes in these programmes were particularly aimed at temporary road space reallocation schemes (with a view to making these permanent at a later stage). Examples of schemes implemented under ATF1 include:

- a) A650 Wakefield Road pop-up cycleway;
- b) Manchester Road cycle facilities;
- c) Hall Ings Cycle Lanes;
- d) Numerous parklets (e.g. North Street, Saltaire and Cavendish Street, Keighley);
- e) School Streets; and
- f) Pavement provision under a railway bridge at Ben Rhydding.

### **Local Transport Plan / Integrated Transport Block and Highway Maintenance Block (Appendix 4)**

3.9 The Integrated Transport Block of the Local Transport Plan funds programmes of schemes including:

- a) Area committee integrated transport/road safety schemes;
- b) Network management (traffic signal) schemes;
- c) Healthy Streets;
- d) Bus Hotspots; and
- e) Major Projects Bid Development;

The funding allocation for these projects in 2019/20 was £1.709m however due to the reallocation of staff resources in response to the pandemic a number of projects were not delivered within year and a carry-over of £307,716 of projects was therefore necessary into the 2020/21 financial year. These underspends include the Safer Roads Strategic Projects 2019/20, Bradford East Area Committee projects and the Healthy Street proposals for Shipley Market Square.

3.10 The funding allocation for the Highway Maintenance Block from the Local Transport Plan in 2019/20 was £9.908m. This funding is allocated based on asset types to the on-going maintenance and repair of the highway network, including the following:

- a) Bridge strengthening, inspection and assessment;
- b) Road Maintenance;
- c) Street lighting maintenance;
- d) Retaining Walls repairs; and
- e) Pothole fund.

Work on highway maintenance programmes was not impacted during the pandemic

### **Smart Street Lighting Project (Appendix 5)**

3.11 The Smart Street Lighting project is an invest to save scheme involving the replacement of approx. 59,000 existing street lighting luminaires with energy efficient

LED units, as part of the project a survey of the entire street lighting column assets has been undertaken and their structural condition assessed, based on this assessment around 19,000 columns will be replaced. The project also includes the installation of a LoRAWAN network on which a Central Management System (CMS) will be hosted giving dynamic control of the street lighting and providing real time data collection from the street lights to determine faults, power consumption and the facility to install other LoRAWAN sensors to capture other data, not only for the Council but the private sector and public as well. These could include air quality, road surface temperature, river level sensors and many other applications.

- 3.12 To alleviate installation issues the project is split in to 'in scope' and 'out of scope work', the 'in scope' to be carried out by the contractor (Amey OW Ltd.) and the 'out of scope' work which is predominantly, heritage assets, back streets, wall brackets, pole brackets and public realm decorative equipment to be carried out by the in house operational teams or passed to Amey dependent upon workload.

### **Mass Rapid Transit (Appendix 6)**

- 3.13 WYCA are leading a programme to introduce a new Mass Rapid Transit system to West Yorkshire. This will be a new low-carbon mode of transportation such as light rail or tram to complement existing bus and rail services. It will be developed in phases, the first phase of which is currently anticipated to be a line linking Bradford city centre with Leeds and Dewsbury. Future links would extend this core backbone with links from Bradford to Leeds Bradford International Airport and Halifax. There would be numerous intermediate stops on the system to enable public transport-led regeneration and new housing.
- 3.14 A Mass Transit Vision document has been published and the prospective plans have been consulted on (earlier this year) as part of the West Yorkshire Connectivity Plan. Further route refinement will take place over the next year culminating in a programme Strategic Outline Case by the beginning of 2022. Whilst this programme is still several years away from the start of construction, which could start from the mid-2020s, the first stage(s) could potentially be opened in the latter half of the decade.

### **Northern Powerhouse Rail (Appendix 7)**

- 3.15 Transport for the North are leading a programme to build new sections of high-speed rail line and upgrade existing lines to deliver high quality rail transport between cities in the North and boost the region's productivity. A new line between Leeds and Manchester would serve Bradford city centre. This would provide fast and frequent services from Bradford to Leeds and Manchester as well as other cities beyond.
- 3.16 The programme's Strategic Outline Case is currently being delayed until the publication of the Integrated Rail Plan for the North and the Midlands. CBMDC and TfN have been collaborating on evolving design and options for serving Bradford with an SOBC to be submitted to Government after the publication of the Integrated Rail Plan. TfN and Network Rail are also working on a case for accelerated delivery of a new Bradford through station to support NPR delivery.

- 3.17 The programme is still several years away from the start of construction which could start from the mid-2020s. A new Bradford through station to support NPR could though open from the end of the decade

### **Electric Vehicle Charging Points**

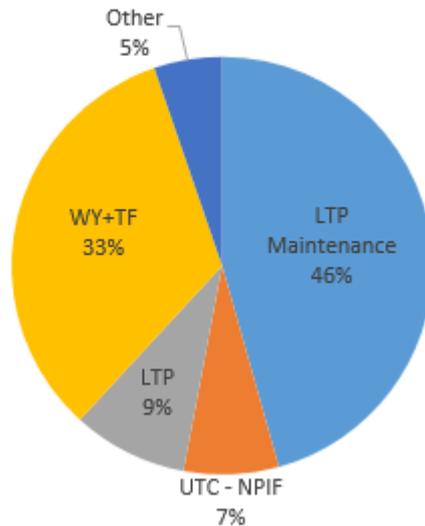
- 3.18 Twenty-two (50Kw) rapid chargers have been installed in the Bradford District funded by OLEVs Taxi Infrastructure scheme, each charge point has 2 bays, one for taxi the other public use, this forms part of the wider programme to install 100+ rapid charge points across West Yorkshire.
- 3.19 Bradford Council has also installed additional public fast (7kW) chargers have been installed at Sedburgh Sports Centre and Valley View Court both of which are new builds and were the result of planning requirements, current council building projects such as Oakworth Crematorium and Darley St Market will also have charge point incorporated into the building design.
- 3.20 Neighbourhood Charge points - A project is underway to install fast (7-22kW) chargers in residential settings particularly where homes do not have access to their own off street parking, council land such as car parks will be utilised. Community Infrastructure Levy funds have been secured for this project, plus an application for a further 75% funding will be applied for from the governments Off Street Residential Charging Scheme grant.
- 3.21 Planning guidance through the West Yorkshire Low Emissions Strategy required new developments in the district to install EV charging infrastructure. This requirement for electric vehicle charging on new development schemes, has resulted in the provision of over 3,000 charging points to date.

### **Funding Bids**

- 3.22 In addition to working on delivery of the capital programme the service has been responding to funding announcements made during 2019/20 and has had to prepare proposals for these bids in response to challenging bid timescales. Examples of bids which have been prepared over the past year include:
- a) Get Britain Building Fund – Canal towpath improvements between Apperley Bridge and Kildwick, delivered through the Canals and Rivers Trust);
  - b) Capability Fund (Active Travel Fund 3) – Development of further Active Travel Neighbourhoods (ATNs), Mini-Holland proposals, school streets and footpath improvements;
  - c) Towns Fund – Place making interventions including active travel improvements in Shipley/Saltaire and Keighley; and
  - d) City Region Sustainable Transport Settlement.

## **4. FINANCIAL & RESOURCE APPRAISAL**

- 4.1 The measures being undertaken by the Council and its partners through these funding streams are being delivered through a range of specific capital grants and revenue budgets. Overall within 2019/20 the service managed to deliver a programme of works of circa £21.8m across its portfolio of programmes comprised as shown below:



4.2 With the introduction of major capital programmes, such as Transforming Cities, the service has had to procure additional support for delivery of its programmes to supplement its own internal resources. As the intensity of delivery for these programmes ramps up over the next couple of years this is likely to be a maintaining trend.

## 5. RISK MANAGEMENT & GOVERNANCE ISSUES

5.1 The programmes of schemes described in this report are subject to robust risk management and governance arrangements to ensure their delivery is effectively managed at both WYCA and Council levels. Individual programme boards, comprising representatives of the Council and their WYCA counterparts meet on a monthly basis to review progress of individual schemes; this arrangement operates for the TCF, NPR, MRT and WY+TF portfolios. A rigorous risk management process is applied to these projects and programmes with comprehensive risk registers being developed and maintained at both project and programme levels.

5.2 Highway Maintenance Block and Integrated Transport Block schemes are delivered by individual teams and programmes within these funding streams are reported to the appropriate Area Committee for determination and management.

## 6. LEGAL APPRAISAL

6.1 The programmes of work identified in this report are being implemented through the Council's role as Highway and Traffic Regulation Authority and the WYCA's role as Transport Authority.

## 7. OTHER IMPLICATIONS

### 7.1 Sustainability Implications

During the pandemic the Government released a number of new policies related to infrastructure schemes including LTN1/20 (Cycle Infrastructure Design) and Bus Back

Better, National Bus Strategy for England which place specific requirements on all future transport schemes to include enhanced measures to support sustainable transport. The requirements of these policies have been adopted as far as possible across all schemes which are at an advance stage of delivery (Outline Business Case or later) within the Highways and Transportation delivery programme and are fully adopted in schemes which are in the early stages of development.

## 7.2 Greenhouse Gas Emissions Impacts

In the context of the Climate Emergency declared by the Council in January 2019, reducing greenhouse gas emissions - particularly carbon emissions from transport – is a priority for the district. The Local Transport Plan's ISA suggested that there would be a reduction of CO<sub>2</sub> of 19% by 2025 across West Yorkshire with WYTS proposals when compared to the 'do minimum' scenario, but since WYTS was adopted, WYCA have stated their ambition of becoming a net zero carbon city region by 2038. WYCA and the Council are working to identify pathways for carbon reduction to meet these ambitions. Therefore, more recent programmes, such as Transforming Cities or Active Travel have seen greater emphasis placed on measures to reduce carbon emissions from transport. A fuller understanding of carbon pathways is being developed including a standardised carbon assessment tool which will be used to assess all future transport infrastructure projects once it is available.

In the meantime, the Council is acting to reduce carbon from transport through the installation of EV charging points, promotion of cycling and walking measures, upgrading street lighting to LED luminaires and implementing a Clean Air Zone which will help reduce carbon dioxide and nitrogen dioxide emissions, as well as planning for a range of interventions to boost sustainable transport options.

## 7.3 Community Safety Implications

Safety and security of the transport network is a key consideration of the WYTS. One of the key objectives is to 'deliver and integrated, reliable transport system that would enable people and goods to move around as efficiently and safely as possible. The ISA concluded that there would be benefits from the WYTS in terms of reducing deaths and injuries from collisions. The WYTS therefore includes projects and schemes to improve safety and reduce casualties on the highway network as well as improving personal safety on public transport.

## 7.4 Human Rights Act

Any Human Rights implications arising from schemes described in this report are taken into account in the development of that scheme.

## 7.5 Trade Union

There are no trade union implications associated with this report.

## 7.6 Ward Implications

7.7 The wards in which the measures described in this report are implemented will generally benefit from the improvements. Appropriate consultation has, and will

continue, to take place with Ward Members and local communities during the development of individual projects.

## **7.8 Implications for Corporate Parenting**

There are no implications arising as a consequence of this report.

## **7.9 Issues Arising from Privacy Impact Assessment**

Not applicable.

## **8. NOT FOR PUBLICATION DOCUMENTS**

8.1 None.

## **9. OPTIONS**

9.1 None.

## **10. RECOMMENDATIONS**

10.1 That progress on the transport programmes across both the programmes described in this report be noted.

## **11. APPENDICES**

11.1 Appendix 1 – Transforming Cities Fund Portfolio Update.

11.2 Appendix 2 – WY+TF Portfolio Update.

11.3 Appendix 3 – Active Travel Fund.

11.4 Appendix 4 – LTP / Integrated Transport Block & Highways Maintenance Block.

11.5 Appendix 5 – Smart Street Lighting Programme.

11.6 Appendix 6 – Clean Air Plan Update.

11.7 Appendix 7 – Mass Rapid Transit.

11.8 Appendix 8 – Northern Powerhouse Rail (NPR).

11.9 Appendix 9 – Glossary of Terms and Abbreviations.

## **12. BACKGROUND DOCUMENTS**

12.1 'My Journey' – West Yorkshire Local Transport Plan 2011-2026

12.2 West Yorkshire Transport Strategy  
<https://www.westyorks-ca.gov.uk/media/2664/transport-strategy-2040.pdf>

- 12.3 West Yorkshire Transport Strategy Integrated Sustainability Appraisal  
<https://www.westyorks-ca.gov.uk/media/2554/issue-wyca-isa-report-final-130716-v20.pdf>
- 12.4 West Yorkshire Transport Strategy Integrated Sustainability Appraisal Technical Appendices  
<https://www.westyorks-ca.gov.uk/media/2555/issue-wyca-isa-report-appendices-final-130716-rev20.pdf><https://www.westyorks-ca.gov.uk/media/2555/issue-wyca-isa-report-appendices-final-130716-rev20.pdf>
- 12.5 Bus Back Better, National Bus Strategy for England  
[Bus back better - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- 12.6 LTN1/20 Cycle Infrastructure Design  
[Cycle infrastructure design \(LTN 1/20\) - GOV.UK \(www.gov.uk\)](http://www.gov.uk)
- 12.7 Planning, Transportation & Highways Service Capital Monitor 2020-21

## APPENDIX 1 – TRANSFORMING CITIES FUND

### 1. BRADFORD INTERCHANGE

#### Scheme Aims:

- New high-quality pedestrian access to the Interchange which would dramatically improve how it connects with and ties into the heart of the city centre.
- New open and landscaped pedestrian approach to the Interchange, transforming the arrival in the city centre for visitors to City Park, Broadway and the emerging Cultural Quarter.
- Better links and improved connectivity between the bus services and train platforms within the interchange to allow people to transfer between modes of transport more easily.

1.1 As a key destination and transport hub in the city centre, Bradford Interchange is integral to the plans for the city centre. Through the scheme Bradford Council and the West Yorkshire Combined Authority plan to deliver a series of improvements at the Interchange, including:

- a) A new station approach: The new approach will begin from a newly pedestrianised Hall Ings (see below) and expanded Norfolk Gardens green space and will make it far more convenient for visitors to access the Interchange. The landscaped approach will feature new planting and greenery to improve the whole look and feel of the area, delivering a new sense of vibrancy and opening up views of the iconic Town Hall for people arriving in the area.
- b) Relocation of the car park and taxi rank: The current car park and taxi rank will be relocated to the rear of the station to allow the front entrance of the Interchange to be pedestrianised. These changes will be delivered through the West Yorkshire Plus Transport Fund, rather than the Transforming Cities Fund.
- c) Creation of a level walkway between buses and trains: The level walkway will provide a better connection between the bus and train platforms, which are currently poorly linked.

1.2 Complementary improvements to the Interchange interior are being developed by the West Yorkshire Combined Authority and a programme of works that will provide new and upgraded facilities at the Interchange to improve the overall user experience. Wider improvements include:

- a) a new modern Travel Centre which will be located on the upper concourse with improved facilities to make information more accessible and reduce waiting times
- b) a new public address system
- c) new and repaired tactile signage
- d) safety and security improvements, such as a new help point, pedestrian barriers, and warning beacons
- e) improvements to help the Interchange run more efficiently with new, reduced flush toilets and an EV charge point for maintenance vehicles

## APPENDIX 1 – TRANSFORMING CITIES FUND

- 1.3 Once complete users of the Interchange will benefit from an improved customer offering through the provision of new, modern facilities that also serve to make the Interchange safer, more accessible, and a more efficient facility to run.
- 1.4 This scheme is currently at Outline Business Case and public consultation closed on 8th September.

### 2. CITY CENTRE CYCLING AND WALKING IMPROVEMENTS

#### Scheme Aims:

- A transformation of Bradford's civic centre to create a greener, more people-focused civic centre – providing better areas of public realm and maximising the city's incredible architectural legacy. These changes would help to attract new employers and investors to the city, leading to the creation of new jobs and drawing more people to live and work in the city centre.
- A more vibrant city centre cultural scene by improving links to between the city centre and schemes such as Bradford Live, One City Park and Darley Street Market together, increasing the vibrancy of the city centre supporting the Council's bid to be the UK City of Culture 2025. The plans would improve the environment between the Interchange and Forster Square Station, providing a better welcome for those travelling to Bradford to visit its fantastic cultural offer.
- Improved access to the city centre via walking, cycling and public transport - Bradford city centre currently lacks high-quality cycling and walking infrastructure, with safety and a lack of convenience currently preventing people from opting to get about this way. The proposals would address this, creating a walking and cycle-friendly city centre that is easy to get around and better for health, without adding to pollution and congestion.
- A reduction in carbon emissions - Bradford Council has committed to becoming the UK's leading 'clean growth' district. By encouraging greater use of public transport, walking and cycling through the Bradford City Centre scheme, we can enable the economy to grow while reducing carbon emissions and tackling air pollution to complement the city's forthcoming Clean Air Zone.

#### New Green Public Spaces

- 2.1 Under the Bradford City Centre Cycling and Walking Improvements proposals, new green public spaces would be formed in the city centre – complementing the city's rich heritage while creating attractive and relaxing areas where people can rest and spend time with friends and family. To facilitate the formation of these spaces, a number of streets would be pedestrianised, removing through traffic to create a pleasant and pollution-free environment.
- 2.2 Norfolk Gardens would be expanded out to create a major new green space, and Hall Ings would be pedestrianised from Jacobs Well roundabout to Bridge Street. Sunbridge Road, Bridge Street, Broadway and Market Street would also be closed to

## **APPENDIX 1 – TRANSFORMING CITIES FUND**

through traffic. Vehicular access would still be available for deliveries within restricted times.

- 2.3 Incorporated within these new areas of public realm would be enhanced paving, street trees, greenery, and plenty of seating. Sustainable Urban Drainage Systems (SUDS) would also be applied to prevent flooding and mitigate against climate change while improving biodiversity.
- 2.4 The new public spaces and pedestrianised areas would create more space for people and make it easier for people to walk and cycle between shopping and entertainment areas, while providing room for pavement cafes and dining as well as pop up events, creating a sense of vibrancy and activity. Access will be maintained to enable loading for businesses, and provision for taxis and disabled parking will be included in the final design of the scheme.

### **Improved cycling and walking infrastructure**

- 2.5 The removal of Jacobs Well roundabout and the pedestrianisation of key streets within the city centre would allow for easy crossing from the east of the city centre to the west, linking key cultural destinations to the city's core.
- 2.6 New cycle routes and cycle parking would also be provided across the city centre, connecting into existing cycle routes such as Route 66(External link), which forms part of the National Cycle Network (NCN). The city centre cycle routes would also connect into the new cycle routes being brought forward by other Bradford Transforming Cities Fund schemes, helping more people to easily and affordably access the city centre.
- 2.7 Pedestrian access to Bradford Interchange would also be improved through accompanying plans to improve the approach to the Interchange and make it more connected to the heart of the city.

### **New public transport corridor**

- 2.8 To increase bus service reliability across the city centre, a new public transport corridor would be introduced along Well Street and Vicar Lane. This would allow bus services to travel through the city centre efficiently without incurring delays. The corridor would also help to facilitate the plans to create pedestrianised green areas of public realm while ensuring buses are still able to drop people off at key locations.
- 2.9 The public transport corridor would run from Forster Square along Valley Road, Well Street, Vicar Lane and Bridge Street down to the Interchange. Well Street would be reopened for public transport use, ensuring bus services are connected directly with the Broadway Shopping Centre.
- 2.10 Seven new bus hubs – where it would be easy to change between buses – are also proposed around the civic core of the city. The new hubs would feature improved facilities for waiting passengers, including features such as seating, real time bus information and ticket purchasing services. The planned hubs would be located at Forster Square, Rawson Square, Goitside, City Park/Entertainment Quarter, Market Street, Cathedral and Little Germany/Broadway.

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2.11 The scheme is currently at Outline Business Case and public consultation closed on 8th September.

### 3. SOUTH BRADFORD PARK & RIDE AND BUS EXPRESSWAY

#### Scheme Aims:

- Reduce the number of car trips made along Manchester Road, helping to decrease pollution and accidents, as well as improve congestion and journey times along the route
- Provide residents in the south of Bradford with a safe, direct and green alternative to travelling into the city centre
- Increase cyclist safety along Manchester Road, providing those who have previously not felt safe cycling on such an arterial route a safer, segregated cycle lane
- Help create a transport network fit for the 21st century, addressing the key challenges around capacity, connectivity, sustainability and air quality
- Deliver better health outcomes for residents living in the south of Bradford by providing people with the opportunity to lead more active lives and reduce pollution in the area.

3.1 The South Bradford Park & Ride and Expressway scheme will deliver a high-quality, high frequency dedicated bus service between Bradford city centre and the M606 motorway, via Manchester Road. The proposed improvements include:

- a) A minimum of 500 car parking spaces alongside a terminal building with waiting amenities, plentiful secure cycle parking and provision for electric bus and car charging;
- b) A Bus Expressway along the length of Manchester Road ending at the Croft Street Gyratory ensuring bus priority and quicker journey times;
- c) A new, largely segregated cycle route will also be implemented along the length of Manchester Road, providing cyclists with a safe, secure space to travel easily between the city centre and areas south of Bradford, including the Park & Ride site;
- d) New bus hubs located approximately every 400 metres along Manchester Road, serving areas along the route and ensuring passengers can get where they want to go easily;
- e) A requirement for any buses used in the Park & Ride scheme to be low emission Euro 6 vehicles as a minimum, limiting noise and air pollution and supporting the cities clean growth targets; and
- f) Improvements to the Croft Street Gyratory helping to facilitate quicker bus movements through the area.

3.2 Further complementary improvements are also being made to the nearby A641 (led by Calderdale Council), which acts as a key route between Brighouse and Bradford. The scheme is currently at Outline Business Case and public consultation closed on 8<sup>th</sup> September.

## APPENDIX 1 – TRANSFORMING CITIES FUND

### 4. WEST BRADFORD CYCLE SUPERHIGHWAY EXTENSION

#### Scheme Aims:

- Provide greater transport choices and make it easier and safer for residents living in the west of Bradford to make short, local journeys, as well as journeys into the city centre via cycling
- Reduce the number of car trips in the area by providing a safer, attractive alternative to the private car, helping to reduce our carbon emissions, congestion and journey times for public transport
- Help create a transport network fit for the 21st century, addressing key challenges around capacity, connectivity, sustainability and air quality
- Support residents living in the west of Bradford to live healthier lives by providing people with the opportunity to be more active, whilst helping to reduce air and noise pollution in the area.

- 4.1 The scheme would deliver a direct, largely segregated cycle route to provide cyclists with a safe, secure space to travel easily and conveniently between the city centre and areas to the west of the city. The proposed improvements include:
- a) A largely segregated cycle route running along the length of Thornton Road between the city centre and Thornton village, passing the University of Bradford and Bradford College as well as a number of areas along the way, including Girlington, Crossley Hall and Lower Grange
  - b) A northern spur off the route connecting with the Bradford Royal Infirmary, allowing cyclists to continue more safely onto the Infirmary
  - c) A southern spur off the route following the Great Northern Railway Trail to Queensbury via Station Road and passing the entrance to Queensbury Tunnel
  - d) Cyclist priority at major junctions along Thornton Road to enable quick and safe passage between the city centre and Thornton
- 4.2 The new cycle route along Thornton Road will form an extension of the existing Bradford Leeds Cycle Superhighway. Complementary improvements are also planned at the junction of Thornton Road and Cemetery Road Junction through the Thornton Road / Toller Lane Corridor Improvement Programme project of the WY+TF.
- 4.3 The scheme is currently at Outline Business Case and public consultation closed on 8<sup>th</sup> September.

## **APPENDIX 2 – WEST YORKSHIRE+ TRANSPORT FUND**

### **1. INTRODUCTION**

- 1.1 In July 2014 the Government announced that WYCA had uniquely secured funding to establish a £1bn West Yorkshire+ Transport Fund. This fund was to be used to develop and deliver schemes designed target reducing congestion, improving the flow of freight and making it easier for people to commute to and from expected major growth areas. Within the total programme Bradford was indicatively awarded funding for a package of nine schemes.

### **2. HARROGATE ROAD / NEW LINE JUNCTION IMPROVEMENT (HRNL)**

- 2.1 Construction of the Harrogate Road / New Line junction improvement commenced in early 2020 following completion of works to Hard Ings Road, Keighley, having suffered a slight delay to commencement due to the Covid19 lockdown. The scheme is progressing to completion which is expected to be achieved by March / April 2022.

### **3. BRADFORD TO SHIPLEY ROUTE IMPROVEMENT SCHEME (BSRIS)**

- 3.1 This project consists of a number of junction improvements along the Canal Road corridor which are proposed to reduce traffic congestion on the Canal Road / Valley Road corridor to improve journey time reliability for all modes. Improvements to the access of Frizinghall station as well as the re-naturalisation of Bradford beck also complements the improvements to this corridor which will support housing and employment opportunities with 5-years of the scheme opening.
- 3.2 As part of this scheme the improvements to Canal Road / Valley road will facilitate all non-local traffic being taken off the A650, Manningham Lane which will be repurposed to become a green route with improvements for buses, pedestrians and cyclists which when combined with the modifications to Canal Road are expected to mitigate the overall net carbon contribution of this scheme.
- 3.3 This scheme is currently in development of its Full Business Case submission.

### **4. SOUTH EAST BRADFORD ACCESS ROAD (SEBAR)**

- 4.1 This scheme aims to reduce congestion for all road users accessing south-east Bradford and parts of Leeds and Kirklees by creating a link between the Drighlington bypass and Leeds Road / Bradford Road. Potential options for this route could unlock development of housing and employment land within the surrounding areas (Holmewood Housing Growth Area and Local Enterprise Zone).
- 4.2 Work on the SEBAR scheme has been impacted due to Covid19 demands on the service following approval of the Strategic Outline Business Case in June 2019. Development of the Outline Business Case is now only just starting with development of further detailed option assessments. The submission of the OBC is anticipated to be achieved in November 2022.

### **5. A650 TONG STREET IMPROVEMENTS**

- 5.1 This scheme is being funded via two principle funding streams, the West Yorkshire+ Transport Fund and the Department for Transport's Large Local Majors (LLM) fund, with the predominant funding being provided by the LLM. The Outline Business Case

## **APPENDIX 2 – WEST YORKSHIRE+ TRANSPORT FUND**

for this project is currently being developed and is expected to be completed by July 2022.

### **6. BRADFORD INTERCHANGE STATION GATEWAY**

- 6.1 The scope of this project involves the creation of an ‘at grade’ route between bus and rail facilities at Bradford Interchange together with relocation of the existing taxi rank and car park from the Bridge Street access. This project is currently being reviewed in light of the Transforming Cities Fund proposals for the Interchange to see if there are efficiencies in delivery which can be achieved through the TCF contractor carrying out both schemes.

### **7. BRADFORD FORSTER SQUARE STATION GATEWAY**

- 7.1 The proposal for Forster Square station include works to address the aims of providing a new, high quality, modern station facility which enhances the user experience of arriving in Bradford city centre, creating an attractive and welcoming gateway. Proposals which are being considered include providing dedicated ticket office / information centre with ticket vending machines, seating on the main concourse and better lift access from School Street.
- 7.2 Work on this scheme was impacted by Covid19 and little progress was made during 2019/20 financial year. Currently, the Council are entering into contract with a delivery partner to progress the Full Business Case submission for this project to achieve a start of construction in early 2023.

### **8. CORRIDOR IMPROVEMENT PROGRAMME – GT HORTON ROAD / HORTON GRANGE ROAD JUNCTION IMPROVEMENT**

- 8.1 This project is part of the Council’s strategic programme of junction improvements on the outer ring road which are designed to help facilitate the removal of traffic from the city centre by making journeys on the outer ring road more reliable. Designs which have been developed for this junction have previously been shared with this committee and include the provision of a new link road between the junction at Horton Park Avenue / Cecil Avenue and the junctions at All Saints Road/Dirkhill Road junction.
- 8.2 Development of this project has continued throughout the 2019/20 financial year and the tender for the construction of this scheme is currently out to market. It is anticipated that a start on site for this scheme will be possible in early 2022.

### **9. CORRIDOR IMPROVEMENT PROGRAMME – THORNTON ROAD / TOLLER LANE JUNCTION IMPROVEMENT**

- 9.1 As with the Gt.Horton Road / Horton Grange Road scheme this project is part of the strategic programme of junction improvements on the outer ring road. The scheme aims to improve the local environment and air quality by reducing congestion as well as bringing cycling and walking enhancements to this area.
- 9.2 The development of this project has been impacted by the proposals for the West Bradford Cycle superhighway extension which passes through this junction. As this scheme was developed in advance of the TCF proposals there is a need to ensure that both schemes are compatible with each other to avoid any unnecessary

## **APPENDIX 2 – WEST YORKSHIRE+ TRANSPORT FUND**

redevelopment of the works. The revised programme for the submission of the Full Business Case from this scheme is currently in development.

### **10. CORRIDOR IMPROVEMENT PROGRAMME 2 – CUTLER HEIGHTS / DICK LANE.**

- 10.1 The proposals for this scheme seek to improve journey time reliability and enhance provision for cycling and walking at Dudley Hill roundabout and along Cutler Heights Lane / Dick Lane. Replacement of the existing pedestrian / cycling underpass with a new bridge to the south and at-grade signalised crossings across the A6177 to the east and west will provide a more secure route for commuters using these modes of transport.
- 10.2 This scheme is currently working towards the submission of its outline business case following recent completion of a period of public consultation on the proposals which resulted in a generally positive response from participants.

## **APPENDIX 3 – ACTIVE TRAVEL FUND**

### **1. INTRODUCTION**

- 1.1 Work on the Active Travel Fund schemes was introduced to the Services' workload during 2019/20 as a result of the Government's announcement of funding to provide measures to support social distancing on public transport. As measures in Tranche 1 were developed rapidly within a tight delivery envelope they were generally temporary in nature and could, if necessary, be removed rapidly. Subsequently Tranche 2 (and the forthcoming Tranche 3) programmes do not need to be delivered at such pace and therefore include more permanent installations in their programmes.

### **2. TRANCHE 1 INTERVENTIONS**

- 2.1 The following interventions were installed as part of the Council's Tranche 1 programme representing a total investment in the highways asset of £614,000:
- a) Pop up cycle lanes on routes to Bradford City Centre (Wakefield Road, Manchester Road, Hall Ings and Horton Road);
  - b) Additional pedestrian space in Town and District Centres (e.g. parklets on North Street, Bradford, Bradford Road-Saltaire and Cavendish Street-Keighley;
  - c) Social distancing measures in Ilkley Town Centre;
  - d) Ilkley Cycle hub;
  - e) Widening the footway under the railway bridge and installation of signals at Wheatley Lane, Ilkley;
  - f) Ilkley Grammar School crossing;
  - g) Routes to schools;
  - h) Eleven School Street schemes (street closures outside of schools at the beginning and end of the school day);
  - i) Shay Lane closure to traffic;
  - j) Cycle parking around the District; and
  - k) Non touch pedestrian signals.

### **3. TRANCHE 2 INTERVENTIONS**

- 3.1 The interventions in Tranche 2 have been developed in line with revised guidance issued from Government based on the experience of introducing the Tranche 1 schemes. On this basis there was an enhanced need to consult and engage with the public on developing any proposals and measures could be more permanent in nature. To develop the list of possible interventions for Bradford a dedicated consultation engagement website was established with residents invited to submit their proposals for consideration. Of those submitted the following measures were incorporated into the Tranche 2 programme:

- a) Wakefield Road Cycleway extension along Fenby Avenue;
- b) Cottingley Mercure to Bingley Cycleway;
- c) Three active travel neighbourhoods (ATNs) at Barkerend, Frizinghall and Saltaire;
- d) Eleven School Streets;
- e) Shipley Bus Gate;
- f) Beechgrove Greenway footpath resurfacing and lighting;
- g) Scotchman Road/Back of Bonn Road pedestrian improvements;

## APPENDIX 3 – ACTIVE TRAVEL FUND

- h) Chellow Hights School footpath widening;
- i) Cleasby Road, Menston footpath Improvements;
- j) Otley Road, High Eldwick new footway;
- k) Ivanhoe Road to Great Horton Rad footway improvement and lighting;
- l) Hill Top Road new footway;
- m) Staithgate Lane new footway;
- n) Bell Dene Road new footpath;
- o) All Alone Road close road to all traffic;
- p) Ashland school and Sacred Hart School footpath widening and resurfacing;
- q) New Silsden School new footpath;
- r) Girlington Greenmile footpath improvements;
- s) Cycle parking; and
- t) Ebike trial.

3.2 Work on developing the specific proposals for the above scheme has commenced and it is expected that most scheme will start on site in Summer 2021 and be completed by March 2022. The total value of this programme of works is £2.1m.

## APPENDIX 4 - LOCAL TRANSPORT PLAN – INTEGRATED TRANSPORT BLOCK (ITB) AND HIGHWAY MAINTENANCE BLOCK (HMB)

### 1. INTRODUCTION

1.1 Funding provided by the Local Transport Block is provided under two core funding block themes – highway maintenance and integrated transport. The Highway Maintenance Block funding is used to carry out highway repairs to the Council’s assets (roads, bridges, retaining walls etc), whilst the Integrated Transport Block funding is used to deliver enhancements to the existing asset under a series of funding themes. During 2019/20 the predominant use of the ITB funding was delivery of the Council’s safer roads programme.

### 2. SAFER ROADS PROJECTS

2.1 The 5 Constituency Area Committees promote Safer Roads schemes at a local level to tackle priorities with a primarily evidence led approach based on casualty rates. The Traffic & Road Safety teams also work with local communities through forums, community groups and day-to-day contact with local residents to assist the Area Committees in determining where the problems and community priorities are. In addition to Traffic Measures and Casualty Reduction schemes, the Area Committees also have responsibility for Disabled Persons Parking Places, access improvement schemes (e.g. dropped kerbs etc.), local public transport infrastructure (e.g. raised kerbs at bus stops, bus build-outs), safer routes to schools and cycling initiatives.

2.2 The Safer Roads schemes therefore not only seek to reduce the incidence of road traffic collisions and thereby the occurrence and severity of associated casualties, but to improve accessibility and encourage sustainable transport i.e. walking, cycling and public transport use. Examples of schemes delivered through this programme in 2019/20 include: -

- a) Pearson Lane/Allerton Road – junction improvement;
- b) Halcyon Way – Traffic Calming;
- c) Bradford East – various sites zebra crossing upgrades; and
- d) Shipley and Ilkley constituencies - area-wide Traffic Regulation Orders for waiting restrictions at various to improve safety and/or access.

2.3 In addition to the locally-determined Safer Roads priorities, the Council has also developed a Strategic Schemes programme. In 2019/20 this included the promotion of significant 20mph zones in Shipley Town Centre and around schools (prioritised using ward-based child casualty rates).

### 3. LTP EXPENDITURE BY SPENDING THEME

3.1 The table below summarises the level of investment from the Local Transport Plan in 2019/20.

| Highway Maintenance Block  | £          |
|--|------------|
| Maintenance of the Principal Road Network (A, B, and C class road) / Non-Principal Road Network (estate roads) | £4,971,495 |
| Bridges, structures and retaining wall repairs   | £140,734   |

**APPENDIX 4 - LOCAL TRANSPORT PLAN – INTEGRATED TRANSPORT BLOCK (ITB) AND HIGHWAY MAINTENANCE BLOCK (HMB)**

|  |            |
|--|------------|
| Street Lighting  | £95,406    |
| National Productivity Investment Fund (NPIF) Urban Traffic Control | £1,247,266 |
| Pot Hole Fund  | £490,108   |
| Local Highways Maintenance Funding                                 | £2,552,738 |
| Challenge Fund – Retaining Wall Repairs                            | £1,299,425 |
| <b>Integrated Transport Block</b>                                  |            |
| Area Committee Safer Roads and Locally Determined schemes          | £1,346,226 |
| Network Management   | £552,923   |
| Healthy Streets  | £100,000   |
| Bus Hot Spots  | £115,000   |
| Major Roads Bid Development  | £33,000    |
| Places to Live and Work  | £277,540   |
| Low Carbon Fuels & Technologies / Air Quality Monitoring           | £50,186    |
| Motorcycling, Cycling and Walking                                  | £115,490   |

## **APPENDIX 5 – SMART STREET LIGHTING PROJECT**

### **1. INTRODUCTION**

- 1.1 The Smart Street Lighting project is an “invest to save” scheme involving the replacement of approx. 59,000 existing street lighting luminaires with energy efficient LED units, as part of the project a survey of the entire street lighting column assets has been undertaken and their structural condition assessed, based on this assessment around 19,000 columns will be replaced.
- 1.2 The project also includes the installation of a LoRAWAN network on which a Central Management System (CMS) will be hosted giving dynamic control of the street lighting and providing real time data collection from the street lights to determine faults and power consumption.

### **2. SCHEME AIMS**

- 2.1 By replacing the Council’s aging SOX lighting asset this project will reduce the Council’s on-going energy bills associated with street lighting through the use of more energy efficient luminaires (LED). The project is financed through a combination of Salix Energy Efficiency Loans (£19.1m) and prudential borrowing (26.5m). Through undertaking this investment the Council is projected to save £165.5m on energy over the next 50 years with an equivalent maintenance saving of £23.5m.
- 2.2 The scheme also includes technology to allow control of street lighting columns on a zone, street or individual basis to adjust illumination levels and provide enhanced fault reporting as well as supporting a wider range of developing sensors for the ‘Internet of things (IoT)’ these could include air quality, road surface temperature, river level sensors and many other applications.

### **3. PROGRESS**

- 3.1 The project comprises three essential deliverables:
  - a) An asset survey of existing street lights to determine the optimum street lighting design and identify those street lighting columns which have reached the end of their serviceable life and hence require replacement.
  - b) Design of the replacement street lighting installation to ensure that optimum illumination levels, compliant with the latest standards, are achieved through LEDs.
  - c) Installation of replacement street lighting.
- 3.2 The contract for the Smart Street Lighting project has been impacted by the pandemic both in confirmation of its award which was achieved in April 2020 and in delays during stages (a) and (b) above. Despite these initial delays the end date for completion of the project (March 2024) remains unchanged.

## **APPENDIX 6 – CLEAN AIR PLAN**

### **1. INTRODUCTION**

- 1.1 The UK has in place legislation passed down from the European Union to ensure that certain standards of air quality are met, by setting Limit Values on the concentrations of specific air pollutants. In common with many EU member states, the EU limit value for annual mean nitrogen dioxide (NO<sub>2</sub>) is breached in the UK and there are on-going breaches of the NO<sub>2</sub> limit value in the Bradford District. The UK government is taking steps to remedy this breach in as short a time as possible with the aim of reducing the harmful impacts on public health. Within this objective, the government published a UK Air Quality Plan and a Clean Air Zone Framework. The latter document provides the expected approach for local authorities when implementing and operating a Clean Air Zone (CAZ).
- 1.2 Air pollution is a national public health priority. Of all environmental factors, it has the largest impact on health in the UK attributable to over 40,000 deaths nationally and has health effects across the life course; from the underdevelopment of the unborn baby through to dementia in the later years of life. The strongest evidence of health impact is worsening symptoms of respiratory diseases and cardio-vascular disease and cancer causation. Furthermore, the health impact is greatest for those at higher risk; people living in areas of highest deprivation are more likely to suffer these health problems than people living in more affluent areas.
- 1.3 The Government first advised the Council for the need to tackle roadside NO<sub>2</sub> concentrations at the beginning of 2017, however, the Council were then informed by the Government in July 2017 that further action wouldn't be supported. Following subsequent High Court rulings, the Council received Ministerial Direction in 2018 to produce a Clean Air Plan to achieve compliance with the EU Limit Value for Nitrogen Dioxide in the shortest possible timeframe. As such, Bradford form part of a 3rd wave of directed local authorities developing plans to improve air quality.

### **2. PROGRESS**

- 2.1 Progress on the development of the Council's Clean Air Plan has continued through 2019/20 following approval of the Outline Business Case proposal in December 2019. Development of the final proposals for the Clean Air Plan continued through the early stages of 2020 to achieve a submission to government in accordance with the revised Ministerial Direction of a submission being received by September 2020.
- 2.2 Following final agreement of the Full Business Case proposal work has subsequently transitioned to the delivery phase of the project with a view to introduce a Category 'C'+ Clean Air Zone in Bradford early in 2022.

## **APPENDIX 7 – MASS RAPID TRANSIT (MRT)**

### **1. BACKGROUND**

- 1.1 Proposals for the creation of a mass-rapid transit system for West Yorkshire are currently being developed by the West Yorkshire Combined Authority. This system would provide a new low-carbon mode of transport (such as light rail or tram) across West Yorkshire to complement the existing bus and rail networks. Due to the complexity of the project the MRT system will be delivered in a series of phases with the first phase of the network comprising connection between Bradford city centre and Leeds city centres. Future phases would include extending connectivity into Dewsbury, Halifax, Huddersfield and Leeds Bradford International Airport.

### **2. PROPOSALS**

- 2.1 Scheme proposals remain in development at this time.

### **3. PROGRAMME**

- 3.1 It is currently anticipated that the Strategic Outline Business Case for MRT would be completed by the beginning of 2022 with the first phase of the project being started on site in the mid-2020's, completing towards the end of the decade.

## **APPENDIX 8 – NORTHERN POWERHOUSE RAIL (NPR)**

### **1. BACKGROUND**

- 1.1 Proposals for NPR have been in development for a number of years following the announcement of the Government's HS2 programme. The NPR programme proposed to create new sections of high speed rail between Leeds and Manchester via Bradford city centre to boost the economic productivity of the north.

### **2. SCHEME PROPOSALS**

- 2.1 The proposals for scheme deliverables include:

- a) Creation of new sections of high speed line between Leeds and Manchester via Bradford City Centre;
- b) Development of a new through station at St James Market in the South of the City;
- c) Re-route Calderdale services through the new station and re-purpose Bradford Interchange; snf
- d) Providing high quality sustainable transport links (bus, Mass Rapid Transit, walking and cycling) from the Southern Gateway area to the new station, the city centre and Bradford Forster Square station.

### **3. PROGRAMME**

- 3.1 The development of the Strategic Outline Case is currently on-going and a decision on routes is expected in Autumn 2021 (after the announcement of the Government's Integrated Rail Plan that sets out how HS2, NPR and other rail schemes in the North and Midlands interact).
- 3.2 It is anticipated that works on NPR can commence in the mid-2020's with works including the new station at St James Market site being complete by the end of the decade.

## APPENDIX 9 – GLOSSARY OF TERMS

| ACRONYM                | DEFINITION   |
|------------------------|--|
| <b>ATF (1) / (2)</b>   | Active Travel Fund. Number indicated funding tranche.  |
| <b>Bike It</b>         | Cycling encouragement programme delivered by Sustrans in schools   |
| <b>CO<sub>2</sub></b>  | Carbon Dioxide   |
| <b>CMS</b>             | Central Management System  |
| <b>Common Database</b> | A 'live' database containing a wide range of traffic and transport data which provides information to websites, Variable Message Signs, UTC systems etc.               |
| <b>DEFRA</b>           | Department for Environment, Food and Rural Affairs   |
| <b>DfT</b>             | Department for Transport   |
| <b>EV</b>              | Electric Vehicle.  |
| <b>FBC</b>             | Full Business Case   |
| <b>HS2</b>             | High Speed 2 Rail Link between London and Manchester / Leeds   |
| <b>HS3</b>             | High Speed 3 Rail Link running east-west connecting Liverpool to Hull via Manchester and Leeds.  |
| <b>Hub</b>             | A location where there is a focus on transport movements and where improvements are being implemented to enhance facilities  |
| <b>ISA</b>             | Integrated Sustainability Assessment – an assessment of the extent to which a strategic plan will help achieve relevant environmental, economic and social objectives. |
| <b>KSI</b>             | Killed and Seriously Injured Road Casualties   |
| <b>LED</b>             | Light Emitting Diode Lighting – energy efficient lighting equipment.   |
| <b>LES</b>             | Low Emission Strategy  |
| <b>LoRAWAN</b>         | Low power wide area network designed to connect low powered sensors to the internet in regional, national or global networks and supports bi-direction communication.  |
| <b>LSTF</b>            | Local Sustainable Transport Fund   |
| <b>LTP / IP3 / IP4</b> | Local Transport Plan / Implementation Plan 3 / Implementation Plan 4   |

## APPENDIX 9 – GLOSSARY OF TERMS

|  |   |
|--|---|
| <b>MOVA</b>  | Micro Processor Optimised Vehicle Actuation – a sophisticated traffic signal operating system that responds to changes in traffic flow by altering green light durations and signal cycle times.    |
| <b>NPIF</b>  | National Productivity Investment Fund – A £23bn fund established to invest in areas that are key to boosting productivity: transport, digital communications, research and development and housing. |
| <b>NPRN</b>  | Non-Principal Road Network – typical estate roads not serving the strategic needs of the nation.  |
| <b>OBC</b>   | Outline Business Case   |
| <b>OLEV</b>  | Office for Low Emission Vehicles  |
| <b>PRN</b>   | Principal Road Network – highways identified as serving the strategic needs of the nation.  |
| <b>RailPlan7</b>                                     | The current rail planning document for West Yorkshire   |
| <b>SOBC</b>  | Strategic Outline Business Case   |
| <b>TCF</b>   | Transforming Cities Fund  |
| <b>TLP</b>   | Traffic Light Priority for Buses – a system that uses GPS positioning to trigger extended or advanced green signals for buses.  |
| <b>Urban Traffic Management Control / UTMC / UTC</b> | The traffic management and control systems that lie behind traffic signals, variable message signs, TLP etc.  |
| <b>WYCA</b>  | West Yorkshire Combined Authority   |
| <b>WY+TF</b>   | West Yorkshire Plus Transport Fund.   |
| <b>WYTS</b>  | West Yorkshire Transport Strategy   |