BIRMINGHAM CITY COUNCIL

JOINT CABINET MEMBER AND CHIEF OFFICER

WEDNESDAY, 19 SEPTEMBER 2018 AT 00:00 HOURS
IN CABINET MEMBERS OFFICE, COUNCIL HOUSE, VICTORIA SQUARE, BIRMINGHAM, B1 1BB

A G E N D A

3 - 50	1	**JOINT AIR QUALITY UNIT EARLY MEASURES FUND FOR LOCAL NO2 COMPLIANCE - APPLICATIONS FOR AND ACCEPTANCE OF FUNDING**

Item Description

BIRMINGHAM CITY COUNCIL

PUBLIC REPORT

Report to:	**CABINET MEMBER FOR TRANSPORT & ENVIRONMENT JOINTLY WITH THE CORPORATE DIRECTOR, ECONOMY**
Report of:	**ASSISTANT DIRECTOR FOR TRANSPORTATION AND CONNECTIVITY**
Date of Decision:	**19 SEPTEMBER 2018**
SUBJECT:	**JOINT AIR QUALITY UNIT EARLY MEASURES FUND FOR LOCAL NO_2 COMPLIANCE – APPLICATIONS FOR AND ACCEPTANCE OF FUNDING**
Key Decision: No	**Relevant Forward Plan Ref:**
If not in the Forward Plan:	**Chief Executive approved** ☐
(please "X" box)	**O&S Chair approved** ☐
Relevant Cabinet Member(s) or Relevant Executive Member:	**Councillor Waseem Zaffar, Cabinet Member for Transport & Environment**
Relevant O&S Chair:	**Councillor Liz Clements, Sustainability and Transport Overview and Scrutiny Committee**
Wards affected:	**Ladywood, Aston, Soho, Edgbaston, Nechells, Sparkbrook**

1. Purpose of report:

1.1 To seek retrospective approval for the submission of a funding application to the Government's Joint Air Quality Unit (Department for Transport and Department for Environment, Food and Rural Affairs) for the 'Early Measures Fund for Local NO_2 Compliance'. Following a successful bid the report seeks to delegate the approval of the acceptance of £2.77m of grant funding to the Assistant Director Transportation & Connectivity.

2. Decision(s) recommended:

2.1 Pursuant to the specific delegation by Cabinet dated 16 May 2017, that the Cabinet Member for Transport and Roads jointly with the Corporate Director, Economy, and the Corporate Director, Finance and Governance:-

2.2 Note the submission of the funding applications submitted to the Government's Joint Air Quality Unit (JAQU) for the Early Measures Fund for Local NO_2 Compliance, as detailed in attached documents, for capital grant funding of £2.77m pursuant to the specific delegation by Cabinet dated 16 May 2017. The application was approved by JAQU, with funding confirmed in December 2017 and March 2018 for Tranche 1 and Tranche 2 respectively.

2.3 Notes that there are no requirements for local funding contributions.

2.4 Delegates grant acceptance of the successful funding application to the Assistant Director for Transportation and Connectivity.

2.5 Notes that Project Definition Document (PDDs) and Full Business Case (FBCs) will be prepared in accordance with the Council's Gateway and Related Financial Approval Framework following the successful funding application.

2.6 Authorises the City Solicitor to negotiate, execute and complete any necessary legal documentation to give effect to the above recommendations.

Lead Contact Officer(s): David Harris
Telephone No: 0121 464 5313
E-mail address: david.i.harris@birmingham.gov.uk

3. Consultation

3.1 Internal

3.1.1 Consultation has been undertaken with our transport partners TfWM, NXWM and Amey in the development of the package of works. Consultation has been undertaken with the City Council's Cabinet member for Transport and Roads who is supportive of the submission.

3.1.2 Local ward Councillors will be briefed and detailed consultation will be undertaken at Project Definition Document and Full Business Case stage in accordance with standard practise, subject to funding approval by JAQU.

3.1.3 Officers from City Finance and Legal and Governance have been involved in the preparation of this report. In line with the delegation approved at Cabinet on 16 May 2017 this report has been prepared in conjunction with the Corporate Director, Finance and Governance.

3.2 External

3.2.1 The measures have been developed in consultation with Bus Operators and Transport for the West Midlands who are supportive of the early measures. The Government's Joint Air Quality Unit has been engaged in the development of the proposals. Consultation with key stakeholders and the public will be undertaken at the Project Definition Document (PDD) and Full Business Case stage in accordance with the Council's project gateway process.

4. Compliance Issues:

4.1 Are the recommended decisions consistent with the Council's policies, plans and strategies?

4.1.1 The report is consistent with the Birmingham City Council Plan 2018 - 2022 and supports the following outcomes:

Birmingham is an entrepreneurial city to learn, work and invest in - this project supports investment in the buildings and transport connections of our city to provide better places to live and work and enable businesses to prosper. Priority 4 of this outcome sets out that 'We will develop our transport infrastructure, keep the city moving through walking, cycling and improved public transport.'

Birmingham is a great city to live in - this project will contribute to Birmingham being a city with clean air, safe and clean streets and green spaces. Priority 4 of this outcome sets out that 'We will improve the environment and tackle air pollution.'

Birmingham residents gain the maximum benefit from hosting the Commonwealth Games – this project supports the provision of a transport legacy created by the hosting of the Commonwealth Games. Priority 3 of this outcome sets out that 'We will deliver

high quality housing, sporting facilities and transport infrastructure for the benefit of our citizens.'

4.1.2 The project is consistent with the Council's key policies and priorities as set out in the West Midlands Strategic Transport Plan, Birmingham Development Plan and the Birmingham Connected transport strategy. In addition, the proposed package of works offers synergies with several other current projects:

- City Centre Traffic Management & Resilience
- Greenwave Project
- National Productivity Investment Fund Tranche 1 – Traffic Signal Upgrades
- National Productivity Investment Fund Tranche 2 – Birmingham Growth Point Public Transport Package.

This project therefore supports early delivery of reductions in NO_2, moving the city closer to air quality compliance.

4.2 Financial Implications (How will decisions be carried out within existing finances and Resources?)

4.2.1 Following the successful bid the capital grant has been offered under Section 31 of the Local Government Act 2003. The Grant Conditions do not include a deadline for the funding to be spent, however, it is expected that these measures will be implemented in 2018/19. Commencing May 2018, monthly budget reports are required by the Joint Air Quality Unit.. Further details will be provided through the approval of future Project Definition Documents and Full Business Cases.

4.2.2 The table below outlines the scheme costs associated with the packages in each Tranche. These will be maximum amounts and any overspends will need to either be funded from other City Council resources or through prioritisation of schemes for delivery within the available funding. The budget allocation also contains a measure of contingency within the grant provided, there is also an opportunity to value engineer each scheme element.

The funding bids were split across the following measures:

Tranche 1 Funding – December 2017 £727,500
For signing and rerouting strategy, traffic management and bus priority enhancements and traffic signals technology pilot.

Tranche 2 Funding – March 2018 £2,043,680
For bus-based traffic management measures and traffic signal technology measures.

4.2.3 There is no requirement on the Council to commit local contributions. New capital transport projects by nature attract additional ongoing costs in respect of maintaining new highway assets and the City Council will be responsible for maintaining additional highway infrastructure. Specific revenue funding implications for the City Council will be determined as part of future Full Business Cases to be subject to City Council governance processes.

4.2.4 It is proposed that the scheme development for the bus package measures is led by Transport for the West Midlands. It is proposed to work in partnership with Transport for the West Midlands to progress elements of the bus measures packages. As such this

arrangement will be subject to a funding agreement, detailed further at PDD and FBC stage.

4.3 Legal Implications

4.3.1 The City Council carries out transportation, highways and infrastructure related works under the relevant primary legislation including the Town and Country Planning Act 1990, Highways Act 1980, Road Traffic Regulation Act 1984, Traffic Management Act 2004, Transport Act 2000, Local Government (Miscellaneous Provisions) Act 1976, Countryside & Rights of Way Act 2000, and other related regulations, instructions, directives and general guidance.

4.4 Public Sector Equality Duty (see separate guidance note)

4.4.1 An initial screening for an Equality Assessment (EA) (ref EA 180314) has been undertaken and has concluded that a full EA is not required, with no adverse impacts on protected groups. The Equality Analyses is included at Appendix C to this report.

5. Relevant background/chronology of key events:

5.1 As a result of ongoing breaches of legal NO_2 limits the Government has identified 28 UK cities which must take action to achieve compliance in the shortest possible time. In urban areas like Birmingham the majority of emissions result from local transport sources. Clean Air Zones are one of the measures being considered by local authorities, including Birmingham, to deliver compliance as soon as possible as part of Government funded local air quality feasibility studies.

5.2 In response to local authority requests Government made additional resources available to develop packages of infrastructure measures to support local air quality improvements at key locations where exceedances are most severe through traffic management and bus priority measures.

5.3 Tackling air Quality is a Council priority and the Air Quality Action Plan identifies measures to support public transport and improve traffic management as key actions. Road transport is the main source of emissions and the measures proposed as within these bids are commensurate with the Council's transport strategies and the objective of delivering compliance with statutory air quality limits in the shortest possible time. In the context of the above objectives, the submission was developed in discussion with the relevant portfolio holders.

5.4 The Council was initially invited by the Joint Air Quality Unit (JAQU) to develop an outline package of measures to be considered for funding in early 2017. However, the overall package of measures eligible for funding was subject to an iterative process with a large amount of scrutiny from JAQU around the selection of measures and which would support delivering compliance. The process did not follow a standard bidding approach. A final proposal was put forward in November 2017 (Appendix A) and confirmation of the measures to be funded through the Tranche 1 funding was received in December 2017.

5.5 JAQU set out a further application process for an additional round of the Early Measures Fund for Local NO_2 Compliance on 15th December 2017. The process has been iterative with initial proposals submitted by 26th January 2018. The proposals were subsequently reviewed twice by JAQU and a final proposal resubmitted on 28th February 2018 (Appendix B). The tight timescale including the Christmas and New Year

period has led to the need to request retrospective approval for the submission of a funding application.

5.6 Before determining the measures to be taken forward for these funding opportunities, the Council and Transport for the West Midlands reviewed where action is already being developed around a number of key supporting measures. A key consideration for this funding is the ability to deliver scalable investment quickly to meet the compressed funding and delivery timeframe i.e. to deliver air quality improvements before 2020. The proposed measures have been selected as they aim to accelerate compliance with air quality legislation and support delivering compliance with air quality in the shortest possible time.

5.7 There is a significant opportunity to build upon existing work and, in particular, the Tranche 2 interventions will complement the first tranche of early measures funding. The proposal also builds on elements of the Smart City work particularly around traffic signals and variable message signing. It is critical for measures to improve air quality to be developed commensurately with the overall aims of Birmingham Connected and the BDP, building on existing work streams to support delivering inclusive sustainable growth.

5.8 The bus-based traffic management measures would enable a genuine transformation in bus transit across the city centre. Buses are one of the most efficient people-carriers on the road network, are flexible and able to deliver extra capacity quickly. When combined with priority measures, buses can reduce delay and promote modal shift to reduce congestion and improve air quality. All the bus measures can be delivered quickly, cost effectively and at low risk.

5.9 Scheme costs have been developed based on experience of other similar schemes; however, in the event that scheme costs increase or decrease there will be a need to value engineer schemes and prioritise schemes for delivery within the available funding.

5.10 The Highway Infrastructure measures will be coupled with measures to promote the benefit of bus travel and improve the off-board customer experience. This will see up to 34 bus stops along the highway schemes priority routes improved to provide enhanced customer comfort and information. A targeted marketing campaign to promote improved journey times and reliability, network branding, better travel information and promotion of the green credentials of our buses will also take place. Through the West Midlands Bus Alliance the City Council and TfWM will explore the potential for match-funding from Alliance partners, to complement the government investment and maximise the benefits for passengers.

5.11 The traffic signal technology and variable message signing package will support the efficient routing of traffic away from air pollution hotspots, particularly in discouraging north/south vehicles movements along the A38. This will be complemented by increasing capacity at key junctions via the implementation of adaptive technology and intersections including MOVA and SCOOT. Both these traffic technology elements could be delivered quickly and furthermore offer a scalable package of measures.

5.12 These measures will also provide benefit in the context of network resilience in and around the city centre by facilitating better journeys by public transport and improved traffic management in areas with poor air quality. This funding proposition to deliver these packages is likely to accelerate benefits realisation in promoting mode shift and is estimated to provide air quality benefits.

5.13 The Updated Transportation and Highways Funding Strategy 2017/18 to 2022/23 approved by Cabinet on the 16 May 2017 delegated approval of funding bids to the relevant portfolio holders jointly with the Corporate Director, Economy, in conjunction with the Chief Finance Officer to bid for and accept grant resources up to £10.0m for projects that align with the approved policies and objectives of the Council.

5.14 This report follows this delegated process, with PDD and FBC documents to be completed in the event of a successful bid in accordance with the Council's Gateway and Related Financial Approval Framework.

5.15 There are no direct procurement implications contained within this report, however, it should be noted that schemes will be delivered by the Council and works will be procured through approved frameworks or competitive tenders utilising either in house resources or partner's procurement arrangements, in accordance with Standing Orders and the Procurement Governance Arrangements. Procurement implications will be reported in individual PDD and FBC reports as per normal practise, with value for money and compliance with the Birmingham Business Charter for Social Responsibility clearly set out.

5.16 The Government provided confirmation of the Tranche 1 funding in December 2017 and Tranche 2 funding in March 2018.

5.17 The measures submitted have been selected on their deliverability and scalability, enabling the interventions to be delivered ahead of the CAZ to facilitate and embed change and allow for long-term air quality monitoring. Next steps and indicative key dates include the milestones below.

Project plan – Bus Based Traffic Management, Network Signing Strategy (including Variable Message Signing), Shelter Enhancements & Traffic Signal Technology:

September 2018	Preliminary design of bus measures / Signing strategy / Procurement of VMS
August to Sept 2018	Procurement of services and resources
September 2018	Making of TROs
September / October 2018	Consultation on TROs / Commence detailed design / Define VMS schedules
September 2018 / January 2019	Submit FBCs for early measures
November / December 2018	Completion of detailed design / Commence marketing activities
Spring / Summer 2019	Delivery
September 2019	Completion of all physical works / Opening of capital works

5.18 This project will be progressed by the Council's Infrastructure Projects team in partnership with Transport for the West Midlands.

6. Evaluation of alternative option(s):

6.1 Not proceeding with the funding application would result in a lost opportunity to advance the air quality programme and improve bus journeys in the city centre.

6.2 Selection of other areas and options has also been considered. However, whilst measures could be rolled out across further corridors/area within Birmingham, the city centre provides the most potential to deliver meaningful improvements in air quality through bus priority and traffic management.

6.3 Other options could also impact on NO_2. However, a key consideration for this funding is the ability to deliver scalable investment quickly to meet the compressed funding and delivery timeframe. The proposed package of works can be delivered quickly, cost effectively and at low risk and offers a scalable package of measures.

7. Reasons for Decision(s):

7.1 To note the submission of the funding applications to JAQU for the Early Measures Fund for Local NO_2 Compliance, as detailed in the attached documents, for capital grant funding of £2.77m and the subsequent approval of the funding application by JAQU.

7.2 To accept grant funding to progress the projects to support the move towards compliance with international air quality legislation, upgrade bus provision in the city centre and add value to other planned works and projects.

Signatures		**Date**
Councillor Waseem Zaffar Cabinet Member for Transport and Environment	…….	……...
Waheed Nazir Corporate Director, Economy	……..	…..…….
Clive Heaphy Corporate Director, Finance and Governance	…….	…..…….

List of Background Documents used to compile this Report:
Programme Definition Document for Transportation and Highways Funding Strategy 2017/18 to 2022/23 approved by Cabinet on 16th May 2017.

List of Appendices accompanying this Report (if any):
Appendix A – Early Measures Fund for Local NO2 Compliance Submission Document – Tranche 1
Appendix B - Early Measures Fund for Local NO2 Compliance Submission Document – Tranche 2
Appendix C – Equality Analysis

PROTOCOL
PUBLIC SECTOR EQUALITY DUTY

1 The public sector equality duty drives the need for equality assessments (Initial and Full). An initial assessment should, be prepared from the outset based upon available knowledge and information.

2 If there is no adverse impact then that fact should be stated within the Report section 4.4 and the initial assessment document appended to the Report duly signed and dated. A summary of the statutory duty is annexed to this Protocol and should be referred to in section 4.4 of executive reports for decision and then attached in an appendix; the term 'adverse impact' refers to any decision-making by the Council which can be judged as likely to be contrary in whole or in part to the equality duty.

3 A full assessment should be prepared where necessary and consultation should then take place.

4 Consultation should address any possible adverse impact upon service users, providers and those within the scope of the report; questions need to assist to identify adverse impact which might be contrary to the equality duty and engage all such persons in a dialogue which might identify ways in which any adverse impact might be avoided or, if avoidance is not possible, reduced.

5 Responses to the consultation should be analysed in order to identify:

(a) whether there is adverse impact upon persons within the protected categories

(b) what is the nature of this adverse impact

(c) whether the adverse impact can be avoided and at what cost – and if not –

(d) what mitigating actions can be taken and at what cost

6 The impact assessment carried out at the outset will need to be amended to have due regard to the matters in (4) above.

7 Where there is adverse impact the final Report should contain:

- a summary of the adverse impact and any possible mitigating actions (in section 4.4 or an appendix if necessary)
- the full equality impact assessment (as an appendix)
- equality duty (as an appendix).

Equality Act 2010

The Executive must have due regard to the public sector equality duty when considering Council reports for decision.

The public sector equality duty is as follows:

1 The Council must, in the exercise of its functions, have due regard to the need to:

(a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by the Equality Act;

(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;

(c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

2 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

(a) remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic;

(b) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;

(c) encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

3 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

4 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

(a) tackle prejudice, and

(b) promote understanding.

5 The relevant protected characteristics are:
(a) marriage & civil partnership
(b) age
(c) disability
(d) gender reassignment
(e) pregnancy and maternity
(f) race
(g) religion or belief
(h) sex
(i) sexual orientation

Department
for Environment
Food & Rural Affairs

Department
for Transport

Adrian Phillips
Birmingham City Council
54 Highfield Road
Birmingham
B8 3QU

Ref: BIRM IEKM 3176

20 December 2017

Dear Adrian,

Implementation of Early Measures

I am writing to confirm I have received clearance to make a capital grant payment of £727,500 to Birmingham City Council under Section 31 of the Local Government Act 2003. I attach a signed Grant Determination Form.

This funding is to support the work you are doing to improve air quality in your local area and your requirement to develop a local plan to ensure the UK achieves compliance with legal limits for nitrogen dioxide in the shortest possible time. This capital grant payment will support the implementation of early measures and deliver Birmingham's local plan. Your projects, which have been approved by our Assurance Panel, are listed in Annex B.

This funding and project delivery will be monitored with the feasibility Project Delivery and Budget Tracker tool and your team has already been provided with this to complete for the feasibility study project. You should set out clear milestones, timelines and work undertaken including performance indicators so that you can evaluate whether the project was effective, achieved its objectives and what the impact of the project was on the local area. JAQU can work with you to develop these indicators and these will be reviewed through the project as part of regular project management meetings.

Should you require to change any element of the project this must be discussed with JAQU as soon as possible, any substantial change may require a variation. Your acceptance of the award of this grant payment will be made by signing the below. No other form of acknowledgement will be accepted. By signing the below you confirm this capital funding

support is additional to existing Local Transport Plan Funding and will not displace any future Local Transport Plan funding. Please remember to quote the reference number in any future communications relating to this grant.

I would strongly encourage you to take advantage of the further funding for Early Measures that is available to you as part of the 17/18 Early Measure Funding opportunity. This has been discussed with your team and additional guidance sent to them on Friday 15 December on huddle.

If you have any questions regarding this letter, please do not hesitate to contact me.

Yours sincerely

Susanna May

Susanna May

Head of the Joint Air Quality Unit

Grant Determination Form

Title: Clean Air Zones: No. 31/3176

The Secretary of State at the Department for Transport, in exercise of the powers conferred by section 31 of the Local Government Act 2003, makes the following determination:

Citation

1) This determination may be cited as Clean Air Zones: No. 31/3176

Purpose of the grant

2) The purpose of the grant is to provide support to local authorities in England towards the Clean Air Zones implementation support, which is being conducted in five cities in England (Birmingham, Derby, Leeds, Nottingham, and Southampton).

Determination

3) The Minister determines as the authority to which the grant is to be paid, and the amount of grant to be paid, the authority and the amount set out in Annex A.

Treasury consent

4) Before making this determination in relation to the local authorities in England, the Minister obtained the consent of the Treasury.

Signed by authority of the Secretary of State for Transport

Richard Bruce
Director of Energy, Technology and Innovation
Department of Transport

December 2017

ANNEX A: Capital allocation for the 2017/18 financial year

Authority to which grant is to be paid	Amount of grant to be paid
Birmingham City Council	£727,500

Signed for on behalf of Birmingham City Council

Name	
Title	
Signature	
Date	

Signed for on behalf of the Joint Air Quality Unit

Name	Susanna May
Title	Deputy Director
Signature	Susanna May
Date	20/12/17

Annex B: Grant Application

Following Assurance Panel Review and the additional information Birmingham City Council have provided to JAQU including the below:

Signing and Routing Strategy

Birmingham Connected set out the need to change the way we use our roads. The city centre is dissected by the A38, which is used as a through route for bypassing traffic. This contributes to air quality issues and impacts on the vibrancy of the city centre. The Council want to focus on the major arterial routes to/from the city centre, to direct bypass traffic away from the centre and around, to make better use of the A4540 Ring Road. Our approach will be to use Variable Message Signs (VMS) and implement a new signage strategy.

VMS

The ANPR data collection from November 2016, confirms our need to re-direct traffic to appropriate routes. Over 55,000 trips each weekday travel straight through the city centre. These are predominately diesel vehicles and use the city centre as a route to travel through contributing to air pollution and congestion in the city centre. These movements account for 45 per cent of the total traffic in the city centre.

The use of Variable Message Signs (VMS) at decision points on key route approaches to the city centre, will inform drivers to use the Ring Road as the most convenient route to continue their journey if bypassing the city centre. VMS will be delivered within 3 months to manage to the existing movement patterns and influence driver route choice. Provision of VMS on the key arterials to/from the city will enable drivers to be informed that the city centre should be avoided as a through route, and directing use of the Ring Road. The placement of VMS will be informed by the ANPR data, which highlights the major city centre through movements to/from the following arterials:

- A38 Bristol Road
- A34 New Town Row
- A41 Soho Road

Signage Strategy

A change to our existing signage strategy for key destinations and tourist locations in the Southern Gateway (Digbeth) and Snow Hill District (business) will be required so that people travel in and out from specific points on the Ring Road, instead of travelling through the city core to reach a destination. This is particularly important as we expect significant construction works in the city centre (and these areas) over the next 10 years, with the arrival of HS2 and other major developments (i.e. Arena Central, metro extension, Birmingham Smithfield). To ensure the VMS is implemented effectively, a signage review will be undertaken to complement the proposed traffic management measures (package 2) and long-term development of the city centre. Following the review, a new signage strategy will be implemented within 6 months, which complements the VMS and package 2 measures to achieve our aim to reduce the proportion (and negative impact) of through traffic and unnecessary routing in the city centre.

The VMS strategy and the new signing and rerouting strategy will be based on the outputs from the ANPR surveys and the traffic modelling that is being undertaken to develop strategies to minimise the impact of displacing traffic and prevent creating air quality problems on other roads within the city centre/wider city. The development process will consider existing traffic movements and changes being made to the transport network in the shorter term over the next few years. It will take into

consideration any potential re-routing and VMS routing options. The ANPR surveys undertaken to support the CAZ feasibility study have shown that some 45% of traffic on the A38 is through traffic – measures to help encourage traffic to use alternative routes coupled with smarter routing for those accessing the city centre will help to reduce the traffic on this link.

As noted the proposal also aligns to the National Productivity Investiment Fund bid being developed by Birmingham City Council which which consists of a package of traffic signal technology upgrades, electronic signing and average speed enforcement measures to assist with reducing congestion and consequent air quality issues along the A38 corridor, and assist with tackling high journey time variability affecting public transport on the corridor. As part of the NPIF scheme development further work was undertaken to try and estimate the impact of the wider signing strategy and estimated average network speed data was collected for the period of 08/05/2016 – 30/04/2017 from the city council's UTMS system.

Statistical analysis was undertaken to establish the expected normal network speeds, when discounting trends and weekly variations. From this analysis, unexpected variances in daily average traffic speeds were identified, for days where traffic speeds were lower than the expected average. It has been estimated that on those days where the average daily traffic speed is over 2.5% slower than the expected speed, a conservative assumption that around a 25% saving in this delay could occur on the corridors on which the VMS system is implemented has been assumed. The existing delay has been estimated based on Trafficmaster data, and savings applied to inbound traffic only in the peak periods. These are conservative assumptions, and the actual benefits realised could be more substantial.

In the longer terms as the preferred CAZ scheme option will shape the wider signing and rerouting strategy – taking account of the scheme boundaries and any further infrastructure changes which may be required. The signing and rerouting strategy for the final CAZ scheme are likely to be of a far more strategic nature and will need to be focused on routes to the city centre much further in advance of the city centre ring road.

The timescales for the elements are subject to refinement but are anticipated to be:

Mobilisation / Procurement – Summer 2017
Study and identification of measures (aligned to emerging CAZ preferred scheme, emerging traffic management programme and other measures e.g. through NPIF funding) – Autumn 2017
Full Business Case – Early 2018
Implementation – Spring 2018

Traffic Management and Bus Priority Enhancements

In collaboration with our transport partners at Transport for West Midlands (TfWM) and the major bus operator in the city, National Express West Midlands (NXWM) (which operates 95 per cent of the bus service kilometres in the city centre) a long-list of 25 potential traffic management and bus priority enhancements were identified. This long-list of measures was prioritised using a 13 criterion multi-criteria analysis (MCA) 5-point assessment framework against strategic, economic, financial, commercial and management objectives:

- Strategic
    - Supports Areas of Transformation
    - Level of Patronage / Bus Demand
    - Bus Delay / Potential Impact

    - Alignment with Transport Strategy
- Economic
    - Value for Money
- Financial
    - Capital Costs
    - Revenue Costs
    - Cost Risks
- Commercial
    - Initial Implementation
    - Permanent Implementation
- Management
    - Evidence of similar schemes
    - Approvals / Stakeholder Management
    - Deliverability Risks

The long-list and MCA framework outcome provides more detail on the justification for the various measures proposed for the selected locations, summaries are provided in Appendix 1 and further information is included as an Annex to this proposal. The result of the MCA was 12 prioritised physical traffic management measures to restrict private vehicle access and/or provide dedicated bus priority. The measures are focused on linking gaps in the core bus network to ensure improved journey time reliability. The city centre has sections of bus priority and bus lanes but gaps in this network results in unnecessary delays and reliability issues for buses.

A. Digbeth (145 buses per hour)
   a. Upper Dean St – Bus Gate eastbound (id 6)
   b. Moat Lane Gyratory – Bus Gate at southern arm (7)
   c. B4100 Digbeth High St / Rea St – Bus only right turn onto Rea St (8)
   d. Moor St Car Park – No straight on movement allowed onto bus mall (9)
   e. Moor St Queensway – Yellow Box Junctions (14)
   f. Moor St Queensway – Bus only straight on lane eastbound to Jennens Road (15)

B. Great Charles St Queensway (60 buses per hour)
   a. Ludgate Hill – Close left turn onto Great Charles St Queensway for private vehicles / bus gate (1)
   b. A4400 Great Charles St Queensway – northbound and southbound bus lanes (Paradise Circus - St Chads Queensway) (3)

C. Ring Road (6 buses per hour)
   a. Lister St / Great Lister St – Bus Gate across the Ring Road (10)

D. City Centre Arterials (36 buses per hour)
   a. Harborne Road – Extend bus lane to Vicarage Road and PM peak period operation (20)
   b. Calthorpe Road – Bus lane Fiveways to Westbourne Road (AM and PM peak periods) (21)

E. City Centre Routes (65 buses per hour)
   a. Smallbrook Queensway – northbound and southbound bus lanes (Holloway Circus – St Martins Queensway) (5)

Impacts

The combined impacts of these measures have been tested in the PM peak (worse-case) using the city centre SATURN traffic model (2015 base). Traffic rerouting impact is shown in Appendix 2 as demand flows comparison plot, where green represents an increase and blue represents a decrease in vehicle demands as a result of the improvement. The comparison plot indicates a decrease of 150 vehicles on Great Charles Street Queensway, a decrease of 250 vehicles in the Jewellery Quarter to the north-west of Great Charles Street and a reduction of 300 vehicles in Digbeth area. As a result of rerouting, more vehicles choose to use the Ring Road and Queensway Tunnel with increase of 300 vehicles (NE Ring Road), 200 vehicles using Tunnels and 150 more vehicles using SE Ring Road.

This has highlighted an improvement in vehicle speeds and bus speeds of 3 per cent and 10 per cent respectively, a reduction in traffic in the scheme areas with re-routing to more appropriate routes. This demonstrates the likely overall benefit of these measures in areas of NO2 exceedance in the city centre area.

Average vehicle speed existing network – 17kph

- Average vehicle speed with CAZ improvements – 17.5kph
- Average bus speed existing network – 17.3kph
- Average vehicle speed with CAZ improvements – 18.9kph

The modelling has limitations as it is not able to model modal shift, which could be expected from improvements in bus journey time reliability. Observed benefits from existing traffic management trials have seen an average bus journey time improvement of 3 minutes, with a 25 minute reduction in the daily journey time variability compared to the before situation. This has improved bus reliability, which is likely to yield patronage increase; however given the short period of operation, patronage changes cannot be robustly assessed. However, applying the 1 minute improvement / 1 per cent increase in patronage rationale could be expected to patronage increases of between 3 to 25 per cent, which would yield air quality benefits from reduced traffic. The journey time savings for bus has resulted in direct air quality benefits, as emissions will be reduced from less idling and stationary traffic.

Implementation

We will seek to implement the measures, initially as temporary works under a Temporary Traffic Regulation Order (TTRO). This will allow monitoring of real-time observed impacts, whilst making adjustments to the permanent design where required. This is a tried and tested approach that has been successful for the delivery of three current traffic management trials in the city centre. This approach will allow implementation within 2 months, to get the scheme operational and the benefits realised, whilst retaining the flexibility to remove or modify a scheme, if it has adverse impacts. Whilst the schemes are operational (albeit in temporary form) the detailed permanent or semi-permanent designs will be developed. The detailed designs will be able to capture any amendments required as a result of the temporary schemes. This could include impacts on other junctions or roads which will require mitigation and would not have been foreseen without implementation. It will also allow for the necessary statutory consultations to be undertaken, costs refined, TROs gained and contracts for delivery developed.

Semi-permanent designs may be delivered to retain resilience in our network. This is particularly important as many of the city centre roads are closed throughout the year to allow major events like our Irish Day Parade, Birmingham Marathon and 10k, Lord Mayors Parade, cycle events and the

Christmas Markets. Semi-permanent designs also allow flexibility in delivery as the risk from any major works is removed.

The permanent/semi-permanent designs will be implemented within a 6 to 9 month timeframe following the temporary works. During this period, the scheme benefits will continue to be realised as the temporary works are operational. If there are unforeseen issues with any design, the temporary works will be continued, as a TTRO can be in place for up to 18 months. The scalable nature of our proposal will allow the project to be delivered ahead of the CAZ to facilitate and embed change and allow for long-term air quality monitoring.

Project delivery

We have put forward a scalable package of measures that can be delivered within a 12 month timeframe. Our approach is practical in its implementation and focused on delivery of the works. We will seek to implement the initial traffic management package 2, as temporary works, which will allow us to monitor real-time, observed impacts, whilst making adjustments to the permanent design where required.

This is a flexible approach that has been successful for the delivery of three current traffic management trials in the city centre. It allows quick implementation to get a scheme operational and the benefits realised, whilst retaining the flexibility to remove or modify a scheme, if it has adverse impacts. The scalable nature of our proposal will allow the project to be delivered ahead of the CAZ to facilitate and embed change and allow for long-term air quality monitoring.

Project plan:

July 2017:	Governance Structure & Procurement Framework and Approvals
August 2017:	Procurement of services and resources
Autumn 2017:	Design and implement trial works
Spring 2017:	Trial Monitoring / Scheme Development
Summer 2018:	Permanent Scheme Implementation

Consultation has been undertaken with our transport partners TfWM, NXWM and Amey in the development of the package of works. Consultation has been undertaken with the City Council's Cabinet member for Transport and Roads. This will facilitate the expedient progress of the project through the Council's governance process.

Resources and procurement:

The City Council will need to bring in external partner support and external consultant resources to deliver the project. We have a close working relationship with our transport partners at TfWM and NXWM, through existing schemes and the different working groups set up in the city centre (i.e. Bus User Liaison Group, City Centre Traffic Management Coordination, Bus Alliance and Statutory Quality Partnership Meetings).

Procurement of external consultant support will be through two frameworks. The frameworks enable a competitive bidding process but also allow quick engagement and appointment of necessary resources.

- West Midlands Transportation Professional Services Framework (WMPSF)
  - Multi-Disciplinary Services
  - Transport Planning

- Traffic Management Technology 2 (TMT2), Crown Commercial Service
  - Supply of traffic and roadside technology goods and services for use by UK public sector organisations

The WMPSF has two lots, with six consultants on each lot. These consultants are well–versed in working with the City Council to deliver transport projects and schemes across the city. Several of the consultants have staff seconded to the City Council to assist with the delivery of works, which improves our close collaborative working practices. Collaborative working will be encouraged through the delivery of the project to ensure resources are maximised and available through the project programme. Governance of the project and consultants will be managed by Council officers. An agile governance structure will be set up, to allow delegation from senior management and a streamlined approval process for timely decision-making. The Council has legal, finance and project delivery capabilities for the delivery of major project works.

Value for money:
VfM will be ensured through a competitive tender process. Schemes have been selected against an initial framework including VfM consideration to ensure the biggest impact for the investment. The implementation of works as temporary trials initially, will allow scheme benefits to be monitored before permanent designs are committed.

Project management and evaluation
As outlined, we have designed a scalable package of measures that can be delivered within a 12 month timeframe. An overall Project Manager has been identified to oversee the implementation and deployment of the works in collaboration with Growth & Transportation, Environmental Services (Air Quality) and Highways Team (Traffic Management).

Project management will be at 2 levels.

1. A BCC project manager with associated resource support to oversee a procured service that project manages the implementation and focused delivery of the works as well as the co-ordination of the BCC internal communication, systems, procedures in line with the Council's governance processes.

2. Procured provider project managing, implementation and deployment of the works including a Stakeholder and required statutory consultation and engagement processes (supported through BCC project Manager and BCC processes).

An evaluation framework, to monitor progress and impact, will be developed to support the operational delivery of the initial traffic management package 2, to be delivered as temporary works, which will allow BCC Project Manager and procured provider project management through the technology already integrated within the equipment to monitor real-time, observed impacts, whilst making adjustments to the permanent design where required. Working alongside BCC air quality monitoring team, measurement of impact, which will align with the target air quality to be achieved and how we go beyond this will be set as part of the evaluation framework. Measurement and monitoring will be ongoing, utilising air quality monitoring stations, diffusion tube analysis, and smart app technology.

Main risks are around the installation of technology and equipment which will require construction work, as well as public & stakeholder engagement. Risks and opportunities shall be managed in line

with Birmingham City Council Risk Management Methodology 2010. As with any capital works, there are revenue risks associated with the long-term maintenance and monitoring required for the project works. Birmingham has a 20-year PFI agreement in place with Amey for our highway maintenance. The impacts on revenue will need to be better understood as schemes are developed and risks to funding mitigated. This project will support the wider Air Quality and CAZ programme- there will be running alongside a communication campaign which will focus on raising public and business awareness, which will be supported through the signing and re-routing developments. Alongside this, other mitigating actions will include ongoing project management, communication management, technical reporting monitoring and evaluation.

Traffic Signals Technology Pilot

The Birmingham scheme would be designed to deliver the optimal emission reductions and air quality improvements on those links which are most critical to demonstrating compliance with the EU Limit Values. The outputs of the CAZ modelling will assist with understanding which links are in exceedance and future scalability if the pilot scheme yields benefits which deliver value for money. The locations of these key road links will be reviewed, and consideration given to how any UTC scenario might affect traffic routing, with the intention of ensuring the alternative routes are not worsened excessively, or have sufficient "NO2 headroom" to accommodate additional emissions as a result of any intervention. The sensor network would then be deployed to cover the worst case links, plus other worsened routes, so that the overall beneficial and adverse impacts of the UTC can be measured, analysed and refined iteratively based on ongoing real-world operations.

The DST will be further developed to react to air quality alerts generated from roadside air quality sensors located at traffic signal junctions. This additional functionality will enable the development and deployment of traffic management strategies that react in real time to air quality issues detected within the city centre. The proposal is to target three key junctions that have been identified as being in exceedance using JAQU's latest PCM model. On selection of these two locations e-mote sensors will be installed at each junction and monitor air quality exceedances.

Project Outputs

The key signalised junctions in the identified project areas will be equipped with e-mote sensors. The usual methodology will be to ensure that each arm of the junction has significant coverage to give a clear picture of overall air quality conditions in the locations. Air quality information will be routed back to the traffic control centre via the existing backhaul network to allow the control room to have a clear picture of the air quality situations. This information will be stored in the UTMC common database.

Traffic management strategies will be created for each junction which can be invoked when air quality conditions are poor. These strategies will focus on queue relocation which effectively hold traffic back at junctions outside of the area of interest, so that less pollution is emitted at sensitive locations. Initially, air quality alerts will be generated and sent to traffic operators, who will be able to make a manual decision as to whether to invoke the strategies. It is envisaged that this could become an automated function of the UTMC common database, once an agreed methodology is implemented.

Data from the common database is automatically made available as open data and will therefore be accessible to third parties who are interested in air quality. The information gathered and patterns at

these junctions will assist with on-going benefits monitoring when a CAZ is implemented, and measure the level of change. This dual output will be valuable in helping to control areas currently in exceedance of EU limits.

Project Benefits

The impact we can gain from this technology is being evaluated as the current delivery programme comes on line but typically we expect to deliver a 12% reduction, based on current out-dated signal settings in traffic delay, a proportional; improvement in journey time reliability and a reduction in queuing or stationary vehicles. In the event that the UTC scenarios lead to material improvements in NO_2 concentrations, then these benefits may be sufficient to incorporate into the CAZ scheme assessment reporting & design, or mean that lower levels of "additional measures" may need to be employed.

To test this, the traffic model could be run with some anticipated UTC control options, and the traffic data used for subsequent AQ modelling. This would help to indicate the typical number of hours (or set of meteorological conditions) a UTC scenario might need to be live to deliver a quantum of NO2 reduction. It should be noted that AQ dispersion models do not tend to perform as robustly for short term outputs vs annual mean predictions, that the real-world monitoring would contain its own uncertainty, and traffic and emissions responses would also be expected to be sensitive to many parameters which are poorly represented in the modelling process.

Project Implementation

We are confident that this can be delivered this within a 12 months period as this is a pilot scheme with focus on three key locations. What is being proposed is essentially a variation on existing implementations in Ashford and Newcastle. In developing the proposal we have not framed the use of the sensors as monitoring air quality as their primary purpose because they are indicative sensors and there is still much debate about their accuracy or rather variability/reliability under changing conditions, and therefore, usefulness for that purpose particularly when it comes to things such as input into the AQAP Review and Assessment process for example.

However, their performance is improving all the time and we have used them successfully to measure the impact traffic state/patterns has on urban air quality to develop understanding of the complexities of AQ, weather and other factors in urban spaces, and monitor the impact the implementation of traffic management strategies, interventions, or events such as roadworks and collisions has on local air quality.The lifespan of the air quality monitoring sensors is typically up to 5 years depending on the device used and the level of support and maintenance. All new capital transport projects by nature attract additional ongoing costs in respect of maintaining new highway assets.. Revenue maintenance commitments will be covered through the existing PFI contract and this will need to be confirmed via the councils governance processes.

To achieve this level of functionality the following tasks will be undertaken:

Deployment of localised air quality monitoring devices to city centre locations and associated strategic routes. This is to provide spatially and temporarily dense measurement of the changes in levels of air quality in order to associate levels with changing traffic patterns and in particular changes in congestion. This data will feed into:

- an AQ analytics platform that will help prediction of congestion related emissions in other parts of the network, broadening the AQ prediction capability (see note on MOVA and AQM below)
- New MOVA algorithms (see below also)
- All data will be backhauled to the existing Argonaut UTMC system, and potentially the Birmingham open data platform, to provide baseline data to develop traffic management strategies that can be deployed to mitigate air quality issues by:
- Keeping traffic moving – minimise queues and idling time
- Provide progressive traffic gating measures to control vehicle flow into the CAZ – potentially out to the city boundaries

The AQ sensor network locations will be on or near junctions on the A38:

- Co-location of several sensors with at least one reference quality/AURN site.
- A road corridor that contains a number of SCOOT and/or MOVA and UTC connected junctions where co-location between traffic count sites and sensors can occur.
- At least one location which is, at least in part, an urban street canyon.

The air quality analytics platform uses traffic data from systems such as UTC/SCOOT to predict emissions using a congestion-sensitive model that is scientifically rigorous and based on years of research and provides a broader coverage of air quality and emissions across the road network (beyond where the physical sensors are installed). Further, it is used to aggregate raw sensor data from pervasive air quality sensors, precision pollution monitoring sites and weather stations are also used to deliver time aligned air quality and noise related information to systems such as UTMC in real time, where in turn they can be made available to the DST, MOVA or other CAZ stakeholders*.

The Expert Module and DST will be used to process real time data being recorded by all available data sources that will be processed and used to affect the control of the local traffic system or indeed the wider strategic network. This data will be fed back into a wider AQM management system so that downstream junctions can pre-empt issues or indeed upstream nodes can be gated. This would allow the use of more aggressive AQM reduction measures locally due to the associated signal junctions being highly adaptive and responsive.

To enable this level of control and efficiency all of the associated traffic signals will be upgraded to enable joint SCOOT/MOVA adaptive control that allows us to:

- Exploit functionality within SCOOT that supports air quality control
- Exploit potential air quality related functionality in MOVA V.8 (currently V.7)
- Deploy Greenwave methodology to avoid unnecessary stop/start scenarios for Buses and Freight vehicles

The traffic management strategies will not be confined to purely driving traffic signal operations but will also encompass the capability to disseminates information that:

- Supports the use of a Smartphone App as a delivery mechanism
- Links real time information dissemination as a component of traffic management strategies i.e. use of VMS signs (linked to Package 1) and media broadcasting

The exploitation of the existing adaptive traffic control systems is particularly important for the project to achieve its objectives and we intend to use the very latest optimisation technology to achieve our aims. A good example of this is the use of the latest version of MOVA (V.8) as this has some improvements that lend themselves well to improving local (junction) air quality. MOVA has a very good stop and delay optimiser built in to it and there have been improvements made in version 8 that this optimiser can be weighted by external influence.

For example, a local AQM input (from the local sensor or data derived from it) can be used to provide an input to MOVA that would weight the stop and delay parameters for an approach or individual vehicle. This can make it more likely an approach would maintain green for approaching vehicles, therefore reducing stop/start and standing vehicles on a busy approach. This parameter can be controlled by priority function so it could be targeted specifically at buses or freight vehicles in the first instance and then extended to all vehicles should pollution levels persist in being higher than a set threshold. In support of this methodology we are already using SVD detection and allowing for clearance of Buses and HGV's at junctions through the Journey Time Reliability for Growth project and the improvements made in MOVA 8 expand and improve on this to make it more useable in an urban environment when there are other sites and issues to consider.

Throughout this project we will develop the ability to automate the system as much as possible to reduce reliance on day to day manual interventions by operational staff whilst delivering an overall control hierarchy that maintains manual intervention as the highest priority. This approach will enable faster reaction times to DST alerts and allow a library of strategies to be built and developed that can adapt to the impact on the network from areas of transformation.

Project Costs

The system cost is envisaged to be [redacted]. The cost for each junction to be fitted with emote sensors will be [redacted]. The system will require some maintenance. E-motes will have a maintenance period of 2 years, after which the city council will pick up the ongoing maintenance costs as part of the existing PFI maintenance contract.

Department for Environment Food & Rural Affairs

Department for Transport

Dr Adrian Phillips
Director of Public Health
Birmingham City Council
PO Box 16732
Birmingham
B2 2GF

Ref: BIR IEKM 3288
22 March 2018

Dear Adrian,

Implementation of Early Measures

I am writing to confirm I have received clearance to make a capital grant payment of £2,043,680 to Birmingham City Council under Section 31 of the Local Government Act 2003. I attach a signed Grant Determination Form.

This funding is to support you to deliver measures that will contribute to reaching legal nitrogen dioxide compliance in the shortest possible time. This capital grant payment will support the implementation of early measures to support the delivery of Birmingham's local plan. The projects that are supported are listed in Annex B.

The conditions of the grant and the monitoring and reporting expectations are also outlined in Annex B. The first reporting submission is expected by 31st May 2018, with subsequent monthly submissions. The Secretary of State may require the repayment of any part of the grant monies paid, if the evidence for funding that has been spent cannot be demonstrated or spend has not been as intended as outlined in Annex B.

Should you require to change any element of the project this must be discussed with JAQU as soon as possible. Any substantial change may require a variation. Your acceptance of the award of this grant payment will be made by signing the below. No other form of acknowledgement will be accepted. Please remember to quote the reference number in any future communications relating to this grant. If you have any questions regarding this letter, please do not hesitate to contact me.

Yours sincerely

Susanna May

SUSANNA MAY

HEAD OF THE JOINT AIR QUALITY UNIT

1

Annex A - Title: NO_2 Plan Early Measures Fund: No.31/3288

The Secretary of State at the Department for Transport, in exercise of the powers conferred by section 31 of the Local Government Act 2003, makes the following determination:

Citation

1) This determination may be cited as NO_2 Plan Early Measures Fund: No.31/3288

Purpose of the grant

2) The purpose of the grant is to provide support to local authorities in England towards delivering measures that will contribute to reaching legal nitrogen dioxide compliance in the shortest possible time.

Determination

3) The Minister determines as the authority to which the grant is to be paid, and the amount of grant to be paid, the authority and the amount set out below.

Grant conditions

4) Pursuant to section 31(3) and 31(4) of the Local Government Act 2003, the Minister of State determines that the grant will be paid subject to the conditions in Annex B.

Treasury consent

5) Before making this determination in relation to the local authorities in England, the Minister obtained the consent of the Treasury.

Signed by authority of the Secretary of State for Transport

Richard Bruce
Director of Energy, Technology and Innovation

March 2018

Capital allocation for the 2017/18 financial year

Authority to which grant is to be paid	Amount of grant to be paid
Birmingham City Council	£2,043,680

Signed for on behalf of Birmingham City Council

Name	
Title	
Signature	
Date	

Signed for on behalf of the Joint Air Quality Unit

Name	JENNY WARD
Title	DEPUTY HEAD OF JAQU
Signature	
Date	22/03/18

Annex B: Grant Project and Conditions

Grant Conditions

1. Grant paid to a local authority under this determination may be used only for the purposes that a capital receipt may be used for in accordance with regulations made under section 11 of the Local Government Act 2003.

2. The Chief Executive and Chief Internal Auditor of each of the recipient authorities are required to sign and return to the team leader of JAQU of the Department for Transport a declaration, to be received no later than by 31st March 2019, in the following terms:

"To the best of our knowledge and belief, and having carried out appropriate investigations and checks, in our opinion, in all significant respects the conditions attached to NO_2 Plan Early Measures Fund: No.31/3288 have been complied with".

3. If an authority fails to comply with any of the conditions and requirements of paragraphs 1 and 2, the Minister of State may reduce, suspend or withhold grant; or by notification in writing to the authority, require the repayment of the whole or any part of the grant.

4. Any sum notified by the Minister of State under paragraph 3(o) shall immediately become repayable to the Minister.

5. The grant will be monitored in the Project Delivery and Budget Tracker tool with a first submission by 31st May 2018 and subsequent monthly submissions. JAQU can work with you to develop the reporting to track progress and to evaluate whether the project was effective, achieved its objectives and what the impact of the project was on the local area. Evidence may be requested to support use of funding, such as contracts, contractor reports, invoices and timesheets.

6. Should you require to change any element of the project this must be discussed with JAQU as soon as possible, any substantial change may require a variation.

Grant Projects

Delivering mode shift on the bus network Package

Highway Scheme Theme

The previous early measures submission (January 2017) incorporated a total of 25 potential schemes, which, following multi-criteria analysis, was prioritised to 12 physical bus-based highway traffic management interventions, which have since been awarded funding.
The measures were predominantly identified through consultation with National Express West Midlands (which operates 95 per cent of the bus service kilometres in the city centre) with a benefits assessment completed using the City Council's SATURN strategic transportation model.

Since the submission, the City Council, in partnership with TfWM, commissioned a study to review and assess options for the roll-out further bus priority measures across the city core. This has taken a different approach to scheme identification, focussing on:

- building-upon measures already approved through successful NPIF's bids and the first round of early measures funding; and,
- plugging gaps in existing city centre bus priority.

The study allowed a more targeted approach, focussed on corridor based investment to ultimately boost benefit realisation to the bus network. The study identified 10 traffic management measures which had the potential to maximise benefits to existing schemes / bus priority. Journey time savings/speed uplifts where calculated using real time data from bus GPS systems, where the relative change between peak hour and out of peak journey times/speeds was compared.

This list of potential interventions has been prioritised based on three key metrics; strategic fit, deliverability and value for money, taking account of forecast bus user benefits, annual passenger (pax) journey and forecast costings.

Given the compressed timescales in formulating a bid, there has been insufficient time to complete any detailed traffic modelling of the interventions nor a more scientific economic assessment using Treasury green book principles. Undertaking detailed transport modelling would be particularly helpful in demonstrating the wider benefits of the scheme; i.e. the extent to which they boost the benefit of existing bus priority infrastructure and the level of modal shift which could be derived.

The above notwithstanding, there is clear evidence that increases in bus speeds increases patronage and mode-share[1]. The scheme developed for this proposal have been subject to robust and methodical analyses using on-board real journey time data. There is, therefore, a very high degree of confidence in forecast benefit realisation.

A summary of the prioritised proposed interventions is set-out within the table below.

[1] TRL593

Priority	Location	Link to corridor	Intervention	Peak bus p/h	Pax p/a	Forecast journey time saving	Forecast speed uplift
1	Moor Street Q'way	Bus mall	Convert existing loading bay to bus stop allowing services to bypass Park St	40	11m	>270 secs AM & PM peak	N/A
2	B4127 Bath Row / Holloway Head	A441	Provide bus lane between Granville Street and Holloway Circus	14	5m	AM – 30 secs / PM – 180 secs	AM – 12kph / PM – 18.7kph
3	Pershore Road / Belgrave Midway 1	A441	Provide new road markings Pershore Rd/Belgrave Middleway R/bout	11	5m	AM – 5 secs / PM - 20 secs	AM –12.1kph PM – 22.4kph
4	A5127 Lichfield Road	A38	A5127 Lichfield Rd I/B – approach to Dartmouth Circus – extend existing bus lane	12	4.8m	AM – 119 secs /PM 131 - secs	AM – 22.5kph /PM – 24.1kph
5	Coventry Rd / Bordesley Circus	A45	Reassign links between junction – 3x e/bound lanes along the approach to Bordesley Circus with an associated reduction of the westbound link	24	9m	AM – 30 secs / PM - 255 secs	AM – 6.4kph / PM – 16.1kph
6	Pershore Road / Belgrave Midway 2	A441	Plug gap in existing bus lane on approach to Belgrave Middleway and increase flare length onto gyratory	11	5m	AM – 185 secs / PM - 40 secs	AM – 22.4kph / PM – 12.1kph
7	Hockley Hill	A41	Provide new bus lanes on the approach to St. Chads	28	12m	AM – 120 secs/ PM - 120 secs	AM – 9.4kph/ PM – 8.1kph
8	Bristol Street / Thorp Street	A38	Widen existing bus lane	15	4m	AM – 30 secs /PM - 25 secs	AM – 6kph/ PM – 5kph
9	Sherlock Street / Pershore Road	A441	Provide bus lane at Sherlock Street from Gooch Street to Ring Road. Additional flare on Sherlock Street approach to roundabout	11	5m	AM Peak – 30 secs /PM - 240 secs	AM – 5.7kph/ PM – 18.7kph

10	Longmore Street	A441	Extend length of bus lane on approach to Belgrave Middleway	11	2.4m	AM – 120 secs / PM - 15 secs	AM – 9.7kph / PM – 7kph

Bus stop infrastructure Theme
To complement the 10 prioritised highway interventions, will be a complementary package of up to 34 bus stop upgrades. These will be delivered along the highway intervention priority routes, where the highway schemes are being delivered.

- Sherlock Street / Pershore Road – 5 bus-stop enhancements
- B4127 Bath Row / Holloway Head – 4 bus-stop enhancements
- Longmore Street – 4 bus-stop enhancements
- Pershore Road / Belgrave Midlway 1 – 2 bus-stop enhancements
- Pershore Road / Belgrave Midway 2 – 0 bus-stop enhancements
- Bristol Street / Thorp Street – 5 bus-stop enhancements
- A5127 Lichfield Road – 0 bus-stop enhancements
- Hockley Hill – 4 bus-stop enhancements
- Moor Street Q'way – 0 bus-stop enhancements
- Coventry Rd / Bordesley Circus – 9 bus-stop enhancements

This will see enhanced passenger comfort through new, upgraded and refurbished shelters and better passenger information, including at-stop information includes printed vinyls, signs, timetables and posters, as well as audio and electronic 'next-bus' and real-time information (RTI).

Improving the off-board bus experience
It is proposed to improve the branding of the bus market, through the West Midlands Bus Alliance, so the public knows the buses are greener, quicker and a reliable means of travel. The infrastructure improvements will be coupled with a targeted marketing campaign to promote improved journey times and reliability, network branding, better travel information and promotion of the green credentials of our buses to existing and new bus users.

Improving the on-board bus experience Theme
Linked to the network branding improvements to public transport, this will provide targeted marketing on the bus routes that have been upgraded by the other complementary measures outlined in this submission. We will explore and seek contributions from our Alliance partners (including operators) to fund this element of the package, to complement the other investment being made off-board through the funding. This will maximise the investment made and enhance the benefit of the packages.

Traffic Signal Technology Package

It is proposed to implement new control strategies at four key intersections within the City Core which are closely related to key air quality locations. This will mean that all junctions will have a choice of SCOOT (which optimises on the network level), MOVA (which optimises at the junction level) and fixed time (fall back scenario). On top of this, green extensions and recalls will be provided at off peak times for priority vehicles, such as buses and freight. This will be to reduce the level of stop-start required for the highest polluting vehicles and will be complementary to the bus priority measures. Traffic loops will also be upgraded with technology that classifies vehicle according to their type. This will have 2 purposes:-

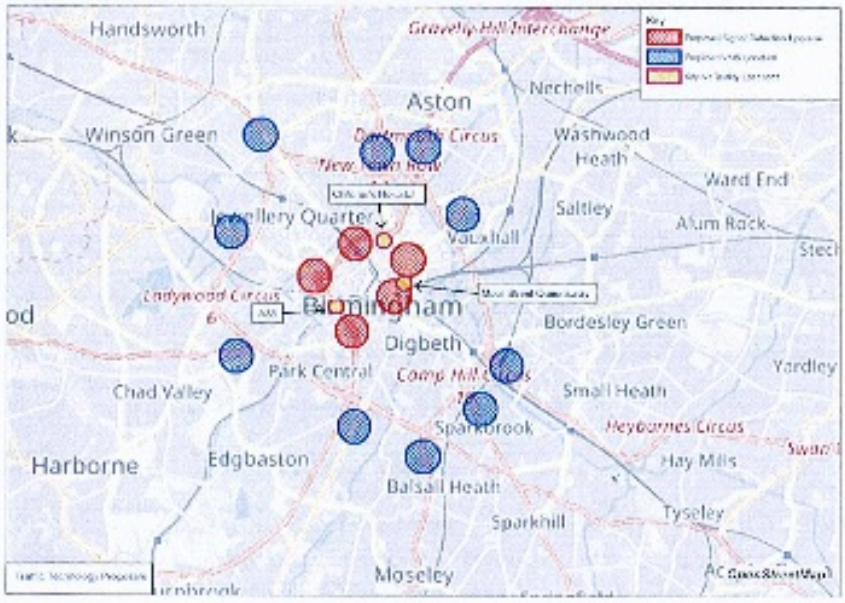
- To allow the above bus and/ or freight priority to be provided

- To enable real-time calculations of air quality to be made

We will implement a Decision Support Tool (DST) that monitors traffic levels using information from the classified loop information and the existing journey time monitoring system. When certain threshold levels of air quality are identified, the system will automatically implement the most favourable control strategy. These will be network based and will involve trying to reduce congestion

at the junctions most sensitive to air quality issues. When carrying out the rerouting the DST will also take advantage of ongoing changes to the network from disruption in relation to the construction of HS2 and other construction in the city centre. In many cases, the solution will be to redirect traffic around the ring road to enter the city from a different direction.

Alongside the upgrade of key intersections, it is proposed to provide a supporting network on Variable Message Signing (VMS) on the approach to the City Centre along the ten key radial corridors leading onto the A4540 ring road as outlined in the figure below. The VMS will strengthen the locations for VMS for which funding has already been secured as part of the first round of early measures whilst additionally plugging further gaps in the network, ensuring a comprehensive network of VMS on all approaches to Birmingham City Centre. Moreover, the VMS will form a key mechanism for the routing strategy agreed as part of the first round of early measures. By upgrading where static routing signs are strengthened by dynamic VMS support planned and unplanned incidents on the network thereby smoothing traffic flow and reducing emissions.



VMS Locations

1. A34 Stratford Road
2. A45 Coventry Road
3. A441 Pershore Road
4. A456 Hagley Road
5. A457 Spring Hill
6. A41 Soho Road
7. A34 Walsall Road
8. A38 Gravelley Hill
9. A38 Bristol Road
10. A47 Washwood Heath Road

Signal Upgrades

1. Bristol Street/Holloway Head
2. Paradise Circus
3. St Chads Gyratory
4. Park Street/Priory Queensway
5. Digbeth Gyratory

The VMS would provide dynamic, real time information relayed by the City's UTMC centre, enabling traffic patterns to be influenced, by informing drivers approaching the city centre of congestion or unexpected events, at a point on their journey where they could reasonably be anticipated to use an alternative arterial route.

For the purposes of the economic assessment, ten major arterial routes have been assumed. This deployment is complementary to that set out in the 'Birmingham City Centre Traffic Management and C-ITS Enhancements' bid which provides for a limited number (four) of VMS signs.

The VMS strategy will be developed in parallel to the signing and rerouting strategy funded through the first round of early CAZ measures and will take account of information from the recent ANPR surveys and the traffic modelling that is being undertaken for the Clean Air Zone Feasibility Study. This will consider how to reduce the impact of displacing traffic and prevent creating air quality problems on other roads within the city centre/wider city.

Estimated Impact of NOx emissions

This chapter outlines an estimate for:

- the change in NOx emissions from reducing vehicle kilometres travelled or vehicle technology, using the inputs and assumptions identified in the previous chapters.
- A 'NOx emission reduction per £' figure and '£ cost per 1 kg NOx saving'.

The latter figure has been produced, as it provides a useful comparison for the value of the scheme interventions against other interventions, as produced by Greener Journeys[2] for the cost to Treasury for saving 1kg of NOx:

- Retrofit buses: £12
- Bus scrappage: £16
- Grant for electric car: £108
- Diesel car scrappage: £175

Delivering mode shift on the bus network Package

Funding for bus-based schemes to improve bus journey time reliability and achieve modal shift. Detailed calculations for each scheme route are presented in **Appendix F**.

The estimate assumes that the bus fleet emissions are unchanged as a result of the scheme interventions. This will underestimate the potential NOx savings, as we would expect to see an increase in bus speeds, which would lead to direct NOx savings from lower bus emissions at higher speeds. Calculation based on the modal shift to bus (from car) and NOx savings as a result of fewer car veh kms.

GJT	*-0.58*
Diversion factor from cars to bus	*0.31*
Estimated average bus journey times decrease	By route, based on estimated maximum peak hour time savings (see table above) as a result of the interventions
Current bus journey time	By route, from existing speeds data for 1km section through the scheme location
Existing annual patronage (see table above):	63.2 million
Increase in bus patronage	By route – capped at 15% (see evidence chapter)
Increase in patronage (annual) due to the schemes	9.3 million
Annual patronage mode shift from car *(applying 0.31 diversion factor)*	2.9 million
Annual number cars reduced *(based on 1.2 average occupancy from city centre cordon data)*	2.4 million
Annual car veh kms reduction *(assumed 7.6km average one-way trip length to city centre – from Birmingham Connected Travel Surveys data)*	36.7 million
Car fleet composition – petrol / diesel	Data from the November 2016 ANPR city centre surveys
NOx savings per annum (tonnes)	**6.430**
Tonnes NOx savings / £ cost *(£1,097,740)*	**0.000005857**
£ per 1 kg NOx savings	***171***

[2] https://greenerjourneys.com/wp-content/uploads/2017/06/TACKLING-POLLUTION-AND-CONGESTION-15-JUNE-2017-FINAL.pdf

Traffic signal technology Package

Savings calculated using the DEFRA EFT and the following assumptions:

Annual vehicle demand city centre	40 million
Average Hourly vehicle flow (from ANPR cordons)	4,800 vehicles
Assume no change in vehicle demand	-
Average savings in travel time due to traffic signal technology improvements	12.8%[3]
Before intervention (base) vehicle speed	10kph
After intervention vehicle speed	11.3kph
Annual NOx emissions (kg) before intervention	297,948
Annual NOx emissions (kg) after intervention	291,584
NOx savings per annum (tonnes)	**6.364**
Tonnes NOx savings / £ cost *(£390,000)*	**0.000008055**
£ per 1 kg NOx savings	***124***

Project delivery

The measures submitted have been selected, inter-alia, on their deliverability and scalability, enabling the interventions to be delivered ahead of the CAZ to facilitate and embed change and allow for long-term air quality monitoring. The milestones below represent a consolidated programme covering all elements of this investment proposition. A high level milestone programme is outlined below.

Project plan – Bus Based Traffic Management, Shelter Enhancements & Traffic Signal Technology:

April 2018:	Governance Structure & Procurement Framework and Approvals
April 2018:	Consultation on TROs / commence detailed design / define VMS schedules
July 2018:	Completion – detailed design / commence marketing activities
July 2018:	Making of TROs
July 2018:	Procurement of services and resources
Autumn/Winter 2018:	Delivery
Early 2019	Opening date of capital works

A detailed project plan can be found in **Appendix G**. Design is already underway (at risk) for a number of projects which means that a number of schemes can be delivered early in the programme.

Where schemes cannot be delivered early in the programme, the project plan reflect the Purdah and post-election period at Birmingham City Council which will restrict consultation. For the delivery of bus priority measures, this effectively results in two periods of delivery; one leading up to late sping/Summer 2018 and a further tranche autumn/early 2019.

Consultation has been undertaken with our transport partners TfWM, NXWM and Amey in the development of the package of works. Consultation has been undertaken with the City Council's Cabinet member for Transport and Roads. This will facilitate the expedient progress of the project

[3] http://www.itsinternational.com/sections/cost-benefit-analysis/features/tfl-expands-scoot-adaptive-traffic-management/

through the Council's governance process. The consultation programme takes account of Purdah and the core summer holiday period in late July August.

Resources and procurement:

It is proposed to work jointly with TfWM to deliver all identified interventions. To guarantee delivery, external partner support and consultancy support will further be required. The City Council has developed a close working relationship with our transport partners at TfWM and NXWM, through existing schemes and the different working groups set up in the city centre (i.e. Bus User Liaison Group, City Centre Traffic Management Coordination, Bus Alliance and Statutory Quality Partnership Meetings).

Procurement of external consultant support will be through two frameworks. The frameworks enable a competitive bidding process but also allow quick engagement and appointment of necessary resources.

- West Midlands Transportation Professional Services Framework (WMPSF)
  - Multi-Disciplinary Services
  - Transport Planning
- Traffic Management Technology 2 (TMT2), Crown Commercial Service
  - Supply of traffic and roadside technology goods and services for use by UK public sector organisations

The WMPSF has two lots, with six consultants on each lot. These consultants are well–versed in working with the City Council and TfWM to deliver transport projects and schemes across the city. Several of the consultants have staff seconded to the City Council to assist with the delivery of works, which improves our close collaborative working practices. Collaborative working will be encouraged through the delivery of the project to ensure resources are maximised and available through the project programme.

Governance of the project and consultants will be managed by Council officers. An agile governance structure will be set up, to allow delegation from senior management and a streamlined approval process for timely decision-making. This is covered further below

Inter-dependencies

There are a number of inter-dependencies as the City Centre goes through a once-in-a-generation physical transformation, requiring significant construction works and associated traffic management.

A City Centre traffic management group has been established - jointly chaired by the City Council's Assistant Director for Growth and Transportation and TfWM's Director of Network Resilience - to manage and coordinate the multitude of concurrent and conflicting work programmes. This has resulted in completion of a composite 'master programme', incorporating all city-centre related traffic schemes.

The first round of early award measures has already been included within the programme and is being managed by the group, in the context of the wider programme. If successful, the highway intervention proposed within this package would further be included within the master programme. All the intervention proposed within this application have been considered against the master programme and it is not considered any conflict existing, both in delivery and project outcome terms.

Project costs

As detailed above, a scalable package of works is proposed due to the funding constraints. The bus-based highway schemes have been further prioritised so investment can be targeted where most benefit is derived. This full cost package can delivered in discrete packages that build upon existing

and the prioritised works. The table below outlines the scheme costs associated with the package. A detailed breakdown of costs where capital highway works are required can be found below.

Package	Scheme	
Bus priority package 1	Moor Street Q'way highway scheme	
Bus priority package 2	B4127 Bath Row / Holloway Head highway scheme B4127 Bath Row / Holloway Head bus stop infrastructure (4)	
Bus priority package 3	Pershore Road / Belgrave Midlway 1 highway scheme Pershore Road/Belgrave Midlway 1 bus stop infrastructure (2)	
Bus priority package 4	A5127 Lichfield Road highway scheme	
Bus priority package 5	Coventry Rd / Bordesley Circus highway scheme Coventry Rd / Bordesley Circus bus stop infrastructure (9)	
Bus priority package 6	Pershore Road / Belgrave Mdlway 2 highway scheme	
Bus priority package 7	Hockley Hill highway scheme Hockley Hill bus stop infrastructure (4)	
Bus priority package 8	Bristol Street / Thorp Street highway scheme Bristol Street / Thorp Street bus stop infrastructure (6)	
Bus priority package 9	Sherlock Street / Pershore Road highway scheme Sherlock Street / Pershore Road bus stop infrastructure (5)	
Bus priority package 10	Longmore Street highway scheme Longmore Street bus stop infrastructure (4)	
Bus Promotion	Off-board customer experience marketing	
Traffic signal technology package – signal upgrade	5 sites as detailed above	
Traffic signal technology package - VMS	10 sites as detailed above	
Design fee – bus priority and traffic	Development costs to prepare the highway schemes for the 10 schemes above	
	Programme total	**2,043,680**

Value for money:

The total cost of the package is £2,043,680.

VfM will be ensured through a competitive tender process. Schemes have been selected against an initial framework including VfM consideration to ensure the biggest impact for the investment. The implementation of works as temporary trials initially, will allow scheme benefits to be monitored before permanent designs are committed. Any cost overruns would be met by partners and not JAQU.

As discussed previously, due to the compressed timescales, no formal traffic modelling has been completed to derive a benefit cost ratio the bus priority and traffic signal element of the package. However, the robust approach taken to scheme evaluation, in terms of journey time benefits, means only schemes which are likely to delivery material benefits on high frequency bus services which generate significant levels of patronage are proposed to be taken forward to delivery.

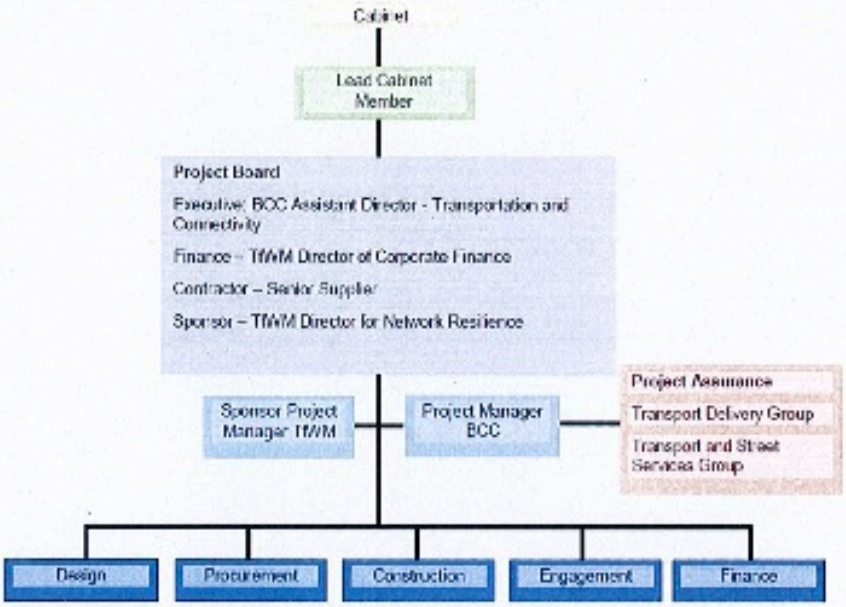
As also discussed above, with all of the identified measures, it remains difficult to accurately quantify the potential impacts of these measures in terms of their benefits to air quality, however, the various evidence set out in this document suggests that the impact will overall be positive for air quality.

The table above shows the breakdown of the capital implementation costs. Additionally, £[redacted] of fee is included which would allow dedicated project management and engineering resource to be appointed to ensure expedient delivery of the programme on the ground.

Project management and evaluation

Project Management / Governance

Given the successful bid for early measures, confirmed in December 2017, it is proposed that successful award for this round of funding will necessitate the establishment a Project Board to oversee delivery of tranche 1 and 2 schemes, consisting of the Executive (SRO), Senior User, Finance and Contractor. These would be joined by a senior member of the contractor's teams and TfWM's Director of Network Resilience, acting as project sponsor.



The project board will meet with predefined regularity and together will be responsible for the project control. They will make decisions within the scope of any Cabinet approval and where appropriate decision on any minor scope alterations are required. Any exceptional decisions, including decisions outside of the approved scope of the scheme, will be referred to the relevant Cabinet Member.

The project manager will manage the project, tracking progress against scope, time and budget. They will give direction to officers across the authority with a specific role in delivering the project, meeting with each area regularly to ensure any risks or issues are identified and providing challenge were needed. They will also report to the Board on a regular basis, escalating any issues for discussion or decisions outside of their remit. Members of the project team will work together to deliver the project, ensuring a joined up approach.

As part of the City Council's obligations under the HMMPFI contract, the Service Provider, Amey will be fully consulted to ensure close coordination between its programmed routine maintenance works and the proposed developments. This will avoid duplication enable better overall use of resources and improved overall value. Two well established officer groups within the authority, the Transport Delivery Group (TDG) and Transport & Street Services Group (TSSG), will provide project assurance. They will scrutinise delivery, finances and procedures, providing challenge to the Project Manager and Project Board and recommendations for improvements where appropriate.

Consultation, particularly in gaining political/stakeholder support for the highway interventions, represent the main risks to the project. However, given the significant policy drivers in supporting air quality improvements within the City Centre and the low risk nature of schemes/

This project will support the wider Air Quality and CAZ programme- there will be running alongside a communication campaign which will focus on raising public and business awareness.

Risk

In the event of successful funding, a risk assessment of key risk has been completed for both rounds of early measures funding and outlined below.

Likelihood	Description
1	Very Unlikely
2	Unlikely
3	Possible
4	Very Possible
5	Almost Certain
6	Certain

Timescale Impact		Min		Max
1	Insignificant	None	1 week	2 weeks
2	Minor	1 week	2 weeks	1 month
3	Moderate	2 weeks	1 month	3 months
4	Serious	1 month	3 month	6 months
5	Catastrophic	3 months	6 months	1 year

Risk Ref.	Nature of Risk	Implication	Mitigation	Action Owner	Risk Owner		Impact Type	
R1	Traffic signal asset inventory inaccurate or incomplete leading to incomplete	Cost estimates may be wrong resulting in possible claims for	Ensure accuracy and updating of inventory and databases.	BCC	BCC	2	Cost	1

	understanding of asset condition	variations from the contractor.						
R2	Returned tenders exceeds budget.	Additional borrowing would be required to cover the shortfal	Develop a plan identifying the maximum limit of construction tender cost and applicable split between parties. Ensure cost estimates are as robust as can be at this stage. Correct procurement process identified to ensure best value	TMM	BCC	3	Cost	1
R3	Works require diversions of statutory undertakers	Potential for significant cost increases	Obtain C3 estimates and early stage and commence value engineering exercise	TMM	TMM	2	Cost	4
R4	Underestimation of costs at application stage	Costs inaccurate adverse effect on affordability of scheme	Technical and financial due diligence and pre-procurement to test application assumptions.	TMM	TMM	2	Cost	1
R5	Public and third party consultation results in a change to the scheme	Objections could cause delay.	Ensure scheme elements are not controversial, in terms of design and scheme impact on other road users	TMM	BCC	3	Delay	2
R6	Potential for design changes to come forward during construction	Could lead to a change in the Works Information and therefore lead to Compensation Events resulting in extra costs.	Effective project management. Peer reviews of projects at critical stages.	TMM	TMM/BC C	2	Delay	2
R8	Availability of contractors limited leading to increased tender prices or delay to programme	Delays to the programme and increase costs	Include an allowance in the risk budget to cover this - allow for % increase in cost of materials. Plan for financing in the event of delays to the programme	TMM	BCC	2	Cost	2
R9	Increased costs of procurement of Variable Message signs	Increase in costs could result in overruns	Develop prioritisation list of locations of most importance for VMS.	TMM	BCC	2	Cost	2
R10	Traffic Management – possible adverse effect on the network, especially on Primary routes.	Increase in short tem delay and congestion	Works on the primary routes could be carried out overnight, all works will be restricted to off-peak working on Primary routes. Contractor should clearly identify the planned TM and seek relevant approvals, adhering to all relevant notice periods etc.	BCC	BCC	4	Both	1

Risks and opportunities shall be managed in line with Birmingham City Council Risk Management Methodology 2010. As with any capital works, there are revenue risks associated with the long-term maintenance and monitoring required for the project works. Birmingham has a 20-year PFI agreement in place with Amey for our highway maintenance. The impacts on revenue will need to be better understood as schemes are developed and risks to funding mitigated

Monitoring and Evaluation

An evaluation framework, to monitor progress and impact, has been developed to support the operational delivery of all early measures proposals. Working alongside BCC air quality monitoring team, measurement of impact, which will align with the target air quality to be achieved and how we go beyond this will be set as part of the evaluation framework. Further measuring of bus patronage and journey times through junctions will further measure success of the package.

It will also assist in maximising the benefits at project inception and help ensure these benefits are realised as the project is developed and implemented; understanding the scheme's impacts is required to enable meaningful feedback to take place.

Equality Analysis

Birmingham City Council Analysis Report

EA Name	Joint Air Quality Unit Early Measures Fund For Local No2 Compliance - Approval To Submit Application For Funding
Directorate	Economy
Service Area	Economy - Transportation Services Growth & Transportation
Type	New/Proposed Policy
EA Summary	This equalities analysis reviews the request to seek retrospective approval to submit a funding application to the Government's Joint Air Quality Unit (Department for Transport and Department for Environment, Food and Rural Affairs) for the, 'Early Measures Fund for Local NO2 Compliance'. The funding will support a Traffic Signal Technology Package / Greening the Bus Fleet project for Birmingham City Centre. The estimated cost of the project, and the subject of the funding bid, is £2.05m. No local contributions are required.
Reference Number	EA002744
Task Group Manager	alison.kennedy@birmingham.gov.uk
Task Group Members	philip.edwards@birmingham.gov.uk, david.i.harris@birmingham.gov.uk, janet.l.hinks@birmingham.gov.uk, sylvia.broadley@birmingham.gov.uk
Date Approved	2018-03-28 00:00:00 +0100
Senior Officer	mel.jones@birmingham.gov.uk
Quality Control Officer	janet.l.hinks@birmingham.gov.uk

Introduction

The report records the information that has been submitted for this equality analysis in the following format.

Initial Assessment

This section identifies the purpose of the Policy and which types of individual it affects. It also identifies which equality strands are affected by either a positive or negative differential impact.

Relevant Protected Characteristics

For each of the identified relevant protected characteristics there are three sections which will have been completed.

- Impact
- Consultation
- Additional Work

If the assessment has raised any issues to be addressed there will also be an action planning section.

The following pages record the answers to the assessment questions with optional comments included by the assessor to clarify or explain any of the answers given or relevant issues.

1 Activity Type

The activity has been identified as a New/Proposed Policy.

2 Initial Assessment

2.1 Purpose and Link to Strategic Themes

What is the purpose of this Policy and expected outcomes?
The purpose of this policy is to retrospectively seek approval to submit a funding application to the Government's Joint Air Quality Unit (JAQU) (Department for Transport and Department for Environment, Food and Rural Affairs) for the 'Early Measures Fund for Local NO2 Compliance'.

The funding will support a Traffic Signal Technology Package / Greening the Bus Fleet project for Birmingham City Centre. The estimated cost of the project, and the subject of the funding bid, is £2.05m. No local contributions are required.

The expected outcome is that approval is given for the bid.

JAQU set out the application process for Early Measures Fund for Local NO2 Compliance on 15th December 2017. The process has been iterative with initial proposals submitted by 26th January 2018. The proposals were subsequently reviewed twice by JAQU and a final proposal resubmitted on 28th February 2018. The tight timescale including the Christmas and New Year period has led to the need to request retrospective approval for the submission of a funding application. A final decision on funding will be made during March, so that awards can be made no later than 31st March 2018.

Bus-based traffic management measures are proposed that would enable a genuine transformation in bus transit across the city centre. Buses are one of the most efficient people-carriers on the road network, are flexible and able to deliver extra capacity quickly. When combined with priority measures, buses can reduce delay and promote modal shift to reduce congestion and improve air quality. All bus measures can be delivered quickly, cost effectively and at low risk.

Highway Infrastructure measures are proposed that will be coupled with measures to promote the benefit of bus travel and improve the off-board customer experience. This will see up to 34 bus stops along the highway schemes priority routes, improved to provide enhanced customer comfort and information. A targeted marketing campaign to promote improved journey times and reliability, network branding, better travel information and promotion of the green credentials of our buses will also take place. Through the West Midlands Bus Alliance the City Council and Transport for West Midlands (TfWM) will explore the potential for match-funding from Alliance partners, to complement the government investment and maximise the benefits for passengers.

The funding application is consistent with the City Council's Vision and Priorities:
Children - We want Birmingham to be a great city to grow up in - this project supports reduction in N02 which is particularly harmful to children's health in the city.
Housing - We want Birmingham to be a great city to live in - this project will contribute to improved air quality and bus access in the city centre, which is a key growth area for new housing, housing renewal and student accommodation
Jobs and skills - We want Birmingham to be a great city to learn, work and invest in. This project invests in bus technologies and infrastructure to improve journey reliability and passenger experience - which will support access to jobs and skills, particularly for people on low incomes.
Health - We want Birmingham to be a great city to grow old in. This project supports the wider 'Brum Breathes' air quality improvements which address serious health issues associated with transport emissions in the city.

The project is consistent with the Council's key policies and priorities as set out in the West Midlands Strategic Transport Plan, Birmingham Development Plan and the Birmingham Connected transport strategy. In addition, the proposed package of works offers synergies with several other current projects:
. City Centre Resilience Measures
. Air Quality Early Measures Funding Tranche December 1st 2017
. Greenwave Project
. National Productivity Fund Tranche 1 - Traffic Signal Upgrades
. National Productivity Fund Tranche 2 - Birmingham Growth Point Public Transport Package)
This project therefore supports early delivery of reductions in NO2, moving the city closer to air quality compliance.

Internal consultation has been undertaken with our transport partners TfWM, National Express West Midlands (NXWM) and Amey in the development of the package of works. Consultation has been undertaken with the City Council's Cabinet member for Transport and Roads.

Local ward Councillors will be briefed and detailed consultation will be undertaken at Project Definition Document and Full Business Case stage in accordance with standard practice, subject to funding approval by JAQU.

Officers from City Finance and Legal and Governance have been involved in the preparation of this report. In line with the delegation approved at Cabinet on May 16th 2017, the bid has been prepared in conjunction with the Corporate Director of Finance and Governance, who supports its submission.

Subject to funding approval by JAQU, external consultation on the Traffic Regulation Orders is planned for April 2018. Consultation with key stakeholders and the public will be undertaken at Project Definition Document (PDD) and Full Business Case (FBC) stage in accordance with standard practice.

For each strategy, please decide whether it is going to be significantly aided by the Function.

Children: A Safe And Secure City In Which To Learn And Grow	Yes
Health: Helping People Become More Physically Active And Well	Yes
Housing : To Meet The Needs Of All Current And Future Citizens	Yes
Jobs And Skills: For An Enterprising, Innovative And Green City	Yes

2.2 Individuals affected by the policy

Will the policy have an impact on service users/stakeholders?	Yes
Will the policy have an impact on employees?	Yes
Will the policy have an impact on wider community?	Yes

2.3 Relevance Test

Protected Characteristics	Relevant	Full Assessment Required
Age	Not Relevant	No
Disability	Not Relevant	No
Gender	Not Relevant	No
Gender Reassignment	Not Relevant	No

Marriage Civil Partnership	Not Relevant	No
Pregnancy And Maternity	Not Relevant	No
Race	Not Relevant	No
Religion or Belief	Not Relevant	No
Sexual Orientation	Not Relevant	No

2.4 Analysis on Initial Assessment

All schemes proposed within the 'Early Measures Fund for Local NO2 Compliance' bid are provided as a 'public good' and are available for all members of the community and visitors alike to use.

Individual schemes will be subject to further screening for equalities analysis.

It is considered that there are no aspects of the scheme that could contribute to inequality. The facilities and measures proposed are for all users and none are excluded. No measures are considered to discriminate against protected groups in terms of age, disability, gender, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, or sexual orientation.

3 Full Assessment

The assessment questions below are completed for all characteristics identified for full assessment in the initial assessment phase.

3.1 Concluding Statement on Full Assessment

All schemes proposed within the 'Early Measures Fund for Local NO2 Compliance' bid are provided as a 'public good' and are available for all members of the community and visitors alike to use.

Individual schemes will be subject to further screening for equalities analysis.

It is considered that there are no aspects of the scheme that could contribute to inequality. The facilities and measures proposed are for all users and none are excluded. No measures are considered to discriminate against protected groups in terms of age, disability, gender, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, or sexual orientation.

4 Review Date

17/03/19

5 Action Plan

There are no relevant issues, so no action plans are currently required.