

## Individual detail for spend of 7.5m Spend.

The detail below is the recommendation of the various asset types from a number of technical teams to consider main priorities across a number of asset groups. All of which are in need of more investment and therefore the most in need across a number of asset groups taking in account H&S, Strategic importance, condition need and deliverability.

### Park Street footways (800k)

Park St is a busy footway in the centre of Bristol with a high footfall of pedestrians including residents, tourist and commuters. The footway is currently of modular construction, which is continually moving and failing due to the required cleaning and ground makeup (cellars).

The authority have received 267 Repairs in last 3 Years therefore an ongoing revenue pressure. Therefore, without significant investment will not be able to defend claims if capital investment is not programmed for delivery. The street has received the second highest number of claims in Bristol only over Cabot Way, which was surfaced last year.

2012 Public Realm and Movement Frameworks identifies the need for improvements to Park Street, reinforced in the Bristol Central Area Plan

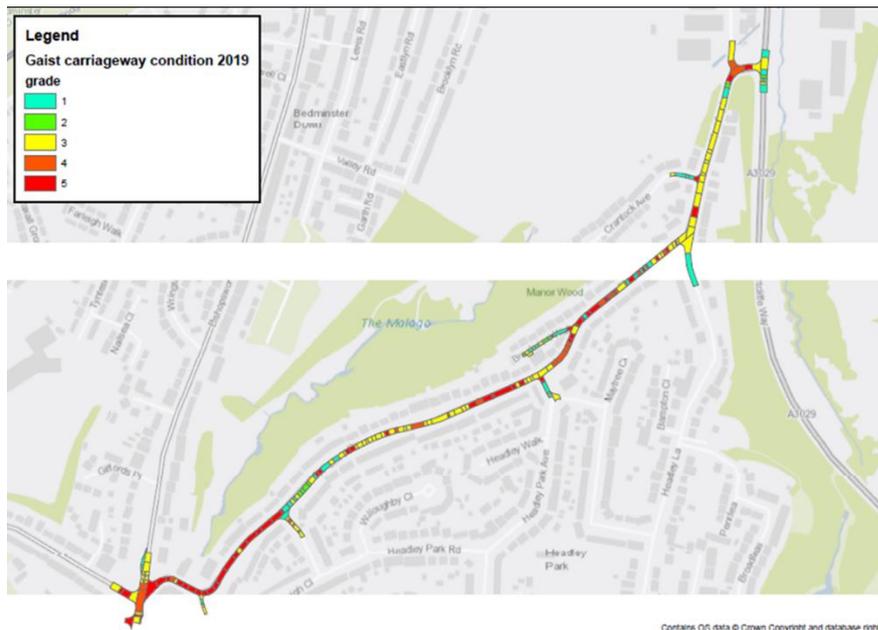
The works are supported by the City Centre BID.

The works plan to install a concrete subbase therefore stabilising the ground over the cellars and provide paving which has a good skid resistance. The proposal is for this to be natural stone for this iconic street in a conversation area will always remain suitable and not polish and become slippery.

### St Peters Rise (£1.7m)

Below is the condition data for St Peter's Rise, which demonstrates a significant depreciation of the carriageway. The carriageway is a composite construction and attempts have been made to previously stabilise the road through injection grouting and Crack N Seal. Both attempts to stabilise the road have failed in the short to medium term therefore the intention is to remove the road construction and install a flexible construction using Geogrids and tried and tested road building methodology to stabilise the road and bus route.





### **Additional funding pressure from Redcliffe Bridge funding solution.**

In December 2020 a cabinet report detailing the spend requirements on Redcliffe Bridge was approved. This enabled crucial repair works of the structure and contracts to be approved. Highways were required to find £800k to secure approvals. The funding was agreed on the basis that further funding would be discussed for highways in the New Year and the new funding would be considered for replacement as removal of 800k from the maintenance budget. Remove of the budget will significantly impact on the delivery of the highways programme of works. Therefore the funding now being approved replaces the initial allocation and allows highway maintenance to continue with its original programme of works for 2021 and deliver its statutory duty for the authority. The program of works is defined through the maintenance prioritisation process which is based on a large number of data sets including condition surveys, pothole repairs, public complaints, strategic importance, etc. This enables the authority to deliver a robust asset management approach to repairs

### **Transport Signage (VMS Replacement) (390k)**

VMS replacement programme, the Traffic Control Service (TCS) have a network of 21 Variable Message Signs (VMS) across the city:

VMS are illuminated, free text signs installed at the roadside, which provide traffic and travel information to drivers in real time. They are used:

- To provide drivers with real-time disruption alerts when unplanned disruptions occur.
- To provide drivers with advanced disruption alerts for planned disruptions.
- To provide road safety messages to support road safety in the city.
- To provide severe weather warnings as appropriate.
- The signs have also played a valuable role recently with regard to displaying public health messages in relation to coronavirus.

When a planned or unplanned disruption occurs on the network, drivers and other stakeholders want information around what has happened. The VMS signs assist drivers to make informed travel choices and avoid disruptions. The identified business need is that 14 of the VMS signs are now

around 15 years old, and are only designed to last for 15 years. The signs are regularly failing and needing repair, causing a loss of service for the travelling public.

The TCS urgently need to replace these signs because many components in the signs are obsolete and therefore cannot be repaired. If one of these components fails, the sign must be replaced as they are not repairable. There is currently no other budget identified for this, which means that as signs fail they cannot be replaced. This results in a reduction in the level of service that the traffic control service (TCS) can provide to the travelling public. For information, the money identified would pay for around 12 signs to be replaced this financial year.

### **Replace life expired signals (200k 21/22, 360k 22/23)**

There are currently over 380 traffic signal sites in Bristol (that consist of pedestrian crossings and signal controlled junctions). Traffic signals equipment has a design life of around 15 years yet 40% of the sites in Bristol are older than this with some nearing 30 years old. This equates to over 150 sites being life expired. Whilst ongoing maintenance is covered by a revenue budget there comes a point when sites can no longer be repaired and have to be completely replaced to modern standards. The Capital monies are used for these replacements and typically five or six sites are replaced per year. At this rate of replacement the signal asset continues to worsen and the number of sites refurbished a year would need to increase to at least 10-15 to remain at the current state.

Below is a list of traffic refurbishments for 21/22 and the additional sites being repaired due to the additional funding highlighted in red.

### **21/22**

- a. 2237 Royal Hotel / College Green – (Microsense - MTC)
- b. 2228 College Green Ped – (Siemens ST700)
- c. 2016 Kellaway Avenue / Wellington Hill West - (Siemens ST800).
- d. 2019 Nine Tree Hill – (Microsense – MTC)
- e. 2299 Cumberland Rd / Gaol Ferry Bridge – (Microsense MPC)
- f. 2259 Winterstoke Road / HMS Flying Fox – (Siemens ST700)
- g. 2275 – Kellaway / Lime Trees junction.
- h. 2276 – Kellaway / Lansdown Pelican.

### **West end and Temple St repairs (750k)**

Temple Gate & West End MSCPs are both now around 50 years old. Both car parks are showing their age. The car parks raise in total around £1.3m income per year.

Both car parks are showing signs of age and as with all reinforced concrete structures of this age require structural repairs and maintenance to extend their useful life. Both car parks were subject to structural surveys in 2018 by CH2M/Jacobs with a view to giving each car park an additional 10 years of useful life. The report recommended approx. £2m of structural repairs and upgrades. Cabinet approval was given in October 2019. It became clear that the amount of concrete repairs to the lower decks of West End car park was greater anticipated once work began. The condition of the structure required a significant amount of scaffolding to be undertaken to support the repairs on the lower decks and above one of the retail unit. The original estimated costs for structural repairs have

been taken up. Additional spend is required to undertake repairs to Levels 3 to 6, new Vehicle Restraint System, and to additional repairs to ensure the retail unit is safe for tenants to complete the Life Care Plan Works”.

### **Replace DFT reduction (£1m 2021/22 and £1m 2022/23)**

In March 2021 the Department for Transport announced a £1,303,394 reduction in funding and therefore the reduction will significantly affect the authority ability to deliver its statutory duty and ability to deliver its preventative programme of work. It is therefore proposed to mitigate the reduction in funding by diverting £1m 21/22 and £1m 22/23 to highways to deliver its programme of works. The works have been identified through the condition surveys, engineering assessments and agreed policy of prioritisation for highways and footways schemes. Failure to undertake these works will result in reputational damage for the authority and potential claims due to the depreciation of the network not being addressed.

### **New cut bridges (500k partially funding)**

During 2020 the Structure Team commissioned specialist rope assess inspections of all eight bridges that currently span the “New Cut” Avon River with the City centres. The bridges are from East to West the following:

1. Sparke Even Park Footbridge – Lightweight Lattice girder Suspension footbridge
2. Bath Old Bridge – Ornate steel Parapet, steel beam and concrete Deck Road over Bridge
3. Bath New Bridge – 1960’s style post tensioned concrete pre stressed Beam Road over Bridge
4. Langton Street Footbridge – (Banana Bridge) – Steel Beam Semi elliptical Arched Footbridge
5. Bedminster New Bridge – 1960’s style post tensioned concrete pre stressed Beam Road over Bridge
6. Bedminster Old Bridge – Ornate steel Parapeted, steel beam and concrete Deck Road over Bridge
7. Gaol Ferry Footbridge – Lightweight Lattice girder Suspension footbridge
8. Vauxhall Footbridge (formally a swing Dock Bridge) Lattice Girder footbridge.

### Summary of findings from Principal Inspection Report undertaken in 2020.

The following four footbridges will need immediate total refurbishment as a matter of high priority over the next four years (as a minimum) to avoid the need of closure due to health and safety concerns as a consequence of their structural condition (as inspected and Reported in 2020) and the ultimate safety of the general public. The order of current risk assessed managed priority of urgent programmed interventions is broadly recommended as follows:

Gaol Ferry Footbridge – Full structural refurbishment and total repainting to be done in 2021 Approximate costing based on Reports = £350 - 400K + 40% contingency = **£560K**

Vauxhall Footbridge – Full structural refurbishment and total repainting to be programmed for 2022 Approximate costing based on Reports = £370 – 425k + 40% contingency = **£595k**

Sparke Evans Footbridge – Full structural refurbishment and total repainting to be programmed for 2023 Approximate costing based on Reports = £370 – 425K + 40% contingency = **£595K**

Langton Street Footbridge – Full structural refurbishment and total repainting to be programmed for 2024. Approximate costing based on Reports = £350 – 400K + 40% contingency = **£560k**

**Note none of the above includes full project cost of design, project management and delivery. This will need full scoping and detail before submitting for approval.**

This converts to an immediate programmed Capital funding shortfall of approximately of 2.310 million pounds over the next four years to ensure that these footbridges can remain open for pedestrians and cyclists and are to remain structurally safe. The capital delivery of these Projects will now be considered possible with the future management of change expanded BCC Structures Team

The remaining four road overbridges will certainly need further Capital investments, especially Bath New and Bedminster New Bridges which require parapet railing strengthening works and stabilisation measures, including full repainting throughout.

The estimate of the parapet strengthening works to both these bridges would be in the region of £250K for each bridge and could be programmed to be undertaken within the next four year cycle concurrent with the proposed suggested works to the above four footbridges, which would require a total Capital investment funding of 2.81 million, increased to **3.0 million** for simplicity. We are still awaiting the results of our Post tensioned bridge beam investigations, which could increase this figure beyond 3.0 million pounds dependent on findings

The remaining two older Road over bridges (Bath Old and Bedminster Old) are both in a reasonable condition but will require general programmed repairs and routine maintenance as normal.

With regard to the New Cut River Walls Asset Condition Project, the expectation is that the structural investigations and de-vegetation works will continue in 2021/22 and that the allocated £500K will be put to this and also to the further active digital monitoring recommendation with regard to Bath New and Bedminster New pre-stress post tensioned beam bridges.