



A consultation on proposed toll revisions

25 September to 7 November 2025

0.	EXECUTIVE SUMMARY	3
1.	INTRODUCTION	5
	Purpose of this document	5
	Structure of this document	5
	Responding to this consultation	6
2.	CONTEXT	6
	The Bridge	6
	The Charitable Trust	7
	Maintenance requirements	8
	Funding the Trust	9
	Tolls and toll levels	9
	Visitor services	10
	Investment returns	10
	Other revenue sources	10
3.	CHALLENGES FACING THE TRUST	10
	Increasing costs of operation	10
	Uncertainty of investment returns	12
	Reduction in traffic volumes	12
	Long-term trend	12
	Step-decline following toll increases	13
	Implications for the proposed toll revision application	13
4.	PROPOSED TOLL REVISIONS	13
5.	PROJECTED FINANCIAL POSITION	15
	Income and cost forecast model	15
	Core tolling scenarios	15
	Financial viability assessment	15
	Modelling outcomes	16

0. EXECUTIVE SUMMARY

Introduction

This document describes the Clifton Suspension Bridge Trust's proposals to increase the maximum permitted tolls for use of the Clifton Suspension Bridge.

The proposals involve:

- an immediate increase in the toll for vehicles from £1.00 to £1.50; and
- thereafter, annual increases in the toll calculated by reference to inflation through a clear, transparent and automatic process which avoids larger one-off increases.

Subject to government approval, it is anticipated that the immediate increase would take effect from 1st January 2027.

There are no plans to change the current arrangements for cyclists and pedestrians to use the Bridge at no charge.

The Trust is seeking feedback on its proposals from local communities and people who live and work in the area as well as local authorities and other relevant organisations. Feedback can be submitted through an online survey and paper copies are available on request. This feedback will be taken into account as the proposals are developed in more detail and a decision is made on how to proceed.

The consultation will run from Thursday 25th September to Friday 7th November with all the information available on the Clifton Suspension Bridge Trust website at: <https://cliftonbridge.org.uk/crossing-the-bridge/>, supported by materials in the bridge's museum and in local libraries.

Context

Clifton Suspension Bridge is a grade 1 listed iconic 19th century structure, carrying 3 million vehicles a year, set 75 metres above a river, in a Site of Scientific Interest, sitting over several key transport links. This means that maintenance costs are much greater than they would be with a modern low-level bridge in a less sensitive or visited location.

The Clifton Suspension Bridge is operated by The Clifton Suspension Bridge Trust, which is constituted as a charity and is regulated by the Charity Commission. Its income must be spent on its charitable objective of operating and maintaining the bridge.

The Trust aims to assess the short and longer term operational and technical needs and risks of running the bridge, to plan ahead, to break-even in the long-term, and by doing so make sure the bridge can continue to be enjoyed by future generations.

A systematic and detailed programme of scheduled maintenance and inspection enables the historic iron bridge to carry the cars, cyclists and pedestrians on a daily basis.

The bridge tolls generate £2.6m per annum which is solely used to employ the bridge master, staff and attendants as well as maintain and upkeep this 160-year-old bridge.

The Trust receives no public money from national, regional or local government, nor from any other public body to subsidise the operation of the bridge or the tolls.

The day-to-day operation of the visitor centre/museum broadly breaks-even and does not require a contribution from toll revenue.

The last toll increase was from 50p to £1 in April 2014. This is payable by card (since summer 2023) or through purchase of a bridge card which makes crossing the bridge more convenient and cheaper if at least 100 journeys are purchased.

Challenges facing the Trust

The Trust currently faces three major challenges, which this proposed toll increase is seeking to assist with:

- increasing costs of operation - including regular and major maintenance programmes;
- uncertainty of future investment returns; and
- reductions in traffic volumes leading to a reduction in future toll revenues.

Proposed toll revisions

The proposed increase in the toll, from £1 to £1.50, would:

- take account of inflation since the toll last changed in 2014;
- cover routine day-to-day running and maintenance costs from in-year toll revenues and provide an adequate emergency reserve fund; and
- allow the Trust to build up and maintain adequate reserve funds to cover major cyclical maintenance and special projects, particularly the next major painting and lighting refurbishment project in 2049/50.

The proposed approach is for the toll to increase annually in line with inflation, which would also mean that:

- the Trust does not have to continually re-apply for new fixed toll levels, avoiding the significant costs and time which would be better spent directly on the Trust's core operations; and
- increases in the toll are linked to the increases in construction costs, ensuring that costs and revenues remain broadly in line with each other.

Projected financial position

Detailed financial projections have been prepared using a 25-year income and cost forecast model. This enables the Trust to determine the level of toll increase needed, both immediately and over the next 25 years.

1. INTRODUCTION

Purpose of this document

- 1.1 This document describes the proposals by the Clifton Suspension Bridge Trust (the “Trust”) to increase the permitted tolls which are currently levied for use of the Clifton Suspension Bridge.
- 1.2 Our proposals involve:
 - 1.2.1 an immediate increase in the base toll for vehicles from £1.00 to £1.50; and
 - 1.2.2 thereafter, annual increases in the permitted toll calculated by reference to inflation.
- 1.1 The Trust’s proposals only relate to revising the toll payable for use of the Bridge by vehicles. The Trustees have no plans to change the current arrangements for cyclists and pedestrians to use the Bridge at no charge.
- 1.3 The purpose of this non-statutory consultation is to obtain feedback on our proposals. We will take this feedback into account as we develop our proposals in more detail and decide on how we wish to proceed.
- 1.4 We are asking for feedback on our proposals from local communities and people who live and work in the area. We are also inviting comments from local authorities and other relevant organisations.
- 1.5 We encourage you to respond to the consultation and we look forward to receiving your comments.

Structure of this document

- 1.6 This document provides an overview of:
 - Chapter 2:** the **Context** for the proposals, including a summary of the history of the Bridge, the Trust maintenance requirements and funding arrangements;
 - Chapter 3:** the **Challenges facing the Trust**, including in relation to increases in costs and the implications of future anticipated traffic volumes on projected toll revenue;
 - Chapter 4:** a summary of the **Proposed Toll Revisions**; and
 - Chapter 5:** the Trust’s **Projected Financial Position** if the proposed changes are implemented.
- 1.7 The information in this document is supported by a number of appendices which provide further information about how we have developed our proposals, and the reasons why. These comprise:
 - Appendix 1:** a **Feedback Form** to assist you in responding to this consultation;
 - Appendix 2:** a **Context Map** showing the Bridge and its surroundings;
 - Appendix 3:** a summary of the key **Relevant Legislation** governing the Bridge and the legal framework for the proposed toll revisions;

Appendix 4: an overview of the **Trust's Charitable Structure**;

Appendix 5: a description of the different types of **Maintenance Requirements** which the Trust must deliver to secure the long-term future of the Bridge and the associated long-term programme;

Appendix 6: an overview of the **Investments and Funds** held by the Trust;

Appendix 7: potential **Other Revenue Sources** which have been considered;

Appendix 8: a graph showing the **Historic Traffic Volumes** using the Bridge;

Appendix 9: an explanation of how and why the Trust's **Assumed Traffic Levels** in the future have been considered and selected;

Appendix 10: the **Proposed Revisions in Detail**;

Appendix 11: the **Modelling Assumptions** selected by the Trust in order to produce the financial projections;

Appendix 12: a summary of the **Sensitivity Analysis** carried out as part of the financial projection modelling; and

Appendix 13: the Trust's **Summary Projections** if the proposed toll revisions are implemented.

Responding to this consultation

- 1.8 This consultation will run for 6 weeks from 25th September to 7th November 2025.
- 1.9 Please use the feedback form provided at Appendix 1 which contains questions about our proposals. We will take account of the feedback from this consultation as we continue to develop our proposals and decide on the terms of the statutory order that we will need to apply for to implement them.
- 1.10 Please make sure you share your feedback with us before the closing date of 7th November 2025.

2. CONTEXT

The Bridge

- 2.1 Clifton Suspension Bridge is a remarkable feat of engineering spanning the Avon Gorge. It was the first commission awarded to the renowned engineer, Isambard Kingdom Brunel, in 1831. It was completed in 1860-1864 by fellow engineers Sir John Hawkshaw and William Henry Barlow as a memorial to Brunel after his death, reusing chains from Brunel's Hungerford Footbridge.
- 2.2 Despite its increased traffic load, the original wrought iron structure is substantially intact with little engineering intervention. It stands today as one of the world's major landmarks, it is the icon of Bristol's urban landscape and when it was designed by Brunel it was one of the longest suspension bridges in the world.

- 2.3 It is a Grade 1 listed structure (listed in 1959) and so maintenance works require consultation and approval by the local planning authorities on each side of the gorge – Bristol City Council and North Somerset Council – as well as conservation officers and Historic England.
- 2.4 It is also an historically and culturally significant icon for Bristol and beyond, being an important tourist destination attracting hundreds of thousands of visitors each year to the bridge and to the city. The bridge sits 75 metres above the Avon Gorge in a prominent position overlooking Bristol. The Avon Gorge is a site of special scientific interest (SSSI) containing many rare plants and any work carried out on the bridge has to ensure that it does not harm the gorge below. Permissions are required from Natural England.
- 2.5 The bridge is served by a museum which received its full museum accreditation in November 2023. The museum is sited on the Leigh Woods side of the bridge and houses exhibitions on the bridge, operates a small shop and provides regular tours/sessions for schools and visitors. The museum activity is self-funding day to day and receives all its income from paid tours, the shop and donations. There is no annual contribution from toll income.
- 2.6 Despite its age, the bridge is also a fully operational historic structure, originally designed for horse-drawn traffic but now seeing over 3 million car journeys every year. Because of its river crossing, it is also a key part of Bristol's transport network, connecting the city with North Somerset.
- 2.7 The nearest alternative bridges over the Avon are the M5 Avonmouth bridge approximately 5 miles north, and three Cumberland Basin bridges over the River Avon/Floating Harbour half a mile south.
- 2.8 Below the bridge is the Portway (a main traffic artery into and out of Bristol), the tidal river Avon and also the Portishead rail line which, although it closed to passengers in 1964, is scheduled to reopen in 2028 and is currently in use as a freight line.
- 2.9 These unique features – a grade 1 listed iconic 19th century structure yet carrying 3 million vehicles a year, set 75 metres above a river, in a SSSI, sitting over several key transport links, and yet at the same time being a national and international tourist destination, has significant consequences and means that our maintenance costs are greater (and often much greater) than they would be with a modern low-level bridge in a less sensitive or visited location.
- 2.10 A map showing the location of the bridge and its immediate context is provided at Appendix 2.

The Charitable Trust

- 2.11 The Clifton Suspension Bridge is operated by a trust established by The Clifton Suspension Bridge Act 1952. The 1952 Act sets out the main provisions regarding the operation of the bridge, and the powers and duties of the Trustees including the power:
- 2.11.1 to levy and demand tolls; and
- 2.11.2 to set aside a Reserve Fund to be used both for future large maintenance expenditures, and as a contingency buffer if an unexpected expenditure need arises.
- 2.12 Further details of the key provisions of the 1952 Act are provided in Appendix 3.
- 2.13 The Clifton Suspension Bridge Trust is constituted as a charity and is regulated by the Charity Commission. As such, it is not a private company which can make and distribute profits to outside shareholders - its income has to be spent on its charitable object of operating and maintaining the bridge in accordance with its statutory powers and duties.

- 2.14 The Trust's aim is therefore not to make profit in the traditional sense - instead it is to assess the long and shorter-term operational and technical needs and risks of running the bridge, to plan ahead, to break-even in the long-term, and by doing so make sure the bridge can be enjoyed by future generations as it has been by ours.
- 2.15 In doing this, the Trustees' aim is to preserve the structure as a working bridge for the long-term, rather than letting it decline into just being an historic monument, closed to traffic, which is what would happen if regular maintenance was not carried out thoroughly and systematically.
- 2.16 Details of the Trust's charity registration are provided in Part 1 of Appendix 4.
- 2.17 Responsibility for the Trust rests with 12 Trustees, comprising 10 "Resident Trustees", chosen for their technical and business expertise, and two "Representative Trustees" nominated by Bristol City Council and North Somerset Council.
- 2.18 The primary duty of the Trustees is to maintain the Bridge in proper repair and working order, with an ancillary objective to operate a visitor centre/museum.
- 2.19 A list of current trustees is shown in Part 2 of Appendix 4.
- 2.20 The Trustees are supported day-to-day by the Bridge Master (currently Trish Johnson CEng FICE), the Clerk Timothy Baines FCA and Laura Hilton, Visitor Experience Manager, together with 33 employees, and many (approximately 40) volunteers.
- 2.21 An organisation chart is shown in Part 3 of Appendix 4.

Maintenance requirements

- 2.22 The bridge is an iron suspension bridge. Two towers (one on each side of the gorge) support the wrought iron chains which are bolted into the rock face on each side of the gorge – 20m below ground level.
- 2.23 Although the bridge is 160 years old, the chains are much older and come from the dismantling of the Hungerford Bridge in London. They are made of a series of links – 4200 in total – which form a pair of three chains each side of the deck.
- 2.24 From the chains hangs the deck through a series of 162 wrought iron rods which are attached to two wrought longitudinal girders which run the length of the deck. Wrought iron cross girders are then attached to these longitudinal girders which then support the timber deck above. The footway parapet fence is supported by a series of cast iron stanchions and wrought iron infill.
- 2.25 Of all these components only approximately 5% have ever been replaced and around 99% of the ironwork is still original, indicating how well the bridge has been maintained over the years.
- 2.26 This preservation is however only possible through a systematic and detailed programme of scheduled maintenance and inspection and as such the bridge is regularly inspected, assessed and maintained to ensure that it is fit for purpose to carry the cars, cyclists and pedestrians it receives on a daily basis.
- 2.27 Appendix 5 provides further information on the many and varied types of essential maintenance and inspection activities which are carried out by the Trust.

Funding the Trust

- 2.28 The Clifton Suspension Bridge Trust currently has annual income of £3.1m per annum, of which:
- 2.28.1 £2.6m is from tolls;
 - 2.28.2 £0.2m relates to visitor services; and
 - 2.28.3 £0.3m is investment income.
- 2.29 The Trust receives no public money, whether from national, regional or local government, nor from any other public body to subsidise the tolls or the Trust's overall operations.

Tolls and toll levels

- 2.30 The more recent history of tolling on the Bridge is as follows:
- 2.30.1 A 20p toll was first introduced in 1982 when an increase from 10p was authorised.
 - 2.30.2 In 1987 the Trustees reduced the toll to 15p per crossing; it being felt that the reserves at that time were sufficient to meet any potential needs. This toll reversal is significant as it demonstrates that the Trustees have always sought to run the bridge efficiently and have been willing to reduce the toll if reserves grew beyond what was needed.
 - 2.30.3 In 1995, when reserves dropped, tolls were increased back to 20p per crossing.
 - 2.30.4 Following a public inquiry in March 2003 the toll was increased to 30p.
 - 2.30.5 Public inquiries were also held before increases in the toll to 50p in 2007, and to £1 in April 2014.
- 2.31 At present the bridge toll for vehicles is set at £1, the sum authorised by the Department for Transport in 2014, following a public inquiry.
- 2.32 The Trust operates a discounted toll scheme for people wishing to bulk-buy crossings ahead. The levels of discount and the number of crossings each level buys have varied considerably over the years, with the current options being to purchase a bridge card for:
- 2.32.1 50 crossings for £50 (this provides no discount compared to paying for each toll individually, but nevertheless provides greater convenience for more frequent users as the cards are linked to the Bridge's Automated Number Plate Recognition system which operates the toll barriers for the relevant vehicles);
 - 2.32.2 100 crossings for £85 (a 15% discount); and
 - 2.32.3 500 crossings for £350 (a 30% discount).
- 2.33 At present around 60% of crossings are via debit/credit card/contactless, and 40% by bridge card.

Visitor services

- 2.34 The day-to-day operation of the visitor centre and museum broadly breaks-even and does not require a contribution from toll revenue.
- 2.35 However, this means that it also does not make a material contribution to the Trust's overall revenues or influence the setting of toll levels.

Investment returns

- 2.36 A summary of the Trust's investments and the funds held is provided in Appendix 6.
- 2.37 Since the investment income derives from previous toll monies having been set aside as reserves, this means that the Trust is effectively funded 100% through toll revenue. Any investment returns are therefore a product of:
- 2.37.1 previous contributions to the reserve funds from the annual toll revenues; and
 - 2.37.2 the subsequent prudent management of those reserves by the Trust.

Other revenue sources

- 2.38 The Trust periodically assesses the potential for raising additional income in other ways. Some examples are described in more detail in Appendix 7.
- 2.39 However, none of these potential alternative sources of funding would provide revenues in the amount needed, at the times needed and with the stability and consistency required in order to defray the significant costs of maintaining the Bridge to an appropriate standard and to ensure its long-term future.
- 2.40 In summary, all of the Trust's income (including any investment returns) is ultimately derived from tolls and will inevitably continue to be.

3. CHALLENGES FACING THE TRUST

- 3.1 The Trust currently faces three major challenges:
- 3.1.1 increasing costs of operation;
 - 3.1.2 uncertainty of future investment returns; and
 - 3.1.3 reductions in traffic volumes with a corresponding reduction in future toll revenues.
- 3.2 It is these challenges which the Trust's current proposals set out in this consultation seek to address.

Increasing costs of operation

- 3.3 Maintaining the bridge is becoming increasingly expensive. The structure itself is now 160 years old and yet it is used by over 3 million vehicles each year, and in all likelihood there are a similar number of pedestrians and cyclists.
- 3.4 The Bridge is also staffed at both ends 24 hours a day, 365 days a year to ensure its continual safe and secure operation.

- 3.5 Whilst 99% of the original ironwork is still intact, that has only been achievable because of detailed and extensive risk assessments and inspections and the scheduled refurbishment of key parts of the structure.
- 3.6 In this connection the current experience at Hammersmith Bridge (another 19th century wrought iron suspension bridge) is salutary, in that key maintenance was successively deferred. This means that “hugely complex repairs of what is an ancient suspension structure riddled with 70 years of untreated corrosion” are now needed.
- 3.7 The current estimate to restore Hammersmith Bridge is a repair bill of over £250m – and that is for a bridge half the length of the Clifton Suspension Bridge and set at only 1/20th of the height. This experience serves as an indication of what could in principle happen to the Clifton Suspension Bridge if necessary scheduled repairs and refurbishment are not carried out.
- 3.8 The majority of these routine and cyclical repair and refurbishment projects can be scheduled into the Trust’s rolling 5-year maintenance programme, with the cost met by a combination of investment income/sales and annual surpluses from tolls.
- 3.9 Excluding investment income, the Trust’s annual budgets break-even in the medium term – as they will always do since the Trust as a charity is prohibited from making or distributing “real” profits or surpluses, with all toll income needing to be spent on the bridge.
- 3.10 The one exception to this “annual tolls pay for maintenance” working arrangement is the essential 25-year major refurbishment project to repaint the bridge chains (the largest iron part of the structure) and also replace the bridge lights.
- 3.11 The reasons for this are explained in Appendix 5, but in essence 25 years is the maximum operational life of both the paint and the lights. In relation to the paint especially, if this was left for even a few years longer, corrosion of the original ironwork would begin which would mean that additional interventions would be necessary to repair and strengthen links damaged by corrosion, at a greater overall cost. If such essential interventions were not delivered over the longer term then this would eventually compromise the structural integrity of the bridge if corrosion is left untreated. This would potentially lead to the Bridge needing to be closed to traffic for safety reasons, with all the consequences this would have for transport in and around Bristol.
- 3.12 The previous major painting and lights refurbishment project took place in 2000/01, and the most recent refurbishment project is currently taking place across the 2024/25 financial years.
- 3.13 An indication of the financial challenge that this recurring major project causes can be seen in that whilst the 2000/01 project cost in the region of £350,000, the current 2024/25 project will cost £8m. This is despite the Trust carrying out an extensive and robust tender process to secure best value.
- 3.14 Half of this increase is attributable to inflation since 2001, but the other half stems from ever-increasing health and safety requirements, far more extensive approval and inspection processes and higher on-costs of labour (including the use of specialist external contractors rather than the Trust’s employed staff).
- 3.15 It is also worth noting that since the Trust’s toll income is exempt from VAT, it is not possible to reclaim input VAT. This means that virtually all of the costs associated with the operation and maintenance of the Bridge (excepting wages) are 20% higher than they would otherwise be if the Bridge was an ordinary going concern.

Uncertainty of investment returns

- 3.16 The Trust has achieved a strong investment performance over the last decade, which has allowed it to set aside significant sums to “save up” for the £8m cost of the 2024/25 major refurbishment project. This means that roughly two thirds of the total cost will have been paid for by investment gains rather than directly from toll income itself.
- 3.17 The Trust has also been able to realise the full cost of the project into bonds and cash over the last 3 years, such that it has not been exposed to being forced sellers in a depressed market. This would have been the case, for example, if the Trustees had been obliged to sell or release investment assets during the current disruption to world markets attributable to international tariff policy.
- 3.18 However, the problem that this causes the Trust is that, whilst it has been very helpful in recent years to know that the refurbishment money is fully available, the Trust’s free reserves will have been depleted very significantly (by well over 50%) by the time the current 2024/25 major project concludes.
- 3.19 In the light of this and as responsible charity managers, the Trustees cannot plan simply in the “hope” that an equivalent strong investment performance might recur, not least as the 2049/50 project is expected to cost over £20m at 2050 prices.
- 3.20 It is therefore necessary for the Trust to have not only the funds required to operate and maintain the bridge between now and 2050, and the money to pay for the many smaller but still significant repair projects which are needed (see Appendix 5 for further details), but also to begin to build back the reserves so that a sufficient refurbishment reserve of over £20m is accrued by 2050.
- 3.21 Although this date seems a long way away, achieving a reserve of £20m in 25 years’ time arithmetically suggests the need for additional income of £800k each and every year. Given that some investment growth can reasonably be expected, the Trustees will nevertheless need at least £500k of extra income every year on top of existing revenues, simply to pay for this next large future project.

Reduction in traffic volumes

- 3.22 Appendix 8 provides a graph setting out the volumes of vehicle traffic using the Bridge for the period from 2000 to 2024. It will be seen that there has been a gradual but sustained reduction in total traffic volumes over the last 25 years. Whilst there are variations in individual years, taken as a whole, the long-term trend has been an approximately 1% reduction each year over that period.

Long-term trend

- 3.23 Traffic volumes reached a peak of nearly 4.5m in each of 2001 and 2002. However, these exceptionally high levels related to a time when the M5 Avonmouth bridge was having significant repairs (with subsequent traffic delays), with the Clifton Suspension Bridge being the next available crossing point upstream along the Avon Gorge. Given that this period was exceptional, we have used the total crossing figure of 4.1m for the year 2000 as the starting point as being more representative of ‘normal’ operating conditions.
- 3.24 For most of the period 2003 to 2019 the gradual 1% traffic volume reduction each year can be seen clearly.

- 3.25 The period of restrictive coronavirus measures (including lockdowns) clearly impacted traffic volumes significantly between 2019 and 2022, but this has now fully reversed with a return to the overall long-term trendline in 2023.

Step-decline following toll increases

- 3.26 The graph also demonstrates a step-decline in traffic volumes following each of the previous two toll increases:

3.26.1 there was a 7% one-off traffic decline in 2006/07 relating to the increase in the toll from 30p to 50p; and

3.26.2 there was a further 13% one-off traffic decline in 2013/15 relating to the increase in the toll from 50p to £1.

- 3.27 Whilst in both cases traffic volumes subsequently recovered to the long-term trend line, the Trust considers that this return to trend is because the toll did not then increase further, and so over time became relatively less expensive due to the general rise in prices and living costs across the economy taken as a whole over the ensuing periods.

Implications for the proposed toll revision application

- 3.28 These historic trends have implications for the levels of traffic which can be assumed for the purposes of the proposed toll revision application.

- 3.29 The Trust expects there to be:

3.29.1 a one-off step-decline in traffic volumes were the maximum cash toll to increase from £1 to £1.50. The Trust is projecting an immediate 10% decline in traffic volumes in this scenario, being the average of the declines in 2006/07 and 2013/15;

3.29.2 no return to the original long-term trend line, as the current proposal explained in section 4 below is for annual increases in the maximum permissible toll (linked to inflation) going forward, rather than the toll remaining at a fixed level as occurred previously following the two previous most recent toll revisions; and

3.29.3 a continued 1% long-term trend decline starting from the lower stepped-down figure.

- 3.30 Further information on the Trust's rationale for assuming a 1% long-term trend reduction is set out in Appendix 9.

4. PROPOSED TOLL REVISIONS

- 4.1 The Trust has not applied for a higher toll since 2012, and there has been no increase to the tolls charged since 2014 despite construction inflation being 50% for the period 2014 to 2025.

- 4.2 This is due to a number of factors, including:

4.2.1 the process of a toll revision application and then public inquiry is very lengthy and expensive; and

4.2.2 until 2023 we accepted cash payments, and setting a cash toll above £1 would have necessitated two or more coins which was considered both inconvenient and certain to slow traffic flow.

- 4.3 With the removal of the cash option in 2023, tolls can now be paid either by debit/credit card/contactless, or by buying a “bridge card” ahead of time. This means that toll levels above £1 have now become practical to collect, as well as necessary for reinstating the Trust’s finances following the ongoing major refurbishment project referred to above.
- 4.4 The Trust’s proposal is therefore for:
- 4.4.1 an immediate increase in the base toll from £1.00 to £1.50; and
 - 4.4.2 thereafter, an annual increase in the permitted toll calculated in line with an appropriate construction inflation index.
- 4.5 Approval for the proposed toll revisions would be sought by the Trust making an application to the Government for an order under section 6 of the Transport Charges &c (Miscellaneous Provisions) Act 1954, currently intended to be made before the end of 2025. This is the same route as was used to authorise the previous toll increases on the Bridge, including most recently in 2014. Further information of the key provisions of this legislation is provided in Appendix 3.
- 4.6 These proposed revisions would allow the Trust:
- 4.6.1 to update the current toll level to take account of the cost inflation that the Trust has experienced since the toll last changed in 2014;
 - 4.6.2 to cover routine day-to-day running and maintenance costs from in-year toll revenues; and
 - 4.6.3 to build up and maintain reserve funds sufficient to cover:
 - (a) major cyclical maintenance and special projects;
 - (b) an adequate emergency reserve fund; and
 - (c) the costs of the next major refurbishment project in 2049/50, currently budgeted at £20.5m (in 2050 prices).
- 4.7 The proposed indexation approach would also mean that:
- 4.7.1 the Trust does not have to continually re-apply for new fixed toll levels, thus avoiding the significant costs involved and consequent strains on relations with customers and stakeholders – every pound saved can then be reinvested directly into the Trust’s core operations;
 - 4.7.2 increases in the permitted toll are linked to the increases in construction costs (which form the vast bulk of the Trust’s major expenditures), thus ensuring that costs and revenues remain broadly in line with each other across the longer term; and
 - 4.7.3 bridge users have greater certainty, with future toll levels set annually through a clear, transparent and automatic process which avoids larger one-off increases.
- 4.8 Appendix 10 explains each element of the Trust’s proposals in more detail, together with a summary of various alternative approaches which have been considered and discounted.

5. PROJECTED FINANCIAL POSITION

Income and cost forecast model

- 5.1 In order to assess the likely impact of the proposed toll revisions, the Trust has prepared a 25-year income and cost forecast model. This covers the period from 2025 to 2050, i.e. from the present day to the time when the next major refurbishment project is anticipated to fall due.
- 5.2 The model allows the Trust to set and vary traffic volumes, income and cost assumptions, and so determine both:
- 5.2.1 the appropriate level of an immediate real terms toll increase; and
 - 5.2.2 a suitable indexation mechanism for building inflation into the model for subsequent increases to the permitted toll.
- 5.3 Appendix 11 provides further detail on the principal modelling assumptions which have been applied in order to generate the financial projections.
- 5.4 The model allows the Trust to plan with reasonable confidence for the next large refurbishment/lighting project in 2049/50, and to confirm that the proposed toll revisions will enable the Trust to respond effectively to the three major challenges with which it is currently faced.

Core tolling scenarios

- 5.5 As part of determining the level of toll increase that it will need to apply for, the Trust has prepared detailed financial projections for the modelling period (from 2025 to 2050) under four core scenarios.
- 5.6 The four scenarios are:
- Scenario 1:** no toll increase above £1 for the whole modelling period;
 - Scenario 2:** an immediate increase to £1.50, but no further increases after that;
 - Scenario 3:** an immediate increase to £1.50, and a further increase to £2.00 after ten years; and
 - Scenario 4:** an immediate increase to £1.50, with the permitted toll then increased annually thereafter by reference to a construction inflation index.
- 5.7 Further sensitivity analysis was then undertaken, the results of which are summarised in Appendix 12.

Financial viability assessment

- 5.8 In relation to financial viability, the Trust has then assessed each scenario against four key operating criteria.
- 5.9 These are that the revenue generated must be sufficient:
- 5.9.1 to 'make good' the cost inflation experienced since the previous toll revision in 2014;

- 5.9.2 to ensure that the Emergency Repair Fund (“ERF”) is not used to subsidise toll deficits in-year or on an on-going basis – we refer to this as an ERF breach;
- 5.9.3 to accrue sufficient reserves to pay for the next major refurbishment project in 2049/50 (estimated to cost approximately £20million in 2050 prices); and
- 5.9.4 to generate a remaining residual unrestricted operating reserve sufficient to keep the Trust operational and able to pay for routine and cyclical projects in the period following 2050, i.e. following completion of the major 2049/2050 refurbishment project.

Modelling outcomes

- 5.10 The table below summarises the modelled outcomes and whether each Scenario would achieve the four key operating criteria in terms of financial viability.

Scenario	Cost since 2014 made good?	inflation 2014	ERF breached?	2049/50 refurbishment project viable?	Modest post 2050 operating reserve?
No change to toll	NO		YES – in 2033 and insolvent by 2041	NO	NO
£1.50 immediate then no change	YES		YES – in 2045	NO	NO
£1.50 immediate then £2 10 years later	YES		YES – in 2050 to pay for the main refurbishment project	NO	NO
£1.50 immediate and then a construction inflation index	YES		NO	YES	YES

- 5.11 As can be seen:
- 5.11.1 Scenario 1 achieves none of the key operating criteria, with the aggregate revenue deficits being so large across the modelling period that they would result in the Trust becoming insolvent by model year 2041;
- 5.11.2 Scenario 2 would require the Trust to breach the ERF in model year 2045, i.e. several years prior to the anticipated date of the next major refurbishment project in 2049/50; and
- 5.11.3 Scenario 3 would not accrue sufficient reserves to pay for the next major refurbishment project in 2049/50, i.e. there would be both an ERF breach and the Trust would be left with no unrestricted operating reserves at all.
- 5.12 This clearly demonstrates that each of the first three scenarios results in the Trust neither being able to pay for the 2049/50 major refurbishment project nor having modest operating reserves post 2050 to enable it to continue to operate on a sustainable basis. As responsible charity managers, the Trustees cannot commit to long-term plans on any of these bases.
- 5.13 The only scenario which satisfies all four key operating criteria and allows the Trust to be able to function on a responsible and prudent basis is Scenario 4, providing:

- 5.13.1 an immediate increase of the toll to £1.50; and
- 5.13.2 annual increases to the permitted toll thereafter calculated by reference to a suitable construction inflation index.
- 5.14 Accordingly, this forms the basis of the proposed toll revisions on which the Trust is now consulting.
- 5.15 Appendix 13 sets out the key summary financial projections for the preferred Scenario 4, showing for each year to 2050:
 - 5.15.1 the headline toll level per crossing;
 - 5.15.2 the projected toll income (net of toll-related direct costs, and allowing for reduced crossing prices for regular users through the pre-purchase of discount cards);
 - 5.15.3 the projected total costs net of ancillary income; and
 - 5.15.4 the net annual cash surplus (excluding depreciation as a non-cash item).
- 5.16 The projections also show the projected value of:
 - 5.16.1 the ERF at the end of each year; and
 - 5.16.2 the remaining free reserves (above the ERF).
- 5.17 In relation to the free reserves, it should be noted that:
 - 5.17.1 it is this fund which provides the Trust's effective financial operating resources and allows the day-to-day operation of the Bridge to be secured; and
 - 5.17.2 whilst the summary projections in Appendix 13 show remaining free reserves in model year 2026 of £3.3m and free reserves in model year 2050 at £9.0m, these figures are expressed in 2026 and 2050 prices respectively. Virtually all of this apparent increase is attributable to inflation over the period from 2026 to 2050. The level of free reserves in both 2026 and 2050 is virtually identical in real terms, once the effect of inflation is taken out.

Appendix 1: Feedback form

Overview

The Clifton Suspension Bridge Trust is a charity run by a group of Trustees (volunteers). They manage the maintenance and upkeep of Isambard Kingdom Brunel's iconic structure to keep this road crossing the Avon Gorge open for the use of the public. The only income received to do this is from the toll paid by vehicles crossing the bridge.

This toll is used to employ the bridge master, staff and attendants as well as maintain this 160-year-old bridge. The trust is acknowledged as a worldwide exemplar of how to maintain and run this type of heritage asset and we have a legal duty to maintain the bridge 'in proper repair and working order'.

The toll was last increased in 2014 when it was set at £1. Since then, rising inflation, construction costs, updated health and safety requirements, wage increases, climate change (how the bridge deals with stronger winds) and increased weight of traffic have affected and will affect the cost of maintaining the bridge.

The Trustees' strategy is to set tolls at a level that not only covers the bridge's day-to-day running costs but also builds up funds to pay for future major refurbishment and structural maintenance projects. The Trustees have determined that the toll needs to be increased to ensure the continued operation and maintenance of the bridge. It is therefore proposed that the toll is increased to £1.50 from 1st January 2027 (to reflect inflation since 2014) and, from then on, be increased annually in line with inflation.

Please refer to the full consultation document for more details of the Trust's proposals and supporting information.

Your feedback

Once you've had a chance to consider the full consultation document, we would like your views on the planned increase in the toll, as well as the proposed mechanism for future increases and how these are calculated. All questions are optional but please answer as many questions as you can.

About you

Please provide the following details:

How often do you travel across the Clifton Suspension Bridge?

Frequently
Occasionally
Rarely
Never

How do you travel across the Clifton Suspension Bridge?

By vehicle
By foot
By wheel

If you travel across the Bridge by vehicle, do you use a pre-paid Clifton Suspension Bridge Card?

Yes
No

What is your full postcode?

Do you represent a group or organisation? If so, please specify:

Quick survey

- 1. Do you understand why the bridge toll for vehicles needs to be increased to £1.50 from January 2027?**
(Yes / No / Unsure)
- 2. Do you agree that future increases to the toll for vehicles should be linked to inflation to reflect rising costs in the future** (refer to Appendix 10, Section 4 at page 53 of the consultation document)?
(Strongly agree / Agree / Neutral / Disagree / Strongly disagree)

3. Do you have any comments or suggestions?

If you would like to provide more detailed responses, please continue.

Additional questions

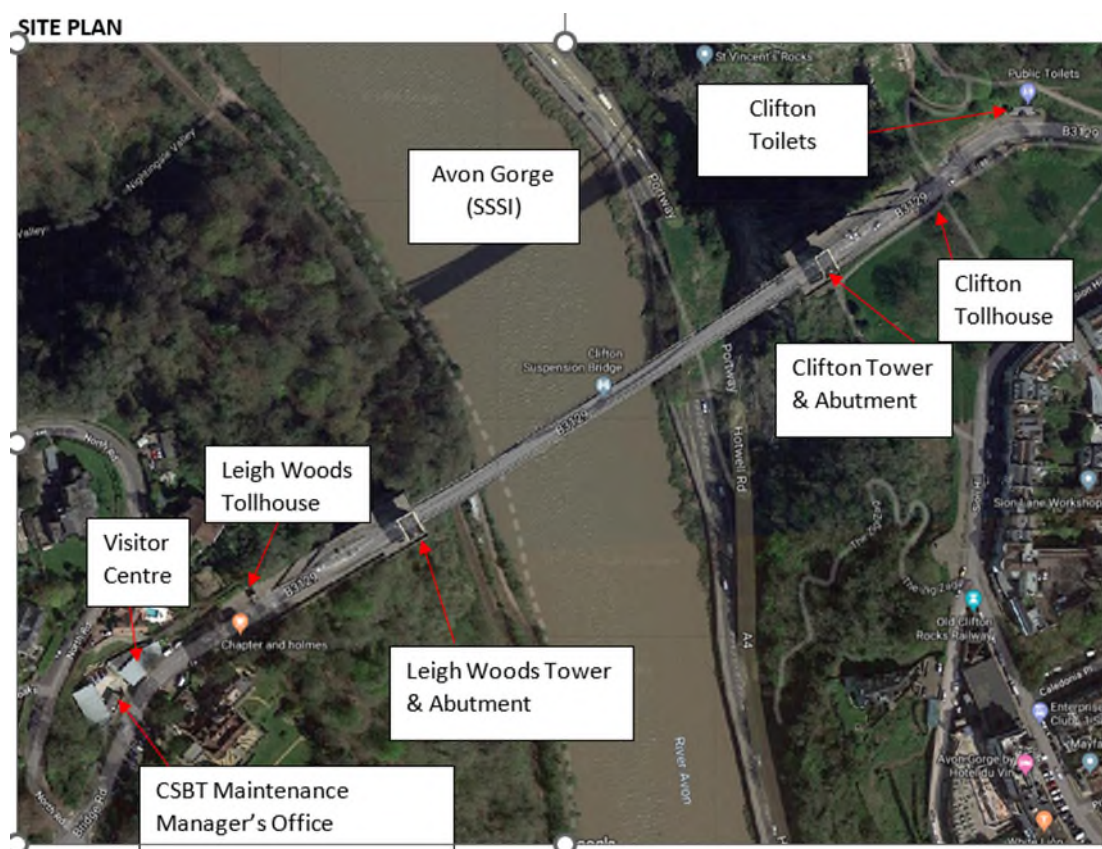
- 4. Do you support the proposed use of the Office for National Statistics Construction Output index (All New Work, Repair and Maintenance) as the applicable inflation index** (refer to Appendix 10, Section 4 at page 55 of the consultation document)?
(Strongly support / Support / Neutral / Oppose / Strongly oppose)
- 5. Do you agree that the annual increase to the toll for vehicles should be 0.5% below the rate of inflation, as proposed by the Trust** (refer to Appendix 10, Section 4 at page 54 of the consultation document)?
(Strongly agree / Agree / Neutral / Disagree / Strongly disagree)
- 6. Do you agree that the traffic forecast assumptions made by the Trust are appropriate** (refer to Appendix 9 at page 48 of the consultation document)?
(Strongly agree / Agree / Neutral / Disagree / Strongly disagree)
- 7. Do you agree with the modelling assumptions used within the Trust's income and cost forecast model** (refer to Appendix 11 at page 56 of the consultation document)?
(Strongly agree / Agree / Neutral / Disagree / Strongly disagree)
- 8. Do you agree with the Trust's financial projections relating to costs and income and related assumptions** (refer to Section 5 at page 15, Appendix 12 at page 57, and Appendix 13 at page 59 of the consultation document)?
(Strongly agree / Agree / Neutral / Disagree / Strongly disagree)

- 9. Do you have any other comments regarding the Trust's proposals and this consultation, including the alternatives considered and discounted by the Trust?**

- 10. Are there any other options that you think should be considered (e.g. charging pedestrians/cyclists; reducing discounts for frequent users/bridge card holders; removing concessions)?**

- 11. Overall, to what extent do you support the Trust's proposals?**
(Strongly support / Support / Neutral / Oppose / Strongly oppose)

Appendix 2: Context map



Appendix 3: Relevant legislation

1. CLIFTON SUSPENSION BRIDGE ACT 1952

- 1.1 The Clifton Suspension Bridge Act 1952 (“**the 1952 Act**”) constituted and incorporated the Trust and conferred powers and duties upon it in relation to the Bridge.
- 1.2 The sections of the 1952 Act that are most relevant for the purposes of the proposed toll revision application are summarised below.
- 1.3 Section 40(1) imposes a duty on the Trust to maintain the Bridge in proper repair and working order.
- 1.4 Section 40(2) allows the Trust to improve, renew, extend or replace the Bridge or contribute towards the cost of such improvement, renewal, extension or replacement.
- 1.5 Section 41 recognises that the roadway over the Bridge is a public highway which confers a general right for the public to pass and re-pass over it.
- 1.6 Section 43(1) gives the Trustees the power to levy and demand in respect of the use of the Bridge such tolls as they think fit in order to discharge their powers and duties with regard to the Bridge, subject to stated maxima.
- 1.7 Section 53(2)(a) outlines how the toll money should be applied – in order of priority:
 - 1.7.1 defraying the costs of:
 - (a) working and establishment expenses;
 - (b) maintenance and repair of the Bridge; and
 - (c) the collection, recovery and disposal of tolls;
 - 1.7.2 payment of interest on any money borrowed;
 - 1.7.3 providing appropriations or paying instalments in respect of borrowings; and
 - 1.7.4 providing a reserve fund.

2. TRANSPORT CHARGES & C (MISCELLANEOUS PROVISIONS) ACT 1954

- 2.1 Section 6 of the Transport Charges & c (Miscellaneous Provisions) Act 1954 (“**the 1954 Act**”) contains a statutory power for the tolls to be revised. The full text of section 6 is set out at the end of this Appendix and the key relevant parts are summarised below.
- 2.2 Section 6 applies to an undertaking:
 - 2.2.1 engaged in the maintenance of a bridge (section 6(1)(d)); and
 - 2.2.2 authorised to demand and take charges in pursuance of any statutory provision.
- 2.3 The Trust is the independent statutory undertaking responsible for the maintenance of the Bridge under the 1952 Act and is authorised to demand and take tolls under section 43(1) of

that Act. This means that the Trust is permitted to apply to the Minister for the permitted tolls to be increased under the 1954 Act (section 6(2)(a) of the 1954 Act).

- 2.4 The general test for making a toll revision order (contained in section 6(2) of the 1954 Act) is that the Minister must be satisfied that “under the circumstances then existing it is proper to do so”, i.e. the Minister may make an order revising all or any of the charges:
- 2.4.1 in such manner as the Minister may think fit;
 - 2.4.2 with effect from such date as may be specified in the order; and
 - 2.4.3 whether or not the charge in question formed part of the subject matter of the application.
- 2.5 It follows from this that section 6 comprises a broad power to revise the permitted tolls chargeable by the Trust for use of the Bridge.
- 2.6 Section 6(3) of the 1954 Act further provides that, in assessing whether it is “proper” for a toll revision order to be made, the Minister:
- 2.6.1 must have regard to the financial position and future prospects of the undertaking; and
 - 2.6.2 must not revise the charges in such a way as would be likely to result in the undertaking receiving an annual income either substantially less or substantially more than adequate to meet its expenditure on:
 - (a) the working, management and maintenance of the undertaking;
 - (b) such other costs, charges and expenses as are reasonably chargeable to revenue, including reasonable contributions to any reserve, contingency or other fund; and
 - (c) where appropriate, a reasonable return upon the paid-up share capital of the undertaking.
- 2.7 This means that – in assessing whether a toll revision order should be made in relation to the Bridge – consideration would have to be given to the following points:
- 2.7.1 First, the focus would be on the Trust’s financial position and future prospects. This does not mean that other matters (such as environmental objectives) are necessarily irrelevant, but they are not central mandatory considerations. The central, mandatory, considerations are the financial position and future prospects of the Trust’s undertaking.
 - 2.7.2 Secondly, the test requires consideration of whether the tolls would be “likely” to result in an “annual revenue either substantially more or substantially less than adequate”. This is a two-part test:
 - (a) It must be “likely” to result. In this context, the word “likely” is to be given its ordinary meaning, i.e. that the end result is probable, not merely possible. The question is whether or not the revenue that would be produced by the proposed toll level is likely to result in substantially more or less income than required, having regard to the Trust’s anticipated costs and expenditures.

- (b) Second, the range within which that “likely” revenue may permissibly fall is not narrowly limited. The repeated use of the word “substantially” indicates that there is a considerable margin within which the final revenue may fall.

If either part of the two-part test is not established then there is no restriction on the toll revision order being made.

- 2.7.3 Thirdly, it is clear from the statutory language that the emphasis is on the present financial position and future prospects of the undertaking. This follows from the fact that – for example, in enacting the 1954 Act – Parliament will have clearly wished to ensure that the ability of bridge undertakers (and other transport undertakers) to continue to fulfil their statutory duties with respect to the maintenance and management of these important infrastructure assets is placed on a sufficient and sustainable footing.
- 2.7.4 Fourthly, as well as immediate expenditure, the Minister is also required to consider the need for reasonable contributions to “any reserve, contingency or other fund”. In relation to the Bridge, this would include contributions to the Trust’s New Projects Fund and Emergency Repair Fund which are intended to ensure that sufficient funds are available to defray both planned maintenance and unexpected costs.
- 2.7.5 Fifthly, due to the Trust’s constitutional and legal status, return on share capital is not relevant and consideration of such contributions is accordingly not appropriate as far as the Trust and the Bridge are concerned.

3. TEXT OF SECTION 6

6 Revision of charges by independent harbour undertakings, etc.

(1) This section shall apply to any independent statutory undertaking, being—

...

- (d) an undertaking engaged in the maintenance of a bridge;

...

Provided that this section shall not apply to any undertaking in relation to any charge if the statutory provisions relating to that undertaking confer a power of revising that charge on the Secretary of State and some other Minister acting together.

(2) An application may be made to the Minister at any time—

- (a) by the undertakers; or
- (b) by any person, or any body representative of persons, appearing to the Minister to have a substantial interest,

for the revision of any of the charges which the undertakers are for the time being authorised to demand and take in pursuance of any statutory provision; and if on any such application the Minister is satisfied that under the circumstances then existing it is proper so to do, he may, subject to the provisions of this section, make an order revising in such manner as he may think fit, with effect from such date as may be specified in the order, all or any of the said charges, whether or not the subject matter of the application, including any classification by reference to which the amount of any of those charges is to be

determined; and any such order shall have effect notwithstanding anything in any statutory provision relating to the subject matter of the order:

Provided that—

- (i) the Minister shall not vary any charge other than those to which the application relates except after consultation with the undertakers and such other persons, or such bodies representative of other persons, appearing to him to have a substantial interest as may appear to him appropriate;
 - (ii) where on any application under this section for an increase or a decrease in any charge the Minister has made an order or has decided that it is not proper to make an order, the Minister shall not entertain an application for a further increase or, as the case may be, a further decrease in that charge, or for a further revision of any other charge revised by the order, if any, so made, if that application is made before the expiration of a period of twelve months from the date of the making of the order or, as the case may be, from the date when the Minister gave notice of his decision not to make an order;
 - (iii) where the statutory provisions in force with respect to any particular undertaking on the third day of September, nineteen hundred and thirty-nine, authorised a maximum for any charge and made no provision for its revision, an order under this subsection shall not revise that charge so as to make it lower than the maximum so authorised;
 - (iv) where immediately before the commencement of this Act, or, in the case of an undertaking such as is referred to in paragraph (f) of subsection (1) of this section, immediately before the coming into force of the order therein mentioned, the undertakers were required by any statutory provision then in force to keep charges levied according to classes of voyages or otherwise in definite proportions, the Minister shall not make an order revising any of those charges which does not maintain the same proportions.
- (3) In making any order on an application under this section, the Minister shall have regard to the financial position and future prospects of the undertaking and shall not make any revision of charges which in his opinion would be likely to result in the undertaking receiving an annual revenue either substantially less or substantially more than adequate to meet such expenditure on the working, management and maintenance of the undertaking and such other costs, charges and expenses of the undertaking as are properly chargeable to revenue, including reasonable contributions to any reserve, contingency or other fund and, where appropriate, a reasonable return upon the paid up share capital of the undertaking:


Provided that where the Minister is satisfied that, in view of the financial position of the undertaking during such period immediately preceding the application as may appear to him appropriate, there are special circumstances affecting the undertaking, the Minister may make such revision of charges as he may consider just and reasonable in the light of those special circumstances, notwithstanding that it is in his opinion likely to result in the undertaking receiving an annual revenue substantially less than adequate for the purposes aforesaid.

- (4) Where an application is made under this section, the applicant and, where the application is made otherwise than by the undertakers, the undertakers shall furnish the Minister with such information and particulars, certified in such manner, as the Minister may require, and the applicant shall publish in such newspapers as the Minister may require a notice stating—

- (a) the general effect of the application; and
 - (b) that within a period of forty-two days from the date of the first publication of the notice any person having a substantial interest may object to the application by giving notice to the Minister accompanied by the grounds of his objection with a copy to the applicant.
- (5) Before making an order on an application under this section, the Minister shall, if required by the applicant or by any person who has objected to the application and has not withdrawn his objection or, where the order would vary any charge other than those to which the application relates, by any person or body with whom he has consulted in pursuance of paragraph (i) of the proviso to subsection (2) of this section, and in any other case may if he thinks fit, cause a local inquiry to be held by such person as he may appoint for the purpose; and where such an inquiry is held subsections (2) to (5) of section 250 of The Local Government Act 1972, or, where the inquiry is held in Scotland, subsections (2) to (8) of section 210 of the Local Government (Scotland) Act 1973, shall apply to that inquiry as if it were an inquiry held in pursuance of subsection (1) of that section and the undertakers were a local authority.
- (6) Any order under subsection (1) or subsection (2) of this section shall be made by statutory instrument, and an order made under the said subsection (2) may vary or revoke any previous order made under that subsection.
- (7) Nothing in this section shall apply to any charge which, by the statutory provisions authorising the charge, is left to the discretion of the undertakers without any restriction or subject only to a requirement that the charge shall be reasonable; and for the purposes of the promotion by any undertaking of a Bill, or of the making with respect to any undertaking of a Provisional Order, being a Bill or Order containing a provision revising any of the charges authorised to be demanded and taken by that undertaking, it shall be deemed, notwithstanding the passing of this section, that the objects of that provision cannot be attained except with new authority from Parliament.

Appendix 4: the Trust's Charitable Structure

Part 1 Charity registration details




CHARITY COMMISSION
FOR ENGLAND AND WALES

Register of Charities


English Cymraeg

[Log in to online services](#)

[Home](#) Search 

CLIFTON SUSPENSION BRIDGE TRUST

Charity number: 205658

 Charity reporting is up to date (on time)

[Charity overview](#)
[What, who, how, where](#)
[Governance](#)
[Trustees](#)
[Financial history](#)
[Assets and liabilities](#)

What the charity does: General Charitable Purposes

Who the charity helps: The General Public/mankind

How the charity helps: Provides Services

Where the charity operates: Bristol City
North Somerset

Part 2: List of trustees

Chris Booy, Chairman (Expertise: Commercial & Business)

John Benson, Vice Chairman (Expertise: Commercial & Property)

Margaret Cooke, Trustee & Technical Committee (Expertise: Engineering & Heritage)

Steve Denton, Trustee & Technical Committee (Expertise: Engineering & Bridges)

Jo Elsworth, Chair of Heritage, Education and Development Committee (Expertise: Collections & Visitor Experience)

Ian Jenkins, Chair of Technical Committee (Expertise: Technical and Architecture)

Ann Metherall, Trustee & Technical Committee (Expertise: Legal & Engineering)

Brian McConnell, Trustee (Expertise: Business & Engineering)

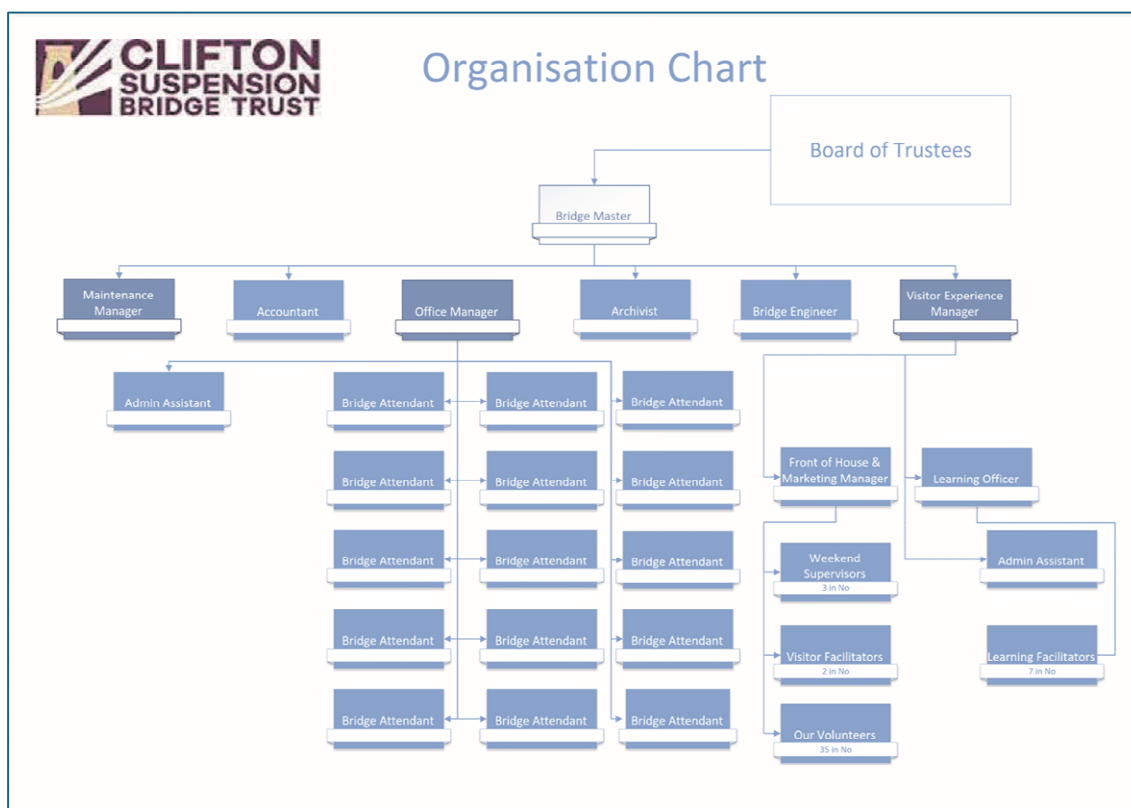
James Stanfield, Chair of Investment Committee (Expertise: Financial & Business)

Colin Taylor, Trustee & Technical Committee (Expertise: Engineering & Bridges)

Ashley Cartman, representative Trustee for North Somerset Council

Paula O'Rourke, representative Trustee for Bristol County Council

Part 3: Organisation chart



Appendix 5: Maintenance requirements

Part 1

1. INTRODUCTION

- 1.1 This Appendix provides a detailed commentary on the practical requirements of works required to maintain the bridge, looking at four areas:
 - 1.1.1 routine day-to day activities;
 - 1.1.2 major cyclical maintenance;
 - 1.1.3 special one-off projects; and
 - 1.1.4 the £8m (at 2025 prices) main repainting, refurbishment and lighting project.
- 1.2 The last of these areas is essential work which must be carried out every 25 years. The most recent such project is currently taking place, and which will next be necessary in 2049/50. It is this major cyclical 25-year refurbishment project which is the primary impetus behind the current toll application.

2. ROUTINE DAY-TO DAY ACTIVITIES

- 2.1 **Routine maintenance activities** are scheduled in an annual plan for approval by the Trustees. An extract of the activities due in 2025 (similar in subsequent years) is shown in Part 2 of this Appendix.
- 2.2 A few key points should be noted:
 - 2.2.1 The bridge is now 160 years old and requires an extensive programme of routine inspection and maintenance. Many of the activities listed are routine and precautionary, but a few activities are critical as described below.
 - 2.2.2 The most important of these is the monitoring of the saddle rollers which track the movement of the tower saddles – should the saddles stop moving they would put very large stresses on the anchorages.
 - 2.2.3 Monitoring of weight on the bridge is carried out by weigh beams installed at each end of the bridge. These measure vehicles crossing the bridge and lock down the barriers should a vehicle heavier than 4T attempt to cross the bridge. The weigh beams are required to be regularly serviced to ensure they are functioning correctly.
 - 2.2.4 Monitoring of the rock face on the Clifton side is carried out monthly. Measurements are taken to ensure there is no movement in the rock face which could cause issues to the Clifton tower above.
 - 2.2.5 The moveable parts of the bridge such as the maintenance gantry and cradle need to be regularly inspected and tested by expert contractors to ensure they are safe to operate. This is done on a six-monthly basis.

3. MAJOR CYCLICAL MAINTENANCE

- 3.1 In addition to routine inspection and maintenance, an extensive programme of **cyclical major works** is necessary, with cycles varying from between one and twenty-five years.
- 3.2 Given the nature and location of the bridge as described earlier, virtually all of the listed major works require preparatory stages including design, preparation of tender documents, often planning approval and various consents from stakeholders such as Historic England and Natural England. Due to the Grade 1 listing of the bridge, it is also essential that the structure of the bridge is not compromised.
- 3.3 This can be a long and drawn-out process which requires extensive planning before a contractor can be appointed and due to the size of some projects and to maintain traffic flows across the bridge, the projects may span several years.
- 3.4 The chart in Part 3 of this Appendix shows the major works programme looking back 25 years (2000 to 2024), and the chart in Part 4 of this Appendix shows the major works programme looking ahead 25 years (2025 to 2050).
- 3.5 The programme shown in these charts is colour-coded:
 - 3.5.1 green items cost below £100k;
 - 3.5.2 amber items cost between £100k and £500k; and
 - 3.5.3 red items cost more than £500k.
- 3.6 By way of further explanation regarding the categories of major cyclical maintenance works (set out in the headings on the left-hand side of each chart):
 - 3.6.1 **Painting** is essential on all metal parts of the bridge to prevent corrosion and subsequent failure of the structure. The bridge is also in a 'marine environment' so can be affected by salts in the air. The bridge components must be painted with three coats of paint to a specific thickness, by hand, and with specific access requirements such as scaffolding, roped access and gantries. All of this has to be carried out by professional contractors who are experienced in dealing with heritage structures and working at height. It then must be checked and inspected by qualified engineers and paint inspectors to ensure the required standard is met. As well as specific access requirements there are environmental and health and safety aspects to take into account which also come with their own conditions and costs.
 - 3.6.2 **Maintenance** involves maintenance of ladders/access that is required on the structure. Access is required to all parts of the bridge for inspection and maintenance purposes and the accesses themselves also have to be inspected and maintained. Any changes to the overall fabric of the structure have to gain approval from local planning and Historic England. Any parts (though few) that need replacement need to show that everything has been considered in terms of repairing it before it is replaced. This often needs testing and experimental methods of repair. If unsuccessful, approval has to be sought to replace the component, and the component (such as a parapet stanchion) would be fabricated in the similar material as the original. The parapet stanchions that have been replaced had to be fabricated in cast iron using a traditional mould.
 - 3.6.3 **Structural Safety and Monitoring.** All bridges require a Principal Inspection within touching distance every six years but because of the historic nature of the Clifton

Suspension Bridge, this is carried out every three years by experienced structural and inspection engineers. These inspections highlight any maintenance requirements that may be needed, and their priority (low, medium or high) and these requirements are incorporated into the maintenance schedule. Monitoring is in place which also needs to be serviced, tested and replaced as required. There are CCTV cameras, saddle movement monitoring, rock movement monitoring, wind monitoring and movement monitoring of the retained wall in the maintenance yard. There is also cathodic protection and lightning protection that needs regular servicing. Testing is also carried out on various parts of the structure to ensure there are no cracks (metal work) or rot (timber).

- 3.6.4 **Ancillary.** Although not part of the structure there are various components that need replacement or maintenance over time. These include the gantry and cradles which are key to gaining access to the underside of the deck and towers and require regular maintenance. Other important improvements are CCTV cameras and lighting of the bridge which are required specifically for safety purposes. We also need periodically to replace the tolling system including structures and software, and to maintain and occasionally repair or replace our buildings – the toll houses and the operational buildings on the Leigh Woods side.
- 3.6.5 **General.** General projects include items such as digital preservation which is essential to preserve all our documentation for projects for future generations. We have an archivist who ensures our documentation will be able to be accessible for many years to come.
- 3.6.6 **Major Maintenance Projects.** Apart from the major 25-year painting/refurbishment project other major projects would include the replacement of the gantry. This is a special engineering project that requires specialised contractors and significant planning. The gantry when replaced needs to be lifted from the river below and the old one removed in the same way. The design is also critical, so it does not cause undue wind restraint or loading on the bridge. There is also a periodic requirement to replace the footway surfacing and waterproofing and improve the drainage on the bridge.
- 3.6.7 **Enhancement Projects.** There are also periodic enhancement projects which enhance the bridge and its structures. These include improvements to the lighting system in the vaults, the museum, and pedestrian and cycling improvements.

4. **SPECIAL ONE-OFF PROJECTS**

- 4.1 These are projects that are not necessarily carried out on a cyclical basis, but must nevertheless be carried out as part of the prudent management of this historic structure.
- 4.2 Some projects are caused by unplanned events such as damage following wind or impact by a vehicle. It could also be a structural member breaking through fatigue such as a vertical hanger.
- 4.3 These special projects include but are not limited to:
 - 4.3.1 Installation of tuned dampers on the bridge (to help control the movement of the bridge in high winds)
 - 4.3.2 Installation of a new timber deck
 - 4.3.3 Replacement of plant that is regularly used on the bridge such as the de-icing tractor.

4.3.4 Repairs to the bridge after a wind event or impact to bridge from vehicle etc.

4.3.5 Repairs to hangers following unforeseen breakage.

4.4 It is important to note that not all special projects can be pre-planned as new projects are sometimes formulated following structural inspections or as a means of reducing risks on the bridge.

5. **THE MAJOR 25-YEAR REPAINTING, REFURBISHMENT AND RELIGHTING PROJECT**

5.1 Every 20 to 25 years a major repaint of the chains (above and below ground) and the parapets is required. This is due to the fact that the three coat paint system has a durability of 20 to 25 years and provides an essential corrosion protection system for the ironwork.

5.2 To achieve a suitable finish any fixings on the chains need to be removed. This includes all the lighting fixtures that have been clamped along the full length of the chains. The lighting has a design life of approximately 15 years so it will generally be replaced at the same time as the painting is carried out. The lighting systems have also improved over the years, so each replacement provides a more sustainable and eco-friendly approach for the bridge.

5.3 This project is known as the bridge refurbishment project and is the largest project carried out by the Trust. Due to the financial size of the contract there is a lot of contract preparation in advance. Drawings and specifications need to be produced and, with the bridge being a Grade 1 listed structure, planning and other permissions sought.

5.4 The tender process is extensive with a two-stage approach. Contractors provide information on their experience in the first stage from which a short list is produced. These contractors then provide a detailed and priced bid, showing how they will carry out the work, how long they will take to do it and what the cost will be.

5.5 The works are carried out under a standard form of contract and are supervised by our appointed Consulting Engineers. To ensure the paint is applied effectively paint inspectors are also appointed to regularly check the work of the contractor by measuring the application and thickness of the paint.

5.6 To ensure that all the work is done safely extensive temporary works have to be designed – for this project we have scaffold pods for painting the chains which is an alternative to a painting cradle that has been used in the past. The temporary works are a large part of the contract as they ensure the safety of the painters and the ability for them to access all the chains. The scaffolding contractor is a very specialised contractor who deals with unusual access requirements on structures.

5.7 All of this means that we have a large team of consultants, contractors and suppliers assisting us with the project which shows why the cost of this work is so high. Assuming that in 25 years' time similar requirements will be needed, the projected costs based on reasonable inflation assumptions would be over £20m.

5.8 The contractors for our current project have produced a video showing the required works <https://cliftonbridge.org.uk/refurbishment-works/>

Part 2

ROUTINE MAINTENANCE FREQUENCIES

Project Description of routine inspection & maintenance activities	Frequency	Contractor / In-house
<u>Mobile Access Equipment</u>		
LOLER inspection of tower cradles	6 monthly	Contractor
Tower cradles maintenance	Annual	Contractor
Replace batteries in tower cradles remote controls	Annual	In-house
PUWER inspection and testing of under-deck gantry	Annual	Contractor
Roped access inspection of underside of gantry inc. NDT	Annual	Contractor
Under-deck gantry maintenance	6 monthly	Contractor
Inspection of Stannah passenger lifts	3 monthly	Contractor
<u>Bridge Structure</u>		
Clean expansion joints and articulation chambers	3 monthly	In-house/ Contractor
Clean deck gutters	3 monthly	In-house
Clean tower top drains and outlets	6 monthly	In-house
Clear inclined shaft drains and land saddle drains	3 monthly	Contractor
Clean land saddle chambers	Annual	In-house
Clean longitudinal girder and lower part of hangers	Annual	In-house
Clean tower top parapets	Annual	In-house
Check integrity of bird netting (towers and articulation span)	Annual	Contractor
Check timber splashboards on footway are secure	Monthly	In-house
Confirm operation of cathodic protection	Monthly	In-house
Extensometer readings	Two-weekly	In-house

Project Description of routine inspection & maintenance activities	Frequency	Contractor / In-house
Tower roof parapet crack monitors	6 monthly	Contractor
Clean out articulation spans	3 monthly	Contractor
<u>Ladders & Platforms</u>		
Inspection of portable ladders and steps	6 monthly	In-house
Inspection of fixed ladders and steps	6 monthly	In-house
Inspection of Visitor Centre roof safety rails	6 monthly	In-house
Inspection of ladders, platforms, and steps in vaults	6 monthly	In-house
Inspection of ladders and platforms in towers	6 monthly	In-house
Inspection of cradle winch platform	Annual	Contractor
<u>Safety Equipment</u>		
Inspection and testing of fall arrest anchors & equipment	6 monthly	Contractor
Tripod & hoist visual inspection	6 monthly	In-house
Tripod & hoist statutory inspection and test	Annual	Contractor
Gas detectors testing & calibration	6 monthly	Contractor
Latchway systems on chains and in towers statutory inspection	Annual	Contractor
Harnesses & lanyards safety inspection	Annual	In-house
Defibrillator functionality checks	Weekly	In-house
Defibrillator – update online checking system	Monthly	In-house
<u>Electrical Systems & Equipment</u>		
Lighting checks	2 weekly	In-house
Lighting maintenance	Annual	Contractor

Project Description of routine inspection & maintenance activities	Frequency	Contractor / In-house
Inspect & test lightning conduction system	Yearly	Contractor
PAT testing	Various	In-house
<u>Fire & Security Systems</u>		
Inspect & test fire & security alarms	6 monthly	Contractor
Inspect & test fire extinguishers	Annual	Contractor
Clean CCTV camera lenses	6 monthly	Contractor
Inspect & test cameras	6 monthly	Contractor
<u>Tolling Systems and Weighbridges</u>		
Maintenance of tolling systems	Annual	Contractor
Maintain weighbridges	Annual	Contractor
<u>Toll Booths</u>		
Check/change air-conditioning filters	3 monthly	In-house
Visually inspect point of use water heater	Annual	In-house
Visually inspect hot & cold-water pipework	Annual	In-house
Visually inspect condensation pipework and components	Annual	In-house
Check hot & cold-water quality	6 monthly	Contractor
Check operation of hot & cold-water isolation valves	Annual	In-house
Check operation of emergency lighting	Monthly	In-house
Check air-conditioning controls	6 monthly	In-house
<u>Drainage & Sewerage Systems</u>		

Project Description of routine inspection & maintenance activities	Frequency	Contractor / In-house
Check & clear toll plaza drainage	3 monthly	In-house
Empty gullies & strip drains	6 monthly	Contractor
Check Leigh Woods cesspit and empty as necessary	Monthly	In-house/ Contractor
Service Kingspan sewage pumps	6 monthly	Contractor
<u>All Buildings</u>		
Clear gutters on all buildings	6 monthly	In-house
Crib wall monitoring	3 yearly	Contractor
Service heating systems	Annual	Contractor
Legionella prevention – flushing of little used outlets	Weekly	In-house
Legionella prevention – temperature checks	Monthly	In-house
Legionella prevention – shower head cleaning	3 monthly	In-house
<u>Buildings Visitor Centre</u>		
External Lights	6 Monthly	Contractor
Automatic Reception Doors	6 Monthly	Contractor
Intercom	6 Monthly	Contractor
Floor Cleaning	6 Monthly	Contractor
Cashiers Till	As & when	Contractor
CCTV	6 Monthly	Contractor
Phone System	As & when	Contractor
Interactive Exhibits	TBC	None
Heating Systems - Underfloor Heating / Boilers / Plant room	6 Monthly	Contractor

Project Description of routine inspection & maintenance activities	Frequency	Contractor / In-house
Public / Staff Toilets	Daily	Contractor
Smoke Detectors	6 Monthly	In-house / Contractor
Emergency Lighting	Annual	Contractor
Gallery Lighting & Education Workshop Room	4 Yearly	Contractor
Maintenance of Visitor Centre	3 Monthly	In-house
Operation of Ventilation Louvres	6 monthly	In-house
<u>Hub</u>		
Clifton Hub hand dryer maintenance	Annual	Contractor
Clifton Hub air source heat pump maintenance	Annual	Contractor
<u>General Inspection & Maintenance</u>		
Clear litter and leaves	Daily	In-house
Clean traffic signs & cones	Annual	In-house
Landscaping	3 monthly	Contractor
Check & clear debris from sign store flat roof	Annual	In-house
Check all vault doors for ease of opening	Weekly	In-house
Load cell visual inspection	6 monthly	In-house
Load cell calibration check	Annual	Contractor
Hanger rod jacking kit statutory inspection and test	Annual	Contractor
Coppicing & Maintenance of Woodland compartment	Annual	Contractor

Part 3

25 YEAR MAINTENANCE CHART LOOKING BACK 2000 TO 2024

PROJECTS OVER LAST 25 YEARS - COSTS INCURRED AT PRESENT DAY COSTS			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Item No.		YEAR LAST CARRIED OUT																									
Painting	1	Painting of chains	2024-25																								
	2	Painting of Parapet Girders	2024-25																								
	3	General Maintenance Painting	2024-25																								
	4	Paint Coatings - Longitudinal Girders	2018																								
	5	Paint Coatings - Cross Girders	2016-17																								
	6	Paint Coatings - Plan Bracing	2016-17																								
	7	Paint Coatings - Tower Saddles	2018																								
	8	Paint Coatings - Tower Parapets /Cornice	2015-16																								
	9	Paint Coatings - Chains - Minor Paint	2024-25																								
Structural Safety & Monitoring	10	Footway Waterproofing & Surfacing	2011																								
	11	Stanchions - Replacements/Repair	2018																								
	12	Towers repointing of Masonry/Stonework	2016																								
	13	Abutments - repointing of masonry	2012																								
	14	Sway Bearings - Refurbishment	2022																								
	15	Parapets - Splice Strengthening	2014																								
	16	Annual Triennial Inspections inc 6Yr Vault Insps & Testing	2025																								
	17	Geological & Geotechnical Appraisals and Works	2021																								
	18	Tower Saddles - Cleaning, regreasing and painting	2021																								
Ancillary	19	Testing of Timber Cores / Ultrasonic Testing	2024																								
	20	Crib Wall Monitoring	2023																								
	21	Weather & Movement Monitoring (UKCRIC) (Automated Saddle Monitoring inc)	2024																								
	22	Aerodynamic Investigations inc Damper installation (2026) & Maintenance	2024																								
	23	Latchway System - Maintenance / Replacement	2025																								
	24	Lighthouse Protection System	2025																								
	25	Refurbishment of Anti-climb Barrier	2024-25																								
	26	SHM System - Replacement / Maintenance	2020																								
	27	Extensometer - Replacement/Refurbishment	2011																								
Major Maintenance Projects	28	Access System - Towers Replacement/Refurbishment	2017																								
	29	Access System - Leigh Woods Vaults	2023																								
	30	Access System - Inclined Slabs	2004																								
	31	Weightbeams - Maintenance	2024																								
	32	Gantry & Caddle Maintenance	2024																								
	33	CCTV System - Upgrade	2024																								
	34	Toll Barriers Maintenance	2024																								
	35	Safety & Architectural Lighting - Replacement & M&E	2025																								
	36	Toll Barriers Replacement	2023																								
Enhancement Projects	37	Footway Surfacing - Replacement	2011																								
	38	Carriageway Surfacing - Replacement	2008																								
	39	Footway Articulation Soles & Joints - Replacement	2019(N) 2022(S)																								
	40	Heritage Development Plan (Museum) - Improvements	2023																								
	41	Traffic & Pedestrian/Cycling Improvements (One Way)	2017																								
	42	Toll House Refurbishment	2019																								
	43	Operations/Maintenance Office Refurbishment	2009																								
	44	Clifton Toilets / Hub Repurposing	2023																								
		Years when works required - Costs below £100k																									
		Years when works required - Costs between £100k - £500k																									
		Years when works required - Costs over £500k																									

Part 4

25 YEAR MAINTENANCE CHART LOOKING FORWARD 2025 TO 2050

25 YEAR COST PLAN - Clifton Suspension Bridge				2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	
Item No.		YEAR LAST CARRIED OUT	FREQUENCY																											
Painting																														
	1	Bridge Refurbishment (including painting of chains)	2024-25	25 YEARS																										
	2	Contingency for above Contract (£500k) and Prof Fees	2024-25	25 YEARS																										
	3	Painting of Anchorage Chains inc Inclined Shafts	2024-25	25 YEARS																										
	4	Painting of Land Saddles	2024-25	25 YEARS																										
	5	Painting/Refurbishment of Long Hangers & Clevis Plates	-	25 YEARS																										
	6	Painting of Parapet Girders (included in Bridge Refurb)	2024-25	25 YEARS																										
	7	Painting of anchorages within vertical shafts	-	25 YEARS																										
	8	Compound Charges	2024-25	25 YEARS																										
	9	General Maintenance Painting	2024-25	Annual																										
	10																													
	11	Paint Coatings - Longitudinal Girders	2018	15 YEARS																										
	12	Paint Coatings - Cross Girders	2016-17	25 YEARS																										
	13	Paint Coatings - Plan Bracing	2016-17	25 YEARS																										
	14	Paint Coatings - Tower Saddles	2018	25 YEARS																										
15	Paint Coatings - Tower Parapets /Cornice	2015-16	25 YEARS																											
	Paint Coatings Chains - Minor Paint	2024-25	15 YEARS																											
Bridge Maintenance & Repairs																														
	16	Access System - Leigh Woods Vaults Refurbishment	2011	20 YEARS																										
	17	Footway Waterproofing & Surfacing	2011	25 YEARS																										
	18	Stanchions - Replacements/Repair	2018	10 YEARS																										
	19																													
	20	Towers repointing of Masonry/Stonework - Minor	2016	25 YEARS																										
	21	Abutments - repointing of masonry - Minor	2012	25 YEARS																										
	22	Hangers - Repair / Maintenance	2022	15 YEARS																										
	23	Sway Bearings - Refurbishment	2022	20 YEARS																										
	24																													
Structural Safety & Monitoring	25	Annual Triennial Inspections inc 6Yr Vault insps & Testing	2025	Annual																										
	26	Geological & Geotechnical Appraisals and Works	2021	5 YEARS																										
	27	Tower Saddles - Cleaning, regreasing and painting	2021	5 YEARS																										
	28	Testing of Timber Cores for Rot	2024	5 YEARS																										
	29	Crib Wall Monitoring	2023	3 YEARS																										
	30	Weather & Movement Monitoring (UKCRIC) (Automated Saddle Monitoring Inc)	2024	Annual																										
	31	Aerodynamic Investigations inc Damper installation (2026) & Maintenance	2024	10 YEARS																										
	32	Latchway System - Replacement	2025	20 YEARS																										
	33	Land Chain Vulnerability - Check & Implement	N/A	25 YEARS																										
	34	Cathodic Protection Replacement	2025	15 YEARS																										
	35	Lightning Protection System	2025	15 YEARS																										
	36	Refurbishment of Anti-climb Barrier	2024-25	25 YEARS																										
	37	SHM System - Replacement	2020	15 YEARS																										
38	Extensometer - Replacement/Refurbishment	2011	25 YEARS																											
39	Access System - Towers Replacement/Refurbishment	2024	20 YEARS																											
40	Access System - Clifton Vaults	2024	20 YEARS																											
Ancillary																														
	41	Gantry & Cradle Maintenance	2024	Annual																										
	42	CCTV System - Upgrade	2024	Annual																										
	43	Toll Barriers Maintenance	2024	Annual																										
	44	Knowledge Transfer Partnership with UoB	2025	One-off																										
45	Safety & Architectural Lighting - Replacement & M&E	2025	25 YEARS																											
46	Toll Barriers Replacement	2023	15 YEARS																											
General																														
	47	COWI Advice on additional works	2024	Annual																										
	48	Other Consultancy Fees (as required)	2024	Annual																										
	49	Contingency	2024	Annual																										
	50	Sustainability/Carbon Study	2024	Annual																										
51	Future Projects Unknowns	-	N/A																											
52	Digital Preservation	2025	Annual																											
Major Maintenance Projects																														
	53	Underdeck Gantry Replacement	1998	25 YEARS																										
	54	Abutment Drainage- Investigation, Replacement & Repairs	-	25 YEARS																										
	55	Cway Articulation Spans & Joints - Replacement	2025	15 YEARS																										
	56	Suicide Deterrent Measures	2024	Annual																										
	57																													
	58	Footway Surfacing - Replacement	2011	25 YEARS																										
	59	Carriageway Surfacing - Replacement	2008	25 YEARS																										
	60	Footway Articulation Spans & Joints - Replacement	2019(N) 2022(S)	15 YEARS																										
	61	Bridge Deck Timber Replacement	1955-59	100 YEARS																										
62	Footway Deck Timber Replacement	-	100 YEARS																											
63	Gantry Rail Replacement	2024/25	25 YEARS																											
64	Cradle Replacement	2024/25	15 YEARS																											
Enhancement Projects																														
	65	Heritage Development Plan (Museum) - Refurbishment	2024	20 YEARS																										
	66	Woodland Compartment Repurposing and Maintenance	2024	Annual																										
	67	Traffic & Pedestrian/Cycling Improvements (One Way)	-	One-off																										
	68	Lighting to Vaults	-	One-off																										
69																														
70	Toll House Refurbishment	2019	20 YEARS																											
71	Operations Office Refurbishment	2009	20 YEARS																											
Years when works required - Costs below £100k																														
Years when works required - Costs between £100k - £500k																														
Years when works required - Costs over £500k																														

Appendix 6: Investments and funds

1. INVESTMENTS, ASSETS AND LIABILITIES

1.1 At 31st December 2024, the Trust had net assets of £17.9m. These comprise:

Tangible fixed assets of £2.2m

1.2 The tangible fixed assets are simply the Trust's operating buildings, toll houses, lights etc, at their current net book values. None of these can be separated from the bridge or liquidated or have any external market value, and as such they are not relevant in considering toll levels.

Investments of £16.5m

1.3 The Trust holds investment assets for two main reasons:

1.3.1 first, to build up funds with which to pay for cyclical large-scale maintenance projects; and

1.3.2 second, as an "Emergency Repair Fund" to cover one or more substantial (but uninsurable) maintenance or failure events in a 5-year period which might require the bridge to be closed for a longer period of time (and during which time the Trust would receive no toll revenue).

1.4 The Trust's Funds are discussed in more detail below.

1.5 Most of the Trust's investments are held under an advisory mandate with Evelyn Partners. They are well-diversified across investment types and geographies and the performance of the funds and managers are externally benchmarked.

1.6 In addition, the Trust holds an investment of approximately £0.75m in the Charities Property Fund, which has a good yield and provides asset type diversification.

1.7 The Trust's investments have performed very well over the last ten years, such that two thirds of the cost of the current £8m refurbishment contract has in practice been paid for through investment gains rather than directly from tolls.

1.8 One of the major issues which now faces the Trust is the extent to which investment performance can or cannot be relied upon to contribute to the next major bridge refurbishment in 25 years' time, which is budgeted to cost over £20m (at 2049/50 prices).

Net current liabilities of £0.8m

1.9 The largest item within net current liabilities is £0.8m of prepaid unspent crossings, in principle due back to members of the public who have bought bridge cards where crossings are currently unused.

2. FUNDS

2.1 The Trust holds four types of funds for accounting purposes.

Permanent endowment

- 2.2 The permanent endowment arises from the original transfer of bridge assets upon the setting up of the Trust in 1952, at their then written down value of £60k.

Expendable endowment

- 2.3 The Trust holds an “Emergency Repair Fund” (“ERF”), currently £6.9m.
- 2.4 The value of the ERF is increased by construction inflation each year. The purpose of the ERF is to provide a contingency reserve for any large or unexpected works which might from time to time be required, and which could involve the bridge being closed for an extended period. The Trust would not only need the funds to pay for the work, but also to cover revenue deficits as it would not receive toll income during this period of closure.
- 2.5 The Trust has carried out extensive work alongside its Consulting Engineers to consider the potential risks and associated costs which might give rise to a claim against the ERF, with the aim to set it at a level which would cover:
- 2.5.1 up to two separate major maintenance events within a 5-year period; or
 - 2.5.2 a series of inter-connected events, all of which were uninsurable, unexpected and which might require the closure of the bridge for an extended period.
- 2.6 It is important to note that whilst certain external events are insurable, damage caused through wear and tear and the elapse of time is not, and it is these latter uninsurable events which the ERF seeks to cover.
- 2.7 Examples of the type of event which have been considered and might be covered by the ERF are:
- 2.7.1 severe wind events;
 - 2.7.2 a failure of an anchorage, tower or abutment;
 - 2.7.3 rock-slope erosion; and
 - 2.7.4 failures within the hangers, chain links, parapet stanchions or gantry.
- 2.8 Given the location and age of the bridge, and its historic nature and Grade 1 listing, it will be appreciated that remedial work relating to any of the above can be extremely expensive, especially if unscheduled. The ERF was last used to pay for the costs of some unexpected hanger failures in the latter half of the 2010s.

New Projects Fund

- 2.9 The Trust operates a designated New Projects Fund (“NPF”), standing at £6.7m at December 2024. This is a fund for new maintenance projects and represents the scheduled new maintenance projects currently budgeted for the next 3 years.
- 2.10 The NPF allows the Trust to proceed with commissioning essential projects as and when they are necessary knowing that the funds are available. The value of doing this can be seen in that the finance for the current £8m refurbishment project was set aside several years ago, and realised into cash and gilts in 2024, meaning that the Trust had the full amount available to pay for the project before it commenced and as such was not exposed to major equity

market fluctuations, such as occurred in April 2025 following disruption in world markets as a result of tariff changes announced in the United States and elsewhere.

Unrestricted reserves

- 2.11 The balance of funds are held as unrestricted reserves, which are invested under our mandate with Evelyn.
- 2.12 The value of this Fund at December 2024 was £4.1m, but this has reduced in recent months for the reasons described above as these investment reserves are fully exposed to market fluctuations.
- 2.13 The importance of maintaining such additional unrestricted reserves can be seen in that the Trust's investments have declined by between 10% and 25% three times since 2000 (albeit that on each occasion they eventually grew back).
- 2.14 The unrestricted reserves provide a vital cushion or buffer, which reduces the risk of the Trust becoming a forced seller at a low point in the market in order to pay for essential maintenance.

Appendix 7: Other revenue sources

- 1.1 Virtually all of the Trust's income is derived either directly from vehicle tolls or the investment reserves accrued indirectly as a result of those tolls.
- 1.2 Whilst neither the Clifton Suspension Bridge Act 1952 nor the Transport Charges &c (Miscellaneous Provisions) Act 1954 require the Trust to seek or to use other sources of funding to mitigate or supplement tolls, the Trustees periodically assess the potential for raising additional income in other ways.
- 1.3 Examples which have been considered include:

Pedestrian and/or cycling tolls

- 1.4 Whilst the Trust could in theory seek to levy a pedestrian or bicycle toll, we have not sought to do so. This is partly because the Trust does not wish to discourage walking or cycling (or indeed visitors to Bristol and to the bridge as probably Bristol's most iconic location), and partly that the cost of levying and collecting such tolls is likely to exceed the financial benefit.

Visitor centre and museum charges

- 1.5 The Trusts' visitor services are self-financing on a day-to-day basis, and we do not view it as appropriate or proportionate to add a visitor levy as a way of subsidising tolls.
- 1.6 This is in part because the Trust has an ancillary charitable object of providing information and education about the bridge to our many visitors i.e. this forms an important part of the public benefit which arises from the Trust's charitable operations.
- 1.7 Whilst charging for entry to the Museum is possible and has been periodically considered, many of Bristol's other museums do not charge for admission. The Trustees do not consider that this position is likely to change.
- 1.8 Charging for entry to the Museum would therefore undermine the Bridge's competitiveness as a visitor attraction and have the effect of reducing both visitor numbers and ancillary revenues (such as from shop souvenir purchases).
- 1.9 Our vaults and educational tours are charged for, but these incomes only go towards covering visitor-centre related costs in support of the Trust's educational objectives.
- 1.10 In addition, the Trust's existing "give what you think" initiative successfully results in donations of £25k each year which would be lost if entry was charged for.

Lights sponsorship

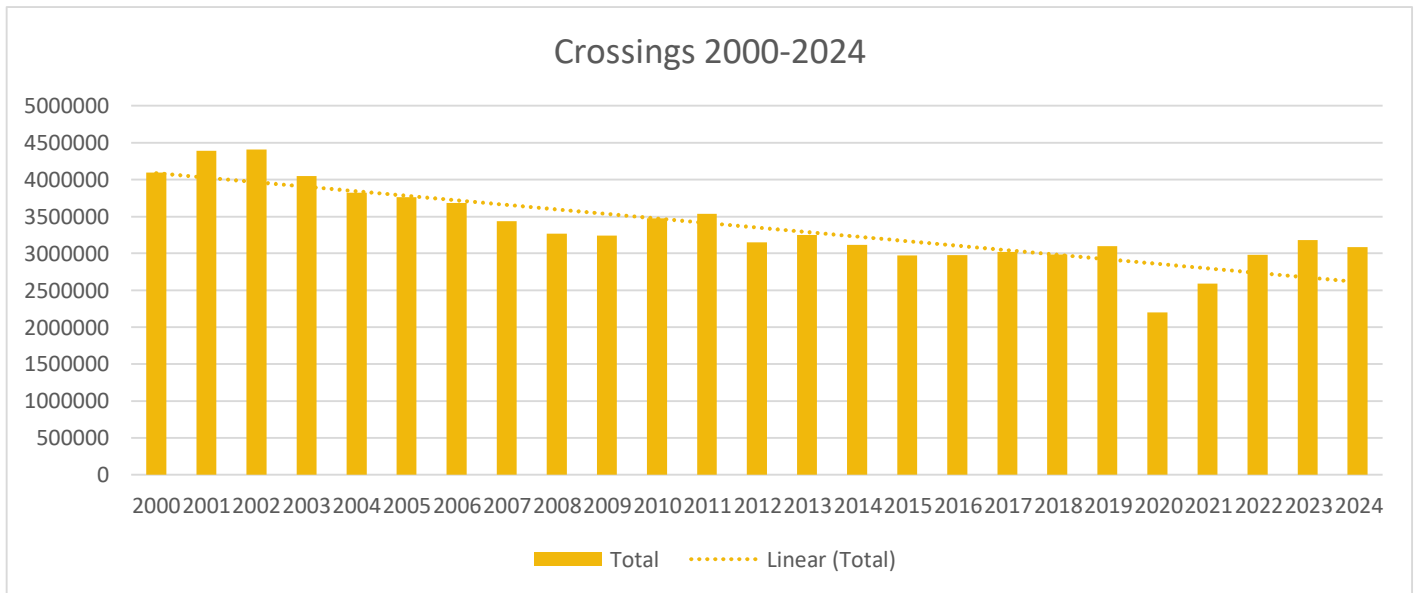
- 1.11 With the new LED lighting (including the potential for colour) becoming operational in 2026, this opens up the possibility of periodic commercial sponsorship. The Trust is examining the issues involved, but has not yet decided on a final commercial strategy.
- 1.12 It should be noted that:

- 1.12.1 planning conditions strictly limit the number of days each year in which coloured lighting may be deployed; and
 - 1.12.2 this would be a completely novel initiative for the Trust – there is no historic data available upon which robust financial modelling and projections could be based so any potential income from sponsorship would be entirely speculative.
- 1.13 In any event, the sums involved are likely to be very modest compared to the annual toll income of over £2.6m.

Other public funding

- 1.14 With the substantial pressures on national and local government finances, the Trust does not consider that there is any way of successfully applying to public bodies for toll-related finance support, not least because the 1952 Act specifically envisages that the Trustees will raise the money needed via tolls.
- 1.15 The only exception to this was the National Lottery's support for the building of the Visitor Centre, but this type of funding is not considered to be relevant or practicable on a long-term basis:
- 1.15.1 it related to visitor experience, not to subsidisation of vehicle tolls;
 - 1.15.2 the works comprised a capital project, not revenue expenditure; and
 - 1.15.3 the external funding provided covered only a portion of the relevant expenditure.

Appendix 8: Historic traffic volumes



Appendix 9: Assumed traffic levels

- 1.1 A key issue is whether the Trusts' assumption of a long-term trend of a 1% per annum traffic volume reduction (after the initial 10% step-change reduction following the up-front increase in the current toll from £1.00 to £1.50)) is appropriate to use for the period 2026 to 2050 i.e. from the assumed start date of the toll revision order to the next major refurbishment project.
- 1.2 In developing and finalising the traffic modelling assumptions, the Trust has met with representatives from the transport teams at both Bristol City Council and North Somerset Council. Their views both on overall forecast traffic levels and on specific measures or actions being taken by local or national government which might impact our forecasts have been obtained and taken into account.
- 1.3 At the present time both national and local governments, and the national and local transport teams, are seeking to promote travel by public transport. In this regard, it should be noted that the age and construction of the Bridge means that buses are too heavy to cross it, which means that the potential use of the Bridge for public transport purposes is not realistically feasible.
- 1.4 The overall policy aim is to reduce unnecessary car journeys, especially into cities such as Bristol. This is partly to manage congestion and to promote public health (for example by walking and cycling) but is especially as part of national plans to reduce carbon emissions and achieve net zero.
- 1.5 In this context it is relevant to note that approximately 30% of all UK carbon emissions are from the transport sector. The Trust should therefore expect measures to continue to be developed which seek to reduce traffic volumes over the medium term. This is a key policy priority for the current Bristol City Council executive, led by the Green Party, and the Bristol Central constituency which also has a Green MP.
- 1.6 In support of this both of our neighbouring local authorities are in the process of implementing specific measures to increase the proportion of journeys undertaken by public transport. Examples of this in Bristol include:
 - 1.6.1 the Clean Air Zone, introduced by Bristol City Council in 2022;
 - 1.6.2 the continued roll-out of Liveable (low traffic) Neighbourhoods;
 - 1.6.3 the continued extension of residents-only parking in Clifton and Redland;
 - 1.6.4 targeted strategic pricing of both road-based parking meters and city centre car parks; and
 - 1.6.5 the support of the City Council and WECA (which is the regional transport authority) for continued development of the Metrobus and similar public transport projects (see: <https://www.bristol.gov.uk/residents/streets-travel/transport-plans-and-projects/mass-transit-public-transport-plans>).
- 1.7 There are similar initiatives in North Somerset, including:
 - 1.7.1 the existing Park and Ride facilities at Long Ashton and Portishead; and

- 1.7.2 extensive bus lane initiatives impacting both the A370 (Congresbury to Bristol) and the A369 (M5 via Abbots Leigh).
- 1.8 Permission has also recently been granted for a restoration of the Portishead to Bristol rail link, which runs straight down the Avon Gorge and therefore is a direct alternative to the A369 road and, to some extent, also the Portway (Avonmouth to Clifton/Hotwells).
- 1.9 A longer-term issue is the potential for the introduction of full road-pricing based on miles travelled in place of and/or in addition to the current Fuel Duty and VAT (which represent around 50% of current fuel pump prices), not least as the transition to electric and hybrid vehicles in place of petrol/diesel vehicles continues across the longer term.
- 1.10 It should also be noted that, compared with most other UK toll bridges or ferry crossings, the Clifton toll is easily avoided:
 - 1.10.1 a round trip avoiding the tolled Mersey Tunnels would require a diversion of 52 miles each way and take 90 minutes;
 - 1.10.2 a round trip avoiding the tolled Dartford Crossing would require a diversion of 31 miles each way and take 100 minutes;
 - 1.10.3 a round trip avoiding the tolled Humber Bridge would require a diversion of 65 miles and take 75 minutes;
 - 1.10.4 a round trip avoiding the tolled Tamar Bridge would require a diversion of 23 miles and take 70 minutes; and
 - 1.10.5 a round trip avoiding the tolled Sandbanks to Swanage ferry would require a diversion of 54 miles and take 55 minutes.
- 1.11 By comparison, a round trip avoiding the Clifton bridge would be only 2.5 miles and can take less than 10 minutes in typical traffic conditions.
- 1.12 Taken together, these measures are in our view sure to continue to provide downward pressure on the traffic volumes likely to flow across the bridge, and as such the Trust sees no reason why a projected 1% decline in traffic volumes per annum over the Clifton Suspension Bridge is not the most appropriate assumption going forward.
- 1.13 No other basis for setting a traffic volume assumption emerged from the Trust's engagement with the Bristol City Council and North Somerset Council transport teams either.
- 1.14 However, the Trust has carried out some sensitivity analysis on this assumption (to model the long-term impact of different traffic volume scenarios) with the headline results set out in Appendix 12.

Appendix 10: Proposed revisions in detail

1. OVERVIEW

- 1.1 The Trust last increased the vehicle toll (to £1.00 per crossing) in 2014.
- 1.2 Whilst a further increase in the toll could have been applied for between then and now, the Trustees elected not to do so. This was partly due to the length and cost of the application process, which costs a significant sum each time – money that cannot then be spent on the Trust's core maintenance functions. The Trust intends to avoid this going forward by linking future increases in the permitted toll to inflation (see below).
- 1.3 In addition, the Trust also accepted cash payments at the toll barrier until 2023. Any toll higher than £1.00 would have necessitated at least two coins being used, not only adding to the Trust's cash collection costs, but inevitably slowing traffic flow as people searched for and inserted suitable coins. This is no longer the case.
- 1.4 The Trust's proposal is for:
 - 1.4.1 an immediate increase in the cash toll from £1.00 to £1.50 (assumed to be from 1st January 2027); and
 - 1.4.2 thereafter, an annual increase in the permitted toll calculated by reference to a suitable construction inflation index, such that the permitted toll changes annually.
- 1.5 It should be noted that calculation of the annual inflationary increase could lead to the permitted toll being set at 'odd' amounts, e.g. £1.57. In order to avoid this and to simplify matters for bridge users, the Trustees propose that the amount of the permitted toll would be rounded down to the nearest multiple of five pence. For example, if the inflation adjusted toll is calculated to be £1.57 then this would be rounded down to a permitted toll of £1.55.
- 1.6 The Trust's proposals are discussed in greater detail below, together with a summary of the assumptions which have been used in our forecasts and the reasons why the Trustees consider the proposed toll revisions to represent a proportionate, prudent and sustainable means of securing the long-term future of the Bridge.
- 1.7 The Trust's proposals only relate to revising the toll payable for use of the Bridge by vehicles. The Trustees have no plans to change the current arrangements for cyclists and pedestrians to use the Bridge at no charge.

2. ALTERNATIVES CONSIDERED

- 2.1 In developing its proposals, the Trust has considered a number of alternative approaches, including:
 - 2.1.1 three alternative core tolling scenarios whereby increases in tolls would occur less frequently or would not be linked to inflation;
 - 2.1.2 applying for only a one-off increase now, with future increases the subject of further applications in the future;

- 2.1.3 expending reserve and endowment funds instead of increasing tolls;
 - 2.1.4 recalculating the permitted toll less frequently, e.g. every three or five or ten years instead of annually;
 - 2.1.5 increasing tolls by reference to alternative inflation indices; and
 - 2.1.6 setting a different efficiency gain whereby tolls would be increased:
 - (a) 1% lower than inflation; or
 - (b) with no efficiency gain, i.e. tolls would rise at the same rate as inflation, rather than below inflation as proposed by the Trustees.
- 2.2 All of these alternatives have been given careful consideration, but have been discounted for a number of reasons. These are summarised below and set out in more detail elsewhere in this document:
- 2.2.1 all three of the alternative core tolling scenarios would fail to achieve one or more of the Trust's key operating criteria;
 - 2.2.2 applying for only a one-off immediate increase would require the Trust to incur additional expense by applying for a further toll increase in the future;
 - 2.2.3 spending reserve and endowment funds in order to artificially reduce the level of tolls charged would be highly imprudent and place the Trust's longer term financial security and stability at risk, which would conflict with the Trust's charitable status and objectives;
 - 2.2.4 recalculating the toll at less frequent intervals would result in steeper increases at each re-calculation round, compared to the modest annual increases that the Trust's proposals are likely to result in;
 - 2.2.5 alternative inflation indices would not adequately reflect the specific inflationary pressures faced by the Trust; and
 - 2.2.6 in terms of setting a different efficiency gain:
 - (a) increasing tolls at 1% below inflation would leave the Trust with almost no remaining operating reserves beyond 2050; and
 - (b) omitting the efficiency gain would provide a slightly increased level of reserves, but would also lead to higher increases in tolls for bridge users compared to the Trustees' proposals.
- 2.3 Accordingly, these alternative approaches do not form part of the Trust's current proposals and, subject to the outcome of this consultation, the Trust does not intend to proceed with them.
3. **IMMEDIATE INCREASE IN THE TOLL TO £1.50**
- 3.1 The first element of the proposal is for an immediate increase in the cash toll from £1.00 to £1.50 per crossing.

- 3.2 The rationale for increasing the toll in the immediate term is that the increase represents the level of average construction cost/earnings inflation experienced by the Trust since the tolls were last increased in 2014.
- 3.3 It is important to note that all such an immediate increase would do is to make good the cost rises we have faced over the last 10 years, i.e. it means that the actual toll charged would catch up with the increase in costs over that period. The immediate increase would neither provide for future cost increases, nor begin to build a reserve for the next major refurbishment project which is expected to cost over £20m in 2049/50.
- 3.4 Whilst the more usual measures of inflation (CPI/RPI) have totalled 35%- 40% since 2014, the Trust does not consider that these indices are relevant to the costs experienced by the Trust or the unique circumstances which apply to the Bridge.
- 3.5 For example, the CPI index includes (amongst other things) the following items in the 'basket' of costs:
- 3.5.1 food and drink;
 - 3.5.2 housing;
 - 3.5.3 recreation;
 - 3.5.4 restaurants;
 - 3.5.5 clothing;
 - 3.5.6 furniture; and
 - 3.5.7 health.
- 3.6 These items are of no relevance to the Trust's cost base.
- 3.7 Instead, the Trust's main costs (accounting for around 90% of total costs) consist of or are attributable to:
- 3.7.1 construction, repair and maintenance;
 - 3.7.2 insurance; and
 - 3.7.3 wage-related costs.
- 3.8 Of these, the greatest cost areas are construction, repair and maintenance, and insurance. This is because the vast majority of the Trust's activities relate to the management, inspection and maintenance of the physical structure of the Bridge and its ancillary buildings, and the provision of associated services.
- 3.9 The UK Government publishes certain inflation data for construction. For example, the ONS's Construction Output Price New Work Index increased by 44% between Q2 2014 and Q2 2025.
- 3.10 However, this 'official' index is focused primarily on housing which is less directly relevant to the Trust's engineering maintenance activities.

- 3.11 Of more use is the data compiled by private indices on building costs and tender prices, such as by BCIS and the UK-based Cost Modelling consultancy <https://costmodelling.com/construction-indices>
- 3.12 The Cost Modelling data show that between Q2 2014 and Q2 2025:
- 3.12.1 building tender price inflation has been 61%; and
 - 3.12.2 building cost inflation has been 49%.
- 3.13 The Trust considers that – taken together – these indices demonstrate that the proposed immediate increase in the cash toll of 50% (from £1.00 to £1.50) is appropriate and reflects the equivalent increases in prices since the last toll revision in 2014.
- 3.14 The Trust's other major cost is wages. At present the Trust has 33 employees, the majority of whom are toll attendants providing 24/7 cover every day of the year at both ends of the bridge. This staffing is expensive, but essential, primarily in terms of safeguarding the Bridge and the public, but also in periodically dealing with incidents on or otherwise relating to the Bridge.
- 3.15 Reviewing the Trust's wage-related costs since 2014, these have increased by 3.9% annually over that time, compounding to an increase of over 50%.
- 3.16 It is important to note that this increase is not attributable merely to wage increases, but also incorporates very significant increases in employers' national insurance and pension costs which the Trust (in common with most employers) has experienced over the same period and which cannot be avoided.
- 3.17 Taken together, the Trust considers that this provides a strong and robust basis for the proposed immediate 50% increase in the tolls, from £1 to £1.50.
- 3.18 Pre-pay bridge crossing cards would increase to the same extent at the same time:
- 3.18.1 to £75 for 50 crossings;
 - 3.18.2 to £127.50 for 100 crossings (retaining a 15% discount); and
 - 3.18.3 to £525 for 500 crossings (retaining a 30% discount).
4. **FUTURE INCREASES IN THE PERMITTED TOLL TO BE SET ACCORDING TO AN AGREED CONSTRUCTION INFLATION INDEX**
- 4.1 The second element of the Trust's proposal is that future increases in the permitted toll would be based on an agreed construction cost index. For modelling purposes, it has been assumed that the first of these would apply from 1st January 2028, with further increases annually beyond that date.
- 4.2 There are several reasons for this proposed approach, which were helpfully summarised in 2014 during a Department for Transport consultation on proposals to streamline the 1954 Act toll revision process.
- 4.3 In summary, the DFT's 2014 consultation paper set out the view that:
- “the procedures for the revision of tolls are cumbersome and time consuming. The very existence of such controls arguably deters rather than inspires long term investment in the undertaking to ensure its optimum efficiency. In addition, as the

costs of this process are likely to be passed on to users through higher than necessary tolls, it is arguable that the current process is often not beneficial for users either. This process also places a modest burden on central Government resources to the cost of the taxpayer”¹

- 4.4 The Trust agrees with this assessment, which still holds true today.
- 4.5 Following the consultation, the Government issued a further paper which summarised the responses received and provided the Government’s view.² This stated that the Government’s recommended approach was to *“allow undertakers to increase tolls by up to 1% below inflation (RPI) on no more frequently than an annual basis without an application being required to the Secretary of State”*.
- 4.6 Whilst this policy initiative was not taken forward into new legislation due to lack of parliamentary time, the Trust believes that the underlying rationale in support of this principle – that future annual increases in the permitted toll should be linked to inflation – still holds good.
- 4.7 This approach – to link future increases in the permitted toll to inflation – forms the core of the toll revision proposals that the Trust is now bringing forward.
- 4.8 The Trust is proposing that the inflationary increase be set:
- 4.8.1 at 0.5% below inflation rather than 1%; and
- 4.8.2 using a construction inflation index rather than RPI or CPI.

Efficiency gain target of 0.5% below inflation

- 4.9 In relation to the proposed level at 0.5% below inflation, the Trust has noted carefully that the DfT’s proposed approach set out in their response to the 2014 consultation was for operators to aim to increase tolls by 1% less than RPI.
- 4.10 However, the Trust’s detailed financial modelling shows that working to this lower level (1% below inflation rather than 0.5%) would materially increase the financial risk to the Trust and the Bridge. This is because of the unique circumstances and costs involved in operating and maintaining the Bridge, and especially the unavoidable need for a specific reserve of over £20 million (at 2050 prices), to pay for the next major refurbishment project.
- 4.11 The deadline by which this project must be carried out (in 2049/50) is largely fixed because of the maximum operational life of both the paint and the lights. If refurbishment work (especially renewal of the paint) is deferred beyond this time then the continued deterioration would begin to allow damage to the original ironwork and, ultimately, compromise severely the structural integrity of the Bridge.

¹ <https://assets.publishing.service.gov.uk/media/5a7c0f2f40f0b645ba3c6731/simplifying-process-revising-tolls.pdf>

² <https://assets.publishing.service.gov.uk/media/5a7eeb08e5274a2e87db2ba2/consultation-response.pdf>

- 4.12 In particular, if increases in the permitted toll at 1% below inflation are assumed, whilst the 2049/50 major refurbishment project would still (just) be affordable, this would leave the Trust with almost no remaining residual unrestricted operating reserves to defray the costs of ongoing routine maintenance beyond 2050. This would mean that the Trust would also be left extremely close to breaching the Emergency Repair Fund.
- 4.13 The sensitivity analysis in Appendix 12 further demonstrates that availability of even this minimal residual reserve is by no means guaranteed if other changes over time – such as to traffic volumes or investment returns – diverge from the assumptions incorporated into the Trust's cost and income forecast model.
- 4.14 Working on this basis, it is the Trust's firm view that this outcome would not be acceptable as part of responsible long-term planning for trustees of a registered charity with clear legal maintenance obligations and responsibility for an historic engineering asset of international importance.

Selection of an appropriate construction inflation index

- 4.15 The Trustees propose that future annual increases in the permitted toll should be calculated using a construction inflation index, with the calculation formula set out in the toll revision order. The Trustees' current intention is that the reference month for the calculation would be December in each year, with the increase then coming into effect on 1st April the following year.
- 4.16 The Trust has considered whether a sufficient reserve fund could be achieved by applying for a fixed increase now, and another in (say) 10 years' time. Whilst possible in principle, the Trustees are not supportive of this route, partly because it requires the Trust to be able to forecast accurately future inflation and partly because of the toll revision application costs involved, which are significant.
- 4.17 This lack of "day-one" certainty can easily be seen in that similar toll revision applications of other undertakers prior to 2020 were based on inflation assumptions of 2% or so, but the disruption to world financial markets arising from a combination of coronavirus and the conflict in Ukraine – and the subsequent inflation "spike" – has already rendered their inflation forecasts redundant. The Trust is aware of at least one undertaker which has recently been obliged to reapply for a further toll revision order as a result of this divergence between the assumed and actual cost inflation.
- 4.18 Using an inflation index and linking future increases in the permitted toll to this avoids these problems.
- 4.19 Whilst the Trust considers that use of either the BCIS index or the Cost Modelling index (see above) would be most representative of the actual cost inflation experienced by the Trust, the Trust is mindful that these are private indices prepared by private companies and their long-term publication across the length of the modelled period cannot necessarily be guaranteed.
- 4.20 Consequently, the Trust is proposing that the ONS's Construction Output Price Index (All New Work, Repair and Maintenance) should be used as the applicable index. This captures most of the relevant categories of costs applicable to the Trust's operations, and as an official inflation index published on behalf of the government it offers full public transparency.

Appendix 11: Modelling assumptions

- 1.1 The following key assumptions have been used within the Trust's income and cost forecast model:
 - 1.1.1 A modelling period of 25 years (from 2025 to 2050)
 - 1.1.2 Construction cost inflation of 3.75% per year. This represents the actual average tender/building price inflation experienced by the Trust over the last 12 years.
 - 1.1.3 Toll inflation of 3.25% per year. This represents 3.75% as the actual average tender/building price inflation experienced by the Trust over the last 12 years (i.e. construction inflation), less 0.5% as an efficiency gain target. Cumulative inflation indexation is applied to the permitted toll for each year of the modelling period.
 - 1.1.4 Wage/salary inflation (including on-costs such as national insurance and pension) of 4%. This is the average of the pay-cost inflation experienced by the Trust over the last 12 years.
 - 1.1.5 RPI/CPI of 3.4%/2.5% respectively for inflation in non wage-related and construction cost areas, and also in relation to other income, such as from visitor services. Whilst the Trust notes that the Bank of England's inflation target is 2%, we view it as optimistic to suggest that the UK economy fully returns to this.
 - 1.1.6 The expected return on the Trust's investments. This has been selected following consultation with the Trust's investment advisors, Evelyn Partners, who have significant experience of the Trust's unique circumstances and portfolio. They have recommended that we use their "Medium Risk Strategy 5" as a suitable model, such that we project a 4.5% target total return rate based on an investment split of 65% equities and 35% bonds and fixed interest. This 4.5% rate has been adopted in the model, split into an income return of 2.2% (the current level achieved by the Trust) and a 2.3% capital return.
 - 1.1.7 An Emergency Repair Fund ("ERF"), which it is essential remains untouched except for the emergency uses it was established for. The value of the ERF is currently £6.9m which is then increased by reference to the assumed construction inflation incorporated into the model.
 - 1.1.8 Projected traffic volumes with an immediate initial step-decline of 10%, followed by an annual reduction of 1% each year thereafter.

Appendix 12: Sensitivity analysis

- 1.1 In addition to the four core tolling scenarios, the Trust has explored the sensitivity of the core outcomes to changes in the assumptions which underpin the cost and income forecast model.
- 1.2 The sensitivity cases explored together with a summary of their impact on the financial outcomes are set out in the table below.

ASSUMPTION	COMMENT
Construction or wage inflation ranging from 1% to 10%	<p>Higher than expected inflation is a major problem under all the first three scenarios, almost inevitably meaning that a new toll revision application would be needed during the modelling period.</p> <p>Under scenario 4 this would not be needed since the toll changes mirror inflation ensuring that revenues and costs remain aligned.</p>
Traffic volumes decline faster than expected (say 2% each year)	<p>Major impact on first three scenarios.</p> <p>Under scenario 4 the 2049/50 project would still be affordable without breaching the ERF, but there would not be sufficient reserves for ongoing operations after model year 2050.</p> <p>The Trustees would need to mitigate this by making a further toll revision application in, say, 2040 once the divergence between the modelled and actual trends has become evident.</p>
Traffic volumes hold up better than expected (say 10% step-decline but no change thereafter)	<p>Scenarios 1 and 2 are still not viable.</p> <p>In Scenario 3 the 2049/50 project is (just) affordable, but there would be no residual operating reserves available after 2050.</p> <p>In Scenario 4 there would be higher reserves than projected which would provide a modest financial 'cushion' and mitigate other identified risks, such as the uncertainty of investment returns.</p> <p>However, based on the previous trends to date, the Trustees do not consider that this sensitivity case is likely to occur in practice.</p>
Capital growth lower than expected (say 0%)	<p>Scenarios 1 to 3 are not financially viable.</p> <p>The financial viability of Scenario 4 would be affected and the Trustees would potentially need to mitigate this by making a further toll revision application in, say 2040, once the divergence between the modelled and actual capital returns has become evident.</p>
Capital growth higher than expected (say 5%)	<p>Scenarios 1 to 2 would still not be financially viable.</p> <p>Under Scenario 3, the 2049/50 major refurbishment project may be (just) affordable, but there would be no residual operating reserves available after 2050.</p>

	<p>Scenario 4 would deliver higher reserves than projected, which would provide a modest financial 'cushion' and mitigate other identified risks, such as the uncertainty of investment income returns and overall traffic levels.</p>
<p>Toll inflation 1% below construction inflation (rather than 0.5% below)</p>	<p>Scenarios 1 to 3 remain unviable.</p> <p>For Scenario 4, the 2049/50 major refurbishment project is (just) affordable, but less than £0.5m of free reserves would remain available at the end of the modelling period.</p> <p>i.e. there would be no money available for projects beyond 2050 and the free reserves would have been depleted to such an extent that the ERF is at high risk of being breached.</p> <p>The Trustees do not consider that taking this sensitivity case through into the proposed toll revision would be prudent or appropriate because of the increased financial risks to the Trust and the long-term financial security of the Bridge.</p>

Appendix 13: Summary projections

Item	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030
	£	£	£	£	£	£
Toll Rate:	1.00	1.00	1.50	1.55	1.59	1.64
Total Traffic Volumes:	3,052,154	3,021,633	2,719,469	2,692,275	2,665,352	2,638,698
Total Income	2,824,500	2,818,570	3,680,272	3,876,950	4,001,356	4,146,217
Total Income-related Costs	163,000	177,718	218,969	228,878	236,833	248,382
Net Toll Income	2,661,500	2,640,852	3,461,303	3,648,071	3,764,524	3,897,835
Net Costs incl. inflation	5,833,092	3,074,410	3,027,550	3,229,489	2,693,874	3,066,883
Cash Surplus	-3,171,592	-433,557	433,753	418,582	1,070,650	830,952
Opening Emergency Repair Fund	7,251,088	7,523,003	7,805,116	8,097,808	8,401,476	8,716,531
Opening Investment Reserves excess over ERF	6,948,913	3,376,997	2,902,055	3,299,357	3,686,034	4,744,266

Item	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	Forecast 2036
	£	£	£	£	£	£
Toll Rate:	1.69	1.75	1.80	1.86	1.91	1.97
Total Traffic Volumes:	2,612,311	2,586,188	2,560,326	2,534,723	2,509,376	2,484,282
Total Income	4,292,023	4,460,126	4,635,832	4,787,773	4,934,000	5,117,796
Total Income-related Costs	259,050	273,645	288,781	297,283	311,884	328,093
Net Toll Income	4,032,973	4,186,481	4,347,051	4,490,490	4,622,116	4,789,703
Net Costs incl. inflation	2,498,222	2,627,940	4,170,810	2,943,996	3,000,797	4,516,501
Cash Surplus	1,534,751	1,558,541	176,241	1,546,494	1,621,319	273,201
Opening Emergency Repair Fund	9,043,401	9,382,528	9,734,373	10,099,412	10,478,140	10,871,070
Opening Investment Reserves excess over ERF	5,577,059	7,144,252	8,766,912	9,007,697	10,650,496	12,402,133

Item	Forecast 2037	Forecast 2038	Forecast 2039	Forecast 2040	Forecast 2041	Forecast 2042	Forecast 2043
	£	£	£	£	£	£	£
Toll Rate:	2.04	2.10	2.16	2.23	2.30	2.37	2.44
Total Traffic Volumes:	2,459,439	2,434,845	2,410,496	2,386,392	2,362,528	2,338,902	2,315,513
Total Income	5,230,808	5,366,552	5,516,509	5,665,889	5,774,351	5,912,429	6,035,074
Total Income-related Costs	336,548	349,812	365,943	381,572	387,521	399,815	408,206
Net Toll Income	4,894,260	5,016,739	5,150,566	5,284,318	5,386,830	5,512,614	5,626,868
Net Costs incl. inflation	3,716,741	3,336,428	3,638,998	5,733,168	4,619,965	5,561,789	3,979,923
Cash Surplus	1,177,519	1,680,312	1,511,568	-448,850	766,865	-49,175	1,646,944
Opening Emergency Repair Fund	11,278,735	11,701,688	12,140,501	12,595,770	13,068,112	13,558,166	14,066,597
Opening Investment Reserves excess over ERF	12,809,237	14,144,910	16,019,527	17,758,273	17,524,902	18,522,989	18,702,119

Item	Forecast 2044	Forecast 2045	Forecast 2046	Forecast 2047
	£	£	£	£
Toll Rate:	2.52	2.60	2.68	2.76
Total Traffic Volumes:	2,292,358	2,269,435	2,246,740	2,224,273
Total Income	6,198,464	6,358,128	6,531,208	6,697,883
Total Income-related Costs	425,454	441,444	460,064	476,798
Net Toll Income	5,773,010	5,916,684	6,071,145	6,221,085
Net Costs incl. inflation	4,447,338	4,146,577	4,750,788	5,025,903
Cash Surplus	1,325,672	1,770,107	1,320,356	1,195,182
Opening Emergency Repair Fund	14,594,094	15,141,373	15,709,174	16,298,268
Opening Investment Reserves excess over ERF	20,613,126	22,231,776	24,334,376	26,017,008

Item	Forecast 2048	Forecast 2049	Forecast 2050	Forecast 2051
	£	£	£	£
Toll Rate:	2.85	2.94	3.03	
Total Traffic Volumes:	2,202,030	2,180,010	2,158,210	
Total Income	6,865,304	7,032,405	6,975,316	
Total Income-related Costs	493,265	509,213	473,753	
Net Toll Income	6,372,039	6,523,192	6,501,564	
Net Costs incl. inflation	5,349,993	15,620,740	17,504,755	
Cash Surplus	1,022,046	-9,097,548	-11,003,192	
Opening Emergency Repair Fund	16,909,453	17,543,558	18,201,441	18,883,995
Opening Investment Reserves excess over ERF	27,601,745	29,036,952	20,143,629	9,086,746

2051 not yet budgeted for