



# Humber Bridge Board

Kevin Moore  
Chief Executive and Clerk to the Board

Ferriby Road, Hessle, HU13 0JG

Fax. (01482) 640838  
Text phone (01482) 647161

Contact: Louise Hawkins  
Telephone: (01482) 613410  
Fax: (01482) 614804  
Email: Louise.Hawkins@hullcc.gov.uk  
Text phone: (01482) 300349  
Date: Friday, 20 September 2019

**Dear Sir/Madam,**

## **Humber Bridge Board**

The next meeting of the **Humber Bridge Board** will be held at **09:30** on **Friday, 27 September 2019** in **Humber Bridge Board Administration Building**.

The Agenda for the meeting is attached and reports are enclosed where relevant.

Please Note: It is likely that the public, (including the Press) will be excluded from the meeting during discussions of exempt items since they involve the possible disclosure of exempt information as described in the provisions of the Board's standing orders.

Yours faithfully,



**Louise Hawkins**  
Democratic Services Officer  
on behalf of the Clerk to the Board

## Humber Bridge Board

To: **Directors of Humber Bridge Board:** *(e-mailed unless otherwise stated)*

Councillor Sean Chaytor, Hull City Council *(hard copy)*  
Councillor Gary McMaster, East Riding of Yorkshire Council *(hard copy)*  
Councillor Richard Hannigan, North Lincolnshire Council  
Councillor Stan Shreeve, North East Lincolnshire Council  
Lord C Haskins, Humber LEP *(hard copy)*  
Mr Peter Drennon, Humber LEP

**Deputy Directors of the Humber Bridge Board:** *(e-mailed unless otherwise stated)*

Councillor Stephen Brady, Hull City Council  
Councillor Chris Matthews, East Riding of Yorkshire Council  
Councillor Rob Waltham, North Lincolnshire Council  
Councillor Stewart Swinburn, North East Lincolnshire Council  
Mr Kishor Tailor, Chief Executive Humber LEP  
Mr Richard Kendall, Humber LEP

**Officers:** *(e-mailed unless otherwise stated)*

Kevin Moore, Chief Executive, Humber Bridge Board  
Andrew Arundel, Head of Infrastructure, Humber Bridge Board  
Fay Baker, Head of Operations  
Andy Dalby, Head of Finance and Commercial  
Sharon Phillipi, HR Manager  
Stephen Turner, Solicitor, Hull City Council *(hard copy)*  
Louise Hawkins, Democratic Services Officer, Hull City Council *(hard copy (x3))*

**For Information:** *(e-mailed unless otherwise stated)*

Matt Jukes, Chief Executive, Hull City Council  
Caroline Lacey, Chief Executive, East Riding of Yorkshire Council  
Denise Hyde, Chief Executive, North Lincolnshire Council  
Rob Walsh, Chief Executive, North East Lincolnshire Council  
Di Baxter, PA to the Chief Executive, Humber Bridge Board

**Humber Bridge Board**

**AGENDA**

**09:30 on Friday, 27 September 2019**

**Humber Bridge Board Administration Building**

**A G E N D A**

**PROCEDURAL ITEMS**

**1 Apologies**

To receive apologies for those Members who are unable to attend the meeting.

**2 Declarations of Interest**

To remind Directors of the need to record the existence and nature of and personal and prejudicial interest in items on the agenda in accordance with the Director Code of Conduct as set out in Schedule 2 to the Board's Standing Orders.

**3 Minutes of the Meeting held on 26 July 2019**

**7 - 14**

To approve the minutes as a true and correct record.

**NON-EXEMPT ITEMS**

**4 Annual Governance Statement Report**

**15 - 24**

To approve the Annual Governance Statement.

**5 Interim External Auditor's Report**

**25 - 28**

To receive the interim report of the External Auditor.

**6 Finance**

**29 - 38**

To provide the Directors with the monthly traffic volume and toll income information.

**7 Health and Safety**

**39 - 46**

To receive an update on health and safety at the Bridge Board.

**8 Internal Audit Annual Report 18-19**

**47 - 52**

To provide the Board with the findings of the internal audit process.

- |           |  |                 |
|-----------|--|-----------------|
| <b>9</b>  | <b>ICT Policy</b><br>To approve the amended policy.  | <b>53 - 64</b>  |
| <b>10</b> | <b>CCTV Policy</b><br>To approve the amended policy.   | <b>65 - 80</b>  |
| <b>11</b> | <b>Safety Barrier on the Bridge – Feasibility Study</b><br>To consider the first stage of a feasibility study and to determine the Board's next steps. | <b>81 - 104</b> |
| <b>12</b> | <b>Items to be Raised at the Next Meeting (Non Exempt)</b><br>To raise any matters of non-exempt business.   |                 |
| <b>13</b> | <b>Exclusion of the Press and Public</b><br>To consider the exclusion of the press and public for the items listed as exempt.                          |                 |

## **EXEMPT ITEMS**

- |           |   |  |
|-----------|---|--|
| <b>14</b> | <b>Engineering and Infrastructure Update</b> <ul style="list-style-type: none"><li>• Information relating to the financial or business affairs of any particular person (including the authority holding that information);</li></ul> |  |
| <b>15</b> | <b>Review of Toll System</b> <ul style="list-style-type: none"><li>• Information relating to the financial or business affairs of any particular person (including the authority holding that information);</li></ul>                 |  |
| <b>16</b> | <b>Wykeland Update</b><br>To provide an update on the current position in relation to the equalisation agreement.   |  |
| <b>17</b> | <b>MS3 Wayleave</b> <ul style="list-style-type: none"><li>• Information relating to the financial or business affairs of any particular person (including the authority holding that information);</li></ul>                          |  |

**18 Items to be raised at the Next Meeting (Exempt)**

To raise any matters of exempt business.



## HUMBER BRIDGE BOARD

26 JULY 2019

### PRESENT

Councillor Sean Chaytor (Hull City Council) (Chair)  
Councillor Richard Hannigan (North Lincolnshire Council)  
Councillor Gary McMaster (East Riding of Yorkshire Council)  
Councillor Stan Shreeve (North East Lincolnshire Council)  
Peter Drenon (Humber LEP)  
Lord Haskins (Humber LEP)

### IN ATTENDANCE

Caroline Lacey (Chief Executive, East Riding of Yorkshire Council and Interim Clerk to the Board)  
Fay Baker (Head of Operations)  
Andy Dalby (Head of Finance and Commercial)  
Sharon Phillippi (Human Resources Manager)  
Steven Turner (Solicitor, Hull City Council)  
Louise Hawkins (Democratic Services, Hull City Council)

<b>Minute No.</b>	<b>Report No.</b>	<b>Business</b>	<b>Action by</b>
489		<b>APOLOGIES</b>  No apologies were received.	
490		<b>DECLARATIONS OF INTEREST</b>  No declarations of interest were received.	
491		<b>MINUTES OF THE MEETING HELD ON 24 APRIL 2019</b>  <b>Agreed</b> – that the minutes of the meeting held on 24 April 2019 be approved as a true and correct record.	
492		<b>MINUTES OF THE MEETING HELD ON 31 MAY 2019</b>  <b>Agreed</b> – that the minutes of the meeting held on 31 May 2019 be approved as a true and correct record.	
493		<b>MINUTES OF THE MEETING HELD ON 21 JUNE 2019</b>  <b>Agreed</b> – that the minutes of the meeting held on 21 June 2019 be approved as a true and correct record.	
494	265	<b>MANAGEMENT ACCOUNTS</b>  The Head of Finance and Commercial submitted a report	

which provided the Board with information relating to the traffic volumes and toll income for May 2019.

The Board was informed that –

- i. May had been a good month in relation to traffic volumes. The income had increased by 1.8% from the same period in the previous year;
- ii. The numbers of vehicles within classes 1 to 3 had continued to increase however the number of commercial vehicles had continued to reduce;
- iii. The trend for June 2019 was very similar to that of May;
- iv. The number of vehicles crossing the Bridge in July was nearing to 900,000 which had never been reached before, and
- v. There was a possibility that maintenance works to be carried out on the Bridge would impact on traffic flows.

A discussion took place around the volumes of traffic that were crossing the Bridge which was an indication of the importance of the Bridge to the regional economy. It was felt that further information about why people were crossing the Bridge was required to inform long term planning in relation to the regional economy and infrastructure.

The most recent traffic survey that had been undertaken had indicated that the majority of traffic crossing the bridge was coming from Grimsby.

The Head of Finance and Commercial informed the Board that –

- i. A year to date saving of 7.7% had been achieved;
- ii. The capital programme was significantly ahead of schedule, and
- iii. The Board had sufficient funds to cover the September loan payment.

A discussion took place around the long term maintenance that was required to the Bridge and whether the Board would need to borrow money to undertake the work. It was confirmed that the Head of Engineering and Infrastructure had commissioned a feasibility study in relation to the painting of the bridge which would assist in planning the capital project programme.

The Head of Finance and Commercial advised the Directors that the Board did not currently need to borrow any funding. It was suggested that financing options needed to be considered as it could be beneficial to borrow



		<p>money now to take advantage of the low interest rates that were available.</p> <p>The Board queried whether there was a scenario in which borrowing would not be required to fund the major repairs and maintenance projects that would need to be carried out in the future. The Head of Finance and Commercial explained that the forecasts for a range of scenarios had been looked at in conjunction with options for the maintenance programme as the safety of the Bridge was the priority.</p> <p>A discussion took place around what would happen if the Bridge became toll free. The Head of Operations noted that when the Severn Bridge had gone 'Toll Free', Highways England had not received any additional funding.</p> <p><b>Agreed –</b></p> <ol style="list-style-type: none"> <li>a. That the report be noted, and</li> <li>b. That discussions take place with the relevant partners in relation to the traffic volumes crossing the bridge and possible reasons for the increase in domestic vehicles and the reduction in commercial vehicles and that a report is submitted to a future meeting which outlines the outcome of the discussions and also outlines the findings of the previous road traffic surveys.</li> </ol>	(b)CL/SC
495	266	<p><b>HEALTH AND SAFETY</b></p> <p>The Head of Engineering and Infrastructure submitted a report which provided the Board with an update on progress and status of health, safety and welfare at the Humber Bridge Board.</p> <p>The Board was informed that there had been no major incidents and the majority of safety issues were related to motorists.</p> <p>It was noted that Officers were working with the adjacent Highway Authority's to review advance signage on the approaches to the bridge to ensure that drivers were aware that they would be required to pay a toll and that they were in the correct lane.</p> <p>The Interim Clerk explained that the Board currently had a hybrid tolling system in place which was unique to the Humber Bridge. A second generation system was being explored and a report which outlined possible high level options would be submitted to the Board.</p>	

		<p>It was confirmed that the Board had a maintenance only contract in place with SICE for the current tolling system. The financial information that was possible to derive from the current system was very limited and the figures had to be manually manipulated as the system did not take into account the discount for HumberTags.</p> <p><b>Agreed –</b></p> <ul style="list-style-type: none"> <li>a. That the report be noted, and</li> <li>b. That a report be submitted to a future meeting which outlines possible options for the development of the current tolling system.</li> </ul>	(b)Head of Operations
496	267	<p><b>KEY PERFORMANCE INDICATORS (KPIs)</b></p> <p>The Head of Finance and Commercial submitted a report which provided the Board with an update on the KPIs.</p> <p>The Board was informed that –</p> <ul style="list-style-type: none"> <li>i. That the financial KPIs were on target;</li> <li>ii. As the major works were completed the cashflow would regulate;</li> <li>iii. The number of days lost to sickness absence were slightly higher than the national average. The Human Resources Manager explained that sickness absence was not a major issue and the Board had the effective policies and procedures in place to manage absence from work;</li> <li>iv. The figures in relation to customer satisfaction and call waiting times were not yet available, and</li> <li>v. The targets for the Operations department had been made more challenging.</li> </ul> <p><b>Agreed –</b></p> <ul style="list-style-type: none"> <li>a. That the Key Performance Indicators be noted, and</li> <li>b. That the local authority averages for sickness absence be included within future reports to provide a comparator.</li> </ul>	(b)Head of Finance and Commercial
497	268	<p><b>RISK REGISTER</b></p> <p>The Head of Finance and Commercial submitted the Risk Register for the Board to approve.</p> <p>The Board discussed the risk tracking and what had happened to cause the shift in a number of the risks identified. The Head of Operations explained that the Senior Management Team had undertaken a review of the</p>	

		<p>register and some of the risks had been rationalised.</p> <p>It was suggested that the risk in relation to Brexit needed to be revisited.</p> <p><b>Agreed</b> – that the Risk Register be reviewed and submitted to a future meeting for approval.</p>	
498	269	<p><b>ANNUAL EMPLOYEE SURVEY</b></p> <p>The Human Resources Manager submitted a briefing note which provided the Board with a snapshot into the results of the Annual Employee Survey.</p> <p>The Board was informed that -</p> <ul style="list-style-type: none"> <li>i. Employees had been given a month to complete the survey and that the questions had been based around the Board’s core values. The questions had changed from previous surveys so it was not possible to make a direct comparison;</li> <li>ii. A positive completion rate had been achieved however it was hoped that this could be improved upon next year;</li> <li>iii. The results of the survey indicated that the Board had a strong safety and no blame culture; that staff felt happy to raise issues and concerns, and that there was an appreciation of the Bridge’s impact on the region, and</li> <li>iv. The survey responses had been anonymous.</li> </ul> <p>The Board commented on the high response rate and that it was an indication that the new structures were having a positive impact on the workforce.</p> <p>It was confirmed that the Board used the NJC pay scales and Hull City Council was used for benchmarking in relation to job evaluation.</p> <p><b>Agreed</b> – that the briefing note be noted.</p>	
499	270	<p><b>MENTAL HEALTH AND WELLBEING IN THE WORKPLACE</b></p> <p>The Human Resources Manager submitted a briefing note which provided the Board with information about mental health and wellbeing in the workplace and the Time to Change employer pledge.</p> <p>The Directors were informed that the Board was planning to sign up to the Time to Change pledge and was looking at how it dealt with mental health in the work place.</p>	

		<p>The Board had drafted an action plan which would need to be submitted for approval before the pledge could be signed.</p> <p><b>Agreed –</b></p> <ol style="list-style-type: none"> <li>a. That the Board supports the intention to sign up to the Time to Change pledge, and</li> <li>b. That a meeting is arranged between the Chair of the Board and a representative from Mind to sign the pledge and show the commitment from the Board Directors.</li> </ol>	(a-b)SP
500		<p><b>ITEMS OF BUSINESS TO BE RAISED AT THE NEXT MEETING (NON-EXEMPT)</b></p> <p>No items of business were raised.</p>	
501		<p><b>EXCLUSION OF THE PRESS AND PUBLIC</b></p> <p><b>Agreed -</b> that in accordance with the provisions of the Board's Standing Orders 1.11 and 1.12 the public (including the press) be excluded from the meeting for the following items of business, minutes 501 to 503 as the reports and appendices contain information in relation to relating to the financial and business affairs of the Board and others and the public interest in making decisions in relation thereto outweighs the public interest in transparency in decision making.</p>	
502		<p><b>WYKELAND EQUALISATION AGREEMENT</b></p> <p>The Head of Finance and Commercial provided the Board with a verbal update in relation to the Wykeland Equalisation Agreement.</p> <p><b>Agreed –</b> that a meeting takes place between the Chair of the Board, the Head of Finance and Commercial, the Interim Clerk to the Board and a representative from Wykeland to progress the negotiations.</p>	CL/SC
503		<p><b>URGENT ITEM</b></p> <p><b>Agreed –</b> that the following item 'MS3 Agreement Update' be agreed to be taken as an urgent item as there had been a development in the situation since the previous update.</p>	

504		<p><b>MS3 UPDATE</b></p> <p>The Board's Legal Advisor provided the Director's with an update in relation to the current relationship with MS3.</p> <p><b>Agreed</b> – that the Board delegates authority to the Chair, Clerk and Legal Advisor to respond to any legal action taken against the Board and that all Directors are informed of any developments and the response provided on behalf of the Board.</p>	CL/ST/SC
505		<p><b>ITEMS OF BUSINESS TO BE RAISED AT THE NEXT MEETING (EXEMPT)</b></p> <p>No items of business were raised.</p>	

Unconfirmed





# HUMBER BRIDGE

27 September 2019

## ANNUAL GOVERNANCE STATEMENT

### Report of the Interim Clerk

This item is not exempt  
Therefore exempt reasons are not applicable.

#### 1. Purpose of the Report and Summary

- 1.1 To present the draft Annual Governance Statement (AGS) for the year to 31 March 2019, (Appendix 1), for comment and approval by the Committee.

#### 2. Recommendations

- 2.1 That Directors inform officers of any amendments they consider should be made to the Statement at this stage.
- 2.2 Approve the draft Statement, subject to any necessary amendments for matters arising up to the date of formal sign-off by the Interim Clerk and the Chair of the Board.

#### 3. Reasons for Recommendations

- 3.1 Due to the nature of its operations, the Board's governance framework largely mirrors the arrangements in local authorities and the Board is working towards full compliance with guidance set out in the CIPFA/SOLACE Framework: Delivering Good Governance in Local Government, insofar as that framework can be applied. The publication of an Annual Governance Statement is a mandatory requirement of the Accounts and Audit Regulations.

#### 4. Background

- 4.1 The Board is responsible for ensuring that its business is conducted in accordance with the law and proper standards, and that its assets are safeguarded and properly accounted for, and used economically, efficiently and effectively.

4.2 The AGS describes the responsibilities of the Humber Bridge Board, and the governance arrangements in place to ensure that the Board was able to discharge those responsibilities during 2018-19.

5. Issues for Consideration

5.1 The AGS should cover the year of the accounts, i.e. year ending 31 March 2019, but also reflect any material changes up to the date it is signed, (in the same way that the accounts would be adjusted for material post balance sheet events).

5.2 The 2017/18 external auditor's Audit Completion Report made a number of significant recommendations. The AGS sets out how the Board has made progress against these recommendations.

6. Options and Risk Assessment

6.1 Not applicable. The Board is working towards full compliance with guidance set out in the CIPFA/SOLACE Framework. The publication of an Annual Governance Statement is a mandatory requirement of the Accounts and Audit Regulations.

Contact Officer: Caroline Lacey, Interim Clerk

Officer Interests: None

Background Documents: - A list of background documents must be included. These documents are then available (if not exempt) for public inspection.



## Implications Matrix

**This section must be completed and you must ensure that you have fully considered all potential implications**

This matrix provides a simple check list for the things you need to have considered within your report

If there are no implications please state

I have informed and sought advice from HR, Legal, Finance, and Operations and any other key stakeholders.	Yes
Value for money considerations have been accounted for within the report.	Yes
I have included any procurement/commercial issues/implications within the report.	Yes
I have considered the potential media interest in this report and liaised with the Board's PR advisors to ensure that they are briefed to respond to media interest.	Yes
I have included any equalities and diversity implications within the report and where necessary I have completed an Equalities Impact Assessment and the outcomes are included within the report.	Yes
Any Health and Safety implications are included within the report.	Yes
Any human rights implications are included within the report.	Yes
I have included information about how this report contributes to the Masterplan priorities.	Yes



# **DRAFT ANNUAL GOVERNANCE STATEMENT**

## **Introduction**

This document describes the responsibilities of the Humber Bridge Board, and the governance arrangements in place to ensure that the Board was able to discharge those responsibilities during 2018-19. It goes on to report the findings of a review of the effectiveness of the governance framework, including the system of internal control.

## **Scope of Responsibility**

The Board is responsible for ensuring that its business is conducted in accordance with the law and proper standards, and that its assets are safeguarded and properly accounted for, and used economically, efficiently and effectively.

In discharging this overall responsibility, the Board is also responsible for putting in place proper arrangements for the governance of its affairs and facilitating the effective exercise of its functions, which includes arrangements for the management of risk.

Due to the nature of its operations, the Board's governance framework largely mirrors the arrangements in local authorities and the Board is working towards full compliance with guidance set out in the *CIPFA/SOLACE Framework: Delivering Good Governance in Local Government*, insofar as that framework can be applied.

## **The Purpose of the Governance Framework**

The governance framework comprises the systems and processes, and culture and values, by which the Board is directed and controlled; and the activities through which it accounts to and engages with the community and other stakeholders. It enables the Board to monitor the achievement of its strategic objectives and to consider whether those objectives have led to the delivery of appropriate, cost effective services.

The system of internal control is a significant part of that framework. It is designed to manage risk to a reasonable level, but cannot eliminate all risk of failure to achieve policies, aims and objectives. The system should ensure that, on an ongoing basis, identified risks to the Board's operations are evaluated and managed efficiently, effectively and economically.

The governance framework has been in place for the year ended 31 March 2019 and remains in place up to the date of this document.

## The Governance Framework

### ***Behaving with integrity, demonstrating strong commitment to ethical values and respecting the rule of law***

The Humber Bridge Board is a statutory body pursuant to the Humber Bridge Act 1959. Its governance arrangements are defined in broad terms by that Act and subsequent Acts, notably the Humber Bridge Act 2013, which set out matters such as:-

- The purpose and powers of the Board.
- Its composition and membership.
- Its funding, accounting and external audit arrangements.
- Its powers to levy and enforce tolls, including the consultation process in the event of real terms toll increases.

The Board has in place Standing Orders which provide further detail about how the Board conducts its business, for example:-

- The conduct and procedures for Board meetings.
- Scheme of delegation.
- Financial Procedure Rules.
- Contract Procedure Rules.
- Access to Information.
- Staff and Director conduct/behaviour.

Standing Orders are complemented by detailed operational policies and procedures covering issues such as (but not limited to):-

- Human Resources.
- Health and Safety.
- Financial processes.
- Use of Information Technology.

Officers, led by the Clerk and Chief Executive, are tasked with:-

- Implementing those policies and procedures.
- Managing budgets through a series of delegated arrangements.
- Maintaining appropriate controls.
- Providing assurance to the Board's Directors as to the effectiveness of processes and procedures

This provides a framework within which the Board can operate and take decisions in a manner that is consistent with the rule of law, demonstrates integrity and ethical behaviour, and promotes efficiency, economy and effectiveness.

### ***Ensuring openness and comprehensive stakeholder engagement***

The Board has established mechanisms for consulting with its stakeholders and communicating with users. These include:-

- The formal process should there ever be a need to increase tolls in real terms.
- Publication of minutes and other key documents on the Board's website.
- An established customer complaints process.
- Liaison with community groups, such as those who seek to undertake charitable events on the Board's estate.
- Liaison meetings with the Board's institutional stakeholders, in particular the Humber Local Authorities, who underwrite the Board's financial risk as defined in the 2013 Act.
- Membership of the Humber Local Resilience Forum.
- Liaison with a range of other relevant parties, including organisations promoting the welfare of emotionally distressed individuals (EDIs), and the police.

Examples of how this engagement has led to service improvements include:-

- Working with partners to improve the Board's procedures for identifying EDIs on the Board's estate and guiding them to appropriate support agencies.
- Partnership working with Humberside Police to protect the public by enforcing safety-related restrictions and closures of the Bridge during inclement weather.

### ***Defining outcomes in terms of sustainable economic, social and environmental benefits; and determining the interventions necessary to optimise the achievement of the intended outcomes***

The Board's vision and values are set out in the Strategic Plan 2018 – 21. The Board's core purpose is to maintain and operate the Bridge. It has in place a maintenance programme and financial plans, including capital and revenue budgets that are approved annually by the Board, to ensure this outcome is sustained. It has also established a strategy that defines a range of outcomes relating to its wider powers to promote social, economic regeneration in the Humber sub-region. This is supported by performance measures which are reported to Board meetings.

The Directors also receive regular reports on the following matters, which provide assurance and enable the Board to determine when further analysis and/or interventions are necessary:-

- Bridge operations including traffic volumes, accidents and incidents and maintenance programmes
- Financial performance
- Health and Safety
- Risk register

Examples of how these reports have led to service improvements include reviews of traffic speed and signage to reduce the incidence of risky driver behaviours, such as erratic manoeuvres by drivers who arrive in the wrong lane.

### ***Developing the entity's capacity including the capability of leadership and individuals within it***

The organisation has undergone several re-structures since 2017 to reflect the current business need and produce a rational, but lean officer structure. This is led by suitably competent and qualified senior managers. The senior management team recognise the need for continual review and improvement and will periodically carry out a review of their departments for effectiveness and to ensure it is still appropriate to the business in this changing environment.

In addition, the Board's staff are supported by specialists from both the constituent authorities and consultants as needed. The Board also benefits from several long standing service level agreements, such as Legal Advice by Hull City Council.

The senior management team also recognise the importance of the staff and benefits from a structured workforce strategy. Whilst this is being finalised, the principles are already in place and include:

- Induction and 'buddy' programme
- Employee development; 1:1s, Training Plans, both business (ie: Formal Leadership and Management being rolled out to all Supervisors and Managers) and individual (eg: Time Management)
- Workforce engagement through team, department and business meetings
- Apprenticeship programme
- Secondment of staff to gain specific technical training
- Succession planning
- Work experience placements
- Sharing best practice from similar organisations

The Board has identified that further training is required to provide a comprehensive induction for new Members and ensure all Board Members are provided with appropriate training.

### ***Managing risks and performance through robust internal control and strong public financial management***

The Board has a risk register that is regularly reviewed. As noted previously, financial procedures and systems exist to ensure strong internal control and work has been undertaken over the last 2 years to improve those controls and reduce overhead costs. As noted previously, a suite of performance information is also monitored to identify any corrective actions, and reported periodically to the Board for assurance purposes.

## ***Implementing good practices in transparency, reporting and audit to deliver effective accountability***

The Board's financial reporting regime is defined in the 2013 Act. The accounts are subject to external audit (currently by Mazars LLP) and the most recent (2017/18) accounts received an unqualified (clean) audit opinion. The Board also receives an internal audit service (currently from Hull City Council) which undertakes reviews of the control environment including risk management. The latest round of internal audit work has led to a conclusion that the system of internal control is adequate overall, but with specific issues to resolve in particular systems. This reflects an improvement compared with the previous audit opinion (in 2016/17). In particular, previous control risks in relation to the toll income system have been substantially addressed. Where audit findings have identified ongoing risks, management has agreed a programme of corrective actions which will be reported to the Board as they are delivered.

### **Review Process**

The Board has undertaken a continuous review of its governance processes during the year. This, together with reports from the internal and external auditors, has identified a number of issues, described in the next section, which have been or are in the process of being progressed.

### **Significant Governance Issues**

The 2017/18 external auditor's Audit Completion Report made a number of significant recommendations highlighting the need for:-

- Quality assurance on the procedures for producing the financial accounts.
- A more detailed medium and long term financial plan.
- A review of the Treasury Management policy.
- An independent Internal Audit service.

The Board has put process in place to address a number of these issues for example, a review of the Treasury Management policy has been completed and the constituent authorities have undertaken a pre-audit review of the 2018/19 accounts. Hull City Council was re-commissioned to provide an Internal Audit Service for 2018/19 and the outcome of their work is reflected in this statement.

The Board recognises that there is further work to do in 2019/10 in respect of the medium term financial plan and to further develop and improve the risk management process.

During 2019/20 the Board has reviewed its Standing Orders which have now been combined with key points from the Humber Bridge Acts to create a new governing document (constitution). This document is expected to be approved in September 2019, together with a programme of training to improve the induction of new members, governance and reporting.

The Board is not formally required to comply with Transparency legislation, such as the Freedom of Information Act, that applies to other public bodies. In the past it has adopted an inconsistent approach when information has been requested. However, as a matter of good governance, it has committed to follow the legislation where practicable, on a voluntary basis, once the new governing document has been approved. Appropriate procedures will be developed during 2019/20 to implement this on a consistent basis.

## **Conclusion**

We place reliance on the systems and procedures identified above, subject to the foregoing measures being taken in the coming year.

Caroline Lacey  
Interim Clerk

Cllr Sean Chaytor  
Chair of the Board



**Audit progress report**  
Humber Bridge Board  
September 2019

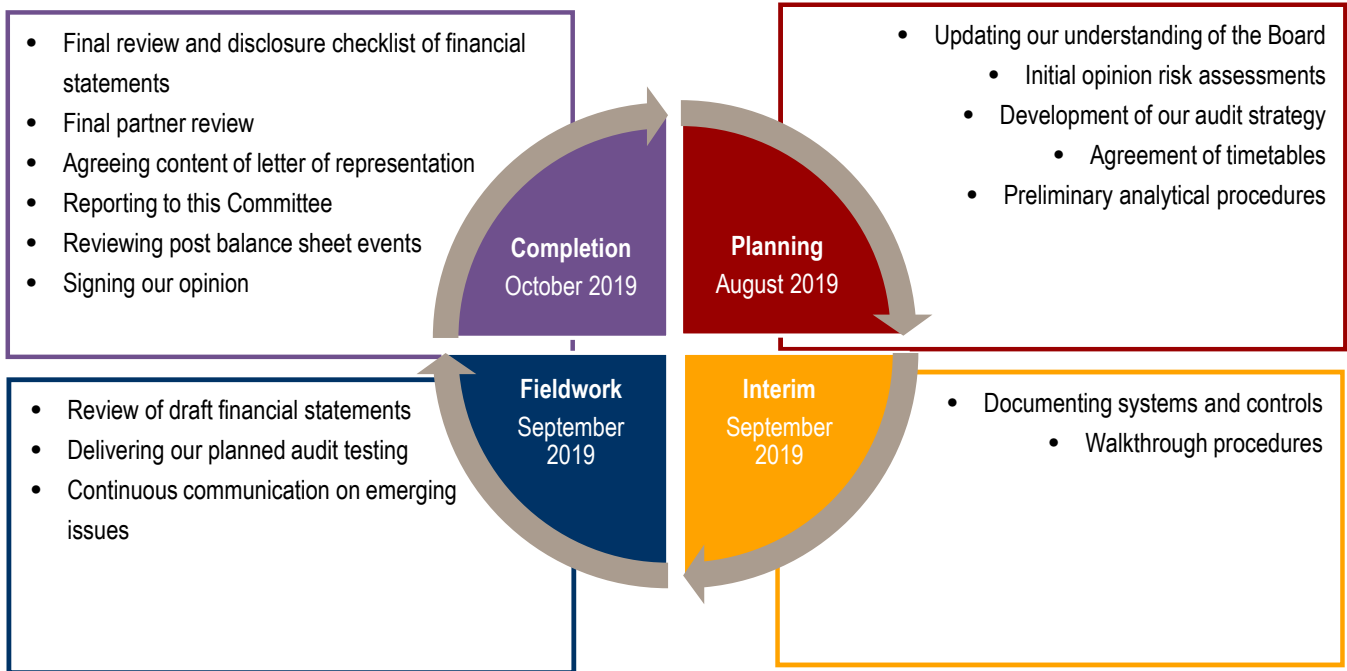


# 1. AUDIT PROGRESS

## Purpose of this report

This report provides the Board with an update on progress in delivering our responsibilities as your external auditor.

## Our audit cycle



We are pleased to report that the level of engagement in the audit process by the Board's finance staff has been good and, following the additional support provided by a partner body, the draft accounts for 2018/19 are significantly better than those produced last year.

We have been making satisfactory progress but the Board's Finance Manager, your main liaison officer, has unfortunately been absent recently and we now have a backlog of requests for working papers and sample information. Despite this, we are still confident that the audit can be finalised in October 2019.

At the time of writing:

- we have completed work on cash, loans, fixed assets and financial instruments;
- we are in the process of identifying samples for income, expenditure and transactions around the year end to ensure expenditure and income are recorded in the correct period;
- there are a number of known amendments identified in the disclosure notes and the asset valuation for the Bridge needs to be updated but the number of drafting errors in the statements is not at the same level as 2017/18; and
- we have seen evidence of progress against all of the recommendations we made in the 2017/18 Audit Completion Report.

We can update the Board and respond to questions during the meeting.

## CONTACT

Partner: Mark Kirkham

Mobile: 07747 764529

Email: [mark.kirkham@mazars.co.uk](mailto:mark.kirkham@mazars.co.uk)

Senior Manager: Rob Walker

Mobile: 07912 763085

Email: [rob.walker@mazars.co.uk](mailto:rob.walker@mazars.co.uk)



**HUMBER BRIDGE BOARD**

**Report to the Humber Bridge Board  
27 September 2019**

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**MANAGEMENT ACCOUNTS - JULY 2019  
REPORT OF HEAD OF FINANCE & COMMERCIAL**

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**1. Purpose of the Report and Summary.**

- 1.1. To provide an overview of financial performance of the Humber Bridge Board as reflected in the management accounts for July 2019.

**2. Recommendations**

- 2.1 That the contents of this report are noted by the Board.

**3. Management Accounts**

**3.1 Income**

Revenue continues to be better than budget. Toll income year to date is up 1.3% in value.

Traffic Volume is up by 2.36% but the reduction in Class 4 (Commercials) reduces the overall revenue gain.

**3.2 Direct Costs**

Operations – On budget in period, slightly down year to date.

Maintenance – Slightly up year to date. Engineering is currently carrying the cost of Crash Barrier repairs for an insurance claim which has been agreed but not financially settled.

**3.3 Overheads**

£5k under in the period, despite incurring £6k charge for Surveyor services re Wykeland.

Year to date £65k under budget.

Overall cost savings to date is 3.2% better than budget.

### 3.4 2:2 Target

Against the 2:2 medium term target we are £47k down on income. However we are £64k up on cost, so overall we are delivering the 2:2 target.

### 3.5 Capital Programme

**Minor works** – spend is slower than budgeted.

Lifts contract for £300k has been let.

**Major works** – Cable inspection works continue to be well in advance of programme with it being £886k in advance of budget in July. This will be further accelerated with August's payment being £771k + VAT.

This will create a short term deficit, however it is forecast that by 31/3/20 we will be £500k short of budgeted surplus for the year, the deficit equates to the hanger testing works that we carried over from 2018-19.

### 3.6. Balance Sheet

Investments/Cash stand at £7.1m.

Creditors include:	£316k	SICE
	£172k	Cleveland Bridge
	£84k	Swarco Signs
	£105k	East Riding (Strain Costs)

Accruals include:	£1165k	Interest
	£90k	Strain Costs
	£143k	Cleveland Bridge

### 3.7 Forecast

Assumed income will be in line with budget, this gives a slight month on month decrease against budget, however with Brexit potentially looming it would appear to be a reasonable approach.

Assumed cost savings will fund additional capital programme works for year.

Total surplus down £517k, which relates to delayed hanger testing works which showed an increased surplus in 2018-19.

### **3.8 Issue**

Currently including Strain Costs for IT Manager made redundant in 2018-2019 which were not identified at the time, (£61k). These should be included in prior year accounts.

### **3.9 Traffic 2019 – Year to date**

July/August continued the annual trend of healthy growth in Class 2 / Class 3 vehicles with a continued decline in Class 4 (Commercials).

The mix in vehicle numbers in the period restricts the value of revenue increase.

The trend in relation to Class 4 vehicles would appear to be deteriorating, with August showing a 7.8% decline and September to date showing a 6.5% decline.

Class 2 / Class 3 vehicle growth continues to mitigate Class 4 reduction generating an increased revenue surplus.

**Andy Dalby**  
**Head of Finance & Commercial**

# HUMBER BRIDGE BOARD

Operating Statement as at 31st July 2019

## Profit and Loss Account

	Actual	Period Budget	Variance	Actual	YTD Budget	Variance	Forecast	Budget
<b>Income</b>								
Toll	787,154	867,661	(80,507)	3,131,150	3,341,463	(210,313)	9,530,000	9,718,157
Tag	916,634	889,909	26,725	3,551,884	3,427,142	124,742	10,047,340	9,967,340
Violation	64,677	-	64,677	172,906	0	172,906	108,229	0
Sundry	8,198	800	7,398	20,066	3,200	16,866	32,600	32,600
	1,776,663	1,758,370	18,293	6,876,006	6,771,805	104,201	19,718,169	19,718,097
<b>Cost of Sales</b>								
Operations	152,764	153,492	728	619,555	614,494	(5,061)	1,895,938	1,870,485
Engineering	24,681	33,487	8,806	110,955	133,934	22,979	355,287	401,844
Facilities	11,809	24,661	12,852	109,632	98,645	(10,987)	306,111	295,532
Works	29,564	28,292	(1,272)	121,759	113,168	(8,591)	356,891	338,361
	218,818	239,932	21,114	961,901	960,241	(1,660)	2,914,227	2,906,222
<b>Gross Margin</b>	<b>1,557,845</b>	<b>1,518,438</b>	<b>39,407</b>	<b>5,914,105</b>	<b>5,811,564</b>	<b>102,541</b>	<b>16,803,942</b>	<b>16,811,875</b>
<b>Overheads</b>								
Executive	25,460	31,334	5,874	104,930	125,338	20,408	253,862	376,014
Bridge Management	13,269	13,132	(137)	52,755	52,528	(227)	162,999	157,584
Customer Services	48,571	54,791	6,220	196,841	219,161	22,320	602,484	657,486
Communications	5,376	10,003	4,627	50,272	40,012	(10,260)	130,382	120,036
Property	21,151	20,950	(201)	79,996	87,150	7,154	289,950	289,950
HR	15,071	14,856	(215)	40,640	59,426	18,786	144,377	178,278
IT	45,567	44,048	(1,519)	202,967	176,190	(26,777)	608,562	528,571
Insurance	3,500	4,167	667	12,317	16,667	4,350	40,000	50,000
Finance	63,308	52,679	(10,629)	181,001	210,715	29,714	632,144	632,144
	241,273	245,960	4,687	921,719	987,187	65,468	2,864,760	2,990,063
<b>Depreciation</b>	<b>404,618</b>	<b>416,667</b>	<b>12,049</b>	<b>1,620,055</b>	<b>1,666,667</b>	<b>46,612</b>	<b>4,860,000</b>	<b>5,000,000</b>
<b>Interest/Charges</b>	<b>291,309</b>	<b>291,309</b>	<b>0</b>	<b>1,165,232</b>	<b>1,165,234</b>	<b>2</b>	<b>3,449,706</b>	<b>3,449,706</b>
<b>Net Margin</b>	<b>620,644</b>	<b>564,502</b>	<b>56,142</b>	<b>2,207,099</b>	<b>1,992,476</b>	<b>214,623</b>	<b>5,629,476</b>	<b>5,372,106</b>
<b>Capital</b>								
Minor Works	80,816	27,000	(53,816)	106,256	148,000	41,744	639,770	642,000
Major Works	300,717	220,000	(80,717)	1,967,251	695,000	(1,272,251)	3,229,052	2,415,000
Visitor Attraction	1,077,460	962,976	(114,484)	61,116	39,000	(22,116)	22,687	60,000
	2,239,112	309,502	(1,929,610)	4,919,910	3,713,901	(1,252,623)	12,201,215	11,566,706
<b>Surplus</b>	<b>239,112</b>	<b>309,502</b>	<b>(70,389)</b>	<b>72,476</b>	<b>1,110,476</b>	<b>(1,038,000)</b>	<b>1,737,967</b>	<b>2,255,106</b>



**HUMBER BRIDGE BOARD**  
**Balance Sheet**  
**As at 30th June 2019**

		Cost	Dep	NBV
<b>Fixed Assets</b>	Land	3,212,000		3,212,000
	Buildings	1,347,500	(20,859)	1,326,641
	Bridge	394,177,902	(6,371,070)	387,806,832
	Plant & Equipment	24,252	(17,785)	6,467
	Vehicles	255,804	(86,803)	169,001
	IT Equipment	22,374	(4,787)	17,587
		<u>399,039,832</u>	<u>(6,501,305)</u>	<u>392,538,527</u>
<b>Current Assets</b>	Stock	207,371		
	Debtors	50,946		
	Income Receivable	221,860		
	Bad Debt Provision	(37,500)		
	Prepayments	284,357		
	VAT	221,384		
	Bank			
	Current	25,000		
	Funds Invested	7,005,000		
	Grants	12,049		
	Toll Income	-		
	Tag Income	214		
	Credit Card	997		
	Business Reserve	63,515		
	Admin	625		
	Petty Cash			
	Floats	<u>600</u>	8,056,419	
<b>Current Liabilities</b>	Creditors	(818,377)		
	Accruals	(1,522,525)		
	HMRC Control	(60,224)		
	Pension Control	(58,858)		
	Payroll Deductions Control	(341)		
	Deferred Income	(26,050)		
	Customer Refunds	(433)		
	Retentions Sub Contractors	(170,784)		
	Advance Income			
	PPT	(339,323)		
	Tag Deposits	(1,014,255)		
	Tag	<u>(1,046,857)</u>	(5,058,026)	
<b>Net Current Assets</b>				<u>2,998,392</u>
<b>Long Term Liabilities</b>	Pension	(3,901,000)		
	PWLB Loan	<u>(137,637,649)</u>		<u>(141,538,649)</u>
				<u>253,998,271</u>
<b>Reserves</b>	Capital			102,833,040
	Revaluation			132,955,121
	Pension			(3,901,000)
	Capital Receipts Reserve			51,000
	Profit and Loss B/F			20,073,299
	Profit and Loss			72,746
	Maintenance			1,914,065
				<u>253,998,271</u>

**HUMBER BRIDGE**

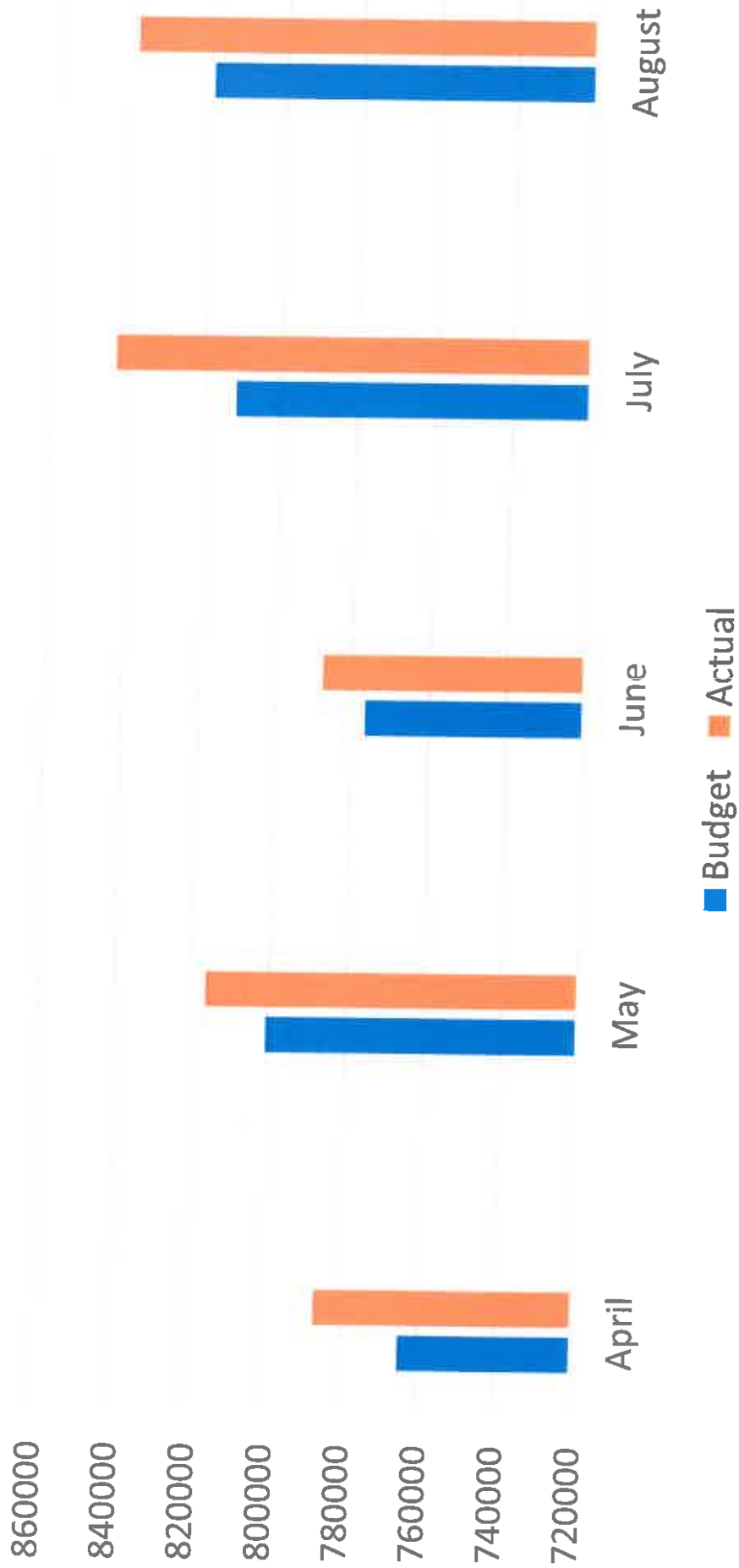
**TRAFFIC VOLUME**

	Class 2	Class 3	Class 4	Total										
30 April	765005	786947	21942	14687	15993	1306	8.89%	43131	(521)	-1.19%	823344	846071	22727	2.76%
31 May	800842	816568	15726	16195	16669	474	2.93%	44109	(820)	-1.83%	861966	877346	15380	1.78%
30 June	776549	787812	11263	15736	16649	913	5.80%	43572	(2201)	-5.05%	835857	845832	9975	1.19%
31 July	811814	843020	31206	17722	21329	3607	20.35%	47114	(665)	-1.41%	876650	910798	34148	3.90%
31 August	818936	838740	19804	14694	17187	2493	16.97%	46329	(3629)	-7.83%	879959	898627	18668	2.12%
	3973146	4073087	99941	79034	87827	8793	11.13%	225596	(7836)	-3.47%	4277776	4378674	100898	2.36%

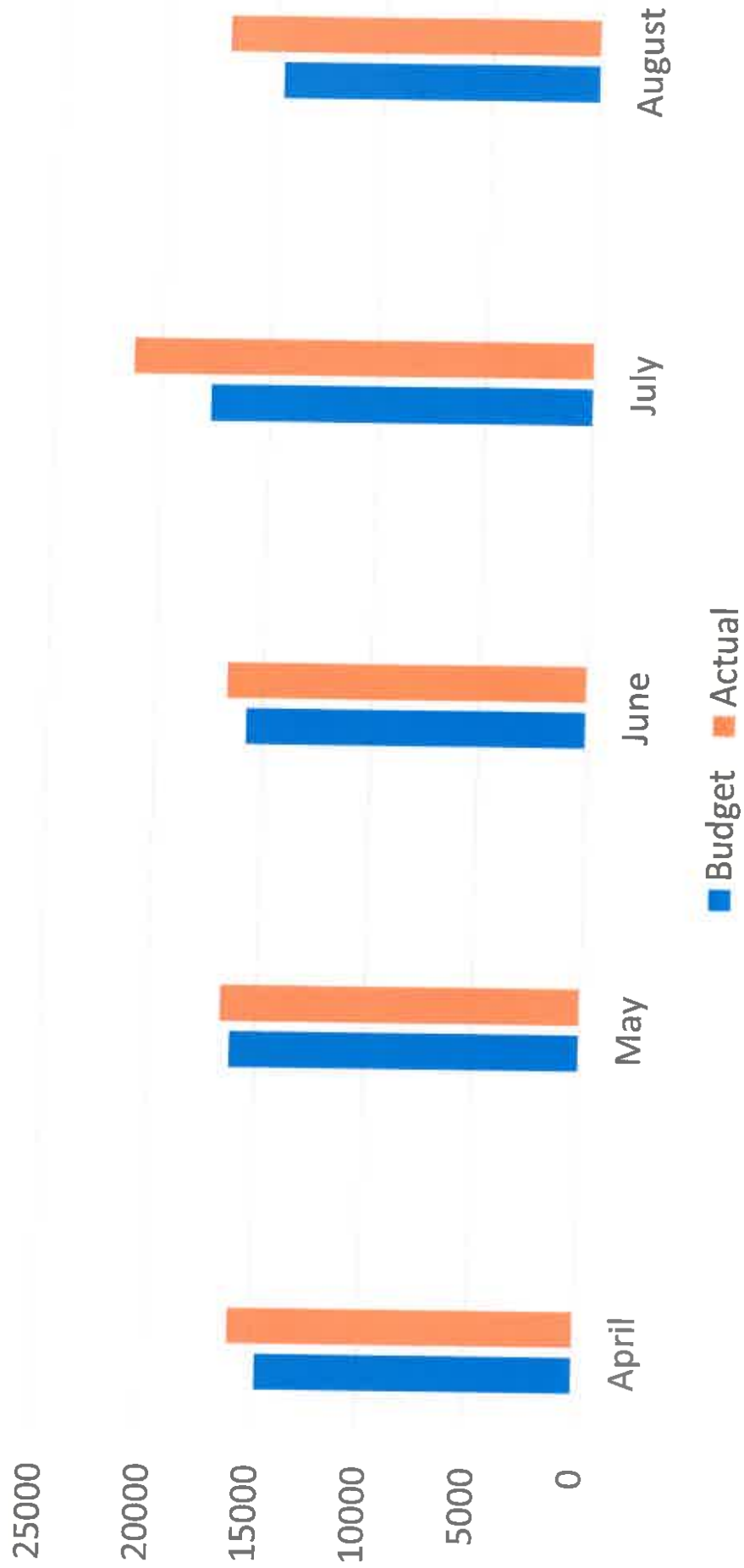
**Additional Income**

Class 2	99941	149912
Class 3	8793	35172
Class 4	(7836)	(94032)
		<u>91052</u>

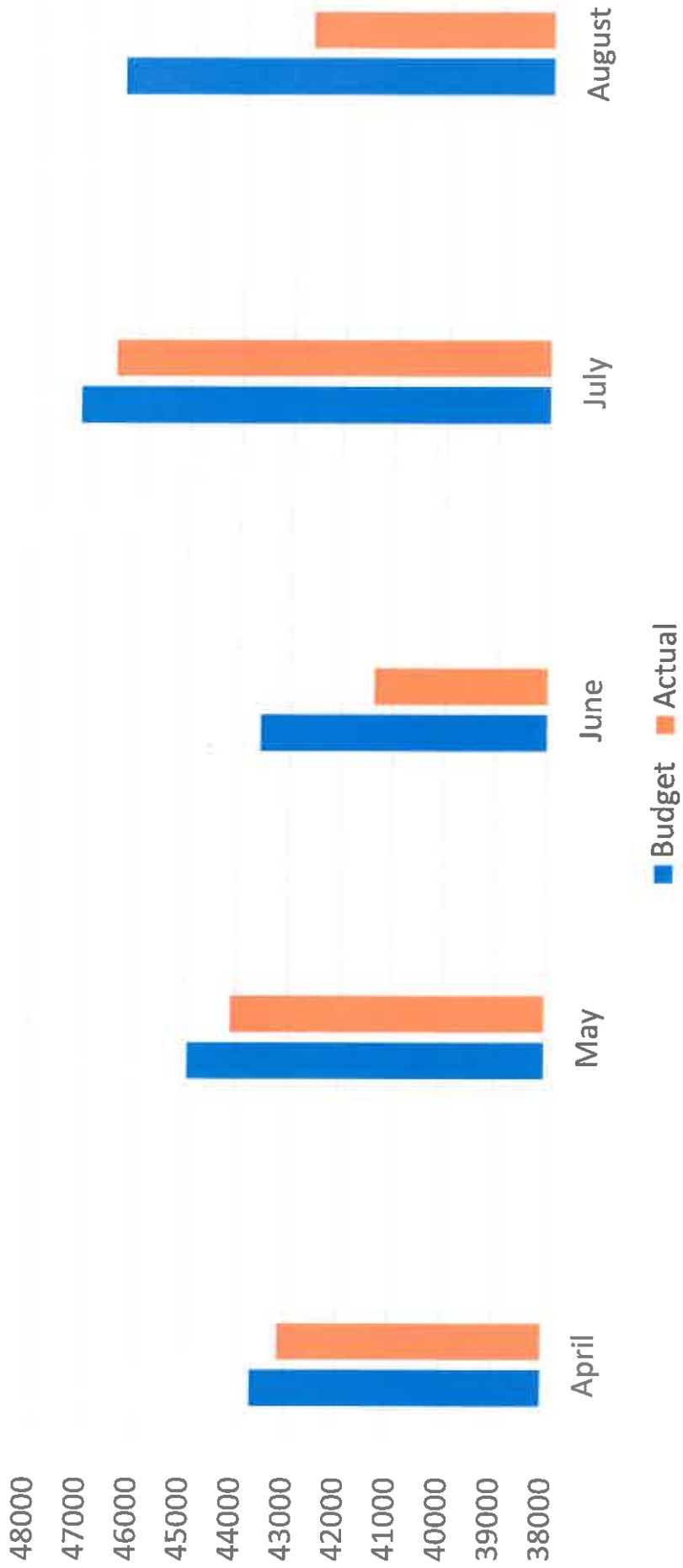
# Class 2 Vehicles



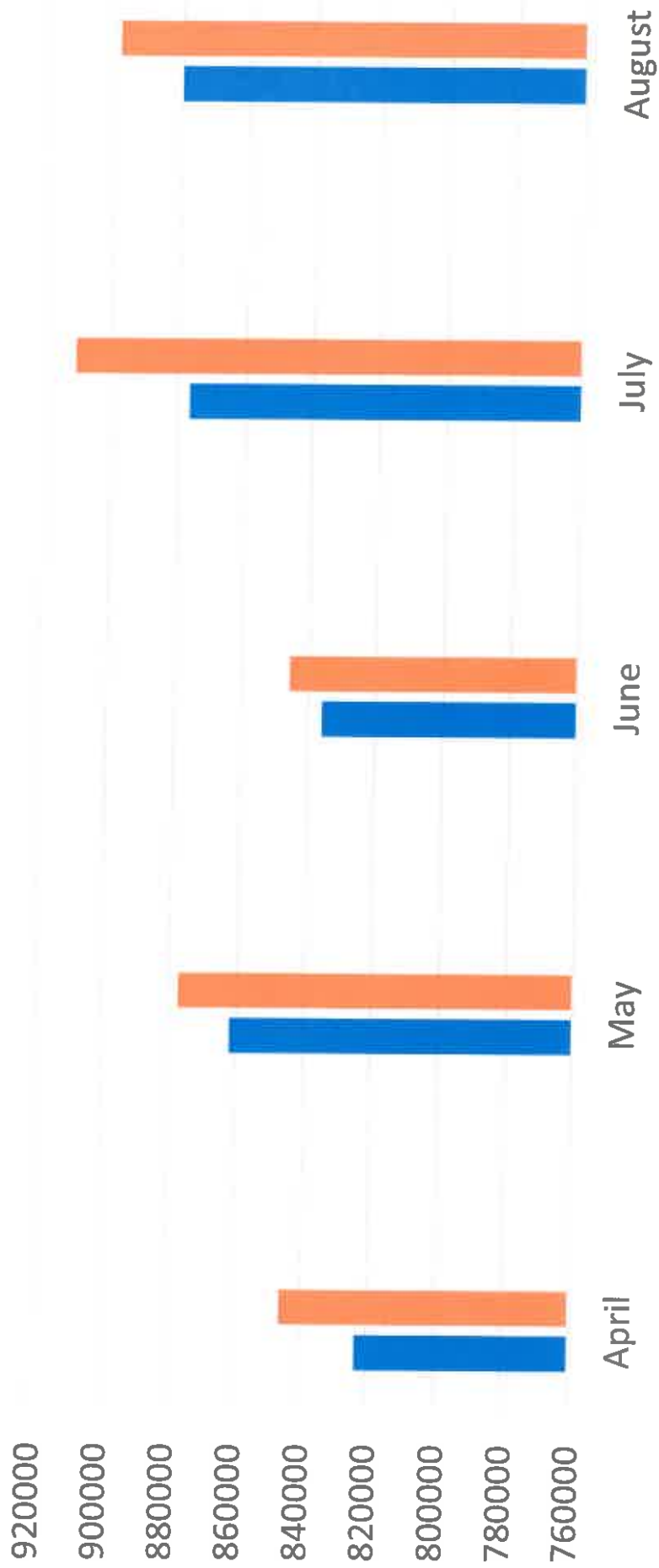
# Class 3 Vehicles



# Class 4 Vehicles



# Total Vehicles



# **HUMBER BRIDGE BOARD**

Report to: **The Board**  
**27<sup>th</sup> September 2019**

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## **UPDATE OF HEALTH AND SAFETY BRIEFING PAPER OF THE HEAD OF ENGINEERING AND INFRASTRUCTURE**

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### **1.0 Purpose of the Paper and Summary**

To update the Board on progress and the status of Health, Safety and Welfare at the Humber Bridge Board.

### **2.0 Background**

The Report in Appendix A provides a detailed update on health, safety and welfare at the Humber Bridge, and also includes a review and actions in relation to minor accidents and near misses.

### **3.0 Issues for consideration**

The Report in Appendix A is noted.

### **4.0 Next Steps**

The Head of Engineering and Infrastructure continues to ensure health, safety and welfare is implemented at the Humber Bridge and reports back to the Board at the next meeting

Contact Officer: **Andrew Arundel**  
**Head of Engineering and Infrastructure**

Background Papers:

- Appendix A





## Humber Bridge Board – Health, Safety and Welfare

### 1.0 Health, Safety and Welfare Meetings

- 1.1 We continue to have regular meetings with management, staff representatives and Union representatives. This covers all parts of the business and is chaired by the Head of Engineering and Infrastructure.

### 2.0 Training

- 2.1 Training for staff is provided and delivered as needed.
- 2.2 This can be identified through a review of the Risk Assessment or work activity and also includes refresher training.
- 2.3 We have recently trialled with success an on-line training module for Fire Awareness Safety. This resolved the issues of training staff on a shift pattern, as they were able to complete the module at a time to suit them using the on-site ICT.

### 3.0 Accidents

- 3.1 Since the last Board meeting, there have been three minor accidents recorded in the Accident Book.

- 3.2 1no operative sustained a cut finger whilst handling emptying external waste bins.

We were in the process of replacing the external waste bins across the site and this has been completed now. Although a 'Sharps proof' glove has been sourced and issued, we have also identified that a second (spare) liner would negate the need to handle the bag of waste. This is being finalised as part of the Risk Assessment and Safe Working Practice.

- 3.3 1no operative sustained a twisted ankle working on the Toll Booth

This appears to be a simple accident, when the operative turned too quickly and lost their footing. They were back at work the following day.

- 3.4 1no operative sustained a cut finger as a result of falling materials

This was a case of operatives not following the safe working practice. This has been addressed through a Tool Box Talk and re-briefing of the procedures.

- 3.5 The AFR target set for the year is 24 or 2 accidents per month.

The total number of minor accidents to date is 4, which is 4 in 3 ½ months against the target of 7 accidents. This equates to 1.14 accidents per month.

#### 4. Near Misses

4.1 There have been 14 ‘Near Miss’ reports recorded in this reporting period. Seven of these relate to poor driver behaviour, the remaining are as follows:

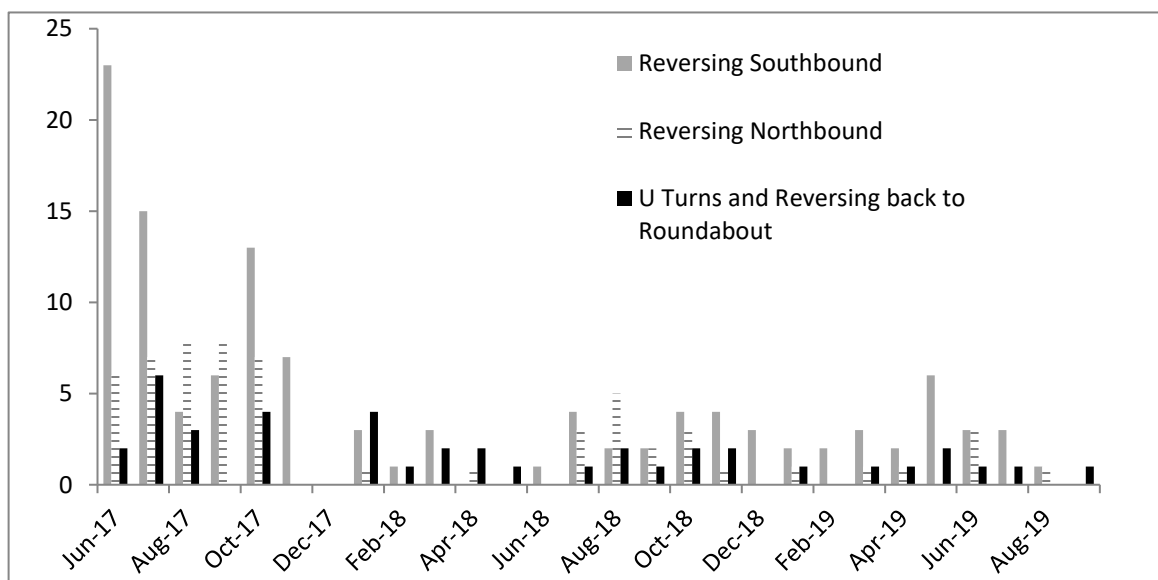
- 2no road traffic accidents (including a 5 vehicle collision in the southbound ORT – front vehicle stopped at entrance of ORT)
- 1no incident involving a family cycling over the bridge on the carriageway
- 1no incident involving a foreign lorry driver stopping and crossing both ORT lanes to access the Admin building
- 1 no incident involving a HBB vehicle damaging street furniture
- 1no incident of debris from a pothole on the carriageway
- 1no incident of an HBB operative not following site rules

The incident involving an operative not following site rules has been addressed with a Tool Box Talk.

4.2 An analysis of the ‘driver behaviour’ incidents can be categorised into:

1. Drivers reversing out of the ORT and then driving to a Toll Booth lane (northbound and southbound)
2. Drivers reversing out of the Toll Booth lane and driving through the ORT (northbound and southbound)
3. Drivers arriving at the Toll Booth or ORT and then reversing or performing a U Turn to drive back against the flow of traffic to the A164/A15/A1105 Roundabout (southbound only)

4.3 This analysis is shown month by month in Graph 4.1 and Table 4.1 below.

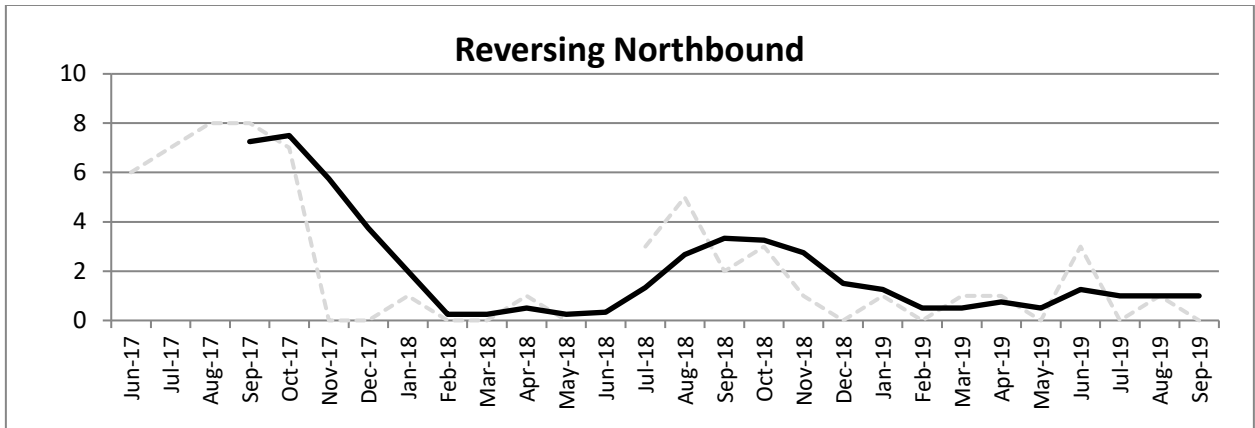


Graph 4.1

Month	Reversing		U Turns and reversing back to roundabout
	Southbound	Northbound	
Jun 2017	23	6	2
Jul 2017	15	7	6
Aug 2017	4	8	3
Sep 2017	6	8	0
Oct 2017	13	7	4
Nov 2017	7	0	0
Dec 2017	0	0	0
Jan 2018	3	1	4
Feb 2018	1	0	1
Mar 2018	6	0	2
Apr 2018	0	1	2
May 2018	0	0	1
Jun 2018	1	0	0
Jul 2018	4	3	1
Aug 2018	2	5	2
Sep 2018	2	2	1
Oct 2018	4	3	2
Nov 2018	4	1	2
Dec 2018	3	0	0
Jan 2019	2	1	1
Feb 2019	2	0	0
Mar 2019	3	2	0
Apr 2019	2	1	1
May 2019	6	0	2
Jun 2019	3	3	1
Jul 2019	3	0	1
Aug 2019	1	1	0
Sep 2019*	0	0	1
* Partial month figures			

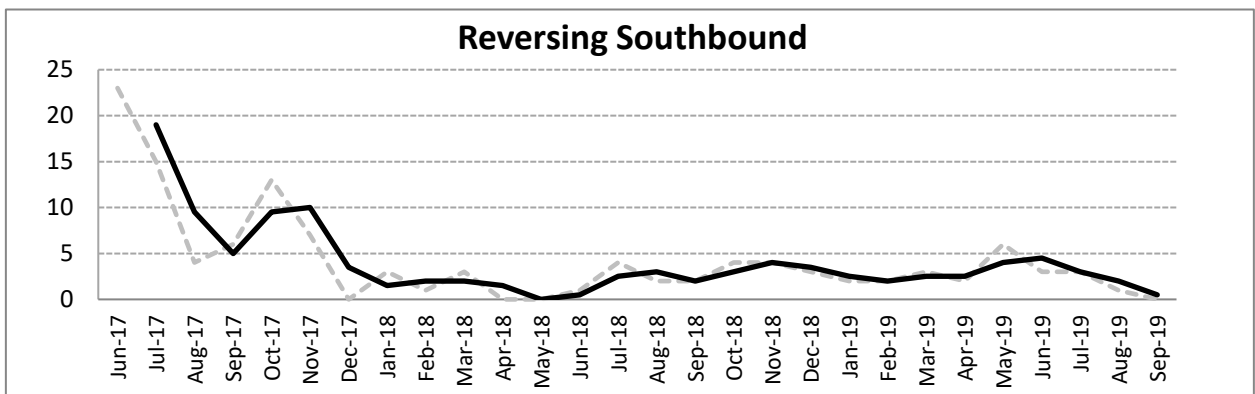
Table 4.1

4.4 Graph 4.2 shows the Trend line for 'northbound reversals' and that this continues to average at around 1 per month.



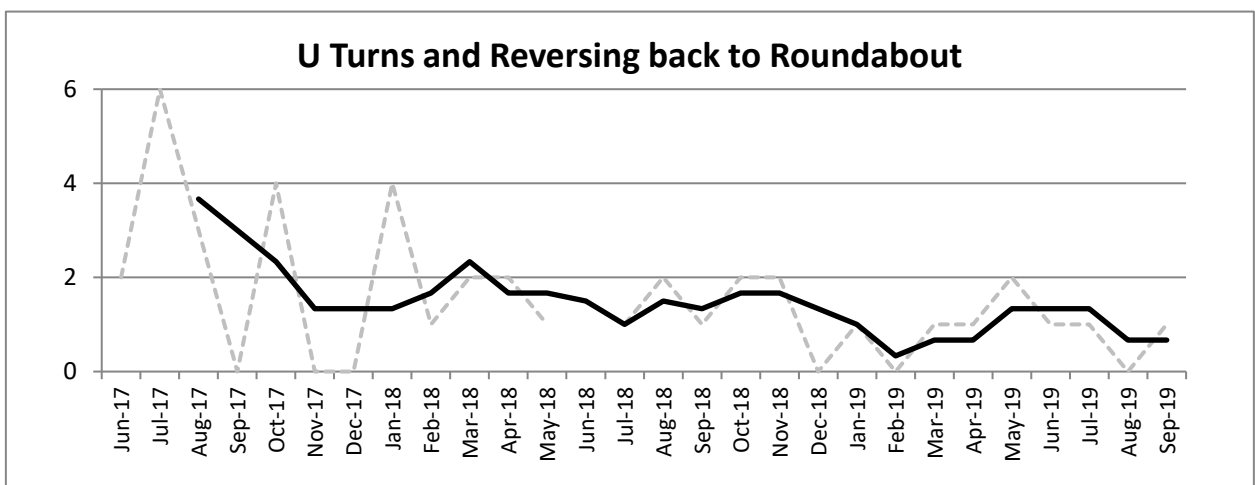
Graph 4.2 Trend - Northbound reversing incidents

4.5 Graph 4.3 shows the Trend line for 'southbound reversals' and that after the 'spike' in May, appeared to average 3 per month in June and July, however this has now reduced to one per month in August and September (part month).



Graph 4.3

4.6 Graph 4.4, shows the Trend line for 'U Turns/reversing' back to the A15/A164 Roundabout. This seems to be maintaining the average of around one per month now.



Graph 4.4

## **5.0 Mitigation and measures – Driver behaviour**

- 5.1 New signage has been installed for southbound non-Toll traffic entering the Toll Plaza and the effectiveness of this will be monitored over the coming months.
- 5.2 We have completed a review of Toll Bridge signage on the approaches to the bridge and A15 carriageway. This has identified that some additional signage may be beneficial. This will be progressed with the relevant highway authority partner.
- 5.3 As part of our collaboration and sharing best practice, we recently attended the Toll Tunnels and Bridges Health and Safety Working Group at the M6 Toll, and discussed this issue with other operators. M6 Toll have had similar issues and have introduced a range of measures. We are now looking at these to see if we can adopt some of these at our site.





# HUMBER BRIDGE

27 September 2019

## Internal Audit Annual Report

**Report of the** Head of Audit and Fraud, Hull City Council

This item is not exempt

### 1. Purpose of the Report and Summary

- 1.1 This report presents a summary of internal audit work recently undertaken, as commissioned by the Board at its meeting of 31 May 2019. It provides an opinion on the adequacy and effectiveness of the Board's internal control framework, to support the Board's Annual Governance Statement, (AGS), and it provides a summary of the information to support that opinion.

### 2. Recommendations

- 2.1 That the Board notes the *adequate* internal audit opinion and the degree of assurance this provides.
- 2.2 That the Board considers what further information it requires from officers to provide ongoing assurance that matters arising from the audit are being progressed on an acceptable timescale.

### 3. Reasons for Recommendations

- 3.1 Hull City Council has delivered the audit work in line with Public Sector Internal Audit Standards, (PSIAS), which define proper auditing practices. Amongst other things, those Standards require the auditor to deliver an internal audit opinion and report that can be used by the organisation to support its AGS.
- 3.2 The purpose of the opinion is to provide assurance to the Board, by summarising the overall adequacy of the framework of governance, risk management and control, in context of the scope of work undertaken. In this case, the Board had agreed that the audit should focus on financial systems and risk management processes, as the organisation was already responding to a number of governance issues, such as the need to revise Standing Orders.

- 3.3 It is normal for any audit process to identify potential improvements. The process adds value when those improvements are implemented. The audit has resulted in an *adequate* overall opinion, but there are some areas where further progress is required to mitigate risks. It is therefore important that the Board receives information (from management and/or auditors) in due course, to provide further assurance on matters arising from the audit.

#### 4. Background

- 4.1 The Board commissioned Hull City Council to undertake an audit covering:-
- Contracts
  - Toll Income
  - Payroll
  - ICT
  - Main Accounting
  - Accounts Payable
  - Risk Management
- 4.2 Auditors work to the PSIAS Standards, which ensure that:-
- Auditors are functionally independent from management so they can provide assurance to the Board.
  - They follow a code of ethics which emphasises their objectivity.
  - Their work is planned, delivered and reported in a methodological way.
- 4.3 The Board therefore agreed both: an internal audit plan to ensure resources were allocated efficiently to key areas of risk; and an audit charter which set out the auditor's terms of reference in line with the Standards.
- 4.4 The historical context for the audit was that the Board had annual audits, coincidentally undertaken by the Council's internal audit team, until 2016/17. The last audit resulted in an unsatisfactory *requires improvement (marginal)* opinion. This was due to a number of control weaknesses, at that time, in particular as regards the toll income reconciliation process.
- 4.5 The internal audit programme ceased in 2017/18. At that point, auditors had undertaken a review of ICT controls and an action plan had been agreed with management to address a number of findings. In addition, management commissioned third party reviews of toll income and other financial systems: those reviews were not commissioned formally as audits, but they did indicate that system improvements were being made.
- 4.6 This audit was therefore designed to: take stock of system



changes and improvements; follow up the agreed actions from the 2016/17 audit and 2017/18 ICT audit; and to provide a formal opinion to support the 2018/19 AGS.

## 5. Issues for Consideration

- 5.1 Internal Audit is an assurance function and its primary objective is defined in the PSAIS and international standards as to “*provide an independent and objective assurance and consulting activity designed to add value and improve the Board’s operations. It helps the Board accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes*”.

### **Scope**

- 5.2 This audit was designed to provide an opinion to support the 2018/19 AGS. An AGS is produced alongside financial accounts, but it covers both the period up to the date then the accounts are signed off. For this reason, and to ensure the assurance was relevant following system changes, the audit included procedures up to the time of the audit, (July 2019) rather than exclusively up to 30 March 2019.
- 5.3 The scope of internal audit work usually includes governance, risk management and controls. As previously noted, the scope of this audit did not include the testing of governance procedures.

### **Opinion**

- 5.4 The audit opinion reflects an overall judgement based on the weight of findings and risks identified in each component of the work undertaken. It reflects the degree of assurance that can be derived from the audit. In line with many audit providers, the Council expresses audit opinions as one of four categories:-
- *Good*
  - *Adequate*
  - *Requires Improvement* (formerly called *Marginal*)
  - *Unsound*

*Good* or *adequate* opinions are generally taken to be satisfactory whilst the others are not.

- 5.5 This audit has resulted in an **adequate** overall opinion. This reflects confirmation that system improvements have been made. In particular, that the previous concerns about toll reconciliations have been substantially addressed. However, some risks remain and, if considered in isolation, some areas covered by the audit would have attracted a *requires improvement* opinion, meaning auditors found some risks that require prompt action and the assurance can be

provided in those areas is limited, as explained below. A detailed report has been presented to senior management team, which has agreed an action plan to address the outstanding issues. Some actions have already been taken and the majority should be complete by the end of the 2019 calendar year.

### **Key Findings**

- 5.6 Controls over the core financial systems, (total income, payroll, main accounting procedures and accounts payable), were all found to be *adequate*. Since the previous audit, a meaningful daily total reconciliation is now in place, enabling any material errors to be identified in a timely manner. In addition, previous findings in relation to payroll, main accounting procedures and key findings in relation to accounts payable have also been addressed. There are a number of findings in relation to these areas, but none were considered to present high risks.
- 5.7 One recurrent theme across all aspects of the audit was that, whilst the processes and controls have improved over time, the current procedures need to be better documented to ensure consistency, role clarity and continuity.
- 5.8 As part of the main accounting element of the audit, a specific test was undertaken, as specified in the approved audit plan, to validate the transfer of balances to the new Sage Line 50 ledger system. This concluded that the data transfer was accurate and assurance can be provided as to the integrity of the starting balances on the system.
- 5.9 The contracts, ICT and risk management elements of the audit would in isolation have resulted in *requires improvement* opinions. In each case, progress has been made since the previous audit, but further work is required to get these over the line.
- 5.10 As regards contracts, the Board has made progress in modernising its approach, in line with good practice and public procurement regulations. Specifically, the use of framework contracts where appropriate and the use of YOR Tender to advertise major works. However, the audit identified a number of points of detail regarding the administration of tendering and subsequent contract monitoring, in particular:-
- The clarity of audit trail to support the quality evaluation of tenders.
  - Reliance on a single officer to undertake the pricing evaluation.
  - Lack of clarity over roles and responsibilities in the tendering process, due to lack of a clear SLA at that time between the Board and Procurement officers from Hull City Council.
  - Variable quality of minutes from contract monitoring meetings.

- The reconciliation of hours-based payments to contractor timesheets.
- 5.11 As regards ICT, progress had been made on a number of issues identified in the 2017/18 review, but others remained outstanding, in particular:-
- Completion of IT strategy, Acceptable Use policy and Data Protection policy update.
  - Business Continuity Plan update
  - Technical review of the IT control environment to ensure compliance with relevant standards.
  - Inventory records to be updated.
- 5.12 As regards risk management, there is a more detailed risk register than auditors had previously seen, and this is regularly reviewed by management and presented to the Board to provide assurance that the reviews are taking place. However, further development is required for the process to have greater impact, including:-
- Tidying up of the register to clarify a number of apparent inconsistencies in the data.
  - Better engagement between officers and the Board to identify the strategic risks and other matters arising from the register that may require Board awareness, direction or decisions.
  - Ensuring risk is documented in decision records.

### ***Audit Quality, Performance and Conformance with Standards***

- 5.13 The PSIAS Standards require auditors to report on quality and performance. Hull City Council's internal audit function has an established quality assurance and improvement regime, which includes:-
- Supervision and file reviews by audit managers.
  - Periodic self-assessments against PSIAS requirements.
  - Mandatory 5 yearly external assessment against PSIAS requirements.
  - Reporting to the Council's Audit Committee on a range of performance measures in quarterly and annual reports.

The results of the assessments and performance measures are published in Audit Committee reports on the Council's website. On the basis of those assessments, the Council conforms with the Standards in all material respects.

## 6. Options and Risk Assessment

- 6.1 Not applicable in context that this report provides feedback as part of the Board's governance framework, as distinct from recommending an executive decision.

7. Consultation

- 7.1 This report summarises a detailed audit report that has been discussed and agreed with the Acting Clerk and senior management team.

Contact Officer: **Peter Holland, Head of Audit & Fraud, Hull City Council**

Officer Interests: None

Background Documents:

1. Internal Audit Report (Draft issued to management 13 Sept 2019)
2. Previous internal audit reports to the Board (June 2017 Board Papers - exempt)

# **HUMBER BRIDGE BOARD**

**Report to: The Board  
27<sup>th</sup> September 2019**

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## **HUMBER BRIDGE BOARD ICT POLICY REPORT OF THE HEAD OF ENGINEERING AND INFRASTRUCTURE**

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**This item is not exempt  
Therefore exempt reasons are not applicable**

### **1 Purpose of the Report and Summary**

- 1.1 The Humber Bridge Board [HBB] recognises that Information and Communication Technology [ICT], including the use of email and the Internet/Intranet, as a legitimate business tool. Using such technology enables HBB to work more effectively and deliver efficient services to a range of internal and external stakeholders.
- 1.2 The proposed ICT Policy v1.3 has been reviewed to take account of the current use of HBB ICT by staff and others who may be affected by HBB's ICT. The Policy has been revised to ensure all current and relevant legislation is complied with and that users are fully aware how to access and use HBB ICT in a safe and secure manner.
- 1.3 The proposed ICT Policy v1.3 has been prepared in conjunction with HBB's ICT Service Provider and has been through Union consultation.

### **2 Recommendations**

- 2.1 That the Board approve the ICT Policy in Appendix A and authorise the Head of Engineering and Infrastructure to implement it.
- 2.2 The Board authorise the Head of Engineering and Infrastructure to finalise the accompanying Guidance Document for this Policy and following consultation with the Unions, implement the Guidance Document.

### **3. Reasons for Recommendations**

- 3.1 HBB need to have a current ICT Policy in place that reflects the ICT in use by HBB staff and those affected by it and that it complies with current legislation.
- 3.2 Inappropriate use of ICT by a user can cause significant business disruption, financial losses and/or reputational damage, therefore it is important that a current and up to date ICT Policy is in place to ensure all users are aware of how they should and shouldn't use HBB ICT.
- 3.3 As part of the on-going Internal Audit reviews, the opportunity has been taken to fully review and revise the Policy to ensure it is in line with current practice.

### **4. Background**

- 4.1 HBB has an ICT Policy and this requires to be reviewed and updated on an annual basis. It is important to ensure any changes in relevant legislation are taken into account and included in the Policy.
- 4.2 ICT technology is constantly changing and this also means the possibility of mis-use whether accidental or deliberate also increases. Therefore it is important that the HBB ICT Policy is current and has clear guidance for all users on how to use HBB ICT safely and securely.

### **5. Issues for Consideration**

- 5.1 The current ICT Policy and Guidance Notes need to be reviewed and revised to take account of changing ICT and to also ensure all users are fully aware of how to use HBB ICT safely and securely.
- 5.2 There is an increased threat from cyber attack and whilst internal controls and firewalls are effective, HBB ICT users need to be aware of the these issues; how to avoid and what to do if accidentally accessed.
- 5.3 The consequences of ICT mis-use or cyber attack will have a significant business, financial and reputational impact.

## 6. Options and Risk Assessments

### 6.1 Option 1 – Approve the recommendations

This option will give approve the ICT Policy v1.3 and authorise the Head of Head of Engineering and Infrastructure to implement it.

It will also allow the Head of Engineering and Infrastructure to finalise the Guidance Notes to accompany this policy and after consultation with the Union, implement them across the business.

This is the recommended option.

## 7.0 Consultation

7.1 As part of the review and revision of this ICT Policy v1.3, consultation has taken place with Internal Audit, HBB's ICT Service Provider and HBB SMT.

7.2 The proposed ICT Policy v1.3 has been approved by the HBB Union representatives.

Contact Officer: **Andrew Arundel**  
**Head of Engineering and Infrastructure**

Background Papers:

- Appendix A







**HUMBER BRIDGE**

Humber Bridge Board

# ICT Policy

V1.3

September 2019

## Policy Status

This Policy will be reviewed on an annual basis and approved by the Board and any changes highlighted to all staff and contractors who may be affected.

Document History				
Version	Date	Author	Comments	Review Date
1.0	9 February 2006	P. Hill	Policy produced, approved and published	Annual
1.1	26 September 2007	P. Hill	Policy reviewed, approved and published	Annual
1.2	16 September 2013	N. Marshall	Policy reviewed, approved and published	Annual
1.3	29 August 2019	A. Arundel	Policy reviewed and revised to reflect current legislation	

Document Approval Status			
Action	Name	Approved by	Published Date
Policy produced	P Hill	The Board, Trade Unions, Senior Management Team	09/02/06
Reviewed	P Hill	The Board, Trade Unions, Senior Management Team	26/09/07
Reviewed	N Marshall	The Board, Trade Unions, Senior Management Team	16/09/13
Reviewed	A Arundel		

## Contents

- 1.0 Policy Statement
- 2.0 Policy Objectives
- 3.0 Policy Implementation
- 4.0 Use of ICT by HBB employees
- 5.0 ICT Users and the Law
- 6.0 ICT Guidance Document (Contents)

## 1. Policy Statement

1.1. The Humber Bridge Board [HBB] recognises that Information and Communication Technology [ICT], including the use of email and the Internet/Intranet, as a legitimate business tool. Using such technology enables HBB to work more effectively and deliver efficient services to a range of internal and external stakeholders.

## 2. Policy Objectives

- To provide as many employees as possible with access to information technology including email, internet, intranet and systems appropriate to role.
- To promote the effective, consistent and legal use of information technology
- To protect the HBB from possible litigation because of illegal or inappropriate use of the supplied information technology.
- To promote the use of information technology in a professional manner, primarily for business purposes.
- To allow for restricted personal use by employees in their own time, ensuring that personal use does not interfere with individual work responsibilities
- To ensure all employees are aware of their responsibilities in relation to the use of information technology and to the law surrounding its use and the consequences of its misuse or abuse.
- To protect systems and networks from the threat of infection from computer viruses by promoting awareness and good practice.
- To establish and maintain security and confidentiality in the use of all information technology.
- To establish a standard for the creation of strong passwords, their protection and frequency of change.
- To ensure passwords are chosen well, kept secure and used correctly for all employees that have been authorised to use the HBB ICT systems.

### 3 Policy Implementation

- 3.1 The Policy applies to all HBB employees including agency workers, casual workers, contractors and volunteers who have been authorised to use HBB's ICT systems.
- 3.2 For the purposes of this document all identified will be referred to as employees.
- 3.3 This Policy outlines HBB's approach to the use of ICT systems and any related equipment or documentation.
- 3.4 The Policy is communicated to all ICT users and is supported by an ICT guidance document. When requested to do so – users must confirm, by clicking on the appropriate button at the sign in page when they log into any HBB IT device, that they have read and understood these documents and will comply with them.
- 3.5 This Policy should be read in conjunction with the Policy Guidance Document. The contents of which are included in section 6.
- 3.6 The Policy will be reviewed annually and approved by the Board
- 3.7 The Head of Engineering and Infrastructure is responsible for implementing the Policy

### 4 Use of ICT by HBB employees

- 4.1 HBB recognises that there are risks associated with employees accessing and handling information in order to conduct office HBB business.
- 4.2 This policy aims to mitigate the following risks:
- Non-reporting of information security incidents;
  - Inadequate destruction of digital/physical data;
  - Loss of direct control of user access to information systems and facilities
- 4.3 Non-compliance with this policy could have a significant effect on the efficient operation of the HBB and may result in financial loss and an inability to provide necessary services to our customers.

### 5 ICT Users and the Law

- 5.1 It is important that all employees are aware of the Law and the policy surrounding information technology and electronic systems., as breaches may result in criminal and/or disciplinary action. Any breach of the law will be reported to the Police.

## 6 ICT Guidance Document

This document is produced as a guidance document to assist and guide all staff and those using the HBB ICT and systems.

### Information and Communication technology (ICT) Guidance 2019

#### Contents

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Green IT..... **Error! Bookmark not defined.**

Display screen equipment..... **Error! Bookmark not defined.**





# **HUMBER BRIDGE BOARD**

**Report to: The Board  
27<sup>th</sup> September 2019**

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## **HUMBER BRIDGE BOARD CCTV POLICY REPORT OF THE HEAD OF OPERATIONS**

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**This item is not exempt  
Therefore exempt reasons are not applicable**

### **1 Purpose of the Report and Summary**

- 1.1 The proposed Humber Bridge Board (HBB) Closed-Circuit Television (CCTV) Policy aims to provide guidance as to good practice in the use of the CCTV system and to detail the controls necessary to ensure compliance with the GDPR, Data Protection Act 2018, the Protection of Freedoms Act 2012 (PFA), the Human Rights Act 1998 (HRA) and the Closed Circuit Television Surveillance Camera Code of Practice.
- 1.2 The proposed CCTV Policy has been agreed by the Senior Management Team, Data Protection Officer and our Union representatives following consultation.

### **2 Recommendations**

- 2.1 That the Board approve the CCTV Policy in Appendix A and authorise the Head of Operations to implement it.

### **3. Reasons for Recommendations**

- 3.1 HBB need to have a current CCTV Policy in place that reflects what is used by HBB staff and those affected by it and that it complies with current legislation.
- 3.2 Inappropriate use of CCTV by a user can cause significant business disruption, financial losses and/or reputational damage, therefore it is important that a current and up to date CCTV Policy is in place to ensure all users are aware of how they should and shouldn't use CCTV equipment.
- 3.3 Following the implementation of new cameras, the opportunity has been taken to fully review and revise the Policy to ensure it is in line with current legislation, current working practices and is in line with Data Protection.

### **4. Background**

- 4.1 HBB has a CCTV Policy and this requires reviewing and updating on an annual basis. It is important to ensure any changes in relevant legislation are taken into account and included in the Policy.
- 4.2 The very nature of CCTV is that it poses an intrusive breach of an individual's privacy. The majority of those who pass by CCTV cameras will do so without an understanding of their range and capability. HBB recognises the very real position of trust that those who operate the CCTV system have. In recognising the legal requirements of the Data Protection Act 2018 and other legislation, HBB have sought to provide those who operate the system with clear guidance as regards their duties and responsibilities.

### **5. Issues for Consideration**

- 5.1 The current CCTV Policy needs to be reviewed and revised to ensure all users are fully aware of how to use HBB CCTV equipment in the correct manner and all legal implications are enforced.
- 5.2 The consequences of CCTV misuse, whether accidental or deliberate may have a significant business, financial and reputational impact.

## 6. Options and Risk Assessments

### 6.1 Option 1 – Approve the recommendations

This option will give approval for the CCTV Policy V2.0 and authorise the Head of Operations to implement it.

This is the recommended option.

## 7.0 Consultation

7.1 As part of the review and revision of this CCTV Policy, consultation has taken place with the Senior Management Team, Data Protection Officer and the Union Representatives.

7.2 The proposed CCTV Policy has been approved by the Senior Management Team, Data Protection Officer and the Union Representatives

Contact Officer: **Fay Baker**  
**Head of Operations**

Background Papers:

- Appendix A





**HUMBER BRIDGE**

Humber Bridge Board

# **CCTV Policy**

V2.0 Draft

September 2019

## Policy Status

This Policy will be reviewed on an annual basis (or sooner where there has been a change in Government legislation) and approved by the Senior Management Team and the Board and any changes highlighted to all staff and contractors who may be affected.

Document History and Status					
Date	Action	Version	Author	Comments & Approved by	Status
11/03/2010	Policy Produced	V1.0	General Manager & Bridgemaster	Policy reviewed and published. Approved by the Board, Trade Unions, Senior Management Team	Superseded by V1.2
05/11/2012	Policy Reviewed	V1.2	General Manager & Bridgemaster	Annual review of Policy amended to incorporate; previously omitted Data Protection requirements; Changes to roles and responsibilities; Changes to disclosure requests; Changes to retention of CCTV images. Policy approved by Humber Bridge Board, recognised Trade Unions and the Senior Management Team.	Live
02/09/2019	Policy Reviewed	V2.0	Head of Operations	Policy reviewed and revised to incorporate and reflect current and changes in legislation; changes in roles and responsibilities. In draft awaiting approvals.	DRAFT

## Contents

- 1.0 Policy Statement
- 2.0 Guiding Principles
- 3.0 Objectives of the Scheme
- 4.0 Roles and Responsibilities
- 5.0 Data Protection Legislation
- 6.0 Standards
- 7.0 Dealing with requests, observations, information and access to recordings
- 8.0 Retention of CCTV images
- 9.0 How the system will be evaluated and monitored
- 10.0 How complaints about the operation of the system will be handled
- 11.0 How breaches of the Policy will be handled
- 12.0 Review arrangements

Appendix 1 The Data Protection Act 2018 – Data Protection Principles

## Definitions of Terms Used

“Organisation”                      Humber Bridge Board (Hereafter HBB)

## 1. Policy Statement

- 1.1 The aim of this policy is to provide guidance as to good practice in the use of the Closed-Circuit Television (CCTV) system and to detail the controls necessary to ensure compliance with the General Data Protection Regulation (GDPR), Data Protection Act 2018, the Protection of Freedoms Act 2012 (PFA), the Human Rights Act 1998 (HRA) and the Closed Circuit Television Surveillance Camera Code of Practice.
- 1.2 This document provides guidance and instruction on how the CCTV Policy is to be implemented and operated. It does this by stipulating:
- The guiding principles.
  - The objectives of the policy.
  - The roles and responsibilities in the management and operation of the CCTV system.
  - The legal requirements as laid down by the Data Protection Act 2018.
  - The standards expected of staff who monitor and operate the CCTV system.
  - How to deal with requests for observations, information and access to recordings.
  - How long CCTV images will be retained.
  - How the system will be evaluated and monitored.
  - How complaints about the operation of the system will be handled
  - How breaches of the Policy will be handled
- 1.3 This document is based on the legally enforceable data protection principles (Appendix 1) that lie at the heart of the Data Protection Act.

## 2. Guiding Principles

- 2.1 The very nature of CCTV is that it poses an intrusive breach of an individual's privacy. The majority of those who pass by CCTV cameras will do so without an understanding of their range and capability. The HBB recognises the very real position of trust that those who operate the CCTV system have. In recognising the legal requirements of the Data Protection Act 2018 and other legislation, the HBB have sought to provide those who operate the system with clear guidance as regards their duties and responsibilities.
- 2.2 Every person involved in the management and operation of the CCTV system will be personally issued with a copy of the CCTV Policy. They will be required to sign documents confirming that they fully understand their obligations to adhere to the requirements of these documents and that any breach is likely to be considered a disciplinary offence.



### 3. Objectives of the Scheme

- 3.1 CCTV at the Humber Bridge is primarily employed to allow remote monitoring of HBB property and infrastructure which would otherwise be impractical.
- 3.2 The equipment is located to allow visual confirmation of conditions throughout the site occupied by the HBB although it is recognised that this will, unavoidably, sometimes include surrounding land which cannot be practically excluded from the field of view of the CCTV equipment.
- 3.3 The images collected will allow observations to be made in respect of ensuring the HBB operates a safe and secure environment for both staff and visiting members of the general public and is able to identify and respond to issues arising that could affect this environment. These issues may include, but not limited to:
- Traffic Management and traffic conditions generally
  - The Operation of the Tolling system
  - The security of staff and the travelling public on the Toll Plaza
  - This is supplemented in the Toll Booths only by an audio recording facility
  - Security in areas unauthorised for general access
  - Casual observation of vehicles and persons entering HBB property to enable early identification of behaviour likely to compromise the safe and secure environment
  - The observation of vehicles or persons whose behaviour causes concern
  - Specific observation of vehicles or persons involved in an incident, dispute or collision on HBB property

### 4. Roles and Responsibilities

- 4.1 Chief Executive – has overall responsibility for security matters but will delegate certain roles and responsibilities to other members of staff.
- 4.2 Operations Manager - is the person to whom questions or queries about the content of this document or the CCTV policy should be directed in the first instance and who is primarily responsible for:
- Ensuring compliance with this policy
  - Ensuring that CCTV operators are issued with and adhere to the requirements of the CCTV Policy, including periodic checks
  - Ensuring that the purposes and objectives of the CCTV system are not exceeded
  - Advising on the adequacy and sufficiency of on-site signage informing visitors to HBB property that there is a CCTV scheme in operation
  - Facilitating formal subject access requests for captured images under the terms of the Data Protection Act.
  - Ensuring copies of this policy are provided when requested to do so

- Ensuring that the CCTV system is maintained under a maintenance agreement and that the agreement provides for regular/periodic checks on the equipment including minor adjustments to maintain picture quality, emergency attendance by engineers to rectify any loss or severe degradation of image or camera control.
- Ascertaining who is deemed to be an authorised user of the CCTV system
- Ensuring that only authorised users operate any of the CCTV equipment in accordance with this policy.

4.3 Control Room staff – use the system on a day-to-day basis. They will:

- Operate and view CCTV systems in accordance with this policy
- Allow only authorised users to operate and view the CCTV system in the Control Room, and in accordance with this policy.
- Maintain surveillance of the areas covered by cameras through appropriate use of the CCTV system.
- React promptly to incidents ensuring that correct action is taken and logged.
- Take real-time recordings of incidents that fall within the purposes of the system.
- Respond to requests for recordings only from authorised people.
- Ensure that images/data is disclosed to authorised staff and third parties in accordance with the Policy.

4.4 Authorised Users – use the system on a periodic basis. They will:

- Operate and view CCTV systems in accordance with this policy
- Allow only authorised users to operate and view the CCTV system in accordance with this policy.
- Maintain surveillance of the areas covered by cameras, where appropriate, through appropriate use of the CCTV system.
- React promptly to incidents, where appropriate, ensuring that correct action is taken and logged

## 5. Data Protection Legislation

5.1 The HBB's CCTV system is registered under the notification requirement of the Data Protection Act to the Office of the Information Commissioner.

5.2 The Data Protection Principles established by the Act will be used by the HBB as a basis for operation of the scheme. Recorded material:

- Shall be obtained and be processed fairly, lawfully and in accordance with this Policy.
- Shall be held lawfully and only for the purposes of this Policy.
- Shall not be used or disclosed for any purpose, or in any manner, which is incompatible with this Policy.
- Shall be adequate, relevant and not excessive in relation to the purposes set out in this Policy.

- Where retained for any of the purposes set out in this Policy, shall not be kept for longer than is necessary for that purpose and shall be stored in a secure manner requiring authorised access from authorised staff.
  - Access will be permitted strictly in accordance with this policy and the operating procedures for the system.
- 5.3 The HBB will ensure that appropriate security measures are taken to prevent unauthorised access to, the alteration of, disclosure or destruction of any recorded material; and to prevent accidental loss or destruction of such material.
- 5.4 Recorded material will not be sold, used for commercial purposes, used for the provision of entertainment or used to provide information for any purpose other than stated within this Policy.
- 5.5 Signs (similar to that shown below) will be placed in the locality of the cameras and at the main entrance points to HBB property. The signs will indicate:
- The presence and purpose of CCTV monitoring
  - The ownership of the system
  - Its purpose
  - Contact telephone numbers

## 6. Standards

- 6.1 CCTV operators are able to control and view images from selected cameras. They are also able to record images from selected cameras in real time, produce hard copies of recorded images, replay or copy any pre-recorded data at their discretion, or as directed by senior management.
- 6.2 The HBB expects its staff to carry out their duties to the highest standards and to conduct themselves in a manner which will not harm their own or the HBB's reputation.
- 6.3 Any person operating the cameras will act with utmost discretion at all times.
- 6.4 Cameras must always be operated so that they capture only those images relevant to the purpose for which the CCTV system has been installed.
- 6.5 Camera operators will be mindful of exercising prejudices, which may lead to complaints of the system being used for purposes other than those for which it is intended. Operators may be required to justify their interest in, or recording of, any particular individual, group of individuals or property at any time by senior managers. Staff who misuse the CCTV system must be aware they could be committing a criminal offence and could face disciplinary action.

## 7. Dealing with Requests, Observations, Information and Access to Recordings

- 7.1 Access to, and disclosure of images recorded on the CCTV system will be restricted and carefully controlled. This will ensure the rights of individuals are retained, and also ensure that the images can be used as evidence if required.
- 7.2 Images can only be disclosed in accordance with the purpose for which they were originally collected.
- 7.3 Images must not be communicated to others who do not require the images as part of their job function. This includes leaving recorded pictures in unsecure areas or saving image files to unsecure storage areas.
- 7.4 The principles of the Data Protection Act 2018 shall be followed in respect of every request.
- 7.5 Individuals whose image is captured on CCTV, but who are not the target of specific surveillance will not be entitled to make an access request. HBB have a discretion to refuse any request for information unless there is an overriding legal obligation.
- 7.6 The processing of data will be protected by adequate safeguards and not be disclosed to any third party unless due to legal requirements.
- 7.7 Disclosures to third parties will only be made in accordance with the purpose(s) for which the system is used, and only where third parties have legal powers to do so. Disclosures will be limited to:
- Police and other law enforcement agencies, where the images recorded could assist in a specific criminal enquiry and/or the prevention of terrorism and disorder.
  - Prosecution agencies.
  - Relevant legal representatives.
  - Members of staff involved with the HBB's disciplinary process.
- 7.8 By way of an example, disclosure to Insurance companies will not be granted unless they are empowered to do so by a court of law.
- 7.9 The release of data must be authorised by a member of the senior management team, and this must be documented using the Data Disclosure Request Form (form is available from the Operations Manager or Control - for internal completion only).
- 7.10 Senior management is deemed to consist of the Chief Executive, Head of Operations, Head of Engineering & Infrastructure, Head of Finance and Commercial and HR Manager.
- 7.11 Members of the public wishing to make a Subject Access Request should be referred to the Data Protection Officer (DPO) in the first instance who will notify the Senior Management team where appropriate. The DPO can be contacted via [Mail@Humberbridge.co.uk](mailto:Mail@Humberbridge.co.uk).

- 7.12 Requests made by the Police or other law enforcement agencies can be made directly through the Control Room or the Operations Manager.
- 7.13 Any person making a request must be able to satisfactorily prove their identity and provide sufficient information to enable the data to be located.
- The individual will need to supply a photograph of themselves or a description of what they were wearing at the time they believe they were caught on the system, to aid identification.
  - If not a CCTV system, the information they need to provide, vehicle registration mark (VRM) in relation to ANPR information together with Proof of Ownership.
  - Details of the date, time and location are required.

## 8. Retention of CCTV Images

- 8.1 Subject to the equipment functioning correctly, images from every camera will be recorded throughout every 24-hour period on to the system hard drives.
- 8.2 CCTV images are held on the hard drive of the of the CCTV recorder for a maximum of 31 days, after which files are overwritten.
- 8.3 CCTV images held on the hard drive of a PC or file server for the purposes of the Toll system will be held for 60 days. This is due to the 30-day period for the initiation of payment default. This then gives the HBB and potential defaulter the further 30 days required by the Act. Photographic images will then be kept for as long as is required for example violations before being deleted.
- 8.4 CCTV images held on the hard drive of a PC or file server will be erased once the purpose of the recording is no longer relevant.
- 8.5 Images stored on a removable media such as a CD, will be erased or destroyed once the purpose of the recording is no longer relevant.
- 8.6 Recorded media no longer in use will be securely destroyed.

## 9. How the System will be Evaluated and Monitored

- 9.1 The system will, periodically, be evaluated to establish whether the purposes of the system are being complied with and whether objectives are being achieved. Records will evidence that the review has been undertaken.
- 9.2 The Operations Manager has responsibility for the monitoring and operation of the system including irregular spot checks, including examination of records, recordings stored on the systems hard drive and the content of recorded material.

## 10. How Complaints about the Operation of the System will be Handled

10.1 Employee issues concerning the operation of the HBB's CCTV system should be directed to the line manager.

10.2 Bridge users and third parties who have complaints concerning the operation of the Board's CCTV system should be directed to the:

- DPO for data issues
- Operations Manager for general issues

with details of their complaint at the Humber Bridge Board, Administration Building, Ferriby Road, Hessle, East Yorkshire, HU13 0JG

10.3 Complainants dissatisfied with the response of the Operations Manager or DPO can appeal in writing to the Chief Executive, Administration Building, Ferriby Road, Hessle, East Yorkshire, HU13 0JG

10.4 Complainants dissatisfied with the response of the Chief Executive can refer their complaint to the Information Commissioners' Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF

## 11. How Breaches of the Policy will be handled

11.1 Any breach of this Policy or of any aspect of confidentiality will be dealt with in accordance with the disciplinary procedure.

11.2 The HBB's Operations Manager will accept primary responsibility for ensuring there is no breach of security and that this Policy is complied with. He/she has day to day responsibility for the management of the system at their location and for ensuring compliance with the Policy.

11.3 The HBB's DPO will accept primary responsibility for ensuring Data Protection issues are complied with.

## 12. Review Arrangements

12.1 This Policy, its operation and the operation of the system will be reviewed annually (or sooner where there has been a change in Government legislation) by the SMT.

## Appendix 1

### The Data Protection Act 2018:

#### Data Protection Principles

1. Personal data shall be processed fairly and lawfully and, in particular, shall not be processed unless-
  - (a) At least one of the conditions in Schedule 2 is met, and
  - (b) In the case of sensitive personal data, at least one of the conditions in schedule 3 is also met.
2. Personal data shall be obtained only for one or more specified and lawful purposes and shall not be further processed in any manner incompatible with that purpose or those purposes.
3. Personal data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which they are processed.
4. Personal data shall be accurate and, where necessary, kept up to date.
5. Personal data processed for any purpose or purposes shall not be kept for longer than is necessary for that purpose or those purposes.
6. Personal data shall be processed in accordance with the rights of data subjects under this Act.
7. Appropriate technical and organisational measures shall be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data.
8. Personal data shall not be transferred to a country or territory outside the European Economic Area unless that country or territory ensures an adequate level of protection for the rights and freedoms of the data subjects in relation to the processing of personal data.





# **HUMBER BRIDGE BOARD**

**Report to: The Board  
27<sup>th</sup> September 2019**

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## **BRIDGE BARRIER FEASIBILITY – HIGH LEVEL OPTIONS REPORT REPORT OF THE HEAD OF ENGINEERING AND INFRASTRUCTURE**

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**This item is not exempt  
Therefore exempt reasons are not applicable**

### **1 Purpose of the Report and Summary**

- 1.1 There has been an on-going issue at the Humber Bridge with distressed individuals for many years. The Board has always taken this issue seriously and supported staff in dealing with this issue. The Board has also supported a trial of higher barriers.
- 1.2 The issue however, has been and continues to be challenging and in light of recent media and political attention, the Board have commissioned a report into possible engineering measures in addition to the excellent work Humber Bridge Board [HBB] staff are already doing, which has been recognised by mental health professionals in the region.
- 1.3 The report has reviewed current practice by other bridge owners and published literature and found that whilst higher barriers are recognised as an effective option. There are a number of operational, environmental and engineering considerations that have to be investigated in detail before progressing an option of higher barriers at the Humber Bridge. These are discussed in detail in the Report in Appendix A.

### **2 Recommendations**

- 2.1 That the Board consider the report in Appendix A and support the findings.
- 2.2 The Board agree with the recommendations not to progress an option involving safety nets.

- 2.3 The Board approve the recommendation to undertake a further detailed study and authorise the Head of Engineering and Infrastructure to commission external consultants to produce this as detailed in 8.3 a. of the Report in Appendix A.

### **3. Reasons for Recommendations**

- 3.1 The issue of those distressed individuals attempting to take their own life at the Humber Bridge has attracted significant local media interest recently and has also become the focus of Political scrutiny. In response to this the Board have agreed to undertake a study into possible engineering options to help address this issue.
- 3.2 Whilst the high level report in Appendix A has discussed engineering options and recommended discounting the use of safety nets (recognised as the most effective measure) as an option, it found that a higher barrier system would help deter and prevent distressed individuals from attempting suicide at the bridge. However, the report has also identified that there are a significant number of considerations that need to be taken into account if higher barriers are to be progressed as a viable option.
- 3.3 Although the Humber Bridge Board has and is doing everything practicable to address this issue, most of which are in accordance with the recommended framework published by Public Health England, it is clear that the issue of 'higher barriers' will remain on the agenda of both the media and local Politicians until it has been fully investigated and determined whether or not this can be achieved.

### **4. Background**

- 4.1 The Board has and always will take the issue of distressed individuals trying to take their own life at the bridge seriously. This has been proven by the support and focus given to date.
- 4.2 The issue has been on-going for many years now, however, more recently it has become the focus of both the media and local Politicians.
- 4.3 A higher barrier system was trialled on the Hessle viaduct approach to the suspended span in 2009. Following this it was reported that this barrier could be installed across the whole bridge for a cost of c. £4M.

## 5. Issues for Consideration

- 5.1 The issues surrounding distressed individuals attempting to take their own life at the Humber Bridge is currently the focus of local Politicians and media interest.
- 5.2 All recognised published literature recommends higher barriers as a viable and proven method to deter and reduce the number of distressed individuals attempting suicide.
- 5.3 Whilst higher barriers have been implemented at various bridges across the world, these have not included suspension bridges (based on the research carried out to produce the report in Appendix A).
- 5.4 There are a significant number of issues to be considered to determine whether it is possible and viable to increase or provide higher barriers at the Humber Bridge.
- 5.5 To progress the next phase, it will be necessary to employ external consultants and specialists to carry out the detailed investigation and analysis needed.

## 6. Options and Risk Assessments

- 6.1 Option 1 – Do nothing  
This would not address the current questions about ‘higher barriers’ from the media and local Politicians  
This option is not recommended
- 6.2 Option 2 – Consider safety nets as a viable option  
This would increase the cost and time involved in carrying out a further detailed assessment of safety nets together with higher barriers.  
This option is not recommended
- 6.2 Option 2 – Approve the recommendations  
This option will give approval to the Head of Engineering and Infrastructure to undertake a further and more detailed study into possible higher barriers, taking account of the issues that need to be considered for the Humber Bridge.  
This is the recommended option.

## 7.0 Consultation

- 7.1 As part of the review and preparation of this report, consultation has taken place with other bridge owners.
- 7.2 The report and outline of the high level study has been discussed with Historic England and the local Conservation Officers. Whilst been unable to comment on any specific proposal, they did advise that input from a Heritage Consultant would be beneficial to produce a Heritage Impact Assessment as part of the detailed proposals. This would be part of the further detailed work proposed in Recommendation 8.3 a. in the Report.
- 7.3 If Board approval is given, then a fuller and more consultation with the relevant stakeholders will take place. This would be detailed in the proposed delivery plan for delivery of Recommendation 8.3 a.

Contact Officer: **Andrew Arundel**  
**Head of Engineering and Infrastructure**

Background Papers:

- Appendix A

## High level options study into engineering measures to reduce and deter distressed individuals from taking their own life

### 1.0 Executive Summary

This report has been produced on behalf of the Humber Bridge Board as part of the Board's commitment to addressing the issue of distressed individuals attempting to take their own life at the Humber Bridge, by the possible use of engineering options.

This report is a high level study into possible engineering options, taking account of current practice and consideration of published literature. As part of the research, consultation with other bridge owners as well as a review of current practice has been undertaken.

The report has found that there is no 'standard practice' to this issue and each bridge owner has to look at a specific and bespoke solution for their bridge that deals with the unique operational, environmental and engineering issues of the bridge. These can and often are a mixture of interventions, including engineering options.

As part of the research into this report, the available published literature has been reviewed on this issue and following two articles have been used as they appear to be the most recent and applicable:

*Comparing different suicide prevention measures at bridges and buildings: lessons we have learned from a national study in Switzerland; A. Hemmer, P. Meier, T. Reisch; 2017*

*Preventing suicides in public places: A practice resource; Public Health England; 2015*

The *Hemmer, Meier and Reisch* study<sup>1</sup> found the most effective method of reducing suicide, was to install safety nets below the point of jumping (77.1% reduction), whilst barriers gave a 68.7% reduction.

The option to install safety nets has been discussed in this report and was found to be not feasible for a number of reasons and is therefore not recommended as a viable option.

The option to install a higher barrier at the Humber Bridge has been discussed in this report with reference to current practice from other bridge owners and published literature.

This found that barriers are proven to reduce and deter distressed individuals from attempting to take their own life. However, as discussed in the report, whilst higher barriers have been successfully installed at numerous bridges to address this issue, there are a number of considerations that would need to be investigated if a higher barrier system was to be proposed at the Humber Bridge and progressed as a viable option.

Therefore, it is proposed that a further detailed study as recommended in this report is progressed for consideration by the Board.

## **2.0 Introduction**

This report has been produced on behalf of the Humber Bridge Board as part of the Board's decision to investigate possible engineering options that could be implemented at the bridge, to help deter people from attempting to take their own life.

This report is a high level study into possible options, taking account of current practice and consideration of published literature. It does not include any detailed assessments as this will be progressed in the next stage, subject to the Board approving the recommendations of this report and the findings therein.

This report has been produced using published and open source data and the views contained within are those of the author based on available information.

## **3.0 Background**

The issue around people trying to and unfortunately taking their own life at the bridge has been on-going for many years now. The actual number is less than five each year.

The issue has always been taken seriously by the Board and this prompted a scheme to investigate and install a trial of higher barriers in the period 2007 to 2009.

The issue has recently become the focus of both the media and local Politicians, and following a number of meetings with stakeholders, the Board decided to produce a report to investigate possible engineering options to deter those from attempting suicide at the bridge.

The excellent work the Board and the staff are doing in dealing with distressed individuals is not covered in this report, however, this 'work' is part of the recommended intervention by mental health professionals in dealing with distressed individuals, and has been recognised by these professionals and others.

## **4.0 Review of Board Reports**

A brief review of Board Reports found that the issue around people trying to take their life at the bridge, has been on-going for many years.

In 2007, the Board committed to a project to investigate and install a trial of 'higher barriers' on the Hessle viaduct approach to the suspension bridge. This trial section was limited to the Hessle viaduct at a length of 120m in advance of erecting some 5,800m of barriers across the bridge.

The trial barriers were installed in 2009 to a height of 2.5m and were made of aluminium to compensate for the additional weight over the existing steel parapets. However, it was noted that the increased size and subsequent wind loading would have resulted in a reduced factor of safety for the main suspension cables. This was reported in June 2009 and the decision taken to defer the proposals to install the higher barriers until the results of the first Main Cable Inspection were known. The Inspection was completed in 2010, however, there is no record or information of any further progress.

The Board has also considered various reports into the footways and the current barrier height, which has concluded the barrier height was appropriate at the time of construction and there is no obligation to increase the height to comply with newer standards.

## 5.0 Review of published literature and current practice

As part of this report, the available published literature has been reviewed although not the definitive text on this subject, it appears that the recent Research Article:

*Comparing different suicide prevention measures at bridges and buildings: lessons we have learned from a national study in Switzerland; A. Hemmer, P. Meier, T. Reisch; 2017*

is generally referred to by most other bridge owners and consultants who are investigating engineering options to address this issue.

Other articles reviewed and referenced in this report include the published:

*Effect of a barrier at Bloor Street Viaduct on suicide rates in Toronto: natural experiment; M. Sinyor; 2010*

*Preventing suicides in public places: A practice resource; Public Health England; 2015*

The review also included a number of un-published reports commissioned by various bridge owners.

The copy of the abstract <sup>[1]</sup> below from the *Hemmer, Meier and Reisch* study shows why this report has credibility and has been used to discuss the possible engineering solutions for the Humber Bridge.

### Abstract

The goal of the study was to compare the effectiveness of different suicide prevention measures implemented on bridges and other high structures in Switzerland. A national survey identified all jumping hotspots that have been secured in Switzerland; of the 15 that could be included in this study, 11 were secured by vertical barriers and 4 were secured by low-hanging horizontal safety nets. The study made an overall and individual pre-post analysis by using Mantel-Haenszel Tests, regression methods and calculating rate ratios. Barriers and safety nets were both effective, with mean suicide reduction of 68.7% (barriers) and 77.1% (safety nets), respectively. Measures that do not secure the whole hotspot and still allow jumps of 15 meters or more were less effective. Further, the analyses revealed that barriers of at least 2.3 m in height and safety-nets fixed significantly below pedestrian level deterred suicidal jumps. Secured bridgeheads and inbound angle barriers seemed to enhance the effectiveness of the measure. Findings can help to plan and improve the effectiveness of future suicide prevention measures on high structures.

As discussed in the abstract above, the *Hemmer, Meier and Reisch* study <sup>[1]</sup> found that installing safety nets below the point of jumping was the most effective method with a reduction of 77.1% and the installation of barriers had a 68.7% reduction.

The study recommended that the barrier height should be at least 2.3m <sup>[1]</sup> and safety nets installed at least 4m <sup>[1]</sup> below pedestrian level may be sufficient. It is noted that unlike the barrier height, they do not state a definitive distance below pedestrian level to install the net.

The *Bloor Street Viaduct Report* <sup>[2]</sup> found that the installed barriers were 100% successful in reducing suicides. However, these barriers are 5m high and the report suggested that this may have led to ‘displacement’ from the bridge site. Fig 5.1 below shows the barriers



Fig 5.1 Bloor Street Viaduct Barriers

As part of the study, discussions have taken place with other bridge owners, who also experience incidents with distressed individuals attempting to take their own life.

This found that there is no standard practice or industry wide guidance, as each bridge site is different and has its individual challenges.

## 5.1 Clifton Suspension Bridge

Clifton Suspension Bridge has been the subject of numerous studies and reports over the years and is often referenced in both published and non-published documents.

They installed a higher barrier system in 1998 to height of 1.9m. This consisted of installing a new parapet system on the inside of the original with the top two thirds projecting into the footway to allow the maintenance gantry to operate. As can be seen below in fig 5.2, the footways are quite narrow and can only accommodate pedestrians. All vehicles and cyclists use the main carriageway.

Fig 5.3 below shows a view along the bridge footway and the projection inwards. The top of the parapet comprises tensioned wire with an inward curve to make climbing over more difficult.

It is noted that these barriers have reduced the number of distressed individuals taking their own life, however, it has not stopped determined and fit young males.

Clifton is now looking at installing measures at the abutment/buttresses.





Figure 5.2 View along the footway showing the inclined barrier



Figure 5.3 Elevation of the parapet and the minimal visual impact from this view

## 5.2 Tamar Suspension Bridge

Tamar Suspension Bridge has been looking at options to increase the parapet height they have on their footways.

Their footways are used by pedestrians and cyclists, and vehicles during maintenance works on the bridge. This means the existing 1.5m high parapets are also substantial in construction to allow for vehicle impact as shown in figs 5.4 and 5.5.



Figure 5.4 view of footway showing barriers



Figure 5.5 view of footway showing barriers

It is noted that the local media have recently reported on a Council meeting to discuss an option to increase the parapet heights and the outcome of the meeting was to set up a working group to consider the issues raised.

Extracts from the media coverage are given below:

***Tamar Bridge bosses told making barriers higher to try to prevent suicides could make it MORE dangerous***

*The Tamar Bridge and Torpoint Ferry Joint Committee considered a report this morning on whether the parapets at the bridge should be raised to prevent people from climbing over*

*Health professionals said most people who climb over barriers on the Tamar Bridge then climb back, so making them higher would make this more difficult*

*A decision on whether to increase the height of barriers on the Tamar Bridge in a bid to prevent suicides has been delayed so councillors can consider more evidence.*

*It had been suggested that the barriers could be increased from their current height of 1.5metres to 2.6m in order to prevent suicides.*

*However, health professionals told the committee that the majority of people who climb over the barriers climb back again and if the barriers were higher it could make it harder to climb back and could actually be less safe.*

***Cornwall Live News***

*Councillors will be asked to consider various options including replacing the entire fence with higher barriers or to add additional fencing to the existing barrier.*

*The report states that increasing the height of the existing barriers would cost between £4.5m and £5m but that the committee should allow a budget of £6m. It would take around 16 months to complete the project.*

*It adds: "The existing parapets at Tamar Bridge are 1.5m high already placing them amongst the highest on any major bridge in the UK and considered to be exceeding typical industry practice."*

*The report also states: "Clearly raising parapets to 2.6m would have a negative impact on unobstructed views from the Bridge for many users, and arguably on the overall aesthetics of the structure."*

***Plymouth Herald***

## **6.0 Possible Engineering Measures**

### **6.1 Safety Nets**

As discussed above in section 5, safety nets have been found to be the most effective system in reducing the number of distressed individuals taking their own life.

The Golden Gate Bridge [GGB] as well as been one of the most recognised and iconic bridges in the world, unfortunately also suffers from a very high suicide rate. GGB has carried out extensive research and feasibility work to consider appropriate measures to address this issue and have chosen to install safety nets along the length of the bridge, at some considerable cost.

The safety nets are positioned 6m below the footways and extend 6m out. Figs 6.1, 6.2 and 6.3 show the proposals. It is noted that the *Hemmer, Meier and Reisch* study <sup>[1]</sup> suggested that nets positioned 4m below pedestrian level may be sufficient.



Figure 6.1 GGB proposed safety nets

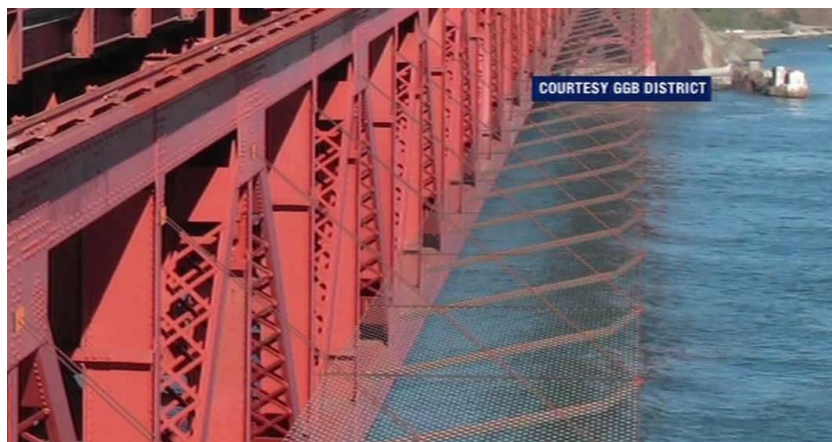


Figure 6.2 GGB proposed safety nets

**Golden Gate suicide net barrier**

The net, which consists of 385,000 square feet of marine-grade stainless steel at a cost of \$211 million, will be located 20 feet below the sidewalk and will extend 20 feet out on either side of the bridge.

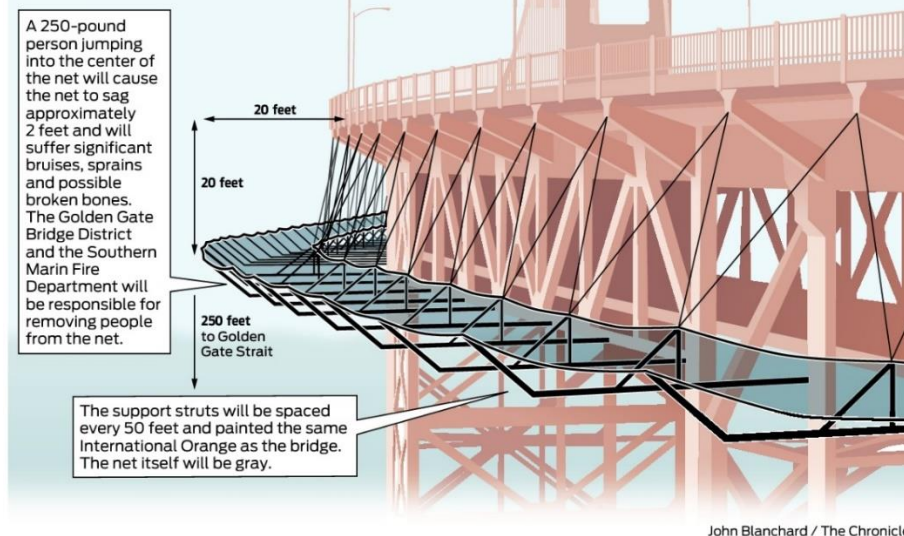
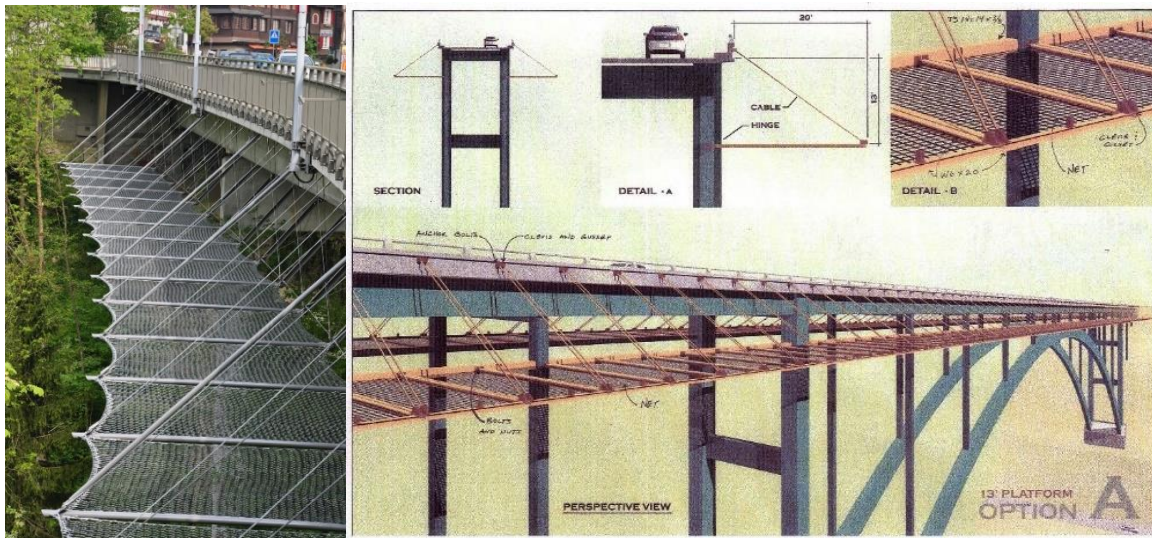


Figure 6.3 GGB proposed safety nets

Safety Nets as shown above and below in figs 6.4 and 6.5 are installed by utilising the vertical structural elements of these bridges to 'cantilever off' and 'suspend from'.



Figures 6.4 and 6.5 Net system cantilevered and suspended from vertical structural elements

However, in the case of the Humber Bridge, this will not be possible due to the design of the deck box section, as shown in fig 6.6. The red target is positioned at 6m below and beyond the lowest point a pedestrian could jump from.

The net is shown diagrammatically by the orange dotted line and the black arrows show that the edge of the net would need to be supported from the edge of the footway cantilever. This would require significant structural changes to the bridge.

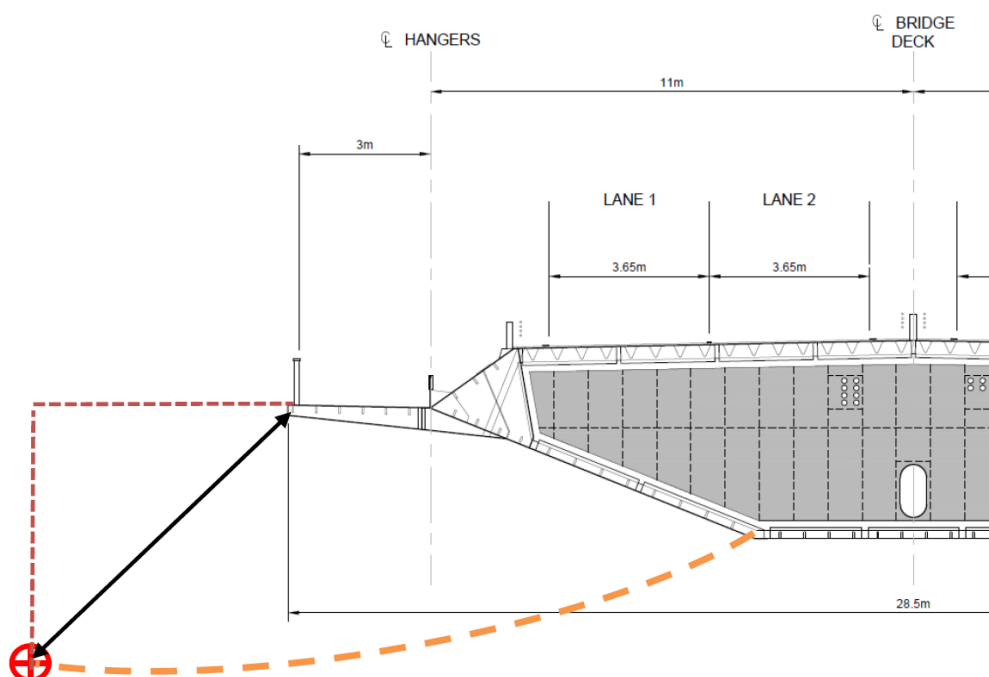


Figure 6.6 Schematic proposal for safety nets at Humber Bridge

The position of the net is shown at 6m below and 6m projection based on the GGB proposal. As discussed above *Hemmer, Meier and Reisch* study <sup>[1]</sup> did not recommend a minimum distance for safety nets and in the absence of other and clear guidance, the 6m distance has been used.

The Humber Bridge Act 1959 states that the main span must maintain a minimum headway for navigation of ninety seven feet at high water of ordinary spring tides [HWOST].

HWOST is given as +3.900m AOD and ninety seven feet converts to 29.585m. This means the minimum navigable headroom is +33.485m AOD.

At 6m below, the net would be at +31.570m AOD, which is 1.9m below the minimum navigable headroom and even at 4m below, the net would be at +33.570m AOD, which although is just above the minimum navigable headroom, the natural sag of the net would likely fall below this limit.

Although the bridge does rise at midspan, the conflict with the navigable headroom would occur in the section from midspan to Barton Tower, which is currently the navigable channel.

Research has also found that netting can be used vertically as shown below in fig 6.7, however, this would require significant support infrastructure to suspend the net and carry the load of the net as well as other loading from wind and ice, and the actual netting would obscure the view from the bridge.



Figure 6.7 Vertical netting

Therefore, from the research and discussions in this section, the installation of safety nets although very effective is not recommended as a viable option at the Humber Bridge.

## 6.2 Increasing the Barrier Height

As discussed above and in numerous publications, an effective barrier will help to deter distressed individuals from attempting to take their own life.

The *Hemmer, Meier and Reisch* study <sup>[1]</sup> indicates that the minimum height of a barrier should be at least 2.3m. Public Health England <sup>[3]</sup> provide the following guidance, fig 6.8.

The main design recommendations for fencing on bridges and high buildings are:

- at least 2.5 metres high
- no toe or foot holds
- an inwardly curving top is recommended as it is difficult to climb from the inside
- the barrier should be easier to scale from the outside, in case an individual wishes to climb back to safety

Figure 6.8 recommended guidance for fencing on bridges and high buildings

In the research carried out to date, only one bridge and Barrier system has proved to be 100% effective (published information) – Bloor Street Viaduct with a 5m high barrier.

As discussed above, both Clifton and Tamar have higher barriers than Humber Bridge and although only 1.9m high, Clifton has significantly reduced the number of distressed individuals attempting suicide, however this has resulted in some displacement.

Tamar have a 1.5m high barrier and had proposed to increase this significantly, however, these proposals have been put on hold and are now subject to a working group review following concerns raised by health professionals and others.

Although not formally documented, the 2.5m high trial barriers at the Humber Bridge have been climbed by fit young males, as part of an authorised 'climbing trial'.

Therefore it is not clear how high a barrier should be (this is assuming that a 5m high barrier would be impractical for the Humber Bridge) and how it should be designed.

The design of the barrier will have to accommodate the environment and operational requirements of the bridge (Clifton had to install an offset barrier to allow for their maintenance gantry and Tamar has to accommodate vehicles). Where a bridge allows cycle access, the minimum clear headroom required is 2.4m and the clear headroom may increase depending on the needs of the maintenance/access requirements.

Research has been carried out to find examples of high barriers that appear to meet the Public Health England requirements (as discussed above), however, at this stage it has not been possible to clarify the exact design/geometry of the barrier or how future maintenance of the bridges depicted is catered for.

The following figs 6.9 to 6.14 are examples of other bridge barriers and proposals for higher barriers. The names of bridges where known are stated, those that are not known are stated as such, however, they are actual images of barriers.

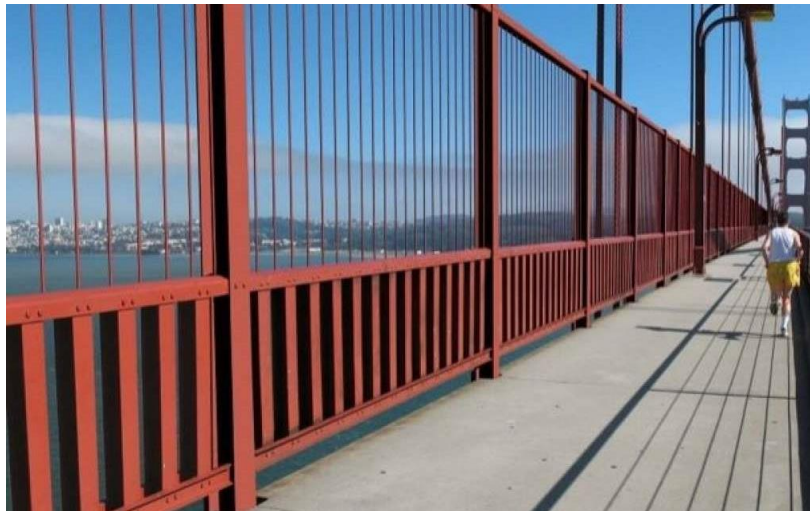


Figure 6.9 GGB Proposal for a Barrier

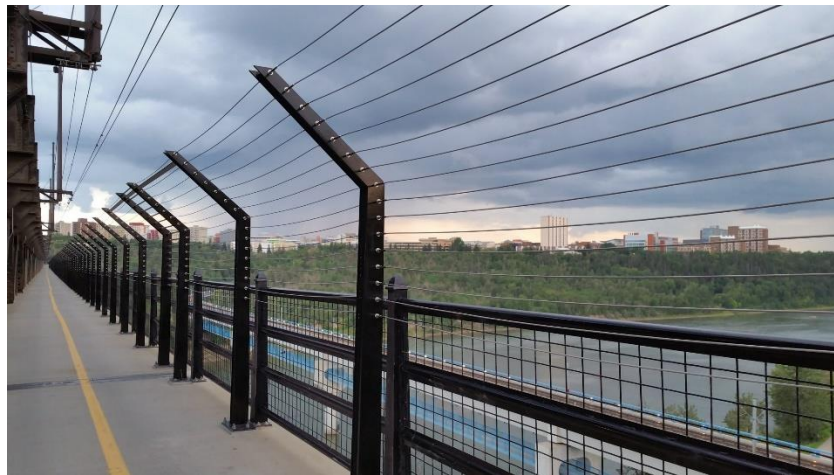


Figure 6.10 High level Bridge Barrier (unknown)



Figure 6.11 High level Bridge Barrier (unknown)





Figure 6.12 Iron Workers Memorial Bridge, Vancouver



Figure 6.13 Proposals for Hornsey Lane Bridge, Whitehall Park Conservation

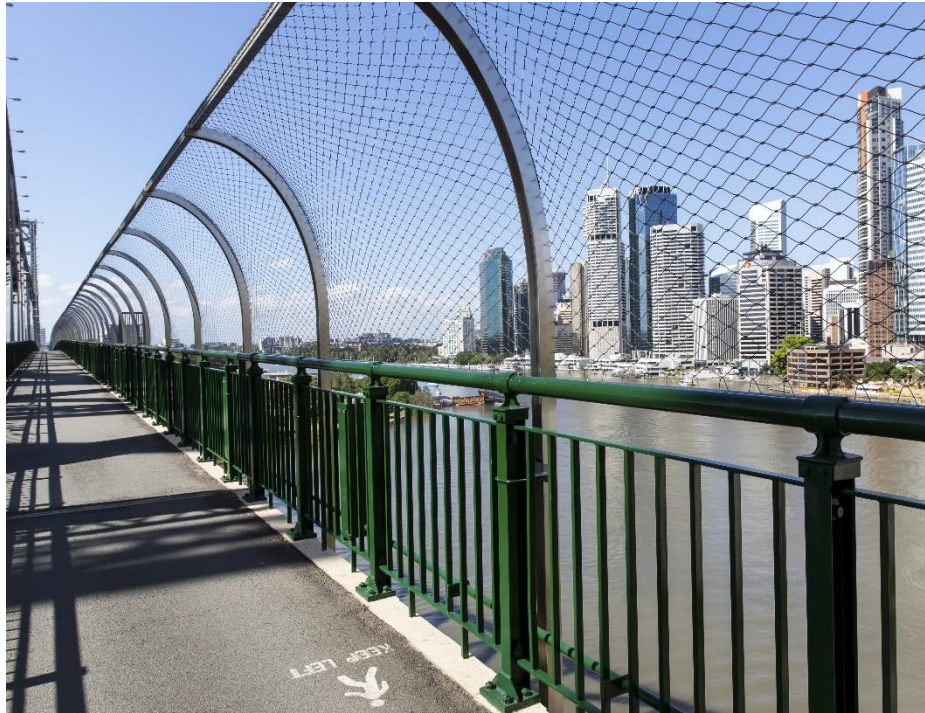


Figure 6.14 Story Bridge, Brisbane

As can be seen in the above figs, there are various different designs and heights of the barriers. It is noted however, that none of the examples are from suspension bridges.

The above designs also appear to be of quite substantial construction and of heavier sections, resulting in significant weight and also cross sectional area that will attract wind loading. The exception to this are the barriers depicted in figs 6.10 and 6.14. The barrier in 6.10 appears to be a retro-fitted system on the inside of the existing parapet, which will result in a reduction in available footway width. The barrier in 6.14 appears to be retro-fitted on the outside of the existing.

It is not clear from the images if it would be easier for a distressed individual to climb back over from the 'wrong' side as recommendation point 4 of Public Health England <sup>[3]</sup> fig 6.8.

As part of the review work undertaken, it is noted that some bridges do have removal panels in their parapet/barrier systems to aid recovery of a distressed individual on the wrong side of the barrier.

Fig 6.15 below shows a proposed parapet system to a height of c.2.6m with the top section leaning out, as against in as recommended above. It is noted that this would make it very difficult for a distressed individual to climb back over.

As discussed in section 5 above, Tamar has developed a viable option to increase their parapet height, however following their latest Joint Committee meeting, their Councillors (equivalent to the HBB Board) have set up a working party to consider further evidence. This will include evidence from the public, emergency services and health professionals.



Figure 6.15 Proposed c.2.6m High Barrier

As discussed above, there is no clear and definitive guidance on the height and design of a barrier to deter distressed individuals from attempting suicide. It is clear however, that each bridge is unique and has to develop a solution/proposal that is specific and takes a number of factors into account.

Fig 6.16 below, shows an indicative line diagram to show a possible inward leaning parapet to a height of c. 2.6m for the Humber Bridge. This is based on the vertical parapet to a height of 2.4m for cycle use and the top section leaning in (straight and curved shown). This would increase the parapet height from 1.165m to c.2.6m an increase of 1.435m.

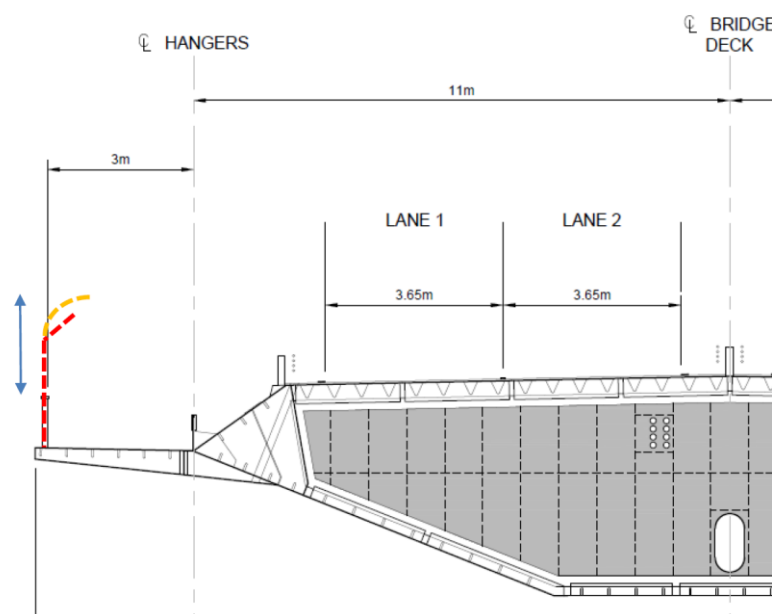


Figure 6.16 Indicative parapet proposal

### **HBB Trial Barrier**

The installed trial barrier has a greater elevation and therefore larger sectional area than the existing pedestrian parapet, as shown below in fig 6.17.

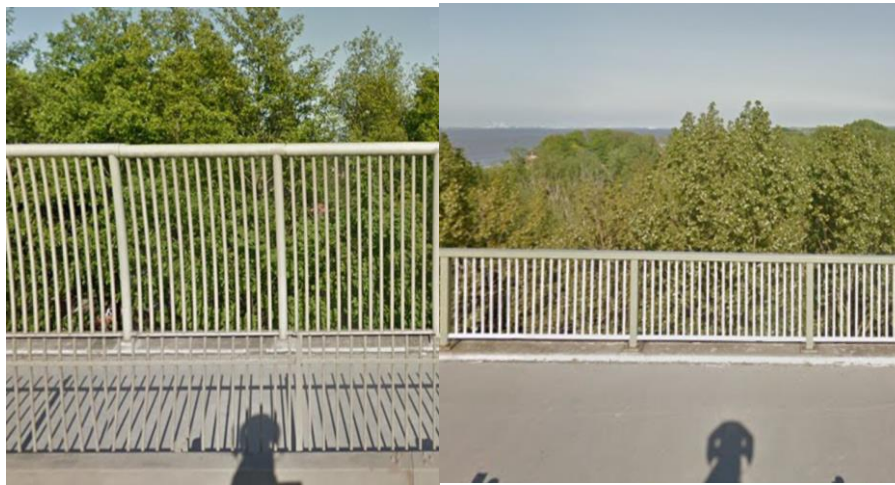


Figure 6.17 visual comparison of trial barrier (left) to existing parapet (right)

The existing parapet is of steel construction and comprises a 127 x 65 RHS top rail, 50 x 30 RHS bottom rail with 26mm dia vertical infill bars at c.120mm centres. The parapet panels are at 2.263m centres to coincide with the deck box construction.

The trial panel is of aluminium construction and comprises a 152mm dia top rail, 70 x 40 RHS bottom rail and 50.8mm dia vertical infill bars at 156mm centres. These were fabricated to suit the 2.263m centres.

Based on a 1 metre length of parapet, the sectional area of each of the above is:

Existing pedestrian parapet = 0.232m<sup>2</sup> / metre

Trial Barrier = 0.942m<sup>2</sup> / metre

This shows the Trial Barrier has over 4 times the sectional area of the existing.

The above calculation shows that the Trial Barrier would attract more windloading than the existing parapet and this is likely to be true of most of the examples shown above in figs 6.9 to 6.15, with the exception of 6.10 and 6.14.

The current HBB parapets have functioned and accommodated the movement of the 'flexible' deck section of the 1410m long central suspended span. The deck moves in the x, y and z direction to accommodate, vehicle loading, wind and thermal expansion due to temperature. Recorded movement at midspan gives approximate movements of:

Lateral + / - 1.2m

Vertical + 1.7m / - 1.1m

Any new barrier/parapet system will have to be designed for this movement as well, without affecting the functional requirements of a pedestrian barrier.

By comparison, Clifton and Tamar have central spans of c. 205m and 360m respectively and are also of a truss construction, making the deck 'stiffer' and less flexible.

It is noted that the trial barriers are also of fixed construction and have now removable panel, that have been used on some higher barrier systems to aid recovery of a distressed individual from the wrong side.

Therefore, whilst barriers are proven to reduce and deter distressed individuals from attempting to take their own life, it is evident from the above that there are a number of issues and considerations that need to be taken into account:

### **General design considerations**

- What is the height of the barrier?
- Should it lean in or out at the top?
- Should the top be curved or straight?
- What design is best ie: vertical bars, horizontal wires or mesh?
- How is a distressed individual recovered from the wrong side?
- What provision in terms of future maintenance needs to be catered for?
- Does the barrier need to be designed for vehicle impact?
- Can the width of footway be reduced?

### **Detailed design considerations**

- What design codes/standards are to be used? The barrier is likely to be 'bespoke' and outside a specific design standard. This will also apply to the relevant load cases from pedestrians, cyclists and vehicles
- What is the additional loading of the new system? This will include dead, live and imposed (including wind)
- Is the existing footway construction capable of carrying the additional load?
- What will be the overall aerodynamic effect on the bridge behaviour?
- What will be the design life of the barrier and elements?
- How will it be maintained to comply with the CDM Regulations?
- How will the new barrier be installed? ie: what are the temporary works required and how can they be installed

### **Consultations**

- The Humber Bridge is Listed, which will require Listed Building Consent from Historic England, East Riding of Yorkshire Council [ERYC] and North Lincolnshire Council
- The works to install a barrier will involve working over Network Rail, Highways England, ERYC assets and the Navigable Humber under Associated British Ports, and will require their approvals. The Humber Estuary is also a SSSI which, may require approval from Natural England.
- Emergency Services on the proposals and how they will affect their response/rescue operations
- Mental Health Professionals

## 7.0 Conclusion

This report has carried out a high level review of possible engineering measures that could be installed at the Humber Bridge to reduce and deter distressed individuals attempting to take their own life.

This has involved a review of published documentation on this subject together with unpublished information and has also sought to identify current practice from other bridge owners.

As part of the research and review of information, it was noted that the Humber Bridge Board is already carrying out and also working towards the published Framework for site-specific suicide prevention, fig 7.1 below, Public Health England <sup>[3]</sup>

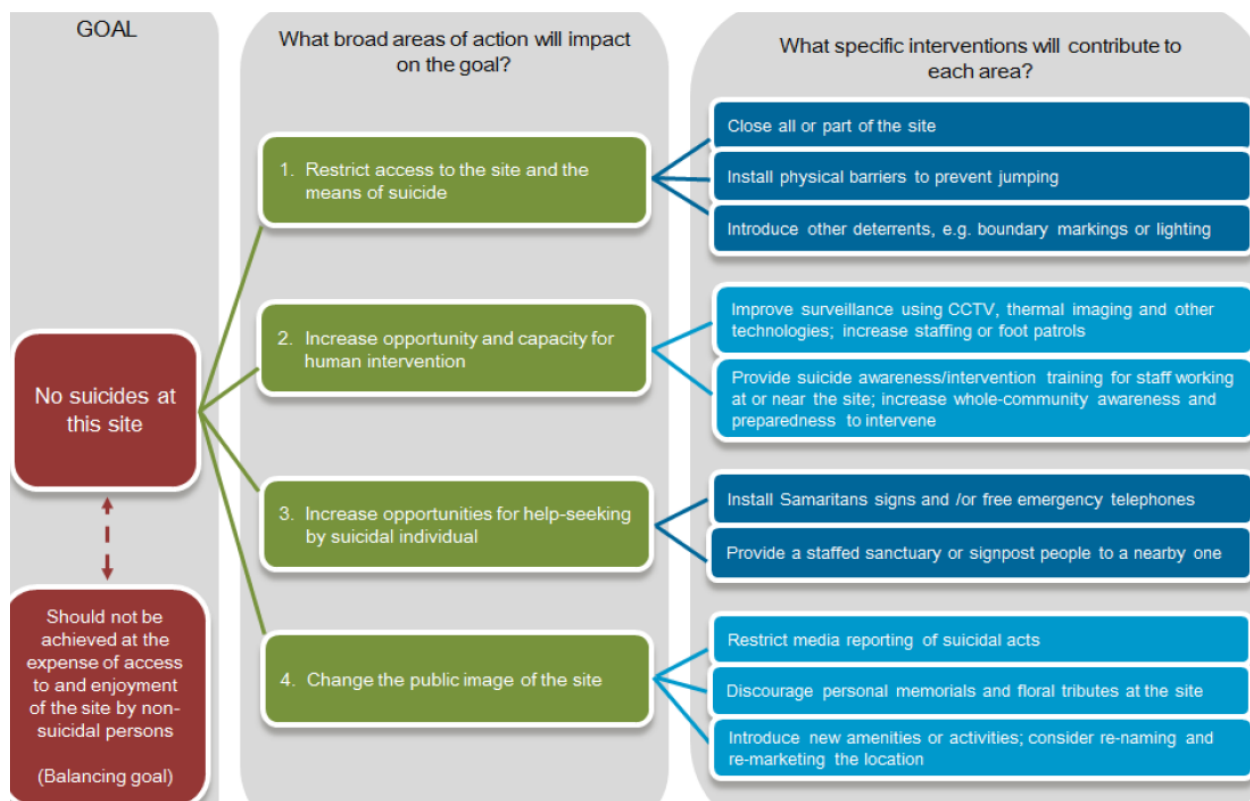


Figure 7.1

Figure 3. A framework for site-specific suicide prevention, Public Health England <sup>[3]</sup>

The goals stated above in fig 7.1, 'should not be achieved at the expense of access to and enjoyment of the site by non-suicidal persons' were raised and cited by the local media in their coverage of the Tamar Bridge Report on options for their barriers.

The report has found that the *Hemmer, Meier and Reisch* study <sup>[1]</sup> is the most recent study and is therefore currently used by bridge owners and consultants in looking at this issue.

This report has discussed safety nets in some detail and has recommended that this option is not viable at the Humber Bridge and should not be progressed.

As discussed above, barriers are recognised as being effective in reducing and deterring distressed individuals from attempting suicide and are generally the most recommended solution.

However, as discussed above, whilst higher barriers have been successfully installed at numerous bridges to address this issue, there are a number of considerations that would need to be investigated if a higher barrier system was to be proposed at the Humber Bridge.

## 8.0 Recommendations

The following recommendations are made:

- 8.1 The Board support the findings of this report
- 8.2 The Board agree with the recommendation not to progress with considering safety nets, for the reasons listed above.
- 8.3 The Board support a further study to consider the viability of installing higher barriers at the bridge with the following hold points:
  - a. develop a proposal to take account of the General considerations listed above in section 6 and consult on the proposals with the listed stakeholders. Ensure the scheme is buildable and produce a robust budget cost  
Submit to the Board for consideration and approval
  - b. Subject to Board approval to a. above, progress a detailed design as listed. Ensure scheme is buildable and produce robust costs.  
Submit to the Board for consideration and approval
  - c. Subject to Board approval to b. above and funding progress the scheme.

## 9.0 References

- [1] 'Comparing different suicide prevention measures at bridges and buildings: lessons we have learned from a national study in Switzerland; A. Hemmer, P. Meier, T. Reisch; 2017'
- [2] Effect of a barrier at Bloor Street Viaduct on suicide rates in Toronto: natural experiment; M. Sinyor; 2010
- [3] Preventing suicides in public places: A practice resource; Public Health England; 2015

