Fiona Smith
Historical Railways Estate
3rd Floor
37 Tanner Row
YORK
YO1 6WP
Tel: 01904 621924

Our ref: 101290
Your ref:

25th August 2020

http://highwaysengland.co.uk

Graeme Bickerdike

Sent via Email

Dear Mr Bickerdike

Freedom of Information Request – Queensbury Tunnel

I am writing to confirm that we have now completed our search for the information, which you requested on 27th July 2020

Your Request - In relation to the disused railway tunnel at Queensbury (HQU/3D), could you please provide me with:
* all photos of the “crease” recently identified in the lining close to No.4 Shaft
* a drawing etc showing those areas of the tunnel identified as being “red zone” (see HE’s email of 15/5/20 to Mathews/Marshall), the definitions associated with this zoning system and the analysis/assessments used to devise it
* the expected duration, cost and detailed description/plans/drawings relating to the ongoing tunnel works which started on or about 13 July 2020.

Our Response – The information is attached.

Your Request - Could you also please provide me with copies of all correspondence/documentation exchanged between Highways England and Jacobs/AMCO-Giffen, and internally amongst Highways England’s own staff, on the subject of Queensbury Tunnel (and related issues) since 27 May 2020. This should include - but is not limited to - all emails/electronic messages plus attachments, letters, proposals, reports, drawings, plans and Compensation Event Forms after CE0036.

Our Response – The information is attached.

If you are unhappy with the way we have handled your request you may ask for an internal review within 2 months of the date of this response for Freedom of Information requests and within 40 days for Environmental Information Regulations requests. Our internal review process is available at:
https://www.gov.uk/government/organisations/highways-England/about/complaintsprocedure

If you require a print copy, please phone the Information Line on 0300 123 5000; or email info@highwaysengland.co.uk.

You should contact me if you wish to complain.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision. The Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF

If you have any queries about this letter, please contact me. Please remember to quote reference number 101290 in any future communications.

Yours sincerely

Fiona Smith
Historical Railways Estate

HRE
Queensbury Tunnel, HQU/3D

Principal Contractor AMCO
Subcontractor Gunform

Report Author [redacted]

General Comments on Performance

Jacobs Engineer, [redacted] completed a supervision visit at Queensbury Tunnel, HQU/3D, on 15th, 22nd and 29thMay 2020.

15th May
Ram Arch and waterproofing membranes have been removed from Shafts 8 and 4 with ring dams fitted to both shaft eyes. Shotcreteing works to the sidewalls were ongoing at Shaft 8 during the visit.

Station Road is now in fair condition throughout following the concrete repairs undertaken by AMCO.

22nd May
Works at Shaft 8 had been completed. At the time of the visit works preparing for shotcreting the RAM Arch beneath Shaft 6 were ongoing and were due to start on 27/05/2020.

The water level within the tunnel had receded from approximately Tab 84 to Tab 86 since the visit undertaken on 15/05/2020.

29th May
Works at Shaft 6 were in progress at the time of the visit.

The water level within the tunnel had receded from approximately Tab 86 to Tab 88 since the visit undertaken on 22/05/2020.

Plant and Labour

The following plant and staff were present on site:

Plant:

- 1No Welfare cabin
- 1No Office / Toilet cabin
- 1No Office (briefing room) cabin
- 1No Drying Room cabin
- 1No Storage cabin
- 2No Vans
- 1 No Electricity generator

Staff:

- 1No. AMCO Site Supervisor [redacted]
- 4No. AMCO Site Operatives
- 4No. Gunform Site Operatives

Problems

None.

Health & Safety Audit

A health and safety audit was not completed by Jacobs on during any of the visits covered in this report, however the Jacobs Engineers were satisfied with arrangements from a Health and Safety perspective. In addition to the confined space entry arrangements, additional measures were in place relating to the control of COVID-19. Social distancing was being implemented by all working on and visiting the site. On arrival at site face masks are issued to be worn at all times and the temperature of personnel is taken.

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Activity	% complete at reporting date
1. Establish site set up	100
2. RAM Arch mesh sheets will be transported into the tunnel	100
3. RAM Arch Installation towards Shaft No. 8 (15m long)	100
4. RAM Arch Installation towards Shaft No. 6 (15m long)	100
5. RAM Arch Installation towards Shaft No. 4 (15m long)	100
6. Investigate the drainage system within the tunnel	100
7. Transfer and place all required plant within tunnel	100
8. Installation of ventilation system within the tunnel	100
9. Clearance of area beneath and between the collapses	100
10. Install colliery arches beneath and between the collapses	100
11. RAM Arch installation between collapses	100
12. Install colliery arches beneath significant bulge at ch.93	100
13. RAM Arch installation between the southern collapse and Shaft No. 3	100
14. RAM Arch Installation at Shaft No. 3 (Shaft eye only)	100
15. Installation of Silt Buster equipment	100
16. RAM Arch Installation at Shaft No. 2 (15m long)	N/A
17. RAM Arch Installation at Shaft No. 1 (15m long)	N/A
18. Set-up secure site area at Shaft No 2	100
19. Filling Shaft No 2 from ground surface level	100
20. Demobilise from site (Shaft No 2 area)	100
21. Demobilise down to 'skeleton crew' (north portal area)	100
22. Re-establish site	100
23. Open Shaft 8 eye	100
24. Install Ring Dam	100
25. Extend Pipes	100
26. Install temporary water control	100
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32. Extend Pipes	100
33. Install temporary water control	50
34. Prepare are and spray concrete at Shaft 4	20

Programme

Contract Start Date	17/09/2018
Contract Period (Phase 1a and 1b only)	23 weeks
Construction Start	01/10/2018
Construction Completion	31/07/2019 TBC
Contract Completion Date (whole of the works)	TBA

<u>Shaft No 2 works</u>

Start date	21/10/2019
Completion date	01/11/2019

<u>Shotcreting Works</u>

Start Date	27/04/2020
Duration	9 weeks
Completion Date	26/06/2020

Potential/ Actual Claim Situations

None

Delays incurred

None in relation to the spray concrete works.

Potential Delays to Future Progress

Not applicable.

Engineers Instructions issued to date

CE0001 - Phase 1 works instructed at a value of £545,372.50. The AFC table below only accounts for the Phase 1 works and currently does not consider the problems noted above, as at this time the costs are unknown.

CE0002 - The use of a larger tracked excavator was required to allow safe excavation deeper into the trackbed. The cost to hire in this excavator was £5,403.04.

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CE0008 - The original plan was to ventilate from both ends and place the fans outside the tunnel. Due to the access restrictions at the South portal and the flooding, blocking the passage of air, AMCO provided an alternative solution using methods which will force air all the way through from one end of the tunnel to the furthest work location, rather than just halfway. Increasing the capacity of the fans and the ducting to ensure the delivery of the clean air requires more powerful generators (from 65KVA to 100KVA) and therefore the requirement for more diesel. In order to accommodate the fans in the tunnel AMCO need to house them in parallel on a steel frame and connect the outlet sides together via a Y shaped steel ducting, which will then lead into the 1200mm layflat mine ducting. As the fans have been transferred in the tunnel AMCO need to prevent any recirculation of the air. The cost for the completion of these works is £115,762.57.

CE0009 - During the Christmas holiday period, work has been carried out at Strines Cutting, at the south end of the tunnel to divert water from Strines Beck into the cutting and therefore the tunnel. This had significantly increased flooding levels in the tunnel which has caused progress of the works to slow considerably. AMCO had been instructed and installed a pumping system at approx. ch.85 with a 6" pipe. The water, before their

management, was up to the ch.75. The cost for the management of this issue, delays and the continuous dewatering is £144,622.67.

CE0010 - During the Christmas holiday period, work has been carried out at Strines Cutting, at the south end of the tunnel to divert water from Strines Beck into the cutting and therefore the tunnel. This had significantly increased flooding levels in the tunnel which has damaged the tracked boom that had been placed in the formation had been submerged in water over this period. The cost for the repairs of the MEWP is £3,654.00.

CE0011 - Due to the increased possibility of mobilising silts and sediments when excavating the collapse debris from the tunnel, the pump had been turned off to avoid possible pollution of the running water at the cutting from unknown contamination of the debris. The installation of Siltbuster was requested and the cost covers the provision, delivery, installation and commission of three Silt buster units such as the period of 2 week hire up to the end of March including the cost for the discharge permit obtained from the Environmental Agency. This cost excludes any chemicals such as Coagulant (PAC) and Flocculent (Concentration for dilution) and it is £19,743.92.

CE0012 - Gas monitoring surveys are required to be completed by the end of Phase 1a of abandonment works. The proposed value include attendance on site on an approximately fortnightly basis over a 12 week period (6No visits), and monitoring for ground gases at each of the 6No boreholes installed at the ventilation shafts in 2017/18. The preparation and delivery of a factual report at the completion of works is included. The cost for the completion of these surveys is £8,426.65.

CE0013 - 12No extra steel colliery arches with B503 mesh covering are required to be installed in an area with a significant bulge between the two collapses. This cost includes only procurement of materials and delivery at a cost of £20,125.92.

CE0014 – Due to the increased possibility of mobilising silts and sediments when excavating the collapse debris from the tunnel, the pump had been turned off to avoid possible pollution of the water at the cutting from unknown contamination of the debris. The installation of Siltbuster equipment was requested to be installed within the tunnel to allow the works to progress. A stand down period of 16 days was incurred whist water pumping was temporally discontinued from the 6th to the 27th of March 2019. The cost for the stand down period due to flooding is £66,906.91.

CE0015 – Provision and installation additional 105m of Ram Arch at the area between the two collapses and to support the remaining 3No shaft eyes and to erect 12No colliery arches (14No in total, however 2No already priced within CE0007 and the colliery arch material priced in CE0013). The EW cost estimate for this item of work was £612,225.66. However, upon reviewing progress of the works Jacobs instructed this work item with a reduced duration. The cost has been calculated based on 5 weeks (25 shifts) for the installation of the 105m of Ram Arch and 1 week (5 shifts) for the installation of the Colliery Arches. The cost for the supply and installation of the additional Ram Arch and colliery arches is £484,132.29. Progress will be monitored and an additional instruction may be necessary to cover any overrun.

CE0016 - Overtime due to pumping and ventilation issues. The price of the present compensation event is to consolidate the recent programme to date. This consists of 2No weeks of labour and equipment for pumping to regain the work area and the delayed excavating tunnel drainage to establish connection during the period 27th March – 05th April and 02nd – 03th May. Also, it includes weekend working in association with the water pumping and 2No shifts associated with the tunnel ventilation. The dates are covered are 06/13/20th January, 10th February, 30/31th March, 07/14/20/22/28th April and 05th May. The cost associated with this compensation event can be attributed to the recent works undertaken by others at Strines Beck to divert water into the Strines Cutting and the tunnel. The cost for the completion of these works was £110,579.06.

CE0017 - Pump damage in association with the flooding. AMCO commenced pumping water from the tunnel as an emergency priority due to the flooding issues; however, this was prior to the ventilation being set up and running. Due to the unexpected amount of water, the pump had been damaged and choking on its own exhaust fumes. This had led to soot adhering to the pump resulting in damage. The cost associated with this compensation event was £1,305.00.

CE0018 - Additional time associated with provision of additional Ram Arch and Colliery Arches between the two collapses - Continuation of CE0015. Due to delays in water pumping and Environmental Agency restrictions. Only

5 weeks of productivity was able to be carried out during the 6 weeks allowed for in CE0015. This residual week has been continued in this EW to a total of 1week (w/c 3rd June) plus three weekend shifts (19/05, 26/05 and 02/06). The cost that has been calculated for the completion of these works is £50,597.02.

CE0018a - Additional time associated with the installation of Colliery Arches beneath the second collapse - Continuation of CE007. Due to delays due to increased water pumping an extended duration of 1.4 weeks and weekend working has been required to complete the colliery arches through both collapses. The additional time has been continued in this EW to a total of 1.4weeks (w/c 1st July) plus two weekend shifts (30/06 & 07/07). The cost that has been estimated for the completion of these works is £63,692.13.

CE0019 - Pumping to recover water levels to work area. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel, discovered on Sunday 9th June 2019. AMCO had deployed operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 3 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £165,005.46.

CE0020 - Provision and installation of additional 33m of RAM Arch between the southern collapse and Shaft No3 from dates 10/07/19 to the 23/07/19 including two weekend shifts (14/07 and 21/07). The cost that has been estimated for the completion of these works is £164,953.52.

CE0021 - Pumping to recover water levels to work area for the period 22/07/2019 – 05/08/2019. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel. AMCO had deployed operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 1.8 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £106,627.41.

CE0022 - Pumping to recover water levels to work area for the period 22/07/2019 – 05/08/2019. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping it is assumed it will be required to control the increased unexpected volumes of water entering the tunnel. AMCO suggest deploying operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 3.8 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £204,796.88.

CE0023 - Provision of a turbidity and pH monitor including installation and commission. Provision of additional pipework. Provision of 20 tonnes of type 1 to be installed to a section of the 'boggy' tunnel floor under the northern colliery arches. The cost that has been estimated for the completion of these works is £9,226.99.

CE0024 - In association with the Environmental Agency table of charges 2.3.39 - "Trade effluent and/or non-sewage effluent discharge with specific substances with a volume greater than 100m(3) a day and up to and including 1,000m(3) a day" the subsistence activity charge is £8,279.00. The Environmental Agency has invoiced the Contractor the amount of £6,944.41 for the charges on a pro-rata basis for the charge period 30/05/2019 to 31/03/2020. The cost, including the direct fee percentage uplift of 9% as applied through the contract with the HRE framework, has been calculated to be £7,569.40.

CE0025 - Damaged Generator. Following an increase of water flow into the tunnel on Saturday 28th August which resulted in a loss of 150m of the work area, water damage has been sustained to the 16.5k diesel generator which has been deemed beyond economical repair and damage has also been incurred to the mechanical seal, shaft and bearings on the pump. The cost has been estimated to £8,764.56.

CE0026 - Additional Security System at South Portal. Due to the authorised increase in water pumping volumes within the tunnel, the Contractor provided and installed a live feed camera with 24/7 access via remote footage at the working area to monitor the water levels and any unauthorised access via the south portal. The camera has been installed on 10/09/19 for an 8 week period, until 05/11/2019. The total cost includes the charge for use of

the camera for an 8 week period, installation and decommissioning fees and has been estimated to £3,073.60 (this has been subsequently revised to £2,352.66).

CE0027 - Pumping to recover water levels to work area for the period 01/09/2019 – 31/10/2019. Due to bouts of heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel. AMCO are deploying operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 8.8 weeks of day and night shifts including weekends and the cost has been estimated to £503,401.99 (this has been subsequently revised to £363,543.57).

CE0028 - On-site security guard. Provision of on-site security officer from 15:00 to 23:00 every day for 7 days a week (total 56 hours per week). The cost includes 45No shifts with £120 per shift and the site set-up fee £162.50 from 17th September until 31st October 2019. The cost that has been estimated for the completion of these works is £5,562.50 (this has been subsequently revised to £1,962.50).

CE0029 - Infilling Shaft 2. Infilling works to be completed at Shaft 2 from the top using normal weight granular material. Works to include secure site set-up, welfare and all necessary plant and materials. The cost that has been estimated for the completion of these works is £148.000,00 (this has been subsequently revised to £118,737.05).

CE0030 - Plant damage caused by flooding. A 360° excavator, spider MEWP, telehandler and 17m boom which have all been damaged in association with the flooding issues that have occurred due the diversion of the Strines Beck. The cost that has been estimated for the completion of these works is £77,677.28.

CE0031 - Testing of cement infused Lytag. AMCO to provide equipment and materials needed for completion of on-site Lytag/cement tests to check the compressive strength at 28 days and the permeability of the mix. The cost that has been estimated for the completion of these works is £5,507.90 (this has been subsequently revised to £5,828.78).

CE0032 – Security guard to Shaft 2. AMCO to provide on-site security officer as requested during the infilling works to shaft 2 during the hours 22:00 to 07:00 for 7 days a week (63 hours per week). The duration of this service was from Monday 28/10/19 until Thursday 31/10/19. The cost for these works was £702.50.

CE0033 – Equipment lost due to flooding. Heavy duty anti slip road plates, standard road plate, plant oil spill guard (medium & large), Avalon barrier with anti-trip feet. The cost that has been provided for these items is £2,767.52.

CE0034 – Loss of pipework due to flooding. Pipework items written off as AMCO has been unable to recover them. The cost that has been provided for these items is £33,046.06.

CE0035 – Shotcreteing works. AMCO to apply spray concrete to the RAM Arch supporting Shaft Nos 4, 6 & 8. The cost that has been estimated for the completion of these works is £585,517.93 (this has been subsequently revised to £575,388.49).

CE0036 – Interim running costs. AMCO to maintain site presence between phases of works. Continuation of EW32, EW39 covers from 01/04/2020 to 13/04/2020 (excluding Good Friday and Easter Monday). The cost that has been estimated for these works is £6,515.13.

CE0037 – Interim running costs. AMCO to maintain site presence between phases of works. A Compensation Event Notification has been issued to cover the cumulative interim running costs between 21/10/2019 and 01/04/2020. The total cost associated with the interim running costs during this period is £103,463.60.

Anticipated Instructions

An early warning has been issued by AMCO relating to maintaining the current Environment Agency discharge licence, which has been 'on hold' since works were suspended in October 2019. This early warning covers the subsistence costs associated with retaining the permit for possible future use at any time this financial year. The cost associated with this is £9,024.11.

Anticipated Final Cost (AFC)

Original Contract Cost	£1,044,234.42
Agreed Variation Costs	£3,113,282.84
Early Warning Estimates	£9,024.11
Anticipated Final Cost (Original Contract Cost + Variations + Estimates)	£4,166,541.37

Progress photographs as at 15/05/2020

Photograph 1: *View of the north portal.*

Photograph 2: *Shotcreteing works at Shaft 8.*

Photograph 3*: Ring Dam at Shaft 4.*

Photograph 4*: Condition of Station Road.*

Progress photographs as at 22/05/2020

Photograph 1: *Completed spray concrete at Shaft 8*

Photograph 2: *Eye of Shaft 8*

Photograph 3*: Preparation at Shaft 6.*

Progress photographs as at 29/05/2020

Photograph 1: *Works area at Shaft 6*

Photograph 2: *Partially completed shotcreting at shaft 6*

Photograph 3*: Completed side at shaft 6*

INTERIM CERTIFICATE No.20 **HQU/3D Tunnel Partial Infilling_Shotcreting Works**

EMPLOYER	Historical Railways Estate 37 Tanner Row YORK, YO1 6WP
PROJECT MANAGER	Dave Parker 37 Tanner Row YORK, YO1 6WP
SUPERVISOR	[redacted] Jacobs, 20 George Hudson Street York, YO1 6WR
CONTRACTOR	AMCO Whaley Road, Barnsley
DATE OF RECEIPT OF APPLICATION	27th May 2020
TENDER TOTAL	£ 1,044,234.42

1	Net Amount Certified for Valuation	£3,914,978.31
2	Deduct total previously certified	£3,604,168.54
3	**Amount due for payment under this certificate**	**£310,809.77**

4 I certify that the sum of ***Three Hundred and Ten Thousand, Eight Hundred and Nine Pounds and Seventy Seven Pence*** is now due to the Contractor in accordance with the terms of Contract.

Signed…… [redacted] upervisor's Representative Date: 29/05/2020

Value added tax payable on £310,809.77 at standard rate of 20.0% £62,161.95

JACOBS

HRE
Queensbury Tunnel, HQU/3D

Principal Contractor AMCO
Subcontractor Gunform

Report Author [redacted]

General Comments on Performance

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Problems

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5 weeks of productivity was able to be carried out during the 6 weeks allowed for in CE0015. This residual week has been continued in this EW to a total of 1week (w/c 3rd June) plus three weekend shifts (19/05, 26/05 and 02/06). The cost that has been calculated for the completion of these works is £50,597.02.

CE0018a - Additional time associated with the installation of Colliery Arches beneath the second collapse - Continuation of CE007. Due to delays due to increased water pumping an extended duration of 1.4 weeks and weekend working has been required to complete the colliery arches through both collapses. The additional time has been continued in this EW to a total of 1.4weeks (w/c 1st July) plus two weekend shifts (30/06 & 07/07). The cost that has been estimated for the completion of these works is £63,692.13.

CE0019 - Pumping to recover water levels to work area. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel, discovered on Sunday 9th June 2019. AMCO had deployed operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 3 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £165,005.46.

CE0020 - Provision and installation of additional 33m of RAM Arch between the southern collapse and Shaft No3 from dates 10/07/19 to the 23/07/19 including two weekend shifts (14/07 and 21/07). The cost that has been estimated for the completion of these works is £164,953.52.

CE0021 - Pumping to recover water levels to work area for the period 22/07/2019 – 05/08/2019. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel. AMCO had deployed operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 1.8 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £106,627.41.

CE0022 - Pumping to recover water levels to work area for the period 22/07/2019 – 05/08/2019. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping it is assumed it will be required to control the increased unexpected volumes of water entering the tunnel. AMCO suggest deploying operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 3.8 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £204,796.88.

CE0023 - Provision of a turbidity and pH monitor including installation and commission. Provision of additional pipework. Provision of 20 tonnes of type 1 to be installed to a section of the 'boggy' tunnel floor under the northern colliery arches. The cost that has been estimated for the completion of these works is £9,226.99.

CE0024 - In association with the Environmental Agency table of charges 2.3.39 - "Trade effluent and/or non-sewage effluent discharge with specific substances with a volume greater than 100m(3) a day and up to and including 1,000m(3) a day" the subsistence activity charge is £8,279.00. The Environmental Agency has invoiced the Contractor the amount of £6,944.41 for the charges on a pro-rata basis for the charge period 30/05/2019 to 31/03/2020. The cost, including the direct fee percentage uplift of 9% as applied through the contract with the HRE framework, has been calculated to be £7,569.40.

CE0025 - Damaged Generator. Following an increase of water flow into the tunnel on Saturday 28th August which resulted in a loss of 150m of the work area, water damage has been sustained to the 16.5k diesel generator which has been deemed beyond economical repair and damage has also been incurred to the mechanical seal, shaft and bearings on the pump. The cost has been estimated to £8,764.56.

CE0026 - Additional Security System at South Portal. Due to the authorised increase in water pumping volumes within the tunnel, the Contractor provided and installed a live feed camera with 24/7 access via remote footage at the working area to monitor the water levels and any unauthorised access via the south portal. The camera has been installed on 10/09/19 for an 8 week period, until 05/11/2019. The total cost includes the charge for use of

the camera for an 8 week period, installation and decommissioning fees and has been estimated to £3,073.60 (this has been subsequently revised to £2,352.66).

CE0027 - Pumping to recover water levels to work area for the period 01/09/2019 – 31/10/2019. Due to bouts of heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel. AMCO are deploying operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 8.8 weeks of day and night shifts including weekends and the cost has been estimated to £503,401.99 (this has been subsequently revised to £363,543.57).

CE0028 - On-site security guard. Provision of on-site security officer from 15:00 to 23:00 every day for 7 days a week (total 56 hours per week). The cost includes 45No shifts with £120 per shift and the site set-up fee £162.50 from 17th September until 31st October 2019. The cost that has been estimated for the completion of these works is £5,562.50 (this has been subsequently revised to £1,962.50).

CE0029 - Infilling Shaft 2. Infilling works to be completed at Shaft 2 from the top using normal weight granular material. Works to include secure site set-up, welfare and all necessary plant and materials. The cost that has been estimated for the completion of these works is £148.000,00 (this has been subsequently revised to £118,737.05).

CE0030 - Plant damage caused by flooding. A 360° excavator, spider MEWP, telehandler and 17m boom which have all been damaged in association with the flooding issues that have occurred due the diversion of the Strines Beck. The cost that has been estimated for the completion of these works is £77,677.28.

CE0031 - Testing of cement infused Lytag. AMCO to provide equipment and materials needed for completion of on-site Lytag/cement tests to check the compressive strength at 28 days and the permeability of the mix. The cost that has been estimated for the completion of these works is £5,507.90 (this has been subsequently revised to £5,828.78).

CE0032 – Security guard to Shaft 2. AMCO to provide on-site security officer as requested during the infilling works to shaft 2 during the hours 22:00 to 07:00 for 7 days a week (63 hours per week). The duration of this service was from Monday 28/10/19 until Thursday 31/10/19. The cost for these works was £702.50.

CE0033 – Equipment lost due to flooding. Heavy duty anti slip road plates, standard road plate, plant oil spill guard (medium & large), Avalon barrier with anti-trip feet. The cost that has been provided for these items is £2,767.52.

CE0034 – Loss of pipework due to flooding. Pipework items written off as AMCO has been unable to recover them. The cost that has been provided for these items is £33,046.06.

CE0035 – Shotcreteing works. AMCO to apply spray concrete to the RAM Arch supporting Shaft Nos 4, 6 & 8. The cost that has been estimated for the completion of these works is £585,517.93 (this has been subsequently revised to £575,388.49).

CE0036 – Interim running costs. AMCO to maintain site presence between phases of works. Continuation of EW32, EW39 covers from 01/04/2020 to 13/04/2020 (excluding Good Friday and Easter Monday). The cost that has been estimated for these works is £6,515.13.

CE0037 – Interim running costs. AMCO to maintain site presence between phases of works. A Compensation Event Notification has been issued to cover the cumulative interim running costs between 21/10/2019 and 01/04/2020. The total cost associated with the interim running costs during this period is £103,463.60.

Anticipated Instructions

An early warning has been issued by AMCO relating to maintaining the current Environment Agency discharge licence, which has been 'on hold' since works were suspended in October 2019. This early warning covers the subsistence costs associated with retaining the permit for possible future use at any time this financial year. The cost associated with this is £9,024.11.

Anticipated Final Cost (AFC)

Original Contract Cost	£1,044,234.42
Agreed Variation Costs	£3,113,282.84
Early Warning Estimates	£9,024.11
Anticipated Final Cost (Original Contract Cost + Variations + Estimates)	£4,166,541.37

Progress photographs as at 15/05/2020

Photograph 1: *View of the north portal.*

Photograph 2: *Shotcreteing works at Shaft 8.*

Photograph 3*: Ring Dam at Shaft 4.*

Photograph 4*: Condition of Station Road.*

Progress photographs as at 22/05/2020

Photograph 1: *Completed spray concrete at Shaft 8*

Photograph 2: *Eye of Shaft 8*

Photograph 3*: Preparation at Shaft 6.*

Progress photographs as at 29/05/2020

Photograph 1: *Works area at Shaft 6*

Photograph 2: *Partially completed shotcreting at shaft 6*

Photograph 3*: Completed side at shaft 6*

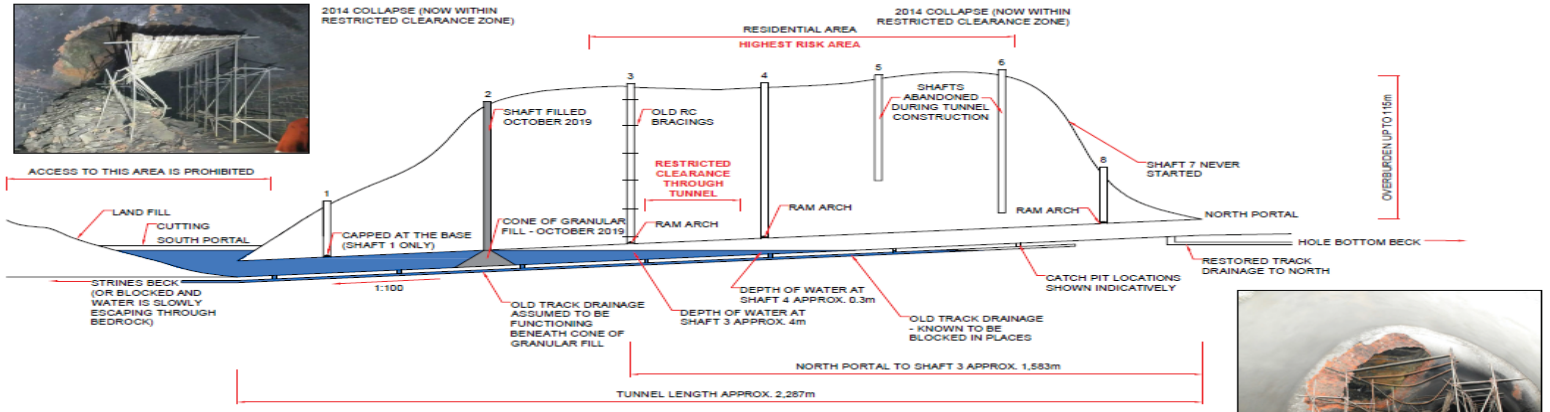
CAP AT THE BASE OF SHAFT 1

REINFORCED CONCRETE BRACINGS IN SHAFT 3

RAM ARCH INSTALLED AT THE BASE OF SHAFT 3

RESTRICTED CLEARANCE THROUGH TUNNEL BETWEEN SHAFTS 3 & 4

2014 COLLAPSE (NOW WITHIN RESTRICTED CLEARANCE ZONE)



2012 COLLAPSE (NOW WITHIN RESTRICTED CLEARANCE ZONE)

SHAFT CAPS IN RESIDENTIAL AREAS

SHAFT 3

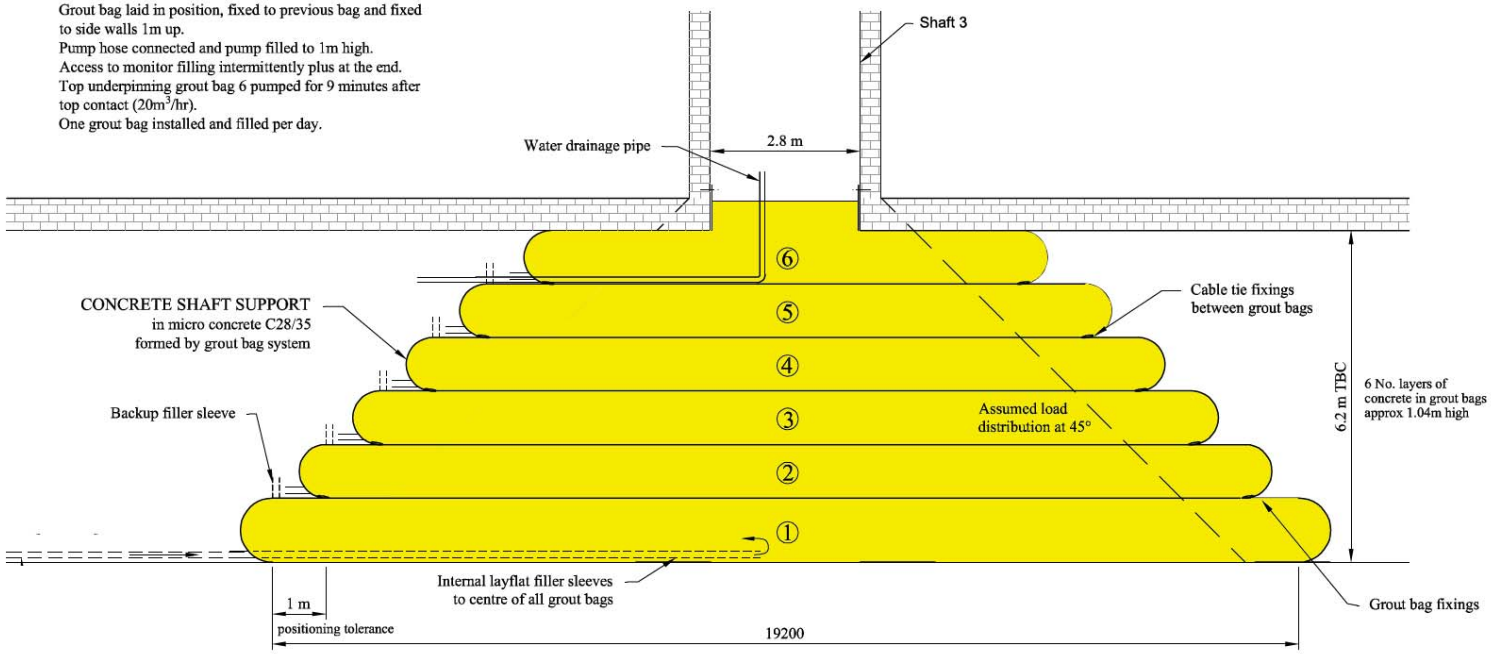
SHAFT 4

SHAFT 5

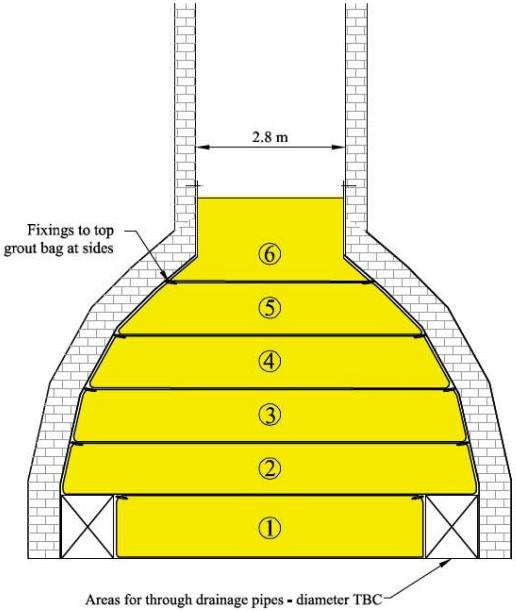
SHAFT 6

GROUT BAG INSTALLATION AND FILLING

Grout bag laid in position, fixed to previous bag and fixed to side walls 1m up.
Pump hose connected and pump filled to 1m high.
Access to monitor filling intermittently plus at the end.
Top underpinning grout bag 6 pumped for 9 minutes after top contact ($20m^3/hr$).
One grout bag installed and filled per day.



LONGDITUDINAL SECTION



TRANSVERSE SECTION

CONCEPT

FILLING PLAN - PRELIMINARY FOR DISCUSSION

10 mm Aggregate concrete mix see B214 supply by readymix microconcrete
Grout bag volumes vary 150 m³ - 20 m³
Pump filling @ 20 m³/ hr
63 mm Ø pumping hose

- steel hose generally
- rubber hose 40 bar at end for grout bag connections

Piston pump (large cylinder and low pressure best to limit hose kick)
Back up pump needed for top bag filling reliability

Title: Shaft 3 Concrete Shaft Support		
Project: Queensbury Tunnel Shaft Infill		
Contractor		
Conceptual Layout Drawing		
Scale	Origin Check	Origin Date
Job Number	Drawing No	Revision: -

Jacobs

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York. YO1 6WR
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03 June 2020

Attention: [redacted]
AMCO Giffen
Whaley Road,
Barnsley,
South Yorkshire
S75 1HT

Our reference: B28280VA-HQU/3D-0451029

Subject: Highways England Historical Railways Estate HQU/3D, Queensbury Tunnel Abandonment - CDM Designer Duties

Dear [redacted]

I write to you to confirm the roles under the Construction Design and Management (CDM) Regulations 2015 with respect to the contract HQU/3D, Queensbury Tunnel Abandonment for Highways England Historical Railways Estate (HRE).

AMCO Giffen have been appointed by HRE under the contract to undertake the duty of Principal Contractor for the works. In addition, given the changing nature of the scheme and works and HRE's decision to proceed with AMCO Giffen's design for shotcrete strengthening of the tunnel lining, AMCO Giffen are also now considered a Designer under the regulations.

As a reminder, a Designer is required to eliminate foreseeable health and safety hazards to everyone affected by the works and, where elimination of hazards is not possible, take steps to reduce or control the risks. This should be presented in the form of a Designer's Risk Assessment to the Principal Designer. Documentation of the hazards encountered, and steps taken, is also required for inclusion of residual risks within the Health and Safety File.

Jacobs remain Principal Designer to this contract and will continue to work with you as Designer and Principal Contractor on the project to eliminate and reduce health and safety risks through design.

If you wish to discuss any of the above further please do not hesitate to contact me.

[redacted]

[redacted]

JACOBS

HRE
Queensbury Tunnel, HQU/3D

Principal Contractor AMCO
Subcontractor Gunform

Report Author [redacted]

General Comments on Performance

Jacobs Engineer, [redacted] completed a supervision visit at Queensbury Tunnel, HQU/3D, on 5th June 2020.

Works at Shaft 6 were complete and works are in progress at Shaft 4. No works were being undertaken at the time of the visit due to an AMCO safety stand-down day.

The water level within the tunnel had receded from approximately Tab 88 to Tab 90 since the visit undertaken on 29/05/2020.

Plant and Labour

The following plant and staff were present on site:

Plant:

- 1No Welfare cabin
- 1No Office / Toilet cabin
- 1No Office (briefing room) cabin
- 1No Drying Room cabin
- 1No Storage cabin
- 2No Vans
- 1 No Electricity generator

Staff:

- 1No. AMCO Site Supervisor
- 4No. AMCO Site Operatives

Problems

None.

Health & Safety Audit

A health and safety audit was not completed by Jacobs on during any of the visits covered in this report, however the Jacobs Engineers were satisfied with arrangements from a Health and Safety perspective.

Progress

Activity	% complete at reporting date
1. Establish site set up	100
2. RAM Arch mesh sheets will be transported into the tunnel	100
3. RAM Arch Installation towards Shaft No. 8 (15m long)	100
4. RAM Arch Installation towards Shaft No. 6 (15m long)	100
5. RAM Arch Installation towards Shaft No. 4 (15m long)	100
6. Investigate the drainage system within the tunnel	100
7. Transfer and place all required plant within tunnel	100
8. Installation of ventilation system within the tunnel	100
9. Clearance of area beneath and between the collapses	100
10. Install colliery arches beneath and between the collapses	100
11. RAM Arch installation between collapses	100
12. Install colliery arches beneath significant bulge at ch.93	100
13. RAM Arch installation between the southern collapse and Shaft No. 3	100
14. RAM Arch Installation at Shaft No. 3 (Shaft eye only)	100
15. Installation of Silt Buster equipment	100
16. RAM Arch Installation at Shaft No. 2 (15m long)	N/A
17. RAM Arch Installation at Shaft No. 1 (15m long)	N/A
18. Set-up secure site area at Shaft No 2	100
19. Filling Shaft No 2 from ground surface level	100
20. Demobilise from site (Shaft No 2 area)	100
21. Demobilise down to 'skeleton crew' (north portal area)	100
22. Re-establish site	100
23. Open Shaft 8 eye	100
24. Install Ring Dam	100
25. Extend Pipes	100
26. Install temporary water control	100
27. Prepare area and spray concrete at Shaft 8	100
28. Prepare area and spray concrete at Shaft 6	100
29. Install temporary dam and overpump	100
30. Open Shaft 4 eye	100
31. Install Ring Dam	100
32. Extend Pipes	100
33. Install temporary water control	50
34. Prepare area and spray concrete at Shaft 4	30

Programme

Contract Start Date	17/09/2018
Contract Period (Phase 1a and 1b only)	23 weeks
Construction Start	01/10/2018
Construction Completion	31/07/2019 TBC
Contract Completion Date (whole of the works)	TBA

<u>Shaft No 2 works</u>

Start date	21/10/2019
Completion date	01/11/2019

<u>Shotcreting Works</u>

Start Date	27/04/2020
Duration	9 weeks
Completion Date	26/06/2020

Potential/ Actual Claim Situations

None

Delays incurred

None in relation to the spray concrete works.

Potential Delays to Future Progress

Not applicable.

Engineers Instructions issued to date

CE0001 - Phase 1 works instructed at a value of £545,372.50. The AFC table below only accounts for the Phase 1 works and currently does not consider the problems noted above, as at this time the costs are unknown.

CE0002 - The use of a larger tracked excavator was required to allow safe excavation deeper into the trackbed. The cost to hire in this excavator was £5,403.04.

CE0003 - AMCO excavated an area exposing part of the drainage system inside the north portal. They installed precast concrete chamber rings and precast concrete biscuit with manhole on the top. The cost for the completion of these works was £7,432.71.

CE0004 - AMCO will use High Pressure water jetting in the drain to attempt to clear built up debris/silt. The cost for three days of jetting/surveying works was £12,510.39.

CE0005 - Following the submission of AMCO's application 1No for Phase 1 of the works at Queensbury, AMCO have identified that they have inadvertently excluded their charges for confined space safe system of works as per items A3591 & A3592. Based on these rates the cost of £35,289.10 was omitted from our price build up for CE001.This is for 6 weeks at rate A3592 and £29,740 for confined space training and safety equipment of rate A3591.

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5 weeks of productivity was able to be carried out during the 6 weeks allowed for in CE0015. This residual week has been continued in this EW to a total of 1week (w/c 3rd June) plus three weekend shifts (19/05, 26/05 and 02/06). The cost that has been calculated for the completion of these works is £50,597.02.

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Early Warning Estimates	£9,024.11
Anticipated Final Cost (Original Contract Cost + Variations + Estimates)	£4,166,541.37

Progress photographs as at 05/06/2020

Photograph 1: *Shotcreting works at Shaft 4*

Photograph 2: *Completed shotcrete at Shaft 6.*

HRE
Queensbury Tunnel, HQU/3D

Principal Contractor AMCO
Subcontractor Gunform

Report Author [redacted]

General Comments on Performance

Jacobs Engineer, [redacted] completed a supervision visit at Queensbury Tunnel, HQU/3D, on 12th June 2020.

Works at Shaft 4 are nearing completion with an estimated 1 day left of spraying to be undertaken.

The water level within the tunnel had receded from approximately Tab 90 to Tab 92 since the visit undertaken on 05/06/2020.

Plant and Labour

The following plant and staff were present on site:

Plant:

- 1No Welfare cabin
- 1No Office / Toilet cabin
- 1No Office (briefing room) cabin
- 1No Drying Room cabin
- 1No Storage cabin
- 4No Vans
- 1 No Electricity generator

Staff:

- 1No. AMCO Site Supervisor
- 4No. AMCO Site Operative
- 2No. Gunform Operatives

Problems

None.

Health & Safety Audit

A health and safety audit was not completed by Jacobs on during any of the visits covered in this report, however the Jacobs Engineers were satisfied with arrangements from a Health and Safety perspective.

Progress

Activity	% complete at reporting date
1. Establish site set up	100
2. RAM Arch mesh sheets will be transported into the tunnel	100
3. RAM Arch Installation towards Shaft No. 8 (15m long)	100
4. RAM Arch Installation towards Shaft No. 6 (15m long)	100
5. RAM Arch Installation towards Shaft No. 4 (15m long)	100
6. Investigate the drainage system within the tunnel	100
7. Transfer and place all required plant within tunnel	100
8. Installation of ventilation system within the tunnel	100
9. Clearance of area beneath and between the collapses	100
10. Install colliery arches beneath and between the collapses	100
11. RAM Arch installation between collapses	100
12. Install colliery arches beneath significant bulge at ch.93	100
13. RAM Arch installation between the southern collapse and Shaft No. 3	100
14. RAM Arch Installation at Shaft No. 3 (Shaft eye only)	100
15. Installation of Silt Buster equipment	100
16. RAM Arch Installation at Shaft No. 2 (15m long)	N/A
17. RAM Arch Installation at Shaft No. 1 (15m long)	N/A
18. Set-up secure site area at Shaft No 2	100
19. Filling Shaft No 2 from ground surface level	100
20. Demobilise from site (Shaft No 2 area)	100
21. Demobilise down to 'skeleton crew' (north portal area)	100
22. Re-establish site	100
23. Open Shaft 8 eye	100
24. Install Ring Dam	100
25. Extend Pipes	100
26. Install temporary water control	100
27. Prepare area and spray concrete at Shaft 8	100
28. Prepare area and spray concrete at Shaft 6	100
29. Install temporary dam and overpump	100
30. Open Shaft 4 eye	100
31. Install Ring Dam	100
32. Extend Pipes	100
33. Install temporary water control	100
34. Prepare area and spray concrete at Shaft 4	90

Programme

Contract Start Date	17/09/2018
Contract Period (Phase 1a and 1b only)	23 weeks
Construction Start	01/10/2018
Construction Completion	31/07/2019 TBC
Contract Completion Date (whole of the works)	TBA

<u>Shaft No 2 works</u>

Start date	21/10/2019
Completion date	01/11/2019

<u>Shotcreting Works</u>

Start Date	27/04/2020
Duration	9 weeks
Completion Date	26/06/2020

Potential/ Actual Claim Situations

None

Delays incurred

None in relation to the spray concrete works.

Potential Delays to Future Progress

Not applicable.

Engineers Instructions issued to date

CE0001 - Phase 1 works instructed at a value of £545,372.50. The AFC table below only accounts for the Phase 1 works and currently does not consider the problems noted above, as at this time the costs are unknown.

CE0002 - The use of a larger tracked excavator was required to allow safe excavation deeper into the trackbed. The cost to hire in this excavator was £5,403.04.

CE0003 - AMCO excavated an area exposing part of the drainage system inside the north portal. They installed precast concrete chamber rings and precast concrete biscuit with manhole on the top. The cost for the completion of these works was £7,432.71.

CE0004 - AMCO will use High Pressure water jetting in the drain to attempt to clear built up debris/silt. The cost for three days of jetting/surveying works was £12,510.39.

CE0005 - Following the submission of AMCO's application 1No for Phase 1 of the works at Queensbury, AMCO have identified that they have inadvertently excluded their charges for confined space safe system of works as per items A3591 & A3592. Based on these rates the cost of £35,289.10 was omitted from our price build up for CE001.This is for 6 weeks at rate A3592 and £29,740 for confined space training and safety equipment of rate A3591.

CE0006 – AMCO asked for an additional one days jetting and CCTV surveying were required over and above the allowance in CE0004. The cost for the completion of these works was £4,170.10.

CE0007 - Work through the collapses to install temporary protection arches & install the pumping system. Additional time for completion of the remaining Phase 1 RAM Arches. The extended programme includes a total of 14 weeks (including 2 week holiday period) to inspect and make safe the tunnel lining between 82ch and the first collapse at 90ch, clear the debris and install temporary colliery arches beneath the collapse areas. A further 3 weeks are included for the installation of the RAM Arch to shafts 1, 2 & 3. As this work is all being undertaken in advance of the main works, this extended programme will not cause a delay to the project completion. The cost for the completion of these works was £498,861.92.

CE0008 - The original plan was to ventilate from both ends and place the fans outside the tunnel. Due to the access restrictions at the South portal and the flooding, blocking the passage of air, AMCO provided an alternative solution using methods which will force air all the way through from one end of the tunnel to the furthest work location, rather than just halfway. Increasing the capacity of the fans and the ducting to ensure the delivery of the clean air requires more powerful generators (from 65KVA to 100KVA) and therefore the requirement for more diesel. In order to accommodate the fans in the tunnel AMCO need to house them in parallel on a steel frame and connect the outlet sides together via a Y shaped steel ducting, which will then lead into the 1200mm layflat mine ducting. As the fans have been transferred in the tunnel AMCO need to prevent any recirculation of the air. The cost for the completion of these works is £115,762.57.

CE0009 - During the Christmas holiday period, work has been carried out at Strines Cutting, at the south end of the tunnel to divert water from Strines Beck into the cutting and therefore the tunnel. This had significantly increased flooding levels in the tunnel which has caused progress of the works to slow considerably. AMCO had been instructed and installed a pumping system at approx. ch.85 with a 6" pipe. The water, before their

management, was up to the ch.75. The cost for the management of this issue, delays and the continuous dewatering is £144,622.67.

CE0010 - During the Christmas holiday period, work has been carried out at Strines Cutting, at the south end of the tunnel to divert water from Strines Beck into the cutting and therefore the tunnel. This had significantly increased flooding levels in the tunnel which has damaged the tracked boom that had been placed in the formation had been submerged in water over this period. The cost for the repairs of the MEWP is £3,654.00.

CE0011 - Due to the increased possibility of mobilising silts and sediments when excavating the collapse debris from the tunnel, the pump had been turned off to avoid possible pollution of the running water at the cutting from unknown contamination of the debris. The installation of Siltbuster was requested and the cost covers the provision, delivery, installation and commission of three Silt buster units such as the period of 2 week hire up to the end of March including the cost for the discharge permit obtained from the Environmental Agency. This cost excludes any chemicals such as Coagulant (PAC) and Flocculent (Concentration for dilution) and it is £19,743.92.

CE0012 - Gas monitoring surveys are required to be completed by the end of Phase 1a of abandonment works. The proposed value include attendance on site on an approximately fortnightly basis over a 12 week period (6No visits), and monitoring for ground gases at each of the 6No boreholes installed at the ventilation shafts in 2017/18. The preparation and delivery of a factual report at the completion of works is included. The cost for the completion of these surveys is £8,426.65.

CE0013 - 12No extra steel colliery arches with B503 mesh covering are required to be installed in an area with a significant bulge between the two collapses. This cost includes only procurement of materials and delivery at a cost of £20,125.92.

CE0014 – Due to the increased possibility of mobilising silts and sediments when excavating the collapse debris from the tunnel, the pump had been turned off to avoid possible pollution of the water at the cutting from unknown contamination of the debris. The installation of Siltbuster equipment was requested to be installed within the tunnel to allow the works to progress. A stand down period of 16 days was incurred whist water pumping was temporally discontinued from the 6th to the 27th of March 2019. The cost for the stand down period due to flooding is £66,906.91.

CE0015 – Provision and installation additional 105m of Ram Arch at the area between the two collapses and to support the remaining 3No shaft eyes and to erect 12No colliery arches (14No in total, however 2No already priced within CE0007 and the colliery arch material priced in CE0013). The EW cost estimate for this item of work was £612,225.66. However, upon reviewing progress of the works Jacobs instructed this work item with a reduced duration. The cost has been calculated based on 5 weeks (25 shifts) for the installation of the 105m of Ram Arch and 1 week (5 shifts) for the installation of the Colliery Arches. The cost for the supply and installation of the additional Ram Arch and colliery arches is £484,132.29. Progress will be monitored and an additional instruction may be necessary to cover any overrun.

CE0016 - Overtime due to pumping and ventilation issues. The price of the present compensation event is to consolidate the recent programme to date. This consists of 2No weeks of labour and equipment for pumping to regain the work area and the delayed excavating tunnel drainage to establish connection during the period 27th March – 05th April and 02nd – 03th May. Also, it includes weekend working in association with the water pumping and 2No shifts associated with the tunnel ventilation. The dates are covered are 06/13/20th January, 10th February, 30/31th March, 07/14/20/22/28th April and 05th May. The cost associated with this compensation event can be attributed to the recent works undertaken by others at Strines Beck to divert water into the Strines Cutting and the tunnel. The cost for the completion of these works was £110,579.06.

CE0017 - Pump damage in association with the flooding. AMCO commenced pumping water from the tunnel as an emergency priority due to the flooding issues; however, this was prior to the ventilation being set up and running. Due to the unexpected amount of water, the pump had been damaged and choking on its own exhaust fumes. This had led to soot adhering to the pump resulting in damage. The cost associated with this compensation event was £1,305.00.

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5 weeks of productivity was able to be carried out during the 6 weeks allowed for in CE0015. This residual week has been continued in this EW to a total of 1week (w/c 3rd June) plus three weekend shifts (19/05, 26/05 and 02/06). The cost that has been calculated for the completion of these works is £50,597.02.

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Photograph 1: *Shotcreting works at Shaft 4*

Photograph 2: *Shaft 4 eye*

F om [redacted]
S [redacted]
C [redacted]
Subject Queensbu y Tunnel
Date 19 June 2020 11 39 03
Attachments [redacted]
Impo tance High

[redacted] has phoned Live T ackway (alum nium oad supplie) and inst ucted them to emove the oadway o he wi l, see attached.

The oadway is equi ed fo access so should fo m pa t of the o ig nal conveyance ag eement.

If you emembe he made the same th eat many months ago but neve ca ed t out, f om memo y the DfT s sol cito s got involved.

Yeste day afte noon I eceived a eply back f om [redacted] which contained the following demands

In the absence of a meeting, the tenant would like me to ask that

- *AMCO-Giffen stops parking vehicles on land rented by the tenant at the bottom of Station Road (between the station house and gate onto the GNRT), as you agreed to do when permission was granted to lay the alumin um trackway.*
- *AMCO-Giffen stops using the land rented by the tenant at the bottom of Station Road (between the station house and gate onto the GNRT) as a loading/unloading area as this exceeds your access/egress rights over the property.*
- *AMCO-Giffen removes the aluminium trackway from the tunnel's northern approach cutting.*

I m assuming the DfT s sol cito s will get nvolved again but can you confi m pleese.

Rega ds

[redacted]
AMCO GIFFEN
Safety | Professiona ism | Innovation | Respect | Integrity | eamwork

Our Lifesaving Rules

[redacted]
www.amcogiff en.co.uk

***Highways England Company Limited | General enquiries: 0300 123 5000 |National Traffic Operations Centre, 3 Ridgeway, Quinton Business Park, Birmingham B32 1AF** | https://www.gov.uk/government/organisations/highways-england | info@h ghwaysengland.co.uk*

Reg stered n England and Wa es no 9346363 | Registered Office Br dge House 1 Walnut Tree Close Gu ldford Surrey GU1 4LZ

F om [redacted]
To [redacted]
Cc a ke Dave
Subject RE and at no the n po tal of Queensbu y unnel
Date 19 June 2020 11 55 17

Fiona,

The fly tipping incident was a one off occu ence that w ll not be epeated.

We have been at the tunnel fo ove 18 months without p io nc dents, the indiv dual involved acted without ou knowledge and has s nce esigned.

Because the waste was his own domestic waste and not comme cial we feel the e is no connection to ou selves.

The events a e known company wide and have been discussed at Di ecto level, I can assu e you the e will not be a epeat.

On a diffe ent note, we don t believe that M Sunde land has a lease on the app oach cutting f om the end of ou oad to the wate fall on the left hand side of the cutting.

This was leased to Wendy, one of the esidents, in 2014 and she has a lease unt l 2024.

She has k ndly p ovided us with a copy, see attached. Funnily enough Wendy phoned us today to say that M Bicke dike had been in touch to see if she had allowed us to fence off the app oach.

This is good news to us!!!

Rega ds

[redacted]

AMCO·GIFFEN

Safety | Professiona ism | Innovation | Respect | Integrity | eamwork

Our Lifesaving Rules

[redacted]

www.amcogif en.co uk

From Smith, Fiona [mailto F[redacted]]
Sent 19 June 2020 11 29
[redacted]
Subject FW Land at no the n po tal of Queensbu y tunnel

[redacted]

Have we put in any measures to stop people fly tipping again?

Regards,
Fiona

Fiona Sm th
Historical Railways Estate (on behalf of Department for Transport)
Highways England | 37 Tanner Row | York | Y01 6WP
General Office +44 (0) 1904 621924
Mobile + 44 (0) 7802 511834
Web http //www.highwaysengland.co.uk
If you wou d like to make a request under the Freedom of information Act, please contact info@h ghwaysengland.co.uk

Mondays – I am not in the off ce and do not have access to emails

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[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

JACOBS

HRE
Queensbury Tunnel, HQU/3D

Principal Contractor AMCO
Subcontractor N/A

Report Author [redacted]

General Comments on Performance

Jacobs Engineer, [redacted] completed a supervision visit at Queensbury Tunnel, HQU/3D, on 19th June 2020.

Works to shotcrete all shafts were complete.

The water level within the tunnel had risen from approximately Tab 92 to Tab 87 since the visit undertaken on 12/06/2020.

Plant and Labour

The following plant and staff were present on site:

Plant:

- 1No Welfare cabin
- 1No Office / Toilet cabin
- 1No Office (briefing room) cabin
- 1No Drying Room cabin
- 1No Storage cabin
- 4No Vans
- 1 No Electricity generator

Staff:

- 1No. AMCO Site Supervisor
- 2No. AMCO Site Operative

Problems

None.

Health & Safety Audit

A health and safety audit was not completed by Jacobs on during any of the visits covered in this report, however the Jacobs Engineers were satisfied with arrangements from a Health and Safety perspective.

JACOBS

Progress

Activity	% complete at reporting date
1. Establish site set up	100
2. RAM Arch mesh sheets will be transported into the tunnel	100
3. RAM Arch Installation towards Shaft No. 8 (15m long)	100
4. RAM Arch Installation towards Shaft No. 6 (15m long)	100
5. RAM Arch Installation towards Shaft No. 4 (15m long)	100
6. Investigate the drainage system within the tunnel	100
7. Transfer and place all required plant within tunnel	100
8. Installation of ventilation system within the tunnel	100
9. Clearance of area beneath and between the collapses	100
10. Install colliery arches beneath and between the collapses	100
11. RAM Arch installation between collapses	100
12. Install colliery arches beneath significant bulge at ch.93	100
13. RAM Arch installation between the southern collapse and Shaft No. 3	100
14. RAM Arch Installation at Shaft No. 3 (Shaft eye only)	100
15. Installation of Silt Buster equipment	100
16. RAM Arch Installation at Shaft No. 2 (15m long)	N/A
17. RAM Arch Installation at Shaft No. 1 (15m long)	N/A
18. Set-up secure site area at Shaft No 2	100
19. Filling Shaft No 2 from ground surface level	100
20. Demobilise from site (Shaft No 2 area)	100
21. Demobilise down to 'skeleton crew' (north portal area)	100
22. Re-establish site	100
23. Open Shaft 8 eye	100
24. Install Ring Dam	100
25. Extend Pipes	100
26. Install temporary water control	100
27. Prepare area and spray concrete at Shaft 8	100
28. Prepare area and spray concrete at Shaft 6	100
29. Install temporary dam and overpump	100
30. Open Shaft 4 eye	100
31. Install Ring Dam	100
32. Extend Pipes	100
33. Install temporary water control	100
34. Prepare area and spray concrete at Shaft 4	100

Programme

Contract Start Date	17/09/2018
Contract Period (Phase 1a and 1b only)	23 weeks
Construction Start	01/10/2018
Construction Completion	31/07/2019 TBC
Contract Completion Date (whole of the works)	TBA

<u>Shaft No 2 works</u>

Start date	21/10/2019
Completion date	01/11/2019

<u>Shotcreting Works</u>

Start Date	27/04/2020
Duration	8 weeks
Completion Date	19/06/2020

Potential/ Actual Claim Situations

None

Delays incurred

None in relation to the spray concrete works.

Potential Delays to Future Progress

Not applicable.

Engineers Instructions issued to date

CE0001 - Phase 1 works instructed at a value of £545,372.50. The AFC table below only accounts for the Phase 1 works and currently does not consider the problems noted above, as at this time the costs are unknown.

CE0002 - The use of a larger tracked excavator was required to allow safe excavation deeper into the trackbed. The cost to hire in this excavator was £5,403.04.

CE0003 - AMCO excavated an area exposing part of the drainage system inside the north portal. They installed precast concrete chamber rings and precast concrete biscuit with manhole on the top. The cost for the completion of these works was £7,432.71.

CE0004 - AMCO will use High Pressure water jetting in the drain to attempt to clear built up debris/silt. The cost for three days of jetting/surveying works was £12,510.39.

CE0005 - Following the submission of AMCO's application 1No for Phase 1 of the works at Queensbury, AMCO have identified that they have inadvertently excluded their charges for confined space safe system of works as per items A3591 & A3592. Based on these rates the cost of £35,289.10 was omitted from our price build up for CE001.This is for 6 weeks at rate A3592 and £29,740 for confined space training and safety equipment of rate A3591.

CE0006 – AMCO asked for an additional one days jetting and CCTV surveying were required over and above the allowance in CE0004. The cost for the completion of these works was £4,170.10.

CE0007 - Work through the collapses to install temporary protection arches & install the pumping system. Additional time for completion of the remaining Phase 1 RAM Arches. The extended programme includes a total of 14 weeks (including 2 week holiday period) to inspect and make safe the tunnel lining between 82ch and the first collapse at 90ch, clear the debris and install temporary colliery arches beneath the collapse areas. A further 3 weeks are included for the installation of the RAM Arch to shafts 1, 2 & 3. As this work is all being undertaken in advance of the main works, this extended programme will not cause a delay to the project completion. The cost for the completion of these works was £498,861.92.

CE0008 - The original plan was to ventilate from both ends and place the fans outside the tunnel. Due to the access restrictions at the South portal and the flooding, blocking the passage of air, AMCO provided an alternative solution using methods which will force air all the way through from one end of the tunnel to the furthest work location, rather than just halfway. Increasing the capacity of the fans and the ducting to ensure the delivery of the clean air requires more powerful generators (from 65KVA to 100KVA) and therefore the requirement for more diesel. In order to accommodate the fans in the tunnel AMCO need to house them in parallel on a steel frame and connect the outlet sides together via a Y shaped steel ducting, which will then lead into the 1200mm layflat mine ducting. As the fans have been transferred in the tunnel AMCO need to prevent any recirculation of the air. The cost for the completion of these works is £115,762.57.

CE0009 - During the Christmas holiday period, work has been carried out at Strines Cutting, at the south end of the tunnel to divert water from Strines Beck into the cutting and therefore the tunnel. This had significantly increased flooding levels in the tunnel which has caused progress of the works to slow considerably. AMCO had been instructed and installed a pumping system at approx. ch.85 with a 6" pipe. The water, before their

management, was up to the ch.75. The cost for the management of this issue, delays and the continuous dewatering is £144,622.67.

CE0010 - During the Christmas holiday period, work has been carried out at Strines Cutting, at the south end of the tunnel to divert water from Strines Beck into the cutting and therefore the tunnel. This had significantly increased flooding levels in the tunnel which has damaged the tracked boom that had been placed in the formation had been submerged in water over this period. The cost for the repairs of the MEWP is £3,654.00.

CE0011 - Due to the increased possibility of mobilising silts and sediments when excavating the collapse debris from the tunnel, the pump had been turned off to avoid possible pollution of the running water at the cutting from unknown contamination of the debris. The installation of Siltbuster was requested and the cost covers the provision, delivery, installation and commission of three Silt buster units such as the period of 2 week hire up to the end of March including the cost for the discharge permit obtained from the Environmental Agency. This cost excludes any chemicals such as Coagulant (PAC) and Flocculent (Concentration for dilution) and it is £19,743.92.

CE0012 - Gas monitoring surveys are required to be completed by the end of Phase 1a of abandonment works. The proposed value include attendance on site on an approximately fortnightly basis over a 12 week period (6No visits), and monitoring for ground gases at each of the 6No boreholes installed at the ventilation shafts in 2017/18. The preparation and delivery of a factual report at the completion of works is included. The cost for the completion of these surveys is £8,426.65.

CE0013 - 12No extra steel colliery arches with B503 mesh covering are required to be installed in an area with a significant bulge between the two collapses. This cost includes only procurement of materials and delivery at a cost of £20,125.92.

CE0014 – Due to the increased possibility of mobilising silts and sediments when excavating the collapse debris from the tunnel, the pump had been turned off to avoid possible pollution of the water at the cutting from unknown contamination of the debris. The installation of Siltbuster equipment was requested to be installed within the tunnel to allow the works to progress. A stand down period of 16 days was incurred whist water pumping was temporally discontinued from the 6th to the 27th of March 2019. The cost for the stand down period due to flooding is £66,906.91.

CE0015 – Provision and installation additional 105m of Ram Arch at the area between the two collapses and to support the remaining 3No shaft eyes and to erect 12No colliery arches (14No in total, however 2No already priced within CE0007 and the colliery arch material priced in CE0013). The EW cost estimate for this item of work was £612,225.66. However, upon reviewing progress of the works Jacobs instructed this work item with a reduced duration. The cost has been calculated based on 5 weeks (25 shifts) for the installation of the 105m of Ram Arch and 1 week (5 shifts) for the installation of the Colliery Arches. The cost for the supply and installation of the additional Ram Arch and colliery arches is £484,132.29. Progress will be monitored and an additional instruction may be necessary to cover any overrun.

CE0016 - Overtime due to pumping and ventilation issues. The price of the present compensation event is to consolidate the recent programme to date. This consists of 2No weeks of labour and equipment for pumping to regain the work area and the delayed excavating tunnel drainage to establish connection during the period 27th March – 05th April and 02nd – 03th May. Also, it includes weekend working in association with the water pumping and 2No shifts associated with the tunnel ventilation. The dates are covered are 06/13/20th January, 10th February, 30/31th March, 07/14/20/22/28th April and 05th May. The cost associated with this compensation event can be attributed to the recent works undertaken by others at Strines Beck to divert water into the Strines Cutting and the tunnel. The cost for the completion of these works was £110,579.06.

CE0017 - Pump damage in association with the flooding. AMCO commenced pumping water from the tunnel as an emergency priority due to the flooding issues; however, this was prior to the ventilation being set up and running. Due to the unexpected amount of water, the pump had been damaged and choking on its own exhaust fumes. This had led to soot adhering to the pump resulting in damage. The cost associated with this compensation event was £1,305.00.

CE0018 - Additional time associated with provision of additional Ram Arch and Colliery Arches between the two collapses - Continuation of CE0015. Due to delays in water pumping and Environmental Agency restrictions. Only

5 weeks of productivity was able to be carried out during the 6 weeks allowed for in CE0015. This residual week has been continued in this EW to a total of 1week (w/c 3rd June) plus three weekend shifts (19/05, 26/05 and 02/06). The cost that has been calculated for the completion of these works is £50,597.02.

CE0018a - Additional time associated with the installation of Colliery Arches beneath the second collapse - Continuation of CE007. Due to delays due to increased water pumping an extended duration of 1.4 weeks and weekend working has been required to complete the colliery arches through both collapses. The additional time has been continued in this EW to a total of 1.4weeks (w/c 1st July) plus two weekend shifts (30/06 & 07/07). The cost that has been estimated for the completion of these works is £63,692.13.

CE0019 - Pumping to recover water levels to work area. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel, discovered on Sunday 9th June 2019. AMCO had deployed operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 3 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £165,005.46.

CE0020 - Provision and installation of additional 33m of RAM Arch between the southern collapse and Shaft No3 from dates 10/07/19 to the 23/07/19 including two weekend shifts (14/07 and 21/07). The cost that has been estimated for the completion of these works is £164,953.52.

CE0021 - Pumping to recover water levels to work area for the period 22/07/2019 – 05/08/2019. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel. AMCO had deployed operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 1.8 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £106,627.41.

CE0022 - Pumping to recover water levels to work area for the period 22/07/2019 – 05/08/2019. Due to the heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping it is assumed it will be required to control the increased unexpected volumes of water entering the tunnel. AMCO suggest deploying operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 3.8 weeks of day and night shifts including weekends. The cost that has been estimated for the completion of these works is £204,796.88.

CE0023 - Provision of a turbidity and pH monitor including installation and commission. Provision of additional pipework. Provision of 20 tonnes of type 1 to be installed to a section of the 'boggy' tunnel floor under the northern colliery arches. The cost that has been estimated for the completion of these works is £9,226.99.

CE0024 - In association with the Environmental Agency table of charges 2.3.39 - “Trade effluent and/or non-sewage effluent discharge with specific substances with a volume greater than 100m(3) a day and up to and including 1,000m(3) a day” the subsistence activity charge is £8,279.00. The Environmental Agency has invoiced the Contractor the amount of £6,944.41 for the charges on a pro-rata basis for the charge period 30/05/2019 to 31/03/2020. The cost, including the direct fee percentage uplift of 9% as applied through the contract with the HRE framework, has been calculated to be £7,569.40.

CE0025 - Damaged Generator. Following an increase of water flow into the tunnel on Saturday 28th August which resulted in a loss of 150m of the work area, water damage has been sustained to the 16.5k diesel generator which has been deemed beyond economical repair and damage has also been incurred to the mechanical seal, shaft and bearings on the pump. The cost has been estimated to £8,764.56.

CE0026 - Additional Security System at South Portal. Due to the authorised increase in water pumping volumes within the tunnel, the Contractor provided and installed a live feed camera with 24/7 access via remote footage at the working area to monitor the water levels and any unauthorised access via the south portal. The camera has been installed on 10/09/19 for an 8 week period, until 05/11/2019. The total cost includes the charge for use of

the camera for an 8 week period, installation and decommissioning fees and has been estimated to £3,073.60 (this has been subsequently revised to £2,352.66).

CE0027 - Pumping to recover water levels to work area for the period 01/09/2019 – 31/10/2019. Due to bouts of heavy rain and water being diverted from Strines Beck into the south end of the tunnel, additional pumping was required to control the increased unexpected volumes of water entering the tunnel. AMCO are deploying operatives both throughout the day and night to operate the pump at a higher pumping rate and to take water samples as required by the higher pumping rates. This compensation event covers 8.8 weeks of day and night shifts including weekends and the cost has been estimated to £503,401.99 (this has been subsequently revised to £363,543.57).

CE0028 - On-site security guard. Provision of on-site security officer from 15:00 to 23:00 every day for 7 days a week (total 56 hours per week). The cost includes 45No shifts with £120 per shift and the site set-up fee £162.50 from 17th September until 31st October 2019. The cost that has been estimated for the completion of these works is £5,562.50 (this has been subsequently revised to £1,962.50).

CE0029 - Infilling Shaft 2. Infilling works to be completed at Shaft 2 from the top using normal weight granular material. Works to include secure site set-up, welfare and all necessary plant and materials. The cost that has been estimated for the completion of these works is £148.000,00 (this has been subsequently revised to £118,737.05).

CE0030 - Plant damage caused by flooding. A 360° excavator, spider MEWP, telehandler and 17m boom which have all been damaged in association with the flooding issues that have occurred due the diversion of the Strines Beck. The cost that has been estimated for the completion of these works is £77,677.28.

CE0031 - Testing of cement infused Lytag. AMCO to provide equipment and materials needed for completion of on-site Lytag/cement tests to check the compressive strength at 28 days and the permeability of the mix. The cost that has been estimated for the completion of these works is £5,507.90 (this has been subsequently revised to £5,828.78).

CE0032 – Security guard to Shaft 2. AMCO to provide on-site security officer as requested during the infilling works to shaft 2 during the hours 22:00 to 07:00 for 7 days a week (63 hours per week). The duration of this service was from Monday 28/10/19 until Thursday 31/10/19. The cost for these works was £702.50.

CE0033 – Equipment lost due to flooding. Heavy duty anti slip road plates, standard road plate, plant oil spill guard (medium & large), Avalon barrier with anti-trip feet. The cost that has been provided for these items is £2,767.52.

CE0034 – Loss of pipework due to flooding. Pipework items written off as AMCO has been unable to recover them. The cost that has been provided for these items is £33,046.06.

CE0035 – Shotcreteing works. AMCO to apply spray concrete to the RAM Arch supporting Shaft Nos 4, 6 & 8. The cost that has been estimated for the completion of these works is £585,517.93 (this has been subsequently revised to £524,650.84).

CE0036 – Interim running costs. AMCO to maintain site presence between phases of works. Continuation of EW32, EW39 covers from 01/04/2020 to 13/04/2020 (excluding Good Friday and Easter Monday). The cost that has been estimated for these works is £6,515.13.

CE0037 – Interim running costs. AMCO to maintain site presence between phases of works. A Compensation Event Notification has been issued to cover the cumulative interim running costs between 21/10/2019 and 01/04/2020. The total cost associated with the interim running costs during this period is £103,463.60.

Anticipated Instructions

The following early warnings have been issued by AMCO:

Maintaining the current Environment Agency discharge licence, which has been 'on hold' since works were suspended in October 2019. This early warning covers the subsistence costs associated with retaining the permit for possible future use at any time this financial year. The cost associated with this is £9,024.11.

Remobilising to site and carry out enabling works and site setup in preparation for shotcrete works outlined in CE0035. The cost associated with this is £60,237.68.

Reduced site activity following spray concrete works, AMCO have allowed for 3 weeks of stand-down time. The cost associated with this is £45,170.82.

Anticipated Final Cost (AFC)

Original Contract Cost	£1,044,234.42
Agreed Variation Costs	£3,062.545.19
Early Warning Estimates	£114,432.61
Anticipated Final Cost (Original Contract Cost + Variations + Estimates)	£4,221,212.22

Progress photographs as at 19/06/2020

Photograph 1: Completed s*hotcreting works at Shaft 4*

Photograph 2: *Shaft 4 eye*

INTERIM CERTIFICATE No.21 **HQU/3D Tunnel Partial Infilling_Shotcreting Works**

EMPLOYER	Historical Railways Estate 37 Tanner Row YORK, YO1 6WP
PROJECT MANAGER	Dave Parker 37 Tanner Row YORK, YO1 6WP
SUPERVISOR	[redacted] Jacobs, 20 George Hudson Street York, YO1 6WR
CONTRACTOR	AMCO Whaley Road, Barnsley
DATE OF RECEIPT OF APPLICATION	18th June 2020
TENDER TOTAL	£ 1,044,234.42

1	Net Amount Certified for Valuation	£4,110,672.63
2	Deduct total previously certified	£3,914,978.31
3	**Amount due for payment under this certificate**	**£195,694.32**

4 I certify that the sum of ***One Hundred and Ninety Five Thousand, Six Hundred and Ninety Four Pounds and Thirty Two Pence*** is now due to the Contractor in accordance with the terms of Contract.

Signed…… [redacted] Supervisor's Representative Date: 30/06/2020

Value added tax payable on £195,694.32 at standard rate of 20.0% £39,138.86

Compensation Event Form CE0037

Structure Reference:	HQU/3D
Structure Name:	Queensbury Tunnel – Abandonment Works
Early Warning No. (if applicable)	EW39

Description of Change: (inc. reason for necessity of change)

Environment Agency fees associated with maintaining the discharge permit during the stand down period. This was in anticipation of additional pumping being necessary upon recommencement of works in the tunnel and to ensure a new discharge application would not be necessary, as this could be refused.

Where this was discussed: • Meeting • ~~Email~~ • ~~Other~~	**Details:** (Which meeting? Who was it discussed between?) 15/12/2019: Meeting between [redacted] (AMCO), & [redacted] (Jacobs).	
Date this was discussed:	15/12/2019	**Was the Client Present at the meeting?** ~~Yes~~/No

Project Impact:

1) Value £9,024.11.
2) This has not caused a delay to the project completion.

Clause in Scope:	**61.1**

Programme (inc. start date and end date of work in addition to any key dates in between. Event must be split into a series of small tasks with their own set of dates, for start and completion):

The current programme has not been affected.

Signed: [redacted]

[redacted]

Compensation Event Form CE0038

Structure Reference:	HQU/3D
Structure Name:	Queensbury Tunnel – Abandonment Works
Early Warning No. (if applicable)	EW42

Description of Change: (inc. reason for necessity of change)

Reduced site activity following the completion of phase ii of the works to spraycrete.

AMCO will maintain a 'round-the-clock' site presence as discussed. We have allowed for a 3 week time period for this standown period 22/06/20 - 10/07/20

Where this was discussed: ~~Meeting~~ Email ~~Other~~	**Details:** (Which meeting? Who was it discussed between?) 18/06/2020: Email between [redacted] (AMCO) & [redacted] (Jacobs).	
Date this was discussed:	18/06/2020	**Was the Client Present at the meeting?** ~~Yes~~/No

Project Impact:

1) Value £45,170.82.
2) This has not caused a delay to the project completion.

Clause in Scope:	**61.1**

Programme (inc. start date and end date of work in addition to any key dates in between. Event must be split into a series of small tasks with their own set of dates, for start and completion):

The current programme has not been affected.

Signed: [redacted]

Compensation Event Form CE0039

Structure Reference:	HQU/3D
Structure Name:	Queensbury Tunnel – Abandonment Works
Early Warning No. (if applicable)	

Description of Change: (inc. reason for necessity of change)

Install plug at the bottom of Shaft 3. Plug to consist of 6 x bespoke grout bags placed by divers and grout pumped 350m to fill the bags.

Where this was discussed: • Meeting • Email • ~~Other~~	**Details:** (Which meeting? Who was it discussed between?) 14/05/2020: Meeting between Fiona Smith (HE-HRE) [redacted] (AMCO), & [redacted] (Jacobs). Various emails between [redacted] (AMCO), [redacted] (HRE) & [redacted] (Jacobs)	
Date this was discussed:	May – June 2020	**Was the Client Present at the meeting?** Yes/~~No~~

Project Impact:

1) Value £779,634.08.
2) This Compensation Event covers the agreed programme extension between 13/07/2020 – 25/09/2020.

Clause in Scope:	**61.1**

Programme (inc. start date and end date of work in addition to any key dates in between. Event must be split into a series of small tasks with their own set of dates, for start and completion):

The original programme has been extended as described above.

Signed: [redacted]

Compensation Event Form CE0040

Structure Reference:	HQU/3D
Structure Name:	Queensbury Tunnel – Abandonment Works
Early Warning No. (if applicable)	EW42

Description of Change: (inc. reason for necessity of change)

Re-establish site and carry out enabling works and site set up in preperation for shotcrete works outlined in CE0035.

Where this was discussed: ~~• Meeting~~ • Email ~~• Other~~	**Details:** (Which meeting? Who was it discussed between?) 18/06/2020: Email between [redacted] (AMCO) & [redacted] (Jacobs).	
Date this was discussed:	18/06/2020	**Was the Client Present at the meeting?** ~~Yes~~/No

Project Impact:

1) Value £60,237.68.
2) This has not caused a delay to the project completion.

Clause in Scope:	**61.1**

Programme (inc. start date and end date of work in addition to any key dates in between. Event must be split into a series of small tasks with their own set of dates, for start and completion):

The current programme has not been affected.

Signed: [redacted]