

Silvertown Tunnel Implementation Group – Record of decision

Air quality monitoring locations

Part A: Relevant DCO references

DCO Article 66 (5)(a)

Part B: Summary of consultation undertaken

The Silvertown Tunnel monitoring programme comprises a number of topic areas including air quality. In accordance with the requirements set out in Schedule 2 Requirement 7 (12) TfL will install NO² monitoring equipment at locations specified in accordance with paragraph 3.7.4 of the Monitoring & Mitigation Strategy (MMS). TfL's proposals including the location, nature and duration of this monitoring were presented to STIG at the meeting on 24 September 2020 and a paper detailing these proposals was provided (attached as Appendix 1). Further engagement with affected local authorities took place in October and November, including meetings with RB Greenwich (30 July 2020), LB Hackney (27 November 2020), LB Lewisham (13 August 2020), LB Newham (4 August 2020), LB Southwark (25 August 2020) and LB Tower Hamlets (6 August 2020), during which time the exact locations of the air quality monitoring sites were discussed.

Part C: Summary of representations/comments/recommendations received

Greater London Authority	GLA support the monitoring proposals in the MMS. Strong support expressed for enhanced air quality monitoring generally and PM _{2.5} specifically. Noted that PM _{2.5} is a complex pollutant and it should be recognised that future changes to air quality in east and south-east London will be a result of many factors, of which the Silvertown Tunnel project is just one. Additional PM _{2.5} monitoring would support the Mayor's ambitions and provide reassurance to local communities.
LB Barking & Dagenham	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.
LB Bexley	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.
LB Bromley	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.
City of London	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.
RB Greenwich	RB Greenwich suggested some adjustments to the proposed locations and requested additional monitoring at sites where developments have recently been completed / is underway. Location of continuous monitoring station on northbound approach to Blackwall and Silvertown tunnels agreed as appropriate.
LB Hackney	LB Hackney expressed concerns that no new diffusion tubes were proposed within the borough, particularly along the A12/East Cross Route. Requested that this approach be reviewed and diffusion tubes placed in the borough.

LB Lewisham	LB Lewisham agreed the locations of diffusion tubes identified in the MMS and requested an additional diffusion tube along the A2209 at Deptford as new development has been introduced to the area since the DCO submission.
LB Newham	LB Newham requested that additional diffusion tubes be placed at the Hoola building given its close proximity to the north portal of the Silvertown Tunnel, and that a third continuous monitoring be installed in the Canning Town area to provide for additional data and coverage. LB Newham believe strongly that, in addition to monitoring NO ₂ , the continuous monitoring stations should also monitor PM _{2.5} . It was noted that a proposed cycle scheme on Silvertown Way / North Woolwich Road could potentially affect the location of the continuous monitoring station at Britannia Gate, but agreed that if need be this could be relocated at a later date.
LB Redbridge	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.
LB Southwark	LB Southwark suggested that some of the proposed diffusion tubes were moved slightly in line with residential areas along Lower Road. Noted that there may be the possibility of development around the Lower Road Gyratory system so this diffusion tube location will need to be reviewed if the development comes forward. Additional diffusion tube requested on St James Road.
LB Tower Hamlets	LB Tower Hamlets requested additional monitoring at some specific additional locations with residential developments built since ES, including west of Lower Lea Crossing. To confirm any other new areas of residential development within the specified area.
LB Waltham Forest	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.
Highways England	No specific comments received. The MMS does not propose any new air quality monitoring in the borough.

Part D: Decision taken by TfL and reasoning

The air quality monitoring locations proposed within the MMS were reviewed by AECOM and confirmed as suitable for monitoring the air quality impacts of the scheme in operation. Engagement with affected local authorities has taken place regarding the exact locations of the monitoring sites and in some instances, locations were adjusted to better capture changes in baseline conditions. In response to discussion with STIG members a further nine diffusion tube sites have been installed across Lewisham, Newham and Tower Hamlets, including a number located around the Hoola building in Newham in response to LB Newham's specific request.

To ensure sufficient baseline monitoring data is collected to inform the updated air quality modelling that will be completed as part of the refreshed assessment, three continuous monitoring stations (two in LB Newham and one in RB Greenwich) and 38 diffusion tubes across five London Boroughs were subsequently installed at the beginning of December 2020 (i.e. four plus years ahead of scheme opening).

A map showing the locations of the air quality monitoring sites is attached as Appendix 2.

TfL has considered LB Newham's request for an additional continuous monitoring station in the Canning Town area and for all of the monitoring stations to also monitor PM_{2.5}, in addition to NO₂. Based on the forecast impacts of the scheme on traffic in the Canning Town area an additional continuous monitoring site is not warranted, however an additional diffusion tube has been installed in the area.

The scheme is expected to have a negligible impact on particulates and the monitoring of PM_{2.5} is therefore not required by the DCO, so it is not proposed to monitor PM_{2.5} as part of the MMS monitoring programme. Notwithstanding this, in recognition that the impacts of PM_{2.5} on human health is a rising concern, we are actively considering the scope for undertaking some continuous PM_{2.5} monitoring outside the scope of the DCO monitoring programme, in support of wider air quality monitoring plans being developed by the GLA and London boroughs. Further information will be shared on this in due course.

In response to LB Hackney's request for diffusion tube monitoring in Hackney, the impacts of the scheme on air quality in Hackney is expected to be minimal to the extent that diffusion tube monitoring in this location would add little to no value to the overall monitoring programme. We have not, therefore, installed any diffusion tubes in Hackney but reiterate our position that we are happy to receive inputs from existing wider monitoring data as part of this work.

We recognise that we have not agreed to all the existing monitoring requested by all STIG members, however, we also note that this work is just one part of an increasingly comprehensive network of air quality monitoring across London developed by TfL, the GLA, London boroughs and private entities. It should be added that we are considering utilising baseline data from existing borough and TfL air quality monitoring sites in the refreshed assessment to supplement the data that is being collected from the Silvertown specific monitoring. If the refreshed assessment indicates materially different effects on air quality to those forecasted previously, the need for additional monitoring will be considered and further monitoring installed if necessary prior to opening.

Signed



Name / position

Andrew Lunt, Lead Sponsor – Major Projects

Date

17 May 2021

Part E: Summary of comments received on decision made

Greater London Authority	No further comments received.
LB Barking & Dagenham	No further comments received.
LB Bexley	No further comments received.
LB Bromley	No further comments received.
City of London	No further comments received.
RB Greenwich	No further comments received.
LB Hackney	No further comments received.
LB Lewisham	No further comments received.
LB Newham	No further comments received.
LB Redbridge	No further comments received.
LB Southwark	No further comments received.
LB Tower Hamlets	No further comments received.
LB Waltham Forest	No further comments received.
Highways England	No further comments received.

Date

1 July 2021

Appendix 1 – Paper on air quality proposals discussed at STIG meeting on 24 September 2020



AECOM Limited



To:
Transport for London

CC:
[Redacted]

Date:
17th September 2020

Silvertown Tunnel Scheme – Air Quality Monitoring

1. Summary

AECOM was appointed to conduct the Lot B Environmental Services for the Silvertown Tunnel Scheme to support Transport for London (TfL) in the delivery of the commitments made in the Scheme Development Consent Order (DCO) as outlined in the 2017 Monitoring and Mitigation Strategy (MMS).¹

This briefing note focuses on the work conducted since AECOM's appointment in June 2020 to progress the pre-scheme opening air quality monitoring programme. Pre-scheme opening air quality monitoring is one of the DCO requirements for the Scheme. It is the intention of TfL and AECOM to commence air quality monitoring before the end of the year.

The purpose of the pre-scheme opening monitoring is two-fold; firstly as an input to the updated air quality monitoring that will be completed as part of the refreshed assessment of the scheme's impacts that will be undertaken before the tunnel opens, and secondly to provide a baseline against which to compare the post-opening monitoring data collected once the scheme is operational.

2. Borough Engagement

The MMS identified 29 indicative air quality monitoring locations within the five London boroughs that are most directly affected by the scheme. The five London boroughs are:

- Greenwich;
- Newham;
- Tower Hamlets;
- Lewisham; and
- Southwark.

The indicative monitoring locations include three continuous monitoring stations (CMS), close to the northern and southern tunnel portals within the London Boroughs of Greenwich and Newham and a larger number of passive diffusion tube sites spread across the five boroughs (see Appendix A for full list of sites).

¹ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010021/TR010021-001726-8.84%20Monitoring%20and%20Mitigation%20Strategy%20R2%20.pdf>

The geographical scope of these locations has been informed by the Environmental Statement (ES) and reflects areas where a potentially significant change in nitrogen dioxide (NO₂) concentrations was forecast, areas where traffic impacts are predicted or where there is relevant exposure to air quality, such as at residential properties. Additionally, AECOM has reviewed the indicative monitoring locations based on the criteria set out in the ES and have concluded that the locations remain appropriate, with several additional diffusion tube locations to be considered in the vicinity of the scheme where new residential development has come forward and to increase monitoring coverage around the Hoola Tower.

The requirement through the DCO and as set out in the MMS is to monitor NO₂ only reflecting the findings of the ES which did not identify any changes in particulate concentrations above relevant air quality objectives.

3. Meeting Records

The MMS sets out a requirement to agree the final monitoring locations with the London Boroughs. To facilitate this, AECOM and TfL held face-to-face meetings with the five boroughs through Microsoft Teams. All the meetings were very productive and a summary of the meetings and the key actions is given in Table 1 below.

Table 1 Summary of Meetings

London Borough	Date of Meeting	Borough Attendees	Key Actions and Decisions
Greenwich	30 th July 2020	Bob Bennett, Ryan Bunce, Ella Smallcombe, Matthew Lund	<p>Confirmed location of NO₂ CMS at Tunnel Avenue, off A102 and diffusion tube sites based on MMS indicative locations.</p> <p>Action 1: To confirm no local site issues which would affect the site installation.</p> <p>Action 2: To agreed method of consent required to install CMS on highway.</p> <p>Action 3: To arrange meeting with EHO nearer installation date to agree specific lamp columns to site diffusion tubes.</p>
Newham	4 th August 2020	Nick Marks, Murray Woodburn, Mark Partridge	<p>Confirmed locations of 2x NO₂ CMS at Hoola Tower and Silvertown Way and diffusion tube sites based on MMS indicative locations.</p> <p>Action 1: To agree method of consent to install CMS on highway.</p> <p>Newham requested a 3rd CMS at Canning Town.</p> <p>Action 2: TfL to review request and follow up.</p> <p>Newham requested PM_{2.5} monitoring is also undertaken at all requested 3 sites.</p> <p>Action 3: TfL to review and follow this up. It is noted that PM_{2.5} monitoring is outside the DCO requirement.</p> <p>Action 4: TfL to site additional diffusion tubes around Hoola (approx. 10 sites) and to consider an additional number of diffusion tube sites at selected sites.</p> <p>Action 5: To arrange meeting with EHO nearer to the installation date to agree specific lamp columns to site diffusion tubes.</p>

London Borough	Date of Meeting	Borough Attendees	Key Actions and Decisions
Tower Hamlets	8 th August 2020	Muhammad Islam, Jack Ettinger	<p>Agreed diffusion tube locations from MMS indicative locations.</p> <p>Action 1: TfL to consider several additional diffusion tube sites around Lower Lea Crossing in new residential areas.</p> <p>Action 2: To arrange meeting with EHO nearer installation date to agree specific lamp columns to site diffusion tubes.</p>
Lewisham	13 th August 2020	Alexandra Crush, Elian Foteu Madio	<p>Agreed diffusion tubes from MMS indicative locations.</p> <p>Action 1: TfL to consider several additional diffusion tube locations around diversion routes e.g. Deptford following LB Lewisham review of locations.</p> <p>Action 2: To arrange meeting with EHO nearer installation date to agree specific lamp columns to site diffusion tubes.</p>
Southwark	26 th August 2020	Bill Legassick (Sally Crew apologies)	<p>Agreed diffusion tubes from MMS indicative locations.</p> <p>Action 1: TfL to consider co-locating diffusion tubes at Southwark's new CMS on Lower Road and around Lower Road gyratory.</p> <p>Action 2: To arrange meeting with EHO nearer installation date to agree specific lamp columns to site diffusion tubes.</p>

4. Current Status of Pre-Scheme Opening Monitoring

A number of the actions outlined above have been progressed further with the above boroughs since the initial meetings.

The main priority has been to agree the locations and siting of the CMS sites in Greenwich and Newham given the potentially long lead times for equipment delivery and installation. The latest situation with regards to these monitors is summarised below.

5. Greenwich

Greenwich is to have a CMS installed on Tunnel Avenue, just off the Blackwall Tunnel Approach (A102). The unit will be close to the wall adjacent to the northbound carriageway as indicated in Figure 1 below. This location closely aligns with the indicative location of monitor CM1 as set out in the MMS.

Following the meeting with Greenwich, we have confirmed there are no local site issues that may affect installation such as changes to the carriageway, other sources in area, or project-related construction impacts. We have also confirmed that Greenwich is the responsible local highway authority.

Figure 1: Blackwall Tunnel CMS, Greenwich (CM1)



6. Newham

Newham is to have two new CMS, one close to the northern portal next to the Hoola Tower and one close to Britannia Gate off the southbound carriageway of Silvertown Way, south of the tunnel as indicated in Figures 2 and 3 below. These locations closely align with the indicative locations of monitors CM2 and CM3 as set out in the MMS.

Figure 2 Hoola Tower CMS, Newham (CM2)



Figure 3 Britannia Gate CMS, Newham (CM3)



7. Ongoing Actions

- AECOM has placed the order for the NO_x/NO₂ monitoring equipment and enclosures for all three sites through supplier Enviro Technology.
- TfL is procuring the services of Keir through their LoHAC framework to install the concrete plinth and electricity feed to the monitors;
- In agreement with Boroughs of Greenwich and Newham, AECOM is preparing a Section 50 (NRSWA) licence application to install the plinth and monitoring enclosures on the borough highways with the aim to submit to the Boroughs of Greenwich and Newham before end of September.
- Several additional diffusion tube monitoring sites are being considered based on discussions with the boroughs against the tests set out in the MMS; and
- AECOM will liaise with the boroughs in October/November to agree exact diffusion tube sites before installation.

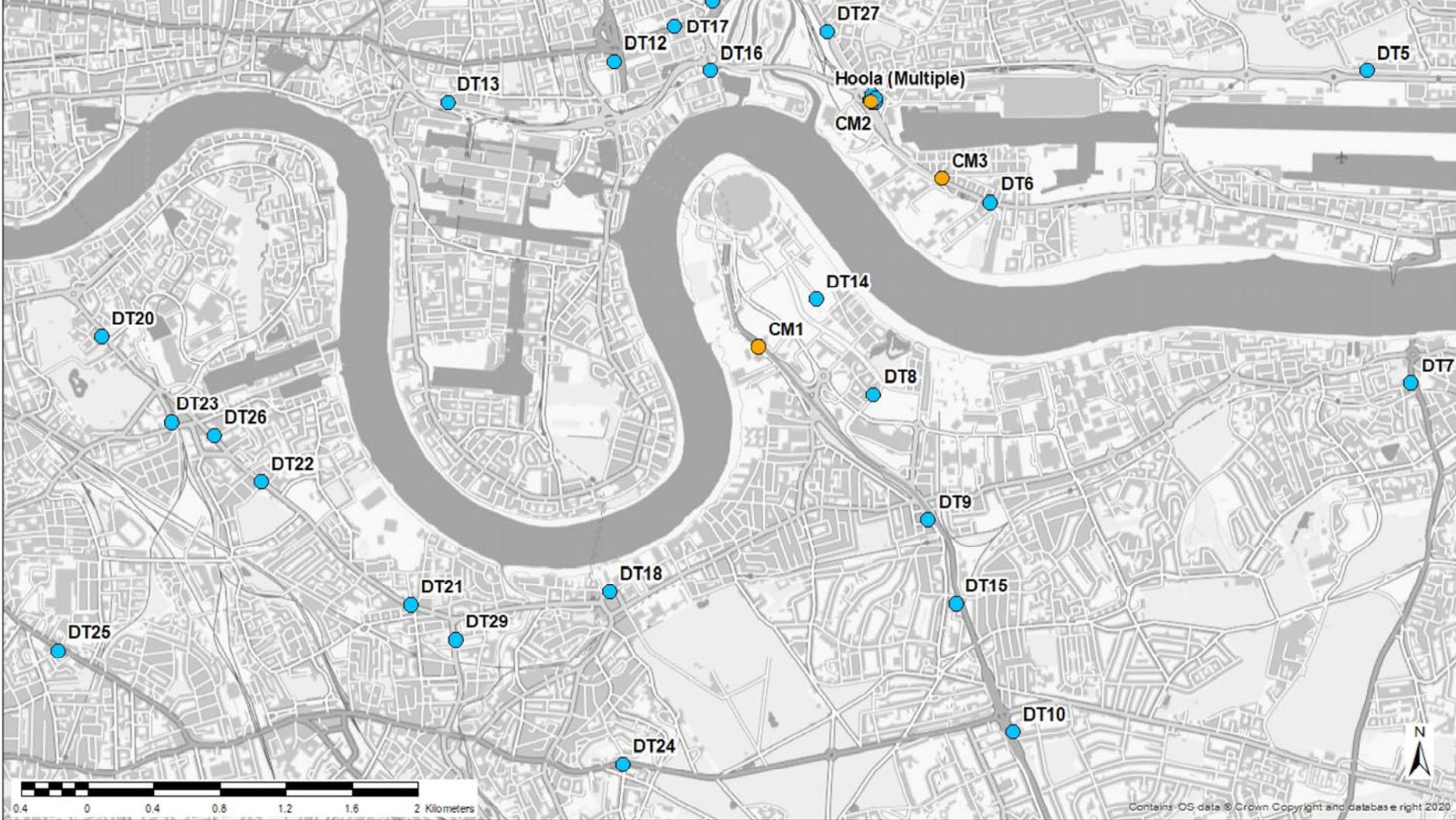
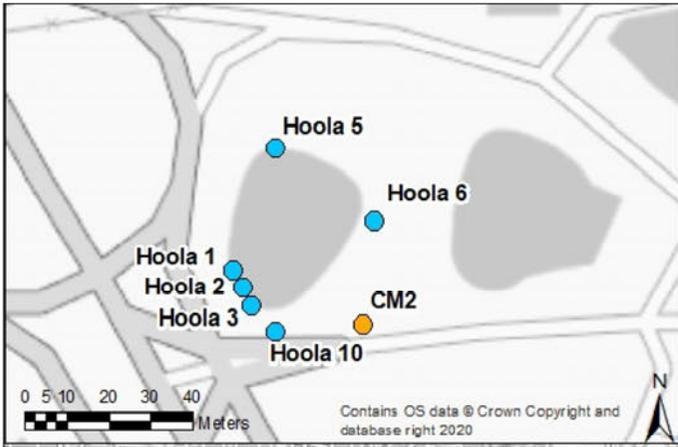
8. Proposed Timescales

TfL is aiming to install all air quality monitoring before the end of 2020 to ensure three years' worth of baseline/pre-scheme data can be collected and to inform the refreshed assessment to be undertaken during 2021/2022. Taking into account the lead time to install the CMS sites, it is expected that the earliest these sites can be installed is end of November 2020.

1 Appendix A: Monitoring Locations

Site Reference	Type	Location	Local Authority
CM1	Continuous monitor	Silvertown Tunnel Southern Portal	Greenwich
CM2	Continuous monitor	Hoola Development	Newham
CM3	Continuous monitor	Dalemain Mews	Newham
DT1	Diffusion tube	Washington Close / B125	Tower Hamlets
DT2	Diffusion tube	Tevoit Street / B125	Tower Hamlets
DT3	Diffusion tube	Douglas Road /A13	Newham
DT4	Diffusion tube	Newham Way	Newham
DT5	Diffusion tube	Campion Close	Newham
DT6	Diffusion tube	North Woolwich Road	Newham
DT7	Diffusion tube	John Wilson Street	Greenwich
DT8	Diffusion tube	Southern Way	Greenwich
DT9	Diffusion tube	Westcombe Hill	Greenwich
DT10	Diffusion tube	Sun-in-the-Sands	Greenwich
DT11	Diffusion tube	Prince Regent Lane	Newham
DT12	Diffusion tube	Robin Hood Lane	Tower Hamlets
DT13	Diffusion tube	Ming Street	Tower Hamlets
DT14	Diffusion tube	East Parkside	Greenwich
DT15	Diffusion tube	Siebert Road	Greenwich
DT16	Diffusion tube	Switch House	Tower Hamlets
DT17	Diffusion tube	East India Dock Road	Tower Hamlets
DT18	Diffusion tube	College Approach	Greenwich
DT19	Diffusion tube	Silvertown Way	Newham
DT20	Diffusion tube	Lower Road	Southwark
DT21	Diffusion tube	Evelyn Street	Lewisham
DT22	Diffusion tube	Evelyn Street	Lewisham
DT23	Diffusion tube	Rotherhithe Old Road	Southwark
DT24	Diffusion tube	Blackheath Hill	Greenwich
DT25	Diffusion tube	Old Kent Road	Southwark
DT26	Diffusion tube	Lower Road	Southwark

Appendix 2 – Air quality monitoring sites



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- Continuous Monitoring Locations
- Diffusion Tube Monitoring Locations

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Proposed Issue

Client
TRANSPORT FOR LONDON

Project Title
SILVERTOWN TUNNEL

Drawing Title
LOCATION OF CONTINUOUS AND DIFFUSION TUBE MONITORING LOCATIONS

Drawn: HC	Checked: AS	AS	Date: 19/05/2021
AECOM Internal Project No: 60636520		Scale: UK A3, 1:25,000	

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AECOM
AECOM Infrastructure
AECOM UK
15, Abchurch Lane
London, EC4A 3DF
Tel: +44 (0)20 7822 0000
www.aecom.com

Drawing No: **FIGURE 1**

Rev: **REV0**

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