

Fleming Way Bus Boulevard

Intrusive Surveys and Testing Specification- Retaining Wall

Swindon Borough Council

20 January 2020

Notice

This document and its contents have been prepared and are intended solely as information for Swindon Borough Council Fleming way subway demolition and use in relation to trial pitting investigation at Fleming way subway

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This document has 17 pages including the cover.

Document history

Revision	Purpose description	Origin-ated	Checked	Reviewed	Author-ised	Date
P01	For Tender	CH	ANJ	AS	MA	31/10/2019
P02	For Tender Updated for SBC comments	CH	ANJ	AS	MA	04/12/2019
P03	Updated for SBC Comments	CH	ANJ	AS	MA	20/12/2019
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Client signoff

Client	Swindon Borough Council
Project	Fleming Way Bus Boulevard
Job number	5191994
Client signature / date	

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1. General Requirement

1.1. General

- 1.1.1. The investigations are to be carried out by a concrete testing specialist (“the Principal Contractor”).
- 1.1.2. The Principal Contractor shall provide all necessary equipment and apparatus in order to complete the surveys specified in this specification.
- 1.1.3. All testing shall be in accordance with relevant British Standards, where possible.
- 1.1.4. The Principal Contractor shall liaise with Swindon Borough Council (SBC) and shall provide all works area fencing, barriers, signs, etc. to safely manage the investigations and work areas.
- 1.1.5. The Principal Contractor shall control noise, dust and other materials to prevent any nuisance to the users of any nearby facilities and any adverse impact on the environment.
- 1.1.6. The Principal Contractor shall allow access for supervision by Atkins staff, if required.
- 1.1.7. The Principal Contractor shall provide a report. Swindon Borough Council (SBC) will make arrangements for Traffic Management.
- 1.1.8. The Principal Contractor shall liaise with the SBC Network Management Team in order to obtain traffic management approvals and a Street Works Licence. SBC may require up to 3 weeks’ notice (see section 1.4).
- 1.1.9. The contact at SBC for all communication in relation to this work will be Lynsey Turner (ltturner3@swindon.gov.uk).

1.2. Contractual Obligations

- 1.2.1. Attention is drawn to the requirements of Swindon Borough Council. Notwithstanding this the Principal Contractor shall ensure, prior to commencing the works, that:
 - All responsibilities regarding Health and Safety have been fulfilled.
 - The Principal Contractor shall ensure that the workforce and site supervisory staff at all times wear high visibility warning clothing as specified in BS EN 471: 2003+A1:2007 along with the appropriate personal protective equipment as necessary.
 - The Principal Contractor should allow for fees for liaison with the Highways Authority and obtaining road space booking including any permits required.
 - Traffic management is in accordance with the Highway Authority and/or Safety at Street Works, Code of Practice and Chapter 8, Traffic Sign Manual.

1.3. Access and Site Procedures

- 1.3.1. The proposed investigation works will involve accessing the existing highways operated by SBC as well as private land at Turl Car Park. The Principal Contractor shall obtain such permissions as required in advance of any work being undertaken with the assistance of SBC.
- 1.3.2. The Principal Contractor is required to make suitable arrangements to ensure all permits are in place prior to commencing the work on site.

1.4. Traffic Management and Road Space

1.4.1. The Principal Contractor shall be responsible for:

- Complying with the traffic management restrictions employed by SBC;
- The application and booking of the necessary road space and/or network occupancy with SBC prior to implementing the required traffic management measures. The contact details at SBC for long period “works” type activities on the network is Sean Smith 01793466357;
- Providing traffic management layouts and associated method statements and risk assessments for approval by SBC, prior to commencement;
- Preparing and submitting Traffic Safety and Management proposals prior to the work to which they relate, for the Project Manager’ s consideration;
- Implementing, maintaining and removing the required traffic control, carried out in accordance with Chapter 8 of the Traffic Signs Manual - “Traffic Safety Measures and Signs for Road Works and Temporary Situations”

2. Health, safety and welfare

- 2.1.1. The Principal Contractor shall be responsible for all aspects of health, safety and welfare of their works. The works shall be carried out in accordance with the requirements of the Construction (Design and Management) Regulations 2015. For the purposes of the CDM Regulations the Client is Swindon Borough Council. SBC will appoint the Principal Contractor in writing.
- 2.1.2. The Principal Contractor shall ensure that suitable and adequate welfare facilities are provided for the use of all personnel on site (including SBC and Atkins staff) prior to any works commencing in accordance with "Provision of Welfare Facilities during Construction Work – Construction Information Sheet number 59", including site set-up.
- 2.1.3. With regards to Statutory undertakers' services, the Principal Contractor shall ensure all known services and drainage are fully identified before commencing investigation activity on site. To assist in this process, the Principal Contractor will be provided with copies of the utility drawings that have already been produced as part of the scheme design, see Appendix A and B. However, these drawings are not to be considered as exhaustive and the Principal Contractor will still be responsible for making their own investigations and enquiries in this regard.
- 2.1.4. The Principal Contractor shall ensure that all staff and operatives receive briefing on hazards associated with the work.
- 2.1.5. The Principal Contractor shall ensure that all staff working at individual locations throughout the site keep in contact with the Principal Contractor's site investigation team leader.
- 2.1.6. The Principal Contractor shall ensure that all relevant staff have the appropriate training and up to date certificates to use the machinery and equipment required.
- 2.1.7. The Principal Contractor shall provide copies of their site specific Risk Assessments and Method Statements (RAMS) to the Client for review and comment, no less than one week in advance of the works. The Principal Contractor shall ensure that all approvals are in place prior to commencing any works on site.
- 2.1.8. The Principal Contractor shall remove all waste prior to leaving site.
- 2.1.9. Consideration must be given to potentially harmful substances within the area. The presence of vermin should be assumed (leptospirosis). In addition to this, the site is assumed to be used by drug users and for antisocial activities. Consideration should be given to the presence of hypodermic needles and other drug/sex paraphernalia.
- 2.1.10. The Principal Contractor shall take note of the following residual risks that arise from the design and apply appropriate controls.
- 2.1.11. The key hazards that have been identified and are residual hazards for the Principal Contractor to manage, together with mitigations that have been implemented during design of the testing, are as follows:

Table 2-1 - Key Hazards

Hazard	Mitigations Implemented in Design
No Asbestos Risk Register available	<p>Date of construction of the pedestrian subway is understood to be in 1960s. The surrounding retaining wall is likely have been constructed in the same period and therefore the use of asbestos was likely .</p> <p>Buried asbestos has been identified within the Fleming Way site and therefore could be potentially encountered within the works area. Refer to the Geotechnical Interpretative Report (GIR), FWB Blvd-</p>

Hazard	Mitigations Implemented in Design
	ATK-GEN-RP-CE-000001 where asbestos has been identified in WS08 and TP01A, see Appendix C. Residual risk to be addressed in the Principal Contractor's method statement.
Breaking/drilling	Test areas kept to a minimum. Residual risk of vibration to be addressed in the Principal Contractor's method statement.
Existing services	Services search has been carried out (see Appendix B). The precise location and depth of services are not known. Residual risk to be addressed in the Principal Contractor's method statement.
Working near to live highways	Limited works to be carried out in carriageway. Off peak working specified. Works moved into the footway areas where possible and where longer durations are likely. Residual risk to be addressed in the Principal Contractor's method statement.

- 2.1.12. The Principal Contractor is to submit a Health and Safety file once the works have finished. This is to include information such as, details of the reinstatement works, any residual risks noted and anything that could have an impact on the H&S working in that area

3. Programme

- 3.1.1. The Principal Contractor shall provide a proposed programme with his quotation. This shall include all relevant activities including mobilisation period, site works, lab testing, report, etc.
- 3.1.2. The timing of the investigation work shall be agreed with Swindon Borough Council (SBC) to ensure that the work is carried out safely and the movement of buses and pedestrians is not hindered. The Principal Contractor shall agree the allowable hours of traffic management with SBC and shall programme and phase his work to fit in with SBC's requirements.
- 3.1.3. The site testing and investigation works shall be completed as per the date agreed between the Principal Contractor and SBC, and the final report shall be provided within four weeks of completion of the investigation works.
- 3.1.4. The Principal Contractor shall adhere to the agreed programme.

4. Test Requirement

4.1. Fleming Way Retaining Wall

4.1.1. Structure

- 4.1.1.1. Fleming Way is located on the edge of Swindon town centre and is adjacent to both residential and commercial properties. The subway provides means for pedestrians to cross Fleming Way via a broad footway linking the bus station to the town centre shopping area.
- 4.1.1.2. The brick faced retaining wall adjacent to the subway is about 2.5m high. It is likely to be a reinforced concrete retaining wall though this is unconfirmed.
- 4.1.1.3. The retaining wall along Turl Street Car Park is about 0.7m high and was built in brick.

4.1.2. Summary of testing required

- 4.1.2.1. Five trial pits are required (see Appendix A) to investigate the retaining walls adjacent to the subway. Trial pits are proposed at where the existing movement joints present in order to investigate if the retaining wall base is stepped. Trial pits shall be of a sufficient size to provide a 1.0 m x 1.0 m expose the extent of the retaining wall base and establish the base thickness and levels. TP1 shall expose the subway base and adjacent retaining wall and establish the thickness and levels.
- 4.1.2.2. Core drill to the concrete retaining wall is to be carried out at trial pits TP1 to TP5 to confirm the wall thickness. The core drill position should be located approximately 300mm above the top of the retaining wall base.
- 4.1.2.3. Four trial pits are required to investigate the retaining wall along Turl Street Car Park (TP6 to TP9). Each trial pit shall be of a sufficient size to provide a 1.0 m x 1.0 m to expose the extent of the retaining wall base and the trial pit should be as deep as the bottom of the existing foundation.

4.1.3. Specific requirements

- 4.1.3.1. Drawings in Appendix A are based on the topographical survey information received from Brunel Survey Ltd on 14th October 2019.
- 4.1.3.2. The proposed locations of the nine trial pits are indicated in drawings FWB Blvd-ATK-SRW-FWML-DR-CB-000001_P02 and FWB Blvd-ATK-SRW-FWML-DR-CB-000002_P02. The testing required at each trial pit is summarised in Table 4-1 below.

Table 4-1 - Trial Pit Schedule

Testing Required	Quantity/Location	Details
Concrete core drill	Five: TP1, TP2, TP3, TP4, TP5	See section 5.1

5. Testing Specifications

5.1. Concrete core drill

- 5.1.1. The Principal Contractor shall extract a 50mm diameter core from the test area to confirm the retaining wall thickness. The core drill position should be located approximately 300mm above the top of the retaining wall base.

6. Reinstatement

- 6.1.1. All drill holes and any break-out areas shall be reinstated using a suitable and approved compatible repair concrete or applicable mortar. The Principal Contractor shall provide and submit the material specifications to be used for all repairs to the Client for approval no less than two weeks in advance of the works. These materials shall be installed in accordance with the manufacturer's recommendations. All loose or fractured concrete shall be removed prior to the reinstatement of the break-out area.
- 6.1.2. Any reinforcement that is damaged during the testing must be notified to the Client and the Principal Contractor must not reinstate an area with damaged reinforcement without explicit instruction to do so.

7. Report

- 7.1.1. The Principal Contractor shall produce a report to detail the investigations carried out and the results obtained.
- 7.1.2. The report shall be arranged in an easily readable form with a logical sequence and shall be factually precise. The report shall include a table of contents.
- 7.1.3. The report shall describe:
- Testing and investigation procedures and methodology used;
 - Precise location of all tests, surveys and investigations; and
 - Results of the investigations, surveys and laboratory tests.
- 7.1.4. All drawings, tables, graphs, diagrams and photographs shall be captioned and clearly cross-referenced with the report text.
- 7.1.5. Colour photographs to illustrate investigation and test locations or results shall be provided.
- 7.1.6. The Principal Contractor shall provide defect drawings for every test panel. Site sketches will not be acceptable.
- 7.1.7. The Principal Contractor shall provide defect drawings for every test panel. Site sketches will not be acceptable.
- 7.1.8. All tests and samples shall be referenced using a unique reference numbering system.
- 7.1.9. The report shall be provided electronically in Adobe PDF format.
- 7.1.10. If the Client judges that the report is of unsatisfactory quality the Principal Contractor shall make corrections at his own expense.

Appendices

Appendix A. Testing Locations

DO NOT SCALE

Millimetres

0

10

100



Fleming Way

Car Park

5. ADJACENT CONSTRUCTION SITE

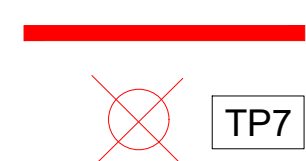
1. PRESENCE OF ASBESTOS

4. THAMES WATER

3. PRIVATE ACCESS

2. UTILITIES

LEGEND



RETAINING WALL TO BE INVESTIGATED

TRIAL PIT LOCATION

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
1. PRESENCE OF ASBESTOS 2. UTILITIES THROUGHOUT SCHEME
3. PRIVATE ACCESS 4. THAMES WATER ASSETS 5. ADJACENT CONSTRUCTION SITE

Maintenance / Cleaning
NONE

Use
NONE

Decommissioning / Demolition
NONE

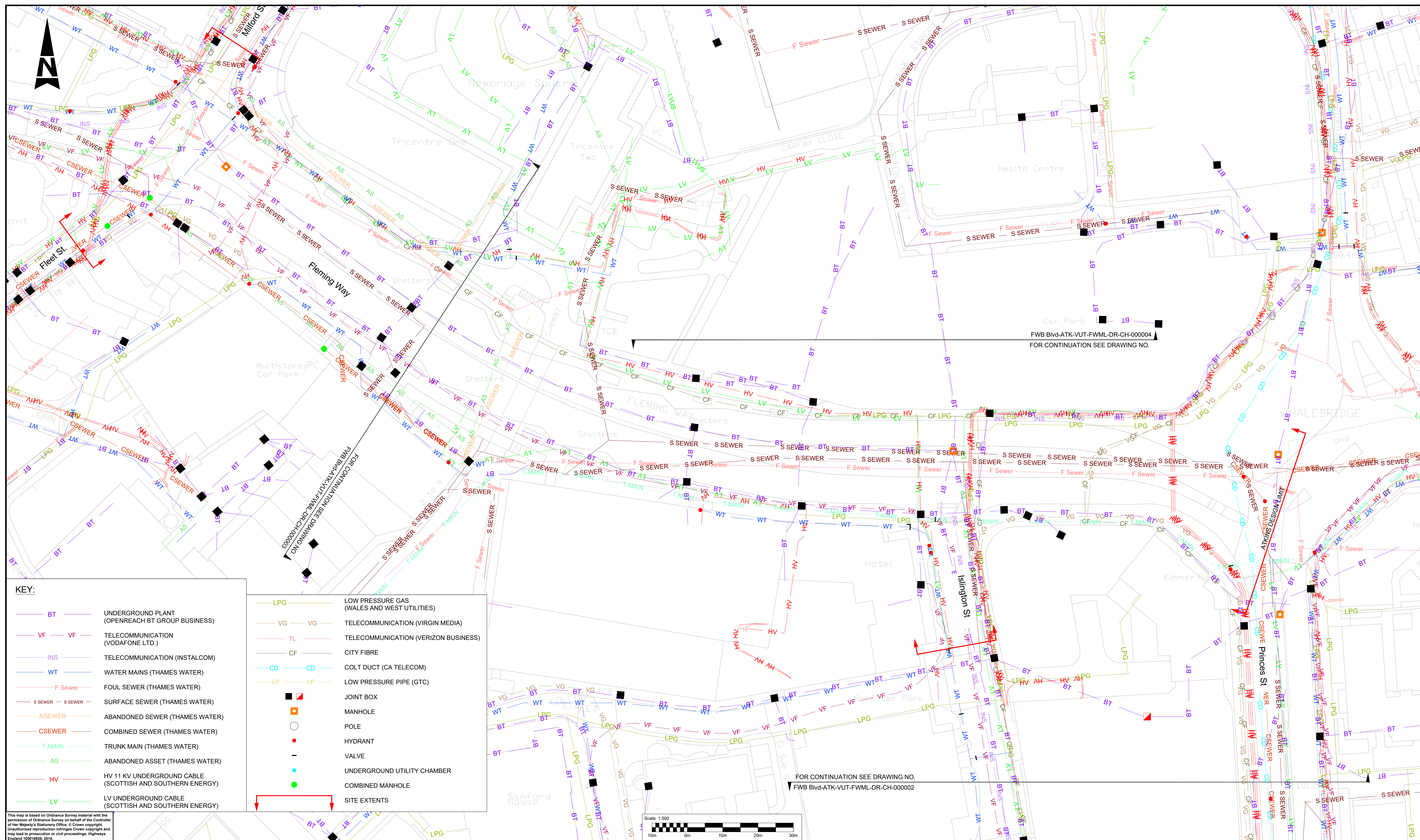
NOTES:













- THIS DRAWING SHALL BE READ IN ACCORDANCE WITH THE "INTRUSIVE SURVEY AND TESTING SPECS" REF. FWBBlvd-ATK-SRW-FW-SP-CB-000001
- THE INFORMATION SUPPLIED ON THIS PLAN IS FOR THE ASSISTANCE OF THE CONTRACTOR AND FOR GENERAL GUIDANCE ONLY. NO GUARANTEE IS GIVEN OF ITS ACCURACY. SERVICES MAY EXIST AT VARIOUS DEPTHS AND MAY DEViate FROM THE MARKED ROUTE.
- ATKINS MAKES EVERY EFFORT TO ENSURE THAT THE INFORMATION WE PROVIDE IS ACCURATE. HOWEVER, THE INFORMATION IS SUPPLIED WITHOUT PREJUDICE AND ATKINS ACCEPTS NO LIABILITY FOR CLAIMS ARISING FROM INACCURACY, OMISSIONS OR ERRORS CONTAINED HEREIN
- THE CONTRACTOR TO VERIFY DIMENSIONS ON SITE AND ADVISE OF ANY INFORMATION DISCREPANCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT LOCATION AND EXTENT OF BURIED SERVICES PRIOR TO COMMENCEMENT OF WORKS

Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
Description						
First Issue						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
D2	P01	GS	CH	MA	---	31/10/19
Description						
Trial Pits Updated						
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
D2	P02	GS	CH	MA	---	04/12/19

Drawing Suitability		Status	Project Title	
FOR TENDER		D2	Fleming Way Bus Boulevard	
<div>ATKINS</div> <div>Member of the SNC-Lavalin Group</div>		<div>Epsom Gateway Ashley Avenue Epsom Surrey KT18 5AL</div> <div>Tel: +44 (0)1372 726140 Fax: +44 (0)1372 740055 www.atkinsglobal.com</div>	<div>Drawing Title</div> <div>RETAINING WALL TRIAL PITS</div>	
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Client		<div><div>Drawing Number</div><div>Project</div><div>FWB Blvd - ATK - SRW - FWML - DR - CB - 000002</div></div> <div><div>Location</div><div>Type</div><div>Role</div><div>Number</div></div> <div><div>Original Size:</div><div>A1</div><div>Scale:</div><div>1:250</div><div>Project Ref. No:</div><div>5167597</div><div>Sheet:</div><div>2 of 2</div><div>Rev:</div><div>P02</div></div>		

Appendix B. Existing Services Search



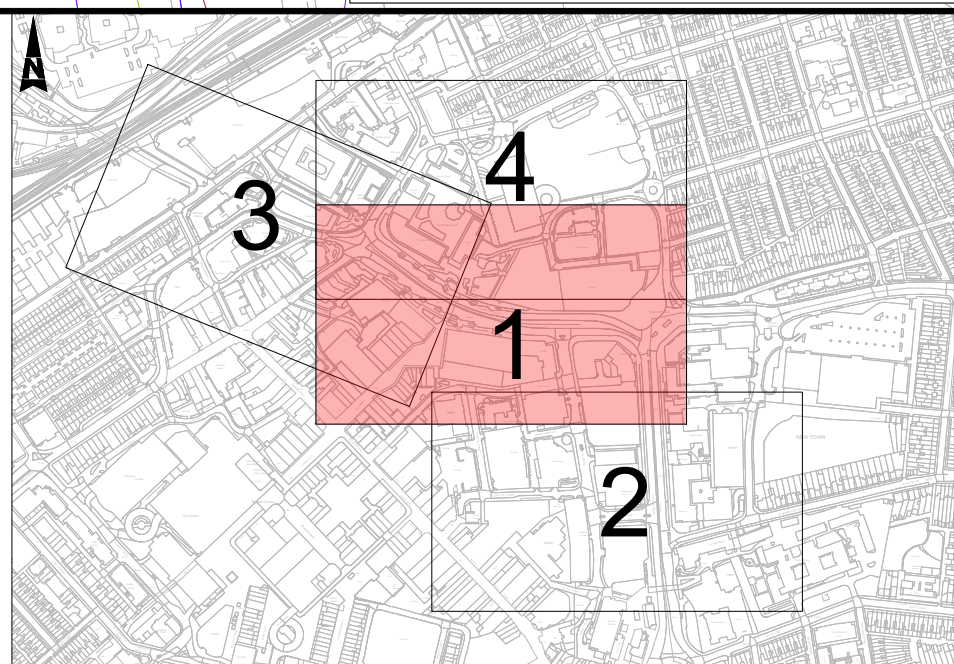
KEY:	
 BT	UNDERGROUND PLANT (OPENREACH BT GROUP BUSINESS)
 VF	TELECOMMUNICATION (VODAFONE LTD.)
 INS	TELECOMMUNICATION (INSTALCOM)
 WT	WATER MAINS (THAMES WATER)
 F Sewer	FOUL SEWER (THAMES WATER)
 S SEWER	SURFACE SEWER (THAMES WATER)
 ASEWER	ABANDONED SEWER (THAMES WATER)
 CSEWER	COMBINED SEWER (THAMES WATER)
 T-MAIN	TRUNK MAIN (THAMES WATER)
 AS	ABANDONED ASSET (THAMES WATER)
 HV	HV 11 KV UNDERGROUND CABLE (SCOTTISH AND SOUTHERN ENERGY)
 LV	LV UNDERGROUND CABLE (SCOTTISH AND SOUTHERN ENERGY)

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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION	
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).	
Construction	
Live traffic	
Live utilities, presence of soil contamination, asbestos, tar and breaking of concrete not known	
Maintenance / Cleaning	
None	
Use	
None	
Decommissioning / Demolition	
None	

NOTES

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
3. EXACT LOCATIONS OF APPARATUS SHOULD BE VERIFIED BY THE CONTRACTOR USING CABLE LOCATORS AND HAND TOOLS. THE COST OF RECTIFYING ANY DAMAGE WILL BE PASSED TO THE CONTRACTORS.
4. THE INFORMATION SHOWN ON THIS DRAWING HAS BEEN TAKEN FROM RELEVANT STATUTORY UNDERTAKERS PLANS. THE INFORMATION IS DIAGRAMMATIC ONLY AND SHOULD NOT BE TAKEN AS REPRESENTING THE EXACT LINE OF ANY APPARATUS. SERVICE PIPES ARE NOT SHOWN AND IT SHOULD BE ASSUMED THAT EACH PROPERTY IS SERVED.
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Description							
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date	
Description Second Issue							
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date	
A1	C01	SJ	SJ	NJ	NJ	13/07/18	
Description Second Issue							
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date	
S3	P02	RA	SJ	SJ	---	04/03/19	
Description Third Issue							
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date	
S3	P03	RA	SJ	SJ	---	19/03/19	
Description Fourth Issue							
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date	
S2	D04	P4	S	S1	---	10/04/19	

Drawing Suitability FOR INFORMATION	Status S2	Project Title Fleming Way Bus Boulevard
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Client <div>  <p> SWINDON BOROUGH COUNCIL </p> </div>	Drawing Number Project FWB Blvd - ATK - VUT - FWML - DR - CH - 000001	
	Location Original A1 Scale: 1:500 Project: 5167597 Sheet: 1 of 4 Rev: P02	

Appendix C. Geotechnical Interpretative Report

Refer to FWB Blvd-ATK-GEN-RP-CE-000001_P01

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