

Edinburgh Tram Network

Report Statement on As-Built Drawings for MUDFA Contract

Doc. Ref: ULE90130-SW-REP-00673



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7th January 2009

CEC01119469_0001

Report Statement on As-Built Drawings for MUDFA
Contract

AUTHORISATION PAGE

Title: Report Statement on As-Built Drawings for MUDFA Contract				
Approvals	Name	Position	Signed	Date
Author	A Dolan	Deputy Project Manager		07-Jan-09
Reviewer	T. Kelly	Systems Engineer		07-Jan-09
Approver	J Chandler	Project Manager		07-Jan-09

Revision History

Ver No	Date	Description	Prepared By
1	15 th Jan 2009	Formal Issue to tie	A Dolan

Distribution

Ver No	Date	Name	Role	Company
1	7 th Jan 2009	Frank McFadden	Contract Representative	tie

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1 EXECUTIVE SUMMARY

BACKGROUND

Following a meeting on 4th December 2007, SDS were requested by **tie** (F. McFadden) to review the As-Built Provision from the MUDFA Contractor and report on any shortfall with a view to proposing a work scope to fill scope gap with the provision of information for Infraco. The scope to be advised to fill such gap is to provide Infraco with an acceptable level of information to move forward with the Infraco construction works. A minuted meeting was convened between MUDFA Representatives and SDS Representatives on 5th December 2007 and is enclosed (see Appendix A). From this meeting it became clear to SDS that unless instructed by **tie**, the MUDFA position was purely to provide the "Red Line Drawings" only, with zero input into any Blank Plate Updates being proposed by L & M and the **tie** Technical MUDFA Team.

Following earlier dialogue with **tie** (November 2006 – Meeting Johnston/Sharp//Dolan), **tie** agreed that there was clearly a scope shortfall. **Tie** decided to procure a Contractor – (separate from MUDFA contractor) to prepare independent As-Built survey drawings to record the shortfall in scope for As-Built drawings. **Tie** prepared a flow chart to show how these two contracts would work together to provide the correct scope result for this scope deficiency. **Tie** included a "**tie** comparison" exercise to ensure a Client Assurance Process is demonstrated (see Appendix B – which is the confirmation dated 28th January 2008 of the dialogue and agreement of meeting Nov 2007).

SDS have advised **tie** of further amendments to this Flow Chart (Appendix B1), but we have yet to receive any update or scope workload given to the new Contractor, L & M Independent Surveys.

SDS were advised that the **tie** work pack instructions provided to MUDFA did not have any definitive instructions into the preparation of As-Built drawings (Both detail of quantum information required or of information to be supplied). SDS would draw **tie** attention to Clause 3.22 of the Agreement and advise that the word "necessary" within the clause may need to be defined and agreed with MUDFA.

Tie have advised SDS that the Contractor, L & M Independent Surveys have successfully taken records of work that is visible to survey but where utilities have been covered over without positioned records. Assumptions have been made, based on trenchwork topping positions.

No drawings of trench/backfilling positions (per section) have been provided to SDS for As-Built Purposes.

No drawings of As-Built utility services have been provided on the SDS blank plates issued to **tie**/MUDFA in October 2008.

No programme of handover of As-Built information is available on a section by section basis. This needs to be structured based on the combined MUDFA completions programme and the Infraco Construction Programme. (Even the early 3 month Look Ahead Programme could/should be utilised).

No weekly updates from MUDFA on As-Built records are evident to SDS. No Schedule of As-Built completions have been provided to SDS (schedule showing omissions etc.).

The As-Built "Red Line Drawings" being prepared by MUDFA do not follow the "singular" or "All-Utilities" Format. An example of this was confirmed at the meeting on 5th December 2008, where telecomm's were collectively shown on As-Built and not individually broken down to each SUC (BT, Thus, C & W & Virgin Media)

Report Statement on As-Built Drawings for MUDFA
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No **tie** comparison checks of As-Built "Red Line Drawings" were being carried out by **tie**. This was agreed as necessary by **tie** to avoid two different sources of information conflicting. This scope is shown on the **tie** protocol flowchart (see appendix B).

2 REPORT FINDINGS

2.1 Instruction

The request to provide this report was given to A. Dolan by F. McFadden on 4th December 2008. Following a meeting between MUDFA and SDS on 5th December 2008 a compilation of the shortfalls in As-Built Information was compiled by SDS.

2.2 Scope Shortfalls

The following shortfalls in As-Built provisions from the MUDFA Contract are advised as follows:

- A. Only "Red Line Drawings" sufficient to return back to the relevant SUC is being provided by the MUDFA Contractor.
- B. Limited Utility service taken out of use and left below ground is identified. Capped end positions (co-ordinates and level) are not recorded for abandoned utilities. This is a future construction risk to other contractors.
- C. "Red Line Drawings" are being measured from a singular fixed point (NOT multiple fixed points). This should be recorded by co-ordinate to the Project Grid for exact positioning of equipment below ground.
- D. Limited level of utilities is recorded. All utilities installed need to have datum information at regular intervals or changes in vertical.
- E. No backfilling information is evident. (Geographical and/or materials used) along with the appropriate certificates of inspection by tie/CEC as necessary for handover back to the Road Authority. Drawings of road cover along with confirmation of TOR's following completion do not appear to be evident.
- F. If and when As-Built information is overlaid onto the Blank Plates provided by SDS. These will just show the utilities moved. Not the existing services left, or abandoned services.

3 INFORMATION REQUIRED FOR AS-BUILTS

It should be assumed that the standard of drawings and information shown on the As-Built drawings will be to a standard (or better) than the quality of drawings deemed acceptable by **tie** for IFC and deemed acceptable by the Statutory Authorities for IFA.

Within the reference to CDM, the As-Built drawings and information from MUDFA to the CDM Co-ordinator should contain sufficient information relating to the project, which is likely to be needed during any subsequent construction work to ensure the health and safety of any person. Where there is risk of information and detail of utilities, the standard of quality and quantity of information is required to be evaluated, both, by the Contractor and the CDM Co-ordinator.

3.1 As-Built Information to be prepared

The information to be prepared and formulated by **tie** which should be handed over to **tie** is recognised on the **tie** protocol flow chart proposed by **tie** on 28th January 2008 (See Report Appendix B).

The information proposed (Drawing update) identifies the following:

- Completed Diversions
- Utilities not moved
- Changes to the DKE
- Updates on Design Changes
- Results from TQ's

SDS have advised **tie** that additional to the above is the necessity to carry out an As-Built check of MUDFA Installations with final infrastructure design IFC's. This check will show any Infrastructure conflicts between As-Builts and Infraco works proposed (See Report Appendix B1).

3.2 Recommendations of MUDFA As-Builts (within Handover Packs)

The recommendation of MUDFA As-Builts within the MUDFA Sectional Completions should include as a minimum the information included on the IFC Drawings and C4 Schedules issued by SDS. The requirement as a minimum would be:

- Start and end co-ordinates of utility amendments (Including directional/ horizontal and vertical changes)
- Datum requirements of amended utility apparatus
- Detail of protection measures installed to utility apparatus (Datum of protection plates etc)
- Details of backfill materials and trench/ road openings
- Detail Plan (per section/ sub-section) of road cuttings
- TOR level confirmation of the following road re-instatement
- Abandoned utility apparatus cap-end co-ordinates (Datum/TOP to be given)
- Manhole co-ordinate setting out
- Joint box positions, where covered

4 WORK SCOPE BY SDS

Utilising the model as indicated on the **tie** Protocol flow chart (Report Appendix B), SDS provide below a time estimate of the scope shortfall in Utilities As-Builts and CSD Drawings.

The assistance to **tie** with the overlaying of the marked up plates from L & M and the As-Built review from MUDFA can only be for CAD/ Engineering Management Time (NOT ENGINEERING DESIGN TIME). This is for CDM reasons and the responsibility of the accuracy of information and final checking of overlay must remain with MUDFA as they are the PC (under CDM rules) to issue the As-Built to the CDM Co-ordinator. In short, the checking of CAD work must remain with MUDFA following completion by SDS.

The estimate is based on all the information indicated in Section 3 of this report, being provided on the marked up Blank Plate background drawings by L & M (These Blank Plates to indicate each utility amendment by SUC discipline).

4.1 Estimate of Quantity and Time

The estimate of As-Built Drawings to be provided by MUDFA is shown below as an approximation.

A quantity of 96 Plates with an average of seven different utility drawings plus backfilling and road survey/ level drawings provides an estimate of the following provision:

$96 \times 8 = 768$ Single Utility Drawings

Added to this is the Combined Utility Drawings and would provide a total of:

$768 + 96$ (All Utilities) = 864 As-Builts

The individual plates would have to be overlaid with the IFA "X – Reference Drawings" from the SDS IFA accepted submissions to provide a full picture to Infraco of what is below the ground in total. This should be provided to Infraco but only on the basis that each SUC has approved the IFA drawings and has signed off the MUDFA Utilities Installation work. This means that the As-Built Drawings **must** be complete with the sign off from each SUC prior to SDS commencing any overlays.

Note the quantity of drawings is an estimate of Phase 1A only, not Phase 1B (Sections 3A, 3B, & 3C).

Report Statement on As-Built Drawings for MUDFA
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4.2 CAD/ Drawing Resource Estimate (Man Hours)

Drawing Quantity	Red Line Lift + Check to Co-ordinate	X-Ref Overlay & Old Utility Position Close Out	Updates to Design Changes	Check DKE Change	TQ Check	Infrastructure Check	QA/QC Eng. Check	Drawing Packs Issue IFA	IFA Check Comments	Amend and issue Equivalent IFC to tie	Total hours
864	8 Not recommended by SDS. This work to be carried out by L& M.	4	1	1	4	4	1	1	1	2	23,328

Printing = 864 Drawings @ 3 for IFA + 5 for IFC = 6912 Drawings

APPENDIX A

Minutes of As Built Drawings

Date: Friday 5th December 2008

Time: 10.30 – 11.15

Venue: MUDFA

Attendees: Alan Dolan AB
Tom Kelly TK
Mike Mann MM
Doug Lynn DL

Apologies:

Meeting : Review of As Built Information provided by CUS

No	WHAT	WHO	WHEN
1	<p><u>As Built Drawings</u></p> <p>SDS confirmed that a local co-ordinated grid had been established for the scheme.</p> <p>SDS stated that IFCs / Works schedule contained co-ordinates for start offsets & end offsets for diversions (X & Y) The depth of cover was also stated on the schedule. (ie No defined Z value)</p> <p>TK confirmed that existing SU information was based on the existing line drawings from each Statutory Authority and had not been provided in co-ordinated form.</p> <p>CUS confirmed that start / end positions of each diversion was obtained from local trial holes following reference to IFC & SU drawings.</p> <p>CUS confirmed that the co-ordinates given had little value since they did not generally tie in with the location of each item of apparatus to be diverted.</p> <p>The route of most diversions needed to be defined from trial holes / exploration on site in order to obtain an agreed route. This had been the method adopted with the diversions completed to date.</p>		

No	WHAT	WHO	WHEN
	<p>CUS confirmed that they maintained as built information in the form of offsets and dimensions from major reference points within the streets and actual depths of cover obtained from existing road level.</p> <p>This information is then drawn to scale onto the A1 plans in the form of a 'red line'. This information is passed to tie Ltd as a record of the diversion.</p> <p>CUS stated that SDS could then transfer the as built information onto the CAD drawings.</p> <p>SDS stated that they expected a full co-ordinated reference (X, Y, Z) for each diversion including any change of direction. They wanted the information in electronic form in order to 'place' the information on CAD drawings before presenting to Infraco.</p> <p>Infraco need the information in this form in order to develop the design for the rest of the works.</p> <p>CUS stated that they did not need to provide co-ordinated as-built information as part of the contract. Red line drawings are considered an industry standard form of recording as built information and SU's would not accept co-ordinated information.</p> <p>It was understood that L & M had been employed by tie Ltd to provide co-ordinated information on the diversion work as it is completed. While CUS could help L&M with aspect of the recording survey work they did not have a contract with them so they could not direct them.</p> <p>SDS had concerns over the amount/content of information received so far from L&M.</p> <p>POST MEETING NOTE</p> <p>MM checked with Neil Hobson over L& M's remit. Neil confirmed that L&M's primary task was to carry out co-ordinated as-built surveys of the diversions and locate existing apparatus if possible.</p>		

APPENDIX B

AP B

Dolan, Alan

From: Jim Johnston - TSS [Jim.Johnston@tie.ltd.uk]
Sent: 28 January 2008 11:00
To: Dolan, Alan
Attachments: Drawing protocal.doc

Alan as discussed

Jim Johnston
Design Manager

MUDFA Team
Western Harbour
Leith Docks
Edinburgh
EH6 6QF

email: jim.johnston@tie.ltd.uk

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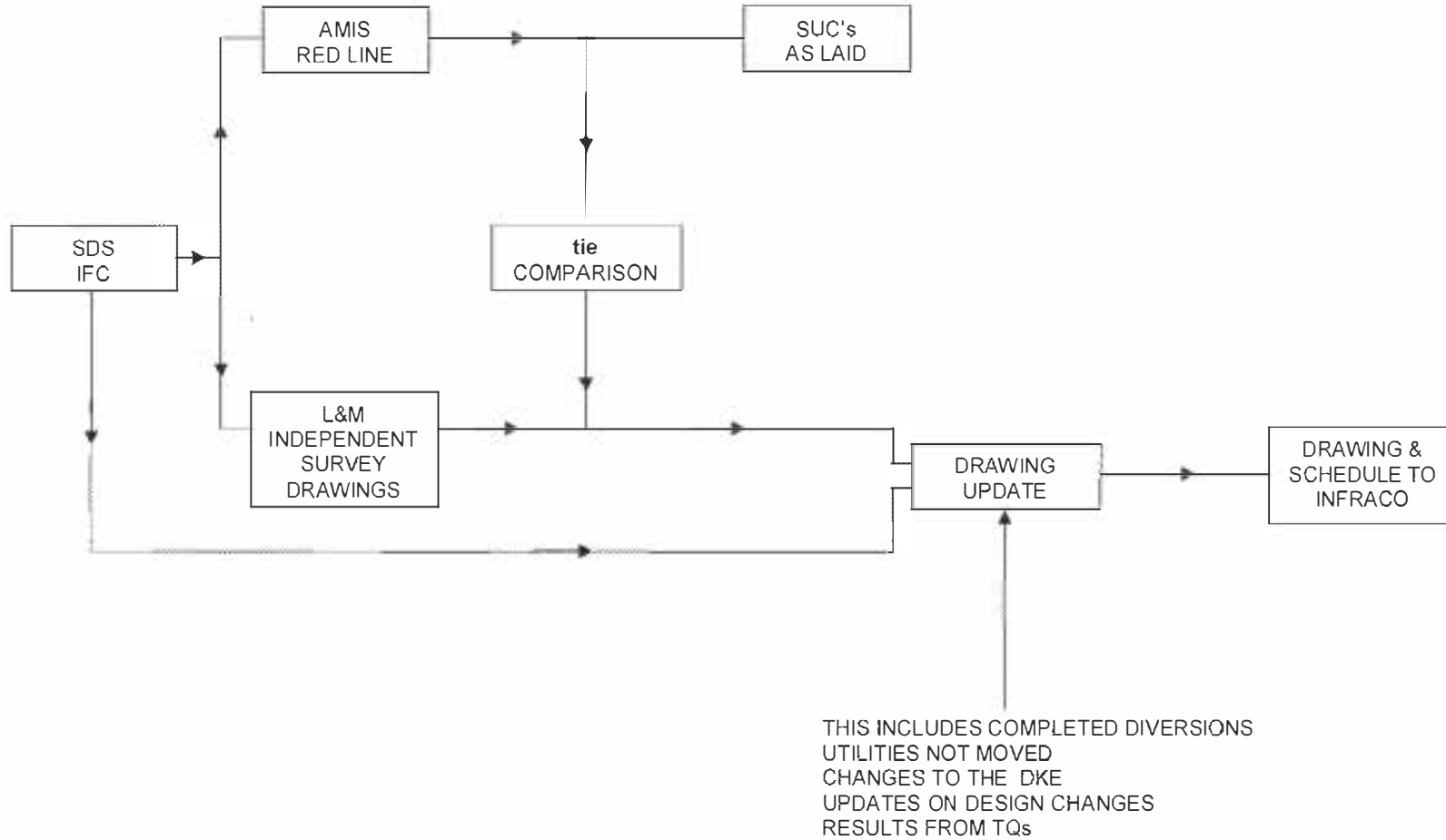
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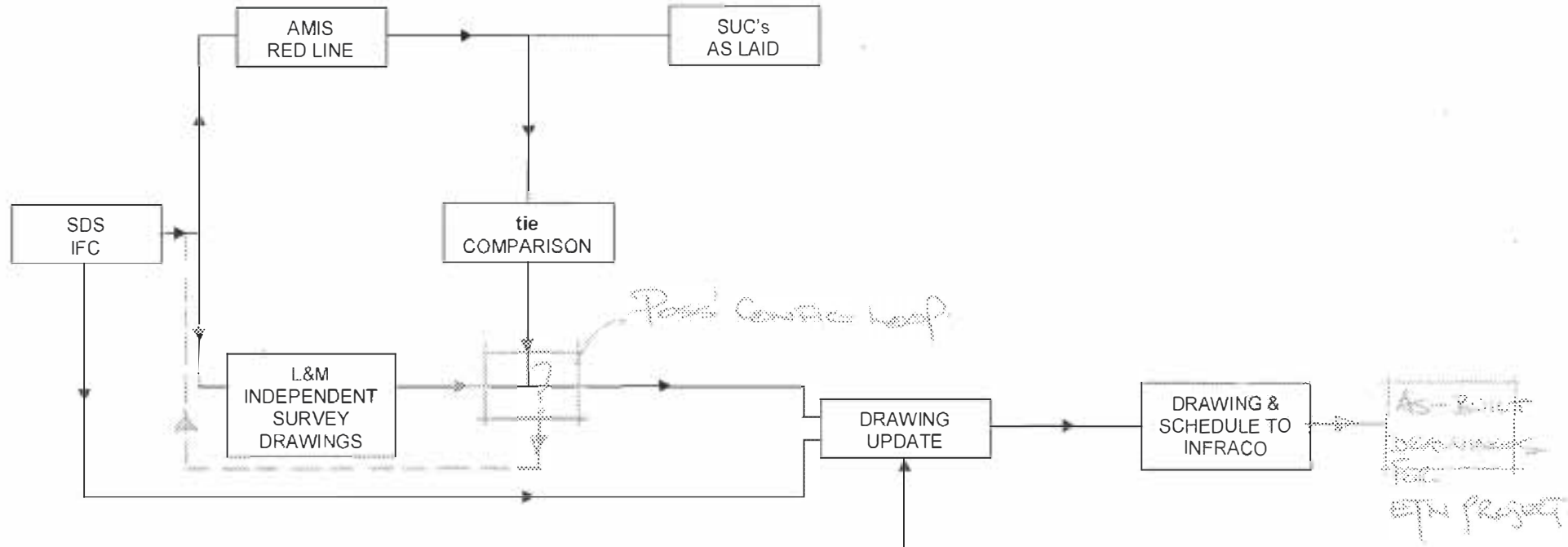
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APP B - tie original



APP B1 - Advice from SDS:



THIS INCLUDES COMPLETED DIVERSIONS
 UTILITIES NOT MOVED
 CHANGES TO THE DKE
 UPDATES ON DESIGN CHANGES
 RESULTS FROM TQs

As-Built/CSO checks with Final Infrastructure Designs

APPENDIX C

SCHEDULE PART 3

SDS RETAINED SCOPE OF SERVICES FOR TIE

Utilities Diversions

1. The SDS Provider shall extend the duration of their provision of technical and specialist assistance to tie with the management of the advanced utilities diversion programme being carried out under the Multi Utilities Diversion Framework Agreement.

This work shall be carried out on a time and expense basis in accordance with the table of rates (as **Appendix C**) and shall include:

- (a) assessing the need for and acquiring relevant data relating to the presence and location of all buried and above ground utility services;
 - (b) agreeing the need for and extent of diversions;
 - (c) undertaking critical design and developing a strategy for all utilities diversions to minimise diversion requirements and out-turn costs;
 - (d) preparing C4 cost schedules;
 - (e) carry out design re-work/modifications/additional diversion designs on an as required basis to deal with unidentified services in a timely manner to avoid or minimise disruption to the ongoing programme of works;
 - (f) Provided adequate notice and information (objective of visit, identification/clarification of problem etc) is received from tie, provide appropriate on-site attendance on an as-required basis;
 - (g) Provided adequate notice and information (Previous Minutes, Agenda etc) is provided by tie attendance at meetings at appropriate seniority on an as-required basis;
 - (h) The timely production of utilities designs that are complete in all respects including input from statutory utilities, and fully and finally checked by the relevant utility and coordinated by PB prior to issue to the contractor under the MUDFA Contract
2. Parsons Brinckerhoff. shall provide all technical support (on and off site) required to address any utilities design issues arising from the works under the MUDFA Contract and including resolution by Parsons Brinckerhoff of all technical queries arising from use by the contractor under the MUDFA Contract of Parsons Brinckerhoff design in a proactive manner to minimise

disruption and delays to the progress of the works under the MUDFA Contract and the Edinburgh Tram Network installation works (The Infraco Works).

This work will be carried out on a time and expense basis in accordance with the table of rates (as **Appendix C**).

APPENDIX C

The table of rates for Retained Scope of Services for tie and the provision of technical and specialist services for utilities

TABLE OF RATES FOR RETAINED SCOPE OF SERVICES		
Reference	Role	Hourly Rate
GD	Graduate Designer	£55.00
SD	Senior Designer	£78.00
PD	Principal Designer	£95.00
CT	CAD Technician	£38.00
ST	Senior CAD Technician	£49.00
TS	Technical Support	£38.00

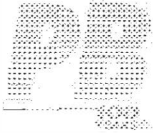
.....
 Director/Authorised Signatory
tie LIMITED

.....
 Director/Authorised Signatory
BILFINGER BERGER UK LIMITED

.....
 Director/Authorised Signatory
PARSONS BRINCKERHOFF LIMITED

.....
 Director/Authorised Signatory
SIEMENS PLC

APPENDIX D



Parsons
Brinckerhoff

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Our Ref: ULE90130-SW-LET-00725

30th July 2007

tie Limited
CityPoint, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Tony Glazebrook

Dear Tony

Gogar Depot – Possible Adjustments

I refer to our meeting on the 24th July 2007 and due to EARL the discussions on the possible changes tie require within the Gogar Depot as the result of the demise of EARL.

During the meeting on Tuesday 24th July 2007, chaired by Lindsay Murphy, SDS agreed to advise you of the costs of the work necessary for SDS to carry out a study and review the moving of the depot northwards to the maximum towards the LOD/EARL boundary.

tie requirements being to –

- Seek to remove sections of the present A8 retaining wall and replace with more simple structures and at the same time provide additional space for Utility Diversion.
- Move the depot footprint to the North utilising as much of the Tram LOD's as are now available following the demise of EARL.
- Review the associated Trackwork layout, configuration of points and crossings etc to provide the same functionality as at present.
- Review the OLE, Roads, Bridges and Depot access accordingly.

Our price for this work, which we believe will take three weeks from receipt of your instructions to proceed, is £27,435.00.

SDS proposes to utilise the following disciplines in what they understand to be urgently required works:

- Architectural
- Trackwork
- Civils
- Structural
- Geotech
- OLE
- Roads

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Newcastle upon Tyne NE5 7YD

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It was agreed at the meeting that *the* would confirm and advise SDS of space required for the proposed utilities/services at their interface with the A8 to enable SDS to ensure that their feasibility review and depot 'adjustment' accommodates this requirement.

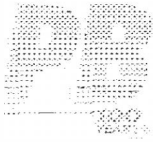
Subject to the outcome of this study the implications to the detail design of the Depot will be subject of a future submission however, SDS are pleased to advise that the Detail Design of the Depot Building itself should not be influenced by this process should *the* wish to proceed with this study.

Yours sincerely



Alan Dolan
Parsons Brinckerhoff

cc. Jason Chandler
Jonathan Bloe
SDM's
Kim Dorrington
Tom Kelly
Bruce Ennion



Parsons
Brinckerhoff

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Our Ref: ULE00130-SW-LET-00846

04 December 2007

tie Limited
CityPoint, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Damian Sharp

Dear Damian

MUDFA As-Built Information to SDS

As you are aware, MUDFA construction has completed work outwith the remit of solely moving utilities, including the removal of trees. As this type of information is pertinent to the on-going scope of works and approvals that SDS are undertaking as part of the infrastructure design, it is imperative that SDS have foresight of these elements, as CEC will require these details on the SDS drawings in order to consider the SDS design for approvals.

May we kindly request tie to transmit the as-built drawings and any other pertinent information from the MUDFA works to SDS.

Any changes will be treated as a variation in accordance with Clause 15.

Yours sincerely,


Jason Chandler
Parsons Brinckerhoff

cc.
Steve Reynolds
Alan Dolan
David Gibb
SDMs
Kevin Perry

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Our Ref: ULE90130-01-LET-00885

20th November 2008

tie Limited
CityPoint, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Graeme Barclay

Dear Graeme

Blank Plates for As-Built Mark Up Section 1C

Please find enclosed as requested a digital file providing Section 1C backgrounds in DWG format such that the As-Built Utilities may be marked on and be provided within the MUDFA Health & Safety File. This delivery is in response to CR39.

Yours sincerely



Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

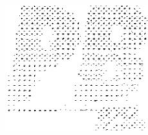
cc. Damian Sharp, tie
Jim Johnston, tie
Tom Kelly

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Our Ref: ULE90190-06-LET-60119

10th November 2008

We Limited
CityPoint, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Damian Sharp

Dear Damian

Gogar Depot - 600mm Scottish Water Main

Please find enclosed a copy of the Site Inspection Sheet dated 31/10/08 at Gogar Depot. This inspection was requested by We, due to the failure of the MUDFA Contractor to achieve a pipe work pressure test of 20 Bar on the 800mm water main.

It is obvious from the report that a portion of the pipe work has been installed with incorrect gasket jointing and remedial work (including re-design to the Thrust Blocks installed works is to be assessed/executed.

May we kindly request the following information :-

1. is there (for official distribution) a tie report on the findings of the failed pipe work installation?
2. Is there written confirmation from the pipe work supplier that the incorrect gaskets have been used/delivered at the Gogar Depot?
3. Confirmation that the present additional assistance being provided by SDS to We in this matter will be on a cost plus basis in accordance with our Novation Agreement Appendix Part 6.

SDS confirm our utmost commitment in the expeditious delivery of any design and/or advice in this matter.

Yours sincerely

Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

cc. Steve Reynolds
J. Chandler
T. Kelly
C. Reid
S. Ney

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77036-2000, USA

CEC01119469_0026

*Edinburgh Tram
Construction Support
Site Visit – Inspections*

Site: Gogar Depot 800mm Water Main on 23rd October 2008

Date: 31/10/08

Weather: rain, wet – Muddy site conditions

PS Personnel: A. Dolan

Purpose: Inspect 800mm water main at Gogar Depot

Comments:

SDS were requested to visit Gogar Depot Site as the installed 800mm Water Main was failing under water test. The site visit was requested by Mr. Andy Scott (t/e) on Wednesday 22nd October 2008.

A. Dolan walked the site and inspected the full installation (only partial pipe work inspection as the main was covered from TB7 to TB22). One Bypass was failing under pressure and one main Valve at TB6 (duplicate across Tram Route) was failing at the flange gasket. He advised that a successful test of 19 bar had been made between valves at TB3 and TB5 but failure was in joints between TB6 and TB21 had been ongoing for some 2-3 weeks of testing.

Whilst the site inspection was being executed a store materials check was being carried out by MUDFA/St Gobain. At this store check, it was established that incorrect gasket joints were on site (delivered by St Gobain and had been installed).

The SDS site inspection was cancelled following this information. SDS await formal notification from t/e regarding the incorrect gaskets being used on the 800mm pipe work at the Gogar Depot.

Information/Reports Requested:

Photos:

CC N. Baldwin (PS)
T. Kelly (PB)
C. Reid (PS)
J. Ch (PB)



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Our Ref: ULE90130-06-LET-00045

21st December 2007

tie

City Point, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Damian Sharp

Dear Damian,

Depot Access Road Design

As per the meeting with SDS, **tie** and BAA on Tuesday 18/12/07 (see minutes ULE90130-07-MIN-00029) and discussions with CEC (Alan Bowen) on Wednesday 19/12/07, please find attached a sketch of the proposed cross section of the Depot Access Road.

SDS proposes to future proof (i.e. not preclude) a 30mph dual carriageway which could be constructed within the Limits of Deviation, including provision for widening (by others) of the Depot Access Road Bridge and the Road itself. The bridge and road will not be built as a dual carriageway for Tram works.

The sketch attached shows the proposed full 30mph dual carriageway cross section which can be built in the future by others. The sketch also shows what will be built by tram at the bridge and at the access road. The proposed northern footpath (3m) will only be constructed up to the hammerhead. Beyond this point, there will be a single footpath leading into the Depot area (on the southern side).

Please confirm that SDS's understanding of the design constraints and requirements are as above. SDS will progress the design on this basis.

Yours Sincerely



Scott Ney
Parsons Brinckerhoff

Attachment – sketch page 2

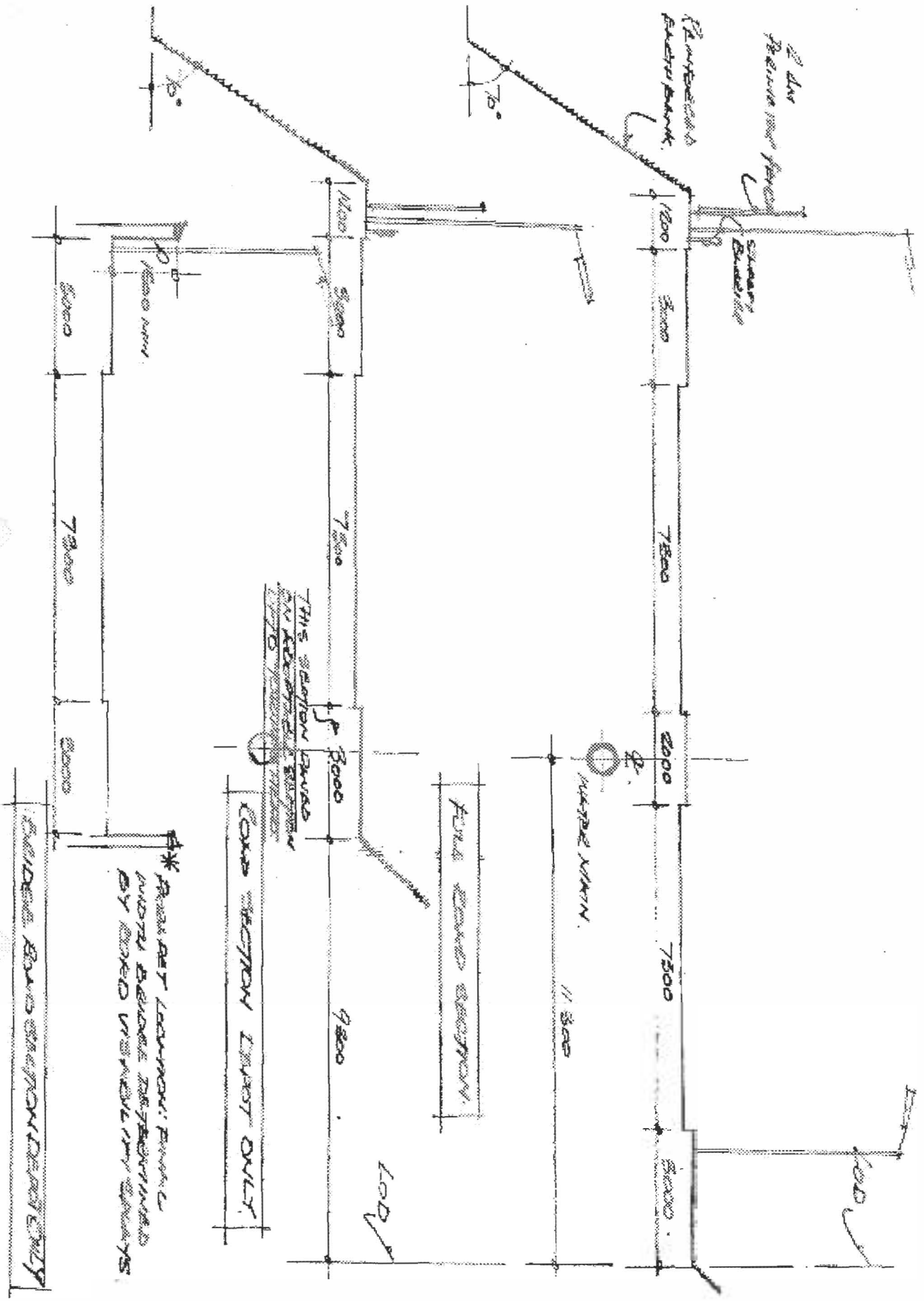
cc:
CEC – Alan Bowen
Kate Shudall
Alan Dolan
Ian Brown
Andy Groves
Kevin Pery

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Carderoy, Ian White Associates
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Doc Ref: ULE90130-SW-LET-01155

15th August 2008

tie Limited
CityPoint, 1st Floor
60 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Graeme Barclay

Dear Graeme

MUDFA As-Built Drawings

We refer to your letter Ref DEL.MUDFA.9881 dated 8 August 2008 and agree with part of the second sentence of this letter. This being:

"Carillion have a clear obligation to provide as-built drawings".

We do not agree the above statement has anything to do with extracts from the SDS Contract (as the tie letter suggests, see second sentence – 4th line). This is contractually incorrect and not factual. Please kindly, by return, withdraw the letter or acknowledge that tie have made a contractual mistake within the letter.

Secondly, SDS letter ULE90130-SW-LET-01129 dated 28 July 2008 (second paragraph) advises tie that the MUDFA Agreement Clause 3.22 clearly states MUDFA are responsible for the provision of As-built information. For avoidance of doubt, the MUDFA Agreement Clause 3.22 states:

"The MUDFA Contractor shall prepare and supply all necessary as built drawings and manuals in respect of the MUDFA works."

This Clause is not limited. It is categorical: "all necessary as-built drawings".

The author of this letter was individually instrumental for the inclusion of Clause 3.22 within the MUDFA Agreement for the below chronological reasons:

1. SDS identified to tie/TSS in January 2006 that the As-built drawing management situation was missing from the SDS Clauses 3.2.1 and 3.2.2 of the Agreement between tie and SDS. Note that Schedule One – Scope of Services of the tie/SDS Agreement is to:

"Provide assistance to tie with the management of an advanced utilities diversion programme."

Nowhere does the "management" scope include the preparation of As-built drawings for the MUDFA Utility works. This was accepted by tie/TSS in January 2006 and therefore included in the MUDFA Agreement. Hence the inclusion of Clause 3.22 of the MUDFA Agreement identified as "As-built drawings".

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The above advice and due-diligence assistance was afforded to ~~us~~ by SDS whilst executing the SDS obligations under Clause 3.2.1 (bullet point 6) of the ~~us~~/SDS Agreement, which states that SDS shall assist with the:

"preparation of documentation (excluding the contract terms) associated with the proposal to appoint a single service agreement with a specialist contractor to carry out advanced utility diversions".

2. Not only did the author of this letter advise ~~us~~ in January 2006 that the SDS utilities management scope failed to identify any management or provision of As-built drawings, he also advised that it was not practical or safe for the SDS Provider to prepare such intermediate material. The only contractor qualified to record, co-ordinate and safely prepare As-built drawings would be the Contractor executing the utility work and the provider of the MUDFA Utilities Health and Safety File (in accordance with CDM regulations and recommendations). Again this advice was accepted by ~~us~~/TSS. Hence the inclusion of Clause 3.22 of the MUDFA Agreement identified as "As-built drawings".
3. During interviews with prospective MUDFA Contractors in 2007, each Contractor was questioned by ~~us~~/TSS/SDS and the minutes of those interviews will record that SDS did question each Contractor regarding their obligations with reference to the recording of installed works and As-built drawings. Both Contractors at the final interview identified that they recognised the importance of the recording of installed works and had included for As-built drawings within their bids. Again, at these interviews there was no limit placed on the provision of services to clause 3.22 of the MUDFA Agreement which states:

"The MUDFA Contractor shall prepare all necessary as-built drawings".

This is total, categorical and not limited to simple red line drawings of the minimum standard which may satisfy a particular SUC.

4. The requirements set out in Clause 3.2.1 and 3.2.2 of Schedule One of the Agreement between ~~us~~ and SDS are also categorical. These requirements relate to the management of services sought by ~~us~~ to support the utilities diversion programme. These requirements are explicit in defining scope, and the scope does not include the production of As-built drawings.

These requirements are entirely divorced from the services sought by ~~us~~ in relation to the design of the infrastructure works, which are set out separately in Clauses 2.1 through 2.7 of Schedule One of the Agreement between ~~us~~ and SDS.

With the above in mind and the review of the out of context definitions and interpretations of ~~us~~ letter Ref DEL.MUDFA.9881 dated 8 August 2008 (paragraphs 2, 3 and 4), SDS categorically refute any responsibility to prepare utility As-built drawings.

When considering all of the above, any intention to contra-charge SDS for utility As-built drawings, carried out by others, is contrary to the contract between us and seen to be invalid, unlawful and unenforceable. Under Clause 36, SDS hereby give Notice of our intention to settle this difference between our two parties and give written notice to ~~us~~ that SDS invoke Clause 28.2 and Clause 28.10 of the Agreement between us.

SDS request that no contra-charge deductions be made against SDS and that this "Dispute" in the first instance, be brought to the Internal Resolution Forum in accordance with the Agreement between us in the hope that SDS may avert the use and protection of Clause 28.3 of said Agreement.




In accordance with Clause 28.10.1, SDS request a meeting to be convened within three business days of written notification being received by the of this correspondence (i.e. three business days from 18th August 2008) such that we may address this issue following the "Internal Resolution Procedure".

For the avoidance of doubt and in accordance of the above mentioned clause (28.10.1), SDS wishes to initiate the Internal Resolution Procedure immediately to bring this issue to conclusion and close.

Yours sincerely



 Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

cc. Steve Reynolds
Jason Chandler
SDM's
Bruce Ennion
David Gibb

Danlan Sharp,
Steven Bell,
Susan Clarke,
Dennis Murray,
Frank McFadden,

Our Ref: ULE90130-SW-LET-01175

28th August 2008

tie Limited
CityPoint, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Graeme Barclay

Dear Graeme

MUDFA As-Built Drawings

At the SDS/ tie Utilities Technical Meeting on Tuesday 26th August 2008, Mr Jim Johnston tasked me to clarify the BSC requirement on utility As-Built Drawings for the works presently being carried out by MUDFA. We tabled the request at the weekly BSC/ PB Technical Meeting on Wednesday 27th August 2008.

Please find enclosed a copy of the response from Mr Colin Brady, Project Director for BSC. The requirement is clear that the present standard of 'Red Line' As-Built Drawings is not sufficient for the needs of accurate information to BSC.

It is essential that the MUDFA As-Built drawings show the utilities by co-ordinate and datum, such that the safety risk of ongoing construction work by BSC is minimised and an accurate knowledge of exact service location is received from MUDFA.

If you require any further information or clarification, BSC/ PB would be happy to discuss this matter in detail with Mr J. Johnston at the next BSC/ PB Technical Meeting on Wednesday 2nd September 2008 at 1200 hrs. BSC/ PB could assist with the exact information to be provided on the As-builts if required.

SDS hope we have executed the task sufficiently to a conclusion, but if further information is required please do not hesitate to contact Alan Dolan in the first instance.

Yours sincerely

Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

cc. Colin Brady, BSC
Robert Kraemer, BSC
Damian Sharp, tie
Tom Kelly

Stefan Rotthaus, BSC
Jim Johnston, tie
F. McFadden, tie
Chris Reid



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Our Ref: ULE90130-01-LET-00850

28th October 2008

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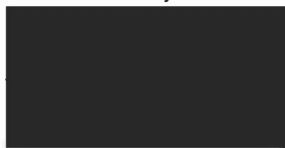
Attention: Graeme Barclay

Dear Graeme

Blank Plates for As-Built Mark Up Section 1B

Please find enclosed as requested a digital file providing Section 1B Plates 22-26 backgrounds in DWG format such that the As-Built Utilities may be marked on and be provided within the MUDFA Health & Safety File. This delivery is in response to CR39.

Yours sincerely



Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

cc. Damian Sharp, tie
Jim Johnston, tie
Tom Kelly

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Our Ref: ULE90130-SW-LET-01234

10th October 2008

CityPoint Limited
CityPoint, 1st Floor
65 Haymarket Terrace
Edinburgh
EH12 5HD

Attention: Graeme Barclay

Dear Graeme

Blank Plates for As-Built Mark Up

Please find enclosed as requested a digital file providing Line 2 backgrounds in DWG format such that the As-Built Utilities may be marked on and be provided within the MUDFA Health & Safety File. This delivery is in response to CR39.

Yours sincerely


Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

cc. Damian Sharp, tie
Jim Johnston, tie
Tom Kelly



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Our Ref: ULE90130-06-LET-00118

10th November 2008

the Limited
CityPoint, 1st Floor
66 Haymarket Terrace
Edinburgh
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Attention: Damian Shaw

Dear Damian

Gogar Depot 800mm Scottish Water Main

Please find enclosed the copy of the email dated 30th October 2008 from Mr. Andy Scott (the) regarding the additional services the have requested SDS to perform. the have requested SDS assistance to the to economically prepare the relevant design information to break out and re-install the 800mm water main at Gogar Depot.

Due to the criticality of the 800mm water main at Gogar Depot, SDS confirm that we have mobilised Mr. N. Baldwin, (DTL for pipe work design) Mr. S. Pallant (structures designer for Thrust Block break-out evaluation) and Mr. J. Brown (Infrastructure Co-ordination for Gogar Depot) to visit the site/project week commencing 27/10/08 and 03/11/08 in order to advise and report to the whether the thrust blocks may be re-used after pipe work break-out. If this is not possible SDS will advise the most efficient and expeditious design/construction options the may wish to consider for the new/corrective work on the failed 800mm portion of the water main.

In order that we may assist the efficiently SDS kindly request the following:

1. A full site arrangement As built of the installed 800mm water main at Gogar Depot. The drawing must reflect the pipe work sections which have been correctly installed (with the correct St. Gobain gaskets) and the sections which have failed in testing (i.e. pipe work installed with the incorrect St. Gobain gaskets).
2. Pipe work test certificates for the sections of pipe work which have successfully achieved a 20 Bar pressure test.
3. A full site arrangement drawing confirming "gunning-out" of Thrust Blocks. (This to be inclusive of any photographs the the/MUDFA Team may have of each "gunned-out" Thrust Block).
4. Confirmation of any failed pipe work which has been cut and extracted from the 800mm water main. (This to be inclusive of any photograph of the cut water main that the the/MUDFA Team may have).
5. Confirmation of the the/MUDFA Team repair/execution plan (which end of the 800mm water main will the/MUDFA commence the repairs from?).
6. Programmed (including re-design/approvals period) of the repair schedule for the 800mm water main.
7. De-watering details of the Gogar Depot. This will be the third written request to the the/MUDFA Team for this information. This is respectfully requested as an urgency.

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SDS will record (by timesheet) the work carried out in the assistance to tie for all survey work, site visits, design, reporting, letter writing, workshops, CAD work etc.

SDS hope the above is satisfactory and can confirm that review work has already commenced by our design team and we further confirm site visits by Mr. N. Baldwin and Mr. S. Pallet week commencing 03/11/08.

It is assumed that some "off the wall thinking" and ideas are required from SDS to ensure this pipe work/jointing failure is repaired/corrected as soon as possible. This being required in an attempt to reduce any contract programme delay the pipe work re-installation will instil on the Master Contract Schedule.

SDS confirm again our utmost commitment to tie to expeditiously carry out any re-design of pipe work and/or Thrust Block detailing, as soon as is practically possible in order to mitigate delay to the tie Master Construction Schedule caused by the failed 800mm SW water main.

In the meantime may we kindly request from tie a Change Instruction for the additional services SDS have already performed and for the tie request to assist in Thrust Block Detailing for the re-design of the failed SW main at Gogar.

Yours sincerely



Alan Dolan
Deputy Project Manager
Parsons Brinckerhoff

cc. Steve Reynolds
J. Chandler
T. Kelly
C. Field
S. Ney
K. Shudell