

Tie

System Design Services Contract (SDS)

Tie Claim to SDS

Document Number: [to be inserted]

Document Version: Aug 07draft

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TIE CLAIM against SDS

1. Background

The procurement of the System Design Services Provider commenced in March 2005 with Bids submitted by 3 consortia in May 2005. The System Design Services Provider's letter of appointment was issued to Parsons Brinkerhoff on the 6th September 2005. The System Design Services (SDS) Agreement was signed between **tie** and Parsons Brinkerhoff on the 19th September 2005.

The procurement background details are as follows:

- The ITN was issued to three Bidding Consortia, Atkins Rail, Mott MacDonald and Parsons Brinkerhoff on 17th March 2005.
- Meetings were held between **tie** and each of the Bidders during the Tender Period and a data room was available to all the Bidders during this period.
- Competitive Bids were received from the bidders on 13th May 2005
- Following receipt of the Bids, there was an evaluation and clarification period between **tie** and each of the bidders.
- During this period, **tie** and SDS met and exchanged correspondence confirming the meeting discussions.
- SDS Contract amendments referenced in SDS letters dated 8th June 2005, 29th June 2005, 10th August 2005, 2 September 2005
- **Tie** Contract Amendments, referenced in **tie** letters dated 2nd June 2005 (reference 40.02.03.01.02 IK/CN), 2nd June letter (reference 40.02.03.01.02/ IK/HEJ), 3rd August 2005 (40.02.03.01.02 IK/GH), 1st September 2005 (reference 40.02.03.014.02 PB/GH/IK/CN)
- Letter of Appointment to SDS reference (40.02.03.02 GH/MH/CN) dated 6th September 2005
- The letter of appointment (ref 40.02.03.02 GH/MH/CN) dated 6th September
- SDS commenced mobilisation, at their risk, from 6th September 2005, as indicated in the Gerry Henderson / Mike Jenkins email of 7th September 2005. Apparently SDS also had an issue with the date of the appointment letter and wanted it changed to the date the SDS agreement was signed, the 19th September 2005. However, Gerry Henderson would not agree to this.

- The SDS Agreement was signed on the 19th September 2005. The contract refers to the appointment letter dated 6th September. SDS should have signed the contract on the 6th September 2005, however there was an issue with the parent company guarantee between Parsons Brinkerhoff UK and Parsons Brinkerhoff (US) and this caused a two week delay, before SDS signed the contract.

The signed SDS agreement included three programmes all dated 12th May 2005, one for Line 1, one for Line 2 and one for Line 2 and 3 combined. The start dates indicated in these programmes were the 1st July 2005, which was approximately 3 months earlier than the actual start date of 5th October 2005 or from the date the contract was signed of 19th September 2005.

The contract programme dated 12th May 2005 10.42 for the Lines One and Two – System Design Services – Outline Design Programme had a start date of 1st July 2005 and a completion date of 27th October 2007. It has been assumed that tie/SDS agreed the durations and sequence set out in this programme and that the dates all shifted by three months. [*TBC by Ian Kendal / Jim Cahill or evidence located*]. The start date of 19th September 2005 with 2 weeks mobilisation period is assumed for this document. [Refer to Table 1 below]

The qualifications to the formal offer set out in the contract definitions, SDS letters dated 13th May 2005, 8th June 2005, 29th June 2005, 10th August 2005 and 2nd September 2005 do not indicate or reference the programme. These are set out in Appendix 1 and the key qualifications refer to:

- 13th May 2005 -
- 8th June 2005 -
- 29th June 2005 -
- 10th August 2005 -
- 2nd September 2005 -
- [more background to be provided by tie / DLA]

2. Programme

SDS signed the SDS Agreement approximately 3 months later than that planned in the original invitation to tender, due to prolongation of the SDS procurement stage. The Analysis of Contract Programme dated 12th May 2005 is set out in Table 1 below.

Table 1: Analysis of Milestone Dates in the 3 Contract Programmes dated 12th May 2005

Line / Sector	Contract Programme Planned Start¹	Contract Programme Planned Finish	Actual Contract Start +3mths	Revised Planned Finish +3mths
Overall ETN line 1	1.7.05	28.02.07	1.10.05	28.5.07
Overall ETN line 2	1.7.05	28.02.07	1.10.05	28.5.07
Overall ETN line 1& 2	1.7.05	25.10.07	1.10.05	28.1.08

The breakdown to the key dates sets out in the contract programme are set out in **Table 2 below**:

¹ The Programme indicates 27.4.05 as a one off date for Project Management and contract award on 1.7.05

Table 2: Detailed Analysis of Key Dates in the Contract Programmes dated 12th May 2005

Overall ETN Line 1 & 2 Programme	Contract Programme Planned Start²	Contract Programme Planned Finish	Actual Contract Start +3mths	Revised Planned Finish +3mths	Actual SDS Finish Delays
RDP (2 months)	1.7.05	30.8.05	1.10.05	30.11.05	1.10.05 to 22.12.05 Resubmit Feb / Mar 2006 Delay 1+2=3mths
RDP approvals (1 month)	1.9.05	31.10.05	30.11.05	22.12.05	January 2006 + March + April 2006 (x3 iterations) Delay :1 mth
PD (2 months)	2.12.05	29.1.06	1.1.06	28.2.06	1.4.06 to 30.6.06; Part submission 30.6.06; SDS resubmit; Sept + Oct 2006; Delay: 1+2=3mths
PD approvals (1 month)	29.1.06	28.2.06	28.2.06	30.3.06	30.6.06 to 28.7.06; +actual Aug to Oct 06 Tie Delay: 2=3mths
DD (3 months)	1.12.05	28.2.06	1.2.06	30.5.06	1.10.06 to June 07 Delay: + 6 months * NB see critical issues
DD approvals (1 month)	28.2.06	30.3.06	30.5.06	30.6.06	30.7.07 to 30.9.07

SDS started to resource the ETN Project with their "Tiger Team" consisting of (Alan Dolan, David Simmons, Chris Mason, Jes Hanson, David Hutchison, Andy Dixon, Nigel Barber, Sandy Elder, Rick Finc *[insert other names]* from 7th September 2005. It took SDS much longer than originally anticipated to reach the resource level required within the originally planned and agreed timescales for mobilisation for the ETN.

² The Programme indicates 27.4.05 as a one off date for Project Management and contract award on 1.7.05

The contract programmes included planned hours included in the contract programme, based on Line 1, Line 2, and Line 1 and line 2 combined are as follows:

- **Line 1:** planned hours 204,375; start date of 27th April 2005 and a completion date of 28th February 2007
- **Line 2:** planned hours 106,275; start date of 27th April 2005 and a completion date of 28th February 2007
- **Line 1 and 2 combined:** planned 269,775; start date 27th April 2005 and a completion date of 25th October 2007

The contract programme (Line 1 and 2 combined) included for 269,775 hours of work to complete the combined Line 1 and 2 works, however the individual amounts were 204,375 for Line 1 and 106,275 for Line 2 works. SDS therefore included a combined Line 1 and 2 discount of 40,875 hours in their offer, approximately -15%. This is a key factor of SDS's bidding strategy and at an approximate value of £60/hour this equates to a value of £2.45m.

The RDP milestone completion certificate was issued at the end of January 2007, on satisfactory completion of the Trackform Technology Review Document. The majority of the RDP phase was completed at the end of April 2006.

3. Resources

The contract programmes included planned hours, based on Line 1, Line 2, and Line 1 and line 2 combined programmes. The total hours included in the SDS bid were as follows:

- **Line 1:** planned hours 204,375; start date of 27th April 2005 and a completion date of 28th February 2007
- **Line 2:** planned hours 106,275; start date of 27th April 2005 and a completion date of 28th February 2007
- **Line 1 and 2 combined:** planned 269,775; start date 27th April 2005 and a completion date of 25th October 2007

The contract programme for Line 1 and Line 2 combined, included for 269,775 hours of work to complete the System Design Services. The individual hours for Line 1 were 204,375 and for Line 2 works were 106,275. SDS therefore, included a combined Line 1 and Line 2, discount of 40,875 hours in their offer, which equates to approximately 15% discount.

[This is a key factor; at an approximate value of £60/hour this equates to a value of £2.45m]

The estimated resources planned by SDS are considerably different to the actual resources deployed throughout the SDS contract to date. The Original SDS Resource Management Team Histogram and Cost Breakdown are included in Appendix 2.

It is noted from this histogram that the works commence in September 2005 and continue until June 2010, albeit the peaks were planned to arise from December 2005 to December 2006 at a resource capacity level of approximately 7,000 hours per month. At least two major computational errors have been found in this SDS spreadsheet and therefore the totals indicated are less than they should be, which must impact on the value and the way that SDS established their bid for the contract.

The analysis of the actual SDS hours booked to the SDS contract is considerably higher and for a longer duration, thus further impacting on the value of work done. The timesheets and actual SDS resource levels (cumulative hours) for this period were eventually received from SDS in November 2006. The detailed analysis of these timesheets and earned hours is included in appendix 3 [insert resource level and timescales] and a summary is provided in Table 2.

Table 2: Analysis of Contract Programmes Line 1 and Line 2 Combined Planned with Actual Hours

Phase	Planned Hours	Actual Hours
RDP	53,213	18,309
PD	51,975	185,347
DD	164,588	66,149 (WIP total to 26.10.06)
Total Hours	269,775	Total to 26.10.07 269,805

4. Contract Details

4.1. Mobilisation Period

After signing the Contract on the 19th September 2005, SDS had an initial mobilisation period to set up their Project offices at PB Glasgow office and Halcrow Edinburgh office and resource the Project.

The duration of this mobilisation period is not set out in the contract programme, however I understand that the period of approximately 2 weeks was agreed between the parties tie / SDS. SDS were slow to resource the Project and did not manage to provide the planned level of resources within the planned timescales, indicated in their resource schedule, which was incorporated into the SDS contract. Mobilisation took much longer than originally expected and this critical path time was never recovered.

[Jim to expand on this section]

At the start of the SDS contract, there were three separate and distinct work-streams ongoing within tie as follows:

- Parliamentary Tram Bill Team (tie, D&W and Faber Mausell and Mott Macdonald)
- Design Team Support for Parliamentary Bill (Faber Maunsell and Mott Macdonald and Tie)
- Procurement and Delivery of SDS and DPOFA (tie, DLA and TSS)

Parliamentary Tram Bills

The Tram Bills were completed in December 2005 and received Royal Assent in April 2006. Design Information relating to the development of the Tram Acts and removal of objectors comments were facilitated by tie's consultants Faber Motts. Any Design development information was supposed to be fed through to the tie / SDS procurement and delivery teams to support the RDP phase.

[Trudi to expand on this]

Design Team Support for Parliamentary Bill (Faber Mausell and Mott MacDonald)

[Gavin to expand on this section]

4.2. Requirements Definition Phase

An initial start up meeting was held on 5th October 2005 between tie, their advisers and SDS. At this meeting SDS were provided with re-issue of the relevant documents issued during the tender stage along with some additional documents. [tie issued 13 disks between Oct and Dec 2005] . After SDS were appointed tie collated all the information was issued to SDS during the Tender stage along with new information and issued it to SDS on a number of discs. The information issued and dates of issue are as follows:

- (see Daniels Files)

SDS were then apparently left to review the information and assess the relevant and non relevant information was irrelevant to the development of the SDS design. Tie facilitated a workshop in [November/ December 2005] to assist in this process.

SDS delivered the initial Requirements Definition Phase (RDP) documents (see attached RDP schedule), just before Christmas 2005 in December 2005, which was 1 month later than planned. Forty seven RDP Documents were submitted by SDS and tie, TSS and Transdev reviewed these in January 2006. However the documents were considered to be generic and not Project Specific, the Records of Review were issued to SDS on 19th January 2006 and out of the 47 Documents, 1 was accepted, 14 were accepted with comments and 34 were rejected for SDS to resubmit. The quality of the RDP documents submitted by SDS were considered to be unacceptable and below the required standard. SDS had to revise the documents from 20th January 2006 and resubmit these to tie for a further review. Some of the documents required 3 submissions and three records of review. This caused a further delay to the Project of 2 months for the resubmissions of this SDS Documents and the tie, tss and Transdev second and third review of these documents.

[overall delay at RDP stage 3 months].

[review Meeting Minutes and locate ROR's for RDP stage – Howard to locate documents]

The Requirements Definition Period (RDP) was programmed to commence on the 1st July 2005, the same day the contract was due to commence, for certain sections of the works with a planned duration of 2 months. Based on a three month delay to the start of the contract, the RDP phase should have started on the 1st October 2005. Refer to table 1 for dates and analysis of the overall contract programme and refer to table 2 for dates and analysis of the key dates for each of the phases of the contract programme. Since the contract and actual start date were 3 months later than the planned dates stated in the programme then I have assumed the programme logic, sequence and durations were agreed and that three months was agreed to be added to these contract dates and that there were no other changes to sequence and or any other amendments to the programme. The overall SDS contract key dates are indicated in Table 1 below.

At the time SDS commenced works, the Tram Line 1 and Line 2 draft Bills were proceeding through Parliament. The Tram Line 1 and Line 2 bills were concluded in [insert date] and received Royal Assent in [insert date].

Table 3: Analysis of Contract Programme for RDP Phase and by Sector

RDP / Sector	Planned Start	Planned Finish	Actual Start ³	Actual Finish
1A	1.7.05	30.8.05	1.10.05	30.11.05
1B	1.7.05	30.8.05	1.10.05	30.11.05
1C	1.7.05	30.8.05	1.10.05	30.11.05
1D	1.7.05	30.8.05	1.10.05	30.11.05
2A	1.7.05	30.8.05	1.10.05	30.11.05
3A	3.10.05	30.11.05	3.1.06	28.2.06
3B	3.10.05	30.11.05	3.1.06	28.2.06
4A & B – Deleted Granton to Newhaven	31.05.05	28.7.05	1.10.05	30.11.05 ⁴
5A	3.8.05	2.10.05	3.11.05	2.1.06
5B	1.9.05	31.10.05	1.12.05	31.1.06
5C	1.9.05	31.10.05	1.12.05	31.1.06
6 – Depot ⁵				
7A	1.9.05	31.10.05	1.12.05	31.1.06
7B – Deleted Gogar to Newbridge	31.5.05	28.7.05	1.10.05	30.11.05 ⁶

The Liverpool Project was stopped in November 2005 and the team from that Project transferred to Edinburgh Tram. The timesheets and resource levels for this period were eventually received from SDS in November 2006. The detailed analysis of these timesheets and earned hours is included in appendix [xx] [insert resource level and timescales].

RDP Phase Notes 1: Line 1 and Line 2 changed to Line 1a and 1b in January 2006 with Granton to Leith loop deleted and Gogarburn to Newbridge branch deleted in January 2006. The contract programme set out the RDP period as 1.7.05 to 30.11.05. The actual period for RDP was 1.10.05 to 28.2.06. The key dates are set out in Table 1 above and in the detailed Contract Programme in Appendix 1.

RDP Phase Note 2: The RDP milestone completion certificate was issued at the end of January 2007, on satisfactory completion of the Trackform Technology Review Document. The majority of the RDP phase was completed at the end of April 2006.

³ +3 months to the planned programme

⁴ +3months is still 6 weeks before the contract was signed, therefore taken to 1st October start date

⁵ No dates indicated for the Depot

⁶ +3months is still 6 weeks before the contract was signed, therefore taken to 1st October start date

4.3. Preliminary Design Phase

The Preliminary design was submitted by SDS on the 30th June 2006. Tie commenced the review of the Preliminary Design in July 2006 and the first Records of Review were issued to SDS from late August 2006 and during September and October 2006.

In November 2006 TSS were commissioned to prepare a Preliminary Design Validation Report to validate the SDS Preliminary Design on behalf of tie. This report was published on [xx] December 2006. A meeting was held with SDS and it was agreed that SDS should prepare a spreadsheet with all the issues identified in the report and timescales for resolution of these issues. SDS agreed to prepare this for 22 Dec 2006 and it was finally received in January 2007. During January and February SDS has been updating documents, drawings and schedules to close out the issues. (See attached spreadsheet). No milestone completion certificates for Preliminary design have been issued to date.

Table 3: Analysis of Contract Programme by Stage and Sector to be updated for PD

PD / Sector	Planned Start	Planned Finish	Actual Start +3mths	Actual Finish +3mths
1A	1.7.05	30.8.05	1.10.05	30.11.05
1B	1.7.05	30.8.05	1.10.05	30.11.05
1C	1.7.05	30.8.05	1.10.05	30.11.05
1D	1.7.05	30.8.05	1.10.05	30.11.05
2A	1.7.05	30.8.05	1.10.05	30.11.05
3A	3.10.05	30.11.05	3.1.06	28.2.06
3B	3.10.05	30.11.05	3.1.06	28.2.06
4A & B – Deleted Granton Sq to Newhaven	31.05.05	28.7.05	1.10.05	30.11.05⁷
5A	3.8.05	2.10.05	3.11.05	2.1.06
5B	1.9.05	31.10.05	1.12.05	31.1.06
5C	1.9.05	31.10.05	1.12.05	31.1.06
6 – Depot				
7A	1.9.05	31.10.05	1.12.05	31.1.06
7B – Deleted Gogar to Newbridge	31.5.05	28.7.05	1.10.05	30.11.05⁸

⁷ +3months is still 6 weeks before the contract was signed, therefore taken to 1st October start date

⁸ +3months is still 6 weeks before the contract was signed, therefore taken to 1st October start date

Relevant Events

1. The first relevant event is SDS delayed the signing of the contract from 6th Sept to 19th September 2005.
2. The second relevant event is that SDS was slow to mobilise and took much longer than planned to complete the RDP phase. 2Two months planned and took about 4 and quality was a further matter of debate between tie and SDS.
3. Third relevant event is that SDS took longer to prepare the RDP phase than planned (2 months) actual 3 to 4 months.
4. Fourth relevant event is Royal assent for the Tram Bills Line 1 and Line 2 in April 2006.
5. Fifth relevant event is the late issue of the Mudfa tender due to delays to the utilities design and surveys.
6. Sixth relevant event is that tie / SDS re-baseline programme in April 2006 due to previous delays to project.
7. Seventh relevant event is tie change management team (IK/ GH/ MH departures) April / May 2006 and regroup and restructure of Project Team and arrival of (WG/AH and co)
8. Eight relevant event is that SDS took longer to prepare the PD phase than planned (two months planned) and they needed 6 months, partly due to prolongation of the RDP phase and the overlap with PD. PD submitted 30th June 2006
9. Ninth relevant event is the surveys programme and the general slippages. Planned completion of Survey March 2006 and still ongoing May 2007.
10. Tenth relevant event is that the Infraco ITN was planned for issue in April 2006 but due to delay to receipt of designs and was actually Six relevant event the charette workshops make their first appearance in May 2006.
11. Relevant event is that tie / tss did not achieve review of the SDS PD within the contracted timescales.
12. Relevant event in Summer of 2006 is the TRO / TTRO process and the lack of progress
13. Relevant Event is the design issues arising from the DAP's and Charettes
14. Relevant Event is the Structures Workshop which was iterative 13th Nov 2006 and in January 2007
15. Relevant event programme re-baselined on 5th December 2006 to which SDS failed to deliver the Utilities detail design.
16. Relevant event is SDS failure to deliver the Utilities detail design to SUC's in accordance with the programme during December and January, resulting in delays to SUC's approvals and delays to AMIS.
17. Relevant event is the critical issues log and the design blockages, first published in February 2007.
18. Relevant event is the reprogramming of Utilities due to changing political objectives from CEC and TS.
19. Relevant event tie changing programme and sequencing
20. Relevant event Infraco Bid issues in and around quality and extent of SDS Designs

4.4. Detail Design Phase

The detail design stage was planned to commence [insert details] and be complete by [insert details] and the actual commenced detail design at the beginning of October 2006, while the preliminary stage was still ongoing, due to the impact of the charettes and the issues quality of the initial preliminary design submission .

Table 2: Analysis of Contract Programmes dated 12th May 2005 per Phase

Phase	Planned Start	Planned Finish	Actual Start +3mths	Actual Finish +3mths
RDP	1.7.05	30.8.05	1.10.05	31.12.05
PD	1.9.05	31.10.05	1.12.05	31.1.06
PD approvals	31.10.05	30.11.05	31.1.06	28.2.06
DD	1.12.05	28.2.06	1.2.06	30.4.06
DD approvals	28.2.06	30.3.06	30.4.06	30.5.06

5. P3e Programme Analysis

6. Value of Work, Resources and Staffing Analysis (from Time Sheets)

SDS Cost Forecasts / Applications / Certification

In reference to the Value of work done by SDS from the start of the contract(19th September 2005 to 31st March 2007) it can be seen that SDS's forecasts over the period from December 2005, January to February 2006 were revised substantially with an initial forecast spend to end of March 2006 of £7,625,000 being eventually down turned to £3,819,000 and this trend is mirrored in the applications / certification over this period.

The principal matters affecting the substantial reduction in numbers over the period in question were:-

- SDS inability to secure and allocate sufficient resource at project start up.
- Delay in procuring and implementing survey works to inform the design process - site investigations and surveys to inform the design and procurement process were initiated in Dec 06 with a plan to execute the bulk of this work in January, February and March 2006. This work fell significantly behind the original programme. At the progress meeting of 9th March 2006, SDS confirmed that all site investigation works had not been awarded, with start dates confirmed for only 20% of the work.
- Delay in completing the Requirements Definition Phase -The original proposed contract duration for completion of this phase was 8 weeks. During tender clarification this period was relaxed to 13 weeks by mutual consent, recognising that in doing so, for SDS, this eliminated risk, eased resource mobilisation pressure and reduced the management effort to achieve deadlines. A £100,000 saving on the tender was offered and agreed for this relaxation. In effect this stretched the timescale for achievement of this contractual milestone to 19th December 2005 i.e. all sub-milestones complete to tie satisfaction such that a Milestone Completion Certificate could be issued. The SDS provider did submit the requisite documentation on the due date, however only 20% of the submissions met the expected standards. As a result of this a protracted period of consultation and re-iteration of documents ensued.
- The knock on effect of the foregoing matters on the preliminary design phase, originally scheduled to commence Jan 06. SDS's cumulative application in respect of preliminary design as at March 2006 totalled £186,000

7. Procurement Issues

7.1. Delays to SDS Procurement

7.2. Delays to Tramco Procurement

7.3. Delays to Mudfa Procurement

7.4. Delays to Infraco Procurement

7.5. Advance Works Procurement due to Infraco Delays

7.6. Additional Procurement Costs

7.7. Amendments to Risks profile more borne by tie

8. Delays to SDS

8.1. Delays to System Design Services (SDS) caused by Parson Brinkerhoff (PB)

8.2. Delays to System Design Services (SDS) caused by Third Parties (Network Rail, BAA)

8.3. Delays to System Design Services (SDS) caused by City of Edinburgh Council (CEC)

8.4. Delays to System Design Services (SDS) caused by Tie

9. Delays to Mudfa Works

9.1. Delays to AMIS caused by Parson Brinkerhoff (PB)

9.2. Delays to AMIS caused by Halcrow sub-consultant to PB

9.3. Delays to SDS caused by City of Edinburgh Council (CEC) re-sequencing

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SDS Programme Planned at September 2005

Planned: ■

Actual: ■

Period	Sept 05	Oct 05	Nov 05	D 05	J a n 0 6	Feb 06	Mar 06	Apr 06	May 06	June 06	July 06	Aug 06	Sept 06	Oct 06	Nov 06	Dec 06	Jan 07	Feb 07	Mar 07	Apr 07	May 07	June 07	July 07	Aug 07	Sept 07	Oct 07	Nov 07	Dec 07
Mobilisation	6th Sept 05 + 19th Sept 05																											
RDP				RDP 19 Dec 05													RDP issued											
PD										PD submitted 30.6.06						PD 90%	PD 95%	PD 98%	PD 100%									
DD																												
Submit Approvals & Consents																												
Novation to Infracore																												
Appoint Infracore																												

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