

PARSONS BRINCKERHOFF LIMITED

**SDS CONTRACT**

**NOVATION AGREEMENT**

**Appendix Part 4**

14 May 2008

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## **1 Introduction**

This document defines the status of the SDS Agreement between **tie** and SDS at the point of Novation. The report details:-

- The status of deliverables completed to date and remaining to be completed for the currently defined scope of services.
- The requirement for future additional services to be provided by SDS for the management of the Approvals process for the Infracore designs.
- The requirement for future additional Construction Support Services to be provided by SDS to the Infracore.

## **2 Current Scope of Services**

### **2.1 Overview**

The scope of work covered by the SDS Agreement is defined as four Phases of work:-

1. Phase I Requirements Definition
2. Phase II Preliminary Design
3. Phase III Detailed Design
4. Phase IV Construction Support

## **3 Phase I Status**

### **3.1 Scope of Work**

Phase I is complete

## **4 Phase II Status**

### **4.1 Scope of Work**

Phase II is complete

## 5 Phase III Status

### 5.1 Scope of Work

#### 5.1.1 Overview

The Deliverables to be produced by SDS for the Edinburgh Tram Network under Phase III of the SDS Agreement can be categorised as Detailed Design packages delivered to the client and submissions presented for Prior and Technical Approvals.

Phase III is not complete. The Phase III scope of work will be completed under the terms of the SDS Agreement.

The following sections provide an analysis of current status for each category of deliverable.

#### 5.1.2 Detailed Design Packages - Status as at 13 May 2008

Total Number of Packages	Total Delivered	Total Remaining to be Delivered
329	296	33

#### 5.1.3 Prior Approvals - Status as at 13 May 2008

Total Number of Prior Approvals	Total Approved	Total Remaining to be Approved
63	22	41

#### 5.1.4 Technical Approvals – Status as at 13 May 2008

Total Number of Technical Approvals	Total Approved	Total Remaining to be Approved
128	30	98

## 5.2 Changes

The table of rates for provisional additional work to be used for the pricing of changes to scope is as follows:-

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

### 5.3 Team Location and Office Accommodation

Office space for the SDS Phase III Team is to be supplied free of charge by tie to SDS for the duration of the involvement of the team

## 6 Phase IV Status

### 6.1 Scope of Work

No work has yet been started under Phase IV. The Phase IV scope of work will be completed under the terms of the SDS Agreement.

Office space for the SDS Phase IV Team is to be supplied free of charge by tie to SDS for the duration of the involvement of the team in supporting Infraco.

## 7 Additional Scope – Siemens Management Services

### 7.1 General

As a result of the request from tie and Infraco SDS will provide an additional service beyond that required by the SDS Agreement during the construction phase of the project to support Infraco to secure Approvals and Consents for client design (as defined in the SDS agreement).

This will be where Infraco complete the systems design with final component selections and will be primarily,

- OLE systems design,
- Signalling and Comms,
- Passenger Information Displays
- Tram Stop Furniture
- Automatic Fare Collection equipment
- CCTV equipment
- Public Address equipment
- Track Finishes
- Substation building modifications
- System wide security systems
- Depot equipment.

The team will support Infraco with technical and prior approvals and will also support Infraco with their duty to discharge outstanding planning and prior approval conditions scheduled by the Approvals Authorities in the formal responses to the SDS prior approvals applications.

### 7.2 Responsibilities of the SDS Support team

SDS will provide personnel with experience of the prior and technical approval processes on the Edinburgh Tram Scheme and the procedures employed by City of Edinburgh Council in registering and approving planning, prior approvals and technical approvals. The SDS team will advise Infraco on these procedures and give guidance on obtaining the outstanding approvals and consents. This will include advice on the content and style of applications as required by CEC, the format of documents to be issued, the timescales for processing of applications and the support of these applications during the process of securing the approval.

During the production of the submissions SDS will advise Infraco on the local knowledge that SDS has gained during the formal and informal consultations SDS previously managed by SDS and the history of the development of the design and any likely requirements of the Approvals Bodies. SDS will also review the submissions produced by the Infraco design teams prior to submission by Infraco and advise on any areas likely to cause objection or rejection of the prior or technical approval.

SDS will support Infraco in their informal consultation process with the Approvals Bodies and with the formal process of making the applications with CEC.

### **7.3 Programme**

The SDS Design Support Team will liaise with the Infraco, tie and SDS planners to inform the Infraco Project Planner of the progress of the Client design approvals and consents.

### **7.4 Design Checks**

In reviewing the Client design SDS will advise Infraco of any errors highlighted in the review process that will impact on the approval of the design. SDS will also advise of any errors or quality control issues that are identified during the review but will not be responsible for quality checking of the Client design.

### **7.5 Reporting**

A weekly report (or as otherwise agreed) will be produced to record the issues being addressed by the SDS Design Support Team. This will detail;

- Progress of the prior, technical and planning approvals;
- The number of prior, technical and planning approvals, the number issued for approval, the number approved and the number of informal consultations in progress.
- New Issues Arising,
- Details of the design issue, location, cause (deviation from SDS design/ design error/programme issue etc) status of resolution,
- Status of any Changes instructed to the design by Approvals Bodies to secure the approval and consent (where applicable)
- Status of resolution of ongoing issues



- Design Progress including target completion dates
- Additional support required from Client/tie etc for the resolution of outstanding issues

## **7.6 Resources**

The SDS Design Support Team is as indicated on the resource chart attached, but is nominally three Principal Engineers, one Document Controller/administration person and one CAD technician. SDS proposes that there is a dedicated engineer for Section 1 of the route, one engineer for Sections 2, 5 and 7 and a further engineer dedicated to supporting SDS in their completion of the design at the depot.

The SDS Design Support Team will report to the Infraco Design Manager. The Infraco Design Manager will be the link with the Client design teams and will be responsible for instructing the Infraco designers in any amendments proposed to the Infraco design at the suggestion/recommendation of the SDS Design Support Team.

The SDS Design Support Team shall lead the negotiations to secure Approvals and Consents for the Infraco related design. The Infraco shall provide all necessary technical support for this process as is required by the SDS Design Support Team.

The SDS Design Support Team will not be responsible for securing the Approvals and Consents for Infraco related design and will perform a supporting and advisory role to Infraco in securing these consents.

## **7.7 Commercial**

The SDS Design Support Team as required above will be a dedicated project team permanently based in Edinburgh. This will be charged and paid by Infraco on a time at contract rates basis (the rates set out in Appendix Part 8 of this Agreement). The team will be nominally as indicated on the organisation chart. This will be flexible in that the team will be increased and decreased to suit project programme demands and as required by Infraco. The team size will be reviewed on a monthly basis and amended as required/agreed.

Additional specialist resources will be made available when requested by Infraco upon request, subject to availability, and this will be charged on a time and expense basis with durations as agreed.

Timesheets will be presented for signature by a nominated Infraco representative for all staff forming part of the Site Support team on a weekly basis and copies made available.

Office space for the SDS Design Support Team is to be supplied free of charge by tie to SDS for the duration of the involvement of the team in supporting Infraco.



Site transport and any specialist equipment required to carry out the above additional services are to be supplied free of charge to SDS by tie.

## **8 Additional Scope – Construction Support Services**

### **8.1 Design**

#### **8.1.1 General**

As a result of the request from tie and the Infraco, SDS will provide an additional Design service beyond that required for Phase IV of the Scope of Work during the construction phase of the project of on-site design support. This is intended to provide design clarification to the construction team on site and address technical queries and issue design clarifications as they arise in so far as this is additional to the Services required for Phase IV of the Scope of Work. The aim is to provide on-the-spot design solutions where possible and fast turn around where additional clarification/advice is required in order to minimise disruption to the construction progress. Where required, the SDS design support team will seek clarification from the wider project Design Team and advise on design solutions/requirements. The team will also review the temporary works method statements and confirm that there is no adverse impact on the SDS permanent works design. The SDS team will review the Inspection and Test Plan with a view to identifying potential programme conflicts and practical problems for implementation.

#### **8.1.2 Drawings**

Where reasonably required by an Infraco (with tie's agreement acting reasonably) request for clarification the team will produce design sketches to assist the construction team and these will also be used to inform the as-built drawing production by incorporating the design clarifications where amendments have to be made to the detailed design of the scheme.

#### **8.1.3 Approvals and Consents**

Where design produced by the Construction Support Team requires amendment to the design that has been the subject of an Approval or Consent the Construction Design Support Team will advise the Infraco of the likely implications based upon experience prior to the change being made. This consent may be a technical approval from the Technical Approval Authority, a Prior Approval matter from CEC local planning authority or a third party consultee. The Construction Design Support Team will inform the SDS Approvals and Consents Construction Support team of the issues, supply the additional design clarification sketches to support the team in securing the Approval and consent.

#### **8.1.4 Survey**

In support of the construction team it may be necessary to undertake additional surveys on site. The Construction Design Support Team, will provide a written scope for the survey required. If it is necessary to procure this survey from sources external to the project the Construction Support team will manage the procurement of the service providing written quotations to enable the surveys to be undertaken in a timely manner.

#### **8.1.5 Confirmation of Verbal Instructions**

The Construction Design Support Team will manage the Confirmation of Verbal Instructions (CVI) process that will be introduced to control the on site design support process. Verbal instructions given to or received from the tie or the Infraco construction team on site will be reinforced by the issue of a Confirmation of Verbal Instructions (CVI) for record purposes. The team will also manage a register of these CVIs and record the status of outstanding issues.

#### **8.1.6 Additional Design**

The Construction Support Team will manage the Request For Information procedure implemented to track the progress of technical queries. The process will be used to manage the technical questions being asked of the Construction Support Team and the associated responses. In cases where the Construction Design Support Team cannot answer the design query themselves they will seek additional support from the relevant technical design function. This may be the SDS designers or the the Infraco design teams. A Request For Information (RFI) form will be generated clarify the design points. The Construction Design Support Team will liaise with the designers to resolve the design issue and mitigate where possible construction programme delays by prioritising design issues with the design teams. Where additional design is required from the SDS team the Construction Design Support Team will inform the Infraco of the design change and will assist to prepare the relevant change instruction.

#### **8.1.7 Health and Safety**

The Construction Support Team will assist the Infraco Contractor with the provision of design information for incorporation into the Health and Safety file in accordance with CDM recommendations.

#### **8.1.8 Programme**

The Construction Design Support Team will liaise with the Infraco, tie and SDS planners to inform the project programme of the implication of on site generated design change. This will include additional detailed design time, approval and consent related amendments and impacts on the critical path activities. The Construction Design Support Team will work with the Infraco, tie and the rest of the SDS Construction support team to mitigate construction programme delay through prioritisation of the design amendment responses.



### 8.1.9 Design Checks

Where design is produced by the Construction Design Support Team as a result of a tie instruction or the Infraco request for clarification that requires checking by the discipline teams e.g. structures, OLE, track etc this process will be managed by the Construction Design Support Team. An assessment of the level of design check required will be made by the Construction Design Support Team and notified in the weekly status report and on the CVI form for the issue.

In pursuance of the general obligations of Infraco and SDS the Construction Support Team will also provide assistance to Infraco by checking that subcontractors, suppliers and the Infraco designs themselves have no adverse impacts on the Permanent Design works and ensure that a suitable level of Infraco Inspection and Testing is incorporated.

### 8.1.10 As Built Drawings

Where additional design is produced in support of the construction team by the Construction Support Design Team, the SDS design drawings will be updated to reflect the changes in preparation for the production of the As-Built Design Drawings.

### 8.1.11 Reporting

A weekly report will be produced to record the issues being addressed by the Construction Design Support Team. This will detail;

#### Critical Issues Summary

- Details of the issue, Location, cause (deviation from SDS design/ design error/programme issue etc) status of resolution, reason for delay in resolution and impact of the delay

#### New Issues Arising,

- Details of the design issue, Location, cause (deviation from SDS design/ design error/programme issue etc) status of resolution,
- Status of the Change instructions (where applicable)
- New RFI s
- Photographic records

#### Status of resolution of Ongoing issues

- Design Progress including target completion dates
- Approval and Consent progress
- Additional support required from the Infraco/tie etc for the resolution of outstanding issues

#### RFI Commentary

- Outstanding RFI responses and owners prioritised on the basis of programme delay/importance

- New RFIs
- Updated RFI register

## Resources

The Design support team is as indicated on the resource chart attached, but is nominally three Principal Engineers, one CAD technician and administrative support and Project Management-

## **8.2 Inspection**

### **8.2.1 General**

The role of the Inspection Team is to provide an overview of the construction as the work progresses. The aim is to enable SDS to comment upon the construction and the compliance with the SDS design. Inspections will be done by a combination of frequent sampling of the construction works as they progress and for some elements of the works e.g. bridges and more rigorous inspection regime. The inspection teams will be expected to provide a report on the construction works undertaken and work with the Infraco Construction Supervision team to advise of issues that, if not addressed, will result in a non-compliant construction to the SDS design and project specifications. The aim of the team will be to minimise abortive works and provide documentary support to the Infraco Construction Quality Plans and Procedures.

The field inspectors will advise on issues where there are overlapping codes, specification standards, and individual interpretations from architects, engineers and the construction team, and will work in conjunction with the Infraco, tie and the Construction Support Design Team to resolve the construction related issues as they arise in a timely manner to avoid delays as the construction progresses.

The Inspectors will not be responsible for the quality of Construction and will not be expected to approve the construction or elements of the works. The inspectors will, however, be responsible for a review of the documentation produced by the Infraco as part of their quality procedures during construction and comment on the works undertaken against these procedures.

The Inspectors will be expected to report instances where the methods of construction are not as described by the Contractor's method statements, the design drawings, Code of Construction Practise, the design specifications, the Quality Plan etc.

### **8.2.2 Duties and Responsibilities**

The Inspectors will form an integral part of the Infraco construction team. The team will review the construction works as they progress and advise on the compliance with the SDS design as required by the Infraco Construction Quality Plan. The reviews undertaken will include



### 8.2.3 Ground Investigation

Review of the Infraco GI results for the testing is undertaken and assistance to ensure that the correct are applying the appropriate treatment/mitigation measures required for the trackbed.

- On an ad hoc basis witness the testing and inspection methods to ensure consistency and adherence to the method statement/procedure.

### 8.2.4 Earthworks

- Checks that the profiles constructed are as indicated on the design drawings
- Checks that the types of reinforced earth materials and installation are in accordance with the SDS design and materials specification.
- Where poor ground is discovered ensure that the correct treatment is used to mitigate to obtain the desired formation quality

### 8.2.5 Drainage

- Checks that drainage is installed in accordance with designs and specifications for the project.
- Confirm that materials used are in accordance with those specified

### 8.2.6 Bridges

The inspectors will have a key role in assessing the adherence to the design for the construction of the bridges including;

- pile sizes and locations,
- Testing of concrete being poured on site, methods of testing and adherence to the design requirements,
- Compaction of the concrete and suitable methods,
- Cover to reinforcement prior to concreting,
- In the case of remedial/repair welding processes and procedures, correct paint specifications for anti rust protection, quality of galvanising,
- Inspections will be undertaken to validate that the bridges are constructed using materials that conform to the drawings and specification provided by SDS for the construction.
- Correct reinforcement at correct spacing
- Quality of the finishes achieved on site.

### 8.2.7 Quality

The Inspection team will not be responsible for ensuring the quality of the construction of the infrastructure and this will remain the responsibility of tie and the Infraco, but will assist with clarification of the design to enable the Infraco to comply with the Construction Quality Plan.

### 8.2.8 Resources

The team will be as shown on the organisation chart but will in principal consist of three inspectors, one dedicated to bridges, one roads and another architectural issues. The inspectors will be supported by an assistant and a CAD operator and Project Management support.

### 8.3 Commercial - Fees for Construction Support Services

The Construction Support Team as required above will be a dedicated project team permanently based in Edinburgh. This will be charged on a time at contract rates basis, (the rates set out in Appendix Part 8 of this Agreement). The team will be nominally as indicated on the organisation chart. This will be flexible in that the team will be increased and decreased to suit project programme demands and as required by the Infraco and tie. The team size will be reviewed on a monthly basis and amended as required/agreed.

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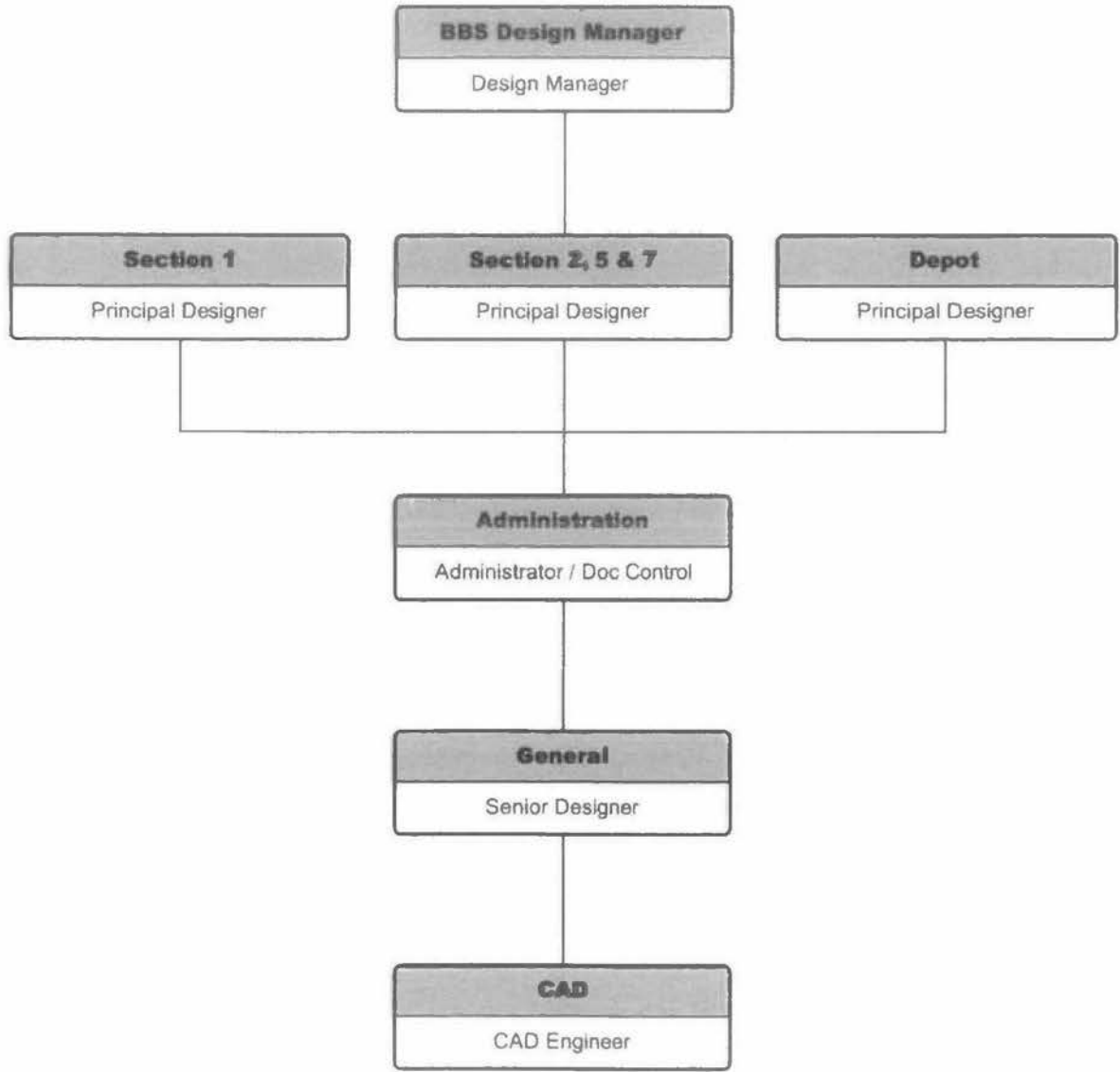
Timesheets will be presented for signature by a nominated Infraco representative for all staff forming part of the Site Support team on a weekly basis and copies made available.

Office space for the SDS Design Support Team is to be supplied free of charge by tie to SDS for the duration of the involvement of the team in supporting Infraco.

Site transport and any specialist equipment required to carry out the above additional services are to be supplied free of charge to SDS by tie.

## 9 Cost to Complete

<b>Total Contract Sum</b>	<b>£ 31,906,128.00</b>	
<b>Certified and Paid to Date</b>	<b>£ 25,922,313.00</b>	
Balance to Complete	£ 4,983,815.00	
Detailed Design Deliverables	£ 2,204,792.00	
Construction Support	£ 1,104,023.00	
Extended Construction Support	£ 1,000,000.00	Provisional Sum
Design Support Team	£ 675,000.00	Provisional Sum



# Construction Support Services

