



Bilfinger Berger – Siemens – CAF Consortium

**EDINBURGH TRAM NETWORK
INFRA CO CONTRACT**

**PERIOD REPORT No 6
TO 13 SEPTEMBER 2008**

CONTENTS

1	Executive Summary
2	HSQE Management
2.1	Health & Safety
2.2	Quality
2.3	Environment
2.4	Management System / Deliverables
2.5	KPIs
3	Programme
3.1	Contract Programme status
3.2	Look Ahead programme
3.3	Design and Consents Programme Status
3.4	Tramco Programme Status
3.5	Critical Impact Notices
3.6	Milestones
4	Progress
4.1	Mobilisation
4.2	Engineering
4.3	Civil & Building Works
4.4	E&M Systems
4.5	Trams
4.6	Testing, Commissioning and Start-up
4.7	Delays and Recovery Action
5	Not Used
6	Stakeholder and Third Party Issues
7	Commercial
7.1	Milestones
7.2	Changes/Instructions/Departures
7.3	Risks and Opportunities
8	Resources
9	Other Issues
10	Appendices
10.1	KPI Report
10.2	Programme Update
10.3	Look Ahead Programme (issued separately)
10.4	Tram Programme
10.5	RFI Register
10.6	Civil Works Procurement Report
10.7	Change Register
10.8	Organisation Charts

1 EXECUTIVE SUMMARY

Mobilisation of management personnel is now essentially complete, and the construction delivery team will continue to increase in accordance with site activities. The Consortium Project office is now physically complete and equipped, awaiting IT/communications connectivity before being occupied. **tie** has expressed concern about delays in commencement of site activities and addressing this has been a key priority in the period. BSC will however also respond in due course providing detailed background to reasons for this delay, to clarify where responsibility lies.

23,000 hours, of which 5,000 were site hours, were worked in the period without any reportable accidents or incidents. production of management plan deliverables, construction control and safety documentation and Employer's Requirements documentation has continued in the period.

Efforts to reach agreement on the impact of the Notified Departure arising from the slippage from V26 to V31 of the design programme have not been successful and will now be resolved formally. Ongoing delays in design completion and the impact of changes and access/utility limitations are also being taken into account in programme updates.

Progress on completion of IFC design continues to be subject to the approval process. The increasing number of changes, many with significant design content, is a significant issue. Both contractor/designer and client teams must achieve greater efficiency in change management to ensure current delays are not exacerbated. Uncertainty over certification for payment of SDS design support resources is a threat to efficient close out of changes and approval of Consortium Design proposals, and needs to be resolved.

Systems design is progressing, and the operation of amending base IFC design to show Consortium proposals (trackform, OLE etc) can commence in the next period.

Civil materials and subcontractor procurement is proceeding, with initial works being carried out on Limited Instructions where necessary. Mobilisation for initial works is in progress for commencement of work activities in the next period. A look-ahead programme for works to the year end has been submitted and will be used for stakeholder notifications etc.

Systems and tram procurement is progressing. Concerns exist with trackwork design due to the lack of IFC drawings and the potential impact of changes

2 HSQE MANAGEMENT

2.1 Health & Safety

2.1.1 Safety Management, including CDM

The BSC Safety procedures training seminar has been rescheduled for September to allow new staff to be included.

The Network Rail Construction Phase Plan was accepted by Network Rail on 5th August. The document is under review by BSC for roles and responsibilities.

The Construction Phase Health & Safety Plan Rev 3 is currently being reviewed and updated to include new roles and responsibilities and include Work Package Contractor's Plans.

2.1.2 Accidents & Incidents

No accidents during period 6.

There have been no accidents between the end of period 6 up to 29th August 2008

tie have classified inappropriate use of PPE on 27th August at the project site establishment offices as a Near Miss.

No reportable incidents in the period. There was one non-reportable incident requiring hospital attention (bee sting).

AFR for the first five periods is 0.00.

The total number of hours worked in period 5 was 22,917.

Non Site Hours = 18,119
Site Hours = 4,798

Breakdown of Site Hours
Parsons Brinckerhoff 1,110
BSC 888
Subcontractors 2,800

2.1.3 A joint BSC/tie training session has been held on Work Package Plans.

2.2 Quality

2.2.1 Quality Management

Bilfinger Berger – Siemens – CAF Consortium

The Project Management Plan (including Project Quality Plan) was reviewed at a meeting with **tie** on 20th August. Updates to the document are being progressed.

Inspection and Test Plans are being developed for scheduled work activities.

The implementation of a solution to address the requirement for project collaboration and project control through BIW is ongoing. Further introductory training on BIW has been carried out and it is anticipated **tie** will have access within the next few weeks.

2.2.2 NCR's

NCR raised by BSC regarding resident complaint at Baird Drive has been resolved and closed out.

NCR No 36 raised by **tie** regarding Edinburgh Park fenced Green Zone has been closed out with training provided by **tie**.

2.2.3 Audit

An assessment audit was carried out on Barr Construction on 13th August, results were satisfactory. An assessment audit on Crummock is being arranged for the next period.

A BSC 'site set up' safety audit was carried out on 20th August, results were satisfactory.

Tie have arranged to carry out an audit on the BSC Project Management Plan on 4th September.

Environmental audit arranged for 3rd September.

2.2.4 Trend Analysis

Nothing to report at present

2.3 Environment

2.3.1 Environmental Management

The initial issue Construction Phase Project Environmental Management Plan was rejected by **tie**. The Revised Plan has been resubmitted.

KN Services have been contracted to advise on elements of survey works to supply appropriate spill equipment for control and spill response.

2.3.2 Issues

There were no Environmental Events reported in the period on the project.

2.4 Management System / Deliverables

2.4.1 Management System

An update to the BSC Management System is due to be issued w/c 8th September.

2.4.2 Deliverables prior to construction commencement.

Project Management Plan

Reviewed at meeting on 20th August. Updates being progressed.

Network Rail Interface Plan

Accepted by Network Rail on 5th August.

Construction Phase Project Environmental Management Plan

Revised plan issued 28th August.

Archaeological & Heritage Mitigation Plan

Plan to be submitted w/c 1st September.

Waste Management Plan

Included in the Construction Phase Project Environmental Management Plan.

2.5 KPI's

KPI spreadsheet for Period 6 was submitted to **tie** on 19th August along with associated notes; a further copy is attached as Appendix 10.1.

3 PROGRAMME

3.1 Contract Programme Status

The programme in the appendix to this report has baselines for V26 and V31.

Progress achieved up to 29 August 2008 has then been recorded against the above baselines including inputting the latest IFC dates received from SDS (V35).

Despite advice to the contrary we have still not received a revised MUDFA programme. Therefore where MUDFA completions were shown as being completed before the 01 August 2008 they are now defaulting to the data date (29 August 2008), which shows an artificially optimistic forecast.

The result is the following changes to Section Completion Dates:

	29 August Update	01 August 2008	29 April 2008
A	24 June 2010	04 June 2010	25 March 2010
B	9 September 2010	20 July 2010	09 May 201
C	27 May 2011	16 May 2011	17 January 2011
D	23 November 2011	13 November 2011	16 July 2011

The above slippage is a direct consequence of incorporating design programmes V31 and V35 into the contract programme and is brought about by significant changes to the IFC dates for the following items in the period.

Subsection 1A3 Roads & Track.
 Ocean Terminal Tram Stop
 Victoria Dock Entrance Bridge
 Section 1B Roads & Track
 Section 1D Roads & Track
 Shandwick Place Tram Stop
 Section 2A Roads & Track
 W18 Murrayfield Tram Stop Retaining Wall
 Murrayfield Tram Stop
 Section 5B Roads & Track
 Section 5C Roads & Track
 Gogarburn Tram Stop
 Depot Drainage
 Section 7 Roads & Track
 W14 Gogarburn Retaining Wall
 Edinburgh Airport Tram Stop

The need to undertake redesign at South Gyle Access Bridge and hence delay its construction is currently driving the final “Tram in Revenue Service” date. If the link between the bridge superstructure and trackwork is removed

Bilfinger Berger – Siemens – CAF Consortium

the end date comes forward by 3 weeks to 02 November 2008. However allowance would then need to be made for the delay and disruption of having to demobilise and remobilise resources associate with the track at South Gyle Bridge.

Programme update attached as Appendix 10.2

3.2 Look Ahead Programmes

The look ahead programme for this period is planned to update programmed works to the year end. As well as adding further detail, it makes a number of assumptions to be able to provide a working programme of the activities to be undertaken in the next 4 months. The following points should be noted.

- Roadworks are now planned to start in Leith Walk CH 100 to 350 on 29 September due to slippage of the IFC date following comments received from CEC.
- Our Works Package Plan for Haymarket Viaduct has received Network Rail approval and works are planned to commence on 01 September 2008.
- A Provisional IFC Date of 19 September 2008 has been added for the Scotrail Depot Car Park.
- A provisional IFC date of 30 September 2008 has been used for Murrayfield Tram Stop Retaining Wall as CEC have rejected the previous design for Murrayfield Tram Stop Retaining Wall. This issue is also related to VE considerations at Roseburn. Design is now proceeding with "Option A" and we understand the SRU agreement has been signed but confirmation copy has not yet been received.
- The commencement of Russell Road Bridge, Murrayfield Stadium Retaining Wall (S21B), Carrick Knowe Bridge, Bankhead Drive Retaining Wall, South Gyle Access Bridge and Edinburgh Park Viaduct are dependent upon Network Rail Form C approvals and the temporary works design and associated ground investigation which is currently being progressed. Further SI works are due to commence on Mon 01 September 2008.
- Following the instructed redesign of South Gyle Access Bridge (and the connected Bankhead Drive Retaining Wall), options for avoidance of an existing sewer are now being reviewed. The Programme has a Provisional IFC Date added of 30 September 2008 until further advised.
- There is no programme allowance for the potential Change Order to relocate the street lighting cables at South Gyle Access Bridge.
- The programme does not include for the instruction to relocate the high voltage electric cable running through the proposed location of the north abutment at Carrick Knowe Bridge. We understand MUDFA may be attempting this work within the next two weeks.
- MUDFA works at Gyle Tram Stop Retaining Wall are ongoing at this time. Infraco works were due to start 01 Aug08 (V34) and are dependant on completion of the MUFA Works which are now assumed to complete around 12 September 2008.

Bilfinger Berger – Siemens – CAF Consortium

- A8 underpass is programmed to commence on 01 September 2008. MUDFA plan to remove any conflicting traffic management by this date.
- We understand MUDFA are planning to divert the existing 1500 dia. sewer which passes under the A8 in time for the Phase 3 Infraco Underpass construction. Any delay at this stage of the underpass construction will suspend Infraco works. The subsequently redundant sewer will also delay Infraco piling works if the abandoned pipe is not filled with grout or other specified material.
- We understand that MUDFA should complete water main works around 15 September 2008, but BSC are to mobilise in the Depot Area on 01 September 2008 to commence earthworks. This will be inefficient and disruptive in comparison to full access for our works.
- The initial material excavated from the depot which was to be taken to the surcharge embankment in Area 7, will now initially be used to re-construct the haul road which is in poor condition.
- Murrayfield Accommodation Works Agreement has been signed but not received. These works were programmed to commence during the SRU closed season.
- IFC drawings for the Hilton Hotel car park (Section 7) have not yet been received. A Provisional IFC Date of 30 September 2008 has now been programmed.
- The sewer diversion works at Gogarburn Bridge have been passed to the Infraco. It is anticipated that the works will commence 22 September 2008.

Look Ahead Programme issued separately

3.3 Design and Consents Programme Status

BSC and **tie** have been in discussions regarding design programme V31, which is a Notified Departure, since making the initial notification. To date, no agreement has been reached on entitlement to Extension of Time. **tie** have now advised that their evaluation of entitlement is 5 working days, whereas BSC's position is that the entitlement is at least the duration by which the programme slipped (approximately 9 weeks) and that **tie** are not entitled to unilaterally reschedule the contract programme to amend EOT.

BSC submitted a revised programme on 14 August 2008 to take account of the effects of V31 of the design programme. A further meeting is scheduled to be held **tie** / BSC on 3 September 2008 to discuss the logic of this programme.

BSC will make a submission for entitlement to EOT when resources are available (planning for mobilisation and other changes is taking priority at present), to provide full details and allow resolution, externally if necessary.

3.4 Tramco Programme Status

Tram design, procurement, manufacturing, delivery and commissioning programme to follow.

3.5 Critical Impact Notices

The following present potential risks to the programme:

CIN001 - Completion of MUDFA works - ongoing

MUDFA Programme not received – Access Dates for Work Areas cannot be planned accurately.

CIN002 – Slippage of IFC dates post V31 - ongoing

We are still experiencing slippage to the programme as the result of the late release of IFC drawings. V35 has now been issued and substantial slippage of IFC dates is ongoing.

CIN003 - Track/Roads Alignment Issues - update

We are now programmed to commence roadworks on Leith Walk on 29 September 2008 due to delay with IFC drawing approval. IFC drgs are now expected on 15 September 2008. Our current programme does not include for full reconstruction in all areas of Leith Walk.

CIN004 - Transfer of MUDFA Works to INFRACO - update

Utility diversions transferred to Infraco now include:-
Gogarburn Bridge (redesign/diversion of existing sewer)
Gogar Landfill Area (diversion of existing sewer)
A8 Underpass (existing BT ductbanks to be accommodated/protected)
South Gyle Access Bridge (bridge redesign due to existing sewer)
Carrick Knowe Bridge (HV cables to be diverted)
Water of Leith Bridge (existing sewer to be diverted)
Murrayfield Underpass (existing sewer to be diverted)
Russell Road Retaining Wall (existing sewer to be diverted)

These works will effect the commencement and/or programme for these structures and associated works.

CIN005 - Network Rail Form C Implications - ongoing

The Murrayfield structures and Bankhead Drive Retaining Wall post design freeze drawings now include a considerable element of temporary works. These structures will be prolonged both for the time taken to construct the temporary works and the associated Network Rail Form C approvals

CIN006 - Murrayfield Accommodation Works - update

We understand the third party agreement with the SRU has been signed. We further requested a copy of the Agreement on 29 August 2008. The associated accommodation works were programmed to be undertaken between June and August 2008 to allow construction of Structure 21B and

Bilfinger Berger – Siemens – CAF Consortium

access to 21E. If this work has to be delayed until next summer it will have a critical effect on the programme.

CIN007 - TTRO / TRO Conflict

We understand CEC believe that TTRO's cannot mirror the final TRO that is required for the operation of the Tram. However in some instances there will be sections of the work completed before the TRO is in place. For example, Shandwick Place Tram stop will form an obstruction to the current flow of traffic until the TRO is in place that means only Buses and Trams run along Shandwick Place. A significant prolongation of the contract would occur if works had to be delayed until the TRO was in place.

CIN007 – Contamination – new

Contaminated ground is now understood to exist at the following locations:-

Gogar Surcharge Area

Baird Drive

Haymarket (railway ballast)

Murrayfield Car Hire (underground fuel/oil tanks)

The programme does not currently make any allowance for the work involved with test time and disposal procedures.

By geographical area the issues are as follows:

Section 7;

- The construction of Burnside Road for BAA.
- Airport Tramstop design and BAA approval.
- RBS requirements for Gogarburn Tramstop.
- MUDFA Completion date.

Section 6;

- Completion of the 800 diameter water main diversion.
- Completion of other MUDFA works.

Section 6 / 5C;

- 1500 Sewer diversion.

Section 5C;

- MUDFA completion.
- A8 Underpass value engineering.

Section 5B;

- MUDFA completion.
- Transfer of MUDFA works to INFRACO

Section 5A;

- SRU Accommodation Works.
- Roseburn Street Viaduct value Engineering (Option A)
- Scot Rail Depot (Oil Tanks etc.).
- MUDFA completion.

Bilfinger Berger – Siemens – CAF Consortium

Section 2;

Sections 1D, 1C, 1B, 1A;

- Alignment of pavement design with INFRACO bid.
- Transfer of MUDFA works to INFRACO

Timely resolution of the aforementioned issues is essential to achieve the programme as currently presented.

3.6 Milestones

No amendments to or comments on the current milestone allocation/structure.

4 PROGRESS

Programme update attached as Appendix 10.2.

A look-ahead programme was discussed on 3rd and 5th September, showing works commencement where possible in the period up to the year end. This programme has been issued separately and is not attached to this report.

4.1 Mobilisation

4.1.1 Consortium

The Consortium Project Office is complete and furnished, with temporary power and permanent water/drainage connected and furniture installed. The IT/telephone landline connection, which was further delayed while **tie** and the landowner resolved the cable wayleave, is the remaining obstacle to occupation. The current forecast is that the Consortium management team will move in towards the end of September.

tie have amended their IT/communications requirements and are making their own arrangements to install the necessary equipment and cabling.

4.1.2 Civil & Building

In the period, the remaining senior members of the Civil & Building Works team have joined the project, including :-

- Commercial Manager
- 2No Works Managers
- Change Manager

Works commencement has been impacted by procurement delay, resource availability, late design issue and utility diversion requirements. BSC will respond to criticism by **tie** of mobilisation, with details of the impact of these problems and the underlying reasons, as soon as possible. The priority at present however, is to achieve commencement of safe and efficient working where possible.

4.1.3 E&M Systems

All required staff available

4.1.4 Trams

CAF are fully mobilised, no further comment on mobilisation will be made in future reports until mobilisation to site is programmed.

Bilfinger Berger – Siemens – CAF Consortium

4.2 Engineering

4.2.1 Civil & Building Design

4.2.1.1 Production of Design

Total Number of Detailed Design Packages	Total Delivered	Total Outstanding	
330	311	19	
Total Number of Planning/PA/Building Warrant Packages	Total Approved	Total Pending Approval	Total Remaining to be Submitted
97	59	22	16
Total Number of Technical Approval Packages	Total Approved	Total Pending Approval	Total Remaining to be Submitted
115	68	37	10
Total Number of IFC Packages	Total Delivered	Total Outstanding	
115	68	47	

From a total of 212 approvals:

60% are approved (127)

28% are pending approval (59)

12% to be submitted (26).

11 Approvals were granted during the last 4 weeks.

Including a two week forecast there will be the following approvals:

70% will be approved (150)

19% will be pending approval (40)

11% have to be submitted (22)

4.2.1.2 Approvals & Consents

Prior Approvals - BSC is continuing to inform **tie** of the delays or potential delays regarding prior and technical approvals due to numerous design changes from CEC during the formal consultation stage.

It is of great concern that after the extended period of informal consultation new comments are received at this stage which will, in many cases impact on the IFC dates and will require change instructions to be issued for the design to be amended. The informal consultation process, intended to avoid this problem, can not be considered successful.

Drainage Consents - applications submitted to Business Stream on 29 May 2008 and the acknowledgement from Business Stream on 3 June 2008 to say our application had been "accepted and passed to Scottish Water"

Assuming Scottish Water's review period started on 4 June 2008, BSC should have received a response by 18 June 2008. The issue was escalated with **tie** at the start of July and contact was made with Scottish Water chairman. SW appears to be dealing with applications now, although very little work has taken place on SDS's applications. A new meeting with Scottish Water has been arranged for 1 September 2008. Scottish Water are now working on the approvals.

Technical Approvals (Roads) – remaining design issues are being progressed at weekly Technical meetings with CEC. Prioritisation programme agreed with CEC.

As noted above, the number of comments from CEC in their formal responses is a real problem e.g.; 1C1 and 1C3 (minus 1C2) had 1200+comments (70 pages of comments) after an extended opportunity to jointly participate in design development.

Technical Approvals (Structures) –5 submissions remain outstanding. All others are either approved or with CEC for approval.

Specific Issues

Section 1

Outstanding – Planning Approvals

- 2 Ocean Terminal Batches (Tramstop and Bypass Road) on hold. Both have yet to be submitted as the ongoing Forth Ports agreement has to be finalised in terms of formal layout.
- 5 applications under consideration now on hold to allow for third party negotiation and submission of further design amendments. These are the 3 Newhaven applications (Tramstop and Retaining Walls x 2), Tower Place Bridge and Shandwick Place.

Bilfinger Berger – Siemens – CAF Consortium

- New batch: 1/04a Victoria Dock Entrance Bridge will be created to meet IFC deadline. BSC awaiting Instruction from tie to progress design.
- 1/12 Picardy Place to be submitted to CEC 05/09/08. There is potential for a delay in submitting this application as CEC Planning is reluctant to start Informal Consultation until a formal decision is taken regarding the future use of the proposed realm space. CEC need to provide a clear and formal position on this matter.

Outstanding - Warrants

- 1/07c Leith Walk substation: Response needed to CEC Report.
- 3 Warrants to be submitted. These are the building on Lindsay Road, Cathedral Lane toilet block, and the Police Box coffee bar. BSC have to provide method statements

Outstanding Listed Building Consents

- 11 Listed Building Consents are due for approval w/c September 1st. This follows an internal oversight made by CEC Planning. 8 IFCs have been delayed as a result of this request for additional time to determine these applications.

Outstanding – Technical Approval

3 Technical Approvals are due to be submitted in the next 2 weeks: Victoria Dock Entrance Bridge (04/09/08); 1A4 Roads (05/09/08) and 1C2 Roads (02/09/08).

5 technical approvals currently pending consideration as follows:

- Lindsay Road Retaining Wall (due 13/10/08)
- 1A1 Drainage (due 05/09/08)
- 1A1 Roads (due 05/09/08)
- 1A2 Drainage (due 05/09/08)
- 1A2 Roads (due 05/09/08)
- 1D Roads (due 29/08/08)

Section 2

Outstanding – Planning Approval

- Potential for 2/01 Haymarket to be resubmitted for Prior Approval pending outcome of Roads redesign.

Outstanding - Building Warrants

- 2 warrants to be submitted: the Crew Relief facility at Haymarket and 20-22 Russell Road. BSC to provide method statements and plans

Bilfinger Berger – Siemens – CAF Consortium

Section 5

Outstanding – Planning Approvals

- 5/06 Murrayfield Stadium Tramstop is pending consideration but on hold. SDS change estimate with BSC to approve and issue.
- Murrayfield Accommodation works and Tramstop Gogarburn both on hold. This is due to ongoing value engineering exercise and awaiting RBS concept design (expected 30/09/08) respectfully.

Outstanding – Warrants

- 4 warrants to be submitted (29 Roseburn St., Murrayfield Stadium works, 127 Balgreen Road and the ATC hut). BSC to provide method statements and plans
- 2 warrants recently approved (15-21 Roseburn St. and 39 Roseburn St.).

Outstanding – Technical

5 technical approvals are currently under consideration as follows:

- Balgreen Road NWR Access Bridge (due 29/08/08)
- 5A Roads (due 23/09/08)
- 5A Drainage (due 23/09/08)
- 5C Roads (due 29/08/08)
- 5C Drainage (due 29/08/08)

Section 6

Outstanding – Planning Approvals

- 6/22 Depot Access Road Bridge is pending consideration.

Outstanding – Warrants

- 6/21a Depot Building Warrant: Respond needed to CEC report.

Outstanding – Technical Approval

3 technical approvals are currently under consideration as follows:

- Depot Earth banks (due early September)
- 6 Roads (due 08/09/08)
- 6 Drainage (due 08/09/08)

Section 7

Outstanding – Planning Approval

Bilfinger Berger – Siemens – CAF Consortium

- 7/31 Reconfiguration of Hilton Car Park is pending consideration and is due for decision on August 29th.
- All Gogarburn Culverts have recently been approved.
- 7/29 Airport Tramstop to be submitted for Prior Approval on 05/09/08.

Outstanding – Technical Approval

Gogarburn Retaining Wall 1 & 2 due to be submitted 28/08/08.

3 technical approvals are currently pending consideration as follows:

- Gogarburn Culverts (due 29/08/08)
- 7A Drainage (due 02/09/08)
- 7A Roads (due 02/09/08)

Roads

Pavement design – BSC have issued the factual test report to **tie**, CEC and SDS for assessment. The design report is due on 8 September 2008. An approval procedure has been agreed between BSC, **tie** and CEC on 28 August 2008.

Utilities

Information from **tie**/MUDFA is now concluding on CCTV sewer and manhole and sewer positions within the tramway exclusion zone and at structures.

Now in receipt of the sewer information BSC/SDS are issuing approval drawings to Scottish Water and **tie** for the sewer diversions. BSC/SDS have submitted the majority of Line 2 sewers designs for approval from Scottish Water,

Section 1A sheets 11-12 has been submitted for approval to SUC's and **tie** awaiting response.

At Newhaven **tie** has proposed an easement outside the LOD and asked to begin the design of the utilities works located inside of the LOD with the assumption that **tie** will obtain the design and approvals for the work outside the LOD.

The remaining outstanding utility diversions design consist of those areas that the infrastructure design is not confirmed to a reasonable level of certainty to allow the design to take place i.e. Ocean Terminal where the kerb positions are still to be confirmed and the revised diversions of Picardy Place where we are awaiting acceptance of design solution.

Bilfinger Berger – Siemens – CAF Consortium

4.2.1.3 Issues and Concerns

Change Orders are not being issued by **tie** in a timely manner to commence design changes, to minimise impact on programme. At present there are 69 changes. 16 nr recorded delays to the submission of IFC's will be issued if there is a knock on effect

South Gyle Access Bridge: Change Order is urgently required such that the Feasibility Study for any re-design/amendment may move forward.

A page turning exercise for each section/sub-section is required for the benefit of the additional new BSC Team. A date of 3rd September 2008 is proposed to start at Section 1.

The current design is in accordance with Edinburgh standards for roads as instructed by **tie**, it is now the intention of CEC that the national standards are to be used. This can impact on pedestrian crossing times which can affect the traffic model. BSC need to be instructed.

As reported last month, finalisation of the design in the Forth Ports area continues to be in delay due to the continuous cycle of change requests to the design. BSC have not been formally made aware of any final agreement between CEC and Forth Ports on bypass road. This is fundamentally impacting the TRO and Ocean Terminal designs. **tie** have instructed to move the design on with Rev 3 of the agreement drawings. SDS understands, however, that these issues are not formally resolved with Forth Ports. Consequently, CEC is not able to provide inputs to the designs for approvals, and objection to the Planning / Prior Approvals in the western area of the FP agreement have been received from an impacted stakeholder (ADM Milling) not party to the FP agreement.

BSC believe that the SRU agreement has been signed, but has not received a copy. BSC are aware of the impact of some of the changes made from the draft version previously issued, namely the structure design across Roseburn Street and the Accommodation works around the Stadium. BSC await a copy of this agreement and the associated Change Control documentation.

Structures

Redesign of 'Option A' of the Roseburn St Viaduct re-design is in progress. As above, BSC await the final SRU agreement in order to mitigate risks, assumed in the cost estimate, prior to commencing re-design in this structure. The accommodation works will need to be re-designed, much of which BSC believe is outwith the LoD. BSC await Change Notification of this design if appropriate.

South Gyle Access Bridge – Requirement letter from **tie** was received to revisit the structural design of the bridge in order to clear Scottish Water sewers in the vicinity of the sub-structure. VE investigation is ongoing and change estimates have been submitted to **tie** for South Gyle Access Bridge,

Bilfinger Berger – Siemens – CAF Consortium

Russell Road Retaining Walls and Gogarburn Bridge Sewer. BSC have requested formal Change Instruction for this work.

With regard Russell Road Access Retaining Walls the comparison of this late information has highlighted that a diversion of the sewer is no longer the best solution and that the structure should be modified. BSC has submitted a Change Estimate for Russell Road Access Ramp Retaining walls to be modified.

BSC is currently reviewing the impact on Water of Leith but the current information supplied does not appear to be accurate to make a complete assessment.

BSC have submitted an estimate for the redesign of Gogarburn Bridge Sewer diversion to relocate the existing sewer to inside the abutments of the structure rather than the existing proposal to locate outside adjacent to the Gogarburn and await instruction.

Forth Ports

There is still not final agreement between CEC and Forth Ports on the proposed bypass road (Road 8). This issues is fundamentally impacting the design development and finalisation of the TRO and Ocean Terminal design. **tie** have previously instructed SDS/ to move the design on with Rev 3 of the agreement drawings. SDS/ has been advised verbally by CEC that the bypass road continues to be negotiated with FP, and that CEC cannot review the technical or planning approvals until such a time that the Forth Ports requirements are known. Up to date, this information has not been received. Additionally, objection to the Planning and Prior Approvals in the west of the site (Batches 1/01a, b, c) have been registered by an impacted 3rd party (ADM Milling) who was not party to the Forth Ports agreement. CEC have raised comment with SDS/ on this and have advised that they cannot come to decision until such issues are resolve. SDS has provided a design in accordance with the revised FP agreement, as instructed, and the negotiation with the 3rd party is not within their scope.

Haymarket Roads

BSC/SDS have submitted an updated Roads and track design to CEC in the Haymarket area to address the Road Safety Concern raised and consequently, CEC's non-acceptance of the originally instructed design.

Haymarket Taxi Stand

BSC/SDS have been advised informally by CEC that their Section 1D comments will contain a requirement to change the previously required bus lay-by in front of Haymarket station back to a taxi stance, similar to the existing condition.

Bilfinger Berger – Siemens – CAF Consortium

Shandwick Place Landscaping

On 14 August 08, CEC provided a letter to SDS containing non-specific comments regarding the planning application submitted to CEC for Prior Approval on 25 April 08. BSC/SDS provided requested information to CEC for their internal meeting on 22 August 08. CEC have not provided any further inputs to BSC/SDS regarding the outcome of the meeting. This issue needs to be resolved, as it is one issue at this location delaying the Prior Approval.

Shandwick Place design changes

CEC have requested several design changes in this area, including shifting of the stop, redesign of street lighting, and relocation of cabinets. BSC has received client notice of change and is awaiting finalisation of change instruction. This will impact the Prior Approval, technical approvals, and IFC drawing submittals.

Picardy Place

Design development is underway based on instruction provided. Outline layout agreed with CEC Roads Authority at regular working group meeting on 06 August. CEC have recently requested additional modifications / clarifications to the design being developed. BSC/SDS provided this information to CEC as requested. A letter was provided to CEC on 25 August 08. BSC/SDS informally provided a concept layout for the island finishes to CEC on 20 August 08. CEC advised that no comment could be provided at this time, and that further internal discussions were required. An internal CEC meeting was understood to have occurred on 26 August, with a further meeting requested for 28 August. CEC subsequently cancelled this meeting, and have advised that they will be requesting additional design development information for further internal discussions. This information request has yet to be received. This may further impact on the Prior and Technical approvals processes.

Tower Place Bridge

CEC provided a letter to BSC/SDS on 28 July 08 outlining planning concerns over the previously agreed (with CEC structures) technical solutions to the pedestrian parapets. Solutions were provided to CEC which reflect the discussions, however, further consultation is continuing, as CEC planning have not accepted the revised proposals.

Victoria Docks Entrance Bridge

No instruction received to date. Delay to IFC now likely.

Delay to Murrayfield Stadium Tram Stop and Murrayfield Stop retaining walls IFC

Bilfinger Berger – Siemens – CAF Consortium

Change Estimate was issued to **tie**. The IFC's are already delayed for these items. BSC await a Change Order from **tie** in order to progress the re-design and approval of these items.

BAA

BSC, SDS, TEL, Transdev, **tie** and BAA have agreed a Way Forward in Principal in order to progress the design and approvals at the Airport. BSC/SDS are planning to issue the Prior Approval w/c 8th September 2008. BSC also await BAA's confirmation of the design for the covered walkway over the Kiosk. It is believed that BAA have appointed their architects, Capita, to review the scope for this. BAA still to confirm approval of concourse and kiosk.

Relocation of Burnside Road

This is construction critical, as **tie** are aware, and the phasing of this will drive the design in the Airport area in some key areas. BSC issued a Change Estimate for a Feasibility Study to design the diversion of Burnside Road and await further instruction with regard to this change.

Airport

As a result of the delay associated with the Prior Approval and changes in the vicinity of the Airport. BSC anticipates that the following IFC will be delayed:

Airport Stop (A27800) 9 September '08.
Gogarburn Retaining Walls (431 & 461) 8 October '08.
7A Roads, Lighting, landscaping, OLE (SDS30920) 1 October '08

Other issues

MUDFA as-built records have been requested from **tie** in an accurate format. Submissions received so far fall short of this requirement. Letter written to **tie** 28/08/08 advising **tie** of the BSC requirement to fully coordinated as built drawings. BSC have stated "Red Line Drawings" not sufficient for safe construction practices.

The construction support and design support teams for the next period are shown on the organisation charts attached in Appendix 1. A procedure for calling off resources and payment has been discussed but is still not working. **tie** have again rejected application for payment, on the basis that certain staff allocated to construction or design support have apparently been identified assisting with other tasks. BSC's view is that this issue is more than compensated for by the extended hours actually being worked (but not billed) by technical staff in the design team, and that the overall design effort is likely to be adversely affected. BSC have instructed SDS that staff allocated to construction or design support are to decline to assist in other activities, and any such requests from **tie** or CEC to avoid such clashes in future.

4.2.2 E&M Systems Design

Overhead Line Equipment

- Design
Preliminary design nearing completion, internal review to be held Sept 2008.
- Approvals and Consents
CEC buildings fixing meeting supported

Traction Power Supply

- Design
On programme
- Approvals and Consents
No comments

Trackwork

- Design
Preliminary Track Design Report has been written and is being reviewed within BSC.
Verification of Alignment Drawings in progress.
Basic design is being written

Depot Workshop Equipment

- Design
DWE design phase started on all equipment as
 - Vehicle washing plant
 - Under floor wheel lathe
 - Under floor lifting plant
 - Crane
 - Service Vehicles
- Approvals and Consents
First Design submittals under preparation

Signalling, SCADA, PIS, PA, Comms

- Design
On programme. Preliminary Design in progress
- Approvals and Consents
Site demonstration to CEC, Transdev of PIS, PA, Scada at Siemens Ashby 2/9/08

Bilfinger Berger – Siemens – CAF Consortium

Traffic Light Controls

- Design
Final road layouts awaiting confirmation
- Approvals and Consents
As above

HV Power Supply

- Design
Surveys by Scottish Power, with BSC in attendance, taking place in September 2008
- Approvals and Consents
To be clarified post surveys

4.2.3 System Assurance

Participation at PSCC Meeting, progress as expected

4.2.4 Design Change Management

Civil & Building Work

The design change management team is in place and administering the large number of notifications and instructions to and from SDS and Tie. After initial lags as communication protocols were established, the notification process to tie is working efficiently. Response times from tie are however becoming more and more extended, having a further delay impact on change implementation.

E&M

Request for design changes and investigation on cost impacts is under investigation.

Changes of SDS design required due to E&M technical proposal still under investigation.

- **OLE**
Confirmation of the basis of design for the OLE tensioning system, which is compliant with the Employer's Requirements but at variance with the original Client design was notified in writing 15th August 2008.

4.2.5 Value Engineering

Civil & Building Works

Redesign of Roseburn Street Viaduct has commenced

Instructions from tie to progress reassessment of other design-to-cost value engineering opportunities (VE7 Depot, VE12 Edinburgh Park Bridge, VE14 A8 underpass) have been actioned and assessment is in progress, however, all these activities are in progress and are, in BSC's view, not feasible in

Bilfinger Berger – Siemens – CAF Consortium

programme terms. Further instruction has been requested by BSC for VE12 and will be sought for VE7 and 14 as soon as possible.

E&M Systems

No specifics addressed

4.2.6 Request for Information

4.2.6.1 Civil & Building Works

See Appendix 10.5 RFI Register

4.2.6.2 E&M Systems

RFI's for design clarification still under distribution, details to be collected from BIW.

4.3 Civil & Building Works

4.3.1 Procurement

4.3.1.1 Subcontractors

A subcontract procurement schedule, showing status at 2nd September, is attached as Appendix 10.5.

The procurement of civil package contractors is progressing in line with the construction dates based on the V31 design programme dates.

Section 1A

Negotiations are ongoing with RJ McLeod, however it is likely that we will need to seek an alternative contractor for this section or split the section into smaller more manageable sections to ensure continued interest.

Section 1B

We have concluded our procurement process for Section 1B and it is our intention, subject to formal consent being achieved to subcontract this section of the works to Crummock Ltd, as a direct subcontractor (i.e with an element of BSC site management, rather than as a Key Subcontractor.

Section 1D

Subcontractors are actively pricing Section 1D and a return date for enquiries is set for the 4th September 2008 after which we will carry out a review of those prices and decide on a way forward.

Section 2A and 5A (Part)

The Limited Instruction to Proceed issued to Grahams for the demolition of the Caledonian Ale House can be amended to include other areas of Section

Bilfinger Berger – Siemens – CAF Consortium

2A as required. A letter of intent has been issued to Hunter Demolition to include other affected buildings in Section 2A and 5B.

Until such times as we have concluded our subcontract discussions with Grahams we are proceeding with the employment of labour only subcontractors to progress the works.

We are progressing the procurement of a piling subcontractor for Russell Road Bridge.

Section 5A(part), 5B and 5C (part)

We have sought quotations for Formwork, Reinforcement and Concrete for all of the structures along this section and we are in final negotiation with one of these contractors to award Edinburgh Park Bridge. Negotiations on other structures are ongoing.

We are in the process of issuing a letter of intent for piling on the A8 Underpass to secure equipment required by the current programme and this should be concluded before the end of the week.

Discussions are on going regarding other smaller trade contractors.

Section 6

We are currently finalising the terms and conditions of the full subcontractor order for Barr Ltd for the construction of the depot. In the meantime Barr Ltd has been issued with a Limited Instruction to Proceed to progress any area of the depot which we consider to be critical to our progress, at risk pending IFC design. Barr are mobilising with a view to commencing work as soon as information is available. The work area is not in a fit state to commence, being left incomplete by the MUDFA contractor, and an instruction to clear the area will be sought prior to works commencing.

Section 7A

Final negotiations are proceeding with Farrans to conclude a subcontractor order and a meeting is arranged for the 3rd September 2008 to finalise the terms of their subcontract order. Initial work activities are in progress.

General

Procurement of relevant Key Subcontractors (Major Civil Works Contractors, Piling Contractors, Ground stabilisation specialists) includes the requirement for provision of a Collateral Warranty, in accordance with cl 28.7 of the Contract.

4.3.1.2 Materials

Procurement of precast beams, bearing and other major materials are being progressed in line with the construction dates based on the V31 design programme dates, although technical design issues with the beams shown in the IFC design for p.c beams have affected timescales. Non availability of

Bilfinger Berger – Siemens – CAF Consortium

IFC design is a concern in that delay could expose the contractor to further inflation based price rises.

Reimbursement for such cost impact would be sought as part of the impact of such external delay.

4.3.1.3 Long Lead Procurement Management

A letter of intent has been issued to Fairfield Mabey to secure delivery of the beams for the Water of Leith bridge in early December and we are about to issue an order for the supply of precast concrete beams.

Whilst procurement of many items is progressing the late issue of 'for construction' drawings is affecting our ability to secure a fixed price. The cost impact of such delay is outside our control and will be the subject of further discussion with tie.

4.3.2 Construction

4.3.2.1 Progress on site, to 16th Sep 2008

Section 1A Newhaven Road to Foot of the Walk

No activities planned to commence during the period.

Section 1B Foot of Leith to McDonald Rd

Mobilisation of Satellite office 163 Leith Walk has continued. Building repairs are ongoing and internal decoration has commenced. Building occupancy is scheduled for 22nd Sept

Ch 100-350 - Mobilisation has commenced.

Traffic Management Scheme scheduled for erection 29th Sept with construction activities scheduled to commence 30th Sept

Section 1C McDonald Rd to Princess Street West

No activities planned to commence during the period

Section 1D Princess St to Haymarket

No activities planned to commence during the period

Section 2A Haymarket to Roseburn Junction

Haymarket Station Viaduct - Sub Structure activities have commenced on piers 2, 3 & 4

Section 5A Roseburn Junction to Balgreen Rd

Bilfinger Berger – Siemens – CAF Consortium

Baird Drive Retaining Wall - Site Clearance has commenced.

Site access and compound access has been established.

Site Clearance to Murrayfield Retaining wall has commenced.

Demolition operations have commenced at Simlock, Viking & NCR buildings

Russell Rd Underbridge – Site Investigation has been completed. Temporary works design required to contain existing structure is being progressed

Site Clearance/Investigation has commenced.

Section 5B Balgreen Rd to Edinburgh Park Central

Carrick Knowe Bridge – Site Access construction has commenced.

Temporary works required for track support zone is currently being designed

Site establishment/clearance has commenced

Track work – Site investigation has commenced

Edinburgh Park Station Bridge – Site Access works have commenced. Sub Structure construction has commenced on Piers 5 & 6. Temporary works for Piers 3 & 4 design has commenced.

Demolition consents ongoing – ATC & Busy Bee

Section 5C Edinburgh Park Central to Gogarburn

Establishment of Consortium office has continued. Alterations to internal layout have now been completed. Water and temporary electricity supply have now been established. IT & phone connection now scheduled for Mid Oct

Depot to Gogarburn – Plant crossing construction complete

Gyle Tram stop/Retaining Wall – Site Access approved. MUDFA works ongoing

A8 Underpass – Traffic Management phase 1 has been established. Preparatory work for piling including installation of guide walls has commenced.

Piling commenced 15th September

Section 6A Depot

Topographical Survey has been completed

Mobilisation has commenced. Accommodation erected 15th Sept.

Programme of works to allow work to commence prior to MUDFA completion is currently being prepared.

Bilfinger Berger – Siemens – CAF Consortium

Section 7A Gogarburn to Edinburgh Airport

Mobilisation has commenced. Accommodation has been erected.

Site Clearance has commenced

Submissions

Archaeology & Environmental Mitigation plan have been submitted

17 Work package plans have now been approved/accepted

24 Work package plans are currently in draft form

4.4 E&M Systems

4.4.1 OLE (Overhead Line Equipment)

- **Production / Procurement**
Requests for expressions of interest based on outline design to be issued by end of Sept 08
- **Issues and Concerns**
Management of likely layout changes such as Haymarket

4.4.2 TPS (Traction Power Supply)

- **Production / Procurement**
No issues
- **Issues and Concerns**
No issues

4.4.3 TRW (Trackwork)

- **Production / Procurement**
 - Critical materials have been contracted
 - Part of the rails and Rheda sleepers will be delivered by the end of October 2008.
 - The first pieces of test-track are foreseen to be constructed in November/December 2008.
 - The first turnouts will be installed per March / April 2009 depending on agreement on the technical details
- **Issues and Concerns**
 - No clarity regarding document / drawing status. Very few drawings "Issued For Construction"
 - Changes in design due to VE-requests and Change Orders may influence the programme.

Bilfinger Berger – Siemens – CAF Consortium

- No information yet on the wheel to be used. It will influence the programme regarding delivery of turnouts.
- Storage area not available yet

4.4.4 DWE (Depot Workshop Equipment)

- **Production / Procurement**

Procurement of DWE equipment already started. Selection of suppliers in progress.

Production of DWE equipment will start after approval of design submittals.

- **Issues and Concerns**

Some RFI regarding DWE equipment are still open. Need to be answered to finalise design.

4.4.5 Signalling, Scada, PIS, PA, Comms

- **Production / Procurement**

No issues

- **Issues and Concerns**

No issues

4.4.6 TLC (Traffic Light Control)

- **Production / Procurement**

Final road layouts awaiting confirmation

- **Issues and Concerns**

As above

4.4.7 HV/LV - Supply

- **Production / Procurement**

To be clarified post surveys

- **Issues and Concerns**

To be clarified post surveys

4.5 Trams

4.5.1 Procurement

No Comment

4.6 Testing, Commissioning and Start-up

No comments

4.7 Delays and Recovery Action

At present, delays due to late issue of design, the volume of change to be administered and the impact of unresolved utility issues on commencement are all increasing. The scale and impact of these issues is still emerging, and it is not yet possible to develop general measures for recovery.

BSC mobilisation for commencement of construction has been criticised by **tie** as an avoidable delay. This is not our view, and we will substantiate the current position for evaluation in due course, however the primary focus at present is identifying areas where works can be safely and efficiently commenced. A detailed look-ahead programme showing works commencement to the year end has been issued, and will be monitored to identify potential for delay recovery wherever possible.

5 NOT USED

6 STAKEHOLDER AND THIRD PARTY ISSUES

Cooperation with tie's stakeholder team is working well, with weekly meetings now identifying future areas of required action.

Traffic Management input into the stakeholder information process continues.

7 COMMERCIAL

7.1 Milestones

Milestones Achieved in the Period

Month 4 Preliminaries (BB)
Month 4 Preliminaries (S)
Month 4 SDS Interface

Milestones Programmed but not Achieved

There are ongoing meetings with tie to discuss the Milestone Schedule and our next meeting is arranged for the 16th September 2008 where milestones which have not been achieved will be reviewed.

By agreement we will revise the milestone schedule to reflect progress to date and the future progress of the works.

7.2 Changes/Instructions/Departures

See Appendix 10.6

7.3 Risks and Opportunities

No comments

8 RESOURCES

8.1 Organisation Chart

See Appendix 10.7

9 OTHER ISSUES



Bilfinger Berger – Siemens – CAF Consortium

No comments



Bilfinger Berger – Siemens – CAF Consortium

10 Appendices

10.1 KPI Report

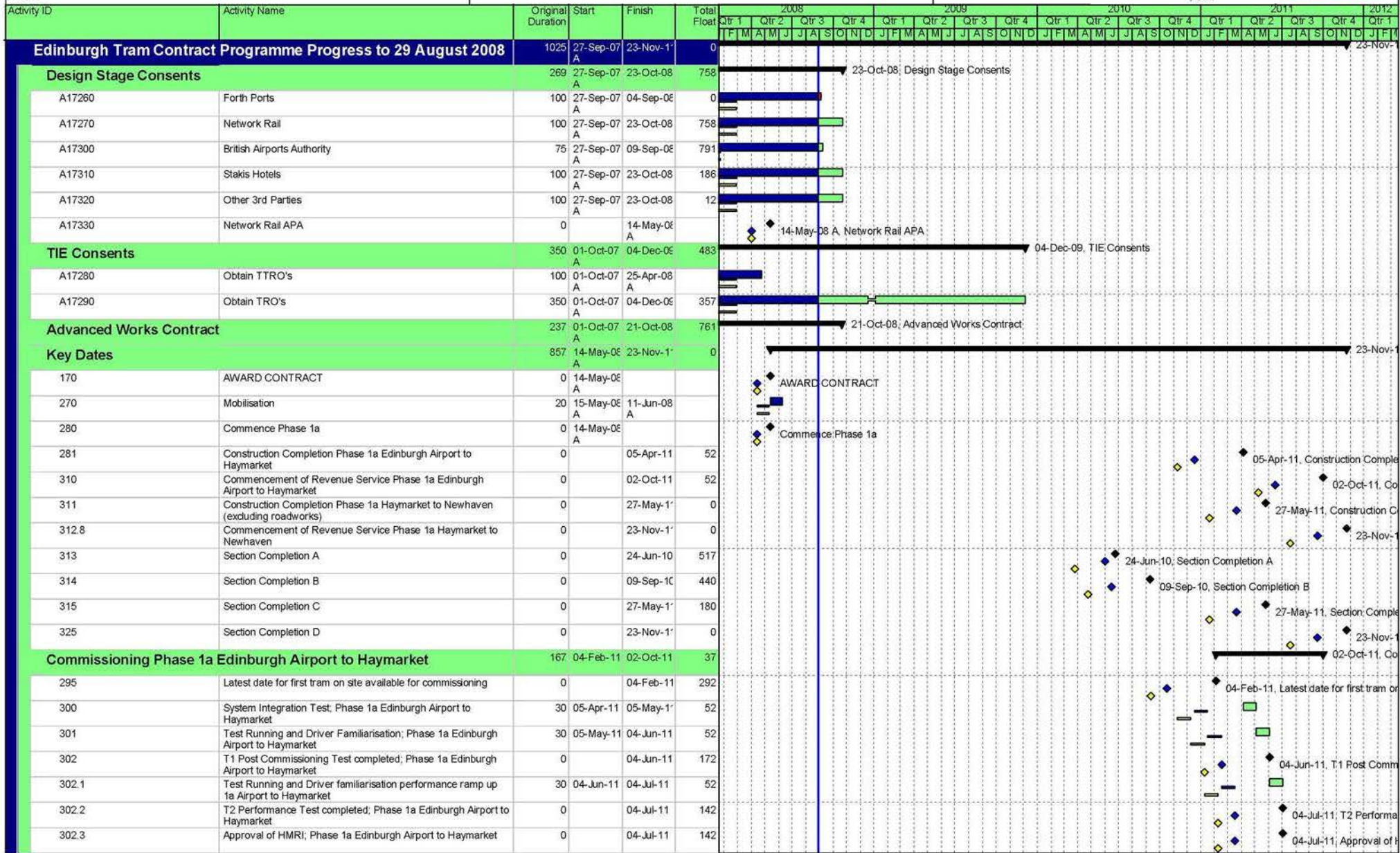


Bilfinger Berger – Siemens – CAF Consortium

10.2 Programme Update

Contract Programme Updated Tracked for V31 and V35 of Design Programme and Progress to 29 August 2008

EDINBURGH TRAM NETWORK

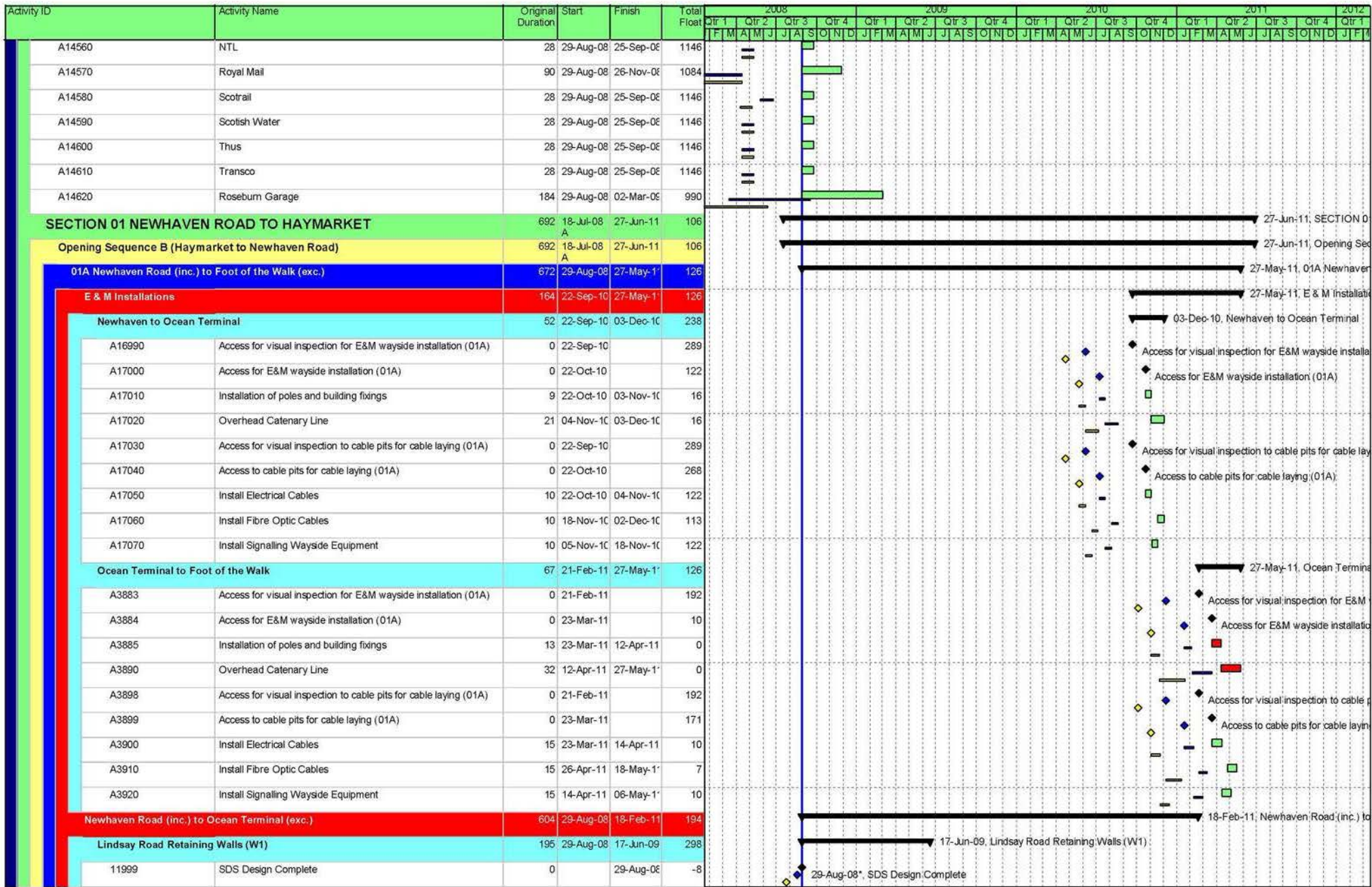


Date	Revision	Checked	Approved
29-Aug-08		scs	

— V26 Baseline
 █ Actual Work
 █ Critical Remaining Work
 ◆ V31 Baseline Milestone
 ◆ Milestone
— V31 Baseline
 █ Remaining Work
 ◆ V26 Baseline Milestone
 ◆ Milestone
 ▶ Summary

CEC01154352_0037

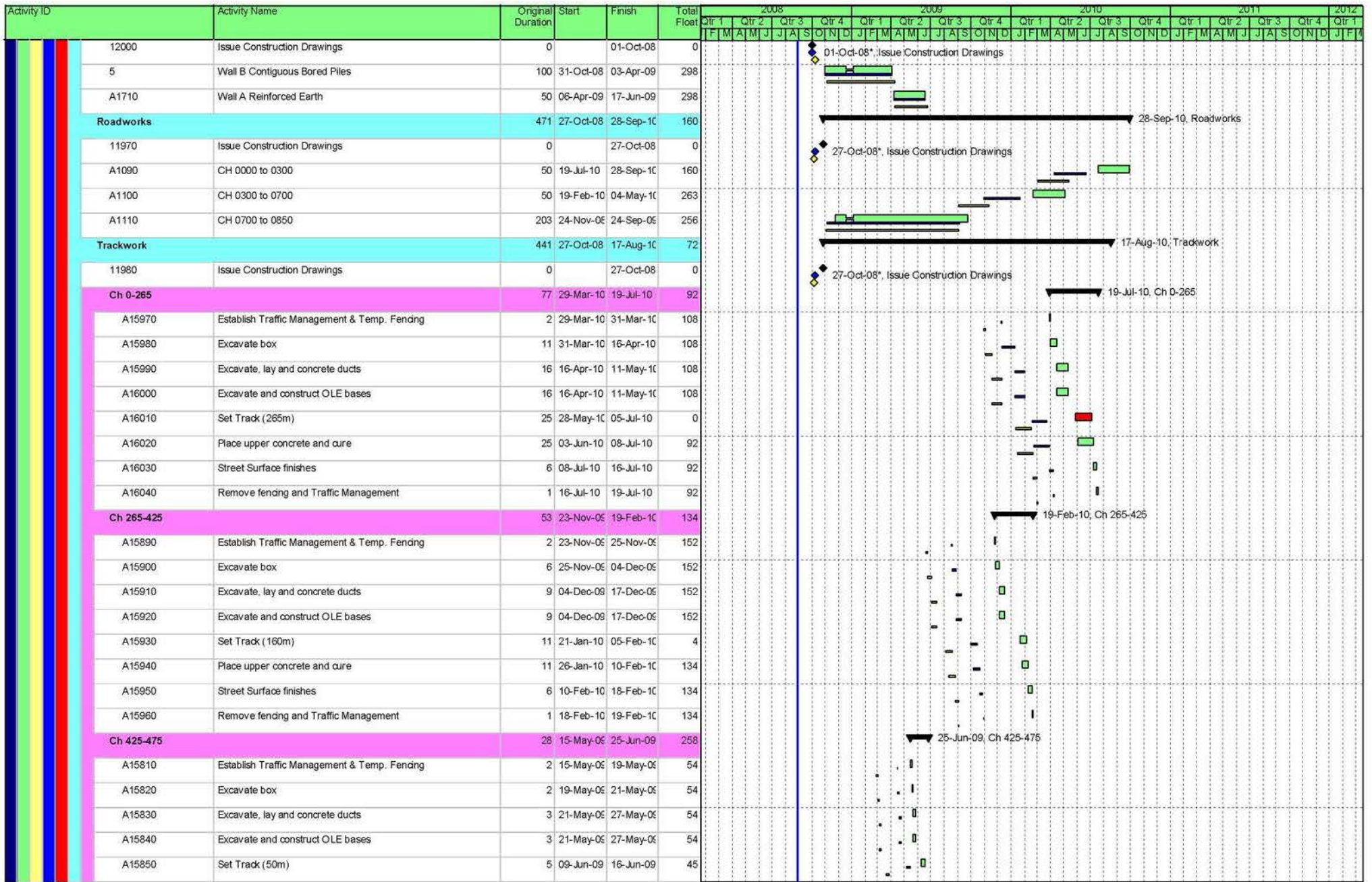
CEC01154352_0040



Date	Revision	Checked	Approved
29-Aug-08		scs	

V26 Baseline
 Actual Work
 Critical Remaining Work
◆ V31 Baseline Milestone
▶ Summary

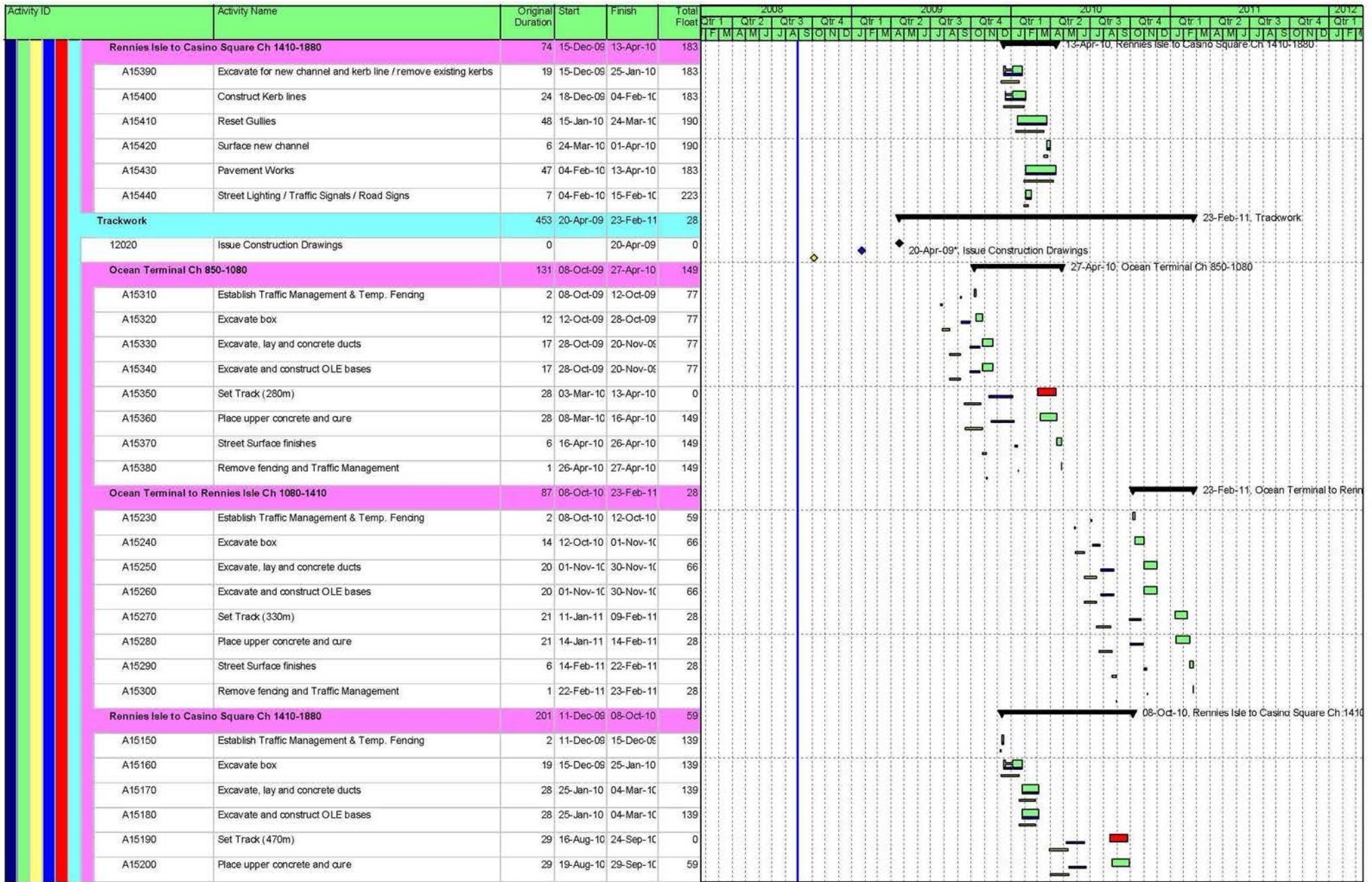
V31 Baseline
 Remaining Work
◇ V26 Baseline Milestone
◆ Milestone



Date	Revision	Checked	Approved
29-Aug-08		scs	

V26 Baseline	Actual Work	Critical Remaining Work	V31 Baseline Milestone	Summary
V31 Baseline	Remaining Work	V26 Baseline Milestone	Milestone	

CEC01154352_0041



Date	Revision	Checked	Approved
29-Aug-08		scs	

V26 Baseline Actual Work Critical Remaining Work V31 Baseline Milestone Summary
 V31 Baseline Remaining Work V26 Baseline Milestone Milestone

CEC01154352_0044

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2008												2009												2010												2011												2012																																																																
						Qtr 1				Qtr 2				Qtr 3				Qtr 4				Qtr 1				Qtr 2				Qtr 3				Qtr 4				Qtr 1				Qtr 2				Qtr 3				Qtr 4				Qtr 1				Qtr 2				Qtr 3				Qtr 4																																																				
						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Port of Leith Tram Stop						534	26-Sep-08	25-Nov-10	244	25-Nov-10, Port of Leith Tram Stop																																																																																																												
12080	Issue Construction Drawings	0	26-Sep-08	26-Sep-08	0	26-Sep-08*, Issue Construction Drawings																																																																																																																
17	Civil Engineering and Building Works	65	15-Dec-09	30-Mar-10	192																																																																																																																	
188	Order REC Supply	0	14-Jul-10		339	Order REC Supply																																																																																																																
A1800	Deliver and Install Shelter	10	26-Aug-10	09-Sep-10	118																																																																																																																	
A4358	Access for visual inspection for E&M Tram Stop installation (01A Ocean Drive)	0	10-Aug-10		335	Access for visual inspection for E&M Tram Stop installation																																																																																																																
A4359	Access for E&M Tram Stop installation (01A Ocean Drive)	0	09-Sep-10		129	Access for E&M Tram Stop installation (01A Ocean D																																																																																																																
A4360	Install LV Power Supply and LV Power Equipment	25	09-Sep-10	14-Oct-10	118																																																																																																																	
A4370	Install Telecon Equipment	20	14-Oct-10	11-Nov-10	128																																																																																																																	
A4380	Install Station Control Equipment + AFC Equipment	25	14-Oct-10	18-Nov-10	118																																																																																																																	
A4390	Package Test Tramstop	5	18-Nov-10	25-Nov-10	118																																																																																																																	
Bernard Street (inc.) to Foot of the Walk (exc.)						646	03-Oct-08	26-May-11	127	26-May-11, Bernard Street																																																																																																												
Bernard Street Tram Stop						646	03-Oct-08	26-May-11	127	26-May-11, Bernard Street																																																																																																												
12090	Issue Construction Drawings	0	03-Oct-08	03-Oct-08	0	03-Oct-08*, Issue Construction Drawings																																																																																																																
198	Order REC Supply	0	11-Jan-11		222	Order REC Supply																																																																																																																
20	Civil Engineering And Building Works	65	28-Oct-10	11-Feb-11	1																																																																																																																	
A1850	Deliver and Install Shelter	10	22-Feb-11	08-Mar-11	1																																																																																																																	
A4398	Access for visual insepction for E&M Tram Stop installation (01A Constitution Street)	0	04-Feb-11		208	Access for visual insepction for E&M Tr																																																																																																																
A4399	Access for E&M Tram Stop installation (01A Constitution Street)	0	08-Mar-11		186	Access for E&M Tram Stop installat																																																																																																																
A4400	Install LV Power Supply and LV Power Equipment	25	08-Mar-11	13-Apr-11	1																																																																																																																	
A4410	Install Telecon Equipment	20	13-Apr-11	12-May-11	11																																																																																																																	
A4420	Install Station Control Equipment + AFC Equipment	25	13-Apr-11	19-May-11	1																																																																																																																	
A4430	Package Test Tramstop	5	19-May-11	26-May-11	1																																																																																																																	
Trackworks						575	03-Oct-08	14-Feb-11	35	14-Feb-11, Trackworks																																																																																																												
12100	Issue Construction Drawings	0	03-Oct-08	03-Oct-08	0	03-Oct-08*, Issue Construction Drawings																																																																																																																
Baltic to Queen Charlotte Ch 2110-2340						68	26-Oct-10	14-Feb-11	35	14-Feb-11, Baltic to Queen Charlotte																																																																																																												
A14870	Establish Traffic Management & Temp. Fencing	2	26-Oct-10	28-Oct-10	1																																																																																																																	
A14880	Excavate box	10	28-Oct-10	11-Nov-10	28																																																																																																																	
A14890	Excavate, lay and concrete ducts	14	11-Nov-10	02-Dec-10	28																																																																																																																	
A14900	Excavate and construct OLE bases	14	11-Nov-10	02-Dec-10	28																																																																																																																	
A14910	Set Track (230m)	15	15-Nov-10	07-Dec-10	28																																																																																																																	
A14920	Place upper concrete and cure	15	18-Nov-10	10-Dec-10	64																																																																																																																	
A14930	Street Surface finishes	6	10-Dec-10	20-Dec-10	64																																																																																																																	
A14940	Remove fencing and Traffic Management	1	11-Feb-11	14-Feb-11	35																																																																																																																	

Date	Revision	Checked	Approved
29-Aug-08		scs	

V26 Baseline Actual Work Critical Remaining Work V31 Baseline Milestone Summary
 V31 Baseline Remaining Work V26 Baseline Milestone Milestone

CEC01154352_0047

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2008												2009												2010												2011												2012											
						Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4														
						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
Queen Charlotte to Foot/Walk Ch 2340-2730						87	24-Jun-10	26-Oct-10	1	26-Oct-10, Queen Charlotte to Foot/Walk Ch 2340-2730																																																							
A14630	Establish Traffic Management & Temp. Fencing	2	24-Jun-10	28-Jun-10	14																																																												
A14640	Excavate box	16	28-Jun-10	20-Jul-10	14																																																												
A14650	Excavate, lay and concrete ducts	24	20-Jul-10	24-Aug-10	14																																																												
A14660	Excavate and construct OLE bases	24	20-Jul-10	24-Aug-10	14																																																												
A14680	Set Track (390m)	25	07-Sep-10	12-Oct-10	1																																																												
A14690	Place upper concrete and cure	25	10-Sep-10	15-Oct-10	1																																																												
A14700	Street Surface finishes	6	15-Oct-10	25-Oct-10	1																																																												
A14710	Remove fencing and Traffic Management	1	25-Oct-10	26-Oct-10	1																																																												
Roadworks						550	03-Oct-08	10-Jan-11	59	10-Jan-11, Roadworks																																																							
12110	Issue Construction Drawings	0	03-Oct-08	03-Oct-08	0	03-Oct-08, Issue Construction Drawings																																																											
Baltic to Queen Charlotte Ch 2110-2340						41	28-Oct-10	10-Jan-11	59	10-Jan-11, Baltic to Queen Charlotte Ch 2110-2340																																																							
A14950	Excavate for new channel and kerb line / remove existing kerbs	10	28-Oct-10	11-Nov-10	59																																																												
A14960	Construct Kerb lines	12	02-Nov-10	18-Nov-10	59																																																												
A14970	Reset Gullies	24	16-Nov-10	21-Dec-10	59																																																												
A14980	Surface new channel	4	21-Dec-10	10-Jan-11	59																																																												
A14990	Pavement Works	23	18-Nov-10	22-Dec-10	62																																																												
A15000	Street Lighting / Traffic Signals / Road Signs	7	18-Nov-10	30-Nov-10	78																																																												
Queen Charlotte to Foot /Walk Ch 2340-2730						62	28-Jun-10	23-Sep-10	23	23-Sep-10, Queen Charlotte to Foot /Walk Ch 2340-2730																																																							
A14810	Excavate for new channel and kerb line / remove existing kerbs	16	28-Jun-10	20-Jul-10	23																																																												
A14820	Construct Kerb lines	20	01-Jul-10	29-Jul-10	23																																																												
A14830	Reset Gullies	40	15-Jul-10	10-Sep-10	26																																																												
A14840	Surface new channel	6	10-Sep-10	20-Sep-10	26																																																												
A14850	Pavement Works	39	29-Jul-10	23-Sep-10	23																																																												
A14860	Street Lighting / Traffic Signals / Road Signs	7	29-Jul-10	10-Aug-10	55																																																												
01B Foot of the Walk (inc.) to McDonald Road (exc.)						585	18-Jul-08	24-Jan-11	213	24-Jan-11, 01B Foot of the Walk (inc.) to McDonald Road (exc.)																																																							
E & M Installation						66	07-Oct-10	24-Jan-11	213	24-Jan-11, E & M Installation																																																							
A3763	Access for visual inspection for E&M wayside installation (01B)	0	07-Oct-10		278	Access for visual inspection for E&M wayside installation (01B)																																																											
A3764	Access for E&M wayside installation (01B)	0	08-Nov-10		257	Access for E&M wayside installation (01B)																																																											
A3765	Installation of poles and building fixings	10	08-Nov-10	22-Nov-10	37																																																												
A3770	Overhead Catenary Line	23	22-Nov-10	24-Dec-10	37																																																												
A3778	Access for visual inspection to cable pits for cable laying (01B)	0	04-Nov-10		258	Access for visual inspection to cable pits for cable laying (01B)																																																											
A3779	Access to cable pits for cable laying (01B)	0	07-Dec-10		237	Access to cable pits for cable laying (01B)																																																											
A3780	Install Electrical Cables	12	07-Dec-10	23-Dec-10	87																																																												

Date	Revision	Checked	Approved
29-Aug-08		scs	

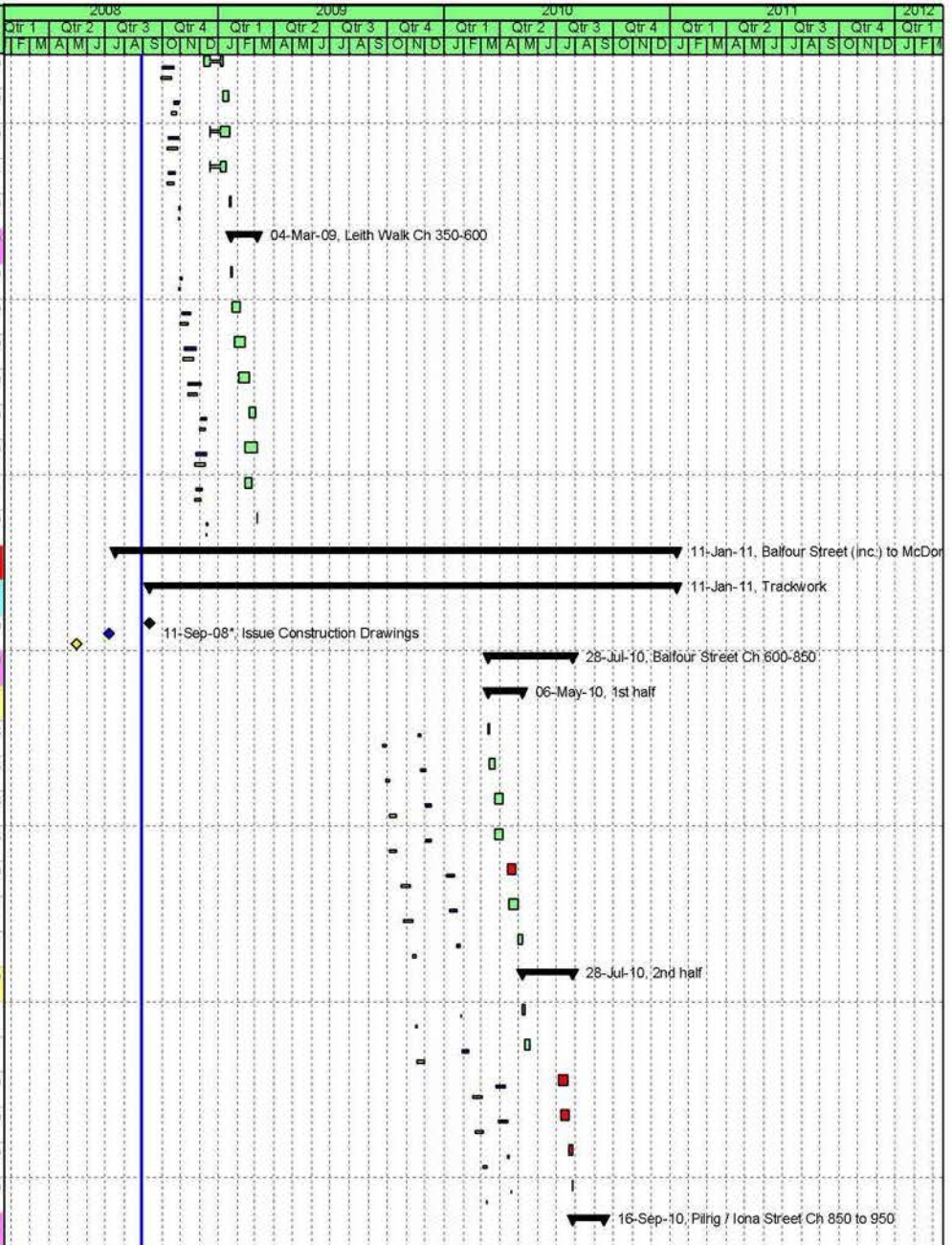
V26 Baseline
 Actual Work
 Critical Remaining Work
 V31 Baseline Milestone
 Remaining Work
 V26 Baseline Milestone
 Milestone
 Summary

CEC01154352_0051

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2008				2009				2010				2011				2012					
						Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1					
						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
A13140	Place upper concrete and cure	10	25-Aug-09	08-Sep-09	57																						
A13150	Street Surface finishes	3	08-Sep-09	11-Sep-09	57																						
A13160	Remove fencing and Traffic Management	1	11-Sep-09	14-Sep-09	57																						
Leith Walk Ch 350-600		118	14-Sep-09	12-Mar-10	6																						
1st half		88	14-Sep-09	29-Jan-10	0																						
A12770	Establish Traffic Management & Temp. Fencing	2	14-Sep-09	16-Sep-09	57																						
A12780	Excavate box	5	16-Sep-09	23-Sep-09	57																						
A12790	Excavate, lay and concrete ducts	8	23-Sep-09	05-Oct-09	57																						
A12800	Excavate and construct OLE bases	8	23-Sep-09	05-Oct-09	57																						
A12820	Set Track (250m)	10	07-Jan-10	21-Jan-10	0																						
A12830	Place upper concrete and cure	10	12-Jan-10	26-Jan-10	0																						
A12840	Street Surface finishes	3	26-Jan-10	29-Jan-10	0																						
2nd half		30	29-Jan-10	12-Mar-10	6																						
A13170	Excavate box	5	29-Jan-10	05-Feb-10	0																						
A13180	Excavate, lay and concrete ducts	8	05-Feb-10	17-Feb-10	0																						
A13210	Set Track	10	17-Feb-10	03-Mar-10	0																						
A13220	Place upper concrete and cure	10	22-Feb-10	08-Mar-10	6																						
A13230	Street Surface finishes	3	08-Mar-10	11-Mar-10	6																						
A13240	Remove fencing and Traffic Management	1	11-Mar-10	12-Mar-10	6																						
Roadworks		113	11-Sep-08	04-Mar-09	59																						
12140	Issue Construction Drawings	0		11-Sep-08	0																						
Foot of the Walk Ch 0-100		31	09-Oct-08	21-Nov-08	59																						
A12370	Establish Traffic Management & Temp. Fencing	2	09-Oct-08	13-Oct-08	59																						
A12380	Excavate for new channel and kerb line / remove existing kerbs	10	13-Oct-08	27-Oct-08	59																						
A12390	Construct Kerb lines	13	16-Oct-08	04-Nov-08	59																						
A12400	Reset Gullies	13	23-Oct-08	11-Nov-08	60																						
A12410	Surface new channel	6	11-Nov-08	19-Nov-08	60																						
A12420	Pavement Works	12	04-Nov-08	20-Nov-08	59																						
A12430	Street Lighting / Traffic Signals / Road Signs	7	04-Nov-08	13-Nov-08	64																						
A12440	Remove fencing and Traffic Management	1	20-Nov-08	21-Nov-08	59																						
Leith Walk Ch 350-100		31	21-Nov-08	20-Jan-09	59																						
A11970	Establish Traffic Management & Temp. Fencing	2	21-Nov-08	25-Nov-08	59																						
A11980	Excavate for new channel and kerb line / remove existing kerbs	10	25-Nov-08	10-Dec-08	59																						
A11990	Construct Kerb lines	13	28-Nov-08	18-Dec-08	59																						

Date	Revision	Checked	Approved	Page 15 of 53	V26 Baseline	Actual Work	Critical Remaining Work	V31 Baseline Milestone	Summary
29-Aug-08		scs			V31 Baseline	Remaining Work	V26 Baseline Milestone	Milestone	

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2008				2009				2010				2011				2012																														
						Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4																											
						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
A12000	Reset Gullies	13	08-Dec-08	08-Jan-09	60																																															
A12010	Surface new channel	6	08-Jan-09	16-Jan-09	60																																															
A12020	Pavement Works	12	18-Dec-08	19-Jan-09	59																																															
A12030	Street Lighting / Traffic Signals / Road Signs	7	18-Dec-08	12-Jan-09	64																																															
A12040	Remove fencing and Traffic Management	1	19-Jan-09	20-Jan-09	59																																															
Leith Walk Ch 350-600		31	20-Jan-09	04-Mar-09	59																																															
A12050	Establish Traffic Management & Temp. Fencing	2	20-Jan-09	22-Jan-09	59																																															
A12060	Excavate for new channel and kerb line / remove existing kerbs	10	22-Jan-09	05-Feb-09	59																																															
A12070	Construct Kerb lines	13	27-Jan-09	13-Feb-09	59																																															
A12080	Reset Gullies	13	03-Feb-09	20-Feb-09	60																																															
A12090	Surface new channel	6	20-Feb-09	02-Mar-09	60																																															
A12100	Pavement Works	12	13-Feb-09	03-Mar-09	59																																															
A12110	Street Lighting / Traffic Signals / Road Signs	7	13-Feb-09	24-Feb-09	64																																															
A12120	Remove fencing and Traffic Management	1	03-Mar-09	04-Mar-09	59																																															
Balfour Street (inc.) to McDonald Road (exc.)		576	18-Jul-08	11-Jan-11	222																																															
Trackwork		567	11-Sep-08	11-Jan-11	37																																															
12150	Issue Construction Drawings	0		11-Sep-08	0																																															
Balfour Street Ch 600-850		95	12-Mar-10	28-Jul-10	0																																															
1st half		37	12-Mar-10	06-May-10	31																																															
A12850	Establish Traffic Management & Temp. Fencing	2	12-Mar-10	16-Mar-10	6																																															
A12860	Excavate box	5	16-Mar-10	23-Mar-10	6																																															
A12870	Excavate, lay and concrete ducts	8	23-Mar-10	05-Apr-10	6																																															
A12880	Excavate and construct OLE bases	8	23-Mar-10	05-Apr-10	6																																															
A12900	Set Track (250m)	10	13-Apr-10	27-Apr-10	0																																															
A12910	Place upper concrete and cure	10	16-Apr-10	30-Apr-10	31																																															
A12920	Street Surface finishes	3	30-Apr-10	06-May-10	31																																															
2nd half		58	06-May-10	28-Jul-10	0																																															
A13250	Excavate box	2	06-May-10	10-May-10	31																																															
A13260	Excavate, lay and concrete ducts	8	10-May-10	20-May-10	31																																															
A13290	Set Track	10	05-Jul-10	19-Jul-10	0																																															
A13300	Place upper concrete and cure	10	08-Jul-10	22-Jul-10	0																																															
A13310	Street Surface finishes	3	22-Jul-10	27-Jul-10	0																																															
A13320	Remove fencing and Traffic Management	1	27-Jul-10	28-Jul-10	0																																															
Pilrig / Iona Street Ch 850 to 950		35	28-Jul-10	16-Sep-10	7																																															



Date	Revision	Checked	Approved
29-Aug-08		scs	

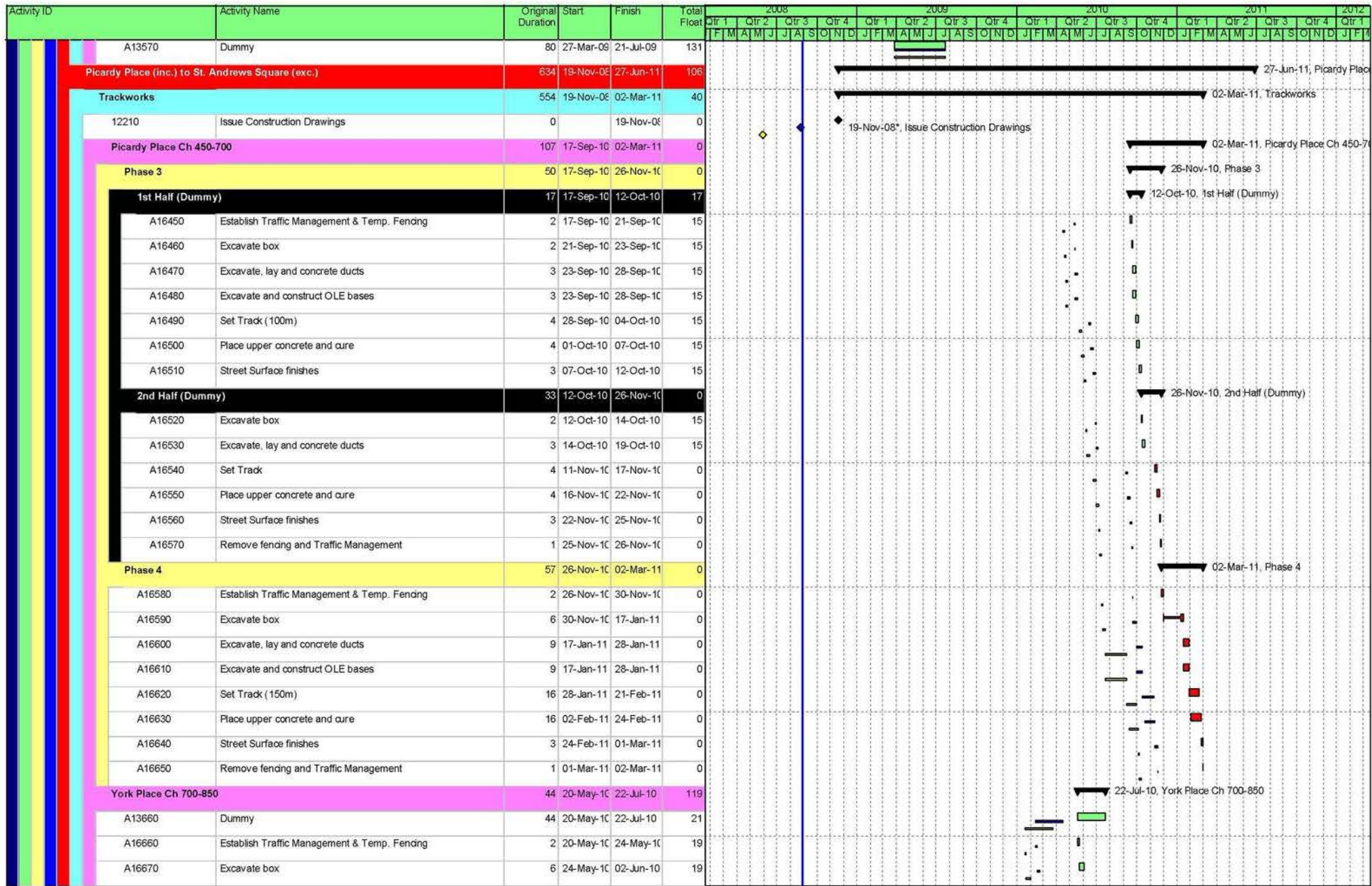
- V26 Baseline
- Actual Work
- Critical Remaining Work
- ◆ V31 Baseline Milestone
- Summary
- V31 Baseline
- Remaining Work
- ◇ V26 Baseline Milestone
- ◆ Milestone

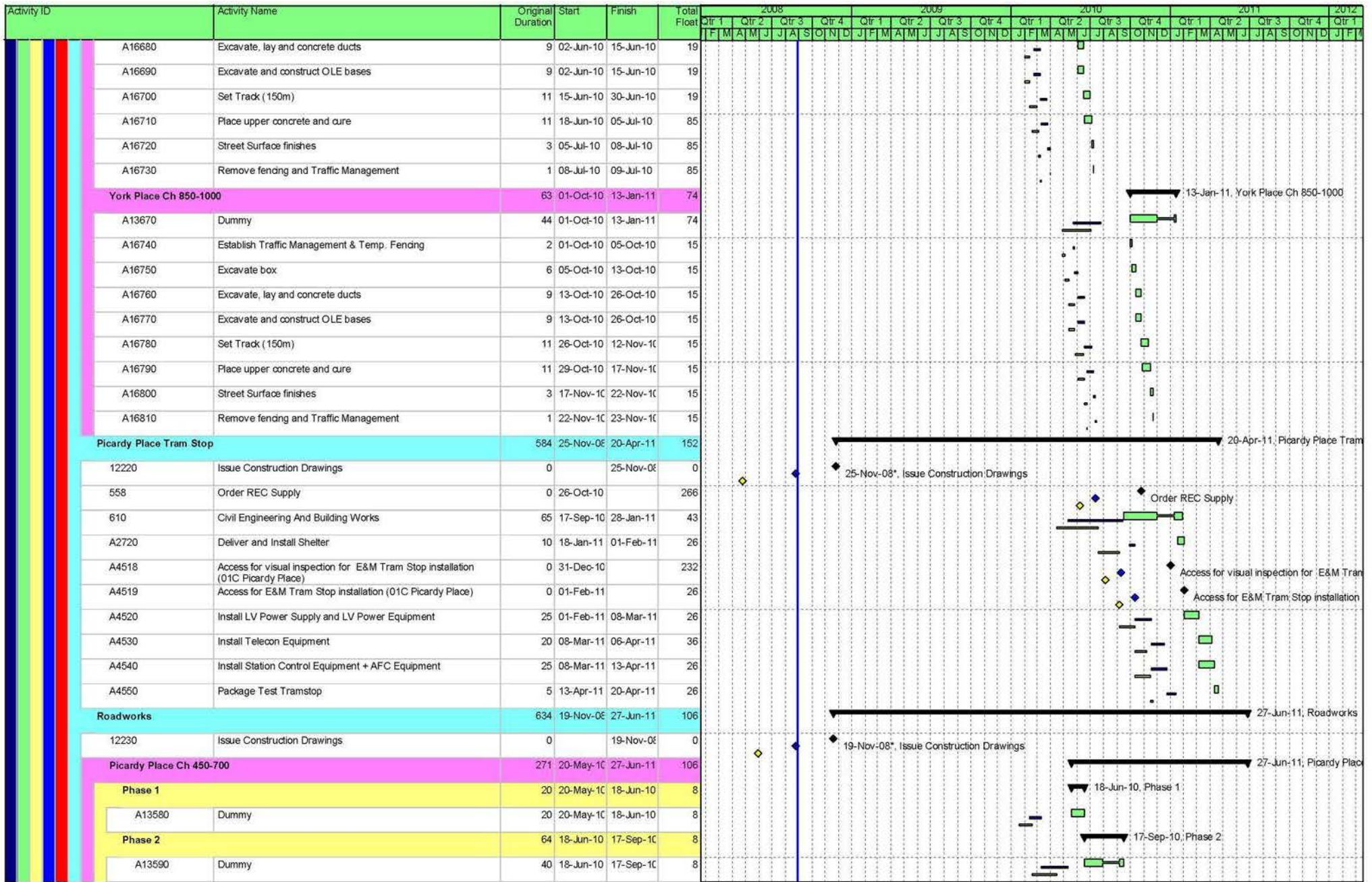
Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2008												2009												2010												2011												2012											
						Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4			Qtr 1			Qtr 2			Qtr 3			Qtr 4														
						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
1st half						18	28-Jul-10	24-Aug-10	1	▼ 24-Aug-10, 1st half																																																							
A12930	Establish Traffic Management & Temp. Fencing	2	28-Jul-10	30-Jul-10	0																																																												
A12940	Excavate box	2	30-Jul-10	04-Aug-10	0																																																												
A12950	Excavate, lay and concrete ducts	3	04-Aug-10	09-Aug-10	0																																																												
A12960	Excavate and construct OLE bases	3	04-Aug-10	09-Aug-10	0																																																												
A12980	Set Track (100m)	5	09-Aug-10	16-Aug-10	0																																																												
A12990	Place upper concrete and cure	5	12-Aug-10	19-Aug-10	1																																																												
A13000	Street Surface finishes	3	19-Aug-10	24-Aug-10	1																																																												
2nd half						17	24-Aug-10	16-Sep-10	7	▼ 16-Sep-10, 2nd half																																																							
A13330	Excavate box	2	24-Aug-10	26-Aug-10	1																																																												
A13340	Excavate, lay and concrete ducts	3	26-Aug-10	31-Aug-10	1																																																												
A13370	Set Track	5	31-Aug-10	07-Sep-10	1																																																												
A13380	Place upper concrete and cure	5	03-Sep-10	10-Sep-10	7																																																												
A13390	Street Surface finishes	3	10-Sep-10	15-Sep-10	7																																																												
A13400	Remove fencing and Traffic Management	1	15-Sep-10	16-Sep-10	7																																																												
McDonald / Brunswick Road Ch 950-1250						72	16-Sep-10	11-Jan-11	37	▼ 11-Jan-11, McDonald / Brunswick Road																																																							
1st half						38	16-Sep-10	09-Nov-10	37	▼ 09-Nov-10, 1st half																																																							
A13010	Establish Traffic Management & Temp. Fencing	2	16-Sep-10	20-Sep-10	7																																																												
A13020	Excavate box	6	20-Sep-10	28-Sep-10	7																																																												
A13030	Excavate, lay and concrete ducts	9	28-Sep-10	11-Oct-10	7																																																												
A13040	Excavate and construct OLE bases	9	28-Sep-10	11-Oct-10	7																																																												
A13060	Set Track (300m)	12	14-Oct-10	01-Nov-10	4																																																												
A13070	Place upper concrete and cure	12	19-Oct-10	04-Nov-10	37																																																												
A13080	Street Surface finishes	3	04-Nov-10	09-Nov-10	37																																																												
2nd half						34	09-Nov-10	11-Jan-11	37	▼ 11-Jan-11, 2nd half																																																							
A13410	Excavate box	6	09-Nov-10	17-Nov-10	37																																																												
A13420	Excavate, lay and concrete ducts	9	17-Nov-10	01-Dec-10	37																																																												
A13450	Set Track	12	01-Dec-10	17-Dec-10	37																																																												
A13460	Place upper concrete and cure	12	06-Dec-10	22-Dec-10	37																																																												
A13470	Street Surface finishes	3	22-Dec-10	10-Jan-11	37																																																												
A13480	Remove fencing and Traffic Management	1	10-Jan-11	11-Jan-11	37																																																												
Leith Walk Railway Bridge (S18)						0	12-Mar-10	12-Mar-10	424	▼ 12-Mar-10, Leith Walk Railway Bridge (S18)																																																							
26	Existing Structure	0		12-Mar-10	424	▼ 12-Mar-10, Existing Structure																																																											
Roadworks						211	11-Sep-08	23-Jul-09	160	▼ 23-Jul-09, Roadworks																																																							

Date	Revision	Checked	Approved
29-Aug-08		scs	

— V26 Baseline — V31 Baseline ■ Actual Work ■ Remaining Work ■ Critical Remaining Work ◆ V31 Baseline Milestone ◆ Milestone ▼ Summary

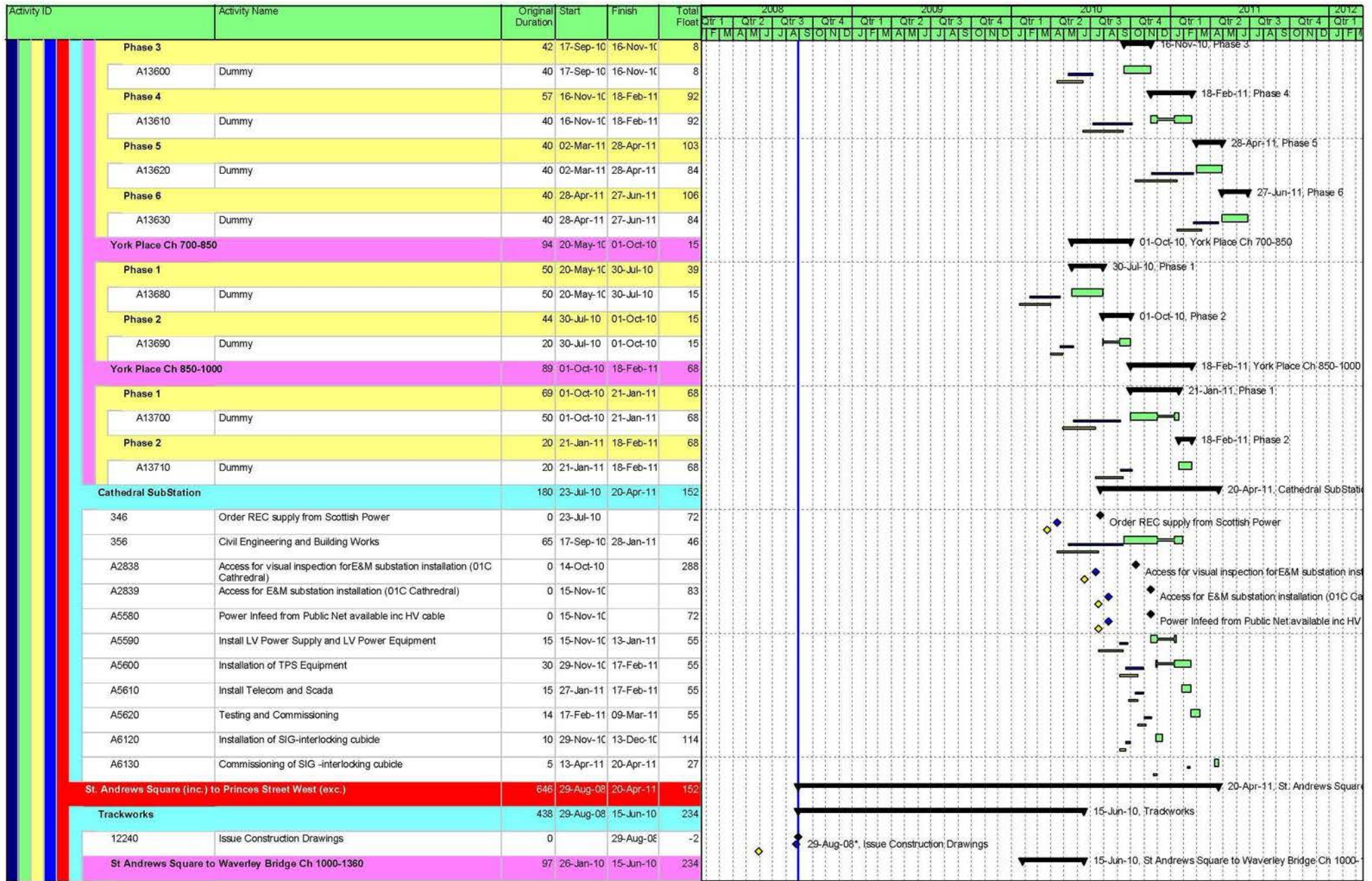
CEC01154352_0053





Date	Revision	Checked	Approved
29-Aug-08		scs	

— V26 Baseline █ Actual Work █ Critical Remaining Work ◆ V31 Baseline Milestone ▬ Summary
— V31 Baseline █ Remaining Work ◆ V26 Baseline Milestone ◆ Milestone



Date	Revision	Checked	Approved
29-Aug-08		scs	

