



Bilfinger Berger – Siemens – CAF Consortium

**EDINBURGH TRAM NETWORK
INFRA CO CONTRACT**

**PERIOD REPORT No 4 & 5
TO 16 AUGUST 2008**

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1 EXECUTIVE SUMMARY

Health, Safety and Environment

The Construction Phase Health and Safety Plan has been approved. No accidents or incidents have occurred in the period.

Mobilisation

Mobilisation is now well advanced. In the period the Consortium Project Office has been built and is currently being fitted out. It is anticipated that the communications and network will be "live" by mid September and that staff will move from Lochside House shortly thereafter. There is a potential further delay in the provision of the main FO cable which would delay the move and we are in discussions with BT on this matter.

Personnel

Staff recruitment and deployment is progressing and key personnel are in place to progress the available work.

Deliverables and Submissions

Production of management plan deliverables, construction control and safety documentation and Employer's Requirements documentation is in progress, and will accelerate in the next period as newly mobilised personnel become effective.

Programme

A revision to the Construction Programme is in progress to take account of delays resulting largely from Consents and MUDFA delays. Consents delays are as illustrated by V34 of the Design Delivery Programme. Agreement to an entitlement to extension of time arising from these delays, including those elements of delay attributable to the Design Delivery Programme in the Novation Agreement (V31) is urgently required. It is anticipated that the Programme revision will assist in coming to agreement by the end of August. The Programme uncertainty continues to be an impediment to procurement and project management

Design

Progress on the design has been made in the period, but continuing uncertainty in some critical areas, and lack of progress on some critical approvals, is likely to impact procurement and construction commencement. Alignment of BSC design with the base design has continued in the period. Uncertainty over payment for SDS resources allocated to Construction Support continues to cause considerable concern and must be resolved urgently to ensure these experienced staff remain available to the project.

The Systems design team have continued to make progress on the basis of available base design information. There are still areas of unapproved track alignment and OLE/power drawings and the lack of IFC information means that the risk of rework and delay still exists. This situation is being closely monitored and will be the subject of further discussion in the next period, to minimise risk and optimise progress.

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Approval for Auto-Tensioned OLE throughout the ETN will enable us to make good progress on the design in the next period.

Agreement to our proposals on Network Rail Immunisation will also facilitate progress.

Procurement

Procurement of civil package subcontractors has continued in the period, and closure of packages for the depot and section 7 is anticipated by end August subject to Main Contract resolution of extension of time. Available initial works and long lead procurement is being carried out on limited instruction, such that delay to construction start is minimised. The main example of this, in the period, is the negotiation of a letter of intent to Farrans for the Gogarburn Bridge. Resolution of contract programme uncertainty is required urgently, to ensure effective procurement of Package Contracts and other sub-contracts and management of these once they are in place.

Systems and Tram procurement activities have continued, with selection of key suppliers and securing of manufacturing timetables in progress. BAM Rail continue with rail procurement. Finalisation of IFC design is required urgently to allow other detailed design and long lead procurement, such as traction power sectioning and manufacture of S&C (points) to move forward.

Works

Site accesses, road crossings, demolition and site investigation have all progressed in the period along with the building of the Consortium Project Office as noted above.

Commercial

BSC's commercial team has been increased in the period and continue to and manage procurement, contract financial procedures and change. The number and volume of design change issues, together with the significant effort required to satisfy the ongoing commitment to achieving Value Engineering savings where possible, continues to be the most demanding workload for the team. In the period a number of instructions for design changes to accommodate services have been issued. The Change team will be assessing the effects of this over the next period. They are likely to have a significant effect on the programme.

Other

A useful and informative visit to Berlin took place in the period to see the Rheda Trackform installation process.

2 HSQE MANAGEMENT

2.1 Health & Safety

2.1.1 Safety Management, including CDM

The Construction Phase Health and Safety Plan Revision 3 was issued to **tie** on 9th July and addressed previous comments. The plan was accepted by **tie** on 14th July 2008.

A BSC Safety procedures training seminar is planned for the end of August.

Network Rail Construction Phase Plan

The Plan was issued to Network Rail on 18th July. Meeting to be arranged with Network Rail to discuss their comments and obtain acceptance of the Plan.

2.1.2 Accidents & Incidents

No accidents during period 4.

There have been no accidents between the end of period 4 up to 1st August 2008

Two Near Misses reported in the period on the project.
No reportable incidents in the period. AFR for the first four periods is 0.00.

The total number of hours worked in period 4 was 22,683.

Non Site Hours = 18,100
Site Hours = 4,583

Breakdown of Site Hours

Parsons Brinckerhoff	1,238
BSC	610
Subcontractors	2,735

2.1.3

Tie in conjunction with the HSE held a Seminar on Occupational Health for all Infraco and Mudfa contractors involved on the project. All attendees regarded the seminar as very worthwhile.

2.2 Quality

2.2.1 Quality Management

The Project Management Plan (including Project Quality Plan) was issued to **tie** on 11th July. No comments received from **tie**.

No Inspection and Test Plans have yet been formally submitted to **tie**.

The implementation of a solution to address the requirement for project collaboration and project control through BIW is ongoing. Following introductory training BIW went

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live for BSC and SDS on 31st July. It is anticipated **tie** will have access within the next few weeks.

Quality Management System training sessions for new staff is ongoing.

2.2.2 NCR's

NCR raised by **tie** at Caley Ale House for lack of dust suppression as per agreed Work Package Plan. Proposed actions implemented and NCR closed out.

2.2.3 Audit

An assessment audit was carried out on Farrans on 30th July. An assessment audit on Barr is in the process of being arranged.

A Link up version 2 audit (on BBUK's Rail Management System) was carried out over 23rd & 24th July.

A BSC 'site set up' audit is planned for mid August.

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 to be submitted w/c 4th August.

An Edinburgh Tram specific template is being developed for the Site Specific Environmental Management Plans.

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

The Rail Management System has been revised to satisfy the requirements of Link Up Version 2. Procedure and form updates were issued to the BSC Management system on 18th July 2008.

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2.4.2 Deliverables prior to construction commencement.

Project Management Plan

Revised plan issued 11th July. Awaiting comment from tie.

Construction Health and Safety Plan

Accepted by tie 14th July.

Construction Management Plan

Contained within Section 16 of the Project Management Plan.

Network Rail Interface Plan

Covered by the Network Rail Construction Phase Plan which is addressed under 2.1 Health & Safety.

Quality Management Plan

This forms part of the Project Management Plan

Traffic Management Plan

Issued 11th July within Section 20 of the Project Management Plan.

2.5 KPI's

KPI spreadsheet for Period 4 was submitted to tie on 22nd July along with associated notes; a further copy is attached as Appendix 10.1.

3 PROGRAMME

3.1 Contract Programme Status

The programme, attached to this report, has two baselines. One baseline shows the original Contract Programme (which is based on V26 of the SDS Design Programme) and one which updates the IFC dates in line with version 31 of the SDS Design Programme. The second baseline has been produced without any changes being made to the original logic of the contract programme.

Progress achieved up to 01 August 2008 has then been recorded against the above baselines including inputting the latest IFC dates received from SDS (V34). The links between the Advanced Works Contract activities and the activity “Award of Contract” have been removed to prevent any erroneous effect occurring due to non completion of Advanced Work items. The links between design and OLE base construction and track electrification –dispatch and OLE pole erection have also been adjusted to prevent delays being shown.

No revised MUDFA programme has been received and therefore where MUDFA completions were shown as being completed before the 01 August 2008 they are now defaulting to the data date.

The result is the following changes to Section Completion Dates:

	21 June Update	21 June 2008	29 April 2008
A	04 June 2010	26 May 2010	25 March 2010
B	20 July 2010	15 July 2010	09 May 2010
C	16 May 2011	19 April 2011	17 January 2011
D	13 November 2011	17 October 2011	16 July 2011

The above slippage is a direct consequence of incorporating design programmes V31 and V34 into the contract programme. The period change in sectional completion dates predominately results from the need to undertake redesign at South Gyle Access Bridge and hence delay its construction. It should be feasible to mitigate some of this delay by resequencing the trackwork associated with this section of the works.

Programme update attached as Appendix 10.2

3.2 Look Ahead Programmes

The 3 month look ahead programme takes the above update to the contract programme and as well as adding further detail makes a number of assumptions to be able to provide a working programme of the activities to be undertaken in the next 3 months. The following points should be noted.

- As reported last period, roadworks now start in Leith Walk on 1 September due to the IFC date of section 1B now being predicted to slip to 31 July 2008. It is proposed that these works commence with CH 100 to 350 and not the Foot of the Walk junction as originally programmed.

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- It is assumed that construction of Haymarket Viaduct can commence without the completion of the new Station Car Park Access Road.
- Commencement of Haymarket Viaduct is dependent on approval of our Works Package Plan by Network Rail.
- An IFC date for the Scotrail Depot Car Park has been added for 19 September 2008
- The IFC for Murrayfield Tram Stop Retaining Wall has been put back to the end of August (V34 14 July 2008) because we understand CEC have rejected the current design.
- 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, the temporary works design and associated ground investigation is currently being progressed.
- The programme for South Gyle Access Bridge (and the connected Bankhead Drive Retaining Wall) assumes the instructed redesign to relocate the piles to avoid an existing sewer will be completed by 8 August 2008.
- The programme does not include for the potential change order to relocate the street lighting cables at South Gyle Access Bridge.
- The programme does not include for the potential change order to relocate the high voltage electric cable running through the proposed location of the north abutment at Carrick Knowe Bridge.
- The commencement of works at Gyle Tram Stop Retaining Wall is dependent upon and assumes MUDFA will be complete in this area by 29 August 2008.
- A8 underpass is programmed to commence on 28 August 2008 following receipt of IFC on 30 July 2008 and assumes that MUDFA will have removed all conflicting traffic management by this date.
- MUDFA is assumed to be completed in the depot area by 1 September 2008 which will allow excavation to commence.
- The initial material excavated from the depot will be hauled to the surcharged embankment in area 7.
- We await details of the Murrayfield Accommodation Works which were programme to be completed in the SRU close season.
- IFC drawings for the hotel car park (Section 7) are assumed to be available by 12 August 2008.
- The programme does not include for the sewer diversion works at Gogarburn Bridge.

Look Ahead Programme attached as Appendix 10.3

3.3 Design and Consents Programme Status

A further tie / BSC meeting has been held to consider the effects of V31 and other delays to the contract programme. A timetable has been established to agree a revised programme by the end of August 2008.

Delays and disruption due to design changes and CEC late responses are to be included into the programme and submitted for approval. Prioritisation programme agreed with CEC regarding Technical Approvals Roads

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3.4 Tramco Programme Status

Tram design, procurement, manufacturing, delivery and commissioning programme attached as Appendix 10.4.

3.5 Critical Impact Notices

The following present potential risks to the programme:

Completion of MUDFA works.

We do not have a copy of the current MUDFA programme and its effect, if any, cannot therefore be analysed against the contract programme. To assist our short term planning we have to assume a number of completion dates as noted above.

IFC dates post V31

We are still experiencing slippage to the programme as the result of the projected late release of IFC drawings.

Track /Roads Alignment Issues

We are programmed to commence roadworks on Leith Walk on 1 September 2008. However our current programme does not include for full reconstruction.

Transfer of MUDFA Works to INFRACO

We are aware of utility diversions required at South Gyle Access Bridge, Carrick Knowe and Gogarburn Bridge that will effect the commencement of these structures.

Network Rail Form C Implications

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 approval

Murrayfield Accommodation Works

We understand that the third party agreement with the SRU is still to be signed. The associated accommodation works were programmed to be undertaken between June and August 2008 to allow construction of Structure 21B and access to 21E. If this work has to be delayed until next summer it will have a critical effect on the programme.

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.

By geographical area the issues are as follows:

Section 7;

- The construction of Burnside Road for BAA.
- Location of Airport Tramstop.
- RBS requirements for Gogarburn Tramstop.
- Archaeological Works obstruction to INFRACO.

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- MUDFA Completion date.

Section 6;

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

Section 6 / 5C;

- 1500 Sewer diversion.
- Consortium Offices.

Section 5C;

- MUDFA completion.
- A8 Underpass value engineering.

Section 5B;

- Edinburgh Park Viaduct value engineering.
- MUDFA completion.
- Transfer of MUDFA works to INFRACO

Section 5A;

- SRU 3rd Part Agreement completion.
- SRU Accommodation Works.
- Roseburn Street Viaduct value Engineering.
- Scot Rail Depot (Oil Tanks etc.).
- MUDFA completion.

Section 2;

- Caledonian Ale House demolition

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

- Alignment of pavement design with INFRACO bid.

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

3.6 Milestones

No comments on current milestone allocation/structure (see section 7.1 below for comment on milestone commercial issues)

4 PROGRESS

Programme update attached as Appendix 10.2.

Look-ahead programme attached as Appendix 10.3.

4.1 Mobilisation

4.1.1 Consortium

As Executive Summary

4.1.2 Civil & Building

As Executive Summary

4.1.3 E&M Systems

Major internal procedures like delegations, commercial basic works, procurement and meeting schedules in a fortnightly frequency filled out the past mobilisation. Due to the availability of new site office in October, Siemens extended office accommodation at Lochside House. A Team Assistant will start as in September to support team.

4.1.4 Trams

As Executive Summary

4.2 Engineering

4.2.1 Civil & Building Design

4.2.1.1 Production of Design

Substantial progress has been made in concluding the detailed design, securing outstanding approvals and consents.

All NR Approvals due to date have been granted. There is one NR approval outstanding but this is not due until December.

SDS has received a significant volume of comments on the roads technical approval packages. These have not prevented approval being granted but will demand rework of the SDS design prior to the issue of the IFC versions of the drawings. Meetings have been held with CEC to resolve the comments and all but very few of the comments are points of minor detail but will need to be addressed nevertheless.

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. There is still no final agreement between CEC and Forth Ports on Bypass Road. If not quickly resolved this will fundamentally impact TRO and Ocean Terminal design. **tie** have instructed SDS to

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move the design on with Rev 3 of the agreement drawings. SDS understand, however, that these issues are not formally resolved with Forth Ports and this is likely to result in objection to the Prior Approval.

The redesign of Roseburn Street Viaduct is to be instructed and will require a complete redesign of the structure taking several months to complete along with its approaches and associated approvals and consents.

To date the workshops have not identified any new significant areas of misalignment between the BSC offer and the SDS design and some further progress has been made in the identification of the potential solutions for alignment of the previously identified misalignments. These are summarised below indicating the areas of concern to be addressed: Other than these areas BSC understand there are no further amendments to the design required and will continue to progress the outstanding detailed design and associated approvals and consents to Issue for Construction status.

Structures

Roseburn Viaduct , original SDS design, was issued for IFC on target as per v31 of the programme on 25th July 2008. SDS attended two meetings with BSC on 25th and 28th July to discuss the VE opportunities moving forward. SDS have since been advised that Option A will be progressed. BSC believe that the SRU agreement was signed w/c 28th July but have not been issued the document and are not aware of the requirements or constraints which may impact this VE.

South Gyle Access Bridge is to be revisited regarding the structural design of the bridge in order to clear Scottish Water sewers in the vicinity of the sub-structure. VE investigation is ongoing.

Roads

Split into two areas, geometry and pavement design.

Geometry – The status of the roads geometry design has not changed significantly in this period regarding opportunities to modify the geometric design for roads to reduce the scope of the associated highway works by methods such as reducing the freeboard height at kerbs. The proposal produced by BSC is being reviewed by CEC and opportunities for re design to reduce the scope of the roads works have been discussed on 31st August.

Pavement design – FWD, GPR and coring is now complete. Laboratory testing is ongoing. BSC will submit an initial report by 7th September. The on-street testing was hampered by CEC and Police. Tie is to issue their design load to BSC to commence the pavement design.

Utilities

Information from **tie**/MUDFA is now concluding on CCTV sewer and manhole and sewer positions within the tramway exclusion zone and at SDS designed structures. Sewer clashes are evident from this late information in the following areas.

South Gyle Access Bridge
Russell Road Access Ramp
Water of Leith Bridge

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The comparison of this late information has highlighted that a diversion of the sewer is no longer the best solution that the structure should be modified. SDS have submitted a Change Estimate for Russell Road Access Ramp and South Gyle Access Bridge (under instruction from BSC/tie). PB is currently reviewing the impact on Water of Leith but the current information supplied does not appear to be accurate to make an accurate judgement.

PB have submitted at the request of BSC 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.

Now in receipt of the sewer information SDS are issuing approval drawings to Scottish Water and tie for the sewer diversions. The first package of IFC drawings for sewers has been issued to tie for Section 1B.

The remaining 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 ie at Newhaven were tie are proposing an easement outside the LOD and Ocean Terminal were the kerb positions are still to be confirmed and Picardy Place were we are awaiting acceptance of design solution.

As-built records have been requested from tie in an accurate format. Submissions received so far fall short of this requirement.

Construction & Design Team Support

SDS have mobilised resources to assist BBS with the BBS detailed design support and construction design support. This team has assisted with the conversion of drawings, technical queries, and approvals and consents assistance. The team is integrating with the BBS construction team and is continuing to maintain links with CEC.

Progress has been made in agreeing the protocol for determining the size of the Construction Support Team on a monthly basis although SDS and BBS still await formal approval for the resource allocation to the project in accordance with the Novation agreement. This is urgently required to maintain the support currently being provided. The nominal size of the teams for the past period was agreed as follows;

Construction Support
Project Manager (1No)
Engineering (2no resources)
Inspectors (2no resources)
Administrator/Doc Control (1no shared with Design Support)
CAD (1no)

Design Support
Engineering (2no)
Administrator/Doc control (1no shared with Construction Support which means 1 no total between Construction and Design)
CAD (1No)

It has been agreed that additional ad-hoc support will be provided by PB as requested by BSC and tie.

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In accordance with the Terms and Conditions of the Novation Agreement SDS have prepared weekly Construction/Design Support Report and weekly Design Support Team Reports.

4.2.1.2 Approvals and Consents

Total Number of Detailed Design Packages	Total Delivered	Total Outstanding	
330	310	20	
Total Number of Planning/PA/Building Warrant Packages	Total Approved	Total Remaining to be Approved	Total Remaining to be Submitted
96	54	42	16
Total Number of Technical Approval Packages	Total Approved	Total Remaining to be Approved	Total Remaining to be Submitted
115	66 with 63 approved at time of writing and 3 are due in w/c 11/8	47	11
Total Number of IFC Packages	Total Delivered	Total Outstanding	
115	33	82	

There is good progress towards gaining all the necessary planning and technical approvals.

From a total of 211 approvals:

55% are approved (117)
 32% are pending approval (67)
 12% to be submitted (27).

24 Approvals were granted during the last 4 weeks.

- Prior Approval for St Andrew Square granted.
- Technical Approval for Roads 1C1 and 1C3 (minus 1C2) granted subject to 1200+comments from CEC. SDS currently assessing 70 pages of comments.
- 1/08 Foot of the Walk – Approval due.
- 1C2/ 1/12 Picardy Place – ongoing work with CEC to complete modelling and technical design
- 1/17 Shandwick Place –BSC is awaiting Instruction to carry out design changes requested by CEC.

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- Listed Building Consents – 11 applications delayed by CEC Planning oversight in advertising applications. 9 IFCs will be delayed as a result of this additional request for time to determine these applications.
- 5/06 Murrayfield Stop. Prior Approval was submitted on 25 April but not validated until 27 May and on weekly list 2 June. IFC was due on 27 June. Design amendments required by CEC have been sketched and submitted for comment. Change estimate submitted.
- 5/07 Roseburn Viaduct/Stadium Retaining Wall works 5/10 Balgreen Bridge Stop/Baird Drive/ 522 line of Route – Prior Approval granted and IFC submitted.
- 5/30 Gogarburn Stop– tie to instruct BBS regarding the Prior Approval application date. IFC critical path for construction is to be maintained.
- Roads 5B – approval due on 5 August.
- Building Warrant for Depot - awaiting report from CEC Building Standards on application.
- Approvals for 7/26 Culvert and 7/27 Ingliston due in the next week.
- 7/29 Airport – being submitted to CEC for Informal Consultation w/c 11 August.

4.2.1.3 Issues and Concerns

There remain numerous areas where progress to complete the detailed design remains hindered/blocked.

- Delay to Murrayfield Stadium Tram Stop and Murrayfield Stop retaining walls. In accordance with Version 31 of the SDS programme, SDS submitted the Prior Approval for the Murrayfield Stop and Retaining Wall stop batch on 25 April 2008. It was validated by CEC on 27 May 2008.
The following IFC dates have not been met.
Murrayfield Stop Retaining Walls (SDS51560) 27 June.
Murrayfield Stadium Tram Stop (A26680) 27 June
CEC did not give BSC formal comments on the Batch until 8 weeks after submission (which is not as per the agreed protocol) and this has considerably affected the programme for IFC's. Any delay due to changes could have mitigated if CEC had responded in a timely manner.
Change Control is in place for this – see DCR0019.
Signed SRU agreement not received. Impact on current design and accommodation works is not known. BSC believe that re-design will need to be progressed for the stadium accommodation works (as well as the Structure VE changes mentioned before). This change may require planning permission. BSC await instruction from tie.
- SDS, BSC, tie and BAA have agreed a Way Forward in Principal in order to progress the design and approvals at the Airport. SDS are planning to start informal consultation on the technical and prior approval in w/c 11th August. Due to the ongoing delay 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
General landscaping requests from CEC which DO NOT require PA. This has impacted batch 7/28 – Ingliston Park and Ride. Generally these issues cause a small delay to the prior approval but this may impact on the IFC for each instance.
There is still not final agreement between CEC and Forth Ports on Bypass Road. If not quickly resolved this will fundamentally impact TRO and Ocean Terminal design. BSC submitted information to CEC Roads Authority for Technical Approvals on 18 April 2008. To date, no comments have been received from

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CEC, which were due by 04 July 2008 under v31 of the SDS programme. As such the following IFCs will be delayed.

- Network Rail Balgreen Access Road Bridge The programme is in delay due to a delay in accessing the Infrastructure to do additional GI surveys.
- BSC has also received numerous design changes from CEC during the formal consultation stage of the prior approvals, as listed below. After all of the time spent developing preliminary design, detailed design and having informal consultation it is very disappointing that new comments are received at this stage and these will, in many cases impact on the IFC dates and will require change instructions to be issued to BSC for the design to be amended.
- 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, we should have received a response by 18 June 2008. This did not happen and tie and SDS have been chasing Scottish Water (SW) and Business Stream for responses by email and telephone over past month. The issue was escalated with tie at the start of July and contact was made with Scottish Water chairman. tie is to continue to press Scottish Water for comments.

4.2.2 E&M Systems Design

OHLE / TPS

- **Production**

OLE/ TPS: will start after design phase

- **Approvals and Consents**

OLE: design phase has started with planners for depot, outer city and city section packages.

Principle of auto tensioned Catenary system for off-street (Haymarket – Airport) areas agreed with tie/CEC – to be confirmed in writing.

Principle of auto tensioned trolley wire system for on-street (Haymarket – Newhaven) agreed with tie/CEC – to be confirmed in writing

Demonstration to tie/CEC of OCS installation in Potsdam held successfully.

TPS design has not started yet due to missing tram data.

- **Issues and Concerns**

TPS: design phase not started (required information not complete); potential impact on programme/ further acceleration of design phase may be required

Trackwork

- **Production**

Proposals for replacing the Plinth-Track by Rheda City track are under preparation.

Preliminary trackwork design has been commenced.

A site visit in Germany has been done with representatives of CEC, tie, Siemens and Trackwork suppliers to illustrate the trackforms.

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- **Approvals and Consents**

No trackwork engineering documents have officially been submitted yet for approval.

- **Issues and Concerns**

The track alignment has not been issued for construction. AutoCAD drawings have been received by SDS but their status is not confirmed. MX-data are awaited for engineering and procurement purposes.

Depot Workshop Equipment

- **Production**

DWE: will start after design phase

- **Approvals and Consents**

DWE design phase not started yet on all equipment (required information not complete)

Inquiries on major equipment prepared

- **Issues and Concerns**

DWE: design phase not started, yet on all equipment (required information not complete); potential impact on programme/ further acceleration of design phase may be required

Signalling, Scada, PIS, PA, Comms

- **Production**

Works to programme no significant issues

- **Approvals and Consents**

No documents have officially been submitted yet for approval.

4.2.3 Tram Design

See progressed programme attached as Appendix 10.4.

4.2.4 System Assurance

System Assurance/Requirements management will be led, within the Consortium, by Siemens. A DOORS based management system for requirements is being established, and existing SDS Design Assurance Statements will be incorporated into this system. A full report on System Assurance will be instituted when the system is functional.

4.2.5 Design Change Management

Management of the process of Design Change is part of the responsibility of the Consortium Engineering Manager, working closely with the Systems Engineering Manager.

4.2.6 Value Engineering

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- Roseburn Street Viaduct Option A
- Reduced ballasted track thickness
- Deleted noise attenuation
- RBS bunded material
- Deleted concrete apron to security fence at depot
- Deleted inner pavement to depot
- Depot future car-park
- Deleted pumping station at depot

4.2.7 RFI's and TQ's

4.2.7.1 Civil & Building Works

See Appendix 10.4A

4.2.7.2 E&M Systems

Siemens distribute TQ's and RFI's for all lots to proceed with design process. Interface management has started to clarify scope & identify misalignment between offer and SDS design.

4.3 Civil & Building Works

4.3.1 Procurement

4.3.1.1 Subcontractors

A subcontract procurement schedule, showing status at 4th August, 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 continue with RJ McLeod and other potential package contractors for Section 1A. The aim is to conclude these around the beginning of September 2008.

Section 1B

Tender invitations were issued to several contractors to be involved in Section 1B and we expect to receive at least 3 completed tenders during week commencing 4th August 2008. We hope to conclude negotiations before the end of August 2008. In the meantime we are progressing with the preparation of Section 1B as if BBUK intended to construct the works.

Section 1D

Expressions of interest in receiving a tender package for Section 1D have been sought and it is our intention to send these packages out before the end of August 2008.

Section 2A and 5A (Part)

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A Limited Instruction to Proceed has been issued to Grahams for the demolition of the Caledonian Ale House and this can be amended to include other areas of Section 2A as required. A letter of intent has been issued to Hunter Demolition to include other affected buildings in Section 2A and 5B including.

We are prioritising our negotiations with subcontractors to focus on Russell Road Bridge and Haymarket Viaduct.

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

We have sought quotations for Formwork, Reinforcement and Concrete for all of the structures along this section and we are now carrying out an adjudication process on the returned tenders. We hope to conclude our adjudication process within the next two weeks.

Section 6

We are currently finalising the terms and conditions of the full subcontractor order for Barr Ltd for the construction of the depot. A further meeting is arranged for Tuesday 12 August 2008 to progress the conclusion of outstanding matters. 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.

Section 7A

Negotiations are proceeding with Farrans to conclude a subcontractor order and a meeting is arranged for the 6th August 2008 to agree the terms of a Limited Instruction to Proceed and discuss the terms and conditions of the Form of Subcontract.

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 is progressing in line with the construction dates based on the V31 design programme dates. Non availability of 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

Where it has been necessary to secure our programme position we have issued a letter of limited instruction to proceed or a letter of intent e.g. we have issued a letter of intent 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**.

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4.3.2 Construction

4.3.2.1 Progress on site, to 8th Aug 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 commenced.
Ch 100 -350 Traffic Management phasing approved

Section 1C McDonald Rd to Princess Street West

Site Investigation works have been carried out

Section 1D Princess St to Haymarket

Site Investigation works have been carried out
Shandwick Place - Topographical Survey work has been carried out

Section 2A Haymarket to Roseburn Junction

Haymarket Station Viaduct
Demolition of Caledonian Ale House has continued
Traffic Management phasing scheme has been submitted

Section 5A Roseburn Junction to Balgreen Rd

Murrayfield Retaining Walls – Site Investigation works completed

Baird Drive Retaining Wall - Site Investigation works completed. Site access location approved

Demolition consents ongoing – Simlock, Viking & ECR buildings

Russel Rd Underbridge –Traffic Management scheme modification ongoing

4.4 E&M Systems

4.4.1 Procurement

4.4.1.1 Trackwork

Orders have been placed for :-

- S49 for ballasted and grass track
- 60R2 for straight track on-street
- 59R2 for curved track on-street
- Switches – rail section 59R2. As noted above, detailed alignment design is required for switch design and manufacturing.
- Rheda sleepers.

Trackwork subcontractor (BAM Rail) in place.

4.4.1.2 Other Systems

Procurement dependent on design progress, as noted above

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4.5 Trams

Programme attached at the end of section 4 showing the progress up to the end of August. Narrative report will be sent at the end of Period Report 5

4.5.1 Procurement

Supplier selection in progress. Preparation of supply orders in progress. Initial procurement for car body components commenced.

4.6 Testing, Commissioning and Start-up

No comments

4.7 Delays and Recovery Action

The process of identification of key delays and possible recovery action has now commenced (eg discussion of how best to deal with impact of V26-V31 design delivery dates), but has not yet led to agreed mitigation. As BSC permanent staff are mobilised and appreciate the background to issues, this process will become more effective.

A summary of Delay/Recovery Action progress will be included in future reports.

5 tie OBLIGATIONS

A commentary from BSC on **tie** progress in discharging obligations, and any significant impacts, will be included in future reports.

6 STAKEHOLDER AND THIRD PARTY ISSUES

Agreement to utilise tie's Public Liaison Manager in a "Project" role, i.e. on behalf of tie and BSC was made in the period. First indications are that this works well and will contribute further to Project Team. Public Liaison will be reported more fully in future reports.

The Consortium Traffic Manager is working closely within the existing project TM structure to ensure this critical area is efficiently managed. The importance of providing accurate construction start dates and TM arrangements to third parties is well understood, but is of course significantly impacted by the currently unresolved impact of delay in issue of IFC design on the programme.

BSC await the issue of **tie's** 3rd party Agreement Programme.

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

Month 4 Network Rail Immunisation
A12370 Foot of The Walk Establish TTM & Temp Fencing
1138 Haymarket Stn Viaduct Demolish Caley Ale House
1139 Bankseat at Grid Line 1
192 Haymarket Stn Viaduct Pier 2
227 Haymarket Stn Viaduct Pier 3
496 Haymarket Stn Viaduct Pier 4
508 Haymarket Stn Viaduct Pier 5
1099 Haymarket to Roseburn Bulk Excavation Subbase
103 Russell Road UBdge Excavation
103 Russell Road UBdge Piling
103 Russell Road Ret Wall W3 & W4 Site Clearance
108 Murrayfield Ret Wall W18 Site Clearance
182 Murrayfield Ret Wall W18 Site Clearance
217 Murrayfield Ret Wall W18 REW 14% Complete
110 Murrayfield Ret Wall S21B Site Clearance
197 Murrayfield Ret Wall S21B Demolition
378 Murrayfield Ret Wall S21B Foundations

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112 Murrayfield Ret Wall S21C Site Clearance
187 Murrayfield Ret Wall S21C Demolition
358 Murrayfield Ret Wall S21C Earthworks
127 Bankhead Ret Wall W11 Construction
Snagging Bankhead Ret Wall W11
3rd Party Bankhead Ret Wall W11 Third Party Sign off
213 South Gyle Access Earthworks and Subbase
758 EPSB North Approach Base Construction Steelfixing
426 EPSB North Approach Excavation
140 EP to Gyle Trackwork Earthworks and Subbase
139 Gyle Tram Stop Ret Wall W16 Wall Construction
Snagging Gyle Tram Stop Ret Wall W16
159 Gogarburn UBdge S29 Temp Access Road Etc

7.2 Changes/Instructions/Departures

See Appendix 10.6

7.3 Risks and Opportunities

7.3.1 Risk

There remains a significant risk of further delay and additional cost to the Project arising from delays to Consents and completion of Service Diversions. Further additional time and cost impacts may arise from re-design for un-diverted services and/or instructed diversions to be carried out under the Infraco Contract. The Contract processes for agreement of estimates for these and other changes may become a delaying factor due to the large volume of change issues which is already becoming apparent on the Project.

7.3.2 Opportunity

BSC are doing feasibility exercises in respect of condensing sections of the programme, for example in Leith Walk, at tie's initiative.

BSC will seek to identify further VE opportunities and delay mitigation measures in the following period.

8 RESOURCES

8.1 Organisation Chart

See Appendix 10.7

9 OTHER ISSUES

No comments



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10 Appendices

10.1 KPI Report

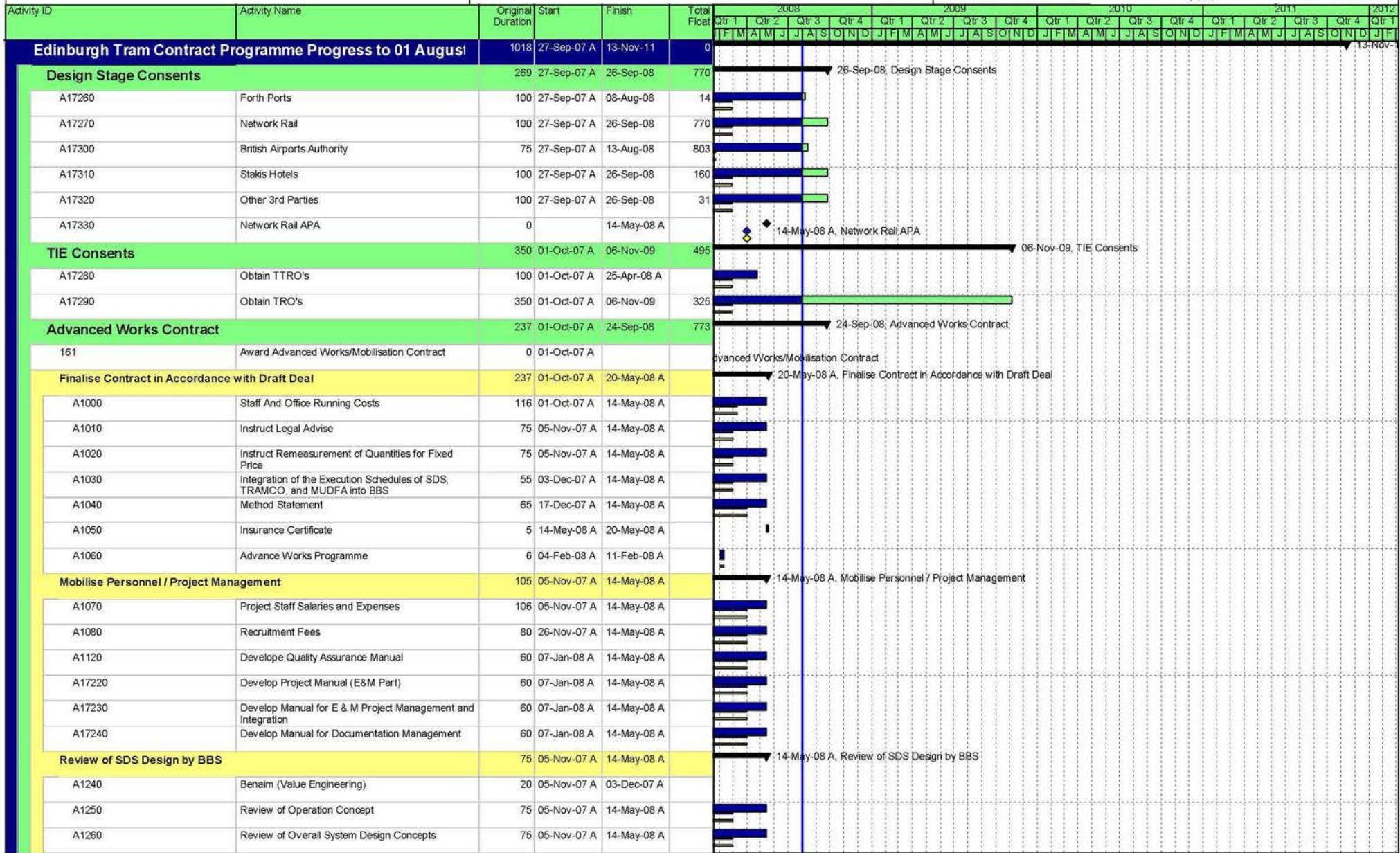


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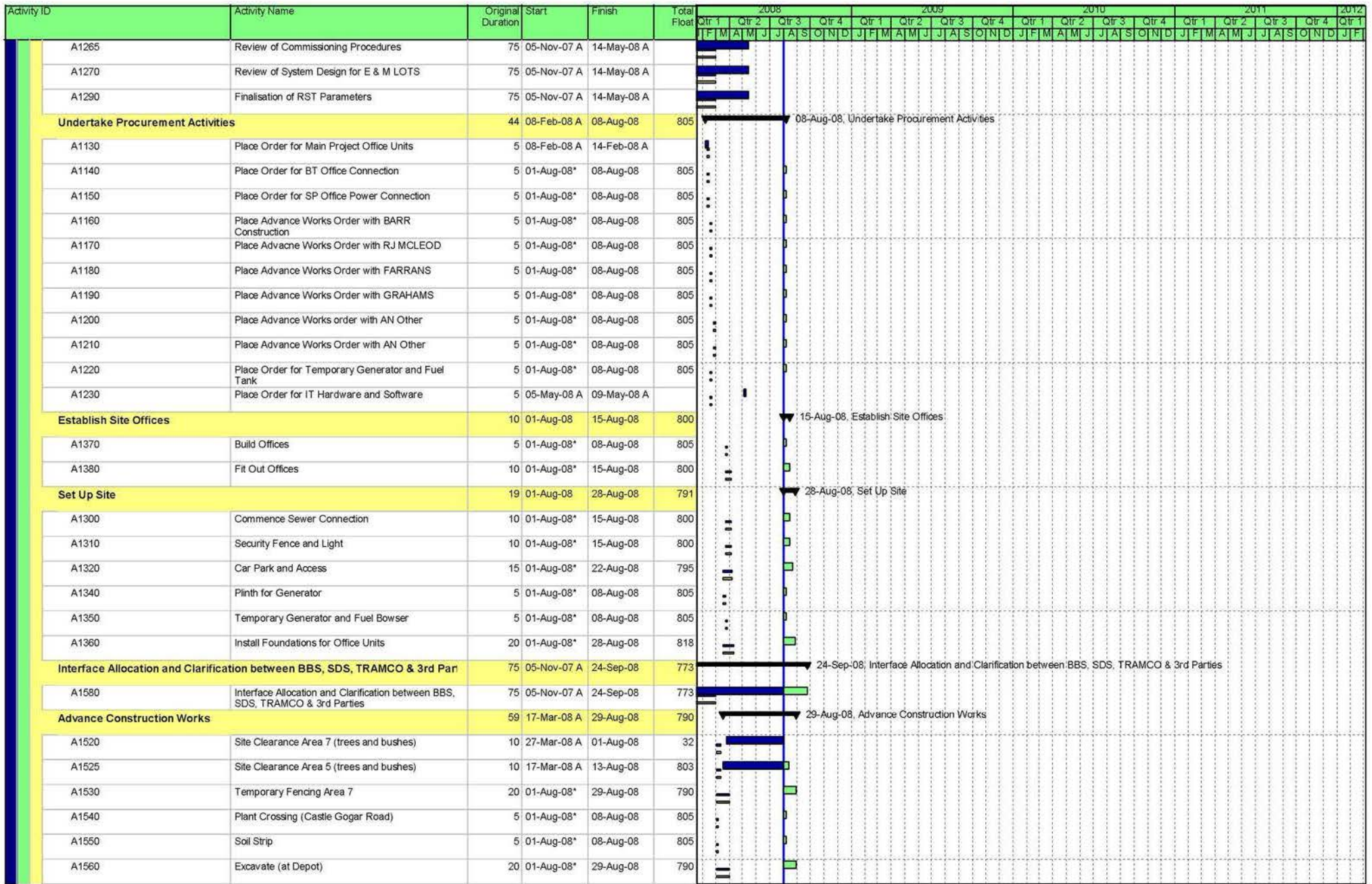
10.2 Programme Update

Contract Programme Tracked for V31 and V34 of Design Programme and Progress to 01 August 2008

EDINBURGH TRAM NETWORK



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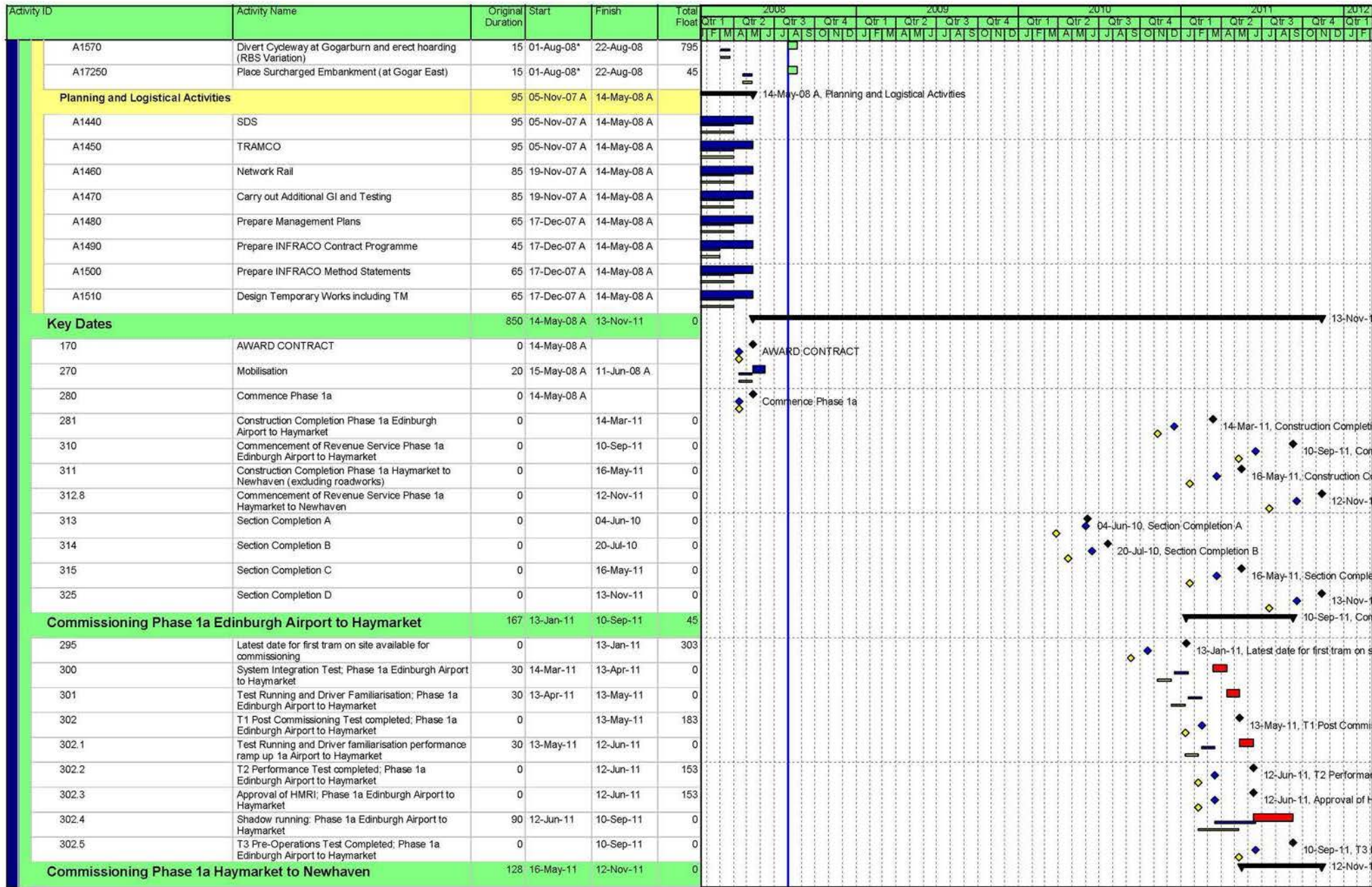


Date	Revision	Checked	Approved
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs	

V26 Baseline
 Actual Work
 Critical Remaining Work V34
 V31 Baseline Milestone
 Summary
 V31 Baseline
 Remaining Work V34
 V26 Baseline Milestone
 Milestone

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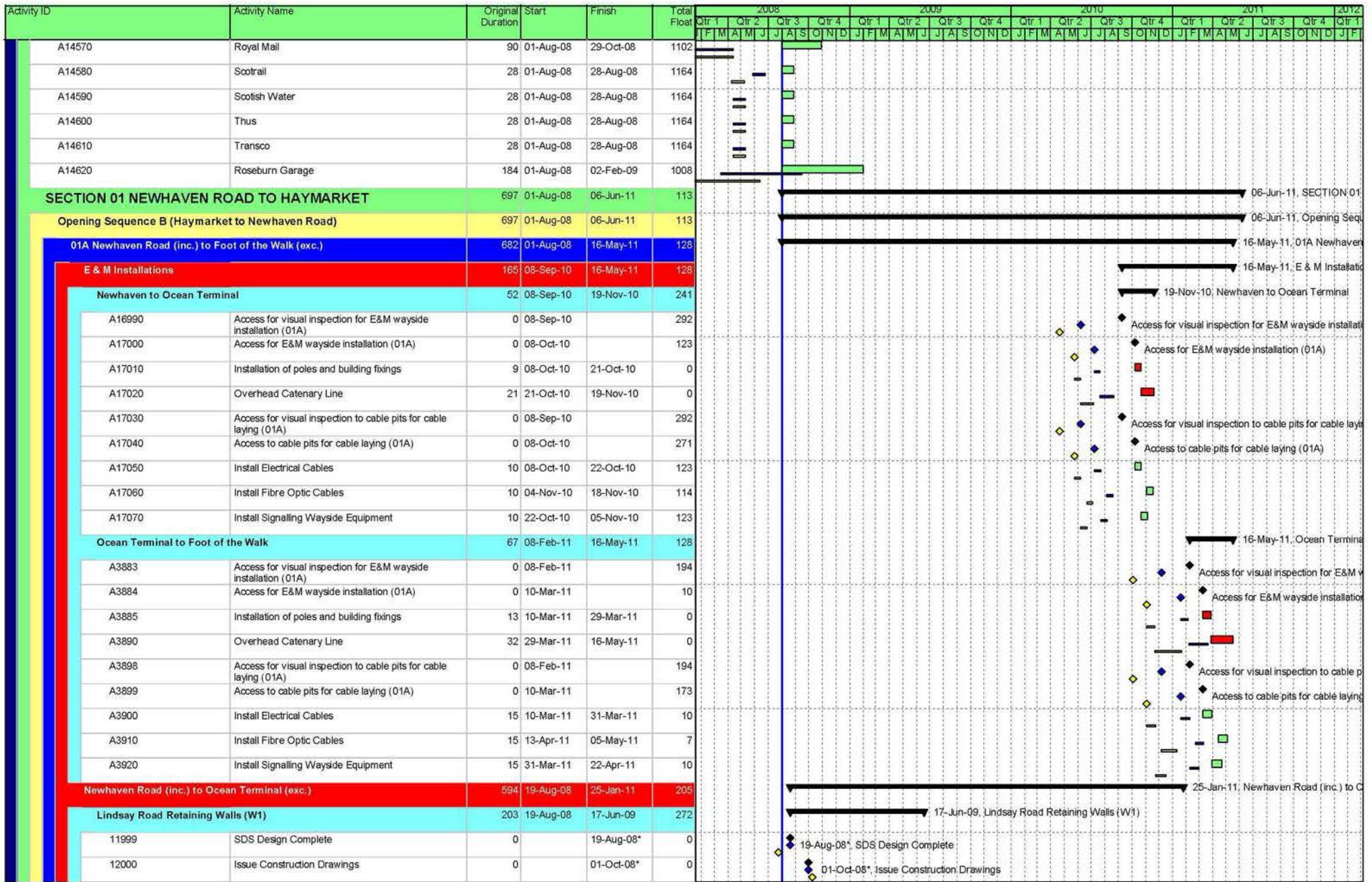


Date	Revision	Checked	Approved
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs	

V26 Baseline
 Actual Work
 Critical Remaining Work V34
 ◆ V31 Baseline Milestone
 ◆ V31 Baseline Milestone
 ▶ Summary

V31 Baseline
 Remaining Work V34
 ◆ Milestone
 ◆ Milestone

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Date	Revision	Checked	Approved	Page 6 of 55	V26 Baseline Actual Work Critical Remaining Work V34 V31 Baseline Milestone Summary
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs			V31 Baseline Remaining Work V34 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												
A15390	Excavate for new channel and kerb line / remove existing kerbs	19	15-Dec-09	25-Jan-10	174																																																												
A15400	Construct Kerb lines	24	18-Dec-09	04-Feb-10	174																																																												
A15410	Reset Gullies	48	15-Jan-10	24-Mar-10	181																																																												
A15420	Surface new channel	6	24-Mar-10	01-Apr-10	181																																																												
A15430	Pavement Works	47	04-Feb-10	13-Apr-10	174																																																												
A15440	Street Lighting / Traffic Signals / Road Signs	7	04-Feb-10	15-Feb-10	214																																																												
Trackwork		441	23-Mar-09	10-Jan-11	50																																																												
12020	Issue Construction Drawings	0		23-Mar-09*	0																																																												
Ocean Terminal Ch 850-1080		120	08-Sep-09	10-Mar-10	156																																																												
A15310	Establish Traffic Management & Temp. Fencing	2	08-Sep-09	10-Sep-09	85																																																												
A15320	Excavate box	12	10-Sep-09	28-Sep-09	85																																																												
A15330	Excavate, lay and concrete ducts	17	28-Sep-09	21-Oct-09	85																																																												
A15340	Excavate and construct OLE bases	17	28-Sep-09	21-Oct-09	85																																																												
A15350	Set Track (280m)	28	15-Jan-10	24-Feb-10	19																																																												
A15360	Place upper concrete and cure	28	20-Jan-10	01-Mar-10	156																																																												
A15370	Street Surface finishes	6	01-Mar-10	09-Mar-10	156																																																												
A15380	Remove fencing and Traffic Management	1	09-Mar-10	10-Mar-10	156																																																												
Ocean Terminal to Rennies Isle Ch 1080-1410		89	24-Aug-10	10-Jan-11	50																																																												
A15230	Establish Traffic Management & Temp. Fencing	2	24-Aug-10	26-Aug-10	83																																																												
A15240	Excavate box	14	26-Aug-10	15-Sep-10	90																																																												
A15250	Excavate, lay and concrete ducts	20	15-Sep-10	13-Oct-10	90																																																												
A15260	Excavate and construct OLE bases	20	15-Sep-10	13-Oct-10	90																																																												
A15270	Set Track (330m)	21	12-Nov-10	13-Dec-10	50																																																												
A15280	Place upper concrete and cure	21	17-Nov-10	16-Dec-10	50																																																												
A15290	Street Surface finishes	6	17-Dec-10	24-Dec-10	50																																																												
A15300	Remove fencing and Traffic Management	1	10-Jan-11	10-Jan-11	50																																																												
Rennies Isle to Casino Square Ch 1410-1880		168	11-Dec-09	24-Aug-10	83																																																												
A15150	Establish Traffic Management & Temp. Fencing	2	11-Dec-09	15-Dec-09	125																																																												
A15160	Excavate box	19	15-Dec-09	25-Jan-10	125																																																												
A15170	Excavate, lay and concrete ducts	28	25-Jan-10	04-Mar-10	125																																																												
A15180	Excavate and construct OLE bases	28	25-Jan-10	04-Mar-10	125																																																												
A15190	Set Track (470m)	29	29-Jun-10	10-Aug-10	19																																																												
A15200	Place upper concrete and cure	29	02-Jul-10	13-Aug-10	83																																																												
A15210	Street Surface finishes	6	13-Aug-10	23-Aug-10	83																																																												

Date	Revision	Checked	Approved	Page 10 of 55	V26 Baseline Actual Work Critical Remaining Work V34 V31 Baseline Milestone Summary
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs			V31 Baseline Remaining Work V34 V26 Baseline Milestone Milestone

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						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
A15220	Remove fencing and Traffic Management	1	23-Aug-10	24-Aug-10	83																															
Victoria Dock Entrance Bridge (\$16)						516	04-Sep-08	07-Oct-10	93																											
12029	SDS Design Complete	0		04-Sep-08*	0																															
12030	Issue Construction Drawings	0		13-Nov-08*	0																															
12330	Permanent Diversion of Services (by Others)	40	18-Sep-08	13-Nov-08	528																															
131	Reprofile and Waterproof Deck (Dummy)	30	26-Aug-10	07-Oct-10	93																															
Tower Place Bridge (\$17)						376	01-Oct-08	19-Apr-10	264																											
12039	SDS Design Complete	0		01-Oct-08*	0																															
12040	Issue Construction Drawings	0		10-Dec-08*	0																															
A16050	Temporary Diversion of Services (by others)	40	14-Oct-08	10-Dec-08	145																															
A16060	Temporary Platforms and Demolition	60	21-Jan-09	16-Apr-09	125																															
A1770	Piling	15	16-Apr-09	08-May-09	125																															
North Widening						76	08-May-09	26-Aug-09	125																											
A101	Substructure	40	08-May-09	06-Jul-09	125																															
A11	Install Beams	1	06-Jul-09	07-Jul-09	125																															
A16070	Superstructure	35	07-Jul-09	26-Aug-09	125																															
South Widening						76	26-Aug-09	11-Dec-09	125																											
A16080	Substructure	40	26-Aug-09	21-Oct-09	125																															
A1760	Install Beams	1	21-Oct-09	22-Oct-09	125																															
A31	Superstructure	35	22-Oct-09	11-Dec-09	125																															
Deck Finishes						80	11-Dec-09	19-Apr-10	264																											
A16090	Permanent Diversion of Services (by others)	40	11-Dec-09	19-Feb-10	264																															
A16100	Finishes	40	19-Feb-10	19-Apr-10	264																															
Ocean Terminal Tram Stop						672	01-Aug-08	29-Apr-11	138																											
12049	SDS Design Complete	0		01-Aug-08*	-8																															
12050	Issue Construction Drawings	0		23-Mar-09*	0																															
14	Civil Engineering and Building Works	65	10-Sep-09	11-Dec-09	208																															
178	Order REC Supply	0	08-Dec-09		475																															
A1720	Deliver and Install Shelter	10	02-Feb-10	16-Feb-10	252																															
A4318	Access for visual inspection for E&M Tram Stop installation (01A Ocean Terminal)	0	15-Jan-10		456																															
A4319	Access for E&M Tram Stop installation (01A Ocean Terminal)	0	16-Feb-10		252																															
A4320	Install LV Power Supply and LV Power Equipment	25	16-Feb-10	23-Mar-10	252																															
A4330	Install Telecon Equipment	20	23-Mar-10	21-Apr-10	262																															
A4340	Install Station Control Equipment + AFC Equipment	25	23-Mar-10	28-Apr-10	252																															

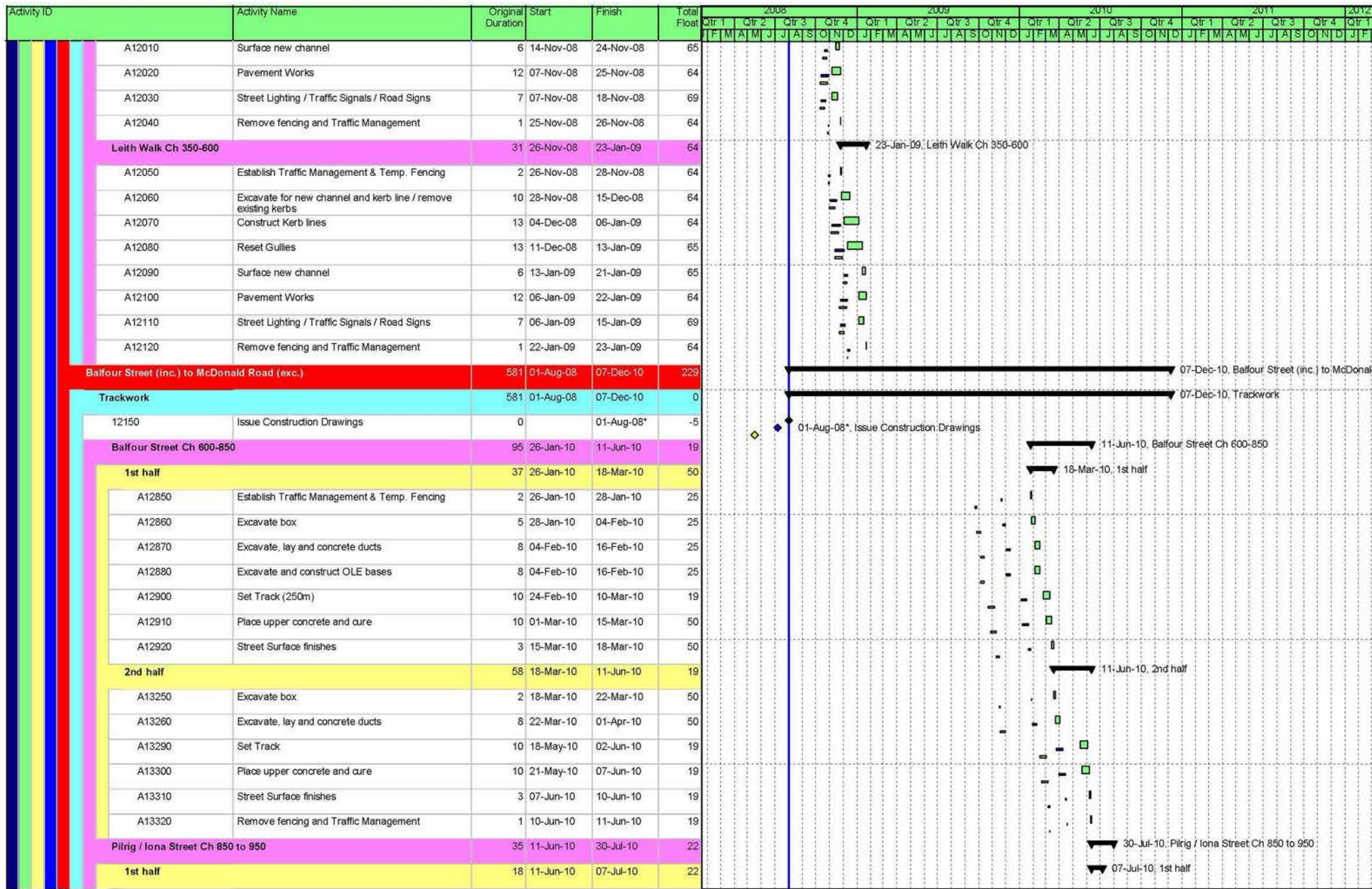
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						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
12080	Issue Construction Drawings	0	26-Sep-08*	0				◆	◆	◆	◆															
17	Civil Engineering and Building Works	65	15-Dec-09	30-Mar-10	183																					
188	Order REC Supply	0	18-Jun-10		350																					
A1800	Deliver and Install Shelter	10	30-Jul-10	16-Aug-10	127																					
A4358	Access for visual inspection for E&M Tram Stop installation (01A Ocean Drive)	0	15-Jul-10		346																					
A4359	Access for E&M Tram Stop installation (01A Ocean Drive)	0	16-Aug-10		138																					
A4360	Install LV Power Supply and LV Power Equipment	25	16-Aug-10	20-Sep-10	127																					
A4370	Install Telecon Equipment	20	20-Sep-10	18-Oct-10	137																					
A4380	Install Station Control Equipment + AFC Equipment	25	20-Sep-10	25-Oct-10	127																					
A4390	Package Test Tramstop	5	25-Oct-10	01-Nov-10	127																					
Bernard Street (inc.) to Foot of the Walk (exc.)		613	03-Oct-08	08-Apr-11	153	◆ 03-Oct-08*, Issue Construction Drawings																				
Bernard Street Tram Stop		613	03-Oct-08	08-Apr-11	153	◆ 03-Oct-08*, Issue Construction Drawings																				
12090	Issue Construction Drawings	0	03-Oct-08*	0				◆	◆	◆	◆															
198	Order REC Supply	0	10-Nov-10		248																					
20	Civil Engineering And Building Works	65	13-Sep-10	14-Dec-10	25																					
A1850	Deliver and Install Shelter	10	23-Dec-10	20-Jan-11	25																					
A4398	Access for visual insepction for E&M Tram Stop installation (01A Constitution Street)	0	21-Dec-10		234																					
A4399	Access for E&M Tram Stop installation (01A Constitution Street)	0	20-Jan-11		212																					
A4400	Install LV Power Supply and LV Power Equipment	25	20-Jan-11	24-Feb-11	25																					
A4410	Install Telecon Equipment	20	24-Feb-11	24-Mar-11	35																					
A4420	Install Station Control Equipment + AFC Equipment	25	24-Feb-11	31-Mar-11	25																					
A4430	Package Test Tramstop	5	31-Mar-11	08-Apr-11	25																					
Trackworks		542	03-Oct-08	15-Dec-10	59	◆ 03-Oct-08*, Issue Construction Drawings																				
12100	Issue Construction Drawings	0	03-Oct-08*	0				◆	◆	◆	◆															
Baltic to Queen Charlotte Ch 2110-2340		68	09-Sep-10	15-Dec-10	59	◆ 03-Oct-08*, Issue Construction Drawings																				
A14870	Establish Traffic Management & Temp. Fencing	2	09-Sep-10	13-Sep-10	25																					
A14880	Excavate box	10	13-Sep-10	27-Sep-10	52																					
A14890	Excavate, lay and concrete ducts	14	27-Sep-10	15-Oct-10	52																					
A14900	Excavate and construct OLE bases	14	27-Sep-10	15-Oct-10	52																					
A14910	Set Track (230m)	15	29-Sep-10	20-Oct-10	52																					
A14920	Place upper concrete and cure	15	04-Oct-10	25-Oct-10	88																					
A14930	Street Surface finishes	6	25-Oct-10	02-Nov-10	88																					
A14940	Remove fencing and Traffic Management	1	14-Dec-10	15-Dec-10	59																					
Queen Charlotte to Foot/Walk Ch 2340-2730		87	07-May-10	09-Sep-10	25	◆ 03-Oct-08*, Issue Construction Drawings																				

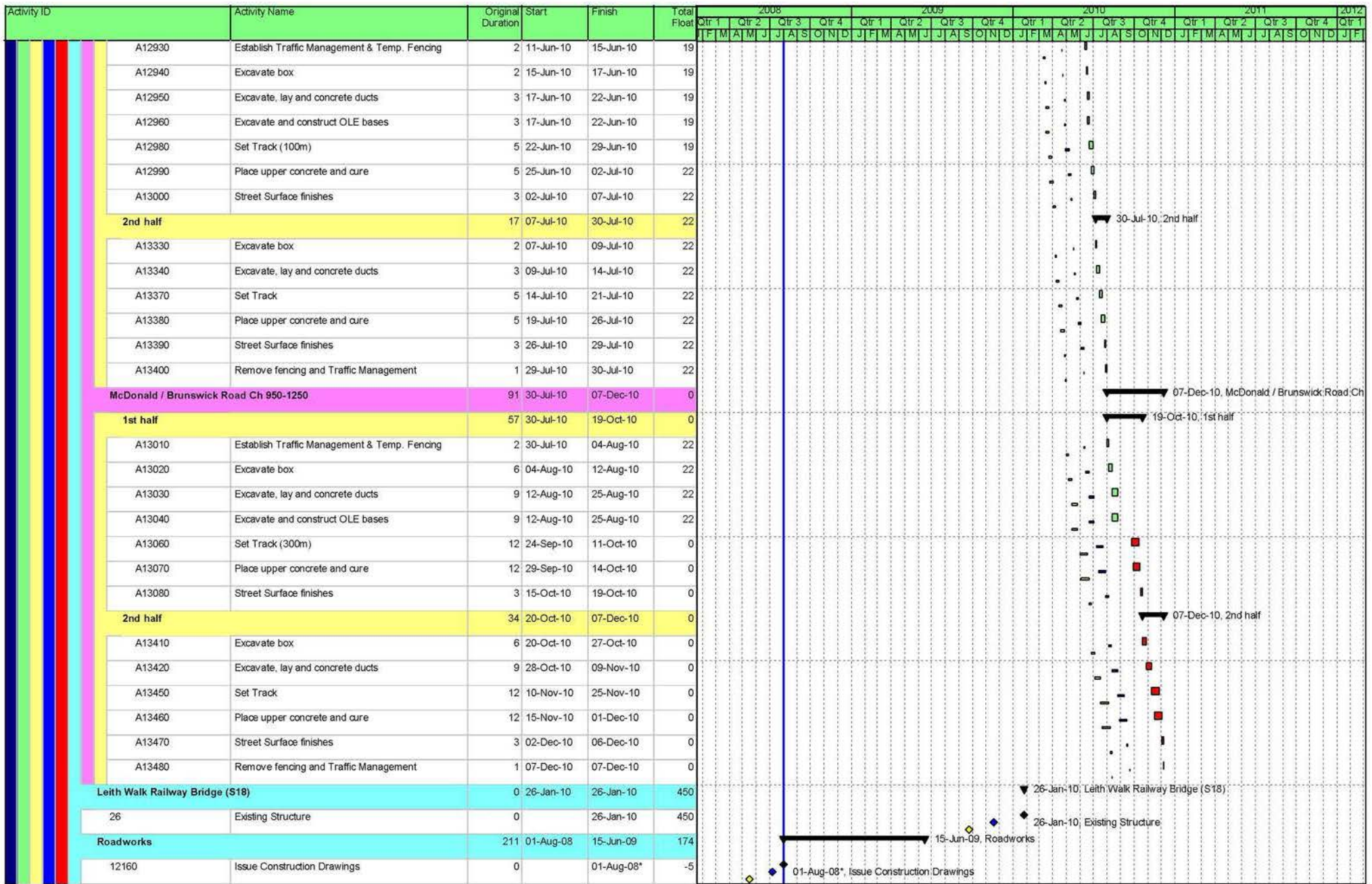
Date	Revision	Checked	Approved	Page 13 of 55	— V26 Baseline	Actual Work	Critical Remaining Work V34	◆ V31 Baseline Milestone	Summary
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs			— V31 Baseline	Remaining Work V34	◆ V26 Baseline Milestone	◆ Milestone	

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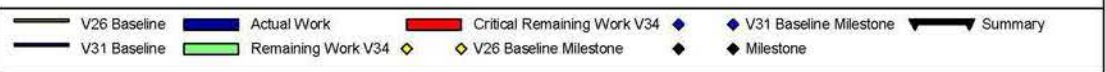


Date	Revision	Checked	Approved	Page 18 of 55	V26 Baseline Actual Work Critical Remaining Work V34 V31 Baseline Milestone Summary
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs			V31 Baseline Remaining Work V34 V26 Baseline Milestone Milestone

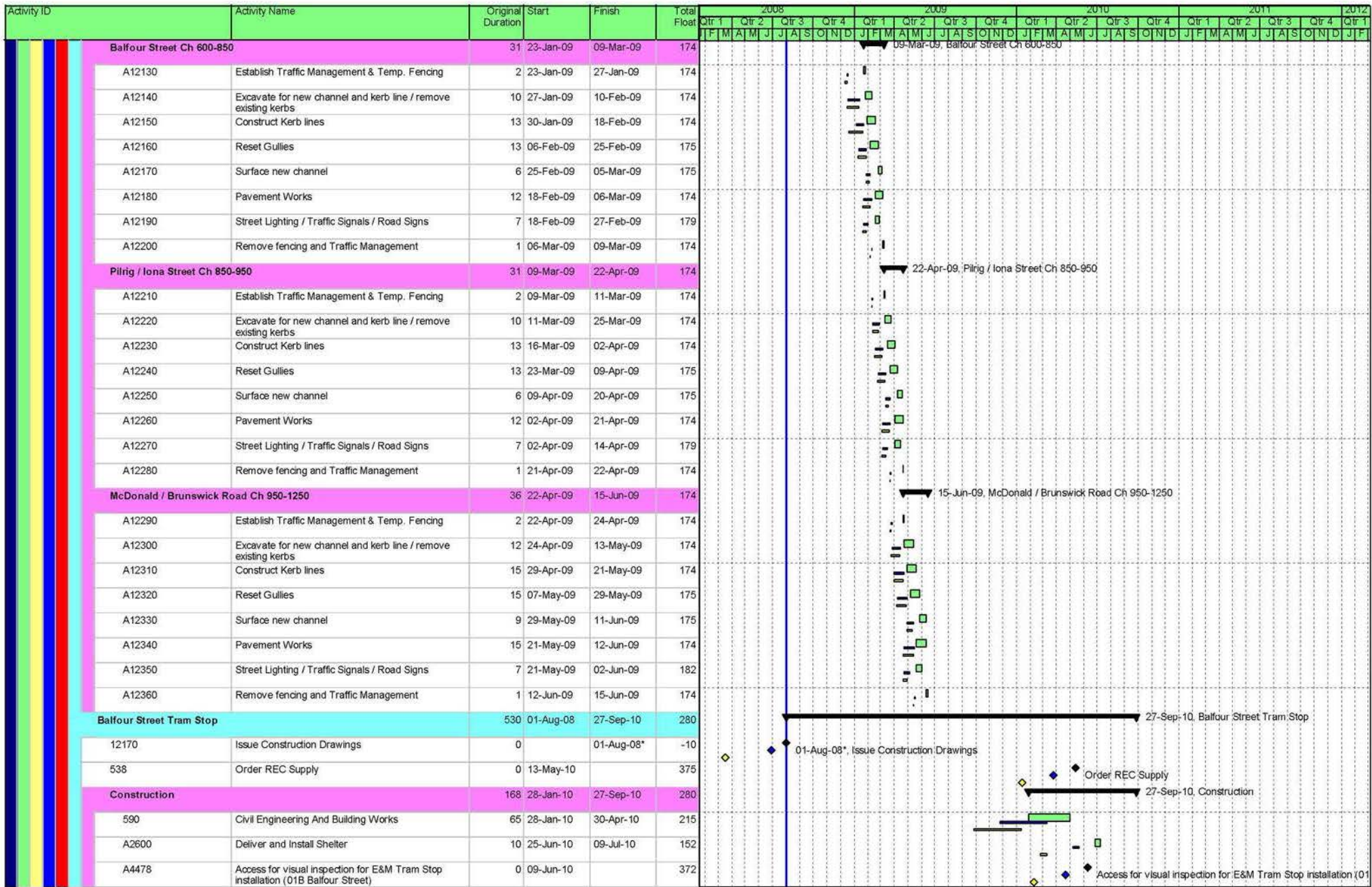
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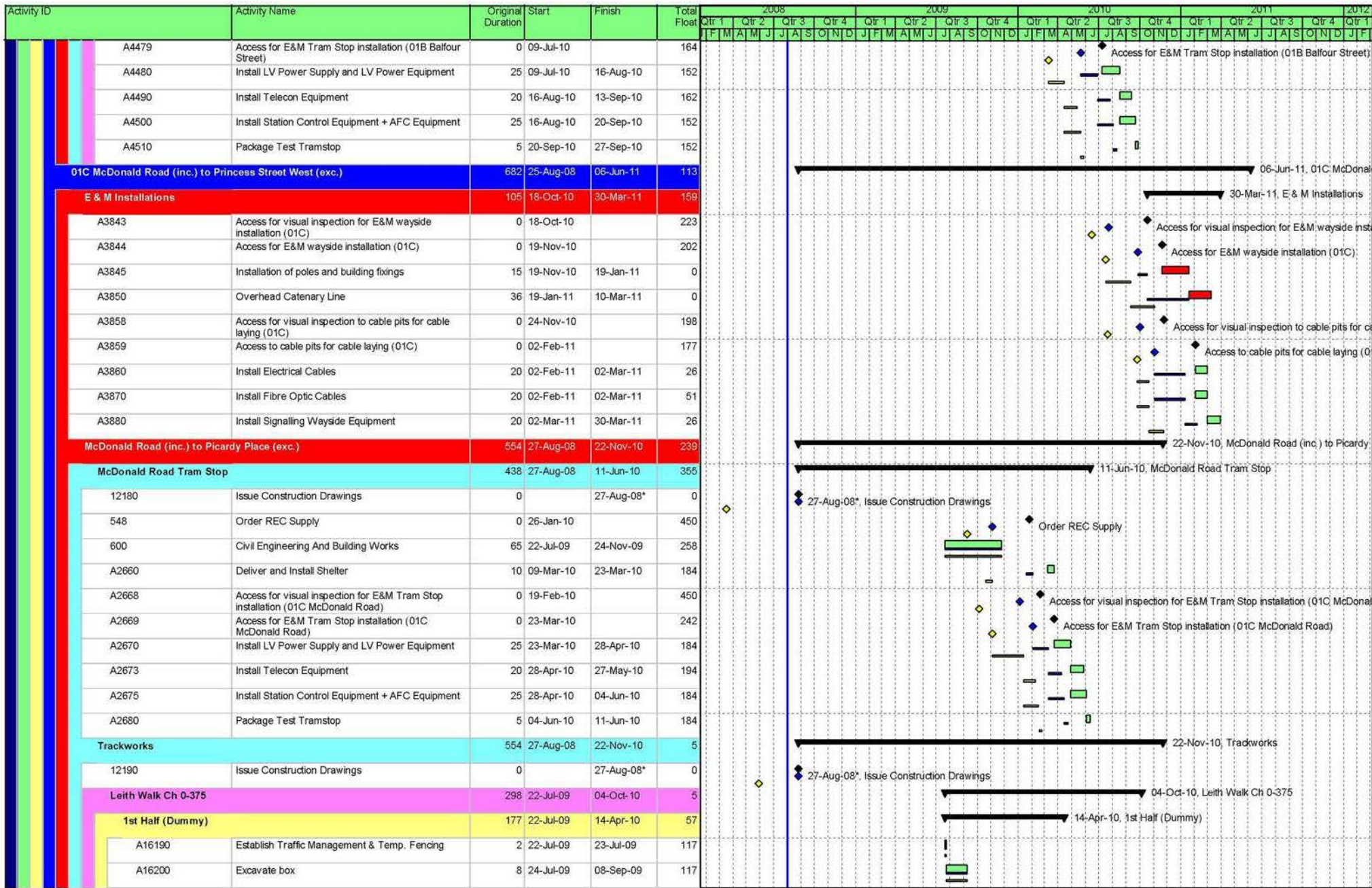
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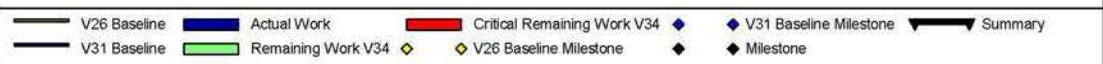
Date	Revision	Checked	Approved
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— V26 Baseline
 — Actual Work
 — Critical Remaining Work V34
 ◆ V31 Baseline Milestone
 ▶ Summary
— V31 Baseline
 — Remaining Work V34
◆ Milestone
◆ V26 Baseline Milestone

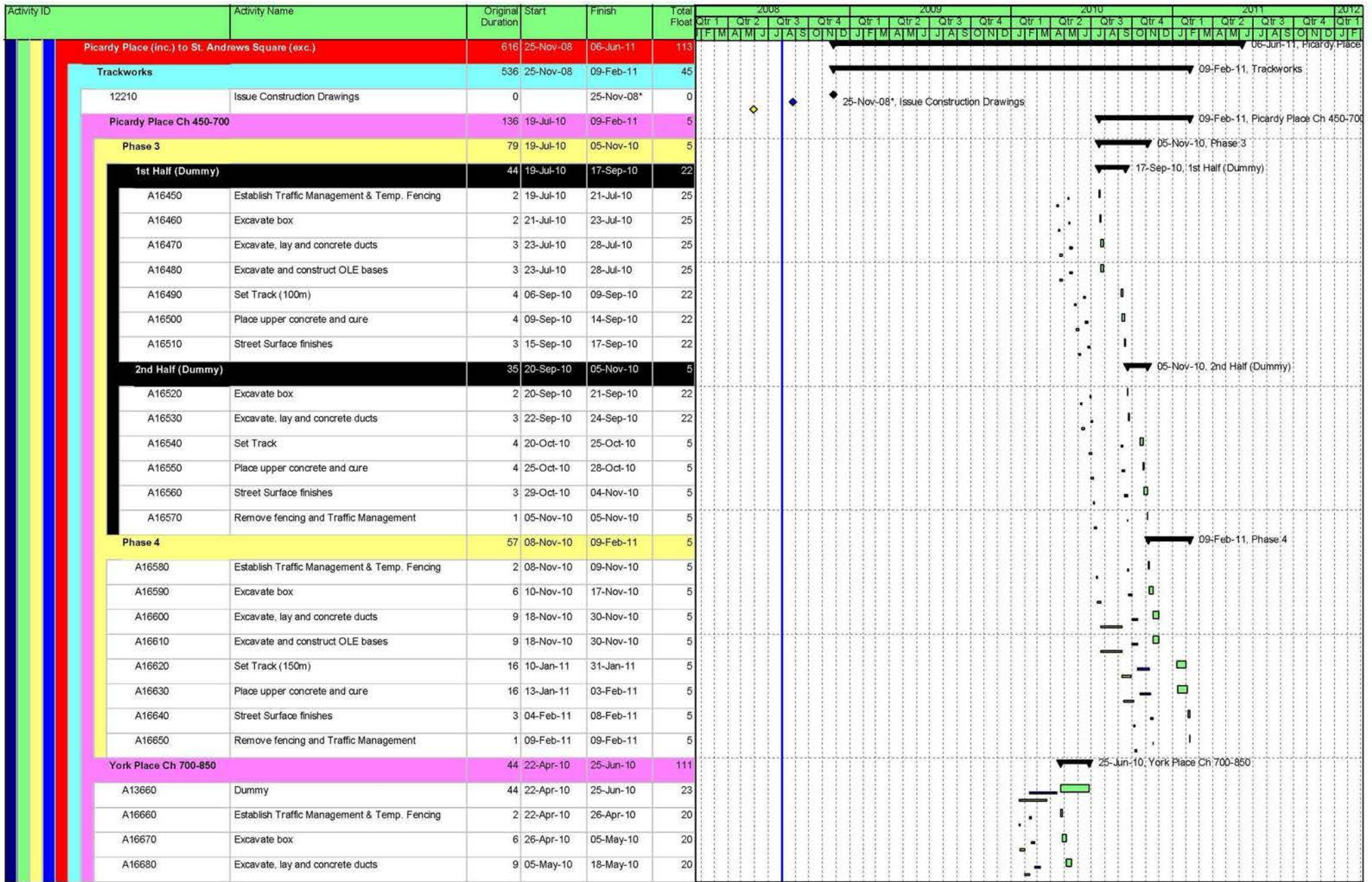
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Date	Revision	Checked	Approved
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs	



BFB00056434_0048



BFB00056434_0050

Date	Revision	Checked	Approved
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs	

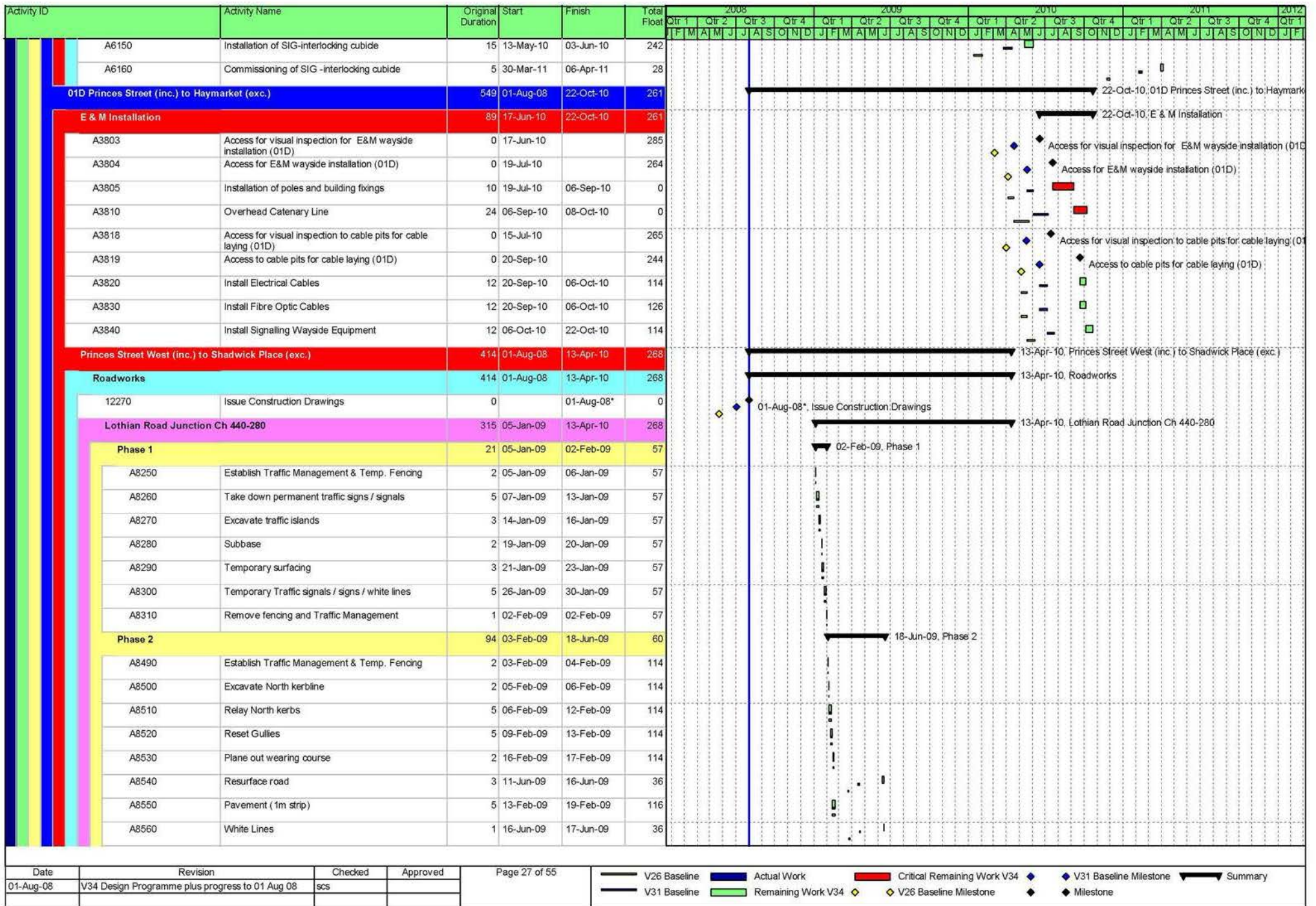
— V26 Baseline ■ Actual Work ■ Critical Remaining Work V34 ◆ V31 Baseline Milestone ▬ Summary
— V31 Baseline ■ Remaining Work V34 ◆ V26 Baseline Milestone ◆ Milestone



Date	Revision	Checked	Approved
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- V26 Baseline — V31 Baseline — Actual Work — Remaining Work V34 — Critical Remaining Work V34
- ◆ V26 Baseline Milestone ◆ V31 Baseline Milestone ◆ Milestone ◆ Milestone
- ▶ Summary

BFB00056434_0052



BFB00056434_0054

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		
A13930	Remove fencing and Traffic Management	1	27-May-09	27-May-09	128																				
South Channel		207	03-Feb-09	25-Nov-09	41																				
A13940	Establish Traffic Management & Temp. Fencing	2	03-Feb-09	04-Feb-09	106																				
A13950	Excavate South kerbline	19	05-Feb-09	03-Mar-09	106																				
A13960	Relay South kerbs	48	12-Feb-09	21-Apr-09	106																				
A13970	Reset Gullies	48	19-Feb-09	28-Apr-09	106																				
A13980	Plane out wearing course	10	29-Apr-09	13-May-09	106																				
A13990	Resurface road	30	08-Oct-09	19-Nov-09	27																				
A14000	Pavement (1m strip)	48	19-Feb-09	28-Apr-09	147																				
A14010	White Lines	1	19-Nov-09	20-Nov-09	27																				
A14020	Street Lighting / Road signs	5	22-Apr-09	28-Apr-09	147																				
A14030	Remove fencing and Traffic Management	3	20-Nov-09	25-Nov-09	27																				
Trackworks (710m)		381	01-Aug-08	24-Feb-10	108																				
12280	Issue Construction Drawings	0	01-Aug-08*	01-Aug-08*	0																				
Lothian Road Junction Ch 440-280		261	03-Feb-09	24-Feb-10	108																				
Phase 2		90	03-Feb-09	12-Jun-09	279																				
1st half		74	03-Feb-09	20-May-09	0																				
A8320	Establish Traffic Management & Temp. Fencing	2	03-Feb-09	04-Feb-09	57																				
A8330	Excavate box	2	05-Feb-09	06-Feb-09	57																				
A8340	Excavate, lay and concrete ducts	3	09-Feb-09	11-Feb-09	57																				
A8350	Excavate and construct OLE bases	3	09-Feb-09	11-Feb-09	57																				
A8370	Set Track (100m)	4	06-May-09	12-May-09	0																				
A8380	Place upper concrete and cure	4	11-May-09	15-May-09	0																				
A8390	Street Surface finishes	3	15-May-09	20-May-09	0																				
2nd half		16	20-May-09	12-Jun-09	279																				
A8410	Excavate box	2	20-May-09	22-May-09	0																				
A8420	Excavate, lay and concrete ducts	3	22-May-09	28-May-09	0																				
A8450	Set Track	4	28-May-09	03-Jun-09	0																				
A8460	Place upper concrete and cure	4	02-Jun-09	08-Jun-09	36																				
A8470	Street Surface finishes	3	08-Jun-09	11-Jun-09	36																				
A8480	Remove fencing and Traffic Management	1	11-Jun-09	12-Jun-09	241																				
Phase 3a		89	08-Jul-09	11-Nov-09	52																				
1st half		75	08-Jul-09	22-Oct-09	16																				
A8680	Establish Traffic Management & Temp. Fencing	2	08-Jul-09	10-Jul-09	36																				

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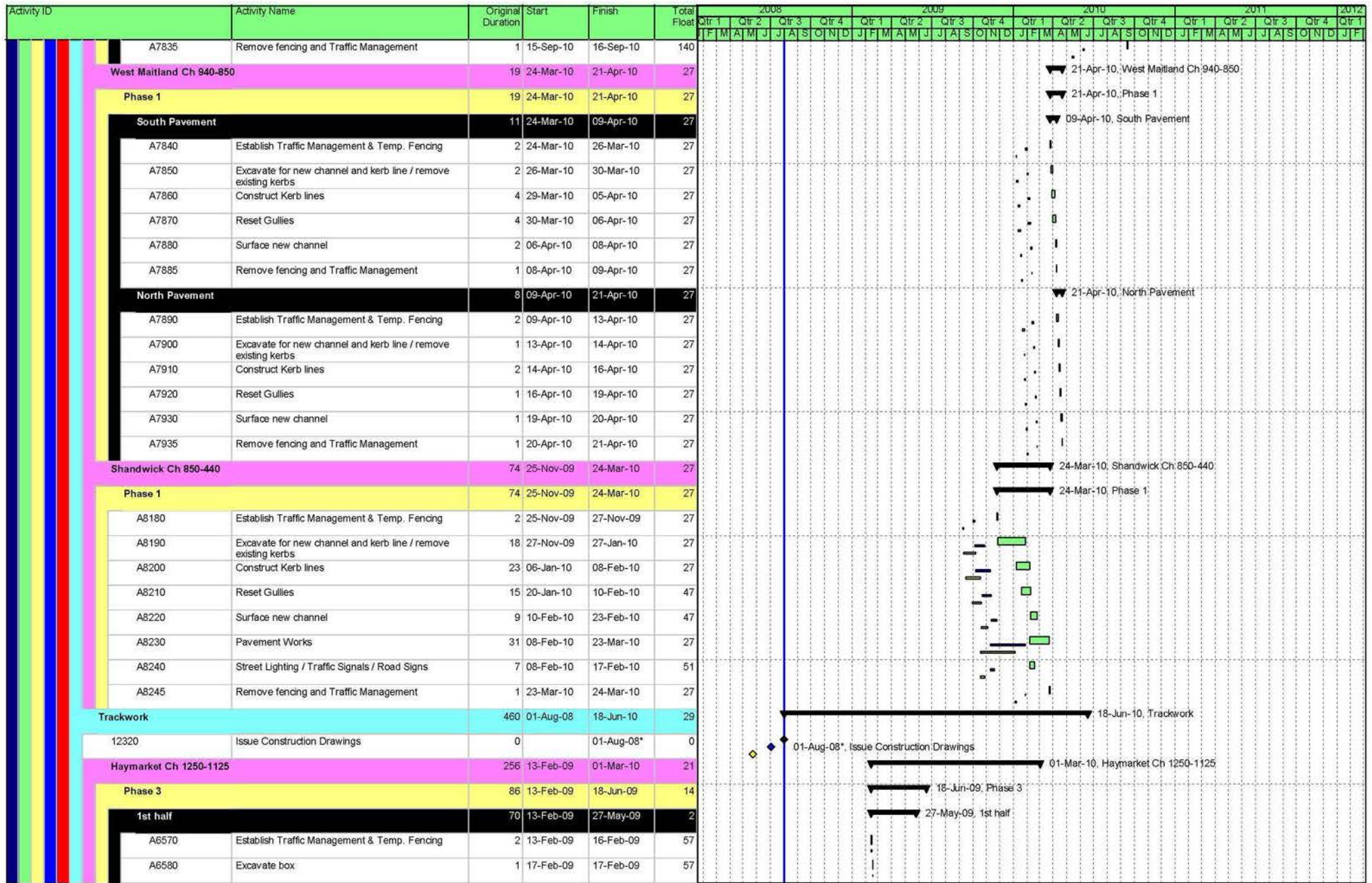
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Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2008				2009				2010				2011	2012							
						Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1				
						F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
A8690	Excavate box	1	10-Jul-09	13-Jul-09	36																					
A8700	Excavate, lay and concrete ducts	2	13-Jul-09	15-Jul-09	36																					
A8710	Excavate and construct OLE bases	2	13-Jul-09	15-Jul-09	36																					
A8730	Set Track (30m)	4	08-Oct-09	14-Oct-09	0																					
A8740	Place upper concrete and cure	4	13-Oct-09	19-Oct-09	16																					
A8750	Street Surface finishes	3	19-Oct-09	22-Oct-09	16																					
2nd half		14	22-Oct-09	11-Nov-09	52																					
A8760	Excavate box	1	22-Oct-09	23-Oct-09	16																					
A8770	Excavate, lay and concrete ducts	2	23-Oct-09	27-Oct-09	16																					
A8800	Set Track	4	27-Oct-09	02-Nov-09	16																					
A8810	Place upper concrete and cure	4	30-Oct-09	05-Nov-09	38																					
A8820	Street Surface finishes	3	05-Nov-09	10-Nov-09	38																					
A8830	Remove fencing and Traffic Management	1	10-Nov-09	11-Nov-09	38																					
Phase 4		64	11-Nov-09	24-Feb-10	108																					
1st half		50	11-Nov-09	04-Feb-10	17																					
A8840	Establish Traffic Management & Temp. Fencing	2	11-Nov-09	13-Nov-09	38																					
A8850	Excavate box	1	13-Nov-09	16-Nov-09	38																					
A8860	Excavate, lay and concrete ducts	2	16-Nov-09	18-Nov-09	38																					
A8870	Excavate and construct OLE bases	2	16-Nov-09	18-Nov-09	38																					
A8890	Set Track (30m)	4	21-Jan-10	27-Jan-10	17																					
A8900	Place upper concrete and cure	4	26-Jan-10	01-Feb-10	17																					
A8910	Street Surface finishes	3	01-Feb-10	04-Feb-10	17																					
2nd half		14	04-Feb-10	24-Feb-10	108																					
A8920	Excavate box	1	04-Feb-10	05-Feb-10	17																					
A8930	Excavate, lay and concrete ducts	2	05-Feb-10	09-Feb-10	17																					
A8960	Set Track	4	09-Feb-10	15-Feb-10	17																					
A8970	Place upper concrete and cure	4	12-Feb-10	18-Feb-10	108																					
A8980	Street Surface finishes	3	18-Feb-10	23-Feb-10	108																					
A8990	Remove fencing and Traffic Management	1	23-Feb-10	24-Feb-10	108																					
Princes Street Ch 280-0,1980-1360		204	03-Feb-09	20-Nov-09	165																					
Phase 1		204	03-Feb-09	20-Nov-09	165																					
A13760	Establish Traffic Management & Temp. Fencing	2	03-Feb-09	04-Feb-09	57																					
A13770	Excavate box	36	05-Feb-09	26-Mar-09	57																					
A13780	Excavate, lay and concrete ducts	54	12-Feb-09	29-Apr-09	242																					

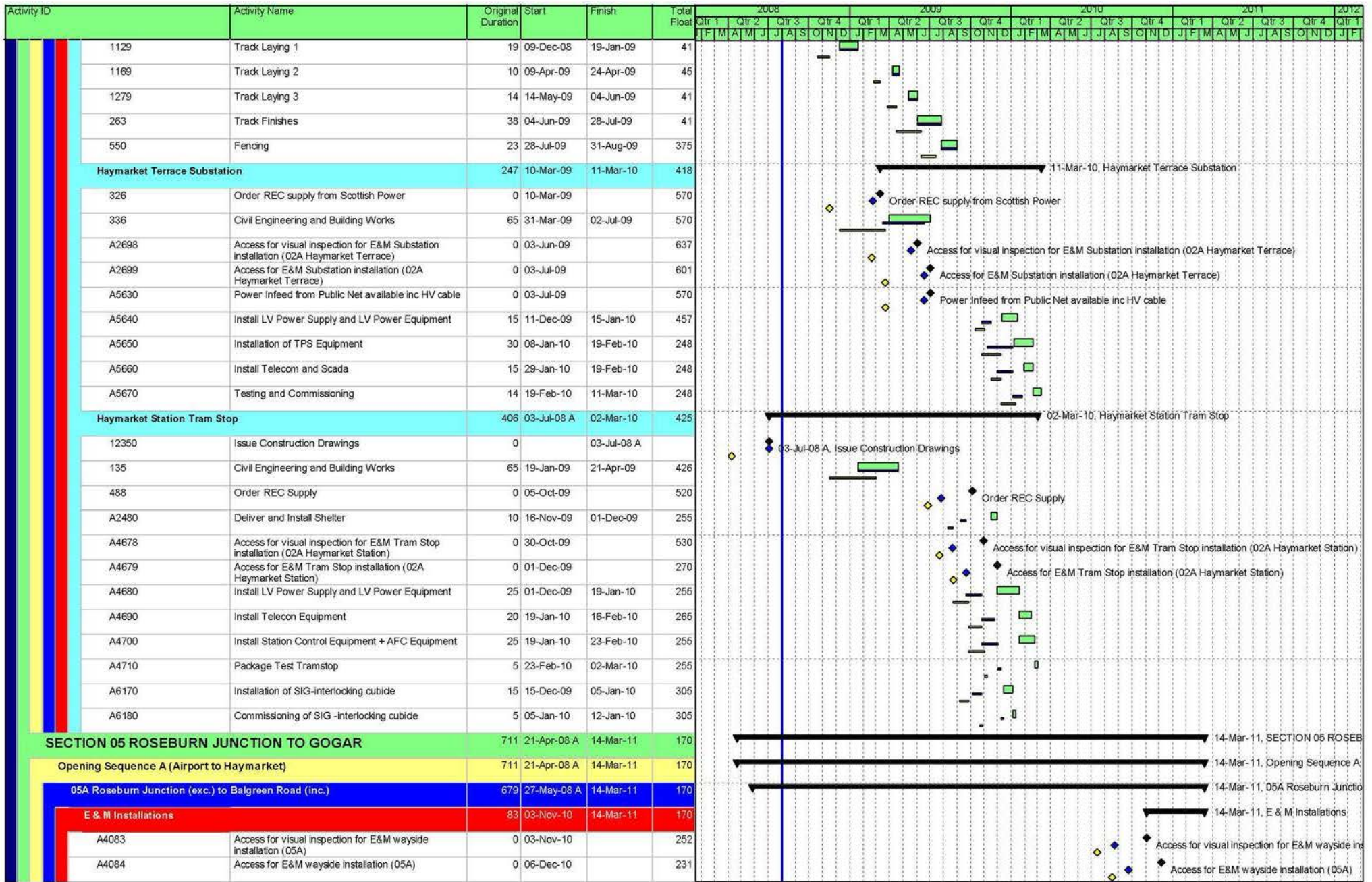
Date	Revision	Checked	Approved
01-Aug-08	V34 Design Programme plus progress to 01 Aug 08	scs	

- V26 Baseline
- V31 Baseline
- █ Actual Work
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- ◆ Milestone
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█ Actual Work

█ Remaining Work V34

◆ Milestone

█ Critical Remaining Work V34

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