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Edinburgh Tram System Design Services

Roads Design Delay & Disruption Claim

Halcrow Group Ltd Presentation to Bilfinger Berger
25 November 2009

Scope of Presentation

1. Obligations of the Parties
2. Rationale for our Claim
3. Process of CEC Roads Department Technical Approval
4. Example Numbers of CEC Comments Received
5. Process for Close-out of Roads Technical Approval
6. Example Time-lines
7. Conclusion

Relevant Obligations

Halcrow's Contractual Obligations:

- In the performance of the Sub Consultancy Services.....(Halcrow) shall exercise a reasonable level of professional skill, care and diligence to be expected of a properly qualified and competent.....design provider.
  (Sub-contract: Clauses 3.2 & 3.9A)
- (Halcrow) shall use its best endeavours and at its own cost and expense to obtain and maintain in effect all Consents which may be required.....as is consistent with, required by or contained within the Sub Consultancy Services. (Clause 5.1.1)
- At the request of (Halcrow), (Parsons Brinckerhoff) may at their discretion render appropriate assistance, without any obligation, in relation to obtaining any Consent. (Clause 5.2)

Roads Authority's Legal Obligations

- The powers in subsection (2) [*for the authorised undertaker to alter the layout of roads*] shall not be exercised without the consent of the Roads Authority, but such consent shall not be unreasonably withheld. (Edinburgh Tram Acts: Article 3(3))

Summary Of Our Claim Rationale

- That our roads designers produced competent designs capable of approval and implementation in accordance with our contractual obligations.
- That Halcrow's roads design submissions have been subjected to an unnecessarily minute and detailed technical audit by CEC officers
  - Resulting in thousands of individual comments and requirements for design modification being issued by the officers
  - Far beyond what we could have reasonably expected given our experience - all of which have to be responded to, evidenced and closed out to the satisfaction of the Roads Department as a pre-condition of their approval – a hugely time-consuming exercise.
- That CEC Roads Department officers have engaged in adversarial behaviours in conducting their technical approval process
  - This has frustrated the roads technical design approvals process and thereby exposed Halcrow to unforeseen additional design costs over an extended period.
- That this process has continued beyond the date of our claim
  - There is still no prospect whatsoever of full unconditional approval of all of our roads designs technical submissions being obtained in the foreseeable future.

Development of the Roads Design

- Roads Design Working Group meetings held regularly with CEC Roads Department & Planning Department officers & tie's technical advisers Scott Wilson
  - In which our designers advised the rationale underlying the configuration and layouts and obtained feedback and comments on the design solutions we presented as work-in-progress.
  - Most CEC officers subsequently undertaking technical approval of roads designs were not aware of the prior discussions at the Roads Design Working Group
  - tie subsequently dispensed with the services of Scott Wilson and left roads matters solely to CEC officers.
- CEC Planning Department held a number of Charettes during roads design development period which resulted in requirements for late changes to roads layouts previously agreed with Roads Department officers
  - Symptomatic of indecision within wider CEC as to acceptability of overall system design and layout being proposed
- Detailed designs were presented, discussed with and reviewed by CEC Roads Department officers during design finalisation.
- Unwillingness of CEC to then accept their obligations as Overseeing Authority to determine the Road Safety Auditor's recommendations
  - Thereby preventing us completing our designs for technical submission.
  - Eventually CEC conceded but only after considerable delay.

Submission to CEC for Technical Approval - 1

Key Issues

- No undertaking exists from CEC Roads Department for their response time to submissions for technical approval
- CEC Roads Department officers issued our submitted designs for comment to CEC officers outwith the Roads Department e.g. CEC Planning Department
  - Statutory basis of Roads Design approval process used by CEC as a means of influencing overall design and configuration of Tram project outwith the formal tie/CEC consultation process.
  - No attempt made by CEC officers to rationalise or moderate the consultee comments or to eliminate duplicated or conflicting comments.
  - CEC officers saw much merit their consultative approach across wider CEC as evidence (from their perspective) of thorough scrutiny of the design by officers representing different interests within CEC.

Submission to CEC for Technical Approval - 2

- Conditional Approval letter received from CEC Director of City Development for most (but not all) sub-sections submitted for roads technical approval.
  - Attached were extensive schedules of comments on each submission "which must be addressed prior to the commencement of construction work."
  - Stated officer requirement "that unless and until designers provided acceptable responses to each and every comment to the satisfaction of Roads Authority officers, formal close-out of the conditional approval would not be granted."
  - Despite our misgivings and irrespective of the technical merit of the individual comments we had no option but to comply with CEC requirements in order to obtain unconditional consent.
  - Clearly the officers were indulging in a war of attrition to force through their design preferences without having to take designers' CDM liability for the roads design solutions they required, and in ignorance of the inter-disciplinary implications of these changes

CEC Initial Comments on Designers' Submissions for Technical Approval

Route Section	Length (m)	No. Drawings	No. Comments
1A1 & 1A2	1435	61	337
1B	1260	54	644
1C	2980	111	1177
1D	1270	58	725
2A	810	26	659
5A	1475	31	344
5B	4555	88	504
5C	1890	36	610
7A	2580	33	259

Close-out of Technical Approval - 1

- In order to address CEC Conditional Approval comments each had to be reviewed by designers, a technical response or revised solution developed, drawings and/or specifications amended, and an IDC undertaken to ensure consistency.
- Close-out meetings for each sub-section then held with Roads Authority officers to review the designers' responses
- Close-out submission for each sub-section then made to Roads Authority officers for approval.
- Further comments subsequently received from CEC Director of City Development on Designers' close-out submissions (but not yet received for all sub-sections)

Close-out of Technical Approval - 2

- Letter received from CEC Director of City Development for each subsection resubmitted for roads technical approval close-out
  - "It is my intention to grant conditional approval of the Close-out Report in terms sufficient to allow construction works to commence"
  - "This conditional approval is predicated on an assurance from the designer that where technical approval comments have been accepted by the designer the required remedial actions will be undertaken prior to issue of construction drawings and start of construction work. This applies also where the designer has rejected the Council's comment but is nonetheless modifying the documents"
  - "The majority of outstanding issues which are generally matters of detail and listed on the attached schedules can be resolved in parallel with those works"
  - "It is [the designers'] responsibility to ensure and demonstrate that all matters have been resolved and agreed with the Council"
  - "A number of issues (informatives) will have to be ratified by the Council as and when the information becomes available"
  - "While I am satisfied as I can be that the design is technically competent, assuming the engineering issues are addressed, the scheme will be judged to a large extent on its fit with the built environment"

Close-out of Technical Approval - 3

- Each close-out letter from CEC is accompanied by further schedules of comments including new comments not previously raised at the technical approval stage.

Route Section	No. Close-out Comments Received
1B	114 of which 30 were new comments
1C3	203 of which 44 were new comments
1D	166 of which 21 were new comments
5B	176 of which 20 were new comments
5C	138 of which 14 were new comments

Many comments were listed in the CEC schedules as still live, although previously agreed with officers at close-out meetings as having been closed-off.

Example Approval Time-lines

Section	1C3	5B
Design Submitted to CEC for Technical Approval	2 May 08	22 May 08
CEC Comments on Designers' Submission Received	7 Aug 08	20 Aug 08
Designers' Responses to CEC Comments Issued to CEC (to Close Out)	28 Oct 08	30 Sept 08
IFC Drawings Issued	20 Feb 09	30 Sept 08
CEC Close-out Letter & Comments Received	6 May 09	4 June 09
Designers' Response to CEC Close-out Comments Meeting with CEC	1 July 09	14 July 09
Revised IFC Drawings Issued	7 Oct 09	4 Sept 09
CEC Confirmation of Designers' Discharge of All CEC Close-out Comments & Informatives	?	?

Halcrow

Outstanding Roads Design & Approval Actions

CEC to Issue Response to Designers' Technical Approval Submission (Conditional Approval)

- Sections 1C1; 1C2 (Picardy Place); 2A; 3A; 3B & 3C

Designers to Submit Response to CEC Conditional Approval (to Close Out)

- Section 1A3 (Ocean Terminal)

CEC to Issue Close-out Comments

- Sections 1A1; 1A2; 1A4; 5A; 6A & 7A

CEC to Confirm that Designer has Discharged All CEC Close-out Comments & Informatives

- Sections 1B; 1C3; 1D; 5B & 5C

Conclusion

- Halcrow incurred unforeseen excess designers' time charges between w/e 16 May 08 to w/e 5 Dec 08 due to the delay and disruption experienced in complying with CEC's unreasonable roads technical approval processes
- This is in the sum of £993,724 which represents 15,940 man-hours of work of the 14 strong roads design team over the 30 week period.
- Omitting work reimbursed through Change Orders this reduces to £763,267
- Included in the above is the sum of £234,385 for team managers' time. To the extent that this is reimbursed through settlement of Extension of Time Claim No.3 it can be omitted from the sum above.
- It is evident that further delay and disruption to the approvals process occurred beyond w/e 5 Dec 08 - and continues to occur. Halcrow has given formal notice that it reserves the opportunity to submit a further claim for the costs involved.

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
3736	3,4 & 5 (p6) Precast Concrete Flags: Thickness specified is 50mm (Marshalls) however drawings state 65mm thick flags (63mm is specified by CEC standard details)	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	A	
3876	The wording on Signs TS113/09 & 51 should be 'No loading 6am - Midnight' The terms '12am' and '12pm' are never used on signs (see Para 12 8 of Chapter 7)	Traffic Signs Layout	A	
213	Note 11: "If kerb to be < 10mm high do not use kerb unit" is incorrect/contradicts details. Note should be removed. SDS Response (17Apr08): Removed SDS Response (28May08): To remove note CEC Response (28May08): Note not removed at Pre-IFC, version 8.	Construction Details Footways	A	
240	It is not apparent which locations are specified There are 3 specifications for Precast Concrete Flags however no indication where each is to be used. SDS Response (17Apr08): Will reviewed and advise for each area as appropriate. CEC Response (15May08): Document revised but still unclear where each material is to be used. SDS Response (28May08): This is a scheme wide drawing and may contain details not pertaining to this isolated section of the works. Drawings must be taken in the context of a "For Construction" scheme wide delivery. CEC Response (11Jun08): Clarification required	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	A	
1843	Zigzags are missing from the exit of the southbound pedestrian crossing.	Traffic Signal Ducting Layout	A	
1881	1:10 taper arrows required prior to road markings on Great Junction Street.	Road Markings Layout	A	
2125	'No entry' signs missing from Casselbank Street	Traffic Signs Layout	A	
2206	Flush kerb type required north of junction into Constitution Street. SDS stated they were to confirm kerb type and material at 8th November 2007 design review	Kerbs Footways And Paved Areas	A	
2255	Dimensions of tram lane to be shown. SDS stated this would be revised at a previous design review	Cross Section CH 110840 Dropped Kerb Pedestrian Crossing	A	
2519	Raised tables are described as having 25mm upstand lip along the centre line, and would ask for clarification of this detail. This is also apparent on the dropped kerbs and crossings similarly. The kerb should be flush or 0 to 6mm as per CEC/DoT Standards	Construction Details Raised Tables	A	
2714	The offside lane on Leith Walk approaching its junction with Great Junction Street is of substandard width at the point where it begins. See RSA Comments	Road Markings Layout	A	
2724	Diag 1012.1 is used incorrectly as a transverse marking in lay-bys. The Traffic Signs Manual Chapter 5 prescribes this line for use as a longitudinal marking only	Road Markings Layout	A	
2726	The markings at the bus layby south of Lorne Street should be Diag 1025.4.	Road Markings Layout	A	
3191	B4.1 (p12) Departures from Standards - Auditor: "No departures from standard have been reported". Response: "The Roads deviation report was supplied at the time of the audit. This is the formal departures submission." - The auditors comment and the fact that the Roads Technical Design Statement (which contains the deviation report) is not listed in the documents reviewed by the auditors indicates that the auditors have not taken on board any departures from standard. This element is seen as a critical flaw in the Stage 2 audit. CEC need confirmation that Auditors have seen and taken on board the roads deviation report.	RSA2 Designers Response	A	
3744	13 (p8) Tactile Paving: include the following - "Tactile paving at uncontrolled crossings is to be blister surface (unless otherwise indicated) and to the specification shown on CEC Standard Detail No. 11506, with the exception of the colour specification, which is amended as follows. In areas of natural paving, tactile paving units shall be grey/white granite stone. Elsewhere, grey (natural or charcoal) concrete units shall be used".	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	A	
3746	Specification required for granolithic concrete for 'D' islands	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	A	
3747	Specification and locations required for High visibility guardrail.	MCHW Appendix 4 1 Safety Fencing And Safety Barriers	A	
3862	Signs TS110/82 & 83 and TS110/86 & 87 are wrong; should be Diag 958 in advance of bus lane tapers. Signs to Diag 959 also required at the beginning of bus lanes.	Traffic Signs Layout	A	
3866	Sign TS110/79 cannot be erected as the right turn from Leith Walk (northbound) into Crown Place is banned.	Traffic Signs Layout	A	
3872	The wording on Signs TS112/21 & 22 should be 'No loading 6am - Midnight'. The terms '12am' and '12pm' are never used on signs (see Para 12.8 of Chapter 7).	Traffic Signs Layout	A	
3873	Sign TS112/55 should be Diag 772.	Traffic Signs Layout	A	
3877	The location of sign TS113/62 & 67 conflicts with traffic signals.	Traffic Signs Layout	A	
3881	General traffic Leith Walk northbound approach to junction with Dalmeny Street is shown in buff high friction surfacing - should be black.	Pavement Surface Colour	A	
3891	Bus lane approaches to junction of Leith Walk/Great Junction Street/Duke Street should have green coloured surfacing.	Pavement Surface Colour	A	
3901	The new left radius for the entry into Manderston Street forces pole 9 and thereby the pedestrian push button unit, away from the tactile paving for the Manderston Street pedestrian crossing. The tactile paving should be extended to the position of the pole.	Traffic Signal Ducting Layout	A	
3906	A pedestrian pushbutton is missing from pole 3 - phase K.	Traffic Signal Ducting Layout	A	
3926	Item B6.3.9 Junction 16 - The designer's response does not answer the safety audit query, it has simply been cut and paste from the previous item and therefore bears no relation to this item.	RSA2 Designers Response	A	
4473	Item 1.3.3 - The dual socket should also have an RCD device for safety	MCHW Appendix 12.5 Traffic Signal Specification	A	
4474	Section 2 - Installation Requirements - No ducting or chamber specification details have been given. The type, colour, size of both ducts and chambers needs to be specified to be in keeping with current CEC traffic signal specifications. This specification should be provided in appendix 5/2, reference should be made to this document here.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4476	Item 2.1.3 - "... shall be slotless, 4 metres in length and installed NAL RS115DF or same as" in ductile iron pole retention sockets." This should read - " shall be slotless, 4 metres in length and installed in pole retention sockets (NAL RS115DF or similar)"	MCHW Appendix 12.5 Traffic Signal Specification	A	

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
4477	Item 2.1.3 - Remove the last sentence "Where passively safe poles... as these are not to be used for traffic signal poles.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4483	Item 2.1.13 - "All signal heads shall be "highly conspicuous" cirrus type or LED type." - This should read:- "All signal heads shall be ELV LED type."	MCHW Appendix 12.5 Traffic Signal Specification	A	
4488	Item 2.1.26 - This label is not required as it is not a CEC standard.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4489	Item 2.2.2 - All cables are to be ELV and therefore this item should be reworded to reflect this.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4490	Item 2.2.6 - Remove the reference to LV cables.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4491	Item 2.2.11 - Remove the reference to LV cable schedule.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4492	Item 2.4 - Site commissioning – A schedule of tests to be conducted should be included so that all parties involved in the SAT know what equipment is required, can estimate of how long it will take and the personnel required can be determined.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4494	Item 3.9 - Factory Acceptance Testing – A schedule of tests to be conducted should be included so that all parties involved in the FAT know what equipment is required and an estimate of how long it will take can be determined.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4497	Item 5.1 - "The OMCU/OTU shall be compatible with Siemens Remote Monitoring and Peek UTC equipment unless otherwise arranged through this contract.." This should read:- "The OMCU shall be compatible with Siemens Remote Monitoring system and the OTU compatible with the Peek UTC system unless otherwise specified by CEC."	MCHW Appendix 12.5 Traffic Signal Specification	A	
4498	Item 5.2 - "...compliant to version 2 of the UTMC..." - This should read:- "... compliant with the latest version of the UTMC."	MCHW Appendix 12.5 Traffic Signal Specification	A	
4499	Item 6.1.1 - Modems are integral to the OMCU and OTU, but at least one modem at the in-station will probably be required.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4500	Item 6.1.2 - "... ensuring that the modems and OTU are setup..." - This should read "... ensuring that the OTU/OMCU/MOVA is setup..."	MCHW Appendix 12.5 Traffic Signal Specification	A	
4501	Section 7 – MOVA requirements - Specifications for data collection of cruise speeds etc not included.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4502	Item 7.1.7 - The latest version of MOVA should be specified and the reference to the large number of links seems superfluous considering a number of junctions might be considered.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4503	Item 7.3.1 - This item makes reference to an unknown/unexplained strategy.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4505	Item 8.1.2 - The method of locating loops has not been specified.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4515	Item 9.4.1 - The explanation for the 'follow inhibit' does not make sense.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4525	Item 10.1.9 - Not required for LED signal heads.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4527	Appendix B – Installation Documents - As there will be no LV cabling, a schedule for LV is not required.	MCHW Appendix 12.5 Traffic Signal Specification	A	
4815	Tactile paving is shown orientated inline with the kerb but not the crossing. This is incorrect and does not tie in with signals drawing.	Construction Details Foot Of The Walk Pedestian Crossing	A	
4819	Granolithic Concrete finish is not as shown on the prior approval submission. The surface should be paved as the adjacent footways.	Construction Details Foot Of The Walk Pedestian Crossing	A	
4820	Note 2 "Kerbs details to comply with BS:7263 Part3 :2001" - This standard has been withdrawn and replaced by BS.EN1340:2003. However this only applies to concrete kerbs which should not be used in this location.	Construction Details Foot Of The Walk Pedestian Crossing	A	
4827	Specification 11/1 and this drawing do not allign. Further information required.	Construction Details Setts	A	
4847	Appendix 5/2 - (P13) - Lighting and signals ducts should be specified here - inline with CEC specification.	MCHW Appendix 5 - Drainage Specification	A	
4864	2.5 (P6) - Signs that can be mounted on lighting columns should be listed.	MCHW Appendix 12.1 Traffic Signs General	A	
4874	Appendix 24/1 - 2(xi) - "Mortar joints to be 100mm" is this correct (should it not be 10mm)	MCHW Appendix 24 Brickwork, Blockwork And Stonework	A	
4908	Conflict between OLE pole and visibility for traffic signal at poles: CH 110918 and CH 110450.	Outline OLE Layout Plan Chainage 110300 to 110950	A	
4909	Conflict between OLE pole and visibility for traffic signal at poles: CH 111227 and CH 120237.	Outline OLE Layout Plan Chainage 110950 to 120300	A	
2494	Excessive distance between gullies at north of Great Junction Street/Leith Walk junction. An additional gully should be provided on the edge of the LOD half way between the existing gully on Great Junction Street and the proposed gully west of the tramway.	Drainage Plan	B	This would improve the existing drainage situation which is considered betterment. This is not part of SDS scope
2741	Drawing shows kerb type K7 at the tramstop. This is in conflict with the tramstop details drawing. The areas around the tramstops are also inconsistent with the tramstop drawings.	Kerbs Footways And Paved Areas	C	PB disciplines did not engage in the agreed IDC process which led to conflicts with the roads design. Subsequent revisions to roads design due to PB disciplines is a commercial issue
4906	Location of pole at CH 110240 unsuitable as bollard required on end of island.	Outline OLE Layout Plan Chainage 102450 to 110300	C	PB disciplines did not engage in the agreed IDC process which led to conflicts with the roads design. Subsequent revisions to roads design due to PB disciplines is a commercial issue

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
4907	Location of pole at CH 111194 unsuitable as bollard required on end of island	Outline OLE Layout Plan Chainage 10950 to 120300	C	PB disciplines did not engage in the agreed IDC process which led to conflicts with the roads design. Subsequent revisions to roads design due to PB disciplines is a commercial issue
246	2.5 (p5) "Where appropriate, to reduce number of posts, signs have been located on shared posts. Signs can also be located on lighting columns, subject to agreement by the Employer's Agent/Site Representative." Should also include sharing OLE poles/traffic signal poles. In addition TRO signage should be located on adjacent walls/fences where appropriate. SDS Response (17Apr08): OLE poles where possible, traffic signals never. CEC Response (15May08): Specification to be updated. Some signs maybe placed on traffic signal poles. This conflicts with SDS's response to comment #386.	MCHW Appendix 12.1 Traffic Signs General	C	Significant additional approvals are required for locating signage on private infrastructure. Obtaining these approvals would require additional costs and is not within the SDS contract. Refer to D.Simmons letter to PB.
381	Appendix 2/3 should highlight if bus shelters to be removed are from "Adshell" as these will require additional authorisation for removal. SDS Response (17Apr08) As per site survey. Dimensions to be provided. Agreement modifications with Adshel not within scope of SDS. CEC to advise to tie. CEC Response (15May08). Dimensions included for some bus stops but not all. Site survey details not received.	MCHW Appendix 2 - Site Clearance	C	Bus shelters are dealt with under CEC's agreement with Adshell which is not within the SDS scope. The design identifies shelters to be removed.
1752	What are the bus shelter locations and types on Great Junction Street and Duke street? No shelters are shown. To ensure visibility of traffic signals is maintained and are footway widths are reduced below standard, clearance provided to be stated.	Roads Design Layout Plan	C	Bus shelters in this area are part of CEC's agreement with Adshell which is not within the SDS scope
1758	There is a tram track crossover close to Manderston Street junction. If it is necessary to reverse a tram that is heading South, to head North, the tram blocks the road junction whilst the driver changes ends and sets back. How is this managed with the signalling - will traffic be signalled into the junction, be blocked and be stuck when the lights change? If a tram is reversing from heading North, to head South (this happens on a piece of tram only highway - good), will it activate the tram stage of the signal at Manderston Street junction?	Roads Design Layout Plan	C	The crossover is for use in emergencies. The design accommodates this. It is the operators responsibility to have a method statement in place for this operation. It is not within SDS's scope
3202	B7.2.1 (p30) Cycle Lanes - Recommendation: "... Rather than split the 3.45m width into cycle and traffic lanes, combine them as a single all-purpose lane." Response: "... This item will be raised with the Overseeing Organisation". A cycle lane should only be provided where standards can be met. This is not possible at the Foot of the Walk, so the 3.45 m lane should be an all-purpose lane, as the Auditor notes. It may be possible to provide a cycle lane at the Top of the Walk, on the approaches to London Road for example.	RSA2 Designers Response	C	This is contrary to the agreedway forward as per the RDWG minutes for 7/09/2007 and 21/09/07
3724	Any lowering of the footway should result in a new subbase layer, reconstructed to 150mm deep. Note should be added to relocate/lower ducts as required when lowering footways.	Construction Details Footways	C	This detail would result in significant additional excavation and subbase works, increasing the capital cost of the project and would not result in best value for money
3728	When lowering the footway the subbase layer should be reconstructed to minimum 150mm deep	Construction Details Footways	C	This detail would result in significant additional excavation and subbase works, increasing the capital cost of the project and would not result in best value for money. This comment is also a duplicate with 3724
3869	General: Inconstancies in sign provision. Signs to Diag 962 (var.) are shown on some side roads (TS111/59 & 67) but not on others (Lorne Street & Jamieson Place).	Traffic Signs Layout	C	Use of dia 962 (var) is a direct consequence of CEC wishing the Bus Lanes to be camera enforceable. The design minimises the use of this additional signage. To use this signage at all locations increases the capital cost with little or no benefit.
3878	General. Inconsistencies in sign provision. Signs to Diag 962 (var.) are shown on some side roads and accesses (TS113/52 & 56) but not on others (three accesses south of Shrubhill House).	Traffic Signs Layout	C	Use of dia 962 (var) is a direct consequence of CEC wishing the Bus Lanes to be camera enforceable. The design minimises the use of this additional signage. To use this signage at all locations increases the capital cost with little or no benefit. This is a duplicate comment with 3869
3909	Facilities for pedestrians do not meet CEC standards - pedestrian facilities are required on all arms of the junction. Currently there is no pedestrian crossing facility on the southern arm of the junction.	Traffic Signal Ducting Layout	C	The design provides pedestrian crossing at all locations where there is an existing crossing. To provide additional crossings at all locations would result in increased capital costs which does not represent value for money
2226	Why guardrail in one location, but not in the other? (looking at areas opposite Arthur Street and on RHS of junction with Iona Street) SDS Response (08Nov07): To provide explanation	Road Restraint Systems	D	To remove PGR where there is a risk to pedestrians would not fulfill SDS's CDM responsibilities. CEC would become the designer and therefore would need to accept liability under CDM
249	3.1 (p7) "Advisory Direction Signs for Pedestrians and Cyclists. Details of logos and colours to be confirmed by CEC.". SDS to confirm what details they require. Existing signs to be retained/replaced inline with the TSRGD. Signs to be included with the design. SDS Response (17Apr08): As per site survey. Where required CEC to provided sign plate location details where needed as determined by CEC. To be considered when any taxi stands are located. CEC Response (15May08): Details of survey not provided. Signs to be included in the road signs package. Existing signs to be retained/replaced. SDS Response (28May08): As the overseeing organisation we would expect CEC to have a signage strategy and have appraised the scheme accordingly. Not in SDS remit. CEC Response (11Jun08): SDS to provide details of sign survey	MCHW Appendix 12.1 Traffic Signs General	I	
2227	Further detail needed of measures to discourage road vehicles entering tram only section eg width of white line, rumble strip etc? (at junction with Arthur Street)	Roads Design Layout Plan	I	
3165	A specification for coloured surface treatments to roads is required including specific colours and required PSV values. (PSV should be inline with HFS). Need to include green for bus lanes and red for cycle lanes and ASLs outwith the world heritage site.	MCHW Appendix 7.1 Permitted Pavement Options	I	
3167	Appendix 5/2 (p13) "Note: Refer to traffic signal & ducting drawings and appendices for all other ducting information." - No appendices for Traffic Signals have been provided. A limited amount of detail is shown on signal drawings. Reference should be made to relevant document numbers.	MCHW Appendix 5 - Drainage Specification	I	

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3196	B5.1.1 (p17) Tram/Road Interface - Recommendation: "It would be preferred that such tram only sections were elevated on a raised kerbed central reserve... " Response: " A raised tram area cannot be provided as it will not work horizontally or vertically due to the number of constraints throughout section 1B. - Tram only areas could be segregated with a low height kerb (10mm) and could be surfaced using Imprint or similar contrasting surface.	RSA2 Designers Response	I	
3922	Item B6.1.2 Junction 15 - The safety auditor's recommendation is correct and congruent with CEC's engineering solution for the junction. The designer's response and critique of the recommendations is based upon incorrect assumptions (pedestrians using islands, islands being clipped) and the final recommendation of additional road markings will not address other intrinsic issues	RSA2 Designers Response	I	
4830	Some bus shelters are ladled (cc) What does this indicate?	MCHW Appendix 2 - Site Clearance	I	
1790	1B0075 is an existing taxi information sign (857 1) Schedule states that this is to be removed and stored: signs drawing show no replacement.	Site Clearance Survey Plans	J	No replacement deemed necessary. This also adhere's to CEC policy of minimising street furntiure and clutter.
2215	Raise table at junction with Albert Street should be replaced	Kerbs Footways And Paved Areas	J	This is not affected by the works so does not need to be replaced.
4863	2.3 (P6) - Foundation surfaces should not be flush with finished ground level (normally 100mm below ground level)	MCHW Appendix 12.1 Traffic Signs General	J	The design provided is adequate. The 100mm dimension is not a mandatory requirement.
236	2.4 (p5) General Requirements "Footway and footway/cycleway construction is to be shown on Construction Detail drawings." Reference to drawing to be provided Detail to be provided. Is this to CEC standard details? SDS Response (17Apr08). Drawings to be provided. CEC Response (15May08): No update made, no drawings provided SDS Response (28May08): Yes it is to the	MCHW Appendix 11.1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	J	Design information provided was sufficient to gain approval.
1816	Bollards should be provided at signals 6, 7, 17 and 18	Traffic Signal Ducting Layout	J	Bollards were considered in tine with safety issues, CEC desire to minimise street furniture and good design practice Provision of bollards is based on designers judgement.
2218	There is a bin shown behind the guardrail at Great Junction Street. This is already a busy, narrow footway. Bin to be relocated. SDS Response (08Nov07): SDS to check and confirm.	Road Restraint Systems	J	Existing situation is a narrow footway. It is a design judgement whether to maintain the existing situation or revise it
2257	Section A-A shows PPC (half-batter) kerbs, should be natural stone, whin kerb. SDS Response (08Nov07) SDS to change and detail	Construction Details Foot Of The Walk Pedestian Crossing	J	This area is outside the WHS and therfore does not require natural stone kerbs
2431	Schedule 5 (p11) "High Friction Surfacing Colour Buff except under hatched road markings where grey " - HFS should be black to match road surface colour in all locations SDS Response (17Apr08): Agree CEC Response (15May08): Text has been updated but is still incorrect. All HFS should be black system wide. SDS Response (28May08): Amended on Drawings HRL-01274-012780 but the legend is wron and will be amended.	MCHW Appendix 7.1 Permitted Pavement Options	J	Design complies with standards and the colour has no impact on the suitability of the design,
2600	Poor visibility for vehicles exiting old bus depot due to proposed bus shelter. Also limited space for pedestrians to wait at the bus stop. Should raised tables be used at either access?	Roads Design Layout Plan	J	Design judgement
2686	Traffic islands at the junction ofLeith Walk/Great Junction Street/Constitution Street all require bollards	Traffic Signs Layout	J	Bollards were considered in line with safety issues, CEC desire to minimise street furniture and good design practice Provision of bollards is based on designers judgement.
2690	Sign TS110/51 signs for City Car Club and Doctor's parking must be separate	Traffic Signs Layout	J	This is a design judgement and is acceptable given no requirements were provided by CEC.
3199	B6.3.4 (p23) Junctions, Traffic Signals, J15 - Response: "The carriageway width at the beginning of the lane dividing line is 5.6m" - Lane widths at this point are 3.5m and 2.1m The latter is too narrow. This response does not address the issue. CEC suggest that the lane divider line should be modified to split the available 5.6 m at the start point (creating two 2.8 m lanes at that point) and taper into the point currently shown at the stop line	RSA2 Designers Response	J	This is the designers response which is based on the designers judgement. The designer is required to prepare this document and CEC can respond through an exceptions report or an instruction. As this is a designer prepared document CEC should not propose modifications
3200	B6.3.11 (p26) Junctions, Traffic Signals, J17 - Recommendation: "Install a pedestrian phase across the side road/access " Response: It would be inappropriate to have a formal pedestrian crossing at this location - Dropped Kerbs and tactile paving should still be provided	RSA2 Designers Response	J	This is the designers response which is based on the designers judgement. The designer is required to prepare this document and CEC can respond through an exceptions report or an instruction. As this is a designer prepared document CEC should not propose modifications.
3201	B7.1.5 (p29) Pedestrians, Tactile Paving - Response: "The use of grey tactile paving is restricted to the World Heritage Site where this is a planning requirement. " This restricted to the World Heritage Site but is the CEC standard detail for tactile paving city wide.	RSA2 Designers Response	J	This is the designers response which is based on the designers judgement. The designer is required to prepare this document and CEC can respond through an exceptions report or an instruction. As this is a designer prepared document CEC should not propose modifications.
3737	4 & 5 (p6) Precast Concrete Flags. Sizes specified 600mm x 450mm x 50mm square edge, however Marshalls do not specify this type. Change to 600mm x 450mm x 63mm square edge	MCHW Appendix 11.1 Kerbs, Footways, Cycleways Laybys Busbays And Paved Areas	J	These sizes can be supplied by Marshals or the design allows another product to be specified
3738	4 (p6) Precast Concrete Flags: Consideration should be given to using smaller element flags with greater thickness in areas subject to vehicle running (lessen the likely hood of breaking)	MCHW Appendix 11.1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	J	Consideration was given and the designers judgement used.
3863	Signs TS110/82 & 83 and TS110/71 are mounted too close together	Traffic Signs Layout	J	The signs can be accommodated in the available area.
3879	TS113/03 & 58 can be mounted on the same post	Traffic Signs Layout	J	Design judgement.
3898	In accord with the RSA, the road markings in the centre of the junction require alteration to guide vehicles from Great Junction and Duke Street through the junction. The yellow box marking should be separated with a continuous blank area between the islands on either side of the junction (pole 6 to pole 17) similarly to the method defining the tram envelope.	Traffic Signal Ducting Layout	J	The standard yellow box is considered sufficient for this situation. Standard signs and markings have been provided wherever possible as good design practice.

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
3900	Phase G requires buses to travel ahead only and therefore a regulatory 'Ahead Only' box sign is required as an ahead green arrow alone is not sufficient	Traffic Signal Ducting Layout	J	The designer deemed that an ahead green arrow was sufficient
3904	Concern exists that the location of the secondary signals for phases B and E will cause vehicles from the side roads to mistakenly stop at these signals. These heads should either be moved nearer to their respective stoplines and a central island should be constructed to relocate phases A and D secondary signals to a more practical and safer location	Traffic Signal Ducting Layout	J	The junction is a standard layout. To introduce the additional hazard of a traffic island was not considered appropriate by the designer
3912	The crossing on the western half of Piling Street should be rotated so that it is at right-angles to the kerb as per the existing crossing, which is preferable for the visually impaired	Traffic Signal Ducting Layout	J	As discussed at mtg on 20/08/08 we believe this to be a less safe solution as the crossing will now not be staggered across Piling Street
3924	Item B6.3.5 Junction 15 - CEC agree that the intermediate call button should be removed but consider that the suggested "D" island should also be incorporated in the design, all other things being equal. Where the island cannot be accommodated the reasons need to be stated	RSA2 Designers Response	J	This is the designers response which is based on the designers judgement. The designer is required to prepare this document and CEC can respond through an exceptions report or an instruction. As this is a designer prepared document CEC should not propose modifications
4173	Should double gully at approximate Ch 111225 not tie in to existing double gully tail?	Drainage Plan	J	CEC is proposing their own design solution. The design provided is suitable and valid.
4472	Item 1.3.1 - A 40 Amp fuse is the normal rating to be used in the Haldo Pillar.	MCHW Appendix 12.5 Traffic Signal Specification	J	This is the normal rating but is not appropriate in all situations
4814	Drawing shows various kerb types, these vary from Half battered quadrants, natural stone kerbs and bullnosed kerbs. Consistency required, all kerbs should be natural stone in this location.	Construction Details Foot Of The Walk Pedestian Crossing	J	This area is outside the WHS and therfore does not require natural stone kerbs
4824	Note 15: "New raised tables are of block paving construction." - This must be determined by vehicle loading. Further specification required for full depth construction of raised tables with imprint construction.	Construction Details Raised Tables	J	Imprint construction is a preference from CEC not previously advised
4825	Note 15: "New raised tables are of block paving construction." - Further specification required for imprint	Construction Details Raised Tables	J	Imprint construction is a preference from CEC not previously advised
4857	2 (P3) - Specify CEC standard detail numbers	MCHW Appendix 7.2 Excavation, Trimming And Existing Services	J	These are not required
4888	Raised table to be provided at Shrub Place Lane	Kerbs Footways And Paved Areas	J	This is not required and was agreed with CEC.
4889	The surface material for the central refuge at the Foot of the Walk is shown as granite setts. This is not consistent with other drawing. CEC anticipate it to match existing i.e. PCC paving slabs.	Kerbs Footways And Paved Areas	J	Design judgement was used in the absence of CEC requirements.
4890	Existing raised table at junction opposite Crown Street should be replaced	Kerbs Footways And Paved Areas	J	This is not affected by the works so does not need to be replaced.
1773	In Tram only areas, such as this is the 3.7m tram lane width excessive?	Cross Section CH 110670 Parking Layby No Cycle Lane	J	Judgement. Accepted by CEC at 3.7m
1778	Why is the large clearance between the tram vehicle and central reserve kerb required in tram only area? Particularly when road and parking bay widths are narrow/sub-standard	Cross Section CH 110670 Parking Layby No Cycle Lane	J	This is a duplicate comment with 1773
3193	B4.2.2 (p12) Drainage - Great Junction Street. Response: "The tram projects employer's requirement is to provide no betterment to the existing drainage situation. The drainage is as existing. We propose no revision." - CEC note that kerblines are being changed; drainage should be provided, as necessary, to reflect the changes.	RSA2 Designers Response	J	This is the designers response which is based on the designers judgement. The designer is required to prepare this document and CEC can respond through an exceptions report or an instruction. As this is a designer prepared document CEC should not propose modifications
3195	B4.6.2 (p15) Skid Resistance - HFS. Recommendation: "The surface course should have a higher friction on the approach to junctions and in particular pedestrian crossings, the latter where HFS would be preferred. HFS should be in a contrasting colour (usually buff) and continue beyond the stop line in black colour..." - CEC standard is to have BLACK HFS on approaches to all signalised junctions. Buff would not provide a contrast with tram only areas, particularly at foot of the walk. Appendix 7/1 of the Specification currently states that a PSV of 60 is to be provided, not 65 as stated in the designer's response. This needs to be addressed. CEC would also expect that a strict application of HD36/06 would identify the need for HFS on more approaches than the design currently shows.	RSA2 Designers Response	J	This is the designers response which is based on the designers judgement. The designer is required to prepare this document and CEC can respond through an exceptions report or an instruction. As this is a designer prepared document CEC should not propose modifications
3865	A banned right turn sign is required from Leith Walk (northbound) into Crown Street.	Traffic Signs Layout	J	Judgement as it requires a turn across a tram only area and the cross-over also the sign cannot be sighted in the central reserve and will be largely obscured from drivers view by vehicles in the loading area
3874	Existing sign TS112/60 - traffic will no longer be able to turn right into Balfour Street from Leith Walk, therefore this sign is of no benefit other than to pedestrians. It should either be omitted or replaced with a suitable pedestrian sign.	Traffic Signs Layout	J	The designer believes this sign is required.
3897	In accord with the RSA, additional islands are required on the opposite side of the pedestrian crossing to poles 6 & 7. The secondary signal heads for phases A, B and E should be relocated to these islands for better visibility and consequently pole 6 can be removed.	Traffic Signal Ducting Layout	J	It is the designers judgement that these islands are not required and reduce the safety of the junction
3899	The secondary signal for phase G, located on pole 10, should be relocated to pole 5 as pole 10 is very close to the kerb edge.	Traffic Signal Ducting Layout	J	The pole is the standard distance from the kerb.
3903	The secondary signal heads for phases D and G will breach the 450mm minimum clearance from kerb edge to any street furniture, due to the projection of the head assembly. To achieve a solution, use 2 poles for the 3 heads which is more appropriate.	Traffic Signal Ducting Layout	J	CEC's 'policy' is to reduce the amount of street furniture. This has been done in this instance
3905	The position for the secondary traffic signal heads should be consistent between phases A and D.	Traffic Signal Ducting Layout	J	Autotrack movements do not allow this.
4478	Item 2.1.4 - Item not required as CEC do not number poles or controllers	MCHW Appendix 12.5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. This may be required by the contractor or site staff so it has been included
4479	Item 2.1.5 - Item not required as CEC do not number poles or controllers	MCHW Appendix 12.5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. This may be required by the contractor or site staff so it has been included
4480	Item 2.1.7 - Item not required as CEC do not number poles or controllers	MCHW Appendix 12.5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. This may be required by the contractor or site staff so it has been included.

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4481	Item 2 1 8 - Item not required as CEC do not numberpoles or controllers	MCHW Appendix 12 5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. This may be required by the contractor or site staff so it has been included.
4482	Item 2 1 9 - Item not required as CEC do not number poles or controllers	MCHW Appendix 12.5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. This may be required by the contractor or site staff so it has been included.
4484	Item 2 1 4 - " bottom of the signal head/bracket shall be not less than 2 3 metres and not more than 2 55 metres " This should read - " bottom of the signal head/bracket shall be not less than 2 25 metres."	MCHW Appendix 12 5 Traffic Signal Specification	J	2 3 metres had been specified to allow for potential future use as a cycle path
4493	Item 3 8 1 - This item is not required	MCHW Appendix 12 5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. SDS have included additional information.
4504	Item 7.4 1 - There is a format error here and the statement is also redundant as the controller bit pattern should allow for this	MCHW Appendix 12.5 Traffic Signal Specification	J	Format errors do not affect the accuracy or suitability of the design.
4506	Item 8 1 4 - The statement of specification G32 needs to be expanded – i e MCHW, Volume 3, drawing reference G32	MCHW Appendix 12 5 Traffic Signal Specification	J	This information was sufficient to gain approval.
4508	Item 9 3 2 - Not required as this is covered elsewhere	MCHW Appendix 12 5 Traffic Signal Specification	J	CEC judge this is not required as they do not need it. SDS have included additional information.
4514	Item 9.3.12 - "The Tram phase request demand shall remain in force until the phase has been satisfied " - This should be amended to be more specific:- "The Tram phase request demand shall remain in force until the phase minimum has been satisfied. "	MCHW Appendix 12 5 Traffic Signal Specification	J	The designers judgement is that the text is suficient
4524	Item 10 1 7 - Item not required as not standard CEC practice.	MCHW Appendix 12.5 Traffic Signal Specification	J	Standard CEC practice / requirements have not been supplied so SDS has used design judgement
793	Where is footway finish/scope of works specified for each location? SDS Response (17Apr08): Will clarify in specification. CEC Response (15May08): Not updated. SDS Response (28May08): Clarified in specification. CEC Response (15May08): Specify where please.	MCHW Appendix 11.1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	NA	Sufficient information was provided at time of Technial Approval
2134	Time plate (TS111/48 and 49): '12am' & '12pm' are never used on this type of sign 'Noon' and 'Midnight' are the correct terms	Traffic Signs Layout	NA	Comment Not Applicable as it is covered through comment 3876. This is a duplicate comment
2137	Time plate (TS112/21 & 22): '12am' & '12pm' are never used on this type of sign 'Noon' and 'Midnight' are the correct terms	Traffic Signs Layout	NA	Comment Not Applicable as it is covered through comment 3876. This is a duplicate comment
2141	Time plate (TS113/09 & 51): '12am' & '12pm' are never used on this type of sign 'Noon' and 'Midnight' are the correct terms	Traffic Signs Layout	NA	Comment Not Applicable as it is covered through comment 3876. This is a duplicate comment
3867	The wording on Signs TS110/46, 69 & 44 should be 'No loading 6am - Midnight' The terms '12am' and '12pm' are never used on signs (see Para 12.8 of Chapter 7)	Traffic Signs Layout	NA	Comment Not Applicable as it is covered through comment 3876. This is a duplicate comment
3870	The wording on Signs TS111/48 & 49 should be 'No loading 6am - Midnight' The terms '12am' and '12pm' are never used on signs (see Para 12.8 of Chapter 7)	Traffic Signs Layout	NA	This is a duplicate comment with 2134
3885	General traffic Leith Walk northbound approach to junction with Pilrig Street is shown in buff high friction surfacing - should be black	Pavement Surface Colour	NA	Design complies with standards and the colour has no impact on the suitability of the design.
3886	General traffic Leith Walk northbound approach to junction with Dalmeny Street is shown in buff high friction surfacing - should be black	Pavement Surface Colour	NA	Design complies with standards and the colour has no impact on the suitability of the design.
3887	General traffic Leith Walk approaches to junction with McDonald Road/Brunswick Road are shown in buff high friction surfacing - should be black	Pavement Surface Colour	NA	Design complies with standards and the colour has no impact on the suitability of the design.
3890	General traffic approaches to junction of Leith Walk/Great Junction Street/Duke Street are shown in buff high friction surfacing - should be black	Pavement Surface Colour	NA	Design complies with standards and the colour has no impact on the suitability of the design.
3999	Appendix 5/1, Section 1.9: Are SDS catering to requirements of BS EN 14396:2004 regarding fixed ladder/handrail for access to manhole? SDS Response (06Dec07): SDS are currently using CEC standards, however SDS will confirm with CEC that these are still suitable for approval	MCHW Appendix 5 - Drainage Specification	NA	SDS have used CEC's standard details which are their requirements
4174	Section 1B/1C cut-line chainage wrong	Drainage Plan	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4821	Note 8 "For footway construction details refer to Appendix 11/1" - The appendix has no details for Granolithic concrete finish	Construction Details Foot Of The Walk Pedestian Crossing	NA	There is no granolithic concrete specified in section 1B.
4840	Throughout document there is reference to different types of guardrail etc. It is not clear which guardrail is specified and is confusing. Clarification required	MCHW Appendix 4 1 Safety Fencing And Safety Barriers	NA	SDS has specified replacing like with like in terms of PGR and the existing PGR is of several different types.
4869	1 (P4) - Refers to "(1200 Series)" drawings however in Schedule 12/3 Notes refer to 500 Series drawing numbers for some sections	MCHW Appendix 12.3 Traffic Signs Road Markings And Studs	NA	This is a duplicate comment with 4862 500 series drawings reference is applicable to line 2 not section 1B.
2216	Name of street is Shrub Place Lane not just Place Lane. SDS Response (08Nov07): SDS to update	Kerbs Footways And Paved Areas	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval. The OS mapping identifies the street as Place Lane. No signage has been proposed stating Place lane. The text only appears on the background to the drawing and should not be altered to comply with the OS copyright
2577	Typo in document references, all are shown as ULEE90130 Should be ULE90130	Cross Section CH 110840 Dropped Kerb Pedestrian Crossing	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
2585	Times are not given for loading bays opposite Kirk Street and north of Jane Street.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
2592	The bus layby south of Lorne Street should have a Clearway (Diag 1025) along the full length of the layby	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
2594	At the north bound crossing, north of Balfour Street "No Warting At Any Time except loading Midnight to 6am" is proposed. This conflicts with crossing zigzag lines Should be changed to no waiting/loading at any time	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
3170	2.1 (p7) Section 1B General - "Section 1B commences at Leith Walk with its junction with Annandale St" - This should be changed to Brunswick Street	Roads Technical Design Statement Detailed Design	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
3172	2.1 (p7) Section 1B General - "Tram; ... Tram only space is denoted by a brown coloured surface." - This should be buff	Roads Technical Design Statement Detailed Design	NA	The colour of the surfacing was not agreed at the time of issuing the document. The colour of the surfacing was dealt with as a system wide issue.
3173	2.1 (p7) Section 1B General - "Bus. Bus traffic is permitted to use the tram lane except at the stops." - This should specify tram stops as opposed to bus stops. Bus traffic is also banned from the cross over area at the foot of the walk. A note should be made regarding bus priority at the Foot of the Walk junction.	Roads Technical Design Statement Detailed Design	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
3174	2.1 (p7) Section 1B General - "Taxi: As for Buses" - This needs to be more specific. Taxi lanes is as per bus lanes. Provide details of changes to taxi stances.	Roads Technical Design Statement Detailed Design	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval. Changes to taxi stances are shown on the drawings.
3176	2.2 (p8) Road Layout and Construction - "Progressing north ... The McDonald Road junction is signalised and is described in Appendix ?" - This should read Appendix B.	Roads Technical Design Statement Detailed Design	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
3179	2.4 (p9) Tramstops - "The design for Haymarket tramstop is being developed by the tramstop design team, and whilst some pedestrian facilities are shown on the Roads drawings, the final design for these public realm spaces around the tramstops resides with the tramstop design team." - This does not apply to section 1B and needs to be updated for the Balfour Street stop. In addition, a fully coordinated design is expected at technical approval. References to the tramstop design and any design commentary details need to be provided here.	Roads Technical Design Statement Detailed Design	NA	The document does refer to the tram stop design. No design commentary details are required. This does not affect the accuracy of the design, or the ability of CEC to grant technical approval.
3182	2.7 (p10) Footways and Footpaths - "There is, on Great Junction Street, just to the West of the junction with Leith Walk, a constriction presented by the need to maintain existing service for a waste disposal bin ... Providing a footway width of approx 1.5m" - It is unclear if this is a litter bin, domestic bin or trade waste bin. Why can the bin not be relocated.	Roads Technical Design Statement Detailed Design	NA	The bin is shown on the drawings and is outside the LOD so cannot be moved
3185	2.11 (p11) Road Safety Audit (Stage 2) - "The Road safety Audit and Designers Response are stand alone documents reference TM/USDS/rsa2/S1B-01 rev. 1 and ULE90130-01-REP-00108." - The audit was issued with reference ULE90130-01-REP-00094 Rev.2.	Roads Technical Design Statement Detailed Design	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
3929	General; no indication is given on the key of bus stop clearways.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3931	The key states that time periods for loading bays are indicated on the plan, however they are not.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3933	Banned right turn required from Leith Walk (northbound) into Crown Place.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3934	Banned right turn required from Leith Walk (northbound) into Crown Street.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3935	No entry required for Casslebank Street.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3937	There is a section of Leith Walk (southbound) south of Jane Street between two loading bays where no waiting and loading restrictions are shown.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3942	Bus bay south of Lorne Street (southbound): the bus stop clearway should extend over the entire layby.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
3951	The key states that time periods for loading bays are indicated on the plan, however they are not.	TRO Plan	NA	TRO plans were not submitted for approval, they were submitted for information. A separate process was in place for approving TRO plans.
4468	Subsections 1.2 and 1.3 are not in the same format as the rest of the section	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4470	Item 1.2.3 - "... installation of an OTU and an Outstation Monitoring and Control Unit (OMCU) and MOVA unit..." This should read:- "... installation of an OTU or an Outstation Monitoring and Control Unit (OMCU) and MOVA unit if required. "	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4471	Item 1.2.4 - "... preferably at the rear of the controller. " This should read - "... preferably at the rear of the controller. "	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4475	Item 2.1.2 - "...undertaken to reduce risk of corrosion." Add:- "... undertaken to reduce risk of corrosion or the item should be replaced."	MCHW Appendix 12.5 Traffic Signal Specification	NA	The text provided is considered appropriate by the designer.
4485	Item 2.1.16 - "When Tram signal heads shall..." - This should read:- "Tram signal heads shall..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4507	Item 9.2.5 - "... controlled by individual tam priority time. " - This should read - "... controlled by individual tram priority time."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4509	Item 9.3.4 - "Prepare - shall allows at least six. " - This should read - "Prepare - shall allow at least six..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4510	Item 9.3.4 - "Stopline - A standard phase demand for the phase shall be inserted exerted if the Tram phase..." - This should read - "Stopline - A standard phase demand shall be inserted if the Tram phase..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4511	Item 9.3.5 - "...Tram events defined above will require to be confirmed by the signal..." - This should read:- "...Tram events defined above will require confirmation by the signal..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4512	Item 9.3.9 - "efficient passage of all trams This is to be..." - There is a full stop missing so that this should read:- "efficient passage of all trams. This is to be..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4513	Item 9.3.10 - "...prepare, demand, stopline, exit, if a configured event " This needs a full stop to divide these statements:- "... prepare, demand, stopline, exit. If a configured event..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.

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4516	Item 9.4.1 - The use of the word 'consequential' seems to be out of context 'Associated' would be a better word to use here	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval
4517	Item 9.4.1 - "... by the inhibit shall prevented from running..." - This should read - "... by the inhibit shall be prevented from running..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4518	Item 9.6.3 and Item 9.6.4 - A sentence should not be started with the word 'however'	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval
4520	Item 9.8.1 - "In addition the stopline influence timer is shall be started" - This should read - In addition the stopline influence timer shall be started"	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval
4521	Item 9.10.1 - "... maximum timer is cancelled due to then the exit timer is..." - This should read - "... maximum timer is cancelled then the exit timer is..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4522	Item 9.12.5 - "... the Tram phase shall inhibited and the..." - This should read - "... the Tram phase shall be inhibited and the..."	MCHW Appendix 12.5 Traffic Signal Specification	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
4838	2.1 (P4) - Don't abbreviate to PGR unless previously stated what this means	MCHW Appendix 4.1 Safety Fencing And Safety Barriers	NA	This does not affect the accuracy of the design or the ability of CEC to grant technical approval.
1765	How does the proposed bus shelter opposite Iona Street tie in with signals?	Roads Design Layout Plan	O	Bus Shelters are covered under the Adshell Agreement
4467	Section 1 - General requirements - Additional specification for RTC – DD CLC/TS 50509	MCHW Appendix 12.5 Traffic Signal Specification	O	These elements are outwith the Roads scope of works
1807	Area around Balfour Street Tram Stop is inconsistent with tramstop drawings	Kerbs Footways And Paved Areas	O	PB disciplines did not engage in the agreed IDC process which led to conflicts with the roads design. Conflicts identifed within PB scope of work are outwith Roads design scope of work and are a commercial issue.
2497	Tram drainage connection opposite Kirk street connects into sewer directly below the tram slab. If a trap/sump unit is to be used how is it to be accessed? Further details are required.	Drainage Plan	O	Trap/sump unit is part of the rail groove drainage system which is outwith roads scope of works.
2582	Concern no kerb protection is provided to 2 OLE poles at 110087 and 110072.	Outline OLE Layout Plan Chainage 102450 to 110300	O	PB disciplines did not engage in the agreed IDC process which led to conflicts with the roads design. Conflicts identifed within PB scope of work are outwith Roads design scope of work and are a commercial issue.
2684	Section 2. "For clarity and design coordination purposes the principle of the power feeding, switching and sectioning requirements are defined and shown on OLE reference design drawings but, not the actual location of trackside cabinets. The details of trackside cabinets and the cable route arrangements are not shown on 'Reference Design' drawings and they are defined and specified elsewhere as part of submission of application for planning and approvals." - Such cabinets need to be shown on the roads design to allow coordination and a comprehensive Road Safety Audit.	OLE Design Commentry	O	OLE cabinets are outwith the scope of the roads design. They were not identified due to PB disciplines not engaging in the agreed IDC process which led to conflicts with the roads design.
3168	1.5 (p6) General Information and References - "Specific construction details relating to the tramway are included within the drawings (ULE90130-CC-HRL-01000 series) None of these drawings have been provided at Technical Approval. Construction details received are SW-CND-00000 series (road & footway) and 01-HRL-01130 series (footway)	Roads Technical Design Statement Detailed Design	O	Tramway construction details are outwith Roads scope of works
3177	2.3 (p9) Traffic Signals "...RTC and TPDS cabinets may change following ongoing coordination with the tram signal For details of the Traffic Signals Safety Case..." To be clarified.	Roads Technical Design Statement Detailed Design	O	These cabinets are outwith the scope of the roads design
3184	2.9 (p10) Drainage - "Any new Road drainage will be shown on the tramway drainage drawings" - Confirm this is the drainage design as issued (provide reference). Details of tramstop drainage to be provided. Details of sub station drainage required.	Roads Technical Design Statement Detailed Design	O	Tramstop and sub station drainage is outwith the scope of the roads design
3192	B4.2.1 (p12) Drainage - Drainage to be provided at Balfour Street Tramstop Response: "Accepted, drainage to be provided." - This information has not been supplied, was not included in previous drainage or tramstop designs	RSA2 Designers Response	O	Tramstop drainage is outwith the scope of the roads design
3745	Specification required for the type of paving used for the tram platform edging	MCHW Appendix 11.1 Kerbs, Footways Cycleways, Laybys Busbays And Paved Areas	O	Tramstop paving is outwith the scope of the roads design
4176	Rail Groove Box drains are hinged on the "up traffic" end for safely reasons However, it is noted that the boxes in the middle of the junctions will be subject to cross-traffic; can the drainage be moved off the junctions to avoid this?	Drainage Plan	O	Rail Groove Box drains are outwith the scope of the roads design
4901	Proposed location of CCTV camera not shown. Details need to be provided and approved by CEC CCTV control and police. Cabling/ducting will need provided. Prior Approval shows CCTV located on OLE column, if approved this is likely to require an additional control cabinet.	Roads Design Layout Plan	O	CCTV design is outwith the scope of the roads design
250	4.5 (p7) "Bollards will be of aluminium construction when specifically directed." To be clarified, is there a requirement for this? Where are these being proposed? SDS Response (17Apr08). Not on this section. SDS Response (28May08): Not required on this section, if not required at all it will be removed for the final IFC issue.	MCHW Appendix 12.1 Traffic Signs General	O	These are not proposed in section 1B
338	6 (p6) Sett Paving. Concern that the specification will not be suitable for HGV and bus loadings at Constitution St & St Andrew Square. SDS Response (17Apr08): Designed appropriately. Note not scope of St. David Street submittal. CEC Response (15May08): Specification does not tie in with CEC detail or SDS drawing 01-HRL-1138 Rev 2. Specification does not take account of trafficked and non trafficked details. To be updated.	MCHW Appendix 11.1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	O	These areas are not in section 1B
339	6 (p6) Sett Paving: Specification states existing setts to be reused. Note there are no sets in Shandwick Place/St Andrew Square at present. SDS Response (17Apr08): Specification intended to note that setts are to be re-used locally as previously advised by CEC. Otherwise, new setts to be used. CEC to advise if setts are available from stock / if to be moved from another location. CEC Response (15May08): Document needs to state this. Not revised.	MCHW Appendix 11.1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	O	This does not apply to section 1B.
345	Note 9: "Kerbs to be sourced from retrieval of existing whin kerbs." For St Andrew Square new kerbs are to be provided. Material to be specified. SDS Response (17Apr08): Capitol Streets Project to design as per agreement. Drawing note to be revised. CEC Response (15May08): Note not updated. SDS Response (28May08): Capitol Streets Project to design as per agreement. Drawinmg note to be revised on receipt of reqts.	Construction Details Footways	O	This does not apply to section 1B

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
504	Kerb type K10 detail must accord with Capital Streets details What is this detail? SDS Response (17Apr08) Detail received from CEC Capital Streets subsequent to submittal. Will incorporate. CEC Response (15May08) The detail now shows Granite Kerb, the Capital Streets detail is for a 300mm by 255mm whin kerb. SDS Response (28May08) Has now been incorporated in HRL-01131v8 as K10 CEC Response (29May08) The detail for St Andrew Square and Princes Street still differs, K10 is used for both, this is not correct	Construction Details Footways	O	This does not apply to section 1B
783	Details for St Andrew Square are not provided despite this document being issued for 1C Technical Approval (St David St) SDS Response (17Apr08): As previously agreed through coordination, Capital Streets project is to provide the details of their project SDS documents submited in good faith under this premise (ie submitting Capital Streets doucments to CEC is not SDS scope). CEC Response (11Jun08): Details required for what tram is constructing	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	O	This does not apply to section 1B.
789	2 4 (p4) General Requirements "Where an access crosses a footway or footway/cycleway the construction thickness will be increased to that shown on Construction Detail drawings " Is this a standard increase for alt accesses? Where is the detail showing the increased thickness? SDS Response (17Apr08): N/A for this submittal.' CEC Response (11Jun08): Where this is proposed a construction detail will be required This does apply to Leith Walk and details are required	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	O	This does not apply to section 1B
2096	4 (p5) Natural Stone Caithness Flagstone Paving What are the bedding/sub-base specifications/thicknesses? SDS Response (17Apr08): Capital Streets issue Tram to be advised and will update accordingly. CEC Response (11Jun08) Details required as not only a capital streets issue It is assumed this is proposed for the West End at Queensferry Street for example	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	O	This does not apply to section 1B
2569	The two entrances to the west of the McDonald Road Tramstop appear to have a sub-standard radii Confirm if these are correct	Roads Design Layout Plan	O	These are in section 1C
3178	2 3 (p9) Traffic Signals "It should be noted that the specification for the Traffic Signal Controllers is not part of the SDS scope and is not covered by the Design Statement." - This specification or a performance specification is required before Technical Approval can be granted as previously discussed	Roads Technical Design Statement Detailed Design	O	This is not within the SDS scope
3739	6 (p7) Natural Stone Caithness Flagstone Paving: Could refer to CEC standard detail 11507 (however this does not include a base course also bedding depths are different)	MCHW Appendix 11 1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	O	This does not apply to section 1B
4831	Appendix 2/3 - Section 1D - Incorrect drawing numbers, shotld be HRL-00221 to 00224 not HRL-00021 to 00024	MCHW Appendix 2 - Site Clearance	O	This does not apply to section 1B
4832	Appendix 2/3 - Section 1C - Incorrect drawing numbers, should be HRL-00217 to 00218 not HRL-00017 to 00018 Cant find 00015 to 00016 or even 00215 to 00216	MCHW Appendix 2 - Site Clearance	O	This does not apply to section 1B.
4834	Appendix 2/3 - Section 3C - Correct drawing numbers However P19 items 0138 and 0139 are on completely different drawings?	MCHW Appendix 2 - Site Clearance	O	This does not apply to section 1B.
4836	Appendix 2/3 - Inconsistency in referencing item numbers i.e.: Section 2A - 2A0016 as per drg whilst 3C - 0135 in schedule but 3C0135 on drg	MCHW Appendix 2 Site Clearance	O	This does not apply to section 1B.
4862	1 (P5) - refers to 1200 series drawings however in schedule 12/1 section 2A refers to 500 series drg nos	MCHW Appendix 12.1 Traffic Signs General	O	This does not apply to section 1B
4870	2 3 (P5) - "Refer to (1200 series) Drawing Nos . 05-HRL-01201 to 01206 for Section 5C" in Schedule 12/3 Section 5C lists drawings in Note 1 as 05-HRL-00561, 00562, 00563 & 00566 Also other sections have 5?? Drg no What is what	MCHW Appendix 12 3 Traffic Signs Road Markings And Studs	O	This is a duplicate of comment 4862. This does not apply to section 1B
4822	Drawing shows kerb type K7 for island at Foot of the Walk pedestrian crossings. Drawing ULE90130-01-HRL-00077 should be referenced here Dropped kerbs types do not tie in between two drawings.	Kerbs Footways And Paved Areas	P	
3727	Raised tables should be laid flush with the top of kerb (drawings show 25mm upstand)	Construction Details Raised Tables	P	
4856	(P9) - Note 7 has been removed - 5 year guarantee on HFS	MCHW Appendix 7.1 Permitted Pavement Options	R	The design provides sufficient detail to allow for technical approval
510	Phase B secondary signal will breach the 450mm kerb clearance therefore this needs to be side mounted or the pole moved to a more appropriate position	Traffic Signal Ducting Layout	R	The pole has been located in the most appropriate location. Swan neck poles are not permitted by CEC.
693	Detail 8, 9, 10 - 150mm upstand should be typical 125mm not 150mm It would be preferable if the height between the kerbs was consistent. SDS Response (17Apr08): As previously agreed through coordination, the kerb upstand varies as the roads design was changed to eliminate large areas of inlay No changes proposed. CEC Response (15May08): If the kerb upstand varies why show 150mm? Remove 150mm note and add note stating standard is 125mm but may vary.	Construction Details Footways	R	The topography of edinburgh does not allow a 125mm kerb in this location The 150mm dimension has been shown as the most appropriate kerb height. The 150 dimension eliminates large areas of inlay which was agreed with CEC.
993	Note 2 is not referencing good practice Reference to BS 5837 2005 should always be used for items relating to vegetation and trees? SDS Response (17Apr08): Standard note referenced. CEC Response (15May08): Rejected refer to BS	Construction Details Footways	R	Note 2 gave the appropriate dimensions for root removal. Operatives do not have the relevant BS when undertaking works so the note is considered appropriate and more useful than a reference to a document
2570	The existing access to the north of 6-10 Croall Place appears to be stopped up Confirm if this is correct	Roads Design Layout Plan	R	Croall Place is not stopped up
2601	Text for proposed loading bays not printed	Roads Design Layout Plan	R	This complies with the TSM CEC policy is for signage and markings to be minimised
2689	Taxi stance sign plates are not shown. Diag 857.1	Traffic Signs Layout	R	There is an existing taxi stance at this location Existing provision was maintained.
2691	Sign to Diag 772 is missing from the access between Springfield Street and Stead's Place	Traffic Signs Layout	R	This sign was removed as agreed with CEC during the walkthrough
2693	What are the signing arrangements for traffic emerging from the access opposite Stead's Place?	Traffic Signs Layout	R	No signage is required at this location as agreed
2697	Sign to Diag 602 is missing from the access north of Balfour Street	Traffic Signs Layout	R	This sign is not appropriate for a minor access
2700	Sign to Diag 772 is missing from the junction of McDonald Road	Traffic Signs Layout	R	This is as agreed at the RDWG
2703	Sign to Diag 772 is missing from the junction of Brunswick Road	Traffic Signs Layout	R	This is as agreed at the RDWG
2710	A number of half-width cycle ASLs are shown. ASLs should either be full-width or, if not, the offside stop line should in line with the general traffic stop line i.e. behind the cycle reservoir	Road Markings Layout	R	Comment 2581 asks for half width ASL's These have been provided
2712	The use of Diagram 1050 with a right-turn arrow is non-prescribed	Road Markings Layout	R	This is the most appropriate sign and was included in the non-standard signs package

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
2718	The use of Diag 1050 with a right-turn arrow is non-prescribed.	Road Markings Layout	R	This is the most appropriate sign and was included in the non-standard signs package.
2720	A number of half-width cycle ASLs are shown. ASLs should either be full-width or, if not, the offside stop line should in line with the general traffic stop line i.e. behind the cycle reservoir.	Road Markings Layout	R	Comment 2581 asks for half width ASL's. These have been provided.
2728	The use of Diag 1050 with a right-turn arrow is non-prescribed.	Road Markings Layout	R	This is the most appropriate sign and was included in the non-standard signs package.
2730	A number of half-width cycle ASLs are shown. ASLs should either be full-width or, if not, the offside stop line should in line with the general traffic stop line i.e. behind the cycle reservoir.	Road Markings Layout	R	Comment 2581 asks for half width ASL's. These have been provided.
2731	No ASL is shown on the northbound side of the pedestrian crossing north of Pilrig Street	Road Markings Layout	R	Cyclists do not need to make turning manoeuvre. This is agreed with CEC.
2733	The use of Diag 1050 with a right-turn arrow is non-prescribed	Road Markings Layout	R	This is the most appropriate sign and was included in the non-standard signs package.
2735	A number of half-width cycle ASLs are shown. ASLs should either be full-width or, if not, the offside stop line should in line with the general traffic stop line i.e. behind the cycle reservoir.	Road Markings Layout	R	Comment 2581 asks for half width ASL's. These have been provided.
3180	2.6 (p9) Bus Stops - "The treatment of bus stops has been targeted to optimise multi-modal usage such as tram and bus. Bus stops have been sized for 12m long vehicles." - Standard bus length in Edinburgh is up to 12.5m and standard bus stop length is 25m to allow buses to manoeuvre into the stop without obstruction.	Roads Technical Design Statement Detailed Design	R	Reference to 12 m bus stops arise from criteria listed early 2007. Bus stops have been sized for 12m long buses. Bus stops have been sized as appropriate to each location. This has been accepted by CEC.
3183	2.8 (p10) Cycling Facilities - "There are no existing cycling facilities in Leith Walk. As noted previously, a 1m cycle lane will be provided where possible in conjunction with advanced stop lines at junctions." - Prior to tram works there were cyclelanes, shared cycle/bus lanes, advanced stop lines, and cycle racks along the length of Leith Walk.	Roads Technical Design Statement Detailed Design	R	Cycle lanes etc are not considered safe with the narrower Leith Walk cross section.
3186	2.14 (p11) Unresolved Issues / Recommendations - "Due to the advancement of the Roads Design in parallel this other sections of the design such as CLE and lighting there requires to be a value engineering exercise to rationalise the design." - This needs to be clarified. The design should be fully coordinated prior to issuing for Technical Approval	Roads Technical Design Statement Detailed Design	R	This does not affect the accuracy of the design or the ability of CEC to grant technical approval
3189	Appendix C (p22) Departures From Standards - Should be checked to confirm is complete and comprehensive inline with previous comments on this document	Roads Technical Design Statement Detailed Design	R	This comment requests compliance with other comments and is therefore superfluous and a duplicate
3198	B6.1.2 (p18) Junctions, Layout, J15 - Response. "These islands would preclude the Clients aspirations that buses at a future date. Not with standing this..." - This response needs to be clarified. CEC accept the Auditor's recommendation and agree that the junction should be modified to incorporate the suggested islands, with some modifications. This should be done in consultation with CEC	RSA2 Designers Response	R	This is the designers response which is based on the designers judgement. The suggestions made by CEC should be made through an exceptions report. The layout of this junction is as agreed at the RDWG.
3203	B8.3.1 (p34) Carriageway Markings, Great Junction Street - Response: "The bus lane was added during consultation with CEC and the bus operators and has been sign appropriately sign the issue of the drawings to the Auditor" This response is unclear. Incorrect signs have been provided.	RSA2 Designers Response	R	The bus lane has been signed appropriately.
3743	10 (p8) Flexible Surfacing: Construction thicknesses do not match with those on Drawings ULE9031-01-HRL-01134 - Also note that CEC current standard construction is 30mm surface course and 50mm binder course	MCHW Appendix 11.1 Kerbs, Footways, Cycleways, Laybys, Busbays And Paved Areas	R	The design provided minimises the amount of excavation required and thicknesses are deemed appropriate. As the proposed detail is for use at locations of existing footway the CEC detail is not entirely appropriate.
3864	A banned right turn sign is required from Leith Walk (northbound) into Crown Place.	Traffic Signs Layout	R	This would provide a less safe layout and this has been agreed with CEC.
3895	The signal heads for phase E are required to have straight ahead and right-turn arrow assemblies	Traffic Signal Ducting Layout	R	This would provide 5 aspects on one signal head. Layout was agreed with CEC
3896	The signal heads for phase A are required to have straight ahead and left-turn arrow assemblies	Traffic Signal Ducting Layout	R	This would provide 5 aspects on one signal head. Layout was agreed with CEC.
3902	The phase B secondary signal will breach the 450mm minimum distance from kerb to street furniture and therefore needs to be either side mounted or the pole moved to a more appropriate position.	Traffic Signal Ducting Layout	R	The pole has been located in the most appropriate location. Swan neck poles are not permitted by CEC.
3907	The nearside secondary signals are not required for phases A and B on poles 1 and 8. These 2 poles can be replaced with stub poles.	Traffic Signal Ducting Layout	R	The nearside secondary signals will be used when tram is stopped. This has been agreed with CEC.
3908	The secondary signals for phases A and E are in excess of requirements – remove secondary heads from poles 10 and 3 and replace pole 3 with a stub pole	Traffic Signal Ducting Layout	R	CEC have agreed the design is appropriate.
3910	Phase H pedestrian crossing should be moved to the junction to make it more efficient, reduce street furniture, cater for obvious pedestrian movements and make it a less complicated and more traditional junction.	Traffic Signal Ducting Layout	R	CEC have agreed the design is appropriate.
3911	Phase B secondary signal is located too close to the kerb. This signal needs to be either side mounted or moved.	Traffic Signal Ducting Layout	R	The pole has been located in the most appropriate location. Swan neck poles are not permitted by CEC.
3913	The Pilrig Street right turn lane stopline should be moved to be 3 metres from the now rotated pedestrian studs and pole 3 adjusted to suit	Traffic Signal Ducting Layout	R	Stopline cannot be moved forward as it would hinder turning movements from Leith Walk.
3914	Pole 7 is mounted with 3 signal heads. There is insufficient clearance to the kerb edge for this arrangement. Install a pole on the opposite side of the tactile paving adjacent to pole 4. This pole to have a push button unit and the secondary for phase H from pole 7. The primary signal for phase H on pole 4 is not required.	Traffic Signal Ducting Layout	R	The designer considers the signal layout provided is the most appropriate and in keeping with CEC policy of reducing street clutter.
3916	Phase A is redundant as the right turn into Pilrig Street is controlled by phase E. All normal traffic movements from this approach can be controlled using a single phase.	Traffic Signal Ducting Layout	R	The design provided is correct and allows for modification following revised traffic modelling
3917	The secondary signals on poles 9 and 15 are not required.	Traffic Signal Ducting Layout	R	The nearside secondary signals will be used when tram is stopped. This has been agreed with CEC.
3923	Item B6.3.2 Junction 15 - The designer's response does not address the issue raised by the Auditor. However, the design revisions noted under B6.1.2 should do so.	RSA2 Designers Response	R	This comment does not propose any revisions and acknowledges the issue will be resolved elsewhere.
3925	Item B6.3.7 Junction 16 - CEC agree that the intermediate call button should be removed but consider that the suggested "D" island should also be incorporated in the design, all other things being equal. Where the island cannot be accommodated the reasons need to be stated.	RSA2 Designers Response	R	As accepted by CEC the D islands are not appropriate.

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
3927	Item B6 3 10 Junction 17 - CEC agree that the intermediate call button should be removed but consider that the suggested "D" Island should also be incorporated in the design, all other things being equal Where the island cannot be accommodated the reasons need to be stated	RSA2 Designers Response	R	As accepted by CEC the D islands are not appropriate
3928	Item B6 3 13 Junction 21 - CEC agree that the intermediate call button should be removed but consider that the suggested "D" island should also be incorporated in the design, all other things being equal Where the island cannot be accommodated the reasons need to be stated	RSA2 Designers Response	R	As accepted by CEC the D islands are not appropriate
4146	Page 6 "Advisory Direction Signs for Pedestrians and Cyclists" – for what location? SDS Response (22Nov07): SDS to confirm	MCHW Appendix 12.1 Traffic Signs General	R	No revisions to cyclist routes are proposed.
4817	Generally the arrangement shown does not tie in with the roads/signals design Location of signal poles will not be achievable. Crossing widths shown here are greater than shown on other drawings	Construction Details Foot Of The Walk Pedestian Crossing	R	CEC have agreed the design is appropriate.
4818	Guardrail on the existing island at this location has been hit by vehicles on numerous occasions. This design shows guardrail and signal poles beside kerbs flush with the road. This is unsuitable for this location	Construction Details Foot Of The Walk Pedestian Crossing	R	CEC have agreed the design is appropriate.
4839	In Guardrail schedule double kerb is mentioned however in the Designers Response to the Stage 2 Road Safety Audit guardrail is to be used - Clarification required	MCHW Appendix 4.1 Safety Fencing And Safety Barriers	R	Safety auditor has agreed with the detail as have CEC
4849	Appendix 5/5 - 1 1 (P19-20) - Envirokerbs are not permitted - must comply with planning guidelines as previously discussed Drawings and specification to be revised	MCHW Appendix 5.- Drainage Specification	R	Envirokerbs have been provided to comply with current legislation regarding heavy lifting and to comply with the designers CDM responsibilities. To specify heavy stone kerbs provides a less safe design
4876	Appendix 26/1 - (P3) - Normally stipulate Ancillary concrete mixes to contain sulphate resisting Portland cement.	MCHW Appendix 26 Miscellaneous	R	All structures on the project have been approved separately by CEC and audited by a third party checker. At no point has the use of sulphate resistant cement been required by the ground conditions. This has been agreed with CEC
4855	(P9) - Note 6 Specifies HFS drawings, however no drawings show HFS	MCHW Appendix 7.1 Permitted Pavement Options	X	Pavement surface colour drawings show HFS
3204	B6.2 3 (p21) Signing, Bus Lanes: Recommendation: "Appropriate signing be installed at the start of bus lanes " Response: '" Theignage has subsequently been amended " - These signage details have not been provided for technical approval	RSA2 Designers Response	X	Signage details are shown on drawings 1240 - 1243 and were issued for TAA
4823	All proposed kerb upstands to be shown as 125mm	Construction Details Footways	X	Due to the edinburgh topography the kerb height vary and are given in the setting out information.
4844	Appendix 5/1 - 1.10 (P9) - Rodding eye detail - Standard detail drawings need to be issued	MCHW Appendix 5 - Drainage Specification	X	No rodding eyes are required for section 1B Rodding eyes are as per CEC standard detail.
4845	Appendix 5/1 - (P10) - Reference to standard detail drawings? - Need to be issued	MCHW Appendix 5 - Drainage Specification	X	Drainage standard details are as per CEC standard details.
4846	Appendix 5/1 - 1.14 (P10) - Reference to standard detail drg DNE-00058 This has not been provided	MCHW Appendix 5.- Drainage Specification	X	This is not required for section 1B
4850	Appendix 5/5 - 1 8 (P23) - Minimum sizes for covers should be specified here	MCHW Appendix 5.- Drainage Specification	X	No new manholes were proposed for section 1B. Reference should be made to CEC standard details.
4868	(P10-82) - Schedule inconsistency - Some have key others don't, Some have a note 1 others have it as note 2 but no note 1, Some schedules have signs ref all as TS../ while others have a mix of RS/ IS/ , etc	MCHW Appendix 12.1 Traffic Signs General	X	This does not affect the accuracy of the design or the ability of CEC to grant technical approval. All relevant details were provided on drawings or in specification
4877	Appendix 26/2 - 1(P4) - Compressive strength to be stipulated	MCHW Appendix 26 Miscellaneous	X	Reference was made to made to the MCHW. This is sufficient

Total specific comments	525	
11 Categories	Number	%age against Halcrow total
Accepted - A	58	19%
Betterment - B	1	0%
Commercial - C	13	4%
Design - D	1	0%
Information - I	7	2%
Judgement - J	54	18%
Not applicable - NA	54	18%
Outwith - O	30	10%
Minor - P	30	10%
Rejected - R	50	16%
Cross-reference - X	9	3%
Total Halcrow	307	
Total accepted	58	
Not Halcrow - NH	218	42%

Total Generic comments	119	
11 Categories	Number	%age against Halcrow total
Accepted - A	15	25%
Betterment - B	0	0%
Commercial - C	0	0%
Design - D	0	0%
Information - I	6	10%
Judgement - J	5	8%
Not applicable - NA	18	30%
Outwith - O	4	7%

CommentID	Comments	DocTitle	11 Cats	Justification of category 1 April 2010
		Minor - P	3	5%
		Rejected - R	9	15%
		Cross-reference - X	0	0%
		Total Halcrow	60	
		Total accepted	15	
		Not Halcrow - NH	59	

TOTAL COMMENTS	644	
Total Halcrow comments	367	57%
11 Categories	Number	%age of Halcrow total
Accepted - A	73	20%
Betterment - B	1	0%
Commercial - C	13	4%
Design - D	1	0%
Information - I	13	4%
Judgement - J	59	16%
Not applicable - NA	72	20%
Outwith - O	34	9%
Minor - P	33	9%
Rejected - R	59	16%
Cross-reference - X	9	2%

Edinburgh Tram Network

Post Novation
Payment Application Incentivisation

Doc. Ref: ULE90130-SW-AFP-00098 V1

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Approver	Jason Chandler	Project Manager		20/10/2010

Revision History

Ver No	Date	Description	Prepared By
1	20/10/10	Final Version	Kate Shudall

Distribution

Ver No	Date	Name	Role	Company
1	20/10/10	Steven Bell	Contract Representative	tie

Summary

Incentivisation			**£1,000,000.00**
	Value per deliverable	**No .of deliverables**	
Delivered on Time	£8,928.57	57	£508,928.57
Delayed at no fault of SDS	£8,928.57	52	£464,285.71
Delayed due to SDS	£8,928.57	3	-£26,785.71
Total Value of Work Done			**£973,214.29**
Less Previously Certified			£0.00
This Application			**£973,214.29**

Agreed with SDS and tie that this was delivered as per v31 - to be incentivised
Agreed with SDS and tie that this was delayed as per v31 due to a tie/CEC delay
Not Agreed - SDS and tie to discuss further - see SDS comments to substantiate delay
Not included in Incentivisation list

IFC Delivery Dates against v31 dates

Section	Batch	Type	Activity ID	Activity Description	V31	tie recorded date	SDS Actual Date	Status	Incentivisation status	Change Number	Letter Reference & date	tie Comment	SDS comment
1C		Substation	A549280	Tram Cathedral Lane Substation(Task300.4.10)	23/04/2008	23/04/2008	23/04/2008	on time	incentivised				
	6/24	Structure	SDS86990	Building Foundations (Task870.1.2)	25/04/2008	13/05/2008	13/05/2008	delayed	SDS delay			Notdelayedby approvals	SDS Delay
	6/24	Structure	SDS87020	Ground Floor Slab & Pits (Task870.1.3)	25/04/2008	13/05/2008	13/05/2008	delayed	SDS delay			Not delayed by approvals	SDS Delay
1B	1/10	Substation	A549180	Tram Leith Walk 163 Substation (Task300.3.11)	02/05/2008	13/05/2008	13/05/2008	delayed	SDS delay			Delayed by building warrant for which SDS responsible	SDS Delay
	6/21	Structure	SDS86980	Depot General - layout drawings	12/05/2008	12/05/2008	12/05/2008	on time	incentivised				
5C	5/19	Structure	SDS86500	W16 Gyle Stop Retaining Walls (Task700.4.6)	13/05/2008	13/05/2008	13/05/2008	on time	incentivised				
	7/24	Structure	SDS36510	S29 Gogarburn Bridge (Task800.2.8)	15/05/2008	15/05/2008	15/05/2008	on time	incentivised				
5B	5/17	Structure	81	S27 Edinburgh Park Station Viaduct (NR Ref 070/003-2)	23/05/2008	23/05/2008	23/05/2008	on time	incentivised				
5B	5/15	Structure	SDS36240	S26 South Gyle Access Road Bridge (Task700.3.12)	23/05/2008	09/06/2008	06/06/2008	delayed	tie/CEC delay			CEC validation delay	
5B	5/15	Structure	SDS57380	W11 Bankhead Drive Retaining Wall (Task700.3.11)	23/05/2008	06/06/2008	06/06/2008	delayed	tie/CEC delay			CEC validation delay	
2A	2/03	Structure	SDS62440	S01 Russell Road Bridge	23/05/2008	23/05/2008	23/05/2008	on time	incentivised				
	6/23	Structure	VO2750	EARTHWORKS - DEPOT - NEW FOR V30	29/05/2008	29/05/2008	29/05/2008	on time	incentivised				
SW		Environmental	SDS87240	Badger MitigationPlan	30/05/2008	30/05/2008	30/05/2008	on time	incentivised			tie records don't show delivery - being checked	
3B	3/15	Structure	A10240	Crewe Road Gardens bridge	04/06/2008	27/06/2008	27/06/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a approvals	
5B	5/14	Tram stop	A26840	Tram Stop Saughton (Task700.3.6)	13/06/2008	19/06/2008	13/06/2008	on time	incentivised		on time	Disagreement over delivery date to be resolved	See BSC transmittal for evidence of timely delivery. This should read Incentivised.
	6/21	Structure	A45810	Depot Ductwork -External Services	17/06/2008	17/06/2008	17/06/2008	on time	incentivised				
3B	3/19	Tram stop	A26360	Tram Stop Caroline Park (Task500.3.8)	18/06/2008	22/07/2008	22/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a approvals	
	6/24	Structure	SDS86090	Steel Superstructure (Task670.1.4)	24/06/2008	24/06/2008	24/06/2008	on time	incentivised				
		Environmental	SDS87760	Environmental - SNH Approval for final Species mitigation plan	25/06/2008	25/06/2008	25/06/2008	on time	incentivisod				
1B	1/09	Tram stop	A25920	Tram Stop Balfour Street (Task300.3.8)	27/06/2008	15/07/2008	15/07/2008	delayed	tie/CECdelay		ULE90130-01-LET-00670 Date: 04/06/08 ULE90130-01-LET-00701 Date: 30/06/08 ULE90130-01-LET-00801 Date: 10/09/08	Link to 1B roads delay	SDS note receiptof INFCORR.045 dated 22/07/08 but remain of the opinion that CEC clarified what supplementary information was required after the main submissons were made, and that this should not have affected the Approvals time.
5A	5/06	Tram stop	A26680	Tram Stop Murrayfield Stadium (Task700.2.6)	27/06/2008		01/10/2009	delayed	tie/CEC delay			CEC validation delay	
5A	5/06	Structure	SDS51560	W18 Murrayfield StopRetaining Walls (Task700.2.17)	27/06/2008		02/08/2010	delayed	tie/CEC delay			CEC validation delay	
	6/21	Structure	VO2140	Depot OLE	[illegible]	[illegible]	[illegible]	delayed	tie/CEC delay		Prior Approval not granted until 04/07/08	No justification for delay offered by SDS	
	6/21	Track	VO2580	Track [illegible]	[illegible]	[illegible]	[illegible]	on time	incentivised				
2A	2/01	Structure	51	S19 [illegible]tion Viaduct	[illegible]	[illegible]	[illegible]	on time	incentivised				
	2/01	Tram stop	A26130	Tram [illegible]ket (Task400.2.7)	[illegible]	[illegible]	[illegible]	on time	incentivised				
	2/01	Substation	A549450	Tram [illegible]errace 1 Sub Station [illegible]ask400.2.8	[illegible]	[illegible]	[illegible]	on time	incentivised				
1D	1/17	Tram stop	A26070	Tram Stop Shandwick Place	03/07/2008	18/02/2009	18/02/2009	delayed	tie/CEC delay	DCR0011	ULE90130-01-LET-00646 Date: 28/05/08 ULE90130-01-LET-00671 Date: 04/06/08 tie minutes - Prior and Technical Approvals Section 2 Date: 15/07/08 ULE90130-SW-LET-01130 Date 28/07/08	SDS entitled to initial relief for CEC validation delay then for tie Change. However subsequent delay due to resolution of legitimate planning issues re trees.	
1D		Road	SDS26020	Roads, Street Lighting & Landscaping (Task300.5.2)	03/07/2008	11/02/2009	11/02/2009	delayed	tie/CEC delay			Delayed due to redesign that tie has accepted as change	
3C	3/21	Tram stop	A26520	Tram Stop Granton (Task500.4.9)	04/07/2008	04/07/2008	04/07/2008	on time	incentivised				

IFC Delivery Dates against v31 dates

Section	Batch	Type	Activity ID	Activity Description	V31	tie recorded date	SDS Actual Date	Status	Incentivisation status	Change Number	Letter Reference & date	tie Comment	SDS comment
1B		Road	SDS25040	Roads, Street Lighting & Landscaping (Task300.3.2)	04/07/2008	11/09/2008	10/09/2008	delayed	tie/CEC delay	DCR0064	ULE90130-SW-LET-01074 Date: 29/05/08 ULE90130-01-LET-00670 Date: 04/06/08 ULE90130-01-LET-00701 Date: 30/06/08 tie minutes - Prior and Technical Approvals Section 2 Date: 15/07/08 ULE90130-SW-MIN-00832V2 Date: 30/07/08 ULE90130-	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	SDS note receipt of INFCORR.045 dated 22/07/08 & INFCORR104A dated 27/06/08 but remain of the opinion that CEC clarified what supplementary information was required after the main submissions were made, and that this should no have affected the Approvals
3A	3/02	Structure	966	Rosebum Corridor Retaining Structure A	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/04	Structure	1016	Rosebum Corridor Retaining Structure C	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/07	Structure	1041	Rosebum Corridor Retaining Structure D	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/09	Structure	1066	Rosebum Corridor Retaining Structure E	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/09	Structure	1091	Rosebum Corridor Retaining Structure F	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/11	Structure	1116	Rosebum Corridor Retaining Structure G	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/02	Tram stop	A26160	Tram Stop Rosebum (Task500.2.6)	07/07/2008	11/09/2008	10/09/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
3A	3/10	Tram stop	A26220	Tram Stop [illegible]	[illegible]	[illegible]	[illegible]	on time	[illegible]				
3A	3/13	Tram stop	A26250	[illegible]	[illegible]	[illegible]	[illegible]	on time	[illegible]				
3A	3/14	Tram stop	A26280	[illegible] Hospital (Task500.2.11	[illegible]	[illegible]	[illegible]	on time	[illegible]				
3A	3/03	Structure	A8540	[illegible] Structure	[illegible]	[illegible]	[illegible]	on time	[illegible]				
3A	3/04	Structure	A8730	[illegible] Structure	[illegible]	[illegible]	[illegible]	on time	[illegible]				
3A	3/04	Structure	A8910	St Georges School Footbridge Structure	07/07/2008	07/07/2008	07/07/2008	on time	incentivised				
3A	3/07	Structure	A9290	Craigleith Drive Bridge Structure	07/07/2008	07/07/2008	04/07/2008	on time	incentivised				
3A	3/09	Structure	A9480	Queensferry Road Structure	07/07/2008	07/07/2008	07/07/2008	on time	incentivised				
3A	3/11	Structure	A9670	Groathill Road South Bridge Structure	07/07/2008	07/07/2008	04/07/2008	on time	incentivised				
3A	3/09	Structure	A9880	Holiday Inn Access Bridge Structure	07/07/2008	07/07/2008	07/07/2008	on time	incentivised				
3A	3/02	Structure	SDS62410	S01 Rosebum Terrace Bridge	07/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
1	6/24	Structure	SDS86220	Depot Main Building (Task870.1)	07/07/2008	07/07/2008	07/07/2008	on time	incentivised				
3A	3/02	Structure	991	Rosebum Corridor Retaining Structure B	08/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
5B	5/12	Structure	267	S23 Carrick Knowe Underbridge NR Ref 090/009-1	11/07/2008	10/07/2008	09/07/2009	on time	incentivised				
3A	3/12	Structure	1141	Rosebum Corridor Retaining Structure H	11/07/2008	15/07/2008	15/07/2008	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	
5B	5/15	Tram stop	A26920	Tram Stop Bankhead (Task700.3.10)	11/07/2008	11/07/2008	11/07/2008	on time	incentivised				
5B	5/16	Tram stop	A27000	Tram Stop Edinburgh Park Station (Task700.3.14)	11/07/2008	11/07/2008	11/07/2008	on time	incentivised				
5B	[illegible]	Tram stop	A27080	Tram Stop Edinburgh Park Central (Task700.3.17)	11/07/2008	11/07/2008	11/07/2008	on time	incentivised				
3A	3/12	Structure	A9860	Telford Road Bridge Structure	11/07/2008	11/07/2008	10/07/2008	on time	Incentivised				
3C	3/20	Tram stop	A26440	Tram Stop Saltire Square (Task500.4.7)	16/07/2008	16/07/2008	16/07/2008	on time	incentivised				
5A	[illegible]	Structure	185	W01 Russell Road Retaining Wall One - GEOTECHNICAL SURVEYS - TAA	18/07/2008	18/07/2008	18/07/2008	on time	[illegible]			Partial issue only - section B of the RW still to be issued - impact of this on incentivisation to be reviewed	
5A	5/05	Structure	SDS62400	W02 Russell Road Retaining Wall Two - GEOTECHNICAL SURVEYS - TAA	18/07/2008	18/07/2008	18/07/2008	on time	incentivised				
5B	5/11	Road	SDS29940	Roads, Street Lighting & Landscaping (Task700.3.2)	21/07/2008	21/10/2008	15/10/2008	delayed	tie/CEC delay	DCR0090 DCR0092 DCR0168	ULE90130-SW-LET-01074 Date: 29/05/08 ULE90130-05-LET-00296 Date: 15/07/08 ULE90130-SW-MIN-00832V2 Date: 30/07/08 ULE90130-SW-LET-01174 Date: 27/08/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	Drainage business stream was unresolved at time of V31 IFC
5B	5/10	Tram stop	A26760	Tram Stop Balgreen (Task700.3.5)	24/07/2008	24/07/2008	24/07/2008	on time	[illegible]				
5A	5/07	Structure	SDS58190	S21B Murrayfield Stadium Retaining Wall (Task700.2.13)	25/07/2008	25/07/2008	25/07/2008	on time	[illegible]				
5A	5/08	Structure	SDS58720	S21C Murrayfield Underpass (Task700.2.14)	25/07/2008	25/07/2008	25/07/2008	on time	[illegible]				
5A	5/07	Structure	SDS59000	S21A Rosebum Street Viaduct (Task700.[illegible]	25/07/2008	25/07/2008	25/07/2008	on time	[illegible]				
5A	5/08	Structure	SDS59280	S21E Water of Leith Bridge (Task700.2.16)	25/07/2008	25/07/2008	25/07/2008	on time	incentivised				
5C	5/20	Structure	SDS36780	VO28 S28 A8 Underpass (Task700.4.9) CNS010	29/07/2008	28/07/2008	28/07/2008	on time	incentivised				
3A	3/05	Tram stop	A26190	Tram Stop Ravelston (Task500.2.7)	30/07/2008	30/07/2008	30/07/2008	on time	incentivised				
[illegible]	3/05	Structure	A9100	Ravelston Dykes Structure	30/07/2008	14/07/2008	14/07/2008	on time	incentivised				
3C	3/22	Road	SDS27980	Roads 3c	01/08/2008		not issued	delayed	tie/CEC delay			Prioritisation of Phase 1a aporovals	

IFC Delivery Dates against v31 dates

Section	Batch	Type	Activity ID	Activity Description	V31	Re-forecasted Date	SDS Actual Date	Status	Identification status	Change Number	Letter Reference & date	tie Comment	SDS comment
5C	5002	Road	SDS30400	Roads, Street Lighting & Landscaping (Task/750.4.3)	01/08/2008	04/03/2009	04/03/2009	delayed	tie/CEC delay	DCR0073 DCR0104 DCR0107 DCR0106 DCR0132	ULE90130-SW-LET-01574 Date: 29/05/08 ULE90130-05-LET-00286 Date: 10/07/08 ULE90130-SW-NIN-00832/2 Date: 30/07/08 ULE90130-SW-LET-01174 Date: 27/08/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	Drainage business stream was unresolved at time of V31 IFC
5A	513	Structure	SDS35400	W08 Baird Drive Retaining Wall (Task/730.2.11)	01/08/2008	[illegible]	01/08/2008	on time	incentivised				
5A	509	Structure	SDS66440	S21D Murrayfield Training Pitches Retaining Wall (Task/470.2.15)	01/08/2008	[illegible]	01/08/2008	on time	incentivised				
3A	3002	Road	SDS35510	Roads, Street Lighting & Landscaping (Task/460.2.2)	11/08/2008	25/09/2008	25/09/2008	delayed	tie/CEC delay	DCR0070 DCR0063	ULE90130-SW-LET-01574 Date: 29/05/08 ULE90130-SW-NIN-00832/2 Date: 30/07/08 ULE90130-SW-LET-01142 Date: 24/09/08 ULE90130-SW-LET-01119 Date: 27/08/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	Drainage business stream was unresolved at time of V31 IFC
6	6001	Road	VO0700	Roads, Street Lighting & Landscaping - inc car park	15/08/2008	14/05/2009	13/05/2009	delayed	tie/CEC delay	DCR0146 DCR0183	ULE90130-SW-LET-01574 Date: 29/05/08 ULE90130-SW-LET-01174 Date: 27/08/08	TAA rejected due to non compliance with Murrayfield path agreement	
8	A001	Drainage	VO2700	Depot Drainage Design (Task/470.6)	15/08/2008		26/11/2009	delayed	tie/CEC delay	DCR0184	ULE90130-09-LET-00070 Date: 27/08/08	SDS responsibility to secure Scottish Water consents	
5B	518	Tram stop	A26016	Tram Stop West Pilton (Task/600.3.1)	15/08/2008	[illegible]	[illegible]	delayed	tie/CEC delay			Prioritisation of Phase 1a approvals	
5A	515	Structure	SDS01310	W05 Balgreen Road Retaining Wall (Task/250.2.12)	15/08/2008	[illegible]	[illegible]	on time	incentivised				
1C	115	Tram stop	A26990	Tram Stop St. Andrew Square (Task/300.4.8)	29/08/2008	18/02/2009	18/02/2009	delayed	tie/CEC delay		ULE90130-01-LET-00776 Date: 27/08/08	No justification for delay offered by SDS	We issued for TAA on time. We received comments end July 08 but didn't issue ifc until feb 09. Letter blames volume of comments, non receipt me exceptions report and delay to 1B resolution.
1C	111	Tram stop	A26040	Tram Stop McDonald Road (Task/300.4.11)	29/08/2008	01/05/2009	01/05/2009	delayed	tie/CEC delay		ULE90130-01-LET-00776 Date: 27/08/08	No justification for delay offered by SDS	We issued for TAA on time. We received comments end July 08 but didn't issue ifc until feb 09. Letter blames volume of comments, non receipt me exceptions report and delay to 1B resolution.
1C	116	Tram stop	A26100	Tram Stop Princes Street (Task/300.3.8)	29/08/2008	18/02/2009	18/02/2009	delayed	tie/CEC delay		ULE90130-01-LET-00776 Date: 27/08/08	No justification for delay offered by SDS	We issued for TAA on time. We received comments end July 08 but didn't issue ifc until feb 09. Letter blames volume of comments, non receipt me exceptions report and delay to 1B resolution.
7	707	Tram stop	A27710	Tram Stop Ingliston Park and Ride (Task/600.2.1)	29/08/2008	25/03/2009	25/03/2009	delayed	tie/CEC delay	CR281	ULE90130-07-LET-00084 Date: 30/09/08	No justification for delay offered by SDS	
1C		Road	SDS46440	Roads, Street Lighting & Landscaping - 1C1 - London Road	29/08/2008	08/12/2008	08/12/2008	delayed	tie/CEC delay		ULE90130-SW-LET-01574 Date: 29/05/08 ULE90130-01-LET-00776 Date: 27/08/08 ULE90130-SW-LET-01174 Date: 27/08/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	
1C	113	Road	SDS46700	Roads - 1C3 - York Place	29/08/2008	08/12/2008						Not incentivised as 1C Roads was split out as one IFC in V31 programme	
5B	518	Road	SDS27400	Roads 5b	04/09/2008		outstanding	delayed	tie/CEC delay			Prioritisation of Phase 1a approvals	
7	708	Tram stop	A27920	Tram Stop Edinburgh Airport (Task/600.2.16)	08/09/2008	24/03/2009	24/03/2009	delayed	tie/CEC delay			Delayed by externally driven design changes	
7	728	Structure	401	S34 Gogar Burn Culvert Three	10/09/2008	10/09/2008	10/09/2008	on time	incentivised				
5C	519	Tram stop	A27140	Hyde Tram Stop	11/09/2008	11/09/2008	11/09/2008	on time	incentivised				
5C		Tram stop	A27240	Depot Halt (Task/700.4.8)	11/09/2008	11/09/2008	11/09/2008	on time	incentivised				
5C	506	Tram stop	A27500	Tram Stop Gogarburn (Task/700.4.13)	11/09/2008		outstanding	delayed	tie/CEC delay			Third party change	
5A	5A6	Structure	SDS05670	S20A Balgreen Road Tram Bridge (Task/750.2.16)	11/09/2008	15/09/2008	15/09/2008	on time	incentivised	DCR0XXX	on time	Disagreement over delivery date to be resolved	See SBC transmittal for evidence of timely delivery. This should read incentivised.
7	722	Structure	341	S15 Gogar Culvert One	11/09/2008	15/09/2008	15/09/2008	on time	incentivised				
7	726	Structure	371	S31 Gogar Burn Culvert Two	17/09/2008	15/09/2008	15/09/2008	on time	incentivised				
5A		Road	SDS29400	Roads, Street Lighting & Landscaping (Task/750.2.2)	23/09/2008	23/01/2009	23/09/2008	on time	incentivised		ULE90130-SW-LET-01574 Date: 29/05/08 ULE90130-SW-NIN-00832/2 Date: 30/07/08 ULE90130-SW-LET-01174 Date: 27/08/08	Disagreement over delivery date to be resolved	See EBC transmittal for evidence of timely delivery. This should read incentivised.
1A	1007	Tram stop	A26816	Tram Stop Balfour Street (Task/300.2.9)	24/09/2008	18/02/2009	18/02/2009	delayed	tie/CEC delay		ULE90130-01-LET-00703 Date: 30/06/08 ULE90130-01-LET-00743 Date: 25/07/08 ULE90130-01-LET-00776 Date: 29/08/08 ULE90130-01-LET-00814 Date: 25/09/08	Link to 1A1 roads delay	SDS note receipt of INFCORR137 noting that initial delay is due to CEC, where responses have been delayed since.
1A	1006	Tram stop	A26900	Tram Stop Foot of the Walk (Task/300.2.10)	24/09/2008	18/02/2009	18/02/2009	delayed	tie/CEC delay		ULE90130-01-LET-00650 Date: 03/06/08 ULE90130-01-LET-00703 Date: 30/06/08 tie minutes - section 1 date: 15/07/08 ULE90130-01-LET-00743 Date: 25/07/08 ULE90130-01-LET-00776 Date: 29/08/08 ULE90130-01-LET-00814 Date: 25/09/08	Link to 1A1 roads delay	SDS note receipt of INFCORR137 noting that initial delay is due to CEC, where responses have been delayed since.
1A		Road	SDS24540	Roads, Street Lighting & Landscaping Subsect 1A1 (Section 1B to Foot of Walk)	24/09/2008	20/03/2009	20/03/2009	delayed	tie/CEC delay		ULE90130-SW-LET-01574 Date: 29/05/08 ULE90130-01-LET-00703 Date: 30/06/08 ULE90130-SW-NIN-00832/2 Date: 30/07/08 ULE90130-01-LET-00743 Date: 25/07/08 ULE90130-SW-LET-01174 Date: 27/08/08 ULE90130-01-LET-00776 Date: 29/08/08 ULE90130-01-LET-00814 Date: 2	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	SDS note receipt of INFCORR 045 dated 22/07/08 but remain of the opinion that CEC clarified what supplementary information was required after the main submissions were made, and that this should not have affected the Approvals time. SDS note receipt of IFI
1A	1005	Tram stop	A26930	Tram Stop Port of Leith (Task/300.2.8)	25/09/2008	18/02/2009	18/02/2009	delayed	tie/CEC delay		ULE90130-01-LET-00703 Date: 30/06/08 ULE90130-01-LET-00743 Date: 25/07/08 ULE90130-01-LET-00776 Date: 29/08/08 ULE90130-01-LET-00814 Date: 25/09/08	Link to 1A2 roads delay	SDS note receipt of INFCORR137 noting that initial delay is due to CEC, where responses have been delayed since.

CEC02084617_0032

IFC Delivery Dates against v31 dates

Section	Batch	Type	Activity ID	Activity Description	V31	tie recorded date	SDS Actual Date	Status	Incentivisation status	Change Number	Letter Reference & date	tie Comment	SDS comment
1A	1/04a	Road	SDS87810	Roads, Street Lighting & Landscaping SubSections 1A2	25/09/2008	02/02/2009	02/02/2009	delayed	tie/CEC delay	DCR0096 DCR0103 DCR0202	ULE90130-SW-LET-01074 Date: 29/05/08 ULE90130-01-LET-00703 Date: 30/06/08 ULE90130-01-LET-00743 Date: 25/07/08 ULE90130-SW-LET-01174 Date: 27/08/08 ULE90130-01-LET-00779 Date: 29/08/08 ULE90130-01-LET-00814 Date: 25/09/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	SDS note receipt of INFCORR 045 dated 22/07/08 but remain of the opinion that CEC clarified what supplementary information was required after the main submissions were made, and that this should not have affected the Approvals time. SDS note receipt of IN
1A	1/01b	Structure	A7810	W01 Lindsay Road Retaining Wall	30/09/2008	30/09/2008	30/09/2008	on time	incentivised				
1	7/23	Road	SDS30920	Roads, Street Lighting & Landscaping (Task800.2.2)	01/10/2008	14/01/2009	14/01/2009	delayed	tie/CEC delay	DCR0134 DCR0198 DCR0200 DCR0205	ULE90130-SW-LET-01074 Date: 29/05/08 ULE90130-07-LET-00337 Date: 13/06/08 ULE90130-07-LET-00364 Date: 20/06/08 ULE90130-SW-LE T-01174 Date: 27/08/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	
1A		Road	SDS78930	VO253 Subsection 1A4 - Roads (Newhaven to Ocean Terminal)	06/10/2008		22/04/2009	delayed	tie/CEC delay	DCR0141 DCR0147 DCR0131 DCR0111 DCR0202 DCR0203	ULE90130-SW-LET-01074 Date: 29/05/08 ULE90130-01-LET-00703 Date: 30/06/08 ULE90130-SW-LET-01174 Date: 27/08/08 ULE90130-01-LET-00812 Date: 22/09/08 ULE90130 01-LET-00831 Date: 16/10/08	Time taken by SDS to resolve TAA comments / late submission of info to CEC for TAA	SDS note receipt of INFCORR.045 dated 22/07/08 but remain of the opinion that CEC clarified what supplementary information was required after the main submissions were made, and that this should not have affected the Approvals time. Drainage business stre
3A		Road	SDS27000	Roads3a	07/10/2008		not issued	delayed	tie/CEC delay			Prioritisation of Phase 1a approvals	
8	6/22	Structure	SDS57660	Depot Structure (bridge)	07/10/2008	10/10/2008	10/10/2008	delayed	tie/CEC delay			Late delivery of TAA decision notice by CEC delayed IFC	
1	7/28	Structure	431	W14 Gogar Burn Retaining Wall One	08/10/2008	28/02/2009	26/02/2009	delayed	tie/CEC delay			Delayed by externally driven design changes	
1	7/29	Structure	461	W14 Gogar Burn Retaining Wall One	08/10/2008	28/02/2009	26/02/2009	delayed	tie/CEC delay			Delayed by externally driven design changes	
1A	1/02	Structure	SDS62420	S16 Victoria Dock Entrance Bridge	12/11/2008	12/11/2008	10/11/2008	on time	incentivised				
1C	1/12	Tram stop	A26010	Tram Stop Picardy Place (Task300.4.9)	24/11/2008		not issued	delayed	tie/CEC delay			CEC Changes to Picardy Place layout	
1C		Road	SDS86570	Roads - 1C2 - London Road to picardy place	24/11/2008							Not incentivised as 1C Roads was shown as one IFC in V31 programme.	
1A	1/05	Structure	SDS62430	S17 Tower Place Bridge	09/12/2008	09/12/2008	09/12/2008	on time	incentivised				
5A	5/10	Structure	SDS83500	S22B Balgreen Road NR Access Bridge (Task700.2.10)	05/01/2009		02/12/2009	delayed	tie/CEC delay	DCR0016	ULE90130 05-LET-00268 Date: 04/06/08 ULE90130-05-LET-00299 Date: 22/07/08 ULE90130-05-LET-00300 Date: 23/7/08	Original delay arose over SDS not securing access to Network Rail land	
1A	1/02	Tram stop	A25860	Tram Stop Ocean Terminal (Task300.2.10)	21/01/2009		19/02/2010	delayed	tie/CEC delay			Link to 1A3 roads delay	
1A	1/01a	Tram stop	A25890	Tram Stop Newhaven (Task300.2.11)	21/01/2009	16/02/2009	18/02/2009	delayed	tie/CEC delay		ULE90130-01-LET-00703 Date: 30/06/08 ULE90130-01-LET-00812 Date: 22/09/08	Link to 1A4 roads delay	Forth Ports
1A	1/02a	Road	SDS78940	VO252 Subsection 1A3 - Roads (Ocean Terminal to Port of Leith)	21/01/2009		27/01/2010	delayed	tie/CEC delay			Initial delay due to introduction of Ocean Terminal bypass road.	

No. of IFC's in list	114			
No. of IFC's in list not included in Incentivisation list (1C 2 & 1C3)	2			
No. of IFC's considered for Incentivisation	112			
		Incentivised 57	£8,928.57	£508,928.57
		tie/CEC delay 52	£8,928.57	£464,285.71
		SDS delay 3		

Parsons Brinckerhoff

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Our Ref: ULE90130-SW-LET-02239

20th October 2010

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

Attention: Damian Sharp

Dear Damian

Post Novation Incentivisation – Application for Payment

Further to your letter INF CORR 5500/SC, dated 07th July 2010, SDS can advise that the remaining IFC that is within SDS' power to deliver, W18 Murrayfield Tram Stop Retaining Walls, was issued to BSC on 02nd August 2010.

The remaining original IFC deliverables:

- Section 3a, 3b & 3c Roads are held up because CEC have de-prioritised the Approvals comments, and have not responded to the TAA submissions.
- The Gogarburn Tramstop was held up by the RBS design Change, which has only recently been resolved. SDS have now gained Prior Approval for this tram Stop but cannot IFC it until the other Tram Stop related changes are instructed, with regard to Branding, TVM's etc.
- The Picardy Place Tramstop is on hold pending instruction on the redesign of Picardy Place generally.

The above issues are outwith SDS control, and therefore, reasonably, should not hold up incentivation payment for the IFC's that have been delivered.

We therefore enclose for your scrutiny and agreement SDS Application for Payment for Incentivisation in accordance with clause 8.8 of the Novation Agreement.

If you have any queries, please contact our Kate Shudall.

Yours sincerely

[redacted]

Jason Chandler
Project Manager
Parsons Brinckerhoff

encl. Application for Payment

cc. Alan Dolan
Kate Shudall
Martin Foerder (BSC)