



Ref: CUS/tie/letter/PK/Projects/3070

21<sup>st</sup> December 2009

**Mr. Stephen Bell**  
tie Project Director Edinburgh Tram  
tie Limited.  
Citypoint,  
1<sup>st</sup> Floor,  
65 Haymarket Terrace,  
Edinburgh.  
EH12 5HD

Dear Stephen,


**Subject: MUDFA Carillion Utility Services (CUS) – Contract A150**  
**Increased Schedule 4 Rates & Prices**

CUS have advised you in each successive Application for Payment that there are circumstances which are not in the Contractor's making or responsibility, that have delayed and disrupted the regular progress of Works resulting in the actual productivity being significantly less than the productivity estimated in the Rates and Prices contained within Schedule 4 of the Multi-Utilities Diversion Framework Agreement.

Appended to this letter is our summary calculation (including claim preparation costs) for all the Work Sections that CUS consider there is an entitlement to further payment. In total the entitlement amounts to £13,144,871. To date we have provided you with 4 no complete submissions and 5 partial submissions and it is our intention to finalise the remaining 5 no in January 2010.

We would ask that tie acknowledge culpability for the claims for the works between 1<sup>st</sup> October 2008 – 28<sup>th</sup> November 2009, whether they are complete or partially complete and substantially increase tie's current payment of £1,109,426.00 with the certification of our December 09 application.

Yours sincerely,  
For and on behalf of **Carillion Utility Services**

  
**Steve Beattie**  
**Project Director**

**MUDFA Project Team**  
Taryne Lowe  
Phil Kolon

Attached/... Draft Final Entitlement Calculations (15 pages)

Carillion Utility Services is a trading name of  
Carillion Infrastructure Services Limited  
Registered in England No 00728599  
Registered Office 24 Birch Street Wolverhampton WV1 4HY  
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A Carillion company

**Carillion Utility Services**  
MUDFA Project  
Western Harbour  
Leith Docks  
Edinburgh  
EH6 6QF

  
www.carillionplc.com

**TIE00104672\_0001**

**MUDFA DELAY & DISRUPTION CALCULATION**

**ENTITLEMENT SUMMARY**

<b>Preliminaries</b>		£1,453,452	<u>£1,453,452</u>
<b>Work Sections</b>			
1A-01-01	Nov	£763,447	
1B-01-01	Nov	£1,016,359	
1B-01-02	Nov	£1,307,381	
1C-01-01	Nov	£562,586	
1C-03-01	Nov	£1,724,320	
1C-04-01	Nov	£1,578,772	
1C-05-01	Nov	£1,361,147	
1D-01-01	Nov	£1,785,183	
2A-01-01	Nov	£288,830	
5B	Nov	£99,497	
5C	Nov	£253,898	<u>£10,741,419</u>
<b>Claims Cost Estimate (Jan'10)</b>		£950,000	<u>£950,000</u>
		<b>Total Entitlement</b>	<b><u>£13,144,871</u></b>

**MUDFA DELAY & DISRUPTION CALCULATION**

**Preliminaries Calculation**

From Work Sections

	Total Cost	Actual Recovery
1A-01-01 Nov	£745,323	£112,048
1B-01-01 Nov	£1,002,248	£147,659
1B-01-02 Nov	£1,222,760	£138,353
1C-01-01 Nov	£854,954	£263,537
1C-03-01 Nov	£2,124,662	£739,159
1C-04 01 Nov	£1,733,992	£408,768
1C-05-01 Nov	£1,370,814	£254,146
1D-01-01 Nov	£1,998,002	£499,482
2A-01-01 Nov	£437,824	£147,810
5B Nov	£104,505	£23,441
5C Nov	£255,225	£907
<b>Total</b>	<b>£11,850,310</b>	<b>£2,735,311</b>

Factor (Total Cost / Actual Recovery) 4.33 [a]

From Preliminaries Schedule Breakdown (Estimators Mark Up)

Other Considerations

- Site Transport (Item f 12)
- Lifting/Hoisting Plant (Item F13)
- Road Cleaning Brush (Item F20)
- Traffic Management (Item WS 6.1), need to exclude cost plus element

	Calculated Cost	Entitlement	Bill Ref
Traffic Management	£284,835 [b]	£1,234,005 [a x b]	£949,169 [Calculated Cost - b] WS 1 & 2 Item 6
Site Transport	£20,885 [b]	£90,479 [a x b]	£69,595 [Calculated Cost - b] F12
Lifting/Hosting Plant	£11,200 [b]	£48,522 [a x b]	£37,322 [Calculated Cost - b] F13
Road Cleaning Brush	£28,000 [b]	£121,306 [a x b]	£93,306 [Calculated Cost - b] F20
Portakabins/Survey/Canteen	£16,891 [b]	£73,179 [a x b]	£56,288 [Calculated Cost - b] Portion D2 running costs
		<b>Sub-Total</b>	<b>£1,205,680</b>
		Add Indices 10.8%	£130,213
		<b>Sub-Total</b>	<b>£1,335,893</b>
		Add MUDFA Margin 8.8%	£117,559
		<b>Total</b>	<b>£1,453,452</b>

**MUDFA DELAY & DISRUPTION CALCULATION**

**Preliminaries Breakdown**

Traffic Management				Site Transport			
Work sector Preliminaries - Line 1				Contract Preliminaries - Line 1			
		Nov'09	Sep'08		Nov'09	Sep'08	
Item 6	TM Night supervision	£99,608	£51,221	Item F12	£45,126	£24,241	
	Labour Proportion	£181,645	£93,406	<b>Recovery in Period</b>			<b>£20,885</b>
	Plant Proportion	£36,666	£18,915	Lifting/Hoisting Plant			
	Equipment Proportion	£73,529	£38,017	Contract Preliminaries - Line 1			
		£391,449	£201,558		Nov'09	Sep'08	
Work sector Preliminaries - Line 2				Item F13			
					£24,200	£13,000	
				<b>Recovery in Period</b>			<b>£11,200</b>
				Road Cleaning Brush			
				Contract Preliminaries - Line 1			
					Nov'09	Sep'08	
Item 6	TM Night supervision	£49,804	£25,610	Item F20	£60,500	£32,500	
	Labour Proportion	£90,818	£46,701	<b>Recovery in Period</b>			<b>£28,000</b>
	Plant Proportion	£18,333	£9,458				
	Equipment Proportion	£36,768	£19,010				
		£195,724	£100,779				
Total (Line 1 & line 2)		£587,173	£302,337				
<b>Recovery in Period</b>			<b>£284,835</b>				

Contract Facilities					
Accommodation Running Costs (Yard & Buildings)			Applicable		
Land Rent & Rates	£1,019				
Main Offices	£1,431				
Site Portakabins	£190	£190			
Sec Systems	£5				
Main Office Services	£467				
Other	£38				
Photo Copies & Consumables	£366				
Survey Equipment	£45	£45			
Canteen Consumables	£72	£72			
IT	£2,166	£5,799	£307		
News Letters	£2,736	already excluded			
			Factor 0.053		
			Nov'09	Sep'08	
			Item D2	£777,106	£458,145
<b>Recovery in Period</b>			(x factor)	<b>£16,891</b>	

**MUDFA DELAY & DISRUPTION CALCULATION**

**Reinstatement Portion**

Calculated utilising values from Work Order Build-ups

	Nett Values	Portion Reinstatement
1A-01-01	£1,849,825	£214,590
1B-01-01	£1,865,031	£228,228
1B-01-02	£1,900,659	£152,083
1C-01-01	£360,079	£33,105
1C-03-01	£1,254,248	£86,324
1C-04-01	£1,049,589	£62,900
1C-05-01	£1,013,144	£68,594
1D-01-01	£888,424	£62,237
2A-01-01	£247,276	£16,312
5B	£380,756	£6,330
5C	£1,050,154	£27,596
<b>Total</b>	<b>£11,859,185</b>	<b>£958,299</b>

% Reinstatement 8.08%

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section	1A 01 01										
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output		
Work Order Values	475,993	370,594	846,587	4,896	172.91 [c]	1,383	8hrs	612.28	3.54		
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	121,527									
Adjusted Work Order Values	597,520	370,594	968,114	4,896	197.74	1,383	8hrs	700.18	3.54		
<b>Adjustment for 10 hr Shift</b>											
Increase day rate for 10hr working day	597,520	370,594	968,114	4,896	197.74	1,106	10hrs	875.22	[a]	4.43	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to Aug 09						Work Site Specific Labour Hiab Drivers (not included in Work Site Allocation Sheets) Total	774.2 (hrs from allocation sheets) 77.42 (@10% calc from WO Build-ups) 851.6				
Average Actual Work Section Output						[d] (detailed in Payment Certificate)	851.58	[b]	0.76		
Factor									[a]/[b]	5.82	[f]
New Rate									£197.74 * [f] =	£1,150.19	[nr]
<b>Entitlement Calculation</b>											
Total Cost based on a 10hr day rate									[d*nr]	£745,323	
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£60,148	
Less actual Im multiplied by Works Order (WO) rate/m									[c x d]	-£112,048	
Sub-Total										£693,423	
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	-£37,631	
Sub-Total										£655,792	
Add for price fluctuations 7%										£45,905	
Sub-Total										£701,697	
Add MUDFA Markup 8.8%										£61,749	
Total										£763,447	

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 180101										Average productivity output
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate		
Work Order Values	440,115	388,793	828,908	5,013	165.35 [c]	1,250	8hrs	662.88	4.01	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	112,366								
Adjusted Work Order Values	552,481	388,793	941,275	5,013	187.77	1,250	8hrs	752.74	4.01	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	552,481	388,793	941,275	5,013	187.77	1,000	10hrs	940.93	[a] 5.01	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to Aug 09						Work Site Specific Labour: 968.33333 (hrs from allocation sheets)				
						Hiab Drivers (not included in Work Site Allocation Sheets) 96.83 (@10% calc from WO Build-ups)				
						Total: 1065.16667				
Average Actual Work Section Output						[d] (detailed in Payment Certificate) 893	1,065.17		[b] 0.84	
Factor									[a]/[b] 5.98 [f]	
New Rate									£187.77 *(f) = £1,122.34 [nr]	
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr] £1,002,248	
Add for Reinstatement D&D (see separate build-up)									(add 8.07%) £80,881	
Less actual Im multiplied by Works Order (WO) rate/Im									[c x d] -£147,659	
Sub-Total									£935,471	
Less Amount recovered in Change Control									(Labour & plant nett value of Charge Control 47.82%) -£62,430	
Sub-Total									£873,041	
Add for price fluctuations 7%									£61,113	
Sub-Total									£934,153	
Add MUDFA Markup 8.8%									£82,206	
Total									£1,016,359	

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 18 01 02										
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output	
Work Order Values	436,500	383,262	819,762	4,669	17 5.58 [c]	1,335	8hrs	613.94	3.50	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	111,443								
Adjusted Work Order Values	547,943	383,262	931,205	4,669	199.44	1,335	8hrs	697.40	3.50	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	547,943	383,262	931,205	4,669	199.44	1,068	10hrs	871.75	[a]	4.37
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to Aug 09						Work Site Specific Labour 1275.13333 (hrs from allocation sheets)				
						Hiab Drivers (not included in Work Site Allocation Sheets) 127.51 (@10% calc from WO Build-ups)				
						Total 1402.64667				
Average Actual Work Section Output						[d] (detailed in Payment Certificate) 788	1,402.65		[b]	0.56
Factor									[a]/[b]	7.78 [f]
New Rate						£199.44 * [f] =				£1,55,173 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr]	£1,222,760
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£98,677
Less actual lm multiplied by Works Order (WO) rate/lm									[c * d]	-£138,353
Sub-Total										£1,183,083
Less Amount recovered in Change Control						(Labour & plant nett value of Charge Control 47.82%)				-£60,058
Sub-Total										£1,123,025
Add for price fluctuations 7%										£78,612
Sub-Total										£1,201,637
Add MUDFA Markup 8.8%										£105,744
Total										£1,307,381



**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 1C0101										
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output	
Work Order Values	105,669	92,052	197,721	721	274.23 [c]	311	8hrs	636.44	2.32	
Increase day rate cost of Labour £20 £14.89 plus 7% inflation	25.53%	26,979								
Adjusted Work Order Values	132,648	92,052	224,700	721	311.65	311	8hrs	723.29	2.32	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	132,648	92,052	224,700	721	311.65	249	10hrs	904.11	[a]	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to Jul 09						Work Site Specific Labour Hab Drivers (not included in Work Site Allocation Sheets) Total	859.7 (hrs from allocation sheets) 85.97 (@ 10% calc from WO Build-ups) 945.6			
Average Actual Work Section Output						961 [d] (detailed in Payment Certificate)	945.63	[b]	1.02	
Factor									[a]/[b]	2.85 [f]
New Rate									£311.65 * [f] =	£889.65 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d]*nr	£854,954
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£68,995
Less actual Im multiplied by Works Order (WO) rate/Im									[c x d]	-£263,537
Sub-Total										£660,413
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	-£177,158
Sub-Total										£483,255
Add for price fluctuations 7%										£33,828
Sub-Total										£517,083
Add MUDFA Markup 8.8%										£45,503
<b>Total</b>										<b>£562,586</b>

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 1C 03 01										Average productivity output
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate		
Work Order Values	371,655	314,816	686,471	4,065	168.87 [c]	1,041	8hrs	659.22	3.90	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	94,888								
Adjusted Work Order Values	466,542	314,816	781,359	4,065	192.22	1,041	8hrs	750.34	3.90	
<b>Adjustment for 10 hr 5hr Shift</b>										
Increase day rate for 10hr working day	466,542	314,816	781,359	4,065	192.22	833	10hrs	937.93	[a] 4.88	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to May 09						Work Site Specific Labour 2059.33333 (hrs from allocation sheets)				
						Hiab Drivers (not included in Work Site Allocation Sheets) 205.93 (@ 10% calc from WO Build-ups)				
						Total 2265.26667				
Average Actual Work Section Output						4,377 [d] (detailed in Payment Certificate)	2,265.27		[b]	1.93
Factor									[a]/[b]	2.53 [f]
New Rate	£192.22 * [f] =									£485.42 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d]*nr	£2,124,662
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£171,460
Less actual Im multiplied by Works Order (WO) rate/Im									[c * d]	-£739,159
Sub-Total										£1,556,963
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	-£75,792
Sub-Total										£1,481,171
Add for price fluctuations 7%										£103,682
Sub-Total										£1,584,853
Add MUDFA Markup 8.8%										£139,467
Total										£1,724,320

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 1C0401										Average productivity output
Work Order Proposal	Labour (E)	Plant (E)	Total (E)	Total (M)	L&P (E/M)	No of 3man team Days	Hrs/Day	Day Rate		
Work Order Values	267,868	237,665	505,533	2,748	183.96 [c]	782	8hrs	646.71	3.52	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	68,390								
Adjusted Work Order Values	336,258	237,665	573,923	2,748	208.85	782	8hrs	734.20	3.52	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	336,258	237,665	573,923	2,748	208.85	625	10hrs	917.75	[a] 4.39	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to Aug 09						Work Site Specific Labour Hlab Drivers (not included in Work Site Allocation Sheets) Total	1717.6 (hrs from allocation sheets) 171.76 (@1.0% calc from WO Build-ups) 1889.4			
Average Actual Work Section Output						2,222 [d] (detailed in Payment Certificate)	1,889.40	[b]	1.18	
Factor								[a]/[b]	3.74 [f]	
New Rate						£208.85 * [f] =			£780.37 [nr]	
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr]	£1,733,992
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£139,933
Less actual lm multiplied by Works Order (WO) rate/lm									[c x d]	£408,768
Sub-Total										£1,465,157
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	£109,010
Sub-Total										£1,356,147
Add for price fluctuations 7%										£94,930
Sub-Total										£1,451,077
Add MUDFA Markup 8.8%										£127,695
<b>Total</b>										<b>£1,578,772</b>

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 1C05 01										
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output	
Work Order Values	267,348	225,327	492,675	2,650	185.92 [c]	783	8hrs	629.60	3.39	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	68,257								
Adjusted Work Order Values	335,605	225,327	560,932	2,650	211.67	783	8hrs	716.82	3.39	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	335,605	225,327	560,932	2,650	211.67	626	10hrs	896.03	[a]	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to May 09						Work Site Specific Labour Hiab Drivers (not included in Work Site Allocation Sheets) Total	1390.8 (hrs from allocation sheets) 139.08 (@10% calc from WO Build-ups) 1529.9			
Average Actual Work Section Output						1,367 [d] (detailed in Payment Certificate)	1,529.88	[b]	0.89	
Factor									[a]/[b]	4.74 [f]
New Rate									£211.67 * [f] =	£1,002.79 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr]	£1,370,814
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£110,625
Less actual lm multiplied by Works Order (WO) rate/lm									[c x d]	-£254,146
Sub-Total										£1,227,292
Less Amount recovered In Change Control									(Labour & plant nett value of Change Control 47.82%)	-£58,083
Sub-Total										£1,169,209
Add for price fluctuations 7%										£81,845
Sub-Total										£1,251,054
Add MUDFA Markup 8.8%										£110,093
Total										£1,361,147

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section	1D01 01									
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output	
Work Order Values	232,366	196,905	429,271	2,574	166.77 [c]	632	8hrs	678.83	4.07	
Increase day rate cost of labour £20-£14.89 plus 7% inflation	25.53%	59,326								
Adjusted Work Order Values	291,691	196,905	488,597	2,574	189.82	632	8hrs	772.65	4.07	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	291,691	196,905	488,597	2,574	189.82	506	10hrs	965.81	[a]	5.09
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to May 09						Work Site Specific Labour 1880.66667 (hrs from allocation sheets) Hiab Drivers (not included in Work Site Allocation Sheets) 188.07 (@10% calc from WO Build-ups) Total 2068.73333				
Average Actual Work Section Output					2,995 [d] (detailed in Payment Certificate)	2,068.73			[b]	1.45
Factor									[a]/[b]	3.51 [f]
New Rate									£189.82 * [f] =	£667.11 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr]	£1,998,002
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£161,239
Less actual Im multiplied by Works Order (WO) rate/m									[c x d]	-£499,482
Sub-Total										£1,659,759
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	-£126,307
Sub-Total										£1,533,452
Add for price fluctuations 7%										£107,342
Sub-Total										£1,640,794
Add MUDFA Markup 8.8%										£144,390
Total										£1,785,183

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section 2A01 01										Average productivity output
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L & P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate		
Work Order Values	67,220	59,533	126,753	927	136.73 [c]	191	8hrs	661.90	4.84	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	17,162								
Adjusted Work Order Values	84,382	59,533	143,915	927	155.25	191	8hrs	751.52	4.84	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	84,382	59,533	143,915	927	155.25	153	10hrs	939.40	[a] 6.05	
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to May 09						Work Site Specific Labour Hab Drivers (not included in Work Site Allocation Sheets) Total	423.7 (hrs from allocation sheets) 42.37 (@10% calc from WO Build-ups) 466.1			
Average Actual Work Section Output						1,081 [d] (detailed in Payment Certificate)	466.07	[b]	2.32	
Factor									[a]/[b]	2.61 [f]
New Rate						£155.25 * [f] =			£405.02 [nr]	
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr]	£437,824
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£35,332
Less actual lm multiplied by Works Order (WO) rate/lm									[c x d]	-£147,810
Sub-Total										£325,347
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	-£77,245
Sub-Total										£248,102
Add for price fluctuations 7%										£17,367
Sub-Total										£265,469
Add MUDFA Markup 8.8%										£23,361
Total										£288,830

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section	58									
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output	
Work Order Values	81,010	72,027	153,037	914	167.44 [c]	230	8hrs	664.23	3.97	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	20,683								
Adjusted Work Order Values	101,693	72,027	173,720	914	190.07	230	8hrs	754.00	3.97	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	101,693	72,027	173,720	914	190.07	184	10hrs	942.51	[a]	4.96
Actual Team Days Worked base d hrs/3man team/10hrs/day for Oct 08 to May 09						Work Site Specific Labour	100.8 (hrs from allocation sheets)			
						Hiab Drivers (not included in Work Site Allocation Sheets)	10.08 (@10% calc from WO Build-ups)			
						Total	110.9			
Average Actual Work Section Output						140 [d] (detailed in Payment Certificate)	110.88		[b]	1.26
Factor									[a]/[b]	3.93 [f]
New Rate									£ 190.07 * [f] =	£746.46 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d * nr]	£104,505
Add for Reinstatement D&D (see separate build-up)									[a add 8.07%]	£8,434
Less actual Im multiplied by Works Order (WO) rate /m									[c x d]	-£23,441
Sub-Total										£89,497
Less Amount recovered in Change Control									(Labour & plant nett value of Change Control 47.82%)	-£4,031
Sub-Total										£85,466
Add for price fluctuations 7%										£5,983
Sub-Total										£91,449
Add MUDFA Markup 8.8%										£8,048
Total										£99,497

**MUDFA DELAY & DISRUPTION CALCULATION**

Work Section	5C									
Work Order Proposal	Labour (£)	Plant (£)	Total (£)	Total (M)	L&P (£/M)	No of 3 man team Days	Hrs/Day	Day Rate	Average productivity output	
Work Order Values	211,415	187,836	399,251	2,640	151.23 [c]	607	8hrs	657.91	4.35	
Increase day rate cost of Labour £20-£14.89 plus 7% inflation	25.53%	53,977								
Adjusted Work Order Values	265,391	187,836	453,228	2,640	171.68	607	8hrs	746.85	4.35	
<b>Adjustment for 10 hr Shift</b>										
Increase day rate for 10hr working day	265,391	187,836	453,228	2,640	171.68	485	10hrs	933.57	[a]	5.44
Actual Team Days Worked based hrs/3man team/10hrs/day for Oct 08 to May09						Work Site Specific Labour Hiab Drivers (not included in Work Site Allocation Sheets) Total	248.5 (hrs from allocation sheets) 24.85 (@10% calc from WO Build-ups) 273.4			
Average Actual Work Section Output						[d] (detailed in Payment Certificate)	273.39	[b]	0.02	
Factor									[a]/[b]	247.78 [f]
New Rate									£171.68 * [f] =	£42,537.48 [nr]
<b>Entitlement Calculation</b>										
Total Cost based on a 10hr day rate									[d*nr]	£255,225
Add for Reinstatement D&D (see separate build-up)									(add 8.07%)	£20,597
Less actual lm multiplied by Works Order (WO) rate/lm									[c x d]	-£907
Sub-Total										£274,914
Less Amount recovered in Change Contr ol									(Labour & plant nett value of Change Control 47.82%)	-£56,819
Sub-Total										£218,095
Add for price fluctuations 7%										£15,267
Sub-Total										£233,362
Add MUDFA Markup 8.8%										£20,536
Total										£253,898