



# Panel 3 - Making good actual expenses

#### ASA Conference on "Shaping Arbitral Proceedings to Deal with Recovery of Actual Expenses: the Expert's View"

#### Ian Osbaldeston



Geneva, 3 February 2017

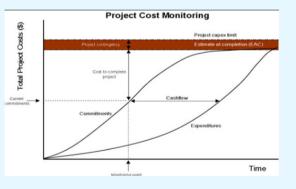


Construction Claims

□ What is cost?



□ How is cost monitored on construction projects?





□ The Experts view on auditing cost.





## > What is cost?



- Different standard contracts have different meanings for 'cost'.
  - FIDIC defines 'Cost' as "all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off Site, including overhead and similar charges but does not include profit"
- **R**ates?
- Cost 'incurred' or 'to be incurred'? Different jurisdictions treat this differently.



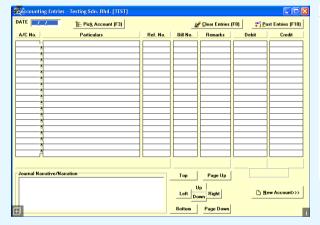
- $\succ$  Costs relating to the works.
  - Labour, plant & equipment, materials, staff, overheads and subcontractors.
  - Costs are incurred:
    - Works
    - Variations
    - Due to increased level of resources
    - Due to resources required or longer
    - Due to resources being inefficient



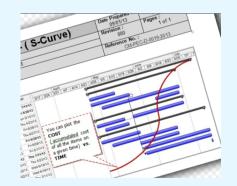




## > How is cost monitored on construction projects?



|     | - 3 | Account no              | Account Name        |      |              |              |              |            |            |            |           |               |
|-----|-----|-------------------------|---------------------|------|--------------|--------------|--------------|------------|------------|------------|-----------|---------------|
|     | 6   | 075.001.001             | DIRECT EFFORT COSTS | 0.00 | 8,029,885.03 | 9,876,224.10 | 4,762,989.35 | 414,815.05 | 199,307.07 | 118,378.42 | 64,753.87 | 23,466,352.89 |
|     | 7   | 075.001.001.001         | TURKISH EMPLOYEES   | 0.00 | 1,024,282.67 | 961,116.48   | 506,200.38   | 260.00     | 0.00       | 81,935.43  | 63,001.37 | 2,636,796.33  |
| -   | 8   | 075.001.001.001.001     | STEEL FIXER         | 0.00 | 0.00         | 18,194.00    | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 18,194.00     |
| Т·  | 9   | 075.001.001.001.001.001 | STEEL FIXER CHIEF   | 0.00 | 0.00         | 0.00         | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 0.00          |
| 1.  | 10  | 075.001.001.001.001.002 | STEEL FIXER HELPER  | 0.00 | 0.00         | 18,194.00    | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 18,194.00     |
| -   | 11  | 075.001.001.001.002     | CARPENTER           | 0.00 | 118,212.28   | 245,050.00   | 47,544.00    | 0.00       | 0.00       | 0.00       | 0.00      | 410,806.28    |
| 1.1 | 12  | 075.001.001.001.002.001 | CARPENTER CHIEF     | 0.00 | 118,212.28   | 207,130.00   | 24,730.00    | 0.00       | 0.00       | 0.00       | 0.00      | 350,072.28    |
| 1.  | 13  | 075.001.001.001.002.002 | CARPENTER HELPER    | 0.00 | 0.00         | 37,920.00    | 22,814.00    | 0.00       | 0.00       | 0.00       | 0.00      | 60,734.00     |
| -   | 14  | 075.001.001.001.003     | MASON               | 0.00 | 23,838.68    | 8,360.00     | 63,290.00    | 0.00       | 0.00       | 26,833.85  | 19,932.18 | 142,254.71    |
|     | 15  | 075.001.001.001.003.003 | MASON CHIEF         | 0.00 | 23,838.68    | 8,360.00     | 63,290.00    | 0.00       | 0.00       | 0.00       | 0.00      | 95,488.68     |
| 1.  | 16  | 075.001.001.001.003.004 | MASON HELPER        | 0.00 | 0.00         | 0.00         | 0.00         | 0.00       | 0.00       | 26,833.85  | 19,932.18 | 46,766.03     |
|     | 17  | 075.001.001.001.004     | HARFIYAT ISCISI     | 0.00 | 0.00         | 0.00         | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 0.00          |
| -   | 18  | 075.001.001.001.005     | PIPE FITTER         | 0.00 | 116,420.76   | 149,209.33   | 79,212.07    | 0.00       | 0.00       | 0.00       | 0.00      | 344,842.16    |
|     | 19  | 075.001.001.001.005.001 | PIPE FITTER CHIEF   | 0.00 | 116,420.76   | 141,366.33   | 79,212.07    | 0.00       | 0.00       | 0.00       | 0.00      | 336,999.16    |
| 1.  | 20  | 075.001.001.001.005.002 | PIPE FITTER HELPER  | 0.00 | 0.00         | 7,843.00     | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 7,843.00      |
|     | 21  | 075.001.001.001.006     | OPERATORS           | 0.00 | 647,796.19   | 444,745.05   | 244,228.18   | 0.00       | 0.00       | 0.00       | 0.00      | 1,336,769.42  |
|     | 22  | 075.001.001.001.007     | LABOUR              | 0.00 | 118,014.76   | 85,207.10    | 71,926.13    | 260.00     | 0.00       | 33,272.33  | 23,151.05 | 331,831.37    |
| -   |     | 075.001.001.001.008     | PAINTER             | 0.00 | 0.00         | 10,351.00    | 0.00         | 0.00       | 0.00       | 21,829.25  | 19,918.14 | 52,098.39     |
|     | 24  | 075.001.001.001.008.001 | PAINTER HELPER      | 0.00 | 0.00         | 0.00         | 0.00         | 0.00       | 0.00       | 21,829.25  | 19,918.14 | 41,747.39     |
| L · | 25  | 075.001.001.001.008.002 | PAINTER CHIEF       | 0.00 | 0.00         | 10,351.00    | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 10,351.00     |
|     | 26  | 075.001.001.001.009     | CHARGE HAND         | 0.00 | 0.00         | 0.00         | 0.00         | 0.00       | 0.00       | 0.00       | 0.00      | 0.00          |
|     | 27  | 075.001.001.002         | OTHER EMPLOYEES     | 0.00 | 7,000,002.36 | 8,915,107.62 | 4,256,788.97 | 414,555.05 | 199,307.07 | 36,442.99  | 1,752.50  | 20,823,956.56 |
| -   | 28  | 075.001.001.002.001     | STEEL FIXER         | 0.00 | 728,049.42   | 1,412,176.02 | 818,206.33   | 44,936.49  | 0.00       | 0.00       | 0.00      | 3,003,368.26  |
|     | 29  | 075.001.001.002.001.001 | STEEL FIXER CHIEF   | 0.00 | 728,049.42   | 1,210,949.02 | 815,461.89   | 2,581.77   | 0.00       | 0.00       | 0.00      | 2,757,042.10  |
| 1.1 | 30  | 075.001.001.002.001.002 | STEEL FIXER HELPER  | 0.00 | 0.00         | 201,227.00   | 2,744.44     | 42,354.72  | 0.00       | 0.00       | 0.00      | 246,326.16    |
| -   | 31  | 075.001.001.002.002     | CARPENTERS          | 0.00 | 1,466,167.94 | 2,059,820.99 | 1,287,379.47 | 34,954.94  | 26,387.71  | 3,325.00   | 0.00      | 4,878,036.05  |
|     | 32  | 075.001.001.002.002.001 | CARPENTER CHIEF     | 0.00 | 1,466,167.94 | 1,462,879.49 | 384,380.47   | 2,147.00   | 0.00       | 0.00       | 0.00      | 3,315,574.90  |
|     |     |                         |                     |      |              |              |              |            |            |            |           |               |



|            | 1      | @ X  | Ð  |   |   | and Pro-          | Poneer Element   | *** [Caroos]  | - Cont  |   | _  |              | 1     |
|------------|--------|--|--|---|---|-------------------|--|---|---|---|--|--------------|-------|
|            | Edit M | Aulti-Edit Delete  | Excel Imp  | ort Rep                                       |   |                   |  |   |   |   |  |              |       |
| -          | . 7    |  | (ed) s   | haw 100                                       | v items 🛛   | Show W            | oided  |   |   |   |  |              |       |
|            |        |  |  |   |   |                   |  |   |   |   |  |              |       |
| triginal D | adget  | \$8,599,000.0  | 0  |   |   |                   |  | Original Estin  | nate \$8,250,000.00   |   |  |              |       |
| Gene       | al 🛛   | Budget Codes   | Adus   | tments  | Badget Fun  | ding              | <b>Cost Code Segment</b>   | s Cost Code Def   | inflions  |   |  |              | terre |
|            |        | Costs  | Descrip  | dise  | Balact Oty  | <u>0.0.M</u>      | Budget Unit Cost   | Badget Amount   | Billed Amount   | Actual Amount   | Parchase By D  | sate On Site | .Øx   |
| • 8        | 1-9    | 00-65-8-0100   | Landscaping  |   |   |                   |  | - \$500,000.0   | e -   |   |  |              |       |
| OR         | 1-01   | 00-65-8-0200   | Site Survey  |   |   |                   |  | - \$250,000.0   | o -   |   |  |              |       |
| OB         | 1-P1   | 0-ES-B-0300  | Geotechnice  | 4   |   |                   |  | + \$125,000.0   | o .   |   |  |              |       |
| OB         | 1-91   | 0-ES-B-0400  | Architecture   | fees  |   |                   |  | - \$1,250,000.0   |   |   |  |              |       |
| OB         | 1-P    | IO-ES-8-0500   | New Constr   | action  |   |                   |  | - \$5,375,000.0   |   |   |  |              |       |
| OR         | 1.0    | 0-55-6-5000  | Continuents  |   |   |                   |  | 51.000.000.0  | 0 1   |   |  |              |       |
|            |        | File Edit View   | Favorites  | Teeb He                                       | ip  |                   | Cost To Co   |   |   |   |  |              |       |
|            |        |  |  |   |   |                   |  |   |   |   |  |              |       |
|            | ľ      |  |  |   |   |                   | 004 10 00  | mpiece  |   |   |  |              |       |
|            |        | Project : [CC  | 12089] Pia   | neer Elem                                     | estory  |                   | COATOCO  | inpiece   |   | View Date:  | 1/31/2013  |              |       |
|            |        | Project : [CC<br>Sorting: F  | hase,Site,T  | )ype  |   |                   |  |   |   |   |  |              |       |
|            |        | Project : [CC<br>Sorting: F  | hase,Site,T  | ype   | Descript  | tion              | ORG BGT * 8  | GT ADJ CUR BG   |   | FND CST TO  | COMPL*   |              |       |
|            |        | Project : [CC<br>Sorting: F<br>B<br>Phase Site   | hase, Site, T  | ypa<br>ed (Dedoe                              | Descript  | tion              |  |   | Act OST<br>Ant Art  | FND CST TO  |  |              |       |
|            |        | Project : [CC<br>Sorting: F<br>B<br>Phase Site<br>[C02009] Pi                                | hase, Site, 7<br>adget Code<br>Type Bo<br>oncer Elem                                 | od Dadge                                      | Descript  | tion              | ORG BGT * 8<br>Ant   | GT ADJ CUR BG<br>Ant  | Ant Ant   | PND CST TO<br>Ant   | COMPL *  |              |       |
|            |        | Project : [C0<br>Sorting: P<br>Phase Site<br>[C02009] Pio<br>1 Pio<br>1 Pio                  | hase, Site, T<br>indget Code<br>Type Bo<br>oncor Elem<br>ES B                        | of Budge<br>entary<br>0200<br>0300            | Descript<br>t   |                   | 0RG BGT * 8<br>Ant<br>\$250,000.00<br>\$125,000.00                                     | GT ADJ CUR BG<br>Ant<br>50.00 5220.0<br>50.00 5123.0  | Amt Amt<br>00.00 \$0.00<br>00.00 \$0.00   | PND CST TO<br>Ant<br>\$0.00<br>\$0.00                                       | COMPL *<br>Ant<br>\$0.00<br>\$0.00                       |              |       |
|            |        | Project : [CC<br>Sorting: F<br>Phase Site<br>[C02009] Pi<br>1 Pi0<br>1 Pi0<br>1 Pi0          | hase, Site, T<br>udget Code<br>Type Bo<br>oncer Elem<br>ES B<br>ES B                 | 990<br>estary<br>0200<br>0300<br>0400         | Descript<br>t<br>Site Survey<br>Dectechnica<br>Architectura | il<br>i Fees      | ORG BGT * 8<br>Aret<br>\$220,000.00<br>\$125,000.00                                    | GT ADJ CUR BG<br>Ant<br>50.00 52200<br>50.00 51230<br>50.00 51230   | Amt Amt<br>00.00 \$0.00<br>00.00 \$0.00<br>00.00 \$0.00   | PND CST TO<br>Ant<br>\$0.00<br>\$0.00                                       | COHIFL *<br>Amt<br>\$0.00<br>\$0.00                      |              |       |
|            |        | Project : [CC<br>Sorting: F<br>Phase Site<br>[C02009] Pi<br>1 Pt0<br>1 Pt0<br>1 Pt0<br>1 Pt0 | hase, Site, 7<br>udget Code<br>Type Bo<br>oncer Elem<br>ES B<br>ES B<br>ES B         | ype<br>estary<br>0200<br>0300<br>0400<br>9000 | Bite Survey<br>Bite Survey<br>Destectora<br>Architectora    | il<br>I Fees      | ORC BGT * 8<br>Ant<br>\$250,000.00<br>\$125,000.00<br>\$1,250,000.00<br>\$1,200.000.00 | GT AD) CUR BG<br>Ant<br>50.00 \$220.0<br>50.00 \$125.0<br>50.00 \$1.250.0<br>50.00 \$1.250.0<br>50.00 \$1.250.0 | Amt Ant<br>00.00 \$0.00<br>00.00 \$0.00<br>00.00 \$0.00<br>00.00 \$13,750.00                        | PhiD CST TO<br>Ant<br>\$0.00<br>\$0.00<br>\$0.00                            | COMPL *<br>Aent<br>50.00<br>50.00<br>50.00<br>513,750.00 |              |       |
|            |        | Project : [CC<br>Sorting: F<br>Phase Site<br>[C02009] Pi<br>1 Pi0<br>1 Pi0<br>1 Pi0          | hase, Site, T<br>edget Code<br>Type Bo<br>oncer Clem<br>ES B<br>ES B<br>ES B<br>ES B | 990<br>estary<br>0200<br>0300<br>0400         | Descript<br>t<br>Site Survey<br>Dectechnica<br>Architectura | il<br>I Fees<br>V | ORC BGT * 8<br>Ant<br>\$250,000.00<br>\$125,000.00<br>\$1,250,000.00<br>\$1,200.000.00 | GT ADJ CUR BG<br>Ant<br>50.00 52200<br>50.00 51230<br>50.00 51230   | Amt Art<br>00.00 \$0.00<br>00.00 \$0.00<br>00.00 \$13,750.00<br>00.00 \$13,750.00<br>00.00 \$13,000 | PND CST TO<br>Ant<br>\$0.00<br>\$0.00<br>\$0.00<br>\$0.00<br>\$22,500.00 [5 | COHIFL *<br>Amt<br>\$0.00<br>\$0.00                      |              |       |



Risk of errors? Which is right?



- Monitored by who?
  - company accountants
  - **quantity surveyors**
  - accounts clerks on site
- Different standards of reporting
  - □ UK Financial Reporting Council ("FRC")
  - European Financial Reporting Advisory Group (EFRAG)
  - □ International Financial Reporting Standards ("IFRS")
  - **US** Financial *Accounting Standards* Board (FASB)





## The experts view on auditing cost. Where to start and what to look for?

- > Where to focus?
  - Contract rates?
  - Time related resources
    - Staff costs salary, benefits,
    - Employment costs visas
    - Equipment costs cranes, generators,
    - Insurances CAR insurance, Employer's Liability insurance etc.
  - □ Head office costs actual or formula?
    - Hudson
    - Emden
- Sampling is acceptable (but check your contract!!!!)



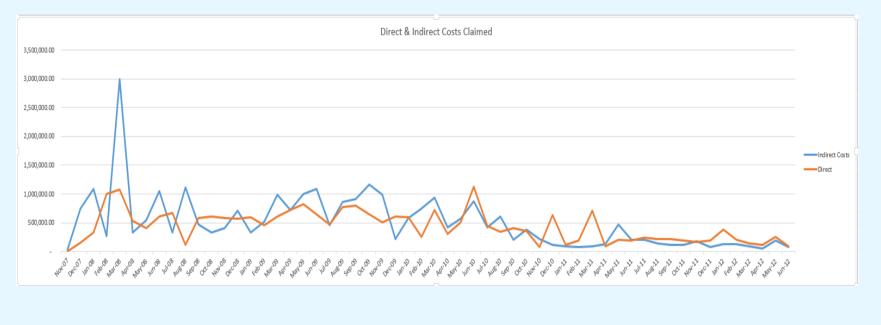






## Sampling – the sensible approach – Time related

- □ Step 1 Cost profile
- □ Step 2 How many entries?
- □ Step 3 Costs booked/incurred in the correct months?
- Step 4 Miscellaneous items such as petty cash?
- □ Step 5 When are the periods of delay?
- □ Step 6 Where are the spikes/drops in cost?







Head office costs?



- □ Actual details of the resources used should be kept
- Formulas should be used as a last resort (or if the Contract says so)



The Hudson formula is:

Contract Profit Percentage x Contract Sum

**Contract Period (weeks)** 

= Value of recovery of overheads per week

