



In this, our Summer 2016 newsletter, our lead article is, 'Cumulative Impact Claims'. The article discusses the merits of this type of claim, which is becoming more prevalent as part of a disruption of loss and expense claim.

Our second article is titled 'Prediction is Difficult, Especially the Future'. The article discusses the quality attributes of a good and realistic project programme.

If you wish to discuss any of the matters or points we raise in these articles, Please do not hesitate to contact us.

Roger Gibson
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Cumulative Impact Claims

When changes in a project become numerous and act concurrently, it creates a compounding effect in the life cycle of the project and to this date, there is no definitive standard to calculate such loss of productivity claims. Cumulative impact claims may be one of the most common cases on projects with multiple changes over the course of the project.

Almost every change to a construction project has some effect on the project's cost and time. There are generally two categories of this effect:

- The direct cost and time of performing the change, and
- The impact the change may have on other unchanged or contractual work because of delay, disruption, change of sequence, lack of resources, etc.

Contractors generally do not have much difficulty estimating the direct costs or time required to perform a single change, but it is very difficult to accurately estimate the impact of that change on the unchanged or contractual part of the work. To execute a change it may be necessary to delay or disrupt the unchanged work, or perform it in a manner or sequence different to that originally planned, all of which may lead to a loss of productivity and increased costs.

Difficulty in estimating the impacts, coupled with the resistance on the part of the contract administrator to recognize such impacts, often leads to a decision to leave such impacts out of the individual changes. Neglecting such impacts may not be a big problem if the number and value of the changes on a project are minimal, but the situation becomes more complex in the case of an extensive number of changes on medium-sized and large projects.



Cumulative Impact Claims (Cont'd)

This compounding and negative effect often goes unnoticed until it is too late. It generally becomes apparent only in the latter stages of a project when work cannot be completed on time and when labour productivity does not measure up to the anticipated levels.

What is a Cumulative Impact Claim?

Two things are certain about almost any construction project: (1) there will be changes made during the course of construction, and (2) the employer and the contractor will seldom agree on the total effect of those changes on the time impact and cost of the project. Changes to the work can and should be addressed on a case by case basis, but when the project is overwhelmed with changes a certain phenomenon is often experienced. This phenomenon is referred to by industry experts as cumulative impact. This is the result of multiple changes to a project that when taken individually do not have significant impact to the project. Many times, contractors, employers and their representatives do not recognize this impact until it has already occurred.

An analogy to describe a 'cumulative impact claim'.

Compare the notion of cumulative impact to a still pond of water which represents a smoothly running construction project. When one change is introduced to a project, it is similar to throwing a rock into the water and watching the ripples that emanate. Those ripples are the effect that one change has on the project. When multiple changes occur, at different times, multiple rocks of varying sizes are thrown into the pond at various locations. Each rock that is thrown into the pond has its own impact in the form of the ripple pattern it creates. Eventually, if enough rocks are thrown into the pond at different times, there is no simple ripple pattern. Instead, turbulence is created with each stone's ripple patterns impacting the others. Soon, there is no pattern and turbulence becomes the order of the day. Such is the effect on a construction project when multiple impacts are experienced over a period of time. While each change or impact, on its own, may be manageable, when they are introduced together over a relatively short period of time, an impact to the overall progress of the project can be felt.

Demonstrating Cause and Effect.

Construction contracts do not typically include adequate language to enable fair and equitable compensation for the unforeseen impact of cumulative changes. Furthermore, cumulative impact claims are one of the most difficult forms of claim to present and prove. It is generally agreed that the theory of cumulative impact is reasonable, and that multiple changes and other types of delays and disruption can negatively impact the performance of the changed work such that a contractor expends additional time, man-hours and costs, in completing its original scope of work.



Cumulative Impact Claims (Cont'd)

When a project is impacted with a large amount of changes, the site supervisors spend their time coordinating the changed work and finding the most productive work for their crews in an attempt to be on budget and on schedule. They have less time to document the impacts to their work and fill out the daily timesheet of their resource allocation. Without these records, the contractor will find it difficult to recover his additional costs.

It is recommended that the contractor should track the changes, individually or in like groups, in separate cost accounts kept apart from the cost codes for the original scope of work. In essence, the use of effective cost-accounting methods and the maintenance of appropriate cost records can minimize many of the proof problems inherently associated with construction claims.

Furthermore, when a contractor becomes aware that a multitude of changes are impacting its productivity it is essential that the contractor notify the contract administrator of this and reserves its rights to claim.

Future articles on 'Cumulative Impact Claims' will present and discuss methods of evaluating these types of claims. Such as 'modified total cost', 'measured mile', and recognised industry studies.

Finally, cumulative impact claims are not just a theoretical concept but a real occurrence on construction projects suffering numerous changes.



Prediction is Difficult, Especially the Future

"Prediction is difficult, especially the future", so said Niels Bohr, the Danish Nobel Prize winning physicist, in the mid 1950's.

However, in the construction and engineering industries we have to predict the future; and this 'prediction' is conveyed and demonstrated by way of a programme.

Sadly, it is my view that a disciplined and knowledgeable approach to planning and programming is seriously lacking nowadays. Shortly after Niels Bohr made the above statement, computers, initially mainframes then pc's, became common use in our industry. However, I consider that the use of computer software planning packages has impacted upon the quality of project programmes. Too often nowadays, "planners" start preparing the 'plan' by inputting data in front of a computer screen.

Firstly 'back to basics'; it is important to understand what a project programme is and what it should be used for. A project programme must accurately reflect the scope of the project and the sequence of activities to deliver the desired outcomes. It should also take into account and document the assumptions it is based on as well as the resources required to achieve it. Once agreed, the project programme is 'baselined' and then used to monitor and control the project; and we have a 'good and realistic project programme'.

Too often I have seen a baselined project programme that does not contain all of the 'work' that needs to be done to achieve the project needs. In other words, too many programmes have incomplete scope, and where the scope is defined there is an over-use of fixed-dates or imposed time-constraints.

Furthermore, and this is more common, the project programme, usually presented in the form of a logic linked network of activities (a 'CPM'), is lacking in quality.

On the matter of 'quality', somewhat surprisingly, I can find no standard guidelines for the construction and engineering industries regarding good practice for a project programme.



Prediction is Difficult, Especially the Future(Cont'd)

This being so, based on my 40 years of experience of planning, programme submissions & approvals, I have developed a 'Six-Point Checklist'. This checklist will be the subject of our next 'Planning & Programming Bulletin', to be posted on our website in a few weeks time.

Conclusion

So what is the effect of not having a 'good and realistic project programme'?

What often happens is that the programme is either impossible to achieve because it doesn't reflect the true scope or real activity sequence; or, that in order to achieve the programme requires extra unplanned resources and/or extensive working hours to do so.

What can be done to overcome this? In my view, computer software packages do not provide the training for 'planning and programming'. Whenever possible actually observe work being carried out on site and the integration of various works and trades.

Remember; "failing to plan is planning to fail".

Contact Us

Details of our services can be found on our website, <http://www.gibsonconsulting.co.uk/>, but if you would like to discuss how we can help you, Please don't hesitate to contact Roger Gibson on 024 7624 3607 or 07970 119 465 or send an email to roger.gibson@gibsonconsulting.co.uk