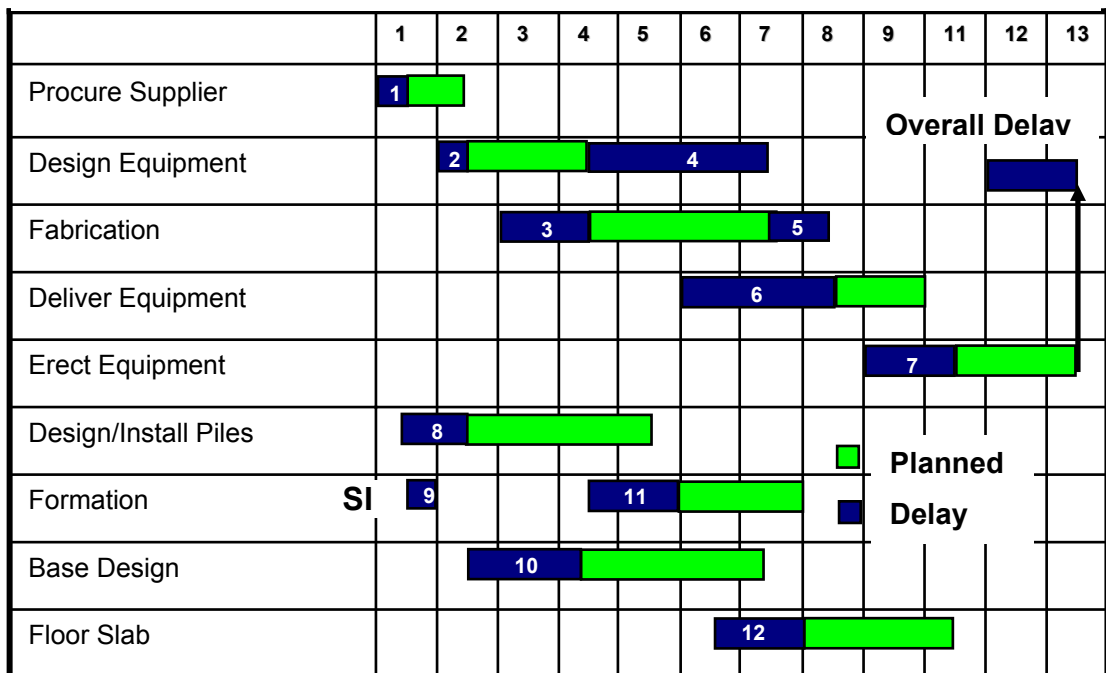


CHAPTER 6 – METHODS OF DELAY ANALYSIS

- 6.13 The example shows that there has been an overall delay to planned completion of the project. The change in the timing and duration of the activities are not in any discernable pattern and does not allow the assumption to be made that the planned construction logic was actually followed. The method does not allow a sufficiently detailed analysis and additional evidence would be required.
- 6.14 The method identifies two types of changes in the example.
 - 6.14.1 Changes in the timing or planned commencement of each activity, and
 - 6.14.2 Changes in planned duration of each activity.
- 6.15 The analysis of the example is shown more clearly below in Figure 15. The delays to each activity are represented as bars together with the planned duration of the activity. The delay in timing or commencement of the activity is shown first, followed by the planned duration and then followed by the additional duration or prolongation to that planned.

Figure 15 - Example - Delays to Planned Programme



- 6.16 Some of the timing delays are the same, but it is a logical fallacy to infer from that fact alone that those delays were caused by the same causative event. Indeed the fact that the timing delays are not the same for all activities suggests that there is more than one causative event that has contributed to the overall delay. In addition, the overall delay cannot be calculated by the addition of all the individual activity delays leading to the conclusion that the consequences of the causative events require a more sophisticated analysis than the comparison method.
- 6.17 The Delay 1 is different to other delays since it is a delay to the first planned activity. The Delay 9 is also different since it is a delay to a milestone. In both cases, it is

CAUSATION IN CONSTRUCTION LAW

likely that an investigation of the activity and the milestone will identify the causative event, without investigation of other activities.

- 6.18 Delays 4 and 5 are also different to other delays, since they are prolongation of the planned duration rather than a delayed commencement. In this case, it may be necessary to investigate other activities and it will be necessary to investigate the work content of the activity and the method of working to identify any change from the plan.
- 6.19 All other delays will require investigation of the relationship of the activity with others. The comparative method does not however provide a mechanism to do so.
- 6.20 When the method is used to compare planned and as-built resources, it allows identification of those activities that have involved different resources than planned. The method identifies three types of changes
 - 6.20.1 Changes in level of resources for the planned activity duration, and
 - 6.20.2 Changes in period of planned level of resources, and
 - 6.20.3 Changes in the planned type of resources.
- 6.21 The first three activities in the example in Figure 15, Delays 1 -5, are shown below in Figure 16 together with the planned and actual resources. The planned resources are shown over the planned duration, but with a time lapse to allow for the delayed start. This allows the planned and actual resource profile for each activity to be compared. Although not shown in the example, it is possible for resources to be allocated to an activity in anticipation of the planned start, so that because of the delay the actual resource profile may commence before actual start of the activity.

Figure 16 - Example – Comparison of Resources – Planned v Actual

