



ARTICLE

# Disruption: The basics

The Society of Construction Law (SCL) Protocol for Determining Extensions of Time and Compensation for Delay and Disruption (dated October 2002), paragraph reference 2.1.7, on page 4 defines disruption as:

*Disruption (as distinct from delay) is disturbance, hindrance or interruption to a Contractor's normal working methods, resulting in lower efficiency. **If caused by the Employer**, it may give rise to a right to compensation either under the contract or as a breach of contract.*

Whereas, Keating on Construction Contracts 9th Edition, on page 330, paragraph reference 9-027 (b) introduction to types of 'Contractor' claims, states:

*A **distinction** should be made between **prolongation claims** (involving costs and losses incurred as a result of delays to the activity in question or the works as a whole which have led to critical delay to the contract completion date) and **disruption claims** (which involve those additional costs and losses incurred during extended or disrupted periods of activities usually without any effect on the completion date for the works.*

## Features of disruption

Programmes plan for resources to work at industry or company standard rates of output, as applicable to each of the planned activities. If appropriate these standard rates of output are reduced, or increased, to accord with the expected efficiency level accounting for the site location, conditions, congestion, complexity, buildability, quality, size of project, continuity, weather, available work fronts, access and egress, etc. specific to that project.

Disruption is a disturbance, interruption or hindrance to the regular progress of the works, resulting in a loss of, or reduction in, productivity. In other words, the actual labour efficiency was different to that which was expected or planned. As a consequence, disruption often causes delay to the regular progress of the works and can lead to late completion of the project, if the disrupted work activities are on the critical path.

Disruption to the regular progress of the works results in the as-built labour man-hours expended, and the actual labour costs, being in excess of what was planned and what was budgeted for, which leads to claims to recover such losses.

## Major causes of disruption

Disruption can be caused by a variety of events, some of which are excusable, some are neutral, and some are non-excusable.

Common examples include, but are in no way limited to; change orders, variations, instructions, late information, late approvals, adverse inclement weather, out of sequence working, excessive overtime working, interface works with others, piecemeal access, stacking of trades, abortive works, acceleration, mitigation, new and additional imposed obligations, etc.

These factors can occur, operate and compete at the same time, making it practically impossible to separate out each of them to determine how much disruption was caused by each factor. This makes it difficult to establish definitive causal linkages and may lead to claims being more global in nature, i.e. all of these factors listed above affected the actual performance of the labour, reducing their productivity, extending and prolonging the work activities and, where critical, caused delay to the date for completion of the project.

Therefore, it is common that loss of productivity cases cannot be proven purely by reference to records, schedules and other documentation, which will likely increase the reliance on witnesses of fact and the opinion of expert witnesses.

## Basis of entitlement

Entitlement arising from disruption caused by Employer Risk Events is generally recognised in contracts:

- **Express Provisions** – Loss and Expense clauses, which provide compensation for disruption.
- **Employer's Breach of Contract** – Damages for Employer's Breach of Express Terms, e.g. late provision of drawings, late access to site, and Employer's Breach of Implied Terms, e.g. not to prevent or hinder the contractor.
- **Variations** – some provisions found in forms of contract, e.g. valuation of variations at fair allowance for changes in conditions, and adjustment for knock on effects of variations on other work.

## Burden of proof

Under all bases of entitlement, the claimant must prove that there has been an act of hindrance by the Employer which entitles the claimant to claim additional payment. The claimant must demonstrate causal linkage between such act and the loss of productivity and additional expenditure. The claimant must prove cost of loss of productivity and additional expenditure arising from disruption or a valuation in accordance with terms of contract.

## Causal linkages

These all-important causal linkages are often difficult to prove in claims for disruption. The contractor is only entitled to compensation to the extent that the Employer causes disruption. The contractor's own poor management and inefficiencies may contribute to loss of productivity, and this is a common line of defence against disruption claims. Additionally, the loss of productivity arising from disruption may be concurrent with acceleration by the contractor, which is subject to different principles of entitlement.

A recurring issue in disruption claims is a lack of sufficient records to demonstrate actual effect and costs caused by disruption events. Consequently, contractors often attempt to claim the difference between as planned and actual man hour productivity. However, a contractor must demonstrate disruption to actual progress, not planned progress as is often claimed. The measure of compensation arising from disruption is to put the contractor in the same position financially, as if the progress of works had not been disrupted.

## Methods of assessing disruption claims

There are different methods commonly employed in the analysis and presentation of disruption claims:

- measured mile;
- bottom up or top down method;
- project and industry studies based on research; and
- global or composite claims.

These methods are each described in more detail below.

## Measured mile

The measured mile method compares the productivity in an un-disrupted period with that in a disrupted period. It would then be alleged that ‘but for’ the disruption in the disrupted period, the productivity achieved in the un-disrupted period could have been achieved in the disrupted period. If utilising this methodology, the contractor, by using actual productivity in an un-disrupted period, factors in any loss of productivity from his planned to actual, and, as such, overcomes charges that the calculation is purely theoretical nature. The principle behind this approach is that the productivity rate achieved in an un-disrupted period would likely have continued had the disruptive event not occurred.

The application of this method, however, requires certain criteria to be met;

- the cause of the loss of productivity must be due to the disruptive events;
- the claimant will need to show it is not responsible for any of the disruptive events;
- the two periods should be similar in length; and
- the nature and character of the work must be similar in all respects.

Therefore, one must ensure that like is compared with like in order to make the analysis credible.

However, finding two areas of work that are similar in all respects can be difficult, and this is often one of the main reasons why the measured mile approach fails to convince. Another reason is that contractor’s own default (culpable events) caused and/or contributed to the disruption in the disrupted period.

## Bottom up or top down

The bottom up method works upwards, starting with the total as-planned man hours and adds on additional man hours that have been incurred due to the impact and effect of disruption events for which the employer is responsible. The top down method works backwards, starting with the total as-built man hours and deducts the man hours that have been incurred due to the effect of disruption events for which the contractor is responsible. However, before this process of deduction, the total as-built man hours are adjusted and discounted to account for the man hours recovered in variations, or the like.

The difficulty with both the bottom up and the top down methods is in determining the extent of the man hours associated with the disruption events for which the

employer is responsible. The disrupted man hours might only be derived from a percentage factor to account for the disruptive effect of the relevant disruption event. As noted earlier, disruptive events can occur, operate and compete at the same time, making it practically impossible to separate them, determine how much disruption was caused by each factor and to establish definitive causal linkages.

## Studies based on research

This project and industry research studies method is often adopted where the contemporaneous site records are incomplete, inadequate and insufficient. In this method productivity on the disrupted project is compared with that in similar un-disrupted projects or with industry standard data and these comparative studies are used to establish the likely extent of disruption. In general terms, the process involves the application of various factors to the disrupted project’s actual resource losses in order to determine whether the level of loss measured on the disrupted project is consistent with the factors determined in the relevant studies.

## Global claims

With a global disruption claim the claimant does not seek to attribute specific loss to specific events, but rather alleges a composite loss as a result of all the excusable events and breaches that it contends have affected progress. Global disruption claims are often, however, inadequate, as they are presented on a total cost basis, i.e. the claim is the difference between what was budgeted and the actual cost. This approach assumes the respondent is responsible for every penny of the claimant’s additional labour expenditure. If allowed to argue a case on this basis the claimant necessarily asserts that; it’s original estimate was sufficient, it’s actual labour spend was reasonable and it was not responsible for the additional labour expenditure. If this approach is successful, it can reward an inefficient contractor as well as a contractor who under bid the work. In addition, this approach generally offers little or no proof of causation and does not effectively allocate responsibility for the loss claimed. Consequently, whilst submitting a global disruption claim may not be fatal to recovery, a global claim which shows no attempt to link cause, effect and entitlement will likely be rejected, at least in part, by courts and tribunals.

## Conclusion

In summary, the recommendation, with respect to the preparation of claims for disruption is, to the extent possible, to use a factual analysis. The causes of disruption need to be determined, notified, particularised and evidenced, and the causal linkages demonstrated. The starting point for the preparation of any claim is the contract and the relevant clauses. The choice of method will depend on the availability, accuracy and quality of the contemporaneous site records, and with regards to the measured mile method, are there two areas of work that are similar in all respects. Whatever method is chosen one needs to be aware that assessments can be subjective.

Therefore, the results of the analysis need to be tested and properly understood. Using graphical presentations will help to illustrate the case and can make a significant impact on its understanding within your audience. The preparation of global disruption claims should be resisted and ideally only employed where it is not practicable to employ a fact-based method.

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