respect to ambiguities or inconsistencies as per the bill of quantity options, the construction against the gran-
grantor rule applies (see above section on original
conditions of contract v. option Z clauses). The gran-


2. Gerrard R, FAQs, in response to Form of
above as a starting point.


inconsistency between them. I suggest they use the
hierarchy or order of precedence of the documents
employers, in their articles of agreement, state the


20.1 The Contractor Provides the Works in accordance with the ‘Works Information’.

In other words, if it is in the works information and the contractor has failed to take it off and price it in the
activity schedule, then it is the contractor that suffers. Works information and arguably site information thus sit above an activity schedule in any hierarchy.

However, if the employer has written the activity schedule and there is ambiguity or inconsistency, then the construction against the granantor rule would apply against the employer, being the party that has created the ambiguity.

Review and conclusion

Given the above comments, my hierarchy of
documents under the NEC would be in the order
illustrated below:

<table>
<thead>
<tr>
<th>Generalised hierarchy of documents under the ECC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any articles of agreement</td>
</tr>
<tr>
<td>Contract data</td>
</tr>
<tr>
<td>Conditions of contract</td>
</tr>
<tr>
<td>Option Z clauses</td>
</tr>
<tr>
<td>Bill of quantities (if option B or D) or employer-written activity schedules</td>
</tr>
<tr>
<td>Employer's works information</td>
</tr>
<tr>
<td>Contractor's works information</td>
</tr>
<tr>
<td>Site information</td>
</tr>
<tr>
<td>The accepted programme</td>
</tr>
<tr>
<td>Activity schedules (if option A or C)</td>
</tr>
</tbody>
</table>

However, as with most contractual issues, the devil is in the detail. It is partly for this reason that many employers, in their articles of agreement, state the hierarchy or order of precedence of the documents that make up the contract if there is an ambiguity or inconsistency between them. I suggest they use the above as a starting point.

References
1. Keown K, A new user’s guide to NEC contract for-
2. Gerrard R, FAQs, in response to Form of

For further information please contact the author on +44 1179 055 335 or email jon@leadingedgecc.co.uk.

GLENN HIDE
NEC CONSULTANT

The recent NEC Users’ Group workshops on programmes have generated some very interesting discussions.

Recurring themes are the issues of float and
time-risk allowances.

It seems widely accepted that, under the contract, project float (commonly known as total float) is available to either the employer or the contractor to absorb the effects of compensation events or lack of progress. I like to describe this concept as ‘whoever gets there first’ – although I would never advocate a contractor deliberately using up float for the sake of it!

However, the other two types of float are not jointly owned and are solely the contractor’s. These other floats are:

- time-risk allowance
- period between planned completion and the completion date (commonly known as terminal float).

Time-risk allowance

In the NEC3 Engineering and Construction Contract (ECC), it is a requirement in clause 31.2 for the contractor to show provisions for time-risk allowance on each programme submitted for acceptance. It conversely becomes a valid reason for the project manager not to accept a programme if it is not shown.

In simple terms, time-risk allowance is the duration allowed for each activity that has been assessed by the contractor as a period of time risk necessary to ensure that the activity will be completed by the date required. It may be that the period of risk allowed for is zero, but this needs to be demonstrated as such.

The following example illustrates the typical way in which time-risk allowance is assessed during programme build-up at tender stage.

100 m pipe installation = 1 gang (3 men) at 7 m / shift / gang = 14.3 shifts = 16 shifts (including 1.7 shifts time-risk allowance)

The output estimates the operation to be complete in 14.3 shifts and it has been rounded up to 16 to allow for a small period of risk.

If a programme is produced without consciously recording time-risk allowances for operations, then it is possible to carry out a retrospective review of each programme activity and assess what is the quickest time that each activity could be completed if everything goes according to plan. The difference between the quickest and the duration allowed for on the programme is the time-risk allowance.

The next consideration is how to show the time-risk allowance on the programme. The contract is not explicit on this, but probably the easiest and most effective way is to just populate a text column on the bar-chart programme with the time-risk allowance period, as follows.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
<th>Time-risk allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install pipework</td>
<td>16 days</td>
<td>1.7 days</td>
</tr>
</tbody>
</table>

It is important to remember that elements of time-risk allowance are only there to demonstrate to the project manager that risk has been assessed in each and every activity such that the overall programme is more likely to be achieved. This is particularly true for critical-path activities.

If the critical path is the quickest route to completion and has no time-risk allowances, it is unlikely the project will meet the planned completion date.

The element of time-risk allowance is not available to mitigate the affects of a compensation event. If, for example, the pipework installation is delayed by one day, and is on the critical path, the activity completion, planned completion and completion date will all be delayed by one day and is not absorbed by the contractor.

A simple example of showing time-risk allowance on a programme is shown below.

Terminal float

The period between planned completion and completion date is owned by the contractor under the contract. This is further detailed as such in section 31.2 of the ECC guidance notes.

Again, if a contractor is delayed on a critical-path activity by the employer by one week, then any period of terminal float is retained by the contractor in any assessment on the affect of the compensation event upon the completion date. Hence both planned completion and completion date would both move out by one week.

Example of a programme with time-risk allowance (TRA) shown

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
<th>Time-risk allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install pipework</td>
<td>16 days</td>
<td>1.7 days</td>
</tr>
</tbody>
</table>

For further information please contact the author on +44 1179 055 335 or email jon@leadingedgecc.co.uk.

www.necontract.com
Buffered programmes?

I have seen examples where contractors are choosing to issue what they call ‘buffered programmes’ for acceptance to the project manager. These programmes have the individual time-risk allowance elements removed from each individual activity and bolted on as a cumulative bar of several weeks at the end of the programme.

The intent is to push for the contractor and sub-contractors to finish each activity as early as possible, on the basis that if they give someone four weeks with one week’s time-risk allowance, then they will naturally take five weeks anyway. I do understand the problem, but suggest this is more of a change in attitude, mentality or culture that is needed than multiple programmes.

Some contractors run two programmes – an unbuffed programme for the employer for acceptance and a buffered one for their own team and sub-contractors. This again I would not advocate as I would always want to operate under a one-programme philosophy. Having two programmes can cause more problems than benefits – for example, if someone picks up a programme, which one are they looking at?

Furthermore, the bigger problems are as follows.

- Reason for not accepting programme includes being unrealistic or not practicable. I suggest that the chances of meeting the completion of each activity which no individual allowance for risk has been included is not realistic and hence is a reason for non-acceptance.
- At the start of a project, the global time-risk allowance duration at the end may be collectively correct. However, half way through a project, how can you tell what the remaining time-risk allowance period should be? You may be 50% through a project with 50% of original time-risk allowance period remaining, yet you have most of the high-risk items left that carried 75% of the original time-risk allowance periods.

I do not recommend the ‘buffered’ approach – it is unnecessary, and deviates from the essence of a contract looking for a realistic, up-to-date programme. Furthermore, if a critical path activity had one-week time-risk allowance and was completed one week early, then that will bring all subsequent activities – including planned completion – back by one week. That will thus create a one-week gap between planned completion and the completion date (assuming previously they were the same), which becomes the contractor’s terminal float. This, by default, is not available to anyone other than the contractor to mitigate its own delays.

To summarise, I believe time-risk allowance is best shown against each individual activity and as a text column on a programme. Once calculated, the information sits on the programme and does not have to be re-evaluated, other than for new programmes activities and compensation events. Both time-risk allowance and terminal float are retained by the contractor and cannot be used to mitigate the affects of compensation events.

For further information please contact the author on +44 20 7173 5250 or email glenn.hide@birstemetro.com. More programme details are covered in the ECC programming workshop (see NEC Diary on page 8).