

Clause 7

Summary

Clause 7 deals with Plant, Materials and Workmanship.

Sub-Clause 7.1 provides that the Contractor is obliged to carry out manufacture of Plant, production and manufacture of Materials and all the Works as specified in the Contract in a proper and workmanlike manner in accordance with recognised good practice and with properly equipped facilities and non-hazardous materials.

Sub-Clause 7.2 deals with the submission of samples by the Contractor.

Sub-Clause 7.3 sets out the right for the Employer's Personnel to have access to the Site and places where Materials are obtained and allow them to examine, inspect, measure and test the materials and workmanship as well as check progress.

Sub-Clause 7.4 deals with Testing. The Contractor is required to provide all amenities to permit the specified testing to be carried out.

Sub-Clause 7.5 provides for the rejection of Plant, Materials and workmanship and provides that if a rejection occurs and the Employer then incurs additional costs then it may claim these under Sub-Clause 2.5 [*Employer's Claims*].

Sub-Clause 7.6 deals with remedial works and allows the Employer to employ others to undertaken the remedial works if the Contractor fails to do so.

Sub-Clause 7.7 applies to the extent that it is consistent with the Laws of the Country and states that Plant and Materials become the property of the Employer free from any rights of ownership or security interests of other persons from the earlier of when they are delivered to the Site or when the Contractor is entitled to payment in the event of suspension.

Sub-Clause 7.8 deals with royalties. The Contractor is liable for payment for royalties and other costs for Materials obtained off Site and for the disposal of materials, except within the Site.

Origin of clause

Clause 7 of FIDIC 1999 had its origins in clauses 36.1 to 38.1 of the FIDIC 4th general conditions.

Cross-references

Reference to Clause 7 is found in the following clauses:-

Sub-Clause 9.1	Contractor's Obligations
Sub-Clause 9.2	Delayed Tests
Sub-Clause 9.3	Retesting
Sub-Clause 15.2	Termination by the Employer

Sub-Clause 7.1 Manner of Execution

This Sub-Clause must be read carefully bearing in mind the meaning of the various defined terms. Plant is defined in Sub-Clause 1.1.5.5 and refers only to the machinery and equipment which is to be incorporated into the Permanent Works. Materials, as defined in Sub-Clause 1.1.5.3, includes everything other than Plant which is to be incorporated into the Permanent Works. However, the Works themselves, as defined in Sub-Clause 1.1.5.8, include not only Permanent Works but Temporary Works.

Thus the specific obligations of the Contractor under this Sub-Clause in respect of Plant and Materials only apply to the Permanent Works, not to the Temporary Works, but the overall obligations apply to both the Permanent and Temporary Works. Since the general includes the specific, it is clear that the obligations under this Sub-Clause apply to all the activities of the Contractor whether in relation to the Temporary Works, the Permanent Works, the Plant or the Materials or anything else. The Sub-Clause could be much more simply worded. There seems no reason to refer specifically to Plant and Materials.

The three obligations set out in the Sub-Clause are, moreover, not always easy to resolve. Under (a) the Contractor is obliged to execute the Works "in the manner (if any) specified in the Contract." However under (b) it is required to execute them "in a proper and workmanlike manner, in accordance with recognised good practice." What happens if the manner in which the contract requires him to execute the works is inconsistent with the execution being carried out in a proper and workmanlike manner, in accordance with recognised good practice? In such a case the Contractor must give notice of the error under Sub-Clause 1.8 [*Care and Supply of Documents*] or under Sub-Clause 1.5 [*Priority of Documents*] if it is an ambiguity.

The issue may come up in the context of testing under Sub-Clause 7.4 [*Testing*]. The Engineer is entitled to insist that the items tested meet the contractual standard and that if they do not then (a) they be remedied; and (b) the Contractor pay the cost of any additional testing necessary. Again the question will arise as to who pays for changes and testing if the items meet the Specification but not the “workmanlike manner, in accordance with recognised good practice” test. It is suggested that under English law it may well be the Contractor who has to bear the cost. In *Thorn v The Mayor and Commonalty of London*¹ the court held that a contractor who bids on the basis of a specification only has himself to blame if he does not check the practicability of building to the specification and the specification turns out to be defective.

Sub-Clause 4.1 sets out the Contractor’s fundamental obligation to execute the Works in accordance with the Contract. This obliges him to do what is set out in the Specification, and, in the case of Sub-Clause 7.1, perhaps to achieve a higher standard. However it does not say anything about who pays if the conditions of Contract oblige the Contractor to do something more. Where the obligations under the Contract have to be adjusted, the variations provisions of the Contract may apply.

Sub-Clause 7.2 Samples

This provision applies to samples of Materials only. The Contractor is required at its own cost to provide manufacturer’s standard samples of Materials and samples specified in the Contract. If the Engineer requires additional samples these have to be instructed as a Variation. Samples have to be labelled as to origin and intended use in the Works.

Materials, as defined in Sub-Clause 1.1.5.3, include everything other than Plant which is to be incorporated into the Permanent Works. Thus, unless the Specification is explicit, this Sub-Clause does not apply to samples of material which are intended for use in the Temporary Works.

Sub-Clause 7.3 Inspection

The Employer’s Personnel have the right at all reasonable times to have full access to all parts of the Site and to all places from which natural Materials are being obtained. When Plant and Materials are being produced, manufactured or constructed, they have the right

¹ (1876) 1 App Cas 120; however see *Turriff Ltd v Welsh National Water Development Authority* [1994] Const LY 122 where the court held that the Contractor was relieved of performance where the works were impossible to construct.

to examine, inspect, measure and test the materials and workmanship and progress. The Contractor is obliged to co-operate fully. As soon as any work is ready for inspection and before it is covered up the Contractor is required to give notice and the Engineer is obliged to inspect or test without unreasonable delay or to promptly give notice that he does not wish to inspect. If the Contractor does not give the required notice he may be required to uncover the work so that it can be inspected. No inspection will relieve the Contractor from any obligation or responsibility.

The fact that no inspection will relieve the Contractor from any obligation or responsibility under the Contract is very significant when it comes to consider the effect of Sub-Clause 7.6 [*Remedial Work*] (see below). The Contractor remains at all times responsible for the proper completion of the Works in accordance with the Contract and if the Engineer fails to notice a defect at the time when he inspected or could have inspected, this does not relieve the Contractor of any responsibility under the Contract.

The right of access to all parts of the Site and to all places from which natural Materials are being obtained exists regardless of whether the Employer's Personnel are intending to carry out any testing.

This Sub-Clause deals with inspection measurement and tests other than those specified in the Contract, whereas Sub-Clause 7.4 deals with those specified.

Thus Sub-Clause 7.3 gives the Employer's Personnel the right to examine, inspect, measure and test and so on at all reasonable times regardless of whether there is anything specifically stated in the Contract and the Contractor has to do everything necessary to facilitate and enable this. As a necessary part of this duty the Contractor has to tell the Engineer whenever the work is ready and before it is covered up.

However, in contrast to the situation where tests are specified in the Contract, these examinations, inspections and tests are carried out by the Employer's Personnel using their own equipment and materials. Further, unlike specified Testing under Sub-Clause 7.4, there is no express reference to the right to extension of time or payment of Cost if the Employer's Personnel delay the Contractor by exercising their rights other than at "all reasonable times".

Thus, if the Employer's Personnel make extensive and even arguably unreasonable use of their rights under this Sub-Clause, the Contractor has no remedy, so long as the rights are exercised at reasonable times. It is quite possible to envisage a situation where the Employer's Personnel exercise these rights to a disruptive extent but only do so at reasonable times. In contrast to the situation under Sub-Clause 7.4, the Contractor has no control over this. Unlike the situation where tests are specified, there is no possibility of

quantifying or programming Sub-Clause 7.3 examinations inspections and tests. Although the Contractor will not be entitled to any financial compensation for such disruption, the right to an extension of time under Sub-Clause 8.4(e) will apply.

The Contractor has an obligation to give notice whenever any work is ready and before it is covered up. The Engineer is then required to exercise his rights “without reasonable delay” or “promptly” give notice of his intention not to do so. The use of the different terms “without unreasonable delay” and “promptly” is unfortunate if they are (as one would expect) intended to mean the same thing. If the Contractor gives his notice and the Engineer neither inspects or responds within a time that the Contractor judges is neither reasonable nor prompt, he is entitled to proceed to cover up the work.

Strangely, the Sub-Clause deals with the situation where the Contractor does not give notice that work is ready to inspect, but does not say what will happen if, having given notice, the Contractor proceeds too quickly to cover the works up. In the former case the Contractor is required at his own cost to uncover them and to make them available for inspection. In the latter case nothing is said about the consequences.

Although nothing is said about the situation where the Contractor covers up too soon, this would be a breach of contract by the Contractor and, if the Engineer had to incur additional expense as a result to carry out an inspection, normal principles of the law of damages would require the Contractor to meet such additional expenses. The Contractor would of course still be under his obligation to provide full co-operation to the Engineer.

The notice required under the last paragraph of Sub-Clause 7.4 has to be given whenever the work is ready “and before it is covered up, put out of sight, or packaged for storage or transport”, however the obligation in the last sentence of this paragraph where the Contractor has not given notice, is merely to “uncover” the work. Presumably this is intended to mean also to bring the work back within sight (when it has been hidden) and to unpack it (when it has been packed), but the Sub-Clause could be clearer in this respect.

Sub-Clause 7.4 Testing

This provision only applies to tests specified in the Contract and does not apply to the Tests after Completion. The Contractor has to provide everything necessary for the testing and then agree the time and place with the Engineer. The Engineer has the right to issue a Variation to vary the location or details of any tests or to instruct the Contractor to carry out additional tests. If the additional tests show that the Contractor has not met

the standards set out in the Contract, the costs will be borne by the Contractor. The Engineer is required to give the Contractor at least 24 hours' notice of his intention to attend the tests. If the Engineer then does not attend, the Contractor may proceed with the tests in his absence. However the Engineer may instruct to the contrary. To the extent that the Contractor suffers any delay or Cost as a result of the Engineer delaying the tests it is entitled to apply for an extension of time and Cost plus reasonable profit. Once the tests are complete, the Contractor is required to send the results to the Engineer. If the Engineer has not attended he is deemed to have accepted the test results as accurate.

While Sub-Clause 7.3 makes it clear that (in respect of tests not specified under the Contract) no testing by the Engineer shall relieve the Contractor of its obligations under the Contract, Sub-Clause 7.4 is not so explicit. However it does not go so far as to say that the Contractor will be relieved of his over-riding duty under Sub-Clause 4.11 [*Sufficiency of the Accepted Contract Amount*] to complete the Works within the Accepted Contract Amount. This has significant implications when Sub-Clause 7.6 [*Remedial Work*] comes to be considered (see below).

In contrast to Sub-Clause 7.3, this Sub-Clause deals with tests specified in the Contract. There is no limitation on the meaning of the term “tests” used here and it will be necessary to refer to the Specifications. There is no reason why the “tests” under a particular contract should not be something more than is normally understood by the term – for example they may include inspections, or verification of quantity as well as assessment of quality. In respect of these specified tests, Sub-Clause 7.4, again in contrast to Sub-Clause 7.3, requires that the tests be carried out by the Contractor on behalf of the Engineer.

In contrast to Sub-Clause 7.3 there is express provision for an extension of time and Cost plus reasonable profit where the Engineer changes the time or place proposed for any tests or otherwise delays or disrupts them. In view of the fact that the Sub-Clause deals with specified tests, the Sub-Clause also has to provide that any departure from the Specification is to be treated as a Variation.

One of the matters which can lead to a Variation is a decision by the Engineer to instruct additional tests. This is a logical result of the fact that the original tests were specified. However it must not be forgotten that Sub-Clause 7.4 only deals with tests carried out by the Contractor on behalf of the Engineer. Where the Engineer decides additional tests are necessary, he may be able to avoid having to issue a Variation Order by using his power under Sub-Clause 7.3 to carry out additional tests himself.

Deeming

In two places, the Sub-Clause uses the term “deemed”. If the Engineer does not attend tests after being given notice, they are “deemed” to have been made in his presence. Then, further, once the test results are provided he shall be deemed to have accepted their readings as accurate. Of course this does not mean that the tests are deemed to have been passed – the results though deemed accepted may show that the work fails to meet specifications. It is only if the results appear to show that the work has passed that this “deeming” provision will be important.

On the face of it this is a very harsh provision. There is no exception, for example, for the situation where the Engineer has been prevented by some accident or other problem from attending the tests. Nor is anything said about what happens if the Engineer has some good reason for suspecting the accuracy of the test results.

These can be very important questions as the Engineer cannot possibly overlook defects in the works simply because he is “deemed” to have accepted them. Indeed Sub-Clause 3.1 (c) [*Engineer’s Duties and Authority*] provides that:

“Except as otherwise stated in these Conditions, any approval ... by the Engineer (including absence of disapproval) shall not relieve the Contractor from any responsibility he has under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances.”

This begs the question as to whether the deeming provisions in Sub-Clause 7.4 are intended to negative this presumption.

Where a deeming provision in a contract is effectively a definition clause (for example “the time shall be deemed to have expired 14 days after notice has been given”), or is a way in which a party is treated as having made a choice under the Contract (for example “if one party gives the other party notice setting out the amount it is entitled to be paid and the other party does not respond within 14 days, that other party shall be deemed to have accepted the entitlement”), there can be little doubt that a deeming provision will be binding on the parties, but if the Engineer’s deemed approval had the same effect here, it could have a profoundly deleterious effect on the quality of the final product. It is in recognition of this reality that Sub-Clause 3.1(c) has been drafted.

So what is to happen if, through accident, deception by the Contractor or neglect the Engineer has failed to attend a test and it turns out that the results are wrong?

Firstly, it can be said that if the results have been falsified by the Contractor or the Contractor has tricked the Engineer into not attending, there can be no question of them being treated as binding. No dishonest or fraudulent behaviour by one party to the other could be treated as undermining the defrauded party's rights. Although there is a deeming provision this will not be permitted to be used by the courts to justify an entitlement where none exists. In *Marshall v Kerr*² Peter Gibson LJ stated:

"I take the correct approach in construing a deeming provision to be to give the words used their ordinary and natural meaning, consistent so far as possible with the policy of the Act and the purposes of the provisions so far as such policy and purposes can be ascertained; but if such construction would lead to injustice or absurdity, the application of the statutory fiction should be limited to the extent needed to avoid such injustice or absurdity, unless such application would clearly be within the purposes of the fiction. I further bear in mind that, because one must treat as real that which is only deemed to be so, one must treat as real the consequences and incidents inevitably flowing from or accompanying that deemed state of affairs, unless prohibited from doing so."

Similarly, Lord Phillips MR in *Transco Plc v Leicestershire County Council*³ stated: "Nonetheless such notices [deeming notices] are, in practice, likely to be treated as determining when works are completed unless there is evidence to rebut this presumption." His Lordship further stated that where there is evidence that shows that presumed dates, because of deeming provisions, are wrong then the deeming provision can be rebutted as this "will reflect the reality and not a fiction."

However if the Engineer is at fault in not attending and the test results are simply mistaken or optimistic a balance must be created between the interests of the two parties and it is therefore suggested that the correct solution would be for the Engineer to exercise his power under the third paragraph of Sub-Clause 7.4 to issue a variation order instructing additional tests. If the tests show that there has been a failure to meet the specification, the Contractor will have to meet the cost of the tests and, if not, the costs will fall on the Employer.

No Deeming

Strangely, in a clause which deems tests to be satisfactory when the Engineer does not attend there is nothing said to deal with the situation where the Contractor sends results of the tests to the Engineer for endorsement but the Engineer wrongly fails to endorse them

² (1993) 67 TC 56, 79

³ [2003] EWCA Civ 1524 at para 34

or delays. Indeed, while the Contractor is required to send the test results to the Engineer “promptly”, there is no express obligation within this Sub-Clause for the Engineer to consider them promptly. However, Sub-Clause 1.3 does require the Engineer not to unreasonably withhold or delay certificates and consents. Although, there is no reference to endorsements in Sub-Clause 1.3, an endorsement under Sub-Clause 7.4 is likely to be considered as a consent. Further, the Engineer is not then deemed to accept the results of the test. So what is their status?

The answer is probably that the failure to endorse or to endorse promptly does not matter. Either the tests have been passed or they have not. The consequences of failure (set out in the following Sub-Clause 7.5 [*Rejection*]) only apply if the tests have actually been failed. Lack of endorsement is not itself evidence of failure. Nor is endorsement proof of compliance. In fact there is nothing in Sub-Clause 7.5 to say that the Engineer is not entitled to change his mind and, having once endorsed a test result (or having not commented on it) he cannot later reject the relevant element of the work. The endorsement provision appears not to have any special effect – except to the extent that if the Engineer has endorsed some part of the works, this is likely to be treated as evidence that they have been successfully carried out. It would then be up to the Engineer to produce a good argument as to why his previous endorsement was wrong.

Further, as will be elaborated in the discussion under Sub-Clause 7.5, the Engineer is not deemed to accept a conclusion by the Contractor that the results mean the work has passed the test. It is quite possible that the Contractor and the Engineer disagree on the conclusions to be drawn from the same set of data.

Sub-Clause 7.5 Rejection

If following any examination, inspection, measurement or testing under either Sub-Clause 7.3 or Sub-Clause 7.4 any part of the work is found to be defective or not in accordance with the Contract, the Engineer may reject it and the Contractor is required to make good. The Engineer may require the remedied work to be retested. Any additional costs incurred by the Employer as a result of rejection and retesting are recoverable from the Contractor.

Although Sub-Clause 7.4 provides that in certain circumstances positive test results are “deemed” to be accepted by the Engineer, Sub-Clause 7.5, gives the Engineer the power to reject the work if the result shows that the work is defective or not in accordance with the Contract. This could result in the situation where, although the Engineer is deemed to

accept the test results as accurate, he still disagrees with the Contractor who may have concluded that the results meant that the works had passed the tests.

However the right to reject only comes into play where there is an examination, inspection, measurement or test which demonstrates that the works are defective or not in accordance with the Contract. Thus the Engineer must have a test result to justify his rejection. If he has been “deemed” under Sub-Clause 7.4 to have accepted some data which would not justify rejection, or has actually accepted some such data but he still suspects non-compliance he will have to exercise his powers under Sub-Clause 7.3 to carry out tests himself or under Sub-Clause 7.4 to order a Variation for the Contractor to carry out tests in his presence before he may become entitled to reject.

The Engineer has a right to order any work allegedly made good following a rejection to be retested “under the same terms and conditions”. If the original testing was carried out under Sub-Clause 7.4 – i.e. if the tests were specified in the Contract or required under a Variation Order, the operation of this provision will be straightforward. However if the original test had been carried out by the Engineer under Sub-Clause 7.3, it will, in the absence of a Variation Order have to be carried out by the Engineer.

Sub-Clause 7.6 Remedial Work

This Sub-Clause applies regardless of the result of any previous test or certification. The Engineer is entitled to require the Contractor to remove from the Site or replace Plant or Materials which is not in accordance with the Contract, to remove or re-execute work and to execute work urgently needed for safety reasons. The work must be done within a time specified or immediately in the case of emergency work. If the Contractor does not comply with the instruction the Employer may arrange for others to do the work. Unless the Contractor would have been entitled to be paid he shall pay the Employer all the costs of carrying out the work.

This Sub-Clause is a recognition of the fact that even if work has been certified or if tests carried out under Sub-Clause 7.4 are “deemed” accurate, the Engineer may require remedial work.

The Sub-Clause says nothing about who will pay for such work. This may be an extremely controversial issue, especially if the Engineer has endorsed the result of the Contractor’s testing or is deemed to have accepted it, and has not exercised his right to reject a part of the Works. A decision on the part of the Engineer to require part of the works to be removed and replaced long after it has been finished and covered up may involve the Contractor in substantial cost and loss of time.

However, unless the action that the Engineer requires the Contractor to take under Sub-Clause 7.6 is a direct result of an error or instruction of the Employer or Engineer or, in the case of damage, is not the fault of the Contractor, it is clear that the Cost of carrying out the instruction falls on the Contractor. There will be exceptions if the remedial work is necessary to overcome a design error or Unforeseeable Physical Conditions (Under Sub-Clause 4.12), or is the result of a change of Law (see Sub-Clause 13.7). If the Contractor has carried out faulty work there is nothing in the Contract to say that the Engineer is obliged to deal with it immediately.

In the situation where the Engineer has not inspected thoroughly, has not attended testing, or has received results which he has not examined closely or, in the extreme case has carried out an inspection or accepted results it would seem anomalous that the Contractor should still have to bear the risk of a later discovery of the defect or a change of mind on the part of the Engineer. However this conclusion would seem to follow from the provisions of Sub-Clause 4.11 [*Sufficiency of the Accepted Contract Amount*] which expressly requires the Contractor to carry out all his obligations under the Contract within the price. The only exception to this can be where an act of the Employer or Engineer forces him to expend more Cost or time than he would have had to do as a result of his own performance. Sub-Clause 7.3 [*Testing*] states explicitly that no testing shall relieve the Contractor of his obligations under the Contract. Both Sub-Clauses 7.3 and 7.4 very carefully avoid stating that the results of any tests, accepted or not, are binding on the Engineer.

If the Contractor is required under Sub-paragraph (c) to execute any work urgently required for the safety of the Works whether because of an accident, unforeseeable event or otherwise, he is likely to be compensated unless the necessity for the urgent work is the result of the Contractors own fault. The event may be an Employer's Risk under Sub-Clauses 17.3 [*Employer's Risks*] or 17.4 [*Consequences of Employer's Risks*]. However in that case, the Contractor will need to give notice under Sub-Clause 20.1 within the time limits probably starting at the latest from the date it has been given notice under Sub-Clause 7.6.

The final paragraph of the Sub-Clause gives the Employer the right to have the work carried out by another contractor if the Contractor fails to do so itself. The Contractor will not be obliged to pay for this work if it would have been entitled to be reimbursed. In this latter situation, there may be circumstances in which the Contractor would be better off refusing to do the work and leaving the Employer to pay someone else. However this final paragraph also makes it clear that unless the need for the remedial works is a result of the fault of another, the Contractor is required to bear their cost. This provision needs to be considered with Sub-Clause 18.2 [*Insurance for Works and*

Contractor's Equipment] which provides that the Contractor must provide a joint names insurance policy which “shall cover all loss and damage from any cause not listed in Sub-Clause 17.3 [*Employer's Risks*].” While usually the inclusion of a joint names’ policy to cover a specific loss would prevent one party suing the other, this implied term can be modified by express agreement: *SSE General LTD v Hochtief Solutions AG & Anor*⁴ and *Tyco Fire & Integrated Solutions (UK) Ltd v Rolls Royce Cars Ltd*⁵.

Timing of Carrying Out of Instruction

The Sub-Clause provides that the Contractor shall carry out the instruction within a reasonable time. It then goes on to define “reasonable time” in this case as being “the time (if any) specified in the instruction.” This has the somewhat bizarre result of making it possible that the Contractor will be required to perform in a time which is not in fact reasonable, but is simply deemed reasonable by reason of having been included by the Engineer in his instruction.

Sub Clause 7.7 Ownership of Plant and Materials

Most countries have laws which override specific agreements between the parties as to ownership of goods and materials which have not been paid for. For example, in the situation where the Contractor has ordered but not paid for Plant or Materials it is possible that the original supplier may retain an interest in them and be entitled to recover them or to be paid directly by the Employer. The situation is likely to be most difficult where the Contractor has become insolvent, leaving debts unpaid and the original suppliers or producers of the goods seek to recover their property. It will therefore be important in these circumstances to find out the precise legal position applying under the law of the country.

However, even in countries which do not give an automatic overriding legal right for an unpaid seller to recover his goods, the terms of the agreement between the Contractor and his suppliers may produce the same result. While this would be a contractual arrangement, it would be something enforceable under the laws of the country and the right of the Employer would thus be affected.

The contractual parties are of course only the Contractor and the Employer so they cannot agree between themselves what rights other third parties may have. Thus all the provision effectively does is make the Contractor liable if Plant or Materials, ownership

⁴ [2015] ScotCS CSOH_92 (14 July 2015) at paras 68 - 78

⁵ [2008] EWCA Civ 286

of which has passed to the Contractor, remains under a lien or encumbrance to a third party. This provision will be useful if the Contractor is solvent but will be of no use if the Contractor is insolvent (the circumstance in which it is most likely to be under consideration).

Sub-Clause 7.8 Royalties

Employers need to be careful when considering whether or not quarries, disposal and other borrow areas are defined as being within or outside the Site as this will have an effect on any liability for royalties or disposal charges. If these areas are within the Site and charges or taxes are payable, it may be necessary to make specific provision as to payment of these charges.

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