

Construction Disputes in India

April 2020

Construction Disputes in India

April 2020

ndaconnect@nishithdesai.com

DMS Code: RSRCH 9000-5039

About NDA

We are an India Centric Global law firm (www.nishithdesai.com) with four offices in India and the only law firm with license to practice Indian law from our Munich, Singapore, Palo Alto and New York offices. We are a firm of specialists and the go-to firm for companies that want to conduct business in India, navigate its complex business regulations and grow. Over 70% of our clients are foreign multinationals and over 84.5% are repeat clients.

Our reputation is well regarded for handling complex high value transactions and cross border litigation; that prestige extends to engaging and mentoring the start-up community that we passionately support and encourage. We also enjoy global recognition for our research with an ability to anticipate and address challenges from a strategic, legal and tax perspective in an integrated way. In fact, the framework and standards for the Asset Management industry within India was pioneered by us in the early 1990s, and we continue to remain respected industry experts.

We are a research based law firm and have just set up a first-of-its kind IOT-driven Blue Sky Thinking & Research Campus named Imaginarium AliGunjan (near Mumbai, India), dedicated to exploring the future of law & society. We are consistently ranked at the top as Asia's most innovative law practice by Financial Times. NDA is renowned for its advanced predictive legal practice and constantly conducts original research into emerging areas of the law such as Blockchain, Artificial Intelligence, Designer Babies, Flying Cars, Autonomous vehicles, IOT, AI & Robotics, Medical Devices, Genetic Engineering amongst others and enjoy high credibility in respect of our independent research and assist number of ministries in their policy and regulatory work.

The safety and security of our client's information and confidentiality is of paramount importance to us. To this end, we are hugely invested in the latest security systems and technology of military grade. We are a socially conscious law firm and do extensive pro-bono and public policy work. We have significant diversity with female employees in the range of about 49% and many in leadership positions.

Accolades

A brief chronicle of our firm's global acclaim for its achievements and prowess through the years –

- **Legal500:** Tier 1 for Tax, Investment Funds, Labour & Employment, TMT and Corporate M&A
2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012
- **Chambers and Partners Asia Pacific:** Band 1 for Employment, Lifesciences, Tax and TMT
2020, 2019, 2018, 2017, 2016, 2015
- **IFLR1000:** Tier 1 for Private Equity and Project Development: Telecommunications Networks.
2020, 2019, 2018, 2017, 2014
- **AsiaLaw Asia-Pacific Guide 2020:** Tier 1 (Outstanding) for TMT, Labour & Employment, Private Equity, Regulatory and Tax
- **FT Innovative Lawyers Asia Pacific 2019 Awards:** NDA ranked 2nd in the Most Innovative Law Firm category (Asia-Pacific Headquartered)
- **RSG-Financial Times:** India's Most Innovative Law Firm *2019, 2017, 2016, 2015, 2014*
- **Benchmark Litigation Asia-Pacific:** Tier 1 for Government & Regulatory and Tax *2019, 2018*
- **Who's Who Legal 2019:**
Nishith Desai, Corporate Tax and Private Funds – Thought Leader
Vikram Shroff, HR and Employment Law- Global Thought Leader
Vaibhav Parikh, Data Practices - Thought Leader (India)
Dr. Milind Antani, Pharma & Healthcare – only Indian Lawyer to be recognized for 'Life sciences-Regulatory,' for 5 years consecutively
- **Merger Market 2018:** Fastest growing M&A Law Firm in India
- **Asia Mena Counsel's In-House Community Firms Survey 2018:** The only Indian Firm recognized for Life Sciences
- **IDEX Legal Awards 2015:** Nishith Desai Associates won the "M&A Deal of the year", "Best Dispute Management lawyer", "Best Use of Innovation and Technology in a law firm" and "Best Dispute Management Firm"

Please see the last page of this paper for the most recent research papers by our experts.

Disclaimer

This report is a copy right of Nishith Desai Associates. No reader should act on the basis of any statement contained herein without seeking professional advice. The authors and the firm expressly disclaim all and any liability to any person who has read this report, or otherwise, in respect of anything, and of consequences of anything done, or omitted to be done by any such person in reliance upon the contents of this report.

Contact

For any help or assistance please email us on ndaconnect@nishithdesai.com or visit us at www.nishithdesai.com

Acknowledgements

Vyapak Desai.

vyapak.desai@nishithdesai.com

Ashish Kabra

ashish.kabra@nishithdesai.com

Kshama Loya

kshama.loya@nishithdesai.com

Mohammad kamran

mohammad.kamran@nishithdesai.com

Contents

EXECUTIVE SUMMARY	01
CONSTRUCTION ARBITRATION IS A SPECIALISED AREA OF EXPERTISE	02
1. CONSTRUCTION CONTRACTS	03
I. Formation of Construction Contracts	03
II. Typical Documentation in Construction Contracts	04
III. Forms of Construction Contracts	05
IV. Standard Forms of Construction Contracts	09
V. Pricing Methodologies	10
3. DISPUTES ARISING OUT OF CONSTRUCTION CONTRACTS	12
4. DELAYS IN CONSTRUCTION PROJECTS	13
I. Critical Path and Float	14
II. Types of Delay Analysis Methodology	14
III. Interplay between the Indian Contract Act and Delay	15
5. EXTENSION OF TIME (EOT) IN CONSTRUCTION CONTRACTS	17
6. VARIATION IN CONSTRUCTION CONTRACTS	18
I. Formal requirements of variation	19
II. Example of a valuation clause	19
7. NOTIFICATION FOR EOT CLAIMS	21
8. REMEDIES FOR BREACH	23
I. Damages	23
II. Specific Relief	26
9. DISPUTE RESOLUTION MECHANISMS	28
I. Multi-Tier Dispute Resolution Clauses (MTDRC)	28
II. Dispute Adjudication Board (DAB)	29
10. CONSTRUCTION DISPUTES: PRACTICE STATEMENT	32

Executive Summary

The construction industry is expected to be one of the highest drivers of economic growth worldwide. It encapsulates a range of activities involving complex infrastructure projects, engineering works, commercial and residential construction, built up works, development projects, among others.

The construction industry has important linkages with other sectors, so that its impact on GDP and economic development goes well beyond the direct contribution of construction activities.¹

In India, construction (infrastructure) is among the top ten largest sectors attracting highest foreign direct investment (FDI). FDI inflows in the construction sector including infrastructure activities has risen manifold in the last two years from USD 1861 million to USD 2258 million.² In the 2018-2019 budget, the government increased its expenditure towards infrastructure development by 20.9% - from USD 75.9 billion in the Financial Year (FY) 2017-2018 to USD 89.2 billion in FY2018-2019.

In the Global Construction 2030 report, PriceWaterCoopers forecasts that by 2030, the worldwide volume of construction output will grow by 85% to USD 15.5 trillion, with three countries, China, US and India, leading the way and accounting for 57% of all global growth.

It is thus clear that construction is proving to be one of the most dynamic sectors not only on a global scale, but also in India. With a sector subject to extreme technicalities and complexities, it is only rational to infer that disputes arising out of construction activities would also call for distinct expertise and in depth understanding of the issues surrounding

construction activities. This paper provides a brief overview of construction contracts, types of contracts, price models, and issues arising out of construction contracts. It further deals with rights of parties and reliefs available to the parties, along-with dispute resolution mechanisms when faced with construction disputes. The key focus of this paper lies in arbitration as an effective mode of alternate dispute resolution, and the need for effective case management techniques in arbitration to bring about effective and timely resolution of construction disputes.

At Nishith Desai Associates, the Infrastructure Dispute Resolution team has expertise in drafting and interpretation of key provisions in construction contracts, and advice on implications of provisions in existing construction contracts. We work with multiple technical experts and civil engineers, often with project management consultants, to ensure seamlessness and uniformity of documents involved in all stages of drafting of construction contracts. This helps our clients by preventing contradictions or inconsistencies between early stage documents such as specifications etc. and subsequent stage documents such as conditions of contract; helps maintain compatibility between early stage and subsequent stage contractual provisions; and work out tenable programme schedules and procedures that align with the requirements spelt out at the initial stage. In addition, we advise on pre-litigation strategy, and conduct complex construction dispute arbitration including projects involving parties from multiple jurisdictions in international commercial and bilateral investment treaty arbitration.

1. <https://www.weforum.org/projects/future-of-construction> last available on August 10, 2019

2. https://dipp.gov.in/sites/default/files/FDI_Factsheet_27May2019.pdf.

Construction Arbitration is a Specialised Area of Expertise

Disputes arising out of construction contracts are distinctly different from other body of disputes. They are highly technical and complex in nature, almost always call for urgent resolution, and involve a multitude of parties. Issues of joinder and consolidation gain prominence in these disputes like no other dispute forms. Construction contracts involve several risks, and resultantly witness a greater need for effective allocation of risk amongst various parties. Ascertaining the liability of a party in a string of parties therefore requires careful study of responsibilities and obligations of each party, nature of commission or omission resulting in breach of obligation, and calculating the quantum of damages. These disputes increasingly involve the role of experts, and therefore a special skill to examine expert witnesses and evaluate expert testimony. Considering the fact-sensitive nature of these disputes, and the need for quick resolution, it is quintessential to deploy effective case management techniques in construction dispute resolution.

International construction disputes may involve different jurisdictions, and hence a need to comprehend diverse cultural standpoints. In addition to compliance with the chosen governing law, these contracts also require compliance with local laws. These laws could range from planning and development to health and safety amongst others. In the event of foreign direct investment in the construction sector, there is an added layer of compliance with the applicable rules and regulations specific to the sector. Construction contracts also often follow a standard form of contract. Hence, while choosing a seat, it is important to assess the judicial approach to issues involved in construction disputes, as well as to standard forms of contract, at the seat of the arbitration. Inversely, this influences choice of an appropriate seat of arbitration.

These disputes also involve a crucial financial angle. Construction projects often involve financing

by lenders and credit providers. Insurance is another dominant segment. Security in the form of guarantees or bonds pave way to a distinct range of disputes against financial institutions.

While construction disputes only arise out of construction contracts, an available opportunity to reduce instances of dispute and mitigate impact is to engage in careful study and drafting of construction contracts. The law of contracts not only determines the applicable principles for ascertaining liability after a dispute arises; it also helps ascertain whether a valid construction contract has been formed at the first stage. Pre-contract documents such as tenders, letters of intent etc. play a role in determining this issue.

It is also imperative to note that construction disputes may not arise out of conditions that are static in time, and could be a product of variations in original designs, fluctuations in price, weather conditions, availability of raw materials, labour conditions such as strikes and lock-outs, amendments to laws and regulations, and other unforeseen, or foreseeable but not predictable, events. As a result, construction contracts assume a dynamic nature and are resultantly, a breeding ground for disputes arising out of these changes.

Further, foreign direct investment in the construction sector could open a new arena of disputes against the State or an organ of the State. Grave issues could arise with respect to breach of legitimate expectations of the foreign investor in construction sector due to change in political or legal framework of the State, regulatory or administrative State measures that could affect the foreign investment, expropriation of the foreign investment etc.

The aforesaid unique blend of factors calls for highly specialised knowledge of issues involved in construction sector and the rights and remedies available to parties involved in construction disputes. This paper briefly explains essential features of construction contracts with a keen eye on features that are material to disputes.

1. Construction Contracts

The term “construction” implies any form of building or assembling, but is usually confined to the creation of, or the carrying out of work to or in connection with, immovable property. This includes both building and engineering works, depending on the technical subject matter of the contract. Building indicates a structure intended for occupation while engineering works cover any form of construction that may not be static. The same principle with some adaptation applies to construction in relation to other property such as ship-building, aircrafts etc.³

The Accounting Standard (AS) 7 defines a construction contract as any contract which is entered into specifically for construction of an asset or a combination of assets that are closely inter-linked or inter-dependent in terms of their design, technology and function or their ultimate purpose or use.⁴

A construction contract involves multitude of parties such as the employer, contractor, sub-contractor, project management consultant, supplier among others. The employer is normally the owner or principal, the contractor engages in design and/or building. The sub-contractor is engaged by the employer or the contractor and works under a sub-contract. A project management consultant manages construction work. A supplier supplies materials or equipment. Design team may also be involved separately. The contours of the term ‘design’ are vague. It is generally understood as detailed physical characteristics of the work that complies with criteria requirements.

In addition to primary focus on construction including design, quality and timelines, a construction contract ought to create a tight framework setting out the obligations of participants, allocating risks, recognising rights of parties in law and equity as applicable, and

provide mechanisms for resolution of disputes in a timely and effective manner.⁵

I. Formation of Construction Contracts

When parties enter into a detailed building contract, there are no over-riding rules or principles covering their contractual interpretation beyond those which generally apply to the construction of contracts.⁶ The law relating to construction contracts is the application of general principles of law of contract in a particular context.⁷ It is therefore essential to understand the context in which a particular provision in the construction contract is sought to be interpreted. Therefore, as a first step, it is important to identify whether a valid contract has been formed.

The most frequent disputes in construction contracts relate to formation of the contract.⁸ This is because a construction contract is often preceded by a range of negotiations, offers, counter-offers, tenders, advance bank guarantees, and related documents. Parties may tend to anticipate execution of a contract, and commence work in anticipation. In the event a party does not recognise work carried out by the other in anticipation, the performing party is compelled to suffer expense and loss of value for work carried out. On the other hand, a party might expect work to commence in anticipation, while the performing party may not consider that a valid contract is in existence. In such an event, the employer may expect completion of some work and have a claim for delays, if any, or

3. Chitty on Contracts, Volume II, Specific Contracts (31st Edition), Sweet & Maxwell, Page 710

4. Accounting Standard (AS) 7 available at http://www.mca.gov.in/Ministry/notification/pdf/AS_7.pdf as on August 23, 2019.

5. Justine Sweet, Standard Construction Contracts: Academic Orphan, 31 *Constr. Law.* 38 (2011), Berkeley Law Scholarship Repository, (January 01, 2011) Available at: <https://lawcat.berkeley.edu/record/1124602?ln=en>

6. *Modern Engineering (Bristol) Ltd. vs. Gilbert-Ash (Northern) Ltd.* [1974] AC 689

7. Chitty on Contracts, , Volume II, Specific Contracts (31st Edition), Sweet & Maxwell, Page 711

8. *Ove Arup & Partners International Ltd. vs. Mirant Asia-Pacific Construction (Hong Kong) Ltd.* [2003] EWCA Civ 1729.

non-completion of work while the performing party may not even recognise existence of a valid binding contract. This gives rise to disputes.

The primary test of determining whether a contract is valid or not or whether a valid contract has come into existence to be binding on the parties, is to employ the classic principles of contract on offer and acceptance. For instance, if work has commenced in anticipation of execution of a formal contract, it will be essential to determine if a clear unambiguous intention to be legally bound by the contract can be culled out from the contract. Any reliance on vague provisions in the tender documents or in the understanding of a party without sufficient evidential support would not suffice to establish formation of a valid contract. Another mode is to test the presence of essential terms in the construction contract. What provisions are vague, indicate clarity of intention, or constitute an essential term are subjects of careful legal scrutiny.

II. Typical Documentation in Construction Contracts

Construction contracts are highly illustrative and comprise of multiple sets of documents having distinct purposes. Though the set of documents differs based on the nature of construction activity and form of contract chosen, the basic documents are usually standardized. Typical contractual documents are:

- i. Drawings – These comprise of a detailed and complete description of construction works that are to be undertaken.⁹
- ii. Specifications: Detailed description of specifications of proposed works to supplement drawings, indicating the scope and quality of work.¹⁰
- iii. Bills of Quantities: A representative list of quantities of items required for construction is mentioned here which also enables pricing of the contract.¹¹
- iv. Conditions of Contract: These conditions contain substantive provisions relating to performance and relationship between the parties. It also covers risk allocation and lays down the responsibilities of the parties.¹²
- v. Employer’s Requirements: It sets out the scope and standard of work required to be done. The document is an embodiment of the expectations of the employer from the contractor.¹³
- vi. Performance Requirements: This document declares the desired output/ performance expected from the contractor relating to the construction project. For example, in a power plant construction project, the final generation capacity of the power plant would be mentioned here.¹⁴
- vii. Responsibility for Information and key data: This helps allocate responsibility on either party for providing key data and information that is pertinent to construction. For example, in a construction contract for an oil refinery, soil testing information may have to be provided by the employer, based on which the contractor begins construction activities.
- viii. Dispute Adjudication Agreement: It sets out the method of dispute resolution under the contract.¹⁵

9. *Id.*

10. *Id.*

11. *Id.*

12. Jane Jenkins, International Construction Arbitration Law (2nd Edition), Arbitration in Context Series, Vol 1., Page 14

13. *Id.*, Page 29.

14. *Id.*, Page 30.

15. FIDIC’s Red Book, Yellow Book, Silver Book and Gold Book provides for decisions to be made within 84 days of a dispute being referred to the Dispute Adjudication Board (see clause 20.4 of the Red Book, Yellow Book and Silver Book, and clause 20.6 of the Gold Book).

III. Forms of Construction Contracts

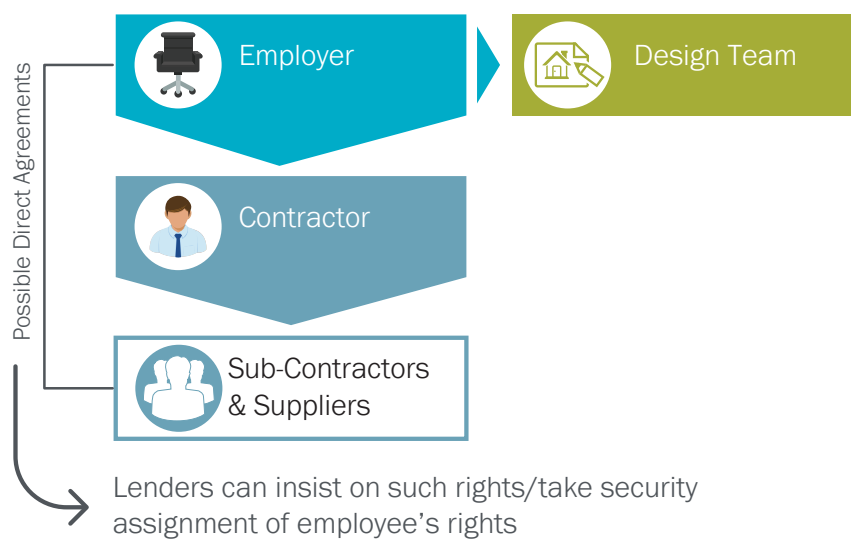
A. Design - Build

i. Design - Bid - Build and Build only Contracts

This model is the most traditional form of a construction project. It involves three phases, namely, a design phase, a bid phase and a build phase. In the design phase, the employer engages a design team. The employer assumes responsibility of all the design aspects of the project including specified quality and standards. Upon completion of substantial design, the employer invites bids for the 'build phase'. A single contractor or a number of contractors in different work 'packages' can succeed in the bid. Once a contractor succeeds in the bid, the original substantial design as provided by the employer in the bid document can be negotiated upon and finalized with the successful contractor.

This model is depicted below:

Diagram : Design – Bid – Build Model¹⁶



The advantages of Design-bid-Build model are many. Firstly, the employer controls the design of the construction project. It has a separate and direct contractual relationship with the design team for design phase; and a separate direct contract with the contractor for the build phase. This makes the employer the sole controller of both design and build phase distinctively. In such a model, there is a higher degree of certainty that the design will meet the objectives of the employer. Further, there is reasonable clarity for the employer on costs for the design phase, as well as construction costs for the build phase.

The disadvantage of such a model is that separation of the design and construction phases into a distinct two-stage process may result in a longer project completion period. Also, in case of contractual breaches, the employer may have to deal with issues of fragmented liabilities as it is often difficult to ascertain whether a contractual obligation lies with the design team or the contractor.¹⁷ Further, the employer does not have a direct link with the sub-contractors or suppliers although it may choose to create a direct contractual relationship with them by entering into direct agreements enabling itself to pursue them for potential contractual breaches.

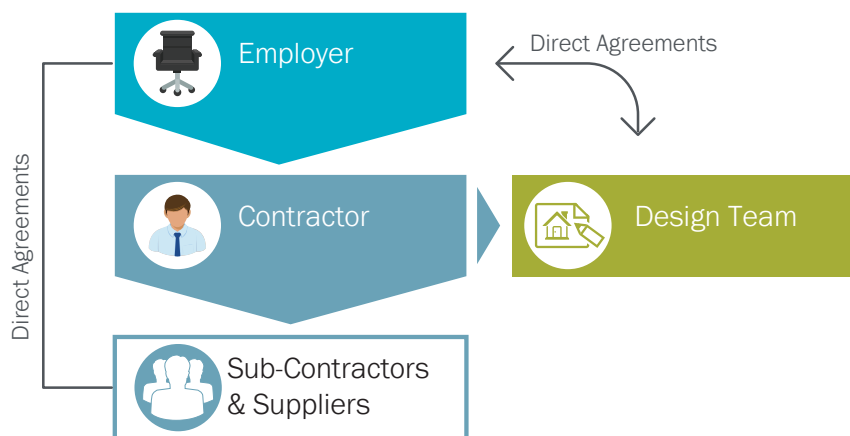
16. Supra at 12, Page 17.

17. Supra at 12, Page 17.

A small variation of the Design-Bid-Build model is the Build-Only model. In this model, the employer has a direct contract with the design team. However, the employer can novate the contract with the design team to the contractor. This has the effect of rendering the design team as a sub-consultant of the contractor, under the direct supervision and control of the contractor. In this way, the only point of contact for the employer is the contractor for the build phase, that subsumes design within itself. A standard form of a build-only contract is the FIDIC Red Book.

In such contracts, design, construction and procurement obligations are all assigned to a single contractor. In addition to the actual construction work, the contractor also assumes the responsibility of design. The contractor is essentially responsible for handing over a ready-to-use facility to the employer. This model is depicted below:

Diagram: Design & Build / Turnkey



ii. Design and Build or Turnkey Contracts

This model is used more frequently in large infrastructure requiring large scale construction projects where the contractor to be appointed is experienced and able to assume a greater risk than would arise under other models.¹⁸ The employer works with the design team to offer a preliminary design at the stage of tender. Upon a contractor's success in the bid, the contractor prepares the balance design along with the design team.

The advantage of the turnkey model is that it can progress on a fast track basis with design, construction and procurement being carried out in parallel. Allocation of risks is also simpler as there is a single point of responsibility. In addition to the 'building' or construction of the works, the contractor assumes the risk of design as well as that of the interfaces between the design team, its own works and those of its subcontractors. As in the case of the traditional 'build-only' model, the employer does not have a direct contractual relationship with the subcontractors / suppliers, although it may choose to do so by entering into direct agreements with them.¹⁹

18. Practice Note – Deciding on the appropriate JCT contract, Part 1: Project Strategy, Joint Contracts Tribunal, Thomson Reuters (Professional) UK Limited, (May 2017), page 2, Available at: <https://www.jctld.co.uk/docs/Deciding-on-the-appropriate-JCT-contract-2016.pdf> Page 16.

19. Supra at 12, Page 17 – 18.

This model has dis-advantages, in as much as variation in design requirements by the employer could lead to disputes in relation to consequent costs and delays by the contractor in completion of work based on modified design. Over the years, such form of contracts are gaining popularity.

B. Public Private Partnership

i. Build – Own – Operate Contracts

In this model, a private entity builds, owns and operates a facility, and sells the product/ service to its users or beneficiaries. A common example of such a model is private sector participation in the power sector in many countries. For such power projects, a government entity may or may not enter into a long-term power purchase agreement at an agreed price from the private sector project operator. This model is also commonly implemented in the transport and logistics sector. Some examples of such projects are the Kutch and Pipavav Railways in India (joint venture BOO projects); Xiamen Airport Cargo Terminal in China and Sukhothai Airport in Thailand; and in the port sector, Wuhan Yangluo Container Port in China and Balikpapan Coal Terminal in Indonesia.²⁰ Under this model, the asset ownership as well as the responsibility for service / facility provision responsibility lies with the private entity.²¹

ii. Build – Operate – Transfer Contracts

In a Build Operate Transfer Project, the project company or owner or operator generally obtains its revenues through a fee charged to the utility or government entity or the project's end users.

In such projects, the public-sector / government entity grants a private sector party the right to develop and operate a facility or system for a certain period in what would otherwise be a public-sector project.²²

In this form, the private sector party does not have ownership of the project and only has a right to construct the project and generate revenues from the same. Post completion of the construction works, the private sector entity operates the project for a fixed period of time (known as the concession period), following which the project is then transferred to the government entity. Some examples of such Build-Operate-Transfer projects are the Nhava Sheva International Container Terminal, Amritsar Interstate Bus Terminal, Delhi-Gurgaon Expressway, Hyderabad Metro Rail Project, Salt Lake Water Supply and Sewage Disposal System.²³

C. Management

i. Construction Management

In this model, the employer directly contracts with the works contractors, design team and additionally appoints a construction manager to act as an interface between all of them. The construction manager does not itself carry out any construction work. The construction manager is tasked with co-ordination between the various participants in the construction project with respect to design as well as construction. In other words, in construction management, the various contractors and subcontractors may be contracted to the employer but managed by the construction manager. The employer therefore has a direct remedy against the works contractor(s).

The advantage with this model is that the design, planning and construction phases can run in parallel and be coordinated efficiently with the

20. Build-Own-Operate (BOO), 2.2.6.1., A Primer to Public-Private Partnerships in Infrastructure Development, UNESCAP, Available at: https://www.unescap.org/ttdw/ppp/ppp_primer/2261_a_buildownoperate_boo.html.

21. Overview of PPP Modal Variants, Public Private Partnerships in India, Ministry of Finance, Government of India, Available at: <https://www.pppinindia.gov.in/toolkit/ports/module1-oopmv-tmpmf.php?links=oopmv1b>.

22. Overview of Concessions, BOTs, DBO Projects, World Bank, Available at: <https://ppp.worldbank.org/public-private-partnership/agreements/concessions-bots-dbos>.

23. *Id.*

assistance of the construction manager, while the employer retains its rights against the various contractors who are carrying out the works. Generally, there is no obligation upon the construction manager to adhere to a specific price / cost or timely completion of the project. Such a model is attractive for sophisticated and well-resourced project developers. This model helps such project developers limit the prime contractor's mark-up for coordination and additional risk contingencies as the same is managed by the construction manager whose sole focus is to tackle the same.²⁴ The disadvantage of this model is that the employer is burdened with the difficult task of coordinating with all works contractors, design team and the construction manager. Since the employer faces an interface risk owing to this model, in the event of failure to perform an obligation by one of the parties, the employer may find it difficult to allocate risk or liabilities.

or re-tender the construction before the commencement of the second stage. Under this model, the employer appoints the design team and a management contractor. The management contractor generally does not by itself carry out construction work. It plays the role of the facilitator and coordinates the work of those carrying out the construction work. Unlike in the case of construction management, a management contractor assumes greater responsibility in ensuring timely completion of the construction process and may even pursue any defaulting works contractors on the employer's behalf, thereby giving the employer the advantage of having a single coordinating entity with whom it must deal. Also, this model reduces the time required for completion of a project as compared to the traditional design-bid-build model as the management contractor may be appointed even when the design is at a very early stage.²⁵

Diagram 3: Construction Management Model



ii. Management Contracts

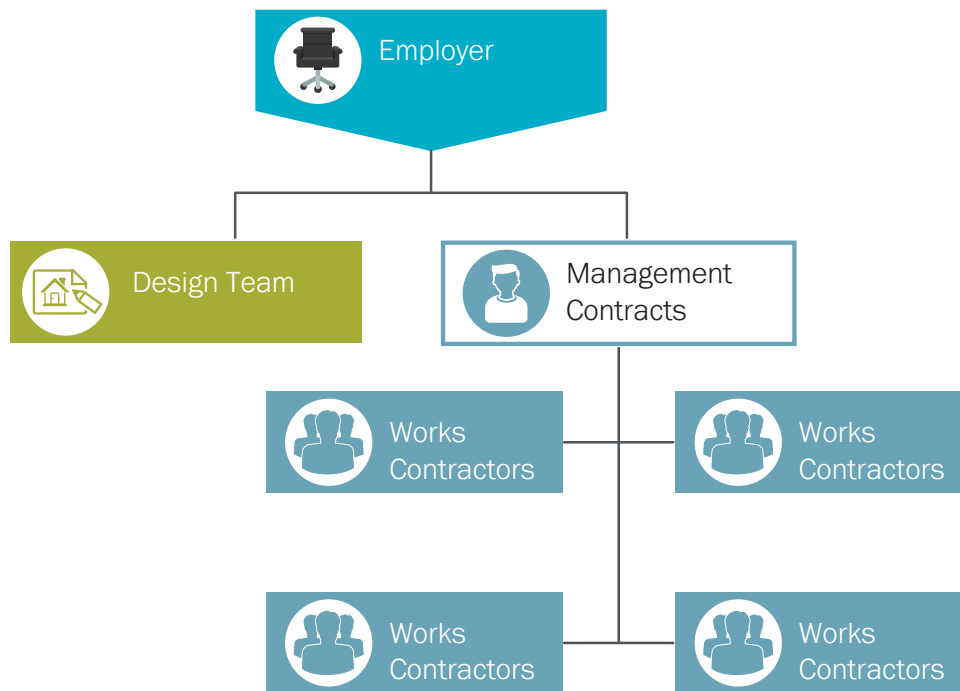
This is a hybrid model of contracting which incorporates elements of both traditional design and build and construction management. Management services can be provided with respect to construction only or both construction and design. Management contracts usually comprise of two stages i.e. pre- and post-construction where the employer has the option of abandoning the project altogether

Such a model is appropriate in large-scale projects requiring an early on site start, such as in a situation where a preliminary design is prepared by or on behalf of the employer but where it is not possible to prepare a complete and finalized design before commencement of the construction work, and where much of the detailed design may be of a sophisticated or innovative nature requiring proprietary systems or components designed by specialists.²⁶

24. Supra at 12, Page 19.

25. Supra at 12, Page 20.

26. Supra at 18, Page 17.

Diagram 4: Management Construction Model

IV. Standard Forms of Construction Contracts

Internationally, various independent organizations have been engaged in framing flexible standard form contracts which can be adopted by companies and governments. They are aimed at supporting faster negotiation and adoption of terms between contracting parties while providing jurisdiction and industry specific flexibility.

The International Federation of Consulting Engineers (“**FIDIC**”), provides standard forms of contract for civil engineering construction which are used throughout the world.²⁷

Each type of a standard construction contract has been assigned a different color. It aims at providing balanced roles and responsibilities to individual parties as well as fair allocation of risk. FIDIC suites are divided into General Conditions of Contract i.e. general conditions that are suited to all kinds of construction project models, as well as Special Conditions of Contract, which can be modified by parties on a case to case basis.²⁸ The different types of FIDIC Contracts are briefly discussed below:

- a. *The Green Book: Short Form Contract (First Edition 1999)* – This is recommended to be used for engineering and building work of small capital value. It is likely to be most suited to fairly simple or repetitive work or work of a short duration without the requirement of specialist sub-contracts.²⁹

27. Standard Form Construction Contracts, Subcommittee of the International Bar Association, Page 1-2, Available at: <https://webcache.googleusercontent.com/search?q=cache:05xi8FRP4Dwj:https://www.ibanet.org/Document/Default.aspx%3FDocumentUid%3DE2E811DA-E906-493D-89D1->

28. The FIDIC Suite of Contracts, Turner & Townsend, 2017, Page 1, Available at http://fidic.org/sites/default/files/FIDIC_Suite_of_Contracts_o.pdf

29. *Id.*, Page 3.

- b. *The Red Book: Conditions of Contract for Construction for Building and Engineering works designed by the Employer (First Edition 1999)* – It provides conditions of contract in circumstances where the design is conducted by the employer. The General Conditions and the Particular Conditions provided therein make up the Conditions of Contract. The Red Book provides guidance for the preparation of Particular Conditions should it be necessary to modify the General Conditions.³⁰
- c. *The Red Book (MDB Edition 2005): Conditions of Contract for Construction for Building and Engineering works designed by the Employer* – The FIDIC MDB edition of the Red book simplifies the use of the FIDIC contract for the Multilateral Development Banks (MDBs) making it a part of their standard bidding documents.³¹
- d. *The Yellow Book: Conditions of Contract for Plant and Design-Build designed by the Contractor (First Edition 1999)* – It is applicable to the provision of electrical and/or mechanical plant, and for the design and execution of building or engineering works used where the design is carried out by the contractor.³²
- e. *The Orange Book: Conditions of contract for Design-Build and Turnkey (First Edition 1995)* – The Orange Book is intended for use on turnkey contracts.³³ Post publication of the red and yellow books, the orange book is used very rarely.³⁴
- f. *The Silver Book: Conditions of Contract for EPC/Turnkey Projects (First Edition 1999)* – The Silver Book is suitable for use on process, power and private-infrastructure projects where a Contractor is to take on full responsibility for the design and execution of a project. Risks for completion

to time, cost and quality are transferred to the Contractor and so the Silver Book is only suitable for use with experienced Contractors familiar with sophisticated risk management techniques.³⁵

- g. *DBO Contract – Conditions of contract for Design, Build and Operate Projects (2008)* – It aims at providing a general framework for general use in projects where tenders are invited on an international basis.³⁶

In addition to FIDIC contracts, there is another popular form of contract called New Engineering Contract (“NEC”) form of contract. NEC was developed by Institute of Civil Engineers (ICE). It provides a legal framework for project management procedures designed to handle all aspects of the management of engineering and construction project. These form of contracts can be used for projects both large and small, civil engineering and building, national and international. They consist of a suite of contract documents and range of support services consisting of training, consultancy, software and a user’s group.³⁷ There are various other standard form of construction contracts such as Joint Contract Tribunal (JCT) form of contracts, Association of Consultant Engineers (ACE) form of contracts, Association of Consultants Architects (ACA) form of contracts.

V. Pricing Methodologies

Post selection of the form of contract, the parties are required to select the price formulation under the contract. This can be done through various approaches, some of which are described as under.³⁸

- **Fixed Price Contract / Lump Sum**– This involves the payment of a pre-decided cost in a lump sum form based on cost anticipated by the contractor. Price escalation is only

30. *Id*, Page 4.

31. *Id*, Page 5.

32. *Id*, Page 6.

33. *Id*, Page 7.

34. *Supra* 27, Page 1.

35. *Supra* 28, Page 8.

36. *Id*, Page 9.

37. *Supra* at 27, Page 7.

38. *Supra* at 12, Page 22.

possible based on a pre-negotiated exhaustive list of conditions. The lump sum should be sufficient to cover the contractor's anticipated actual costs including overheads along with a profit component.

- Cost-Plus Price – This method usually guarantees payment of costs of the contractor at actuals in addition to a 'profit fee'. It is utilized in complex projects where the cost cannot be accurately assessed, such as in construction projects with innovative design or complex engineering, with a high-risk element, in which case a lump sum price that accounts for all contingencies would be near impossible.³⁹
- Target Cost – Target costing is a variation of the cost-plus pricing mechanism. It involves specification of a target cost, agreed on between the Employer and the Contractor. In case of exceeding the target, the over spend will be shared between the employer and contractor as per agreed upon proportions. The employer is paid as per the actual costs incurred together with an additional fee to cover profit and indirect costs. However, as an incentive to keep costs at a minimum, the
 - contract may include a provision for bonus payments by which the Contractor has a share in the cost savings, in case the actual costs is below the target cost.⁴⁰
 - Unit Price/Measured Works – It is a hybrid between the fixed price / lump sum and cost-plus pricing methodology. It breaks down the works into separate tasks and accordingly prices the construction work in accordance with a bill of quantities which comprises a list of items specifying the quantities and providing a brief description of the works comprised in the contract.⁴¹
 - Guaranteed Maximum Price – This method divides the project into two parts, first, being the preliminary investigation and feasibility study of the project and, second, design and construction. The first part is done on a cost-plus basis, following which, the employer has the option to scrap the project in case of a high cost assessment. The second part then converts to a 'Guaranteed Maximum Price' and it effectively operates on a lump sum basis.⁴²

39. Supra at 12, Page 21.

40. Supra at 12, Page 22.

41. Supra at 12, Page 23.

42. Supra at 12, Page 23.

3. Disputes Arising out of Construction Contracts

Complexity of documents involved in construction contracts, coupled with the long lifecycle of a construction project, offers a breeding ground for disputes. As stated above, disputes could arise from the stage of formation of contracts on existence of a valid contract. Contractual interpretation of key provisions, and inconsistent provisions in the documents forming the entire contract could lead to another set of disputes. Disputes relating with bank guarantees, conditional and unconditional nature of these guarantees constitute a set of disputes seeking reliefs against wrongful invocation. Fraud in tenders could attract a set of penal laws.

The cream of substantive disputes arise during performance of construction contracts. Time is the essence in every construction, yet the most frequent disputes arise out of delays in completion. Both fact and legal experts need to be deployed to analyse delays and allocate risks

and liabilities accordingly. Variations could result in added costs, expenses, losses, delays or claims for extension of time. While a host of disputes arise out of construction contracts, this paper briefly focusses on three major issues namely delays, variations and extension of time. Breach of contract, wrongful termination, wrongful invocation of bank guarantees, wrongful withholding of retention amount, non-rectification of defects during defects liability period are other types of disputes.

Once a dispute arises, the issue is identified and risk is allocated, the next step is to determine the reliefs that can be claimed under the law. Specific performance of contract, damages, injunctions are key remedies available to non-recalcitrant parties. Liability can also arise under the law of torts. These have been dealt with briefly below.

4. Delays in Construction Projects

Almost every construction contract provides for a time for completion of the project. In the event completion time is not stipulated, it is implied that the performance ought to be completed within reasonable time. Generally, completion is categorised into two heads: practical and substantial. Interpretation of practical and substantial completion varies from contracts. Ascertainment of whether the contract has reached practical or substantial completion depends on the fact and legal expert's analysis of works completed or balance works. Contracts also stipulate obligations post completion.

Generally, majority contracts provide for consequences in case the stipulated timelines are not met. Typically, the contractor is exposed to a claim for liquidated damages for failure to complete the project within the time specified under the contract. However, the contractor may avoid such consequences if the delay is attributable to the employer or any other factor outside the control of contractor. Delays could arise due to breach by employer, contractor, sub-contractors, and also due to external unforeseen circumstances such as force majeure, armed conflict, strikes etc. Hence, construction contract almost always, and ought to, provide for the manner in which various types of delays are to be treated.

It is generally assumed that delays in completion arise due to failure of performance by the contractor engaged by the employer. However, the wide and unique range of disputes seen in our experience stand testimony to the fact that ascertaining liability in cases of delays is a result of in-depth analysis of various events that occur during the lifecycle of the contract, careful allocation of liability at various stages of the construction, and a calculative approach to compute delays and resultant extensions of time and costs. Delays could also be a result of non-provision of the project site to contractor or modification of project requirements or any

such other acts. It entitles the contractor to extension of time and releases it from liquidated damages for the concerned period of delay. It can also give rise to contractor's right to claim direct loss and expenses incurred for the period of delay depending upon the provisions of the contract. Delay could also occur due to acts of neutral forces where neither the contractor nor the employer is at fault. Such delays are typically force majeure events such as earthquake, war, etc. Such delays entitle the contractor to an extension of time. However, it may not entitle the contractor to claim loss or expenses.

At times, delays could be concurrent i.e. when two events occur - one which is attributable to the employer and one to the contractor, might be regarded as causing or contributing to delay to the project. The result of concurrency usually entitles the contractor to an extension of time but may not entitle payment of expenses incurred. In the UK, concurrent delay is defined by courts as "Two or more delay events occurring within the same time period, each independently affecting the 'Completion Date' or where the events may have happened at different times, but their effects (at least in part) are felt concurrently."⁴³

In India, there is no definite approach to concurrent delays yet, but this type of delay was seen in the case of *Essar Projects (India) Ltd. & Ors. vs Gail (India) Ltd.*⁴⁴, wherein, owing to the concurrency of delay caused by the parties, contractor was not granted any additional cost nor did it entitle the employer to any liquidated damages.

Typically, the consequences for delay are governed by liquidated damages provisions in construction contracts. In the absence of such provisions, general contract law provisions will govern the right of employer to claim damages from contractor on account of failure

43. *Royal Brompton Hospital NHS Trust v Frederick A Hammond & Ors.* No. 7 [2001] EWCA Civ 206, 76 Con LR148.

44. ARB.P.No.424 of 2012.

to complete the project in time. Under Indian contract law, employer has to prove actual loss to be entitled to damages. As many projects face time and cost overruns, dispute often arise between the employer and the contractor regarding which side caused the delay. If the delay is attributable to employer then the contractor may become entitled to extension of time and get discharged from liquidated damages. It may also be able to recover direct loss or expenses incurred depending upon the contract. However, if the delay is attributable to contractor, the contractor may become entitled to liquidated damages. Thus, it becomes imperative to determine the actual cause for a delay event, its impact on the critical path and whether any float was available.

I. Critical Path and Float

Assessment of delays involves analysis of programmes, identifying critical path to completion, and studying deviations. The critical path in a project can be defined as that series of connected activities commencing at the start of the project and finishing at the end which determines the overall project duration.⁴⁵ For any project, the progress of works is planned and measured against an agreed programme, which may or may not be specified as a contract document.⁴⁶ The programme will identify generally the 'critical path' or paths through the works, thereby, making critical path, the linkage between activities which the contractor is required to complete in order to avoid delaying the date for completion.⁴⁷ Delay to any activity on the critical path will delay overall project completion.

On the other hand, "Float" is the total time an activity can be delayed without delaying the entire project. Sometimes, an activity which is not critical because it has float can become critical if the float time is used up.⁴⁸ Usually, it is

only those events, which cause critical delay to any activity on the critical path and hence cause critical delay to the project as a whole, that are relevant to any assessment of the contractor's entitlement to an extension of time.⁴⁹

It is therefore, important to identify the origin of individual delay events for the activities that were on the critical path to calculate extent of delay and liability arising thereof. Based on the origin, liability may be appropriately apportioned. An expert may employ one or more methods of assessing critical path delay. The choice of the delay analysis methodology to be used would often depend upon the nature and extent of the relevant records.⁵⁰ A few methods of delay analysis are discussed below.

II. Types of Delay Analysis Methodology

1. As planned versus as built: this involves a direct comparison between the original plan (as planned) and the actual amount of work done (as-built). However, this fails to take into account more complex activities or multiple events causing delays.
2. As planned but for: This involves the preparation of an adjusted schedule where, in the as-planned schedules, all the delays of a particular party are incorporated. The completion date of this adjusted as-planned schedule compared with the actual completion date gives the amount of delay for which the other party is responsible.
3. As built but for: It takes into account the actual progress and deductions are made from it to reflect matters which are employer's responsibility to determine the earliest date on which the project could have been completed without the effect of employer's default. However, this method requires a considerable amount of time, effort and money.

45. Supra at 12, Chapter 10, Page. 221.

46. Supra at 12, Chapter 2, Page 36.

47. *Id.*

48. J. Constr. Eng. Manage. 1987.113:591-602 at Page 594.

49. Hudson's Building and Engineering Contracts, Atkin Chambers, Sweet & Maxwell, 13th Edition, Para 6-051.

50. *Id.*, Para 6-052.

4. **As-planned impacted:** this method looks at the planned programme and then the expert determines the effect of the delay events on the programme to determine the delay. This method therefore involves a theoretical analysis of the delay event by the expert and its impact on the planned programme. Thus, it depends on the subjective assessment of the expert and a reasonable accurate planned programme to start with. Given the theoretical nature of this technique, it is usually used in situations where the work is still to be completed.
5. **Time-impact:** In this method impact of each delay event is seen in the as built schedule for the project as it is until the stage of commencement of that delay event. From that point on the as planned schedule is used to determine the impact of that particular event. This exercise is then repeated for each delay event, to ascertain their impact. This method could be complex if there are multiple delay events which have to be analyzed independently.

The type of delay claims in dispute influences the type of method to be employed. It also depends upon the nature of information / documentation available. If there is a detailed as-planned programme available which has not been simultaneously been updated with *as-built* records, then “as planned impacted” method may be appropriate.⁵¹ On the other hand if there is sufficient *as-built* record available then *as-built v. as-planned* method may be more appropriate. More complex methods (such as time impact analysis) would require more time and resource and hence, for small projects simpler methods may prove to be more appropriate.

Courts have also developed *prevention principle* in relation to construction contracts. It requires that if the contractor has been prevented from performing an obligation due to an act or omission by the employer,

then the employer cannot compel the party to perform that obligation.

This principle was laid down by the English Court of Appeal in *Peak Construction (Liverpool) Ltd. v. McKinney Foundations Ltd.*⁵² In this case, the employer’s failure to give clear instructions caused delay to the contractor. The contract did not provide for extension of time. The Court of Appeal found that it was ‘beyond all reason’ to find the contractor liable to pay damages for delay and held that the principal may not claim liquidated damages for the delay. It is pertinent to note that the application of this principal is limited to the completion of works within a reasonable time post the delay attributable to the principal. Any delay extending beyond such reasonable time would leave the contractor open to an action for liquidated damages.⁵³ The principal laid down in this case led to the adoption of extension of time clauses as standard form in construction contracts. Further, this principal would not be applicable in cases where the contract provides for extension of time and the contractor has failed to avail the same.⁵⁴

III. Interplay between the Indian Contract Act and Delay

The terms of the contract provide for the ways in which delay has to be dealt with by the parties. Whereby, a party who has promised to do a certain thing at a specified time, fails to do it at or before that time, the contract becomes voidable at the option of the promisee, when ‘time is of the essence’ in the contract (see Section 55 of the Indian Contract Act, 1872 (“**Contracts Act**”)). Time may be specified by fixing a date or time, or fixing a period of time for performance.⁵⁵ But if the intention of the parties reflect otherwise, then the contract is not

51. Nuhu Baraimah, Construction Delay Analysis Techniques—A Review of Application Issues and Improvement Needs, Available at <https://www.mdpi.com/2075-5309/3/3/506/pdf>

52. (1970) 1 B.L.R. 111.

53. *North Midland Building Ltd. v Cyden Homes Ltd.*, [2018] EWCA Civ 1744.

54. *Turner Corporation Pty Ltd v Austotel Pty Ltd*, [1994] 13 B.C.L.378.

55. Nilima Bhadbhade, *The Indian Contract and Specific Relief Acts*, (14th edn., Pollock & Mulla, 2014) Page 848.

voidable, however, the promisee is entitled to damages for loss caused to him by such failure (see Section 55 of Contracts Act). Section 55 also applies to reciprocal promises.⁵⁶

If no time is specified, sections 46-50 of the Contract Act will apply. Section 46 attracts principle of 'reasonable time' of performance of contract. The subsequent sections 47 – 50 deal

with proper place and time of performance when there are no explicit terms in the contract. In such cases, it is not open to a party to unilaterally stipulate a time and then cancel the contract on such assumed stipulation.⁵⁷ It is for the courts and arbitral tribunals⁵⁸ to decide, the intention of the parties, by referring to the terms of the contract.

56. *Buldeo Doss v. Howe*, (1881) I.L.R. 6 Cal. 64.

57. *Supra* at 55, Page 849.

58. *N Srinivasa v. Kattukaran Machine Tools Ltd*, AIR 2009 SC 2217.

5. Extension of Time (EOT) in Construction Contracts

The general rule of construction contracts is that the contractor must complete the assigned works by the contractual completion date. However, the contractor may become entitled to extension of time and thereby relieved from his liability to pay liquidated damages for delay under the contract in certain circumstances. Such circumstances may include delays attributable to parties other than the contractor or any other delay provided for in the contract meriting an extension of time or variations. This is done through provision of an extension of time clause in the main contract. These clauses are common place and found in almost all standard forms of construction contracts.

Assessment of Extension of Time

While assessing an application for extension of time, the relevant authority making such determination must assess the delay caused to the completion of the entire construction project. It is important to identify whether the relevant event causing delay is critical event. The subsequent activities are mapped to identify a critical path connecting all subsequent activities. The relevant authority also considers contributing factors to delays at each stage and disregards them in case the contractor himself has contributed to it. Typically the relevant authority tasked with these determinations is the contract administrator, that is, to illustrate, the engineer in case of the FIDIC Suite of Contracts or the architect in case of JCT contracts.⁵⁹

59. Supra at 49.

6. Variation in Construction Contracts

A 'variation' to a construction contract refers to alterations or modifications to the pre-existing construction contract.⁶⁰ Such variations may include modifications to the design or quantities, or changes to the scope of works under the original contract amongst others. Owing to the length, nature and complexities of a construction project, the power to vary work is found in almost all construction contracts. Variations clauses empower the employer to order desired changes where necessary. They also ensure that contractors recover payments for properly directed changes/modifications.⁶¹ It is important to note that such a power must be expressly provided under the original contract.

What falls within the scope of permissible variation under the construction contract is often a bone of contention between parties. Without express authority, there is no power to order the contractor to carry out extra work.⁶² Similarly, an unauthorised variation to the work demanded by the employer, and not corrected by the contractor, may result in breach of contract. Further, the contract could place limitations on the power to order variation such as limitation to not vary beyond a certain proportion of the value of the work, or grant of right to contractor to claim additional payment for work exceeding the prescribed proportion in the contract. Various standard form contracts provide for an express provision, conferring power to the contract administrator to give instructions as to variations.⁶³ Additionally, these variation provisions are accompanied by adjustment provisions which grant the parties the power to also adjust contract price and the schedule of payments.⁶⁴ These provisions enable parties to smoothly administer works and avoid disputes.

In a leading case, the Appellate Court of Illinois, USA laid down general principles entitling a contractor to receive payment for a variation. They include:

- The works must be beyond the agreed scope and outside the express or implied obligations of the contractor under the original contract.
- The work should have been ordered by or on behalf of the employer.
- The employer should, have expressly or impliedly, agreed to pay for it.
- The extra work has not been done voluntarily by the contractor.
- The work should not have been rendered necessary by the fault of the contractor
- Where applicable, that any failure of the contractor to comply with contract requirements as to procedure or form should have been waived by the employer.⁶⁵

In certain cases, however, variations may not be permissible without the consent of the contractor (unless expressly provided by the contract)⁶⁶, they include:

- Acceleration of progress and advancement of completion date
- Additional works beyond the usual scope of the contract⁶⁷
- Change the nature of works under the project
- Omission of parts of the contracted works and transferring them to another contractor
- In case of lump sum contract, variation without additional payment

60. Supra at 49, Para 5-017.

61. *Knight Gilbert Partners v Knight* (1968) All ER 248.

62. *Dodd vs. Churton* [1897]1 Q.B. 562.

63. Clause 13.1, FIDIC Silver Book (1999 edition).

64. *Id.* Clause 13.3.

65. *Watson Lumber Co. v Guennewig*, 226 NE (2d) 270 (1967).

66. Supra at 49, Para 5-027.

67. *Smith v. Salt Lake City* 104 Fed. Rep. 457 (1900).

I. Formal requirements of variation

A variation is typically required to be given in writing by the employer or employer's agent/principal engineer who is authorised under the contract. It is important that the conditions of variations are properly observed by both employer and contractor. What constitute a variation "in writing" may also sometimes become contentious. For example, in a decided case sketches in the architect's office describing the variation to be done was held not to be sufficient.⁶⁸ On the other hand a letter signed by the architect authorizing the work was held to be sufficient.⁶⁹ Certain turnkey projects contain a stipulation that in the event of variation, the contractor must highlight the variations that could impact its ability to deliver the project within the prescribed timeline / within the prescribed budget. Such clauses help put the employer to notice that the proposed variation could affect the project completion timelines without the fault of the contractor, and help the employer withdraw its variation order if required in the interest of timely completion of the project. This mechanism helps predict the resultant extension of time that could be reasonably claimed by the contractor.

Variation Valuation Clauses

They are clauses that prescribe an agreed methodology or procedure for determining the value of the variation in the absence of an agreement on price between the parties. Such clauses usually prescribe two approaches to variation, the first, based on a separate schedule of rates and prices. The second approach uses a derivation of price from the breakdown of the contract pricing (for example, using the bill of quantities for valuation).⁷⁰ It is important to note that change in valuation due to variation include (considering for the purposes of

valuation) not only work directly resulting from variations, but also all associated changes in work due to the variation.

Some contracts, as stated above for turnkey projects, may also contain provisions where the contractor is required to highlight the impact of the variation on costs of the project, as soon as the variation is ordered. This mechanism helps conduct a cost impact analysis of the variation, enabling the employer to make a decision to withdraw, modify or implement the variation.

II. Example of a valuation clause

In the FIDIC Suite of Contracts (Silver Book), Clause 13.3 which discusses variation procedure redirects the parties to sub-clause 3.5 which relates to determinations as to adjustments in contract price and the schedule of payments. Sub-clause 3.5 entails that the determination as to adjustment must be made by a consultation between the employer and the contractor in the endeavour to reach an agreement. In case of a failure to reach such an agreement, the employer is required to make a fair determination of the adjustment in accordance with the contract. Any further disagreement based on this fair determination may be referred to the Dispute Adjudication Board (DAB).

Disputes arising out of Variation

As discussed above, the scope of variation is the primary source of disputes relating to variation orders. Parties need to ascertain whether the variation ordered falls within the scope of the provisions empowering the employer to order a variation. This could result in disputes to ascertain if the extension of time claimed by the contractor as a result of the variation is reasonable or not. The same applies for increase in costs, where the contractor demands additional costs for carrying out the variations.

68. *Wormald Engineering Ltd v Resources Conservation Co* (1992) 8 BCL 158.

69. *Bedford v Borough of Cudjgegong* (1900) 16 WN (NSW) 142.

70. *Supra* at 49, Para 5-050.

Disputes could also arise from failure of the parties to comply with procedural requirements stipulated in the contract in relation to variation orders such as notice ordering variation, or time to object to variation or presentation of time and cost analysis within a reasonable period of time after the variation is ordered. Disputes could arise for price adjustment upon carrying out the

variation, and the applicable rates if agreed to under the construction contract. The range of disputes that could arise from variation clauses highlights the need for careful contract drafting and placing appropriate rigours in the contract to safeguard rights of the stakeholders as well as allocate risks where they ought to belong.

7. Notification for EOT Claims

Most standard form construction contracts contain provisions prescribing a strict form of notice required to be submitted by the contractor in case of a claim for extension of time. It has been seen that contractors often risk harming meritorious claims for additional payment and or additional time due to their failure to follow the prescribed procedure for notification.

Generally, notification requirements are mandatory for a claim for extension of time under the contract. To illustrate a typical notification of EOT claim provision, an example of FIDIC Suite of Contracts is discussed below.

Sub-Clause 20.1 read with sub-clause 8.4 of the FIDIC Conditions of Contract (Silver Book)

This provision discusses the procedural requirements in relation to notification and substantiating claims for extension of time and additional payment. It requires that for any claim relating to an extension of time or additional payment in connection of the contract, the contractor must give a detailed notice to the employer within 28 days of the contractor becoming aware or from the date when the contractor should have been aware of any such event. The failure to give such notice would result in extinguishment of the rights of the contractor in relation to extension of time or any additional payment related thereto.

This leads to the question of whether such time constraints are directory or mandatory. In England, in one case it was held that such time scales are not mandatory in nature unless expressly stated in the contract.⁷¹ In another case, the House of Lords held that the timelines for submission of notices would be mandatory when the precise time within which service is required is prescribed and where it makes it plain by expressly stating that the failure to give such notice would result in forfeiture

of rights to the claim.⁷² The rationale behind enforcing clauses prescribing notice within a fixed timescale is that it enables investigation of the matter when it is still ‘current’. Further, it gives the parties an opportunity to remedy any conduct causing delay in real time.⁷³

Position in India

It can be argued that strict notification clauses may get hit by Section 28 of the Contract Act.

Section 28 of the Contract Act, 1872 provides:

“28- *Agreements in restraint of legal proceedings void* –

Every Agreement

- a. *by which any party thereto is restricted absolutely from enforcing his rights under or in respect of any contract, by the usual legal proceedings in the ordinary tribunals, or which limits the time within which he may thus enforce his rights; or*
- b. *which extinguishes the rights of any party thereto, or discharges any party thereto, from any liability, under or in respect of any contract on the expiry of a specified period so as to restrict any party from enforcing his rights, is void to the extent....”*

Thus, in view of above, such notification clause may become void under Indian law.

In the case of *Chander Kant and Co. v. Vice Chairman, DDA*,⁷⁴ the Delhi High Court held that both curtailment of the period of limitation for specific period and extinction of the right are not permissible under Section 28 and if there is any clause to that effect in an agreement it would be barred under law. However, some High Courts have differed in their opinion on the issue.

71. *Temloc Ltd. v. Erill Properties* (1987) 39 B.L.R. 30.

72. *Bremer Handels GmbH v Vanden Avenne Izegem PVBA* [1978] 2 Lloyds Rep 109.

73. *Multiplex Construction (UK) Ltd. v Honeywell Control Systems Ltd.* [2007] E.W.H.C. 447 (TCC).

74. DHC – 2009.

The Supreme Court however, in the case of *Union of India and Ors v. IndusInd Bank Ltd. and Ors.*⁷⁵, held that “even where an agreement extinguishes the rights or discharges the liability

of any party to an agreement, so as to restrict such party from enforcing his rights on the expiry of a specified period, such agreement would become void to that extent...”

75. (2016) 9 SCC 720.

8. Remedies for Breach

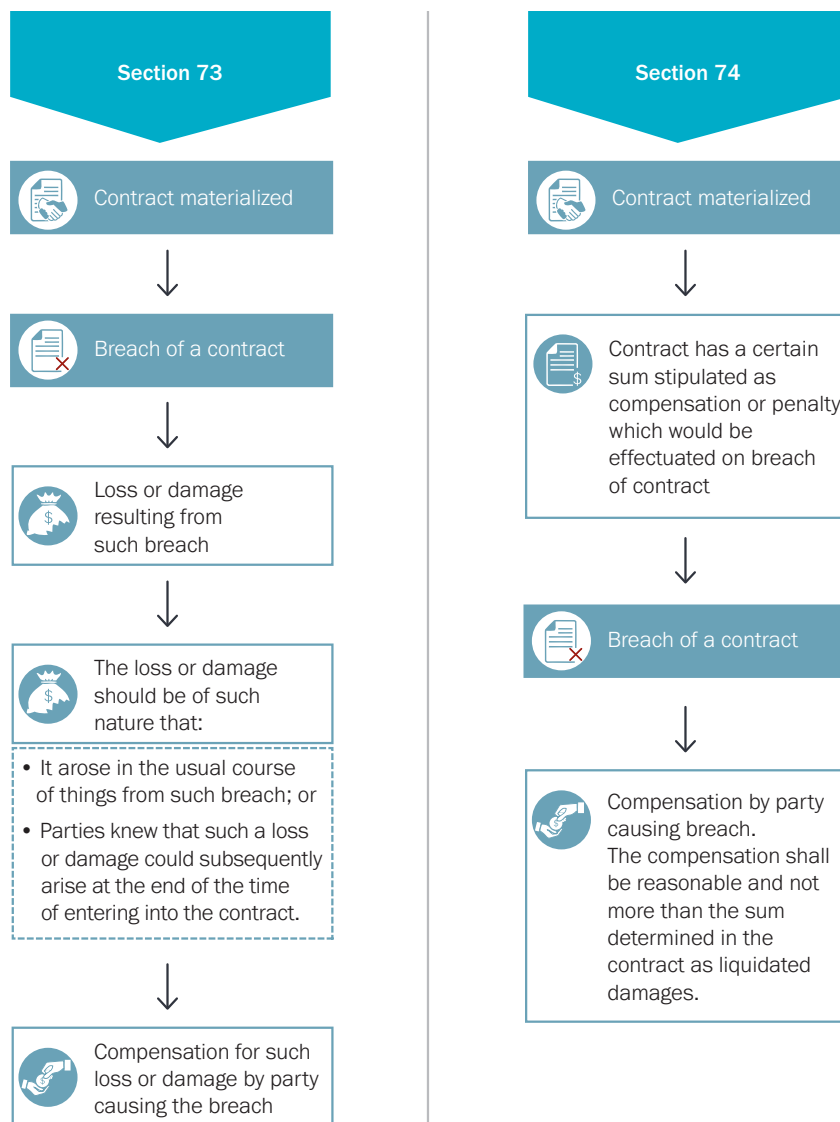
I. Damages

Under Indian law, Sections 73 and Section 74 of the Indian Contract Act, 1872 deals with compensation for breach of contract. These provisions are foundations for principles constituting the law of damages.

Section 73 deals with actual damages following breach of contract and the injury resulting from such breach which are in the nature of unliquidated damages since these damages are awarded by the courts on an assessment of the loss or injury caused to the party against

whom breach has taken place, while Section 74 deals with liquidated damages, referring to damages that are stipulated for. Thus, for a claim of damages, there must be a breach of the contract.⁷⁶ In cases, where there is a valid termination of the contract, without any violation of the terms of the contract, the question of claim for damages should not arise since there is no breach per se. These provisions are subsequently discussed in detail.

Based on the requirements mandated for claim of damages, basic comparison between section 73 and Section 74 has been done below:



76. P. Radhakrishna Murthy v. NBCC Ltd. (2013) 3 SCC 747.

Damages are generally claimed and granted to enable restoration of the position of the plaintiff in which he would have been, if the breach would not have taken place.⁷⁷ Generally, these damages are to be claimed from the party causing such breach. In case of liquidated damages under Section 74, claims can be made by plaintiff as well as defendant.⁷⁸

In case of liquidated damages, there is an assurance of compensation since a reasonable compensation is agreed upon. Thus, it would be expected that since the risks of a party causing a breach would be lesser since damages are already stipulated for.⁷⁹

A. Liquidated Damages

Standard form contracts typically contain provisions regarding payment of liquidated damages for delay. Such provisions usually provide for payments for delayed completion of the project by the contractor. They are generally calculated at the rate of certain percentage of the total contract price per day or week of delay with a maximum cap. Thus, for instance, if in a given case the contract price is INR 100,000,000/- (Rupees One Hundred Million), and liquidated damages provide for 1% of the contract price per week of delay. Liquidated damages would be INR 1,000,000/- (One Million) for each week of delay.

The overall level of damages is frequently limited by a limitation of liability clause in the contract. However, construction contracts in most cases, provide for recovery of liquidated damages in the event the contractor is culpable for delay.

In India, liquidated damages clauses in contract would be subject to Section 74 of the Contract Act. Section 74 entails that when a sum (liquidated damages) is named in the contract as the amount to be paid in case of a breach, then upon such breach, the innocent party is entitled to receive reasonable compensation not exceeding the amount so named. Where the exact amount of

loss is difficult to ascertain, the innocent party is only required to prove that it suffered loss. Once such loss is proved, the Court grants reasonable compensation. The provision also speaks about penalty, and in case of penalties too, the innocent party is entitled to reasonable compensation not exceeding the amount named as penalty.⁸⁰ The aim of awarding damages is to make good the loss or damage that naturally arose in the usual course of things or which was so contemplated by the parties at the time of making the contract.⁸¹ There can be no award of any compensation if there is no legal injury to the party.⁸² For instance, in *Haryana Telecom Ltd. v. Union of India*,⁸³ when a contractor delayed in supplying cables requiring the Government to purchase the same from other sources subsequently procuring it at cheaper rates, the award of the arbitrator awarding damages for breach was set aside as no loss was caused.

Interestingly in India, for a claim of liquidated damages, the language in the clause: “*whether or not actual damage or loss is proved to have been caused thereby*” would not dispense the requirement of proof of loss in toto.⁸⁴ This is because under Indian law one cannot compensate a person who has not suffered any loss or damage. There may be cases where the actual loss or damage is incapable of proof. Hence, the contract act provides for exemption to prove the actual extent of the loss or damages but some loss or damage has to be still shown. Thus, existence of loss or injury is indispensable for a claim of liquidated damages.

Another interesting aspect of Indian Contract Act is that irrespective of stipulations in the form of liquidated damages, a plaintiff can only recover damages to the extent of reasonable compensation for the injury sustained by him, and not the entire sum laid down as liquidated damages.⁸⁵ Thus, provisions

77. *Trojan & Co. v. Rm N.N. Nagappa Chettiar* AIR 1953 SC 235.

78. *Kailash Nath Associates v. Delhi Development Authority* (2015) 4 SCC 136.

79. *Fateh Chand v. Balkishan Dass* (1964) 1 SCR 515.

80. *Id.*

81. *Id.*

82. *State of Kerela v. M/s United Shippers and Dredgers Ltd.*, AIR 1982 Ker. 281.

83. 2006 SCC OnLine Del 575.

84. *ONGC v. Saw Pipes* (2003) 5 S.C.C. 705.

85. *Union of India v. Raman Iron Foundry* AIR 1974 SC 1265.

relating to liquidated damages are required to be drafted with clarity and it has to be proven that the amount was a genuine pre-estimate of the loss or damage likely to be suffered. It is pertinent to note that the amount stipulated as liquidated amount or penalty is the “upper limit beyond which the court cannot grant reasonable compensation”.⁸⁶ Meanwhile, other factors like extent of mitigation of losses, along with other facts and circumstances cannot be overlooked and warrant sufficient consideration.

Based on this reasoning, recently a Division Bench of the Bombay High Court in *Raheja Universal Pvt. Ltd. v. B.E. Bilimoria & Co. Ltd.* had upheld the finding of a Single Judge who had set aside the arbitral award on the ground that the award for grant of liquidated damages had been made even though no evidence had been led to prove any loss or damage.⁸⁷ Thus, even in the presence of a pre-determined sum agreed by both the parties as liquidated damages, courts will have to consider factors such as mitigation of losses, reasonability of the sum, and other facts and circumstances so as to ensure that while the party suffering the loss or damage is adequately compensated, at the same time there should not be any windfall profit due to a mere breach of a contract.⁸⁸

The Hon’ble Supreme Court of India in *Maula Bux v. Union of India* had also noted the following:

“

It is true that in every case of breach of contract the person aggrieved by the breach is not required to prove loss or damage suffered by him before he can claim a decree, and the court is competent to award reasonable compensation in case of breach even if no actual damage is proved to have

been suffered in consequence of the breach of contract. But the expression “whether or not actual damage or loss is proved to have been caused there by” is intended to cover different classes of contracts which come before the courts. In case of breach of some contracts it may be impossible for the court to assess compensation arising from breach, while in other cases compensation can be calculated in accordance with established Rules. Where the court is unable to assess the compensation, the sum named by the parties if it be regarded as a genuine pre-estimate may be taken into consideration as the measure of reasonable compensation, but not if the sum named is in the nature of a penalty. Where loss in terms of money can be determined, the party claiming compensation must prove the loss suffered by him.”⁸⁹

”

In the absence of such proof or honest estimation by the claimant, the court shall award damages which are below the stipulated liquidated damages. And while awarding damages, it should take into consideration a reasonable assessment of the consequences of the breach of contract.⁹⁰ Thus, an automatic pecuniary liability does not arise in the event of a breach of a contract which contains a clause for liquidated damages.⁹¹

B. Differentiating liquidated damages from penalty

Considering the differences between liquidated damages and penalty, in general, while liquidated damages are pre-determined estimates

86. *ONGC v. Saw Pipes* (2003) 5 SCC 705; *Maya Devi v. Lalta Prasad* (2015) 5 S.C.C. 588; *A.S. Motors (P) Ltd. v. Union of India* (2013) 10 SCC 114.

87. *Raheja Universal Pvt. Ltd. v. B.E. Bilimoria & Co. Ltd.*, 2016 (5) Mah L.J. 229.

88. *MSK Projects (I) (JV) Ltd. v. State of Rajasthan* (2011) 10 SCC 573; *M/s Auto Craft Engineers v. Akshar Automobiles Agencies Private Limited* (2016) SCC OnLine Bom 5185.

89. *Maula Bux v. Union of India* (1969) 2 SCC 554.

90. *Oil and Natural Gas Corporation Ltd v. Saw Pipes Ltd* AIR 2003 SC 2629; *BSNL v. Reliance Communication Ltd.* (2011) 1 SCC 394.

91. *Indiabulls Properties P. Ltd. v. Treasure World Developers P. Ltd.* [2014] 183 Comp Cas 491(Bom).

of losses and corresponding compensation, that is payable on breach of the contract, penalties are usually disproportionate to the losses and are higher than the losses that could result from the breach of contract, which are stipulated with the intent to ensure performance of the contract and to avoid any breach.

The stipulation made within the contractual terms is often disputed as to whether such stipulation is in the nature of penalty or liquidated damages. The need to differentiate between liquidated damages and penalty arises mainly because of the fact that a provision for penalty would not disentitle the plaintiff from claiming unliquidated damages as well; however, in the presence of a clause relating to liquidated damages, no additional remedy can be sought by way of unliquidated damages.⁹²

With respect to the nature of liquidated damages under Section 74, the apex court has observed that:

“

“Duty not to enforce the penalty clause but only to award reasonable compensation is statutorily imposed upon courts by Section 74... In all cases... where there is a stipulation in the nature of penalty for forfeiture of an amount deposited pursuant to the terms of contract which expressly provides for forfeiture, the court has jurisdiction to award such sum only as it considers reasonable but not exceeding the amount specified in the contract as liable to forfeiture.”⁹³

”

Additionally, with respect to ‘stipulation by way of penalty’, it has been noted that Section 74 applies where a sum is named as penalty to be paid in future in case of breach, and not to cases where a sum is already paid and by a covenant

in the contract it is liable to forfeiture.⁹⁴ Under Section 74, such stipulation by way of penalty would refer to an amount to be paid and not an amount already paid prior to the entering into of the contract.⁹⁵

Ideally, forfeiture of a reasonable amount paid as earnest money or advance deposit as part payment does not amount to imposition of penalty; however, in cases where the forfeiture is in the nature of penalty, Section 74 would apply.⁹⁶ Earnest money is part of the purchase price when the transaction goes forward, and would be required to be forfeited on occasions of failure of transactions which could be due to the fault or failure of the vendee.⁹⁷ However, in cases where a party has ‘undertaken’ to pay a sum of money or to forfeit a sum of money which he has already paid to the party complaining of a breach of contract, the undertaking can be said to be in the nature of a penalty.⁹⁸

II. Specific Relief

In India, remedies for breach of contract may also be sought under the Specific Relief Act, 1963. Recently, the said act has seen sweeping changes through the passage of the Specific Relief (Amendment) Act, 2018. They are particularly significant in relation to construction disputes.

- First, the act envisages making *specific performance of the contract as a mandatory remedy* at the discretion of the party filing the suit. This replaces the time honored common law rule of specific performance being a remedy at the discretion of the court on proving that monetary damages would be inadequate.

94. *Natesa Aiyar v. Appavu Padayachi* (1915) ILR 38 Mad 178.

95. *Abdul Gani & Co. v. Trustees of the Port of Bombay* ILR 1952 Bom. 747.

96. *Kunwar Chiranjit Singh v. Har Swarup* AIR 1926 P.C. 1; *In Kailash Nath Associates v. Delhi Development Authority & Anr* (2015) 4 SCC 136, it was observed that “Section 74 will apply to cases of forfeiture of earnest money under a contract. Where, however, forfeiture takes place under the terms and conditions of a public auction before agreement is reached, Section 74 would have no application.”

97. Id.

98. Id.

92. Supra at 55, Page 1287.

93. Supra at 79.

- Second, in the alternative that the party filing the suit does not want to compel the other party to perform the contract, it can opt for *substituted performance*. Substituted performance is a new form of relief provided under the act, which provides that, when the contract has been breached due to non-performance by either party, the party that is affected by such breach has the option of ensuring its substituted performance through a third party of his choosing or his own agency. The expenses and costs incurred for this substitution can then be recovered through the party committing such breach. This relief is important from a construction dispute perspective as the option of substituted performance would significantly help in cutting down delays and reducing costs. The employer would have the option of having the contract performed by another contractor and claiming the excess costs from the original contractor.
- Third, the act provides the court with the power to engage technical experts to assist on specific issues related to the suit. The expert may also be called upon for providing evidence, including production of documents on the issue. In complex construction disputes, use of experts whether for delay, quantum, design or otherwise is almost a norm. Thus, express power granting courts ability to engage technical experts would improve their capability in resolving construction disputes.
- Fourth, the act bars courts from granting injunctions in relation to any contract involving an infrastructure project (transport, energy, water and sanitation, communication and social and commercial infrastructure)⁹⁹ in cases where granting such an injunction would significantly delay or cause any impediment to the progress of such a project.¹⁰⁰
- Fifth, it establishes special courts in respect of contracts relating to infrastructure projects.¹⁰¹ These specialized courts would be in a better position to understand matters relating to infrastructure projects, keeping in mind the sector's peculiarity.
- Sixth, it prescribes disposal of suits filed under the act within twelve months from the date of service of summons to the defendant.¹⁰² The fixed timelines would pressure both the parties and the court to act expediently.
- Seventh, the act changes the nature of compensation as a remedy. As per the amendment, it is mandatory for the party filing the specific-performance suit to ask for specific performance or substituted performance. Compensation now may only be provided as an additional remedy to specific performance as opposed to the previous provision which provided compensation as an additional or substituted remedy at the discretion of the court.¹⁰³ This is important as compensation as a substitute remedy was unable to cover the indirect losses of the party filing the suit, hence, it is now provided in addition to a remedy of specific performance.

The said amendments to the Specific Relief Act, 1963 should be beneficial to the construction industry particularly as it would cut down delays caused by lengthy court proceedings and reduce costs. But there is a flip side too. This is because now a party can claim compensation in addition to specific performance. This increases burden on the players who may be genuinely suffering from unfavorable market conditions in the construction industry.

99. Schedule, Specific Relief Act.

100. Section 20A, Specific Relief Act.

101. Section 20B, Specific Relief Act.

102. Section 20C, Specific Relief Act.

103. Section 21(1), Specific Relief Act.

9. Dispute Resolution Mechanisms

Dispute resolution mechanisms opted by parties differ based on the nature and type of the construction project. The focus of dispute settlement mechanism should always be on ensuring maximum time and cost savings, while being effective. Since, construction involves so many variable factors, innovative and flexible mechanisms are adopted by parties. These include multi-tier dispute resolution clauses (a cocktail of alternative dispute resolution mechanisms), establishment of dispute resolution boards and, sometimes though rarely, through local courts.

I. Multi-Tier Dispute Resolution Clauses (MTDRC)

Parties may create their own dispute resolution mechanism, based on a mix and match of different ADR mechanisms. To illustrate, in a long term project, where parties need to maintain relationship over a long period of time, parties often opt for mediation, conciliation or negotiation as the first tier of resolution. On the other hand, for smaller and simpler projects, the parties may opt for arbitration directly to ensure quicker resolution. It is important for the parties to have the right number of tiers in the clause as excessive tiers can lead to delays in resolution. Most standard form contracts include MTDRC's as their dispute resolution mechanism.¹⁰⁴

The different types of ADR mechanisms utilized as a part of MTDRC's, include:

- i. Negotiation – This stage is an attempt by the parties to ensure that the dispute is resolved in a non-adversarial manner. It involves direct, principal to principal negotiations between all involved stakeholders. It aims at avoiding escalation of the dispute.
- ii. Mediation or Conciliation – A neutral third-party is appointed by the two parties who assists them in resolving the dispute.

The difference and between Mediation and Conciliation is mainly based on the fact that a mediator does not actively make decisions for parties whereas a conciliator assists the parties more actively i.e. proposes workable solutions to move forward.

- iii. Arbitration – An impartial third party (or parties) are appointed as arbitrators, who makes an award based on the submissions made by both parties and evidence on record.
- iv. Expert Determination – This involves submitting specific points of dispute to an expert(s) appointed by the parties who makes a decision based on the materials before him. It may or may not be binding based on the agreement of the parties.
- v. Arb-Med-Arb – It is a hybrid between arbitration and mediation which aims at incorporating the non-adversarial nature of mediation and the binding nature of an arbitral award. The parties enter upon arbitration following which the arbitrator necessarily refers parties to mediation. The result of the mediation can then be recorded as terms of settlement by the arbitrator, making it binding.

Enforceability of MTDRC's in India

Indian courts have interpreted and enforced pre-arbitral steps in MTDRC's on multiple occasions.¹⁰⁵ However, enforcement of pre-arbitral steps is contingent on the clause complying with certain non-exhaustive factors, which have been developed through the interpretation of the courts. These factors include:

- a. usage of words such as 'shall' instead of 'may' which would indicate the mandatory nature of the pre-arbitral steps;
- b. usage of unambiguous language through careful drafting processes;

¹⁰⁴. Clause 20.5 and 20.6, FIDIC Red Book (1999 edition).

¹⁰⁵. *Tulip Hotels Pvt. Ltd. v. Trade Wings Ltd.*, 2010(1) Mah. L.J. 73.

- c. ensuring that pre-arbitral steps are time-bound and balance the rights of both parties;¹⁰⁶ and
- d. the parties have not waived or deemed the enforcement impossible through their conduct.¹⁰⁷

It is important to note that fulfilling the above factors doesn't guarantee enforcement as the same differs on a case to case basis.

In Singapore, the Singapore High Court in the case of *Ling Kong Henry v Tanglin Club*,¹⁰⁸ confirmed that a multi-tier dispute resolution clause (e.g. a clause providing for conciliation, then mediation and finally, arbitration), constitutes a single arbitration agreement – even if the obligation to arbitrate only takes effect once the prior dispute mechanisms are completed.

The UK Courts too have recognised multi-tier dispute resolution clauses. For example, in the case of *Emirates Trading Agency LLC v Prime Mineral Exports Private Ltd*,¹⁰⁹ a multi-tiered dispute resolution clause was found to be enforceable which required the parties to seek to resolve the dispute by “friendly discussions”, failing which either party could refer the dispute to arbitration.

II. Dispute Adjudication Board (DAB)

Time and cost savings in construction project are of foremost importance. Halting work due to disputes can have serious consequences on the viability of the project as it would lead to cost overruns. This led to a requirement for a body that could adjudicate disputes on an interim basis without stopping work progress. This body is commonly referred to as the Dispute

Adjudication Board (DAB)¹¹⁰ or Dispute Review Board (DRB).¹¹¹

In India, dispute boards were first used post liberalization, when they were mandatory in all projects financed by the World Bank having a value of USD 50 million or more. Recently, dispute boards have become the norm in most large construction projects. To illustrate, a few instances are mentioned below:

- Indian Railways' project to build a dedicated freight corridor in India¹¹²
- Chennai Metro Rail Project¹¹³

Composition, Jurisdiction and Decisions of the DAB

The DAB/DRB comprises of a panel (one or more) of neutral members appointed on contract commencement stage for the entire duration of the contract period or on an ad hoc basis. This standing panel usually comprises of experts in the field, having the relevant skill set to adjudicate the matters brought before them. Its jurisdiction emanates from the contract based on which it issues binding interim orders, until revised by amicable settlement, an arbitral award or a court decision.

Enforcement of Decisions of the DAB

The parties are required to promptly give effect to the decision made by the DAB. However, in the event where either party: (1) is dissatisfied with the decision of DAB, (2) issues a notice of dissatisfaction within the stipulated time, and/or (3) fails to comply with the same; the dispute may be referred to arbitration.¹¹⁴ Therefore, the only way to enforce the award of the DAB against a non-complying party is by referring the matter to arbitration (where it is provided by the agreement) or to the courts. This is a

¹⁰⁶. *Ravindra Kumar Verma v. M/s BPTP Limited*, (2015) 147 D.R.J. 175.

¹⁰⁷. *Demerara Distilleries Pvt. Ltd. v. Demerara Distilleries Ltd.*, (2015) 13 S.C.C. 610.

¹⁰⁸. [2018] SGHC 153

¹⁰⁹. [2014] EWHC 2104 (Comm)

¹¹⁰. Clause 20.2, FIDIC Red Book (1999 Edition).

¹¹¹. World Bank Standard Bidding Documents, 1990.

¹¹². BID DOCUMENT, Dedicated Freight Corridor, Civil and Structures Contract Package, June 27, 2018, Available at: http://www.dfccil.gov.in/upload/Bid_Doc_BRKN-DER_RFO_Pt_1-4.pdf.

¹¹³. Chennai Metro Rail Limited, Tender Track No. 02 – Track Works issued on 01.10.2016.

¹¹⁴. For example see Clause 20.7, FIDIC Conditions of Contract.

significant disadvantage of DAB's decisions and sometime leads to delays.

A perception therefore, has developed that the DAB system is not being implemented as effectively in India as envisaged. Some of the reasons for lack of effectiveness of the DAB system are stated to be as follows:

- i. Delay in constitution of DABs and loss of considerable time before the DAB mechanism is put in place;
- ii. Lack of requisite qualifications and expertise and awareness about the spirit and procedures of DAB operations by DAB members;
- iii. Long time taken in resolving disputes referred to the DAB, much beyond the period stipulated in the contract;
- iv. Tendency of parties to challenge the decisions of DAB in Arbitration and Litigation, as such decisions are not statutorily final and binding,
- v. Mindset of non-acceptance of the system and lack of honoring of the decisions given by DABs¹¹⁵

Evidence in Construction Disputes

The taking of evidence in construction disputes involves handling voluminous documents, interviewing witnesses from all involved parties and taking expert evidence. Among these, documentary evidence is considered the most important due to its reliability and accuracy. A document is "a writing, communication, picture, drawing, program or data of any kind, whether recorded or maintained on paper or by electronic, audio, visual or any other means." It relates to both physical and electronic media.

The tribunal usually conducts a hearing on evidentiary issues to determine the extent of disclosure and methods to do the same in fairly, economically and efficiently. The scope of

documentary disclosure is determinable either by the parties' agreement or tribunal issued directions. All documents directly relevant to the issues and being relied on by the party must be disclosed. A representative list¹¹⁶ of the types of documentary evidence is given below:

- a. Pre-contractual documentation
- b. Contractual documentation
- c. All work schedules including extension of time applications
- d. Correspondence
- e. Other contract-related documents including minutes of meetings, work reports etc.
- f. Cost documentation, including invoices, receipts and payment proof.

i. Witness Testimony

The parties to the dispute identify fact witnesses post the document disclosure stage of dispute resolution. The testimony of these witnesses provides contextual analysis of the disclosed documents and helps the dispute resolution forum construct a factual background. These witnesses are examined and cross-examined by the parties and, their testimonies become part of the evidence to be considered by the tribunal.

ii. Expert Evidence

The inherent complexity of construction disputes and the requirement of expert help to interpret terms such as 'general industry standards' in the contract contribute to the importance of expert evidence in support of either parties' claims. This is resolved through expert opinion which, is lent credence by the experience and knowledge of the expert who is suitably acquainted with the relevant industry. Expertise in construction disputes is usually required in delay assessment and quantification of claims.

Experts can be of two types, (a) party-appointed experts and (b) tribunal-appointed experts. The former are a product of the common law

¹¹⁵. "Improving the Functioning of Dispute Review Boards (DRB) in India", World Bank, in Standard Operating Procedures for Dispute Boards in India, Indian Council of Arbitration, New Delhi, April 2016, Page. 2.

¹¹⁶. Supra at 12, Chapter 9, Page 189.

adversarial system whereas the latter are a product of the inquisitorial method of civil law jurisdictions. The type of expert appointment may be determined by the underlying contract or when nothing is provided explicitly – based on the agreement of the parties or order of the tribunal. The evidence of the experts submitted and its admissibility is considered independently by the tribunal. It is important to note that expert evidence is not a substitute for the decision making duties of the tribunal.

i. Briefing an expert

The requirements of independence and impartiality make it relevant to give clear written instructions to the expert demarcating the scope of the expert's appointment. In case of party-appointed experts, parties must grant access to relevant documents which would enable the expert to make a relevant assessment of the claim. Instructions must be specific and aimed at ensuring transparency into the expert's opinion making process. Tribunal-appointed experts on the other hand must be given clear written instructions by the tribunal seeking redressal of specific questions.

ii. Forms of expert evidence

Expert evidence is generally of two types, written evidence in the form of reports or oral evidence in the form of a testimony at the evidentiary hearings. In case of written reports, the report must contain¹¹⁷ (a) the background, qualifications and experience of the expert, (b) description of instructions provided by the parties, (c) statement of his independence from the parties, (d) list of documents and facts relied on, including the

methodology, assumptions and evidence used while preparing his opinion, (e) an affirmation of his genuine belief in the truth of his findings along with his signature.

The expert is usually subject to oral cross examination based on the contents of his report. The communicative skills of the expert are of particular importance here. Recently, it has been seen that parties opt for a joint expert meeting to help experts discuss points of disagreement. Based on the meeting, the experts then produce a joint report that is submitted to the tribunal.

iii. Techniques of presenting expert evidence¹¹⁸

A number of techniques have been developed and used in the context of construction arbitration. To illustrate, a few have been discussed below:

- Building Information Modelling: This involves making a multi-dimensional model incorporating engineering drawings and specifications. It is comprehensible and shows all activities related to the project contextually.
- Joint Reports: Party-appointed experts meet and discuss areas of agreement and disagreement relating to the analysis to limit expert disputes in a case.
- Hot Tubbing: Experts from both sides present evidence and are cross-examined at the same hearing. This permits the tribunal to test the views of the arbitrators at the same time, which in turn reduces the number of expert disagreements on methodology, quantifications mechanisms etc.

¹¹⁷.Art. 5.2, IBA Rules on Taking of Evidence.

¹¹⁸.*Id.*, Page 210-211.

10. Construction Disputes: Practice Statement

We regularly advise and have represented several clients in construction related disputes. Some of the key contentious matters are provided below:

1. Represented one of the world's largest (U.S.A. based) technical, professional, and construction services company in ad-hoc arbitration proceeding arising out of a multi-million-dollar dispute related construction of a naval dry dock in India. The principal issue in case related to whether the design had flaws which lead to issues in construction or whether the construction itself was faulty.
2. Represented an India focused renewable energy generation group (contractor) against the owner of the largest wind energy project in India in disputes related to the construction of the wind energy plant. The case involved ascertainment of cause of delays in construction of the wind energy plants i.e. whether the delay was due to the employer such as lack of provision of an appropriate site or was it due to other factors and the extent of damages payable including liquidated damages.
3. Represented the investor in litigation proceedings against sub-contractors and National Highway Authority of India in relation to road construction projects involving issues of delayed performance, cost escalation and termination of concession agreements.
4. Represented the sub-contractor against the operator of Mumbai International Airport on issues related to delayed performance, cost escalation and termination of contracts.
5. Represented a global consortium of six leading private equity investment funds in successful arbitration proceedings before SIAC in a USD 450 million dispute arising out of construction of hydro power plants in India. The case involved issues around funding and construction of one of the largest hydel power projects in India.
6. Represented an Indian contractor against a German energy management and automation subcontractor in dispute arising out of a turn-key project awarded to the Indian contractor by one of the largest Indian public sector undertakings.
7. Advised a Canadian global supplier of furnaces against largest steel making company in India in a dispute relating to setting up / installation of Additional Heat Treatment Facilities at the Steel Plant on turnkey basis.
8. Represented a Real Estate investor in an S.E.Z. construction project in a dispute leading to commercial and investment treaty arbitration.
9. Represented a multinational company in disputes arising out of a joint venture project for construction, development and revenue sharing of a toll bridge project based in Kolkata.
10. Represented a leading global engineering, construction, and project management company in one of the first cases relating to taxation of turnkey contracts comprising of onshore and offshore project activities in respect of setting up of power projects in India.
11. Represented a medium enterprise client against a large European multinational corporation specializing in global energy management. The matter involved tender of several millions awarded by a Government of India undertaking, to the client in relation to design and commissioning of panel systems.

The following research papers and much more are available on our Knowledge Site: www.nishithdesai.com

 <p>Private Equity and Private Debt Investments in India</p> <p>May 2019</p>	 <p>International Commercial Arbitration: Law and Recent Developments in India</p> <p>May 2019</p>	 <p>Are we ready for Designer Babies?</p> <p>June 2019</p>
 <p>India Opens Skies for Drones</p> <p>August 2019</p>	 <p>Digital Health in India</p> <p>November 2019</p>	 <p>Impact Investing Simplified</p> <p>July 2019</p>
 <p>IP Centric Deals: Key legal, tax and structuring considerations from Indian law perspective</p> <p>February 2019</p>	 <p>Fund Formation: Attracting Global Investors</p> <p>February 2019</p>	 <p>Building a Successful Blockchain Ecosystem for India</p> <p>December 2018</p>

NDA Insights

TITLE	TYPE	DATE
Delhi Tribunal: Hitachi Singapore's Liaison Office in India is a Permanent Establishment, Scope of Exclusion Under Singapore Treaty Restrictive	Tax	November 2019
CBDT issues clarification around availment of additional depreciation and MAT credit for companies availing lower rate of tax	Tax	October 2019
Bombay High Court quashes 197 order rejecting Mauritius tax treaty benefits	Tax	May 2019
Investment Arbitration & India – 2019 Year in review	Dispute	January 2020
Changing landscape of confidentiality in international arbitration	Dispute	January 2020
The Arbitration and Conciliation Amendment Act, 2019 – A new dawn or sinking into a morass?	Dispute	January 2020
Why, how, and to what extent AI could enter the decision-making boardroom?	TMT	January 2020
Privacy in India - Wheels in motion for an epic 2020	TMT	December 2019
Court orders Global Take Down of Content Uploaded from India	TMT	November 2019
Graveyard Shift in India: Employers in Bangalore / Karnataka Permitted to Engage Women Employees at Night in Factories	HR	December 2019
India's Provident Fund law: proposed amendments and new circular helps employers see light at the tunnel's end	HR	August 2019
Crèche Facility By Employers in India: Rules Notified for Bangalore	HR	August 2019
Pharma Year-End Wrap: Signs of exciting times ahead?	Pharma	December 2019
Medical Device Revamp: Regulatory Pathway or Regulatory Maze?	Pharma	November 2019
Prohibition of E-Cigarettes: End of ENDS?	Pharma	September 2019

Research @ NDA

Research is the DNA of NDA. In early 1980s, our firm emerged from an extensive, and then pioneering, research by Nishith M. Desai on the taxation of cross-border transactions. The research book written by him provided the foundation for our international tax practice. Since then, we have relied upon research to be the cornerstone of our practice development. Today, research is fully ingrained in the firm's culture.

Our dedication to research has been instrumental in creating thought leadership in various areas of law and public policy. Through research, we develop intellectual capital and leverage it actively for both our clients and the development of our associates. We use research to discover new thinking, approaches, skills and reflections on jurisprudence, and ultimately deliver superior value to our clients. Over time, we have embedded a culture and built processes of learning through research that give us a robust edge in providing best quality advices and services to our clients, to our fraternity and to the community at large.

Every member of the firm is required to participate in research activities. The seeds of research are typically sown in hour-long continuing education sessions conducted every day as the first thing in the morning. Free interactions in these sessions help associates identify new legal, regulatory, technological and business trends that require intellectual investigation from the legal and tax perspectives. Then, one or few associates take up an emerging trend or issue under the guidance of seniors and put it through our "Anticipate-Prepare-Deliver" research model.

As the first step, they would conduct a capsule research, which involves a quick analysis of readily available secondary data. Often such basic research provides valuable insights and creates broader understanding of the issue for the involved associates, who in turn would disseminate it to other associates through tacit and explicit knowledge exchange processes. For us, knowledge sharing is as important an attribute as knowledge acquisition.

When the issue requires further investigation, we develop an extensive research paper. Often we collect our own primary data when we feel the issue demands going deep to the root or when we find gaps in secondary data. In some cases, we have even taken up multi-year research projects to investigate every aspect of the topic and build unparalleled mastery. Our TMT practice, IP practice, Pharma & Healthcare/Med-Tech and Medical Device, practice and energy sector practice have emerged from such projects. Research in essence graduates to Knowledge, and finally to *Intellectual Property*.

Over the years, we have produced some outstanding research papers, articles, webinars and talks. Almost on daily basis, we analyze and offer our perspective on latest legal developments through our regular "Hotlines", which go out to our clients and fraternity. These Hotlines provide immediate awareness and quick reference, and have been eagerly received. We also provide expanded commentary on issues through detailed articles for publication in newspapers and periodicals for dissemination to wider audience. Our Lab Reports dissect and analyze a published, distinctive legal transaction using multiple lenses and offer various perspectives, including some even overlooked by the executors of the transaction. We regularly write extensive research articles and disseminate them through our website. Our research has also contributed to public policy discourse, helped state and central governments in drafting statutes, and provided regulators with much needed comparative research for rule making. Our discourses on Taxation of eCommerce, Arbitration, and Direct Tax Code have been widely acknowledged. Although we invest heavily in terms of time and expenses in our research activities, we are happy to provide unlimited access to our research to our clients and the community for greater good.

As we continue to grow through our research-based approach, we now have established an exclusive four-acre, state-of-the-art research center, just a 45-minute ferry ride from Mumbai but in the middle of verdant hills of reclusive Alibaug-Raigadh district. **Imaginarium AliGunjan** is a platform for creative thinking; an apolitical ecosystem that connects multi-disciplinary threads of ideas, innovation and imagination. Designed to inspire 'blue sky' thinking, research, exploration and synthesis, reflections and communication, it aims to bring in wholeness – that leads to answers to the biggest challenges of our time and beyond. It seeks to be a bridge that connects the futuristic advancements of diverse disciplines. It offers a space, both virtually and literally, for integration and synthesis of knowhow and innovation from various streams and serves as a dais to internationally renowned professionals to share their expertise and experience with our associates and select clients.

We would love to hear your suggestions on our research reports. Please feel free to contact us at research@nishithdesai.com

Nishith Desai Associates

LEGAL AND TAX COUNSELING WORLDWIDE

MUMBAI

93 B, Mittal Court, Nariman Point
Mumbai 400 021, India

tel +91 22 6669 5000
fax +91 22 6669 5001

SILICON VALLEY

220 California Avenue, Suite 201
Palo Alto, CA 94306-1636, USA

tel +1 650 325 7100
fax +1 650 325 7300

BANGALORE

Prestige Loka, G01, 7/1 Brunton Rd
Bangalore 560 025, India

tel +91 80 6693 5000
fax +91 80 6693 5001

SINGAPORE

Level 30, Six Battery Road
Singapore 049 909

tel +65 6550 9856

MUMBAI BKC

3, North Avenue, Maker Maxity
Bandra-Kurla Complex
Mumbai 400 051, India

tel +91 22 6159 5000
fax +91 22 6159 5001

NEW DELHI

C-5, Defence Colony
New Delhi 110 024, India

tel +91 11 4906 5000
fax +91 11 4906 5001

MUNICH

Maximilianstraße 13
80539 Munich, Germany

tel +49 89 203 006 268
fax +49 89 203 006 450

NEW YORK

1185 Avenue of the Americas,
Suite 326 New York, NY 10036, USA

tel +1 212 464 7050