

IN THE COURT OF APPEAL (CIVIL DIVISION)
ON APPEAL FROM THE TECHNOLOGY AND CONSTRUCTION COURT
HHJ MARK RAESIDE QC
[2016] EWHC 2191 (TCC)

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 22 February 2018

Before:

LORD JUSTICE JACKSON
LORD JUSTICE MOYLAN
and
SIR STEPHEN TOMLINSON

Between:

AMEY BIRMINGHAM HIGHWAYS LTD

**Claimant/
Respondent**

- and -

BIRMINGHAM CITY COUNCIL

**Defendant/
Appellant**

Ms Anneliese Day QC and Mr George McDonald (instructed by **DLA Piper UK LLP**)
for the **Appellant**

Mr Christopher Lewis QC and Mr Peter Land (instructed by **Freshfields Bruckhaus
Deringer LLP**) for the **Respondent**

Hearing dates: 30, 31 January and 1 February 2018

Judgment Approved

Lord Justice Jackson:

1. This judgment is in eight parts, namely:

Part 1 – Introduction	Paragraphs 2 – 8
Part 2 – The contract	Paragraphs 9 – 24
Part 3 – A brief history of events	Paragraphs 25 – 39
Part 4 – The appeal to the Court of Appeal	Paragraphs 40 – 43
Part 5 – Were ABHL under a duty to update the MINV and MSEC tables in the Project Network Model?	Paragraphs 44 – 74
Part 6 – What was the extent of ABHL’s obligations?	Paragraphs 75 – 79
Part 7 – Should milestone certificates 6 to 9 be set aside?	Paragraphs 80 – 91
Part 8 – Conclusion	Paragraphs 92 – 96

Part 1: Introduction

2. This is an appeal by Birmingham City Council against a decision concerning the correct interpretation of a PFI contract. The principal issues are: (1) whether the PFI service provider was required to update inventory details on a database provided at the outset and (2) whether four completion certificates can be set aside for “manifest error”.
3. The present disputes have been the subject of both adjudication and litigation. Birmingham City Council were the referring party in the adjudication. They are defendant in the litigation and appellant in this court. I shall refer to them as “BCC”.
4. Amey Birmingham Highways Limited were respondent in the adjudication. They are claimant in the litigation and respondent in this court. I shall refer to them as “ABHL”.

5. Scott Wilson are a firm of consultants based in Nottingham. Scott Wilson were engaged by ABHL to run a software system known as the Pavement Management Model (“PMM”).
6. In this judgment I shall use the abbreviation “PFI” for Private Finance Initiative. I shall use the abbreviation “TCC” for Technology and Construction Court.
7. The PFI contract in this case legislates for a 25 year period. It is around 5,190 pages long, excluding discs, plans and documents incorporated by reference. The parties have provided to the court only those parts which are relevant to the present appeal.
8. Before tackling the issues in this appeal, I must first set out some of the more important terms of the contract.

Part 2: The contract

9. By a contract dated 6 May 2010, entitled “Project Agreement”, BCC engaged ABHL pursuant to the Government’s PFI policy to undertake the rehabilitation, maintenance, management and operation of the road network in Birmingham for a 25 year period.
10. The contract is a formidable document. The definitions alone span over 200 pages. In that contract BCC is referred to as “the Authority”. ABHL is referred to as “the Service Provider”.
11. The main body of the contract includes the following provision:

“1. DEFINITIONS, INTERPRETATION AND CONSTRUCTION

1.1 This Contract comprises:

1.1.1 the Main Body;

1.1.2 the schedules; and

1.1.3 the annexures;

together, the “**Contract**”.

1.2 Priority

This Contract shall be construed and interpreted as a whole provided that in the event of any conflict or inconsistency between the provisions of the Main Body, the schedules and annexures, or between any of the schedules, or between any of the annexures, then, save as expressly provided for by clause 1.3, the conflict or inconsistency shall be resolved according to the following descending order of priority:

1.2.1 the Main Body and schedule 1 (*Definitions, Interpretation and Construction*);

1.2.2 schedule 2 (*Output Specification*);

1.2.3 schedule 4 (*Payment Mechanism*); and

1.2.4 all other schedules and annexures.

...

4. APPOINTMENT OF AN INDEPENDENT CERTIFIER

On or prior to the date of this Contract the Authority and the Service Provider shall appoint jointly the Independent Certifier using the Independent Certifier's Appointment. The Independent Certifier's Appointment shall set out the duties owed by the Independent Certifier to the Authority and to the Service Provider.

...

5. CONDITION OF THE PROJECT NETWORK

5.1 The Service Provider confirms that, subject to clause 5.2, it has satisfied itself as to:

5.1.1 the condition and extent of the Project Network at the Pre-Commencement Survey Date (including the volume and type of Apparatus and Highway Trees); and

5.1.2 the work that it needs to carry out on the Project Network in order to comply with the requirements of schedule 2 (*Output Specification*).

...

6. SURVEYS AND INSPECTIONS

6.1 General

6.1.1 The Service Provider shall undertake all inspections, surveys, tests and assessments and provide strategy documents and reports in accordance with this clause 6.1 (*General*) and (subject to the provisions of this clause 6 (*Surveys and Inspections*)), and clause 41.6 (*Change in highways standards*) the Highways Maintenance Code, the Highway Structures Code and the Highways Lighting Code so that all the unprocessed data provided as a result of undertaking the inspections, surveys, tests and assessments is available to:

6.1.1.1 the Authority to enable it to support a defence under section 58 of the [Highways Act 1980] and any other Legislation that requires the Authority to know or reasonably be expected to know whether or not the condition of the Project Network (or part thereof) was likely to cause danger to users of the Project Network;

6.1.1.2 the Authority to monitor that the Services are being provided in accordance with the requirements of schedule 2 (*Output Specification*);

...

6.1.1.4 the Service Provider to run the NCI Calculation Methodology, the FWCI Calculation Methodology, the VGCI Calculation Methodology, the KBCI Calculation Methodology, and the CTCI Calculation Methodology using the Pavement Management Model (and, for the purposes of this Contract, solely the Service Provider shall perform such calculations and such calculations shall only be performed using the Pavement Management Model).

6.1.1A The Service Provider may update the Pavement Management Model from time to time:

6.1.1A1 in accordance with any changes made to the Project Network Model pursuant to this Contract; ...

...

6.3 Condition Surveys

6.3.1 The Service Provider shall carry out Condition Surveys on all Project Roads annually for the duration of the Contract Term in accordance with this clause 6 (*Surveys and Inspections*) and any applicable Highways Standards.

...

9. MILESTONES

9.1 The Service Provider shall achieve Milestone Completion by the relevant Planned Milestone Completion Date. The Milestones and their respective Planned Milestone Completion Dates are set out in the table below:

Milestone	Planned Milestone Completion Date
1	6 Months after the Service Commencement Date.
2	12 Months after the Service Commencement Date.
3	18 Months after the Service Commencement Date.
4	24 Months after the Service Commencement Date.
5	30 Months after the Service Commencement Date.
6	36 Months after the Service Commencement Date.
7	42 Months after the Service Commencement Date.
8	48 Months after the Service Commencement Date.
9	54 Months after the Service Commencement Date.
10	60 Months after the Service Commencement Date.

...

11. SERVICE PROVIDER PROGRAMMES and SERVICE PROVIDER REPORTS

11.1 The Service Provider shall produce, revise and provide to the Authority the Service Provider Programmes in accordance with the provisions of this clause 11 (*Service Provider Programmes*)

...

11.1.3 The Core Investment Period Programme shall contain, without limitation, the following information:

11.1.3.1 a detailed plan on a PFI District by PFI District and street by street basis of each item of Core Investment Works that are to be carried out by the Service Provider to the Project Network in order to comply with the requirements of this Contract in respect of the forthcoming Contract Year and how, having made due enquiry, such Core Investment Works will be managed and/or co-ordinated in the context of other works being carried out on the relevant areas of the Project Network by the Authority (as Highway Authority), Statutory Undertakers or third parties in respect of the same period;

11.1.3.2 a detailed plan, on a PFI District by PFI District and street by street basis, of ... all the surveys, inspections and tests (including timings and locations of such surveys, inspections[,] tests and assessments) to be carried out on the Project Network pursuant to the provisions of clause 6 (*Surveys and Inspections*) which relate to the Core Investment Works in respect of the forthcoming Contract Year;

11.1.3.3 a strategic plan on a PFI District by PFI District basis for the remainder of the Core Investment Period setting out:

- (a) the Core Investment Works to be carried out to meet each Milestone and the requirements of part 1 of schedule 2 (*Output Specification*);
- (b) the NCI_{link}, NCI_{local}, NCI_{main} and NCI_{sec} profiles for the Project Roads in a graphical or tabular format demonstrating the relevant NCI profile for each PFI District for each Month during the Core Investment Period;
- (c) details of all surveys, inspections and tests (including timing and location of such surveys, inspections and tests) to be carried out in accordance with the provisions of clause 6 (*Surveys and Inspections*) which relate to the Core Investment Works;

...

...

13.2 Certification of Milestones

13.2.1 The Service Provider shall notify the Independent Certifier and the Authority five (5) Business Days before the date upon which the Service Provider requires the Independent Certifier to assess whether it has achieved Milestone Completion or Partial Milestone Completion in respect of each Milestone.

13.2.2 Following notification pursuant to clause 13.2.1 above, the Independent Certifier shall assess whether Milestone Completion or Partial Milestone Completion has been achieved by the Service Provider, and shall, within ten (10) Business Days of the date of the assessment referred to in clause 13.2.1, issue to the Service Provider (with a copy to the Authority):

13.2.2.1 a Certification of Completion; or

13.2.2.2 a Certificate of Partial Completion, in which case the certificate shall:

- (a) identify those PFI District(s) in respect of which Milestone Completion has been achieved; and
- (b) in respect of the remaining PFI District(s), specify the outstanding matters that must be attended to

before a Certificate of Completion can be issued;
or

13.2.2.3 a Certificate of Non-Completion, in which case the certificate shall specify the outstanding matters that must be attended to before a Certificate of Completion or a Certificate of Partial Completion can be issued.

13.2.3 If, in respect of a Milestone, the Independent Certifier has issued either a Certificate of Partial Completion or a Certificate of Non-Completion, the Service Provider shall:

13.2.3.1 attend to all outstanding matters specified in the Certificate of Partial Completion or Certificate of Non-Completion (as relevant) as expeditiously as possible; ...

...

13.5 Effect of Issue of Certificates of Completion etc

13.5.1 As between the Parties the decision of the Independent Certifier to issue any Certificate of Completion, Certificate of Partial Completion or Certificate of Non-Completion at any time shall, in the absence of fraud or manifest error, be final and binding on the Parties but without prejudice to the right of either Party to make a claim under the Independent Certifier's Appointment.

...

19. MANAGEMENT INFORMATION SYSTEM AND PROJECT NETWORK MODEL

19.1 Management Information System

19.1.1 The Parties agree and acknowledge that, on or before the date of this Contract, the Authority has provided to the Service Provider all the data it holds on Confirm and BMX to enable the Service Provider to develop a Management Information System.

19.1.2 The Service Provider shall, from the Service Commencement Date until the MIS Upgrade Date, provide a Management Information System in accordance with the provisions of Table 8.1 in part 8 of schedule 2 (*Output Specification*).

...

19.2 Project Network Model

19.2.1 From the Service Commencement Date the Service Provider shall accurately update the Project Network Model in accordance with Performance Standard 8 of schedule 2 (*Output Specification*) and shall ensure that the information contained in it is up to date at all times.

19.2.2 The Authority shall, from time to time and at the reasonable request of the Service Provider, provide any necessary information reasonably required to update the Project Network Model.

PART G – THE SERVICES

20. OBLIGATION TO PROVIDE THE SERVICES AND PERFORMANCE STANDARDS

20.1 Commencement of the Services

The Service Provider shall commence delivery of the Services from the Service Commencement Date and shall provide the Services for the remainder of the Contract Term in accordance with the terms of this Contract.

20.2 Standards to which the Services must be provided

The Service Provider shall supply the Services continuously throughout the Contract Term:

20.2.1 in order to comply fully with schedule 2 (*Output Specification*)

20.2.2 in accordance with Highway Standards and Relevant Lighting Standards save as expressly permitted or required to do otherwise in accordance with this Contract;

20.2.3 subject to clause 20.6, in accordance with the Method Statements;

20.2.4 in accordance with Good Industry Practice;

20.2.5 in accordance with the Service Provider Programmes or, in the case of Minor Works, as permitted in accordance with clause 11.5, or, where clause 11.14.2.2 applies, as instructed by the Authority ...

...

54.4 Service Provider's Due Diligence

54.4.1 The Service Provider shall be deemed to have:

54.4.1.1 satisfied itself as to the assets to which it will acquire rights and the nature and extent of the risks assumed by it under this Contract; and

54.4.1.2 gathered all information necessary to perform its obligations under this Contract and other obligations assumed, including:

(a) information as to the nature, location and condition of the Project Network (including hydrological, geological, geo-technical and sub-surface conditions) ...

...

55. INDEMNITY

55.1 Matters indemnified by the Service Provider

The Service Provider shall, subject to clause 55.2 (*Exclusions*), be responsible for and shall release and indemnify the Authority, its employees, agents and contractors on demand from and against, all liability for:

55.1.1 death or personal injury;

55.1.2 loss of or damage to property (including property belonging to the Authority or for which it is responsible "**Authority Property**");

55.1.3 breach of statutory duty; and

55.1.4 third party actions, claims, demands, costs, charges and expenses (including legal expenses on an indemnity basis);

which may arise out of, or in consequence of:

55.1.5 the design (subject to clause 7 (*Latent Defects*)), installation, operation or maintenance of the Project Network excluding Privately Maintainable Public Rights of Way; or

55.1.6 the operation or maintenance of the Project Assets and/or the Project Facilities; or

55.1.7 the performance or non-performance by the Service Provider of its obligations under this Contract; or

55.1.8 the presence on the Authority's Property or on any part of the Project Facilities not the property of the Authority, of a Service Provider[,] a Sub-Contractor, their employees or agents in each case in relation to the provision of the Services or the discharge of obligations under this Contract,

and (without limitation to the generality of clauses 55.1.5 to 55.1.8 inclusive) which may specifically include:

55.1.9 the failure by the Service Provider to keep the Management Information System and/or the Project Network Model up to date at all times;

...

68. HANDBACK PROCEDURE

68.1 General

The Service Provider shall perform the Services in accordance with the provisions of this Contract so that at the Expiry Date (and, for the avoidance of doubt, not the Termination Date) the Project Network (and each Project Network Part) and the Project Facilities comply with the applicable Expiry Condition Requirements.

...

70. DISPUTE RESOLUTION

70.1 Consultation

70.1.1 Any Dispute arising in relation to any aspect of this Contract shall be resolved in accordance with this clause 70 (*Dispute Resolution*).

70.1.2 If a Dispute arises in relation to any aspect of this Contract, the Service Provider and the Authority shall first consult in good faith in an attempt to come to an agreement in relation to the Dispute.

70.1.3 If the Service Provider and the Authority fail to resolve the Dispute through such consultation within fifteen (15) Business Days, either party may refer the matter to an Adjudicator selected in accordance with clause 70.2 (*Adjudication*) below. Without prejudice to clause 70.1.2 above, either party may give the other notice of the intention to refer the Dispute to adjudication and the Adjudicator shall be selected in accordance with clause 70.2 (*Adjudication*).

...

70.2.6 The Adjudicator shall act impartially and may take the initiative in ascertaining the facts and the law. The Adjudicator shall have the power to open up, review and revise any opinion, certificate, instruction, determination or decision of whatever nature given or made under this Contract.

...

70.3 Arbitration

70.3.1 If:

...

70.3.1.2 either Party is dissatisfied with or otherwise wishes to challenge the Adjudicator's decision made in accordance with clause 70.2.3;

...

then either Party may (within thirty (30) Business Days of receipt of the Adjudicator's decision, where appropriate), notify the other Party of its intention to refer the Dispute to:

70.3.1.4 arbitration, in which case the provisions of this clause 70.3 (*Arbitration*) shall apply; or

70.3.1.5 the Courts of England and Wales if it relates to a question of law.

...

95.1 Common Law Rights for the Authority

Subject to:

95.1.1 the provisions in clause 95.3; and

95.1.2 any other express right of the Authority pursuant to this Contract; and

95.1.3 the Authority's right to claim, on or after termination of this Contract, the amount of its reasonable costs, losses, damages and expenses suffered or incurred by it as a result of rectifying or mitigating the effects of any breach of this Contract by the Service Provider save to the extent that the same has already been recovered by the Authority pursuant to

this Contract or has been taken into account to calculate any compensation payable by the Authority pursuant to clause 69 (*Compensation on termination*);

the sole remedy of the Authority in respect of a failure to provide the Services in accordance with:

- (a) the Output Specification; or
- (b) any of the provisions of this Contract listed in the Sole Remedy List; or
- (c) any other provision of this Contract which, if breached, results in the making of an Adjustment which fully compensates the Authority for the Loss suffered by it as a result of such breach,

shall be the operation of schedule 4 (*Payment Mechanism*).”

12. The Appendix to this judgment is a glossary extracted from Schedule 1 to the contract. It sets out those definitions which are relevant to the present appeal.

13. Schedule 2 to the contract is the “Output Specification”. Part 1 of the Output Specification provides:

“1. REQUIRED OUTCOMES

1.1 The Service Provider shall comply with the provisions of this Performance Standard 1 and ensure that at the end of the Core Investment Period and thereafter until the expiry of the Contract Term in relation to the Project Network:

1.1.1 no Road Section Lengths in each of PFI Districts 1 to 12 (inclusive) are Failed;

1.1.2 no Road Section Lengths on each of the Network Route Hierarchies except the Local Access Route Network in each of PFI Districts 1 to 12 (inclusive) have an SRI of less than 1.2;

1.1.3 no Footway Section Lengths, Verge Section Lengths, Kerb Section Lengths or Cycling Track Section Lengths are Poor or below;

...”

14. Part 1A of the Output Specification (“PS1A”) sets out what work must be done in order to achieve each of the ten milestones in the core investment period. Part 1B of the Output Specification (“PS1B”) sets out the condition in which ABHL must maintain the roads, footways, verges, cycle tracks and kerbs during the subsequent 20 years of the contract.

15. Part 8 of the Output Specification (“PS8”) sets out what ABHL must achieve. Paragraph 2.2.2.1 of PS8 requires ABHL to maintain and update a project network inventory. PS8 includes the following provision:

“2.3 Project Network Model

- 2.3.1 Where the Authority notifies the Service Provider of a change to the Project Network in accordance with this Contract, the Service Provider shall ensure that all information provided to the Service Provider by the Authority relating to such change is input into the Project Network Model within five (5) Business Days of the date of such notification unless otherwise agreed between the parties.
- 2.3.2 On each occasion where the Project Network Model is updated in accordance with paragraph 2.3.1 the Service Provider shall provide the Authority with an electronic copy of the updated Project Network Model within one (1) Business Day of the date on which the Project Network Model is altered in accordance with paragraph 2.3.1 above.
- 2.3.3 The Service Provider shall, from the Service Commencement Date, notify the Authority on a monthly basis of any amendments it would recommend to be made to the Project Network Model specifying all details and the reasons for such recommendation.”

16. Part 11 of the Output Specification sets out how the network condition indices are to be calculated. Paragraph 1.1.1 of Part 11 states:

“1.1.1 NCI_{main} in respect of a Road Section Length (“RSL”) on the Strategic Route and Main Distributor Network is calculated in accordance with the following formula:

$$NCI_{main} = PCI_{main} + SRI_{main} + SRI_{main}$$

where:

PCI_{main} is calculated in accordance with paragraph 3;

SRI_{main} is calculated in accordance with paragraph 4; and

SCI_{main} is calculated in accordance with paragraph 5”

17. In relation to the pavement condition index, Section 3 of Part 11 provides:

“3.2.4 Where the survey undertaken in accordance with paragraph 3.1.1 reveals that the length of the relevant RSL is more than 5%, but less than 10% over or under the length for that RSL recorded in the Project Network Model, then, provided that the Service Provider can demonstrate the accuracy of its measurement to the satisfaction of the Authority then the Service Provider shall amend the Project Network Model accordingly and the existing survey data shall be used in the PCI calculation.

3.2.5 Where the survey undertaken in accordance with paragraph 4.1.1 reveals that the length of the relevant RSL is 10% or more over or under the length for that RSL recorded in the Project Network Model, then the RSL shall be re-surveyed. Where the Service Provider can demonstrate the accuracy of its original RSL length measurement via the re-survey to the satisfaction of the Authority then the Service Provider shall amend the Project Network Model and align any associated condition data accordingly and the data from the re-survey shall be used in the PCI calculation.”

There are similar provisions in respect of skid resistance index and surface condition index. These are at paragraphs 4.2.4 to 4.2.5 and 5.2.4 to 5.2.5.

18. Schedule 3 to the contract contains method statements. I shall not weary the reader with lengthy quotations from these formidable documents, but will refer to them insofar as necessary when dealing with the issues in dispute.
19. Schedule 4 to the contract sets out the payment mechanism. Paragraph 2.1 of Schedule 4 sets out a formula for calculating the monthly payment due from BCC to ABHL. One element of that formula is:

“PS8T = the sum of any Adjustments due in relation to Performance Standard 8 calculated in accordance with paragraph 3.10 of this Part 1 of schedule 4 (*Payment Mechanism*) in respect of the month that is three (3) months prior to the Month to which the MUC relates.”

20. Schedule 11 to the contract deals with monitoring. It includes the following provisions:

- “1. The Service Provider shall carry out those inspections, surveys, tests and assessments that it is required to carry out during the Contract Term, pursuant to clause 6 (*Surveys and Inspections*) of this Contract and in accordance with Method Statement 13 (*Inspections, Assessments and Monitoring*).
2. This schedule 11 sets out the specific Monitoring Methods required to monitor performance of the Services described in schedule 2 (*Output Specification*). In respect of each Monitoring Method set out within this schedule 11, the Service Provider shall carry out monitoring against the Performance Targets as set out in schedule 2 (*Output Specification*). In addition, in respect of certain Performance Targets as set out below, the Service Provider shall carry out monitoring as specifically described in this schedule 11.

3. **Monitoring Method A**

The Service Provider shall carry out those inspections, surveys, tests and assessments to enable the Service Provider and the Authority to run the NCI Calculation Methodology, the FWCI Calculation Methodology, the KBCI Calculation Methodology, the VGCI Calculation Methodology and the CTCI Calculation Methodology at least once by 1 November of each Contract Year.”

21. Schedule 15 to the contract sets out the milestone completion criteria. The test procedure for NCI set out in column 4 of the table in Schedule 15 includes the following passages:

“The data entered into the approved Pavement Management Model is delivered from two streams and may consist of:

- updated PCI, SCI and SRI survey data and/or
- re-setting of PCI, SCI and SRI following completion of interventions to individual RSLs.

For updated survey data the Independent Certifier shall validate through a 5% sample check of data that any updated survey results were obtained as follows:

...

- SCI – DVI data collected in accordance with the latest version of the UKPMS Survey Manual using accredited DVI Inspectors

...

- The Independent Certifier shall run a report from the PMM to confirm that the most up to date data has been input to the PMM.”

22. Annexure 3 to the contract sets out the form of the independent certifier’s appointment. Paragraph 2.1.2 of Appendix 1 to Annexure 3 provides:

“2.1.2 The Independent Certifier shall carry out the Initial Services set out in paragraph 2.2 (*Certification of Milestones*) in accordance with schedule 15 (*Milestone Completion Criteria*) of the Project Agreement, and in particular in respect of each criteria (as listed in column 1 of the table in schedule 15 (*Milestone Completion Criteria*) of the Project Agreement), the Independent Certifier shall carry out the relevant test (as detailed in column 3 of the table in schedule 15 (*Milestone Completion Criteria*) of the Project Agreement) in accordance with the relevant test procedure set out in column 4 of the table in schedule 15 (*Milestone Completion Criteria*) of the Project Agreement in connection with the certification of Milestones pursuant to clause 13.2 (*Certification of Milestones*) of the Project Agreement.”

23. Annexure 14 to the contract is the Sole Remedy List. This is the document referred to in clause 95.1(b) of the contract.

24. Having set out some of the contractual provisions, I must now turn to the history of events.

Part 3: A brief history of events

25. On 22 October 2008 BCC supplied to ABHL a database document known as “DRD0626”, detailing the Birmingham road network. DRD0626 contained six tables of data. These were:

1. MSEC
 2. MINV
 3. MSURV
 4. MECSURV
 5. MCON
 6. MSCRIM
26. Both parties intended that DRD0626 should be the initial version of the Project Network Model (“PNM”). Some of the details in DRD0626 accurately recorded the assets which then existed. Approximately 60% of the inventory details, however, were based upon national averages rather than detailed observation and measurement. Both parties were well aware of this fact.
27. On 6 May 2010 the parties entered into the project agreement, as noted in Part 2 above. On 7 June 2010 ABHL started to perform their services under the contract. The core investment period therefore commenced on that date and was intended to run for five years.
28. All went well for the first three and a half years. The independent certifier duly issued milestone certificates 1, 2, 3, 4 and 5. No one makes any complaint about those certificates. The independent certifier under the contract was Atkin Limited. In practice it was employees of Atkin who carried out the independent certification, one of whom was Mr William Moss.
29. In February 2014 Mr Clive Betts, BCC’s PFI Contract and Performance Manager, noticed a most remarkable thing. Some parts of the roads and footpaths were being left unrepaired. ABHL were deliberately leaving the defects in selected areas untreated. Mr Betts has produced photographs showing areas of defective paving and roads. One particularly striking photograph shows a cul-de-sac road, which has been resurfaced up to a line and the old surface, for no apparent reason, lies beyond that line.
30. As from the beginning of 2014 ABHL took the view that their contractual obligations in PS1 extended only to those roads, footways, kerbs, verges and cycle tracks which were detailed in MSEC and MINV. They were under no duty under PS1 (absent a change notice from BCC) to repair and maintain any sections of roads, footways, kerbs, verges and cycle tracks which were not detailed in MINV or MSEC. Since a large part of DRD0626 was based on default data (as explained above) there were many areas which fell into this category.
31. Mr Betts asked ABHL what was the reason for their changed approach. ABHL’s response in summary was this. As was always intended, they were using DRD0626 as the PNM. They were regularly updating four of the tables in that database as they gained new information about the road network. Those four tables were MSURV, MECSURV, MCON and MSCRIM. ABHL were not, however, updating MSEC and MINV. Those two tables contained inventory data.
32. ABHL continued to work on that basis from 2014 onwards. BCC maintained that this was a clear breach of contract: ABHL were under a duty to rehabilitate and maintain the road network which actually existed, not a hypothetical road network which both parties knew to be based upon default data. BCC maintained that ABHL were obliged to

update the default inventory data in the PNM with actual inventory data, as survey results came in. ABHL denied that they were under any such duty. The independent certifier took the view that it was not his function to resolve the contractual issues between the parties. In due course he issued milestone certificates 6, 7, 8 and 9. Certificate 9 is dated 2 March 2015.

33. The parties remained in dispute about whether ABHL were complying with the contract. Accordingly BCC referred the dispute to adjudication pursuant to clause 70.1.3 of the contract. Mr Andrew Goddard QC was appointed adjudicator. The three issues referred to the adjudicator were: (1) what was the scope of ABHL's obligation in relation to the core investment works; (2) whether ABHL were under an obligation to keep the PNM updated; and (3) whether milestone certificates 6 to 9 could be and should be set aside. The adjudicator received extensive evidence. He held an oral hearing on 23 June 2015. On 9 July 2015 the adjudicator handed down his decision.
34. In essence the adjudicator found in favour of BCC on all issues. He made the following declarations:
 - “(i) That ABHL's obligations to perform the Core Investment Works and meet the requirements of Performance Standard 1 extend to the Project Network as a whole and are not limited to the RSLs as recorded in the Project Network Model contained in DRD0626.
 - (ii) That ABHL must update the Project Network Model and maintain a Project Network Inventory which accurately reflects the actual extent of the Project Network and the Project Road.
 - (iii) That the Certificates of Completion for Milestones 6 to 9 inclusive be set aside, alternatively opened up, reviewed and revised and the relevant calculations performed again by reference to the actual Project Network Inventory.”
35. ABHL were aggrieved by the adjudicator's decision. Accordingly they referred the dispute to the TCC pursuant to clause 70.3.1.5 of the contract.
36. ABHL commenced proceedings in the TCC on 18 August 2015. The action came on for trial before HH Judge Mark Raeside QC, sitting as a Deputy High Court judge, on 23 to 25 February 2016. The judge received written evidence, but he did not hear any oral evidence. That was a sensible approach. The issues before both the judge and the adjudicator principally concerned the correct construction of the contract.
37. The judge handed down his reserved judgment on 31 August 2016. He came to the opposite conclusion from the adjudicator on issues 1 and 2. Accordingly, he did not need to decide issue 3. He issued a declaration that the adjudicator's decision was wrong.
38. As the battle has raged between BCC and ABHL, at different times both the adjudicator and the judge have come in for some trenchant criticisms. I do not accept those criticisms. Both the adjudicator and the judge were wrestling with a massive and convoluted contract, containing many oddities and infelicities, in addition to some fairly muddled evidence about the relevant computer programmes. It is perhaps unsurprising that the adjudicator and the judge came to opposite conclusions.

39. BCC were aggrieved by the judge's decision. Accordingly they appealed to the Court of Appeal.

Part 4: The appeal to the Court of Appeal

40. By an Appellant's Notice filed on 31 October 2016 BCC appealed against the judge's decision. In effect, BCC are seeking to reinstate the decision of the adjudicator. The parties are therefore asking this court to decide the same three issues which were originally before the adjudicator.
41. In April 2017 this case was referred to me for consideration on the papers. I took the view that the appeal had a real prospect of success. I therefore granted permission to appeal.
42. The appeal came on for hearing on Tuesday, 30 January 2018 and continued for two and a half days. Ms Anneliese Day QC and Mr George McDonald appeared for BCC, as they had done below. Mr Christopher Lewis QC and Mr Peter Land appeared for ABHL, as they had done below. I am grateful to all counsel for their assistance.
43. In my view the critical issue in this case is issue (2). That raises the question whether ABHL were under a duty to update the MSEC and MINV tables in the PNM. I shall therefore address that question first.

Part 5: Were ABHL under a duty to update the MINV and MSEC tables in the Project Network Model?

44. Two computer models play a vital role in the operation of this contract. They are the PNM and the PMM. The PNM holds information about the various roads, footways, verges, kerbs and cycle tracks. MINV and MSEC hold details of where the assets are and their precise sizes. MCON is a data table which records the condition of each asset. For example, MCON might say that a footway detailed in MINV is in a poor condition.
45. ABHL had been carrying out surveys and regularly updating the MCON table in the PNM. The PMM is a piece of software which uses the information in MCON in order to generate condition indices and inform the service provider programmes. In order to do this effectively, the PMM needs to receive accurate inventory information about the dimensions and locations of all roads, footways, verges, kerbs and cycle tracks. During 2010, 2011, 2012 and 2013 the works carried out by ABHL appeared to be consistent with the use of accurate inventory information in conjunction with the PMM. Since the beginning of 2014, however, ABHL have been carrying out works based on inaccurate inventory information in the PMM (by acting upon the condition indices which the PMM generated and which informed the service provider programmes). That inaccurate information was the data in MINV and MSEC without any updating.
46. At first sight that seems to me a most bizarre approach. But, says Mr Lewis, that is what the contract mandates. He points out, quite correctly, that it is not the function of the court to rescue parties from bad or even disastrous bargains which they make. In advancing that submission, Mr Lewis gained support from the judgment of the Supreme

Court in *Arnold v Britton* [2015] UKSC 36; [2015] AC 1619. See, in particular, the judgment of Lord Neuberger at [19] to [20].

47. Let me now turn to the provisions of the contract and see whether they really do mandate such a bizarre state of affairs.
48. The crucial provision for this purpose is clause 19.2.1 of the contract. Ms Day submits that this is a complete answer to ABHL's case. It requires ABHL to keep all six tables in the PNM updated, not just four of those tables.
49. Mr Lewis has advanced some formidable arguments to the opposite effect. He relies upon the same arguments as he adopted at trial. Both counsel have referred to these as "the eleven arguments" and I will follow suit. The judge has helpfully summarised the eleven arguments at paragraph 244 of his judgment. Both counsel were content to work from the judge's summary. It reads as follows:
 - i) That if the Adjudicator's argument was correct then the first part of the clause was entirely otiose;
 - ii) If there was a freestanding obligation to update the PNM then it would not be added to the end of the clause;
 - iii) The Project Agreement was highly regimented and therefore it is possible to track the obligation to update into Schedule 2, PS8, paragraph 2.3.1 and 2.3.2 but not so for those additional words.
 - iv) It was not in accordance with the thrust of the clause or indeed PS8.
 - v) The need to update the MIS, was carefully prescribed in PS8 but the same was not true for the PNM.
 - vi) No remedial consequences are provided for breach of clause 19.2.1 which is in the sole remedies list in Annexure 14 to the Project Agreement.
 - vii) Reference can be made to clause 43.1.1.2 which requires ABHL to maintain and update the MIS. No similar provision is made in respect of the PNM.
 - viii) As a basic inconsistency between the first part of those and those latter words.
 - ix) Such a clause would also be inconsistent with Schedule 2, Part 11, which refers to the need to amend the PNM in certain limited circumstances.
 - x) Those words at the end of the clause are not otiose and, thus, the meaning to be given to those additional words is read correctly to indicate that the obligation is to ensure the information is correct.
 - xi) The obligation at the end of the Contract Term to return the PNM is referable to Schedule 8 and not clause 19."

50. In relation to the eleven arguments, I have carefully considered both the current skeleton arguments and also counsel's oral submissions during the appeal. Mr Lewis' oral submissions are to be found on pages 49 to 63 of the transcript of day 2 of the appeal. Ms Day's response is to be found in the transcript of day 3 at pages 39 to 44. I see some force in argument 11. I see much less force in arguments 1 to 10. Let me deal with the eleven arguments individually.
51. As to argument 1, the first part of clause 19.2.1 is not otiose. It is a helpful cross-reference to PS8. Paragraph 2.3 of PS8 requires ABHL to update the PNM if BCC makes a change to the road network, for example by adding or removing a road. That is a substantial change which will affect the amount of the monthly payments. The last 16 words of clause 19.2.1 then add a general obligation upon ABHL to keep all the information in the PNM updated. In other words ABHL must replace the default inventory data with actual inventory data when available.
52. As to argument 2, I see nothing odd about placing the general obligation at the end of clause 19.2.1. As Ms Day points out, this clause does not stand on its own. It links in with clauses 6, 20 and 55. I will discuss the other linking provisions later.
53. As to argument 3, Mr Lewis is correct to say that the first part of clause 19.2.1 links into a regimented procedure, namely paragraph 2.3 of PS8. That is to be expected when new roads are being added to the network or when existing roads are being removed. But the updating of default inventory data in the PNM with actual inventory data derived from surveys is a more modest and routine operation. Indeed ABHL accepts that it has updated databases with actual inventory data without any fuss between 2010 and 2013. That operation does not require any regimented procedure.
54. Argument 4 seems to be another way of expressing the previous arguments. It adds nothing to ABHL's case.
55. As to argument 5, clause 19.1 deals with the Management Information System ("MIS"). Mr Lewis submits that PS8 contains detailed provisions about updating the MIS, but no similarly detailed provisions about updating the PNM. That is correct. On the other hand, the MIS contains a number of elements, each of which require separate consideration. They are the Project Network Inventory, the Powered Apparatus Inventory, the Underground Apparatus Inventory, the Routine Maintenance Management System, the Bridge Management System, the Tunnel Management System, the Structure Management System, the Street Lighting Management System, the Tree Management System, the Customer Care Management System and the Street Works Management System. It was appropriate for PS8 to provide some detail about the updating of all those elements.
56. On the other hand, the updating of the PNM as new survey information came in, was not a task which required elaborate guidance or prescription. It is common ground that ABHL have been updating the MCON table in the PNM quite satisfactorily. Indeed up until December 2013 ABHL were using updated inventory data for effecting repairs without difficulty.
57. I turn now to argument 6. Clause 19.2 is one of the provisions listed in the Sole Remedy List at Annexure 14 to the contract. The effect of clause 95.1 of the contract is that

BCC's sole remedy for non-compliance by ABHL with clause 19.2 is an adjustment of the monthly payment under the payment mechanisms set out in Schedule 4 to the contract.

58. If a road is added to or subtracted from the network, but ABHL fail to update the PNM in that regard, then they are in breach of paragraph 2.3 of PS8. That leads to a deduction from BCC's monthly payments to ABHL. Mr Lewis has taken the court through the sequence of contractual provisions which lead to that result.
59. It is also correct, as Mr Lewis states, that if ABHL fail to update the PNM in any other respect that does not lead to any deduction from the monthly payments. But in my view that is not problematical. As Ms Day says, if ABHL fail to update the inventory data, they will not achieve the milestone certificates. There is, therefore, no need to write into the contract any provision for financial deductions in respect of failure to update the PNM.
60. Argument 7 is correct so far as it goes. Clause 43.1.1.2 requires ABHL to maintain and update the MIS. There is no similar provision in respect of the PNM, other than clause 19.2.1. I do not see that this argument leads anywhere. In fairness, Mr Lewis only touched upon argument 7 briefly.
61. Argument 8 is no longer live. Mr Lewis states that he does not pursue it.
62. Argument 9 takes us into new terrain, namely Part 11 of the Output Specification. As noted earlier in this judgment, six provisions of Part 11 expressly require amendment of the PNM in specified circumstances. Those six provisions are paragraphs 3.2.4, 3.2.5, 4.2.4, 4.2.5, 5.2.4. and 5.2.5. Mr Lewis submits that the very fact that those clauses are there militates against there being any broader duty on ABHL to update the PNM.
63. Argument 9 has given rise to a lively exchange of notes. This continued for some 30 hours after the hearing, before the gunfire died down.
64. I have carefully studied these notes. Without going into the detail, my overall conclusion is this. Paragraphs 3.2.4, 3.2.5, 4.2.4, 4.2.5, 5.2.4 and 5.2.5 are dealing with special situations for which it was sensible to make specific provision. I do not think that those clauses are inconsistent with there being any general duty to keep the PNM updated.
65. Argument 10 is that the last 16 words of clause 19.2.1 simply require that the updating of the PNM in accordance with PS8 be done accurately. I do not accept this argument. The word "it" which appears in the last 16 words refers to the PNM as a whole.
66. I come finally to argument 11. Aficionados of this litigation sometimes call argument 11 the "book end" argument. Mr Lewis submits that clause 68 of the contract combined with the definition of "Expiry Condition C requirements" in Schedule 1 requires ABHL to hand over at the end of the 25 year period the PNM in a state of compliance with PS8. There is no requirement at the end of the project for the PNM to be updated in all respects.

67. Ms Day draws attention to the other provisions of clause 68 and to Expiry conditions A requirements. These require survey data to be taken into account. They also require all roads, footpaths, verges, kerbs and cycle tracks to be compliant with PS1A. I do not think that any of Ms Day's submissions are an effective answer to argument 11. If ABHL are under a duty to update the PNM generally, it seems strange that at the end of the project, Expiry conditions C only require the PNM to be compliant with PS8.

68. Let me now summarise the position. I do not see force in arguments 1 to 10. I do see some force in argument 11.

69. On the other hand, there are seven strong indications in the contract that ABHL were required to update the whole of the PNM, not just MSURV, MECSURV, MCON and MSCRIM. These are as follows:

(i) Clause 5 of the contract required ABHL to satisfy themselves about the extent of the project network. That requirement only makes sense if ABHL were required to maintain the roads, footways, verges, kerbs and cycle tracks which actually existed. If ABHL were going to work for the next 25 years on the original unamended inventory in the PNM, there would be no point in satisfying themselves about the extent of the project network which actually existed.

(ii) Clause 6 of the contract required ABHL to carry out all inspections and surveys in accordance with the Highways Maintenance Code. The Highways Maintenance Code states:

“8.6.7 A detailed highway inventory or asset register or database is an essential prerequisite of establishing a cost effective and adequate maintenance regime. It is also a vital component of the HAMP and is the starting point for valuation of the asset which is dealt with in Section 17. The inventory is the foundation on which asset management is built and when analysed in combination with other data, for example, road casualties and traffic flows, it provides crucial decision support information.

...

8.6.9 When inventory surveys are found to be necessary, the use of appropriate technology (e.g. video or aerial survey) may be considered. Careful specification of quality and accuracy is essential. In addition, once an asset inventory database has been established, it will be essential to keep it up to date, which means establishing a cyclic updating regime, defined by hierarchy or triggered by work on the ground. No authority should commence inventory data collection until assured arrangements for updating are in place.”

(iii) Clause 6.1.1.1 of the contract requires that ABHL will make available to BCC accurate inventory data about the highways, not default data.

- (iv) The test procedure set out in Schedule 15 to the contract requires the independent certifier to confirm that “the most up to date data” has been input into the PMM. The data referred to must be both inventory data and condition data.
 - (v) Clause 6.3.1 of the contract requires ABHL to carry out condition surveys on all project roads annually. It is implicit that ABHL will record the condition of all sections of road that are actually there. It would be a breach of clause 6.3.1 to disregard the condition of a section of road, simply because that section is not shown in the default inventory.
 - (vi) Clause 54.4.1 of the contract proceeds on the basis that ABHL are required to deal with the project roads, as they are on the ground, rather than those shown in the default inventory.
 - (vii) Clause 55.1.9 of the contract is an indemnity clause based upon the premise that ABHL is required “to keep ... the Project Network Model up to date at all times”.
70. There are a number of references in the method statements to ABHL’s obligations to update both the PNM and the PMM. But I do not find it necessary to embark upon an odyssey through the tortuous byways of the method statements. Those documents come at the bottom of the contractual hierarchy. Furthermore, as Mr Lewis observed, they are not free from inconsistencies.
71. It is clear from the main body of the contract and the other provisions to which I have referred that ABHL were under a duty to keep the PNM updated.
72. There is a further matter which supports the above conclusion. ABHL accept that they were under an obligation to update four of the six database tables in the PNM, namely MSURV, MECSURV, MCON and MSCRIM. None of the contractual provisions on which Mr Lewis relies provides any justification for treating MSEC and MINV differently from the other four database tables. Either ABHL are under a duty to update the PNM or they are not. It is clear from ABHL’s conduct that they accept an obligation to keep most of the PNM updated.
73. Let me now draw the threads together. Mr Lewis put his submissions most skilfully and attractively. I acknowledge that his “book end” argument has some force. But reading the contract as a whole, as clause 1.2 requires, I am quite satisfied that the answer to the question posed in this part of the judgment is ‘Yes’.
74. The appellant therefore succeeds on issue (2). I must now turn to issue (1), which concerns the extent of ABHL’s obligations.

Part 6: What was the extent of ABHL’s obligations?

75. ABHL contend that their obligations to rehabilitate and maintain Birmingham’s road network only applied to the assets originally defined in DRD0626. Those obligations do not extend to the actual road network as it exists on the ground.

76. DRD0626 was the PNM in its initial form. Mr Lewis contends that the parties chose this document to act as a reference base for calculating the condition indices. Mr Lewis took us through Schedule 2, the Output Specification, in some detail in order to demonstrate how this was done. He submits that the PNM is used definitionally to identify what are the section lengths of roads, footways, verges, kerbs and cycle tracks for which ABHL are responsible.
77. Ms Day does not dispute anything which Mr Lewis says about the role of the PNM in the output specification or the calculation of the condition indices. But, says Ms Day, the PNM is not a static document. The contract requires that the PNM be regularly updated, so as to record the actual road network not a hypothetical network based on default data.
78. I have held in Part 5 above that the PNM is not a static document, but requires regular updating, in order to replace the default inventory data with actual inventory data. In the light of that finding, Mr Lewis' careful submissions on issue (1) fall to the ground. ABHL's obligations extend to the whole of the road network, as it exists on the ground.
79. Having determined issues (1) and (2) in the same way as the adjudicator, I must now consider whether milestone certificates 6 to 9 should be set aside.

Part 7: Should milestone certificates 6 to 9 be set aside?

80. There appears to be a tension between clause 70.2.6 of the contract and clause 13.5.1. Ms Day suggested that this tension could be resolved by reference to the words "as between the parties" in clause 13.5.1. In other words, she submitted that if an adjudicator or arbitrator or court come onto the scene, the restrictions imposed by clause 13.5.1 fall away.
81. I do not accept that submission. In my view the dispute resolution procedures in clause 70 of the contract are subject to the restrictions imposed by clause 13.5.1. In other words, neither the adjudicator nor the court could set aside milestone certificates 6 to 9 unless there has been fraud or manifest error.
82. No one suggests that there has been any fraud. So that drops out of the picture.
83. Is this a case of manifest error? There are two helpful recent authorities on this issue, namely *IIG Capital LLC v Van Der Merwe* [2008] EWCA Civ 542; [2008] 2 All ER (Comm) 1173 and *North Shore Ventures Ltd v Anstead Holdings Inc* [2011] EWCA Civ 230; [2012] Ch 31.
84. *IIG* was a claim for payment against guarantors. The defendants had bound themselves to pay on demand, absent manifest error. Lewison J, the trial judge, rejected the suggestion that there was manifest error. He said that a manifest error was "one that is obvious or easily demonstrable without extensive investigation". The Court of Appeal approved the judge's approach to that issue and upheld his decision: see the judgment of Waller LJ at [33] to [35]. Lawrence Collins and Rimer LJ agreed.

85. *North Shore* was an action by a lender against the two guarantors of the loan. Clause 3.4 of the guarantee stated that a certificate signed by the claimant for the amount of the indebtedness was conclusive evidence against the guarantors, unless manifestly incorrect. The Court of Appeal approved the test for manifest error formulated by Lewison J in *IIG*. The court held that the certificate was invalidated by manifest error, because it did not take into account an agreed variation in the rate of interest.

86. At [61] Smith LJ said:

“On reflection I have come to the conclusion that for a party to rely on a manifest error in a certificate does not depend upon his ability to demonstrate the error immediately and conclusively. In the present case, the guarantors were able to recognise immediately that the certificate was based upon the interest rates as set out in the original loan agreement and not as varied in November 2004. They could see that it was manifestly incorrect. They could not immediately demonstrate that conclusively; they could not do so until the court had determined the issue of variation. But they were right, as this court has now held. I would hold that the certificate was manifestly incorrect and was of no effect.”

87. Finally, in relation to the law, I should refer to *IG Index v Colley* [2013] EWHC 748 (QB). In a very thorough judgment Stadlen J reviewed the authorities on manifest error. At [813] to [814] he held that the court could have regard to extrinsic evidence.

88. Let me now return to the facts of the present case. Schedule 15 to the contract sets out the test procedure which the independent certifier was to follow. I have set out the relevant passages in Part 2 above. Mr Moss has given unchallenged evidence as to the agreed procedure which he followed for issuing each milestone certificate. He visited the offices of Scott Wilson in Nottingham in order to review the data.

89. During 2014 and 2015 everyone involved in the certification process was aware of the contractual dispute between the parties. On 1 December 2014 Mr Moss circulated the following draft of a note which he proposed to add to milestone certificate 9:

“Note: the actual indices achieved shown in Table 1.9b are calculated using the original Pavement Management Model. The Independent Certifier recognises that the Authority and the Service Provider are in dispute regarding the validity of the Project Network Model and Project Network Inventory and any change to the Project Network Model or Project Network Inventory could change the numbers in Table 1.9b.”

90. In the event Mr Moss did not attach any such note to the certificate. This was because both BCC and ABHL were hoping to resolve their dispute without any need for adjudication or litigation.

91. The position therefore is this. On the dates when the independent certifier issued milestone certificates 6, 7, 8 and 9 everyone knew those certificates would be based upon erroneous calculations, if BCC’s case on the interpretation of the contract prevailed. In the event BCC’s interpretation of the contract has prevailed. The present case is similar to *North Shore*. Smith LJ’s dictum at [61] is directly in point. In my view milestone certificates 6, 7, 8 and 9 should be set aside for manifest error.

Part 8: Conclusion

92. The contract before the court is a PFI contract intended to run for 25 years. It may therefore be classified as a relational contract. In recent years there has been much academic literature on relational contracts and on the question whether they are subject to special rules. See, for example, Professor Hugh Collins' paper "Is a relational contract a legal concept?" in *Contracts in Commercial Law* (Degeling and others, Thomson Reuters 2016). For good reason, none of that literature has been cited to us and I do not venture into those contentious issues.
93. I do, however, make this comment. Any relational contract of this character is likely to be of massive length, containing many infelicities and oddities. Both parties should adopt a reasonable approach in accordance with what is obviously the long-term purpose of the contract. They should not be latching onto the infelicities and oddities, in order to disrupt the project and maximise their own gain.
94. In the present case the PFI contract worked perfectly satisfactorily for the first three and a half years. Things only went wrong in 2014 when ABHL thought up an ingenious new interpretation of the contract, which would have the effect of reducing their workload, alternatively increasing their profit if BCC issued change notices.
95. For the reasons set out in Parts 5 and 6 above, I would reject ABHL's ingenious new interpretation of the contract. For the reasons set out in Part 7 above I would set aside milestone certificates 6, 7, 8 and 9.
96. If my Lords agree, BCC's appeal will be allowed. This court will make declarations to the same effect as the declarations made by the adjudicator. I request counsel to agree the precise wording.

Lord Justice Moylan

97. I agree.

Sir Stephen Tomlinson

98. I also agree.

Appendix

"Accrued" means a Proposed Accruable Project Network Part which has become the responsibility of the Service Provider pursuant to this Contract by reason of the application of the provisions of schedule 19 (*Accrual and De-Accrual of Project Network Parts*) and

"Accrual" and **"Accrue"** shall be construed accordingly;

“Annual Unitary Charge” or **“AUC”** means the amount due from the Authority to the Service Provider calculated in accordance with paragraph 1.2 of schedule 4 (*Payment Mechanism*) (and, for the avoidance of doubt, the Annual Unitary Charge at the Service Commencement Date shall be 79,435,000.00; [Note, in the original the figure is handwritten]).

“Carriageway” means that part of the highway laid out for use for motor vehicles and which includes Cycle Lanes and does not include Footway, Footpaths or Cycle Tracks;

“Certificate of Completion” means a certificate issued by the Independent Certifier pursuant to clause 13 (*Certification*) certifying that, in respect of the Milestone in question, it is satisfied that Milestone Completion has been achieved in all Districts;

“Condition Survey” means one or any combination of a Surface Condition Assessment, SCRIM or Grip Tester, Detailed Visual Inspection, Deflectograph Survey, Failing Weight Deflectometer Surveys, Ground Penetrating Radar, CHART Surveys (and/or any new methodologies and/or machines that may be developed and subsequently approved by the Authority in writing from time to time) and **“Condition Surveys”** shall be construed accordingly;

“CONFIRM” means the proprietary software produced by Pitney Bowes for the maintenance and management of public infrastructure and assets;

“Core Investment Period” or **“CIP”** means the period of time commencing on the Service Commencement Date and ending on the date on which a Certificate of Completion in respect of the final Milestone is issued pursuant to clause 13.4.1 (*Dates on which Milestone Completion can occur*) or the Service Provider is deemed to have achieved Milestone Completion in relation to Milestone 10 pursuant to clause 9.4.7 (*Inability to complete Milestone*);

“Core Investment Works” means those works and/or services to be carried out (or procured to be carried out) by the Service Provider in order to meet the requirements of part 1A of schedule 2 (*Output Specification*) during the Core Investment Period;

“CTCI Calculation Methodology” means the methodology for calculating the Cycle Track Condition Index set out in paragraph 8 of part 11 of schedule 2 (*Output Specification*);

“Cycle Lane” means that part of a Carriageway or Footway which is laid out specifically for use by cycles;

“Cycle Track” means any path or route laid out for use by cycles which is not part of a Carriageway or Footway represented in the Project Network Model as separate Road Section Lengths;

“Cycle Track Condition Index” or **“CTCI”** means the index representing the condition of Cycle Tracks in the Project Area that is calculated in accordance with the CTCI Calculation Methodology;

“Cycle Track Section Length” or **“CTSL”** means a length of Cycle Track for an individual cross sectional position identified in the Project Network Model;

“De-Accrued” means, when applied to any item of Project Network Part, a Project Network Part which is no longer the responsibility of the Service Provider pursuant to this Contract by reason of the application of the provisions of schedule 19 (*Accrual and De-Accrual of Project Network Parts*) and **“De-Accrual”** shall be construed accordingly;

“Deflectograph Surveys” means a survey of the Carriageway undertaken to determine the structural condition of the Carriageway and **“Deflectograph Survey”** shall be construed accordingly;

“Detailed Visual Inspection” or **“DVI”** means a survey that is carried out by a qualified inspector on foot in accordance with the UKPMS Visual Inspection Guide V.1.0 as updated or amended from time to time and **“Detailed Visual Inspections”** or **“DVIs”** shall be construed accordingly;

“Disclosed Information” means all and any materials, documents, drawings, plans or other information relating in any way to the Project made available by the Authority or its agents in connection with the negotiation and preparation of this Contract and during the procurement process which preceded such negotiation and preparation, including all such materials, documents, drawings, plans, models or other information provided in connection with pre-qualification for that process (but shall exclude the information set out at annexure 2 (*Financing Agreements*));

“DVI” means Detailed Visual Inspection;

“Expiry Condition A Requirements” means that:

- (a) all Project Roads, Footpaths, Verges, Kerbs and Cycle Tracks comply with the requirements of paragraphs, 1.1 to 1.5 (inclusive) of Performance Standard 1B;
- (b) all Structures and Bridges comply with the requirements of paragraph 1.6 of Performance Standard 1B; and
- (c) all Tunnels comply with the requirements of paragraph 1.9 of Performance Standard 1B;

“Expiry Condition C Requirements” means that:

- (a) the UTMC complies with the requirements of Performance Standard 7;
- (b) the Management Information System and the Project Network Model comply with the requirements of Performance Standard 8;
- (c) the Depot is in the state of repair and condition required by the Depot Lease;
- (d) the UTC Centre is in a state of repair and condition required by the UTC Centre Lease;

“Expiry Date” means the twenty fifth (25th) anniversary of the Planned Service Commencement Date;

“Failed” means the values in the row titled "Failed" ascribed to condition indices in respect of:

- (a) a Road Section Length, set out in Tables 1 to 10 of part 11 of schedule 2 (*Output Specification*);
- (b) a Footway Section Length, the values as set out in Tables 11A, 11B, 12A and 12B of part 11 of schedule 2 (*Output Specification*);
- (c) a Verge Section Length, set out in Tables 13A and 13B of part 11 of schedule 2 (*Output Specification*);
- (d) a Cycle Track Section Length, set out in Tables 14A and 14B of part 11 of schedule 2 (*Output Specification*); and
- (e) a Kerb Section Length, set out in Tables 15A and 15B of part 11 of schedule 2 (*Output Specification*);

“Footpath” means those segregated facilities laid out for use by pedestrians which are remote from a Carriageway represented in the Project Network Model as separate Road Section Lengths;

“Footway” means those segregated facilities laid out for use by pedestrians which are proximate to a Carriageway and **“Footways”** shall be construed accordingly;

“Footway Condition Index” or **“FWCI”** means the index representing the condition of Footways in the Project Area that is calculated in accordance with the FWCI Calculation Methodology;

“Footway Section Length” or **“FSL”** means a length of Footway associated with a Road Section Length for an individual cross sectional position identified in the Project Network Model;

“FWCI Calculation Methodology” means the methodology for calculating the Footway Condition Index set out in paragraph 6 of part 11 of schedule 2 (*Output Specification*);

“FWCI_{link}” means the Footway Condition Index for the Link and Local Access Footway Network;

“FWCI_{prest}” means the Footway Condition Index for the Prestige, Primary and Secondary Footway Network;

“Geographical Information System” or **“GIS”** means an accurate electronic system which can be used to view and analyse data from a geographical perspective and which can be used to display the location of all Project Network Parts;

“Good Industry Practice” means using standards, practices, methods and procedures (as practised in the United Kingdom) and conforming to Legislation and exercising that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced service provider, manager, operator or other person (as the case may be) engaged in a similar type of undertaking as under this Contract under the same or similar circumstances;

“Highway Standards” means save to the extent that the same are:

- (i) Relevant Lighting Standards; and/or

(ii) inconsistent with the provisions of schedule 2 (*Output Specification*) in which case the provisions of schedule 2 (*Output Specification*) shall take precedence; all standards, specifications, codes of practice, all department technical advice notice, technical design notes, supplements, bulletins and any other documents of a similar nature issued by the Secretary of State for Transport and/or the Department for Transport (or such successor body) and/or any other Relevant Authority (including a local authority) in respect of the design, construction, operation or maintenance of highways including the following:

...

(h) Well Maintained Highways: Code of Practice for Highways Maintenance and Management;

“Highways Maintenance Code” means the Well-Maintained Highways - Code of Practice for Highway Maintenance Management;

“Highways Register” means the list maintained by the Authority pursuant to section 36(6) of the 1980 Act giving details of HMPE, Carriageway, Footway, Footpath and Cycle Tracks designated as Highway, Privately Maintainable Public Rights of Way and private streets as set out in the Authority's Data Room document 0084b v5;

“Independent Certifier” means the appropriately experienced and qualified professional person appointed jointly by the Authority and the Service Provider to act as the independent certifier to the Project in accordance with the Independent Certifier's Appointment;

“Independent Certifier’s Appointment” means the deed of appointment of the Independent Certifier in the form set out in annexure 3 (*Form of Independent Certifier's Appointment*);

“Integrated Property Management System (IPMS)” means the Authority’s geographical database detailing in map format the extent of Highway Maintainable at the Public Expense, Privately Maintainable Public Rights of Way and land required for proposed road schemes excluding, for the avoidance of doubt, any item which is not included in the Highways Register;

“KBCI Calculation Methodology” means the methodology for calculating the Kerb Condition Index as set out in paragraph 9 of part 11 of schedule 2 (*Output Specification*);

“Kerb” means an edge between the Carriageway and the Footway or the Verge and Carriageway within the Project Area consisting of a line of kerbstones;

“Kerb Condition Index” or **“KBCI”** means the index representing the condition of Kerbs within the Project Area calculated in accordance with the KBCI Calculation Methodology;

“Kerb Section Length” or **“KSL”** means a length of Kerb associated with a Road Section Length for an individual cross sectional position identified in the Project Network Model;

“Link and Local Access Cycle Track Network” means the network of CTSLs that are identified as being on a link and local access Cycle Track in the Project Network Model and/or the Highways Register;

“Link and Local Access Footway Network” means the network of FSLs that are identified as being on a link road or a local access road in the Project Network Model and/or the Highways Register;

“Link and Local Access Kerb Network” means the network of KSLs that are identified as being on a link road or a local access road in the Project Network Model and/or the Highways Register;

“Link and Local Access Verge Network” means the network of VGSLs that are identified as being link and local access Verge in the Project Network Model and/or the Highways Register;

“Link Road Network” means the network of RSLs that are identified as being on a link road in the Project Network Model and/or the Highways Register;

“Link Route” means those Carriageways that are identified as being on the Link Road Network in the Project Network Model and/or the Highways Register and **“Link Routes”** shall be construed accordingly;

“Link Walking Routes” means those Footpaths and Footways (or any part thereof) that are identified as being link Footways and/or Footpaths in the Project Network Model and/or the Highways Register;

“Local Access Road Network” means the network of RSLs that are identified as being on the Local Access Road Network in the Project Network Model;

“Major MS Breach” means any breach of a Method Statement which:

- (a) causes a breach of the Output Specification or any other provision of this Contract (save in respect of clause 20.2.3);
- (b) has an adverse effect on the carrying out of the Authority's statutory duties or statutory functions;
- (c) has an adverse effect on activities carried out by the Authority or any other third party on the Project Network;
- (d) causes a breach of any Law, Highways Standards (save as expressly stated in clause 20.2.2), Good Industry Practice, applicable approvals or Consents;
- (e) has an adverse effect on the likelihood of the Services being carried out by the relevant Planned Milestone Completion Date;
 - (i) will not reasonably minimise works or disruption on the Project Network;
 - ...
- (l) has an adverse effect on the health and safety of any persons (whether or not users of the Project Network);

“Management Information System” or **“MIS”** means the electronic system comprising of the Project Network Inventory, Powered Apparatus Inventory, Underground Apparatus Inventory, Routine Maintenance Management System, Bridge Management System, Tunnel Management System, Structure Management System, Street Lighting Management System, Street Works Management System, Tree Management System and the Customer Care

Management System to be provided and maintained by the Service Provider in accordance with this Contract;

“Milestone Completion” means, in respect of each Milestone, the completion (or deemed completion pursuant to clause 9.4.4 and 9.4.7 (as applicable)) by the Service Provider of the Services necessary to meet both the relevant Milestone Completion Criteria, the relevant Targets for Milestone Completion in all Districts and the requirements of part 2 of schedule 2 (*Output Specification*);

“Milestone Completion Criteria” means, in respect of each Project Network Part, those criteria set out in schedule 15 (*Milestone Completion Criteria*);

“NCI” or **“Network Condition Index”** means the index representing the condition of RSLs in the Project Area that is calculated in accordance with the NCI Calculation Methodology;

“NCI Calculation Methodology” means the NCI calculation methodology set out in paragraphs 1 and 2 of part 11 of schedule 2 (*Output Specification*);

“NCI Data” means the current PCI, SRI and SCI results for the RSLs in the Project Network and the survey data used to calculate such PCI, SRI and SCI;

“NCI_{link}” means the Network Condition Index for the Link Road Network;

“NCI_{local}” means the Network Condition Index for the Local Access Road Network;

“NCI_{main}” means the Network Condition Index for the Strategic Route and Main Distributor Road Network;

“NCI_{sec}” means the Network Condition Index for the Secondary Distributor Road Network;

“Node” means a five figure identifier which defines the beginning, intermediate and end parts of an RSL;

“Pavement Management Model” or **“PMM”** means the pavement management model agreed between the Parties at the date of this Contract (a copy of which is annexed in Annexure 16) excluding the predictive functions of that model (including all related rules, functions and date), as updated from time to time in accordance with this Contract;

“PCI Calculation Methodology” means the PCI calculation methodology set out in paragraph 3 of part 11 of schedule 2 (*Output Specification*);

“PCI” or **“Pavement Condition Index”** means the index representing the pavement condition of RSLs in the Project Area that is calculated in accordance with the PCI Calculation Methodology;

“PCI_{main}” means the Pavement Condition Index for the Strategic Route and Main Distributor Road Network;

“Poor” means the values in the row titled "Poor" ascribed to condition indices in respect of:

- (a) a Road Section Length, set out in Tables 1 to 10 of part 11 of schedule 2 (*Output Specification*);
- (b) a Footway Section Length, the values as set out in Tables 11A, 11B, 12A and 12B of part 11 of schedule 2 (*Output Specification*);
- (c) a Verge Section Length, set out in Tables 13A and 13B of part 11 of schedule 2 (*Output Specification*);
- (d) a Cycle Track Section Length, set out in Tables 14A and 14B of part 11 of schedule 2 (*Output Specification*); and
- (e) a Kerb Section Length, set out in Tables 15A and 15B of part 11 of schedule 2 (*Output Specification*);

“Prestige, Primary and Secondary Cycle Track Network” means the network of CTSLs that are identified as being prestige, primary and secondary Cycle Tracks in the Project Network Model;

“Prestige, Primary and Secondary Footway Network” means the network of FSLs that are identified as being on a strategic and main distributor road or a secondary road in Project Network Model;

“Prestige, Primary and Secondary Kerb Network” means the network of KSLs that are identifiable as being prestige, primary and secondary kerbs in the Project Network Model;

“Prestige, Primary and Secondary Verge Network” means the network of VGSLs that are identified as being prestige, primary and secondary Verges in the Project Network Model;

“Prestige Walking Routes” means the Footpaths and Footways that are identified as being on the prestige walking zones in the Project Network Model;

“Programmed Maintenance” means the pre-emptive refurbishment, maintenance and life cycle replacement of Project Network Parts so that they meet the requirements of schedule 2 (*Output Specification*) and other relevant provisions of this Contract;

“Programme of Surfacing works for Year 1 Requirements” means the requirements set out in paragraph 2 of appendix G of part 1 of schedule 2 (*Output Specification*);

“Project” means the rehabilitation, operation and maintenance of the Project Network by the Service Provider in accordance with the provisions of this Contract;

“Project Area” means the City of Birmingham, as more particularly defined in the plan set out in the Authority's Data Room document 0572 and part 1 schedule 33 (*Plans*);

“Project Network” means:

- (i) Streetscene Land as contained in document number 0370c;
- (ii) Project Roads;
- (iii) Structures, Bridges and Tunnels (excluding subterranean structures, bridges or tunnels unknown to the Authority and the Service Provider at the Pre-Commencement Survey Date other than Drainage Structures with a diameter of less than 1.5 metres);

- (iv) Apparatus;
- (v) Reserved Areas;
- (vi) Communications Installations;
- (vii) Privately Maintainable and Public Rights of Way; and
- (viii) Highway Trees;

“Project Network Inventory” means an electronic records system which records the following information in respect of all Project Network Parts (with the exception of Powered Apparatus and/or Underground Apparatus) and all other above ground assets pertaining to the Project Roads (whether maintained by the Service Provider or otherwise or owned by the Authority or a Third Party):

- (a) data in relation to the nature of all current and historical faults and details of the steps taken in relation to the repair of such faults and all relevant response times;
- (b) all other information which may be of relevance to the Authority having regard to any of its statutory responsibilities and functions (whether as Highway Authority and/or Lighting Authority under the Highways Act 1980, Best Value Authority under the Local Government Act or otherwise); and
- (c) all other information required in accordance with this Contract;

“Project Network Model” or **“PNM”** means the database document 0626 which provides information in respect of the Project Roads including RSLs, numbering, length, hierarchy allocation and preferred direction of survey and inspection and digitised geographical centreline representation;

“Project Network Part” means:

- (i) Streetscene Land or any part thereof; and/or
- (ii) a Project Road or any part thereof; or
- (iii) a Structure, Bridge or Tunnel or any part thereof; or
- (iv) Grassed Areas and Hard Landscape Areas or any part thereof; or
- (v) Apparatus or any part thereof; or
- (vi) any Reserved Area or part thereof; or
- (vii) Communications Installations or any part thereof; or
- (viii) Highway Trees

“Project Roads” means those Carriageways, Footways, Kerbs, Verges, Footpaths and Cycle Tracks identified in the Highways Register (together, where consistent with the details set out in the Highways Register, with further details given in the Integrated Property Management System (IPMS)) save to the extent such Carriageways, Footways, Kerbs, Verges, Footpaths or Cycle Tracks are designated as private in the Highways Register and the term **“Project Road”** shall be construed accordingly;

“Road Section Length” or **“RSL”** means the individual section lengths of a Project Road between consecutive Nodes in the Project Network Model and **“Road Section Lengths”** or

“RSLs” shall be construed accordingly;

“SCI” or **“Surface Condition Index”** means the index representing the surface condition of RSLs in the Project Area that is calculated in accordance with the SCI Calculation Methodology;

“SCI Calculation Methodology” means the SCI calculation methodology set out in paragraph 5 of part 11 of schedule 2 (*Output Specification*);

“SCI_{link}” means the Surface Condition Index for the Link Road Network;

“SCI_{local}” means the Surface Condition Index for the Local Access Road Network;

“SCI_{main}” means the Surface Condition Index for the Strategic Route and Main Distributor Network;

“SCI_{sec}” means the Surface Condition Index for the Secondary Distributor Network;

“SCRIM” means sideways force coefficient routine investigation machine;

“Secondary Distributor Network” means the network of RSLs designated as such on the Project Network Model;

“Services” means the works and services which are necessary for the Service Provider to undertake (or to procure the undertaking of) in order to comply with the provisions of schedule 2 (*Output Specification*) and the other provisions of this Contract;

“Skid Resistance Index” or **“SRI”** means the index representing the skid resistance condition of RSLs in the Project Area that is calculated in accordance with the SRI Calculation Methodology;

“Sole Remedy List” means the list of clauses set out in annexure 14 (Sole Remedy List);

“SRI_{link}” means the Skid Resistance Index for the Link Road Network;

“SRI_{local}” means the Skid Resistance Index for the Local Access Road Network;

“SRI_{main}” means the Skid Resistance Index for the Strategic & Main Distributor Network;

“SRI_{sec}” means the Skid Resistance Index for the Secondary Distributor Network;

“Strategic Route and Main Distributor Network” means the network of RSLs designated as such in the Project Network Model;

“Surface Condition Assessment” or **“SCANNER”** means a traffic speed survey that collects real time data on transverse and longitudinal profiles in respect of the textures and cracking of the assessed Carriageway;

“Surface Condition Data” means the information collected in respect of the surface condition of Carriageway on the Project Network in order to calculate the Surface Condition Index;

“Target for Milestone Completion” means, in respect of each Milestone, the targets for each Project Network Part set out in part 1A of schedule 2 (*Output Specification*) and

“Targets for Milestone Completion” shall be construed accordingly;

“UKPMS” means United Kingdom Pavement Management System as updated or amended from time to time;

“Verge” means hard or soft standing between the Kerb and the Footway and/or between the Footway and the RSL and/or between Footways and/or on the central reservation in the Project Area;

“Verge Condition Index” or **“VGCI”** means the index representing the condition of Verges in the Project Area that is calculated in accordance with the VGCI Calculation Methodology;

“Verge Section Length” or **“VGSL”** means a length of Verge for an individual cross sectional position identified in the Project Network Model;

“VGCI Calculation Methodology” means the methodology for calculating the Verge Condition Index as set out in paragraph 7 of part 11 of schedule 2 (*Output Specification*);

“VGCI_{link}” means the Verge Condition Index for the Link and Local Access Verge Network;

“VGCI_{prest}” means the Verge Condition Index for the Prestige, Primary and Secondary Verge Network;

“Well Maintained Highways: Code of Practice for Highways Maintenance and Management” means the Code of Practice entitled “Well-maintained Highways Code of Practice for Highways Maintenance Management”.