IN THE GRENFELL TOWER INQUIRY
AND IN THE MATTER OF
THE INQUIRIES ACT 2005
THE INQUIRY RULES 2006 (SI 2006/1838)

PHASE 2, MODULE 3, TOPIC 3

RYDON MAINTENANCE LIMITED

OPENING SUBMISSIONS – SMOKE CONTROL SYSTEM

INTRODUCTION

1. The work package for the smoke control system was specialist in nature and formed part of the mechanical and electrical ("**M&E**") works within the refurbishment works, in respect of which Rydon Maintenance Limited ("**Rydon**") was the main contractor. Rydon engaged specialist subcontractor, JS Wright & Co Limited ("**JSW**"), to oversee the M&E works, including the work to the smoke control system.

2. The contract between Rydon and JSW (the "**Contract**") was on the basis of a letter of intent issued on 25 July 2014[1] and incorporated Rydon's Terms and Conditions and the JCT DOM/2 Standard Terms and Conditions. Under the Contract, JSW was responsible for all aspects of the M&E works, including design, installation, testing, commissioning and certification.

3. JSW entered into a collateral warranty in favour of KCTMO in relation to the M&E works dated 25 April 2016, by which JSW warranted to KCTMO that:

> "*(i) it has performed and shall continue to perform all of its duties and obligations under or arising out of the Design Sub-Contract; and (ii) it has exercised and will continue to exercise in the performance of the Services all the reasonable skill and*

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[1] **{RYD00000007}**.

care to be expected of a properly qualified and competent Mechanical and Electrical engineer experienced in the provision of services and works for projects of a similar size scope value character and complexity to the Project; (iii) it shall owe a duty of care to the Beneficiary in respect of all matters which lie within the scope of the Design Sub-Contractor's responsibilities in relation to the Project...".[2]

4. JSW appointed various sub-subcontractors, including PSB UK Limited ("**PSB**") in relation to the design, supply, testing and commissioning of the new smoke control system; (2) RJ Electrics Limited ("**RJE**") in relation to the electrical works, including those relating to the smoke control system; and (3) Parkerr Ventilation and Heat Recovery and Croydon Ductwork in relation to the ductwork.

THE DESIGN OF THE SMOKE CONTROL SYSTEM

5. The initial design work was done prior to Rydon's involvement in the project. The design evolved over time following discussions between Max Fordham LLP ("**Max Fordham**"), Studio E Architects Limited ("**Studio E**") and Exova UK Limited ("**Exova**") which started in mid-2012[3], and subsequently as the result of input from PSB from at least November 2012[4]. Studio E and Exova had discussions around the design of the smoke control system with RBKC Building Control ("**RBKC BC**") from as early as 6 November 2012[5]. Max Fordham prepared Stage D submissions on 22 November 2012 which included a detailed description of the proposed new system[6] and subsequently the Employer's Requirements dated 16 October 2013.

6. The key design decisions were made by PSB – most notably the introduction of a pressure differential system[7]. JSW and Max Fordham were also involved

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2 **{TMO00837180}**.

3 For example, **{ART00005947}**, **{TMO10037771}** and **{MAX00003249}**.

4 **{MAX00003357}**.

5 **{EXO00000309}**, **{CCL00002355}**.

6 **{SEA00006700}**.

7 **{JSW00006697}**.

in finalising the technical submission. The performance criteria (*viz.* the required opening door force, air flow through the open door between the lobby and stairs, and pressure differential between the lobby and the stairs) and the component parts of the new system (for example: fans, dampers etc.) were set out in PSB's Smoke Ventilation Technical submission[8].

7. Input was also received from RBKC BC on a number of occasions throughout the design process and the final proposal was approved by them. JSW also liaised directly with RBKC BC.[9]

8. Rydon relied on the expertise of those involved in the design process, as well the input and approval received from RBKC BC, and reasonably expected that the design of the smoke control system was compliant with all relevant contractual and regulatory obligations.

THE INSTALLATION OF THE SMOKE CONTROL SYSTEM

9. Over a number of years prior to Rydon's involvement with the refurbishment project, the maintenance contractor engaged by KCTMO, RGE, had been highlighting issues with the smoke control system. For example in May 2010, RGE raised an issue with the inlet dampers, that the actuators were not reliable and may not operate on every activation[10]. The 29 November 2012 FRA, reviewed in April 2013, by Carl Stokes[11] included the following: "*Reported since 2009 tha* [sic] *RGE cannot guarantee tha* [sic] *in the event of an emergency this system will work*". On 23 January 2014 RGE emailed Max Fordham in the following terms: "*We have stated every service to the TMO that in the event of a* [sic] *activation, we cannot guarantee that the system will work.*"[12].

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8 **{RBK00027367}**.

9 For example: **{MAX00004511}**; **{JSW00003163}**; **{MAX00004632}**; **{ART00003423}**; **{MAX00002079}**.

10 **{RBK00013637}**.

11 **{TMO10039247}**.

12 **{MAX00004262}**.

10. Rydon did not become aware of the problems with the pre-existing smoke control system until the early stages of the refurbishment works. It was noted at the progress meeting on 27 August 2014: "*the existing system may or may not be in full working order*".[13] Investigations were undertaken by JSW and then, on 11 September 2014, Rydon was provided with a copy of the deficiency notice that had been issued by the London Fire Brigade ("**LFB**") back in March 2014.[14] It was apparent that the system was not fully operational. As such, it was proposed and subsequently agreed that the work to the smoke control system would be completed in two stages so as to ensure a degree of protection for the building as soon as possible. Whilst Rydon drove the search for a solution, the proposals were provided by JSW/PSB.

11. As the main contractor, Rydon retained overall responsibility to ensure that the work was completed. In practical terms, Rydon's role largely involved facilitating communication between the various other parties involved in the installation process *viz*. Studio E, Max Fordham, JSW, PSB, RJE, Harley, KCTMO and RBKC BC. In relation to the preparation of the O&M Manuals, Rydon relied on JSW, PSB and RJE to provide the relevant information and documentation. When troubleshooting in relation to issues that arose during the project (for example, in relation to getting the autodialler connected, questions about the capacity/integrity of the existing cabling, the need to find a suitable route for the extension to the smoke control shafts, and the requirement for make up air on the lower floors), Rydon sought advice/input from those other parties including RBKC BC as was appropriate to the issue in question.

12. Discussions about the smoke control system also took place without Rydon's involvement. For example, PSB made the decision to change to a pressure

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[13] **{TMO10007298}**.

[14] **{JSW00002916}**.

differential system[15] and JSW, PSB and RJE communicated about the secondary power supply[16], amongst other issues, without input from Rydon.

THE COMMISSIONING OF THE SMOKE CONTROL SYSTEM

13. The commissioning and certification of the smoke control system formed part of the package of works subcontracted by Rydon to JSW. These were technical and specialist matters. Rydon required JSW and its sub-subcontractors to ensure that the smoke control system was demonstrated to comply with the specification/approved design criteria and regulatory framework, and to provide sufficient and appropriate evidence of commissioning.

14. In its capacity as main contractor, Rydon arranged for the operation of the smoke control system to be witnessed on the following dates:

    (1) **28 April 2016**. The following people were invited to attend: Tony Batty (Silcock Dawson), John White (JRP), Alan Whyte (JSW), John Hoban and Paul Hanson (RBKC BC), Nicholas Davis (LFB), Kemal Mehmet (Engie), Anthony Cheney, Claire Williams, Robert Regan and Paul Steadman (KCTMO), and Matt Smith (Max Fordham).[17]

    The session was arranged by Rydon, but the demonstration of the smoke control system was undertaken by Granville Partlow of PSB.

    At this session, the smoke control system was demonstrated to (amongst others) representatives from the KCTMO, Max Fordham and the LFB.

    Rydon were also involved in a further familiarisation visit for the LFB on 26 July 2016, at which representatives from the LFB were shown

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15 **{JSW00006697}**.

16 **{PSB00000700}**, **{JSW00001938}**

17 **{RBK00044898}**; **{MAX00006794}**.

the operation of the Human Mechanical Interface ("**HMI**") panel for the smoke control system.[18]

(2) **5 May 2016**. This session was arranged by Rydon for RBKC BC due to their unavailability on 28 April 2016[19]. The demonstration of the smoke control system was undertaken by Alan Whyte of JSW.

15. A letter of comfort was provided by RBKC BC on 2 June 2016[20] relating to the project as a whole, with two items in relation to the smoke extract system which were duly addressed. The Buildings Regulation Completion Certificate was issued on 7 July 2016.[21]

16. Following RBKC BC approval, Rydon reasonably believed that the new smoke control system had been appropriately commissioned and that the system as installed was compliant.

THE INSPECTION AND MAINTENANCE OF THE SMOKE CONTROL SYSTEM

17. The provision of maintenance information relating to the M&E works formed part of the contract between Rydon and JSW. Rydon relied on JSW and its sub-subcontractors to provide adequate information in this regard.

18. KCTMO carried out routine testing of the smoke control system post-handover. Rydon organised a "familiarisation visit" for Rydon and JSW aftercare teams and KCTMO employees on 22 June 2016; a second familiarisation visit was held for KCTMO employees on 5 July 2016 and further session was held on 2 November 2016 for Paul Steadman, the KCTMO Estates Services caretaker.[22] Rydon also provided comments on a document

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[18] **{RYD00094213}**.

[19] **{RYD00076166}**

[20] **{TMO10013671}**.

[21] **{TMO10013999}**.

[22] **{RYD00094213}**.

prepared by the KCTMO called "Estates Services Monthly Checks at Grenfell Tower".[23]

19. Under the terms of the contract between Rydon and JSW, a maintenance service was required to be provided by JSW during the 12-month defect liability period, which ran until 4 July 2017. A sum was provided for in Rydon's Order Value for the AOV[24] for this service which was provided by the JSW aftercare department. When during visits on 30 May 2017 and 1 June 2017 (which were walk-round visits for the project as a whole, given that the defects liability period was shortly due to expire), Rydon became aware of a potential issue with the environmental mode of the smoke control system, this was reported on 1 June 2017 to the JSW aftercare department[25] and it was for JSW to undertake or arrange the required maintenance. KCTMO were aware of the issue, with Claire Williams joining the 30 May 2017 and 1 June 2017 walk-round visits.

THE PERFORMANCE OF THE SMOKE CONTROL SYSTEM DURING THE FIRE AND GENERALLY

20. Rydon has no direct knowledge on the performance of the system during the fire. Much of the expert evidence about the smoke control system has only been disclosed relatively recently. As such Rydon reserves its position generally to address such matters during closing submissions if required.

DAC Beachcroft LLP

Solicitors for Rydon Maintenance Limited

25 June 2021

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23 **{RYD00094316}**.

24 **{JSW00000003}**.

25 **{RYD00094319}**.