WITN04110100

Witness Name: John Graeme Simpkins

Statement No.: WITN0411_01

Exhibits: WITN0411_01/1 to WITN0411_01/4

Dated: 4 August 2022

POST OFFICE HORIZON IT INQUIRY

FIRST WITNESS STATEMENT OF *JOHN GRAEME SIMPKINS*

I, *MR JOHN GRAEME SIMPKINS*, will say as follows:

INTRODUCTION

1. I am currently employed by Fujitsu Services Limited ("**Fujitsu**") as a Team Leader within the Software Support Centre for the Horizon IT system. I have held this position since 2010.
2. This witness statement is made on behalf of Fujitsu to assist the Post Office Horizon IT Inquiry with the matters set out in the Rule 9 Request provided to Fujitsu on 11 March 2022 and a series of follow-up questions provided to me by the Inquiry on 1 July 2022 (the "**Request**"), to the extent I have direct knowledge of such matters.
3. The topics set out in the Inquiry's Request relate to events that took place many years ago. Such topics include the design and development of the Horizon system, the pilot releases and the robustness of Horizon. I have tried to remember these events to the best of my ability. However, given the passage of time, there may be certain matters where my recollection is more limited.

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4. Where I have included information from documents relevant to the Inquiry's Request, these documents are referred to using references WITN0411_01/1 to WITN0411_01/4 and are listed in the index accompanying this statement.

BACKGROUND

5. I joined ICL Pathway Limited ("**ICL Pathway**") in July 1996 as an Application Developer in the European Development and Support Centre ("**EDSC**"), having worked previously at ICL Edacom since 1994. The EDSC was the precursor to the Software Support Centre ("**SSC**"), as the team is still known today. The development team became separate units.
6. Shortly after joining ICL Pathway in 1996, I moved away from development work into a support role. I have remained in this support role ever since, firstly in the EDSC, then the SSC, working under various managers. During the period prior to the national rollout, my managers were Raj Aurora in 1996 and then Mik Peach from 1997 onwards. I then became a SSC Team Leader in 2010. There were three Team Leaders in the SSC which reported to the SSC Manager, who was Steve Parker at the time. The Team leader role included:
    a. maintaining the support rotas;
    b. assigning new projects to staff in the SSC, for example when new features were introduced, one or more SSC team members were assigned as the Subject Matter Expert (SME) to learn the details;
    c. carrying out personnel appraisals; and
    d. ensuring there was enough staff during holiday periods.
7. The EDSC/SSC is the software third line support team. The team does not support the hardware or operating systems. The team had a good interaction with the testing teams and development to supply evidence and find possible ways to re-

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create defects on test equipment. We also interacted with sub-postmasters when gathering evidence or providing support. The EDSC/SSC was not responsible for reporting to Post Office. My understanding is the Service Management team reported on certain issues to Post Office. I was not directly involved in raising issues with Service Management. While I am not sure of the details, my understanding is the head of the SSC fed certain information to the Service Management team.

8. Alongside my support work, I have also designed and developed some systems in use by the support teams and the wider Post Office Account, including the incident management system known as Peak. The Peak system came about when looking to replace the aging PinICL system. It was decided that the SSC had the correct skills to develop the solution. The data was migrated from PinICL into a newer database platform and we created a web-based front-end. We did some parallel running with the LST (Live Support Test) team before finally rolling it out across the account. There were no unresolved issues outstanding from this pilot and the speed and ease to develop the Peak system has kept it in use for the last 18 years.

DESIGN AND DEVELOPMENT

9. While I was initially taken on as an Application Developer, I only remained in this role for a very short time and did not in fact develop any aspects of the Horizon system myself. During my time as an Application Developer, I worked with Dai Jones to learn the coding language being used at the time. This language was known as Visual Basic. A key role of the development team was to ensure that the Visual Basic coding being used by the team interfaced properly with Escher's software product, Riposte, which I will come on to discuss in more detail later in

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this statement. Access to the Escher source code was only granted to the development team if absolutely necessary.

PILOT - INITIAL GO LIVE (RELEASE 1A)

10. Once we got to the Initial Go Live in 1996 (also known as Release 1A), we knew we would need to establish a team to support the system. In anticipation of the Initial Go Live, I volunteered to leave the development team and join the new support team. This team was also referred to as second line support. Raj Aurora was my manager and I recall that Caren Slack was the Team Leader. There were three lines of support in place during the Initial Go Live (first line, second line and Development), but this has since evolved to four lines of support. I was not involved in the decision-making behind the move to four lines of support, nor do I recall when this happened. The Service Management Centre ("**SMC**") was the extra line of support that was added. They provided continuous monitoring of the live estate and also took on roles from other support teams via automation, knowledge bases and training.
11. My team and I worked in a custom configured room in ICL Pathway's offices in Feltham. There were three other teams all working from the same room, including the first line support team who answered calls from sub-postmasters, the EDSC where I worked, the operations teams and a banking benefits team. These teams were all from ICL Pathway, except for the banking team who were external - I think the bank in question may have been GiroBank. This arrangement was possible as the Initial Go Live was only a small pilot. There was also a back room which contained hardware.
12. The Initial Go Live involved ten post office branches and involved the rollout and trial of one main function. This function was the provision of benefits to members

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of the public via a payment card (this was known as the Benefit Encashment Service ("**BES**")). Information related to benefit payments was transmitted via the Oracle database and downloaded to a particular Post Office branch. In most cases, benefits claimants would go to a nominated branch to collect payments using their payment card.

13. I was not party to the design or development of the Oracle database but do not recall any concerns raised about the Oracle database or the system generally. Had there been any outstanding defects, these would likely have been recorded in the PinICL archives.

14. To support the BES, Release 1A included certain other functions, including:

    a. PoLo (Post Office Log On): A two-factor authentication for the sub-postmasters to log on to the branch counter using a smart card holding a key;

    b. PUN (Pick up Notice): Letters were sent to benefits claimants telling them to collect their new benefit card from their nominated branch by scanning the bar-code contained in the letter;

    c. FTMS (File Transfer Management Service): Required to move files between the ICL Pathway data centres and the external parties' data centres;

    d. Agents: Required to move data from the BES database to Riposte (and vice versa);

    e. Maestro scheduling software: Required to run the data centre processes – initially this was manually run by the operations team; and

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f. CAS (CAPS Access Service): The Virtual Machine Environment ("**VME**") interface to the benefits agency (Customer Accounting and Payments Strategy).

15. PoLo (see paragraph 14a above) was initially implemented for security purposes. It ensured that if a counter was stolen the messages could not be read. One issue I recall being present in the system at about this time related to PoLo. Sometimes the two-factor authentication process failed or the sub-postmaster would lose their PoLo card and the support team would speak to the sub-postmaster over the phone to reset the encryption and resolve the issue. When PoLo was first implemented, the recovery process was time consuming as it involved reading about 16 lines of 15 characters from the counter and the support team would have to enter these into the PoLo recovery workstation to generate a recovery key which was then keyed into the counter. This was later shortened to an automated process that meant the sub-postmaster only had to type in a single line of 15 characters. I am not sure when this change took place.

16. I also recall there being issues with the network, which affected the timely transmission of data to and from the data centres. An application Counter Network Infrastructure Manager (CNIM) ran on the counter to detect for network outages, this information was sent to Tivoli for Quality of Service (QoS) monitoring. I believe the EDSC/SSC (using the NSAT application – Network Service Allocation Tool) could change the network configuration at a branch to try and improve the service. For example, by keeping the line open during working hours rather than connecting each 30 minutes or on demand. There were a number of network configurations, including Bronze, Silver, ISDN or Satellite.

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17. Regarding rectification of deficiencies in general, during Releases 1A, 1B and 1C (I cover the latter two releases in more detail below), my recollection is that there remained three support lines in place. The first line support team received calls from sub-postmasters regarding problems or issues they might be having. I think the system we had in place at the time to record these calls was called PowerHelp. If first line support could not resolve the issue and it was related to the software, it would be escalated to the second line support team. Matters that came through to the second line support team would be recorded initially in PowerHelp and then later in PinICL.

18. Issues that could not be resolved by second line support would be passed to the development team, who would use PinICL to record their work after it was introduced. At the time of the release, significant individuals that I recall from first and second line support included:

    a. Sandie Bothick, Donna Munro (Horizon Service Helpdesk (HSH));

    b. Jan Ambrose, Richard Brunskill, Angela Shaw, Nicole Meredith, Hazel Salvat (Business Support Unit ("**BSU**") / Management Support Unit ("**MSU**"));

    c. John Bradley, Mike Conneely, Adrian Chambers (Management System Support ("**MSS**") / Systems Management Group ("**SMG**")).

19. Mark Taylor, Iain Jannsens, Roy Birkinshaw were some of the development managers that I have come across.

20. Both first and second line support teams operated out of Feltham during Release 1A but, sometime during 1997, the EDSC (second line support) moved to offices in Bracknell and first line support moved to Stevenage. The Operations team

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moved to Ireland and the data centres moved to Bootle and Wigan. I think the development and test teams remained in Feltham.

PILOT - RELEASES 1B AND 1C

21. I can see that in the Appendix to the Request, certain questions refer to further software releases at approximately 200-300 branches. I cannot recall the precise number of branches (or which branches they were), but this seems to me to be referring to Release 1B and Release 1C. Each of these releases added functionality to the system. In relation to Release 1B, I recall that the Order Book Control System ("**OBCS**") was added. This functionality allowed benefits claimants to present their order books with slips to receive cash payments. An Oracle database was set up to record the details. The order book slips were scanned at the branch and checked against data from the Oracle database. OBCS data was sent and received via a VME interface (known as the OAS (OBCS Access Service)).

22. Release 1C then added EPOSS-type functionality. EPOSS means "Electronic Point of Sale System" and enabled branches to sell stamps and other products, perform bulk sales and apply discounts. This functionality included:

    a. reference data: configuration information such as products available to sell, the value of the products or the layout of the menu hierarchy; and

    b. user roles: different user roles would have permissions to perform activities such as create new users, create new stock units or reset passwords.

23. At around this time a reporting function which harvested branch transactions and passed aggregated totals to Post Office was added in the form of a TPS (Transaction Processing System). The TPS batched up transactions performed by

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the branches and sent them to Post Office's TIP (Transaction Information Processing) system. I think the TPS functionality was introduced as part of Release 1C but I am not certain of this.

24. I cannot recall if the Cash Account was incorporated into EPOSS by Release 1C or if that functionality was introduced later. I will come on to discuss the Cash Account later in this statement.

25. I have reviewed an Investment and Strategy Committee Meeting document dated 15 December 1997 (WITN0411_01/1), which relates to the roll-out of Release 1C. I do not recall any defects that were outstanding at the time Releases 1B and 1C were rolled out. However a manual investigation of the PinICL archive should identify which (if any) were outstanding at these times. To the extent that there were any known defects when these releases were rolled out, my understanding is that this would have been communicated to Post Office, either by the Service Management team (as noted at paragraph 7 above), or by other ICL Pathway teams. I was not involved in communications with Post Office in this regard, neither am I aware of how or if such issues were communicated to sub-postmasters.

26. One issue I recall being present in the system at about the time of Releases 1B and 1C related to reports that sub-postmasters would print off. Sometimes parts of these reports were "cut-off" whilst other transactions were performed in that review period. A report is cut-off (cleared) once the sub-postmaster has compared it to their receipts. This may include a list of OBCS foils they were sending back. Looking at PinICL PC0037808 (WITN0411_01/2), I understand that the issue arose where the sub-postmaster may have printed a report and stayed on the cut-off page whilst further transactions were performed on another counter. This would not have affected the branch account.

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27. Another problem I remember was that sometimes transactions failed to replicate between branch counters; this could cause confusion and re-keying (in paragraph 51 below I provide some more detail regarding the replication of transaction data between counters). Re-keying transactions could cause discrepancies in the branch accounts as sometimes, a sub-postmaster would re-enter a missing transaction when a transaction on one counter was not replicated on another counter. As a result, there would be a duplicate transaction when the counters re-established contact.

28. I also recall there being issues with the print quality of scanned OBCS foils.

29. I cannot remember how these specific problems were rectified, but I would echo my earlier comment that PinICLs from the time may record how these issues were dealt with. When agreeing to close the call, the support team resolving the ticket would report the root cause of any ticket to the person that had raised the call. I cannot comment on how the service management team would then report any of these matters to Post Office.

DELAY

30. I do not recall why there was a delay to the project and no specific technical issues come to mind. However, once the Benefits Agency withdrew from the project, there was a need to pivot the work being undertaken on the project as, until that time, much of the work done related to the payment of benefits.

31. In terms of the reason for this change, I believe we were told that the Benefits Agency had decided that benefits would be distributed directly into people's bank accounts and those without an account will have a special account for withdrawal only known as Post Office Card Account (POCA) or Card Account Post Office (CAPO). However, Post Office wanted to continue to computerise the branches

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and so the Pathway project would pivot from a PFI initiative to being a Post Office customer.

32. Having reviewed the Chief Executive's Report dated 7 May 1997 (WITN0411_01/3), it seems as though the test teams identified defects that were fixed by redirecting developers from working on Release 1C to Release 1B before it was released, causing a delay in Release 1C. Having also reviewed the Chief Executive's Report dated 15 July 1997 (WITN0411_01/4), it appears it relates to defects found in the testing of Release 1C. Such defects apparently caused an 8-week delay, with a further 7-week delay coming from delayed requirements and Post Office adding new requirements into a release.

33. I also have no recollection of an internal audit being undertaken in relation to Release 1B and 1C.

CASH ACCOUNT

34. I was not involved in the design or development of the Cash Account, but I played a role in supporting sub-postmasters when completing their Cash Account. I cannot be sure if my recollections of my work in relation to the Cash Account include the period prior to the rollout of the Horizon IT system or after the rollout, but I describe them below nevertheless.

35. When the Cash Account was first introduced, sub-postmasters were required to complete and balance their Cash Account once a week. This was done on a Wednesday.

36. The purpose of the Cash Account was to check, for each stock unit, whether the cash and stock physically held in the branches matched the amount of cash and stock recorded in Horizon. This was known as balancing.

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37. There would sometimes be discrepancies between the stock unit's physical holdings figure (as manually counted by the sub-postmaster) and the figures calculated by the system. Such discrepancies could have been caused by a number of issues and were not necessarily system faults. As it relied on a manual counting process, the discrepancy would only be visible at the point of the sub-postmaster balancing their accounts. My team made it a practice to stay later on a Wednesday evening to assist sub-postmasters with balancing their Cash Accounts over the phone. For example, we would investigate messages in the branch Message Store, locate particular transaction references and provide advice on reversals. We also had access to developer support, who also typically stayed later on Wednesdays to assist.

38. I have no knowledge of whether or how issues relating to the Cash Account were reported externally. Generally at this time, I think the reporting of issues to Post Office would have been the responsibility of the Service Management team.

ACCEPTANCE CRITERIA AND TESTING

39. As noted above, my role was in supporting the system. I was not therefore involved in the testing or acceptance of Horizon prior to the national rollout (or since). My team did, however, work closely with the test teams. From memory, the test teams interfaced with Post Office quite a lot. They would also have used the PinICL system for their defect reporting and analysis, including raising issues to be addressed/rectified during the test phase.

ROBUSTNESS

40. By way of background, in the Horizon IT system, each branch counter had its own database known as the Message Store. The individual counter Message Stores recorded transactions carried out on that particular counter (along with other data).

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The data from the Message Store would be replicated to the other counters in the branch, meaning that each counter had a complete copy of all the data from the other counters in that branch.

41. In addition, the data would also be replicated to the correspondence servers in the data centre. As data is written to each correspondence server, it is also written to a file which was securely stored on an Audit Server. At this time, there was one data centre in Wigan and another in Bootle. To decrease the chances of any data being lost, there would be two copies of the Message Store in Wigan and two copies in Bootle. I do not know how these data centres were selected or if there were any concerns about their locations as it was outside my job role. I am also unable to comment on the hardware and operating systems running in the data centre as they were not supported by the EDSC/SSC.

42. In addition to data replication, other checks were also undertaken to ensure the accuracy of the data being recorded. These included:

    a. Cyclic Redundancy Checks (CRC): These were checks of the Riposte Message Store which took place each time a message was read and which stopped the current operation if invalid messages were identified. In the event that an invalid message was identified, a Windows event would be raised to alert support. This was more common as the counters aged and disk errors increased. Windows also creates disk warning events when it detected signs of corruption and we would run a 'checkdsk' to flag parts of the disk as not to be used. This check became used increasingly to identify hard disk corruption as hard disks aged.

    b. Payments and Receipts Checks: The counter software was a dual entry book keeping system so, for each transaction, an equal and balancing

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transaction must take place (e.g. sell a stamp and receive cash for the equal and opposite value). If the payments did not match the receipts' totals then an alert would have been displayed to the sub-postmaster and it would have been picked up by the data centre report, as mentioned below.

c. Cash Account Checks: These were performed on transactions at the data centres, with issues then being reported to the MSU team.

d. Each part of the Riposte software suite has a hash associated with it, these were also stored in the Message Store and were checked on start-up. The software hash was recalculated and checked against those in the Message Store. If they did not match, Riposte would not start up. This prevents doctored software from being introduced.

43. Because the data from the individual counters was replicated to the correspondence server, which my team could access, we were able to review the counter data across the entire estate, identify any problems and potentially rectify them. For example, in the 'Dalmellington' Branch Out Reach issue, we were able to identify affected branches by searching for duplicate pouch IDs and then create a report of the affected branches that I believe was sent from the Fujitsu Service Management team to Post Office.

44. To my knowledge, there would only be a difference between a counter and the data centre if a counter was replaced and all the messages had not recovered before Riposte came up or replicated to other neighbours or the counter was out of communication.

45. Sometimes we would not make the correction ourselves and would instead inform Post Office of the issue through the MSU team. In terms of who was informed of

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when the ticket was rectified, this was managed on a case-by-case basis and would depend on who raised the PinICL/Peak. Any investigation outcome would be updated on the support call and the closure agreement was required with the call raiser.

46. At some point, although I do not recall whether this was before or after the national rollout, ICL Pathway / Fujitsu introduced an event monitoring system, as part of the Tivoli suite. I cannot comment on the operation of Tivoli in detail as the MSS/SMG teams were responsible for this. Microsoft Windows NT is the operating system that was used on the counters. It manages the three logs (security, system and application) itself, reporting about the operation of Windows. Other applications, including ours, could also post messages into these logs. Some events recorded on these logs were harvested by our own application, Tivoli. These events were then visible to the SMC who monitored the Tivoli event console and issues were dealt with appropriately by raising a ticket with PowerHelp, which may then be transferred to PinICL for progression. These event logs were also available to the EDSC staff but only in an ad-hoc fashion.

47. In relation to the accuracy and integrity of the data recorded and processed on the Horizon system, I believed that the software worked well on the whole. However, there were a number of issues relating to accuracy and integrity which I discuss further below. I cannot comment on how general issues would be relayed to Post Office but, in respect of individual incidents, I believe that information was passed back to Post Office through the BSU/MSU or Service Management.

48. In terms of deficiencies during this time, there were a number of difficulties arising from the Riposte product. These included malformed messages (which would be identified by the data centre checks) and replication issues.

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49. All messages required certain attributes (such as user ID, date, time) to be harvested and sent to third party systems. Where there was a missing or corrupted attribute in the message, it would be harvested but flagged as incorrect by TPS and not sent to third party systems. The TIP Repair Tool was used to repair these malformed messages. The tool identified and ring-fenced any messages that did not meet an expected criteria. For example, the message may be missing a user attribute, the date may be too short or a value may be too large. Following this, the MSU would raise a support ticket for each exception and the EDSC/SSC team would investigate and look for the correct information for the message. To my knowledge, a malformed message could potentially result in a receipts and payments mismatch but it would have been very unlikely to cause a discrepancy (i.e. a loss or a gain) as it would probably require two malformed messages, one for the receipt and one for the payments of equal amount.

50. The main replication issue was that, when a transaction was performed on a counter which was not communicating to its neighbours, the transaction would not be replicated. If a report was later produced on another counter, sub-postmasters sometimes realised the transaction was missing and re-entered it manually themselves (known as re-key). As a result, when communication between the counters was later restored, the branch then had two copies of the same transaction (as the transaction had been entered manually at the branch again). This may then have led to the sub-postmaster experiencing a loss or gain.

51. There could be many root causes for replication failures between counters. This could include, network cable faults, hub faults for large branches, hardware faults, and issues with Riposte. Where it was a hardware and/or network issue, an appropriate engineer may have been required. Where it was a software issue, the

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events were monitored by second line support who would raise a ticket for first line support to contact the sub-postmaster to reboot the affected counter.

52. At around 7 pm, each counter sent an "end of day" message. If a counter failed to send an "end of day" message, any transactions performed during the affected day would not be harvested into the TPS database (transactions sent to Post Office's MIS systems) or the APS database (bill payments sent to multiple client, such as BT). This would not have a direct effect on the branch account. The support teams were also notified. Once a counter had failed to send an "end of day" message for several days, the team would try to recover the outstanding messages. This could be done by engineers using a special laptop to replicate/relay the outstanding messages over a branch telephone line or by retrieval into the secure support centre in Bracknell (BRA01) with both the PMMC card & PIN supplied by the sub-postmaster.

53. When Network Banking was introduced, the development team released a programme to monitor whether the counter became disconnected from the data centre. If it became disconnected, the software would disable the banking options and display an alert banner on the counter. If disconnected, the branch would also not write an "end of day" message.

54. Another issue that I recall at this time related to reference data. One example was when a product was withdrawn before branches had remitted out all stock from their system. This may have resulted in a receipts and payments mismatch in the branch's account. This would have been visible to the sub-postmaster when balancing and would also have been captured by monitoring from the data centre. As reference data was controlled by Post Office, in this case, the fix and communication of this to sub-postmasters would have been handled by them.

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55. By way of background, PinICLs originated from various sources, including Powerhelp (from branches) and Fujitsu teams including development, test and release. Generally, I was not involved in development, test and release so can only comment on PinICLs that originated from Powerhelp.

56. The volume of PinICLs was manageable for the team. Although it was a long time ago, I do not recall any particular concerns in relation to the volume of PinICLs and my recollection is that all Live raised incidents received into the EDSC/SSC were addressed effectively. Other teams that should be able to comment on this are the BSU/MSU team or the Service Management team.

57. My interactions with sub-postmasters focused on resolving specific incidents raised to help keep counters and branches operating. I was not involved in the general reporting of issues to Post Office. As noted earlier in this statement, my understanding is that this would have been the role of the Service Management team. I do not recall the details of any specific conversations with sub-postmasters.

CONSULTATION WITH END USERS

58. I am not aware of any practices or procedures that may have been in place to obtain input or feedback from sub-postmasters during the pilot and rollout of Horizon. However, as explained above, as a member of the EDSC and then SSC, I would sometimes speak to sub-postmasters on the phone to assist with issues (such as the Cash Account).

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Statement of Truth

I believe the content of this statement to be true.

Signed: GRO

Dated: 04 / 08 / 2022

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	Description	Date	Control Number	URN
WITN0411_01/1	Investment and Strategy Committee Meeting	20 November 1997	POINQ0067424F	FUJ00077836
WITN0411_01/2	PC0037808	21 June 2000 (last update status)	POINQ0052009F	FUJ00045838
WITN0411_01/3	Chief Executive's Report – May 1997 (PLC/97/8)	7 May 1997	POINQ0067422F	FUJ00077834
WITN0411_01/4	Chief Executive's Report – July 1997 (PLC/97/12)	15 July 1997	POINQ0067423F	FUJ00077835