



Watford Park u3a



Computing and Technology Group

DATA BACKUP



MEMBER SURVEY

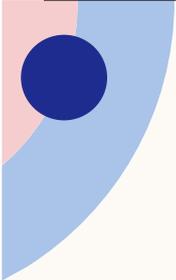
How many members here back up their important data: Monthly? Weekly? Daily?

How many members here can retrieve historic versions of files when they realise that the latest version has gone wrong, or simply disappeared?

How many members here keep a copy of their data at a safe location separate to their home (excluding on the Cloud).

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- Thank you to everyone who responded to my survey.
- As I expected, responses varied from no backups to fairly thorough backup regimes.
- Show of hands for recap . . .
- I will start with the fundamentals for the benefit of our beginners.
- Apologies to those who know it already.
- I will then go on to cover more sophisticated aspects of backing up.



DURING PRESENTATION

Don't hesitate to stop me at any time and ask questions.

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- The term 'Presentation' has connotations of a tedious lecture with just one-way flow of information
- Danger with that is that the recipients getting lost and looking and feeling glazed, or worse still, go to sleep.
- Don't hesitate to stop me at any time and ask questions.
- That will help people to remain engaged.
- I will be happy to take time to explain things to make sure everyone stays with me.
- If we run out of time before we get through everything I have prepared, never mind; we can always convene another session to carry on where we left off.

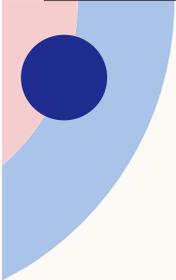


TYPES OF DATA

- Documents (e.g. pdf files)
- Spreadsheets (tables of figures – e.g. financial accounts)
- Photographs
- Music
- Emails
- Contacts Lists
- Calendars
- WhatsApp messages

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- What is it that we want to back up?
- It is all the important data that we keep on our electronic devices.
- This list shows the typical things which we have on our devices.
- Much of it is not critical, but it can cause a lot of grief if it is suddenly not available.



DOCUMENTS

u3a **WATFORD PARK u3a**
 Website: www.wpu3a.org.uk
 December 2025
 Issue 213 **Newsletter**

From the Chairman
 This will possibly be my last newsletter front page. I hope so, because I am running out of things to write and you already know more about my childhood than my children do. I will write the January one, but that is really just the formal Chairman's Report for the AGM. After that, somebody else will be writing their thoughts to keep you informed.

I decided that I would reflect on the changes to this u3a over the years that I have been involved. I joined originally to play bridge and at that time (2010) most of the local u3as were full. Watford Park was relatively new and was still building its membership. When we reached capacity and had a waiting list, Woodside u3a was formed to absorb the waiting lists of all of the Watford area u3as. The u3a movement was thriving. After a few years I was approached about joining the committee, and first time around, spent nearly five years there, initially as a guest, then as Vice-Chairman and finally as Chairman.

One of our issues was that of selecting a maximum membership number. It was raised from 450 to 475 and then to 500. We were always keen to ensure that any member who wanted to could attend a monthly meeting, and we tried to set the limit accordingly. The Third Age Trust (TAT) discourages us from setting a limit – but then all they want is the maximum number of paying members. With Woodside opening, our membership settled around that 500 number quite comfortably.

And then, Covid struck.
 In 2020, whilst I was still Chairman, we suffered a blow to our activities. We could not meet in numbers and, being of the age range most affected, we feared any contact with other members. For a couple of months, we did not know what to do – much like the Government at the time. Then along came Zoom, and many activities were able to re-start. Zoom was a great help at that time, allowing us to broadcast our monthly speaker and continue with many of the talking and musical activities. What we could not pursue were the "Doing" activities. The bowling group, walking groups, trips and all sporting activities were stopped, many of them never to start again. We struggled, but we survived. The fear of Covid eventually went away, but unfortunately so did many of our members. Many had decided not to renew because they could not take part in the activities they favoured. Others moved away or simply lost interest. Few new people joined, because we had little to offer. Membership went down to around 400, and it has stayed that way ever since. Next year we hope to start a recruitment campaign to rebuild our membership and get us back to that 500 number. Word of mouth is a good recruiting tool. Tell your friends how wonderful we all are.

We still need a few volunteers. For example, we need a Secretary for the Executive Committee (EC), an important job which we believe could be shared. It requires some computer skills, but nothing too much. Just as importantly, we need somebody to supervise the teas and coffees at monthly meetings. Pauline Edwards has been doing the job since I joined 15 years ago, and probably long before that. She needs and deserves a rest. She always enlists the help of other members for kitchen duties, but it is Pauline who oversees the whole operation. Unless you wish to end monthly meetings in future with a glass of tepid water, we need somebody to come forward for this role. And of course, we are always keen to see new people on the Executive Committee, helping to keep things going and bringing new ideas.

And with that, I wish you all a Merry Christmas and look forward to another busy year of u3a activities – with a little learning thrown in for good measure.

Ron Duckling - Acting Chairman

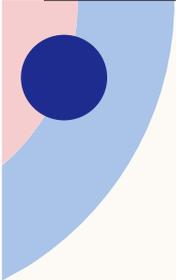


SPREADSHEETS

| | A | B | C | D | E | F | G |
|----|--|----------------------------------|----------------------------|---------|---|---|---|
| 1 | GARDEN GROUP ACCOUNTS 1 Jan 2019 to 31 Oct 2019 - OVERALL SUMMARY | | | | | | |
| 2 | | | | | | | |
| 3 | Balance at 1 Jan 2019 | | | +£869 | | | |
| 4 | | | | | | | |
| 5 | Outcome of Events | | | | | | |
| 6 | Date | Event | Surplus (+) or Loss (-) | | | | |
| 7 | Indoor Meetings | | | | | | |
| 8 | 15/01/19 | Kate Harwood talk | +£76 | | | | |
| 9 | 19/02/19 | Chris Day talk | +£62 | | | | |
| 10 | 19/03/19 | Ann Rowe talk | +£24 | | | | |
| 11 | Sub Total | Indoor Meetings | | +£162 | | | |
| 12 | | | | | | | |
| 13 | Trips | | | | | | |
| 14 | 16/04/19 | Capel Manor | -£23 | | | | |
| 15 | 16/07/19 | Sissinghurst | +£13 | | | | |
| 16 | 04/09/19 | Wisley | +£45 | | | | |
| 17 | Sub Total | Trips | | +£35 | | | |
| 18 | | | | | | | |
| 19 | Other | | | | | | |
| 20 | 18/01/19 | Late banked cheque from previous | -£15 | | | | |
| 21 | 31/01/19 | RHS Affiliation | -£35 | | | | |
| 22 | 19/02/19 | Printing | -£2 | | | | |
| 23 | | | | | | | |
| 24 | Balance at 31 Oct 2019 | | | +£1,014 | | | |
| 25 | Check | | | +£1,014 | | | |
| 26 | | | | | | | |
| 27 | | | | | | | |

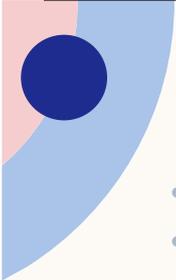
PHOTOGRAPHS





MUSIC





TYPES OF DATA

- Documents (e.g. pdf files)
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No need to show examples of emails etc.



LIKELY CAUSES OF LOSS OF DATA

- **Device failure** (quite likely, as devices are a very complex combination of electronics, mechanics and battery technology)
- **Accidental deletion** (quite likely due to user ‘finger trouble’)
- **Cyber Attack (ransom demand)** (most ransom demands are on businesses rather than individuals. For individuals to guard against cyber attacks, the most important thing to pay attention to is security, ref. Tim’s talk last month)
- **Theft** (all too common, especially portable devices like laptops. If your house has been burgled, the last thing you want to be worrying about is the loss of all your insurance details, often held in electronic form these days)
- **Fire** (fortunately, rare)
- **Flood** (most of Watford’s housing is safely above river levels, but failures of domestic plumbing can cause a lot of damage, especially to electronic devices)



BACKUP LOCATIONS

- **Memory stick (up to 2 TB)**
 - Plugs directly into USB socket on device
- **External drive (up to around 28 TB)**
 - Connects to device by short USB cable
- **Another device (e.g. laptop, desktop)**
 - Connects via Wi-Fi, ethernet cable (via router), or direct via USB cable
- **The Cloud**
 - Connects via broadband + router + Wi-Fi or ethernet
- **NAS (Network Attached Storage)**
 - Like the Cloud, but storage is on purpose designed hardware in own home.
 - Hardware includes multiple drives with redundancy against failure.
 - More secure than Cloud storage and does not rely on broadband connection.

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Here are some examples of physical devices we can backup data to:

Prices are from Amazon.

- Memory stick 32 GB, can buy 64 GB for less than £10
- Netac Solid State portable drive 512 GB, current price £58
- My Passport Hard Disc portable drive, current price for 500 GB £27, 500 GB SSD £93
- SSDs are more expensive than HDDs because faster and more robust.
- Internal Hard Disc 1 TB for £40.



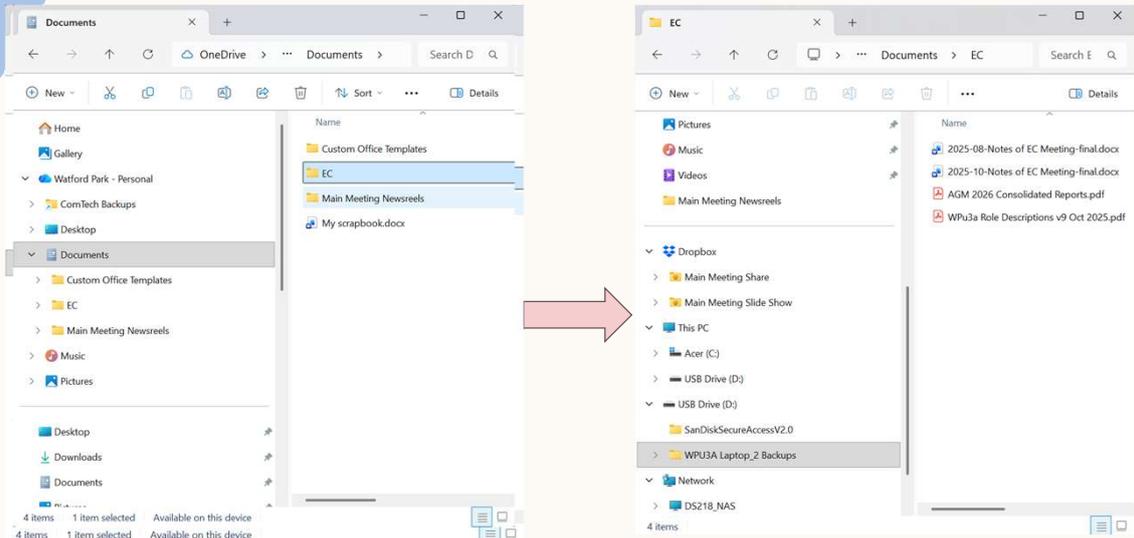
BACKUP METHODS

- **Manual** using copy / paste or drag & drop
- **App controlled**
 - Options include:
 - Full backups
 - Incremental backups
 - Differential backups
 - Synthetic Full backups
 - Manual or scheduled (automatic)
 - Retention of previous file versions (file history)

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- Backing up is all about copying data files into more than one location.
- We looked at different types of data.
- It is worth noting that backing up can include setup data for a device, and/or applications within it, but I don't intend to cover such backups today.
- We will look at how to do a manual backup first. That is the simplest form of backup.
- We will then go on and look at more sophisticated methods of backing up, which invariably means using a purpose designed app.

MANUAL – using copy / paste or drag & drop



Files are manually copied from source folder to backup folder.

This method is only suitable for a Full Backup.

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Demonstrate live. Suggestion – copy a couple of Main Meeting Newsreel files across.
Backups are on SanDisc memory stick 'WPU3A Backups'.



FULL BACKUPS

- Full backups are the simplest but most time-consuming, space-intensive and least flexible. The process backs up all the files in specific folders to identical folders in the backup location.
- Any ongoing backup regime has to start with a full backup, but after that it becomes inefficient because all the files are copied every time.

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- Full backup includes every single file in the chosen data set.
- When starting any sort of backup regime, it invariably means carrying out a full backup first.
- After that it becomes inefficient to do full backups because there is no point in copying a file again if it has not changed.



INCREMENTAL BACKUPS

- Incremental backups back up only the changed data since the last backup activity - a full or incremental backup.
- The incremental backup process requires one full backup followed by subsequent incremental backups over time.

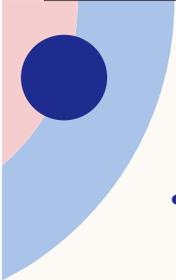
For example:

You perform a full backup on Sunday; Monday's incremental backup will take a snapshot and comprise all new or changed data since Sunday's backup. Tuesday's incremental backup will only back up new or changed files since Monday's incremental backup. The incremental backup process will continue as described until you perform a new full backup.

Upon completing the latest full backup, the incremental backups will "reset", use the new full backup as a starting point and continue to backup daily until the next full backup.

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- I am going to go over the next few slides quickly, because they are quite technical and you don't need to understand the detail.
- We will fast forward to a commonly adopted backup method which experience has shown me is efficient and easy to deploy.



DIFFERENTIAL BACKUPS

- A differential backup backs up only the files that changed since the last full backup rather than the last differential backup.

For example:

you do a full backup on a Sunday. On Monday, you back up only files that have changed since Sunday. On Tuesday, you back up only files that have changed since Sunday (including data changes that occurred on Monday); and so on until the next full backup.

Note: The amount of data being backed up grows with each differential backup until the next full backup

- A differential backup refers back to the last full backup whereas an incremental backup refers back to the previous incremental backup.
- There are trade-offs, which the typical home user does not need to understand or get involved in.



SYNTHETIC FULL BACKUPS

- The synthetic full backup method keeps a running full backup by applying each incremental backup to the existing full backup. i.e. any files which have changed since the last backup are saved into the full backup by overwriting the previous version.
- This method lends itself to retaining previous versions of files.
 - This works by saving any modified files before they are overwritten.
 - Similarly, any files which are deleted rather than overwritten in the backup process can be saved in case they need to be recovered.
- Given an appropriate application for running the backup process, this is method is probably the most suitable for U3A members as combines simplicity with robustness.

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- This is a commonly used form of backup and one which a lot of popular backup apps give you.
- As well as being easy to use, it has the advantage of making historic versions of files available.
- In essence, this backup method simply maintains a full backup data set by modifying the existing one at chosen intervals.
- Any changed or deleted files are saved in a separate place for recovery if required.

SYNTHETIC FULL BACKUPS using the GoodSync App

App deals with

- New files
- Modified files
- Renamed files
- Deleted files

User can check proposed file actions before proceeding.

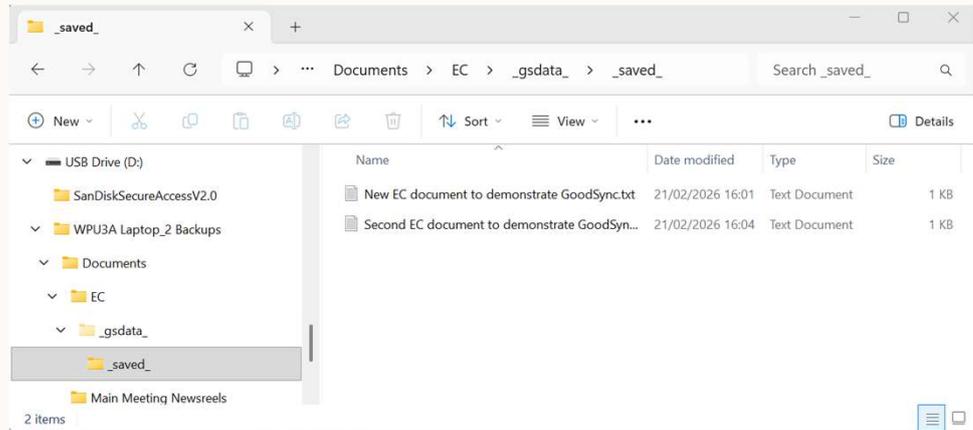
18

- I will show you what's involved in carrying out a typical synthetic backup.
- Personally, I use an app called 'GoodSync'. I recall Dave saying in an earlier ComTech meeting that he does not like to make recommendations, as they can backfire.
- All I will say is that I have been using this app for several years. It is robust, easy to use, and a reasonable price.
- Subscription £25 for 1 year, often discounted.

RETRIEVAL OF PREVIOUS FILE VERSIONS AND DELETED FILES using the GoodSync App

- Previous file versions and deleted files are stored in `_gsdata/_saved_` folder on destination side of backups.

- Need to tick View Hidden Files option in File Explorer.



- By default, only latest version of file is saved, and it is deleted after 30 days.
- Option for saving all historic versions of files, and not deleting after 30 days, but folder could become unduly large.

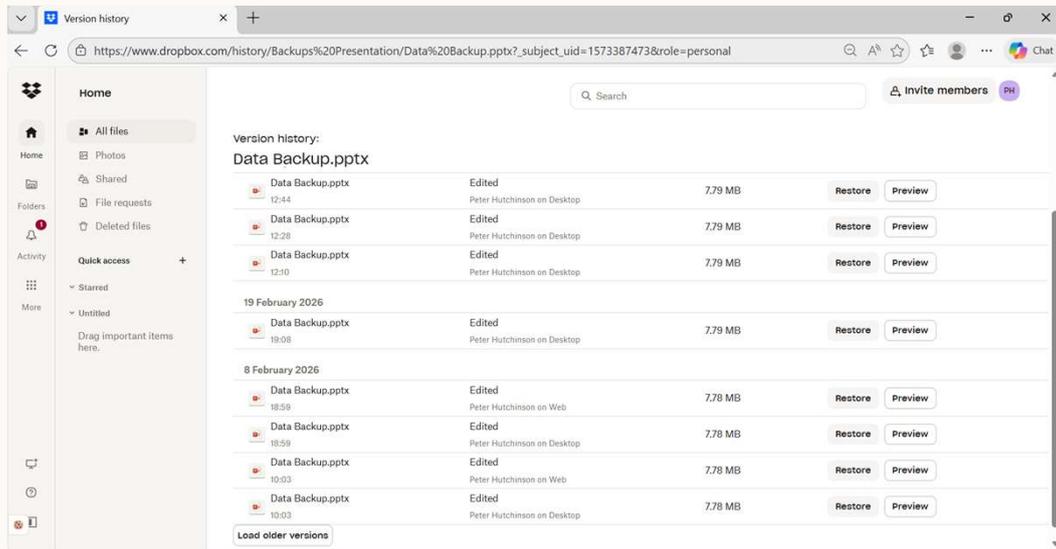
19

Demonstrate:

- Handling of new files.
- Handling of modified files
- Handling of deleted files.
- A limitation of GoodSync is that, although previous files which are modified are kept (in a separate folder), and similarly, deleted files are kept, there is not simple and convenient way of searching for particular old files (one can only look down all the files in the `_saved_` folder).

SEARCHABLE HISTORICAL BACKUP

Several previous versions of a file are kept and can be readily searched by date.



The screenshot shows the Dropbox version history interface for a file named "Data Backup.pptx". The page displays a list of versions, each with a timestamp, the user who edited it, the location (e.g., Desktop or Web), and the file size (7.78 MB or 7.79 MB). Each version has "Restore" and "Preview" buttons. The versions are grouped by date: 12:24, 12:28, 12:30, 19 February 2026, and 8 February 2026. A "Load older versions" button is visible at the bottom of the list.

| Version | Edited | Location | Size | Actions |
|------------------|--------|-----------------------------|---------|-----------------|
| Data Backup.pptx | 12:44 | Peter Hutchinson on Desktop | 7.79 MB | Restore Preview |
| Data Backup.pptx | 12:28 | Peter Hutchinson on Desktop | 7.79 MB | Restore Preview |
| Data Backup.pptx | 12:30 | Peter Hutchinson on Desktop | 7.79 MB | Restore Preview |
| 19 February 2026 | | | | |
| Data Backup.pptx | 19:08 | Peter Hutchinson on Desktop | 7.79 MB | Restore Preview |
| 8 February 2026 | | | | |
| Data Backup.pptx | 18:59 | Peter Hutchinson on Web | 7.78 MB | Restore Preview |
| Data Backup.pptx | 18:59 | Peter Hutchinson on Desktop | 7.78 MB | Restore Preview |
| Data Backup.pptx | 10:03 | Peter Hutchinson on Web | 7.78 MB | Restore Preview |
| Data Backup.pptx | 10:03 | Peter Hutchinson on Desktop | 7.78 MB | Restore Preview |

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- Cloud based storage systems often include the availability of previous versions of files.
- I will demonstrate looking at the historical versions of this presentation in Dropbox.
- By the way, the reason I save the file in Dropbox is that it is a Cloud based shared folder. That means I can work on it from any device anywhere.
- For example, this presentation is using a WPU3A laptop, but a lot of the preparation was done on my own PC. I don't need to transfer the file from one device to another, and I will always have access to the latest version.



CLOUD BACKUPS – BASICS

- ‘The Cloud’ means data storage in data centres accessed via the internet.
- The data centres can be anywhere in the world.
- Examples of popular Cloud storage services are OneDrive (Microsoft), iCloud (Apple), Google Drive, Dropbox.
- All these services provide a limited amount of free storage, which is generally enough for domestic users as long as they don’t store lots of large files such as high-resolution photos or music.
- Additional storage and facilities are available on a subscription basis.
- Data is encrypted in transit and at rest, so should be reasonably secure.
- Accounts are password protected, so security depends on the strength of the password set by the user.

CLOUD SYNC





CLOUD SYNC / BACKUPS – LIMITATIONS

- Cloud sync can be regarded as a form of backup, but one needs to be aware of limitations and dangers.
- THE KEY LIMITATION IS THAT SHOULD UNWANTED DELETETION OF FILES ON USER DEVICE OCCUR, THEN THE CORRESPONDING FILES ON THE CLOUD SERVICE WILL BE DELETED AS WELL, ALBEIT AFTER A SHORT 'GRACE' PERIOD.
- What exactly is cloud sync? The following applies to Microsoft OneDrive (which is part of Windows)
 - As soon as a file stored in OneDrive is created, modified or deleted, the changes are reflected on the attached device.
 - The next slide explains whether the file is actually copied, or simply referenced.



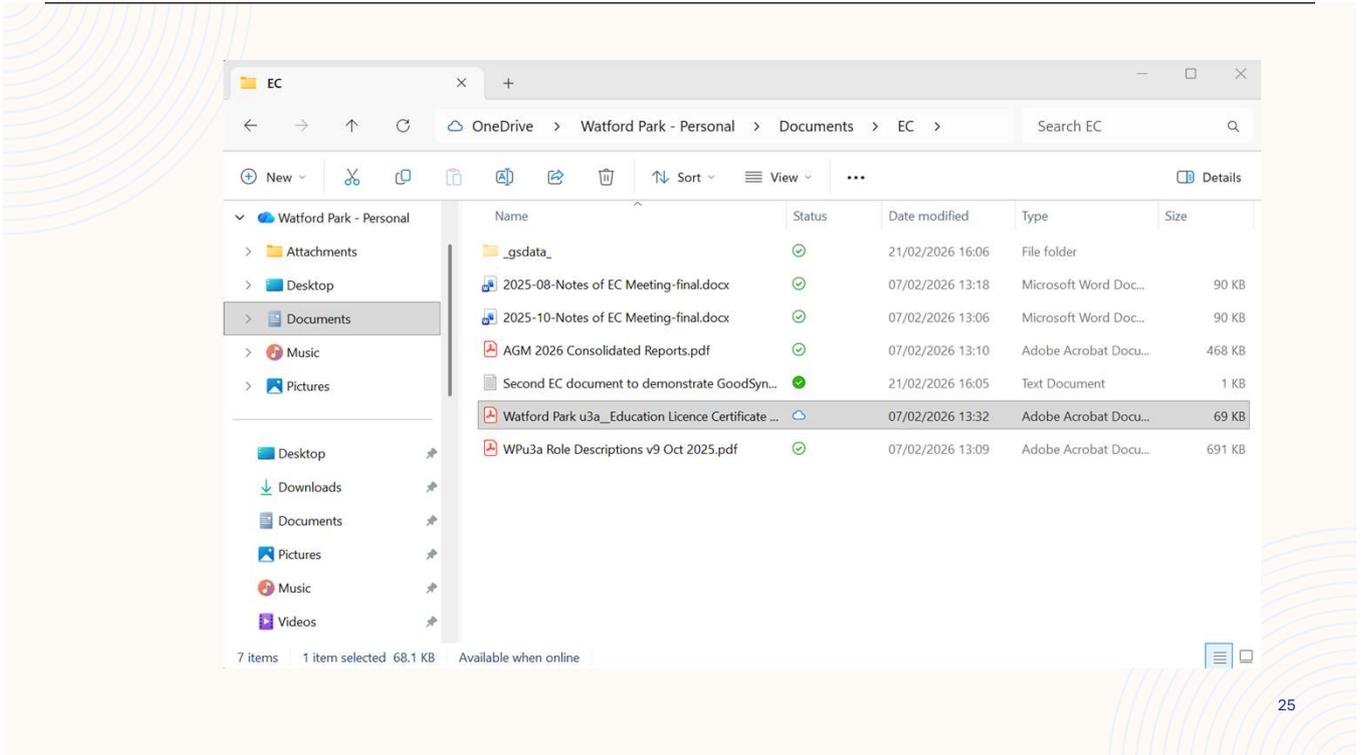
CLOUD SYNC / BACKUPS – LIMITATIONS – 1

- Files are not automatically kept both in The Cloud and on the local device. They can be set to:
 - **Free up space on local device.** *i.e. kept only in The Cloud, in which the file can only be accessed when online.*
 - **Available on local device** *after access, but subject to deletion from local device if storage space runs short.*
 - **Always available on local device.**

Files can only be regarded as backed up if they are set to ‘Always available on this device’, and even then, they are vulnerable to inadvertent deletion.

Note: The above terms are those used by OneDrive. Other Cloud based systems have similar functionality.

Next slide shows local storage levels in OneDrive.



- Solid green circle with white tick icon means 'Always keep on this device'
- White circle with green tick icon means locally available at present, but might change to cloud-only to save storage space.
- Blue cloud icon means available online only. Not stored locally.



CLOUD SYNC / BACKUPS – LIMITATIONS – 2

- Historical versions of files are retained for a limited period – typically 30 days.
- If a file is deleted, its historical versions (version history) are deleted as well
- Recovery can be possible from 'recycle bin', but with most systems only the latest version of the file can be recovered. Dropbox is an exception depending on the particular plan.



OFFSITE BACKUPS

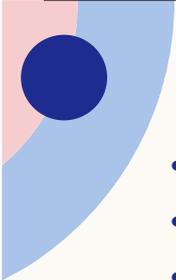
- On hardware kept somewhere safe outside of own home, in case of theft, flood or fire in home.
- Encryption of drive recommended. Even if custodian is trusted, the drive could be stolen.



WhatsApp



- WhatsApp messages can only be backed up by using the app to do its own special backup, either to Google Drive or iCloud depending on whether the phone is Android or Apple.
- They cannot be treated the same as normal files which can be copied and backed up.
- WhatsApp messages and attachments are tied to the user device which contains a SIM carrying the WhatsApp mobile number.
- Some messages can appear on linked devices such as tablets and laptops, but they rely on obtaining encryption keys from the phone.
- All messages are wiped if the phone is changed as the encryption keys will become invalid.



SYSTEM BACKUPS

- Includes operating system and settings in addition to data.
- Enables replacement of drive in single drive device.
- Modern devices have operating systems linked online to supplier (Microsoft, Apple, Android phone manufacturer, etc) and settings can be stored in account with supplier.
- Data is backed up separately, and suppliers invariably offer backup service and storage free of charge (but it ties one to the particular manufacturer).
- Data backup to own hardware is free of ties and does not rely on internet.