***<Preservation Maintenance Plan Template, v3.0, 16Nov2021>***

*<If this is the first time that Digital Preservation work has been done on a collection EITHER use the Scoping template to get started (best for large, complex collections)*

*OR use this Maintenance Plan template to get started (can be effective for smaller, simpler collections - retitle it to ‘Initial Digital Preservation work on the @@@ collection’ and ignore sections Schedule, 3-7) >*

*<To use this template, delete all material between the < > characters as well as the <> characters themselves; overwrite @@@ characters with the correct information; and fill in the sections of the document as appropriate.>*

*Title:***@@@** **PRESERVATION MAINTENANCE PLAN FOR @@@   
<***Insert the short name of the collection which is to be preserved, and the year the next maintenance exercise is to take place.>*

*Author: @@@*

*Date: @@@*

**Schedule:** The next Maintenance exercise is scheduled to start on @@@. To perform the maintenance, go through each of the following 23 steps.

**1. Purpose:** This document specifies the actions to be taken in the future to enable the contents of the @@@ collection (both digital and physical) to continue to be viewed and used to a level of quality and utility not less than was possible in @@@. <*Insert the year this Maintenance Plan was produced.*>

**2. Contents & Location:** The @@@ collection contains @@@ belonging to @@@. Its digital files are stored on @@@; and the physical @@@ are stored in @@@.

**3. Changes:** The following changes were made to the collection and its digital platform between the Maintenance performed in @@@ and the @@@ Maintenance exercise that has just been completed:

* @@@
* @@@
* @@@

**<***If this is the first Preservation exercise performed on this collection, remove all text from this section and put after the Changes heading, ’Not applicable – this is the first preservation exercise.>*

**4. Hardware, operating system, and application strategy:** @@@

*<List any changes that are planned for the hardware and operating system platforms upon which the digital collection resides; and for the applications which run on those platforms.>*

**5. Preservation actions taken in the Preservation project just completed:** At the point at which this document was written, the following preservation actions had just been completed:

* 1. **Work done on the list of ‘Possible Future Issues’ in the @@@ Maintenance Plan:** *<Insert the current year to identify the Maintenance exercise just completed)*
* @@@
* @@@
* @@@

**<***If this is the first Preservation exercise performed on this collection, remove all text from this section and put after the 5.1 heading, ’Not applicable – this is the first preservation exercise.>*

* 1. **Inventory check:** An inventory check was carried out and identified that @@@.
  2. **File type identification:** A Droid run on the @@@ directory identified @@@ files of @@@ different types as identified by PUID (the National Archive’s PRONOM Unique Identifier). <*Adjust this text to reflect whatever file cataloguing method you employed*>
  3. **File conversions:** The conversions listed below were performed to ensure the files concerned remain readable in the future. All files that were converted kept the same file title as the original but had 'UPDATED' and the date of the conversion inserted into their titles. The original versions were retained but had 'ORIGINAL' inserted into their file titles. <*Remove these last two sentences if they do not apply.*>
* @@@
* @@@
* @@@
  1. @@@ *<List any other preservation actions that have just been completed>.*
  2. @@@ *<List any other preservation actions that have just been completed>.*
  3. **Backup review:** Backup arrangements were due to be implemented immediately following the production of this document (this was left to last to ensure that this Maintenance Plan gets included in any backups taken as part of that exercise).

**6. Possible future preservation issues:** In the course of taking the above preservation actions, the following issues were identified as possibly requiring preservation work in the future:   
*<List any preservation issues that are known about but not yet resolved.>*

**6.1** @@@

**6.2** @@@

**6.3** @@@

**7. Elements to be left out of file cataloguing exercises:** The following items can be excluded from future @@@ Preservation Maintenance file cataloguing work for the reasons given (though this does not mean that the item should not be checked in some way or other):

*<When dealing with thousands of files, some of which may be related to executables and other programming-related functions, their inclusion in a file cataloguing exercise can hugely increase its complexity and duration. This section provides an opportunity to limit such challenges. If no items are to be excluded, write ‘None’ in the first row of the table below.>*

| **Element** | **Reason for excluding from file cataloguing** | **Alternative check** |
| --- | --- | --- |
| @@@ *<Insert Ref No and title or other appropriate reference text>* | The CD contents work, and there are too many files (16,000) *<This is just an example - replace as necessary with appropriate text>* | Check that the contents can be opened and navigated *<Replace as necessary with appropriate text>* |
| @@@ *<Insert Ref No and title or other appropriate reference text>* | This does not need to be checked again until two Preservation Maintenance cycles have passed *< This is just an example - replace as necessary with appropriate text>* | None *<Replace as necessary with appropriate text>* |

**8. How to implement this Maintenance Plan:** To implement this Plan, perform the activities listed in this section in the order they are presented. Before starting, create a document in which you will summarise the actions you take, and which will refer out to the detailed analysis documents (if the two types of document can be combined in some way by using appendices or worksheets, so much the better). The summary and analysis documents will provide a mechanism to actively finish work on each step, and to move on to the next step; they will also make it easier to create the next Maintenance Plan. The activities are listed below to provide an overview of what is required; a description of each activity is provided in sections 9 - 23 of this document.

* Specify the preservation period.
* List changes that have occurred since the plan was created.
* Review the hardware, operating system, and application strategy.
* Perform an inventory check and identify any work required on the physical items and storage.
* Investigate the Possible Future Issues identified in the Maintenance Plan.
* Catalogue the file types.
* Then, for each file type:

- try opening a few example files

- define the application and platform strategy for that file type

- define any conversion action to be taken.

* If required, create a Digital Preservation Plan DESCRIPTION and CHART at this point.
* Make any changes to the Applications and Platforms that have been defined.
* Perform any work previously specified on the physical items and storage.
* For each file type, implement the specified file conversion actions.
* Create the next version of this maintenance plan.
* Review and update the backup arrangements and make new backups as necessary.

**9. Specify the preservation period**: Decide when the next Maintenance exercise after this one is to take place. This will determine the minimum period over which the collection is to be preserved by the actions taken in this maintenance exercise. It is recommended that the period should not exceed 5 years. Create a new Maintenance Plan document for that future exercise andput the new date into the Schedule section at the beginning of the document.

**10. Changes since this Plan was created:** List any significant changes that have been made to the collection and its digital platform since this plan you are working on was created and document them in section 3 of the new Maintenance Plan.

**11. Review the hardware, operating system, and application strategy:** The ability to open and use the collection's digital files is critically dependent on the hardware and operating system platforms upon which the application software runs; and on the applications themselves. Therefore, identify if any changes are planned for these elements over the period leading up to the next maintenance exercise, and document them in section 4 of the new Maintenance Plan.

**12. Perform an inventory check and identify any work required on the physical items and storage:** Check that all physical and digital items are in place, and try to find any missing items. If they still can't be found, record the fact that they are missing. While doing the check, identify any physical items or storage containers that are in poor condition or inadequate in any way, and either deal with them immediately, or specify what action is to be taken for inclusion in a Project Plan produced in step 18 below.

**13. Investigate the Possible Future Issues identified in the Maintenance Plan:** Consider each of the Possible Future Issues listed in the Maintenance Plan you are currently working to, and decide what action, if any, to take. Action can be taken immediately, or left for inclusion in a Project Plan produced in step 18 below.

**14. Catalogue file types:** Use a software tool such as DROID (which was downloadable for free from the National Archives web site in 2021), or simply use Windows Explorer or equivalent in other operating systems, to identify what file types are present in the collection.

**15. Try opening a few example files:** For each file type, take a few example files and try to open them. Make notes on what happens including what application (and its version number) is used to open the files.

**16. Define the application and platform strategy:** For each file type, decide what application you want to be able to open it in; then what operating system you want the application to run on; and then what hardware you want to use (it is probable that you'll want to use the same operating system and hardware platforms for all the items in the collection - but it is also possible that particular applications may influence the platform decision).

**17. Define conversion action to be taken:** For each file type, define what conversion, if any, is to be performed on particular files of that type; and the process and tools to be used to achieve the conversion.

**18. Create a Project Plan:** If required, create a Digital Preservation Plan DESCRIPTION and CHART at this point, using the templates provided.

**19. Make any changes to the Platforms and Applications that have been defined:** Before proceeding with any conversion activities in step 21, make any changes to the Hardware, Operating System and Applications that are required.

**20. Perform any work previously specified on the physical items and storage:** If any problems with the physical items and storage containers had been identified while undertaking the inventory check, carry out the rectification work that has been specified.

**21. Implement the specified conversion actions on each file:** For each file type perform the conversion actions that have been specified on the files of that type. Test that the converted files open satisfactorily before deleting any originals. Consider retaining the originals to mitigate against any changes or reductions in quality introduced during conversions. If originals are to be retained, consider putting ‘ORIGINAL’ into their file titles, and putting ‘UPDATED’ in the titles of the newly converted files. If the collection has an index, update any information relating to file formats and numbers that have been changed by these conversion actions.

**22. Complete the next version of this maintenance plan:** Complete the Maintenance Plan that was initiated in step 9 for the next Maintenance exercise. Modify the maintenance process steps if required as a result of experience gained in the exercise just completed. Include the date of the next exercise in your personal calendar or reminder mechanism.

**23. Review and update the backup arrangements:** Review the backup arrangements and check they have been operating correctly. Test the recovery of files from the different backup mechanisms. Make any changes to the backup arrangements that are needed. When all changes have been made, check that the backup documentation (including any hardcopies) is completely up to date, and then ensure that the latest versions of all the electronic components of the @@@ collection are backed up.

**ENDS**

***< Changes to this Preservation Maintenance Plan template since v2.5***

* *In the title of the document, include the year when the next Maintenance exercise is due to take place. For example, @@@ PRESERVATION MAINTENANCE PLAN FOR 2025.*
* *New section 3 on changes to the collection between the previous Maintenance exercise and the one just completed.*
* *New section 4 on hardware and operating system strategy.*
* *New section 5.1 on work done on the ‘Possible Future Issues’ in the previous Maintenance Plan*
* *New section 7 on elements that can be left out of file cataloguing exercises in future Preservation Maintenance projects.*
* *In the new section 21 on converting files, the following sentence was added: ‘If originals are to be retained, consider putting ‘ORIGINAL’ into their file titles, and putting ‘UPDATED’ in the titles of the newly converted files.’*
* *Various tidying-up changes and renumbering.>*

*<This v3.0 Preservation MAINTENANCE PLAN template accompanies the Preservation Planning SCOPING Document template and the Preservation Project Plan DESCRIPTION and CHART templates, to support Digital Preservation projects. It has been tested on a digital collection of over 29,000 documents and zip files, and 105,000 files in total, through two preservation cycles over a period of three years; and is now considered to be fit for purpose. It has been created by Paul Wilson as part of his Order from Chaos investigations (see pwofc.com) and is available for use by anyone who may find it helpful.>*