The Books and Borrowing Content Management System

This section gives an overview of the project's Content Management System (CMS), which will be used by the project team to add, edit and delete the project's data. The CMS will connect to the database as defined in the preceding section and will enable the project team to manage all of the listed record types and fields, such as borrowings, borrowers, books and authors. Each main page of the CMS is described below, but it should be noted that the functionality and contents of the pages may change as the system is developed.

Add Library

This page will provide facilities to add a new library to the system and will feature text boxes enabling all of the library fields as defined in the previous section to be filled in. Any free-text fields such as library description will incorporate the TinyMCE HTML editor which provides a word processor style interface for formatting text and also enables text to be copied and pasted from a word processor whilst retaining the formatting. Facilities will also exist to add one or more types of source. Note that other than 'library name' all other fields will be optional and may be supplied at a later point.

Browse Libraries

This page will list all of the libraries that are in the system and will be the main access point through which the bulk of the data will be managed. Libraries will be listed in a table that will feature the following columns:

- Library name
- Settlement
- Library type
- Borrowing spans (inferred from ledger records)
- Number of ledgers (the number of ledger records that have been created for this library in the system)
- Number of borrowing records (the number of borrowing records that have been created for this library in the system)
- Editor's notes

It will be possible to order the table by any of the columns, e.g. to list libraries with the largest number of borrowing records first. It will also be possible to open the record about a library by clicking on its name. There will also be an option to delete a library, but this will only be available for any library record that does not have an associated ledger record. Note that 'deleting' a library record (or any other type of record) will not remove it from the underlying database but will merely hide it from the CMS and it will therefore be possible to reinstate any record that has been accidentally deleted.

View Library

When a library name is clicked on from the list of libraries its corresponding 'view' page will load. This page will display all of the information that has been entered about a library via the

'Add Library' page. An 'Edit' button will also be displayed, and when clicked on a form will load through which all of the library's fields may be edited.

The page will also feature a section for managing the additional fields that are included in ledgers located at the selected library. The section will include an option to add a new additional field, specifying its name, a description, its type (borrowing, book holding or borrower) and whether the field will be publicly viewable or not. A tabular list of all previously entered additional fields will also be displayed in this section, through which a field record may be edited, for example updating a field to make it publicly viewable. An option to delete an additional field will also be given, but only for fields that have not had any data entered into them.

The View Library page will also contain a section listing the Borrower records that have been created for the library. These will appear in a table containing the following columns:

- Title
- Surname
- Forename
- Number of associated borrowings (split into 'main' and 'other')
- Cross references (a list of all links to other borrower records)
- Settlement
- Gender
- Occupation(s)
- Editor's notes
- View Borrower button

As with other tables, it will be possible to order the list of borrowers by any of the listed columns. It will also be possible to delete a borrower from the library, so long as there are no associated borrowing records or cross references. There will also be a link to a facility to create a new Borrower record for the library (see below).

The View Library page will also contain a list of all Book Holding records that have been created for the library. These will appear in a table containing the following columns:

- Short Title
- Full Title
- Author(s):
  - Title
  - Forename
  - Surname
  - Other titles
  - Date of birth (and circa)
  - Date of death (and circa)
  - Author aliases
- Language
- Publication place
- Publication date (and circa)
- Catalogue URL
- Associated Book Item records

- Number of associated borrowings
- Editor's Notes
- Connection to Book Edition and Book Work (noting whether this holding in the library has been associated with a more general Book Edition record and associated top-level Book Work record)
- View Book Holding button

As with other tables, it will be possible to order the list of Book Holding records by any of the listed columns and it will be possible to delete a Book Holding record so long as there are no associated Borrowing records. Note that deleting a Book Holding record will also delete any author associations that have been made at the Holding level, any connection to a higher-level Book Edition and any lower level Book Item record that has been created. There will also be a link to a page where a new Book Holding record can be created for the library (see below).

The View Library page will also contain a list of all ledger records that have been created for the library. These will appear in a table containing the following columns:

- Ledger Volume
- Start Date
- End Date
- Number of pages (the number of page records that have been created for this ledger)
- Number of borrowing records (the number of borrowing records that have been created for this ledger)
- Editor's notes

It will be possible to order the table by any of the columns (e.g. to list ledgers with largest number of page records first). It will also be possible to edit the record for the ledger from within the table, for example updating the Editor's notes field. Any ledger records that contain no pages will also include an option to delete the record.

Any ledger that contains at least one page record will feature an option that allows the ledger row to be expanded to display a further table of all the page records. This table will contain the following columns:

- Page ID
- Folio Number
- Number of borrowing records (the number of borrowing records that have been created for this page)
- Page image URL
- ID of previous page
- ID of next page
- View page button

The table will be ordered by Page ID and the order will not be changeable. It will be possible to select a row to edit its contents, for example adding in a page image URL. It will also be possible to delete a page record if it does not contain any borrowing records. An option to add a new page record will also appear in the section for each ledger.

View Borrower

When the 'View Borrower' button is pressed from the list of borrowers, a page will load that displays all of the information about the selected borrower, including a list of all associated borrowing records with links through to the pages where these records are found. It will be possible to disassociate the borrower from a borrowing record and also to edit any of the information about the borrower (e.g. updating the editor's notes, updating the cross references to other borrower records or changing the borrower's selected occupations).

Create new Borrower

While it will be possible to create a new Borrower record for a library during the process of creating a new borrowing record (see below), it will also be possible to create new Borrower records directly through a link from the View Library page if required. The Create New Borrower facility will consist of a form through which the RA can enter all necessary information about a borrower (e.g. names, gender), add in cross-references to other borrower records, select one or more occupations from the list of occupations or create a new occupation, if required. Adding cross references and occupations will use an auto-complete function, whereby the RA can start typing the first few letters of a name or occupation and a list of any existing matches will be brought up for selection.

View Book Holding

When the 'View Book Holding' button is pressed from the list of Book Holdings for a library, a page will load that displays all of the information about the selected Book Holding. From this page it will be possible to view all of the information relating to the Book Holding, including all fields from any related Book table (Book Work, Book Edition, Genre, Book Item, associated authors at all levels). The page will also provide a list of all borrowing records the Book Holding is associated with, and links through to the pages where these records can be found.

It will also be possible to edit the book record via this page. This facility will enable the RA to make changes to any of the Book Holding fields, create and edit Book Item records for the holding and delete a Book Item, provided it is not already associated with a Borrowing record. It will also be possible to manage the association between the Book Holding and higher level Book Edition / Book Work records from this page. A new association to an existing Book Edition may be established by typing a few letters of the Book Edition's title or supplying the ESTC Number. Any matching edition will appear in an auto-complete list and can then be selected. It will also be possible to remove any existing associations to Book Editions if these need to be replaced. Note that if a new Book Edition needs to be created this will need to be done via the Create New Book Work / Edition facility described below. Once created, the new Book Edition will then be findable via the auto-complete facility on the View Book Holding page.

The page will also provide facilities to associate authors with the Book Holding or the Book Item record. Authors will automatically cascade down from any higher level Book Edition / Book Work that is associated with the Book Holding, but in some cases authors will need to be specifically associated with the Holding or Item. This will function in the same way as associating Book Editions, in that the RA will start typing an Author's name and any existing matches will be displayed in an auto-complete list. Upon selecting the author the team member will then also have the option of supplying an author alias, which is the author's name as it appears on the specific Holding or Item. If a new author needs to be created this will need

to be done via the Create New Author facility described below. Once created, the new Author will then be findable via the auto-complete facility.

Create new Book Holding

This page will enable a new Book Holding record to be directly added to the library, as an alternative to adding a new Book Holding record whilst adding or editing a Borrowing record (see below). Through this page the team member will be able to fill out all fields relating to a Book Holding and generate one or more Book Items for the Holding. It will also be possible to associate the new record with one or more higher level Book Edition / Book Work records in the same manner as described in the preceding section, and to similarly associate authors with the Holding or Item records if required.

View Page

When the 'View page' button is pressed for a page in a ledger, the system will load a page through which the borrowing records and their associated data can be managed. This page will provide navigation buttons through which the next and previous pages in a ledger (if available) can immediately be jumped to, and an option to create a new 'next' page if an existing 'next' page has not yet been created.

If a page image URL has been specified for the page then a button will appear that when pressed on opens the image in an OpenLayers-based zoom and pan interface in a new browser tab or window. This will enable the RA to transcribe directly from the image or to check an existing transcription against the image.

Any previously transcribed rows on the page will be listed in a table consisting of a subset of the columns from the Borrowing, Borrower and Book Holding tables. A subset is required as there are too many potential columns to display in a useable manner in a table. The following Borrowing fields will be displayed:

- Order on page
- Original diplomatic transcription of the record
- Borrowed Day
- Borrowed Month
- Borrowed Year
- Returned Day
- Returned Month
- Returned Year

The following columns about the Borrower table will also be displayed:

- Surname
- Forename
- Title
- Settlement
- Gender
- Occupations
- Type of borrowing (main or other)

Note that as multiple borrowers may be associated with a borrowing the borrower section of the table will be further split into rows for each associated borrower if required.

The following columns about the book that was borrowed will also be displayed:

- Short title
- Full title
- Publication place
- Publication year (with circa)
- URL
- Book item(s)
- Author(s) names and aliases
- Author(s) dates of birth and death (with circa)
- Connection to Book Edition / Work

It will be possible to expand a row in the table to display and edit the full data about the record. Doing so will cause a new section of the page to slide open beneath the row in question which will feature an editable form containing all the fields from the Borrowing, Borrower and Book Holding tables, plus any additional fields for these tables that have been created for the current library. Through this form the team member will be able to edit the fields of the borrowing record, edit the details of the borrower (which will affect any other borrowing records the borrower is associated with), remove the borrower and assign a different borrower, edit the details of the associated Book Holding and Item and associated authors (which will also affect any other borrowing records the book appears in), remove the book association and assign a different book and associate the Book Holding with an existing Book Edition / Work in the same way as described in the 'View Book Holding' section.

'View Page' will also feature an 'Add New Record' button that when clicked on will open up a section containing a form through which a new borrowing record may be entered. This section will function in the same way as the 'Edit Record' section described in the preceding paragraph, and will enable details for a new borrowing record to be added, including the option of associating existing books and borrowers or creating new book and borrower records as part of the borrowing record creation process. Note that the only mandatory field will be the 'original transcription', which will feature a TinyMCE editor that will allow HTML formatting for features such as superscript text to be easily entered. Note also that 'order on the page' will automatically be set to the next available number, but may be manually updated to that of any other existing record. Doing so will insert the new record at that point in the page and will shift all records down by one. For example, if there are 10 existing records on the page and the 'order on page' is manually assigned to '1' for a new record then this record will become the first record on the page and all others will be shifted along one, with the previous record '1' becoming record '2' etc.

It will also be possible to delete a record from the page. Doing so will also remove the associations from the record to any associated books and borrowers but will not remove the book and borrower records themselves. Note that 'deleting' the record only removes it from the CMS and it remains in the underlying database, and therefore the 'order on page' value for all records on the page will not be changed when a record is 'deleted' but there will instead appear to be gaps in the numbering. This will enable a deleted record to be more easily reinstated if required and will not have any adverse effect on the ordering system which will only ever order the page by records that are not deleted.

Browse Book Works / Editions

This page will provide a list of all Book Works and Book Editions in the system, with links through to any associated Book Holdings and Items, Authors and Genres. All existing Book Work records will be listed in a table featuring the following columns:

- Title
- Date of initial publication (and circa)
- Authors associated with Book Work:
  - Title
  - Forename
  - Surname
  - Other titles
  - Date of birth (and circa)
  - Date of death (and circa)
  - Author aliases
- Editor's Notes
- Number of associated Editions
- Number of associated Holdings
- Number of associated Borrowings

As with other tables, it will be possible to order the table by any of the fields and to delete a record so long as there are no associated Editions. It will also be possible to edit the record, for example removing or adding a new associated author or changing the editor's notes. If there is one or more associated Editions it will be possible to expand the record's row to list these editions in a further table that will contain the following rows:

- Title
- ESTC Number
- Place of Publication
- Publisher
- Year of publication (and circa)
- Format
- Pagination
- Editors
- Translators
- Authors associated with Book Edition:
  - Title
  - Forename
  - Surname
  - Other titles
  - Date of birth (and circa)
  - Date of death (and circa)
  - Author aliases
- Number of associated Holdings
- Number of associated Borrowings
- Genre(s)
- Editor's notes

It will also be possible to order this table by any of the fields and to delete a record so long as there are no associated Holdings. Note that only those authors that have been associated specifically at Book Edition level will be listed in the table; any associations at Book Work or a lower book level will not be listed. It will be possible to edit the record for the Book Edition from the table, for example to associate a new genre or change the associated authors. It will also be possible to create a new Book Edition record for the selected Book Work.

If the Edition is associated with one or more Book Holdings at specific libraries then it will be possible to expand the table to display a list of these. The newly expanded table will contain the following fields:

- Library name
- Short title
- Full title
- Language
- Publication Place
- Publication year (and circa)
- URL
- Authors associated with Book Holding:
  - Title
  - Forename
  - Surname
  - Other titles
  - Date of birth (and circa)
  - Date of death (and circa)
  - Author aliases
- Book Items associated with the Book Holding:
  - Part number
  - Authors associated with Book Item
  - Number of associated Borrowings
- Editor's notes
- View Book Holding button

It will not be possible to edit a Book Holding / Book Item record from this table, but instead the RA will be able to access these facilities by pressing on the 'View Book Holding' button, which will load the relevant Book Holding page, as described previously.

Create New Book Work / Edition

This page will enable the RA to create a new Book Work record and one or more associated Book Edition records. The page will contain a form featuring the fields relating to Book Works and a facility to associate one or more existing authors with the new record, or to create a new author to associate with the Book Work. A further section will give the RA the option of further specifying one or more Book Editions for the Work, including facilities to associate authors and genres. Note that it will also be possible to skip the creation of Editions and add these later via the 'Browse Book Works / Editions' page.

Browse Genres

This page will list all of the genres that have been created. Genre is treated as a non-hierarchical set of keywords and the browse list will feature an alphabetical list of genres plus a count of the number of Book Editions that appear in each genre. It will be possible to select a genre to edit it and also to view a list of Book Editions that appear within it, with each book title linking through to the relevant section of the 'Browse Books' page. It will also be possible to delete a genre so long as no Book Editions have been associated with it.

Create New Genre

This page will feature a form through which one or more genres can be added to the system.

Browse Authors

This page will feature a means of accessing and editing all of the authors that are in the system. Authors will be listed in a table containing the following columns:

- Title
- Forename
- Surname
- Other titles
- Birth date (with circa)
- Death date (with circa)
- Number of Book Work / Edition / Holding and Item associations
- List of aliases
- Editor's notes

As with other tables it will be possible to order the table by any of the columns, it will be possible to edit an author's details and to delete an author, provided they are not already associated with a Book record. It will also be possible to list all of the Book records of each type that an author is associated with and to edit, add or remove these associations (for example changing the author's alias for a book, or removing the association to a Book Edition record and instating an association between the author and the corresponding Book Work instead).

Create New Author

This page will allow the RA to create a new author, including supplying all of the fields relating to an author and establishing associations between the author and existing Book Work / Edition / Holding / Item records, which will include supplying author aliases where necessary.

Browse Occupations

This page will list all of the occupations that have been created. As with genre, occupations are treated as a non-hierarchical set of keywords and the browse list will feature an alphabetical list of occupations plus a count of the number of Borrowers to which the occupation has been assigned. It will be possible to select an occupation to edit it and also to view a list of the related borrowers, with each borrower name linking through to the relevant 'View Borrower' page. It will also be possible to delete an occupation so long as no Borrowers have been associated with it.

Create New Occupation

This page will feature a form through which one or more genres can be added to the system.