Guide to the Laboratory Information Management System used at the Centre for Genomic Research

Introduction

The Centre for Genomic Research (CGR) uses a Laboratory Information Management System (LIMS) for submission and processing of samples for sequencing. The GeneSifter software by Geospiza streamlines our procedures and provide our users with an enhanced service, including tracking progress of orders and samples. This document is a step-by-step guide to help you navigate the GeneSifter LIMS.

To log in or create a new account, please go to https://cgrlms.liv.ac.uk/login and provide the required information (to follow the website link, just hover the mouse above the link, press Ctrl and left-click on the mouse).

Figure 1

As shown in Figure 1, please log in using your existing username and password, or click

1. Create new account if you are a new user and log in using your chosen user name and password.

2. Forgot password if you are an existing user, but have forgotten your password.
Figure 2 shows your personal homepage once you have logged in.

On the left, select “Place order” to place a new order or “View order” to be directed to your existing draft or submitted orders.

**Place an order - Part 1: Open the appropriate sample submission form**

**Step 1:** Click "Place order" in the left hand menu of your homepage (see Figure 2 above) to get an overview of the available sequencing platforms at the CGR (illustration below shows a selection of available platforms and order forms: 

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**Place Order**

**Notes**

If you experience difficulties or have any queries relating to completion of the online so
Hover you cursor over an order form link to obtain a description of the relevant sample and workflow types for that particular order form (see an illustration of this in the blue pop-up box for DNA fragment libraries below):

![Order Form](image)

**Step 3:** Click on the appropriate link to open the relevant order form.

If you require multiple types of sequencing, you will need to make multiple orders, using the relevant order form for each.

**Place an order - Part 2: Complete the project and sample information form**

**Figure 3**

![Field Filled](image)

Figure 3 shows some information we require for all types of orders.

*Note* that all required fields are denoted with a red asterisk and you will not be able to submit the order without completion of those.
Figure 4 shows an example of sample requirements (printed as above or obtained via a link). These obviously differ depending on the type of samples, libraries and platform. Please check the specific requirements before you prepare your samples for submission.

Figure 5 illustrates that for some sample types, we require additional information.

1. Details of the additional information is provided in a document that can be downloaded via a link on the order form.

2. Once completed and saved, the document can be uploaded using the browsing dialog box.

At the bottom of the order form there is a sample information table that needs to be completed for each sample.
Figure 6 shows a small part of a sample information table. Please read below for information on ① - ⑦.

① Please enter the required number of rows required for your samples (do **not** include any empty rows).

You can enter the information in each column and row individually (move sideways by use of the tab key; **not** the enter key) or you can use the **Easy fill controls** as explained below.

To use the **Easy fill controls**:

② Enter the required information in row 1 (see Figure 6 for input options such as free text or number only).

③ Fill in the remainder of the column by clicking on one of the Easy fill control icons.

See the table below for a description of their use.

<table>
<thead>
<tr>
<th>Easy fill control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>Fills every row in the column with the information that was entered in row 1 ②.</td>
</tr>
<tr>
<td>▲</td>
<td>Can be used if the information entered in row 1 ② ends with a digit. Using the &quot;Fill down plus&quot; icon will automatically increment the last digit of the entry by one for each row.</td>
</tr>
<tr>
<td>✗</td>
<td>Deletes all information entered in the column</td>
</tr>
<tr>
<td>✡</td>
<td>Locks all other columns, allowing you to use the tab key to move to the next row when entering data in the highlighted column</td>
</tr>
</tbody>
</table>

④ You can also use the Excel download/upload **Easy fill controls**. The table below gives a description of their use.

<table>
<thead>
<tr>
<th>Easy fill control</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Download Icon](download.png) ![Excel Icon](excel.png) | Downloads the input grid (sample information table) into Excel.  
- If you use this option, you **cannot** make any changes to the contents of the top row of the grid or to the column number/order. If you make changes to any of those, the grid will not be recognised by the LIMS software and, hence, you will not be able to upload the data entries.  
- If you choose to complete a sample field with a dropdown menu while in Excel, you **must** pick one of the options from the menu **exact** wording).  
- Once you have completed the grid, save it in a known location and upload the information using the icon described below. |
| ![Upload Icon](upload.png) ![Excel Icon](excel.png) | Uploads a completed input grid (sample information table) from a known location. |
⑤ If you click the icon, you remove all the information entered in that row.

⑥ If all of the compulsory (indicated by a red asterisk) information has been entered on the entire order form, click the “Proceed to purchasing info” button to complete this part of the submission.

⑦ If you have left any of the compulsory fields (indicated by a red asterisk) empty, you will not be able to enter the purchasing information, however, you can save all of the entered information by clicking the “Save as draft” button and return to the form for completion.

The project ID (last five digits of the tracking ID) will be assigned, although information is still missing.

**Place an order - Part 3: Completion of the purchasing information form**

When you have saved or submitted the project and sample information form, you will automatically get to a summary page similar to the one in Figure 7.

Figure 7

![Figure 7](image)

Figure 7 illustrates:

① After completion of the project and sample information form, the order is not yet submitted.

② You are required to provide the purchasing information (see more about this in Figure 8 below).

③ Throughout LIMS you will find blue action buttons at the top of the page. Click on these to carry out the labelled functions; for example, to edit or delete an order.
Figure 8 shows the purchasing information that needs to be completed.

1. Please select the name and address of yourself or your principal investigator in the "Bill to" dropdown menu. If the details are not already there, please add them using the Add address link. This is required for invoicing.

2. Please select the payer of the order from the dropdown menu.

3. Select the charge code type from the dropdown menu. Once selected, a description of the charge code type will be displayed. Please see the table below for a complete list of options.

<table>
<thead>
<tr>
<th>Charge code type</th>
<th>Charge code description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase order number</td>
<td>For&lt;br&gt;• all users outside the University of Liverpool&lt;br&gt;• NERC NBAF award holders, if the principal investigator holds the funds.</td>
</tr>
<tr>
<td>Cost centre code</td>
<td>For University of Liverpool users only. Valid format for the cost centre code is 3 capital letters followed by 5 digits. The complete funds will be charged against your grant when the project is completed.</td>
</tr>
<tr>
<td>NERC NBAF number</td>
<td>Please enter the NBAF or NEOF number, if NERC or the Centre for Genomic Research hold the funds for this project.</td>
</tr>
<tr>
<td>Funds held with the Centre for Genomic Research</td>
<td>Please provide the AGF number for reference. If you have not already obtained this, please contact Emma Quayle (<a href="mailto:Emma.Quayle@liv.ac.uk">Emma.Quayle@liv.ac.uk</a>).</td>
</tr>
<tr>
<td>Centre for Genomic Research R&amp;D</td>
<td>For R&amp;D projects within the CGR only. Please provide the cost centre code in the format 3 capital letters followed by 5 digits.</td>
</tr>
<tr>
<td>TD voucher scheme</td>
<td>Please enter the commitment reference number provided by the Technology Directorate.</td>
</tr>
<tr>
<td>MIF-OMIC credit</td>
<td>For projects funded by the MIF-OMIC credit scheme</td>
</tr>
</tbody>
</table>
If you have raised a **purchase order** for your project, please upload the PO document to avoid delays at the time of invoicing upon completion of your project. Similarly, if your project is funded by a **TD voucher**, please upload your application to aid identification of your funds.

Enter the charge code (see the table above to decide which type of charge code is appropriate for your order.

Once you have completed the purchasing information and clicked the “Next” button, you are directed to a page similar to Figure 7. If your LIMS account has been assigned, please scroll down the page and click the "Submit order" button.

If your LIMS account has not yet been assigned, your “Order details” page will look as illustrated in Figure 9.

**Figure 9**

1. The “Lab Group” will read UNASSIGNED in red font. The LIMS administrator will assign the account as soon as possible and contact you via the email address given when setting up your LIMS account.

2. The “Submit order” button will remain unfunctional until the LIMS account has been assigned.