

Policy - 3D Printing

Gladstone Regional Libraries desire to offer community access to new and emerging technologies such as 3D printers to inspire a new interest in design and help the community to bring their creations to life. This policy establishes how and under what circumstances the public may use the Library's 3D printers.

The Library's 3D printers are available to the public to make three-dimensional objects in plastic using a design that is uploaded from a digital computer file.

Conditions of Use

The Library's 3D printers may be used only for lawful purposes. The public will not be permitted to use the Library's 3D printers to create material that is:

- Prohibited by local, state or federal law.
- Unsafe, harmful, dangerous or poses an immediate threat to the well-being of others.
- Obscene or otherwise inappropriate for the Library environment.
- In violation of another's intellectual property rights. For example, the printers will not be used to reproduce material that is subject to copyright, patent or trademark protection.
- An information sheet from the Australian Copyright Council on 3D Printing & Copyright (http://www.copyright.org.au/acc_prod/ACC/Information_Sheets/3D_Printing__C_opyright.aspx) is available to download for your reference.
- Files submitted to the library that fall into any of the above categories will be reported to the authorities.

The Library reserves the right to refuse any 3D print request

3D Printing Charges

ABS filament (plastic – hard finish)

- **\$0.25c** per metre
- **\$1.00** minimum charge

PLA filament (plastic – hard finish)

- **\$0.25c** per meter
- **\$1.00** minimum charge

3D Printing is available at Boyne Island Library, Calliope Library and Gladstone City Library.

3D Printer Specifications

- The Boyne Island and Calliope Library uses a XYZ Da Vinci 1.0 Pro 3D printer.
- The Gladstone Library used a Creality CRX 3D printer.
- The printer build area is 200mm x 200mm x 200mm.
- Printing is available in ABS plastic only and in the following colours, subject to availability and what is already installed in the printer:
 - **Black**
 - **Green**
 - **Blue**
 - **Red**

Further conditions of use:

- Jobs **must** be submitted in *.STL or *.OBJ file format only. They will be converted by staff to *. GCODE using the printer's slicing software.
- Only single colour prints are available and staff will not change filament colours during jobs.
- TinkerCAD (<https://www.tinkercad.com/#/>) will be available on all Library Public PCs and Laptops for preparing/creating prints, however library staff members will not be able to offer assistance with 3D modelling.
- Any 3D drafting software may be used to create a design if the file can be saved in *.STL, or *.OBJ format.
- Only filament obtained by Gladstone Regional Libraries may be used in the 3D printer
- Limit of one job per customer per week
- Gladstone Regional Libraries have a duty to respect copyright, and library staff may **refuse jobs that are potentially illegal or inappropriate;**
- Due to machine limitation a print job's printing time **can not** exceed the open hours of the library branch it is printed at, as printers can not be left running unattended.
- Customers will need to specify if there is a need for supports when printing their job.
 - Standard Printing ABS
 - Nozzle Temp: 240C
 - Print Bed: 90C
 - Infill: 15%
 - Speed: 30mm/s
 - Layer: 0.25mm
- Customers are to submit their file/s via email to library@gladstone.qld.gov.au which will then be forwarded to the specific branch email account and saved to branch specific USB for use on 3D computer to minimise risk of virus transmission.
- On submission of your file you will be given a quote for the total cost of the print. The quote may not be able to be supplied immediately. Staff will contact you as soon as possible with the quote. Charges for the print job are payable up front after which the job will be queued for completion within 10 business days.
- Your job will be held for one week for collection. After this time, if it has not been collected, the print will be recycled.
- The library cannot guarantee that a job will print successfully and by accepting the quote for the print you accept that fees are applicable **regardless of the outcome of the print.**
- Should machine issues cause printing failure, the job will be reprinted, or you will be refunded any charges already paid.
- Due to the nature of 3D printing, objects may have some imperfections and rough edges, particularly where supports are required during the printing process to keep materials from collapsing. Printed models will be supplied with supports and brim/raft still attached. Removing the supports and smoothing the finish of the model is up to you;
- Handling of the 3D printer is restricted to library staff.