Image: Fruit Routes

# Food + Wood

### "Apple store and Performance Stage" in Loughborough
2nd LU – ARC Summer School

10-16th September 2019, Loughborough (Stage 1)
7-11th October 2019, Hiroshima (Stage 2)

# Contents

Loughborough University

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# Food + Wood
an Apple Store and Stage in Hiroshima and Loughborough University Campus
a lu-arc summer school

> There's a natural link between the physical act of growing and harvesting, contact with the soil and plant, and connecting with your community through feasting celebrating, and marking the seasons. It enhances an individual experience by bringing it into a collective experience. It becomes about celebrating and honoring our relationship to land, food and non-human inhabitants of the land.
>
> Anne-Marie Culhane: Fruit Routes

# Design brief

## Background

Architects do much more than simply "create spaces" even if that is often how architecture is understood. Buildings do not only shelter people but are also places that can generate and enhance communities. This aspect is as important to our practice as spatial organization, materials and construction issues. In our society, where the position of the architect is constantly changing, increasing mobility has a more and more direct impact on local communities as our society faces new challenges with an aging society, this quality of 'enhancing and building communities' as part of the architecture profession is more important than ever before.

## Fruit Routes

Fruit Routes Initiative is a platform for community project connecting the university with the local community. The activities mainly focus sustainability and art ant try to enhance the engagements between campus and the city. One of their most popular activity is the annual fruit harvest on campus, which ends with a "fruit sale" in autumn, when the apples collected can be picked up for free. The new Apple store will be designed as a focal point of these activities. Please visit the link to learn more about Fruit Routes (YouTube): https://www.youtube.com/watch?v=GdWkA8xSG-s

## The Apple Store and Stage

The Summer School will focus on two construction sites: one in Loughborough and another in Hiroshima. Both locations are on university campus and will call for a pavilion that can function as a public stage for various activities. The Stage will be designed and modelled during first week in Loughborough. The selected best project will be built in Hiroshima in full scale during the second week. If funding allows it, a second Stage will be built in Loughborough, which will also operate as an Apple Store for Fruit Routes.

The Stage should be a place to meet, learn, share and explore between students, staff and the wider community –the architecture provide a platform for this outdoor engagement. The proposals need to consider both locations (Loughborough and Hiroshima) possible events that engage wide audience and locations for both visitors and performers. The Stage should offer flexibility for multiple arrangements and a function for periods without performances.

Additionally, the Store will need to consider how to keep the apples cool and dry – e.g. will they be stored in trays, racks or shelves?  How can people easily access, move and inspect the fruit?  Other technical considerations include lighting for winter months and making the store mouse/rodent proof.

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The store should act as a place where people can access fruit for free, which should be obvious to passers-by. How this is communicated is important, particularly when the store is 'unmanned'. Does the store have multiple states (open/close) which allows it to service the community in different ways? Can/should a small kitchen be included to make the chutneys that are produced annually from the fruits?

In addition to the initial questions above to provoke design considerations, the scale of the store should be approximately 15m$^2$ in total size, but could deviate depending on a convincing and logical rationale.

## Summer School Schedule, Stage 1 in Loughborough

The Summer School is planned for one week, from 10$^{th}$ (Mon.) until 16$^{th}$ (Mon.) September 2019.

DAY 0 (Mon): arrival in Loughborough (accommodation in LU Student Lodge)

DAY 1 (Tue): Morning: Opening Lectures and presentations
9:00-9:30 –Registration
9:30-9:45 – *Welcome and Introduction (M. Gutai)*
9:45-10:15 – *Fruit Routes Initiative and Community project (J. Shields)*
10:15-10:45 – *Art projects with Loughborough Community Fruit Routes (A-M. Culhane)*
10:45-11:00 – *Art and Architecture Projects on Loughborough campus (N. Slater)*
11:00-11:45 – *Site Visit and Fruit Routes walk (A-M. Culhane and J. Shields)*
11:45-12:00 – Forming of Design Teams
12:00-13:00 – Lunch break
13:00-14:00 – *Rhinoceros training (basic modelling and drawing)*
14:00-15:30 – *Grasshopper training (parametric design and laser cutting)*
15:30-17:30 – Presentation of first ideas, discussion
18:30 – Exploring Loughborough

DAY 2 (Wed): 9:00-12:00 – Design work in studio
12:00-13:00 – Lunch break
13:00-18:00 – Design work in studio

DAY 3 (Thu): 9:00-12:00 – Design work in Studio
12:00-13:00 – Lunch break + lecture: *Agent-based design in Architecture (by S. Sugita)*
13:00-18:00 – Design work in studio
18:00-19:30 – Midterm presentation

DAY 4 (Fri): 9:00-12:00 – Design work in Studio
12:00-13:00 – Lunch break + lecture: *Hybrid material systems in Architecture (by M. Gutai*)
13:00-18:00 – Design work in studio

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DAY 5 (Sat):     9:00-12:00 – Design work in Studio
                 12:00-13:00 – Lunch break
                 13:00-18:00 – Design work in studio -> submitting drawings for laser cutting
                 19:00- Dinner

DAY 6 (Sun):     10:00-16:00 – Bus tour to Peak District and Nottingham (optional)
                 (your works will be laser cut during this day in the workshop by staff)

DAY 7 (Mon):     9:00-12:00 – Design work in Studio
                 12:00-13:00 – Lunch break
                 13:00-17:00 – Design work in studio
                 17:00-19:30 – Final presentation
                 20:00- Dinner

Facilities:
Studio:   Keith Green Arch. Bld. http://www.lboro.ac.uk/study/undergraduate/courses/study-areas/architecture/

Computer Labs: in Keith Green building. The stations will have the necessary software (Rhino, Grasshopper and Adobe) installed. You can use these computers in case you are not able to bring laptop with you.

Workshops: Digital Fabrication Lab (3d printing, laser cutting)
           Analogue Workshop (wood, metal, paint works)

Students will have full access to all facilities. The university provides materials and tools for design, prototyping and modelmaking. All facilities are on campus, about 5-10 min walk from accommodation.

## Site 1: Apple Store and Stage in Loughborough

The first site is located near the Pilkington Library, the weather station and student halls on campus (Figure 1). This area is close to the bus stop and is frequently visited by most of the students on their way to the library, to their accommodations or when taking the bus which offers a great opportunity to pick up fruits on the way or while waiting for the bus. This site was chosen for its central location (west-east axis), accessibility and the proximity to the largest apple orchid on campus. The site sits on the south fringe of the campus with a pedestrian access point just to the west of the car park.
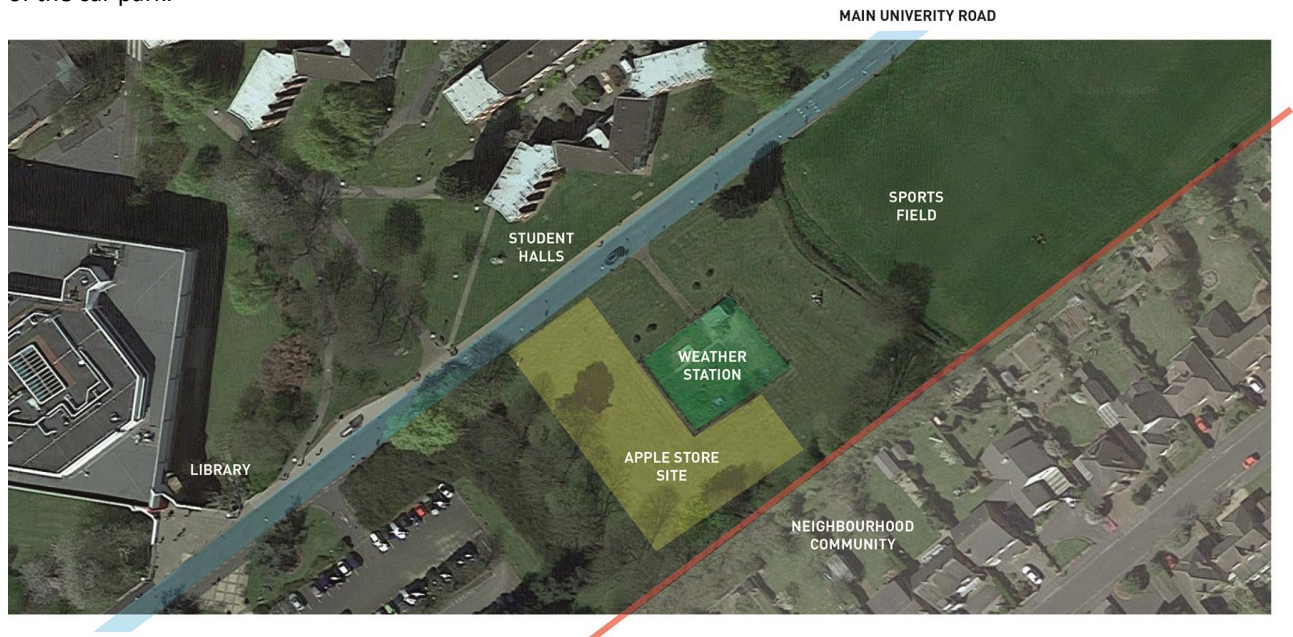


Figure 1 Aerial photo of site and surrounding elements

The site is predominately flat and covered with grass (see Figure 2). It has two predominant zones, an area setback from the main University road, behind the weather station and an area that meets the University road – please note the minimum curb condition between the road and the green space.
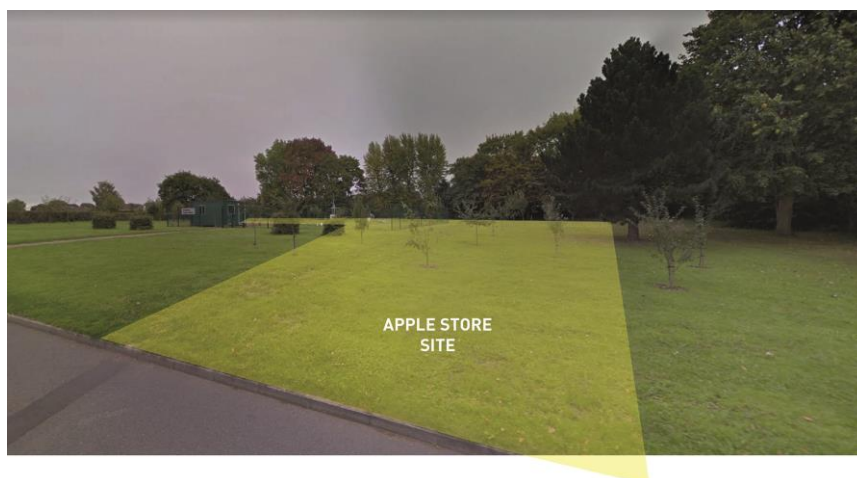


Figure 2 Site photo illustrating the possible area for the apple store

Google Maps link (with Street View): https://goo.gl/maps/a3WsrZVECCE2

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## Site 2: Apple Store and Stage in Loughborough

The second option for the site is located in front of the architectural building.  This area is located next to a south facing slope, which makes it ideal for performances. Just like in case of Site 1, this site was also chosen for its central location (west-east axis), accessibility and the proximity to the largest apple orchid on campus. The site sits on the south fringe of the campus with a pedestrian access point just to the west of the car park.



Figure 3 Aerial photo of site and surrounding elements

The site itself is predominately flat and covered with grass (see Figure 2).  Incorporating the surrounding landscape is an essential part and challenge of the design.



Figure 4 Site photo illustrating the possible area for the apple store

Google Maps link (with Street View): https://goo.gl/maps/KPjkTPppoN2YbgxP7

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# Summer School Tutors

### Anne-Marie Culhane

## Fruit Routes Project, U.K.
Anne-Marie is artist founder, design and co-ordinator of Fruit Routes/Eat Your Campus project at Loughborough University working closely with the Sustainability Team at Loughborough and supported by the School of the Arts & Transition Loughborough. She co-creates events, performances and long-term projects inviting people into active, enquiring and health-giving relationships with each other and the land. She collaborates across disciplines to engage broad public participation, address specific ecological challenges and catalyze systemic change.

### Jo Shields

## Loughborough University, U.K.
Jo Shields is strategic lead for sustainability at Loughborough University and Project Manager of Fruit Routes. She is a passionate environmentalist and advocate for linking teaching, research and operations on campus.

### So Sugita

## Hiroshima Institute of Technology, Japan
So Sugita is an Assistant Professor in Computational Design and Digital Fabrication at Hiroshima Institute of Technology and co-founder of Hiroshima Design Lab. He worked on wide range of projects that intertwine architecture, computational design and digital fabrication, like HDL pavilion 2016, HDL pavilion 2017, Game of Space, Gathering and StickMergy.

### Toshiki Hirano

## University of Tokyo, Japan
Please fill in here…

### Yosuke Komiyama

## Kyoto University, Japan
Please fill in here…

### Matyas Gutai

## Loughborough University School of Architecture, Building and Civil Engineering, U.K.
Matyas Gutai is a teacher, practicing architect and a specialist in sustainable architecture and hybrid building material projects like water-glass (Water House) and Algae-wood that explore how material innovations can lead into new spatial qualities and opportunities in architectural design. His research field focuses on Hybrid Architecture, a construction system that can disseminate mass to create an energy-based network of city blocks and communities.

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# Travelling to Loughborough – useful information

## Budget

Participating students are asked to cover their travel expenses (flight, train, accommodation).
Participation in the Summer School is for free.

## Travel to Loughborough

### Flights and closest airports to Loughborough:
EMA (East Midlands Airport) – 20 min by bus
BHX (Birmingham) – 80 min by train (East Midlands Trains)
LTN (London-Luton Airport) – 60 min by train (East Midlands Trains)
Other London airports – 60 min by local train/metro + 75 min by train (East Midlands Trains)

### Trains to Loughborough:
From London St. Pancras station or from Birmingham: East Midlands Trains
Ticket reservation and booking: https://www.eastmidlandstrains.co.uk/
Price of your journey will depend on the type of your ticket (flexible/fixed journey), time of your travel (off-peak/peak) and the time of your purchase (prices are lowest usually when you buy at least 2-3 weeks ahead).

### Buses to Loughborough:
From London to Loughborough:
Megabus
tickets: https://uk.megabus.com/ )
stopping in Loughborough at the University (bus stop on Google Maps: https://goo.gl/maps/6oJxgKQVRu52 )
National Express
tickets: https://www.nationalexpress.com/en
stopping in Loughborough in the town center the Rushes) (bus stop on Google Maps:
https://goo.gl/maps/8dxyjWsCFYP2 )

## Accommodation
Students are recommended to stay in the University Lodge on campus. All Summer School Students are entitled for a discount rate. You are asked to make reservation by yourself, but make sure that you add: *I am a 'LU-ARC SUMMER SCHOOL' student"* to your application to receive the discount rate. (discount rate will be available after 1st July).

All rooms are on "Half board" basis (breakfast and evening meal on workdays, brunch on weekends).

You can make reservation online here:
http://www.lboro.ac.uk/services/accommodation/short-stay/lodge/
How to book:
- Go to the bottom of the page
- Click "Make an enquiry"
- Fill out the form and add *I am a 'LU-ARC SUMMER SCHOOL' student"* in the "additional booking information section"
- After submitting the form, you will receive an email with online instructions for payment to complete your reservation. Please confirm that you received the discount rate.
You can stay longer in the accommodation if you wish, as long as there are rooms available for your period.

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## Internet access

Wi-fi connection on campus for guests will be provided by "imago" network. The network can be used on mobile devices as well.

In addition to "imago" network, the campus has "eduroam" connection too for participants with an existing profile.

Participants from overseas needing a cellular network are suggested to purchase a prepaid SIM card. The cheapest ones in Loughborough are available in Tesco supermarket (£10.00 for 3Gb, Google Maps: https://goo.gl/maps/oF297euDMEM2). There are additional options available at airports.

## Cash and payments

There are plenty of ATMs available in Loughborough for cash withdrawal or currency exchange. Most of the supermarkets, restaurants, stores and pubs accept credit cards for payment in the UK.

## What to bring for the Summer School

### Laptop and software
Please bring your laptop with you if possible.
**Please install Rhinoceros and Grasshopper for the training before you come.** If you don't know these programs or have no experience with them, don't worry as we will provide training on the first day. You only need to make sure that you install the programs before you come.

You can install Rhino 6 trial version (for 90 days) here:
https://www.rhino3d.com/download/rhino-for-windows/6/evaluation
This version comes with integrated Grasshopper plugin therefore you don't need to install it additionally.

If you have earlier Rhino version, you need to install Grasshopper (if you don't have t already), using this link:
https://www.grasshopper3d.com/page/download-1

These programs run on windows therefore if you have a MAC, you will need to install Parallel Desktop (or similar software) first. (Grasshopper for Mac runs only on Rhino 5.4, which requires license key).

Parallels trial download (valid for only 14 days!):
https://www.parallels.com/products/desktop/trial/?utm_source=bing&utm_medium=cpc&utm_campaign=PDfM%20-%20B%20-%20EN%20-%20ROW%20-%20PS%20-%20APAC&msclkid=6965243eb0bf134ded6f7fbbfc61e8df&utm_term=parallels%20desktop%20trial&utm_content=Parallels%20Trial

These programs are essential for the Summer School from Day 1 therefore please make sure that you install them before you arrive.

Please note that UK has a different electric plug and you will need a converter if you are coming from abroad.

### Modelling and drawing tools
The university will provide most of the modelling tools and materials you will need for the workshop, but for working in the Design Studio space, we recommend that you have some basic tools with you like cutter, rulers and pencils.

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## Buildings on campus

### Accommodation
Student Lodge (accommodation): https://goo.gl/maps/ENyuHLrcLbG2

Registration for the Lodge is in Rutherford Hall. You will get wifi access and key after registration. The building is located on campus, close to the Lodge: https://goo.gl/maps/6oJxgKQVRu52

Village Bar (breakfast and dinner): https://goo.gl/maps/agyF2t3LEfN2

### Architecture building (Keith Green building)
Most of our activities will be here in the Design Studio (1$^{st}$ floor). Please come here on Monday at 9:00 AM for registration. Google Maps: https://goo.gl/maps/DReLvwu9xzm

### Workshop building (Sir Frank Gibb Labs)
Workshop facilities for Summer School are located on GF and 1F. Please always talk to Roger, Jonathan or Yang before using facilities or if you need any help. Google Maps: https://goo.gl/maps/QtGDGz4FQ3Q2

### Building access
The buildings will be open during office hours. The participants will have access to the facilities everyday until 10 PM with a personal card. The cards will be provided on the first day for free. You are recommended to keep the card with you at all times on campus and return the card on your last day. Please make sure that you keep the card safe because we have to charge you a fee of £8.00 in case the card is lost or gets broken.

## Contact

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Phone: +44-1509-228023 (office)

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