CarverHaggard

Mushroom Farm

London, NW5 4SE

Design and Access Statement
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CarverHaggard Architects

Unit 415, 241–251 Ferndale Road
London SW9 8BJ

+44 (0)20 7274 2137
info@carverhaggard.com
www.carverhaggard.com

CarverHaggard

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About us

CarverHaggard is a design and research practice optimistically exploring the complex and compromising modern world.

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Introduction

The purpose of this report is to expand on a previous planning application for a mushroom farm in a semi-basement level garage space in a residential block in Camden.

The applicant has considered queries and concerns raised by residents during the previous public consultation period in relation to the operation of the farm.

The report provides an overview of the proposal including responses to the concerns and queries raised in previous discussions. Responses to some frequently asked questions are included at p.12.

The Proposal

The proposal will entail a change of use from vacant residential parking (C3) to mushroom farm (Sui Generis).

The proposed development will occupy seven parking bays which will be converted to use for the various stages of cultivating mushrooms. Additionally, the proposal will include WC and staff changing facilities.

The construction and operation of this small scale development will have minimal disruption to the local community, while providing benefits to local businesses and residents.

Article No. 25

Article No. 25 is a start-up that is striving to change the food system into one that is better for the environment, society, people and the economy.

Their aim is to facilitate commercial scale urban farming to close food, energy and waste loops and show that cities and nature can work together to safeguard the future of both.

Urban Mushroom Farming

Urban farming has gained widespread attention in recent years as a sustainable way of feeding the populations of cities. By making use of leftover urban spaces, as well as materials that would otherwise go to waste, this type of food production is great for the environment and eases the pressure on cities to source food from further afield. Growing food in close proximity to where it is sold and consumed significantly reduces the amount of energy consumed in transit while supplying customers with fresher produce.

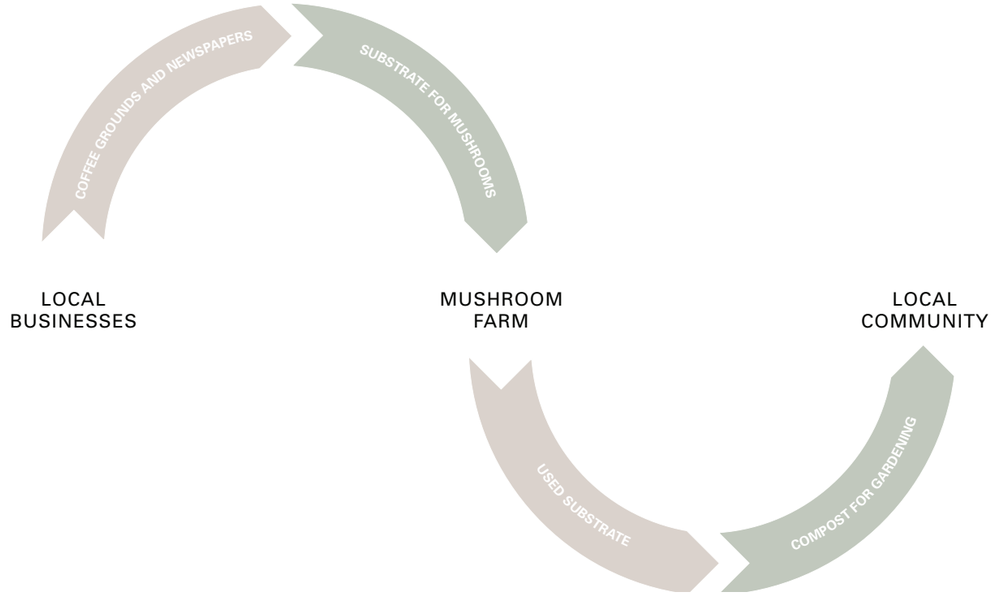
Integrating these projects into local communities encourages the spreading of ideas that can enable people to make informed choices about where they buy food, and even encourage them to grow their own.

Mushrooms are particularly suited to growing in London, as they do not require a vast amount of sunlight, and they grow rapidly, meaning that they don't require a lot of space.

The mushroom farm at Ludham would be able to produce up to 750kg of oyster and shiitake mushrooms per month, which would be sold at local markets and to grocers and restaurants. Residents of the estate would be entitled to a discount on the produce, and local jobs would be created in the farm's management and distribution.

The mushrooms would be grown in a substrate made up of waste materials from local businesses, such as used coffee grounds and newspapers.

The used substrates would then be delivered to Kentish Town City Farm, local residents and Camden's gardening services to be used as compost. This closed loop system would help many local businesses to operate more sustainably, as well as the farm itself.



The proposed closed loop waste system

Examples of similar mushroom farms

GroCycle, Exeter

GroCycle are an Exeter-based social enterprise, who occupy an unused office building in the city centre to grow mushrooms from used coffee grounds. Hundreds of kilos of coffee grounds are collected from cafes around the city each week to grow oyster mushrooms.

Like the proposed farm at Ludham, GroCycle also recycle their used substrates to distribute back to locals as compost. The project has been running for five years and has proven to be a great success.

The company has expanded to provide an online course on growing mushrooms, as well as selling “Grow Your Own Mushroom” kits for people to grow them at home. Their business model helps to reduce the amount of coffee grounds going to landfill, while making delicious food and engaging local people in the process.

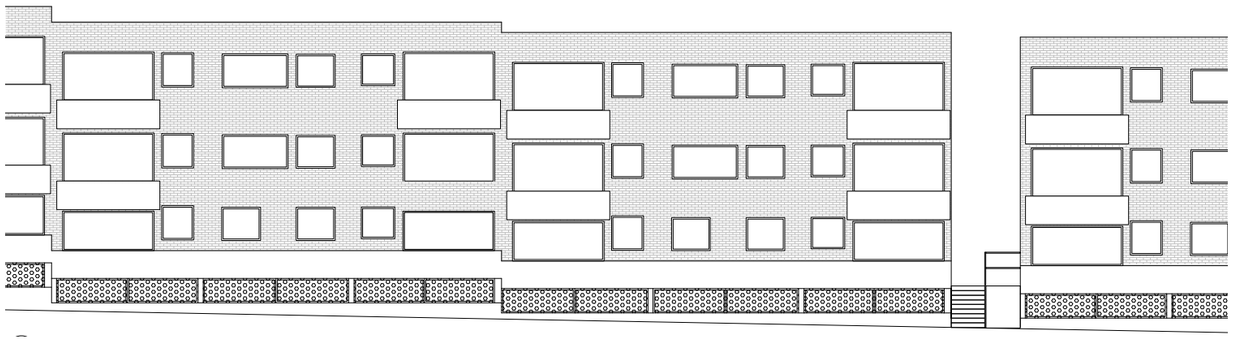
The Mushroom Garden, Wales

The Mushroom Garden is a small family business in Snowdonia, growing 600 kg of oyster and shiitake mushrooms per month. These are all grown in four shipping containers in a small yard in a residential area.

The business has been running for over 10 years and supplies its produce to a range of markets and other stockists. They have had no adverse effects reported by theor staff or neighbours due to the operation of the farm in this period.

They attend numerous fairs and events, and have won several awards for their produce, while operating on a small scale with environmentally friendly methods.

GroCycle urban mushroom farm



Existing elevation

The Site

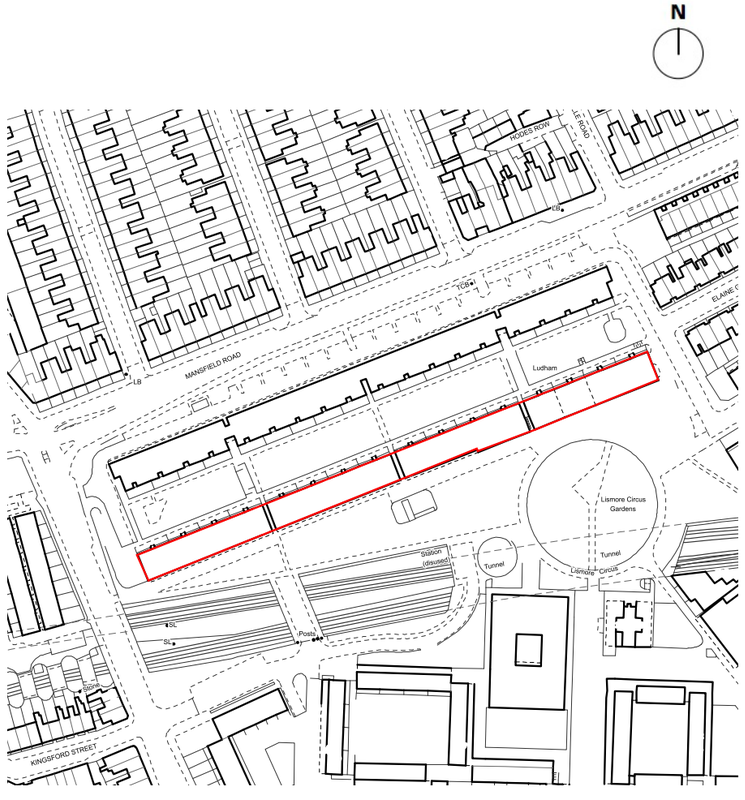
Location

The farm is proposed to be located in Ludham, a mansion block in Lismore Circus in the London Borough of Camden. It is one of two five storey blocks that run in an east west orientation alongside Mansfield Road.

The area is largely residential, with a concentration of shops and amenities along Malden Road to the south.

Building

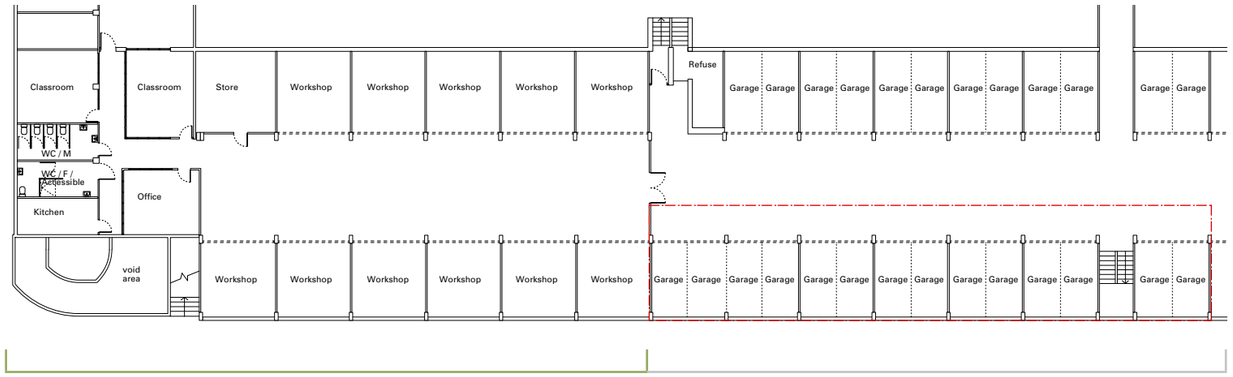
The block, dating back to the 1970s, consists of housing units with garages at semi-basement level. There are also shops at ground floor level towards the eastern end of the site.



Site Location Plan

Garages below residential units

Shops below residential units



The garages in their vacant state

The Site

The proposed farm will be located in the garages at semi-basement level below the housing units.

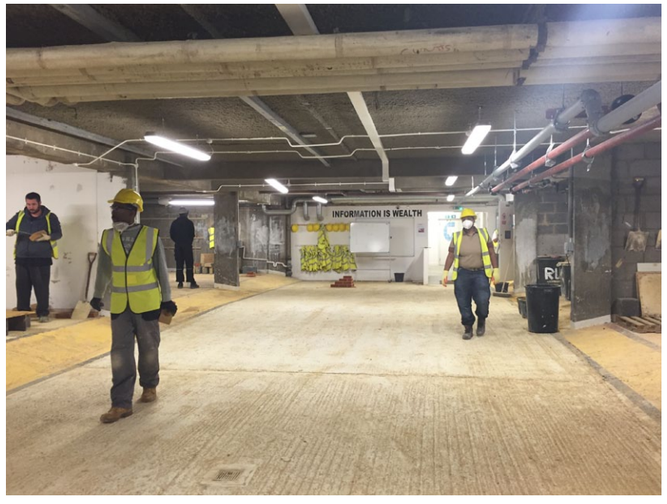
These garages have not been used for parking for a considerable time, and are predominantly used as a service entrance by traders of the shop units located at the eastern portion of the block.

They are also used by refuse collectors as a means of access to the refuse store areas that service the building.

Due to the lack of surveillance in the garages, they have been known to attract antisocial behaviour, and local groups campaigned to have the garages closed.

When Building Lives occupied a number of parking bays for their offices and workshops, these neglected spaces were put to good use, and it has been reported that the risk of crime was significantly reduced as it was no longer a dark, derelict space.

If more of the garages were to be converted for a positive use, the residents of the estate should benefit from a safe, productive space beneath the flats rather than an empty space which may attract anti-social behaviour.



Building Lives workshop

Storage Space
Storage of materials and substrate
1 bay

Lab/work Space
Mycelium is cultivated and grain and substrate inoculated.
1 bay

Spawn Room
The grain inoculate is colonised.
1 bay

Spawn Run Room
The first farming room where substrate is colonised by the mycelia.
1 bay

Pinning Room
The mycelia is exposed to a set of conditions that force it to switch to reproductive growth.
1 bay

Fruiting Room
The final stage of the mushroom farming where the mushroom itself is formed.
2 bays

Use

The main requirement of a mushroom farm is a series of individual rooms with controlled temperature and humidity to accommodate the four stages of mushroom cultivation.

The garages are well suited to these needs, as temperature and humidity levels are easily controlled with equipment that can be installed without affecting the rest of the building. Moreover, as the garages are already split into individual bays of a suitable size, there would be minimal work involved in converting the garages for this use.

In total, seven bays would be occupied, totalling 184m^2. The individual uses of the bays are detailed on the above diagram.

The farm will be thoroughly equipped to ensure that the highest levels of hygiene and safety are maintained for both workers and the public.

Although mushrooms are formed from spores, which are in certain cases associated with mould, the type of spores used in the farm will pose no risk of mould.

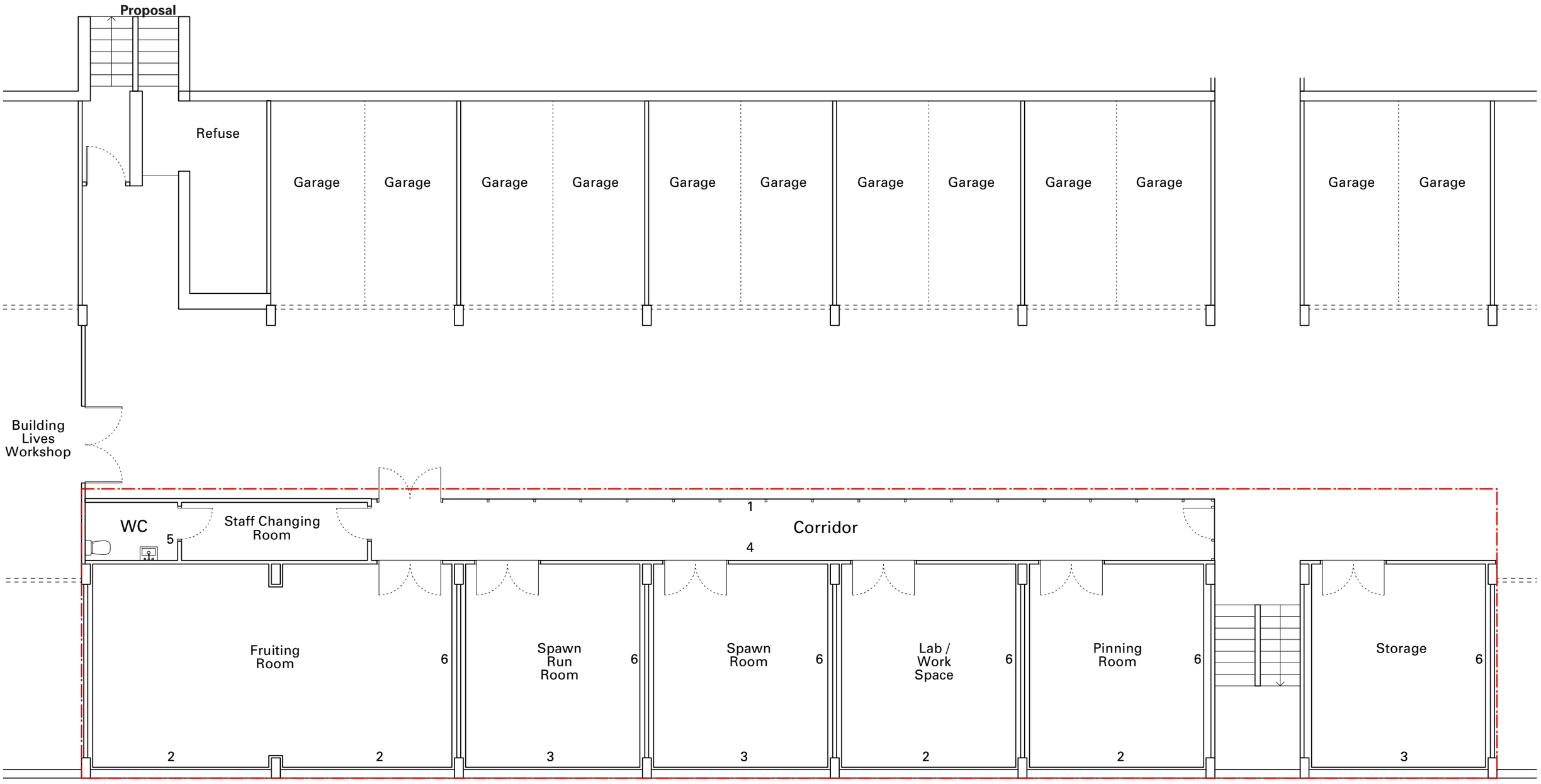
Filtration

Staff will be provided with APF 40 protective respiratory equipment to avoid inhalation of spores while working.

The fruiting room, which is the only room where spores will be produced, will be fitted with HEPA filters to eliminate any risk of spores spreading to other rooms or outside. These will be maintained and replaced on a regular cycle, to ensure that they are working effectively at all times.

Other amenities

As well as the spaces required for farming, the proposal will also incorporate a WC and staff changing room.



Proposed Plan

Key

1. Polycarbonate enclosure on timber frame

2. Metal grille replaced with clear polycarbonate and exhaust grille

3. Metal grille replaced with insulated polycarbonate and exhaust grille

4. New insulated timber-framed wall with new doors to bays

5. Accessible WC

6. Insulated lining

Access

Access to site

The site is in close proximity to public transport links such as Gospel Oak station which is 6 minutes away by foot and is served by London Overground services. Additionally, the immediate area is served by bus routes 24, 46 and C11.

Although the garages are no longer used for parking, there are a number of external parking spaces on the estate.

Disabled access

The estate has several ramps to allow wheelchair users to manoeuvre the change in level from the pavement to the estate. The garages are currently accessed through the Building Lives workshop, which is also accessed via a ramp. It would therefore be possible for a disabled person to visit or work at the farm, in accordance with app

Deliveries

The operation of the mushroom farm will involve deliveries into and out of the site. The majority of these deliveries will be a daily trip by bicycle to deliver produce to local restaurants and to collect coffee grounds and other organic substrates to bring back to the site. These deliveries would be estimated to take place between 07:00 and 10:00, and would take place once per day, causing minimal inconvenience to local residents.

Additionally, the farm will require 250kg of straw to be delivered to the site twice per month. This would be delivered by a medium lorry or small truck.The delivery would be quick, as only a single bale of straw would need to be unloaded from a suitable loading location, and transported to the farm.

Ramped access to the estate on Mansfield Road and Southampton Road

Proposed Works

Damp proofing

To begin with, all parts of the building in proximity to the proposed farm will be damp proofed with a concrete sealer to prevent problems arising from the high humidity in the growing rooms.

Partitions

The existing mesh between individual bays will be removed and replaced with an insulated lining. A new partition containing all of the spaces will be constructed out of polycarbonate on a timber frame.

Grilles

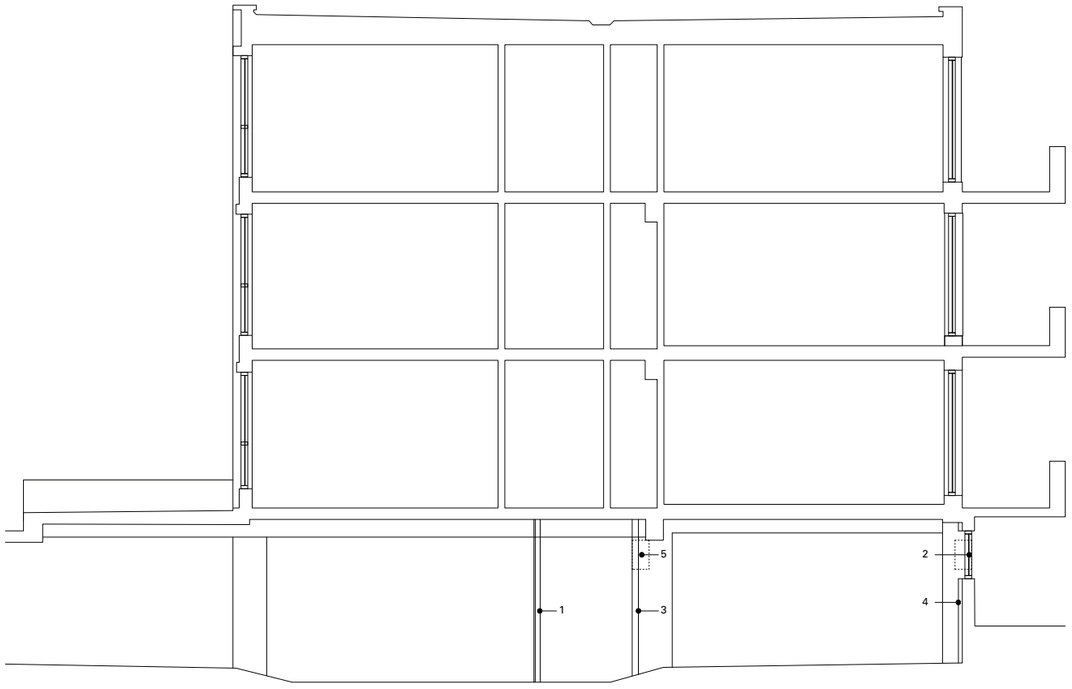
The existing metal grilles that provide light and ventilation from the street will be replaced with polycarbonate grilles that will provide suitable levels of light and ventilation for what is required in the individual spaces.

Services

Electrical installation will be required in each bay to accommodate lighting and other electrical equipment required in the work spaces. The installation of equipment for controlling environmental conditions will vary according to the needs of the various spaces, but will include heaters, ventilators, exhaust fans, humidifiers and various sensors.

Water pipes will need to service the work spaces to allow for the installation of a sink.

Heating will be provided by waste heat from the district heating pipes that traverse the length of the basements.



1. Polycarbonate enclosure on timber frame
2. Metal grille replaced with clear polycarbonate and exhaust grille
3. New insulated timber-framed wall with doors to bays
4. Insulated lining
5. Extract/evaporative cooling fan

Public Consultation

In response to queries raised by residents during the consultation phase of the previous planning application for the proposal, Article No. 25 have been in contact with various groups to discuss the project and answer their queries.

Residents

Article No. 25 have made numerous attempts to arrange a meeting with local residents to consult them directly on the scheme, and would very much like the opportunity to discuss the project with the residents. Although this meeting has yet to take place, council officer Julia Farr has met with three local residents, responding to their questions about the scheme on behalf of Article No. 25. The main concerns the residents had were health risks associated with spores; potential traffic problems from transporting mushrooms and other materials to and from the site, and fire hazards associated with storing straw bales. Article No. 25's responses to these concerns are outlined on the following page.

Local Councillors

Theo Blackwell, councillor for Gospel Oak, has shown consistent support for the proposal, offering suggestions for progressing with the project and for presenting the project to the local residents.

Gospel Oak Business Group

On 14th April, Alexandro Rizzo of Article No. 25 attended one of the GOBG's monthly meetings to introduce the project to the local business community. The project was met with enthusiastic support, with some members offering to assist in mediating between Article No. 25 and the local residents. In subsequent meetings the group have continued to offer their support to the project.

Transition Kentish Town

Article No. 25 were invited to present the project at the August meeting of an environmentally focused community group, who approved of it with enthusiasm. Following this meeting, the group invited Article No. 25 to their September festival to disseminate their ideas to a wider audience. During the festival held in the Kentish Town Health Centre, Article No. 25 held a stall where they presented the project to the community, who responded to it positively.

Residents' Queries

Some of the residents who had not yet heard about the project in detail at the time of the previous planning application expressed some concern about the safety of the project.

Article No. 25 are very keen to ensure that the farm would never have a negative impact on local residents. Their answers to the most common queries from the local residents are outlined here, and they continue to be happy to meet with residents to talk through the proposals.

Is there any risk of harmful spores escaping from the farm and affecting residents of the estate?
As mentioned on p. 7, the production of spores will be confined to the fruiting room where air flow will be carefully controlled to minimise their production, and the room will also be fitted with HEPA filters to prevent any spores from spreading elsewhere.

Furthermore, staff will be given dedicated clothing for working in the fruiting room to make sure they don't inadvertently bring any dust out with them afterwards. In any case, the health risk posed by spores is only significant if a person is exposed to them in close proximity over several years with no form of protection. Both GroCycle and The Mushroom Garden have reported that during their time in operation they have encountered no adverse health effects relating to spores whatsoever.

Will there be increased traffic on and around the estate as a consequence of the farm?
As the farm's operations will be fairly small, the regular delivery of mushrooms and substrate to and from the farm will be made on a push bike. The only extra vehicular traffic will be a small lorry arriving once or twice a month to deliver straw, as explained on pg. 9.

Could the storage of straw and substrate pose a fire hazard?
The environment in the mushroom farm will be very humid, meaning that the fire risk overall will be very low. The stored straw bales also don't represent much of a hazard as they are so compact that fire does not spread through them easily. The other substrates (ground coffee, sawdust and old newspaper) will be watered to eliminate any fire risk.

Will the farm attract vermin?
It is in the farm's best interests to maintain high standards of hygiene, to prevent the produce becoming contaminated by anything that would make it unfit for consumption.

Therefore, the set up of the farm will be similar to that of a laboratory, with exceptional levels of cleanliness.
The space is in fact more attractive to vermin in its current unused state than it would be with the farm operating there.