

GROW Farm at The Totteridge Academy

Design and Access Statement

ASSEMBLE
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1 Project Overview

1.0 Introduction

This design and access statement corresponds to the planning application by GROW for the land to the north of Totteridge Academy, Barnet Lane, London, N20 8AZ.

The planning application is for the erection of a new outdoor classroom building and associated storage, a new greenhouse and 3 new polytunnels.

The proposed development includes the following works:

- 1 insulated Classroom building including 2 WCs
- 1 uninsulated Barn
- 1 Greenhouse
- 3 Polytunnels

1.1 Planning History

In December 2019 GROW submitted a planning application for change of use from use of the site as a school playing field to a City Farm with educational farming.

On 13th August 2020 (planning ref: 19/6686/FUL) Barnet Council granted the site change of use as a City Farm with educational farming, including erection of an animal shelter, raised planters, chicken coops, beehives, new paths and pedestrian access and associated alterations to landscaping.

An application to discharge planning conditions has been submitted and is currently under consideration.

1.2 Project Overview

The GROW Totteridge farm is a collaboration between GROW, a charity dedicated to transforming our relationship to food, the land and each other, and Totteridge Academy.

This is a working farm that offers students from Totteridge Academy, and other young people and members of the community the opportunity to engage with nature and the outdoors.

This design and access statement outlines the proposal developed by GROW and architects Assemble to ensure the site for GROW at Totteridge Academy allows them to develop their programme and benefit the wider communities of Barnet and Totteridge. The inclusion of this outdoor classroom and associated agricultural buildings and structures is critical to the adequate functioning of the GROW charity.



GROW Farm at The Totteridge Academy

1 Project Overview



Aerial view of the site

2 What GROW has achieved

2.0 GROW

Set up in May 2019 GROW is a charity that is aiming to transform young people's relationship with food, the land and each other. Alongside running a community farm on the land north of The Totteridge Academy, GROW teaches a life-skills education programme to students in the school, engaging them with nature and teaching them about nutrition and wellbeing. The aims of GROW are to build confidence and nurture wellbeing; to cultivate new relationships with nature and the outdoors; and to give everyone the tools to shape their own future and make positive changes in the world.

2.1 GROW at The Totteridge Academy

Since launching its pilot scheme at The Totteridge Academy in May 2019, GROW has started a community farm on land adjacent to the school and now provides a sustainable source of food for the school canteen, feeding staff and students as well as selling produce in the local community. Since its launch GROW has been teaching its specialist programme to 296 students every week as part of the curriculum. The GROW team work very closely with the school to integrate the programme into the everyday lives of each student.

Headteacher Chris Fairbairn credits GROW with helping transform the school's culture, "by encouraging our pupils to ask bigger questions and understand their place within the world."

Alongside running the community farm and its associated teaching programme, GROW has also started a Forest School working with at risk young people from the local area and have run after school and weekend activities for local young people and adults.

2.2 GROW in the long term

GROW farm at The Totteridge Academy is envisioned to be the first of many such farms across the UK. The facility is being partially funded through a crowdfunding campaign that has reached its target to enable the project to progress. The project is being supported and partially funded by the Mayor of London.

GROW launches its second site in Spring 2021 and ultimately aims to bring 360° Learning to every secondary school in the UK by 2030. GROW's long-term aim is to roll out the GROW curriculum to schools and communities nationwide, re-shaping the landscape of education, food and well-being.

2.3 GROW and Covid-19

Throughout the Covid-19 pandemic GROW has been able to continue as normal, with its operations and teaching ability unaffected by restrictions brought into place. With many schools and businesses having to close, GROW has remained open. This way of working is inherently Covid-secure, and shows how this kind of site and approach to learning will be beneficial in future pandemics.

Since March 2020, GROW has sold £10,000 of organic, affordable produce to local people and businesses and provided over 300 hours of volunteering opportunities for local people, teaching skills in sustainable food production and welcoming volunteers of all ages and abilities as part of their weekly and weekend socially distanced farming events. Four women were trained in food production through GROW's traineeship scheme, three of whom have now gone on to work in sustainable food. In 2020 GROW also offered paid placements on the farm to two young people (18-25) through a charity partnership, both of whom have been employed in the education department.



3 Project Objectives

3.0 Overview

The GROW farm has been operating as a community farm on the land adjacent to The Totteridge Academy for the past six months and has fully integrated itself into the life of the school. Through an educational programme focused on food and farming, mental and physical well-being and philosophical thinking, GROW aims to provide students with the skills, knowledge and tools to reach their full potential.

At The Totteridge Academy GROW teaches 296 students per week. In order for students of The Totteridge Academy to be able to access the site throughout the school year, and for the GROW farm to be able to operate as a place of food production it is essential that an insulated classroom space is provided, as well as an agricultural storage barn, greenhouse and set of screw-anchor polytunnels.

3.1 The Site

As the GROW farm is already up and running and the land available is adjacent to a school, it is difficult to see how these conditions could be easily replicated on another site. The Headmaster of The Totteridge Academy and the schools administration have given their support for this project to go ahead to be able to fulfil it's purpose. Crucially the site is adjacent to, but not part of, the school, allowing it to operate independently as a public farm and have it's own facilities, providing benefits to, and able to be accessed by students, as well as members of the public. The GROW team have already raised the necessary capital budget to fund the construction of the classroom, barn, greenhouse and polytunnels and there is widespread support for the project.

3.2 Classroom

For the site to function as an educational facility, warm and waterproof shelter must be provided so that students can access and make full use of the site in all weathers throughout the year. Classrooms set the tone how children learn. The care invested in them directly affects the value students place on their own education, themselves and their environment. For the site to be used as place of education, it is essential that the students have a classroom on site that directly connects to their subject. Alongside the educational needs, there are also a number practical necessities for an insulated building on site. These include providing space for students to change footwear and gloves on site, keeping mud and dirt from the farm off school premises. And allowing for volunteers and attendees who aren't affiliates of the school to access shelter without having to access the school grounds.

3.3 Toilets

It is essential that toilets for GROW staff and students to use on site are provided. The nearest toilet is located too far away in the gymnasium hall. Toilets not being provided for on site creates access issues with users who aren't members of the school as each time they would need to be accompanied by a member of staff to use the toilet on the school premises. It also ensures that all dirt remains on site and that staff and students can maintain good levels of hygiene, washing hands and boots before and after work on the farm without contaminating rest of school.



Inadequacy of current on-site shelter

3 Project Objectives

3.4 Barn

A Barn is necessary to enable the day to day running of the site as an agricultural farm, and to allow GROW to continue to supply food for school canteen and local community. Food grown on site must have a clean, dry, ventilated and secure space for it to be stored safely. The Barn provides this as well as a covered space for packaging food before it is delivered to the school canteen, the local farmer's market or local suppliers. The Barn also doubles up as a place for storing tools securely on site, as well as material and vehicle storage, all necessary for the farm to be able to be work.

3.5 Polytunnels and Greenhouse

The polytunnels and greenhouse allow the farm to operate effectively and grow food throughout the year. Without these the growing season would be unnecessarily cut short, reducing the productivity and capacity of the site. Not providing polytunnels and a greenhouse also limits the educational capacity of the site with students not being able to experience the most productive season of the year as they are all out of school during the summer holidays. They provide a place for horticultural work that is safe from the rain, making it more accessible during winter for staff, students and volunteers. Growing crops from seed produces healthier plants and also reduces the outgoings of the farm, allowing the end costs of plants to the consumer to be kept down. Extending the growing season means that GROW can produce a wider range of crops and produce crops all year round.



A view of the farm from the north boundary

4 Assessment - Physical Context

4.0 Surrounding the site

Adjacent to the south side of the site is Totteridge Academy. Behind mature trees and hedgerows the school sports hall building and outdoor basketball court run along the perimeter to the field.

To the north of the site is another open field of grass which is accessed by a small footpath that runs along the west side of the site, and is infrequently used by dog-walkers. At its northern edge the field is edged by Dollis Brook, a very small stream that runs through Barnet. Beyond the trees and hedgerows to the west and the east of the site are more open fields of grassland.

There is a large car park used primarily by staff and students of Totteridge Academy at the south eastern end of the site, with vehicular access onto the site through a large gate. The car park is accessed from Barnet Lane, a road that runs between Totteridge to the south and Barnet to the north.

The nearest residential properties are 220m away to the north of the site - the Dollis Valley Estate, there are also houses 225m south of the site on Barnet Lane and Oaklands Road. The site is only able to be seen from the adjacent footpath to the west and from limited locations along the London Loop.

The site lies within the Metropolitan Green Belt and is covered by an Article 4 directive restricting permitted development rights.

4.1 Within the site boundary

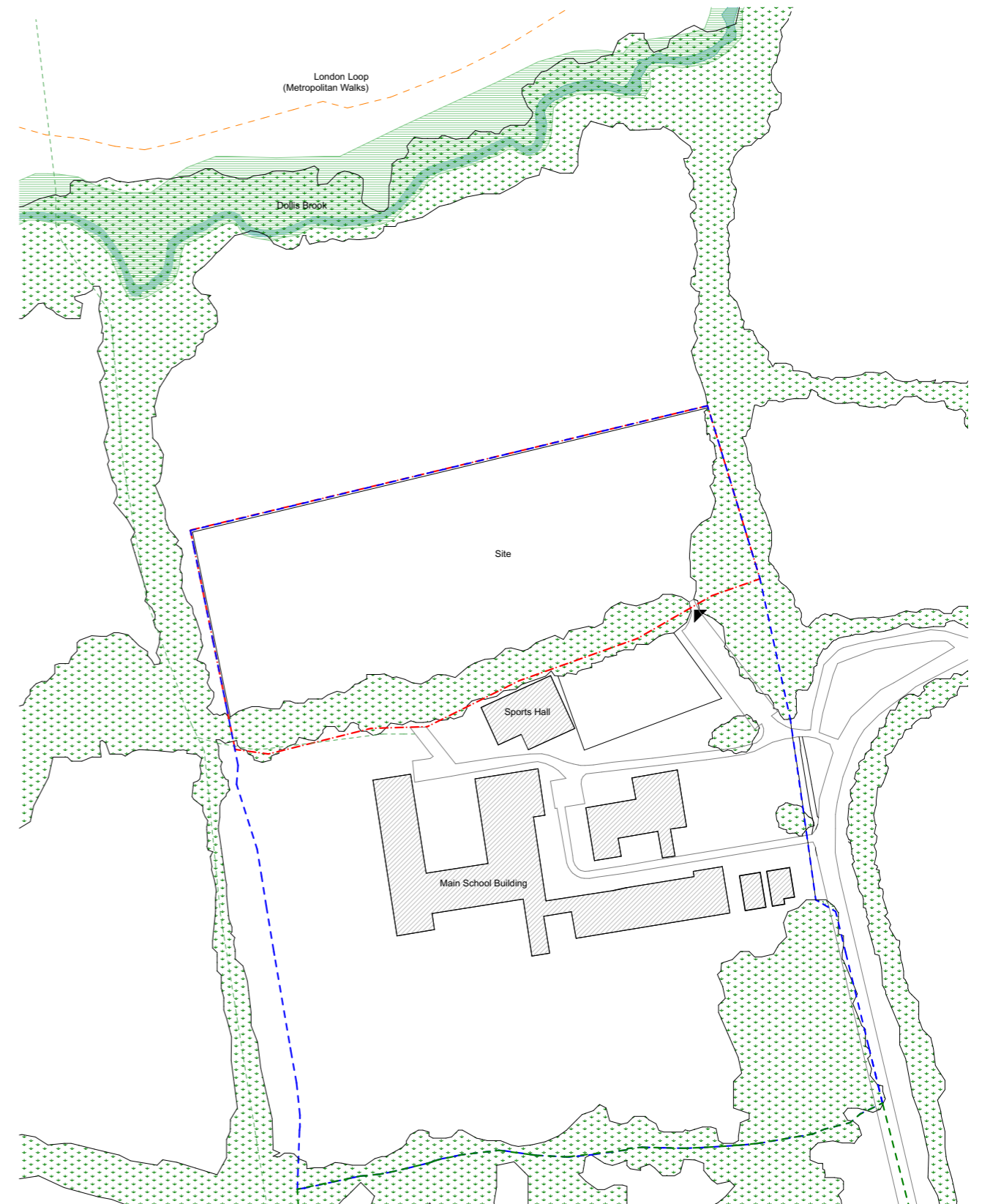
The site is currently a large field laid out to agricultural and horticultural principles to afford the best growing conditions for the produce and practical management of the site. Each use and activity is grouped together into different areas across the field. Along the northern edge of the site and stretching into the centre - the area which receives the most of daylight throughout the year - are field beds dedicated to food production. There are 23 rectangular field beds each measuring 10m x 15m, and 7 larger field beds measuring 10m x 30m. These beds host fruit and vegetable crops on annual rotation.

A new hedge is being planted along the northern and western boundaries. Bee-hives are located in the north eastern corner of the field. There is one existing main entrance onto the site, a vehicular access route from the car park at the south eastern corner.

4.2 Planning permissions

The following has been granted planning permission:

- A new second pedestrian entrance for students from the school on the southern side of the field
- A livestock enclosure on the western edge of the site.
- A livestock shelter, an open-sided single storey structure, located on the east edge of the livestock enclosure.
- 12 raised beds and two mobile timber chicken adjacent to the livestock enclosure and together enclosed by a low rise brick wall.
- An orchard
- A small pond is on the eastern side of the site.
- Three orchard and hedge windbreaks running north to south either side of the vegetable beds and through the centre.
- cycle parking and paths



- - - - - School boundary
- Site of borough importance for nature conservation
- - - - - London loop
- - - - - Building conservation area
- ▲ Entrance into the site
- Dense tree cover
- - - - - Farm boundary

5 Assessment - Socioeconomic Context

5.0 Overview

The site that the farm is on is rented from Barnet Council by The Totteridge Academy.

According to a 2016 Natural England study 1 in 9 children nationally had not set foot in a park, forest or other natural environment in the last year, and children from a BAME household were even less likely to have done so. In the UK, only one third of the population achieves the recommended level of exercise and the impact of this on our health is estimated to have a direct economic cost of £1 billion per year. Spending time in green spaces has been shown to produce levels and patterns of chemicals in the brain associated with low stress and positive impacts on blood pressure.

5.1 History of The Totteridge Academy

In 2016 United Learning took over what was Ravenscroft School, a struggling state school with a poor local reputation. In four years, the school has transformed from being historically under subscribed to oversubscribed in year 7 and is now performing in the top 10% of schools nationally. The aim of the school is to be the most improved school in London in the next three years. The school rejects the view that success in life is pre-determined or that our talents are fixed. The ethos is to improve through practice; calm, focussed classrooms led by knowledgeable, passionate teachers provide its students with the ideal environment for this practice to take place.

5.2 The Totteridge Academy now

The Totteridge Academy is a 530 pupil secondary school. According to the school's census 40% of the pupils at the school are eligible for the Pupil Premium - free school meals (the national average is 12.4%). 66% of the school's population identifies as belonging to a minority ethnic group and 20% of students have Special Educational Needs and Disabilities (SEND). The school's students will all benefit from frequent access to the site.

5.3 Health in Barnet

According to London Borough of Barnet's Health & Wellbeing Strategy, across Barnet 1 in 5 children are overweight or obese by the time they reach year 6, and 1 in 3 adults in the borough are physically inactive. In Barnet, approximately 4,700 children and young people (5-16 years of age) have mental ill health. Of those, approximately 1/3 are in contact with local health and care services and the number of children's admissions for mental ill health has been increasing. There is substantial inequality in levels of mental ill health between wards and poor mental health it is often linked with levels of deprivation.

Grow is committed to using the site to improve awareness of healthy living and eating at an early age. The use of the site as a fully functioning city farm will bring many children and adults from the area - especially the students of The Totteridge Academy - into close proximity with food-growing and natural surroundings. This close interaction with nature is of huge benefit to the people of Totteridge and Barnet more widely, and supports the aims of Barnet Councils' Health & Wellbeing Strategy.



5 Assessment - Socioeconomic Context

5.4 Economic Context

The farm contributes to the local economy through the sale of produce at a local level, as well as providing employment for staff to run the farm. In 2020 during the pandemic, GROW sold £10,000 of organic, affordable produce to local people and businesses. GROW estimates that this will rise to £25,000 in 2021 and to £100,000 within six years. The farm also creates positive economic factors by improving the health and ecology for local residents.

In 2020 GROW provided over 300 hours of volunteering opportunities for local people, teaching skills in sustainable food production and welcoming volunteers of all ages and abilities as part of their weekly and weekend farming events. Four women were trained in food production through GROW's traineeship scheme, three of whom have now gone on to work in sustainable food. In 2020 GROW also offered paid placements on the farm to two young people (18-25) through a charity partnership, both of whom have been employed in the education department.

In 2021, GROW will offer four more paid placements for 18-25 year olds who are currently claiming universal credit. GROW sees an enormous opportunity to create sustainable and secure employment on the farm which will have a ripple effect helping to support the set up other sustainable businesses in the area.

The team now employs two full time members of staff and two part time staff plus a roster of freelance facilitators who work with young people when they come to the farm.

These roles are:

- Farm + Outdoor Education Manager - Full Time
- Farm Assistant - Full time
- Farm assistant - Part time (2 days a week)
- Food + Farming Facilitators x 3 - freelance/seasonal

5.5 Funding

The proposed GROW farm at The Totteridge Academy is envisioned to be the first of many such farms across the UK. The facility is being funded through a crowdfunding campaign that has reached its target to enable the project to progress. The project is being supported by the Mayor of London.

5.6 Planning Policy

The following planning policy documents and guidance have been considered in relation to the proposed development:

- National Planning Policy Framework ("the Framework") (2019);
- The London Plan (2016) (consolidated with alterations since 2011);
- Barnet's Core Strategy (2012);
- Barnet's Development Plan Document (2012); and
- The relevant supplementary planning guidance documents.

Please refer to the supporting planning statement prepared by Maddox, which assesses the proposal against the adopted and emerging planning policy framework. Crucially, given the location of the site within the Green Belt, the statement explains why very special circumstances exist that justify the development of what is considered under planning policy to be inappropriate development in the Green Belt.



6 Design

6.0 Layout

The site is laid out to agricultural and horticultural principles to afford the best growing conditions for the produce and practical management of the site. Each use and activity is grouped together into different areas across the field. Along the northern edge of the site and stretching into the centre - the area which receives the most of daylight throughout the year - are field beds dedicated to food production. There are 23 rectangular field beds each measuring 10m x 15m, and 7 larger field beds measuring 10m x 30m. These beds host fruit and vegetable crops on annual rotation.

A new hedge is being planted along the northern and western boundaries. Bee-hives are located in the north eastern corner of the field. There is one existing main entrance onto the site, a vehicular access route from the car park at the south eastern corner.

6.1 Proposed

The new Classroom and Barn are proposed to be grouped together around a yard on the southern boundary of the site, consolidating all incoming services into the site in one place. Located as close to the southern tree line as possible so as to preserve the openness of the site, the Classroom and Barn are positioned adjacent to one another either side of the new pedestrian entrance from the school.

To the south of the site, just behind the Classroom and Barn is the existing school sports hall building. Whilst the sports hall is about twice the height of the Classroom and Barn, they have been sited nearby, grouping the larger buildings in the area together and as such reducing the impact on the openness of the site.

On the northern side of the yard, adjacent to the chicken coops is proposed to be a Dutch Greenhouse. Three polytunnels are proposed to be located in the southeast corner of the site where two of them can receive full sun throughout the day (the third occupies a shaded spot adjacent to the hedge and will be used to grow shade-needing mushrooms). This is also the highest part of the site and so achieves the best drainage conditions. The lower side of the field suffers from standing water which impedes crop growth.

The children are highly aware of the quality of their environments. By housing them for classes and study in a provisional tent they are being told that what they are doing does not matter, and that it is an insubstantial activity that might not last. By housing their activities within good quality, well-designed structures you send clear and unequivocal messages to the children, and all other farm visitors, that their contributions are valued and important. It will show them that it is important that they learn about nature and how to respect it, and that places like this field in Barnet and all it represents, the Green Belt, and nature in general, are for them to use and care for.



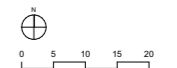
Totteridge Academy Farm

6 Design



1. All dimensions and levels to be checked on site before commencing work.
 2. This drawing to be read in conjunction with all relevant contract documents.
 3. Do not scale from this drawing, use figured dimensions only.
 4. Report any errors, contradictions or omissions to the designer as soon as possible.

Rev	No	Change	Date
A	01	Planning Issue	25/01/2021



Planning
 Drawing
 Proposed Site Plan
 Project
 Totteridge Academy Farm
 Client
 GROW
 Date
 08/02/2021
 Drawing No
 1002_03_101_01
 Drawn by
 JG
 Scale
 1:500 @ A1
ASSEMBLE
 Enterprise Station, 19 Collett Road, SE16 4DJ
 +44 (0)2072970000
 info@assemblestudio.co.uk

Proposed site plan for Totteridge Academy Farm

7 Design - Classroom

7.0 Design

Taking influence from the agricultural character of farmsteads in Hertfordshire such as Croxley Great Barn, the new Classroom will be an exemplary piece of contemporary vernacular architecture, with the design drawn from its community and context. As with the regenerative farming practised on the land, the building will adopt a regenerative approach to its architecture. The building will be architecturally innovative through its delivery and carbon footprint. Designed to have as low a level of embodied carbon as possible through its construction and ongoing energy use, the Classroom will be built for this and future generations. Aspects of the materiality will be developed and delivered with students from the school, teaching them how buildings are made and instilling a level of care in their environment through participation in its construction. We hope to run an educational programme alongside the design using the site as our material source and testing ground.

7.1 Use

The Classroom building is comprised of:

- 1 classroom for 30 secondary students to learn about connecting to the land, including principles of horticulture, farming, nutrition and well-being as part of the GROW curriculum. e.g. learning to incubate eggs and raise chickens, growing food from seed to harvest to plate
- 2 compost toilets for students, staff members and volunteers working on the GROW farm
- 1 outdoor sink to be used for washing hands and tools after work on the farm

7.2 Amount

The planning permission covers 5 structures: 3 polytunnels, 1 greenhouse, 1 barn, and 1 classroom. The classroom building is comprised of a single 105sqm classroom and 2 no. 4sqm

accessible composting WCs.

The classroom, at 105sqm, is based on the scale mandated by the Building Bulletin 103 for a class of this size*, and a spatial study of the various activities that might be undertaken here to teach the Grow Curriculum. It is carefully calibrated to allow 30 students to comfortably undertake a range of activities in the tempered environment of a classroom, but is not oversized beyond the size of a practical workshop classroom as it is assumed that the indoor space is strongly related to the external space.

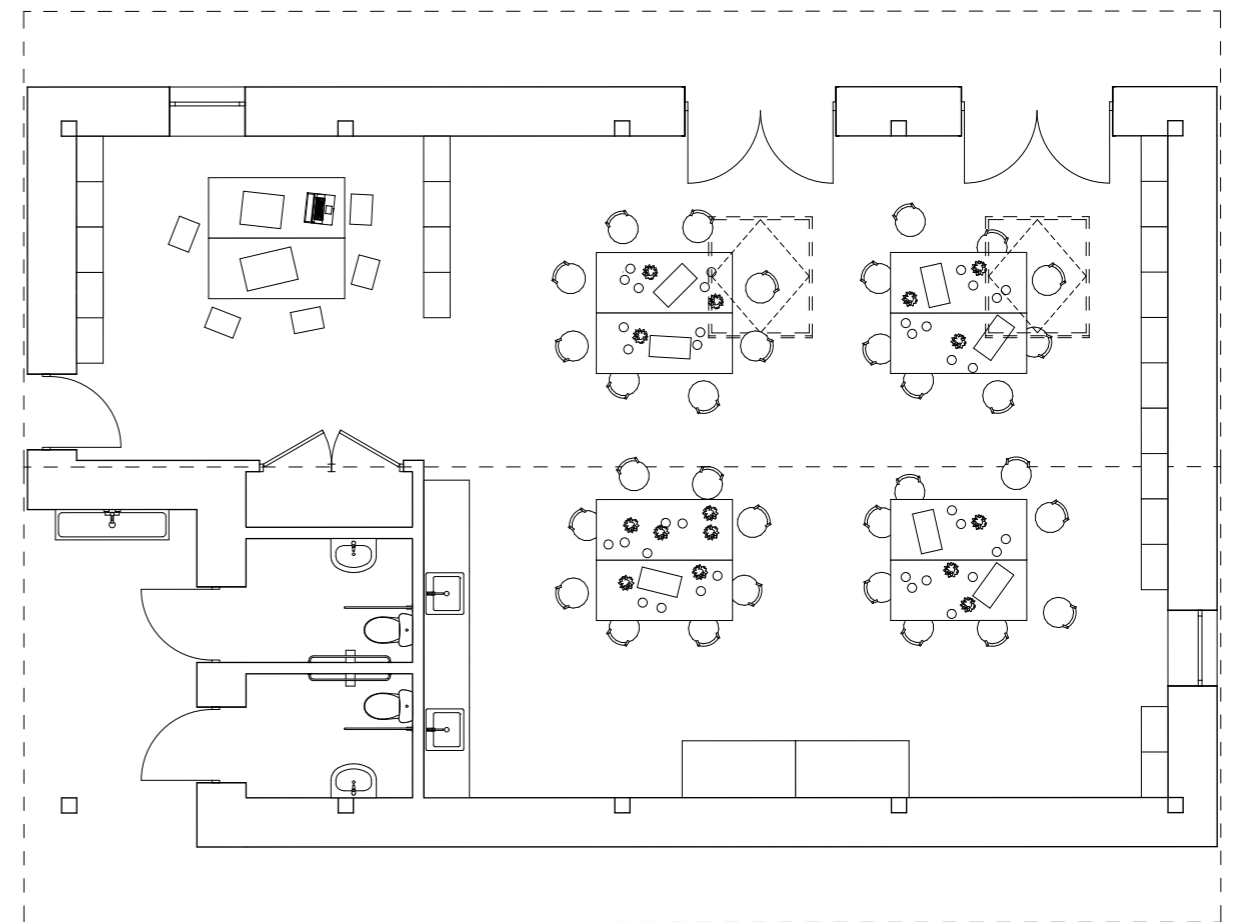
There are 2 no. accessible composting WC's. This is based on a usage estimate of approximately 30 uses per day. Composting WC's, assuming that not everyone uses them 'correctly', have a capacity of 20 uses per day. So 2 WC's allows a capacity of 40 uses. Both are fully accessible to enable a diverse usership of farm visitors.

* 'Building Bulletin 103: Area Guidelines for Mainstream Schools' does not describe the space requirements for a classroom of this kind, but does give guidance on classroom sizes for activities that are broadly analogous such as food room (104sqm) or a resistant materials workshop (104sqm).

7.3 Scale

All the structures are appropriately scaled to their use and context. The classroom has a ridge height of 4.5m in order to give a clearance at the projecting eaves of 2.4m, it is similarly scaled to the barn, in spite of a smaller internal clearance as it has a substantial insulation build-up to ensure it is extremely energy efficient.

This scale is similar or smaller to standard or 'off-the-shelf' single-storey agricultural buildings.



Proposed plan of Classroom

7 Design - Classroom

7.4 Structure

The Classroom structure is proposed to be timber frame, taking inspiration from the architectural vernacular of agricultural buildings found in Hertfordshire such as the Great Croxley Barn. The structure is designed to have a low level embodied energy, avoiding the use of concrete or steel where possible. Timber for the structure could be sourced locally to the site and built in traditional timber framing techniques. The foundations will look to avoid using concrete and are proposed to be masonry rubble strip foundations with brick dwarf wall upstands to support the timber frame, keeping it off the ground and dry. The slab is proposed to be made from an insulated cement-free product such as Glapor recycled foam glass.

7.5 Materiality

Taking a lead from the great Croxley Barn and continuing a low carbon approach the classroom is proposed to be clad in dark stained overlapping timber boards. The roof is clad in red Onduline panels, corrugated bitumen sheets typical of agricultural buildings. Aspects of the materiality and finishes will be developed and delivered with students from the school, such as the stains applied to the timber cladding or clay plasters used on the internal walls.

Within the technical development of the project, the material of these participatory workshops will be explored with regards to finish and robust detailing to ensure longevity and low maintenance.

7.6 Mechanical and Environmental

We are designing the classroom to be as low energy as possible, delivering a U-value of 0.1. With a very well insulated envelope using natural products such as hemp block, producing low ongoing running costs and energy use once built, this ambitious U-value should be achievable.

7.7 Lighting, windows and doors

Doors and windows will be timber framed with painted exterior joinery and clear finished interior joinery.

The exception to this is the large doors on the barn which to ensure that they are sufficiently light to slide open will be galvanised metal doors.



Great Croxley Barn, Hertfordshire



Onduline roofing system



Hempcrete insulation



Hempcrete insulation



Recycling materials available on the site



Recycled local materials used to create new cladding

8 Design - Barn, Polytunnels, Greenhouse

8.0 Design

The new Barn, Polytunnels and Greenhouse are necessary to allow the running of a small-scale farm. Designed around the practicalities of managing on site food production, preparation and delivery, the Barn will be environmentally considerate and built in a way that is sensitive to and rooted in its local and historical vernacular.

8.1 Use

The Barn itself will provide a lockable storage space for tools for the farm workers and volunteers, as well as a second storage room with a large fridge for food produced on the site before its delivered to the school canteen or local farmers market.

A larger room is set aside for storage of larger on site tools such as wheelbarrows and any vehicles that might be used in production. This room will also be used for preparing and washing produce and packaging it ready for delivery. One of the significant advantages of the Barn is that volunteers and children are able to be separated which is key for the future safeguarding of the children on site.

The Greenhouse and Polytunnels enable the farm to extend its growing season throughout the year and make best use of the site as a place of food production.

8.2 Amount

Barn
The barn is comprised of three spaces: a multi-use 145sqm space, and two secure 11sqm storage spaces for tools and food respectively. The multi-use space is defined by spatial planning exercises around expected activities which vary from the packing of vegetables to preparing and storing crops, working during adverse wather (woodwork and building

projects) to volunteer and staff lunch and tea breaks.

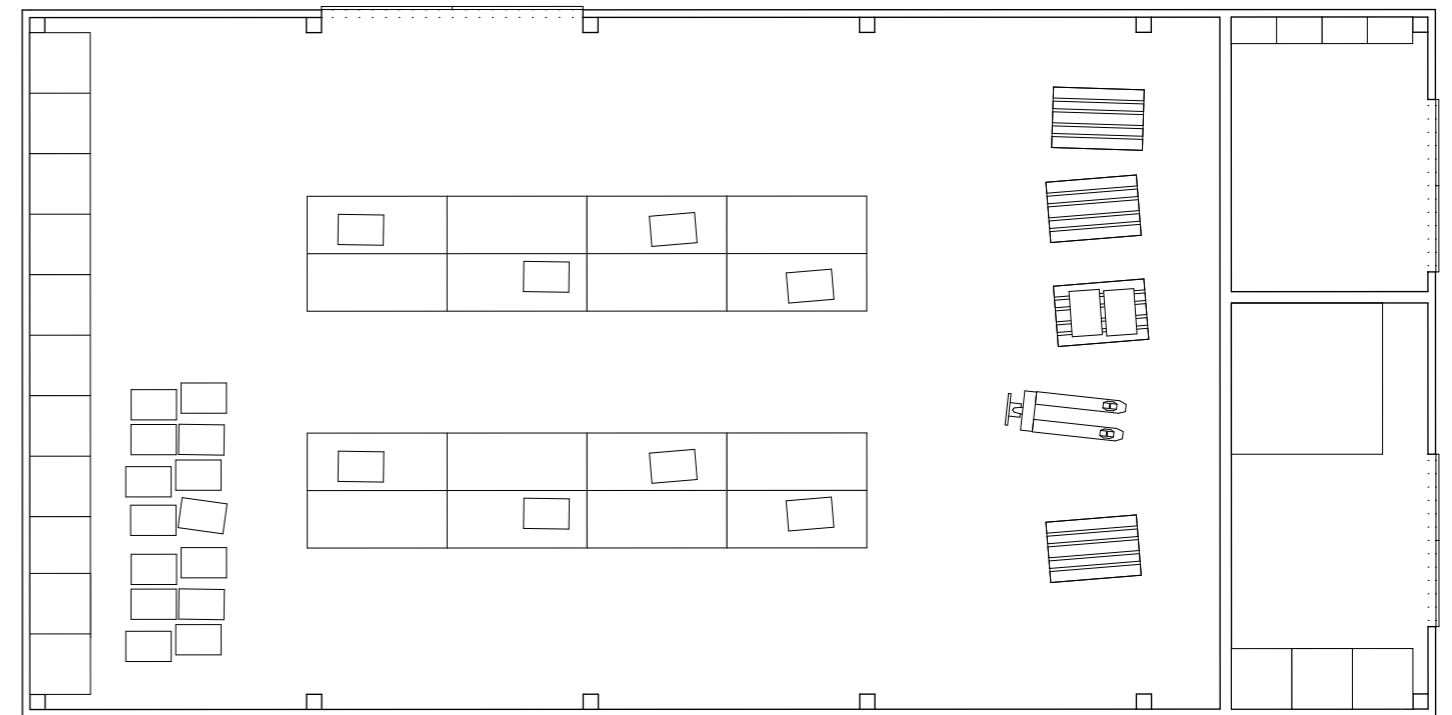
There are then two storage places which provide secure storage for tools and equipment which will be required for day to day farm work such as spades, hose-reels. Plus a second storage room if any produce needs to be stored securely when the principal barn space is required for other things, with a 2m x 2m solar powered fridge.

Polytunnels

The proposed Polytunnels are 3 no. 3.7m x 12.2m single-span (45sqm space per) polytunnel structures installed on screw piles. These polytunnels are required at their proposed capacity for the everyday running of the farm. One polytunnel is to be used for the propagation of and raising of seedlings. The second polytunnel for growing tomatoes, cucumbers and chillis in the summer and for winter crop production out of season such as salads, kales, pak choi. The third polytunnel is dedicated to growing fruit edible mushrooms with shade netting around the outside.

Greenhouse

The proposed timber-frame dutch greenhouse provides 50sqm of space. This structure is intended to operate within the walled garden with the raised beds and so provide a more tempered environment for the growing of vegetables and other produce. This allows the farm to extend the growing (and therefore learning) season of the site beyond what would be possible with simply the use of the raised beds.



Proposed plan of Barn

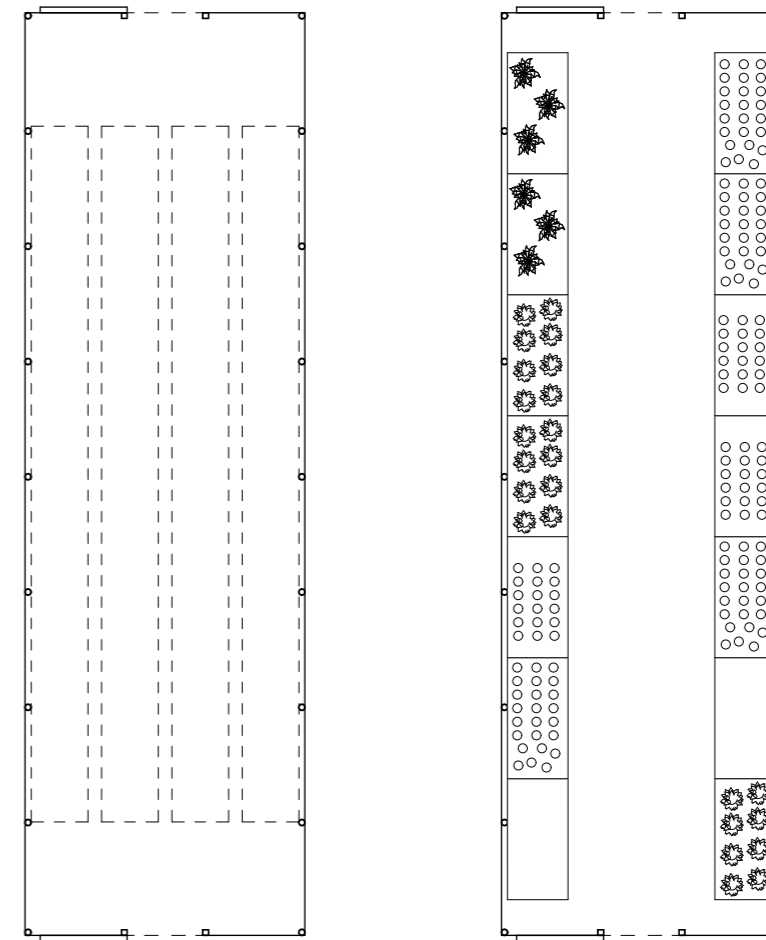
8 Design - Barn, Polytunnels, Greenhouse

8.3 Scale

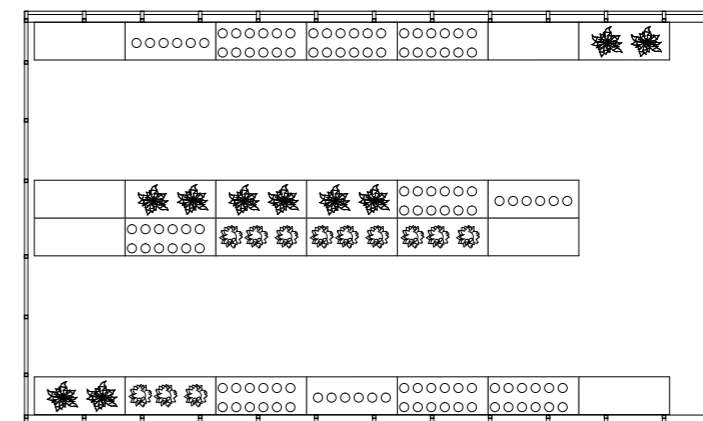
All the structures are appropriately scaled to their use and context. The barn is the largest structure in height at 4.53m (taken at the ridge of the roof), which is still substantially smaller than the adjacent sports hall (at a height of approximately 8.5m). The height of this structure is required to give a good clearance at the eaves for moving goods in and out, as well as to provide decent storage volume.

The polytunnels and greenhouse structures are standardised and so their heights of 3m (greenhouse ridge height) and 3.5m (polytunnels) are entirely typical with the character and type of these structures and their associated use.

All the structures are substantially smaller than the structures visible above the southerly hedge border of the site - the sports hall (ridge height of 8.5m) and the music building (ridge height of 9m).



Proposed plan of Polytunnels



Proposed plan of Greenhouse

8 Design - Barn, Polytunnels, Greenhouse

8.4 Structure

The Barn is proposed to be a single storey uninsulated timber frame building, similar to typical agricultural barn buildings found in Hertfordshire. The structural strategy will take a similar approach to the Classroom building, the details of which will be further developed at RIBA Stage 4 with the Structural Engineer.

The Greenhouse is proposed to be a timber frame dutch greenhouse with a clear varnish finish.

The polytunnels are standardised screw anchor polytunnels made with steel tube hoop structures and polythene cladding.

8.5 Materiality

The Barn building is proposed to be clad in the same materials that being used for the new Classroom creating a coherent visual language referencing the vernacular tradition of making farmsteads out of a local material palette. It will be uninsulated with externally hung large steel sliding doors typical of farms in Hertfordshire and across the UK, allowing the storage of larger pieces of machinery and material.

The greenhouse is a typical timber framed greenhouse with glass panes.

The polytunnels are standardised screw anchor polytunnels made with steel tube hoop structures and polythene cladding.

8.6 Additional landscape works

The raised garden is to be surrounded - as is traditional with kitchen gardens - with a short brick wall. This will engender a conducive microclimate for growing and protect against the strong westerly winds that the site receives. As the image on the bottom right shows these red brick walled gardens are very characteristic of the local area and across England.

This wall was drawn on the approved plans within the previous application but is included here for the avoidance of doubt.



Black painted agricultural precedent: Croxley Great Barn, Hertfordshire



Uninsulated timber frame barn



Polytunnels



Timber frame dutch greenhouse



Reclaimed Hertfordshire soft red bricks with half round brick coping



The walled garden at Stanstead Bury Farm, Hertfordshire

9 Design Development

9.0 Design Development

Figure 1

The project team submitted a request for pre-application planning advice on the original proposal on the 14th August 2019. This proposal located a new barn and separate classroom building clustered around a yard in the centre of the site.



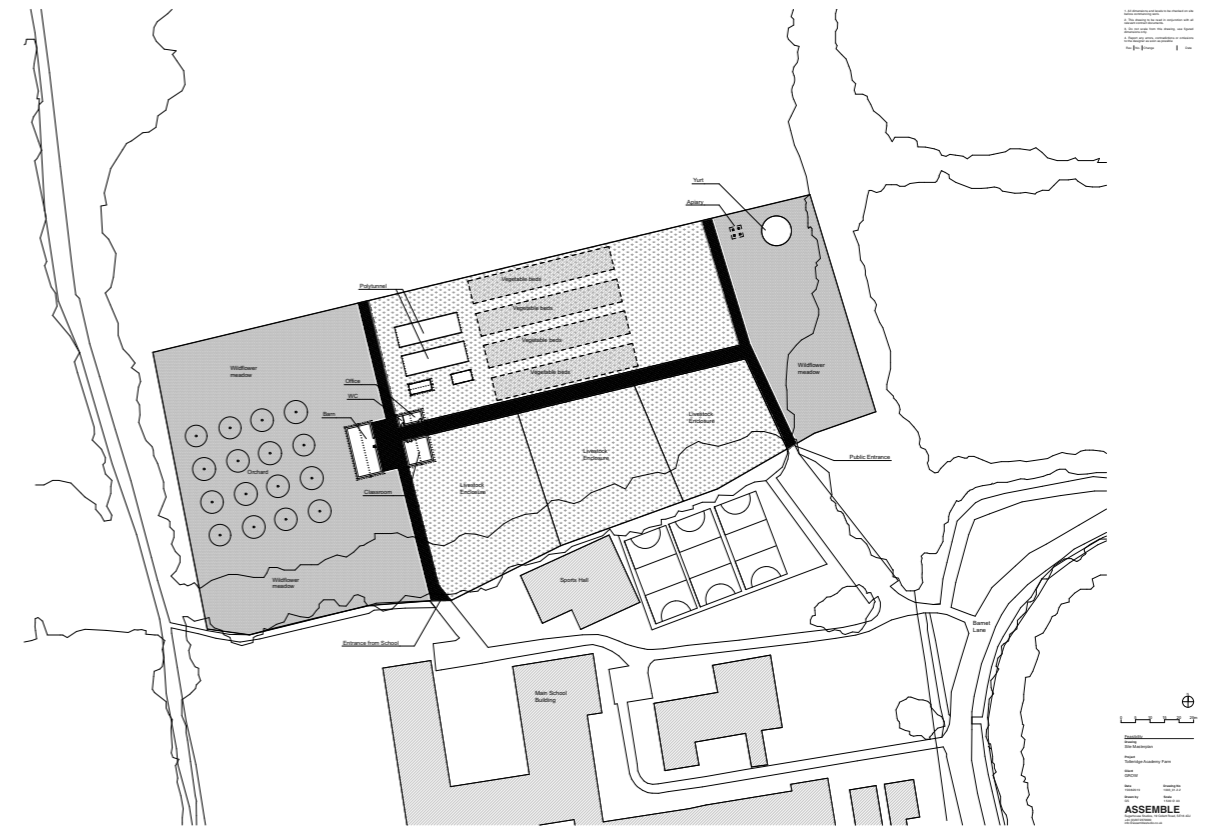
Pre-application proposal - a view looking west toward the buildings in the centre of the site

Figure 2

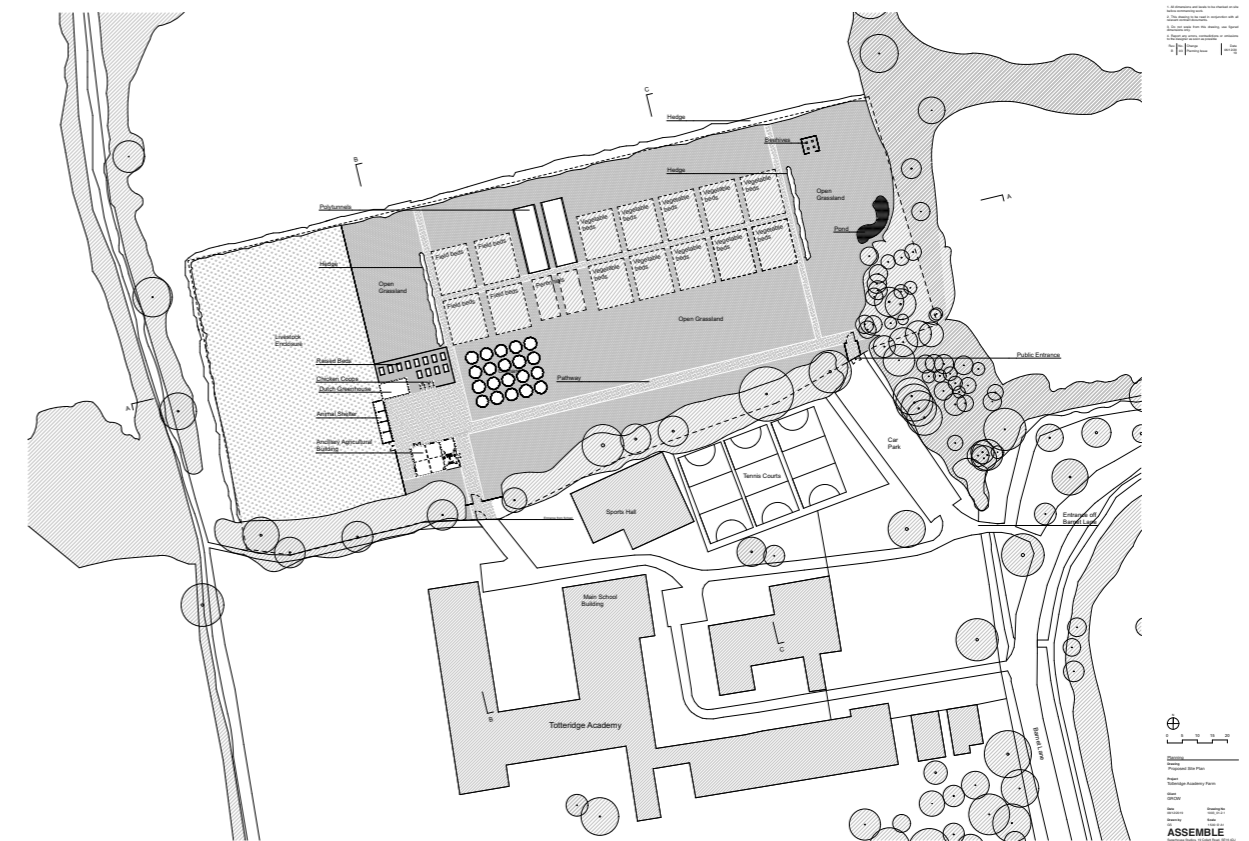
Following the feedback from the Case Officer we amended the scheme accordingly. To preserve the openness of the site we removed the classroom building leaving only the essential agricultural buildings necessary for the day-to-day running of the farm - the barn, greenhouse and polytunnels. The barn was given a smaller footprint, at 130sqm rather than the 200sqm originally proposed, and was moved to be alongside the southern tree lined boundary of the site to maintain the site's sense of openness as much as possible. This proposal was submitted for planning in December 2019.



View of the scheme as submitted in December 2019



Pre-application proposal - Totteridge Farm site plan



Previous planning application - Totteridge Farm site plan