



# RETROFITTING THE SELBY

## CENTRE PLAN

### INTRODUCTION

The third sector is badly lagging behind the private and public sector with regard to the uptake of energy efficiency measures in their buildings. The Selby trust have an ambition to change this, and wants to lead the way.

The Selby trust manages the Selby Centre. It is a large community hub in Tottenham. The centre is a former school building and is well used by over 100 diverse social action organizations, attracting over 1500 people per day.

The Community Energy Lab is an initiative of the Selby Trusts – Green Hub. It seeks to improve the energy efficiency of buildings and train people to install these measures. This being based at the Selby Centre makes it an ideal canvas for development and implementation of retrofitting techniques.

The trust generates 75% of its own income, despite the lack of capital investment in an area of high deprivation. Please see Appendix I for a brief description of the current activities of the Selby Trust.

### AMBITIONS

**Environmental and technological** - Create a new skin – via retrofitting existing buildings and creating new accommodation where appropriate

**Economic** - self sufficiency

**Social and political** - Extended and secured lease beyond 2022

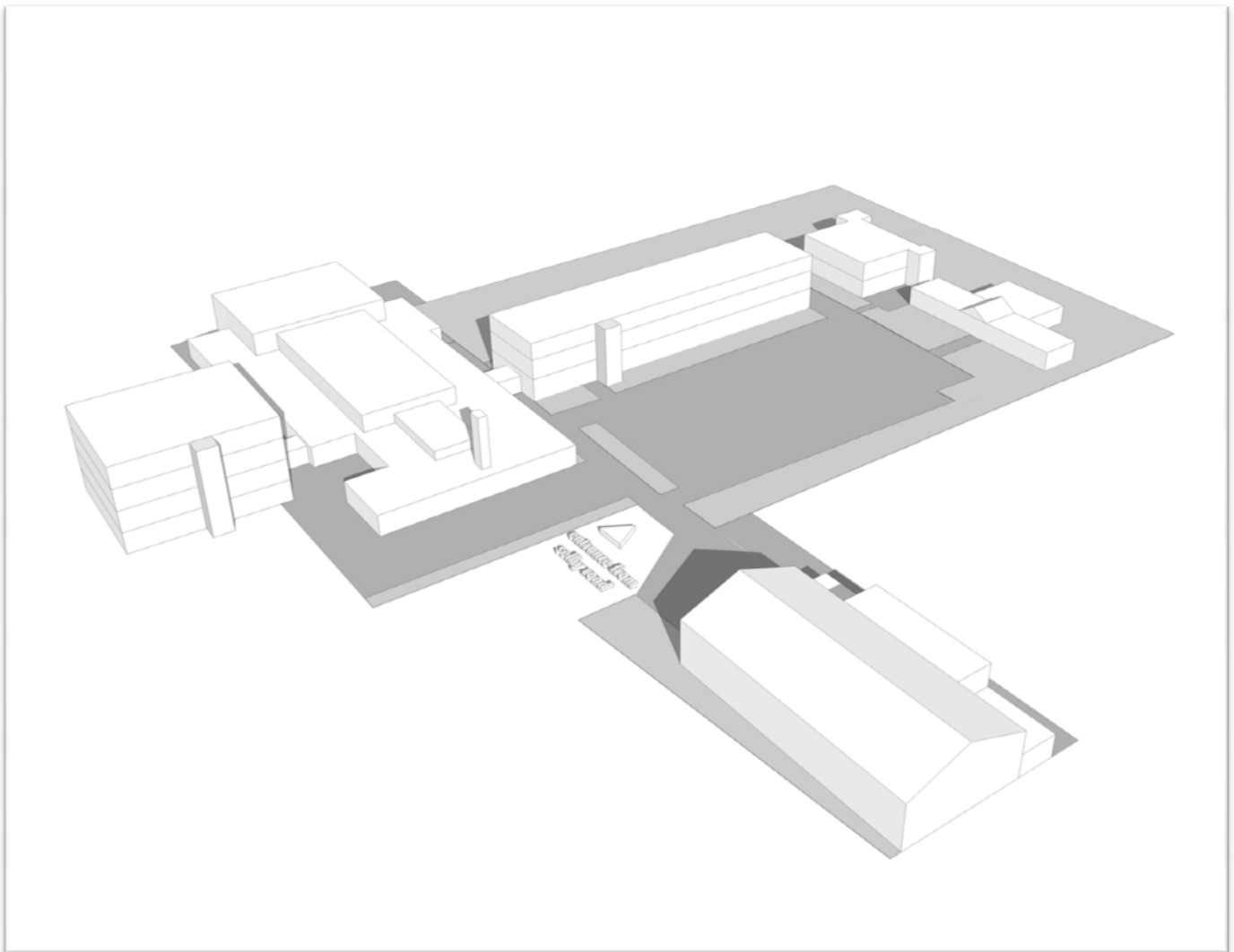


Figure 1 A 3D view of the existing site

However before we can begin we need to take stock of what is currently on site. Assessments of the existing building stock have been done by various audits and surveys over the past 5 years (available upon request). Here is a synopsis of the main points looking at the existing site and outlining possible opportunities.

### THE NORTH, MAIN AND SOUTH BLOCKS

Generally the north south and main block are the most iconic and modernist of the selby centres buildings and also the most robust, with a concrete post, beam and slab construction. However they lack any meaningfully wall insulation and the single glazing is a large source of heat loss in the winter.



Currently they have 2 x 750kw boilers, with only one in use at any one time, past examination points to the unequal distribution of heat within the current system leads to inefficiencies in the whole system. There is a need to overhaul the pipework and electrics for these blocks to bring them in line with 21<sup>st</sup> century requirements.

## THE SPORTS HALL

The sports hall is a well used resource of the local community, and expanding and improving the amenities for using the Hall would be greatly welcomed.

Currently the hall has no natural daylighting and little to no insulation and poor ventilation, it is heated by a blown air system that is old and the energy efficiency would benefit from its replacement.



## THE PAVILION AND ANNEX

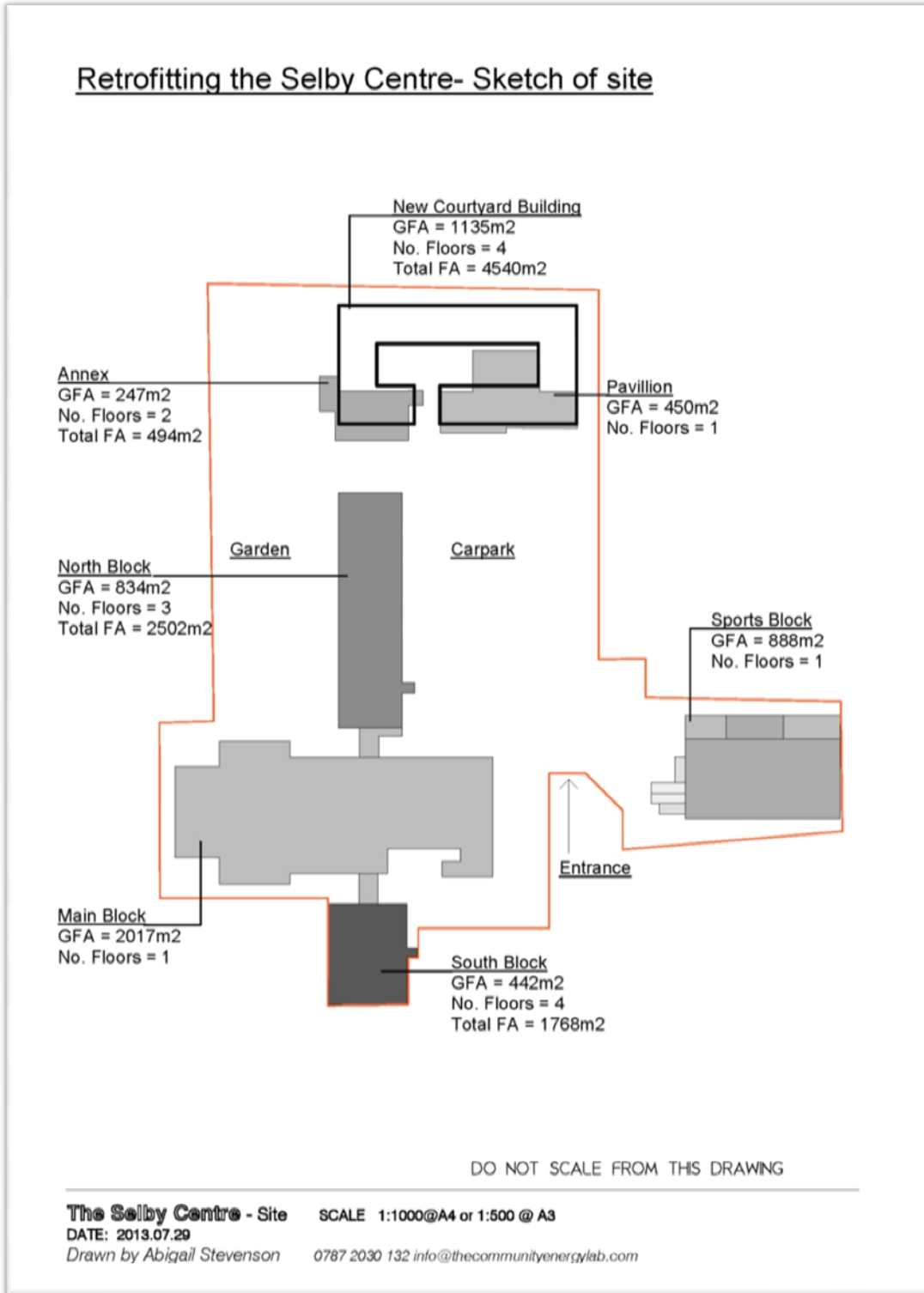


The pavilions the annex are both of poor condition sitting at the north end of the site, currently used as office space.

The pavilion was a temporary building used originally as a changing room for the sports field to the north of the site. The boiler that heats both buildings was replaced recently with a high efficiency condensing boiler with weather compensation controls, this

could be reused to heat an equivalent space.





The main development opportunities of the site are on the current location of the pavilion and the annex. Due to their poor location within the grounds, a large underused area of the site surrounds them. The principal elevation is to the south onto the car park and therefore affords the best opportunity for solar gain on the site.

The site could be divided up to provide much needed housing and still perform the functions necessary of such a valuable community resource.

## A NEW COURTYARD BUILDING.

The north end of the site offers the greatest opportunity for development. A new courtyard building could be built here to offer, dual aspect offices allowing good natural daylighting and natural ventilation an internal garden managed by global garden team, bringing the green into the middle of the new Selby Centre.

4 storey's in height.

Communal facilities cafe, crèche, info centre, large meeting rooms/main Hall etc on ground floor along with Selby trust offices and new plant room.

Office space and meeting rooms for hire on the upper floors, making sure that the construction consists of a super structure allowing for flexible internal partitions between offices, to allow the building to adapt to the space and financial requirements of its users.



## SELBY CENTRE PHASED PLANS...

*THE TEN YEAR PLAN - MOST AMBITIOUS AND COMPREHENSIVE REDEVELOPMENT AND RETROFITTING OF THE SITE. DEPENDENT UPON THE CONDITION OF GETTING THE LEASE OF THE SITE EXTENDED AND SECURED.*

### *STEP 1 (YEAR 1) GREEN HUB AREA*

Temporary green hub area outside the sports hall, this to include food packing area for crop drop scheme and green wheels bicycle workshop.

### *STEP 2 (YEARS 1+2) NORTH BLOCK RETROFITTING*

Retrofit north block, this to include external insulation to the walls and roof and secondary glazing throughout. This would be carried out by the community energy lab, as part of a training facility in practice.

Installing a standalone biomass heating system for this block only. This would reduce the drain on the existing old boilers, possibly even out the flow in the existing supply, and allow waste wood to heat the north block reducing the dependency on non renewable fossil fuels.

### *STEP 3 (YEARS 2+3) PLUS ONE LIGHTWEIGHT LEVEL ONTO THE NORTH BLOCK*

Add an additional lightweight level onto the north block, making it 4 storeys high and increasing its capacity by 810 m<sup>2</sup> to a total of 3240 m<sup>2</sup>. Install 700 m<sup>2</sup> photovoltaic panels onto the top of the roof, approx 100 kWp of solar power, potentially generating 77,984 kWh per annum.

### *STEP 4 (YEAR 2,3 +4) SPORTS HALL REFURBISHMENT*

Sports Hall refurbishment, add natural lighting to the main hall at ceiling level, New heating system and insulation. Addition of viewing gallery on a new second floor above refurbished changing area allowing for additional meeting and office space.

New entrance on ground floor level with green hub reuse and products selling point.

### *STEP 5 (YEAR 4+5) DECANT PAVILION, BEGING COURTYSRD BUILDING*

Decant pavilion into new offices on top of north block, demolish pavilion and begin work on phase 1 of courtyard building.

### *STEP 7 (YEARS 5-6) COMPLETE COURTYARD BUILDING*

Decant annex into phase 1 of completed courtyard building and begin on phase 2 as well as the new entrance.

### *STEP 8 (YEARS 6) OCCUPY COURTYARD BUILDING*

Decant the south block and main block users into the new courtyard building.

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## YEAR 6 MILESTONE - THE TRANSFORMED SELBY CENTRE

### STEP 9 ( YEARS 7-9) DIVERSIFICATION

Develop the area of the south block and main hall into housing. Either by selling it on to a developer or in partnership so that the Selby Trust becomes a responsible social landlord, to guarantee social housing is provided on the site.

However it is possible that in 7 years there may be a greater requirement for office and enterprise space, so it is also possible to convert the space for this use. The development of the site with close consultation with all stakeholders will help inform this point.

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## YEAR 10 MILESTONE - FULLY OPERATIONAL IN NEW SET UP IN 10 YEARS.

This meets the council's desire for greater housing in the borough and allows for the existing users of the site to benefit from better facilities.

## HOWEVER....

*AS THE LEASE IS NOT SECURED AT THE MOMENT, BEYOND THE EXISTING 12 YEARS, I WOULD LIKE TO SUGGEST OTHER WAYS OF PROGRESSING.*

## THIS IS CALLED THE MAKE DO PLAN

### STEP 1 (YEAR 1)

Temporary green hub area outside the sports hall, this to include food packing area for crop drop scheme and green wheels bicycle workshop.

### STEP 2 (YEARS 1-3)

Retrofit north block and sports hall. This to include external insulation to the walls and roof and secondary glazing throughout. This to be carried out by the community energy lab as part of a training facility in practice.

Also the possibility of installing a stand alone biomass heating system for this block only. This would reduce the drain on the existing old boilers, possibly even out the flow in the existing supply, and allow waste wood to heat the north block reducing the dependency on non renewable fossil fuels.

It is essential that a comprehensive cost benefit analysis is carried out with scope of retrofit deployed, must pay back in 8 years.

### STEP 3 (YEARS 1-3)

Repair and maintenance to continue as normal on the other buildings on the site, and where specific easy gains in energy efficiency measures can be gained, work to be carried out.

### STEP 4 (YEARS 1-3)

Securing this retrofitting plan would help with extending the lease, therefore;

If we secure the lease within these 3 years then it is possible to jump to step 3 in the 10 year plan and continue the development of the whole site.

However if the lease is not secured, then if investment in PV panels is taken on by the trust, this will reduce costs and fortify the financial sustainability of the trust, also the PV panels can be dismantled and moved to a new site.



