

**UNIVERSITY OF CAMBRIDGE
BUILDINGS AND ENVIRONMENT COMMITTEE**

The 6th meeting of the Computer Laboratory Buildings and Environment Committee will be held on Monday 30 April 2018 at 2:00pm in Room SW00.

Committee Members: Dr Pieter Brooks
Mr Ian Burton-Palmer
Miss Claire Chapman (Secretary)
Mr Brian Jones
Professor Ian Leslie (Chair)
Mr Martin McDonnell
Mrs Caroline Stewart
Dr Graham Titmus

AGENDA

1. Apologies for Absence

None.

2. Minutes of the Previous Meeting

The minutes of the meeting held on 12 January 2018 are attached **(2018-04-02)**

3. Matters Arising

Matters arising from the previous minutes are included in Agenda items below.

4. Reducing Energy Consumption

- i. Clearing of SE14 (BDJ)
- ii. Advising EM that on 1 June the air conditioning will be switched off and a crane will be required on this date (IBP)

5. Passive Cooling

- i. To inform Andrew Curley (EM) and Richard Mortier on 1 June the heat exchangers will be removed from offices (IBP and IML)
- ii. Time frame for completion to replace all vents in the Atrium (MJM)
- iii. Letter from Andy Hopper to ascertain when work will go ahead (CS)
- iv. Quotes for installing 2 high level windows in SW00, SW01, SW02 and SW04 (IBP)

6. Building Matters

- i. Replacing both meters in GN17 (IML)
- ii. Data wiring for cameras in the projection booth (BDJ)
- iii. Kitchenette refurbishments (IBP)
- iv. Trial run of LED boards (BDJ)
- v. Roof Membrane
 - Progress report from EM (IML)
- vi. Sourcing Office Lighting

- Trial test in the SN corridor with LEDs (IBP)
 - Costs involved to carry out the work (IBP)
 - Approval from Andy Hopper for work to go ahead (CS)
- vii. Lift lights
The current lift lamps have been discontinued. Does the committee agree to move over to LED lighting when the current lamps are used? (IBP)
- viii. Cycle Park Report (2018-04-06viii)
The Post Doc Forum asked for the report from Dr Matt Danish be taken to this committee for discussion and possible implementation.
- ix. Green Impact Suggestion
Suggestion to install pressurised boiling water dispensers in all kitchenettes as an alternative to kettles. Kettles take up a lot of energy and waste energy when water is left to cool. The pressurised water dispensers store water in an insulated tank so boiling water is instantly available and less is lost due to cooling.
- Committee Members are asked for their views.
- x. Status of Chiller (IBP)
- Letter from HoD to EM
 - UFO nudge to use split coolers
- xi. Intel Lab Ceiling (bowing panel) (IBP)
- xii. Vent Leak on 2nd Floor (IBP)

7. AV Matters

- i. Temperature control fan on back wall of LT1
- Approved supplier name from Andrew Curley (EM)

8. Committee Budget

- i. Budget report comparing our costs to this time last year (IML)

9. Any Other Business

10. Date of next meeting

The next meeting of the Committee will be arranged for July by Doodle Poll.

**UNIVERSITY OF CAMBRIDGE
BUILDINGS AND ENVIRONMENT COMMITTEE**

Minutes of the 5th meeting of the Computer Laboratory Buildings and Environment Committee
held on Friday 12 January 2018 at 10:00am in Room SW00.

Present: Dr Piete Brooks
 Mr Ian Burton-Palmer
 Miss Claire Chapman (Secretary)
 Mr Brian Jones
 Professor Ian Leslie (Chair)
 Mr Martin McDonnell
 Mrs Caroline Stewart
 Dr Graham Titmus

AGENDA

1. Apologies for Absence

None.

2. Minutes of the Previous Meeting

The minutes of the meeting held on 18 October 2018 were approved.

3. Matters Arising

None.

4. Reducing Energy Consumption

i) Pick and Place Machine Report

BDJ reported that he has constructed a *Pick and Place* machine for light installations and it is now in use. It is slow compared to commercial units, but can be done in-house without any costs.

ii) Report of unused equipment in SE18

It was agreed that SE18 will be fully cleared after Easter and it needs to be ready to use as office space by October. Simon Moore's and Theo Marketos's equipment will be the next to be cleared from the room.

The next room to clear will be SE19 which currently stores Andrew Moore's equipment. This room will have capacity for 2 people but it was noted that as the building is adaptable, the walls can be moved. As the racks can be dismantled in-house they can be cleared by 19 January.

BDJ agreed to clear SE14. GT said that there is storage capacity under the seats in LT2 if needed.

It was agreed the air conditioning will be switched off on 1 June. IBP will contact EM to advise them that this will be the date when the crane will be required.

Action: IBP and BDJ

5. Passive Cooling

i) List of all items to be removed from the roof; list to be submitted to Tim Jones

It was agreed that the heat exchangers in offices will be removed at the same time as the chillers on the roof. IBP will inform Andrew Curley and IML will inform Richard Mortier.

Action: IBP and IML

ii) Update on replacing all vents in the Atrium; including obtaining a quote

At the last test, 5 of the 16 vents had failed. Jim Gorman has been notified and said that Colt have ceased working with BBC Fire and Frost Engineering will now assess the roof vents. MJM will ask Jim Gorman the timeframe for completion and CS will ask Andy Hopper to write a letter asking when the work will go ahead.

Action: MJM and CS

iii) Quotes for installing high level windows in SW00, SW01, SW02 and SW04 (IBP)

The windows on the East side of the building have been replaced and will be sprayed on 15/01/18. Once this has been completed, IBP will obtain quotes for the new work to be carried out and the work should be completed by the summer.

Action: IBP

6. Building Matters

i. Re-mounting both meters in GN17

This should be amended to *'Replace both meters in GN17' as it was cheaper to replace them with newer meters which are configured from the front panel.*

The CT setting for the meters were not correctly configured when they were installed. It is important that the metering works correctly before shutting down SE18, so that the changed can be monitored. A calibrated kettle may be used to test the supply before any shut down.

[Afternote: the settings have been corrected]

Action: IML

ii. Specification for the positioning of 8 mains sockets in LT1

BDJ estimated that 30 sockets will need to be installed to gain full benefit. It was agreed that the data wiring for the cameras in the projection booth is the most vital to action and it was agreed to go ahead with this. GT questioned the need to install extra sockets, as there are only approx. 3 conferences per annum and it would be perfectly adequate to warn organisers against trailing wires along the stairways and provide tables at the front of the LT to charge devices between sessions. The committee agreed with this.

Action: BDJ

iii. Cost code for VELFAC order and update on when work will be carried out

This has been completed and the work will be carried out 22/01/18.

iv. Types of minor works which committee members feel require attention

This relates to the Kitchenette refurbishments and will be kept on the agenda until the work has completed.

v. Advanced Electronics re configuring Lux Logger software

This can be taken off the agenda as there are no further costs involved, and the system allows us to monitor all the emergency luminaires.

vi. Replace all fluorescent tubes which are not functioning in SW02

The bare boards have arrived and BDJ will build them up as LED boards and do a trial run. All failed tubes have now been replaced in SW02 and the hangout area, but some are not working due to failed ballasts which are no longer available.

Action: BDJ

vii. Replace all fluorescent tubes which are not functioning on the first floor student hangout area

A new model of LED light has been found, which has three colour temperature settings, so can be changed if needed. These are also being fitted on the First Floor of the Street.

viii. Outside bike shelter

Matt Danish from the Post -Doc Forum is collating a report. CS reported that the Cavendish Laboratory re-development plan will make cycle security a priority and so we should hold on this item for now, as the existing path by the shelter may be widened.

Report of bike theft to circulate to building users

A report was circulated to all building users by MGK in December 2017.

ix. Roof Membrane

Proposal to fit solar panels in the upper side of roof membrane whilst EM replace roof membrane

IBP said that EM will give a progress report to IML.

Action: IBP and IML

x. Committee to agree a list of energy reduction proposals for the Facilities Manager to submit to Estate Management

It was agreed the list includes: replacing windows and fire doors to allow passive cooling and changing the lighting to LED.

xi. Car Parking

1 disabled space has now been converted to a normal car parking space.

xii. Sourcing Office Lighting

- **Change to LED lighting due to existing light units becoming difficult to source**

It was agreed to do a trial test in the SN corridor as it has false ceilings and replace all lighting with LEDs. These lights have light sensors which turn on and off, adjust their brightness due to light levels and can be used as emergency lighting. IBP will obtain the costs involved to carry out the work. CS will get approval from Andy Hopper for the work to go ahead.

Action: IBP and CS

7. AV Matters

i. Lecture theatre lights – Creston software update

No further progress has been made with updating the programme. Discussion took place on whether to give up on the current software and install basic software which we can program ourselves. This item will be removed from future agendas until BDJ is ready to make progress.

Action: BDJ

ii. Temperature control fan on back wall of LT1

IBP will contact Andrew Curley for the approved supplier name.

Action: IBP

8. Committee Budget

IML will produce a budget report for the next meeting comparing our costs to this time last year.

Action: IML

9. Any Other Business

None.

10. Date of next meeting

The next meeting of the Committee will be arranged for April by Doodle Poll.

Postdoc Forum Cycle Park Report

Dr Matt Danish (mrd45)

March 22, 2018



1 Introduction

The Computer Laboratory Postdoc Forum decided on 27 November 2017 to investigate changes to the cycle park at the William Gates Building such as measures to control access and re-arrangement of stands. Later, in February, Cavendish III (application 17/1799/FUL) was granted permission by the city council on condition that a revised plan for the William Gates Building cycle park was submitted, one which accommodated the planned segregated footway and cycleway alongside JJ Thomson Avenue.

1.1 Objectives

- Establish secure doors with card access for a subset of the cycle park.
- Improve flow of people and cycles in and around the cycle park.
- Ensure full accessibility for all people and a variety of adapted or cargo cycles.
- Fix current problems with cycle parking layout.
- Re-arrange stands to accommodate planned segregated cycleway and footway on JJ Thomson Ave.

2 Existing conditions

The existing cycle park has 217 Sheffield stands providing a theoretical capacity of 434 cycles, as shown in Figure 2. However, not all of the spaces are equally accessible. When the cycle park becomes busy, it becomes increasingly more difficult to access spaces towards the centre. This problem is caused by the substandard width



Figure 1: (a) Substandard aisles (b) Obstructed entry (c) Motorcycles

of aisles, which vary from 60–80cm, and by substandard gaps between Sheffield stands, of about 80cm. Apart from that, there are no designated spaces for larger cycles such as adapted or cargo cycles, so those are squeezed into whatever space is available, and some of the open areas are also used for motorcycle parking. At the west (shown as top in Figure 2) side of the cycle park there are steep grades (9% and 7%) where the aisles rise up to meet the level of the existing path along JJ Thomson Ave — these were access ways in the past but are now blocked by a fence and a hedge. The current entry points are both on the east side of the cycle park, both about 1.3m wide, open to the public and monitored by CCTV cameras. The northern entry point is at a constricted location facing an outward-opening doorway into the William Gates Building (leading to a secure cycle park) and a bollard in the path. The outward-opening doorway has been a problem in the past and has been outfitted with warning lights and signs. The arrangement of fence and bollard obstructing the entry causes problems for people with reduced mobility.¹ Examples of these issues are shown in Figure 1.

3 Relevant policies and guides

Cambridge City Council has published the *Cycle Parking Guide for New Residential Developments*,² which contains dimensional specifications for cycle parking, and is the officially recognised standard used by the emerging Cambridge Local Plan. Wheels for Wellbeing, a charity based in London, has published *A guide to inclusive cycling*,³ which contains advice for designing cycling facilities that are accessible to all people, especially focusing on the needs of people riding cycles adapted for disability. The *Cycle Parking Guide* sets out this basic standard for bicycles parked at a Sheffield stand:

The footprint of two [bi]cycles parked at a Sheffield stand should be taken as 2m x 1m. This may be used to calculate the space required for a given number of stands. This also allows some space for baskets and panniers etc. An aisle is needed to access the stands and should be 1.1m in width.

All cycle parking spaces are provided with Sheffield stands or something more useful (precise details to be discussed at a later date) for the adapted cycle parking spaces. Double-stackers and split-level stands were not considered because many people do not find them usable.

4 Proposals

The pages with figures 3, 4 and 5 show different ideas, ranging from least amount of work and benefit to most amount of work needed and benefit gained. Sheffield stands are shown as black lines. Diagonal support columns are shown as shorter, thicker grey lines. Grey boxes show the outline of selected cycle parking spaces: 200cm by 50cm for 'bicycle parking spaces' and 250cm by 100cm for larger cycle parking spaces. Card access keypoints are shown as black boxes. Aisles span at least 110cm as required by the guide, unless otherwise indicated.

¹I had a clear example of this when I was visited by a friend of mine who only has the use of one leg. He rides a specially-adapted recumbent cycle and was unable to navigate the bollard and the fence at the corner while trying to use this cycle park.

²https://www.cambridge.gov.uk/sites/default/files/docs/CycleParkingGuide_std.pdf

³<https://wheelsforwellbeing.org.uk/campaigning/guide/>

Existing conditions (measurements in centimetres and (slope%))

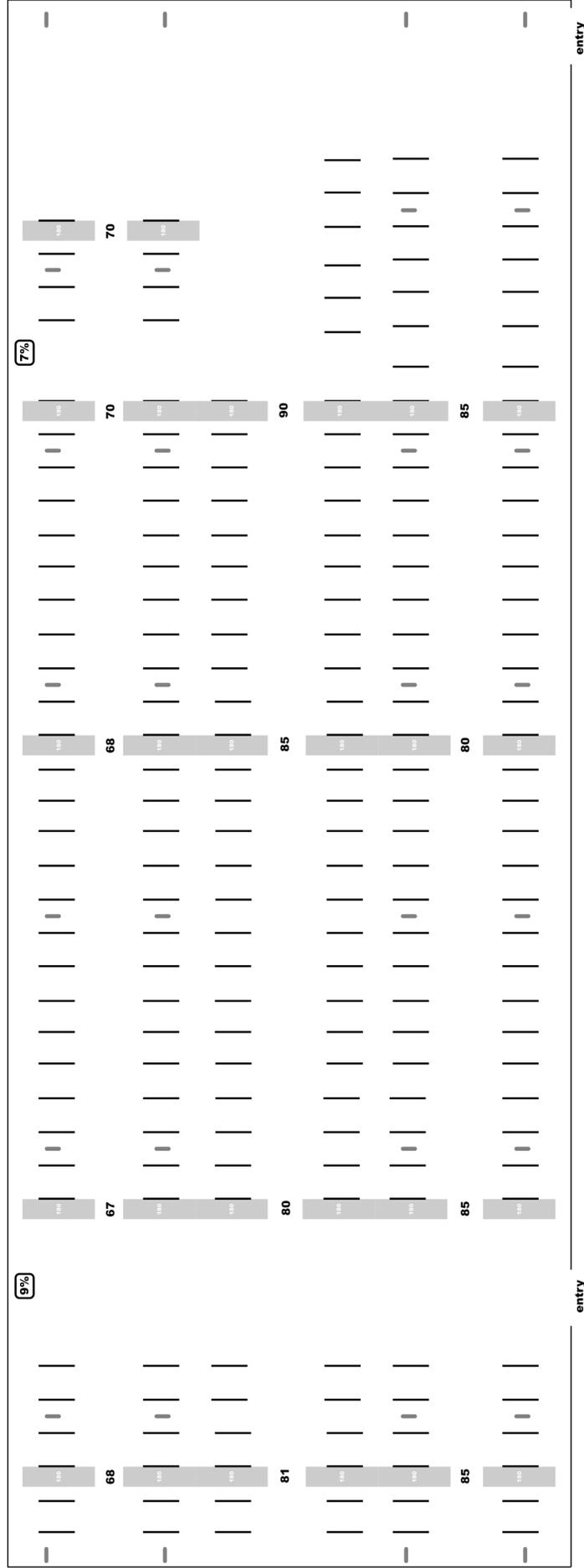


Figure 2: Schematic of the existing cyclepark. Sheffield stands are black lines. Diagonal support columns are shown as shorter, thicker grey lines. Grey boxes show the outline of selected cycle parking spaces, 200cm long. Numbers between boxes represent aisle width in centimetres. Percentages inside of rounded rectangles are approximate slope at that point. Theoretical capacity: 434 cycles.

Minimal modification (measurements in centimetres and $\text{slope}\%$)

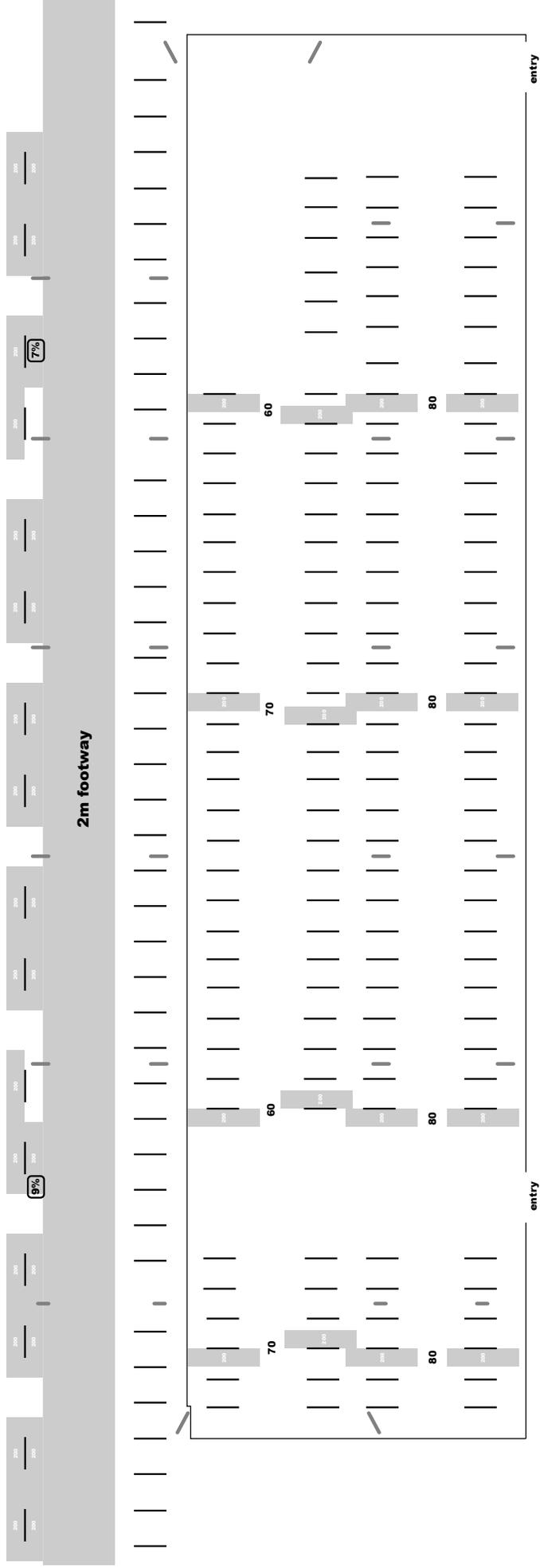


Figure 3: Idea A: Minimal change to allow new segregated footway. Eliminates two rows from shed and restores 112 cycle parking spaces outside resized shed. Does not fix existing issues within the shed. Theoretical capacity: 400 cycles, of which about two-thirds are protected from the rain, and there are no larger cycle parking spaces. There remains some potential for expansion to the south, though.

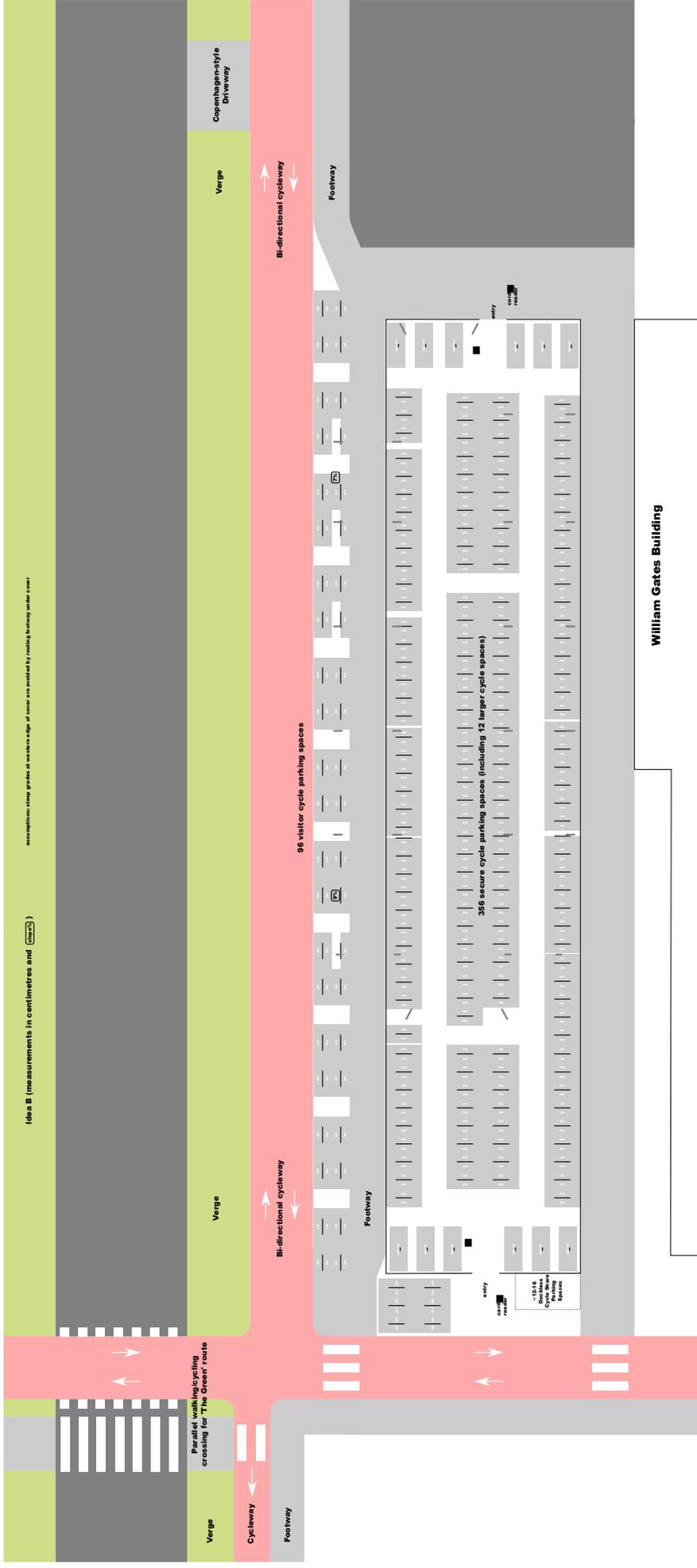


Figure 4: Idea B: This diagram shows the possible surrounding street context based on the Cavendish III plans. It features additional changes to the shed walls, expansion to the south, and relocation of all Sheffield stands so that gaps and aisle widths meet the dimensional standards. The support poles are kept where they currently are. Better flow and accessibility is provided with a new card-controlled accessway. Capacity: 452 cycles, of which about half are protected from the rain, including 12 larger cycle parking spaces.

