



HARRIS INSTITUTE.


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➤ PROSPECTUS ◀

OF THE

VICTORIA JUBILEE TECHNICAL SCHOOL

—†— PRESTON. —†—



HARRIS * INSTITUTE.

PROSPECTUS

OF THE

VICTORIA JUBILEE TECHNICAL SCHOOL,

* PRESTON. *

The project has been prepared to carry out Courses of Instruction
in the following Departments of Industry, viz. :—

SPINNING AND WEAVING AND DESIGNING ;

MECHANICAL ENGINEERING ;

AND THE

BUILDING TRADES IN GENERAL.



✦ SYLLABUS. ✦

SPINNING DEPARTMENT.

The Theoretical Branch of the instruction will provide for the Study of Spinning Operations, and for the Drawing and Design of Spinning Machinery. Students will be instructed in the cotton plant and cotton fibre ; the conditions of growth, the treatment of the fibre, and the machinery required for producing various kinds of yarn.

In this branch, the calculations relating to the expense of spinning will be taught ; the cost in coal, depreciation of machinery and buildings, the losses from waste, &c., so that the student can ascertain the margin between the cost of the raw cotton and the cost of the finished yarn.

The course will also include the commercial branches, brokerage, shipment, the customs of the trade, systems of payment in distant markets, the incidence of import and export duties, and the theory and practice of commercial accounts.

In the instruction will be included the investigation of the arrangements of new spinning mills, and the preparation of plans and estimates for the same.

For the Practical Teaching of Cotton Spinning the department will be furnished, in sections, with all the appliances of an actual factory.

The cotton will be unpacked from the bale, and passed through the various operations, ending in spinning by mule, ring, and throstle process, under the supervision of a practical man.

WEAVING AND DESIGNING DEPARTMENT.

This Department will also comprise two sections, one for the Theory of Weaving and Designing, the other for Practical Work.

The theoretical division will embrace the whole theory of manufacture, the uses of various materials, the cost of the processes, the analysis of every kind of cloth and fabric, and the special study of such tissues as are adapted to the manufactures of the district.

As in the Spinning Department, this course will include the study of the system of industrial accounts.

The division for the Practice of Weaving comprises the course of drawing, designing, constructing, setting and fitting up, and starting weaving machinery, work at the loom, the analysis and the application of fabrics to the looms, and the weaving of the actual stuff, with all the preliminary details of manipulation, carried out by the pupil himself under the guidance of a practical man.

Instruction will be given in the principles and practice of design as applied to the preparation of patterns, and the mode in which the machinery is prepared for weaving such patterns.

The course of study in this section will include an investigation of the best methods of dealing with new fabrics, and the preparation of plans and estimates for plant and weaving sheds.

In both the Spinning and Weaving Departments Courses of Lectures will be given on the construction and action of the different machines in current use, including the principles and practical application of designs to the loom.

A large room will also be arranged as a Commercial Museum of Products connected with the Cotton Trade, both of raw materials, work in process, and finished work, including specimens of designing connected therewith and new inventions bearing on the trade.

MECHANICAL ENGINEERING DEPARTMENT.

The Course of Mechanics will comprise :—

- (1). The Study of the different Combinations of Mechanical Movements, of Power, and of Work.
- (2). Steam, Gas, and Hydraulic Motors.
- (3). Steam Machinery, Heating, Fuel.
- (4). Machine Drawing and Construction.
- (5). The Strength and Elasticity of Materials.
- (6). Practical Work in the Mechanical Workshop.

Lectures on the above subjects will be given.

A Collection of Models of Machines will be placed in the Commercial Museum on the upper floor.

The workshops will be provided with lathes, shaping and boring machines, vices, and such other apparatus as may be deemed desirable, so that the student will have practical work in fitting and turning, pattern making, &c.

The course of this department will be generally inter-related with that of Spinning and Weaving, and *vice versa*.

BUILDING TRADES DEPARTMENT.

This Course will comprise theoretically :—

- (1). Geometrical Drawing and Freehand Sketching in all their applications to Building.
- (2). Building Materials, their nature, properties, strength and elasticity, and specific uses.
- (3). The Principles and Practice of Building Construction in all Materials.
- (4). Warming and Ventilating.
- (5). Sanitary Arrangements.
- (6). Measurements of Quantities, Modes of Pricing, and Book-keeping.

Lectures on the above subjects will form part of this course.

A Collection of Models of Building Construction and Specimens of Materials will be placed in the Commercial Museum on the upper floor.

The workshop course will be taught in workshops under the direction of practical men. The woodwork shop will be fitted with circular saw benches and lathes ; the plumbers' shop with benches, vices, and stoves ; and a third workshop will contain all appliances for drawing and setting-out full-size details of work for Joiners, Masons, Bricklayers, Plasterers, &c.

Throughout the teaching of all the foregoing departments there will be a division between the Day and Evening Classes.

In the Evening Classes workmen and apprentices engaged in their several factories and workshops during the day will receive instruction of a character suited to their requirements, not merely on the practical side, but specially in the principles of Science in their application to the processes with the actual details of which they are familiar in their daily work.

In the Day Classes, the theoretical and practical teaching of the Spinning, Weaving, and Mechanical Engineering Departments combined is designed to enable a student to be thoroughly instructed in the theory and practice of those Trades.

Systematic courses of instruction will be arranged, adapted to fit a youth to enter upon the duties of his Trade with a Scientific Knowledge of his own and allied Industries, such as is not likely to be acquired in any single establishment, and particularly tending to the advantage of all young men destined to hold prominent positions, whether as principals, or foremen, or managers.

ADDENDUM.

The accompanying block floor plans have been designed in conformity with the foregoing prospectus, for a site on land to be given by the Corporation, north of the new street along the Harris Free Public Library and Museum.

The two Institutions would be in association thus far, that a Technical Library, together with the literature and exemplars of the higher forms of design, would be, for purposes of reading and reference, immediately accessible to and obtainable by the students of the Technical School.

It is proposed that the design of the building should be simple in character, and still not unworthy of the site.

The estimated cost of erecting such a building as is here suggested, in brick with stone dressings, and providing the necessary furniture and fittings, is not less than £17,000.

The Trustees of the Harris Institute have recently received from the Harris Trustees a further grant of £30,000.

The Supplemental Scheme applicable to this fund provides that £10,000 may be spent in building and furnishing a Technical School, the remaining £20,000 being held as an Endowment Fund.

If the Institute Trustees are restricted to the sum of £10,000, it will be impossible with that sum alone to carry out the objects described in the foregoing prospectus.

It is obviously important that whatever may be done should be done thoroughly and efficiently.

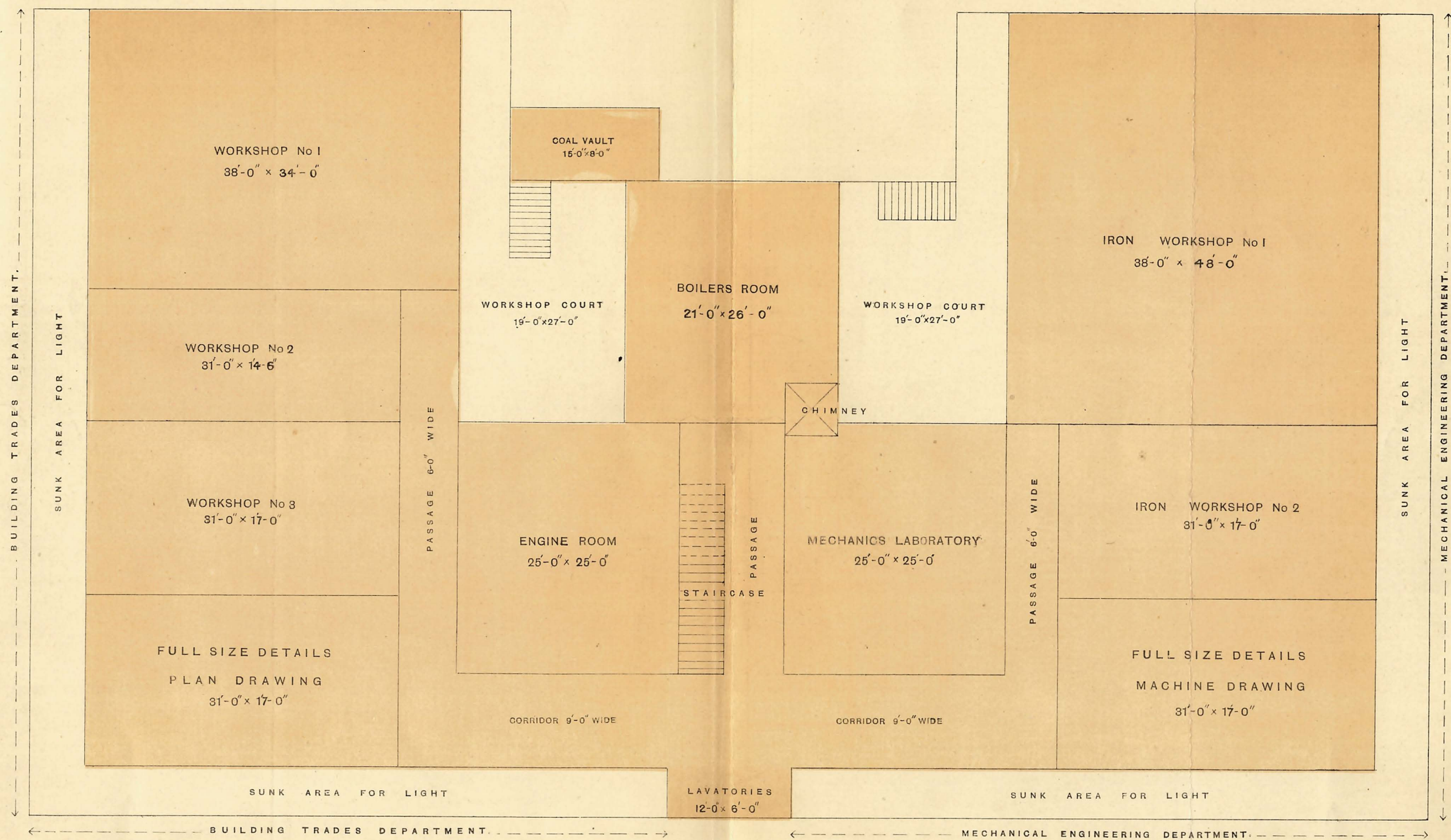
It is felt to be most important that Preston should as early as possible be supplied with the advantages which most towns of an equal size will very soon possess, namely, a well equipped Technical School, wherein may be taught the principles of all the leading trades on which its prosperity depends.

Inasmuch as the proposed new Technical School is intended to be the permanent local memorial of the Jubilee of Her Most Gracious Majesty Queen Victoria, it is suggested that the Corporation might, if suitably approached, apply to Parliament for powers to grant a sum of money, as well as a site, towards the complete and adequate carrying out of the scheme here described, which is intended for the practical benefit of the entire community, and will, it is hoped, have a most important effect upon the future development of the Trade of Preston.

(Signed) WILLIAM ASCROFT,
PRESIDENT.

*Harris Institute, Preston,
8th June, 1887.*

HARRIS INSTITUTE VICTORIA JUBILEE TECHNICAL SCHOOL, PRESTON.



BASEMENT PLAN

HARRIS INSTITUTE
VICTORIA JUBILEE TECHNICAL SCHOOL, PRESTON.

Nº 2.

L O R D S T R E E T

SCHOOL YARD

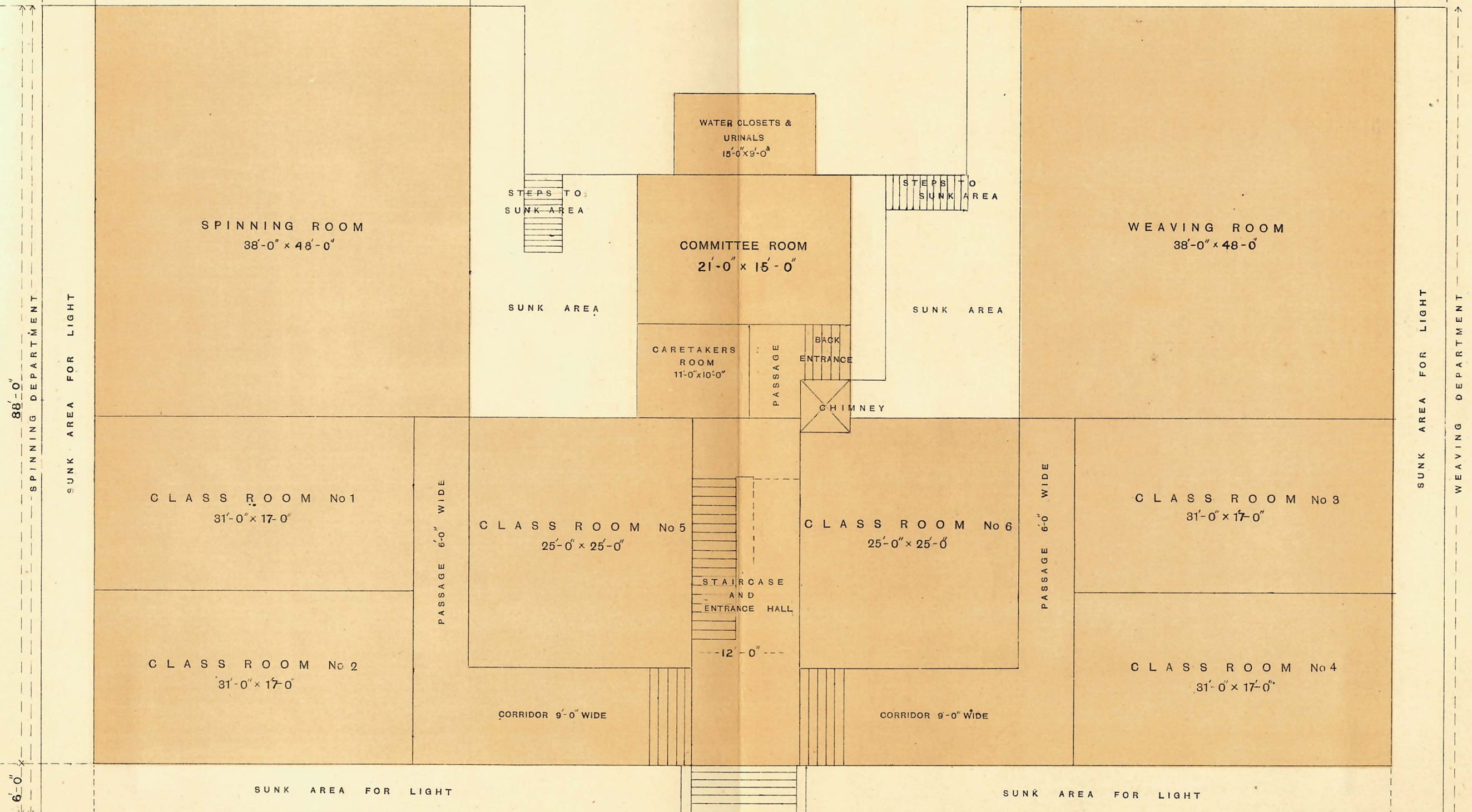
FUTURE EXTENSION

FUTURE EXTENSION

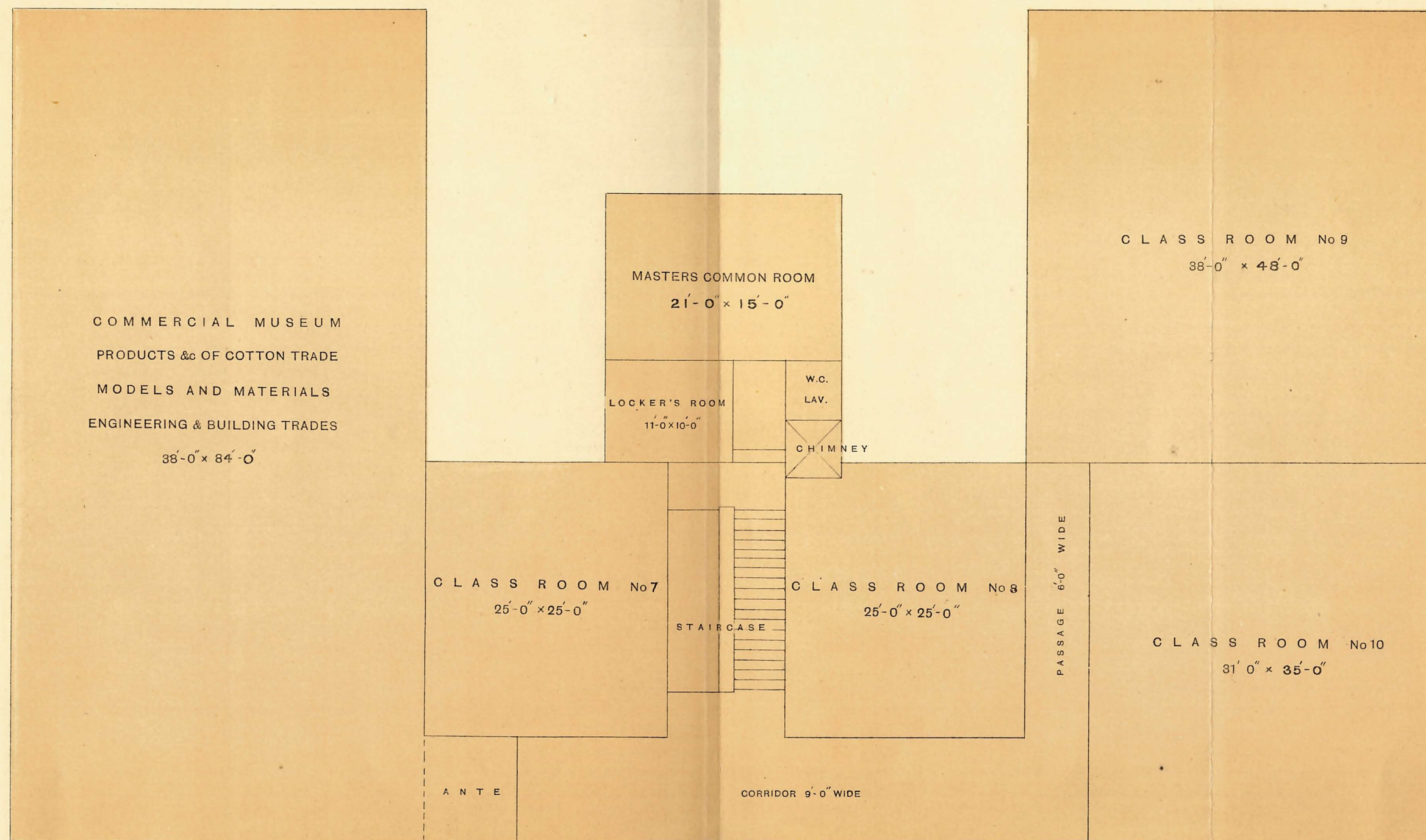


N E W S T R E E T

L A N C A S T E R R O A D



HARRIS INSTITUTE
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PRESTON.



UPPER FLOOR PLAN

COMMERCIAL MUSEUM AND CLASS ROOMS &c.