



General Certificate of Secondary Education
2014

Centre Number

71

Candidate Number

Construction and the Built Environment

Unit 1: The Construction Industry for the 21st Century

[GCB11]

WEDNESDAY 4 JUNE, AFTERNOON



TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper. Answer **all eleven** questions.

Questions **1, 3, 5** and **9** should be answered in relation to the enclosed house drawings and specifications previously issued as Pre-Release Material. You should **not** bring any of the material previously issued into this examination.

INFORMATION FOR CANDIDATES

The total mark for this paper is 120.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question. Quality of written communication will be assessed in Questions **8** and **10**.

A scale ruler is required.

For Examiner's use only

Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

Total Marks

Section A
Answer **all** questions

**Use the Pre-Release Material to assist with answering
Questions 1, 3, 5 and 9.**

- 1** The external walls of the houses shown in the Pre-Release Material are constructed from two skins of blockwork with a space between them.

(a) What is the name given to this type of wall construction?

_____ [1]

The two skins of blockwork are joined at regular intervals to increase structural stability.

(b) What is the material used to make the components that join the two skins of blockwork together?

_____ [1]

(c) What is the correct name for these components?

_____ [1]

(d) What is the correct spacing of these components in walls?

Horizontal Spacing _____ mm [2]

Vertical Spacing _____ mm [2]

Vertical Spacing at window or door jambs _____ mm [2]

Examiner Only	
Marks	Remark

- 2 Domestic accommodation requires many different types of buildings, which must be specifically designed to meet the client's brief.

Identify the types of residential accommodation shown in this question and briefly state the distinguishing characteristics of each.



Fig. 1

- (a) (i) The type of dwellings shown in **Fig. 1** is

_____ [1]

- (ii) The distinguishing characteristics of this type of dwelling are:

 _____ [2]

Examiner Only

Marks Remark

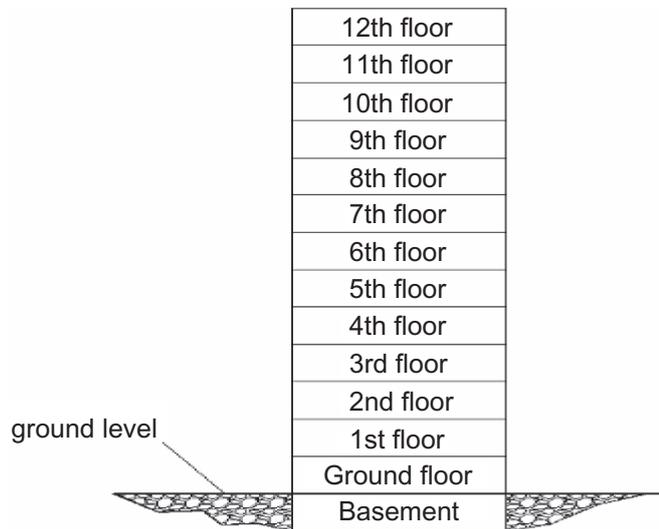


Fig. 3

(c) (i) The type of accommodation illustrated in Fig. 3 is a

_____ [1]

(ii) The distinguishing characteristics of this type of accommodation are:

 _____ [2]

Examiner Only	
Marks	Remark



Fig. 4

(d) (i) The type of accommodation illustrated in **Fig. 4** is a

_____ [1]

(ii) The distinguishing characteristics of this type of accommodation are:

_____ [2]

Examiner Only	
Marks	Remark

- 3 Using the attached Pre-Release Material give the following internal room dimensions in **millimetres**.

Some dimensions may need to be scaled.

- (a) The length and width of the living room for **house D**.

Length _____ mm Width _____ mm [4]

- (b) The length and width of the kitchen in **house E**.

Length _____ mm Width _____ mm [4]

- (c) The overall width of **house A**.

Width _____ mm [2]

- (d) Ignoring internal walls, calculate the total ground floor area of **house E**. Show your working out.

_____ square metres [2]

- (e) How many 1000 mm wide windows are in the front elevation of the five houses shown in the Pre-Release Material?

_____ [2]

Examiner Only	
Marks	Remark

- 4 As fuel costs continue to rise home owners are looking at alternative sources of sustainable energy.



Fig. 5

- (a) What type of renewable energy source is shown in **Fig. 5**?

_____ [1]

- (b) List three alternative sources of renewable energy other than the one shown in **Fig. 5**.

_____ [1]

_____ [1]

_____ [1]

- (c) List the names of two materials commonly used to insulate buildings.

_____ [1]

_____ [1]

Examiner Only	
Marks	Remark

6 List **five** different materials used in the construction of a roof.

Give one example of where each material would be found and the function of that material.

Material 1 _____

Where in the construction of the roof is it found?

What is its function?

_____ [3]

Material 2 _____

Where in the construction of the roof is it found?

What is its function?

_____ [3]

Material 3 _____

Where in the construction of the roof is it found?

What is its function?

_____ [3]

Material 4 _____

Where in the construction of the roof is it found?

What is its function?

_____ [3]

Examiner Only	
Marks	Remark

Material 5 _____

Where in the construction of the roof is it found?

What is its function?

_____ [3]

Examiner Only	
Marks	Remark

7 List the names of **five** native hardwoods.

[1]
[1]
[1]
[1]
[1]

Examiner Only	
Marks	Remark

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(Questions continue overleaf)

9 Fig. 6 opposite shows an incomplete foundation detail with a 200 mm wide inner skin that is to be considered for the house shown in the Pre-Release Material.

Complete the drawing and include all labels from the list below:

- | | |
|-------------------------|-------------------------|
| Concrete foundation | Outer skin of brickwork |
| Inner skin of blockwork | Damp Proof Course |
| Floor screed | Cavity Insulation |
| Ground Level | Hardcore |
| 100mm Concrete subfloor | Damp Proof Membrane |

10 marks for labels and 10 for drawings.

[10]

Examiner Only	
Marks	Remark

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General Certificate of Secondary Education

Construction and the Built Environment

Pre-Release Material

Examination Copy

Assessment Unit 1: The Construction
Industry for the 21st Century

[GCB11]

JANUARY 2014 AND SUMMER 2014



GCB11

You must only use **this** clean copy of the Pre-Release Material in the examination and **not** your own annotated copy

NOTE: Students will require the use of a scale ruler during the examination.

Construction and the Built Environment

Introduction

A copy of the pre-release information for this examination is included in the following pages

NOTE Students will require the use of a scale ruler during the examination.



FRONT ELEVATION

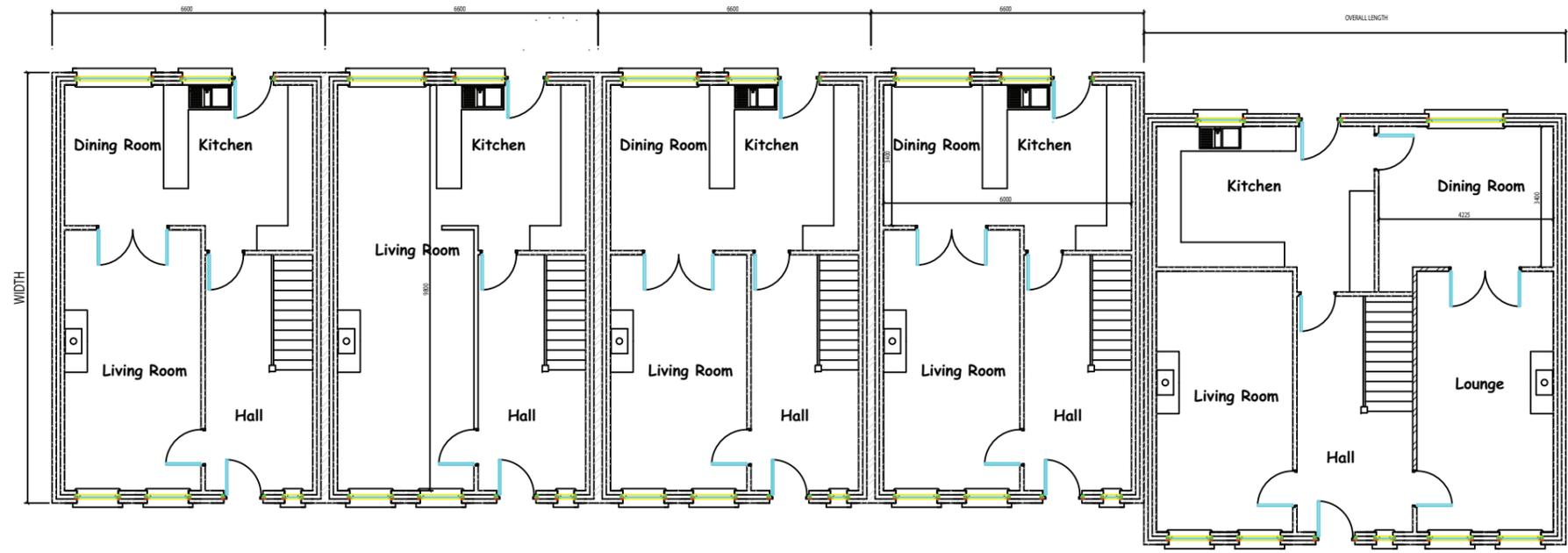
GCSE Construction and the Built Environment

Unit 1

Pre-Release materials

JANUARY 2014 - SUMMER 2014

Not to scale Drawing Number 01



House A

House B

House C

House D

House E

Working Drawing

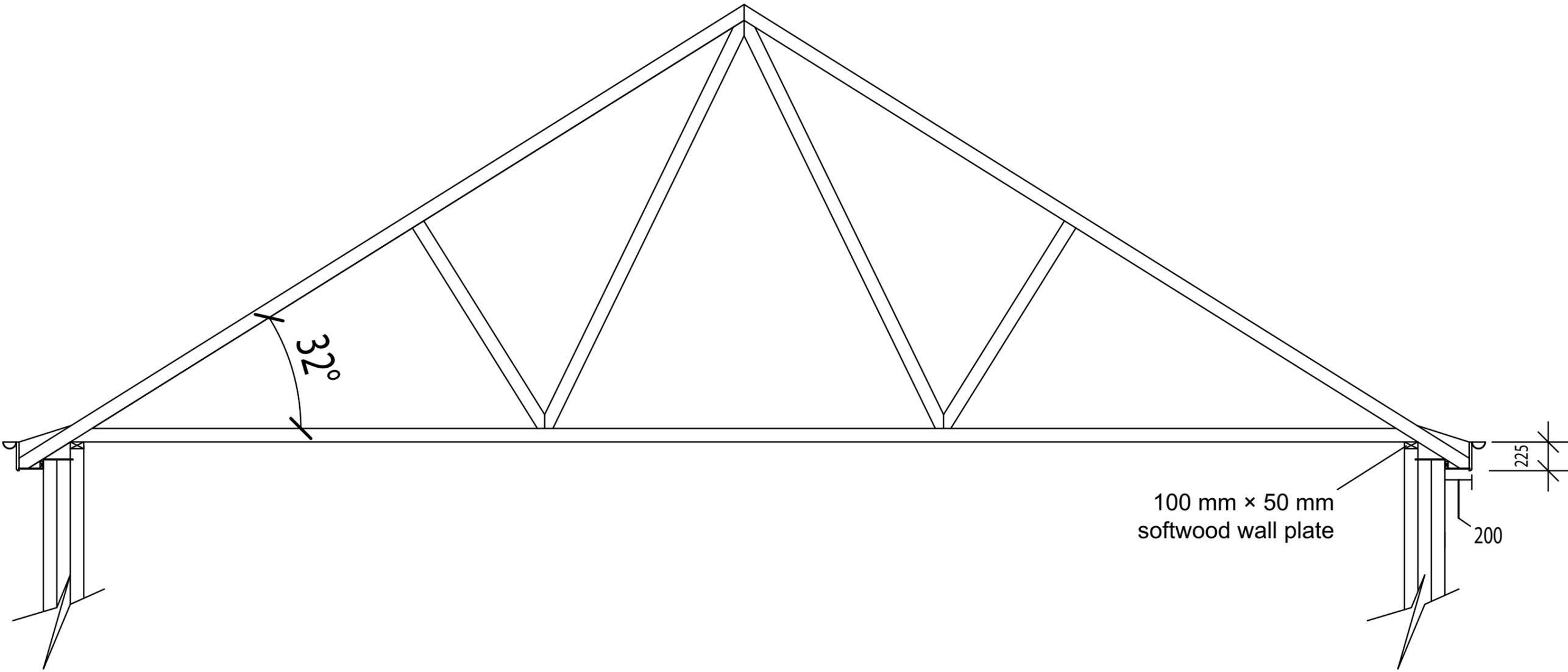
GCSE Construction and the Built Environment

Unit 1

Pre-Release materials

JANUARY 2014 - SUMMER 2014

Not to scale Drawing Number 02

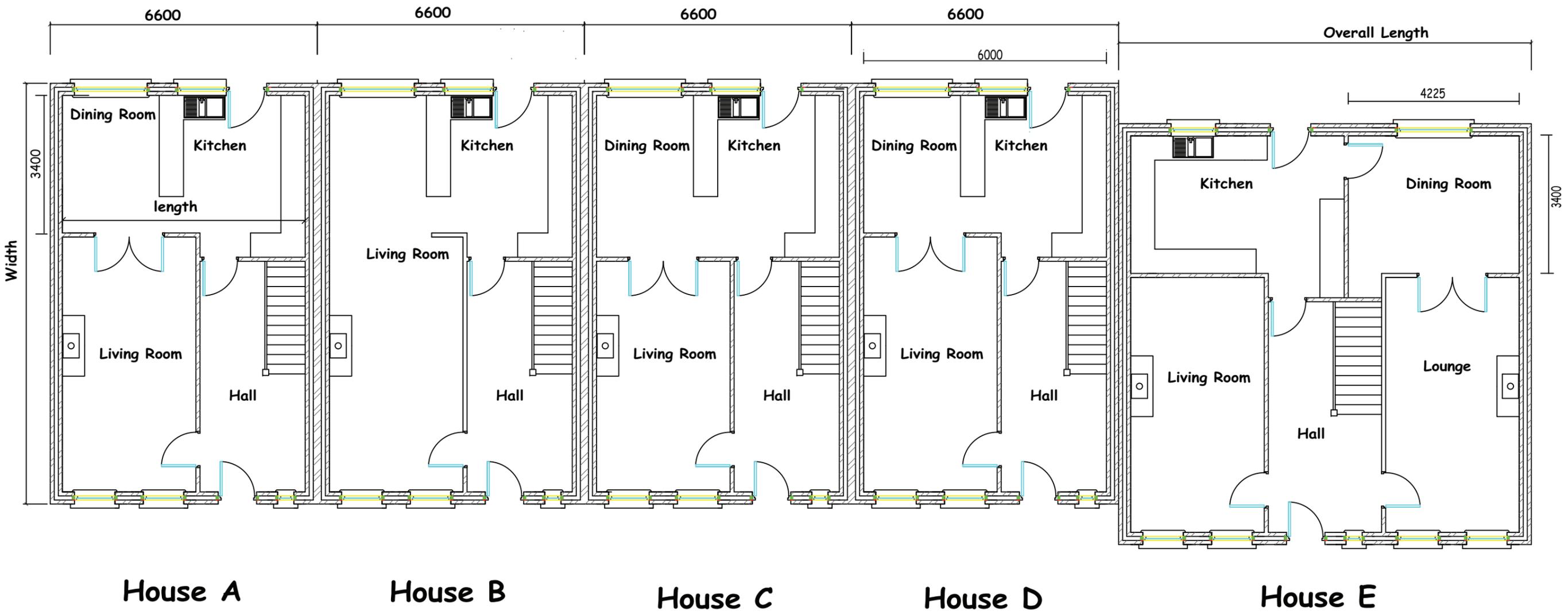


TRUSS RAFTERS SPACED AT 400MM CENTRES

GCSE Construction and the Built Environment

Unit 1
Pre-Release materials
JANUARY 2014 - SUMMER 2014

Not to scale Drawing Number 03



House A

House B

House C

House D

House E

Plan view

GCSE Construction and the Built Environment

Unit 1

Pre-release materials

JANUARY 2014 - SUMMER 2014

Scale 1:100 Drawing Number 04