

**STUDENT PACK**

**A) SPOUT ROOM**



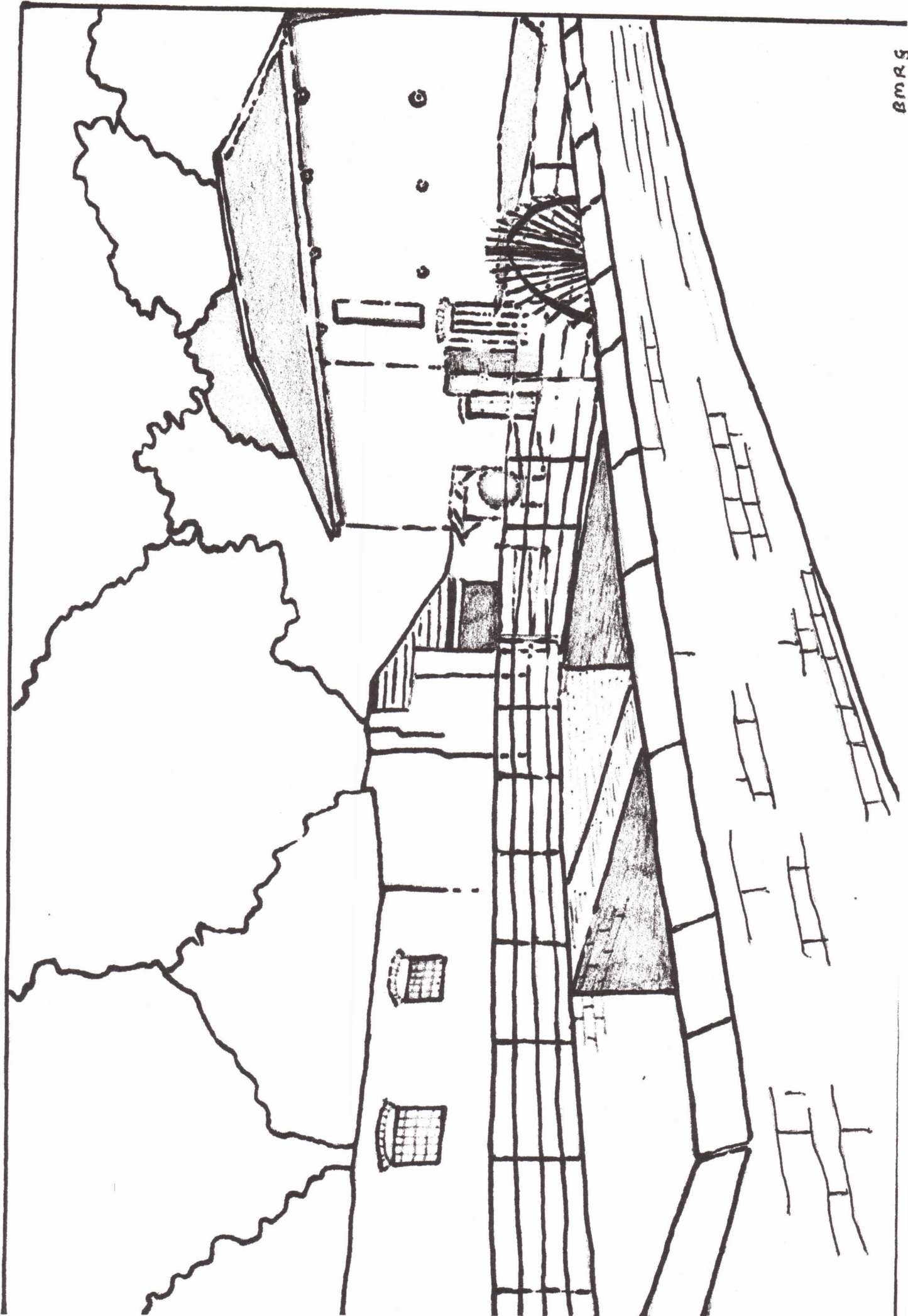
## Beeleigh Mill - diagram

Using the list of words below, put their number where it belongs in the diagram of the mill:

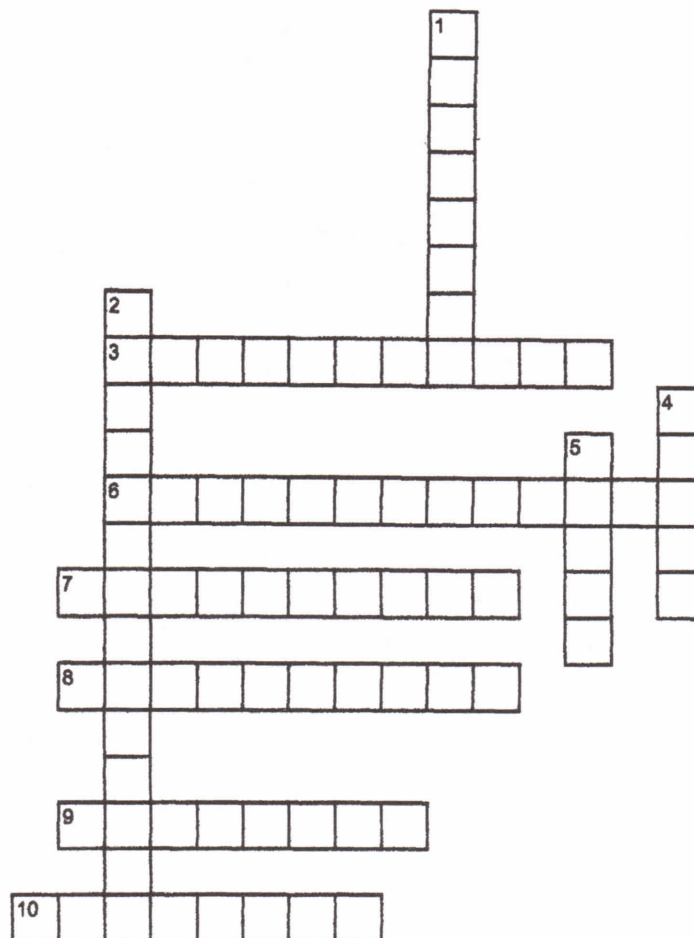
- 1) Tidal barge dock    2) Site of old mill    3) Elephant Boiler  
4) Site of waterwheel    5) Engine House    6) Stone Floor  
7) Spout Floor    8) Coal pit    9) Bridge

**Questions: Circle the correct answer(s)**

- 1) The Engine House was saved from burning because it was built from?  
a) wood    b) straw    c) brick
- 2) What was the source of power before Steam?  
a) wind    b) solar    c) water    d) nuclear
- 3) Water turns to steam at:    a) 50 C    b) 80 C    c) 100 C
- 4) What causes the tides?    a) the Sun    b) Rivers    c) the Moon
- 5) A 'Victorian' sack of flour weighed:    a) 50kg    b) 127kg    c) 25kg
- 6) A complete 'revolution' is:    a) 180 degrees    b) 90 degrees    c) 360 degrees
- 7) Circle or cross through the odd one(s) out?  
Yeast    Baked    Flour    Water    Boiled    Wheat    Milled    Salt
- 8) Put the correct words from above in the right order to make a loaf of bread:
- 9) Cereals are harvested in:    a) spring    b) autumn    c) summer    d) winter
- 10) Transporting the wheat and flour was by:  
a) train    b) canal barge    c) lorry



## Beeleigh Mill - The Hurst (Spout floor)



### Across

- 3 a moving horizontal stone above the bed stone
- 6 this alters the distance between the bedstone and runner stone
- 7 ground floor where flour is put into sacks after milling
- 8 the main horizontal axle from the engine room
- 9 fixed horizontal stone which does not move
- 10 the gear which transfers horizontal motion to vertical movement

### Down

- 1 the gear which drives the runner stone
- 2 the main horizontal gear which is used to drive the stone nut
- 4 the frame which houses the mechanism to drive the millstones
- 5 the connecting metal or wooden blocks which mesh to transfer motion

# The Hurst (Spout Floor) BMRG

answers can be forward, backward or diagonal. Circle or cross through.

R	E	V	O	L	U	T	I	O	N	I	N	T	C	P	Z	T	H	T
I	E	D	T	X	P	G	H	B	D	O	E	N	R	D	U	N	W	G
J	L	C	Y	B	P	E	V	V	I	N	N	Y	P	J	R	V	A	L
K	S	S	E	A	N	E	Y	T	T	W	O	H	S	G	T	R	L	E
X	G	J	A	S	R	W	C	E	H	A	T	F	T	Q	P	J	L	V
F	S	Z	A	T	G	I	R	B	I	Y	S	J	S	G	T	H	O	G
Z	H	P	I	X	R	I	H	Z	D	M	D	A	R	T	X	K	W	O
S	L	C	Y	F	N	M	U	S	U	D	E	L	U	L	M	X	E	S
L	A	I	F	G	K	B	R	D	P	L	B	V	H	N	P	C	R	P
L	K	H	G	L	E	E	H	W	R	U	P	S	T	A	E	R	G	O
G	X	E	O	K	G	O	T	M	G	I	A	P	W	M	A	B	C	U
K	A	O	F	R	Y	M	I	U	O	K	V	E	C	P	Q	B	R	T
R	G	U	R	V	I	Z	C	I	N	K	C	E	S	E	A	K	O	F
A	U	O	Y	C	S	Z	T	Q	W	E	D	L	S	H	E	W	X	L
K	Z	Z	K	L	B	D	O	L	K	F	N	S	A	H	T	D	W	O
A	Z	F	G	H	U	G	Q	N	S	N	N	O	P	V	A	E	K	O
R	W	R	U	N	N	E	R	S	T	O	N	E	T	Q	S	F	E	R
S	C	B	T	W	K	T	K	Y	I	A	M	B	V	S	Z	W	T	T
N	V	J	U	G	V	B	C	L	K	E	L	C	X	C	R	M	V	Q

BED STONE  
 DRIVE SHAFT  
 FRICTION  
 GREAT SPUR WHEEL  
 HORIZONTAL

HURST  
 REVOLUTION  
 RUNNER STONE  
 SPOUT FLOOR  
 STONE NUT

TEETH  
 TENTERING GEAR  
 VERTICAL  
 WALLOWER



# **Beeleigh Mill Restoration Group (BMRG)**

## **Beeleigh Mill – The Hurst (Spout Floor)**

**Bed Stone** – a fixed horizontal round millstone for grinding grain

**Horizontal Drive Shaft** – horizontal rod which provides rotation from the steam engine to the hurst mechanism.

**Hurst Frame** – framework which houses the mechanism for drive to the Stone Floor.

**Rotation** – to move or turn around a central axis or point.

**Runner Stone** – the moving horizontal millstone for grinding grain.

**Spout Floor** – houses the hurst frame and is the end journey for flour from the Stone Floor.

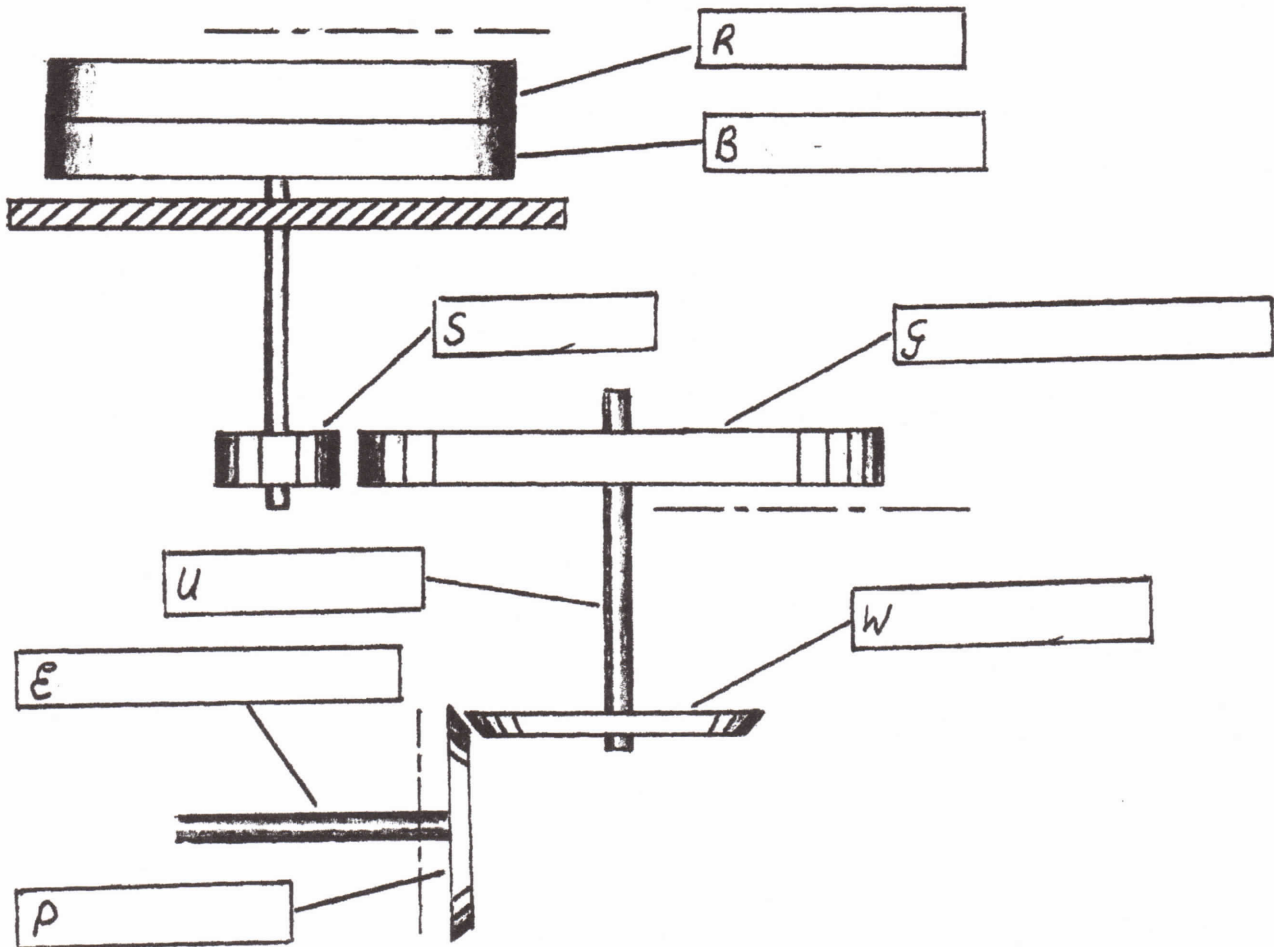
**Teeth** – wood or metal shaped blocks which mesh to transfer motion.

**Stone Nut** – provides drive from the Great Spur Wheel to the Runner Stone.

**Tentering Gear** – alters the gap between the Bed and Runner Stones.

**Wallower**- transfers rotational movement between the horizontal and vertical.

## Beeleigh Mill – The Spout Floor (Hurst mechanism)



1) Label the diagram above:

Engine drive shaft   Pit wheel   Upper shaft   Great spur wheel

Runner stone   Bed stone   Wallower   Stone nut

2) Add an arrow to show the correct direction of rotation on the dashed lines — — — — —

3) The Engine drive shaft runs at 30 revolutions per minute (or rpm) and the Runner stone at 120 rpm.

Another way of showing this is as a ratio of 30:120 or:

a) 3:12   b) 12:3   c) 1:4

4) A filled sack of flour could weigh 127kg (280lbs). If the average weight of a 10 year old is 32kg, how many children could the sack hold?

a) 3   b) 4   c) 6