

Analysis of Returns by villagers expressing their preferences for house building in the village – April 2016

Here is a summary of the results, a brief commentary as to how the figures were arrived at, and a brief commentary.

The data was in-putted with slip numbers, which allowed us to screen for duplicate slips, and then the data was anonymised, by removing the original slip numbers and re-assigning new numbers.

This anonymous raw data and these results are being made available via the Village website.

There were 166 responses.

- 44 (26.5%) indicated a first preference for additional building at Site 2.
- 42 (25.3%) indicated a first preference for additional building at Brickfields.
- 36 (21.7%) indicated a preference for no additional building anywhere.
- 32 (19.3%) indicated a first preference for additional building at Site 1.
- 27 (16.3%) indicated a first preference for additional building at Site 4.
- 23 (13.9%) indicated a first preference for additional building at Site 3.
- 2 (1.2%) indicated a first preference for additional building at Site 5.

A complete set of preference data is set out here.

PREFERENCE ANALYSIS												
1st Choice	32	0.19	44	0.27	23	0.14	27	0.16	2	0.01	42	0.25
2nd Choice	26	0.16	34	0.20	30	0.18	32	0.19	6	0.04	23	0.14
3rd Choice	27	0.16	32	0.19	38	0.23	14	0.08	9	0.05	28	0.17
4th Choice	24	0.14	21	0.13	28	0.17	34	0.20	7	0.04	19	0.11
5th Choice	28	0.17	5	0.03	16	0.10	33	0.20	14	0.08	27	0.16
6th Choice	10	0.06	11	0.07	10	0.06	6	0.04	91	0.55	8	0.05
other/blank/etc.	19	0.11	19	0.11	21	0.13	20	0.12	37	0.22	19	0.11
totals	166	1	166	1	166	1	166	1	166	1	166	1
	Site1		Site2		Site3		Site4		Site5		Brickfields	

Thus of the 6 sites, Site 2 and then Brickfields, seem indicated as the preferred building sites; very little support is shown for building at Site 5; the remaining sites similarly rated some way between those two other groupings.

The “NILs” : zero or blank returns indicating a preference for no building at that site show a similar pattern : Site 5 being the most objected to, with Brickfields and Site 2 being least objected to, with the other three sites sitting somewhere generally together, in between again.

75	63	72	80	144	61
Site1	Site2	Site3	Site4	Site5	Brickfields

Various different formats of ‘average’ bring forth similar results.

An arithmetic mean was extracted from the preferences from each site : first using the raw data as presented, and then following a cleaning exercise to make the data from different residents comparable with each other. The results show Site 2 and then Brickfields clearly the first choices of the Village’s residents for building, Site 5 firmly least preferred choice, and the remaining three sites clumped together, between those two other sets.

AVERAGE OF PREFERENCES USING RAW DATA

	Rank	Rank order
Site 1	2.78	4
Site 2	2.31	1
Site 3	2.70	3
Site 4	2.83	5
Site 5	4.13	6
Brickfields	2.60	2

AVERAGE OF PREFERENCES USING CLEAN DATA

	Rank	Rank order
Site 1	3.30	4
Site 2	2.82	1
Site 3	3.28	3
Site 4	3.36	5
Site 5	5.15	6
Brickfields	3.09	2

Other 'averages', mode and median values were extracted.

Site	Average		Median		Mode = most common	
	Rank Order	Rank order	Rank	Qty	Rank	Qty
Site 2	2.31	1	2	17.5	1	30
Brickfields	2.60	2	3	8	1	0
Site 3	2.70	3	3	20	3	0
Site 1	2.78	4	3	20	1	0
Site 4	2.83	5	3	10	4	0
Site 5	4.13	6	6	0	6	0

So again, a similar pattern emerged. For the number of housing units this way seems more appropriate and calculated this way we get the returned the most frequently indicated Site and quantity of housing units indicated by the responses.

It was suggested one might look at preferences as a Single Transferrable Preference, so that exercise too was done, initially working directly with the raw data.

First iteration

32	44	23	27	2	42
Site1	Site2	Site3	Site4	Site5	Brickfields

Removed Site 5 and Site 3

For each respondent, transferred their preference to their next choice.

Thus their lowest, or lowest equal, non-blank, non-zero number changes to become a '1'.

Count the '1's for each remaining site.

Second iteration

34	54	38	43
Site1	Site2	Site4	Brickfields

Removed site 1

Third iteration

72	44	52
Site2	Site4	Brickfields

Final iteration

95	66
Site2	Brickfields

So that is STV. Numbers not exactly 166. That was as some put zeros everywhere, and others put equal values for sites. The same exercise was repeated using slightly cleaned up data and returned very similar values and the exact same rank order:-

1. Conyngham Lane (site 2)
2. Brickfields
3. Surgery (site 4)
4. Allotments (site 1)
5. School/Surgery (Site 3)
6. Church Meadow (site 5)

The raw data is available too; you may be interested to carry out the exercise for yourself.

A.A.