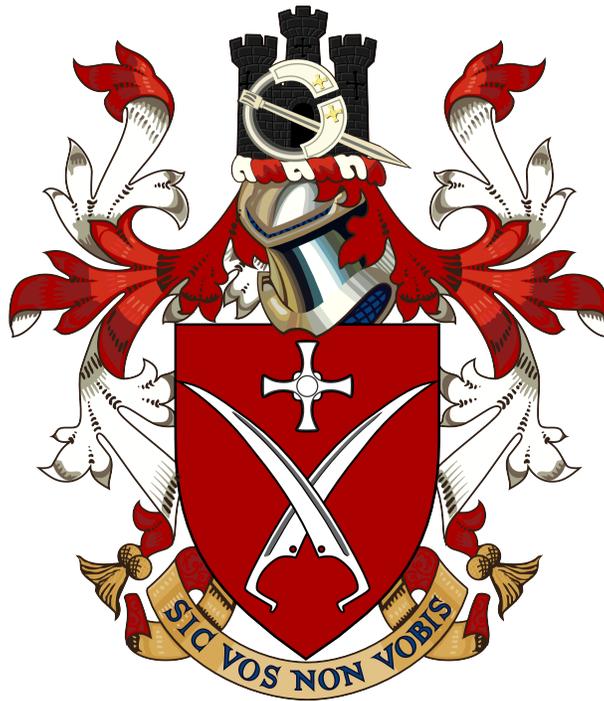


Appendix J: Single Transferable Vote

Van Mildert College Junior Common Room

6th May 2022



This appendix sets out the procedure for counting votes in JCR elections using the Single Transferable Vote (STV) system.

This procedure is based on that in Schedule 1 of The Scottish Local Government Elections Order 2011.

1 Conduct

- 1.1. The returning officers may use an electronic counting system that complies with the procedure set out in this appendix, so long as such a system can be verified by examination of its source code to be correct.

2 Quotas

- 2.1. The quota used is the Droop quota.
- 2.2. The Droop quota is calculated as follows in formula 1:

$$\left\lfloor \frac{v}{p+1} \right\rfloor + 1 \tag{1}$$

where:

- v is the total number of votes cast;
- p is the number of positions available; and
- $\lfloor x \rfloor$ is the *floor function* (rounding down to the nearest integer).

- 2.3. However, in an uncontested election, the quota for RON is calculated as follows in formula 2:

$$\lceil 0.33 \times v \rceil \tag{2}$$

where:

- v is the total number of votes cast; and
- $\lceil x \rceil$ is the *ceiling function* (rounding up to the nearest integer).

3 Counting

- 3.1. In each round, the returning officers must:
1. Count and record the total number of votes.
 2. Count and record the number of votes held by each candidate.
 3. Calculate and record the quota.
 4. If the number of votes for a candidate equals or exceeds the quota, then the candidate is deemed to be elected.
 5. If no further vacancies remain, then the count is concluded.
 6. The votes of any candidates elected in the round are redistributed.
 7. If no candidate was elected in the round, the candidate with the lowest number of votes is excluded and their votes redistributed.

Values

- 3.2. Vote values must be calculated to five decimal places, with any remainder being ignored.
- 3.3. Each vote starts the count with a value of 1.00000.
- 3.4. When a candidate is elected, each of their votes must be assigned a new value, prior to transfer, calculated according to formula 3:

$$\frac{s \times v}{t} \quad (3)$$

where:

- s is the surplus of the excluded candidate;
 - v is the current value of the vote; and
 - t is the total number of votes held by the excluded candidate.
- 3.5. For the avoidance of doubt, where this procedure refers to “number of votes”, it means the sum of the values of the votes.

Redistribution

- 3.6. When votes are redistributed, they are transferred to the continuing candidate for whom the next available preference is given, or removed from the count if no such candidate or preference exists.
- 3.7. If at the end of a round more than one candidate is elected, the ballot papers of the candidate with the largest surplus are redistributed first.

Tie-breaking

- 3.8. If at any point during the count, two or more candidates have the same number of votes and the procedure does not allow for this, the tie must be broken by random selection.

4 Results

- 4.1. The returning officers must report the following the following details of each round of counting:
 - (a) The total number of votes;
 - (b) The quota;
 - (c) The number of votes held by each candidate;
 - (d) The names of any candidates elected; and
 - (e) The names of any candidates excluded.