

Systems Tool – Interpreting Variation Charts

The **attached** *Winchart* graphs are those used by staff to understand current performance.

The graphs plot customer days for individual in-house Planning Consents (Graph One) and Building Consents (Graph Two).

The data at the bottom left hand side of the graph summarises the performance.

In summary:

Split Start Highlights clear changes in performance and splits the Upper Control Limits and Mean at those points. Those analysing the graphs can learn why splits have occurred and see the effect of any intentional intervention.

U.C.L Upper Control Limit. This identifies a range within which any performance is as likely as another. The upper limit of the range is represented on the graph by the top dotted horizontal lines with breaks at the Split Starts.

This is helpful as any performance above the line is normally caused by something outside the system. Therefore no action on the system should occur in response to this.

The variation of performance within the U.C.L and L.C.L (Lower Control Limit) is normal variation and attention is focused on interventions aimed at reducing this variation.

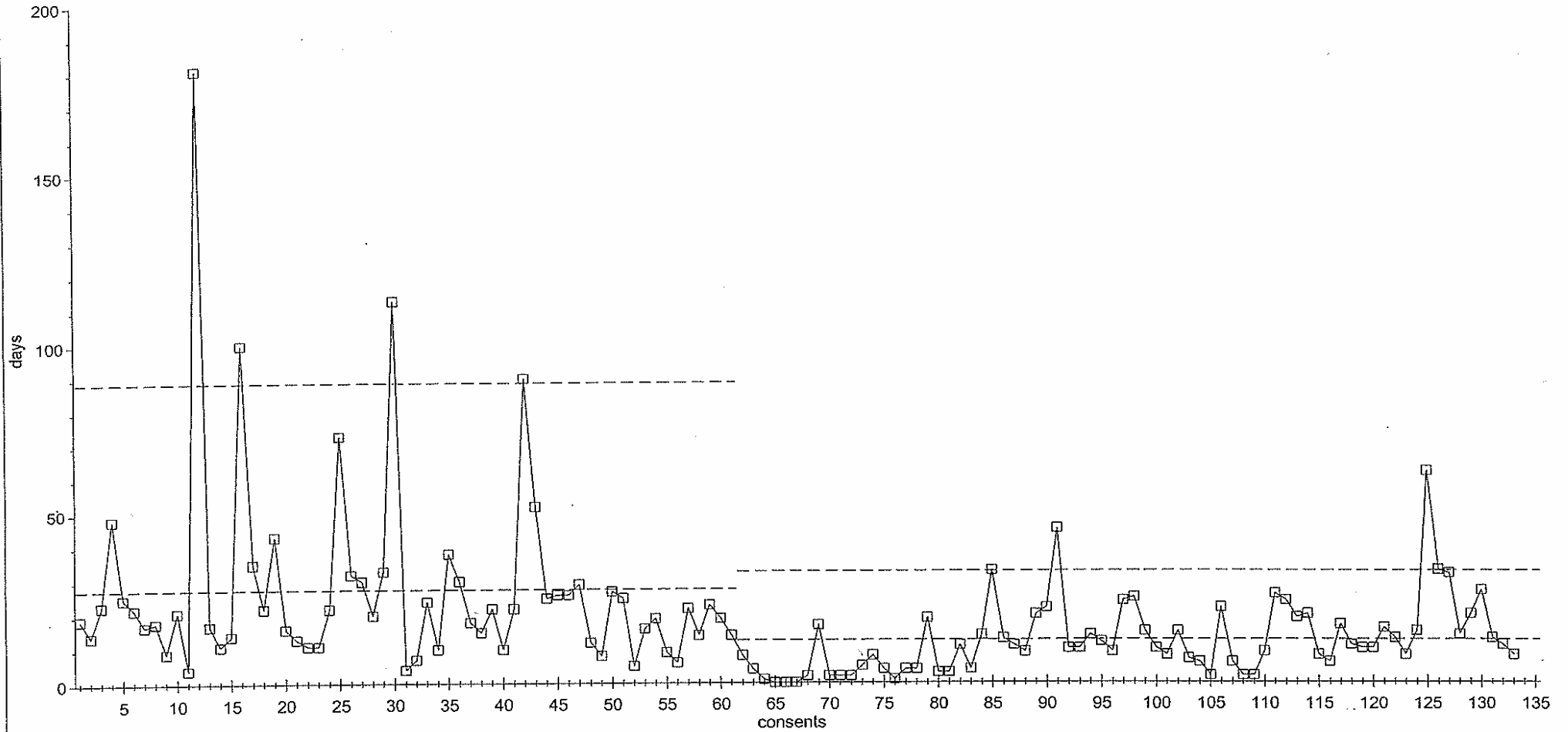
Mean This is represented by the second horizontal dotted line and shows the average days taken for consents within each split. As variation is successfully reduced it leads to improvements in the Mean.

L.C.L Lower Control Limit. This tracks the bottom of the range.

For the two graphs this is zero days i.e. normal range for Building is 0 – 26.7 days with an average of 9.3 days.

Graph One

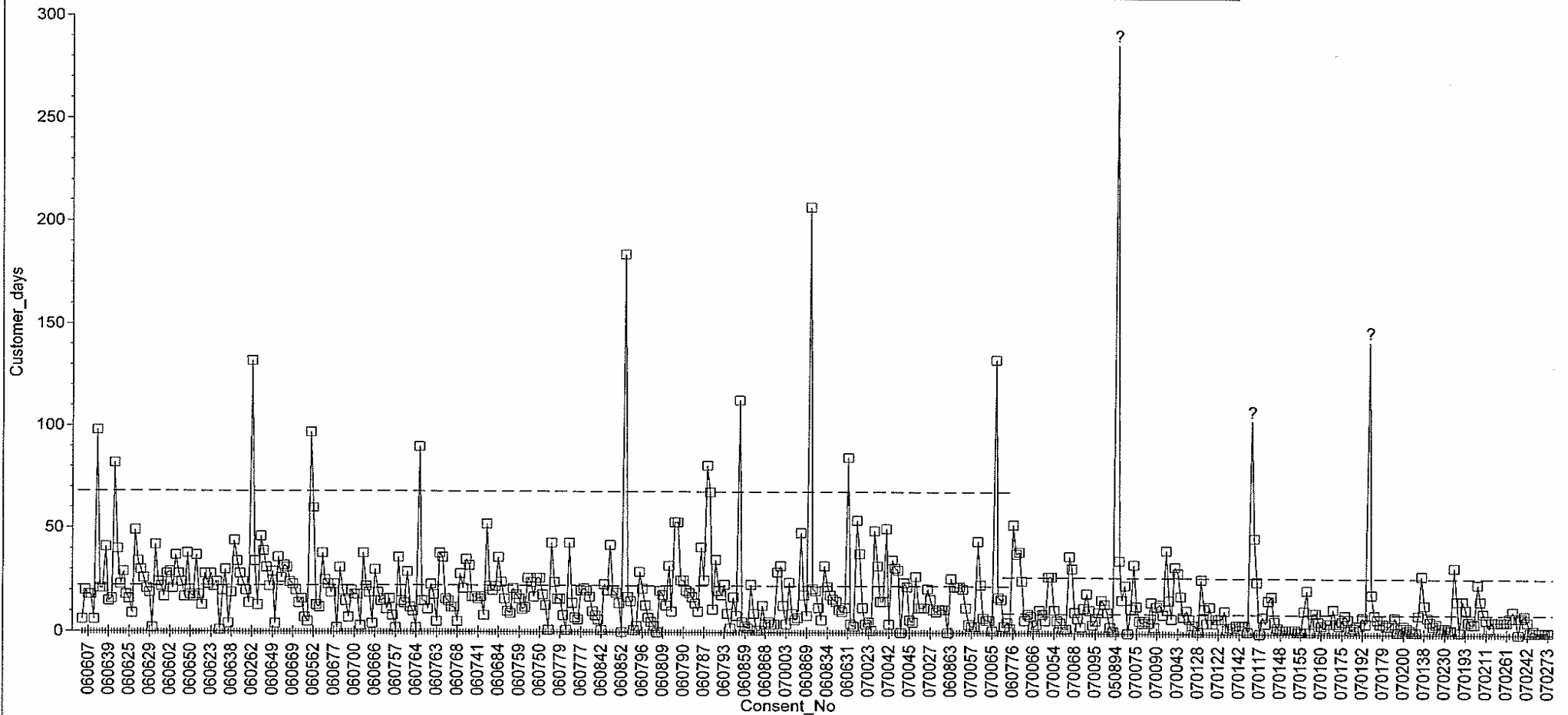
In house Planning Customer days March 05-August 06



Split Start 1 62
 U.C.L. ≈88.7 32.8
 Mean ≈27.6 12.5
 L.C.L. =n/a n/a

Graph Two

BC issued (from 20/9/06 to 12/4/07) - Customer days



Split Start	060640	070061
U.C.L.	=68.1	26.7
Mean	=22.3	9.3
L.C.L.	=n/a	n/a