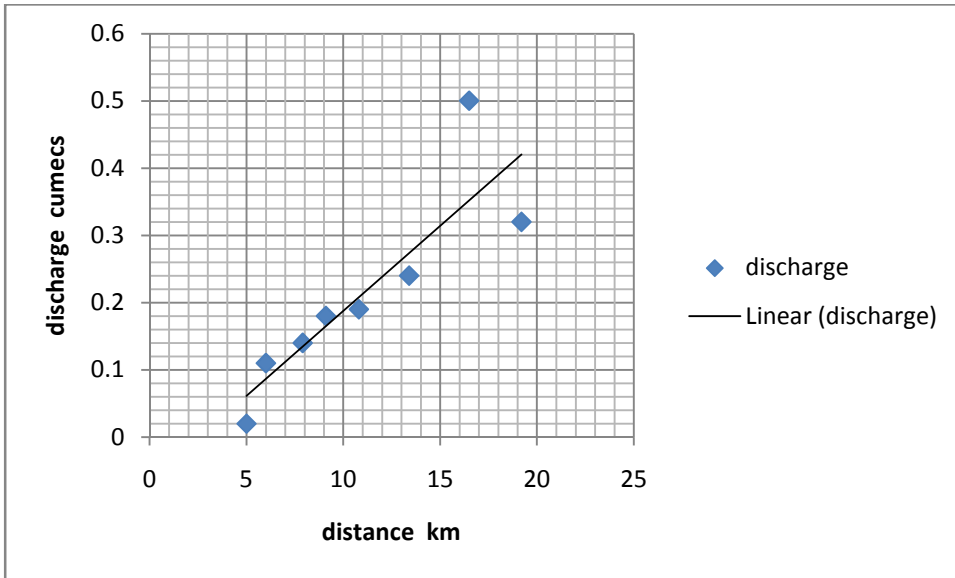
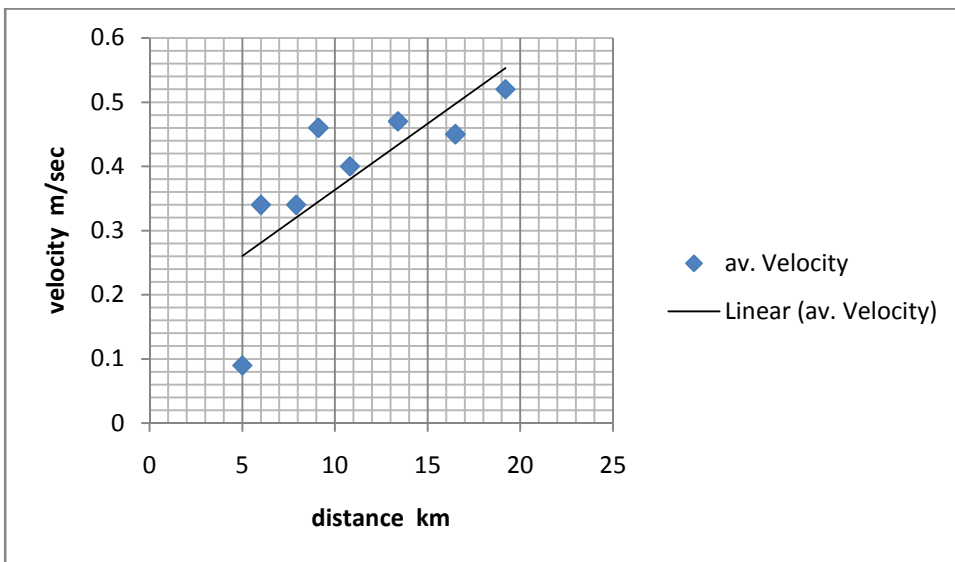


**SCATTERGRAPHS TO SHOW THE RELATIONSHIP BETWEEN DISTANCE DOWNSTREAM AND CHANNEL, FLOW AND BEDLOAD CHARACTERISTICS OF WAITHE BECK IN LINCOLNSHIRE**



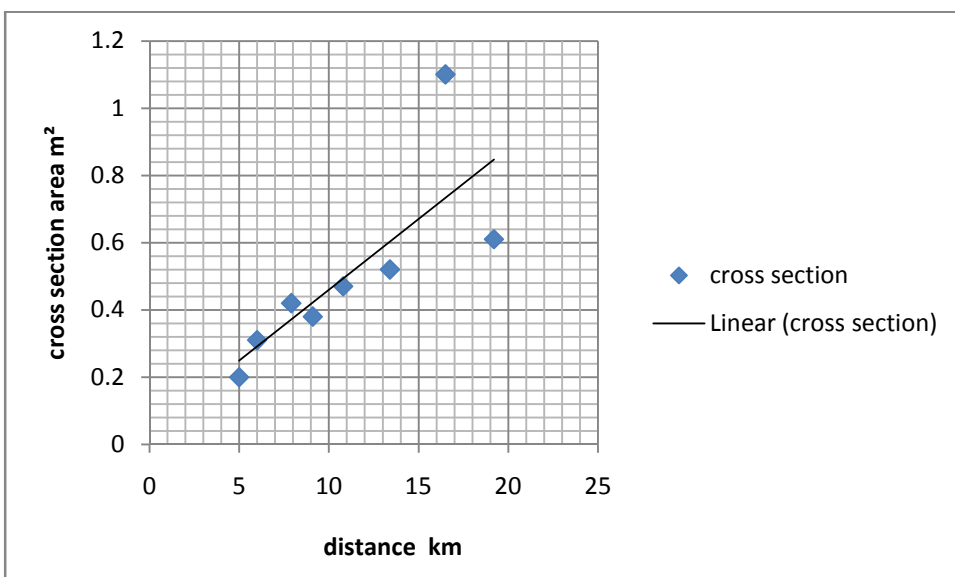
Discharge, velocity and channel cross section area all show strong positive relationships with distance downstream.

The strength of the relationship is shown in each case by how far the points on the scattergraph follow line or trend.

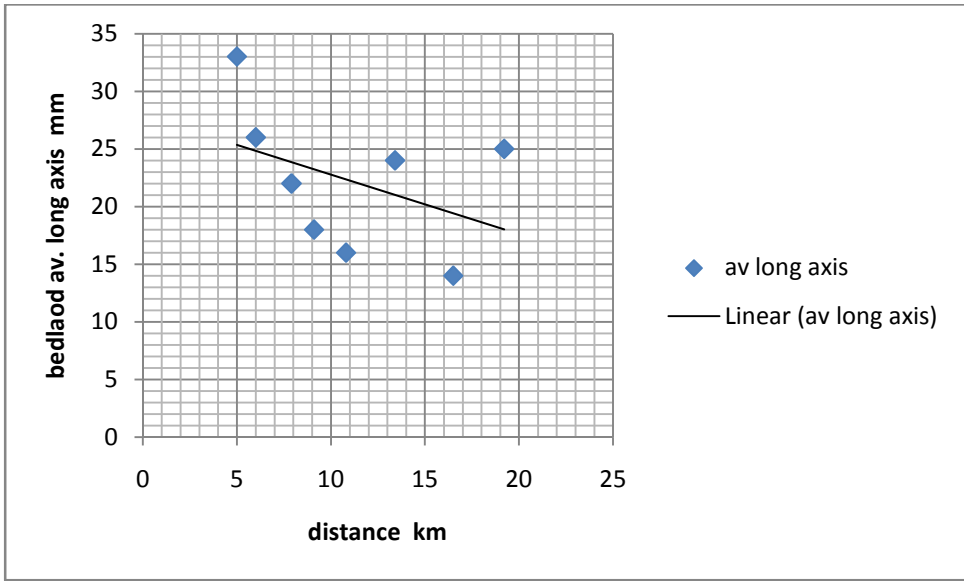


A line of best fit shows that relationship and also its trend.

The line of best fit illustrates any anomalies or residuals. These are points that do not follow the trend shown by the best fit line and are found well away from the line.

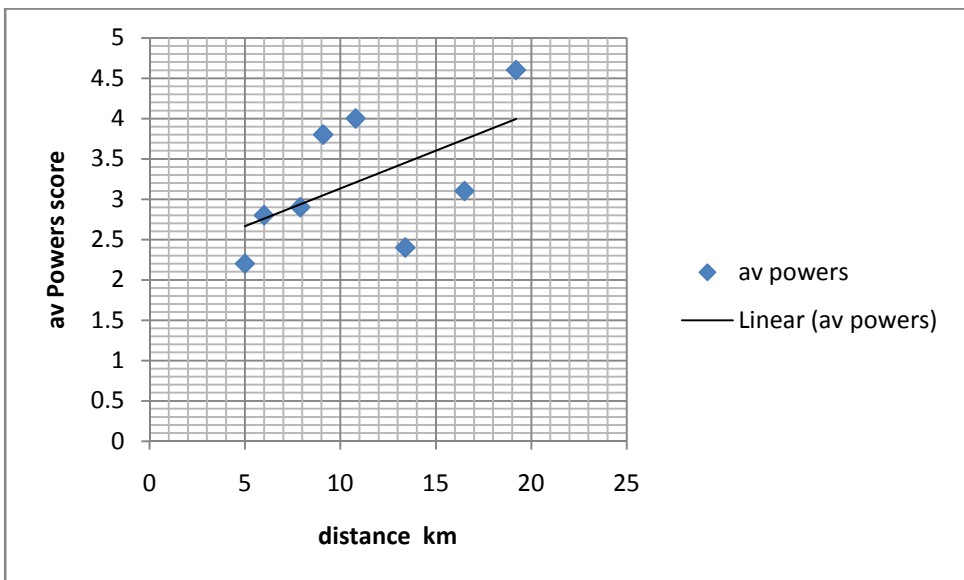


Anomalies need to be explained and may indeed shed further light on the relationship under investigation by suggesting other influential factors.



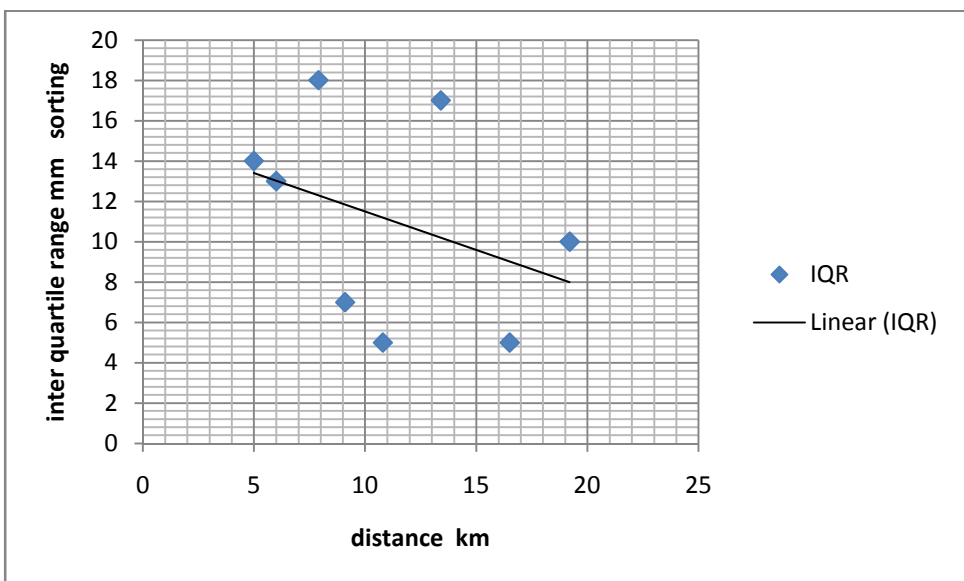
The scattergraphs for the relationships between distance downstream and the bedload are not as strong as those for the discharge and velocity.

This is shown by the fact that the points on the graphs do not follow a line or trend to the same extent.



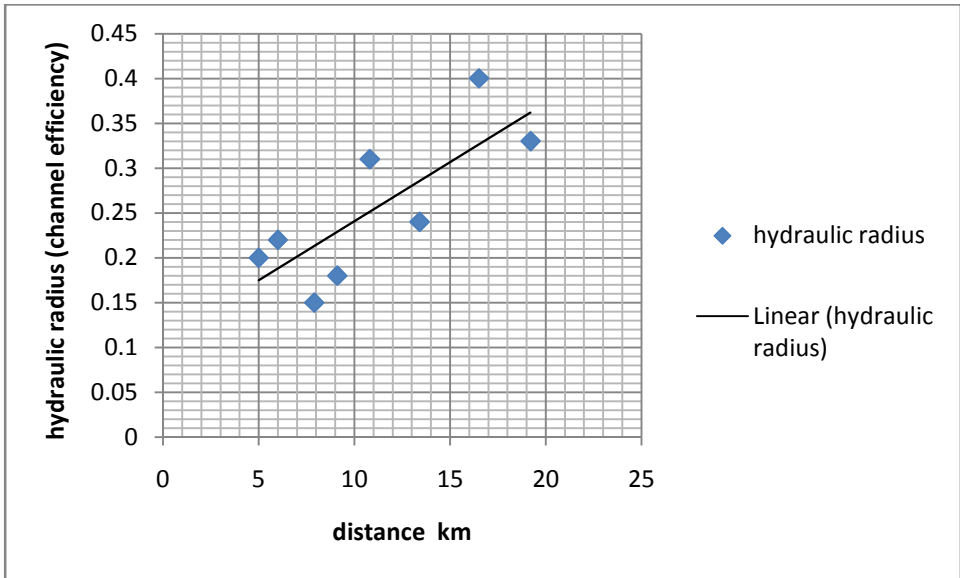
The graph for average bedload long axis shows that some of the sites nearer the mouth have a larger average size and some attempt must be made to explain this.

The relationship between Powers score (the roundness of bedload pebbles) shows a weak relationship with distance downstream.



Some other factor/s must be affecting the size and shape of bed load other than the process of attrition which produces smaller more rounded pebbles.

The degree of sorting of bed load, as shown by the inter quartile range of long axes also shows a weak relationship with distance downstream.



The Hydraulic Radius of a river channel is a measure of the efficiency of the channel.

The larger the hydraulic radius the more efficient the channel, so we should see a positive relationship.

Larger channels are more efficient, offering less friction to flow so velocity should increase as the hydraulic radius increases in a downstream direction.