

Examine, with the aid of a labelled diagram or diagrams, the processes that have led to the formation of any one Irish landform of erosion or deposition of your choice.

(30 marks)

**N.B. The following points should always be used when describing a fluvial feature:**

- ✓ Name the feature requested
- ✓ Give an example of where the feature is located and its name
- ✓ Diagram – 1) Boxed  
2) Block Capitals for labels
- ✓ Explanation and processes involved –
  - 1) If you are asked for one feature, you name 3 processes and explain 2.
  - 2) If you are asked for two features, you name 2 processes and explain 1 for both features.

In this answer I will discuss the processes involved in the formation of a waterfall. An Irish example of a waterfall is Powerscourt Waterfall, Co. Wicklow and a global example is Niagara Falls, Canada. Waterfalls are formed as a result of vertical erosion in the upper course of a river through the processes of Hydraulic Action, Abrasion and Solution.

A waterfall usually develops where a band of hard rock lies across a band of soft rock on the river bed. The process of hydraulic action, which is the force of the moving water as it flows over the bed of the river, erodes the softer rock more quickly than the harder rock. This is known as differential erosion. Gradually a small fall develops. This fall is then deepened by the process of abrasion (the wearing away of the river bed using the river's). As a result of hydraulic action and abrasion, a plunge pool is formed at the base of the waterfall. This plunge pool is deepened by the swirling action of the water, also known as eddying. The back wall of the waterfall is dissolved through the process of solution. This means that the hard rock at the top of the waterfall begins to be undercut. This hard rock is called the 'cap rock'. As the cap rock continues to be undercut, the overhang collapses. In this way the waterfall retreats upstream as a result of this headward erosion. A steep-sided gorge is formed. Downstream of the Victoria falls on the Zambezi River, a gorge measuring 100km in length has formed.

