Transfer Design Objectives
The design objectives of the WEaBAck transfer include:

- Controlling the direction and speed of product flow
  - Central discharge loading on receiving conveyor
  - Loading in direction of conveyor travel
  - Retardation or control of flow
    - matching material speed to receiving conveyor speed
- Control of stream shape
- Control of spillage
- Control of dust
- Reduction of product degradation
  - Minimising material on material wear and material on chute wear
- Provision of surge control
- Long intervals between maintenance periods
- Easy access for inspections and maintenance
The WEarBAck design controls flow direction, speed, stream shape and spillage by:

- Obtaining control of the material flow from the initial impact
- Maintaining contact with the chute surface where possible to maintain a constant velocity (boundary layer effect)
- Using incremental and subtle directional changes
- Using a horseshoe/V cross sectional shape to concentrate the ore stream into a single continuous flow
- Using a horseshoe/V cross sectional shape and ledge system to create a virtual tube for manipulating ore flow (just like the water in a water slide)
- Using the appropriate chute elevation angle to match the velocity of the ore to the speed of the receiving conveyor to eliminate boiling at impact
- Using a wedge shape discharge to:
  - Allow smaller material to load on to the receiving conveyor first
  - Centralise ore flow
  - Provide an upward taper to prevent ore entrapment between chute and belt
The WEarBAck design controls dust, capacity surges and reduces product degradation by:

- Keeping the ore in contact with the chute surface as much as possible
- Concentrating the ore stream
- Keeping impact angles as small as practical
- Keeping the velocity of the ore as constant as possible
- Matching the direction and velocity of the ore to the speed of the receiving conveyor
- Using the ore to create a face to absorb the initial impact
- Providing enough volumetric capacity in the transfer to cope with conveyor over runs and ore surges together with:
  - A wedge shape discharge for ease of chute clearance during plant restarts
The WEarBAck design provides long intervals between maintenance periods and easy access for inspections and maintenance by:

- Using a ledge system to trap ore thus creating a material on material face that protects the chute wall
- Using removable panels on chute sections where practical to provide uninterrupted access for maintenance
- Providing “soft” loading to the receiving conveyor thus reducing belt and idler maintenance
- Installing inspection doors in as many areas as practical for visual periodic maintenance.
- Using light weight and relatively inexpensive ledges in lieu of large difficult to handle iron or steel lining systems
Current Installations
- BHP Billiton Mount Newman Operation x 2
- Newcrest Mining Ridgeway Operation
- Newcrest Mining Telfer Operation

Scheduled Installations
- Newcrest Mining Ridgeway Operation, November 07, February 08
- Newcrest Mining Cadia Operation, November 07, February 07
- Newcrest Mining Telfer Operation, Late 07
Newcastle

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