Modern Cane Railways of Queensland

Carl Millington's presentation at the Modelling the Railways of Queensland Convention, 2004

CaneSIG: http://www.zelmeroz.com/canesig

Part 2: Trackwork

Early cane tramways saw lightweight rails laid on wooden sleepers placed on a formation that had very little preparation and simply followed the natural ground, providing some very ruling grades. Earth that was removed during the construction of the formation was used to provide a "ballast" to stop track movement.

As tramways evolved over the years, practices in tramway construction changed and now tramways, or as they are more commonly known railways, have formations that have been surveyed to provide gentle grades. Rail sized range from between 40 to 60 pounds. Most mills at sometime have laid rails recovered from government railway systems. The rails are laid on either wood, steel or concrete sleepers. Crushed quarry stone is used as ballast to provide drainage and to stop sleeper movement.

Transitions

Only one transition exists throughout Queensland cane railways. The transition came about after Invicta and Kalamia Mill's two-foot gauge systems were linked on the dual gauge system with Pioneer Mill. The transition was used because Kalamia Mill was biased to the right hand rail and Invicta Mill was biased to the left.

Diamond Crossings

Several mills have diamond crossings where one line crosses the other. Diamond crossings can be at any angle to each other.

Points and Point Indicators

The sugar mills throughout Queensland have points mounted on either wooden, concrete or steel sleepers. The angle of the point depends on the location of the point and the speed permitted over the track. The point blades are moved by way of a points tumbler. The tumbler can be of a two position type or of the "kangaroo" type where they are always set for the main line due to the counter-weight arrangement.

Mills such as Plane Creek and Invicta use "trailable" points at crossing loops so as to speed up the crossing of trains. The points at each end of the loop are set in the opposite direction to each other and a spring system in the point blades allows a train to "run" the point set against it and push the blades over to the right direction. Once the train has passed the point blades return to the position they were originally set to.

A points tumbler is provided at each set of trailable points so they can be used in manual if the need arises. A point indicator is located at each set of points to show the train crew which way the points are set.

A handful of mills use remotely controlled points operated by the locomotive crews. Posts with several coloured lights mounted indicate to the crew which way the points are set. Once again a tumbler is provided so the points can be used in the manual position.

Several mills have point indicators located at points located in key positions like junctions or sidings that are located in or near built-up areas and may be tampered with. These indicators show the crew if the points are in the right or wrong position or which branch line has been set.

Dual Gauges

Over the years most mills at one point in time have had dual gauge tracks. Today only three mills still use dual gauges. These are Kalamia and Invicta, which have a gauge of two-foot and Pioneer Mill with a gauge of 3 foot 6 inches. Kalamia and Invicta Mills are linked together by dual gauge over Pioneer Mill's system, while Kalamia has a dual gauge branch from the mill to the town of Ayr to allow QR trains to travel to the mill.

Typical trackwork, Moreton Mill, paralleling a shire road and branching into the cane fields

New road diversion,, Bingera Mill

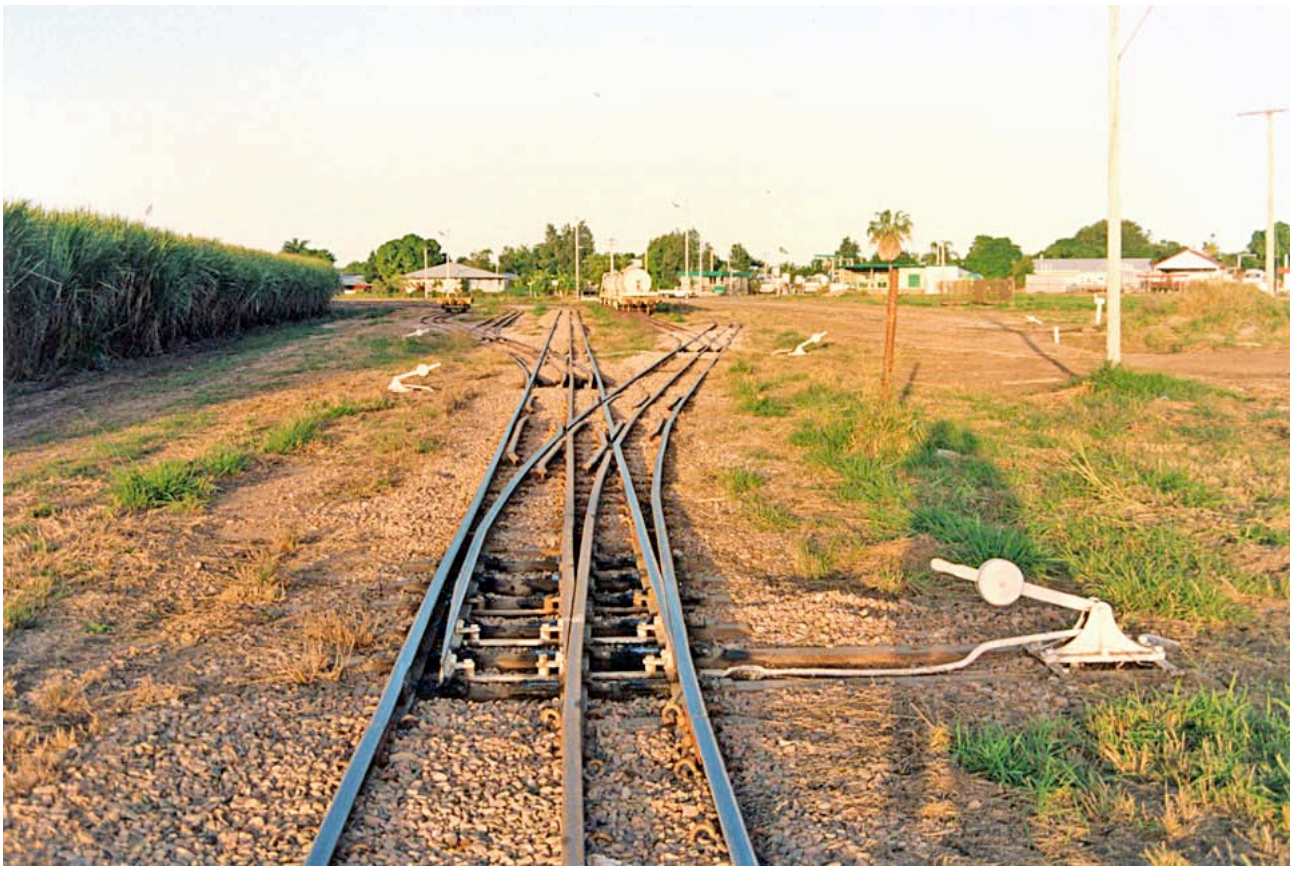
The transition near Browns Road No 3 siding on the Pioneer system

Diamond crossing on the Kalamia Mill system.

A timber sleepered point from Bingera Mill (above) and a new steel sleepered point (below) on the Farleigh mill system.

Automatic points at Airdale where the Kalamia and Pioneer systems combine.

Point indicator on the Invicta Mill system at McLain Road Junction. The same type of indicator is used for trailable points.



Dual gauge track and points at Kalamia Mill's Town Terminus at Ayr.