



# **IMPROVING MAHO JUNCTION STATION TO REDUCE TRAVELLING TIME**

**Report prepared by**

**The Society of Sri Lankan Engineers &  
Scientist in the UK**

**January 2014**



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### **INTRODUCTION**

At Maho Junction, trains operating from Colombo to Trincomalee/ Batticaloa have to detach the locomotive from one end and attach it to the other end of the train before proceeding with the journey. This delay of about half an hour can be avoided by undertaking some track modification.

Delays are caused by the locomotive having to be detached from the front of the train and going to the turntable so that the cow-catcher and the short-hood are pointing in the direction of travel. Then it has to be attached to the train and made ready for travel.

### **DISADVANTAGES OF THE PRESENT SYSTEM**

1. The above procedure causes delays up to half an hour.
2. When the locomotive is detached the carriages are without power and in darkness. Therefore the passengers are liable to theft and other misdemeanors.
3. Maho Junction station has only two platforms with three branches. If there are three trains approaching the station at the same time, the third train cannot be admitted until one departs the station.

### **SSLES PROPOSALS**

Society of Sri Lankan Engineers and Scientists in the UK (SSLES) suggests two alternative proposals to overcome this problem as follows:

#### **Proposal 1**

Please refer to Drawing 1.

From Konwewa ( KON) lay a new track by the side of the existing track up to Yapahuwewa ( YPW) train halt, and then after passing Yapahuwewa (YPW) divert from the present track to the right and go on a curve and proceed behind Maho town, cross the main highway road and enter the Maho ( MHO ) station as if it is approaching from Ambanpola(ABN). An overhead bridge was built prior to 1970 to accommodate two railway tracks – therefore no expenditure in road works is needed now.



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This proposal has five significant benefits as follows:

- a. Same track gang can maintain KON/YAP section as both tracks are side by side.
- b. No acquisition of land between Konwewa and Yapahuwewa is required since it is within the railway reservation. Between Yapahuwewa and Maho acquisition of land is required.
- c. Trains coming from Baticoloa/ Trincomalee can go to North ( KKS ) using the existing track.
- d. At present all trains going to Baticoloa/Trincomalee need two break vans at either end of the train. With this proposal only one break van is needed thereby increasing the number of payload carriages.
- e. Between Maho and Konwewa there will be two tracks thereby increasing the capacity of the service.

## **Proposal 2**

Please refer to Drawing 1.

From Nagollagama( NAG) lay a new track by the side of the existing track up to Walaswewa a train halt and then after passing Walaswewa divert from the present track to the left and go on a curve and proceed behind Maho town, cross the main highway road and enter the Maho (MHO ) station as if it is coming from Ambanpola(ABN). An overhead bridge was built prior to 1970 to accommodate two railway tracks – therefore no expenditure in road works is needed now.

This proposal has five significant benefits as follows:

- a. Same track gang can maintain Nagollagama and Walaswewa as both tracks are side by side.
- b. No acquisition of land between Nagollagama and Walaswewa is required since it is within the railway reservation. Between Walaswewa and Maho acquisition of land is required.
- c. Trains coming from Colombo ( COL ) can still go on the existing track to the North
- d. At present all trains going to Baticoloa/Trincomalee need two break vans at either end of the train with this proposal only one break van is needed thereby increasing the number of payload carriages.
- e. Between Nagollagama and Maho there will be two tracks thereby increasing the capacity of the service.



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### **COST ESTIMATES**

Estimates for the two proposals are attached.

In summary,

Proposal 1 Rs 4469 Million

Proposal 2 Rs 4158 Million

### **COMPARISON**

SSLES recommendation is to opt out for proposal 2 due to the low cost and the double track between Maho and Nagollagama will enhance the operation of train service to the north.

### **PROGRAMME**

Even if the project is not undertaken immediately, the following could be done for which SSLES will be pleased to offer its expertise free of charge.

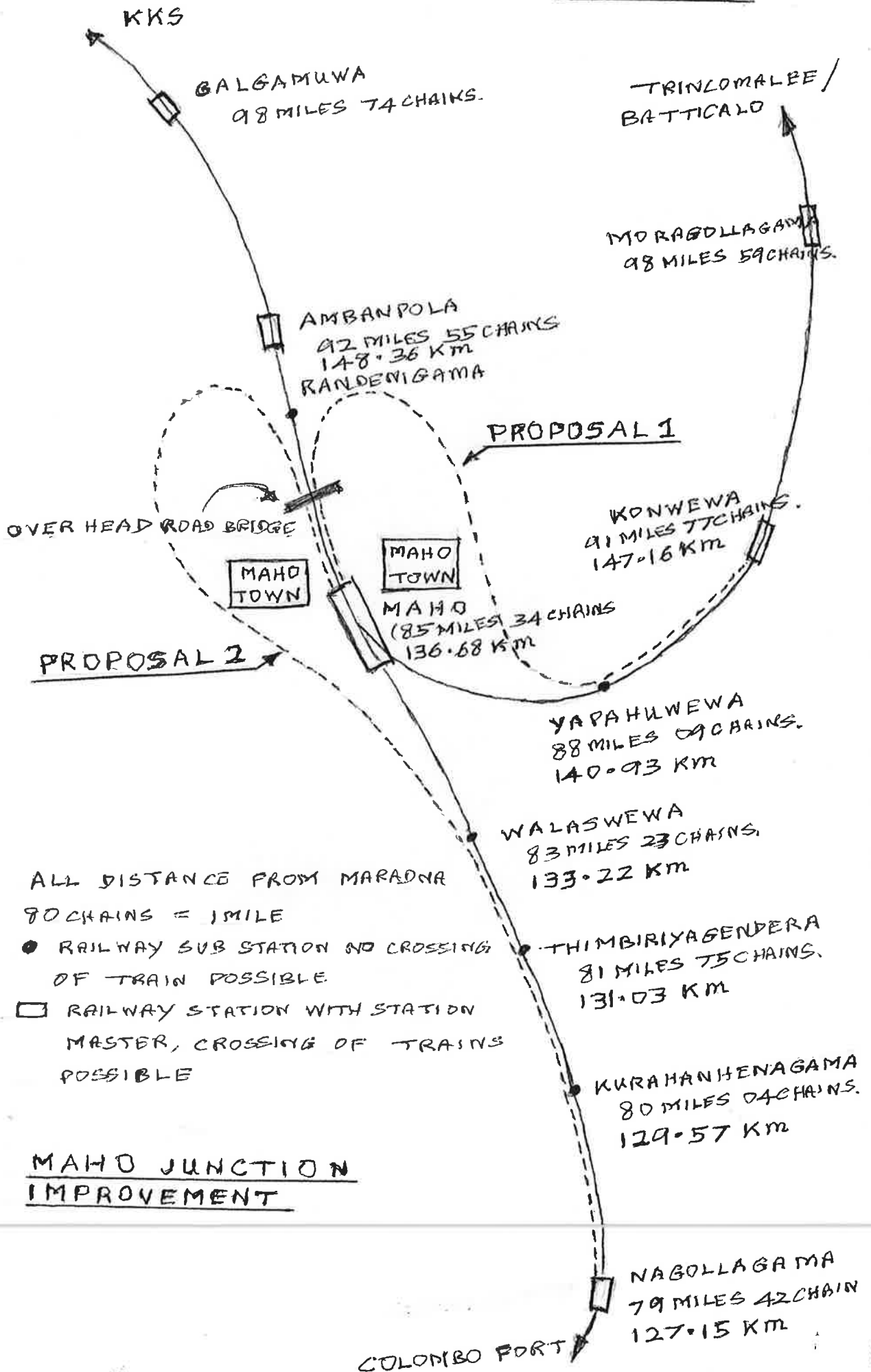
1. Assist with the preparation of a detailed feasibility study
2. Prepare project drawings
3. Assist with a study for the Acquisition of Land

These proposals are made by an engineer who originally was in Sri Lankan Railways and now is a member of SSLES.

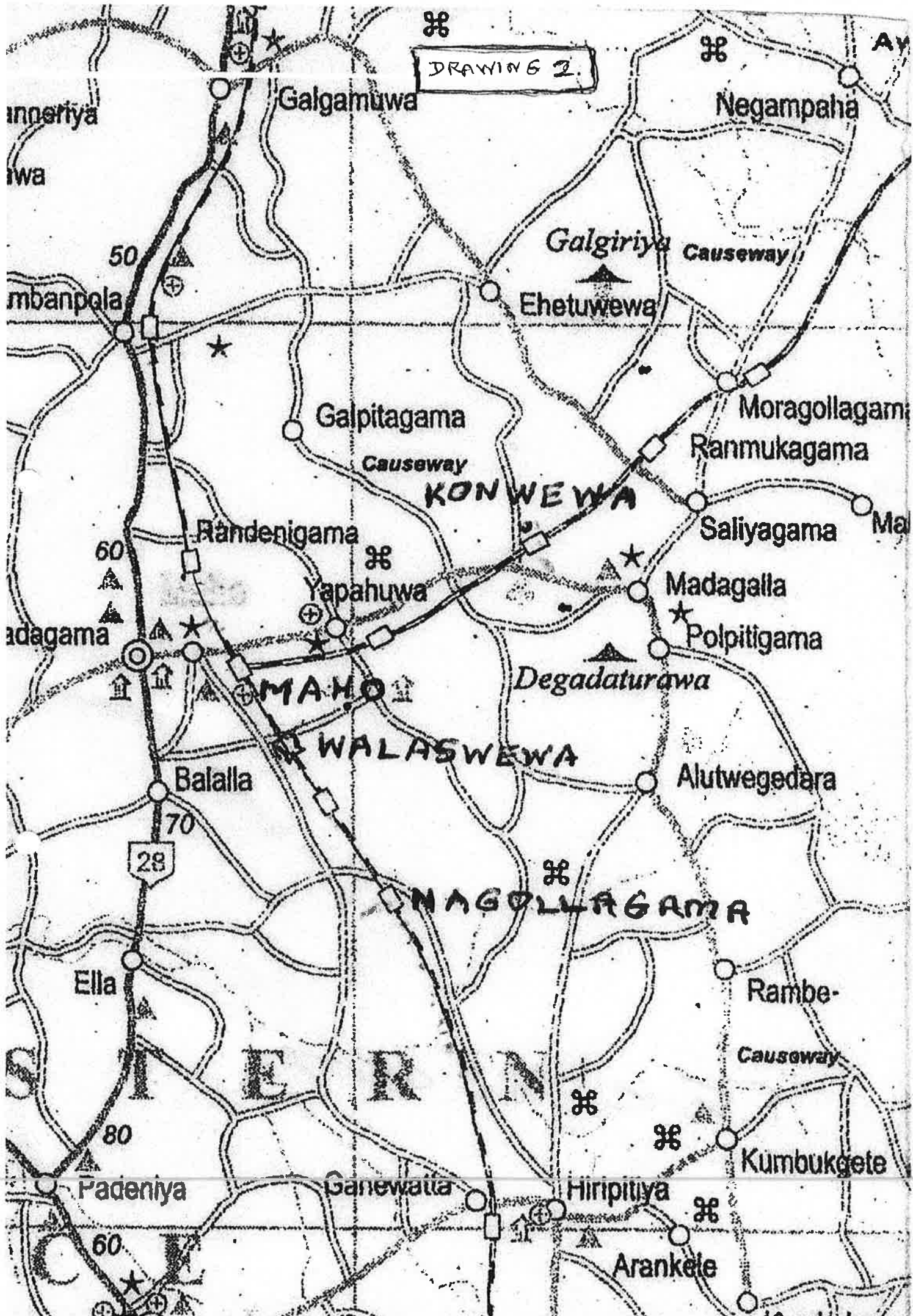
### **Annexures**

1. Drawing 1
2. Maho Area Road Map
3. Railway Mileage from Colombo
4. Estimate

DRAWING 1



DRAWING 2



DRAWING 3  
DISTANCE TABLE

**Nagollagama to Maho**

	Name	Code	Distance from Colombo	
			Miles / Ch	Km
1	Nagollagama	NAG	79/42	127.15
2	Kurahanhenagama	?	80/04	129.57
3	Thimbiriyagedera	?	81/75	131.03
4	Walaswewa	?	83/23	133.22
5	Maho	MHO	85/34	136.68

**Maho to Ambanpola**

	Name	Code	Distance from Colombo	
			Miles / Ch	Km
1	Maho	MHO	85/34	136.68
2	Randenigama	?	?	140.00
3	Ambanpola	ABN	92/55	148.36

**Maho to Konwewa**

	Name	Code	Distance from Colombo	
			Miles / Ch	Km
1	Maho	MHO	85/34	136.68
2	Yapahuwewa	YPW	88/09	140.93
3	Konwewa	KON	91/77	147.16

**ESTIMATES**

**PROPOSAL-01**

Station Name	Cost	Distance from Yapahuwewa		Area of land require		Land acquisition cost		Track laying cost	
		miles/ch	km	km <sup>2</sup>	Acres	US \$	Rs	US \$	Rs
Maho		4/55	7.47	0.455371	112.52678	129,839	16,879,017	18,675,000	2,427,750,000
Konwewa		3/68	6.23	0.379781	93.847633	N/A	N/A	15,575,000	2,024,750,000
TOTAL						129,839	16,879,017	34,250,000	4,452,500,000
NET cost in million US \$	34.3798386								
NET cost in million Rs	4469.37902								

**PROPOSAL-02**

Station Name	Cost	Distance from Walaswewa		Area of land require		Land acquisition cost		Track laying cost	
		miles/ch	km	km <sup>2</sup>	Acres	US \$	Rs	US \$	Rs
Maho		4/11	6.68	0.407213	100.62636	116,107	15,093,953	16,700,000	2,171,000,000
Nagollagama		3/61	6.07	0.370027	91.437421	N/A	N/A	15,175,000	1,972,750,000
TOTAL						116,107	15,093,953	31,875,000	4,143,750,000
NET cost in million US \$	31.9911073								
NET cost in million Rs	4158.84395								

Assumptions (Proposal 1&2):-

\$1=Rs130

Land acquisition cost Rs 150000 per ac

Land width -200ft

Track laying cost US \$ 2.5million per 1km

2 miles (3.22km) distance added to new curve track

No land acquisition required when the new track goes next to the existing track