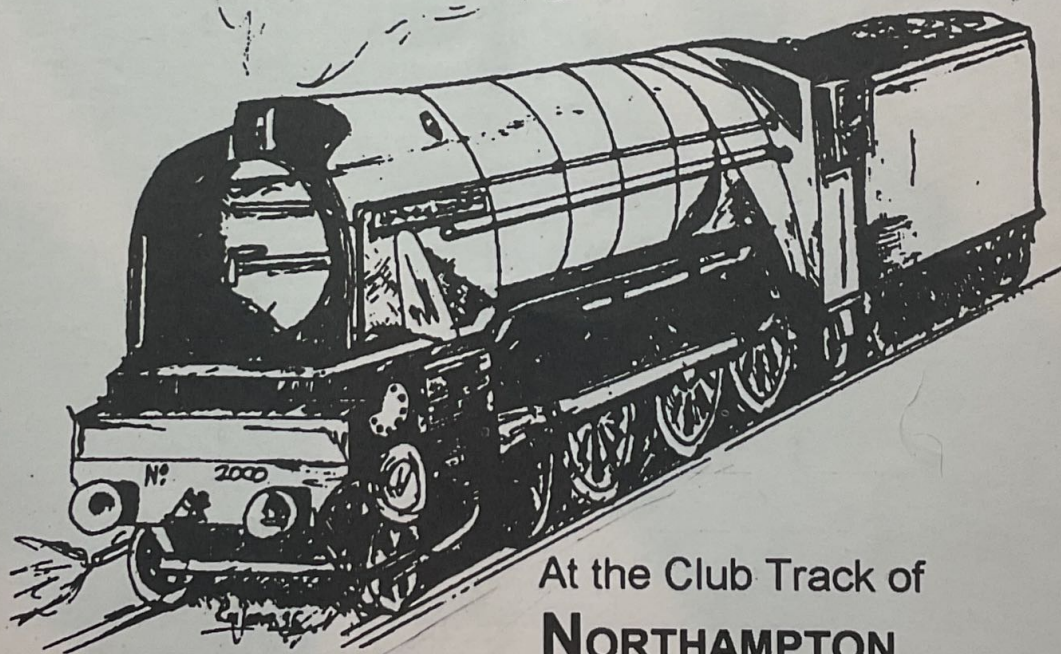


**The 31st
International
Model
Locomotive
Efficiency
Competition**



At the Club Track of
NORTHAMPTON

**SOCIETY OF
MODEL**

ENGINEERS LTD

Lower Delapre Park, Northampton
Saturday 3rd July and
Sunday 4th July 1999

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**The 31st International Model Locomotive
Efficiency Competition**

For the

**MARTIN EVANS CHALLENGE
TROPHY**

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Presentation of Prizes

Presentations by His Worship the Mayor of
Northampton, Councillor Arthur P McCutcheon, will
take place on

Sunday 4th July 1999 at 5.30pm.

Prizes will be awarded for

1st, 2nd, 3rd and 4th places

plus a prize for the best 3½" if it is not in the first 4
places.

All Competitors will receive a commemorative
Plaque.

I.M.L.E.C. OFFICIALS

Overall Adjudicator...	Fred Winsall
Observers...	Richard Follwell
	Chris Orchard
	Pete King
	David Cleworth
Calculations...	Brian Reeve
	Peter Jarman
Track Engineers...	Peter Spikings
	Mike Smith
Steaming Bay Marshals...	Steve Winter
	A N Other
Time Keepers/Station Marshals...	Keith Nichols
	Bernard Clarke
	Brian Andrews
Trade Stands & Exhibition Organiser...	Bob Spikings
Catering and Ticket Sales...	Margaret Spikings
	John Tomlinson
Public Address Commentary...	Chris Sanders
	Roy Brookes
First Aid...	Mary Jolliffe

Acknowledgements

We would like to extend our thanks for their assistance to:

The Northampton Borough Council for allowing us to use Delapre Park.

The Guildford and Birmingham Societies for the loan of the Dynamometer Cars.

Charringtons for donating the coal used in the competition.

NORTHAMPTON SOCIETY OF MODEL ENGINEERS LTD

COMPANY REGISTERED IN ENGLAND No. 21783R

REGISTERED OFFICE: 125 WELFORD ROAD, NORTHAMPTON NN2 8AJ

TIMETABLE

Saturday 3rd July 1999

08:30	Catering Commence
09:00	Competition Commence
10:00	Ground Level Track open for rides
13:00	Passenger rides on Elevated Track
14:00	Competition resumes
18:10	Last Competition run of the day
19:00	Evening Function begins
23:00	Close ~

Sunday 4th July 1999

08:30	Catering Commence
09:00	Competition Commence
10:00	Ground Level Track open for rides
13:00	Passenger rides on Elevated Track
14:10	Competition resumes
16:00	Prize Draw
16:10	Last Competition run
17:30	Speeches and Prize Giving
18:00	Close

Welcome to Delapre Park, Northampton

As President of the Northampton Society of Model Engineers Ltd. may I extend a very warm welcome to you at Delapre Park on the occasion of the 31st International Model Locomotive Efficiency Competition.

Back in 1996 when we staged this event for the first time we had no idea that only three years later the honour would fall upon us again. The first time we discussed the idea of a second competition here was last summer and we finally agreed to volunteer for the task just prior to the Kinver event. Having already hosted IMLEC we felt that many lessons had been learnt and that we could, in the light of this experience, do a better job the second time around.

If you attended the 1996 event you will see quite a few changes around the site. The ground level track is now a complete loop and the track was officially opened by the then Mayor of Northampton, Cllr Richard Church, on 3rd May 1998.

Immediately prior to the opening, on Good Friday, Northampton was hit by some of the worst floods ever to hit the Town and surrounding area. Our tracks were both completely submerged by up to 4 feet of water for nearly 24 hours but fortunately the Clubhouse did not suffer any flooding. The only damage sustained was a few feet of ballast washed away on the ground level track. There are some photographs of the floods in the clubhouse.

In preparation for this weekend it was decided to erect another footbridge to allow visitors to safely cross into the centre of the ground level system where they can enjoy a walk through the woodland alongside the tracks. It is not a very long walk but if the weather is kind to us the shade afforded by the trees may be a welcome experience. There are several small bridges over which the paths cross and if you are lucky you may see some of the wildlife that we are trying to encourage within the unmown areas around the site.

Some of the changes that we have made from 1996 are to locate the Trade Stands inside the Elevated Track and to bring the Model Exhibition closer to the Station area. By doing this we hope to make it more enjoyable for you, the visitor, and also to make the management of the weekend easier.

Quite a lot of work has been carried out on maintenance of the elevated track by a small band of very conscientious workers so lets hope that this weekends running is successful.

Finally I hope the weather is kind to us over the two days and that you can relax and enjoy your stay with us at Delapre Park. If you are a competitor may I wish you every success with your run and may the best Locomotive win.

Gordon Lane
President

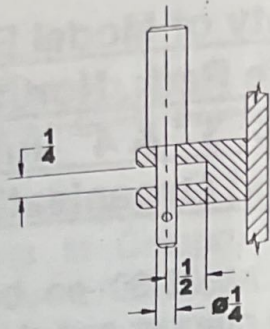
Northampton Society of Model Engineers Ltd.

Lower Dealpre Park, Northampton

31st I.M.L.E.C. 3rd & 4th July 1999

Rules and Organisation

1. The competition will commence at 08.30 on both Saturday and Sunday. Competitors will be allocated a run number and start time. This information will be given with the instruction pack issued after being accepted to the competition.
2. Competitors must arrive at the track at least one and a half hours before their run and report to the steaming bay reception. Competitors must, at this time, present a current boiler certificate for the locomotive to be used in the competition and state the number of passengers required for the run.
3. One hour before the commencement of the run, the Driver will be allocated an observer and asked the size and the amount of coal that is required for the run. This will be weighed and allocated in presence of the Driver. Additional coal will be available on the run and all excess will be returned and debited off the total in the Driver's presence.
4. Drivers must use their discretion in when to commence lighting up, but must be ready to start their run at the time allotted. Any time slippage will be notified to the Driver before lighting up.
5. When ready to raise steam for the run, the Driver will be provided with as much dry, or paraffin soaked, charcoal and wood as required to raise steam. The Driver may change over to the measured coal when he likes, but all coal used is included in the weighed amount for the run. The Driver must have a good coal fire burning before going out onto the track.
(NOTE: 12 & 24 Volt D.C. power is available to drive steam raising blowers on all the steaming bays.)
6. The train will be prepared for the Driver with the dynamometer car at the front and sufficient passenger cars to carry the number of passengers he/she requires, for safety reasons this must be limited to a maximum of 28 persons excluding the Driver and Observer.
7. The competing locomotive must be equipped with a forked towing coupling that will accept a 1 /8 inch thick coupling plate to be attached using a 1 /4 inch diameter pin, the plate and pin will be supplied by the host society. The suggested forked coupling dimensions are shown below.



8. The Steaming Bay Marshal will tell the Driver when to put the locomotive onto the transporter and move it onto the running track.
9. All coupling and uncoupling of the locomotive to the train must be carried out by N.S.M.E. officials.
10. The train will then be backed round to the station to take on the passenger load.
11. The Observer will record the initial dynamometer car readings in the presence of the Driver.
12. The Driver will tell the Observer when he is ready and the Timekeeper will then give the Driver permission to start.
13. The duration of the run is a nominal 30 minutes. No time allowance will be made for stops except for derailments. A competitor may opt to stop once 25 minutes have been completed but the run must terminate in the station. Any competitor not completing 25 minutes will be deemed to have retired. A line side clock will be provided so that the Driver can see the progress of his run. The Driver will be advised when he/she has ten and five minutes remaining and when on the last lap. The total period the train may stop during the run will be eight minutes. If this is exceeded then the Driver will be deemed to have retired.
14. Any re-run will be run under the same conditions as the original run (same number of passengers etc.).
15. The run will end at the station. Any competitor stopping short of the station because of lack of steam must raise sufficient steam to bring the train into the station before the run is deemed to be completed. All recordings will end in the station. Once the run has finished the Locomotive will be uncoupled from the train and the driver will move the Locomotive along the track into the tunnel and wait until the next Locomotive to run has been brought onto the track before moving back onto the steaming bays.

16. All the unused coal will be collected immediately the run finishes and weighed in the Drivers presence by one of the Judges. Only the total coal burnt will be used in the calculations. No allowance will be made for any unburnt coal left in the firebox. The result will be calculated and put up onto the results board as soon as possible after the completion of each run.
17. A maximum speed limit of 8 mph will be in operation for the competition. The dynamometer car provides a speed indication at the Drivers position. The Observer will remind the Driver of the speed limit if the speed of the train should approach 8 mph. The Observer will issue a warning to the Driver should the speed exceed 8mph. Three such warnings will result in disqualification.
18. The Driver must not lean on the locomotive/tender or apply the hand brake in such a manner as to increase the drawbar pull. Infringement of this rule will result in disqualification.
19. The use of the handpump is not permitted once the run has commenced. However it may be used in emergencies when all other means of water feed have failed and in which case the locomotive must be retired and the run terminated immediately.
20. Water will be provided in suitable containers during the run to enable locomotive water tanks to be topped up without stopping. The amount of water used is not recorded or limited in anyway.
21. Passengers and carriages may be dropped off during the run if the initial load proves to be too heavy, but only when the train is stationary and it is safe to do so. Additional passengers may not be added at anytime.
22. No external assistance is to be given to the train in any way whatsoever at anytime during the run.
23. Ballast (including water) added externally to the scale outline of the loco (or in the case of a freelance model, the likely scale outline) is not permitted.
24. For practical reasons it may be necessary to limit the load or number of carriages pulled in the contest.
25. The decision of the Judges is final in all matters relating to the competition. The Judges are appointed by the Northampton Society of Model Engineers Limited.

The Northampton Society of Model Engineers Ltd.

A Brief History of the Society

The Northampton Amateur Model Engineering Society was founded in October 1945 and met every Tuesday at various venues in and around the Town until in due course some rooms at a Community Centre in Thornton Park in Northampton were found and used. At that time the Society did not have a permanent track.

In 1965 the present site at Delapre Park was acquired and work began on the construction of the first 3½" and 5" elevated track which was completed in 1967. The Club members then used both Thornton Park and Delapre Park until 1984 when the Clubhouse was built at Delapre Park. Once the Clubhouse was complete the facilities at Thornton Park were dispensed with and all activities moved to Delapre Park, the membership at that time totalled approximately 30 people. Also during this period the name was changed to Northampton Society of Model Engineers and then in November 1976 became a Registered Company.

In the late 1980's it was decided that the elevated track needed to be rebuilt and the track as you see it now was completed in 1990, a plan of the site and track is shown on page 19 of this programme.

In 1993 an Extraordinary General Meeting was called and the decision was taken to extend the Clubhouse and to build a ground level 7¼" and 5" track which, when finished, would be approximately 1700 feet long. The Clubhouse has now been extended and the ground level track is virtually complete.

The membership has now risen to over 60 but more new members are needed so if you live locally and are interested why not come and join this exciting Society and help us to improve still more the facilities we have to offer.

Members meet every Tuesday evening and on Sunday mornings when the majority of the necessary work on the site is carried out.

Five years ago we hosted our first National Rally, the Don Young Rally. Unfortunately Don died the week before the Rally which cast a black cloud over the day although those who did attend thoroughly enjoyed themselves. In 1995 we hosted the Midland Federation Rally and the Martin Evans Rally.

In 1997 the Southern Federation Spring Rally was held here at Northampton.

On the first Sunday of every month from May to October the site is now open to the public with trains being run on both tracks.

Finally, the Northampton Society of Model Engineers Ltd., thank you for coming this weekend and hope to see you again in the future.

Previous IMLEC Winners 1969 - 1998

<u>Year</u>	<u>Host Club</u>	<u>Engine</u>	<u>Gauge</u>	<u>Efficacy</u> <u>%</u>	<u>Driver/Society</u>
1969	Birmingham	Royal Scot	5"	?	J Drury, Birmingham
1970	Whitney	Firefly	5"	?	L Labram, Birmingham
1971	Southampton	Dean Single	5"	?	A Haydon, Newton Abbot
1972	Tyneside	GWR 57XX	5"	1.066	N Spink, Chesterfield
1973	Chingford	LNER L1 Tank	5"	1.6	B Longstaff, S Durham
1974	Bristol	Nigel Gresley	5"	2.54	F Winsall, Rugby
1975	Tyneside	GWR King	3½"	1.55	L Joyce, Chingford
1976	Kinver	Speedy	5"	1.58	B Perret, Southampton
1977	Chingford	Speedy	5"	2.32	B Perret, Southampton
1978	Guildford	Maid of Kent	5"	1.61	P Wood, Chingford
1979	Bristol	Sterling Single	5"	2.17	D Morris, Urmston
1980	Bedford	BR Class 7	3½"	1.37	P Wood, P/Entry
1981	Bournemouth	LNER J39	5"	2.41	P Wood, Chingford
1982	Leyland	GWR de Glen	5"	1.5	R Amsbury, Derby
1983	Guildford	Royal Scot	5"	1.35	L Pritchard, Harlington
1984	Bristol	Royal Scot	5"	3.66	L Pritchard, Harlington
1985	Urmston	Nigel Gresley	5"	1.85	A Crossfield, P/Entry
1986	Bournemouth	Nigel Gresley	5"	1.64	A Crossfield, P/Entry
1987	Birmingham	LSWR Adams	5"	2.29	K Moonie, Chingford
1988	Leeds	BR Prop. 2-8-2	5"	4.392	L Flippance, Guildford
1989	Leyland	BR Prop. 2-8-2	5"	3.02	L Flippance, Guildford
1990	Guildford	BR Prop. 2-8-2	5"	3.317	L Flippance, Guildford
1991	Bristol	BR Prop. 2-8-2	5"	1.733	K Ayling, Worthing
1992	Leeds	7F S&D	5"	1.886	D Sutcliffe, Ribble Valley
1993	Leyland	LMS Stanier	5"	2.08	J Heslop, Rydale
1994	Gravesend	LMS Stanier	5"	1.511	J Heslop, Rydale
1995	Kinver	LNER Class P2	5"	3.32	J Heslop, Rydale
1996	Northampton	GWR Manor	5"	2.437	A Crossfield, Leyland
1997	Lannelli	Brittania	5"	1.882	L Steel, Steam
1998	Kinver	BR Proposed	5"	2.274	K Ayling, Worthing
1999	Northampton				

IMLEC '99 at Northampton – Results

Saturday 3rd July

Run No.	Driver	Society	Locomotive	Gauge	Wheel Arrangement	Passengers excl Crew	Coal Used	Distance Run	Work Done (ft/lbs)	Run Time (mins)	Average D/B HP	Coal Cons Rate (lb/hr)	Specific Fuel Cons	Thermal Efficiency (%)	Final Placing
1	Brian Eatock	Chesterfield MES	Black Five	3 1/2	4-6-0										
2	Bernard Clark	Northampton SME	Freelance, D15	3 1/2	4-4-0										
3	David Mayall	Bracknell	4F	3 1/2	0-6-0										
4	Barry Sumsion	Whitchurch (Cardiff) MES	Claud Hamilton LNER, D16	5	4-4-0										
5	Ken Smith	Birmingham SME	LMS Duchess	5	4-6-2										
7	Les Pritchard	Harlington Loco Society	L&R 'A' Class Goods	5	0-6-0										
8	Brian Remnant	Romney Marsh MES	Sweet Pea	5	0-4-2										
9	Graham Platt	South Cheshire MES	B1	5	4-6-0										
10	Roger James	North West Leicester MES	LNER style "Mogul"	5	2-6-0										
11	David Ball	Guildford MES	GWR "Torquay Manor"	5	4-6-0										
12	Jim Elliott	Staines SME	Speedy G.W.R. 1500XX	5	0-6-0										
13	Barbara Milton	Private	SECR K Class	5	2-6-4										
14	Alan Bibby	Leyland SME	Lion	5	0-4-2										

Sunday 4th July

Run No.	Driver	Society	Locomotive	Gauge	Wheel Arrangement	Passengers excl Crew	Coal Used	Distance Run	Work Done (ft/lbs)	Run Time (mins)	Average D/B HP	Coal Cons Rate (lb/hr)	Specific Fuel Cons	Thermal Efficiency (%)	Final Placing
15	Eddie Gibbons	Private entry	GNR No. 1418 Large Atlantic	3 1/2	4-4-2										
16	Ian Priest	Kinver and West Mid. SME	Black Five	3 1/2	4-6-0										
17	Andrew Harvey	West Huntspill MES	Lancs & Yorks CL 30 Goods	3 1/2	0-8-0										
18	Peter Dickson	High Wycombe MES	GER Claud Hamilton	5	4-4-0										
19	Ballan Baker	Lindsey Model Society	L.N.E.R. Y4	5	0-4-0										
20	Mike Richardson	Bristol SME	Lionheart, a modified Simplex	5	0-6-0										
21	Phillip Bevan	Rugby MES	Gresley A3 Pacific	5	4-6-2										
22	Bob Bramson	Butterly Park MRS	LNER B1 "Roedeer"	5	4-6-0										
23	Paul Tompkins	Private Entry	No1 Railmotor	5	0-4-0										
24	John Richardson	Brighouse & Halifax MES	Crampton	5	2-2-2-0										

CALCULATION OF RESULTS

The dynamometer car measures and gives readings of the Total Work done in foot-pounds and the Total Distance Travelled in feet. In addition the Overall Run Time (in minutes) and the Weight of Coal Used (in pounds) are recorded. From these the following calculations can be made.

$$\text{Overall Thermal Efficiency (\%)} = \frac{\text{Work Output} \times 100}{\text{Heat Input}}$$

The fuel being used has a calorific value of 13684 BTU per pound. Using the value 778 Ft/Lbs. = 1 British Thermal Unit: -

$$\text{Overall Thermal Efficiency (\%)} = \frac{\text{Work Output} \times 100}{\text{Weight of Coal Used} \times \text{Cal Value} \times 778}$$

The Locomotive that returns the highest efficiency is the winner of the competition.

Some interesting subsidiary calculations are: -

$$\text{Average Drawbar Horsepower} = \frac{\text{Total Work Done (Ft/Lb)}}{\text{Overall Run Time (Mins)} \times 33000}$$

$$\text{Coal Consumption Rate} = \frac{\text{Weight of Coal Used (Lb)} \times 60}{\text{Overall Run Time (min)}}$$

$$\text{Specific Fuel Consumption} = \frac{\text{Coal Consumption Rate}}{\text{Average Drawbar Horsepower}}$$

$$\text{Average Drawbar Pull} = \frac{\text{Total Work Done}}{\text{Distance Travelled}}$$

Ted Jolliffe

This is the last IMLEC that Ted Jolliffe will officially be involved with and to mark the occasion it is perhaps fitting that he is mentioned here today.

As most of you know Ted has been the Editor of the Model Engineer for 15 years having taken over the Editorship from Laurie Lawrence when he retired. Before joining the Model Engineer Ted served in the Police in the Tottenham area of London and was at that time a member of the Chingford DMEC. He was also a Committee member of the Southern Federation of Model Engineering Societies, at one point he was the Editor of their Newsletter.

One of Ted's passions in life is his association with the Isle of Man and, as those of you who read the Model Engineer cannot fail to know, that he has a soft spot for the railway on the Island. He has written many articles on the subject of this railway over the years, probably to the point that some of us think he may be biased or maybe we are even bored with reading about it (sorry Ted I'm only kidding).

At Northampton we had not really thought about staging IMLEC until Ted decided that he liked our site and that it would make a good venue for this annual event. He tried for several years to persuade us to host the event and even attended our AGM in 1995 to talk to the members and convince them how good the idea would be. Well we finally succumbed and agreed to host the 1996 event which turned out to be a success for all concerned and a most enjoyable weekend.

Just before IMLEC last summer no venue for 1999 had been forthcoming and Ted telephoned me to ask if we could possibly take the event on, what could I say but "yes". When I then faced the committee and told them that we were hosting this year's competition everyone agreed that it would be a good idea.

Here at Northampton we hold two Barbecues every summer which Ted and his wife, Mary, regularly attend on a purely social basis and we hope that now he has retired they will still honour us with their company at these functions.

Personally, I have only known Ted for about five years but in that time it has been obvious to me that he has many friends and acquaintances within the modelling world who will miss his particular style of writing. Having said that I am sure that, in the future, we will be seeing articles in various magazines that have come from the pen Mr Ted Jolliffe.

Finally, I am sure that you will all join me in wishing Ted a long and happy retirement, he may even be able to spend some time in his workshop.

Brian Reeve
Chairman NSME

Coal kindly donated by



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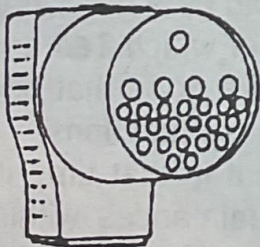
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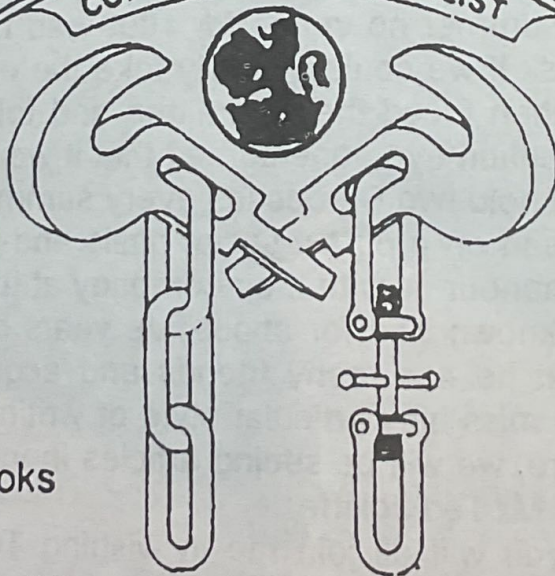
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The Competitors

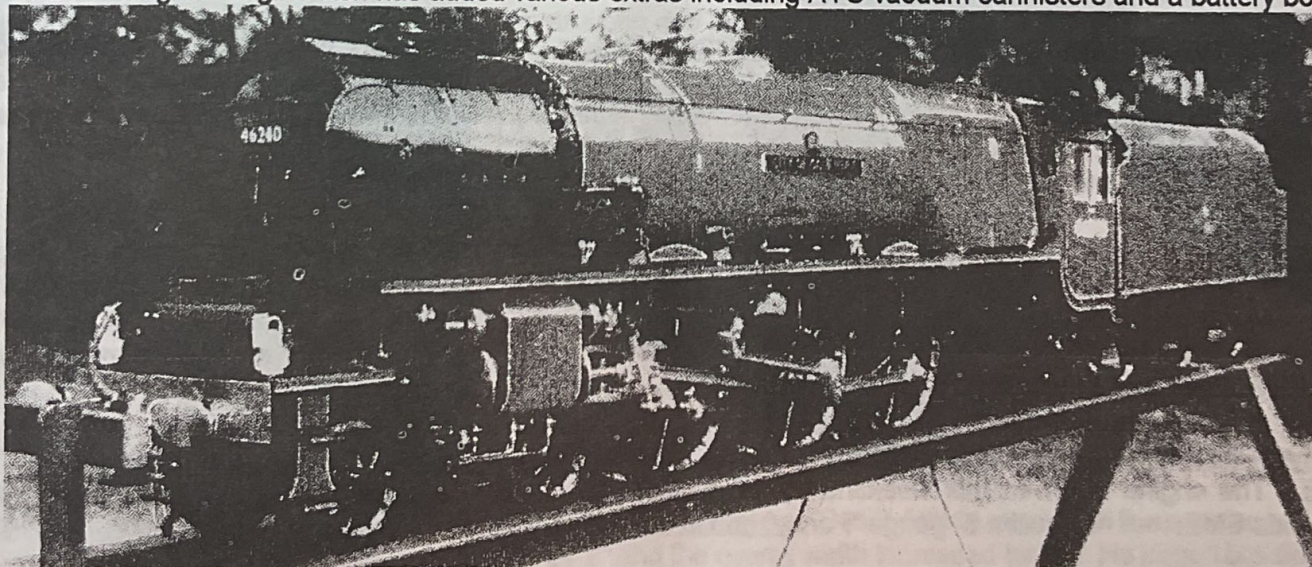
Brian Eatock - 3½" gauge 4-6-0 Black Five. This locomotive was built between 1991 and 1996 to LBSC "Doris" design. It is all Brian's own work including the boiler and is the second model he has built, the first being a Rob Roy. On retirement from the National Coal Board he joined Chesterfield MES to make a model Windermere steamboat but got bitten by the railway bug. Since finishing this loco he has built a "Minnie" and is now finishing off the steamboat he originally started.

Jim Elliott - 5" gauge "Speedy". Christened by Ted Jolliffe "the Pink Un" this maroon loco is fitted with Don Young valve gear. . It originally took part in IMLEC in 1987, coming 13th, and again in 1989 when it came 5th. Modified valve bobbins were fitted last year to alter the lead and lap after experiencing starting problems with the higher pressure supplied by the 100 psi boiler now fitted. Last winter an arch was fitted in the firebox to improve combustion. Jim also has an interest in old clocks having recently restored a 160 year old long case clock.

Philip Bevan - 5" gauge Gresley A3 Pacific. Built to the late Harry Clarksons drawings with a few variations to suit the builder. The boiler boasts eight vertical water tubes, a single Nicholson thermic syphon in the firebox and a water preheater fitted in the smokebox. The Engine is fitted with conjugated valve gear operating slide valves and makes extensive use of silicon "O" rings throughout the locomotive. Philip worked for 13 years in the Doncaster Works and spent some time working with the late Don Young, he is a member of the Rugby MES.

Jeff Rodway - 5" gauge "Claud Hamilton". Built to Martin Evans design with the addition of a brick arch and radiant superheaters. The loco is being driven this weekend by Barry Sumsion who also drove it at Northampton in '96 and finished in 12th place. Barry is a very experienced steam engine driver and this includes full size traction engines. This engine is a hard working member of the Whitchurch (Cardiff) Society where it is regularly used for passenger hauling.

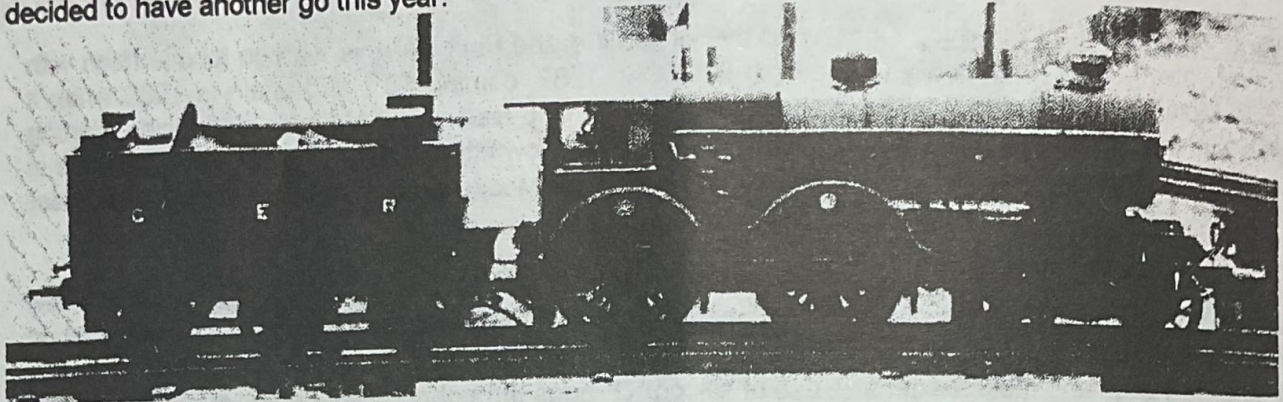
Ken Smith - 5" gauge LMS Duchess. No. 46240 "City of Coventry" was originally built by the late Geoff Gregson, a member of the Urmston SME, and was loco no.3 of a batch of 4 built between 1992 - 1994. Since owning the engine Ken has added various extras including ATC vacuum cannisters and a battery box.



The livery represents the prototype loco as it would have appeared after its final re-paint in April 1962 complete with overhead power line warning transfers. Ken is a member of the Birmingham SME and has been involved in the manufacture of dual gauge, 7¼" & 5", points for the last 2 years.

Bernard Clark - 3½" 4-4-0 D15 Bernard is representing the Host Society with this Locomotive which he purchased several years ago in a very sorry state. At the time it was thought to be a freelance loco but very recently it has been identified as a D15. After a major re-build the D15 is now regularly used for passenger hauling on public running days.

David Alexander - 5" gauge GER "Claud Hamilton" This D16 was built in 1970 as No.1903 and was acquired by David in 1990. It was subsequently re-numbered as No.1844 before being completely re-built by David and Peter Dickson, Peter will be driving the engine in the competition this year. Peter is representing the High Wycombe MES. He drove in IMLEC last year for the first time and came well down the order but has decided to have another go this year.



Eddie Gibbons - 3½" No.1418 GNR Large Atlantic This private entry was partly built to the LBSC design for "Maisie" and was started in the early fifties. The boiler is slightly undersize to allow for the lagging and relies solely on the two injectors for its water supply, The injectors are controlled by combined water & steam valves as on the full sized prototype. Since a complete re-build in 1982 the engine has run very reliably. Eddie is the Secretary of the Stephenson Memorial Miniature Locomotive Association.

David Ball - 5" gauge GWR Cookham Manor Finished in 1996 after taking 6 years to build this is Davids second locomotive, the first being a "Pansy". Built to Martin Evans design this locomotive differs from the design slightly with hollow axles and the axle boxes are fitted with oilite bushes. Representing Guildford MES, David regularly uses "Cookham Manor" for passenger hauling at the Guildford track and his current project is building a GWR 0-6-0 Armstrong Goods tender engine to his own design.

Les Pritchard - 5" gauge Lancs & Yorks 'A' Class Goods Started in 1981 the engine was built to Don Young's design and completed in 1995. It was found to be very light footed until the weight distribution was adjusted. The engine gained a Silver Medal at the 1997 Model Engineering Exhibition. Les has been a keen competitor at IMLEC for a number of years and gained a second place driving the late Tony Baker's B1 at Northampton in '96 and came 8th at Llanelli in '97 with the B1 driving on one side only.

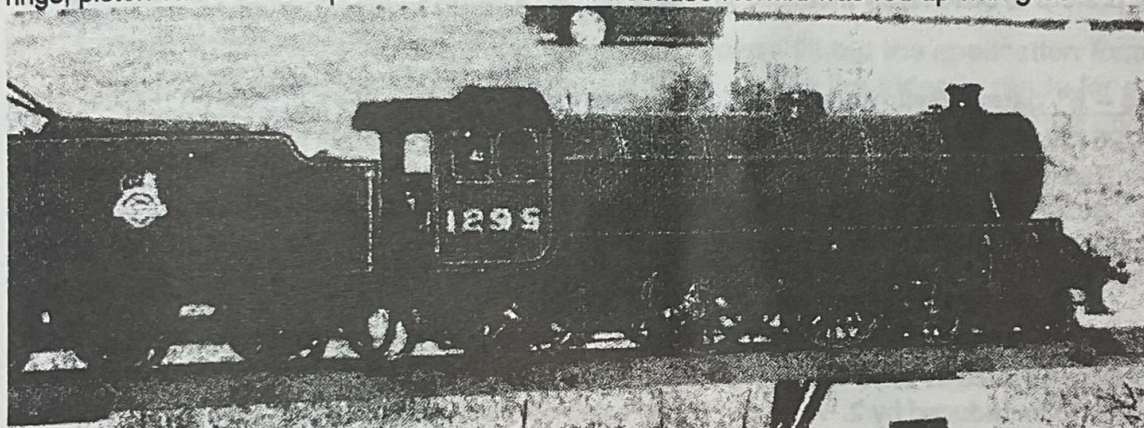
Brian Remnant - 5" gauge Sweet Pea This much modified loco is fitted with a copper tubed steel boiler, large cylinders, working steam brakes, Bremme valve gear and relies on injectors for its water supply. Brian built the engine over a period of 12 years and it was first run in 1987 and after de-railing in the '91 IMLEC at Guildford he fitted a rear pony truck to make it more stable. In his spare time Brian is a volunteer driver on the Kent and East Sussex Railway and a fireman on the North Yorkshire Railway.

Kenneth Woodings - 3½" Black Five Built to the LBSC design over a period of 2 years and first steamed in 1988. The engine is driven this weekend by Ian Priest who is the Vice-Chairman of the Kinver and West Midlands SME. Ian has built a 5" gauge "Pansy" and is currently building a 5" gauge "Nigel Gresley".

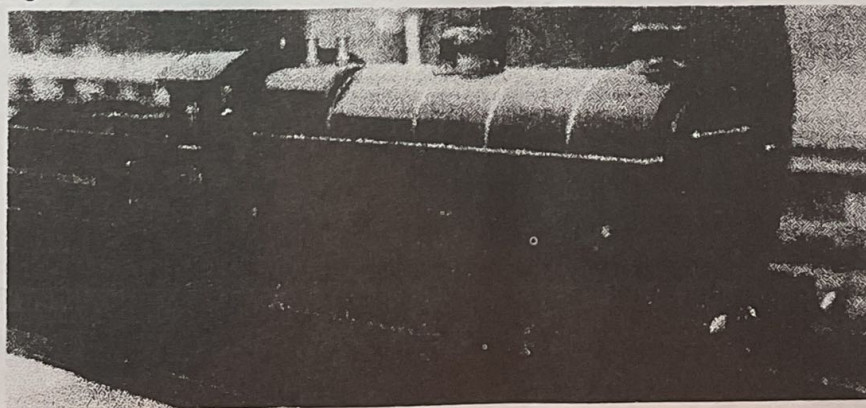
David Mayall - 3½" gauge 4F. This was the second locomotive built by David and was built to Don Young's drawings, some minor alterations were made to suit David's driving preferences. After a major re-build the locomotive was entered for the Llanelli IMLEC in '97 and managed to finish the run with a crank axle out of line after a violent slip. The engine is regularly used for passenger hauling on the Bracknell and District Model Railway Society track. David is currently finishing off a "Speedy" and has a Don Young BR Std2 and a Doug Hewson BR Std4 part built as well.

Roger James - 5" gauge LNER style Mogul. Roger's father started to build the locomotive some years ago but Roger took over the construction at a very early stage. The boiler and valve gear are to Roger's own design and he even made the patterns for the cylinder castings himself. Currently the Silver Medallist for 10cc tethered Hydroplanes and British record holder for 10cc boats with a speed of 135.08 MPH, Roger also flew control line aircraft to international standards until 1979.

Ronald Maddocks - 5" gauge B1. Representing South Cheshire MES the locomotive is driven this weekend by Graham Platt. The loco is claimed to be "50% Martin Evans" it sports valve gear to D. Ashton's guidelines, cab and running boards scaled from the full size engine, Spencer type drain cocks, P.T.F.E. piston rings, piston valves and is painted in LMS colour because Ronald was fed up with green and black engines.



Andrew Harvey - 3½" Lancashire and Yorkshire Class 30 Goods Engine. The late J. B. Escritt originally built this engine in 1962. Andrew purchased it at auction and continued the re-build he had already started prior to the builder's death. The original construction was scaled entirely from works drawings and Andrew is currently building a 5" version from the same works drawings. Andrew is representing West Huntspill MES.



Mike Richardson - 5" gauge "Lionheart" Modified Simplex. This is Mike's version of the popular Simplex design with the chassis lengthened by 2" and the overall width increased by ½". He began building a standard version of Simplex in 1992 but made a new set of frames to the increased sizes to enable the fitting of a larger cab. The first steaming was in late 1998. Mike is representing the Bristol SME.

Bob Bramson - 5" gauge LNER B1 Roedeer. Representing Butterly Park Miniature Railway Society, Bob has so far spent over 4000 hours building Roedeer and estimates that another 200 hours are needed to complete it. Based on the Martin Evans Springbok design many alterations were made to bring the locomotive nearer to the full size specifications and to improve performance.

Norman Rossiter – 5" gauge SECR K Class. Norman has handed the footplate over to Barbara Milton for the competition this year. Barbara has been driving for 11 years now and has been a competitor in IMLEC many times but has so far failed to carry off the trophy, maybe this could be her lucky year. The locomotive was completed in 1994 and the design was scaled up from 4mm drawings. It is a regular performer on the Bristol SME club track.

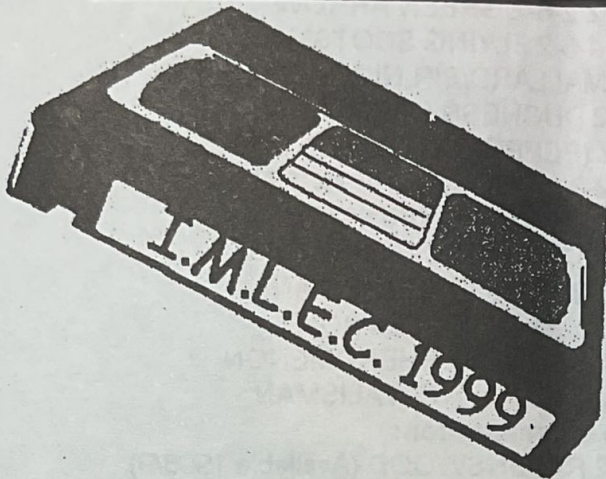
Alan Bibby – 5" gauge Lion. Built to the LBSC design but with much external detail added from the full size engine this model has now run over 1000 miles since it was completed over ten years ago. Alan says that it will not win IMLEC but should prove to be interesting run. The model was given a full overhaul a few years ago and is fitted with a spark arrestor, an exhaust oil separator and modified superheaters.

John Richardson – 5" gauge Crampton. Built to the EIM design over at two year period, this locomotive was first steamed in May '99. The regulator, steam pipes and water pump have been altered to be more in line with the typical Crampton design. John has previously entered IMLEC in 1978 and 1984 and says that he prefers to build rarely modelled prototypes. He is representing the Brighouse and Halifax MES.

Dave Tompkins – 5" gauge Railmotor No.1. The driver for this private entry is Paul Tompkins who competed in the '96 IMLEC, at Northampton, driving a 3½" A4 "Seagull" and this is his 5th attempt to win the Trophy. The Railmotor competed at the '95 IMLEC as a No.2 Railmotor recording one of the lowest efficiencies ever. Subsequently it was rebuilt as a No.1 version as you see it this weekend and during the rebuild Baker valve gear was fitted. The only casting used is for the smokebox door with the rest being machined from solid.

Ballan Baker – 5" gauge LNER Y4. Completed in 1986 this locomotive has logged over 1500 hours in steam. A new boiler was fitted in 1995 with the firetubes increased to 18g x7/16" diameter, this caused the number of tubes to be reduced by 2. A new axle and axleboxes were fitted in 1997. Ballan is representing the Lindsey Model Society.

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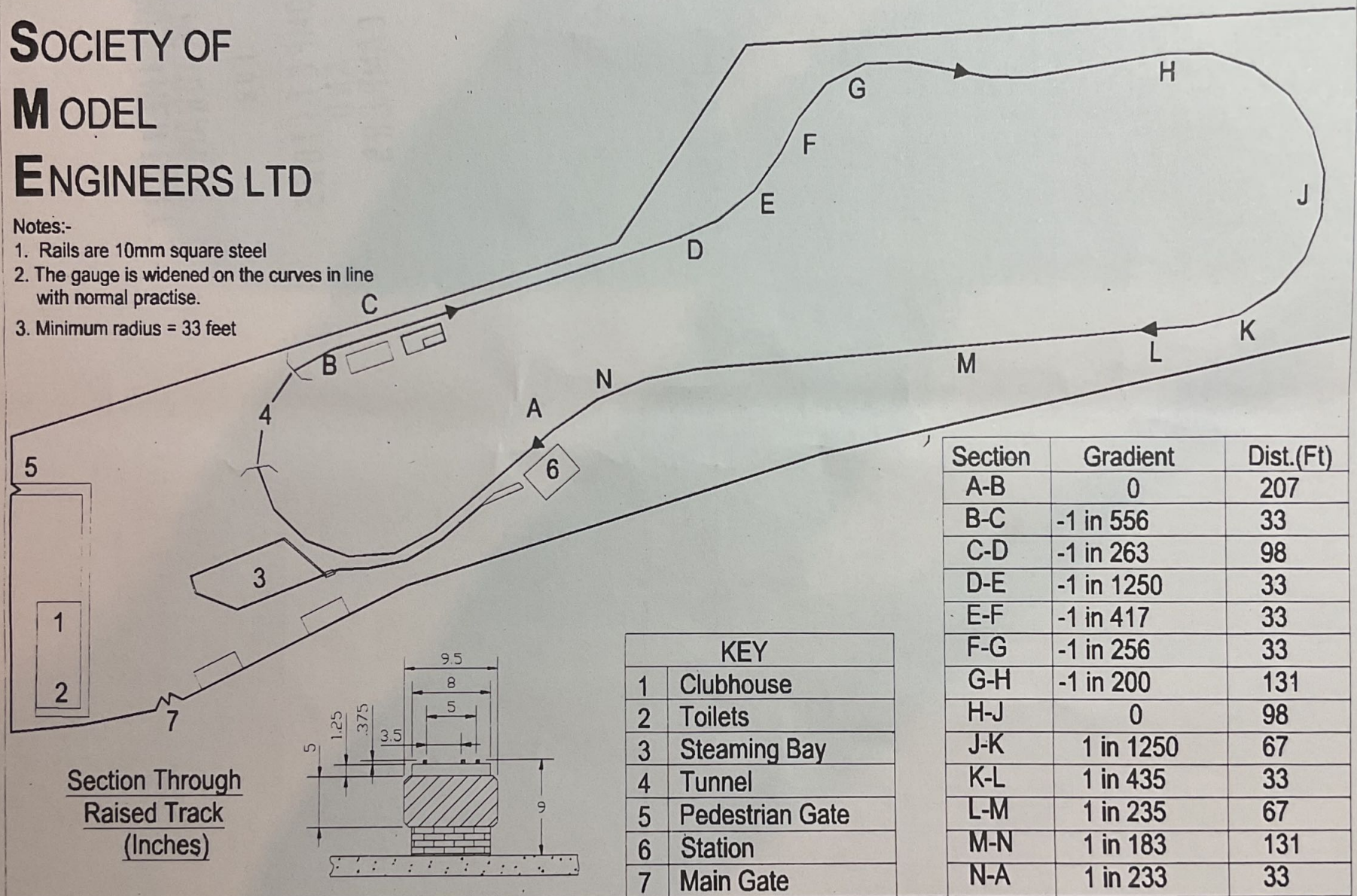
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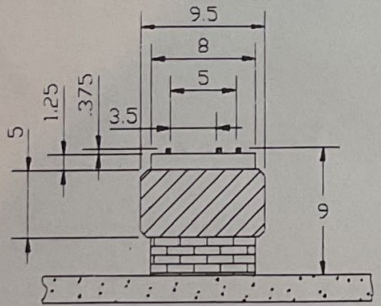
Notes:-

1. Rails are 10mm square steel
2. The gauge is widened on the curves in line with normal practise.
3. Minimum radius = 33 feet



Section	Gradient	Dist.(Ft)
A-B	0	207
B-C	-1 in 556	33
C-D	-1 in 263	98
D-E	-1 in 1250	33
E-F	-1 in 417	33
F-G	-1 in 256	33
G-H	-1 in 200	131
H-J	0	98
J-K	1 in 1250	67
K-L	1 in 435	33
L-M	1 in 235	67
M-N	1 in 183	131
N-A	1 in 233	33

Section Through
Raised Track
(Inches)



KEY	
1	Clubhouse
2	Toilets
3	Steaming Bay
4	Tunnel
5	Pedestrian Gate
6	Station
7	Main Gate

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