

HaRakevet

Series 16

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הרכבת

A Quarterly Journal on the Railways of the Middle East
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63:1

Proposal for a tramway bridge at the entrance to Jerusalem, by Aharon Gazit

EDITORIAL.

It has been a busy few months again, in the Middle East. And in Europe and elsewhere the worries concerning the slow progress of the stabilisation process in Iraq, and the Palestinian Intifada, terrorist attacks in Saudi Arabia and Turkey, and the construction of a security fence (sections of which are a wall) have led to a further deterioration in the level of objectivity and accuracy in media reports. Worrying because, it seems from history, people are always more likely to believe a lie than the truth. Which makes it the more important to present in this magazine what we can, as factual information and as a slight counter-balance to some of the misinformation on the past and the present. But there IS good news, of constructive moves and exciting developments. This time, however, relatively little on other M.E. systems. So, read and enjoy!

With this issue Series 16 ends and, almost by coincidence, a Series and a Calendar Year end at the same time. It is hoped in the future to make the Series and the Years coincide, as it is appreciated that some subscribers would find this administratively a lot easier. You should find a Subscription Renewal Form for Series 17 with this issue - if not, please contact the Editor or Steve Waldenberg. The Editor.

63:3.

In previous issues we have discussed the issue of HR and PR cranes. This photo by John Alexander shows Nippon Pacific HJR No. 82 being repaired at Amman on 3rd. June 1997; specifically, a superheater header is being installed using a hand-operated crane.



63:4.

NEWS FROM THE LINE.

Suddenly there seems a veritable spurt of new projects; In what follows there are some repetitions and some contradictions from various sources, but the trend is clear. And work on refurbishing the Jerusalem line is making such progress that soon Sybil's Beit Shemesh reports will become redundant. Below is what may be one of the last from our intrepid (and now freelance) reporter.

(a). PROJECTS APPROVED.

From "Israel Line" 14.08.2003.

"Minister of Finance Binyamin Netanyahu has acceded to a request from Israel Railways and declared three new rail infrastructure projects of national importance, 'Ha'aretz' reported. The projects are the Acre-Karmiel line, the Ha'Emek line, and the Be'er Sheva-Ashkelon line. The 24-kilometre Acre-Karmiel line will link the coastal line with Galilee, shortening travel time between the Galilee and Haifa and to the centre of the country. The Ha'Emek line will stretch 71 kilometres between Haifa and Afula and will shorten travel time from the Ha'amakim region to Haifa and Tel Aviv. The line from Be'er Sheva to Ashkelon will create a rail continuum for passengers and cargo between Be'er Sheva and the western Negeve communities, and will also link up to the coastal line."

(b). EILAT LINE DEVELOPMENTS.

The old/new idea of building the line to Eilat and Aqaba on the Red Sea is now beginning to look more serious, after several recent setbacks. A document put to the Cabinet on 19.08.03 points out that the change in approach is due partly to the growth in freight traffic through the port of Eilat, and also to the

possibility of developing the settlements along the line in the "Aravah", a Hebrew term denoting something between a desert and a prairie. There is also pressure from the municipality of Eilat to build the line in order to improve employment prospects there. There have been several feasibility studies carried out over the years, but only recently has the line been defined as profitable if it also serves Jordan.

From 'Israel Line' 10th. Oct. 2003: "Minister of Finance Benjamin Netanyahu and Minister of Transportation Avigdor Lieberman appointed a committee on Tuesday in order to examine the feasibility of connecting the southern port city of Eilat to the national rail network, "Ha'aretz" reported. The committee, which has until June 30 to submit its conclusions, will consider Eilat's role as the nation's southern freight entrance and transfer station for

goods moving between Israel and southeast Asia and Africa."

The Cabinet has, in the meantime, appointed Mr. Samuel Slavin - one of the former General Managers of the Ministry of Finance - to head a Committee for National Projects. He will thoroughly check the whole idea, considering the total current freight movements to and from Eilat, as well as the present passenger traffic (by road and air) - currently reaching 3 million annually. One idea being floated is to let the line be built by the private sector.

The line would be between 179 and 183km. long (depending on where the terminal and station of Eilat is built), will enable the distance of 350km. from Tel Aviv to Eilat to be covered in 2.5

hours by trains travelling at a speed of 180 km/h.

Mr. Slavin is due to publish his report not later than 30.11.2003. Remarks by Avigdor Liberman later indicated that initial thinking is for a freight line, with passenger services only to be introduced later dependent on growing demand; however, fast freight trains should be able to cover the 300km. distance between the ports of Eilat and Ashkelon in 3.5 hours, making this landbridge service concept competitive with trucks which need up to 8 hours, and thus relevant to shipping services who time their services in several days around the Cape.

In the meantime, on 13.11.2003 the 'Jerusalem Post' reported that Finance Minister Benjamin Netanyahu had met with representatives of the General Electric Corporation Pension Fund and other potential investors in the USA, and presented them with the plans to build a railway line between Ashdod and Eilat. Some of the meetings were initiated by US businessman Stanley Gold, head of Shamrock Investment Fund, which has invested hundreds of millions of dollars in Israel. A Treasury spokesman said that the GE fund, the largest in the US, manages assets worth \$70 Billion. According to this report, despite the reference to Ashdod (from where, of course, a line already exists to Kiryat Gat etc.), Netanyahu was referring to a 180km. stretch of line between Beersheba and the Red Sea, to 'break the Egyptian monopoly on the movement of trade between East and West'.

(c). NORTHERN LINES.

Meanwhile, the Infrastructure Committee on the same date approved the building of two lines already in an advanced stage of planning - the revival of the historic Hedjaz "Valley" (or "Ha'Emek") line between Haifa, Afule, Beit Shean and Jordan, and the 24km. new line between Akko and Carmiel!

d). RISHON LEZION.

A Transport Ministry Press Release on 31.08.03 noted that the Transport Minister Liebermann announced proudly (as though he had had anything to do with it!), "Good news for the people of Rishon leZion - for the first time since the State of Israel was founded they will enjoy a rail link to Tel Aviv." As well as easing congestion, the 3km. long link will also allow fast and easy connection to the rest of the system. The connection will be even further improved when the Lod - Rish HaAyin - Kfar Sava link, currently still freight-only or under

construction, is reopened to passenger traffic, enabling direct travel between Kfar Sava and Ashdod without the detour through Tel Aviv. Even more improvement will be felt from 2007 when the line Tel Aviv - Rishon Le Zion West opens - thus linking the two cities directly without the detour through Lod; this line will also be extended further to Ashdod, thus providing a second link between the two centres. The Rishonim station is elevated to enable the future link to West station to cross over the nearby road junction, has 2 platforms of 200m. length, underground pedestrian passage, lifts and elevators and a huge parking area. It cost \$40M to build, and was designed, as noted in the last issue, by the same team that designed "Kfar-Sava-Hod-Hasharon-Nordau" (a lengthy name designed, says Aharon, to avoid annoying any Municipalities!) The traffic forecast for the link is 1.2M passengers in the first year of operation, due to the fact that only an hourly service can be offered initially due to the continuing shortage of rolling stock. From March 2004, as more stock arrives, annual traffic may rise to 1.8M. (However, the public reaction to fares 50% higher than the bus will still have to be awaited.)

(e). PENDOLINO COMPENSATION?

In August 2003 Alstom Ferroviaria was still trying to reach an agreement with the State of Israel regarding claim for compensation since Israel did not in the end purchase any Pendolino diesel multiple units; Alstom claims to have invested about \$420,000 in preparing the Tender documents.

(f). I.R. MANAGEMENT CONTINUITY ISSUES.

See 62:4:(j). In August Yossi Snir, despite previous reports still acting as I.R. Ltd. General Manager, was negotiating with the Company's Directorate to be employed as a consultant for major projects, at a monthly salary of \$5,000 for one year. He intends to run as a candidate for the municipality of Rishon leZion, where he lives. Around a year ago he declared it to be his ambition to run as Mayor for this city, but since the current Mayor Mr. Meir Nitzan is unbeaten till now, he would be content to be an ordinary Member of Council.

The Directorate confirmed that the negotiations were taking place, explaining that their intention would be to employ Mr. Snir for the large and complex projects such as the lines to

Modi'in and Jerusalem, that to Rishon leZion West and the electrification plans, due to the experience he has gained in these matters during his current post.

As yet - again, despite previous reports - (there has clearly been some backpedalling going on) - no fixed date has been set for terminating his current employment; this means he will indeed inaugurate the new lines and stations on 13.09.2003, the date of introduction of the new timetable.

No successor has been appointed so far, and the only candidate known by the end of August was Mr. Yaron Zalikha, currently Deputy General Manager for Finance in 'Derekh Eretz', the company building the Trans-Israel toll highway. He is the candidate of both Finance Minister Benjamin Netanyahu and Transport Minister Avigdor ('Ivette') Liebermann. The candidate himself stated that "he is still considering the job".

(g). BEN-GURION AIRPORT LINE.

From a Ministry of Transport Press Release of 26.08.03:

"The Transport Minister, Mr. Liebermann, announced today that the line between Tel Aviv and Ben Gurion International Airport will be opened during March 2004, about three months ahead of the opening of the new "Airport 2000" Terminal 3.

The line is 7.5km. from Shapirim Junction (a rail junction near a highway interchange of the same name) to Terminal 3, and runs for 5.4km. below ground level, including 3 tunnels totalling 700m., and is considered to be one of the most complicated projects in I.R.'s history. It employs seven construction companies with a total of 300 workers. There are four bridges, of which two are overbridges for agricultural vehicles, one a road overbridge, and one rail bridge over the Ayalon river.

When opened, trains will cover the section between the airport and Tel Aviv in 10 minutes, at an initial frequency of 2 trains per hour in each direction, later to be increased to 4 per hour.

The overall cost of the project is stated to be more than \$83M; during the first year of operation the forecast traffic is 900,000, whilst within three to four years it should reach 2M. p.a. The line between the airport and Modi'in, now under construction, should open in Nov. 2005, while the new fast link Modi'in - Jerusalem is now foreseen opening in 2009."

(h). HAIFA SUBURBAN.

Unusual locos on the Haifa suburban workings were noted towards the end of August 2003. The Kiryat Motzkin - Hof Carmel train which is regularly top-and-tailed was seen on 19/08/03 with Jumbos 604 and 607. Next day Bo-Bo 734 worked the early morning Nahariyya - Hof Carmel. These were the first occasions such loco combinations had been observed on trains which are almost invariably worked by G12s.

(i). NEW LOCOS ARRIVE.

Six new Alstom JT42BW Bo-Bos arrived at Ashdod Port on Thursday 6.11.03. Running numbers are 756-761 and works numbers are 2118-2123. By the next day they were ensconced in the newly renovated 3-bay central maintenance facility at the Haifa East loco depot.

(j). BEERSHEBA LINE REALIGNMENT.

Nearly six kilometres of the Beersheba line, between Na'an and Kiryat Gat is being completely realigned to eliminate speed restrictions on several curves. The new section is to the west of the old alignment and up to one kilometre distant from it. Work is due for completion in late November or early December 2003.

(k). SEPTEMBER STATISTICS.

The onward and upward progress of IR traffic figures continues, and shows no sign of abating. Passenger traffic in September 2003 totalled 1.64 Million, 22% more than in September 2002; from the beginning of 2003 this makes a cumulative total of 14.3M - a 14.1% increase on the same nine-month period in 2002. In the first two weeks of operation of the two new lines opened on 13th. Sept., a very encouraging picture was seen: between Beth Shemesh and Tel Aviv 14,000 were carried, between Rishon-Le-Zion and Tel Aviv more than 21,000 - much higher than expected. During the week of the Sukkot holidays (11-18.10.2003) 3,000 passengers used the Beth Shemesh line daily - the forecast had been 500!

The rise in passenger traffic was distributed as follows:

Rosh haAyin - Kfar Sava.
103,000 = + 66%.
Beer Sheva - Tel Aviv.
225,000 = + 25%
Tel Aviv - Nahariyya.
221,000 = + 16%
Ashdod - Tel Aviv.
254,000 = + 18%.
Haifa - Nahariyya.
134,000 = + 19%.

(l). ASHKELON LINE DOUBLING SCHEMES.

From a Press Release of 25.10.2003 by the Ministry of Transport:

Minister of Transport Avigdor Lieberman has urged the railways to finish the rebuilding, upgrading and double-tracking of the Ashdod - Ashkelon line, specifically the sections Nitzanim - Ashdod and Nitzanim - Ashkelon, totalling 15km. at a cost of \$49M, in order to open this for passenger traffic within 18 months. This would enable Tel Aviv to be reached in 46 minutes - this journey time would be cut even further in 2008 when the direct line via Rishon Le-Zion West should be opened, thus avoiding the need for the roundabout journey through Lod. Within weeks, the tender for the new station in Ashkelon should be published. This will have Park-and-Ride facilities. An initial service of two trains hourly in each direction is envisaged once all this is completed.

(m). BINYAMINA FOOT BRIDGE.

For the first time in Israel, the overhead pedestrian bridge to be built during 2004 at the Binyamina station at a cost of \$2.05M, with a length of 65 metres, will be provided with four elevators (normally there are only two in underpasses.) It will be integrated architecturally with the stone-built station building, and will include elements of styled stone, iron and glass. It will provide full and safe access to each platform.

\$4.55M has been invested in this station so far, including an acoustic barrier wall at a cost of \$1.36M and parking for 550 cars.

(n). COMPENSATION.

The Court has recently instructed the Railways to pay compensation fees of \$2.73 M to landowners along the Rosh HaAyin - Kfar Sava line, compared with \$0.61 offered by the railway, thus rejecting the latter's claim that the land was of poor quality and access.

(o). LATEST MUSEUM ACQUISITION

After almost a year of numerous problems and equivocations (both real and imagined) G12 Bo-Bo diesel loco No. 107 finally arrived at the Museum from Qishon Works in the late afternoon of 17th November. Something had seized tight during its stay at Qishon and had to be flooded with oil to release it, with another loco being used to rock 107 back and forth until it

moved freely. These procedures had occupied much of the spring and early summer, but further delays then ensued. 107 is in quite good external condition, though the paintwork is rather tired and will need washing and touching up to make it properly presentable.

(p). LEVEL CROSSING ACCIDENT.

On the morning of 16.11.2003 a train to Beersheva formed of IC3 units hit a vehicle on a level crossing. It is known that there were several injured, including the train driver. Some were transported to hospitals by helicopter.

63:5.

JERUSALEM LINE NEWS.

(a). ENVIRONMENTAL ISSUES AND THE FATE OF BITTIR.

In August the General Manager of the Ministry of Environment, Dr. (Mrs.) Miki Haran, appealed to the Chairman of the Railways Directorate regarding "ignorance of preserving the landscape along the alignment of the old line to Jerusalem" during the upgrading works still under way. She claimed that the reasons originate in inaccurate survey works, and the free hand given to contractors, who do not have any idea that they are destroying parts of a National Park and historical stations, which were to be preserved even though no longer in use. As an example, it appears the former buildings at Bittir have been demolished "without any justification".

IR rejected these appeals, claiming that they work closely with a landscape architect and with full co-ordination with the National Parks Authority, as well as with the Ministry, and have so far invested more than \$4.2M in landscape preservation and development along the line.

(b). BETH SHEMESH PROGRESS.

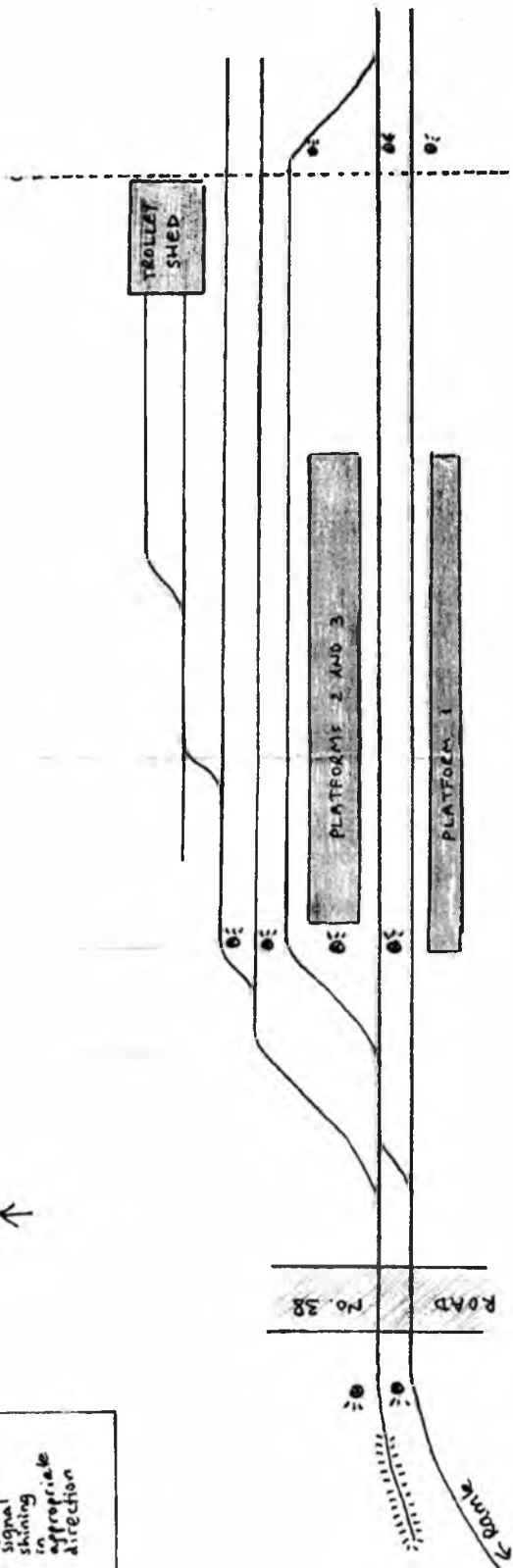
Several reports, for the record. Sybil Ehrlich writes:

15th. August 2003: Here is a track-plan of Beth Shemesh as at this date. Some notes: At the time of my visit there were no buffers anywhere; lines that stop suddenly in the diagram do just that on the ground. Two sidings end on purpose-built embankments as shown. The one on the west side is in exactly the same place as its predecessor, also on an embankment. The road (Sha'ar Hagai to Kiryat Gat) is being widened, and until the bulldozers and

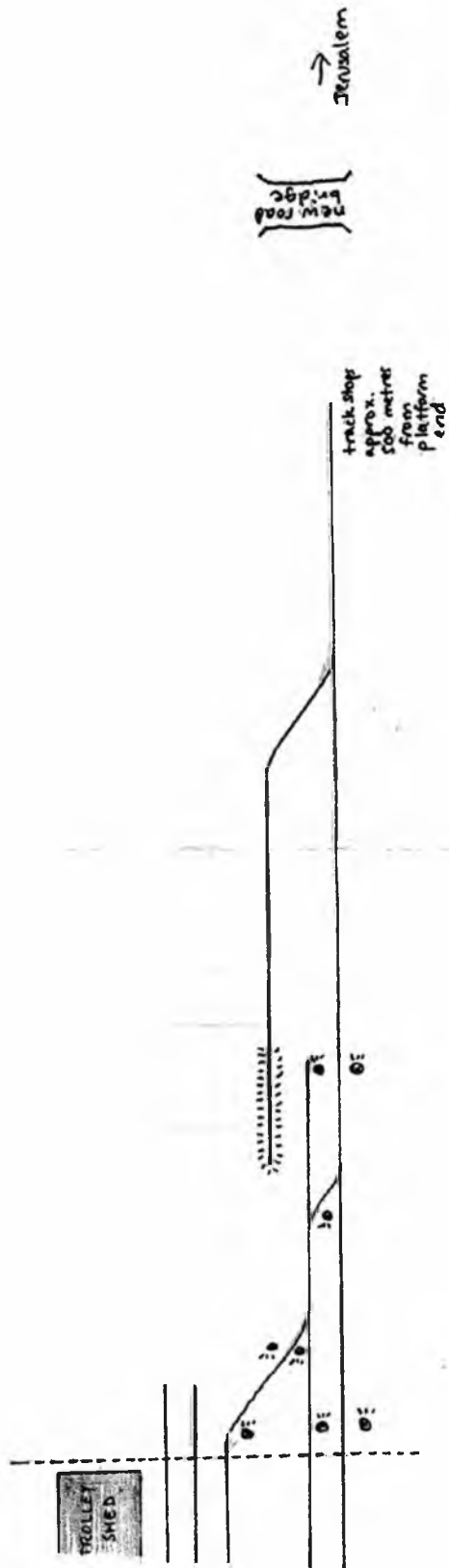
NOT TO SCALE

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הרכבת



Page 5

steamrollers finish going to and fro there are of course no level-crossing barriers. The bridge to the east of the station is in place, but there is no road on it yet. I understand that this will become the main access road to Beit Shemesh in the future, avoiding the level crossing.

(see track plan on previous page)

It is interesting to compare the track layout with the 1944 layout (Harakevet 44:26), which - except for the turntable, water tanks etc. - was unchanged until it was all swept away in February 2002.- The access road to the station (in the middle of the 1944 diagram, south of the words 'Station Building') has been there since at least 1933, and I'm happy to report is still the access road. Workmen are putting finishing touches to the pavement and a roundabout (traffic-circle.)

Three signs have been put up by the Beit Shemesh Municipality and Israel Railways, pointing to the station. They are all the same except for arrows showing the precise direction. They show a double-decker train (at least it's not an HST!). I suggested to the municipality spokesman that I prepare a small exhibition on the history of the station, as was done for the reopening of Rehovot. He was thrilled by the idea, and most impressed by what I gave him - five photos from various eras, and an 1896 timetable, and a brief article describing the history of the station.

On 21st. Aug.: "Every day this week there was a works train (loco 601 or 615), and heaps of track - actually just lengths of rail - but I can't get any sense out of the workmen. They probably think that, being female, I wouldn't understand..... When I came home at about 1 p.m. today (Friday) the loco had gone but the rail was piled up by the side of the track, on the west side of the road."

On 8th. September she wrote: "I notice you said Beit Shemesh is opening on September 15. This date was announced some time ago, but in fact the new timetable is coming into effect

on Saturday night, Sept. 13th. Of course I will be there. I was at the station today and by chance met the new stationmaster. He said he recognised me from the trains to Jerusalem.(Of course there aren't that many female railfans in this neck of the woods!) He seems well-disposed towards people like us, so there won't be any problem taking pictures on Saturday night (scheduled double-decker, too bad it will be dark), and Sunday (all IC3s). The first passenger-carrying train (not public) was in Beit Shemesh on August 26th. carrying the IR bigwigs on a tour of inspection. I found out about it quite by chance when I happened to be doing a bit of linesiding at Na'an (only 2 km walk from the nearest bus stop). A train terminating at Ramle came in (they continue to Na'an where they wait for an hour). I got talking to the driver, and was surprised to see an IC3 going past in a southerly direction when there wasn't one listed in the timetable. The driver thought for a moment and told me it was going to Beit Shemesh..... On the one hand I was annoyed at not being there, but on the other hand if I hadn't been at Na'an none of us would have known about it. To cut a long story short, someone at IR took pictures of it, which he sent me by e-mail and I forwarded them to the Railnews Israel web site. And I got a ride in the driver's cab from Na'an back to Ramle!"

And at last: "Last night, Saturday Sept. 13th., the station was finally opened. Note that this was the date decided upon a few months ago - it was originally announced as Sept. 15th., but IR's new timetables always start on Saturday night for some reason.

I rushed to the station the minute that Shabbat was over - Evyatar Reiter was there from 17.30, he said - and found the whole place in darkness, because the electricity wasn't working! This included the signals. Evyatar, who

had presumably spent the past two and a half hours talking to the security guard when he wasn't taking photos, assured the guard that I wasn't a terrorist and should be allowed into the station, which I was. A few officials were flapping around in the dark and the rail-

way electricians were summoned from Ashdod.

Crowds of Beth Shemesh residents had come to watch the great event, and some even to travel on the first train, but presumably because of the safety issue (dark platform edges and the possibility of falling off) the doors to the station building weren't opened until the train was in the Platform.

A few minutes before the arrival of the train the level crossing warning bells rang and the barrier came down. And loco 738 trundled in, with double-decker coaches 440, 441 and 442 and driving coach ("Karon Nihug" - the correct term) 496, having come in e.c.s. from Lod to form the 21.19 departure. The booking office was closed and tickets were sold on the train. The fare to Tel Aviv was a rather high NIS 22.50, and since the old-style paper tickets don't come in higher values than NIS 5, each passenger was presented with a total of 10 tickets - if they all had what I got - (one @ NIS 5, three @ NIS 3, three @ NIS 2, five @ NIS 0.50). The journey to Tel Aviv was exciting but not especially eventful. I and many further passengers got off at Tel Aviv Hashalom, which is adjacent to the Azrieli Mall, had coffee and took the 22.59 train back to Beit Shemesh. By the time we got back, all the lights were on - Evyatar stayed in the station taking photos, and he assured me the lighting came on shortly after the train left.

Connections from Beit Shemesh to Rishonim are as bad as they could be - involving a 59 minute wait at Tel Aviv! But not many normal passengers would go this way."

On 2nd. October came the following report:

"Well, the station at Beit Shemesh now officially exists, having been opened with great fanfare by Prime Minister Ariel Sharon. I was there in my capacity as 'Jerusalem Post' freelance reporter on Tuesday September 30.

Security was, of course, extremely tight. I knew I would need a permit to get in, and it turned out that permits were issued by the Beit Shemesh municipality. No problem there - I know the spokesman because I had previously introduced myself as the local pet tame railway station expert. He took my particulars and said I should be at the station at 12 noon. I got there and found about 300 policemen and security people, and barriers up everywhere. At the first hurdle I was asked whether I had some card or other. I said "No". "Without the card you can't get in". I



said "Hey, I gave my particulars to the municipality; if you look on your list you will see my name". Sure enough, there it was. So I was admitted to the outer precincts of the Temple.

Next stage, into the station building, where there were two X-ray machines and whatever you call those sensors that you have to walk through. Eventually I found myself in the Holy of Holies. There was a red carpet on the platform (!), and two "living sculptures" – each one consisting of a girl standing on a small stool, the whole thing (girl and stool) swathed in white, topped with a circular red hat (representing Old English level-crossing gates?!), waving her arms around and performing gyrations. Don't ask me what that was all supposed to be. More interesting was the lunch, provided by the Beit Shemesh municipality.

At 12:14 the regular train from Tel Aviv arrived. I don't know what the passengers thought when they saw all the flags, balloons and red carpet. They were hastily ushered out, and the train, which normally waits in the station for half an hour, left immediately. The 12:46 departure was cancelled, and a bus laid on instead.

At 12:42 the "royal train" arrived – two IC3 sets, numbers 7231, 7431, 7031, 7036, 7436, 7236. The train had started in Ashdod, where there was also a ceremony, and went via Lod where of course it reversed.

The speeches consisted of the usual platitudes. Yossi Snir said there are more than 1,000 passengers a day using the station, with 27 trains. When the line is opened to Jerusalem the number of trains will be doubled. He has inspected the line of the track to Jerusalem, and damage to the natural landscape is minimal and will be repaired.

Transport Minister Avigdor Lieberman said there will be a railway to Eilat (he didn't specify in which century), and also to Sderot, Akko (oops!) and Afula. Total railway investment is NIS 20 billion. He said in two years it will be possible to get from Dimona to Tel Aviv in 1 hour and 20 minutes.

The next speaker was Beit Shemesh mayor Daniel Vaknin who, needless to say, had no original thoughts on the matter.

After a short musical interlude, the prime minister spoke. He also said it "wouldn't be long" before there is a railway to Eilat. He summarized the history of the station, and threw out a few more platitudes. As station openings go, it wasn't at all bad. And I didn't have to go very far!

In other Beit Shemesh news, there are now monthly season tickets to Tel Aviv, at a cost of NIS 630. Single fare is NIS 22.50 – on the high side; there are no return tickets to Tel Aviv. In comparison, the return fare by bus is NIS 35. And this bus fare is from anywhere in Beit Shemesh (the bus goes all round the town before heading out to Tel Aviv), but of course only to the central bus station in Tel Aviv. NIS 22.50 will take you by train as far as University station, but unless you walk to Beit Shemesh station it will cost you NIS 4.60 for the bus each way. As far as the fares are concerned, bus wins hands down, but of course it takes much longer by bus. However, the train is very popular."

On Friday Oct. 3rd. a surprise visitor arrived at Beit Shemesh station - it was actually the delayed 11.22 arrival, which should have been formed by an IC3 like all services apart from those on Saturday evenings; however, presumably due to a failure a double-decker set comprising loco 738 and double-deck coaches 466, 465, 464 and 414 appeared, thus giving Sybil a chance to get some photos in daylight.

By 16th. Nov. it appeared that there was ballast on the trackbed for 1.5km. towards Jerusalem - though no track - and even two separate signals which are already connected and lit, standing next to the trackless ballast!

63:6.

TENDERS.

(i). TM/SR/09/03. A framework contract for providing various crane services from time to time, according to the Railways' needs.

Contract for 24 months, with optional extension a further 36 months. Bids by 22.09.03.

(ii). MC/SR/15/03. A Framework Agreement for Supply and Installation of Data Communication Systems. Contract includes: Supply and installation of Routers, Switches and control systems from time to time according to the Railways' needs, which will be used to communicate between the Railways' sites all over the network.

The Routers will serve several parallel systems, as well as widening the existing communications network, including links to back-up centres, using the infrastructure of the internal relays system based on the SDH technology.

The Routers equipment is designed to support the LAN/WAN communication at the sites, IP based, and to

link them with the computer and security centres and the designated back-up sites for each of them.

The supplier will attach to his quotation a statement that, as far as he knows, as well as according to a personal check with the manufacturers, there is no manufacturer's statement of EoL (End of Life) regarding the equipment used.

The contract is for 24 months with an optional extension of a further 36 months; There is also an option for maintenance services for seven years from the end of the guarantee period.

Last date for bids: 24.09.2003.

(iii). BN/KB/14/03. Building the station at Modi'in Outskirts.

Works to include: Structure 01: the station building, underground pedestrian passage, parking and access roads.

Structure 02: An option for building a public through passage.

Structure 03. Track infrastructure.

Time for implementation: 18 months. Bids by 10.11.2003.

(iv). HN/KB/18/03. Covering Walls with Stone on the sections required on the upgraded Beit Shemesh - Jerusalem line.

Time for implementation: 3 months. Bids by 20.10.2003.

(v). MC/RC/01/03. Frame agreement for supply, installation and servicing of a lathe for manufacturing rolling stock parts.

There may be an option for an additional lathe during three years from the supply of the first machine. Bids by 27.11.2003.

(vi). MC/RC/01/03. Manufacture and Supply of four 10-ton Screw Lifting Jacks. IR estimates that two sets will be needed upon signature of an agreement, and a further four sets will be ordered by the end of 2005. Bids by 30.11.2003.

Request for Information - on the availability of second-hand or refurbished/overhauled rolling Stock for Purchase or Lease. IR wishes to purchase or lease single-deck passenger push-pull locomotive-hauled trailer coaches suitable for electric power generating, including vehicles with driving cabs suitable for operation on the IR system. This information to be submitted by 25.12.2003. [The Editor has already suggested surplus DB 'Silberling' or Inter-City coaches which

are currently being withdrawn from service in Germany - and now the twenty ICE-TD tilting four-car diesel units are to be withdrawn also!]

The Railways have also published a request for designers and consultants in the local market for apply for jobs in designing stations, tracks, controlling various projects, bridges and tunnels, and low-voltage electrical works.

63:7.

LIGHT RAIL PROJECTS.

(a). TEL AVIV.

(i). GHOST STATION? Some discussion on the 'Pasim' electronic chatline concluded that the "Kolbo Shalom" office building was perhaps built with foundations in such a way that a subway could pass under the building and maybe a station could be built, but that this does not count as a ghost underground station!

(ii). RED LINE REALIGNMENT IN B'NEI BERAK. The National Council for Design and Construction approved in August a change in the alignment of the first LRV line; in B'nei Berak, the section between Ben Gurion Street and Geha Junction road will now run under the Jabotinsky Road. This will cost \$162M more than the original design, which envisaged street running on this section. One reason for the change is the worry raised by the B'nei Berak Municipality concerning trams running on an already-overcrowded road, thus creating more problems rather than traffic relief.

NTA, the company planning and managing the project, supported the change, claiming that this will enable traffic to be increased by 25% by allowing use of longer trains. The Transport Minister has also given formal approval.

(iii). GREEN LINE REALIGNMENT. Changes are also proposed to the alignment of the second LRV line; according to these the line will start in Rishon LeZion, pass through Holon on the surface, reaching Ben-Zion Avenue (near the old Central Bus Station), then pass underground to Maariv Junction, under Ibn Gabirol Street to Dov Airport, from which it is planned to continue to Herzliyya through Glilot Junction. The alignment of this final section, and whether it should be surface or underground, has not been finalized. Also still unknown is the source for additional funding - the 5.5km. of the underground sections will cost at least \$550M for the deep boring. Also unclear is the future for two additional lines, the Yellow Line to Herzliyya and the Purple Line to Kiryat Ono.

(b). JERUSALEM.

The Sub-Committee for Appeals of the National Council for Design and Construction has finally approved the first Jerusalem LRV line, thus rejecting all the appeals which claimed the LRV "will increase noise and air pollution in the city". However, the plan to build a bridge at Herzl Avenue at the city's entrance has not been approved; it is claimed that such a plan needs to be presented separately to gain the public's reaction.

It was also recently announced that the Bank Hapoalim will lead the financing of the project, to be implemented by the City Pass group. The project's Tenders Committee has permitted this group to raise the money by November 2003, and the bank will complete this procedure within a few weeks.

However, the project was in October 2003 facing financial problems, among the reasons being the crisis facing Alstom, the winning supplier of the Citadis LRV. (Alstom had made heavy losses in other parts of its engineering production.) The government had promised to help, but in the meantime the competing group headed by Siemens had re-appealed to the Court, claiming that "winning the project through bidding a slightly cheaper price does not secure the ability of Alstom to fulfil its commitments."

63:8.

OTHER MIDDLE EAST RAILWAYS.

A. IRAQ. (a). One has to scabble for scraps of information here and there. "De Volskrant" of 11.08.03, p.3, had an article on the problems facing 1,100 Dutch troops in Southern Iraq, and the amount of unexploded ammunition still lying around. The unit ("Explosieven Opruimings Commando" or "EOC", "Explosives Removal Unit", are in As Samawah. The following (translation from the Dutch by the Editor): "In a land which, under Saddam Hussein, was one large military store, there is plenty of work for the EOC men. Even in the railway station, the provisional billet for the Dutch troops, there are mortars and grenades lying freely all over the ground. A few hundred metres from the storage shed where the military sleep, the weapons are simply lying on the tracks. Mortar shells that were too close to the camp have been removed in recent days. "We think the Iraqis must have simply shoved them out of the wagons" says Brandenburg. It stinks between the sleepers. "When you don't smell munitions, then you smell the shit" calls Corporal Frits Frielink, "From the Americans who were here until recently." In the barracks complex, where not a single building is still standing intact, Jansen is amazed at the variety of weapons and munitions that one can find here. "Whatever you can think of, it's here." "Up to here and no further" he calls out, suddenly. "from here it will get too dangerous." The Netherlands may control the large province, but the removal of all munitions is not seen by the military as their job. Says Jansen: "It is not in our mandate; it will take years and cost a lot of effort; the local administration should start a project to tackle this problem."...." Hmm. It appears that it will take some time before train-spotters will be able to move freely in such conditions.

(b). According to CRJ No. 135 p.38: "News reports during and after the recent conflict have been largely silent on the subject of railways. However, a television news item on 19th. April showed a train with food aid departing Umm Qasr for Basra, diesel-hauled and with military escort. The Baghdad - Basra main line reopened to passenger traffic on 9th. May. Before the war there was a 9.00 day train from Baghdad West taking 10 1/4 hours for the 541 km. journey, and three overnight services on slower schedules. The 'Daily Telegraph' of 7th. June contains a journalists's account of his attempt to travel by train from Baghdad to Basra. Fare was a mere 1000 Dinar (less than GBP 0.60), and scheduled departure time 'not before 8.30' - in practice it was 9.10. Motive power was a Chinese-built diesel loco numbered 2706, reputedly only delivered in 2002 but described as unreliable rubbish by the driver. Heat and dust were not conducive to a pleasant journey, and condition of the track was such that there were sections where only

20km/h were permitted. At Samawah, 274 km., the train was scheduled to cross the opposite working. Arrival here was at 14.20, but at 17.00, with still no sign of the northbound train, the journalist abandoned the train and took a taxi to Basra. On calling in at the station there, he found that the train to Baghdad had never left, as the workers were on strike demanding wages they had not been paid for four months!"

(c). A British ITN news report on 22.11.2003 indicated that the first train from Baghdad to Mosul under the new regime had just operated.

TURKEY. (a). EXHIBITION. From CRJ No. 135, Autumn 2003, p. 40: "Iron Track - Age of the Train" was the title of an exhibition organised jointly by TCDD and Yapi Kredit Bank in Istanbul, from 14th. March to 24th. May 2003. The venue was the Yapi Kredit Bank Art Gallery at the Vedat Nedim Tör Musuem in Galatasaray Square, On display here was a wide range of small exhibits including tools, medals, paintings, photographs, old paperwork, scale models of locos and rolling stock and loco builders' plates. In the Square itself was TCDD 0-4-OT 2251, normally displayed at Sirkeci station, and which returned there after the exhibition closed. The British firm of Hornby had a stand at the exhibition. The title was also used on two publications - one a 32-page English language exhibition guide, well illustrated in monochrome and colour; Presumably a Turkish-language version was also produced. The other is a massive 264-page book, bilingual Turkish and English, though text is comparatively brief. A handsomely produced volume, with numerous colour and monochrome pictures - for the record the ISBN is 975-08-0575-5."

(b). OY VEH IZMIR. During winter 2002/3 the small museum at Izmir Alsancak Station was stripped out and refurbished; it was scheduled to re-open in Spring 2003.

(c). OLD TRAMS IN ISTANBUL! It is amazing where information can be found. In "Berliner Verkehrsblätter" No. 592, Jg. 30 Nr.11, p. 214 is a brief item on two four-wheel trams from the DDR which have been sold by the Verkehrsbetrieb Schöneiche-Rüdersdorf (who run a metre-gauge electric tramway east of Berlin) to run on a planned Nostalgic Tramway in the Asiatic side of Istanbul! The trams are Tw 75 (built 1975) and Tw. 77 (built 1957, formerly Cottbus no. 91).

63:9.

NOTES AND COMMENTS.

(a). PR DISTRICT ANNUAL REPORTS (from Paul Cotterell):

Since the article in 61:14 appeared, a whole bundle of these District annual reports have now turned up at the IRM Archives. They cover the years from 1930 almost to the end of the Mandate. It is now evident that the District reports formed the basis for the better known Annual Reports of the PR General Manager. However, the District reports provide a great deal more information, and in an easily accessible layout, than appears in the GM's Annual Reports. There are also a few Haifa District reports among the documents recently discovered, but it is obvious that the Lydda District really went to town on the presentation of their reports, including hand-coloured maps and numerous small but sharp photos (rather a lot of which have sadly degraded over the long years of storage in less than ideal conditions). The District reports were compiled by the Engineering Departments involved and mainly reflect their areas of concern: locomotive matters etc are dealt with only peripherally and not in any detail. So far, at least, the Mechanical Department is poorly covered in known surviving documents, but there remains an awful lot of unsorted material which could yet shed more light on this and other areas of Palestine Railways.

(b). THE HILLMEN'S PRIDE - BUNKER WAGON.

The old mobile concrete bunker dating from The Disturbances was last featured in a view at the Railway Museum on page 26 of *Harakevet* 52. The Lydda District Annual Report of 1936-37 has a small, slightly blurred, photo of this bunker in use at the rear of a passenger train and includes the following notes:

"A reinforced concrete armoured truck was built on a 30 ton flat [wagon]. This was used to protect passenger trains on the Jerusalem line and for patrol trains on this line where very determined attacks were made on trains and on patrols. It was designed with a 'boulder proof' roof for protection against stones rolled down from the mountainside, mounted seven Lewis guns and had special fittings for rifle grenade firing. It was christened by the Army 'The Hillmen's Pride'."

It may be noted here that in this report the word "Hillmen's" is given an apostrophe. However, as received at the Museum in May 1999 with faded original lettering, there was no apostrophe.

(c). THE FUTURE OF THE IRM ARCHIVES (PART 2):

A brief outline of the decision to transfer these Archives to Jerusalem was given in 58:9:(o). For various reasons, not all of which had previously been apparent, it was subsequently decided to try to forestall such a move. Early in 2003 representations were made to the IR General Manager who ordered that the transfer should be frozen. It is obvious that the 'natural' location for these Archives is at the IRM. There was a real danger, also, that the Railway Archives would be split up since the Ginzach HaMedina in Jerusalem appeared only to be interested in acquiring the written material, and only a proportion of that too. This would have meant that a large part of the collection, such things as diagrams and drawings (of which there are thousands), photos, tickets and other items, were in danger of becoming homeless. There was concern, too, that the Railway Archives may have been assigned to a 'black hole' in Jerusalem as the Ginzach HaMedina has its own problems of under-staffing and under-funding. And there was the absurd situation of IR being responsible for sorting and listing the collection for transfer to Jerusalem - precisely what would be needed to be done to properly establish the Archives at the IRM in Haifa. Why do all that work for someone else when you can do it for yourself?! These concerns were reinforced in June 2003 when the State Archivist resigned his position as head of the Ginzach HaMedina, saying that the standard of documentation and preservation there was that "of a third world country" and that he was unable to carry out his duties properly.

For the moment at least the IRM Archives will, therefore, stay at the Haifa Museum. However, the problems which led to the original decision for their transfer have still to be addressed. Most importantly, there is no room to collect and accommodate much material stored at different sites around the country. An enormous amount of work still needs to be done on the material already in the IRM Archives, and the minimal staffing requirements are absent. (Chen Melling plugs away determinedly in his limited spare time to impose order out of chaos, but his is now the lone volunteer input and this may end when he begins university studies). It seems that the Railway Archives have been 'saved' for now, but a prognosis on their future well being remains uncertain.

(d). WORKSPLATE MYSTERY.

Paul wrote: A large and hefty worksplate has arrived at the Museum from Qishon Works where it was found thrown out with other, much less interesting, odds and ends. The plate reads as follows:

HERBERT MORRIS LTD
EMPRESS WORKS LOUGHBOROUGH
CAPACITY 20 TONS
"WD". PM/C/8463
1917

I have the feeling that this plate may be from an overhead travelling crane, but

would appreciate confirmation from someone more knowledgeable than I in such matters. The date of 1917 suggests that it was originally at Kantara workshops in WW1, and it is known that certain items and material were removed from there for reuse in the new Qishon Workshops.

Additional information came from Ray Ellis, who searched around and came up with a lot on this firm (much of it post-1917). Very briefly indeed: The firm of Herbert Morris & Bastert were manufacturers of boilers, cranes and pulley blocks, beginning business in Sheffield in 1884 and moving to Loughborough before 1902. The German-sounding name Bastert was dropped from the title in WW1, evidently sometime before 1917. Ray agrees with me that the plate is from an overhead crane probably originally used at Kantara."

[The Editor suspects that the name "Baster" was dropped for other reasons than that it sounded German. Unless, in 1917, the phrase "You German Baster" was common.]

(e). MORE ON BUS PROBLEMS.

'Segregation' is a dirty word in America now, but an increasingly-popular one in Israel. The issue here is not race but gender - for the Haredi (Very-Strictly-Super-Orthodox) Jews, men and women have to stay apart for as long as...er....possible, concomitant of course with fulfilment of marital duties under strictly defined circumstances. (Statistically, these appear to work just fine.) But the Jerusalem Post on 16th. September had an item on how the issue affects public transport, and the question of course is, How long before IR institutes a "men downstairs, women upstairs" rule on the new double-deck coaches? Or the Haredim run open-access private trains on the Bnei-Berak-Jerusalem line? (Double deckers of course, women upstairs....)

'Taken for a Ride?' By Nechama Veeder.

Welcome to the world of mehadrin (strictly kosher) buses, designed to cater to ultra-Orthodox communities around the country. But the latest in the segregated bus lines, Egged's No. 418 that runs between Ramat Beit Shemesh and Jerusalem, primarily serving the ultra-Orthodox Ramat Beit Shemesh B and Nahala Umenuha neighborhoods, has only served to incense Beit Shemesh's haredi population.

...haredi protesters, led by the Toldot Aharon community - a Netorei Karta enclave - and the Eda Haredit, a haredi stream with pre-state roots, claimed they oppose the Egged bus line because it didn't meet the requirements for strict segregation.

...According to Avner Ovadia, a spokesman for the Transportation Ministry, the ministry is currently taking legal steps to close down the Yulzari line.

If the ministry is successful "the haredi world will go to war with Egged," says Mesillat Yesharim's Itzik. Unless Egged can guarantee efficient and reliable service on bus No. 418, he says, not only will ultra-Orthodox rabbis impose a herem on Egged, but haredim will establish private lines to compete with Egged's most lucrative routes

around the country. "Egged has been contemptuous of the haredi public," he says. "We set up the [Yulzari] line out of lack of choice, we run it now out of lack of choice, and we will continue running it out of lack of choice."

(f). Re 59:18:2 and 61:7(e) - TURKISH STATION AT BEERSHEBA.

Files 184/11/2 and 184/18 at the IRM Archives show that the original station still had extensive remnants following WW1. The military were in occupation of some railway buildings in 1920 and they had to be evicted to make way for railwaymen and their families. Several sheds or warehouses were in an imminent state of collapse by the early 1920s and had to be demolished, while those remaining in reasonable repair were rented out. There was also a loco shed. This was noted on 14/6/1926 by the District Engineer as follows:

"The above wooden framed shed was caught by the storm on 21st May [1926] and roof blown off and sides flattened. It is not possible to rebuild. Damage was also done to C.I. [? - Chief Inspector? Ed.] rest room and stores attached. With one train per week this shed is not necessary. There is ample room in the Station building or platformers quarters for rest room and Stores. Meanwhile debris of shed is being collected and I propose to demolish the rest room and store which are now also quite unnecessary".

This proposal was agreed to by the Engineer Ways & Works and the Superintendent of the Line.

(a). THE WILSON CRANE.

Ray Ellis writes: "Re Paul's query of the Wilson crane as above, Paul and I had discussed this some time back after we got copies of Garraway's photos - he remembered when reminded, but with so much on the go, can understand it probably slipped his mind. Anyway, the following might be of interest for Harakevet:

In the September 2003 issues of Harakevet (Ref. 62:7) Paul quoted a very interesting reference to a Wilson 20ton crane at Haifa. Unfortunately the quote isn't dated, but I would suspect the 1920s-early 1930s. John H. Wilson & Co. Ltd. was located in Liverpool, England, and was one of the smaller UK crane builders. They were located at Sandhills, near the important LYR loco shed of the same name, who first appear in the 1860s, and were well established as a machinery supplier by the 1880s. From fairly early on they built loco cranes of varying capacities for a number of the British main line railway companies, as well as private and industrial railways, and there were also some exports (Chile, for example). Building of cranes ceased in 1930, by which time it is estimated they had produced some 1,500 cranes using a number of propulsion methods - steam, electric, etc. For a more comprehensive coverage of their history and production, readers should consult pp 277-281 of the excellent book 'Railway Steam Cranes - A Survey of Progress Since 1875' by John S. Brownlie (a Scot from Glasgow), and published privately by the author in 1973. This book deals mainly with British

use cranes (with some export), their construction and operation, and is considered one of the best on the subject. Copies can still sometimes be obtained through the second-hand book market.

The 20 ton crane which Paul mentions is to be found in no less than four photos taken by the late Ron Garraway (father of Allan Garraway of Festiniog fame) when he served with the Royal Engineers at Kantara in the period from 1918 to 1920. At this time the Wilson crane shared duties with the more well known Cowans Sheldon 25 ton crane built for the WD in 1918 which is, I believe, now preserved. Ron took nearly 100 separately numbered photos which contain direct railway interest (the 'missing numbers' presumably being of non-railway interest) which form a most valuable archive of WD ROD operations on the PMR during this time. There are some real delights - lots of ESR locos on loan, Hedjaz engines down for repair at Kantara, narrow gauge engines (incl. one of Hunslet 4-6-OTs), Luxor-Aswan locos on loan, ambulance trains, and all sorts of other mouth-watering delights!!

Altogether three steam cranes are shown in these photos - the Cowans Sheldon 1918 WD crane, the Wilson 20 ton crane, and No. 9848, also a Cowans Sheldon product (date unknown) believed to have been loan from the ESR, as was much PMR equipment at this time. They were used on both loco, rolling stock and building erection duties and workshops duties, as well as in their more familiar role at the scene of derailments and accidents.

Paul and I had discussed this crane quite some time back when Ron's photos first surfaced, and were uncertain whether it originated on loan from the ESR, had been requisitioned by the WD from a British source and was brought to the PMR during the war, or possibly was built specially for the WD. The fact that the crane appears to have remained on the PMR after the war, apparently well into PR days, strongly suggests to me that it was ex WD, as by PR days most of the 'borrowed' ESR equipment (like crane 9848 for example) had returned home across the canal to Egypt. It's privileged use outside the shops only in emergencies would suggest it may not have been in the best of condition, another reason to suggest it was not newly built, and came second-hand to the WD. The ROD certainly used cranes on the Western Front which were from British home railways, and this may be yet another one which, in this case, found itself serving in the Middle East instead of France and Belgium.

Any further information that any British readers might have on this crane and/or it's origin would be warmly welcomed."

(Ray adds some head-expanding compliments, but as they refer not only to myself I shall include them here with the appropriate modest blush. Ed.)

"Many recent issues of Harakevet have included numerous examples of Paul's continuing research into the IR archives held at the railway museum at Haifa, and we must all be forever grateful for what he has so far found and shared with us, and what he's

certainly still likely to find. No doubt we are all amazed, as each issue appears, to find what new tidbit Paul has managed to unearth. Thank you, Paul, and may your excellent research work continue, and thank you Walter for providing the forum for it to be shared with a wider audience. Best wishes to all, Roy Ellis, Brisbane, Australia." Ahem.

63:10.

CLOSING THE NAQB ASHTAR LINE.

By Paul Cotterell.

63: 9a

BAGHDAD- AND HEDJAZ RAILWAY EXHIBITION

The DB Museum in Nürnberg has an exhibition of photos and items connected with German railway construction in Turkey and Syria - in other words, the Bagdadbahn from Constantinople to Aleppo, and the Heschasbahn (German spelling) from Damascus to Medina. The Exhibition began on 28th. September 2003 (the Editor was invited to the Opening Day but it was Rosh Hashanah and as a Rabbi he had to work!) and will end on 29th. February 2004. How good that 2004 will have an extra day of February. It is open 09.00-17.00, but closed on most Mondays. The Museum is about ten minutes' walk from Nürnberg Hauptbahnhof and always well worth a visit in any case, but this exhibition is something special - one enters through an oriental bazaar with stalls filled with spices, a carpet-repairer at work on our visit (there is a variety of hand-workers and story-tellers and musicians on the programme), through hanging curtains to the actual exhibition, where typical work scenes, Beduin encampment etc. have been set up as well as the more normal photographs, maps and paraphernalia of an exhibition - tools, measuring instruments, uniforms etc. The coverage is uneven, reflecting the history and indeed the purpose of the exhibition, which is to 'showcase' German involvement. That is to say, there is a lot of fascinating material on the construction period and up to 1918, when the German engineers, surveyors, Field Medics etc. were on site - their notes, photos and souvenirs are fascinating - and then we move swiftly to the modern period of railtours through Turkey, Syria and Jordan. Relatively little on the in-between period. The Editor's collection was visited and partially used in the preparation period, but although we are mentioned with thanks in the list of contributors, we are not sure what - if anything - was actually used. Several publications accompany the exhibition - including a large catalogue with many photos, 170 pages, costing 25 Euros. It is entitled "Bagdad- und Hedjazbahn - Deutsche Eisenbahngeschichte im Vorderen Orient". There is also a series of colour postcards of modern scenes, many of them more 'arty' than record shots. Manfred Pohl's book "Von Stamboul nach Bagdad", a reworking of his history for the Deutsche Bank, is also on sale at the museum shop. Anyone wishing more information or to place orders is advised to contact the museum direct at Lessingstr. 6, 90443 Nürnberg, Germany. e-mail is info@db-museum.de, or website www.dbmuseum.de (i.e. without the hyphen). Fax is 0911 - 219-2121.

Very little has been recorded on this short-lived WW2 military desert branch from the Hedjaz Railway main line in TransJordan (but see 62:12). File C.103/99 Sec.28(2) in the IRM Archives allows some insight into what seems to have been a prolonged and complicated closure procedure for the Naqb Ashtar line. I have summarised pertinent extracts from the internal correspondence in that file.

On 9/8/1944, under the heading 'Maan-Naqb Ashtar Line-Recovery of movable assets-Job No.1312', the PR Chief Engineer at Haifa noted in a memo "that no expenditure whatever should be incurred on maintenance, guarding or occasional patrolling of the Naqb Ashtar line to prevent or report thefts..." [indicating that the line was no longer used].

Next day the Haifa District Engineer memoed the Permanent Way Inspector at Amman: "You should remove all wooden doors and windows from Naqb Ashtar, Mureigah and Samneh and send with any other surplus material, such as semaphores stacked at Maan, to 6 Tn. [ie.Transportation] Stores Suez... When this is done you should cease to maintain this line and withdraw all labour. Inspections of any sort are not required". [In fact, the recovered material was destined for the stores at Azzib not Suez, as corrected shortly after].

This work was begun on 19/8/44. It was noted that "Owing to the fact that Class 1 engines are not permitted on this line and that no others are at present available in Transjordan, all doors, windows and loose fittings from Samneh and Mureigha were brought in to Maan by material trolley...There is a large quantity of military material salvaged sheds [sic] lying ready for loading at Naqb Ashtar but arrangements for disposal are not yet final".

It is evident that co-operation between the railway and army left something to be desired for it was recorded that "The ganger at Naqb Ashtar reported that on 30.8.44 Army personnel started salvaging the shunting neck and three other dead ends, and that materials are being stacked on site. No notice has been given the Railway of this work".

A complaint must have been made to the army, for on 13/9/44, Major J. Hancock of the Royal Engineers wrote to the PR Supt. of the Line stating that "There are at Naqb Ashtar approximately 400 tons of R.E. stores including 300 tons of steel work, CGI sheets, water piping, pumping plant, and water tanks. It is estimated that 25 x 15-ton open wagons and 2 x 15-ton box wagons are required for this traffic, and it is desired to rail it from Naqb Ashtar to Kiryat Motzkin [for the army depot there?]. It would therefore seem that some special arrangement would be required whereby the line could be opened temporarily for this traffic, and it is considered that the most economical method would be to work, say, two rakes of empties and return as two train loads in order to minimise locomotive working...a third locomotive trip would be required to clear up the work".

In response to this suggestion the PR Chief Engineer was satisfied that "The line is still in safe condition for the trips contemplated, and speed need not be restricted. Before the first train a pilot trolley would be advisable and a small party of platelayers would travel on these trains in case of trouble".

Although not precisely stated in any surviving correspondence in the file, it is obvious that a good deal of material was recovered from Naqb Ashtar, presumably by trolley, and forwarded by train along with other materials from Maan. These recovered items are carefully listed in a memo of 11/10/44 from the District Engineer in which it is noted that wagon No.843, containing redwood sleepers from Naqb Ashtar, failed to arrive at Haifa. Investigations were immediately made, but without success, and the DE was soon calling for pressure to be

brought to bear "on the local authorities in Trans-Jordan with a view to having these sleepers recovered or to have the culprits arrested. Further thefts of timber sleepers from this line are possible, particularly during the winter months, owing to shortage of fire-wood in Trans-Jordan".

On 20/11/44 the District Engineer called for work to be put in hand for carrying out necessary repairs to the line (after the army had removed track without Railway consent as previously related). This was "to put the...line in order for 6 train trips to complete recovery of movable army assets". (Major Hancock's suggestion had evidently been agreed to.) Three days later the Supt. of the Line noted that "12 low sided opens and 3 flats have been worked to Transjordan which, together with the 8 wagons you can provide locally, will start the programme going...".

A first trip was scheduled to depart Maan for Naqb Ashtar on 24/11/44 with wagons being worked out empty, some of these being left behind at Naqb Ashtar for continued loading by the military while loaded wagons were taken out and forwarded to Dera'a. The same procedure was to take place next day, with another "12 to 15 opens being worked to Dera'a [presumably from Haifa] for despatch to Naqb Ashtar and completion of loading there on 26/11/44".

This timetable did not go according to plan due to the "complete breakdown of telephone communication with Aqaba" and labour could not be made immediately available. However, "18 empty wagons were placed at Naqb on Nov. 25th and the second load worked from Amman of 9 wagons was placed on Dec. 1st". The army Officer in Charge, Charles Taylor, "proposed to work two class 2 engines to Maan on Thursday Dec. 7th with a view to clearance of all the traffic to Ma'an on Dec. 8th". (One wonders what engines had been used previously in view of the restriction on Class 1 locos).

There remained the problem of the track taken up by the army at Naqb Ashtar without the Railway being informed. Taylor was of the opinion that "So far as I can foresee the track now remaining will serve all the purposes which Naqb Ashtar is likely to be called upon to perform as a station". The PR District Engineer was not so sure, but came to no immediate decision on the matter. Memos were exchanged between various offices and a guard was placed on the lifted track to prevent any more thefts.

On 9/7/45 Officer in Charge Taylor, sounding rather chastened, informed the Haifa District Engineer that "the Army are at present replacing the sidings which were wrongfully removed". On 2/8/45 Taylor also advised that "This work will probably be completed in another two weeks...At Samneh 9 wooden sleepers are missing and both point levers, and at Mureigah both point levers are missing...The relaying being undertaken by the Military at Naqb Ashtar is not a thorough job in so far as the sidings are not being more than approximately aligned and roughly packed, so that before these lines are brought into use additional work will require to be performed on them. Apart from these features the layout will be re-established according to original plan".

On 8/8/45 the D.A.D.Tn. (Way & Works) Levant wrote to the PR Chief Engineer saying that "it is agreed that the relaying at Naqb Ashtar will need considerable packing before it could be used as a running line. Our main object, however, has been achieved in having the materials physically replaced as track and it is not considered that at the present time any further expense is justified. As far as the Army is concerned this job should now be considered closed". A lack of subsequent correspondence suggests that PR concurred.

Nevertheless, some 18 months later, the mothballed Naqb Ashtar line features briefly one last time in the file. On 20/1/47 the station master at Maan wired "that the government at Maan has sent men to dismantle and collect the water tank and other materials at Abu El Lisan Post - Naqb Ashtar line, and asks to be informed whether there are any objections". The military notified that "The tank, Army property, was purchased by the Arab Legion who sold it to the Trans-Jordan Government from whom it was bought by the Municipality of Ma'an. We are therefore not concerned". And neither was PR.

From all this it appears that the 'last' train on the Naqb Ashtar line ran on or about 8/12/44, with a trolley possibly being used thereafter for that relaying work at the terminus until July or early August 1945. But didn't I read somewhere that the line was reopened for a while some years later to transport Moslem pilgrims making the Haj?

N.B. I imagine that Samneh and Mureigah were passing loops, evidently with at least one building each. I'm by no means certain what was at Abu El Lisan, though it wasn't much, possibly just a military guard post.

63:11.

FROM THEN TILL NOW

(Part 13).

Noted in reading by Paul Cotterell from Baruch Katinke's book 'Me'az v'ad Hena'; see earlier installments in 11:22, 13:17, 16:15, 19:19, 20:15, 24:11, 30:21, 38:15, 46:12, 59:15 and 61:9. This is the chapter entitled 'Dieckman Gives an Order' on pp. 205-6 of that book.

With the appointment of General Allenby as commander of the British army, the British opened a string of attacks on the Turkish-German army. One after another the stations of Deir Suneid, Beersheva, Asluj and eventually Irak el Manshiye [Kiryat Gat] were captured. With the capture of Irak el Manshiye the way was open for the British to Wadi Surar station, junction of the lines to Jerusalem and Lod.

The great and protracted retreat of the Turkish army caused much congestion in Wadi Surar station. Hundreds [sic] of wagons loaded with weapons and damaged vehicles and about twenty locomotives stood at Wadi Surar. Because of the lack of water and wood their removal to the rear was delayed and the evacuation of the station proceeded with difficulty. The continual aerial bombardment and shelling from long-range cannon also slowed the evacuation.

One dark night, a couple of days before the station fell, there was heavy shellfire. I had already reported to nearby stations about the shelling which began in the evening, and requested that they not send any trains to Wadi Surar. Around midnight the shelling was so intense that it was impossible to move at all in the station area [see Note 1].

The manager of the station workshops, Kolcheko [spelling], and chief of the "technical service" [sic - possibly chief mechanic], Giovanni, who worked with me all evening on emergency arrangements, suggested we go down into the shelter to examine the situation together and decide on our actions for the morning. The station shelter was broad and large and its ceiling was about a metre below ground level and built of rails in two layers, and above them was a layer of gravel and earth.

In the previous fortnight we had been forced more than once to go down into the shelter in which a candle burned continuously. As we entered the

shelter this time we found it full of bursting. Railway clerks, workers, and soldiers of all ranks had found cover from the shellfire which moved upon the earth above. We managed to sit on the bare ground close to the entrance and stared at the preparations for the rapid evacuation of the station. While we were talking the whistle of a locomotive was heard. A train entered the station. We got up with an effort and forced a way to the entrance of the shelter. At that moment the shelling intensified and we saw people leaping from the train and racing towards the shelter. Among those running was the General Manager of the whole Hedjaz Railway, Dieckman, who had been at Tulkarem station and, hearing of the shelling at Wadi Surar, left in his special coach and an engine to see at first hand what was happening.

When we returned to the shelter Dieckman said to me that, as there was danger the station would be hit and the train service between Haifa and Jerusalem would be cut, in his opinion I should return to Jerusalem and do everything possible to ensure the regular movement of military trains between there and Wadi Surar. North from Wadi Surar the railway management would take care of the trains. He relieved me temporarily (until the regular connection could be restored) of responsibility for the railway from Wadi Surar to Samakh (the northern limit of my operational area).

I willingly accepted his order. I had been very tired the last few days and was happy that I would be able to visit occasionally with my family at home in Jerusalem and enjoy the company of my wife and children. My heart told me it would be best to get the order in writing and signed by the General Manager. I asked Dieckman to write the order in my diary; he was slightly aggrieved at my request, but when I explained that we were both mortal men and in such perilous times neither one of us could know what the morrow would bring, Dieckman agreed to my request and wrote his order signed by his own hand in my work journal. I also asked him to include in his order upon who responsibility for Wadi Surar station now devolved, and that he allow me to take Kolcheko and Giovanni to Jerusalem. He agreed and relieved me of responsibility for Wadi Surar station.

When the shelling ceased, at two in the morning, we three left by foot for the nearest station to Wadi Surar on the way to Jerusalem, Deir a-Ban station [see Note 2], as I did not want to order

a locomotive from Jerusalem to Wadi Surar for fear of shelling. Shouldering our rifles we marched east for about half an hour along the track. Suddenly we heard a trolley approaching us from the direction of Deir a-Ban. We shouted to the trolley to stop. It continued. We fired over it and then it stopped. It transpired that the Deir a-Ban station master was travelling on it to check on Wadi Surar after the shelling. I ordered the trolley to turn back and take us to Deir a-Ban. The route there is up an incline, a distance of about twenty kilometres [sic - actually more like eleven or twelve only], and the four trolley runners laboured mightily to bring us to the station.

From Deir a-Ban I contacted Jerusalem and told them to send me an engine. The loco arrived towards dawn and we arrived at Jerusalem that morning. First I went home to see how my family was, to wash and eat a light meal. Afterwards I went to Mount Scopus, to the palace [sic] of Augusta Victoria which was the seat of the main military command for Jerusalem and the south. I presented myself to the commander and showed him the order I'd received the previous evening. I made myself available for duty and gave my private address to his office so they could contact me at the necessary time.

Two days later the British conquered Wadi Surar station and then Lod station.

That same evening we installed at Bittir station, next to Jerusalem, a pump and water pipe from the springs at Bittir. In this restricted section I had available three locomotives and about fifty freight wagons.

Note 1: With all these British shells falling around the place you'd think that Wadi Surar station must have taken a real beating with hardly a stone left standing. However, a splendid view (neg. no. P1668.002 in the Australian War Memorial collection, wrongly captioned as at Latrun) evidently taken immediately after the British occupation and looking across the station from a low rocky ridge to the south, shows little or no sign of damage anywhere. All the buildings appear to remain intact.

Note 2: So what happened to Sejed, the much discussed J&J station immediately east of Wadi Surar? Had it already been dispensed with by the end of 1917? Or did it not have the basic facilities Katinke needed to contact Jerusalem, so he subsequently dismissed it from his memoirs?

63:13.

A HEDJAZ RAILWAY TRACKLAYING TRAIN?

The accompanying photo came from the archives of the Palestine Exploration Fund, with the request for identification. After some thought I provided roughly the following answer; any comments or corrections will be appreciated. The Editor.

"I am pretty certain we are dealing with the bridge in the Jezreel Valley over the Kishon/Qishon River, a few kilometres east of Haifa (just beyond where Neshet is nowadays.) The mountains in the background will be the Carmel range, and the view is from the north side of the line and looking towards Haifa. Six stone arches.... I am fairly sure, for the landscape is of a relatively wide valley with gentle slopes and not like in the Yarmuk gorge. Nowadays the main road runs parallel here. Looking at the list in Tourret p. 32, Table 4, it appears to be that before Tel-esh-Shammam. I believe the bridges on this section were in fact built for the standard-gauge Syria-Ottoman Railway project, which never got beyond preparing the formation and structures for the first section towards Beit Shean before the money ran out, though some track materials were delivered. (See Tourret p.29 and onwards.) If so, this train, with a wagon piled high with wooden sleepers behind the loco, a Krauss 0-6-0T, would clearly be involved in some form of track-laying. However, one curiosity is the second flat wagon which appears to have a tent or canopy on it, for some dignitaries, and several flags, and another curiosity is that the track in the foreground looks like it is laid on wooden sleepers, whereas the Hedjaz lines proper were eventually laid on steel sleepers pre-drilled for 1.05m. gauge. Maybe this is in the early days of the work, around 1902 (cf. Tourret p.30) when they were regaging the old British lines by nailing the rails a bit closer together, and gathering up the bits of leftovers here and there? Though why this would involve such a palaver with so many flags, I am not sure. Maybe the canopy was for an Engineer."

see photo next page.....



63:14.

BOOK REVIEW. **"STEEL IN THE SAND".**

By Gary Goldfinch.

Published by Finial Press, 2003. Available from: 15, Hoburne Road, Swanage, Dorset. BH19 2SL, or mail@finial.co.uk. Or via Motor Books, whom we thank for a review copy. Price GBP 14.95 plus P&P. ISBN 1-900467-15-1.

Subtitled "The History of Egypt and its Railways" this is exactly that - unusually for a railway book, the history of the country which the system served is put first and helps to explain what came later. A smartly-produced softback book of 86 pages with many maps and b/w illustrations, plus colour on the cover, this brief account takes us from the early days of the Stephensons up to the present, covering some of the turbulent political changes and upheavals along the way. This also includes some very perceptive comments on Egyptian social tensions, the poverty which drives so many to travel in squalor and the economic pressures which make it necessary for the railways to offer such squalid facilities for the poorer passengers. There are notes on the changing freight traffics and on the adaptation of the system to meet British military

needs - but written from an Egyptian rather than a standard British perspective! This alone makes the book worthwhile. There are extensive notes on the use of multiple-units, developments in the field of rolling-stock, and of railway architecture and infrastructure - this is not just a book about locomotives.

Goldfinch learned Arabic while working for the British Army and it is clear that some of the historical accounts reflect what he learned of the region for military and intelligence purposes while he worked in the region. Some of the place-names and maps are rather selective and of course use different transliterations. Photos are varied, many station scenes but including the Badrasheen crash of 1995 and the new station at Ismailia built in 2001! The issues surrounding initial British involvement, the period of the Two Kingdoms, Lord Cromer's involvement, the New Kingdom, the Nasser period and others are all sketched in very effectively, and this reviewer learned a great deal that he had not known before.

Appendices include the 1995 Cairo - Alexandria timetable, a list of locos in 1889 (annotated), locos in 1926 (likewise), diesels delivered until 1980, Manufacturers' details, and a good Index. The Editor has put the author in touch with Alan Clothier, who is currently working on a much fuller treatment from a more technical railway viewpoint, and from Alan (the Master on this topic) one understands that there are a few minor errors of factual details, but that the overall treatment is very good.

So - this book is highly recommended for anyone interested in Egypt and its railways - it will give a broader, deeper perspective than one will get elsewhere. (And incidentally, we publish elsewhere in this issue a 1960's account, which provides a lot of background but in no way reduces the interest of the new book.)

The Editor.

A COUPLE MORE DECAUVILLES.

by Paul Cotterell.



The accompanying two views have been copied from publications, so the quality is somewhat less than perfect. The first shows construction of the Technion on the slopes of Mount Carmel in Haifa and dates to just before the First World War. Work on the Technion (Institute of Technology) was considerably delayed by the war, and the first students were only enrolled in 1924. A corner of the Technion building can be seen on the right. Just beyond the kneeling camel are two tip wagons. These have a large Star (more properly a Shield) of David insignia on the body side, and the left hand wagon carries the number 4. There appear to be Hebrew letters also, but I cannot quite make them out.

The second view was obviously taken in an orchard, but the location is unknown to me. The caption translates as "Transporting fruit to 'Bika' by Decauville". Both these narrow-gauge portable lines were hand-worked, and have long since disappeared without trace other than the two photos.



EILAT DREAMS OF 1963.

Paul Cotterell has sent copies of a couple of newspaper items which shed some light on a long time ago:

From "Haaretz" of 2nd. May 1963.

"Almogi: RAILWAY TO EILAT SOON". By the 'Haaretz' correspondent in Haifa.

"To me, a railway to Eilat is no dream, but fact that will soon be taking shape" - so said the Minister for Housing & Development, Mr. Yosef Almogi, in Haifa. These words were spoken at a reception held on Tuesday evening at the home of Mr. M. Savidor, General Manager of the Railways, in honour of Prof. Edgar Salin, Head of the List Research Institute, Basle. The List Institute has recently recommended the construction of a Beersheba - Sdom - Eilat line. Mr. Almogi added that a railway is vital for the consolidation of Eilat and its port and for the development of the Negev quarries.

In his reply, Prof. Salin said that the economic value of the railway to Eilat could not be measured by the profitability of the line itself, but essentially by its contribution to the development of the quarries and the impetus it would give to the economic growth of the factors that it would serve in the Negev.

From "News Digest" No. 91 of 2.7.1963 - translated from "Davar", "Lamerhav" and "HaBoker".

"COMMITTEE OF DIRECTORS-GENERAL RECOMMEND RAILWAY TO ORON.

The Directors-General Committee for the "Eilat Railway" will recommend the building of a railway from Beersheba to Oron, but the postponement of an extension to Eilat - this decision was arrived at at a meeting of the Directors-General Committee held at the Ministry of Transport in Jerusalem yesterday. The execution of the recommendation in regard to the line from Beersheba to the Phosphate plant at Oron will require an investment of nearly L 25 Million, and with the addition of rolling stock - engines and wagons - the investment is liable to climb to L 30 Million."

A BRIEF RAILWAY HISTORY OF EGYPT.

This is taken from "Railways of Northern Africa" by John R. Day, pub. Arthur Barker Ltd., London, 1964 - pp. 59-73. A little dated - much has changed - it is nevertheless a wonderful brief summary of some of the complexities of Egyptian history. I have retain the spellings of place-names as in the original, even though they are not the same as those used elsewhere in Harakevet. (e.g. Kena for Qena.) The account differs a little from Hughes. Ed.

"The story of the railways of modern Egypt starts in 1834 with a proposal for a railway line between Alexandria and Suez to form an easy overland route between the Mediterranean and Red seas, and railway materials were actually brought in for the line. In the end, after a mile or two had been laid, the rest of the rails and sleepers were stored near the harbour, where, mostly, they remained until they rusted, or rotted, away.

Carrying the Indian Mail by carriage and coach was not very satisfactory, and negotiations for the building of a railway were started by Abbas Pasha, Khedive of Egypt, resulting in the signing of a contract on July 12, 1851, and the appointment of Robert Stephenson as Chief Engineer. He was to build a railway between Alexandria and Cairo in the first instance, and work started from Alexandria on September 1, 1851. By the end of the next February the line was already at Abu Hummes, 25 miles inland, and 24,000 men were at work on it. By April 1853 the railway was built to Kafr El Eis at about the half-way point on the western bank of the canal opposite Kafr El Zayat, where an iron bridge was being built to take the line. Meanwhile, construction was carried on from the other bank and the line from Kafr El Zayat to Tanta and on to Cairo was opened in 1856. Two bridges had to be built for this section, that at Benha in 1854 and the other, at Berket El Sabee, the following year. Until the bridge at Kafr El Zayat was completed, passengers and goods were carried across the river by steam boats, which were later replaced by a specially fitted steam ferry capable of carrying the trains themselves. This steamer was 78ft. 9 in. in length and 59 ft. in breadth, and tracks were laid on the decks just as with modern train ferries. It could make the Nile crossing in six minutes and greatly speeded the journey. On May 16, 1858, there was a serious accident, a train falling into the river.

The Alexandria - Cairo railway was officially opened for traffic in January 1856, the trains taking 7 hr. to cover the 130 miles against the 42 hr. taken by the Nile steamers. The Alexandria station was at Gabbary, part of it still existing in the present goods station, and was opened in 1854. The Cairo station, opened in 1856, was on the present site.

The new line improved the lot of the traveller to India, but he still had to make the journey from Cairo to Suez across the desert. A railway was needed here and was assured of lucrative traffic, so building started again in 1857 and the "Desert Line" was through to Suez in 1858. When the Suez Canal was opened on November 17, 1869, and the steamers themselves could move from sea to sea, traffic on the railways fell away. In 1878, traffic having dwindled to practically nothing, the "Desert Railway" was taken up - only to be reconstructed in 1934. Having been built under British influence, these early lines were on the standard gauge of 4 ft. 8 1/2 in.

The opening of the original line was quickly followed by others. Building started north-eastwards from Tanta and by 1858 the line reached Mohallet Roh. It was pushed on to reach Samman-noud in 1859, Talkha in 1863, and Damietta in 1869. A connection from Talkha to El Mansourah was built in 1896 when the Damietta section of the Nile was bridged. The Tanta - Mohallet Roh section was doubled in 1878, and the Mohallet Roh - Talkha stretch was doubled in 1930-32. The main line from Alexandria to Cairo had been doubled in 1861-64.

The next line of importance was built, also north-eastwards, from Benha, a point on the main line between Tanta and Cairo. This new line reached Zagazig, nowadays an important junction, in 1860, and was extended to Ismailia on the Canal in 1867, just

before the Canal was opened. In 1870, the line was extended again from Nefisha Junction, west of Ismailia, southwards down the side of the Canal to Suez. Suez was thus linked to Cairo by two lines - the new one via Nefisha and Zagazig and also by the direct "Desert Railway". The Benha - Zagazig line was doubled in 1870, and the Zagazig - Ismailia section was doubled in 1916 during the First World War.

In 1865, a line was built from Zagazig to El Mansourah and a connecting line was carried from Kalioub, a few miles north of Cairo, to Zagazig. This is an important line usually called the "Eastern Line". Also in 1865, a line was built from Mohallet Roh to Zifta (to be extended much later, in 1916, to Zagazig) and another line was extended in the opposite direction from Mohallet Roh to Kallin and Dessuk, and the two lines were connected with the completion of the bridge in 1897.

The Suez Canal Company had built a narrow-gauge line along the Canal from its northern entrance at Port Said to Ismailia. This was opened in 191 and was really in the nature of a steam tramway rather than a railway, and by an agreement reached in February 1902, the Government took it over and rebuilt it by 1904 as a standard-gauge line. The section between Ismailia and Ferdan was doubled during the First World War, but the second track was removed again in 1936. Except for the "Desert Railway", all these lines were within the fertile triangle at the mouth of the Nile, the corners of which, very roughly, are Cairo, Alexandria and Port Said. From its shape, this area is usually called the "Delta" after the fourth letter of the Greek alphabet which is of similar shape. (It has given its name to other deltas all over the world).

The next line to be built was also in the Delta, but on the western side. It ran from Tanta southwards, more or less parallel with the main line to Shiebin El Kom and Menuf, reached in 1890. It was continued to Ashmoun in 1896 and to the irrigation barrage about 10 miles west of Kalioub in 1916. The barrage, a short distance downstream from Cairo, had already been connected with Kalioub, which is on the main line, in 1865.

A cross-country line as built between 1875 and 1890 to link Sherbin on the Damietta line with Kalline, and so with the Alexandria main line at Damanhur. This cross-country line runs parallel with the coast, but about 30 miles from it. Other branches included one from Abu Kebir on the Zagazig - Mansourah line eastwards to El Salhiah in 1869. This proved of importance in the 1914-18 war, when the line was extended to Kantara in 1916 for military use. The wartime extension was, however, removed again in 1918. The Abu Kebir - Salhiah branch itself has a sub-branch, which leaves it at Fakus, about half-way along the branch, and runs northwards to El Samaana.

We have not yet dealt with the railways of Upper Egypt, which were a separate organi-

sation, but to complete the present picture in Lower Egypt it should be recorded that in 1872 a line was built from the Cairo terminal of the Upper Egypt system at Boulak El Dacrour, on the west bank of the Nile, along the western edge of the Delta to Kattabah and Etya El Baroud, which is on the Cairo - Alexandria main line about 50 miles from Alexandria. In 1898 a great improvement in railway communications in Egypt was brought about by building a very short line in Cairo to link Beshtil on the Upper Egypt system with Embaba on the Delta system and thus to Cairo Main station.

The Upper Egypt line started from the station on the west bank of the Nile in Cairo (Boulak El Dacrour) and was built alongside the Nile, running up-country to Assiout, 230 miles from Cairo, which was reached in 1874. In the meantime, a branch had been built from this line at Wasta to run some 30 miles due west to the Fayoum Oasis, reached in 1868. This line was extended some 15 miles north-westwards to Abu Ksah the following year. A further branch was taken from Fayoum northwards to Saneris in 1869.

The main line eventually pushed on up the river from Assiout and crossed the Nile by a bridge at Nag Hammadi. It reached Kena, 147 miles from Assiout, in 1897. This Upper Egypt line to Kena, the limit of the State system, was of standard gauge, but the continuation of the line southwards was built by a specially-formed construction company - the Kena - Assuan Railway Company - which carried the standard gauge on only as far as Luxor. From Luxor southwards the 3ft. 6 in. gauge was used and the line was completed in 1898, when it was bought from the contractors by the State system. The last payment was made on July 1, 1947.

When the line reached Assuan, it found a 3ft. 6in gauge railway already running from that point up-river to Shellal about 7 miles south. This had been built during the first Sudan campaign, to by-pass the First Cataract of the Nile, and in 1898, at the end of the Sudan fighting, the line was absorbed into the Egyptian State system. The whole line from Luxor to Shellal was converted to standard gauge in 1926.

The line from Cairo up the Nile Valley was doubled over the years between 1897 and 1930 as far as Assiout, except that Embaba bridge remained single-track until it was renewed in 1924. This is probably the most important of the Nile railway bridges and it has six fixed spans and one swing span, the total length being just over 1,600 ft. As well as the double-track railway, it carries roadways on each side and footways on an upper level. Another bridge which remained single-track for some time was that at Wasta, known as the Koshiesha Bridge, which was not replaced by a double-track structure until 1909.

We have already mentioned a number of lines laid down for military purposes and taken up again, but there were several others which started - and sometimes ended -

their life in this fashion. In the 1914-18 war a standard gauge railway was built, for military purposes, from a point on the opposite bank of the Suez Canal from Kantara, and now known as Kantara East, into Palestine. The line was built to support action against the Turks, who were in turn mounting attacks on the Suez Canal. The Turks were themselves supported by a railway built from Sorek on the Jaffa - Jerusalem line southwards through Beersheba to Maghdaba - but that is not a part of the North African railway story. The Royal Engineers building the line from Kantara were subjected to Turkish attacks, and the railway was protected by barbed-wire entanglements and fortified posts. Water was brought from the Delta by pipeline as the railway slowly made its way across the Sinai Desert. In April 1916, the line had stretched out nearly 30 miles from Kantara when the Turks attacked in force. After some initial success, they were thrown back, but not decisively defeated, and the British commander fortified a position near Katia, the nearest town to the railhead at that time, against further attack. It came in August, and this time the Turks were well and truly beaten and withdrew, allowing the railway building to go on. Further attacks when the line was approaching the 100-mile point (El 'Arish) and at Rafa, the frontier town, were also driven off. The line went on to Gaza, and the Royal Engineers took their pipe-line, fed from Egypt by water which had come from the Nile, all the way to Gaza (146 miles) with them.

Traffic between Kantara on the west bank of the canal (now Kantara West) and Kantara East on the military line to Palestine was at first conveyed by train ferry, but to speed up the transfer of the considerable number of wagons, the Suez Canal Company agreed that a bridge could be built on the understanding that it should be removed after the war. A swing bridge was built in five months and opened in July 1918. It was duly dismantled after the war.

During the 1939-45 war, another bridge was built, in 1942, by the military authorities, across the Suez Canal at El Ferdan, south of Kantara. This new swing bridge was hit by a ship in November 1946, and again by the Dutch troopship 'Volendam' in November 1947, the collision causing a span to collapse into the water. The ferry was brought back into use and pressure was brought for the removal of the bridge.

In the early 1950's, however, a contract was awarded to Baume & Merpent for the construction of a double swing bridge for rail and road traffic over the canal to replace the damaged bridge. The new bridge is 689 ft. long with a clear navigable channel of 315ft. It will take locomotives weighing 180 tons, and is turned by diesel power.

In 1940-341 a military line was built on the east bank of the Suez Canal from a point opposite Suez (El Shat) to Kantara East, a distance of just over 70 miles. There were other military lines, but we will discuss them after we have dealt with various other railways to

which they were connected.

In Upper Egypt, the Corporation of the Western Desert built a 2 ft. 6 in. gauge line from a point between Abu Tisht and Farshut, on the west bank of the Nile 340 miles south of Cairo, now known as Oasis Junction, out to El Kharga in the Great Oasis. This 120-mile line was opened for traffic in 1907 and two years later was purchased by the Government. It is now operated as part of the State system. Although most Egyptian lines are on the level, this one has to climb steeply out of the Nile Valley and then descend to the low plateau of the Oasis. At one time, tourists could be carried on this line upon request, on motorised trolleys to see the view, and before motorised trolleys came on the scene pedal trolleys were used.

Another line, on the standard gauge, runs from Korna, on the west bank of the Nile opposite Luxor, for some 37 miles to Isna. Like the main line, it follows the Nile southwards. There is no bridge over the river and thus no physical connection between this line and the main system. Another line, also on the west bank, runs between Beni Saleh, near Fashen station, to Deirut, through country watered by the Bahr Yusef Canal, parallel to the Nile. This 125-mile line runs parallel to the main Cairo - Assuan line and connects with it at several stations. Both of these lines were built to serve sugar cane plantations in the period 1870-78 and both were purchased by the Government in 1906. The longer of the two lines carries passengers as well as freight traffic, but the other has only freight trains. A third short standard-gauge line, only 15 miles long, was built in 1927 from Beni-Suef, south of Wasta, to Lahon. It connects with the main line from Cairo to Shellal at Beni-Suef and has passenger and freight services.

During the 1914-18 war a military railway on the 2 ft. 6 in. gauge was built from a point on the Beni Mazar - Sandafa section of the longest of these auxiliary lines out towards the Bahria Oasis in the Western Desert. It reached a length of 80 miles but was dismantled in 1918-19. The possibilities of a new railway to tap the iron ore deposits of this oasis are now being explored.

During the 1939-45 war, a 104 mile, 3 ft. 6 in. gauge line was built from Kena, on the Upper Egypt main line, eastwards across the desert to Safaga on the shores of the Red Sea. This was intended for military purposes and was built by the British Army, to whom it belonged. It was, however, operated by the Egyptian State Railways on behalf of the British Army. It was dismantled in 1946. It followed an old trade route and reached an altitude of over 1,600 feet in its course - a high line for this country, for Assuan is less than 250 ft above sea level.

One line which figured prominently in the last war was the Mayard line, which was built in 1900 from Wardian opposite the western end of Alexandria harbour westwards for 150 miles along the coast to Abu Haggag. The 105 miles from Wardian to

Dabaa were standard gauge, but narrow gauge was used for the extension. During the 1914-18 war the track from Hemmam to Abu Haggag was taken up and re-used in Palestine, during the military campaign, but it was relaid in 1928, on the standard gauge, to Dabaa. It was extended to Fuka in 1930 and to Mersa Matruh in 1936, when it had a length of 180 miles. One of the stations along this line is El Alamein.

Although originally a private enterprise line, it was purchased by the Government on February 17, 1914, to prevent its sale to a foreign company, and since then it has been worked as part of the State railways. During the 1939-45 war the line was extended from a point near Mersa Matruh as far west as Tobruk, and a survey was made for further extension to Benghazi, if needed. When its wartime purpose had been served, the railway was cut back to Sollum on the Egyptian border; it is worked by the State railways. In 1941 a direct line about 20 miles long was built from Kafr El Dawar on the main Alexandria - Cairo line to Abdel Gadir on the Western Desert line. This enabled military trains to run from Delta to Desert without touching Alexandria, which has a large stretch of water as its hinterland, and thus saving many miles. The line was of little commercial value and was removed in 1945.

One of the more important suburban lines is that between Cairo and Helwan. Built in 1870-72 by a private company, it was State-railway operated until 1888, in which year the Metropolitan and Cairo Helwan Railways Company took it over. Later, the line was transferred to the Delta Railways Company, and in 1914 the Government bought it and incorporated it into the State system. It was already double-track between Saida Zeinab and Tura, and the Government continued the double-tracking from Tura as far as Helwan. In 1938, the section from the Bab El Louk terminus in Cairo to Saida Zeinab was doubled. This standard gauge line was electrified in 1956 at 1,500V d.c.

Another line is that known as the Mataria line, which was built in 1888 from a terminus near the Main station in Cairo to Mataria, in a north-easterly direction. It reached El Marg in 1890 and El Alg two years later. In 1911 it was extended again to meet the Kalioub - Zagazig line at Shebbin El Kaniur. It was doubled in the period 1893 to 1906 as far as Ein Shams, from which point the rebuilt Desert Railway strikes across the sands to Suez. The Mataria line is heavily used by suburban traffic and has been put forward several times for electrification.

The track of the Egyptian lines is of a good standard, the 95 lb. flat bottom rail on wooden sleepers having been adopted as standard as long ago as 1912. Cast-iron sleepers had been tried but had been discarded. The tracks deteriorated during the 1914-18 war for lack of maintenance, but there was an extensive renewal programme which brought them back to standard between 1925 and 1932. At this time steel sleepers were being tried, about 250 miles

of track having them in the mid-1930s. They later became much more widespread. Because of intensive use during the 1939-45 war, the track again deteriorated and by 1950 it had become necessary to spend more than £11 Million on track renewals. Some 690 miles of track needed renewal, and the opportunity was taken of replacing the 95 lb. rail with 110 lb. rail on the main lines - Cairo - Alexandria, Benha - Port Said, and Cairo - Shellal; concrete sleepers are now being used.

Fifty years ago the Egyptian railways already had 588 locomotives, 897 coaches, and 11,500 or so wagons. The main-line expresses between Cairo and Alexandria, and between Cairo and Port Said, with loads of 300-400 tons, were booked to run at 50 m.p.h. They were hauled by 4-6-0 locomotives built in Britain by the North British Locomotive Company, or by 4-4-2 French De Glehn compounds. There were also some 4-4-0's weighing about 87 tons as compared with 112 and 107 tons of the larger types. Somewhat lighter 4-4-0s were the general type of motive power on the Upper Egypt line and for local traffic. Suburban traffic, already heavy, was being worked by 4-4-2 tank locomotives drawing trains of five bogie coaches, but new 2-6-2 locomotives for these services - 50 a day in each direction - were on the way. The maid-of-all-work for goods traffic was the 0-6-0 locomotive familiar in Britain and many other countries. The few eight-coupled locomotives that had been obtained were found to have more power than was needed for the traffic at that time, but some branch line goods trains were hauled by American 2-6-0s.

The main-line coaching stock at this time was made up of bogie coaches with electric or gas lighting. There were excellent dining and sleeping cars. Branch-line trains were generally worked by six-wheel coaches relegated from main-line services, so that many of them were comfortable, fitted with lavatories, and generally of a good standard. The vacuum brake was fitted to all these trains. Goods wagons were mainly 30-ton bogie vehicles or four-wheel 10-tonners.

At this time the Luxor - Assuan line was still of 3 ft. 6 in. gauge and thus had its own rolling stock; passenger trains were worked by 4-4-0 locomotives and goods trains by 2-6-0s. The coaches were fitted out in similar fashion to the standard-gauge stock elsewhere in Egypt and there were dining cars on the more important trains. The main workshops for locomotive and passenger stock were in Cairo, but a large new workshop for wagon repairs was being opened at Alexandria, and this was to be the principal wagon workshop.

By the mid-1930's the stock of locomotives was about the same, but the number of coaches had nearly doubled to 1,600 and the 11,500 wagons had increased to 14,300. All-steel coaches were taking over and gas lighting was already a thing of the past. Roller bearings were also being introduced on passenger stock. Even more important, 10 streamlined railcars had been obtained from Ganz & Co. of Budapest. They

were air-conditioned and intended largely for the Cairo - Suez "Desert Railway", which was just being rebuilt. They were the shape of things to come. These were the days when the 'Sunshine Express' whisked tourists up the Nile from Cairo to Thebes, Karnak and Luxor, the Cairo - Luxor journey of 340 miles taking some 12 hours. There were seven expresses daily each way between Cairo and Alexandria, the fastest taking only 2 1/2 hours.

One or two of the Ganz diesel cars were used on the Helwan suburban line, where they seem to have made their mark. Towards the end of 1937 the operation of this line was entrusted to Ganz twin-car diesel sets and the next year such freight and parcels traffic as there was was also given to railcars. This suburban line - a very busy one - was thus entirely diesel-worked even before the war.

In post-war conditions it became necessary to carry out renewals and improvements of all types, including track renewals with heavier rail. This latter was one of the factors which enabled the maximum speed to be raised from an average of about 654 m.p.h. (it varied on different sections) to 75 m.p.h. This in turn, together with an increase in the weight of trains from 300-400 tons to 500-600 tons made it necessary to have new motive power. A standard 4-6-0 steam locomotive was decided on and several makers built batches of them. Trials were also carried out with 12 main-line 1,600 h.p. diesels to test this type of traction for main-line use, and diesel-hydraulic shunters already in use. Coaching stock was given a new standard length of 72 ft. against the previous standard of 65 ft. 6 in. Ten five-car articulated diesel-electric sets were ordered for Cairo-Alexandria, Cairo - Port Said and Cairo - Minia services. There were eventually 19 of these luxurious 800-h.p. sets supplied by English Electric, and they were supplemented by 11 three-car 400-h.p. sets for suburban use.

At about the same time, the narrow-gauge, waterless Western Oases branch, which had had five steam locomotives of its own, was provided with four twin-unit diesel locomotives, each unit being made up of two 180-h.p. diesel-hydraulic two-axle machines marshalled back-to-back. There is no space to deal with the full story of diesel traction in Egypt, but from its tentative start it increased rapidly in importance, and by March 31 1963, the use of steam locomotives had ceased.

Major works put in hand in the last decade have included a new bridge over the Nile at Kafr el Zayat, with six fixed spans and a swing span for river traffic, to replace the original bridge which was not strong enough for present-day traffic. Proposals have also been put forward for a new line across the northern part of the delta to link Belkas, on a branch from the Damietta line, with Alexandria via Hamul-Barari and Sidi Salem, and for another new line on the east bank of the Nile to link Manfalut with Nag Hamadi. This 136-mile line would be linked with the existing line on the western bank by a bridge at

Manfalut. New works were also built at Abu-Zaabal, near Cairo, and this area rapidly became a railway colony, with shops, cinema, sports grounds, hospital, schools, etc. Its is linked to Cairo by a special bus service and by special trains for non-residents who work in the railway workshops.

A new traffic which has grown in recent years is in iron ore from mines near Assuan to a new iron and steel works at Helwan. Trains carrying 1,500 tons of ore are diesel-hauled from Assuan to Helwan, a distance of some 540 miles. This new development has also meant a large traffic in imported coal from Alexandria to Helwan. The ore traffic reaches Helwan via a new nine-span, 2,665 ft. bridge at Marazik, 24 miles south of Cairo. A new 15-mile line links the mines with Assuan.

At the time of writing the Egyptian railways were carrying 120 million passengers a year and 9 1/2 million tons of freight traffic on their 3,000 miles of track. The motive power position was changing so rapidly as to make figures meaningless before they were printed, but there probably were about 850 locomotives of various types, some hundreds of railcars and trailers (one order alone was for 350 cars from Japan) and getting on for 1,600 coaches. The wagon stock was in the region of 18,500.

Before leaving the main-line railways it is worth noting that the luxury cars of the Wagons-Lits Company were at one time as familiar in Egypt as in Europe. Pullman and dining services were taken over by the State railways in 1950 and the Wagons-Lits assets were formally sequestered in 1961. The actual day-to-day running of the company's cars was not interfered with, but new sleeping and dining cars are expected to be run entirely by the Egyptians.

Egypt also has a variety of light railways, the more important of which are the Delta Light Railways (2ft. 6 in. gauge), the Basse Egypte Light Railways (metre gauge) and the Fayoum Light Railway (2 ft. 6 in. gauge). The Delta and Fayoum railways were constructed under a 5-year concession, and the Basse Egypte railway under a 50 year agreement. The Delta railway in particular grew to be a very large system, with about 594 miles of track, and the Basse Egypte line grew to 157 miles.

The Delta Light Railways have what might be termed a main line running from the Barrage below Cairo out along the east bank of the Damietta branch of the Nile to Mansura, with a branch to Zagazig. At Mansura it crosses the river to connect with a line running for many miles along the west bank of the river and a network of other lines reaching out to the Rosetta branch of the Nile. On the west side of the Rosetta branch of the river is a further network which approached within a few miles of Alexandria. The lines link many smaller towns and villages and provide passenger services as well as goods. Their principal freight is cotton, and in a good year they carry a large tonnage on their unfenced system. The other

two lines give a similar services, but all three have been threatened by road transport rivalry in recent years. The Delta lines, it was reported in 1958, were to be replaced by road transport under a four-stage scheme and would be abandoned as the metalling of roads was extended. In 1962, however, the Delta system asked for tenders for 13 diesel locomotives capable of hauling 400 tons on the level at about 20 m.p.h., so it may be that the system will not all be closed. The Basse Egypte Railway still appears in reference lists, with its headquarters at Mansura, and has over 20 locomotives, some 50 coaches, 350 wagons, 20 railcars and - perhaps the writing on the wall - 22 buses. The Fayoum Light Railway, now part of the State system, serves the fertile Fayoum Oasis south of Lake Karun, west of Wasta on the Upper Egypt Line. Fayoum has been called the "Orchard of Egypt". It is watered by the Bahr Yusef, and lies largely below sea-level.

In his Presidential address to the Institution of Locomotive Engineers in 1962, Mr. John F. Alcock, Chairman and Managing Director of the Hunslet Engine Co. Ltd., gave a graphic picture of a trip on one of the Delta lines. He had visited Egypt in 1934 to put into service a small diesel locomotive built for the Delta lines. It was an 0-4-0 112-h.p. unit designed to travel at not more than 20 m.p.h. Of a trial trip, Mr. Alcock recalls: "I ... well remember my consternation as we ran at full speed through villages, scattering camels, donkeys and children in all directions, the driver hanging on to the whistle cord continually and using the argument that provided he whistled continuously the police would exonerate him from all blame should anything happen." Mr. Alcock also recalls that the whistle was served from the same air reservoir as the brakes, and that his main worry was that there would be no air for the brakes if they were needed. Since that day, he says, his firm has never built a locomotive without an entirely separate reservoir for the whistle. The diesel must have impressed the Delta system, for at the last report they had well over 100 small diesel units.

Mention must also be made of the Khataiba - Wadi Natrun Railway. This 2ft. 6 in gauge line, 38 miles long, runs from Khataiba on the main line between Alexandria and Cairo westwards to the Wadi Natrun, a depression in the desert which contains a string of lakes and has considerable deposits of soda. The line was built to exploit the soda deposits."

Photos in this section - unfortunately hard to reproduce from the photocopy which I have been sent - include p.61: "Train of Dutch-built cars on the electrified Helwan suburban line, Cairo" (3-car e.m.u.); p.63: "Train of Hungarian-built diesel cars" (6 cars at least), "German-built diesel-electric 1,950 h.p. main-line locomotive" (externally similar to Belgian and Norwegian NoHAB-type units); p.65: "Train of Japanese-built diesel railcars in typical surroundings" (at least four cars); p.69: "Hunslet 12-h.p. 0-4-0 diesel-mechanical locomotive built in 1934 on the 75cm. gauge Egyptian Delta Light Railway" (note metric gauge in this caption.)



On Friday 3 - October 2003 the 11.22 arrival at Beth Shemesh arrived at 11.45, formed unusually by loco 738 and double-deck set 466, 465, 464 & 414. All normal services on this line at present, except on Saturday evenings are formed of IC3 sets. (Photo Sybil Ehrlich)