



**Once again a cover without a train visible. But this picture, taken by Aharon Gazit on 1st. June, while it may seem undramatic, tells a contemporary story. For many weeks no passenger trains have run over this busy four-track section of line just north of Tel Aviv Savidor station (the left pair of tracks for Haifa, the right pair of tracks for B'nei Berak and onwards). Israel Railways responded to the 'Covid-19' crisis or the 'Corona Virus' crisis by closing down all passenger services until things seem safer for crowds of passengers in enclosed vehicles. On the other hand, this provided an opportunity for a great deal of infrastructure work, and so these lines could be electrified much more rapidly than if masts and catenary could only have been erected during short 'windows' between trains each day.**

**For some weeks the Ayalon Highway (Road 20) was also eerily empty but now traffic has resumed - and with it the congestion. The Ayalon river itself, penned in by concrete walls, is reduced to a summertime trickle.**

**The railway tracks wait for the order to return to life..... Hopefully by the time this issue reaches you.**

# EDITORIAL.

As the March issue was being prepared in the early part of that month, the future looked very dire and reference was made to closed borders, cancelled railtours and more. In the meantime - it is now the beginning of June - a lot of people have become infected, a lot of these have then become ill and developed symptoms, and whilst many appear to have recovered, many have also died - and yet the Earth continues to spin and for the rest of us, in whatever risk category we are placed, Life Goes On. In some countries - including Israel - the 'lockdown' is slowly being eased although there are concerns regarding a new wave of infections; in Iran the plague seems to have hit particularly badly, whichever statistics one does or does not believe. In Europe a sense of impatience at the lockdown and the psychological and economic consequences is being felt, although a recent newspaper cartoon rather brilliantly divided the German population into 1.5% 'Immunologists, Epidemiologists and Government Medical Advisers' and 98.5% 'Experts'.

Israel Railways actually used the crisis to good effect - with the system largely shut down, they could do the work that was necessary without any pesky passengers in the way. Erection of electrification infrastructure shot ahead of schedule and deserted stations could be refurbished and repainted. Construction and planning work on Light Rail projects also went ahead. After 508 days of non-government a new Israeli government was appointed, including a Transport Minister who had declared openly she saw the job merely as a short-term consolation prize for political loyalty and not something that interested her - a sad sign of the lack of significance Transport still enjoys in the political perspective. We have received or found many interesting items; thanks go to our contributors. At the time of preparing this Editorial (3rd. June) IR passenger services had not yet been reintroduced and it seems the days when we could safely breathe the air shared with others have gone for a while, so masks and distance will become new norms. Despite that: Stay healthy, keep breathing and Enjoy!

The Editor.

Having recently marked the 75th. anniversary of the end of World War 2 it seems appropriate to reproduce this message sent by Arthur Kirby, the General Manager of Palestine Railways & Ports to his loyal and long-suffering staff:

The General Manager sends this announcement to railway and port workers on the occasion of Victory Day.

## THE VICTORY

This is indeed a week of glorious victories and we at the railways and ports are honoured that we had the opportunity to play our part in the great victory over Germany and Italy in the Mediterranean.

We were able to keep the supply lines open during those dark days and we later took upon ourselves the difficult task of transporting soldiers, supplies and machinery by rail and through the ports. During the days of the offensive, we played our part honourably.

We are proud of our participation and thank God for the tremendous victory.

Haifa  
8th May 1945



# NEWS FROM THE LINE.

*(Some of these items just scraped as 'Stop Press' into No. 128 but belong here in the record, especially due to the rather remarkable months the world has just experienced. Ed.)*

## (i). ASHKELON ELECTRIC TRAIN DEPOT WORKS.

From a press release of 04.03.2020 by Israel Railways Ltd.:

"The railways continue accelerating the current phase of the electrification programme at a total cost of \$173.5M (NIS 600M) which is to be completed at the second half of 2021.

The project includes among others: laying 11 km of electrified tracks including stabling sites for trains, building a 350m long platform for treating emu's, construction of engineering buildings, electricity, water reservoir, pumps, etc.; this in addition to building an emu depot at Ashkelon by Siemens as part of the tender the company won for supply and maintenance of double-deck emu's.

As an integral part of the project, the railways will link the depot with the network, and consequently, the Ashkelon railway station will be closed for traffic from Friday, 13.03.2020 at 00:01 and Wednesday 18.03.2020 at 05:00. This will cause the following traffic changes:

The services of trains on the Western Negev line (Beer-Sheva – Ashkelon - Rishon-LeZion Moshe Dayan - Tel-Aviv - Ra'anana) will be split; trains from the south will start/terminate at Sderot and from the north will start/terminate at Ashdod Ad-Halom.

Passengers to/from Beer-Sheva are recommended to use the eastern line which will operate regularly.

Direct night trains between Beer-Sheva and the southern inhabited areas and Ben-Gurion Airport (through Ofakim, Netivot, Sderot, Ashkelon, Ashdod Ad-Halom, Rehovot, Lod, Ben-Gurion Airport and Tel-Aviv HaHagana stations, will start/terminate from the north at Ashdod Ad-Halom, instead of Beer-Sheva Central.

Suburban trains between Ashkelon, Rehovot, Netanya, and Binyamina will start/terminate at Ashdod Ad-Halom instead of Ashkelon."

*(See photos next page)*

A link for download of a video film: <https://www.jumbomail.me/he/Download.aspx?sid=6F35354C4875687A315A54464B3342347436653838673D3D>

And later:

"In order to accelerate the linking of Ashkelon's new electric depot with the



**Computer-generated pictures of the new depot at Ashkelon being built by Siemens for its electric multiple units. (Those illustrated are single-deck, which is a slight error.)  
Courtesy of Aharon Gazit)**

network, Ashkelon railway station will be closed from Wednesday 12.03.2020 at 22:00 (and not 13.03.2020 as formerly announced) until Monday 16.03.2020 at 05:00 (and not Wednesday 18.03.2020 as formerly announced); other changes to traffic remain as announced."

(ii). CORONA VIRUS AFFECTS TRAFFIC.

(a). On 12.03.2020 it was reported: "Here are the latest developments regarding restrictions and traffic reductions:

According to instructions from the Ministry of Health, people arriving in Israel from the corona affected countries are forbidden to go by public transport; consequently they will not be permitted to go by rail; these instructions commenced Wednesday at 08:00; workers of Ben-Gurion Airport and Israelis going/arriving for internal flights will be allowed to enter by showing their Airports Authority worker card and - for passengers on internal flights - by showing identity cards.

Due to the rise in the number of train inspectors in isolation because of the corona virus, to 27, and due to a shortage in this manpower as a result, the railways have decided that as from today - Thursday 12.03.2020 - services on the lines: Dimona - Beer-Sheva North/University, Beit-Shemesh - Jerusalem-Malkha, and Lod - Rishon-LeZion Harishonim are closed until further notice.

Also night trains between Beer-Sheva Central and Tel-Aviv HaHagana will not operate."

(b). From a press release of 15.03.2020 by Israel Railways Ltd.:

"The railways are intensifying their preparations to prevent the further spread of the corona virus, and according to the instructions of the railways' General Manager Mr. Michel (Micha) Maiksner, increased cleaning and disinfection activities started at the end of last week, including: rolling stock, stations, all areas exposed to intensive touch by hands such as validators, gates, hand rails, handles at car external entrances and internal handles on seats and other parts, elevator push buttons, etc.

Mr. Maiksner also instructed staff to clean and disinfect all areas and points essential for operation and safety, and to increase the distribution of the protective equipment which started 2 weeks earlier to additional railway employees to be used when instructed by the Ministry of Health.

Maiksner said: "In addition to the activities taking place according to Ministry of Health instructions, I have instructed the employees to increase their precautions at a very high cost, of which the cleaning and disinfection activities are only part; I would like to thank all the railways' employees for their devotion at these hard times and wish us all a strong health".

Meanwhile, the temporary suspension of services on the lines: Rishon-LeZion Harishonim - Lod, Beit-Shemesh - Jerusalem Malkha and Dimona - Beer-Sheva North/University continues until further notice; This is due to 34 inspectors being placed in isolation after providing service for infected passengers on trains.

As at 15.03.2020, the Transport Ministry's General Manager Mrs. Keren Terner said on TV news that passenger traffic by rail has fallen by almost 90%, and by buses by more than 60 %.

Attached herewith are pictures provided by courtesy of Mr. Matan Berkovich-the railways' spokesman assistant; credit for the pictures and the video film: Mr. Shabtai Tal-Cloud View/Air Photos/Israel Railways Ltd.

(c). Then on 17.03.2020 came this:

"As per instructions of the Health and Transport Ministries, all public transport services - trains and buses - will operate between 05:00 and 20:00 only, starting tomorrow 18.03.2020; there will be no services, neither on Fridays nor on Saturdays and Saturday nights.

The railways are creating a 'corona isolated car' on each train (preferably in the middle of the train) for passengers suspected of being infected."

A 'Karon Corona'!

(d). CORONA VIRUS SERVICE RESTRICTIONS.

From a press release of 22.03.2020 by Israel Railways Ltd.:

"Due to the Corona virus epidemic, service frequency on most of the lines will shrink by about 50% on most lines to one train/hour in both directions from Monday 23.03.2020 and until further notice, this in addition to the existing restriction of operations to 06:00 to 20:00 with no trains operating on Fridays and on Saturday nights. However, the railways have also some benefit from the shrinking traffic; this enables an acceleration of electrification work as well as performing maintenance works both on infrastructures and rolling stock."

(iii). LOD AND KIRYAT GAT TRACKWORKS.

"As an integral part of the railways' annual development, maintenance, and tracks upgrading program, the railways will perform upgrading and replacement of turnouts and point machines at the station of Lod, also as part of preparative works towards linking tracks with the new railway station in construction as part of the transportation centre also in construction. Israel Roads Co. Ltd. will perform track infrastructure works in the Kiryat-Gat area.

Due to the works to be performed between Wednesday 25.03.2020 (the night between Tuesday and Wednesday) at 00:01 and until Sunday, 29.03.2020 at 04:30 the following temporary changes will take place, regarding traffic at Lod and southern areas:

- The stations of the eastern line to Beer-Sheva (Lehavim/Rahat, Kiryat-Gat, Kiryat-Malakhi-Yoav and Mazkeret-Batya) will be closed Wednesday 25.03.2020 at 00:01.

- The stations of Lod, Yavne-East, Rehovot and Beer-Ya'akov will be closed from Wednesday, 25.03.2020 at 22:30.

The closures will affect the following changes too:

- Between Wednesday 25.03.2020 at 22:30 and 00:01 trains on the Beer-Sheva - Nahariya and Beer-Sheva - Carmiel lines from the north will start/terminate at Lod instead at Beer-Sheva Central; trains from Beer-Sheva will not operate.

- Between Wednesday 25.03.2020 (the night between Tuesday and Wednesday) at 00:01 and until Sunday 29.03.2020 at 04:30 trains on the Beer-Sheva - Nahariya and Beer-Sheva - Carmiel lines from the north, will start/terminate at Tel-Aviv HaHagana instead of at Beer-Sheva Central; trains from Beer-Sheva will not operate.

Passengers who have to start/terminate at Beer-Sheva will use the Negev Western line (Ra'anana - Rishon LeZion Moshe Dayan - Beer-Sheva) which will operate regularly.

- Trains on the suburban line Ashkelon - Binyamina from the north will start/terminate at Tel-Aviv HaHagana instead of Ashkelon and Rehovot; trains from the south (Ashkelon and Rehovot) will not operate.

- Trains on the Beit-Shemesh - Netanya and Netanya - Ashkelon services will not operate.

Traffic on the closed sections will resume on Sunday, 29.03.2020 at 04:30.

(iv). FINANCIAL RELIEF FOR STATION TRADERS.

From a press release of 23.03.2020 by Israel Railways Ltd.:

"According to instructions of the railways' General Manager Mr. Michael (Micha) Maiksner and after a discussion held by the management, due to the Corona crisis which has caused a drastic decline of 80% in passenger traffic and hard economic damage to the businesses active at the railways' sites, it has been decided to delay payments of concession fees and monthly rental fees until the end of April 2020 at this stage.

This benefit will be given also in cases of the rental contract being managed by a third party (permission fees to concessionaires) as a mediator between the railways and the tenants.

Israel Railways General Manager Mr. Michael (Micha) Maiksner said: "The railways' management has understood that many businesses active at the railways' sites have been severely damaged by the situation and the drastic decline of 80% in passenger traffic, so we've decided this week on some minimum relief to give a breathing space; I hope that the emergency situation will soon end so that business will gradually return".

(v). ISRAEL RAILWAYS 2019 RESULTS.

From a press release of 25.03.2020 by Israel Railways Ltd.:

"Today, Wednesday, 25.03.2020, the railways have published their results for 2019:

The railways have ended 2019 with an overall profit of \$9.86M (NIS 36M) as against an overall loss of \$90.4M (NIS 330M) in 2018.

The EBITDA in 2019 was \$0.14M (NIS 0.5M) as against a loss of \$13.15M (NIS 48M) in the 2018 EBITDA.

The income for 2019 was \$702.5M (NIS 2.564Bn) as against \$667M (NIS 2.463Bn) in 2018; up by 5.3%.

The railways are negotiating with the government to correct the current development and operation agreement, in order that it might reflect in the best way the railways' costs and the subsidy they should receive, thus presenting the actual business results.

#### Passenger Sector:

The railways ended 2019 with new records in passenger traffic, despite shortages in track capacity (without a fourth track of the Ayalon corridor and quadrupling of the Tel-Aviv - Haifa coastal line):

During 2019 the railways carried 69M passengers, compared with 67.7M in 2018; up by 1.9%.

The daily average of passengers carried in 2019 was 259,000, compared with 257,000 in 2018; up by 0.8%.

The income for 2019 was \$202M (NIS 737M), compared with \$206.3M (NIS 753M) in 2018; down by 2%.

#### Passenger Train Punctuality:

The average punctuality for 2019 was 90.8% compared with 91.6% in 2018; down by about 1%; it was caused mainly by the labour conflict which hurt services during the first half of 2018.

During the 2nd half of 2019 punctuality improved to 92.2%, thanks mainly to more managerial attention, hand-in-hand with operational preparedness, by providing trains on standby at strategic points of the network, as well as the beginning of the pilot scheme of converting cars for suburban services to carry more passengers while retaining the number of seats.

Punctuality is significantly affected by the acute shortage of track capacity particularly on the sections mentioned which are responsible for 80% of Israel's rail traffic; also the increasing congestion at railway stations mainly due to boarding and alighting from congested trains, as well as the significant rise in the number of bicycles carried on trains which increases the delays, also affecting punctuality.

#### Cargo Haulage Sector:

In 2019 the railways carried 8.5M tons of cargo; identical to 2018. Income in 2019 was \$50M (NIS 182M) compared with \$48.5M (NIS 177M) in 2018; up by 2.8%. Loss in 2019 was \$9.3M (NIS 34M) compared with \$16.7M in 2018; down by 56%.

The loss was caused partially by steps taken by the workers' union in the first half of 2019 which included strikes paralyzing the sector, as well as

initiated section closures in favour of track works and electrification.

Cargo haulage by rail is more expensive than by trucks, and therefore a governmental subsidy is needed to reflect the national interest of reducing congestion, air pollution, and accidents on roads.

The 2nd half of 2019 was a turning point regarding electrification when electric trains started commercial services between Jerusalem Navon and Tel-Aviv HaHagana stations; the electrification works are on progress between Tel-Aviv HaHagana, Tel-Aviv HaShalom, Tel-Aviv University and Herzliya stations; works are also on progress on the southern part of the Eastern Line from Lod northwards as well as on the '431' line between Mod'in and Rishon LeZion HaRishonim.

Details can be found on the link: <https://maya.tase.co.il/reports/details/1286021>

According to the government decision of 25.03.2020, all passenger services are suspended until further notice; the railways have announced that the much-reduced traffic will enable even more progress on electrification as well as other infrastructure projects, as well as a thorough treatment of passenger stock and motive power.

#### (vi). FURTHER ELECTRIFICATION.

(a). From a press release of 29.03.2020 by Israel Railways Ltd.:

"The government approved today the outline of the railways' electrification project; the railways' General Manager Mr. Michael (Micha) Maiksnor said: "The outline is a vital energy adrenaline burst for the project which has achieved progress during recent months with the introduction of commercial electric passenger services between Jerusalem Navon and Tel-Aviv HaHagana stations and in the coming month to Tel-Aviv Savidor/Central station too" (as and when passenger traffic resumes...).

The new outline has been approved both by the government and the railways' Directorate after months of negotiation, as well as a thorough check by an external control company.

The outline is based on the original contract with S.E.M.I., (principal contractor Sociedad Española de Montajes Industriales) with the addition of a section which defines milestones of the project with emphasis on the required accelerations for which the original payment will be given, as well as an additional bonus for acceleration, as part of emphasis on outputs regarding the network to be electrified.

According to the outline S.E.M.I. will continue to electrify all the lines planned to be electrified, while significantly increasing their manpower and their teams; they will also be free to recruit their own



subcontractors; S.E.M.I. will receive an increased payment of \$139M (NIS 500M) to be paid according to S.E.M.I.'s ability to meet the milestones and schedules anchored in the contract.

The outline comes after checking all the electrification options including reducing the work volume of S.E.M.I. in favor of additional electrification contractors; after a thorough check and due to good progress on electrification works it has been decided to continue working with S.E.M.I. as a leading contractor while updating the outline regarding the gaps from which the contract suffered.

It should be mentioned that since the railways' General Manager Mr. Maiksnor started his job on July 2019 the project enjoyed from the first an energy adrenaline burst thanks to changes of managers in the electrification management teams, longer working times have been allocated for electrification works on active tracks, a trust has been created between the railways and S.E.M.I., and - not less important - more resources and manpower have been allocated to the project.

Meanwhile electrification works are in progress also north of Tel-Aviv Savidor/Central, Tel-Aviv University, Herzliya and the Sharon line to Ra'anana West, Ra'anana South, Hod-HaSharon, Sokolov and Kfar-Sava Nordau stations; works also started on electrification of the Tel-Aviv HaHagana - Ashkelon line; at Ashkelon, a depot is under construction for the double-deck e.m.u.'s ordered from the Siemens which are to arrive soon."

(b). On 05.04 it was then announced:

"History has been made.... The High-Speed railway from Jerusalem now reaches the HaShalom and the Savidor stations in Tel-Aviv. The electrified line has been extended.

The train-system builders are continuing their acceleration of infrastructure projects due to the current situation which has halted rail traffic due to the epidemic.

After the recently-completed construction of the electrification infrastructure structures at the Savidor station, carried out this morning (Sunday), a successful test-drive of a fast electric train from the HaHaganah station to the HaShalom & Savidor station was run. Loco 3005 headed a double-deck set into a deserted Savidor station, Platform 1.

Electrification of this section was planned to be completed in June 2020, but the train-company and the SEMI Spanish company accelerated their electrification infrastructure works by two months.

In the coming weeks more tests and special loaded train trips will be running.

The test drive is intended to carry out a preliminary examination of the electrical infrastructure and finding gaps in preparation for commercial operation of the line, so that passengers can (eventually) enjoy a direct journey, with no need to change between Jerusalem and Tel-Aviv Savidor.

CEO Michael (Micha) Maiksner said the completion of the electrification and operation of the high-speed line between Jerusalem and Tel-Aviv Savidor is a significant public step for passengers, who will benefit from the expansion of the service to HaShalom & Savidor, which enjoy high connectivity all over Gush Dan.

Unfortunately, this achievement comes at a time when this plague has closed, many services ....but we are working hard towards better days, and making sure public rail service ensures quality. This is an important achievement for the national project of electrification of the rail network, which comes after great efforts and intensive work by the railway contractor in cooperation with government representatives.

This achievement demonstrates the necessity of accelerating the electrification outline drafted with the contractor for electrification, sponsored by the state and representatives of the Ministry of Transport & Finance."

#### (vii). E.T.C.S. LEVEL 2.

An Israel Railways Spokesperson announced on 01.04.2020:

"Israel Railways has successfully conducted a test drive of the new signalling system "ETCS LEVEL 2". (European Train Control System). This is a part of the acceleration of projects due to the coronavirus.

Israel Railways recorded yesterday (Tuesday 31.03) a historic milestone with the success of the first test drive operated and controlled entirely using the new signalling system ETCS LEVEL 2. This trip took place near the Mishmar Ayalon freeway line to Jerusalem, on which have been successfully tested several scenarios including extreme scenarios assembled in operation.

This project, like others, has recently accelerated as a result of the termination of the movement of passenger trains due to the coronavirus pandemic.

The system - ETCS LEVEL 2 - is the innovative technology and the most advanced in the field of control of trains. Israel Railways is the world's first developer to adapt the railway network for this technology. Realization of the project includes three engineering projects: Installation of railway equipment, installation of dedicated equipment in cars and locomotives, and the establishment of an independent cellular communication network on

Israel Railways – GSMR, which is the foundation of the system - ETCS.

The transition to the new signalling system is one of the most important projects of Israel Railways and is estimated at \$ 2.5 Billion. Operation will begin gradually in the coming years until the end of the project in 2023.

Thanks to the system IR will be able to increase rail capacity by increasing the frequency of trains and improved service, without the addition of rail infrastructure. This is in addition to other changes and significantly increasing the safety of travel."

*(Ed. adds: This is the dream of all track and signalling engineers – an empty railway system that they can play around with while all passengers stay at home.)*



- The first test run under ETCS Signalling conditions, a light engine (3014) at Ben Gurion Airport station. 31.03.2020.
- (N.B: 'ETCS' does not stand for 'Empty Trains, Corona Syndrome' - but it could just as well do so!)

#### (viii). GRADUAL RETURN TO NORMALITY?

(a) On 27.04.2020 the government decided to resume all bus services, operated so far partially only, as a step to resume business and the economy. (In fact when buses did recommence they could take only twenty passengers and there were massive queues of soldiers attempting to return to their bases.)

(b). The Chairman of the Workers Union Mr. Bar-David has sent an angry letter to the current Transport Minister Mr. Bezalel Smotrich, who had said that as for now rail services will not resume, in order to enable completion of the electrification up to Herzliya, and claimed that rail is vital for resuming economy and will accelerate it; Mr. Bezalel Smotrich's response was that his ministry is analyzing and mapping the passenger needs as for now, and decisions to resume services will be taken soon.

(c). On 28.04 Sybil found a news site stating that when trains run again social distancing will be imposed – either one passenger per bay of four seats or two with a table separating them; other ideas being floated were that one would have to book ahead and for a specific train. In the meantime advantage has been taken of the closedown also for station refurbishment work, renovating toilets, painting etc. Electrification work is, as we have seen, ahead of schedule. It was expected that reopening would take place in reverse order to the closing, with

Ben-Gurion Airport last since hardly anyone is flying now in any case! Also no night trains and no Friday services..

#### (d). On 01.05.2020 'Times of Israel' reported:

"Israel Railways will resume train routes gradually, beginning May 16, the Transportation Ministry said Thursday. All trains have been suspended amid the pandemic over fears of overcrowding in the cars, while buses have continued running on a restricted schedule, stopping in the evenings and cancelling weekend lines.

Transportation Minister Bezalel Smotrich on Thursday met with railway officials to discuss the resumption of services. He said the lines would resume in two weeks, provided the plan receives the final go-ahead from the Health Ministry. Train passengers will be expected to keep social distancing rules and wear masks and the railway service was preparing to conduct temperature checks at the train stops. In recent days, Israel's infection rate has dropped off significantly, with only dozens of new cases being reported every 12 hours, and the government has announced steps to ease restrictions on businesses and travel. Thursday was the fourth consecutive day with fewer than 200 new cases.

Israel on Thursday returned to some semblance of normalcy, with much of the country opening up following two days of ramped-up restrictions in place for the Memorial Day and Independence Day holidays.

(e). Then on 05.05.2020: "After the government has permitted it, bus services resumed at the end of last week with the exception-at the moment-of weekends and according to the covid19 restrictions.

Yesterday, 04.05.2020, Prime Minister Mr. Benjamin Netanyahu announced in a press conference through the media that on Saturday night 16.05.2020 rail passenger services will resume partially and gradually, whilst at the end of this month the services will be fully restored.

#### (f). From a press release of 11.05.2020 by the Transport Ministry:

"Good news for Passengers: Transport Minister Mr. Bezalel Smotrich (until Thursday 14.05.2020 when his successor will start his job!) announced today, Monday 11.05.2020, that electric trains will start running between Jerusalem Navon and Tel-Aviv Savidor/Central from 24.05.2020.

He travelled today on the first passengers carrying electric train (invited guests only) between these two stations together with the Israel Railways Ltd. General Manager Mr. Michael (Micha) Maiksner and senior officers from the ministry and the railways.

He also said that in September 2020 electric services will be extended to Herzliya.

Mr. Bezalel Smotrich further said: "The date for opening the AI for electric trains to Tel-Aviv Savidor/Central station has been put significantly

forward thanks to accelerated electrification works during the Covid19 crisis when no passenger trains were - and still are - not operating; it is uneasy to see an empty station, but this is only temporary; the station will enjoy a lot of happy passengers using quieter trains powered by green energy thanks to the efforts made by Israel Railways Ltd. General Manager Mr. Michael (Micha) Maiksner and the railways' employees; the frequency of service from 24.05.2020 will be 2 trains/hour each direction between 06:30 and 21:30 between Sunday and Tuesday; there will be services on Saturday night too; travelling time between Jerusalem Navon and Tel-Aviv HaHagana stations will be 32 minutes (as it was prior to the Covid19), to Tel-Aviv HaShalom 37 minutes and to Tel-Aviv Savidor/Central 42 minutes.

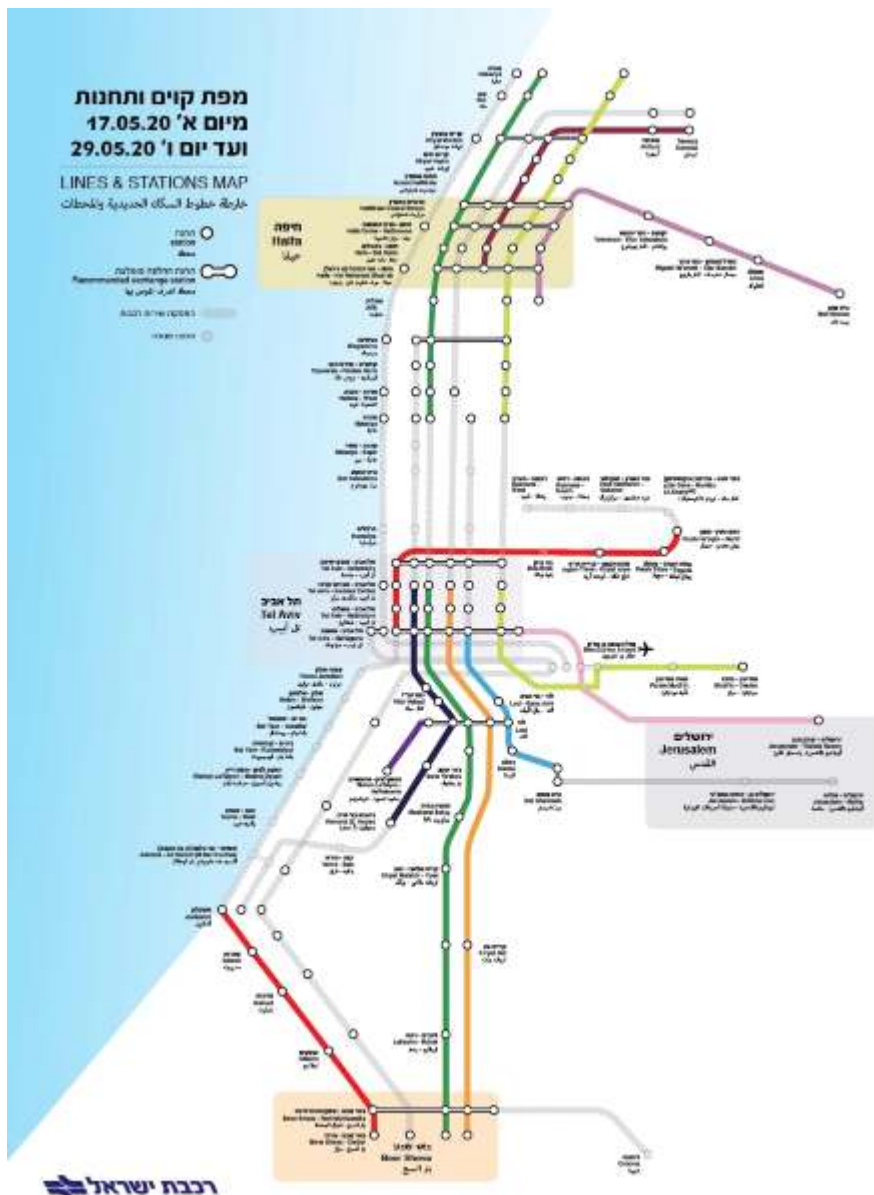
It should be mentioned that since the completion of electrification between Jerusalem Navon and Tel-Aviv HaHagana stations the daily passenger traffic grew from 10,000 to 20,000 and with the electrification completed to Tel-Aviv HaShalom and Tel-Aviv Savidor/Central stations it will grow significantly; with the arrival of the Siemens double-deck emus in the second half of 2021 travelling will be further improved".

Israel Railways Ltd. General Manager Mr. Michael (Micha) Maiksner said: "The electrified line between Tel-Aviv and Jerusalem is an historical landmark for the railways both from the service aspect and from the view forward to replace diesel trains by electric trains powered by green energy." He added that "In addition to the completed electrified section opened, work is running ahead on destinations such as Herzliya, Ra'anana, Kfar-Sava and Ashkelon; I thank our employees for their efforts and devoted work, and wish our passengers to enjoy rail travel."

(g). From a press release of 11.05.2020 by Israel Railways Ltd.:

"Passenger services will resume partially and gradually on Sunday, 17.05.2020 until Thursday, 29.05.2020; trains will operate between 05:00 and 23:59 between Sunday and Thursday." Much of the information is not clear, and in order not to complicate matters too much, attached herewith is a graphical diagram of lines and services for these dates, called train-map-may20.webp, provided by courtesy of the railways' spokesman assistant Mr. Matan Berkovich.

(h). Then, just to show how one should never believe anything until the wheels actually turn (and see below for political shenanigans) on 15<sup>th</sup> May Sybil noted an announcement on the IR website stating that the resumption of rail services had been postponed to June 1<sup>st</sup>. "by government decree". Since the general lockdown was already being generally eased it is not clear why the sudden two-week postponement was called, although at least it will benefit further electrification work along the heavily-trafficked bottleneck between Tel Aviv Savidor, Universita and Herzliyya.



- This was the (at 11th May) anticipated revival of the system as from 17.05.20; as we know it could not after all be implemented until several weeks later.
- (Diagram courtesy of M. Berkovitch, IR Spokesman's Office.)

(ix). NO ENLIGHTENMENT AT THE END OF THE TUNNEL.

From: 'Asharq al-Awsat', 07.04.2020: Israel Plans to Construct Railway Tunnel under Jerusalem

"Israel has revealed a new plan to construct an underground railway tunnel in the occupied city of Jerusalem that reaches the outskirts of the Al-Aqsa Mosque. It comes in light of the world's preoccupation with the novel coronavirus pandemic.

"Israeli authorities have prepared the plan during the emergency period they recently declared over the outbreak," the Arab Center for Alternative Planning said in a report published Sunday.

Israel's National Infrastructure Committee announced the plan during a March 17 meeting, the center reported. The first phase of the project calls for the construction of an underground railway tunnel that connects west Jerusalem with the Moroccan Gate (Bab al-Magharib), reaching the outskirts of the Al-Aqsa Mosque. While the other phase will see the construction of a railway above ground that crosses several neighbourhoods in Jerusalem.

The committee has published an announcement for preparing the aforementioned project and imposed restrictions according to the Articles 77 and 78 of the Organization and Building Law. These articles allow the freezing of issuing building permits and carrying out any work within the limits of these plans.

"The tunnel that will be built will pass under the Palestinian neighbourhoods in East Jerusalem, specifically the Old City neighbourhoods of Silwan and Abu Tor," the report explained.

"As it seems, it will have many impacts on many aspects of life of these neighbourhoods, which the center will study in turn."

It noted that they are part of a series of other vague and dangerous projects that are being implemented secretly in this sensitive area. These include the Temple tunnel, which runs under the neighbourhoods of the old town and threatens its safety and stability, and the City of David project, whose various installations threaten Silwan and the Moroccan Gate area.

The centre announced it will continue to follow up the Israeli projects and identify and analyze their consequences to determine the damage they might cause to Arab neighbourhoods."

(x). LEVEL CROSSING REPLACEMENT AT DOR.

From a press release of 19.04.2020 by Israel Railways Ltd.:

Due (or "thanks"... ) to there being no traffic of passenger trains caused by the corona virus shutdown, the railways are accelerating building of a grade separation near Dor/Nachsholim (south of Atlit) on the Tel-Aviv - Haifa coast line, replacing a level crossing; in regular times such works required line closures (at least on weekends) which on the busy coast line mean severe interruptions for passenger services.

The works are being performed by the railways' implementation department at a cost of \$ 19.5M (NIS 70M) with the participation of dozens of workers and engineering equipment, at the end of which the access road to Dor/Nachsholim (two resort villages, beach and hotel), will run under the tracks, thus getting rid of the bottle necks for car drivers at each lowering of the barriers and - no less important – removing a headache for the railways.

Works include also building a pumping station for rain water drainage, paving roads, moving of electricity & communication systems, building lighting systems, gardening, planting trees, etc.

Due to accelerated works, completion of the project - originally planned for the beginning of 2022 - is now foreseen much earlier.

Over the last decade more than 60 level crossings have been either eliminated and/or replaced by grade separations as part of the Transport Ministry & Israel Railways Ltd. policy to eliminate/replace as many level crossings as possible; in the next two years, many additional level crossings at Carmiel, Kfar Yehoshua (Valley Line), Lod, Kfar-Habad, Shefayim (north of Herzliya), Ma'ayan Tzvi (north of Binyamina), Avihayil (north of Netanya), etc. are to be eliminated or replaced by grade separations.

(xi). POLITICS.

Until now we have truly done our best to keep out of political issues as far as possible but sometimes, for the sake of the historical record and what will be reported in the future, one has to delve deeper into the details of internal conflicts and coalitions and personal patronage than one would like. What follows is, after all, relevant to the future of transportation projects in Israel.

*From 'Times of Israel' 14.05.2020:*

"Prime Minister Benjamin Netanyahu has reportedly offered Likud's Miri Regev to be appointed Foreign Minister in 18 months, when Blue and White chairman Benny Gantz takes over as Premier in the rotation government between the two parties.



• *Work on replacing a level crossing with an underpass. April 2020. (Photos courtesy of M. Berkovich.)*

According to a Channel 12 news report Wednesday, under Netanyahu's offer Regev will begin as Transportation Minister in the new government, before moving to the Foreign Ministry when Gantz becomes Prime Minister on November 14, 2021.

Regev, who is currently Culture Minister, reportedly did not rule out the offer. The Likud party refused to comment on the report.

The network described the offer as compensation to Regev, who publicly expressed interest in heading the Public Security Ministry. Reports last week said she told Netanyahu she wouldn't serve as a minister at all if she was not appointed to the post. The ministry, which is responsible for



overseeing police, is now expected to go to outgoing Justice Minister Amir Ohana, a close ally of the premier.

Blue and White MK Gabi Ashkenazi will initially be Foreign Minister in the new government, which is set to be sworn in Thursday evening."

What does all this mean? Business as usual and the Transport portfolio being offered as a sop or sweetener to someone who is not qualified for it, doesn't know anything about it and doesn't really want it. And yet Israel continues to function....

Then on Friday 15.05.2020 Times of Israel reported:

*"Incoming transportation minister Regev fires director on maternity leave."*

Likud MK calls ministry chief to inform her of replacement with new government about to come in; labour lawyer calls move illegal.

"Incoming transportation minister Miri Regev on Thursday informed the ministry's director-general, Keren Terner Eyal, who is on maternity leave, that she would be removed from the post when Regev takes over the portfolio on Sunday.

Regev told Terner Eyal in a Thursday night telephone call that she would be replaced, Terner Eyal told ministry employees. Responding to criticism of the move, Regev later said it was common practice and urged the "bleeding hearts" complaining about it to "calm down."

The call with Terner Eyal came about an hour after the announcement that Regev would take over the ministry, but ahead of the swearing-in of the new government, which is set for Sunday.

Terner Eyal said in a message to Transportation Ministry employees: "The incoming Minister Regev called me and informed me that on Sunday a new director-general is coming in."

On Friday Terner Eyal downplayed the issue, saying that it was normal for incoming ministers to replace director-generals. "I would not want to remain director-general just because of the important maternity leave legal protections."

Prime Minister Benjamin Netanyahu said he would appoint Regev to the position on Thursday as he struggled to placate senior Likud lawmakers with a limited number of available cabinet posts. The swearing-in of the new government was delayed from Thursday to Sunday due to the Likud party infighting.

Terner Eyal is a candidate for director-general of the Finance Ministry after Shai Babad said he was leaving the position, a report on the Ynet news site said. Terner Eyal came to the Transportation Ministry after working in the budget department of the Finance Ministry.

Former Transportation Minister Israel Katz appointed Terner Eyal to the position in 2016, making her the first woman to hold the office. She gave birth to her third child a month ago.

Attorney Sigal Pail, a specialist in labour laws, said: "This is illegal. Labour laws for women set a period of time that is protected from harm to

working conditions, and definitely from getting fired. The protected period of time is 60 days from the end of the delivery and it's not permissible to fire a worker without a permit from the Commissioner for women's labour laws."

An incensed Regev said in response to the report that "It is well known that every minister arriving at a new ministry appoints a trusted person as their director-general, in order to promote the worldview of the new minister." She said her conversation with Terner Eyal had been "good-natured" and that she had not wanted her to learn of the decision in the media.

"Before speaking to her I spoke with the civil service commissioner to ensure that all her rights will be maintained, and so it will be," she added. "So all the bleeding hearts and tut-tutters might want to tell the truth and calm down a bit."

Outgoing Transportation Minister Bezalal Smotrich praised Terner Eyal on Twitter.

"Behind the engine that is called the government there are public workers who are excellent and dedicated. The best of them is called [Keren Terner Eyal], the great director of the transportation ministry that I was privileged to work alongside with and learn from," he wrote.....

A statement from the Prime Minister's Office on Thursday said that Regev, the current Culture and Sports Minister, would be appointed Minister of Transportation and National Infrastructure in the new government, and then become Foreign Minister in November 2021, when Blue and White leader Benny Gantz takes his turn as Prime Minister according to the power-sharing agreement he signed with Netanyahu.

Netanyahu said Regev would also be a member of the top-level security cabinet. In addition, she would be in charge of Israel's Hasbara (public diplomacy) centre as well as a member of the Judicial Appointments Committee." And so forth.

"Regev was earlier reported to be unhappy with only becoming Transportation Minister, having expected a more senior position, apparently prompting Netanyahu to upgrade his offer to her.

The unity government was set to be sworn in Thursday evening, but the ceremony was delayed until Sunday as Netanyahu struggled to divvy out the remaining available ministerial posts in his incoming coalition to lawmakers from his own party. Numerous Likud MKs, some of them ministers and veteran lawmakers, were privately and in some cases publicly rebelling against Netanyahu, furious that they had been offered minor government positions or no post at all."

The Editor is reminded of the old definition that a Politician is someone who "does to his country what he can no longer do to his wife" - although in the case of the current Prime Minister in Britain this needs to be modified, of course, to include what he can do to other people's wives or people who are not yet his wives. Interesting also is the unspoken assumption that "senior lawmakers" are people who take the law seriously; Also that politicians have people whom they claim to trust; Or that one call such a rabble a 'Unity' Government..... With 36 Ministers they must count as 'Lammed-Vavniks', a

reference to a tradition that the world is only kept going by the presence of 36 'just' people...

In an article in 'Times of Israel' of 17.05.20 on these developments, one example of potential problems was described thus:

"Miri Regev, for example, will serve as Transportation Minister for 18 months, then upgrade to Foreign Minister for the next 18. Such a rotation is a recipe for inaction. In a large and complex agency like the Transportation Ministry, it can take a minister many months to develop a working knowledge of the subject matter and a productive relationship with the bureaucracy. A minister who is slated from the start to leave after 18 months is a minister who will be largely ignored by the ministry staff for the duration of their term. Reforms won't advance. Budget fights — where the political echelon is especially useful — will go unfought. Things will stand in place."

Thank goodness some major railway developments, the electrification programme, the orders for new units, have already been put in place.....

Mrs. Regev took over her new Transport & Road Safety Ministry on 18.05 and a press release was issued that day: "The newly-appointed Transport Minister Mrs. Miri Regev, took up her post today succeeding the temporarily-appointed Transport Minister Mr. Bezalel Smotrich, both appointed by Prime Minister Benjamin Netanyahu in his former and present government; There was an official ceremony at the Transport Ministry.

She holds the rank of Brigadier-General (Reserves) under which she served as the IDF (Israeli Defence Forces) General Censor and later spokesman; since 2015 she has been Minister of Culture and Sport."

Aharon adds: "She is 54 years old, married with Dror Regev, an engineer at the IAI (Israeli Aerospace Industries) and has three children; she lives at Rosh HaAyin, where many retired senior IDF members live. She is the first woman to be Transport Minister.

She is considered to be very energetic and aggressive, and loyal to Prime Minister Netanyahu, and does not mince words in her speeches. However, when it comes to briefing data at press releases she is not very accurate; this happened today — 18.05.2020 - when she spoke about the Turkish Ottoman régime who built railways from Turkey to Sinai, she forgot to mention that these lines, particularly in the then-Palestine, were used to transport troops and military equipment to Sinai during WWI, rather than serving the population; then she mentioned closing the original Valley Line, building the coast line to Tel-Aviv while some years later closing the Eastern Line which is now being renovated. Finally she said that she wants to bring in all the latest innovations in transportation particularly rail."

The next day 20.05 'T.O.I.' reported: "Newly-appointed Finance Minister Israel Katz (Likud) announced Wednesday that he had appointed the former director-general of the Transportation Ministry, which he headed in the last government, to the same position in his new office. Keren Terner Eyal, who will be the second-ever female director-general of the Finance Ministry, made headlines last week when then-incoming transportation minister

Miri Regev informed her while she was still on maternity leave that she would be removed from the post immediately."

#### (xii). UPGRADING WORK CONTINUES.

Meanwhile, back in the real world: From a press release of 13.05.2020 by Israel Railways Ltd.:

In addition to accelerating infrastructure projects, maintenance of tracks and rolling stock, the railways utilized the time of line closure to passenger traffic to upgrade 40 railway stations all over the network, which account for more than half of the stations.

These works at an estimated cost of \$4.3M (NIS 15 M) had been planned to be implemented in the coming years, but have been significantly accelerated as per instructions of Israel Railways Ltd. General Manager Mr. Michael (Micha) Maiksner already at the beginning of Covid19 pandemic.

The railways are currently completing the acceleration of the mentioned works towards service resumption on 01.06.2020 (originally planned to resume partially on 17.05.2020 - but this was rejected by the Ministry of Health).

Israel Railways Ltd. General Manager Mr. Maiksner said: "We are preparing ourselves to re-open the stations and gradually resume passenger service according to instructions from the Ministry of Health; in accelerating major infrastructure projects regarding tracks, electrification and rolling stock, we have utilized the recent months to rebuild and upgrade more than half of the passenger stations, so that the public will enjoy a much-improved service; This is an opportunity to remind the public to behave according to the instructions from the Ministry of Health".

The upgrading works performed are as follows:

##### Main Upgrading in the North:

Nahariya station: This station serves 130,000 passengers/month and underwent upgrading at a cost of \$128,000 (NIS 450,000) which included: replacement of the entrance hall floor and lighting, painting and upgrading of signs and accessibility components, gardening and pruning, as well as an overall rebuilding of toilets for passengers of limited abilities.

Haifa Central HaShmona (the Eight) station: At this station which serves 100,000 passengers/month, works included: more canopies, upgrading and replacement of the existing lighting system to a pleasant and economical LED system, drainage and roof sealing, and sand cleaning of the station stone front (originates from 1937) at an overall cost of \$28,500 (NIS 250,000).

Haifa Hof-HaCarmel (Raziel) station: At this station which serves 200,000 passengers/month, works included: renovation of entrance hall, replacement and upgrading of toilets, painting the walls, replacing floors and pavement, installing new security scanners, and replacing the platform yellow strip at an overall cost of \$1.42M (NIS 5M).

Binyamina station: At this station which serves 140,000 passengers/month, works included: replacement and upgrading of platform canopies, additional entrance gates to the platforms,

relocating of exit carousels in favour of passenger flow at an overall cost of \$228,000 (NIS 800,000).

Additionally, the railways have accelerated by three months a huge \$635,000 (NIS 2M) project to extend island platform Nos. 2/3 from 215m to 250m length in order to allow longer trains to use the station and more passengers to use it, as well as preparations to carry the new Siemens emus planned to arrive in the second half of 2021.

Caesarea - Pardes-Hanna station: At this station which serves 60,000 passengers/month, the canopy along the western platform has been upgraded, replaced, and repaired at a cost of \$85,500 (NIS 300,000).

Hadera West station: At this station which serves 100,000 passengers/month, \$1.14M (NIS 4M) have been invested in accelerating the construction of the adjacent new public transport terminal by two months.

At both Herzliya and Haifa Bat-Galim stations the pedestrian subways have been renewed and upgrading and drainage works have been carried out at a cost of \$228,000 (NIS 800,000); at Herzliya station, works of creating a direct passage from the platforms to an overhead pedestrian bridge above the Ayalon road (Highway 20) simultaneously to improve accessibility of passengers to both parts of Herzliya as well as to the high-tech area at the city's western part.

##### Main Upgrading in the South:

Ashkelon station: At this station which serves 125,000 passengers/month, additional canopies over the platforms have been installed as well as many painting works performed; this in addition to accelerating the construction of a new site for a depot for electric trains and linking it with the electrified network.

Rehovot station: At this station which serves 180,000 passengers/month, and considered one of the railways' main stations, works at a cost of \$4.3 million (NIS 15M) will start soon to include: an overall upgrading and rebuilding of the station structures, additional gates of entrance/exit to/from platforms, additional security check points and exit carousels in favor of passenger flow, upgrading of toilets, upgrading the pedestrian subway between platforms, improved accessibility, and upgrading fire extinguishing system; the station front will also be significantly upgraded by enlarging the sidewalk near the main entrance, an additional canopy over the entrance, additional bicycle parking spaces, planting of trees, and various gardening works.

Ashdod Ad-Halom station: At this station which serves 160,000 passengers/month, the elevators have been upgraded, many painting works performed, and toilets renewed at an overall cost of \$171,000 (NIS 600,000).

Beer-Sheva Central & Beer-Sheva North/University stations: At both stations intensive painting works have been performed; additionally, at Beer-Sheva North/University station additional toilets have been built at the platform level, the existing toilets at the entrance level have been upgraded, and accessibilities to passengers with limited capabilities improved at an overall cost of \$285,000 (NIS 1M).

Simultaneously, infrastructure and development works of adding a fifth platform at Beer-Sheva Central station are being performed in order to increase service frequency on future.

#### (xiii). LEVEL CROSSING NEAR-ACCIDENT.

Although passenger services have not been resumed, trains are still running on parts of the IR system. This from a press release of 17.05.2020 by Israel Railways Ltd.:

—"Last Thursday, 14.05.2020, a disaster was avoided at a level crossing near Ashdod (km. 146.4) when a bus driver, probably entering the area at a speed higher than permitted, did not notice the warning devices being activated towards barriers being lowered for a quickly-approaching freight train.

The barriers came down on the bus and by stopping suddenly he created a bottle-neck behind him and thus an inability to move the bus in reverse.

The warning systems equipped with VMD were activated and the level crossing inspector passed a focussed warning to the Safety Centre who acknowledged immediately through the Emergency Frequency to all trains around, including the freight train's driver who managed to apply emergency braking and to stop before the level crossing. (Video shows the phosphate wagons were headed by 712T & 713T).

Israel Railways Ltd. General Manager Mr. Michael (Micha) Maiksner praised the workers for their reaction, which avoided a disaster and said: "In this morning's event too, all the safety circuits functioned perfectly, from the level-crossing inspector who identified the danger and sent a warning, through the safety centre who acknowledged immediately the pending emergency on the Emergency frequency to all trains around including the freight train driver, who braked in time; the car drivers have to pay more attention to the fact that, despite no passenger trains being operated due to Covid-19, freight trains, works trains and track machinery vehicles do run; the railways are investing in the most advanced warning technologies, but there is no alternative to care and discretion".

The level crossing is to be replaced soon by a grade separation as part of the road/rail interchange Ashkelon North currently under construction.

As part of the many activities undertaken by the railways to increase safety at level crossings the railways launched a cooperation with the Israeli company Waze (who developed a way guiding system) in which a warning is given for the drivers approaching a level crossing through an audio warning and graphical display.

*(See photos on next page)*

#### (xiv). RAIL PASSENGER TRAFFIC RESUMPTION DATE.

After many disagreements between the former senior officials of the Ministry of Health and the Transport Ministry regarding the date of passenger traffic resumption, and after the former date of 01.06.2020 had been rejected, it is now hopefully to be 08.06.2020; this is almost two weeks after the full resumption of bus services on 28.05.2020.



• *Two views of the near-catastrophe at the level crossing near Ashdod 14.05.2020. (Photos provided by courtesy of Mr. Matan Berkovich, Assistant Spokesman; Credit for pictures to IR Safety Dept.)*

#### Trains to restart, as virus regulations eased

Buses to carry up to 75% of full passenger capacity from end of the week; railways to run on June 8. (By Stuart Winer. Times of Israel 24 May 2020).

Transportation Minister Miri Regev and Health Minister Yuli Edelstein agreed Sunday that, from the end of the week, public buses will be able to increase their passenger load to 75 percent of the maximum capacity, and that trains will return to full service early next month.

There have been long lines and overcrowded conditions at bus stations, especially of soldiers returning to their bases after the weekend, as the public transportation routes ran at limited capacity due to restrictions imposed to curb the coronavirus pandemic.

In an easing of the lockdown measures, from Friday intercity buses will be permitted to carry 46 passengers instead of the 23-passenger limit currently applied.

129:05.

## TENDERS.

### A. TENDERS SOUGHT.

(i). Request for Information ("RFI") Concerning Rail Journey Planning Engine ("RJPE")

*[Since I have no idea what this jargon is meant to mean, I cite this tender 'in extenso'. Ed.]*

#### I. Introduction

Israel Railways Ltd. ("ISR") requests information and an overall analysis regarding Rail Journey Planning Engine ("RJPE").

ISR seeks such information from Startups and other Companies that have a compatible solution for public transportation such as trains, aviation, buses etc, all as generally defined in Appendix A attached hereto (the "Technical Attachment") and as further described below.

#### 2. Objective of RFI

The objective of this RFI is to enable ISR to explore the option of acquiring the proposed RJPE, as well as to review and estimate the costs involved.

This RFI is not to be considered as a request for proposals, nor as a tender and the provisions of neither the Israeli Mandatory Tenders Law 5752-1992, nor the Government Procurement Agreement shall apply hereto.

Notwithstanding the aforesaid, ISR may, as a result of this RFI, at its sole and absolute consideration, approach one or more of the Respondents to this RFI and/or to any other party, in order to obtain additional information.

#### 3. Response

The Respondent is invited to submit ISR data and any technical and commercial information regarding the project.

#### 5. Submission of a Response

Responses are to be submitted in writing (also in soft copy – in PDF format in USB memory stick) and/or by email mirelah@rail.co.il, to the attention of Ms. Mirela Halfim, no later than April 30, 2020, at the following address:

ISRAEL RAILWAYS LTD - Procurement and Contracting Division

Yoseftal 1, Lod

7136801, ISRAEL

To the attention of Mrs. Mirela Halfim

vi. ISR may at its sole discretion, request from any of the Respondents, additional information, details, approvals, recommendations and/or certificates, as required by ISR.

vii. ISR may ignore any Response which lacks information or has unclear details.

viii. ISR shall not be bound to accept and/or consider any Response and it does not undertake herein any commitment whatsoever towards any of the interested parties.

ix. ISR reserves the right, at any time and at its sole discretion, to amend this RFI or any aspect thereof, as well as to extend the date for submittal of the Responses. In addition, ISR reserves the right to cancel this RFI in its entirety at its sole discretion, without providing the Respondent(s) any (or no) reason or explanation.

x. This RFI process is undertaken by ISR for the purpose of receiving data and information, and it does not create any obligation on ISR's part to commence, continue or complete any purchase procedure and/or to act in any other method of acquisition, and ISR shall act at its sole and absolute discretion in this respect.

xi. ISR reserves the right to accept, in future stages, information and/or any commercial proposals from entities which did not participate in this RFI process, as ISR shall deem fit.

xii. ISR reserves the right, as a result of this RFI, at its sole consideration to conduct an additional procedure, including, inter alia, tender procedure, and may use, at its sole consideration, any of the information provided in this RFI.

#### Appendix A

Rail Journey Planning Engine ("RJPE")

#### I. Introduction

The RJPE system is a central planning system that provides journey planning information to train passengers (from origin to destination at specific date), ISR's users and authorized external systems (B2B). The RJPE receives information from Floor Management Systems ("FMS") and from other relevant systems, calculates the best journey planning and returns it evenly to be consumed by various systems and customers.

## 2. Background

ISR currently has an RJPE system that has been operable for over eight (8) years. The system is located on a private cloud and consumes information from FMS. The data is transferred to the RJPE system via web service and FTP protocols. The RJPE system imports data, such as:

- \* Seasonal and daily timetables
- \* Timetable updates
- \* Future time tables
- \* List of stations
- \* Tariffs
- \* Platforms
- \* Train passenger's statistical loads
- \* Updates of change/cancellation of trains
- \* Data about stations
- \* Data about trains' current location (for trains that move at current time)
- \* Etc.

The results provided by RJPE are useful for customers, internally and externally. ISR is interested in implementing a new robust RJPE software system, that will support future growth of users and will get the inputs from FMS seamlessly.

Currently, the RJPE system serves the following clients:

- \* Web site journey planner
- \* Mobile device applications
- \* Call center
- \* External authorized customers that use the service via WS or REST API

Current average usage (December 2019) of the RJPE system is approximately 500,000 transactions per day. Expected usage in 2030 is of more than 1,000,000 transactions a day.

### 3. RJPE Requirements

#### 3.1. RJPE Solution

1. Must remain active without downtime (99.999%) at all time, including during updates from the FMS and other input systems, in order to prevent service interruption.
2. Must provide a passenger journey plan result in less than 1 second.
3. The new RJPE system should be an "off the shelf" solution.
4. The decision algorithm will rely on data that will be supplied by FMS and a set of parameters, filters and rules that will be set by the RJPE administrator.
5. Will calculate the fastest route with the fewest train transfers (connections) for a passenger trip.
6. Must manage schedules history and should be able to calculate retroactively a journey plan according to past schedules.

7. Should be able to provide supplementary data to the suggested journey plan such as: station accessibility, parking info, train occupancy, current location and etc.

8. Should be able to support more than one future timetable.

9. Should be able to function in cloud environment (such as Microsoft azure) and/or local networks installations (on premises).

10. Must support receiving input data from FMS via FTP/WS/Rest API.

11. Able to update the system data without interrupting the service to customers

12. Use of third party solutions or components must be noted by the solution provider.

13. Supports scalability and redundancy mechanisms.

14. The administration environment must support web browser UI.

#### 3.2. RJPE Nice to have

The solution shall be able to calculate trips including alternative transport, such as bus shuttles.

#### 3.3. RJPE Supplier

ISR seeks such information from Startups and other Companies that have a compatible solution for public transportation such as trains, aviation, buses etc.

RJPE supplier shall prove experience of at least two (2) years in RJPE solutions, preferably for Railway's companies.

(ii). 03.04.2020. Israel Railways Ltd. Tender No. 32004: Supply of the following Forklifts for the railways' Yards, Depots and Stores:

1 diesel forklift of 2.5 ton lifting capacity.

1 diesel forklift of 3.5 ton lifting capacity.

1 diesel forklift of 5 ton lifting capacity.

1 electric forklift of 2.5 ton lifting capacity.

1 electric forklift of 3.5 ton lifting capacity.

1 electric forklift of 5 ton lifting capacity.

1 diesel forklift of 28 ton lifting capacity for lifting and carrying rails.

The contract is for 24 months with optional extensions of up to additional 60 months. Latest date for submission of proposals: 23.06.2020.

(iii). Tender No. 32001: Annual agreement for supply of various Tools for railway sites: The tools are: electric and hydraulic tools, generators, compressors, lifting devices, welding machines, painting equipment and brushes, etc. for depots and workshops. The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 09.06.2020.

(iv). Tender No. 32002: Annual agreement for supply of various Machining Tools for railway sites: The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 09.06.2020.

(v). Tender No. 12001: Proposals for Design, Supply, Building, Operating, Monitoring, and Maintaining services of Distribution Signals indicating the passage points at Gates on platforms and station halls for passengers using the most advanced applications on smart phones, etc. The contract is for 60 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 09.06.2020.

(vi). Tender No. 42001: For the Manufacture and Supply of Interchangeable Brake Shoes.

Israel Railways Ltd. in accordance with its obligations under the Israeli Mandatory Tender Laws, its implementing regulations and the International Agreement on Government Procurement, wishes to obtain bids for: The manufacture and supply of Interchangeable Brake Shoes; 1.1 The Bidder must be the manufacturer and supplier of the Brake Shoes; 1.2 The Bidder has manufactured and supplied, commencing from 2017 and up to the final submission date, at least twenty-one thousand (21,000) Molded Steel Brake Shoes and thirty-three thousand (33,000) Composite Material brake shoes for rolling stock equipment....

Israel Railways Ltd. Tender No. 2202: Providing Consulting Services for Combined Multidisciplinary Control for the railways' development projects: The intention is to select up to 2 winning bidders. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 24.05.2020.

Israel Railways Ltd. Tender No. 1194: Providing Maintenance, Repair, and/or Rebuilding, and/or occasional treatment for the variety of forklifts in service on the railways: The contract is for 24 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 02.06.2020.

(ix). Tender No. 200302 : Providing taxi services to/from Ashkelon railway station; tender No. 200303: Providing taxi services to/from Haifa Hof Ha-Carmel railway station. The contract for each tender is for 36 months. Latest date for submission of proposals for each tender: 08.06.2020.

(x). Tender No. 21952: Rishon LeZion Moshe Dayan (West) railway station -infrastructure works between Mevo-Ayalon railway tunnel at section 5 between km 0+670 and km 3+050 in order to link the station with Rishon LeZion Harishonim as an integral part of line 431 to link Rishon LeZion with Modi'in Outskirts as well as with the AI to Jerusalem Navon; Note: this is a further progress of the project; the tunnel basically exists already. Latest date for submission of proposals for each tender: 07.07.2020.

(xi). Israel Railways Ltd. Tender No. 191201: Operating a new pharmacy shop at the Lod new railway station (under construction);

The new pharmacy will have an area of 248 sq.m. The contract is for 2 periods: 1. An adjustment period of up to 6 months. 2. A permitted period of up to 120 months. Latest date for submission of proposals: 25.06.2020. (Continued on page 13)

# LIGHT RAIL.

## A. TEL AVIV.

(i). NTA Tender No. 043/2020: Providing temporary manpower services for NTA: The intention is to select up to 3 bidders who will require the lowest commission. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 30.04.2020.

(ii). VIRAL BENEFITS.

"Near empty roads allow government to accelerate infrastructure projects. Construction being fast-tracked includes extension of Jerusalem - Tel Aviv high-speed train, light rails in both cities and expansion of fast lanes along Ayalon highway."

### From 'Times of Israel' 31.03.2020:

"Construction to extend the Jerusalem - Tel Aviv high-speed train along with work on light rails in both major cities will be fast-tracked in the coming weeks thanks to the strict coronavirus guidelines that have almost entirely emptied streets throughout the country, the Transportation Ministry announced on Monday.

A budget of NIS 900M (\$252M) has already been approved by the cabinet for the pandemic-time project and the Transportation Ministry is seeking to further expand that budget to NIS 2.5Bn (\$700M).

Construction to extend the Jerusalem-Tel Aviv high-speed train along with work on light rails in both major cities will be fast-tracked in the coming weeks thanks to the strict coronavirus guidelines that have almost entirely emptied streets throughout the country, the Transportation Ministry announced on Monday.

A budget of NIS 900M (\$252M) has already been approved by the cabinet for the pandemic-time project and the Transportation Ministry is seeking to further expand that budget to NIS 2.5 Bn.

The Jerusalem - Tel Aviv fast train made its first trip from Navon Station in the capital to Haganah station in south Tel Aviv in December, but authorities said the route would reach other Tel Aviv stations and Herzliya sometime this year.

Transportation Ministry officials told Channel 12 that with the ability to accelerate their work in the coming weeks, they hope to be able to move up their finish dates by months. The Tel Aviv and Jerusalem light rails are also slated to benefit from the specially approved budget, with the former not even expected to inaugurate its first line until mid-2022 and the latter plagued with delays as it seeks to extend its already-existing line.

Construction to expand the fast lanes in central Israel's Ayalon highway has already begun thanks to NIS 54M (\$15M) from the recently approved budget. Other highways to enjoy a jolt in their work for lane expansions include Routes 2, 4 and 5.

Transportation Minister Bezalel Smotrich had pushed for infrastructure workers to be included among those the government deemed as essential personnel so that they would be allowed to continue working, as the vast majority of Israelis have been ordered to remain at home amid the near-lockdown."

(iii). NTA Tender No. 551/2019: Providing Consulting Services regarding safety at work and traffic safety: "This tender comprises both safety at work and traffic separately.

Regarding safety at work sites, the following activities are required: Daily control at sites, checking working methods, documents and risk surveys, creating and introducing safety situations at work sites, assimilation and learning of lessons from work accidents, and participation in the sites' weekly meetings.

Regarding traffic safety the following activities are required: Control services of traffic safety, daily control at sites, creating and introducing safety situations at work sites, coordination between the contractor and the management company, assimilation and learning of lessons from work accidents, and participation in the sites' weekly meetings.

## B. TENDERS AWARDED.

Israel Railways Ltd. have announced names of the following winners:

(i). The Israeli consortium Shikun-U-Binuy-Solel Bone Infrastructures Ltd. won Tender No.21931 for performing infrastructure works of bridges on section 4.2 of the '431' railway line between Anava Junction (near Modi'in Outskirts) and Rishon LeZion HaRishonim railway station from km 21 + 912 to km 23 + 850.

(ii). The Israeli company G-Van Security Solution Ltd. won Tender No. 11839 for providing inspection services at level crossings, as well as patrol and control work.

The intention is to select a separate winner for each safety item. The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 25.05.2020."

(iv). NTA Tender No. 410/2019: Providing services of Building and Maintaining Transmission Lines over entire NTA network: The required services: transmission lines of the types: DWDM-Dense Wavelength Division Multiplexing & L2VPN-Layer Two Virtual Private Network at different rates and different service levels for NTA communication network at all its sites on a secured network managed by the winner.

The network has to be isolated from the internet by operating strict security procedures in order to secure information and keeping it secret. The winner is requested to build and install the transmission lines in order to transmit data, including edge equipment. The winner is also requested to provide services of upgrading for the transmission, monitoring the network control, and treating failures. NTA intends to select one winner only. The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 05.06.2020.

(v). NTA Tender No. 199/2020: Providing Transportation-Economic Consulting Services: The required services: particularly for the 3 planned metro lines-consulting regarding strategic transportation, providing professional opinions for economic-transportation, preparing an economic-transportation analysis, and any activity for the mentioned services. The intention is to select up to 2 winning bidders. The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 04.06.2020.

(vi). NTA Tender No. 399/2019: Frame agreement for performing complex works of Moving Protected Trees along the various lines and Replanting them at new sites, as well as treating their acclimatization: The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 01.06.2020.

(vii). NTA Tender No.001/2020: Providing car and bus traffic Counting & Measuring services on roads crossed by LRV and BRT lines: NTA intends to select up to 2 winning bidders. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 20.07.2020.

(viii). International Tender No. 356/2019 for Design and Construction of Pinchas Rosen St. Bridge and Station. The list of various separate works includes: At Grade: Mobilization Sites Including Temporary Traffic arrangements; underground and on ground Utilities Relocation; Station Utilities connection - Water, Sewage, Drainage etc.; Pipes connection to TTR; Temporary Traffic arrangements; Final Traffic arrangements at the end of infra 1 stage; Final Traffic arrangements at the end of infra 2 stage NTA Infra 2; Landscaping of all surfaces excluding station area and TTR area. Landscape station area and TTR area.

Infra 2. Bridge civil work: Bridge construction from foundation (including waterproofing & structural earth works) to deck level including casting the deck. The works exclude waterproofing and protective layer on deck. Bridge civil work; Bridge Deck waterproofing and protective layer. Bridge civil work Rail expansion joints. Bridge civil work : Structural expansion joints. Bridge civil work OCS foundations; Bridge civil work Bridge parapet & railing; Bridge PPP Rail System on Bridge, VLV, slab track Rails Multi tabular, OCS (without foundation).

Station Civil Work : Foundations & structural earth works; Foundation - Base slab at ground level; Outer Walls construction; Platform Level Concrete Slab (on top of bridge deck); Staircases Concrete & elevator shaft ; Station technical room.

**Station Fitting Out:** All preparation works (such as: conduits, earthworks, holes) needed for elements constructed by infra 2 and embedded in works constructed by the contractor. Outer Wall Cladding; Shadow Canopies including roofing & steel structure; Platform Canopies - foundation Platform Canopies – complete; Flooring - Staircases, Platforms, Ground floor; Station room partitions; Station Technical room accessories; Internal station wall cladding & technical room; Accessibility & Signage; Finishing of the station including: Suspended ceilings & lower canopies cladding, glazing works & aluminum, handrails & balustrades, housing metal works & carpentry. MEP system - HVAC, escalators, elevators, LV, lighting, station signing, plumbing. Fire Fighting system. TTR & technical rooms, Foundation & earth works, slab, Outer wall (including cladding), concrete slab. Bids by 01.09.2020.

(ix). From: "THE JOURNAL OF A JEWISH TRAVELLER" by Israel Cohen. (Bodley Head, London, 1925.)

"Preface: This is the story of a pilgrimage that was undertaken between the spring of 1920 and the spring of 1921...."

(p.19). "Petach Tikvah covers an area of nearly 8,000 acres, and a few years ago it had a population of 4,500; but it suffered seriously during the war, and its inhabitants, through various causes, have diminished by a third. For one month it was the head-quarters of the Turkish Army, and for eight months the head-quarters of the British Army, whilst for an even longer period it was exposed to the shells from both sides. There is no train to Petach Tikvah from anywhere. There is only a diligence from Jaffa, which runs at fixed hours and at a leisurely pace, and as my time was severely limited I did the journey in a motor car. I was told that the approach to the colony was rather sandy, but I did not appreciate what this meant until we reached the outskirts. Bad as the road was in many places, it suddenly disappeared altogether in a flood of soft, yielding sand. The car could go no further, and the chauffeur advised us to proceed on foot..... We ploughed our way along in the sand for at least a quarter of an hour before we reached the house of the elderly colonist to whose guidance I was recommended...

"Why is there no proper road to this colony?" I asked.

"For the same reason that there is no proper road to the other colonies," was the answer. "Because the Turks had no desire to improve the conditions of the country. We wished to make a road ourselves, although it would have cost us £20,000; but we had first to obtain the permission of the Turkish authorities, and as that would have cost us another £40,000, we had to abandon the idea. The question of transport is very serious. Our yield of oranges before the war amounted to 400,000 cases, besides 300 tons of almonds and an equal quantity of grapes. All this has to be conveyed to Jaffa by camels for export - a very slow and unsatisfactory method. It therefore occurred to us that it would be much better to carry our product by boat on the River Auja, but when this proposal was made to the Turkish authorities there was a cry of indignant astonishment

- "What! The Jews want to have a fleet!" So nothing could be done. But now I am happy to hear that Baron Edmond de Rothschild has generously undertaken to build the road, and the Government has promised to build a railway....."

Our chauffeur decided to avoid the sandy track on our return journey and so struck out along a good hard road, which we fondly hoped would continue all the way to Jaffa. But we had scarcely driven more than ten minutes than we found ourselves, with the darkness thickening, in a narrow path with the branches of the trees hanging so low that he had to hold our hats in front of our eyes to protect them from injury. Nor was it easy to do this, for the car bumped over so many stray clumps and hollows that we were frequently jolted out of our seats. And then we came to a little ditch before which our driver stopped just in the nick of time, and it required much patience, ingenuity and energy before we arrived safely on the other side. .... The second route proved altogether much worse than the first and when, upon reaching our destination, I learned the amount of the fare, I offered up a silent prayer for the immediate construction of a railway or at least an electric tramway from Jaffa to Petach Tikvah."

*[Which is now at last being done, a century later!! Ed.]*

(x). JAFFA ALIGNMENT.

Not as formerly reported, the so-called 'Turkish alignment' between Tel-Aviv and Jaffa which ran under Slush road bridge runs under the alignment in a cut-and-cover tunnel, emerging to the surface near the sea and turning in a sharp angle south to the median of Jerusalem Avenue up to the end at Bat-Yam; the initial intention was to run on the surface but this was rejected by the Tel-Aviv municipality.

**B. JERUSALEM.**

(i). Not 'Rail' as such but public transport – this link:

<https://www.youtube.com/watch?v=LenAtSI46b4&feature=youtu.be>

• Red Line Tracklaying at Petach Tikvah in the median of Orlov Street. - photos by Aharon Gazit from 26th. April 2020.



leads to video on the plans for a cable car link across the Hinnom Valles, Silwan, past the Old City, to the Mount of Olives and on. I suspect the 'reality' part was filmed by a drone at 4am since it shows main roads as empty, not (as in reality) constantly congested with traffic!

(ii). As we were going to press we received a 5-page article by Reuven Levy of the Jerusalem tram company, published in 'Tranways and Urban Transit' No. 990, concerning planning for the Covid crisis and for return to normality thereafter. This has been held over till the next issue.

**C. NAZARETH.**

This is clearly going to be a big heading for future issues.

From 'R.G.I.' 07.04.2020:

(i). "TENDER NO. 420128: Consulting Services of Supervisory Independent Safety Assessment (SISA) for the LRT Haifa - Nazareth Project. Company name: Cross Israel Highway Ltd. Final Date for the Submission of Requests for Clarifications: April 23rd, 2020. Bid Submission Date: June 1st, 2020, until 16:00 Israel time (GMT+2). Location: Haifa – Nazareth, Israel. Full tender information: <http://www.transisrael.co.il/template/default.aspx?PagId=5958>"

(ii). From a press release of 07.04.2020 by Trans Israel Ltd:

"Trans Israel Ltd. has published today an international PQ (Pre-Qualifying) process for the groups to participate in the concession tender of the \$838 million (NIS 3 billion) Haifa - Nazareth LRV (tram/train) project to be published in the 4th quarter of 2021.

The PQ has been published 3 months ahead of the original date, due to the decision of the Transport Ministry to accelerate the project as part of the policy to move forward the economy under the shadow of the Corona crisis.

It is a mega infrastructure complex project, the first of its kind in Israel, which includes: Design and building a tram/train line to serve the population of northern Israel, and to link the Haifa Greater Metropolitan Area with the Nazareth & Galilee Panorama (formerly called Upper Nazareth) cities and surroundings.

The total cost of the project is estimated at \$1.96 Billion (NIS 7 Billion).

The PQ published today, 07.04.2020, turns both to international and local companies with rich experience in providing similar rail services. The participants at the PQ are requested to introduce the consortium structure which will be responsible as a concessionaire on all the project contents along the full concession time to be defined in the concession tender.

They are also requested to prove their experience in the following professional areas: managing and leading of infrastructure projects as main contractor, experience in operating LRV/METRO projects, design and installation of railway SYSTEMS, design and installation of signaling, design and installation of tracks, manufacturing and supply of rolling stock, and maintenance of LRV/METRO projects.

The groups to be approved at the PQ will be permitted to participate in PPP tender; there is no limit for the number of participants and each group fulfilling the professional and financial requirements can participate; the latest date for submission of proposals is 17.11.2020.

The full procedure can be found at: [Lrt.transisrael.co.il](http://Lrt.transisrael.co.il).

In parallel, Trans Israel has started the procedure of selecting an international company to follow up the project's safety procedure until the approval for operation; this is required per the law as part of preparations to the LRV commercial operation and in order to receive operation permission from the Rail Administration in the Transport Ministry.

The Transport Minister Mr. Bezalel Smotrich, the Chairman of Trans Israel Mr. Hussam Beshara, and Trans Israel General Manager Mr. Dan Shoenbach, said that the company has been defined as an essential service provider already from the outbreak of the corona epidemic, and therefore the tender and the procedure have been published today, to restart the economy; they all said that it is an important milestone of the project.

Attached herewith are questions which I sent to Trans Israel General Manager Mr. Dan Shoenbach and his answers:

1. What is the present stage of the project?  
Preliminary Design

2. How many trains/cars will be required? 30-40.  
Final decision will take along the design

4. Has it already decided which voltage to use; 750 VCD or 1500 VDC? Not yet

4. Any definite schedule? PPP tender – 2021, Full operation on 2027

5. Sort of concession? According to the PQ documents

Also are attached: simulation of the planned LRV and Gilad station-credit: Yenon Consulting and Research Ltd.; and a map of the line - credit: Trans Israel.

All the material has been provided by courtesy of Mrs. Sarit Giladi/Dor-Trans Israel Communication Consultant.

#### Background

TransIsrael company is responsible for the Light Rail project between Haifa and Nazareth - a national mega-project that will serve the northern population and connect communities across the Galilee and Haifa metropolitan area.

This unique project, being a first of its kind in Israel, combines urban and inter-urban public transportation.

The Light Rail route will be a total length of 41 km and include 20 stations, connecting "Merkazit HaMifratz" station in Haifa to Nazareth.

**The Haifa - Nazareth Light Rail Project will:**  
Strengthen towns in Israel's periphery by connecting them to metropolitan centers.

Serve over 100,000 passengers daily and provide new business opportunities by driving the development of new commercial and residential real estate.

Create accessible commercial centers and employment opportunities, stimulating economic growth.

Provide new business opportunities by driving the development of new commercial and residential real estate.

#### **LRT Haifa - Nazareth Project by numbers**

##### **A Route of Growth: Haifa to Nazareth**

The route will start at the Merkazit HaMifratz station in Haifa, the largest transportation hub in Israel with a wide array of transportation options: trains, city and intercity buses, BRT vehicles, cable cars to Haifa University and the Technion.

From there the line will go through the main business route in Kiryat Ata, around which new neighborhoods and a commercial center are planned.

Then the line will pass by the towns of Shfar'am, Bir El-Maksur, Mashhad, Reineh, and Nof HaGalil, one of the main cities in Northern Israel, which is an industry, services, trade and government hub for the area.

The final stop of the line is Nazareth, the largest Arab city in Israel, a key regional center, and a

popular tourist destination for Christians from around the world.

#### **Procurement approach**

##### **Infra 1**

Infra 1 stage will involve projects of infrastructure, including grubbing, excavation, relocating existing communication, water and electricity infrastructure and building bridges, roads and under road passages.

##### **Infra 2**

Infra 2 stage is a public-private partnership to fund, plan, build, operate and maintain the light rail line, which includes the construction of electrification, signaling and command and control systems, as well as the purchase of rail vehicles.

#### **Large scale government investments**

Haifa-Nazareth LRT project is one of the large scale infrastructure projects managed currently in Israel. The Israeli government has been investing billions of dollars in recent years in large scale mass transit projects. It intends to continue these investments over the next few years in:

The Tel Aviv metropolitan area light rail.

Greater Tel Aviv metropolitan area metro.

Adding more lines to the existing light rail network in Jerusalem.

A Light rail line in the Haifa metropolitan area.

#### **The TransIsrael Company**

The TransIsrael Company is government owned corporation functioning as a project management agency of the Ministry of Transport and Road Safety.

TransIsrael manages complex transportation Public Private Partnership (PPP) franchise projects.

The company has supervised and managed the construction of Israel's first toll road (Highway 6). Currently TransIsrael is involved in planning and managing the extension of Highway 6 to the north and the south, doubling the Tel Aviv fast lane parking lot, constructing and upgrading roads, interchanges, railways and more.

(iii). From 'R.G.I.' 1.05.2020: "Government-owned project management company Trans Israel Ltd has launched the prequalification process for the planned Haifa – Nazareth tram-train route, seeking international consortia and local companies to tender for a US\$838M PPP concession to design, build and operate the 41 km line.

Intended to link the Greater Haifa metropolitan area with the Nazareth & Galilee Panorama, the route will start from Haifa's Merkazit HaMifratz station, the largest transport hub in Israel. It will serve the business district in Kiryat Ata and the towns of Shfar'am, Bir El-Maksur, Mashhad, Reineh, and Nof HaGalil, before terminating in Nazareth, the largest Arab city in Israel and a popular tourist destination. There will be 20 stations.

Trans Israel General Manager Dan Schoenbach says the project will create 'an efficient, environmentally friendly, large scale public transport network' for northern Israel, stimulating economic

growth. The line is expected to carry more than 100 000 passengers per day.

129:07.

The tram-train vehicles are expected to operate in light rail mode through Nazareth and Nazareth Illit, where the stops will be closely spaced, and at up to 100 km/h on the inter-urban railway section to Haifa. There would be up to four services each way per hour at peak times.

A joint venture of Spanish company Ineco and Israel's Yenon Research & Design was awarded a US\$90m contract in March 2019 for initial planning and design work. According to Shoenbach, the project is still at the preliminary design stage, and it has not yet been decided what electrification voltage would be used. He estimates that between 30 and 40 LRVs will be required, depending on their capacity.

Total cost of the scheme is estimated at US\$1.96bn. The project is being procured in two stages. Infra 1 covers land clearance and utility relocation, together with construction of the civil works including bridges and road diversions. Infra 2 covers the PPP concession to finance, design, build, operate and maintain the line, including the supply of railway systems and rolling stock.

Prequalification has been started three months ahead of the original schedule, as the Ministry of Transport & Road Safety is keen to accelerate work as part of the policy to revitalise the economy following the impact of the coronavirus pandemic. Submissions are due by November 17, with tenders for the concession due to be called in the fourth quarter of 2021; the line is expected to open in 2027.

Bidders seeking to prequalify for the concession are expected to demonstrate their experience managing infrastructure projects, design and installation of railway systems, manufacturing and supply of rolling stock and the operation and maintenance of light rail or metro projects."

#### (iv). TENDER NO. 420128

Consulting Services of Supervisory Independent Safety Assessment (SISA) for the LRT Haifa - Nazareth Project. Company name: Cross Israel Highway Ltd. Final Date for the Submission of Requests for Clarifications: April 23rd, 2020. Bid Submission Date: June 1st, 2020, until 16:00 Israel time (GMT+2). Location: Haifa - Nazareth, Israel. Full tender information: <http://www.transisrael.co.il/template/default.aspx?Pa geld=5958>

(v). Invitation for Pre-Qualification for the participation in a tender for the light railway project between Haifa and Nazareth. 15 April 2020. Trans Israel company is responsible for the Light Rail project between Haifa and Nazareth - a national mega-project that will serve the northern population and connect communities across the Galilee and Haifa metropolitan area. This unique project, being a first of its kind in Israel, combines urban and inter-urban public transportation. The Light Rail route will be a total length of 41 km and include 20 stations, connecting "Merkazit HaMifratz" station in Haifa to Nazareth. Company name: Cross Israel Highway Ltd. Final date for the submission of Requests for Clarification: August 17, 2020. Location: Haifa - Nazareth, Israel. Tender information:

<http://lrt.transisrael.co.il/>

## OTHER MIDDLE EAST RAILWAYS.

### A. IRAN.

#### (i). MASHHAD METRO.

From 'R.G.I.' 9.3.2020: "Mashhad Metro completed the excavation of an 8.5 km tunnel for Line 3 on March 9. The tunnel will form part of the 28.5 km-long metro Line 3 connecting Amirieh Boulevard in the northwest part of the city to Abouzar district in the southwest. The line is scheduled to serve 24 stations, and according to the president of the City Council of Mashhad Mohammad-Reza Heydari it is expected to open mid-2022."

#### (ii). HISTORICAL REFERENCES.

An excellent blog on railways in Iran including many old and newer images can be found at:

<https://rogerfarnworth.com/2020/03/24/railways-in-iran-part-2-the-1910-to-1945/>

This site includes two Pathé films at:

[https://www.youtube.com/watch?v=Lq\\_HbiFtLEE](https://www.youtube.com/watch?v=Lq_HbiFtLEE)

#### (iii). RUSSIAN RAILWAYS PULL OUT.

From 'R.G.I.' 02.04.20: "Russian Railways confirmed on April 2 that it had ceased work on infrastructure projects in Iran, and was to close its Tehran office.

As part of this, its overseas engineering business RZD International has ceased work to electrify and increase capacity on the 495 km route from Garmsar on the Tehran - Mashhad main line to Incheh Borun on the border with Turkmenistan. The work was being undertaken under a €1.2bn contract signed by RZD International and Islamic Republic of Iran Railways in March 2017, financed with a €1bn Russian export loan.

RZD declined to give reason for pulling out. However, it has been reported to have been concerned about US sanctions targeting entities involved in the Iranian construction sector, while the Incheh Borun project had been subject to prolonged negotiations and disputes over costs and priorities.

RZD said it hoped that the end of its infrastructure activities would not affect its work with Iran's national railway in the field of international logistics, including the development of the North-South Transport Corridor to link Europe and India by rail and sea."

#### (iv). ESFAHAN - AHVAZ LINK MEMORANDUM.

From 'R.G.I.' 23.04.2020: "The Ministry of Roads & Urban Development has signed a memorandum of understanding with Mapna Group for construction of the long-planned rail link between Esfahan and Ahvaz, capital of Khuzestan province

Running through the Zagros mountains southwest from Esfahan, the 510 km electrified line would significantly shorten the rail distance for the movement of iron ore from central Iran to steel plants in Khuzestan, as well as relieving the congested road between the two provincial capitals.

Under the terms of the MoU signed by Minister of Roads & Urban Development Mohammad Eslami, CEO for Construction & Development at the Transport Infrastructure Co Kheirollah Khademi and Mapna President Abbas Aliabadi, the engineering conglomerate will be responsible for developing the project under an engineering-procurement-construction package.

Mapna will also be responsible for raising the necessary finance. Previously estimated at €2.1Bn, the line is now expected to cost around €3Bn to complete."

'I.R.J.' 26.04.2020 added that this EPC scheme (Engineering-Procurement-Construction) "is meant to halve the number of passenger and freight vehicles on the Ahwaz-Isfahan road, increasing safety while reducing traffic accidents and pollution."

#### (v). ONLINE VIDEO: TRAIN TRAVEL IN IRAN.

<https://www.youtube.com/watch?v=lqSoLVkYYu0>

At 9.49 a Bo-Bo hauls former DB 'Silberlinge' carriages, acquired second-hand!



## B. TURKEY.

### (i). ANKARA – SIVAS TEST RUNNING STARTS.

From 'R.G.I.' 9.3.2020: "Trial running on the Ankara – Sivas high speed line began on March 5, with Transport Minister Mehmet Cahit Turhan travelling on a test train on part of the route. The 405km line has 49 tunnels with a total length of 66km, as well as 53 viaducts and 611 bridges. Construction has cost TL9.749Bn. The opening of the line is planned for mid-2020, with trains using the Ankara – Kırkkale conventional line which has been upgraded for 140 km/h running and then the new alignment from Kırkkale to Sivas which is suitable for 250 km/h. There will initially be four trains each way per day, cutting the Ankara – Sivas journey time to 2 hr. 50 min compared to around 10 hr on the current 602km indirect route."

### (ii). ISTANBUL METRO LINE M11 TO AIRPORT.

From 'R.G.I.' 28.04.2020: "The Ministry of Transport & Infrastructure has awarded CRRC Zhuzhou Locomotive Co a contract to supply 176 metro cars for Istanbul Line M11, which will serve the city's new airport.

CRRC Zhuzhou was the sole qualified bidder for the tender which was opened on December 26, submitting a bid of TL1.75bn. According to state tendering portal EKAP, CRRC is to supply the vehicles within 32 months of the contract date, which is stated as January 10.

The first two trains are to be delivered within nine months, followed by four more within 10 months and a further four by the end of the 11th month. A further 14 sets are to be delivered by the end of the 22nd month and the final set by the end of 32 months.

Once deliveries have been completed, the contract allows for a further 60 days of testing, followed by 60 days of trial operation. The manufacturer must also supply all maintenance and repair equipment within 23 months of the contract commencing.

The 37.5km Line M11 is being built by a consortium of Kolin and Enbay. Tracklaying began in January following completion of the bulk of the civil works, along with the start of installation of telecoms and CBTC and fitting out of the nine stations.

The line will be equipped for GoA4 (unattended) automated operation, with an operating speed of 120 km/h and a minimum headway of 300 sec. This will provide a 35 min journey time from the terminus at Gayrettepe to the airport.

Opening had originally been planned for November 2019, but this was later pushed back to August 2021. No official announcement has been made as to whether construction has been affected by the coronavirus pandemic and whether the opening will be further delayed."

### (iii). MAERSK CONTAINERS FROM CHINA TO IZMIT.

From 'R.G.I.' 5.5.2020: "Maersk has launched its first rail service from Xi'an in China to Izmit in

Turkey. Departing every Tuesday, it runs via Korgas, the Caspian Sea ports of Aktau and Baku, and the Baku – Tbilisi – Kars railway with a transit time of 18 days. There are a wide range of options for connections in China and Turkey. The service is expected to be attractive for automotive and technology customers requiring fast delivery to market.

'After having successfully launched our Intercontinental Rail service from China to Europe three years ago we have seen increase in demand by our customers for this particular service from different locations across both Asia and Europe,' said Kasper Krog, Head of Intercontinental Rail at AP Moller - Maersk on April 29. He said Izmit benefited from a strategic location, as well as a range of industries and improvements which have been made to Turkey's rail infrastructure."

### (iv). TCDD REOPENS SIVAS – SAMSUN LINE AFTER FIVE-YEAR UPGRADE.

From 'I.R.J.' 12.05.2020. "Turkish State Railway (TCDD) has reopened the 431km line connecting Sivas with Samsun on the Black Sea coast following a €350m rebuild. The line was closed to rail traffic on September 29 2015 to allow work to be carried out unimpeded. TCDD says 378km of trackbed and superstructure was renewed and ERTMS installed. The line is electrified at 25kV ac.

The first commercial freight train ran along the upgraded line on May 4. TCDD expects the upgraded railway to transport 3 million tonnes of freight annually."

'R.G.I.' reported slightly differently on 12.05.2020: "The Samsun – Kalin section of the line from the Black Sea city of Samsun to Sivas in central Anatolia was reopened for freight operations on May 4, following a five-year closure by infrastructure manager TCDD while major renovation and modernisation works were undertaken.

A date for the resumption of passenger services is not expected to be confirmed before the lifting of restrictions on travel in and out of the areas of Turkey which have been worst affected by the ongoing Covid-19 pandemic. Work to modernise and electrify the 378 km line began in June 2015, using a grant of €240m from the European Union's IPA Transport Operational Programme to cover 85% of the cost.

Construction was undertaken by a consortium of Çelikler Group, Gülermak Heavy Industries and Czech firm AŽD Praha, which had a €27m share of the contract covering the supply, installation and testing of signalling systems. TCDD is also constructing a 550,000sq.m logistics centre at Sivas.

A photo shows "an inaugural 29-wagon train to collect 554 tonnes of bricks and steel sheeting from Turhal and Samsun was despatched from Kalin by the Governor of Sivas, Salih Ayhan."

### (v). ANKARA – SIVAS HIGH-SPEED LINE.

Also 'R.G.I.': On May 5, Minister for Transport & Infrastructure Adil Karaismailoğlu announced that tracklaying had been completed on the 405 km high

speed line between Ankara and Sivas, while signalling and electrical works were nearing completion. Test running began in March, and Karaismailoğlu anticipated that high speed services on the route with six new stations would begin before the end of the year. This is expected to reduce journey time between Ankara and Sivas to 2hr, compared to 12hr on the existing 603 km route via Kayseri."

### (vi). CONTAINERS TO KYRGYZSTAN.

From 'R.G.I.' 11.05.2020: "Turkey's Arkas Lojistik has shipped 60 containers of aluminium electric cable in 40 wagons over 5,500 km to Kyrgyzstan. This was said to be the largest number of containers on the longest train ever used for exports from Turkey and its longest distance for exports by rail."

### (vii). FINANCING FOR IZMIR METRO.

From 'R.G.I.' 19.05.2020: "Société Générale is to provide part of the financing for the construction of a 7.2 km western extension of Izmir's 19 km Evka 3 – Fahrettin Altay metro line.

The French lender is providing €25m as a B-loan under the European Bank for Reconstruction & Development's A/B syndication structure, supplementing an €80M loan provided by EBRD in 2018.

The extension from Fahrettin Altay to Narlıdere and Kaymakçik is expected to open in 2022, improving connections to a university campus, hospital and retail areas from the bus, suburban rail and tram networks.

'Work to build the Fahrettin Altay – Narlıdere – Kaymakçik metro line continues at full speed and the line will become operational as planned', said Mayor Tunc Soyer. 'This loan is a good example of the support given to Izmir despite the Covid-19 outbreak.'

EBRD Managing Director for Turkey Arvid Tuerkner welcomed the city's drive to expand its transport network 'in a green, sustainable manner, and improve the quality of urban travel'.

The bank has also provided €23.5m of financing for 85 metro cars and a €33m loan for five car ferries. It is also planning to co-finance a 13.5 km, 11-station driverless metro line between the Üçyol and Buca districts."

### (viii). DOMESTIC FREIGHT TRAFFIC STARTS THROUGH THE MARMARAY TUNNEL.

From 'R.J.I.' 18.05.2020: "Turkey's minister of transport and infrastructure, Mr Adil Karaismailoğlu, has inaugurated the start of domestic freight services through the Marmaray tunnel under the Bosphorus in Istanbul.

Karaismailoğlu and Mr Ali Hsyan Uygun, general manager of Turkish State Railways (TCDD), boarded the first domestic freight train at Söğütözü station on the Asian side of Istanbul at 22.40 on May 8 and travelled in the locomotive cab as far as Kazlıçeşme station on the European side where the train arrived at 23.04.

The 1,200-tonne train with 16 flat wagons was loaded with 32 containers containing plastic raw materials destined for Çorlu. Up to now, rail freight has been transported by ferry from Derince on the Anatolian side to Tekirdağ on the European side.

"We are witnessing a historic moment this evening," Karaismailoğlu said. "As of this evening, we are starting to pass our domestic freight trains through Marmaray. After that, freight will pass from Marmaray to Europe without interruption." The first freight train from Beijing to Europe via Turkey travelled through the Marmaray tunnel in November.

Karaismailoğlu also gave a quick update on the expansion of the high-speed rail network in Turkey. "High-speed train investments continue," he said. "We are trying to put the Ankara - Sivas high-speed line into service this year. Work continues on the Ankara - Izmir line. Our railway investments in all parts of our country such as Bursa, Yenişehir, Osmaniye, Adana and Mersin are progressing rapidly."

The 'R.G.I.' report shows the loco was E68 078 and adds: "The train comprised 16 wagons carrying 32 containers of plastic raw materials, which were being transported 524 km from Gaziantep in southeast Turkey to Çorlu in the European part of the country. Freight services through the tunnel would replace the existing rail and ferry route via the ports of Derince and Tekirdağ, significantly cutting costs. Up to 25,000 containers/year were expected to pass from Asia to Europe through the Marmaray tunnel, the key stage in the 'middle corridor' rail route between China and Europe."

#### (ix). PUBLIC SERVICE OBLIGATIONS.

From 'R.G.I.' 19.05.2020: "The government has designated 61 routes or service groups as eligible for Public Service Obligation support, under an amendment to Clause 8 of the railway liberalisation legislation which came into force in May 2013.

A presidential decree which took effect on April 8 amended the liberalisation regulations to facilitate the provision of public support for the continued operation of rail services that are seen as socially desirable. It provides for the ministry of transport to sign contractual agreements with any operator, private or state-owned, to run the designated service, although as yet there is no indication whether such contracts would be put out to competitive tender.

The initial list covers the majority of routes run by state-owned operator TCDD Taşımacılık, apart from a few services deemed as 'commercial', and has been split into three sections, broadly by service type.

There are seven YHT high speed routes, mainly those serving Ankara and the east of the country rather than the commercial hub of Istanbul. The inter-city category covers 18 conventional services including a number of overnight trains.

The 36 regional routes mainly link smaller towns and cities with the major hubs in each region. There are seven routes radiating from Izmir's Basmane station, three from Mersin and Eskişehir and two

each from Ankara and Zonguldak. Also designated is the Samsun - Sivas route which has just been reopened after an extensive blockade for upgrading and electrification.

In the western part of the country, the list includes services from Istanbul's suburban interchange at Halkalı and routes to the Greek border crossing at Üzüncöprü and the Bulgarian border at Kapıkule. However, it is notable that a number of routes in the southeast of the country have not been included, such as the Toprakkale - Şkenderun branch with its six stations and the Nizip - Mardin - Nusaybin line which runs close to the Syrian border. Also missing are the lines from Van to Kapıköy on the border with Iran and Kars to Doğakapı, on closed border with Armenia.

#### PSO routes designated under Clause 8

##### High speed services

Ankara - Eskişehir

Ankara - Karaman

Ankara - Konya

Ankara - Sivas

Konya - Soğutluçeme

Sivas - Halkalı

Sivas - Soğutluçeme

##### Main line services

İzmir - Bandırma (17 Eylül Express)

İzmir - Bandırma (6 Eylül Express)

Ankara - Malatya (4 Eylül Express)

Ankara - Halkalı (Ankara Express)

Ankara - Gebze (Boğaziçi Express)

Ankara - Adana (Çukurova Mavi Train)

Ankara - Kars (Doğu Express)

İzmir - Eskişehir (Ege Express)

Kayseri - Adana (Erciyes Express)

Elazığ - Adana (Firat Express)

İsparta - İzmir (Göller Express)

Ankara - Kurtulan (Güney Express)

İzmir - Ankara (İzmir Mavi Express)

İzmir - Balıkesir (Karesi Express)

Konya - İzmir (Konya Mavi Express)

Denizli - Eskişehir (Pamukkale Express)

Konya - Adana (Toros Express)

Ankara - Tatvan (Van Gölü Express)

##### Regional Services

Adana - Mersin

Adapazarı - Pendik

Afyon - Eskişehir

Amasya - Havza

Ankara - Karabük

Ankara - Polatlı

Aydın - Söke

Basmane - Alaşehir

Basmane - Aydın

Basmane - Denizli

Basmane - Ödemiş

Basmane - Söke

Basmane - Tire

Basmane - Uşak

Çatal - Tire

Denizli - Söke

Divriği - Erzinçan

Diyarbakır - Batman

Elazığ - Tatvan

Eskişehir - Kütahya

Eskişehir - Tavşanlı

Gaziantep - Nizip

Şkenderun - Mersin

Şanlıurfa - Mersin

Kapıkule - Halkalı

Kars - Akyaka

Konya - Karaman

Kütahya - Balıkesir

Manisa - Alaşehir

Samsun - Amasya

Samsun - Sivas

Sivas - Divriği

Söke - Ortaklar

Üzüncöprü - Halkalı

Zonguldak - Gökçeboğ

Zonguldak - Karabük

#### (x). DELAYS TO TRAMS FOR POLAND:

From 'Metro Report Intl.' 27.05.2020: "Manufacturer Durmazlar has asked the Polish city of Olsztyn to extend the schedule for delivery of 12 trams four months because of supply chain problems caused by the coronavirus pandemic, and to increase the 107.9m Złoty contract value by 5% to reflect currency changes."

#### (xi). CORONAVIRUS APP.

From 'R.G.I.' 27.05.2020: "To support the restart of inter-city public transport, a mobile phone app is being used to track passengers in case anyone should subsequently test positive for the coronavirus. Intending passengers must install the app and input their date of birth, national identity number, ticket number, telephone number and other contact details and confirm their 'risk status'. In return they get a travel code which authorises them to travel."

## C. UNITED ARAB EMIRATES.

### (i). ETIHAD RAIL TRACK CONTRACT WON BY VOSSLOH.

From 'R.G.I.' 26.03.2020: "Rail fastenings and turnouts for Package 2A of the Etihad Rail network are to be supplied by Vossloh, under a contract awarded by the joint venture responsible for the 139km Ruwais – Ghufeifat line.

The contract to build this section was awarded in March 2019 to a joint venture of China State Construction Engineering Corp and South Korea's SK Engineering & Construction. As with other parts of Stage Two, the 1,435mm-gauge line has been designed for mixed-traffic operation, and will be mainly double track. Passenger trains would be able to run at up to 200km/h and freight trains at up to 160km/h. Maximum axleload will be 32.5 tonnes.

Vossloh is due to supply by October 2020 a total of 38 turnouts and sets of W30HH rail fastenings for 495,000 concrete sleepers to be used on Package 2A. The company had previously supplied turnouts and fasteners for the 264km Stage One freight line linking the gas fields at Shah and Habshan with the port and industrial city at Ruwais in Abu Dhabi emirate."

### (ii). CONTROL CENTRE CONTRACT AWARDED.

From 'R.G.I.' 06.04.2020: "National railway promoter Etihad Rail has confirmed the award of an 846m dirham contract for construction of its central Operations & Maintenance facility at Al Fayah in the suburbs of Abu Dhabi.

To be built by a joint venture led by Vinci Construction France, the O&M facility will include locomotive and rolling stock maintenance workshops, warehousing, the operations control centre and an administrative building from which the expanded network will be managed. The initial Stage One network has been operated since opening from a smaller depot at Al Mirfa near Ruwais.

The contract award was formally approved by the Etihad Rail board during a virtual meeting on April 2. This occasion also marked the formal start of construction on the Stage Two Package B civil works contract, when Chairman Sheikh Theyab bin Mohamed bin Zayed Al Nahyan remotely inaugurated a concrete sleeper factory at Saih Sheib.

Package B covers a total of 216 route-km, running northeast from a junction with Stage One at Liwa near Tarif to the edge of Dubai, including branches to serve the Khalifa Industrial Zone Abu Dhabi (KIZAD), Khalifa Port and Industrial City of Abu Dhabi.

During the meeting, the board reviewed the mechanisms put in place to ensure operational continuity on the 264 km Stage One line, which transports granulated sulphur from Shah and Habshan to the port of Ruwais.

The board also approved the company's results for 2019 and the 2020 strategic plan. Sheikh Theyab stressed the importance of continuing to implement the 'strategic plans, future visions, and operational work' on the national railway project, despite the current coronavirus pandemic,

highlighting the importance of putting in place 'precautionary and preventive measures to ensure business continuity'."

## D. QATAR.

From the NVBS magazine 'Op de Rails', 03-2020 p.121. courtesy of Marc Stegemann, translation from Dutch by Editor:

"At the end of December 2019 two tramlines entered service in Doha, the capital of Qatar. One is the first almost-2,5 kilometre section of a line in Education City, a university complex. In the coming years this will be extended to make a circular line some eleven kilometres long. Nineteen Avenios have been ordered from Siemens, which can charge up their batteries from short sections of catenary erected at the halts.

In addition in the centre of the city is a ring line of some two kilometres with free conveyance. Three four-axle cars operate here, with hybrid drive formed of a generator run by LPG and a set of batteries. It will be possible to install fuel cells later. Builder is the American TIG/m who also built the trams for Oranjestad in Aruba.

Also in December, the first phase of the planned Metro network with two extensions of the first line and the opening of a completely new line. The network now has three lines – Red, Gold and Green – and a length of 76km. Many of these activities are connected to the planned football world championship that is (still) planned for Qatar in 202."



• The entire fleet of the new tram line in the centre of Doha. The three trams use LPG as fuel but will in the future possibly work with hydrogen. 5 September 2018. Foto: TIG/m."

## E. EGYPT.

### (i). CAIRO MONORAIL SITE CONTRACT AWARDED.

From 'Metro Report Intl.' 14.04.2020: "Arab Contractors has awarded Fugro a contract to undertake geophysical and geotechnical investigations for the second phase of the Cairo Monorail project.

Fugro is to deploy up to 15 geotechnical drilling rigs along the 43 km route of the planned Giza to October 6 City line. Advanced testing of the soil samples will take place in Fugro's laboratory in Cairo.

The Cairo Monorail project covers the October 6 City route with 12 stations as well as a 54 km route connecting east Cairo with the New Administrative City. It is being undertaken by Bombardier Transportation and local partners Orascom Construction and Arab Contractors under a deal announced last year."

### (ii). KNORR BREMSE BRAKES FOR EGYPTIAN CLIMATE.

From 'R.G.I.' 16 April 2020 : "Knorr-Bremse is supplying pneumatic braking systems for the 1,300 coaches which TMH International is building for Egyptian National Railways.

The first of the 140 km/h coaches of various types, which were ordered in September 2018, are scheduled to enter regular service in Q3 2020.

The brake contract valued in the 'mid-double-digit million-euro range' involves Knorr-Bremse sites in München, Moscow, Budapest and Mödling, with deliveries to TMH International scheduled to be completed by the end of 2022.

'This project is extremely important to us on two counts', said Dr Jürgen Wilder, Knorr-Bremse executive board member responsible for the Rail Vehicle Systems division, on April 16. 'Firstly, it is Knorr-Bremse's largest ever individual equipment order in Egypt. And secondly, it is our first joint

original equipment project in Egypt with our partner TMH International. Along with our global production network, one of the key reasons we were awarded the contract is our established successful presence in Egypt's growing rail transportation market.'

The hot and dusty desert climate poses particular challenges, and Knorr-Bremse is supplying brake calipers with a special paint finish designed to protect them in the tough environment.

Transmashholding CEO Kirill Lipa said the coach contract was a multi-country project involving Egypt, Russia and Hungary, as well as South Africa and the global supply chains of companies such as Knorr-Bremse."



• Transmash Carriage.

Electric for the delivery of one hundred new diesel-electric mixed traffic locomotives worth a total of 575M \$US. A first tranche has been delivered, 25 locos of Type ES30ACi 'Light Passenger Evolution' numbered 2481-2505. The first ten locos arrived in Egypt in December 2019 and are already in service. They have a 12-cylinder GEVO motor of 3,200hp and have air-conditioned cabs. The contract also includes maintenance for 15 years and in addition the overhaul of 81 older ENR locos.

The Evolution Series has found great popularity in North America since 2005 with the Types ES44DC, ES44AC and ET44AC; There have also been exports from this family to Australia, Brazil, China, Kazakhstan and Pakistan. Others were built under license for India and South Africa. ENR itself already has over 80 examples of the ES40ACi that were delivered between 2009 to 2011; these include the blue-liveried 2401-2440 for passenger services and their red/black sisters 2441-2480 mainly for freight work.

In 2007 ENR ordered 40 locos of type JT42CWRM (often referred to as 'Class 66' due to their numbering in Britain) which arrived by October 2009 in three batches. Of the series 2124-2163 which were used especially in passenger work many individual locos are currently withdrawn and stored with substantial damage, and by 2019 barely a dozen were left in service. In spite of the new arrivals the Diesel locos of class AA22T Nos. 3001-3221, 3241-3299 delivered by Henschel from 1976 remain irreplaceable."

(iii). More to these same carriages: FINANCING AGREEMENT.

From 'R.G.I.' 21.04.2020: "The €1 bn multilateral agreement to finance Egyptian National Railways' purchase of 1,300 Transmashholding coaches over five years has come into force, the Russian supplier announced on April 21.

The chair of the ENR board has received the official loan authorisation notice from the Hungarian ambassador, marking the final approval of the financing which is being provided by the Hungarian Export-Import Bank and Russia's Rosximbank with insurance provided by national export-import agencies MEHIB of Hungary and EXIAR of Russia.

The project to supply the coaches under an order placed in September 2018 'is among our top priorities', said TMH CEO Kirill Lipa. 'Not only does it complement our expertise and ambitions, it contributes to the bilateral relations of Russia with Egypt and Hungary, helps expand Russian businesses' international presence, and it also contributes to the development of the Russian transport industry.'

Russian Export Centre CEO Veronika Nikishina said 'despite the obstacles posed by the coronavirus pandemic, all involved did everything possible to bring the contract into effect. The contract is an illustration of the demand for Russian technology abroad. The unique financing solution, prepared by REC Group in partnership with our Hungarian colleagues, could not be matched by the competition from China, Italy, India, Spain and Romania.' "

(iv). NEW DIESEL LOCOS ENTER SERVICE.

From 'Eisenbahn Kurier' 5/2020 p.32, by Matthias Hille.

"In 2017 the Egyptian National Railways (ENR) signed a contract with the American firm General

## F. GENERAL.

### BAMBOO SLEEPERS FOR THE MIDDLE EAST.

From 'R.G.I.' 27.05.2020: "ASIA: A start-up branded TieBam is targeting Asian rail enhancement projects with a novel sleeper design produced from bamboo.

Following more than five years of research and development activity, US-registered TieBam plans to open a manufacturing facility in Taiwan through a wholly-owned subsidiary later this year.

According to Founder & CEO Jason Avraham, TieBam has patented a manufacturing process that 'densifies bamboo to provide an eco-friendly alternative to traditional wooden sleepers'. Because of its rapid growth and distinctive mechanical properties, bamboo can be 'stronger, more durable, longer lasting, and more environmentally-friendly than wood'.

The properties of its bamboo sleeper have been validated by a series of tests carried out at the University of Delaware, which runs a course on railway engineering and safety. These confirmed the sleeper's durability, flexibility and strength, the company says. TieBam is initially looking to deploy its sleepers in the Middle East, tapping into the wave of railway construction taking place across the region. Southeast Asia is also a logical focus, since this is where TieBam will procure its raw bamboo, providing an important source of income for farmers.

Avraham says that bamboo sleepers bring advantages in railway construction and renewal because the material does not require additional after-treatment with substances such as creosote in order to provide long term protection. It is also naturally impervious to insect infestation. This means the risk of soil and groundwater contamination from chemicals is minimised compared to alternative materials.

TieBam intends to launch production using approximately 50,000 tonnes of raw bamboo sourced from Myanmar, Cambodia, Vietnam, Indonesia and the Philippines. Its 6,500 sq.m factory at the port of Su'Ao in Yilan will be able to produce 500 000 units per year, operating 24 hours per day. 'We are hoping that the 6,000 tonne hydraulic press will be finished by October and that we will be operational by the end of the year', Avraham says.

The company already has plans to expand by opening a second production facility on the site in Yilan."



# NOTES AND COMMENTS.

*By coincidence we start with several items relating to the LMS '8F' Stanier-designed 2-8-0 locos in the Middle East.*

## (j). RON JARVIS IN TURKEY 1941-1942.

The 8F at Beersheba Railway Museum is, as is well known, one of the batch that was sent in 1941 to Turkey and erected there in the Sivas Workshops and later imported with some classmates to Britain before being sold on to Israel. (Of the others, one is at Bo'ness in Scotland, one 45160 on the Gloucester Warwickshire Railway) In 'Black Eight', the magazine of the Stanier 8F Locomotive Society No. 144 (Autumn 2019) pp.61-69 are reproduced some documents by Ron Jarvis, one of the two men sent out by the London, Midland and Scottish Railway with the locos to help the Turkish railmen erect and use these engines, which had been lent by Mike Hoskin of the 'Churchill (8F) Locomotive Co. Ltd. One is the text of a radio broadcast, broadcast on the B.B.C. Home Service, 9.20-9.35a.m. on Tuesday 18th. December 1942. Very much in the avuncular semi-patronising tone of the time, designed to improve morale, it does not of course cover the diplomatic background, issues of the actual status of two British civilian workmen on what amounted to a military project on War Department locos in neutral Turkey, the efforts of the Germans to provide the TCDD with 2-10-0 locos at the same time, and more! But the text speaks for itself. (With thanks for permission to reproduce it). (One is vaguely reminded of Ron Garraway's memoirs of loco erecting at Kantara in WW1)

"The British Government look upon Turkey as a firm friend and as such we've got to help her in every way we can: that's why it was decided about a couple of years ago to send a number of locomotives and wagons out to Turkey, at some sacrifice to ourselves considering the need we have for locomotives in this country.

Well, actually eighteen locomotives were sent out and over five hundred twenty-ton wagons; they commenced shipment about a year last February. There were two of us from the L.M.S. Railway detailed to go out, because the locomotives were of L.M.S. design and we had to superintend the erection of this stock, get it running and instruct the Turkish railway staff in working it. The gauge in Turkey is exactly the same as we have here and that means that British railway stock can perfectly well run on Turkish railways. Turkey is a very mountainous country: practically every section of the railway traverses mountains. As for conditions - you have extreme heat and dustiness in the summer-time and, in many parts of the country, extreme cold in the winter-time. That is to say, at Ankara in the summer it's about one hundred degrees in the shade and during last winter where we were it was down to sixty degrees of frost - about thirty below [Fahrenheit] So that during the winter you get conditions of extreme frost with a large amount of snow up in the mountain sections, and it's quite a

frequent occurrence for trains to get snowed up, despite the use of rotary snow ploughs.

We arrived in Turkey about May of 1941 and that was at a time when Turkey was surrounded by the war without being in it. The Greek Campaign was over to all intents and purposes - actually our forces were just out of Greece - we were being turned out of Crete; Iraq was still in turmoil. There were beginning to be rumours about Persia being infiltrated; the Russian position was uncertain; Syria was in the hands of Vichy and the Germans had started to use the Syrian aerodromes, and of course there was, at that time, quite a considerable threat to Egypt, so Turkey was very nearly ringed in by our enemies - Bulgaria and Roumania having been taken over by the Nazis. Well, we went to Turkey and when we arrived it wasn't without some mixed feelings as to what we were walking into, and we were very relieved to find that at least the Turks, while realising the seriousness of the position, were still quite sure we were going to win.

I'd better explain that the type of engine sent was a 2-8-0 which in this country is used purely on freight services. In Turkey, where passenger train speeds are considerably lower, the same locomotive becomes a maid-of-all-work. It's used on passenger trains, freight trains or, as the majority of trains are, a combination of both.

Now the position as regards getting our material to Turkey was that, owing to the collapse of Greece and the occupation by the enemy of the Greek islands off the coast of Turkey it was at any rate inadvisable for our ships to go to the big ports of Turkey, and consequently the only ports that were available were those to right in the corner of Asia Minor, almost the top right-hand corner of the Mediterranean - Iskenderun, better known as Alexandretta, and Mersin. And neither of these was too well equipped to deal with heavy loads.

We set to work, first of all, to make arrangements which would enable our cargoes of railway material to be off-loaded principally at Iskenderun.

For reasons of shipping, most of our earlier shipments were off-loaded far away in Egypt. It was not until September that anything came through for us in Turkey, but meanwhile by pegging away at Iskenderun we got the crane rigged up, more railway lines laid, other cranes repaired; in fact, quite a reorganisation of the port was in hand.

The locomotives were shipped dismantled. The boiler went in one piece and so did the underframe complete with cylinders. These were the heavy lifts. The rest consisted of a tender tank, a tender frame and eight pairs of wheels. The small parts were packed in eleven packing cases for each locomotive.

The actual job of erecting the locomotives was carried out at Sivas - a very ancient town, I believe

at one time the capital of Eastern Anatolia. It lies a little to the north-east of the centre of Asiatic Turkey and is about four thousand feet up in the mountains.

Sivas is a real old-fashioned place quite like you see in films of medieval England. The streets are roughly paved, and the houses built of timber and white-washed mud bricks have a tumble-down appearance. Until about ten years ago, when the railway was opened to Sivas, the town had little connection with the outside world. The extension of the railway beyond Sivas to the East was only recently carried out.

There are about 40,000 inhabitants, who are mostly peasant farmers. But the Railway Workshops situated there are very up-to-date and employ about 2,000 men. We found the Turks very friendly. They gave us every assistance and we had good relations with them all the time.

All the time we were quite on our own; incidentally we were probably among the first Englishmen ever to live in Sivas. We were in a rather unusual position in that we hadn't any men of our own working for us. We were only there in an advisory capacity and we had to persuade rather than give orders. In this way we succeeded in keeping the workmen hard at it, but nevertheless we kept on extremely good terms the whole time, and when the first locomotive went to Ankara for inspection, we were told that it was the quickest job that had ever been done in Turkey.

We had many amusing experiences and sometimes they were a bit alarming. A good example was the moment when that first engine was finished. Before we had a chance to test her, the Turks were so anxious to get her running that they filled her up with water, put a fire in and drove her out on the first trial run before even the brakes had been tested, and the speed at which they took the curves on this occasion was quite alarming. But she did all right, and there wasn't the slightest trouble as a result of it, although of course the initial running should be carried out at a reasonable speed to see that nothing runs hot. The thing was they put the engine through her paces and the paces were a bit excessive for our peace of mind.

Then the next trip she did was from Sivas right across the mountains to a junction to the East - a matter of about sixty-five miles away - and she hauled a heavy freight train of four hundred tons. My colleague was on the foot plate on this particular occasion - I didn't go. Now the coal supplied was not too good according to our standards and it was a bit difficult to keep up steam; but anyway, she worked her train all right that day, and the day afterwards the paintwork was finished off and the following day she was sent off at the head of the Express to Ankara, three hundred and seventy-five miles away, which she did in about nineteen hours. Of course, the country is very mountainous and an

assisting engine was attached for negotiating the steep inclines, as is usual with heavy trains. During part of this run I had a very interesting time on the footplate.

At Ankara the engine was much admired because she was so neat and shapely in contrast to the engines of German design - quite a little piece of England in Turkey - or a piece of Britain, I suppose I should say, because she was made in Scotland. She worked back to Sivas and then we had to take her in hand and alter the blast arrangements in order to burn the Turkish coal, and after slight modifications she was perfectly satisfactory.

By this time the second engine was already finished and three more were in hand.

There was a lot of delay actually in getting these locomotive parts through to us: this was partly on account of shipping difficulties and then later when the Winter came along it was the worst winter in Turkey for over fifty years - and the Anatolian Highlands are well known for being a cold spot! The railways themselves were closed almost continuously during January and February; on the mountain sections, where there were great snow drifts, and though rotary snow-ploughs were in use, as soon as they'd swept the line and before a train could move up, the wind had blown the snow back on to the track again.

Despite all this, the locomotives and wagons were delivered and set to work in Turkey. That Great Britain could, at so critical a stage in the war implement her promises to Turkey in the face of the worst of our enemies could do, was to say the least, a very creditable achievement.

We left in May, when sixteen of the locomotives were in service and the remaining two were being completed.

There were about 430 of the 500 wagons finished and the remainder could easily be dealt with by the Turks as they arrived.

What it comes to is that to Turkey and to various other countries in that direction such as Persia and Egypt and Syria, we have parted with a number of our biggest freight locomotives, and this has been a considerable sacrifice to us and we've got a good deal of work to do to replace these locomotives, considering our needs in this War. There's no doubt that these locomotives will help the Turks and in my opinion, it's worth the sacrifice we have made.

We do hope also that the locomotives and wagons will give a good account of themselves so that it will lead in post-war period to increased trade and thereby increased friendship and closer ties between our two countries.

Although the engines we have parted with were freight engines and not passenger locomotives, the effect is that a certain number of engines that would normally be used for passenger traffic have had to be put on freight trains. And that, of course, has had its repercussions on the passenger services which the railway companies can run in this country until these sacrifices that we have made in this way are made good by new building. This is one of the reasons why you, as a traveller, may be experiencing some discomfort and annoyance at the moment."

Additionally Ron sent a message to the Turkish railway authorities:

*"D2/15. MESSAGE TO TURKEY.*

To our Turkish friends, particularly all those in Sivas with whom we worked, to erect the English locomotives and wagons in the Ger Atelyesi, I am addressing this message.

Mr. Soden and I wish to thank you all sincerely for your kindness and friendly collaboration which enabled us to complete our task. We greatly appreciate the warm hearted reception which helped to make our stay comfortable, despite the rigours of your winter climate.

We hope you are getting good service from the stock we delivered, and that both engines and wagons may be your faithful, reliable servants for years to come. We hope, before long, that we will supply from this country all the big locomotives you need, and the wagons and passenger carriages you will require for the new railway construction you have commenced. This will open up your great country from end to end and enable you to exploit all its mineral wealth.

We shall long remember the happy times we spent together, and all the jokes and funny incidents we laughed about. We hope we shall meet many of our friends again, perhaps when you come to visit us in this country.

The journey home was a very quick one and a most interesting experience. We enjoyed a short stay in Haifa before proceeding to Cairo. From there we made the whole journey to England by aeroplane, taking only eight days. Our great flying boat went first southwards up the Nile to nearly the centre of Africa, and then westwards and down the Congo to the west coast and across to Lagos. We saw elephants, crocodiles and hippopotami and other wild animals. We stopped at many interesting places. It was a great experience. The last part of the journey was in three big 'hops' and so, in less than three short weeks, we were once more back in our own country.

Back here we found everything much as we left it, except that we not now have the nightly visits of enemy aeroplanes and there is very little bombing. We have enough to eat, but we try not to waste anything. We found all our people quite well, and already we are back at our work on the railways, and we are both very busy.

So now we send you our greetings. We wish you all the best of health and luck, and 'Cheerio'."

Of course it was important to be upbeat to let the Turks know that things were going well in Britain, since the information was bound to be spread. Post-war the Vulcan Foundry did indeed build some 2-10-0's for the TCDD.

He also wrote to L. W. Hayes esq. at Broadcasting House, London W.1., on 24th September 1942, who was clearly eager to get information on radio reception "in the wilds".

"Dear Sir, I thank you for your letter of the 3rd. instant and regret that owing to pressure of work and exceptional circumstances I have been unable to reply to you earlier.

No doubt Mr. Alford has told you that I was in Turkey until late in May this year, having spent just over a year in that country.

Last Summer I was at Iskenderun and there heard the B.B.C. Overseas News most days at the local restaurant. The transmission was clear, but I can give you no technical details as to wave band, etc. From October until May I was at Sivas, which is nearly due north of Iskenderun, up in the mountains at an altitude of about 4,000 ft. It was in this very out of the way Anatolian town that my colleague and I purchased a magnificent, spot new, Marconi 7-valve set.

Owing to poor local electrical arrangements, particularly an antiquated telegraph installation, the interference was often appalling - particularly in the day time. By moving house to a part of the town remote from the telegraph office we generally got very excellent reception, except for the occasional splash from rotary light switches of continental origin.

We used to listen to the 7.00 Forces News and the adjoining programmes. After 8.30 am (Turkish Time) the Forces faded out. They became possible again at about 5.00 p.m, and in the evenings were magnificent. We always found the Forces programme the most pleasant and the easiest to tune. With our set we could get at least three times the volume we normally required - we reserved "full blast" with the windows open for "God Save the King", "Land of Hope and Glory" and "There'll always be an England", just to give the locals a treat.

If I remember rightly, we used the 25 metre band but could also do well with the 19.

The overseas transmissions came though quite well but tended to be 'sandwiched' by enemy radio. The local people are in the habit of listening to the B.B.C. News in French and in Turkish, and 'Big Ben' may often be heard, booming in the streets of Sivas, emanating from some 'Coffee House'.

The Free French transmissions were popular - "il reste à Hitler exactement" - was a standing joke. It may also interest you to know that we got Schenectady quite clearly, but rather weakly, on the night of Pearl Harbour, and an interesting relay from Hawaii.

I hope there may be something in this that may help you, and if there is anything else I can do please let me know. R.G.J."

(ii). RERAILING AN 8F IN THE CANAL ZONE, EGYPT, 1952.

In 'Black Eight' issue 144 (Autumn 2019) pp.71 is a lengthy and detailed article by Lieut.-Colonel Graham Alexander, O.B.E., T.D, R.E. written in 1952 and originally published in the March 1953 edition of the 'Royal Engineers Journal' (a version also in 'Railway Gazette' for 13. February 1953.) We give here (with permission) the introduction and then just selected items.

"The present unsettled state of affairs in the Suez Canal Zone of Egypt can be dated back to 16th. October 1951, from which date the Egyptian Government exhorted its peoples to adopt a policy of non-cooperation with the British Army.

For just over a year prior to this date 10 Railway Squadron had operated a main-line W.D. freight service throughout the Zone, using its own locomotives and rolling stock. These trains were manned by military personnel, but the Egyptian State Railways provided a pilotman. In August 1951, prior to this date, the Egyptian State Railways had specifically requested the British Army to withdraw this service, and in view of the political tension between the two countries it was, in fact, withdrawn.

However, with the advent of non-cooperation, it became necessary to ensure that military stores and equipment were moved about the Canal Zone as and when required. A considerable amount of passive resistance was met with by the Railway Squadron when it carried out this requirement. This passive resistance gradually turned into a more active type and took the form of culverts being blown up, signal boxes sniped at and short pieces of rail blown out of the track etc. but at the onset in a very amateurish way. This was not to last, however, and on 15th. December 1951 at approximately 07.30 hours the first really major attempt to disrupt W.D. military traffic occurred. A W.D. train routed from Adabiya to Nefisha was derailed by terrorists at El Zeitiya, 3 miles south-west of Suez. The train was being hauled by an ex-L.M.S. Class 8 locomotive (wheel arrangement 2-8-0, W.D. Number 70387, now 503) carrying the nameplate 'Corporal W.J. Lendrim V.C., R.E.' which was overturned complete with tender, and the first seven vehicles which were also telescoped.

Due to the considerable disruption caused by the derailment to the track and formation, no accurate proof could be obtained to show the exact cause of the derailment, but it can be assumed that either fishplates and a length of rail had been removed, or that a portion of the track had been demolished by an explosion. The train is known to have been travelling at 20mph and the locomotive came to rest on its side some sixty yards from the assumed point of derailment. All the track over this length was torn up and the formation disturbed by the leading wagons ploughing their way through.

#### Site Conditions.

The alignment at the site of derailment is straight; the main line track is single line and built with flat bottomed rail on wooden sleepers and ballasted with local soil. The track is on an embankment 3ft. above the general ground level. A siding line runs parallel with the main line at 30ft. centres and is also on an embankment. The locomotive, tender and some of the wagons came to rest in the valley formed between the two embankments. The surrounding ground is low-lying, swampy and subject to flooding at spring tides and after heavy rain and consists of sandy clay soil, approximately 3ft. thick, overlying a sand subsoil. Considerable rainfall occurred in the four weeks following the derailment. The open

drainage channels on both sides of the main line were damaged and blocked.....

Due to the pressing need to maintain rail communication between Adabiya and the remainder of the Canal Zone, it was essential for immediate steps to be taken to provide an alternative track, as the removal of the derailed stock was likely to take several weeks owing to there being no breakdown cranes available. It was decided that the adjacent siding should be utilised and connected to the main line south of the derailment. This involved the construction of an embankment of approx. 300 cu. yards, the material to be obtained from the immediate vicinity. Two D.7 bulldozers were obtained to assist in this construction, but due to the softness of the surrounding ground these machines could not be used to the best advantage.....

To complete the construction of this embankment and the subsequent connecting of the track by manual labour, the services of twenty Mauritian troops and a company of the Royal Sussex (110 men) were obtained to assist the fifteen sappers who were available from 10 Railway Squadron. The link through was completed at 12.00 hours on Monday 17th. December 1951 and the first train passed the site immediately the line reopened. To ensure complete structure clearance, the corner of the roof of a 40-ton box wagon had to be removed by flame cutting.

The clearance of the seven derailed wagons was effected by the use of a 10-ton mobile crane of American design, mounted on caterpillar tracks, obtained by the Transportation Directorate at G.H.Q., M.E.L.F. After an overhaul this was brought to the site by road transport, but due to consistent electrical and mechanical trouble caused by the lack of suitable spare parts, the crane did not commence work until 25th. February. Prior to this date however a sleeper roadway constructed on the strip prepared by the bulldozers earlier, to allow easy access to and from the site and to allow the crane to move forward along the formation of the main line as the clearance of wagons proceeded.

Two craftsmen of R.E.M.E. were allotted the task of removing all salvageable fittings and cutting free those parts of the stock likely to cause obstruction when lifted by the crane. All of the seven wagons were damaged to a degree that prohibited their rerailling and removal from site by locomotive. As the line capacity and locomotive availability would not allow the continual use of engine power to stand on the site with empty wagons to receive each lift by the crane the following method was adopted:

The wagons were lifted in such component parts as could conveniently be arranged, subject to the limitation of the crane, and placed on either side of the crane track as it moved forward along the line of wagons. At a later date all the parts of the wagons were loaded on to a train of empty wagons with the minimum of delay to traffic, and taken to railway workshops for disposal. By this method the crane was able to deal with five wagons before a large crater formed by Flat wagon No. 346, which had nosed into the formation at the point at which the close-jointed pipe crossed the track, stopped progress along the route.

To remove the remaining two wagons it was, therefore, necessary to take the crane along the line of the diversion track until alongside the wagons. This was done at a later stage when the diversion track had to be slued away from the locomotive to facilitate the removal of the latter, thereby leaving sufficient clearance to stable the crane between the wagons and the running track.

Great care had to be exercised when movements of the crane were made, due to its weight, and at all times a fully sleepered roadway had to be laid to ensure that there was no risk of the crane sinking in the poor soil.

#### Locomotive Recovery. (Plan One).

As locomotive No. 70387 had only left railway workshops one day prior to the derailment after a complete overhaul and, from such inspection as could be made in the position in which it was lying, there was no apparent severe damage, it was a requirement that the locomotive should be raised complete and with as little damage as possible.

To achieve this object it was decided to construct two reinforced concrete rafts beneath the locomotive to be used as jacking platforms, With the aid of four 50-ton jacks, the locomotive was to be raised sufficiently to allow a bed of sleepers to be inserted below the locomotive and then the four jacks could be used to commence the overturning movement using timber packing. Before the construction of the concrete platforms could proceed, it was necessary to carry out certain preparatory work to ensure maximum stability of the surrounding ground. On the diversion track side of the locomotive it was decided to drive steel sheet piling parallel with the track alongside the locomotive and tender, to maintain the stability of the running track as the excavation of the soil from around the locomotive would otherwise seriously weaken the embankment. It was also necessary to slue the diversion track away from the locomotive by 3ft. 6in. to provide adequate working room. This involved the tipping of soil on the side of the embankment over a length of 200ft. requiring approximately 100 cu. yds. of material. A further task was the construction of 'cut-off' drains in the agricultural ground that lay on the north of the site, in an endeavour to stem the flow of water in the subsoil before reaching the working area.

To carry out these tasks the services of 50 Field Squadron, R.E. were obtained and a working party of either infantry or Mauritian troops was provided. The Field Squadron concentrated on the task of driving 12ft. sheets of 'Larsen' piling, using a pile frame constructed by the D.C.R.E. Suez in accordance with the light frame recommended in the Manual of Field Engineering, utilizing an 11-cwt. monkey and the power winch of a D.7 tractor. The frame and power unit were mounted on a flat wagon and the monkey guides extended below the floor of the flat to within 6in of rail level, to facilitate the maximum depth of drive. The wagon was stabled on a nearby siding and piling operations were carried out in occupation times between trains, the wagon being moved into position from the siding by utilizing the winch rope of the power unit attached to conveniently-located holdfasts. The working parties

were engaged in the construction of the embankment extension and the cut-off drains.

By the end of January it became evident that the construction of concrete rafts below the locomotive would become a major engineering operation involving the continual use of dewatering pumps and then complete encirclement of the locomotive and tender with sheet piling, as the efficiency of the 'cut-off' drains was not as great as had been expected. The drainage had considerably lessened the amount of water flowing toward the site and conditions had improved, but from a few trial holes which were dug it was evident that the subsoil was so water-logged that any excavation would only cause the locomotive to sink deeper into the mud.

#### Locomotive Recovery. (Plan Two).

Faced with the difficulties stated, an alternative scheme was formulated which involved the construction of two gantries over the locomotive, utilizing light steel trestling. Using four 20-ton Morris blocks and tackles, the locomotive would be raised into an upright position. To lighten the load as much as possible, the motion on the upper side and the pony wheels were removed. The necessary stores were located and release obtained by Transportation Directorate. Delivery of the material commenced in the middle of February. At this time a change in location of field units took place, and at a site meeting held on 22nd. Feb. it was agreed that 3. Field Squadron, R.E. should now undertake the construction of the gantries, and assist 10 Railway Squadron in any other such works as might be necessary.

It was subsequently agreed that 3 Field Squadron should also be responsible for raising the locomotive into an upright position,..... To support the south-side piers of the two gantries advantage was taken of the sheet piling already placed under Plan One. It was considered necessary for the movement of normal rail traffic that a completely new diversion track should be made to allow the construction of these piers. The building of this further diversion involved the construction of another embankment of approx. 350 cu. yds. and infantry working parties were made available for this work.

#### Raising of Locomotive.

3 Field Squadron with advice from 10 Railway Sqdn, planned to pivot the locomotive on the lower driving wheels. It was considered that no damage would occur to the wheels or the main frame. It was never established where the centre of gravity lay, but... it was estimated from scaled drawings that the locomotive should reach the point of balance at about 60 degrees from the horizontal....."

#### (iii). MORE 8F PROBLEMS.

This from Mike Christensen who found them in the World War 2 'Transportation Bulletins'.

#### "Para 189 Locomotive Difficulties and Modifications in Palestine.

A recent report from Middle East includes the following remarks regarding LMS locomotives transferred from another theatre and now working on the Palestine railways: -

The running of these locos on the PR has revealed several more weaknesses, which usually fall to the Rly. Wkps to attempt to cure.

The chief trouble has been priming, which has caused several direct failures due to regulator valves sticking, etc, and several other indirect failures. Priming has become so bad with this class of loco that engines which have been worked from LYDDA to KANTARA have their boilers emptied at the latter station and refilled with fresh water which, of courses, very much delays the turnround of the locos.

An experiment is now proceeding with the fitting of a manually operated blowdown cock to one of these engines in an attempt to overcome the trouble. This fitting presents some difficulty, as there has been no provision for it on the engine, the original design being for use of a continuous blowdown apparatus. The first trial engine should be in service within a few days\*

Piston packing failures are also attributed to priming troubles, as it has been found that original LMS packing supplied from U.K. has been no more successful than that of local manufacture.

Another source of trouble has been the exhaust steam injector, and a great deal of time has been wasted in endeavouring to correct this. One engine has been returned twice on this account and is still giving trouble

The ESR have also had trouble with injectors on this class which they have overcome by paying particular care to the size of their own make of cone end by fitting a 4" extension to the tender feed pipe inside the tank, so as to raise the intake level by that amount and avoid the ingress of sludge and sand, etc. Tenders have also been washed out at the same time as the boilers."

#### (iv). TAURUS EXPRESS TIMETABLE.

Thanks to Lorenz Degen's Facebook researches we have a 'Taurus Express' timetable sheet, alas undated and in French: Beyrouth – Istanbul – Paris.

	<u>Arr.</u>	<u>Dép.</u>	<u>Jours.</u>
Bth. Gare	-	18.00	Samedi
Bth – NBT	18.08	18.10	"
Jounieh	18.50	18.51	"
Tripoli	20.43	20.46	"
Akkari	22.48	23.55	"
Homs	1.10	1.28	Dimanche
Alep	5.45	6.45	"
Adana	15.52	16.15	"
Ankara	7.42	8.05	Lundi
H. Pacha	18.52	-	"
Istanbul Dim.	-	19.50	Mar. Mer. Ven.
Sofia Sam. Lun.		12.40	Mer. Jeud.

Belgrade	19.06	20.09	"	"
"	"	"	"	"
Trieste Dim. Mar.	8.27	9.32	Jeu.	Ven.
Milano Lun. Mar.	16.00	17.15	Ven.	Sam.
Paris Mar. Jeu.	6.26	-	Sam.	Dim.

N.B. Le train circule également chaque Mardi de Bth. à Alep."

From this we see a weekly train on Saturday evenings, making a stop both at the station and at the NBT station, taking two and three quarter hours to Tripoli over the northern section of the former HBT, pausing over an hour (for Customs?) at the border station of Akkari, arriving at Homs in the middle of the night, getting to Ankara by Monday breakfast time, to Haydarpasha by Monday dinner time.

One then has over twenty-four hours (in theory) to make the connection from Sirkeci station on the other side of the Bosphorus (depending how punctual the train was by this time!) but at least the Orient Express runs four times weekly, Tues, Wed, Fridays and Sunday evenings, so taking the Tuesday evening option one is at Sofia by Wednesday lunchtime, at Belgrade (a terminus, so reversal is necessary, taking an hour) that evening, into Trieste by Thursday breakfast, into Milano (another terminus) by teatime Friday and arriving into Paris by breakfast on Saturday. A week under way! On Tuesdays the train also runs from Beirut to Aleppo but in this case the carriage does not run through to Europe.

#### (v). FUTURE DREAMS?

Steve Sattler of Jerusalem has been musing again – here his thoughts, similar in many respects to those of Theodor Herzl in his novel 'Altneuland':

"..and now to the greater Middle East:-

From 1971 I have seen the exponential growth of better public transport in Israel, from the slow, black-smoke belching old green Egged buses, to the new-improved (bigger) Sherut taxis; and now the growth of the Israel rail system and how it even functions on a European level. [Well almost].

**THE FUTURE!** ....So, in 50 years' time - what will we have?:-

Israel, as the centre of the geographic and economic Middle East will cater to over 50 million residents and tourists per year - and this requires an extensive, efficient, integrated and safe mega-transport service -based on TRAINS. {Forget cars!}.

I... In Jerusalem :- I.I... The LIGHT-RAIL:- 9 interlocking lines - a range of colours and a Cable Car to the Kotel, and Har HaZeitim. (They are saying 68 kms of track and all electrified.)



1.2...A short Jerusalem metro - from the Navon train station to the City centre and under the OLD CITY - as an extension of the A1 line. (maybe 6 stops).

1.3...The A1 line;- A fully functional [3 trains per hour] High-Speed train from Jerusalem-Navon to all stations in Tel Aviv and then connections to the rest of the Israel rail network.

1.4...A unique tram/train from the Jerusalem city centre - mostly underground - to Gush Etzion and Hebron, with a stop in the Beit Lechem autonomous area. This will service the 180,000 people in the Gush, and the 120,000 in Beit Lechem and more.

1.5...A 30 metre (up in the air - on concrete pillars) train from Beer Sheba - to the North - in a 'straight line' - through Hebron, Jerusalem, several stops in the Shomron and then up to Afula and down to Tiveria.

2... Tel Aviv and the Gush-Dan complex. 2.1... An integrated 5 - 8 line light-rail for the whole complex and the 6 line underground metro from Netanya/Herzlia to Ashdod with many eastern connections to the two main airports - BGA and Tel Nof - and to Lod and Modiin.

2.2 A high speed jet-ferry service from Tel Aviv South to Ashdod & Ashkelon, and another North to Haifa. (Two sets of ferries).

3... A high-speed and air-conditioned train from Tiveria, Beit-Shean past the Dead Sea and on to Eilat: with a connection to Jerusalem – through tunnels.

4... A container and bulk ore/minerals train from Eilat Northwards -east of the the Egyptian border, with a stop in Beer Sheba - to Ashdod port. This will be night service, and during the day a passenger service.

5... International Services. To Jordan and the Gulf; a quality (air-conditioned) service - with some hotel trains - from the Haifa Pilgrim Terminal {The Haj} to Beit-Shean, and then joining the Hejaz line to Amman, Medina & Mecca, and the ports of Saudi Arabia. This same service can also cross KSA to the GULF states.

6.2... The main TOURIST – hotel-trains - from Morocco, across to Egypt, the Sinai {the Riviera of the Middle East}, Tel Aviv [a tunnel and stations] up the coast and into Beirut. This same train service can also cross into Europe - via Syria/Turkey .

This would be a tourist, passenger, cargo and bulk minerals service with specialist trains. This route is similar to the Mandate Egypt/Tel Aviv and WW2 route }

7... All trains are driven by AI computers - [no driver] and facial recognition software will be the ticket and security for all train services. {no more credit cards - just Facial Recognition Software and the computer does the ticket calculation or the security filter. (Your face will be your credit card - and the computer on buses, trains and even at the airport will calculate your fee - from your face and your position.)

8... Finally, all cities will have electric city-cars -(in several sizes) that are the public transport - and you - the user will order a city-car to your door - with your phone; and your application will tell it where

to drop you off. This same vehicle will then take other passengers - on a 24 hour basis.

9... Special School/Education trains will criss-cross the ME - with teachers and students to teach geography, history and other subjects as schools on wheels. These same trains can have chemistry/physics and 'university' laboratories on them for efficient teaching of students.

10... Most cities will have tunnels - deep underground - serviced by small robot-trains that carry garbage, sewerage and even maintenance workers under a city to selected specialist garbage/sewerage farms.

The modern citizen and tourist in 2070 will enjoy AI computers looking after him/her and the family - with care, efficiency and very little pollution, and sensors that measure and deal with weather, air-quality and electricity service and water pressure. Every household and office/shop will have an AI terminal that acts as a secretary, co-ordinator, vacation planner and safety expert: and with a simple voice command - a city-car, train, auto-bus or flight can be coordinated to allow a quality daily life and a happy citizenry.

If we look at the last 100 years - and all the technological advances WE have created - We can have high expectations for the next 50 years." (Steve Sattler)

(Ed. adds: A lot of this sounds not only wildly optimistic in terms of international traffic but also dangerously like E.M. Forster's 'The Machine Stops' for the AI implications....)

#### (vi). A HASIDIC VIEW OF RAILWAYS.

"When the railroad finally came to Zdzunska Wola, the town council decided to dedicate the station with a public ceremony, and many Hasidim went to see the wonder that would unite us to the rest of Poland and the world. Reb Mendel (Strykowski) also went, accompanied by some younger Hasidic students. They all listened to the station master and politicians make speeches about the modern world and progress. Afterward, as Reb Mendel and the young men walked home, they asked, "What does the train mean?"

"What does the train mean?" he mused. "Let me tell you what a Hasidic rebbe said. The steam engine teaches us that if one is hot, he can pull many cold ones behind him. So, too, fervour and intensity in spiritual matters may pull along those who are less intense. A train comes in and leaves at the exact time. That means that if you are just one minute late, you may miss everything. If you are late in the study of Torah, you may miss the holy one, blessed be He. And with the train we are linked to the rest of Europe."

"And what is so important about being linked to Europe?" they asked him.

"All linkages help to unify a shattered world," he answered. "Telephones are also such linkages, for the telephone teaches us that what is said here can be heard over there, whether over the wires or through prayers. We are linked by the telegraph, too, which teaches us that every word counts and must be paid for."

(from 'The Narrow Bridge', by Rabbi Isaac Neumann. p.22f.)

#### (vii). A BRIEF DIVERSION INTO ZIONIST HISTORY.

We try to avoid Politics where possible but this quotation from Vladimir Jabotinsky just could not be resisted and some context is required:

"This childish fantasy of our 'Arabophiles' is rooted in a kind of prejudiced contempt for the Arab people; in a kind of totally groundless perception of this race, which sees it as a corrupt mob that would surrender its homeland for a good railway system."

This is cited in 'Catch 67: The Left, the Right and the Legacy of the Six-Day War' by Micah Goodman. (Yale University Press, 2017, ISBN 978-0-300-24841-8. pp.24f.)

Goodman adds: "As the Nazis were gaining power in Germany in the 1930's, Jabotinsky warned repeatedly of a terrible catastrophe that would soon befall the Jews of Europe: 'We are living on the brink of the abyss, the eve of a final disaster in the global ghetto.' He tried to shake the Zionist movement out of its complacency and urged the Zionists to push for the migration of the Jews of Europe to Palestine. The man who correctly predicted the Jews' betrayal at the hands of the British also correctly predicted their annihilation at the hands of the Germans.

Jabotinsky was also right about the Arabs. Contrary to widespread optimism among Zionists, Jabotinsky foresaw that mass immigration to Palestine by the Jews would provoke mass resistance in Palestine from the Arabs. Jabotinsky wrote that the anti-Jewish Jaffa riots of 1921 were not an exception to the norm but were now the norm. (4) The Zionist movement was unwittingly marching towards a violent confrontation with the Arab national movement. Some Zionists believed that the Arabs would not object to Zionism because they were certain to benefit from it. (5) Jabotinsky saw this position as patronising:

"This childish fantasy of our 'Arabophiles' is rooted in a kind of prejudiced contempt for the Arab people; in a kind of totally groundless perception of this race, which sees it as a corrupt mob that would surrender its homeland for a good railway system.

'There is no justification for this perception. It may be possible to bribe individual Arabs, and to do so often. But from this it does not follow that the Arabs of the Land of Israel as a collective will sell their fanatical sense of patriotism, which even the Papuans refuse to sell. Every nation will wage a struggle against settlers so long as it has even a glimmer of hope to be rid of the danger of their settling the land. This is what the Arabs of the Land of Israel have done, and this is what they will continue to do.' (6)

Zionist patriots needed to understand that the Arabs were also patriots, believed Jabotinsky. They would not sell their right to nationhood for a mere improvement in their quality of life. Jabotinsky taught that it is precisely the Zionist who respects the Arabs who should prepare for war with them.

Jabotinsky foresaw the coming treachery of the British, the impending destruction by the Germans, and the inevitable clash with the Arabs. He was a suspicious man and a pessimist, and, tragically, he was almost always right."

(Continued on page 26)

# TRANSPORT OF MINERALS FROM THE DEAD SEA AND THE NEGEV BY RAIL (1932 – 2020)

By HAREL EVEN

## During the British Mandate.

Palestine Potash Ltd. (PPL) was registered in London on 28th October 1928. The company was then given on 1st January 1930 a concession by the governments of Palestine and Trans-Jordan to utilize the salts and minerals of the Dead Sea for a period of 75 years. Minimum quotas were defined for production: from 1,000 tons of potash for the third year to 50,000 tons from the 10th year onwards. The company was given permission to build a cable-way from the Dead Sea to Jerusalem (18 km) (though this was not done) and rail tariffs for the potash haul from Jerusalem to Haifa Port and for future railway lines to be built by the government to Aqaba and Bet-Shea'an were defined. Throughout this period of operation the main site of the company was the potash production plant built at Kallia on the northern shore of the Dead Sea. Production of liquid Bromine started as early as February 1931 and the production of potash by December of that year. A second production plant at Sodom along the southern shore of the Dead Sea began operation by 1937. Bulk Potash was carried from Sodom by a 7 km Decauville 60cm line in tipper wagons hauled by a diesel engine to a jetty from which it was carried 80 km in 100- to 200-ton capacity barges to the north shore (each string of 3 to 4 barges were hauled by a tugboat). That line was also used to carry workers from the workers' camp (adjacent to the jetty) to the plant. On arrival it was then reloaded in tipper wagons and carried along a 2 km Decauville 60cm line to the northern plant. From there the potash produced by both plants was carried by 10-15-ton lorries to Jerusalem station where it was loaded onto freight wagons for conveyance to Haifa Port. In 1947 part of the potash was carried in 102kg sacks. The barge

frequency throughout the first years was once a week. The peak frequency reached 25 'sailings' per month during the 1940s. The annual production reached 100,000 tons (of which 54,000 ex-Sodom) by 1941 and a peak of 102,000 tons (of which 57,000 tons ex-Sodom) by 1947. In total 1,040,000 tons of potash were produced between 1932 and 1947.

The loading of wagons at Jerusalem station was carried out at a dedicated siding ("potash siding") just south of the station. Potash was then sent to Haifa by a daily evening regular freight train to arrive at Haifa East early next morning for unloading at Haifa Port. That was scheduled by 1st April 1943 as Regular Goods train no. 188 (departing Jerusalem at 19:35 and arriving Lydda at 22:30) to catch Regular Goods train no. 98 (departing Lydda at 23:40 and arriving at Haifa East at 04:02 next day). The maximum permissible weight of trains between Jerusalem and Lydda was limited to 400 gross tons during Summer (if hauled by a 2-8-4T Kitson steam engine – otherwise 350 / 300 tons if hauled by a Baldwin 4-6-2T or 4-6-4T engine / 4-6-0 Baldwin engine respectively) (360 / 315 / 270 gross tons during winter). The limiting section was between Artuf (now Bet Shemesh) and Er Ramle (now Ramle) due to a 1.2% gradient. The maximum train length was limited to 40 axles between Jerusalem and Artuf.<sup>2</sup> Those trains were usually double headed from Jerusalem to Artuf by a Baldwin Tank in the lead and a Kitson coupled second. In the opposite direction the Kitson was used to lead assisted by a banking Baldwin tank in the rear.

Unloading took place at a potash warehouse siding at the Haifa Port, located parallel to Haifa Central station.

## First years of the State of Israel

After the War of Independence in 1948 (and until 1967) the northern production plant came under the control of the State of Jordan. The potash company was nationalized by Israel in June 1952 and renamed Dead Sea Works (DSW). It reopened its production plant in Sodom.

Apparently the Decauville system was last used on 28th August 1956. At its peak there were 22-23 locos and 311 wagons.

A new road was built to connect the works to Beer Sheva. Another State-owned mining company, Negev Phosphates, was established in order to exploit phosphates in the Negev area. The first phosphate production plant opened in 1952 at Oron. In order to allow potash and phosphates transport by rail to Haifa port for export, a new railway line was built by Israel Railways to connect Na'an (between Ramle and Bet Shemesh on the old Jerusalem line) to Beer Sheva, and inaugurated on 29th March 1956. A mineral loading silo was built along the north-east side of the new station to allow the transshipment of bulk potash and phosphates arriving by road from Sodom and Oron respectively. New 25-ton two-axle open wagons built by Uerdingen and DWM as well as 20-ton hopper two-axle wagons Nos. 3043-3050 and 3102-3056 built on the frames of former WD 20-ton Continental opens were used for that purpose (the latter for phosphate). In order to cope with the increase in potash transport, ISR ordered 30 new 50-ton bogie hopper wagons Nos. 8001 – 8030 from Orenstein & Koppel under the Reparations Agreement between Israel and West Germany. These wagons were rebuilt by Kishon works to 55-ton capacity and later renumbered 55001 – 55030 ? (Peh).<sup>5</sup> Five smaller 42-ton bogie hoppers Nos. 8101-8105 were used to haul potash as well.

The distance between Beer Sheva and Haifa East was 192 km. The amount of phosphates carried by rail from Beer Sheva reached 154,000 tons by 1961/2, down to 113,000 tons in 1962/3 and up to 210,000 tons in 1963/4. The potash figures were 97,000, 111,000 and 149,000 tons respectively. Minerals in total (small quantities of Sulphur and clay included) represented 22.6% of ISR freight throughput in ton/km terms by 1961/2, 16.1% by 1962/3 and 22.7% by 1963/4. The replacement of steam by diesel motive power between 1952 and 1959 and the installation of air-brake systems in the freight wagons by the mid-1960s allowed the operation of heavier trains of up to 1,200 gross tons headed by EMD G12 Bo-Bo engines.

(Continued from page 25) Note 4: See: Jabotinsky, speech at the Zionist General Council, 'The Security of the Yishuv - the Foundational Question of Zionism' (Jabotinsky, 'Collected Works', Vol. 10, 'Speeches 1905-1928'). Jabotinsky compares the Arab riots to the pogroms on Europe. He considers them both expressions of anti-Semitism, believing there is no reason to attempt persuasion or dialogue.

Note 5: Such was the position of Theodor Herzl, illustrated most clearly in his utopian novel 'Altneuland.....'

Note 6: Jabotinsky: 'On the Iron Wall'. 1923. Jabotinsky's warnings were implicitly directed at the official Zionist leaders, particularly Chaim Weizmann and Nahum Sokolov, who believed that it was possible to reach an agreement and a compromise with the Arab leaders.

(viii). ANDY WILSON.

From Andy's brother Edmund we have heard that Andrew Wilson of Leeds is badly ill. For many years Andy travelled and worked as a civil engineer in various parts of the Middle East, always checked out any local railway relics and was a regular contributor. He has also become an expert on the railway(s) of Yemen. Our thoughts are with him.

90 60-ton bogie hopper Belgian ABR6 wagons (Nos. 60 001 – 60 088 and 60 159 – 60 160 ?) were built between 1964 and 1966 by Vulcan Engineering, Haifa for the transport of potash and phosphates. In addition, 60 almost identical Romanian UVA wagons (60 089 – 60 158 ?) were built between 1969 and 1970 at Vulcan. These wagons became the standard mineral wagons until the end of the 1970's. (Note: Many of the hoppers were listed as constructed by Vulkan Handassa while some parts (e.g. bogies, wheels, braking systems etc.) were actually imported from the supplier who also did the engineering and planning.)

The building works on the next 37 km section of the Negev railway to Dimona began in 1959 and later on ceased for about four years, before the line was finally opened to freight traffic by September 1965. A new transshipment facility for potash and a similar facility for phosphates were installed at Dimona to allow the unloading of lorries coming from Sodom and Oron and the reloading of rail wagons.



• Ex-ESR EMD G8 No. 251 shunting empty phosphoric acid tanks and flats loaded with steel coils from the docks at Ashdod Port to Ashdod Yard on 29.3.1988. The first three wagons were manufactured by Wagon Union seven years earlier for ISR but at the time the picture was taken already belonged to ICL. (photo: Harel Even)



• The potash transshipment facility at Dimona in the summer of 1982. The white wagon in the middle is a BREL wagon and the others are Belgian and Romanian wagons built by Vulcan Handassa between 1964 and 1970. (photo: Harel Even)

### Connecting the plants and Ashdod port

In order to better serve the central and southern areas of the State of Israel a new deep-water port was built from April 1961 in Ashdod. In order to transport the necessary building materials (mainly stone and ballast) a new 7 km line connecting Pleshet Junction (at km. 131 on the Haifa East – Kantara main line, between Yavne and Ashdod) and the new port site was built and opened to traffic during November 1961. Loading and unloading of sea vessels started on 21st November 1965. The mineral bulk terminal was completed by January 1967. Dedicated sidings were built to the potash and phosphate warehouses on the south side and to the phosphoric acid terminal at the north side of the port. That enabled shifting the mineral exports from Haifa Port to Ashdod Port and cut the distance from Dimona to the port by rail by 83 km to 146 km. Loaded trains ran northbound to Lod and then reversed and went southbound to the new port.

Some mineral traffic continued running to Haifa Bay – for two chemical plants situated next to the oil refineries:

Deshanim veChomarim Chimi'im (Fertilizers and Chemicals Ltd.) - plant and siding built at the end of the 1940s. It had been 94% state-owned until January 1975, when it became part of ICL. It used to receive potash (from the end of 1987 – until then by road), phosphate and phosphoric acid by rail. In an effort to compete with new local competition and growing

Haifa Chimi'alim (Haifa Chemicals – plant and siding built in 1969). The latter used to manufacture



• Deshanim private siding when used as a container terminal in 17.7.2014. The old phosphate warehouse may be noted on the left side (photo: Harel Even)

imports a southern terminal opened adjacent to Kiryat Gat station in 1985 and this survived for a short period of time.

Production at the plant was reduced drastically during the end of the 1990s and rail traffic ceased in 2007. After this and until 2018 it was used as a container terminal by a logistic company called Millennium which also owns some flat wagons. Since then the siding has been closed to traffic because of lack of funds to upgrade it.

Potassium Nitrate which was then carried by rail to Haifa Port and unloaded in the old potash warehouse until the end of the 1980's.

The third stage of developing the Negev railway included the building of the Dimona – Oron section (29 km) inaugurated in March 1970. That enabled a direct rail haul of phosphates from the plant here to Ashdod Port. As a new phosphate mine opened in 1967 at the Small Crater (Makhtesh Qatan) the phosphate transshipment facility at Dimona continued in operation until the late 1980s.



77,000 litre ex-white oil bogie tank wagon no. 77 015 ? (Daled) loaded with Ammonia and 50-ton bogie flat wagon no. 50 028 ? (Tet) loaded with ISO Containers unloading at the terminal in Kiryat Gat. (photo: Harel Even)

A year later a 14 km branch line connecting Mamshit (9 km east of Dimona) to a newly-built

phosphoric acid plant Tishlovet Arad (Arad Complex) was inaugurated. The latter was renamed Rotem Deshanim (Rotem Fertilizers Ltd.) and was incorporated into ICL in 1977. For that purpose, 12 60-ton 33,000 litre phosphoric acid bogie tank wagons Nos. 60 001 – 60 012 ? (Zayin) (old ISR numbers 8121 – 8132) were purchased by ISR in 1971. The new lines were generally descending from Dimona towards Oron and Tzefa. The Dimona to Lod main line was generally descending northbound. It was therefore possible to run heavier trains north of Dimona. This led to Dimona becoming a marshalling yard. Maximum permissible load south of Dimona was 900 gross tons for an EMD G12 engine and 1,900 tons north of Dimona (Double-heading was necessary between Na'an and Lod).

During the Six-Day War back in June 1967 ISR received eight ex-Egyptian State Railways EMD engines abandoned by the Egyptians along the Sinai

By the beginning of the 1970s the phosphate company had been promoting plans to build a new plant along the river Tzin. For that purpose, the Negev railway was extended from Oron to Nahal Tzin (33 km). The new plant and railway were inaugurated together on 13th December 1977



• BREL wagons undergoing maintenance at the wagon repair workshop at Beer Sheva in Summer 1982. At that time the facility was sub-contracted by ISR to Kadmany Metal Works. (photo: Harel Even)

and hauled by a Jumbo and the rest 1,600 gross tons were hauled by a G12 or other loco.

#### Building Capacity to meet growth

By 1975/6 ISR carried 1,103,000 tons of minerals. By 1980/1 traffic has been tripled to 2,853,000 tons and plans were made by the Traffic Department to transport 5 million tons annually. Hence the following investments were made up to 1987:

Upgrading Pleshet Junction to Km. 159 line and signalling (between Ashkelon and Yad Mordechai along the Haifa – Kantara main line).

Building a new 20 km line (called the Heletz Line) between Km. 159 and (just south of) Kiryat Gat on the Negev railway.

The inauguration of the latter on 17th November 1982 made it possible to run from Dimona to Ashdod directly by-passing Lod, shortening the route from 146 to only 131 km and saving the time needed for running round at Lod.

Adding two passing loops at Nevatim (Km 87) and Eilat (Km 139).

Opening a wagon repair workshop at Beer Sheva station

EMD G26CWs Nos. 603 & 604 from Tel Aviv South calling at Lod, Beer Sheva and Dimona to pick up more than

1,200 guests. The growing quantities of



• 4,000-ton Train No. 856 (10:40 Dimona to Ashdod) arriving at Lod New Loop on a sunny afternoon in the summer of 1980. The train was double-headed by G26CW No. 604 and G12 No. 112 up to Na'an from where it was triple-headed on to Lod by G12 No. 116 to assist in coping with the 1.2% incline. (photo: Harel Even)

railway. These included a G8 shunting engine which became ISR No. 251 (mainly used to shunt at Ashdod Port and to haul light freight trains to Lod and v.v.) and four EMD G12 engines given ISR numbers 127 - 130 (though the last one was never taken into operation). There were also three EMD G16 Co-Co engines which became ISR Nos. 161 – 163. With 1,800hp these engines were allowed to haul 1,250 gross tons south of Dimona, which allowed heavier mineral trains. The good experience gained with these big locomotives together with the growing demand for mineral transport led ISR to order two new EMD locomotives of a next generation type – G26CW of 2,000hp. Nos. 601 – 602. Nicknamed 'Jumbos' (after the first Boeing 747 inaugurated by EL-AL the same year – 1971) their main task was to haul mineral trains from the Negev. They were allowed to haul 1,500 gross tons from Oron to Dimona (later limited to 1,350 tons) and 2,600 tons north of Dimona (Double-heading was necessary between Na'an and Lod).

Two new EMD G26CW locomotives Nos. 603 – 604 were purchased and taken into operation in 1974 and another one, No. 605 in 1977. 31 new 60-ton phosphate bogie hoppers Nos. 60 201 – 60 231 ? (Pey) were purchased from British Rail Engineering Ltd. (BREL) and taken into operation in 1976.

Phosphates produced at Tzin and carried by rail led to most trains running double-headed between Tzin and Dimona with up to 2,000 gross tons. Towards the end of the 1970s lack of line capacity made it necessary to run two double-headed 4,000 gross tons trains daily between Dimona and Lod. At least one of the locos was a Jumbo. A G12 helper was added between Na'an and Lod. They were split in turn at Lod to continue to Ashdod Port – usually one of 2,400 gross tons

#### Procurement of 10 new EMD Jumbo Co-Co locomotives between 1979 and 1986:

- G26CW Nos. 606 – 609 (1979)
- G26CW-2 Nos. 610 – 611 (1982)
- G26CW-2 Nos. 612 – 613 (1984)
- G26CW-2 Nos. 614 – 615 (1986)

Procurement of 310 60-ton phosphate bogie hopper wagons from Arbel, France assembled by Vulcan Handassa, Haifa:

No. 60 301 – 60 400 ? (1978 (Tzadi)  
 No. 60 401 – 60 430 ? (1979)  
 No. 60 431 – 60 460 ? (1980)  
 No. 60 461 – 60 479 ? (1981)  
 No. 60 480 – 60 494 ? (1982)  
 No. 60 495 – 60 505 ? (1983)  
 No. 60 601 – 60 638 ? (1985)  
 No. 60 639 – 60 645 ? (1986)  
 No. 60 701 – 60 760 ? (1987) Later renumbered  
 65 701 – 65 760 ?

Procurement of 58  
 60-ton potash  
 bogie hopper  
 wagons from Metal  
 assembled by Israel  
 Shipping Yard,  
 Haifa Nos. 60 801  
 – 60858 ? (Chaf)  
 in 1987. Later  
 renumbered 65  
 801 – 65858 ?  
 (Chaf)  
 Building an 18-km  
 conveyor belt



• Brand-new Metal wagon No. 60 839 ? (Chaf) in Haifa East yard in the summer of 1980 already carrying a Dead Sea Works logo as well as the ISR logo. It was renumbered later as 65 839 ? (Chaf) with permitted payload raised to 65 tons. The majority of this type of wagon are currently stabled at Oron (photo: Harel Even)



• Brand-new Arbel wagon No. 60 452 ? (Tzadi) in Lod in the summer of 1980 already carrying a Negev Phosphate logo as well as the ISR logo. The latter will soon disappear. The majority of this type of wagon are still in working condition after 40 years of heavy duty in desert conditions (photo: Harel Even)



• Brand-new Arbel wagon No. 60 717 ? (Tzadi) in Haifa East yard after arrival from Vulcan Handassa works in Haifa bay in 24.6.1987 already carrying a Keter Tovala logo alongside the Negev Phosphate logo. The works used to be connected by a private siding to the Haifa – Bezet main line near Kishon block post. The wagon was renumbered later as 65 717 ? (Tzadi) with permitted payload raised to 65 tons (photo: Harel Even)

Procurement of 20 60-ton phosphoric acid bogie tank wagons Nos. 60 051 – 60 070 ? (Zayin) from Wagon Union (1981)

Lack of resources led ISR to sell most of its mineral rolling stock (about 300 hoppers and phosphoric acid tanks) for 9.2M US\$ to Israel Chemicals Ltd (ICL) in 1982. ICL was founded in 1968 as a governmental company. DSW, Negev Phosphates and Rotem Fertilizers became part of ICL in 1975. Negev Phosphates and Rotem Fertilizers were merged in 1991 together with European Amfert into a new company called Rotem Amfert Negev. ICL has been a public company since 2000. A daughter company Keter Tovala was created by ICL in 1982 to coordinate the use and maintenance of wagons. The wagon repair workshop at Beer Sheva was leased for that purpose.

connecting the Sodom potash plant with a new transloading facility at the entrance to Tzefa station, opened in 1987. The conveyor enabled avoiding road transportation of potash from Sodom to Ashdod Port.

Upgrading of Ashdod Yard, Dimona and Tzefa station layouts and signalling

systems.

As a result, the amount of minerals carried by ISR reached 4.7 million tons by 1988/9 as follows:

Tons	t o n / k m	
Average distance (km)		
Phosphates for export		
2,373,049	421,813,860	178
Phosphates to Haifa		
249,246	73,359,932	294
Potash for export		
1,430,580	217,451,281	152
Potash to Haifa		
221,528	60,728,837	274

Phosphoric Acid

173,100 29,351,400 170

Salt

44,016 11,840,304 269

Imported Sulphur

211,440 33,407, 521158

TOTAL

4,702,959 847,953, 135180

The longest route had been 306 km for phosphates moved between Tzin and Deshanim plant in Haifa bay.

Minerals in total represented 71% of ISR freight tonnage and 82% of ISR freight throughput in

ton/km terms by 1988. The related income was 34,807,325 NIS which represented 77% of ISR freight income.

That included also the following:

Salt loaded at Dimona station and carried by rail to Electro-Chemical Industries (also known as Frutarom) siding (km 17.076 Haifa – Bezet line). For that purpose, 13 56-ton Low-sided bogie wagons Nos. 56 101 – 56 113 ? (Ayin) were converted from 60-ton bogie flat wagons (60 IXX ? (Tet) series). Not included in the data above is caustic soda transported on the same route in 30-ft. tank containers on 60 2XX ? (Tet) series flat wagons.

Imported Sulphur from a siding built to the east of Ashdod Yard and carried by rail since 1981 to a new siding built at the phosphate plant in Tzefa. It is transported southbound in the same wagons used for transporting phosphates northbound.

Actual share of ICL's minerals by rail has been actually even higher as since the late 1960s some products e.g. Bromine have been carried by ISO containers and tank containers. At first, they were transshipped from lorries at the ISR intermodal terminal built on the former site of the mineral loading silo at Beer Sheva station. In the mid-1990's a temporary terminal was opened at Dimona. In 2000 a new intermodal terminal was built by Keter Tovala at Tzefa and traffic from Sodom and Tzefa has been handled there instead of at Dimona. The Beer Sheva terminal was replaced on 1.6.2004 by a new terminal built at Ramat Hovav.

Other notable events during the following years:

New diesel locomotive shed opened at Dimona on 1st January 1990.

The purchase in 1993 by ISR of 53 potash and phosphate 65-ton bogie hoppers Nos. 65 001 – 65 053 ? (Peh) from CAF, assembled by Vulcan Handassa. These wagons replaced the remaining ISR 55 and 60-ton wagons which used to haul phosphate and potash to the Haifa Chicalim plant in Haifa bay. Some of these retired wagons were then rebuilt in Kishon works to transport ballast.

A new plant called Rotem 2 was built at the phosphate plant at Tzefa in 1997. As it consumed humid phosphate from Oron and Tzin, a new siding was built. Trains have been running to Mamshit



• EMD G26CW No. 601 and Ex-ESR G16 No. 161 double-heading a 43-wagon train no. 860 from Dimona loaded with phosphoric acid, phosphate and potash for Ashdod Port on 9.8.1988 south of Ashkelon. The three leading phosphoric acid tanks were from the first series manufactured in 1971 (photo: Harel Even)

where locomotives had to run round the train in order to continue to Tzefa.

The purchase of the Alstom JT42CW Co-Co locomotives in 1998 made possible the double-heading of 2,600 gross ton trains south of Dimona (together with a Jumbo).

After the end of coal transport by rail in 2001 the 68 coal hopper wagons were sold to ICL and renumbered 65 901 – 65 969 ? (Chaf) They have been used since to haul potash.

A new spur was built in 2004 at Mamshit Junction to allow direct running of Tzin – Tzefa phosphate trains eliminating the need to run round at Mamshit.

The transport of potash and phosphate by rail to Haifa Bay had been declining by the end of the 1990s due to the following reasons:

Deshanim ve Chomarim Chimi'im ceased to consume phosphate and potash. Phosphoric acid continued to be transported in ISO tank containers until 2007.

Haifa Chimi'alim had a dispute with ICL after which phosphate was imported since 2000 and potash transported by road since 2009. (In 2017 negotiations to rebuild plant sidings and resume traffic took place but unfortunately the plant closed a few months later). The 52 wagons no. 65 001 – 65 053 ? (Pey) have been used since to carry potash for ICL.

The wagon repair workshop in Beer Sheva had been leased to MTR (Rail Industries Works) since 1992. The workshop was closed in 2011 in order to allow the upgrading of stabling sidings for rolling stock near the enlarged passenger station area. A new replacement workshop opened in 2011 in Dimona.

The purchase of the Vossloh Euro 4000 Co-Co locomotives in 2012 made possible the operation of 2,100 gross tons single-hauled trains south of Dimona.

13 remanufactured GT26CW locomotives Nos. 710 – 722 were purchased by ISR from NRE between

2015 and 2017 becoming the most common motive power on mineral trains since.

Since the purchase of the mineral wagons in 1982,



• La Brugeoise 60-ton bogie flats loaded with empty 30 feet ISO containers for Caustic Soda on 19.4.1986 en-route southbound at Haifa East yard. Behind are loaded Gaz tanks from the refineries to Gililot coupled to empty hoppers from Haifa Chemicals southbound. (photo: Harel Even)

ICL prepared to replace ageing phosphoric acid tanks with ISO Tank containers constructed on flat wagons hired from ISR (mainly La Brugeoise 60 2XX ? (Tet) series). That philosophy changed a few years ago when 28 new 40,000-litre tank wagons were ordered from Tatravagonka and taken into operation in 2017. In parallel the leasing of flat wagons ceased and the last surviving tank wagon No. 60 054 ? (Zayin) was withdrawn.

The trends in mineral rail traffic quantities during the last years have been bi-directional. There was a sharp decrease of more than 30% due to the world economic recession in 2008/2009. Nevertheless the lowest point was 2012. By that year the rail market share had dropped to 66% while the rest of ICL's transport into and out of Ashdod Port went by road. Hence a new plan prepared by ISR during 2012 in cooperation with ICL and the Port led to winning back the lost market share by 2016 although there has been a decrease again in 2018 as a result of a decrease in ICL's sales. One of the outcomes of the new plan was a reduction in wagon turnaround – that enabled ICL to stable the majority of the 65 8XX ? (Chaf) series potash wagons in Oron siding (Phosphate roasting at Oron ceased in 2006 due to new environmental directives). Another outcome of the plan has been the operation of 3,000 gross ton trains between Tzefa (later also Tzin) and Ashdod Port double-headed by two JT42CW's or Euro 4000's (currently two GT26CW's). Currently under negotiation is a new siding to Haifa Darom (Haifa Chimi'alim) plant in Tzefa which could serve the phosphate haul from Tzin in addition to other commodities.

The future of transport of phosphate and potash destined for South-East Asia by rail is still pending on the long-planned line to Eilat. Nevertheless the mineral business does still play a major roll in ISR's

Rail Freight sector. It might lose its leading place throughout the next decade to aggregates, planned to be hauled from a new quarry called Mezad Tamar, 7 km east of Tzefa to new unloading terminals planned at Kedma and Eyal.



- *Ex-ESR G12 No. 127 ready to depart Haifa East yard northbound with 56 OXX ? (Ayin) wagons loaded with salt on 16.12.1988. (photo: Harel Even)*



- *Brand-new Tatravagonka 40,000 litre phosphoric acid tank wagons no. 65 228 ? (Chet) and 60 206 ? (Chet) at MTR works in Dimona on 23.5.2017. The first is insulated for the purpose of transporting white acid while the latter is non-insulated for the purpose of transporting green acid (photo: Harel Even)*

If anyone had any doubts that the Dead Sea really Works, this must help to allay them. One could say this would be a perfect beach for hydrophobes and non-swimmers. The wagons have stood in this wilderness almost as long as the Israelites did.'

