

The magazine of Hitachi Construction Machinery (Europe) NV

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GROUND CONTROL

Issue 18 Autumn 2014 www.hcme.com

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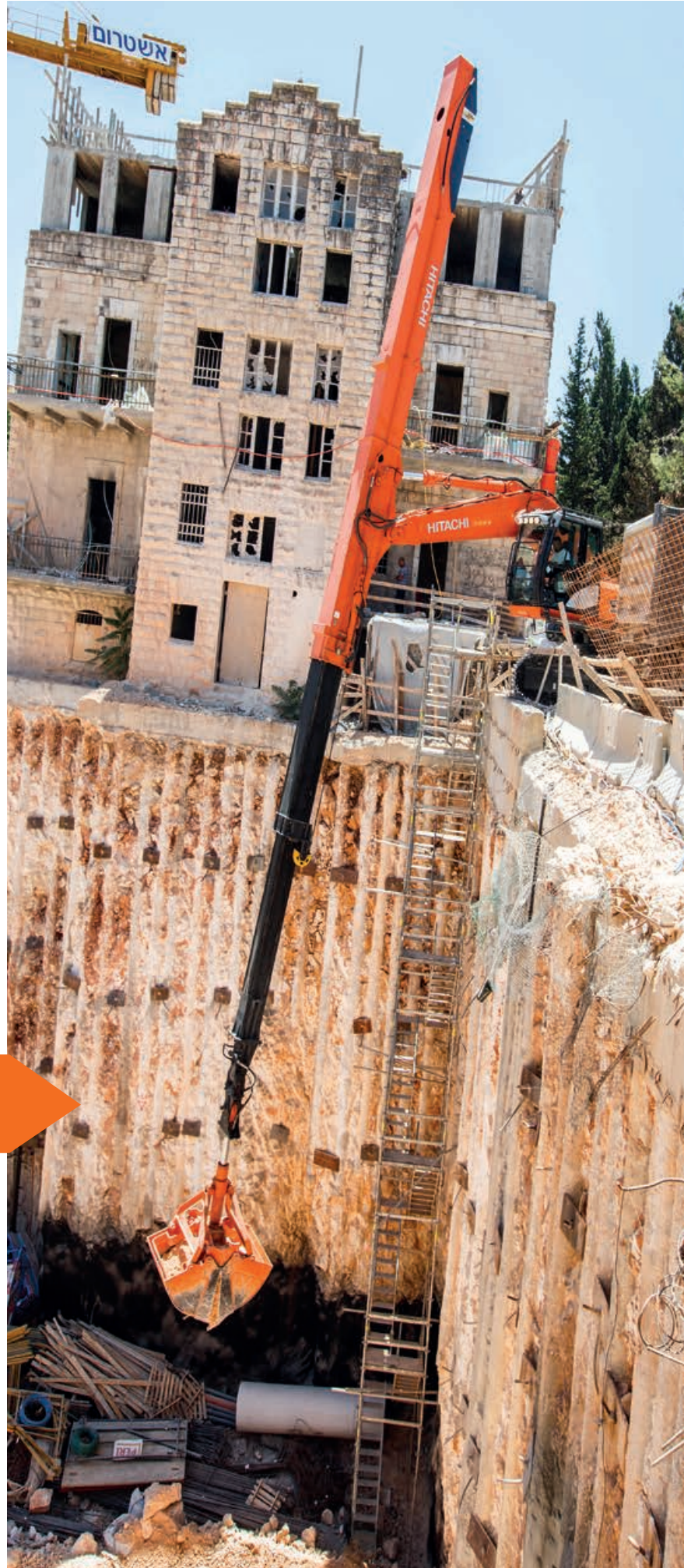
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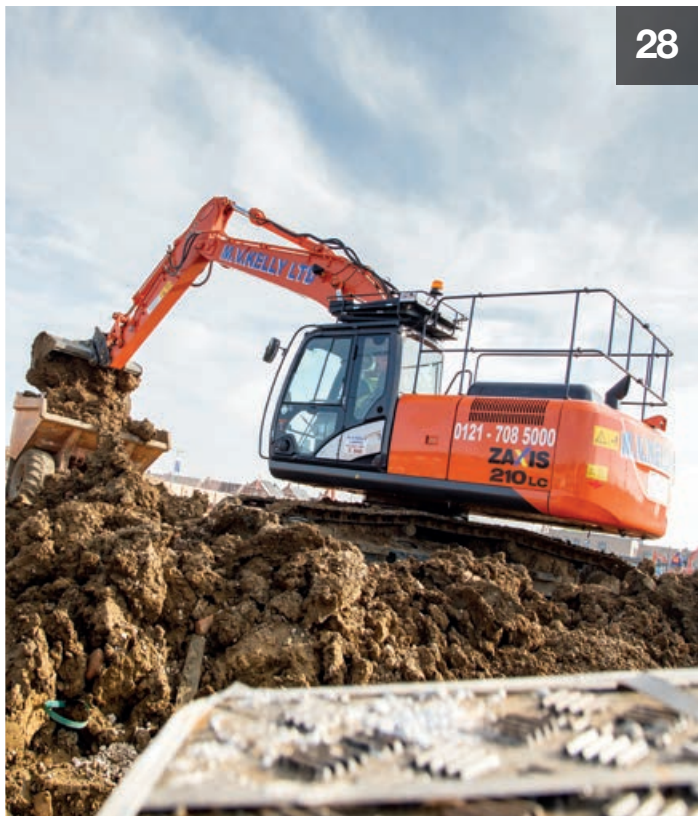
Hitachi Zaxis-5 models are the machines of choice for Israeli construction companies working on large-scale infrastructure projects



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NEWS

Two **successful** debuts at Hillhead



(Left to right): HCMUK's Motomu Sue, HCME's Moriaki Kadoya, Morris & Perry's Dave Roberts and HCMUK's Mark Turnham

The first Hitachi ZW330-5 in the UK has been delivered to a large independent quarry operator after appearing at Hillhead 2014 in June. The wheel loader was displayed on the Hitachi Construction Machinery UK (HCMUK) stand, in addition to the

largest excavator at the exhibition, the ZX870LCR-5. The latter was sold during the three-day event, which took place in a quarry in central England.

Morris & Perry required the new wheel loader to load trucks in the stockyard, keep access roads clear and push up blasted materials at its quarry in Somerset. The family-owned company provides aggregates, asphalt concrete and ready mixed concrete products to customers across South West England.

Equipped with a 4.8m³ bucket, the ZW330-5 loads more than 1,000 tonnes of materials per day. Quarry Manager Dave Roberts says: "We load everything with the wheel loader and it's vital to our operation. It speeds up the process considerably."

The UK's first ZX870LCR-5 was purchased by the Walters Group, one of the largest contractors in the UK. Group Chairman David Walters and Group Managing Director Huw Richards were visiting Hillhead when they decided to take a look around the excavator.

"The Hitachi ZX870LCR-5 is an impressive piece of equipment and its excellent reputation for fuel economy, reliability and productivity were all factors that influenced our decision to make the purchase," said Huw. "In addition, we have operated large-size Hitachi machinery in the past and have been impressed by the residual values and HCMUK's strong support network."

New **ZW-5** wheel loaders

Hitachi has launched three new medium-sized ZW-5 wheel loaders: the ZW140-5, ZW150-5 and ZW180-5. The new models have been designed to meet the requirements of European customers. They offer high productivity, excellent fuel efficiency, a smaller impact on the environment and a lower total cost of ownership. Operator comfort and safety, and easy maintenance features, have also been considered in their design.

A powerful water-cooled turbo engine delivers a strong digging performance and impressive travel speeds, as well as excellent fuel consumption. Operators can choose from two work modes, suitable for particular tasks, which also help to minimise fuel consumption. Standard mode is for regular operations on a level terrain. P (power) mode gives a greater traction force, which is useful for heavy-duty excavation.

The operator can also see when the wheel loader is operating economically in ECO drive thanks to the display in the cab. An optional auto-engine shutdown avoids fuel wastage while the wheel loaders are long idling.

The cab of the new wheel loaders is more spacious than previous models. The seat slides further back providing more legroom and the tilting telescopic pop-up steering column has been repositioned.



Easy maintenance features include a redesigned engine cover that can be opened fully, providing convenient access. Greasing points, oil levels and fuel filters can all be accessed at ground level.



Hitachi **compaction** equipment launched at IRE

A new range of Hitachi compaction equipment was unveiled to visitors at the International Rental Exhibition held in Amsterdam in June. The comprehensive line-up now available to European construction customers includes rammers, vibratory plate compactors and rollers.

Manufactured at the factories in Yamagata and Saitama by Hitachi Construction Machinery Camino Co., Ltd., they are already available in Japan, as well as Australia, New Zealand and Brazil. Designed to provide high levels of performance and durability, the new products are also easy to operate and maintain.

The ZV-R series of rammers are equipped with a low-vibration handle, user-friendly throttle lever and visible oil gauge. They offer a powerful compaction force and are easy to manoeuvre, which makes them suitable for difficult working conditions. The ZV-RL and ZV-RLS models are lightweight and feature Pipe Guard engine protection. They also benefit from easy-to-maintain engine oil and air cleaner.

The ZV-P vibratory plate compactors have a compact, user-friendly design and are extremely durable. Hitachi also manufactures the

ZV-PR reversible vibratory plates, which are known for excellent manoeuvrability and easy maintenance.

Several walk-behind rollers are also available. The ZV-W models have conveniently located levers and switches for easy operation. They can be cleaned quickly using the pull-out sprinkler nozzle and other maintenance jobs can be carried out easily, thanks to the one-touch keyed gull wing engine cover.

HCME Product Specialist Joep van den Maagdenberg said, "Compaction equipment is a significant addition to the wide range of Hitachi construction machinery now available in the European market. The new products share the same qualities as Hitachi excavators, wheel loaders and dump trucks, such as reliability and durability.

"We had a lot of positive feedback about the compaction equipment from visitors at the IRE and it received a great deal of press coverage. Although we are still investigating options for distribution throughout Europe, large customers and key accounts will be able to source the new products directly from HCME."



Groupe Noblet's owner, Laurent Galle (left) and HCME's Hiroyuki Kamata

First Hitachi hybrid in Europe

The first Hitachi hybrid excavator has been handed over to rental company Cotra Styl – part of Groupe Noblet – in an official ceremony at its office in Trappes, west of Paris. Groupe Noblet's owner, Laurent Galle, received the keys of the ZH210LC-5 from HCME General Manager Engineering, Hiroyuki Kamata, and the local Hitachi dealer Payen's Commercial Director, Stéphane Bonifacy. Hitachi Construction Machinery Sales and Service France's President Haruyuki Shimada also presented a special Japanese plate to Monsieur Galle.

Groupe Noblet and Cotra Styl specialise in the rental of excavators and trucks for earthmoving and decontamination work, as well as the construction of roads and sewers. The most significant part of its turnover comes from the three largest French contractors – Colas, Eiffage and Vinci – supplemented by a number of smaller customers.

"We are delighted to be the first owner of the Hitachi hybrid excavator in Europe," said Monsieur Galle. "This is a truly innovative machine for us as we are environmentally friendly and therefore keen to promote the virtues of hybrid products. For instance, we have reduced the fuel consumption of our existing excavators and trucks by 15% in the past two years.

"The test with the prototype model went really well on projects that varied from city centre sites to rural locations. There were less emissions and noise from the ZH210LC-5 than a conventional machine, without a compromise on performance. We were also able to save costs with lower fuel consumption."

Hitachi invests in Brazil

Hitachi Construction Machinery Co., Ltd. (HCM) has opened a new factory in Brazil in a joint venture partnership with John Deere. The new facility is located in Indaiatuba, São Paulo, and will produce the ZX160, ZX180, ZX210, ZX250 and ZX350 Hitachi medium excavators, as well as several John Deere models.

Construction of the new plant began in 2011 and took two years to complete. An exclusive John Deere factory for the manufacture of wheel loaders and backhoe loaders was also built in the same location. HCM and John Deere invested approximately \$180 million in both manufacturing facilities.

Michijiro Kikawa, Chairman of the Board, HCM, said the opening of the new facility in São Paulo represented "great advancements for our operations in Brazil. John Deere and Hitachi have a solid partnership, placing us at the forefront of the hydraulic excavator market."

Brazil is one of the fastest growing construction equipment markets in the world and offers a significant opportunity for both companies. Michael Mack, President of John Deere Construction & Forestry, commented: "Investment potential on infrastructure is very high in Brazil, which makes us confident of the success of this enterprise."

HCM and John Deere's partnership began in 1988 when they formed Deere-Hitachi Construction Machinery Corporation. This 50:50 joint venture is based in Kenersville, North Carolina, USA, and also manufactures and markets hydraulic excavators.



EX1200-6 **optimises** quarrying process

Boral Peppertree Quarry in Australia has selected a Hitachi EX1200-6 excavator to optimise its quarrying process. Situated at Marulan South in the NSW Southern Tablelands, it is Boral's largest hard-rock quarry investment in the country.

It supplies the Sydney Metropolitan area and greater NSW building and construction industries with up to 3.5million tonnes of aggregate per annum. It is home to over 80million tonnes of proved resource and over 1.8billion tonnes of inferred resource on land owned by Boral in the Peppertree area.

The Hitachi ultra-large excavator was chosen for its reputation for reliability and large-scale productivity in quarry applications. It loads material directly into a mobile crusher's hopper. This is capable of crushing 1,150 tonnes of rock per hour.

The process parameters of the mobile crusher, such as hydraulic pressure, temperature and feed rate, are sent wirelessly to a human-machine interface panel located in the excavator's cab. Cameras on the crusher allow the operator to observe the feed process. If necessary, the operator can alter the feed rate via the interface panel in the cab.

The EX1200-6 boasts a new hydraulic system and advanced hydraulic technologies that aim to boost production capabilities and lower fuel consumption. Several improvements have been



made to the design, resulting in greater mobility, digging force, swing performance, boom lifting force, and enhanced operator comfort and visibility.

New factory in Russia



Hitachi Construction Machinery Eurasia Manufacturing (HCMR) has opened a factory in the Tver region of Russia. The new plant will meet the growing demand for Zaxis excavators due to an increase in infrastructure contracts and large construction projects.

HCMR plans to manufacture 2,000 medium excavators per year at the factory. In 2014, it is estimated that 400 ZX200-5 and ZX330-5 models will be produced – these are the most popular in the Russian market.

Excavator booms, arms and frames will be manufactured at the new location, which employs 150 people. The machines will also be painted and assembled. Components will be supplied by two companies in Tver, Tsentswarmash plant (part of Transmash



Holding) and Incom, and two Japanese suppliers, Iwashiro and Nikko, which have since registered subsidiary companies in Tver. This is in line with the Hitachi strategy to localise production.

HCMR is 80% owned by its parent company, Hitachi Construction Machinery Co, Ltd., (HCM), and 20% of shares are held by the European Bank for Reconstruction and Development. Situated north of Moscow, at the confluence of the Volga and Tvertsa rivers, the Tver plant has the most northerly location (56 degrees north latitude) of all HCM group factories. It is the 17th to be built outside of Japan. A total of 18 Hitachi group factories operate in Japan.

NEWS



Hitachi Genuine **GET** for mining machines

HCME has introduced a range of ground engaging tools (GET) to its customers in Europe, Africa and Russia. The range has been developed exclusively for Hitachi mining excavators – from the 120-tonne EX1200-6 to the 360-tonne EX3600-6 – to complement each machine's digging capabilities.

The Genuine Hitachi-branded tools are manufactured and tested to the same high standards as all Hitachi construction equipment, and have already been proven in the Australian market. They have been designed to increase productivity, enhance safety on the job site and reduce maintenance costs.

Specifically engineered for hard rock mining applications, the new Hitachi Genuine GET products improve penetration and enhance the overall digging power of the excavator. The streamlined profile increases bucket filling and dumping rates to increase productivity and efficiency.

The tools are manufactured from a high grade of superior steel that enables them to become self-sharpening and increases hardness throughout the casting thickness.

All products within the new Hitachi Genuine GET range benefit from the unique side lock system. This hammerless locking system results in greater safety on the job site. It also reduces the time required for change outs/replacements, minimising downtime and maintenance costs. New wear caps and straddle adapters with extra wear protection also require less maintenance.

Wayne Partridge, HCME Technical Sales Manager Mining & Quarrying, says: "Hitachi Genuine GET have been designed and manufactured to a specification that balances weight, operational wear life and the equipment's power efficiency. These features provide a combination that, over each operation cycle, minimises the power required by the machine as a ratio of the total workload and cost per tonne, improving overall productivity.

"HCME is pleased to offer the Hitachi Genuine GET range to customers via the European dealer network. This is another example of how Hitachi is lowering the cost of ownership for customers by providing reliable tools that will enhance the productivity of their equipment."

Behind the machines

The Hitachi Support Chain encompasses all of the manufacturer's after-sales services: Global e-Service, technical support, Hitachi Extended Life Program (HELP) and service contracts, and Hitachi Parts. It has been developed to protect customers' investments in Hitachi construction machinery.

In a new initiative by HCME, a behind-the-machines look at how customers benefit from Hitachi Support Chain will be promoted throughout Europe. This will not only be carried out through the pages of *Ground Control*, but also through an extensive new advertising campaign and online case studies.

As an example within this issue: Trasswerke Meurin (page 12) enjoys "peace of mind" on its ZW370-5 wheel loader thanks to a HELP extended warranty package; Carrières de Cusy (page 25) has "minimal downtime" with its ZW250-5 wheel loader and ZX290LC-5 excavator due to the technical support from its local Hitachi dealer Teramat; and Kelston Sparkes (page 26) is "more productive" thanks to the information it receives on its fleet of Hitachi Zaxis-5 excavators from Global e-Service.

"Hitachi Support Chain has been rolled out into the European dealer network," says Ghislaine Jonker, HCME's Assistant Manager Corporate Communication. "With this new campaign, we will be highlighting Hitachi customers' after-sales experiences with their new machines. This is indicative of the emphasis that we place on customer care."



SUPPORT CHAIN

Merchandise

Seat cover
E0PP0000073



Floor mats
ZX, ZXW and ZW floor mats



Fuel cap
E0PP0000074



Ask your dealer for more information



Rising to the challenge

Among the first large Hitachi ZW-5 wheel loaders to be delivered in Europe were the ZW330-5 purchased by the Colas Group in France and the ZW370-5 by Trasswerke Meurin in Germany. *Ground Control* visited both quarries to find out whether the machines were living up to expectations in tough working conditions

The ZW330-5 wheel loader at the Socavi limestone quarry in France



The latest range of large Hitachi ZW-5 wheel loaders has been designed to satisfy the requirements of European owners and operators. Built upon Hitachi's reputation for reliability and quality, the ZW330-5 and ZW370-5 have been given numerous features to enhance their performance, reduce running costs and improve the overall operating experience.

Impressive performance

Equipped with powerful engines, Hitachi large ZW-5 wheel loaders can deliver a strong digging performance and are capable of impressive travel speeds. The new hydraulic circuit facilitates the combined operation of bucket and lift arm for loading, and prioritises use of the bucket when needed for this type of work.

They are easier to manoeuvre around the job site than previous models, thanks to the automatic gearshift controls. A new clutch cut-off system allows for smooth operation during loading and a quick power switch boosts the power of the ZW-5 wheel loaders when required, by changing the work mode.

Reduced running costs

The two work modes available on the ZW-5 wheel loaders provide an appropriate level of performance for a particular job, ensuring lower fuel consumption (and costs) and maximum productivity. In Standard mode, the engine speed is controlled for smooth and efficient acceleration during regular operations, such as loading, and fuel consumption is reduced by up to 10%. P mode is for demanding tasks such as heavy-duty digging and travelling uphill.

Further fuel costs are achieved by the optional auto-engine shutdown function. It helps to prevent fuel wastage while the machine is long idling. An ECO display on the monitor in the cab also highlights when the wheel loader is in ECO drive, using less fuel.



Safe and comfortable

Hitachi engineers have made several adjustments to the cab following extensive customer feedback. Air conditioning and sound insulation contribute to the high level of comfort in the cab. The new large multi-function LCD monitor displays information at a glance to the operator.

The heated air-suspension seat slides further back than on previous models, providing more legroom. A tilting telescopic and pop-up steering column has been repositioned to create additional space. The pillar-less windshield, rear-view monitor and large sun visor have enhanced visibility from the cab, and the counterweight is now visible on both sides.



Volcanic materials being collected at the Trasswerke Meurin site by the ZW370-5 wheel loader

A positive impact on productivity

The Colas Group invested in a new Hitachi ZW330-5 wheel loader for its Socavi limestone quarry in Savoie, in the Rhône-Alpes region of France. The quarry in Commune de Villette, near Moûtiers, produces 200,000 tonnes of aggregates per year, which are predominantly used for construction and public works.

Since July 2013, the ZW330-5 has been used for transporting the limestone materials, reshaping stockpiles and loading trucks. Approximately 70% of the material is allocated to Socavi's customers, which are largely public works contractors.

Delivered by local dealer Teramat, the Hitachi wheel loader has a three-year/5,000-hour Hitachi Extended Life Program (HELP) warranty, which includes the supply of Hitachi Parts. Colas decided to invest in the new machine following a positive experience with Teramat's after-sales support team.

Quarry Manager Renaud Hatton explains: "We have two Hitachi

excavators working on the quarry floor – an EX800 delivered in 2000 with 13,000 hours and a ZX650 delivered in 2002 with 12,000 hours. When we needed some technical assistance with the EX800 a couple of years ago, Teramat was able to satisfy our immediate and longer term requirements."

This helped to establish the relationship between the two companies and ultimately led to the delivery of the ZW330-5. Operator Thierry Ougier says: "I'm impressed by the visibility from the cab, especially with the help of the rear-view camera. The display is easy to read and highly visible, even on sunny days – it's the most advanced I have seen."

In terms of performance, Thierry feels he can use the Hitachi ZW330-5 without compromise, even when fully loaded and travelling up steep inclines. "The high breakout force enables me to fill the bucket easily," he explains.

"The transmission is very smooth and, in combination with the



“We are very happy with the quality and low cost of ownership of the Hitachi wheel loader”

Phil Meuser-Schaede,
owner, Trasswerke
Meurin



auto ride control, it allows the wheel loader to travel fully loaded without losing any materials, even when I change gear. I can move easily and quickly around the site when loading trucks thanks to the fast acceleration.”

Compared to the previous wheel loader he used at the site, Thierry has noted a reduction in fuel consumption with the ZW330-5: “The fuel efficiency is much better, but it has also greater productivity at the same time. This highlights the lower running costs of the new Hitachi wheel loader.”

Excellent value for money

Trasswerke Meurin took delivery of its ZW370-5 wheel loader to handle lava, pumice and basalt materials in its quarry in the Eifel region, where it started working more than 150 years ago. These materials are common to the area due to an eruption approximately 12,900 years ago that created the Vulkaneifel volcanic field.

Trasswerke Meurin’s team of 100 workers produces bricks from the quarry in Kruft, near Koblenz, for the housebuilding industry. The Hitachi ZW370-5 is used in the excavation and loading process that transports the materials from the quarry floor to a crusher.

The ZW370-5 has been fitted with a large 5.6m³ bucket that has been customised by German Hitachi dealer Kiesel with a blade below the teeth to suit the demands of the site. The teeth are suitable for penetrating into the rock, while the blade is used for cleaning up the stockpiles and levelling the ground for trucks.

In addition, Kiesel supplied the large wheel loader with a 48-month, 6,000-hour HELP extended warranty. The machine also benefits from a double cab air intake filter, heated mirrors, a belly guard and additional lights.

Owner Phil Meuser-Schaede is responsible for the purchase of new machinery at Trasswerke Meurin and says: “We are very happy with the quality and low cost of ownership of the Hitachi wheel loader.

“The decision to buy this machine was due to the high level of service that we’ve received from our supplier in the past and the excellent value for money that it represents. We check the fuel consumption on a regular basis and the ZW370-5 is already showing a significant one-third saving over the previous model – which was another brand of wheel loader.”

Phil also considers the opinion of the operator to be very important, especially an experienced employee such as Markus Hoffman. He has worked for Trasswerke Meurin for 22 years and says: “I recommended that we should buy this machine because of the engine capacity, tipping height and overall design in comparison with other wheel loaders.

“The cab is very comfortable, especially because of the pop-up steering column, fully adjustable seat and quality of the audio system. The speed of the arm and the bucket, traction force and fast loading cycle results in optimum productivity. The large fuel tank and low fuel consumption enable me to work long shifts on this site – without compromising on performance.”



To see movies of the ZW330-5 and ZW370-5 wheel loaders in action, please visit www.youtube.com/user/HitachiConstruction. To receive a digital version of *Ground Control* with new movies, please register online at www.igroundcontrol.com/subscribe/en



The **best** tool for the job

With a specific requirement for a machine to work in a confined space over 30m below ground level, Danish contractor MJ Eriksson has to ensure that it has the best tool to complete the job. *Ground Control* visits the Cityringen project in Copenhagen to assess the merits of the ZX135US-5 short-tail swing medium excavator

The ZX135US-5 breaks up soil and limestone materials underground at the Cityringen site in Copenhagen



“The ZX135US (-3 or -5) is the fastest and strongest excavator in its class. We have tested it against other machines working in the same conditions at other sites and it came out on top with 20% better productivity!”

Erik Inmark (left), Foreman, MJ Eriksson
with Henrik Sørensen, Area Manager,
HP Entreprenørmaskiner

The Danish Government has issued a contract to expand the existing Metro system in Copenhagen with Cityringen at a total cost of DKK 21.3billion (€2.85billion). This will be a completely new, fully automated and driverless 15.5km underground circle line in the city centre, constructed on the same principles as the existing system.

The next generation of Metro station is being created to complement the Cityringen concept. The 17 new locations will have safe, spacious and open facilities, with easy access to platforms from street level. The design gives natural daylight inside the stations, which is one of the Copenhagen Metro's hallmarks.

The line will consist of two single-track tunnels, four crossover facilities and four construction and ventilation shafts. In addition, Cityringen will include an automated control and maintenance centre for the operation and maintenance of the system. The trains will operate 24 hours a day, seven days a week and are expected to serve 225,000 passengers a day – or 72million passengers a year.

Cityringen will be completed by 2018, and once in service, passengers will be able to transfer to the existing Metro system, as well as the regional rail and commuter train network. It will have frequent departures and, with an average travelling speed through the city of 40km/h (including stops) will reduce travel times dramatically. It will take approximately 24 minutes to travel all the way around the circular line, and when trains are running in both directions, the longest single trip will take approximately 12 minutes.

Pioneering role

The Copenhagen Metro Team (CMT) consortium – consisting of Salini, Tecnimont and SELI – has been awarded the contract to build Cityringen after two tender processes. Salini Costruttori employs around 13,000 people, has 29 global subsidiaries and more than 70 years' experience of working with major infrastructure projects. Tecnimont also works with the construction of high-speed railway lines, road projects, tunnels and metros. Founded in 1950, SELI (Società Esecuzione Lavori Idraulici) specialises in underground construction projects.

They are supported by the largest earthmoving, utilities and road construction company in Denmark, MJ Eriksson, which is operating as a subcontractor for CMT. The Brøndby Strand-based contractor is responsible for the construction of 21 shafts for the 17 new stations and four other Cityringen facilities.

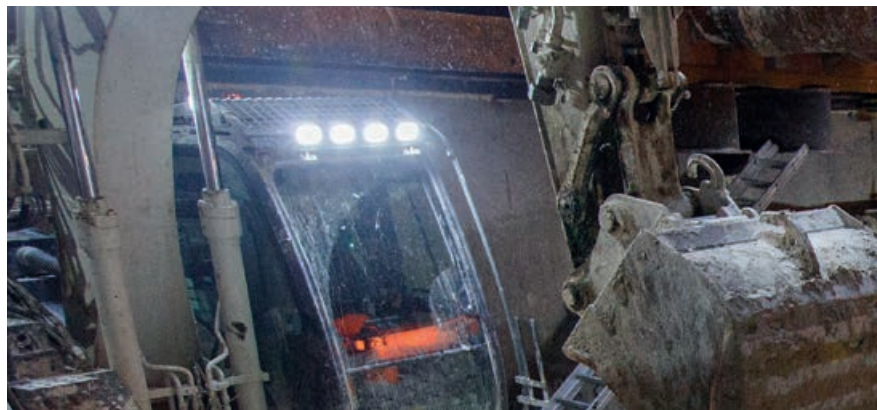
Founded in 1920 and currently employing more than 300 people, MJ Eriksson benefits from an integrated quality management system and environmentally sound work practices. As part of its goal to have a pioneering role within the industry, the company assesses methods for minimising impacts on the external environment, for example through its: selection of new materials and processes; and contingency plans for unanticipated environmental impacts.

This strategic approach includes the purchase and maintenance of a comprehensive range of construction machinery. With more than 200 pieces of equipment, including 17 Zaxis excavators (three

ZX85USB-3s, one ZX85USB-5, five ZX135US-3s, three ZX135US-5s, two ZX210LC-3s, one ZX280LC-3 and two ZX470LCH-3s), MJ Eriksson relies on the support of such suppliers as Denmark's official Hitachi construction machinery dealer, HP Entreprenørmaskiner.

Excellent relationship

The two companies have been working in partnership since MJ Eriksson purchased its first Hitachi excavator (a ZX280LC-3) in 2010. HP Entreprenørmaskiner's Henrik Sørensen is the Area Manager for Zealand and he also looks after his customer's business on a national basis.



One of three Cityringen shafts under construction



Materials are raised up to ground level using a skip



ZX135US-5 operator Jacob Spohr

"We have worked hard for the opportunity to work with MJ Eriksson," says Henrik, "and now we have built up an excellent relationship with the owner, Jørgen Eriksson, and his team. He takes informed decisions on the purchase of construction machinery, and even looks at the fuel consumption figures and overall service costs for different machines.

"However, he does also listen to the opinions of the operators and takes advice from the managers of each division within the company. A good example is the first ZX135US-3 that was ordered under the influence of the manager of the rail department. In addition, they had heard so many positive stories about the performance of Hitachi machines, especially from their sub-contractors using Zaxis excavators on construction sites.

"MJ Eriksson employs its own service team, so it doesn't buy service contracts with its new machines. However, it does order Hitachi Parts and calls upon our technical support team as and when required. The expectation is that there is a high level of service and we are confident that the customer is very happy with our support and commitment."

Excavation process

One of the three Cityringen shafts under construction in January 2014 was on Sønder Boulevard in the Vesterbro part of the city. This was being built in preparation for the installation of the control centre. The job started in October 2013 and was scheduled to finish within six months.

The excavation process for each shaft begins with a suitably sized hole being dug in the first 1.5m of concrete. This is used as the main point of access to remove the soil and limestone materials as MJ Eriksson's earthmoving team continues to go deeper under the ground.

A number of levels are created at an average height of 5m each over a period of two to three weeks. A Hitachi ZX135US-5 and ZX135US-3 are located at the bottom of the hole, with the



former used for breaking up the ground and the latter for loading the loose materials into a skip, which is then raised up to ground level by a crane and dumped on to a truck.

As each level is completed, the excavation work stops and the steelwork is fitted to the walls of the shaft to reinforce the structure. This process takes another week, during which time HP Entreprenørmaskiner's technical team may be required to carry out repair or routine maintenance work during the enforced downtime.

On this site, MJ Eriksson is moving 40,000m³ of materials, which is enough to create six levels or a complete depth of 33.75m. The volume varies between 25,000 and 50,000m³ across all of the shafts. The first 8m is soil and then the limestone becomes more prevalent, with the hardest stone extracted at 10m.

The company works on two to four shafts at any one time. It has 11 employees working on this site and around 30 across the whole project (excluding truck drivers).

They are complemented by a fleet of 15 excavators, with four Hitachi machines employed on this site on the day of *Ground Control's* visit: the ZX135US-5 and three ZX135US-3s, with a second ZX135US-5 due to arrive at the start of the following week. The machines work tirelessly 15 hours a day, five days a week (7am to 10pm) and for six hours on a Saturday (9am to 3pm).



The ZX135US-5 utilises a wide range of attachments to remove the materials

Better productivity

The ZX135US-5 on view was delivered to MJ Eriksson in October 2013 and had completed over 500 working hours by January 2014. It utilises a wide range of attachments to remove the materials, including a hammer, a standard heavy-duty bucket, a two-metre wide-tilt bucket and a ripper tooth. It has also been supplied with LED lights, extra protection for the cylinders and cab, and an additional hydraulics kit that delivers oil from both pumps for the optimal performance of the hammer.

Erik Inmark is the foreman on this Cityringen site. He's been working with MJ Eriksson for 18 years and has amassed 36 years' experience in the industry. With direct responsibility for the earthmoving excavation work, Erik relies on the performance of the Hitachi excavators to meet his targets.

"There is no doubt that the Hitachi excavators are the best machines for this particular job," he says. "The ZX135US (-3 or -5) is the fastest and strongest excavator in its class. We have tested it against other machines working in the same conditions at other sites and it came out on top with 20% better productivity!"

"Sometimes an operator error could lead to some repair work having to be carried out on the machines. When I call HP Entreprenörmaskiner, the technical support team responds on time with the right parts and most appropriate level of service. The Hitachi excavators are very reliable and they are the best machine for this type of work."

Jacob Spohr joined MJ Eriksson within the past six months and he has been operating excavators "for as long as I can remember". He says, "The ZX135US-5 is a machine of the highest quality, with very precise steering – especially when compared to other machines – and lots of power."

"I enjoy working in the cab, which has a comfortable seat for working on long shifts. The joysticks are also well placed and it is easy to control everything. The monitor is user friendly and fast, which means that I don't waste any time unnecessarily. Overall, this machine makes my job easier down in such confined spaces as this below the ground."

The fine balance between the size and power of excavators can be a difficult choice for owners and operators alike. However, in this case the experienced team at MJ Eriksson has done its homework and come up with the best solution for its specific requirements. The ZX135US-5 is the best tool for the job, with its short-tail swing radius, durable build quality, comfortable workspace and versatility in the most challenging of working environments.



To see a movie of the ZX135US-5 in action, please visit www.youtube.com/user/HitachiConstruction. To receive a digital version of *Ground Control* with new movies, please register online at www.igroundcontrol.com/subscribe/en

Hitachi was selected as the preferred supplier of six new dump trucks, which were delivered to Rotem in 2012

There is a fascinating 15-minute movie on the Hitachi Construction YouTube channel that depicts the significant impact of the arrival of six Hitachi rigid dump trucks on Rotem's employees. It was an emotional experience to see the old fleet of Euclid trucks – three of which had been working for 26 years and had more than 100,000 working hours – being superseded by the EH3500ACILs.

The Head of Heavy Construction Equipment Garage, Meir Shemtov, was the first man to drive one of the new trucks. "For me it's a dream come true..." he says during the movie. Two years later, Meir and another interviewee, Mining Equipment Maintenance Manager Guy Eitan, share their own personal experiences with the EH3500ACILs.

History in the making

In 1991, Rotem was formed through a merger of Negev Phosphates – established in 1952 to exploit the phosphates reserves in the Negev Desert – and the Rotem Amfert Group, which was originally established as Rotem Fertilizers in 1977 to process phosphate rock into phosphoric acid and fertilizers.

The company became part of ICL Fertilizers after a further merger in 2001 and is now positioned as an integrated, multinational phosphate group. Its wide range of products are based on phosphate rock as a raw material and lead to downstream derivatives, such as phosphoric acids, fertilizers, specialist chemicals and phosphate salts.

Guy joined Rotem in 2007 and is responsible for: all aspects of the mining equipment; ensuring high levels of availability and safety in the mine; and what he describes as an "unofficial problem-solving role". The acquisition of the new trucks soon became one of his ongoing projects.

"I asked for approval to change the old trucks," he explains, "and it seemed that there might be a good chance of this happening in 2009. So, we started the long process required for this type of investment and looked at a list of possible suppliers."

A shortlist of five leading rigid dump truck manufacturers was eventually reduced to two, due to the size of the product required and the need for it to be electrical. The contents of the final two proposals were similar, so there was a long and detailed process of negotiations, before Hitachi was selected as the preferred supplier.



"Our aim was to find the best solution and Hitachi had the highest overall score"

Guy Eitan,
Mining Equipment
Maintenance
Manager





Driving availability and productivity forward

Two years after their delivery to Rotem Amfert Negev (Rotem) in southern Israel, *Ground Control* visits six Hitachi EH3500ACIIs to see how they are adapting to life in the Negev Desert's phosphate mine



The best solution

“We didn’t only evaluate the best product,” continues Guy, “because it was also important for us to assess the whole package. This included a number of different parameters, such as maintenance, parts and servicing, as well as operator comfort and the capital cost of each truck. In the end, our aim was to find the best solution and Hitachi had the highest overall score.”

HCME Manager of Mining & Quarrying Malcolm Edwards was heavily involved in the process. “Rotem chose Hitachi because it could offer the lowest owning and operating cost, and its own electronics for the truck’s drive system – it is a one-stop shop that is unique to the industry,” he says. “They also saw the successful operation of the EH350ACII trucks working at the Talvivaara nickel mine in Finland in temperatures as low as -32°C and as high as 35°C.”

“This is the only mine in Israel,” adds Guy, “and therefore our equipment is unique. In the past, we have had issues with other suppliers, who have gone by the wayside along with their local distributors. So, it’s great to have such an active local dealer like CMD to help us. The direct communication and access to HCME has also been a huge help.”

Once the deal – the largest sale of mobile plant equipment in the country’s history – was finalised, Guy’s attention shifted to checking that each element of the package was on track for delivery. This incorporated everything from the training and logistics, to the supply of the tyres, rims and bodies. Each truck was to be shipped 90% built – without the body, wheels, final drives and other components – and then on Friday 11 March 2011 a devastating earthquake and tsunami hit Japan...

With a force majeure in place, a delay of some months was expected and then Hitachi committed to a new delivery date. When the trucks were ready, Guy took Meir and another colleague to the Hitachinaka-Rinko Works factory in Japan for 12 days’ training, accompanied by CMD’s Service Manager and a top technician allocated to the project.

“The training course was a very interesting experience,” says Guy. “It highlighted that the technology within the EH350ACII is a leap forward from the Seventies’ design of the Euclid. That was when I realised that we need to think differently and change the mentality of our people.”



Meir, who has worked at the mine for 31 years, adds, “The biggest benefit from our training in Japan was that it helped us to assemble the trucks when they arrived at the mine. We were also able to pass on our knowledge to the other members of our team with the help of CMD and Hitachi. After the success of the early training sessions, we still have a monthly refresher course for our technicians and operators.”

A giant leap forward

After the trucks left the port of Eilat for the road journey north to the mine, a large reception committee gathered for their arrival in April 2012. Everyone was amazed as the trucks were lifted off the



The EH3500ACIIs work on 20-hour shifts to remove overburden and haul the phosphate to storage areas, the crusher and processing plant

transportation vehicles and placed on their stands, ready for the final assembly process.

With the help of CMD and Hitachi personnel, it took approximately six weeks to complete the assembly process. Then the operators undertook a one-week training course, not only for driving the machines, but also basic maintenance tips. They visually inspect the truck at the start of each shift and they are able check a special reference book that has been prepared by Rotem.

"I like to operate the trucks and inspect each machine after any work has been carried out in the workshop," says Meir. "This has enabled me to understand how Hitachi has designed the EH3500ACII with the operator in mind. I feel like the machine has

been built around me and I am central to its performance."

Finally, from mid-May to the start of June 2012, the machines started working on their 20-hour shifts (or a scheduled 6,400 hours per year). They are being used to remove overburden and haul the phosphate to storage areas, the crusher and processing plant at the mine.

"As the main coordinator of the project, I made a huge effort for it to succeed – from the dismantling of the trucks in Japan to the anticipation of their arrival at the mine," adds Guy. "Every step of the process brought more excitement, including the first test run, which was carried out in rigorous detail."



The current lifespan of the 72km² mine is seven years and the management team is working towards a long-term plan via new mining areas and methods

Maintaining the machines

The Hitachi Support Chain after-sales programme kicked in at the same time as the EH3500ACIIs started working in temperatures approaching 50°C. The trucks undergo a maintenance check every 250 working hours (or every twelve days) that includes changing the oil and filters, measuring the suspension, checking the electrics and if anything has arisen from the service bulletin, as well as an overall visual inspection.

In addition, the Rotem team uses preventative maintenance, oil sampling, thermography and other techniques to provide the best possible service to the machines. Hitachi also recommended the parts that the mine should keep in stock for the scheduled maintenance and servicing work.

The team includes 29 technicians, featuring three electricians, two lubricant specialists and four welders. They are available on one 12-hour shift (7am-7pm) with two personnel on call to provide cover through the night. One of CMD's technicians was also based at Rotem for the first two years of service.

"As the mine's technical department, we also like to come up with solutions for any issues that might arise," adds Guy. "We are proud that we have made some small improvements to the trucks and our tools. For example, we have fitted a tyre-monitoring system, which enables us to check the pressure and temperature.

"There are many challenges encountered on the mine: from the working environment and understanding the machines, to potential errors made by operators or technicians. We manage all of these

“We find out some invaluable management information, for example the fuel consumption is less than half that of the old trucks”

Meir Shemtov, Head of Heavy Construction Equipment Garage



impressive, with all of the available data, such as fault codes, fuel consumption and load time – it's a smart truck!

“We also find out some invaluable management information, for example the fuel consumption is less than that of the old trucks. We can also see if the operators are slowing the trucks down in the correct way or if they are being loaded correctly. It's a whole new way of working with these operator-friendly trucks.”

Achieving better results

The current lifespan of the 72km² mine is seven years and the management team is working towards a long-term plan via new mining areas and methods. There is room for optimism with geological evidence suggesting that there are phosphate reserves in place.

After receiving the mining permit, a full survey is carried out to find out the depth of the layers and the location of the boundaries. Then, after the preparation of the mining plan, Rotem mines up to 70-80m of overburden until they come to a layer of rock. This is drilled and blasted, before being removed to reveal the phosphate. The mined area is filled with overburden from other areas of the site before a full reclamation of the land is carried out and then returned to the authorities.

“I can't single out any particular feature on the EH3500ACII,” concludes Guy, “because it is such a huge and complicated machine that everything needs to work. The whole unit must give us the performance we need. The expectation is that we must achieve results and provide two important statistics: a high percentage of availability and better tonnage per hour. If the machines are working well, then we'll have enough materials for production.”

issues to optimise availability, combined with safety at the lowest possible cost – any decision can save or lose money, depending on the outcome.”

Meir adds, “Our job has been made easier with the acquisition of the EH3500ACIIs, for example there is less maintenance with the switch from DC to AC drive. They have also been constructed with high-quality materials, so there is less repair work to be carried out.

“If there is an issue with a machine, then the operator can see a code on the monitor and this will help him to decide on an appropriate course of action. The troubleshooting is easy and means that we can quickly find a fault and repair it. The level of communication between the truck and computer system is also



To see a movie of the EH3500ACIIs in Israel, please visit www.youtube.com/user/HitachiConstruction. To receive a digital version of *Ground Control* with new movies, please register online at www.igroundcontrol.com/subscribe/en

The ZW250-5 wheel loader and a ZX290LC-5 excavator are essential machines for Carrières de Cusy's limestone quarry



Sound investments

Today's European quarrying market is characterised by a need for greater fuel efficiency, reduced costs, minimal downtime and growing environmental awareness. Following an industry expert's view on the sector, *Ground Control* highlights the experiences of a quarry owner in France and an operator in the UK

While many quarries in Europe are owned by the big four operators (Holcim, Lafarge, Heidelberg Cement and Cemex), it is estimated there are some 14,000 producers – mainly small to medium enterprises (SMEs) – in the EU-27 and EFTA countries. These countries are producing around three billion tonnes per year at some 23,000-plus quarries and pits.

The main products are aggregates, sand and gravel used for the production of concrete for infrastructure projects such as houses, offices, hospitals and schools, but also bridges and roads.

According to Guy Woodford, Editor of *Aggregates Business Europe/International**, there has been encouraging growth in demand for aggregate and quarrying equipment in eastern Europe over the past couple of years. "Much of this is fuelled by governments, such as Russia spending billions of euros on new transport and building infrastructure for the World Cup in 2018 and this year's Winter Olympics in Sochi. Other big infrastructure investors creating quarry sector business opportunities include Poland, Lithuania, Latvia and Estonia."

In western and southern Europe, however, the continuing tough economic climate, lack of investment and political uncertainty has seen quarry operators and contractors adopt a cautious approach to buying and renting new equipment and site management technology.

"The UK is something of an exception," explains Guy, "with its economy performing better than the Eurozone, and aggregate demand set to increase thanks to the Government's £100bn investment in new infrastructure from 2015 to 2020. New tax incentives for SME quarry sector firms have also helped stimulate fleet investment."

Key developments within the European quarrying sector have been in response to the challenging economic climate. Moves to drive down quarry operator and contractor operating costs, for example, have led to more fuel-efficient machines and equipment, coupled with OEMs increasing investment in hybrid models.

"Also integral to reduced running costs while – at the same time – boosting productivity, has been the growing embracement of



Back to nature

Considering the picturesque surroundings of the Carrières de Cusy quarry, situated in France's Parc Naturel Régional du Massif des Bauges, it is evident why the company's commitment to restoration is a priority. While producing 110,000 tonnes of limestone per year, it must also protect local wildlife (including a rare species of frog), and closely observe environmental regulations on noise limits, dust and machine emissions.

Owned by brothers Yves-Pierre and Denis Mathieux, the quarry opened in 1981. "It takes us one to two years to extract the limestone from each section of the quarry," explains Yves-Pierre. "Then in the following year, we restore the land, planting trees and vegetation in a continuous process."

Approximately 80% of Carrières de Cusy's customers are public works contractors. "They also contribute to the restoration process," he adds, "by bringing soil materials from earthmoving operations to dump at the site. Their empty trucks are then filled with aggregates. Half of these materials are used for road construction, the other half for general construction projects."

Essential to the activities at Carrières de Cusy are two new Hitachi machines: a ZW250-5 wheel loader and a ZX290LC-5 excavator. Supplied by local dealer Teramat, which has a branch at nearby Saint-Girod, they were delivered in July and September 2013 respectively.

"Many of our customers use Hitachi excavators, so we knew we could rely on the Hitachi brand," says Yves-Pierre. "The product specs of each machine matched our requirements, especially regarding the power to lift heavy rocks, fuel consumption and emissions."



"The product specs of each machine matched our requirements, especially regarding the power to lift heavy rocks, fuel consumption and emissions"

Yves-Pierre Mathieux, owner, Carrières de Cusy



performance monitoring technology solutions, whether for improved quarry machine control or overall site management efficiency," adds Guy.

"Key European quarrying industry shows have showcased breaking, processing, loading and hauling model lines offering longer uptime due to longer gaps between servicing. This can partly be attributed to improved machine control and performance monitoring.

"Europe has also seen a rise in greener quarrying, with lots of new equipment offering reduced noise pollution and better dust emission control. There also seems to be a concerted effort to return former and recently shut quarries to nature-welcoming habitats."

*Aggregates Business Europe/International is published by Route One Publishing Ltd. Register for a free copy at www.aggbusiness.com

Denis operates the ZX290LC-5 and has been impressed by the stability and power of the excavator, especially on rugged and uneven terrain. "The lifting capacity is excellent, it is still powerful even when handling heavy rocks and it has to work hard on this site," he adds. "The TRIAS hydraulic system makes operating the machine so smooth and it helps to make it highly productive."

Smooth operation is also one of the benefits of the ZW250-5, according to operator Denis Greiller: "The ride control is good and this makes the machine very smooth." Used for loading trucks varying from 3.5 to 44 tonnes, the ZW250-5 is the perfect size for the site. "The penetration and pull-out forces are excellent, and the lifting height is ideal," he adds.

Both the Zaxis-5 excavator and ZW-5 wheel loader are well suited to the working environment at Carrières de Cusy. Their fuel consumption can be monitored on a daily basis from the comfort of the cab. They offer excellent visibility of the site – especially with rear-view cameras – and their reputation for reliability and durability provide the Mathieux brothers with peace of mind.



Kelston Sparkes' biggest operation is a quarry in Somerset, where it moves 90% of the materials for the owner

Back to growth

In line with the improving economic situation in the UK, there is now an increased level of demand from leading European cement and aggregate companies, who own sites and sell aggregates in the country, for local companies to load and haul their materials.

This is good news for national contractors such as the Kelston Sparkes Group. It has purchased seven new Hitachi medium and large excavators as part of a £1.5million machinery replacement and expansion programme primarily for its quarrying operations.

The Bristol-based company has purchased two ZX210LC-5s,

two ZX470LCH-5s, a ZX520LCH-5 and a ZX670LCR-5 in 2014. In addition, over the past 12 months it has also added a ZX290LC-5 excavator and a ZW310 wheel loader to its fleet of Hitachi construction machinery.

"Our replacement cycle for excavators was 6,000 hours before the economic crisis," says Alan Sparkes, whose father Kelston established the company in 1952. "We're getting back to this level, as the future is looking positive in this region."

Alan co-owns the company with his brother-in-law, Robert Stark. Quarrying now accounts for more than half of Kelston

“Hitachi has always been at the top of the market in terms of performance and reliability. It is the number one manufacturer... and no one else comes close”

Alan Sparkes, co-owner,
Kelston Sparkes



Kelston Sparkes also enjoys strong partnerships with its suppliers – and Hitachi is no exception. It bought its first model (a UH09) in 1977 and Hitachi has featured on Kelston Sparkes’ list of leading excavator manufacturers ever since.

“Hitachi has always been at the top of the market in terms of performance and reliability,” Alan continues. “It is the number one manufacturer, especially for machines over 50 tonnes – and no one else comes close. We are very confident about the new Zaxis-5 range of excavators and they are already proving to be fantastic products.”

The most important criterion that Kelston Sparkes considers when buying a new machine is after-sales support. The workshop manager is influential in purchase decisions and the back-up he gets is vital to the company’s entire operation.

“Reliability is the number one reason for buying Hitachi excavators,” adds Robert. “Our customers have no patience for downtime – they need an immediate response from us and our suppliers. It’s not just about technical support and genuine parts though, it’s about the whole Hitachi Support Chain package, including Global e-Service and Hitachi Extended Life Program [HELP].

“The information from Global e-Service is very useful for analysing fuel consumption and actual machine usage. It is company policy to take out HELP for a minimum of three years/6,000 hours. We focus on the total cost of ownership of each machine, with a full record of everything from the running costs to the resale value of each model.”

Please note all modifications were made by dealer to comply with site safety regulations.

Sparkes’ £20million turnover and it moves an estimated eight million tonnes plus of materials per year.

The biggest current operation is in the Mendip Hills, Somerset, where the quarry owner relies on Kelston Sparkes for 90% of the movement of its materials (3.5million tonnes per annum). It has between 30 and 36 machines on the site at any one time, all supplied with operators.

“Our strategy has been to stick to what we do best, i.e. bulk earthmoving,” adds Alan. “We’ve never had so much long-term work thanks to the excellent working relationships we have with our customers.”



To see a movie of Carrières de Cusy’s limestone quarry in France, please visit www.youtube.com/user/HitachiConstruction. To receive a digital version of *Ground Control* with new movies, please register online at www.igroundcontrol.com/subscribe/en



Quality, service and reliability

A British contractor has taken delivery of more than 130 new Hitachi excavators in 2014 from Hitachi Construction Machinery (UK) Ltd in response to rising demand from the housebuilding sector

Vince and John Kelly founded MV Kelly in 1995 in Birmingham, England. Its purpose-built headquarters were completed in the south east of the city nine years later, from which all of the accounts, procurement and personnel functions are now managed. It has also opened a new £1.2million office in Northamptonshire this year to support its growing regional operations in the south and east of England.

“In 2007, we appointed a board of directors to carry the day-to-day running of the business forward,” says John. “Following the start of the recession, we restructured the spread of the business and our customers in 2008 to sustain and continue our growth strategy. We currently have an annual turnover of more than £120million and employ over 1,200 site operatives and 70 support staff, who serve 140 different job sites.”

“We believe that we have a strong reputation for quality, service and reliability,” adds Managing Director Paul Whelan. “This has led all of the blue-chip housebuilding companies to join our growing customer base and helped our turnover to increase by £25million in the past 12 months. The quality of our experienced operators and up-to-date fleet of Hitachi construction machinery enable us to deliver a finished

product that is unrivalled within the industry.”

The civil engineering and building company has invested more than £8million this year in a wide range of mini and medium Zaxis models – ranging from the ZX29U-3 to the ZX250LC-5 – increasing the total size of its Hitachi fleet to 250 machines. In total, it has now purchased almost 1,200 excavators from the British Hitachi dealer (formerly known as HM Plant) to carry out residential groundworks, roads and sewers, and associated infrastructure work for the UK’s major housebuilders.

Four reasons for choosing Hitachi

Approximately 75% of the new Zaxis machines are direct replacements for the existing fleet that has reached the end of MV Kelly’s strict three-year replenishment cycle. The remaining 25% represent the need to manage the increased workload and will replace rented machines that were temporarily drafted in to meet demand.

“There are four main reasons for choosing Hitachi construction machinery: ability, reliability, service and residual value,” says MV Kelly Director Brian Kelly. “These attributes make Zaxis excavators the best machines available in today’s market.



“Operating a three-year replacement cycle gives us an optimum level of output and productivity – with virtually no downtime. In addition, this ensures excellent resale values. We insist on meeting the required service intervals – using only Hitachi Parts – to help us achieve complete reliability.

“The service that we receive from Hitachi is second to none and meets the same high standards, from the purchasing and administration process, through to the delivery and after-sales support. The no-nonsense approach to our relationship over the years has developed a mutual respect and understanding, which is as strong as ever today.”

Please note all modifications were made by dealer to comply with site safety regulations.



To see a movie of MV Kelly's fleet of Hitachi excavators in the UK, please visit www.youtube.com/user/HitachiConstruction. To receive a digital version of *Ground Control* with new movies, please register online at www.igroundcontrol.com/subscribe/en

Highly trained operators

A loyal team of highly trained operators has also played its part in the company's expansion and growth. MV Kelly values their skill and expertise to get the most from the latest Hitachi equipment.



Michael Currin

(20 years' experience):
“I operate a ZX130LCN-5 for digging trenches for foundations and sewers. It's a very stable and well balanced excavator, even when it's at full stretch with a heavy load. Nothing else compares to Hitachi and this is an excellent machine – as good as anything else I've used.”

Neville Cooper

(22 years' experience):
“The ZX210LC-5 is an ideal machine for excavating roads into formation and installing sewage systems. The power of the engine and finesse of the hydraulics mean that this new Zaxis-5 excavator is so smooth and easy to operate.”



Giles Bleakney

(30 years' experience):
“The ZX250LC-5 is an excellent and versatile machine for all of our roads, sewers and earthmoving work. Its overall power, speed and comfort mean that it is easy to operate and I am able to work more productively.”



Expansion to meet demand

Israeli construction companies are investing in Hitachi Zaxis-5 machines for major projects in the transportation and tourism sectors. *Ground Control* meets the owners and operators of the large and special application excavators, who are helping to drive the country forward

The ZX350LC-5 telescopic clamshell machine removes materials from 19m below ground level



Israel's demographic and economic growth is exceeding the rate of other similarly developed countries. In addition, official figures point to a new record in tourist entries in 2013, with more than 2.9 million visitors (excluding day trippers) – a three per cent increase on the previous year.

In line with these trends, the latest data shows a growth of 3.1% forecast for the Israeli construction industry in 2014. The country's prospects over the medium term also appear to be optimistic with an average growth of 4.2% expected up to 2019.

These growth levels have generated an increase in the demand for means of tourism and transportation. Tourism contributed an estimated NIS 40billion (€8.4billion) to the economy in 2013. More than 100,000 people were employed in the industry last year, with two thirds of them working in hotels.

In the last decade, the development of transportation in Israel has gained momentum. A number of important projects are now at the implementation and advanced planning stages. It is anticipated that the development and operation of these projects will have a significant impact on the transport sector and the economy as a whole.

Boosting tourism

The most popular city in Israel is Jerusalem, which was visited by 75% of tourists in 2013. Promoting the hotel industry in Jerusalem is a significant part of the strategy to highlight it as an international tourism destination.

Sixty-four per cent of tourists stayed in hotels last year and so an increase in room supply is essential, in order to reach the Government's target of attracting five million tourists by 2015. Jerusalem is eligible for significant financial support from the Government and grants totalling NIS 450million (€95million) for the construction of six new hotels and the conversion of four existing buildings into hotels were approved, including a new branch of the Isrotel Hotels chain.

Work has already started on the exclusive 5,600m² location in the German Colony, where this five-star hotel is being built. A new Hitachi excavator is carrying out a specialist earthmoving project on the site. The ZX350LC-5 telescopic clamshell machine was supplied by subcontractor Dror Balulu Civil Engineering Ltd. to



“With the ZX350LC-5, we are able to load ten times more materials than with a crane and skip”

Dror Balulu, owner, Dror Balulu Civil Engineering



remove 3,000m³ of materials in five days from the bottom of the site, 19m below ground level.

Founded in 1996, the Beit Nechmia-based company is renowned for the specialist nature of its civil engineering work, mainly in the Tel Aviv area. It has invested in its first Hitachi excavator specifically for projects that require materials to be lifted vertically from a maximum depth of 25m. The ZX350LC-5 was delivered in May 2014 with a three-year/6,000-hour extended warranty by the Hitachi dealer in Israel, CMD.

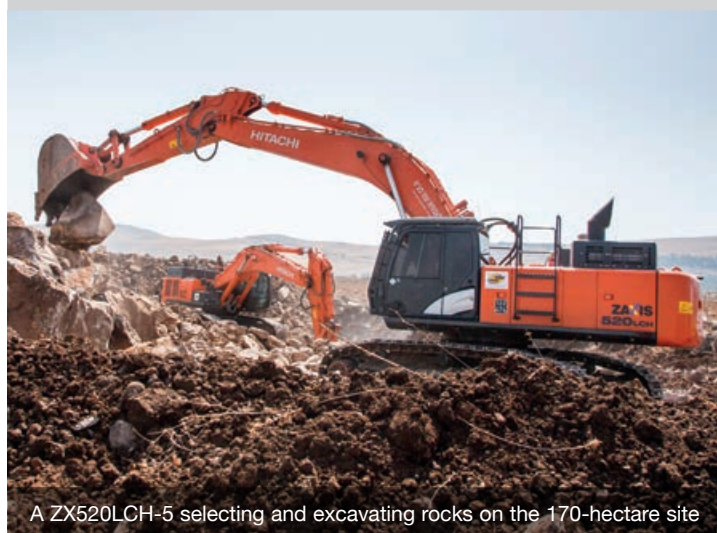
"I first saw this machine working on a Hitachi movie on YouTube," says company owner Dror Balulu, "and I immediately thought it would be the perfect solution for sites that require an efficient form of vertical lifting. It is ideal for working in limited space – for example on this site – or excavating from smaller holes, such as underground shafts.

"The ZX350LC-5 telescopic clamshell is an excellent product for this type of work and is a good match for the size of jobs that we require. The alternative would be to load the materials on to a conveyor belt, but some are too heavy and water is also found in underground sites. We wanted to have the complete product manufactured by one company and Hitachi had the answer with this powerful, productive and fuel-efficient model – which is ten times more productive than the conveyor."

Operator Nir Nissim has worked with Dror Balulu Civil Engineering for six years and says: "This is a new machine for a new generation!"

"They are reliable machines from a reliable company, and so they only need routine maintenance and regular servicing"

Edan Hadash, Site Manager, AD Edan Hadash Earthmoving Contractors



A ZX520LCH-5 selecting and excavating rocks on the 170-hectare site



A ZX470LCH-5 working close to Elifelet village, overlooking the Sea of Galilee

I am able to operate the ZX350LC-5 with more confidence, as it is very stable and enables me to work with all types of materials. It also speeds up this application considerably, especially when loading trucks. It is very powerful for digging materials and is easy to manoeuvre into restricted areas such as this.”

Isrotel's luxurious 250-room property will help to alleviate the shortage of hotel rooms in Jerusalem when it opens in 2015. With an investment of NIS 450million (€95million) – including approximately NIS 260million (€55million) in construction costs – the hotel is being built in a style that blends in with the surrounding residential area, incorporating two historical buildings from Templar settlement times.

Developing ports

The ancient ports of Jaffa, Caesarea and Acre have been replaced by three modern deep-water harbours at Haifa, Ashdod and Eilat, which serve international shipping. Haifa is one of the largest container ports on the Mediterranean Sea and a busy passenger terminal, while Ashdod is used mainly for shipping goods, and Eilat on the Red Sea links Israel to the southern hemisphere and the Far East.

With a further increase forecast in Israel's freight transport sector in 2014 and the Eurozone set to return to economic growth, Israel could see a boost in its export volumes. For example, the average annual tonnage throughput growth at Haifa is forecast at five per cent up until 2018. The country is therefore looking towards the

future and is committed to developing its ports.

A contractor has invested in three large Hitachi excavators to supply rocks for extending breakwaters, which will form part of the construction project for two new container terminals at the ports of Haifa and Ashdod. AD Edan Hadash Earthmoving Contractors Ltd. has purchased two ZX470LCH-5s and a ZX520LCH-5 to join its existing fleet of construction machinery at a 170-hectare site close to Elifelet village and overlooking the Sea of Galilee.

The Haifa-based company was established in 1992, although owner Dan Cohen used to work for his father's (Shlomo) company that was founded in 1948 and ran successfully for 38 years. Dan's son, Edan, also works in the business, which specialises in water-related contracts.

The heavy-duty Hitachi excavators are used to select and extract the stones from a depth of no more than 3m. Once this process has been completed, each area is replenished to its former state. The different sizes of materials – D rock (one to three tonnes) and C rock (three to six tonnes) – are then determined by checking the weight, size and quality, before being transported to stockpiles for the respective ports.

The site opened in 2013 and the initial order for 200,000 tonnes of rock was completed within eight months. The AD Edan Hadash team is now geared up to supply a capacity of 300,000 tonnes per annum, with the potential for between seven and eight million tonnes to be delivered overall.

"The Zaxis-5 excavators come with a high level of service from CMD and Hitachi – one of the best that I have experienced – and we have an excellent working relationship in place with them both," says Edan, who is the Site Manager and also has responsibility for quality control.

"They are reliable machines from a reliable company, and so they only need routine maintenance and regular servicing. We take advantage of all aspects of the Hitachi Support Chain package – such as Global e-Service, genuine parts and extended warranty – which are incredibly strong and integrate well with each other."

Dan agrees: "The biggest benefit to our business is that the large Hitachi excavators have been completely reliable over the past two years. We're very comfortable with the fact that CMD and Hitachi monitor the machines using Global e-Service. The whole service package gives me the peace of mind to concentrate on other important activities within the business.

"The high quality of the ZX470LCH-5 and ZX520LCH-5 compares favourably to other machines working alongside them. They have more power and stability, as well as 15-20% better fuel consumption and 20-25% greater productivity."

Wafi Hojrat has 15 years' operating experience (13 years with AD Edan Hadash) and he has been assigned to the ZX520LCH-5. "This is a big and powerful machine – the best that we have on this site," he explains. "It is durable and yet also precise – I have to be careful with the rocks, as they have to be excavated and lifted in a certain way.

"The cab is the best feature of this machine. It is very comfortable, with lots of space and everything I need is within easy reach. There are also many user-friendly functions, such as the convenience of checking the fuel, oil and any warnings on the monitor. I'm a big fan of the radio, and with the outside temperature almost reaching 50°C at times, the air conditioning is obviously very important!"

Expanding the road network

Roads are the principal means of transport in Israel, and the surrounding infrastructure affects both the activities of the population and the state of the economy. The number of vehicles in Israel has doubled to approximately two million since 1990 and is indicative of a rise in living standards over the past decade.

In recent years, the road network has been extensively expanded and improved to accommodate the rapid rise. Despite increasing government investment in this area, however, there is still a significant need for further development of Israel's transportation infrastructure.

One construction project currently underway is on Road 65 in the north of the country. This major highway connects the Hadera (central) and Galilee (northern) regions. The current project is to widen the road between the Golani and new Nahal Amud interchanges. A second carriageway is being added, which will provide for two lanes in each direction, along with eight new junctions and a bridge. The earthmoving work between Masad and the Nahal Amud junction began in November 2013 and the whole project is scheduled for completion within the next two years.

Contractor Hilkiyahu Ltd is using a new Hitachi excavator for major earthmoving work on the project. The ZX670LCH-5 has already clocked up over 1,100 working hours in its quest to help excavate and load 1.5million m³ of materials on the upgraded route.

The road construction company/quarry operator has been established for 16 years and took delivery of the large Zaxis-5 machine from the Hitachi dealer in Israel, CMD, in December



The ZX670LCH-5 is helping to excavate and load 1.5million m³ of materials on the upgraded route



2013. It was supplied with a 4.2m³ rock bucket and two-year/6,000-hour extended warranty to join Hilkiyahu's expanding fleet of seven excavators.

Owner Hilki Bernstein says: "We are working as a sub-contractor on the third section of the new road, which is 13km long. Our responsibility is to complete all of the earthmoving, drainage, blasting and breaking of the rocks, and add the base layers to the road, before another contractor lays the asphalt. In addition, we are operating a ZX470LCH-3 in a nearby quarry, which is supplying aggregates for the road."

The company, based in Eliad in the south of Golan Heights, bought the ZX670LCH-5 specifically for this job: "We expected that it would be ideally suited to the tough conditions and high volume of abrasive materials," adds Hilki.

"In the past, we have invested in another brand of construction machinery, but we were keen to try some Hitachi excavators as we had heard so many good things about their power and reliability. We have developed a very good relationship with CMD and Hitachi, and the ZX670LCH-5 has been an excellent addition to our fleet. It is highly durable, productive and uses less fuel than our other similar machinery."

Hosam Zawa has been an operator for 20 years, the last six of which have been with Hilkiyahu, and he has been working with the ZX670LCH-5 since new. "The large Zaxis-5 excavator is very powerful – with a strong digging force – and works quickly for moving rocks and loading dump trucks on this busy site," he explains.

"It is very stable, even on rocky ground, the control levers are precise and the hydraulics also allow me to work smoothly. There is excellent visibility from the cab, which is also very comfortable in these demanding conditions. The air conditioning and adjustable seat in particular help me to feel less tired at the end of a long day."



To see movies of the ZX350LC-5 telescopic clamshell and ZX470LCH-5/ZX520LCH-5 excavators in Israel, please visit www.youtube.com/user/HitachiConstruction. To receive a digital version of *Ground Control* with new movies, please register online at www.igroundcontrol.com/subscribe/en

"The ZX670LCH-5 is highly durable, productive and uses less fuel than our other similar machinery"

Hilki Bernstein,
owner, Hilkiyahu



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