

United Kingdom

Metro Handover Agreement is Imminent

The government is on the brink of signing a long-awaited contract to transfer the London Underground to a private sector consortium, ending months of wrangling, legal argument and political infighting. A public-private partnership (PPP) deal with the Tube Lines consortium is likely to be sealed by new year's eve following pressure from bankers who want to include the transaction in their 2002 accounts. Once the contract is signed, Tube Lines – which includes Jarvis, Bechtel and Amey – will take over the maintenance of the Jubilee, Northern and Piccadilly lines. The government will then refund its bid costs of some £120 million. The consortium will take on 2,000 staff, hundreds of kilometres of track and dozens of stations, bridges and tunnels. Over the 30-year contract, Tube Lines has promised to replace 96 escalators, refurbish 49 lifts, and modernise 97% of the stations on its three lines. The remaining lines are due to be handed over to a second consortium, Metronet, in the spring. Visit www.londontransport.co.uk

World Digest of Tunnels Under Planning

India. The National Hydroelectric Power Corporation (NHPC) hopes to commence work on its 2,000 MW Subansiri Lower hydropower project by April 2003. India's largest hydropower plant on the Arunachal Pradesh-Assam border is about 470 km from Guwahati, the capital of Assam, and 70 km from North Lakhimpur, Assam. It comprises the construction of a 116 m-high dam, five 9.5 m-diameter horse shoe-shaped diversion tunnels, eight 9.5 m-diameter horse shoe-shaped headrace tunnels, with lengths varying from 225 to 390 m, eight pressure shafts, a 24 m x 62.4 m x 337 m underground powerhouse for eight 250 MW Francis turbines and eight 9.5 m-diameter horse shoe-shaped tailrace tunnels, with lengths ranging from 450 m to 780 m.

Investigation surveys have been completed and the Detailed Project Report (DPR) has been prepared and is presently under examination by the ministry of environment and forests. The estimated cost of the project is Rs74.7 billion (value March 2001). The project is expected to be completed in a period of six years. Visit www.nhpcindia.com

India. The Bangalore metro project is taking shape. The detailed report for the east-west line is expected by 31st March, 2003. Work might be kicked off on 1st April. The Rail India Technical and Economic Services (RITES) has undertaken the studies on behalf of the Delhi Metro Rail Corporation, which has been awarded work by the Karnataka government to build the project. The 14.5 km east-west line between Mysore Road and Byappanahalli will run through Vijayanagar, Magadi Road, Kempegowda Road, Dr Ambedkar Road, Vidhana Soudha, Queen's Road, MG Road, CMH Road and Old Madras Road serving 19 stations. RITES has started physical survey for the 14.5 km north-south line between Yeshwanthpur and J.P. Nagar VI Phase, covering Iskcon Temple, West of Chord Road, Rajajinagar, Malleswaram, Navrang theatre, Raja Mill (Sampige Road), Majestic, Chickpet, Balepet, Akkipet, City Market, under Sirsi flyover, K.R. Road, Basavanagudi, Lalbagh, R.V. Road, Jayanagar IV Block Complex and J.P. Nagar. The east-west and north-south lines will intersect at Majestic. The Bangalore metro will be underground, on the surface and elevated. About 3 km on each line would be underground. The two

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lines are expected to cost Rs40 billion. Visit www.rites.com

Italy. Work for the penetration of the high speed line in Firenze will begin in 2004. A 7 km tunnel at an average depth of 20 m under a maximum cover of 32 m will be driven from Campo di Marte to Castello using two TBMs. The new station will start in 2005 for completion in 2010. Visit www.tav.it

World Digest of Bids

Austria. Preinformation notice for electrical and safety equipment of the Strenger tunnel (5,659 + 5,775 m) on the S 16 motorway in Tyrol. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=197007-2002>, OJ S 247, or contact Alpen Straßen, Innsbruck, fax +43 51252012134. E-mail hansjoerg.wieser@asg.co.at

Austria. Open call for bids, deadline 12th February, 2003 for construction in cut-and-cover of the 820 m-long Vösendorf tunnel on motorway S 1, Vösendorf-Schwechat. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=197052-2002>, OJ S 247, or contact ÖSAG, Vienna, fax +43 15313414020. E-mail office.wien@osag.at

Belgium. Open call for bids, deadline 4th February, 2003 for excavation of a 850 m tunnel under levels +1 and 0 to create levels -1 and -2 between Berchem and Antwerp central station. This is part of the Antwerp-Amsterdam high speed line. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=195842-2002>, OJ S 245, or contact SNCB, Brussels, fax +32 25297810. E-mail klm@tucrail.be

France. Open call for bids, deadline 5th February, 2003 for engineering services to sink a 200 m-deep shaft, diameter 5-6 m, and an access adit of 250 m. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=197399-2002>, OJ S 247, or contact Institut National des Sciences de l'Univers du CNRS, Paris, fax +33 144964761. E-mail marches-insu@cnrs-dir.fr. Read E-News Weekly # 44.

Germany. Open call for tenders, deadline 22nd January, 2003 for construction of a road section including a 120 m cut-and-cover tunnel. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=188713-2002>, OJ S 237, or contact Straßenbauamt Dresden, Dresden, fax +49 3512851245. E-mail jochen.tittel@sbadd.smwa.sachsen.de. Read E-News # 43.

India. The international tendering process for the 144 MW Sawra Kuddu hydro project in Shimla district on a build, own, operate and maintain (BOOM) basis expired on 17th October. No bid was submitted and the tender was declared void. The Himachal Pradesh government has therefore decided to execute the project through a joint venture with four partner states. The scheme involves a 22 m-high dam, a 11.3 km-long 6.3 m-diameter headrace tunnel and an underground powerhouse. Visit www.hpseb.com

Luxembourg. Preinformation notice for technical equipment (lighting, ventilation and special technics) of the 2.7 km Gousselerbiertunnel. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=198644-2002>, OJ S 249, or contact Ministère des travaux publics, Luxembourg, fax +352 446597. Visit www.tunnelbuilder.com, lu/13.

United Kingdom. Restricted procedure, deadline 14th January, 2003 for the detailed design and construction of 140 m-long jack box tunnel and associated works at North Manchester Business Park. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=192756-2002>, OJ S 242, or contact Manchester City Council, Manchester, fax +41 1612308966. E-mail jimscott@c2c-uk.com and mark.kay@arup.com

World Digest of Contract Awards

Spain. Ineco has been awarded a €291,600 contract for engineering for the railway access to the Asturias airport. The railway access will be 2 to 3.5 km in length approximately including approximately 1 km of tunnel and a possible underground station. Read E-News Weekly # 33. Visit www.ineco.es

World Digest of Ongoing Tunnelling

India. A 6.8 m-diameter Herrenknecht EPB TBM has holed through on 20th December connecting Patel Chowk to Connaught Place on metro Line 2 in New Delhi, 20 metres below Central Park. Work started on 18th July. A similar tunnel, parallel to the first, is also near to break through. This tunnel will be complete in the next 25 days by the second TBM. The tunnelling method is being used for four kilometres of the route in the extremely congested areas near Chawri Bazaar, New Delhi Railway Station, Connaught Place and in the stretch between Delhi University and Central Secretariat. The first TBM will be dismantled soon and taken to New Delhi Railway Station to begin its job towards Connaught Place in January. The two refurbished machines have been previously used on the Taipei and Bangkok metros. A third TBM will bore in hard rock from New Delhi Railway Station to ISBT. Work will commence in July 2003.

The TBM sections, which represent about 6.5 km out of the 11 km fully underground Line 2, are being built by International Metro Civil Contractors (IMCC), a consortium of Dywidag, Shimizu, Larsen & Toubro, Samsung, and IRCON International. Mott McDonald designed each segmental ring made up of five 1.2 m-wide x 280 mm-thick concrete segments and a key. The remainder, a 4 km cut-and-cover section between Vishwa Vidyalaya and ISBT, is currently being constructed by the KSHI consortium which includes Kumagai Gumi, Skanska, Hindustan Construction, and Itochu. Maunsell is engineering consultants. Read E-News Weekly # 27. Visit www.delhimetrorail.com

Spain. Construction of the Nou Barris light rail – or Line 11 – between Trinitat Nova and Can Cuyàs is nearing end. The contractors expect to complete the 2 km of tunnels by end of January. Tunnellers are also about to complete the 50 m-deep 15 m-diameter shaft in Ciudad Meridiana station. The shaft will house three lifts from the ticketing hall to the platform. The line will open to traffic end of September next year, serving five stations, all built in cut-and-cover, except the Torre Baró-Vallbona station. The project will cost €42 million. The line will be operated by TMB. Visit www.tmb.net

Picture 1: The Ciudad Meridiana shaft.



World Digest of Inaugurations

Brazil. The downhill carriageway of the Imigrantes highway has been inaugurated on 17th December, dualling the first carriageway of Rodovia dos Imigrantes inaugurated in 1976. Alignment studies have been carried out by a consortium grouping Brazilian consulting engineers Figueiredo Ferraz and its Italian partners In.Co, specialised in viaducts, and well-known tunnel consultants Geodata. The consortium opted for an alignment running 2/3 in tunnels through Serra do Mar and 1/3 on viaducts. There were three tunnels totalling 8,230 metres: tunnel TD 1 (3,146 m), the longest road tunnel in Brazil, TD 2 (2,080 m), and TD 3 (3,005 m). The tunnels have been blasted using four drill rigs. Average advance was 4.5 m per cycle which represents 480 sq m of rock. The project has been built by Consórcio Imigrantes, a consortium of Brazilian contractor CR Almeida and Impregilo of Italy. Read E-News Weekly # 26. Visit <http://ecovias.terra.com.br>

Greece. Deputy minister for environment, physical planning and public works Yiannis Tsaklidis inaugurated on 18th December the stretch of road linking the Preveza-Igoumenitsa national highway with the city of Preveza and the Preveza-Aktio undersea tunnel. The new road link to the undersea

tunnel is the first major road project to be completed in Epirus, northeastern Greece. The underwater tunnel across the gulf of Amvrakikos between Preveza and Aktio provides a faster connection between South Greece and Aitolokarnania. The total length is 4,710 m, of which approximately 910 m is an immersed single tube tunnel, a 150 m cut-and-cover tunnel on the one side and a 500 m cut-and-cover tunnel on the other side. The remaining length is approach roads. Eight precast elements were constructed in a dry dock and were immersed into the exact place at a depth of 15 m with the use of GPS technology. The bottom of the sea was first dredged. For seismic protection, the bearing capacity of the sea bottom was improved by using stone columns as foundation for the tunnel. Each element has a length of 134.5 m and a weight of 10,000 to 15,000 tons. The cross section has a free clearance with a width of 10.6 m and a height of 5.4 m includes plus a 4 m side land and a 1.3 m-wide pavement in each direction. Visit www.minenv.gr/welcome_en.html and www.ramboll.dk

Italy. The 1.8 km tunnel under Reggia Park has holed through on 4th December. The tunnel is part of the Caserta outer bypass road running from Maddaloni to Capua. It has been blasted by Giustino Costruzioni from two drives. Entry is service is planned for next spring.

World Digest of Tunnel Renovation & Maintenance

France. Preinformation notice for operation and maintenance of technical equipment in the tunnels on the expressways in the northern part of Hauts-de-Seine county. Tender value €450,000-€900,000. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=192895-2002>, OJ S 242, or contact DDE des Hauts-de-Seine, Nanterre, fax +33 140972900 or 141917005, Mr. Brun or Mr. Bontemps.

Germany. Open call for bids, deadline 18th February, 2003 for improvements (anchoring, shotcreting, grouting, etc.) to the 891 m-long Weinsberger tunnel on the Heilbronn-Öhringen line. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=197475-2002>, OJ S 247, or contact Albtal-Verkers-Gesellschaft, Karlsruhe. Read E-News Weekly # 50.

Italy. Three invitations to tender, deadline 7th January, 2003 for renovation of lighting. First tender is for the Tremonzelli tunnel (1,784 + 1,860 m). Tender value €1.6 million. Second tender is for the Fortolese tunnel (1,613 + 1,622 m). Tender value €1.3 million. Both tunnels are on the A 19 motorway Palermo-Catania in Sicily. Third tender is for the Segesta tunnel (2 x 1,615 m) on the A 29 motorway Alcamo-Trapani. Tender value €1.3 million. Contact ANAS, Direzione regionale per la Sicilia, Ufficio Speciale G. V., Via A. De Gasperi, 247, 90146 Palermo. Arch. Giovanni Proietti, tel. +39 091379111, fax +39 0916703090. Visit www.enteanas.it

Italy. Invitation to tender, deadline 10th January, 2003 for modernisation of the fire protection systems in the Quarto tunnel (2,522 + 2,370 m) and Roccaccia tunnel (1,840 m) on E 45 road Orte-Ravenna. Tender value €909,000. Contact ANAS, Compartimento della viabilità per l'Emilia Romagna, Viale Angelo Masini, 8, 40126 Bologna. Tel. +39 0516301111, fax +39 051244970. Visit www.enteanas.it

United Kingdom. Restricted procedure, deadline 10th January, 2003 for maintenance of tunnels, traffic controls and communications equipment on motorways and trunk roads. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=195271-2002>, OJ S 245, or contact National Assembly for Wales, Cardiff, fax +44 2920826233. E-mail terryj.britton@wales.gsi.gov.uk and leighton.james@wales.gsi.gov.uk