TR Powell

Portals Holdings PLC

Laverstoke Mill, Whitchurch, Hampshire RG28 7NR.
Telephone Whitchurch (0256) 892360:
Fax (0256) 893398: Telex 858059.

29 March 1988
JJLGS/pmc

Bernard Ingham Esq
10 Downing Street
London SW1

Dear Bernard,

It was very good to see you the other evening at yet another reunion of the NODE.

I am enclosing a brochure that we have produced in support of our efforts to win the Omerli contract in Turkey. I thought you, and maybe the Prime Minister, would be interested in seeing it prior to your visit.

Yours ever
Julian.

İSKİ

İSTANBUL SU VE KANALİZASYON İDARESİ
GENEL MÜDÜRLÜĞÜ

ÖMERLİ PROJECT

COSTAIN

Costain International Limited

PWT WORLDWIDE
WPI
TURNKEY WATER PROJECTS

Water Projects International

Financial Advisors

Midland Bank plc

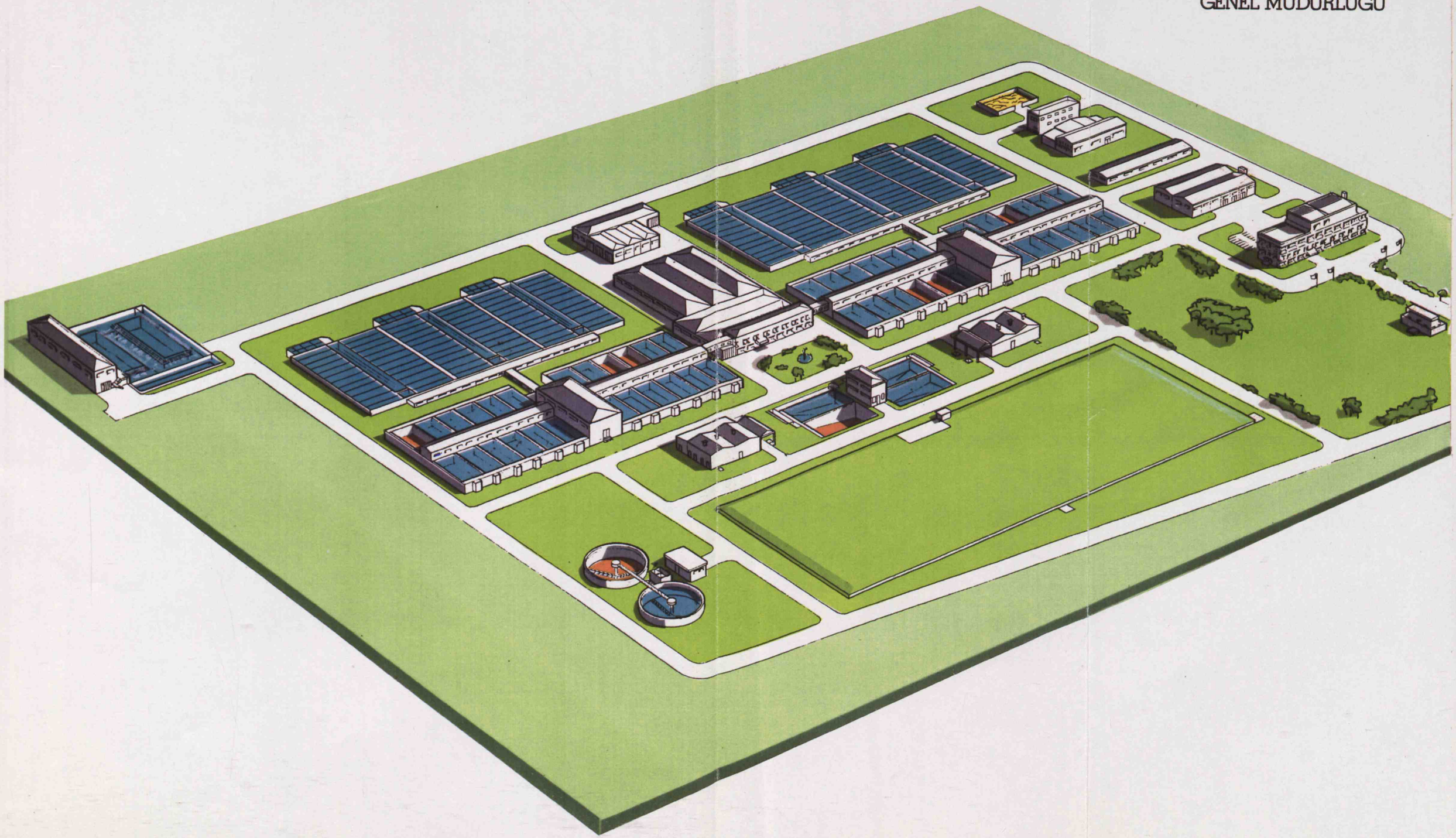
ÖMERLİ 3

WATER TREATMENT PLANT

İSKİ

İSTANBUL SU VE KANALİZASYON İDARESİ

GENEL MÜDÜRLÜĞÜ



Water Projects
International Limited
21 The Mall
Ealing London W5 2PU*
Telephone : 01-579 1311
Cables : Clarify London W5
Telex : 27239

OMERLIPROP1

INDEX

SECTION 1 PROPOSAL

SECTION 2 ISAKOY DAM

SECTION 3 TRANSMISSION PIPELINES

SECTION 4 OMERLI 3 TREATMENT PLANT

SECTION 5 FINANCIAL

SECTION 6 COSTAIN CAPABILITY

Water Projects International Limited
21 The Mall
Ealing London W5 2PU*
Telephone : 01-579 1311
Cables : Clarify London W5
Telex : 27239

SECTION 1 - PROPOSAL

The present population of Istanbul is over 6 million and increasing at 5% per annum. There is also a large tourist population.

The city is currently suffering from serious water shortages, and rationing and cuts in supply are commonplace. The present situation will get worse unless immediate action is taken.

As part of the 2nd Istanbul Water Supply Project, the General Directorate of the Istanbul Water and Sewerage Administration - ISKI plans to construct a number of new works to increase the supply of potable water to Istanbul Province.

A large part of this project will involve the construction of the Isakoy dam and its associated pumping station, the completion of the construction of the Darlik Dam and its associated pumping station, the construction of the Ömerli 3 water treatment plant, having an initial output of 1,000,000 m^3 day and the construction of the pipelines and tunnels linking the dams and water treatment plant. See Sections 2 and 3.

The Darlik Dam will be completed in 1988 and impounded by 1990. Therefore the treatment plant, Isakoy dam and associated pipelines and tunnels should also be completed as soon as possible to make most use of the new reservoir If ISKI are to meet their programme date of 1990/1 speed is of such vital importance that normal tendering procedures are inappropriate.

To assist the Municipality of Istanbul Water Projects International Ltd and Costain International Ltd have joined forces to form a Consortium to put a proposal to ISKI for the construction of these works. The Midland Bank have agreed to act as financial advisor to the Consortium.

Water Projects International Ltd has been operational in Turkey since 1974 working in joint venture with a Turkish civil contractor. WPI has established a high reputation for the efficiency and reliability of our Process Designs.

WPI Ltd are also involved in plant operation and maintenance for clients notably the Karkh plant for Baghdad.

Costain International Ltd are civil construction contractors with worldwide experience of managing very large projects and are currently working in Turkey.

The Portals Group of companies of which WPI Ltd is part and Costain International Ltd have considerable financial strength and ahigh reputation in the City of London.

Based on this unique blend of turnkey contracting experience in Turkey, financial strength and operating experience the Consortium propose to construct the Isakoy Dam and pumping station transmission pipelines and Ömerli 3 treatment plant as a Build/Own/Operate/Transfer scheme (BOOT) to supply 1,000,000 m^3/d of treated water to ISKI on a bulk basis.

*Registered Office Registered No. 258985 England

The consortium would take responsibility for the design, funding, building, and successful operation of the Ömerli Scheme for a period of time agreed with ISKI. The structure of the whole operation would seek to spread the risk and reward as fairly and acceptably as possible amongst all the relevant parties, as well as cover and raising of the implementation finance and of the disbursement of subsequent assured income.

DESCRIPTION OF WORKS

The works which form the overall scheme are as follows:-

a) Darlik Reservoir on the Darlik River, with a capacity of 110 million cubic meters. Completion 1988.

b) A pumping station at Darlik, with a capacity of 270 000 m^3/day. Completion 1988.

c) *Isakoy Reservoir on the Goksan River with a capacity of 220 million cubic meters. Completion 1990/1.

d) *A pumping station at Isakoy with a capacity of 550 000 m^3/d. Completion 1990/1.

e) Sungurlu Reservoir on the Canak River with a capacity of 85 million cubic meters. Completion 2000.

f) *Transmission facilities.
Consisting of approximately 100 km of metallic and concrete pipelines and 5 km of tunnel, linking Darlik and Isakoy Reservoirs to Ömerli. Completion 1990/1.

g) *A third water treatment plant at Ömerli, having an initial capacity of 1,000,000 m^3/d, with provision for extension to 1,500,000 m^3/d in the future. The plant is known as Ömerli 3. Completion 1990/1.

The items marked * thus are the elements included in this BOOT proposal.

The treatment plant is to be located near the Ömerli dam, to the north of the existing Ömerli 1st and 2nd treatment plants.

Raw water will initially be supplied to the plant from the Darlik Reservoir, which will be impounded by the time the treatment plant enters service, and then after completion from the Isakoy Reservoir. Sungurlu reservoir will be constructed at a later date.

The Ömerli 3 treatment plant will be completely separate from the Ömerli 1 and 2 plants, and will have its own chemical plant, standby power generation, administration and workshop facilities. The Ömerli 1 and 2 treatment plants treat raw water from the existing Ömerli Reservoir.

The plant will stand on an area of high ground at sufficient elevation to allow the treated water to flow by gravity to the treated water reservoir at Dudullu, where it will enter the distribution system.

Technical descriptions of the various elements follow in the subsequent sections.

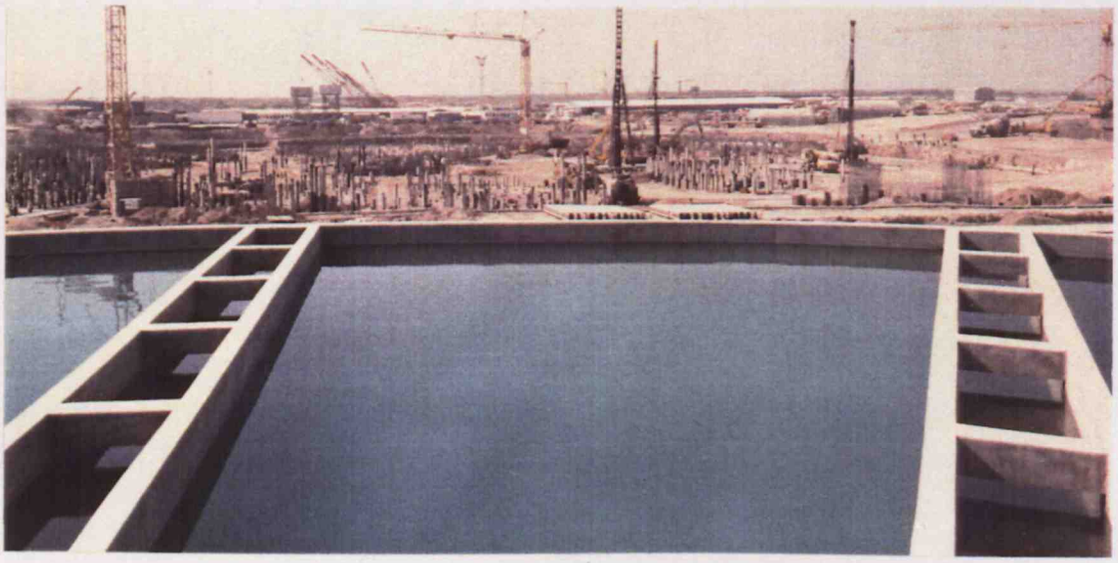
Ankara Water Treatment Works

PWT WORLDWIDE
WPI
TURNKEY WATER PROJECTS

Water Projects International

Kurkh Water Supply Project - Iraq

PWT WORLDWIDE
WPI
TURNKEY WATER PROJECTS



Water Projects International

Costain International Limited

Costain House, West Street,
Woking, Surrey, GU21 1EA.
Telephone: 04862 27911.
Direct Line: (04862)
Telex: 859375 Coswok G.
Fax: 04862 21351
Cables: Cosdown Woking

SECTION 2 - ISAKOY DAM

The water will be impounded by means of an earth dam with a crest length of about 850 m. This will have a clay core, with a concrete cut-off underneath, and a coarse drainage blanket under the downstream section. The "shell" of the dam will be of granular fill material obtained from suitable sources nearby. Protective rip-rap will be placed on the upstream slope, to prevent erosion.

As an alternative, a concrete gravity dam is also being considered.

A draw-off tower will be built in the reservoir area, just upstream of the dam. This will be of reinforced concrete construction.

The reservoir will have a total capacity of 220 million cubic metres, and provide a water supply of 194 million cu. m per year.

There will be two pumping stations, one at Darlik (270,000 cu. m per day), and one at Isakoy (550,000 cu. m per day). These will be in reinforced concrete, and blockwork construction, complete with overhead travelling cranes for pump maintenance.

Registered Office:
111 Westminster Bridge Road,
London, SE1 7UE
Registration No: 563275 – London
A Member of the Costain Group.

Lilyvale Dam
New South Wales, Australia

COSTAIN

SECTION 3 - TRANSMISSION PIPELINES

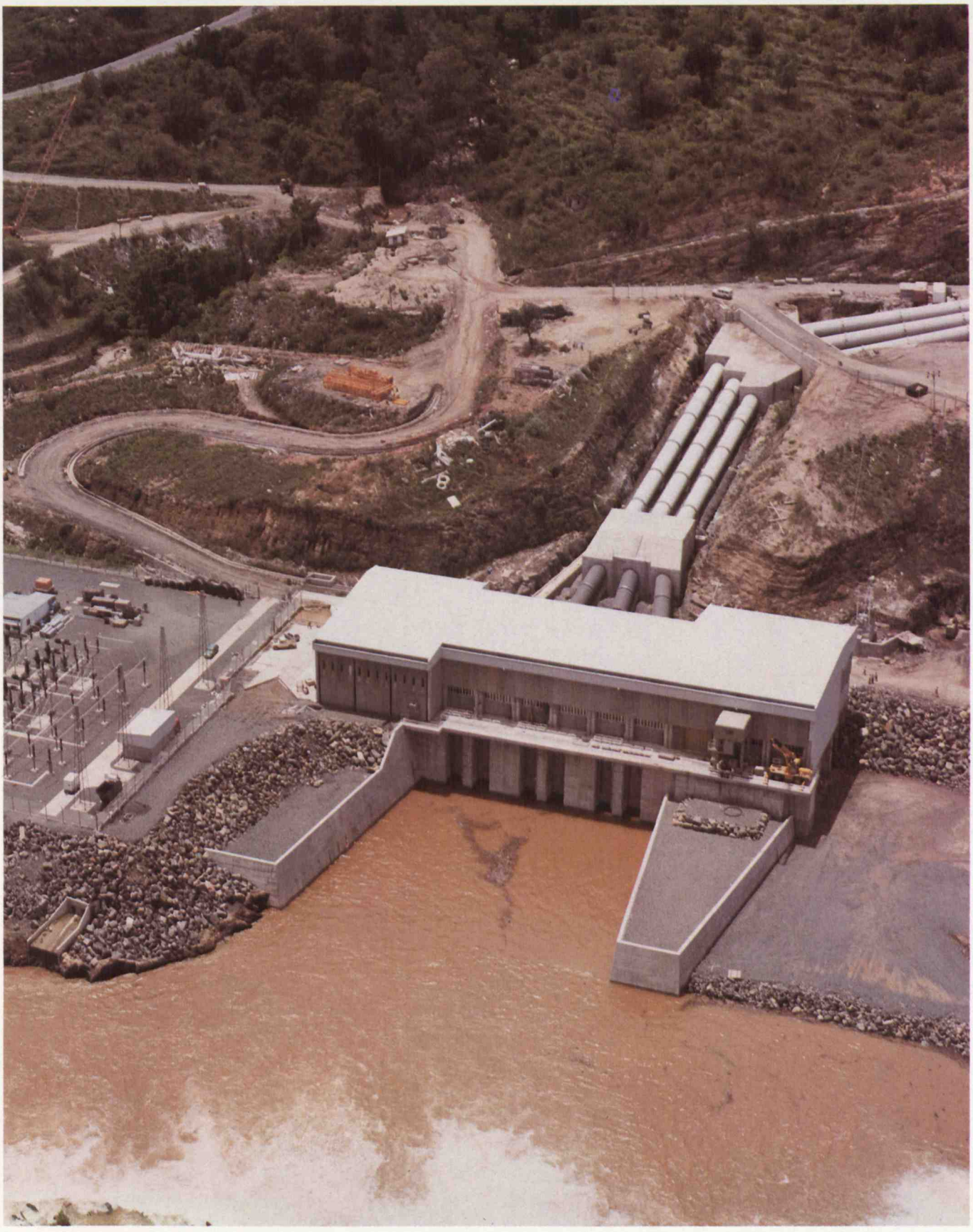
The twin pipelines linking the pump stations to Ömerli will be 2 x 48 km long, of steel construction, 2.2 m in diameter. Using imported flat steel plate, they will be fabricated locally by feeding the sheet through a bending roll, followed by welding using an automatic process.

An alternative design of prestressed concrete is being considered for the pipes.

The pipeline will be surface-mounted on concrete stools, with thrust blocks at bends. In addition, two sections of 4 m diameter tunnel will be constructed in the hilly terrain between Darlik and Ömerli. This will be done using conventional drill and blast techniques.

Victoria Power Station, Sri Lanka

COSTAIN



Water Projects International Limited
21 The Mall
Ealing London W5 2PU*
Telephone : 01-579 1311
Cables : Clarify London W5
Telex : 27239

SECTION 4 - OMERLI 3 TREATMENT PLANT

Plant Data

Output 1,000,000 m^3/day Stage 1
1,500,000 m^3/day Stage 2

RAW WATER QUALITY

The raw water will be stored in the Darlik and Isakoy reservoirs prior to treatment at the works. Raw water characteristics are assumed as follows:

1. Low turbidity and suspended solids.
2. Colour up to 100 Hazen units.
3. pH in the range 7.0 to 7.5
4. Algae at certain times of the year.
5. No taste and odour.
6. Water temperature between 5-25°C.
7. Iron present.
8. Manganese present.

FINAL TREATED WATER QUALITY

The treated water will comply with the Turkish Standards for drinking water TS266 and will also meet the following standards:

pH value	At or slightly above pHs (pHs + 0.2)
Colour	Not exceeding 5 Hazen Units
Turbidity	Not exceeding 1.0 J.T.U.
Iron as Fe	Not exceeding 0.1 mg/l
Manganese as Mn	Not exceeding 0.05 mg/l
Aluminium as Al	Not exceeding 0.15 mg/l
Taste and Odour	Unobjectionable
Coliform Organisms (MPN/100 mls)	Absent

TREATMENT PLANT PROCESS

1. Measure the incoming flow and control it at the set amount.

2. Aeration of the raw water to increase the oxygen level if there has been depletion of oxygen in the reservoir.

3. Split the flow into 3 parts and distribute to 3 clarification Units. Each unit has its own chemical dosing and mixing facilties.

4. Chlorination of the water to kill algae and provide additional oxidation if necessary. To reduce trihalomethanes to the lowest level chlorination will normally be carried out upstream of the filter and not at this point.

5. pH conditioning of the water with sulphuric acid to adjust the pH to 6.5 to 6.9 which is the optimum level for flocculation with aluminium sulphate.

6. Dosing with aluminium sulphate to flocculate the raw water together with hydraulic mixing to provide rapid dispersion of the chemical.

7. A variable delay period of 3 or 5 minutes to allow flocculation to start forming.

8. The addition of polyelectrolyte to improve the size and stability of the floc formation.

   Space will be provided in the chemical plant to allow for the future dosing of potassium permanganate, for the oxydation of iron and manganese and powdered activated carbon, for taste and odour control, to the inlet of the clarification tanks.

9. Clarification of the chemically treated water in six PCI clarification units. Each unit comprises two Flat Bottomed Clarifiers (F.B.C.).

10. Chlorination at the inlet to the filtration plant as an alternative to the inlet of the clarification tanks.

11. Dosing of lime to the inlet to the filters to raise the pH to assist in the removal of manganese.

12. Filtration through forty PCI 'D' type rapid gravity filters.

13. Chlorination of the filtered water for disinfection and pH correction with lime before entry to the contact tank.

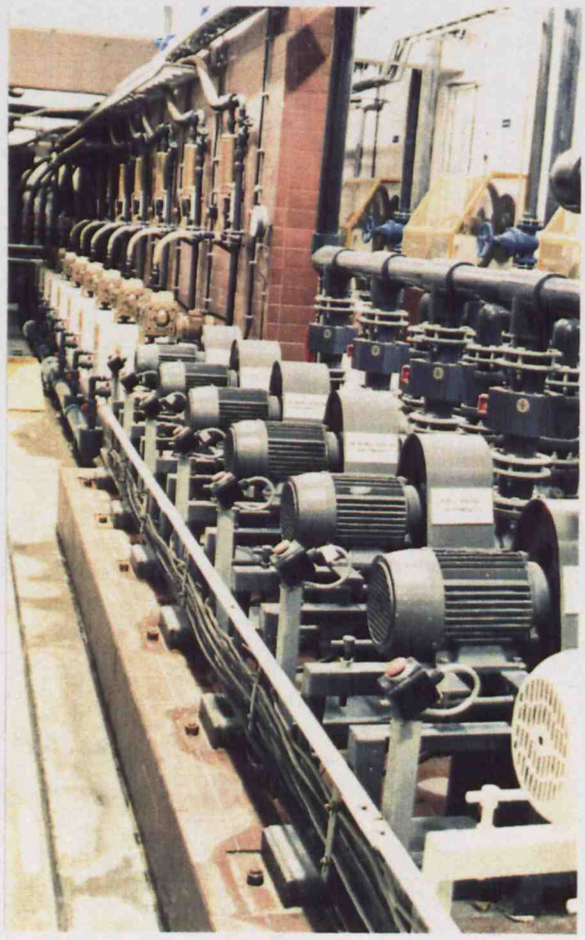
14. Retention of the water for a period of not less than 20 min in a contact tank.

15. Storage of treated water prior to distribution to reduce flow variations through the plant.

The treatment plant will utilise the latest process designs optimised for efficient operation, and will be constructed to the highest standards and finishes. In addition to the water treatment process units, the works will be equipped with all necessary support facilities, such as chemical and bacteriological laboratories, workshops, offices, conference rooms and staff messing facilities.

Ankara Water Treatment Works

PWT WORLDWIDE
WPI
TURNKEY WATER PROJECTS



Water Projects International

Midland Bank plc

Our reference Your reference

International Division

Walker House
87 Queen Victoria Street
London EC4V 4AP
Telephone 01 - 260 (Direct Line)

SECTION 5 - FINANCIAL

FINANCIAL ASPECTS

1. Project Structure

It is proposed that the project is undertaken with the application of the Build-Operate-Transfer (BOT) model which would seek to satisfactorily spread the risk and reward amongst all the relevant parties, in addition to ensure sufficient implementation finance and the disbursement of project revenues. Turkey is a world leader in the development of the BOT model and it is important that project proposals comply with the stated concepts which include a requirement for limited recourse financing, including assumption of risk by the contractors, shareholders, and the lenders with an acceptable level of participation by the Turkish authorities. Accordingly, it is anticipated that the following structure would be put in place.

1.1 The Formation of a Project Joint Venture Company ("The Company")

A joint venture company would be incorporated and its shareholders would include WPI, Costains, Senior Turkish contractors as well as a Turkish Government entity and foeign institutional investors (such as I.F.C).

Incorporation would follow the exclusive award of the project to the WPI bidding consortium, the issuance of the Ministerial Decree and the agreement of the necessary Turkish authorities to provide funding for their share. The fully constituted company would have the responsibility to finance, contract for, operate and maintain the Project Assets and facilities and sell all associated products and services. The company would act as borrower under all associated credit agreements.

1.2 Associated Agreements

It will be necessary to draw up a number of agreements with the Turkish authorities and the first such agreement would be an Implementation Agreement with the Turkish Government for the BOT Facility.

A Water Sales Agreement with the Turkish authorities would need to be completed which would include a tariff charge to cover costs of operation, service of debts and return on capital. Additional offshore Escrow accounts to cover debt service, reserve, and divident payments may need to be set up.

The joint venture company should seek the incentives available under the Foreign Capital Encouragement and Free Zone Laws for the project as Istanbul would not be declared a "free zone". The provision of standby financing to cover overruns, force majeure, or unbudgeted price inflation and interest rate escalation, as well as any debt service shortfall, until project completion and successful operation for an acceptable number of years, is also an important factor.

1.3 Debt:Equity Ratio

An appropriate Debt:Equity ratio would need to be established once the overall scope of the project is finalised. The underlying economics of the project will influence this ratio, but the pricipal objective is to maximise the debt within acceptable risk parameters. Where the viability of the project allows, some BOOT proposals are currently being considered within Turkey where the debt:equity ratio is 3:1. The stated Equity would be made available by the shareholders of the project joint venture company.

2. DEBT

One of the key objective is to achieve the longest terms and the lowest financing costs. The most probable sources of debt would include the following:-

2.1 Export Credits

Export Credits can represent up to 85% of the foreign sourced capital goods and services. Normally the maximum term which is currently available is 8½ years maturity from commissioning, with the prevailing interest rate being 9.35% fixed for most currencies. However, these terms are due to review in July 1988.

The project appears to fall under the new guidelines recently issued by ECGD regarding BOOT models and project financing in general.

2.2 Multilateral Institutional Loans

Institutional loans may be available from various bodies such as the IFC. In the recent past the IFC has indicated a strong and supportive interest in participating in project financing. Subject to project and other approvals, terms on which loans can be available include 5 years grace plus 10 years repayment.

2.3 Aid Trade Provision ("ATP")

Given the size of the project, its developmental nature, the likely competition and the follow-up business in this vital sector for Turkey, there appears to be a strong case for ATP support. Current OECD regulations state that should a grant be made available it would, at present, need to represent at least 30.1% of the contract price. This rises to 35.1% in July 1988.

2.4 Commercial Finance

Under certain circumstances there may be a requirement for an element of residual commercial finance. It is not possible to give firm indications of attendant terms of such facilities at this stage. However, given a significant degree of support and involvement by the export credit agencies/other government departments, and assuming no adverse market movements then it might be possible to accommodate a limited commercial finance requirement.

3. PRESENT POSITION

Midland Bank has been appointed to provide the financing and banking services in support of the British Consortium's bid. This is to include the preparation of the financing section for the feasibility study which is shortly to be undertaken.

SECTION 6 - COSTAIN CAPABILITY

Costain International Ltd is part of the Costain Group which is involved world-wide in Engineering and Construction, Mining, Housing and Property, with an annual Turnover approaching £900M. Projects which has been complete in recent years including Dubai Dry Dock, the Thames Barrier, Hong Kong Island Eastern Corridor, and Shajiao coal-fired power station in the People's Republic of China. Costain is also one of the companies currently participating in the £5000m Channel Tunnel contract, due for completion in 1993.

The photographs in this presentation show examples of water supply and other projects which Costain has carried out in the last few years, often working in remote areas.

ERINLE RIVER DAN, OYO STATE, NIGERIA

Client: Water Corporation of Oyo State, Nigeria
Consulting Engineer: Tahal Consultants (Nigeria) Limited

Construction of an homogeneous compacted earthfill dam with a reinforced concrete spillway incorporating three radial gates, reinforced concrete conduit through dam, pressure grouting of dam foundations and rip-rap protection.

RUFARO DAM, MARONDERA, ZIMBABWE

Client: Ministry of Water Resources and Development

Construction of earthfill dam requiring approximately 500,000 cubic metres of fill, impounding a reservoir for the provision of drinking water.

EL CADILLAL DAM AND HYDROELECTRIC SCHEME, TUCUMAN, ARGENTINA

Client: Provincial Government of Tucuman.
Consulting Engineers: Agua & Energia Electrica, Argentina
Sir Alexander Gibb and Partners

Construction of a hydroelectric and irrigation scheme in the foothills of the Andes involving the construction of a clay core, earthfill dam, two low level tunnels, an overflow tunnel and a small hydroelectric generating station.

LILYVALE DAM, LITHGOW, NEW SOUTH WALES, AUSTRALIA

Client: State Electricity Commission of New South Wales

Construction of rockfill, concrete faced dam together with associated works including concrete lined tunnel 200 metres long, concrete outlet tower and access bridge, concrete spillway, valve house and pumping station. Supply and installation of associated mechanical and electrical works.

WATER SUPPLY EXPANSION SCHEME, OYO STATE, NIGERIA

Client: Water Corporation of Oyo State, Nigeria
Consulting Engineer: Tahal Consultants (Nigeria) Limited

Construction of water treatment and distribution network, including water intake works, water treatment plant with a daily capacity of 160,000 m^3, supply and installation of rising mains, high lift pumping station and 850 km of trunk main and distribution pipeline, together with booster pumping stations and storage reservoirs.

PAK KONG WATER TREATMENT AND TRANSFER WORKS, HONG KONG (Stage I)

Client:	Water Supplies Department, Hong Kong
Engineers:	Watson-Haswell, Hong Kong

Construction of all civil engineering works related to the treatment of 273,000 m^3 of water per day derived from the Plover Cove and High Island Reservoir systems. Associated works include administration and control buildings, housing, workshops, pipelines, roads and services.

SUGAR LOAF WATER TREATMENT PLANT, VICTORIA, AUSTRALIA

Client:	Melbourne and Metropolitan Board Works,
Consulting Engineers:	Metropolitan Water Board

Construction of a 2.7 megalitre per day water treatment plant together with associated process pipework, penstocks and pressure pipes.

VICTORIA POWER STATION, MAHAWELI IRRIGATION SCHEME, KANDY, SRI LANKA

Client:	The Mahaweli Authority of Sri Lanka
Engineers:	Sir Alexander Gibb and Partners

Construction of a 210 MW hydroelectric power station associated with the Victoria Dam, including provision of massive reinforced concrete foundations and machine bases, penstocks and associated pressure pipe.

SHAJIAO POWER STATION, GUANGDONG PROVINCE, PEOPLE'S REPUBLIC OF CHINA

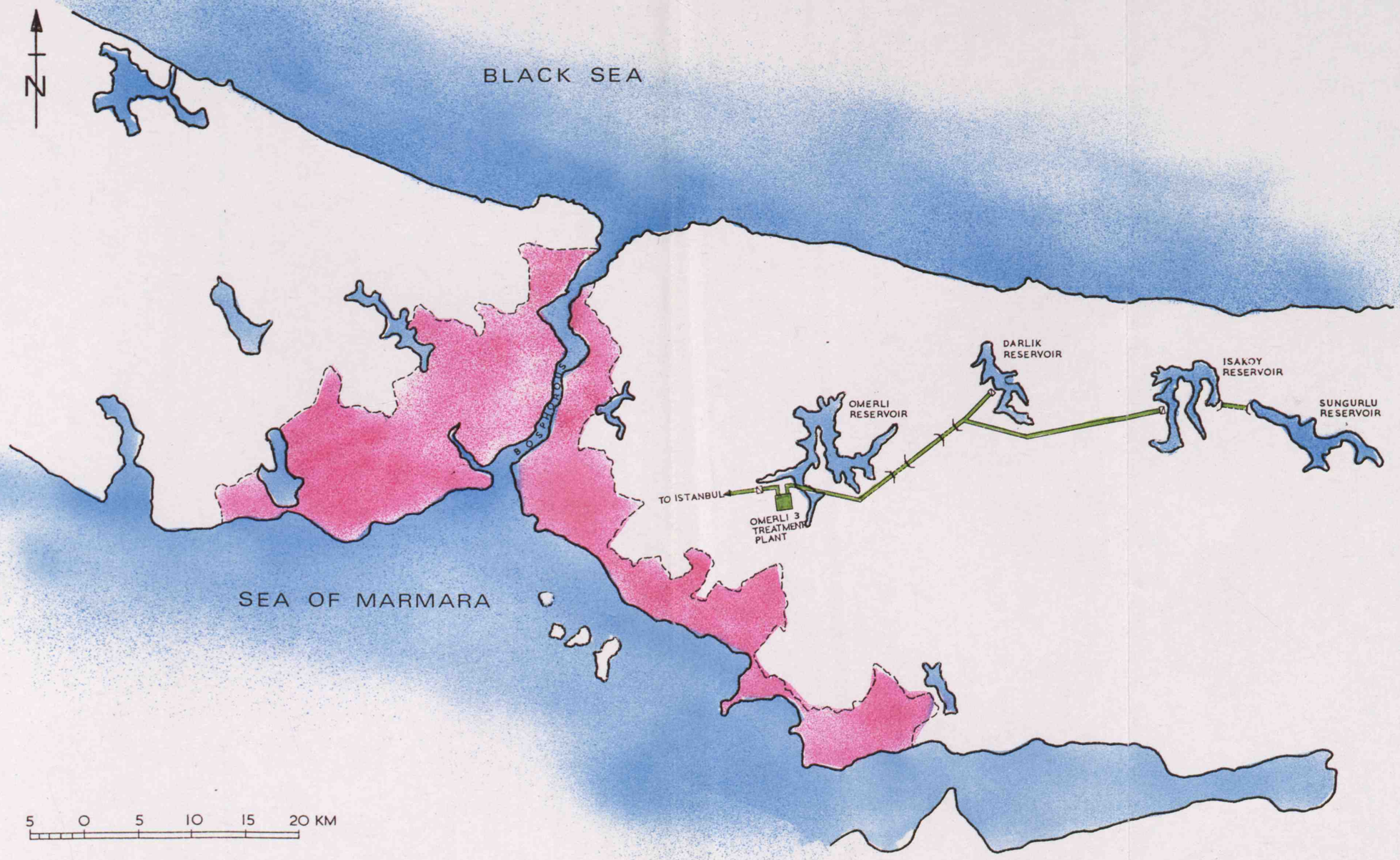
Client:	Hopewell Power (China) Limited
Project Managers:	Hopewell-Costain Limited
Consultants:	Ove Arup Hong Kong Limited
	Ewbank Preece

Management contract covering the overall design and construction of the civil and architectural works for a 700 MW coal-fired power station on the Pearl River.

It was financed on a Build-Operate-Transfer basis, with electricity being sold to the Guangdong Electric Power Corporation over a 10 year period.

Sugarloaf Water Treatment Plant
Victoria, Australia

COSTAIN



OMERLI PROJECT

GENERAL LOCATION MAP