هيئة الأشغال العامة

Public Works Authority

قطر تستحق الأفضل

Qatar Deserves The Best

26 March 2019

PPP for the Al Wakra Wukair Sewage Treatment Plant

Information Memorandum

Contents

Speakers at the session today

Speaker	Designation
Dr. Eng. Saad bin Ahmad Al Muhannadi	President, Public Works Authority (Ashghal)
Mr. Khalid Al-Khayareen	Manager, Drainage Networks Projects Department (Ashghal)
Mr. Jonathan Looker	Principal, Mott MacDonald
Ms. Shikha Garg	Director, PwC
Mr. Dani Kabbani	Partner, Eversheds Sutherland

Welcome

Role of PPPs in supporting Qatar's economic development goals

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Economic Development Goals – QNV 2030

- Developing a competitive and diversified economy
- Enabling the private sector to play a role in sustainable development
- Building a knowledge-based economy
- Fruitful public-private cooperation

Ashghal plans to boost private sector participation in the delivery of public services, starting with this Project

Qatar National Vision 2030

Economic Development Goals

Ashghal

Project Background

As part of its wider plans, Ashghal wants to procure the wastewater treatment plant for Al Wakra and Al Wukair as a PPP project

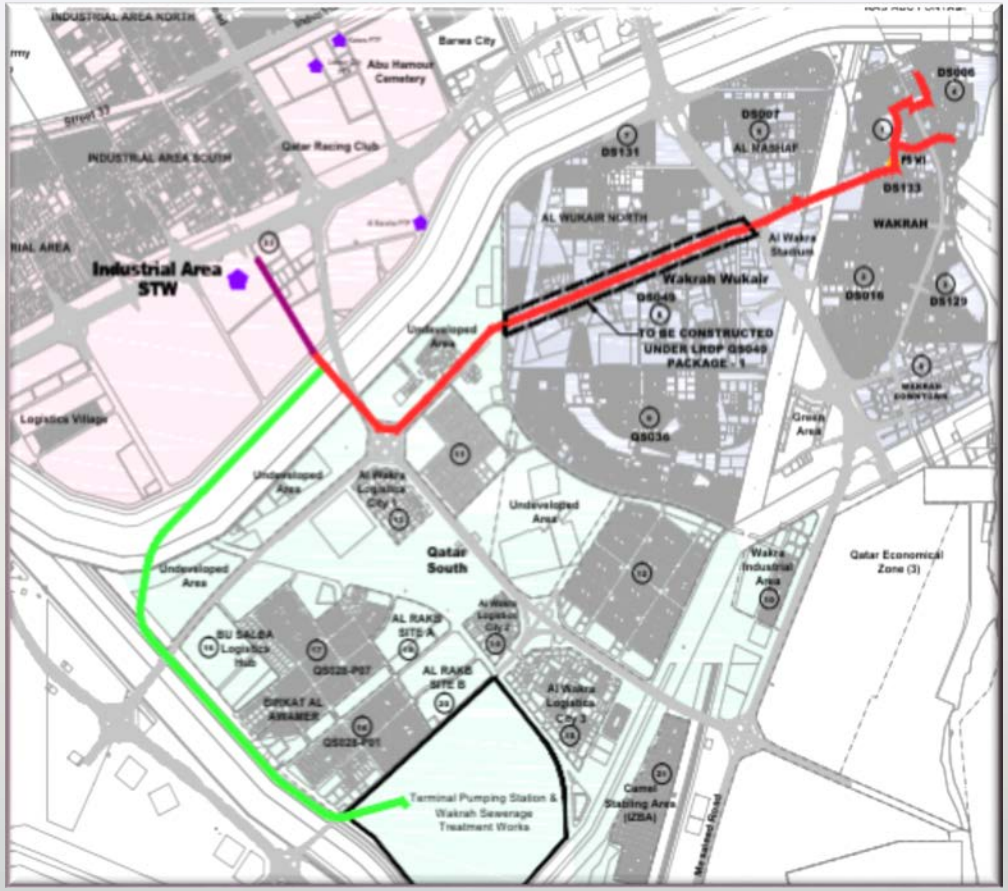
- Al Wakra and Al Wukair areas have experienced significant population growth in recent years
- The proposed wastewater infrastructure is part of Ashghal's Master Plan for the region to accommodate the anticipated population growth in the area and the diversion plans from other sewage treatment works.
- Ashghal intends to develop the wastewater infrastructure in different phases to service the growing population in the area
- Ashghal plans to deliver the Network separately, outside of the scope of this Project, on an EPC basis.

Contributing areas	Year 2024 Expected Average Flow	Year 2030 Interim Average Flow	Year 2045 Build out Average Flow
Al Wakra	35,000	50,322	55,322
Mashaf	8,000	10,546	11,717
Al Wukair	33,000	45,347	56,154
Qatar South	6,000	36,236	54,151
Industrial Area	60,000	90,000	120,000
Al Hadharma	10,000	30,000	40,000
Doha South		245,000	270,000
Total	152,000	507,450	607,344
STW Design Flows	**150,000**	**500,000**	**600,000**

Estimated wastewater flows (cubic meters per day)

Project Site and Key Features

Project Site:



The figure above shows the indicative layout of Al Wakra and Al Wukair wastewater infrastructure.

Project Key Features:

- The Project scope includes provision of a TPS, the Wakra STW and TSE management facilities.
- The STW will have capacity to treat average flows of 150,000 cubic meters per day. Flows to the STW will be guaranteed by Ashghal.
- Ashghal plans to develop the Network separately (outside of the scope of this Project) through an EPC contract.
- The Network will be completed prior to 2024 to gravitate the flows to the STW from the respective catchments.
- The PPP Project is expected to have a Commercial Operations Date of June 2024.

Technical Aspects

The Project Scope includes TPS, STW and TSE Facilities

Key elements of the proposed Project Scope are listed below:

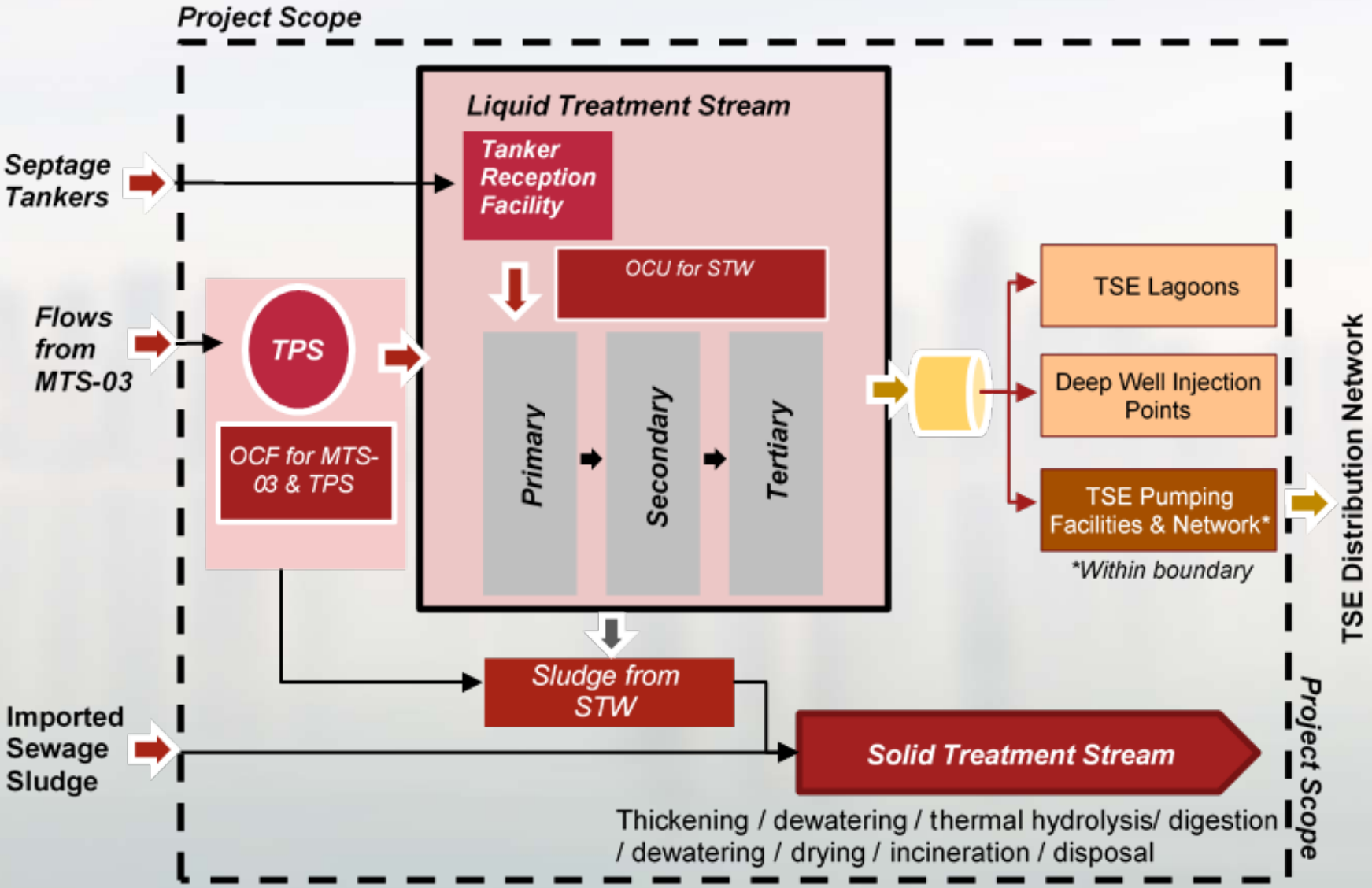
1. **Terminal Pump Station** (“TPS”), including an odour control facility (“OCF”) for the TPS and Main Trunk Sewer (“MTS-03”)

2. **Sewage Treatment Works** (“STW”) with an average capacity of **150,000 m3/day,** including primary, secondary and tertiary treatment units, sludge treatment and management facilities and odour control units

3. **Treated Sewage Effluent management facilities** (“TSE Facilities”)

The components above will produce Treated Sewage Effluent (“TSE”) and treated sludge that can be disposed of in a landfill, used as fertiliser, dried or incinerated as needed.

The diagram below provides a general schematic for the scope of the Project



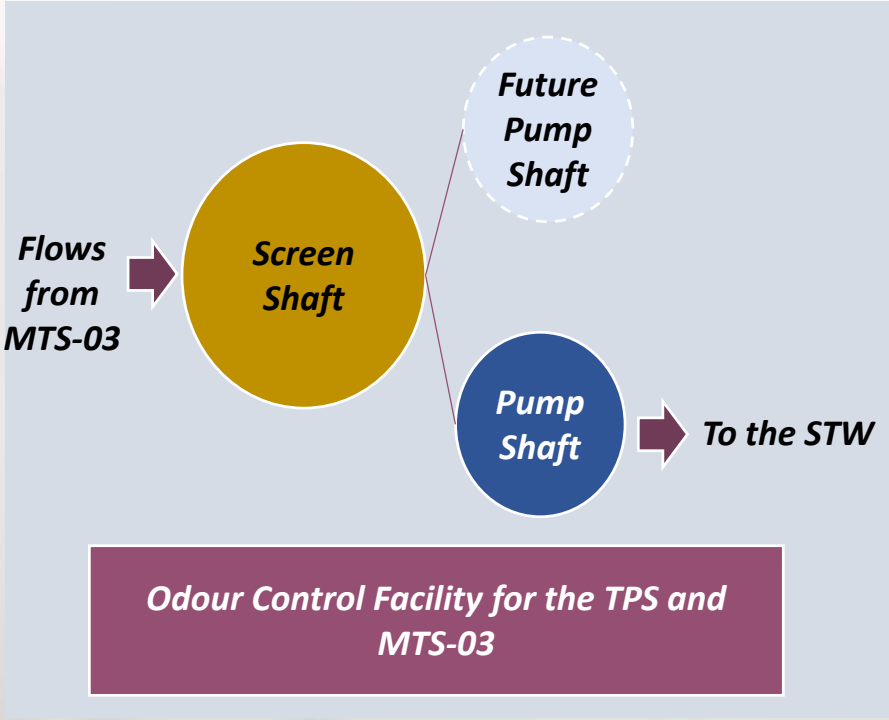
Terminal Pumping Station (TPS)

- The TPS will receive raw sewage **influent conveyed** by gravity through **MTS-03** from the connected catchments.
- TPS has two shafts:

a. **Screen Shaft**

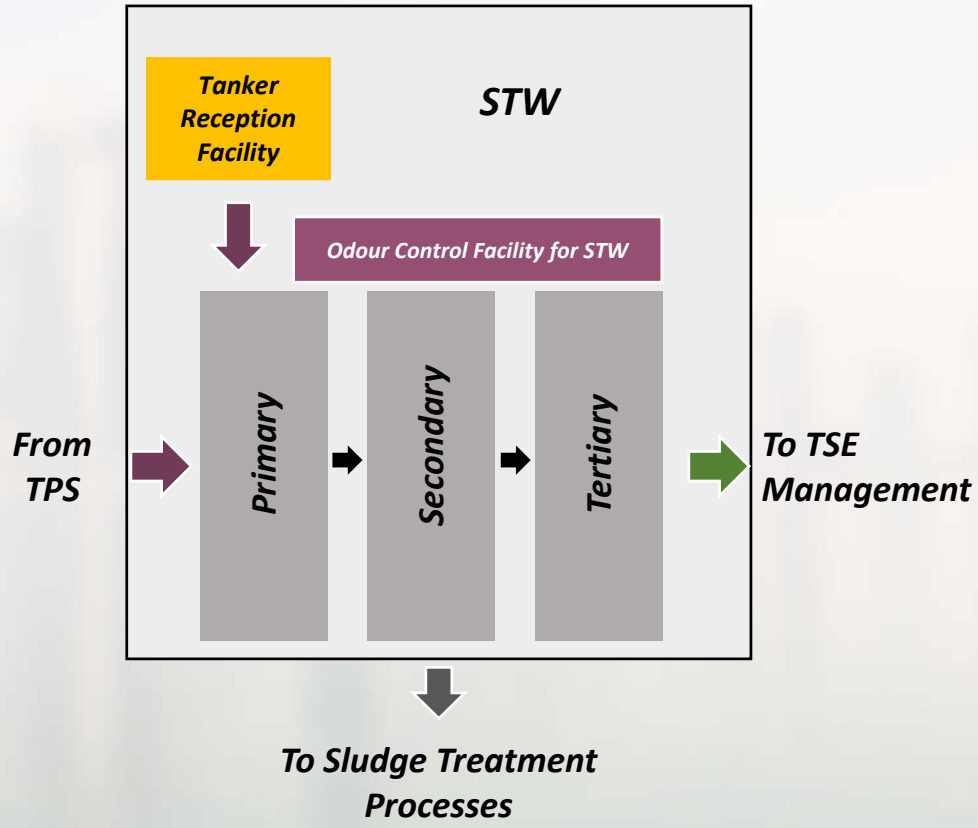
  - Receives an **average flow of 600,000** cubic metres per day with a peak factor of 2
  - Screen Shaft comprises coarse screens to separate large objects and screens are disposed via skips

- **Pump Shaft**
  - Receives sewage from screen shaft and pumps sewage to the STW, with an **average flow of 150,000** cubic metres per day with a peak factor of 2.
- **Odour Control Facility**
  - Serving both the TPS and MTS-03

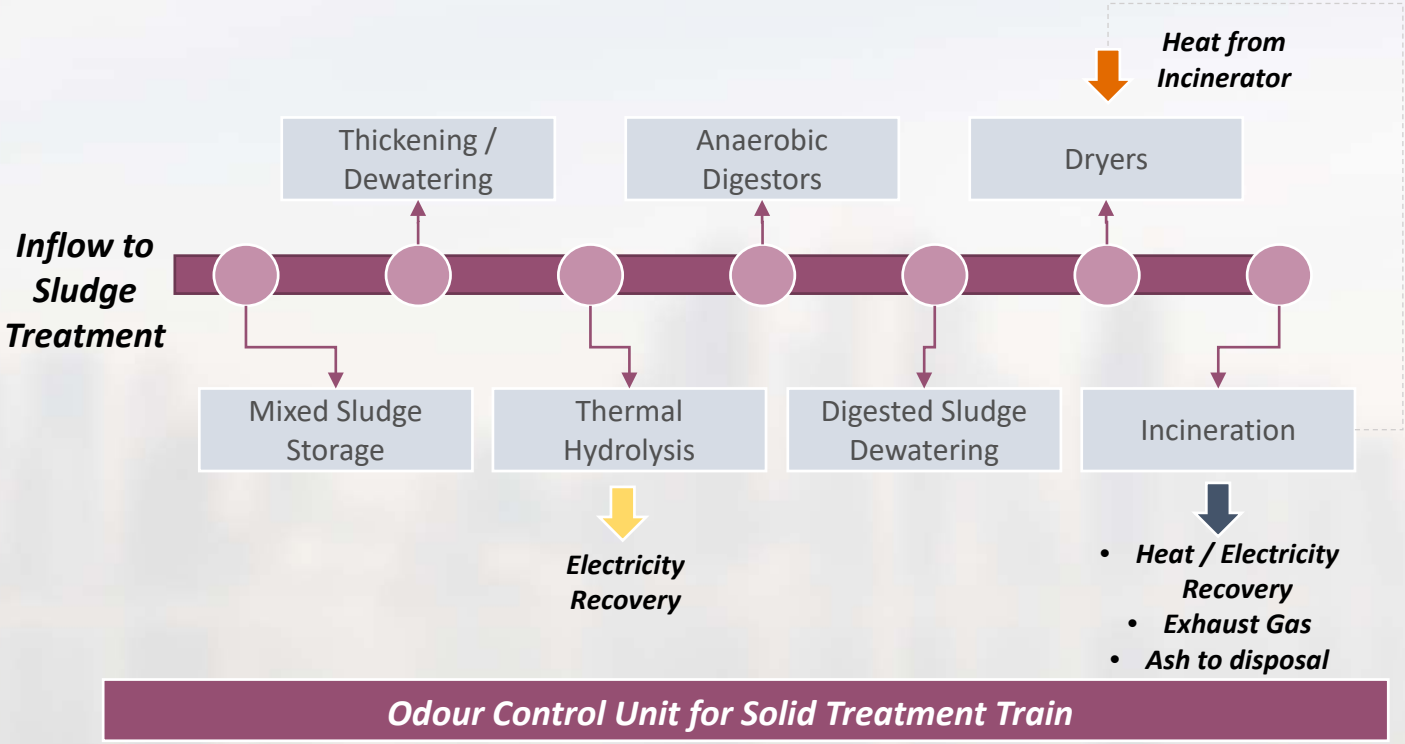


Sewage Treatment Works (STW)

- **Inlet works** to the STW receive sewage from:
  - TPS
  - Imported sewage through tankers.
- **Primary treatment** is envisaged to include primary sedimentation tanks, chemical dosing plant & emergency storm lagoons.
- **Secondary treatment** is envisaged to include aerobic biological treatment operations and processes, including nutrient removal.
- **Tertiary treatment** is envisaged to include technologies such as disk and sand filters, ultrafiltration plants, ultraviolet disinfection and chlorination plants.

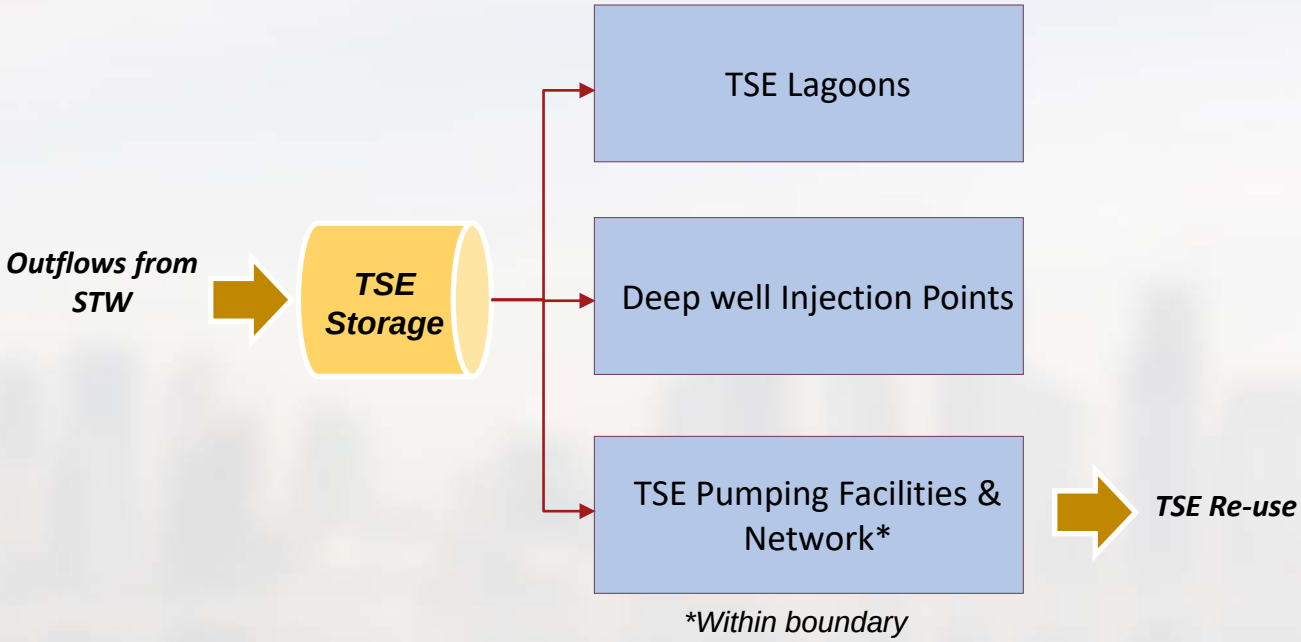


Sludge Treatment



- **Two main inputs** into the sludge treatment are **sludge from the STW** and **imported sludge**.
- Sludge treatment is envisaged to comprise storage, thickening, hydrolysis, anaerobic digestors, dewatering, drying and incineration facilities.
- The process shall also have facilities to **recover electricity and heat** at various points along the solids process train.

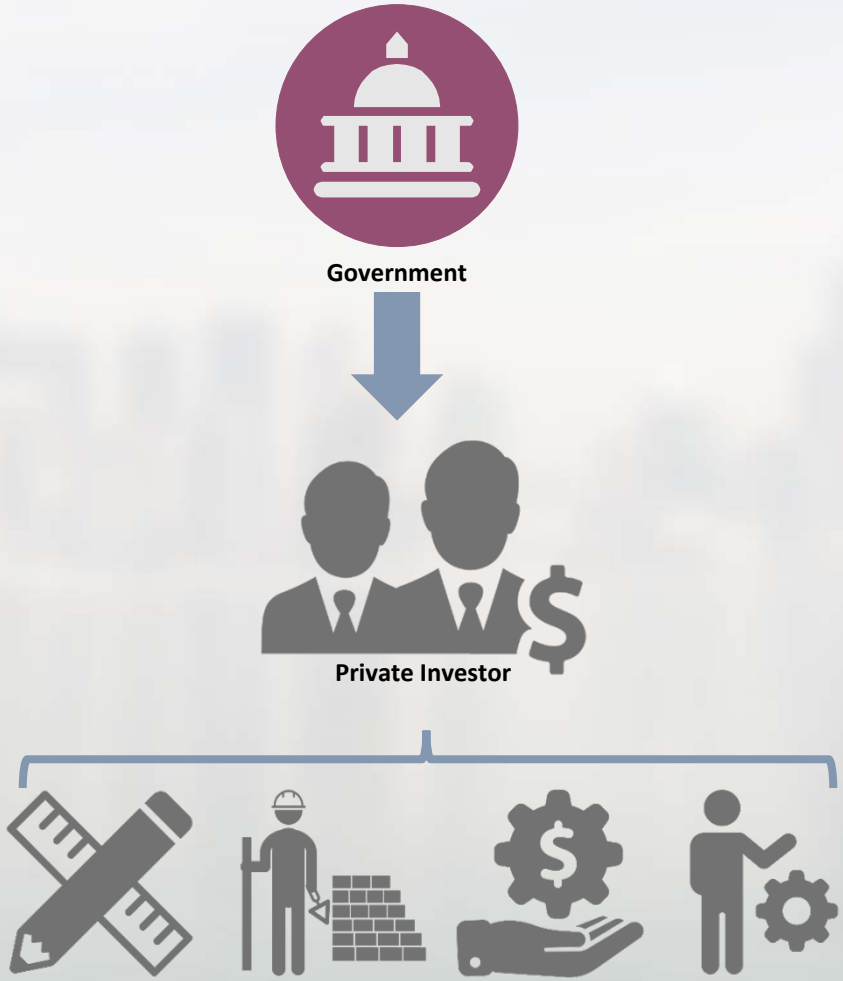
Treated Sewage Effluent Management Facilities (TSE Facilities)



- The **primary** TSE management **mechanism** is **deep well injections** from TSE storage tanks on site.
- In the event of **emergencies**, the flows through the STW and downstream TSE network will be managed with **TSE balancing lagoons** and as well as **pumping off-spec TSE** back **through the STW** treatment process.

Contractual & Commercial Structure

The Project will be procured on a BOT basis with an operational term of 25 years



- The Project will be procured on a **Build-Operate-Transfer** ("BOT") basis for an operational term of **25 years** from the commercial operation date ("COD")
- The successful bidder will be responsible for the **design, finance, engineering, construction, testing, commissioning, insurance, operation and maintenance of the Project and transfer it back to Ashghal** at the end of the term.
- The Project Company will enter into a **Public Private Partnership Agreement** ("PPPA") with Ashghal, setting out how the Project Company will develop and implement the Project on a BOT basis
- The Project will receive **availability payments** from Ashghal under the PPPA, **subject to a performance regime**.
- Ashghal's payment obligations are expected be backed by a **government guarantee**.

The Project is expected to follow 'best in class' PPP practice

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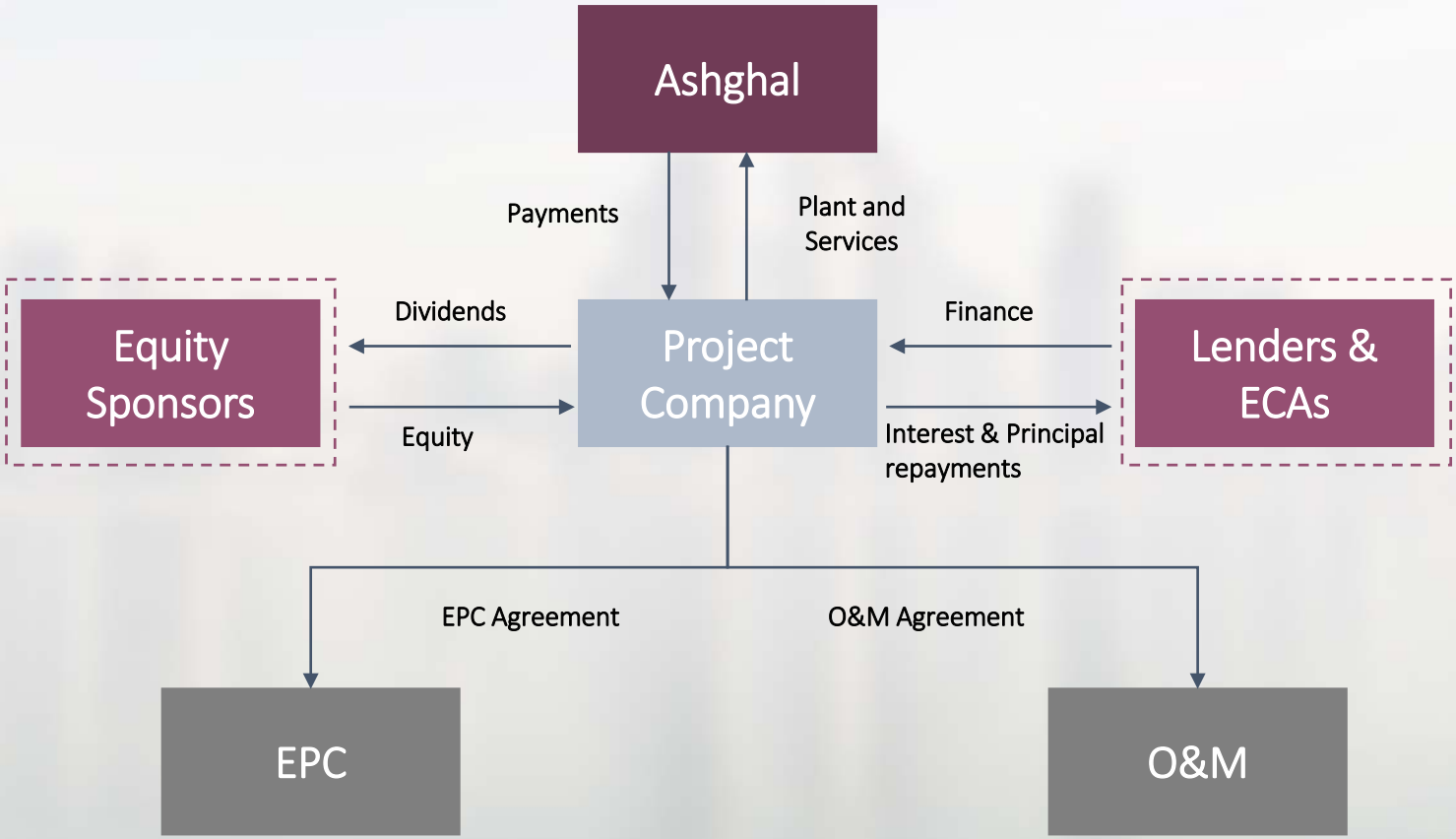
The PPP structure for the Project follows a similar structure to successful regional wastewater PPPs

The indicative commercial structure for the Project is illustrated in the diagram below



Proposed payment mechanism

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Total Payments = Capacity Payments + Output Payments

- **Paid to reimburse the Project Company for debt repayments and equity returns**

- **Output charge paid to reimburse the Project Company for O&M Payments**

Responsibilities of the private sector

Interested parties should note that the scope of services for this Project will include, but will not be limited to the following:

Stage	Private Sector Role	Government Role
Design and Build 	• Design • Construction • Landscaping	• Provision of land • Performance monitoring for Design and Construction
Operation and Maintenance 	• O&M of the Project • Provide Treated Sewage Effluent	• Provide sewage influent • Performance monitoring for O&M
Financial / Commercial 	• Arrange Project Finance for the Project • Arrange Equity for the Project	• Manage PPPA • Make availability payments according to performance

Legal Framework

Legal Framework for Procurement Process

- The Procurement Process will be governed by Law No. 24 of 2015 (the Tenders Law) and Decision No. 22 of 2016 (the Executive Regulations to the Tenders Law).
- Procurement process to be managed by Ashghal's Grand Tenders Committee (GTC).
- RFQ Process
  - Qualification of companies in accordance with Title 2, Chapter 3 of Executive Regulations
  - Criteria for qualification to be communicated in RFQ
  - GTC to make recommendation on qualified companies
- RFP Process
  - Qualified companies shall be invited to submit offer
  - Submittal of offers shall be subject to Title 2, Chapter 1, Section 1 of Executive Regulations
  - Technical and commercial evaluation criteria to be communicated in the RFP
- Participation of Consortia as Bidders
  - Article 36 of the Executive Regulations shall govern.

Contractual Framework – Key Components

Structure of the PPPA shall be in accordance with international best practice on PPPs of similar type; draft PPPA to be included with the RFP

- Prior to Concession Award/Concurrent with PPPA Execution, Ashghal will enter into **Land Access Agreement** with the Developer
- Ashghal will take steps to secure preliminary consents/permits (e.g. **Environmental Permit**)
- Prior to Concession Award/Concurrent with PPPA Execution, Developer will deliver to Ashghal, *inter alia:*
  - Project Agreements (agreements Developer has entered into in order to fulfill its obligations under the PPPA)
  - Financing Agreements
  - Warranties and Insurance Policies

Other Key Terms to be set out in PPPA to include:

- Wastewater-Related Obligations
- Sludge-Related Obligations
- Ashghal's Design Requirements
- Construction Timeline/Time for Completion
- Performance Testing
- Operation and Maintenance/Concession Period
- Relief Events
- Payments
- Step-In Rights
- Risk Allocation Provisions, including:
  - Change in Law
  - Force Majeure
- Insurance and Indemnities
- Termination
- Dispute Resolution
- Governing Law

Next Steps

The private sector should have demonstrated expertise in participating in similar projects

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PPP Experience	Respondents should have past experience of undertaking projects on BOT basis.
Development Experience	Respondents should have experience of designing and constructing wastewater infrastructure projects.
Ownership Experience	Respondents should have experience of owning wastewater projects.
Operations and Maintenance	Respondents should have experience of undertaking operations and maintenance of wastewater projects.
Financial Strength	Respondents should have sound financial standing in the last three years.
Experience and Track Record in Raising Finance	Respondents should have experience of raising project debt for wastewater projects.
Regional Experience	Respondents should have design, construction, operations and maintenance experience for similar projects within MENA.

Procurement Timeline

Procurement Stage	Timeline
Request for Expression of Interest	March 2019
Submission of EOI	April 2019
Request for Qualification	April 2019
Submission of Statement of Qualification	May 2019
Request for Proposal	June 2019
Clarification Sessions	July/August 2019
Submission of Bids	September 2019
Selection of Preferred Bidder	December 2019
Financial Close	February 2020

Q&A