

# Toll Roads Module

Full Description

## **Module 3 of the [Annex in Asset Recycling](#).**

This module sets out sector-specific asset recycling guidelines for toll roads sector, including sector-specific due diligence requirements, [sample risk allocation matrix](#) and [sample terms of reference \(TOR\)](#) for selection of transaction advisors. *Find more below, or visit the [Guidelines for Implementing Asset Recycling Transactions](#) section and [Content Outline](#), or [Download the Full Report](#).*

The Relevant Authority should undertake a due diligence study of the toll roads asset that is considered for asset recycling. This should form part of the asset recycling transaction preparation process. The due diligence process for a toll roads asset should include:

- [Traffic Forecast and Demand Assessment](#)
- [Road Infrastructure and Capacity Development](#)
- [Financial Performance](#)
- [E&S and Climate Resilience Due Diligence](#)

## **Due Diligence for Toll Roads**

In conducting due diligence, the objectives are as follows:

- Review the condition of the toll road;
- Review operations of the asset; including the tolling technology used, toll processing systems, safety and patrol services, repairs and maintenance, landscaping and operations of rest stops;
- Review service standards provided under the current operations of the asset including standards pertaining to safety and maintenance, incident response, repairs, signages and street lighting;
- Review the financial status of the asset and the financial feasibility of the asset under private sector party operations;
- Determine measures that can be implemented to enhance the asset's value either through an extension or expansion of the toll road, the introduction of any operational efficiency or tariff adjustments; and
- Identification of key Environmental and Social (E&S) and Climate risks to be taken into account in the asset's selection and the risk allocation process.

In the context of a toll road asset recycling transaction, the following additional due diligence should be undertaken:

- Traffic and revenue forecast of the asset;
- Assessment of other ancillary revenues that could potentially be derived from the system;
- Assessment of existing built infrastructure and future capacity development for the asset;
- Assessment of E&S risks and Climate risks;
- Assessment of all operation and maintenance performance; and
- Assessment of financial performance of the Asset including consideration of the asset as interesting to lenders as well as equity.

## **Traffic Forecast and Demand Assessment**

The relevant authority should consider the following aspects when conducting the traffic forecast for the Asset and an assessment of demand of the asset:

- Perform a traffic study, including traffic counts and origin-destination survey using the most appropriate and cost-efficient method (manual counts, automatic traffic counting stations, drones, satellite imagery, etc.);
- Perform a traffic demand assessment to provide a robust forecast over the stipulated concession period;
- Prepare traffic forecasts based on the traffic study and (Origin-Destination) O-D data. Realistic annual traffic growth rates for the base year and over the stipulated concession period; considering factors such as the impact of the national economic growth and future regional development/s, including any relevant ongoing, committed or otherwise planned/expected road projects.

### **Road Infrastructure and Capacity Development**

Undertake a preliminary assessment of the existing road alignment, propose any re-alignment (where possible and permitted) to improve the geometric characteristics and road safety. Several options should be proposed and considered, including various technical solutions, and amending the number of total travel lanes and their widths.

A gap analysis report, including an assessment of the asset's condition, to determine the adequacy to provide required service levels should be prepared. The gap analysis should cover:

- Assessment of the remaining useful life of the asset;
- Potential replacement / overhaul / major maintenance required and the timing thereof;
- Major lifecycle costs over the term of the term of the operations of the asset by the private sector;
- Overall performance against benchmark with reference to the current capacity;
- Service specifications required to meet future needs; and
- Any shortfall with respect to the maintenance obligations and the remediation measures and any remediation costs required.

### **Financial Performance**

Due diligence should be undertaken of the toll road's financial performance. To this end, the due diligence process should review toll revenues, and operating expenses, presenting historical and projected Earnings Before Interest, Tax and Depreciation/Amortisation (EBITDA). Using reasonable leverage levels, forecast lenders metrics such as Debt Service Coverage Ratio (DSCR) and Loan Life Coverage Ratio (LLCR) as well as key equity metrics such as project rate of return.

### **Toll Revenues**

- Current structure of the relevant toll charges and the applicable fee adjustment mechanism/s:
  - Base charges detailing the prevailing charges and historical revenue there from;
  - Base charges growth rate detailing prevailing escalation or indexation regime and an assessment as to whether adjustments have been adequate to cover historical inflation;
- Forecast of toll revenues based on traffic forecast and prevailing toll charging mechanisms.

### **Operating Expenses**

- Review operations and maintenance expenses comprising staff and non-staff costs;
- Review total operating cost and benchmark it against the median average of comparable (i.e., regional, or local road assets).

### **Capital Expenditure**

- Assess projected capital investment in extensions or expansions and asset renewal and detail any required expenditure plans (for improvement of service levels, technological upgrade or increasing

- capacity) to meet expected growth in traffic demand over the term of the concession agreement;
- Assess estimates for the cost of proposed road upgrade (as applicable) including all required services, such as pre-design investigations, design, road safety audit, supervision, etc.

## E&S and Climate Resilience Due Diligence

This is a high-level summary to be expanded and tailored to the project risks by the E&S and Climate Resilience Advisory engaged to undertake the E&S and Climate Resilience Due Diligence (DD).

During the E&S Due Diligence to identify:

- gaps between national applicable law and GIIP/Lenders requirements and way to bridge them with related timeline for implementation;
- key E&S risks may include, but not limited to: land acquisition and/or clearing, resettlement, impact on livelihood, removal of trees and vegetation, disturbance during construction activities with utilities interruption, traffic diversion and safety, presence of sensitive receptors in the project area of influence with potential limitation in access to residential and commercial activities and increase in noise levels, air emissions, pollution, dust, wastewater and storm water management, waste management, and hazardous material/waste handling, presence and close proximity of the alignment with key biodiversity areas, legacy issue (if any);
- applicable E&S permitting and E&S studies to be developed and to be considered in the risks allocation between the government contracting party and the private sector.

The Climate Resilience Due Diligence should include at least an:

- assessment of GHG emissions baseline of the toll road asset;
- historical climate data and natural disaster events affecting the toll road asset;
- review of climate and natural disasters risks of the toll road asset (e.g., flood risks to roads, increased scour of bridges, increased instability of embankments, increased damage to road surfaces; increased drought and wildfires);
- assessment of the Disaster Risk Management plan or Emergency Preparedness and Response plan (if any in place); and
- assessment of integration of climate resilience concepts in maintenances regimes and road surface specifications.

## Related Content

[Guidelines for Implementing Asset Recycling Transactions \(Download PDF version\) - Now Available!](#)

## Additional Resources

[Regulatory Framework for Public-Private Partnerships in Roads](#)

[Public-Private Partnerships in Roads](#)

[PPP Reference Guide](#)

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*The Guidelines have not been prepared with any specific transaction in mind and are meant to serve only as general guidance. It is therefore critical that the Guidelines be reviewed and adapted for specific transactions To find more, visit the Guidelines to Implementing Asset Recycling Transactions [Section Overview](#) and [Content Outline](#), or [Download the Full Report](#).*

