

In 2024, the **Wellington Sludge Minimisation Facility (SMF)** green syndicated loan of **NZD 400 million** became the latest example of the **Industrial and Commercial Bank of China (Industrial and Commercial Bank of China, ICBC)** putting the **Green Investment Principles for the Belt and Road (Green Investment Principles for the Belt and Road, GIP)** into practice.

The project completed fund disbursement in **August 2024** and has since entered the equipment installation phase. ICBC's New Zealand Branch acted as **Mandated Lead Arranger and Joint Sustainability Coordinator**, demonstrating strong capabilities in green financing, risk management, and multi-stakeholder coordination.

(Sources: *The New Zealand Herald*; original reporting by Tim McCready;  
<https://www.nzherald.co.nz/business/business-reports/infrastructure-report/icbc-innovative-funding-for-green-infrastructure/A56IFMK7ZBF5ZHBC6GZUI5HEJA/> ;  
<https://timmccready.nz/2024/08/28/infrastructure-icbc-innovative-funding-for-green-infrastructure/> )

---

## 1) Investment Overview

- **Location:** Moa Point Wastewater Treatment Plant, **Wellington**, New Zealand
  - **Investment Size:** Approx. **NZD 400 million** ( $\approx$  **USD 245 million**) syndicated loan with a **33-year tenor**. The debt is issued by an **IFF-SPV**, with repayment supported by dedicated local government levies.
  - **Sector:** Solid waste resource recovery and clean energy (sludge drying + anaerobic digestion with biogas recovery for heat and power generation).
- 

## 2) Project Background and Client Profile

Wellington generates around **60 tonnes of wet sludge per day**. Traditional landfill disposal has resulted in significant greenhouse gas emissions and leachate pollution. Under the city's **Net Zero 2050 Strategy**, the municipal council decided to develop the SMF to comply with new central government regulations prohibiting the landfill disposal of untreated sludge.

The **SPV (Civic Financial Services Ltd.)** is responsible for financing and fee collection. Leveraging its local experience in **PPP/IFF infrastructure financing**—including projects such as the Transmission Gully Motorway and public-private partnership university accommodation—**ICBC New Zealand Branch** was selected as the lead arranger.

---

### 3) Environmental Benefits (Quantified Indicators)

Indicator	Baseline	After Project Operation*	Change
Sludge sent to landfill	100%	–80%	80% reduction
Annual CO <sub>2</sub> -equivalent emissions	63,000 tonnes	25,000 tonnes	–60% direct emissions
Annual biogas production	0	1.5 GWh of clean heat/power	100% substitution for natural gas
Landfill service life	Until 2035	Until 2045	+10 years (estimated)

\* Environmental benefits are based on registrations with NZ Infra.gov and municipal technical feasibility studies. Final figures will be independently verified after commercial operation in **2027**.

### 4) Innovative Financial Structuring and Integrated Benefits

Innovation	Financing Challenge	Economic / Social Benefits
<b>IFF-SPV structure</b> (debt kept off the municipal balance sheet)	Local government debt ceiling	Costs spread over 33 years; annual levy <0.3%, avoiding crowd-out of other infrastructure spending
<b>Sustainability coordinator role with performance-linked terms</b>	Investor focus on environmental outcomes	If key KPIs (sludge reduction rate, CO <sub>2</sub> abatement) underperform, loan margin +10 bps; if exceeded, –5 bps
<b>Multilateral syndicate with local banks</b>	Scarcity of long-tenor cross-border capital	Six lenders including ICBC, ANZ, and Kiwibank; ~30% aligned with green incremental deposits

### 5) Application of GIP Principles and Transferable Insights

#### Application of GIP Principles

- **Principle 2 – Understanding Environmental, Social and Governance Risks:**  
ICBC engaged third-party consultants during the feasibility stage to conduct an environmental impact assessment, focusing on leachate management, noise, and community health risks, with mitigation measures embedded in the financial model.
- **Principle 3 – Disclosing environmental information:**  
The loan agreement requires the SPV to publish semi-annual construction progress and

emissions monitoring reports, subject to independent audit. ICBC New Zealand discloses loan balances and environmental performance in its annual climate-related disclosures.

- **Principle 5 – Utilizing green financial instruments:**  
The loan qualifies under ICBC’s internal green classification for “solid waste resource recovery,” is recorded as green credit, and benefits from preferential FTP pricing.
- **Principle 7 – Building capacity through collective action:**  
Project documentation and post-lending monitoring templates have been shared with **12 Asia-Pacific member banks** within the Belt and Road Banking and Research (BRBR) network to replicate the “municipal sludge + IFF” model.

## Key Takeaways

1. **Local legislation combined with SPV-based user charges** can effectively bypass municipal debt ceilings.
2. **Linking environmental performance to interest-rate step-ups/step-downs** strengthens borrower incentives for operational excellence.
3. **Early engagement of third-party emissions verification** is recommended to facilitate subsequent green bond refinancing.

---

2024 年，惠灵顿污泥减量设施（Wellington Sludge Minimisation Facility, SMF）4 亿新西兰元绿色银团贷款成为中国工商银行（ICBC）践行“一带一路”绿色投资原则（GIP）的最新范例。项目在 2024 年 8 月完成资金划拨并进入设备安装阶段，**中国工商银行新西兰分行**担任牵头安排行和联合可持续发展协调行，充分展示了绿色融资、风险管控与多方协作的综合实力。（出处：<https://www.nzherald.co.nz/business/business-reports/infrastructure-report/icbc-innovative-funding-for-green-infrastructure/A56IFMK7ZBF5ZHBC6GZUI5HEJA/>（新西兰先驱报）；<https://timmccready.nz/2024/08/28/infrastructure-icbc-innovative-funding-for-green-infrastructure/>（记者个人博客原文）

### 1) 投资情况

地点：新西兰首都惠灵顿，Moa Point 污水处理厂园区。

投资额：约 4 亿新西兰元（≈2.45 亿美元）银团贷款，期限 33 年，由 IFF-SPV 发行债务、地方政府征收专项费偿付。

行业：固废资源化与清洁能源（污泥干化+厌氧消化并回收沼气发电）。

### 2) 投资背景与客户概况

惠灵顿市每日产生约 60 吨含水污泥，传统填埋方式导致温室气体和渗滤液污染。市议会会在《2050 净零战略》下决定新建 SMF，以满足中央政府禁止未脱水污泥入填埋场的新规。SPV（Civic Financial Services Ltd.）负责融资与收费；中国工商银行新西兰分行依托在 PPP / IFF 基建融资中的本地经验（Transmission Gully 高速、公私合营高校宿舍等）获选牵头行。

### 3) 环境效益（量化指标）

指标	基线	项目投运后*	变化幅度
污泥减量	100%送填埋	-80%送填埋	80%减量
年 CO <sub>2</sub> 当量	63000 吨	25000 吨	-60%直接排放
年产沼气	0	1.5GWh 清洁热/电	100%替代天然气
填埋场使用寿命	2035	2045	+10 年延寿（估算）

\*环境效益由 NZ Infra.gov 登记文件与市政技术可研给出，最终数据将由独立工程顾问在 2027 年商业运行后核证。

4) 创新产品设计与综合效益

创新要素	融资挑战	经济/社会收益
IFF-SPV 模式：债务不并表市议会	地方政府负债上限	33 年分摊费率<0.3‰，不挤占其他基建预算。
可持续发展协调行+绩效挂钩条款	投资者关注环境成效	若干关键指标（污泥减量率、CO <sub>2</sub> 减排量）未达标，贷款利差+10bp；反之-5bp。
多边银团+本地银行并行	跨境长周期资金稀缺	引入 ICBC、澳新、Kiwi Bank 等 6 家行共同承贷；30%份额对接绿色增量存款。

5) GIP 原则的应用与可借鉴见解

1.

**原则二：充分了解环境、社会和治理风险。**ICBC 在可研阶段聘请第三方完成环境影响评估，重点审查渗滤液、噪声与社区健康风险，并将缓解措施纳入财务模型。

**原则三：充分披露环境信息。**贷款协议要求SPV每半年发布建设进度与排放监测报告，并接受独立审计；ICBC NZ在年度气候相关披露中对外公开贷款余额与环境绩效。

**原则五：充分运用绿色金融工具。**该笔贷款满足ICBC绿色分类“固废资源化”门类；内部计入绿色信贷并享受FTP优惠。

**原则七：通过多方合作进行能力建设。**项目文件与贷后监测模板已分享至BRBR联盟内12家亚太成员行，用于复制“市政污泥+IFF”模式。

2.

启示：1) 本地立法+SPV 征费可规避地方政府举债天花板；2) 将环境绩效与利率阶梯挂钩，可提升借款人运营积极性；3) 建议在早期就引入第三方减排核证，方便后续绿色债券再融资。