Financing Offshore Wind.

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Jarredine Morris

Associate Director and Co-Head Africa - Carbon Trust



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Section 1

What is a bankable offshore wind project?

Key components of an effective OSW financing market

Successful OSW financing depends on risk allocation, revenue certainty and access to diverse long-term capital.

1

Broad investor base

- Participation from developers, infrastructure funds, private equity, pension funds, and insurers
- Different risk appetites across development, construction, and operations
- Enables capital recycling and long-term ownership transitions

2

Revenue certainty

- Strong offtaker credit quality and predictable revenue frameworks
- Government-backed support mechanisms (FiTs, CfDs, guarantees)
- Clear and enforceable contractual arrangements

3

Flexible financing

- Access to senior project debt, green bonds, sustainability-linked bonds, and refinancing
- Dedicated green market platforms that enable tailored issuances

Features of a bankable OSW project

OSW projects are considered bankable when the following conditions are met. Where gaps exist, tailored financial solutions can help close them and ensure the project's viability.

Market conditions

- **Ready infrastructure:** Ports, grids, and logistics capable of supporting construction and operations
- **Local supply chain capability:** Access to skilled labour, specialised vessels, and suppliers for project execution and maintenance
- **Stable policy framework:** Transparent rules and predictable regulations that reduce legal and political uncertainty
- **Fair market mechanism:** Electricity pricing determined efficiently and competitively to ensure economic viability

Deal specific features
Financial elements

- **Reliable offtake arrangement:** Clearly defined mechanism for selling electricity
- **Long-term contracts (PPA):** Agreements with creditworthy offtakers providing stable and predictable revenue streams
- **Competitive tariff:** Pricing that is attractive for offtakers and viable within the market
- **Private capital commitment:** Significant investment from commercial banks, private equity, or other profit-seeking entities
- **Risk allocation and mitigation:** Contracts and instruments that distribute and manage risks among stakeholders
- **Currency risk management:** Adjustments in financial modelling to account for exchange rate volatility

Deal specific features
Non-financial elements

- **Experienced developer:** Proven track record delivering similar energy projects
- **Creditworthy offtaker:** Financially stable entity capable of honouring long-term agreements
- **Lender step-in rights:** Provisions allowing lenders to assume control under defined circumstances, protecting debt repayment

Amended from GWEC's paper on Innovative Finance Mechanisms for Southeast Asia's Offshore Wind Take-off (2025)

Closing bankability gaps through targeted approaches

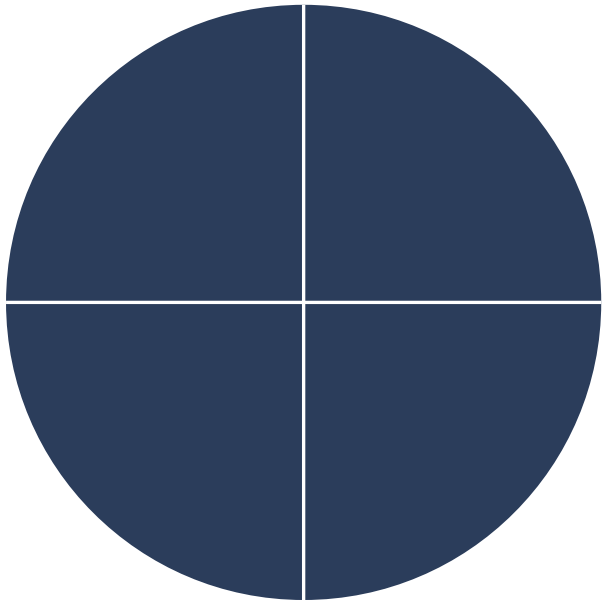
To deliver cost-effective finance on the scale required by the OSW projects, equity and debt investors must consider the following approaches.

Clear risk definition

- Identify, quantify, and allocate all major risks early, including unique risks such as earthquakes and typhoons, or where local industry experience is limited
- Ensure risks are borne by parties best able to manage them

Flexible capital structures

- Use highly leveraged project finance (≈70% debt) to maximise capital efficiency
- Build in refinancing flexibility to recycle capital into future OSW projects



Risk management

- Drive down the cost of capital by taking advantage of low risk, long term cashflows inherent in OSW
- Mitigate development, construction, operational, and political risks by relying on experience developers and suppliers with proven track records

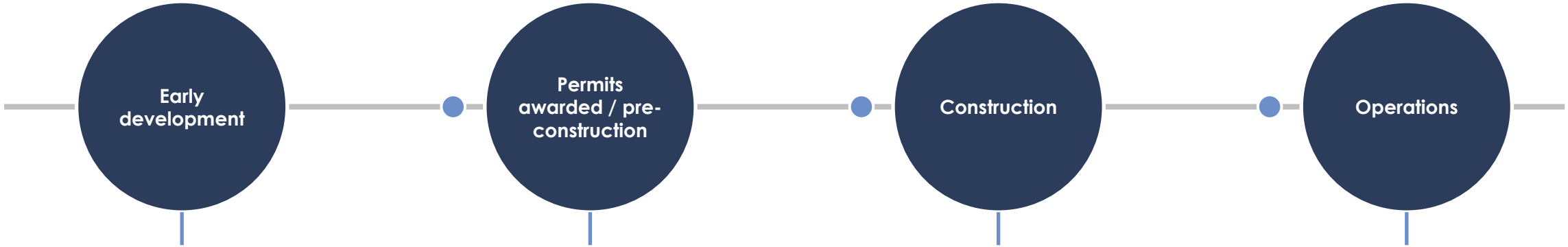
Market confidence

- Require bankability enhancements such as lender step-in rights and contractual remedies to protect debt repayment
- De-risk enabling OSW infrastructure by co-financing grid, port and logistics upgrades critical for OSW

Amended from Financing offshore wind in Taiwan – link

Key financing considerations along the OSW lifecycle

Risk is highest early while capital needs peak later. Financing structures evolve as uncertainty falls.



- Site studies, permit applications
- **Low capital requirements, very high risk**
- Funded by developer balance sheets, equity from investors or shareholder loans

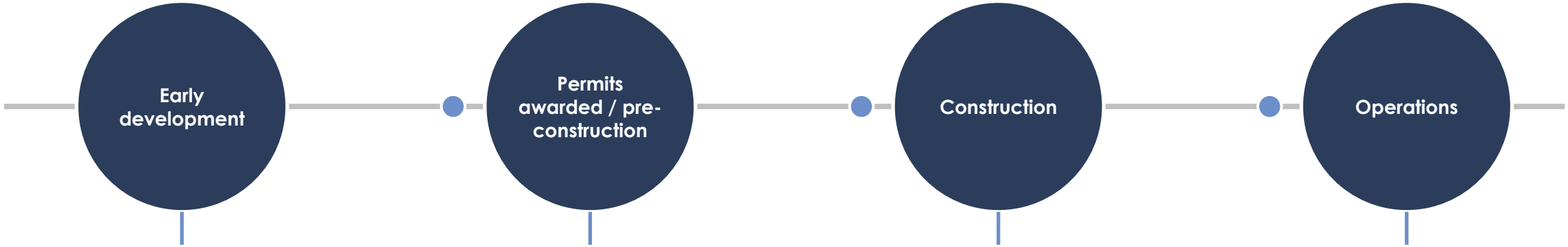
- Supply and installation contracts prepared, financing is secured
- **Medium risk, rising capital needs**
- Equity from developers/investors, shareholder loans, early-stage project finance

- Installation and grid connection
- **Very high capital needs, declining risks**
- Project finance becomes viable; export credit agency-backed finance or bond issuances are also options

- Stable power generation and revenues
- **Low risk**
- Refinancing loans on better terms; developers sell equity stakes to long-term investors; corporate finance for ongoing operations

What this means for financial institutions

Understanding the evolving risks and financing needs across the offshore wind lifecycle is key for banks to identify where and how to participate effectively.



- High risk stage, with a potential to lose up to 100% if project fails regulatory approvals
- Banks may be involved in limited roles related to advisory or small-scale financing exposures

- Medium risk profile as regulatory approvals received, but construction not yet started
- Banks may be engaged to prepare for larger construction financing or be involved in structuring risk-sharing mechanisms

- Lower risk profile, but construction and technical risks remain.
- Banks are involved in lending, and can structure non-recourse or limited recourse financing to lower capital costs for developers.

- Significantly reduced risks as project feasibility is confirmed and revenue streams are predictable.
- Banks have the opportunity to refinance the loans for developers.

What should be evaluated to ensure project bankability

Lenders need to review specific documents at each stage of an offshore wind project to assess risk, confirm readiness, and ensure the project is bankable.

Early development

Assess project viability and initial risks:

- Feasibility studies
- Environmental and social impact assessments
- Initial project design and concept layouts
- Preliminary cost estimates and financial model assumptions
- Letters of intent from suppliers or contractors

Permits awarded / pre-construction

Confirm regulatory compliance and readiness for financing:

- Permits and licenses secured
- Engineering and procurement plans
- Supply agreements and equipment contracts
- Offtake agreements and creditworthiness of offtaker
- Updated financial model

Construction

Monitor risk during high CAPEX period:

- EPC contracts with performance guarantees
- Construction schedules
- Insurance policies (construction, third party liability, delay in start-up)
- Drawdown schedule and cashflow forecast

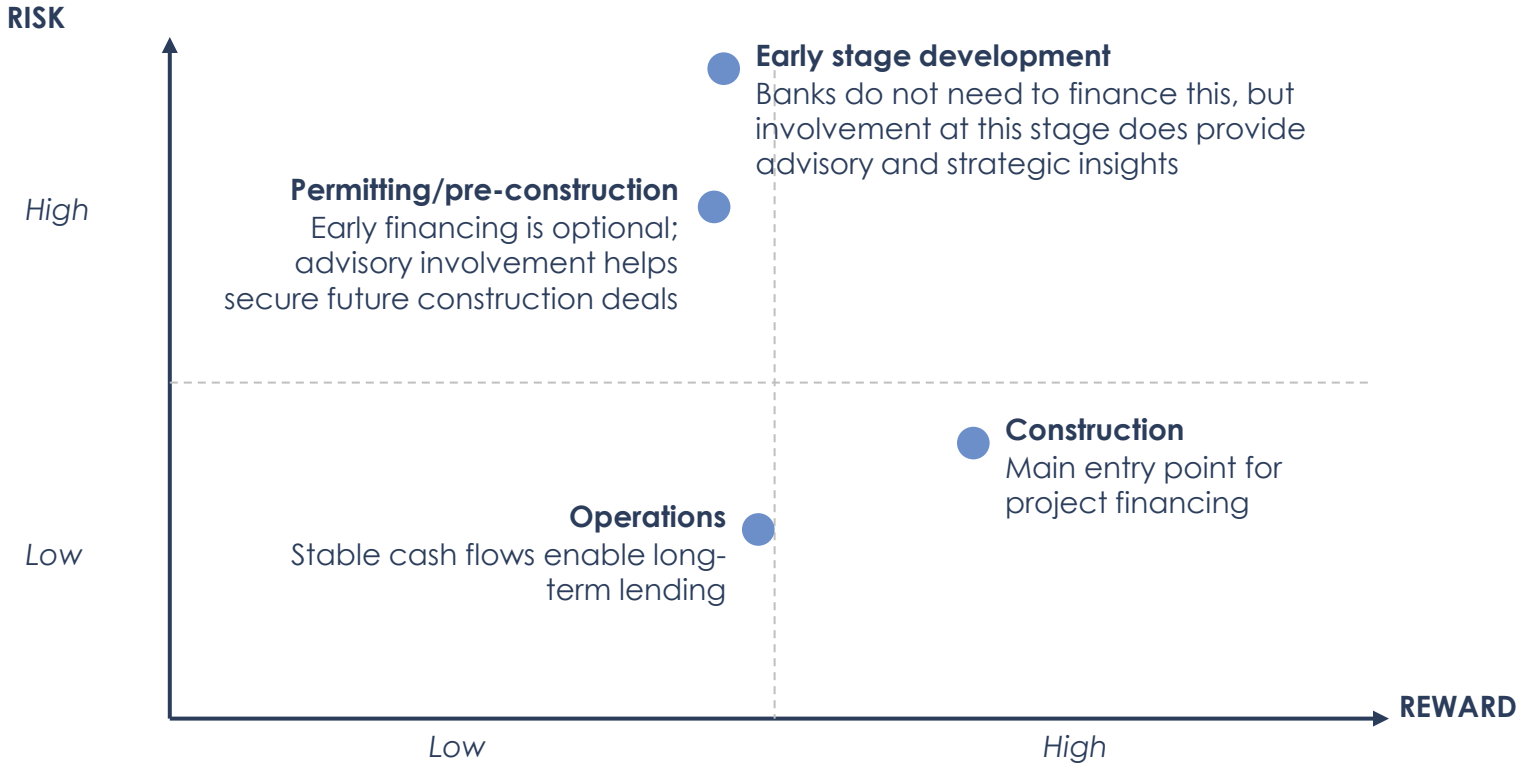
Operations

Confirm revenue generation, and ongoing risk management:

- Operations and maintenance contracts
- Performance monitoring reports
- Insurance policies (operational coverage)
- Financial statements and revenue reports (from PPA or market sales)

Key takeaways for managing risks across the OSW lifecycle

Navigating risk and reward across the offshore wind lifecycle helps banks strategically target financing and advisory opportunities, and build in-house capacity accordingly.



Risk mitigation tools that banks may consider

Permitting/pre-construction:
- Early stage project insurance
- Development guarantees

Construction:
- Fixed price contracts
- Completion guarantees
- Export Credit Agency / Multilateral bank support

Operations:
- Refinancing once operational

The role of blended finance in making OSW bankable

Blended finance is particularly effective when commercially viable OSW projects cannot proceed on purely market terms due to elevated risks or market constraints.

When is blended finance appropriate?

Blended finance should be used only where clear financing gaps exist, such as:

- Excessively high risk premiums
- Lack of credit enhancement or long-tenor debt
- Shallow domestic capital markets or limited lender appetite

Why blended finance is relevant for global FIs?

Banks face structural constraints when financing OSW at scale:

- Large single-asset exposures relative to balance sheets
- Long tenors (20–30 years) exceeding traditional lending norms
- Construction and typhoon-related risks that are difficult to price domestically
- Multi-currency exposure driven by imported turbines and equipment

How blended finance supports local bank participation

Risk reduction

Guarantees and ECA-backed tranches absorb higher-risk exposures, transferring political, construction, and country risks away from local banks and improving internal credit approvals.

Tenor alignment

Long-tenor funding from DFIs and ECAs aligns debt maturity with project life, allowing local banks to participate through shorter or medium-tenor tranches without compromising project viability.

Improved structural dynamics

ECAs and international banks boost lender confidence, reduce concentration risk, and help provide financial stability during periods of market stress.

Section 2

UK Case study

Case Study

UK 900MW project

Based on a case study from SCOR

Step 1: Basic bankability

- **Location:** Offshore Lincolnshire / North Norfolk, UK
- **Capacity:** ~900 MW, 90 × 9.5 MW turbines
- **Grid connection:** 66kV subsea arrays; offshore substations; 220kV export cables
- **Sponsor:** Leading German energy company, BBB credit rating, USD 30B market cap
- **Offtaker:** Integrated Danish energy company, BBB+ rating, 100% output under long-term PPA
- **Financing:** ~GBP 2B senior secured project finance
- **Timeline:** 4 year construction + 15-year repayment



Key questions to ask:

- Does the sponsor have balance sheet strength to support construction risk?
- Has the sponsor delivered projects of similar scale before?
- Is the offtaker investment-grade and contractually locked in for the debt tenor?

Strong sponsor and offtaker reduce counterparty risk, and fully consented site minimises development risk.

Step 2: Understand the regulatory context

The UK Contract for Difference (CfD) is a revenue stabilisation contract between the project and a government-backed counterparty. It sets a fixed strike price per megawatt-hour for ~15-20 years.

The project is insulated from market price volatility:

- When prices fall, revenue is topped up
- When prices rise, upside is returned

For banks, this means the project no longer depends on power price forecasts to repay debt.

This is very similar in effect to a long-term, creditworthy PPA, except the counterparty risk is ultimately linked to the UK government.

However, the CfD **does not remove all risks**. Banks still need to focus on:

- Construction risks and cost over-runs
- Turbine performance and availability
- Settlement mechanics and whether reserve accounts cover timing mismatches
- What happens to revenues after the CfD expires

Step 2: Understand the regulatory context - revenue certainty

Project finance is essential for scaling offshore wind but only works when revenue certainty and risk allocation meet lender and investor requirements. Revenue uncertainty raises risk for both equity and debt providers, increasing costs and potentially limiting project viability.

With revenue support (feed in tariffs, contracts for difference, bankable CPPAs)

- Predictable cash flows
- Lower risk premium for debt
- Broader pool of equity investors
- Enables project finance, higher leverage
- Supports large-scale OSW deployment

Without revenue support

- High cash flow volatility
- Reduced leverage, tighter loan terms
- Higher equity return requirement
- Shift toward balance sheet finance or stalled projects
- OSW may fall outside risk appetite of conservative investors

Step 2: Understand revenue certainty and cash flow strength

- 15-year Contract for Difference (CfD) awarded 2017
- Guarantees GBP 75/MWh strike price for electricity produced
- 100% offtake under long-term PPA with offtaker (investment-grade Danish energy company)
- High debt service coverage ratio of > 1.50x
- Cash flow stress tested against operational downtime and minor price variations

Why this is important for banks

- Eliminates merchant price risk
- Provides predictable cash flows for debt service
- Aligns revenue certainty with 15-year loan tenor
- Simplifies credit risk assessment and DSCR modelling

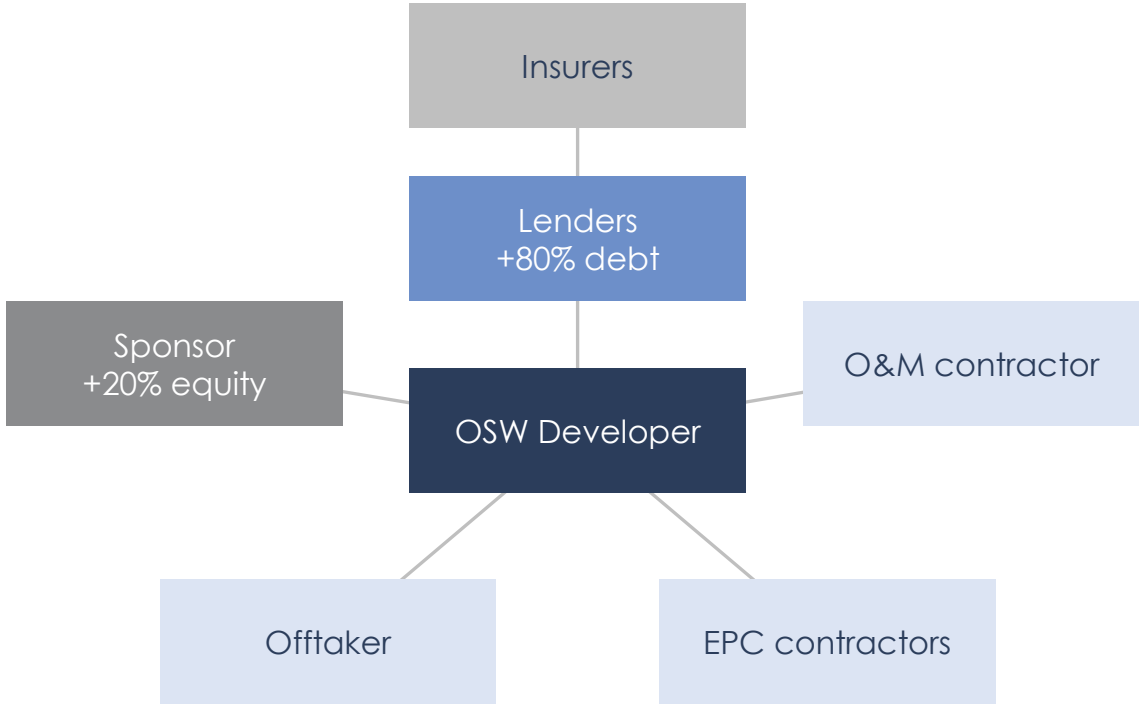
Reliable, government-backed revenue allows banks to confidently provide long-term, non-recourse project financing.

Step 3: Review capital structure

- Debt/Equity: 80% debt / 20% equity
- Senior secured project finance
- 4 year construction tenor + 15-year repayment
- Security over all material contracts and assets
- Insurance: Covers all risks under construction and operations, as well as "Delay in Start-up" and business interruption

What should banks focus on:

- Adequate equity commitment upfront
- Full security over cash flows and assets
- Insurance coverage aligned with risk profile



Full security and insurance package reduces downside exposure and enhances credit comfort.

Step 4: Identify key risks and mitigation measures

	Risks	Mitigation measures
Construction	- Tight budget - Multi-contract structure - Supply chain constraints (e.g. installation vessel shortages, turbine delivery bottlenecks)	- Sponsor's proven construction management capability - Fixed price contracts and delay liquidated damages - Full construction and delay insurance - Advance booking of vessels and diversified supplier strategy
Operations	- Turbine downtime affecting availability	- Tier-1 turbine supplier - 94% availability warranty
Regulations	- Changes to the CfD scheme - Changes in annual network charges (cannot be fully mitigated through contracts)	- Government-backed mechanism embedded to UK national law, terms cannot be unilaterally changed by government - Model scenarios for network charge volatility and ensure financial buffers
Supply chain	- Global installation vessel shortages - Turbine and component delays	- Early procurement and locked-in manufacturing slots - Contractual penalties for late delivery

Risks are clearly identified by the developer, contractually allocated, and insured which is a core requirement for non-recourse lending.

Lessons for financial institutions

Prioritise revenue certainty and creditworthy offtakers

Assess sponsor experience against project scale and complexity

Ensure construction and operational risks are contractually allocated and insured

Match debt tenor to revenue visibility

Require robust debt service coverage ratios

Use syndication and blended finance to diversify risk and leverage local bank participation

THANK YOU

CONTACT DETAILS

Jarredine Morris
Associate Director and Co-Head Africa
Carbon Trust

Email: Jarredine.Morris@carbontrust.com