

MASTERING THE LEE

Protecting Lives During Pilot Transfers



Introduction

Why the Lee matters

Creating a Lee¹ for a pilot transfer is one of the most safety-critical operations in navigation. It's a moment where timing, teamwork, and clear communication must align, under pressure, in changing conditions, and often in confined waters. A poorly executed Lee can expose both the pilot and the pilot vessel to significant hazards, including unpredictable and often violent motion caused by wind and sea, compounded by the dynamic interaction.

While physical rigging and the pilot transfer arrangement (PTA) are covered extensively elsewhere, this guide focuses on **navigational decisions** and **bridge team coordination** involved in creating a Lee. However, we emphasise that for all PTA arrangements, a responsible officer must be present at the pilot boarding access.

¹ The sheltered side of the vessel, intentionally created to mitigate wind and sea exposure during pilot transfers.



Section 1

Understanding the risks

Key hazards when creating a Lee

Like any manoeuvre, creating a Lee carries inherent risks that must be anticipated and managed with precision. The following hazards represent the most critical threats to vessel safety, pilot welfare and operational control:

1. Turning toward danger

Temporarily altering course to create a Lee may bring the vessel closer to navigational hazards such as shallow water or other obstacles. This risk must be managed through precise timing, accurate distance assessment and continuous situational awareness.

2. Misinterpretation by other vessels

Nearby traffic may wrongly misread your turn as a collision avoidance measure, leading to unexpected and hazardous reactions. The master remains fully responsible for compliance with all applicable COLREGS and must ensure intentions are clear and predictable.

3. Bridge team disruption

When the master steps onto the bridge wing, collective situational awareness can degrade. Clearly defined roles and robust closed-loop² communication protocols must be clearly defined.

4. CPA/TCPA changes

Alterations in course or speed will affect your Closest Point of Approach (CPA) and Time to CPA with nearby traffic or other navigational hazards. These must be continuously monitored and reassessed, particularly where room to manoeuvre is limited.

5. Weather exposure

Creating a Lee may increase your vessel's exposure to wind and sea, which may introduce new risks including increased drift, reduced manoeuvrability and greater motion on deck – all of which may compromise safety.

6. Increased rolling

Holding a steady course in a beam or quartering sea for too long may induce rolling, making pilot boarding unsafe. Ideally, the Lee is created immediately before the pilot vessel is ready to make its approach alongside. This requires careful timing and good communication between the vessels.

7. Reduced steering control

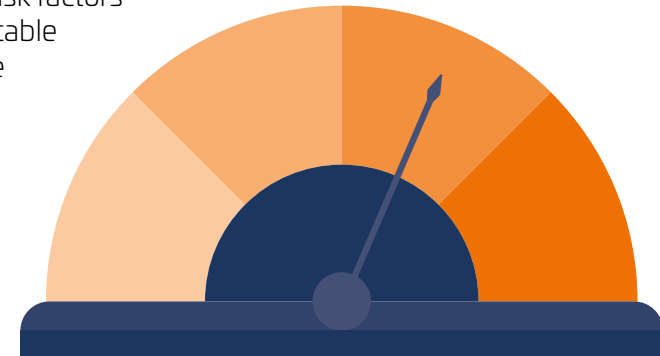
Low speeds degrade helm response, especially in swell or current. Maintaining steerage may require proactive use of engine power and larger steering inputs to keep the vessel steady and responsive during the pilot transfer.

8. Single-point communication risk

Relying on a single person or communication channel – especially via radio – can lead to missed or misunderstood instructions. A closed-loop communication system with redundancy is essential in dynamic situations.

Key Takeaway: These risk factors can combine in unpredictable ways. Every Lee must be treated as a high-stakes manoeuvre requiring full team coordination.

² Closed-loop communication is a safety protocol in which the recipient of an instruction repeats it back verbatim to confirm accurate understanding. This reduces the risk of miscommunication during high-pressure and dynamic situations



Section 2

Planning the transfer

Pilot boarding areas (PBAs)

PBAs are charted and selected for their shelter, sea room, and separation from traffic.

- Always aim to complete transfers **within** designated areas unless conditions require otherwise.
- If requested to board outside a PBA, **pause and assess**, seek confirmation from VTS or pilotage authorities.

Be aware: Time spent creating a Lee consumes space quickly. Stay alert to positional drift while manoeuvring.

Timing is critical

Creating a good Lee is as much about **timing** as it is about heading and shelter.

VTS coordination

- VTS should allocate boarding windows and advise optimum speeds to prevent congestion.
- Use this quiet window to execute the manoeuvre without distractions.

Speed and ETA management

- Aim for steady, mid-range speeds. Avoid rushing or arriving too early.
- Maintain predictable movements in the vicinity of the pilot station.

Pilot vessel boarding speed

- Confirm the correct boarding speed early. It will depend on the pilot boat's capability and sea conditions.
- Don't over-commit to a final approach if the pilot boat is delayed. This is especially dangerous on a flood tide.



Section 3

Executing the plan

Creating the Lee

Creating a Lee is usually requested by the coxswain of the pilot boat. The heading requested can sometimes be more than necessary to create a lee, and this can cause difficulties for the master in regaining steerage when at slow speed. If this occurs, the master must reject the request and state what is safe for the vessel.

- Turn so that wind, swell, or sea strikes the hull from roughly **two points off the bow opposite** the ladder side.
- While a wind from ahead is ideal, sometimes a quartering wind is necessary; this increases rolling and reduces helm response, so caution is vital.
- Maintain **visual contact** with the pilot boat and continuously monitor its position.

Tip: Creating the lee is the culmination of the approach, not the beginning. It should feel like a coordinated, final step - not an improvised action.

Communication: A two-way system

Once steady on the Lee heading, inform the pilot boat immediately.

The responsible officer at the pilot boarding area should report back to the bridge as each of the following occurs:

- pilot boat is alongside
- pilot is on the ladder
- pilot boat is clear
- pilot is safely aboard

Only then should the master return to the original heading and adjust RPM as needed.

Situational awareness during the transfer

The master should stay on the leeward bridge wing from the time the pilot boat approaches until the pilot is safely on board.

Because this limits the master's full navigational overview, the bridge team must:

- Report distance and time "off track"
- Continuously monitor traffic (CPA/TCPA)
- Plot nearby targets — especially at or near the end of fairways
- Use flags (e.g., **Hotel** or **Golf**) to indicate to other ships what is happening, but never relax active monitoring of nearby traffic.



Section 4

Contingencies and team culture

Share the plan

- Before arrival or departure, communicate your Lee-making intentions to the pilot station or VTS.
- A shared understanding supports quicker adjustments if something changes mid-manoeuvre.

Abort early if unsure

- If weather, traffic, or timing compromise safety, **abort early**.
- Notify the pilot boat immediately and outline an alternative plan.
- A transfer can always be reattempted under better conditions.

Aborting is not failure — it is professionalism.

Section 5

Summary

Creating a Lee is a moment of intense **focus**, where multiple risks converge and decisions must be made with precision. When done right, it is seamless. When misjudged, it quickly becomes hazardous.

Key Takeaways:

- Respect the risks — plan with care.
- Coordinate with VTS and pilot services early.
- Manage timing, speed, and space deliberately.
- Keep communication constant and structured.
- Never hesitate to abort if safety margins are eroded.
- **A good lee is brief, safe, and controlled.** It protects the pilot, the vessel, and everyone involved.



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