

aking Cathedrals

elmsman Kevin
Cooper noses
the pilot cutter
out of Ramsgate
harbour and
steers towards
an orange smudge
on the horizon.

It's nine in the morning and the night mist is fading.

Kevin guns the throttle and, as the cutter carves through the sea at 20 knots, his target sharpens into the shape of a ship.

She's the *Cap Cleveland*, a container vessel that's spent the night seven miles off Kent's North Foreland, waiting for a rising tide to carry her into the Thames.

She's huge - almost one and a half times the length of Canterbury Cathedral, with a bridge that towers seven storeys above the deck.

When fully loaded she can carry 1,400 large containers, each similar in size to a lorry trailer. She's also a Panamax - one of the largest vessels to squeeze through the Panama Canal.

As the pilot cutter closes on her, she literally blots out the morning sun.

Midway along her deck, two storeys above sea level on her port side, crewmen in yellow overalls appear. They lower a rope ladder - it's an invitation.

The pilot boat starts to slow, edging in towards the *Cap* until it's matching her boarding speed - 6.5 knots. The sea's slapping, hissing and spitting through the narrowing gap between the two vessels.

Port of London Authority pilot Bob Ward walks up to the cutter's fore deck and, as the 16 metre



Bob Ward





support boat nudges against the *Cap's* hull, he grabs the ladder and begins to climb.

He's met on deck by a member of the crew and led through a labyrinth of walkways and stairwells to Captain Poprochalov Valeri on the bridge.

For the next four hours and 45 minutes, Bob will be responsible for guiding this ocean-going giant through the shoals and channels of the tidal Thames.

It's taken the ship just eight days to steam from Philadelphia, but her time in the cross-currents of the Thames will be among the most challenging.

She'll be riding a flooding tide, so the water's not at its deepest as she passes through the channels.

In fact, in parts, she'll have just a metre - the length of an adult's leg - between her and the bottom.

"You need your wits about you when you're piloting a ship like this," says Bob, as he gives the

Cap's helmsman a course to steer.

"Where there's a metre of water under us, we've got to be very careful - if the sea swell gets up, we'll have less depth in the troughs.

"We've also got to watch our speed. If we go too fast, the water passing between us and the sea or river bed can cause a suction that pulls the ship towards the bottom - we call it squatting.

"There's a similar effect if ships pass too close in a channel they're literally drawn into each other.

"I've also got to keep an eye on the wind because it can have a major impact on the way a highsided vessel like this behaves."

But the airs are light today, and the *Cap* slides calmly through a maze of channels. The Fishermans Gat takes her roughly north, then she swings left into the Black Deep - heading south west towards the Thames.

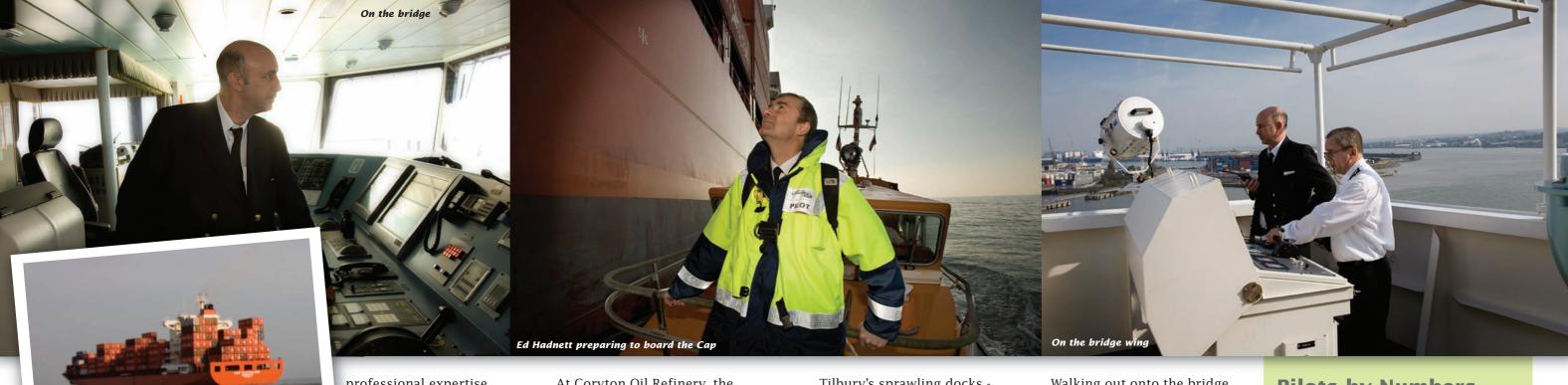
A fog bank is hanging on the horizon and, out here, it feels like the *Cap's* gliding across the open ocean.

Only the occasional marker buoy gives a clue to the complex canyons, shallows and obstacles that run beneath this glassy expanse of sea.

Bob, a pilot for 17 years and a seafarer since leaving school, has two electronic GPS charts and two radar screens to refer to on the bridge.

They track the *Cap's* progress as she eases through the Knock John Channel, dwarfing a rust-blasted World War II fortress tower that shares the channel's name.

"The technology is a great help," he says. "But it's not a replacement



for traditional skills.

Cap Cleveland

"There's a time lag between the moment a ship manoeuvres and when that registers on the screen, so we're always seeing a reflection of the past rather than a prediction of the future.

"That's why you still need to feel the ship moving beneath the soles of your feet. You still have to know where you are relative to the real world."

Pilots are among our most skilled seafarers. They've been guiding ships through the Thames since the days of Henry VIII. And, for an island nation that relies on the sea for more than 95 per cent of its imports and exports, they're crucial to the economy.

Ed Hadnett, the Port's pilotage operations manager who's travelling with Bob, says: "Many of our people commanded their own vessels at sea before they joined us as trainee pilots.

"Unlike most ship's masters, they can be navigating a relatively small coaster or "scoot" one day and ocean liners or an aircraft carrier the next.

"The breadth of experience and

professional expertise required to do this job is considerable."

The *Cap*, packing

The *Cap*, packing goods as varied as electrical items and

refrigerated food, passes into the Oaze Deep. The Shivering Sands Tower and Kentish Flats Wind Farm are picked out against the fierce blaze of the sun that now hangs over Kent.

Through the Oaze and along Sea Reach, which cuts a swathe between Southend and the Isle of Grain, Bob constantly adjusts the *Cap's* course and regulates her speed.

Now other ships are steaming out of the Thames and, off Southend, white flecks of yacht sails are scattered around the pier.

"Visibility's always an issue, even on a clear day," says Bob. "There's a 400 metre blind spot directly under the *Cap's* bow, so a small craft that steers into that area won't be seen from the bridge.

"Even if it is seen, a ship like this doesn't stop or turn on a sixpence - in fact, when she's fully loaded, it could take around 20 ship-lengths to come to a standstill.

"That's why the law says that these smaller vessels must give way to us in these channels." At Coryton Oil Refinery, the *Cap's* running at around eight knots. The mist's gone completely and, in the blinding sunlight, the river snakes away towards the west like a gold thread.

Bob's checking a small black notebook where he's listed a number of landmarks and waypoints on the river. Next to these he's pencilled his expected arrival times.

He says: "Before I've even set foot on a ship, I draw up a passage plan. I take a look at the ship's displacement, its draught and speed.

"I look at the time we're expected on the berth. And I look at the tidal predictions and weather forecasts. (In fact, my obsession with the TV weather bulletins drives my wife mad.)

"On the back of this, I workout what time we should pass various markers on the way up the Thames, and what the depth will be at these points.

"At each marker, I compare the ship's performance against my calculations and, if I have to, adjust her speed to make sure we're on time with enough water under us."

Today, Bob's timings have been spot on.

The *Cap* winds up river through Lower Hope, then swings into Gravesend Reach.

Tilbury's sprawling docks the journey's end - feel close enough to touch. But the way ahead's blocked.

Two Svitzer tugs, *Cecilia* and *Mercia*, are sitting mid-stream. They don't shift as the *Cap* bears down of them. It's like a maritime stand-off.

"These two are crucial," says Bob, thumbing towards the tugs and taking out a hand-held VHF radio. "The slowest speed this ship can do is 6.5 knots and it has no brakes.

"We can stop the engine but then we won't be able to steer her.

"So these tugs are our steering and brakes instead."

Bob talks into the radio and the tugs break, *Cecilia* hurtling backwards down the *Cap's* portside and disappearing astern; *Mercia* tucking, unseen, under the bow.

Captain Valeri, on a separate radio, orders his crew to the bow and stern, to take the tugs' towing lines.

Bob's radio crackles, both tugs have put lines aboard - they've strapped themselves to the *Cap*.

Now, with Tilbury Container Services almost alongside, Bob's coordinating the crews of three vessels with all the calm of a man ordering pizza. Walking out onto the bridge wing, which overhangs the side of the ship, he talks the tug teams and Captain Valeri through the final stages of the complex manoeuvre.

The *Cap's* no longer moving forwards, but sliding sideways into a 'parking space' behind another container vessel that's already unloading.

From the lofty bridge, the huge dockside looks deceptively small. But Bob isn't daunted.

"Everyone who works for the Port, regardless of their occupation, contributes to the same goal - the safe movement of vessels on the tidal Thames,' he says, as 35,000 tonnes of ship and cargo gently kiss the dockside and come to a standstill.

* Although the Cap Cleveland's large at 222 metres long and capable of carrying 2,824 teu (20ft equivalent units), she's not the biggest vessel to call at Tilbury Container Services. Earlier this year, Bob was second pilot aboard the Sovereign Maersk - 347 metres long, 8,050 teu.

Pilots by Numbers

- 73 sea pilots work the waters between the North Sea and Crayfordness.
- 12 river pilots take vessels between Gravesend and London Bridge.
- Three bridge pilots guide specialist cargoes through central London as far as Putney.
- Six master mariners are currently training to become pilots for the Port.
- London pilots work from four stations - Gravesend, Sheerness, Ramsgate and Harwich - where special boats or cutters carry them to and from ships travelling between the Port and the open sea.
- Around 13,000 pilot boardings take place each year for a port that's the third biggest in Britain.