



MARINE COORDINATION

GREATER GABBARD OFFSHORE WIND FARM

CASE STUDY



“Marine Coordination is the operational heartbeat of any offshore wind farm.”

The [G+ Marine Coordination Good Practice Guidelines \(GPG\)](#) sets out the industry standard for how offshore wind operators should manage the movement of people, vessels, and activities at sea. It defines the core principles of safe marine operations.

This case study demonstrates how SSE puts those principles into practice.

At Greater Gabbard, SSE's setup reflects the Duty of Care principles set out in the G+ GPG. In practice, this means maintaining real-time situational awareness of every vessel, technician, and offshore activity — ensuring people are kept safe and operations run efficiently.

Marine Coordination in practice

SSE delivers this through dedicated Marine Coordination control rooms, each staffed by trained Marine Coordinators who:

- Manage personnel access
- Track vessel movements
- Monitor metocean conditions
- Lead responses to unexpected events

Their constant oversight ensures all activity remains within safe operating limits.

From single-site to hub models

Traditionally, Marine Coordination followed a single-site model — each wind farm controlling only its own activities. As SSE's portfolio grows, the approach is shifting toward hub-style coordination. Benefits include:

- Greater resilience and shared expertise
- Streamlined and consistent processes
- Improved resource efficiency across sites

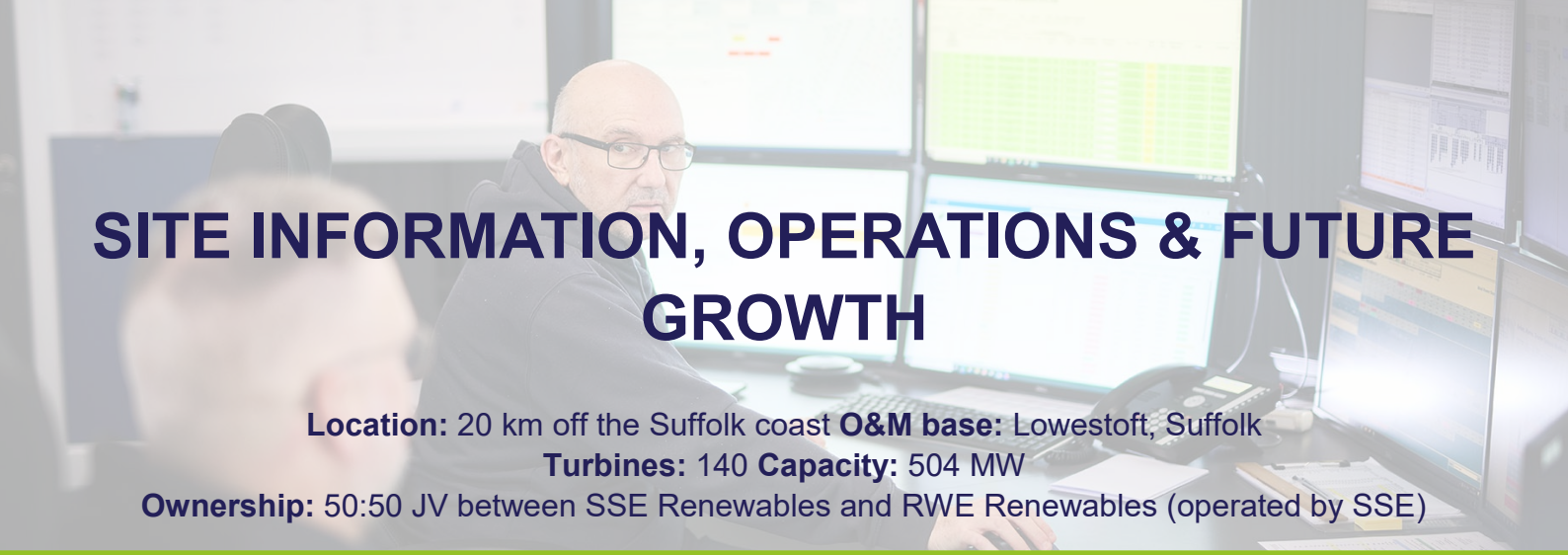
For a large and expanding portfolio like SSE's, this evolution supports safer, more integrated operations.

Good Marine Coordination does three things exceptionally well:

Prevents incidents

Improves efficiency

Supports emergency response



SITE INFORMATION, OPERATIONS & FUTURE GROWTH

Location: 20 km off the Suffolk coast **O&M base:** Lowestoft, Suffolk

Turbines: 140 **Capacity:** 504 MW

Ownership: 50:50 JV between SSE Renewables and RWE Renewables (operated by SSE)

Greater Gabbard operations

SSE's strategy prioritises vessels that are proven, compliant, and suitable for the site's metocean conditions. Every vessel undergoes a full acceptance process including:

- Certifications checks
- Electronic common marine inspection document inspections
- Communication testing
- Audits

From the Lowestoft control room, the Marine Coordinators maintain real-time tracking (personnel on board, vessel movements, weather windows, and access approvals). All crews begin the day with a briefing to ensure shared understanding of risks, plans, and conditions.

Collaboration

Continuous alignment with wind turbine generator (WTG) original equipment manufacturer (OEM) and offshore transmission owners (OFTO)* ensures safe scheduling and synchronised access.

Cross-site communication with neighbours supports shared radio channels, notification processes, and conflict avoidance.

Each morning, Greater Gabbard and a neighbouring site confirm transit plans, weather risks, restrictions, and operational priorities.

Consistency across diverse sites

SSE's two further UK sites currently in operation, Beatrice (Wick Harbour) and Seagreen (Angus) each have unique characteristics — different vessels, port arrangements, and operational rhythms. Despite these differences, consistency is maintained through G+ guidance, SSE standards, unified vessel acceptance process, internal working groups focused on assurance and coordination alignment.

Digital enhancements

SSE is trialling integrated systems combining vessel tracking, metocean data, personnel information and permit management.

AI-based decision tools and historic performance analytics are being explored to support improved planning and risk assessment.

Portfolio growth

As SSE's offshore footprint expands, more vessels and greater simultaneous operations (SIMOPS) complexity will require:

- Advanced marine management platforms
- Predictive scheduling
- Portfolio-wide dashboards
- Enhanced competency framework for Marine Coordinators

*Offshore transmission owner: A licensed company responsible for owning and operating the offshore transmission assets that export electricity from an offshore wind farm to the onshore grid.

A day in the life of a Marine Coordinator



04:30 Starting the day early

A typical day for John, Marine Coordinator at Greater Gabbard, begins before sunrise, when most people are still deep asleep. By 04:30 he's already up and easing into the day with a deep dive into the weather. He's checking and confirming conditions are safe enough for everyone heading offshore.

05:00 Vessel readiness and personnel checks

Once he's satisfied the weather won't throw any surprises, John moves on to vessel readiness. That means making sure the boats are good to go, packs are loaded, manifests are spot-on, and nothing has been overlooked.

05:30 Route plans, Toolbox talks and morning briefings

Before the first vessel even leaves the port, John has already verified route plans, delivered Toolbox talks (a word document that is updated daily and emailed out), and sent out the key morning emails that set the tone for the day. It's a mix of coordination and communication, making sure everyone has the information they need before stepping onto a vessel.

06:00 Vessel departures and real-time monitoring

As vessels begin to leave the harbour, John logs each departure and tracks their transit to the wind farm in real-time. He keeps a close eye on progress, making sure everything is running smoothly as the day's operations get underway.

Throughout the day—the coordination hub

Once the teams are offshore, John becomes the central point of contact for just about everyone: technicians, port teams, OEM representatives, Marine Warrant Surveyors, OFTO colleagues. He monitors vessel movements inside the wind farm, manages SIMOPS, and issues permissions for assets access. Every movement is tracked, every update noted, all to make sure the day stays safe and compliant.

Incident response—when things don't go to plan

If something goes wrong, and occasionally it does, John is the one who responds. Whether it's a minor issue or a major incident, he coordinates the response calmly and methodically. He has dealt with everything from unexpected third-party vessel entering the site to aviation-marine interface issues, and every now and then, something more dramatic—like losing engine power in the traffic separation scheme and drifting towards assets. In those moments, John's actioning drift plans, advising on shutdowns, and ensuring separation is maintained to avoid harm to people and prevent asset damage.

Late afternoon—returns, confirmations and close-out

As technicians finish up on assets and vessels begin their return journey, John continues monitoring until everyone is safely back in port. He confirms arrivals, validates returns, and wraps up the day with operational checks and a debrief. Only once everything is accounted for does he hand over to the night shift.

GOING GLOBAL: COLLABORATION WITH SSE PACIFICO

SSE hosted SSE Pacifico, a joint ownership between SSE Renewables (UK) and Pacifico Energy (Japan) at Greater Gabbard to demonstrate a mature Marine Coordination model. Greater Gabbard is a strong example of G+ aligned good practice, it was the natural choice for knowledge sharing.

Key learnings

- Competency expectations for Marine Coordinators
- Vessel acceptance and assurance processes
- Integration of marine, logistics, and port operations.

SSE, in turn, gained insight into Japanese regulatory structures and cultural safety approaches. It also demonstrated the importance of ensuring global guidance, such as G+ publications, are adaptable to meet the requirements of different markets.

What's next?

G+ is already translating the Marine Coordination Good Practice Guide into Japanese, and SSE will continue working with SSE Pacifico as their development projects progress.

More broadly, there is increasing interest in offshore wind across Asia. SSE is progressing an offshore wind development pipeline in Japan through the SSE Pacifico joint venture, the company will continue to share relevant experience to support safe and consistent marine operations in offshore wind.

Contact details

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Organisations involved

The Greater Gabbard Offshore Wind Farm is a 504 MW project on sandbanks 23 kilometres (14 mi) off the Suffolk coast, England. It is owned by **Greater Gabbard Offshore Wind Limited (GGOWL)**, a JV between SSE Renewables and RWE Renewables (operated by SSE).

SSE Renewables have supported the development of this case study and provided the operational information referenced throughout.

The **G+ Global Offshore Wind Health and Safety Organisation (G+)** brings together the offshore wind industry to pursue shared goals and outcomes. The members of the G+ are lead operators and owners of offshore wind farms and WTG OEMs.

The **Energy Institute (EI)** is a not-for-profit registered charity, which exists to promote and advance knowledge, skills and good practice in energy for society's benefit.