

# Innsikt og innovasjon

## Sammenstilling av havvind turbiner i Norge

Wergeland Group

CEO Margunn Bjørnstad

# Who we are

- ▶ Family-owned group
- ▶ Founded in 1956
- ▶ 12 business areas
- ▶ 200 employees
- ▶ Brick-by-brick development philosophy



# Vision

**Wergeland Group –  
a leading industrial group  
in Europe**



# SOLID

Vi står stødig, leverer med kvalitet og bygger  
tillit over tid

# VISJONÆR

Vi tenker langsiktig, utfordrer det etablerte og former  
fremtidens industri

# ENGASJERT

Vi er engasjerte - i jobben vi gjør, folkene vi jobber  
med og i samfunnet vi er en del av

# ANSVARLIG

Vi tar eierskap, gjør det riktige og står for det vi gjør



Dry Dock:

- Length 135 m
- Width 102 m
- Depth 20 m

- 18 MW Test Turbine

Landowner



Base operations



Offshore wind



Environmental



E-ferry operations



Shipyard



Oil spill response



Mechanical services



Plaster and gravel



Concrete prod.



Shipping



Finance



# Plaster and Gravel



- ▶ One of Norway's largest quarries
- ▶ Extraction of masses as part of the development of the industrial area
- ▶ Aggregates qualified for FOW floaters
- ▶ 3,000,000 tons delivery annually, aims to increase production over the next 5 years

# Tenants @ Sløvåg



# Sustainability



- ▶ Reduced carbon footprint
- ▶ Port distributed heating system for all building and concrete production
- ▶ All concrete aggregates produced locally – no incoming transport
- ▶ Change from fossil fuel to electrical driven cars and machines
- ▶ Electric quarry
- ▶ Electrical ferry operations
- ▶ Planned 18 MW test wind turbine at port
- ▶ Installed shore electrical power capacity for vessels
- ▶ From waste to resources: Baseoil

# Supersite Sløvåg - Port features

- ▶ Immediate vicinity to the North Sea
- ▶ 1 600 000m<sup>2</sup> ++ zoned area
- ▶ 960 000m<sup>2</sup> levelled at quay height with 150 t/m<sup>2</sup> ground bearing capacity
- ▶ Deep water quayside
- ▶ 1 750 metres quay length(currently)
- ▶ All essential infrastructure in place
- ▶ Small tide difference
- ▶ Sheltered port with free passage to the North Sea
- ▶ No height restrictions
- ▶ ISPS approved
- ▶ Wet Storage



# Size matters

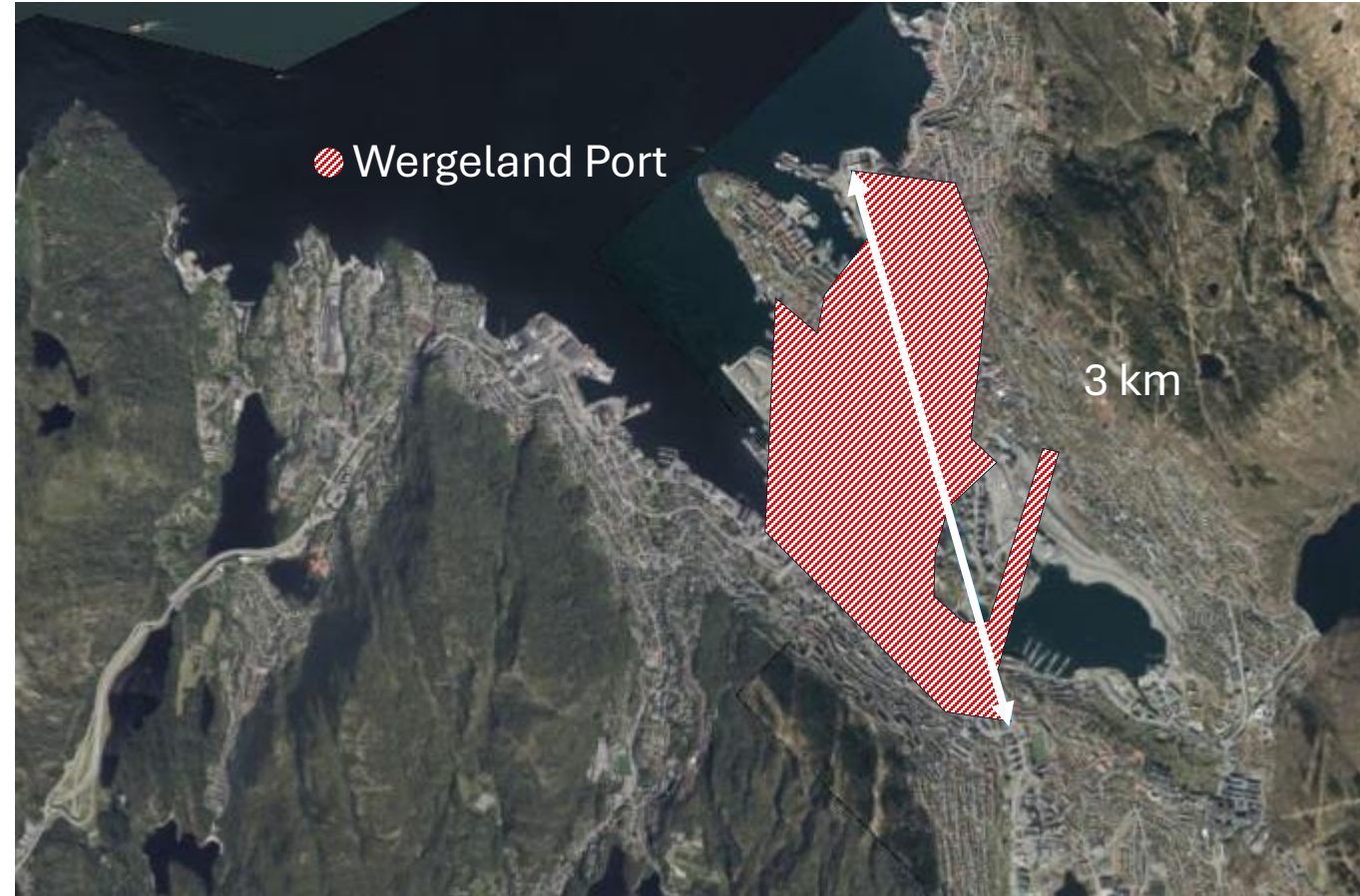
- ▶ Immediate vicinity to the North Sea
- ▶ 1,600,000 m<sup>2</sup> zoned area for storage , logistics, fabrication and assembly
- ▶ Acquired additional 700,000 m<sup>2</sup> in 2025
- ▶ Large wet storage area available
- ▶ All essential infrastructure in place including HL crawler crane Demag CC12600
- ▶ 960,600 m<sup>2</sup> levelled at quay height with minimum 150 t/m<sup>2</sup> ground bearing capacity
- ▶ Deep water quaysides – currently 1,750 metres total length
- ▶ Main Norwegian chain and anchor base
- ▶ Target 1 GW offshore wind annually



(Danmarks plass – Bontlabo 3 km)

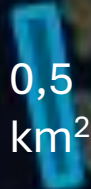
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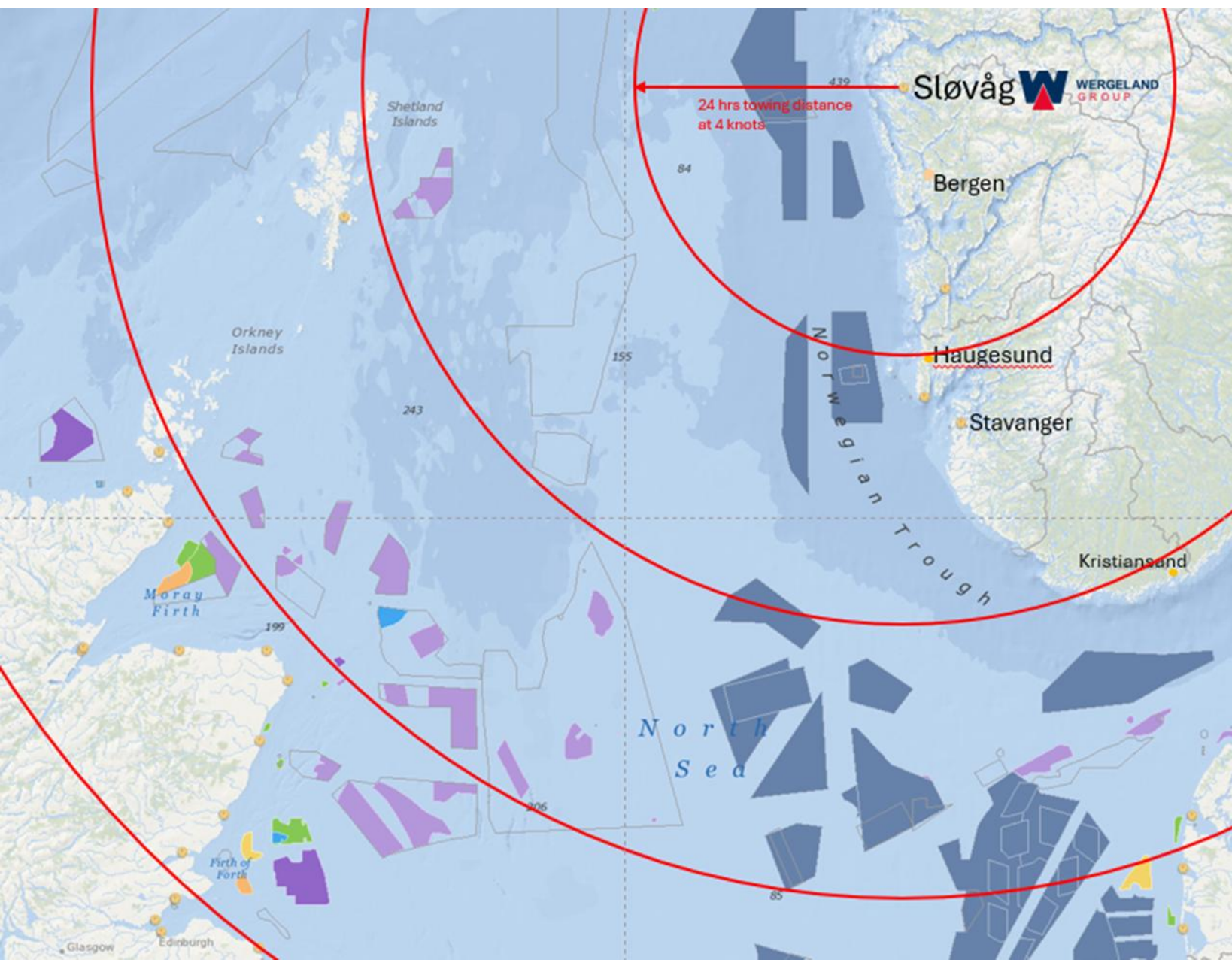
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# Local wet storage locations



Wergeland port





# UK – Just nearby

- ▶ 2-3 days transport
- ▶ Possibility for collaboration
- ▶ Co-operation UK & Norway could be beneficial
  - ▶ Floating Wind
  - ▶ Jackets

# Local industry

- ▶ Approx 400 workers located at the Wergeland port, approx 4.000 in the Fensfjord area
- ▶ Hotel with 120 rooms at site
- ▶ Catering and cleaning service
- ▶ Rental equipment available such as: Machines, aggregates, compressors, mobile light poles, welding equipment and more
- ▶ A large local cluster of suppliers with experience from the oil & gas and renewable energy sectors
- ▶ Local downstream solutions for waste handling and recycling
- ▶ Efficient cooperation with larger companies in the region, is one of the key to secure manpower and competence for larger projects





# Experience Offshore wind

## **2019-2023 Hywind Tampen**

- ▶ 11 floating wind turbines
- ▶ Electricity for Snorre and Gullfaks
- ▶ Storage and assembly

## **2023 Neart NA Gaote**

- ▶ 36 bottom fixed jackets, Scotland
- ▶ Green power for 370 000 homes
- ▶ Marshalling yard

## **2024 Hywind Scotland**

- ▶ 5 floating wind turbines
- ▶ Green power for 35 000 homes
- ▶ Main component exchange and maintenance

## **2025/2026**

- ▶ Culzean demo
- ▶ 3 MW
- ▶ Floating semi-submersible

# Hywind Tampen 2022 - 2023

## Wergeland Base:

- Storage, assembly and commissioning site for the 11 x 8.6MW FWTG
- Deepwater location – depths ranging from 20meter LAT to 150meter LAT close to quay
- Construction of foundation (quay) for the heavy lift ringer crane, and other strategically supporting infrastructure. Bearing capacity at HL-quay 25te per m<sup>2</sup>.
- Support services, project management, personnel and equipment for all involved parties
- Winter storage of 4 WTG's, moored at the commissioning stations at Wergeland Base



# Saipem Jackets NnG Windfarm - 2023

## Wergeland Base:

- Marshalling yard for Saipem Jackets
- Produced in Indonesia and transported to Wergeland Base
- 36 pcs
- Height: 92m
- Weight: 1500t pr. Pcs.
- Transport (SPMT)
- Storage
- Mounting of cranes at top of jackets
- Project management, HSSE management, Base services and delivery of third-party services
- Cleaning of deck and sea fastening – Shipment to Scotland



# Hywind Scotland 2024





# Hywind Scotland Main Component Exchange 2024

## Hywind Scotland Facts:

- ▶ The first floating offshore wind farm in the world
- ▶ 30MW capacity
- ▶ 5 turbines
- ▶ Diam. 145m
- ▶ Peak height: 253m
- ▶ Spar design
- ▶ Powers 35.000 homes in the UK
- ▶ 30km cable to shore

# Ongoing 2025/2026: Culzean Floating Wind Pilot Project



## Wergeland Group provides:

- Port infrastructure and base operations
- Project coordination
- Heavy lifting
- Local sourcing and support services

# Ingen konflikt med fiskeriinteresser i området!



**NORGES FISKARLAG**

# Lessons learned

- ▶ Gained valuable experience/insight in the offshore wind industry propelling our further development.
- ▶ Gained valuable experience in the heavy lift and complex operations segment.
- ▶ Gained valuable experience, allowing us to be comfortable with and to mitigate risks, both economic and within HSSE.
- ▶ Developed close relationship/partnership with established international suppliers and clients
- ▶ Contributed to the development of the local supply chain for services and materials targeting the offshore wind industry



# Havvind – fra ord til handling

- ▶ Energisikkerhet
- ▶ Arbeidsplasser
- ▶ Kompetanseutvikling
- ▶ Infrastruktur
- ▶ Attraktive lokalsamfunn
- ▶ Grønn omstilling
- ▶ Samarbeid og innovasjon



# Testturbin Sløvåg

***Vi bygger ikke bare kraft – vi bygger industri***

# Thank you

## Supersite Sløvåg - the Offshore Wind Port

- ▶ Floating wind assembly and storage
- ▶ Bottom fixed wind storage
- ▶ Marshalling port

