

IMMINGHAM EASTERN RO-RO TERMINAL



Environmental Statement: Volume 3
Appendix 10.2: Navigation Simulation Study - Part 2
Document Reference: 8.4.10 (b)

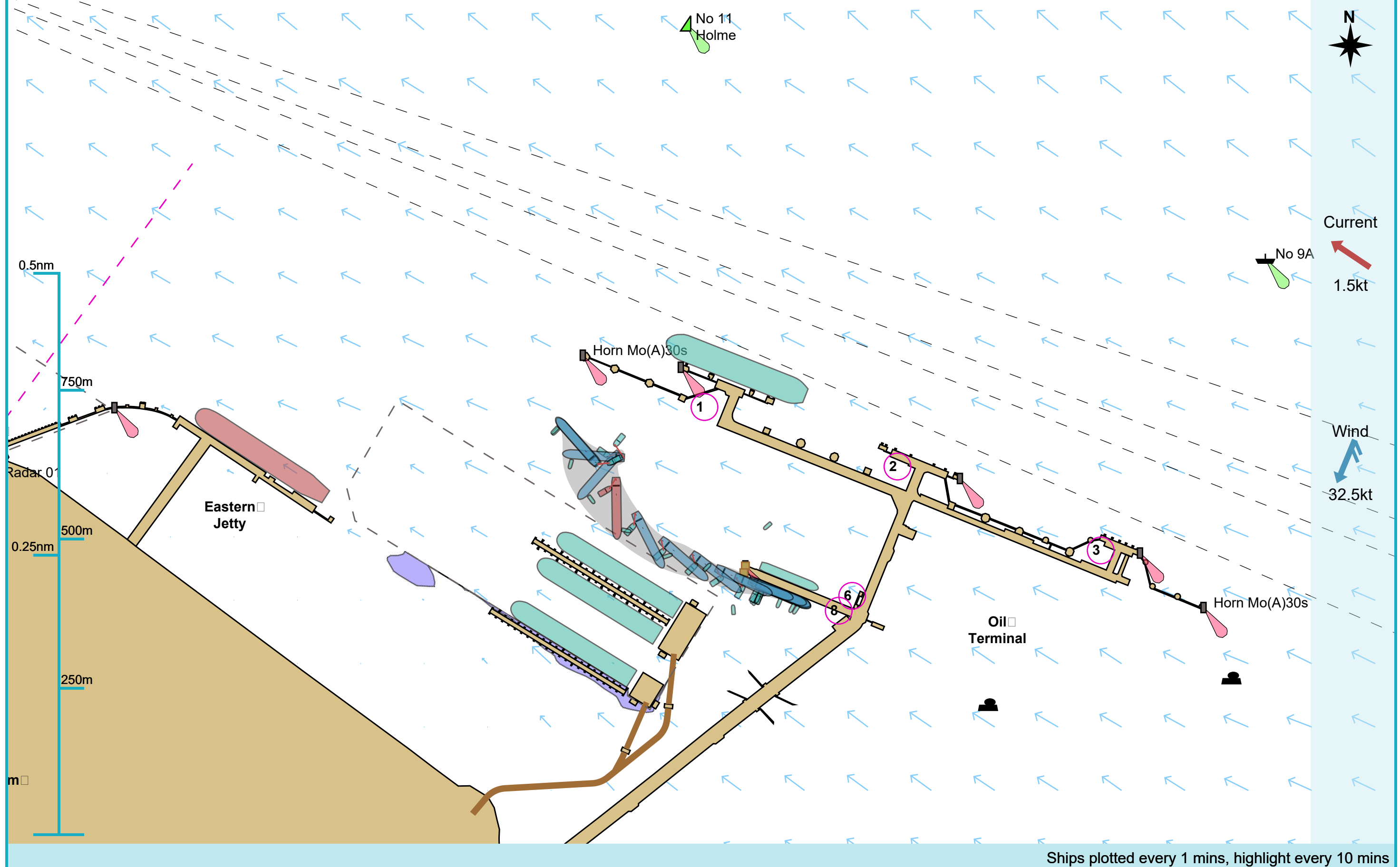
APFP Regulations 2009 – Regulation 5(2)(a) and 5(2)(e)
PINS Reference – TR030007

December 2022

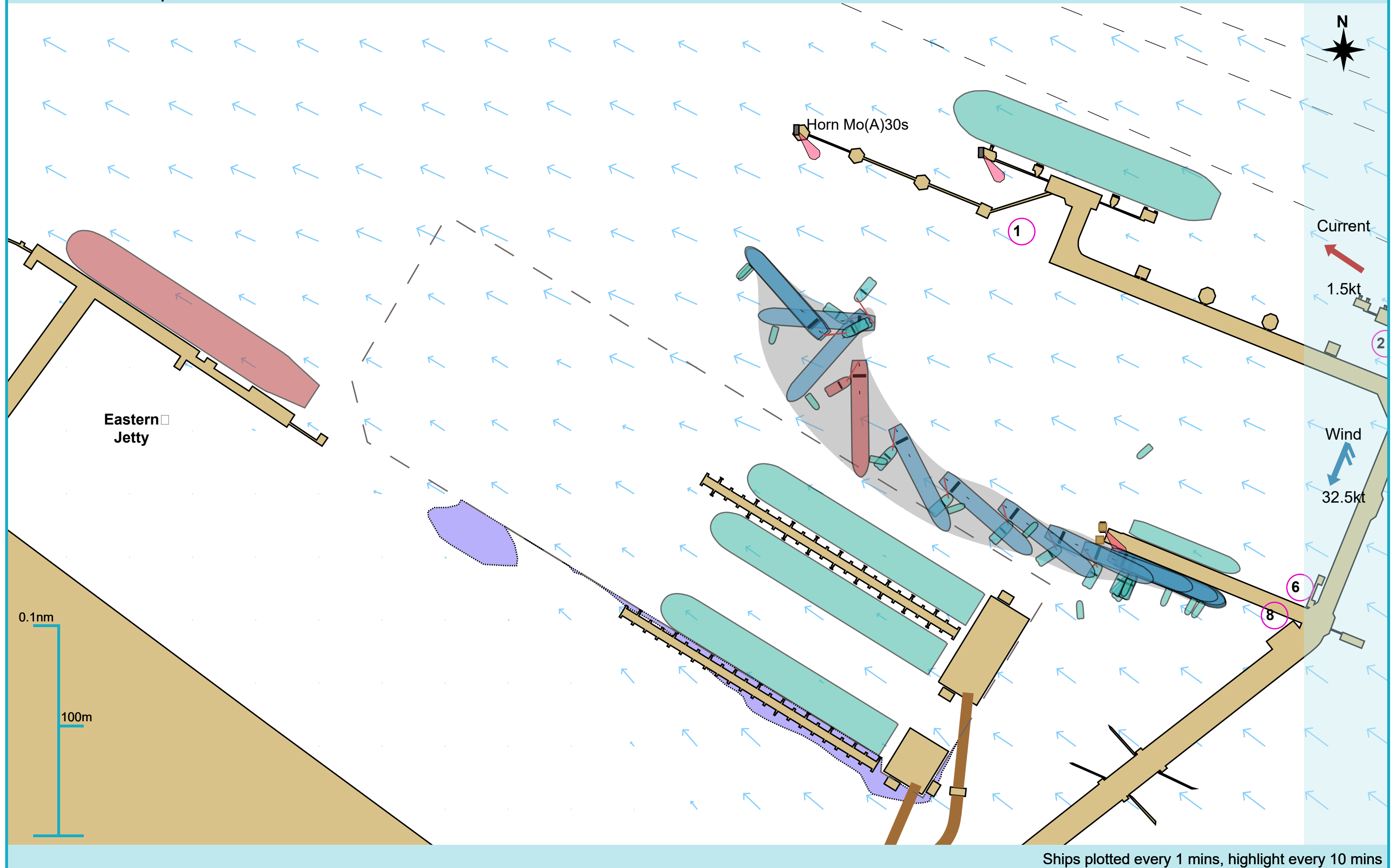
Appendices

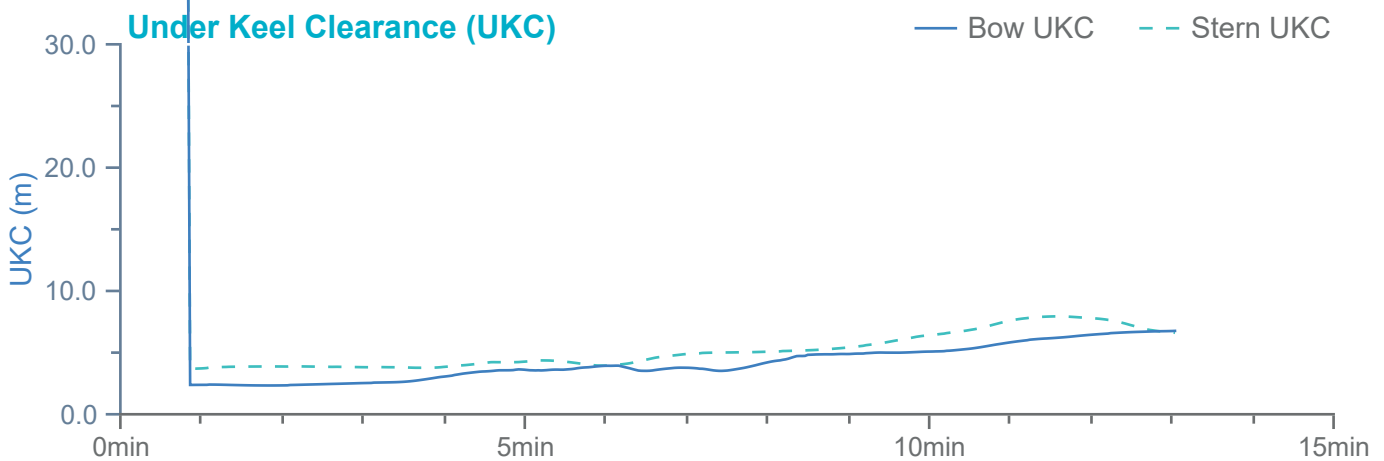
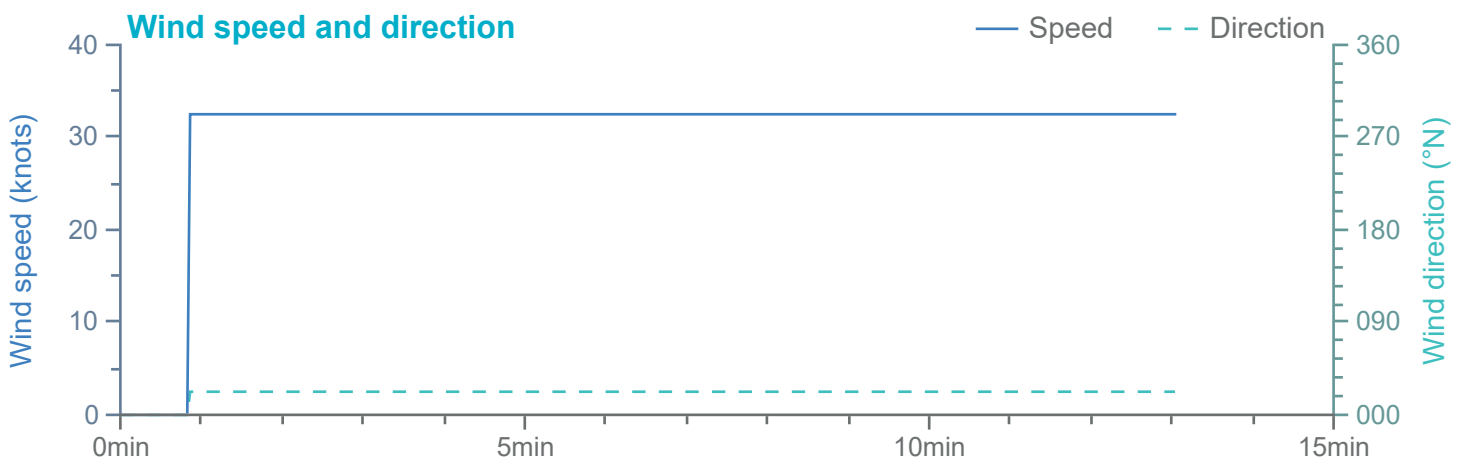
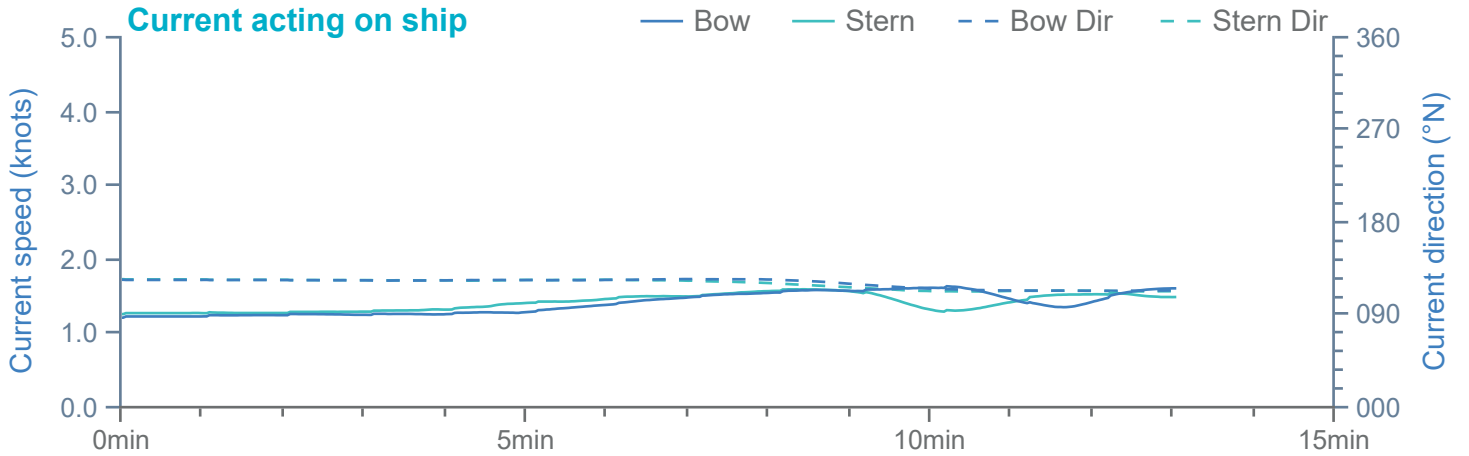
A Simulation track and data plots - Part 2 (Runs 30-70)

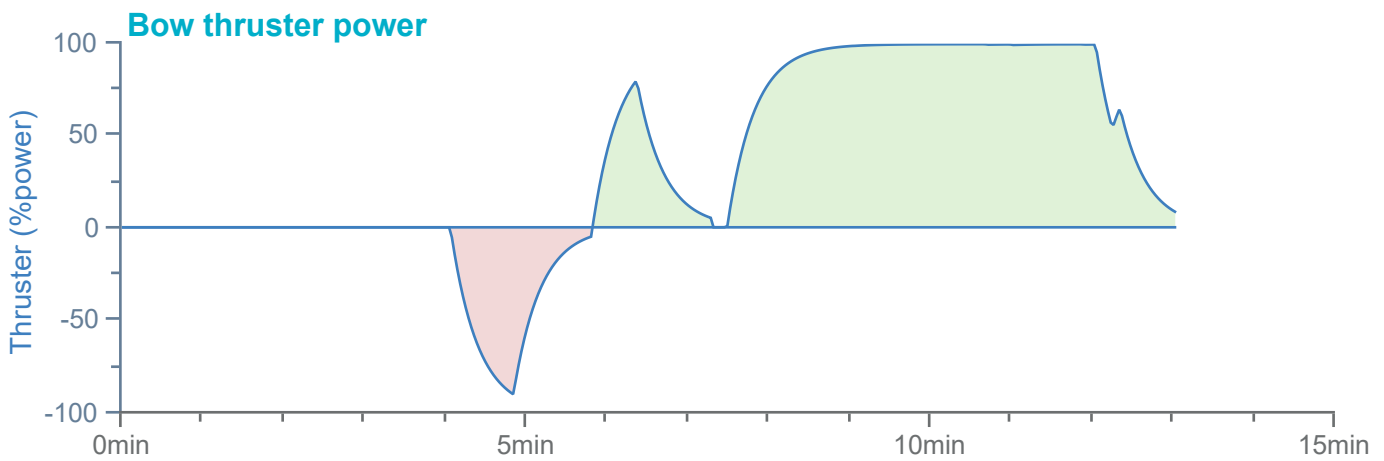
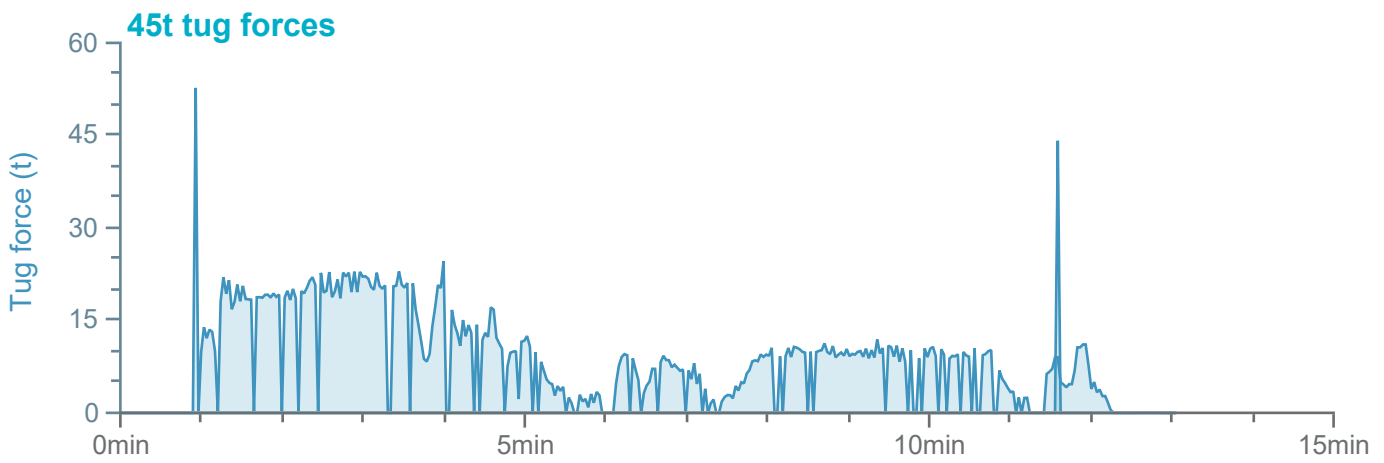
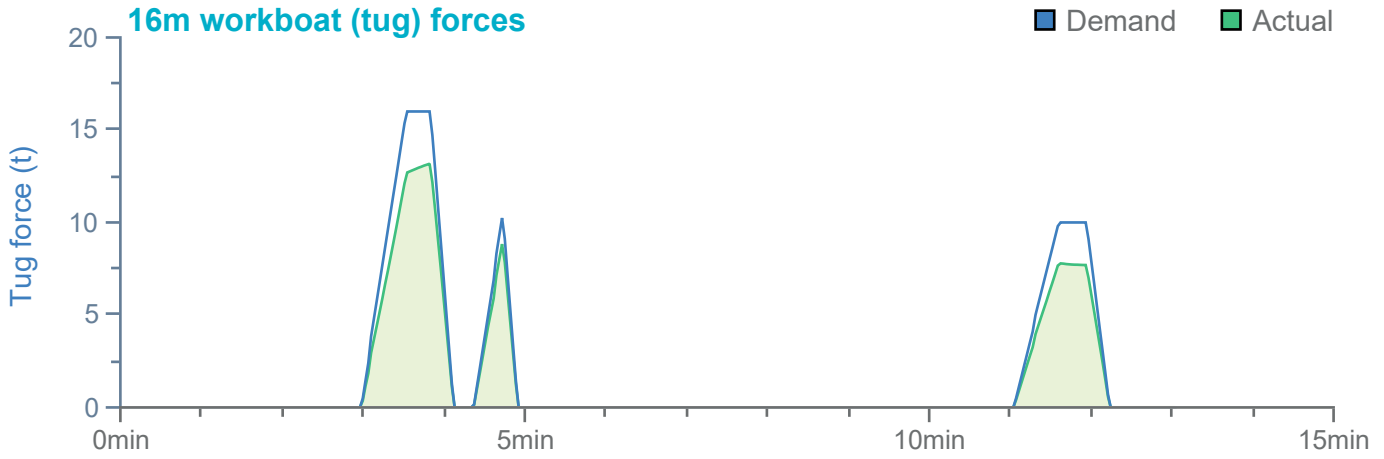
Manoeuvre track plot

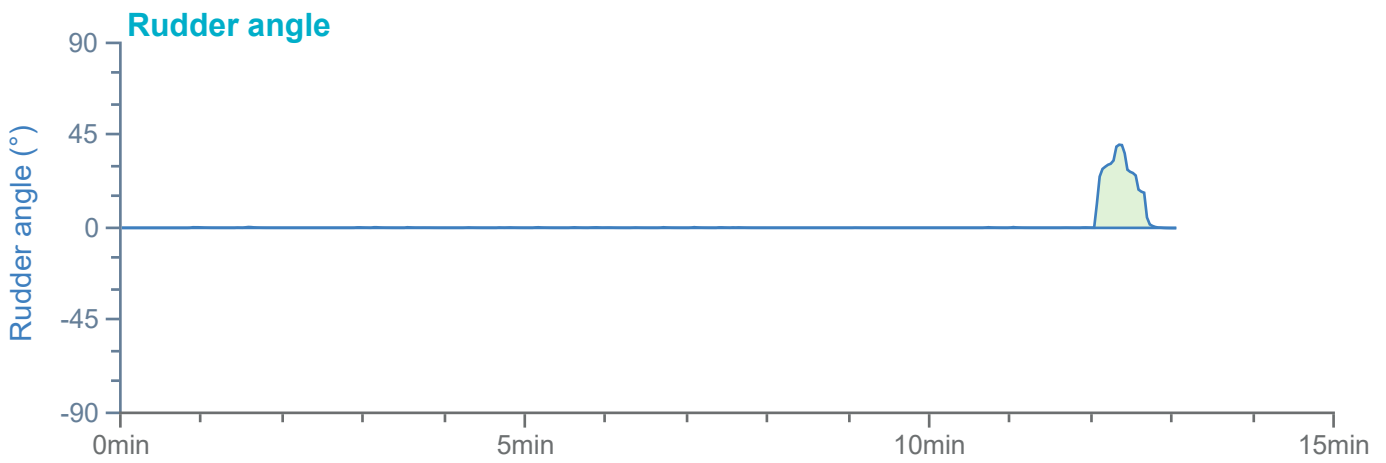
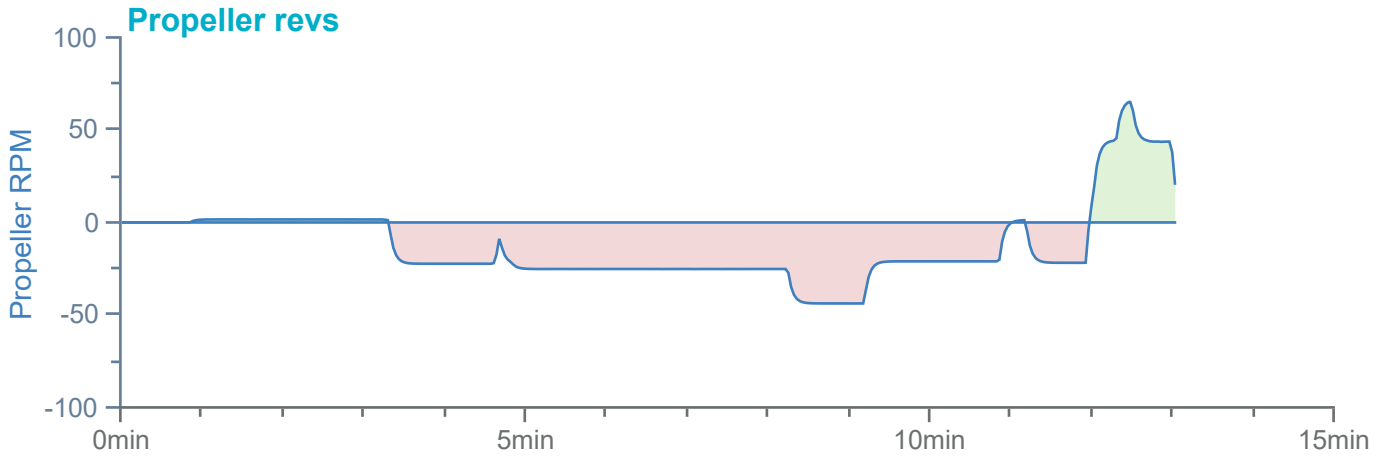


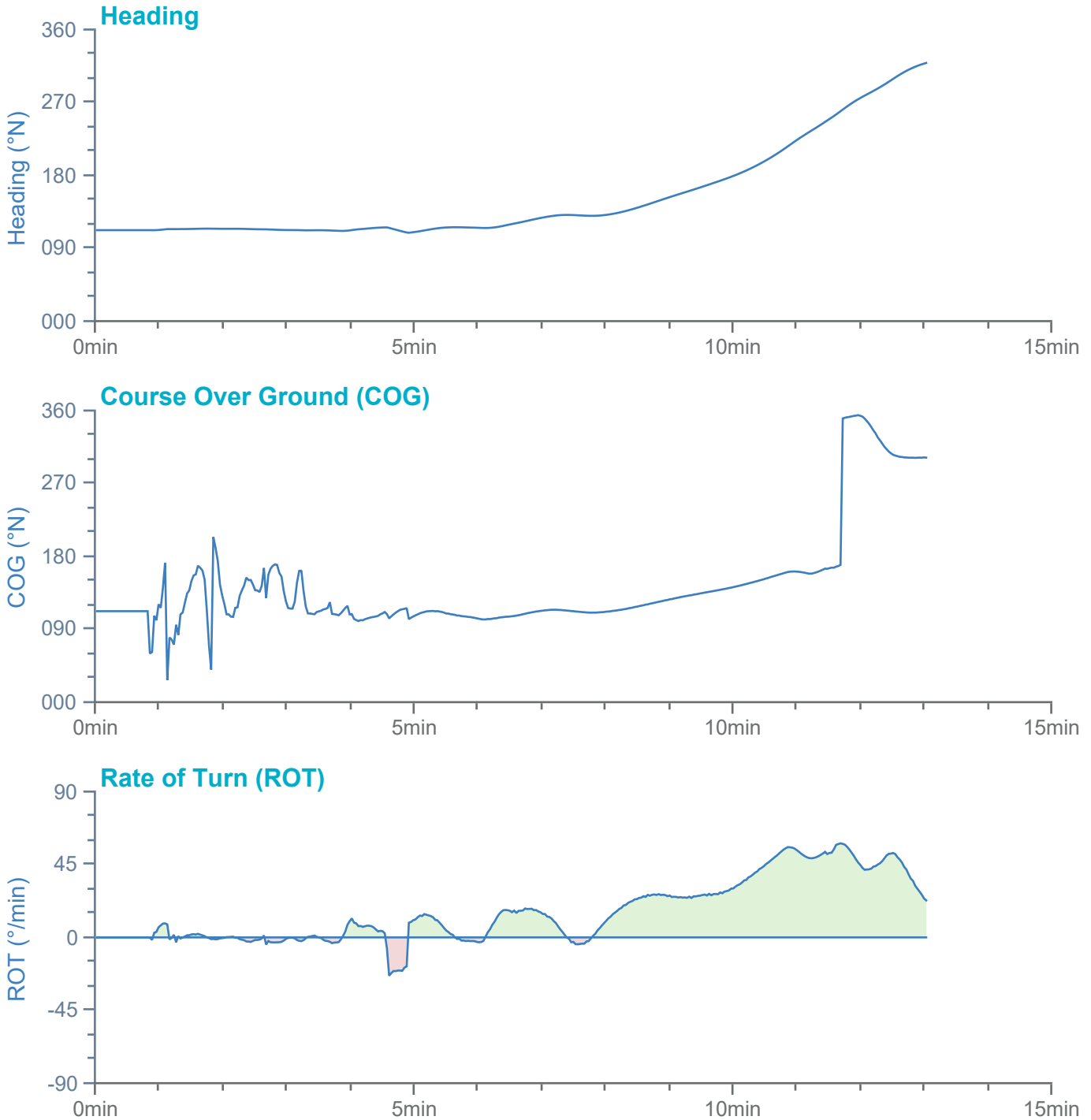
Manoeuvre track plot

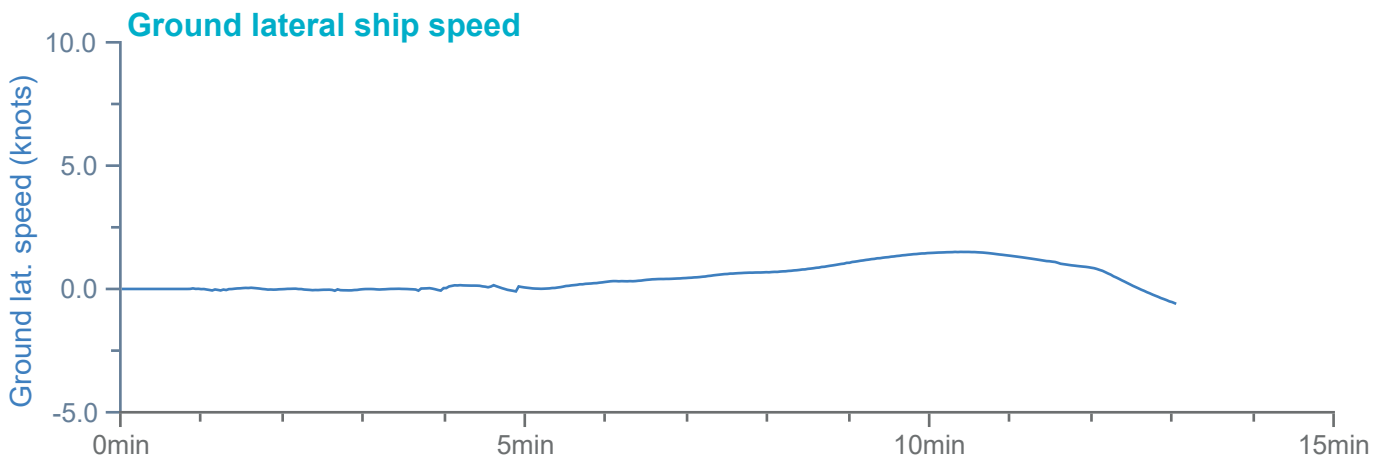
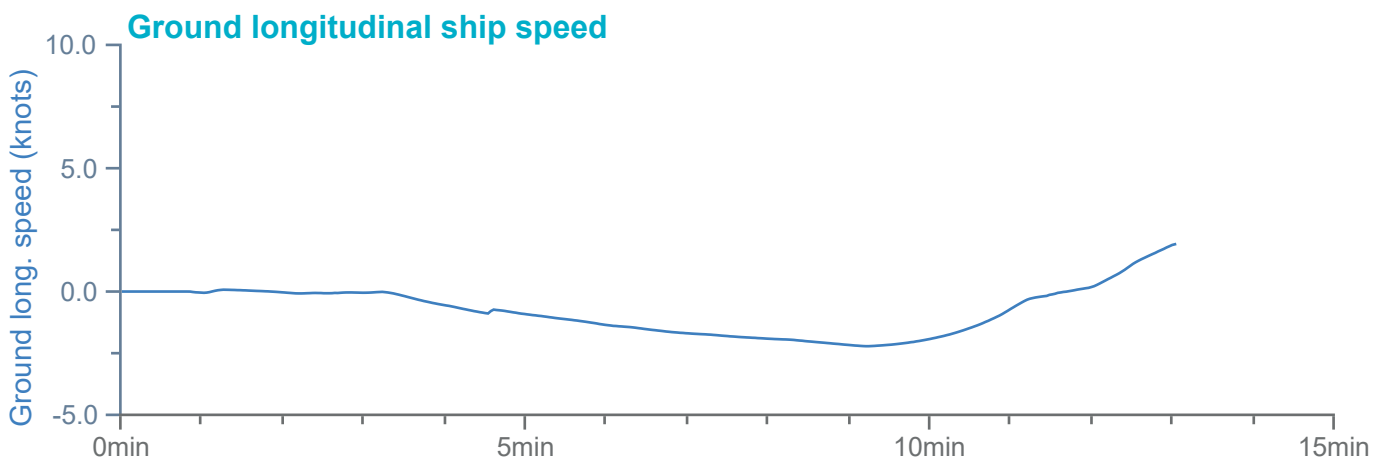
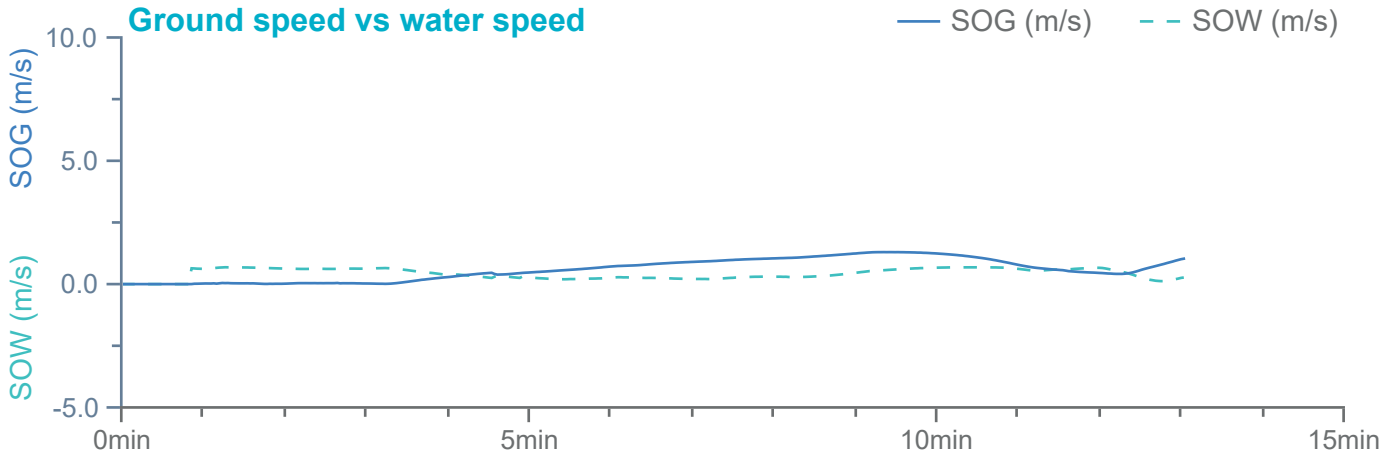




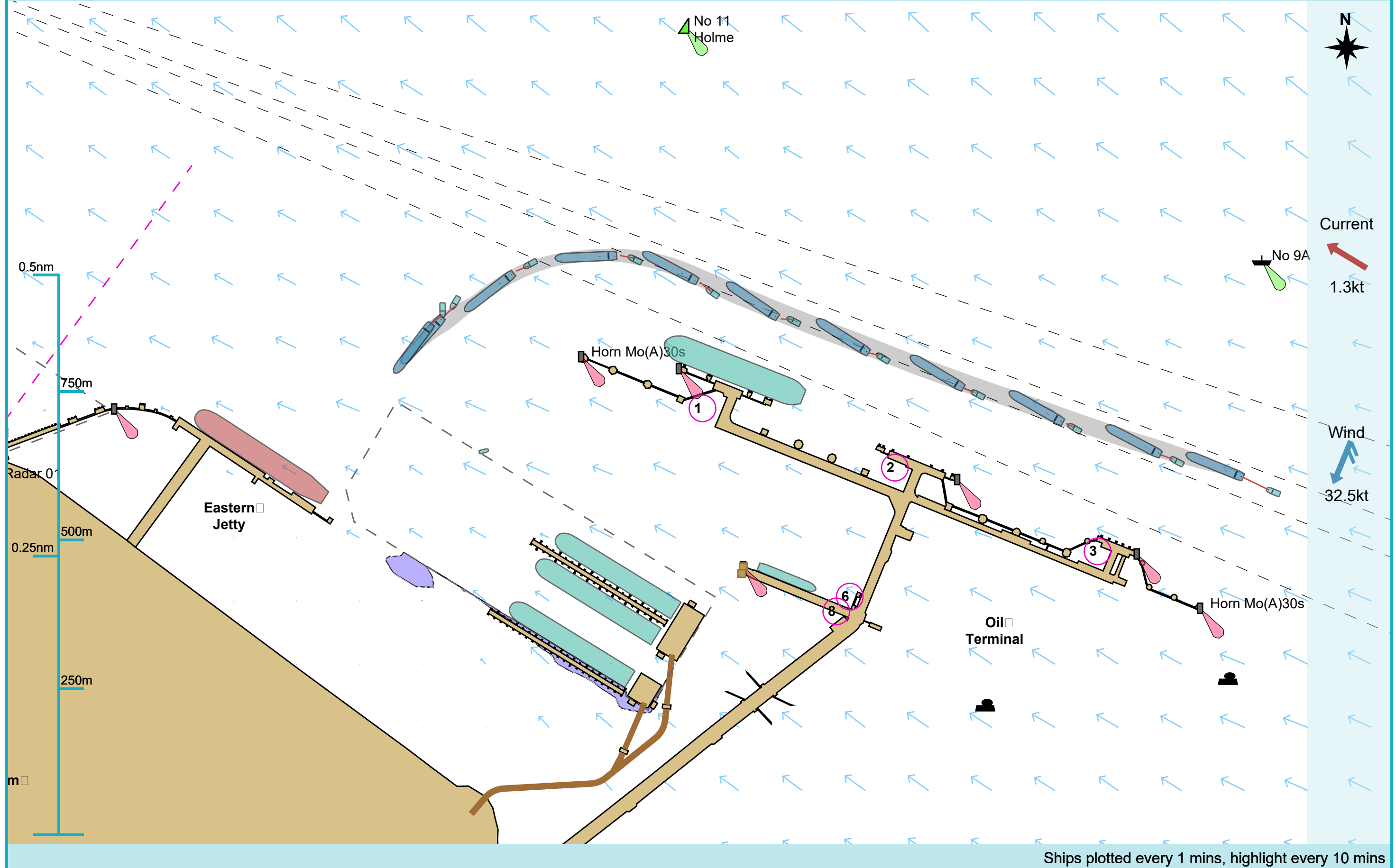




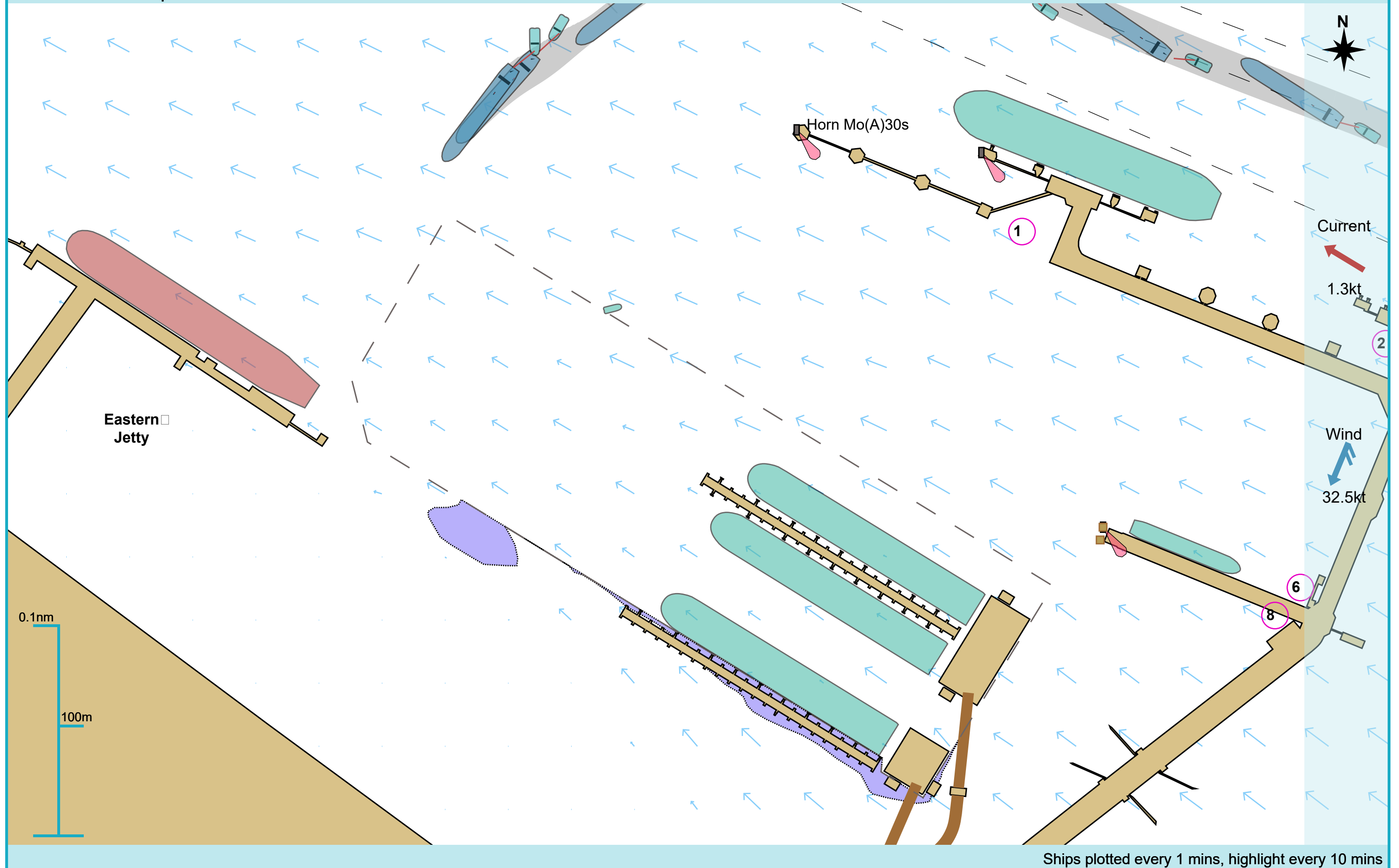




Manoeuvre track plot



Manoeuvre track plot

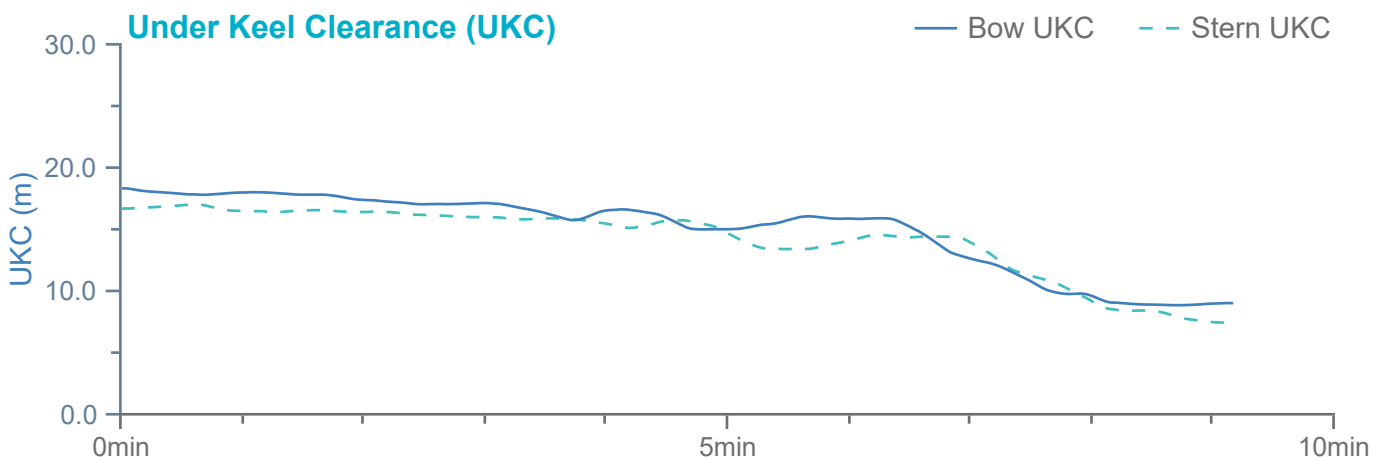
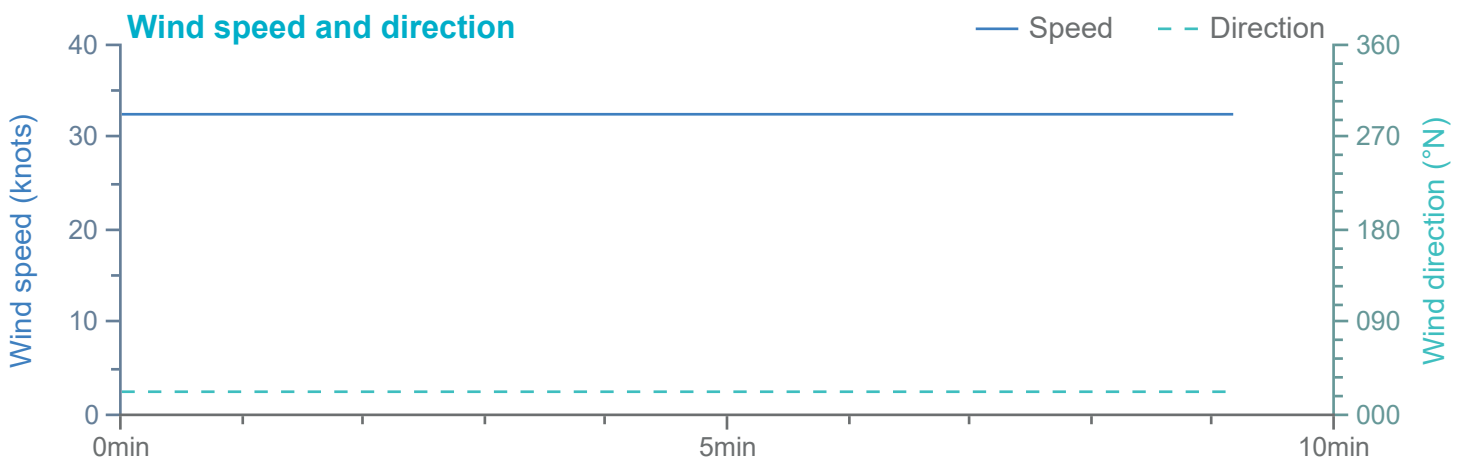
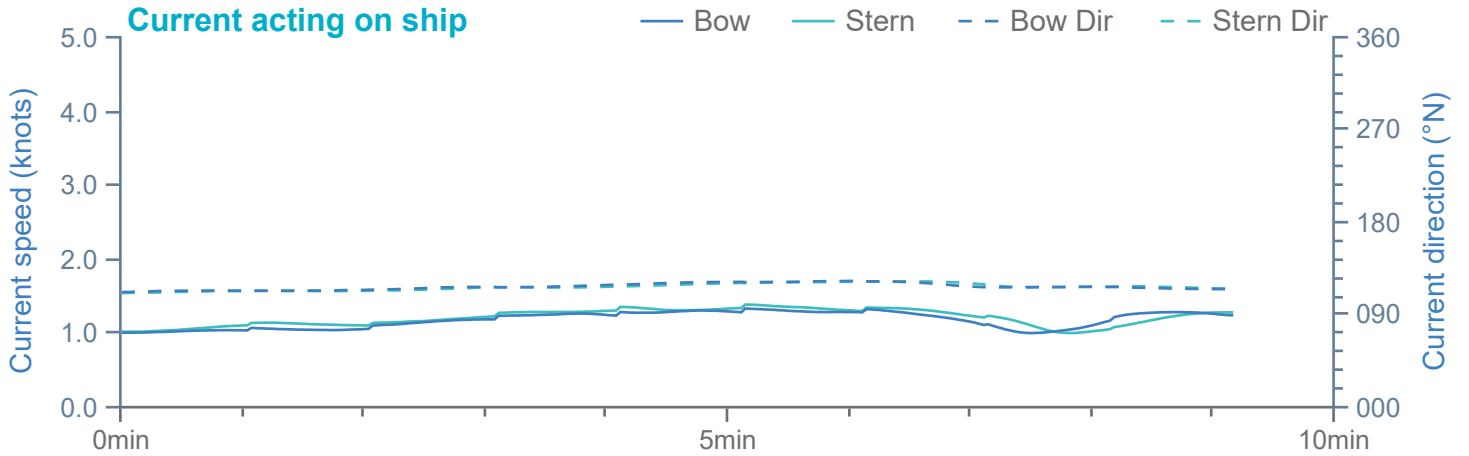


Ships plotted every 1 mins, highlight every 10 mins

Summary

Environment

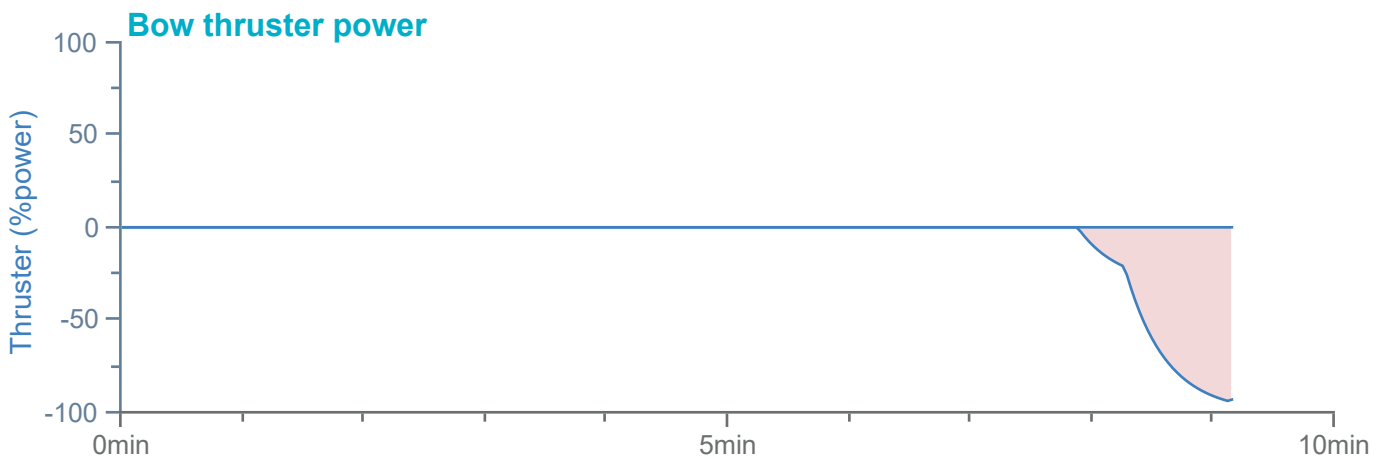
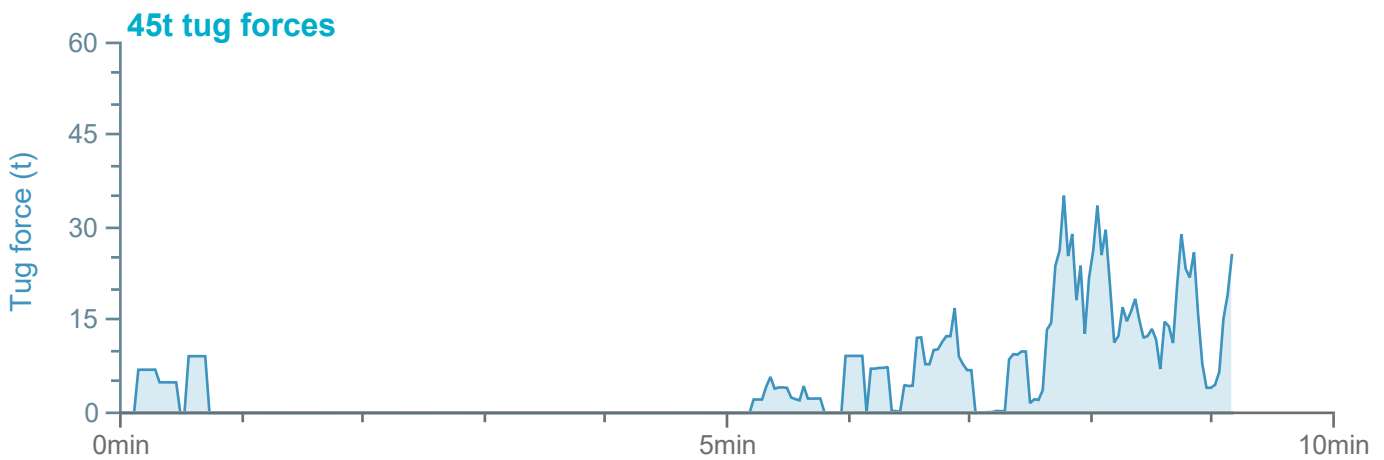
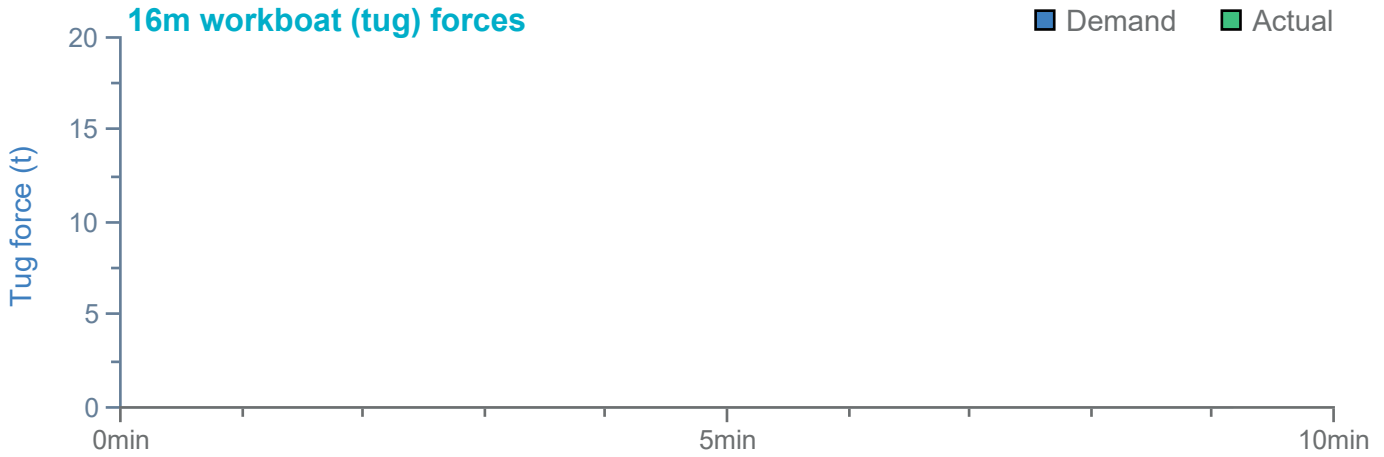
104m x 15m Product Tanker



Summary

Environment

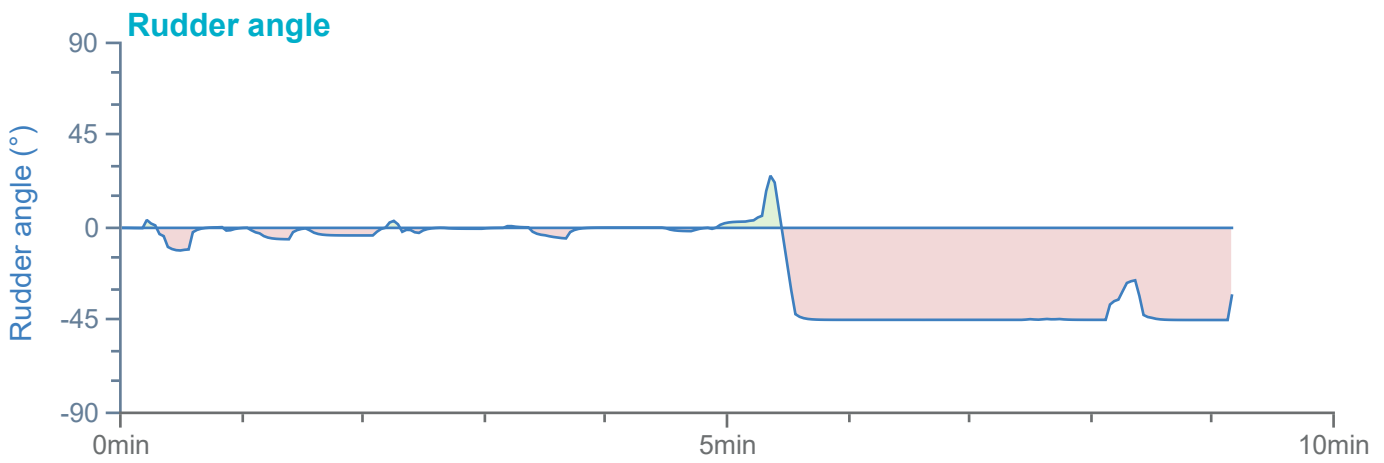
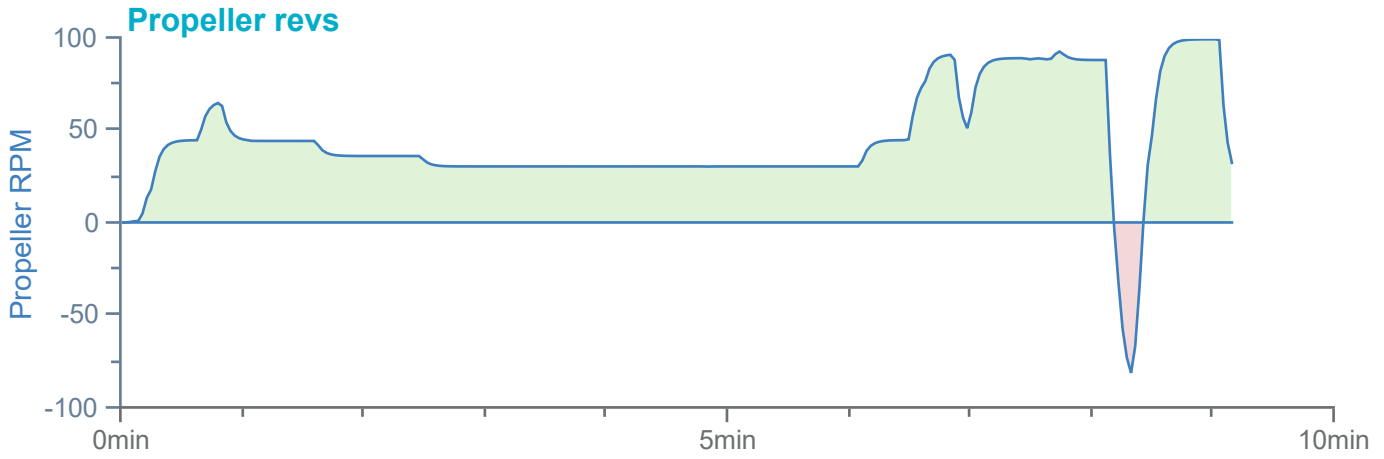
104m x 15m Product Tanker

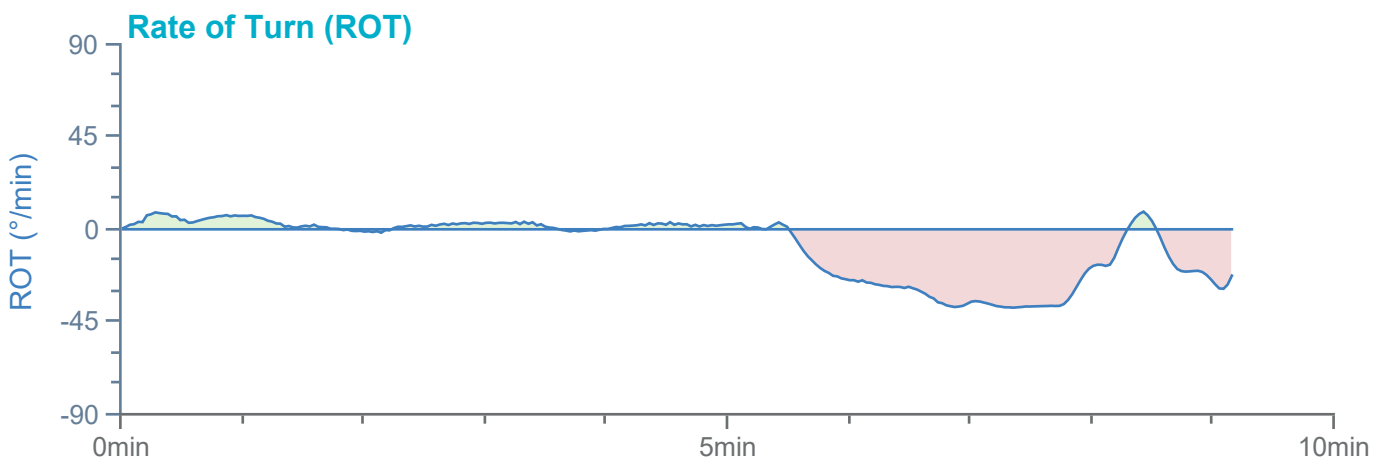
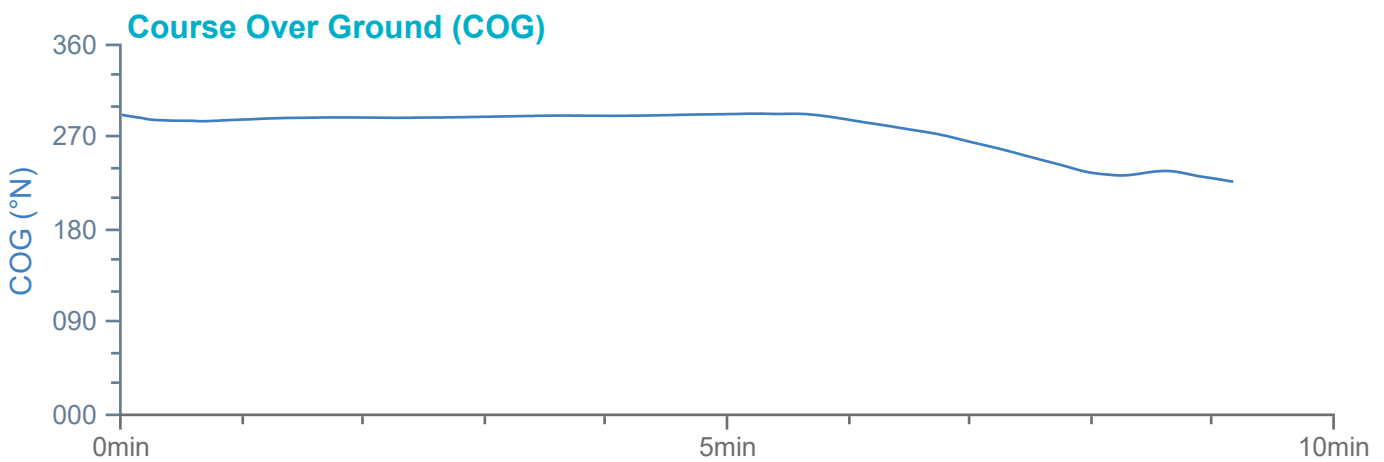
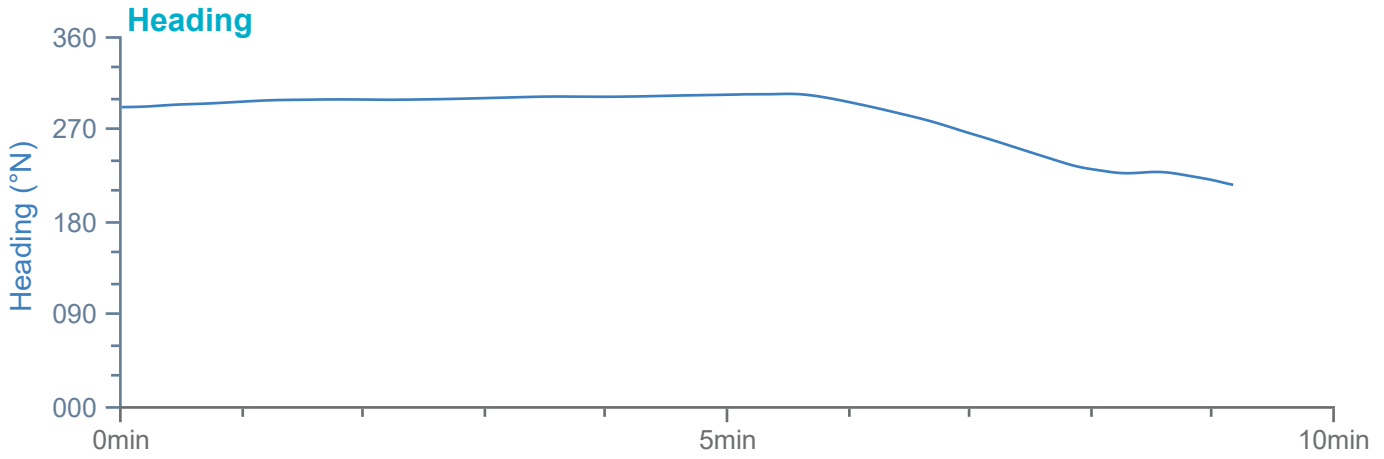


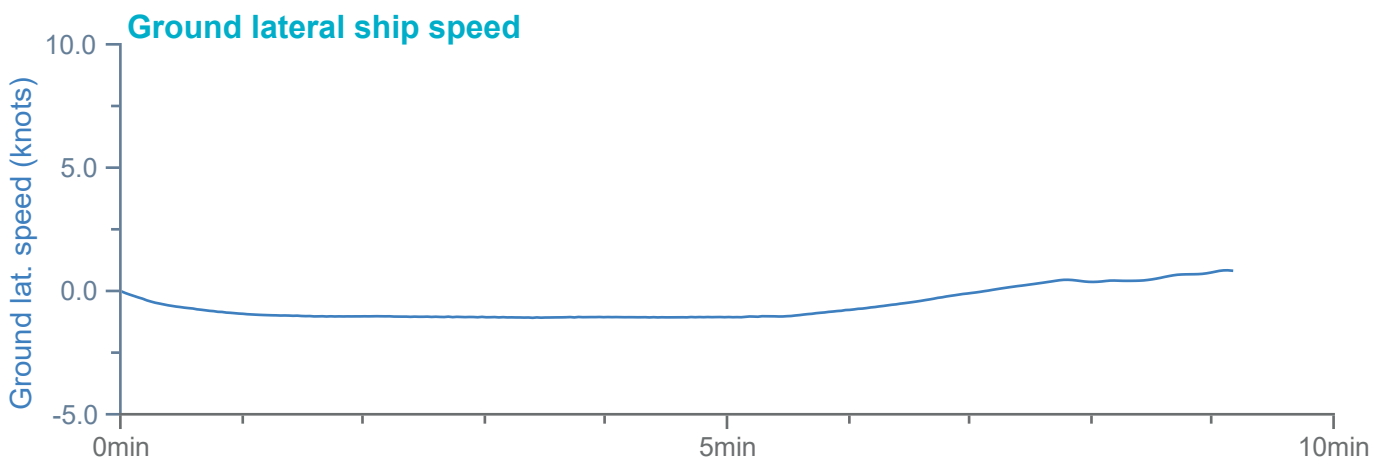
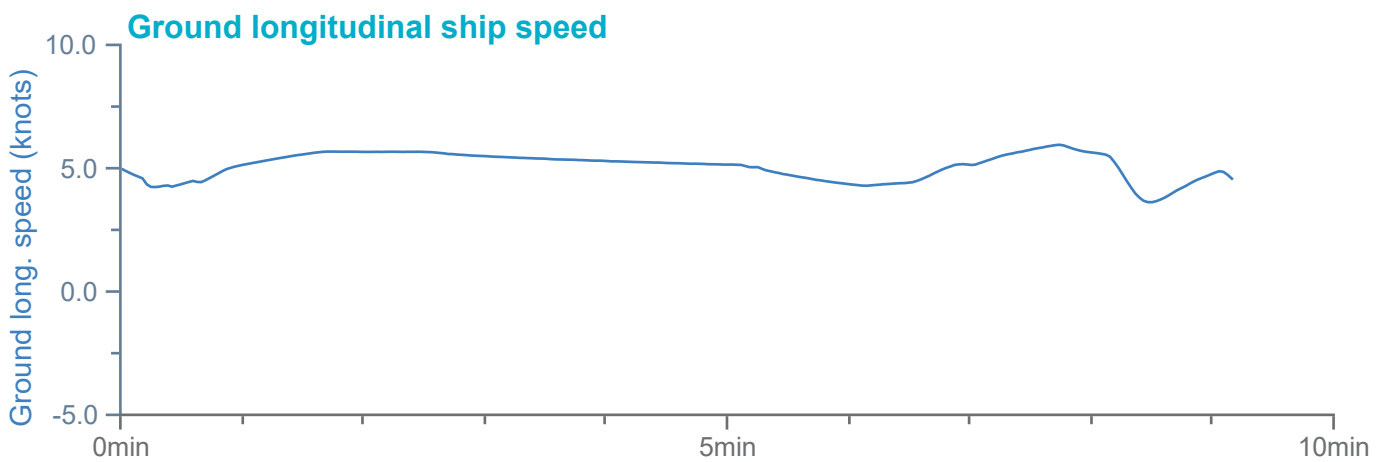
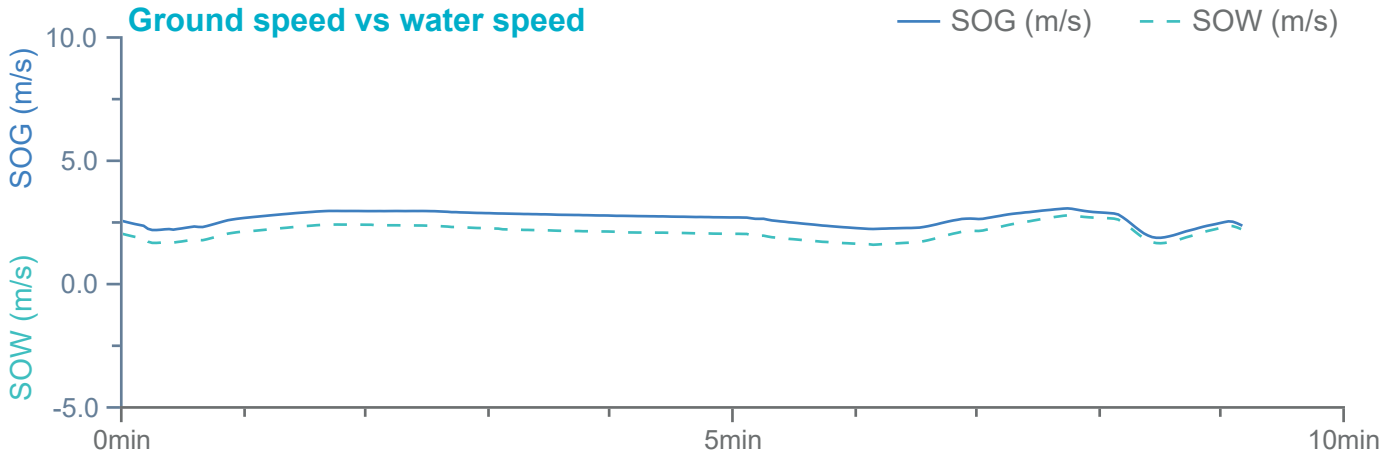
Summary

Environment

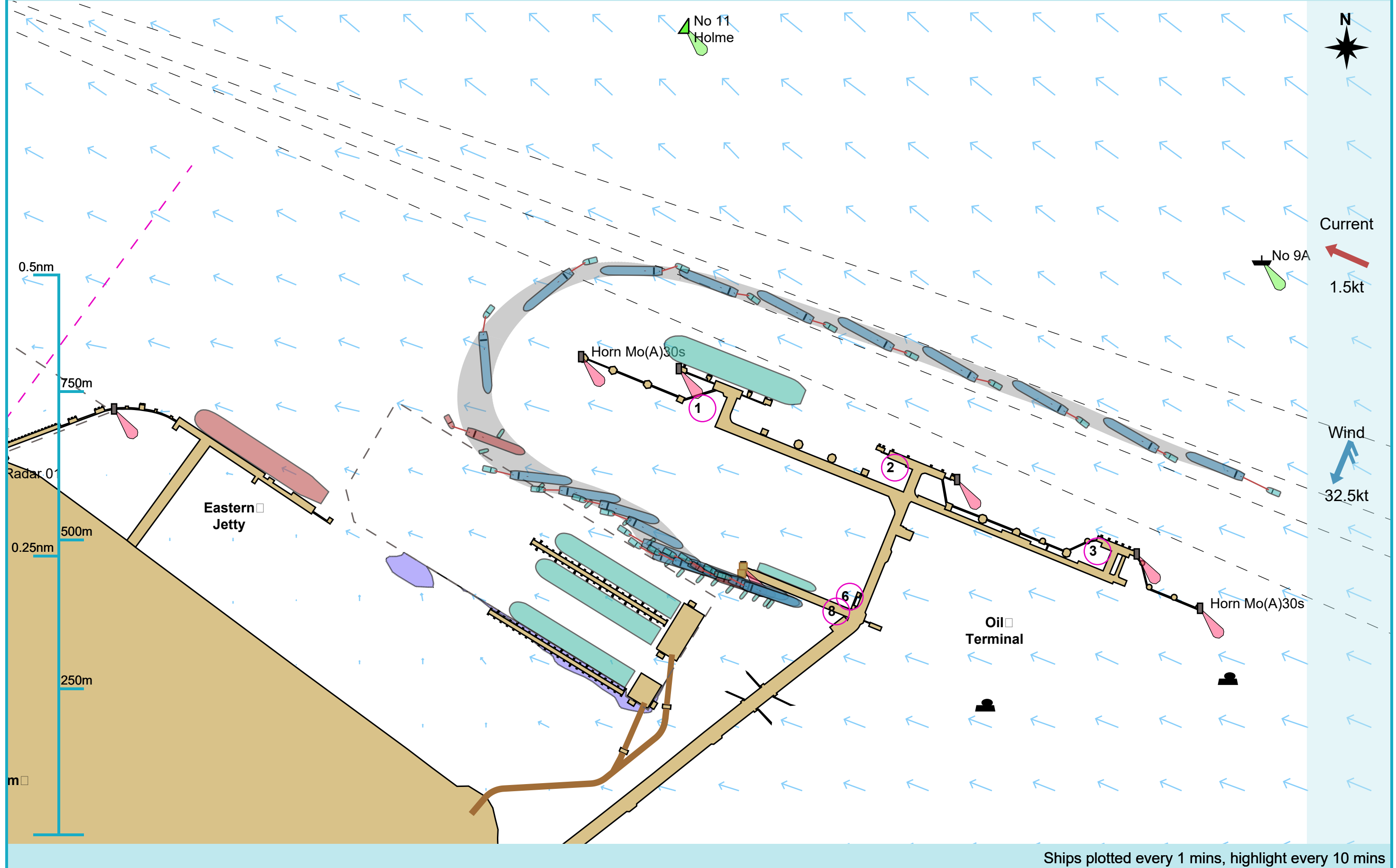
104m x 15m Product Tanker





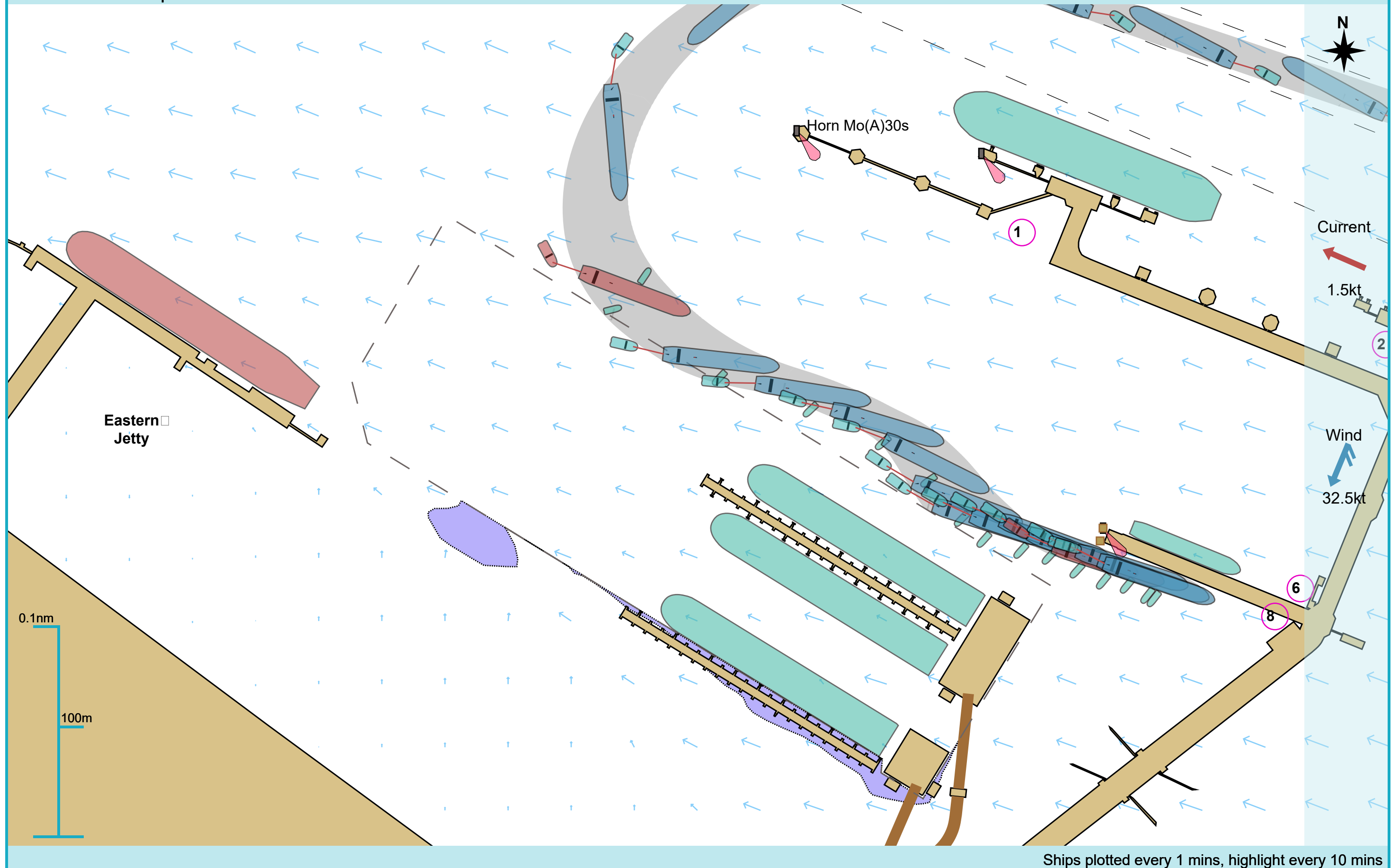


Manoeuvre track plot

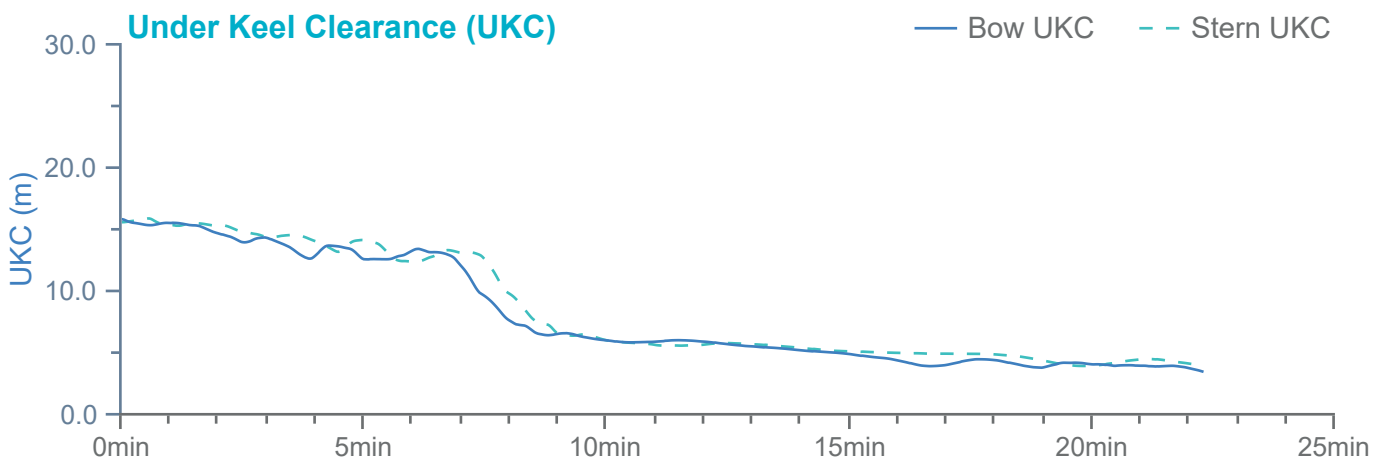
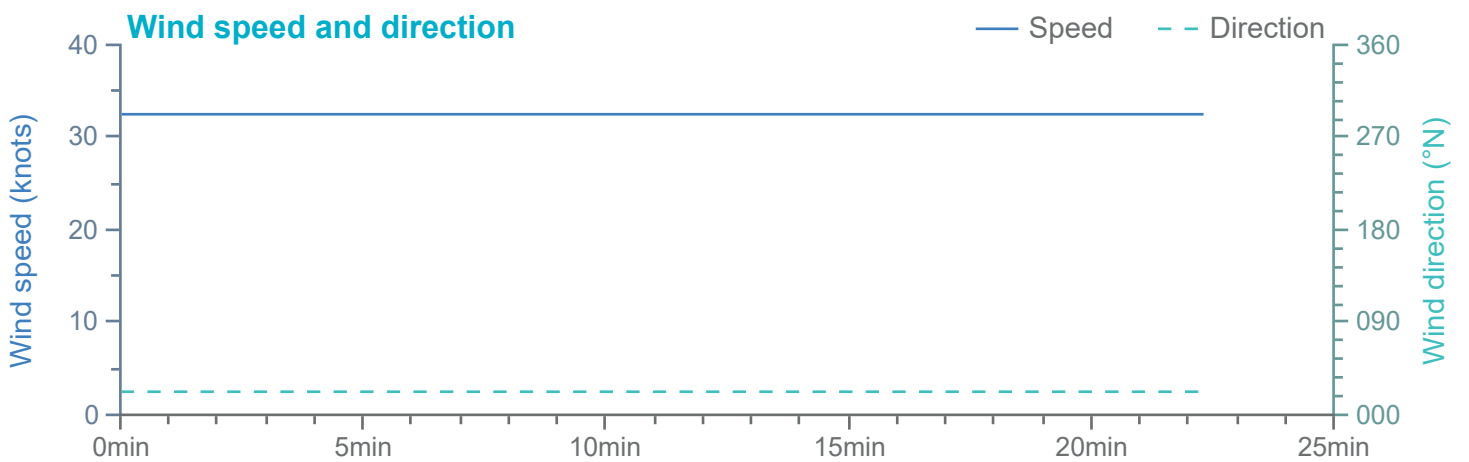
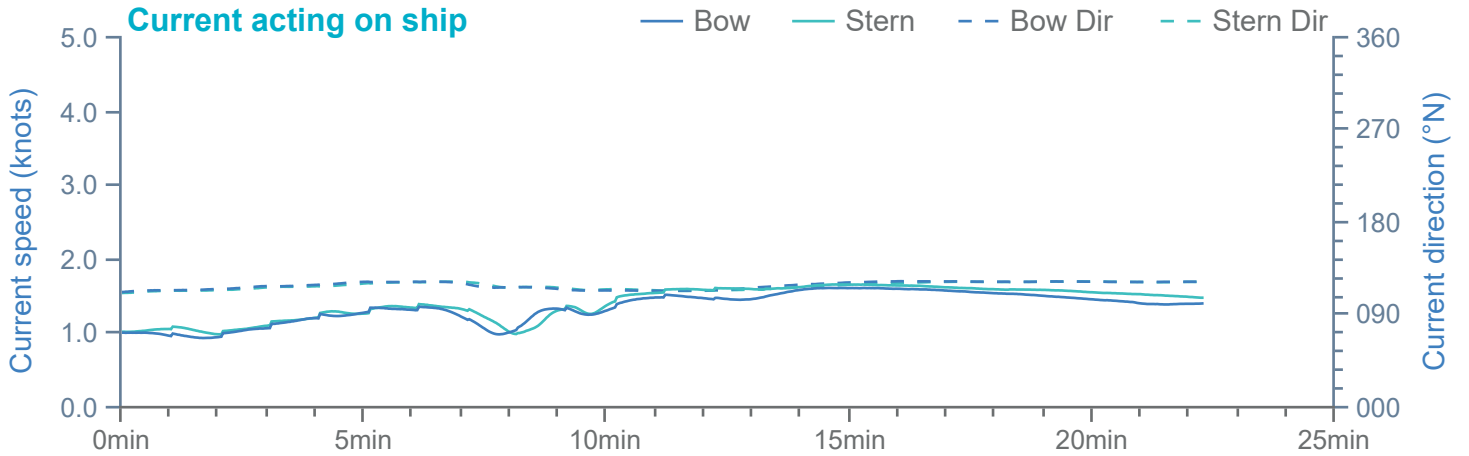


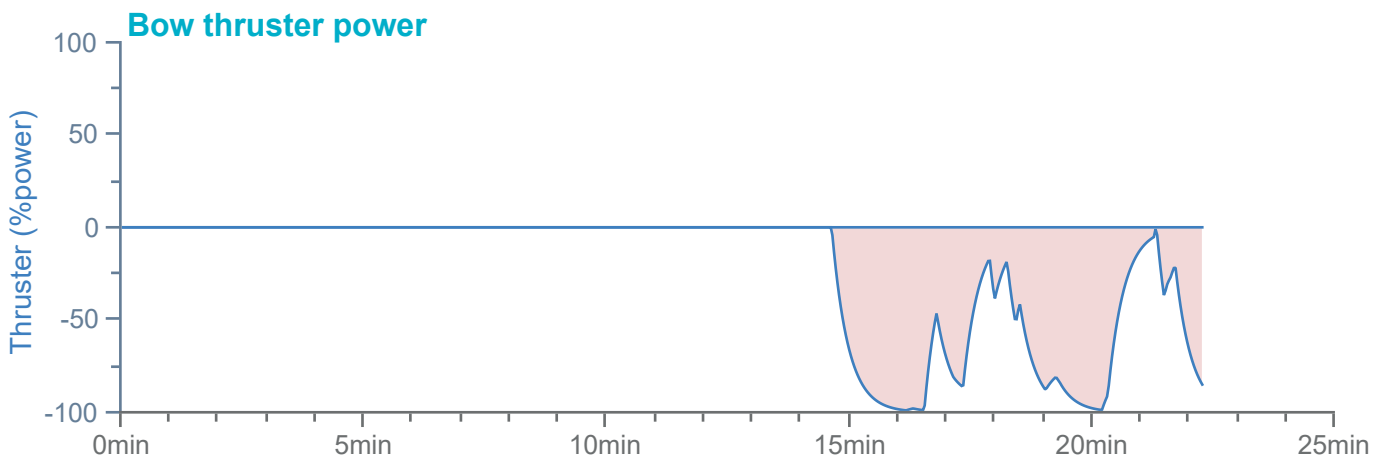
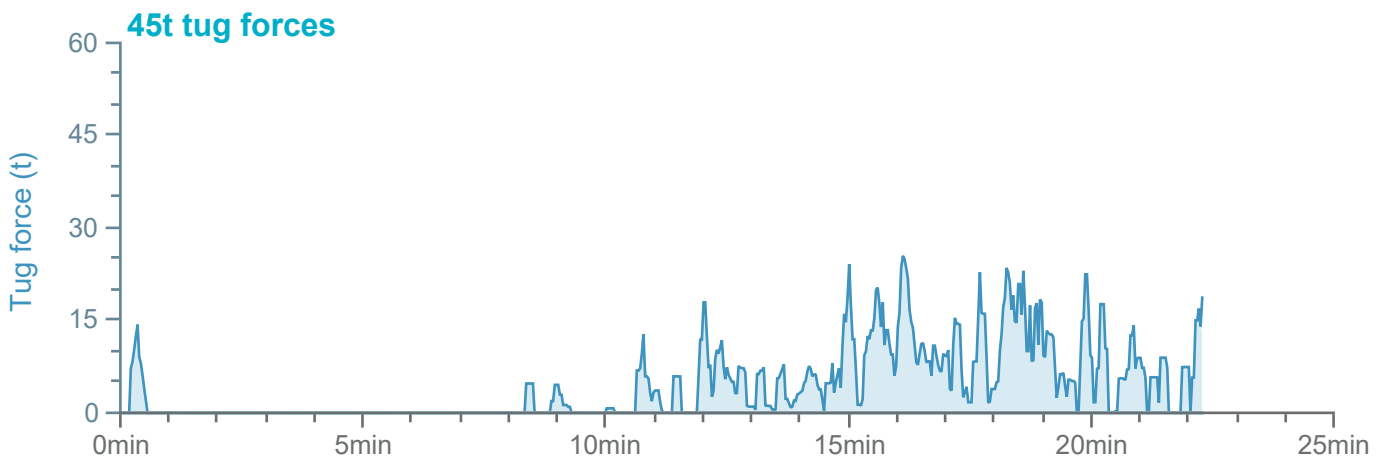
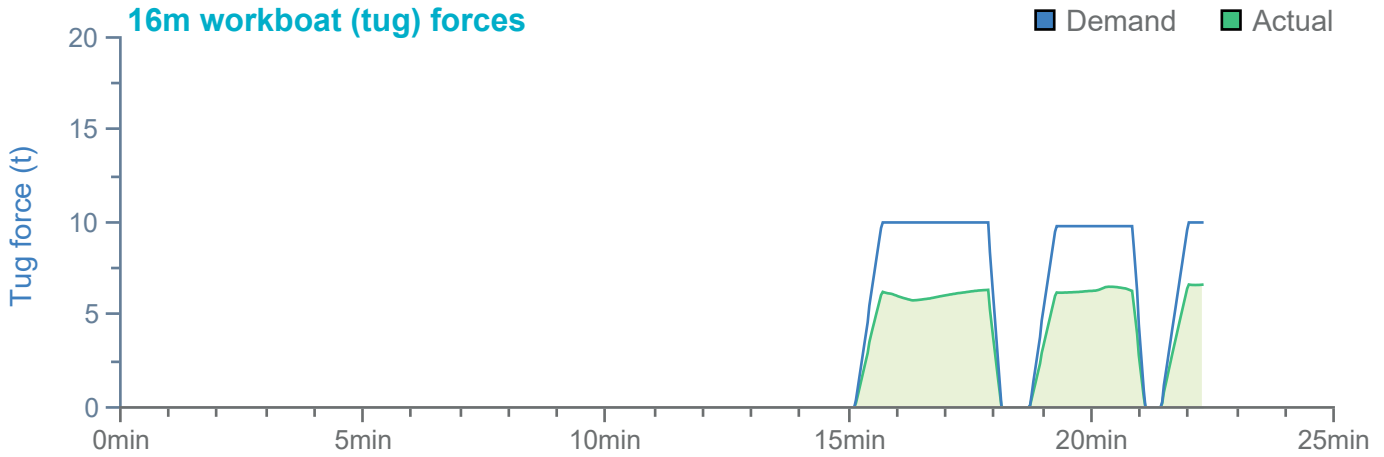
Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

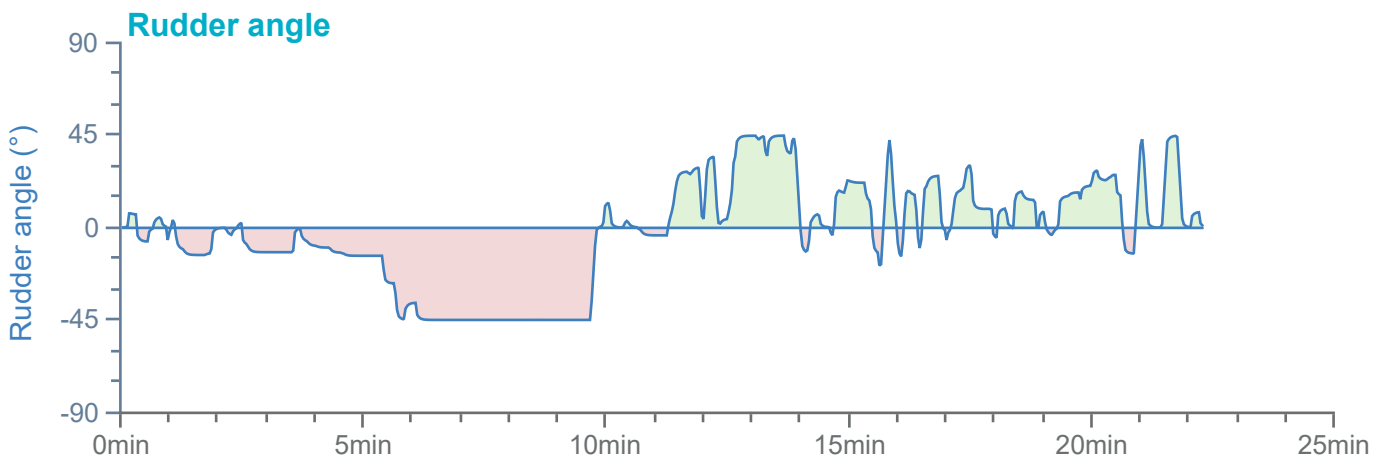
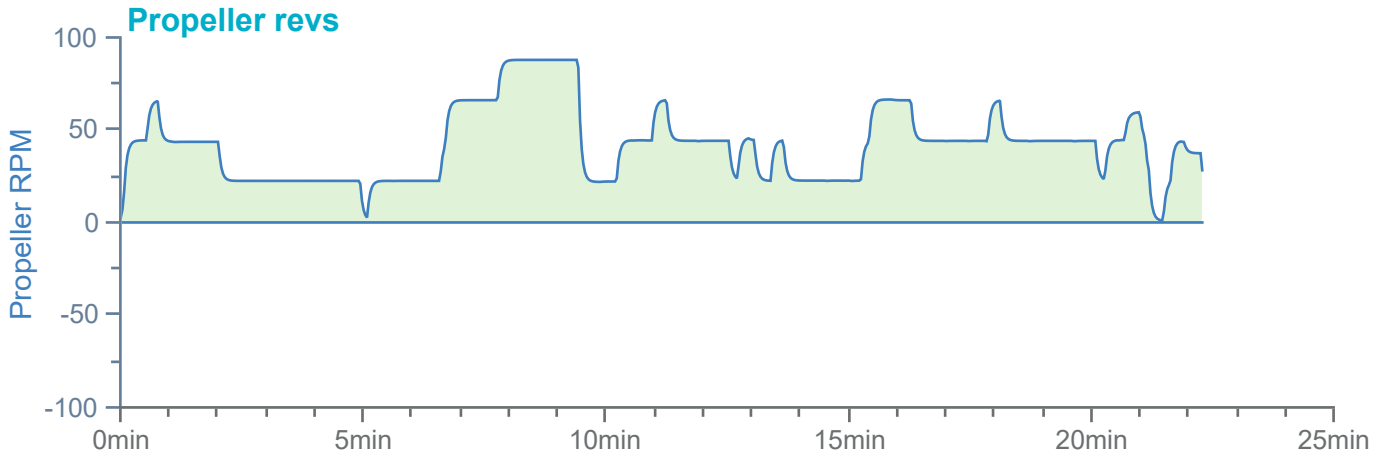


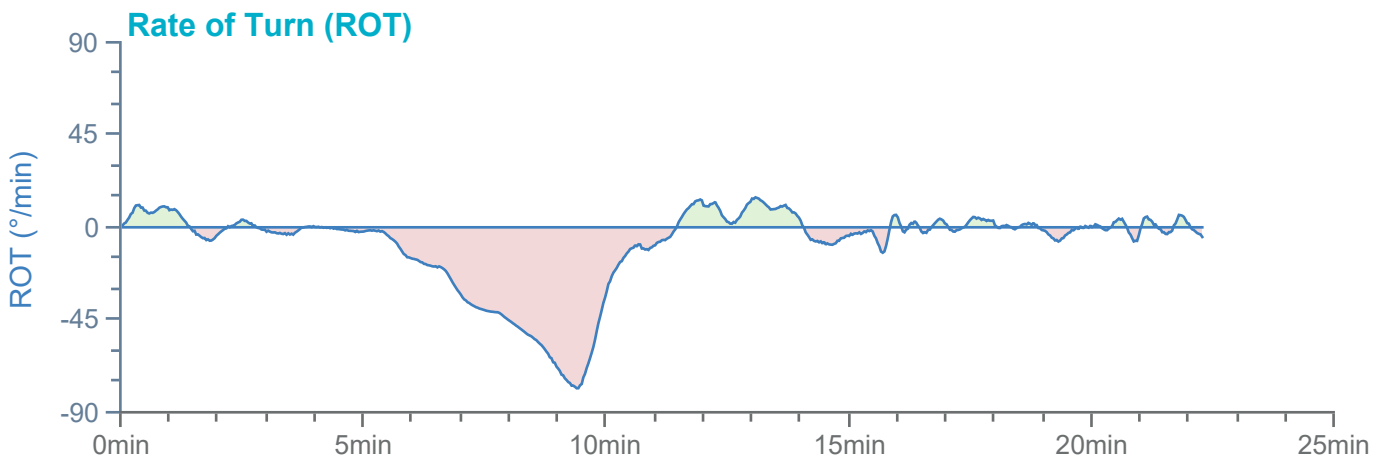
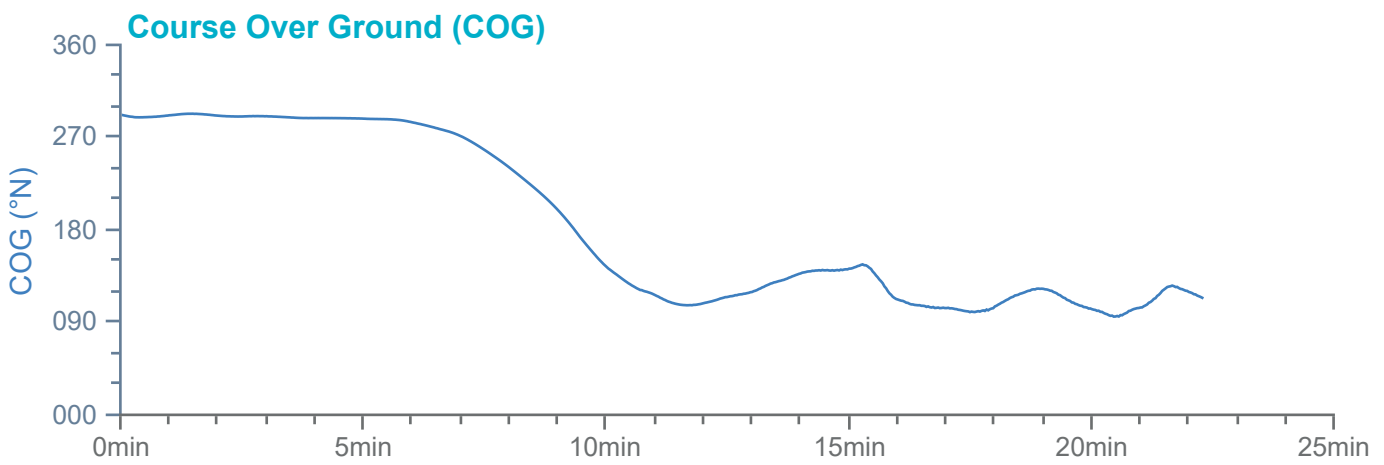
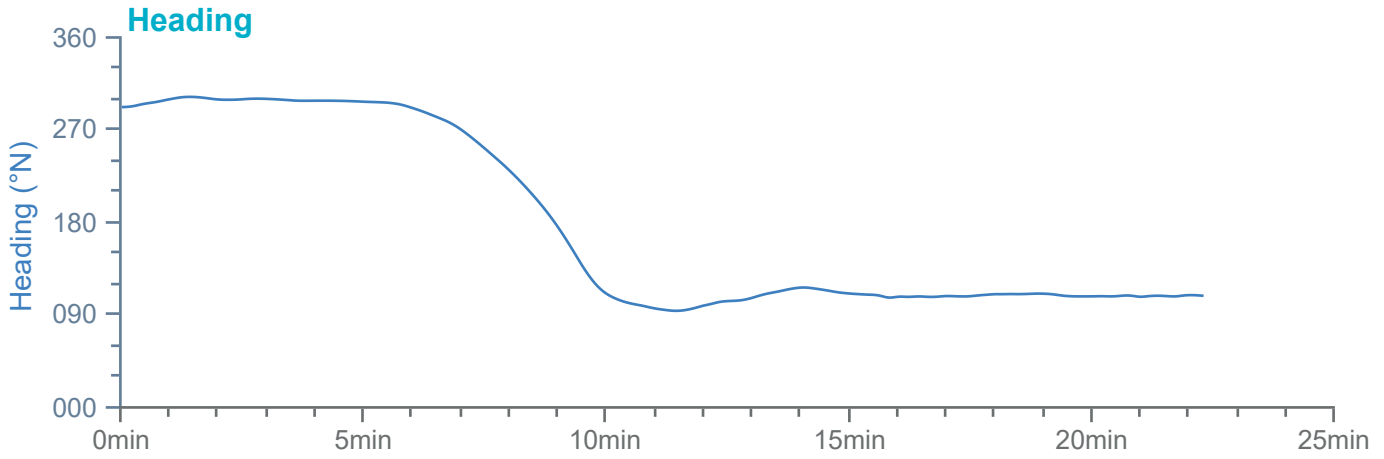


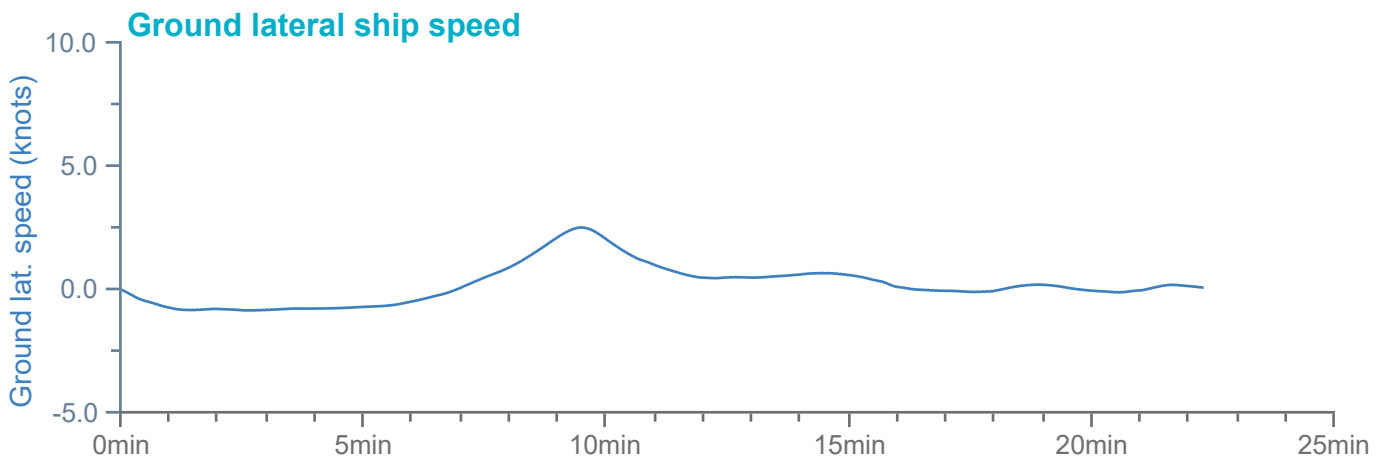
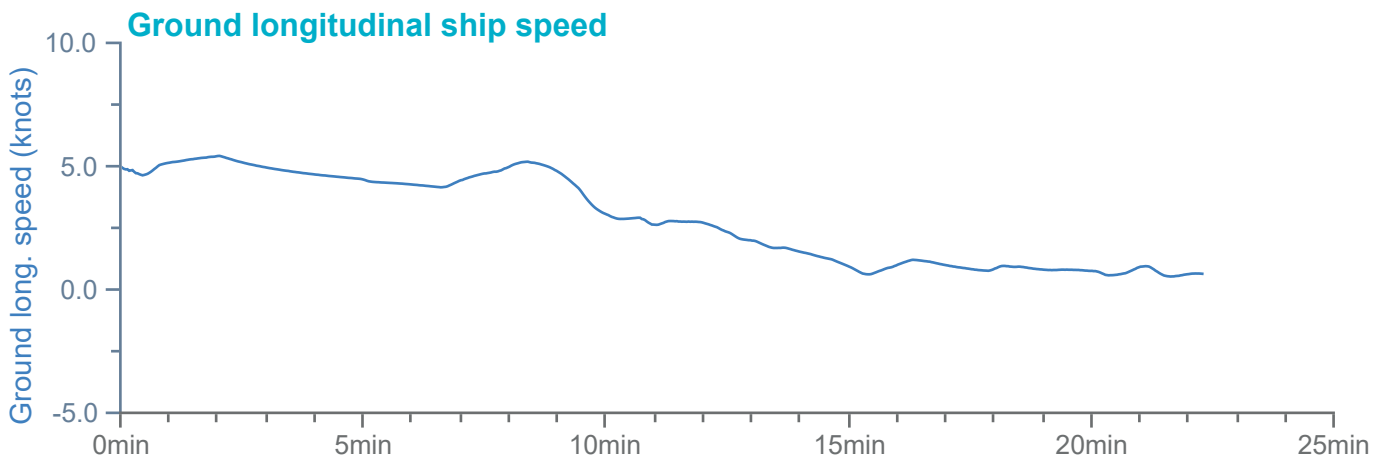
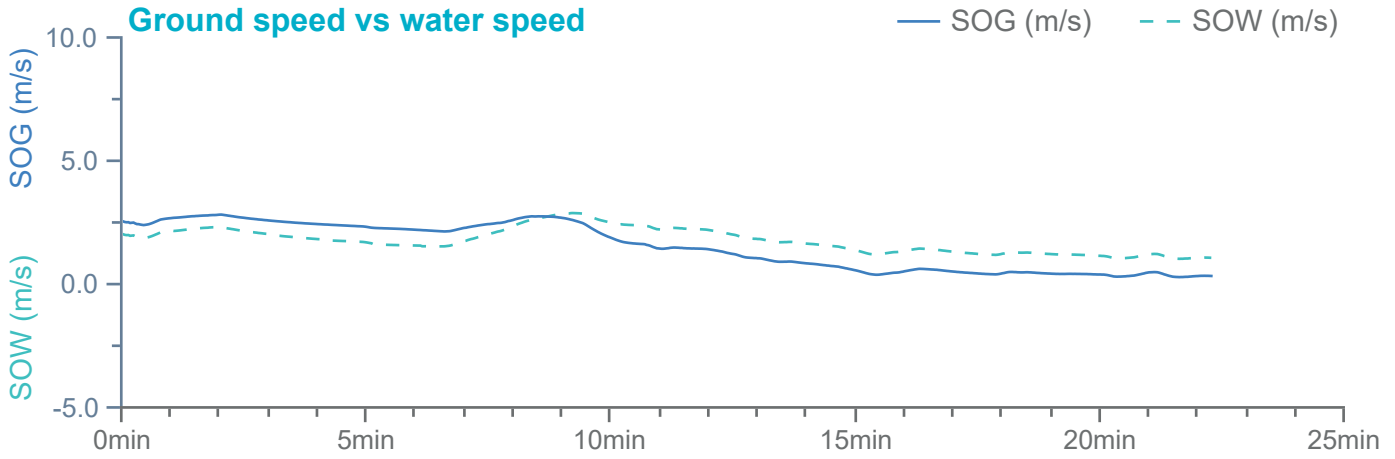
Summary

Environment

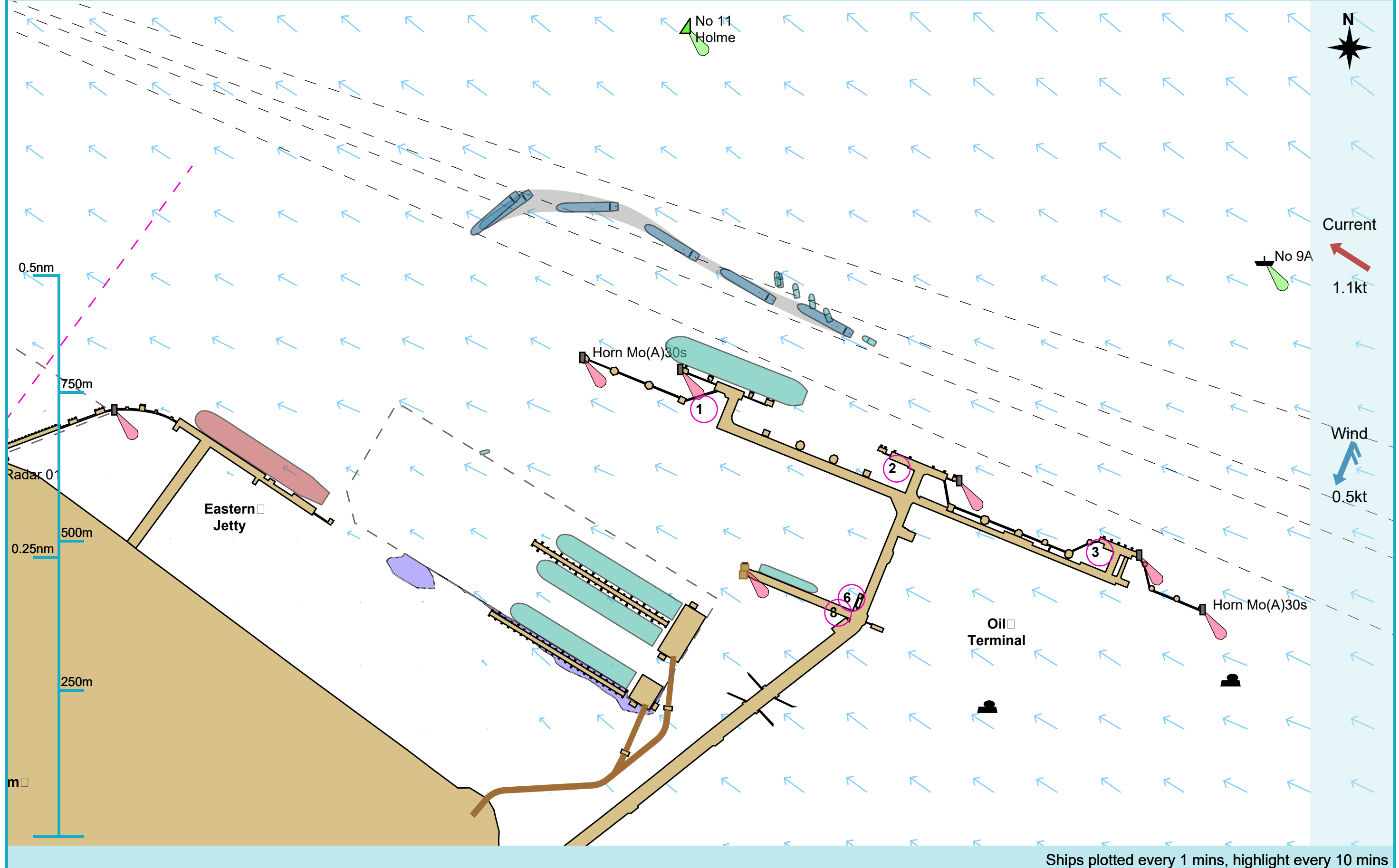
104m x 15m Product Tanker



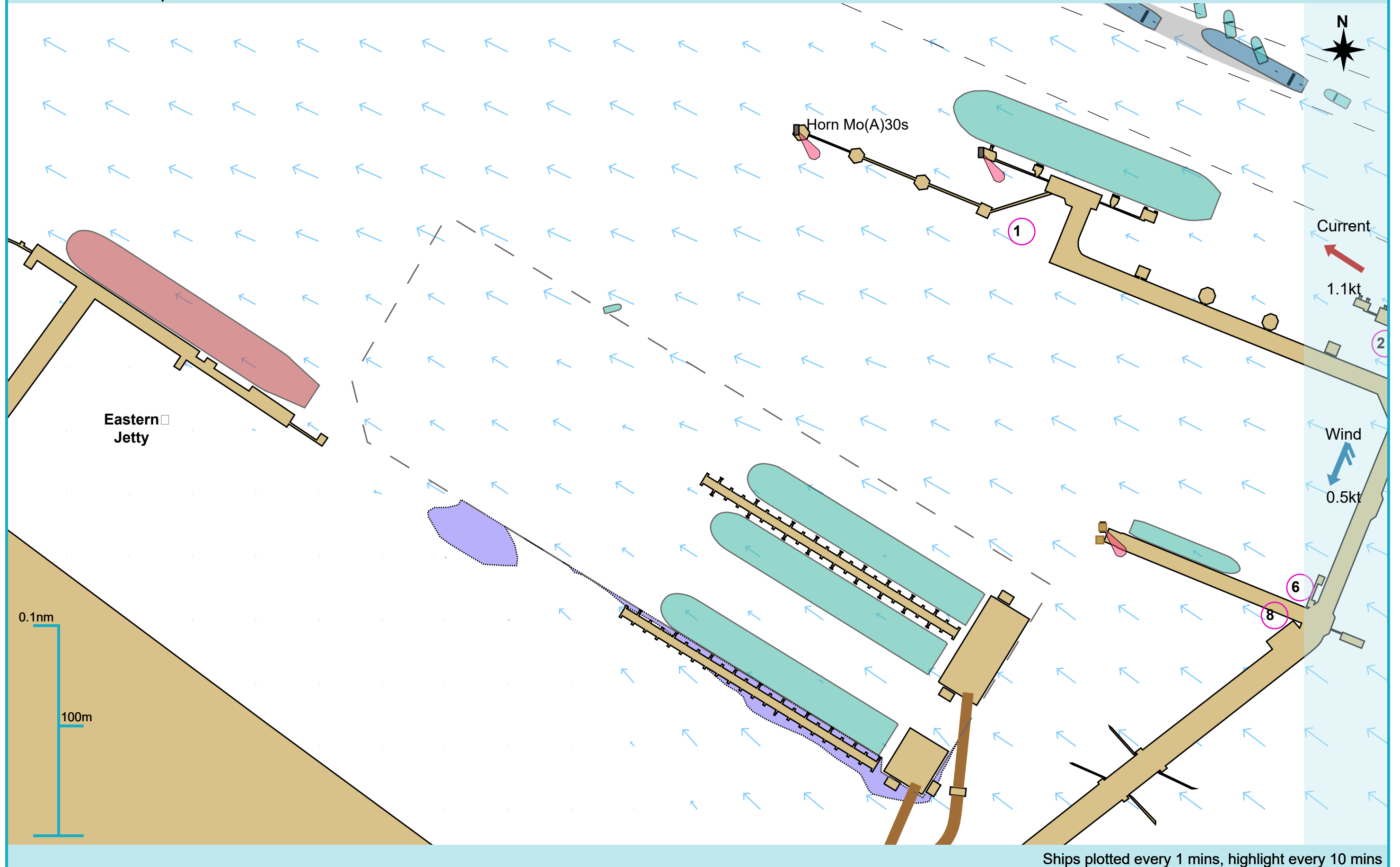




Manoeuvre track plot



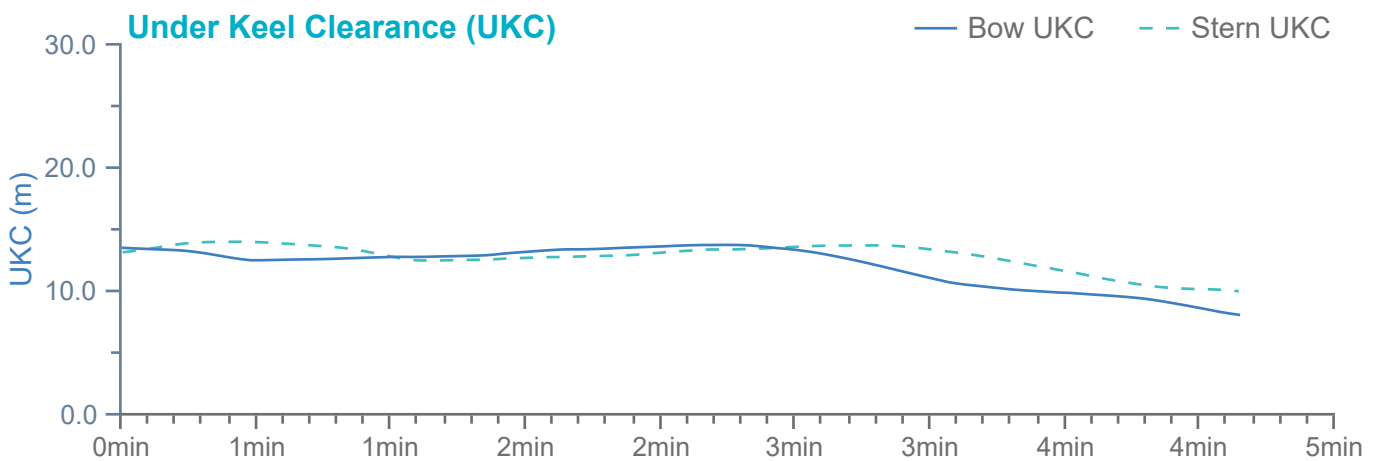
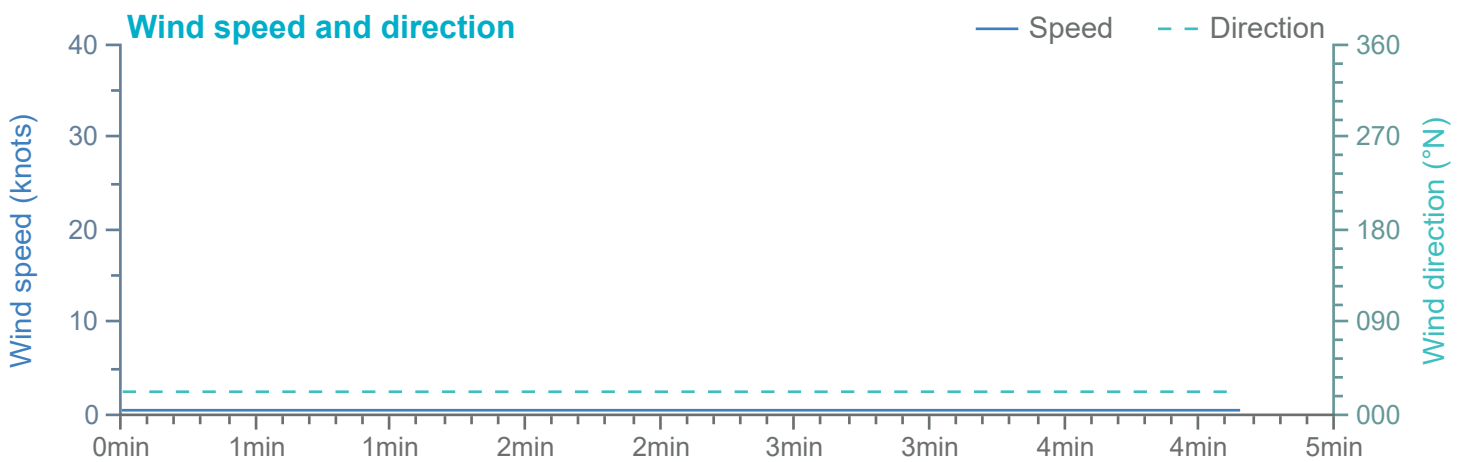
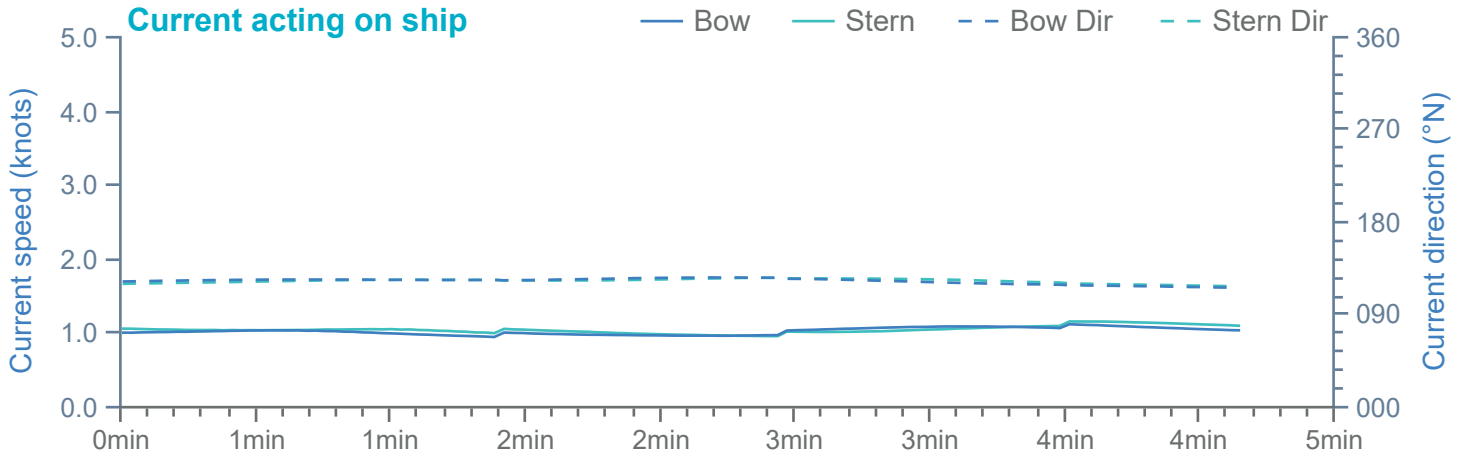
Manoeuvre track plot

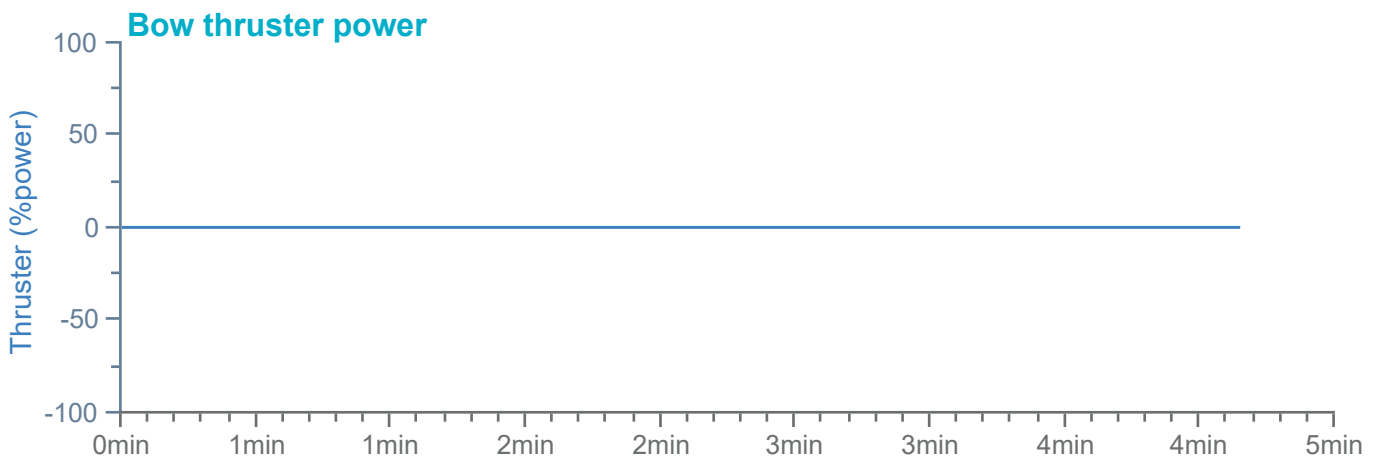
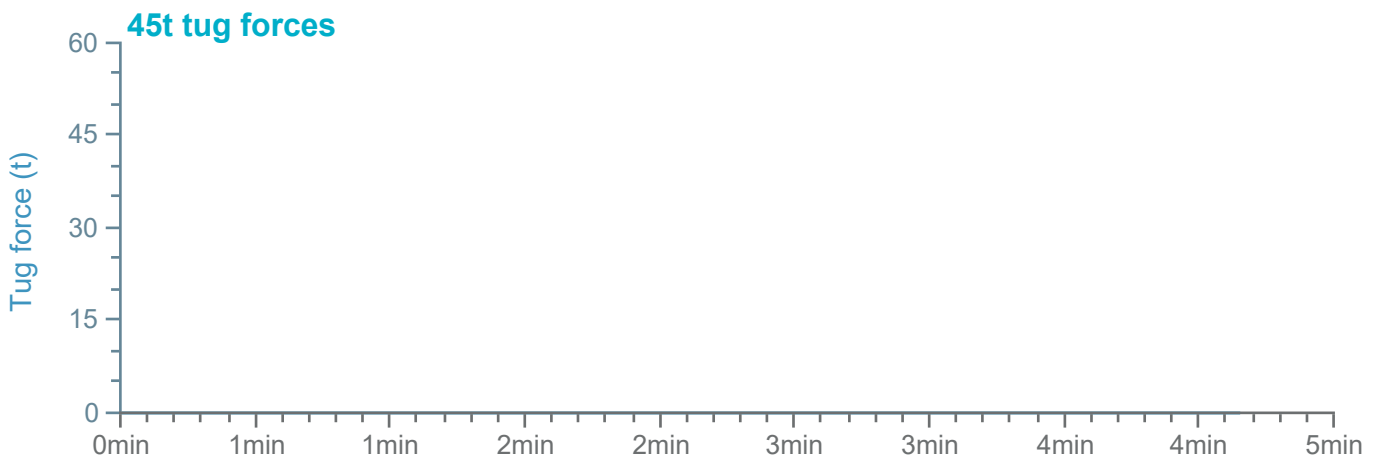
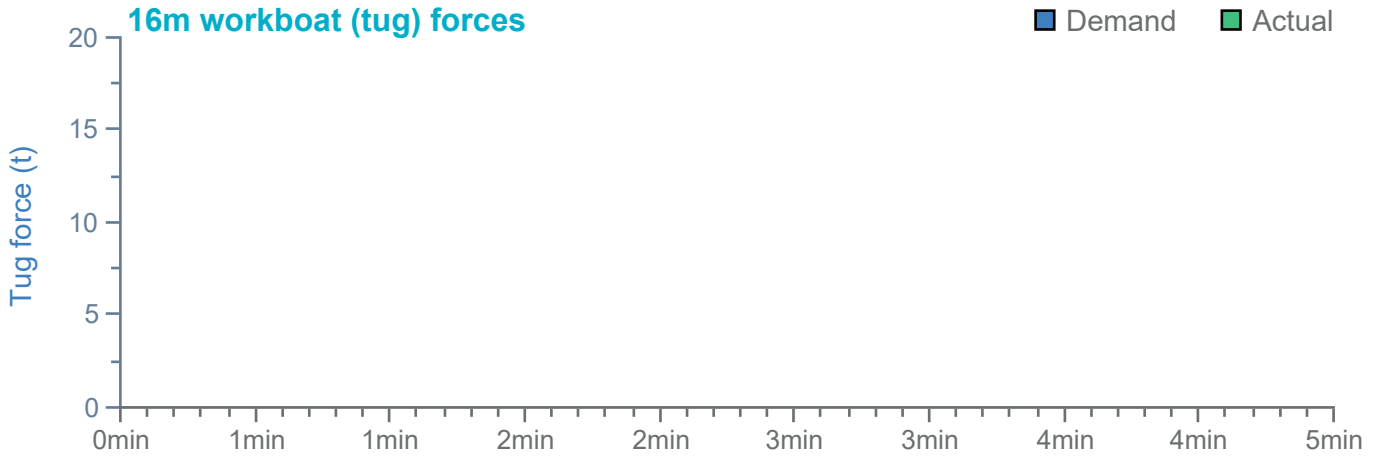


Summary

Environment

104m x 15m Product Tanker

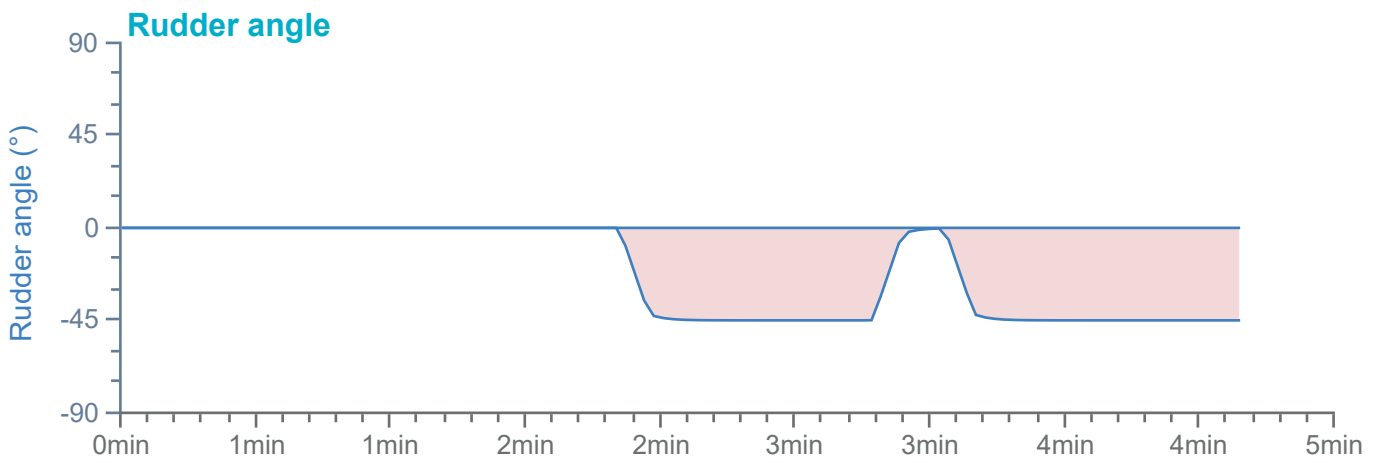
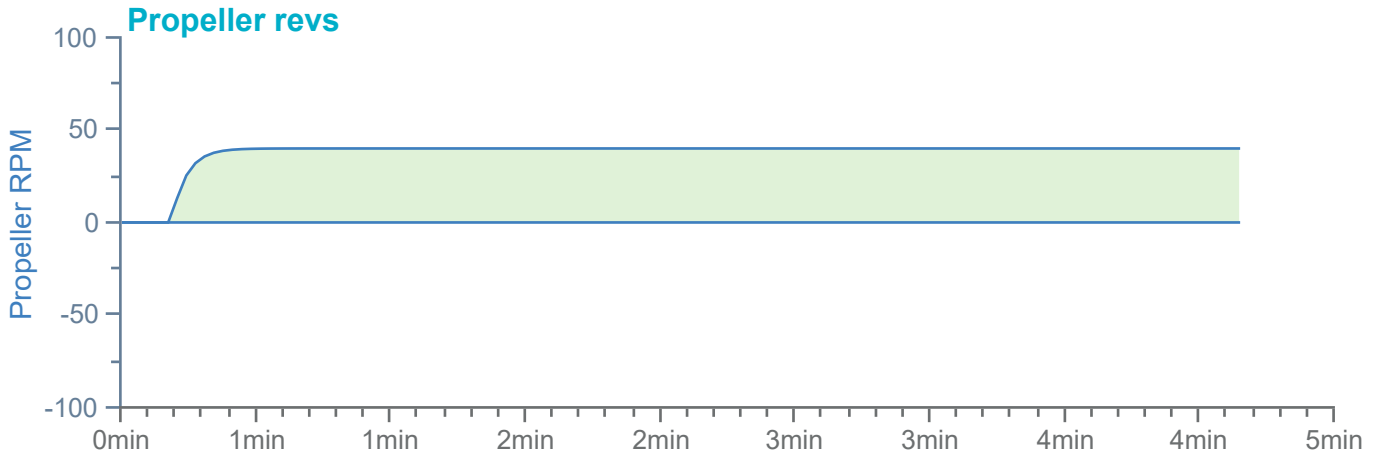




Summary

Environment

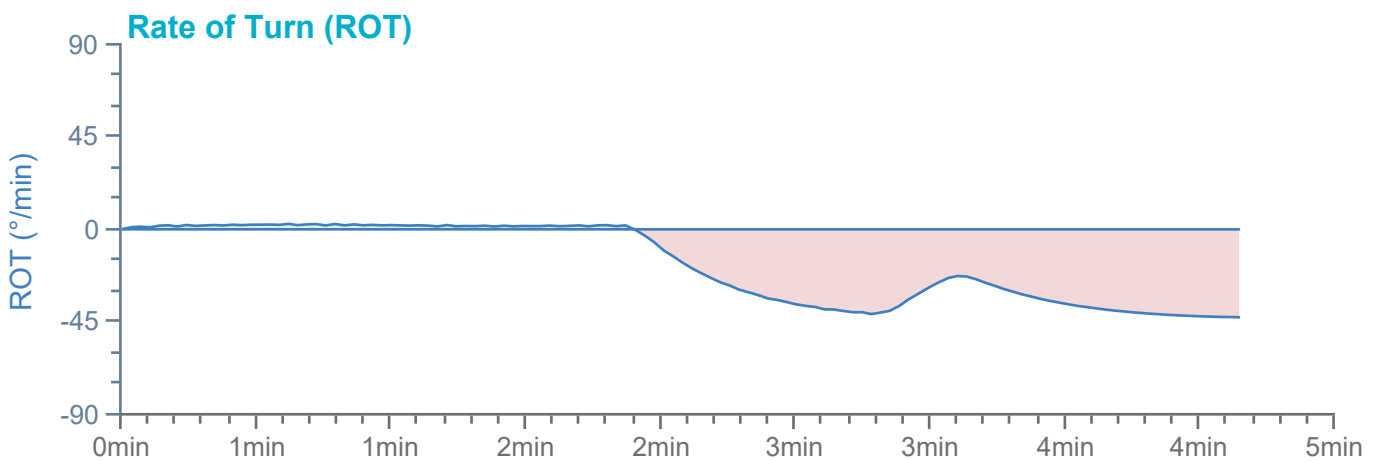
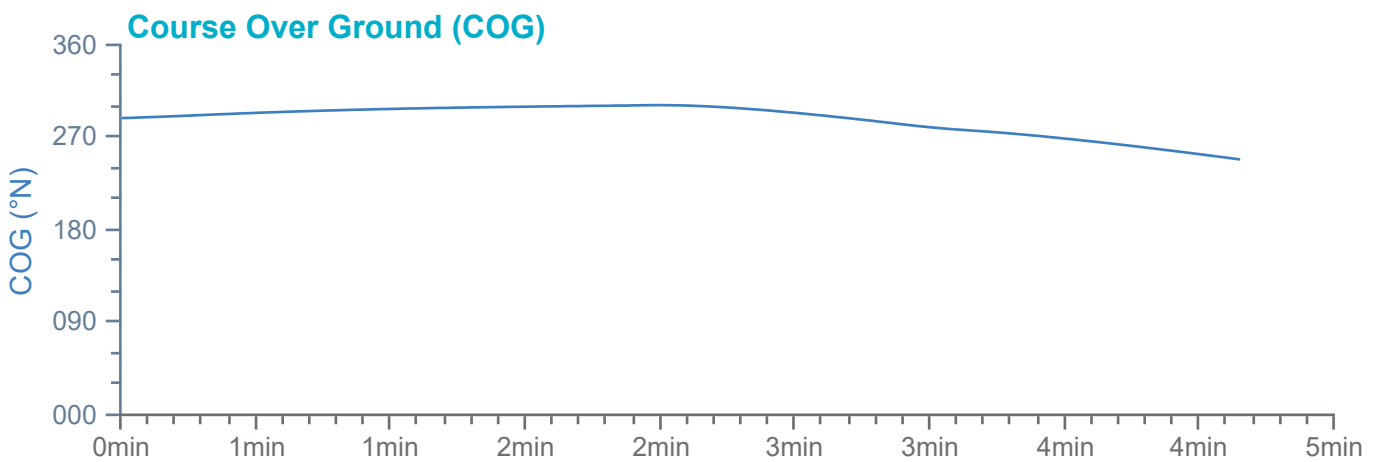
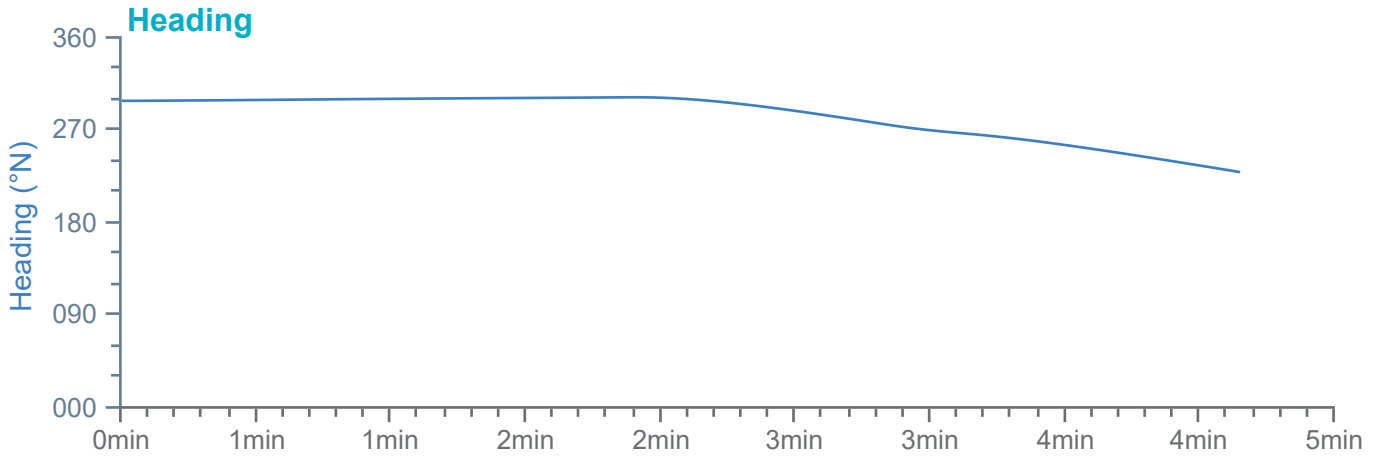
104m x 15m Product Tanker

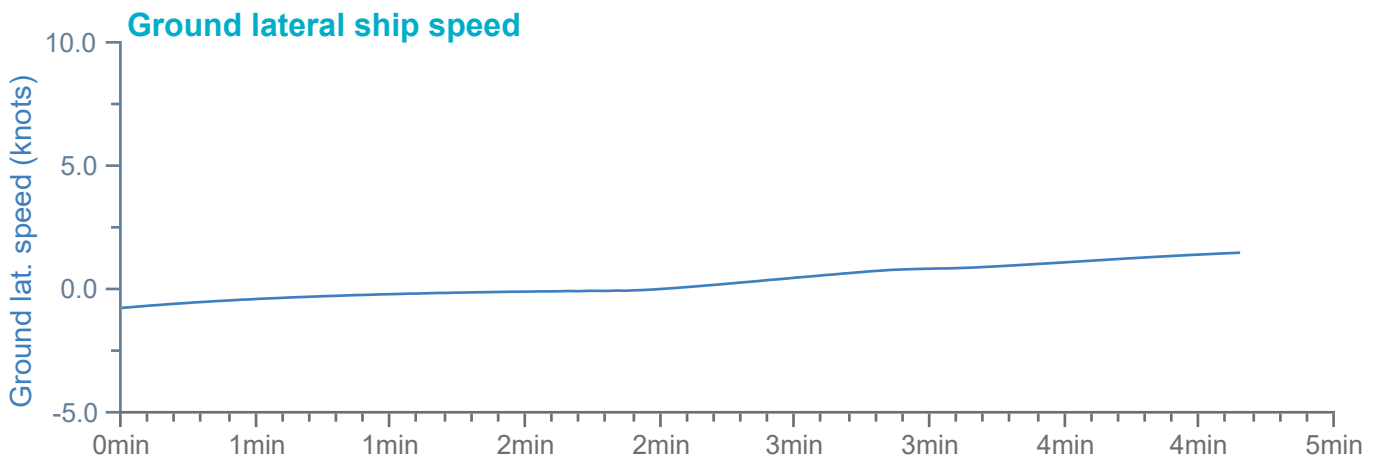
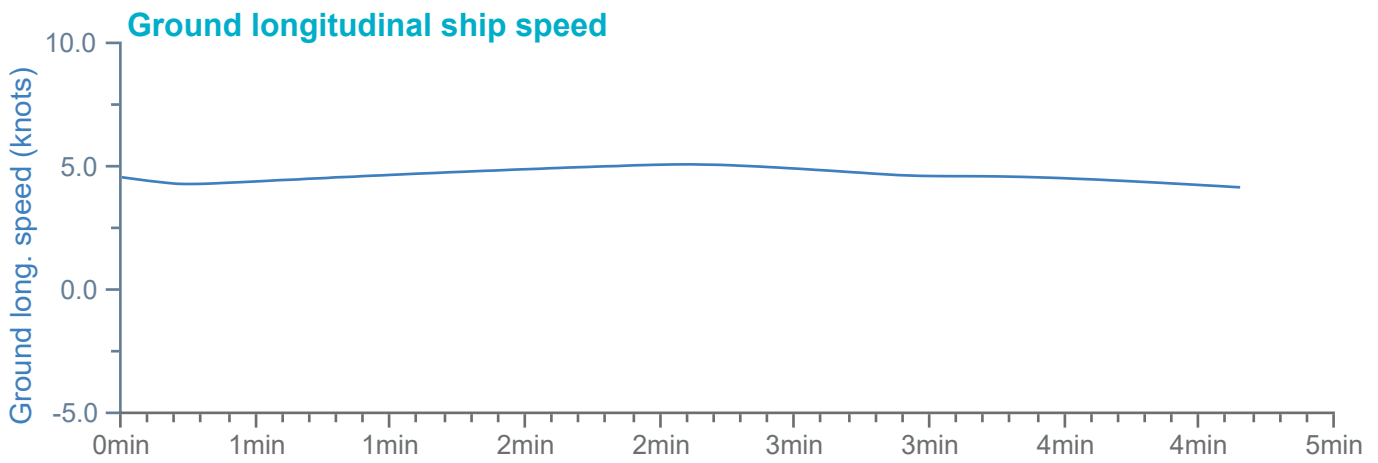
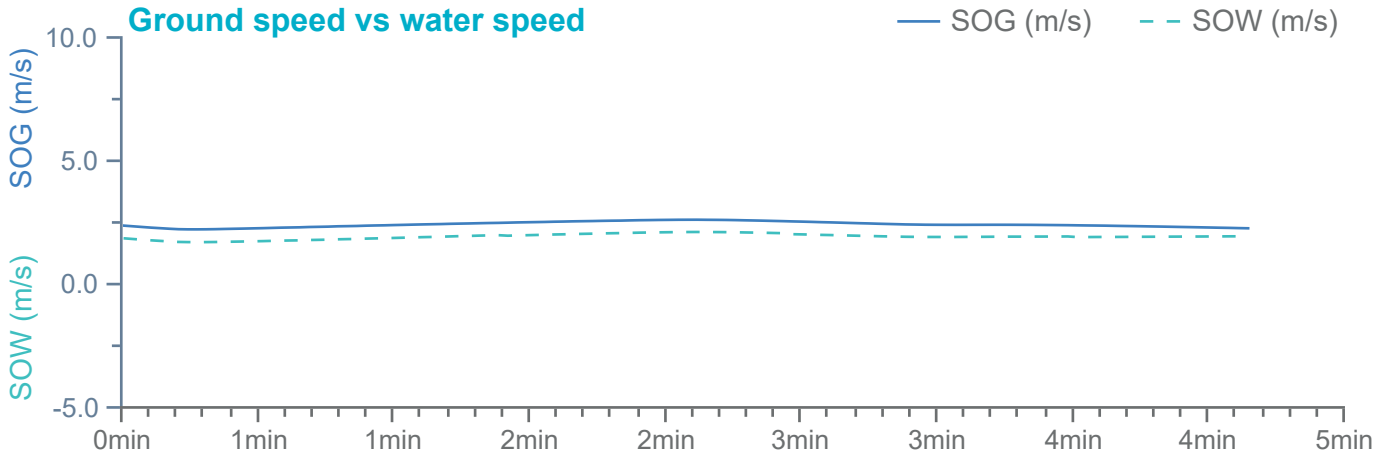


Summary

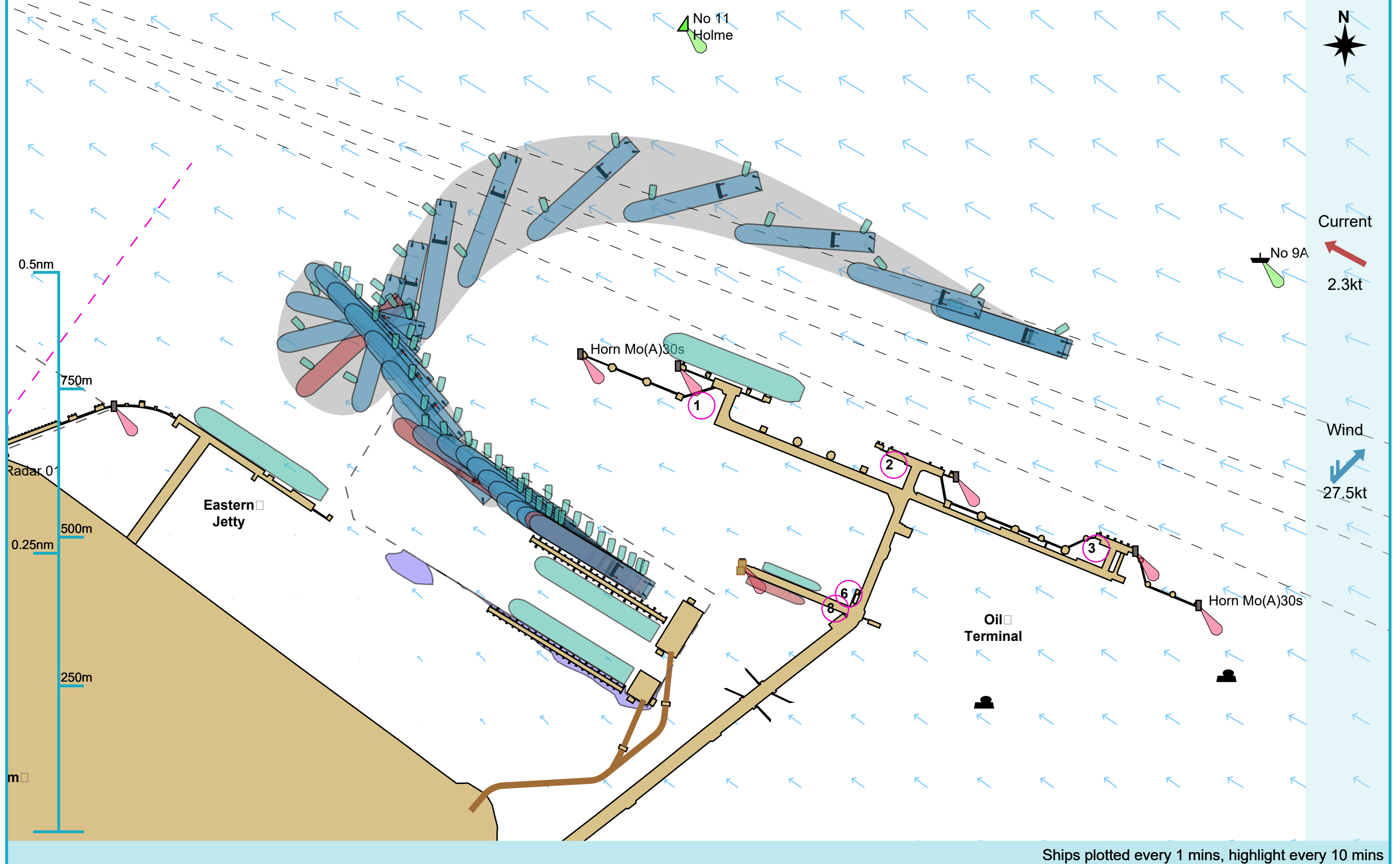
Environment

104m x 15m Product Tanker



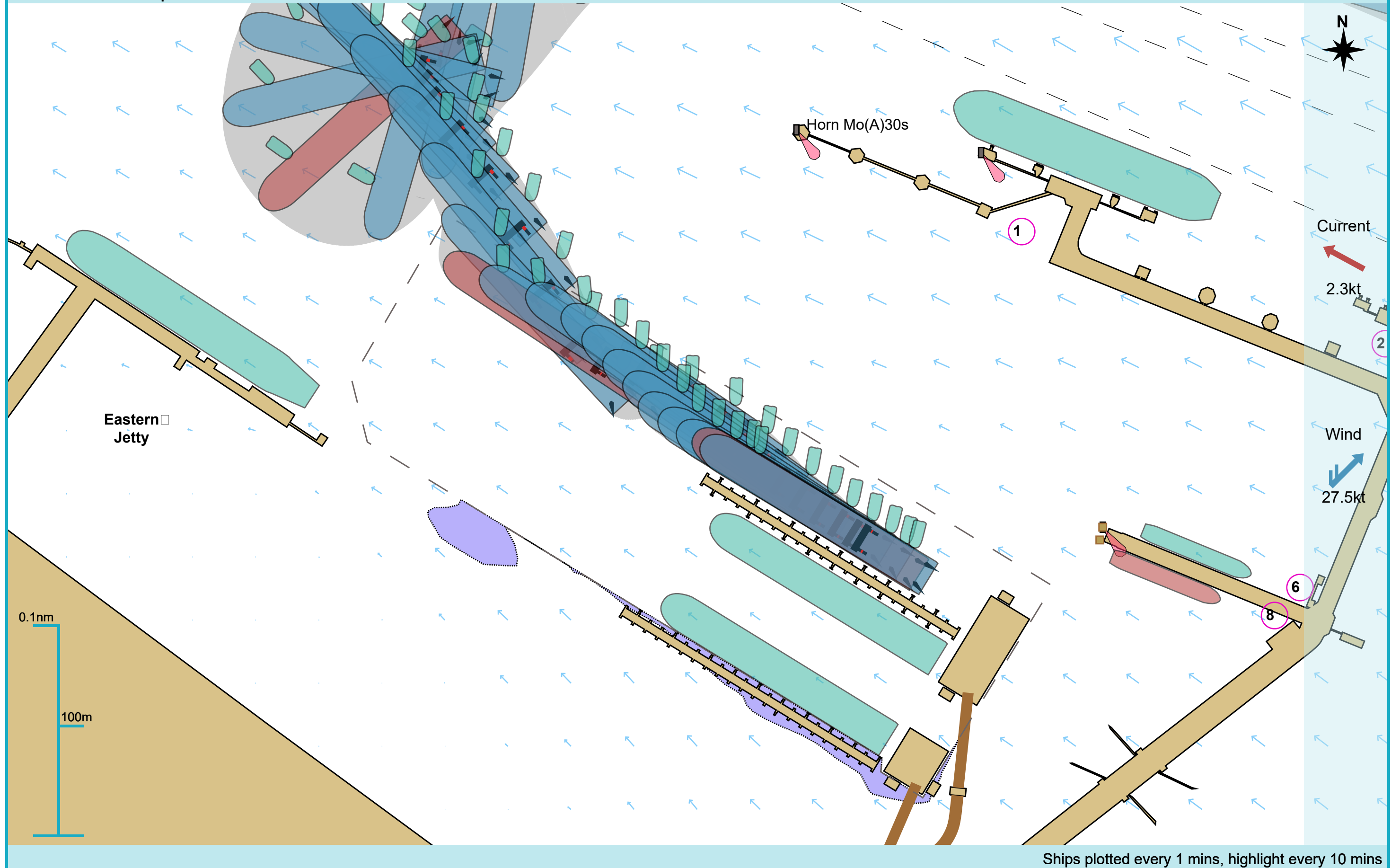


Manoeuvre track plot

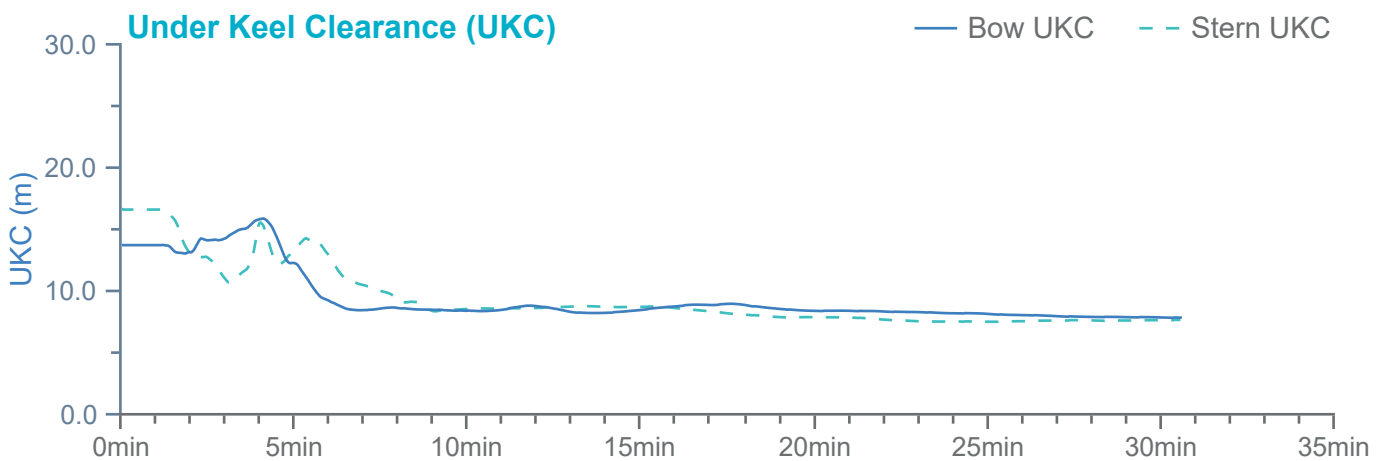
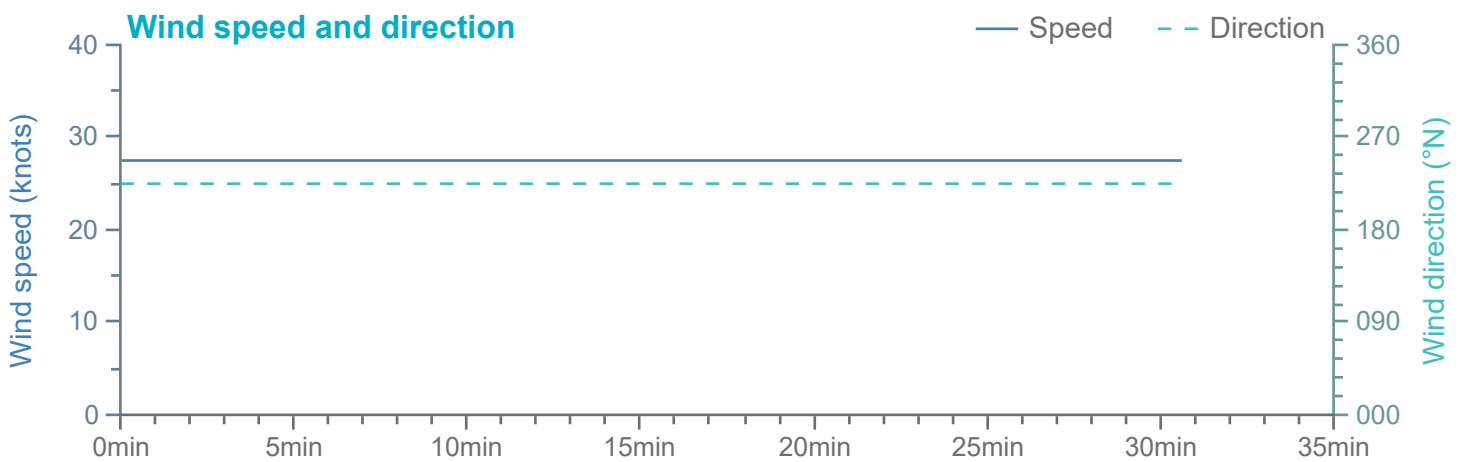
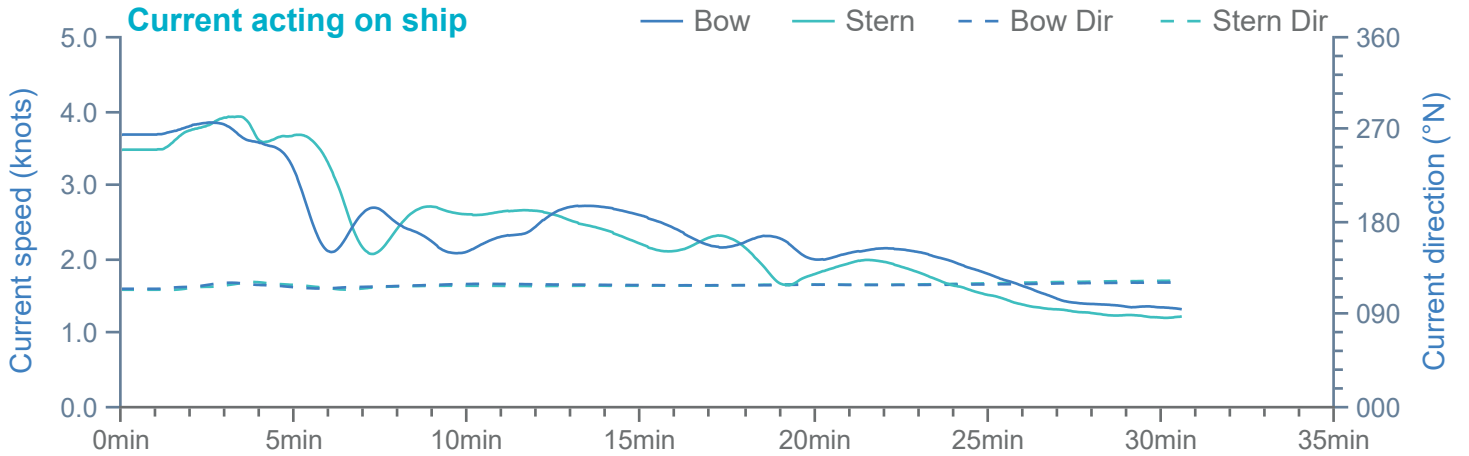


Ships plotted every 1 mins, highlight every 10 mins

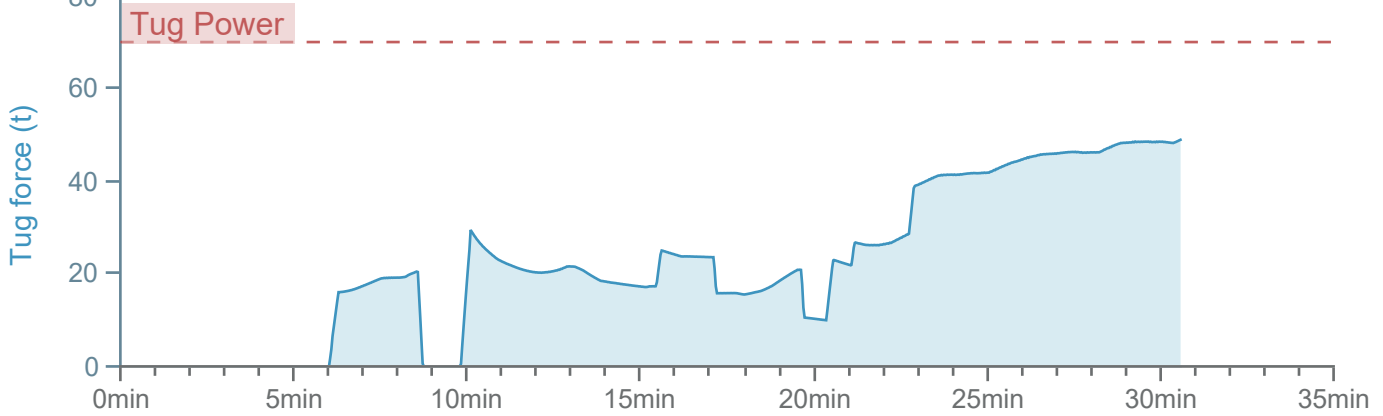
Manoeuvre track plot



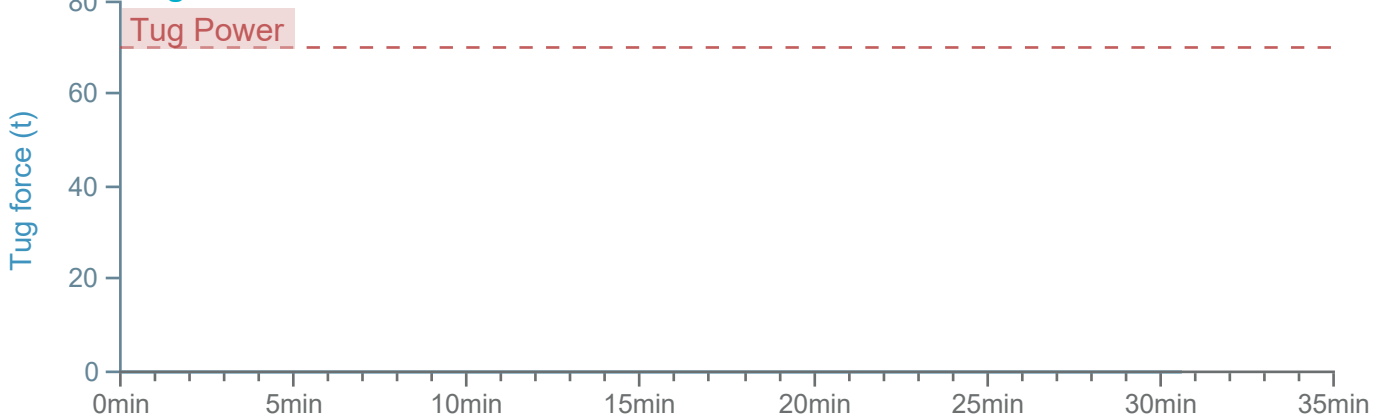
Ships plotted every 1 mins, highlight every 10 mins



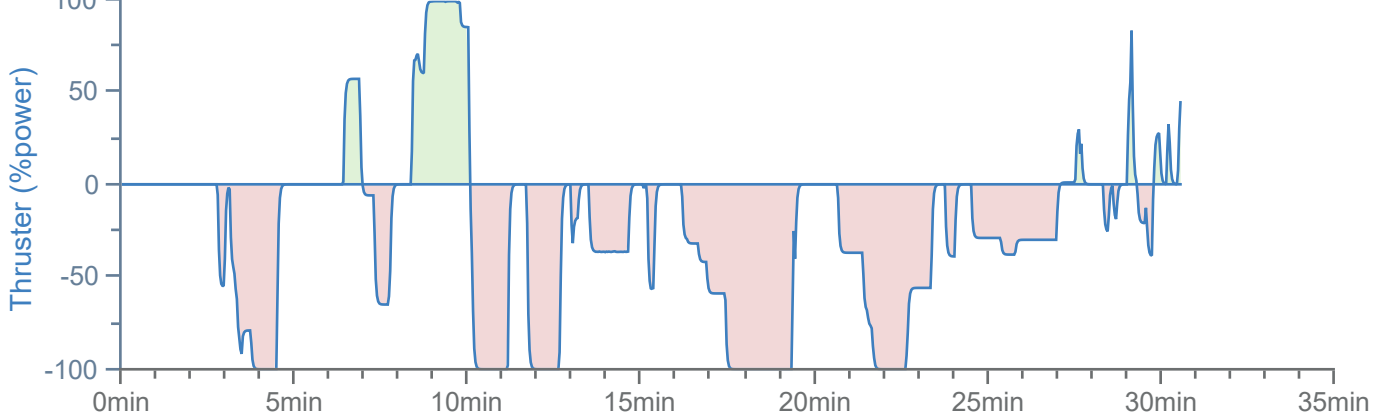
Tug 1 forces

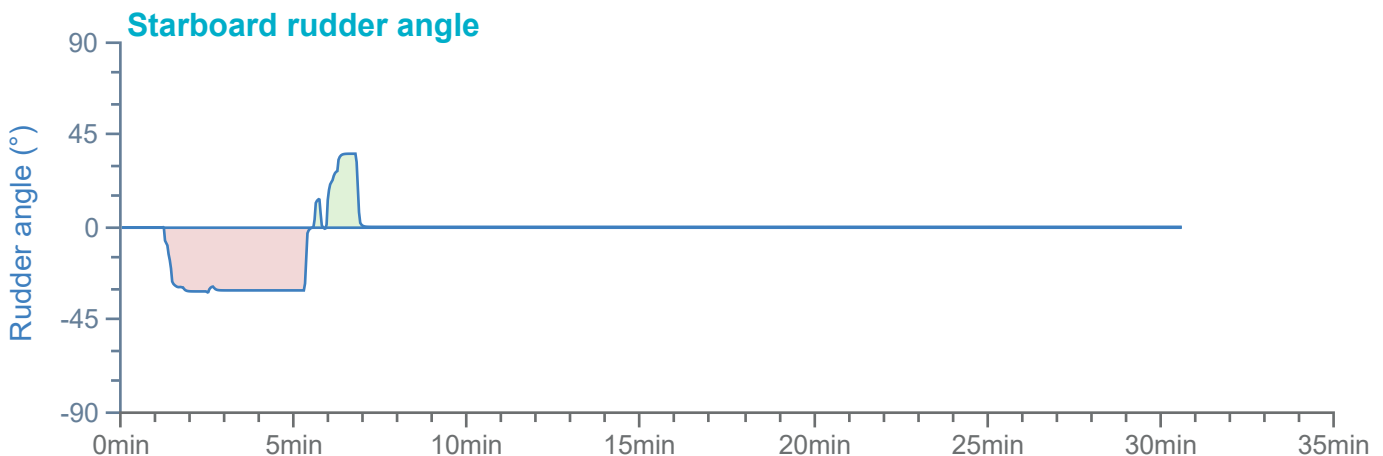
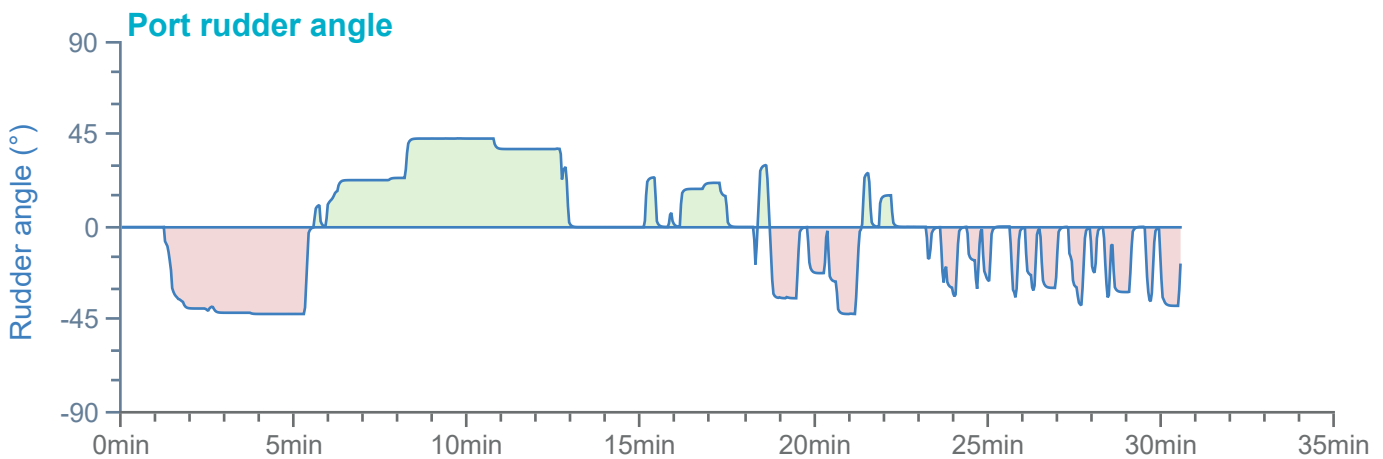
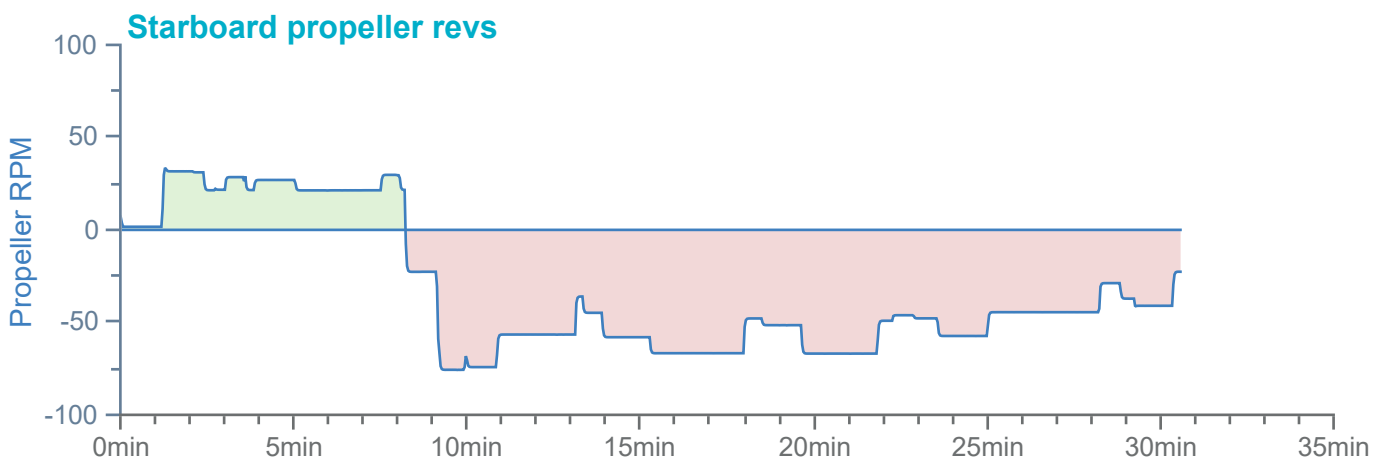
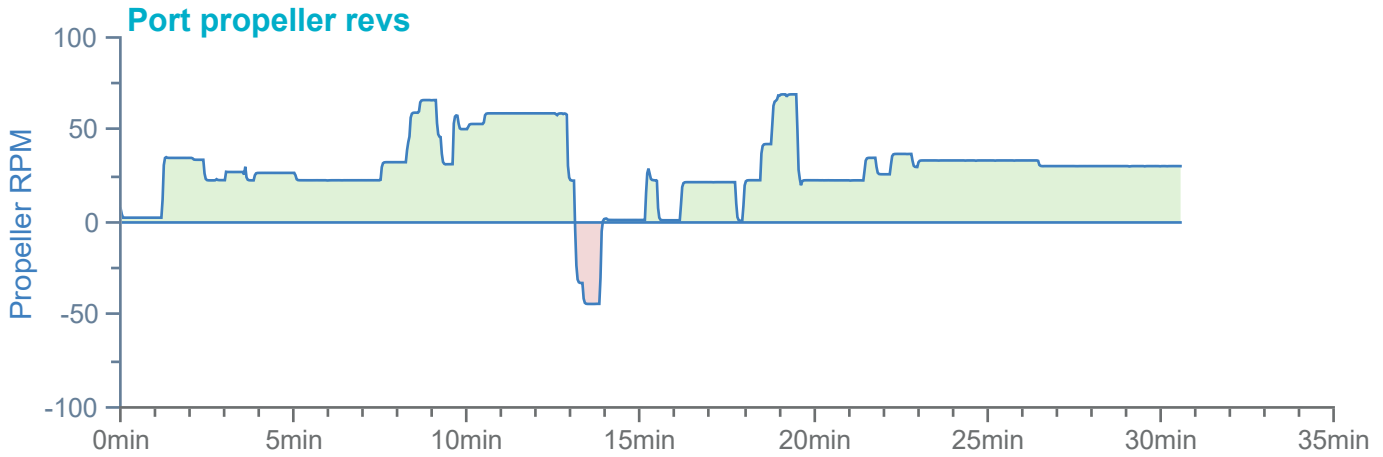


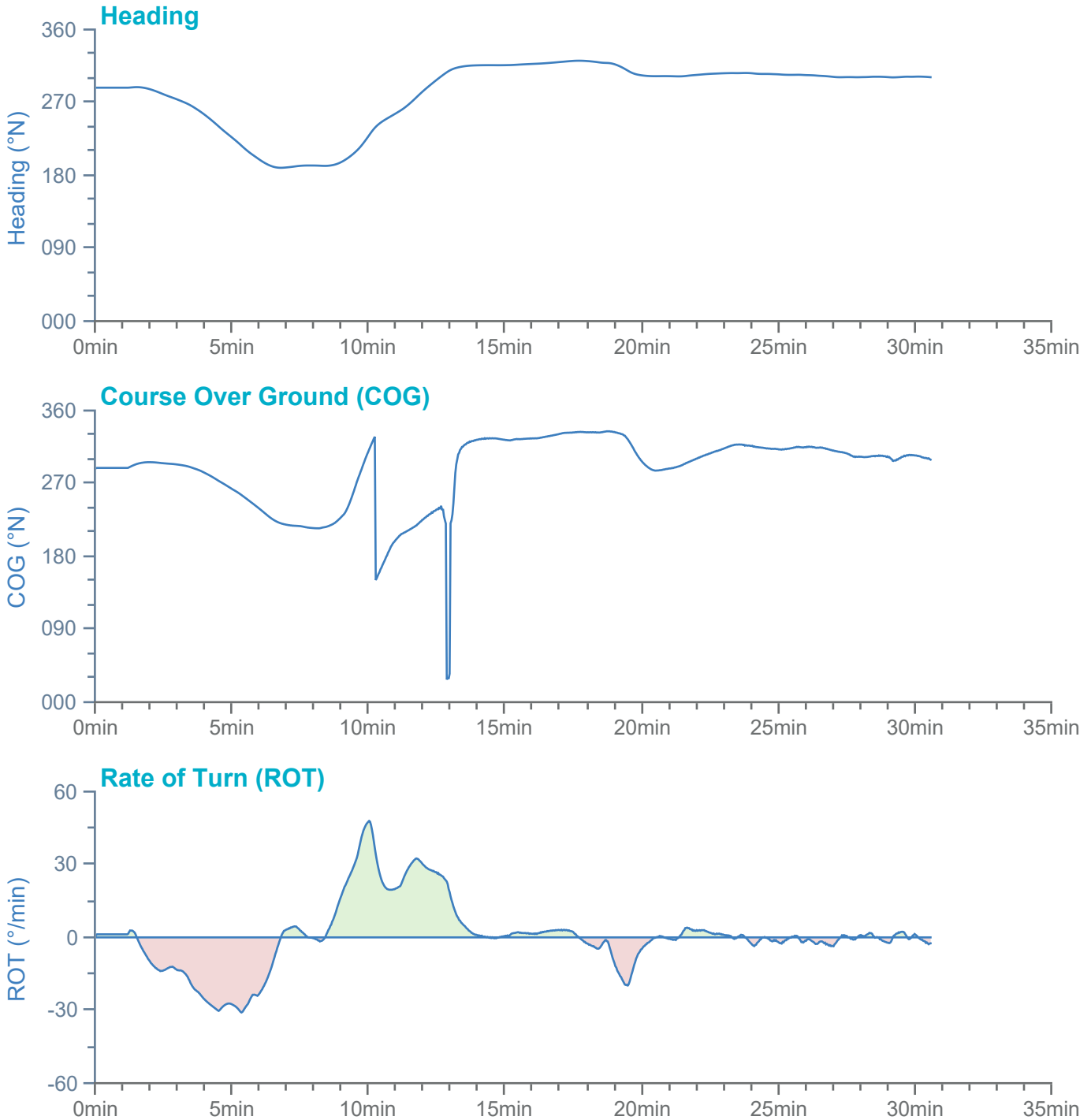
Tug 2 forces

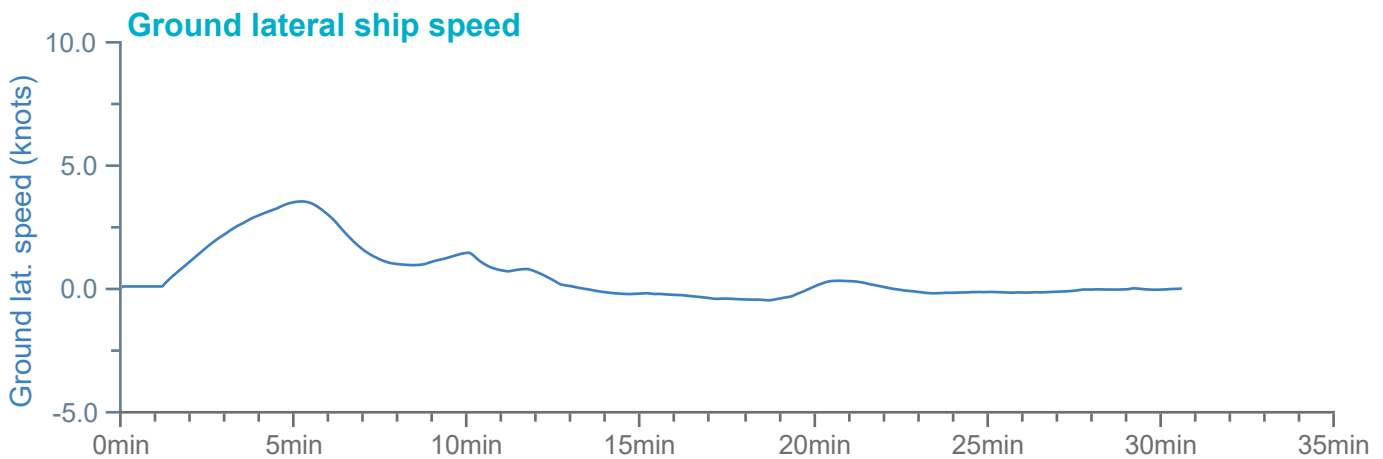
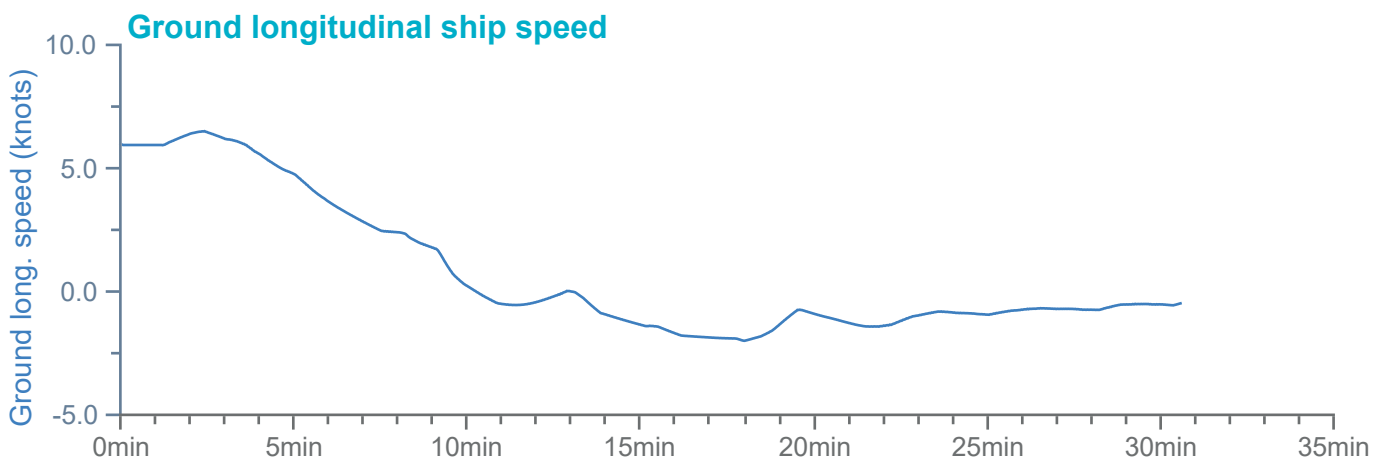
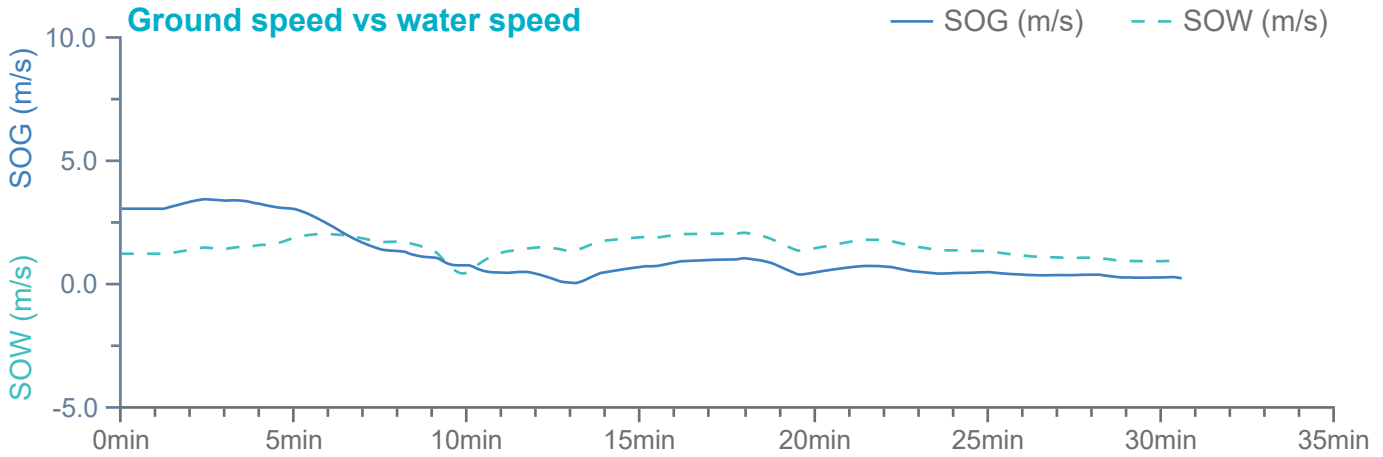


Bow thruster power

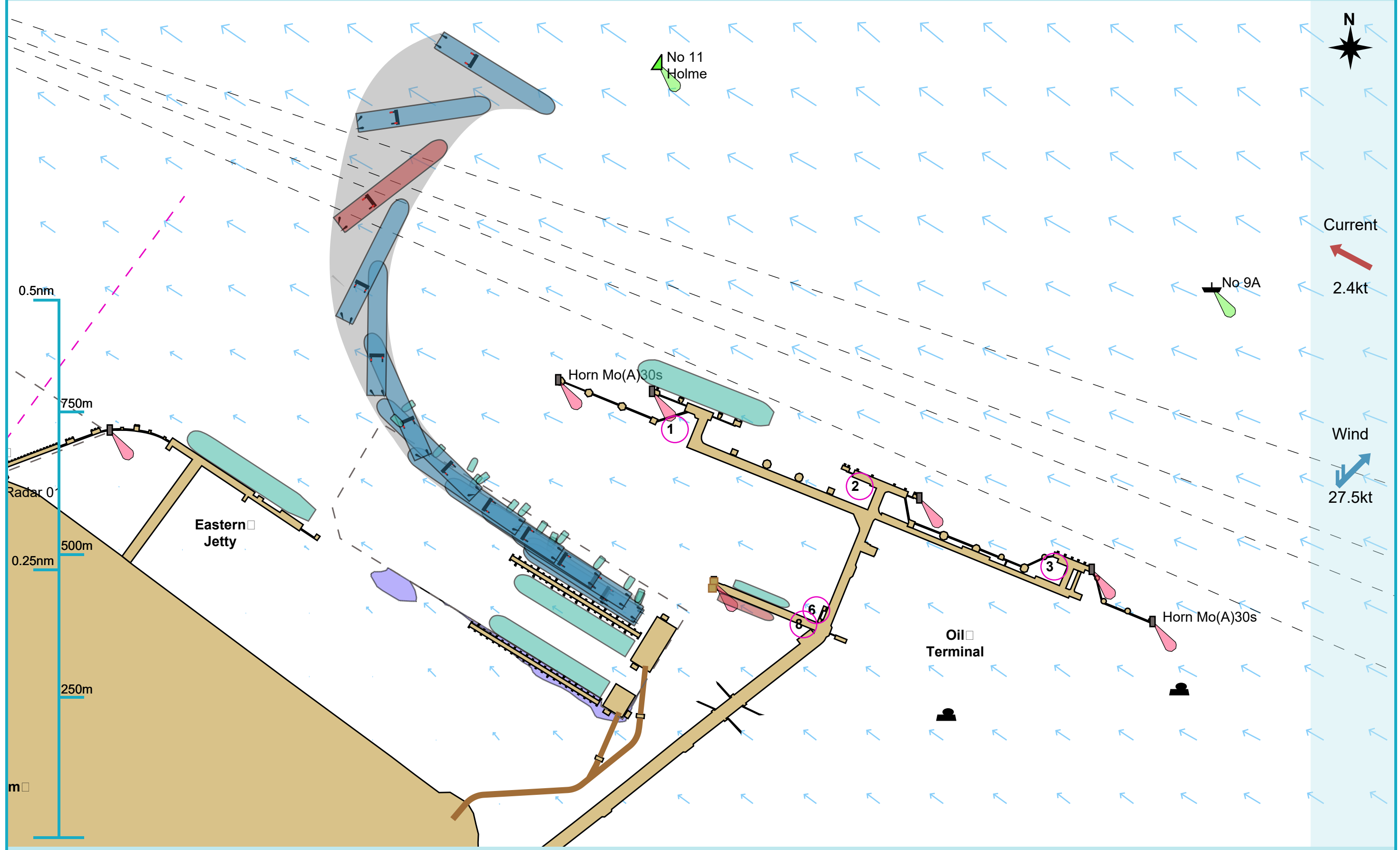






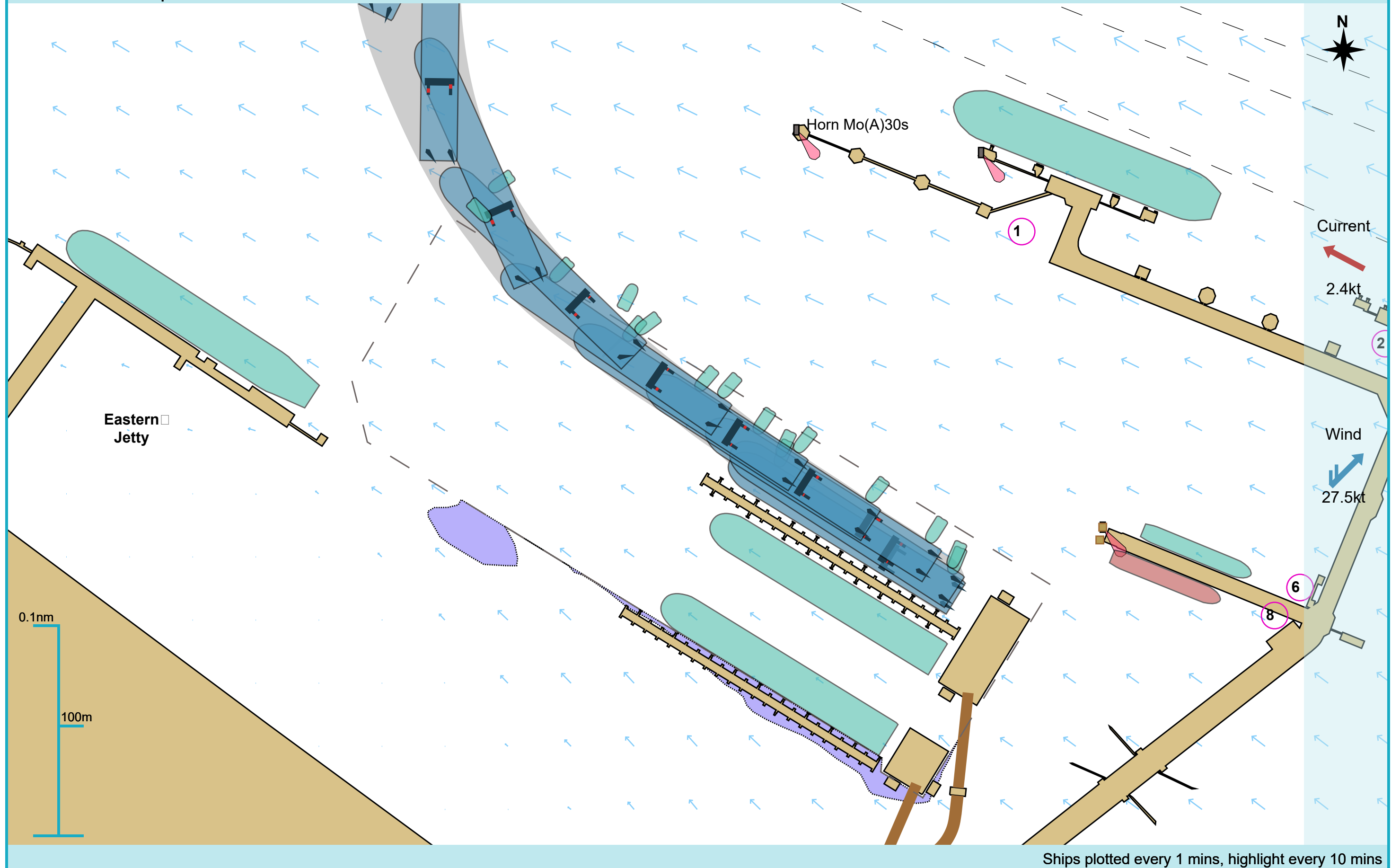


Manoeuvre track plot

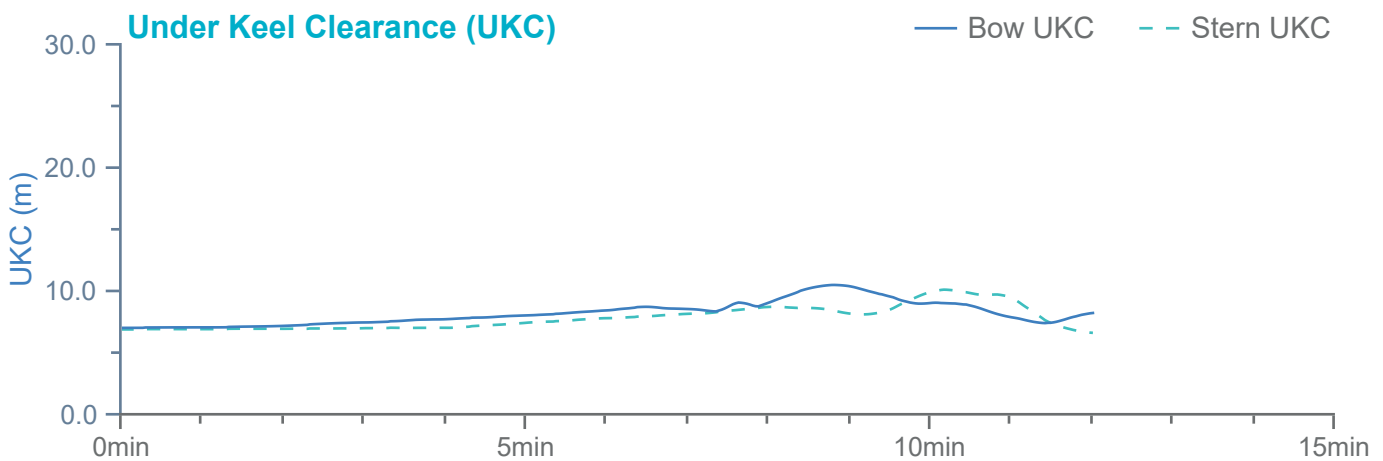
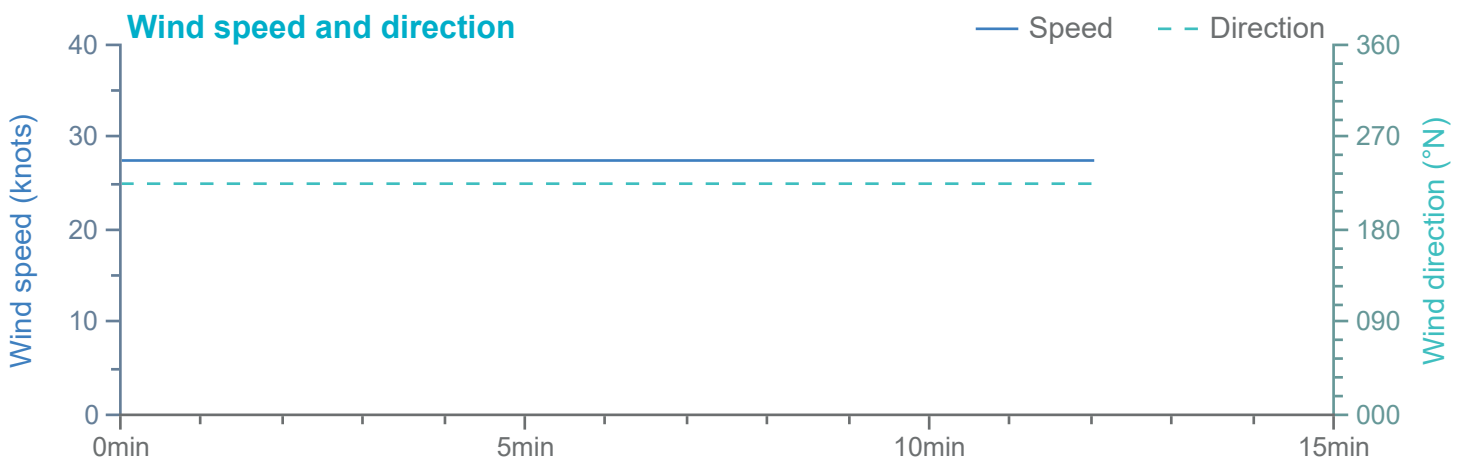
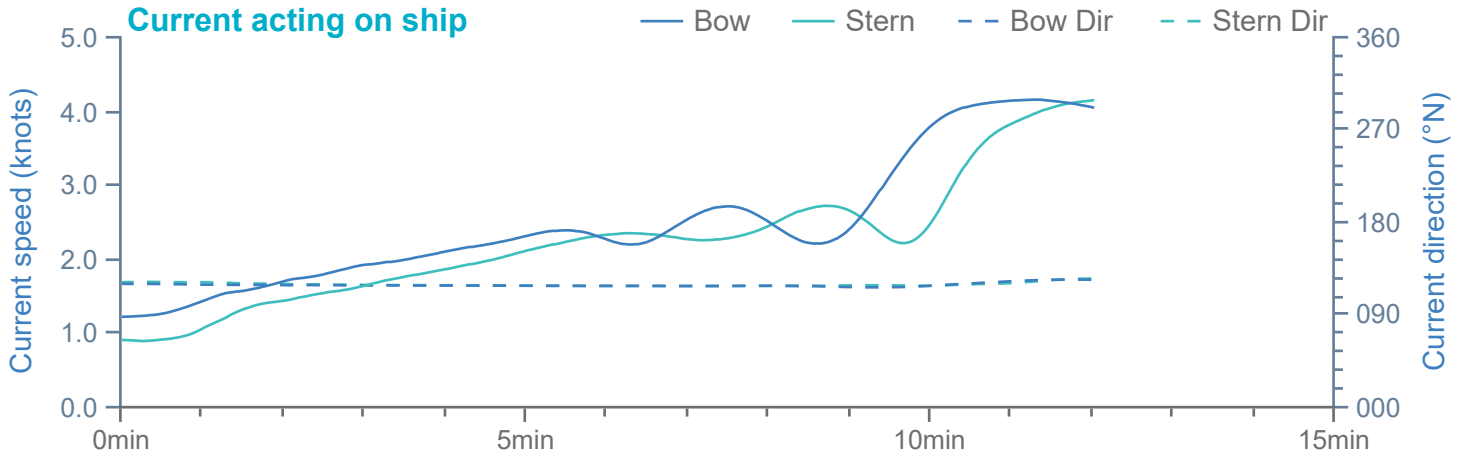


Ships plotted every 1 mins, highlight every 10 mins

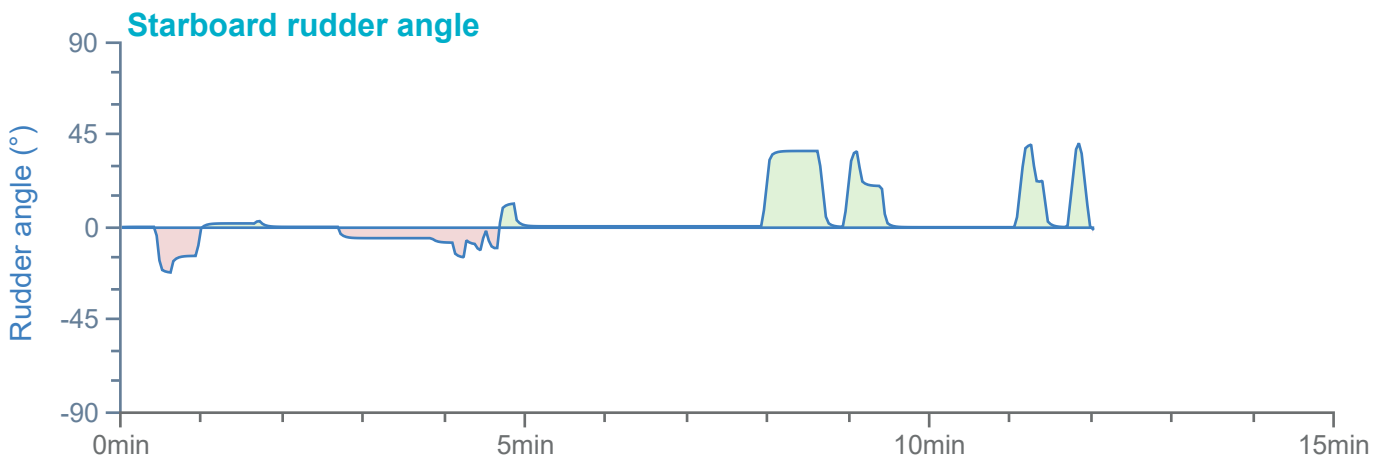
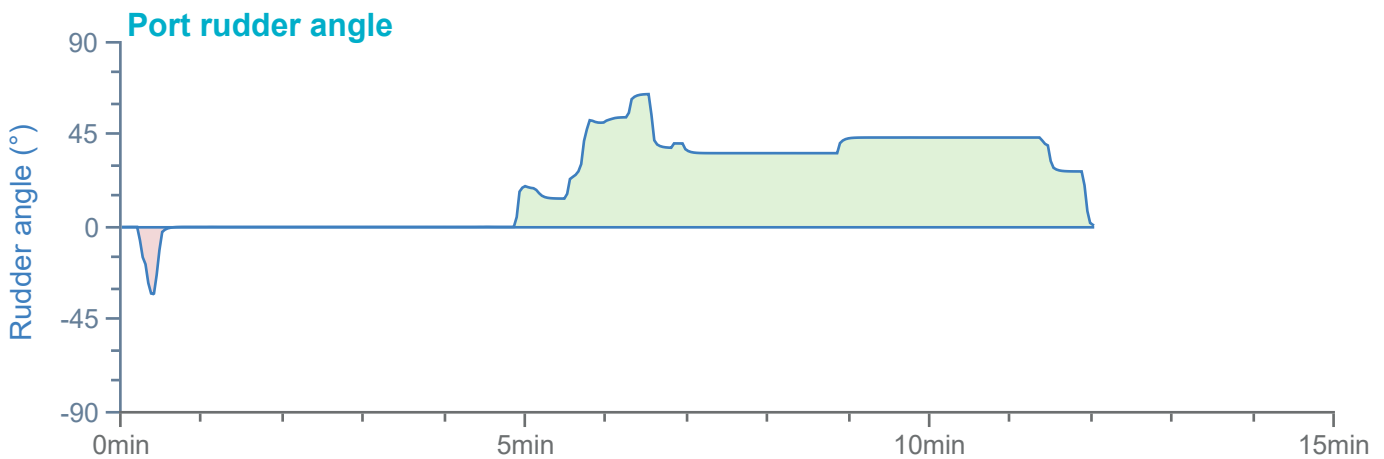
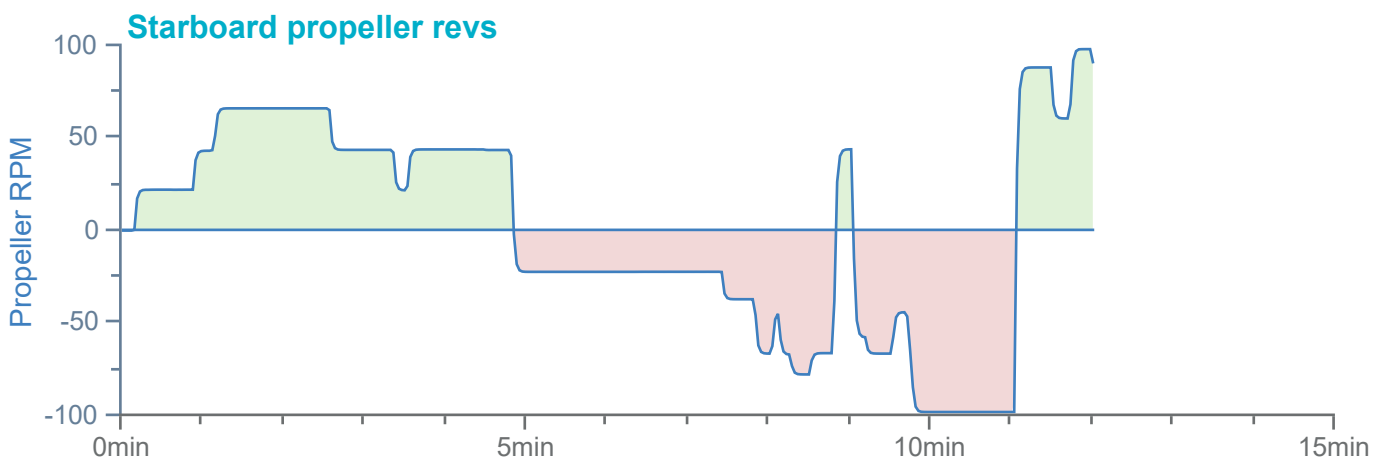
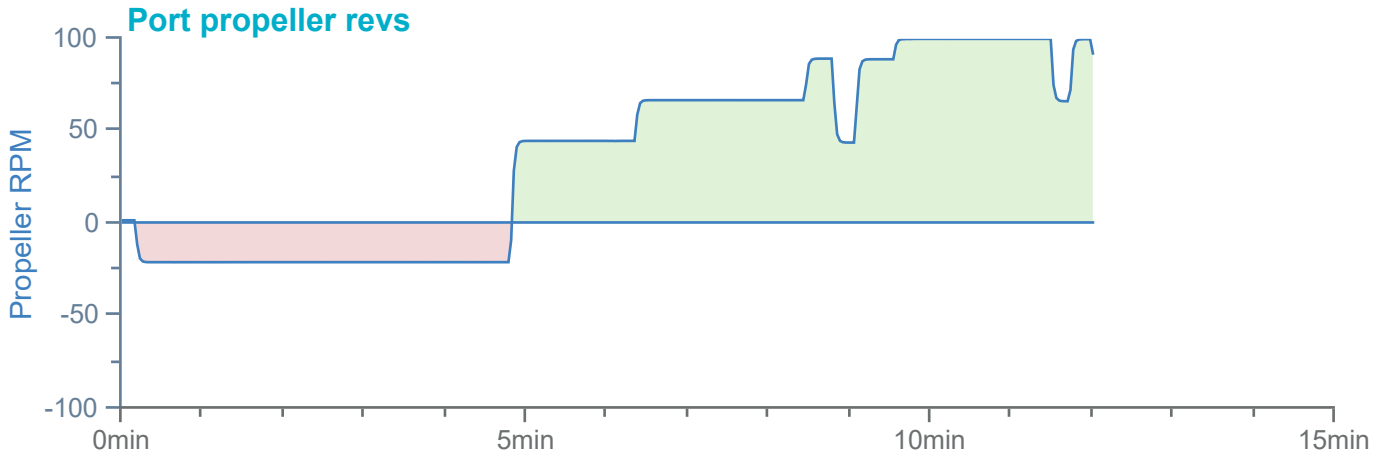
Manoeuvre track plot

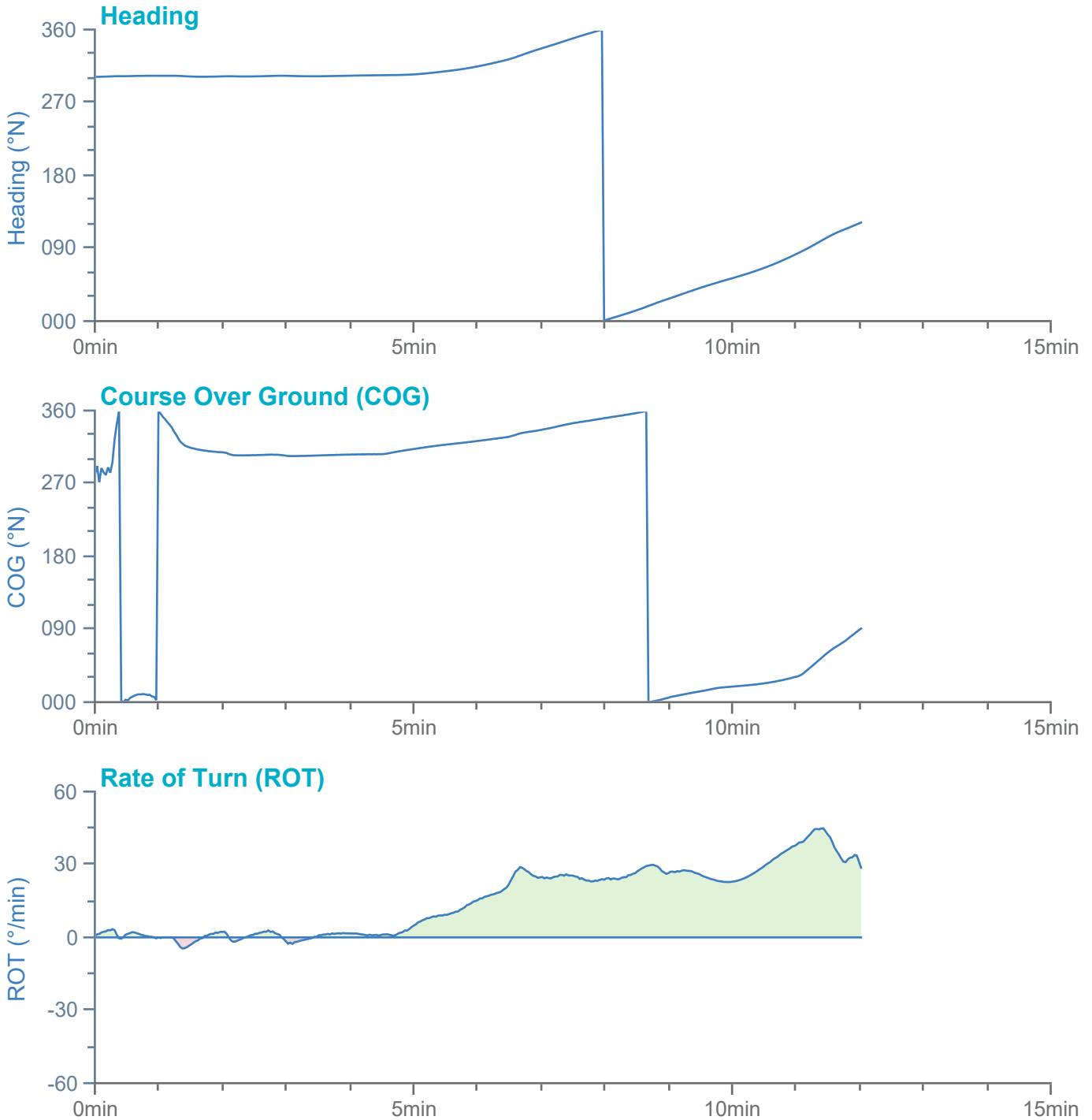


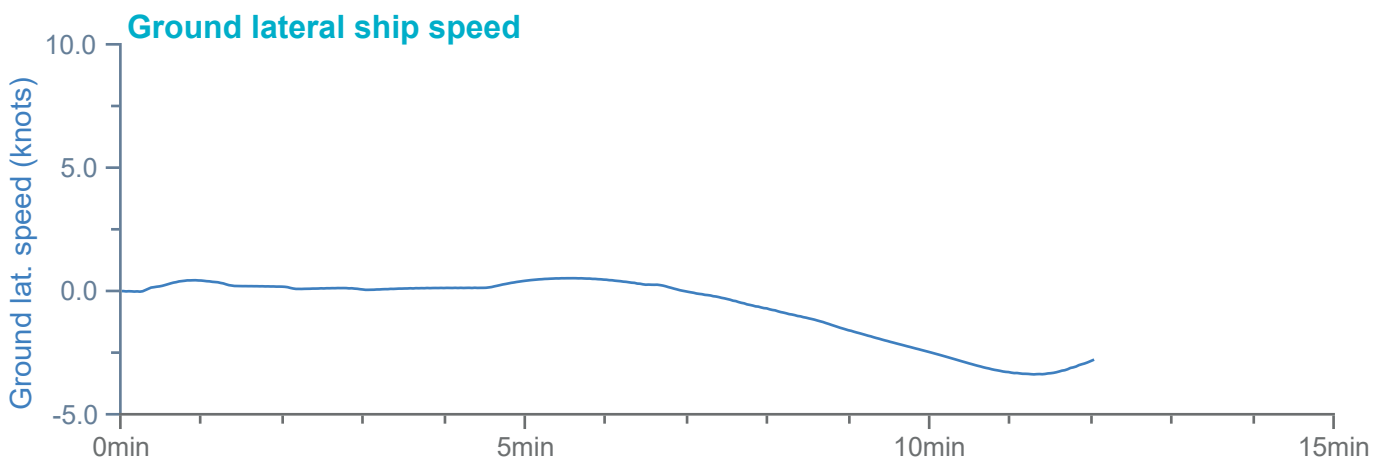
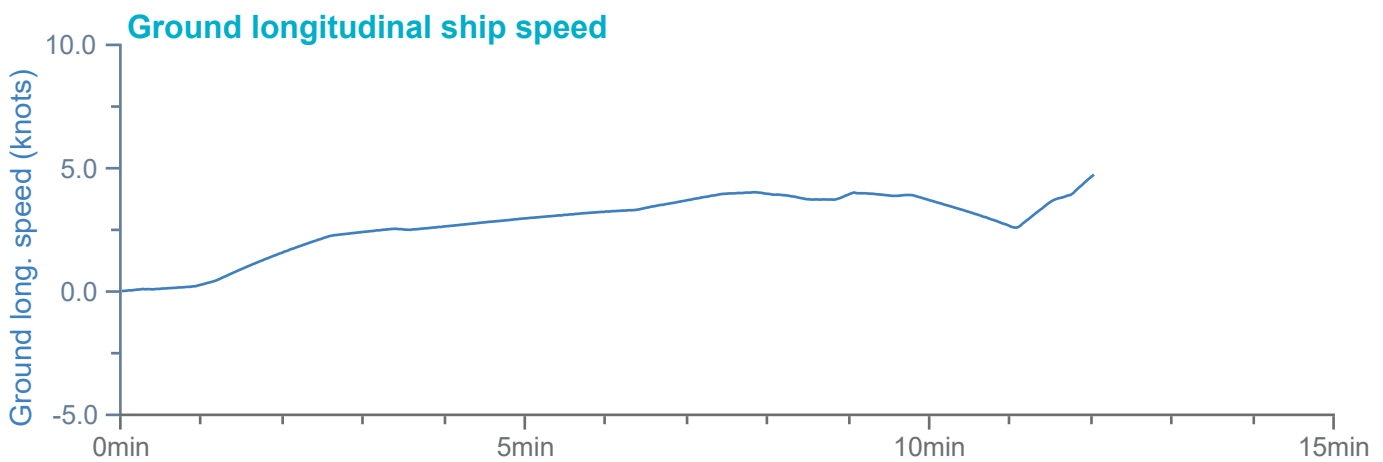
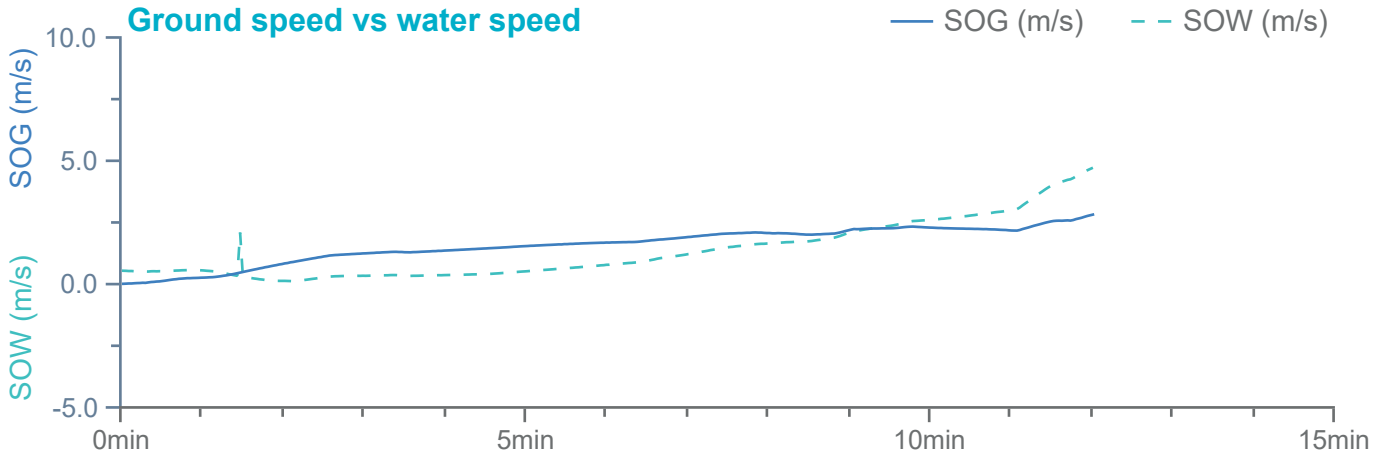
Ships plotted every 1 mins, highlight every 10 mins



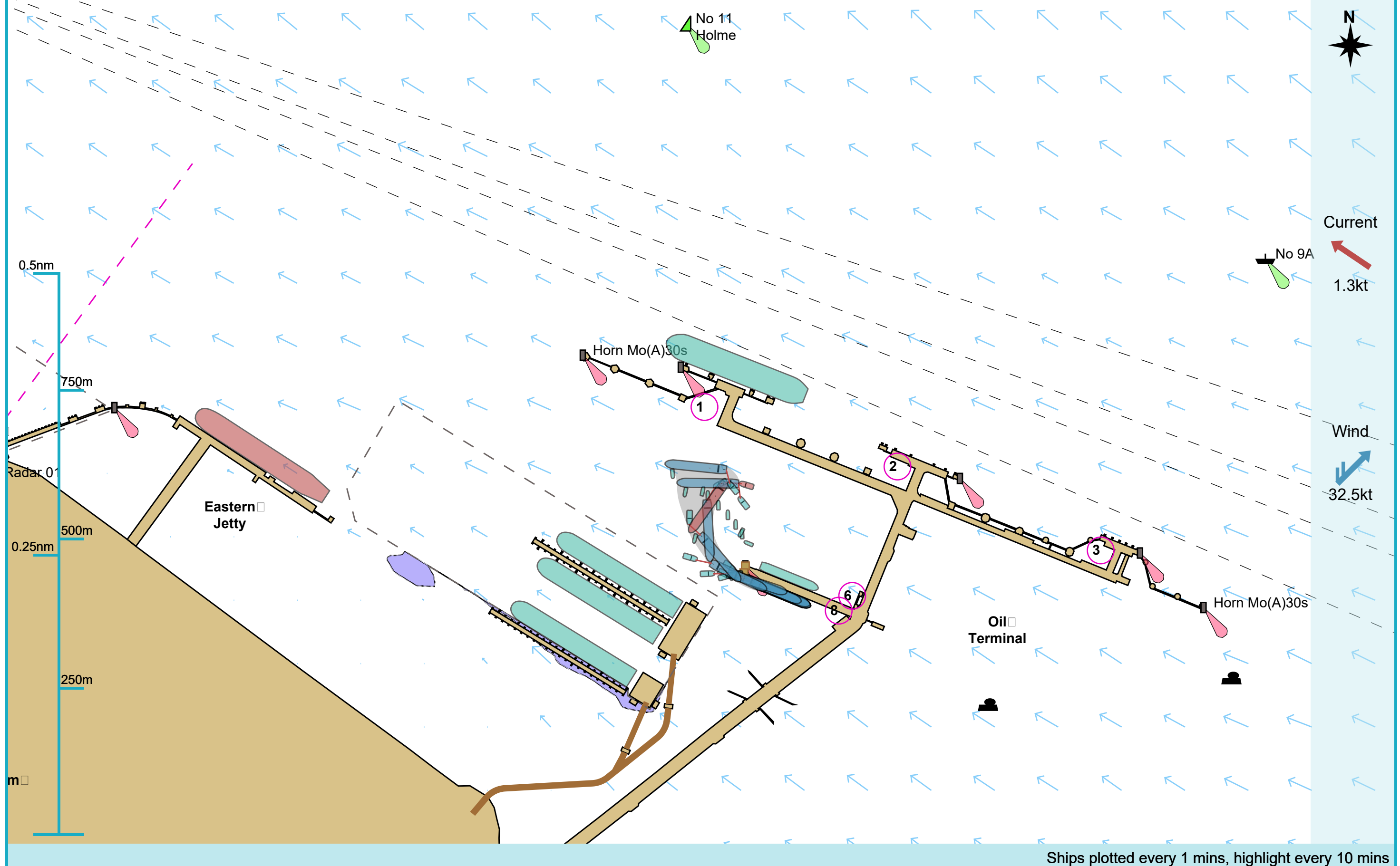






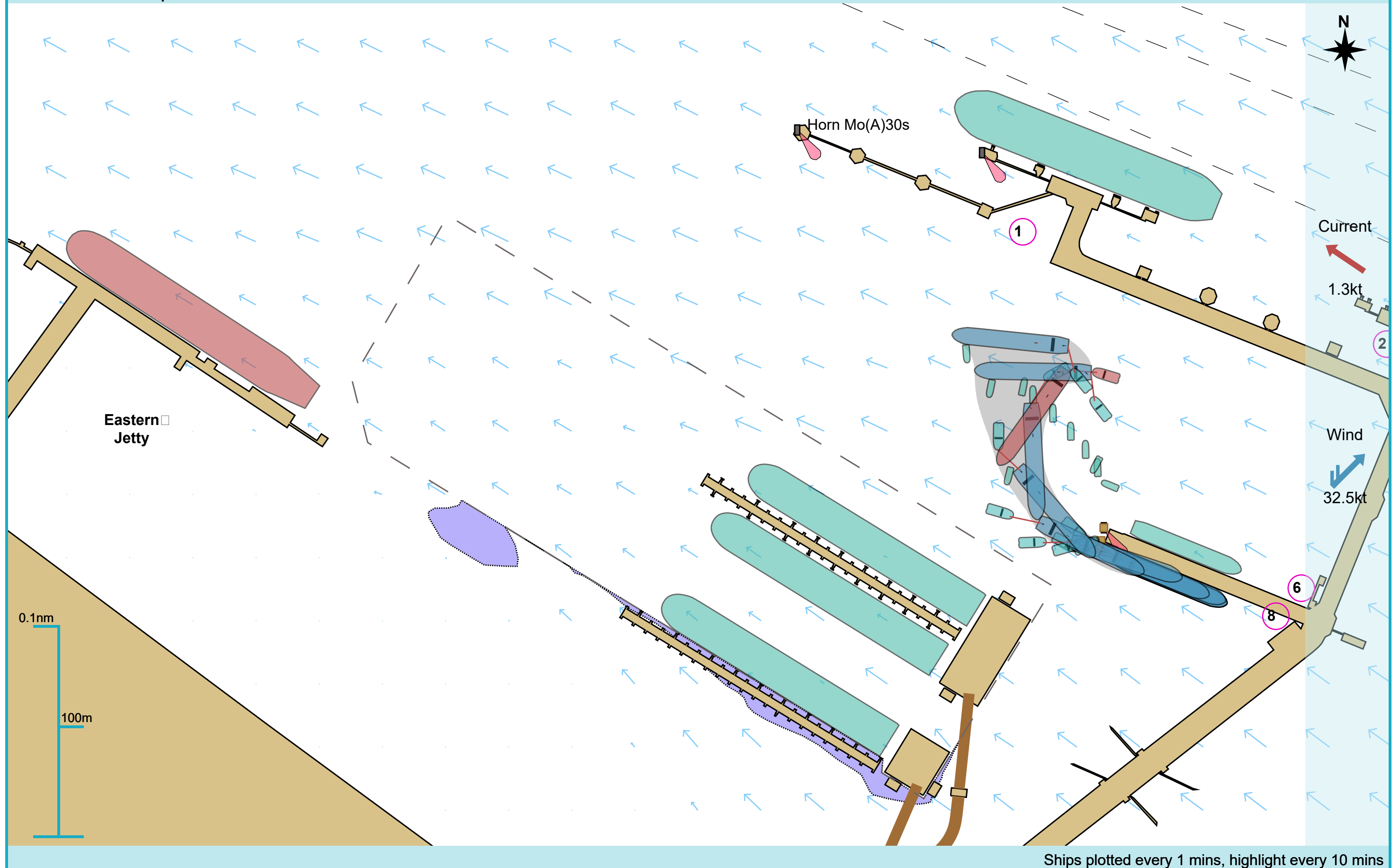


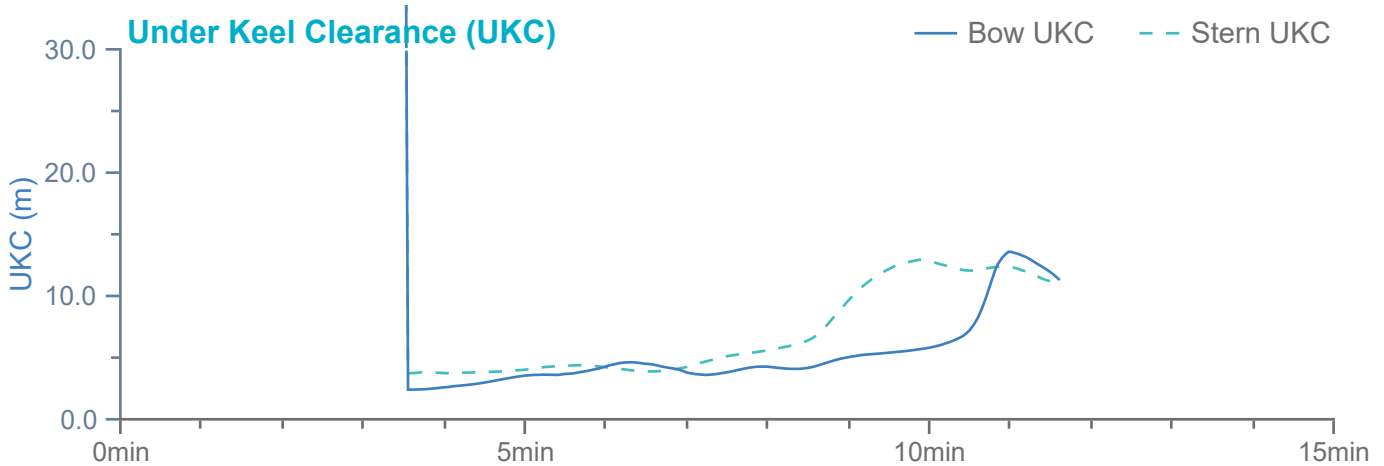
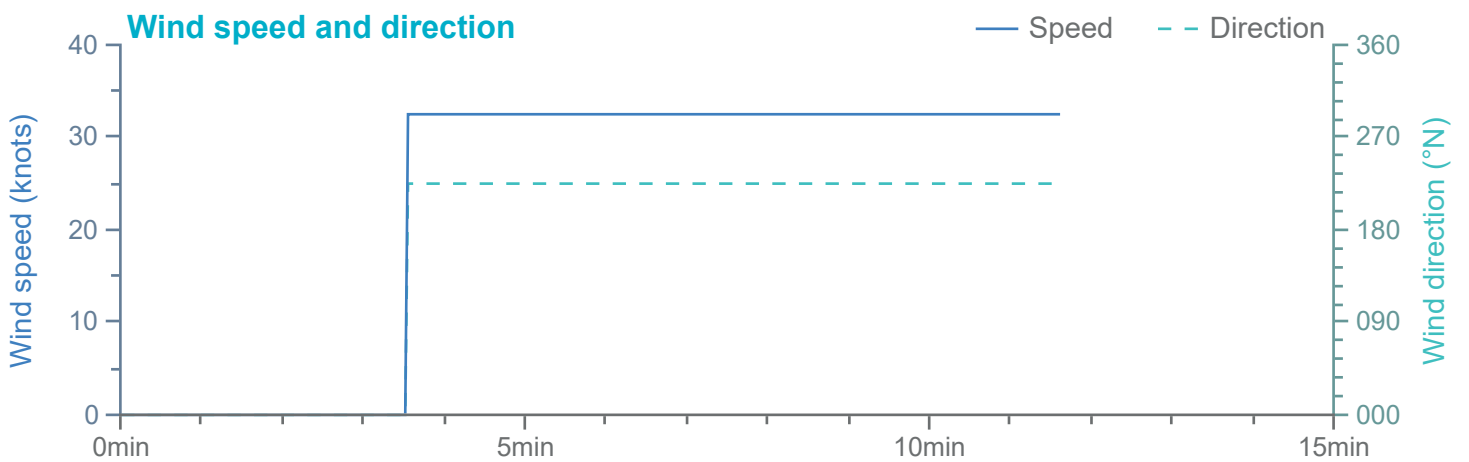
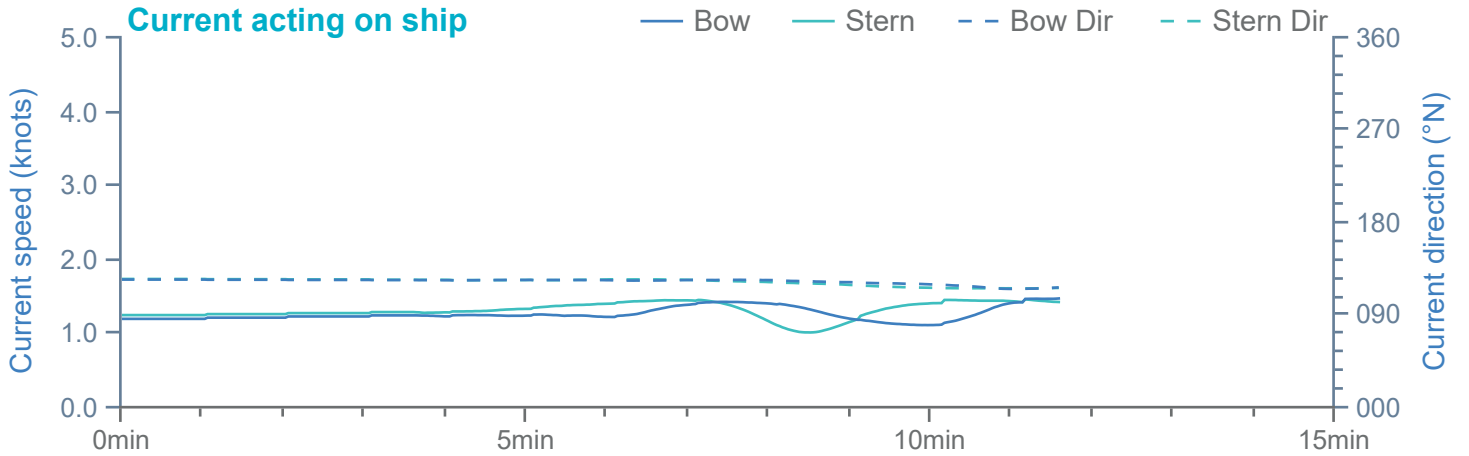
Manoeuvre track plot

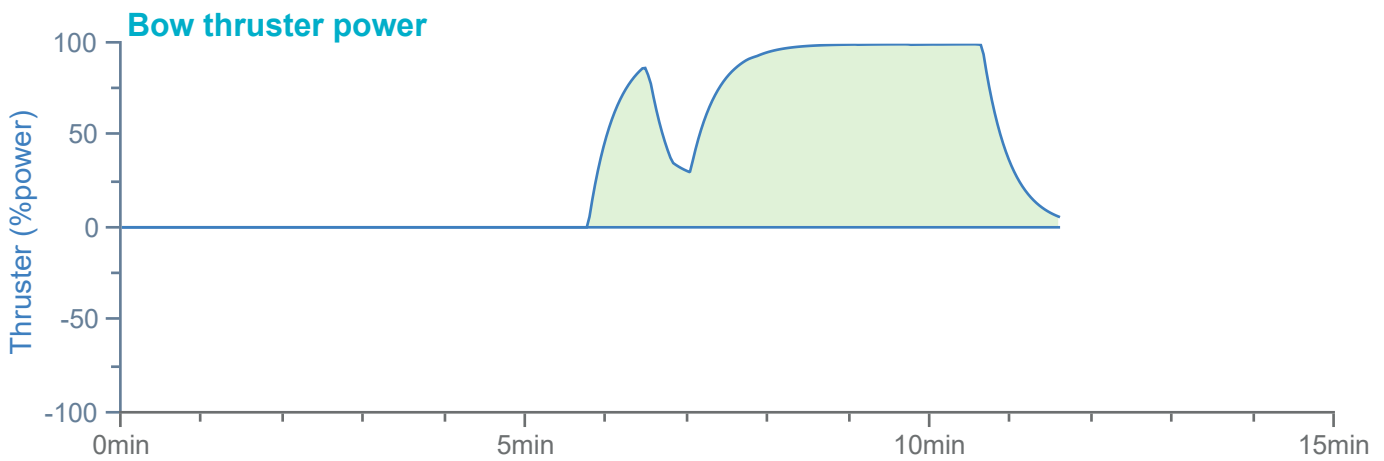
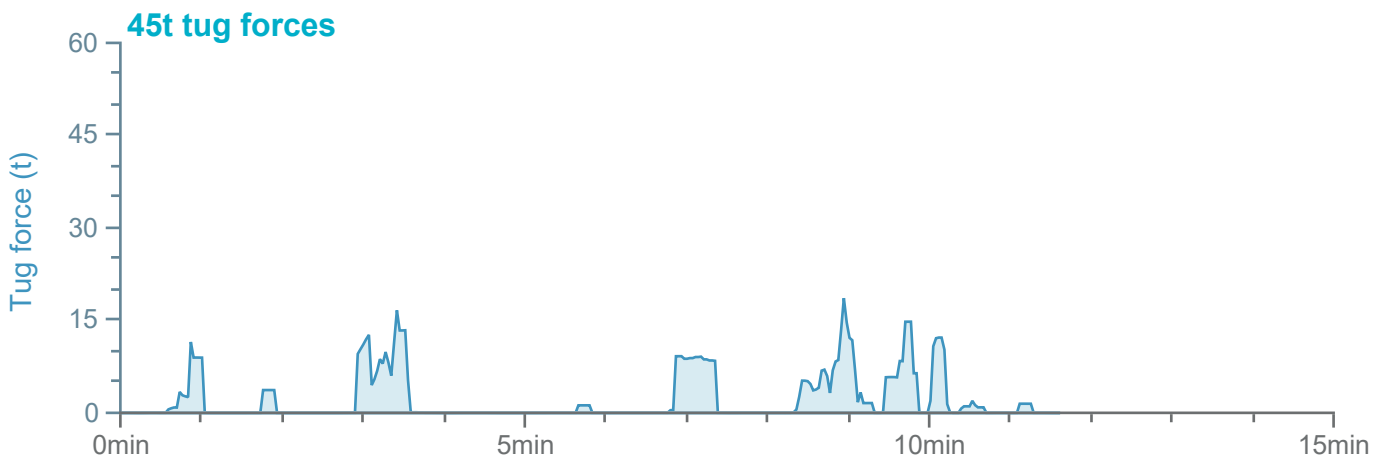
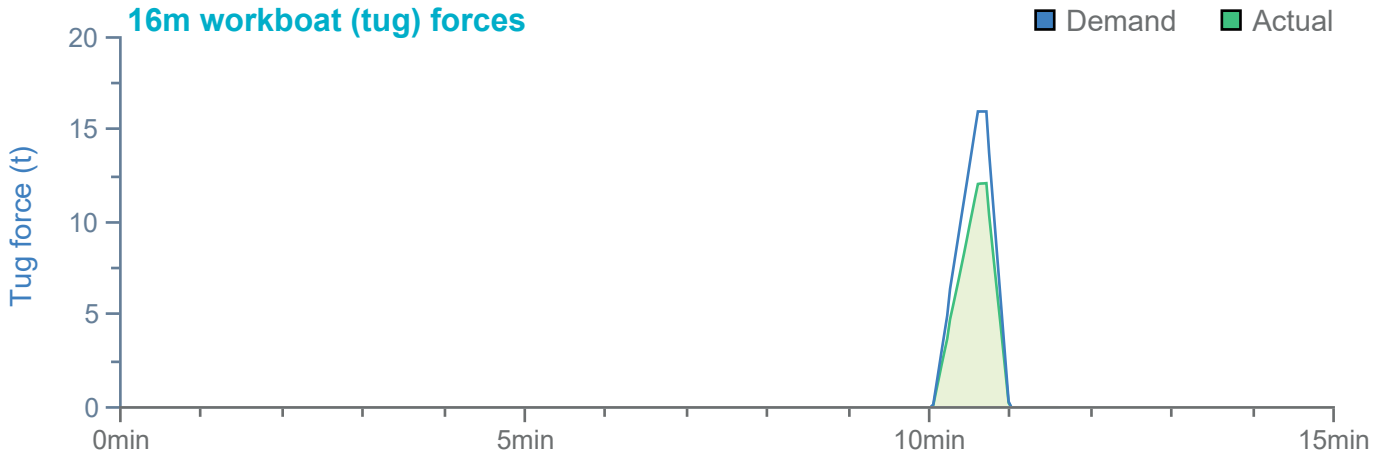


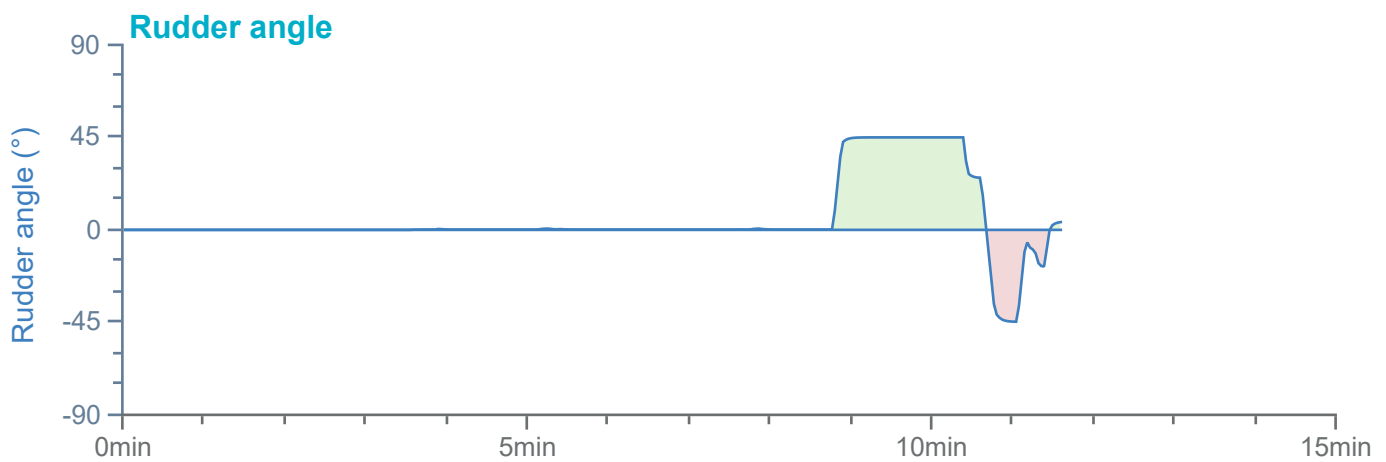
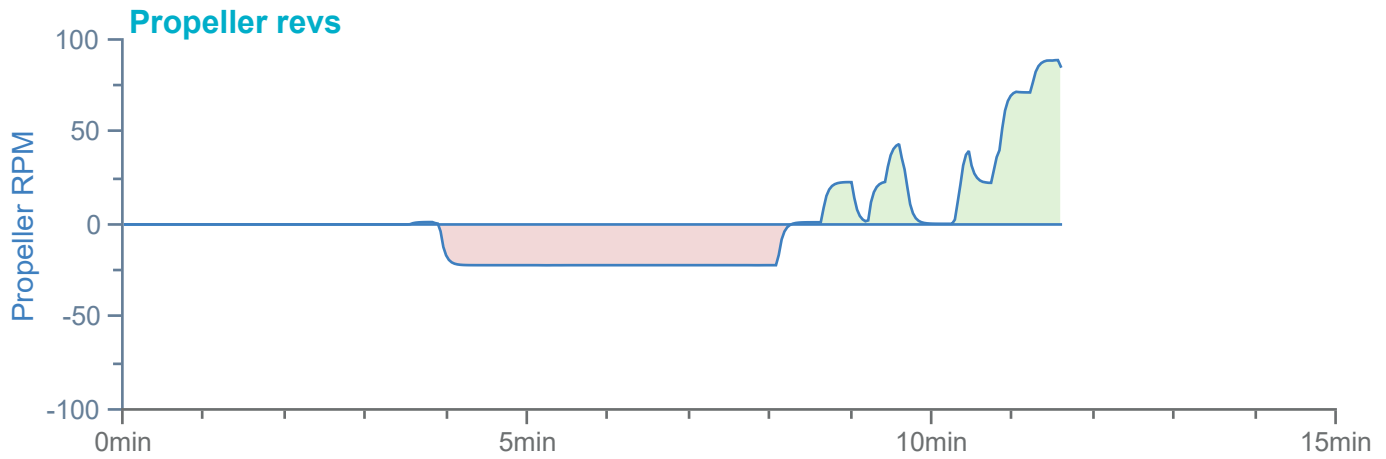
Ships plotted every 1 mins, highlight every 10 mins

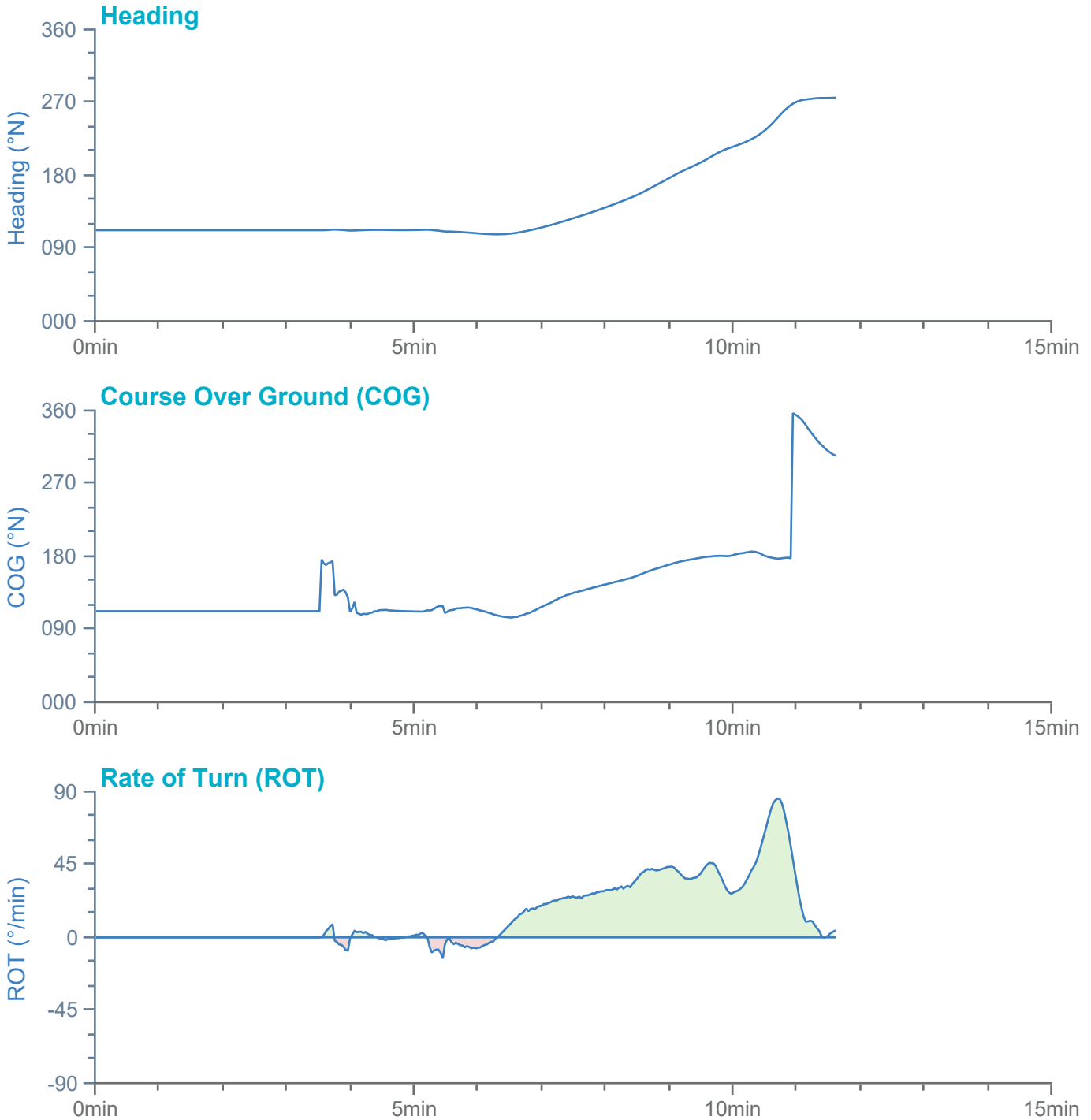
Manoeuvre track plot

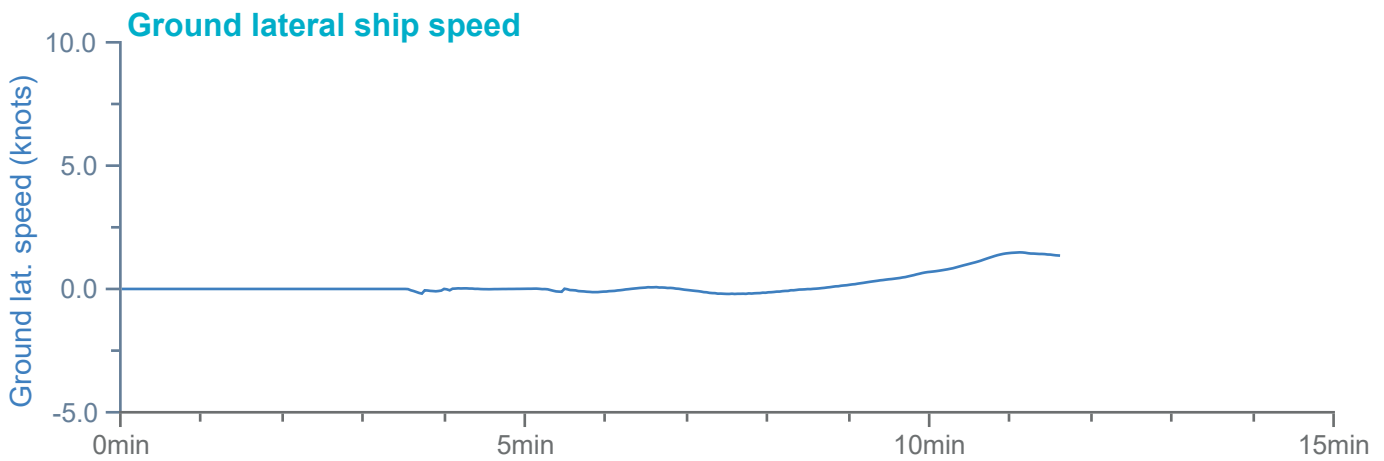
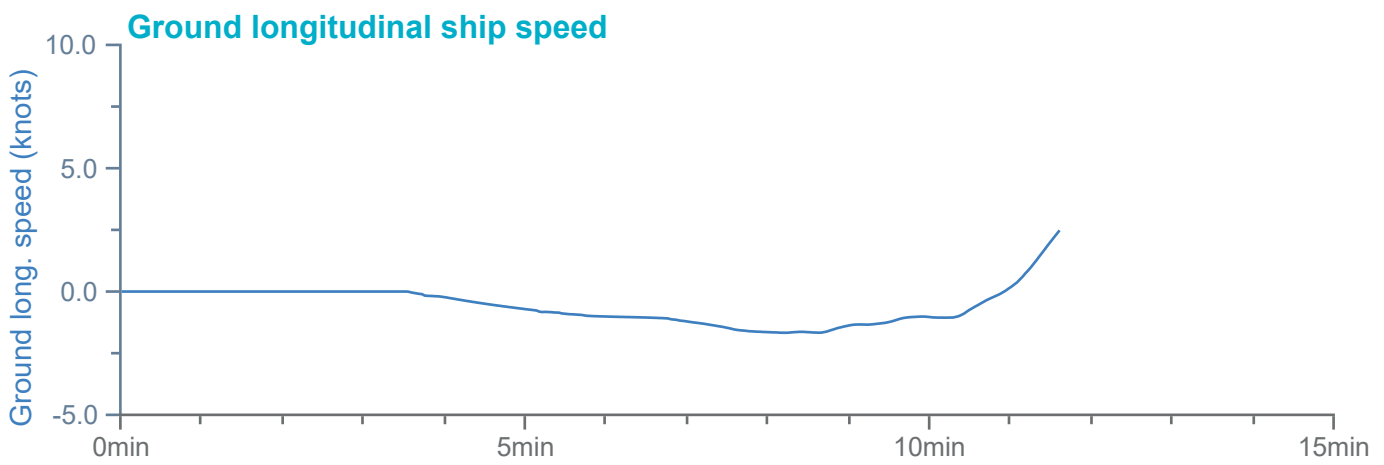
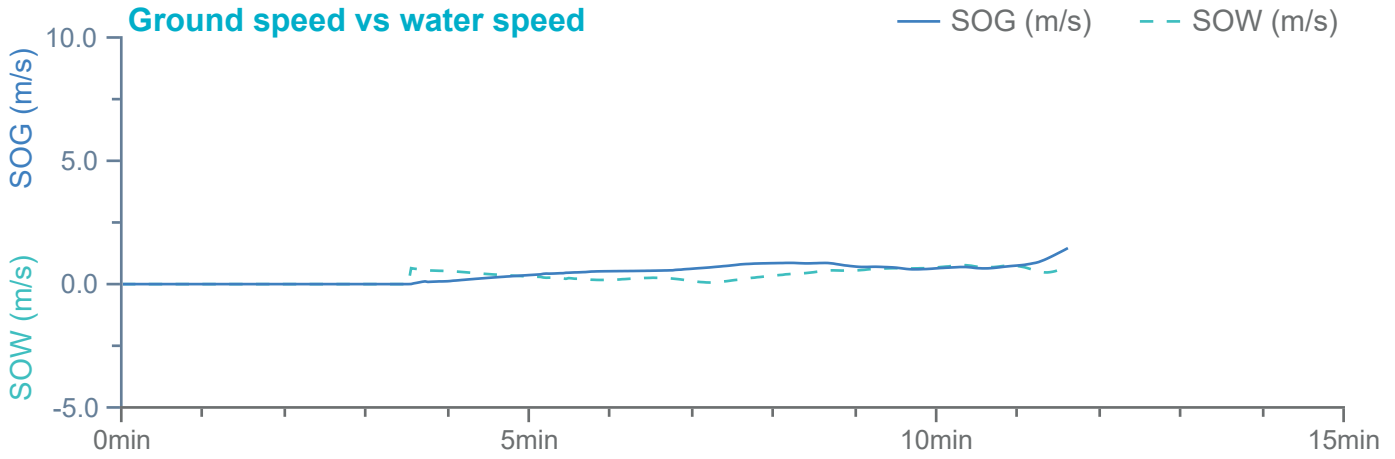




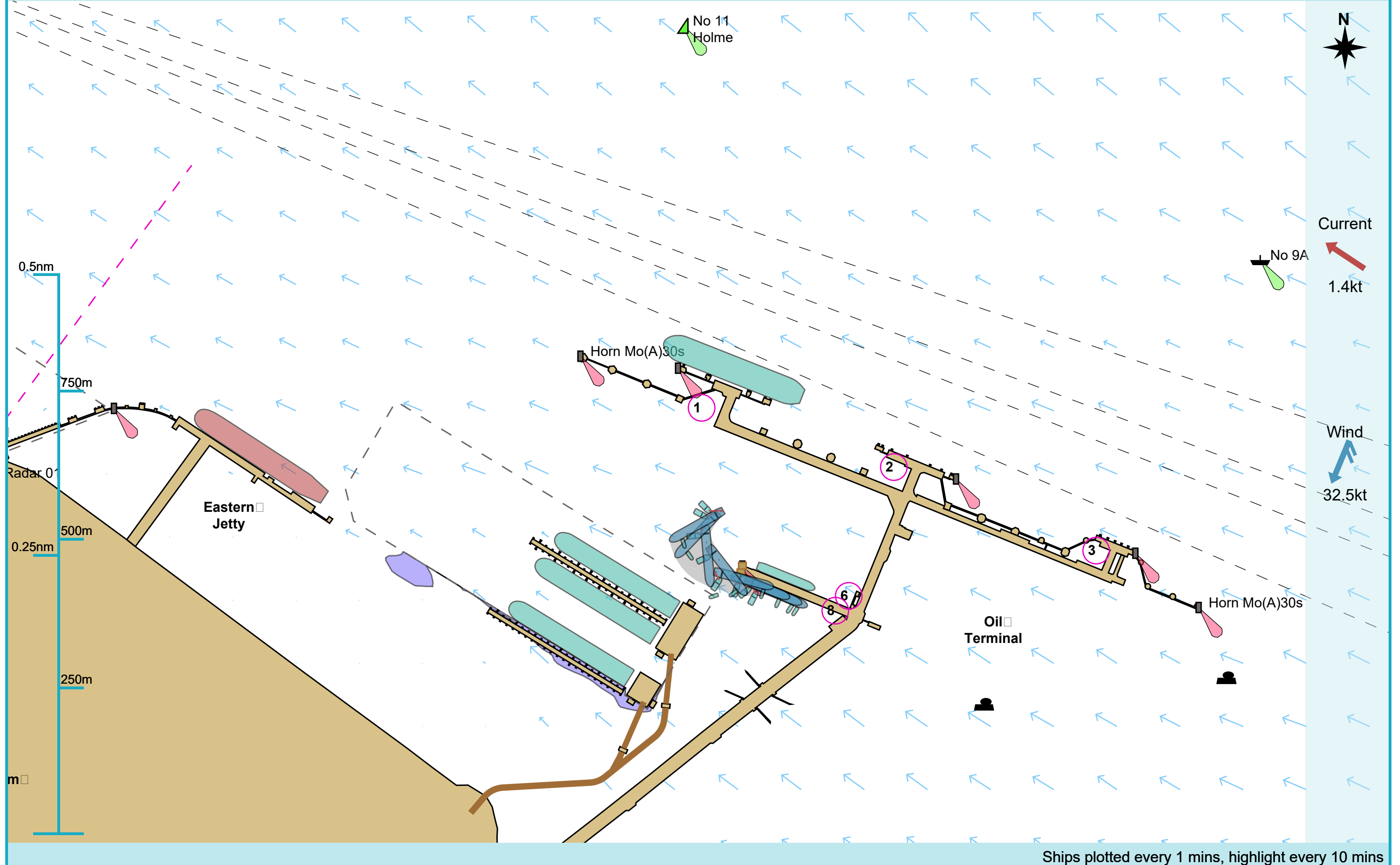






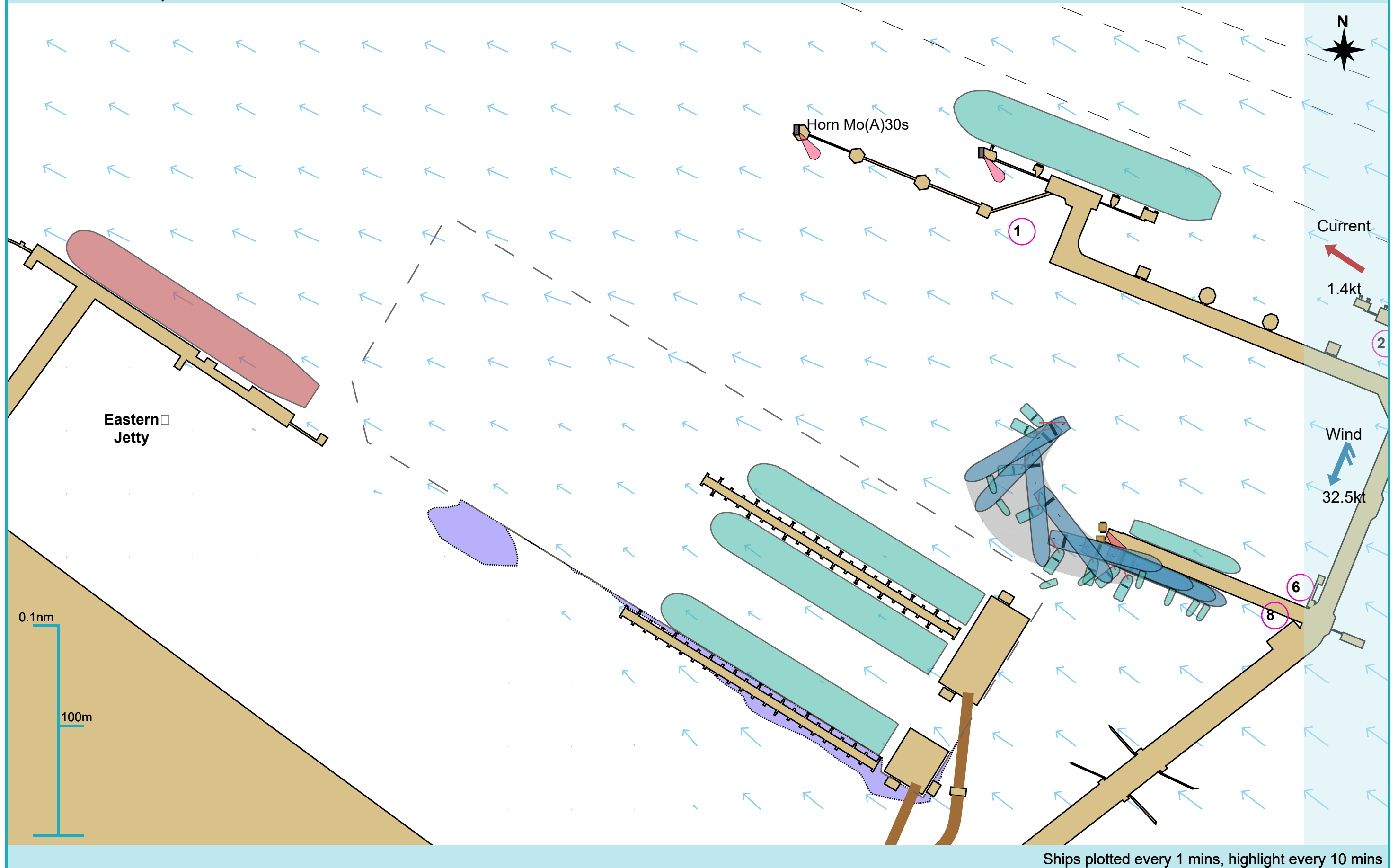


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

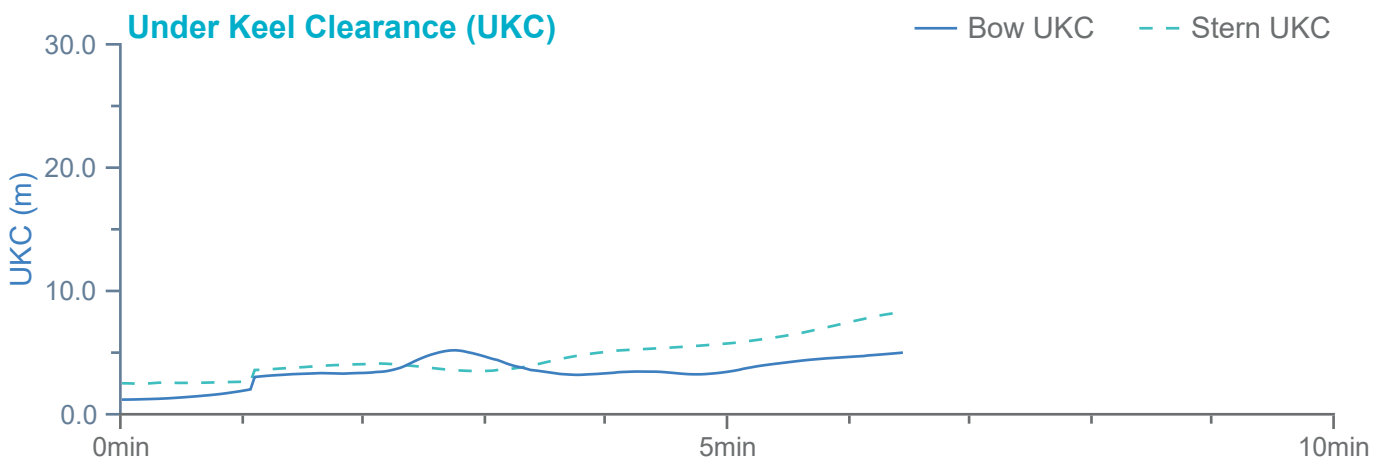
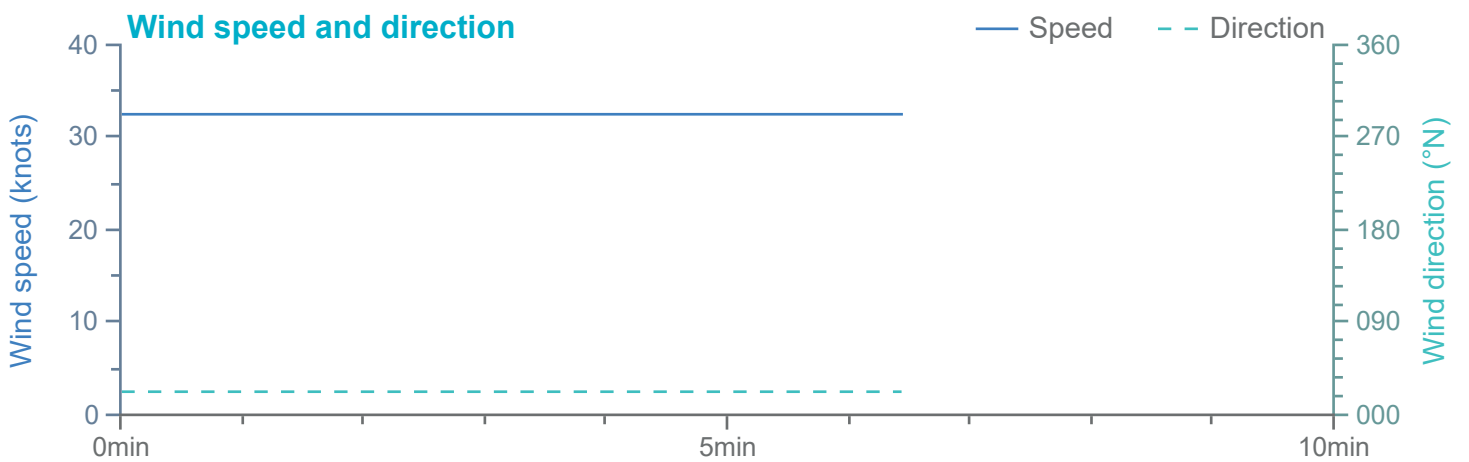
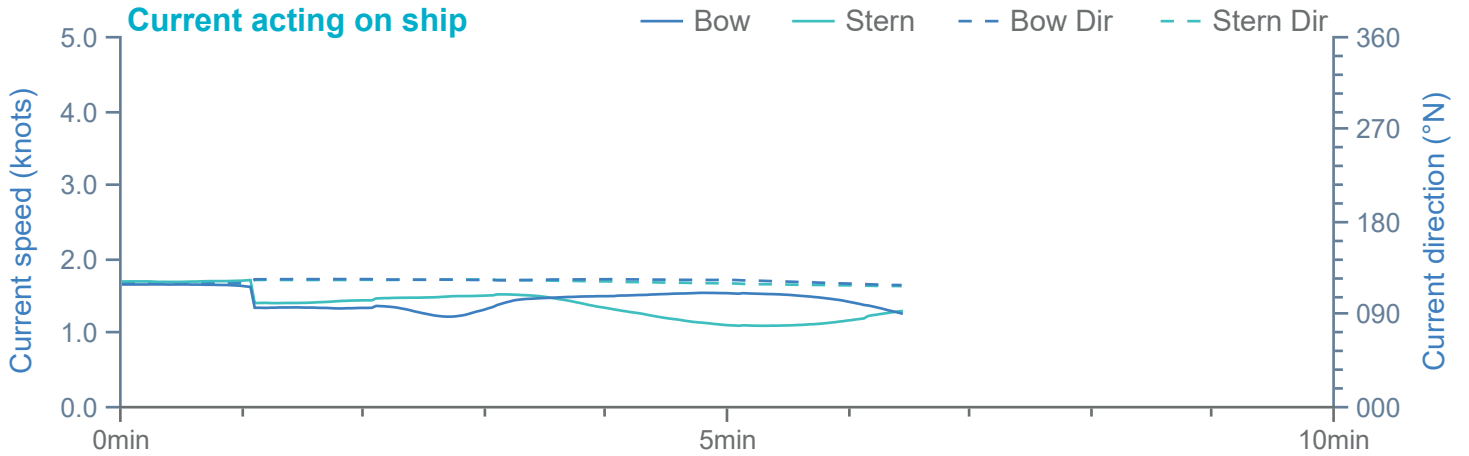


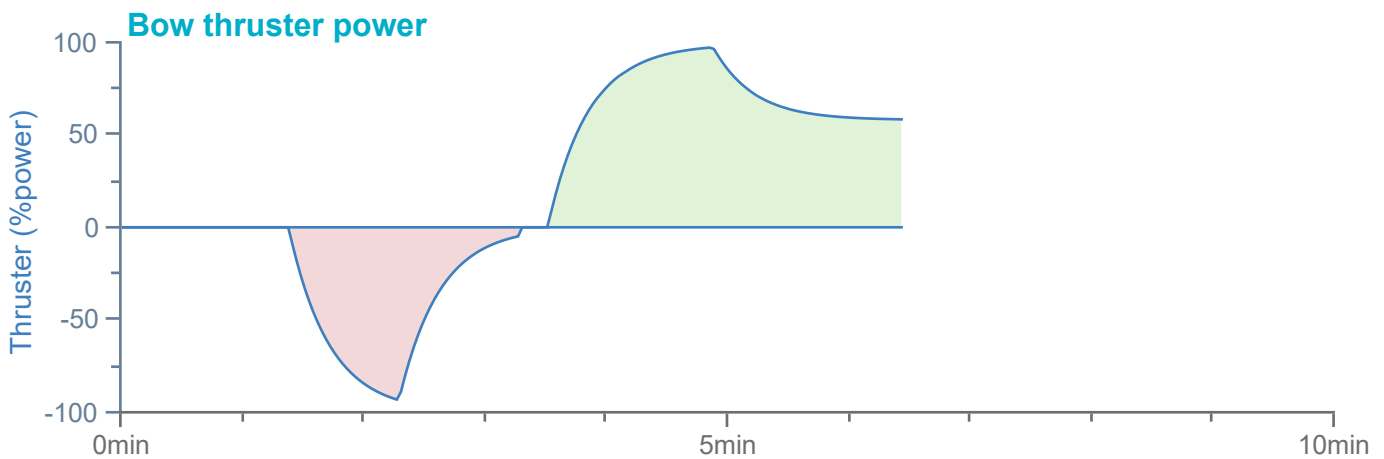
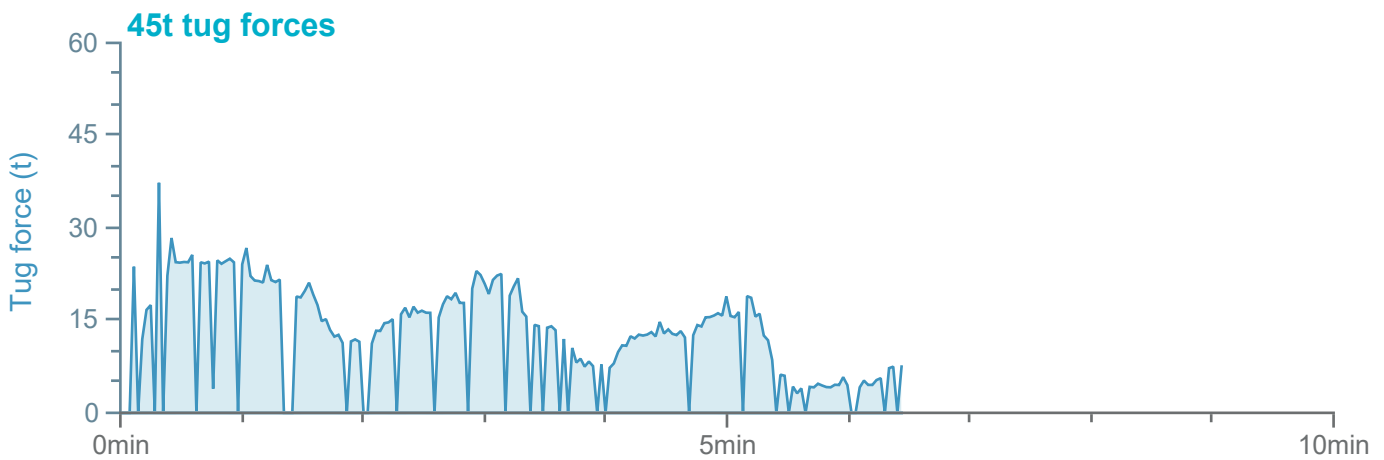
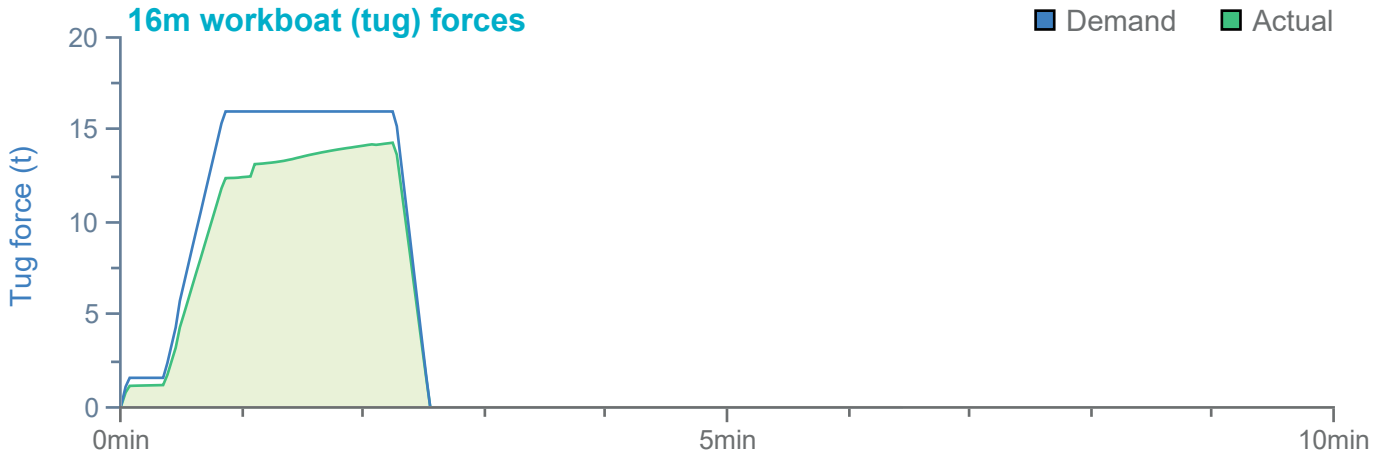
Ships plotted every 1 mins, highlight every 10 mins

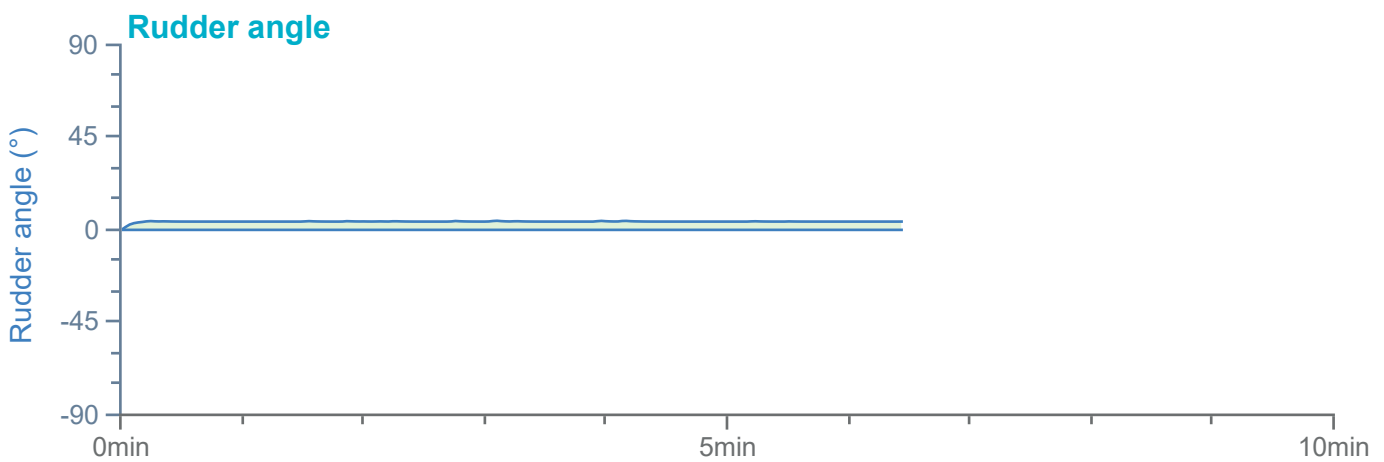
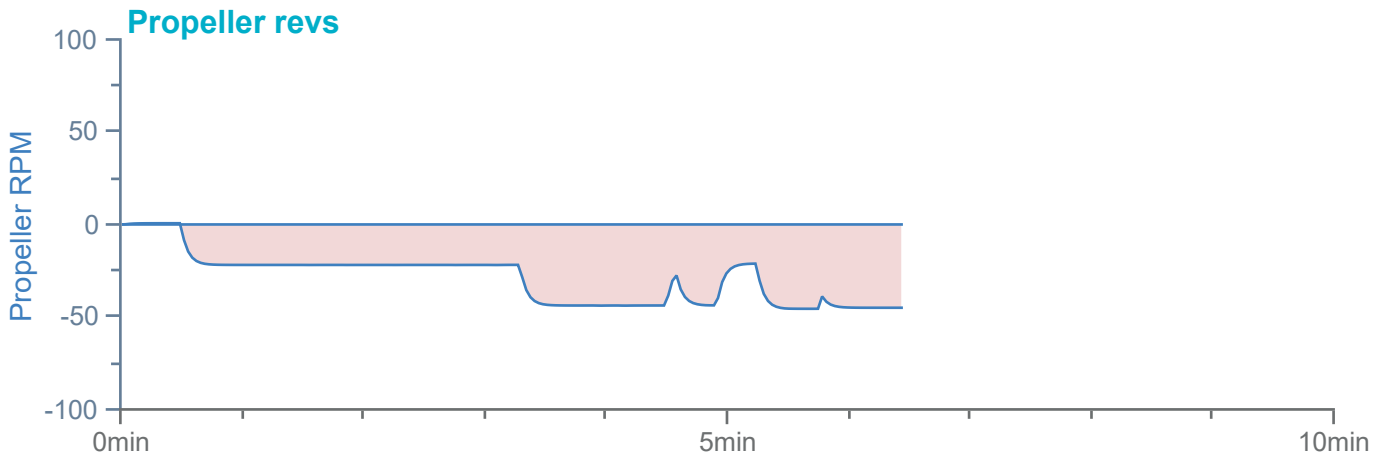
Summary

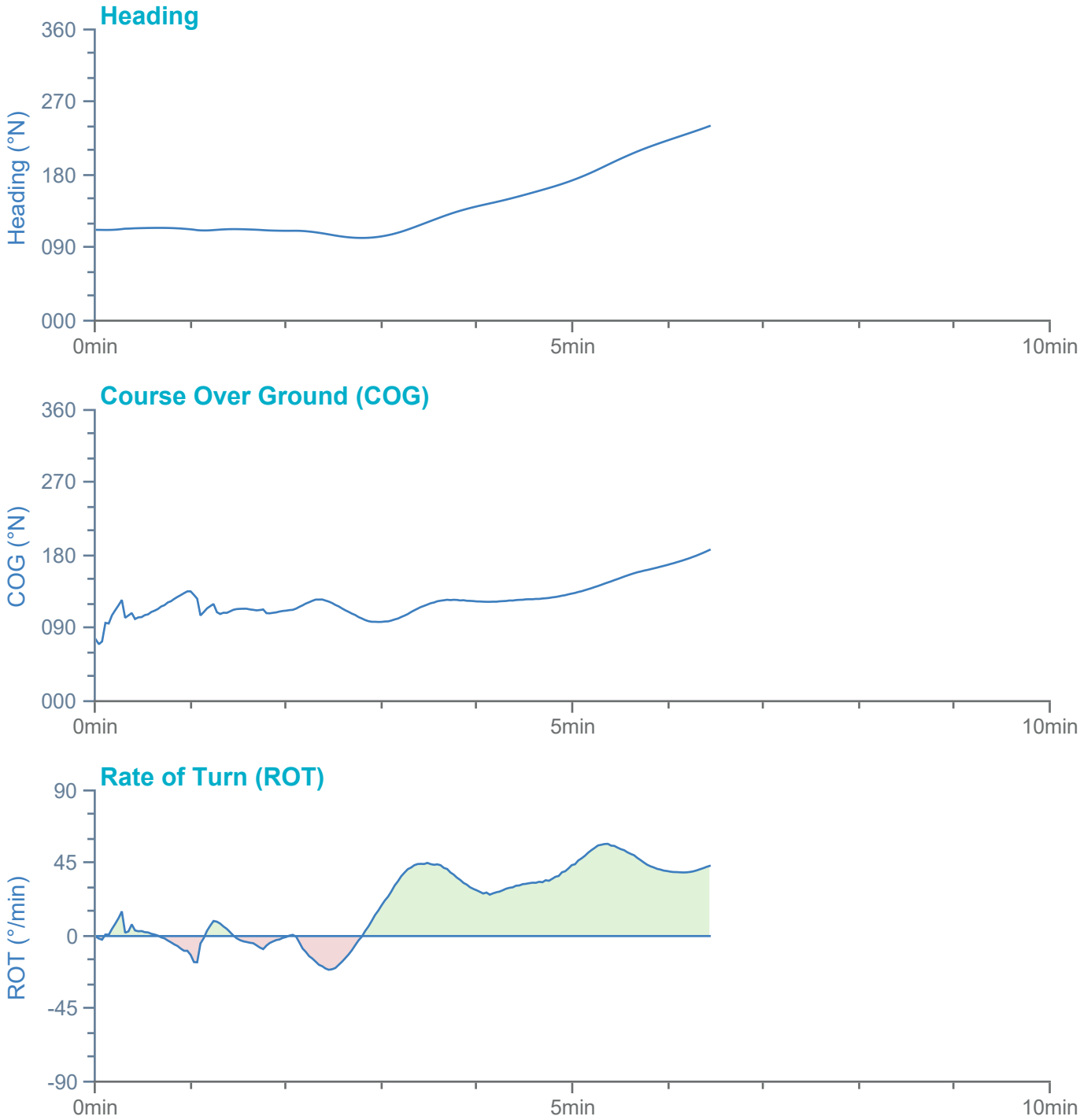
Environment

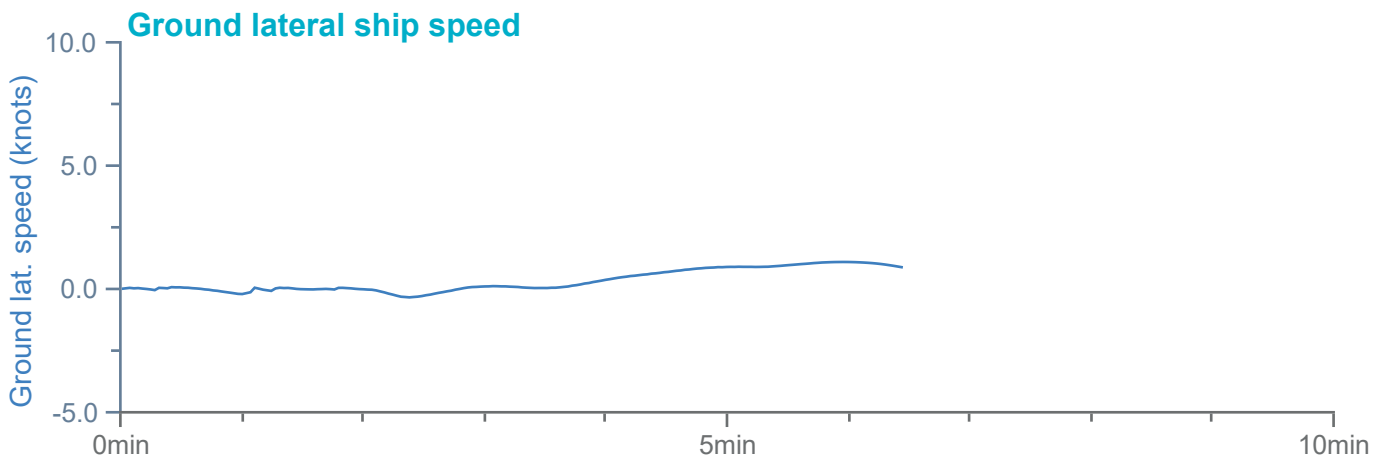
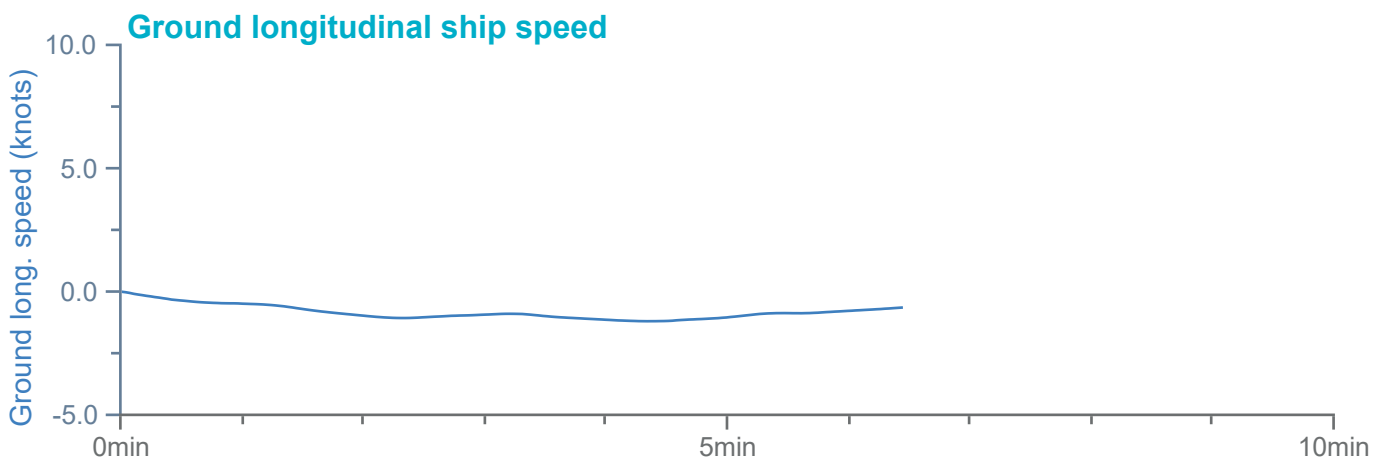
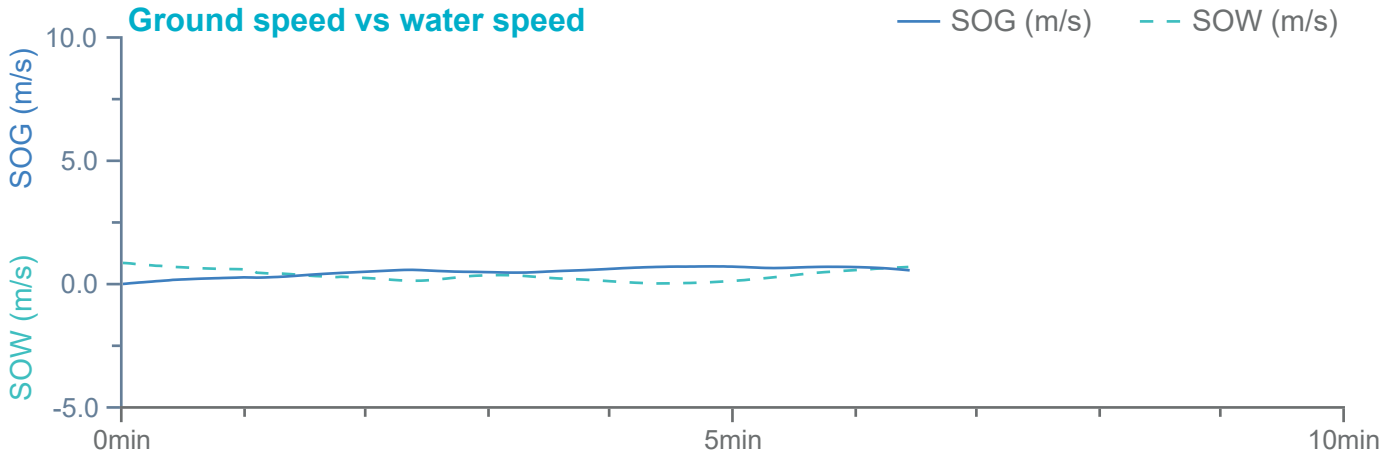
104m x 15m Product Tanker



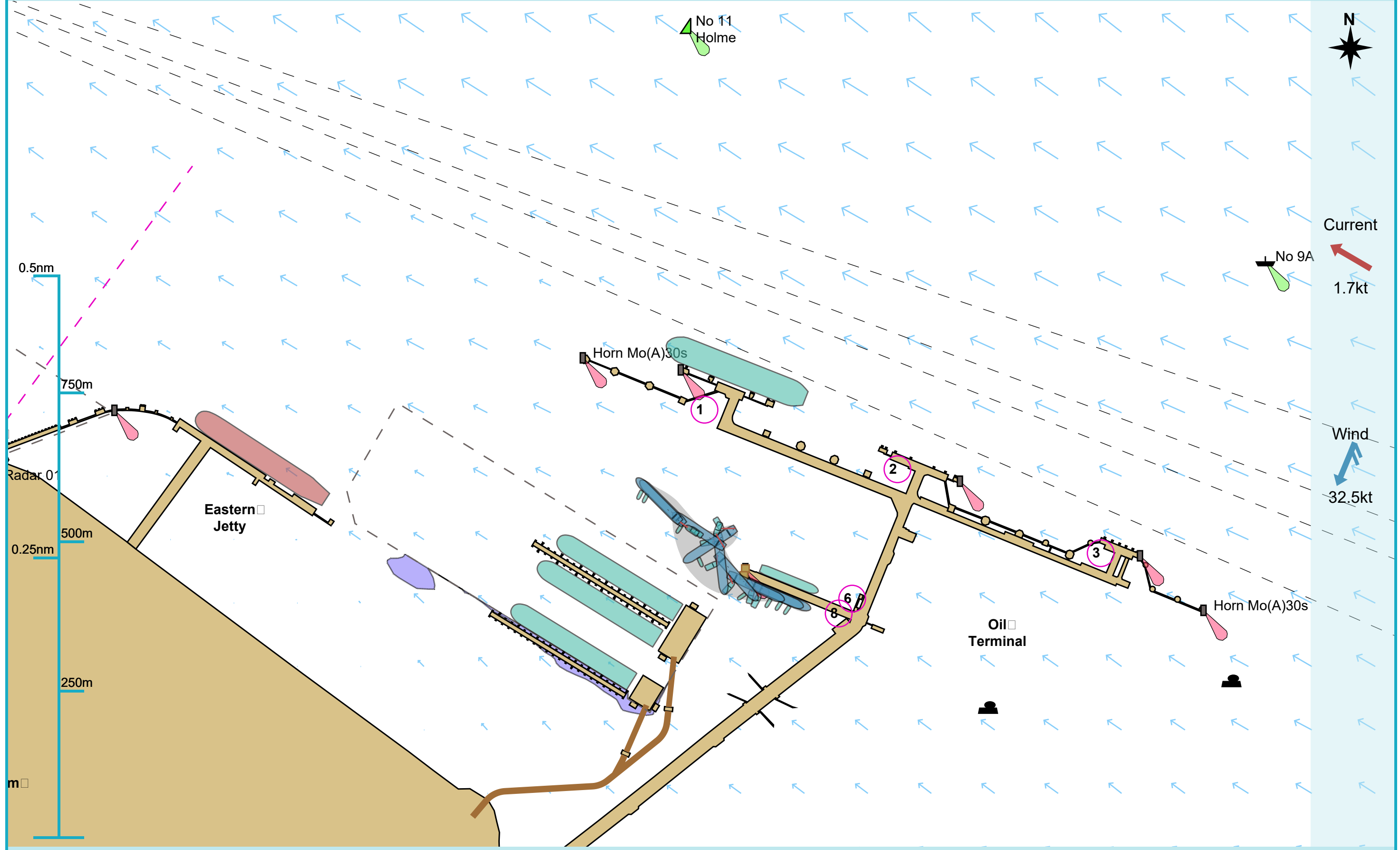






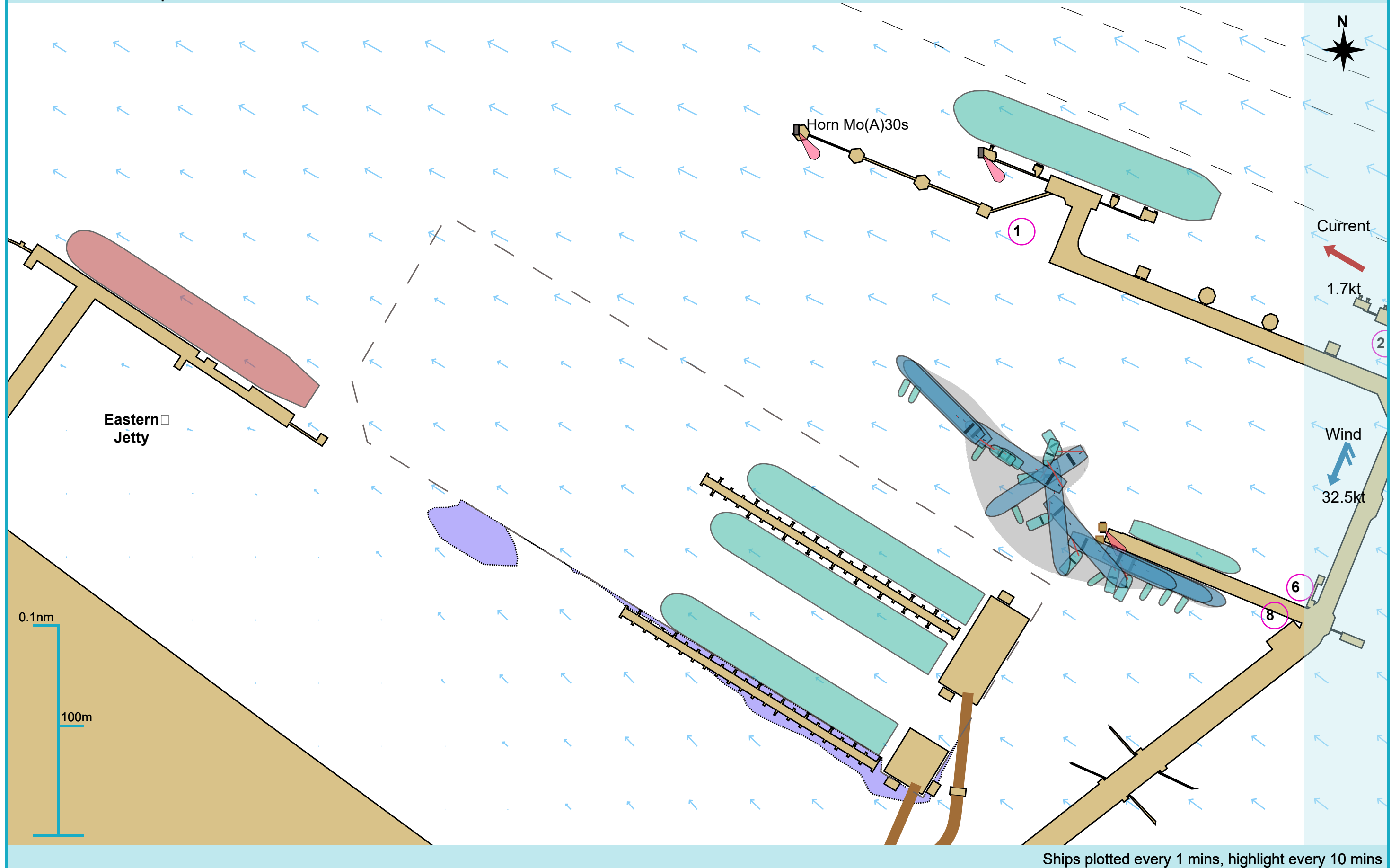


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

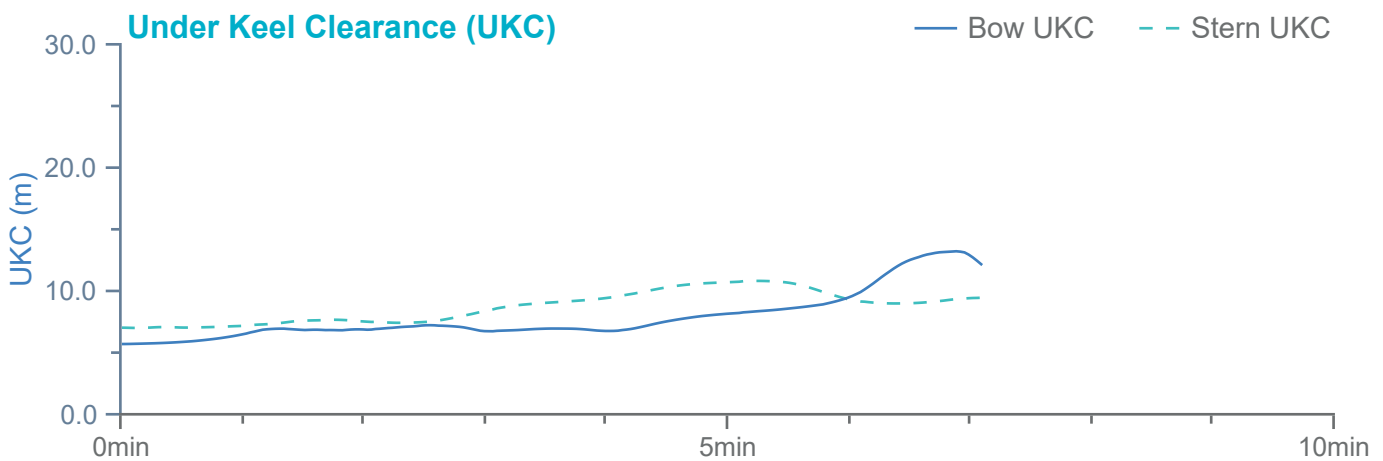
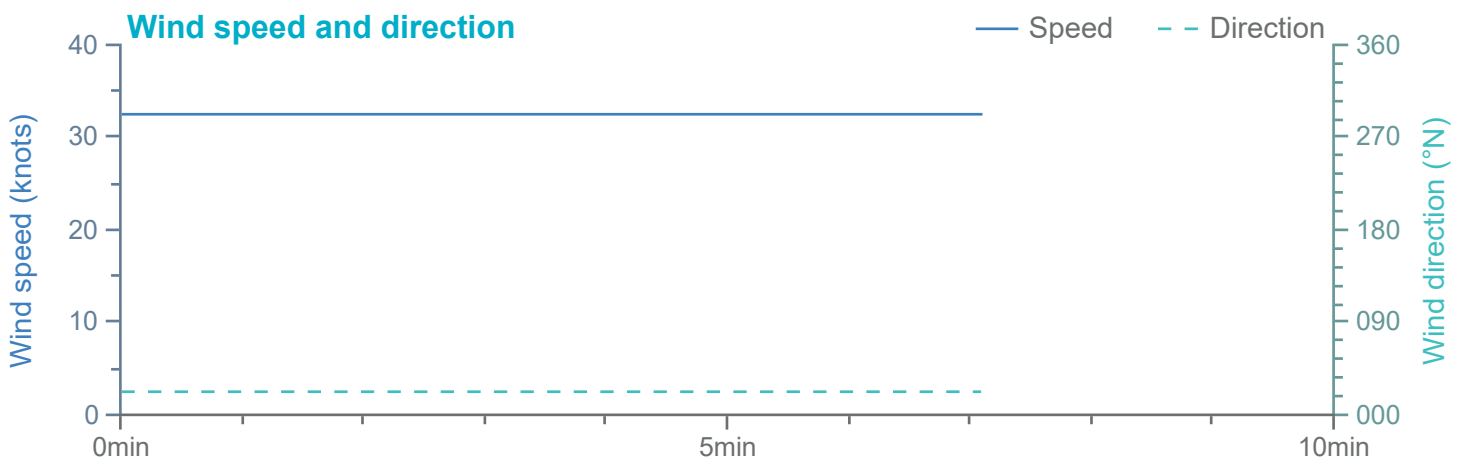
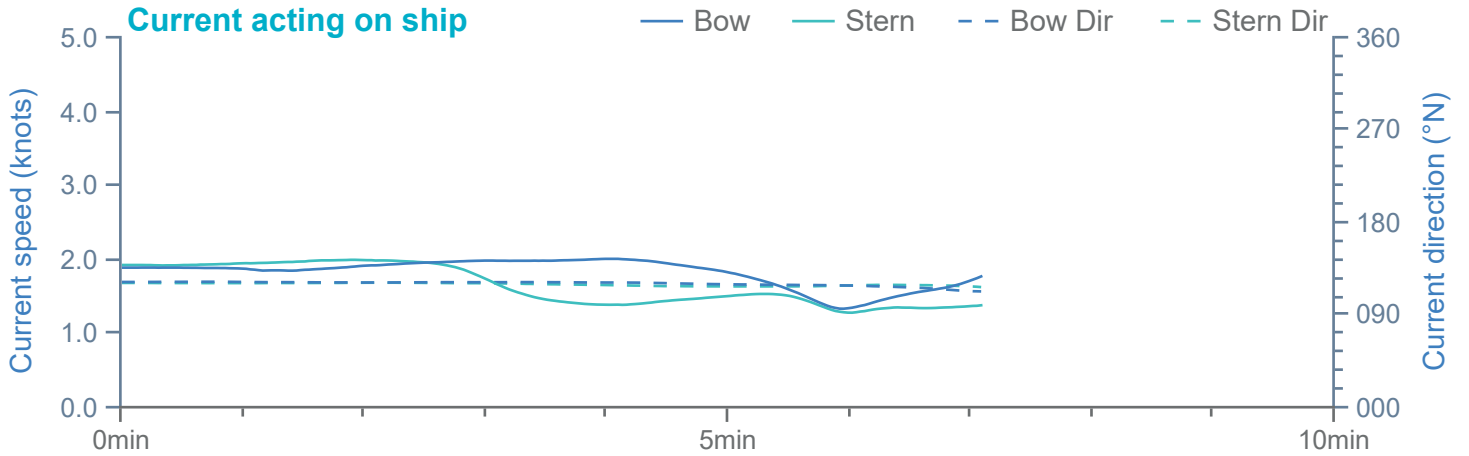
Manoeuvre track plot

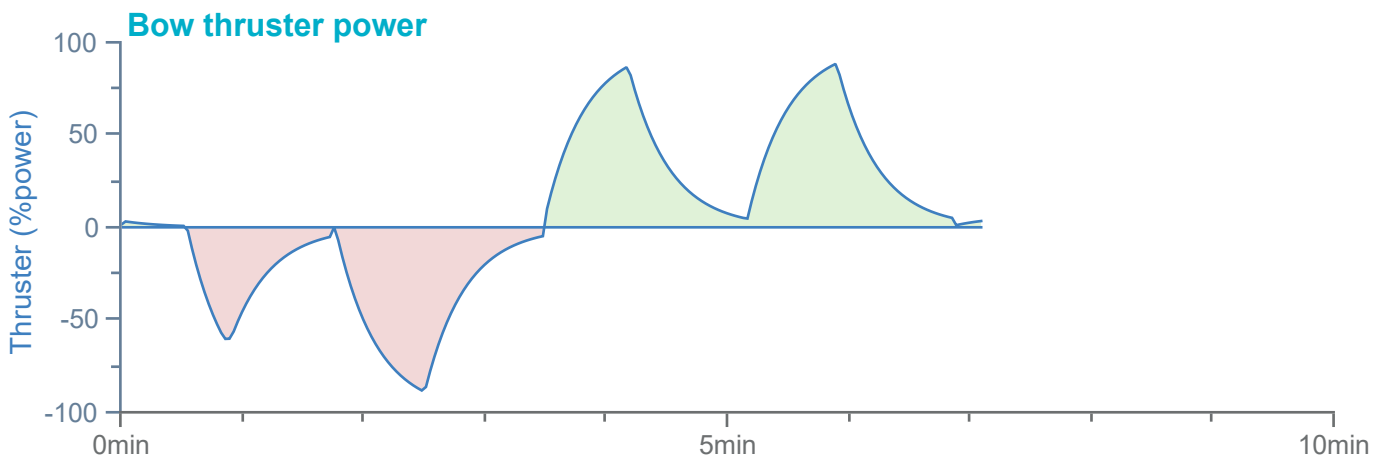
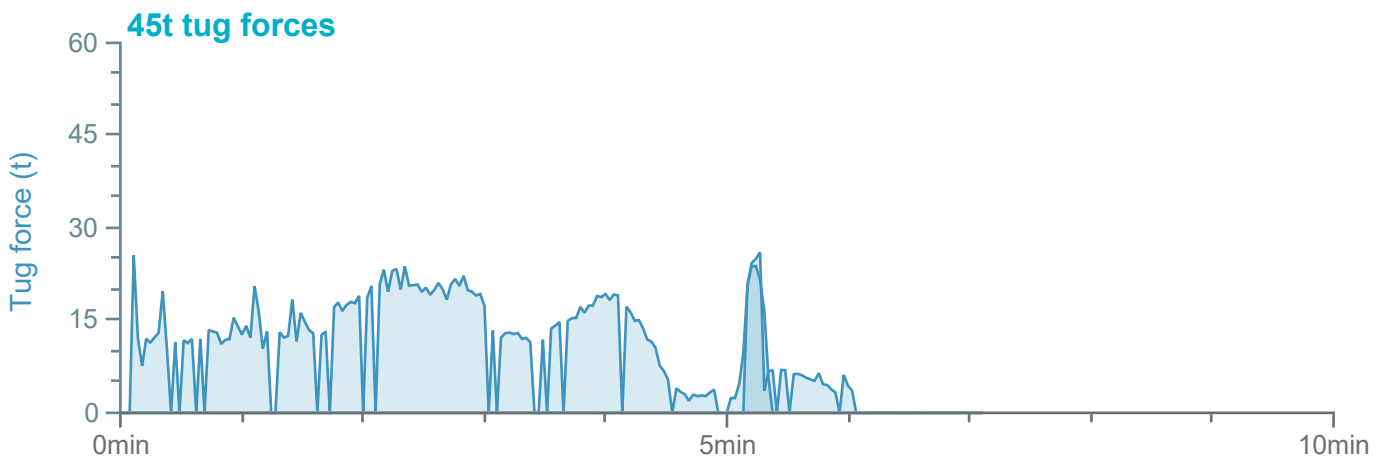
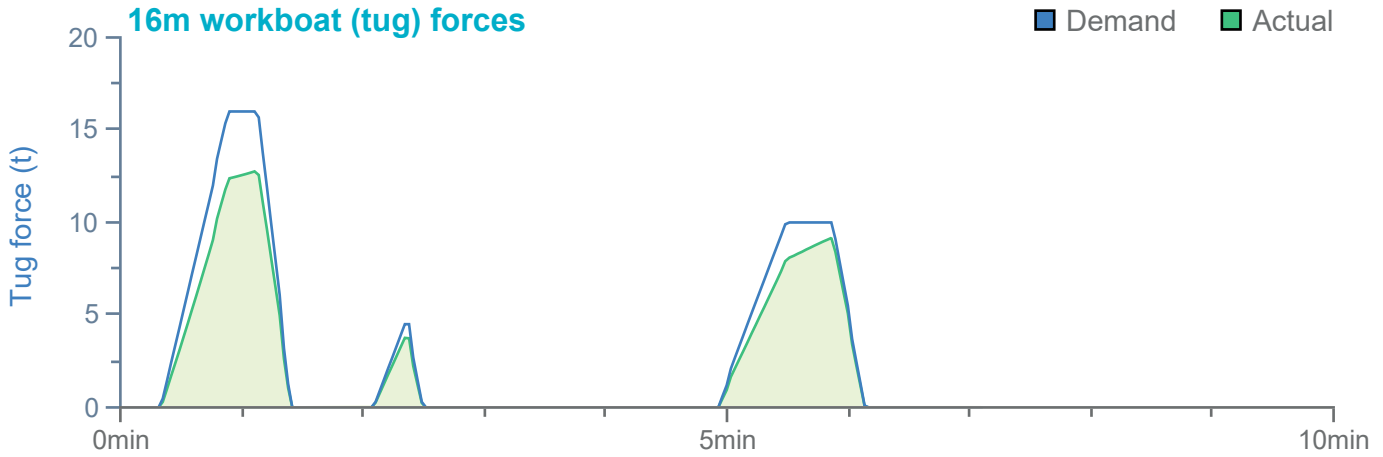


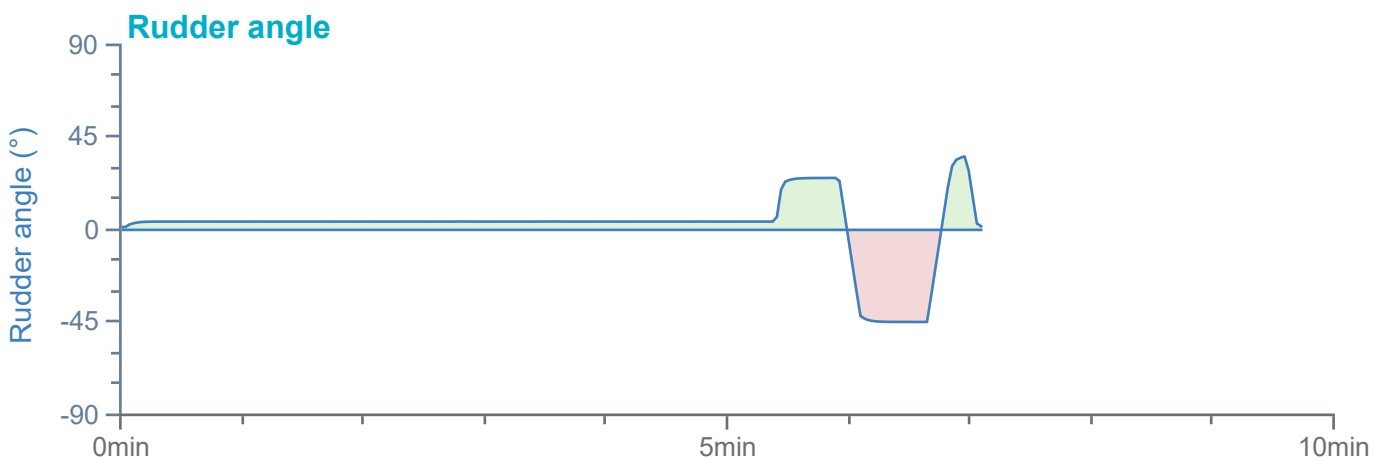
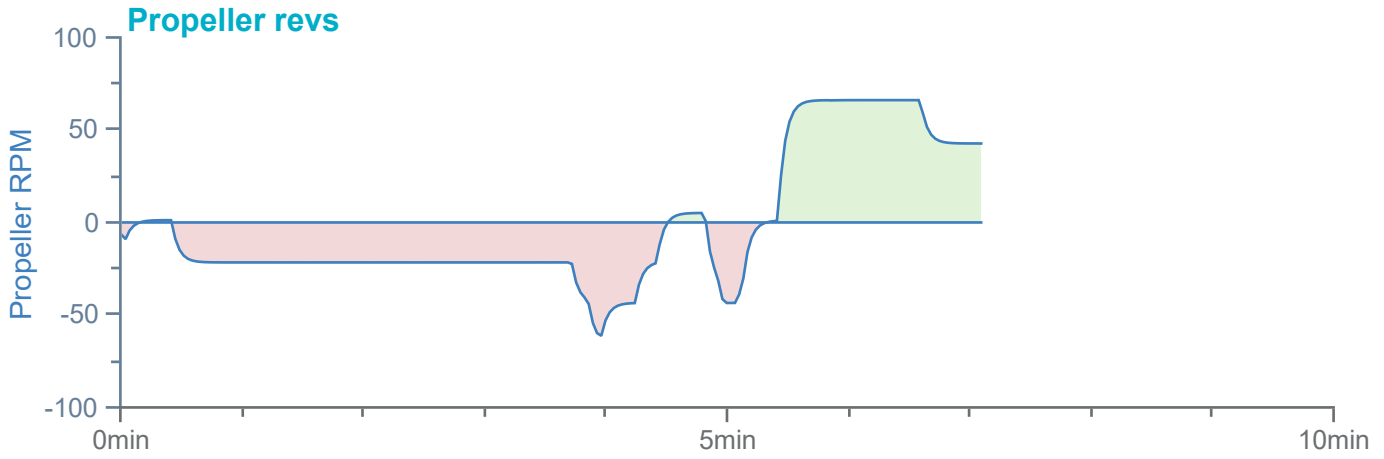
Summary

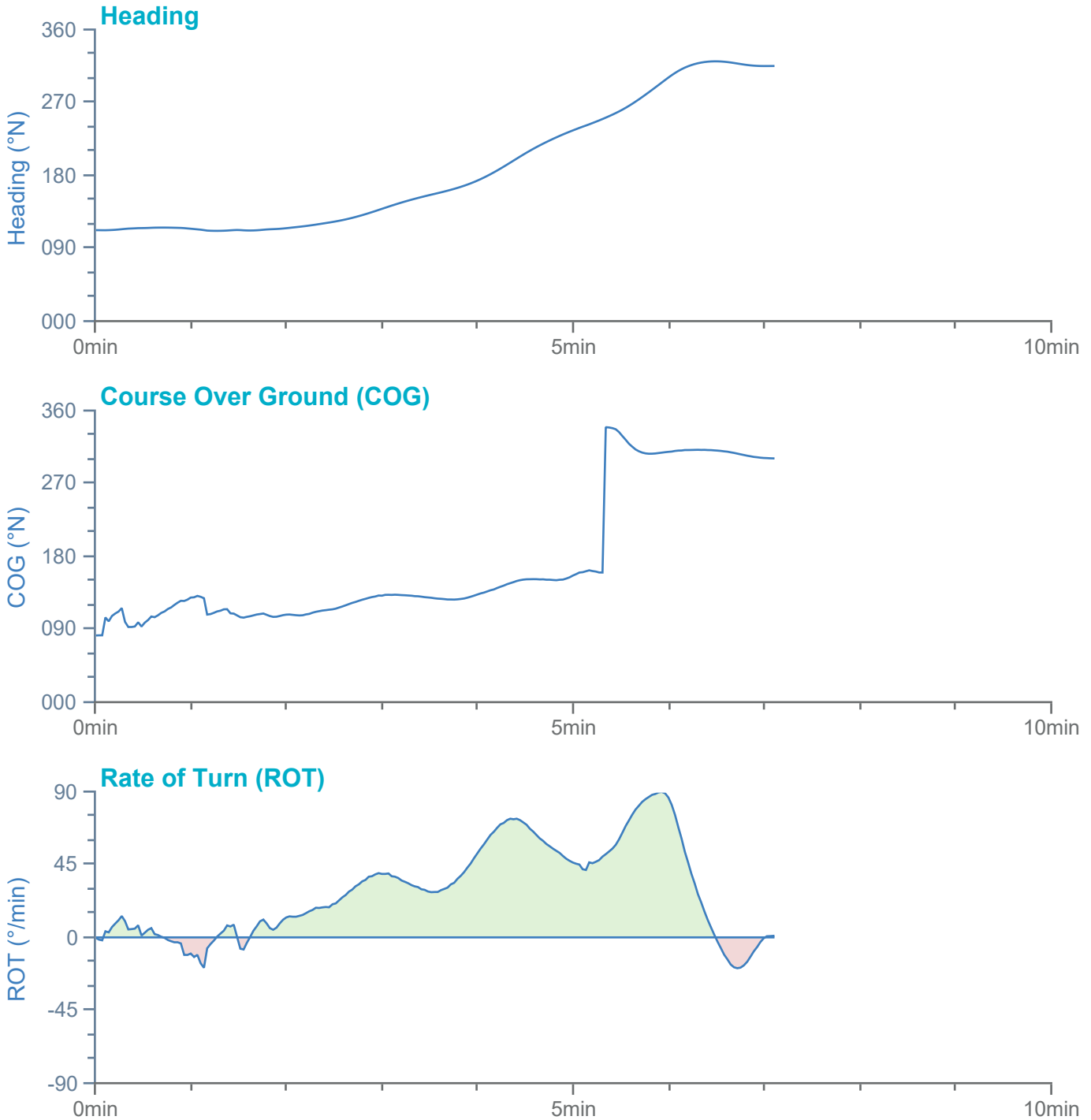
Environment

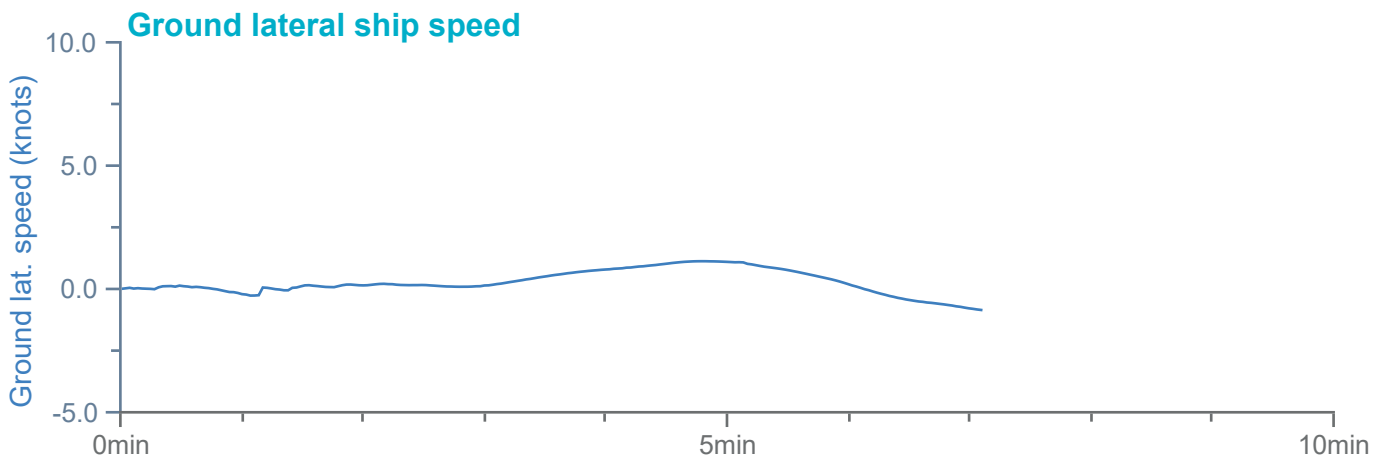
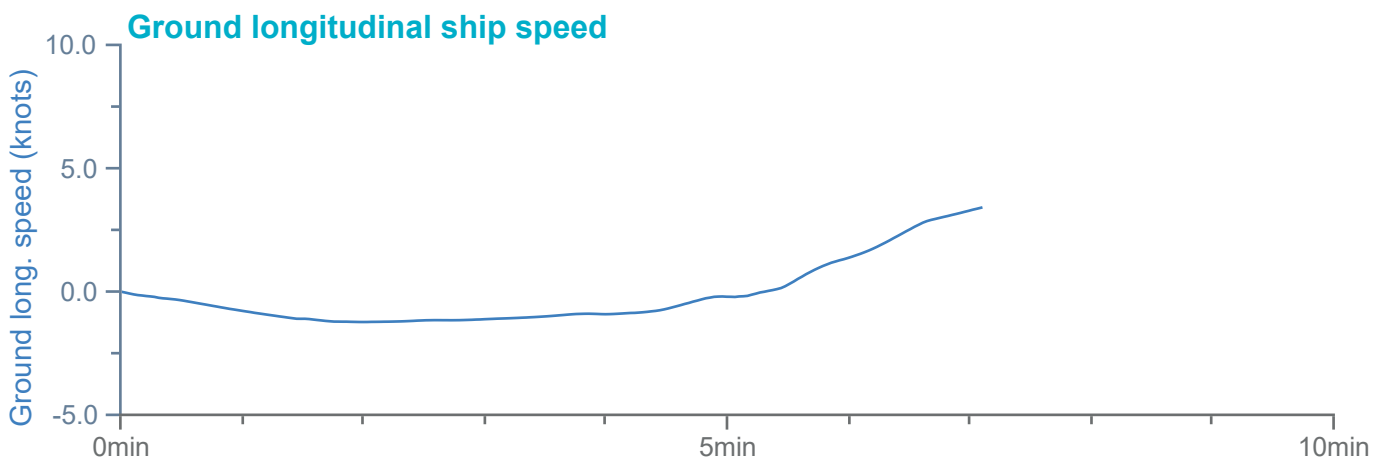
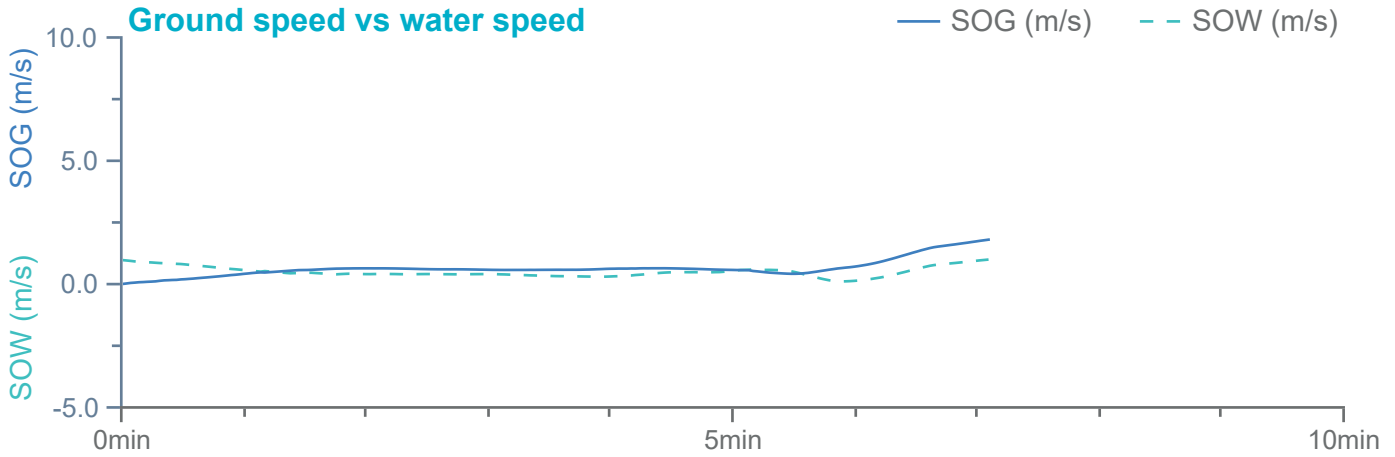
104m x 15m Product Tanker



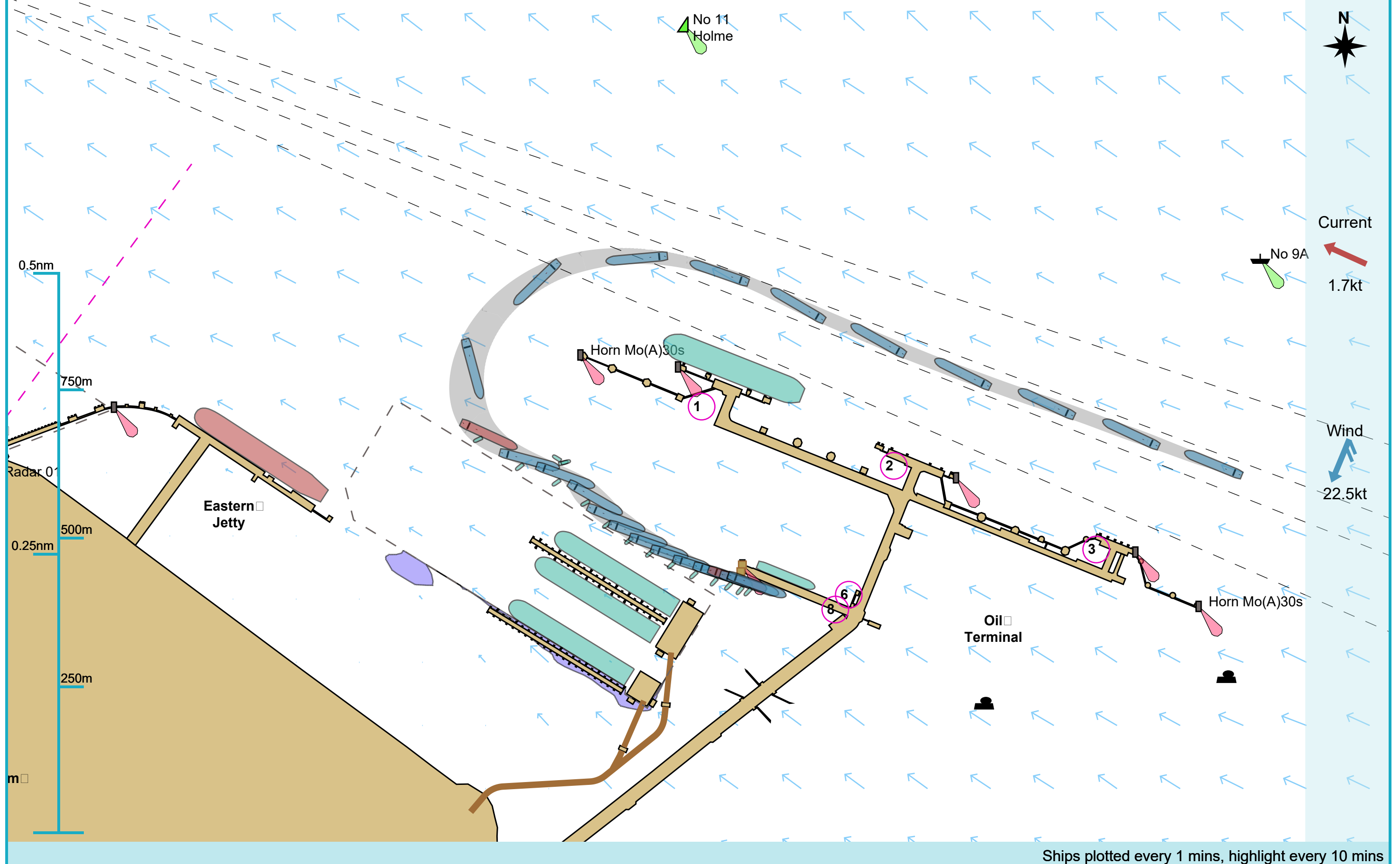




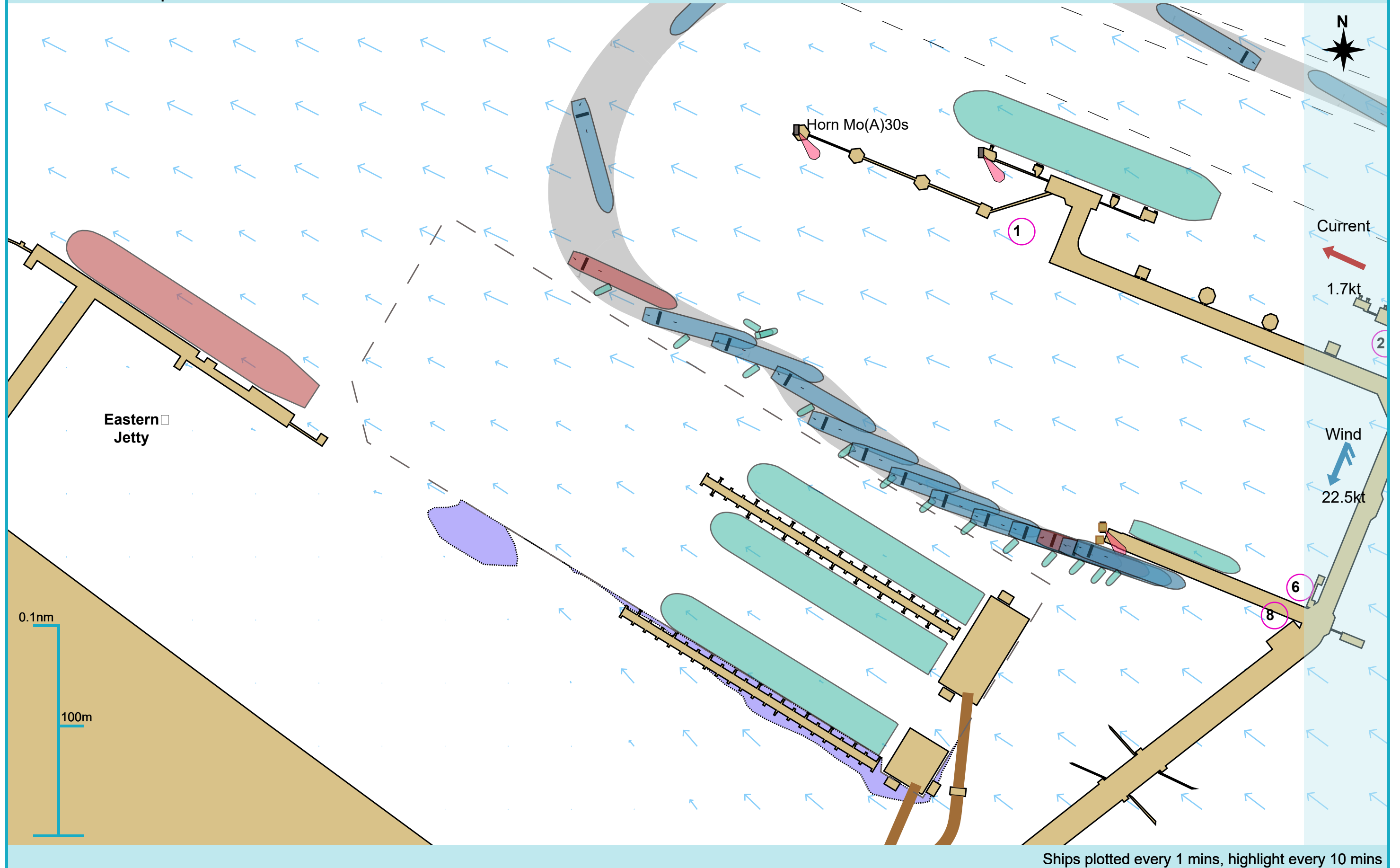


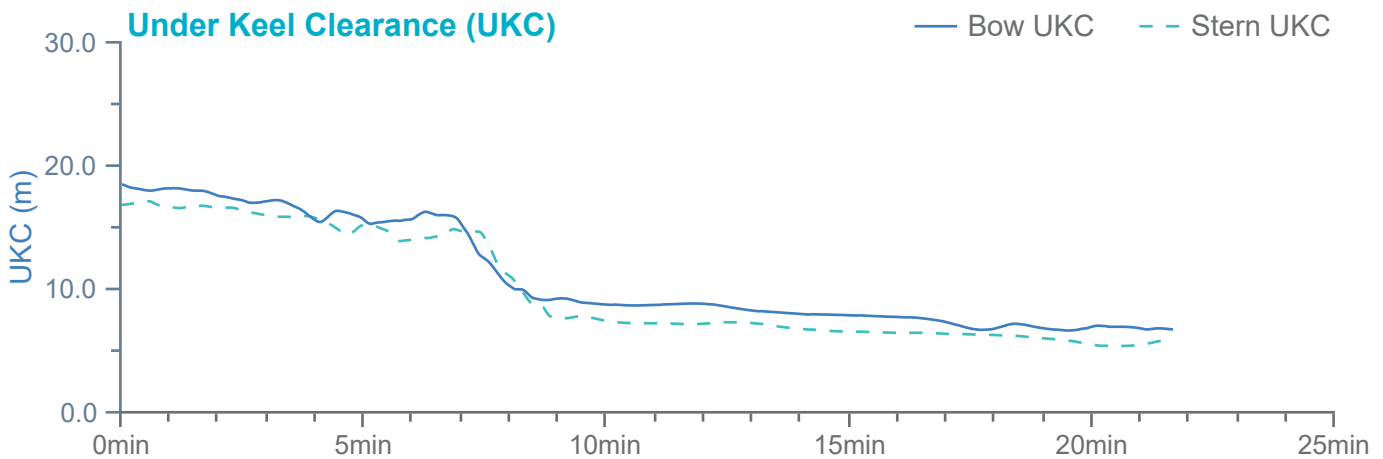
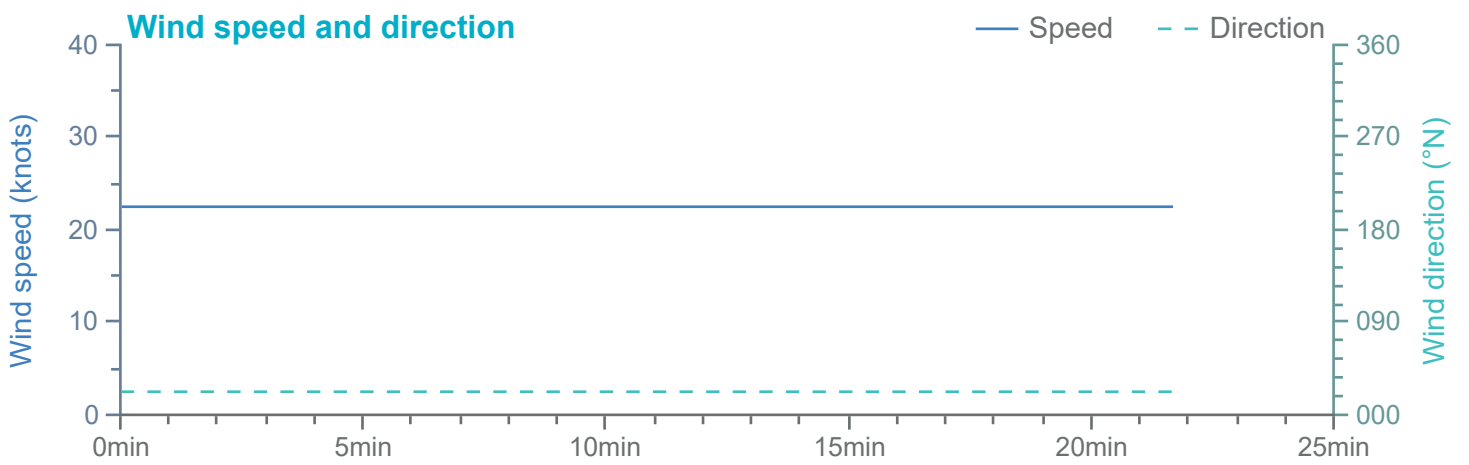
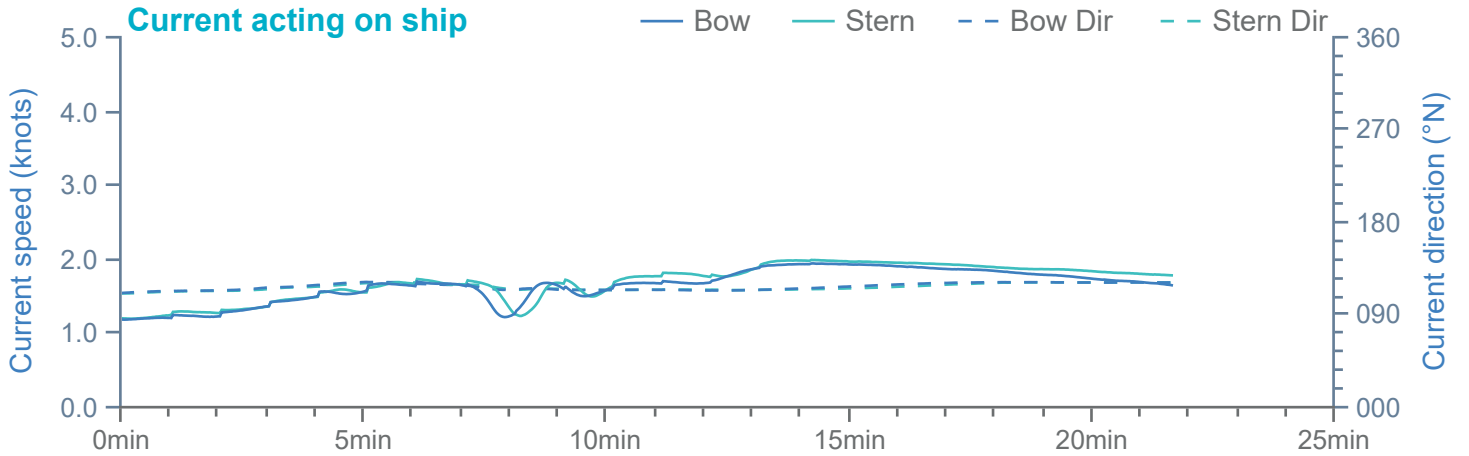


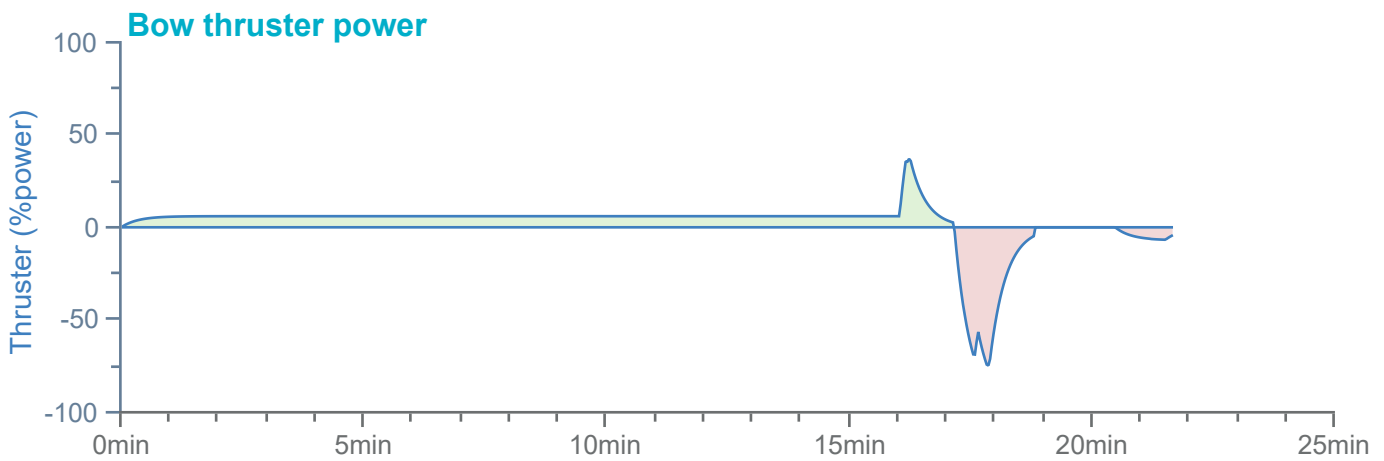
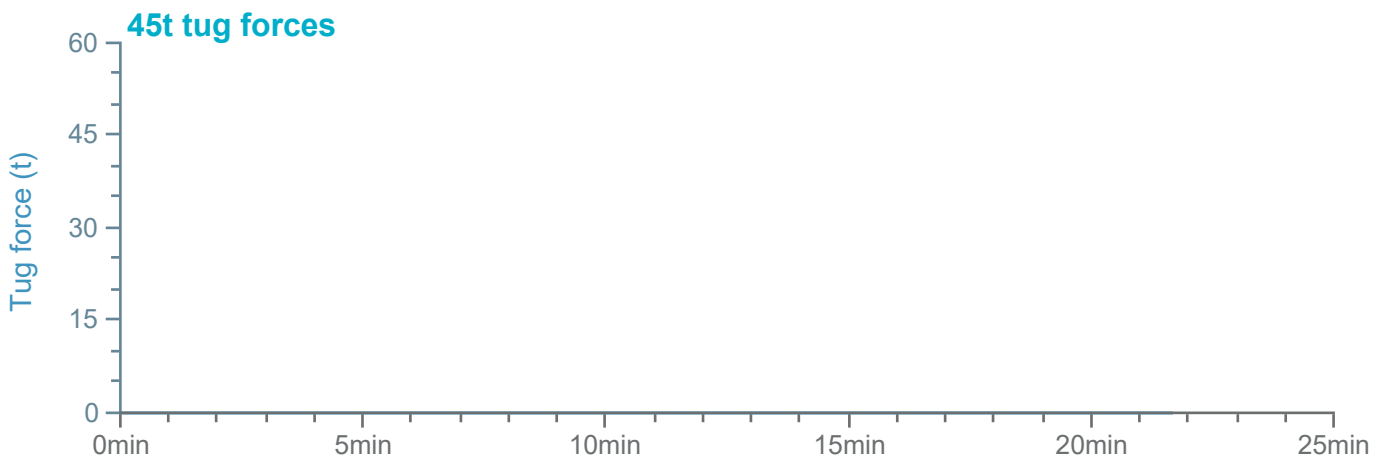
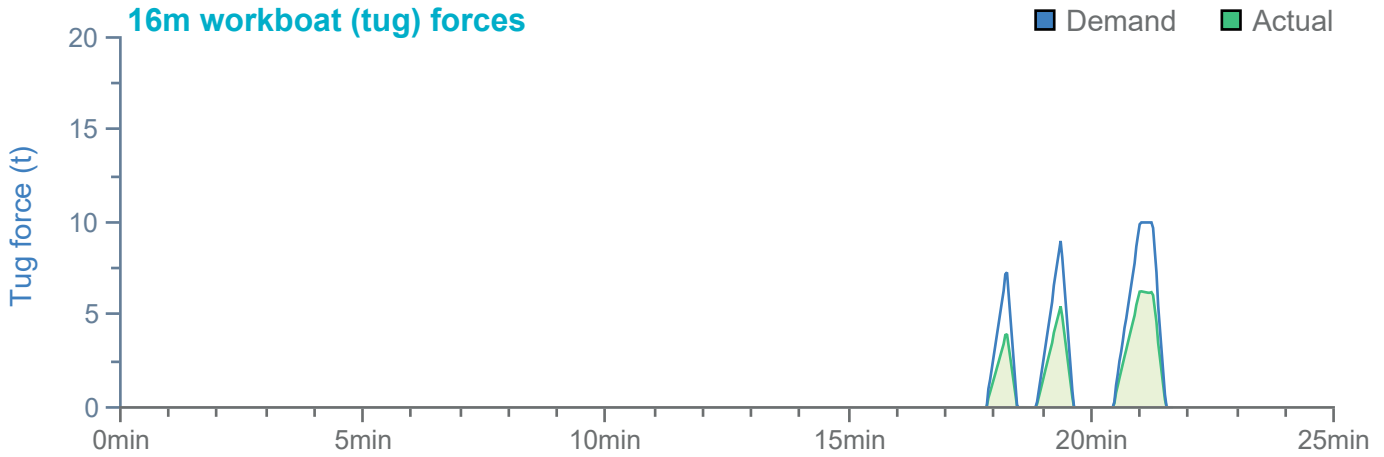
Manoeuvre track plot

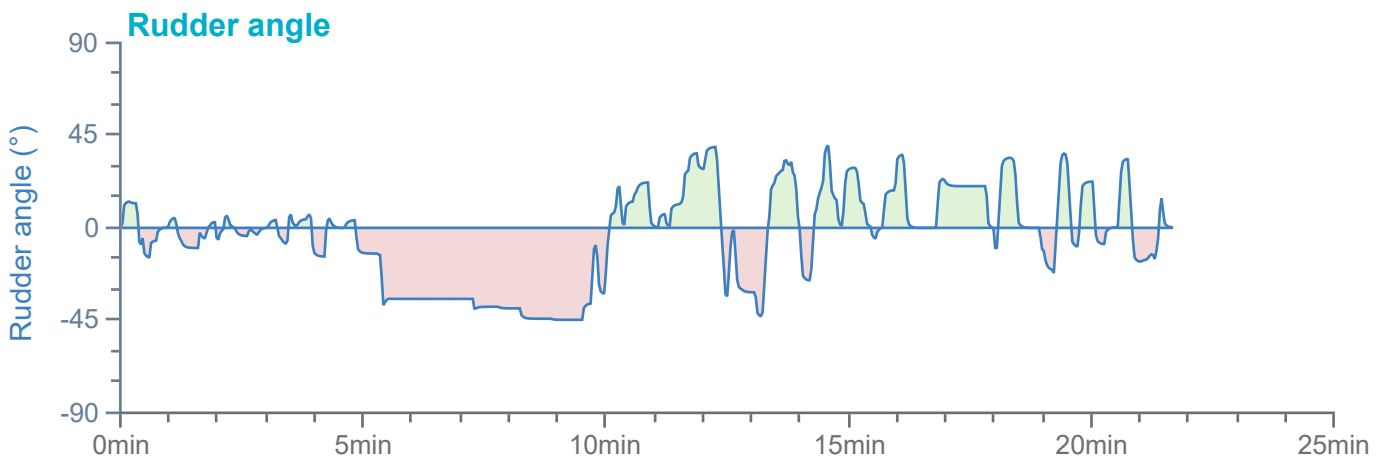
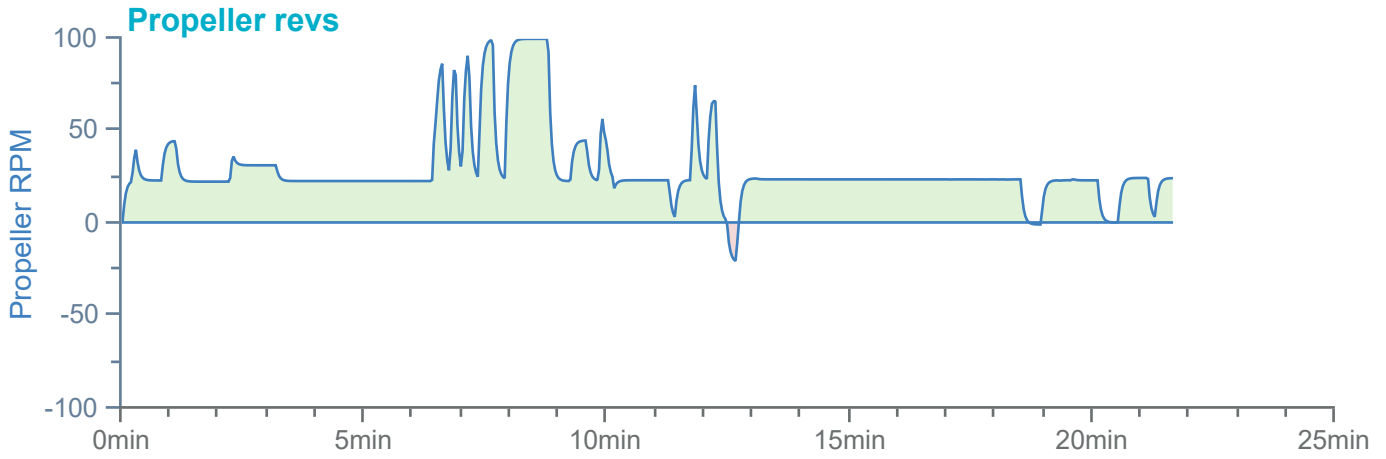


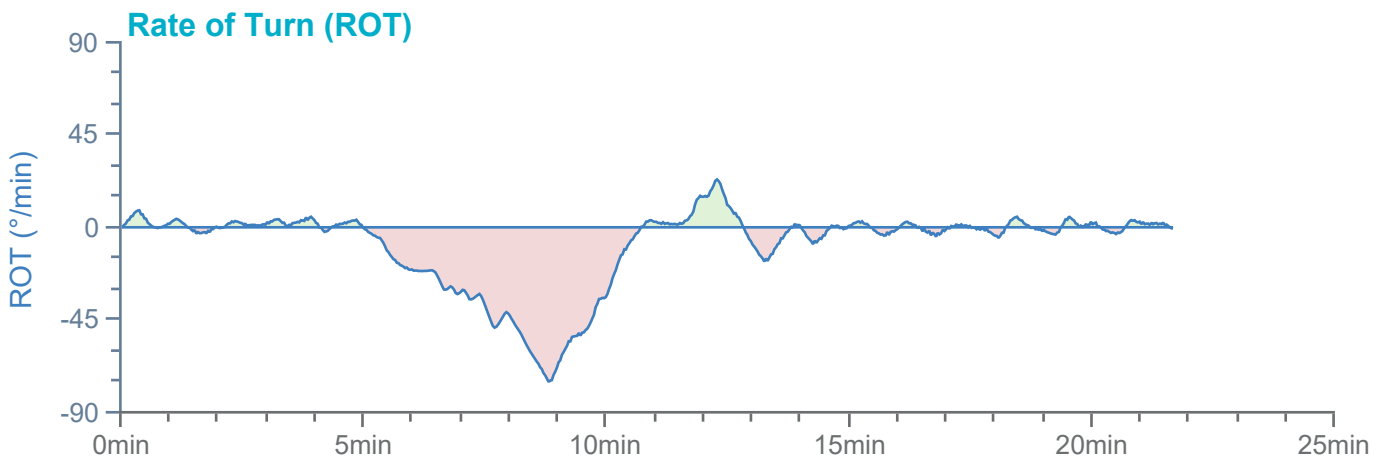
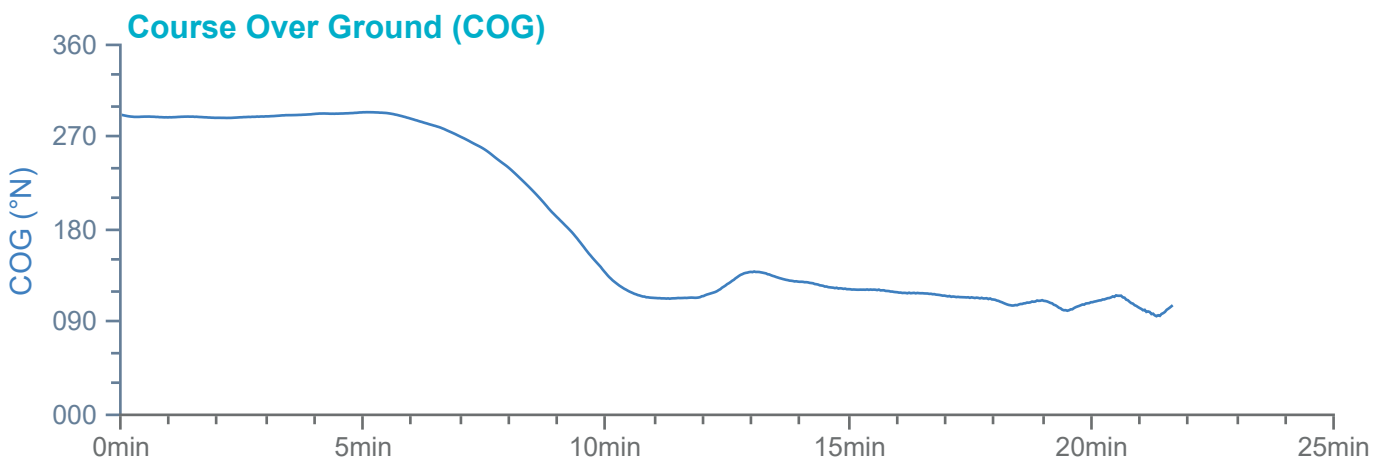
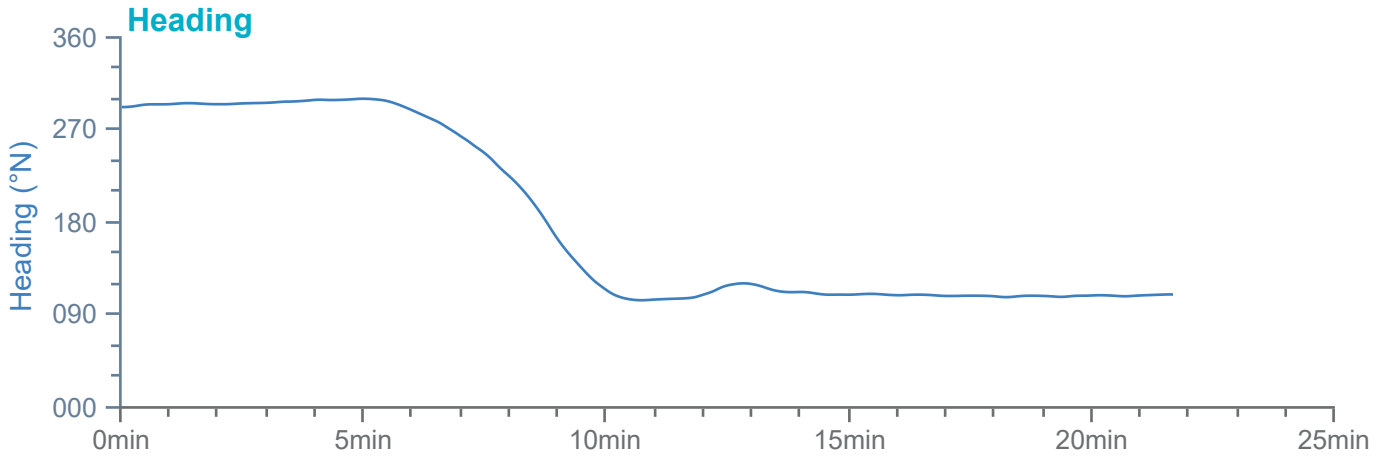
Manoeuvre track plot

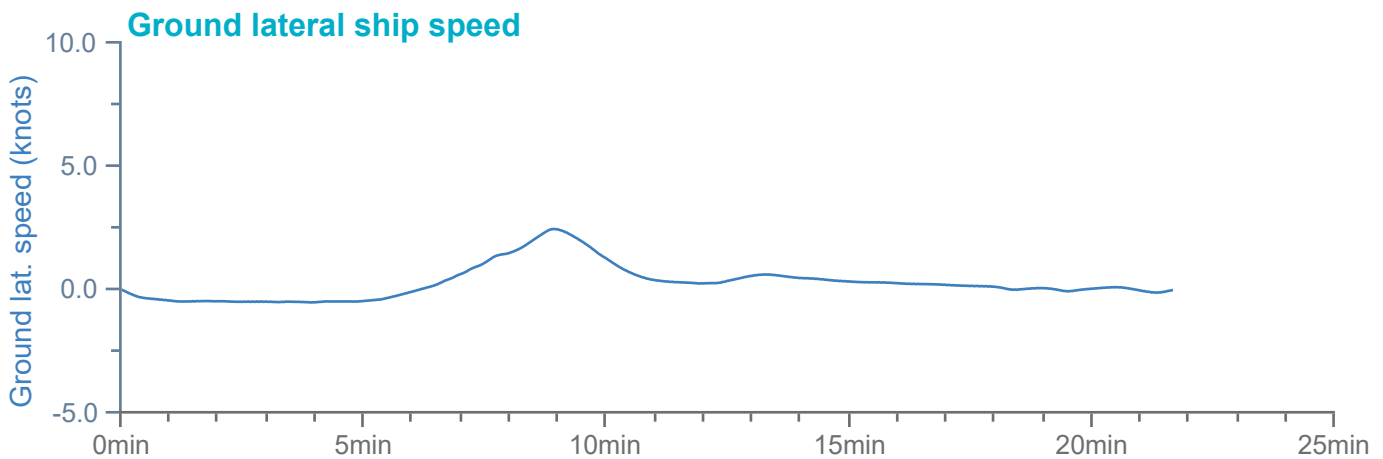
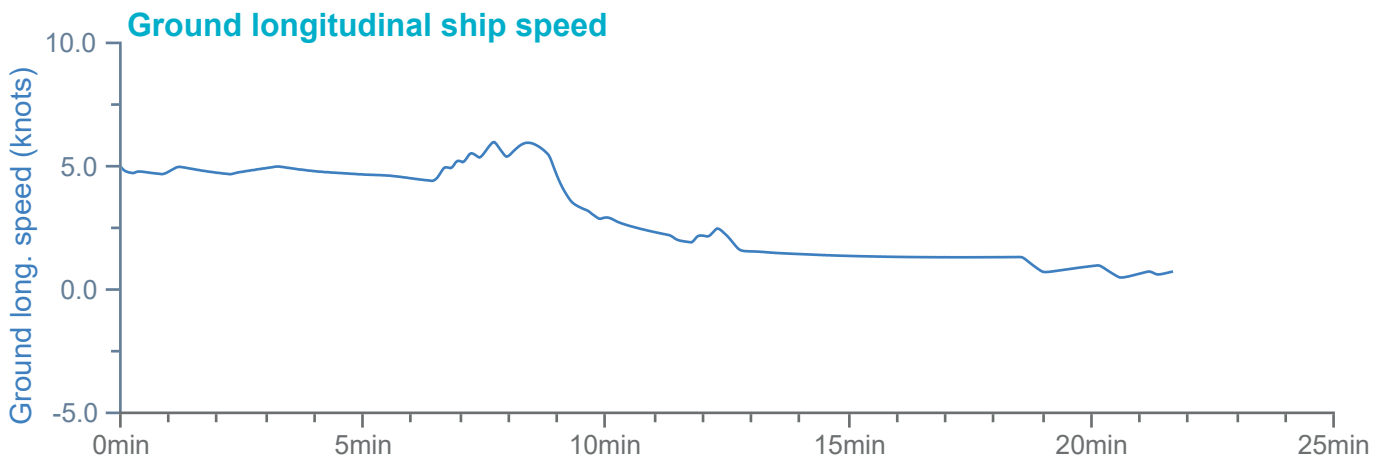
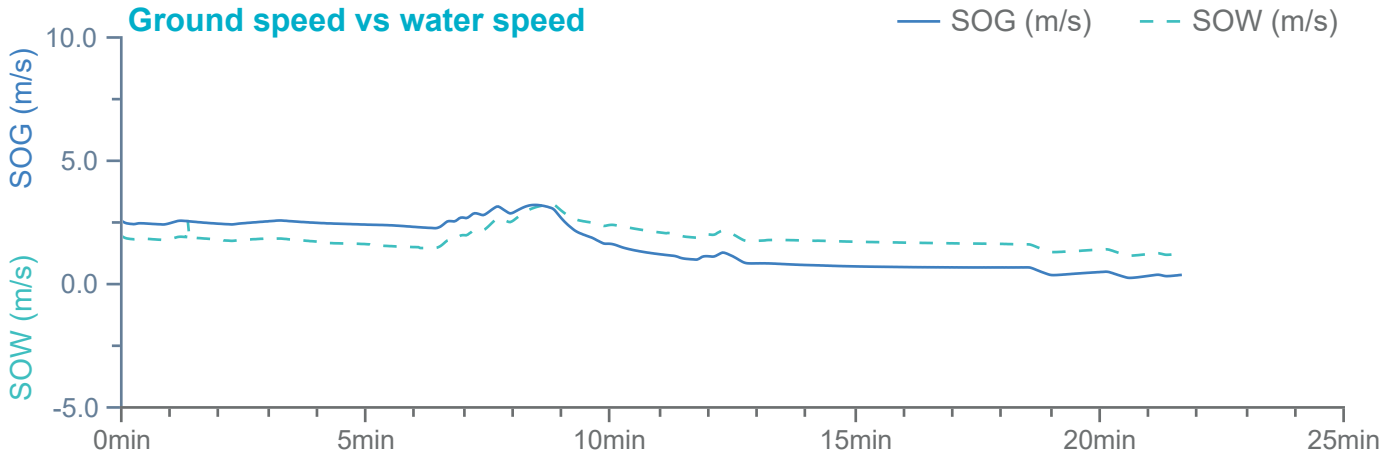




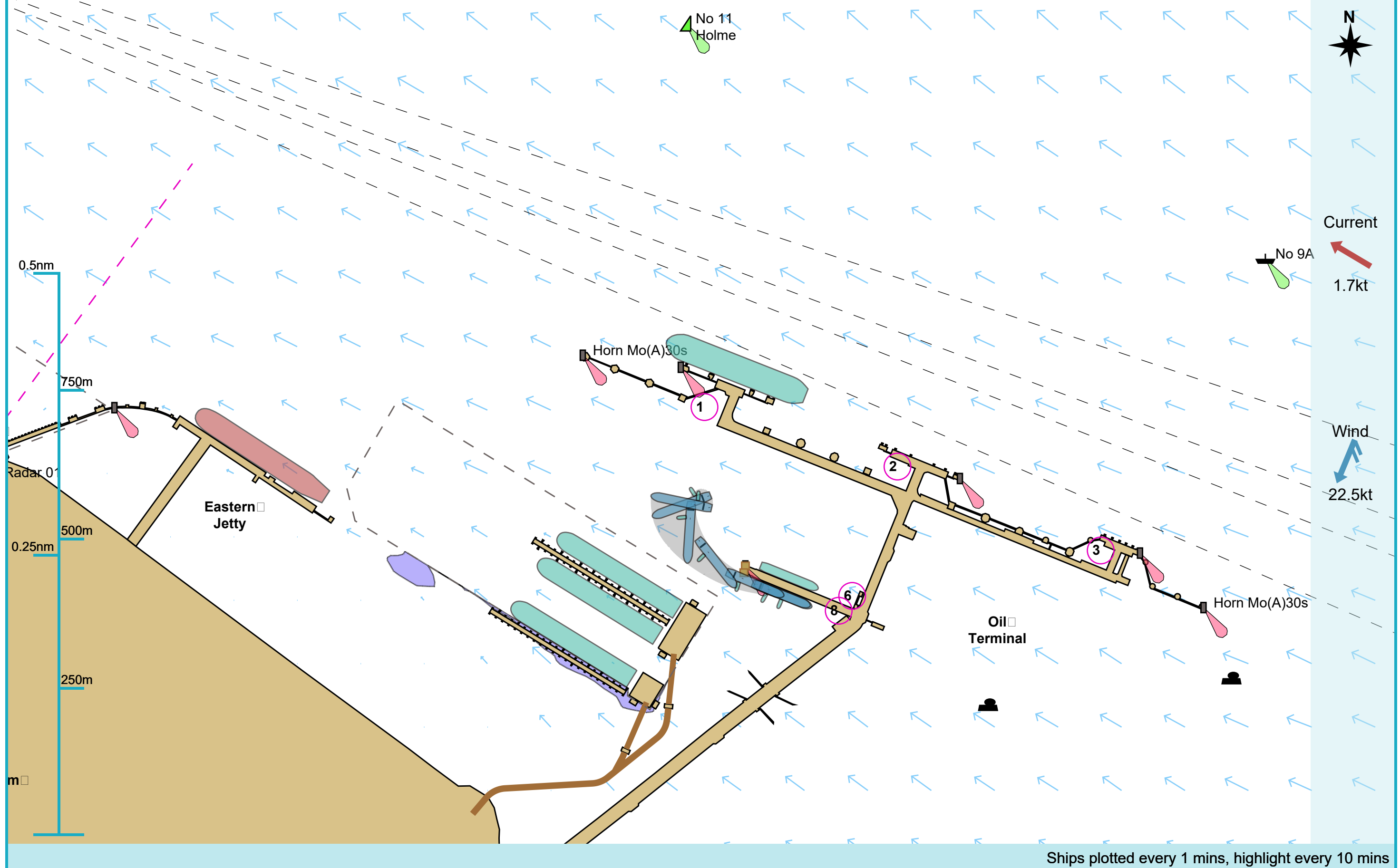






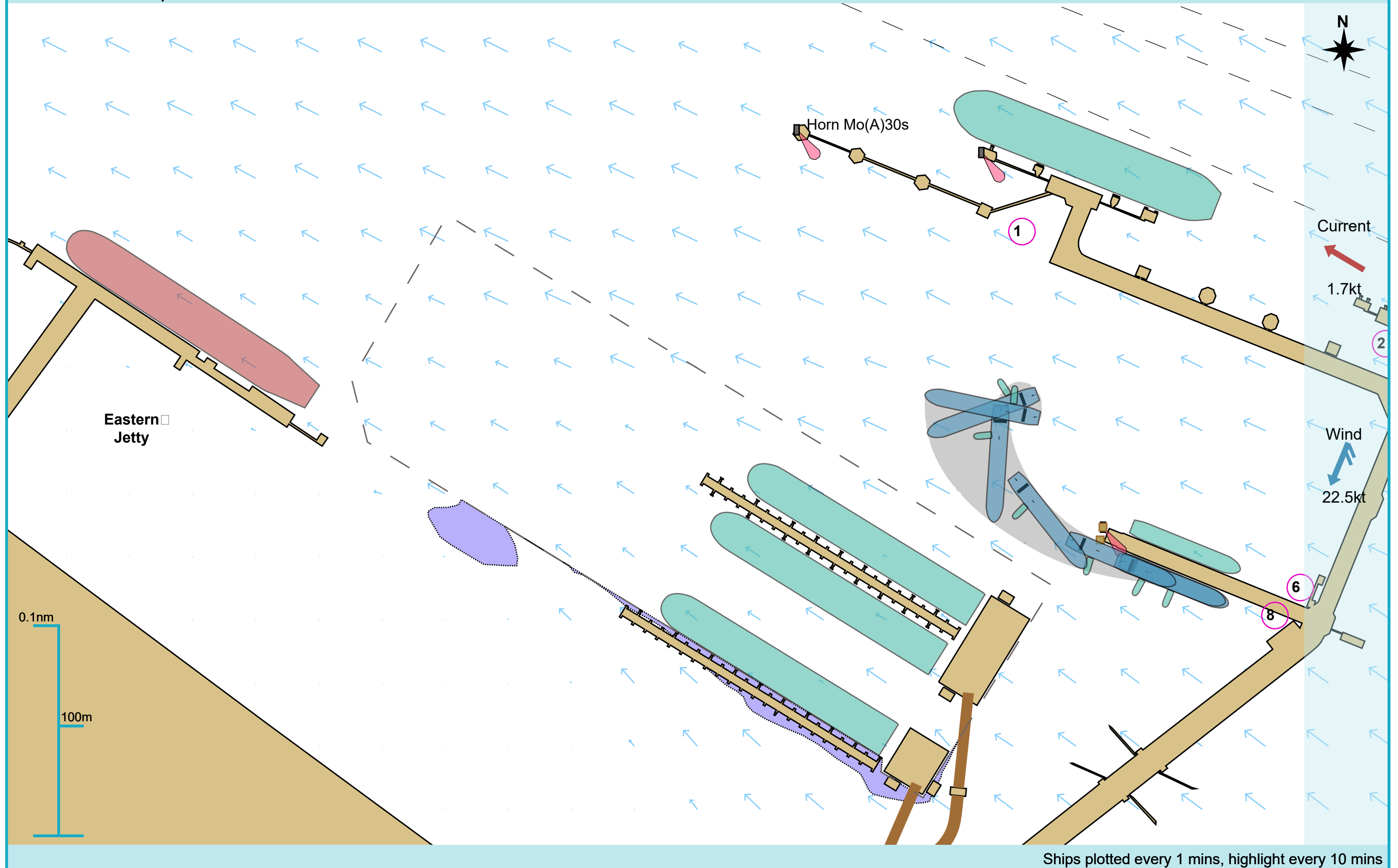


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

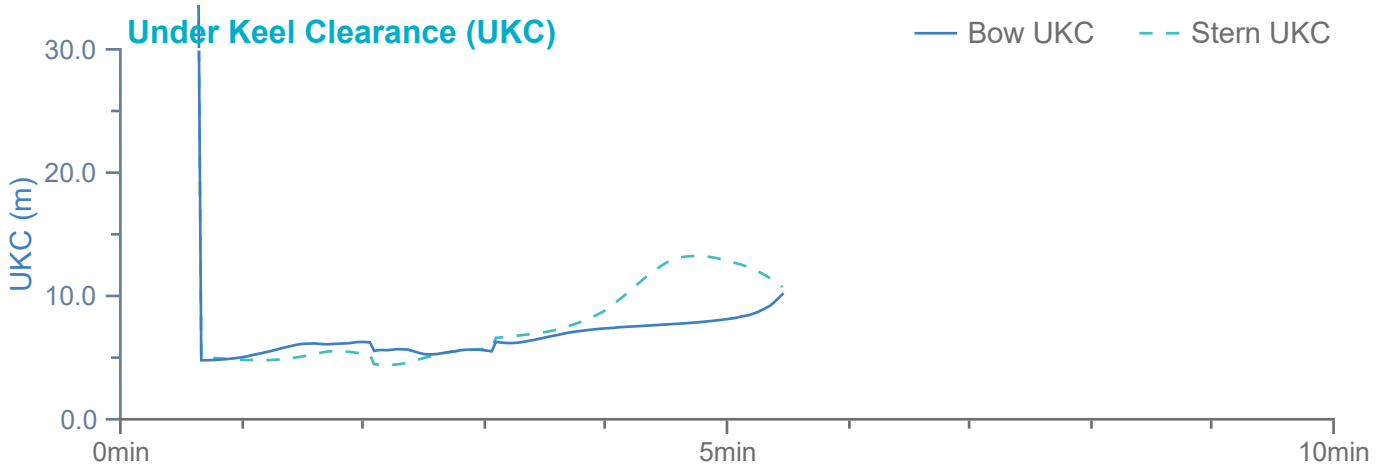
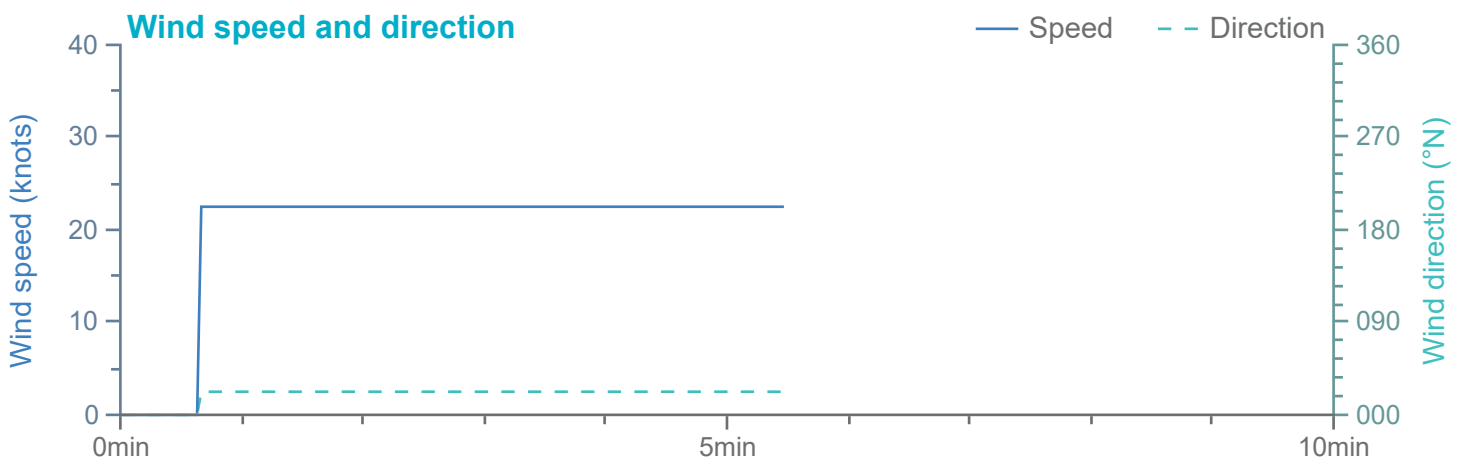
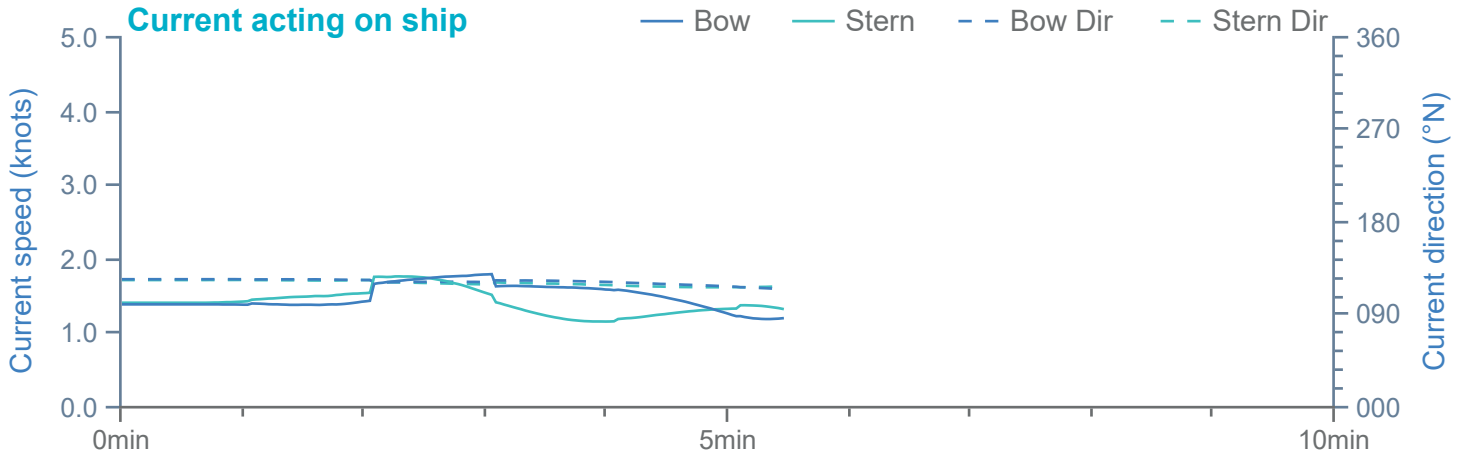
Manoeuvre track plot

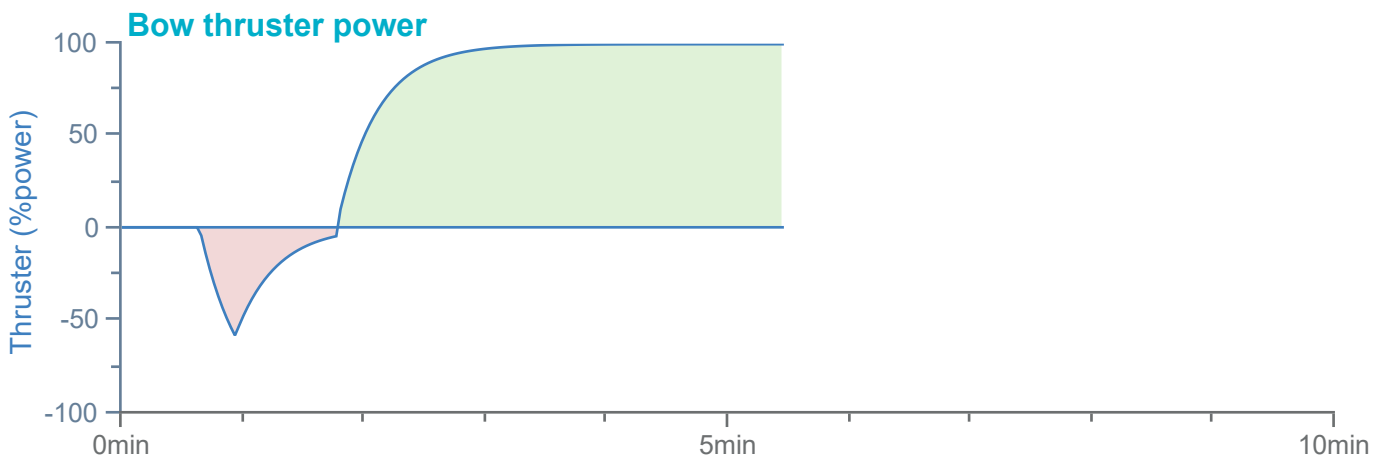
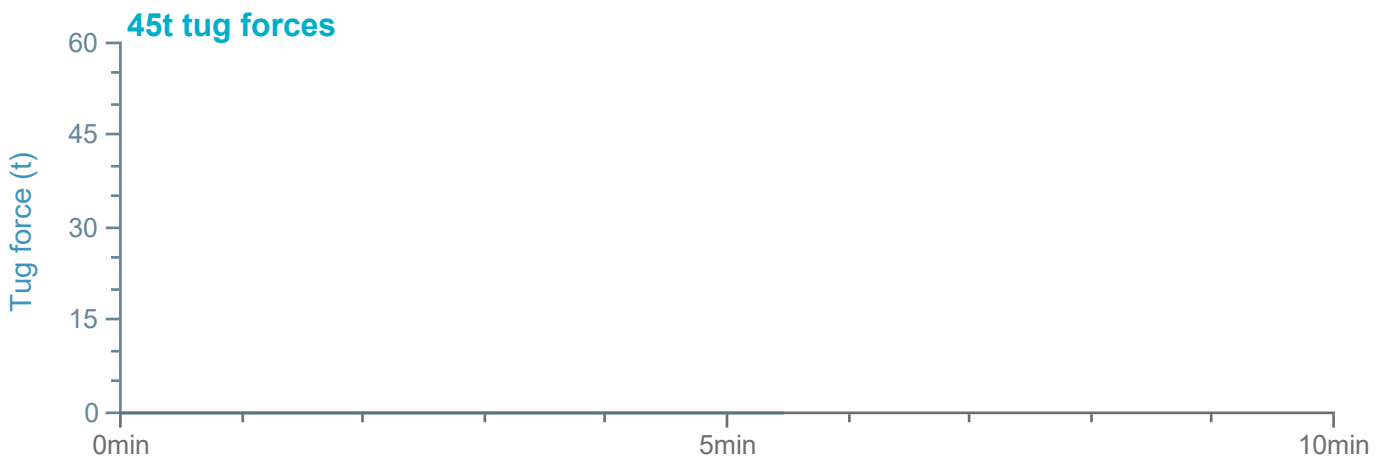
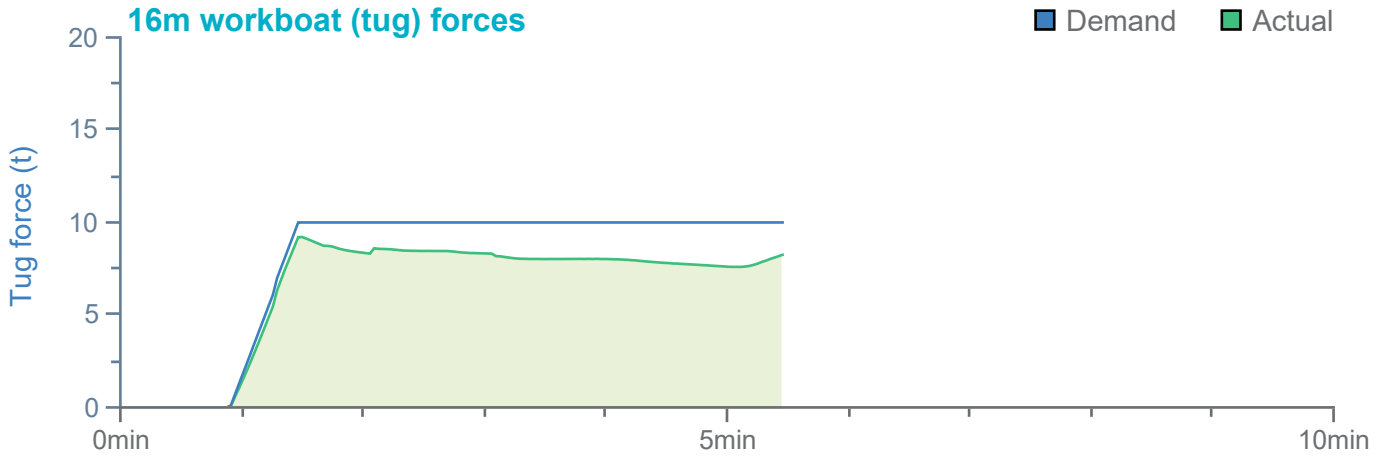


Summary

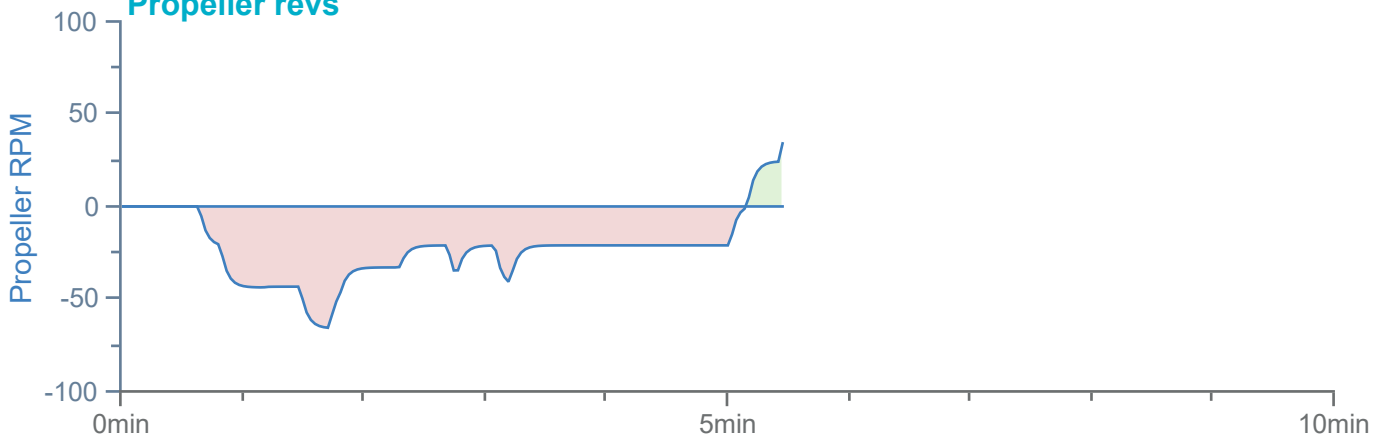
Environment

104m x 15m Product Tanker

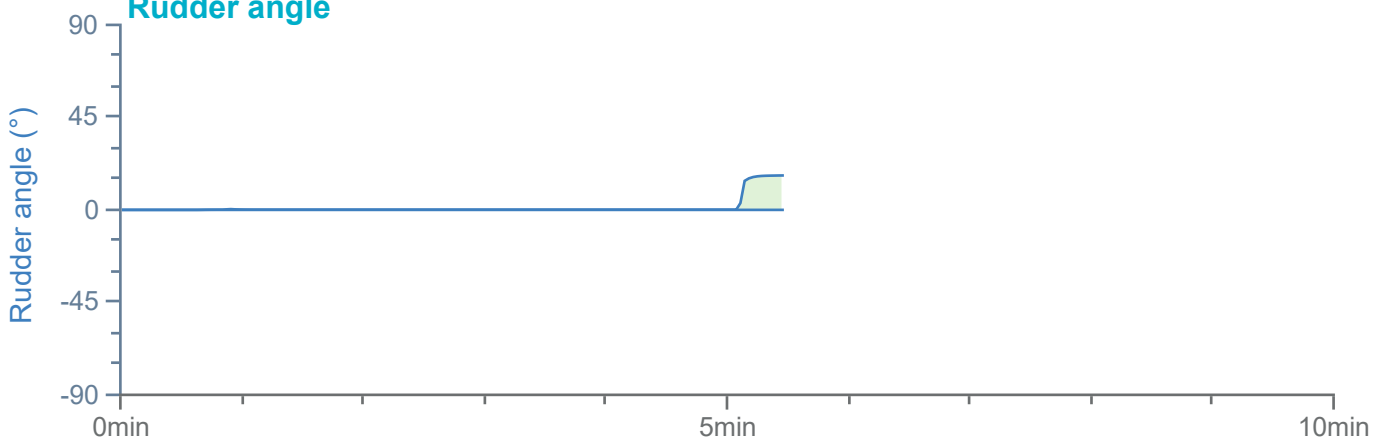


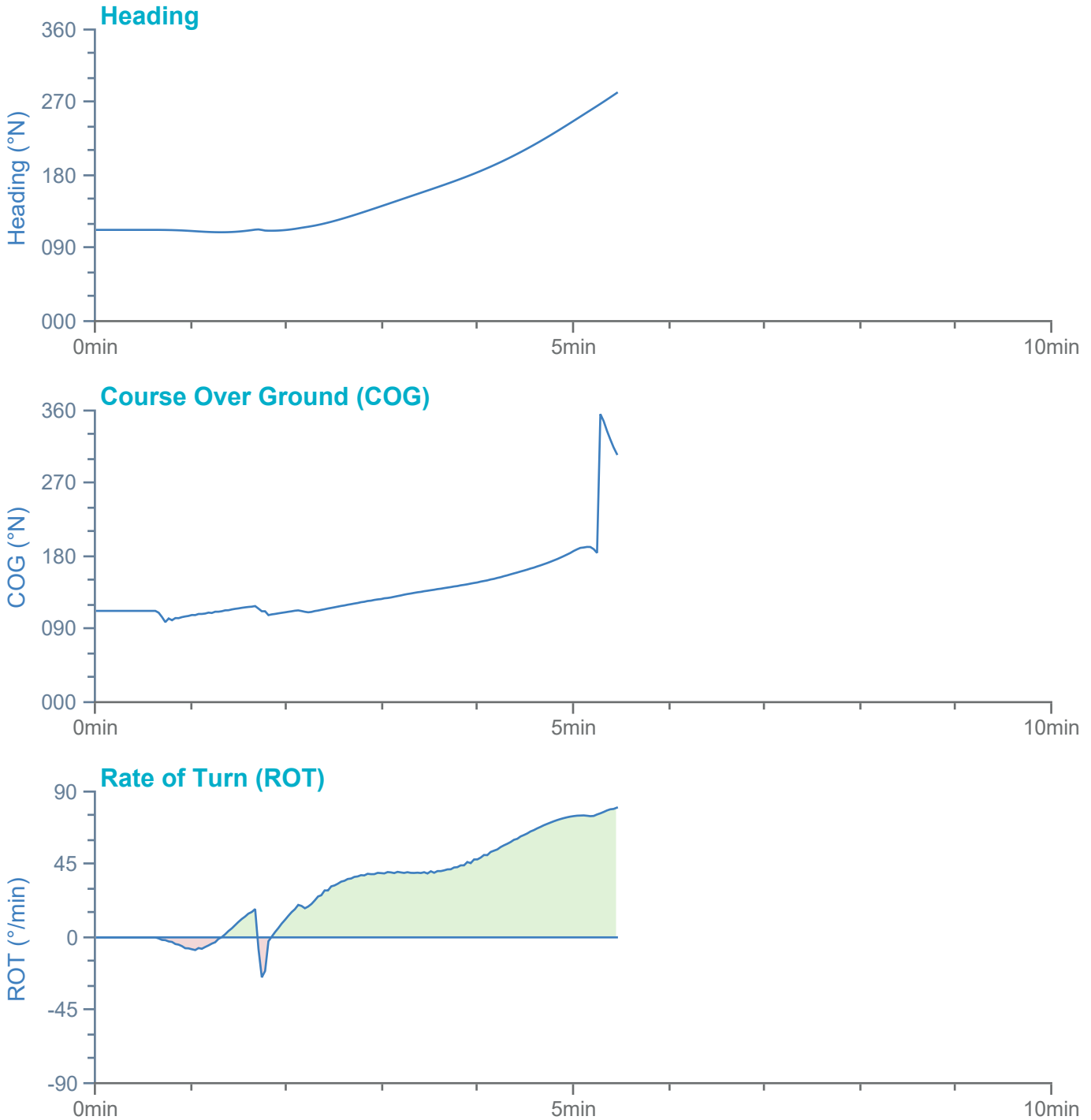


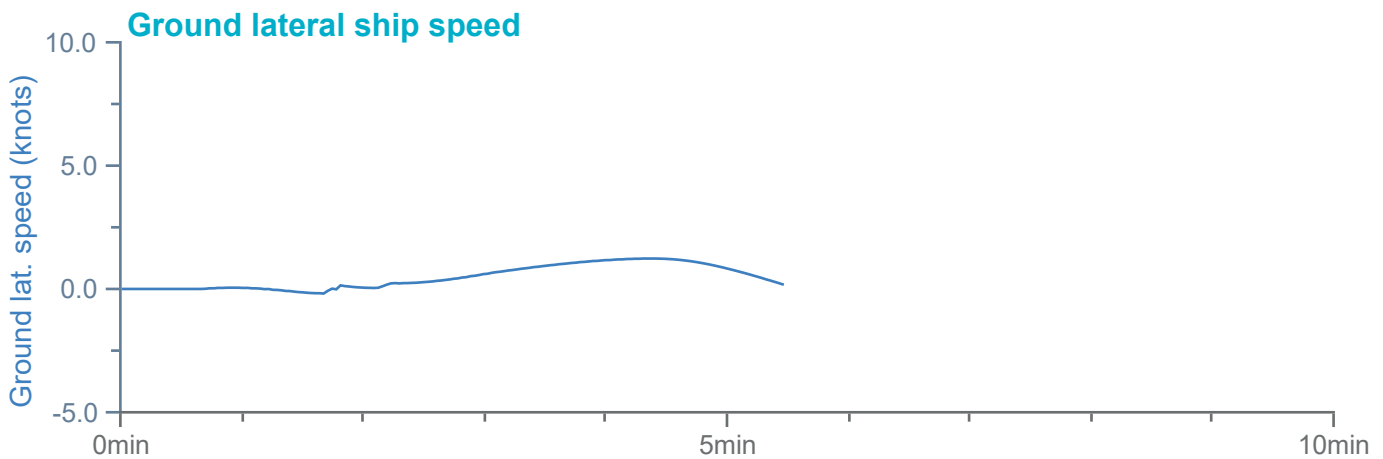
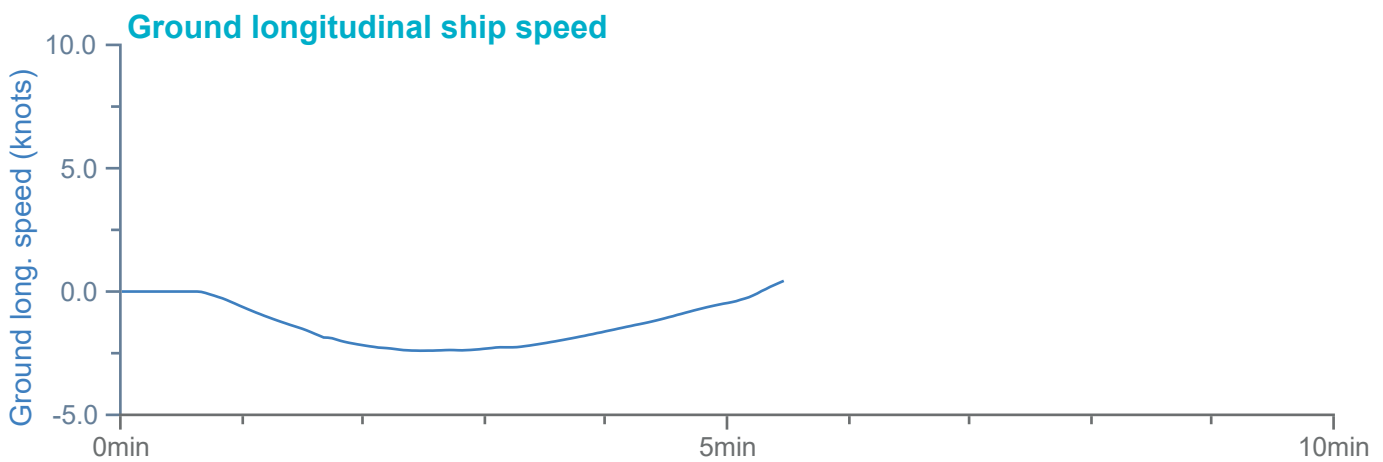
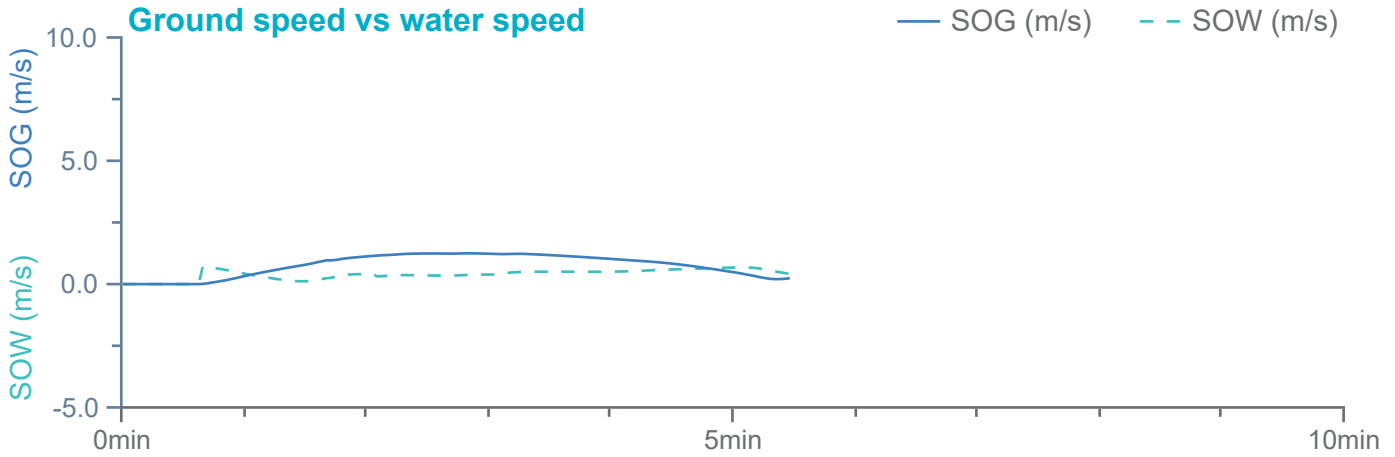
Propeller revs



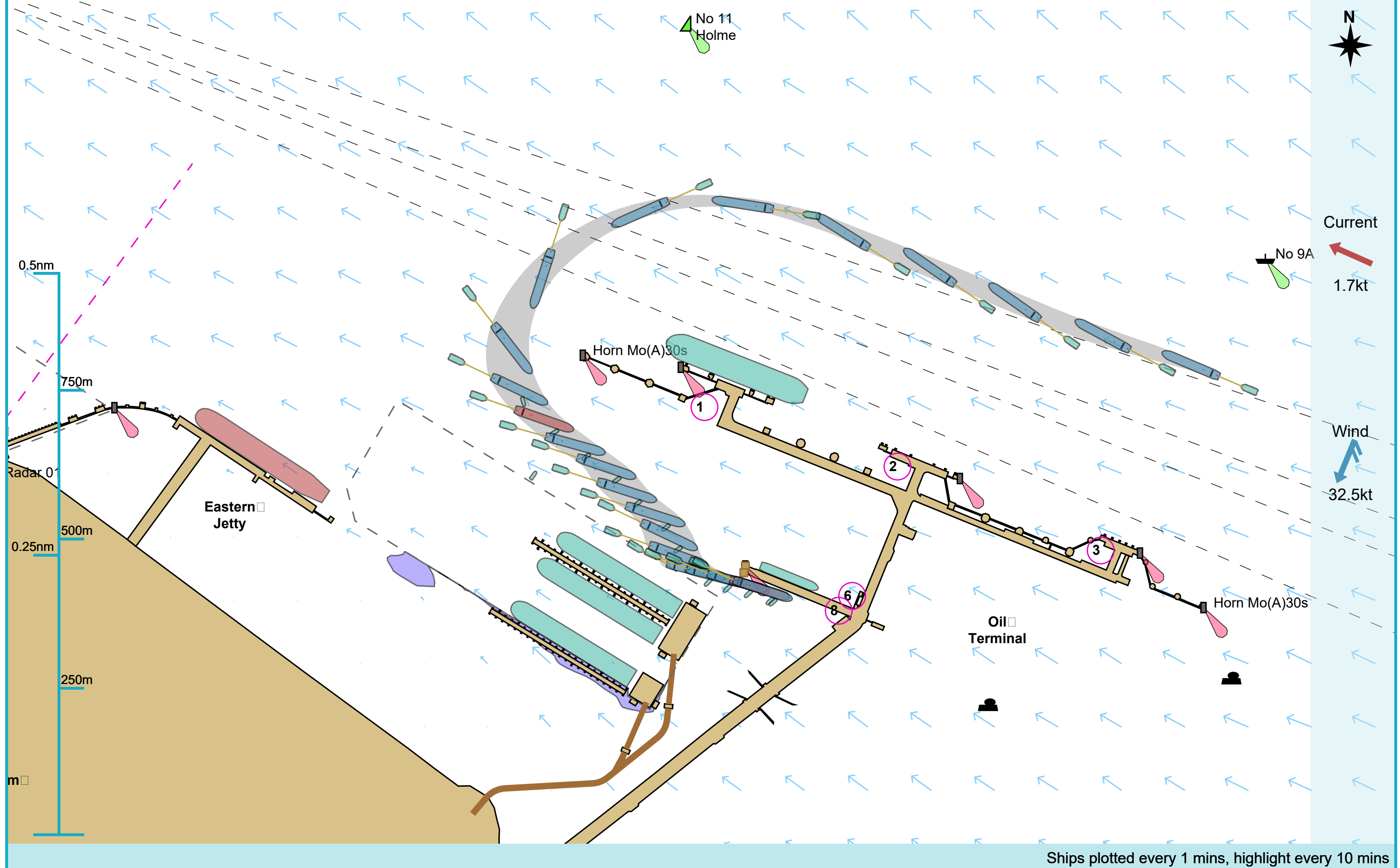
Rudder angle



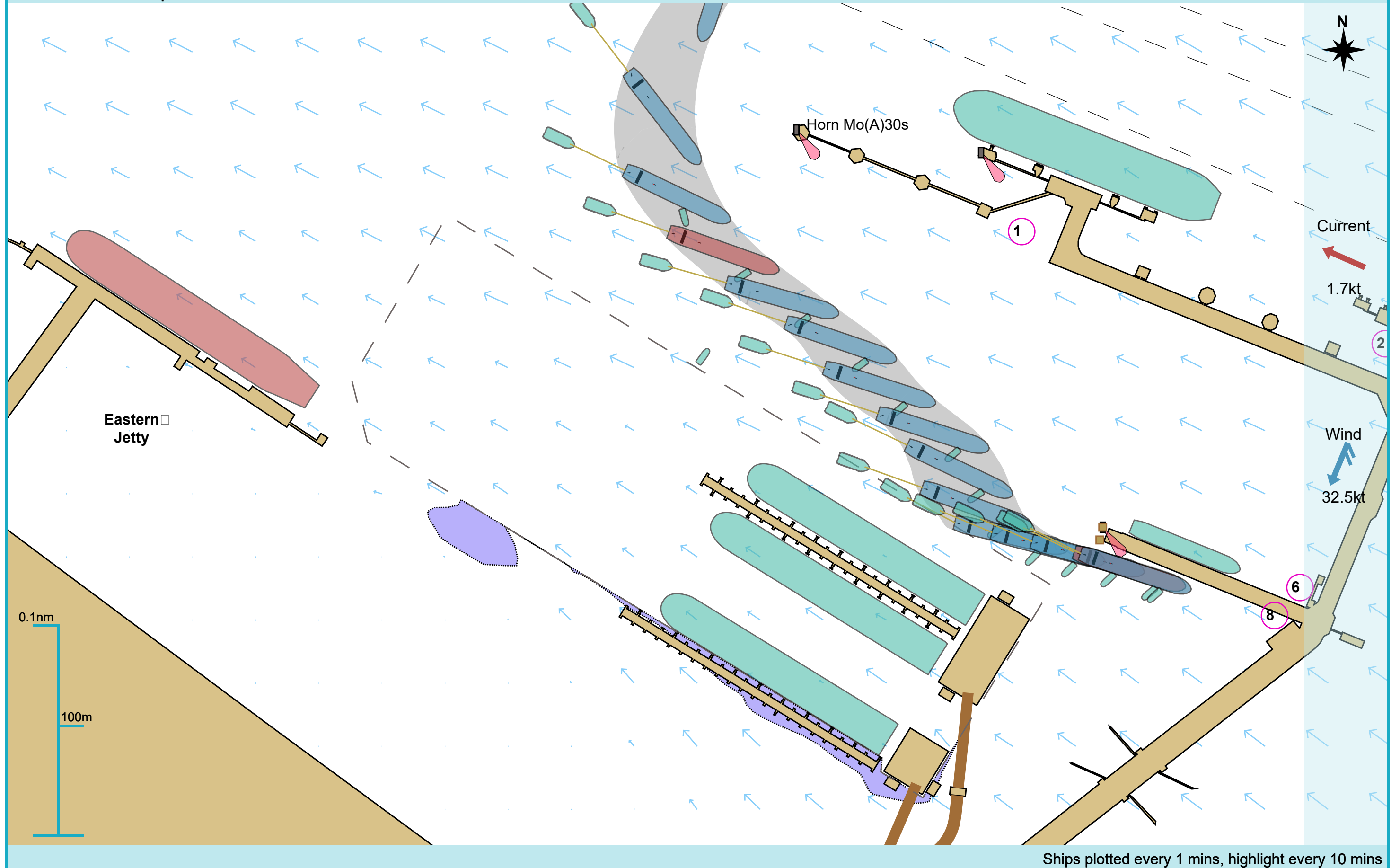




Manoeuvre track plot



Manoeuvre track plot

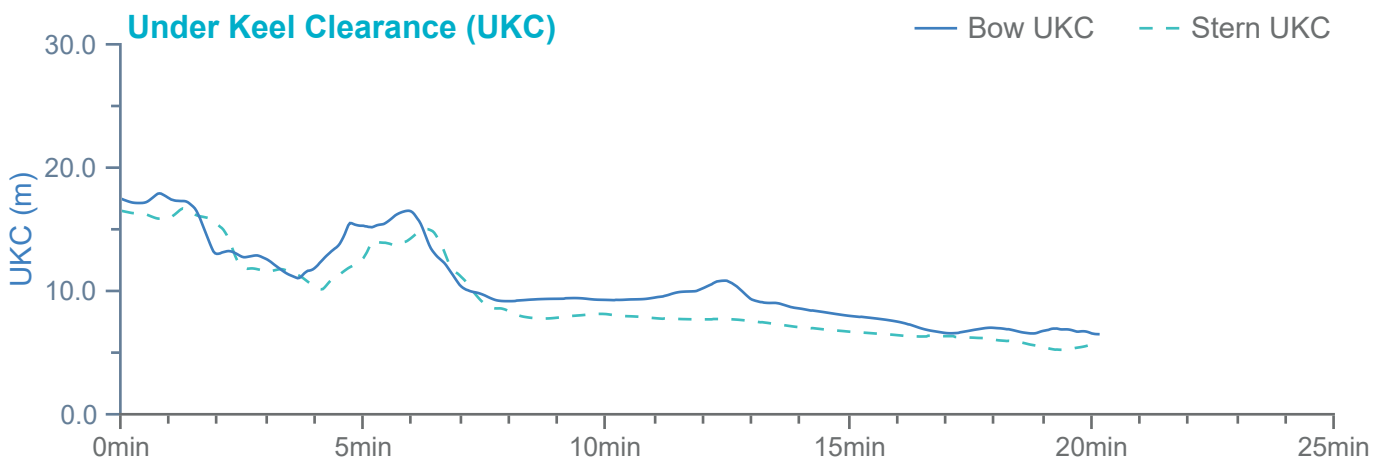
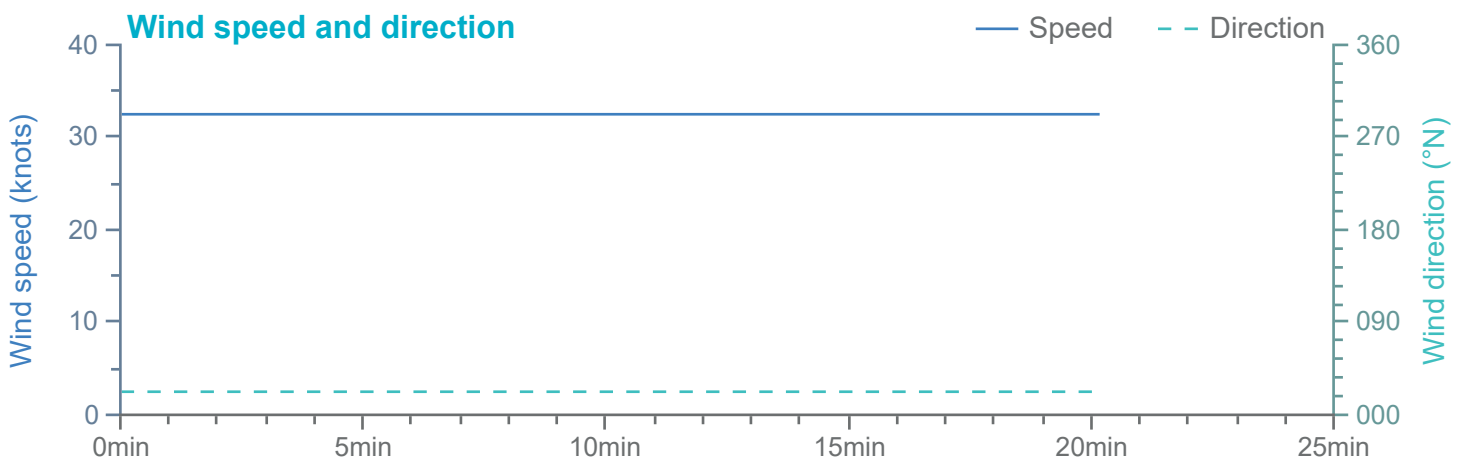
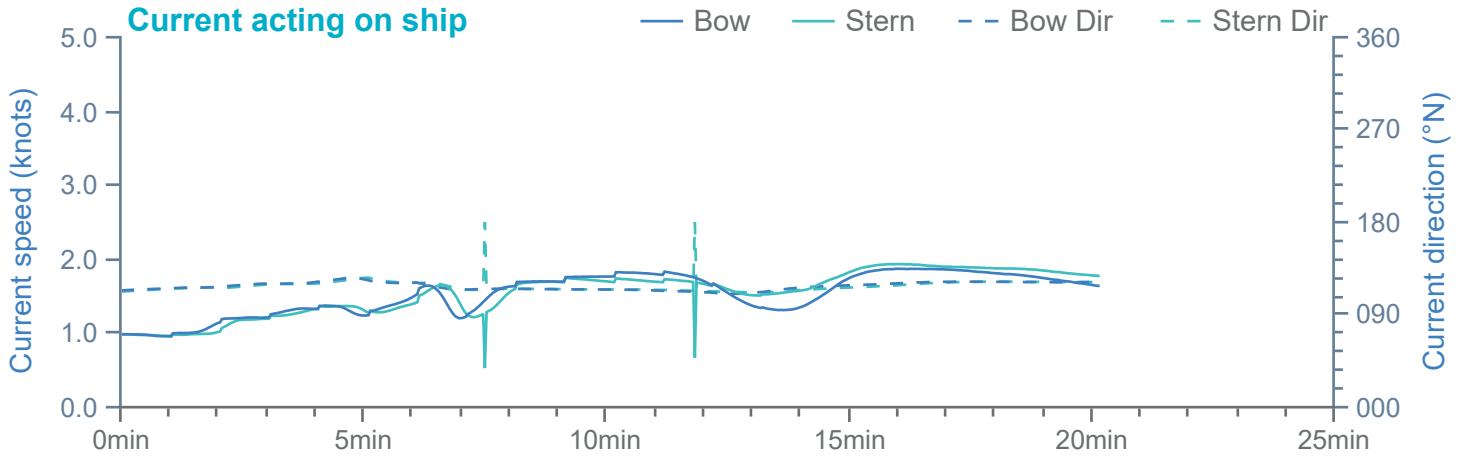


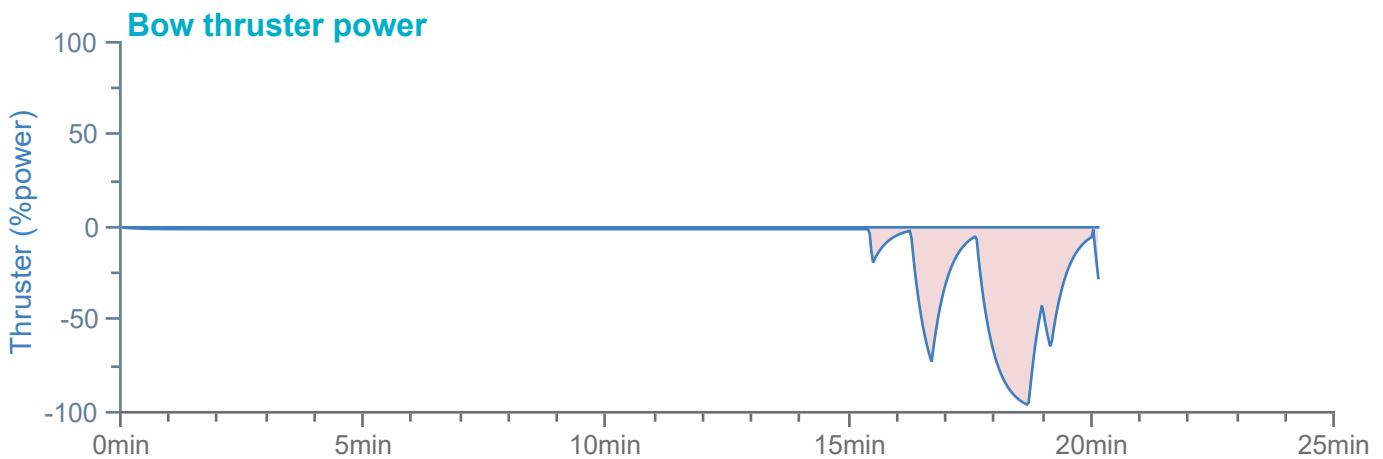
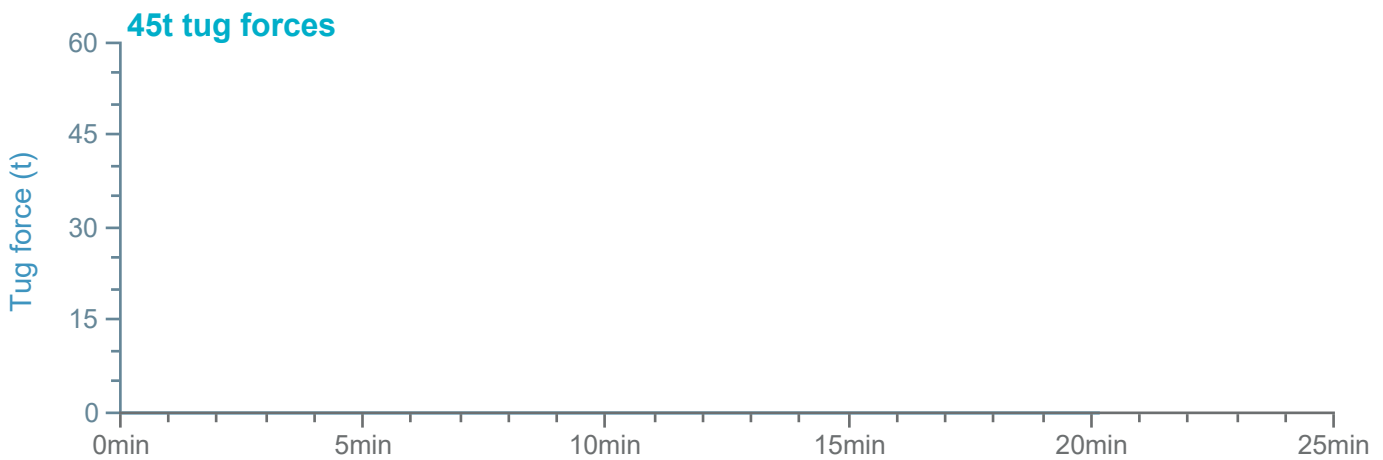
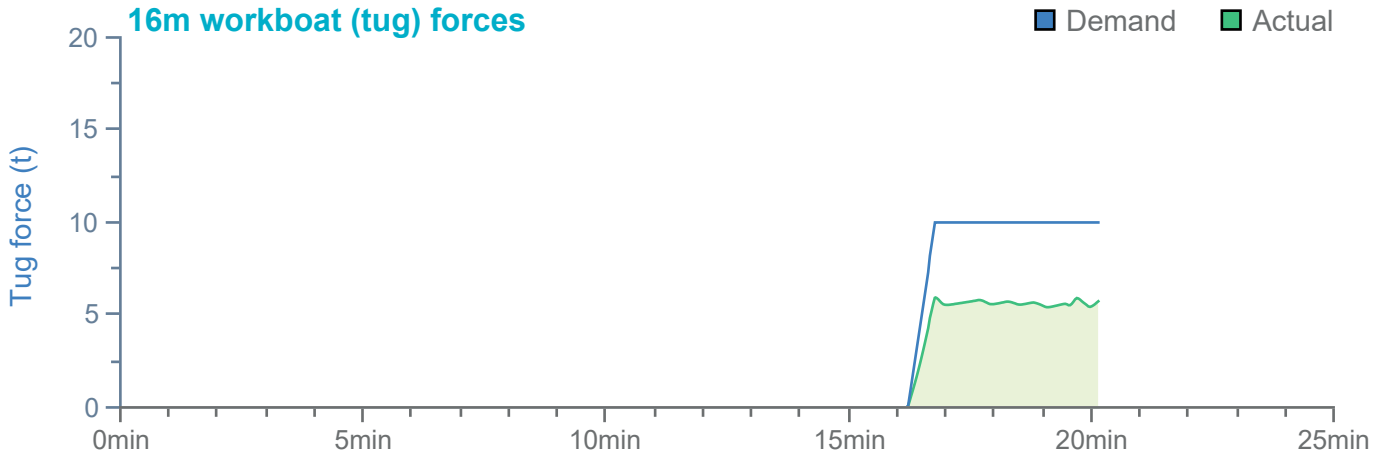
Ships plotted every 1 mins, highlight every 10 mins

Summary

Environment

104m x 15m Product Tanker

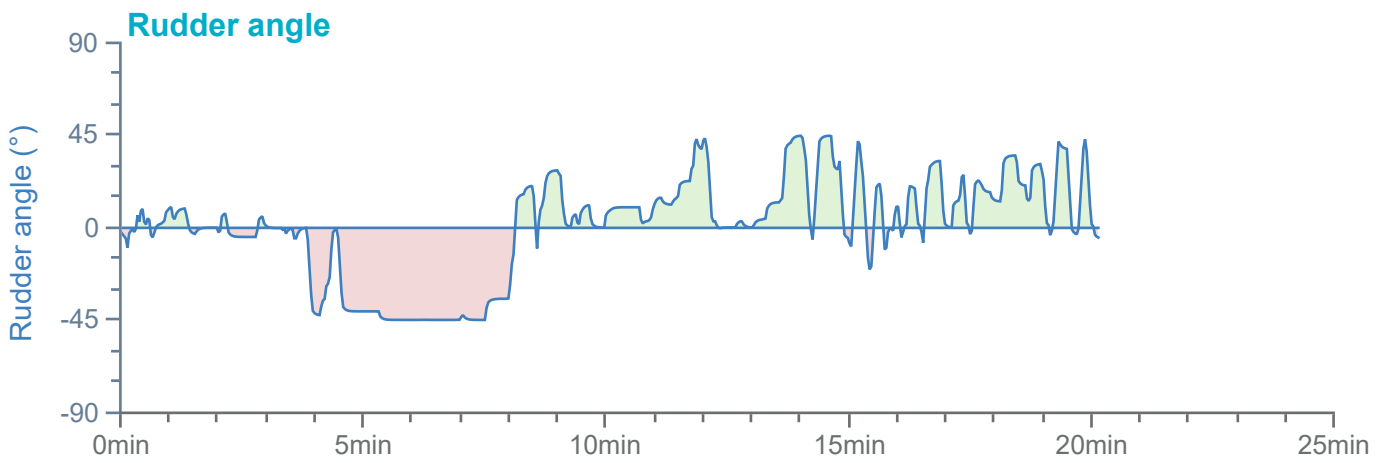
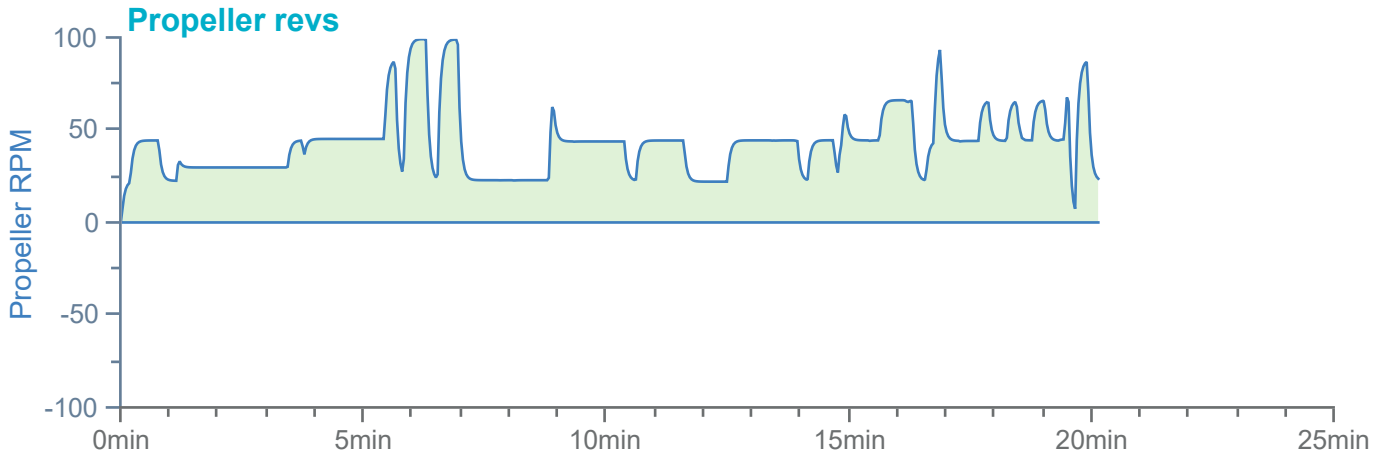


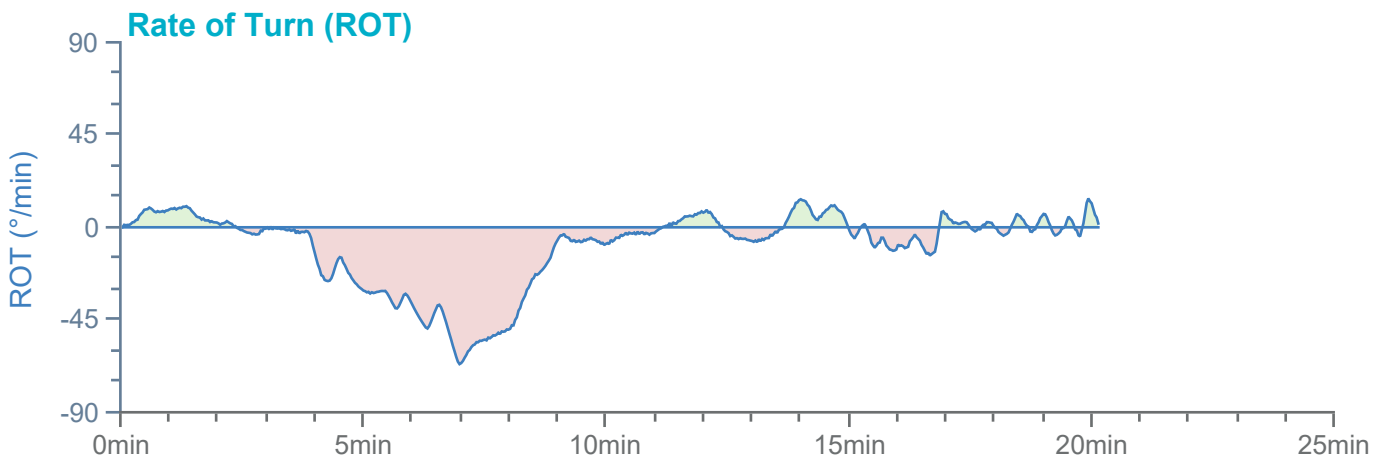
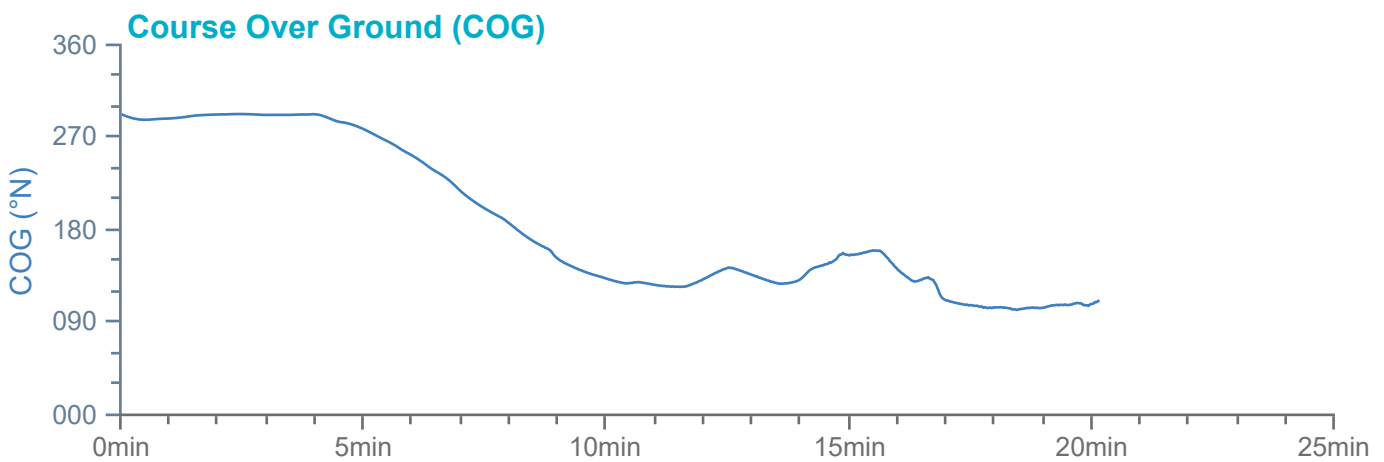
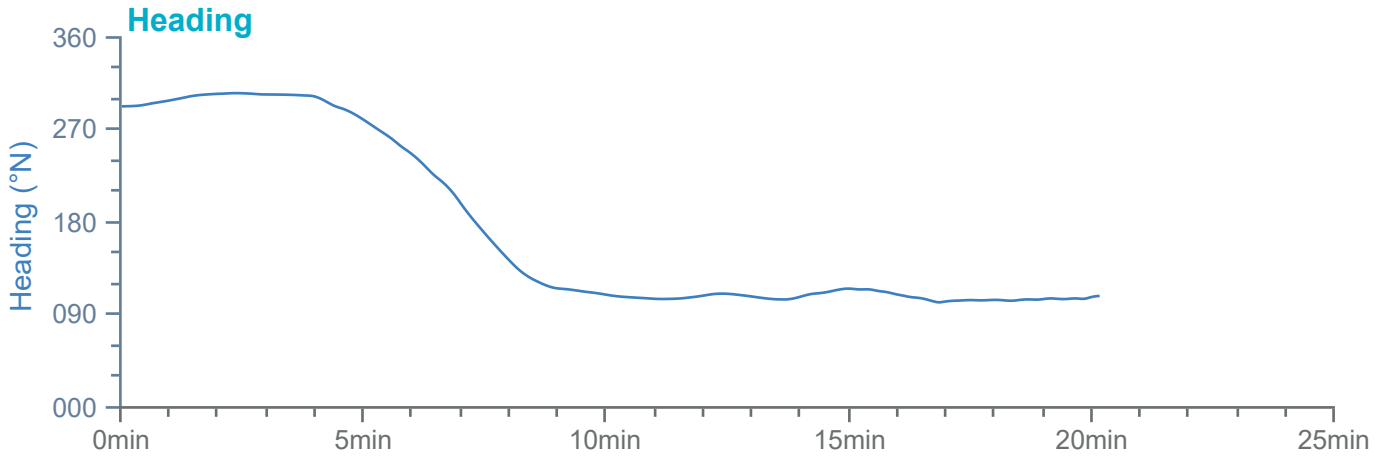


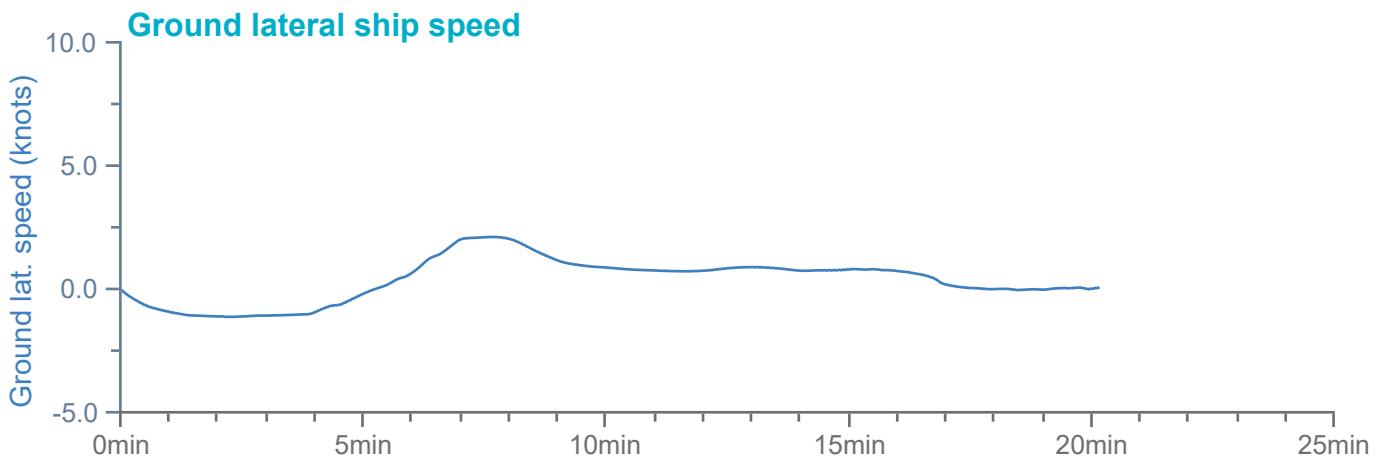
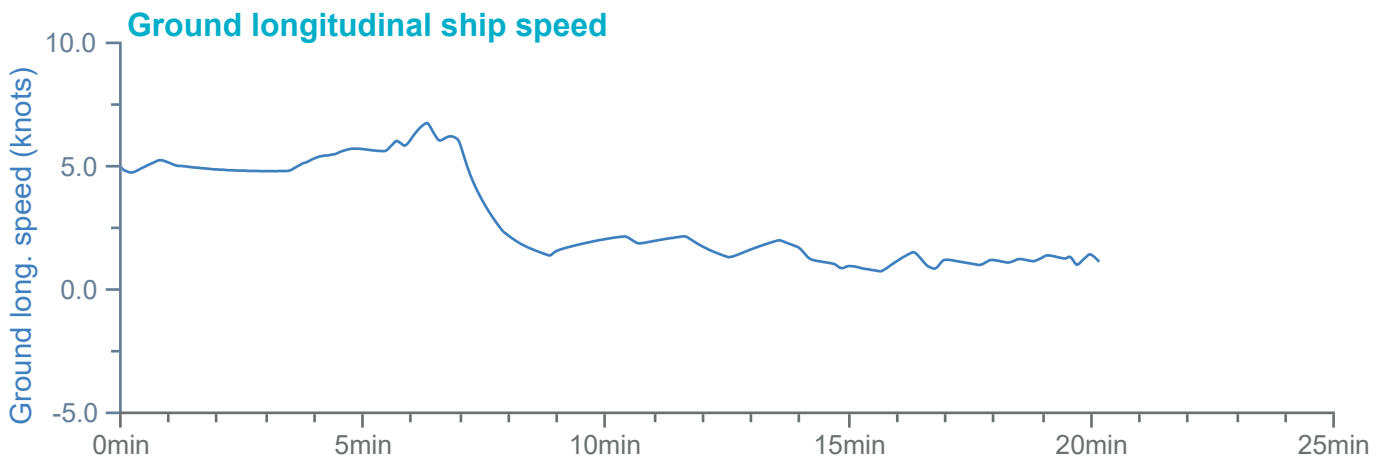
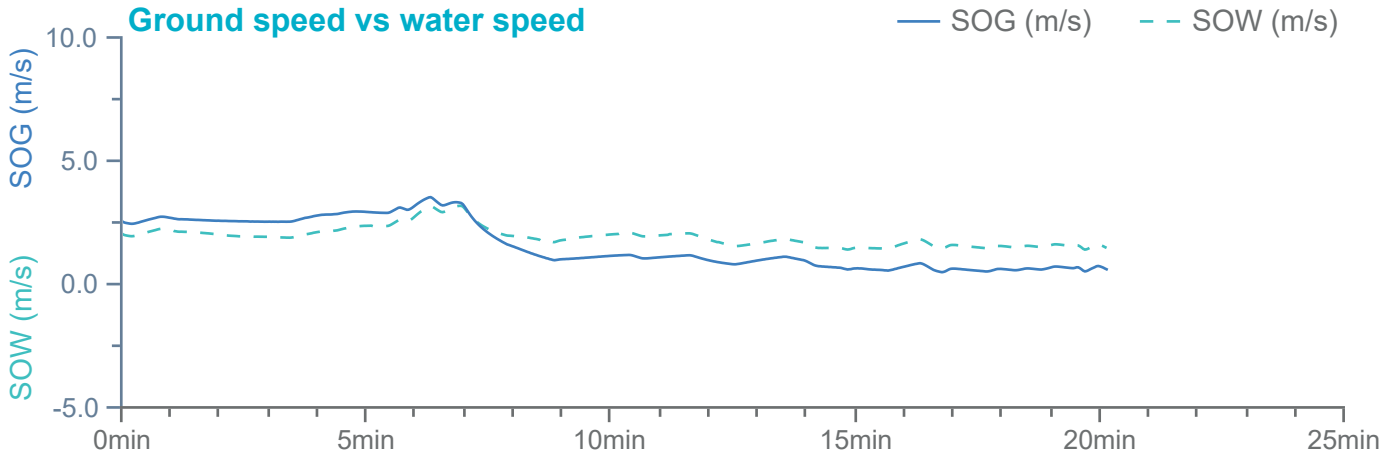
Summary

Environment

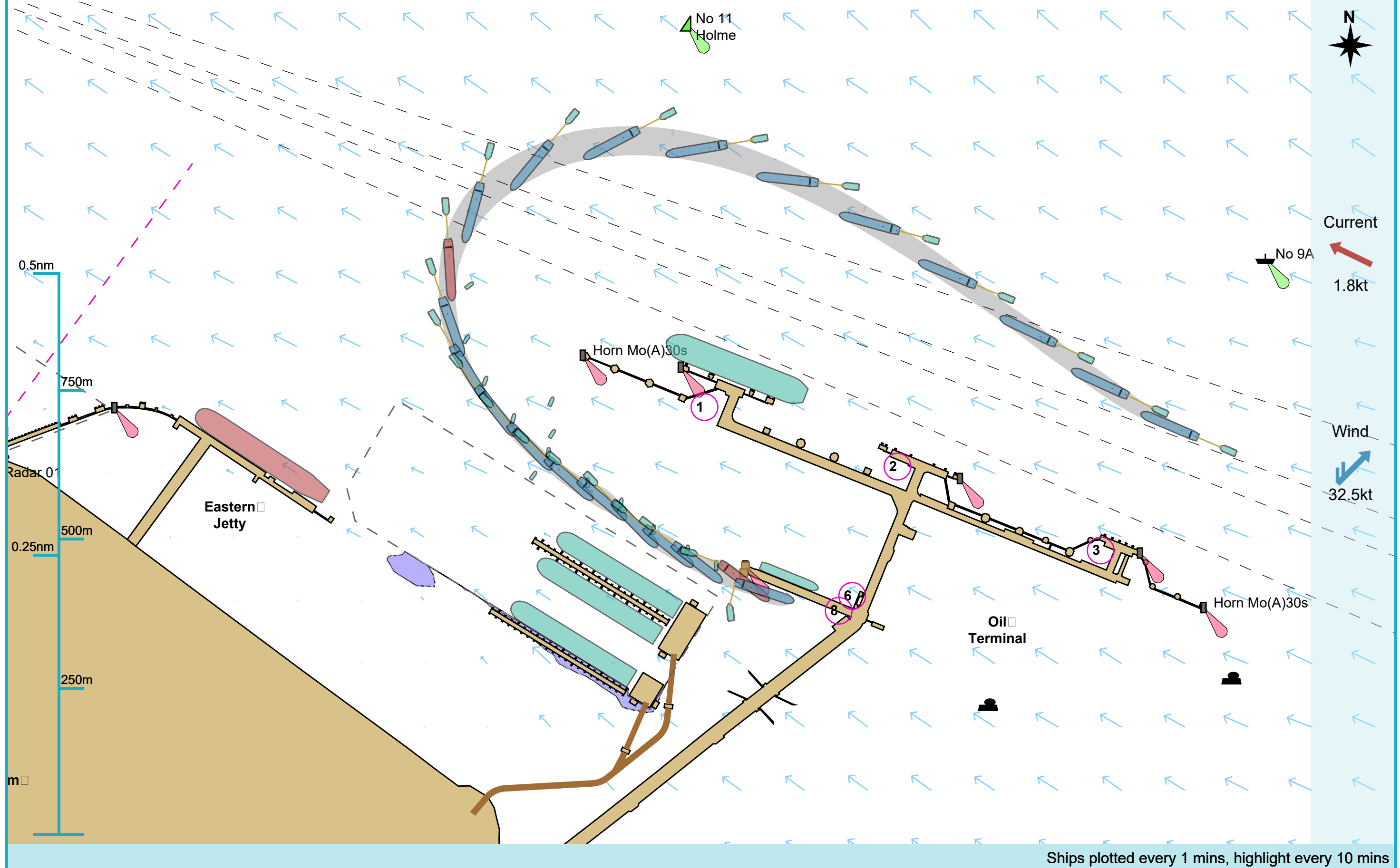
104m x 15m Product Tanker



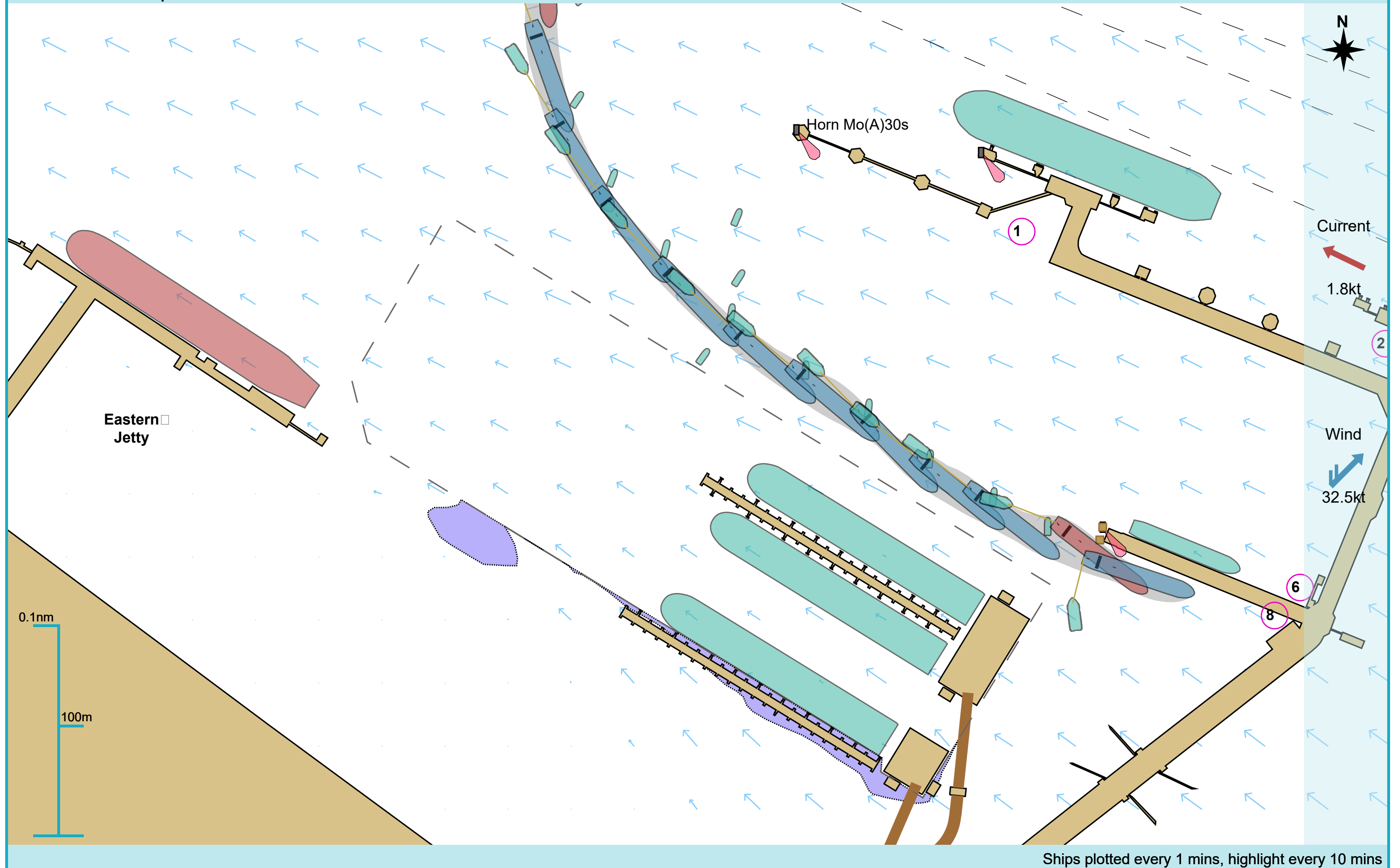


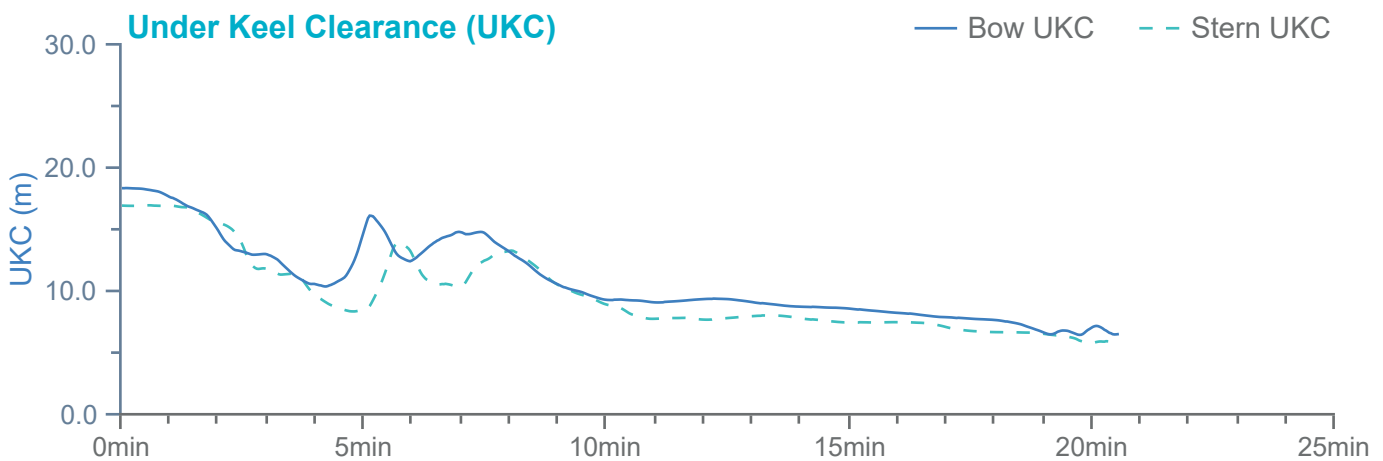
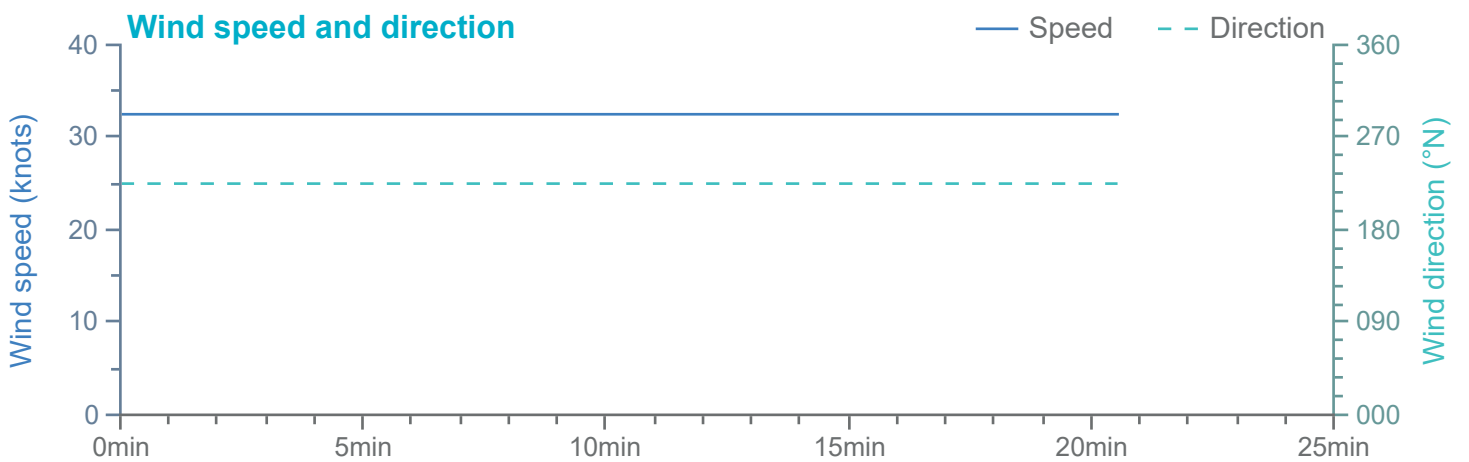
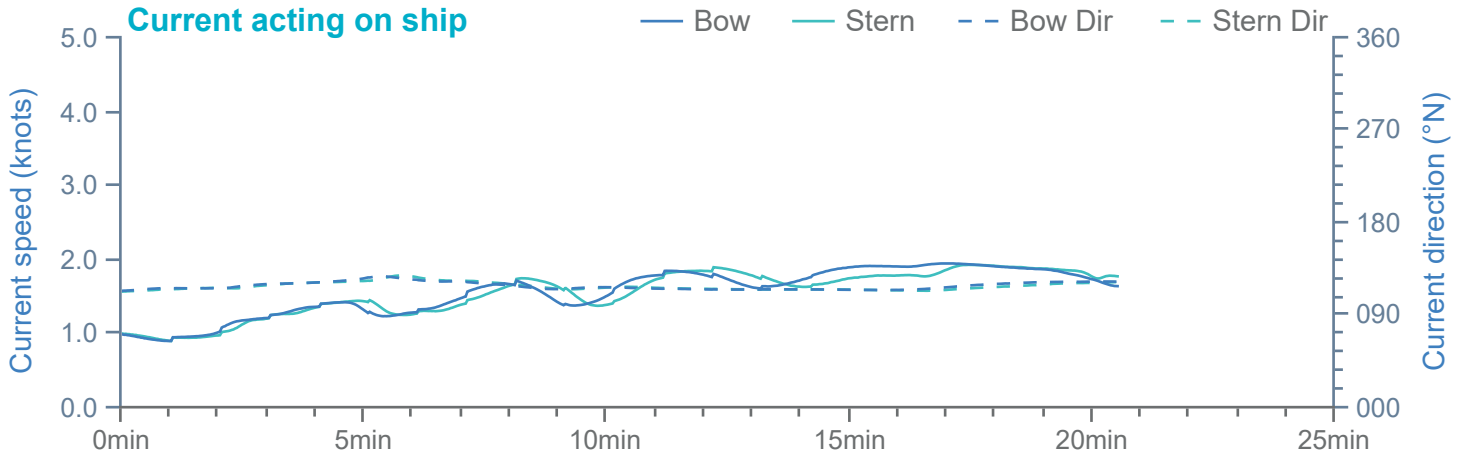


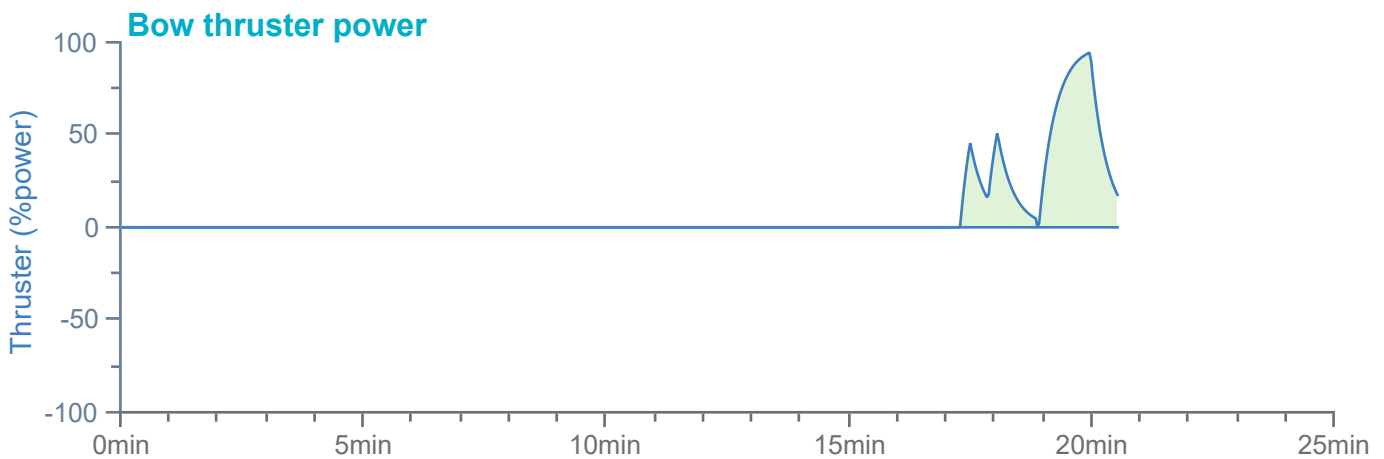
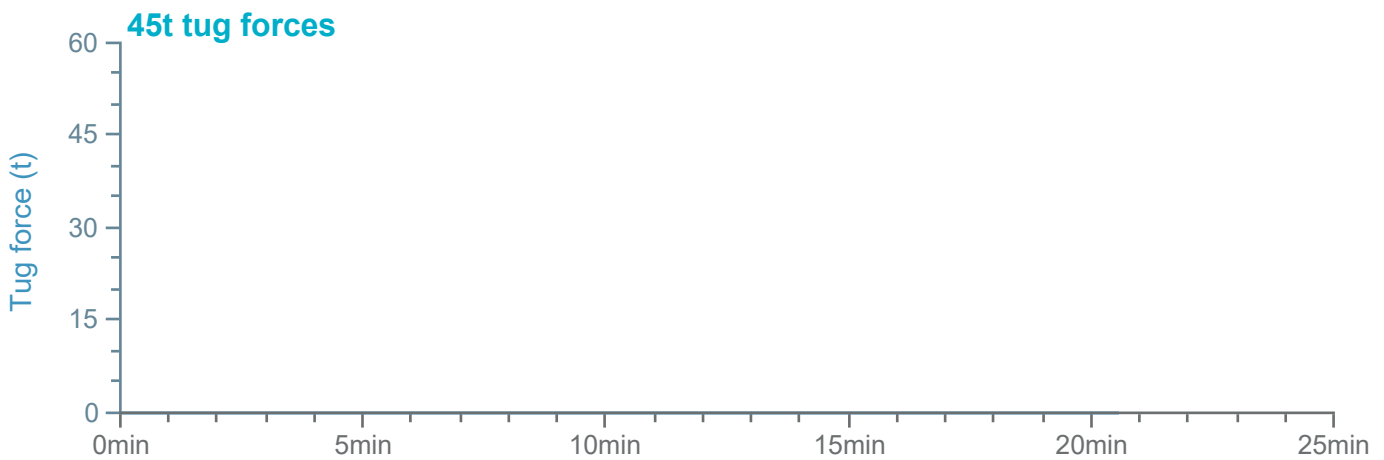
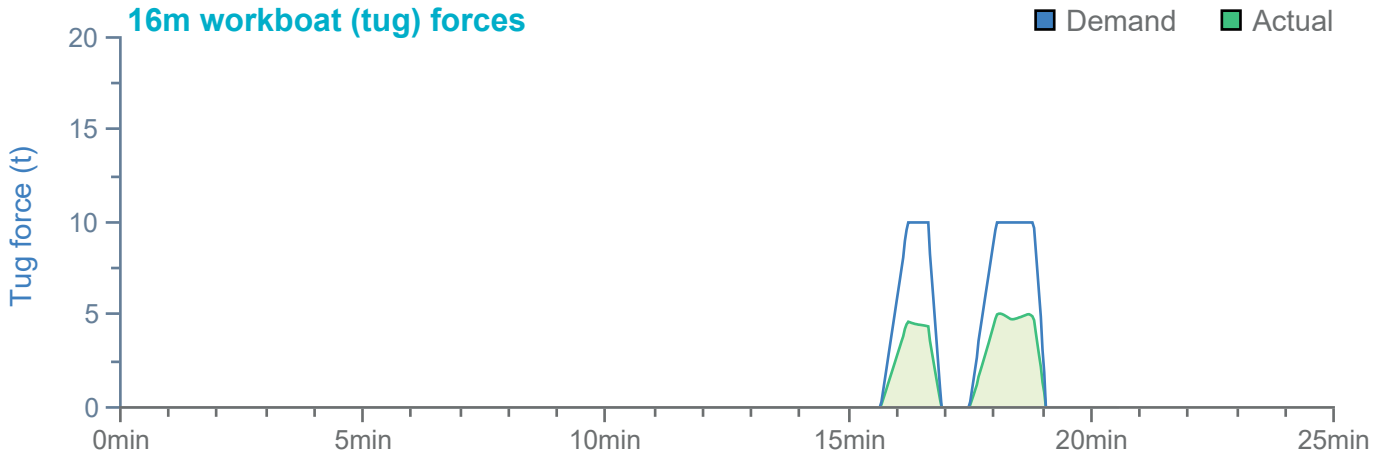
Manoeuvre track plot

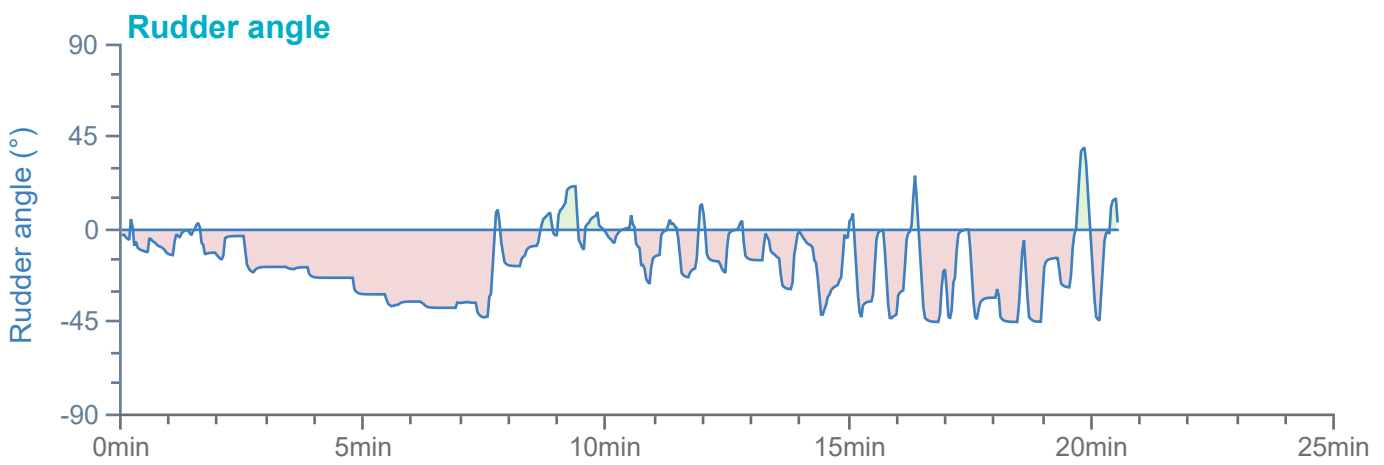
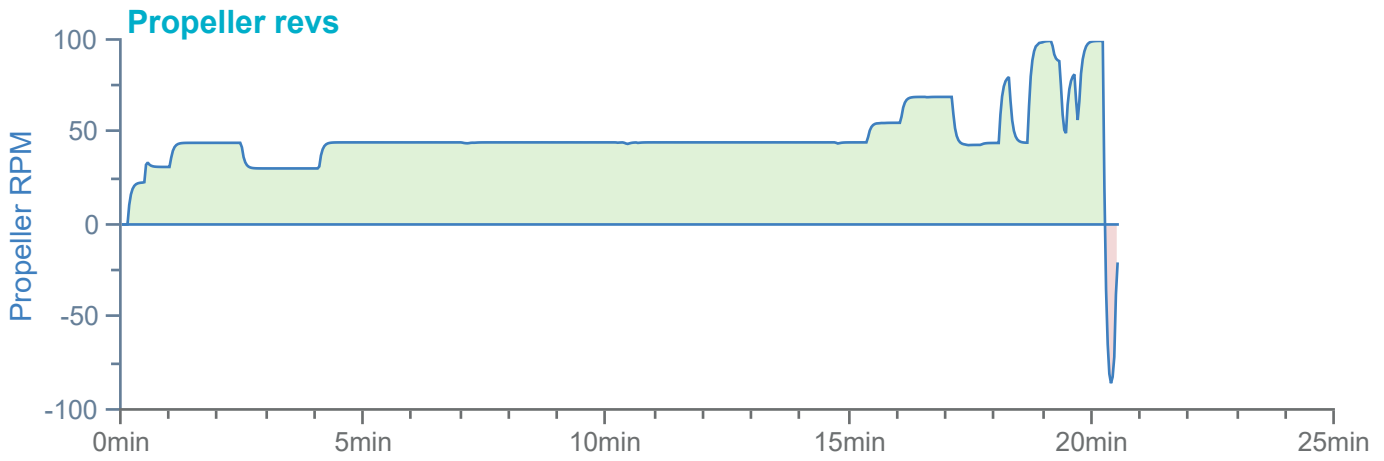


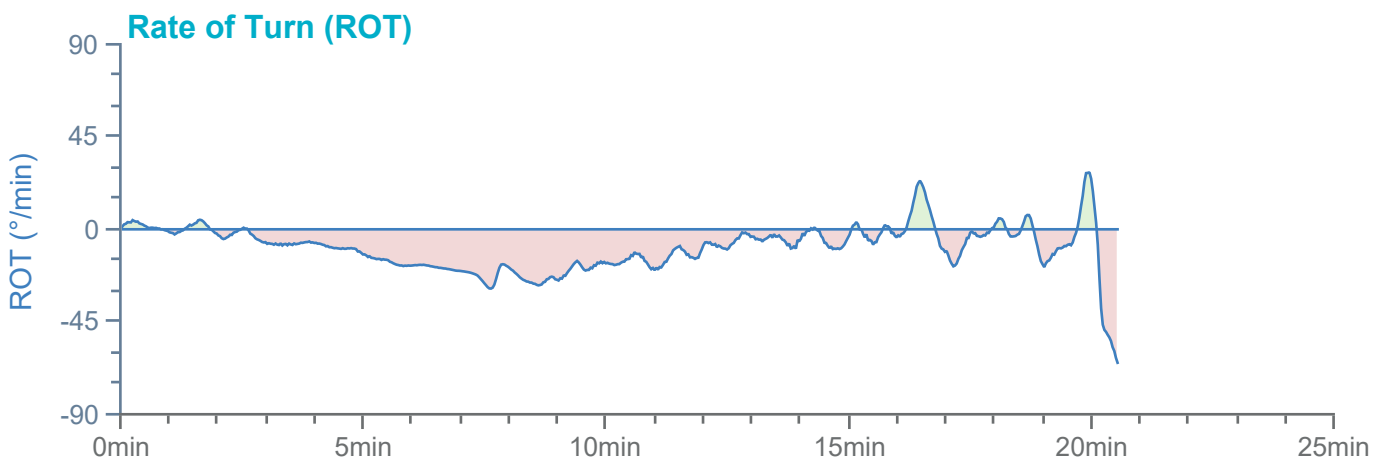
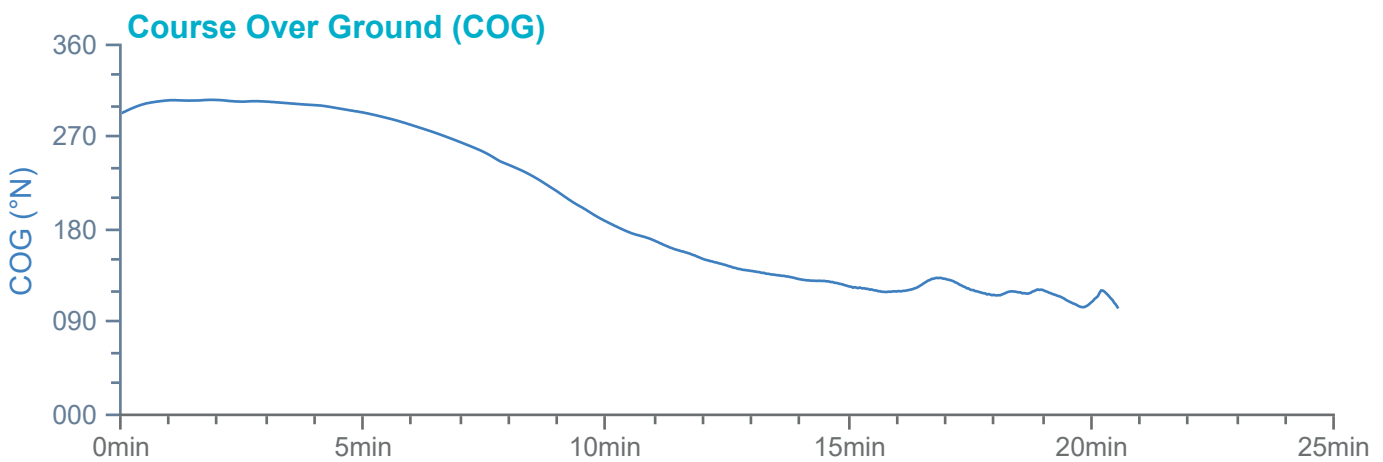
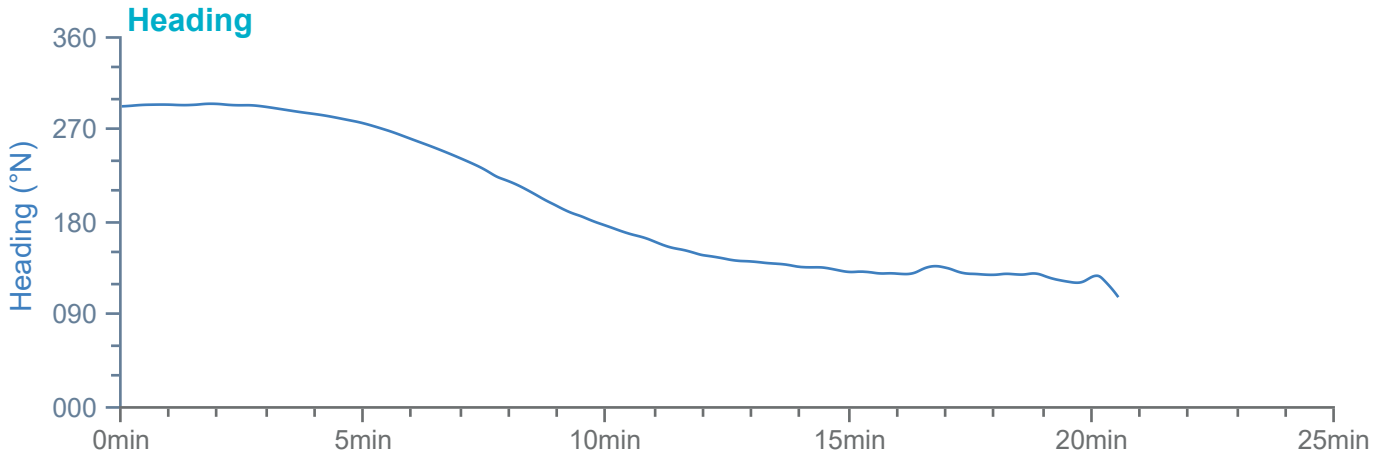
Manoeuvre track plot

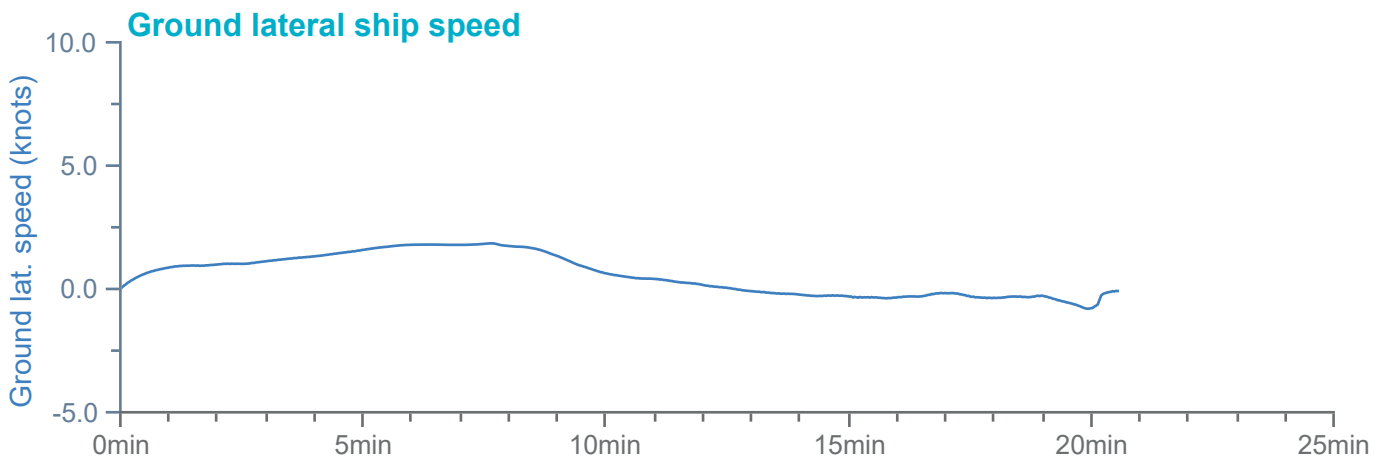
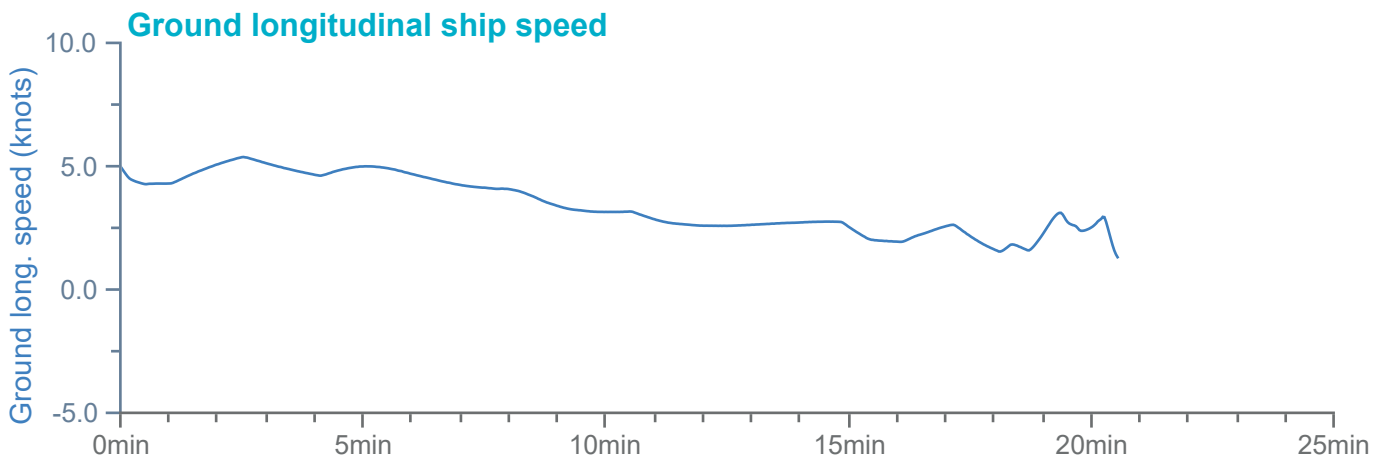
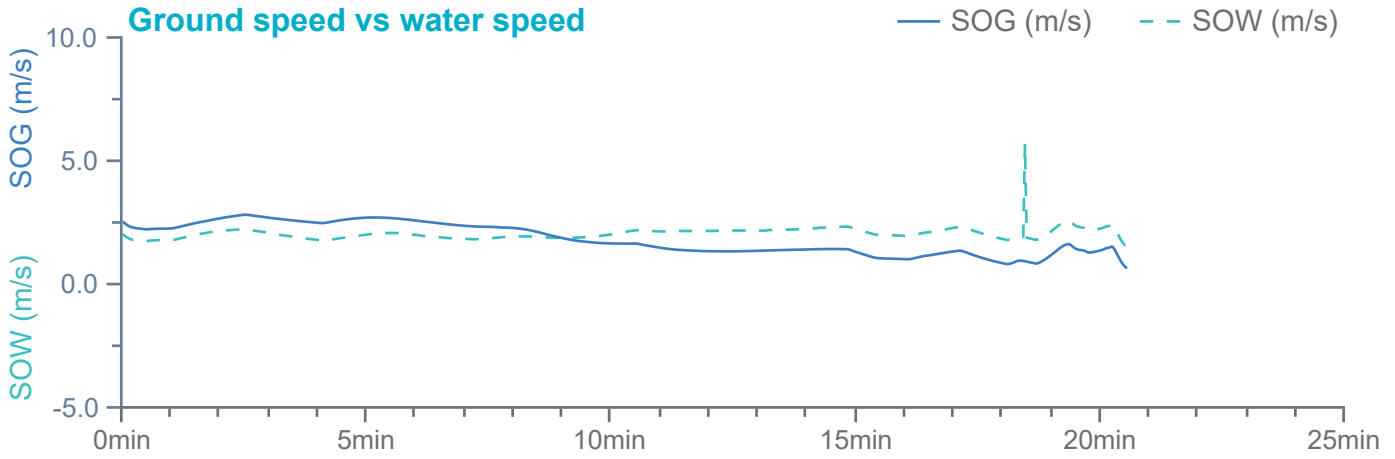




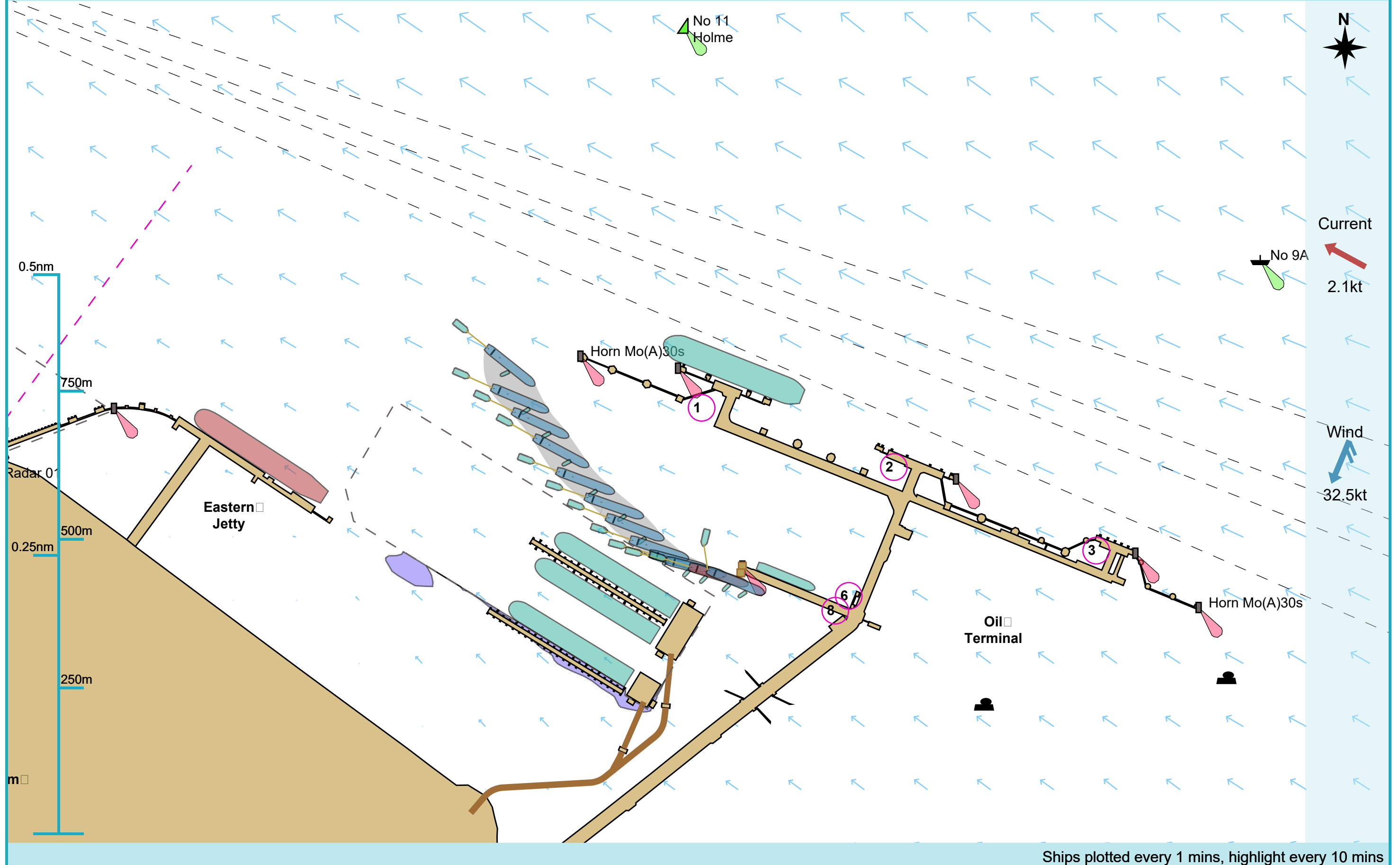




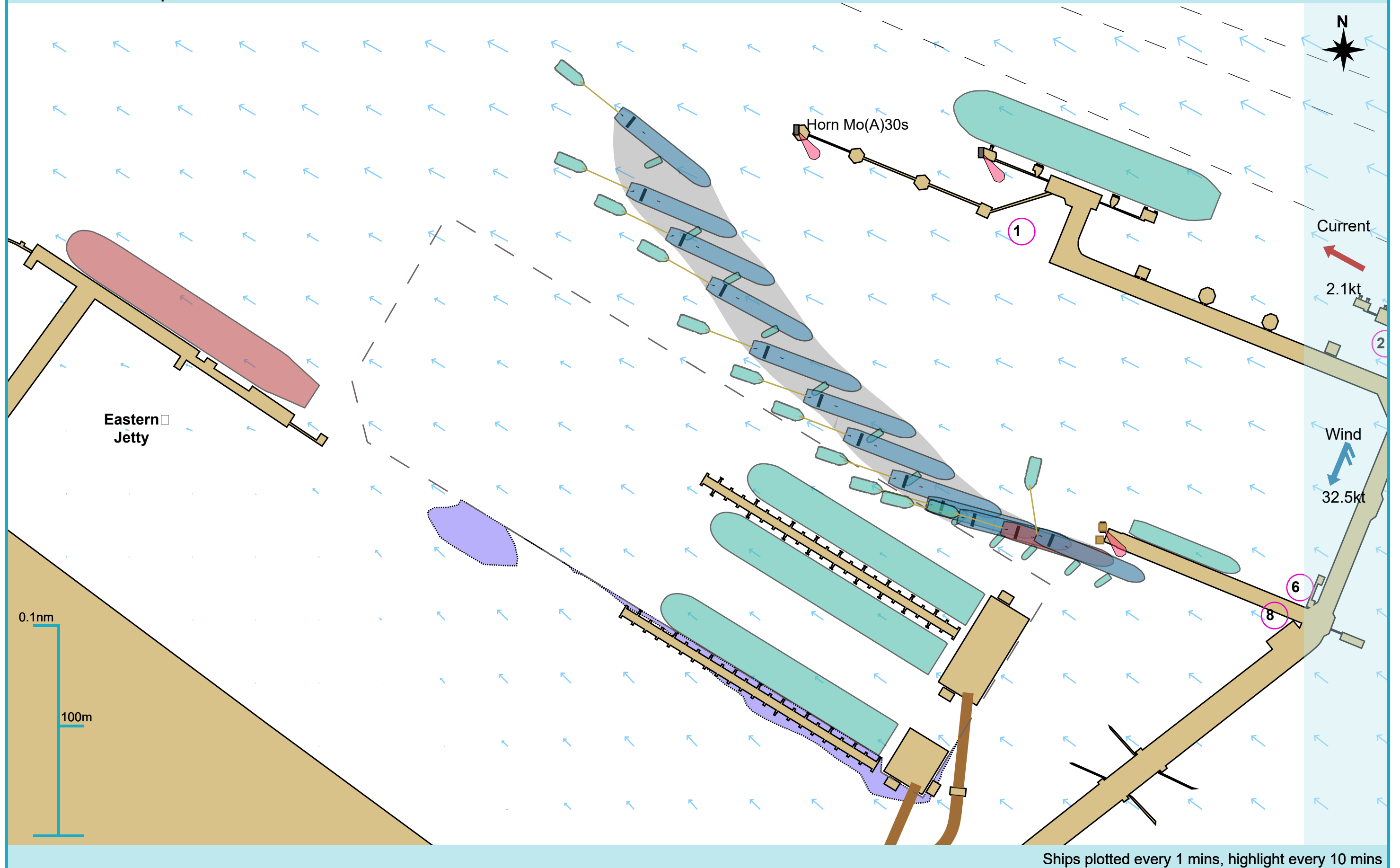




Manoeuvre track plot



Manoeuvre track plot

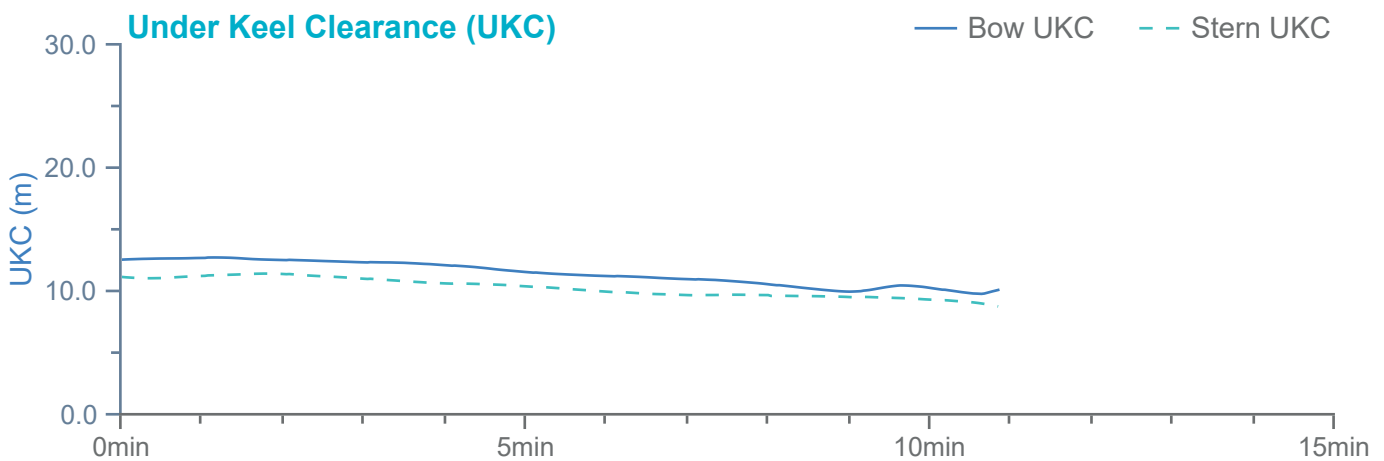
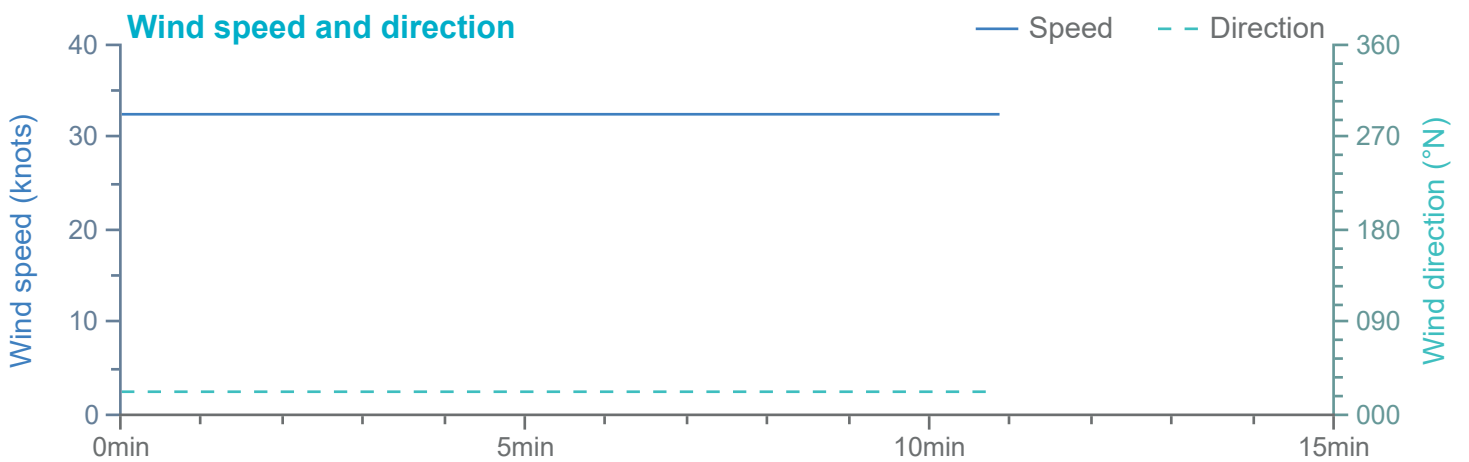
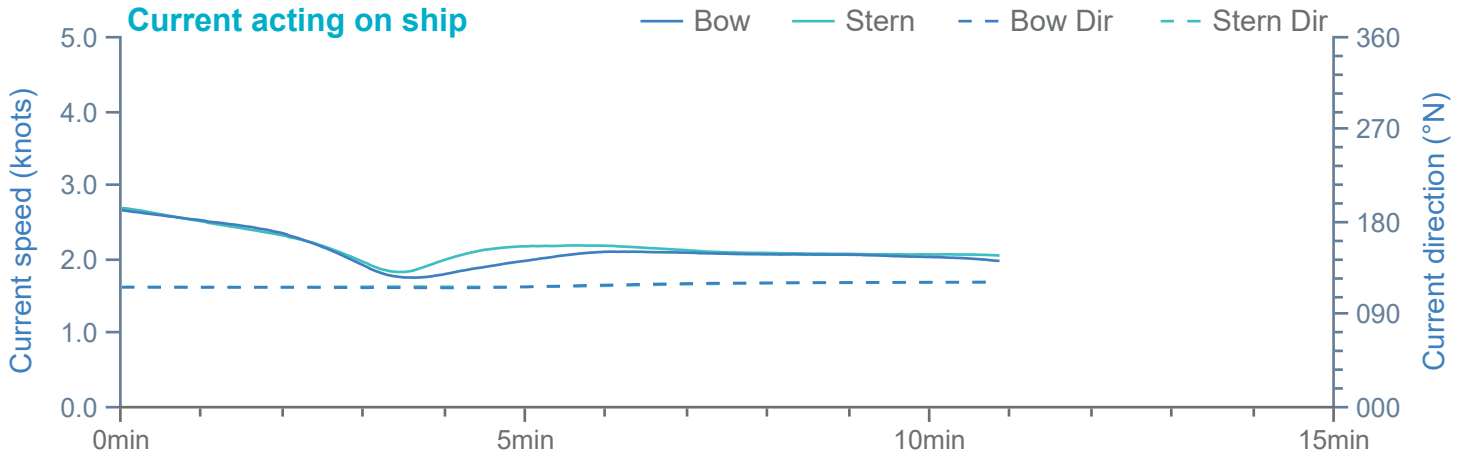


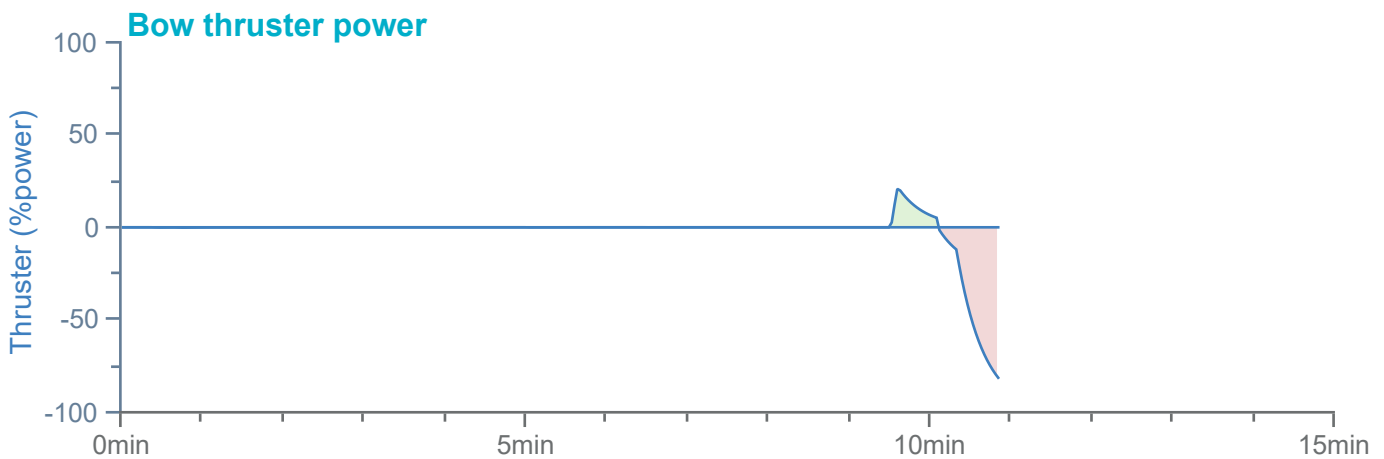
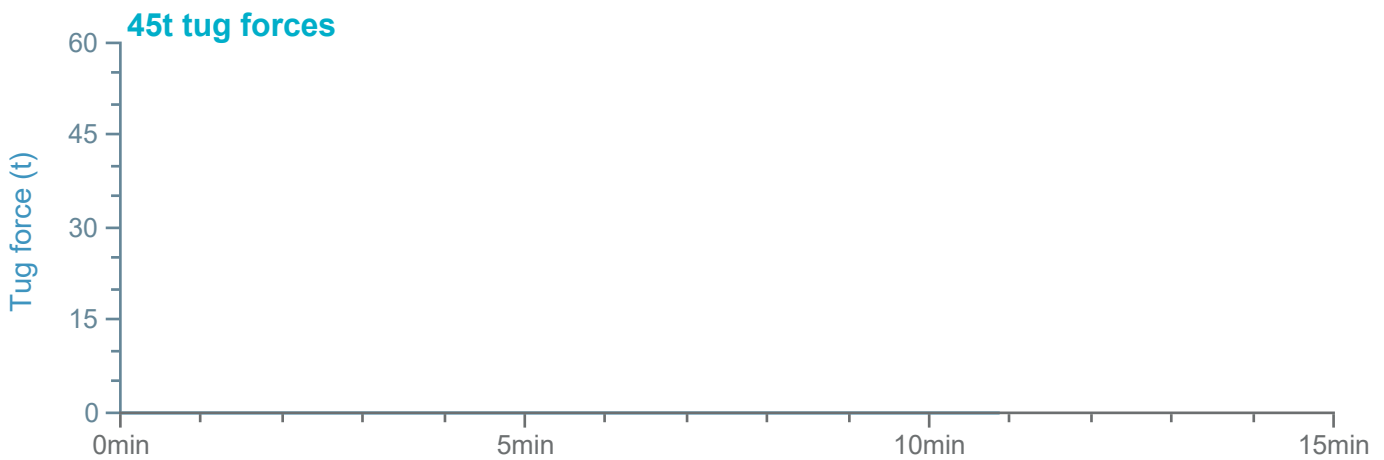
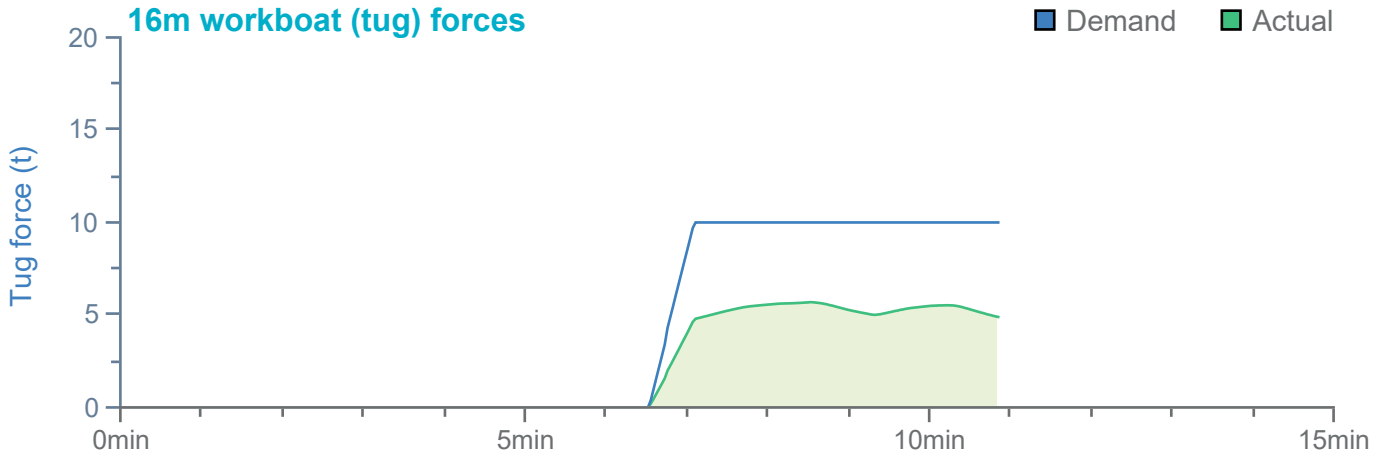
Ships plotted every 1 mins, highlight every 10 mins

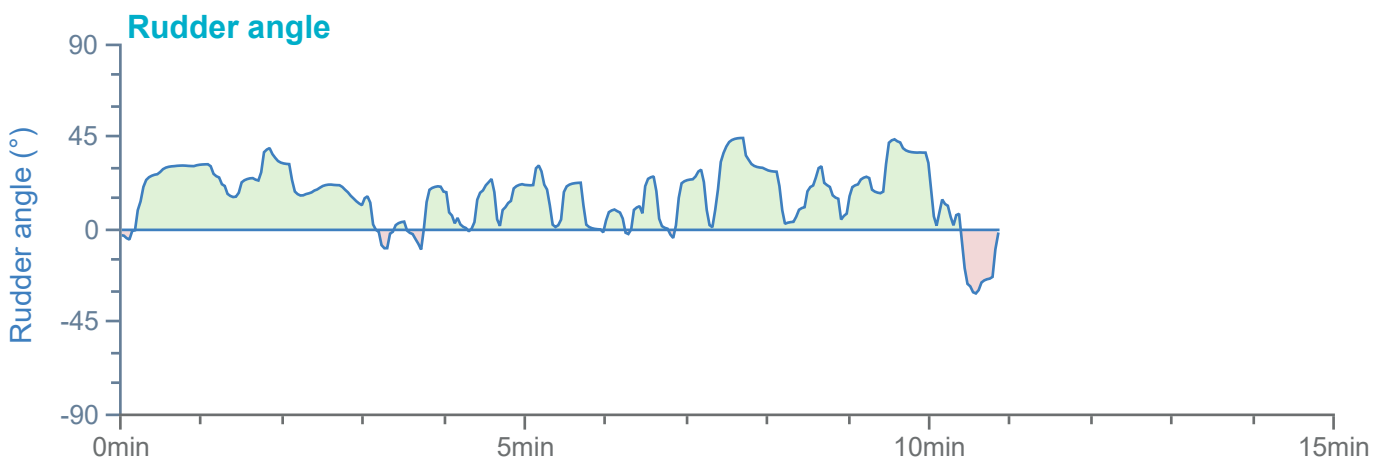
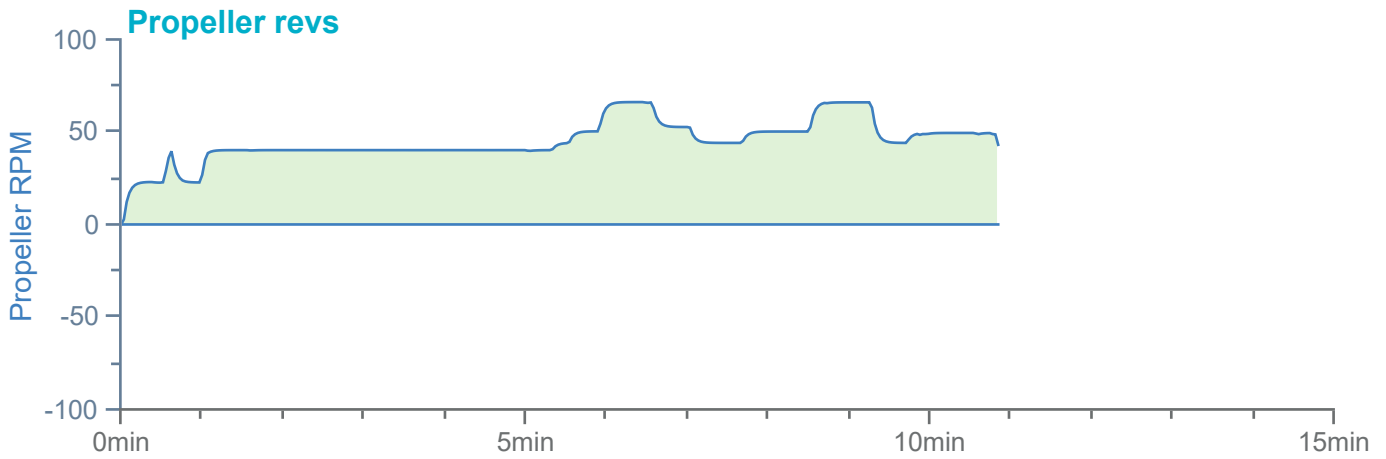
Summary

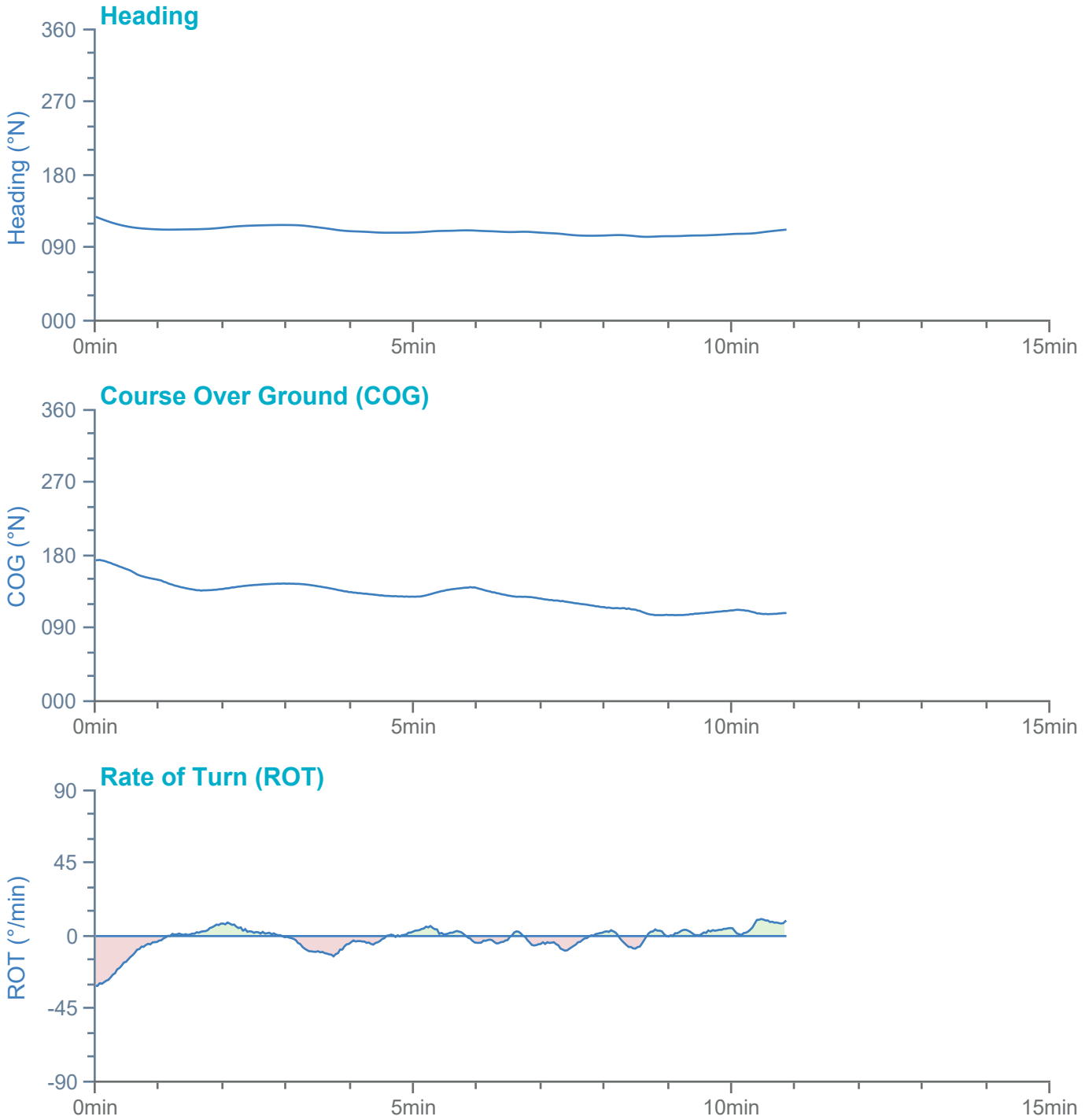
Environment

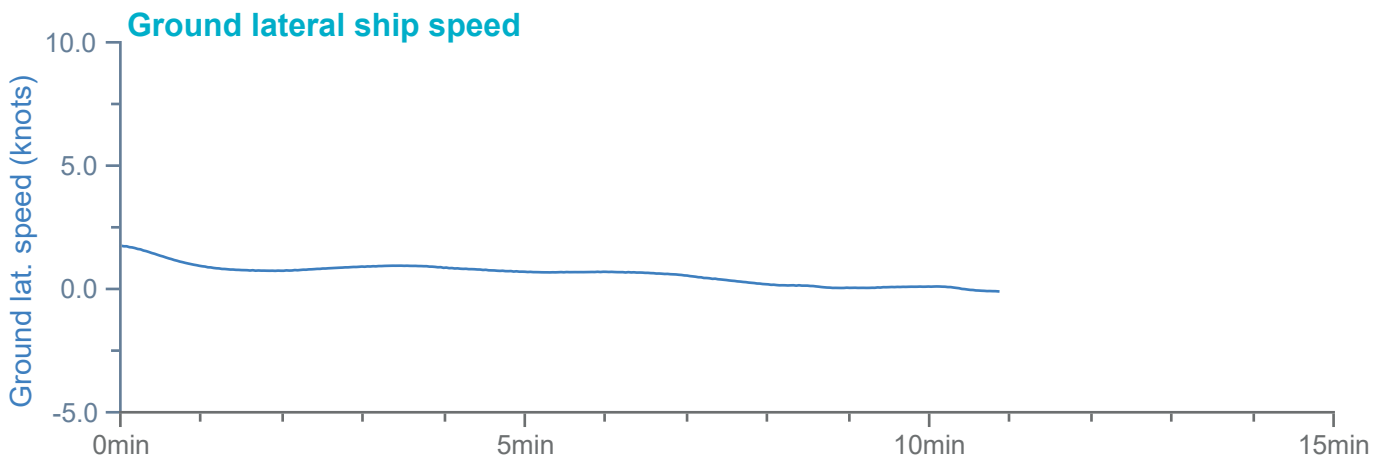
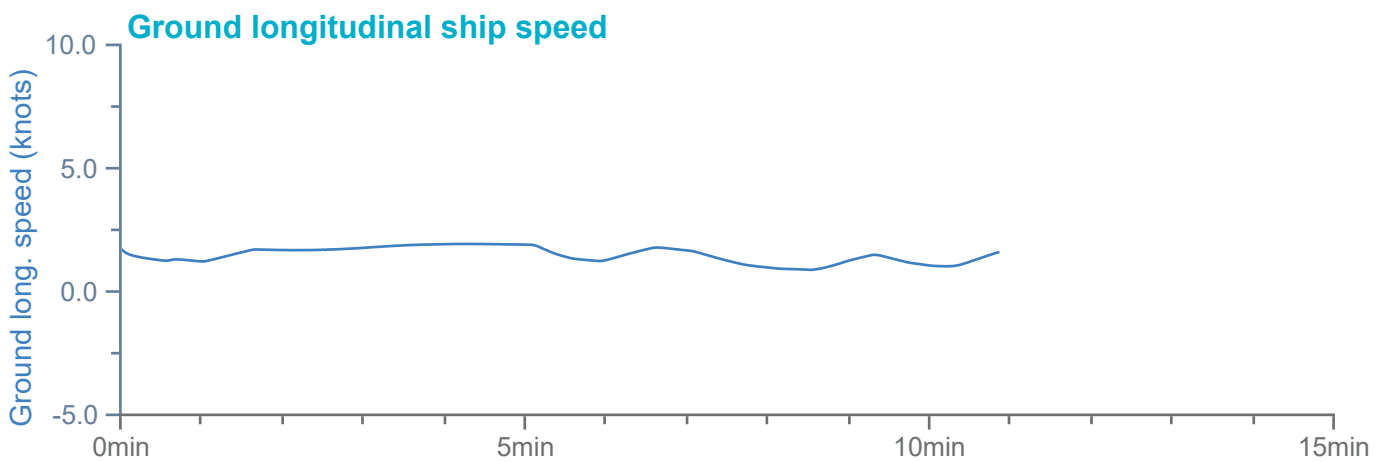
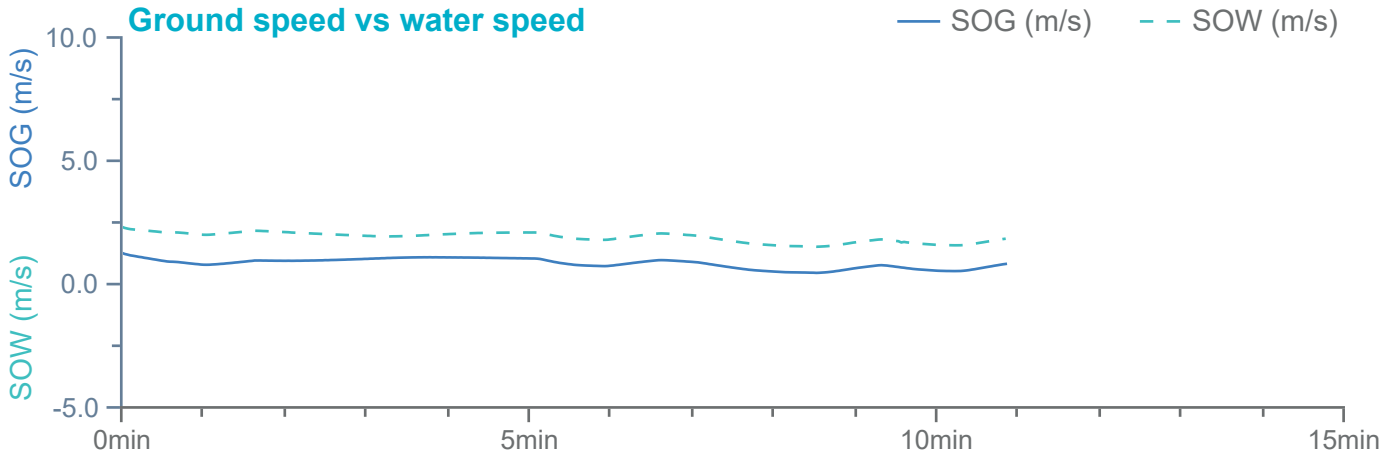
104m x 15m Product Tanker



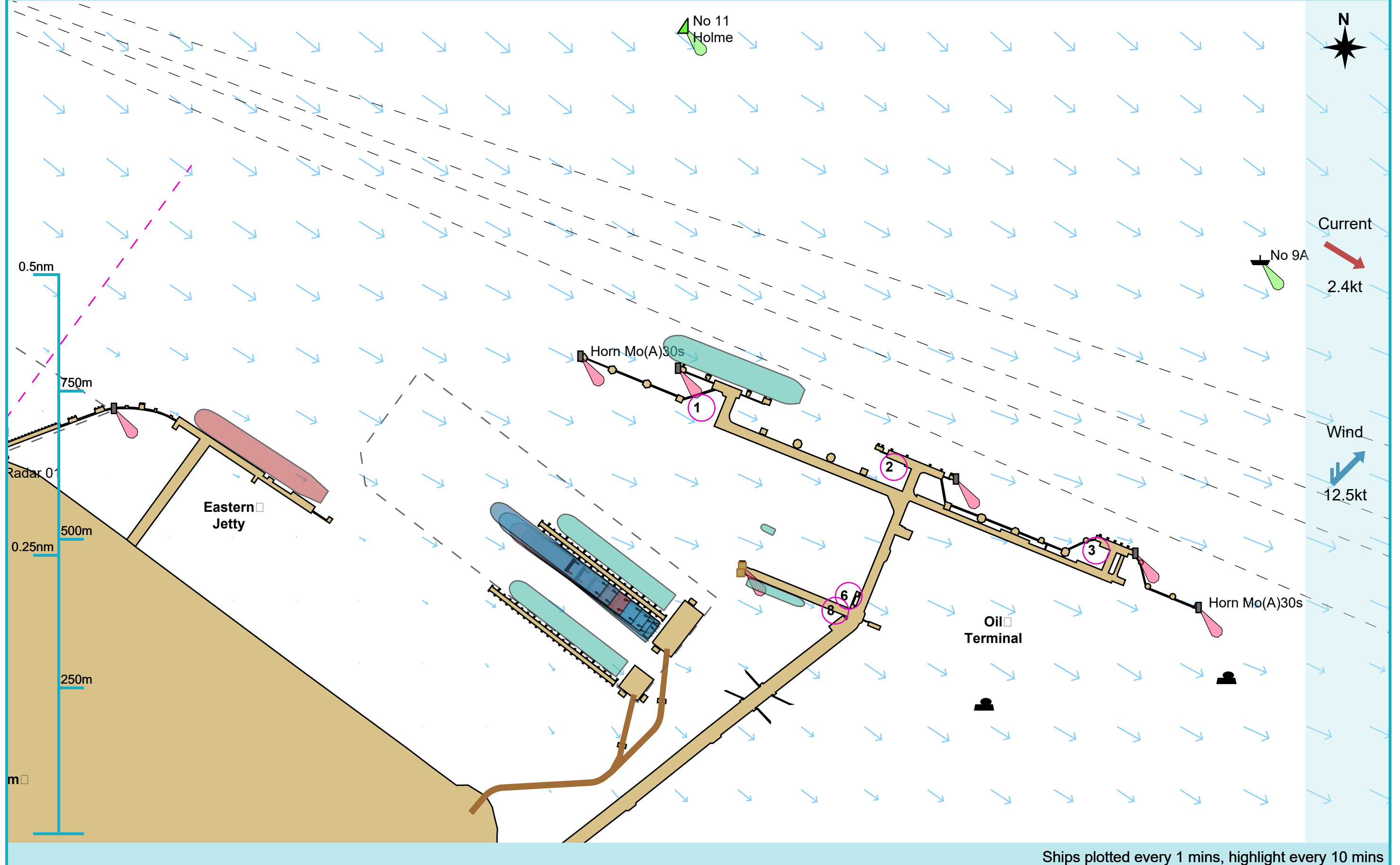






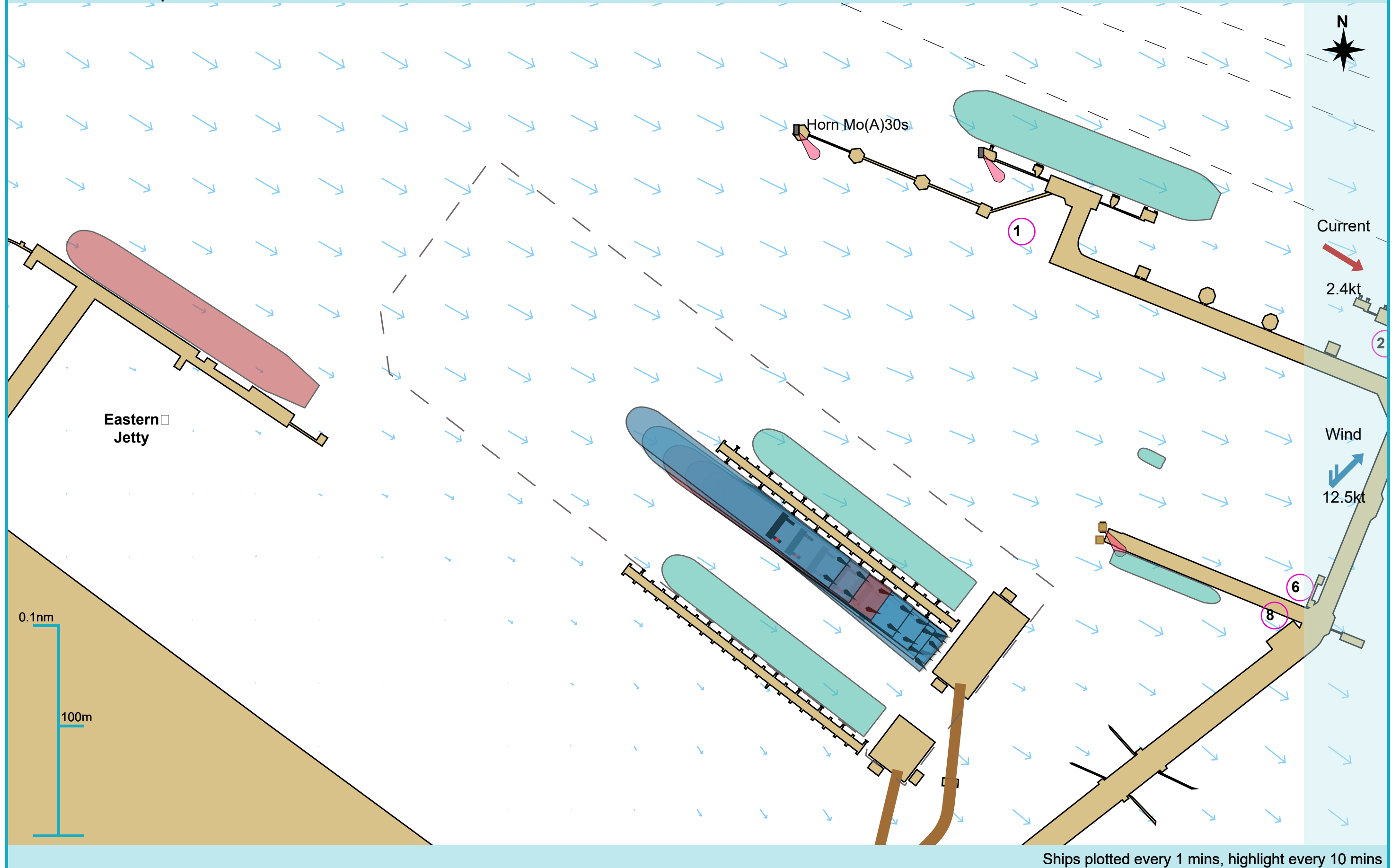


Manoeuvre track plot

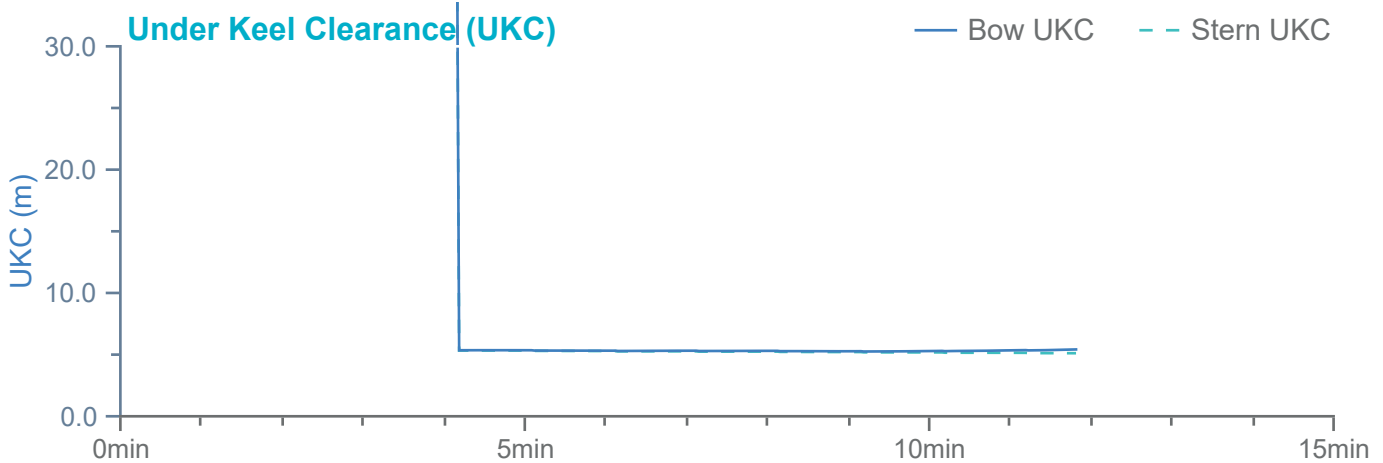
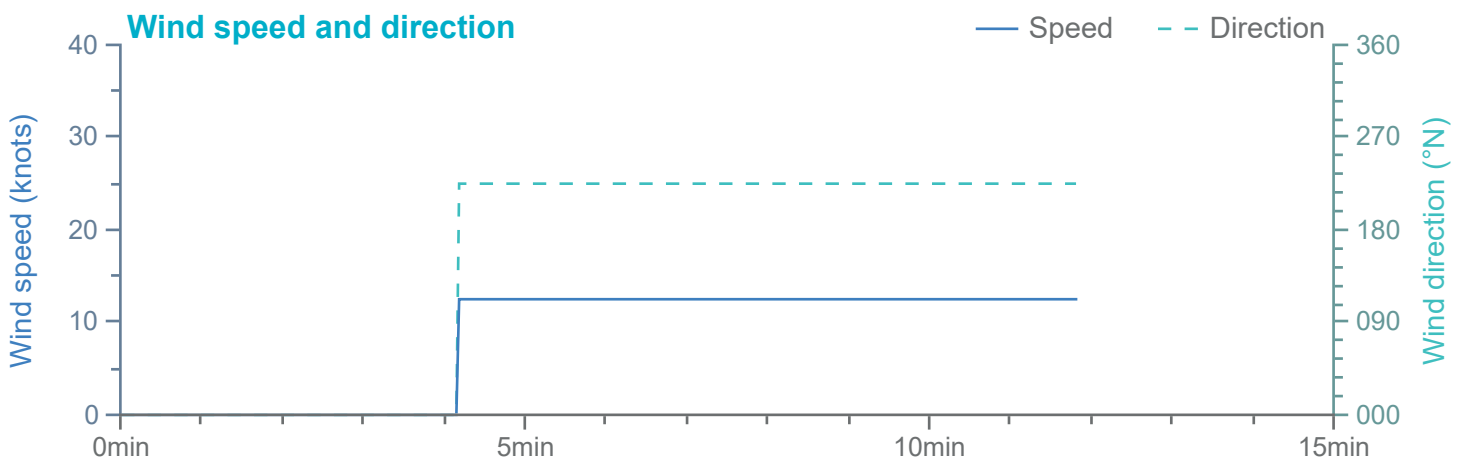
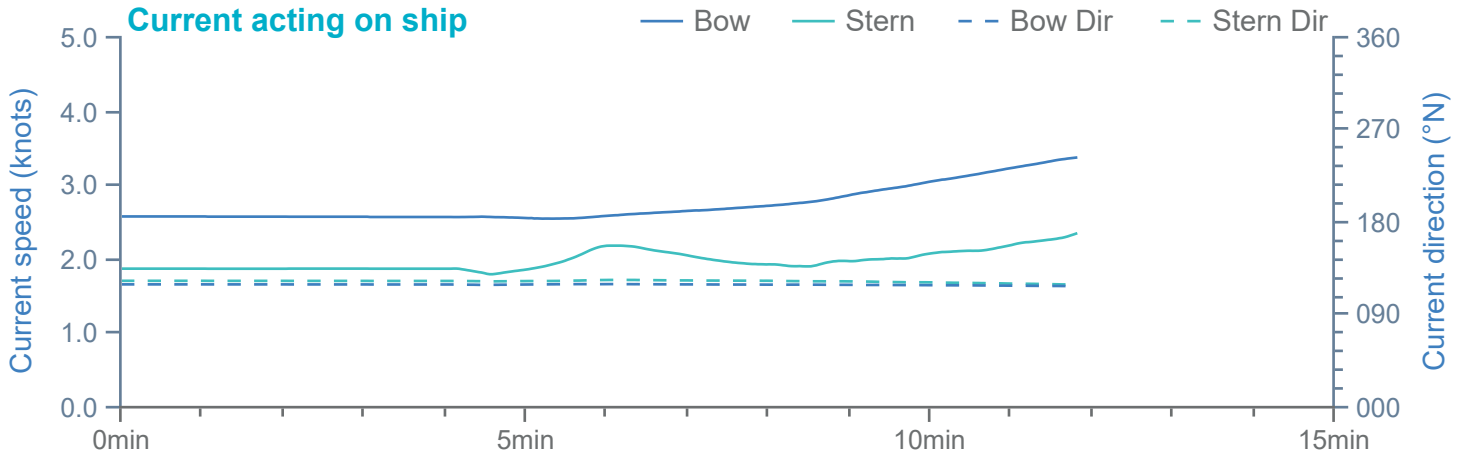


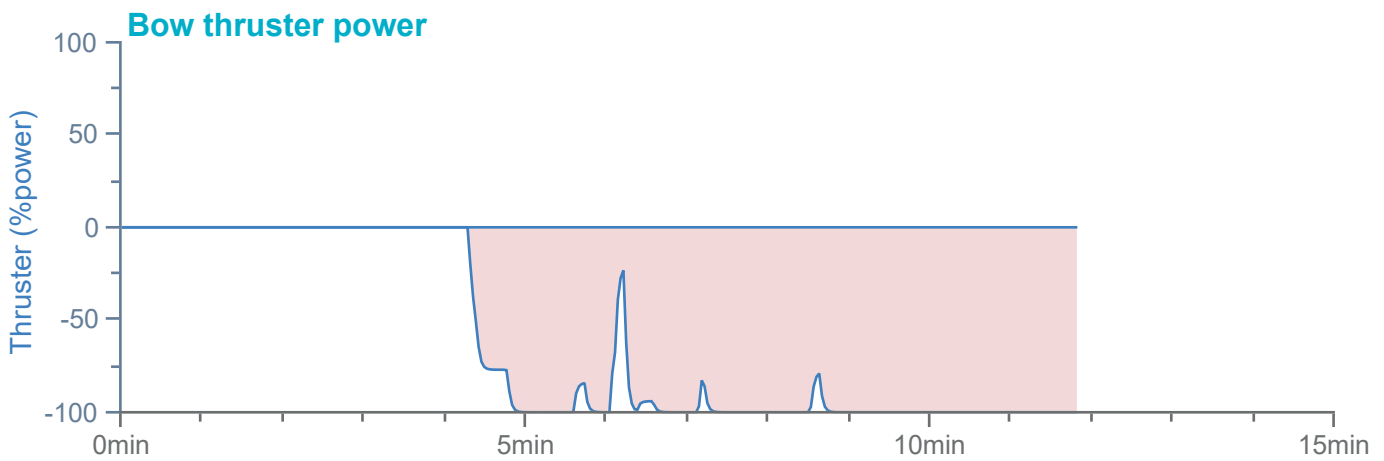
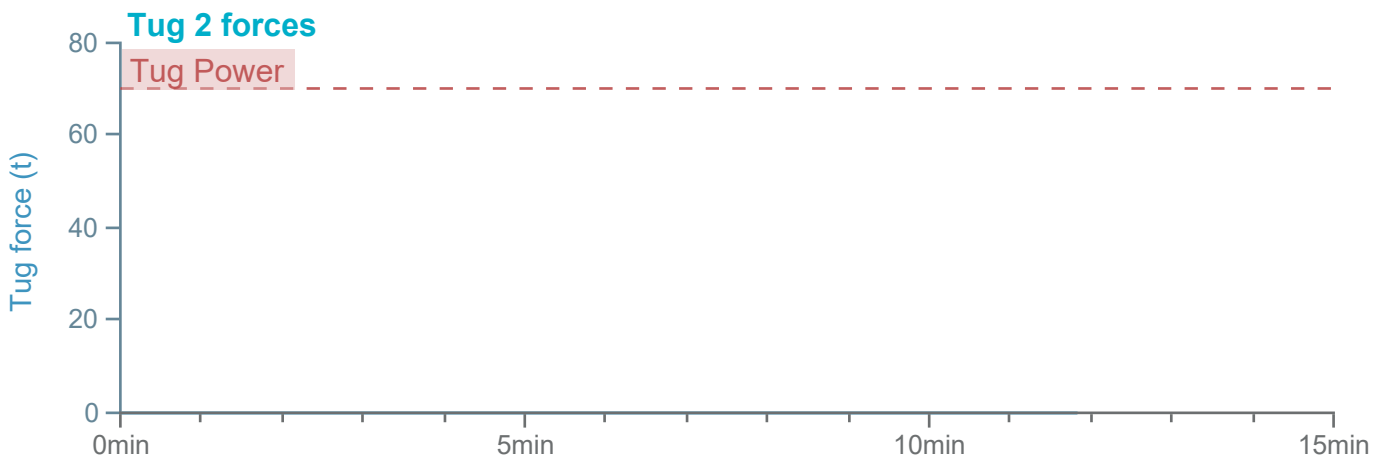
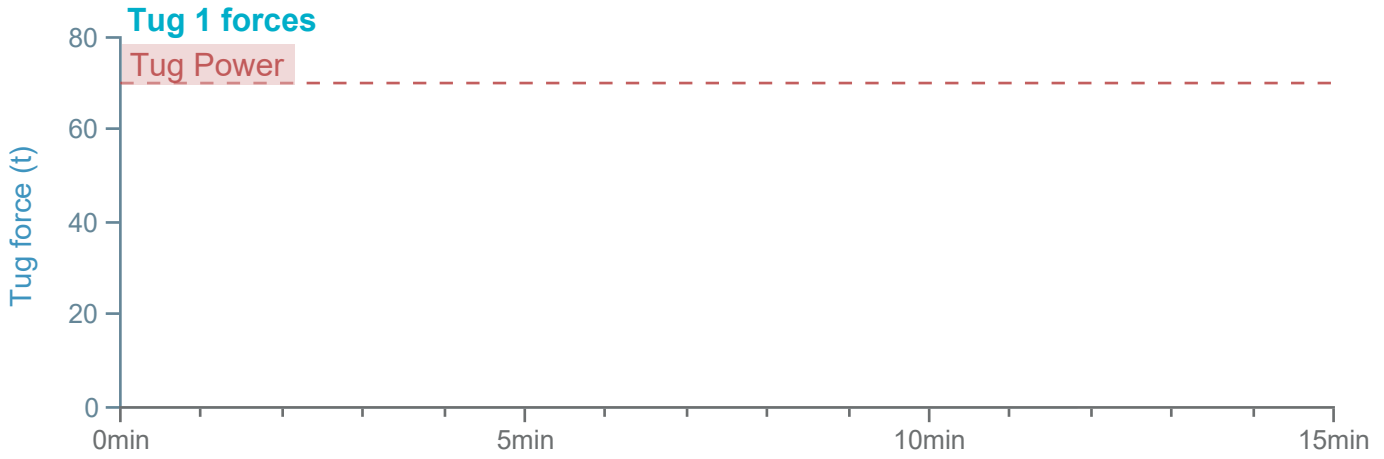
Ships plotted every 1 mins, highlight every 10 mins

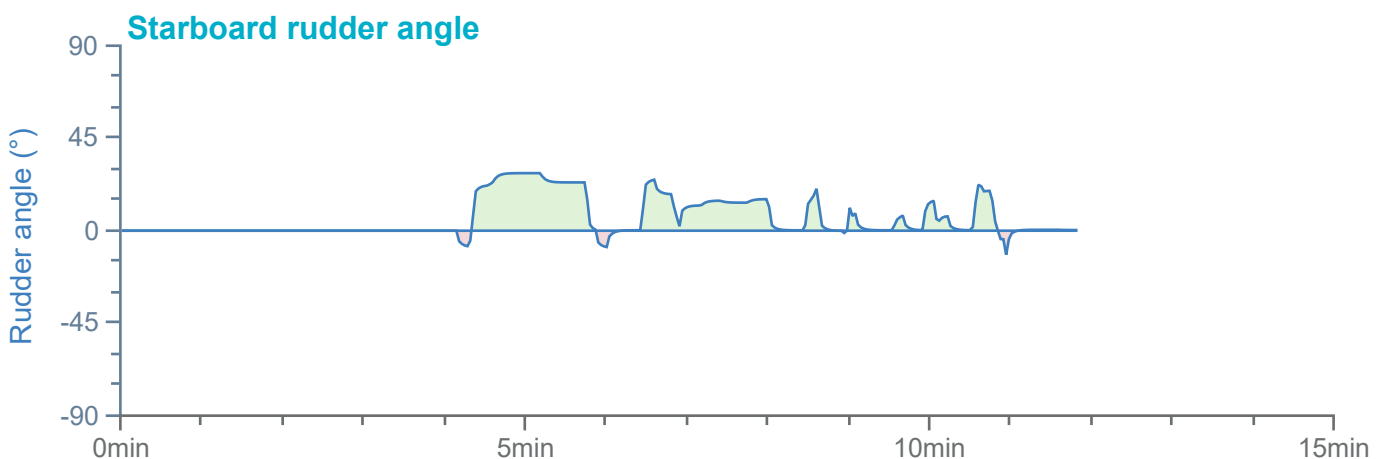
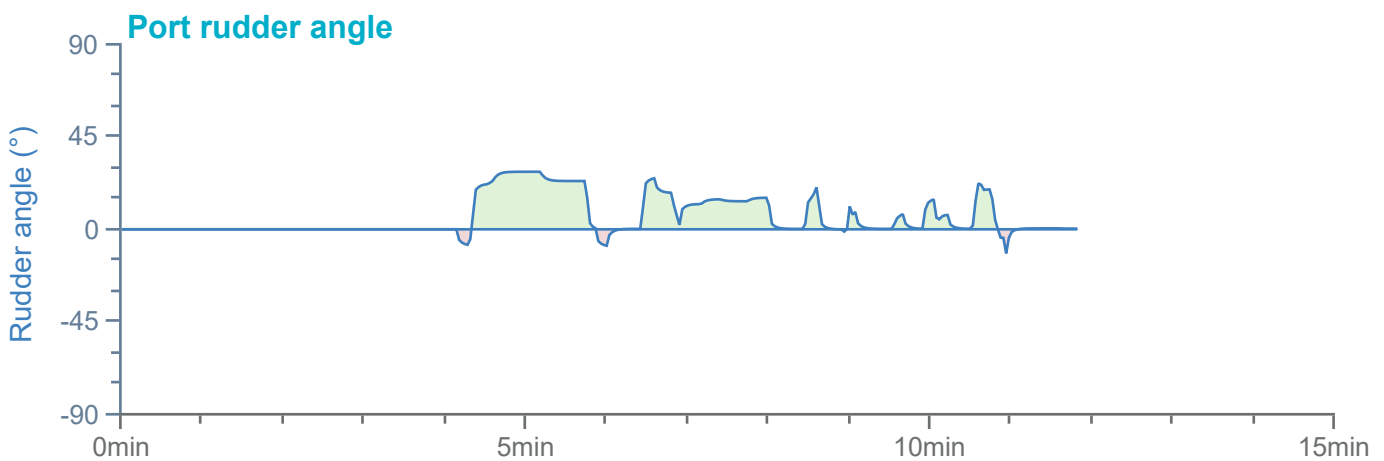
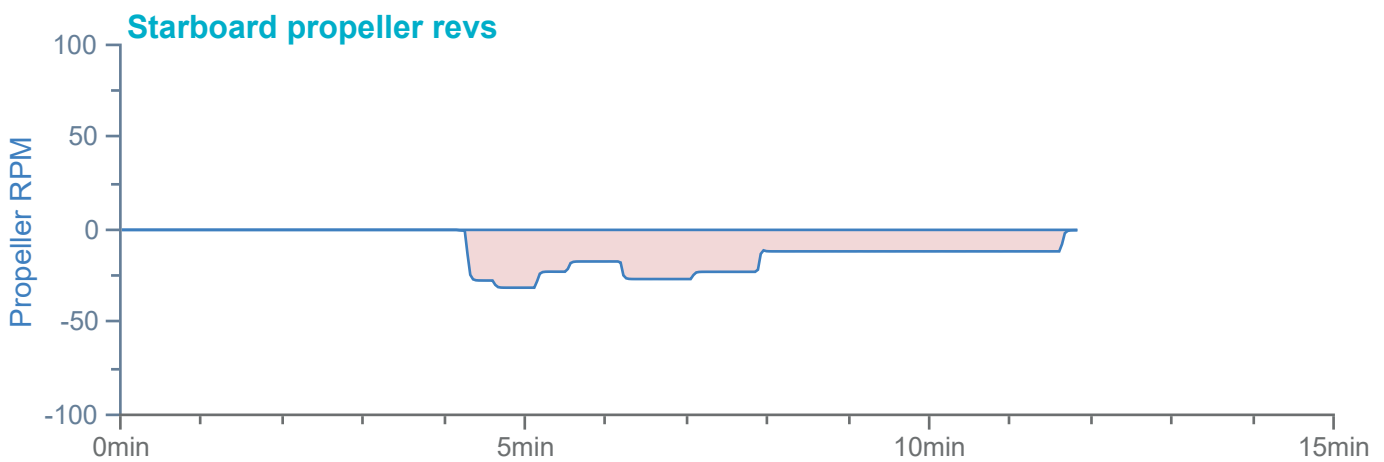
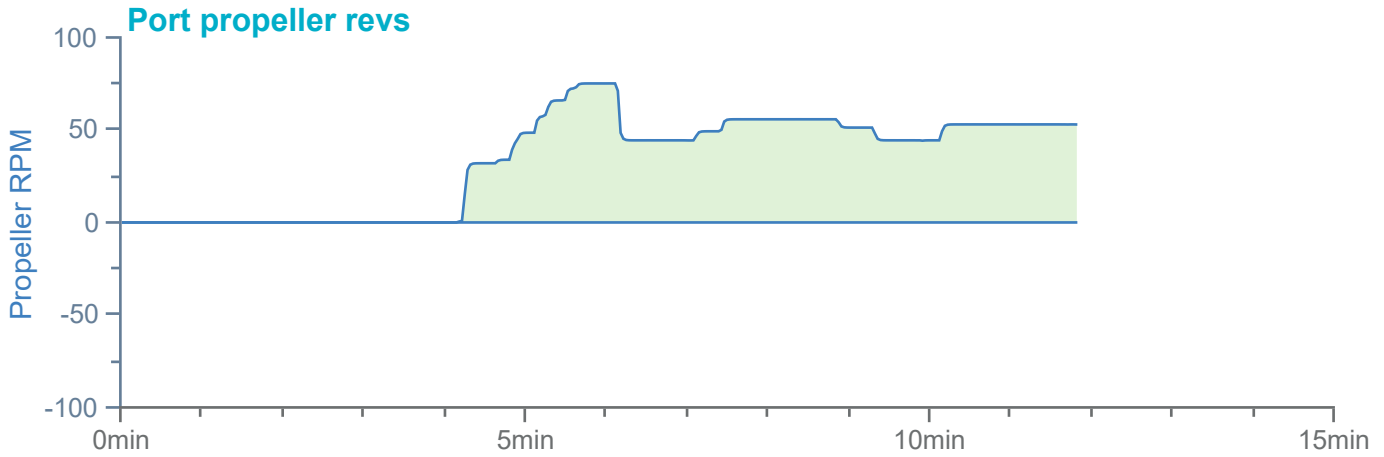
Manoeuvre track plot

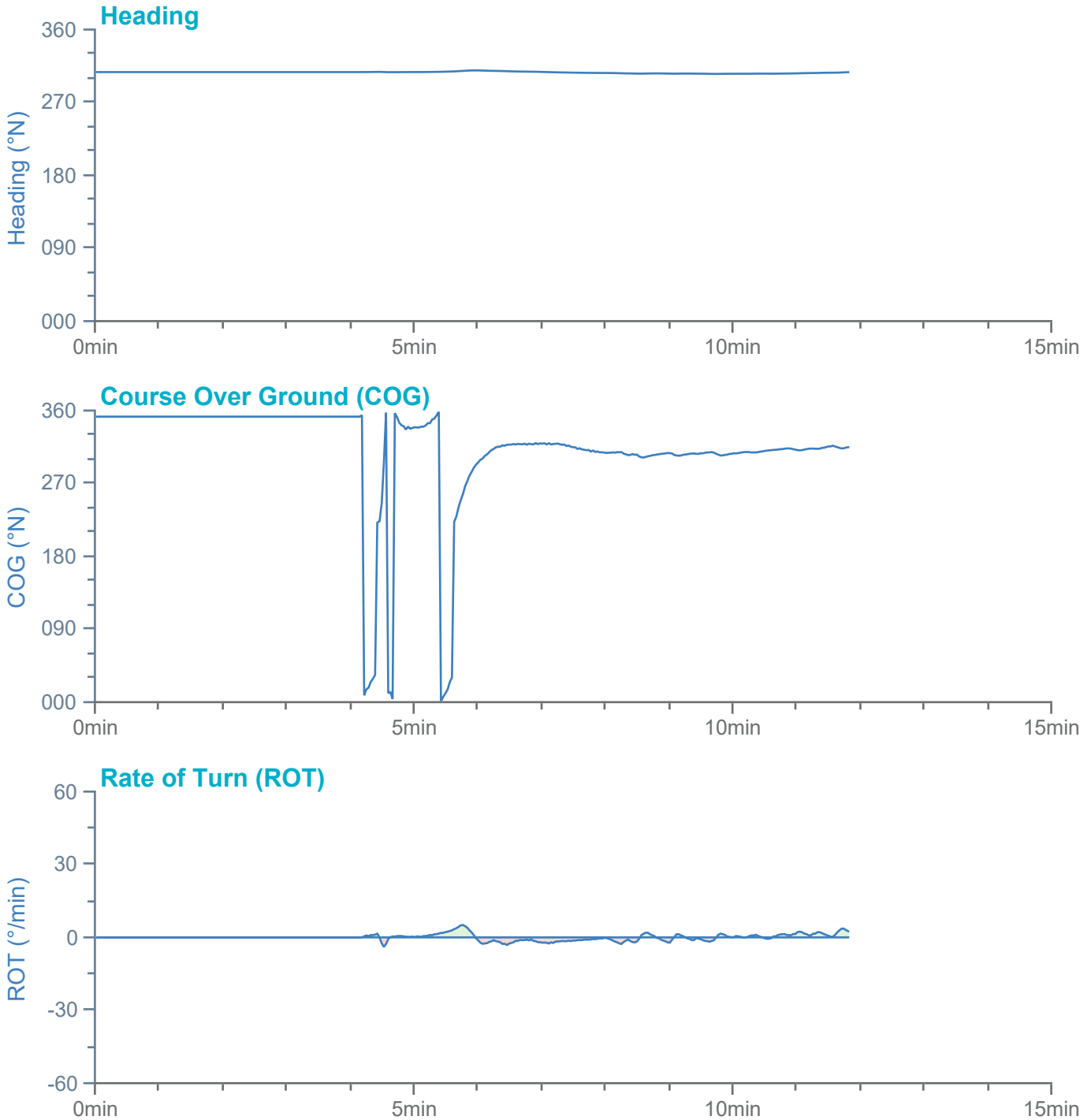


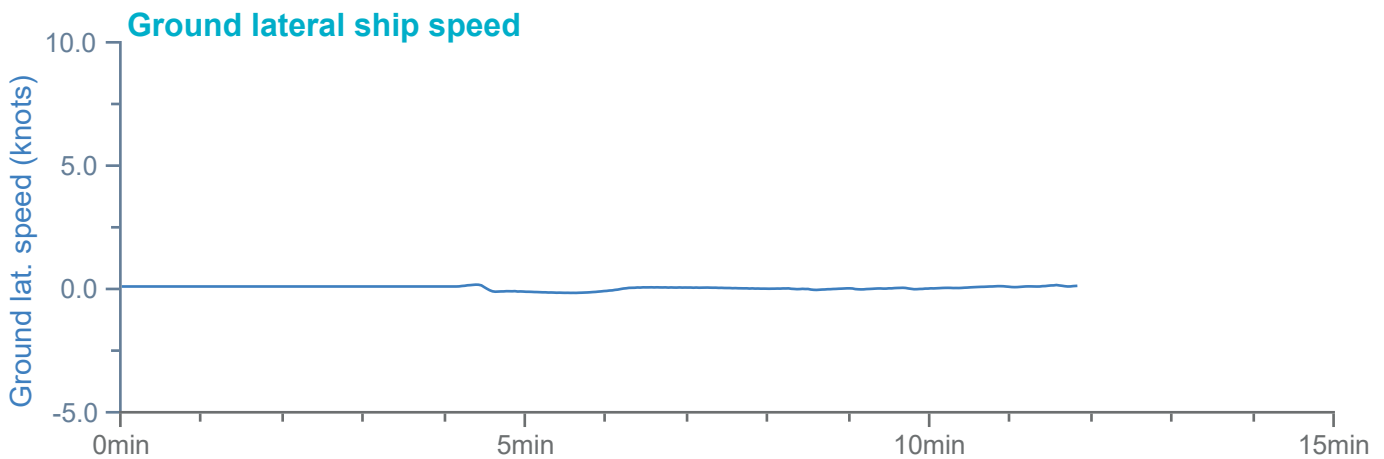
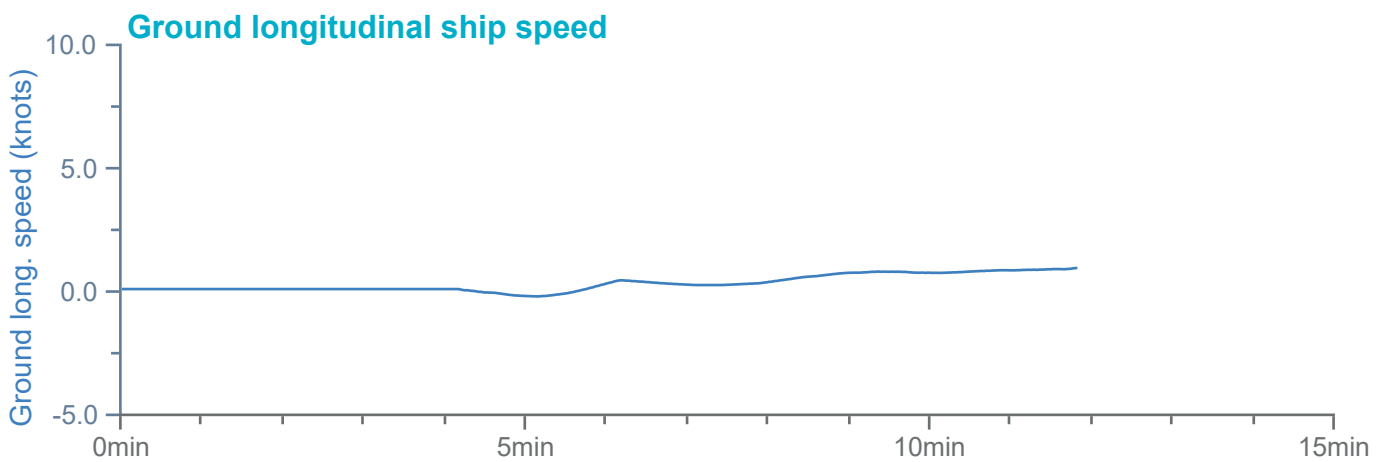
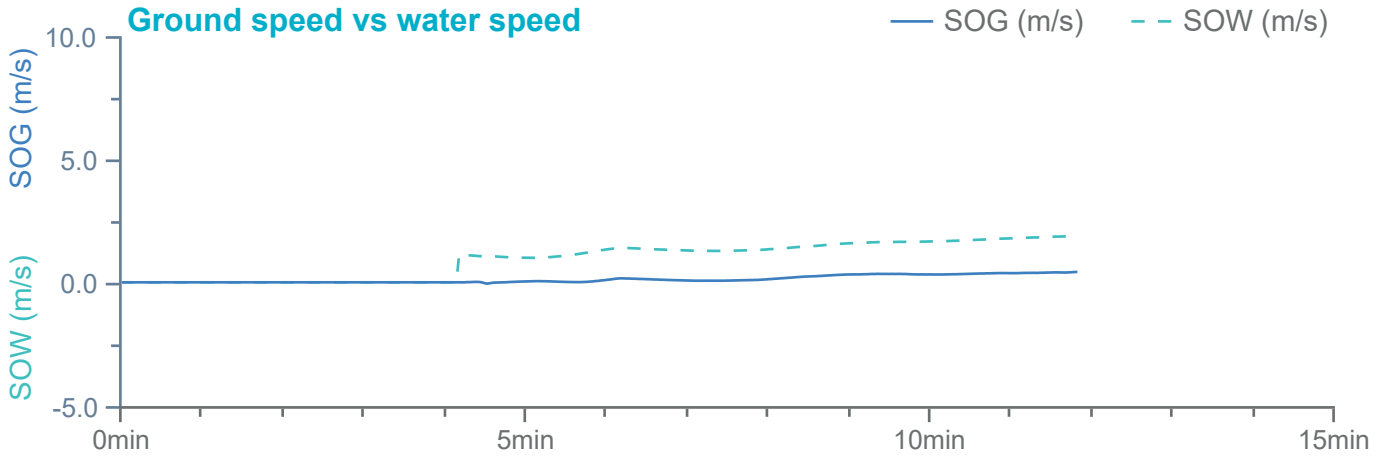
Ships plotted every 1 mins, highlight every 10 mins



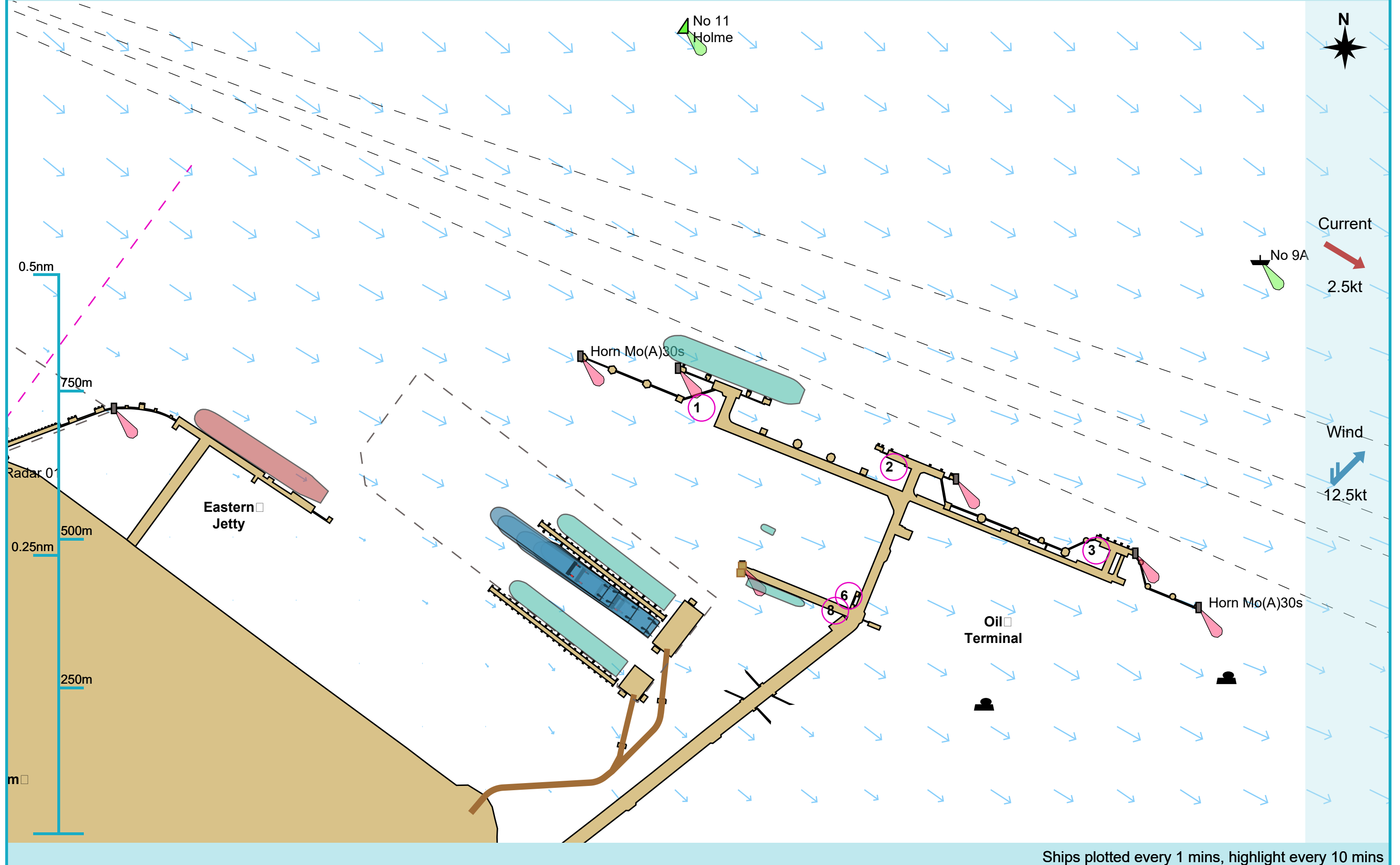






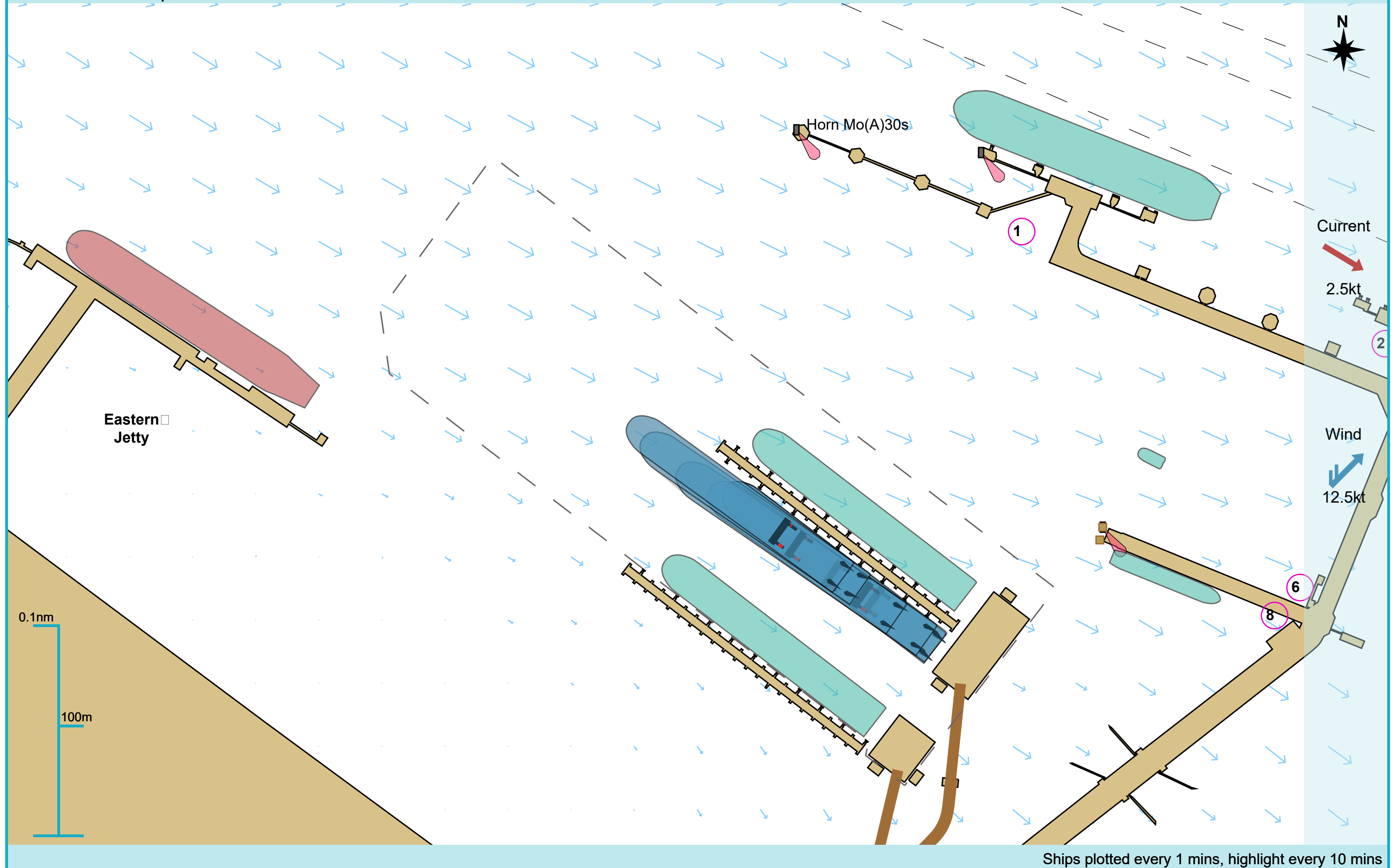


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

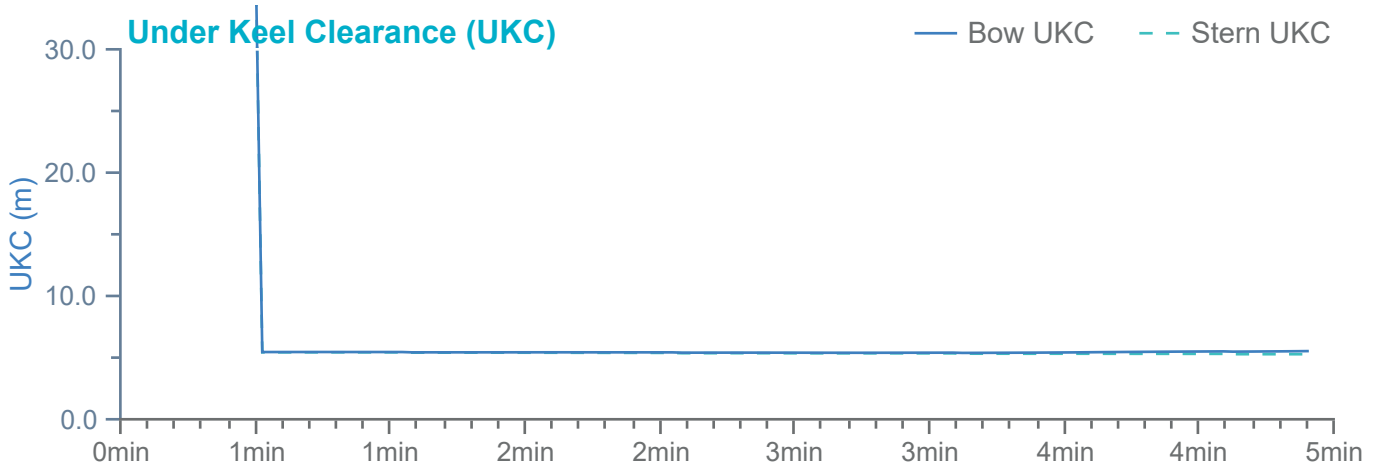
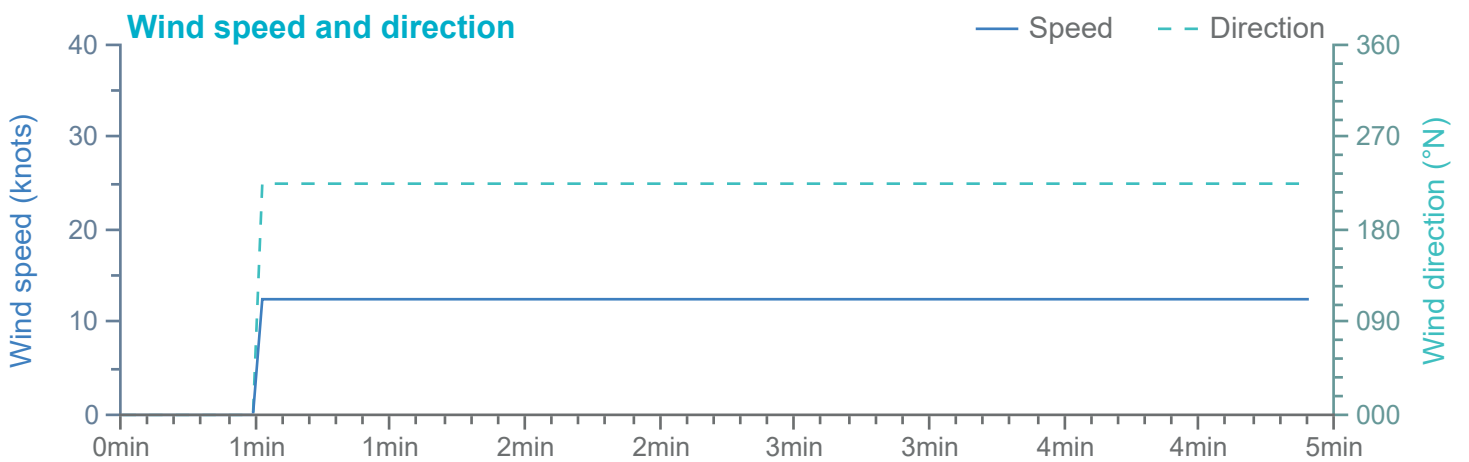
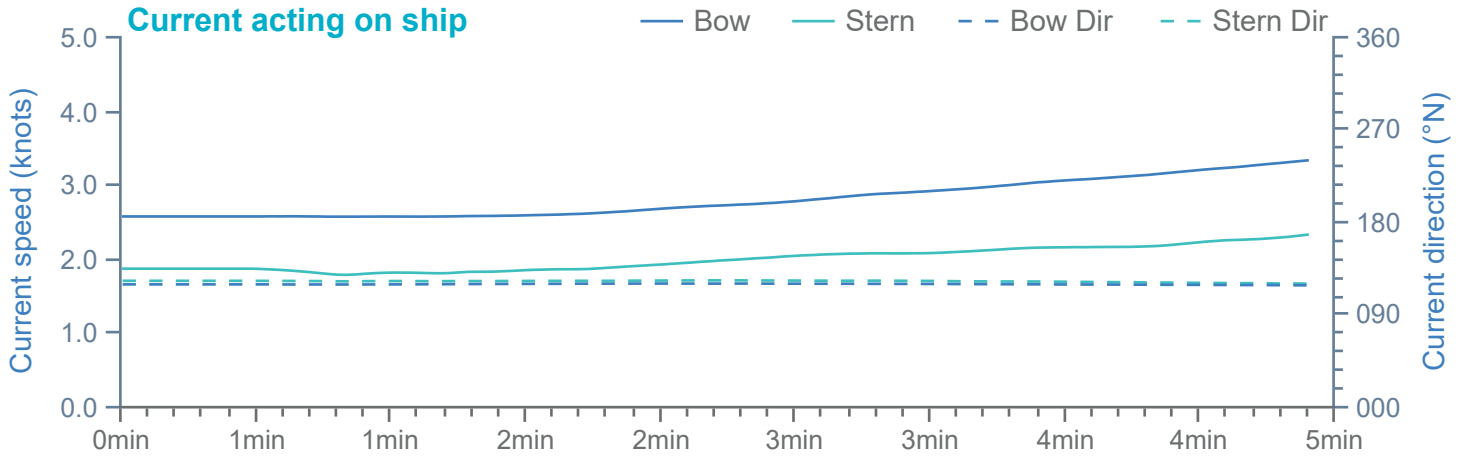


Ships plotted every 1 mins, highlight every 10 mins

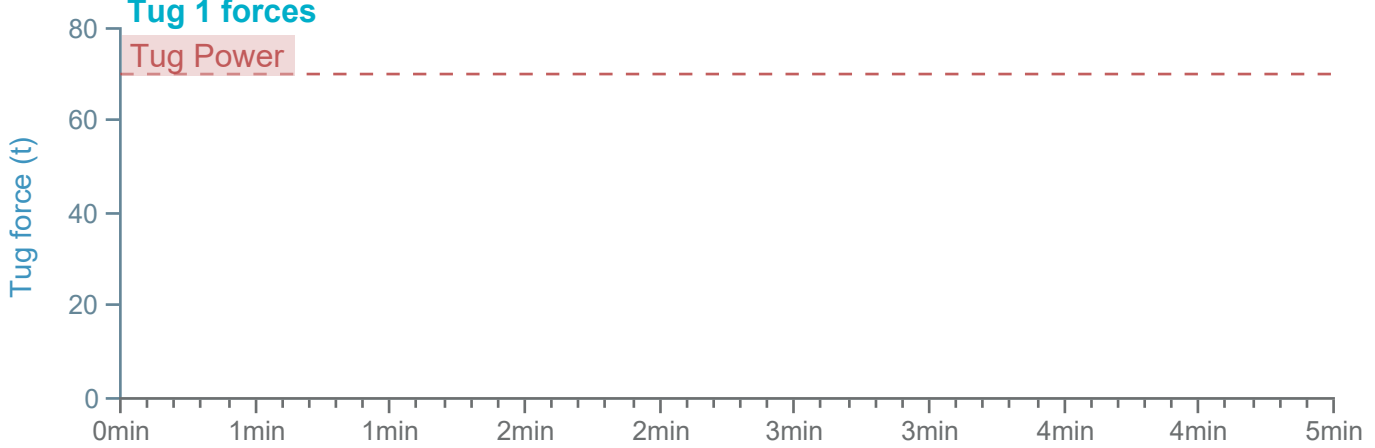
Summary

Environment

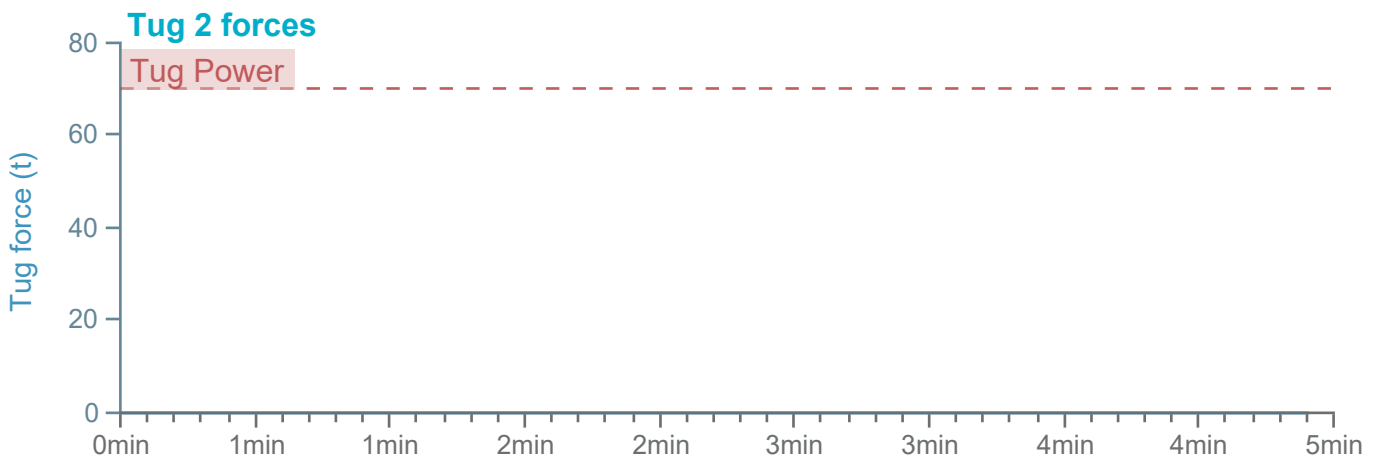
237m RoRo unnamed



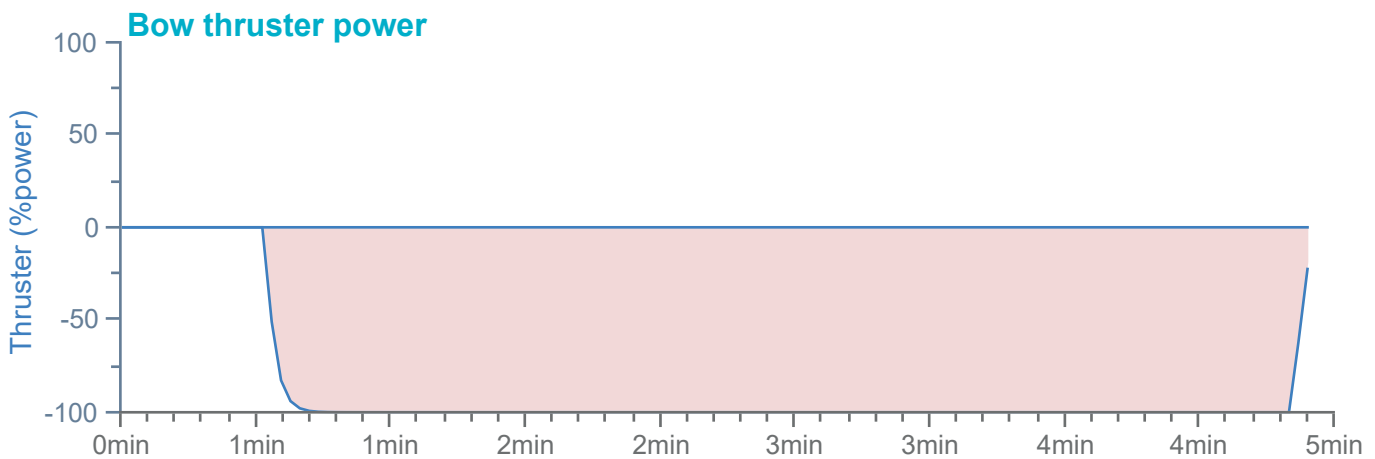
Tug 1 forces

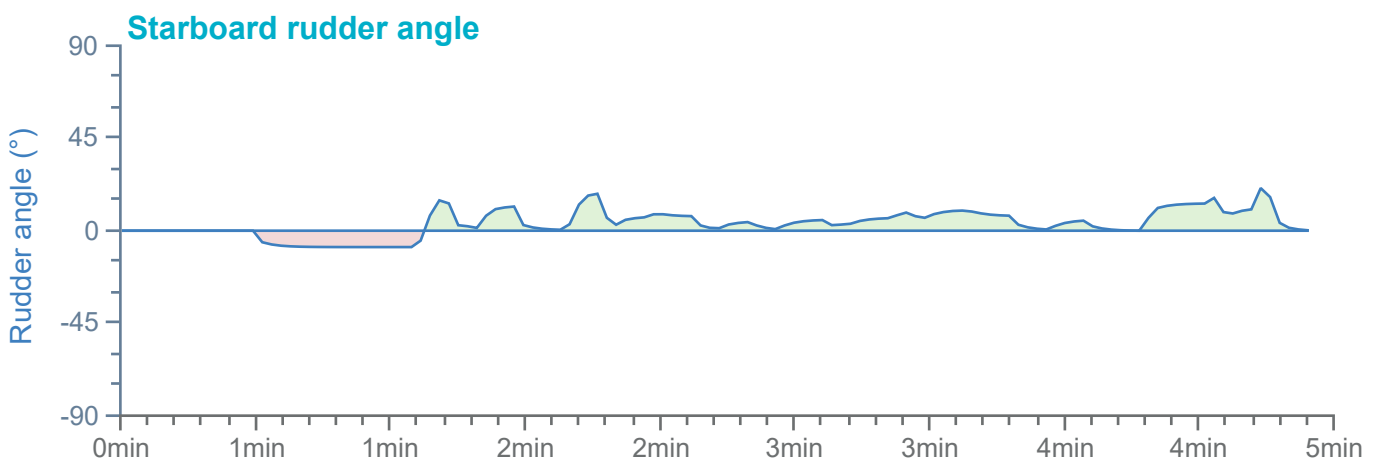
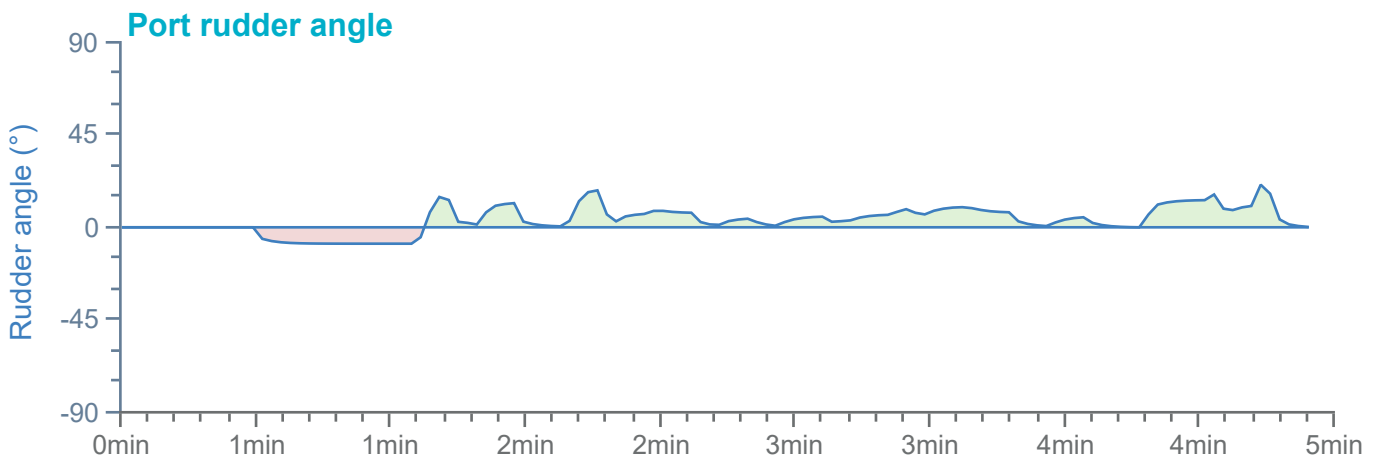
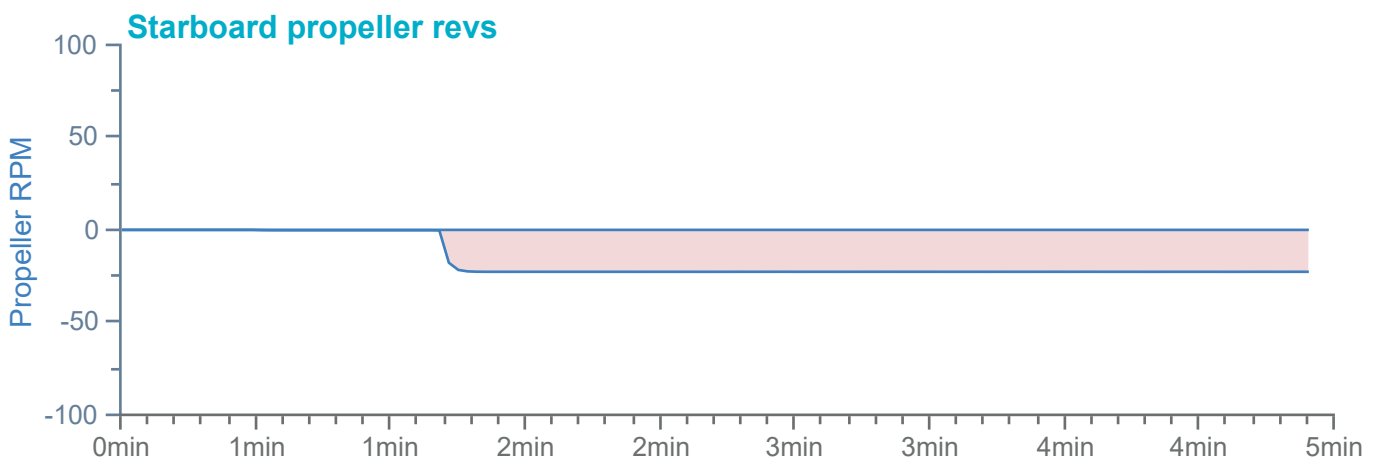
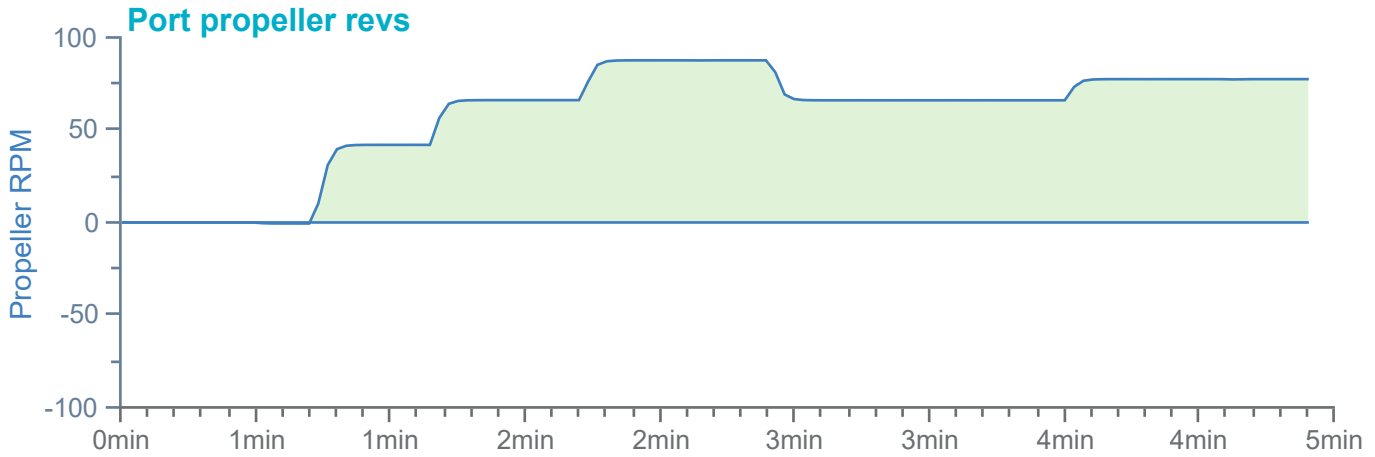


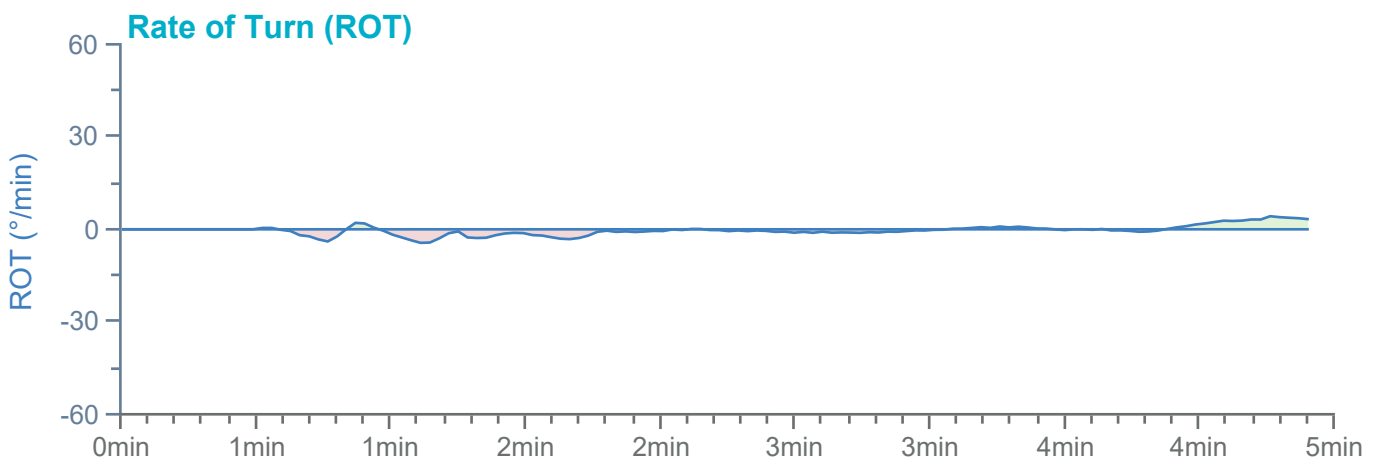
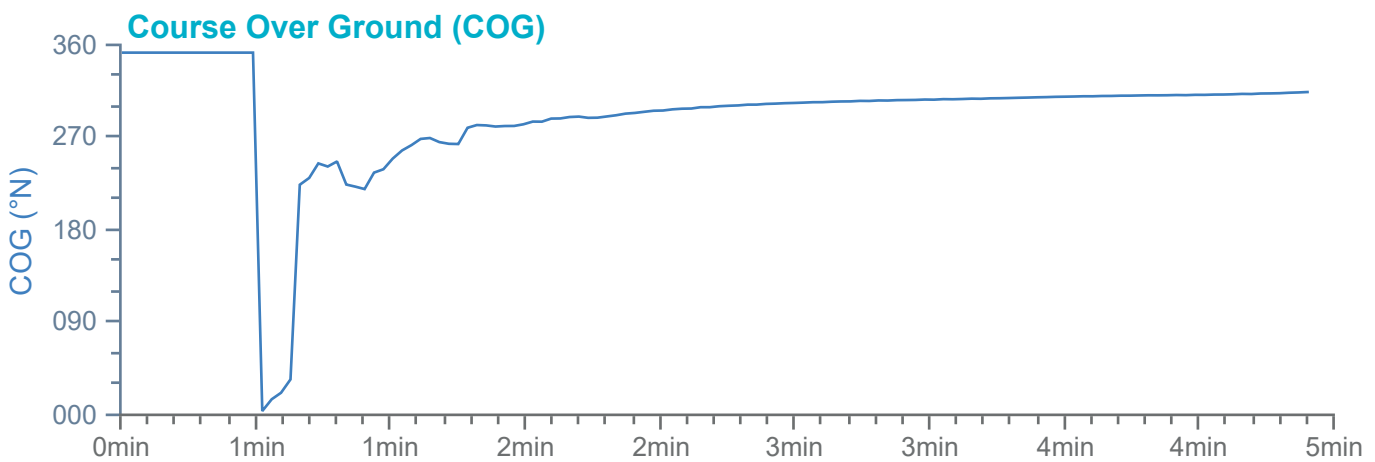
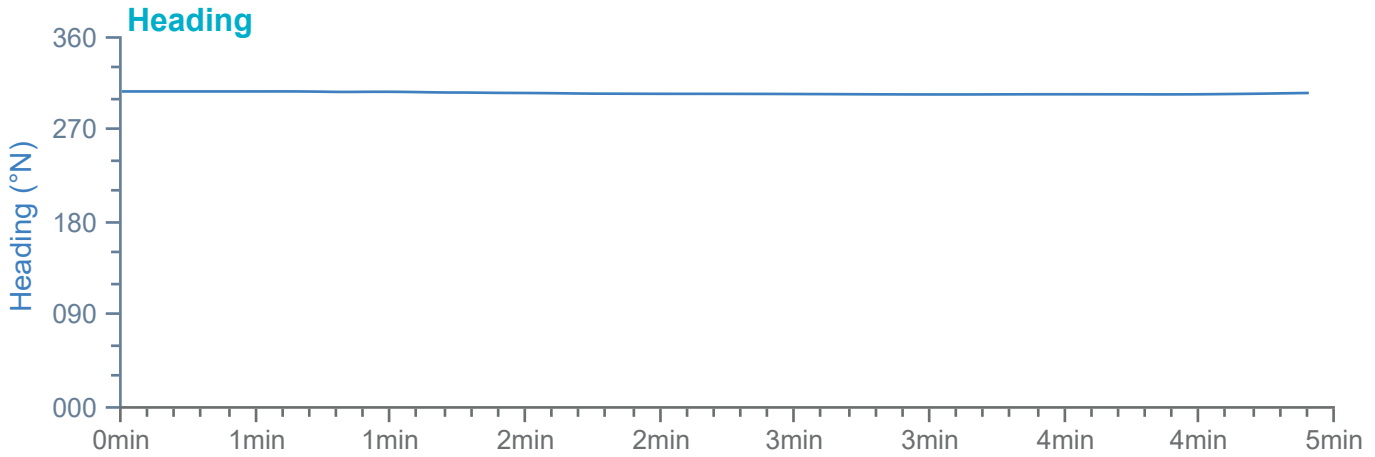
Tug 2 forces

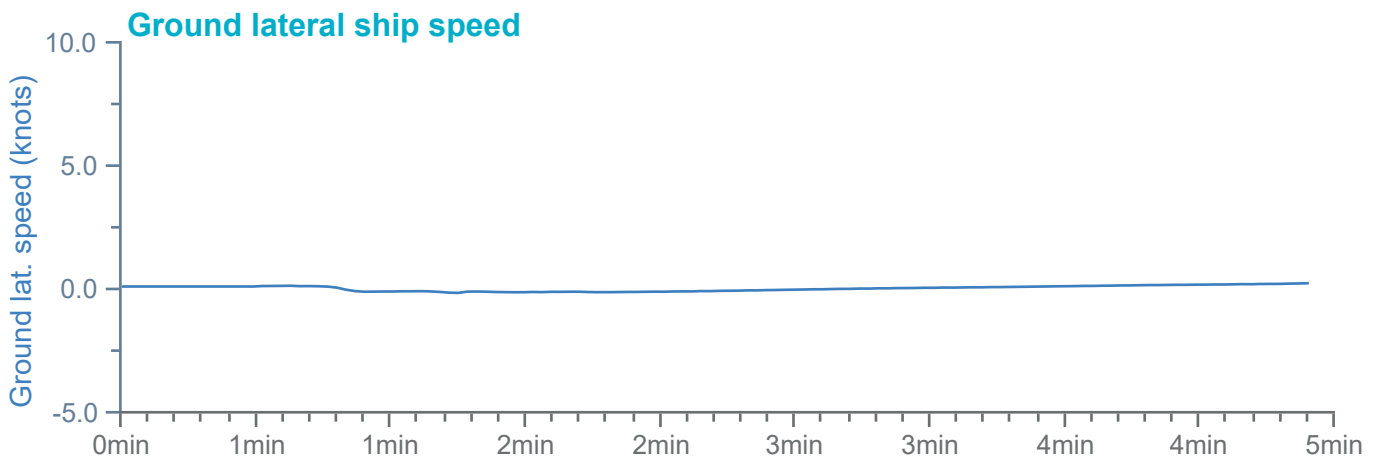
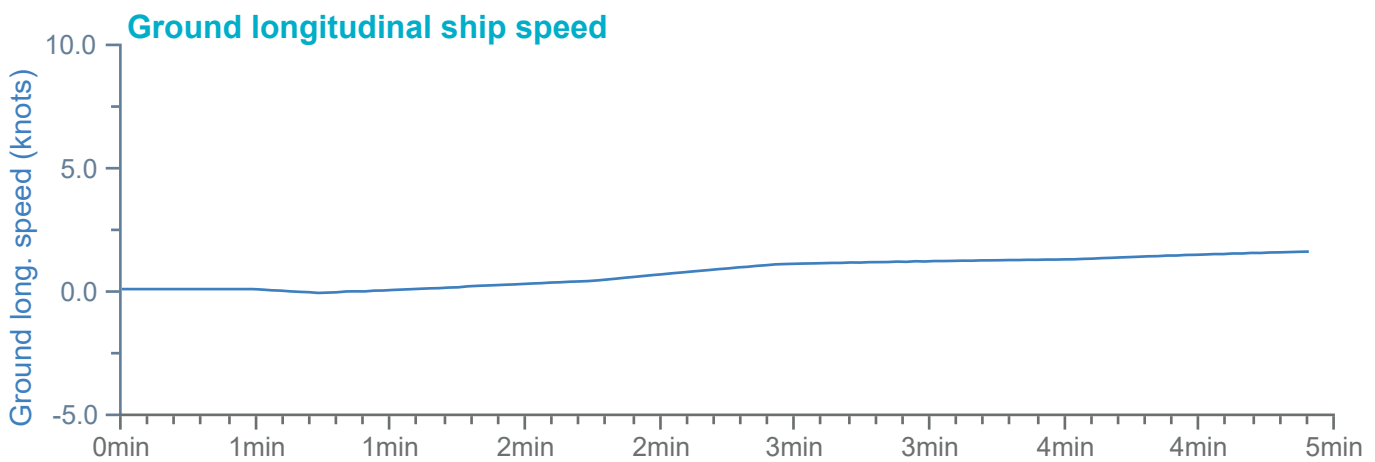
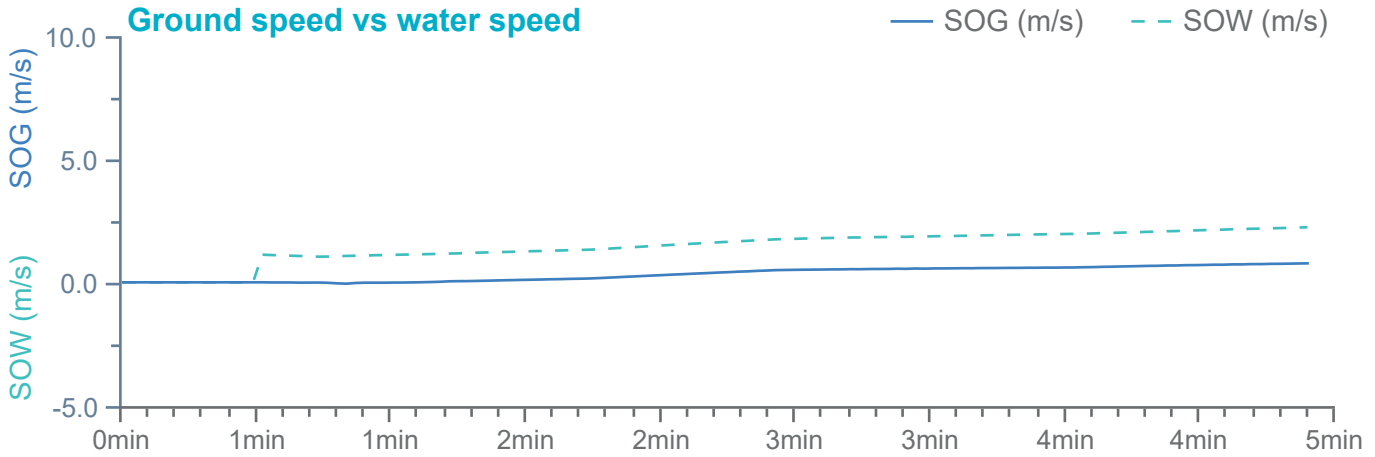


Bow thruster power

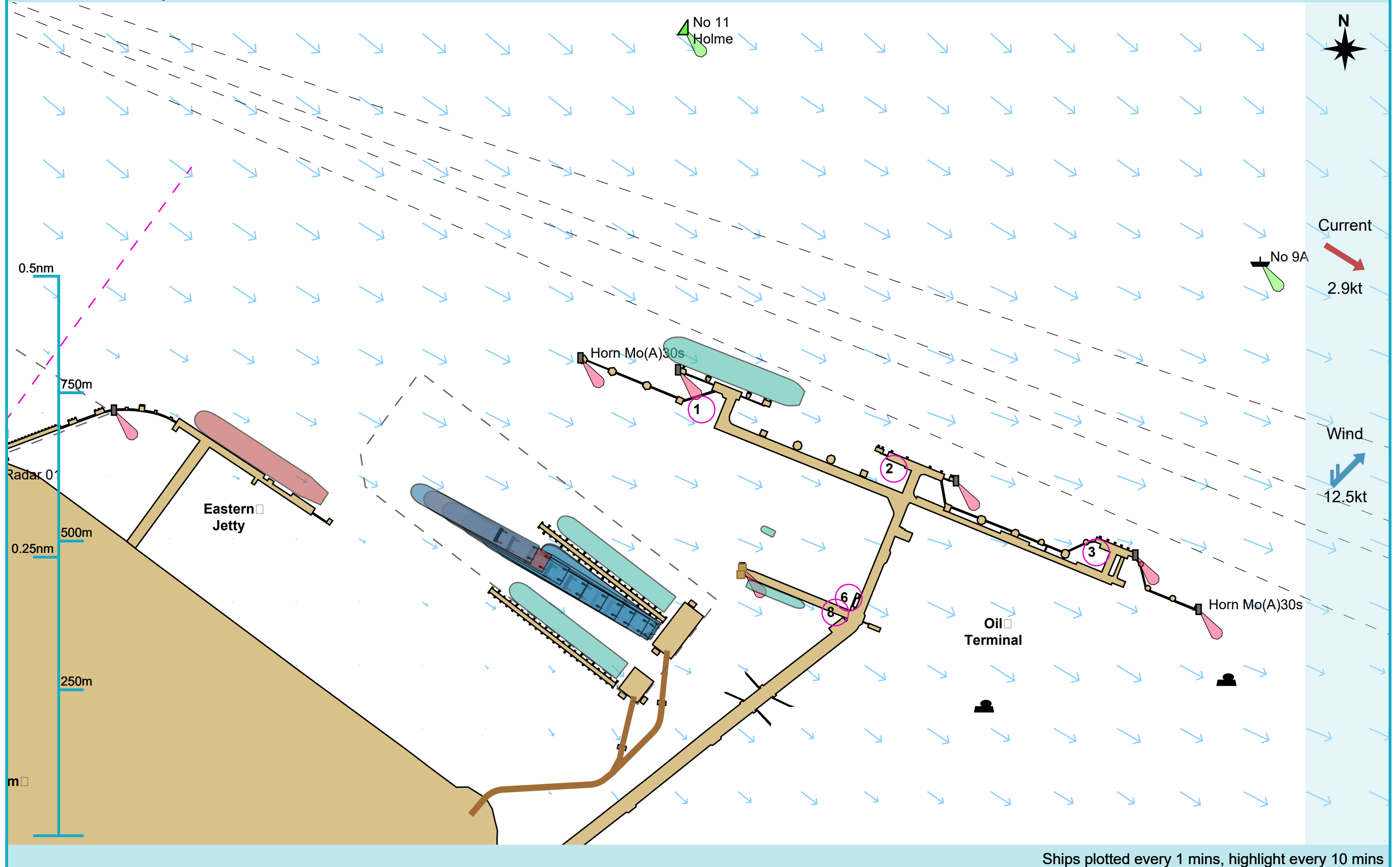






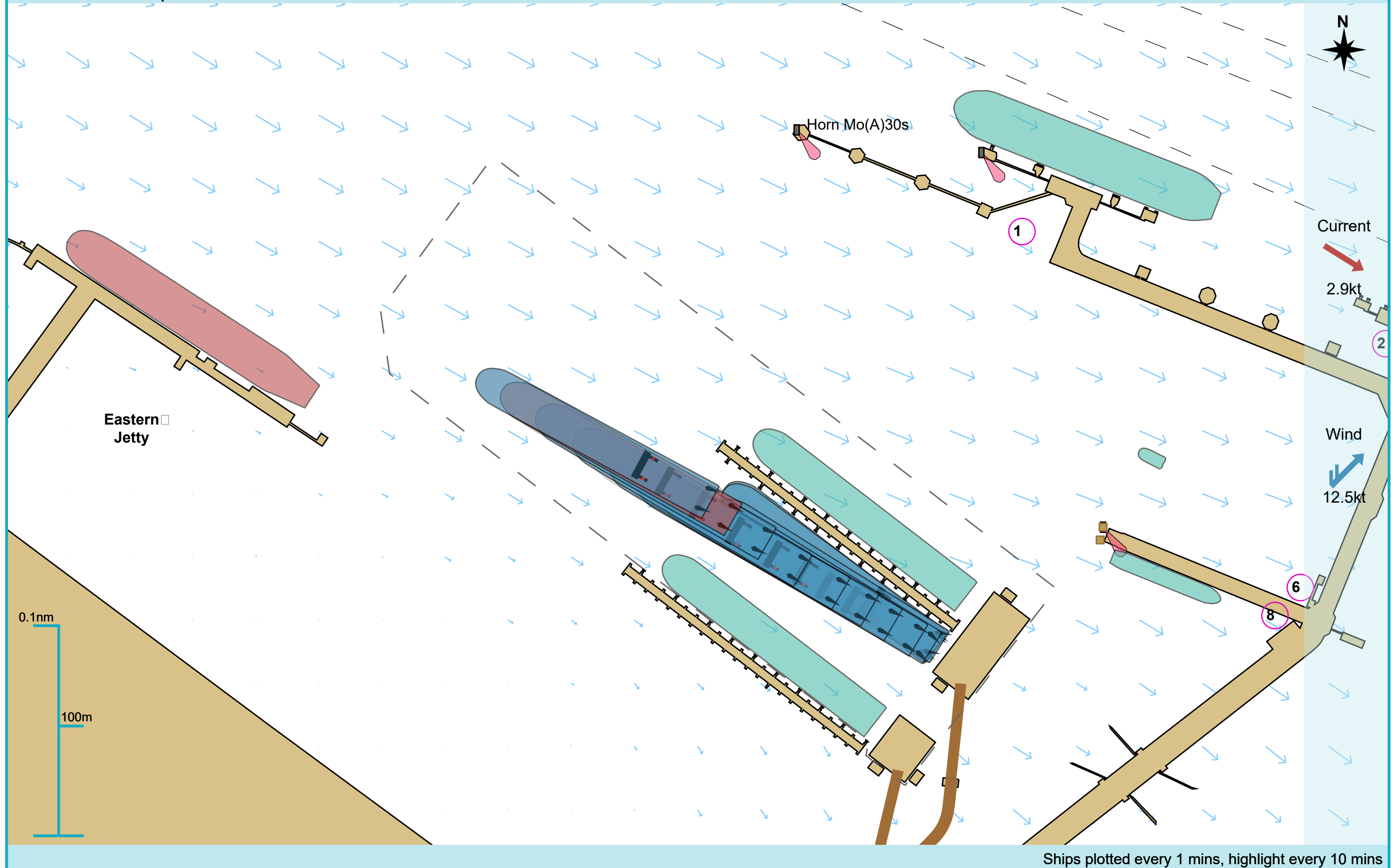


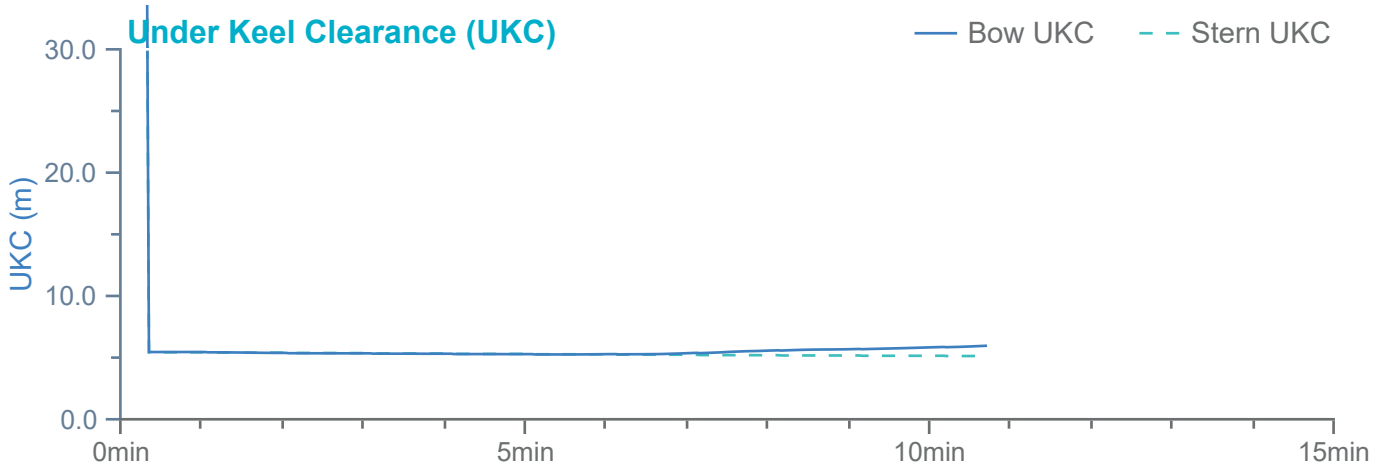
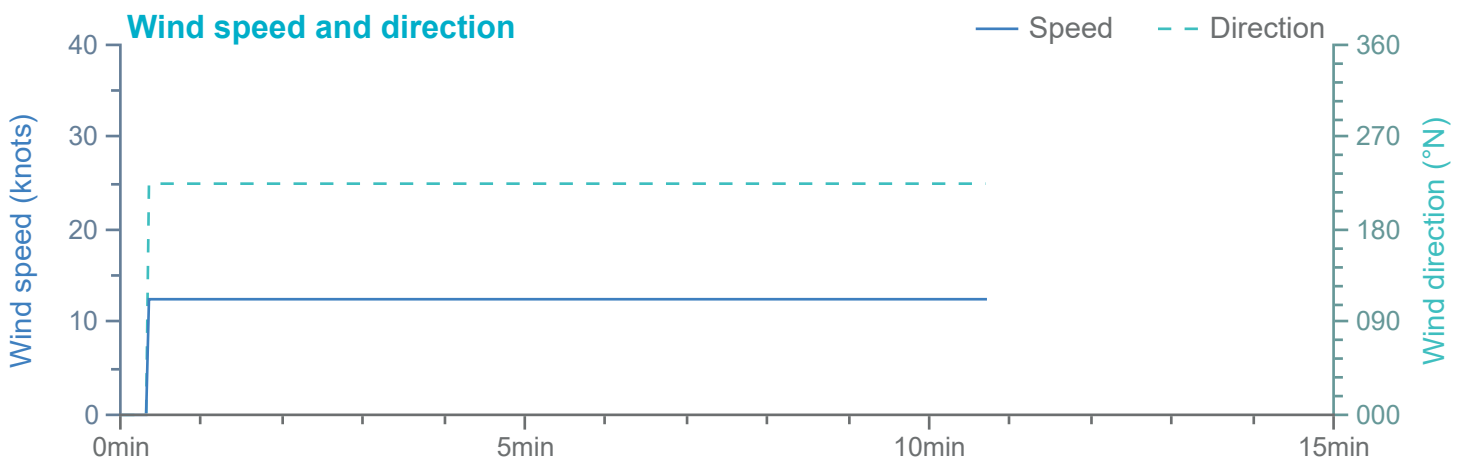
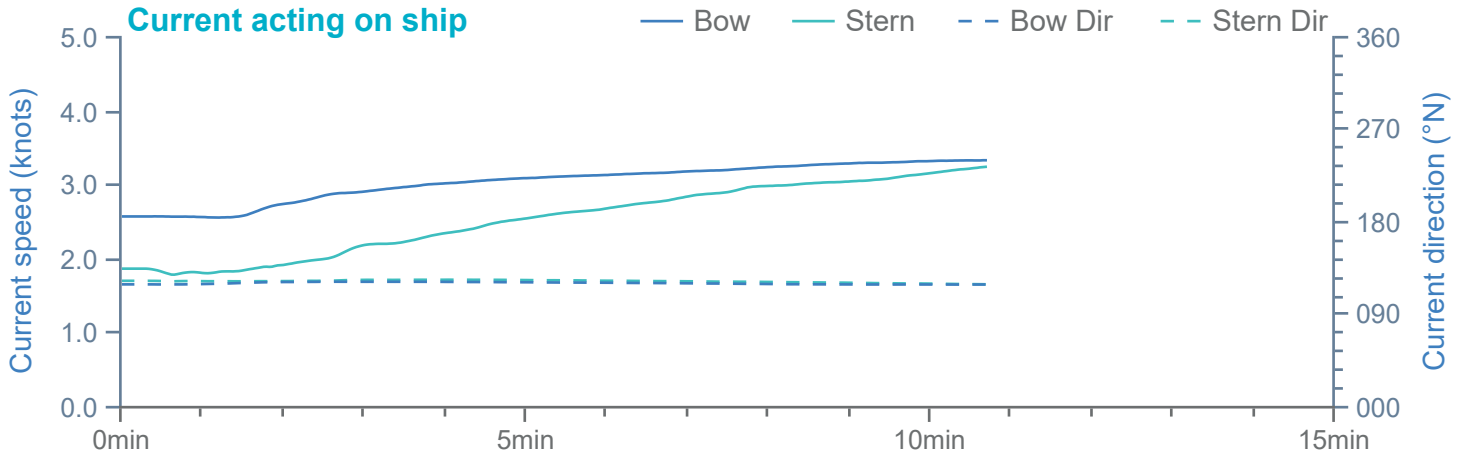
Manoeuvre track plot

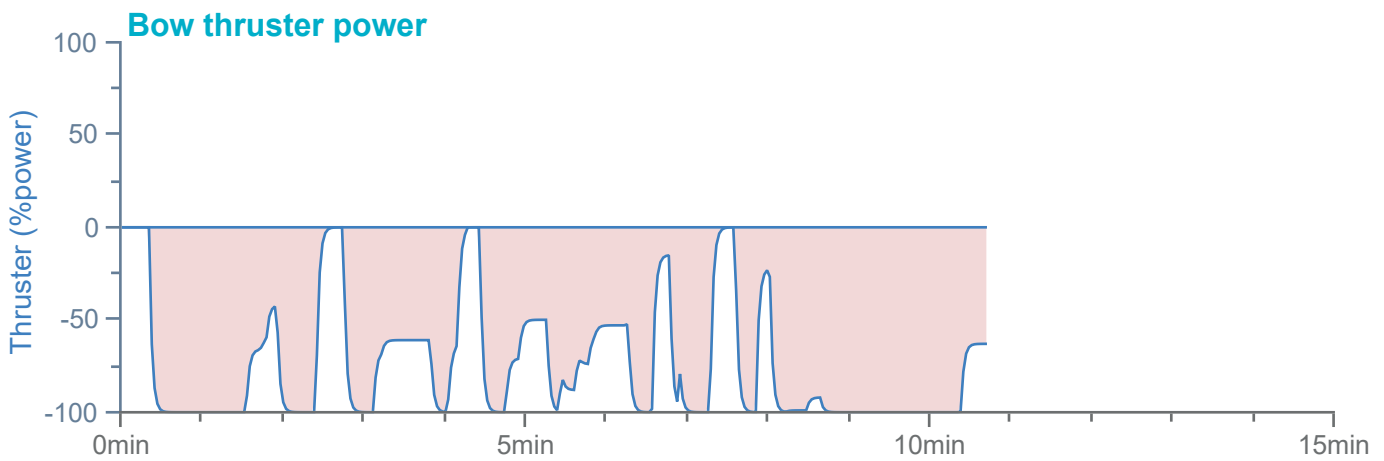
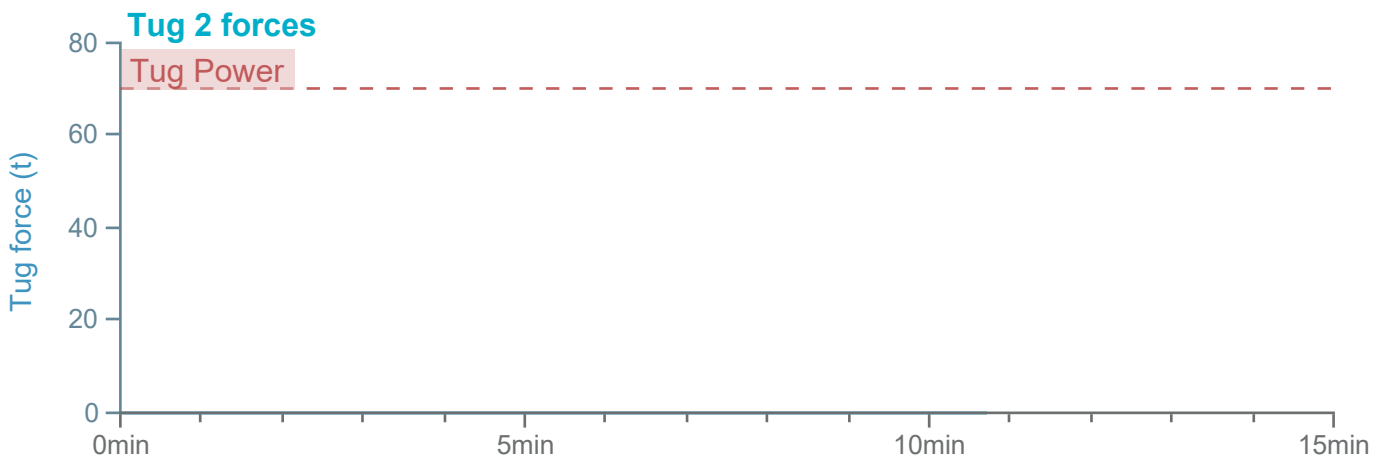
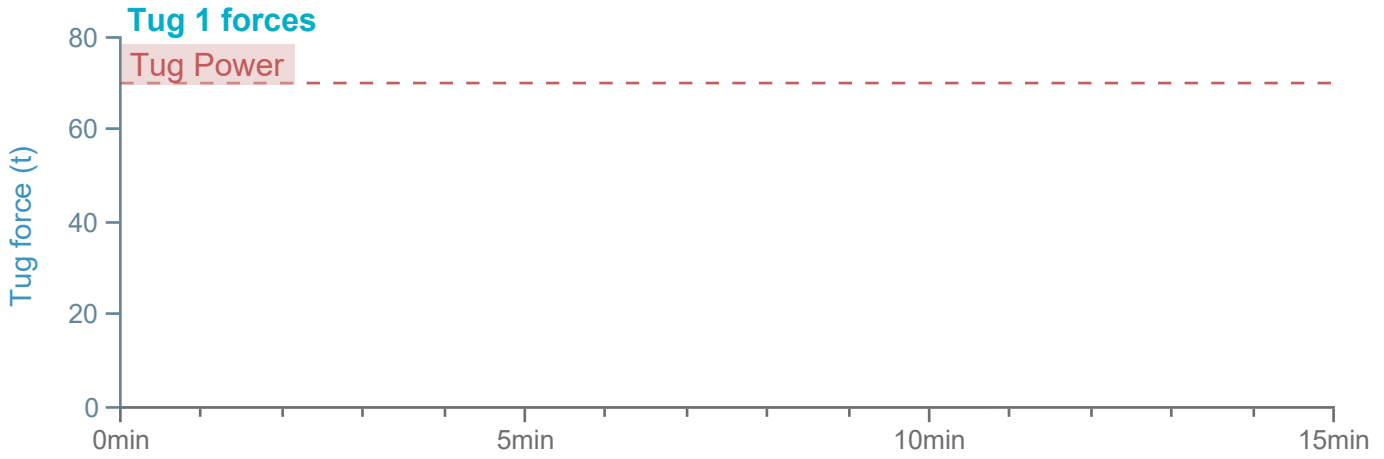


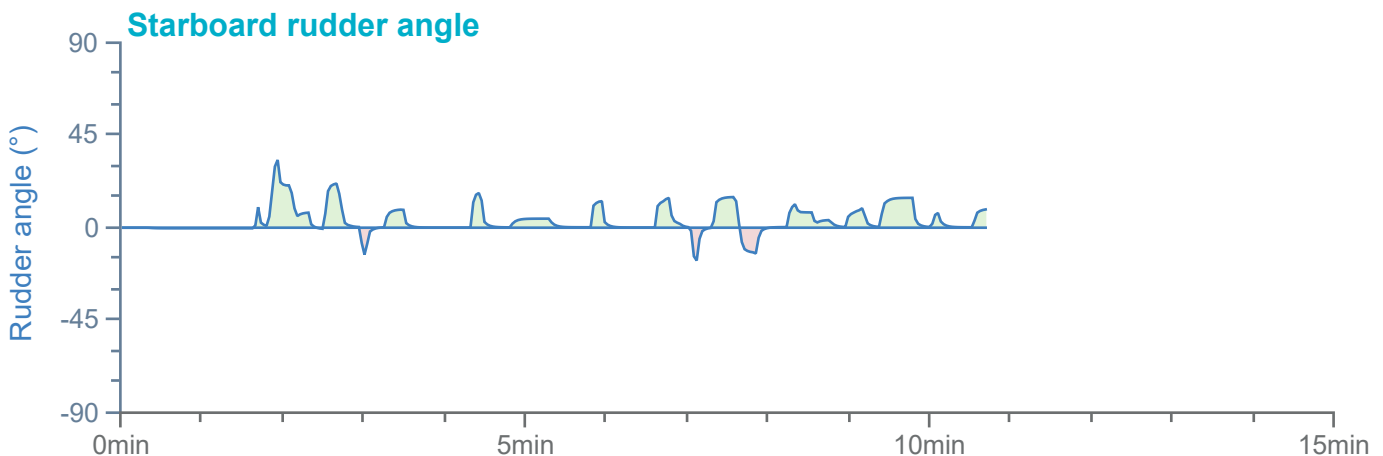
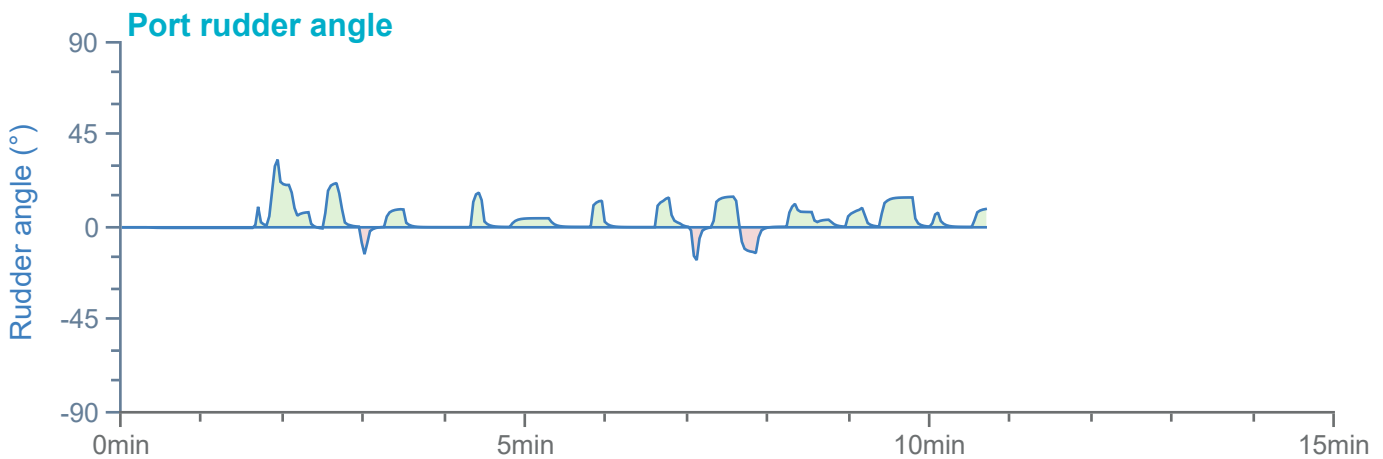
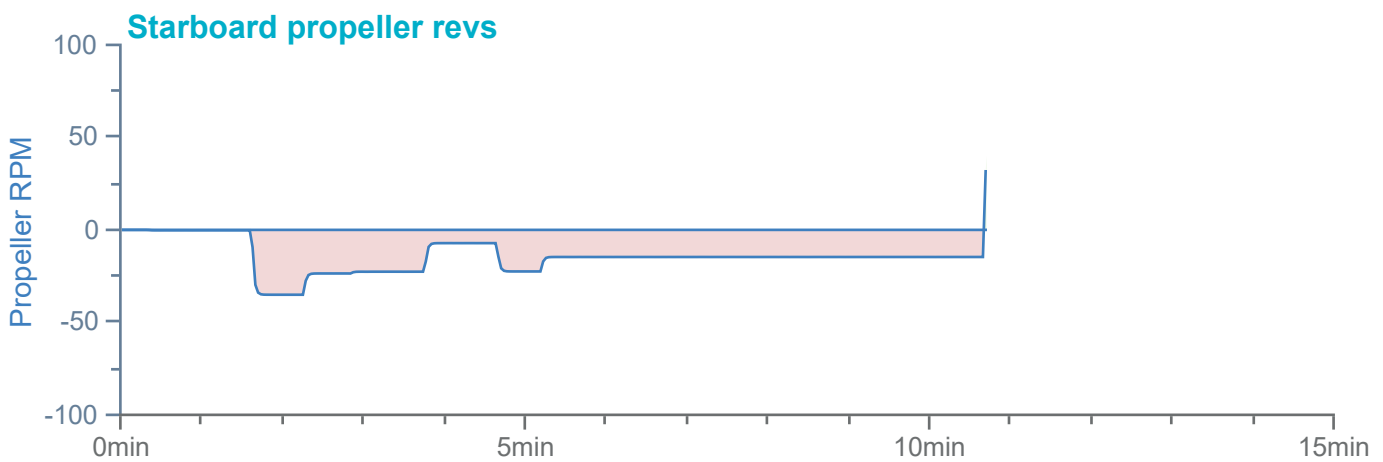
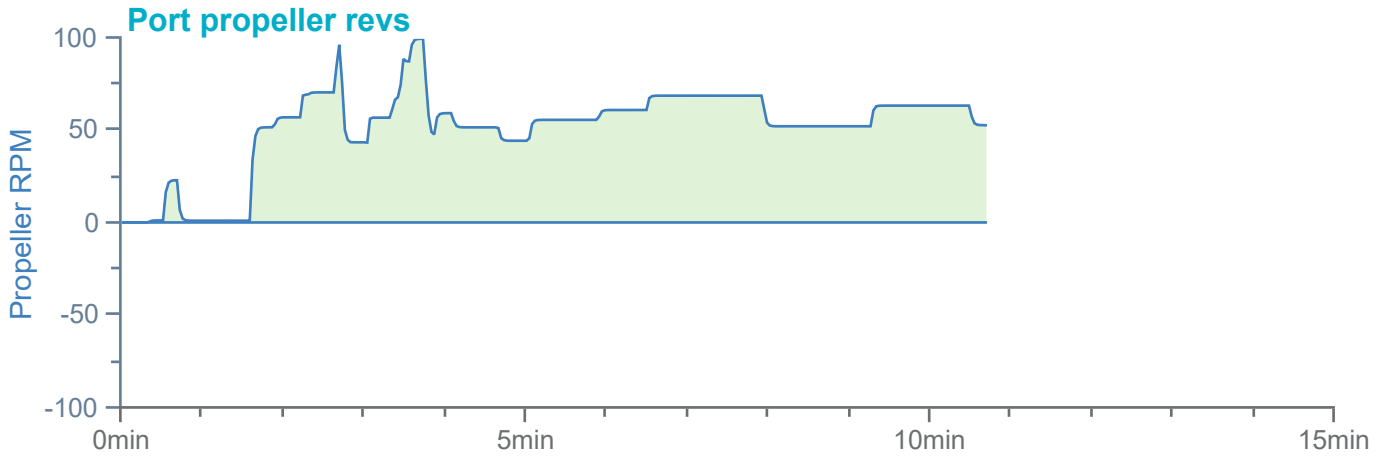
Ships plotted every 1 mins, highlight every 10 mins

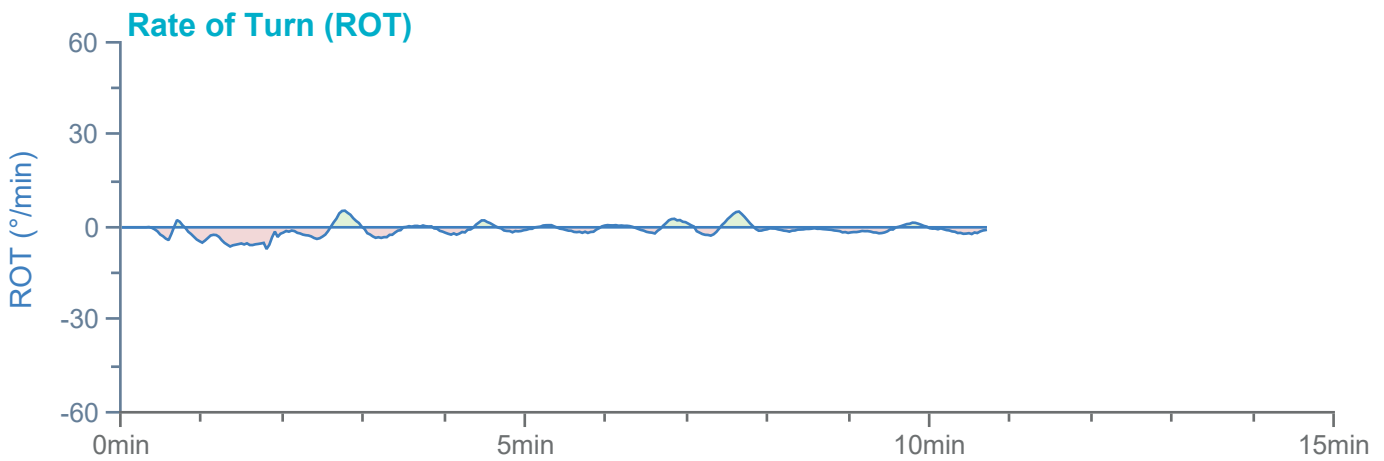
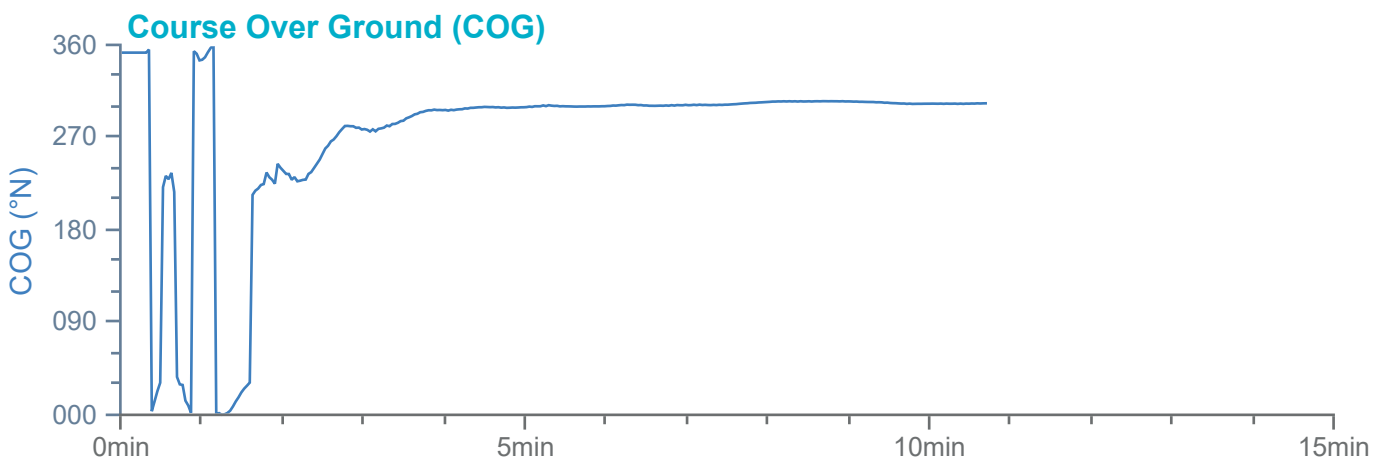
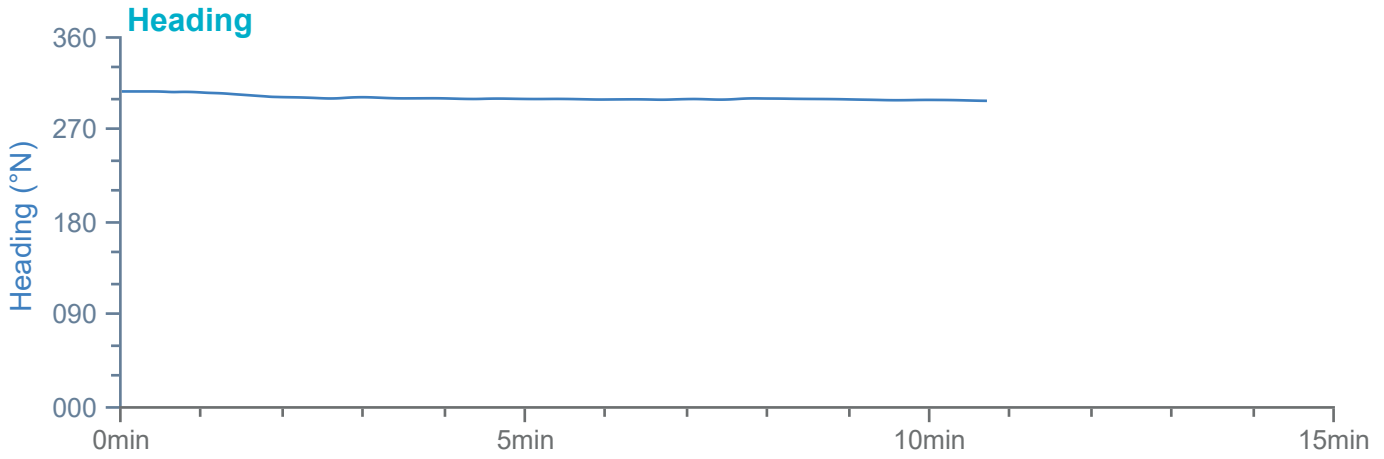
Manoeuvre track plot

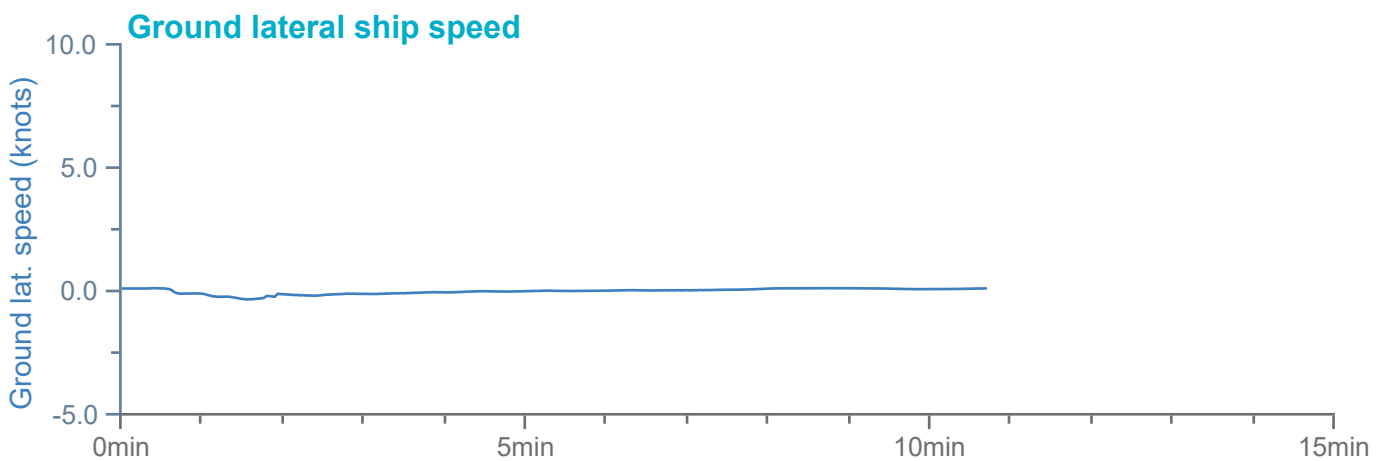
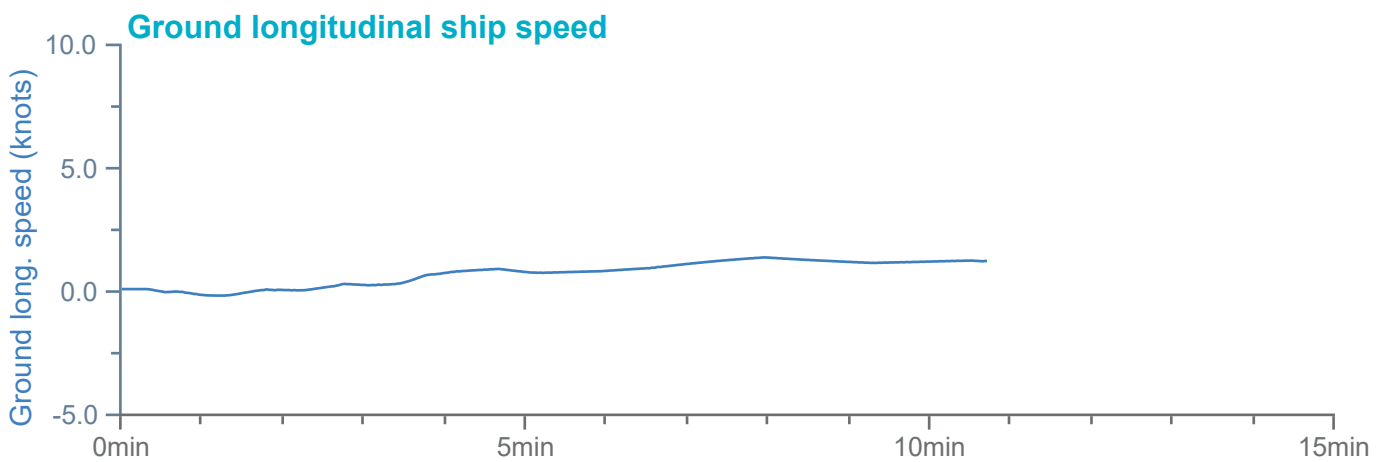
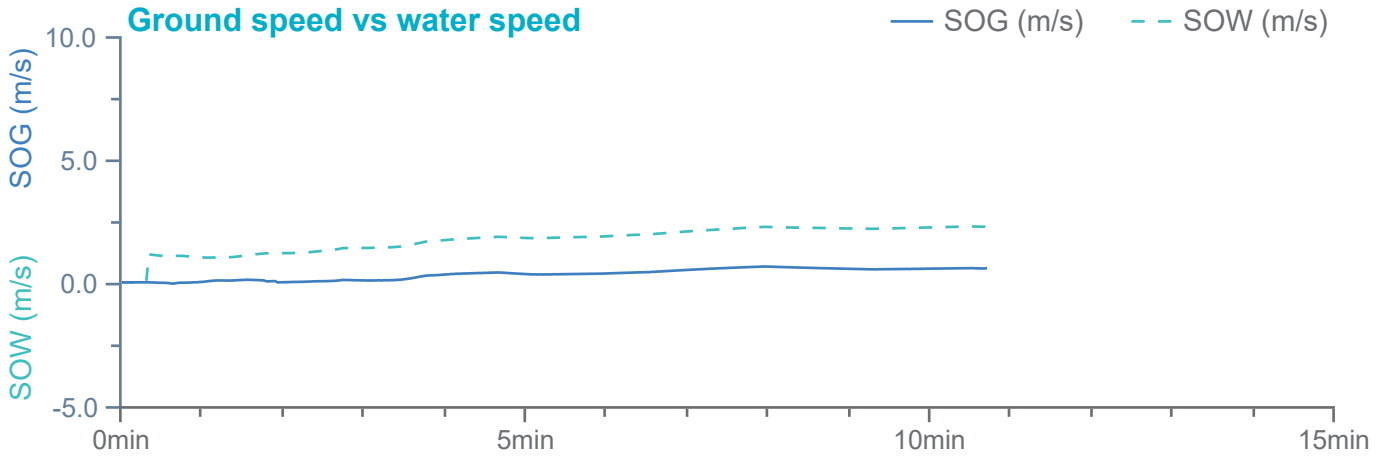




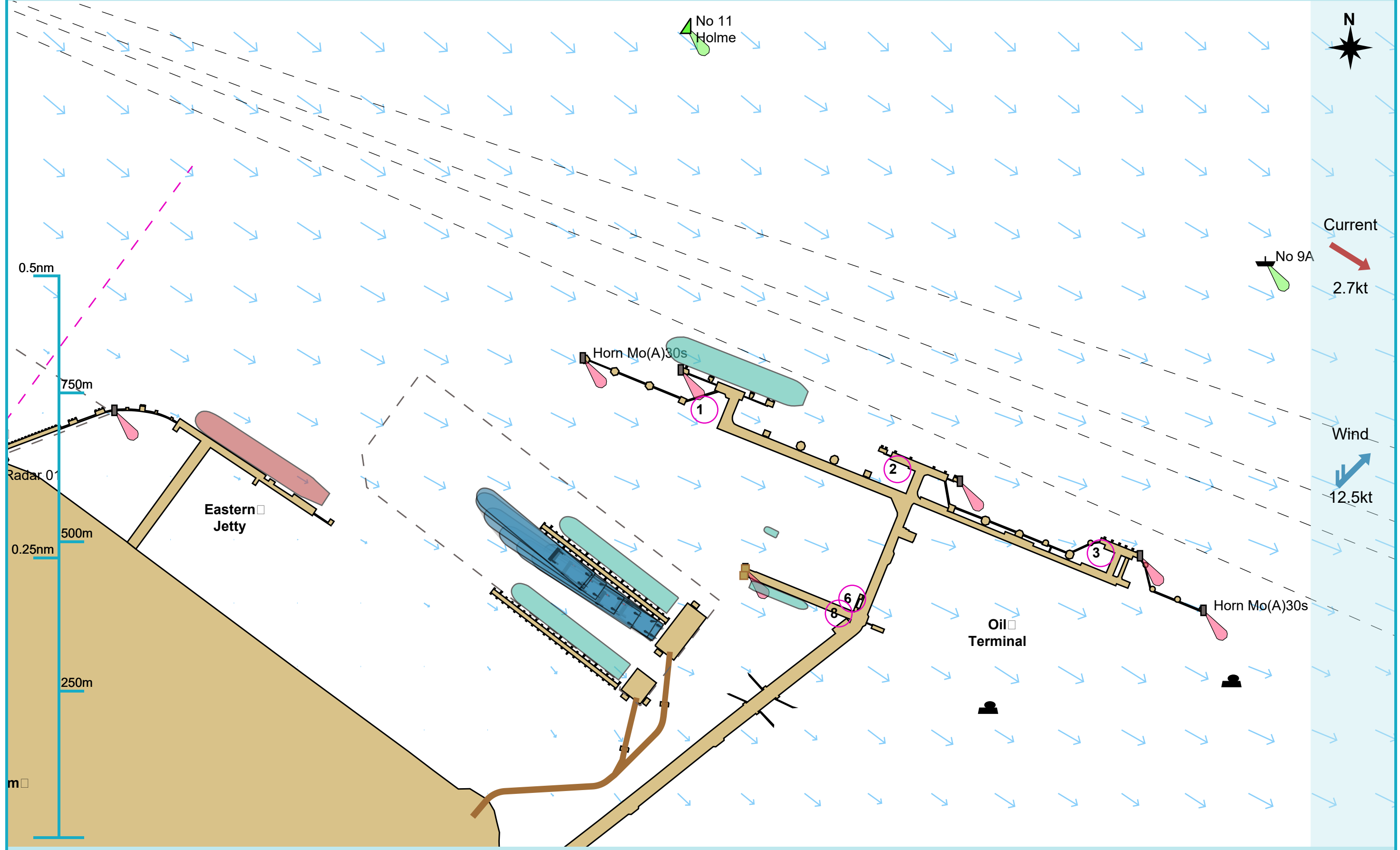






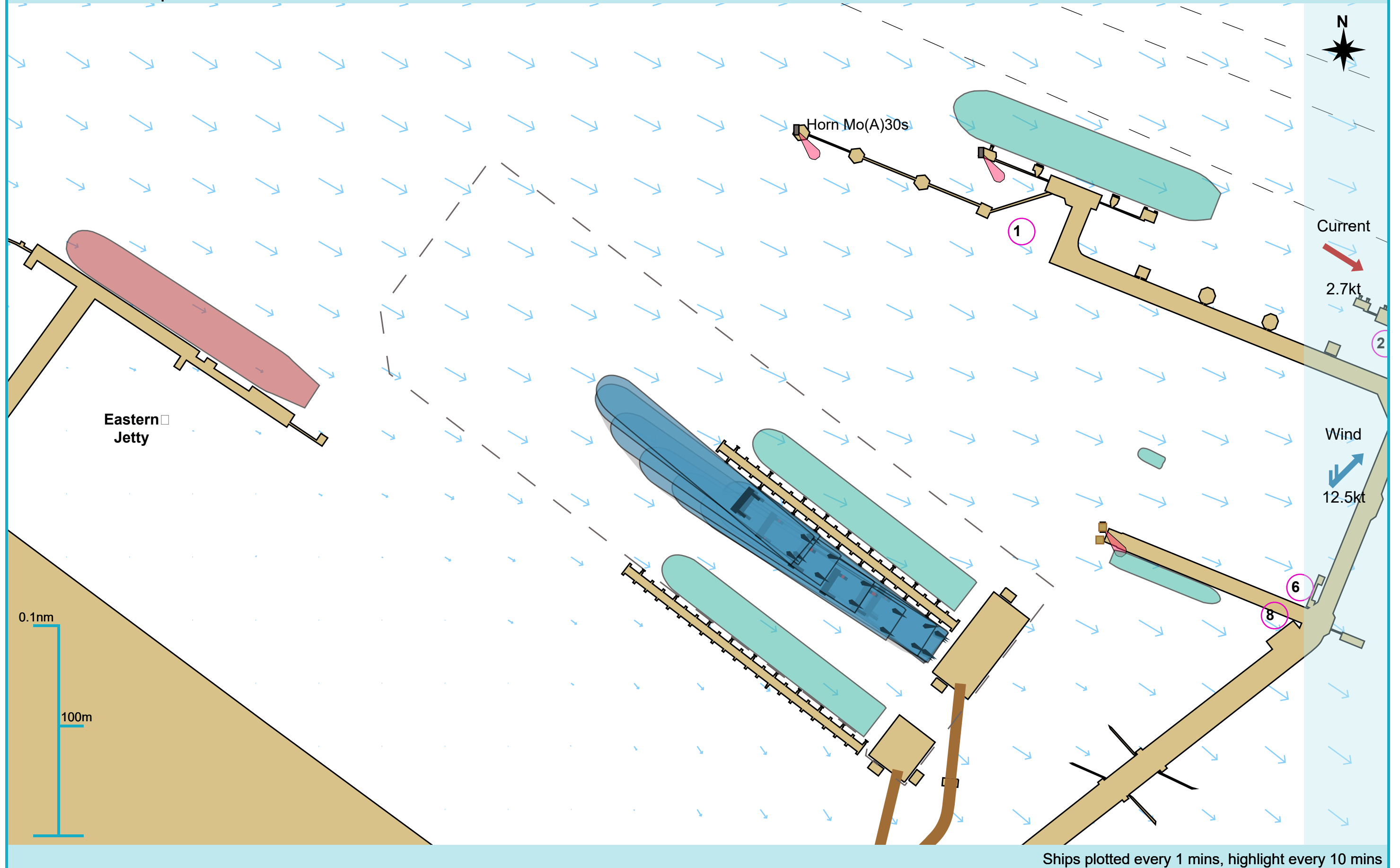


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

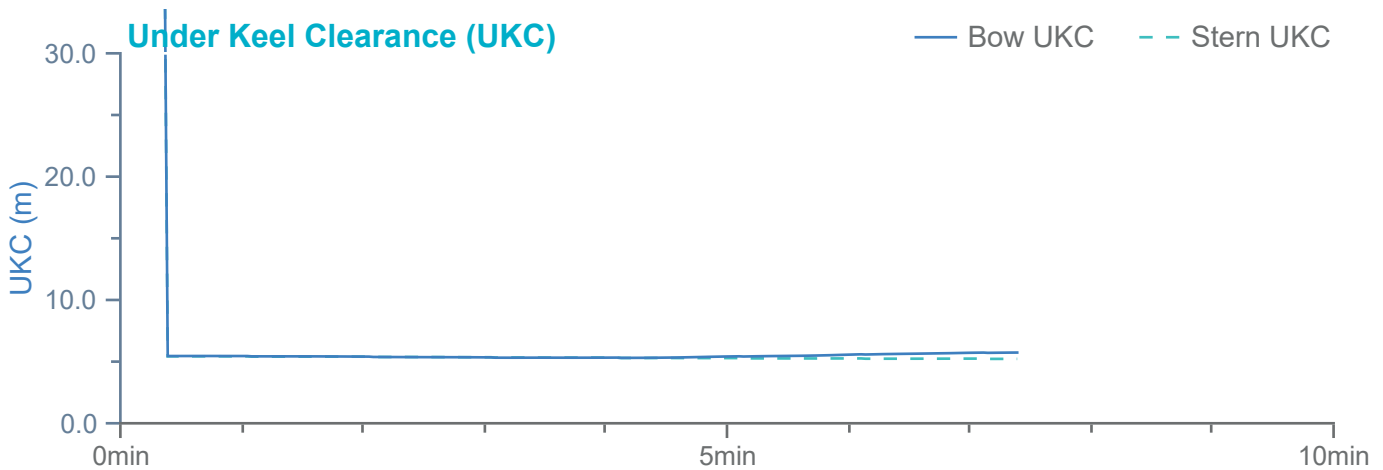
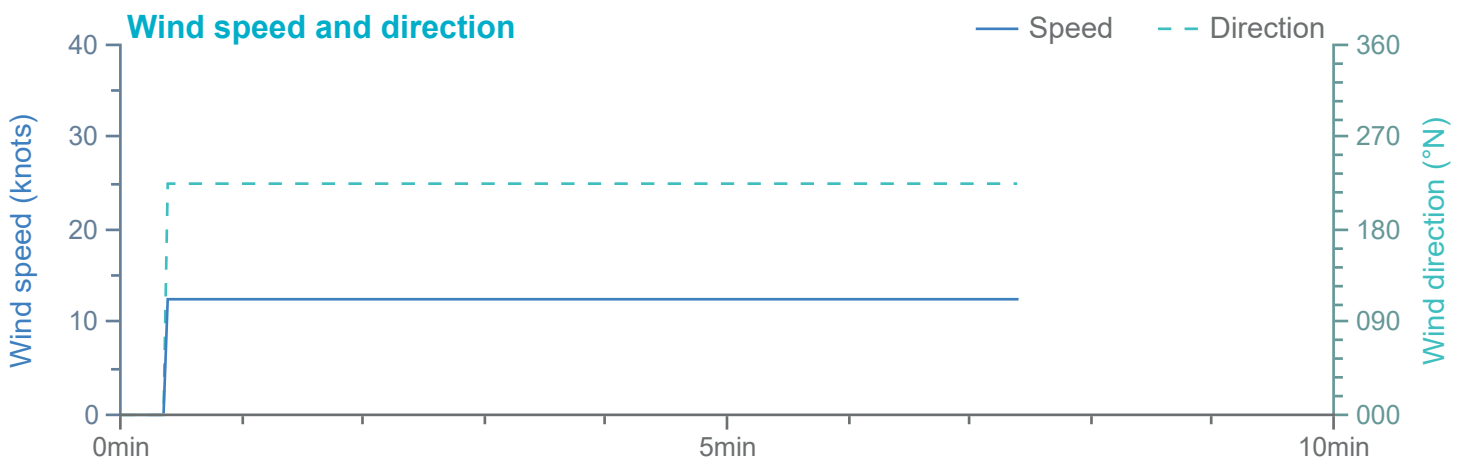
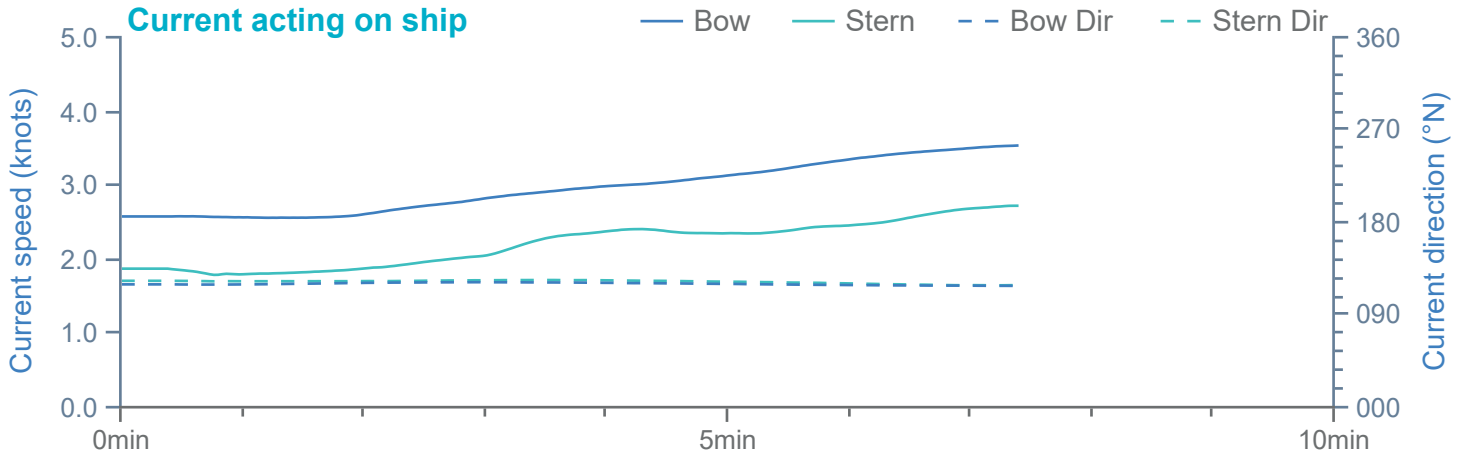


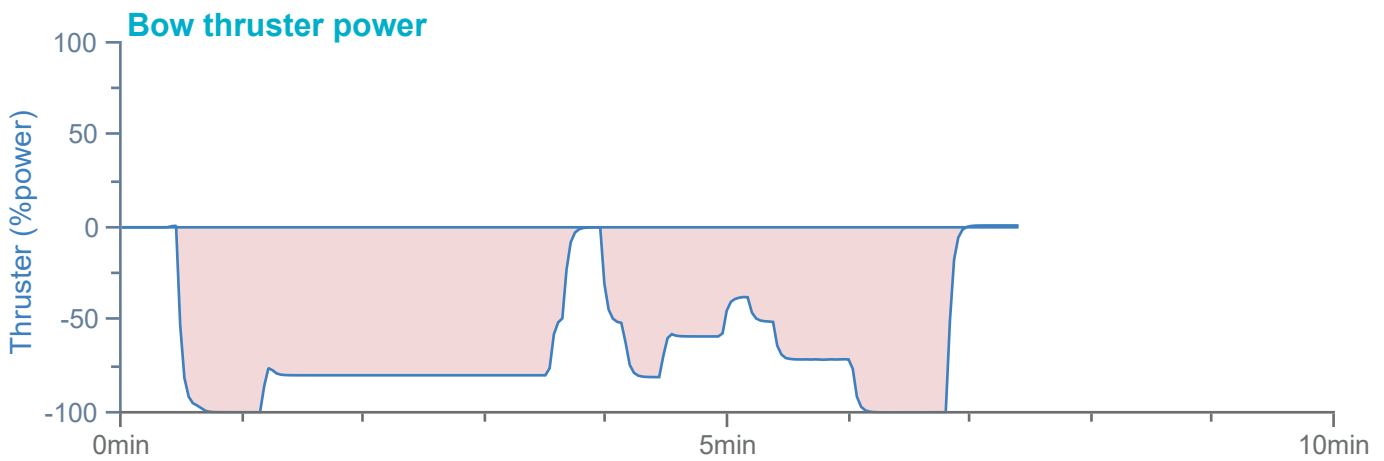
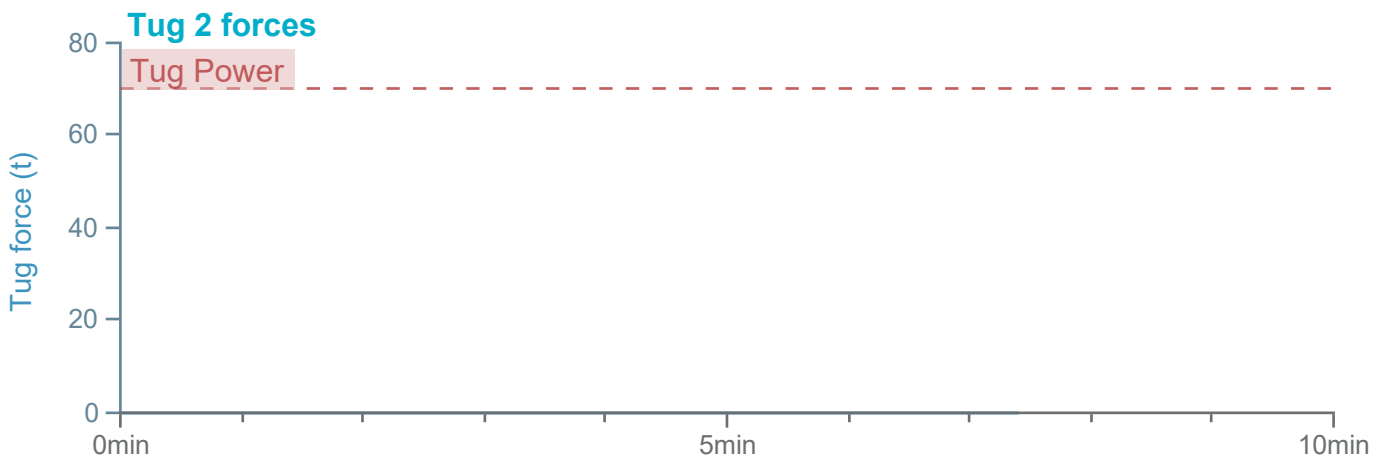
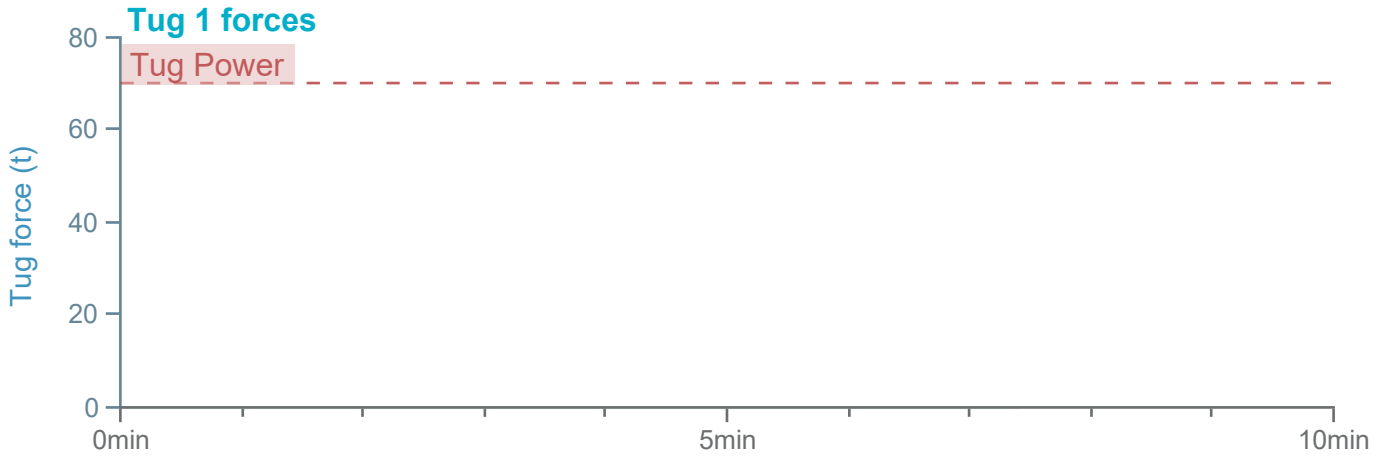
Ships plotted every 1 mins, highlight every 10 mins

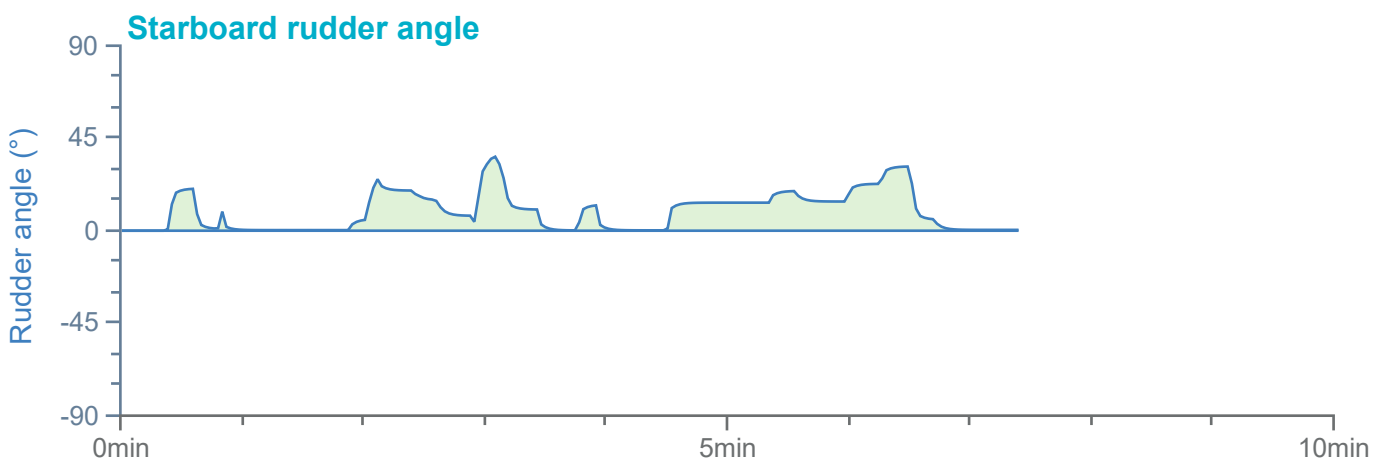
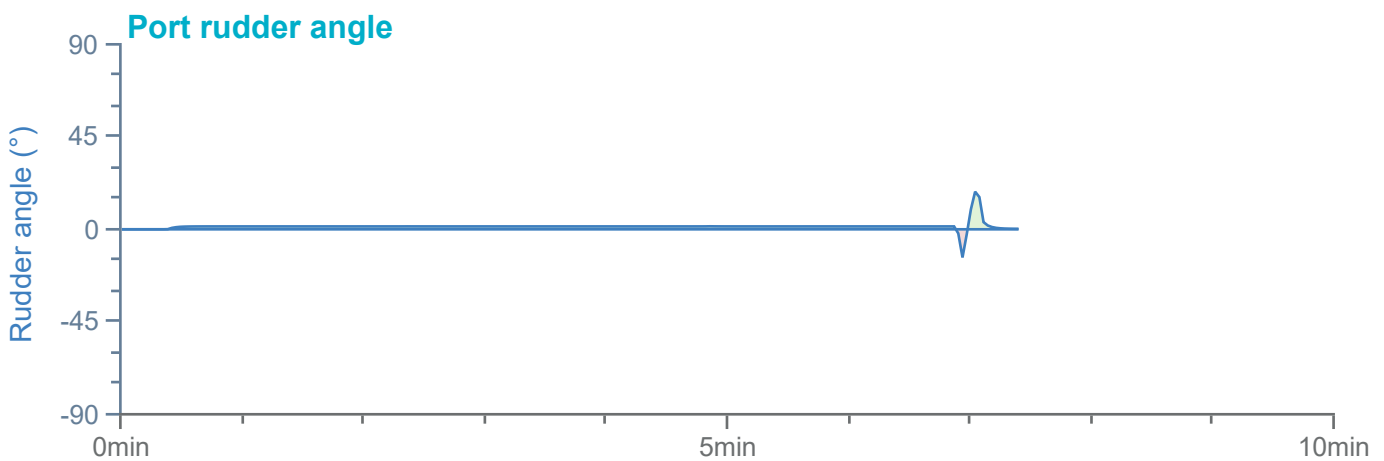
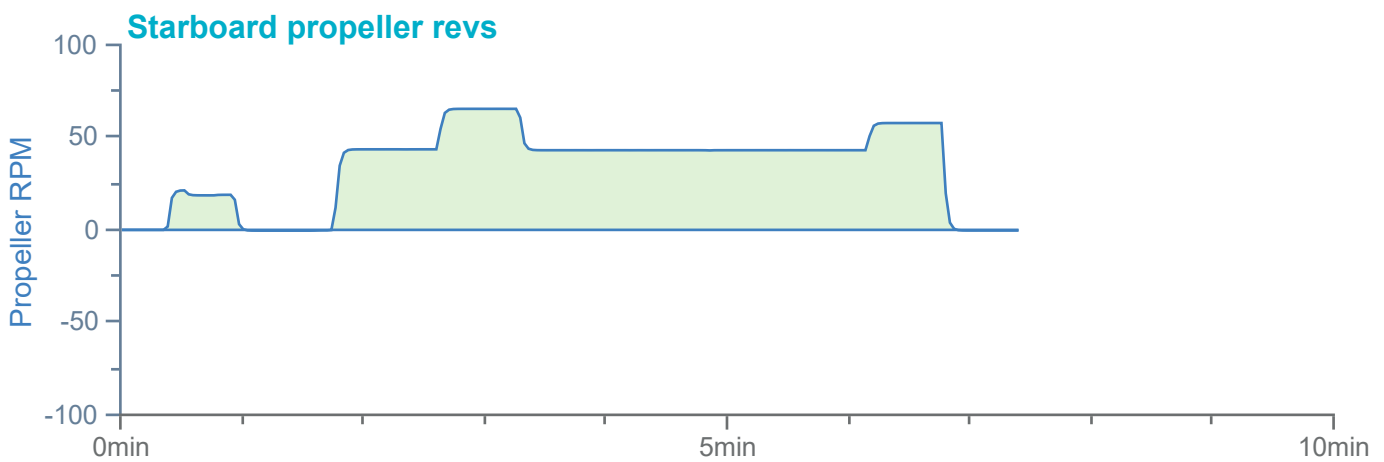
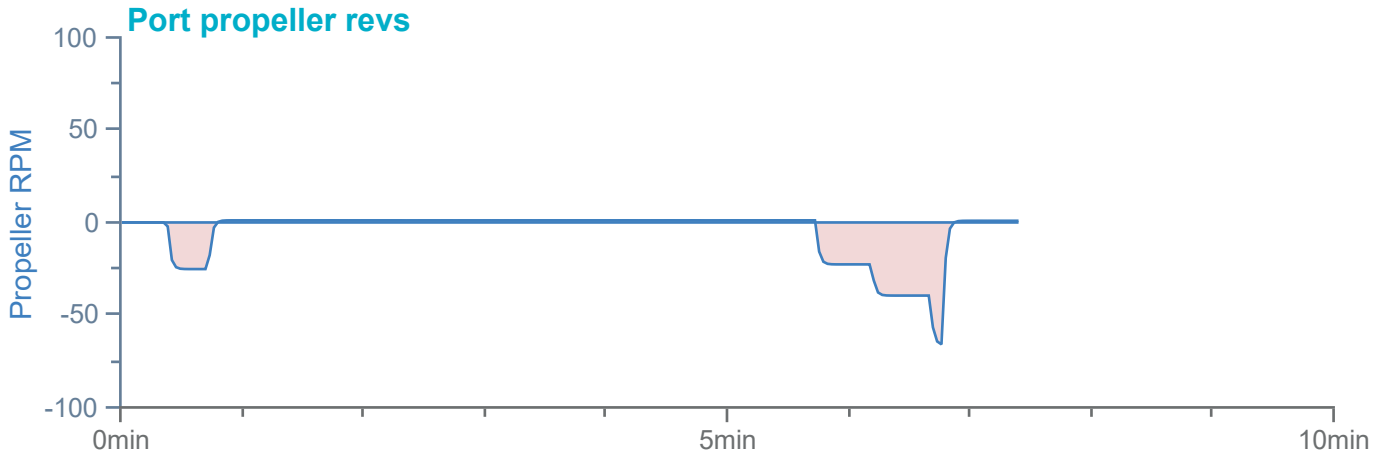
Summary

Environment

237m RoRo unnamed



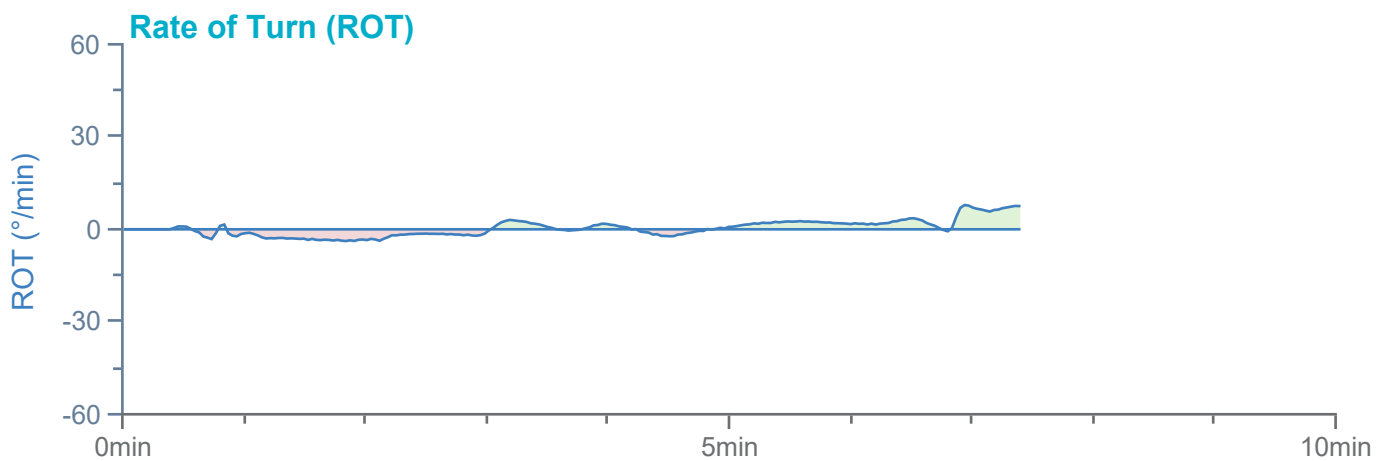
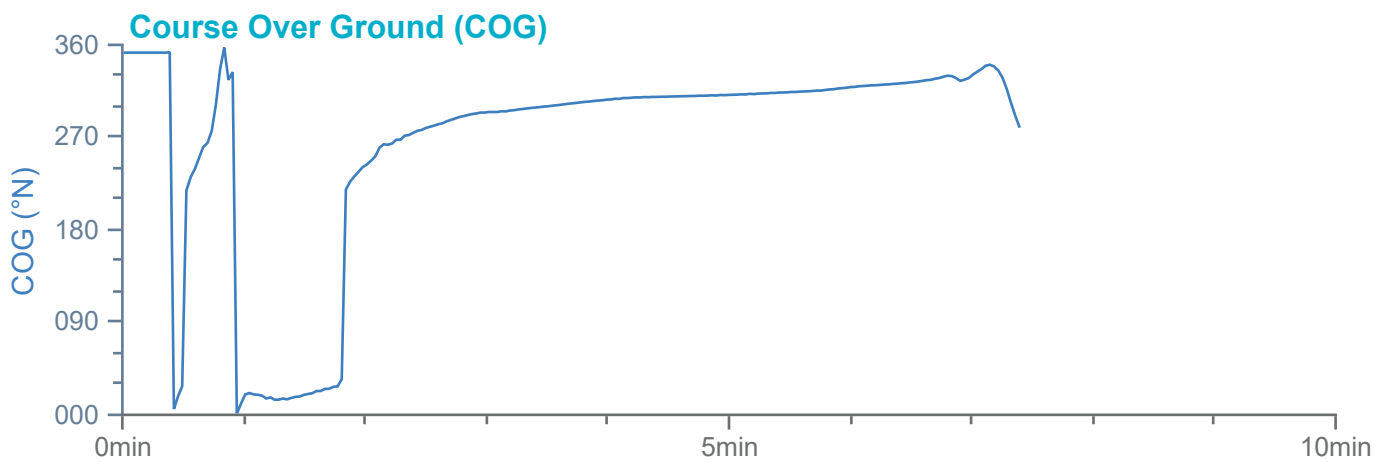
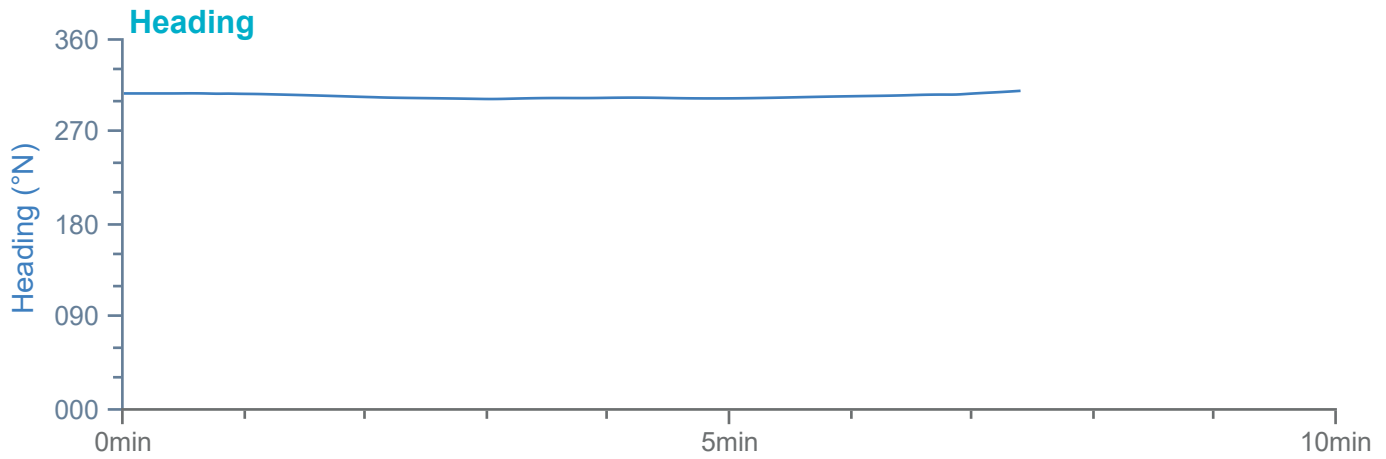


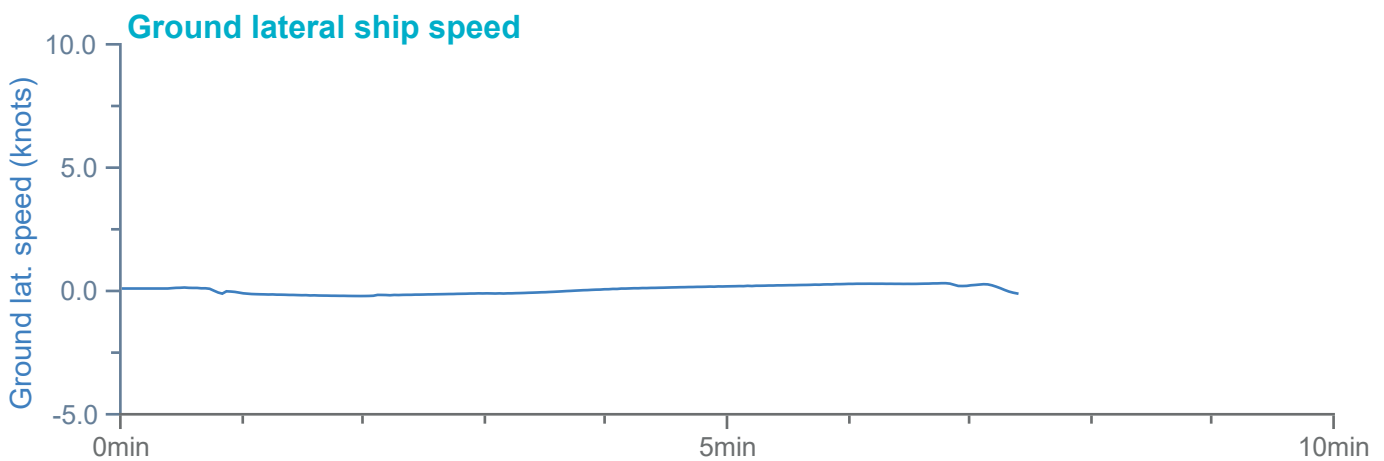
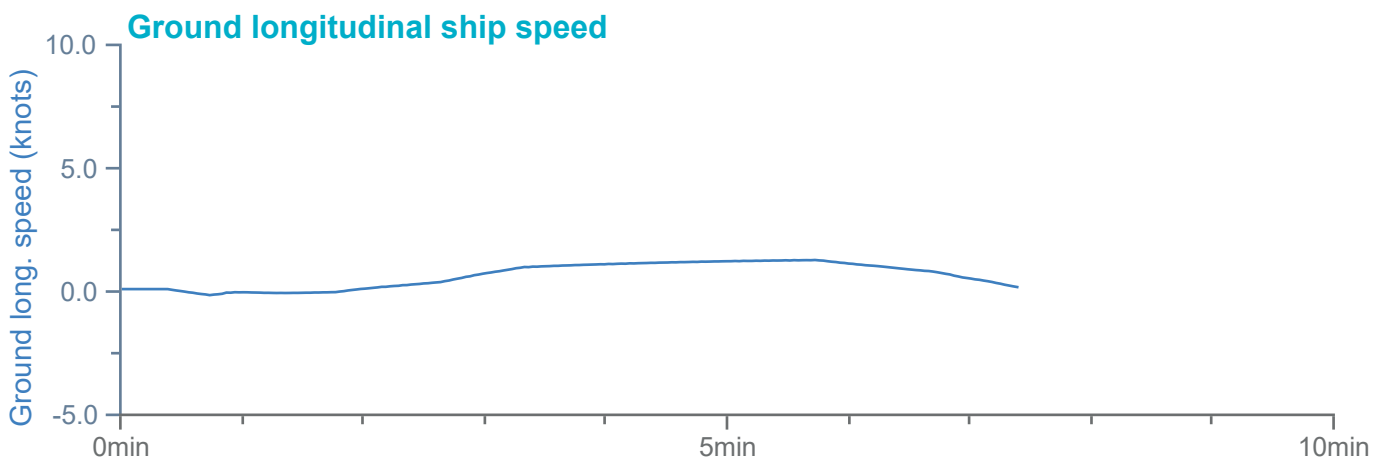
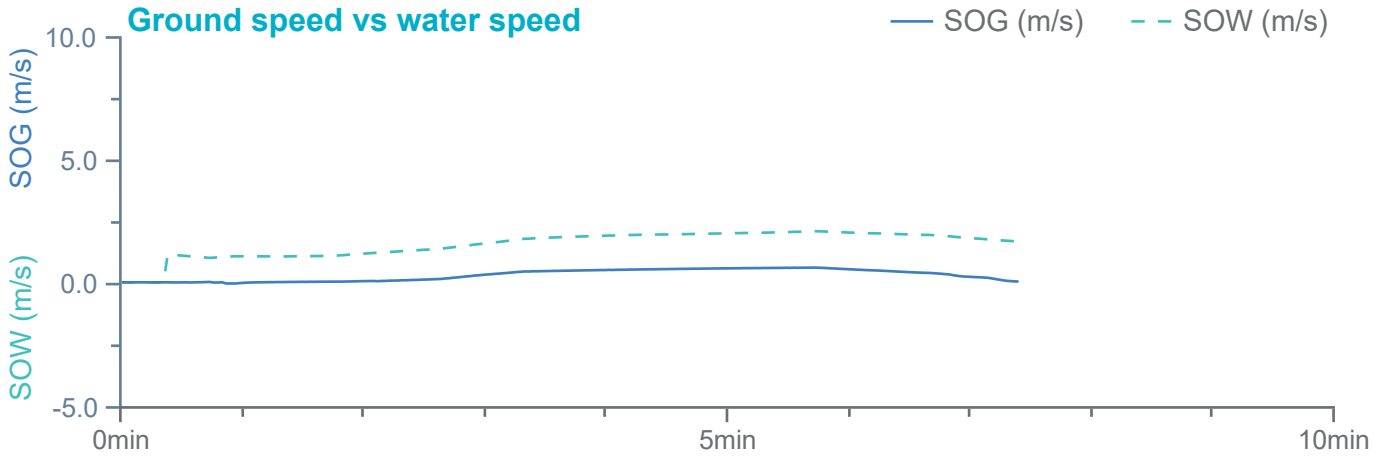


Summary

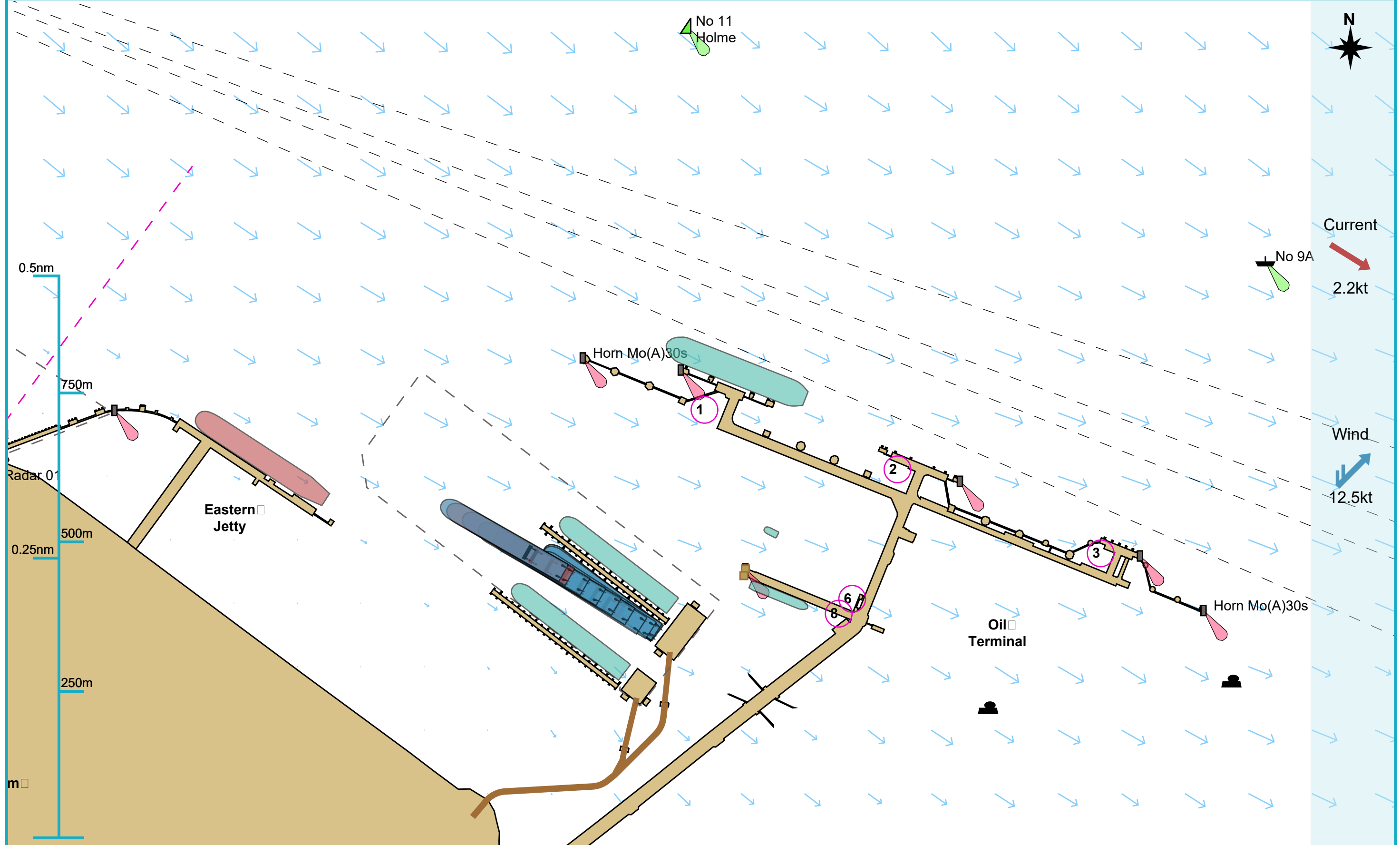
Environment

237m RoRo unnamed



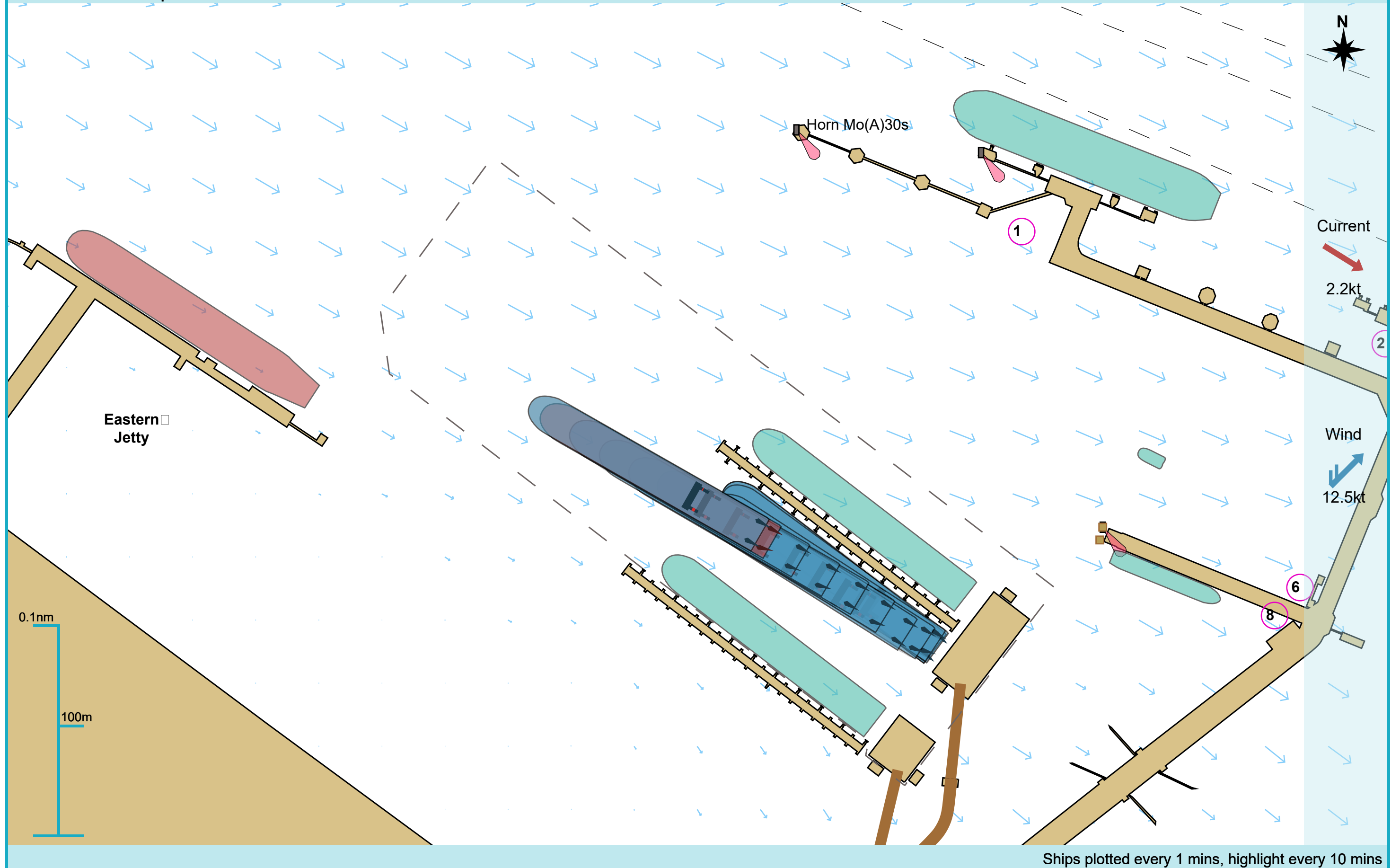


Manoeuvre track plot

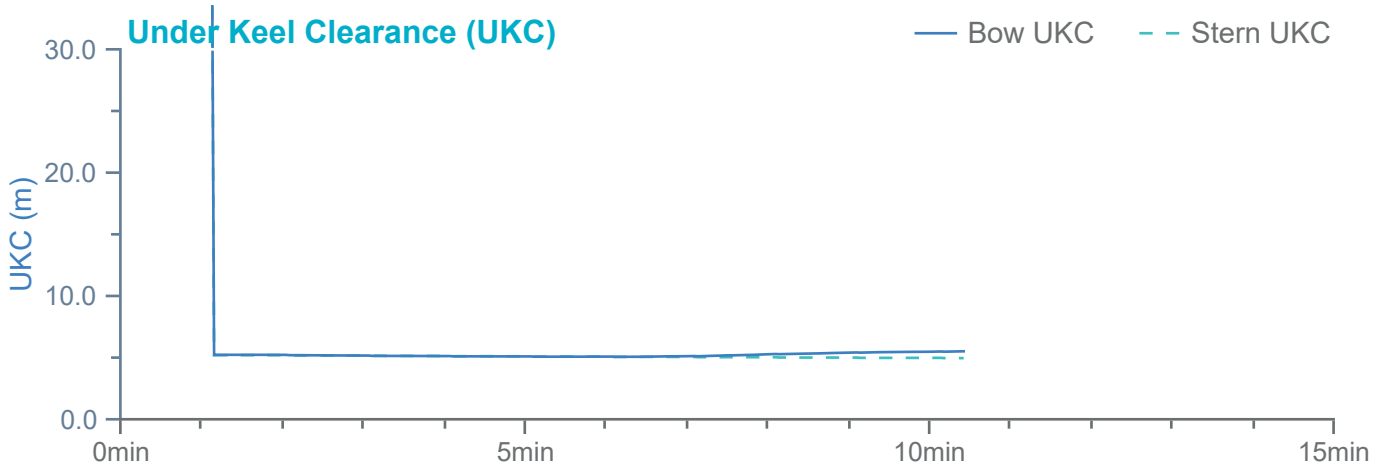
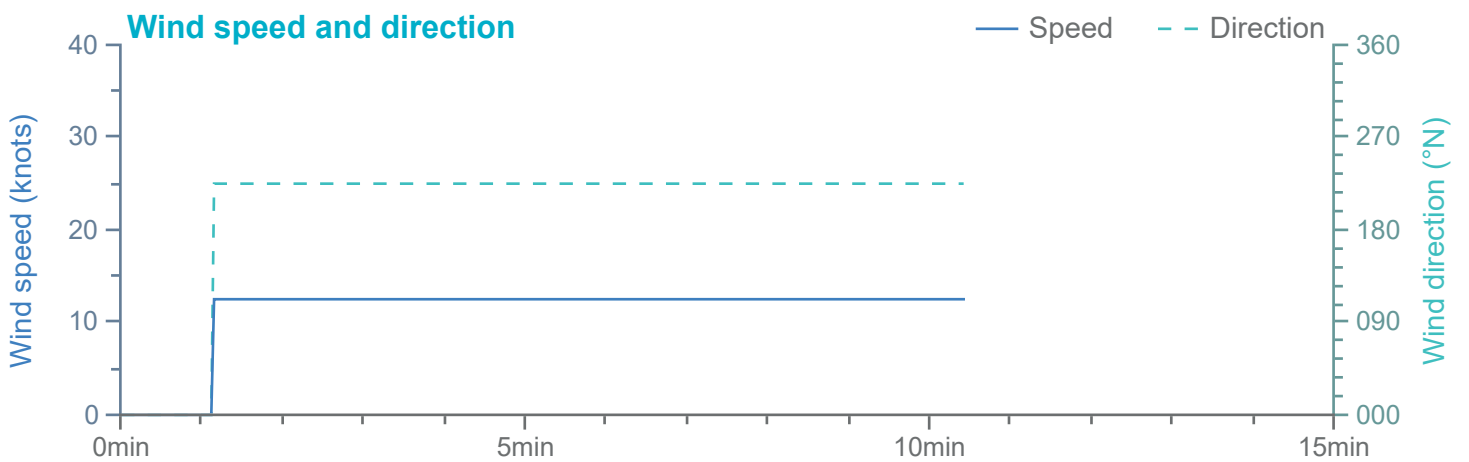
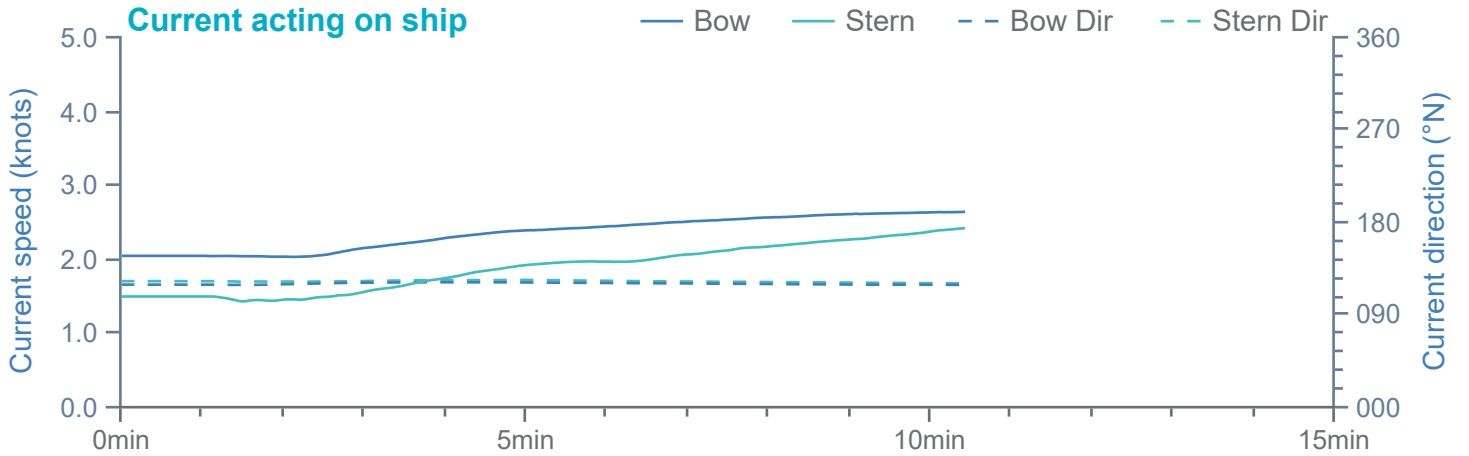


Ships plotted every 1 mins, highlight every 10 mins

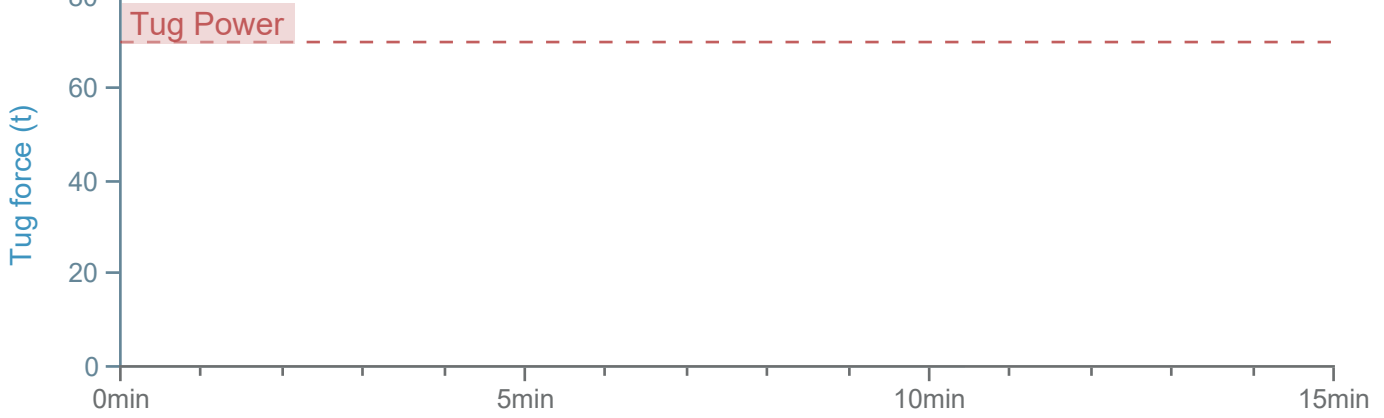
Manoeuvre track plot



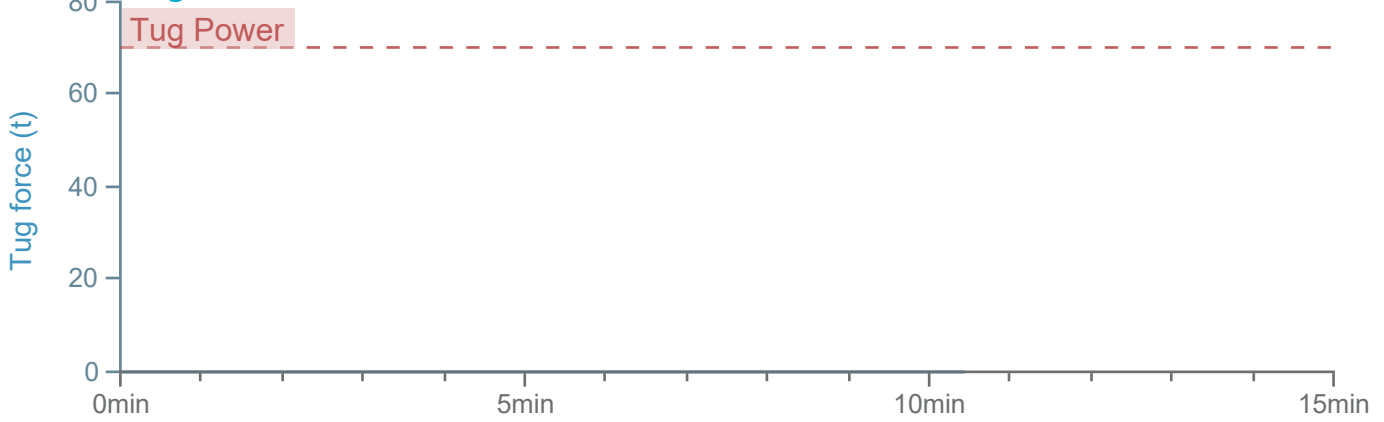
Ships plotted every 1 mins, highlight every 10 mins



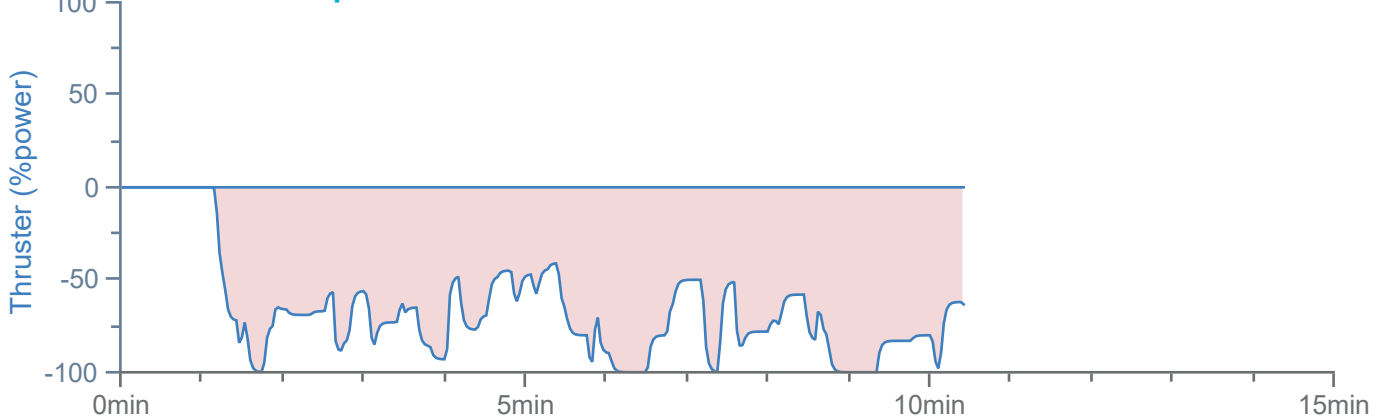
Tug 1 forces

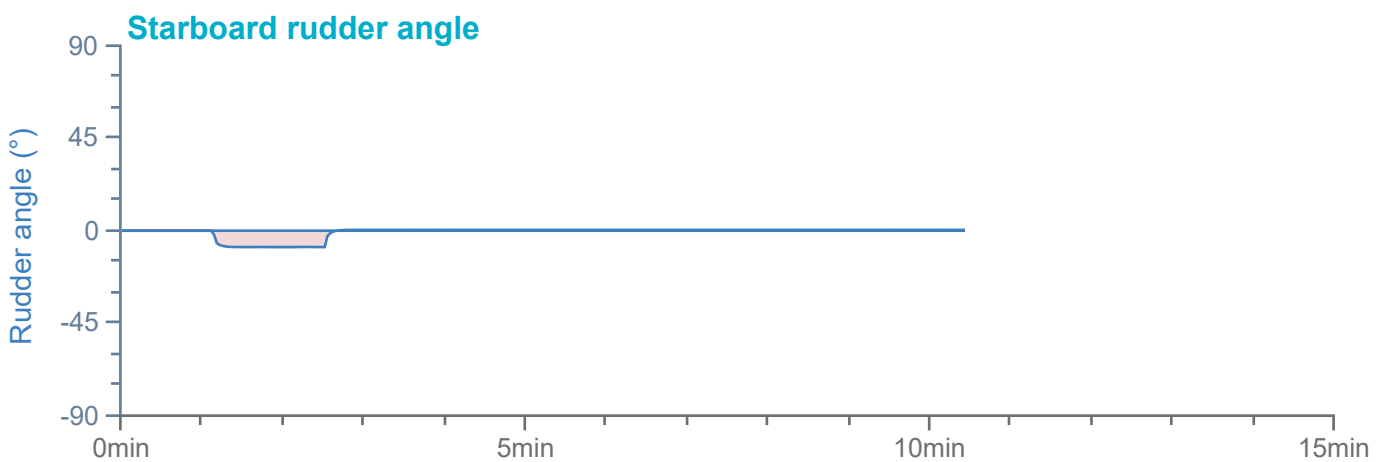
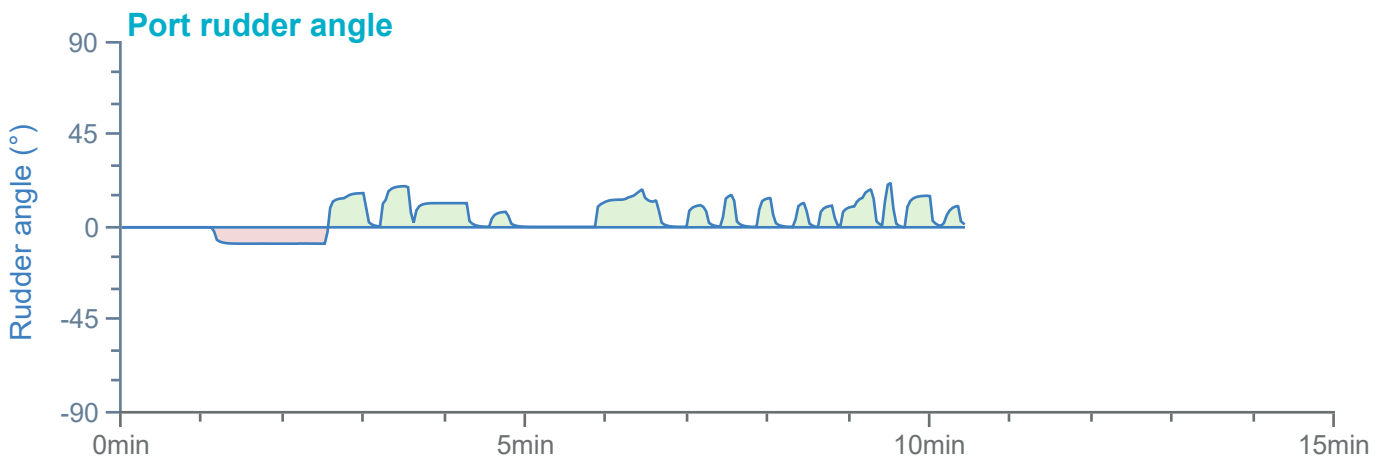
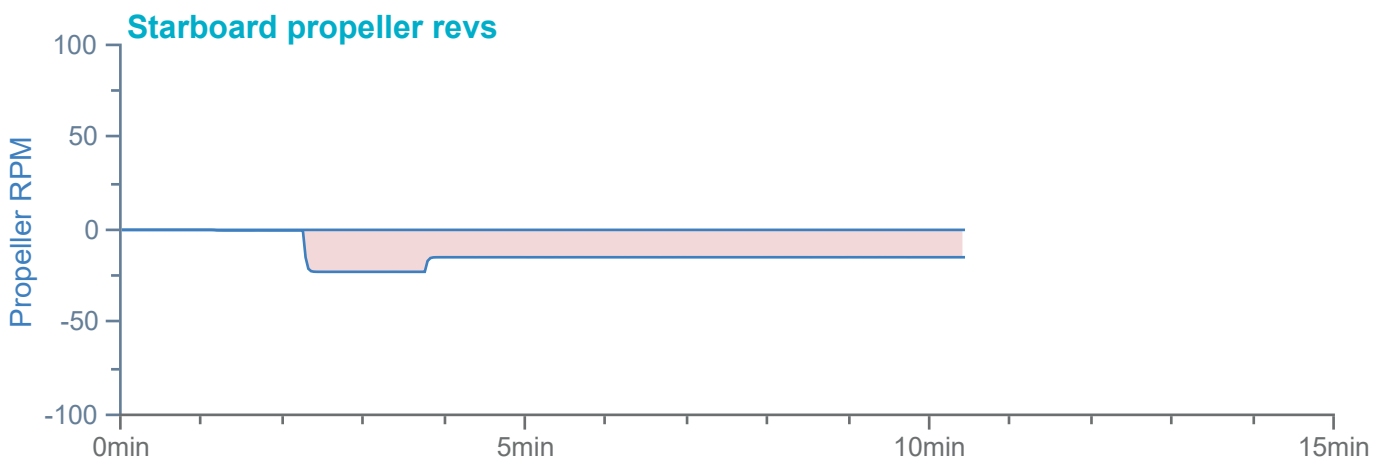
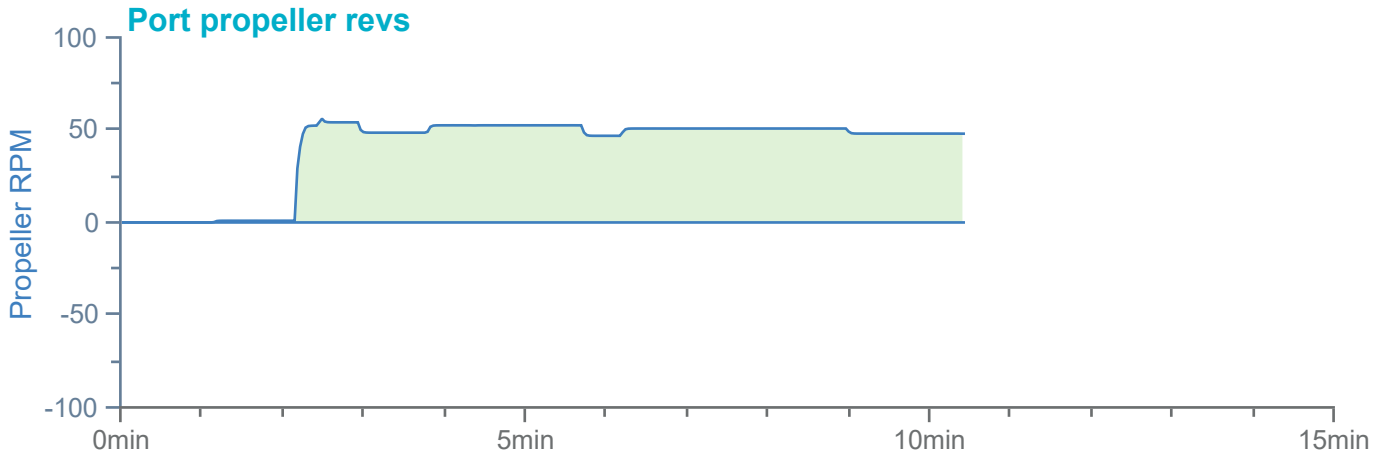


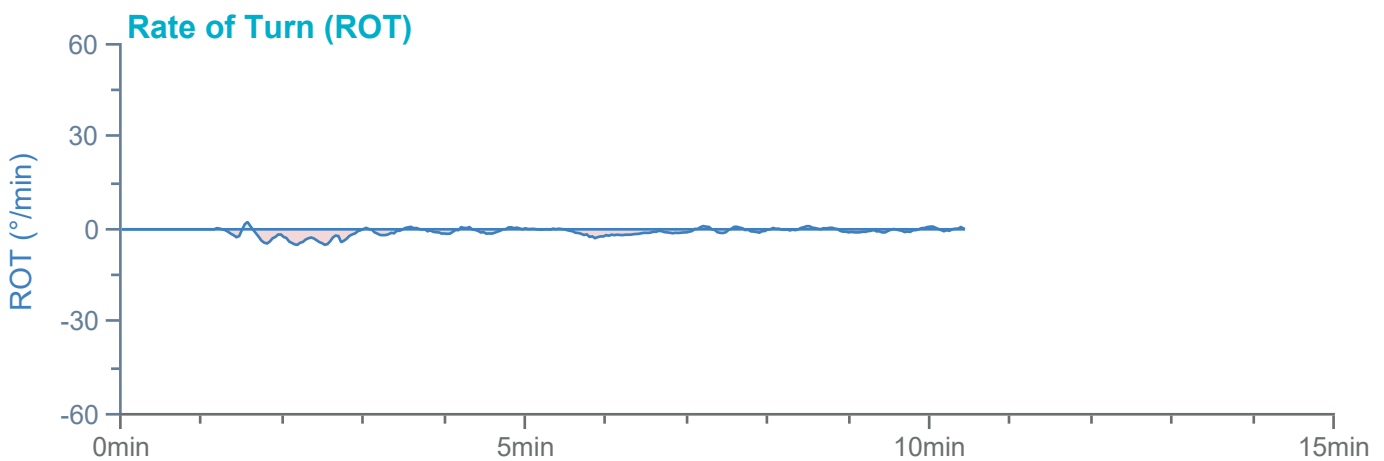
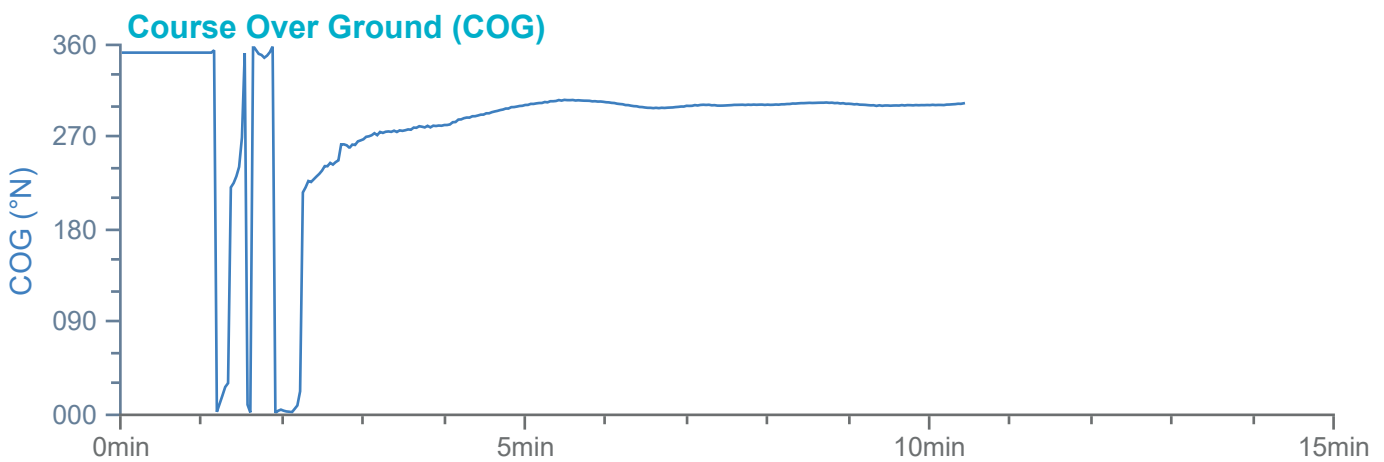
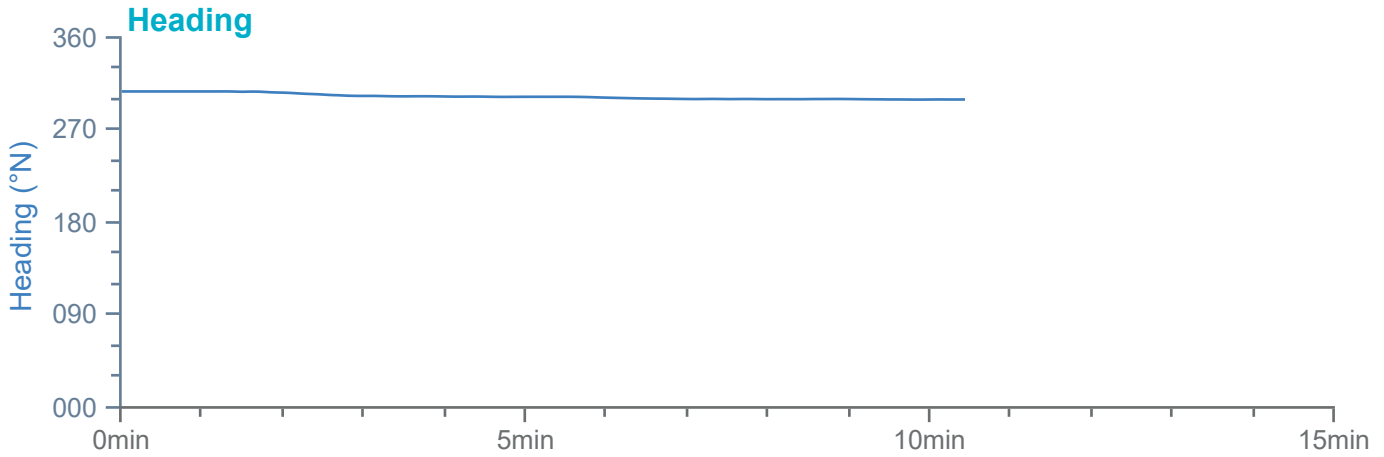
Tug 2 forces

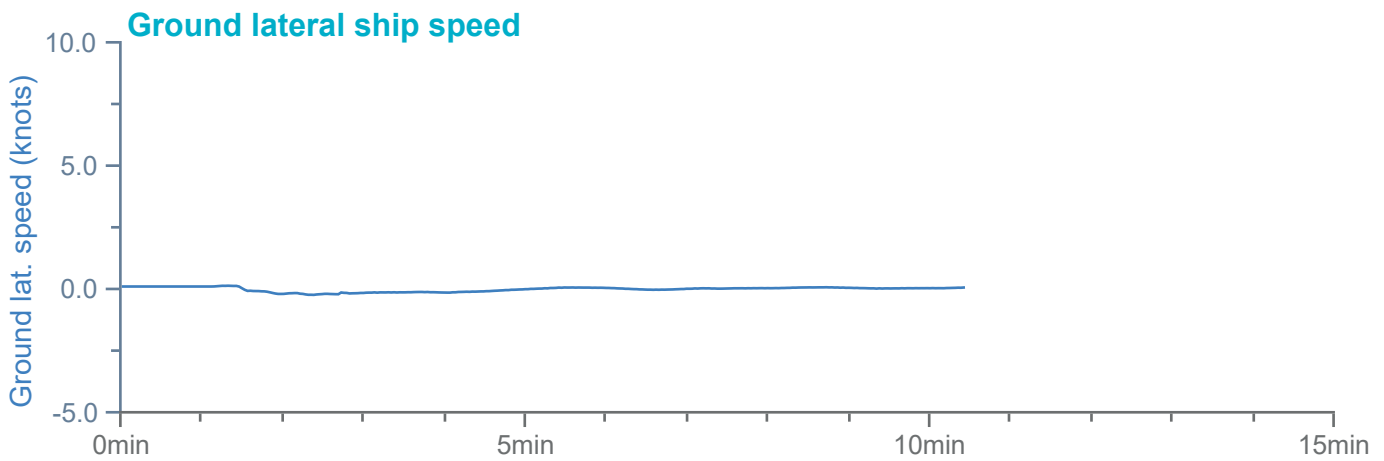
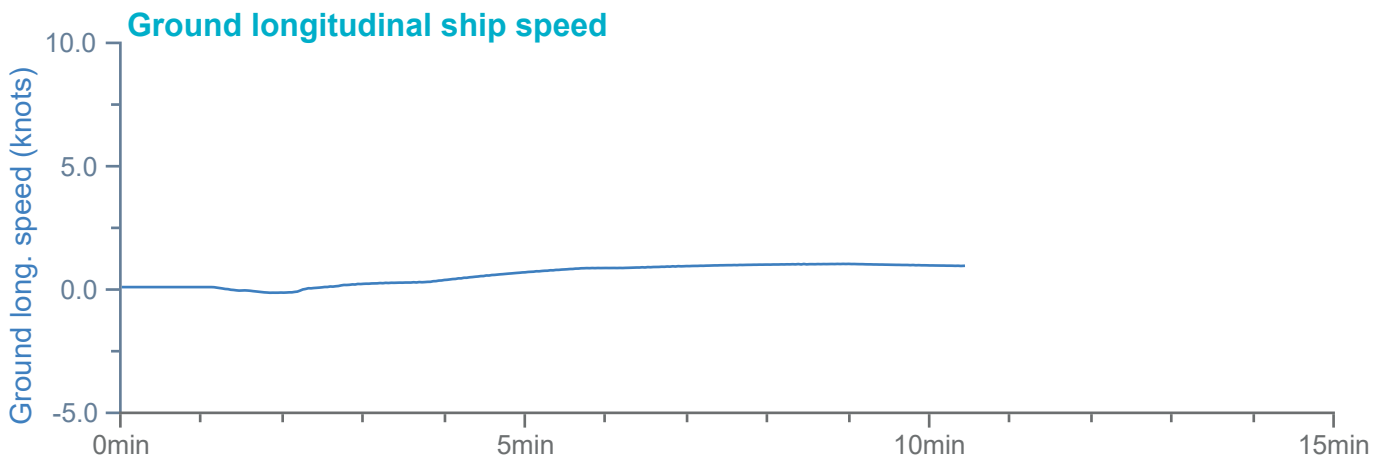
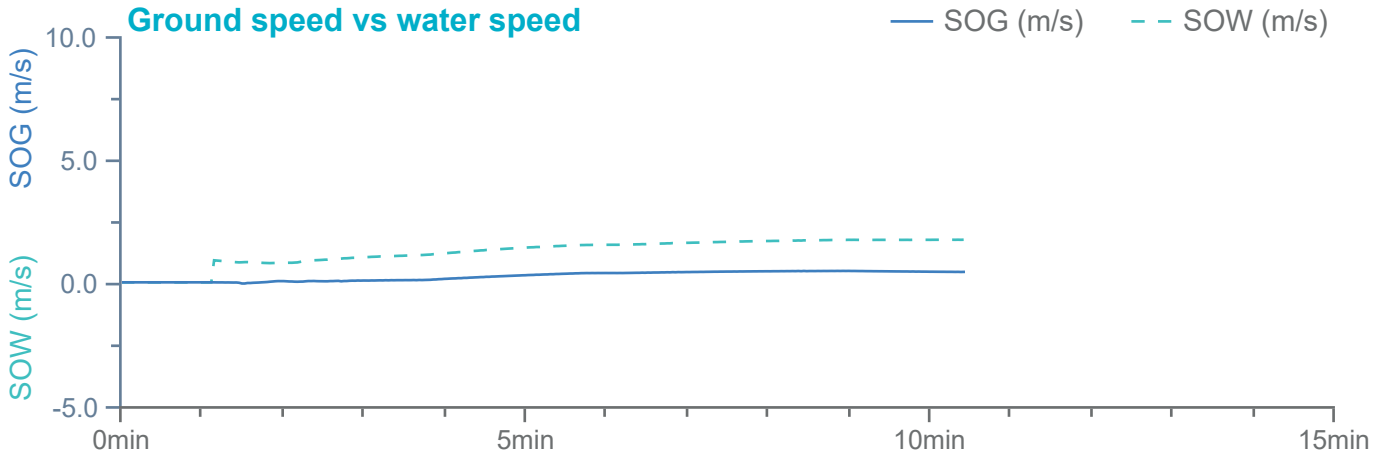


Bow thruster power

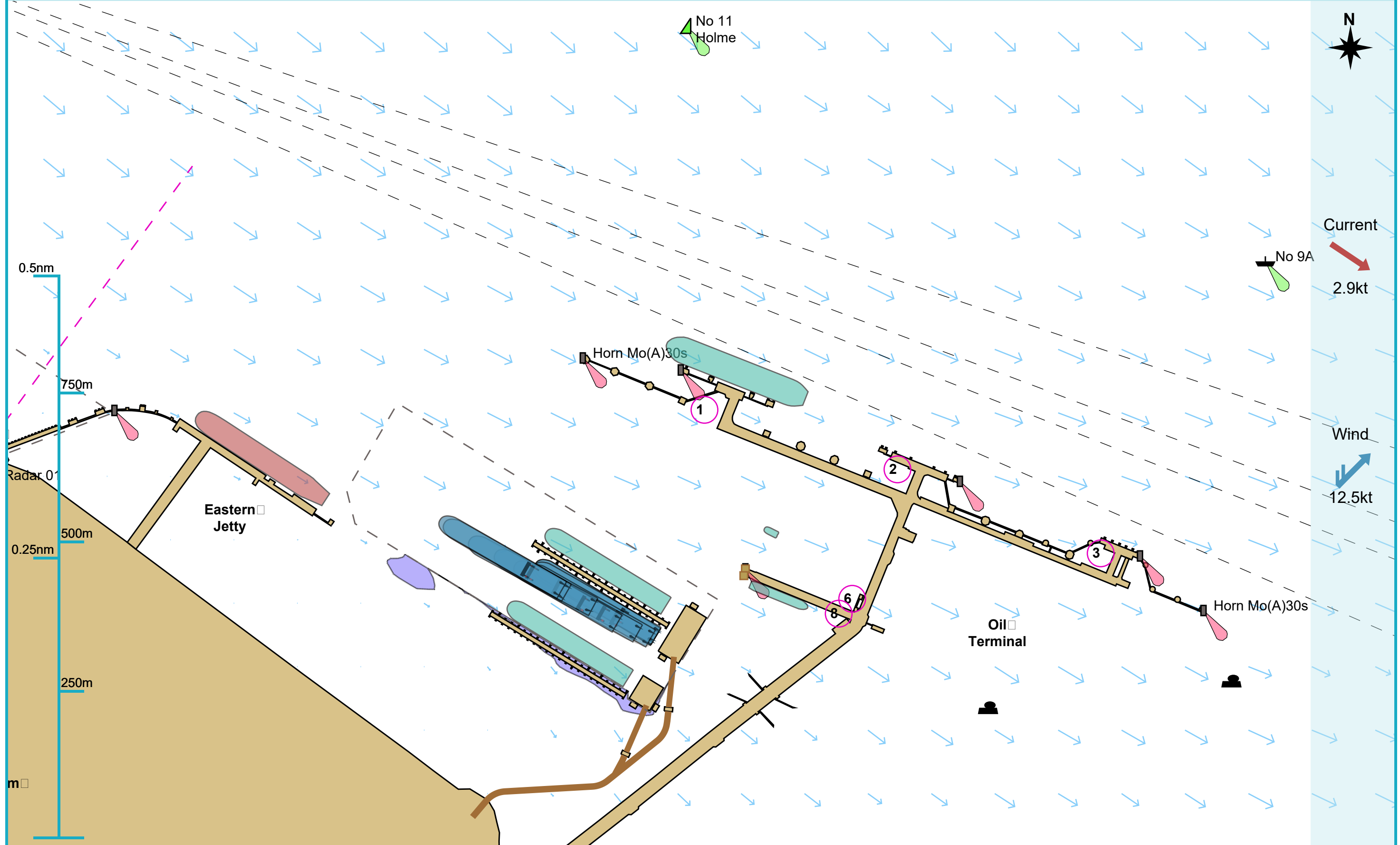






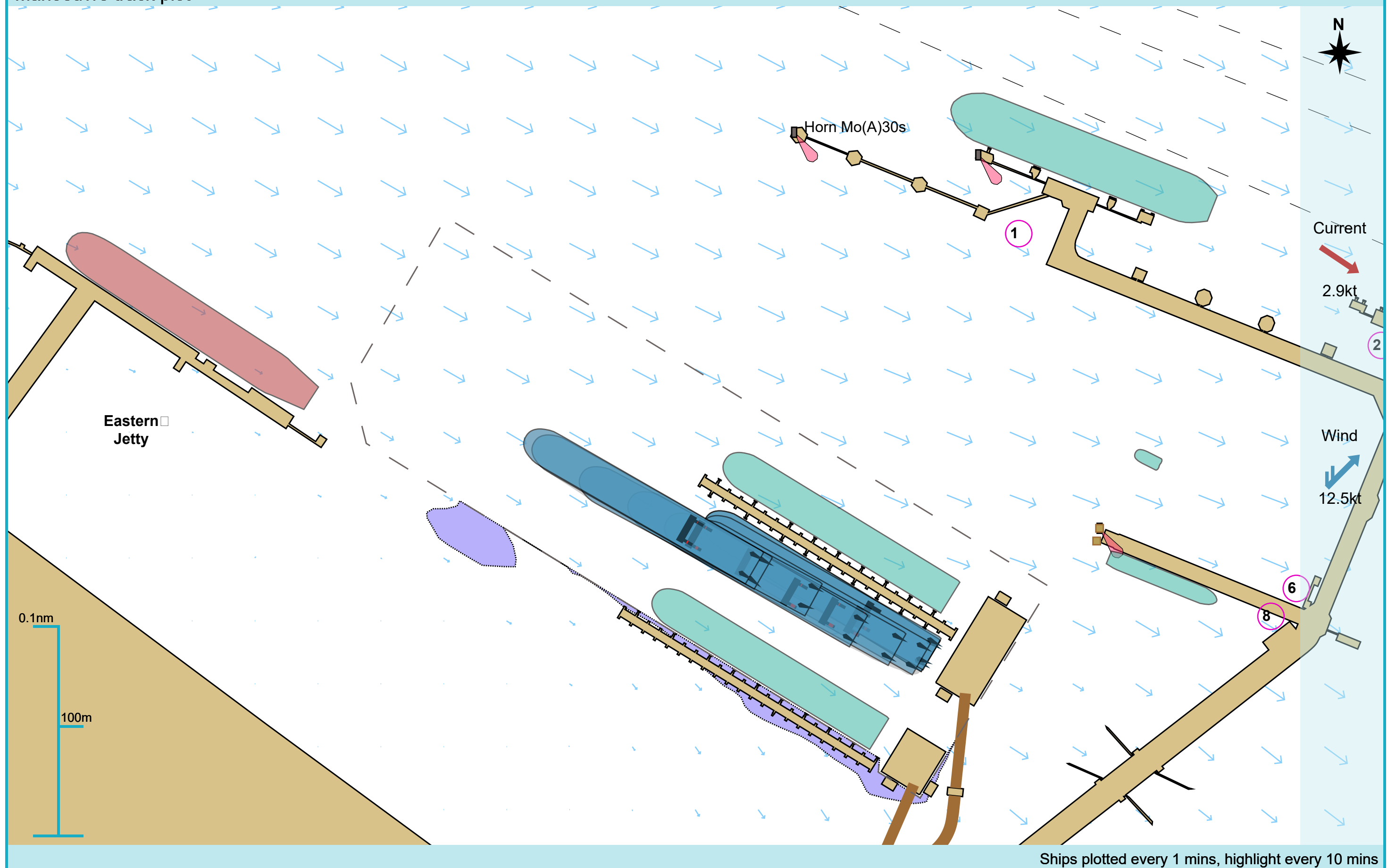


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

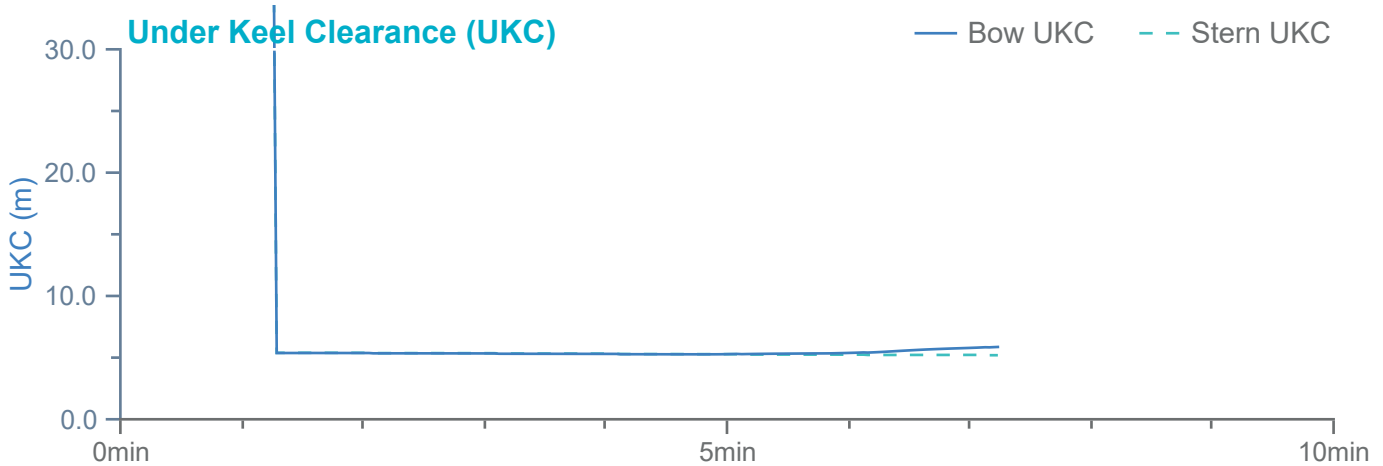
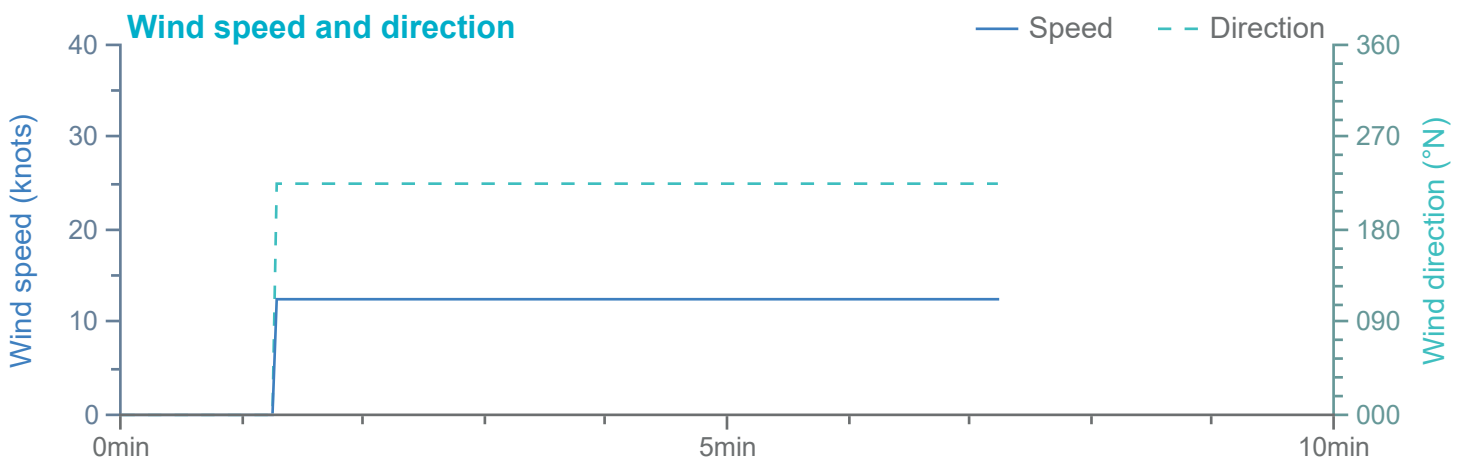
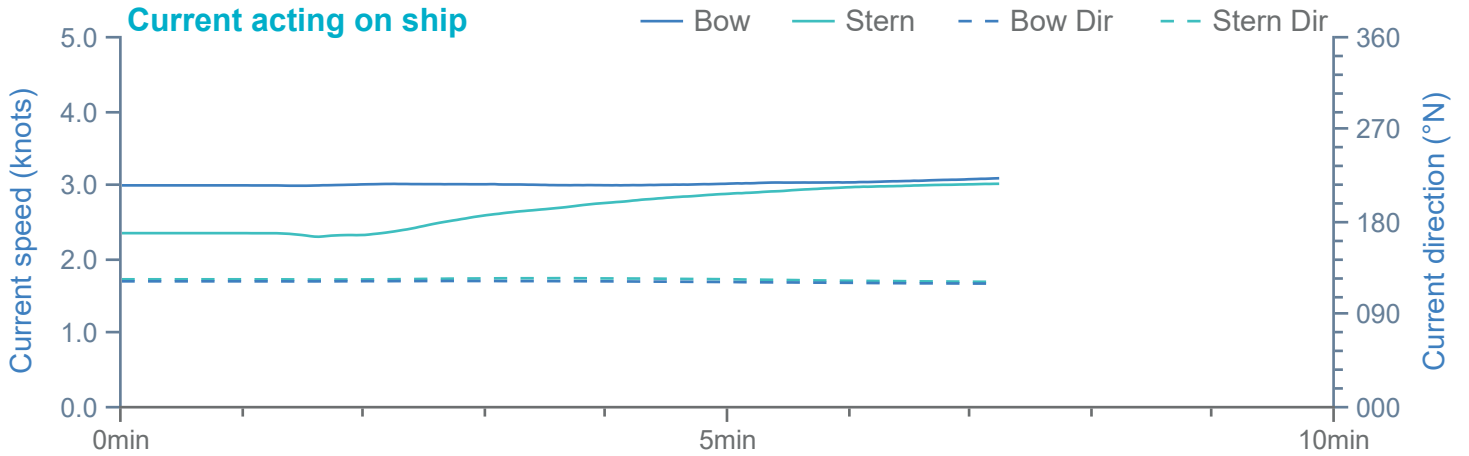


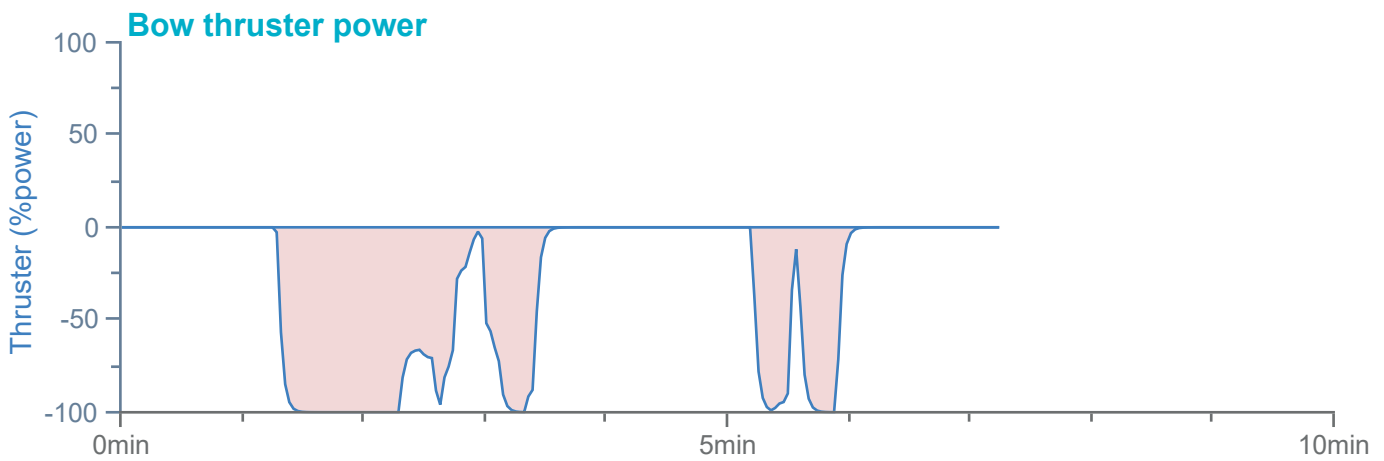
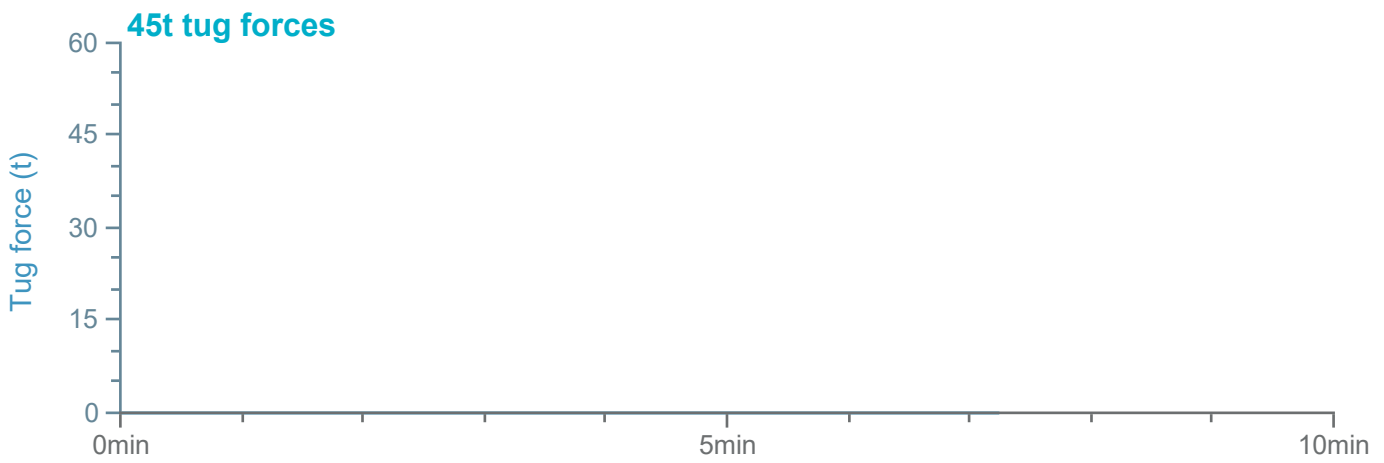
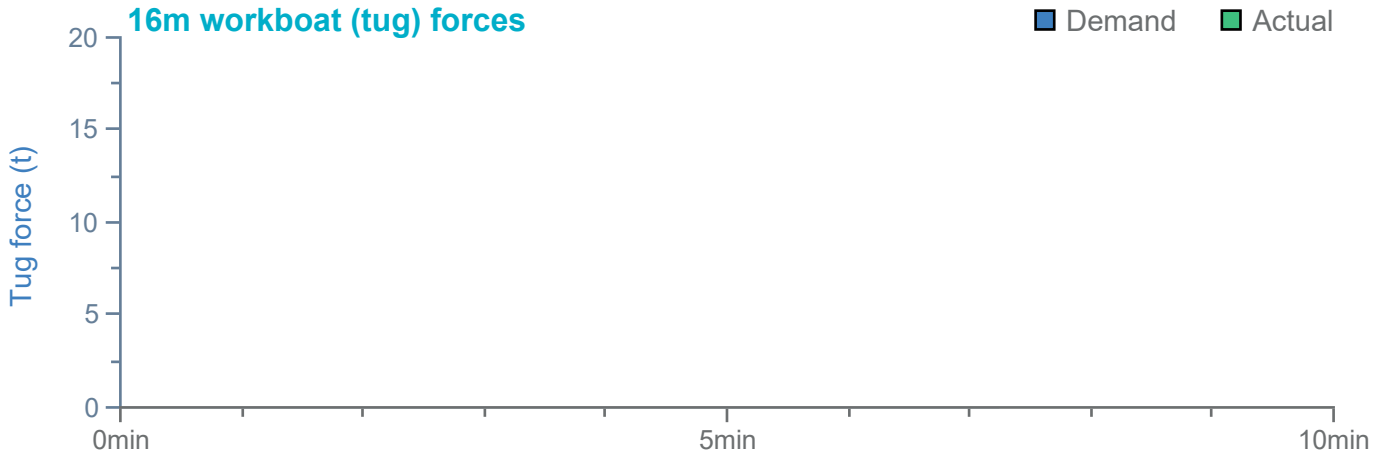
Ships plotted every 1 mins, highlight every 10 mins

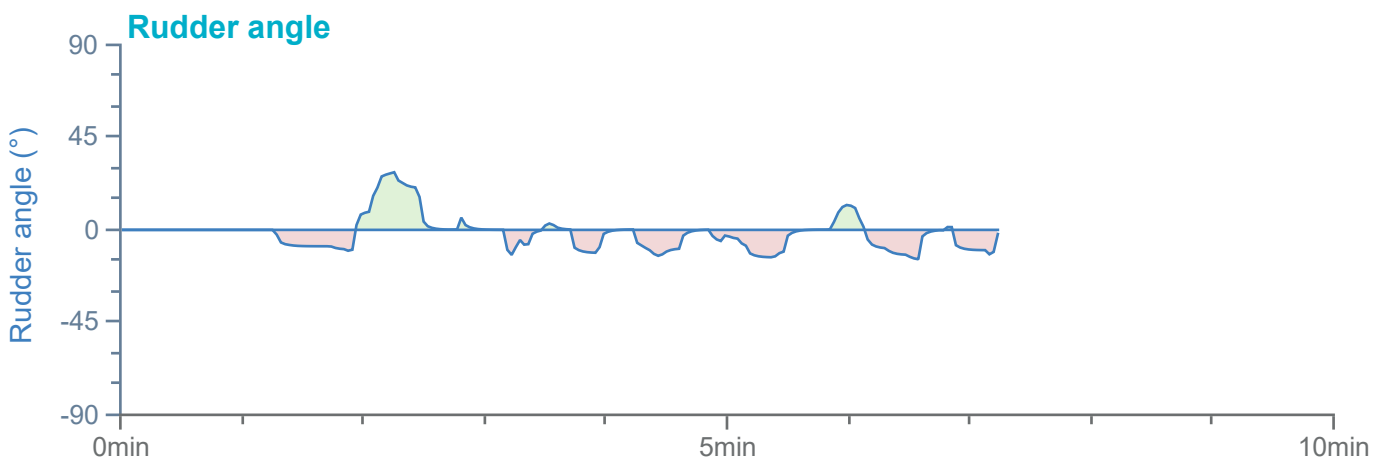
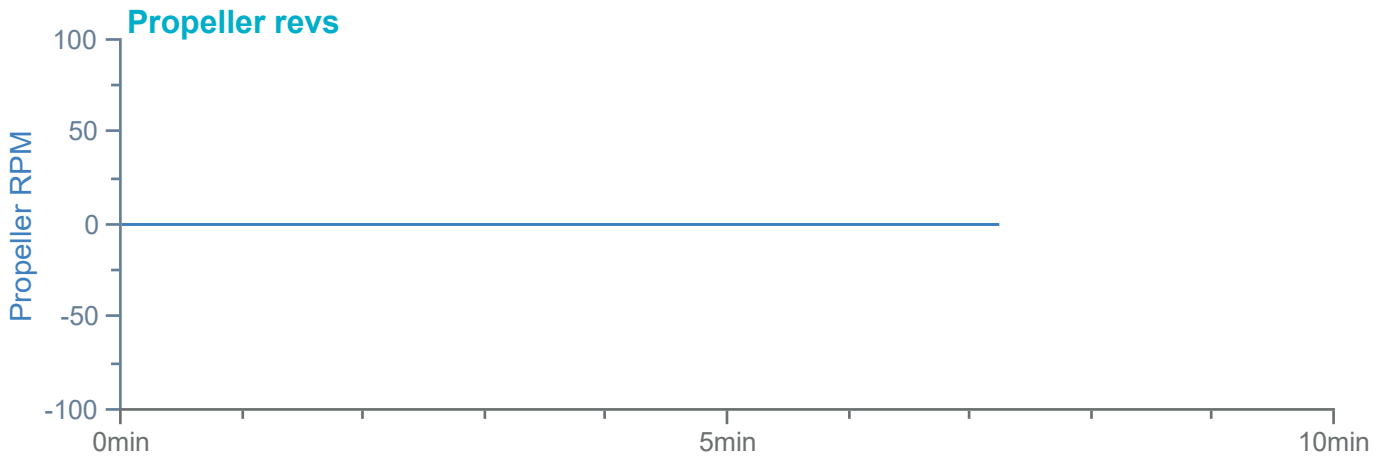
Summary

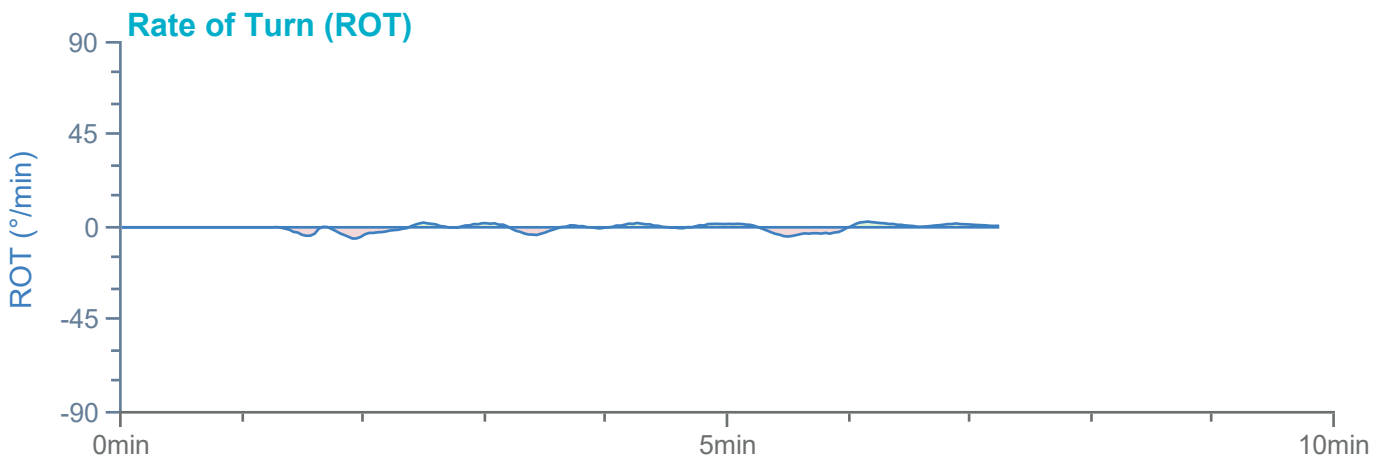
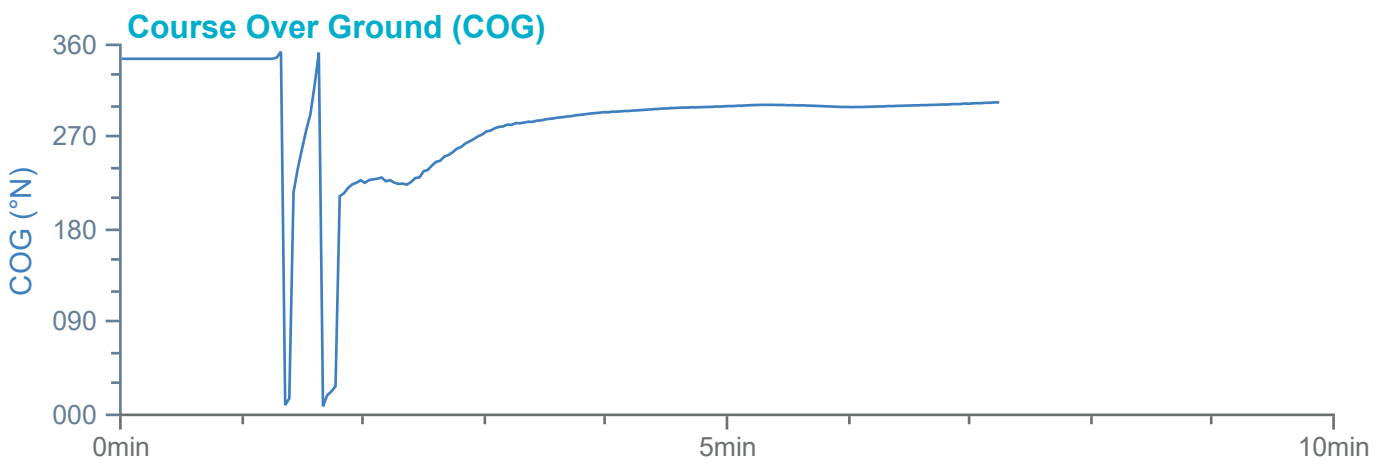
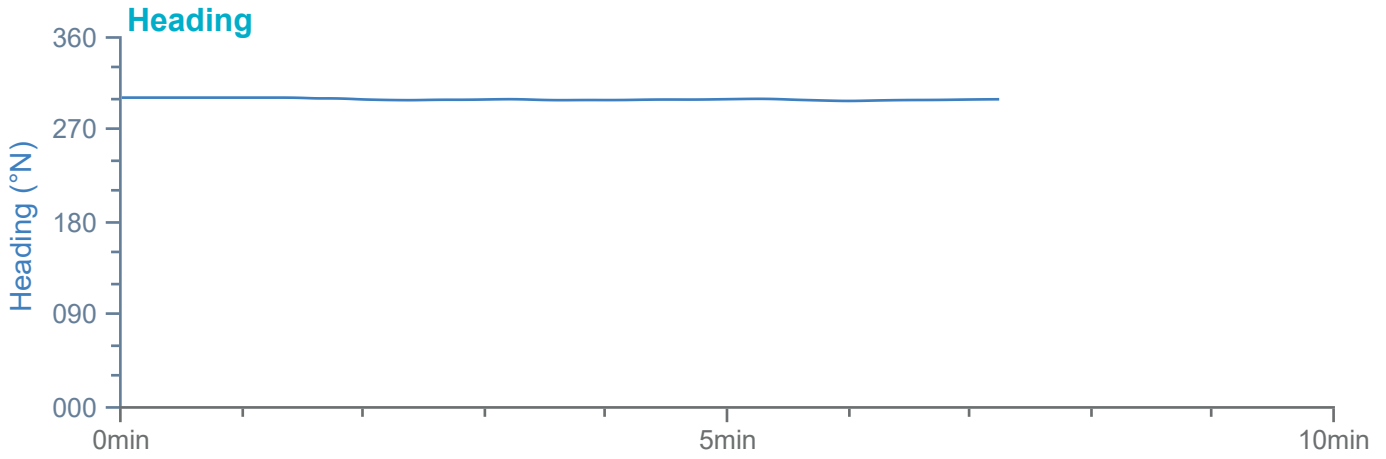
Environment

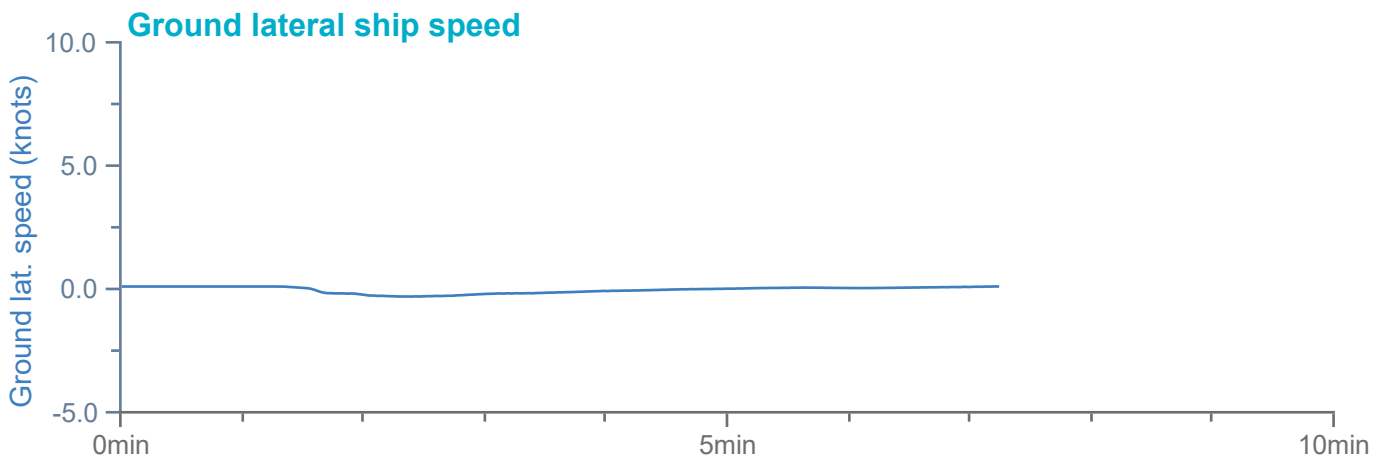
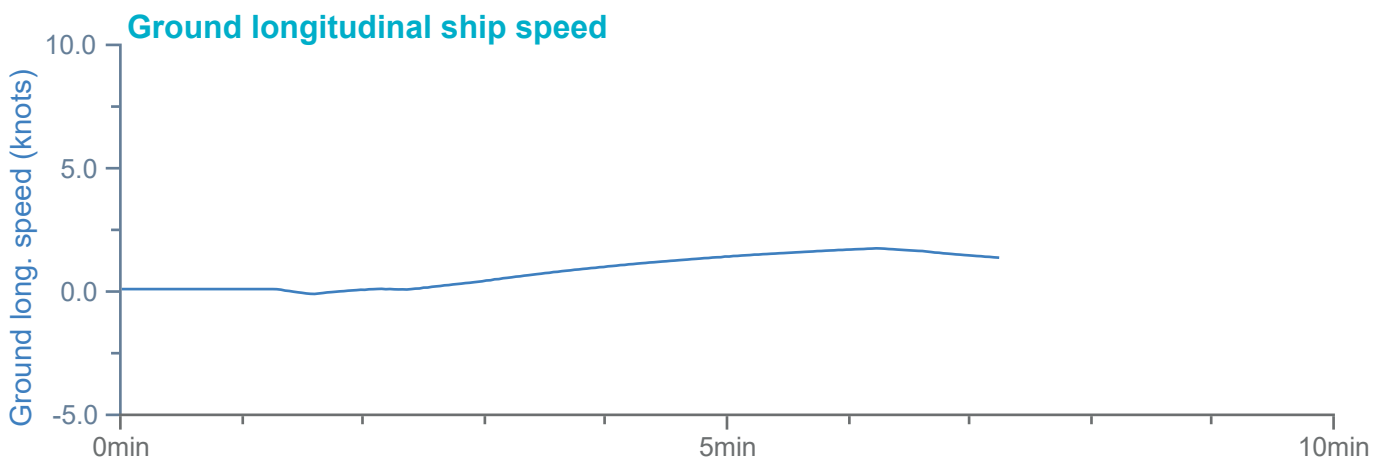
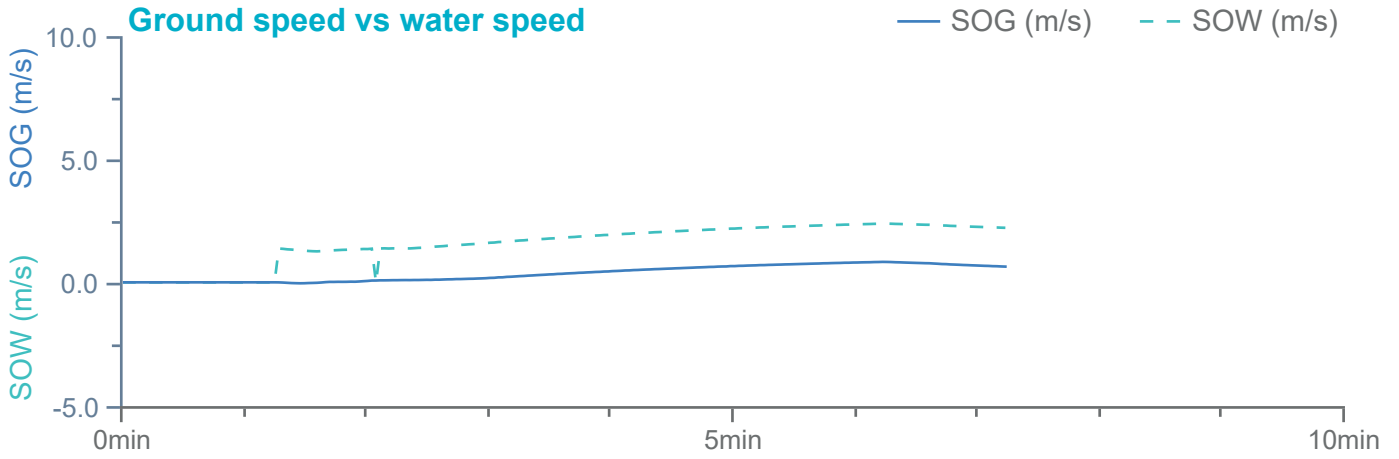
237m RoRo unnamed



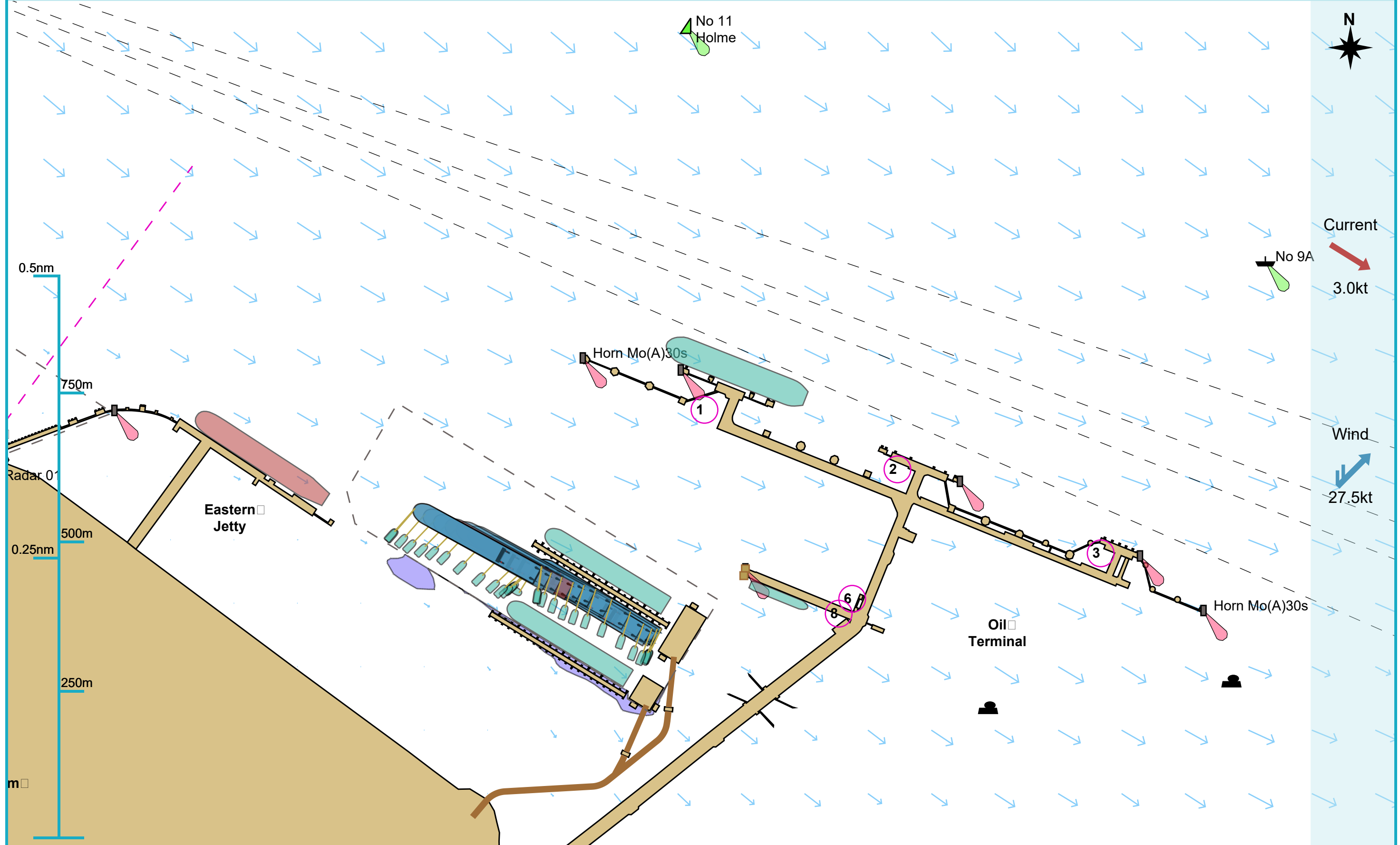






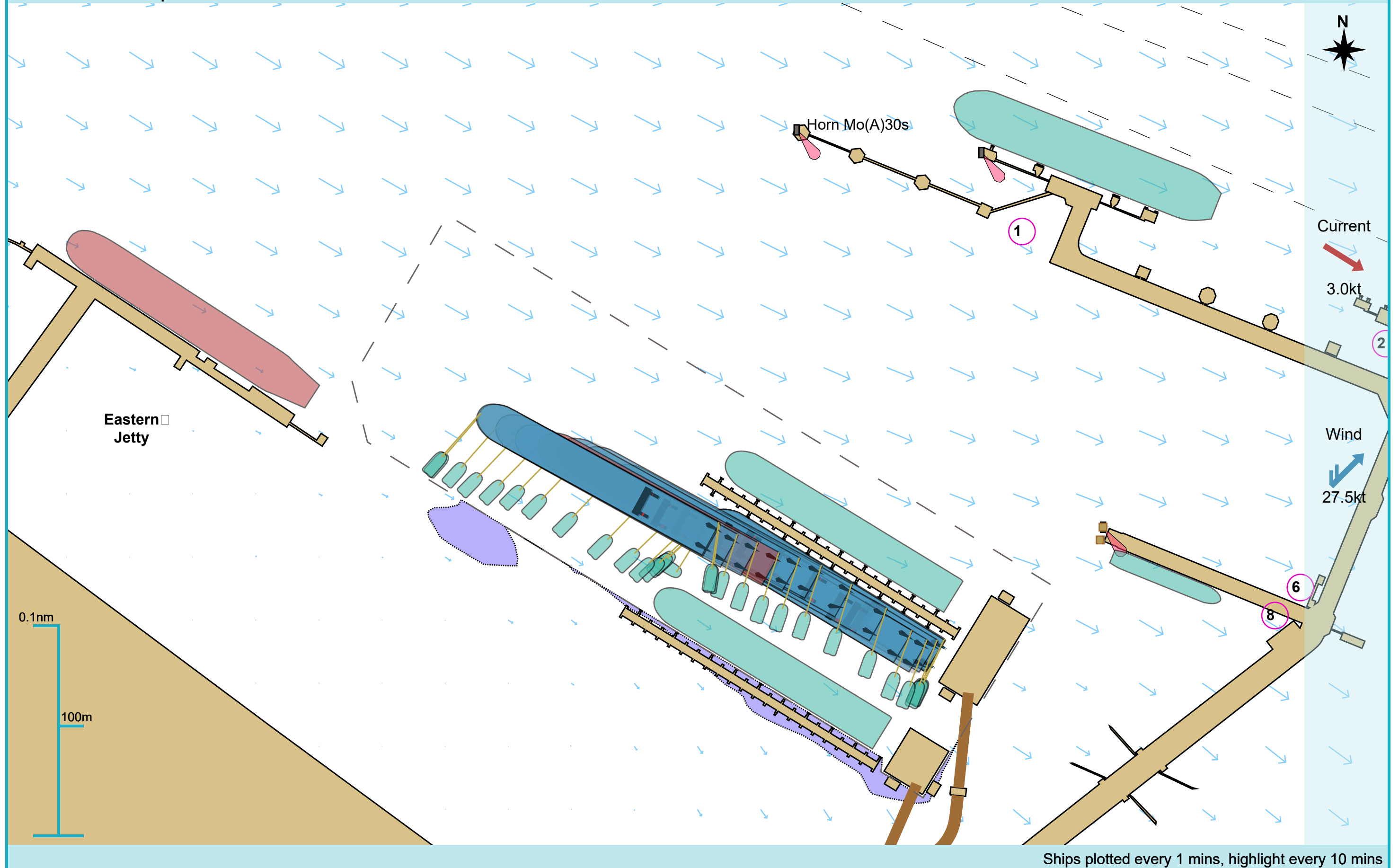


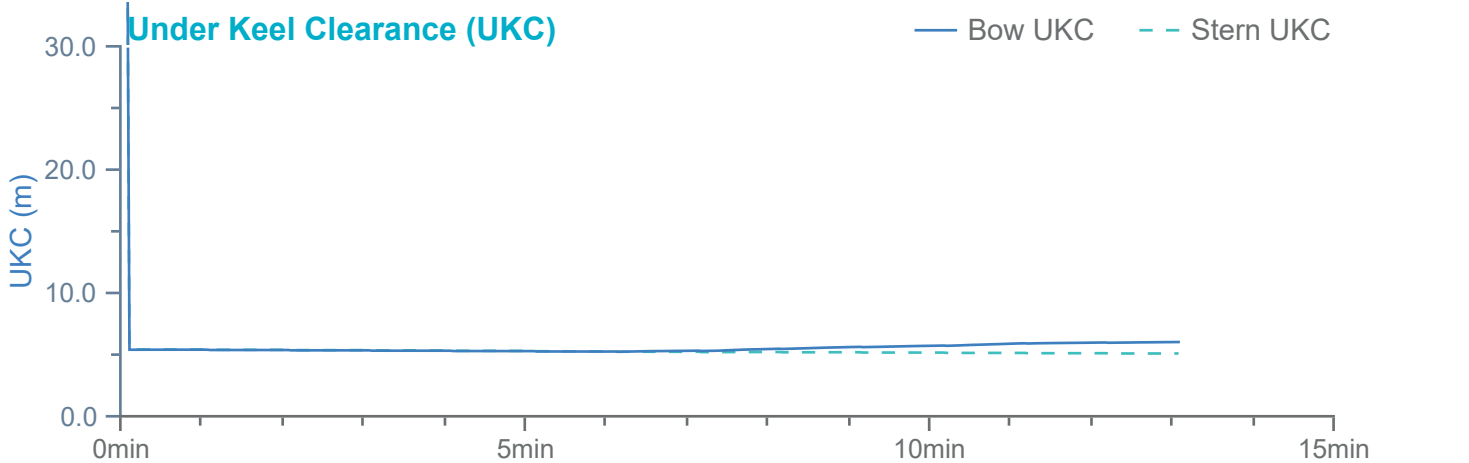
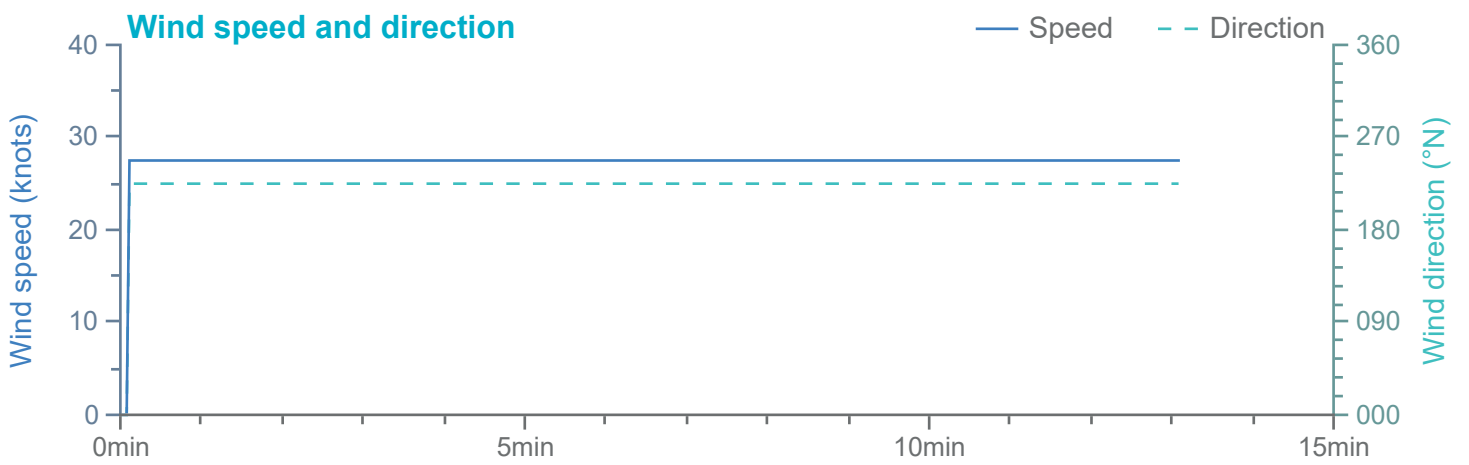
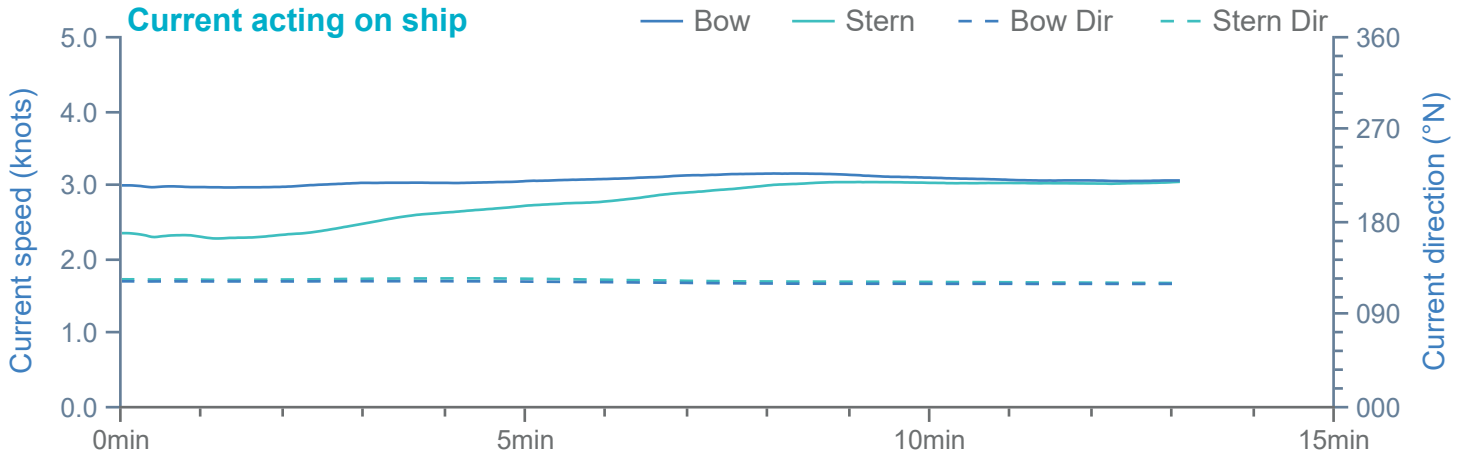
Manoeuvre track plot



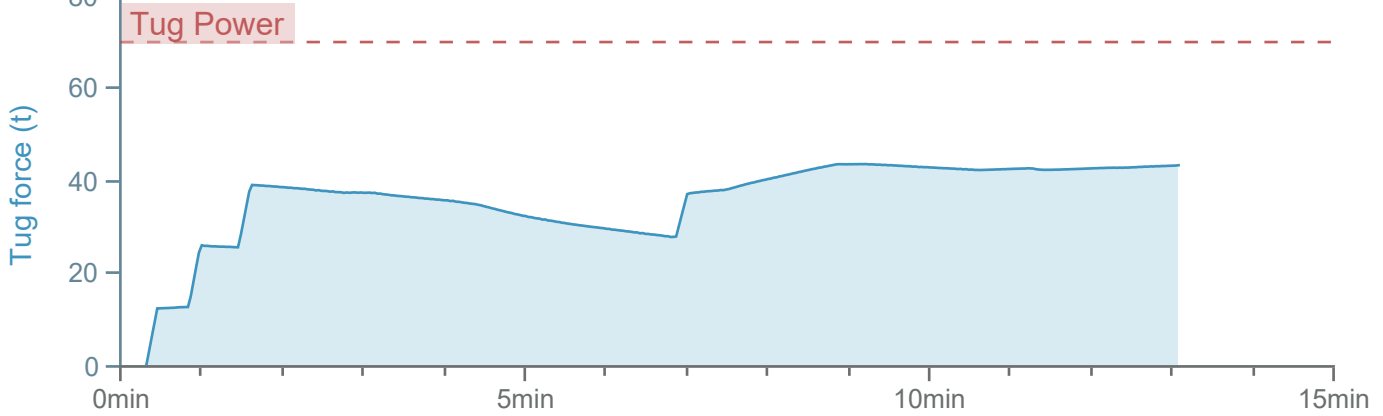
Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

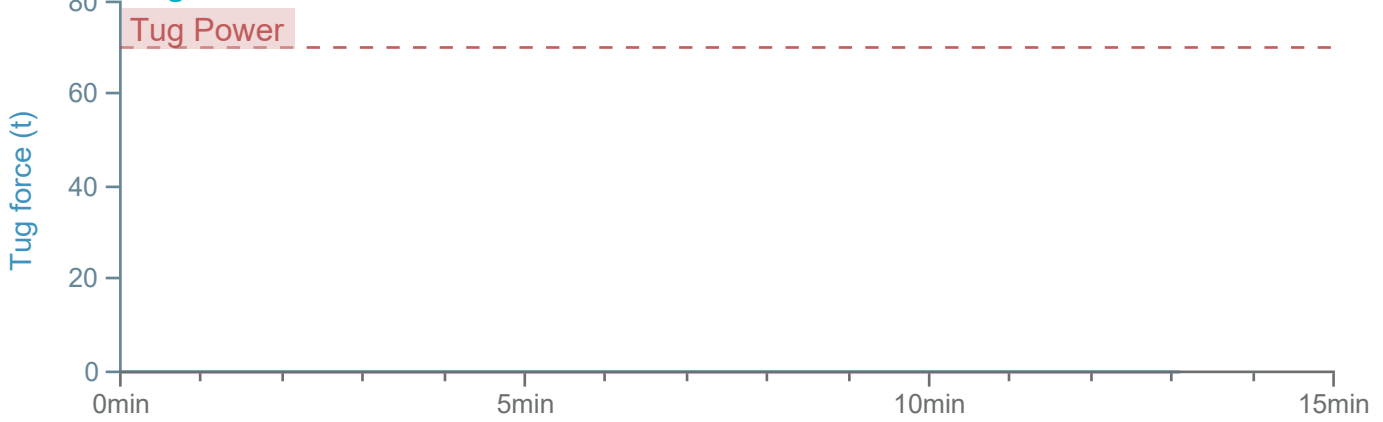




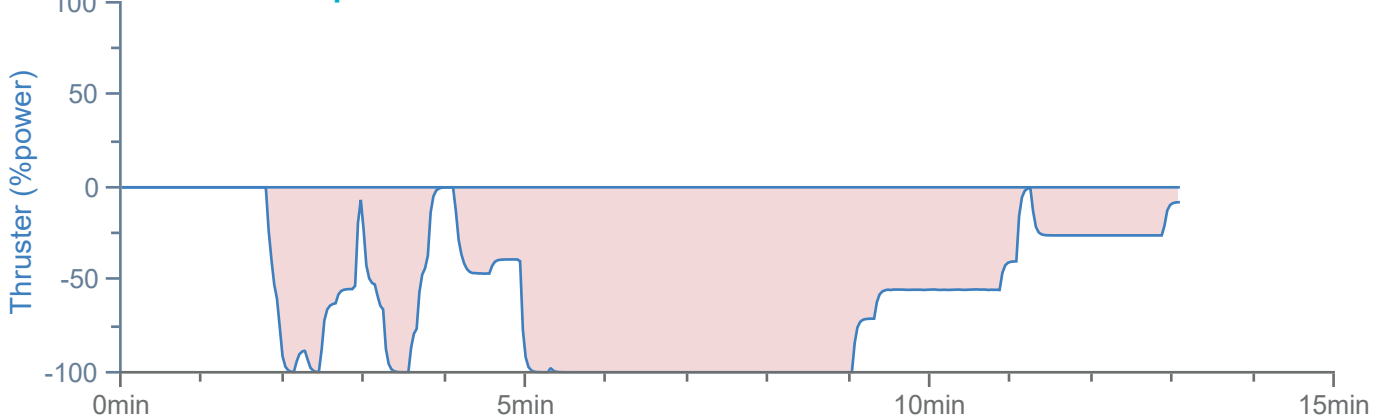
Tug 1 forces

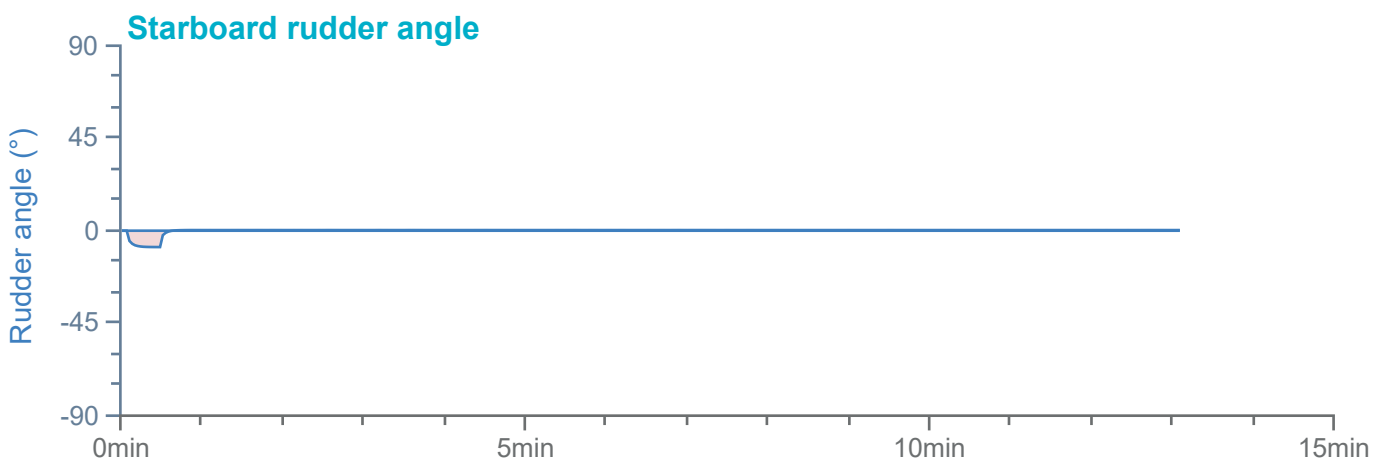
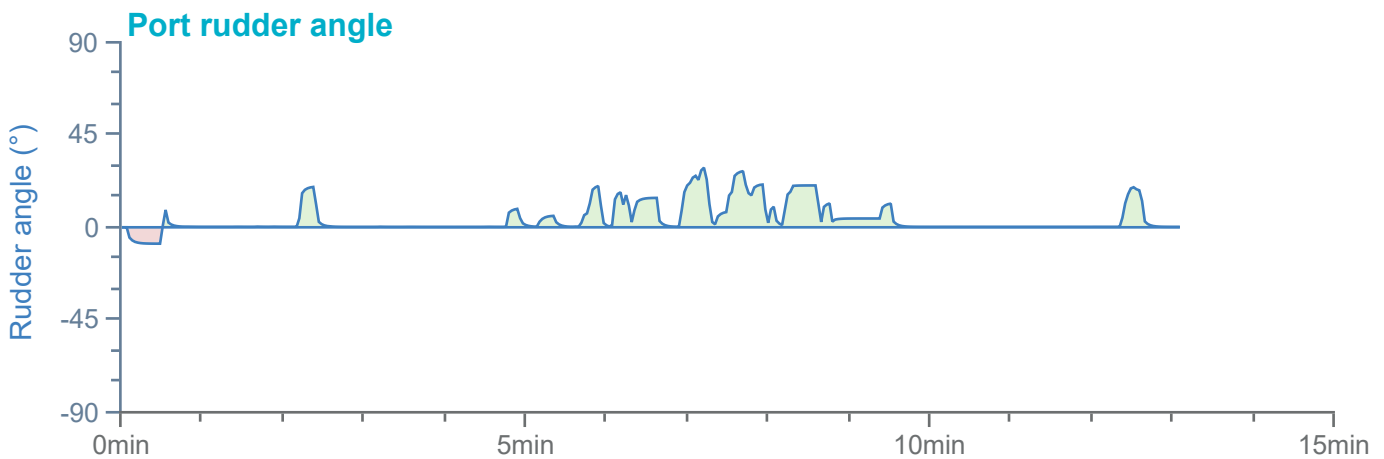
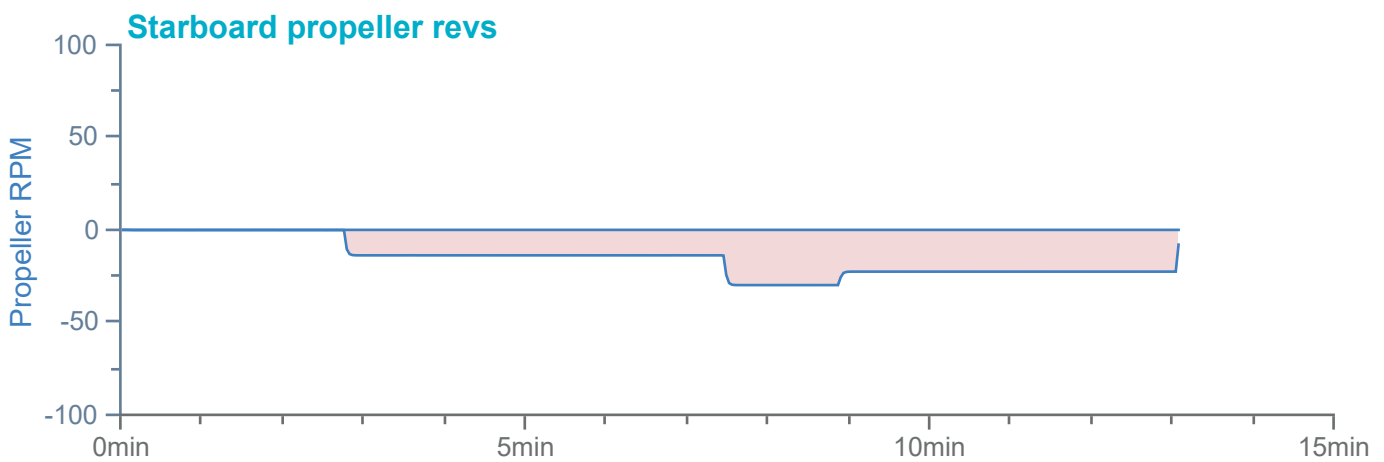
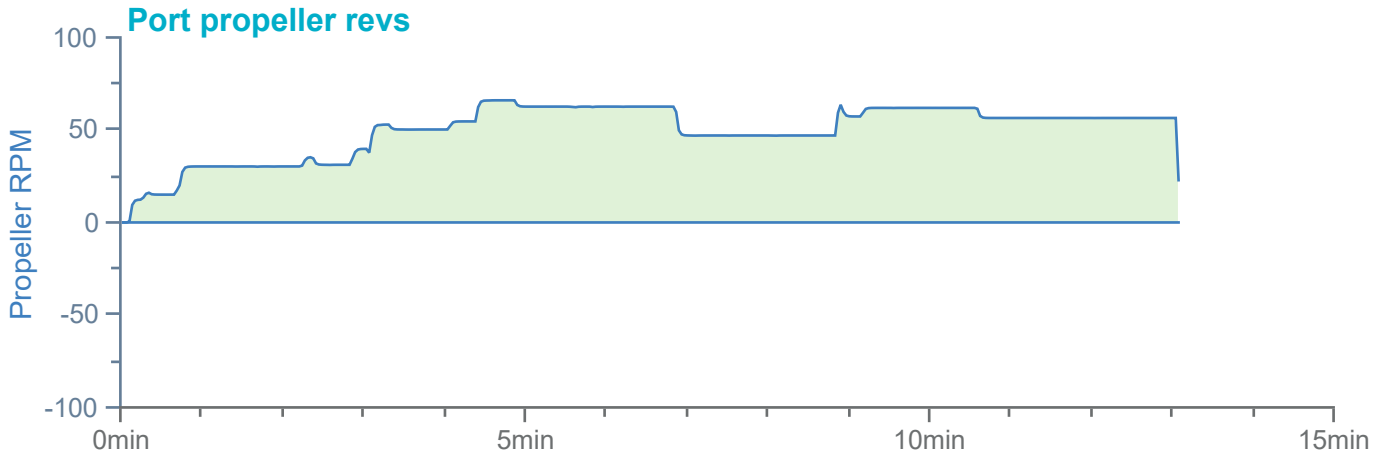


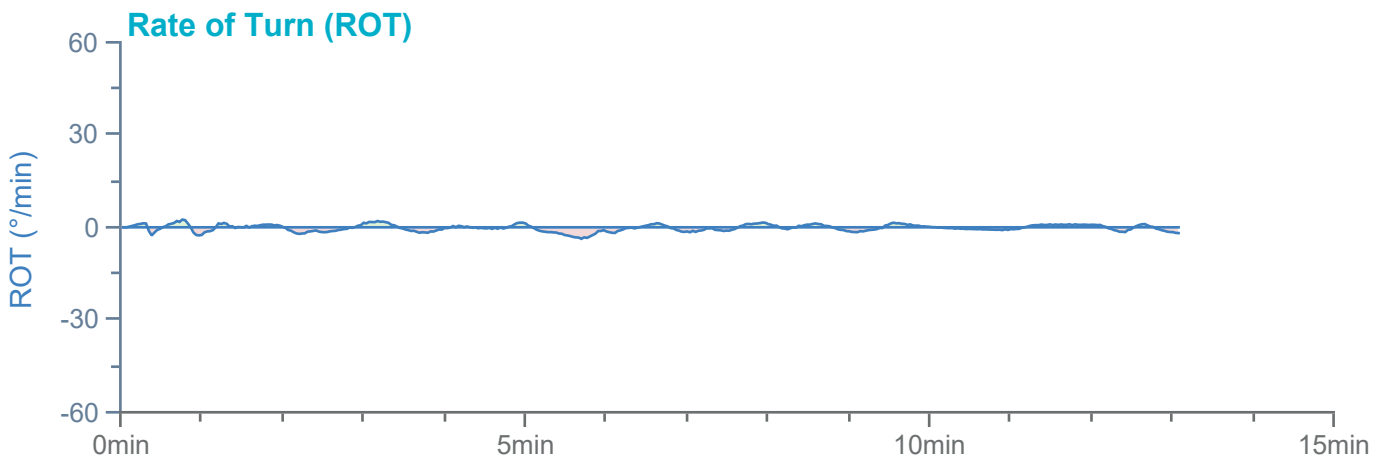
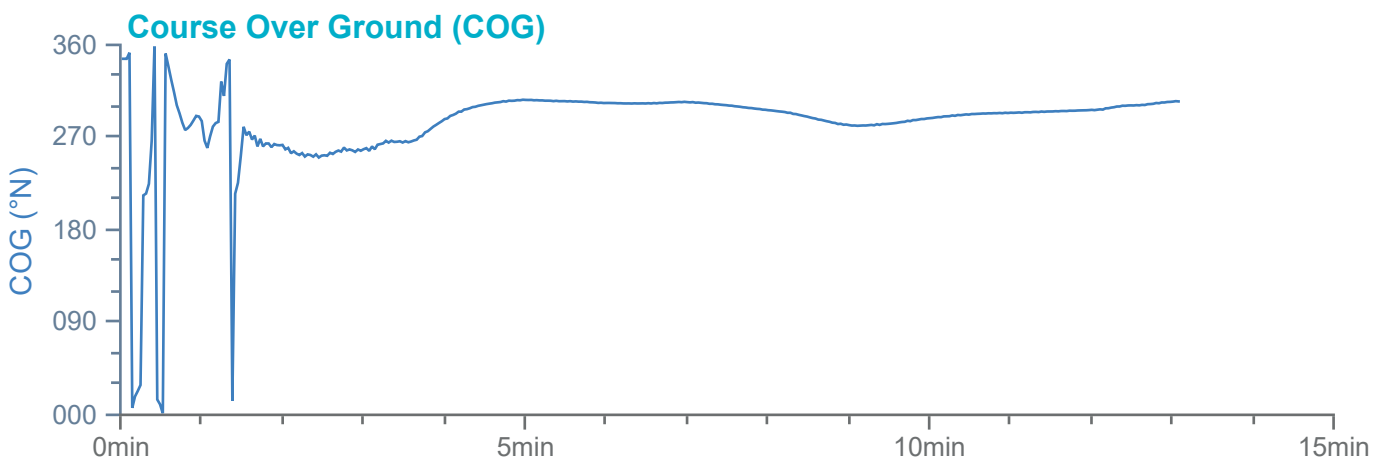
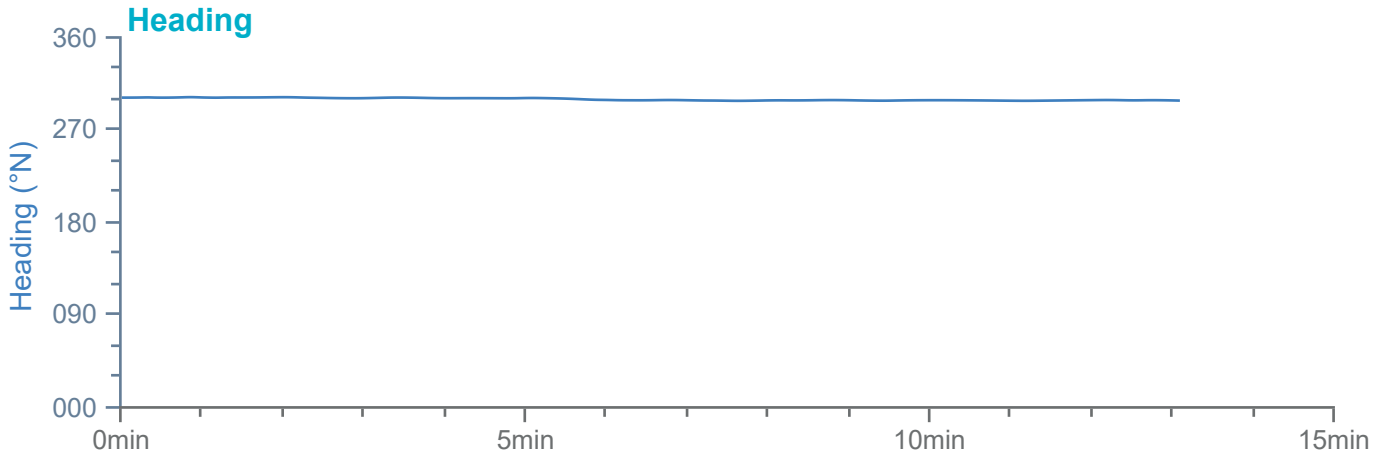
Tug 2 forces

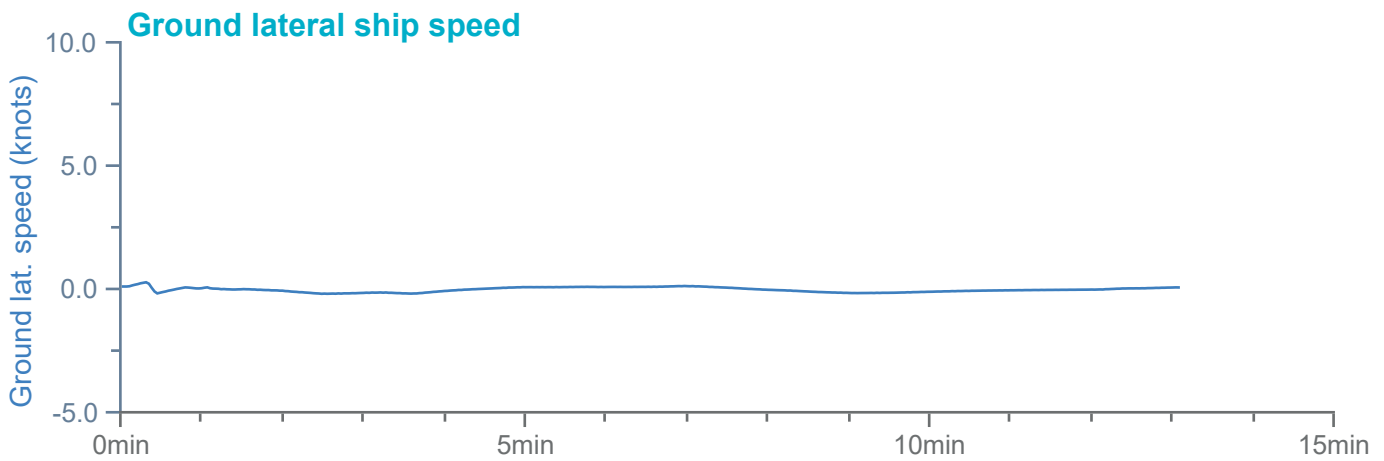
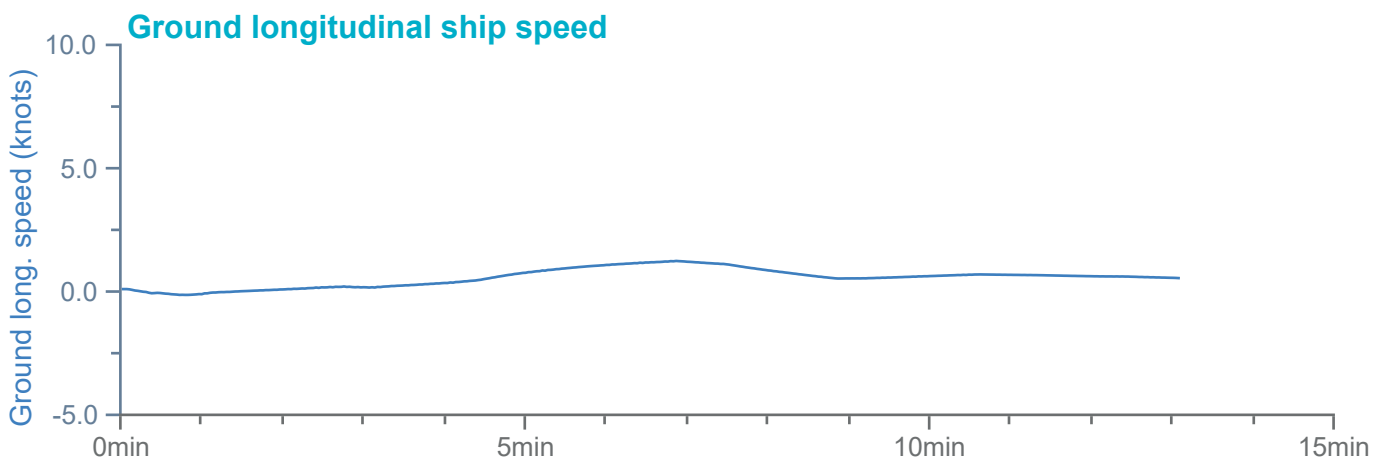
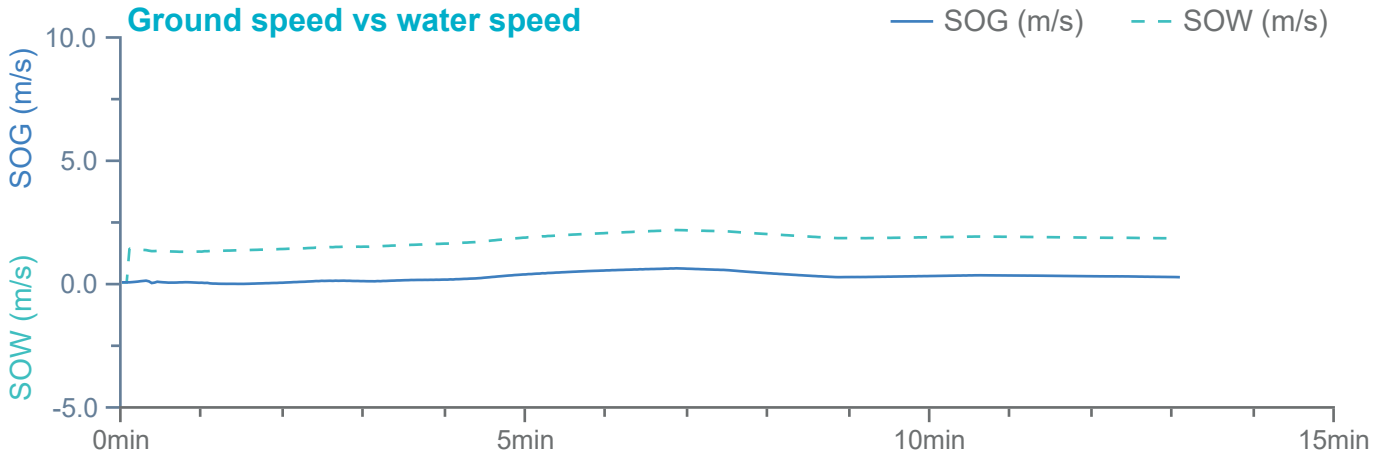


Bow thruster power

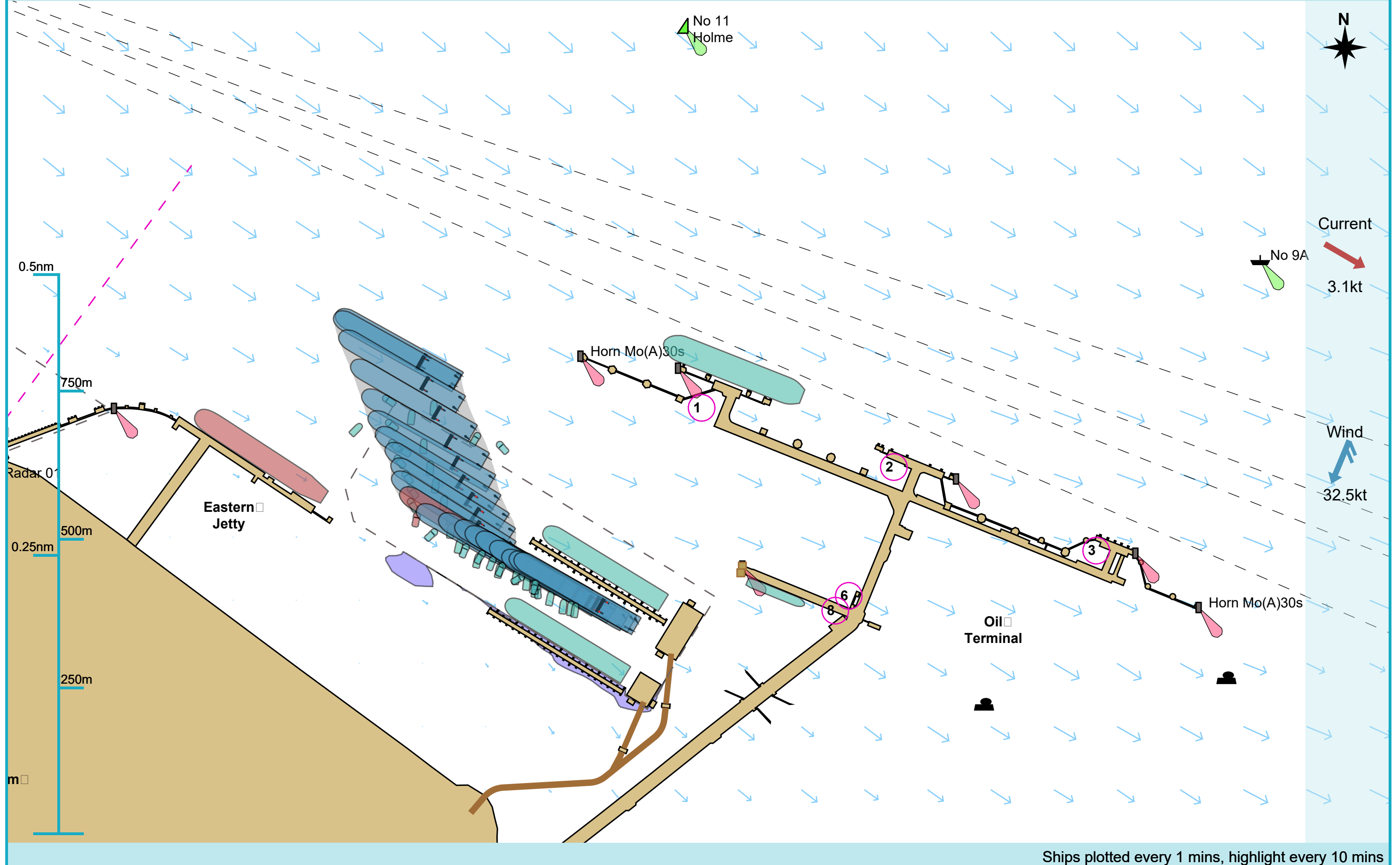




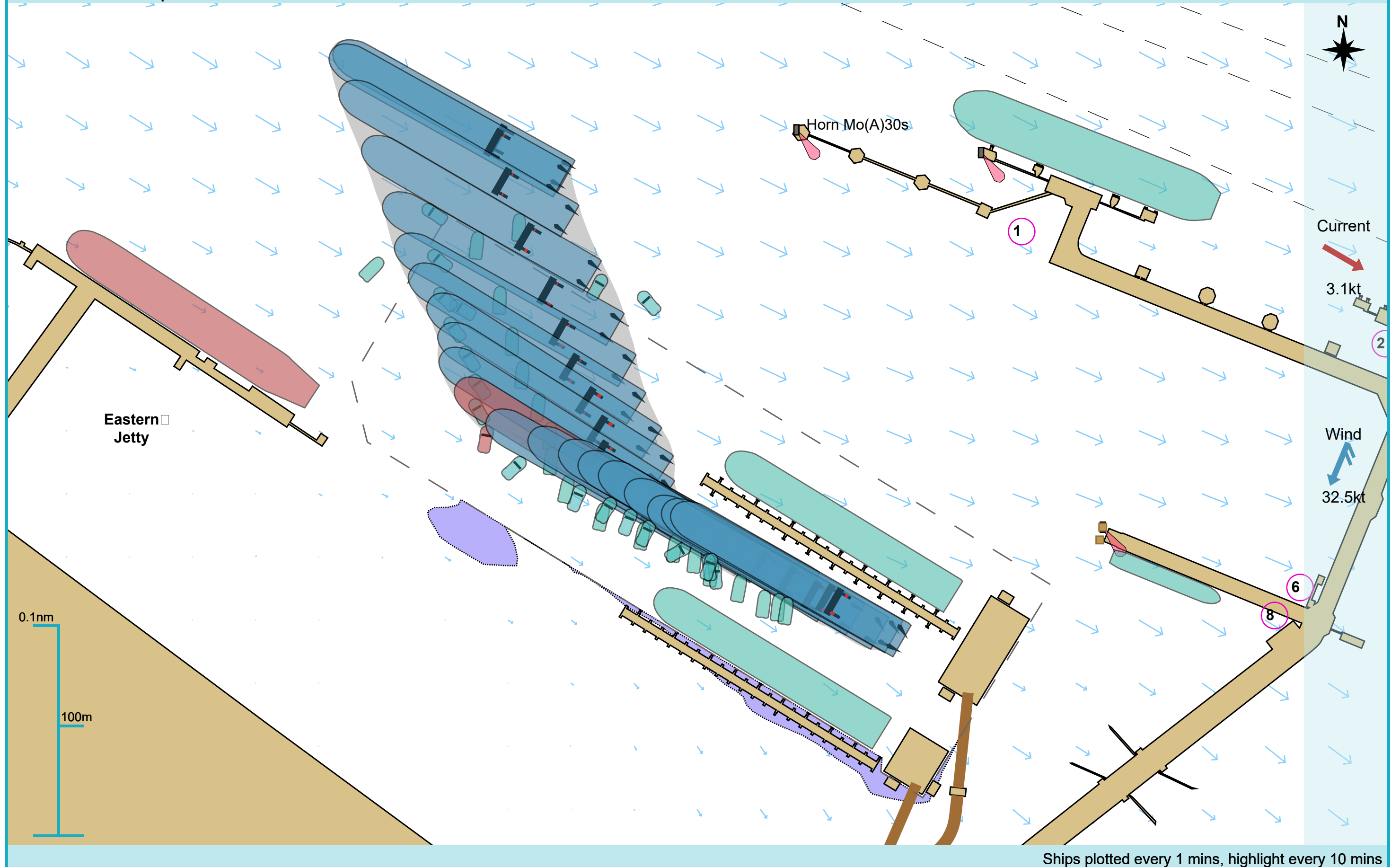




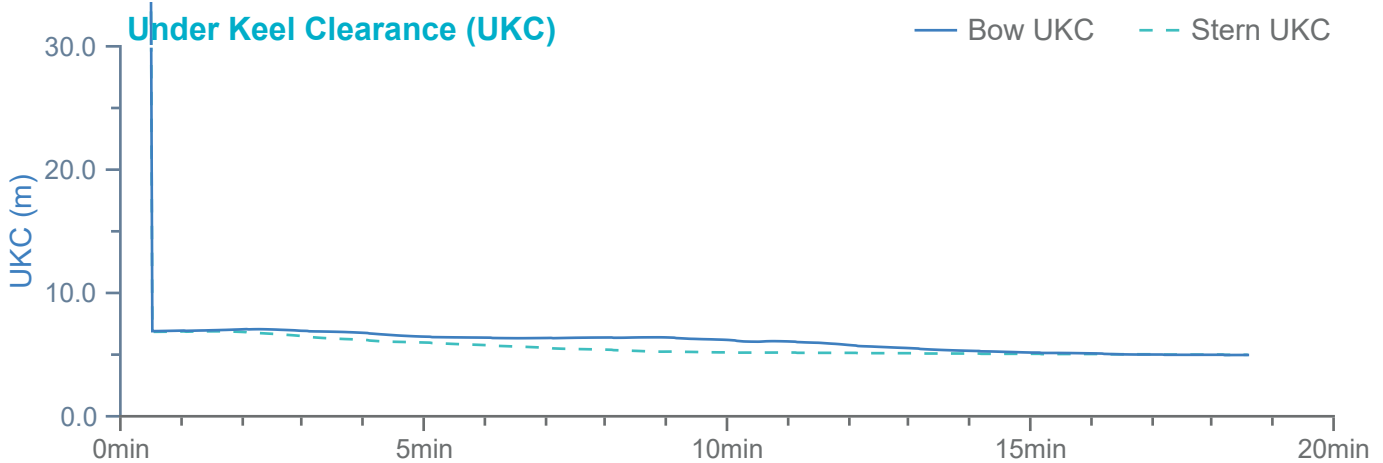
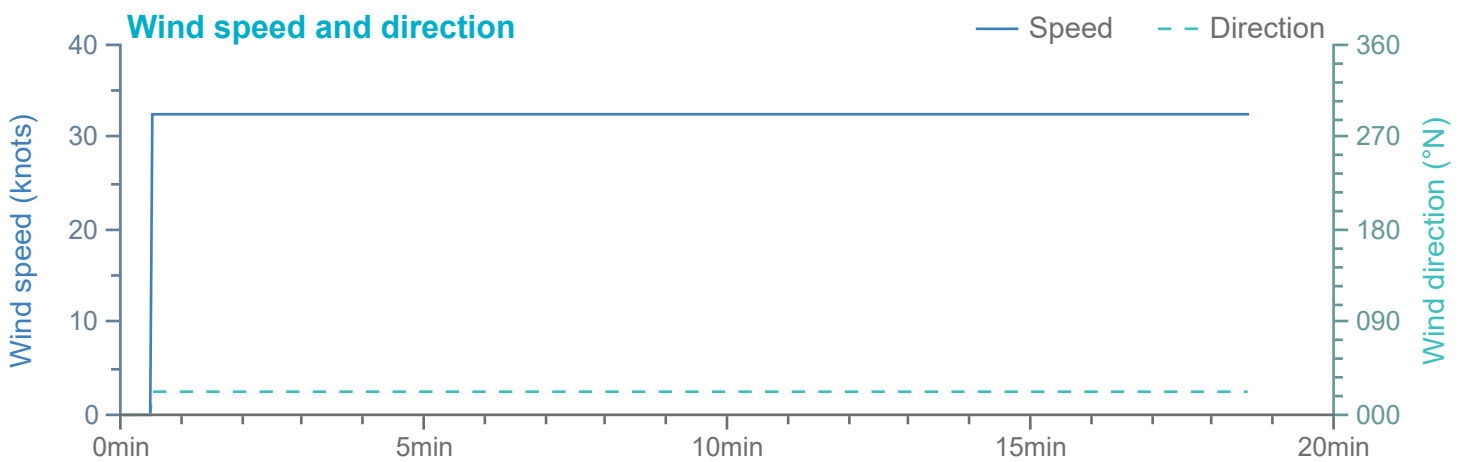
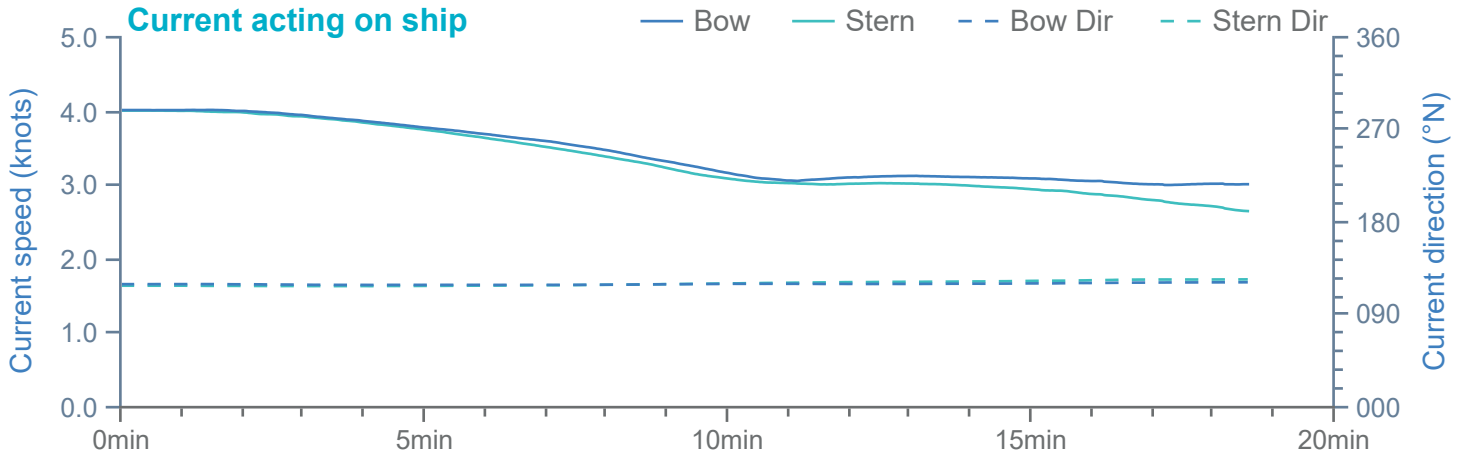
Manoeuvre track plot

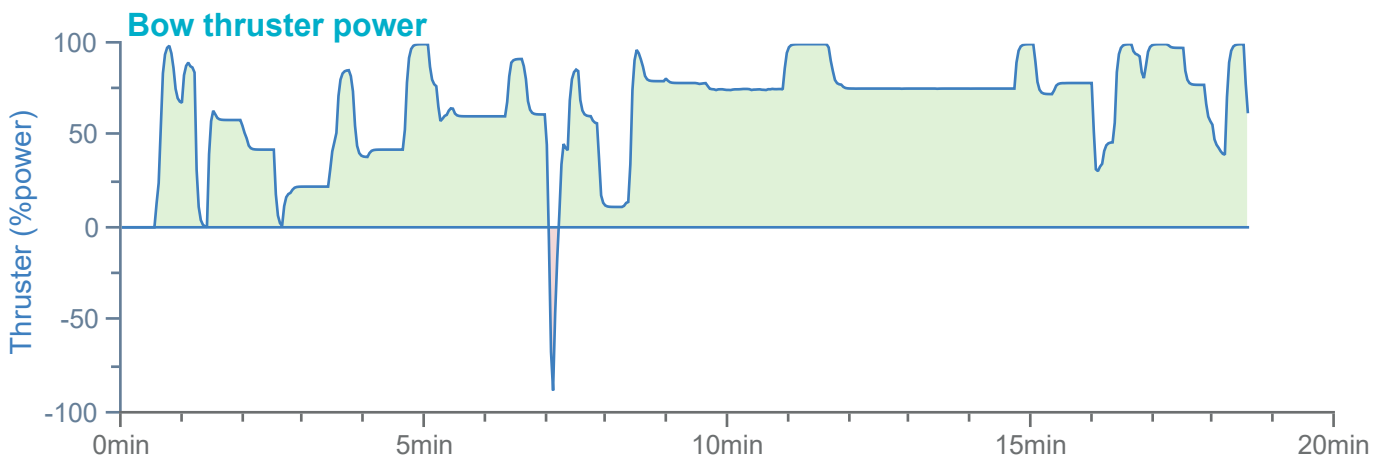
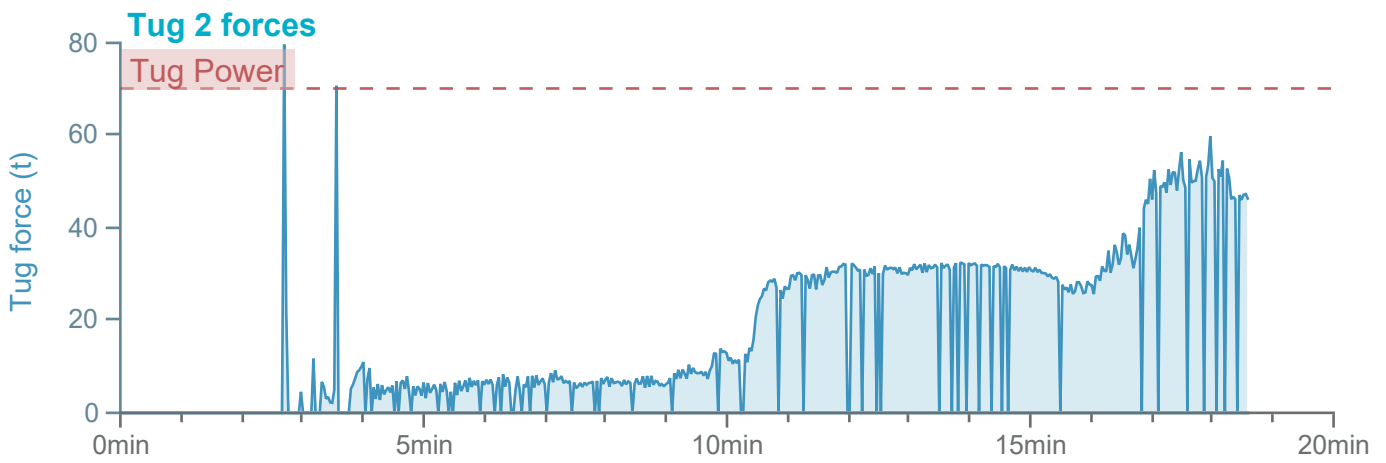
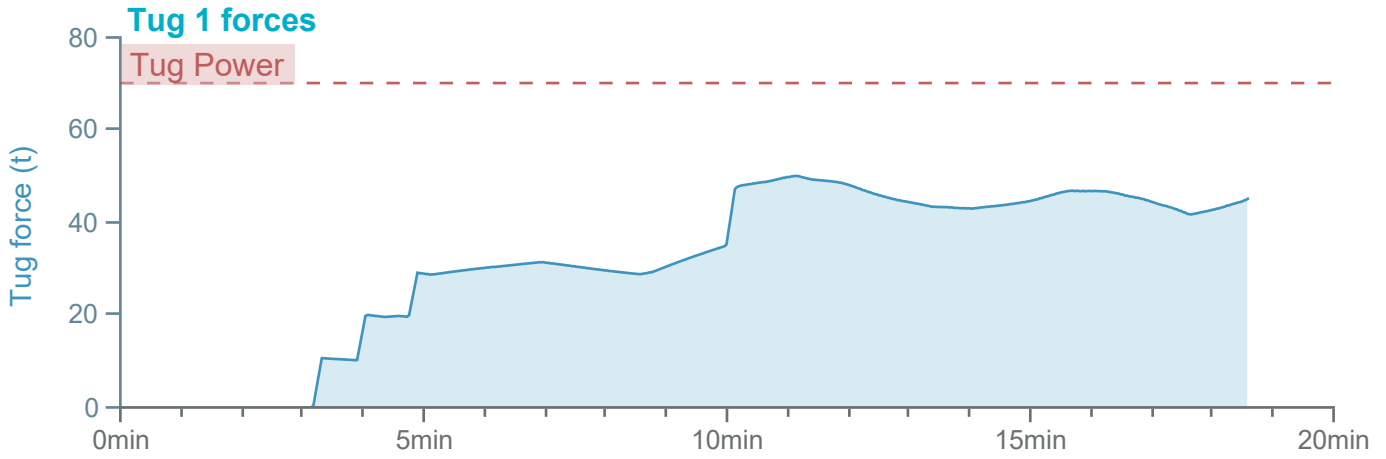


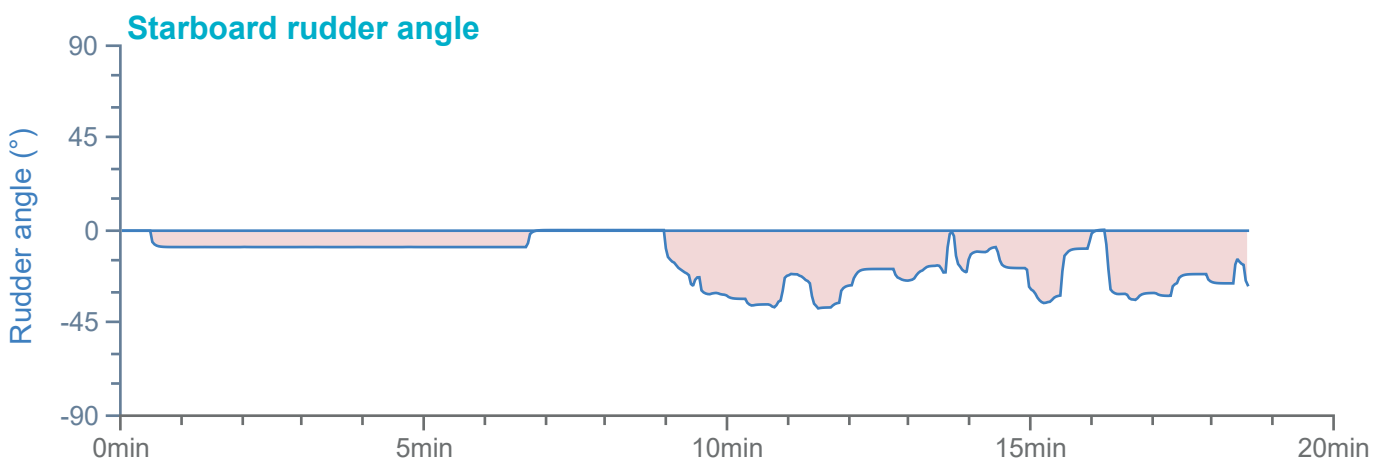
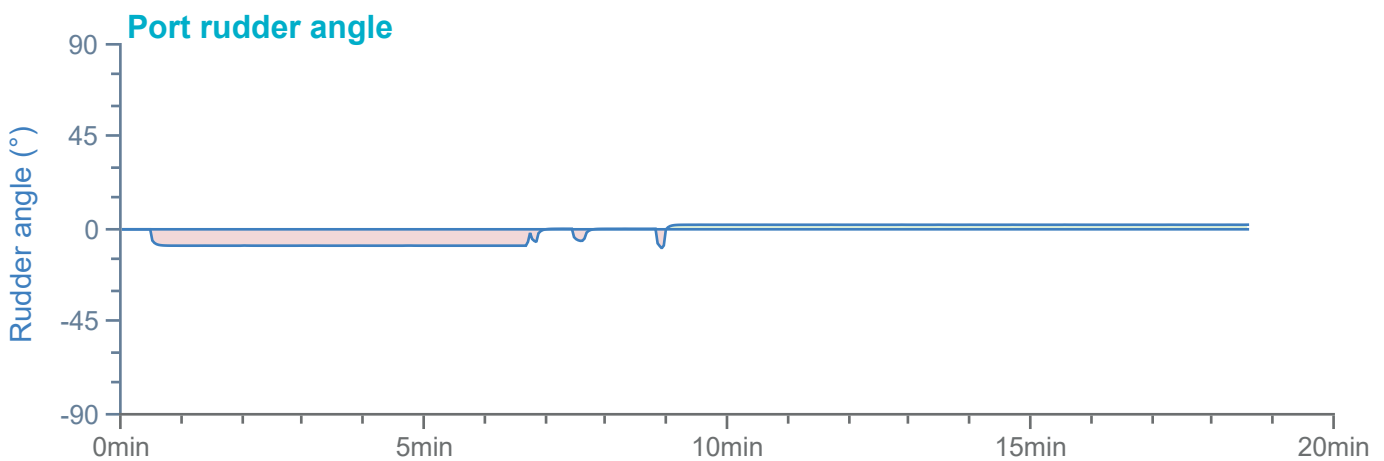
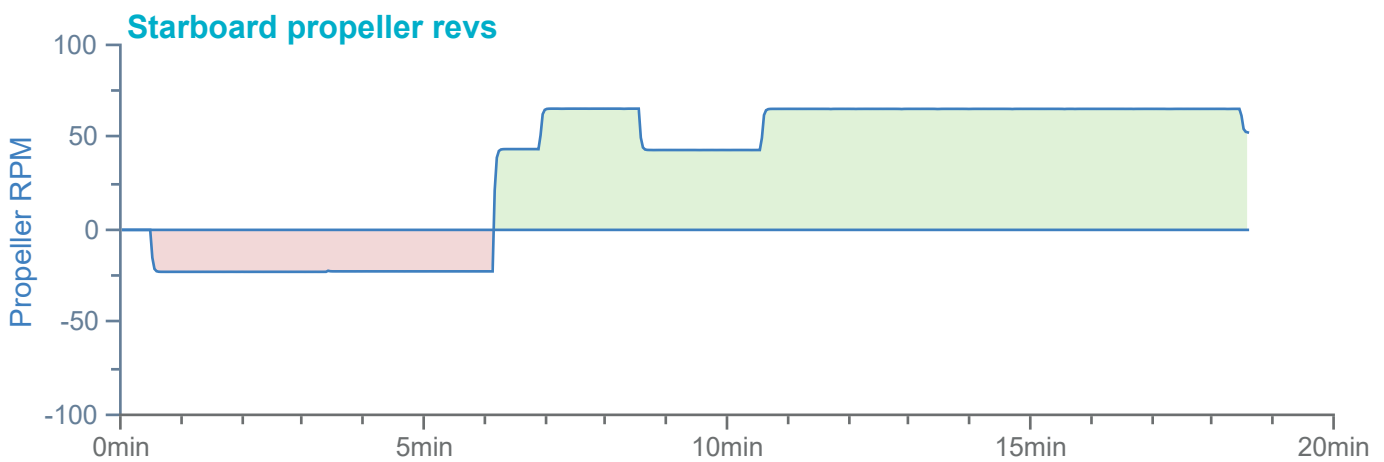
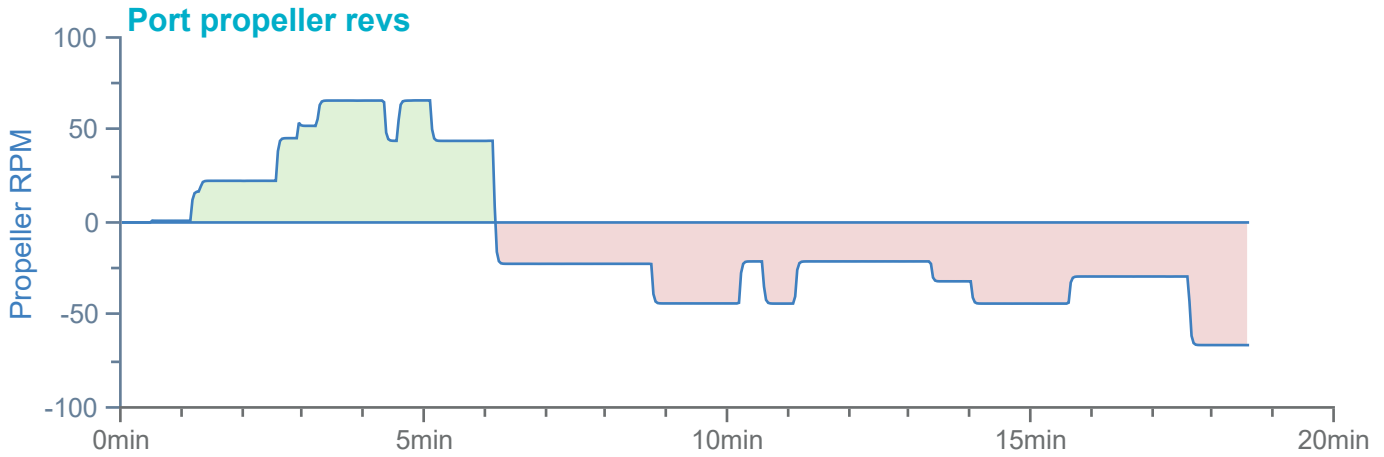
Manoeuvre track plot

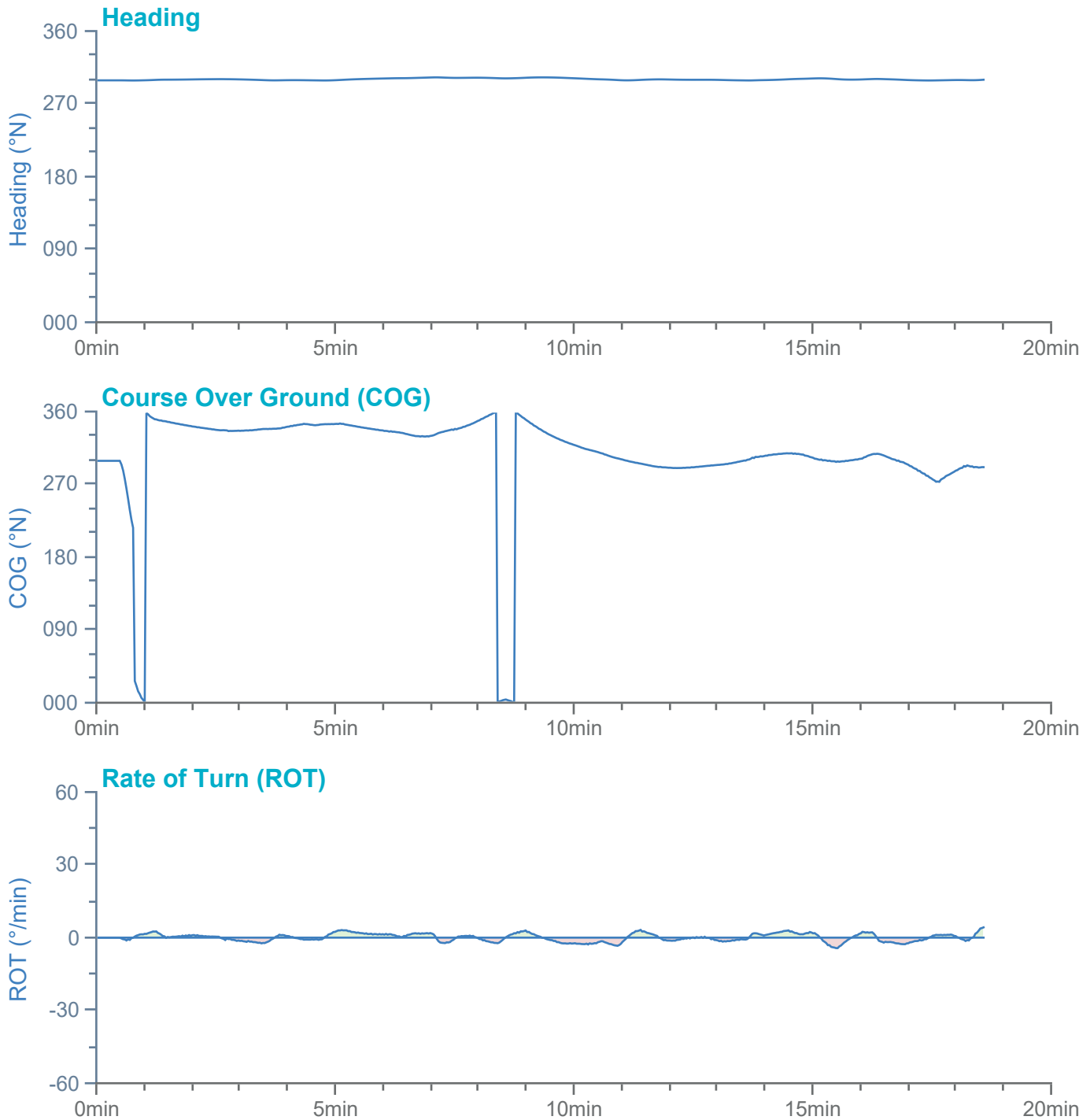


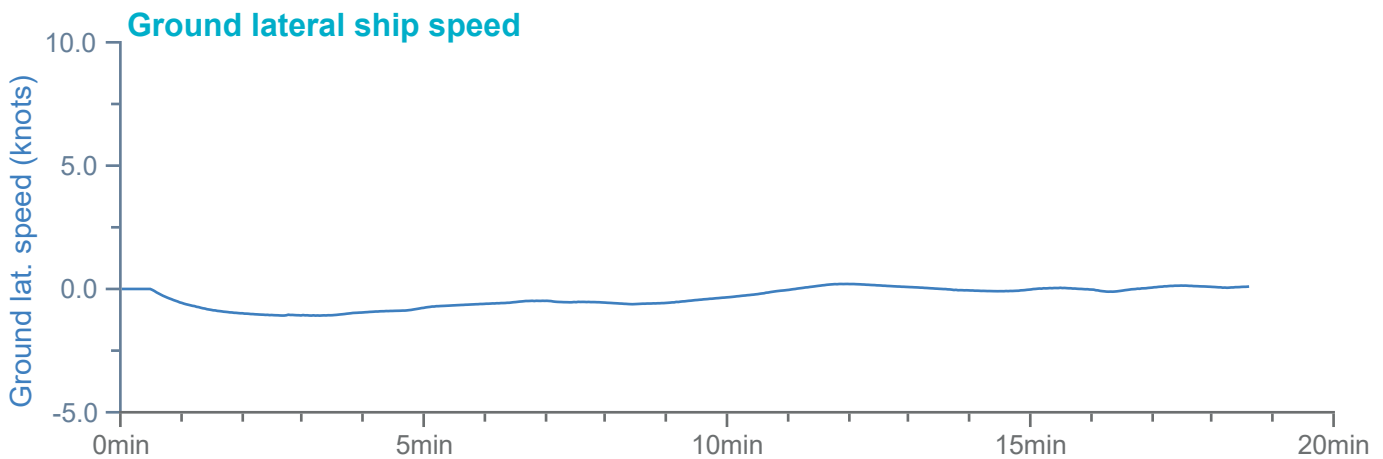
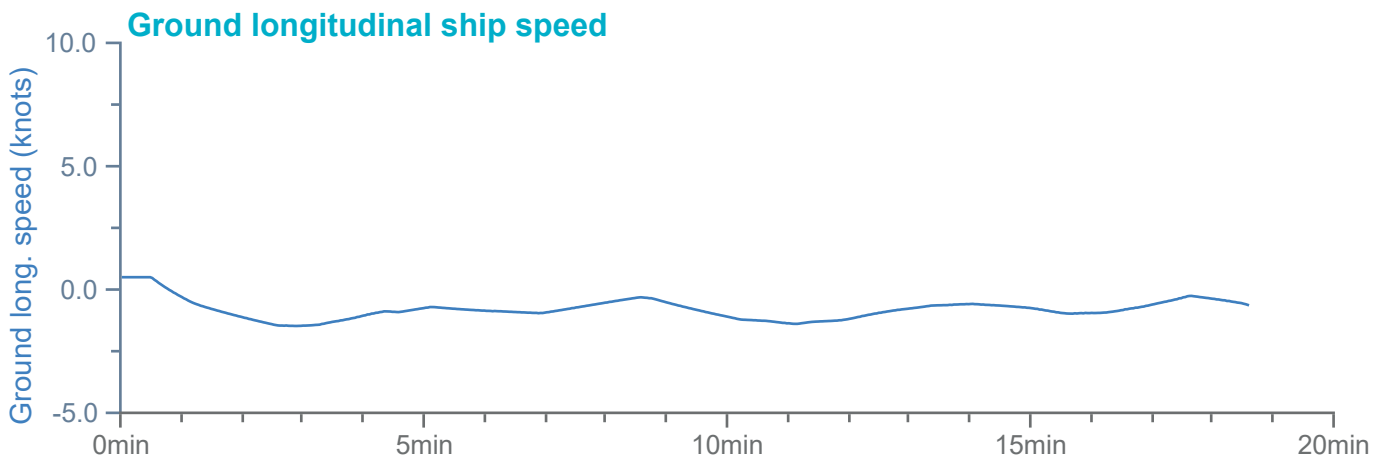
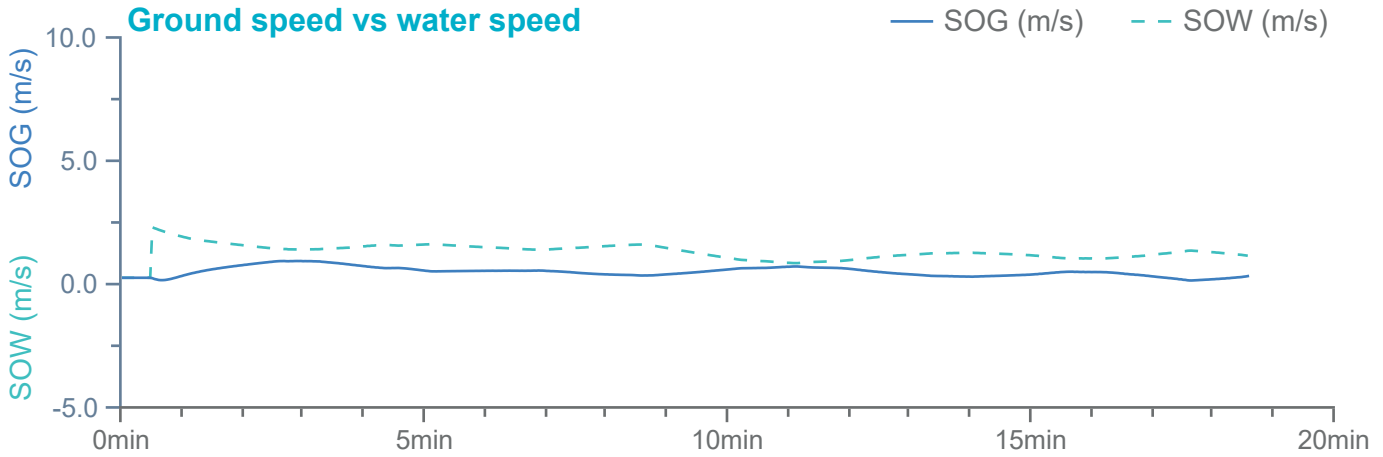
Ships plotted every 1 mins, highlight every 10 mins



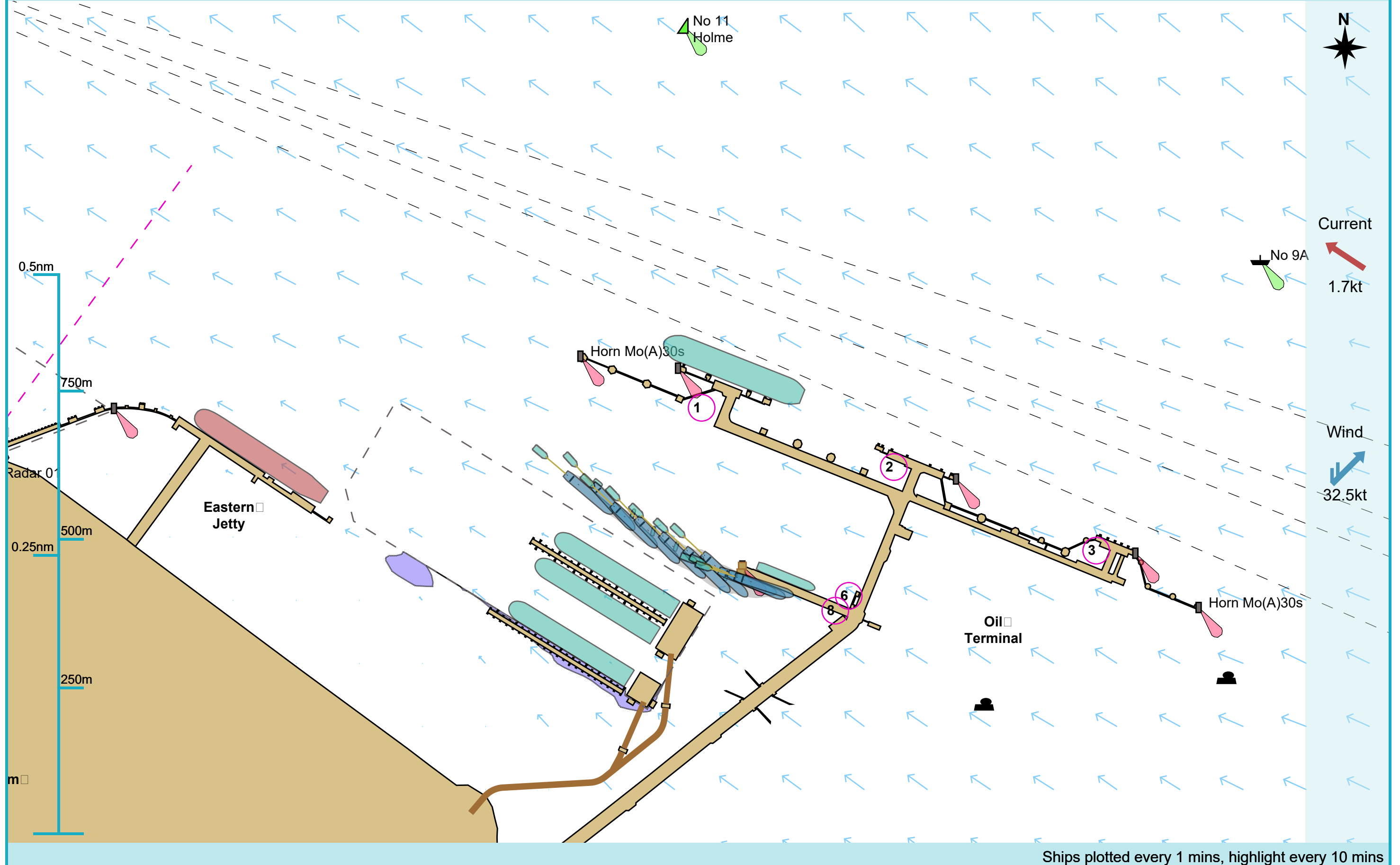






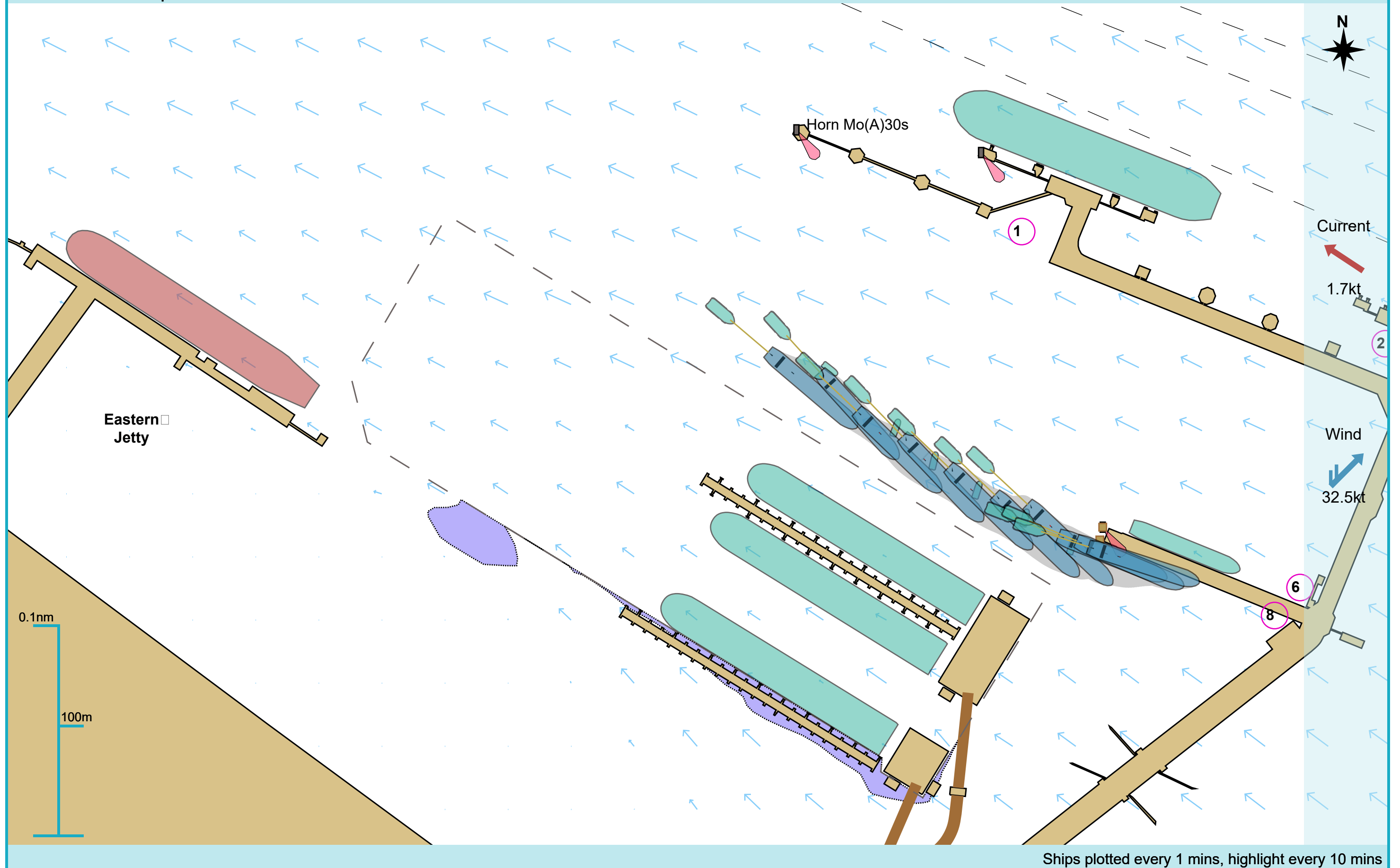


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

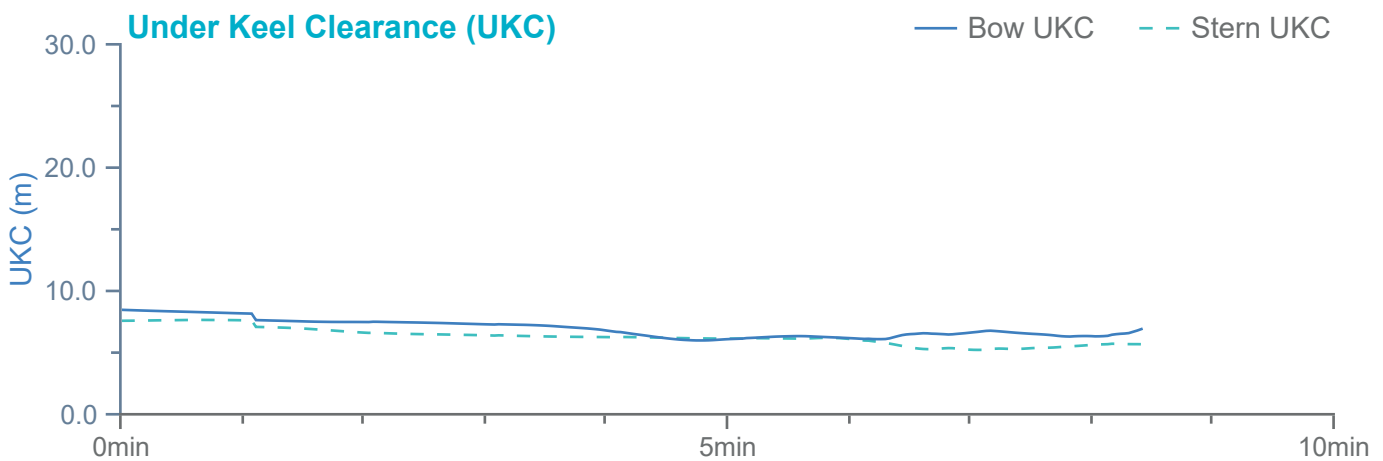
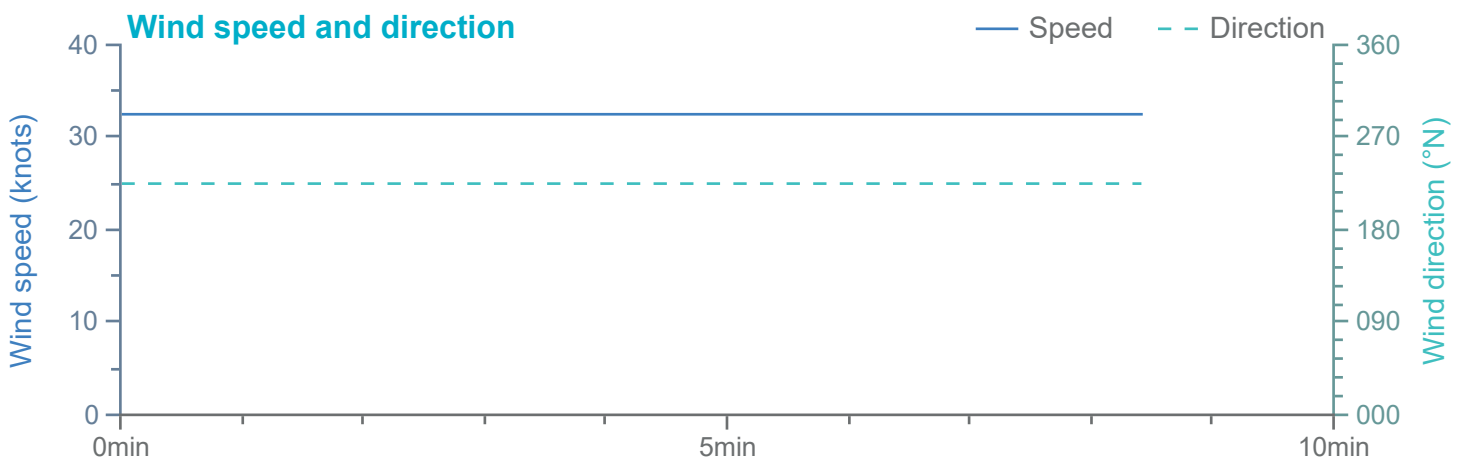
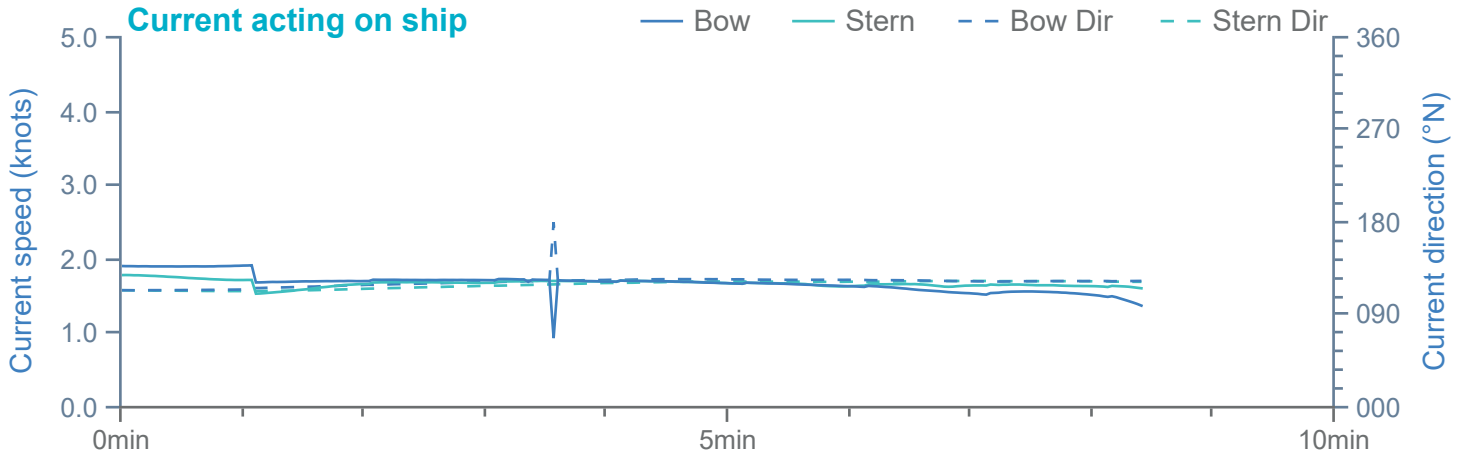
Manoeuvre track plot

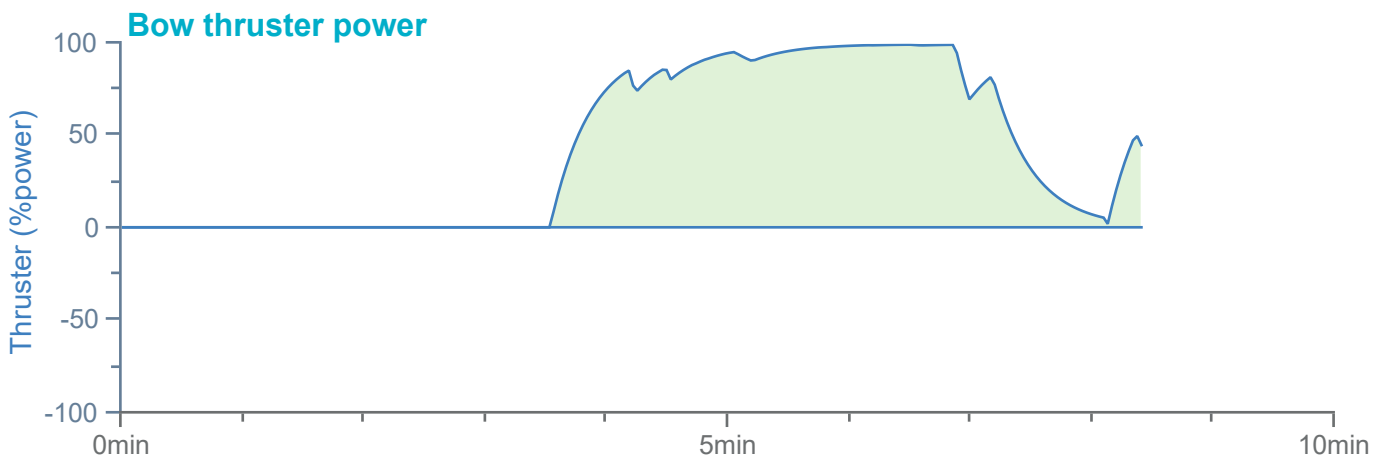
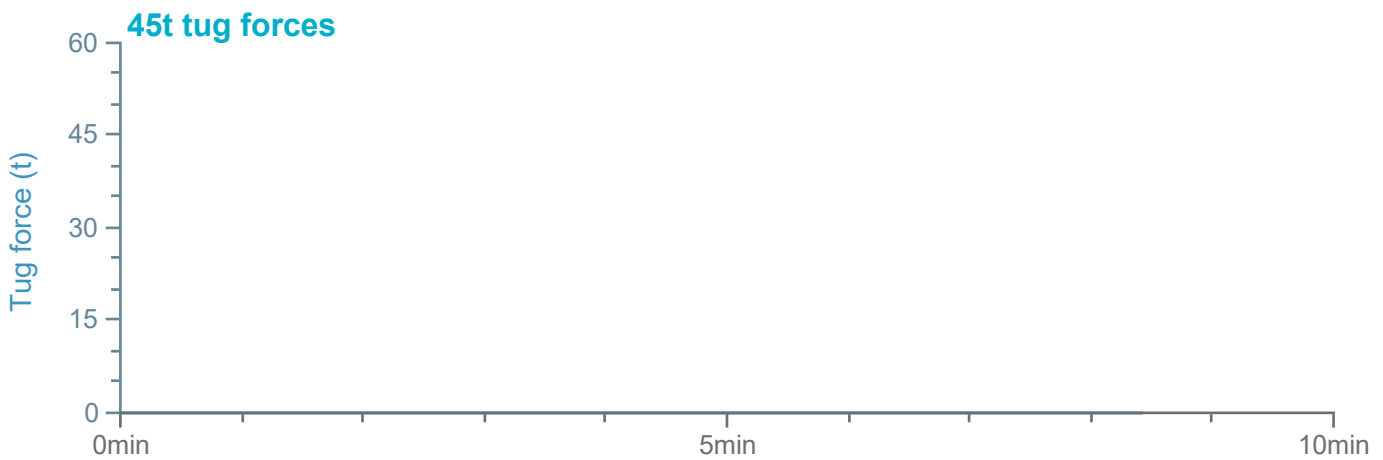
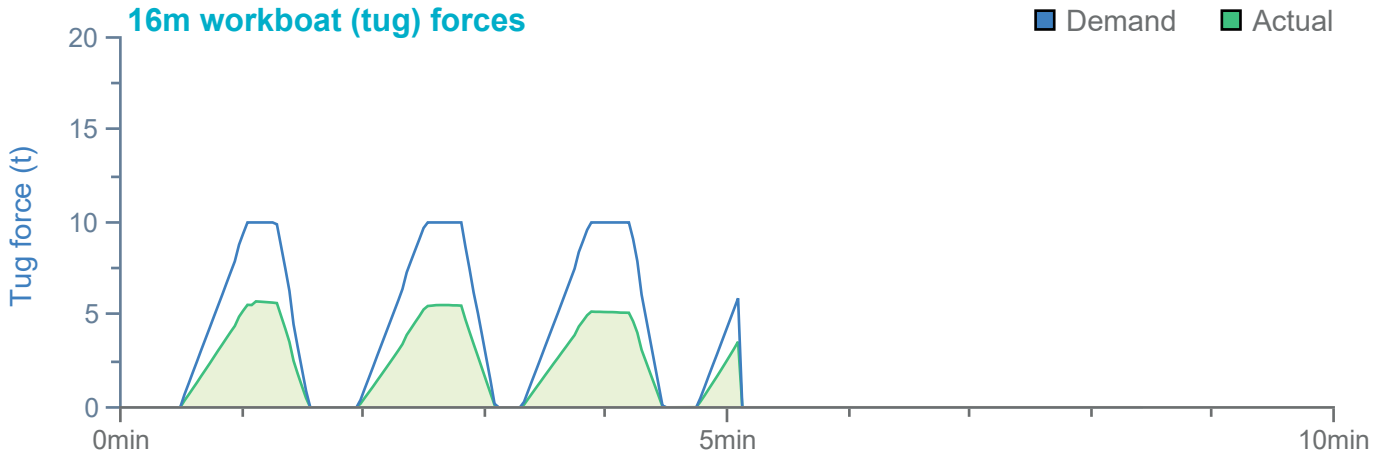


Summary

Environment

104m x 15m Product Tanker

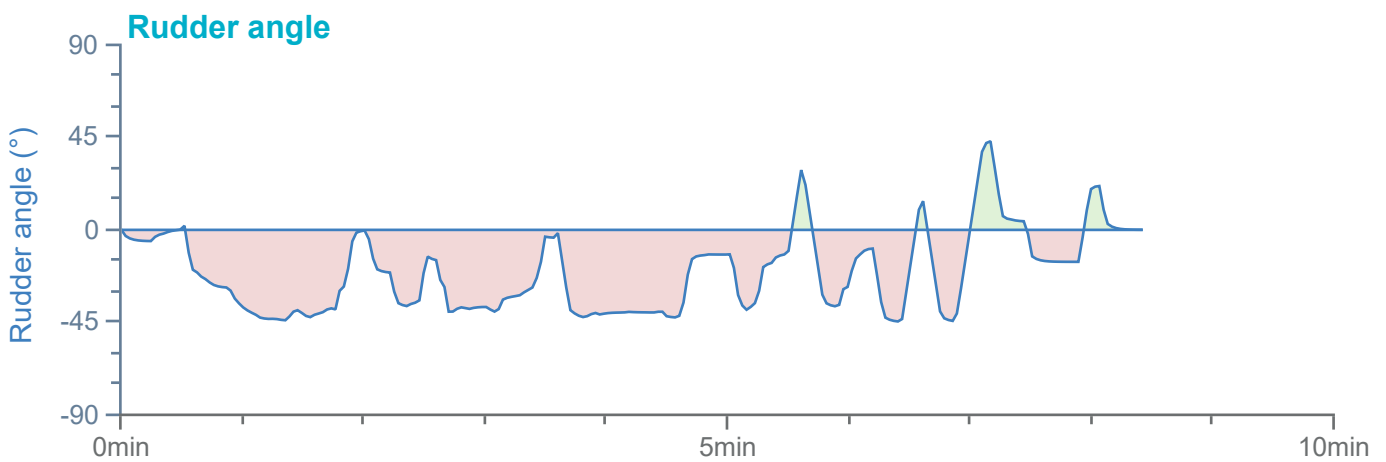
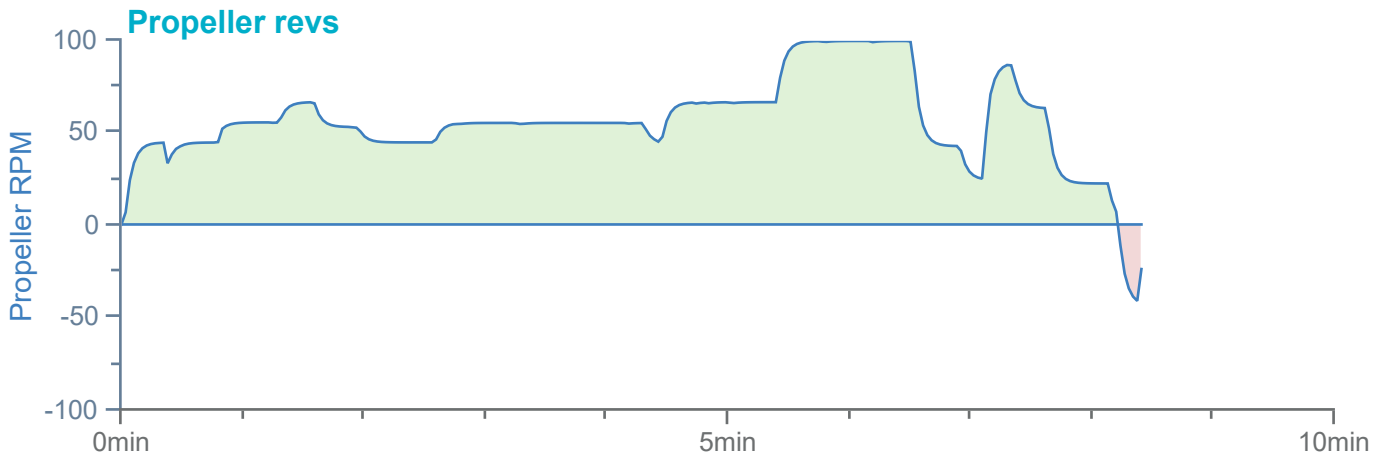


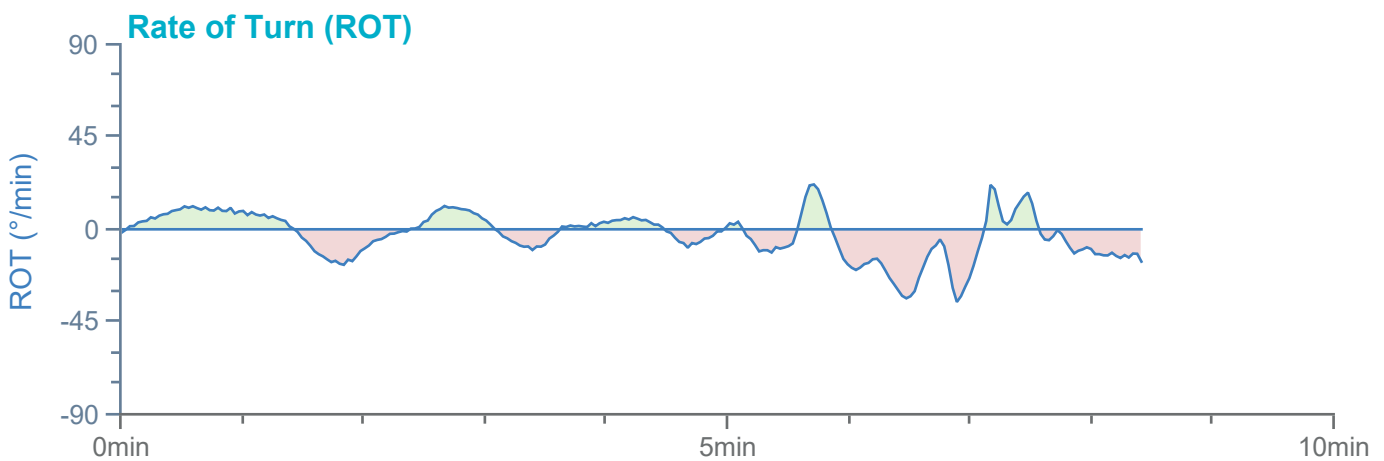
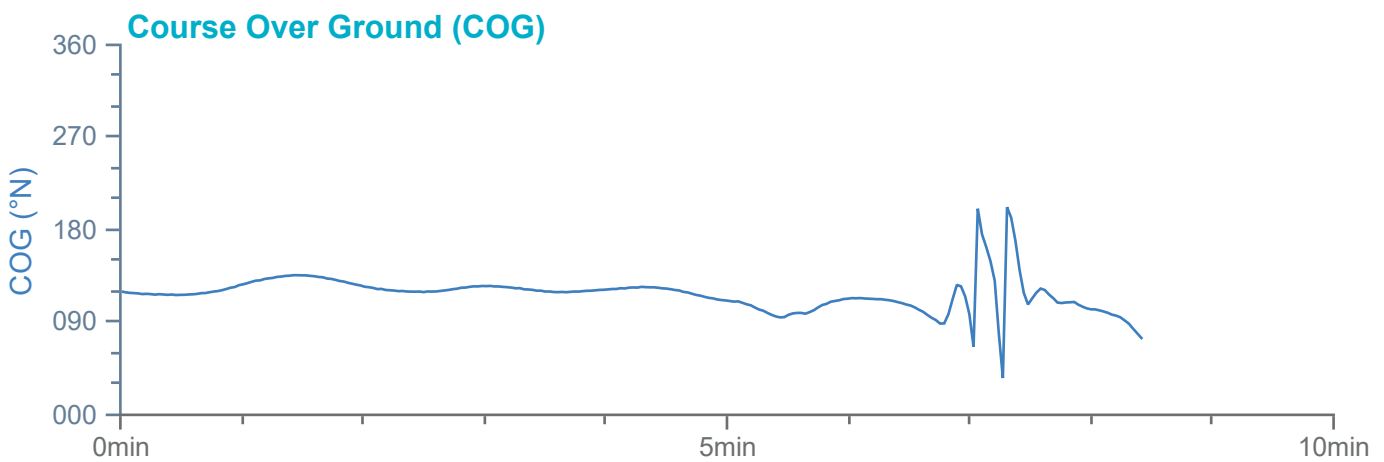
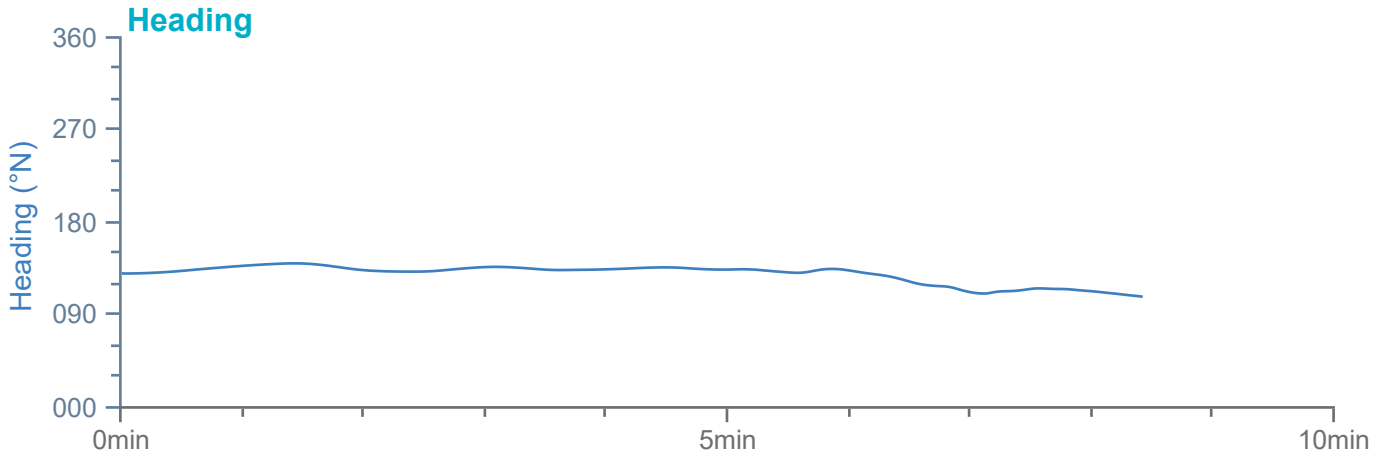


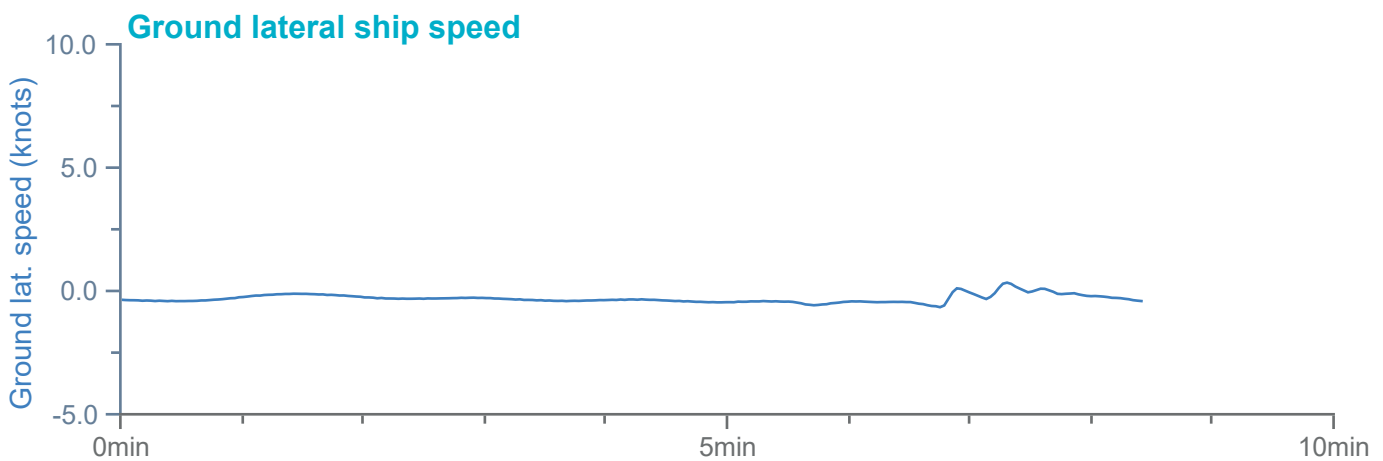
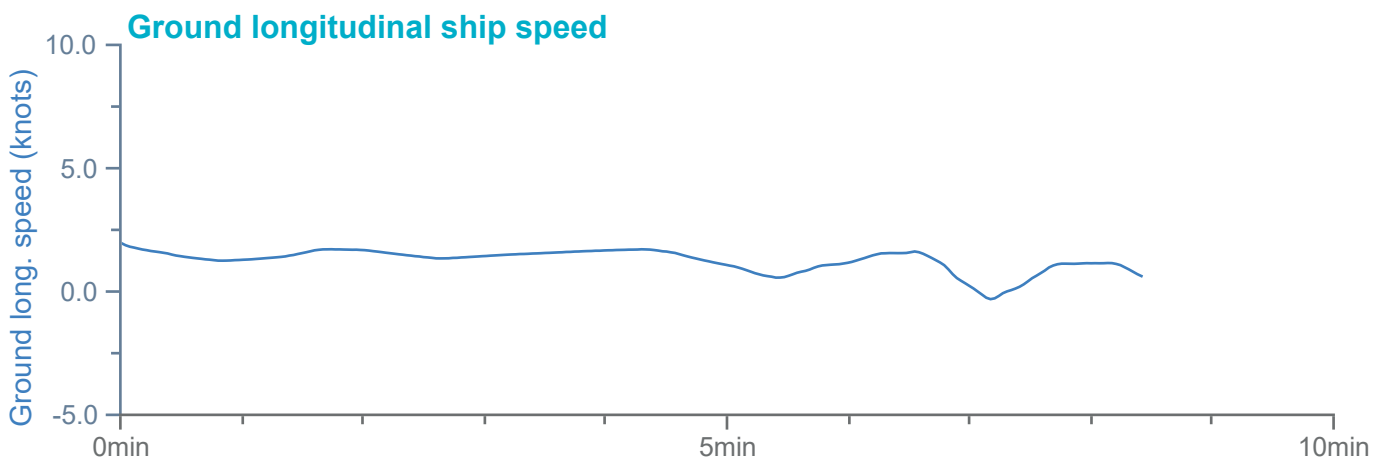
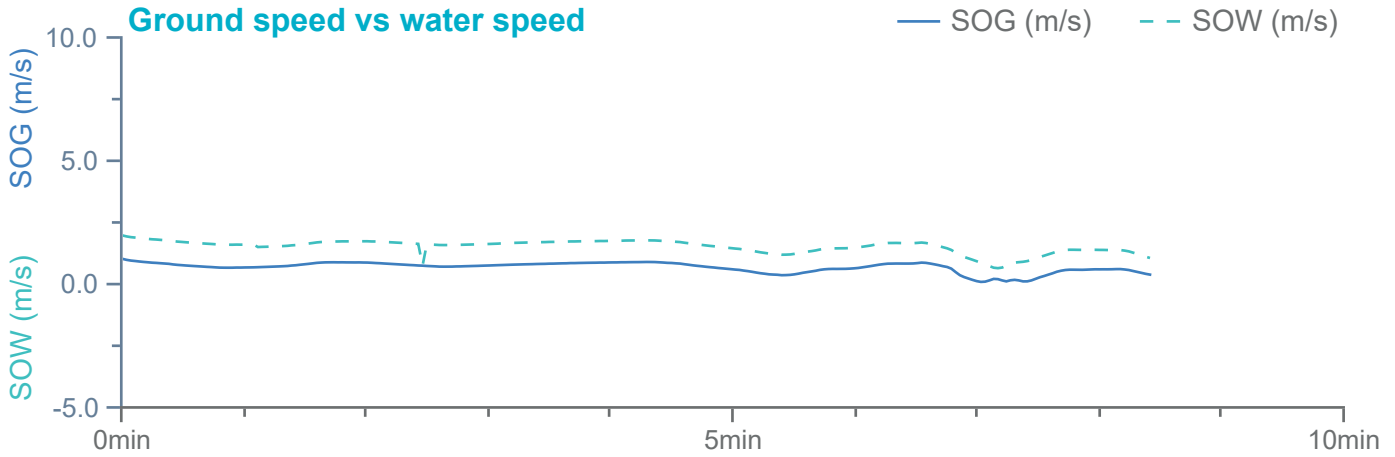
Summary

Environment

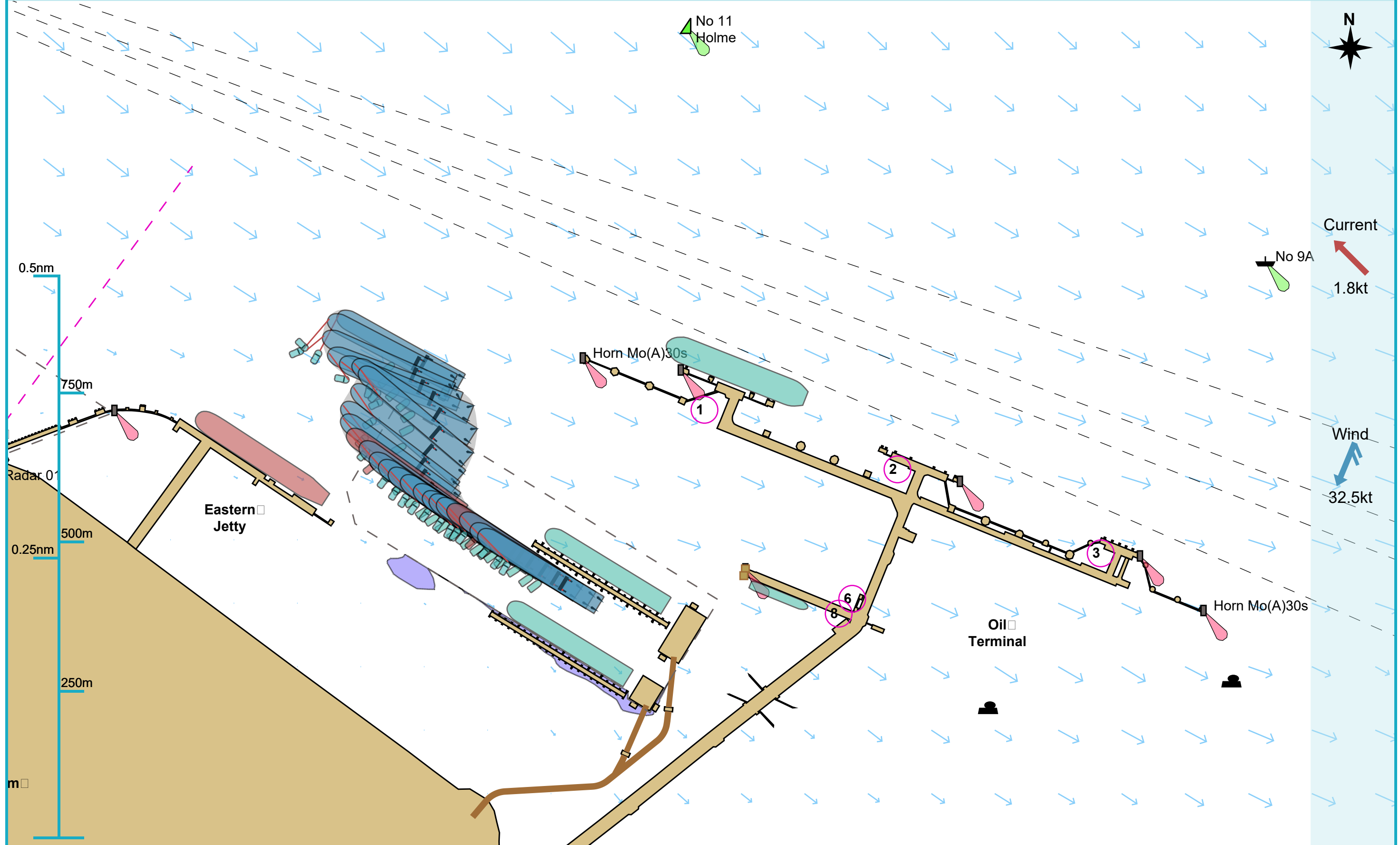
104m x 15m Product Tanker





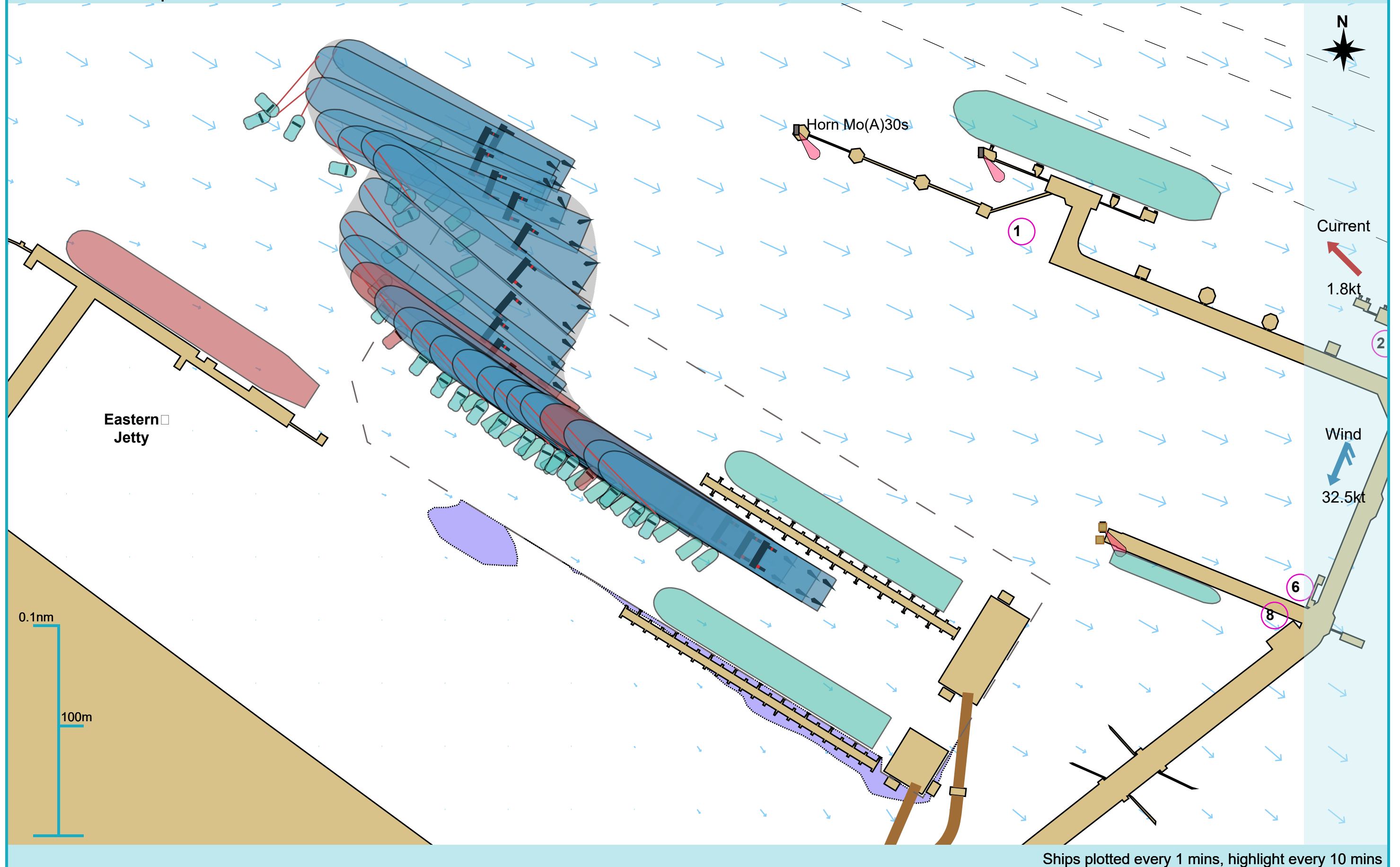


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

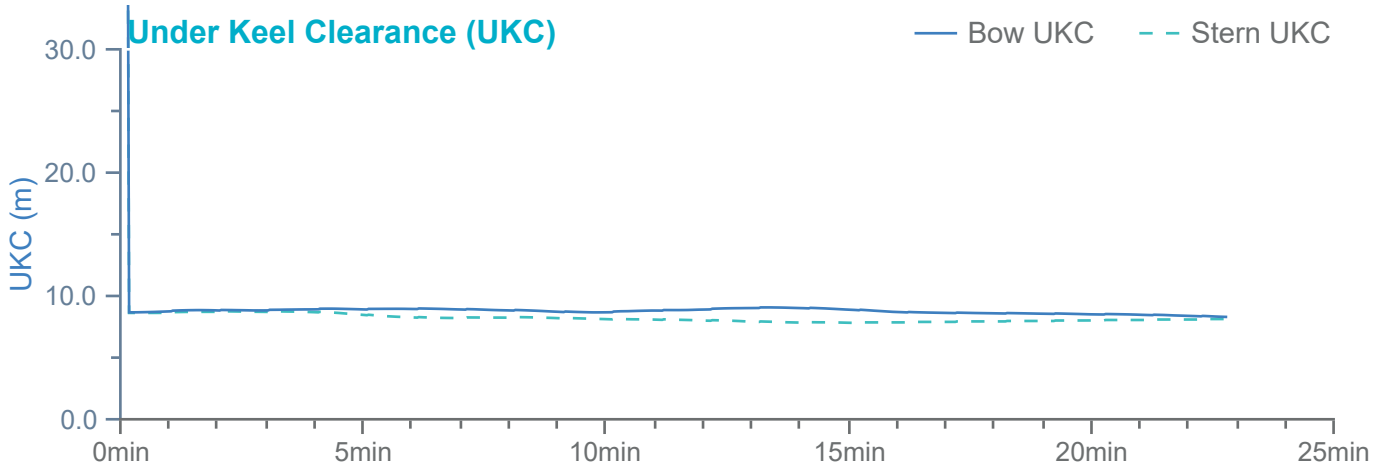
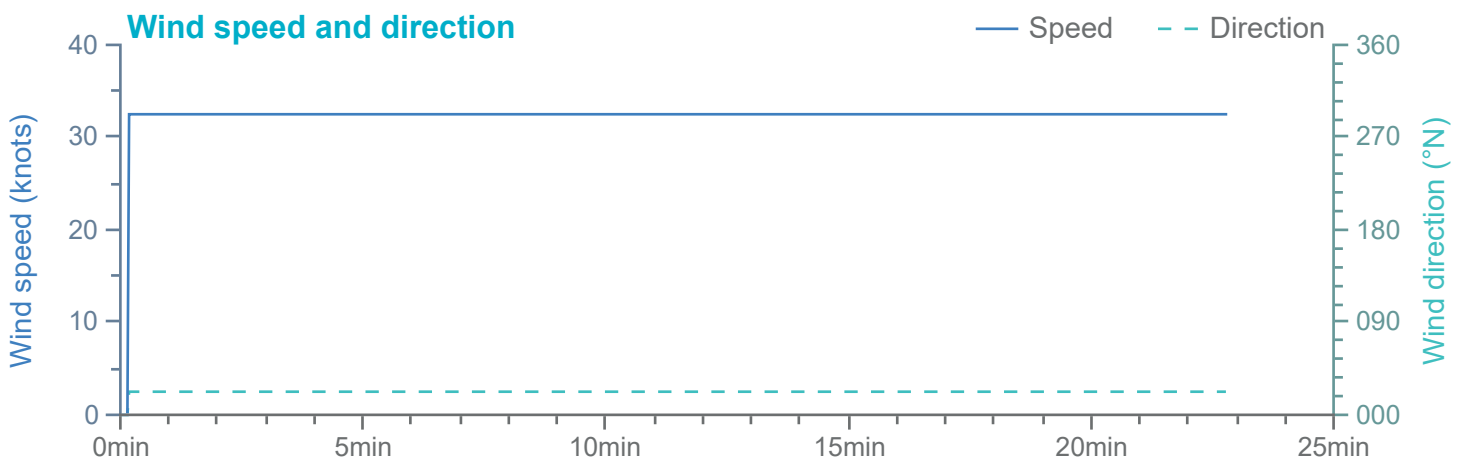
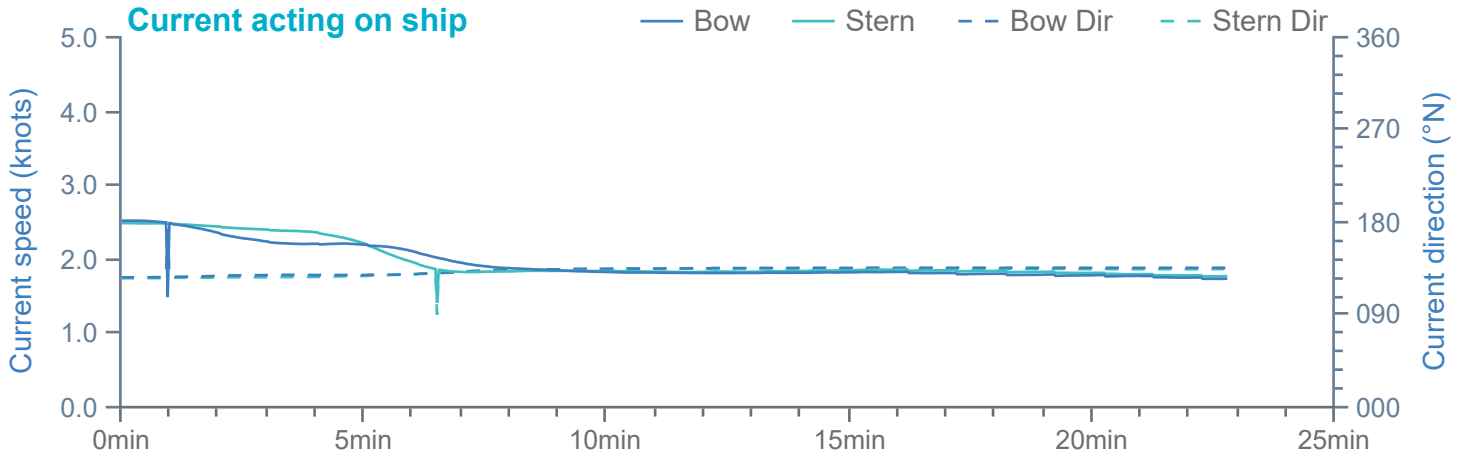


Ships plotted every 1 mins, highlight every 10 mins

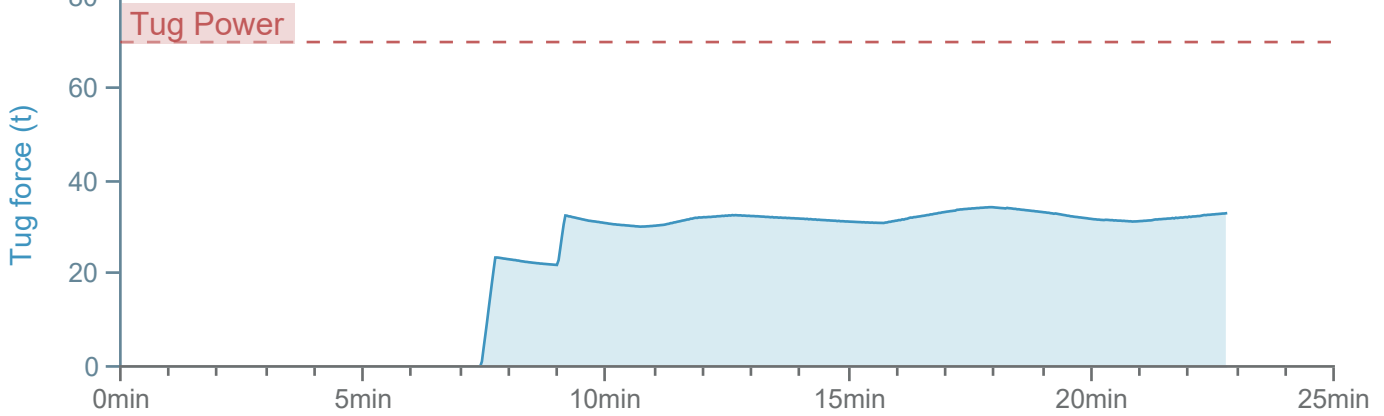
Summary

Environment

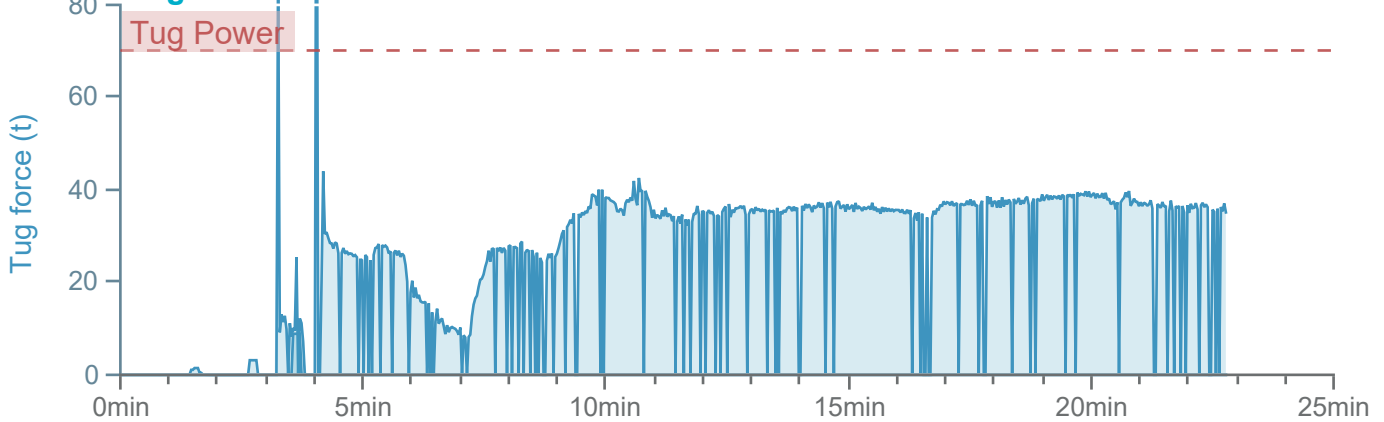
237m RoRo unnamed



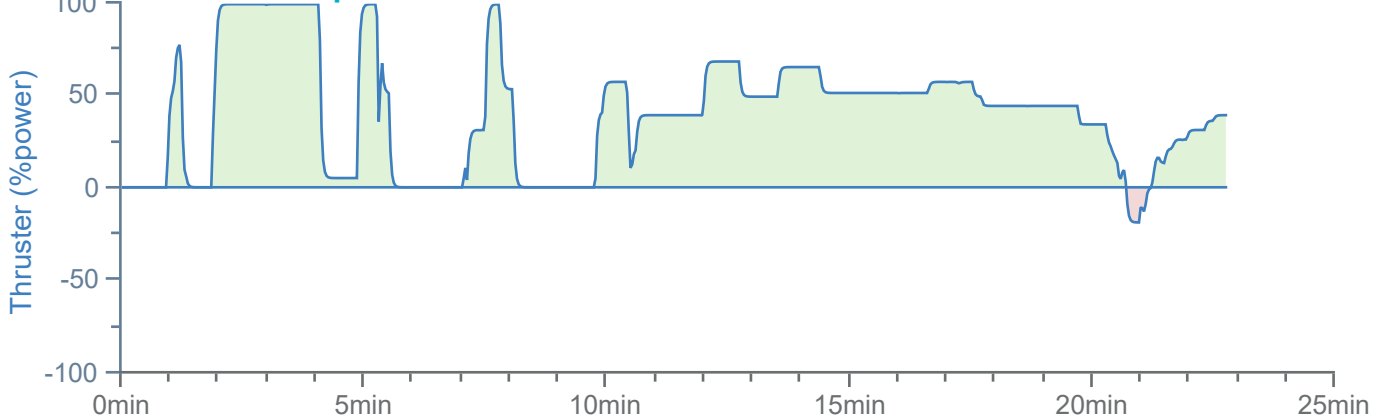
Tug 1 forces



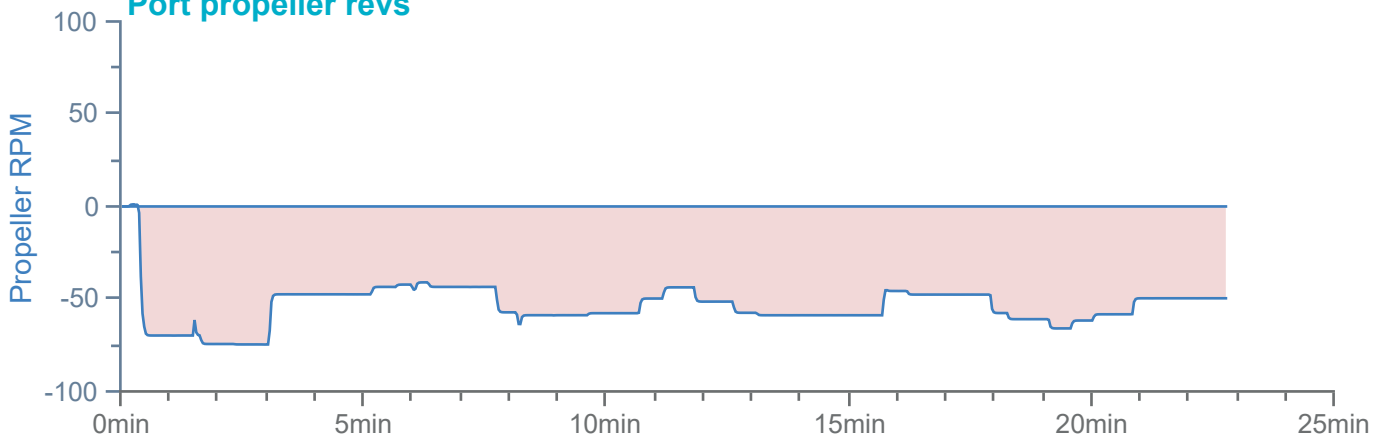
Tug 2 forces



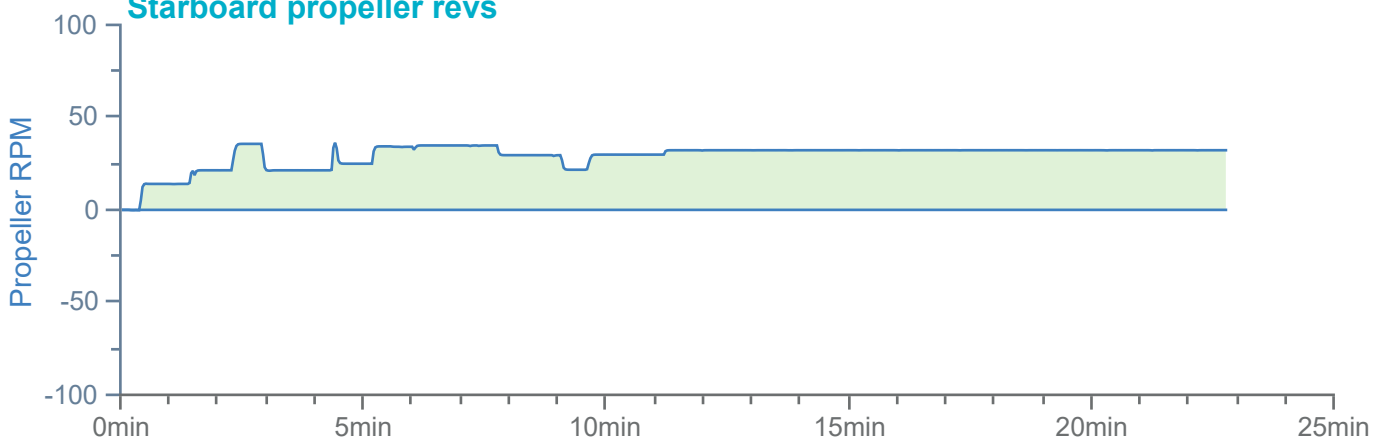
Bow thruster power



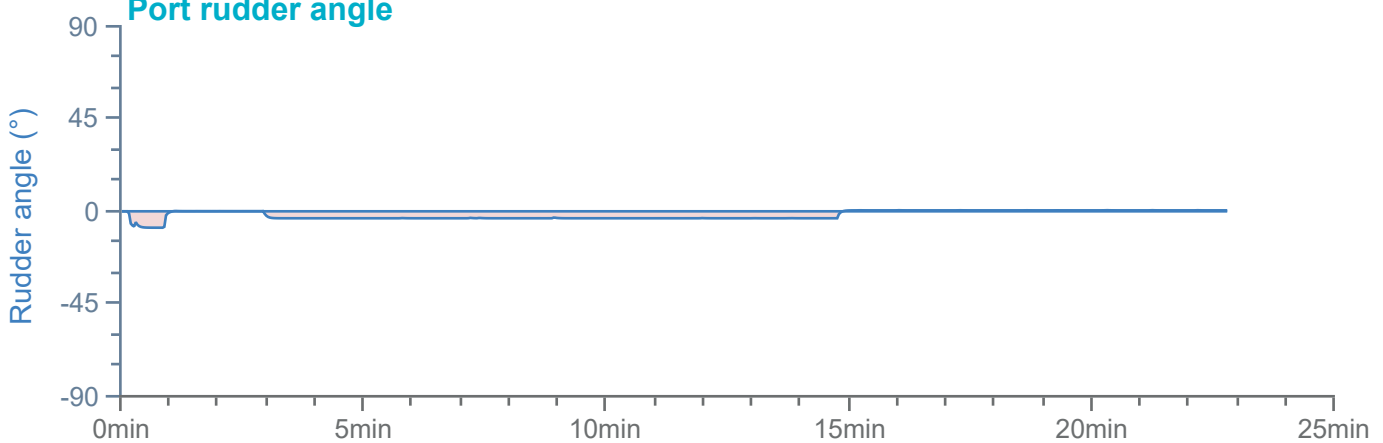
Port propeller revs



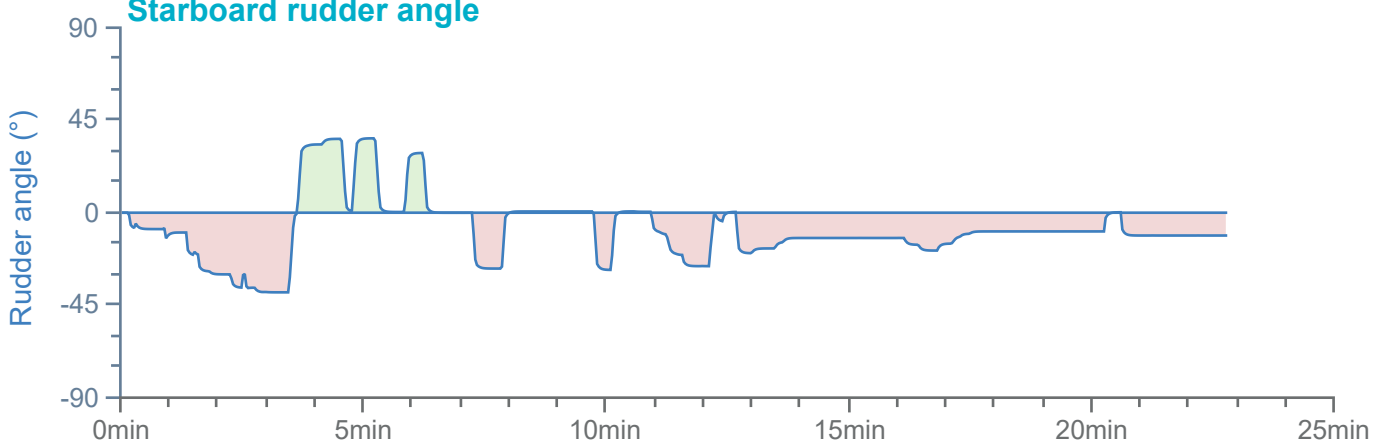
Starboard propeller revs

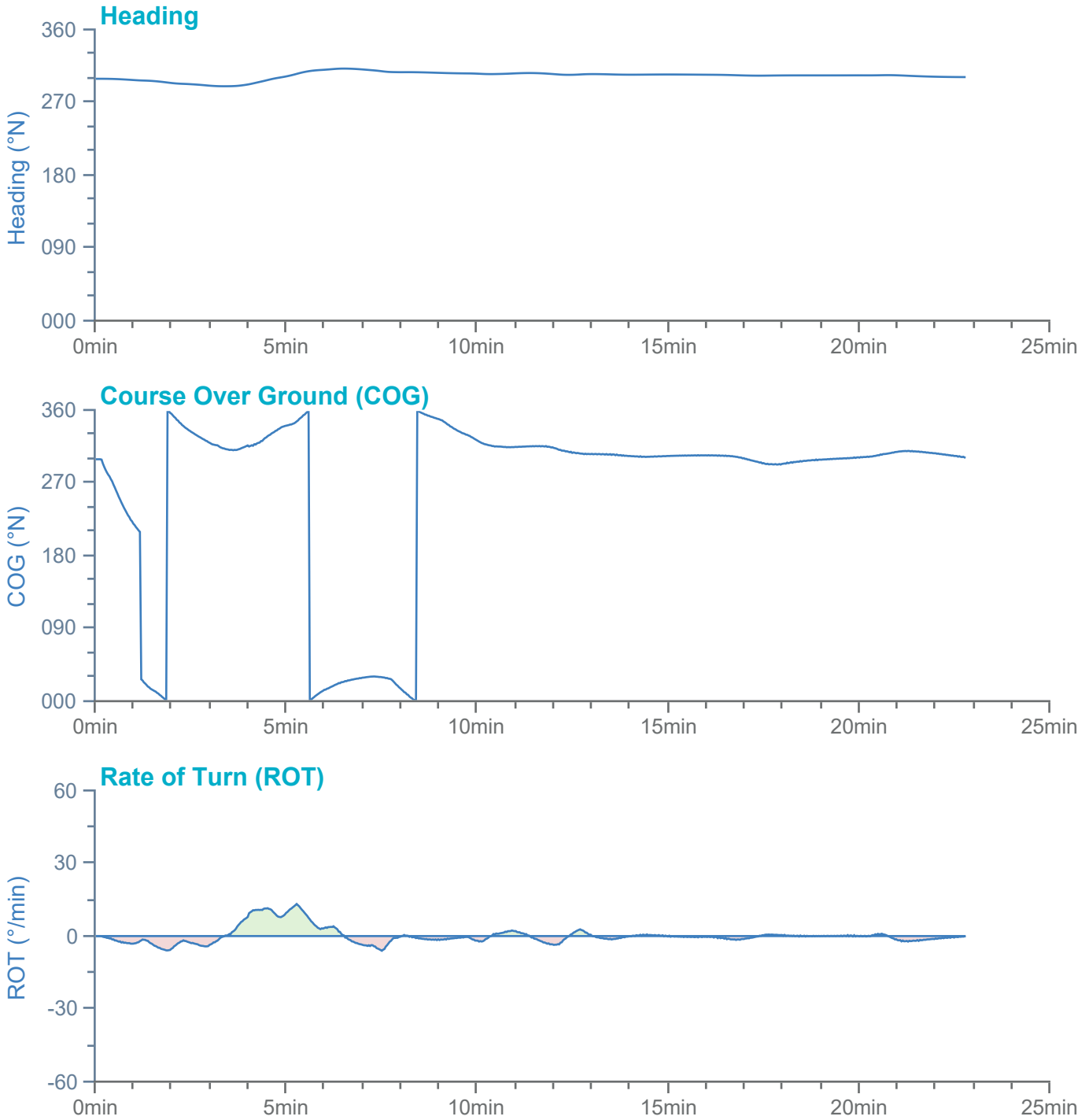


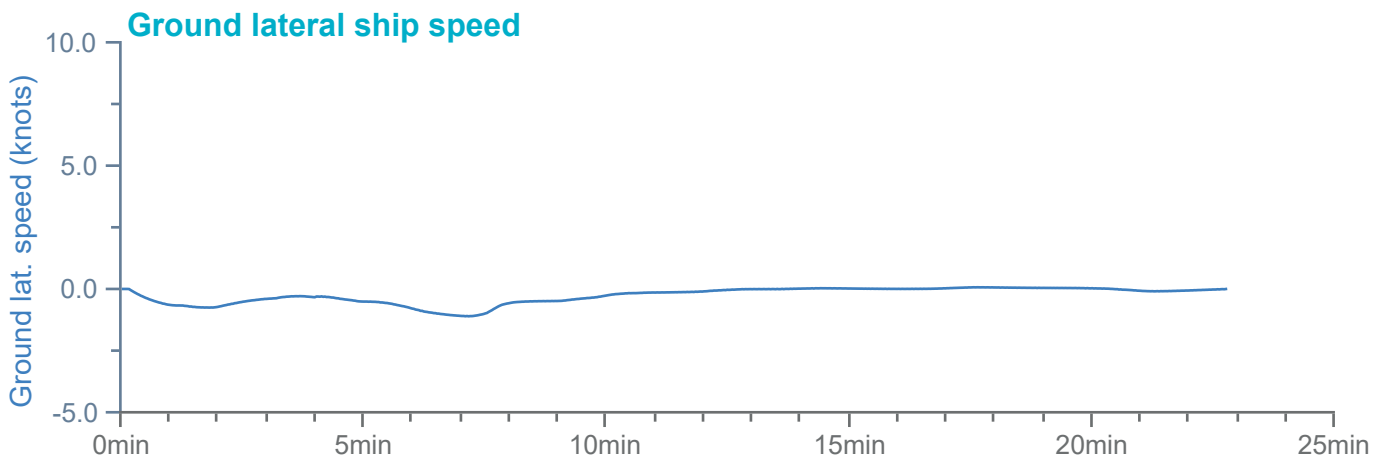
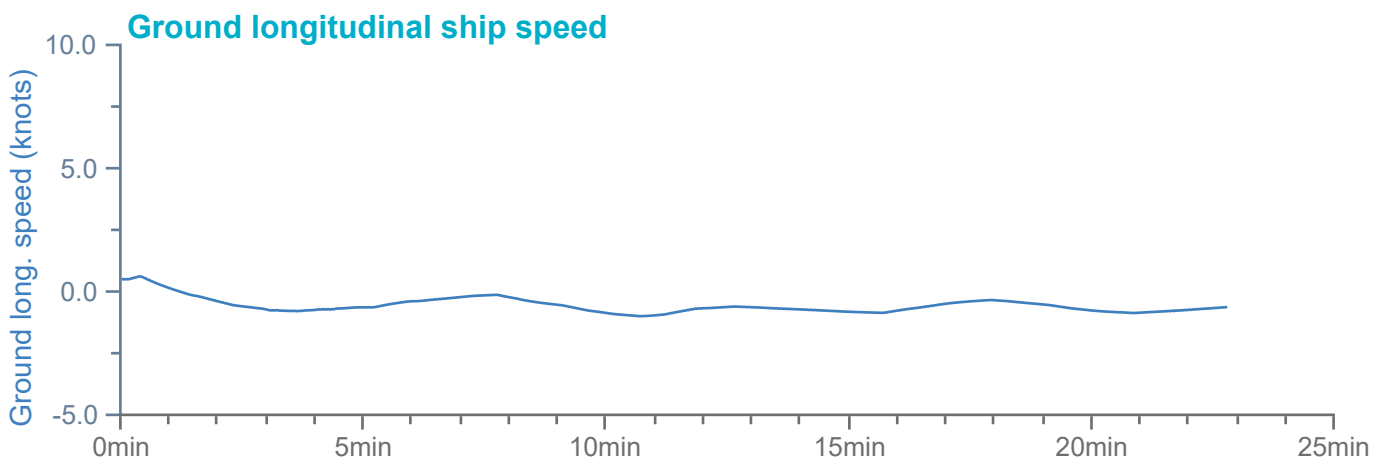
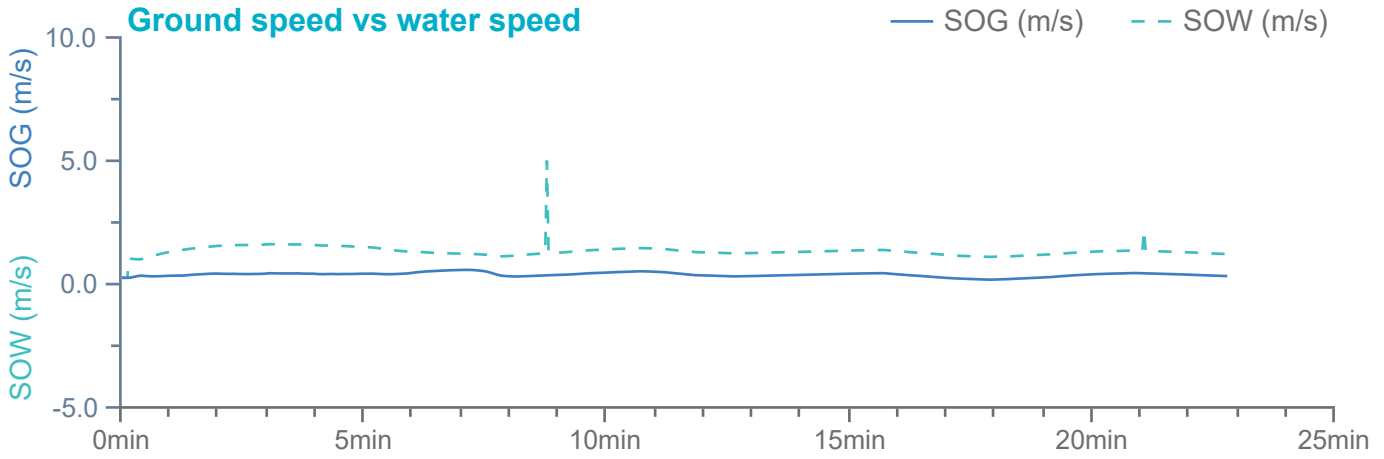
Port rudder angle



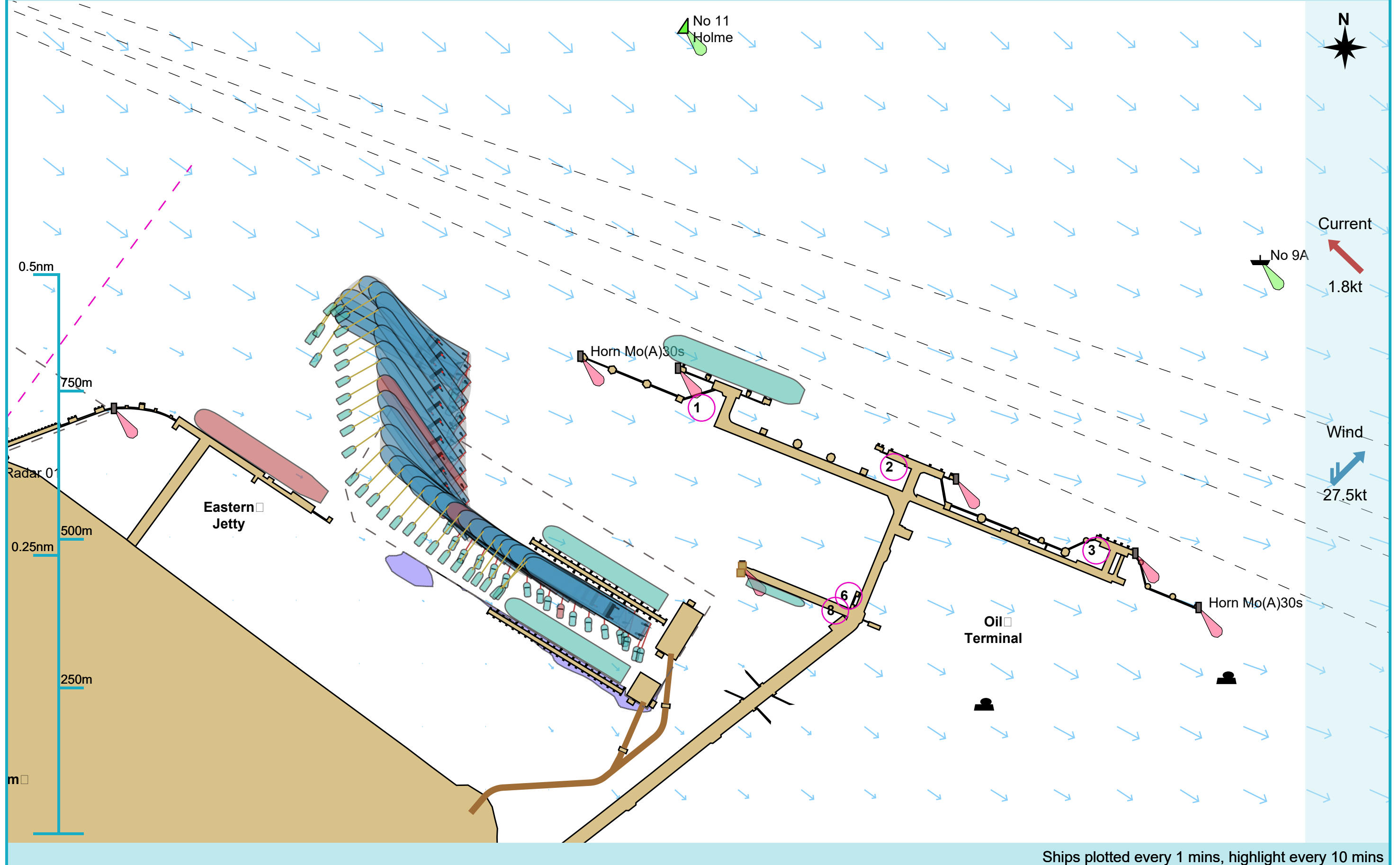
Starboard rudder angle





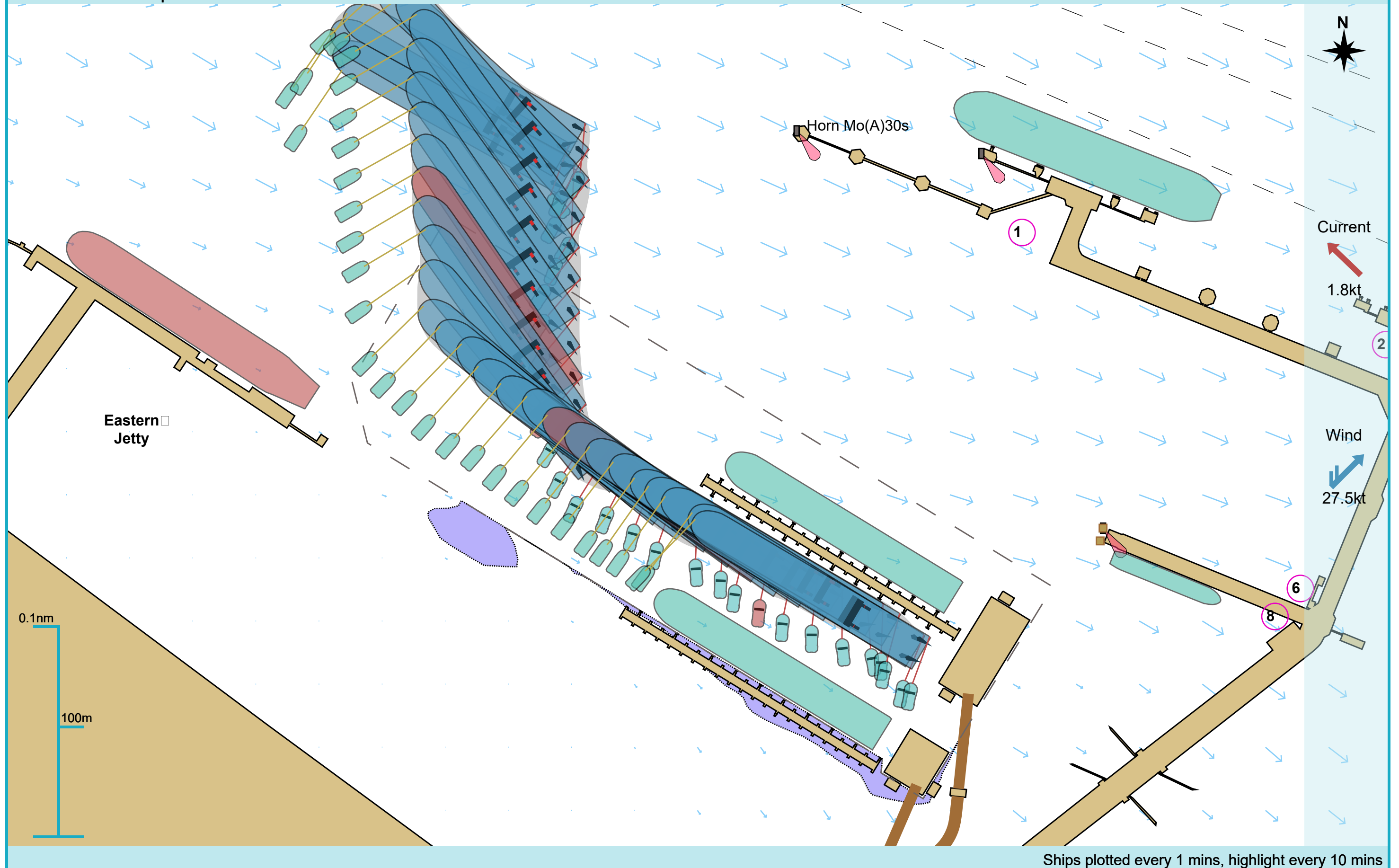


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

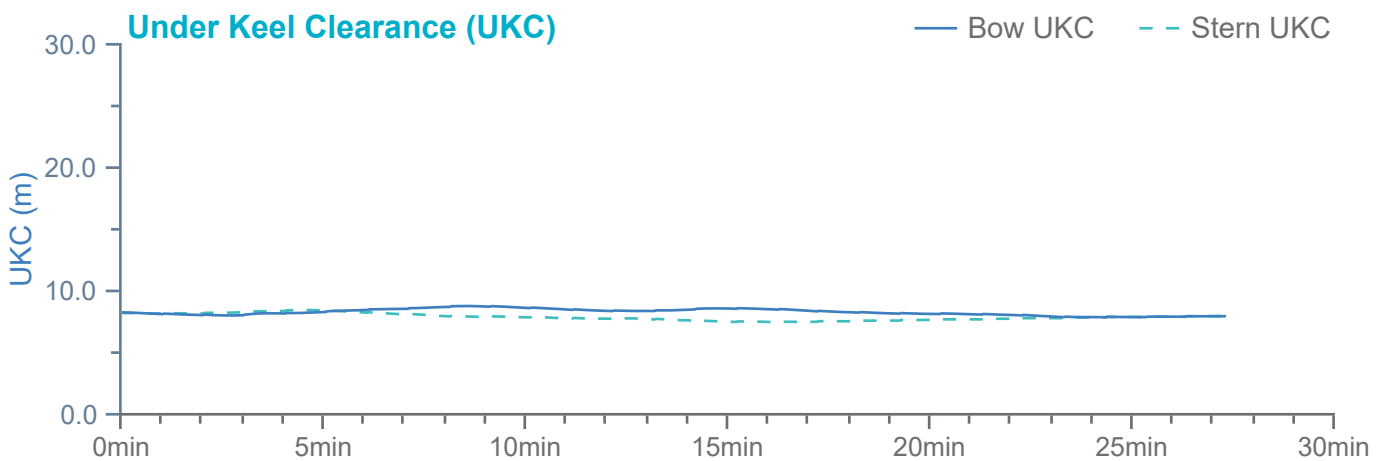
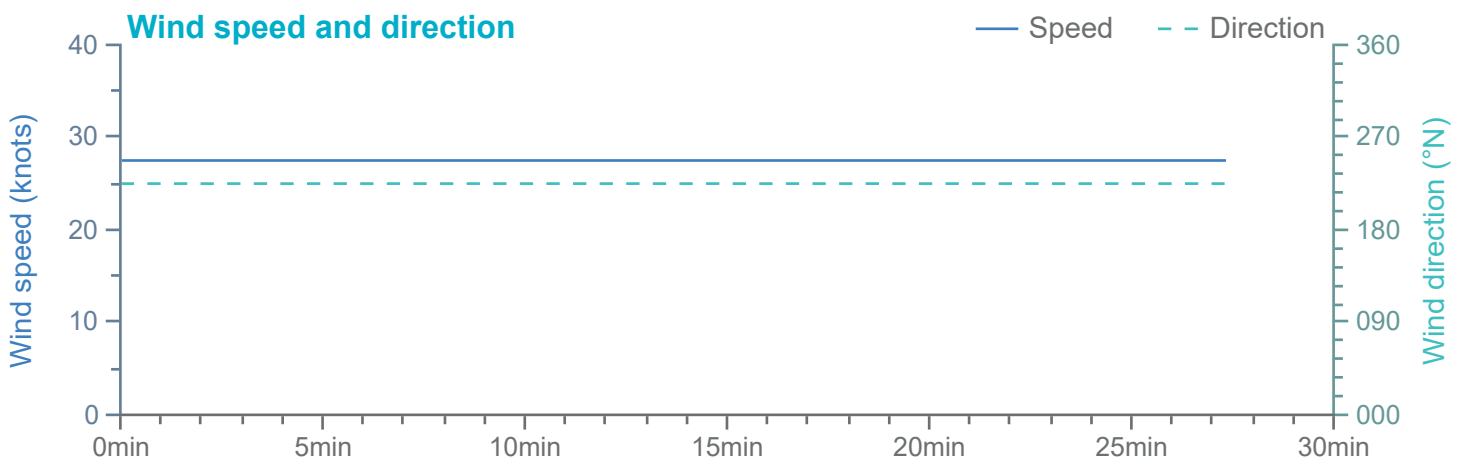
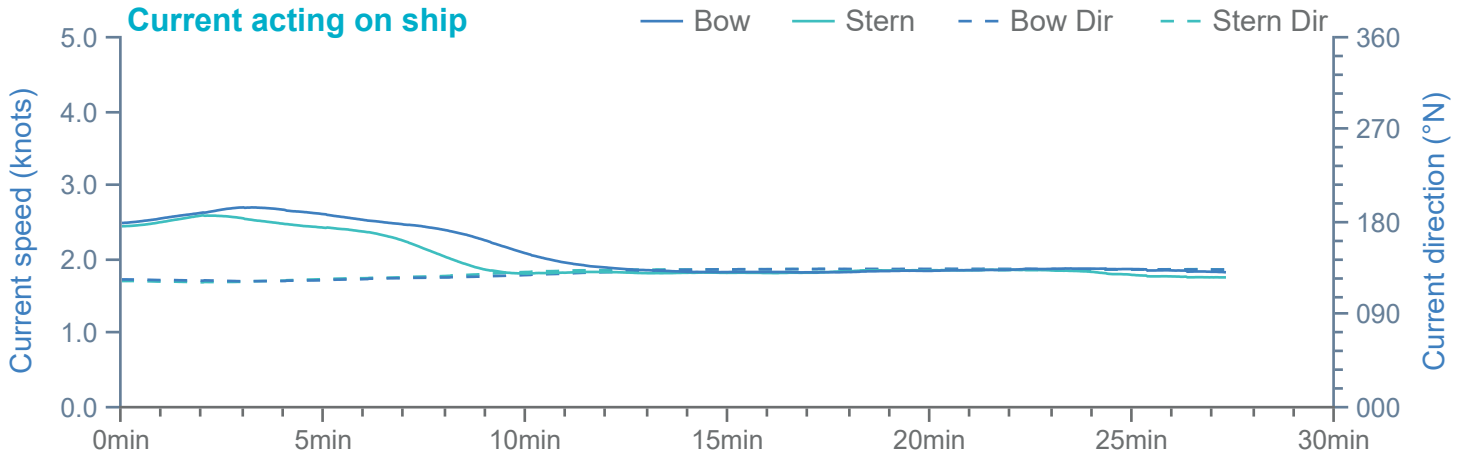
Manoeuvre track plot



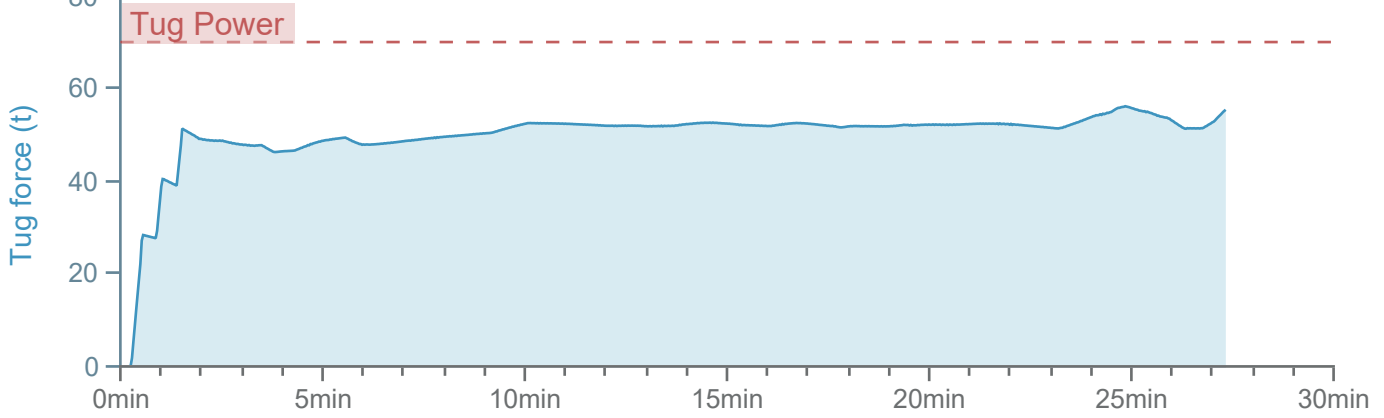
Summary

Environment

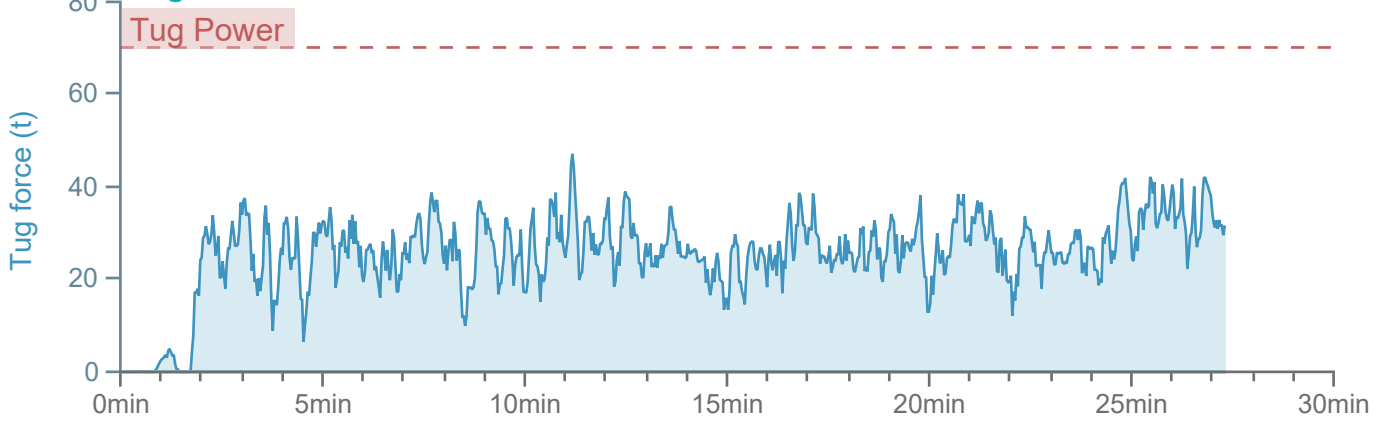
237m RoRo unnamed



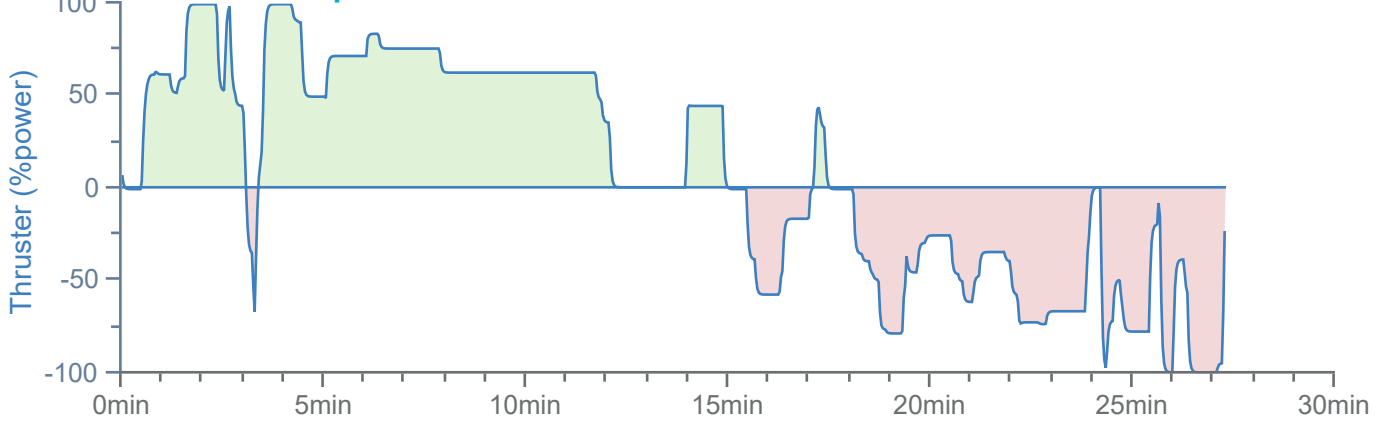
Tug 1 forces

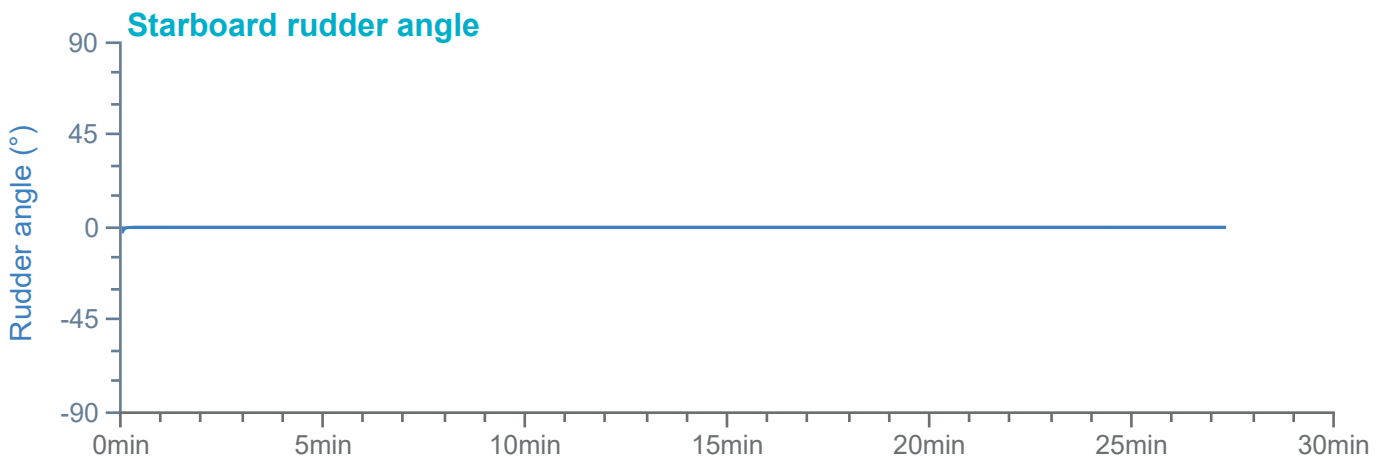
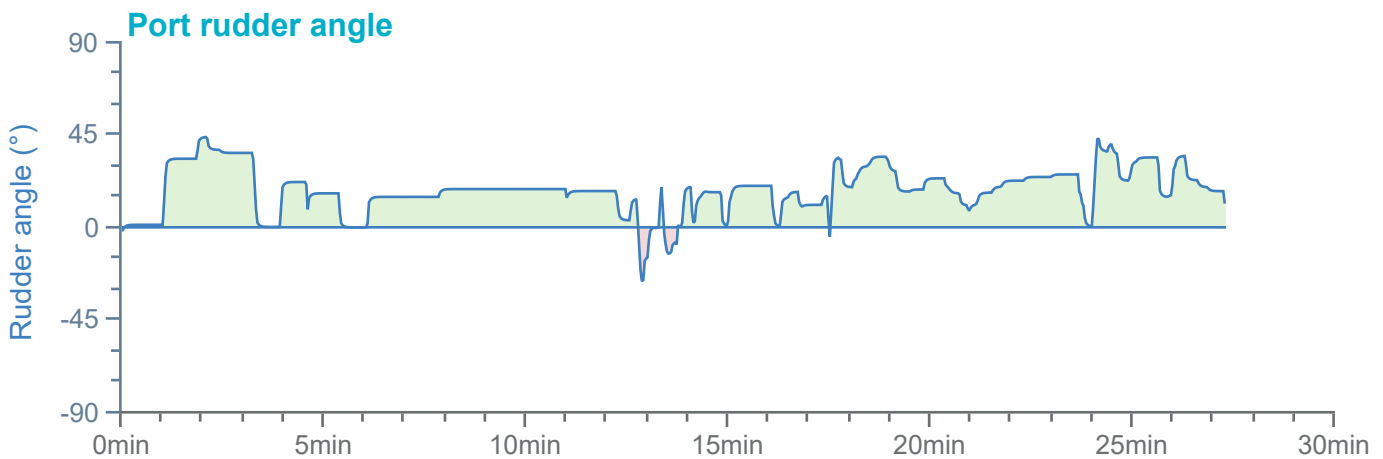
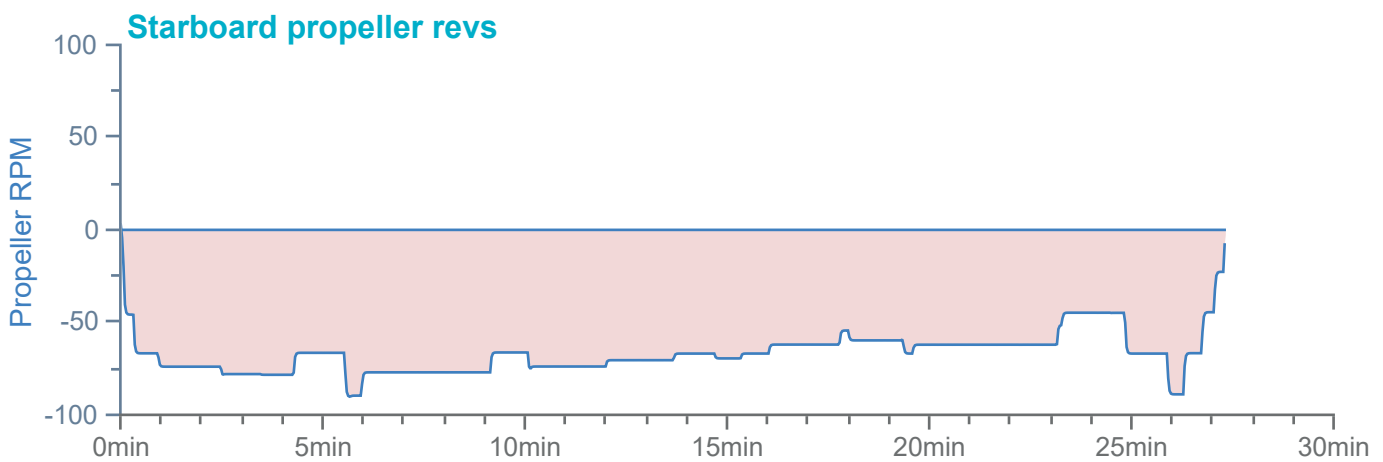
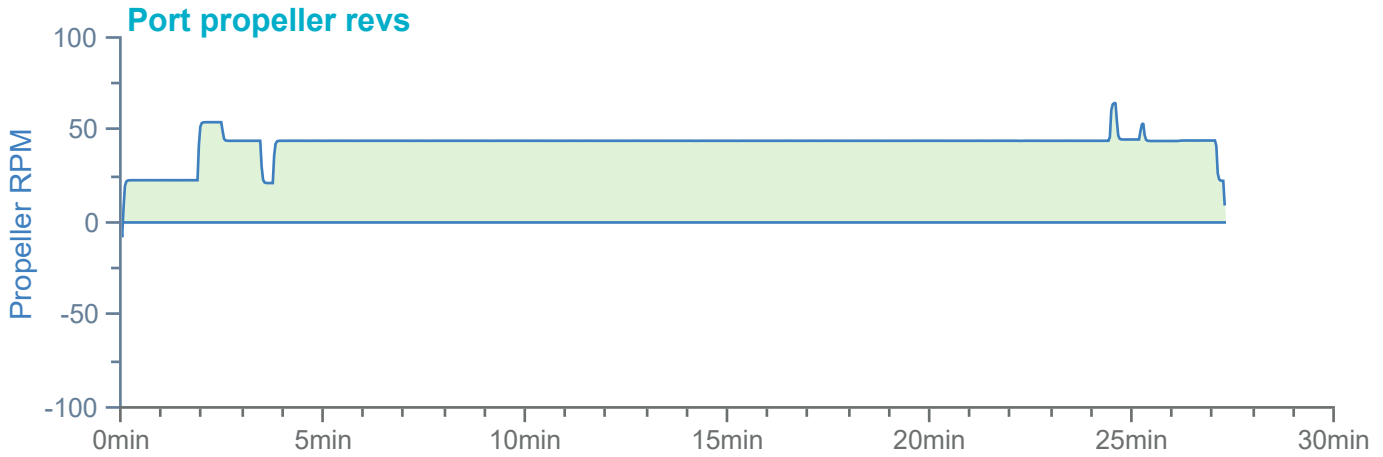


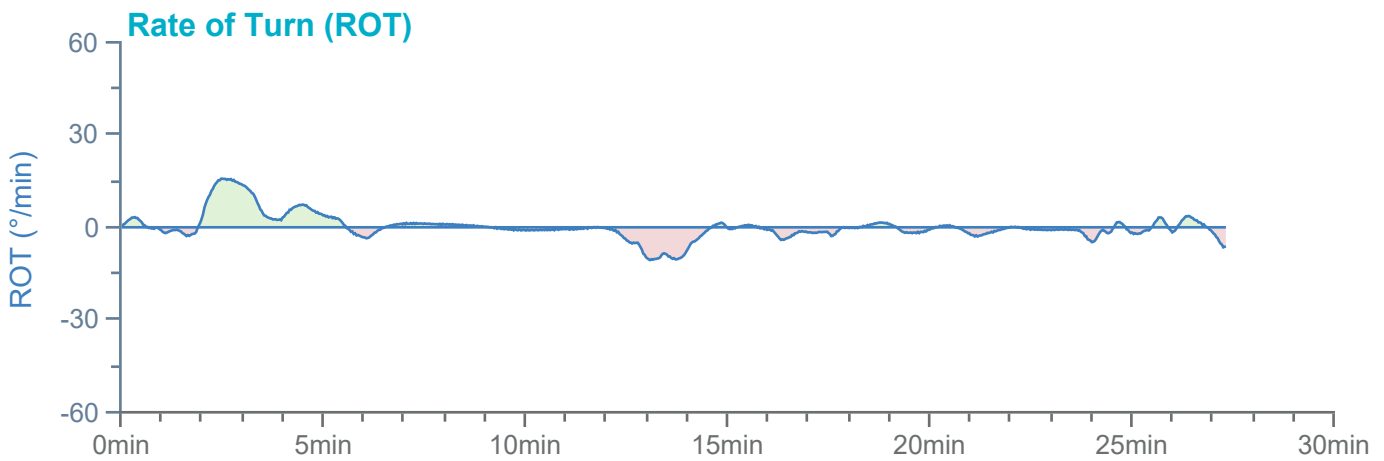
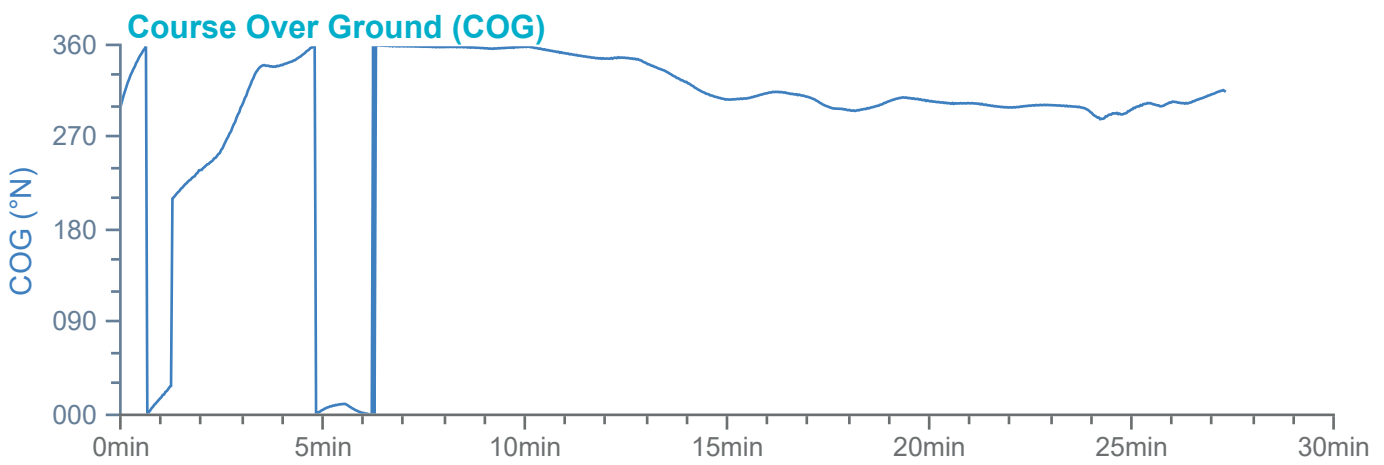
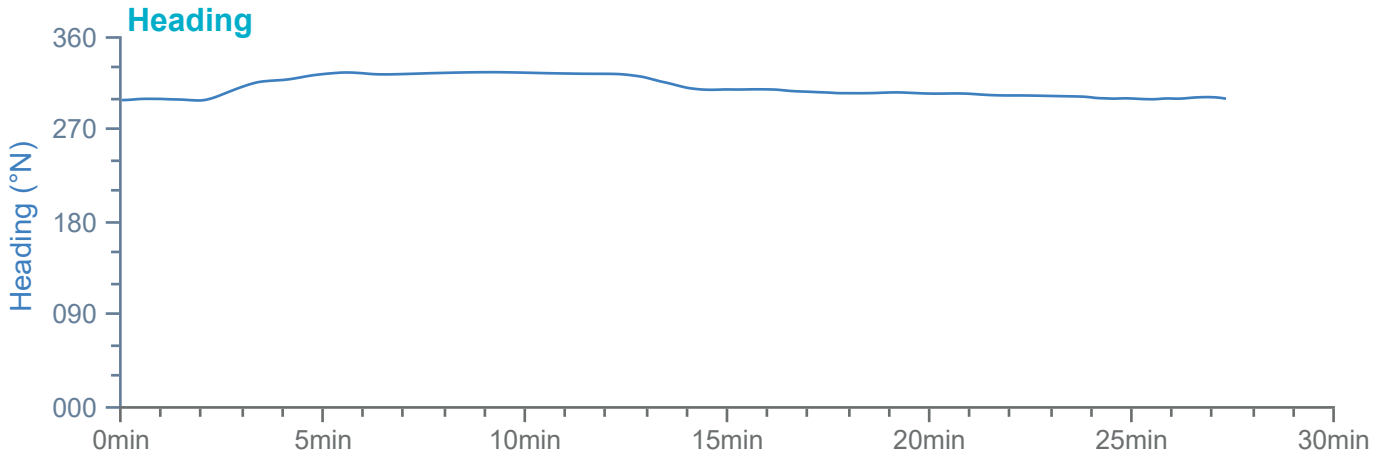
Tug 2 forces

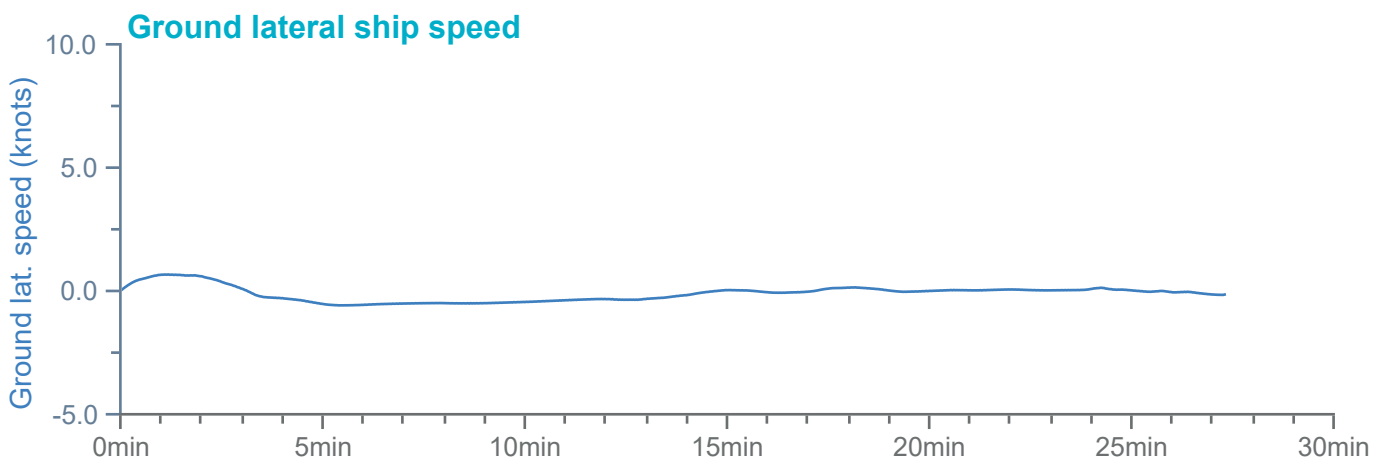
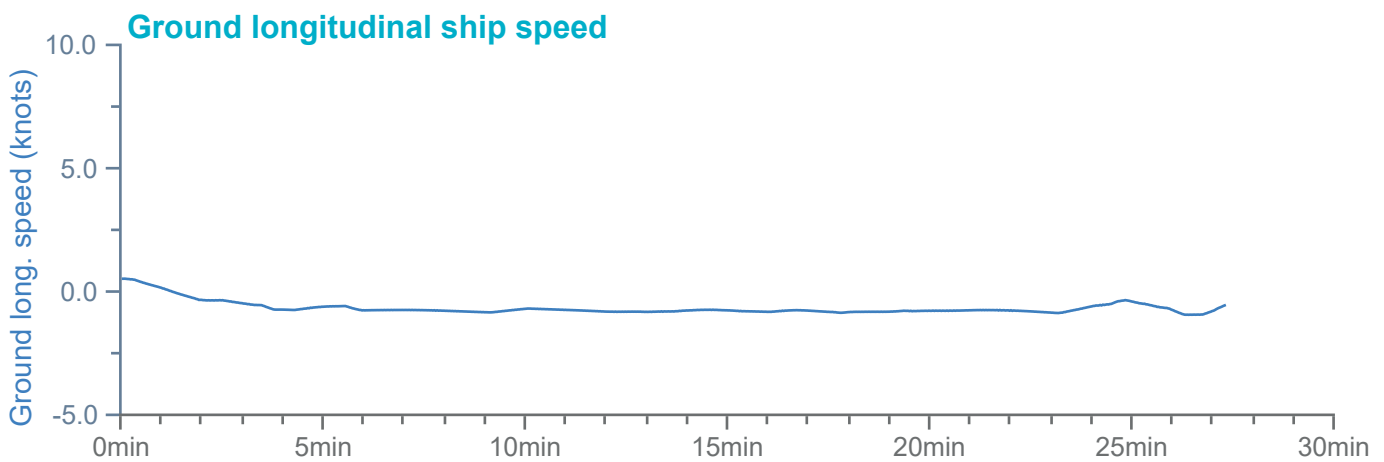
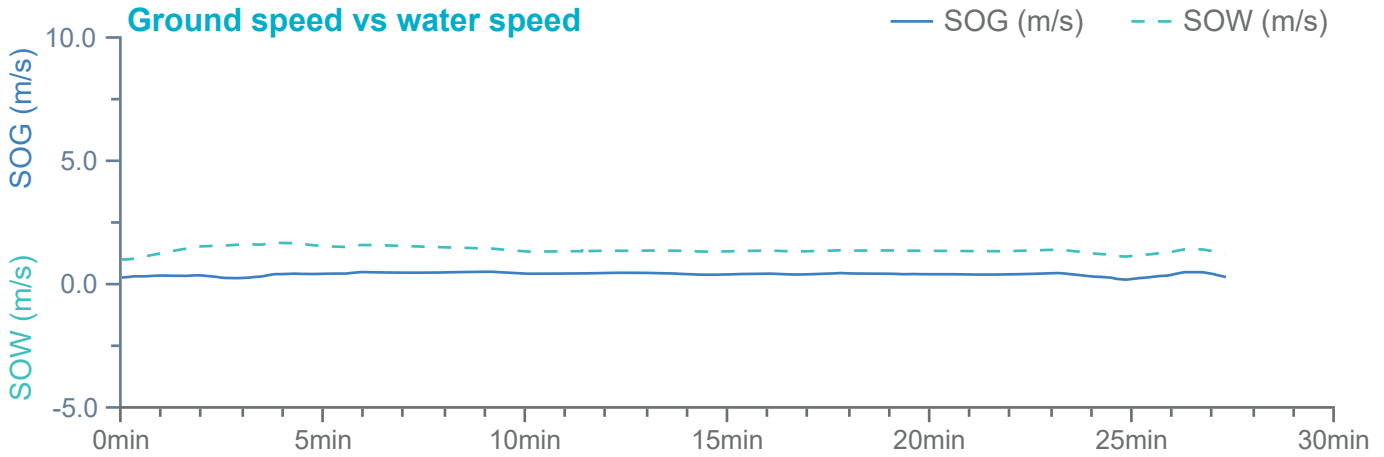


Bow thruster power

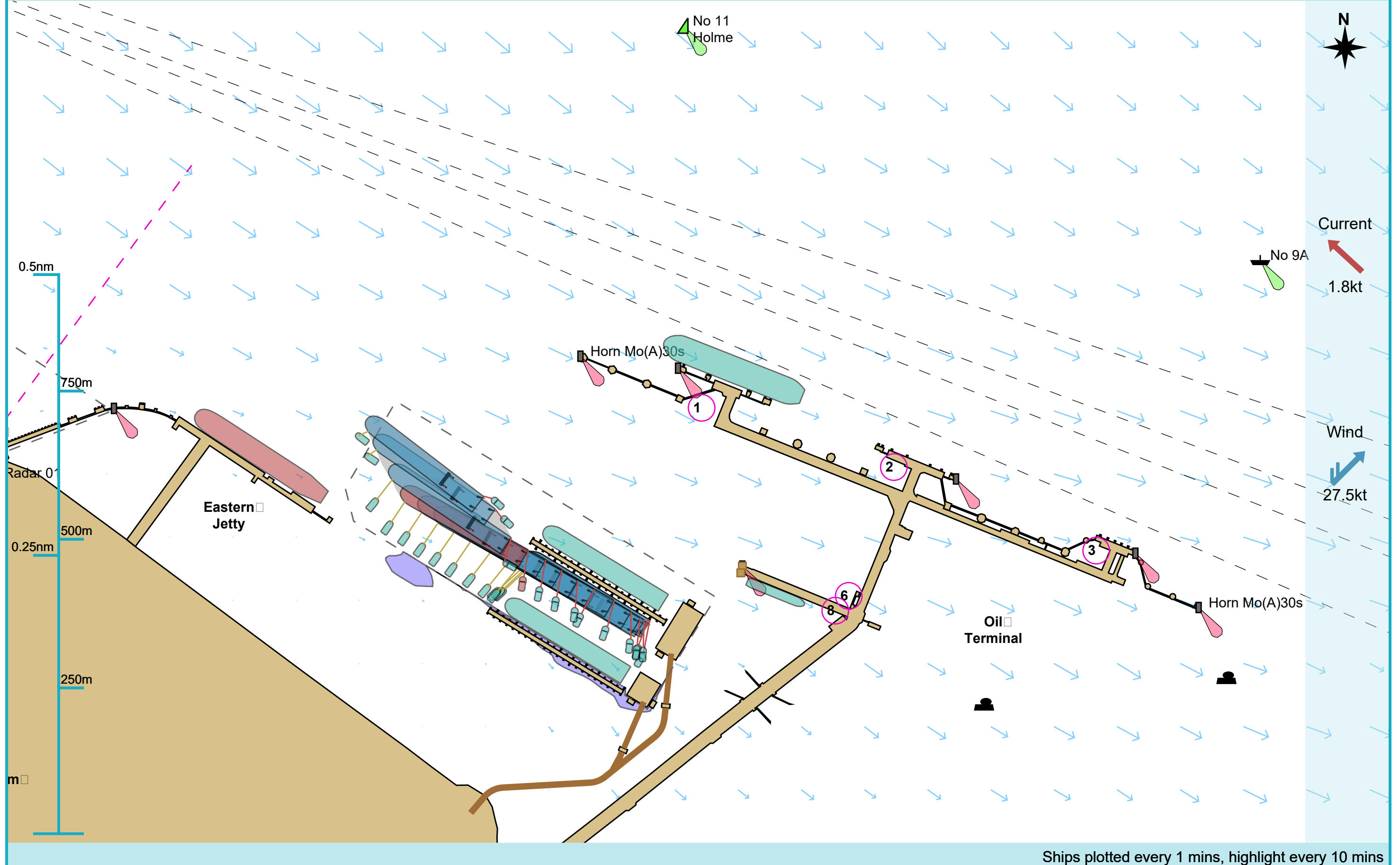






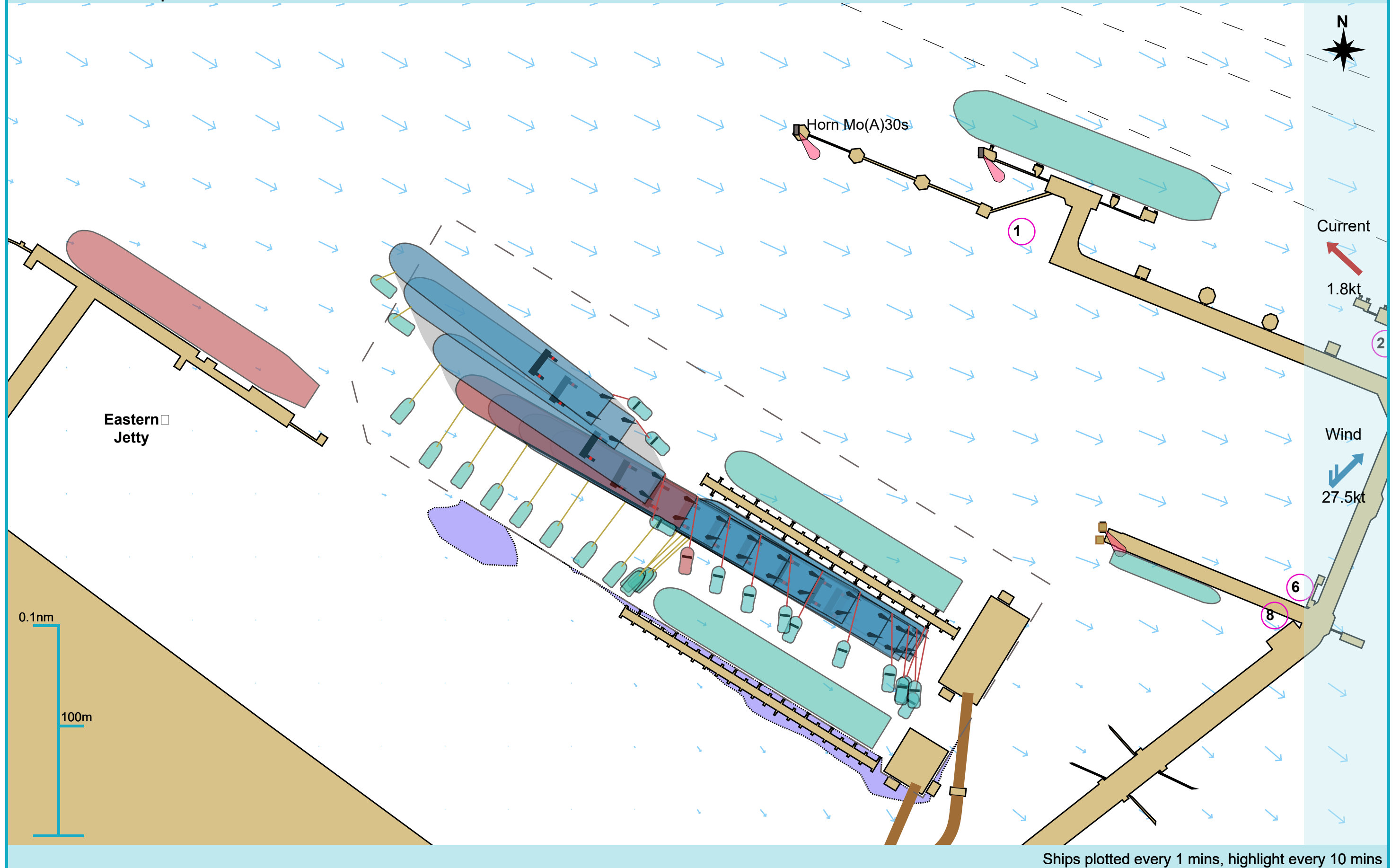


Manoeuvre track plot

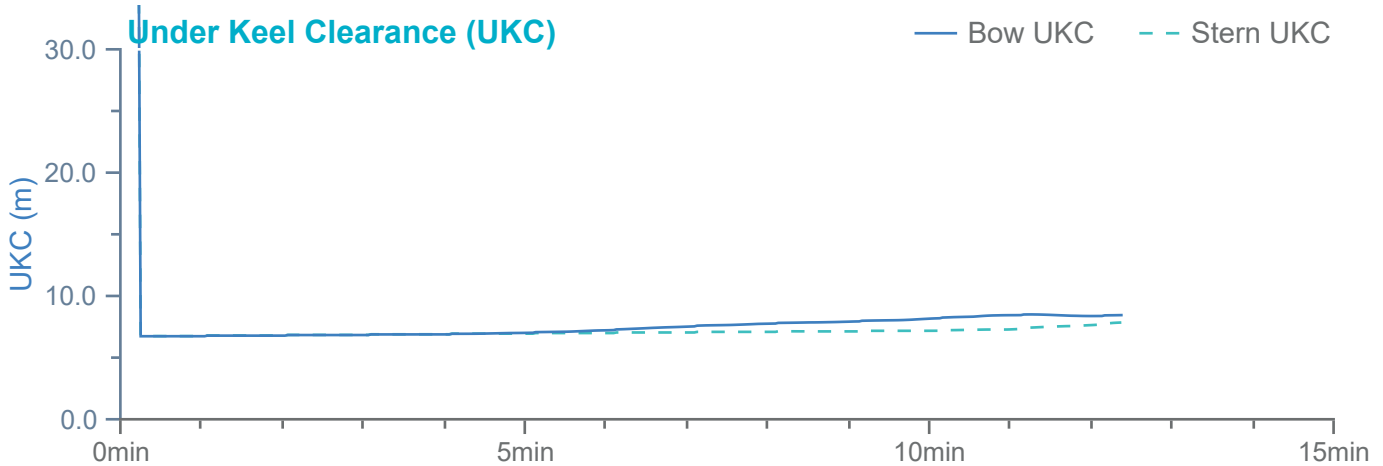
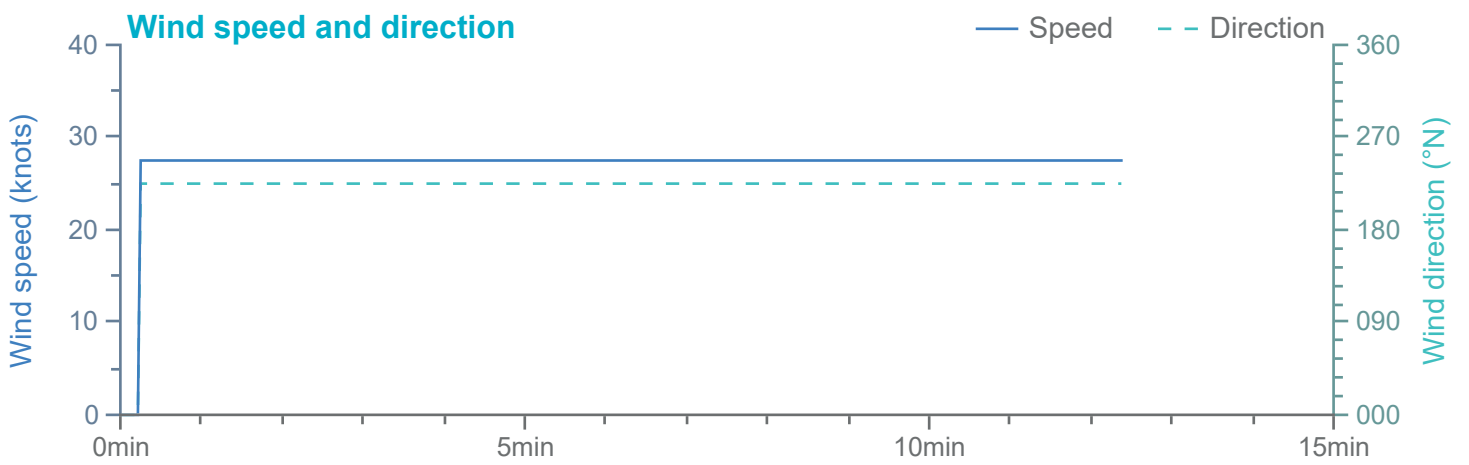
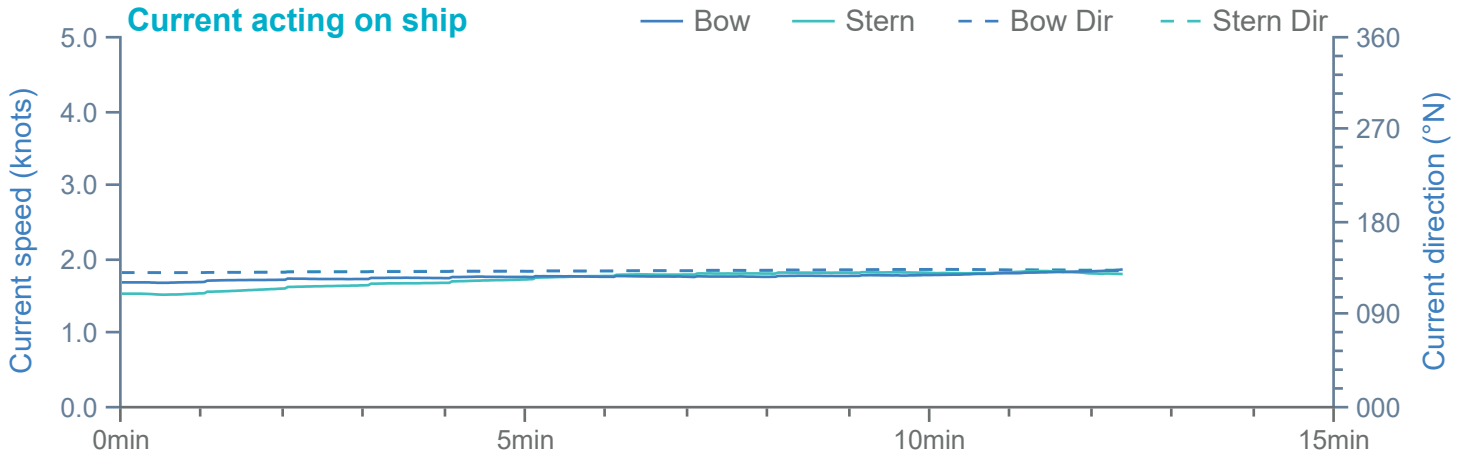


Ships plotted every 1 mins, highlight every 10 mins

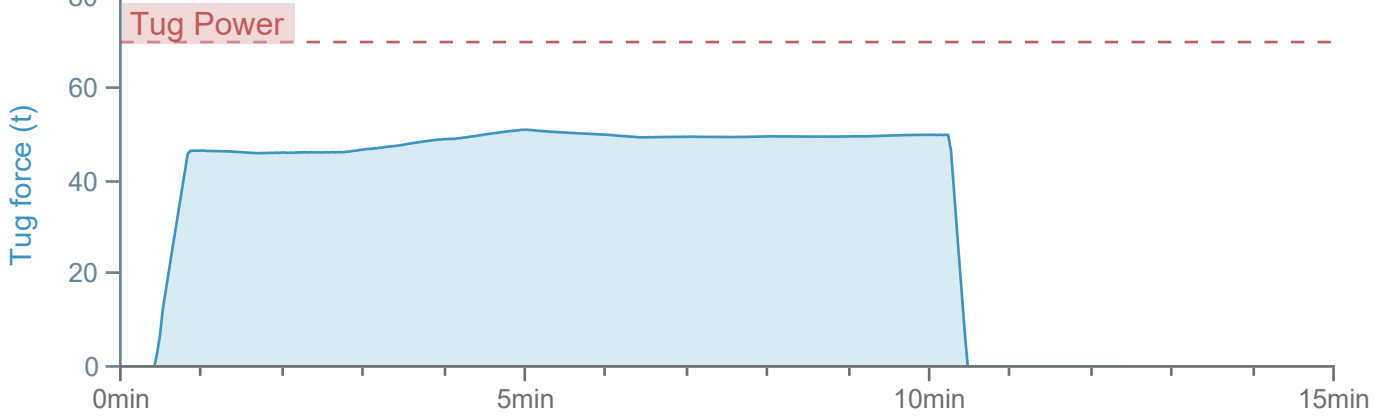
Manoeuvre track plot



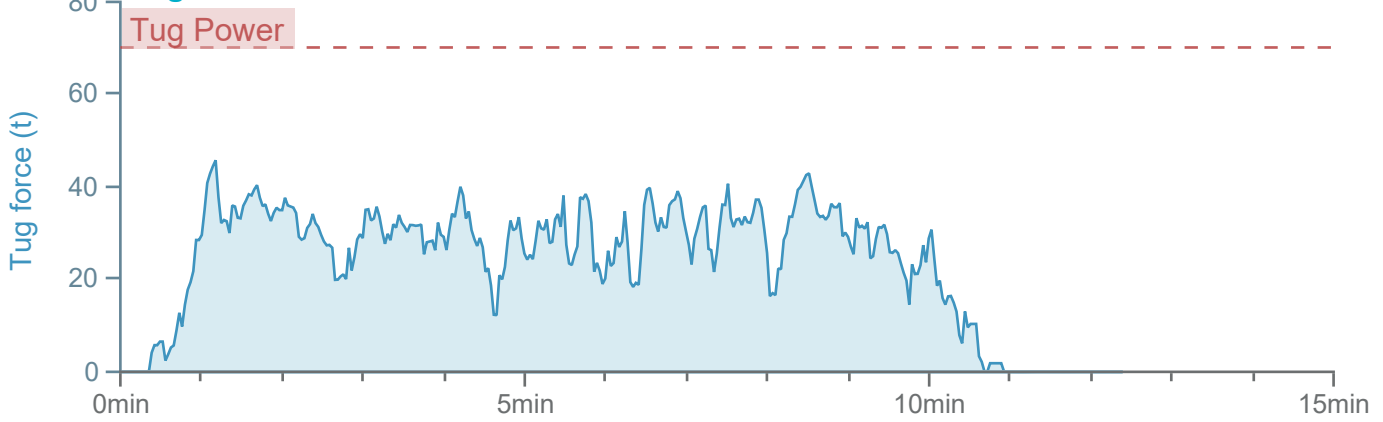
Ships plotted every 1 mins, highlight every 10 mins



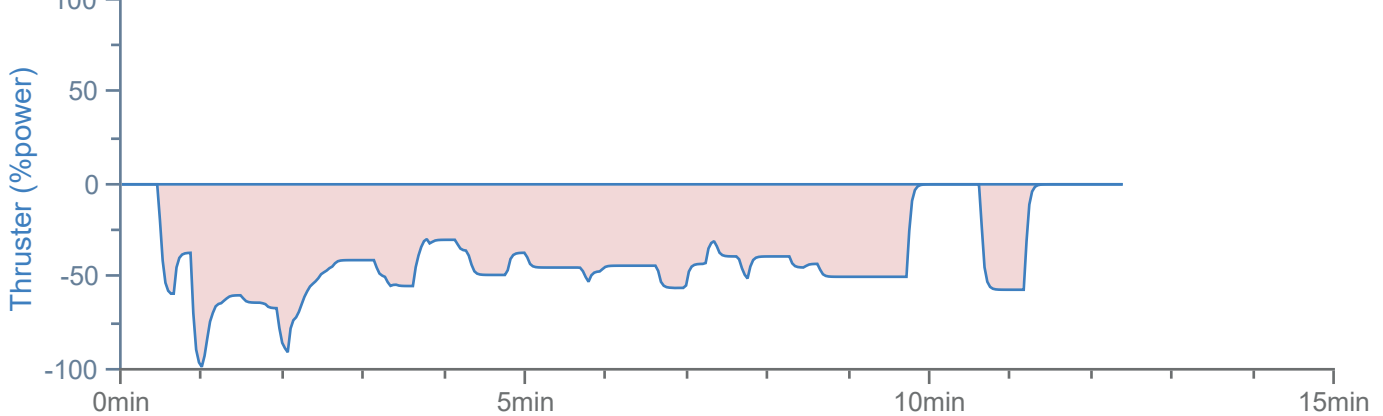
Tug 1 forces

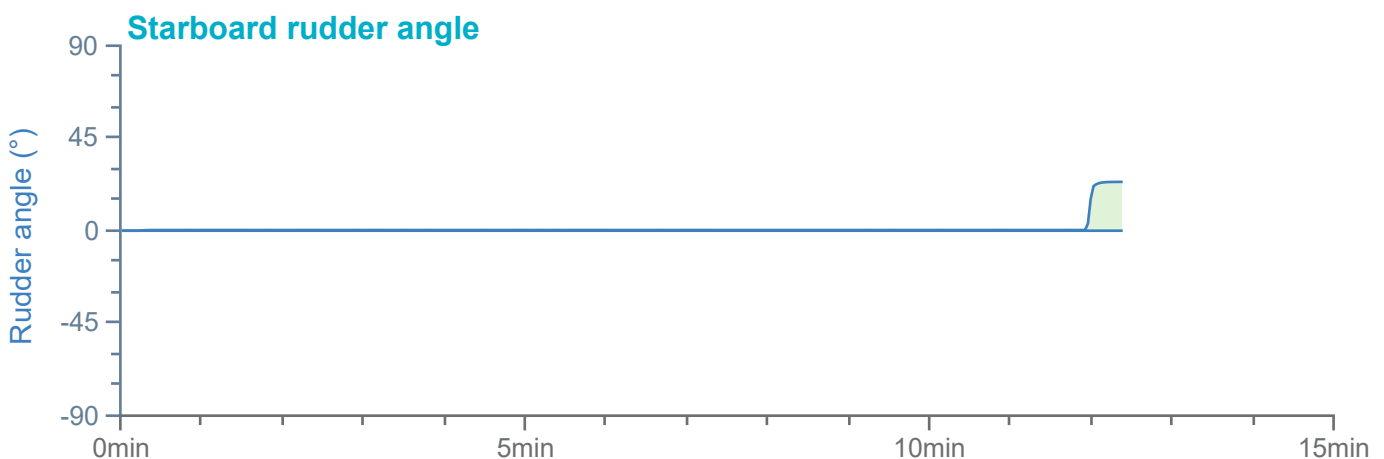
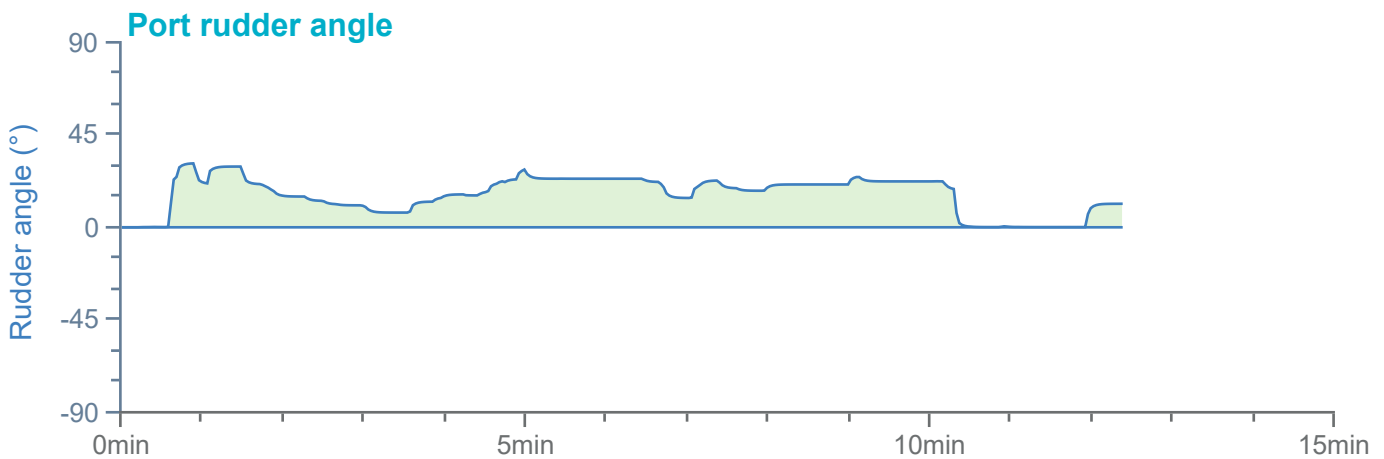
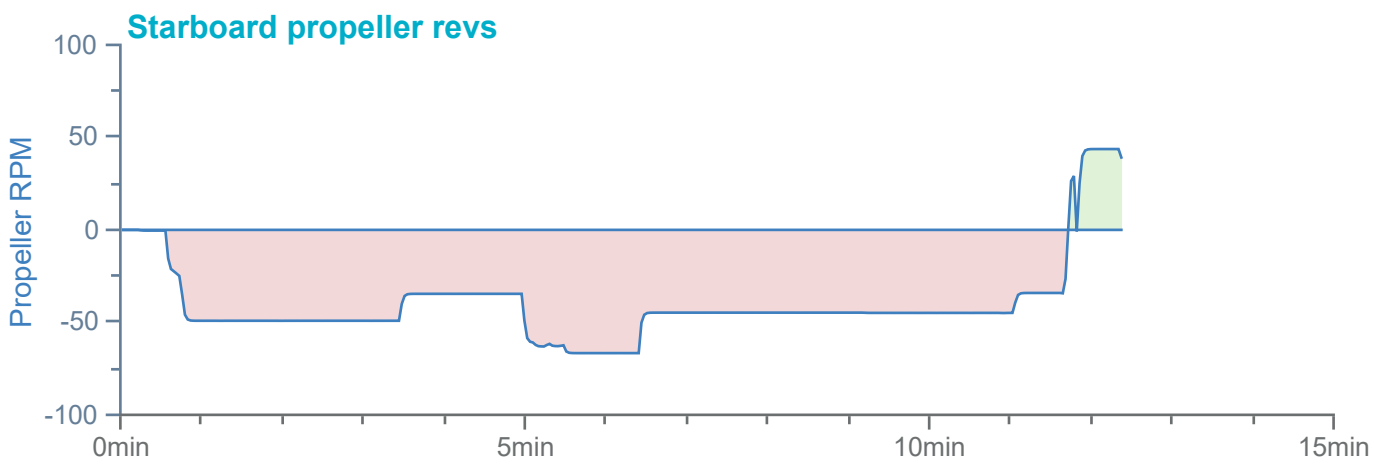
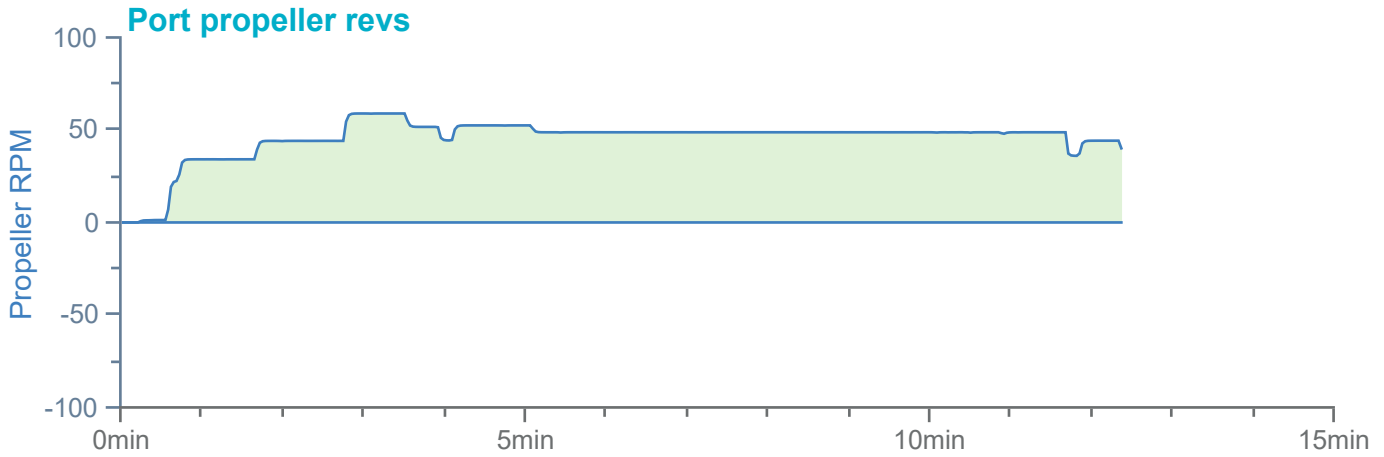


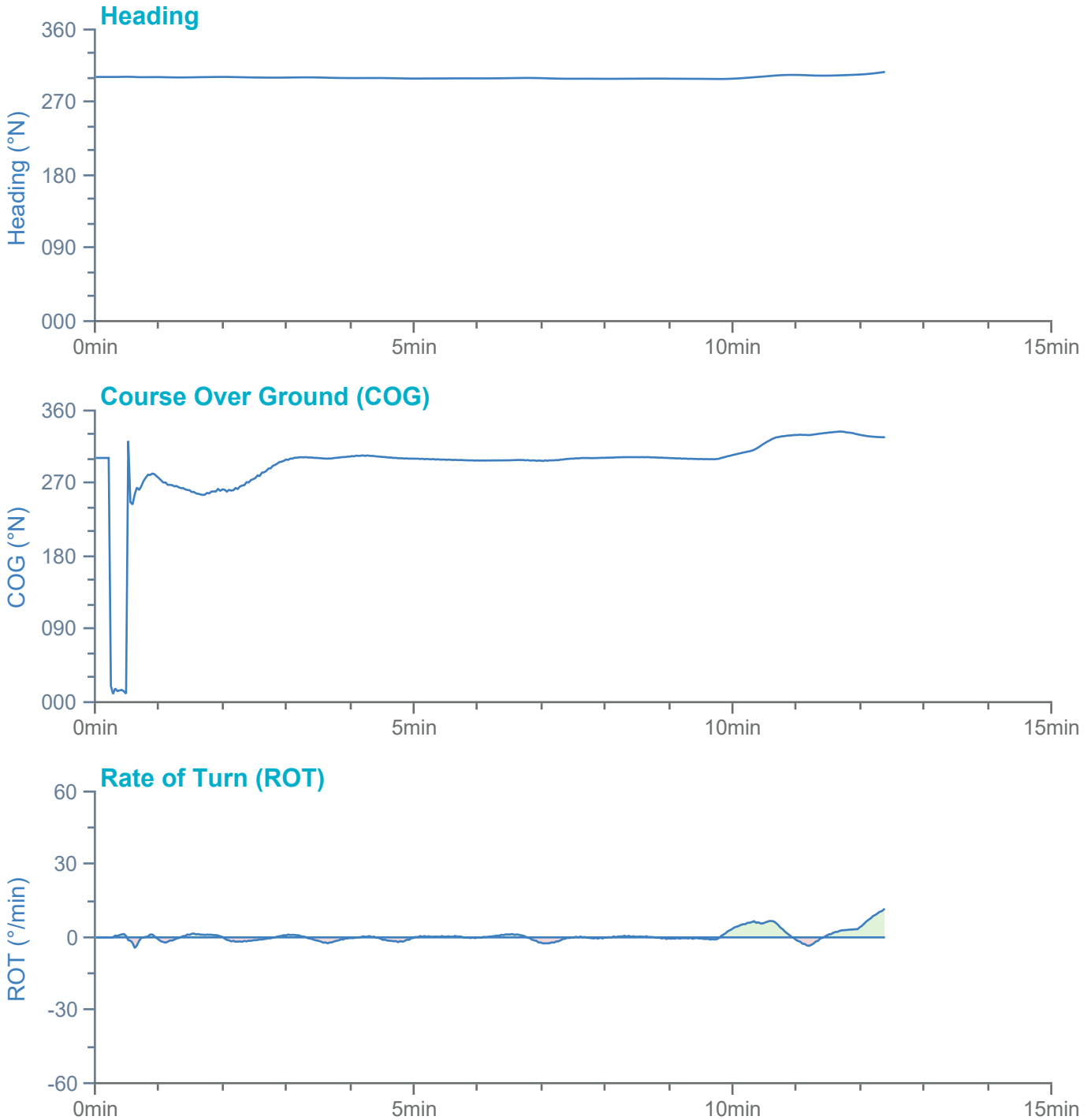
Tug 2 forces

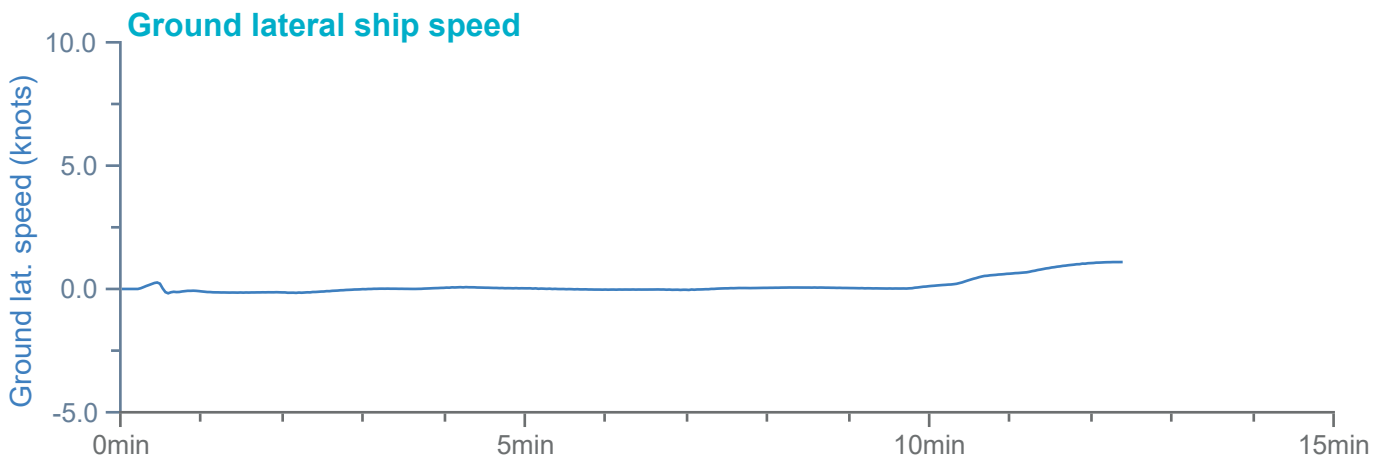
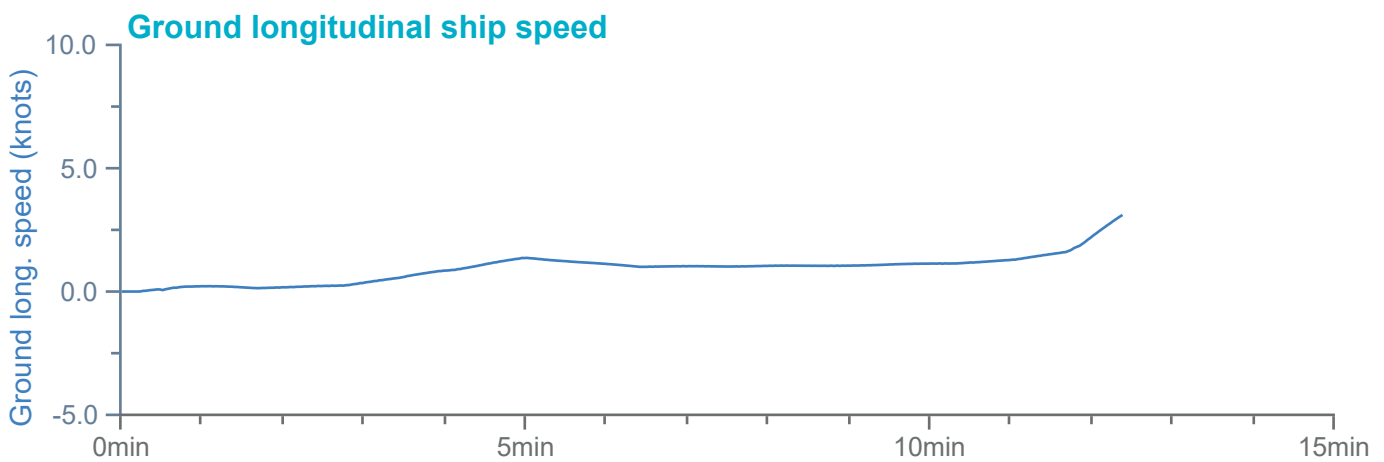
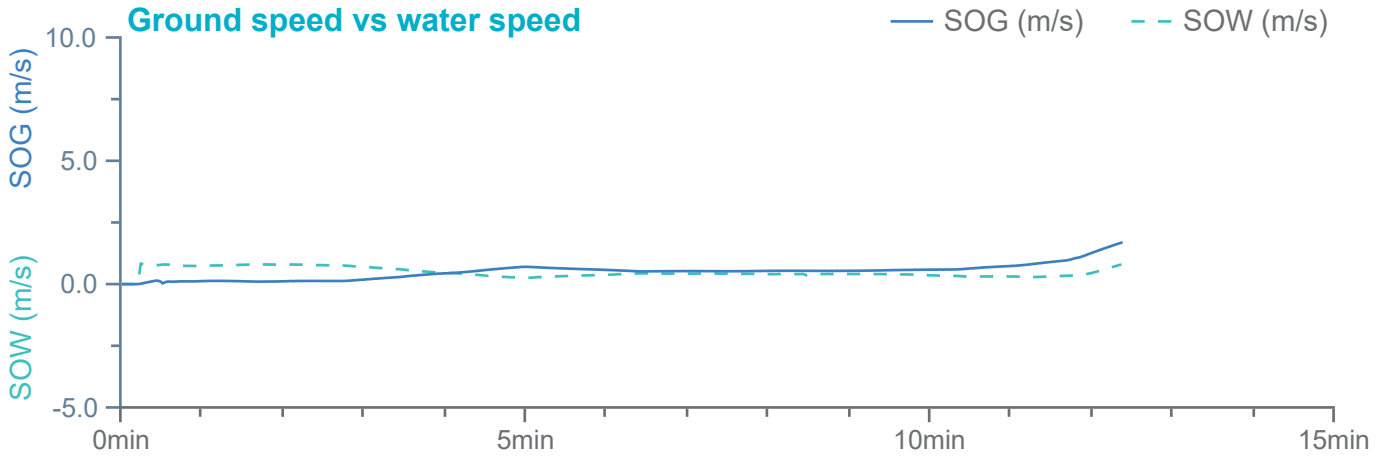


Bow thruster power

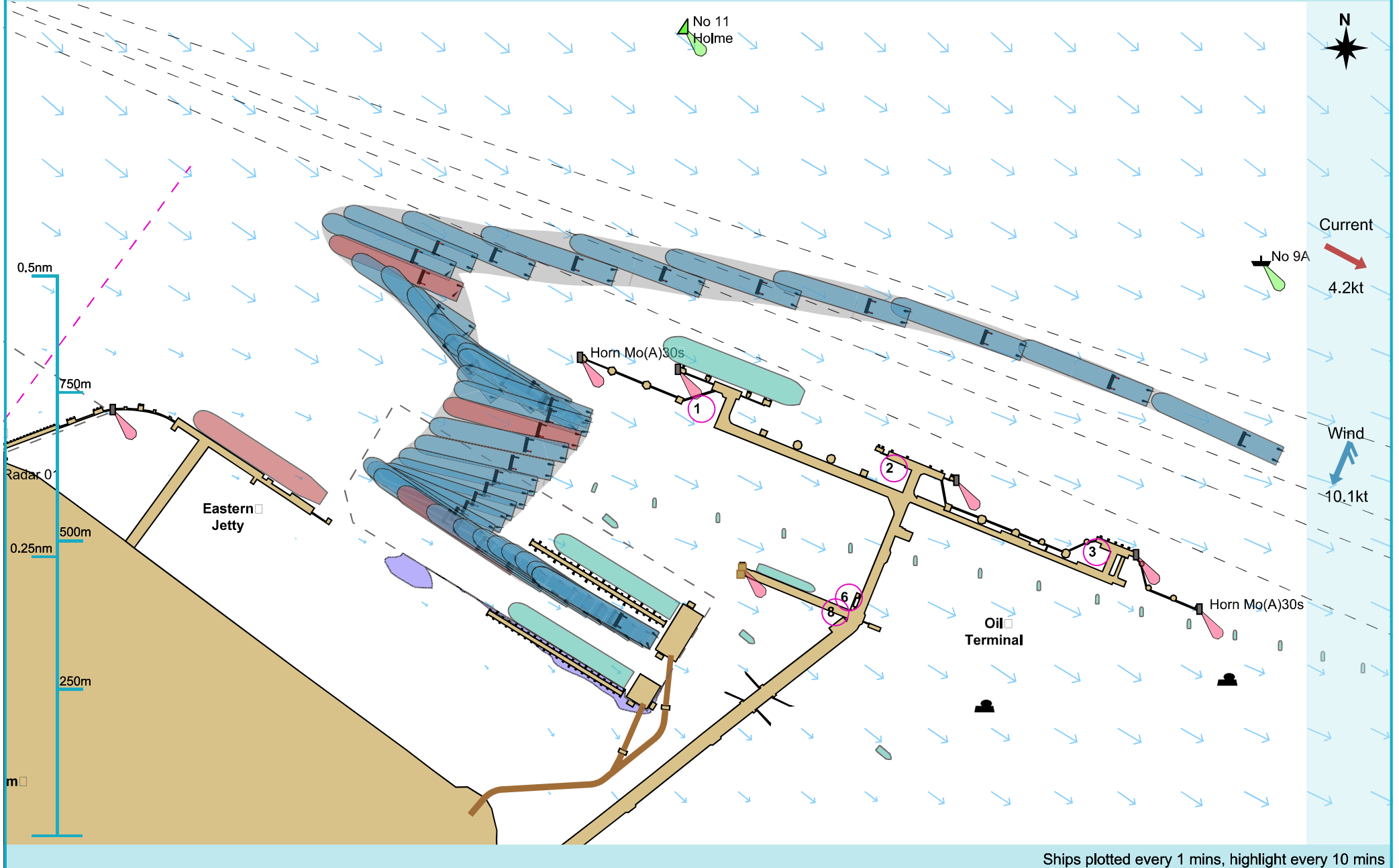






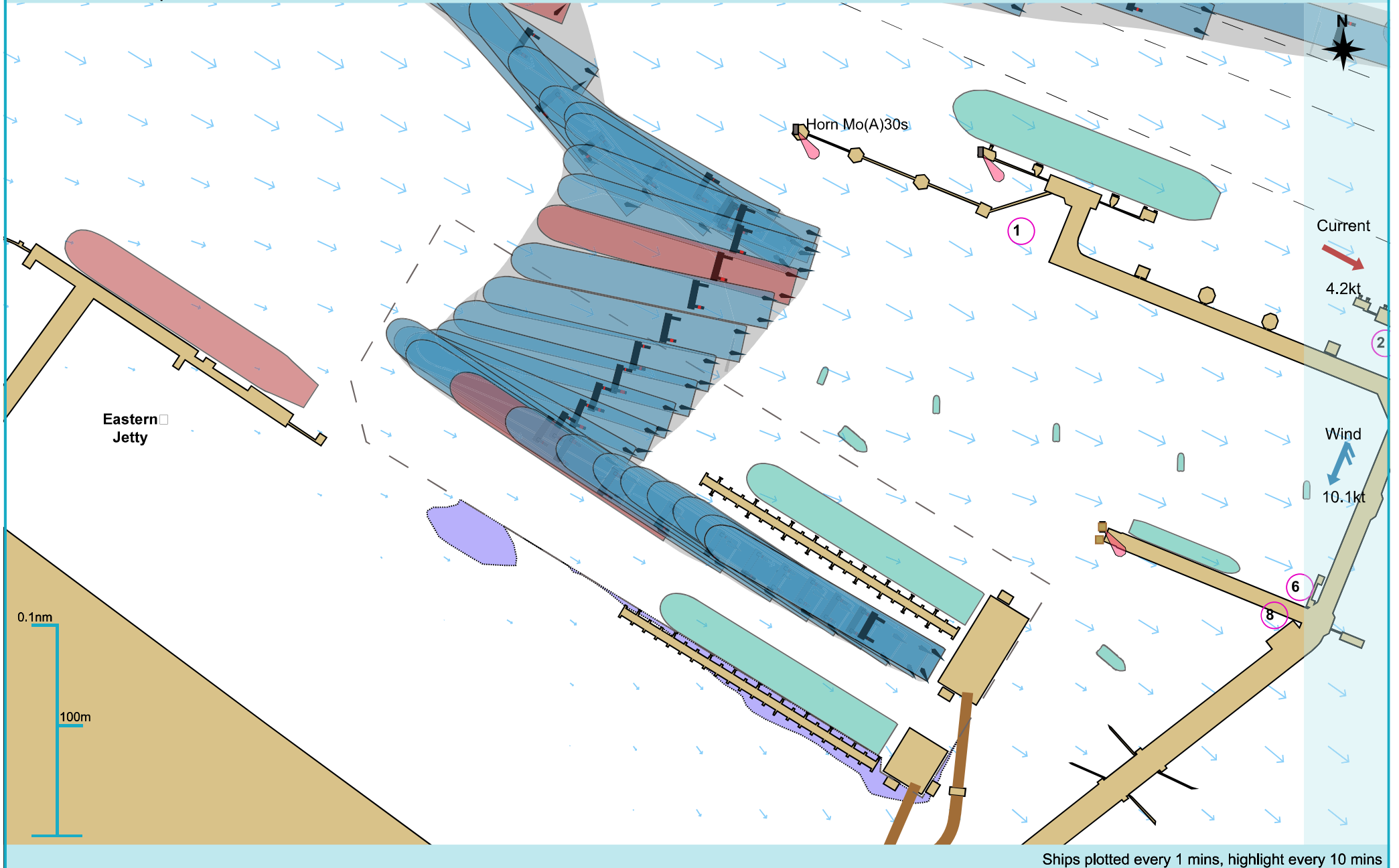


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

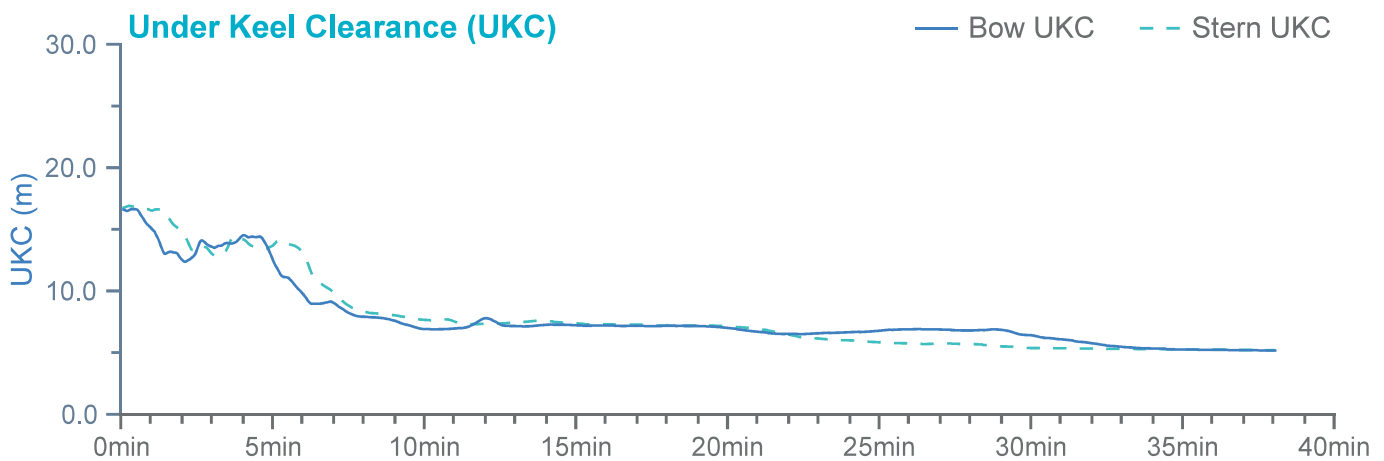
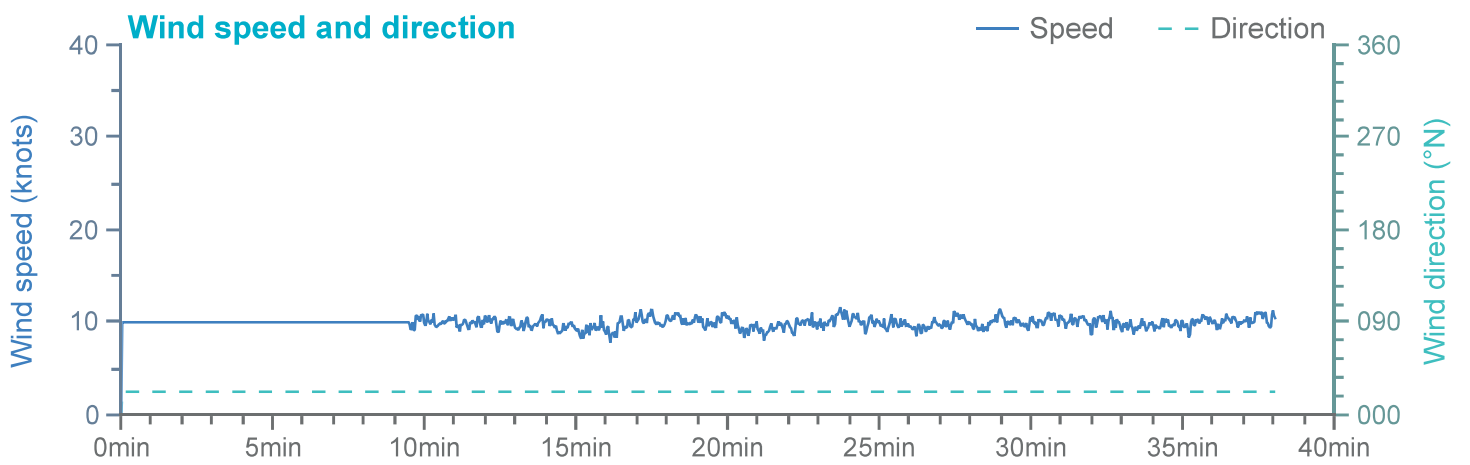
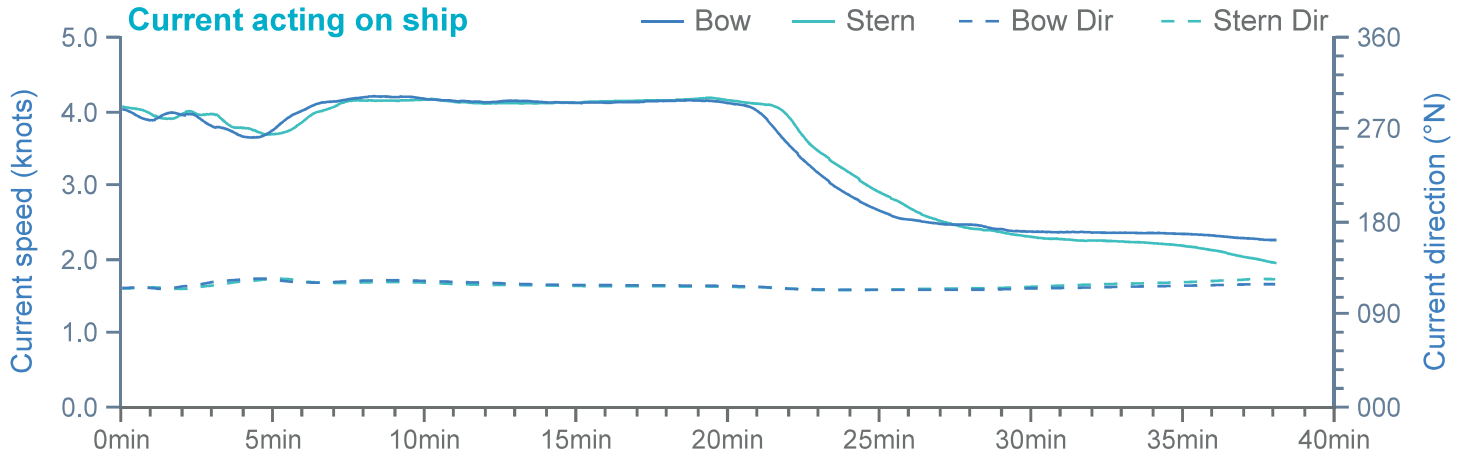


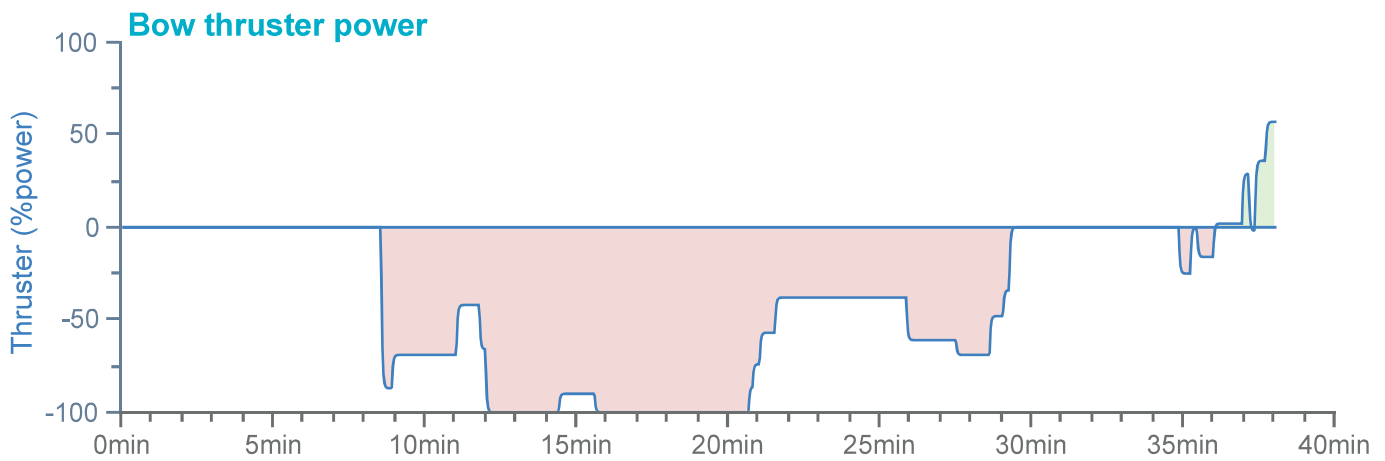
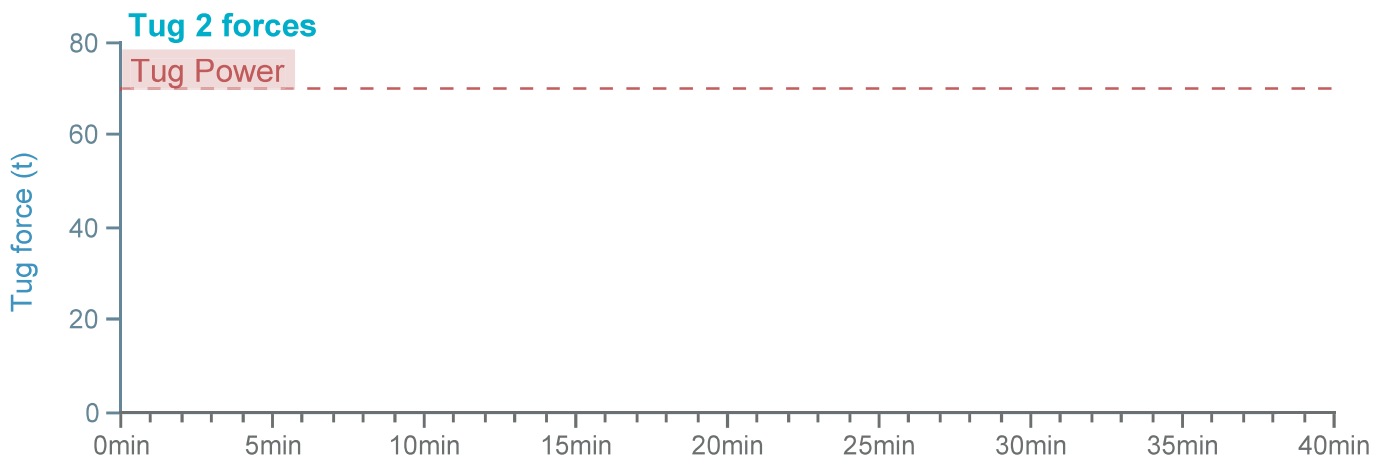
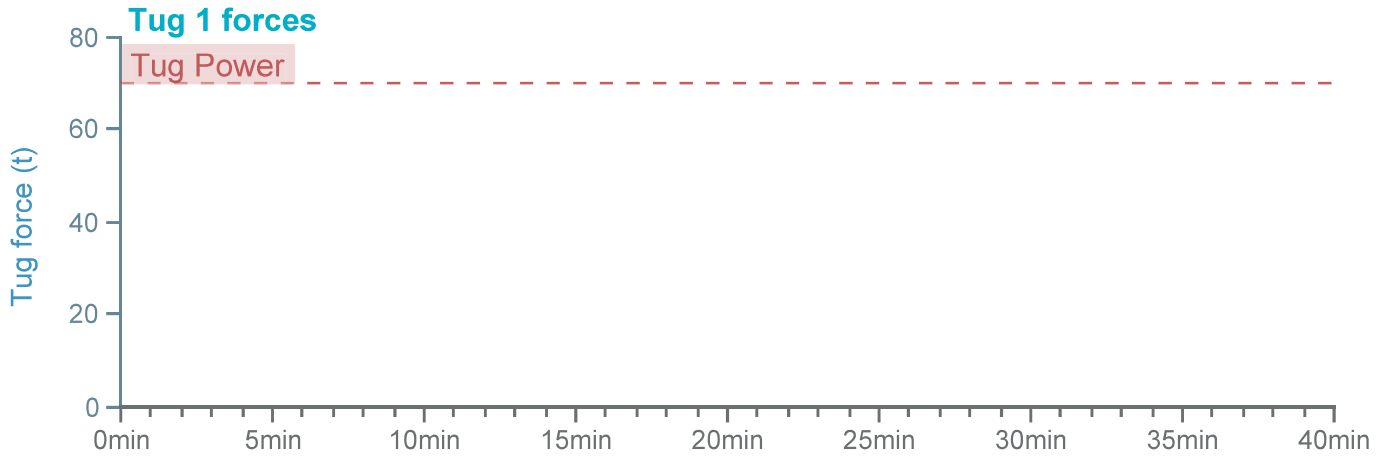
Ships plotted every 1 mins, highlight every 10 mins

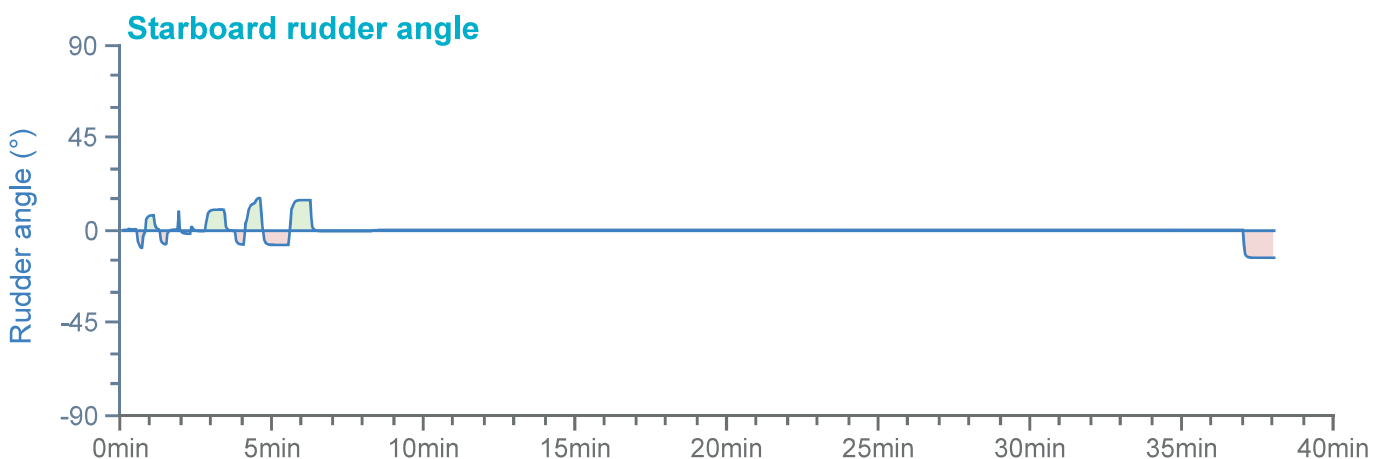
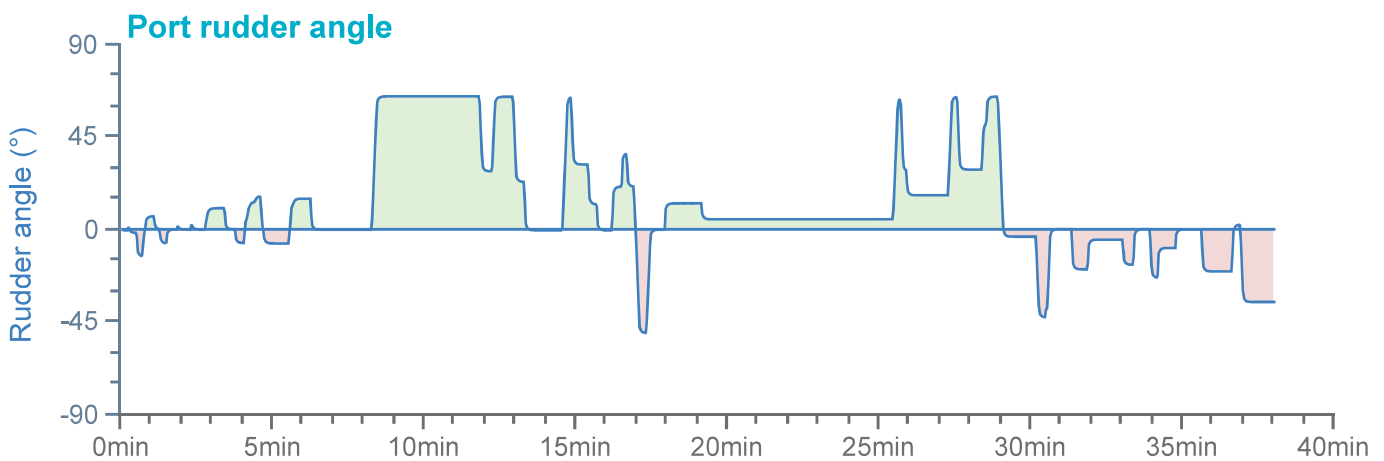
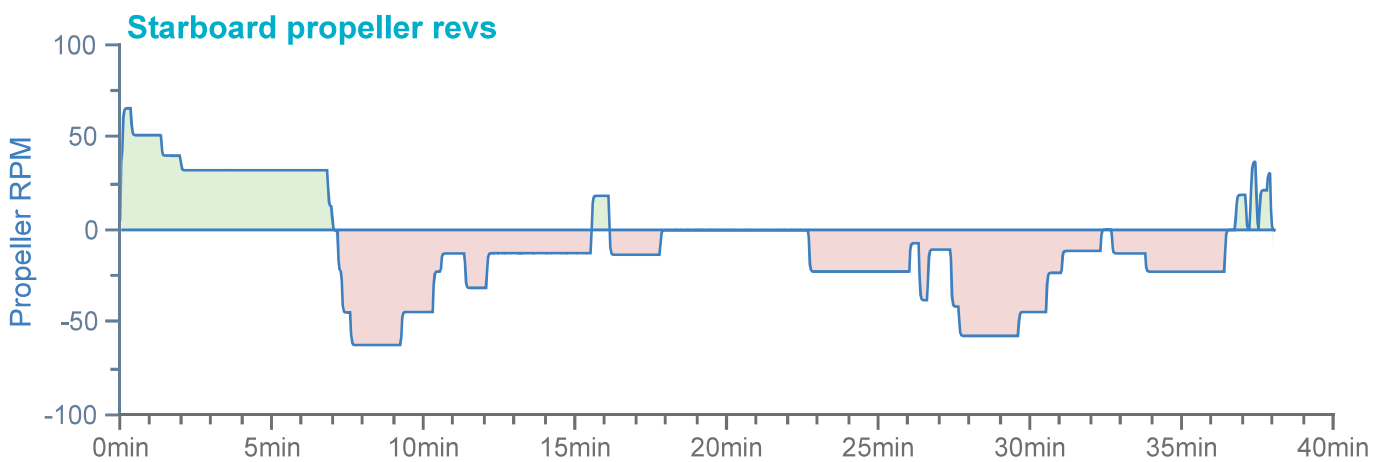
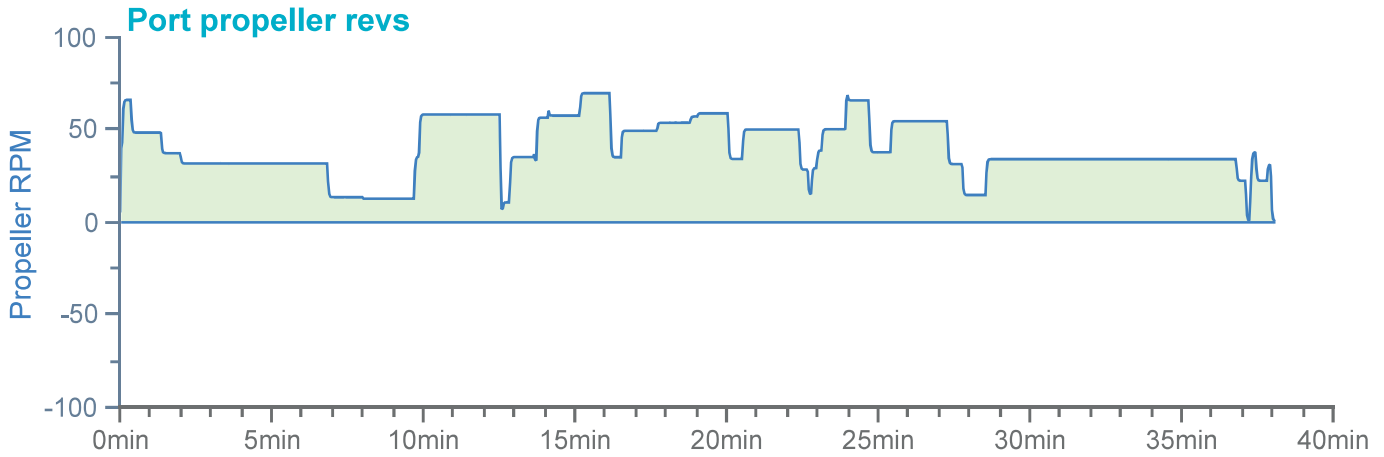
Summary

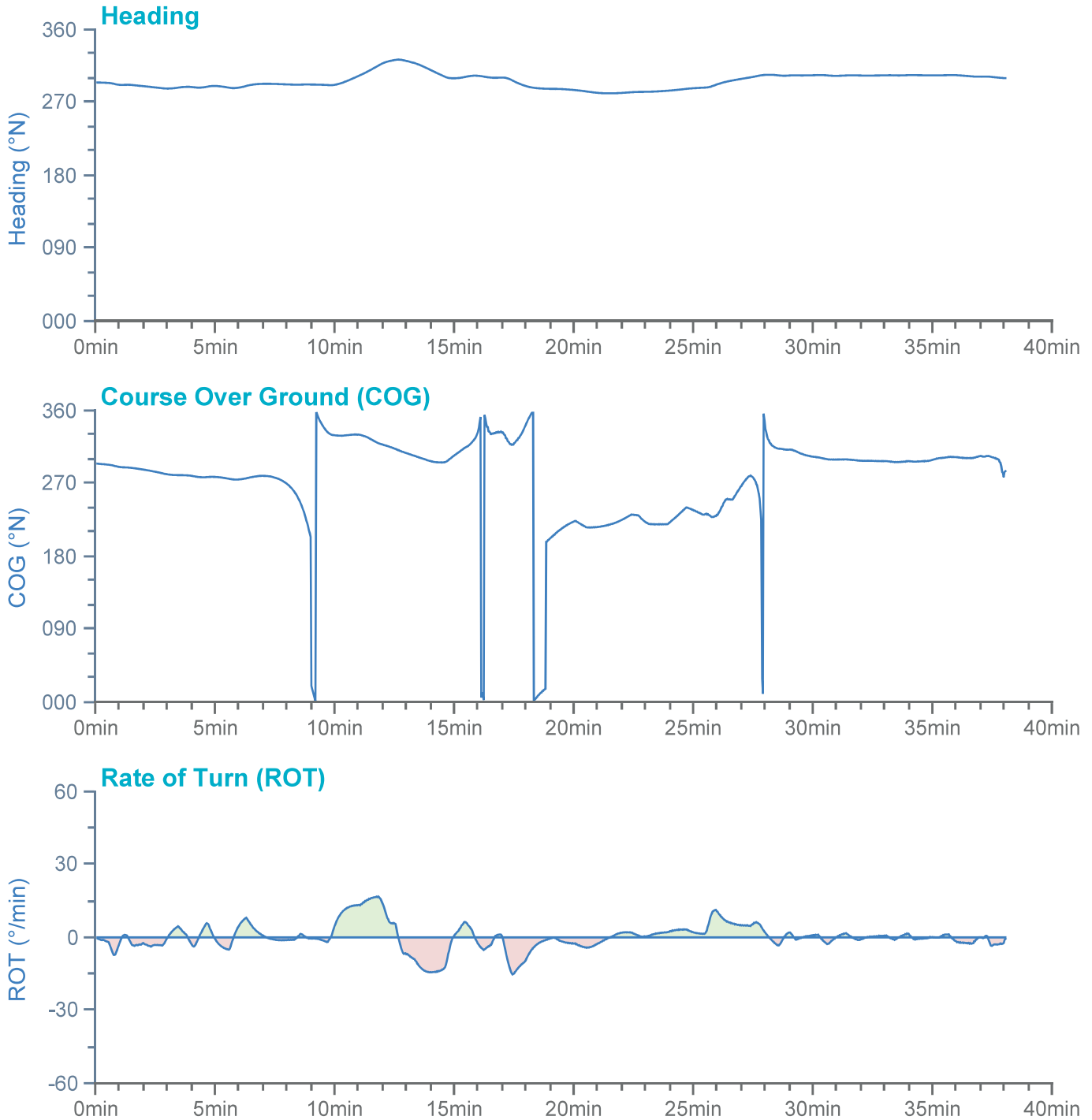
Environment

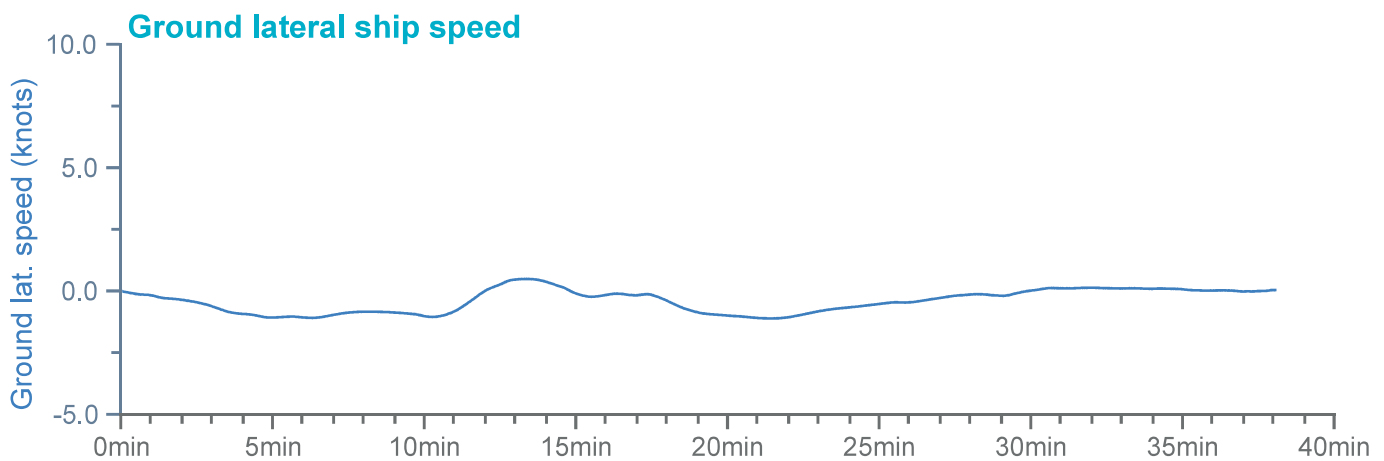
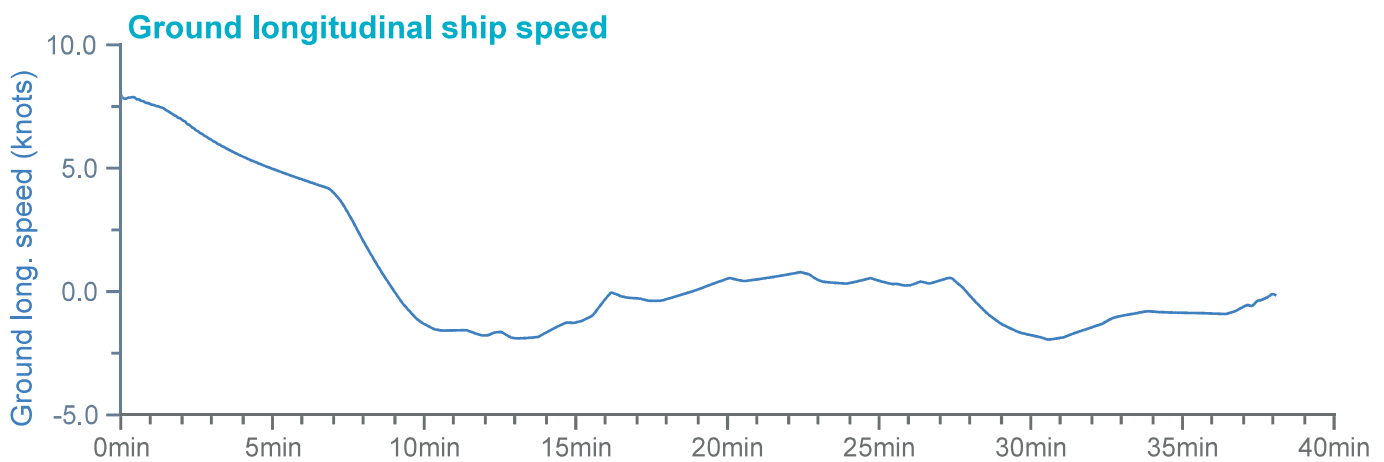
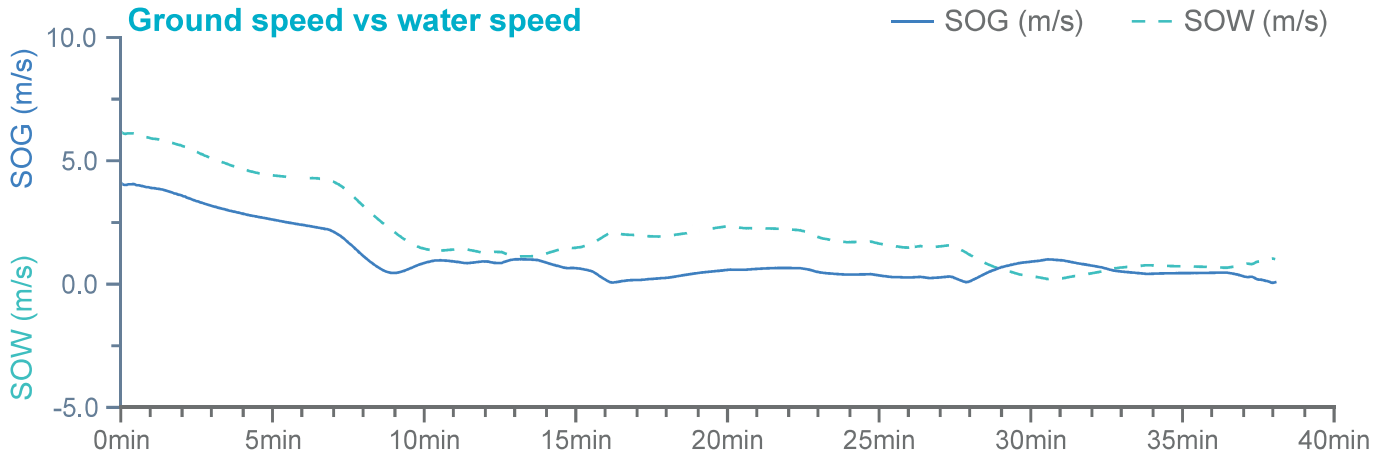
237m RoRo unnamed



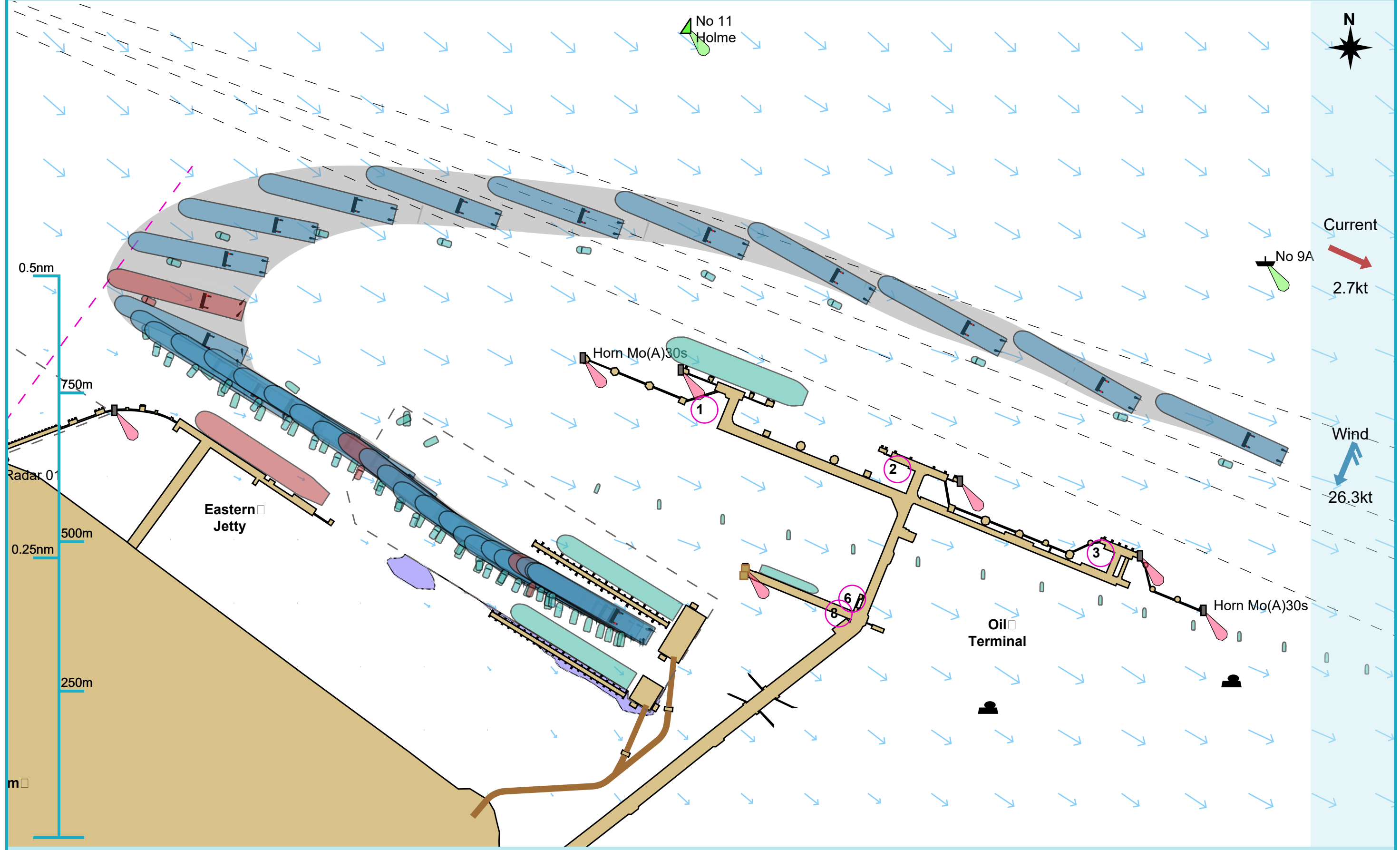






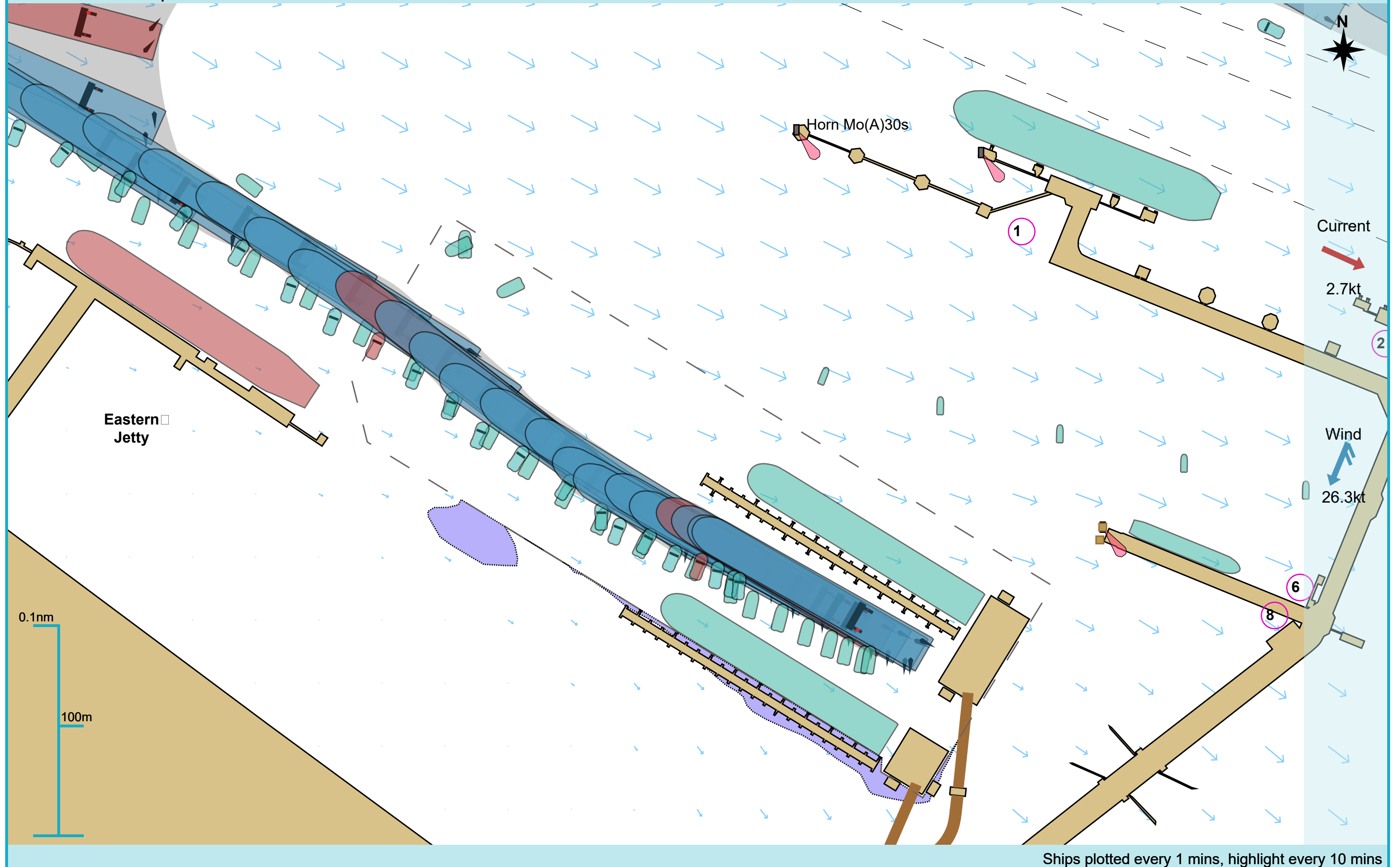


Manoeuvre track plot

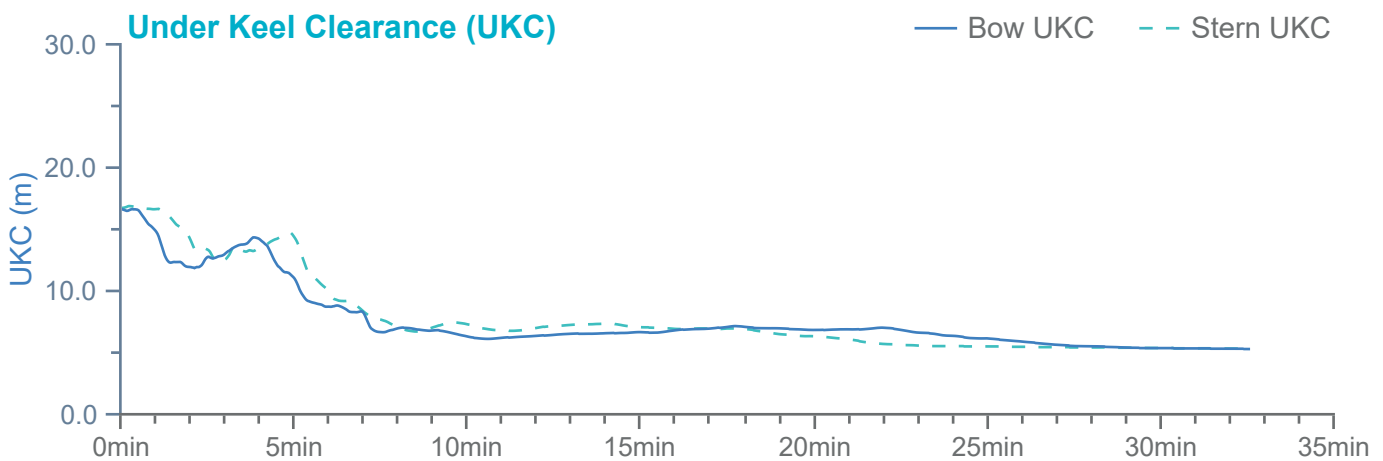
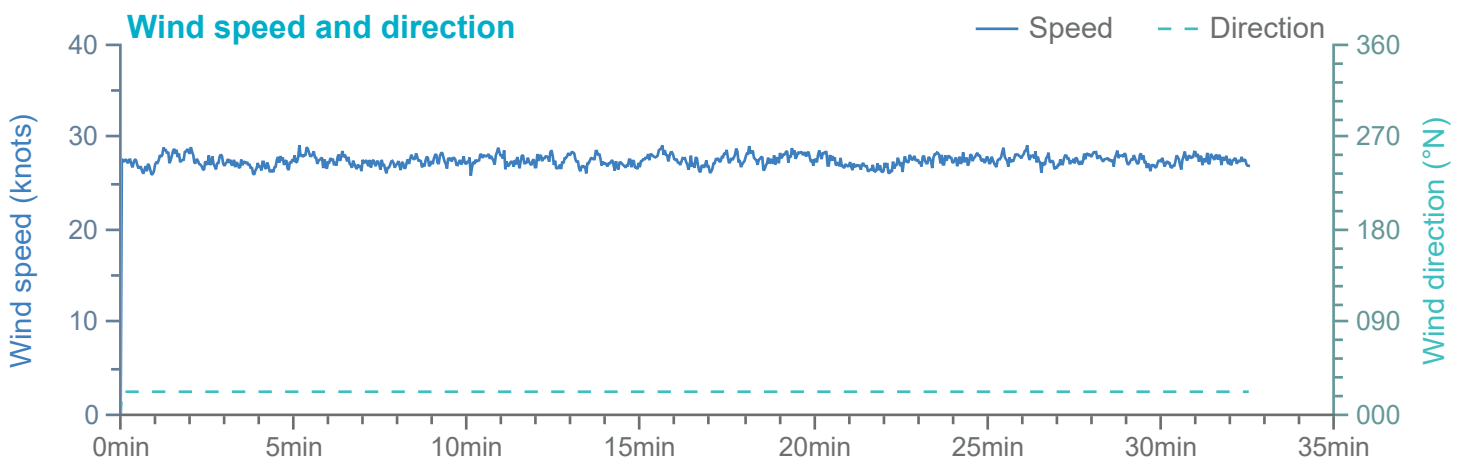
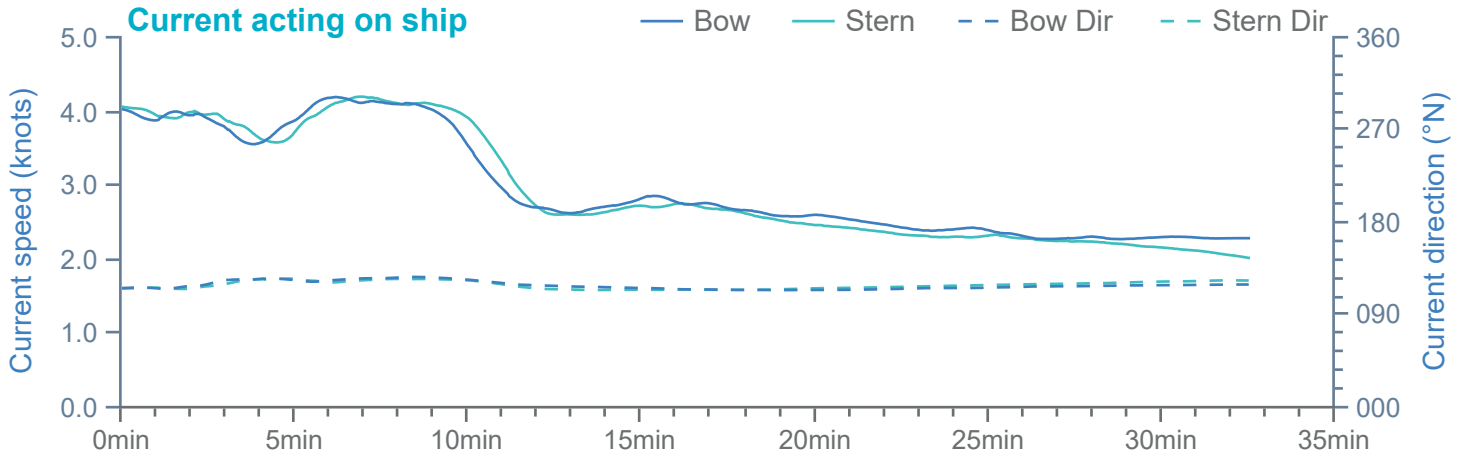


Ships plotted every 1 mins, highlight every 10 mins

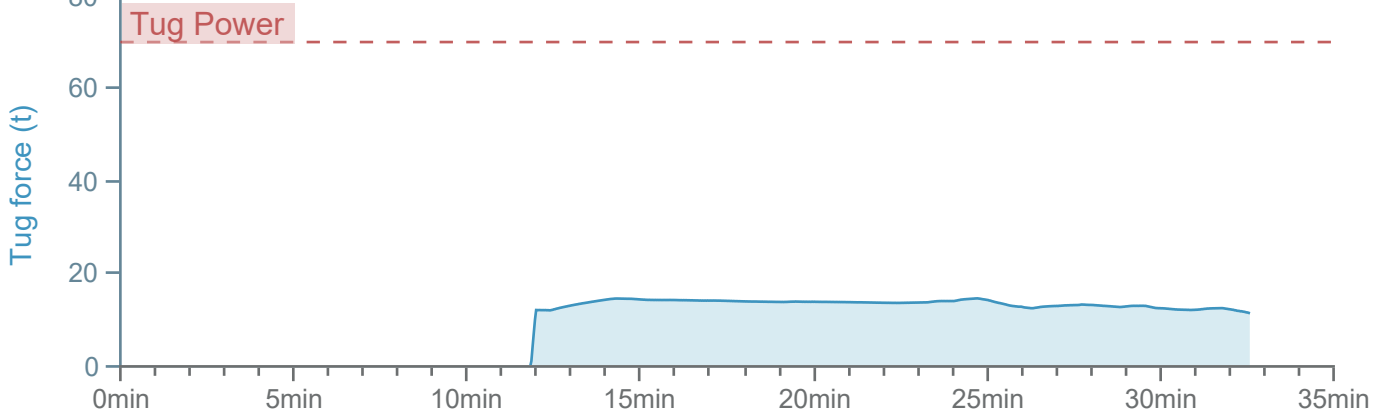
Manoeuvre track plot



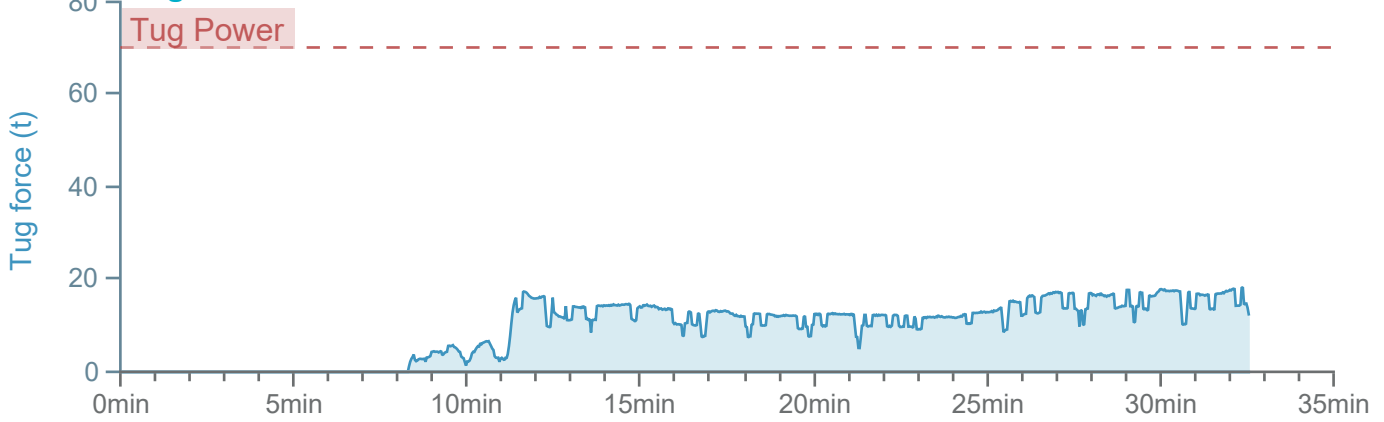
Ships plotted every 1 mins, highlight every 10 mins



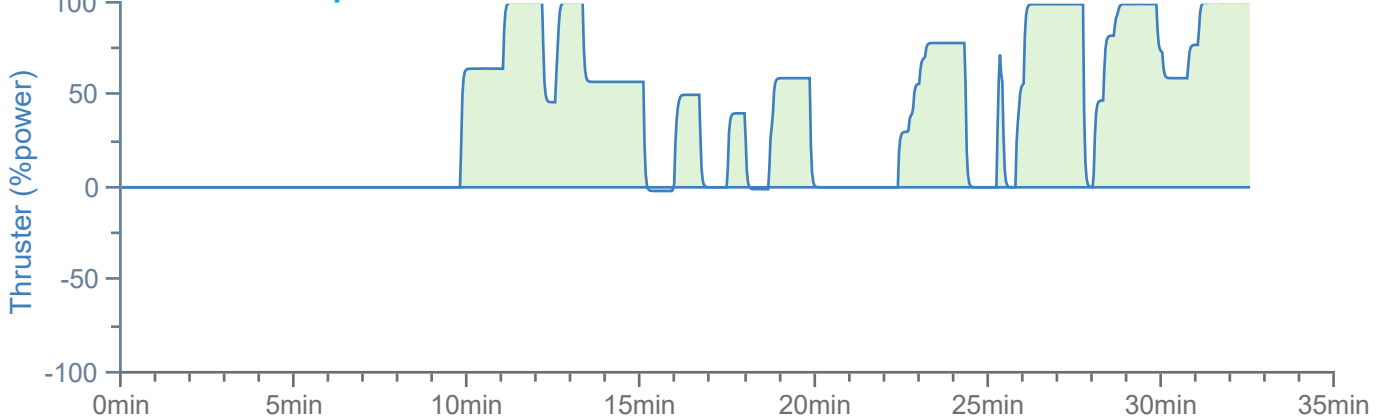
Tug 1 forces

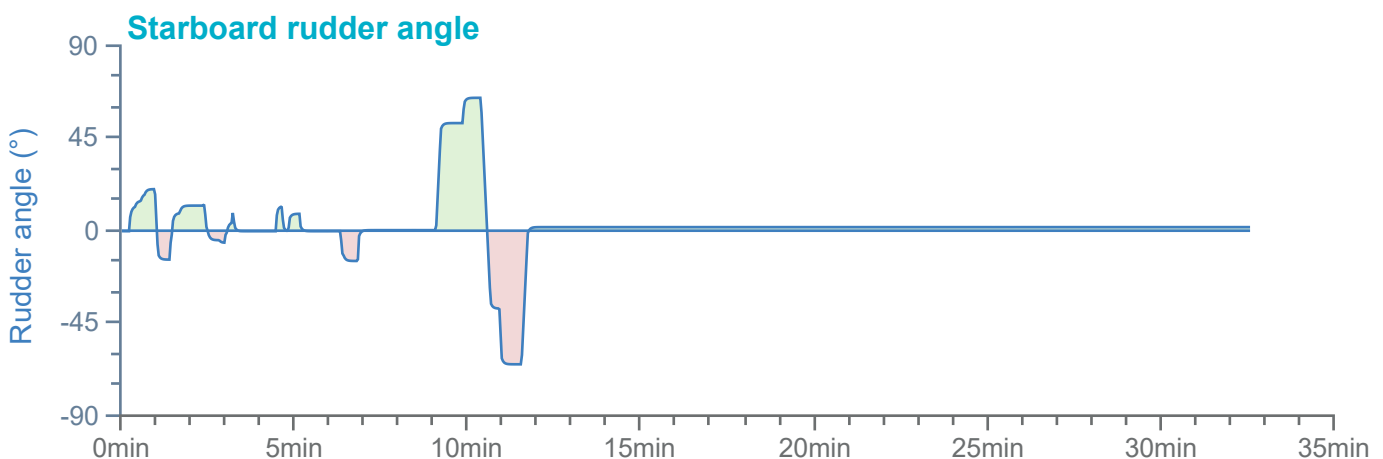
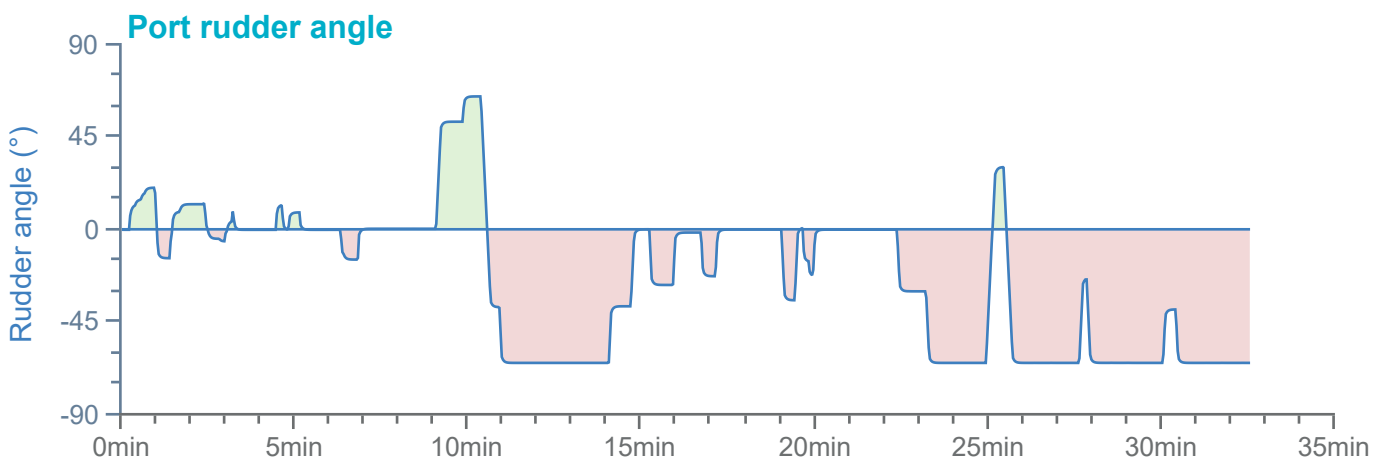
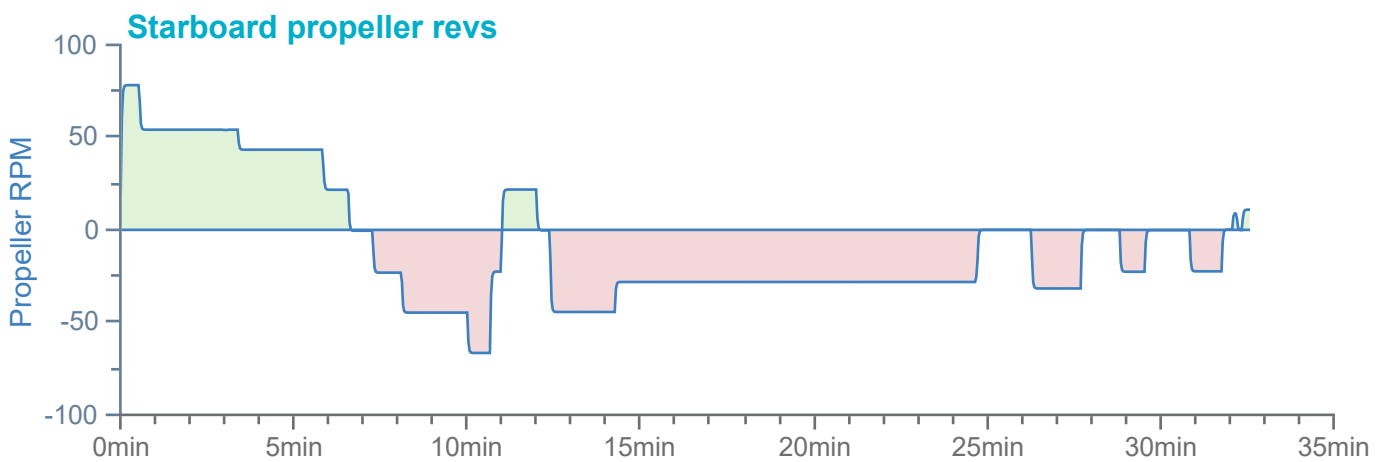
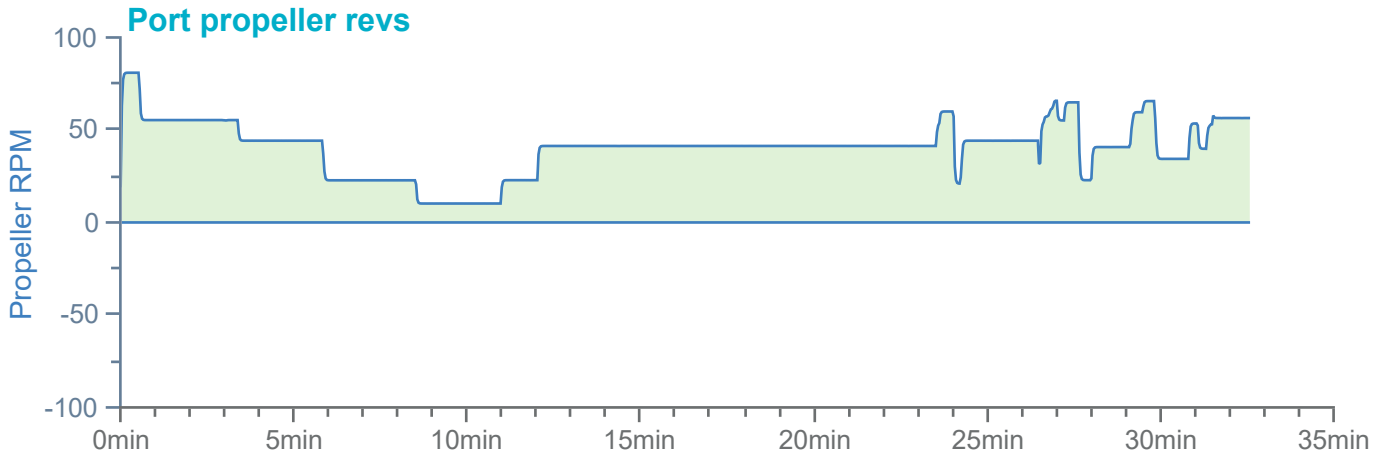


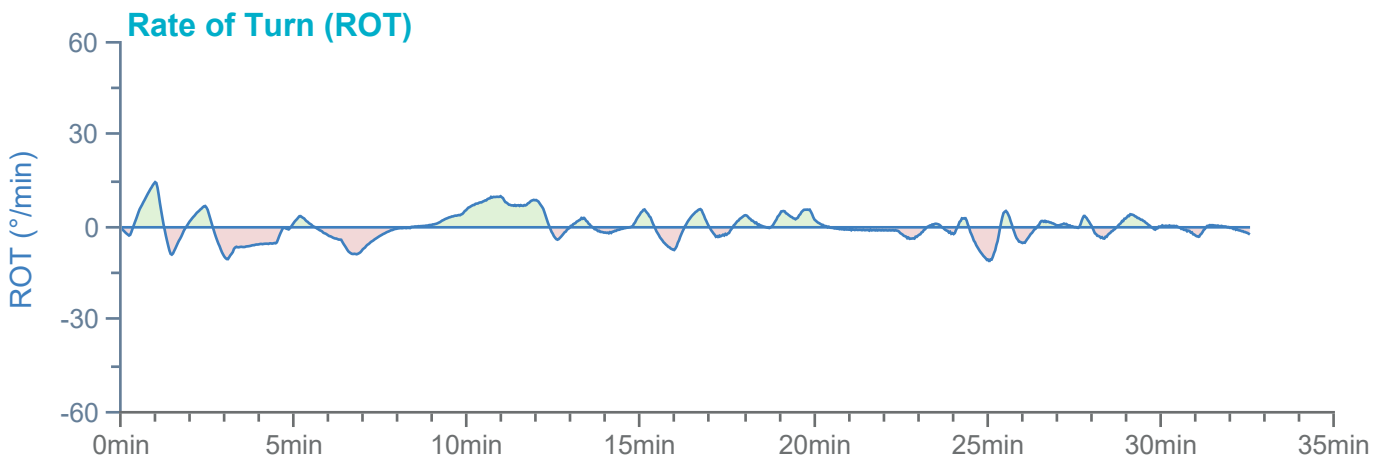
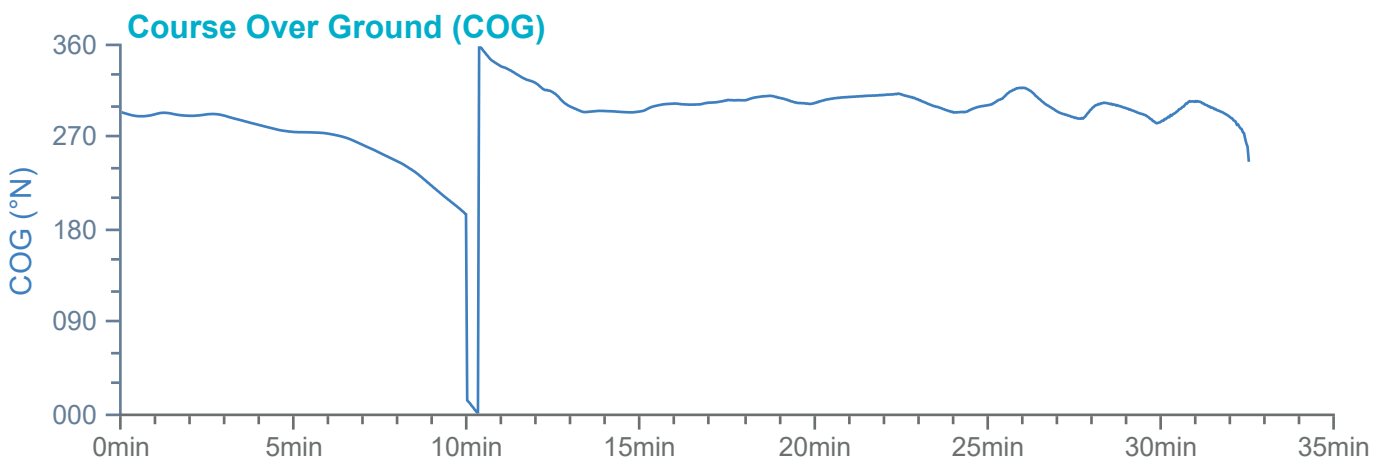
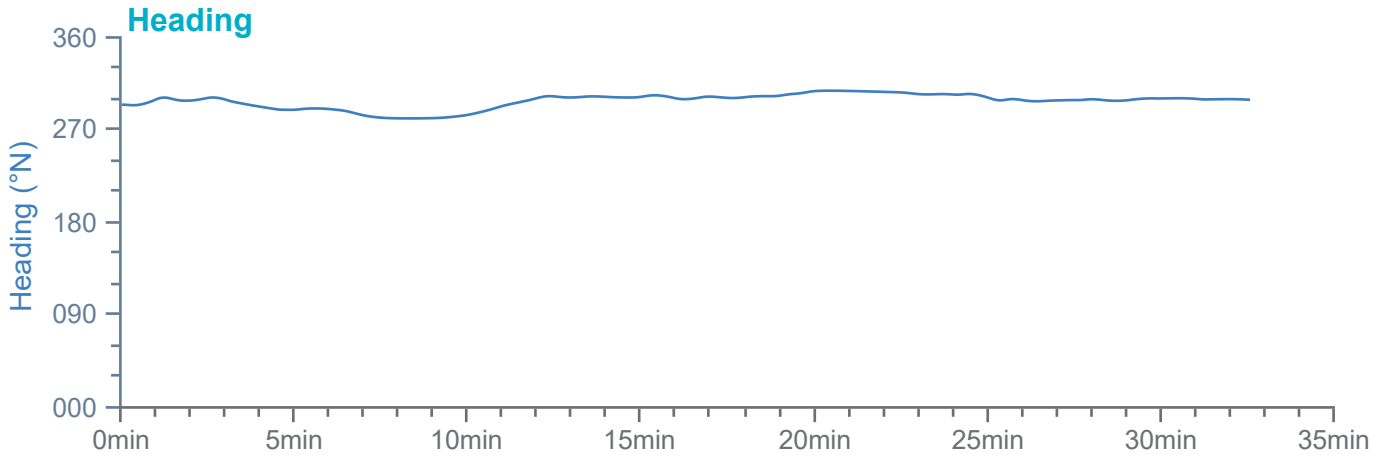
Tug 2 forces

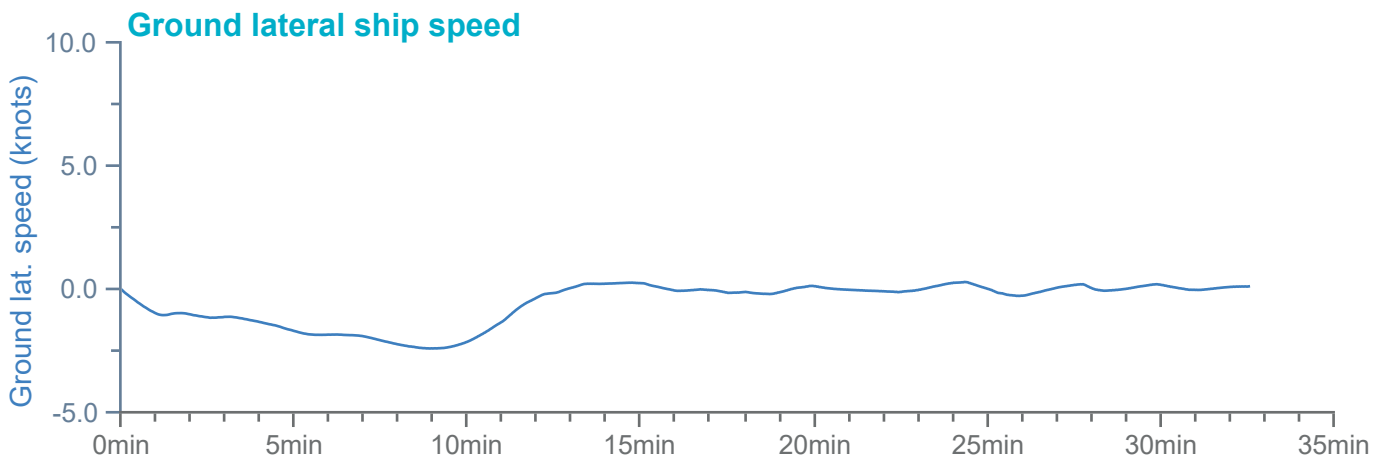
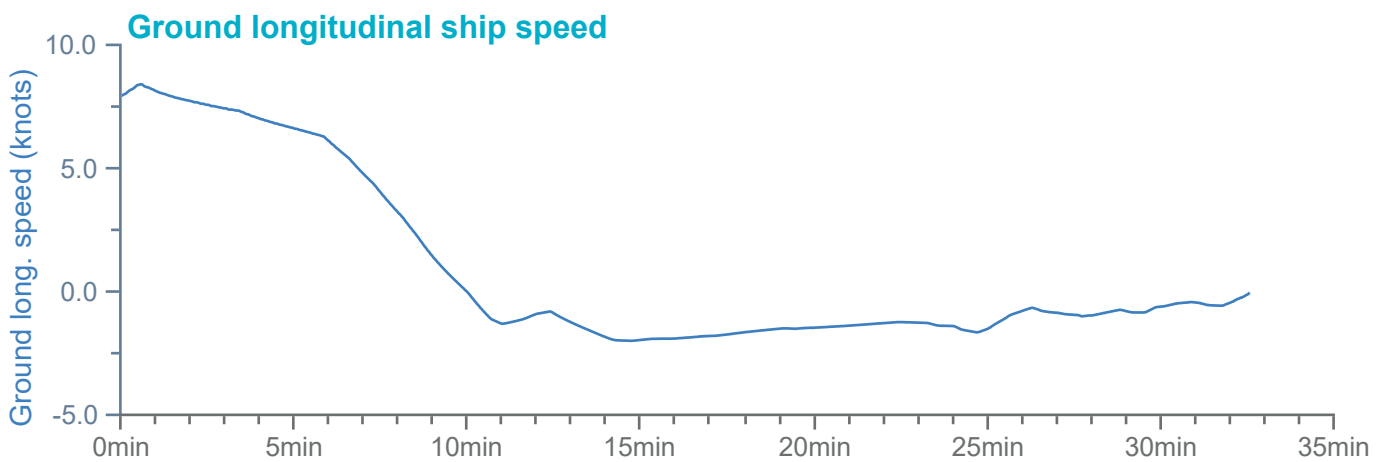
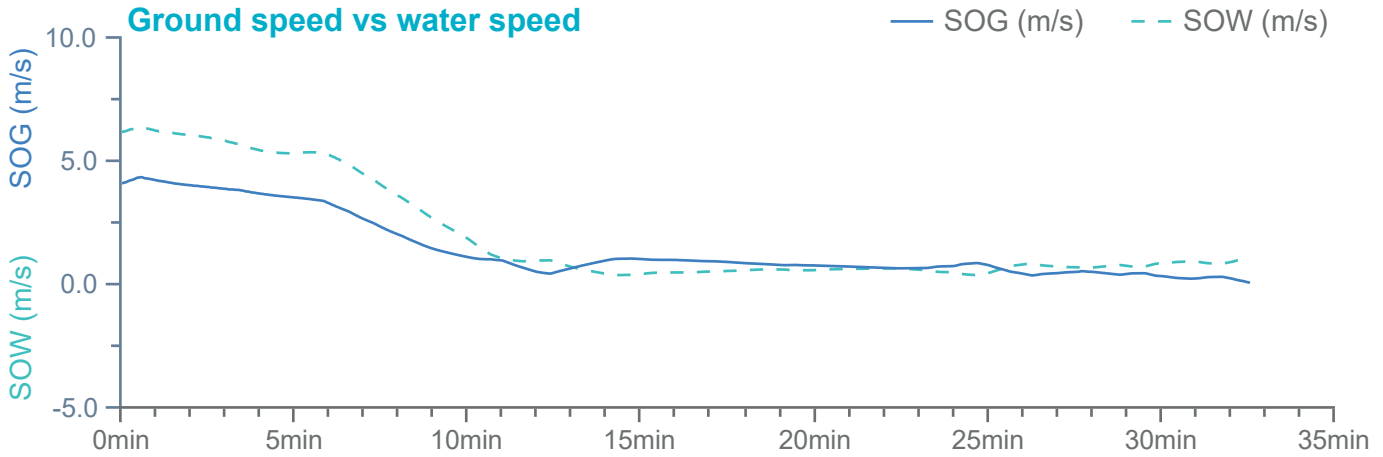


Bow thruster power

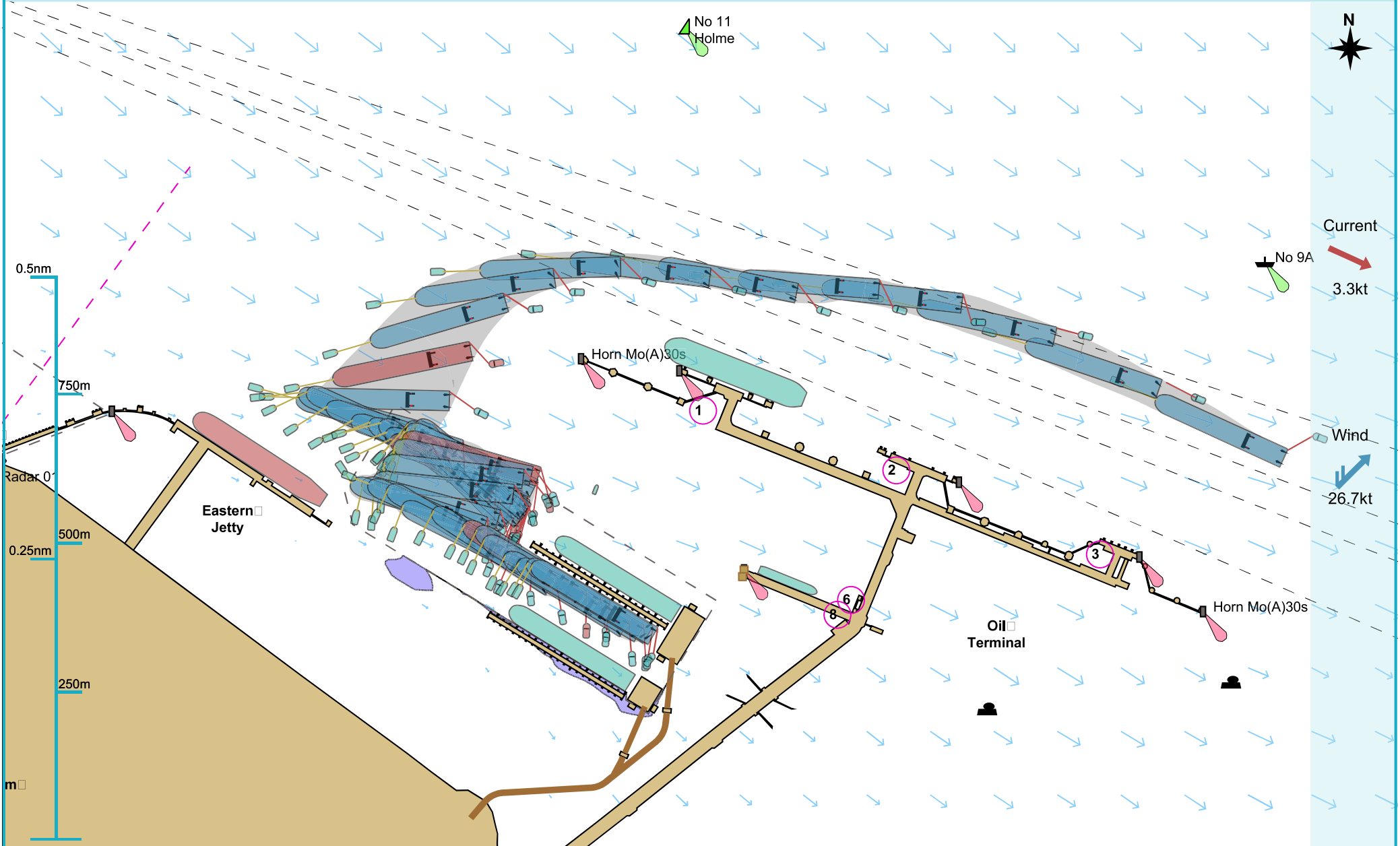






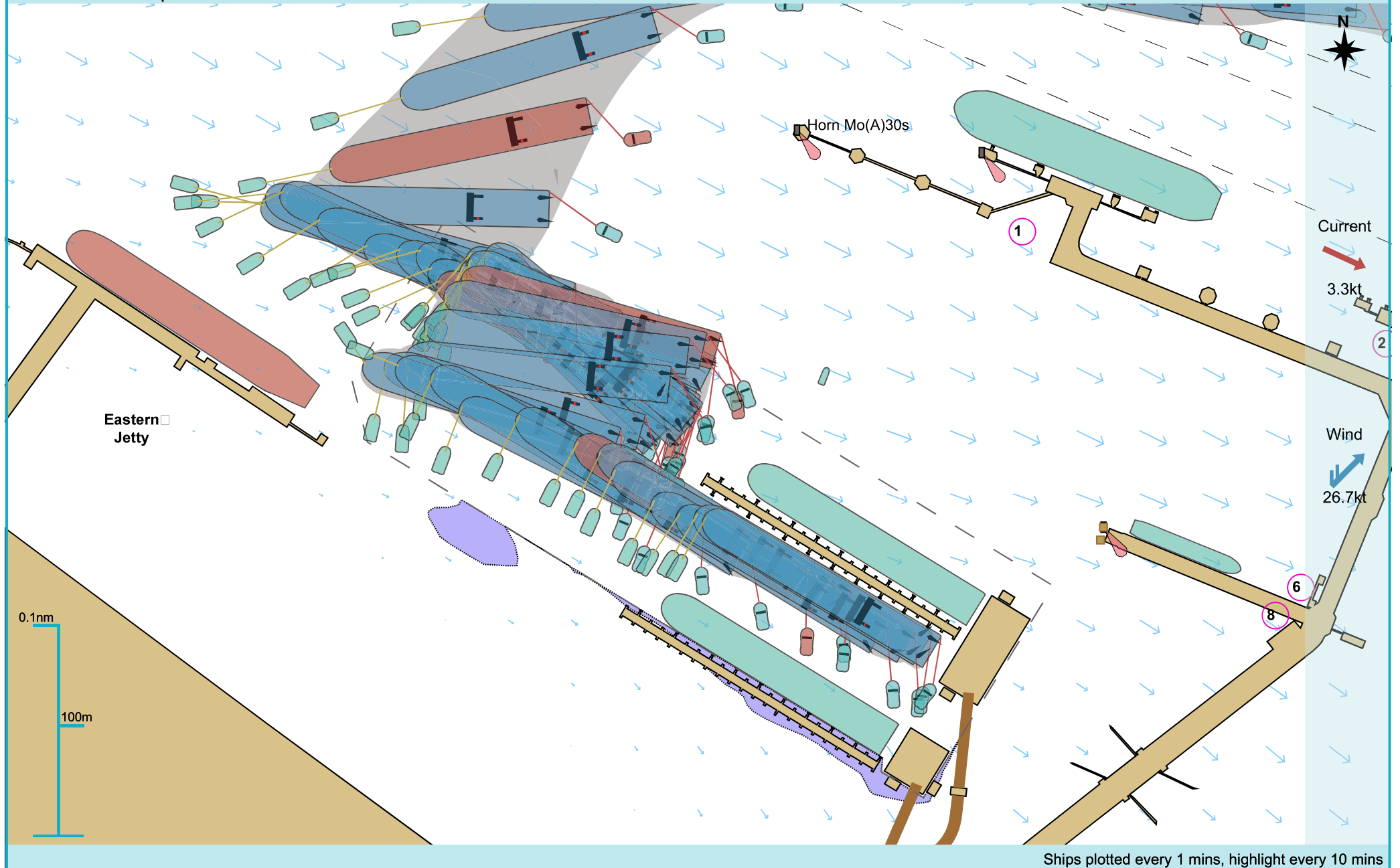


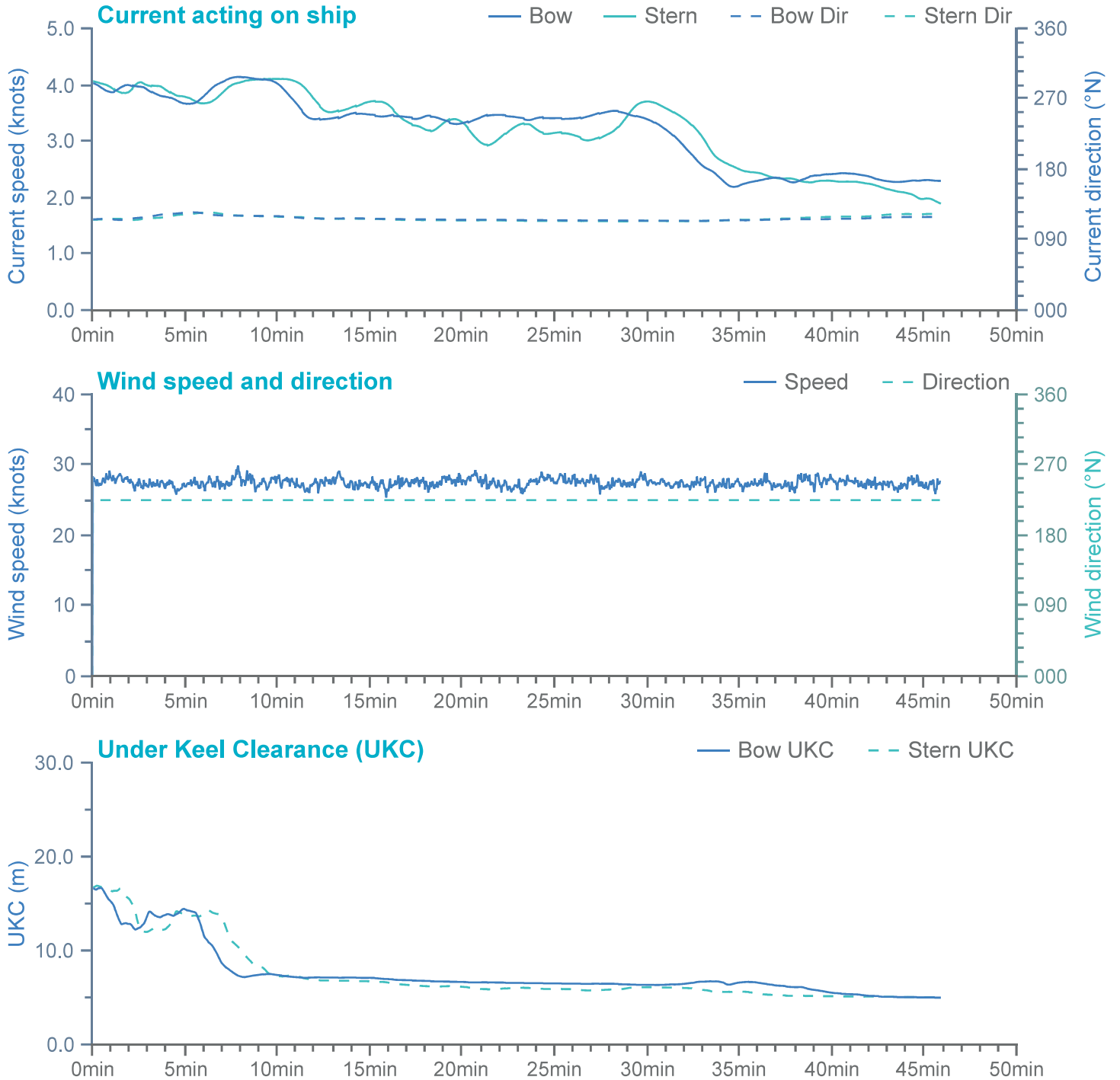
Manoeuvre track plot



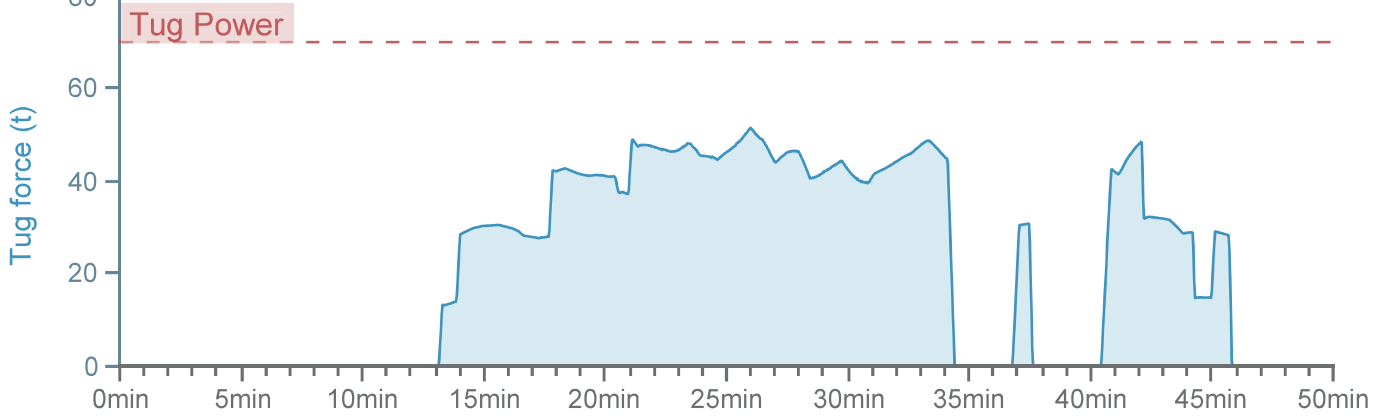
Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

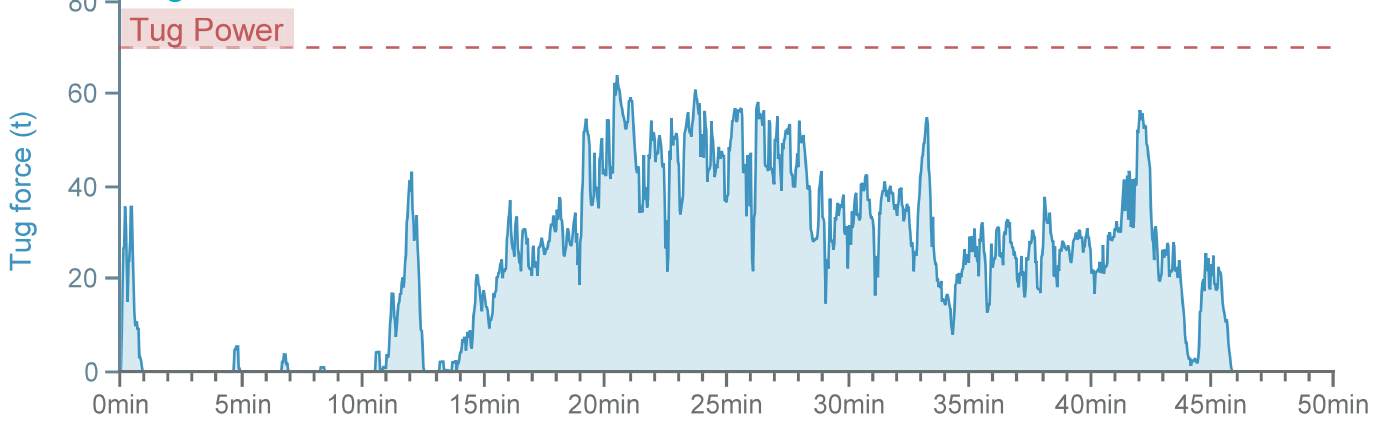




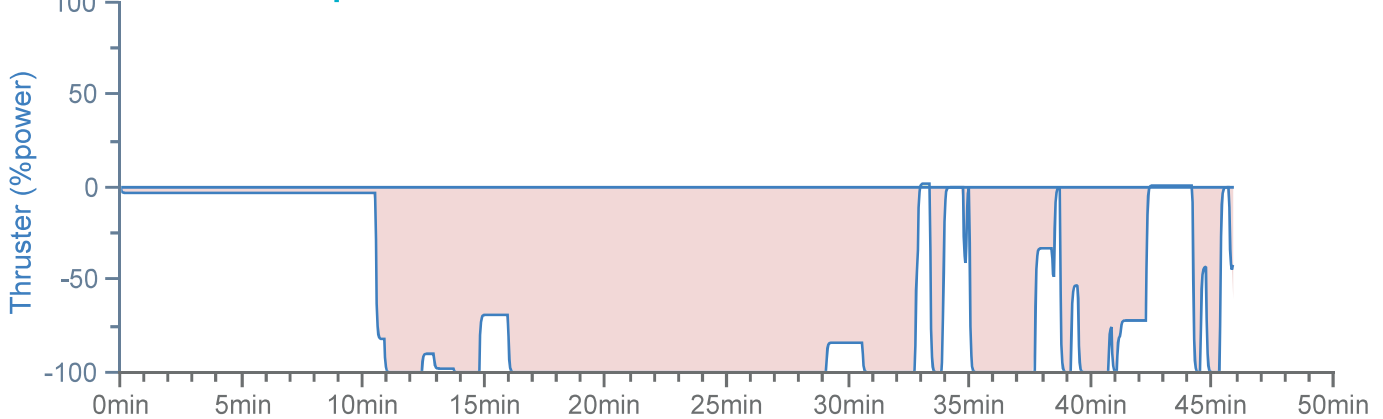
Tug 1 forces

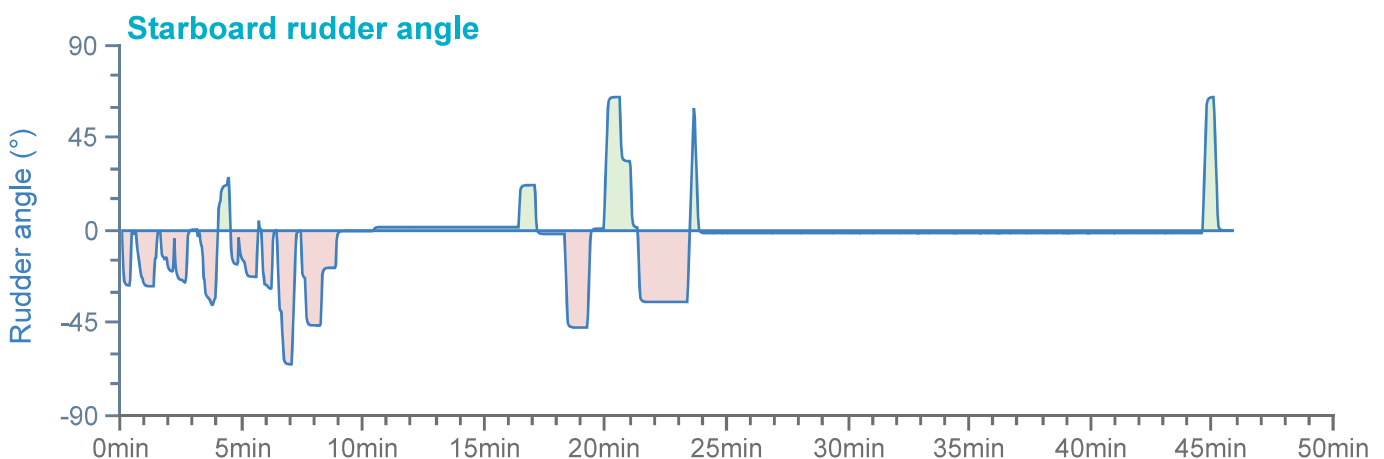
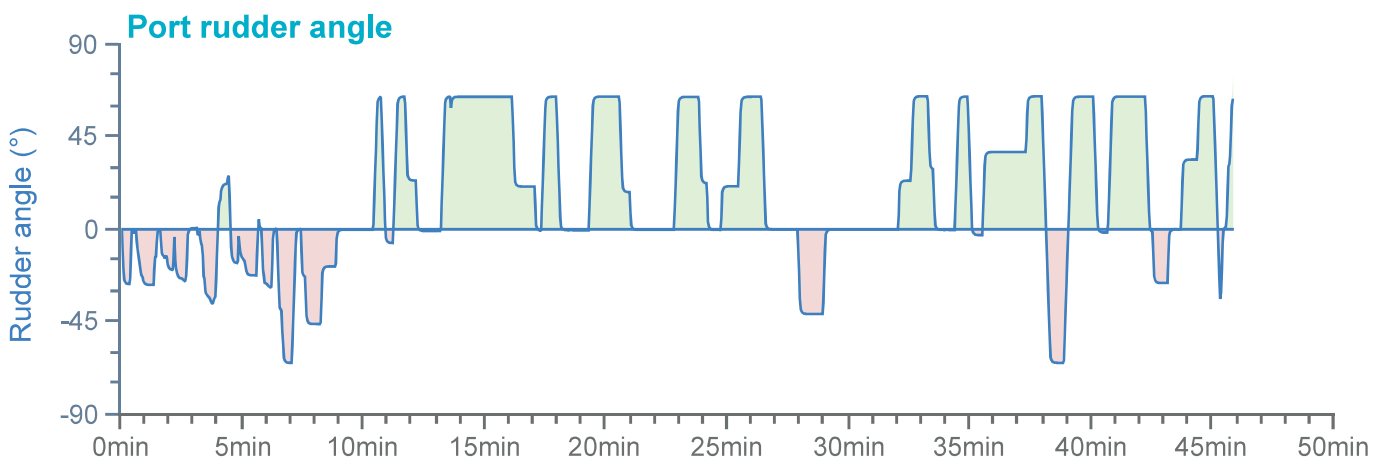
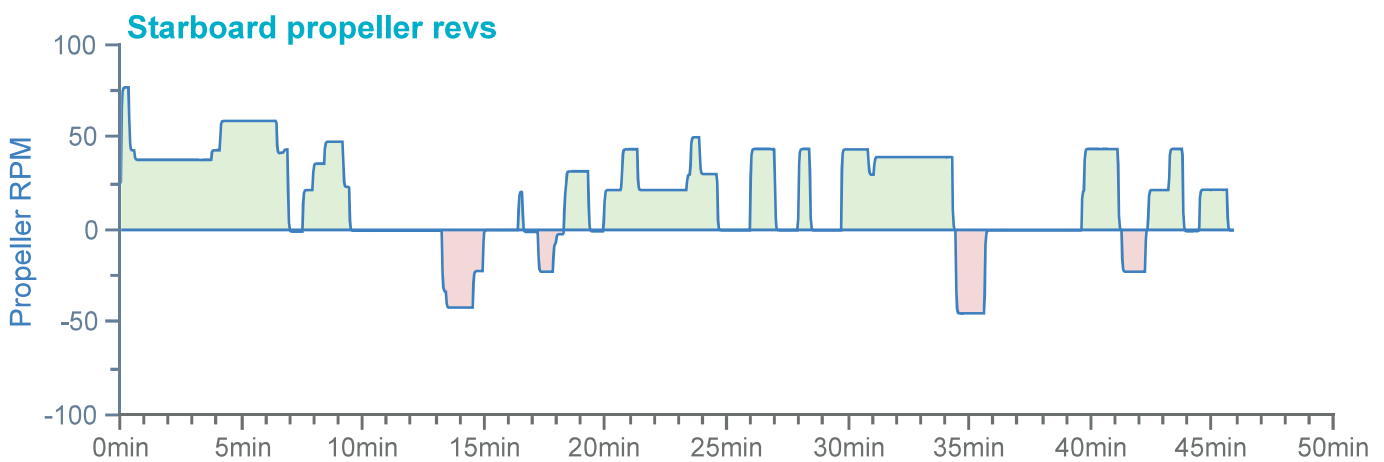
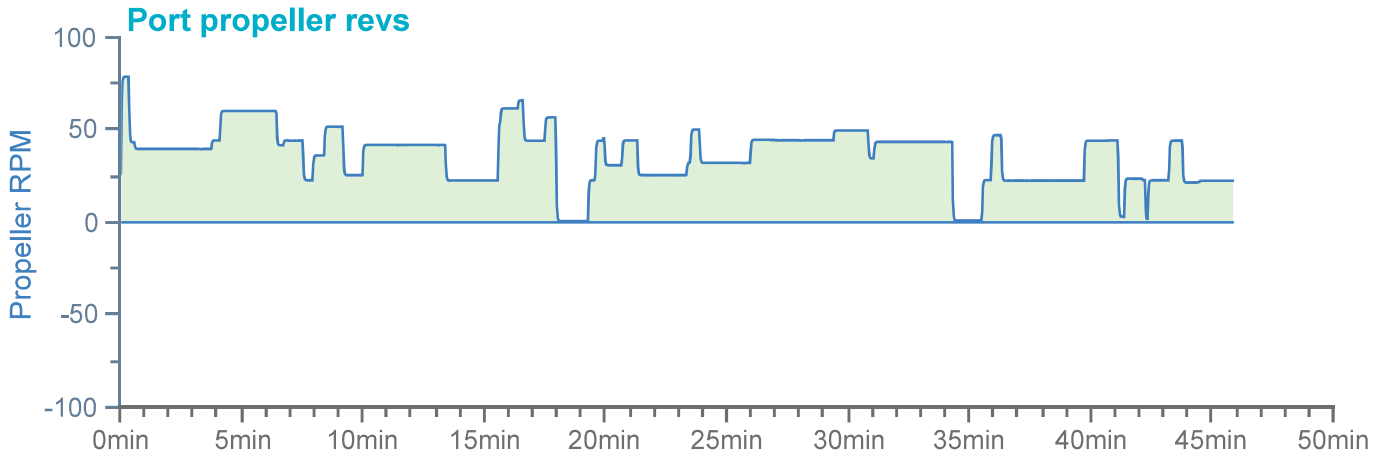


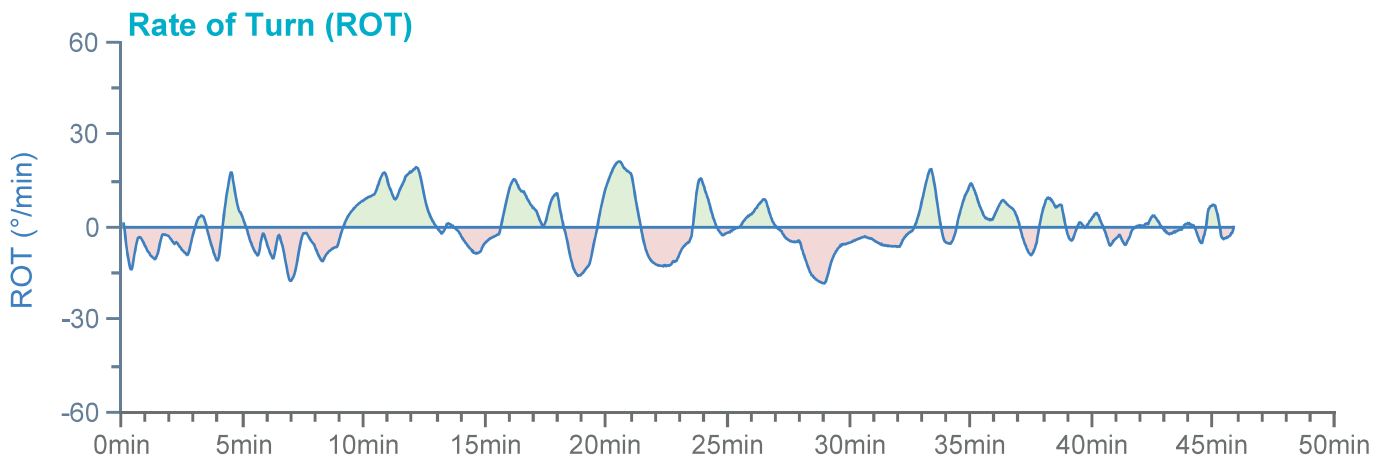
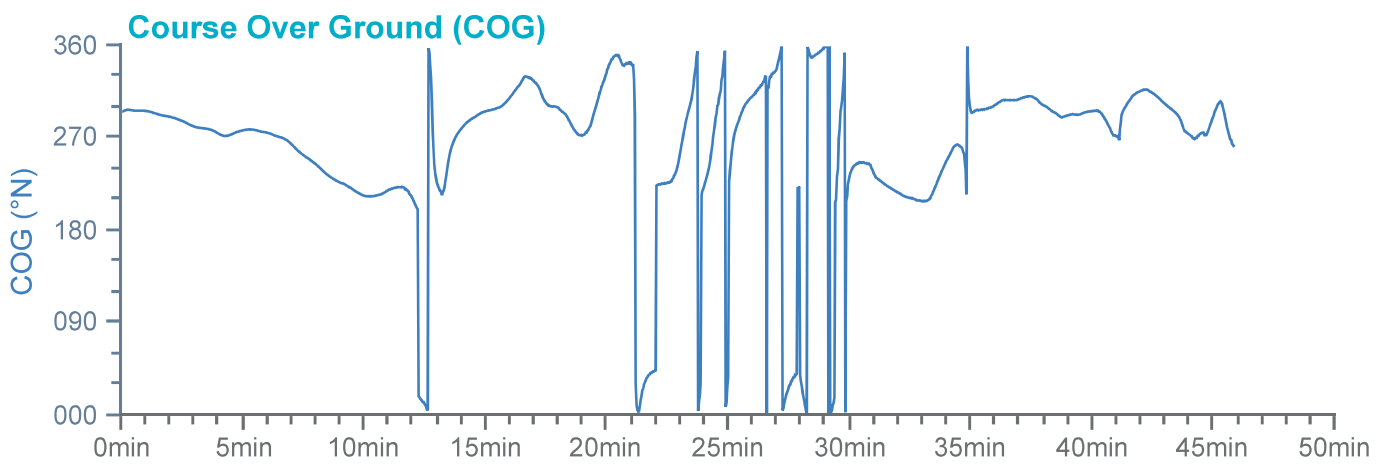
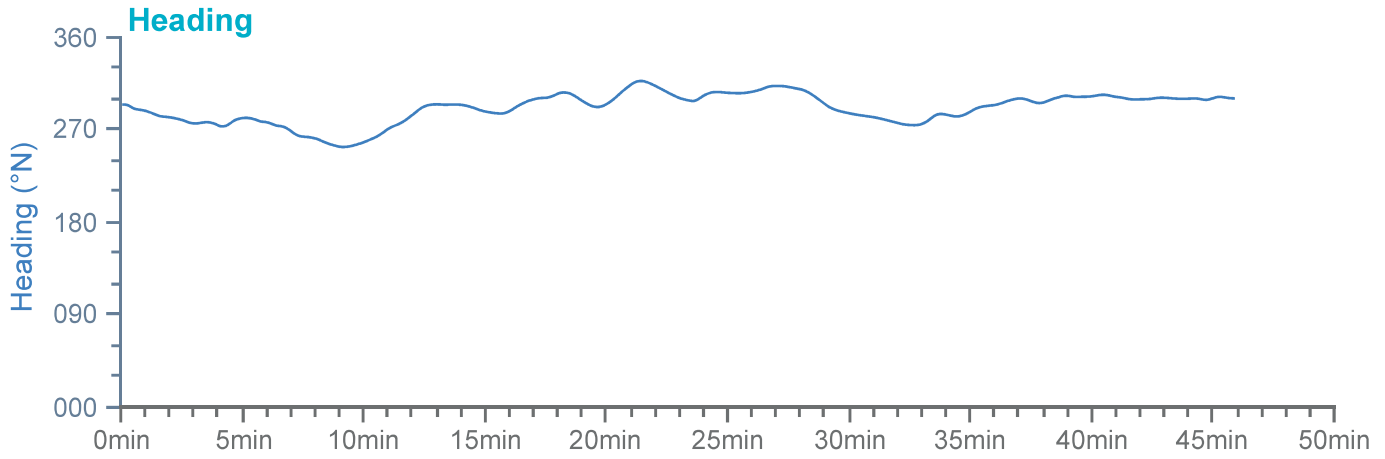
Tug 2 forces

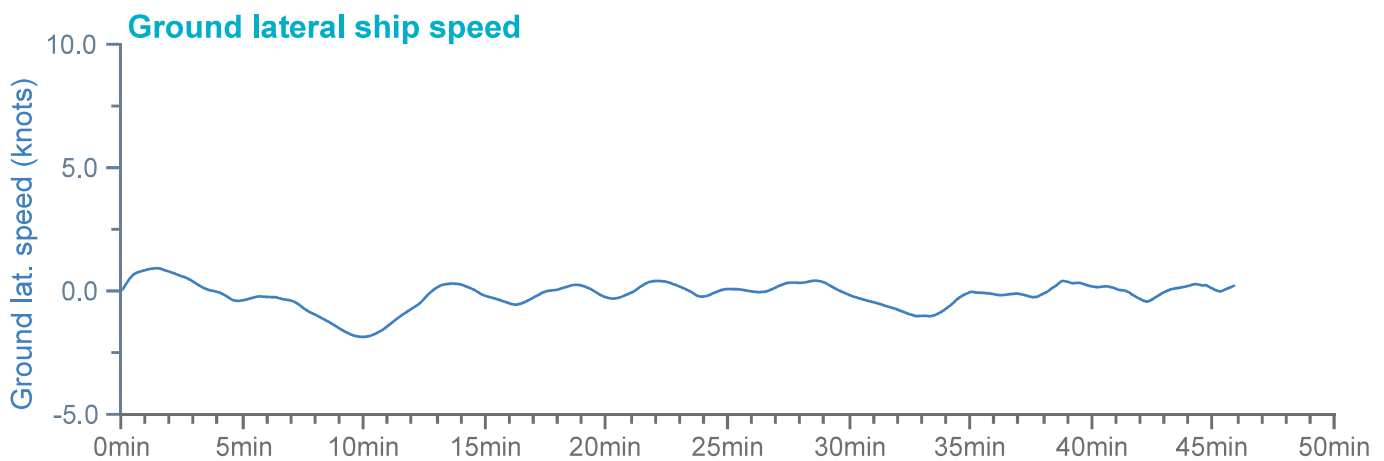
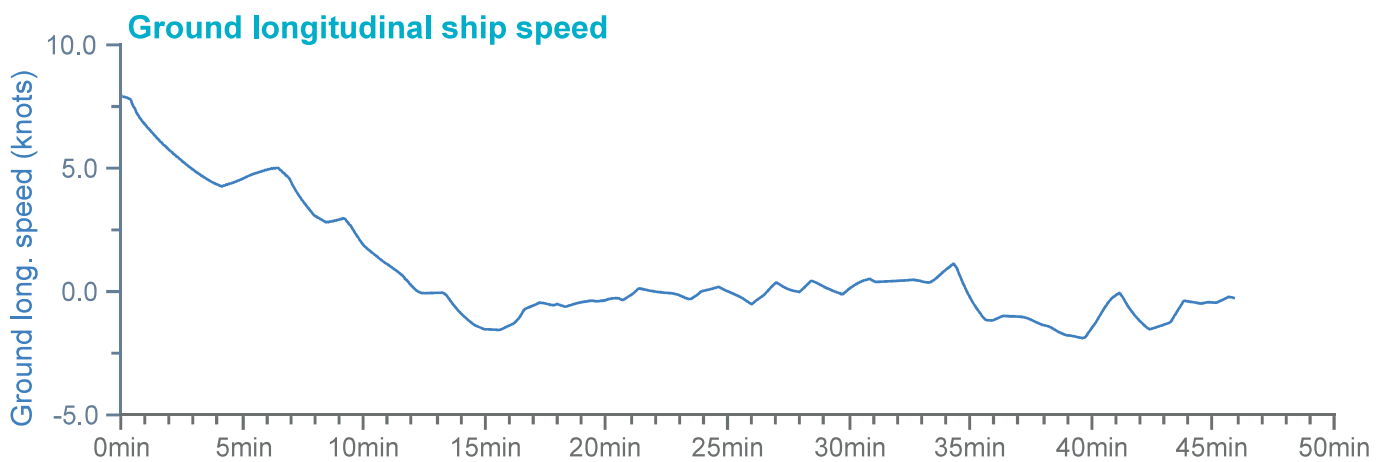
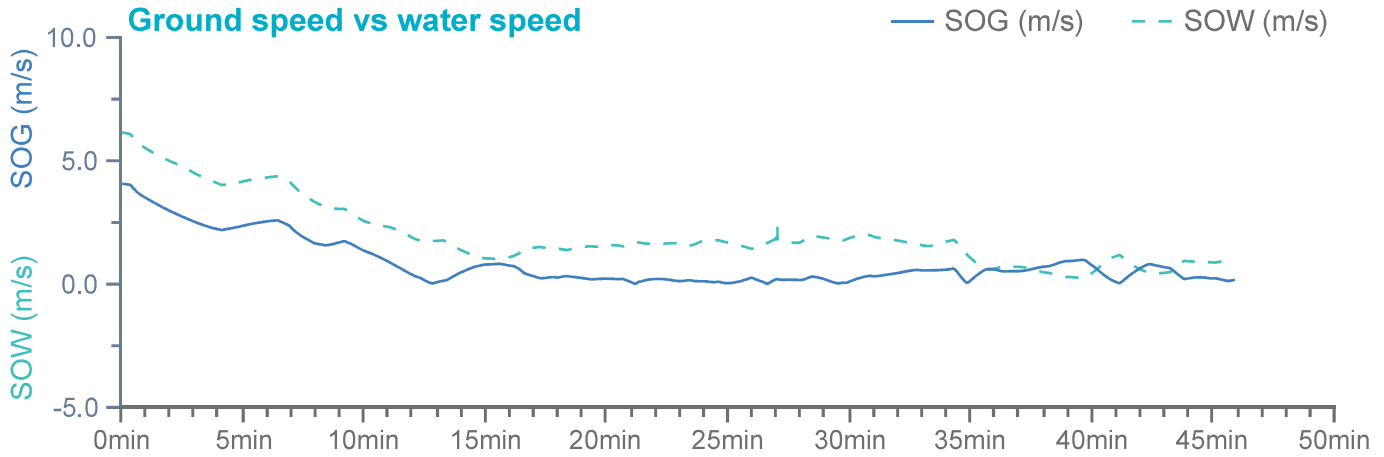


Bow thruster power

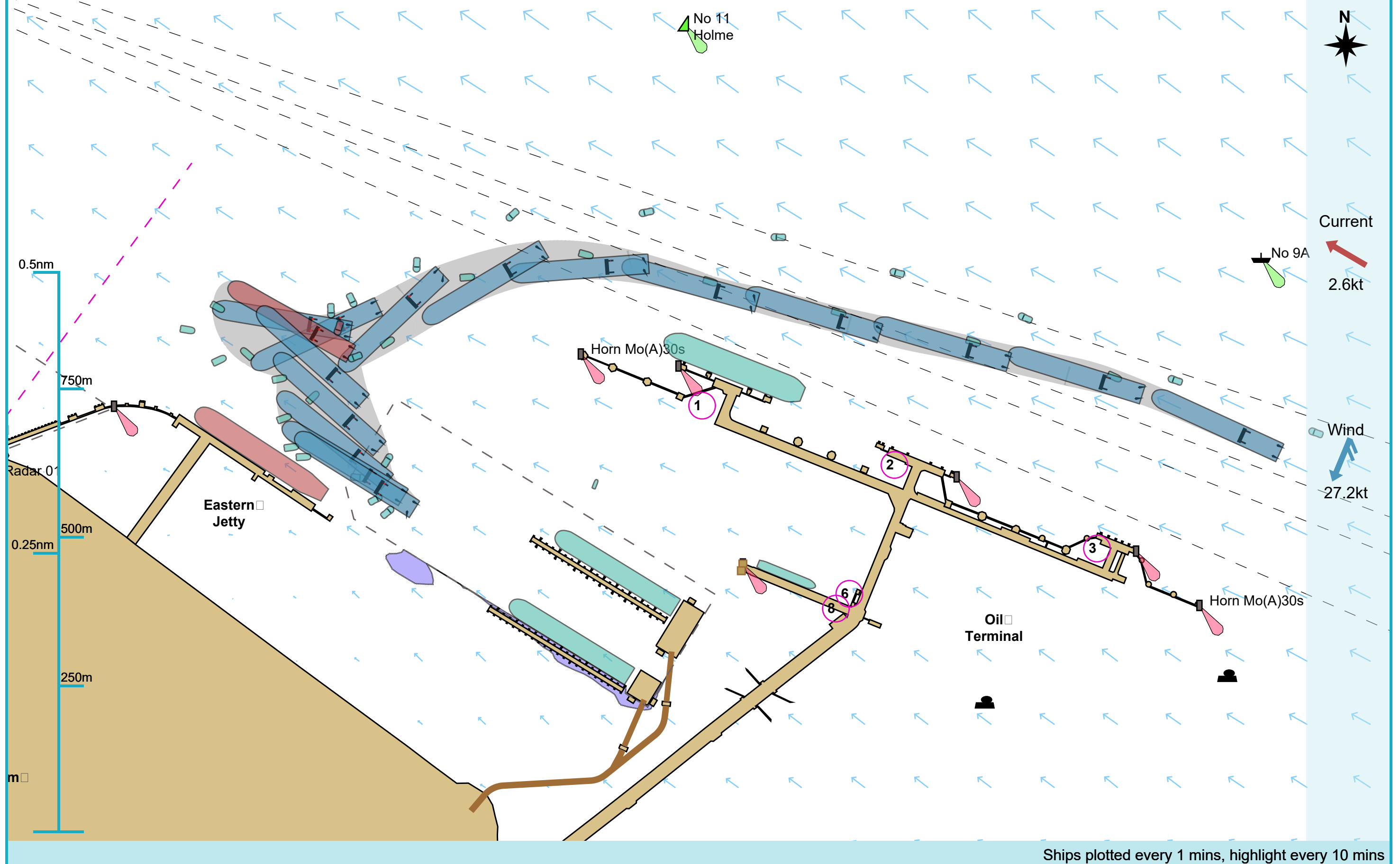




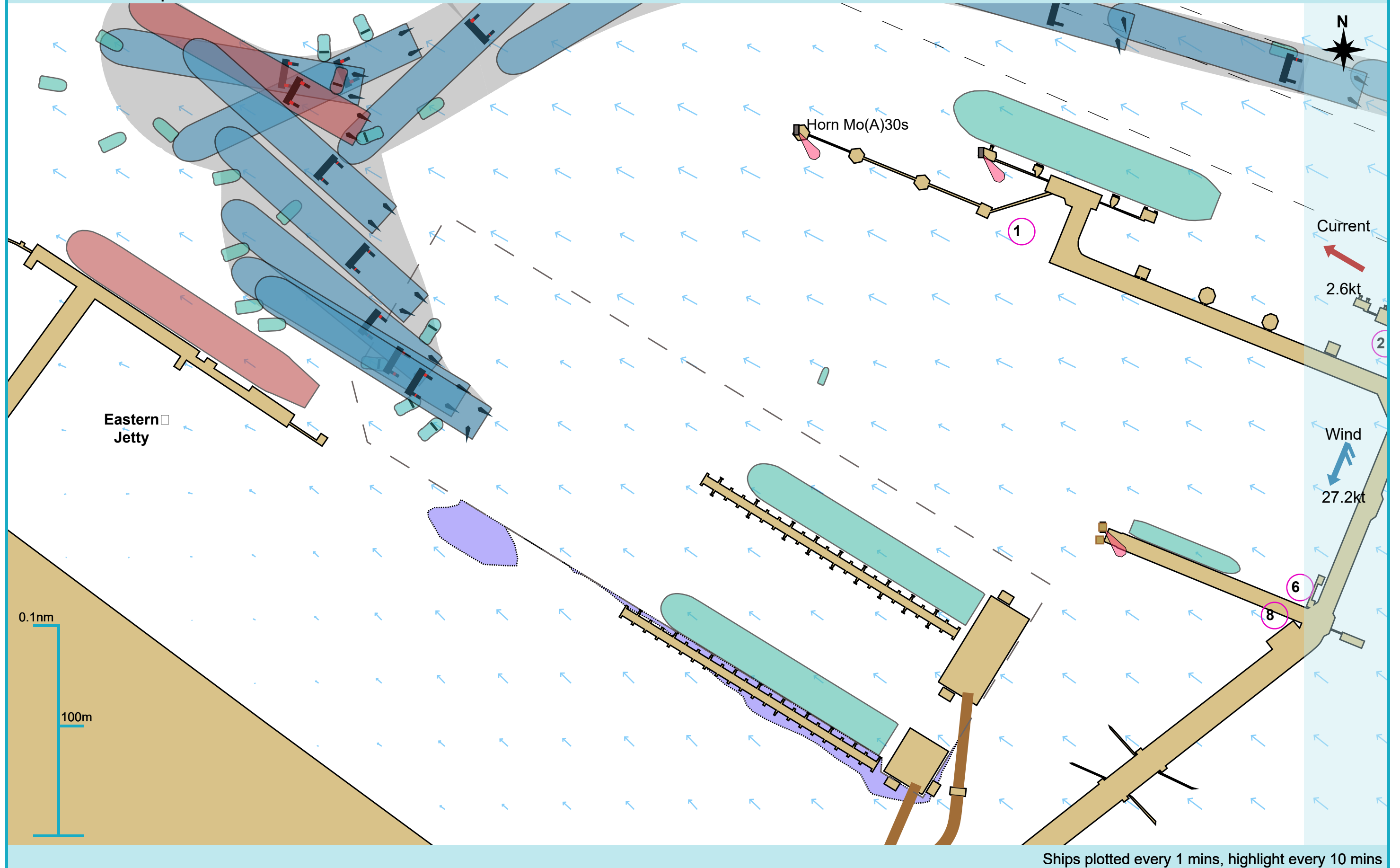




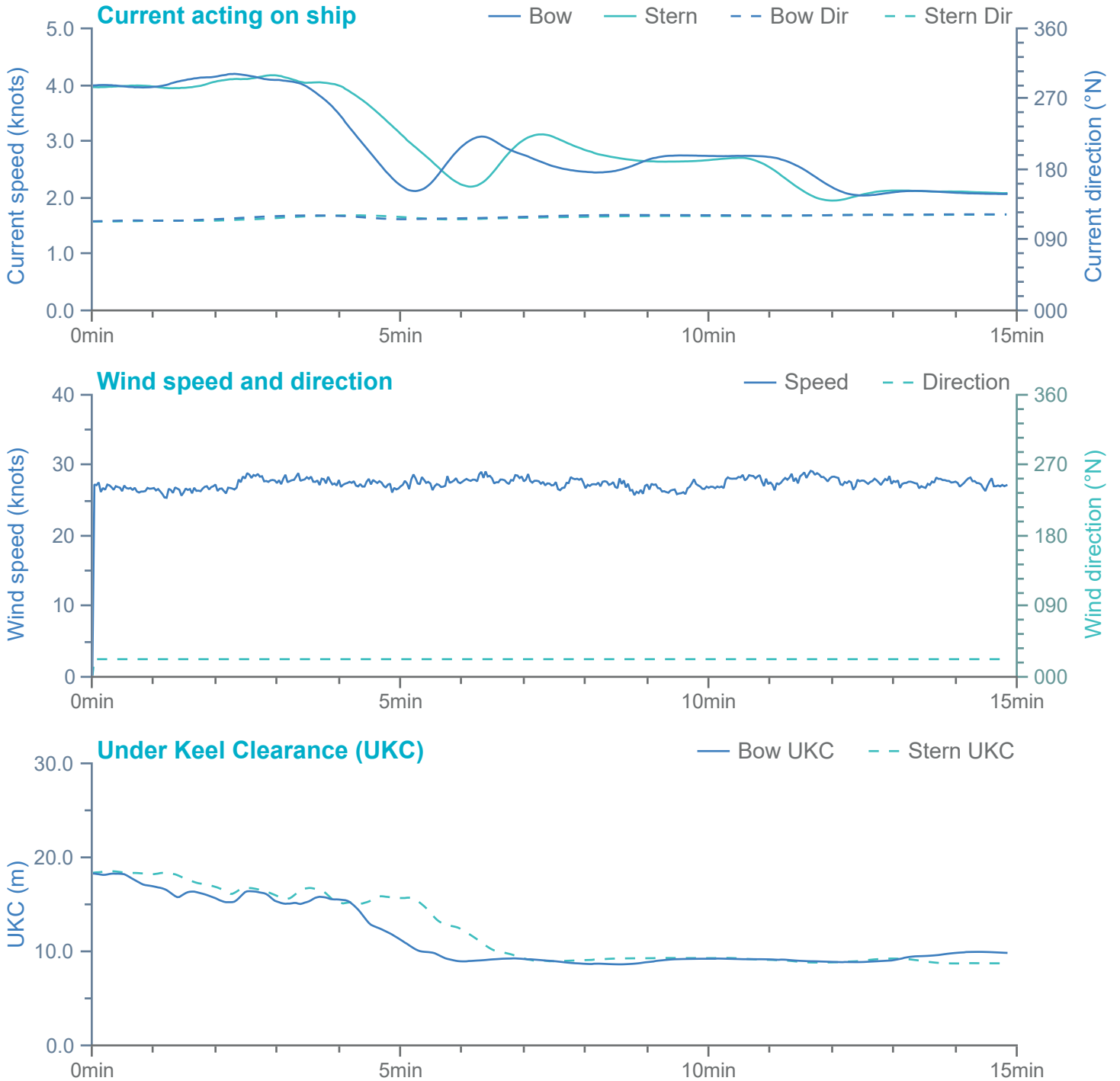
Manoeuvre track plot

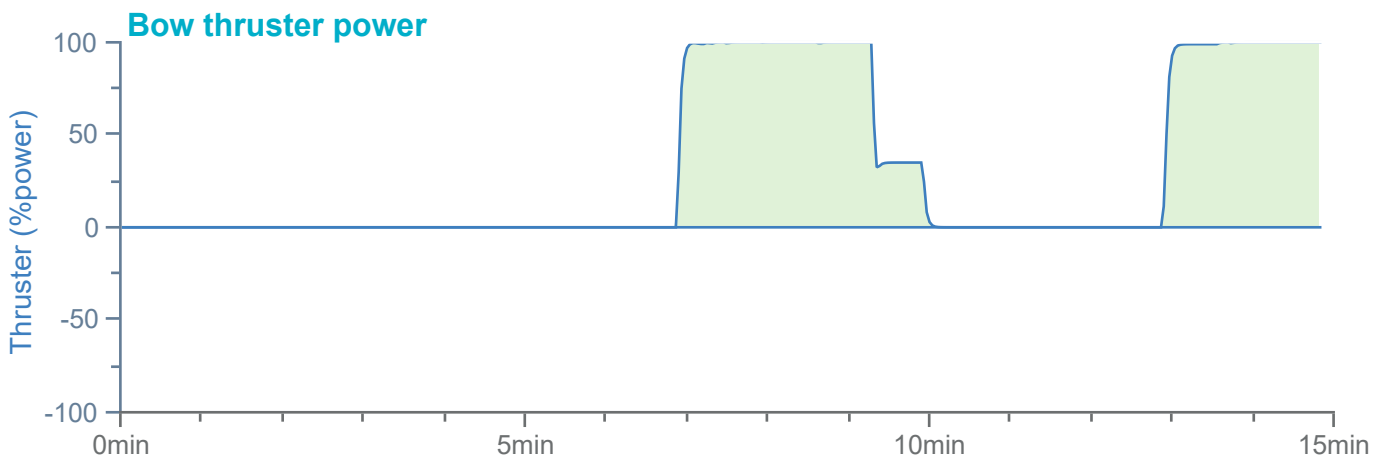
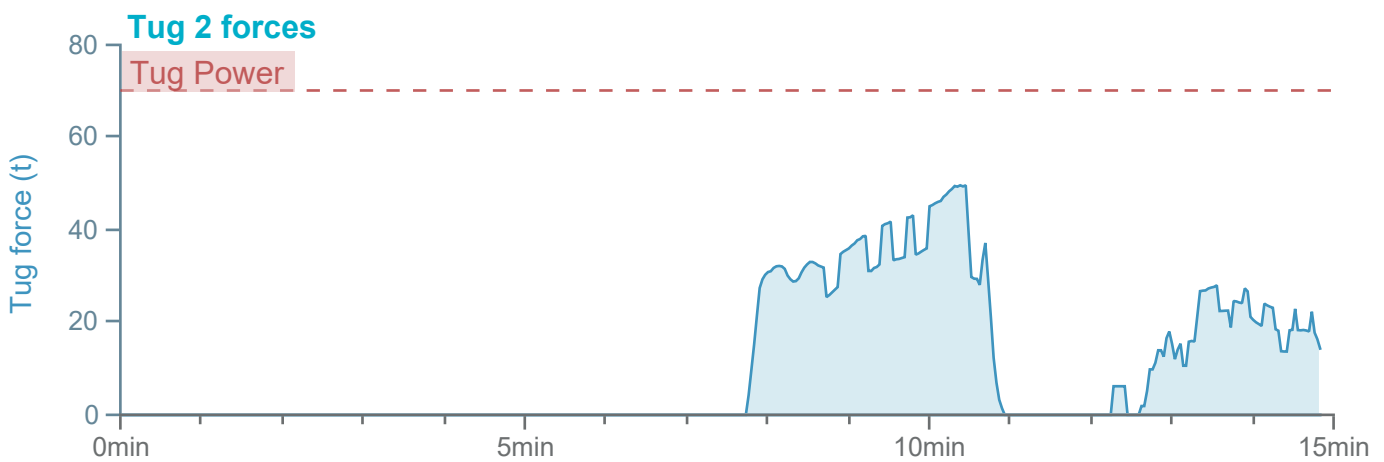
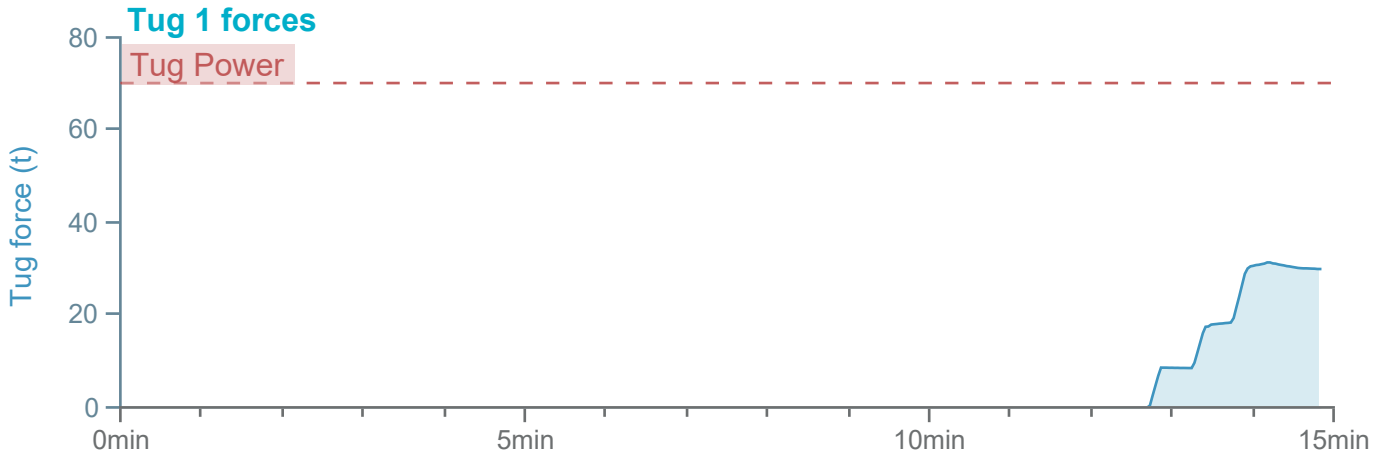


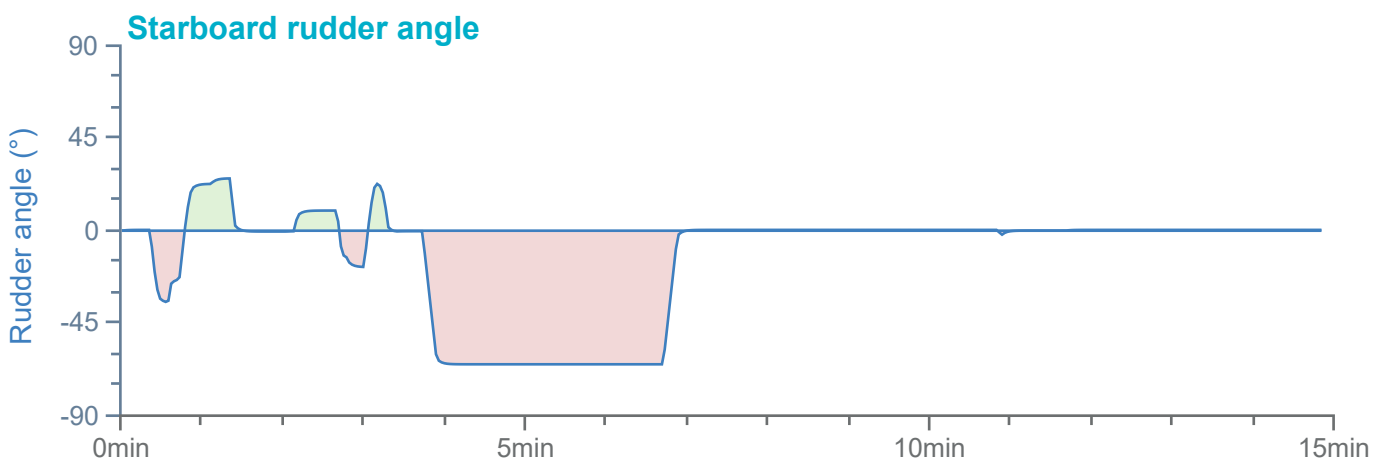
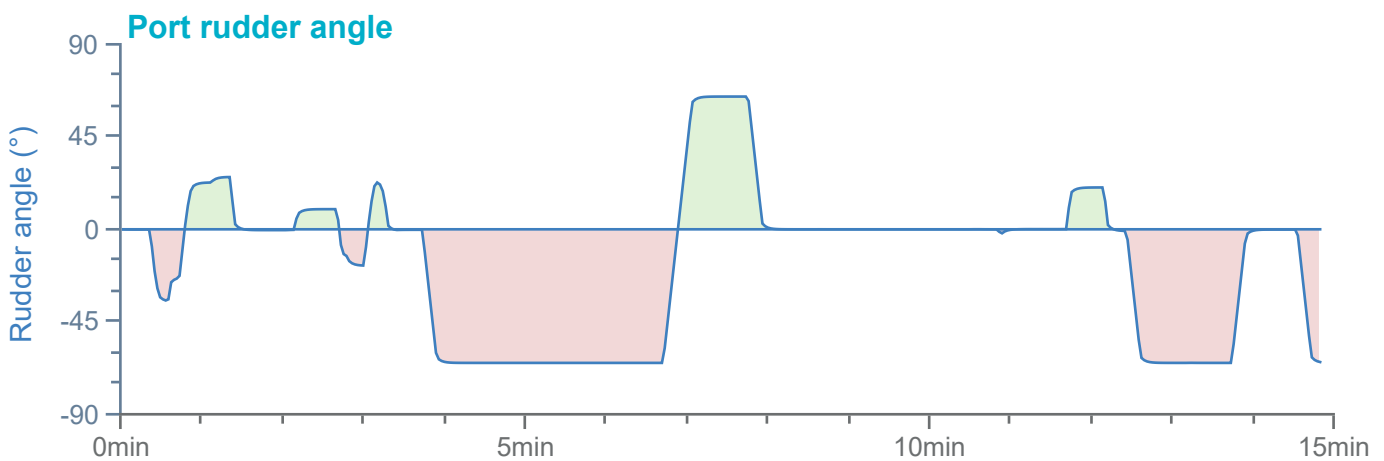
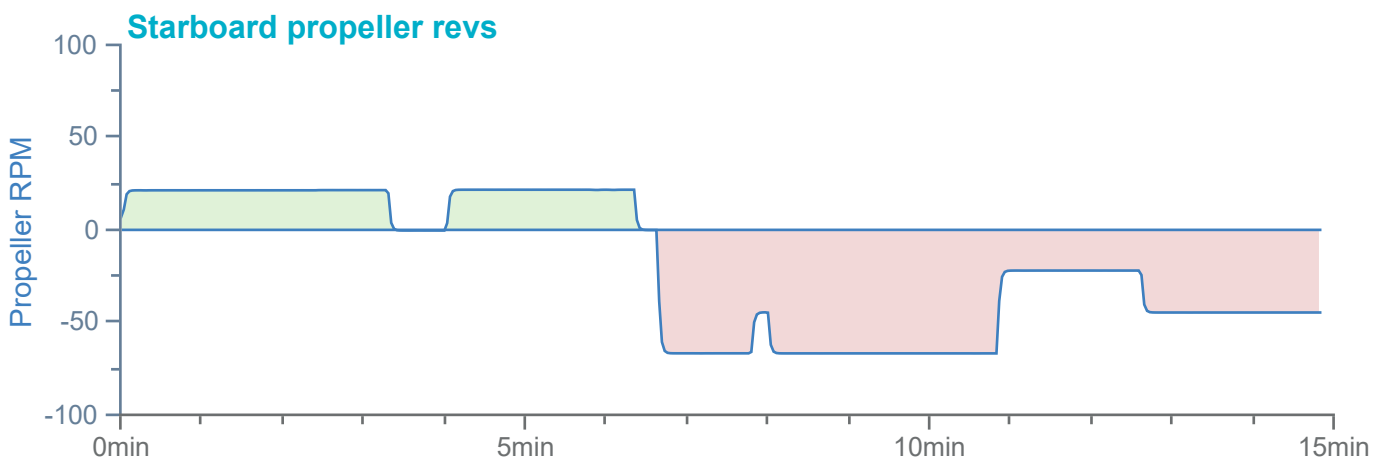
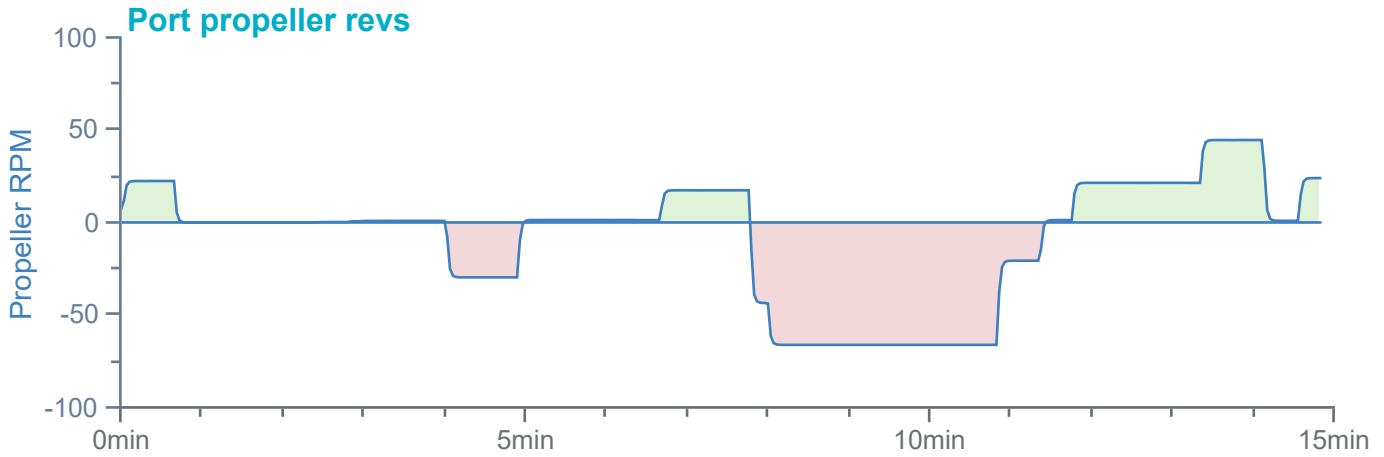
Manoeuvre track plot

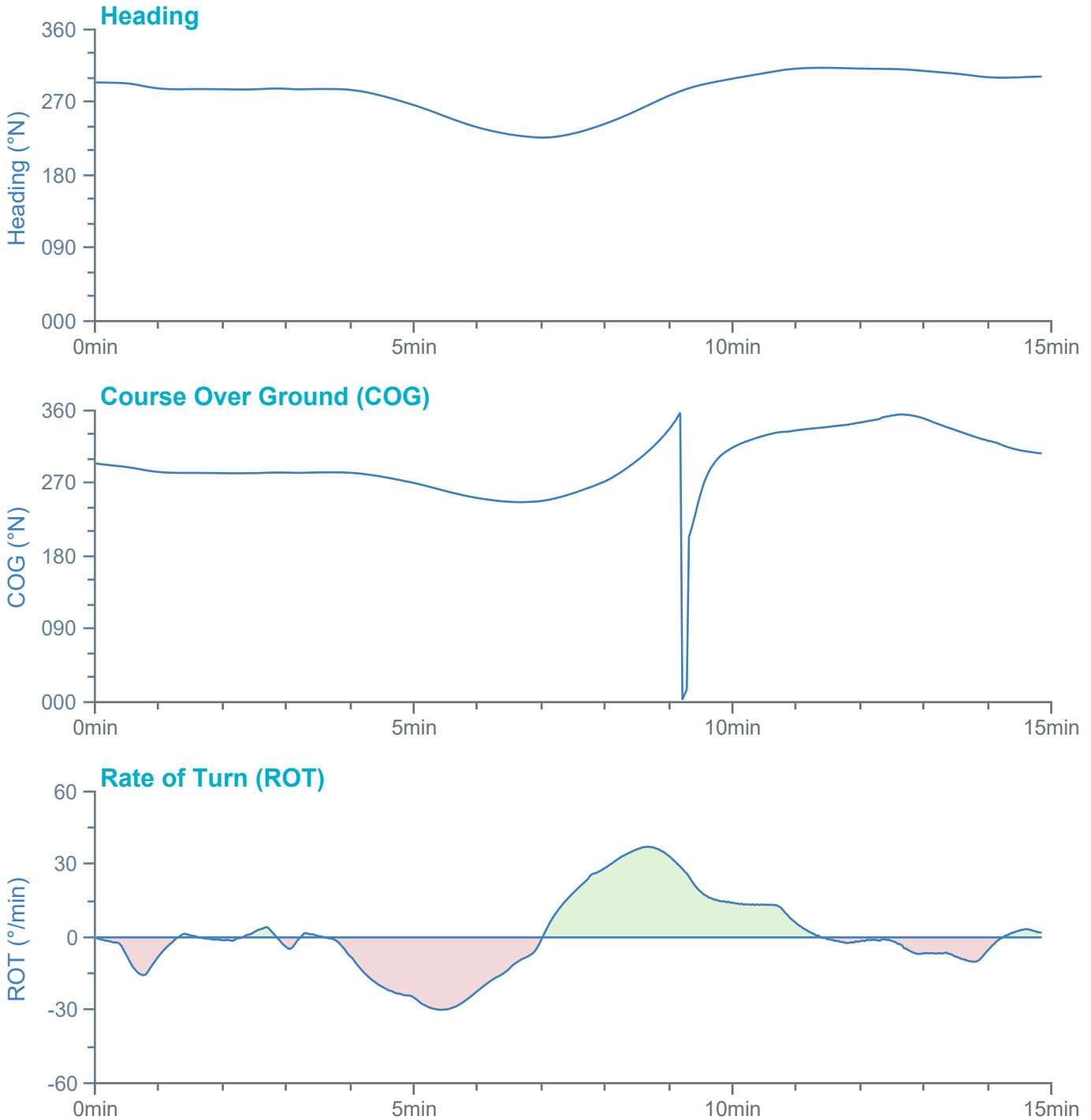


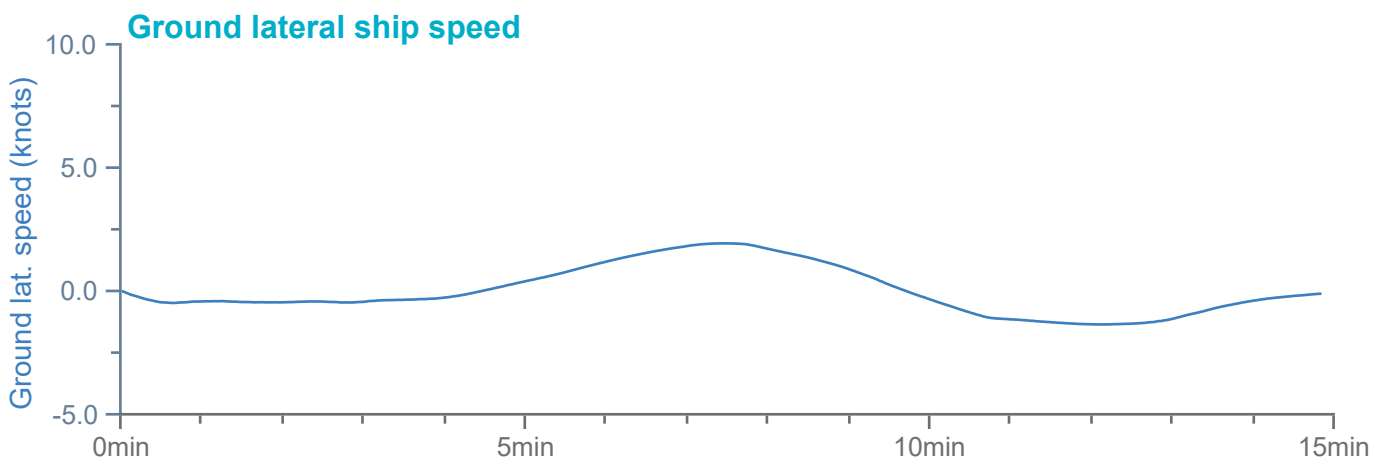
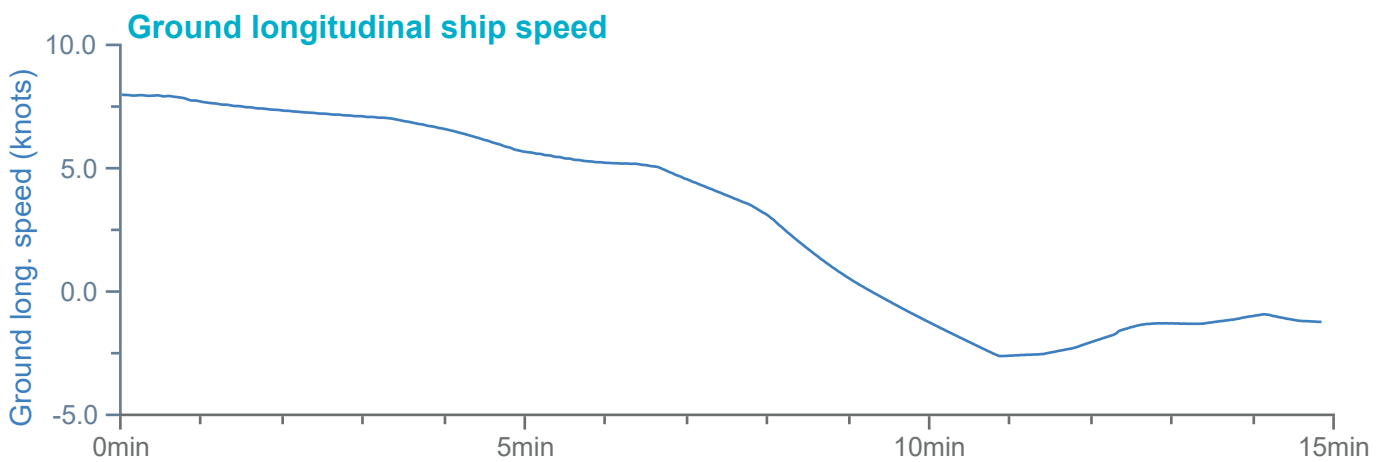
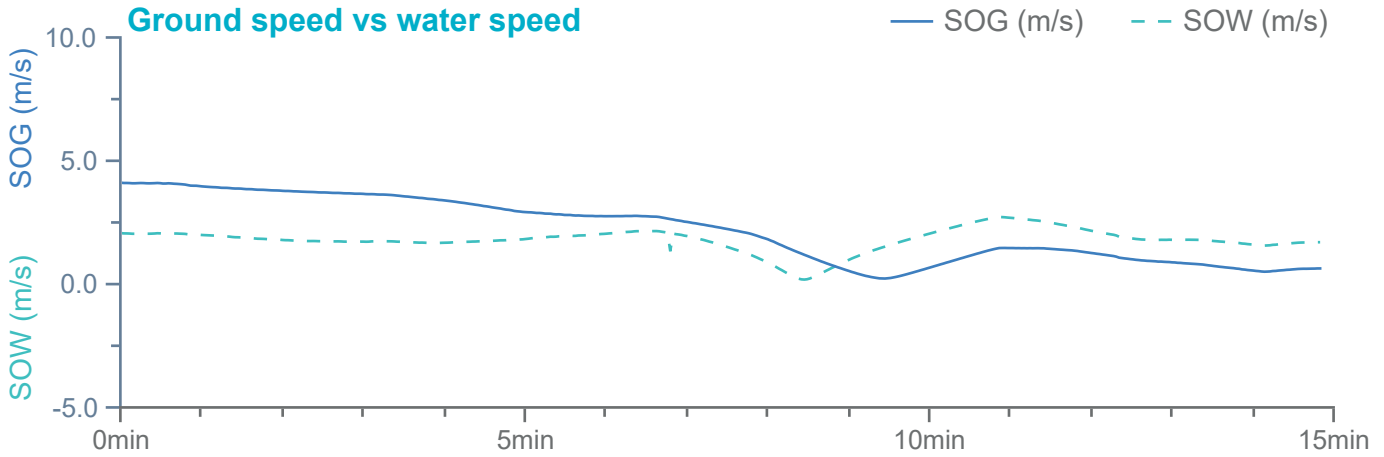
Ships plotted every 1 mins, highlight every 10 mins



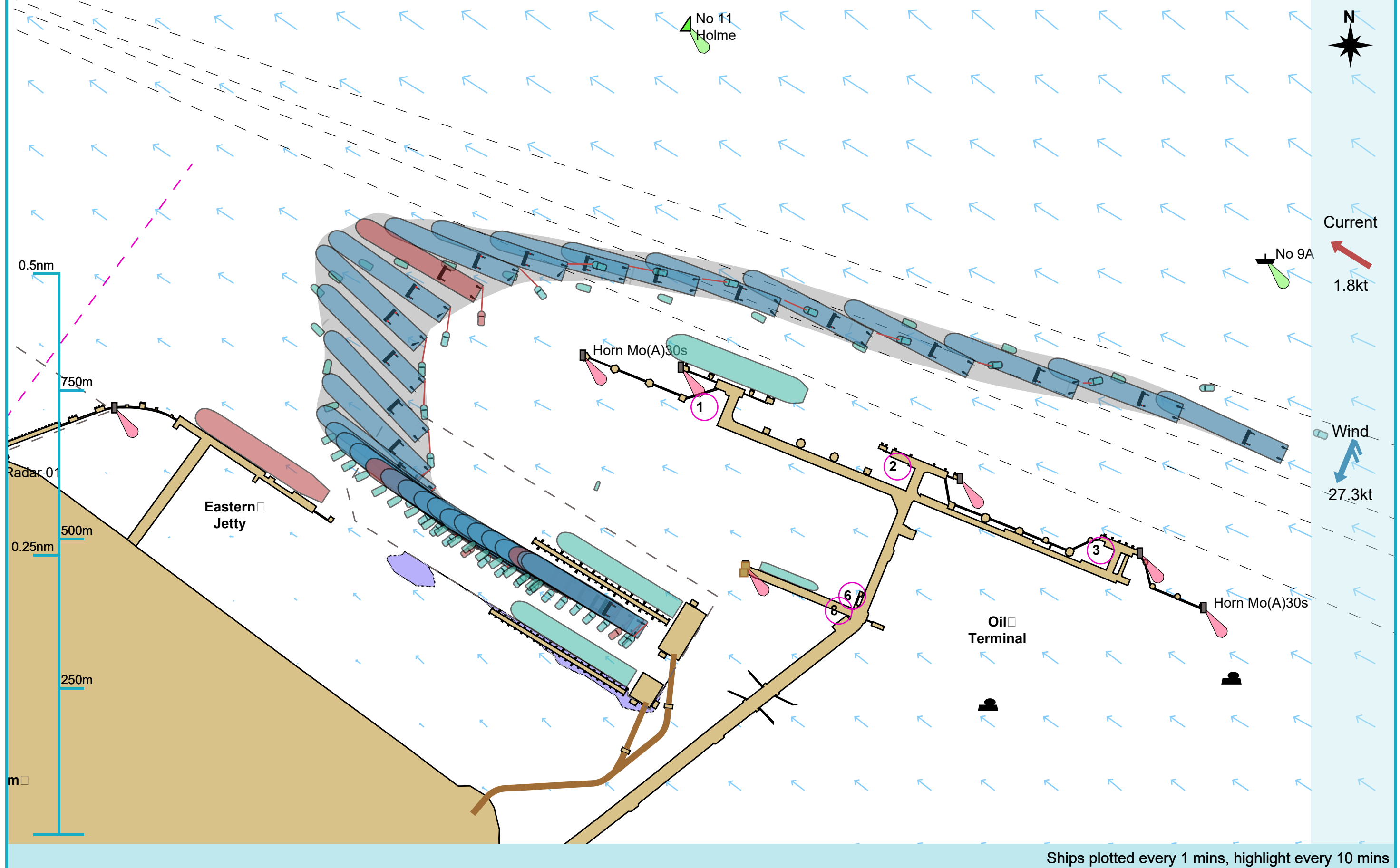






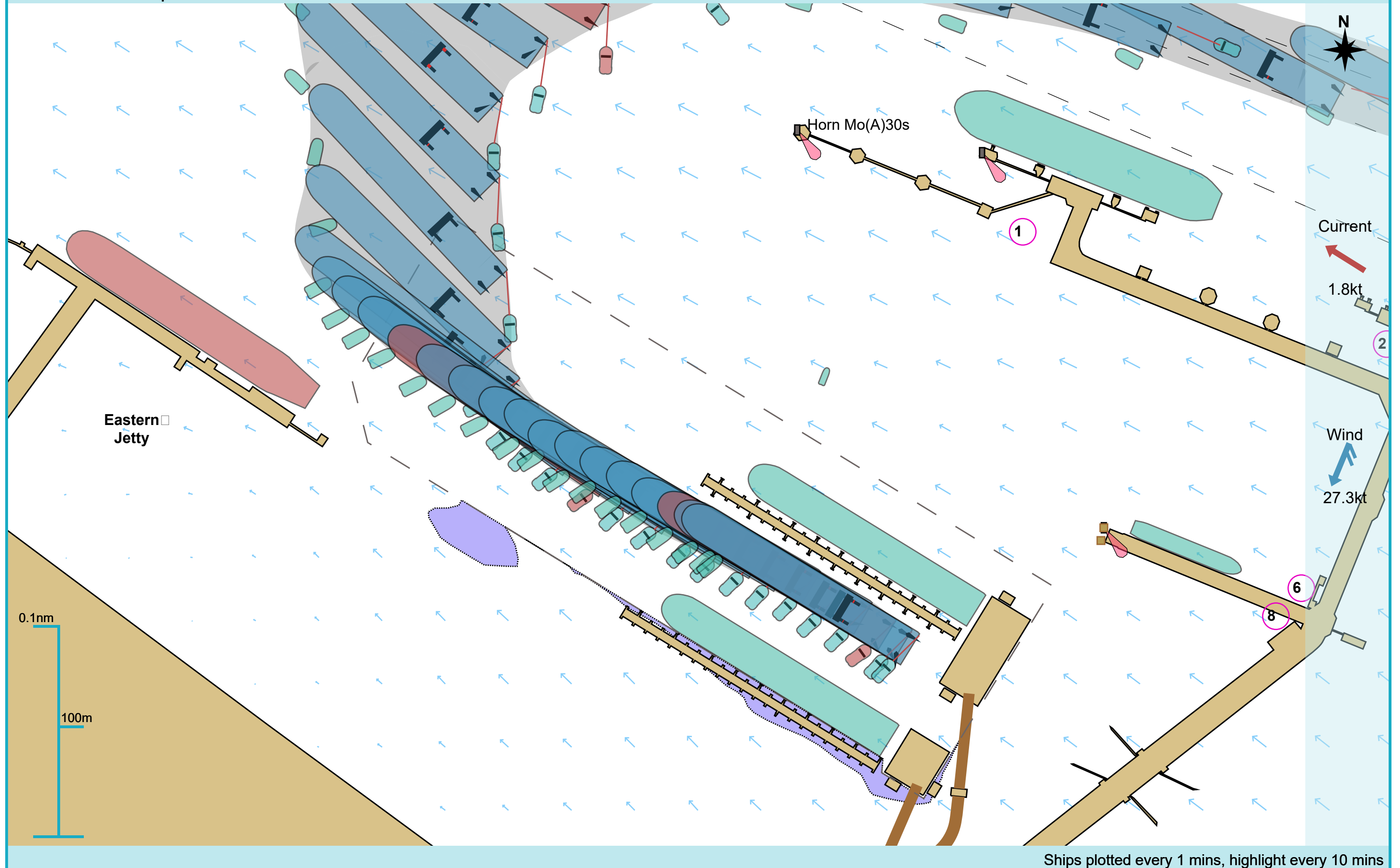


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

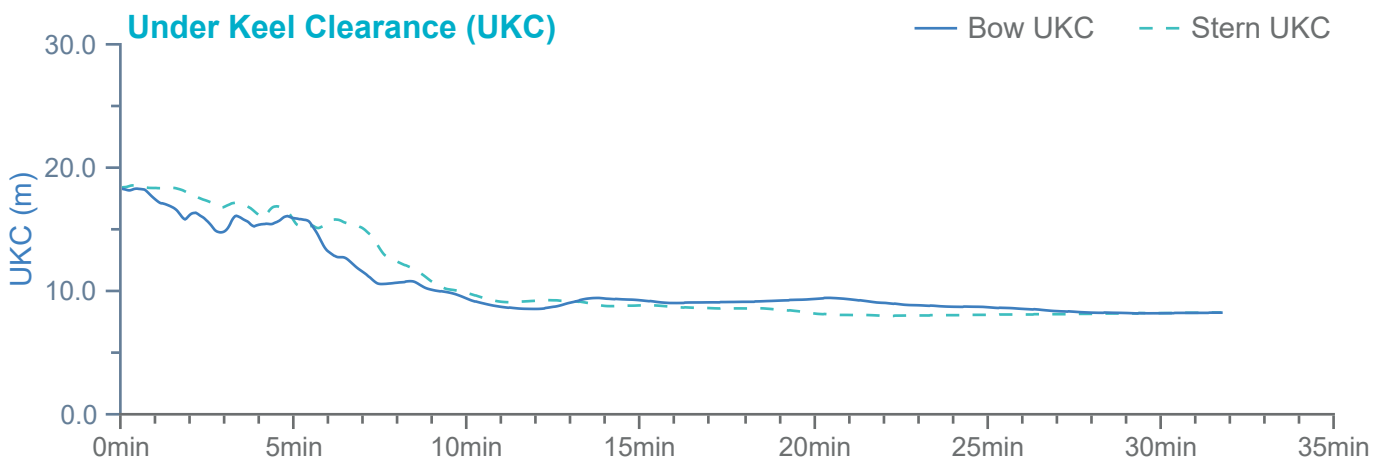
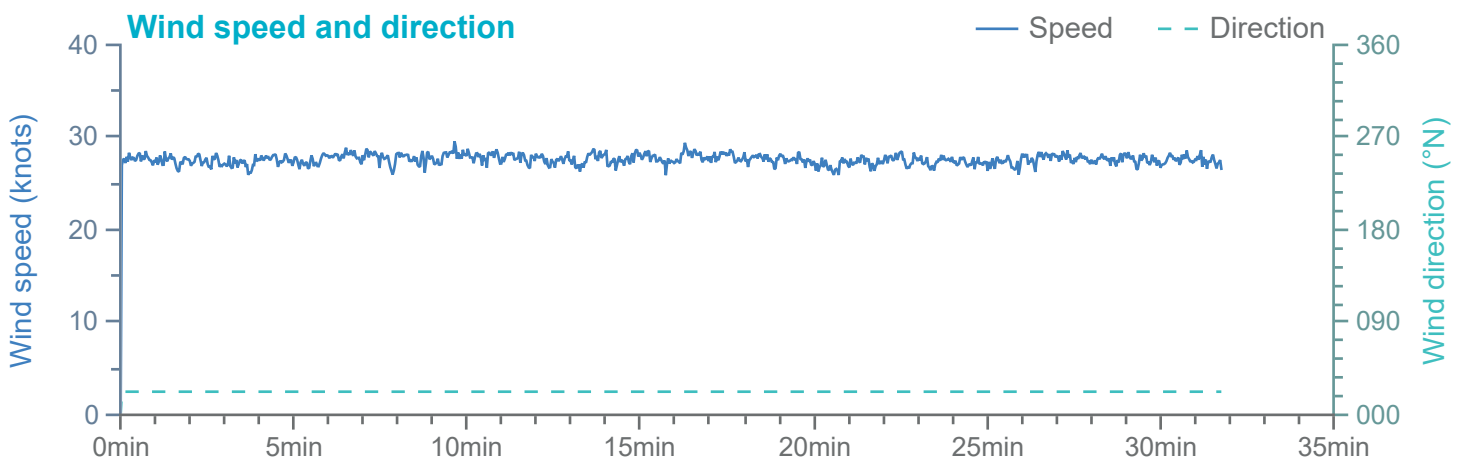
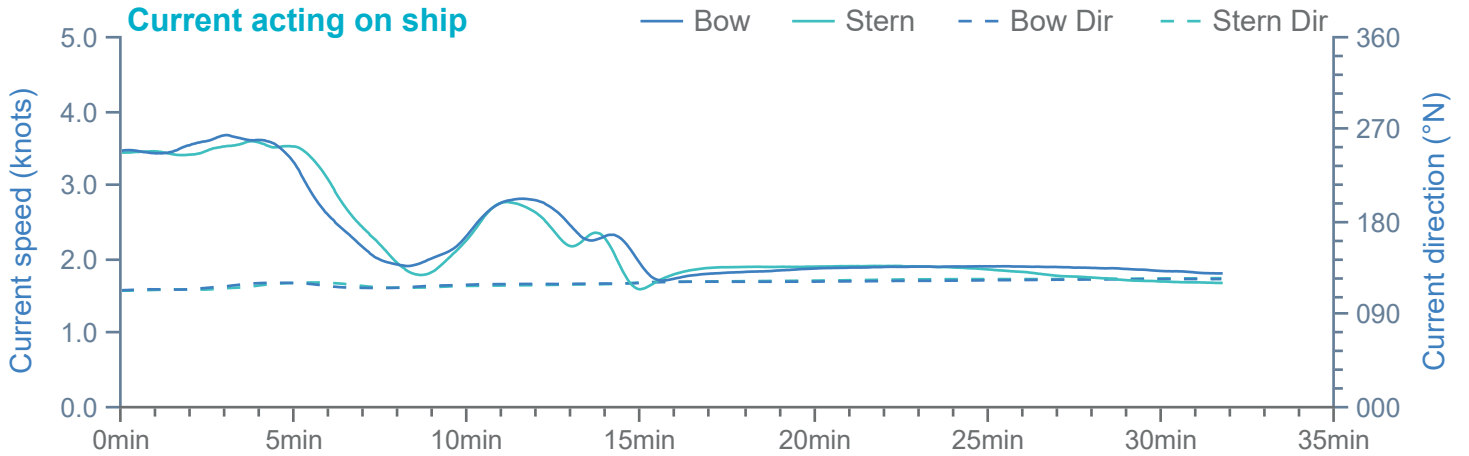
Manoeuvre track plot

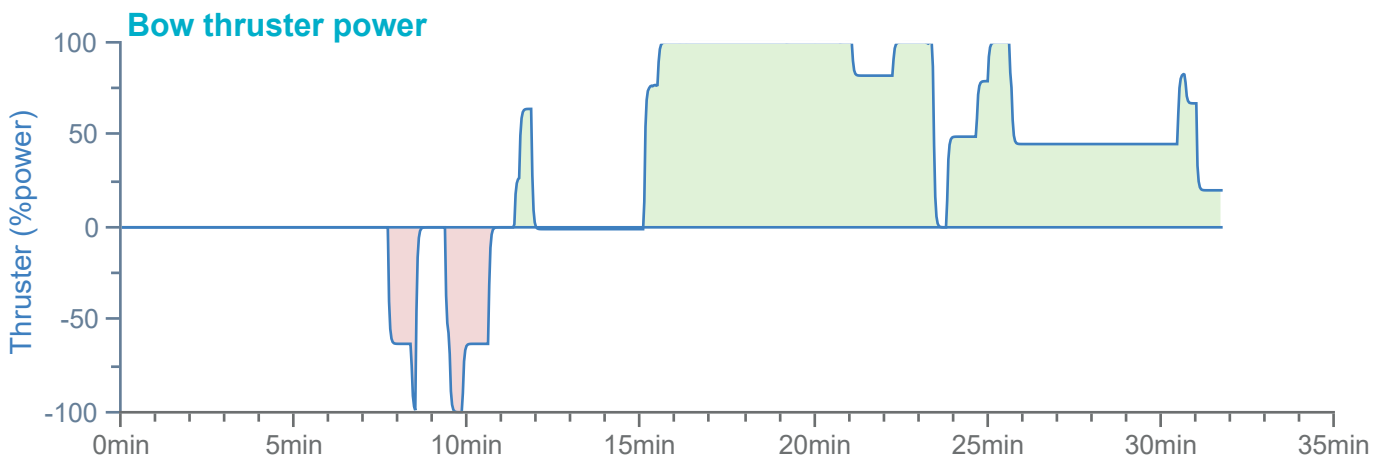
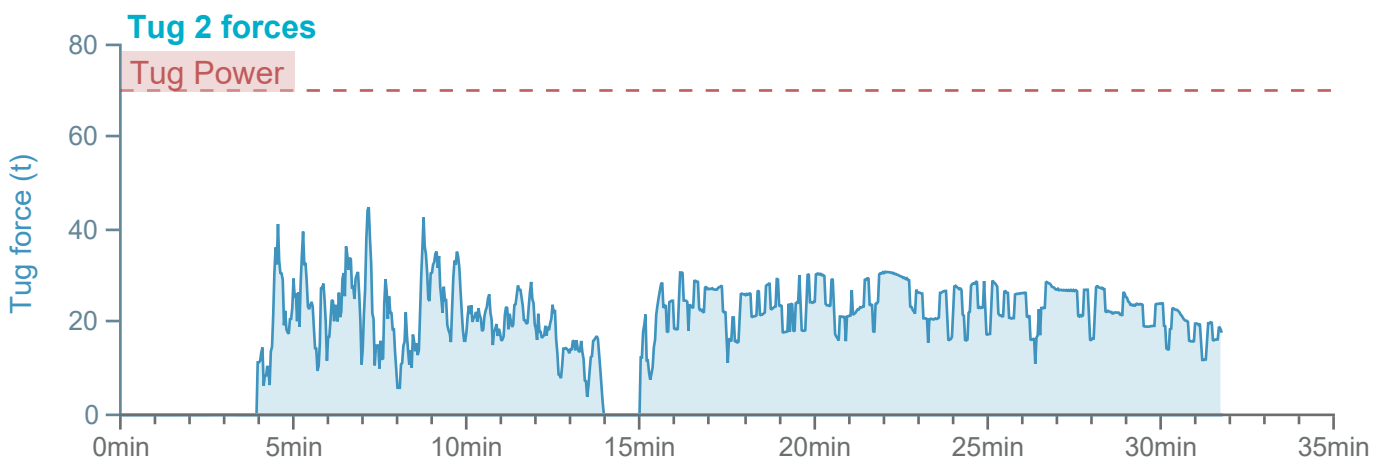
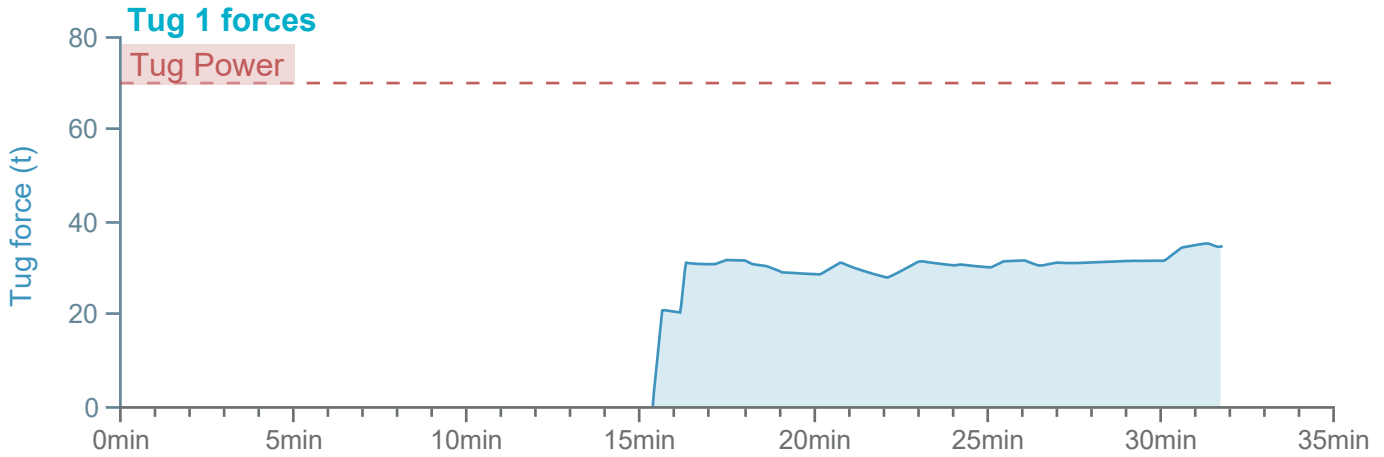


Summary

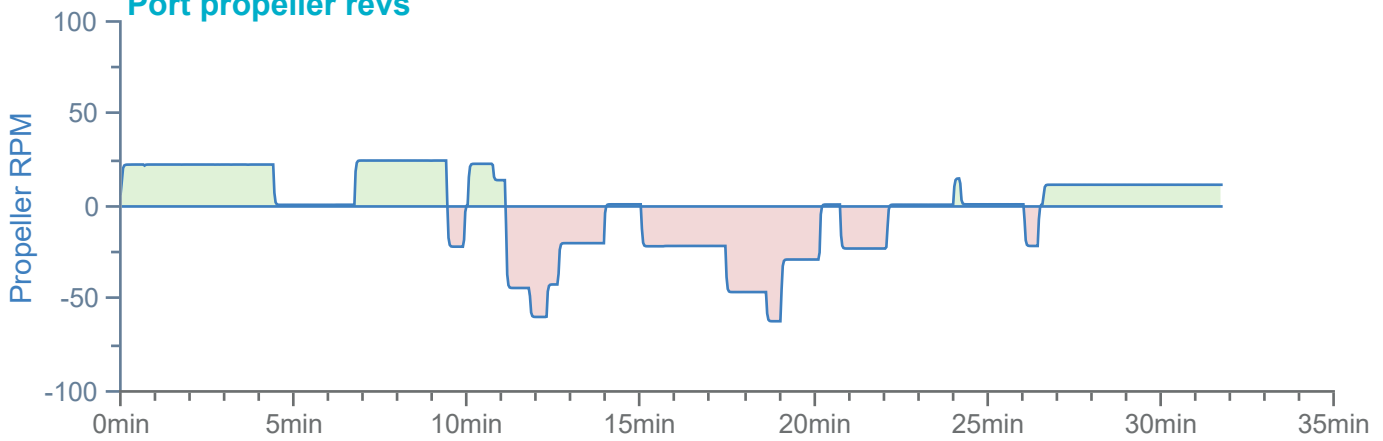
Environment

237m RoRo unnamed

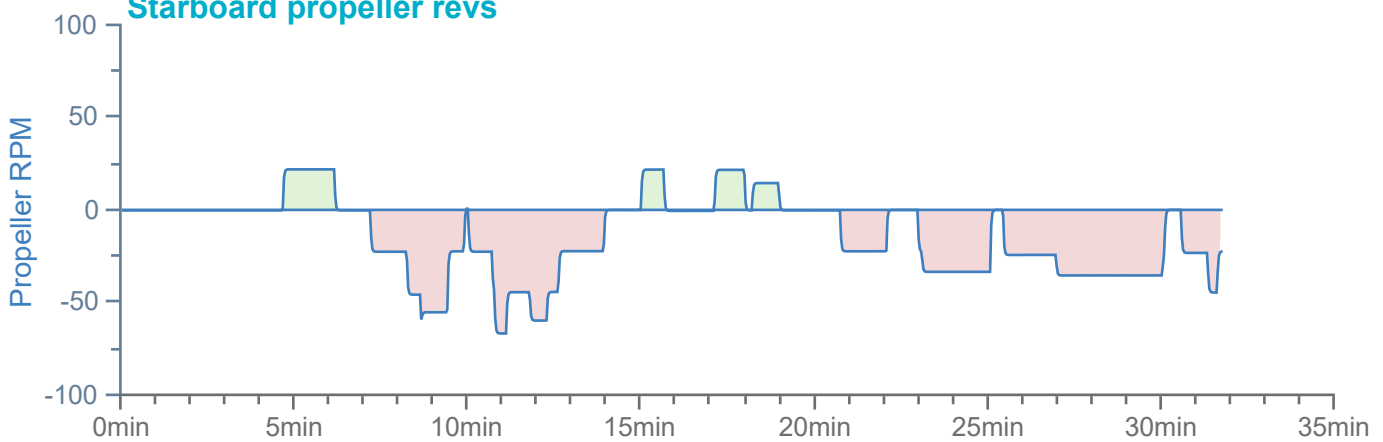




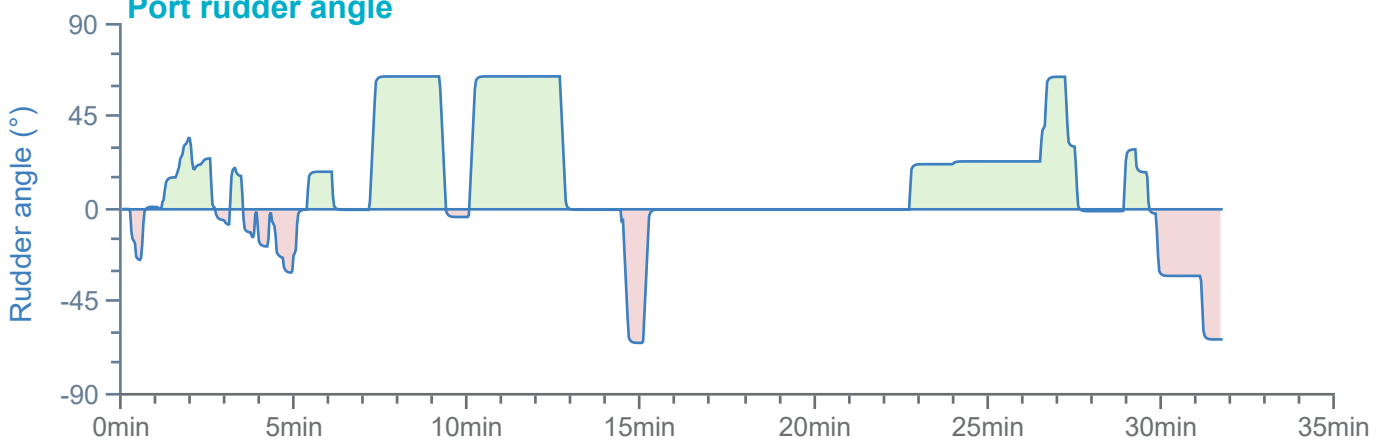
Port propeller revs



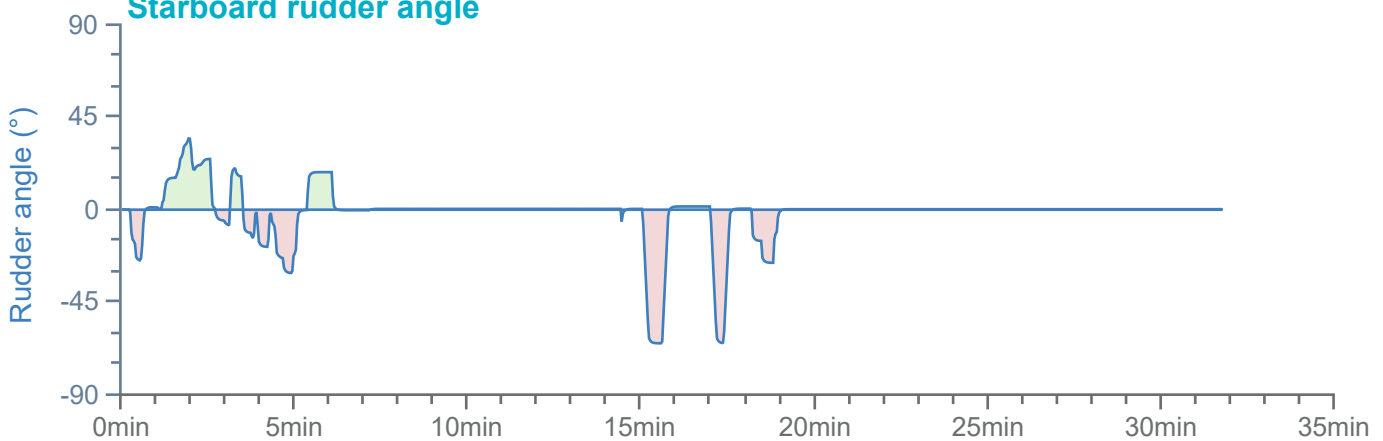
Starboard propeller revs

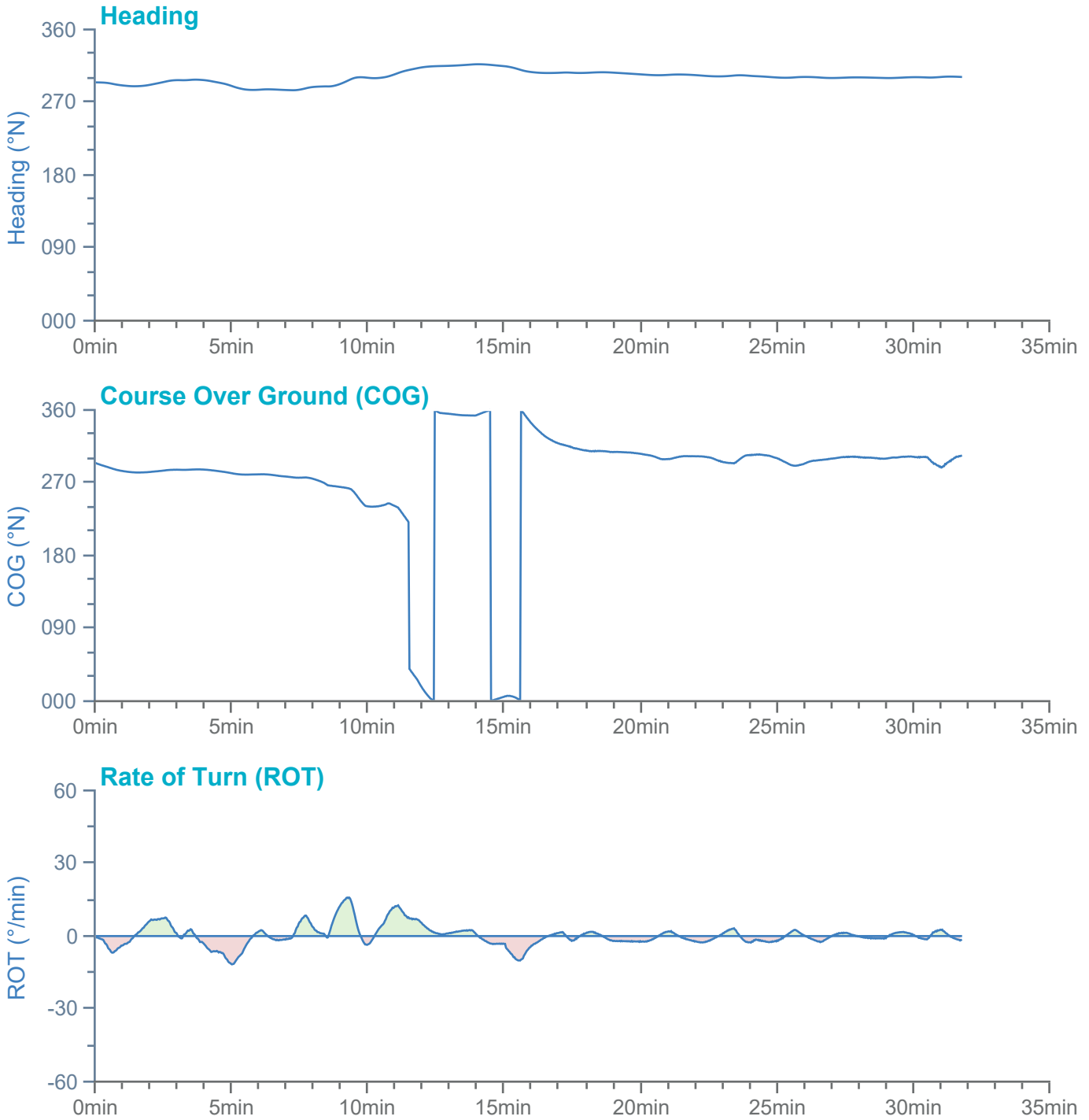


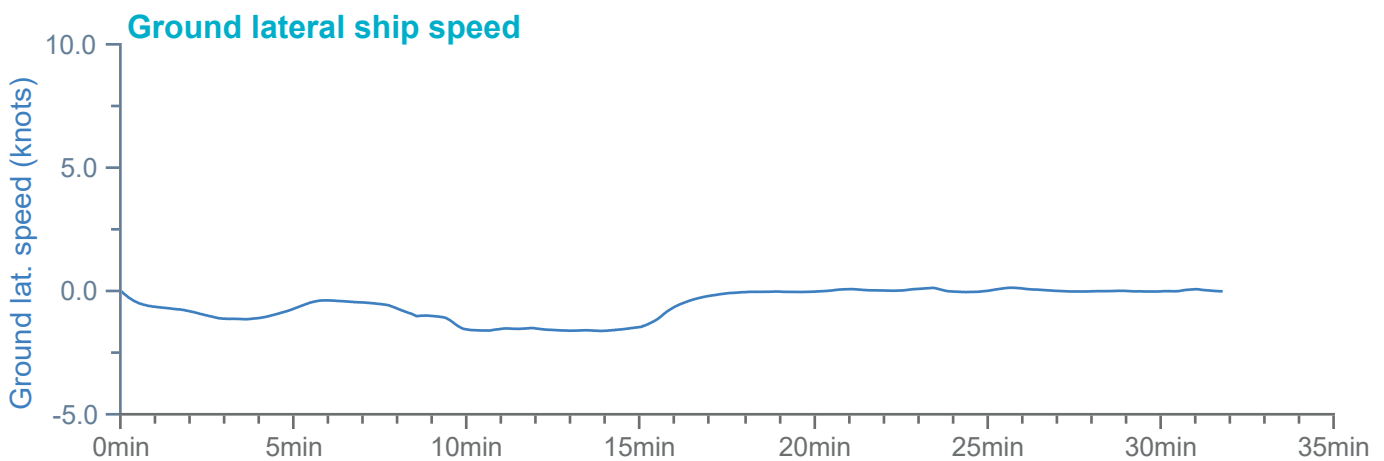
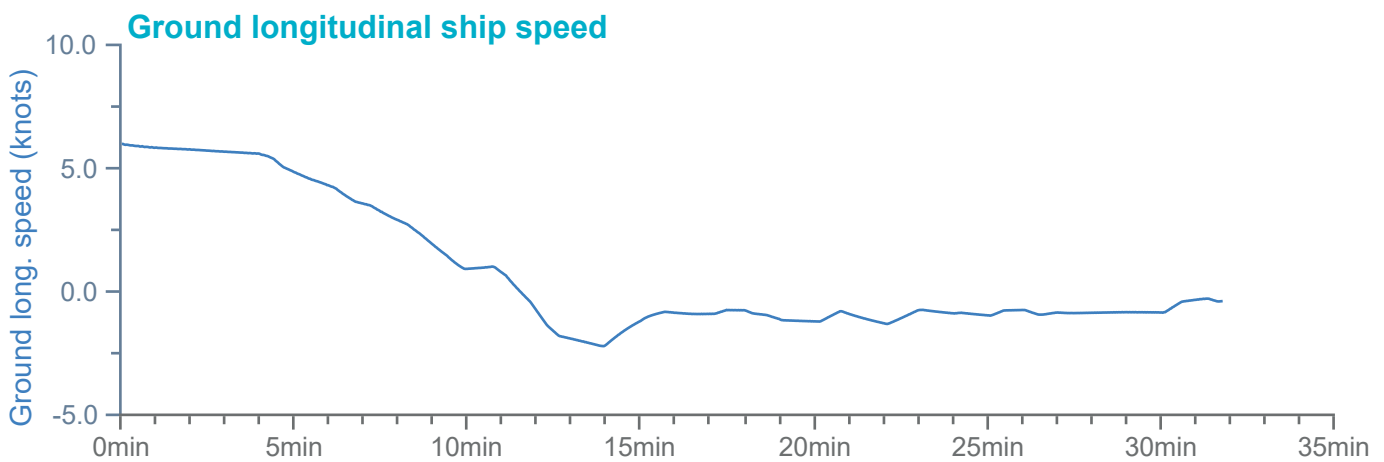
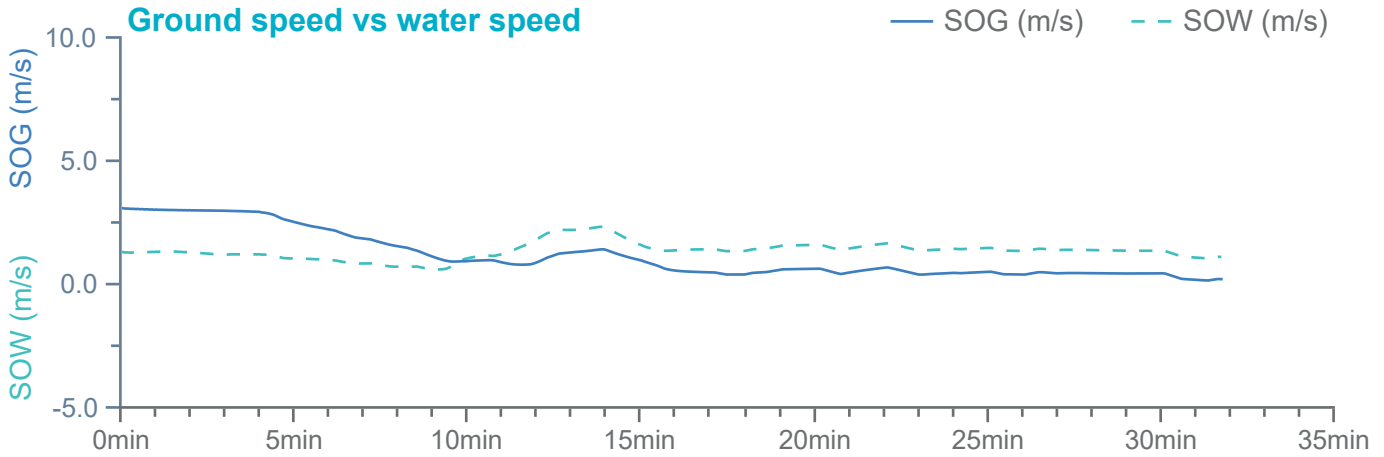
Port rudder angle



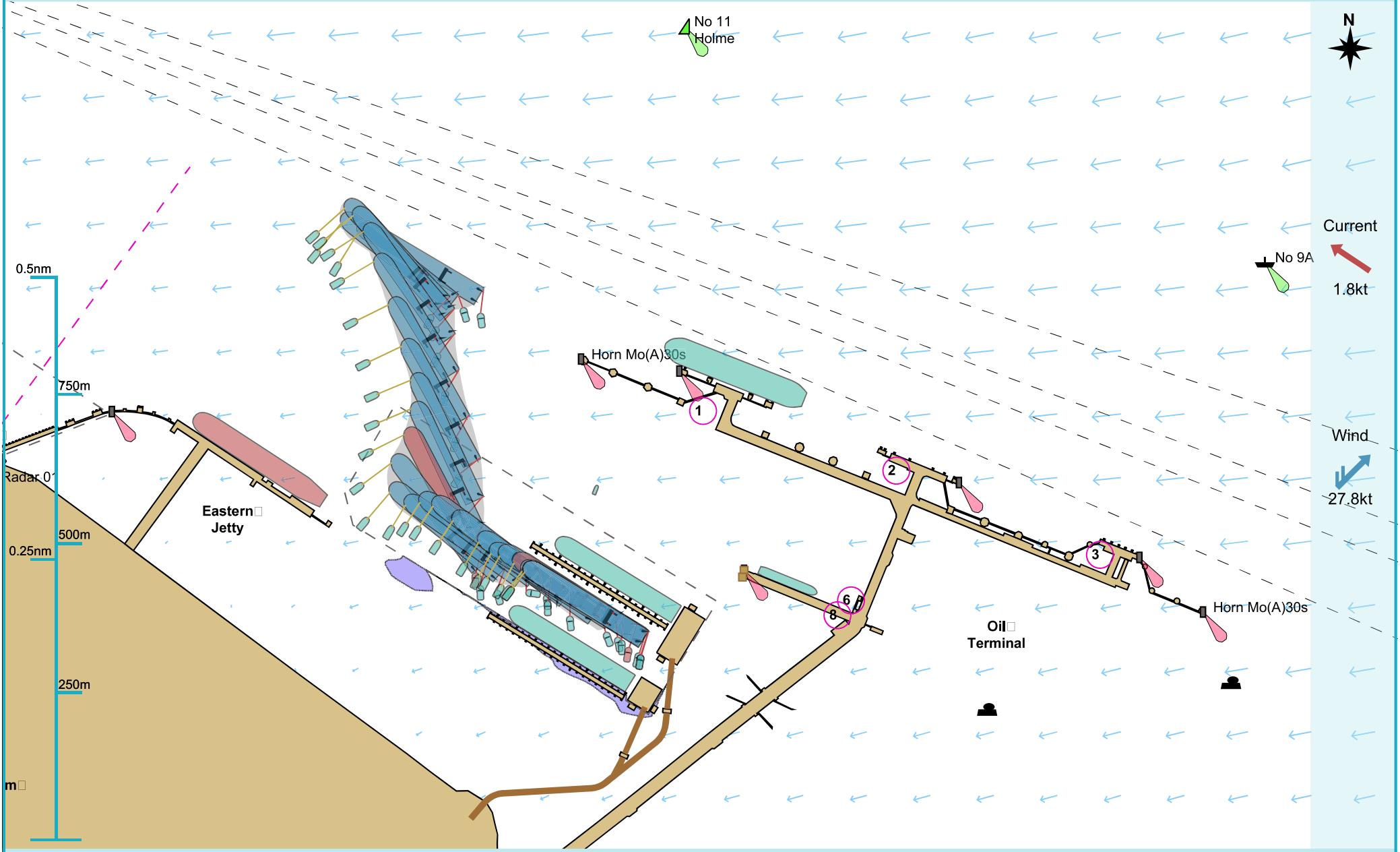
Starboard rudder angle





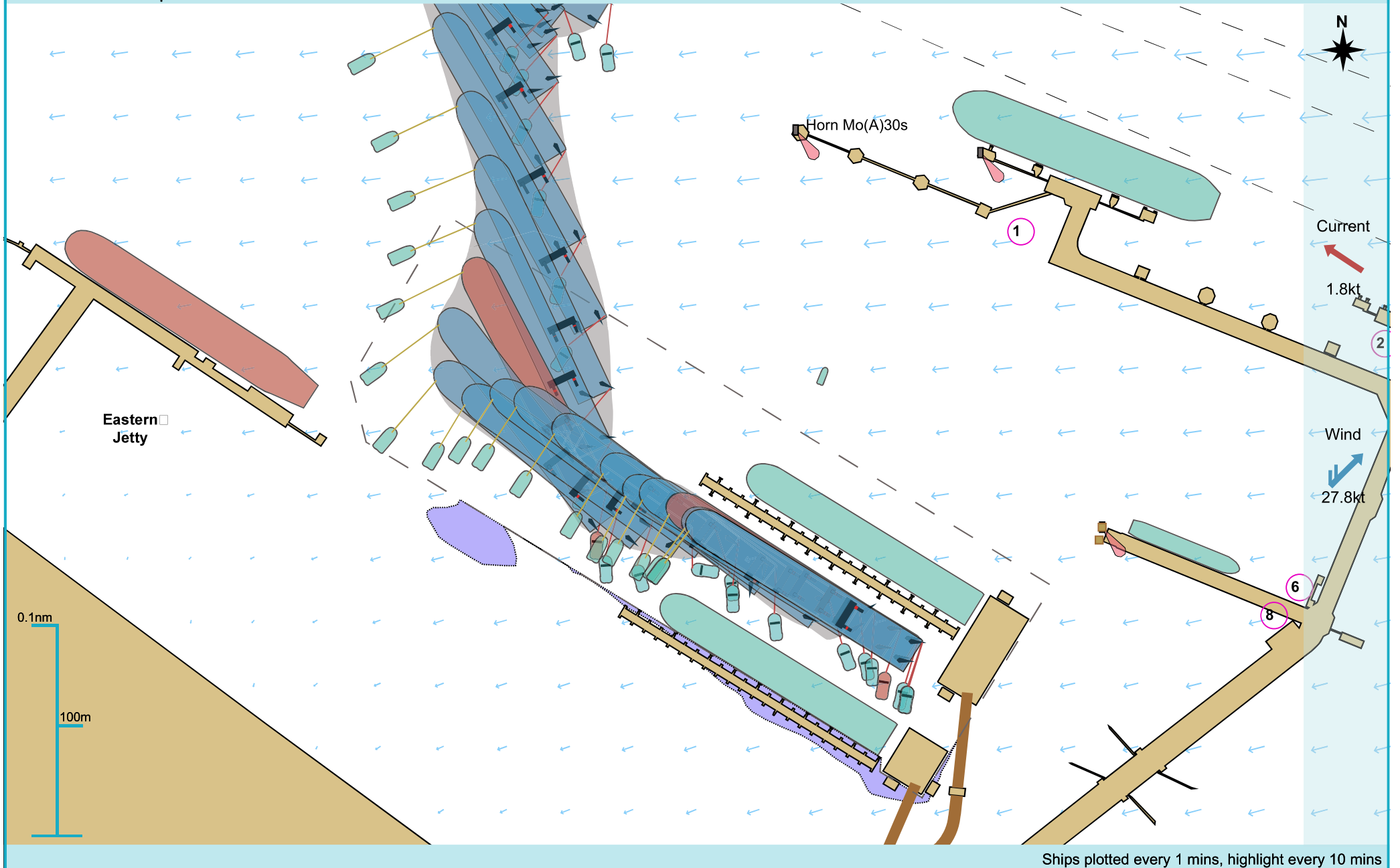


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

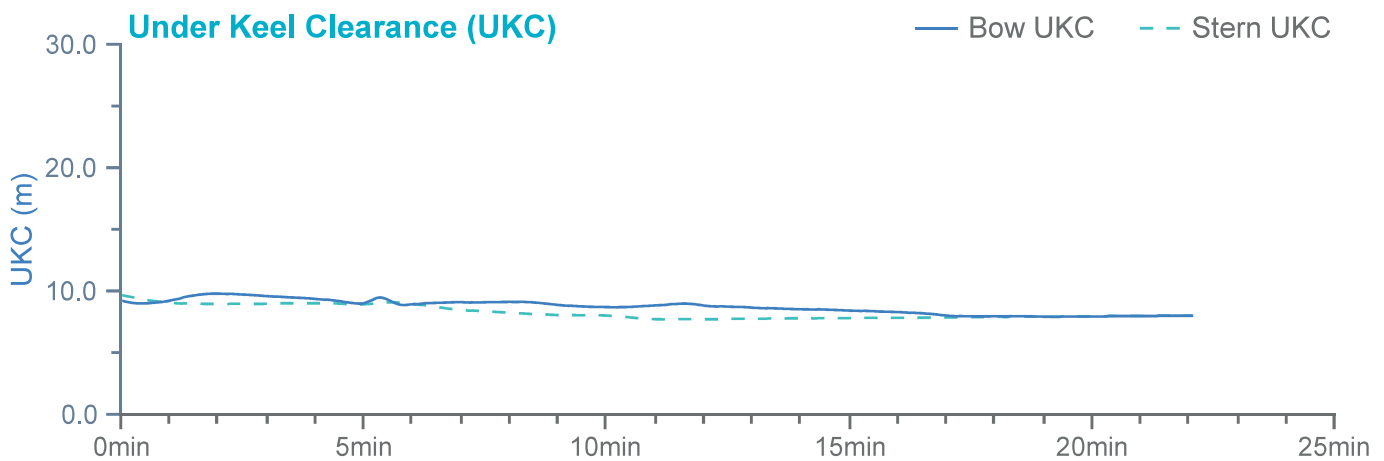
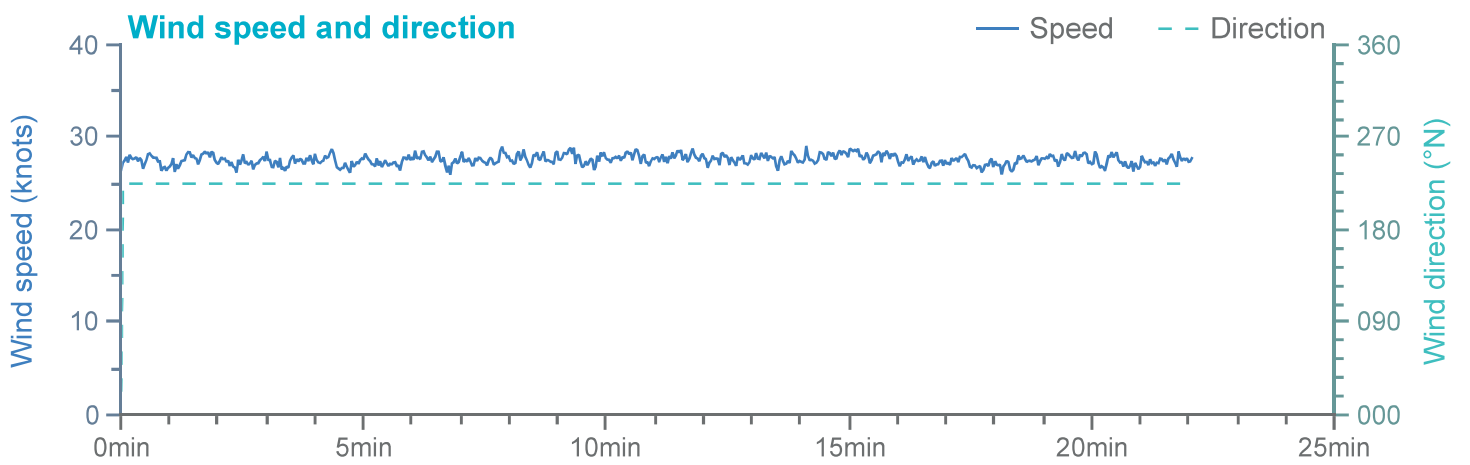
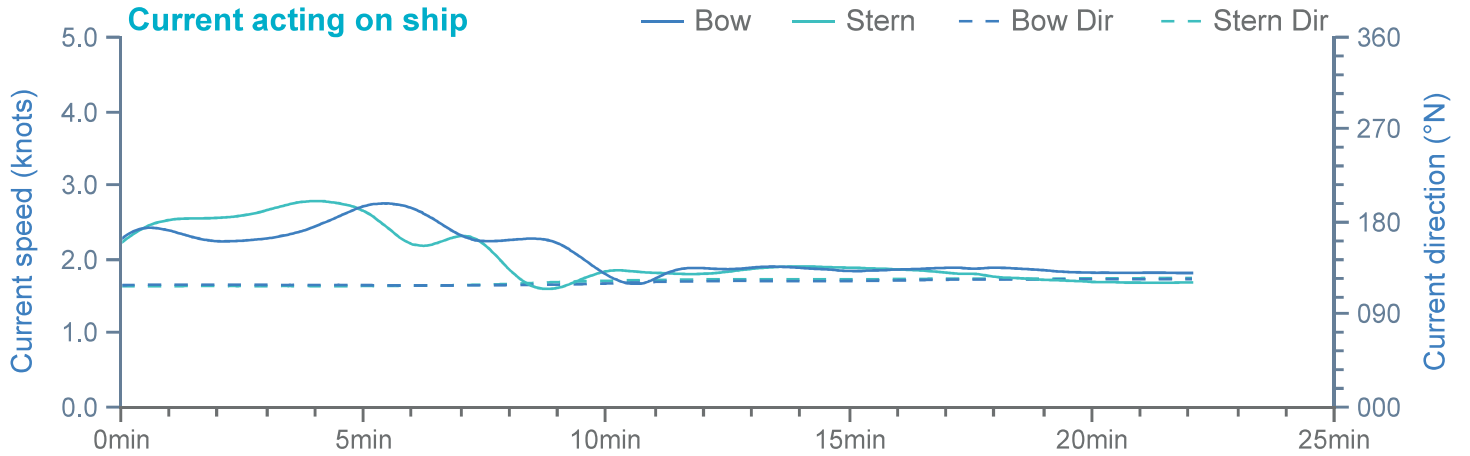


Ships plotted every 1 mins, highlight every 10 mins

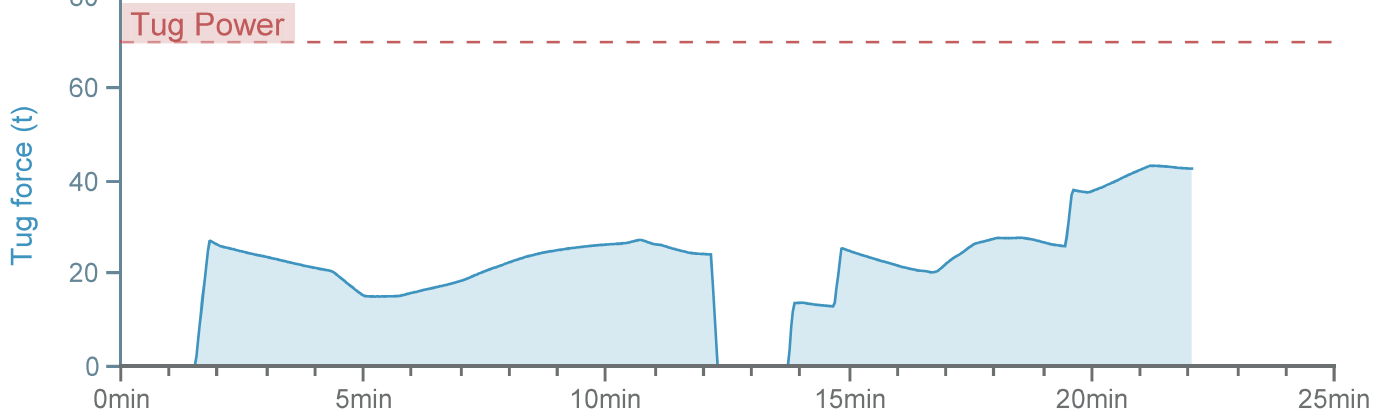
Summary

Environment

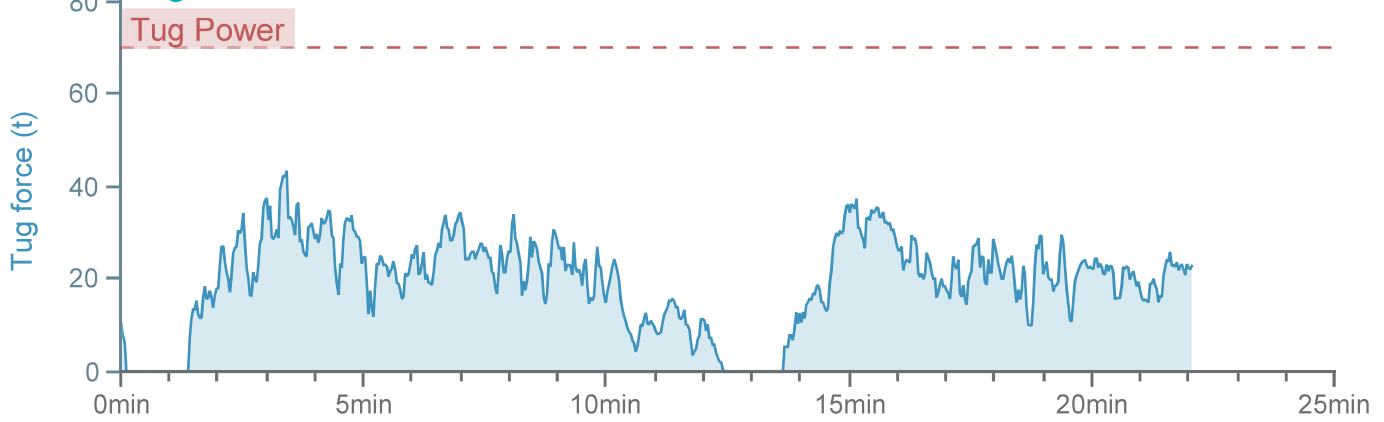
237m RoRo unnamed



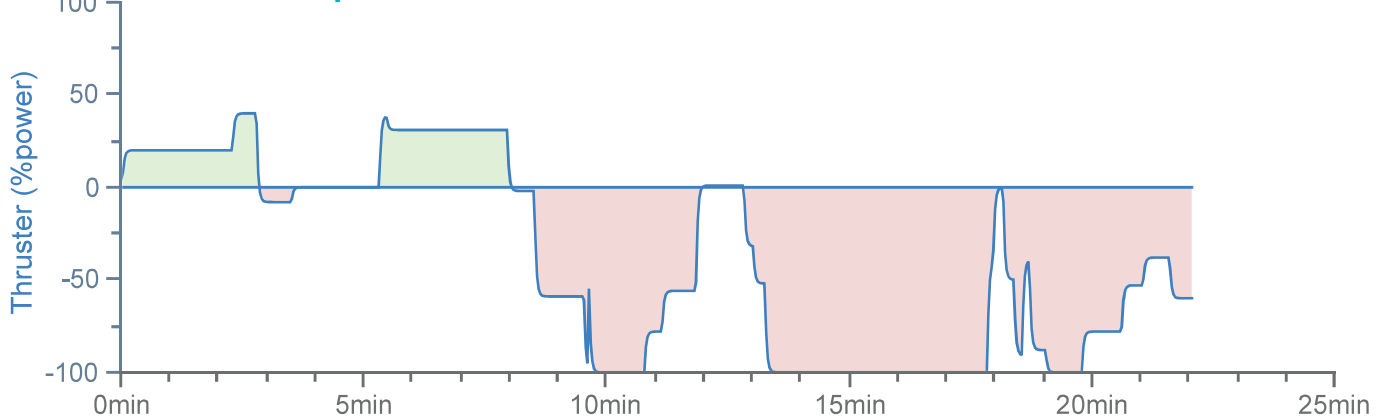
Tug 1 forces

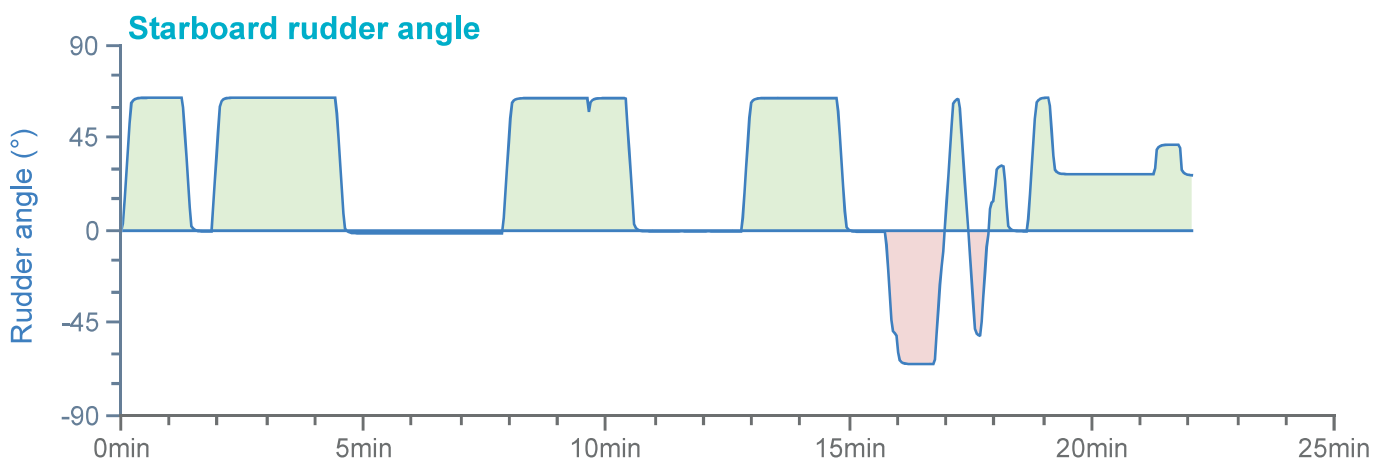
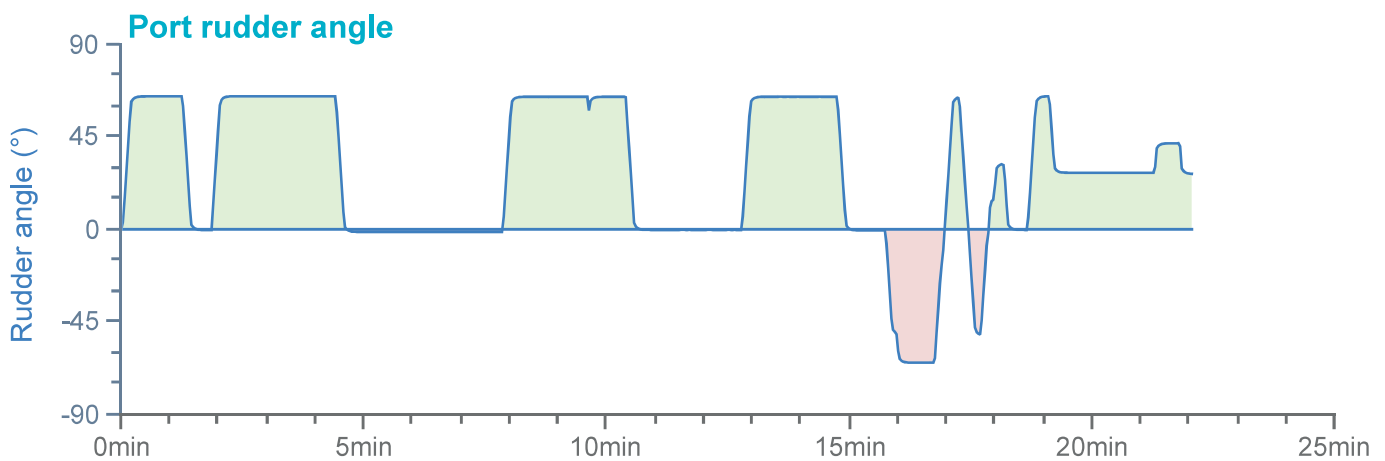
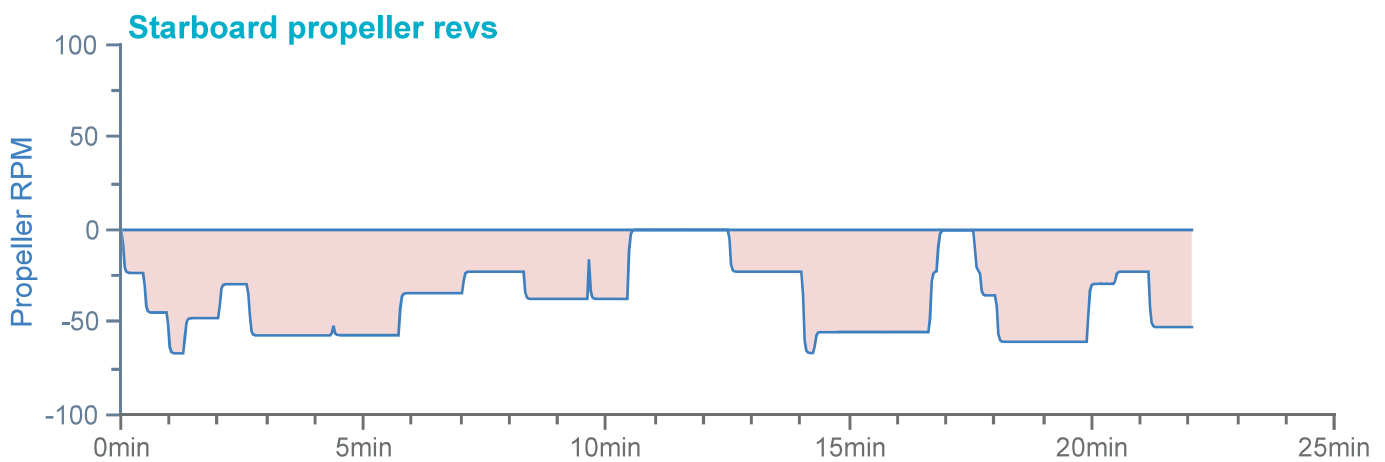
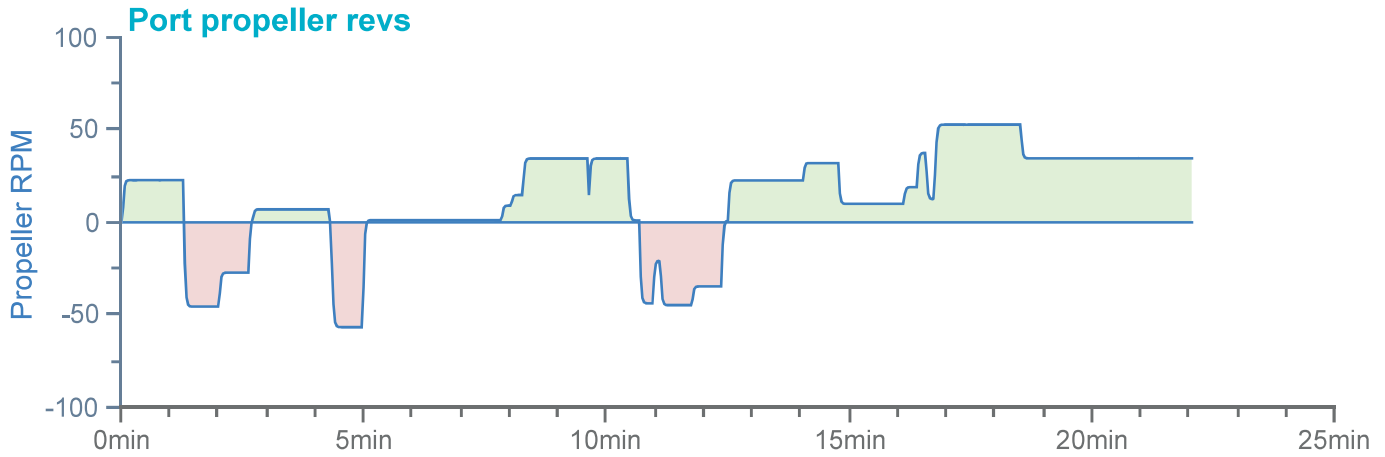


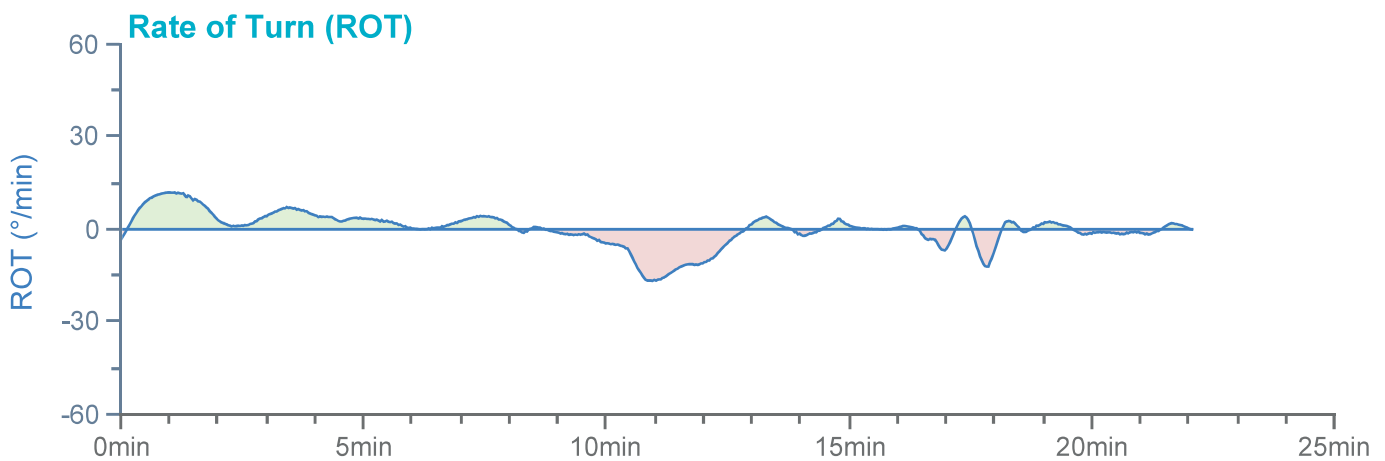
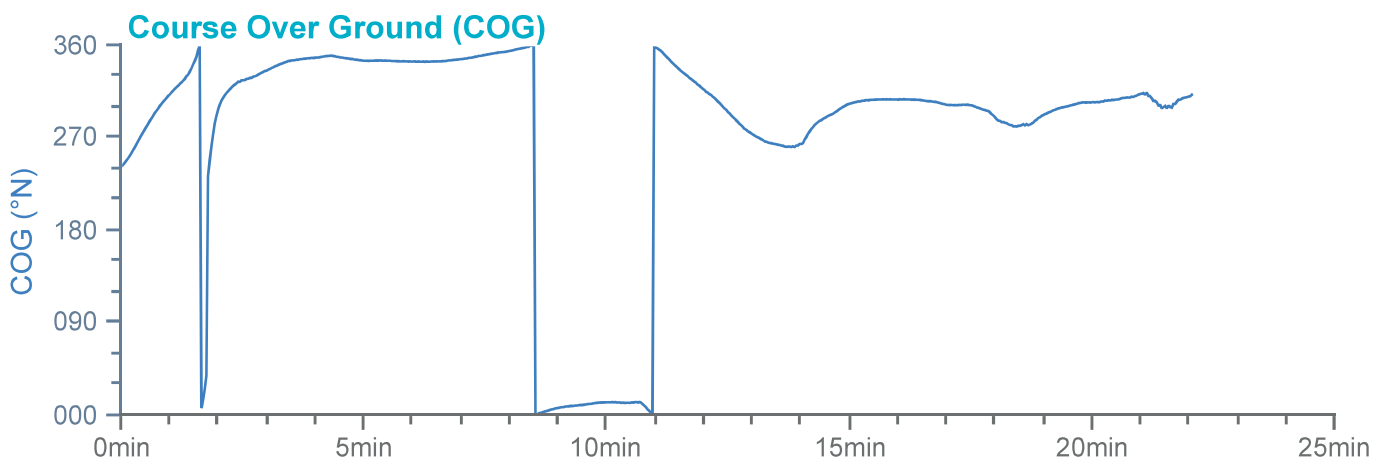
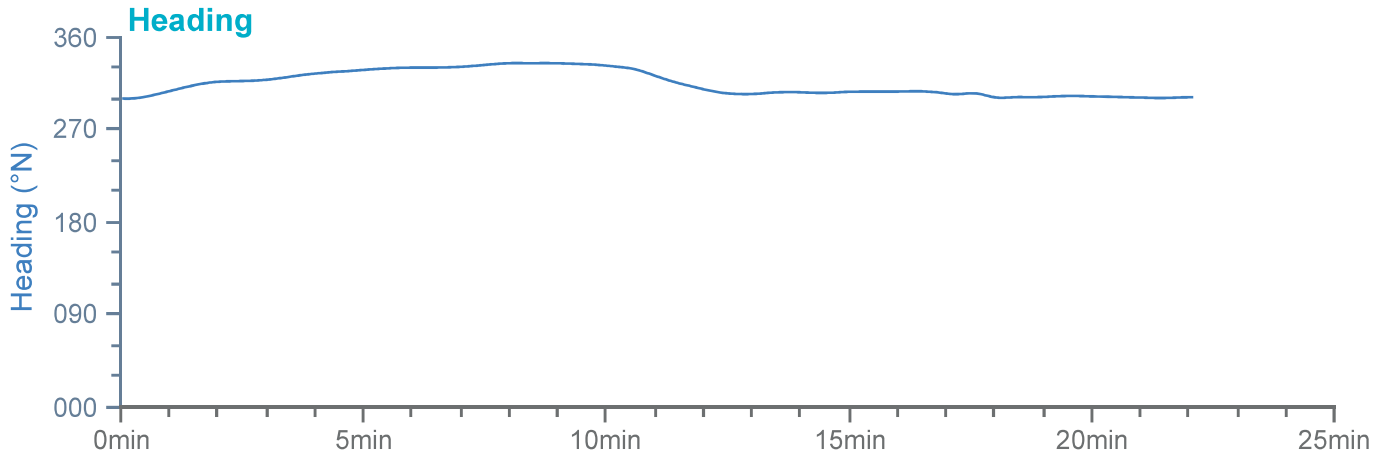
Tug 2 forces

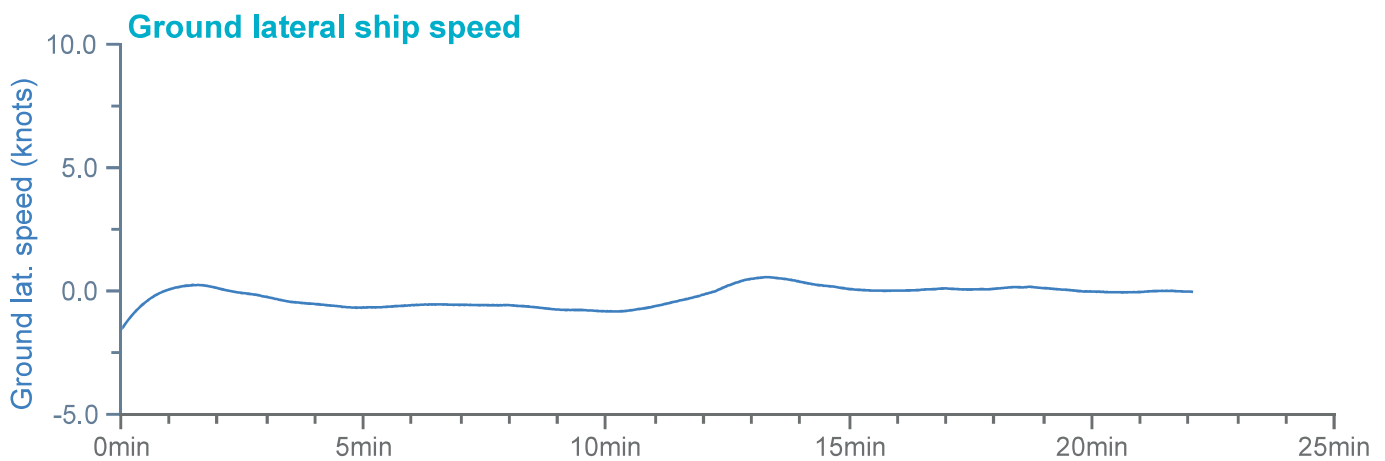
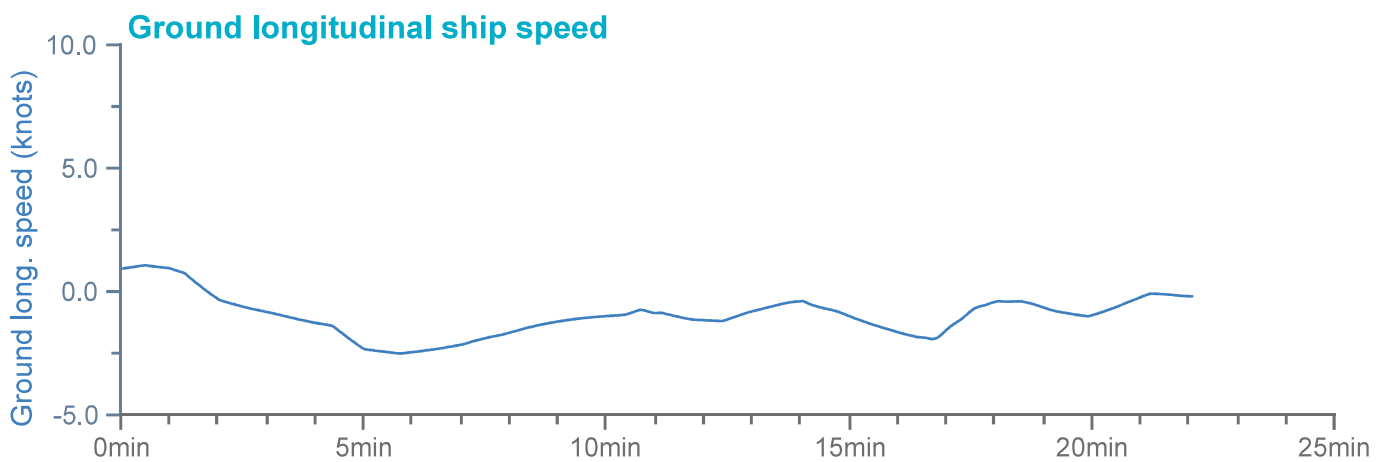
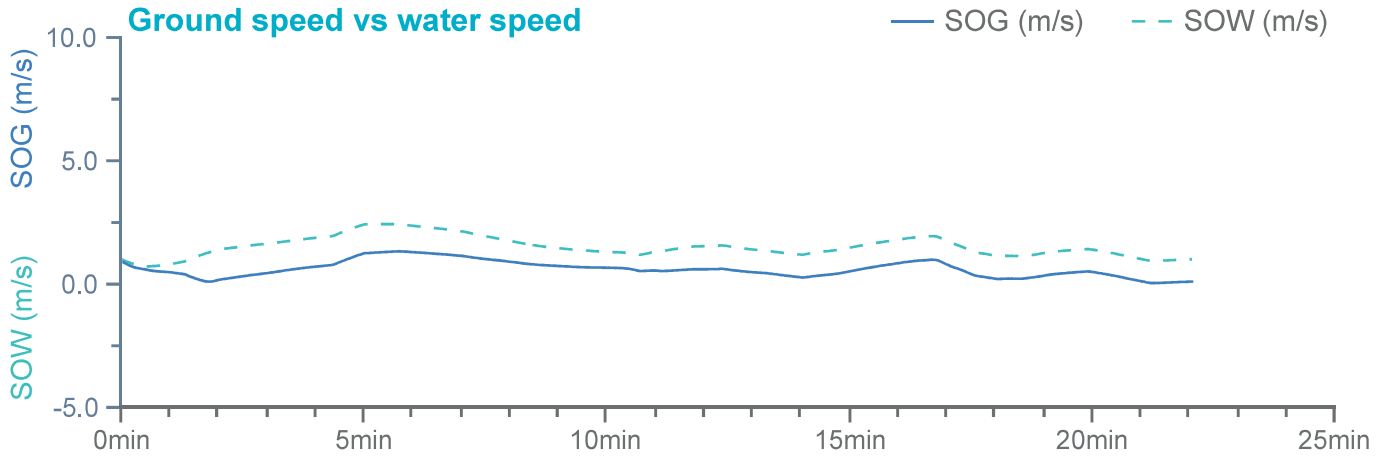


Bow thruster power

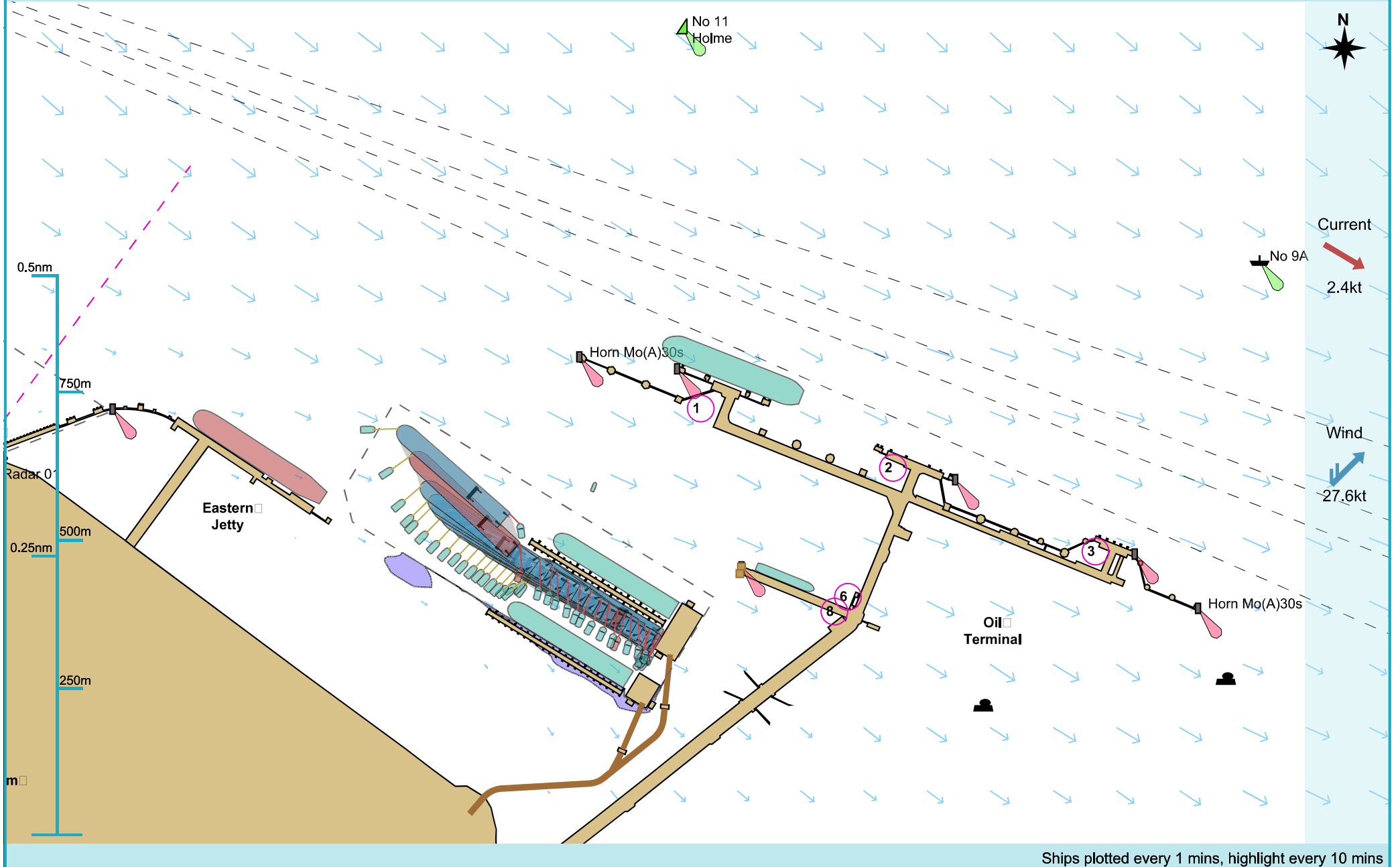






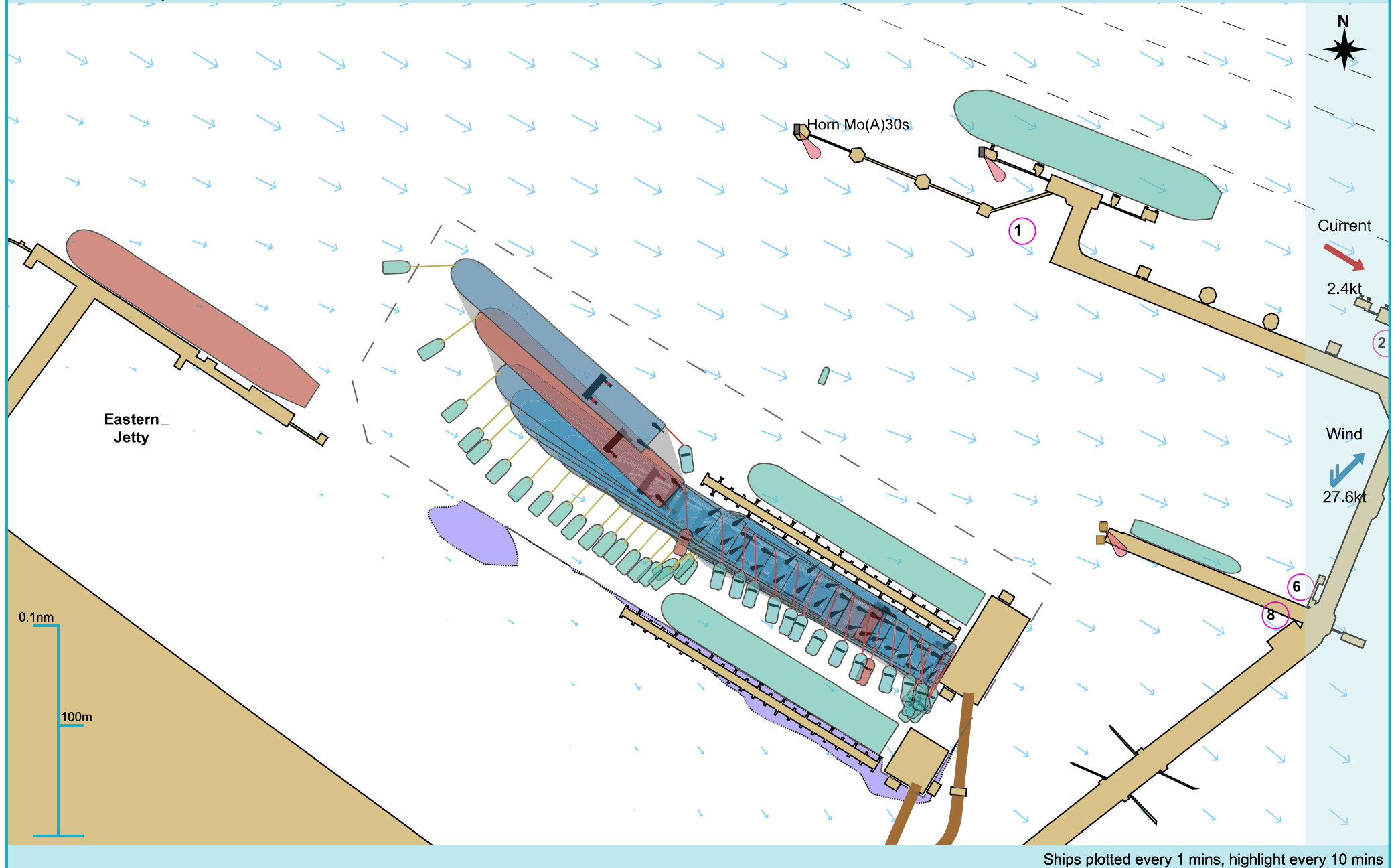


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

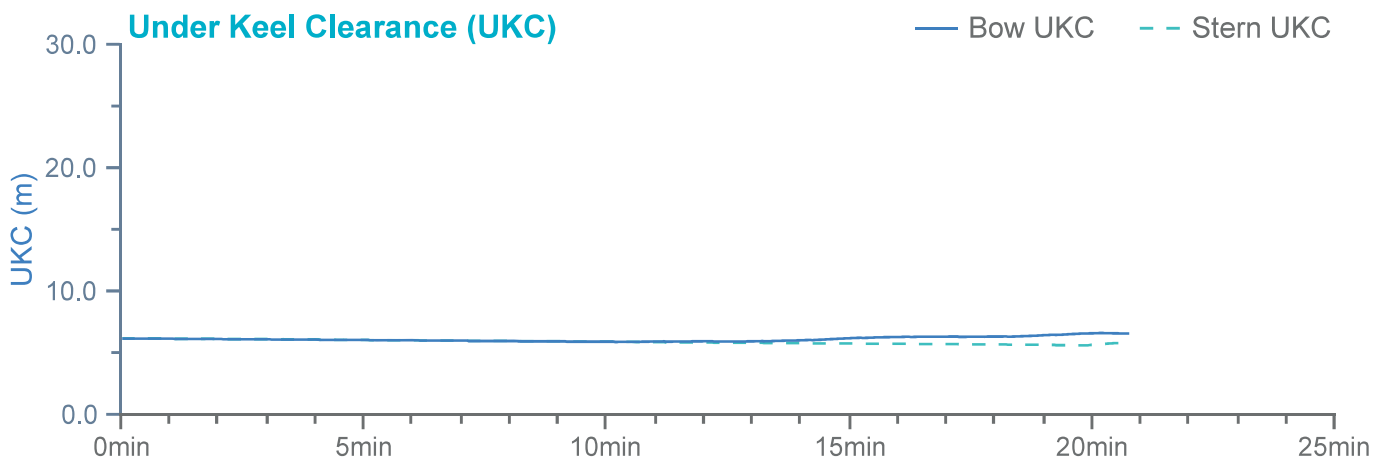
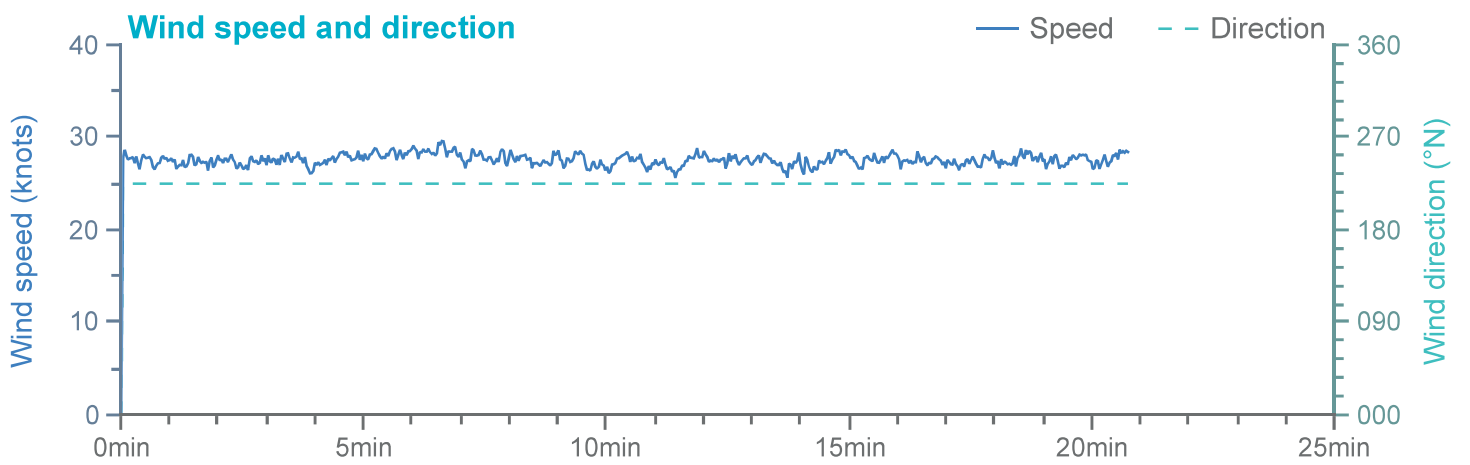
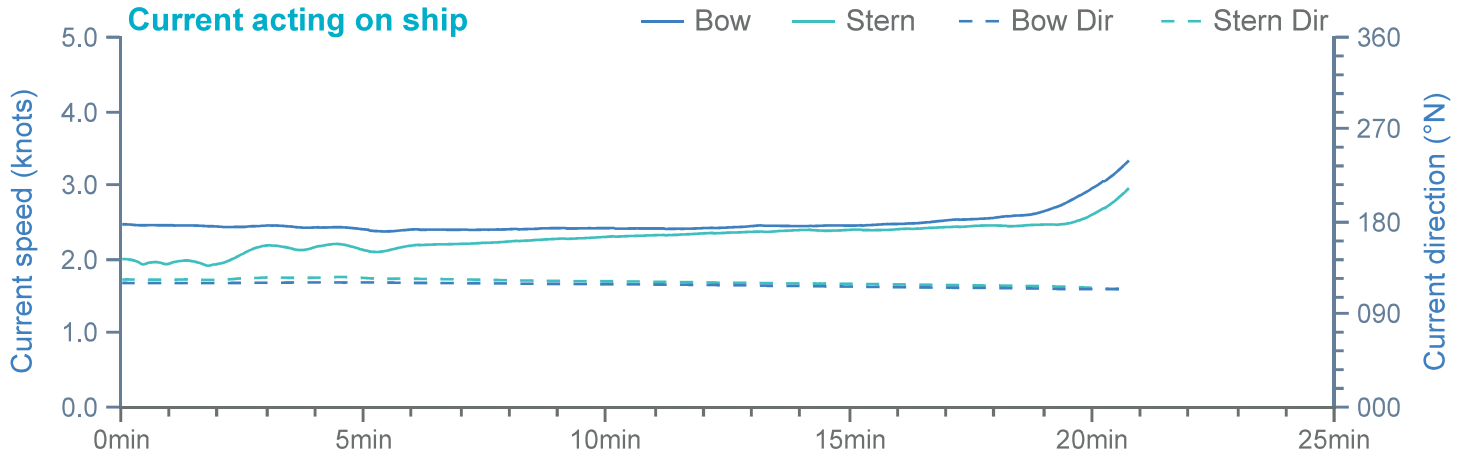
Manoeuvre track plot



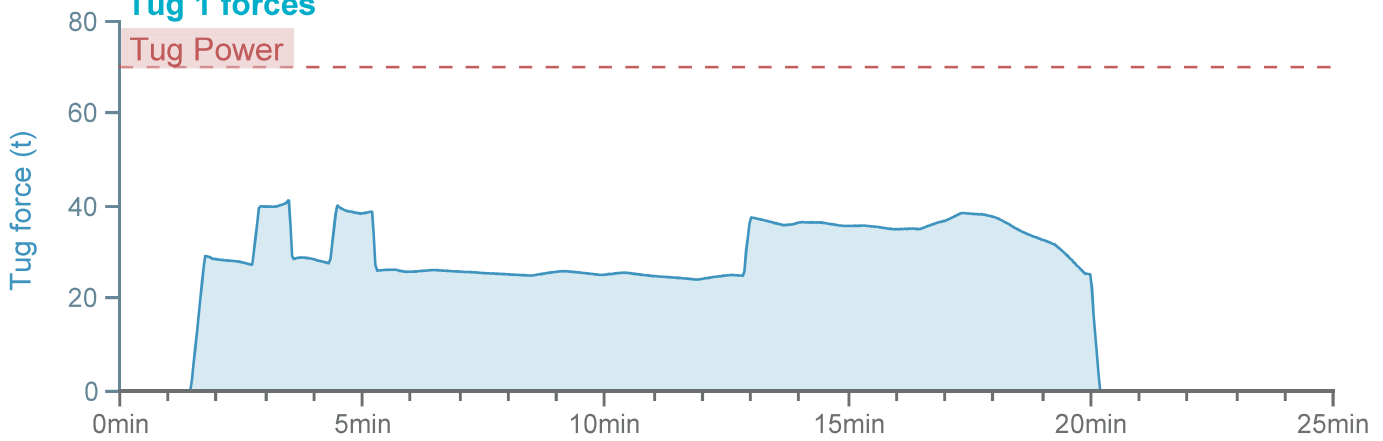
Summary

Environment

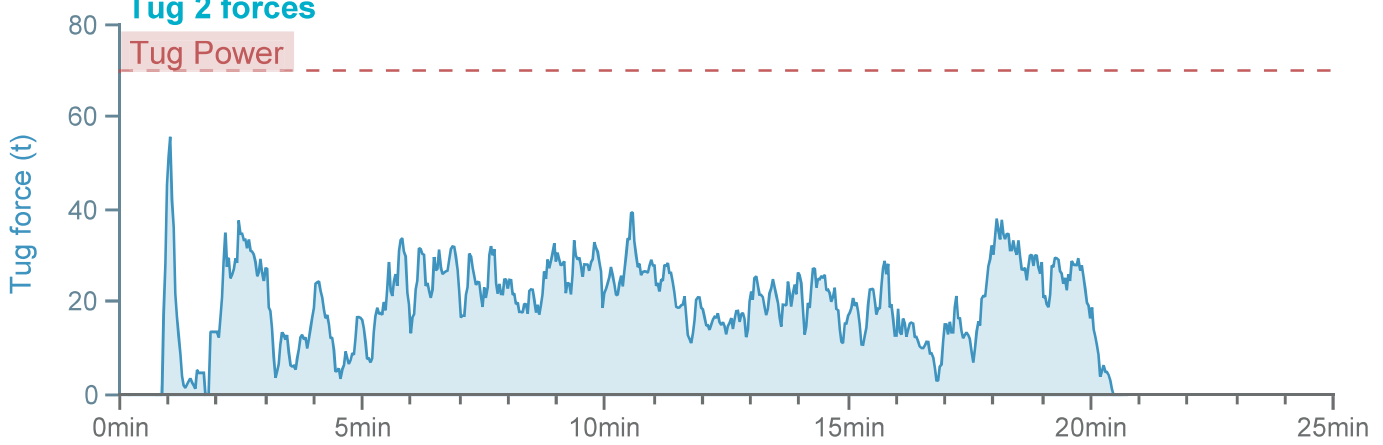
237m RoRo unnamed



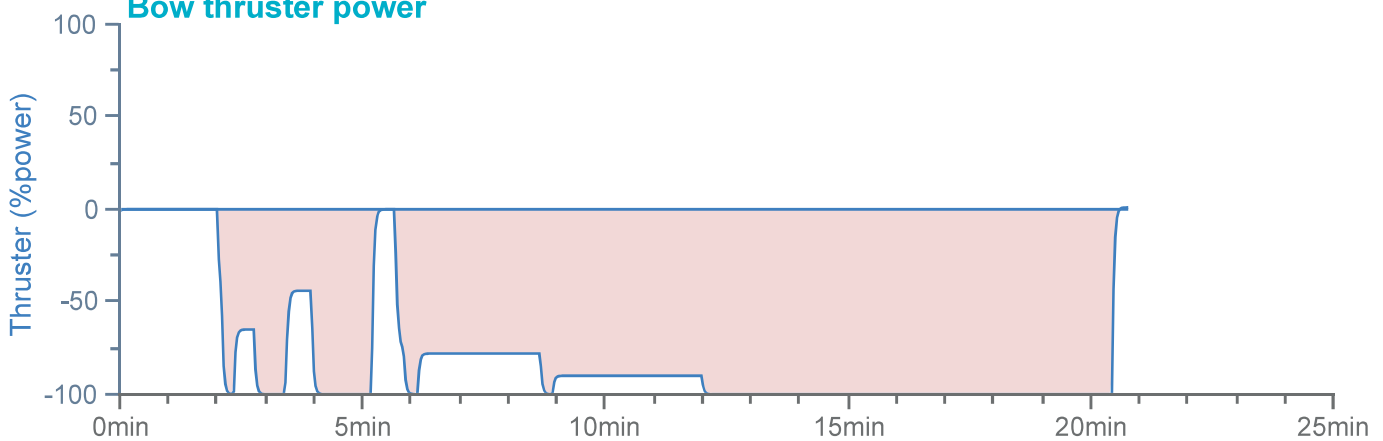
Tug 1 forces

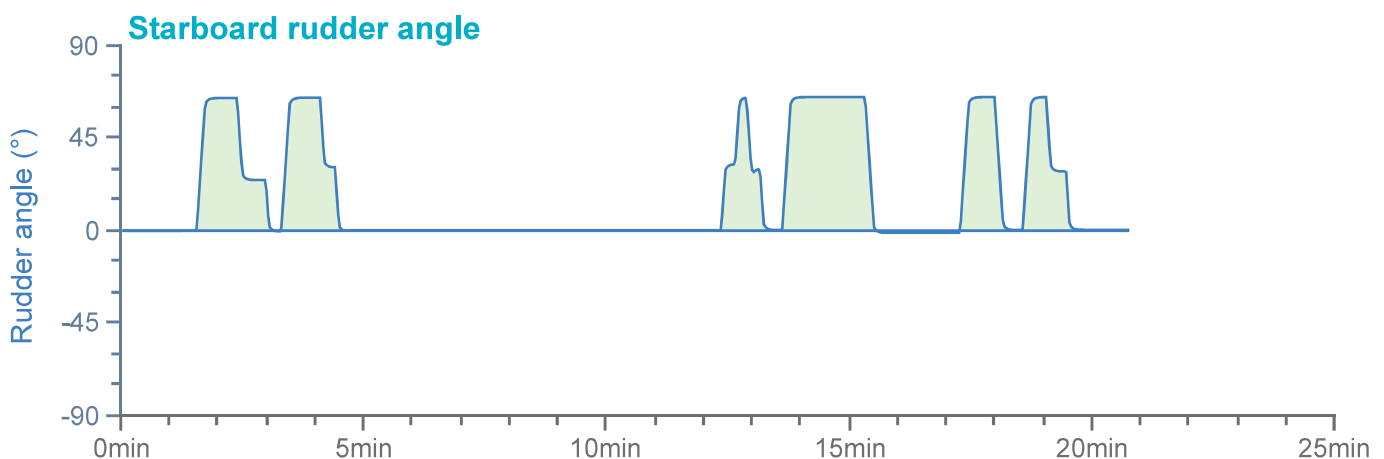
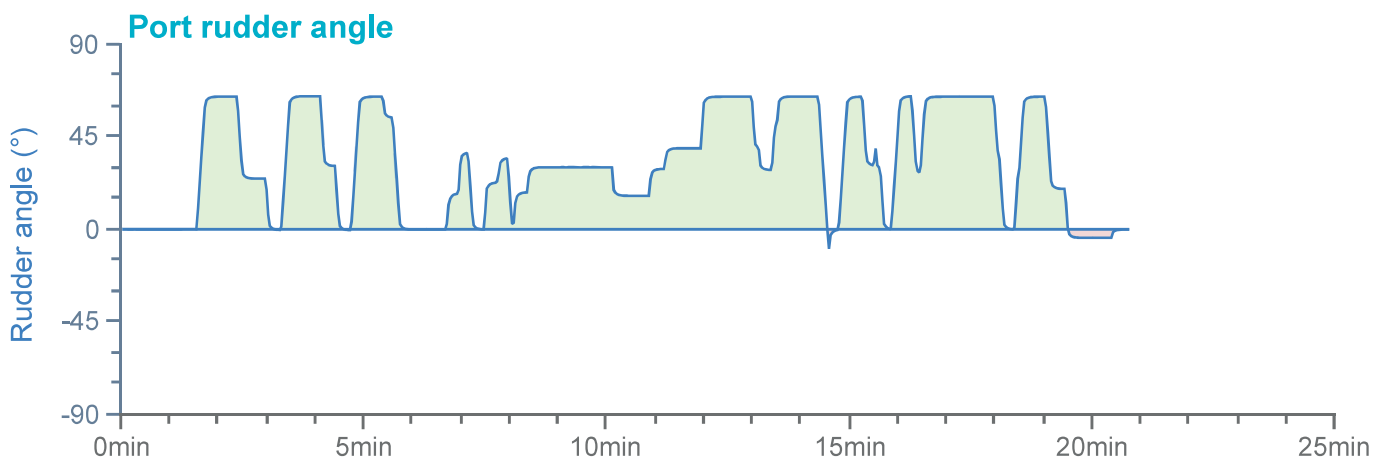
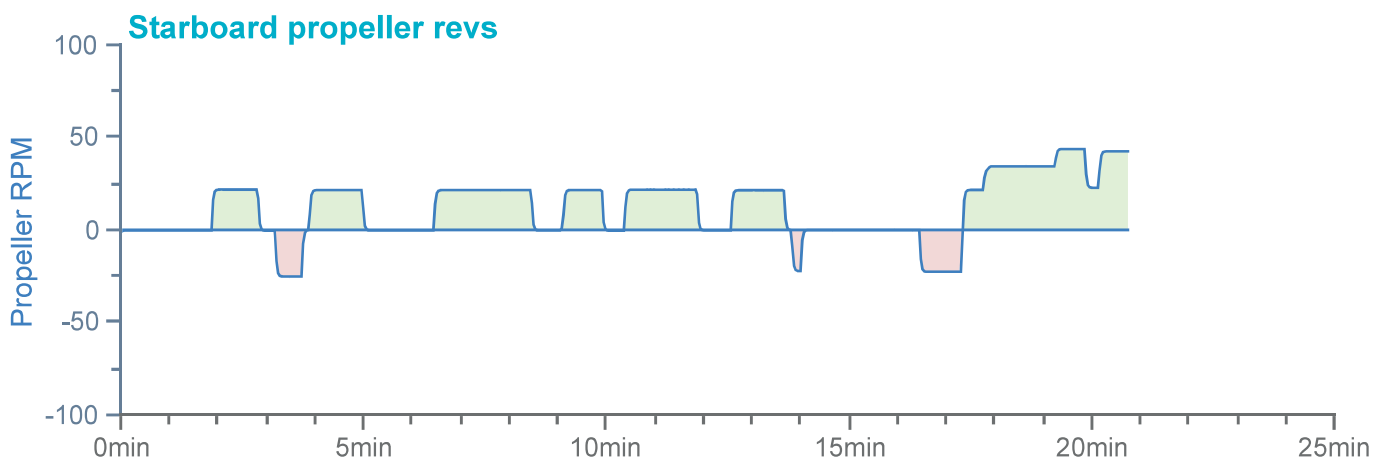
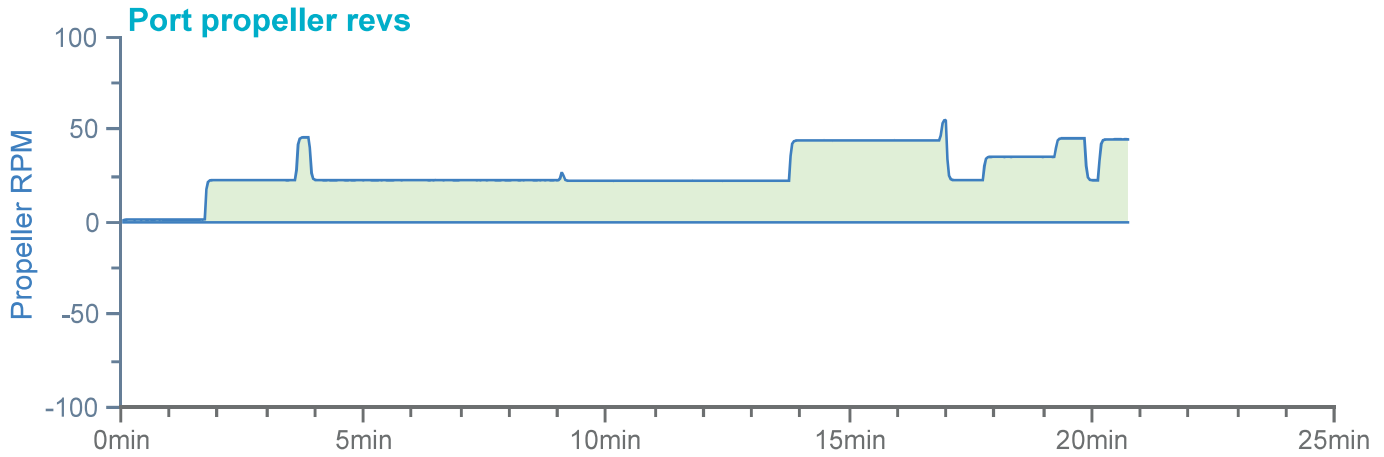


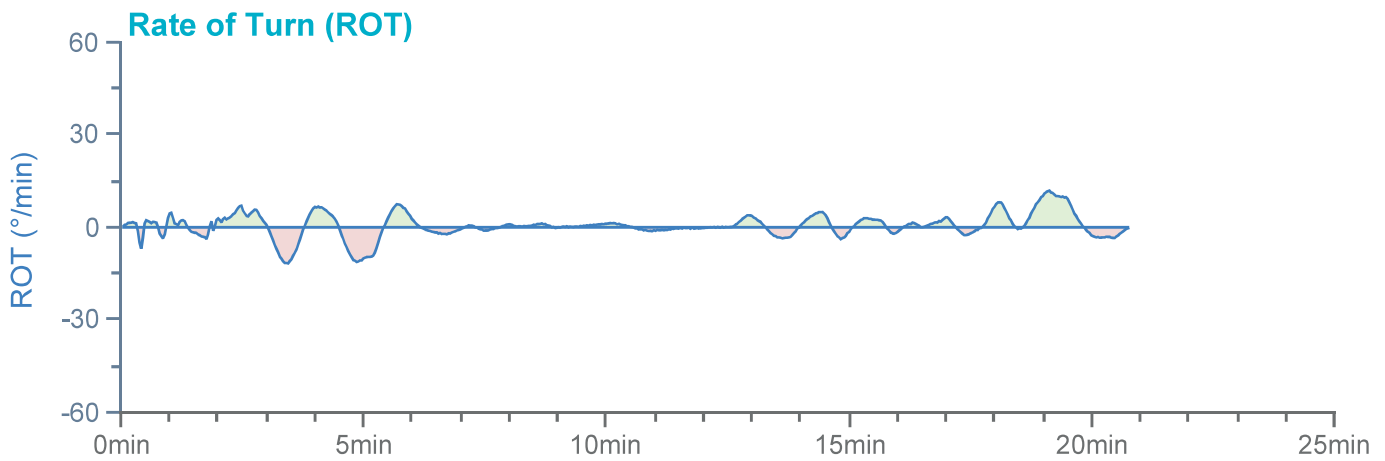
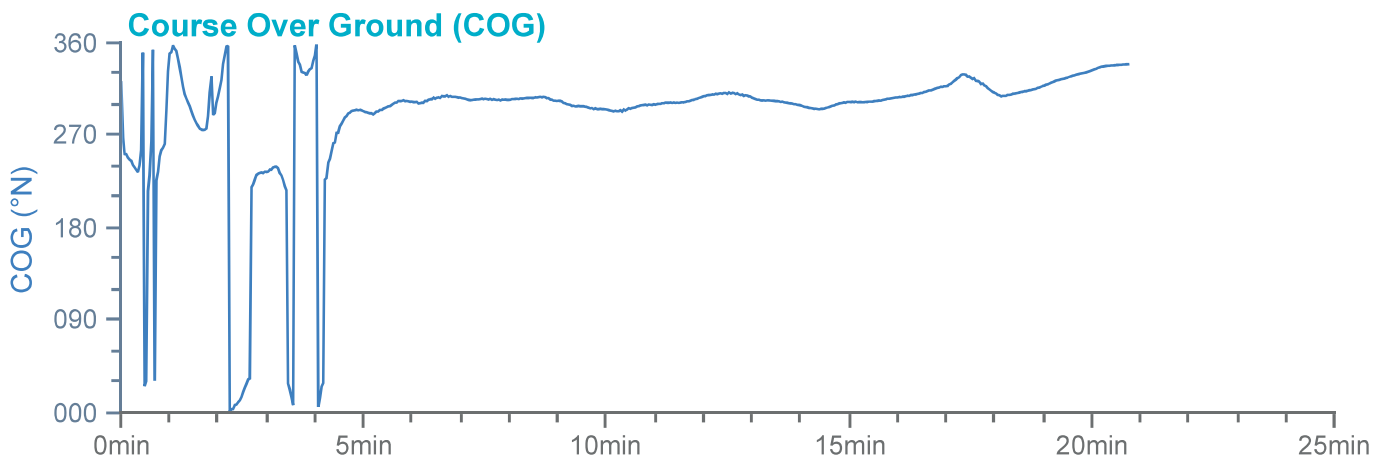
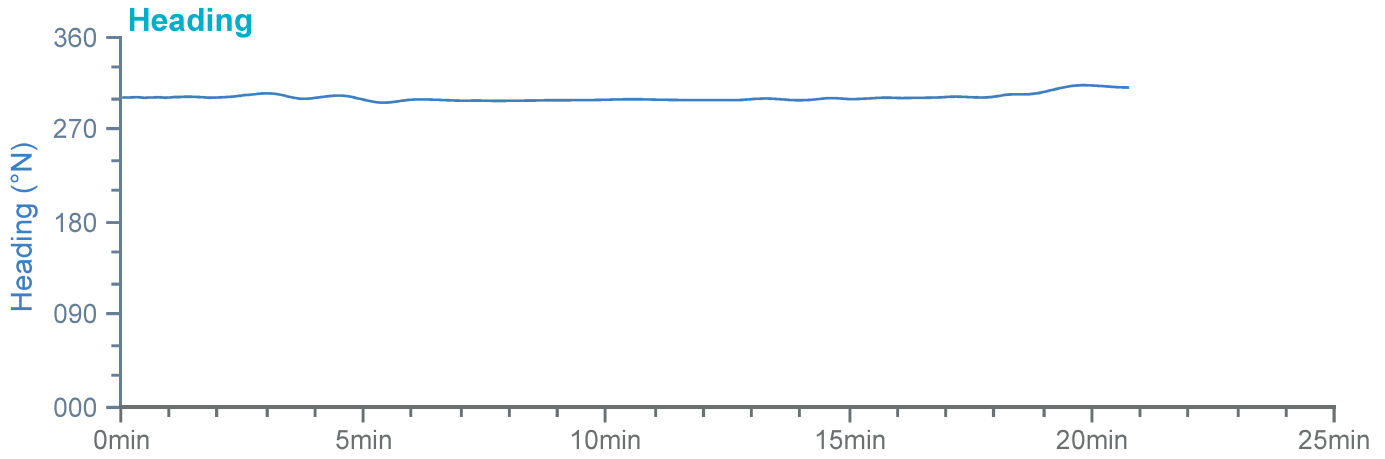
Tug 2 forces

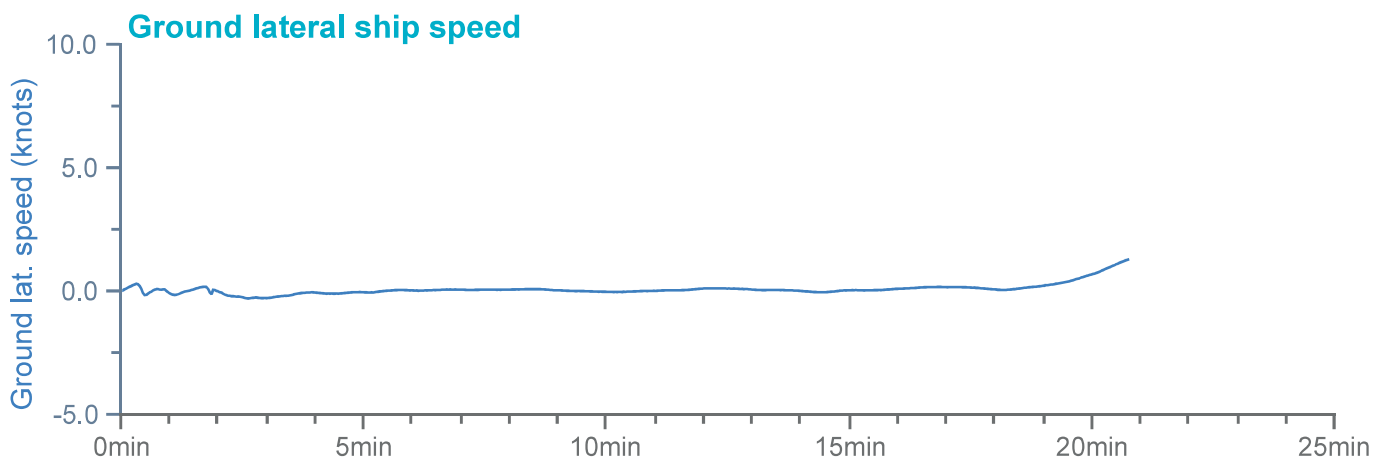
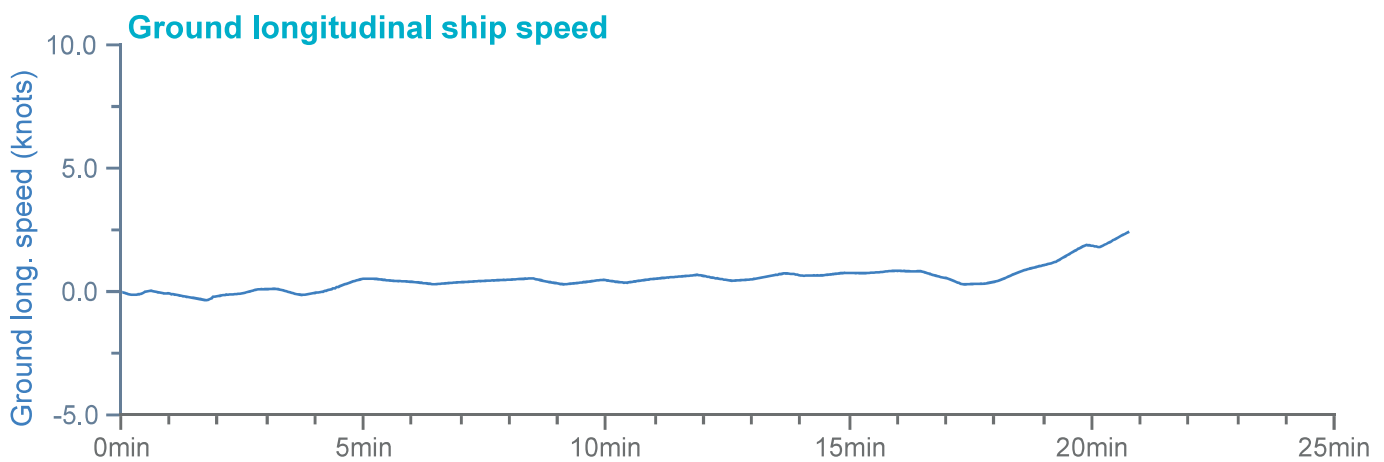
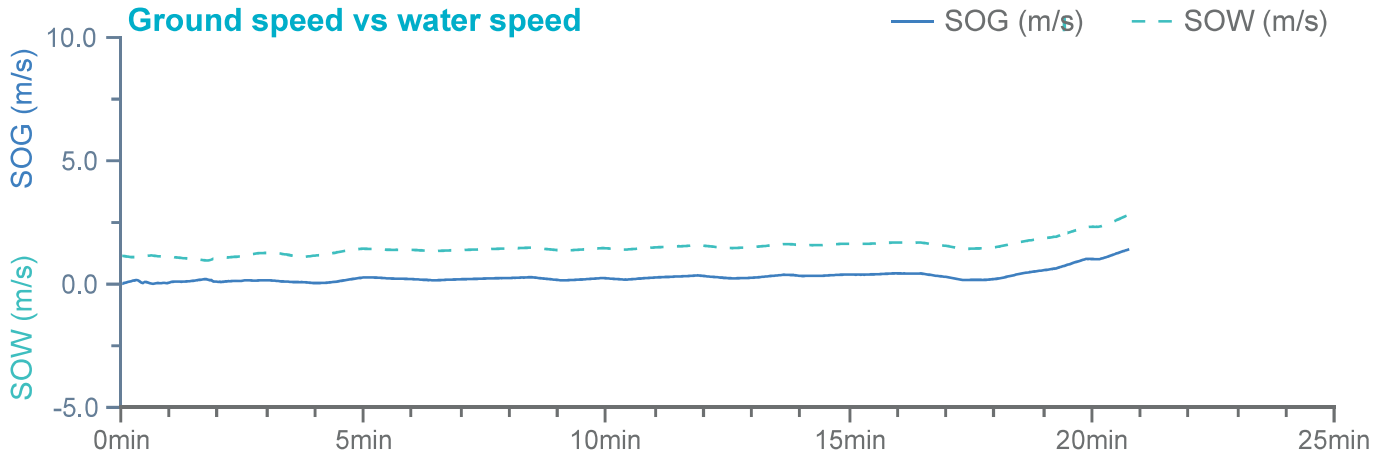


Bow thruster power

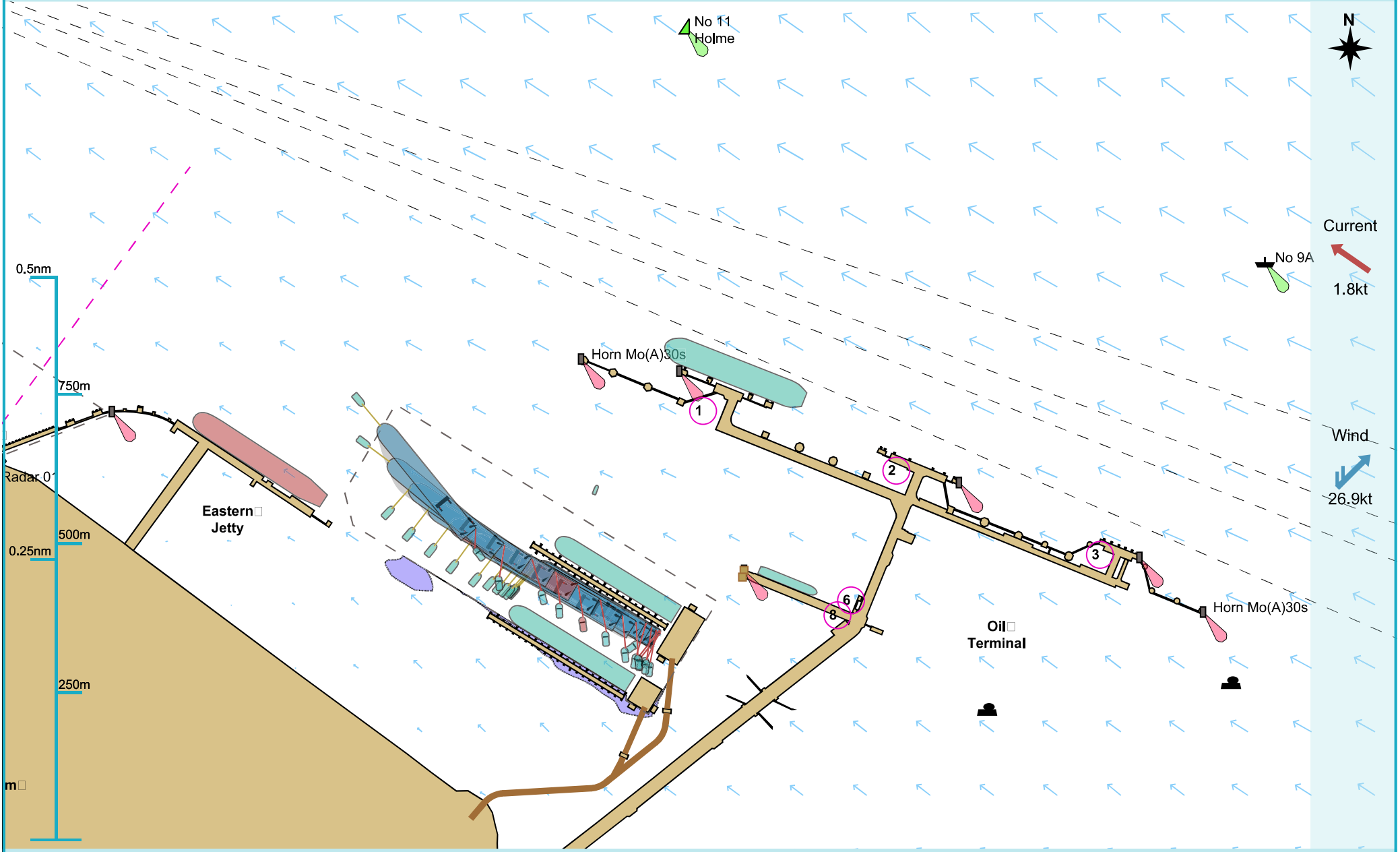






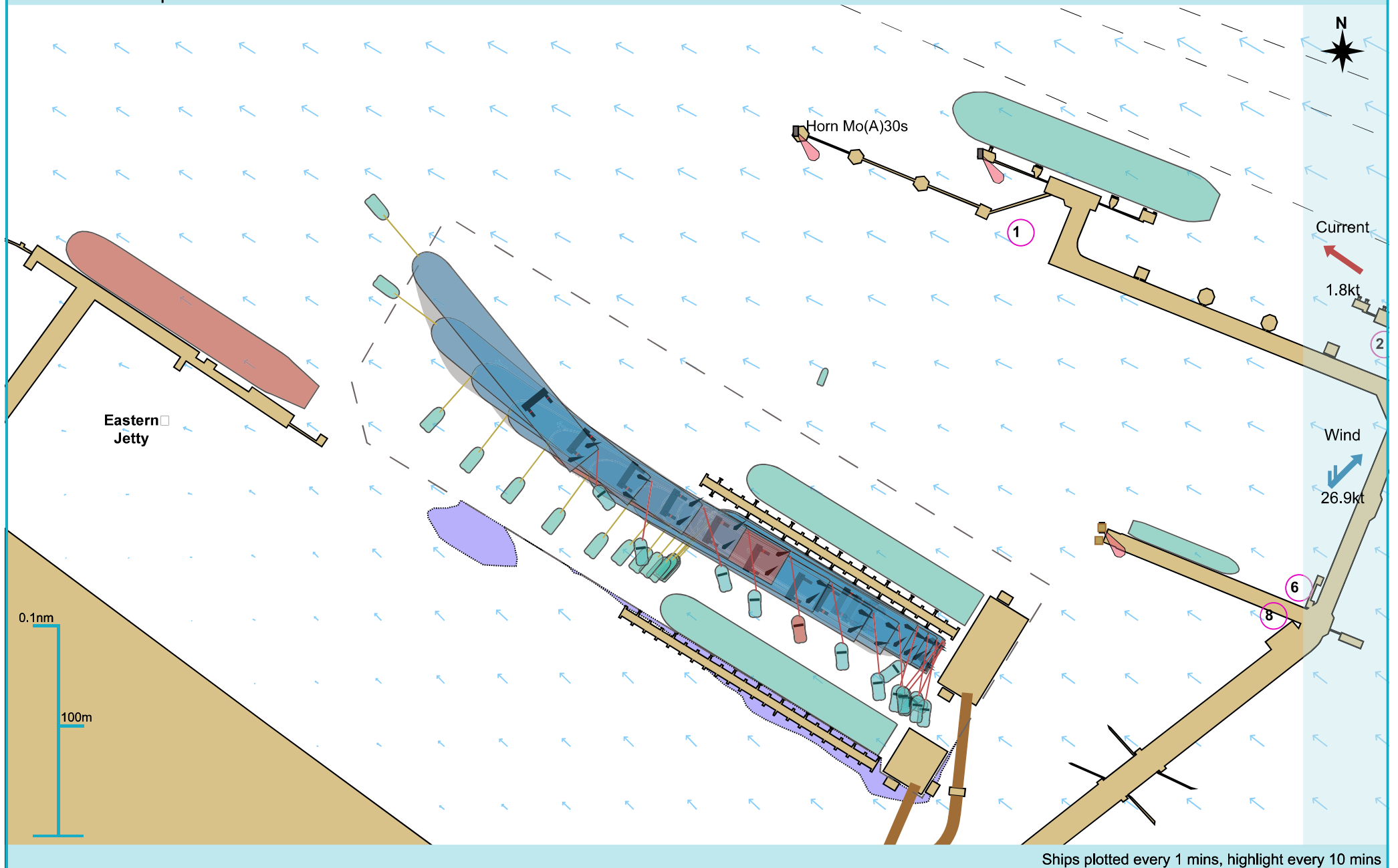


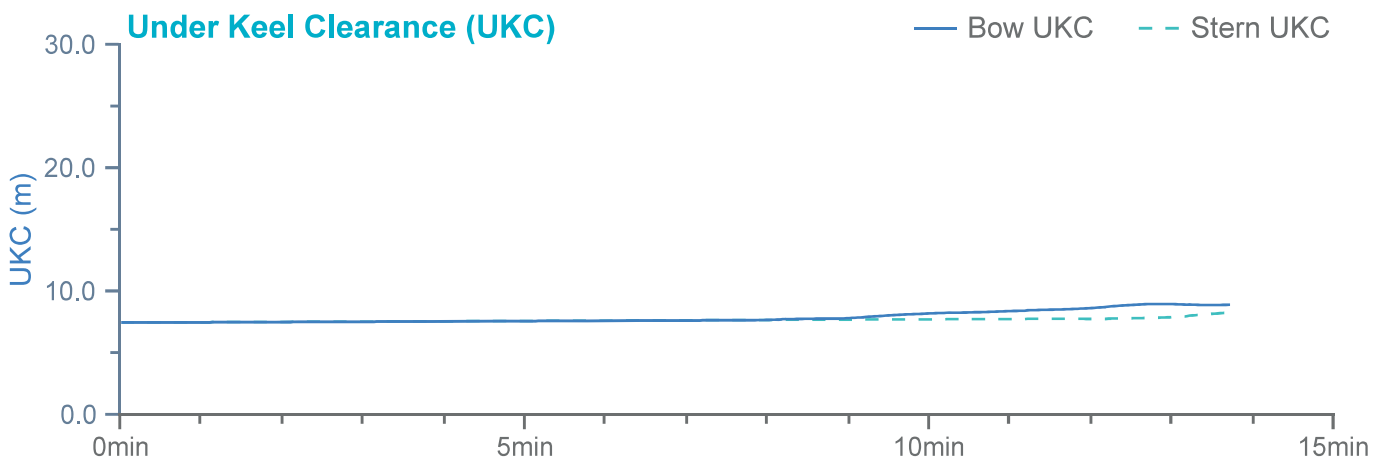
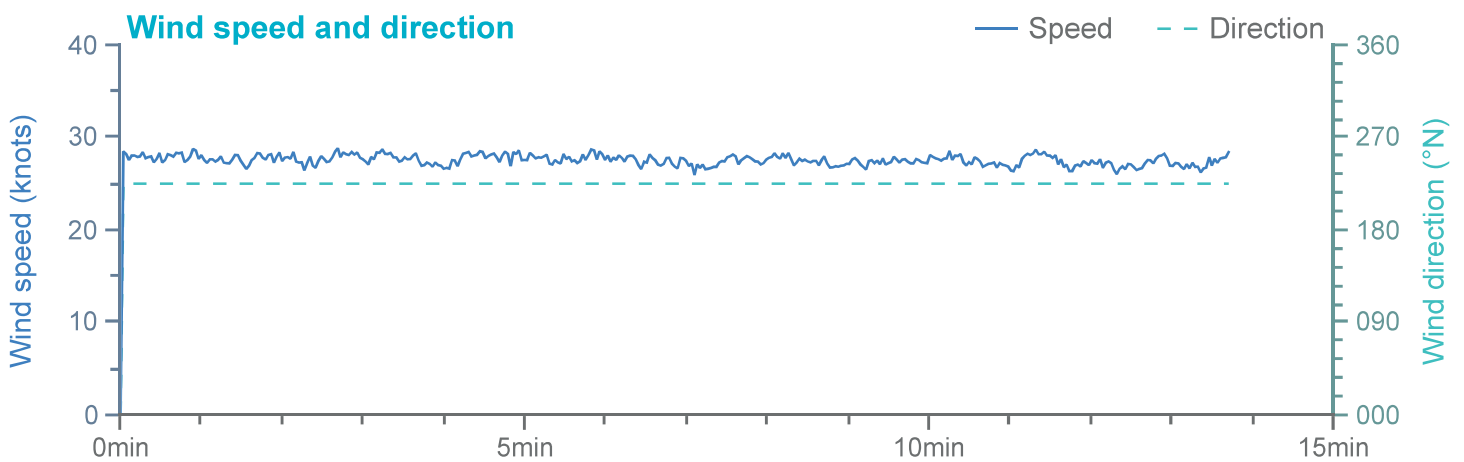
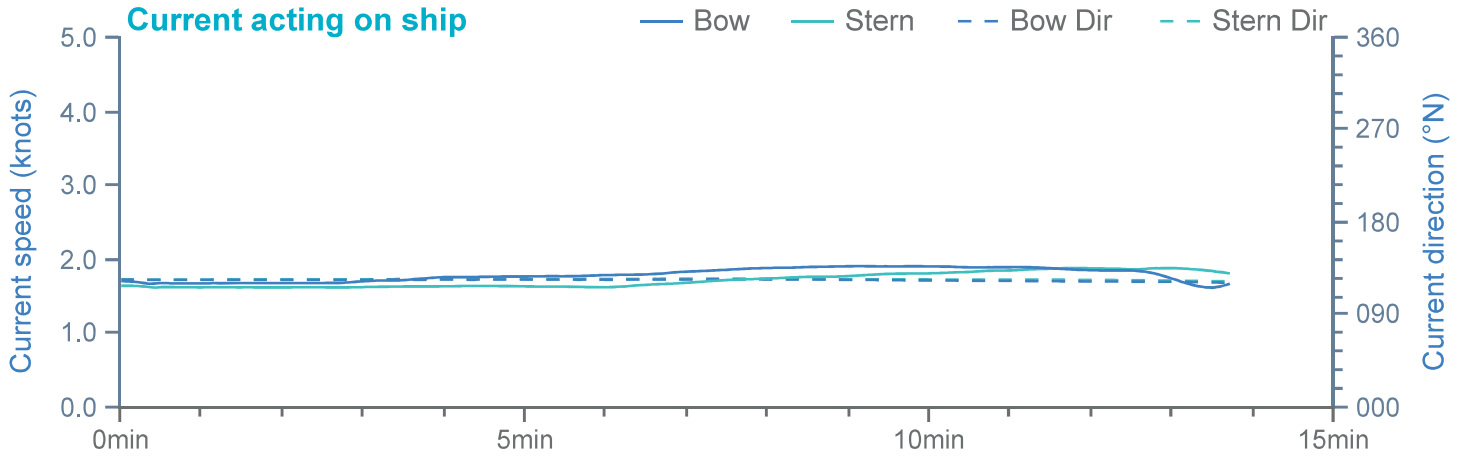
Manoeuvre track plot



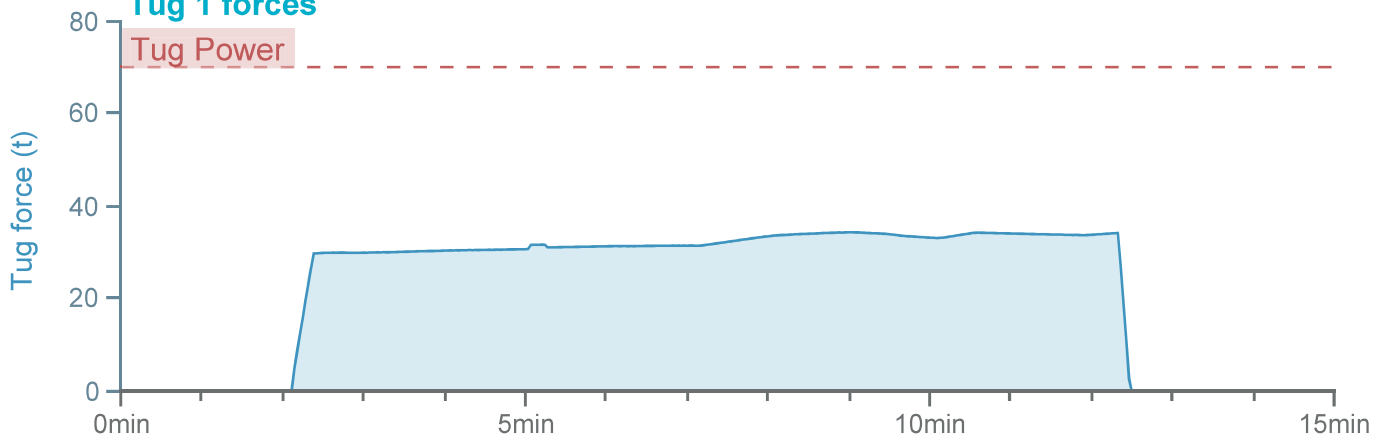
Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

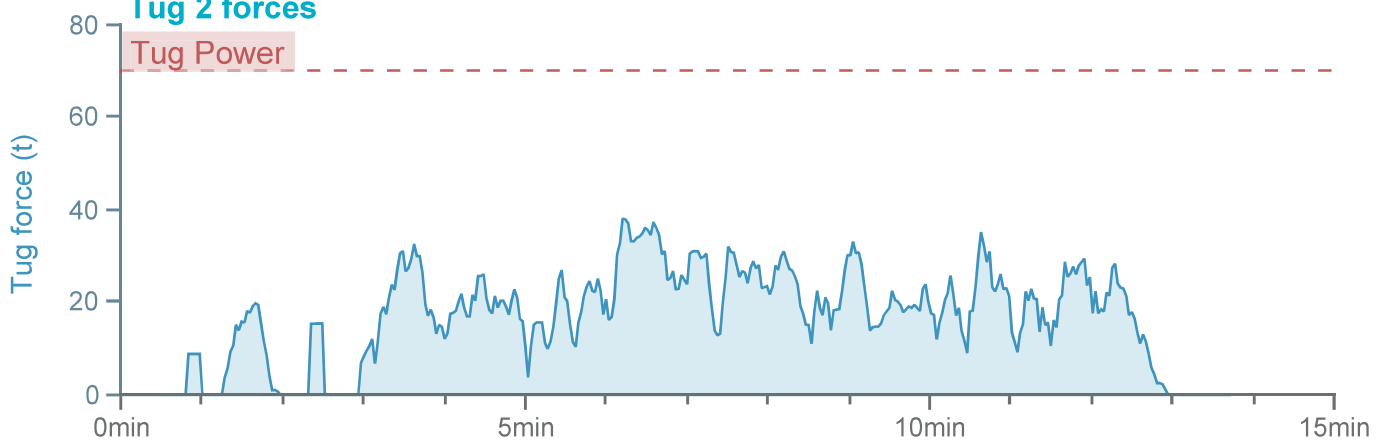




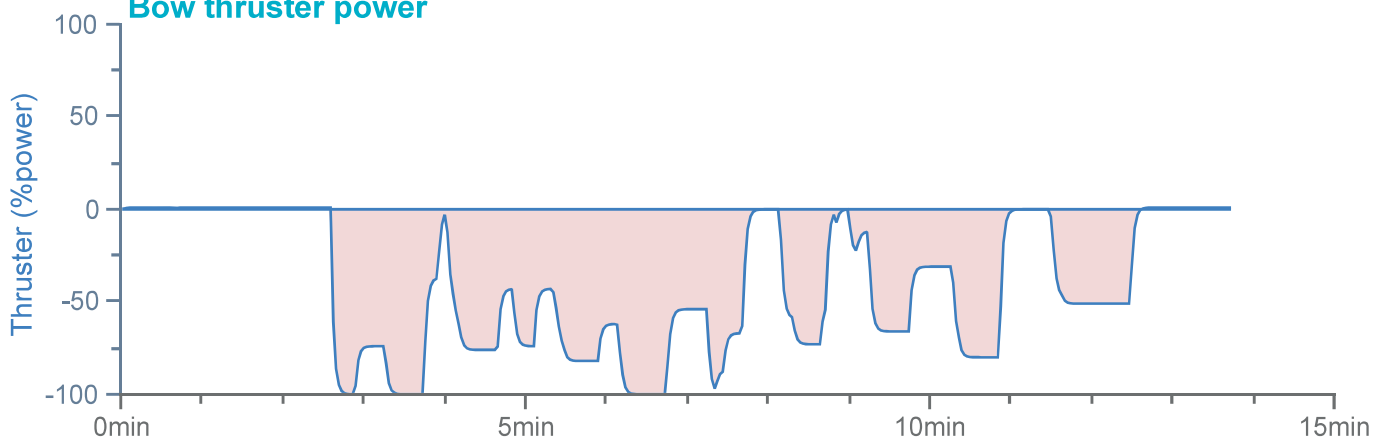
Tug 1 forces

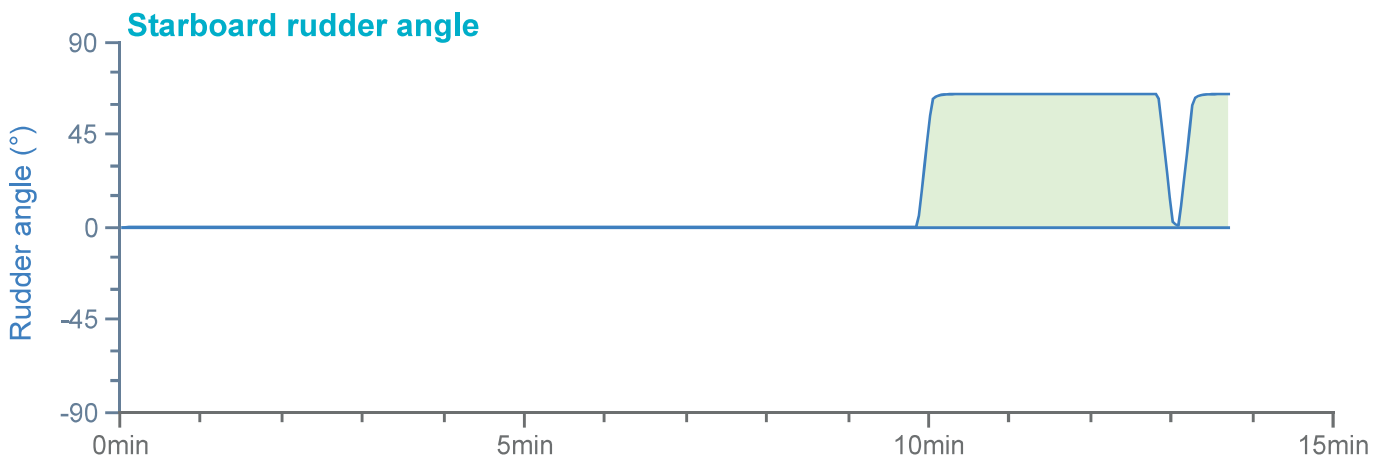
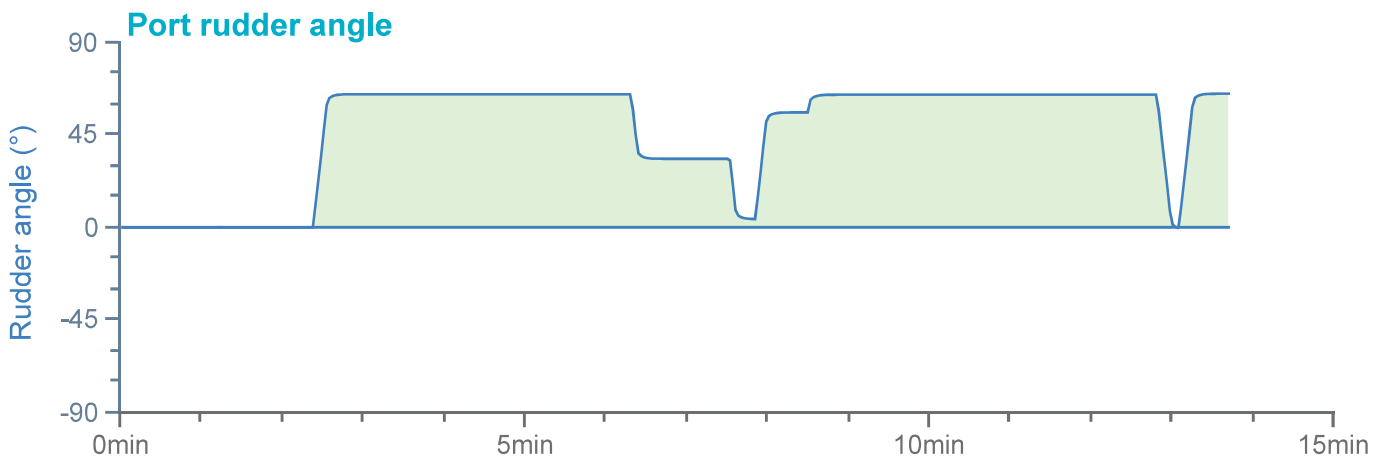
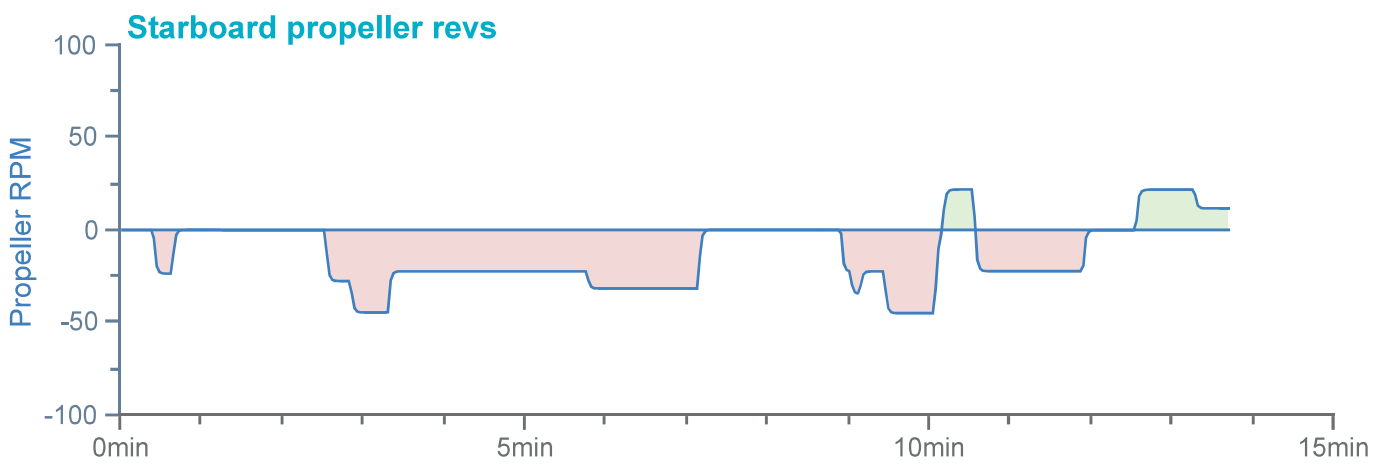
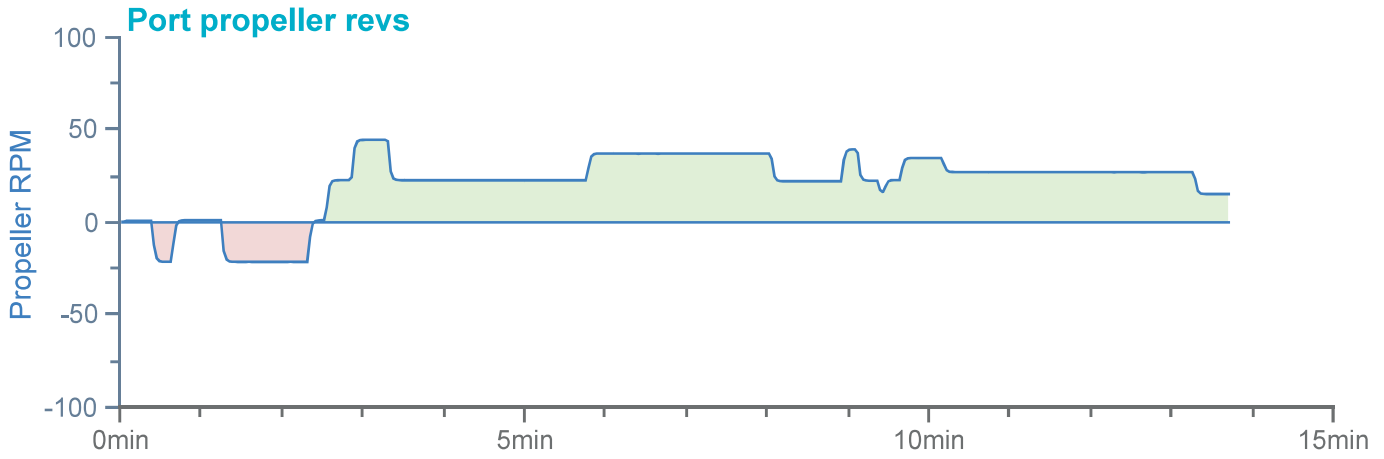


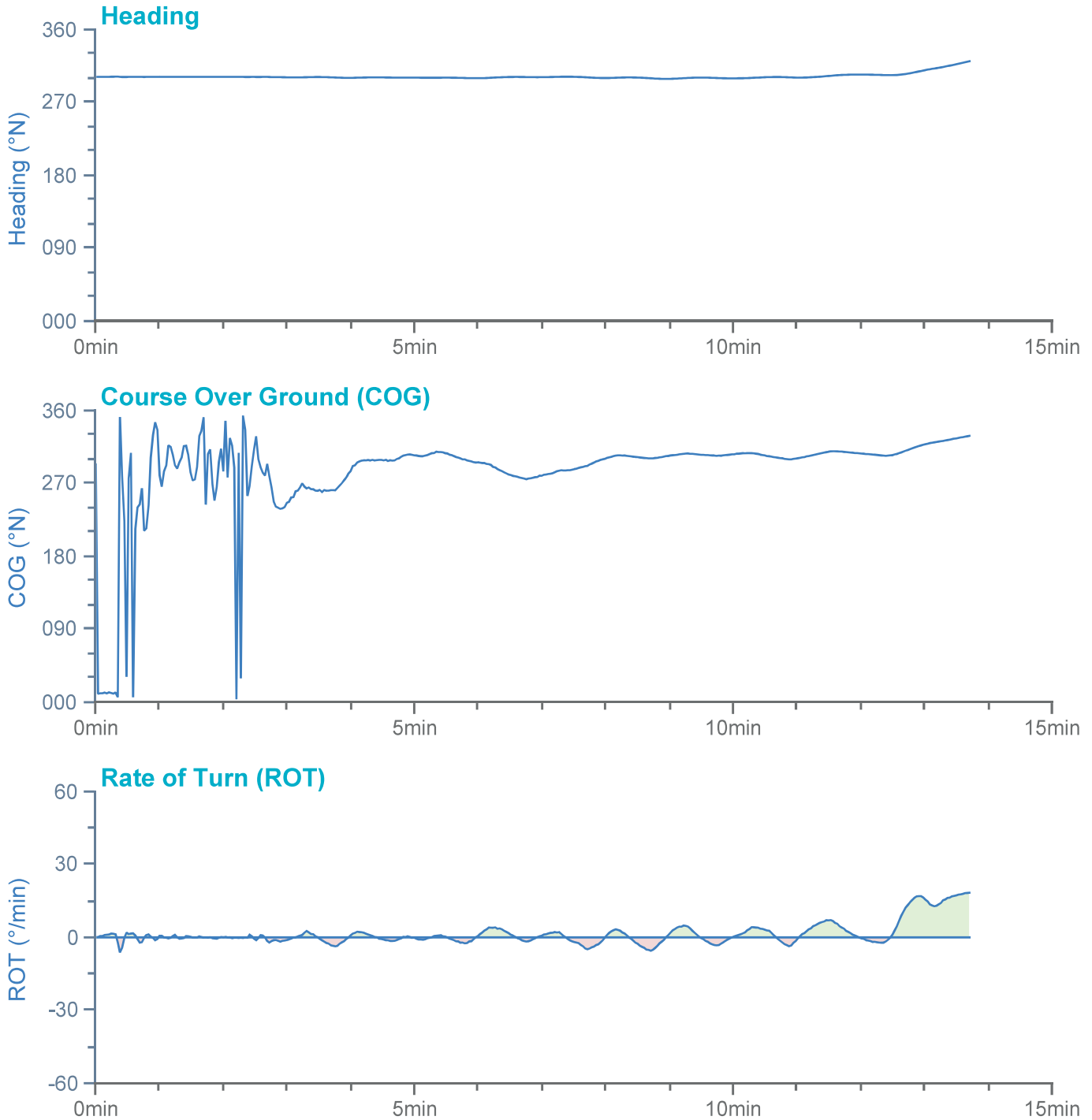
Tug 2 forces

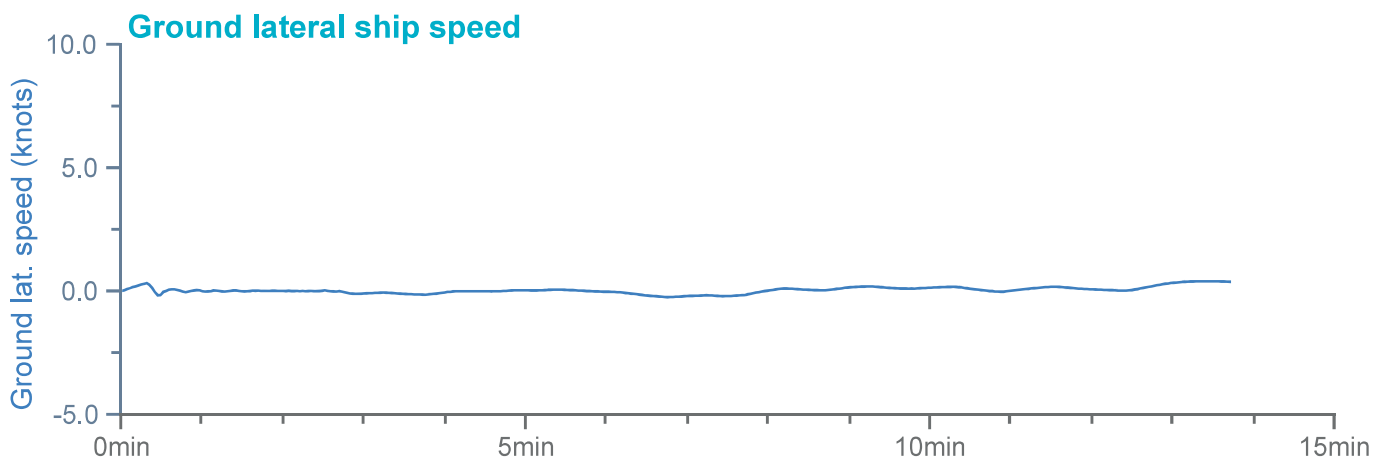
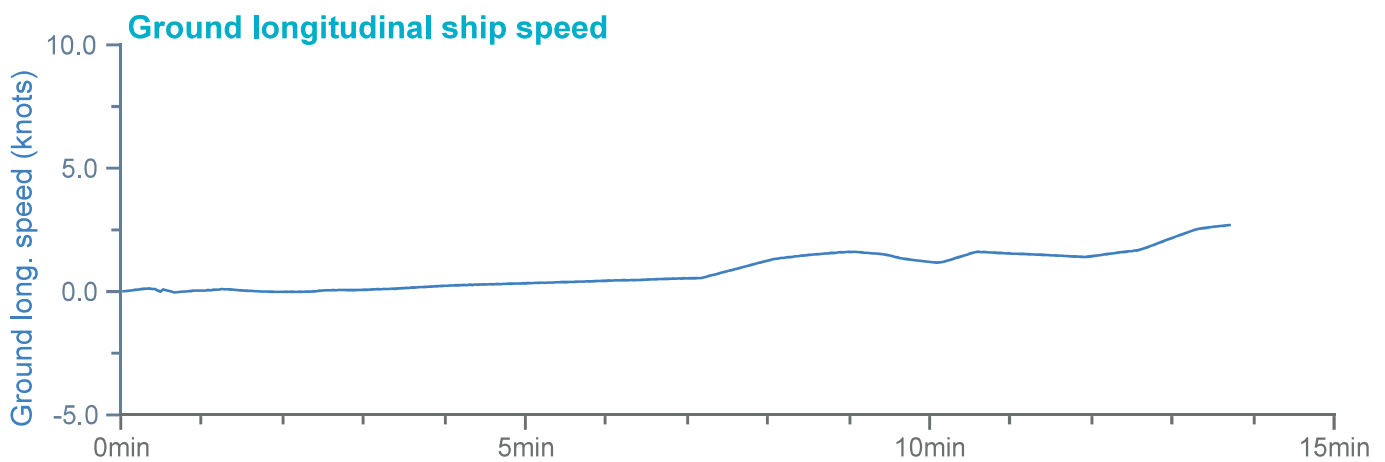
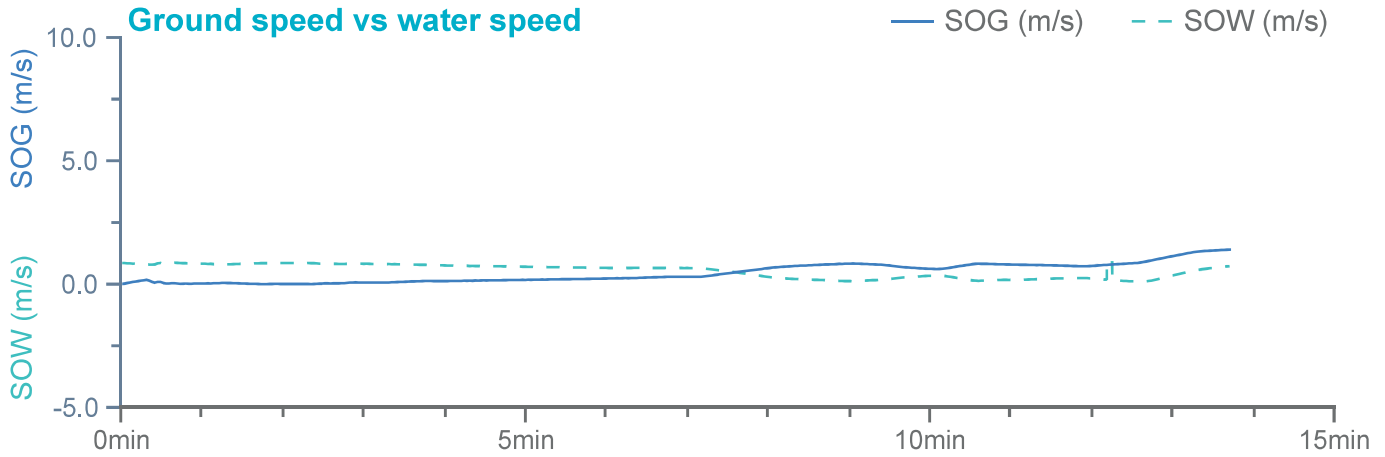


Bow thruster power

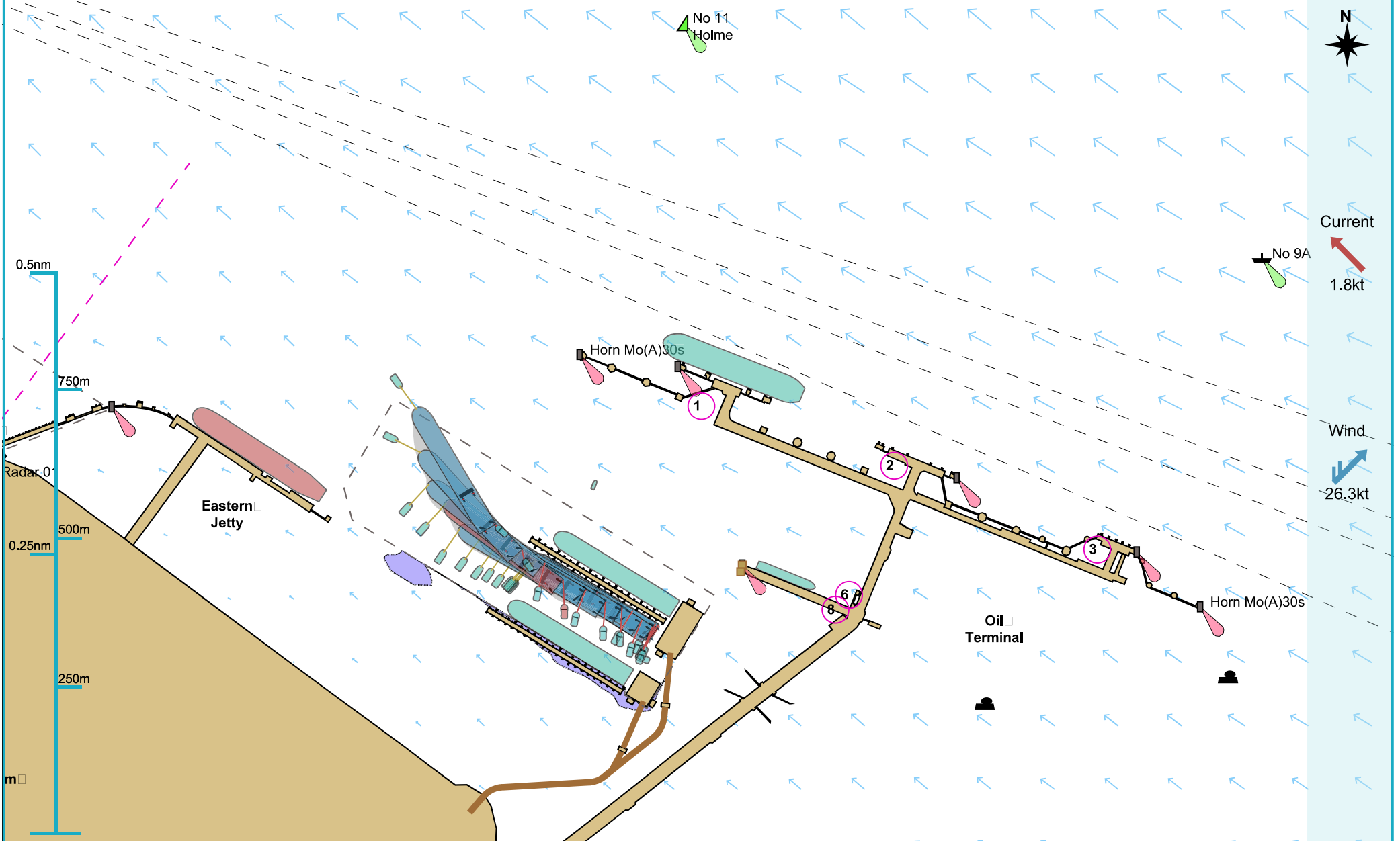






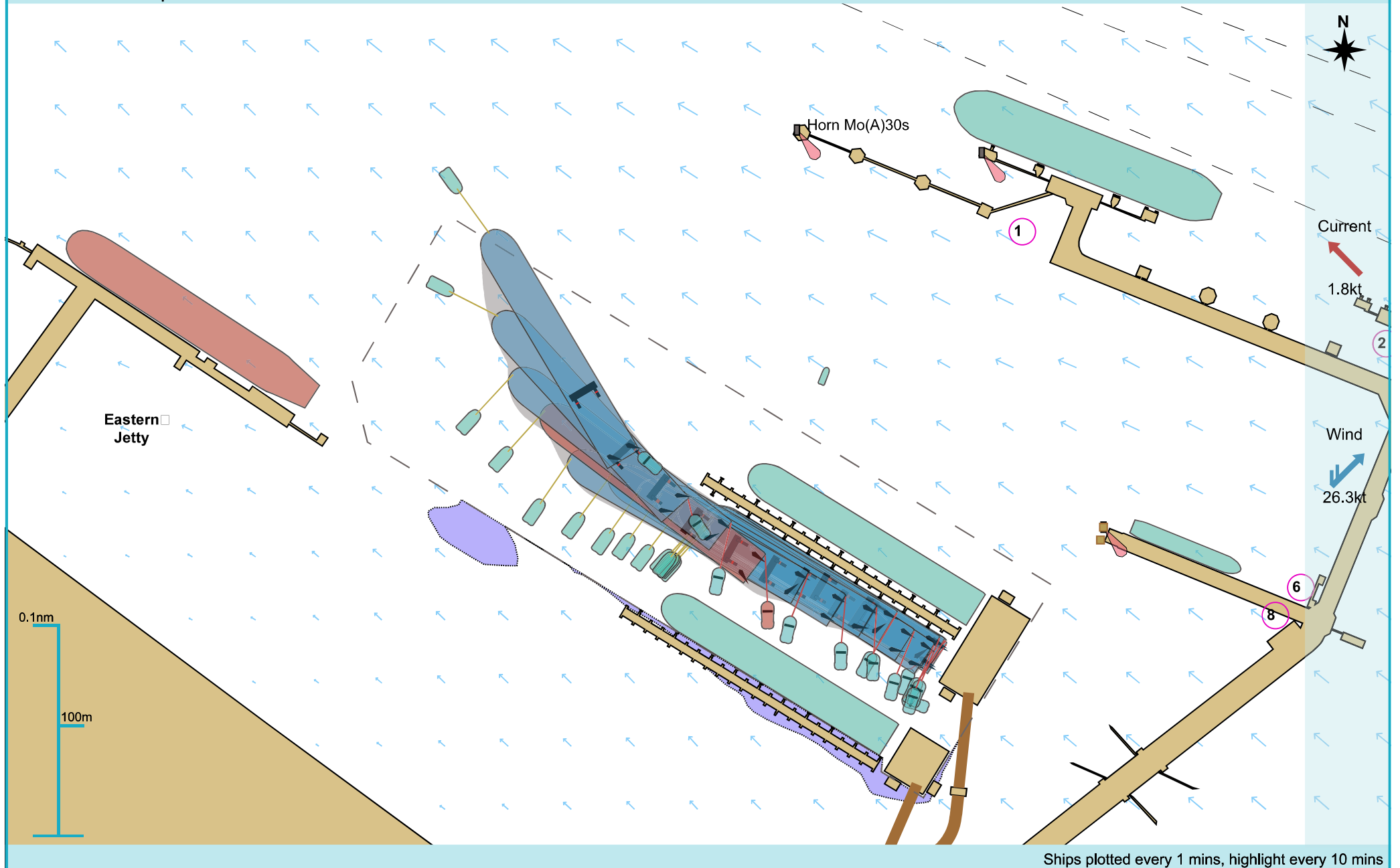


Manoeuvre track plot

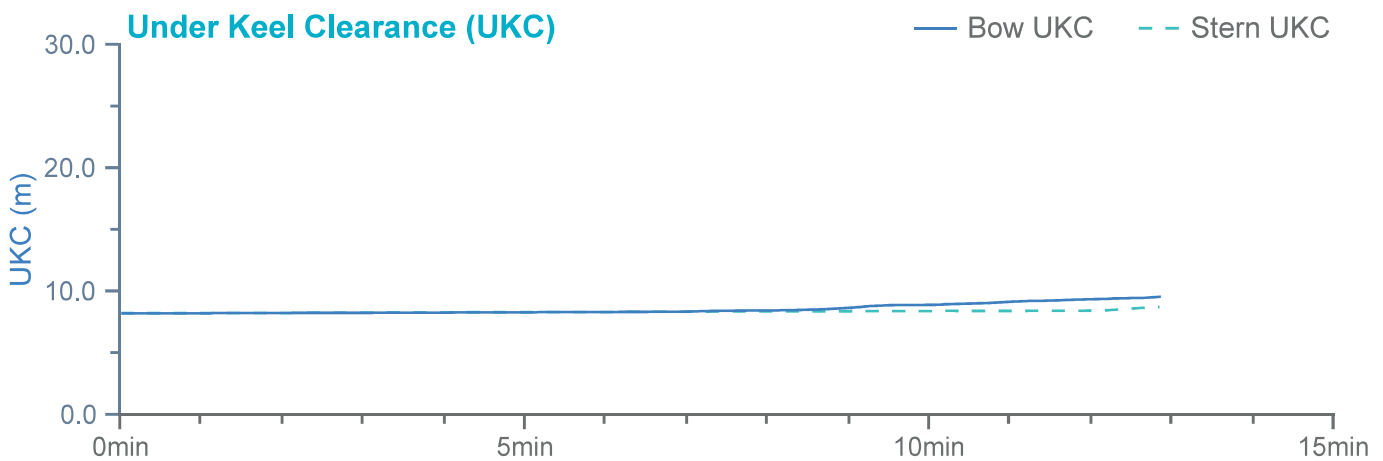
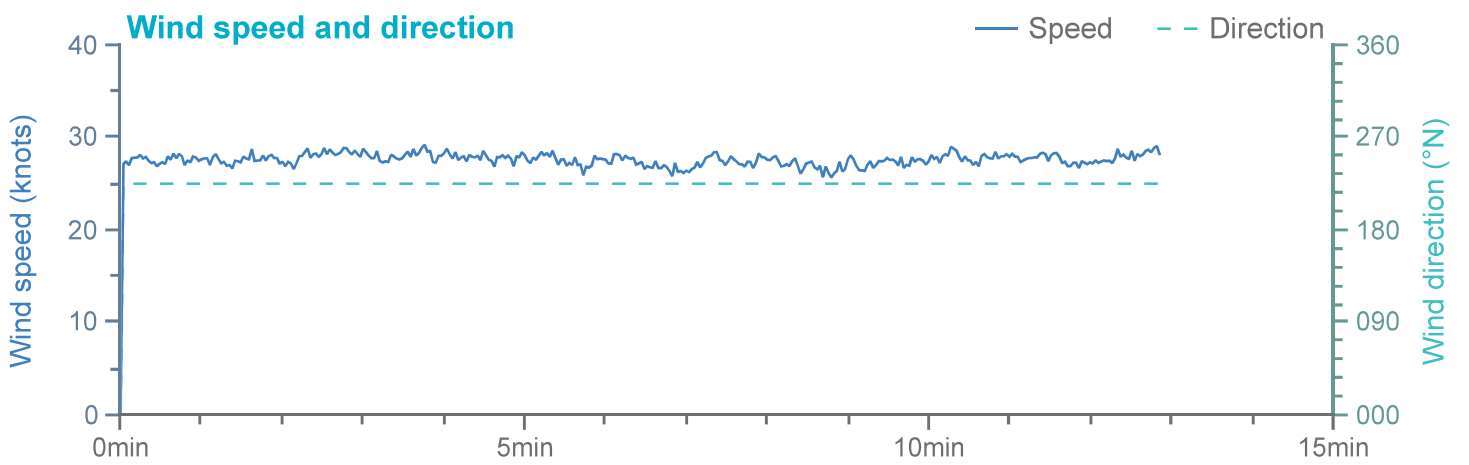
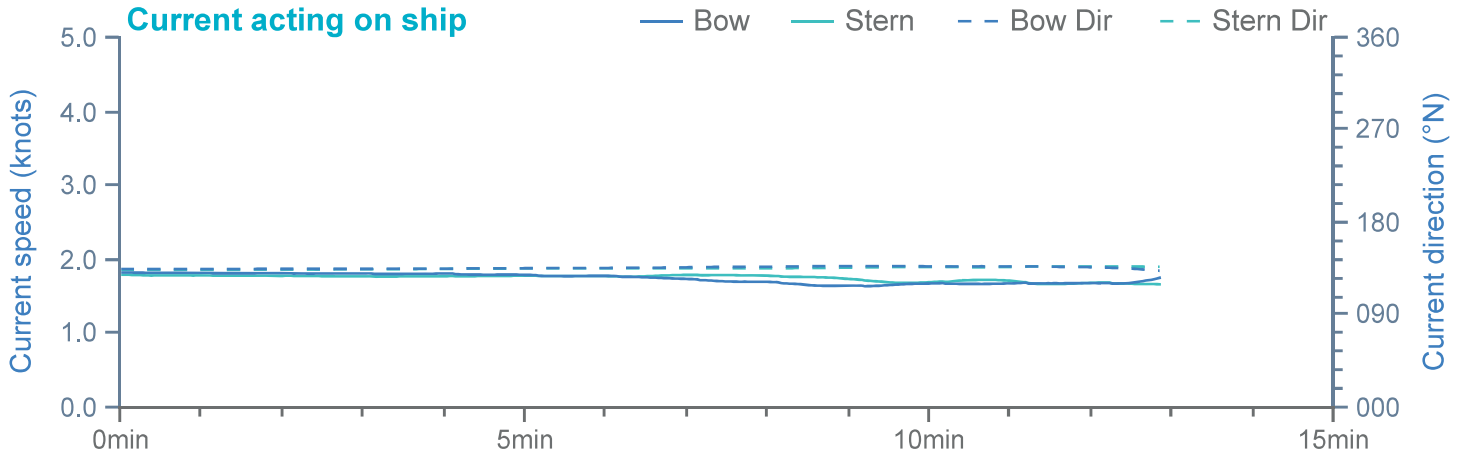


Ships plotted every 1 mins, highlight every 10 mins

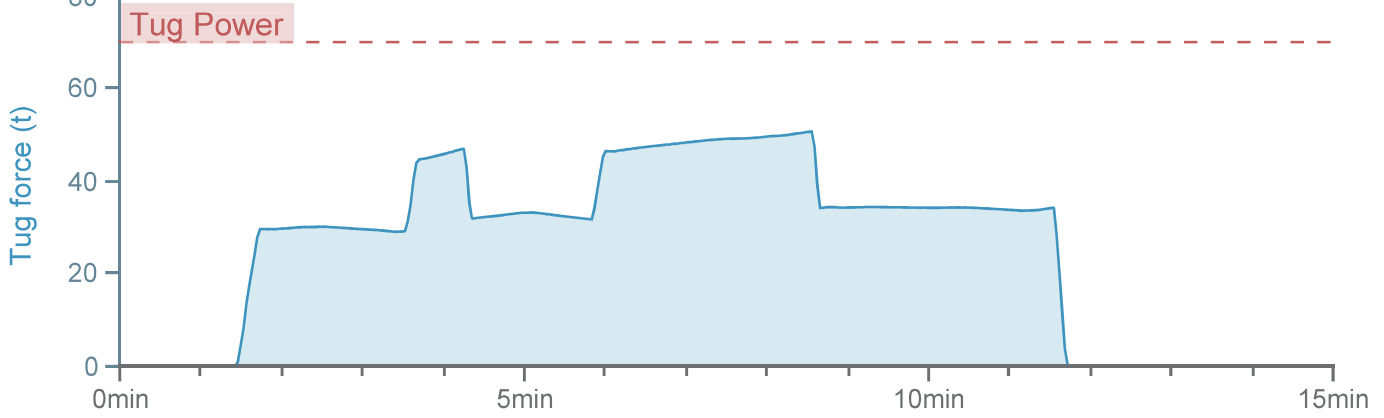
Manoeuvre track plot



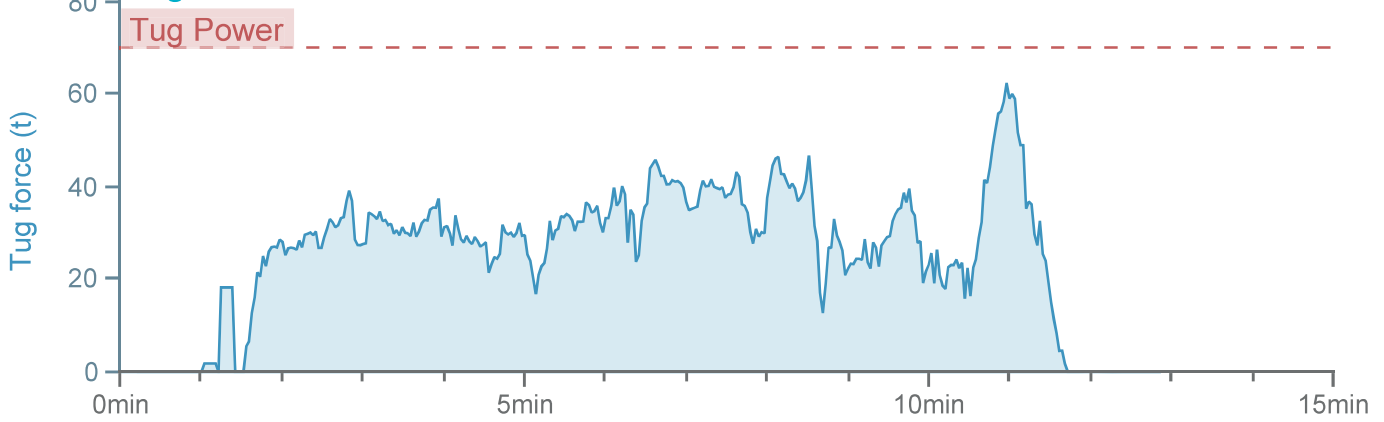
Ships plotted every 1 mins, highlight every 10 mins



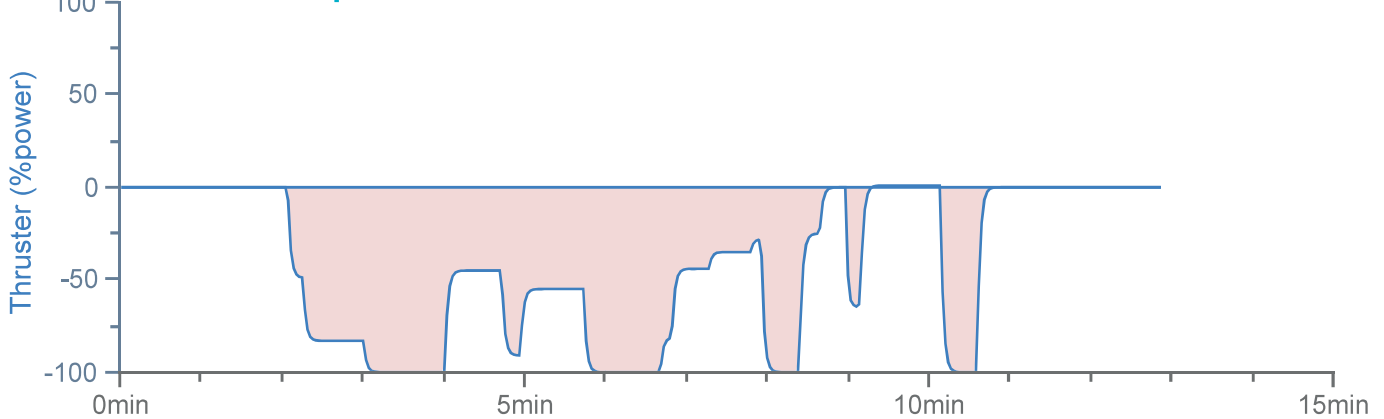
Tug 1 forces

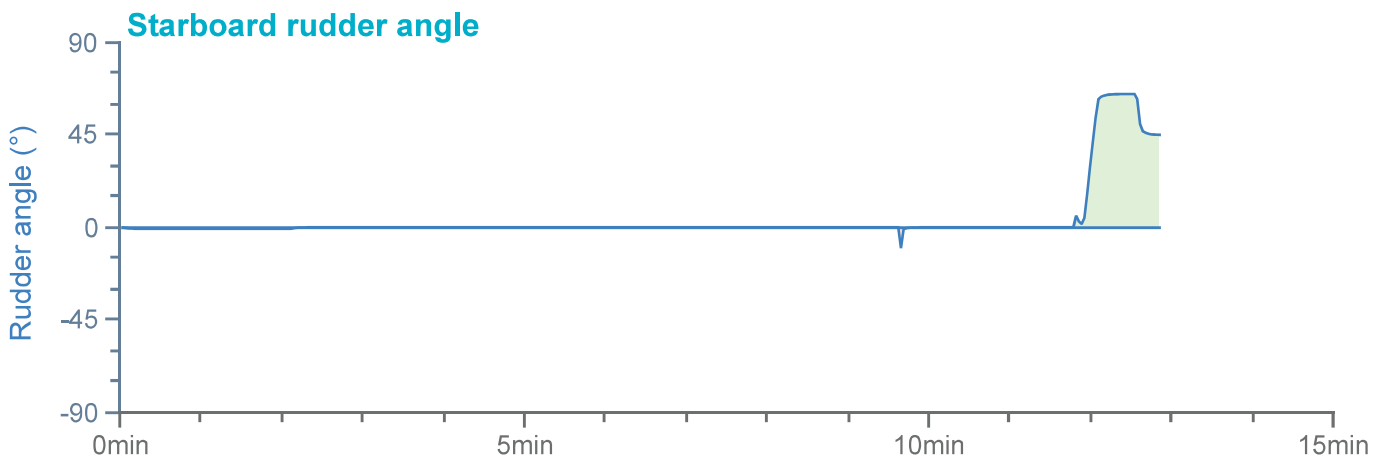
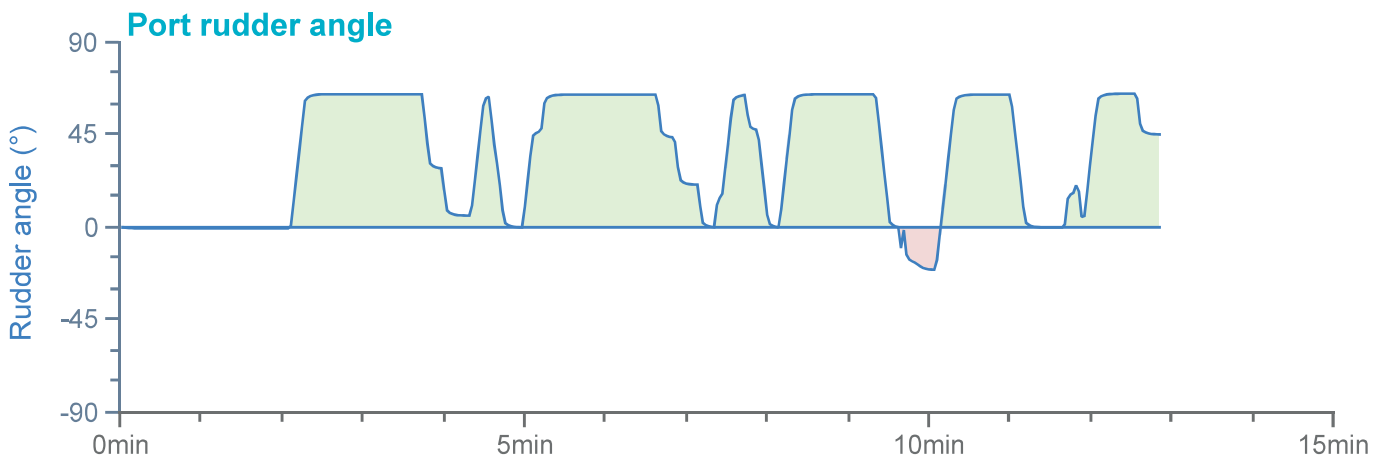
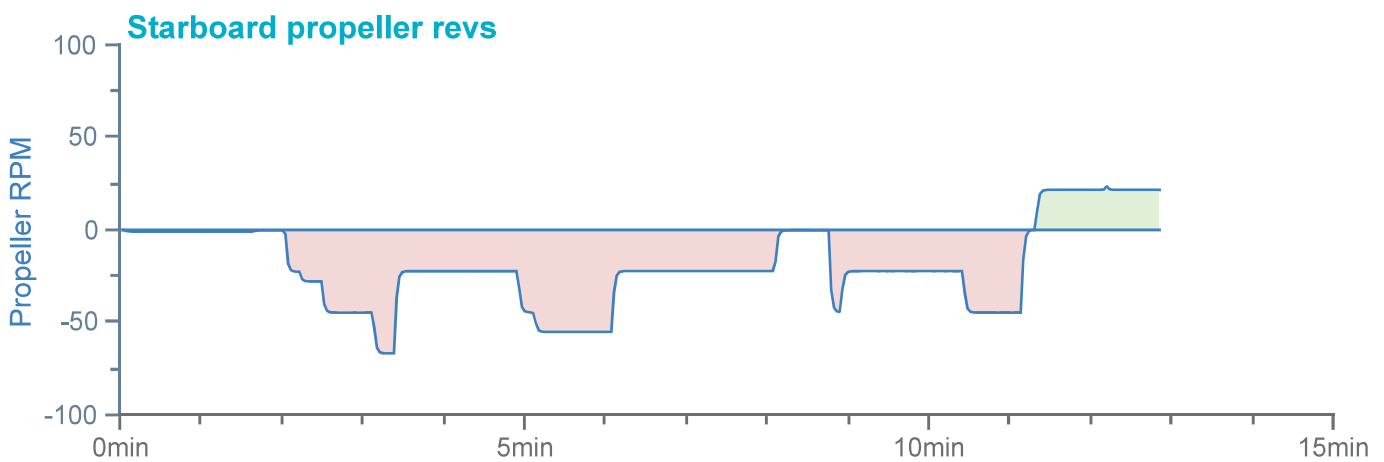
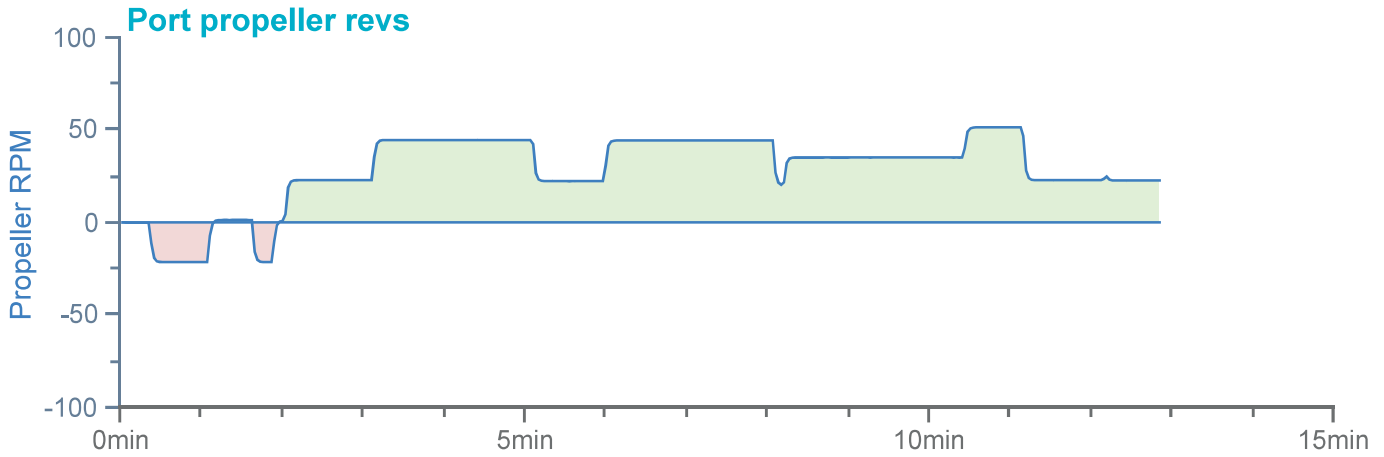


Tug 2 forces



Bow thruster power

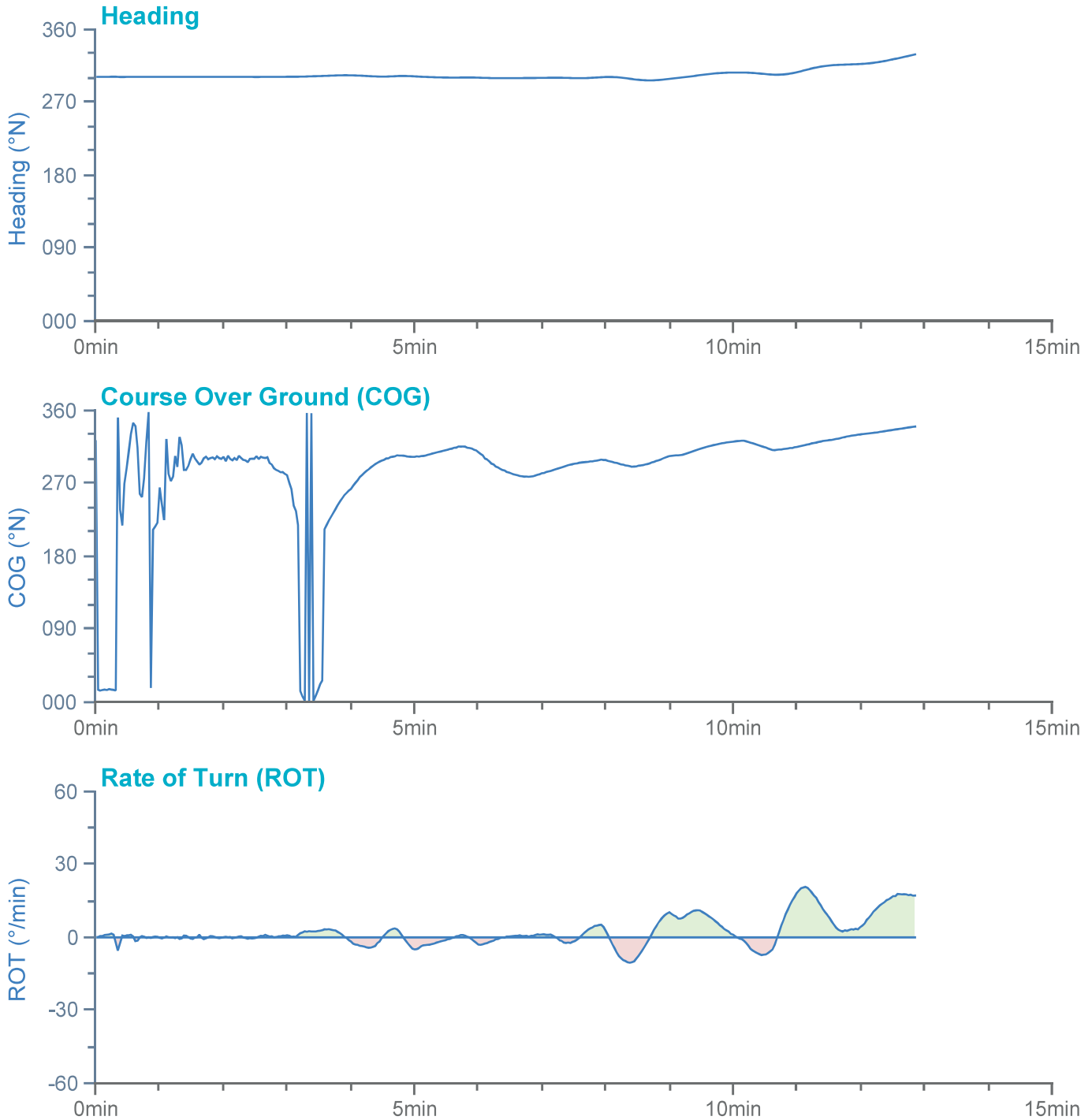


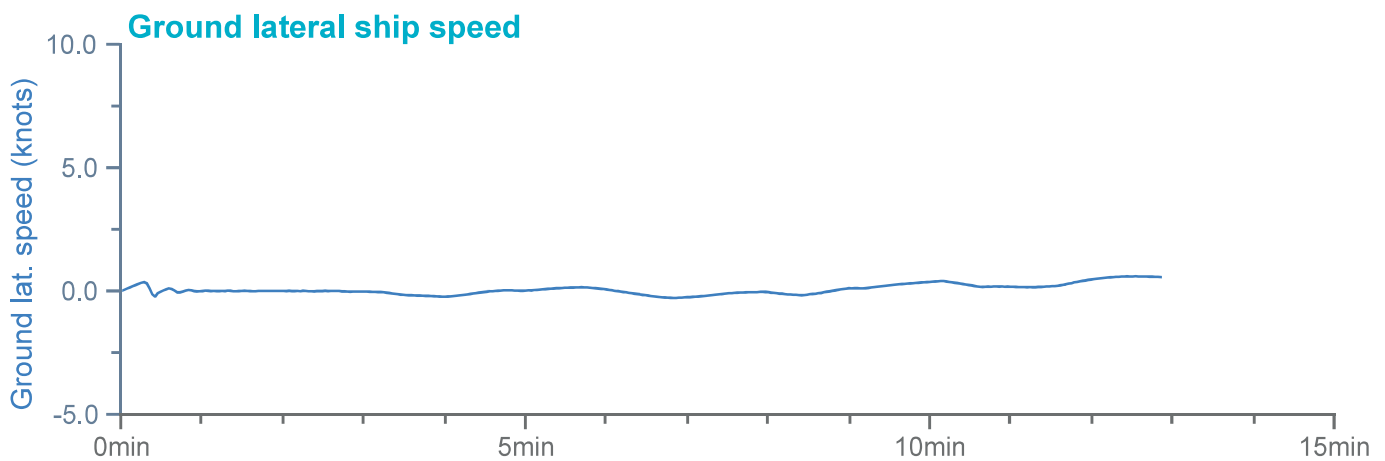
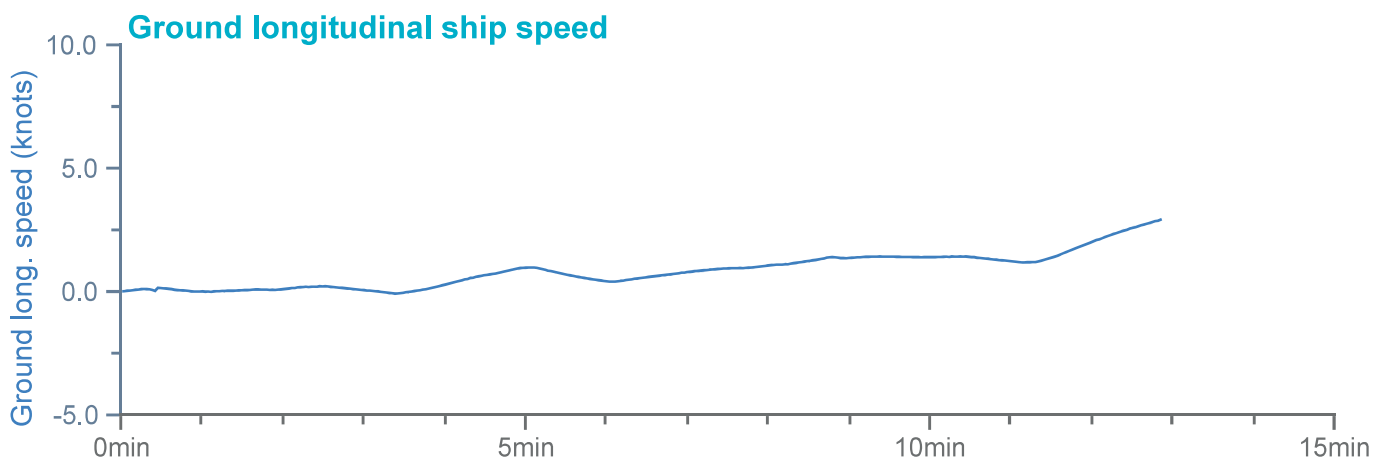
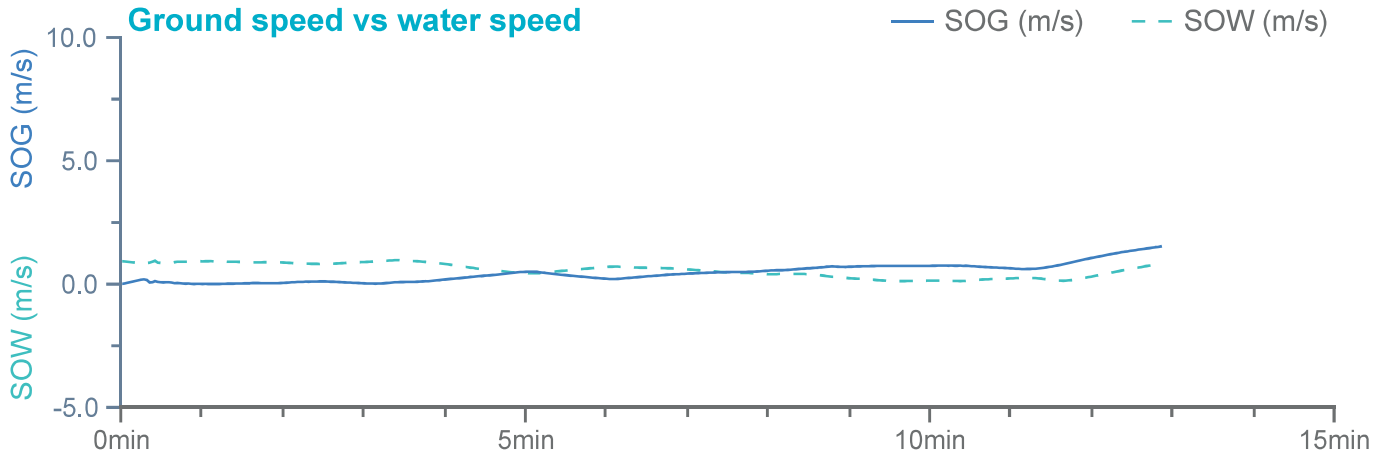


Summary

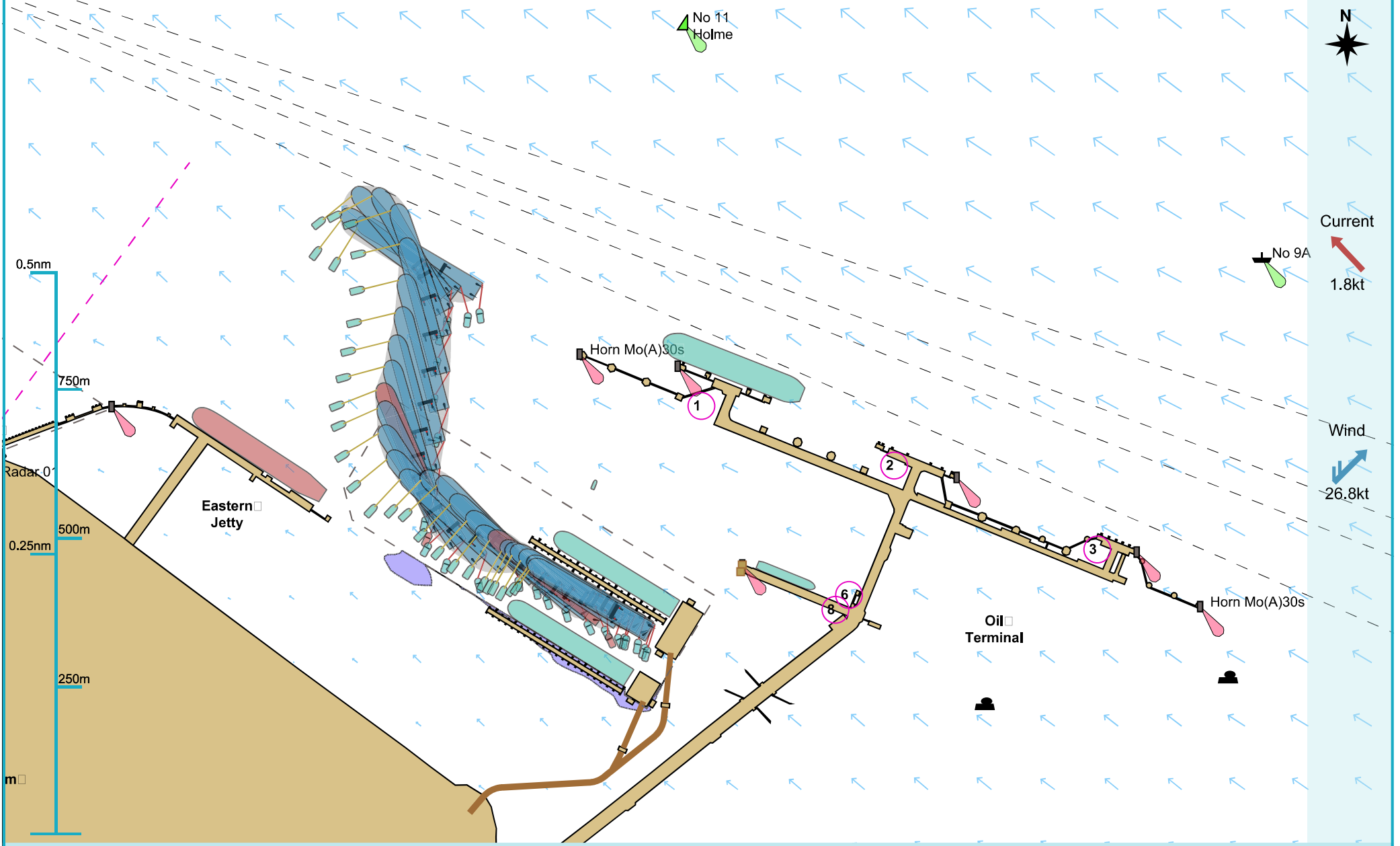
Environment

237m RoRo unnamed



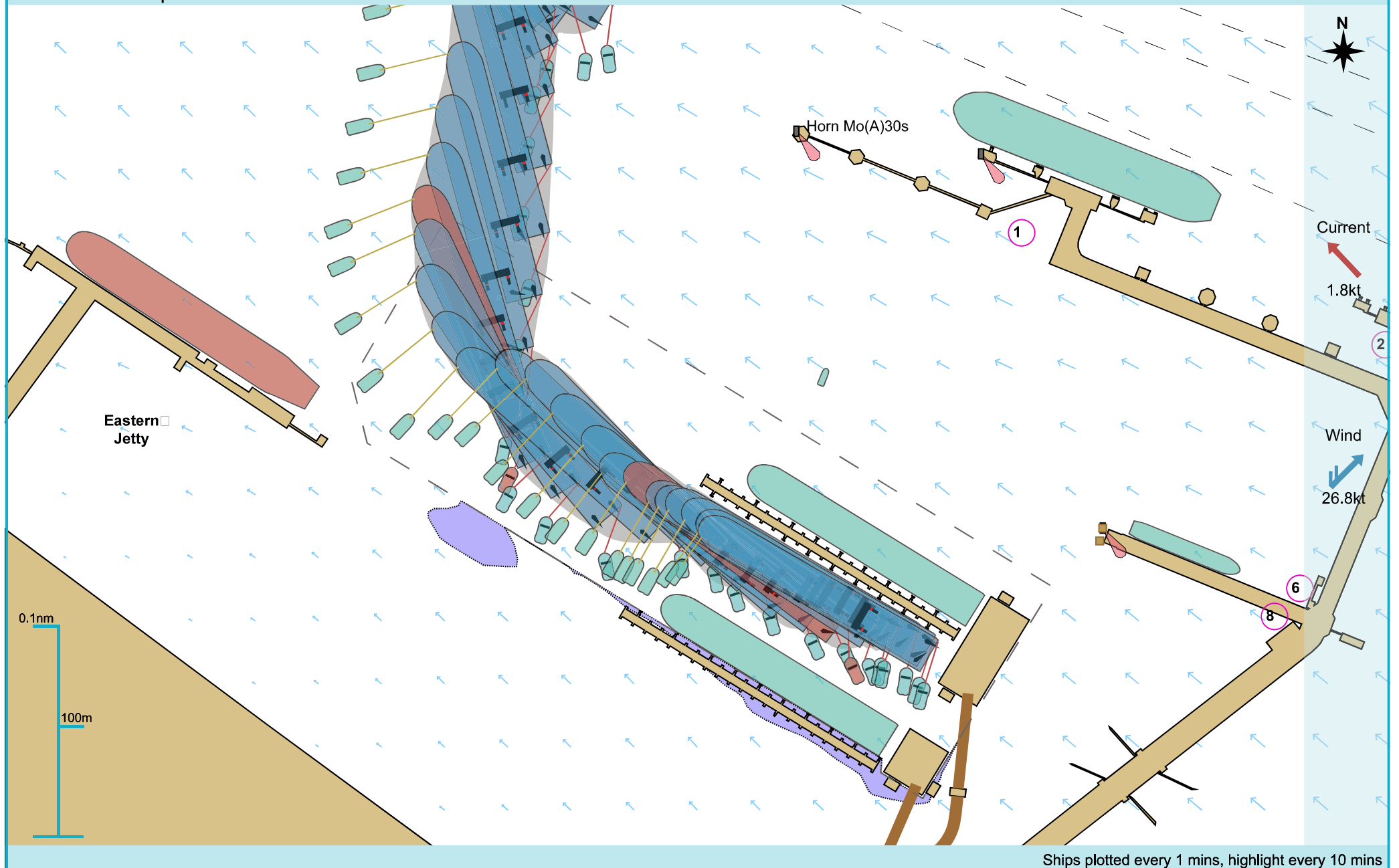


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

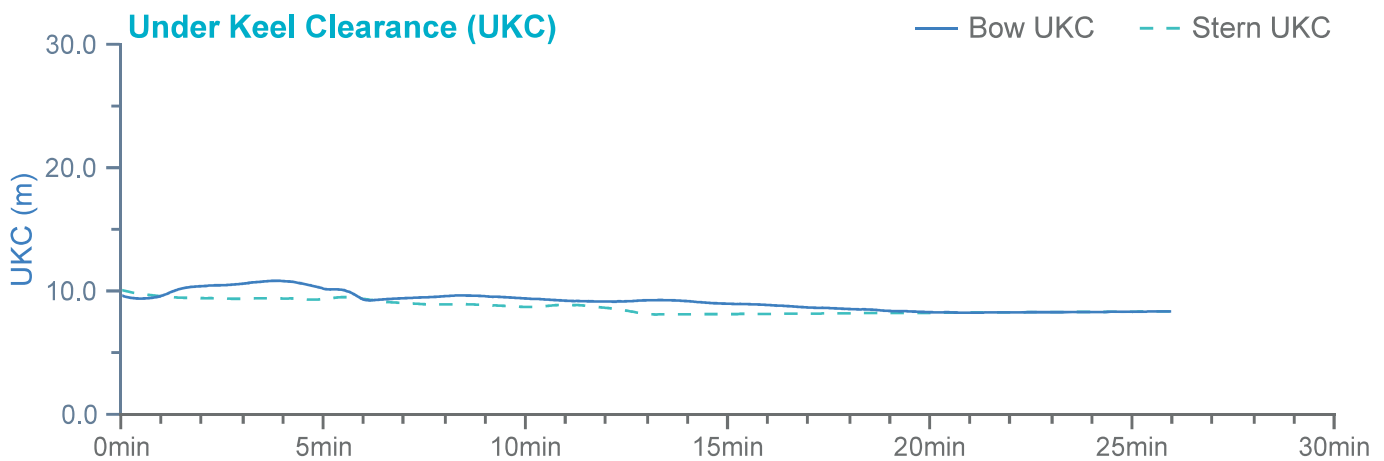
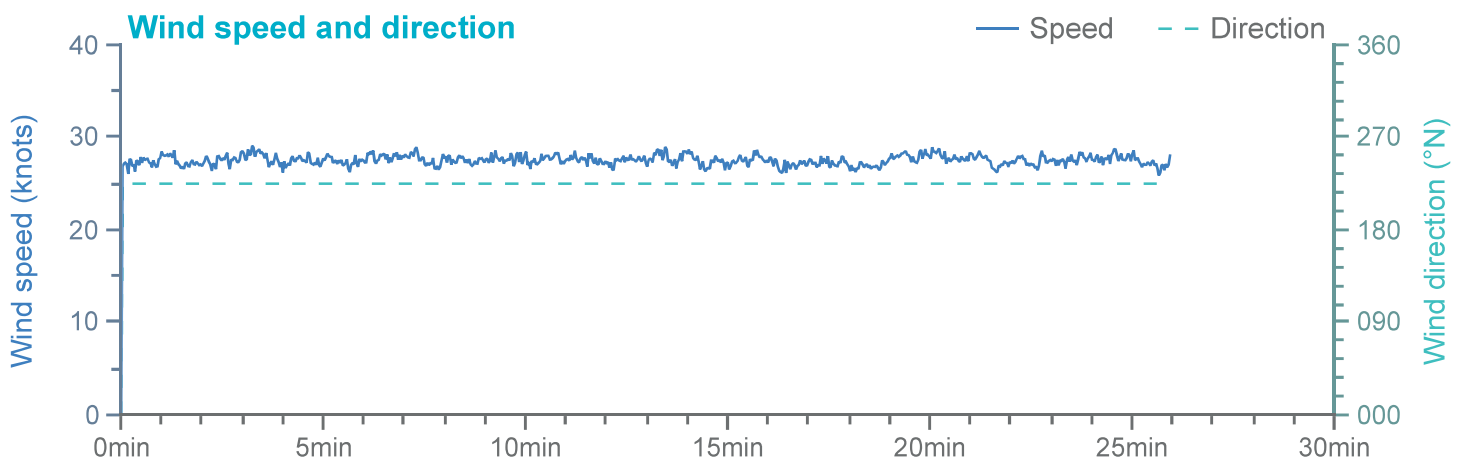
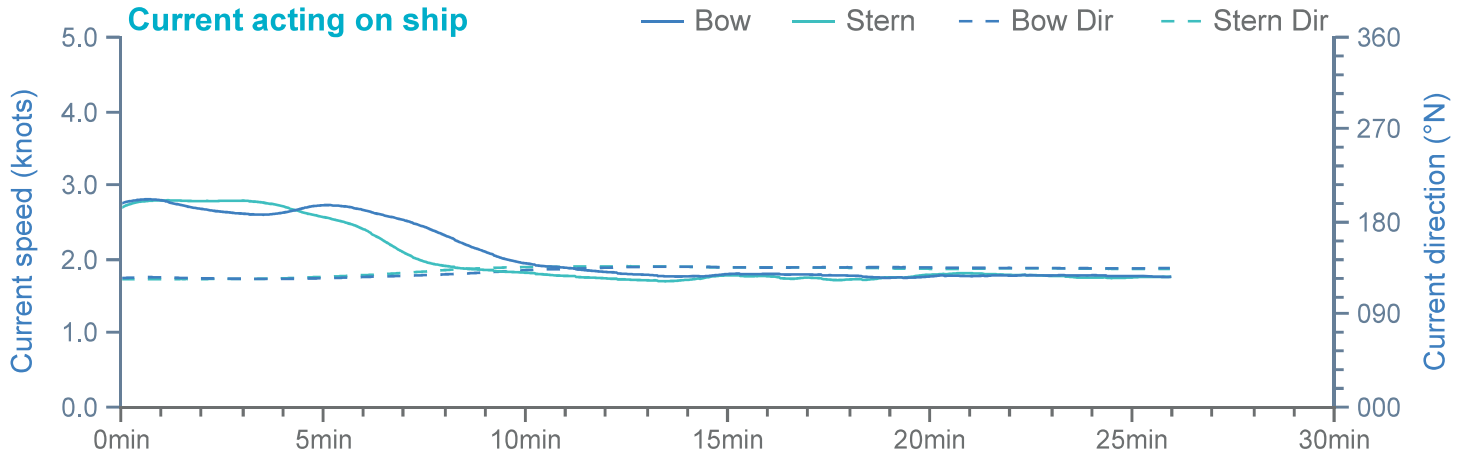


Ships plotted every 1 mins, highlight every 10 mins

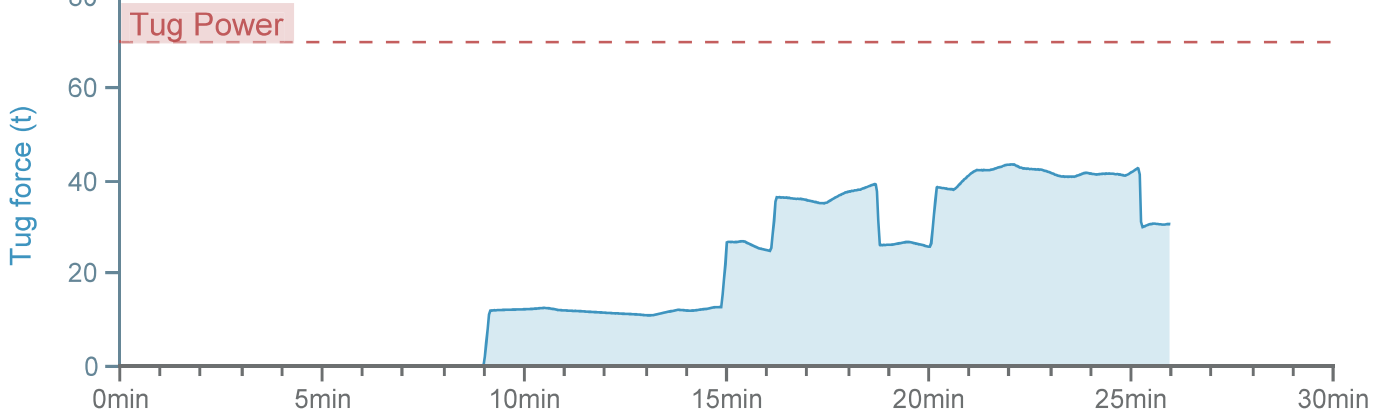
Summary

Environment

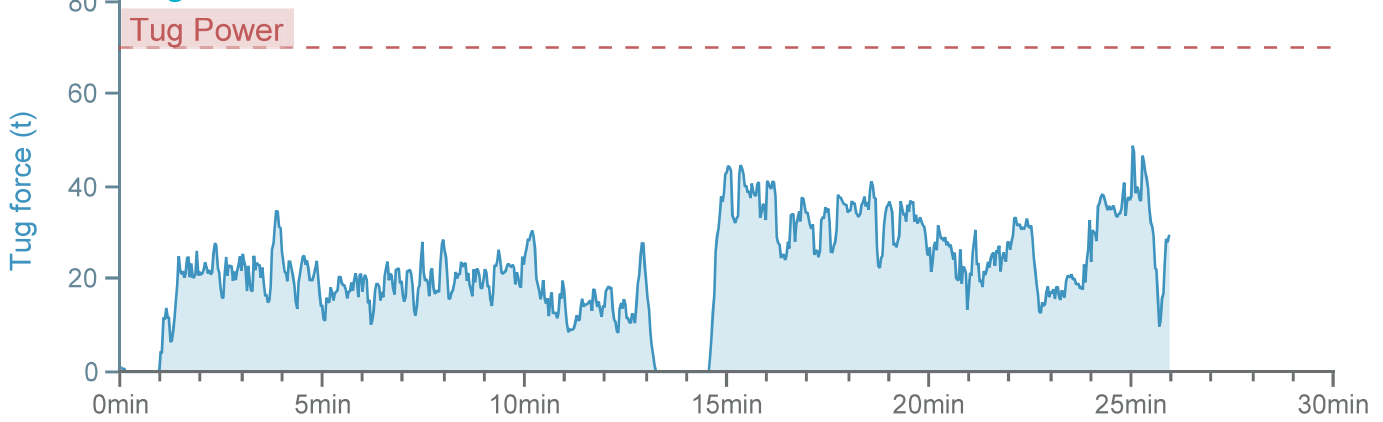
237m RoRo unnamed



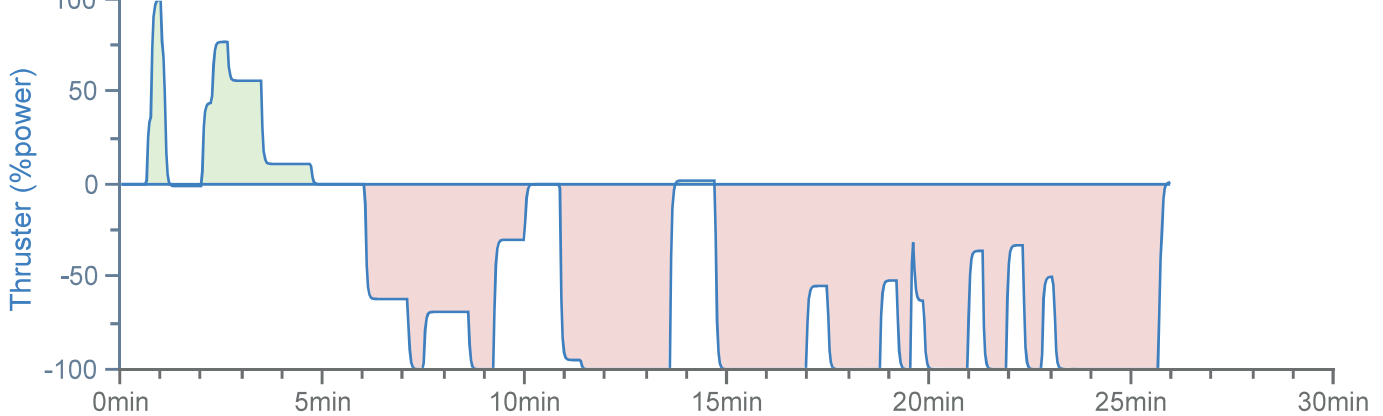
Tug 1 forces

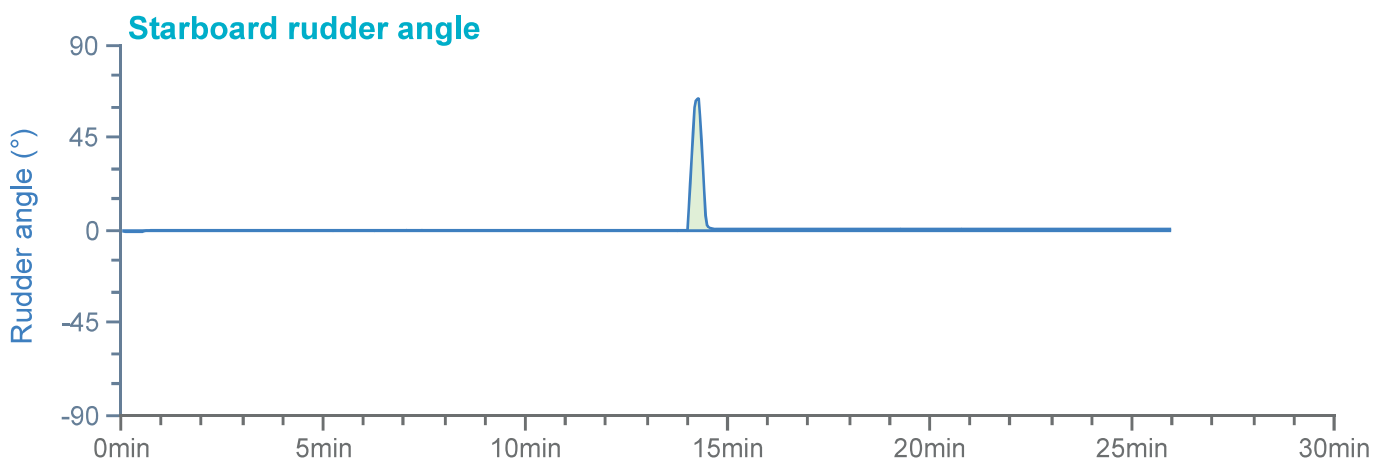
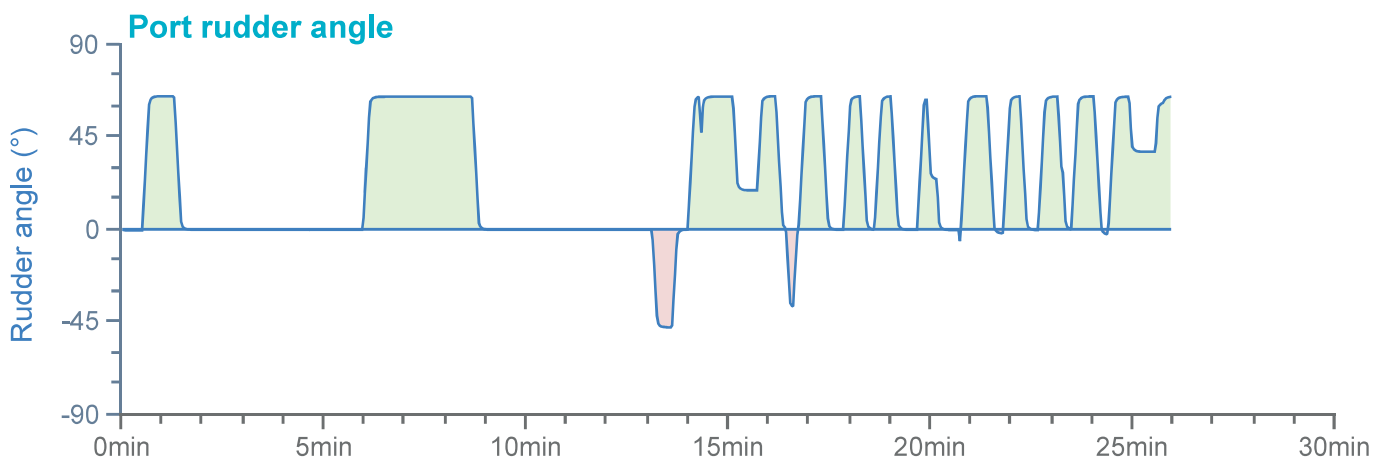
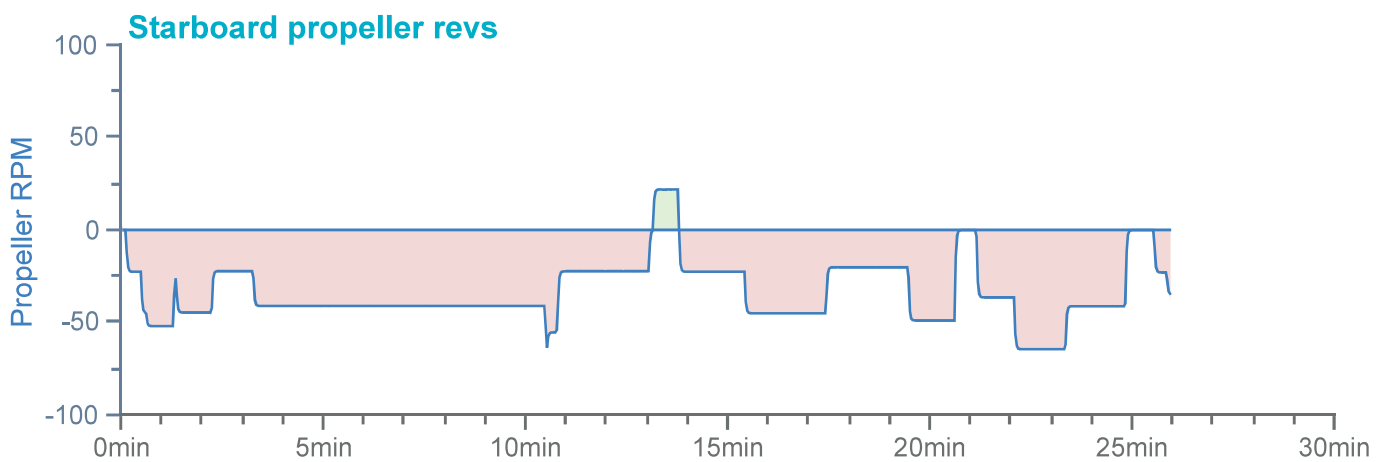
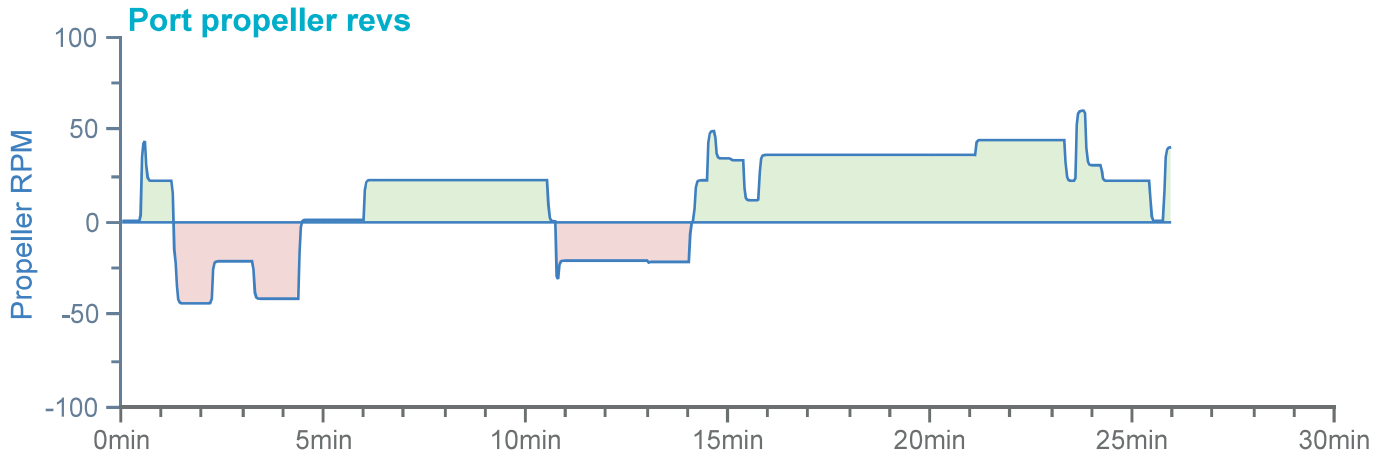


Tug 2 forces



Bow thruster power

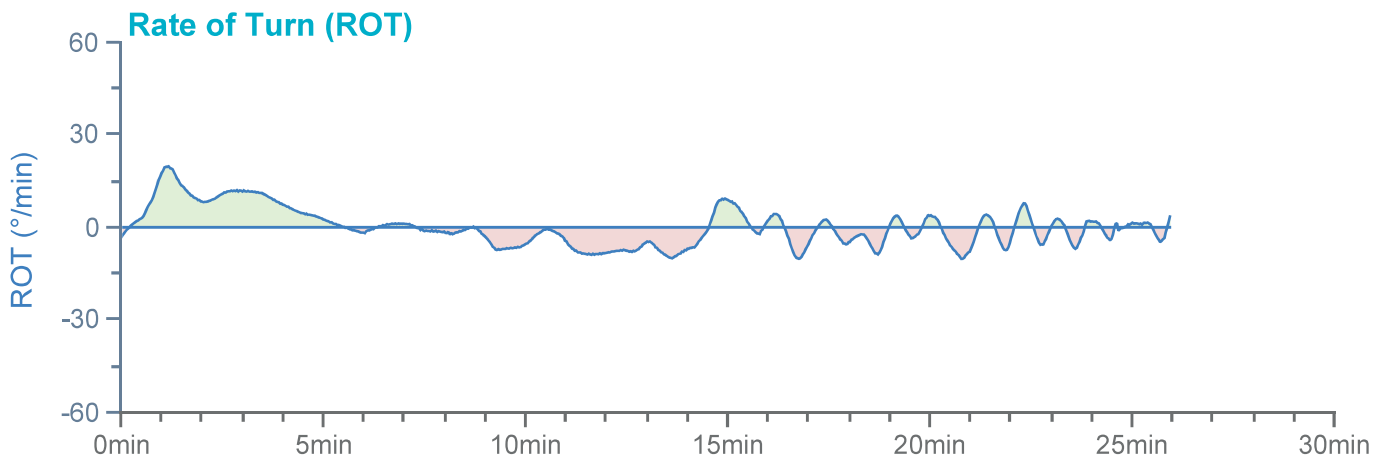
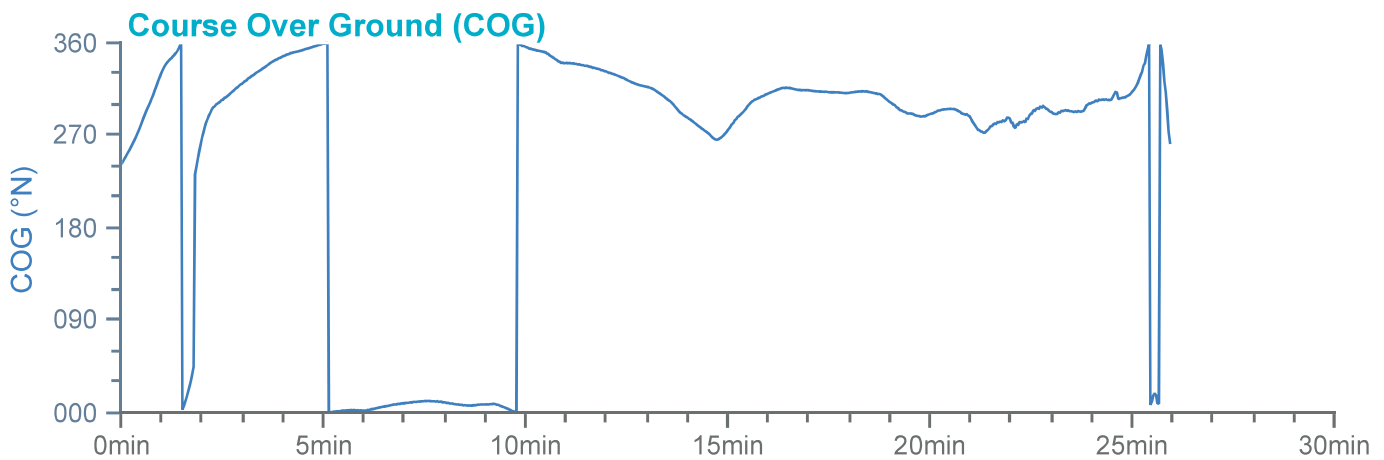
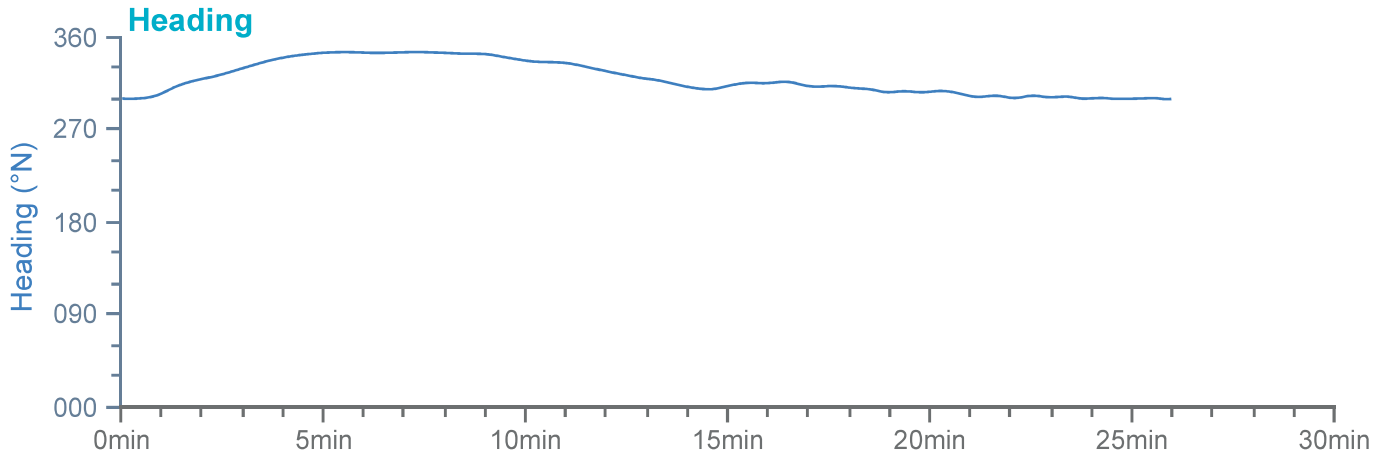


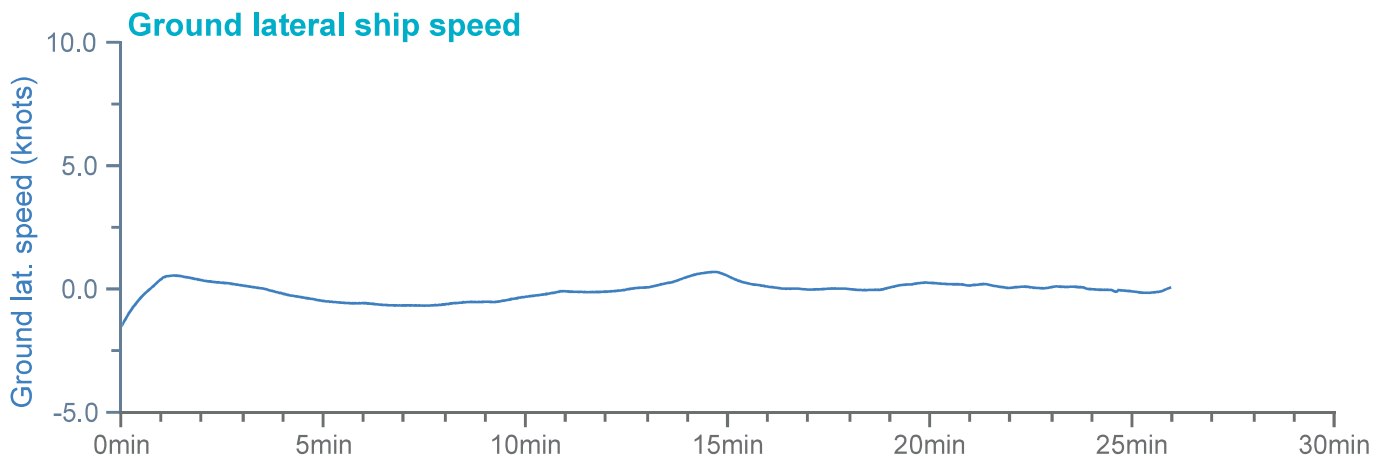
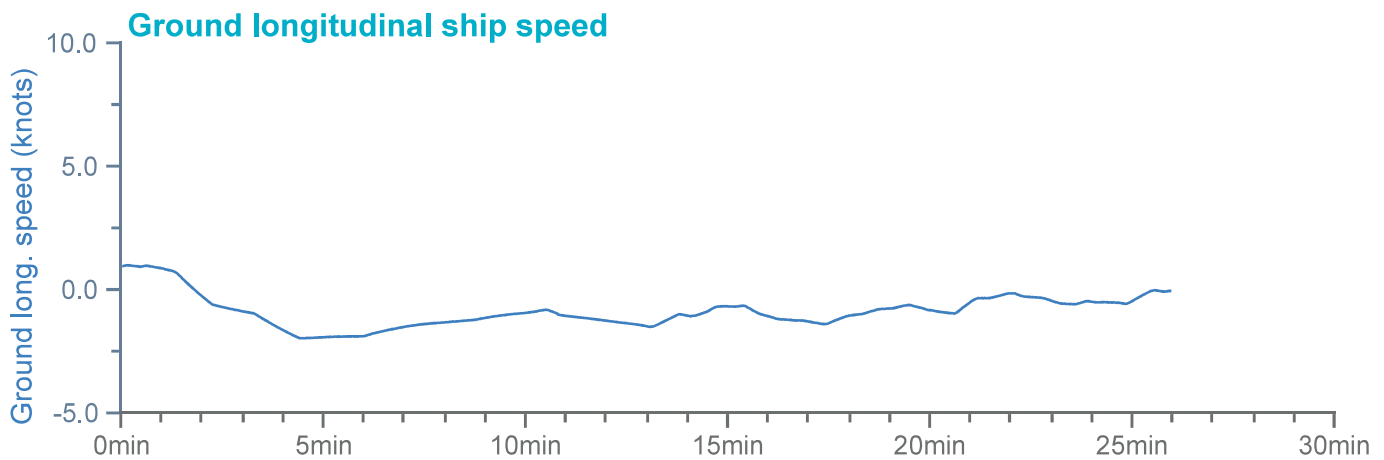
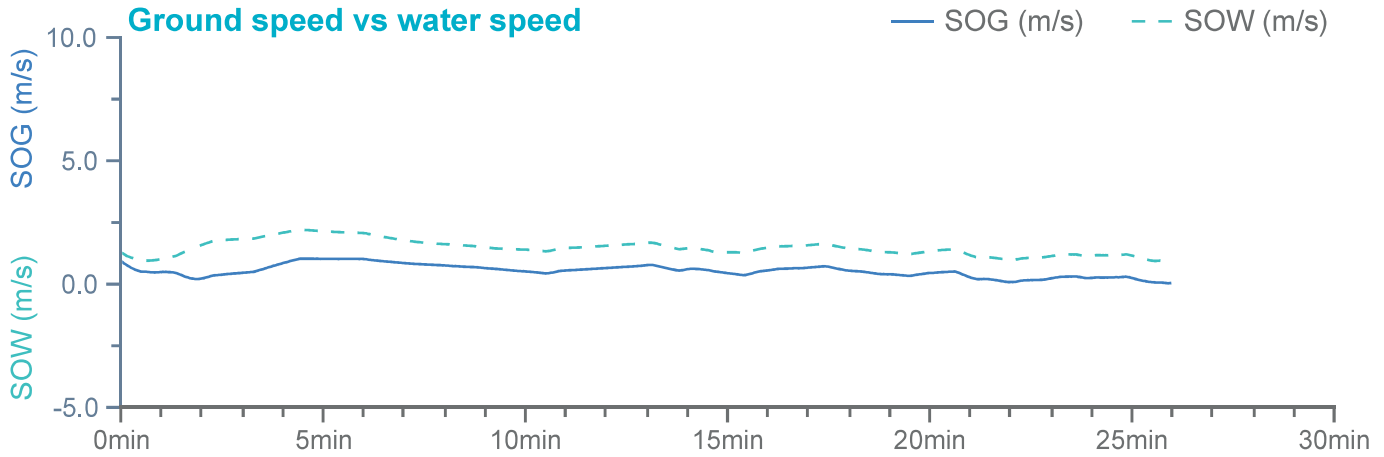


Summary

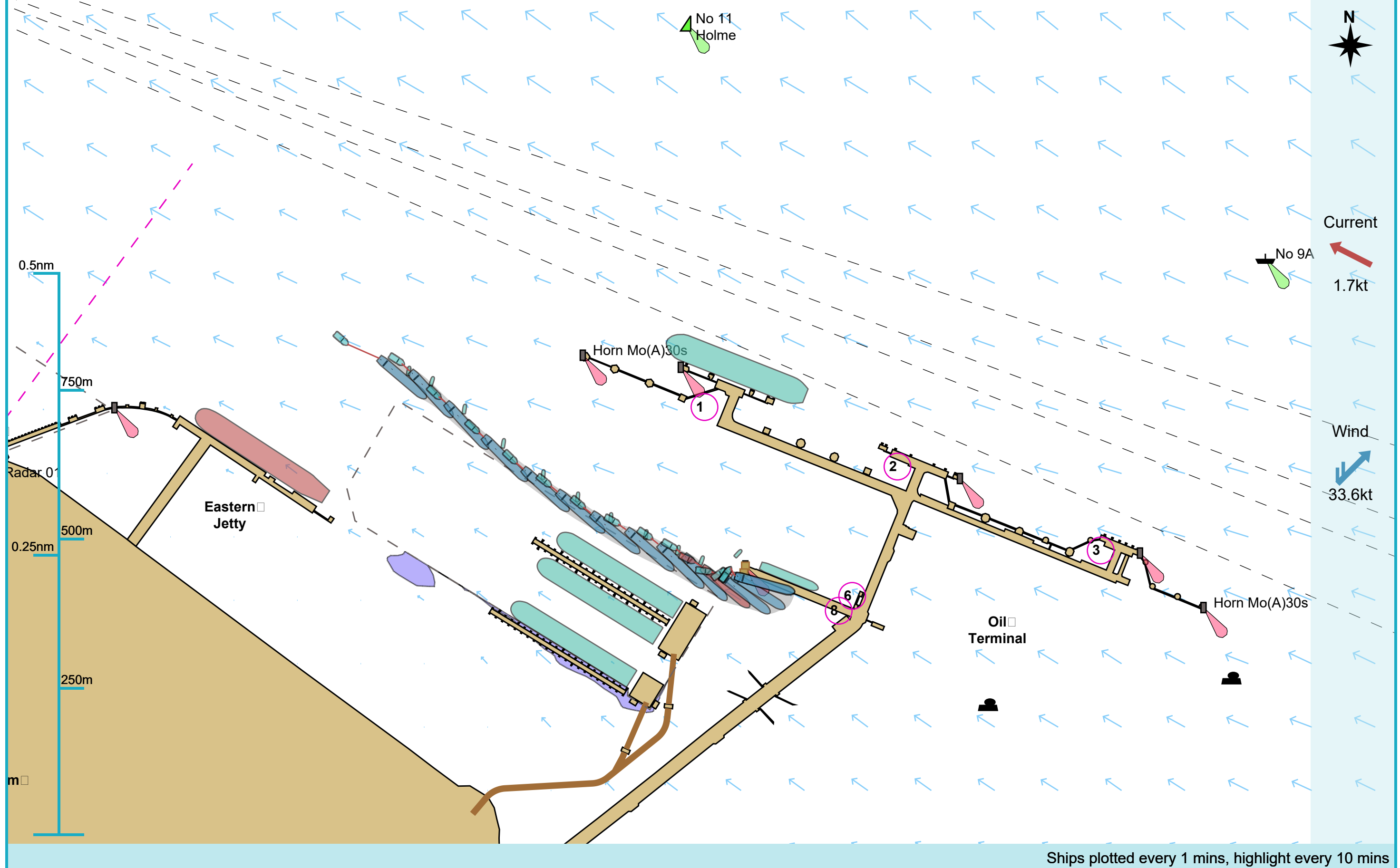
Environment

237m RoRo unnamed



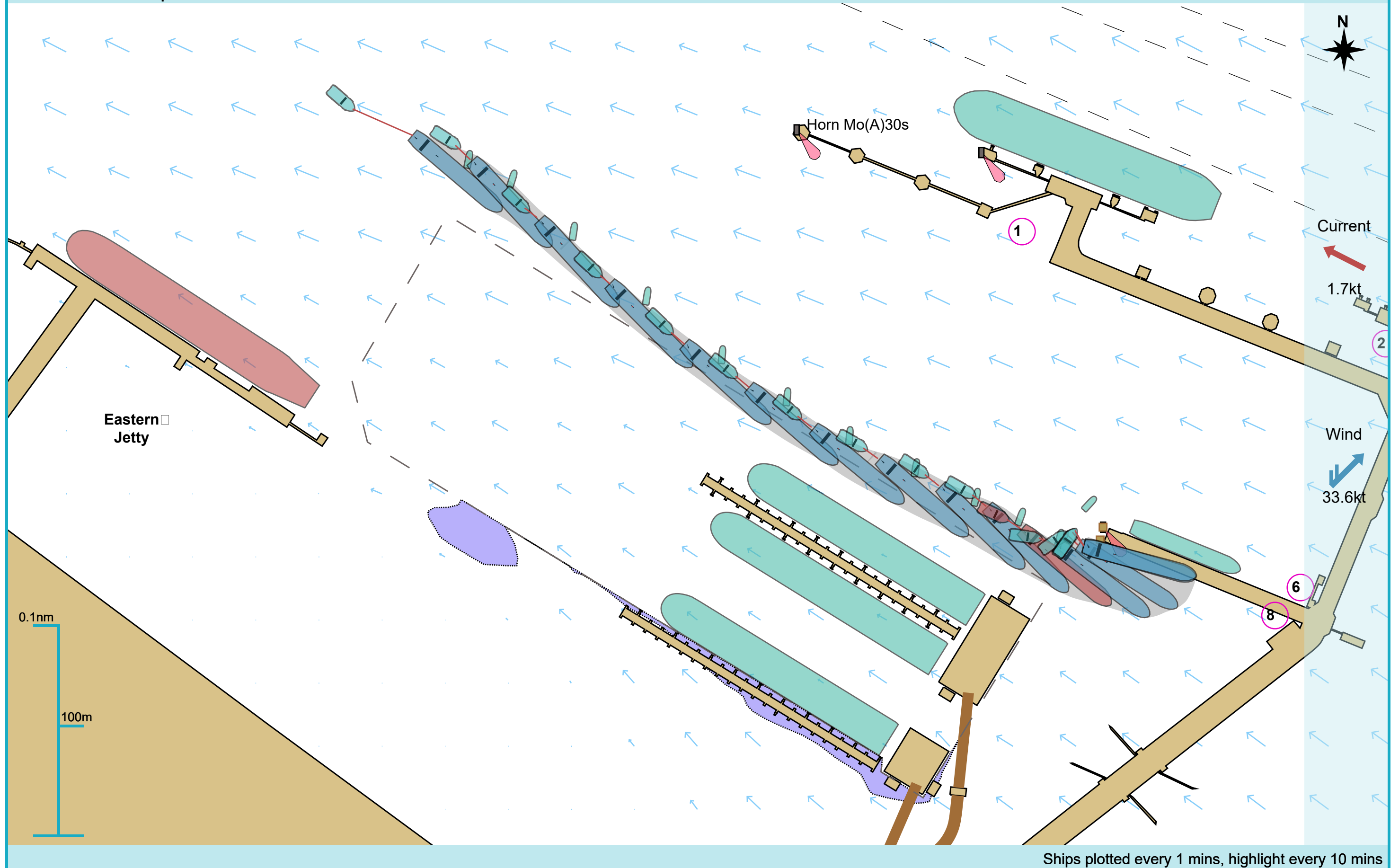


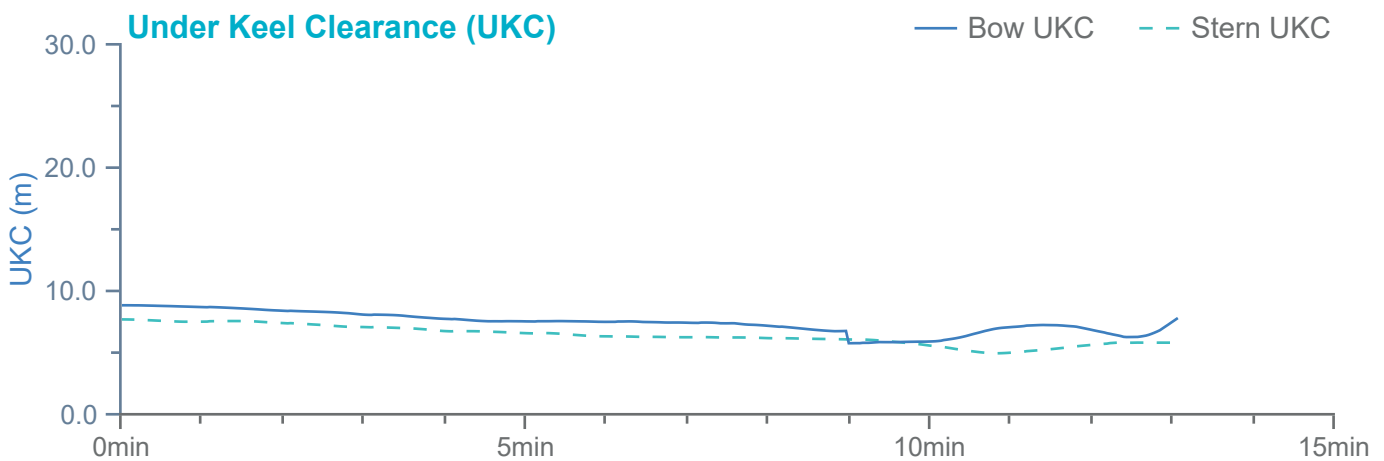
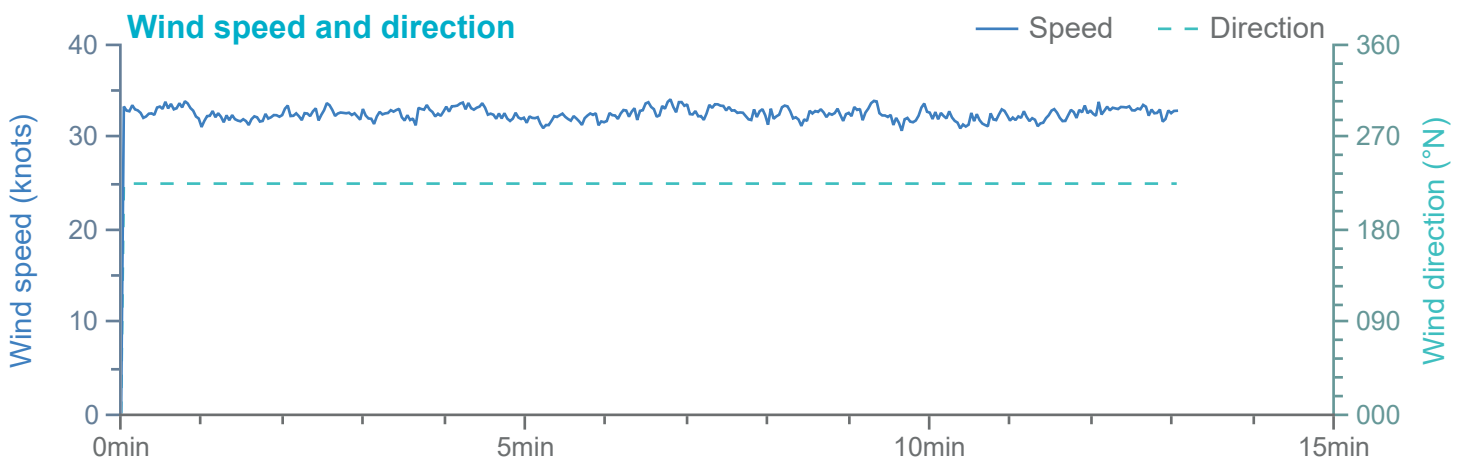
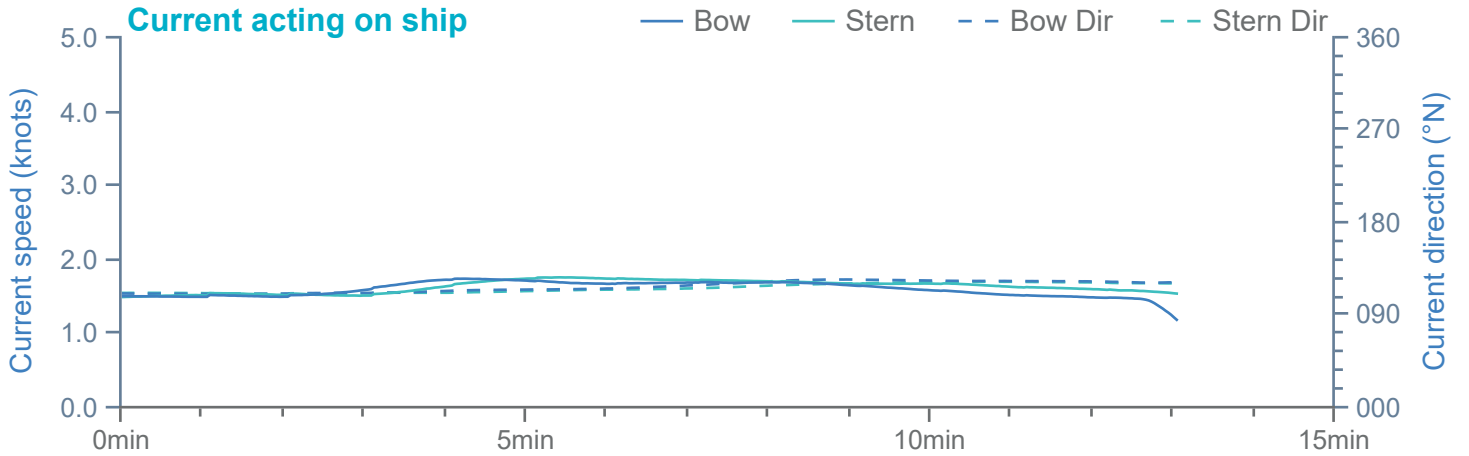
Manoeuvre track plot

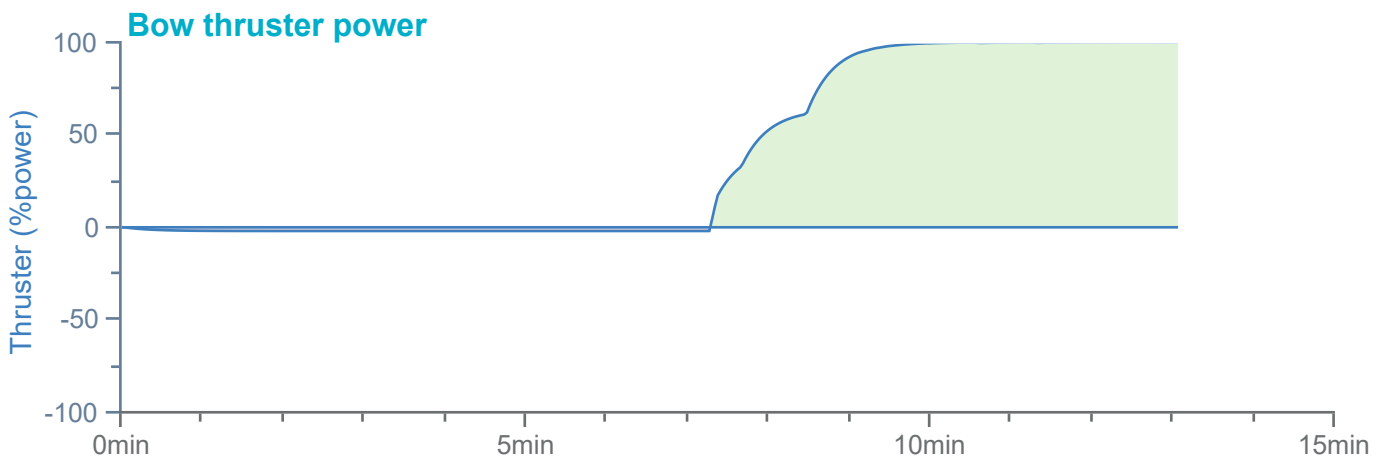
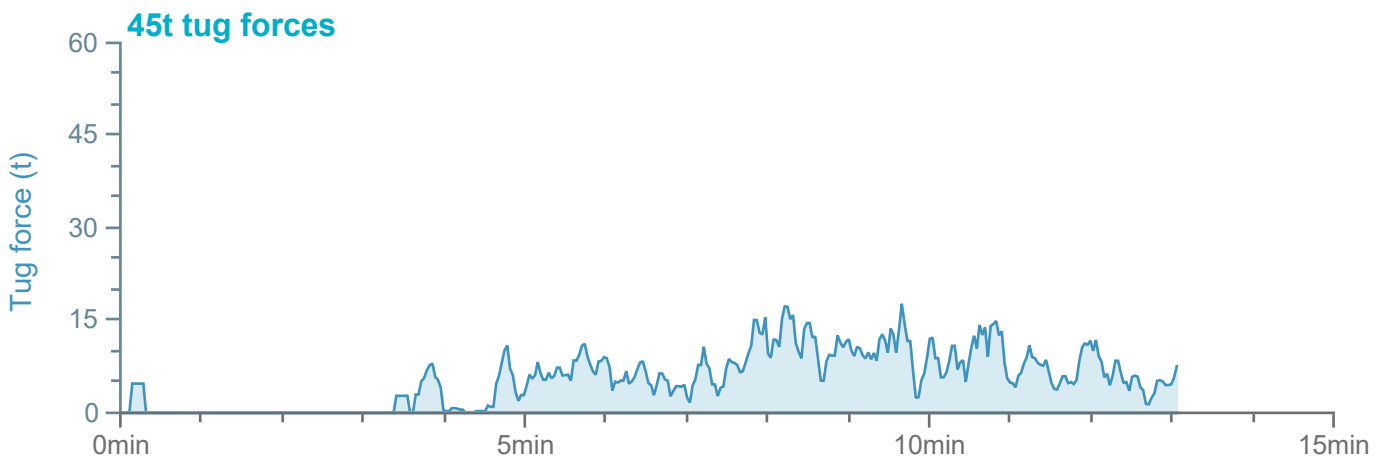
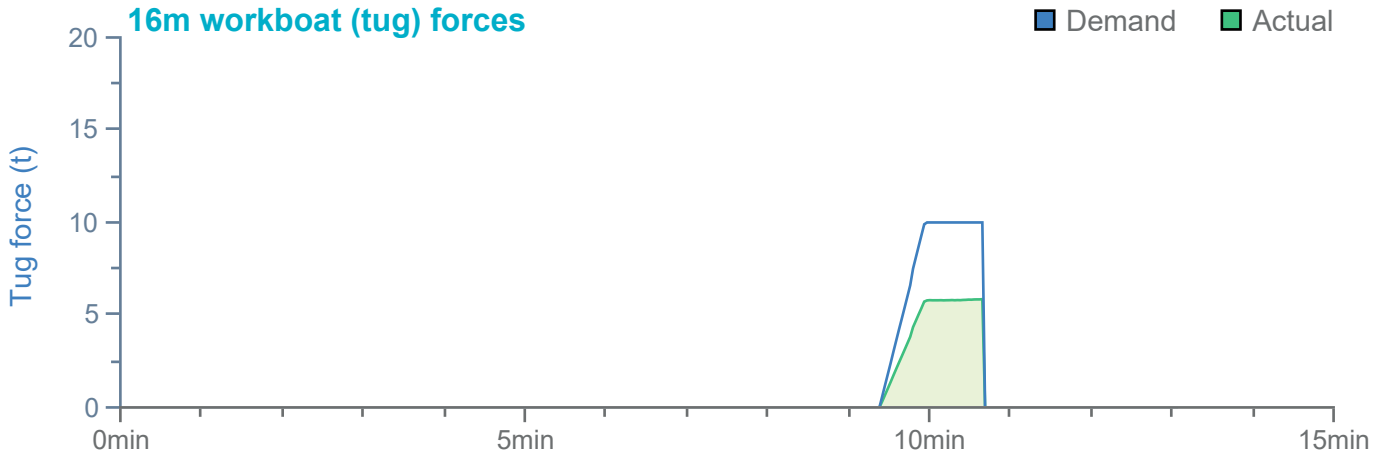


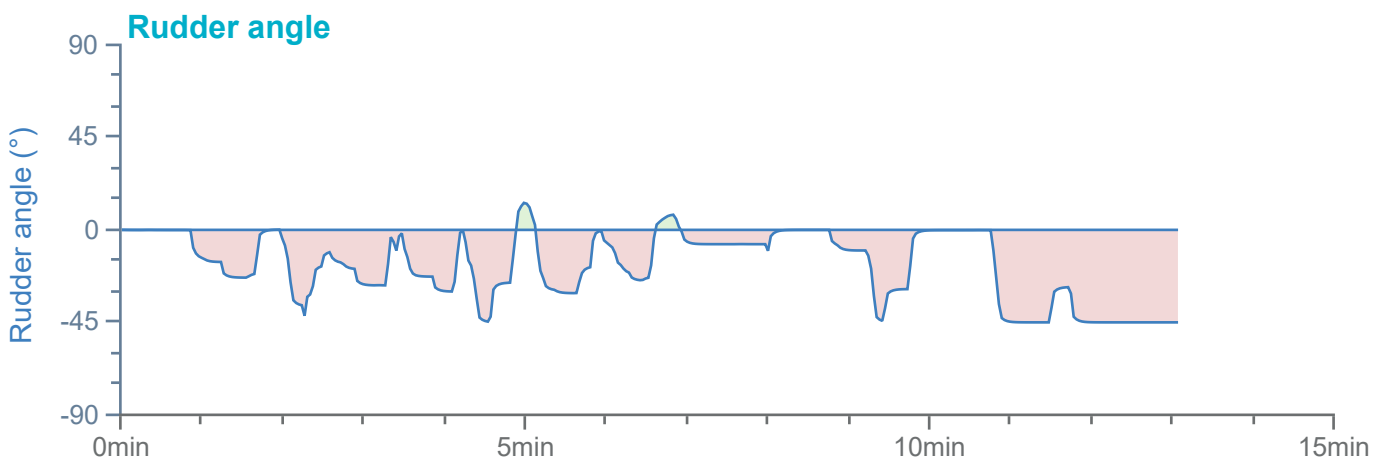
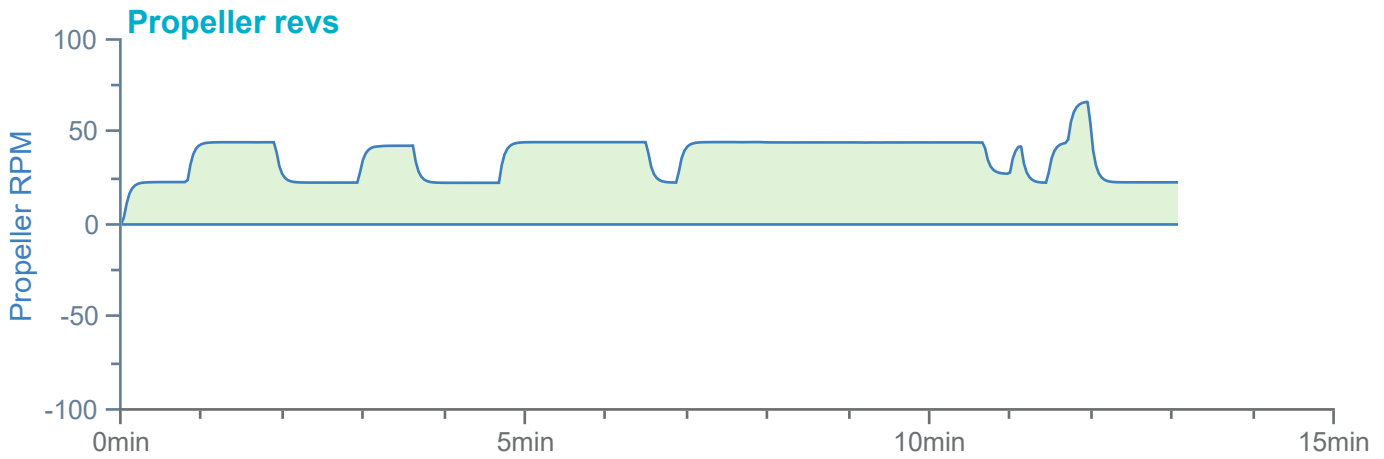
Ships plotted every 1 mins, highlight every 10 mins

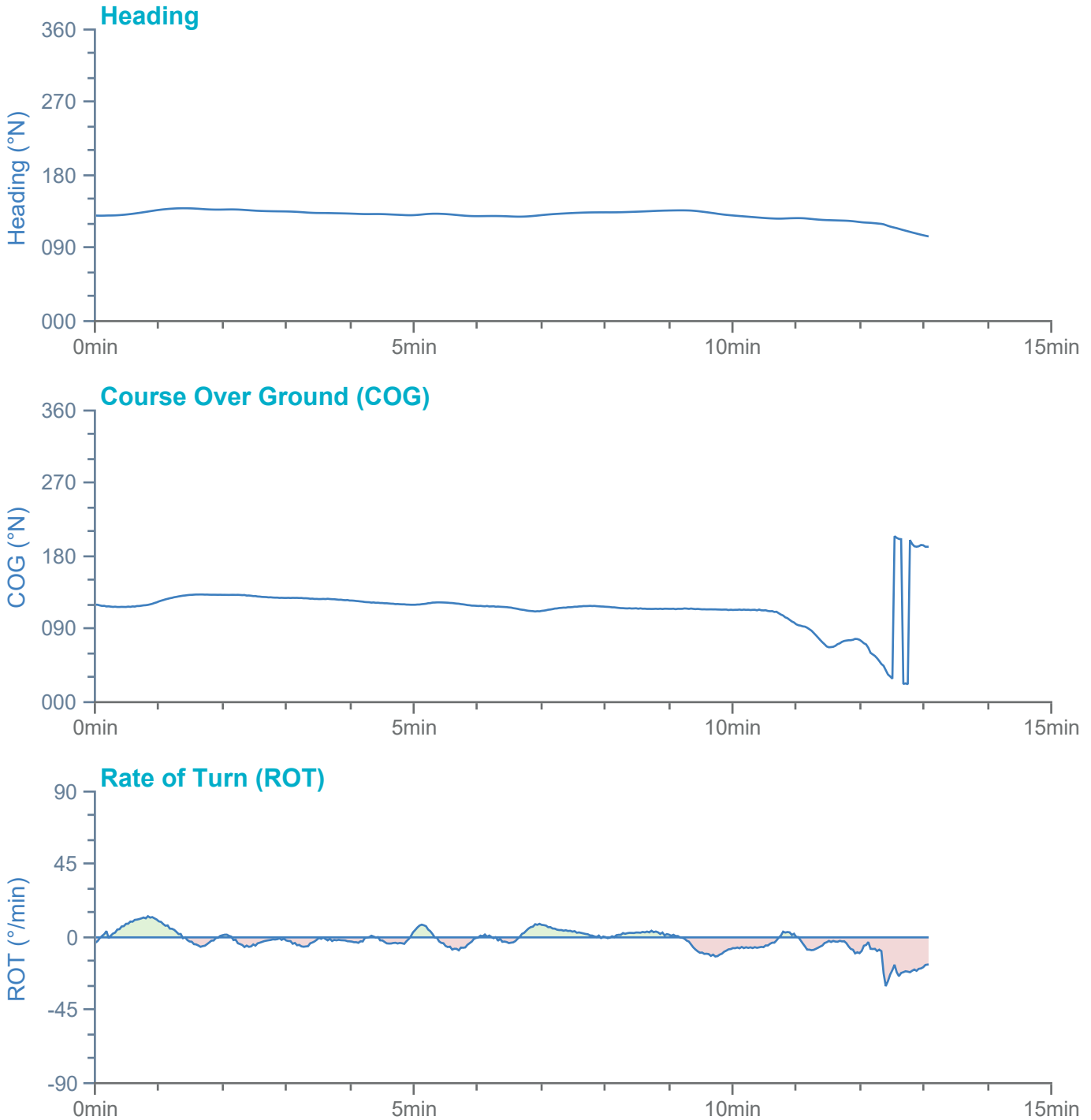
Manoeuvre track plot

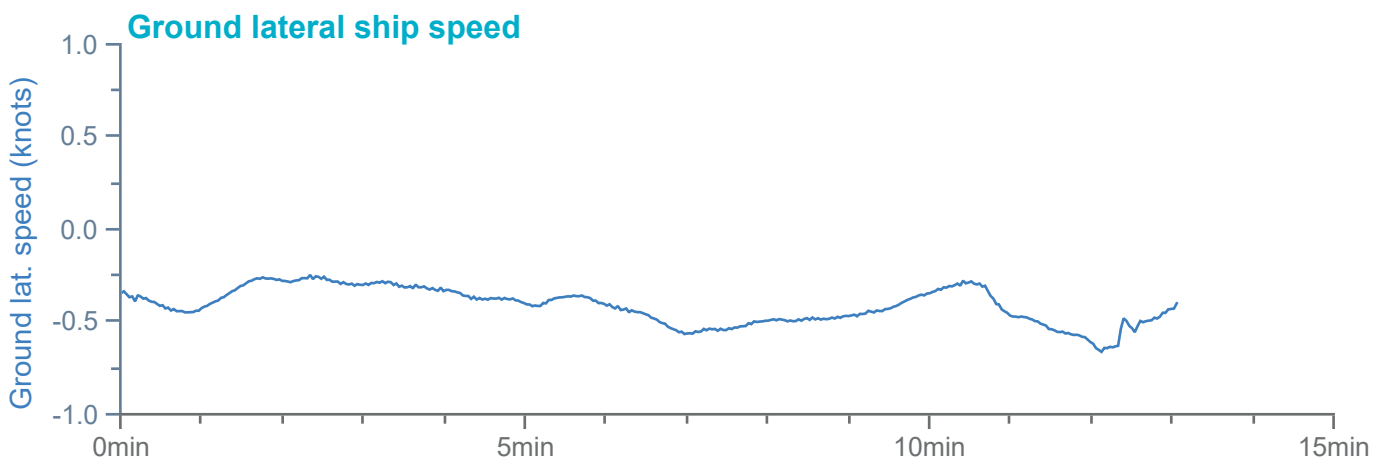
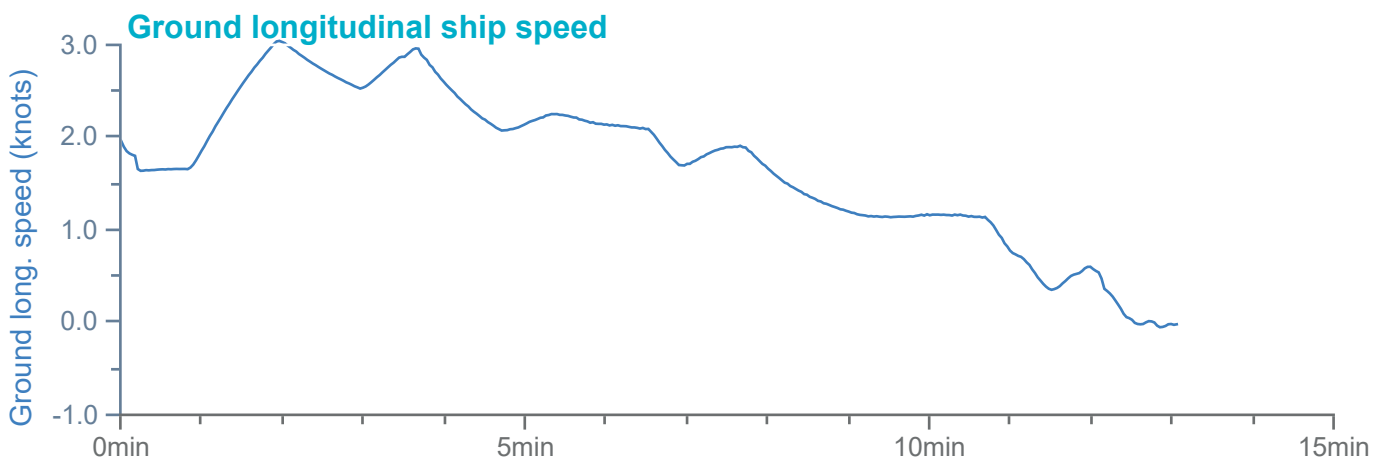
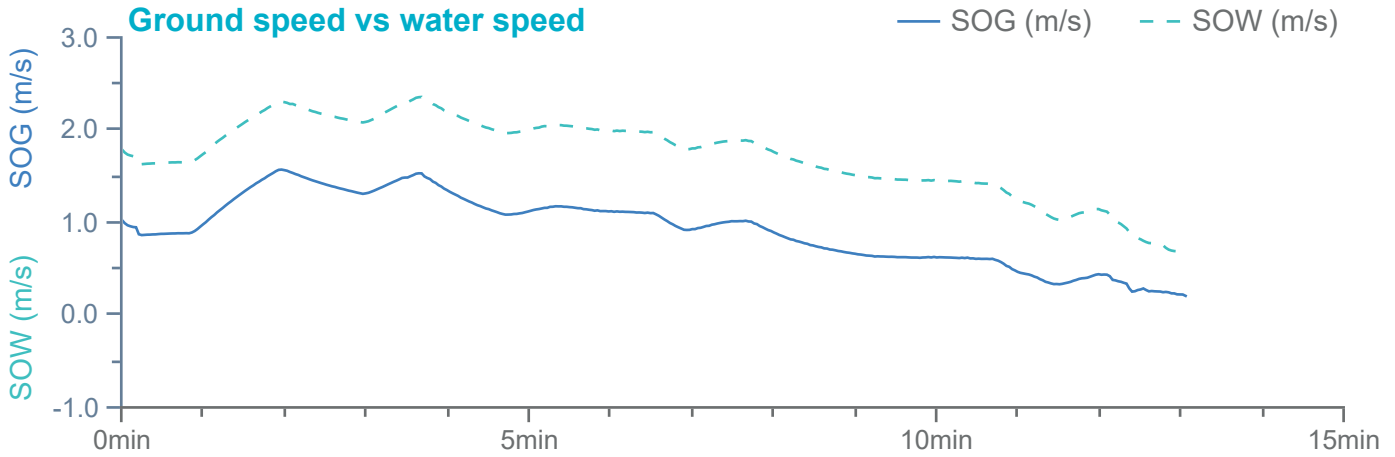




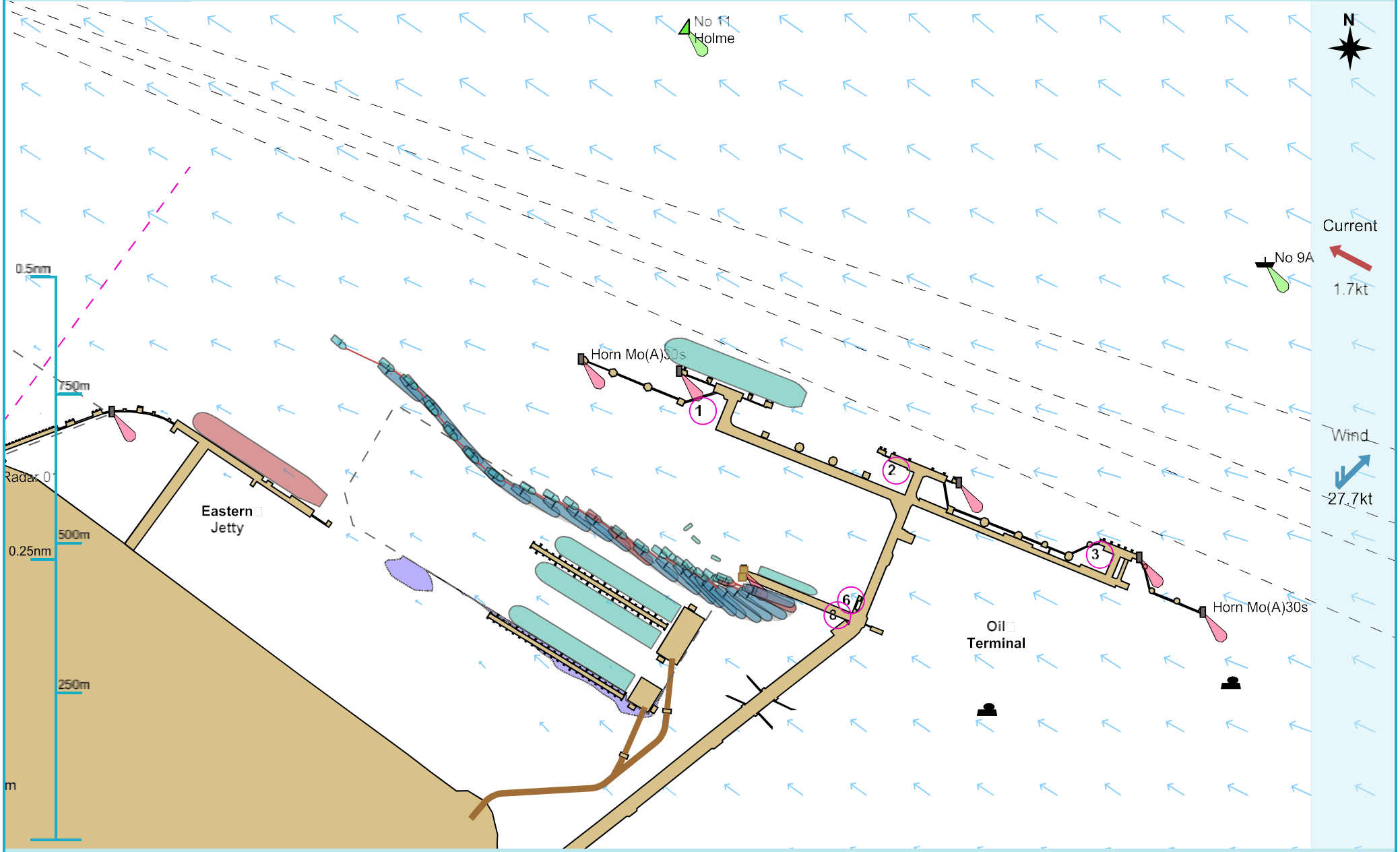






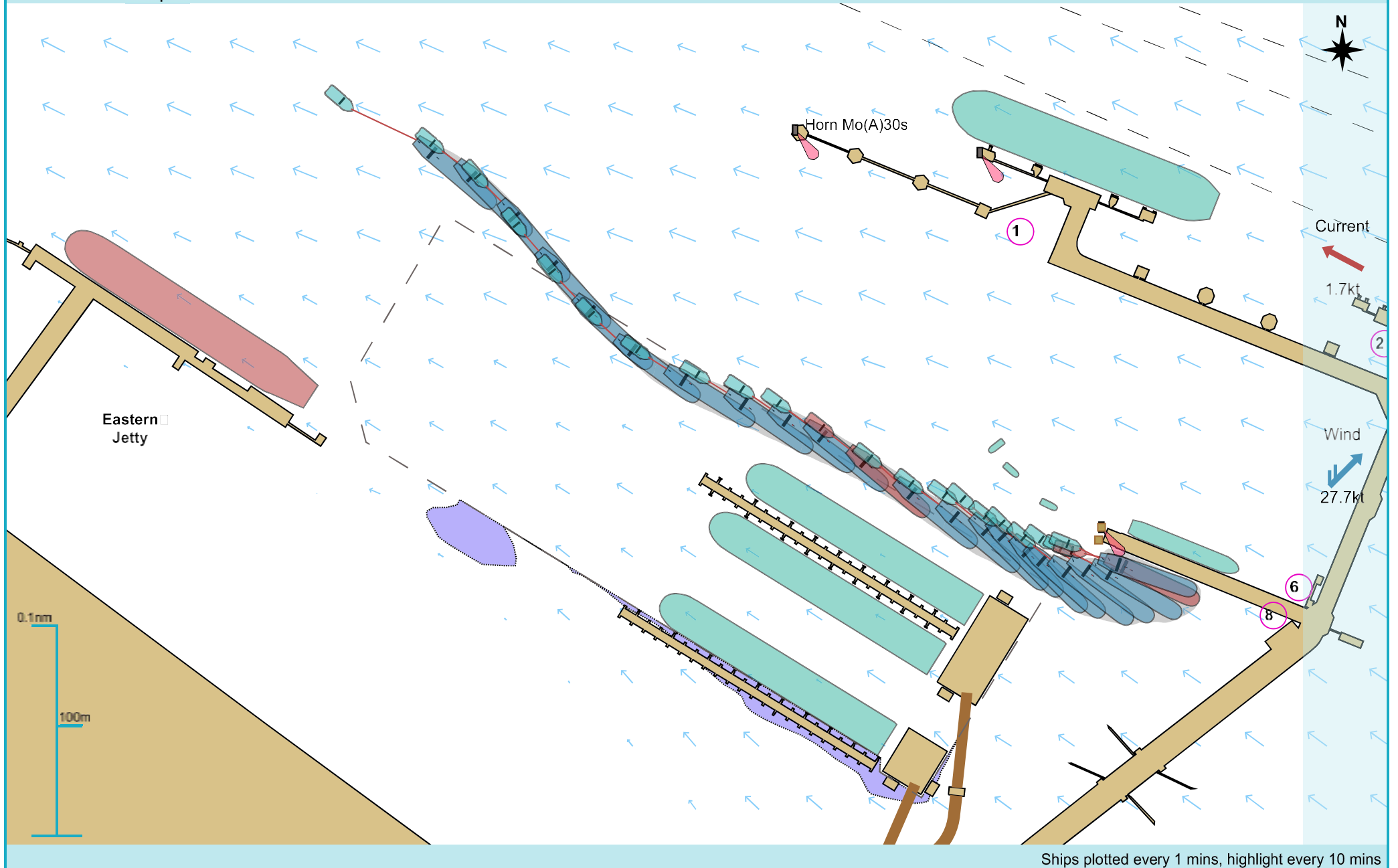


Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

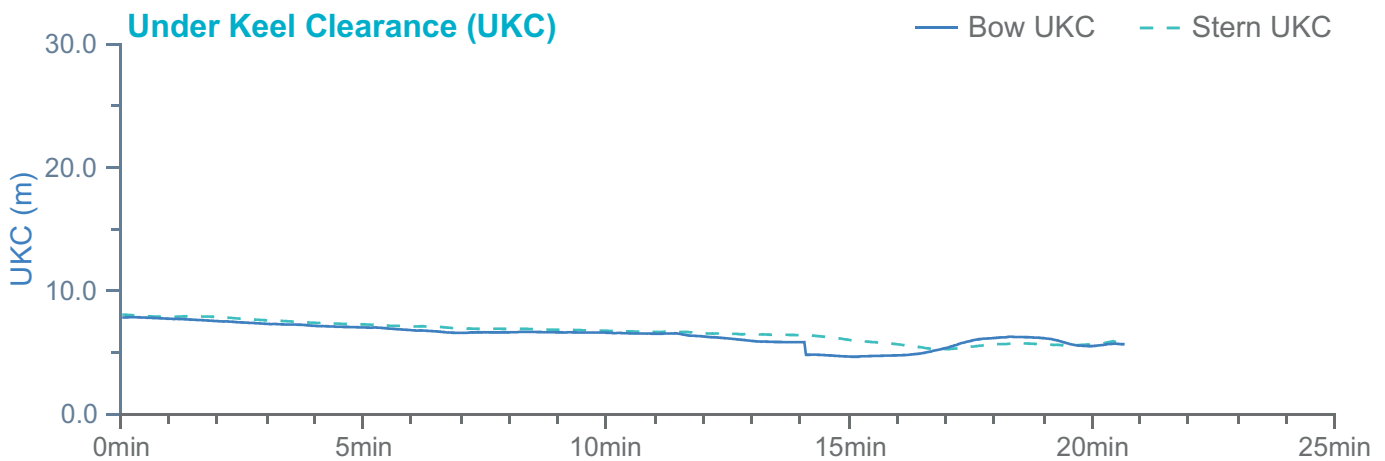
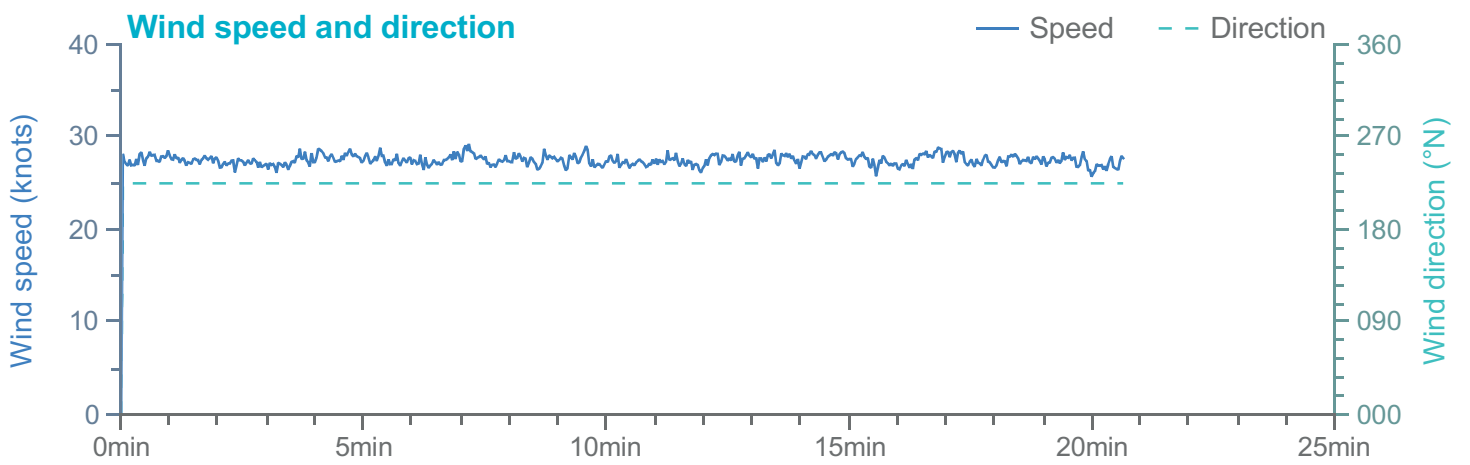
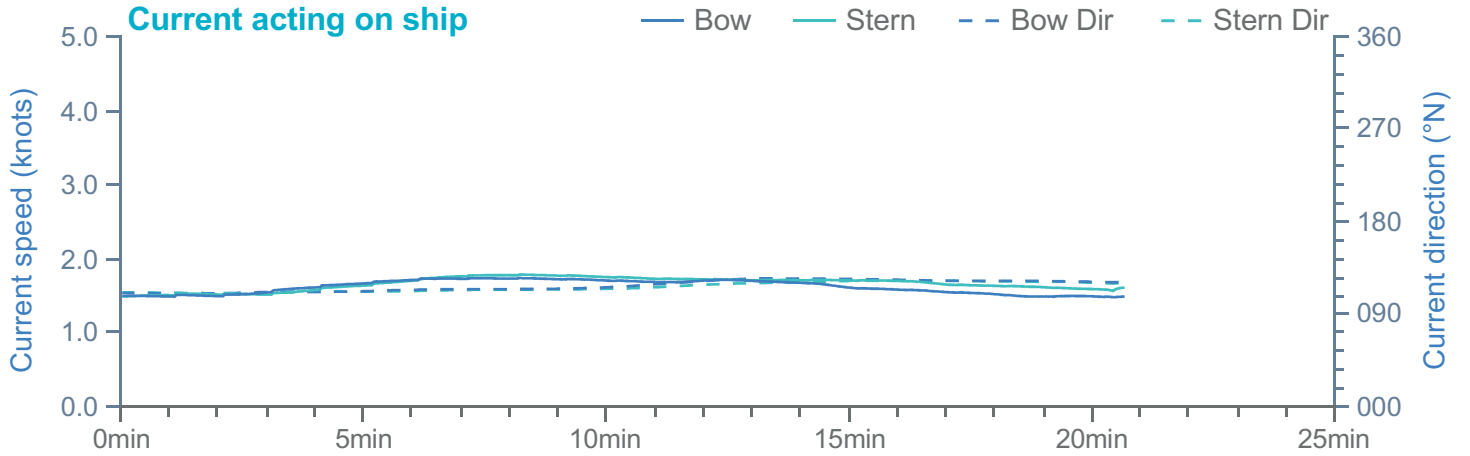


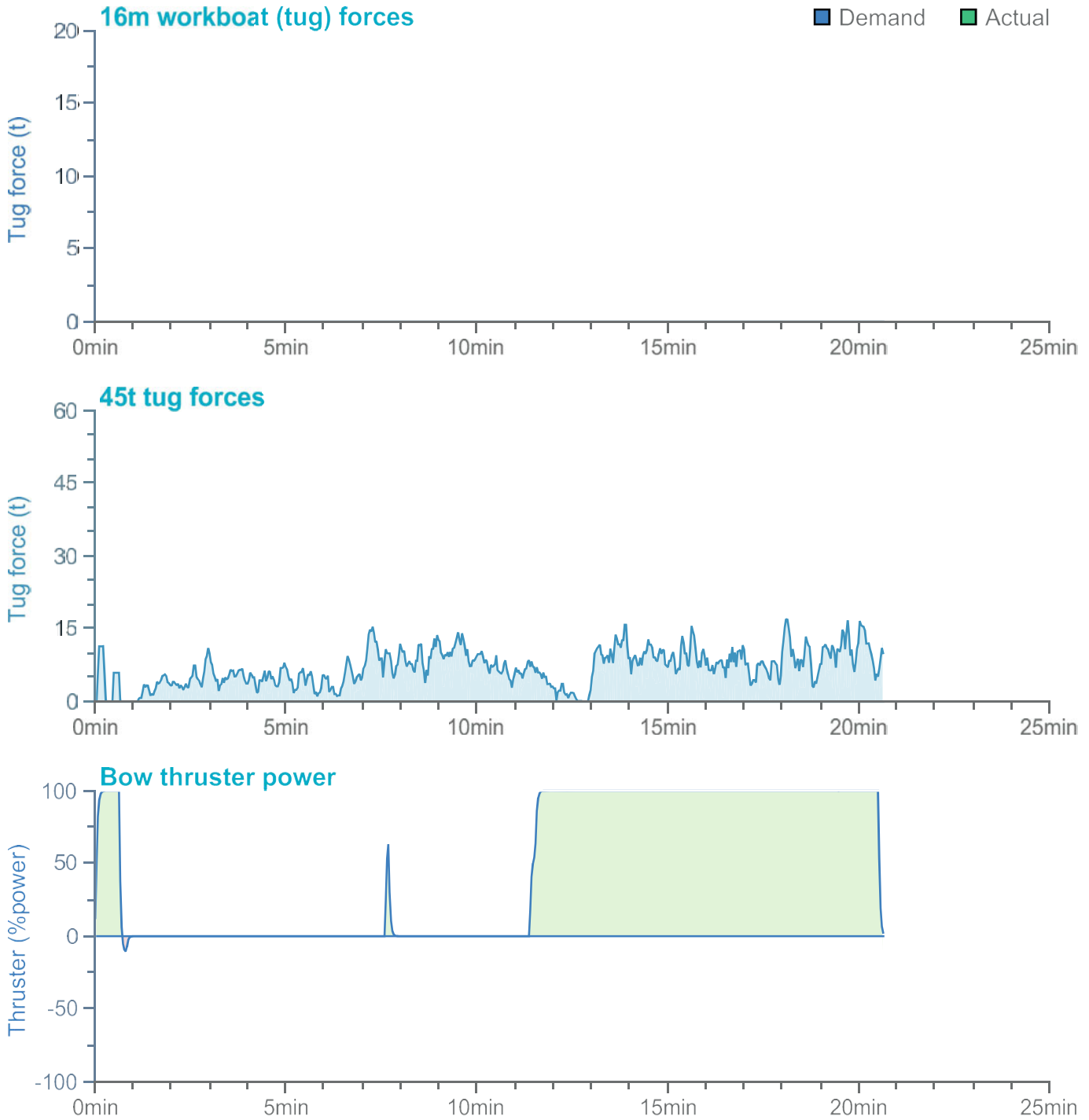
Ships plotted every 1 mins, highlight every 10 mins

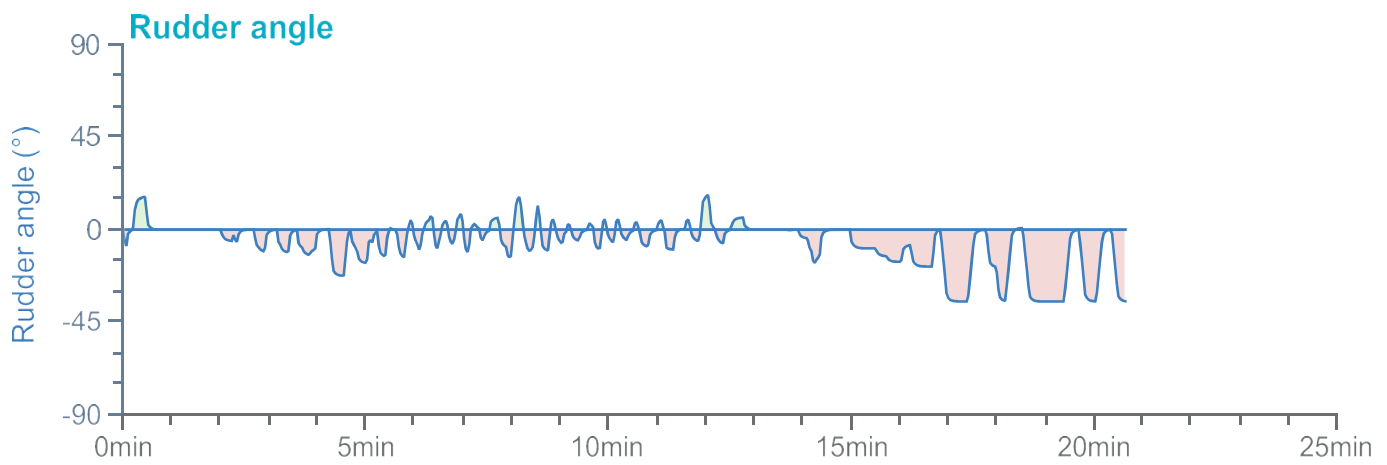
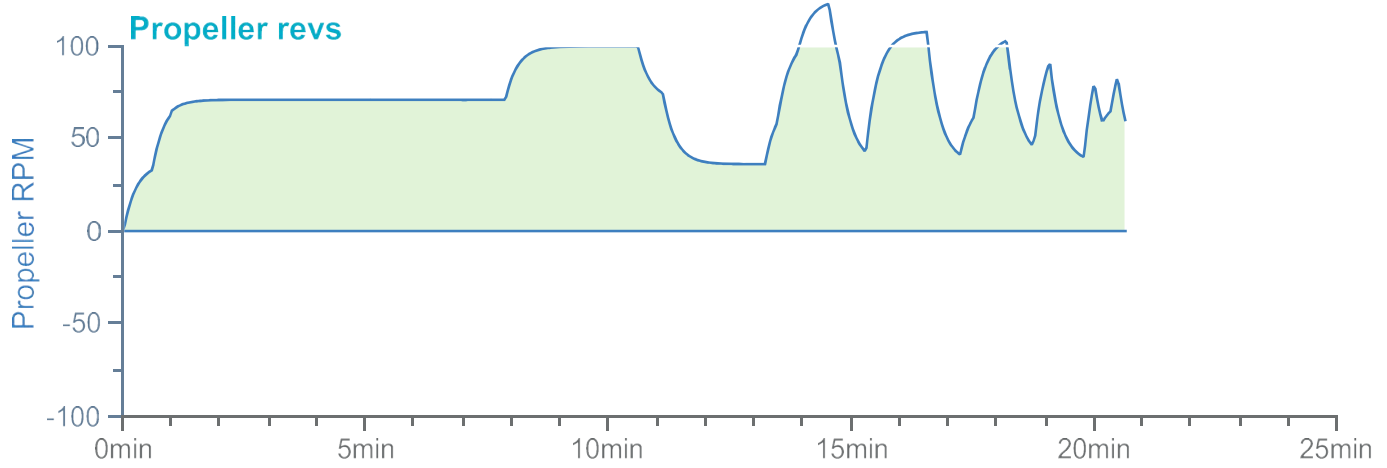
Summary

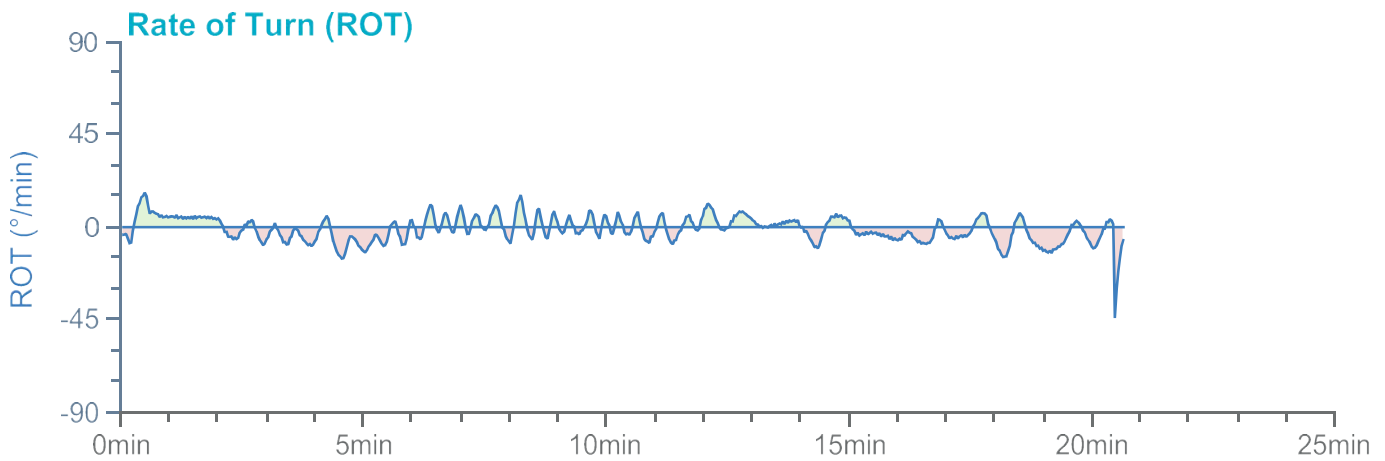
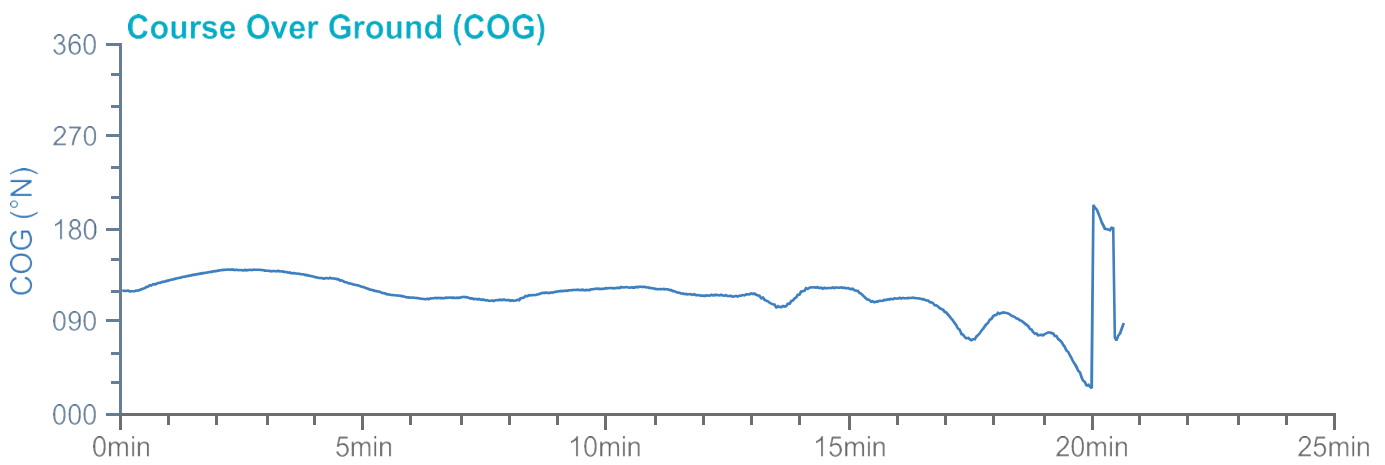
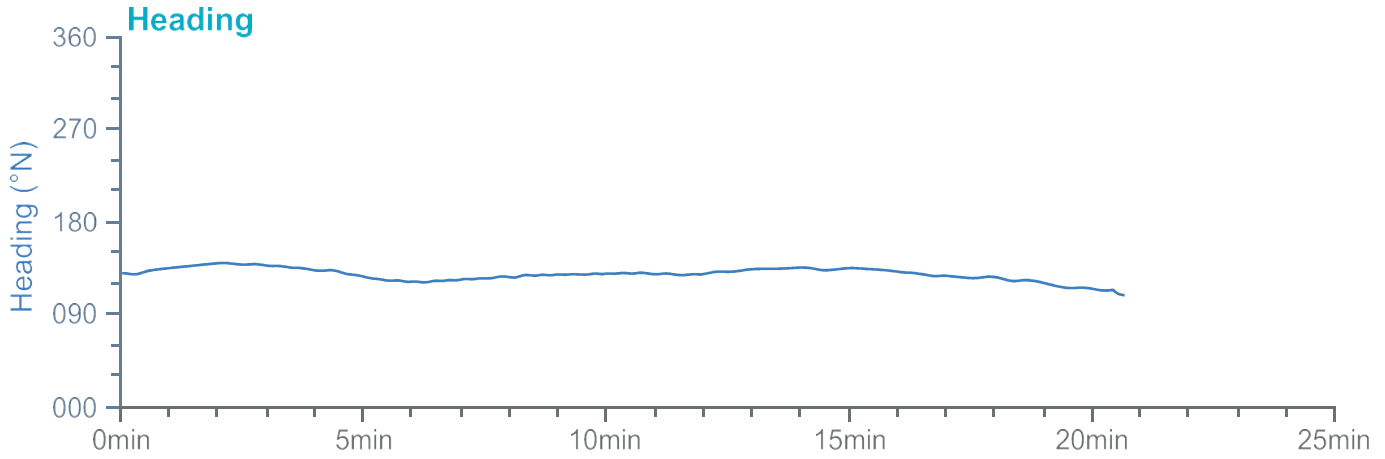
Environment

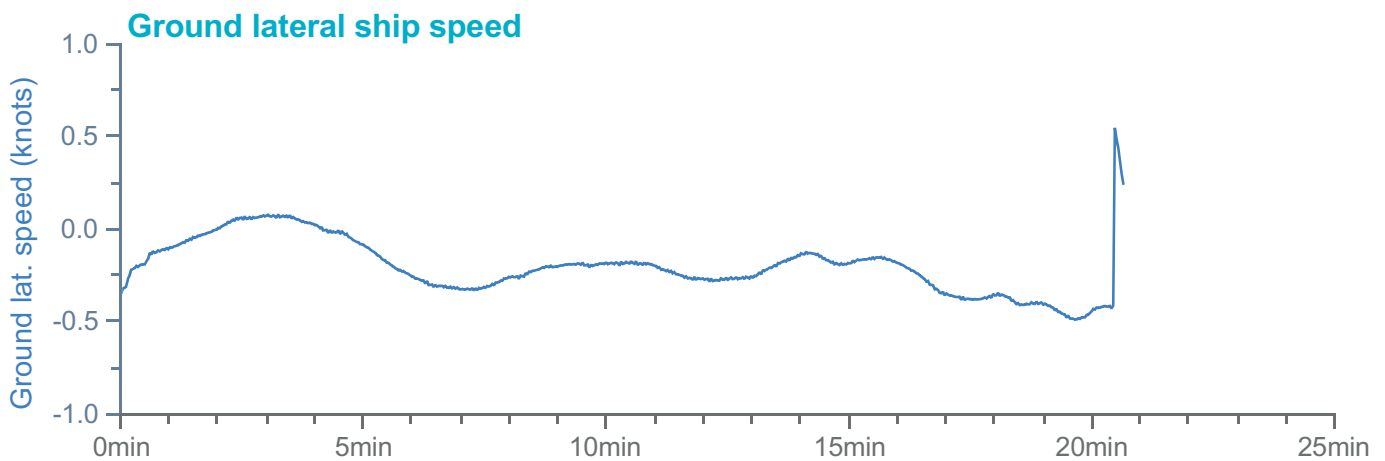
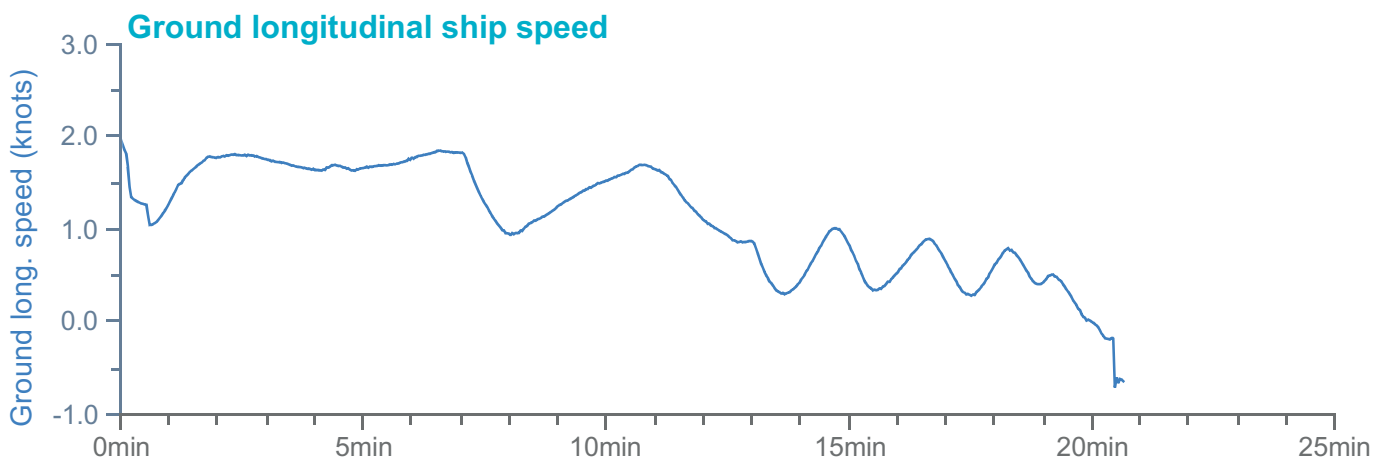
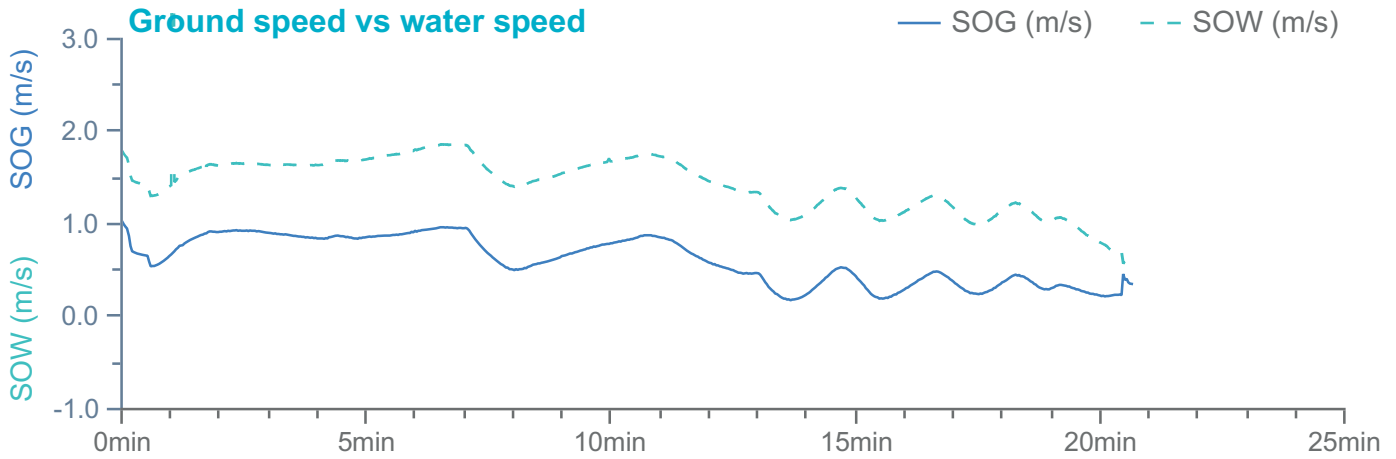
Thames Fisher



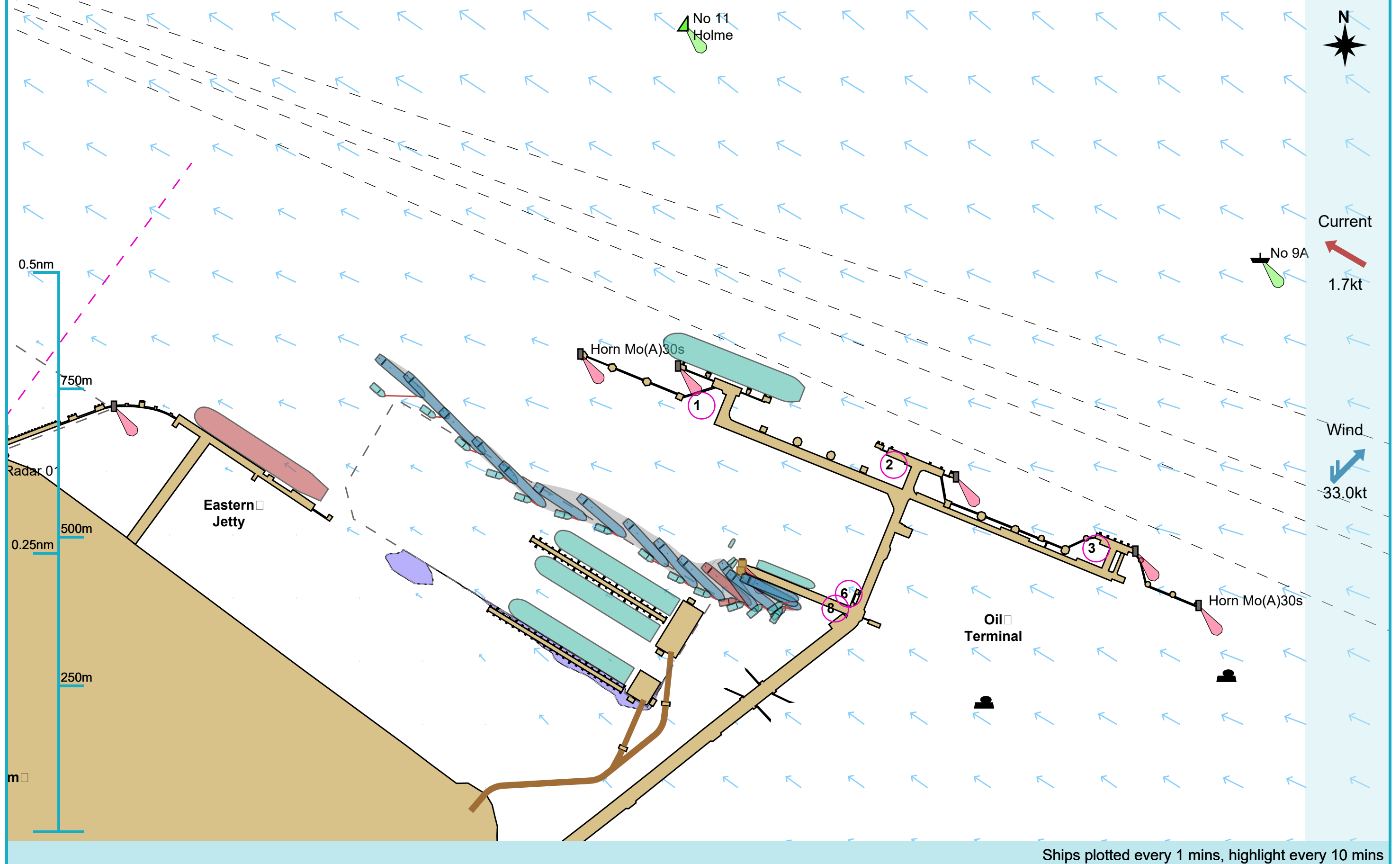






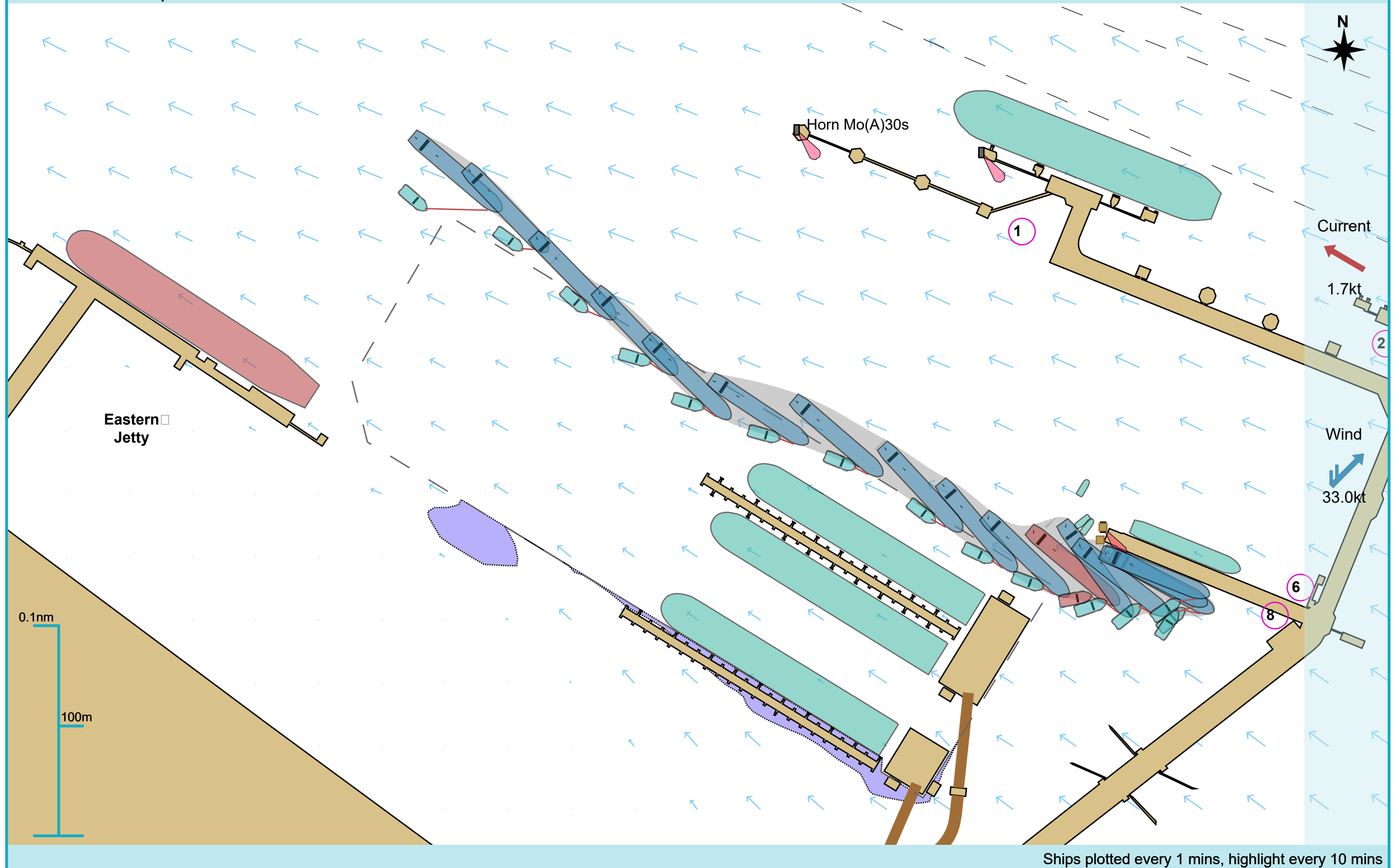


Manoeuvre track plot

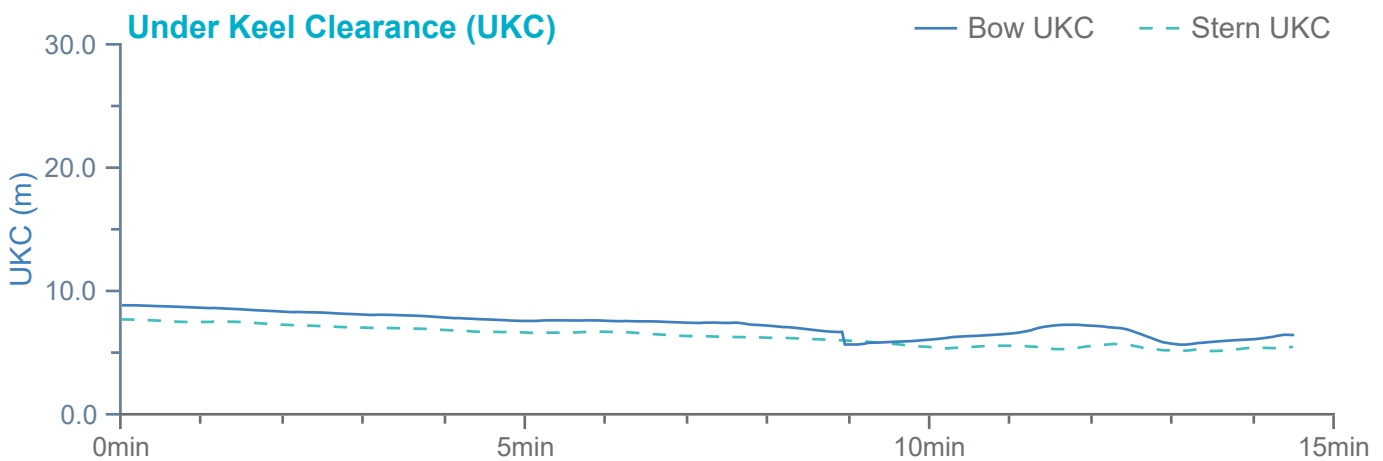
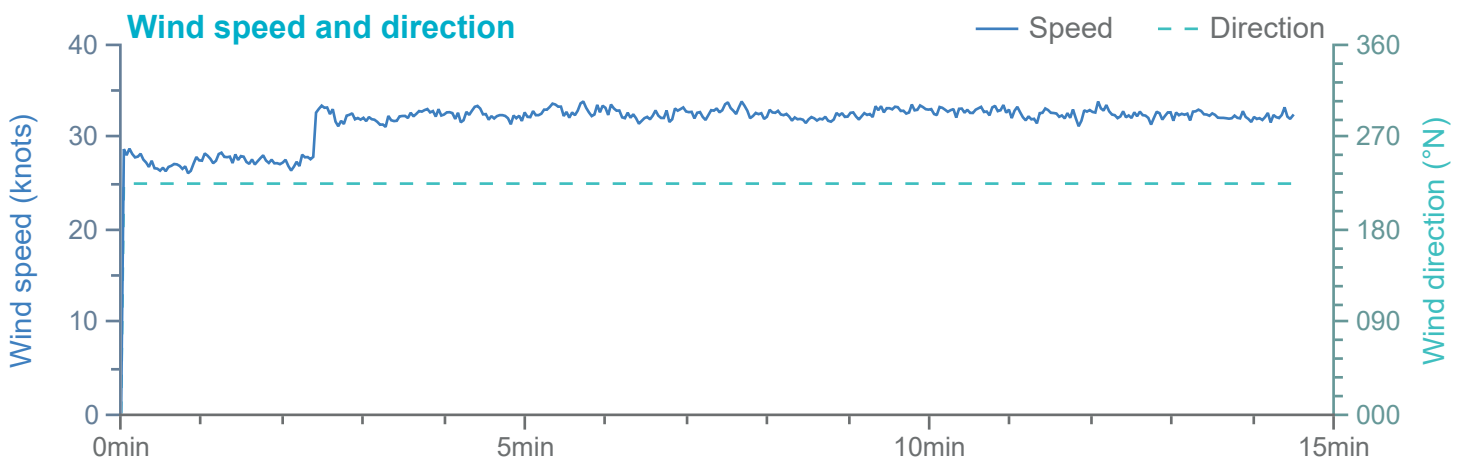
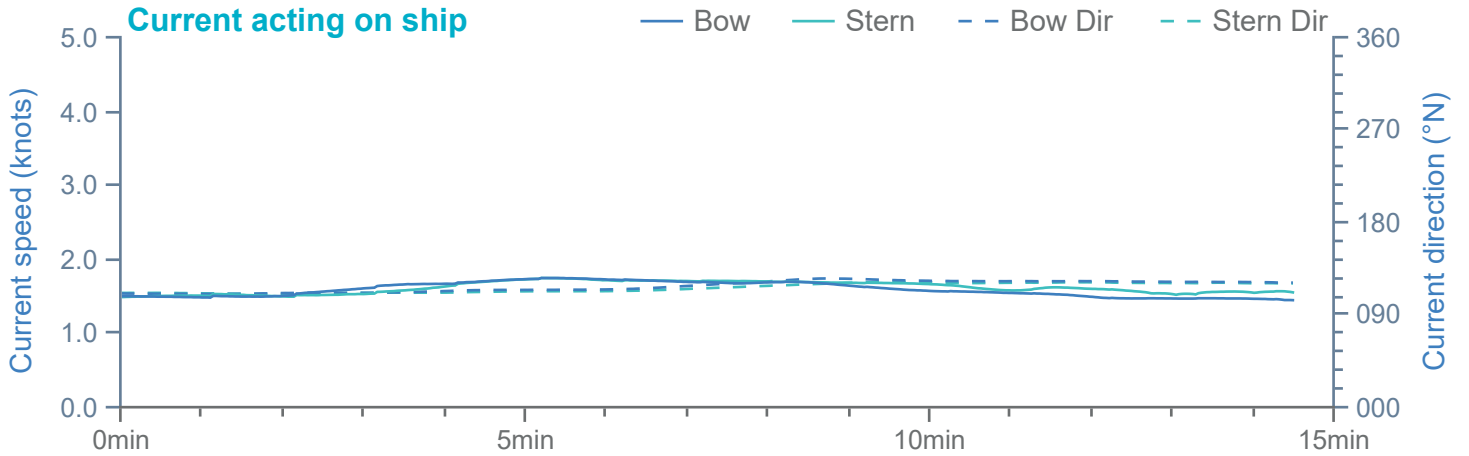


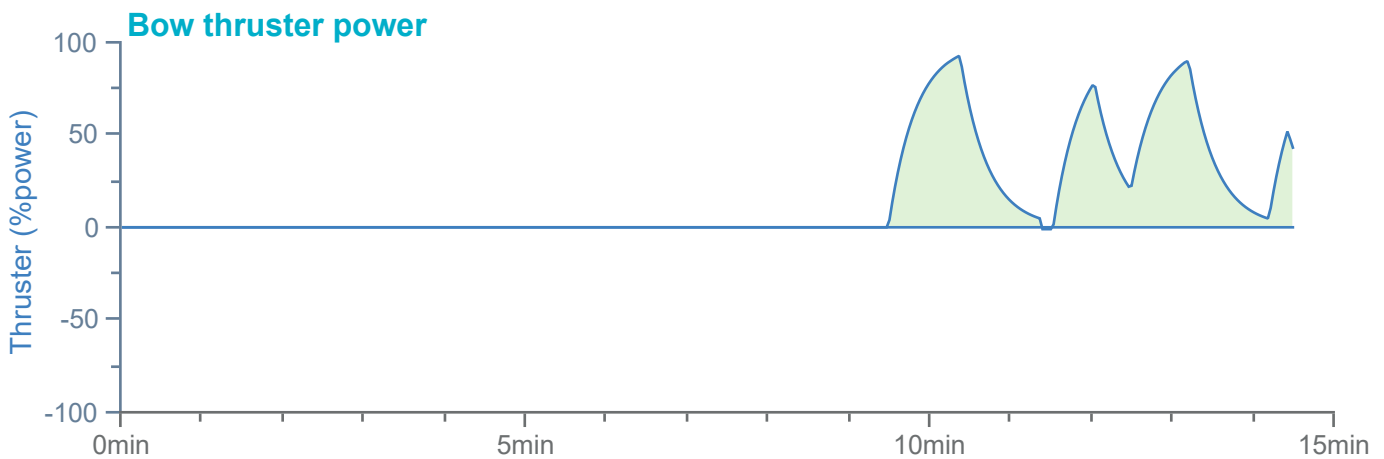
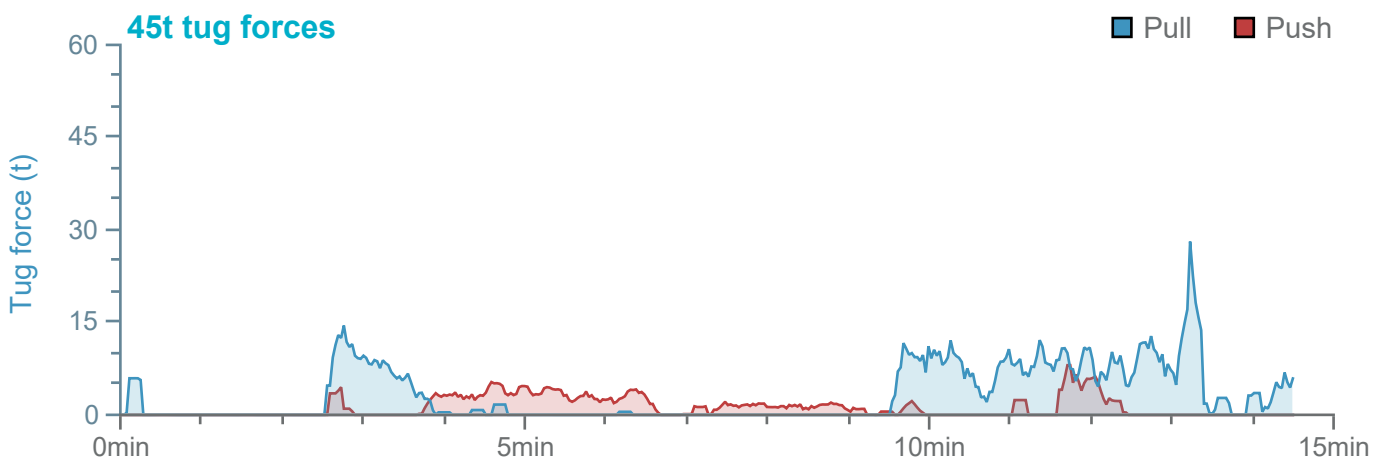
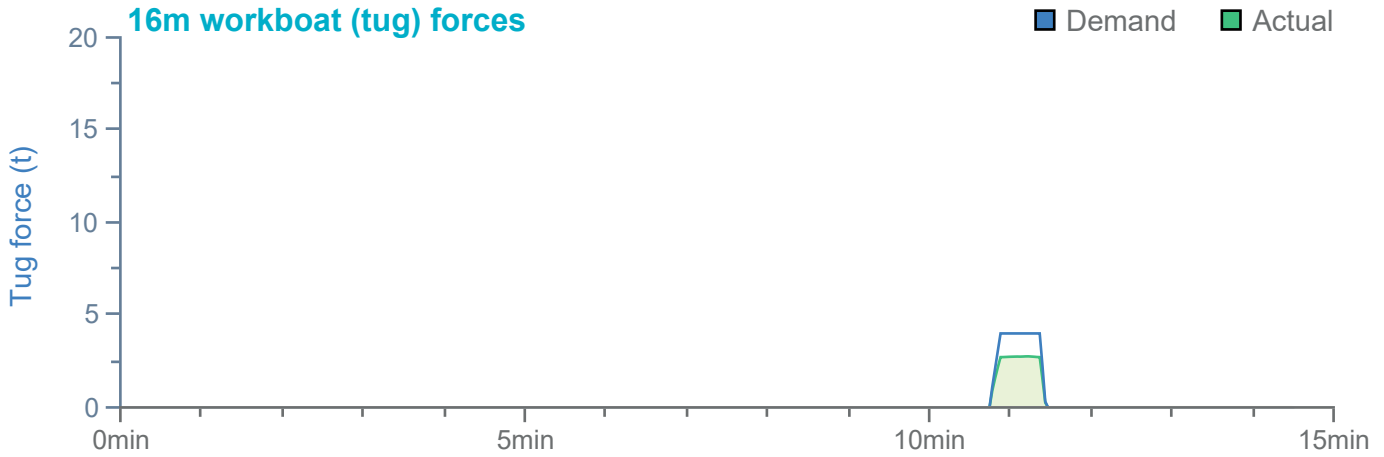
Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

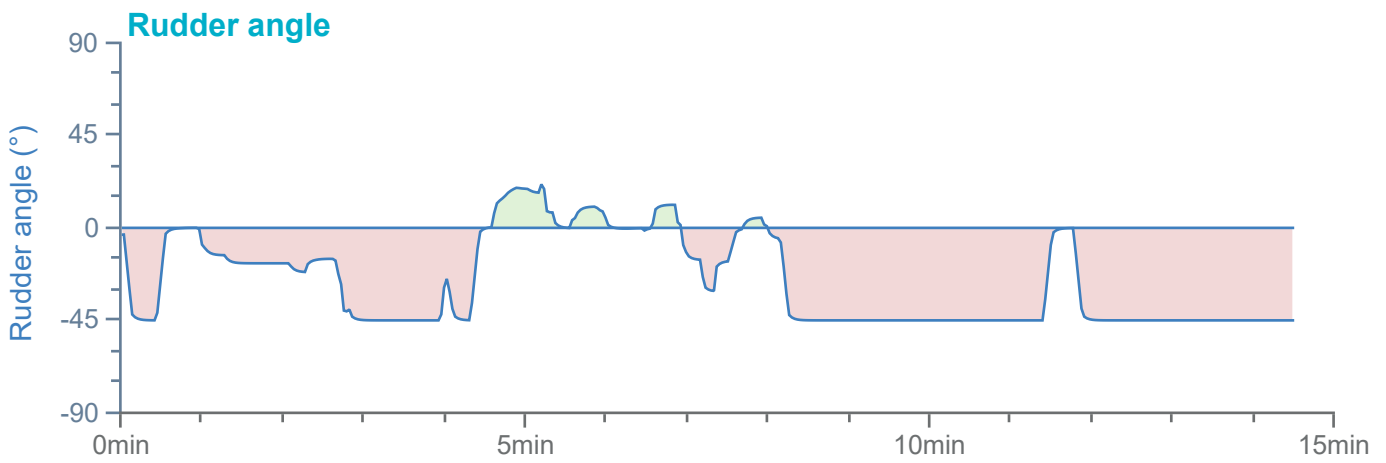
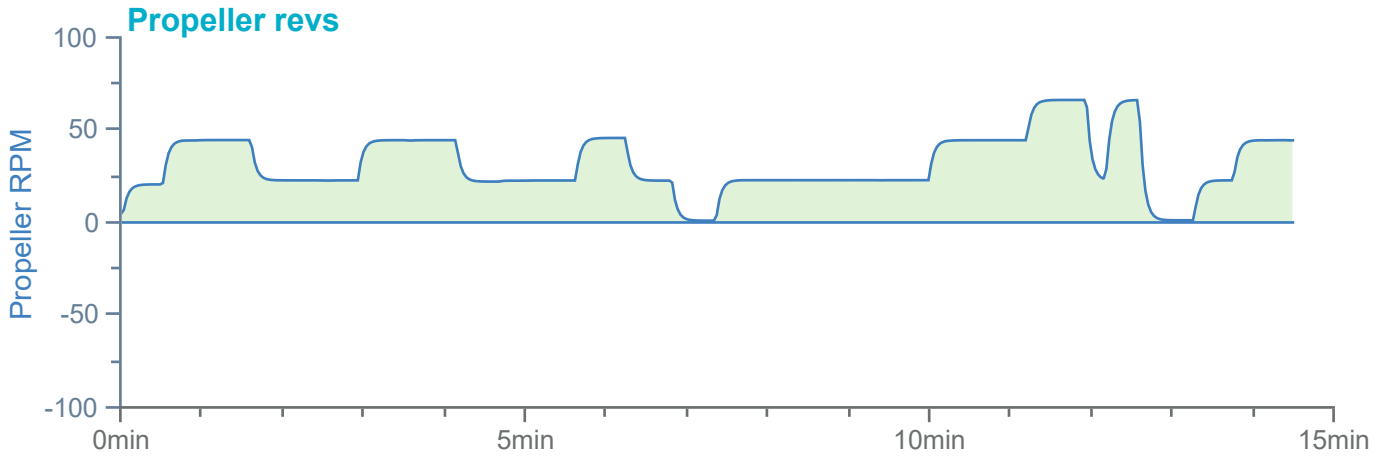


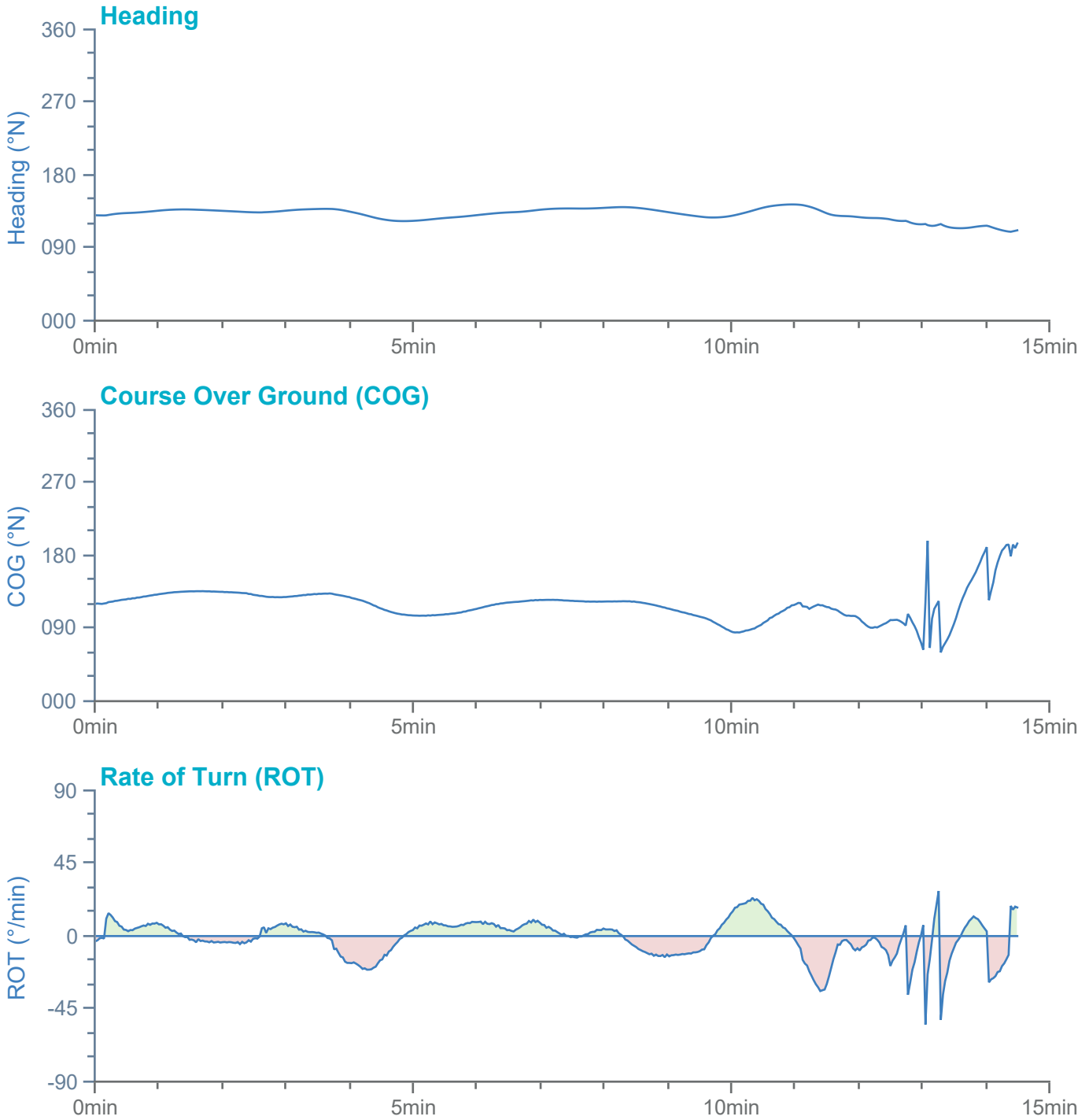


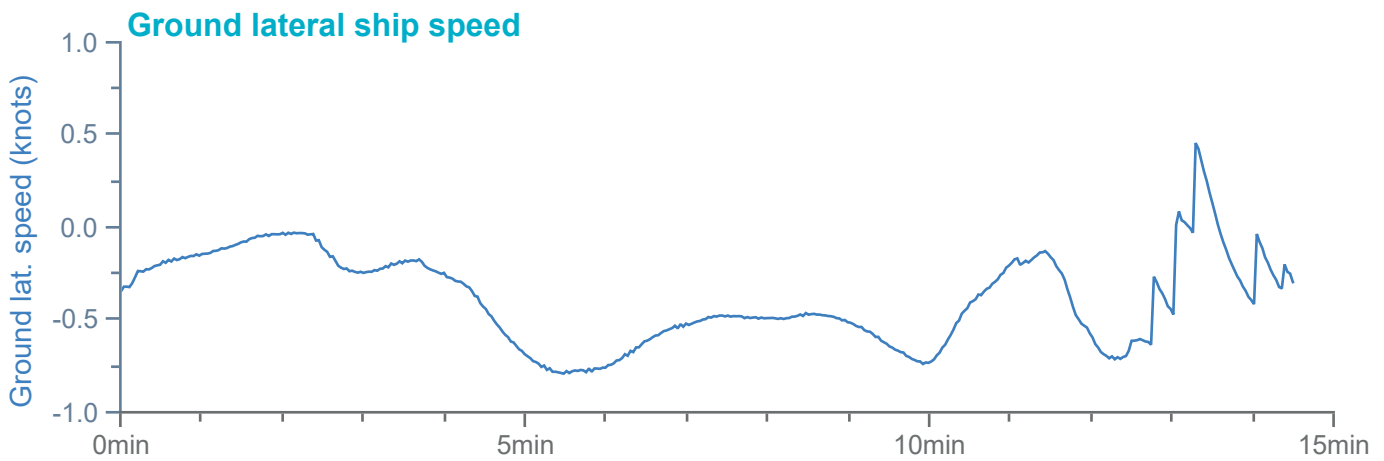
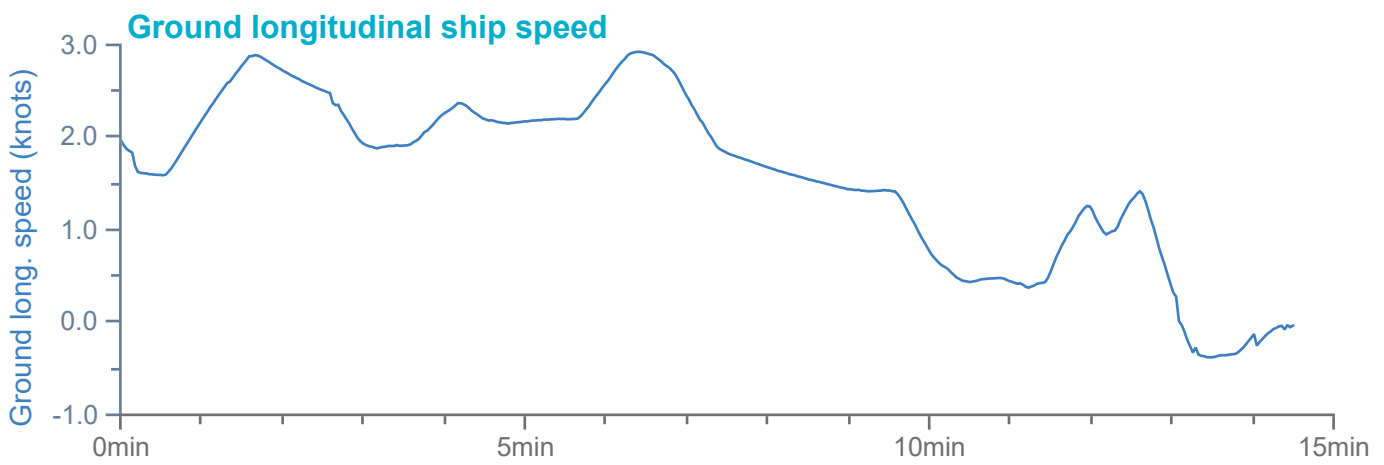
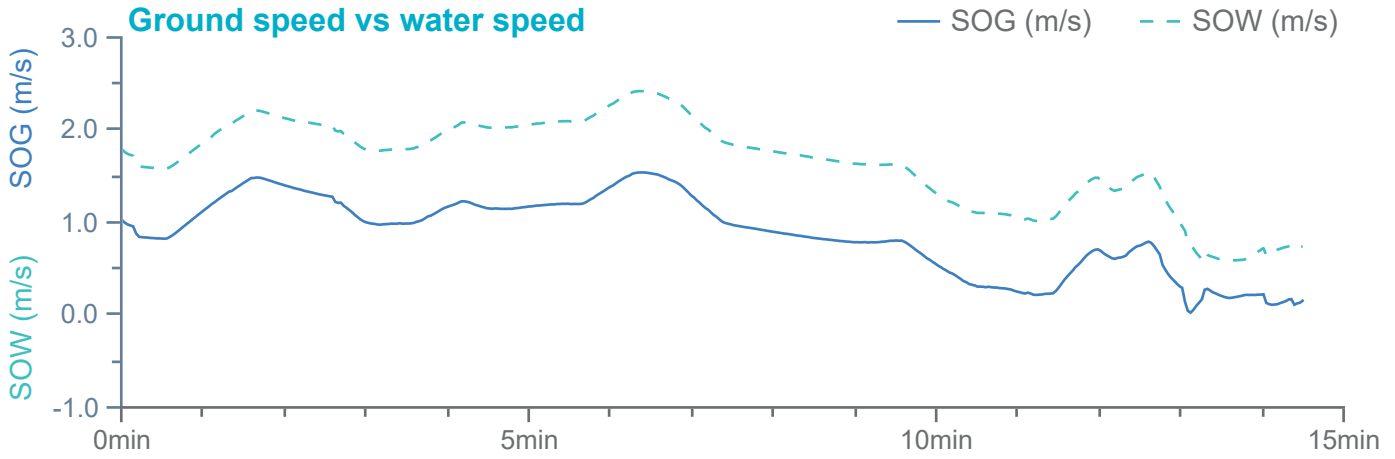
Summary

Environment

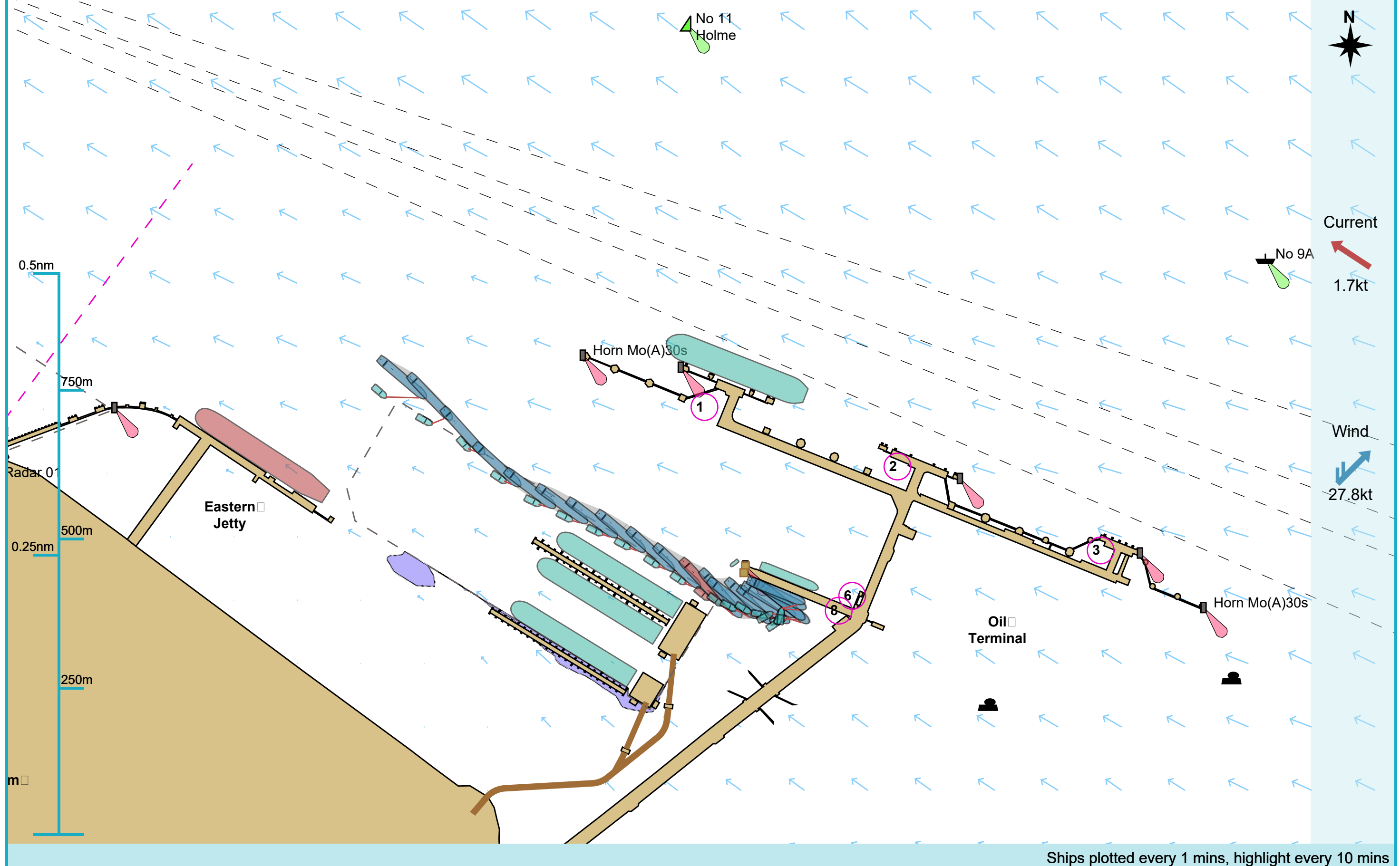
104m x 15m Product Tanker





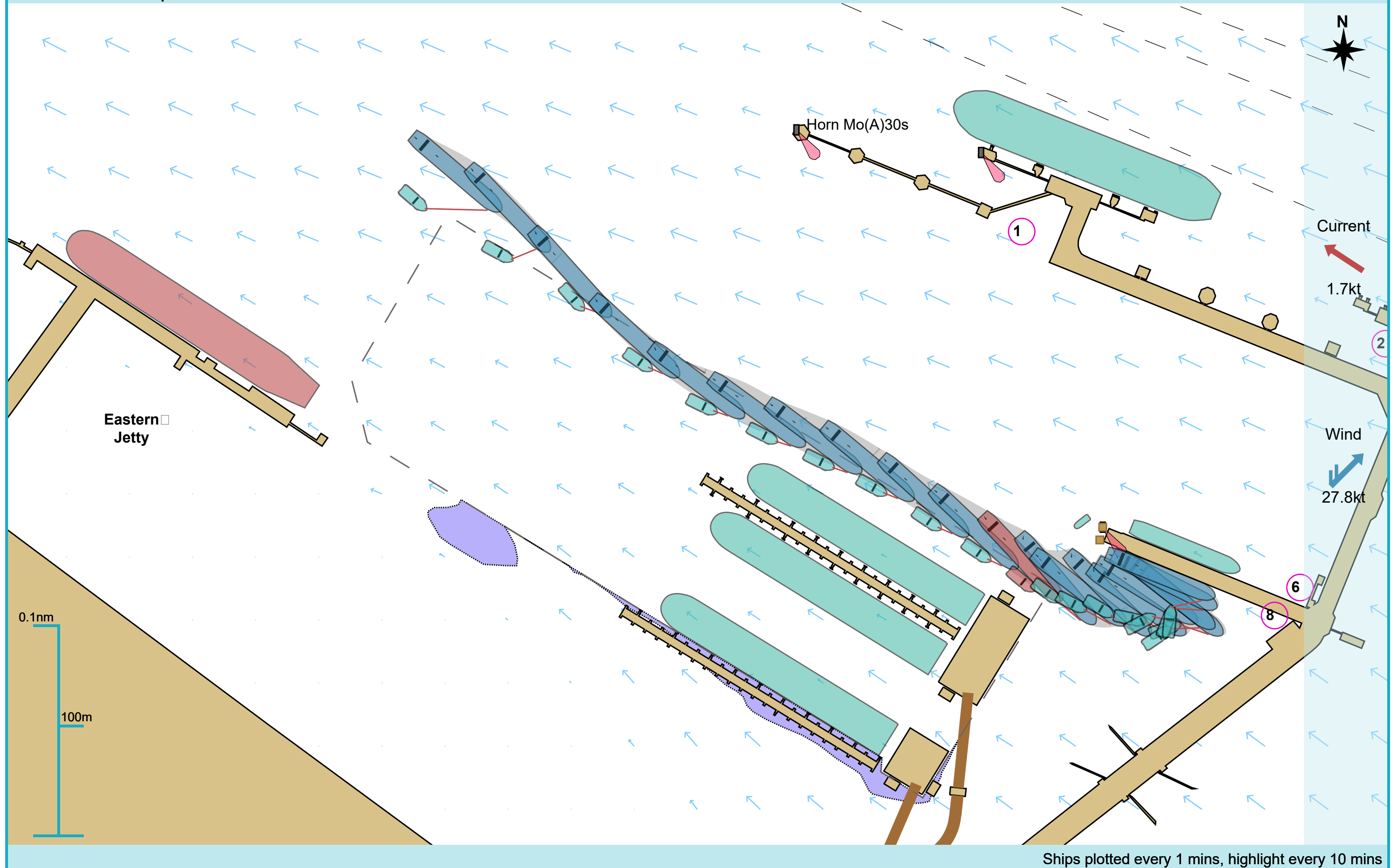


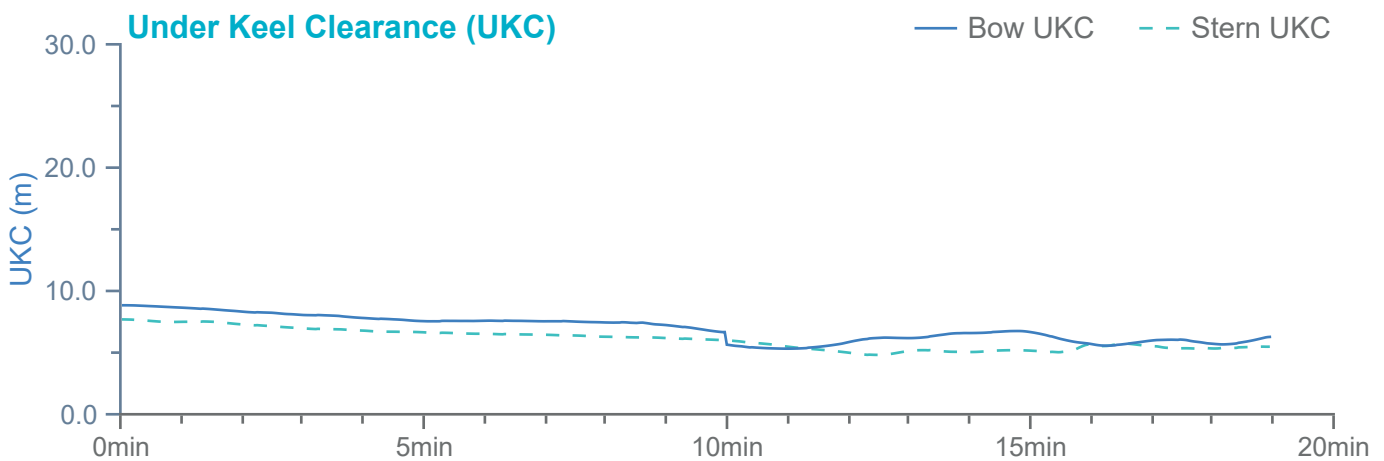
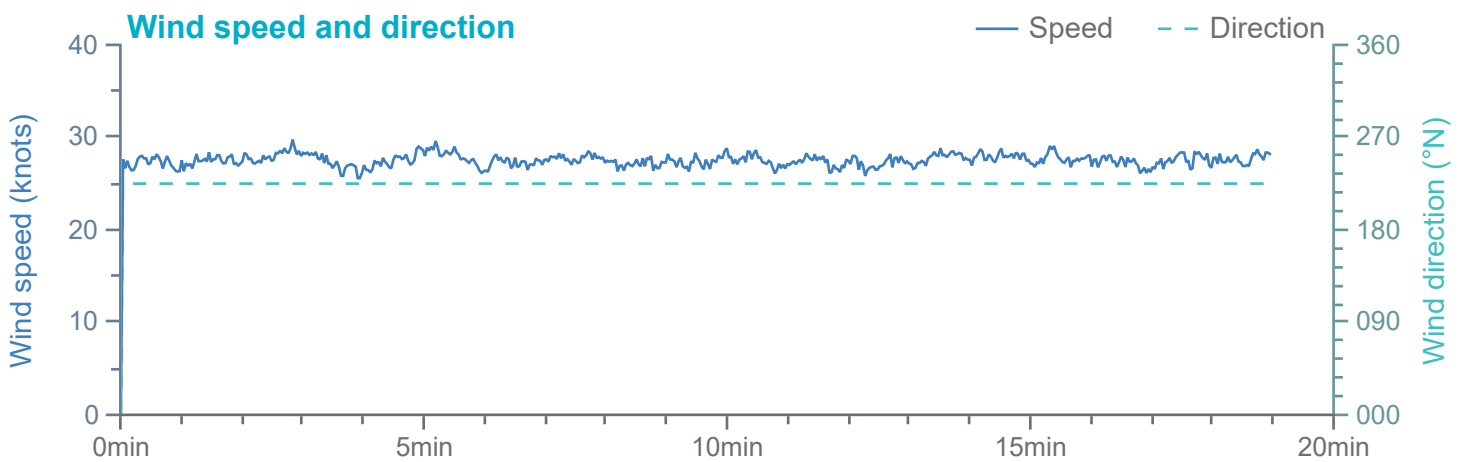
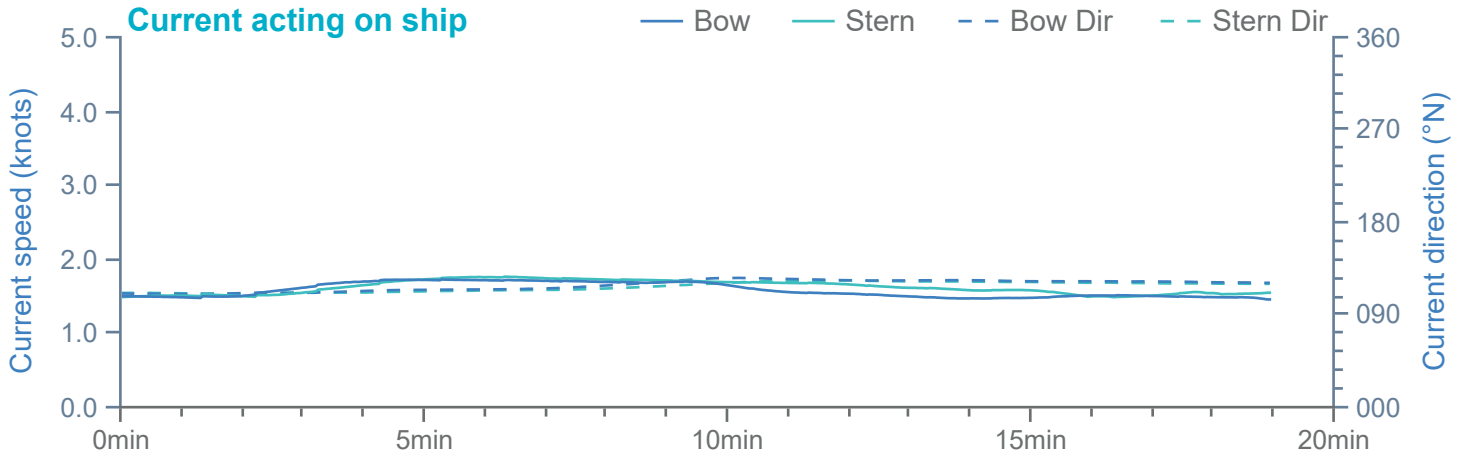
Manoeuvre track plot



Ships plotted every 1 mins, highlight every 10 mins

Manoeuvre track plot

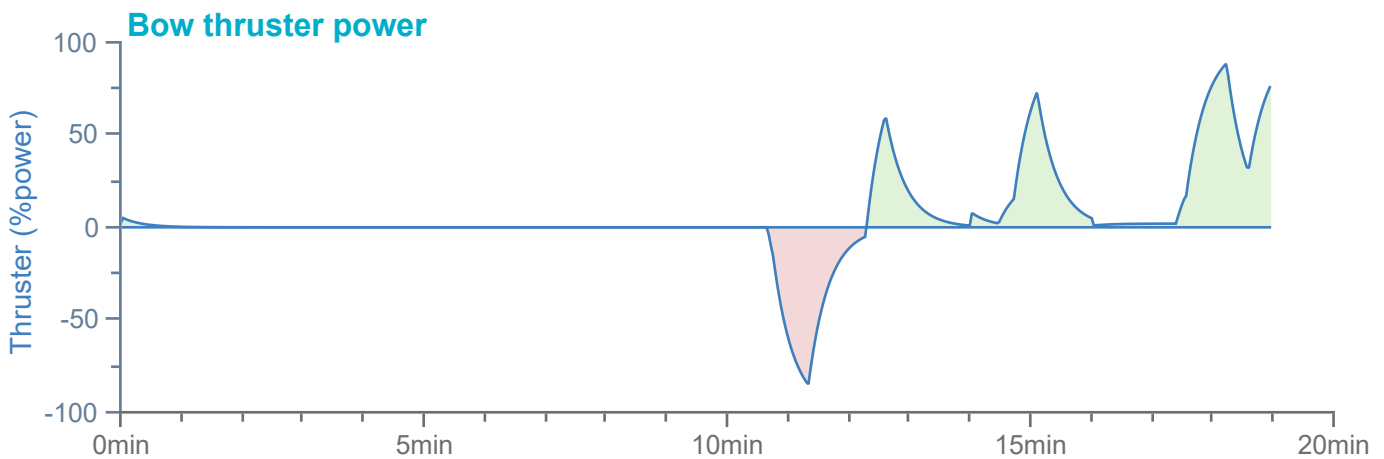
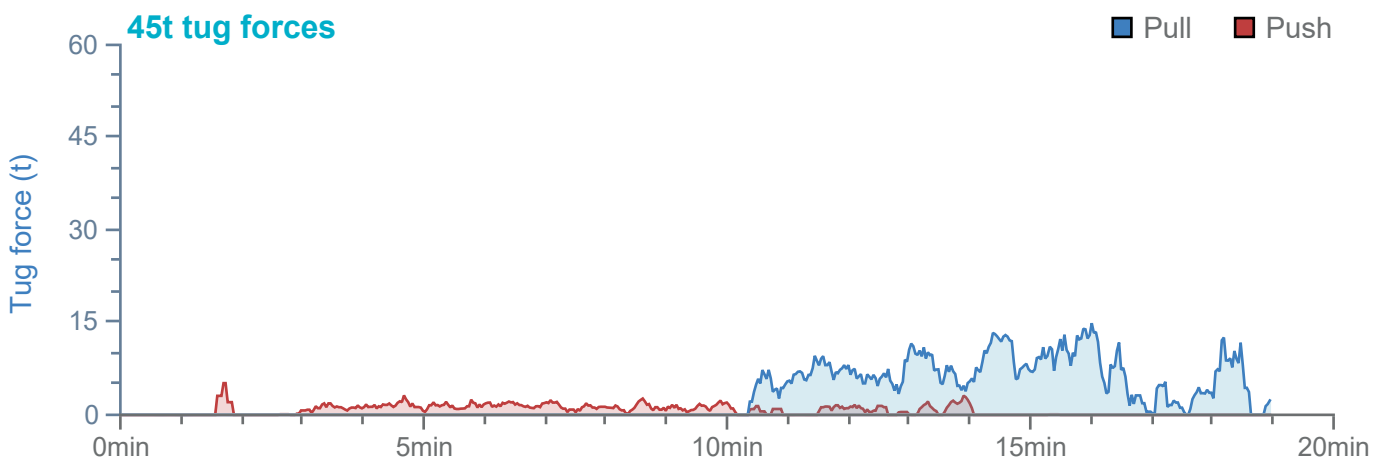
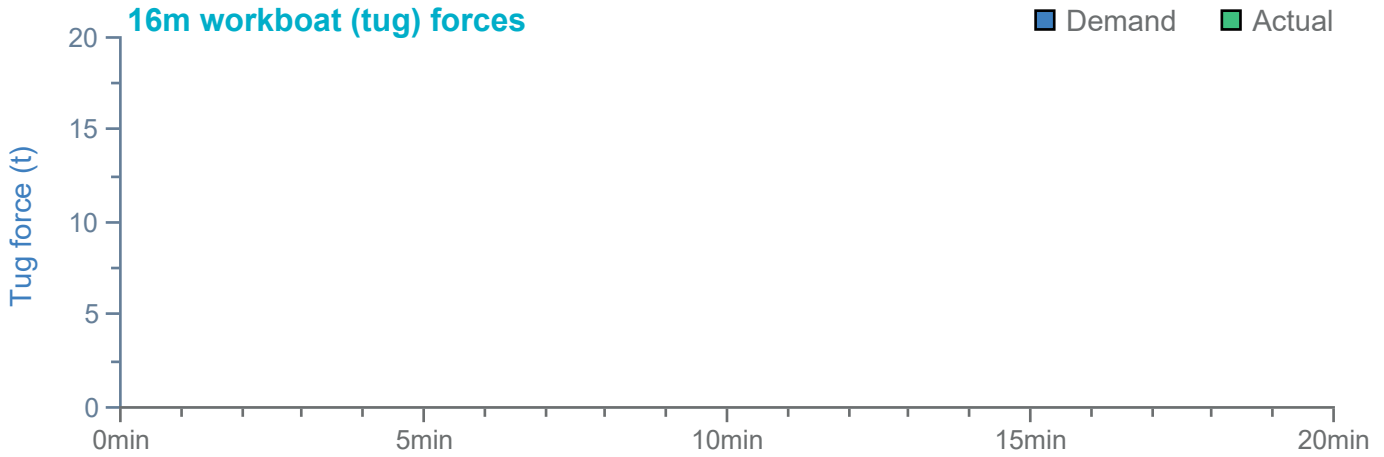




Summary

Environment

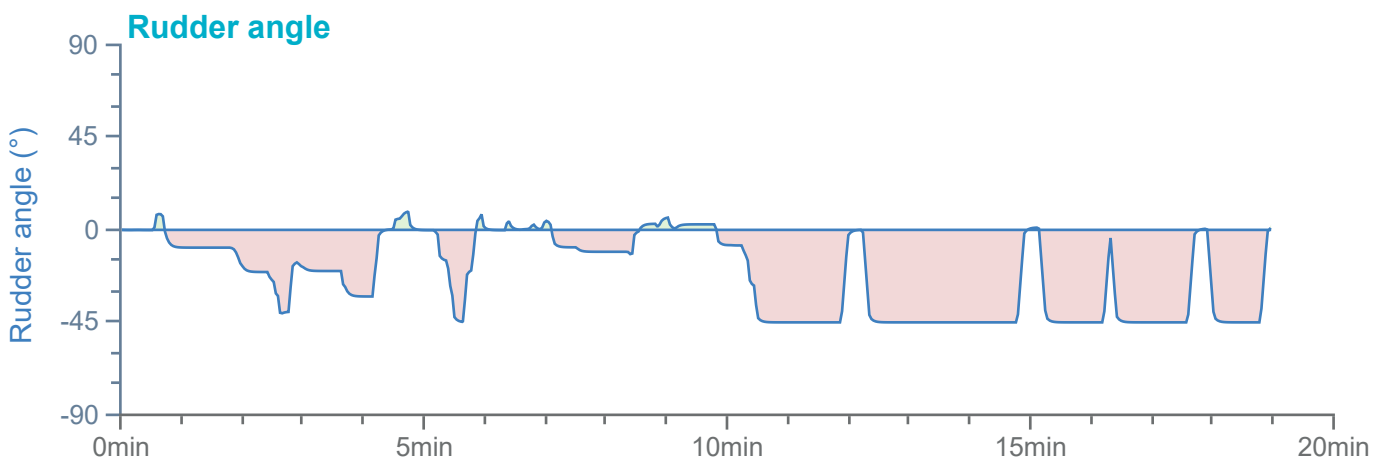
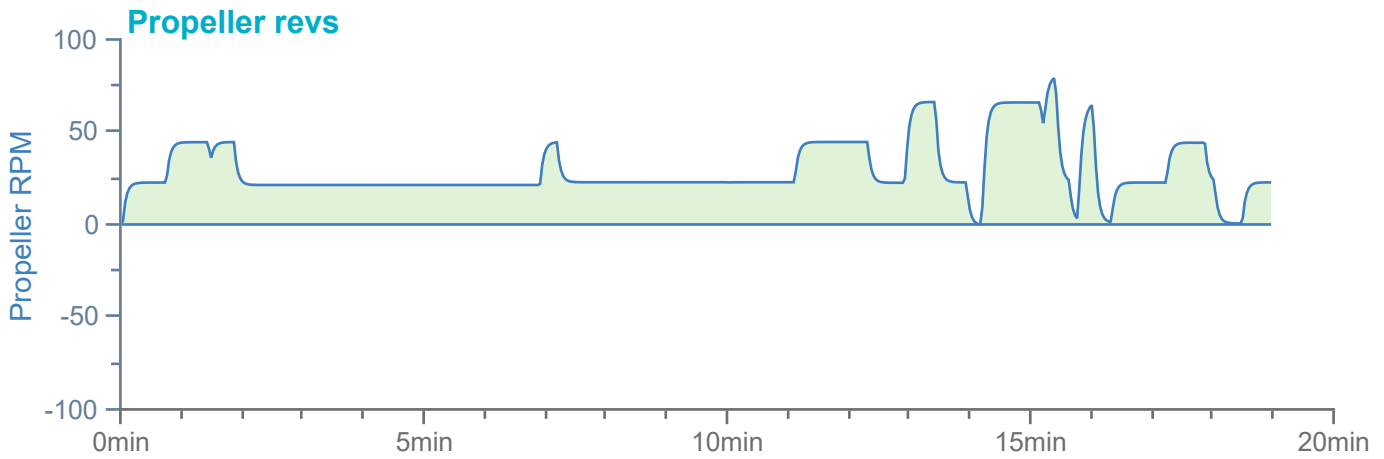
104m x 15m Product Tanker

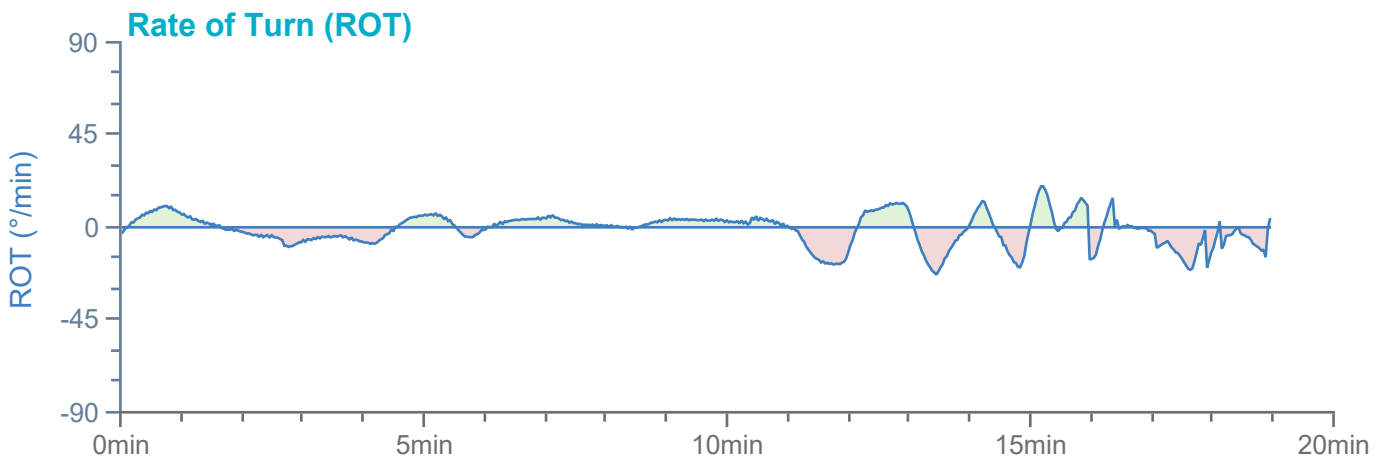
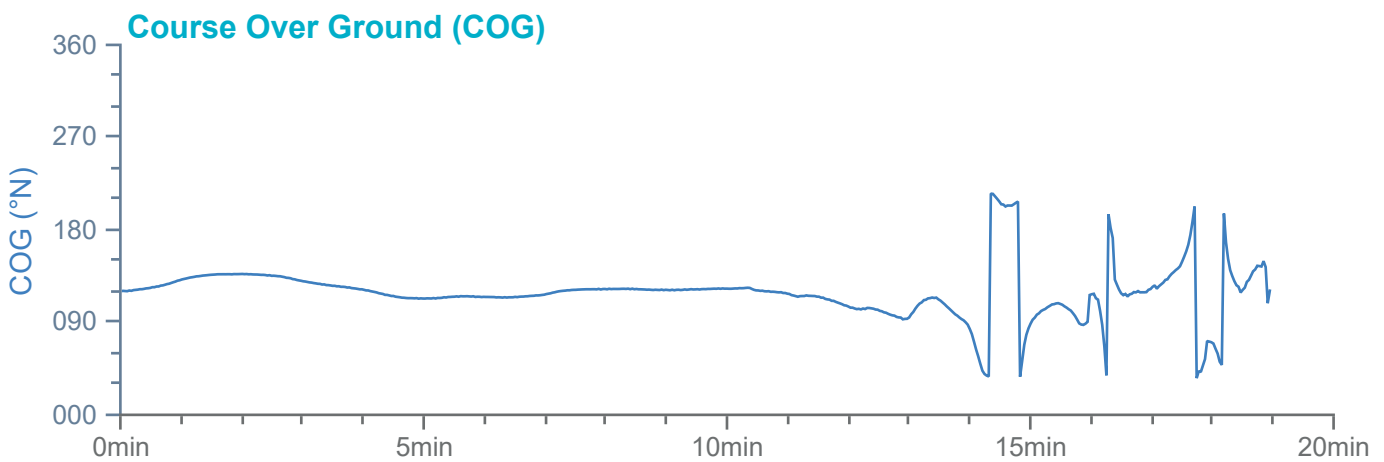
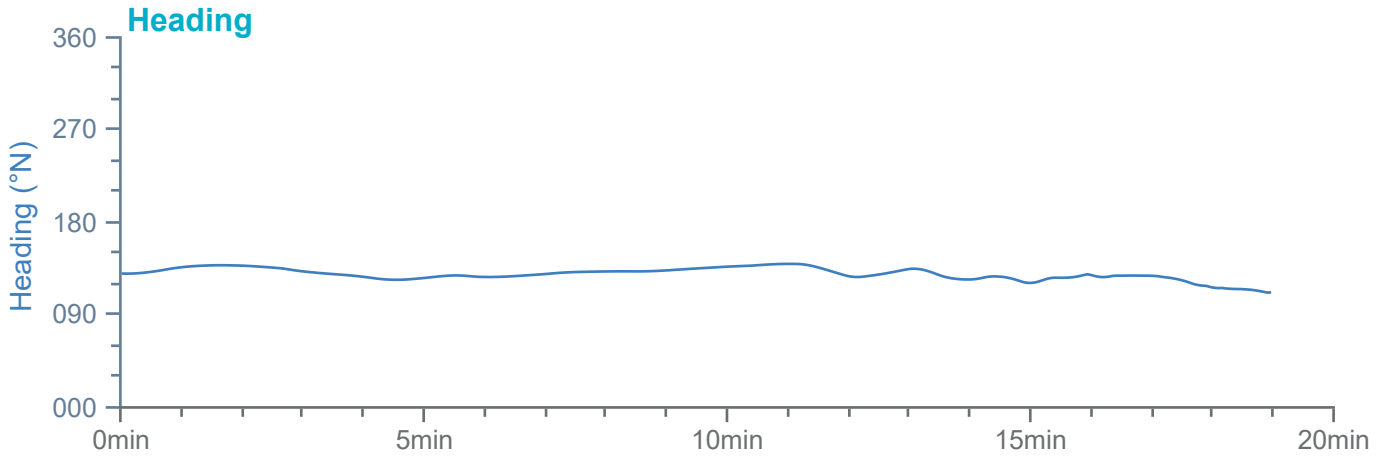


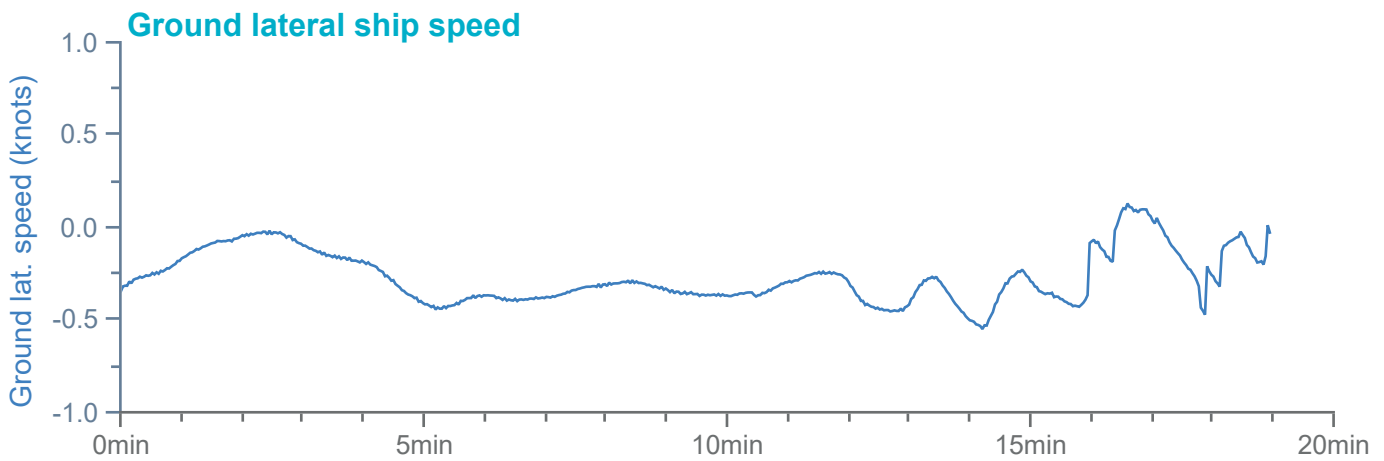
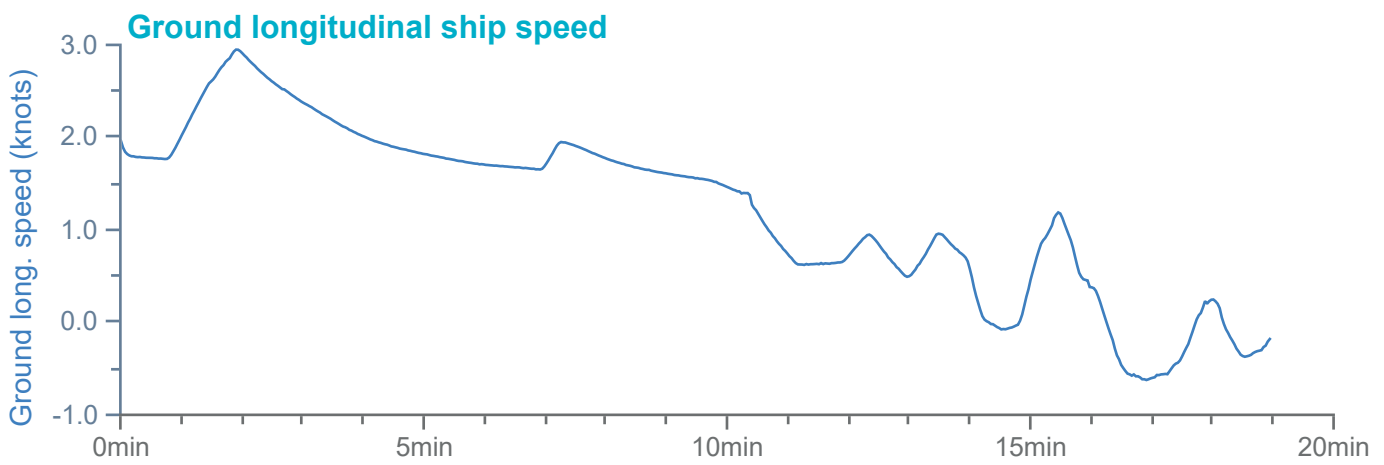
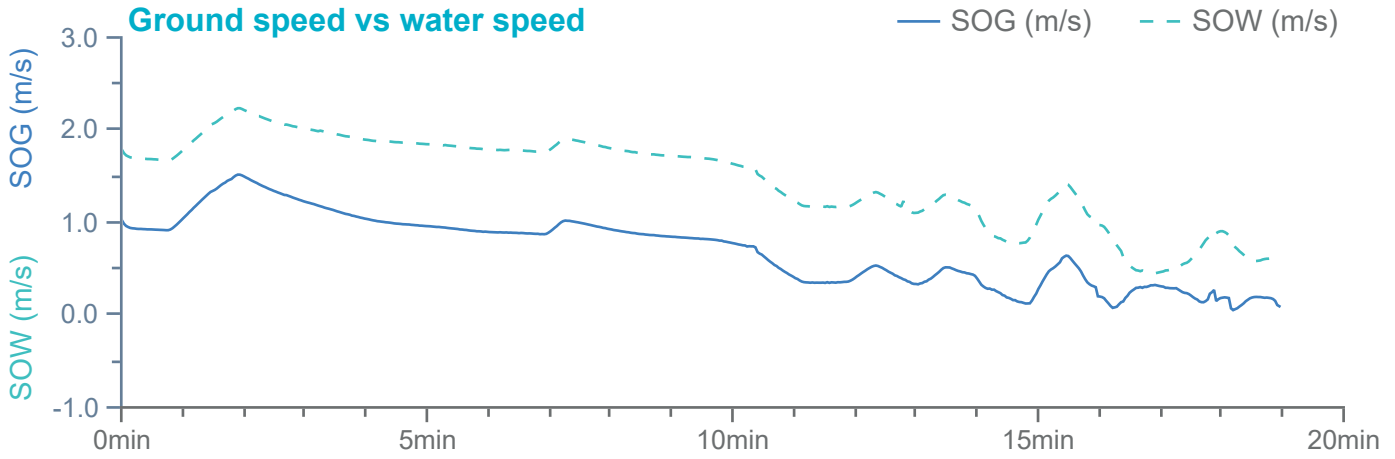
Summary

Environment

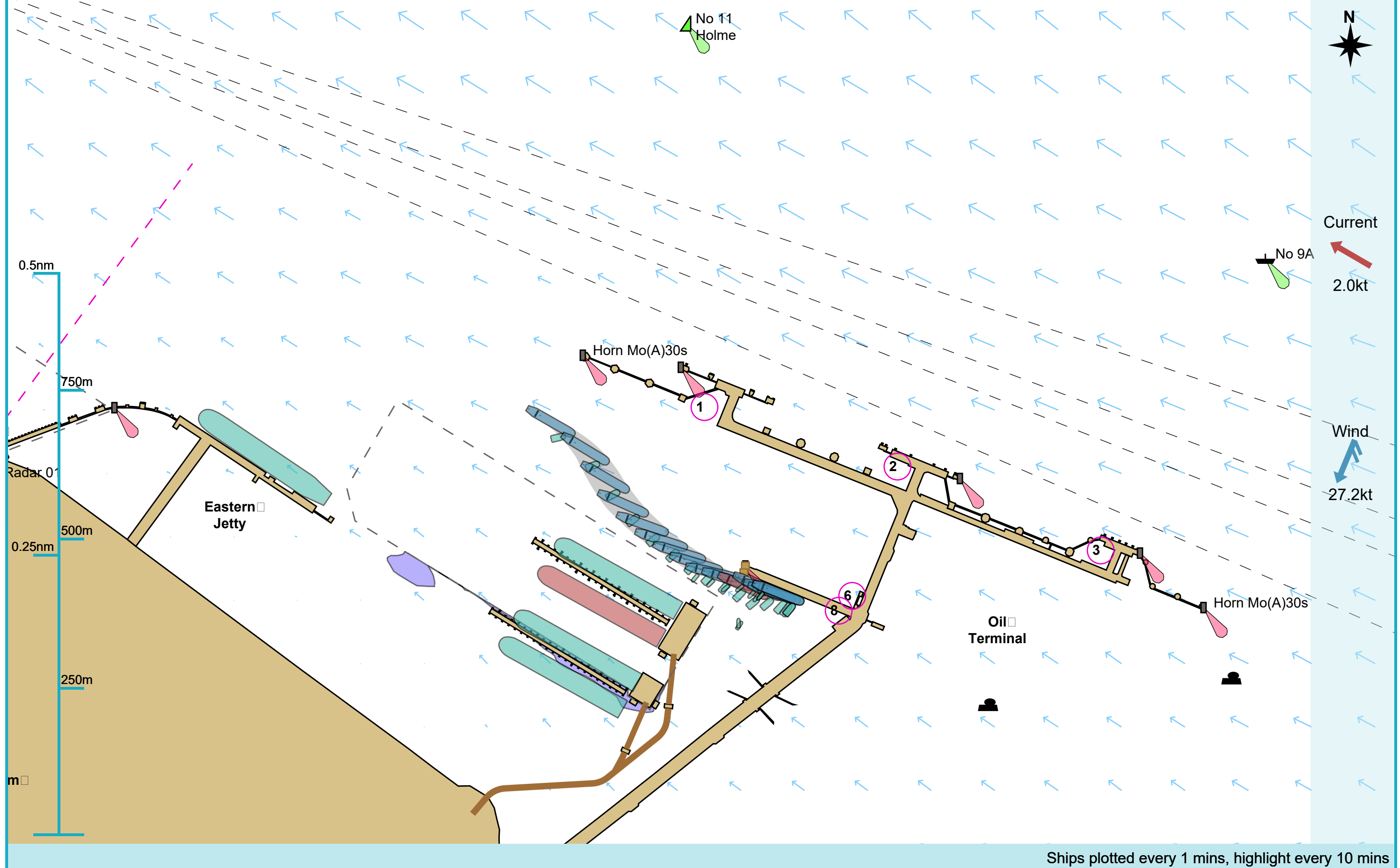
104m x 15m Product Tanker



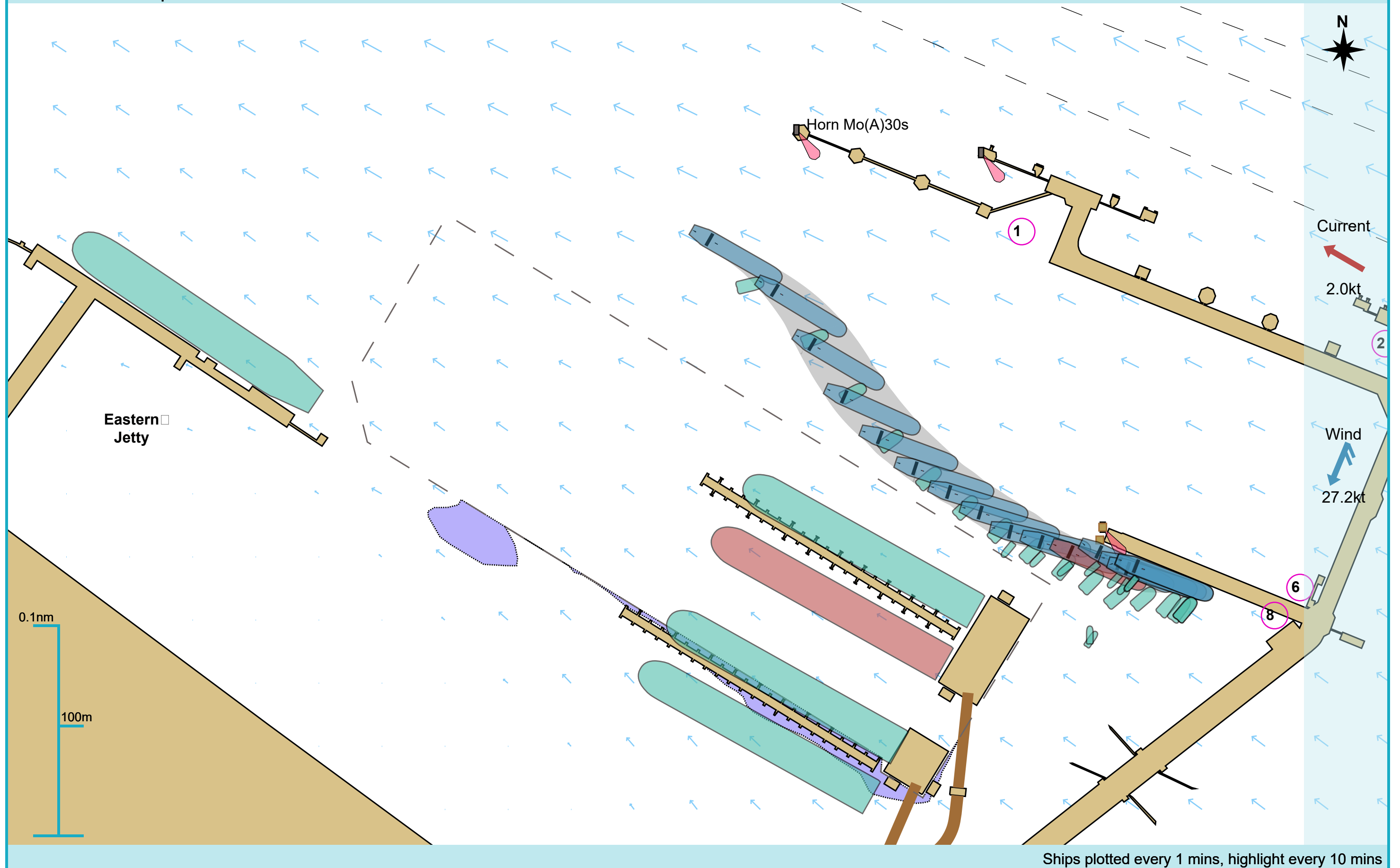




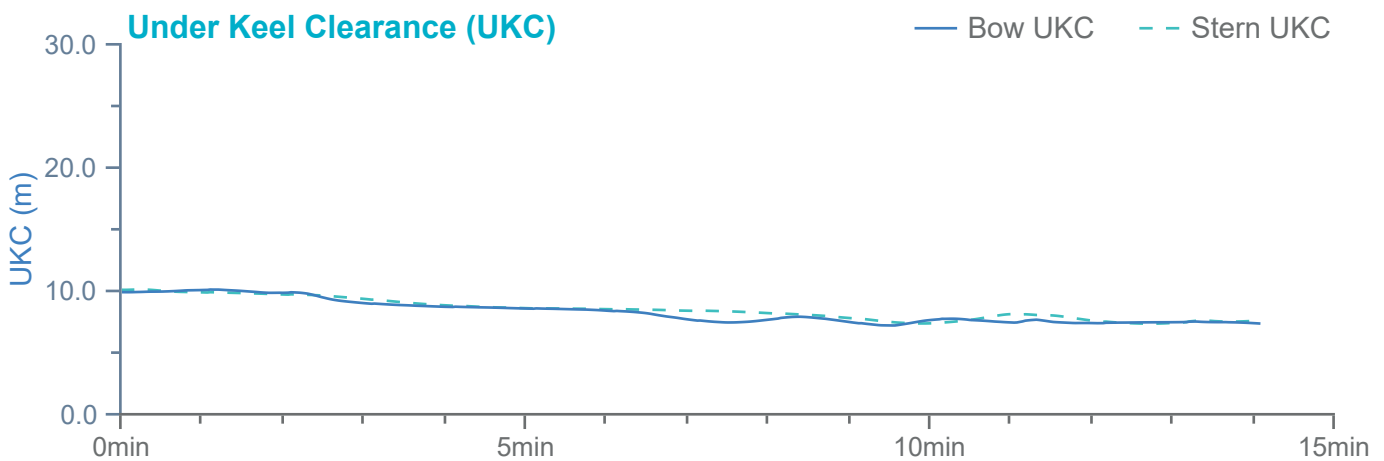
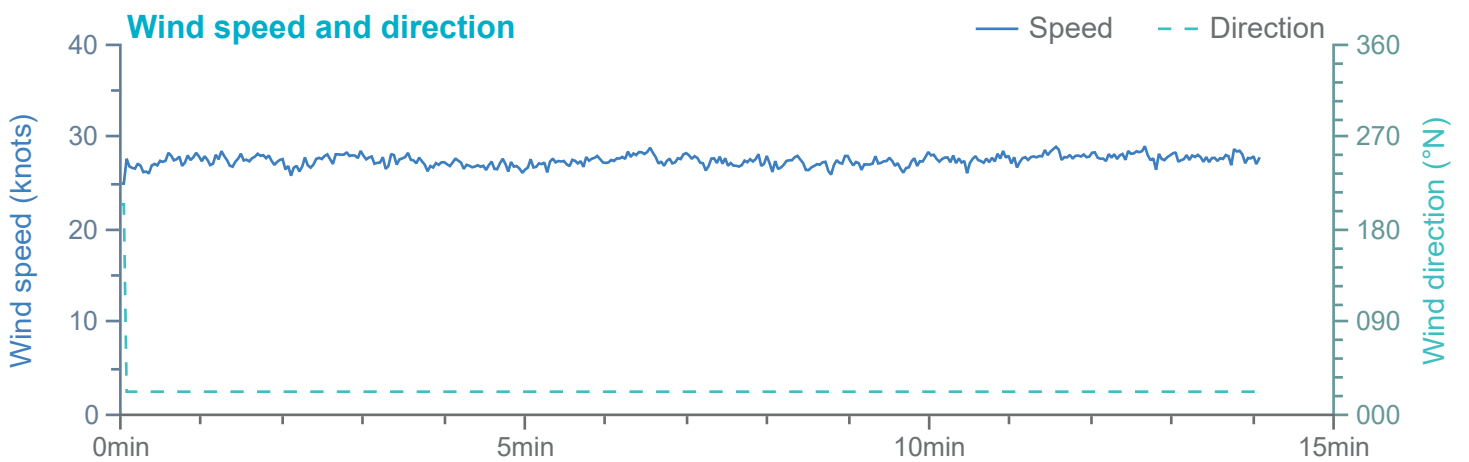
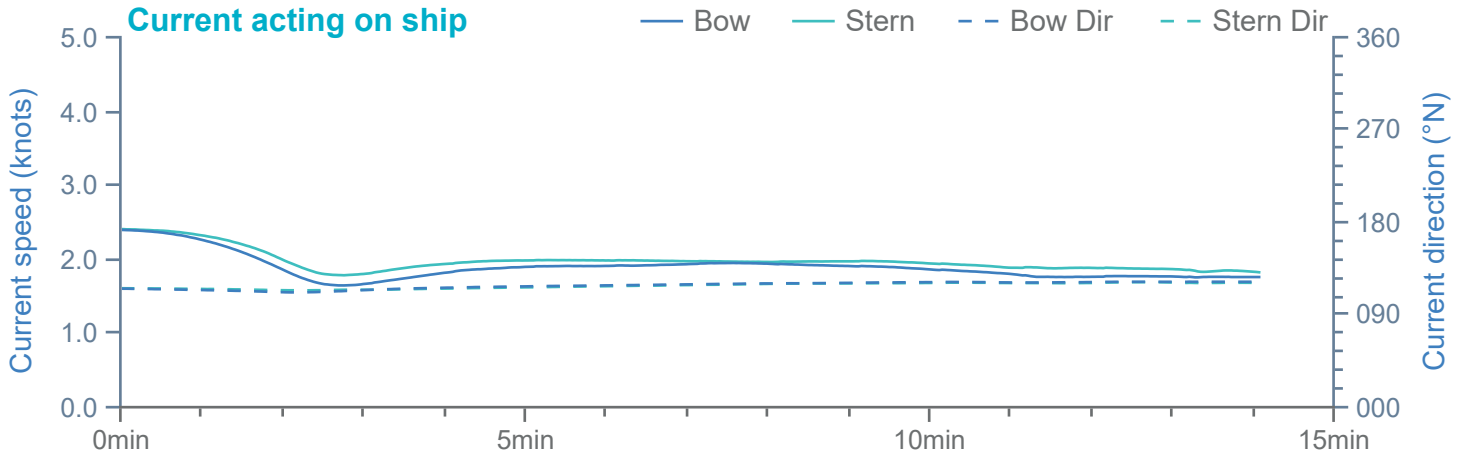
Manoeuvre track plot

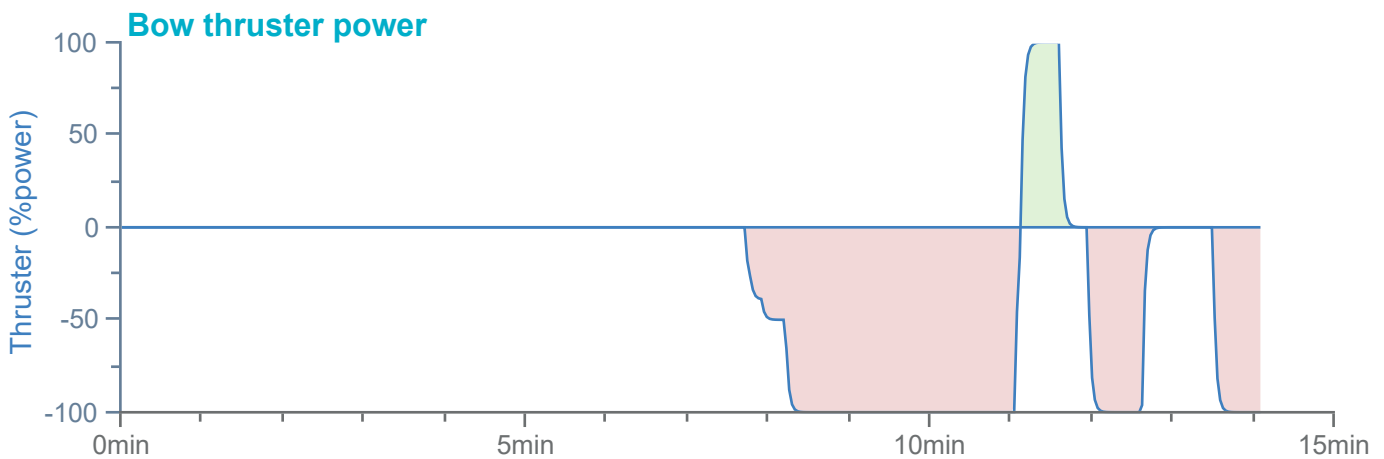
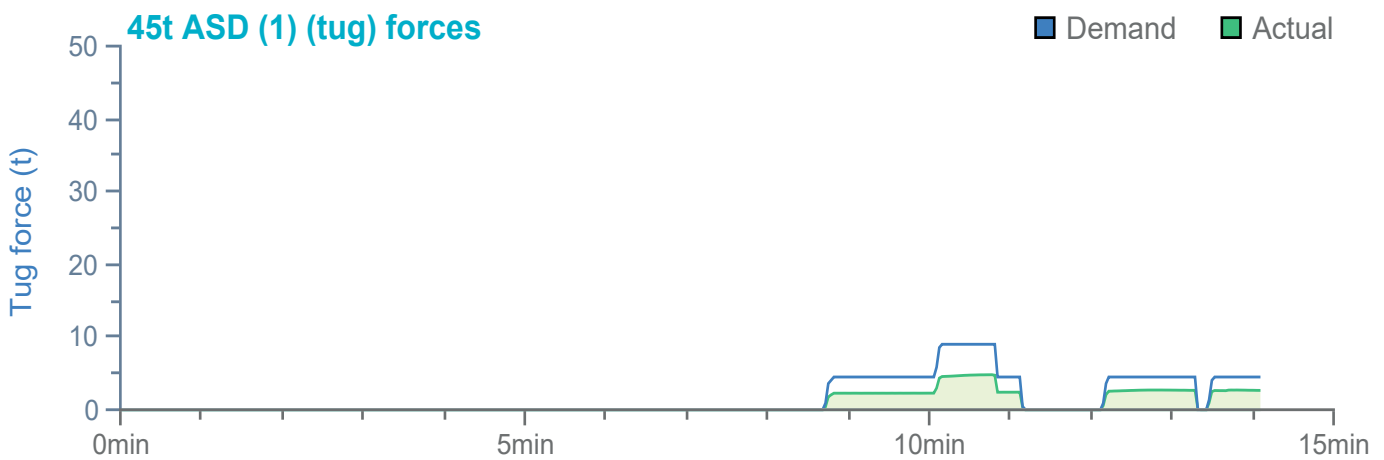
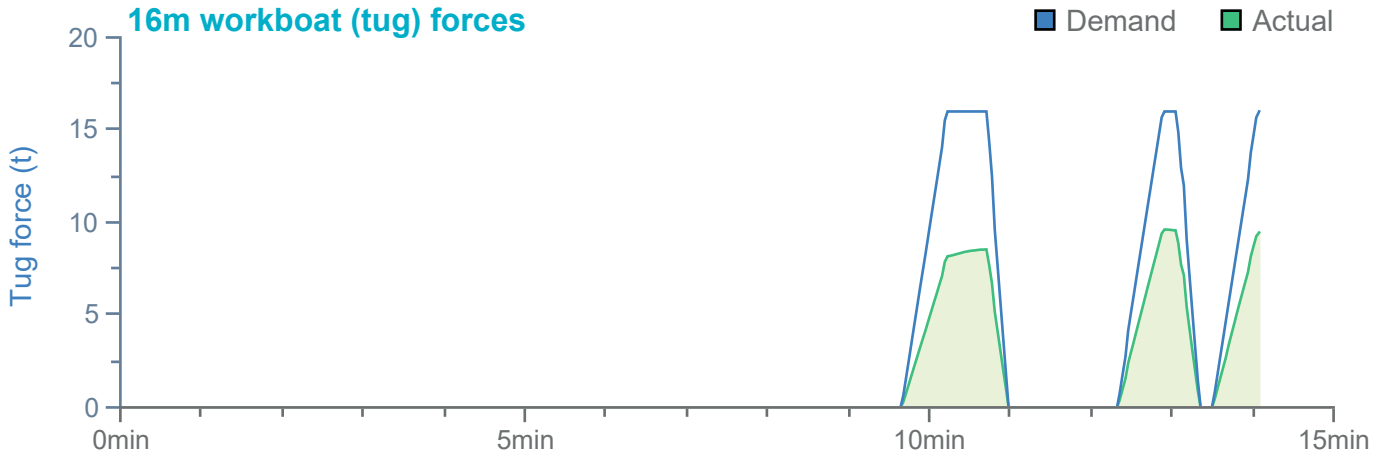


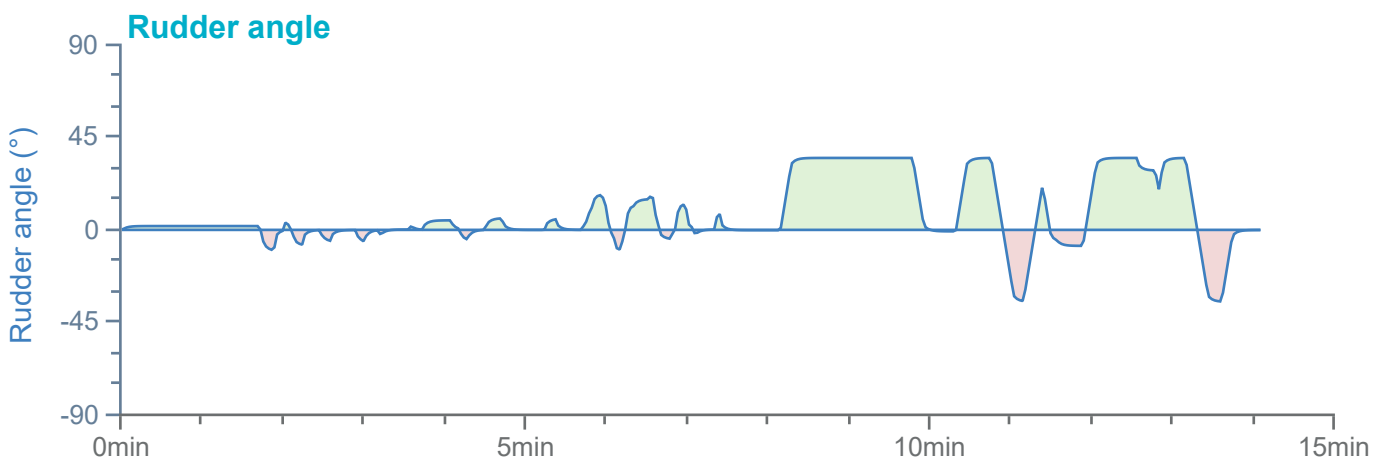
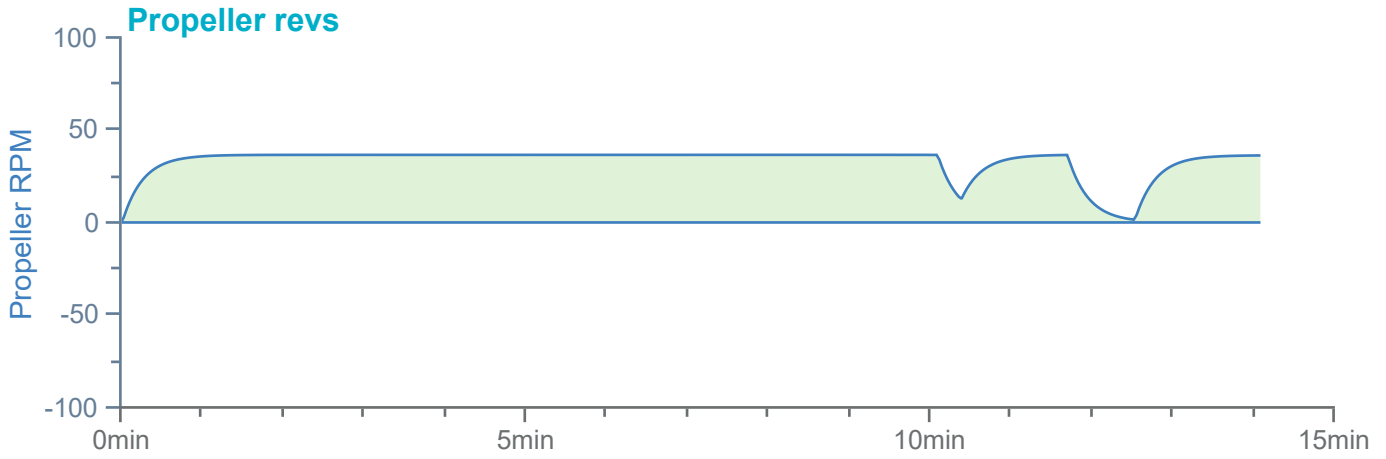
Manoeuvre track plot

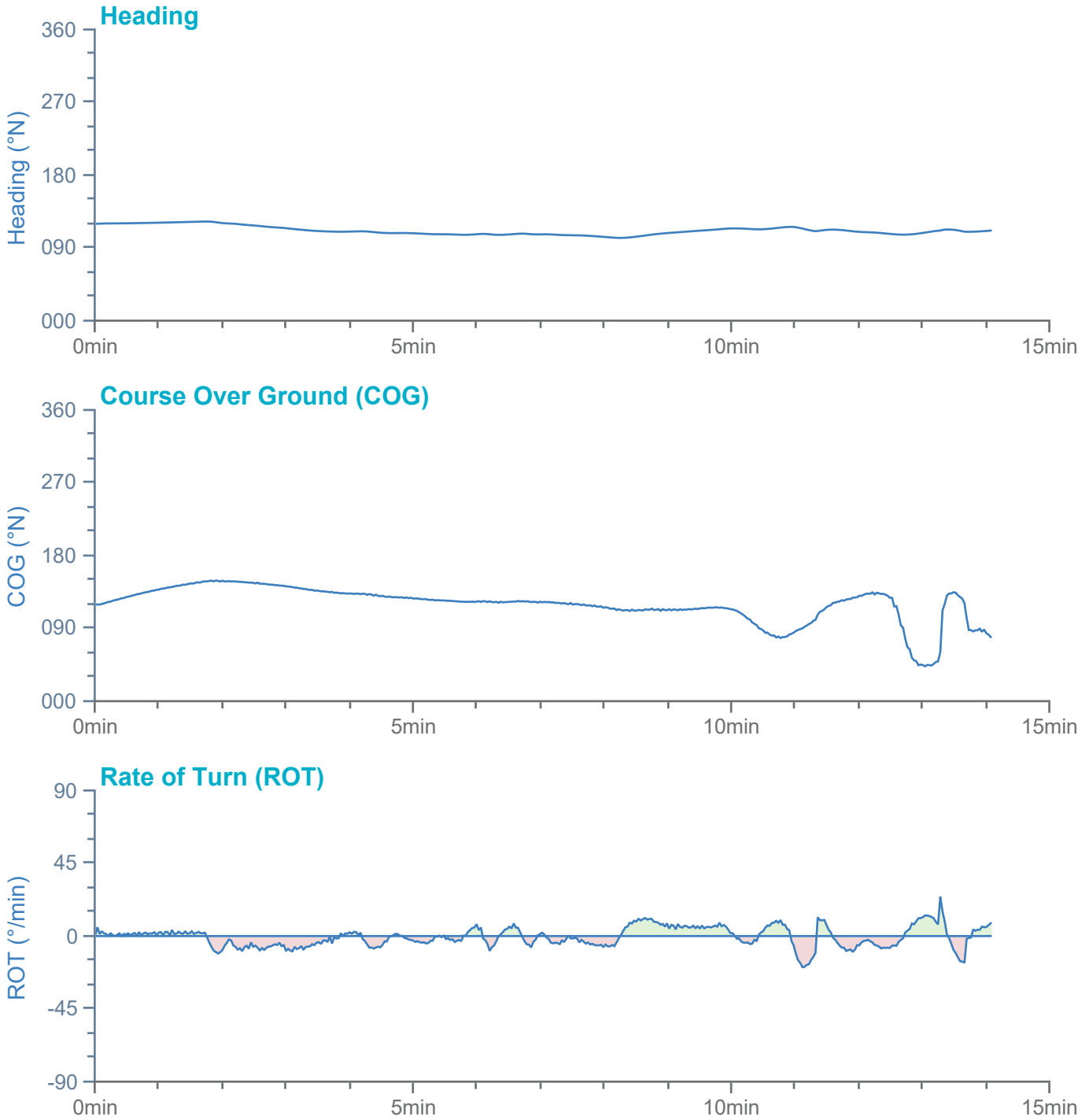


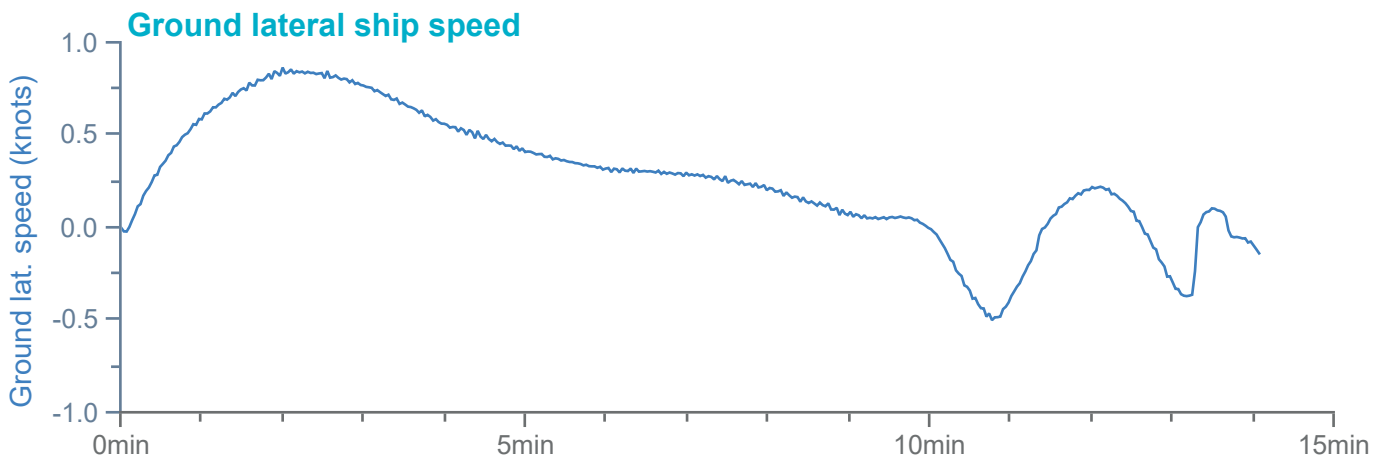
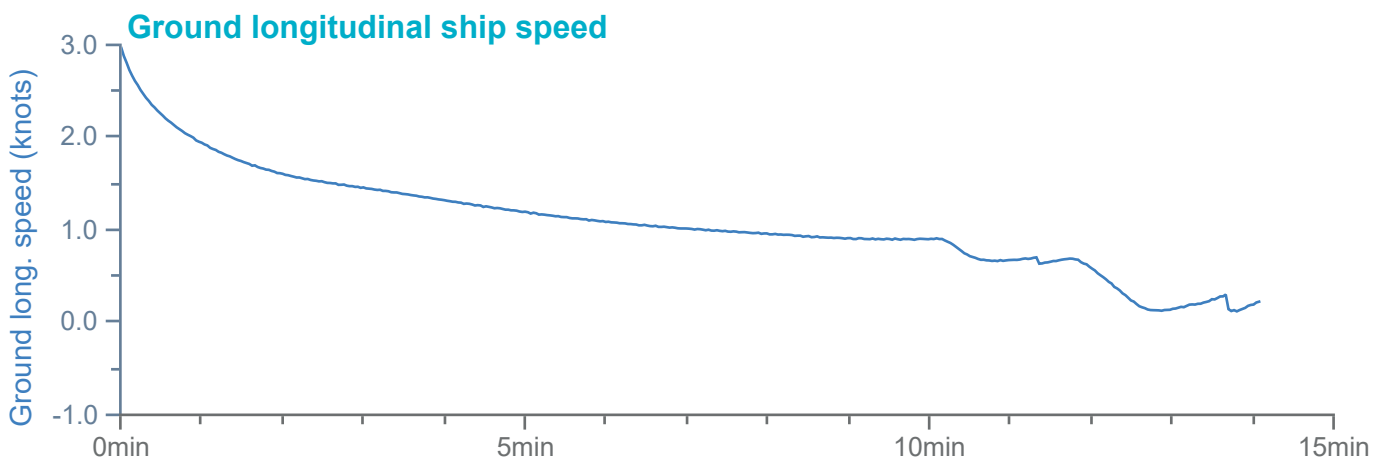
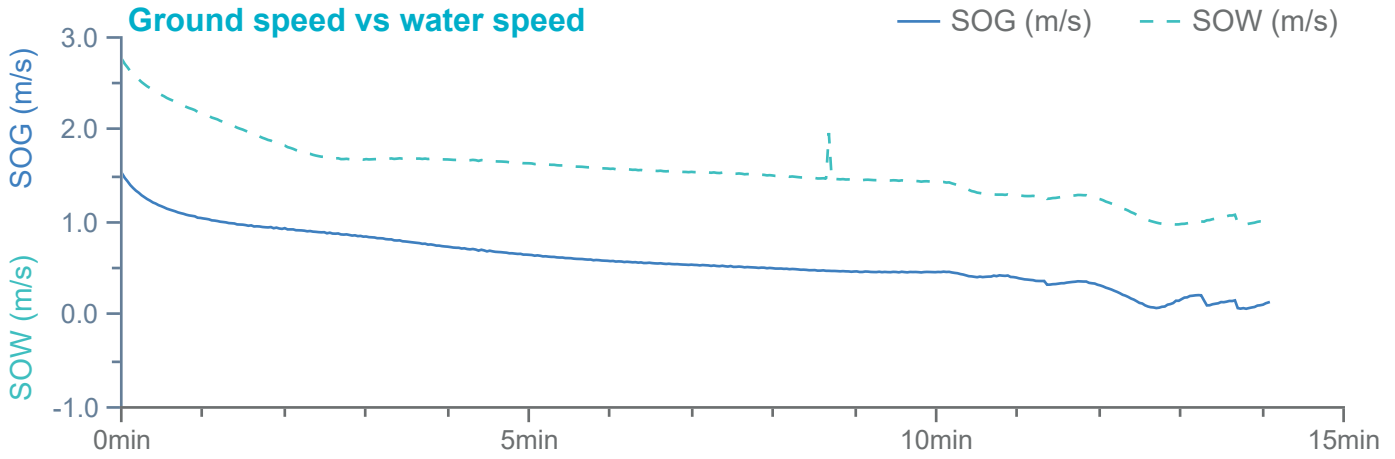
Ships plotted every 1 mins, highlight every 10 mins



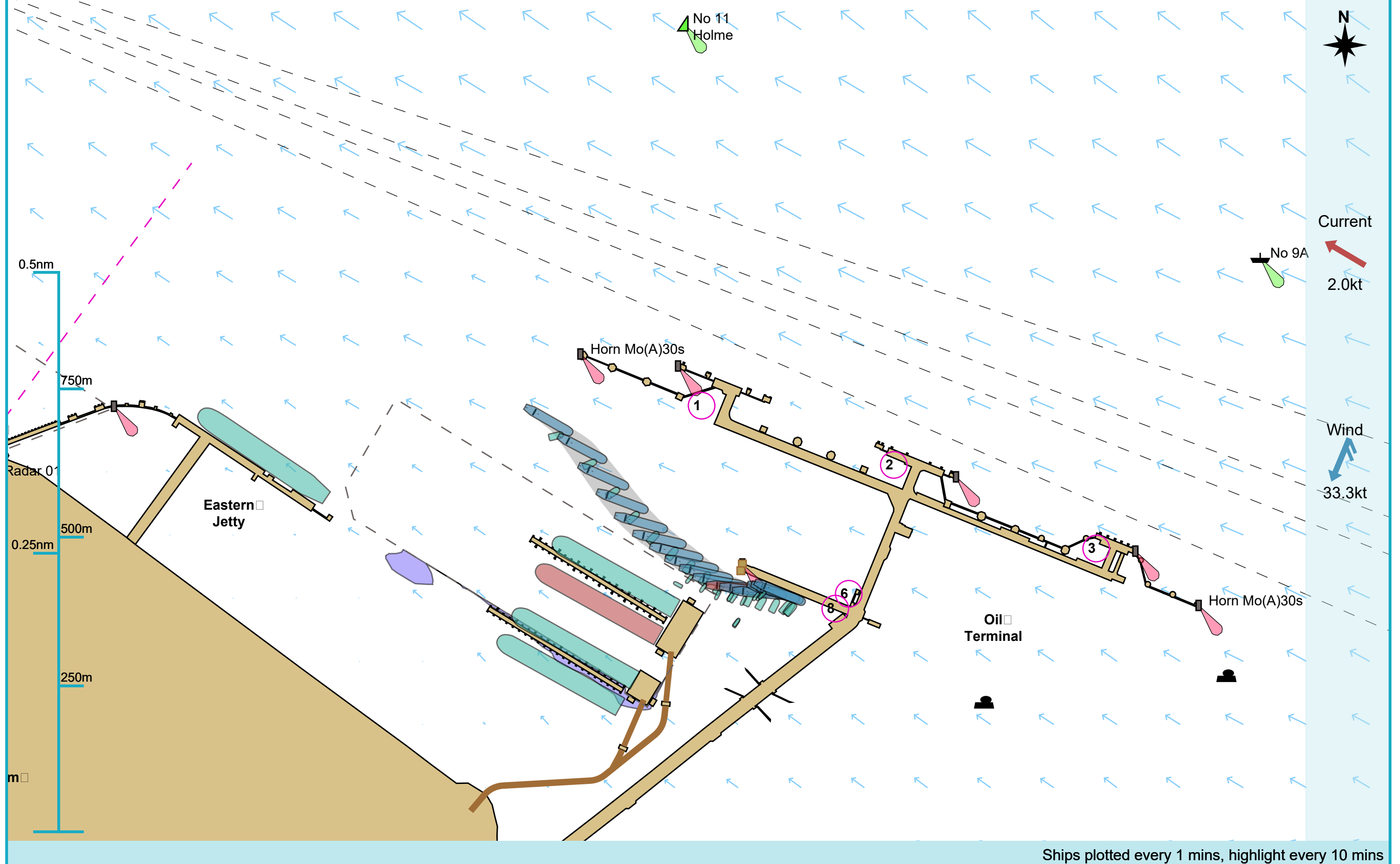






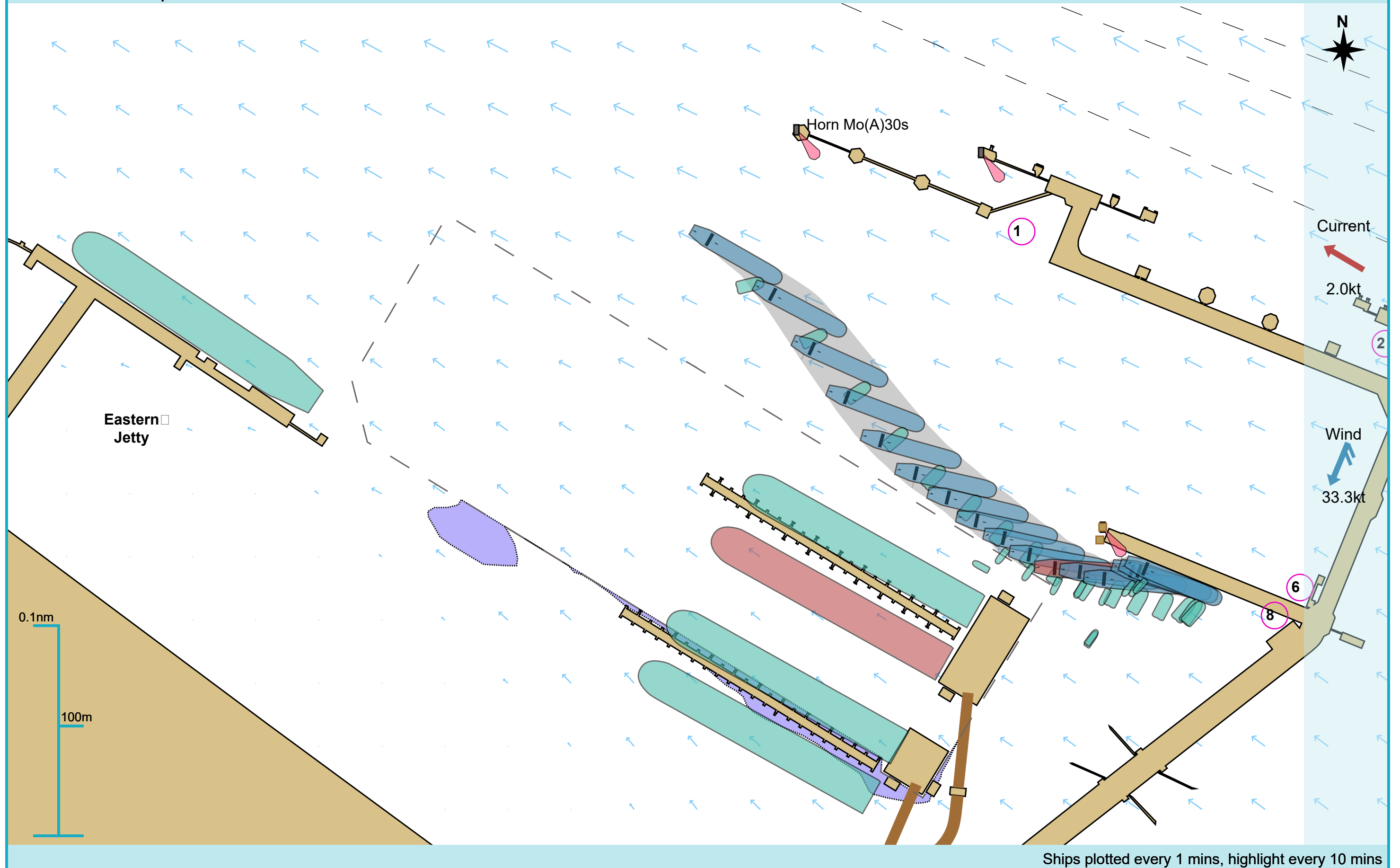


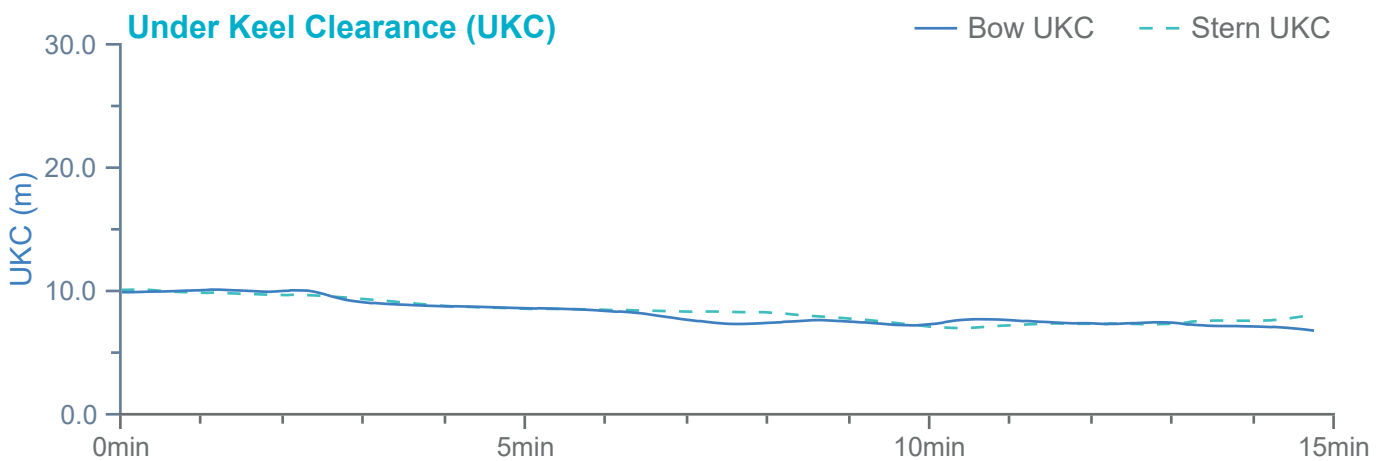
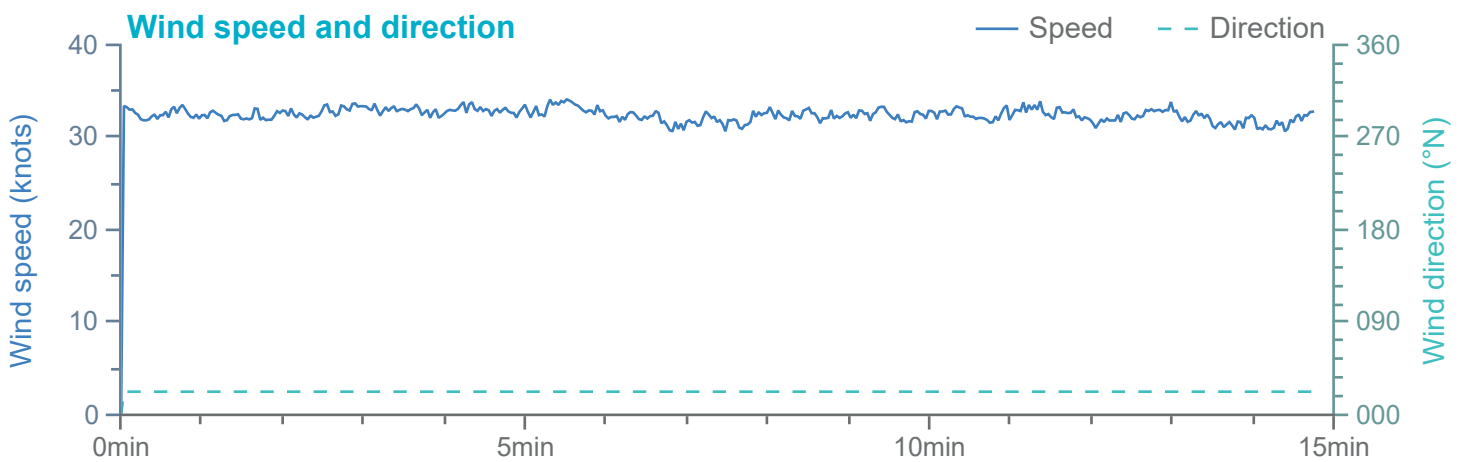
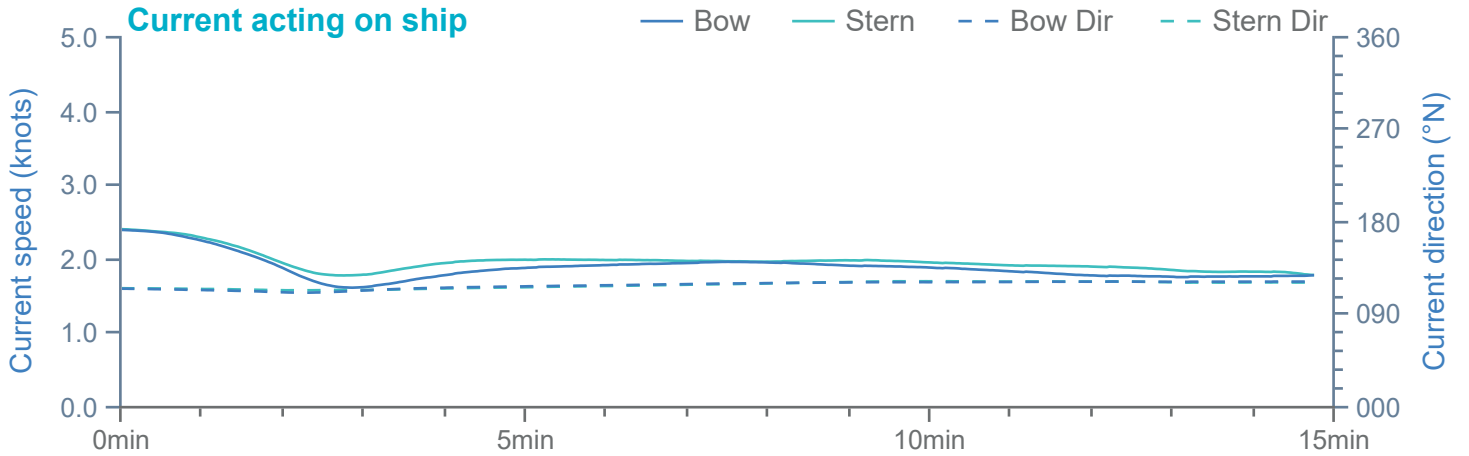
Manoeuvre track plot

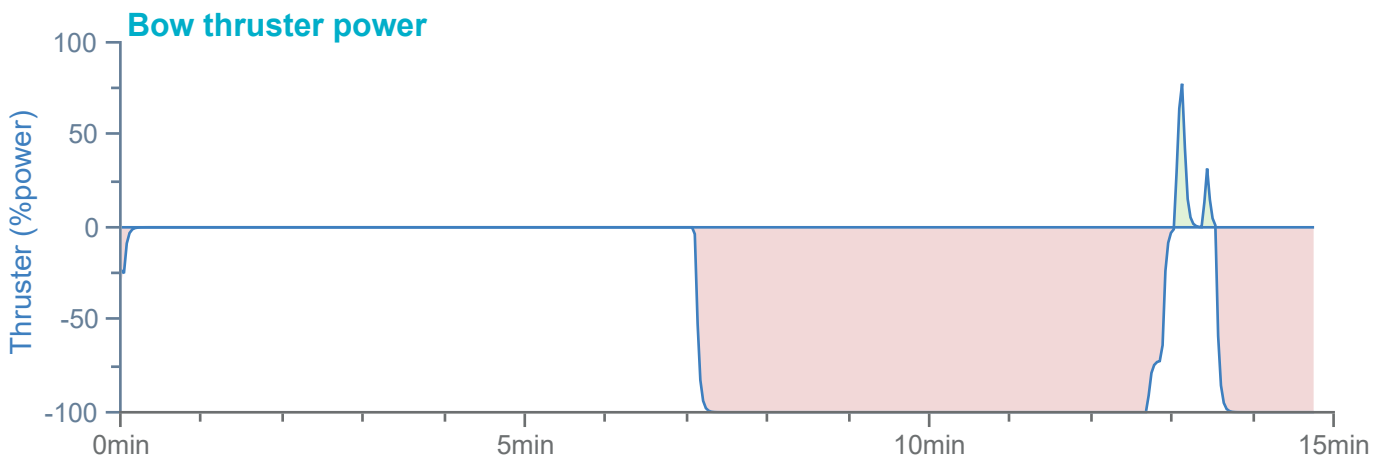
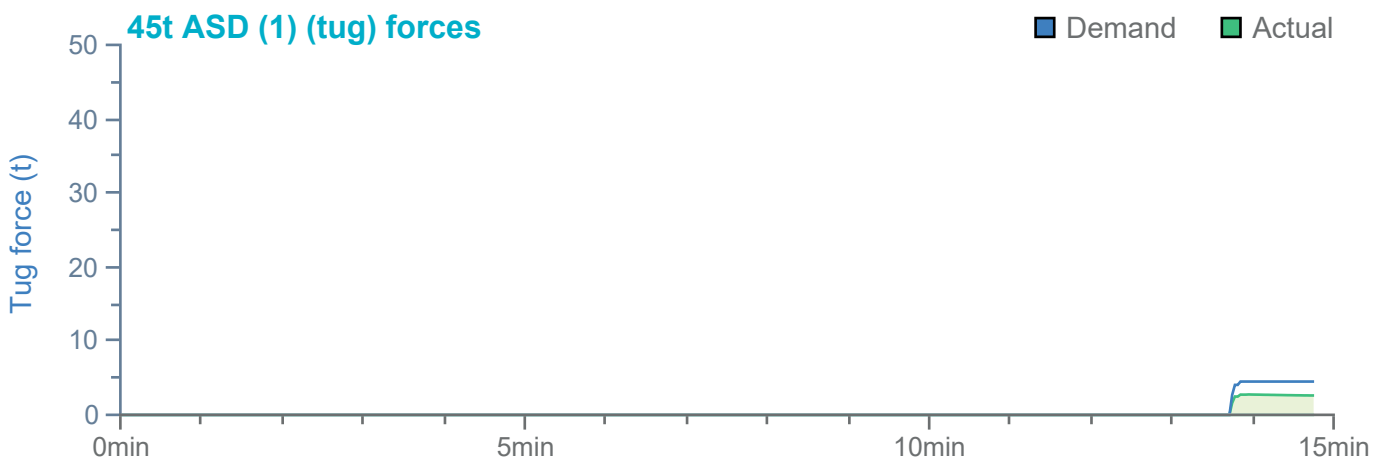
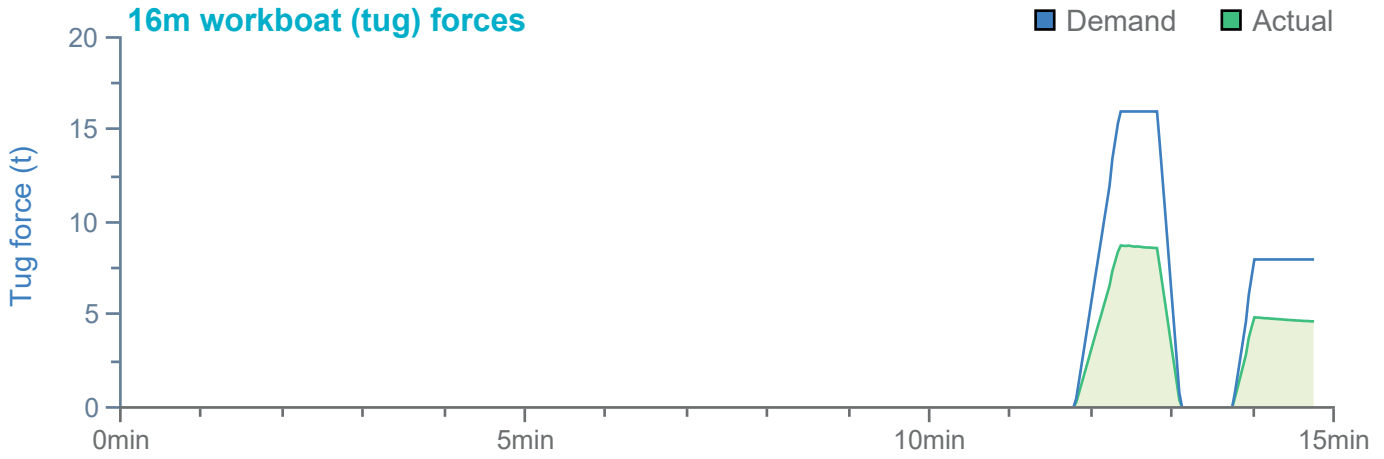


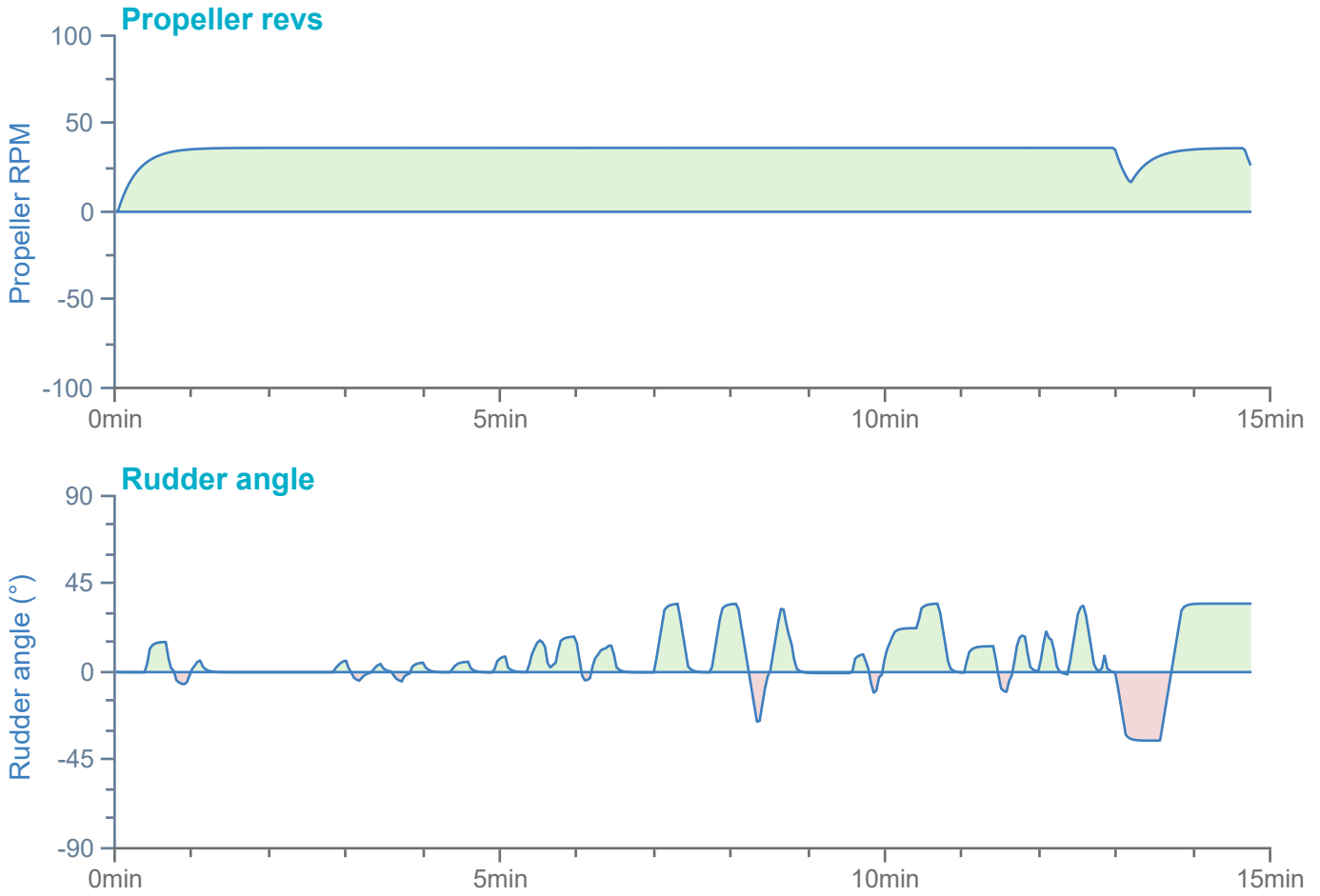
Ships plotted every 1 mins, highlight every 10 mins

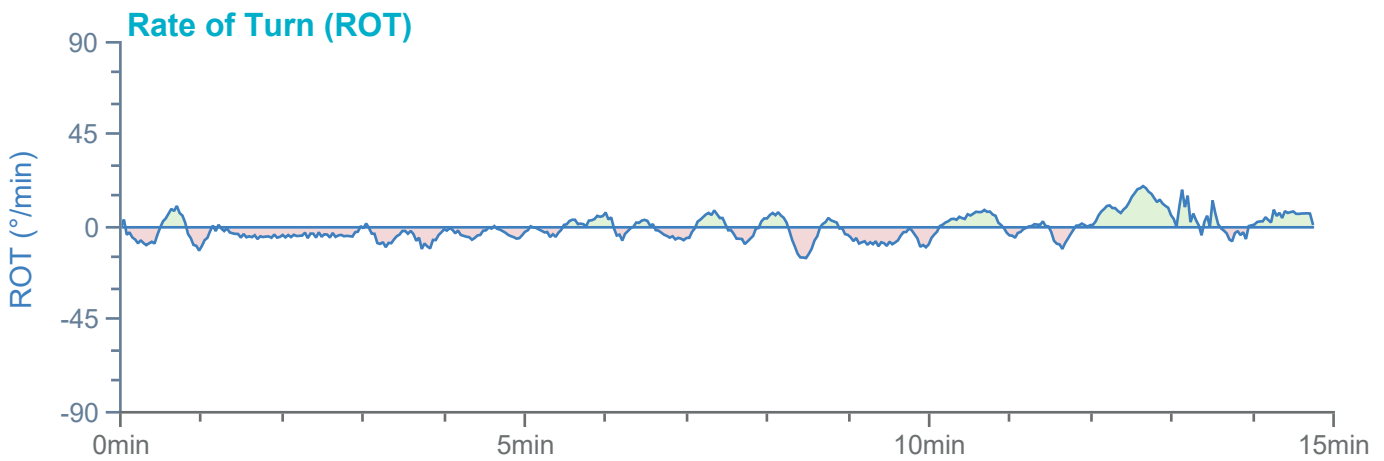
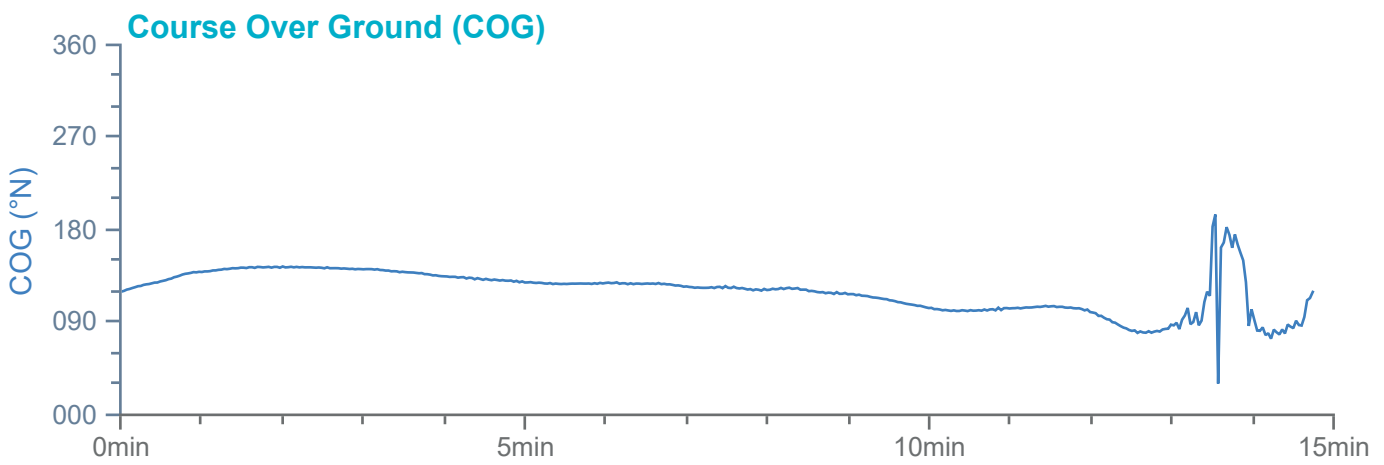
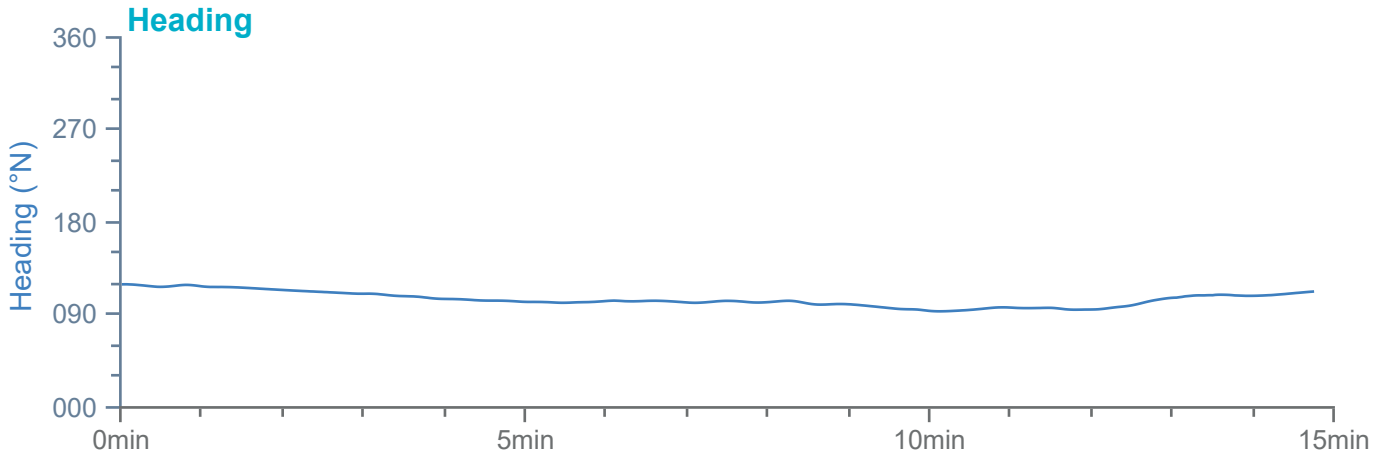
Manoeuvre track plot

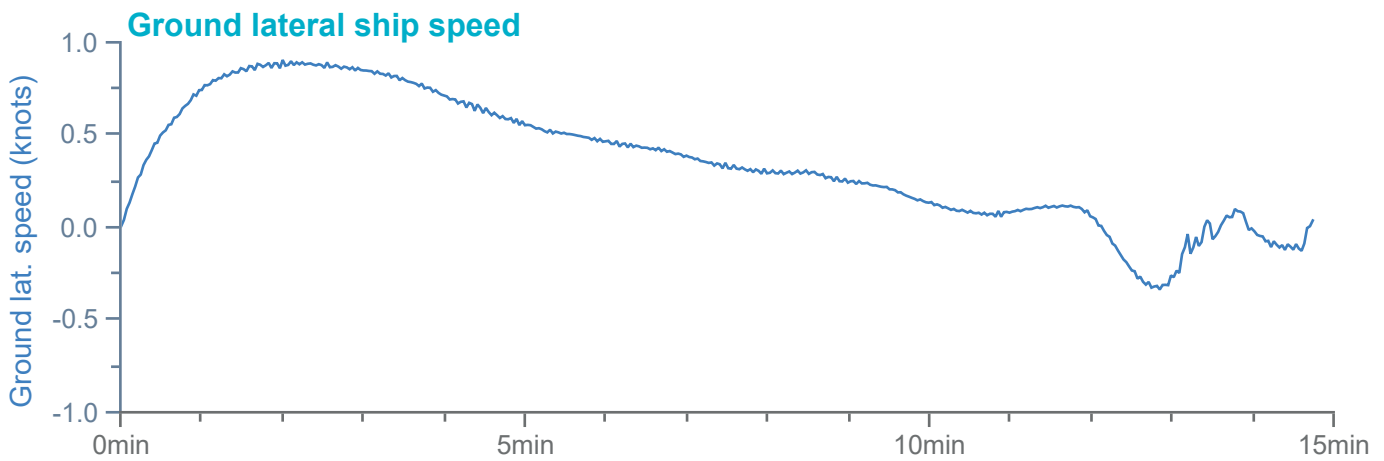
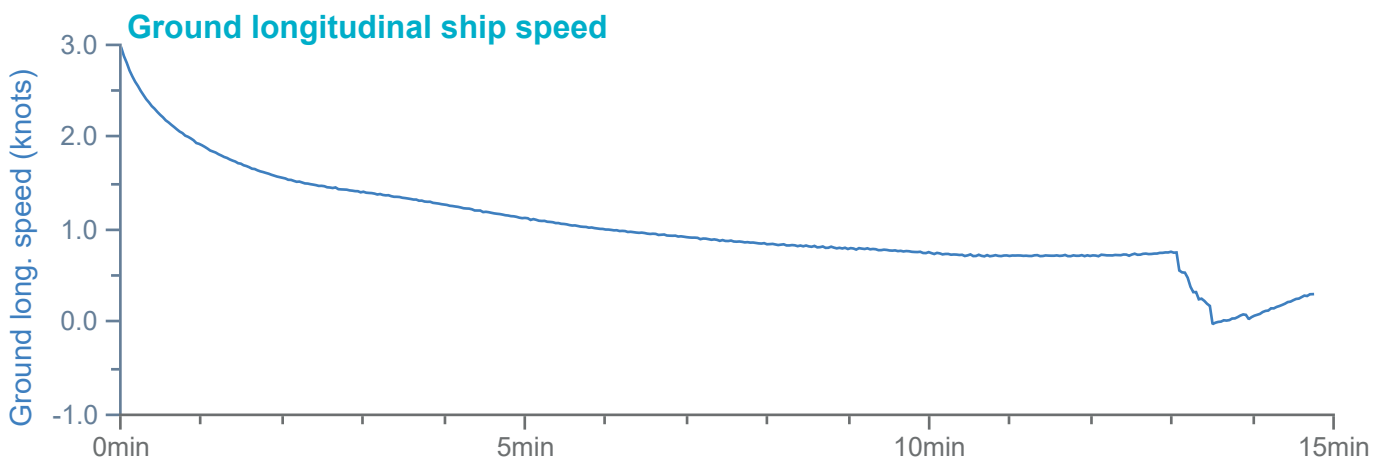
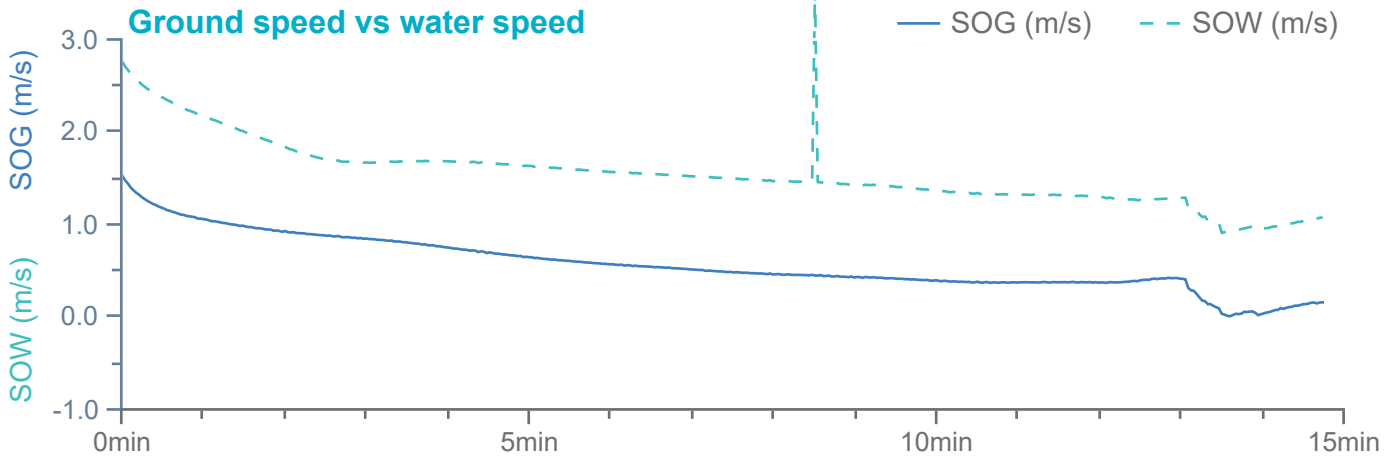














HR Wallingford
Working with water



DMR 719286



FS 516431

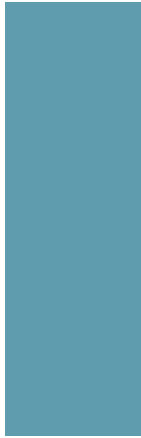


OHS 595357



EMS 558310

© HR Wallingford Ltd



HR Wallingford is an independent engineering and environmental hydraulics organisation. We deliver practical solutions to the complex water-related challenges faced by our international clients. A dynamic research programme underpins all that we do and keeps us at the leading edge. Our unique mix of know-how, assets and facilities includes state of the art physical modelling laboratories, a full range of numerical modelling tools and, above all, enthusiastic people with world-renowned skills and expertise.

HR Wallingford Ltd, Howbery Park, Wallingford, Oxfordshire OX10 8BA, United Kingdom
tel +44 (0)1491 835381, email info@hrwallingford.com
www.hrwallingford.com



Contact Us

ABPmer

Quayside Suite,
Medina Chambers
Town Quay, Southampton
SO14 2AQ

T +44 (0) 23 8071 1840

F +44 (0) 23 8071 1841

E enquiries@abpmer.co.uk

