Adaptation of the South-Eastern drainage system under a changing climate Limestone Coast Airborne Electromagnetic Survey: Conductivity-Depth Sections

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## **First Nations Respect and Reconciliation**

The Goyder Institute for Water Research and Limestone Coast Landscape Board, acknowledges the Traditional Custodians of the lands and waters of the Limestone Coast and South East region, where this project took place. Together we pay our respects to their Elders—past, present, and emerging—and recognise Aboriginal people as the First Peoples and Nations of South Australia, possessing and caring for these lands under their own laws and customs.

We respect the enduring cultural, spiritual, physical, and emotional connections that Aboriginal peoples maintain with their lands and waters. We recognise the diverse rights, interests, and obligations of First Nations and the deep cultural connections that exist between different First Nations communities. We seek to support their meaningful engagement and honour the continuation of their cultural heritage, economies, languages, and laws, which remain of ongoing importance.

We walk together with the First Nations of the South East and the Ngarrindjeri peoples through organisations such as Burrandies Aboriginal Corporation, Ngarrindjeri Aboriginal Corporation, the Ngarrindjeri Lands & Progress Aboriginal Corporation and South East Aboriginal Focus Group. For the work of generations past, and the benefit of generations future, we seek to be a voice for reconciliation in all that we do.

# **Executive Summary**

This report contains a set of conductivity-depth sections for the flightlines acquired as part of the Limestone Coast airborne electromagnetic survey. It accompanies the report by Davis et al. 2025, entitled Adaptation of the South-Eastern drainage system under a changing climate - Limestone Coast Airborne Electromagnetic Survey: Acquisition, Processing and Modelling. Goyder Institute for Water Research Technical Report Series No. 25/5.1

## **Funding and Delivery Statement**

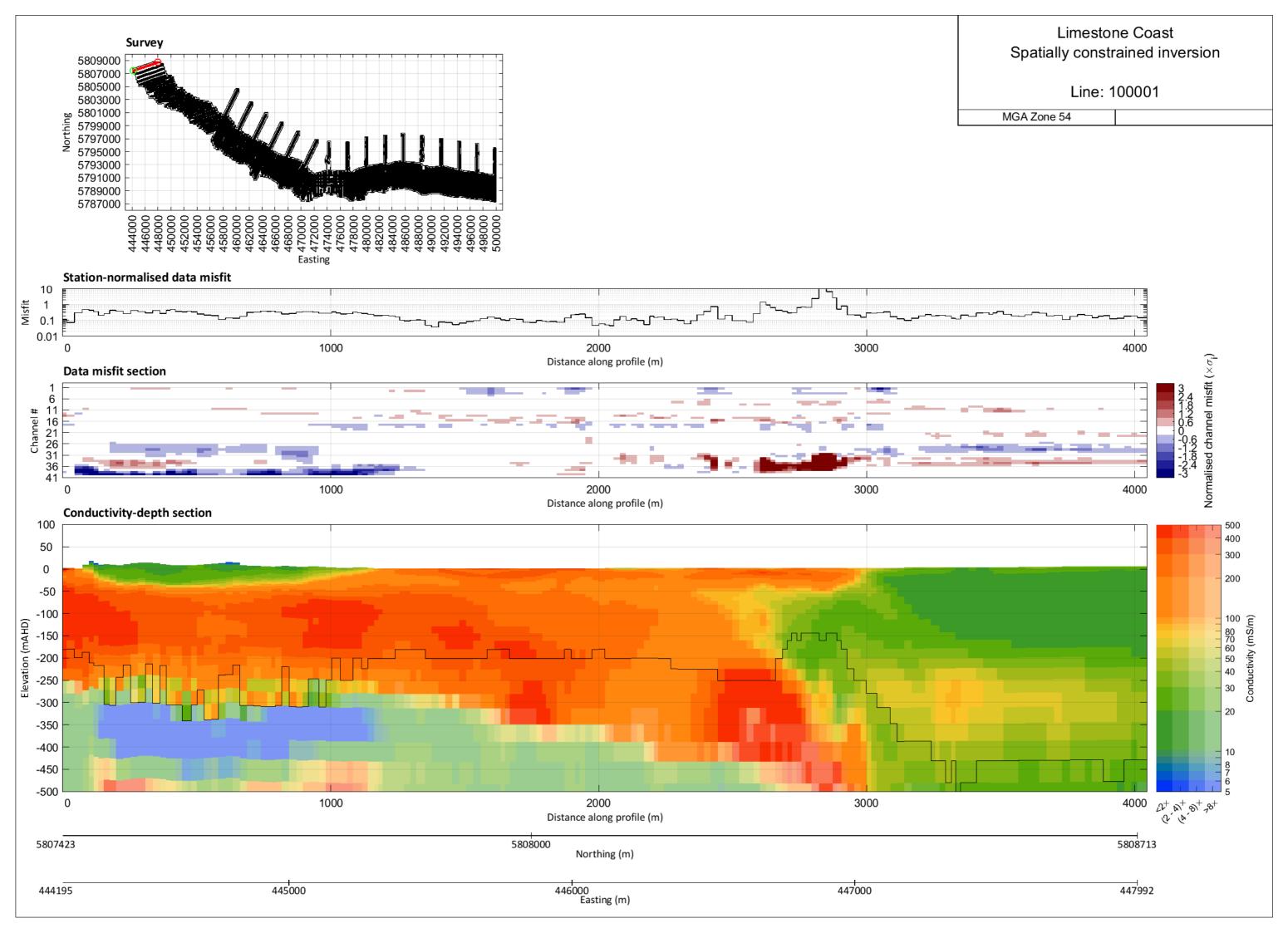
This Adaptation of the SE drainage system to a changing climate project has been jointly funded by the Australian Government through the National Water Grid Authority, the Limestone Coast Landscape Board, and the South Australian Government. The project was delivered by the Goyder Institute for Water Research partners: CSIRO, the University of South Australia, Flinders University and the University of Adelaide in collaboration with the Limestone Coast Landscape Board, South Eastern Water Conservation and Drainage Board (SEWCD Board) and the Department for Environment and Water. This report was prepared by Aaron Davis and Tim Munday.

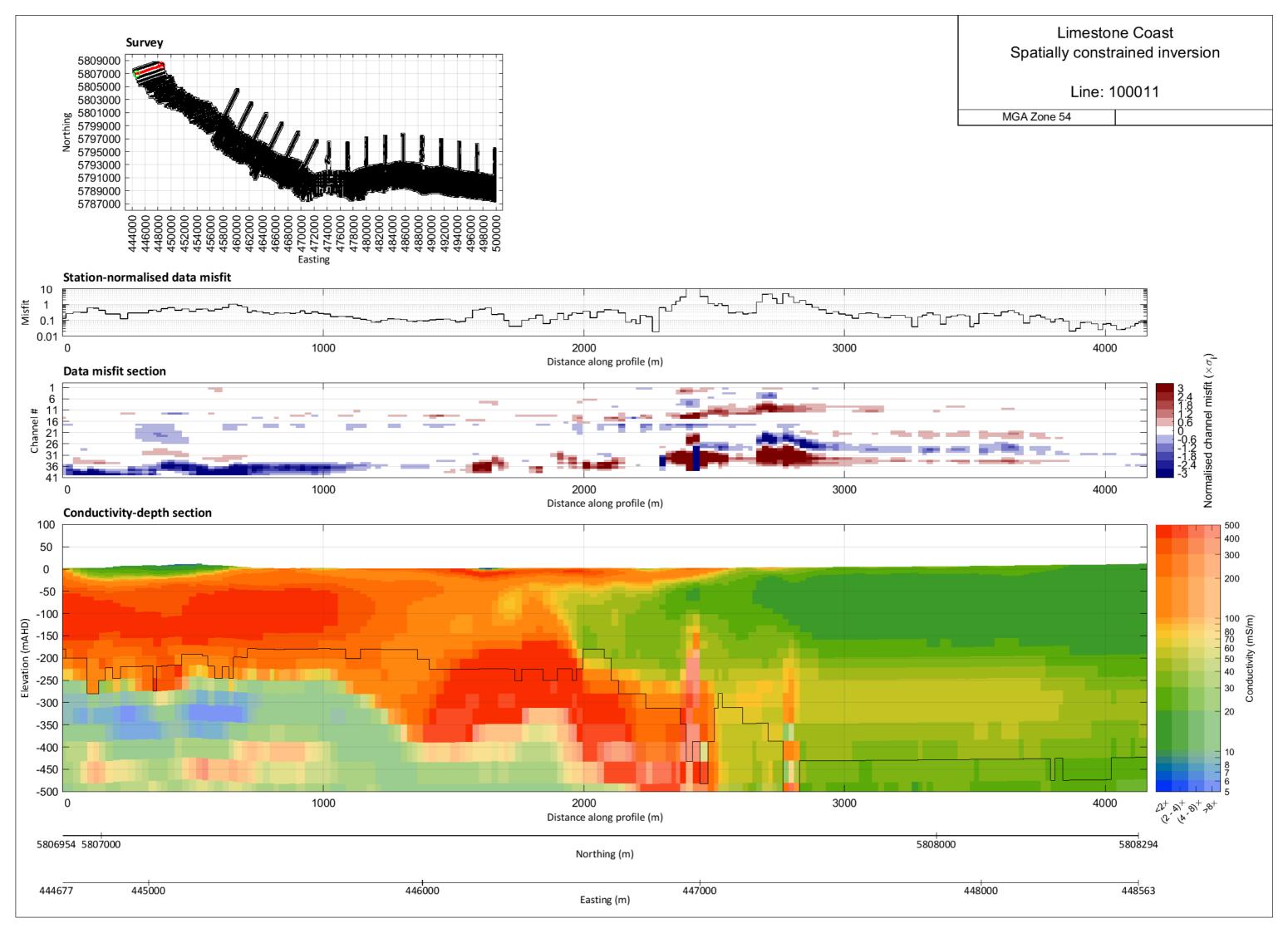
## 1 Introduction

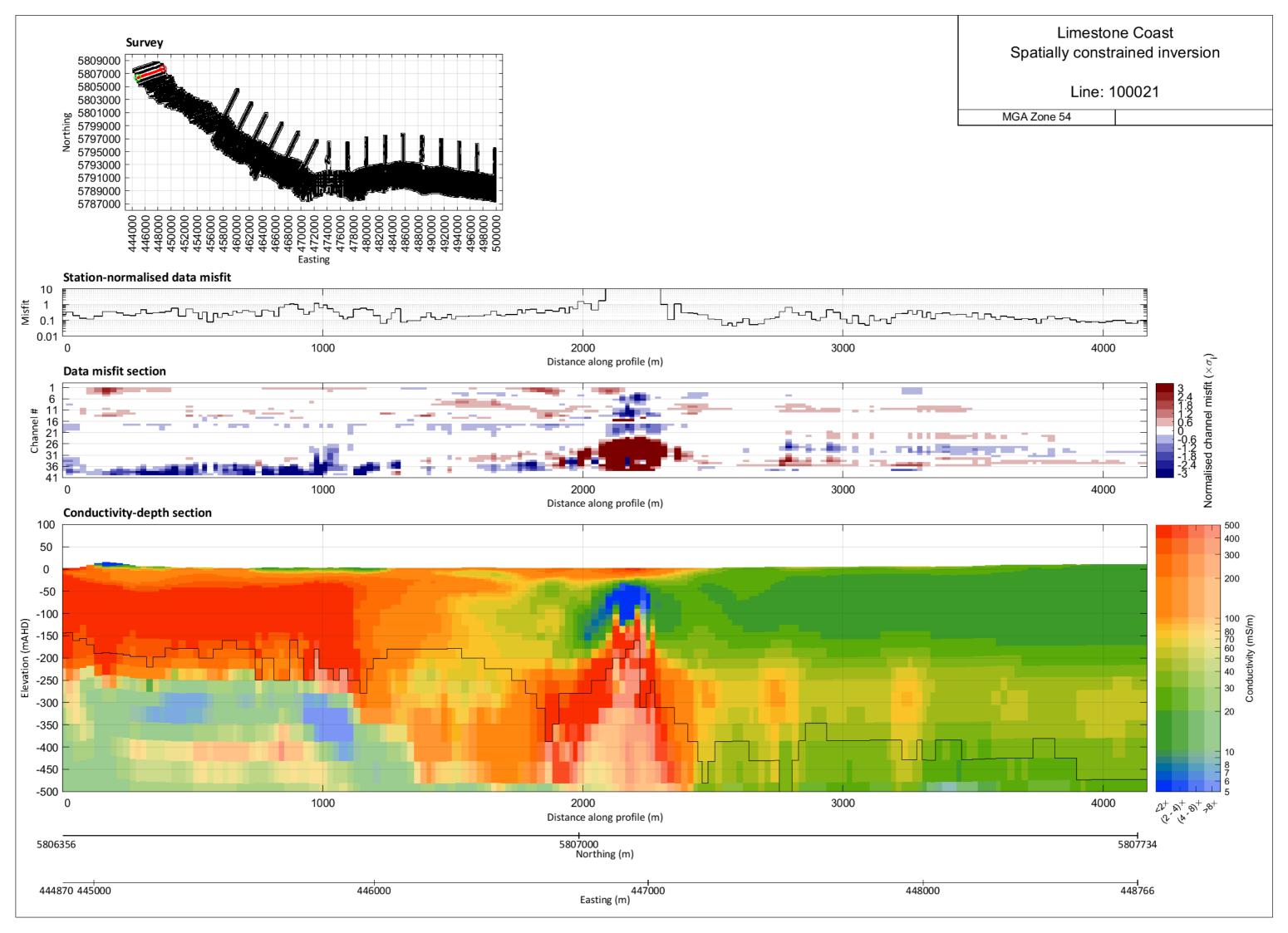
This report accompanies Goyder Institute for Water Research Technical Report Series No. 25/5.1 and presents the modelled conductivity structure for each flight line flown with the SkyTEM airborne electromagnetic (AEM) system over the Limestone Coast between Lake Bonney and the border between South Australia and Victoria.

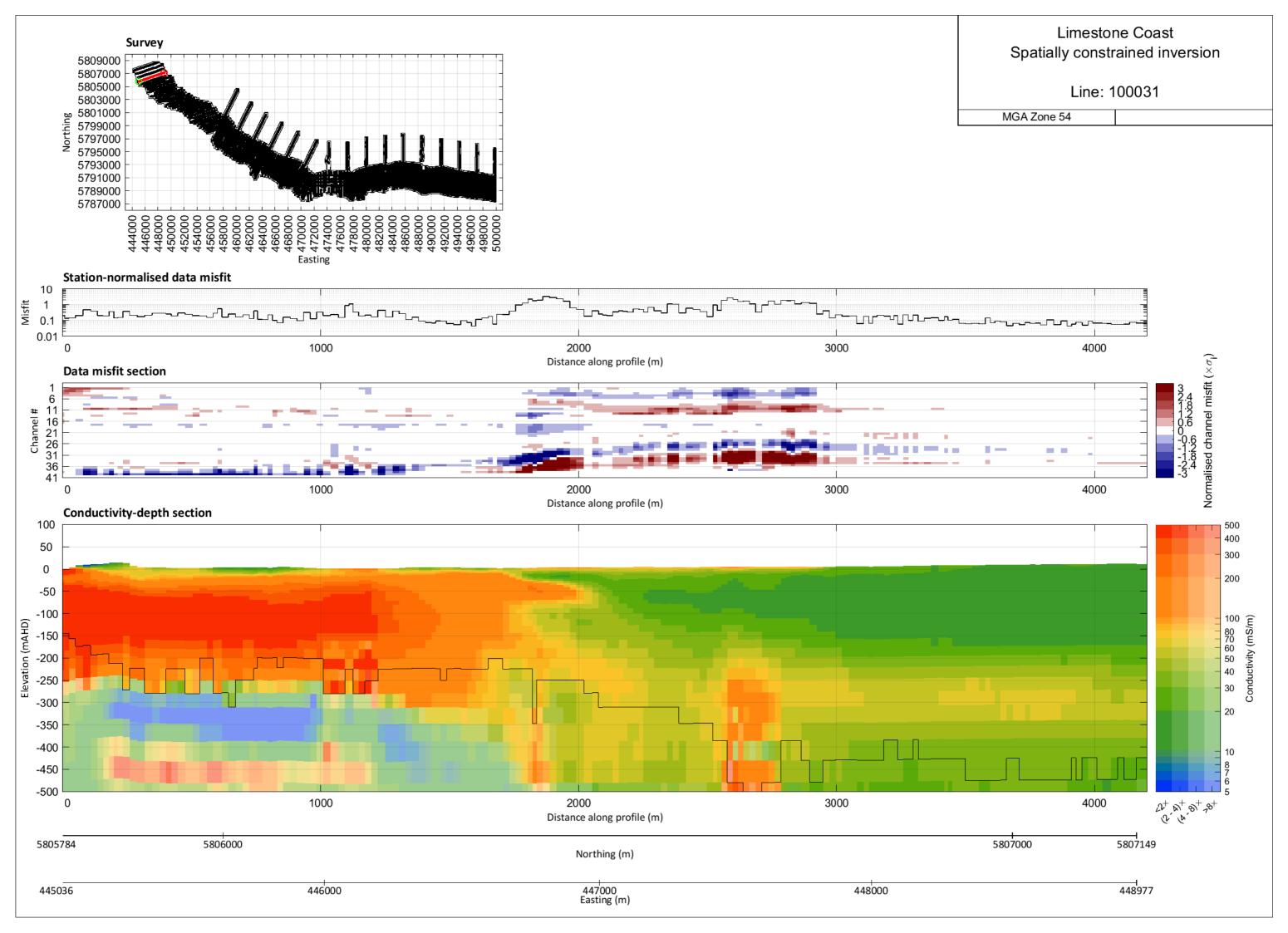
The modelled conductivity structure is represented in a pseudo-coloured section and shows the variation in subsurface conductivity from the ground surface to a nominal elevation of -600mAHD.

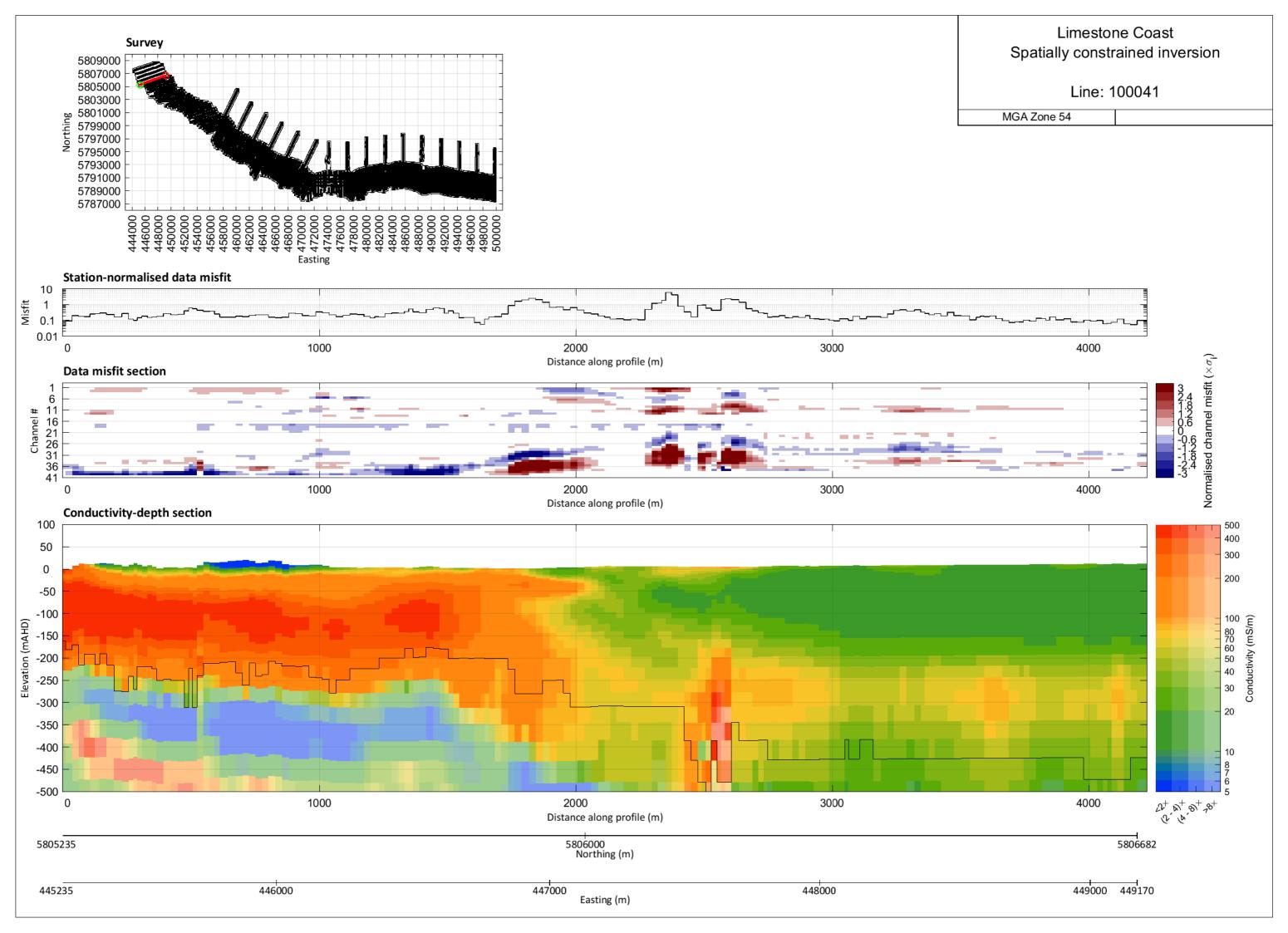
The top panel shows the flight path of the survey line in plan view, the next panel shows the normalised data misfit of each station along the survey line, the data misfit section shows the difference between predicted and measured data, weighted by the data noise, for each station, and the bottom panel shows the modelled electrical conductivity along the flight line. Note the electrical conductivity is scaled to logarithm base 10. The colour key accompanying the conductivity depth section indicates the confidence of the model fit expressed as colour saturation. The less saturated the colour, the less confidence in the determined model.

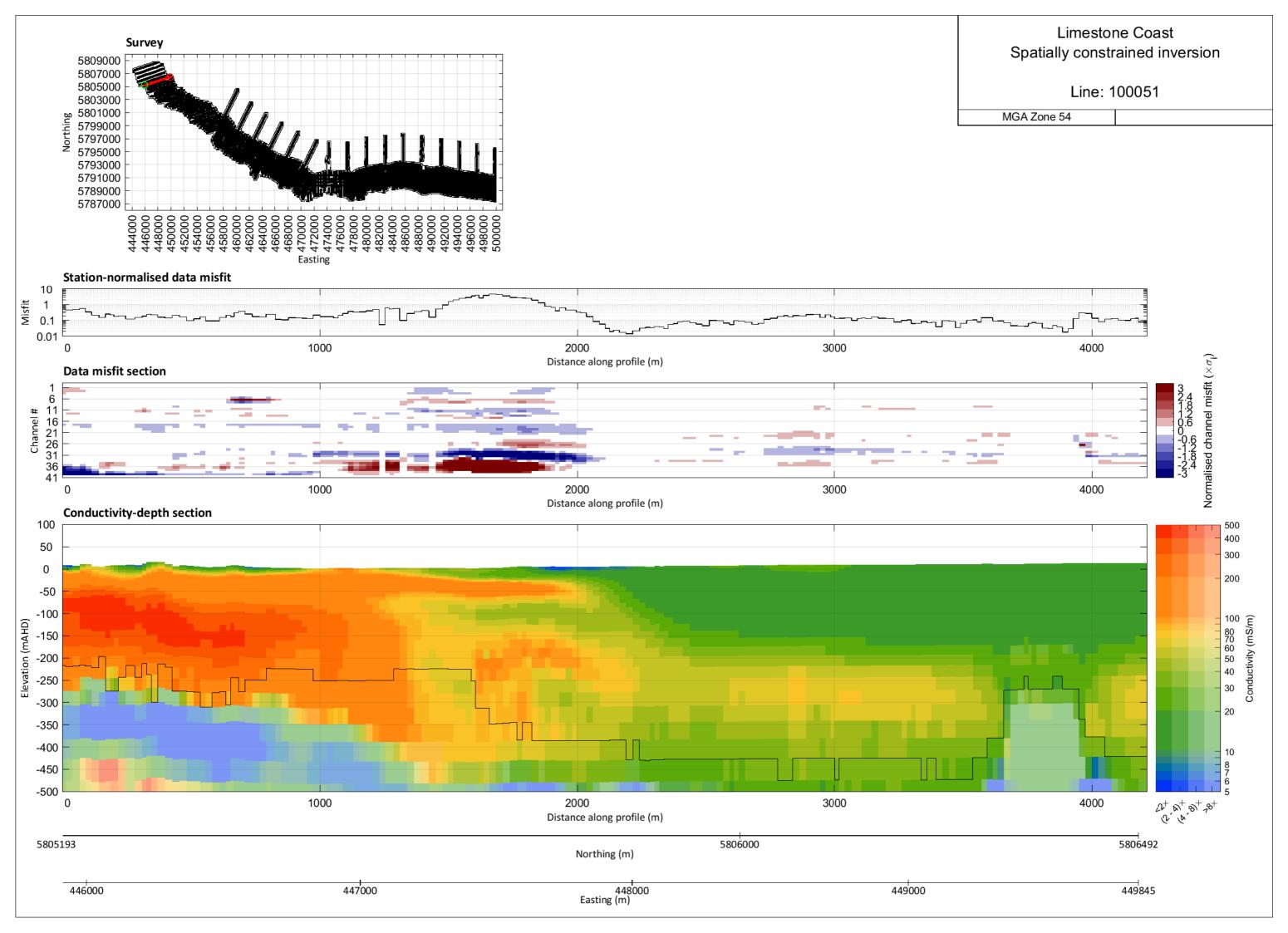


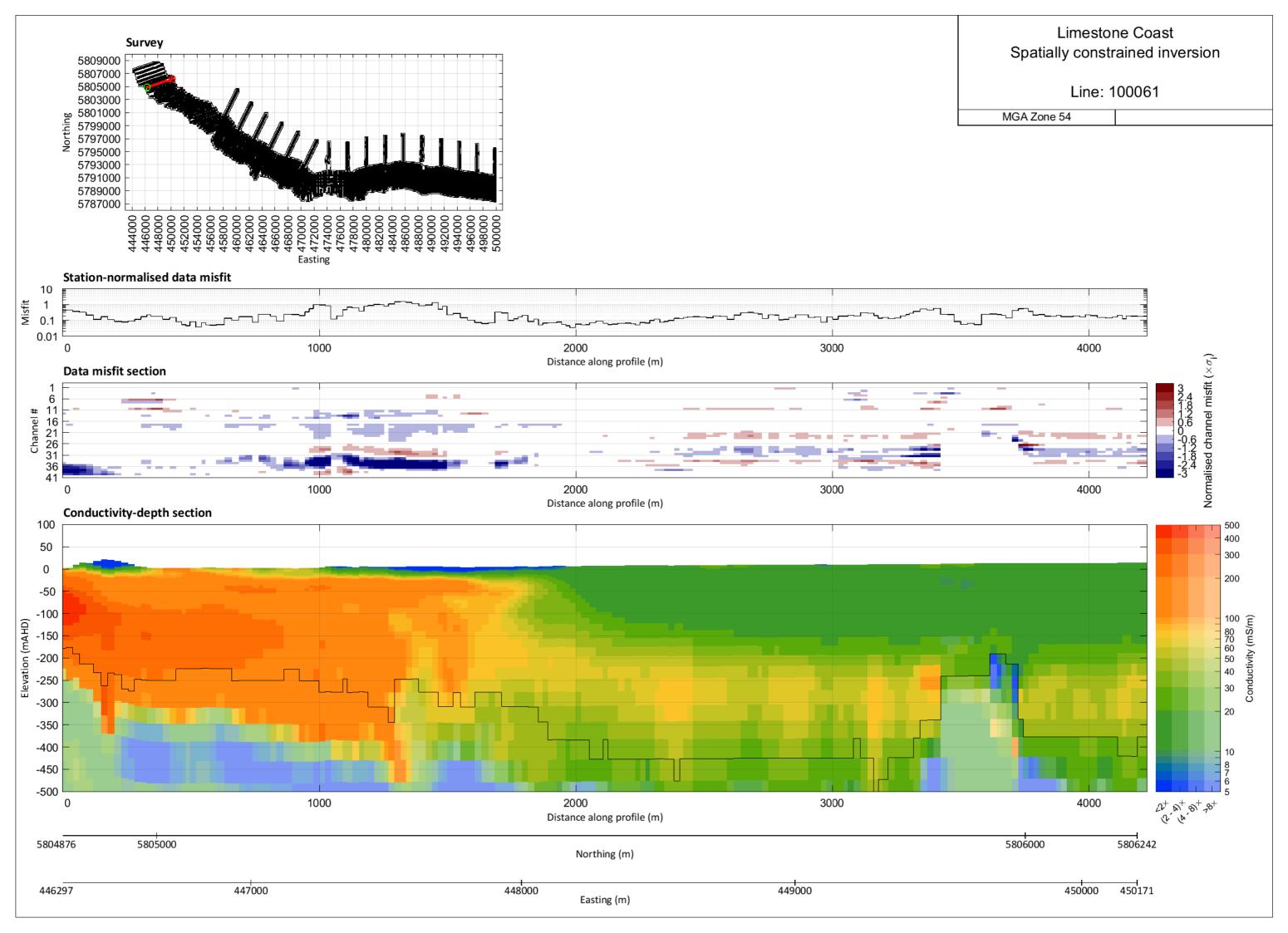


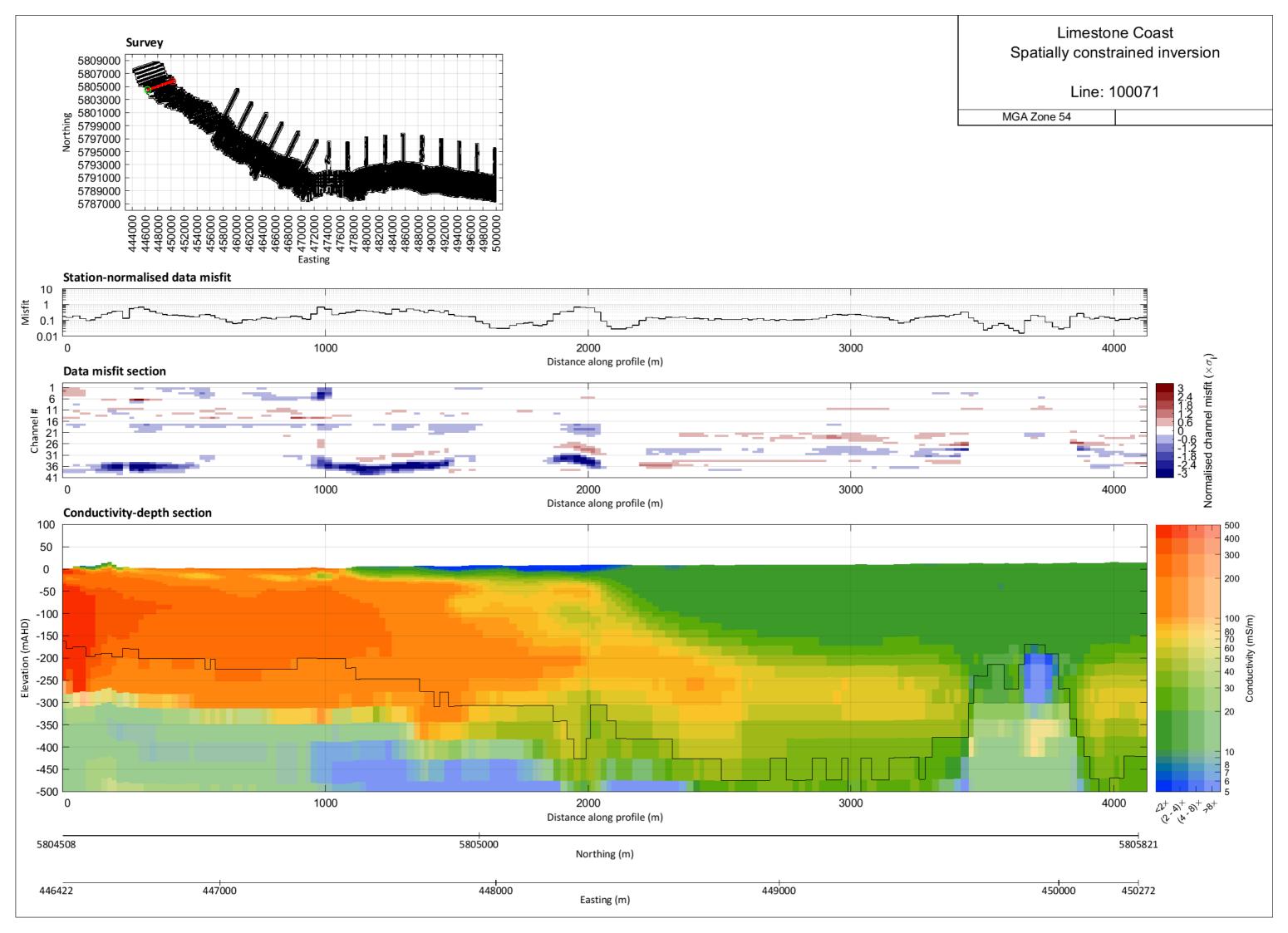


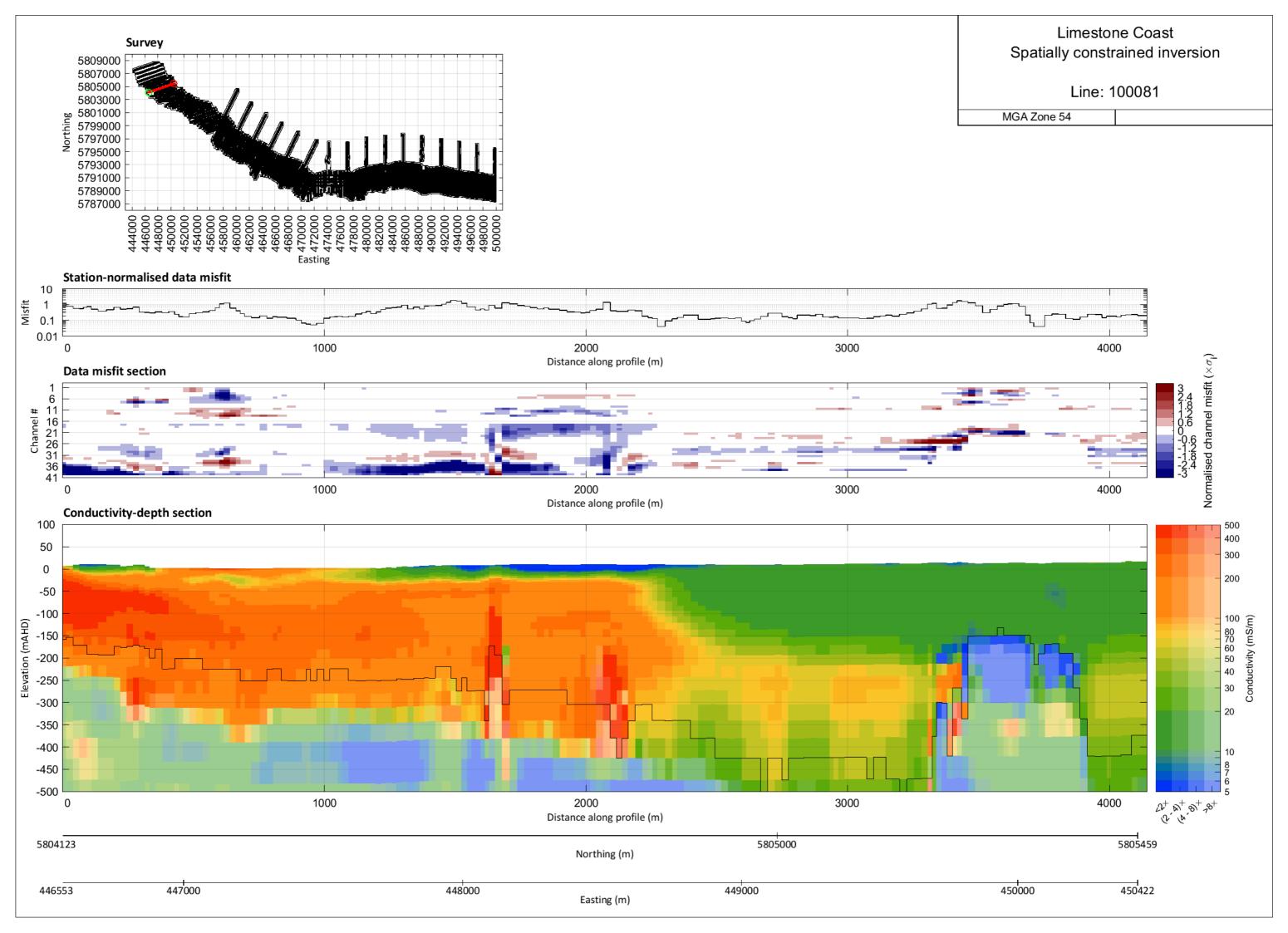


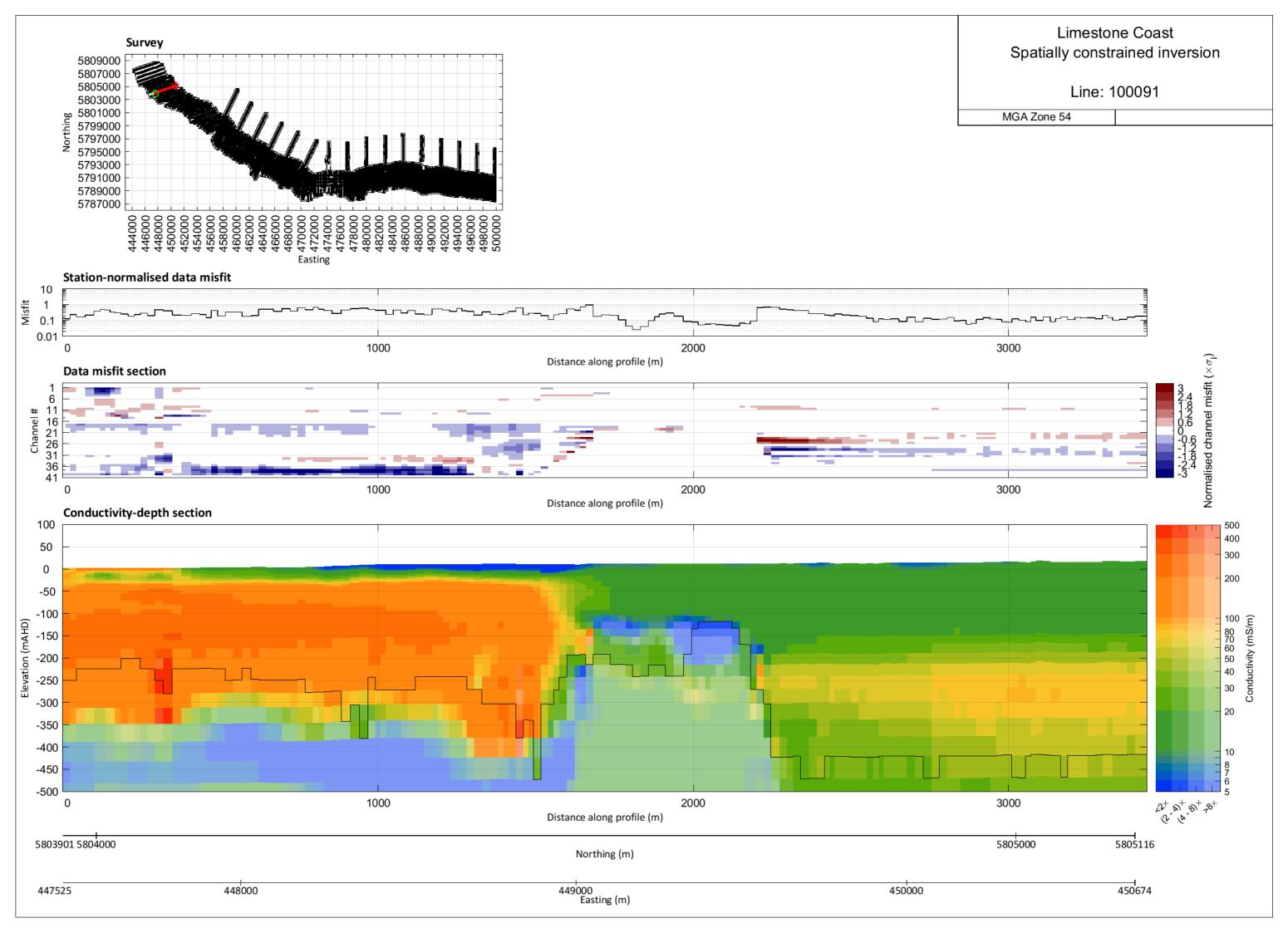


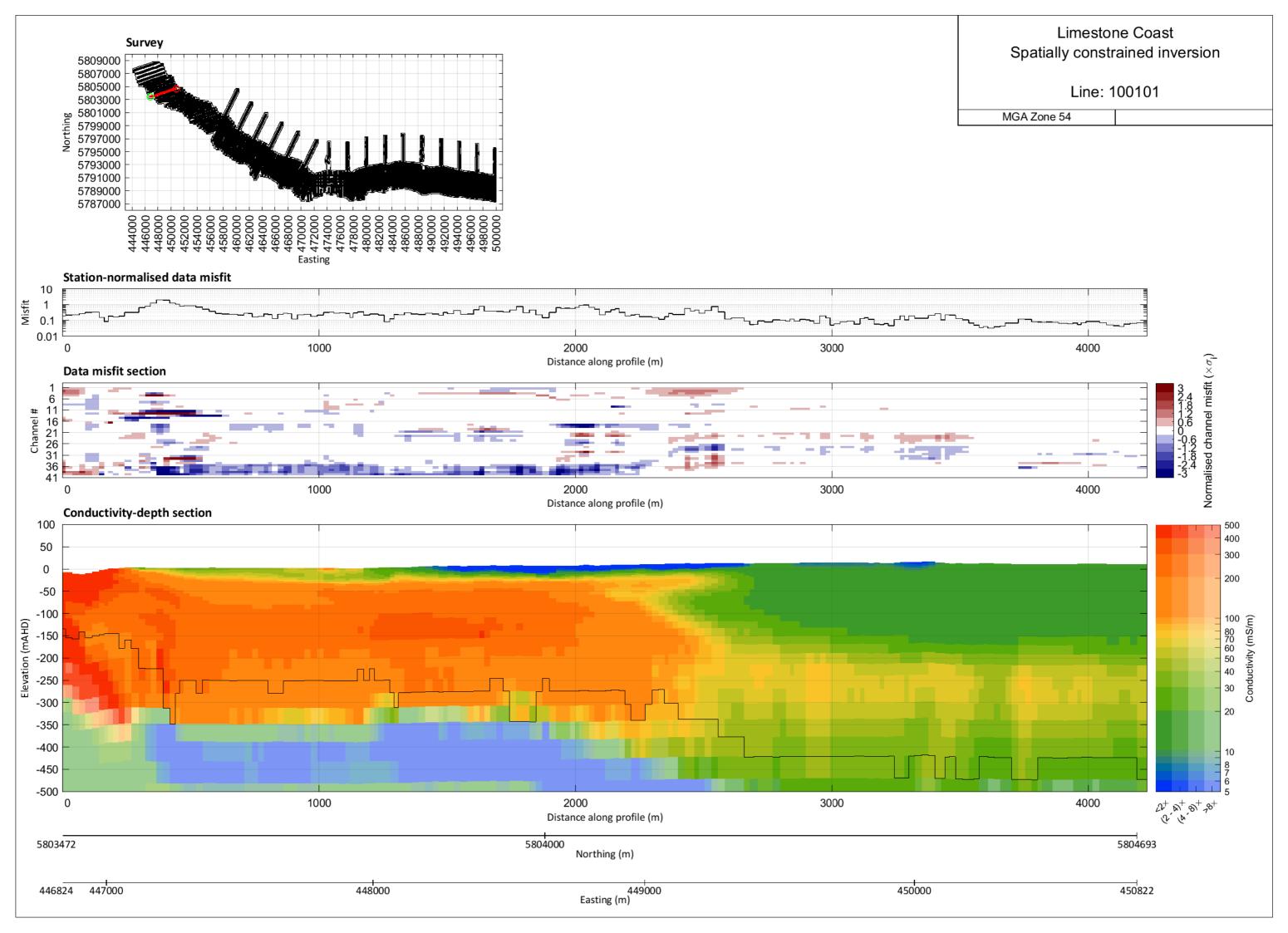


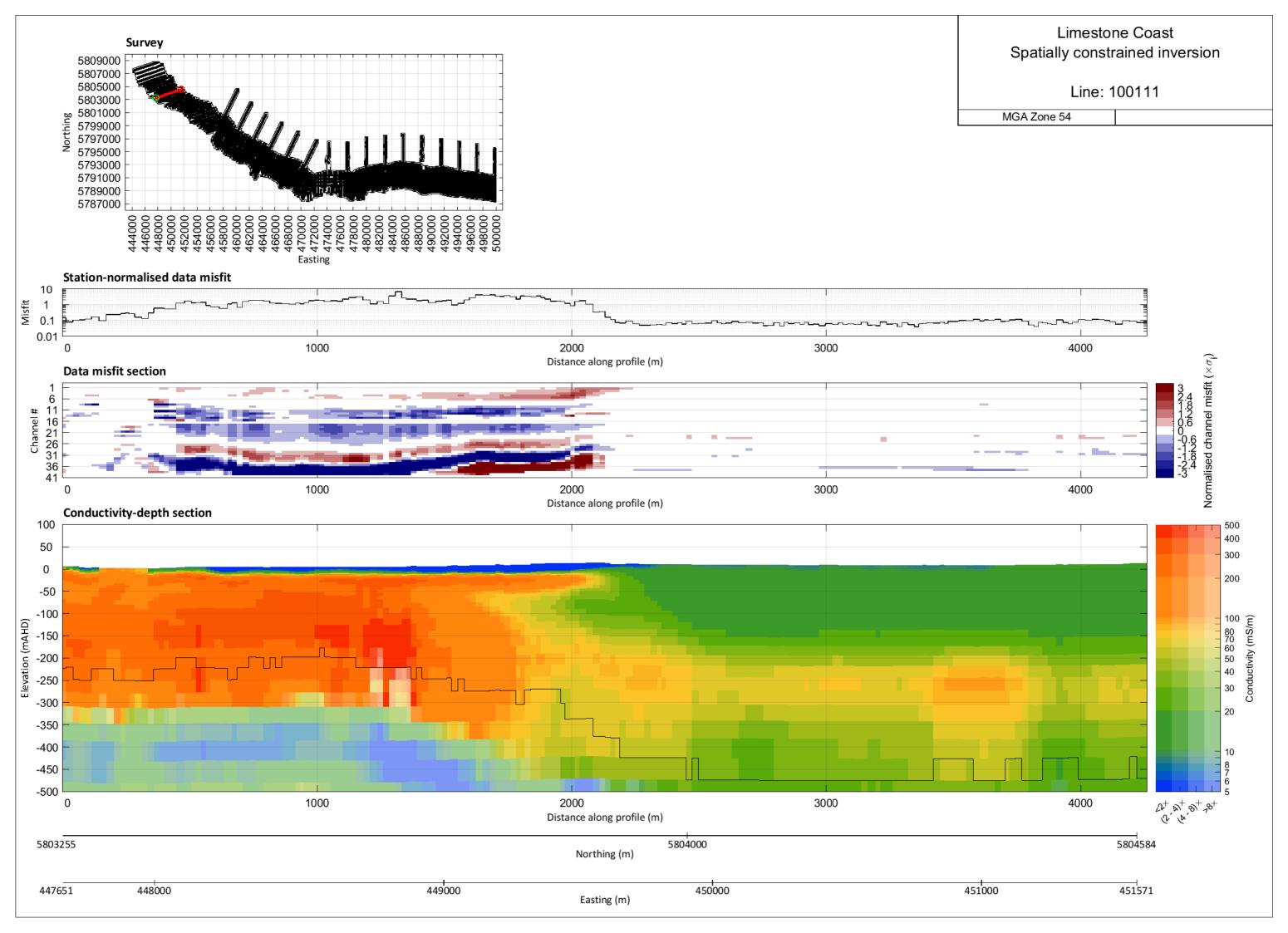


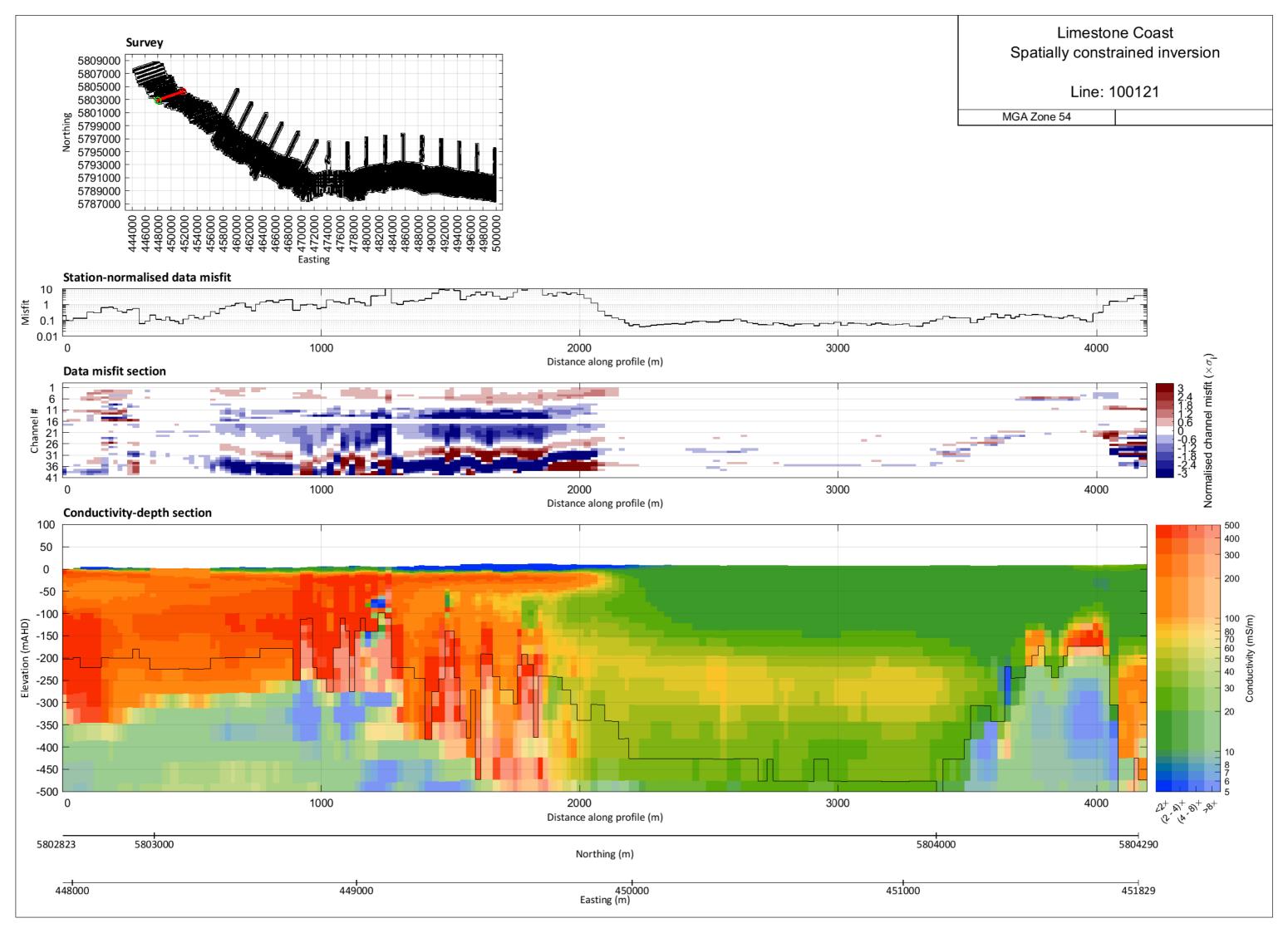


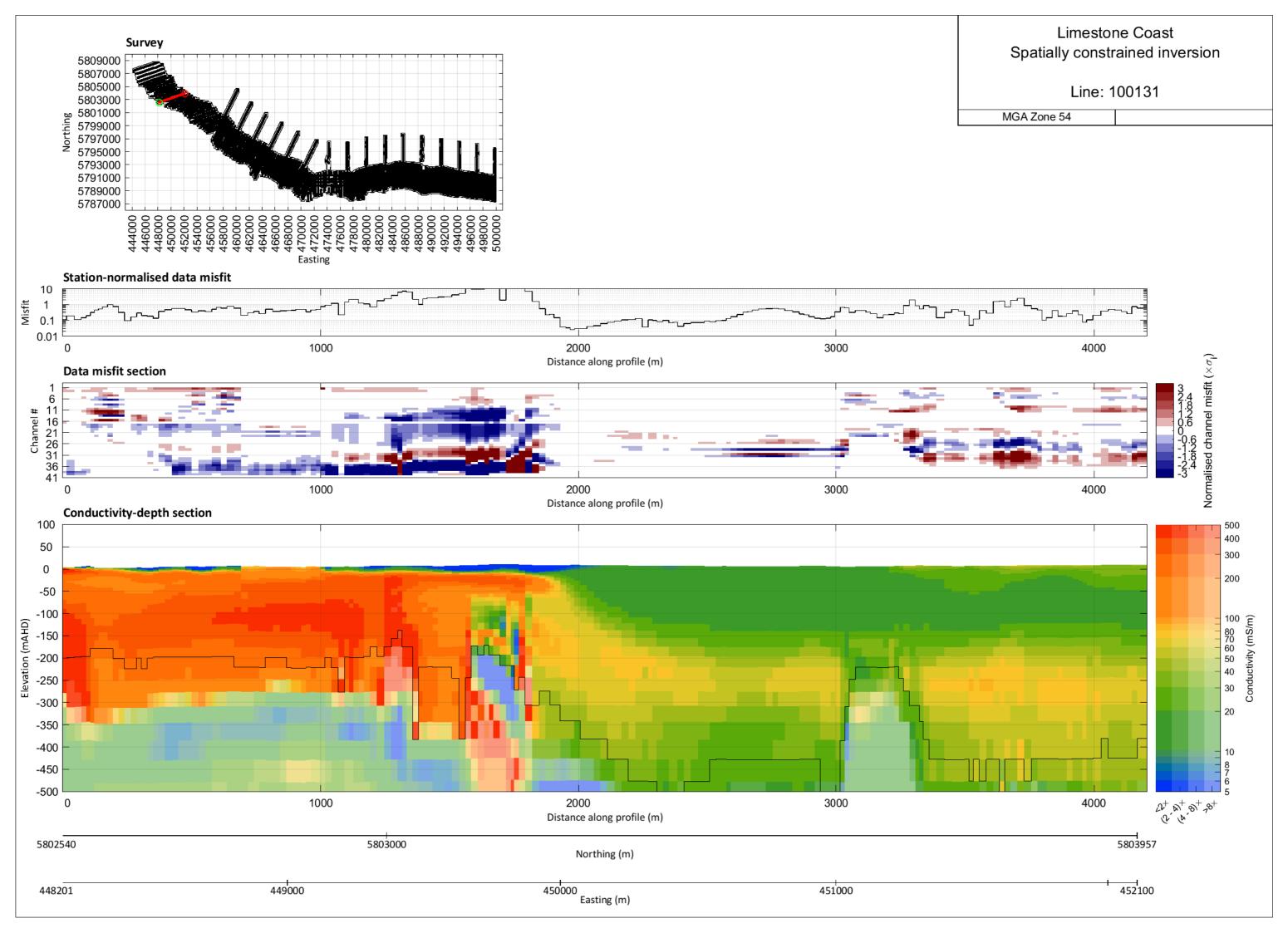


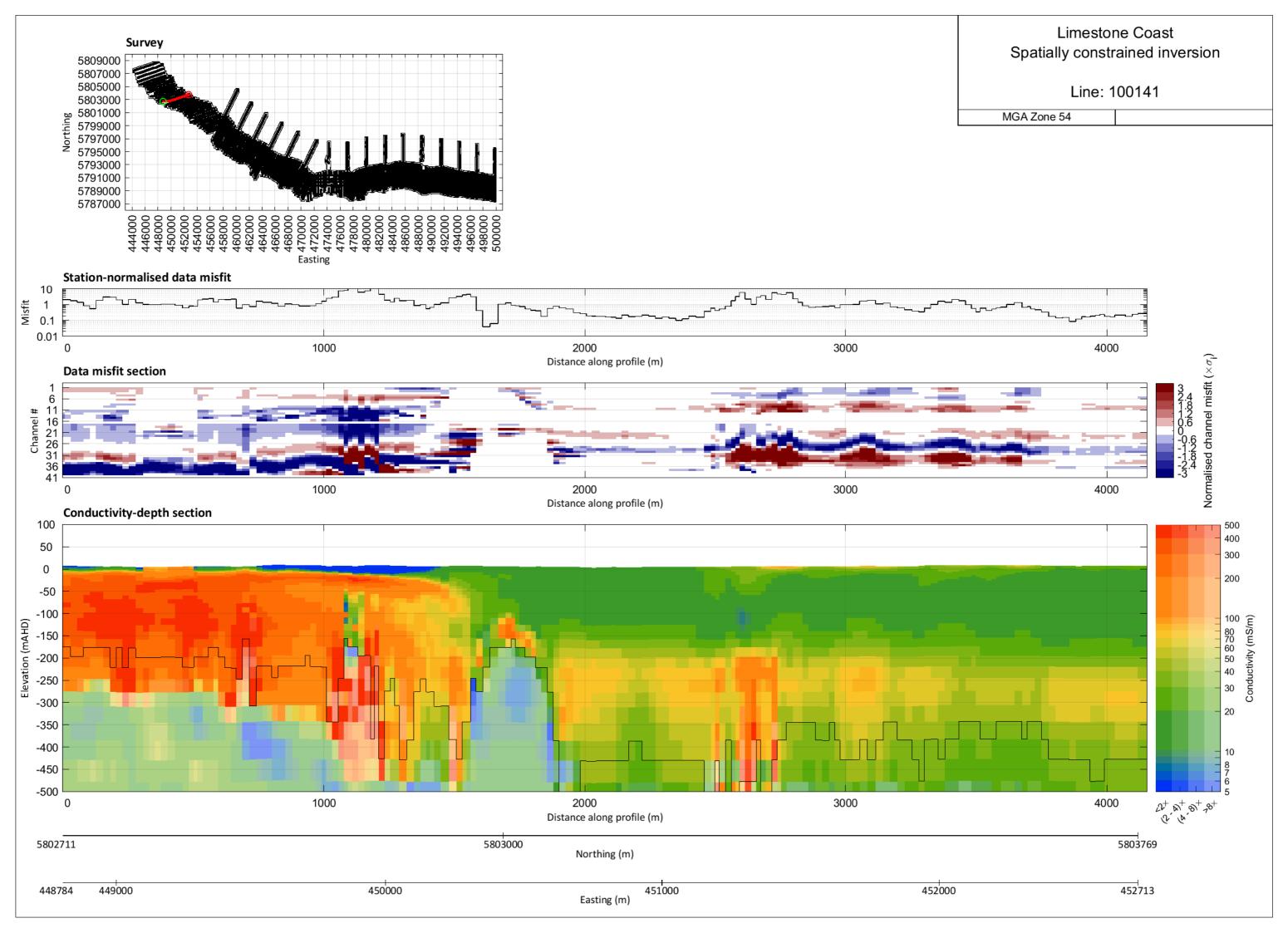


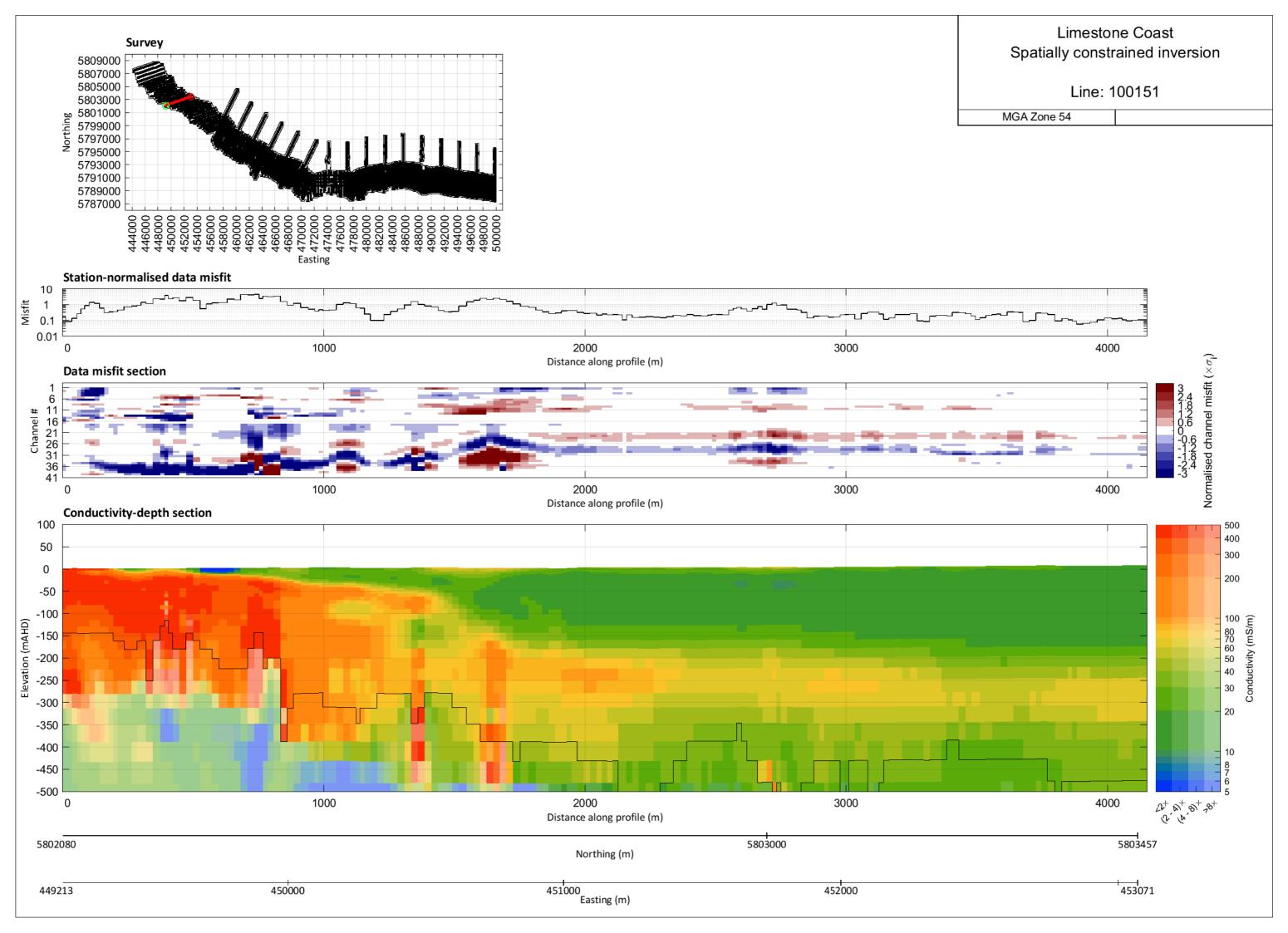


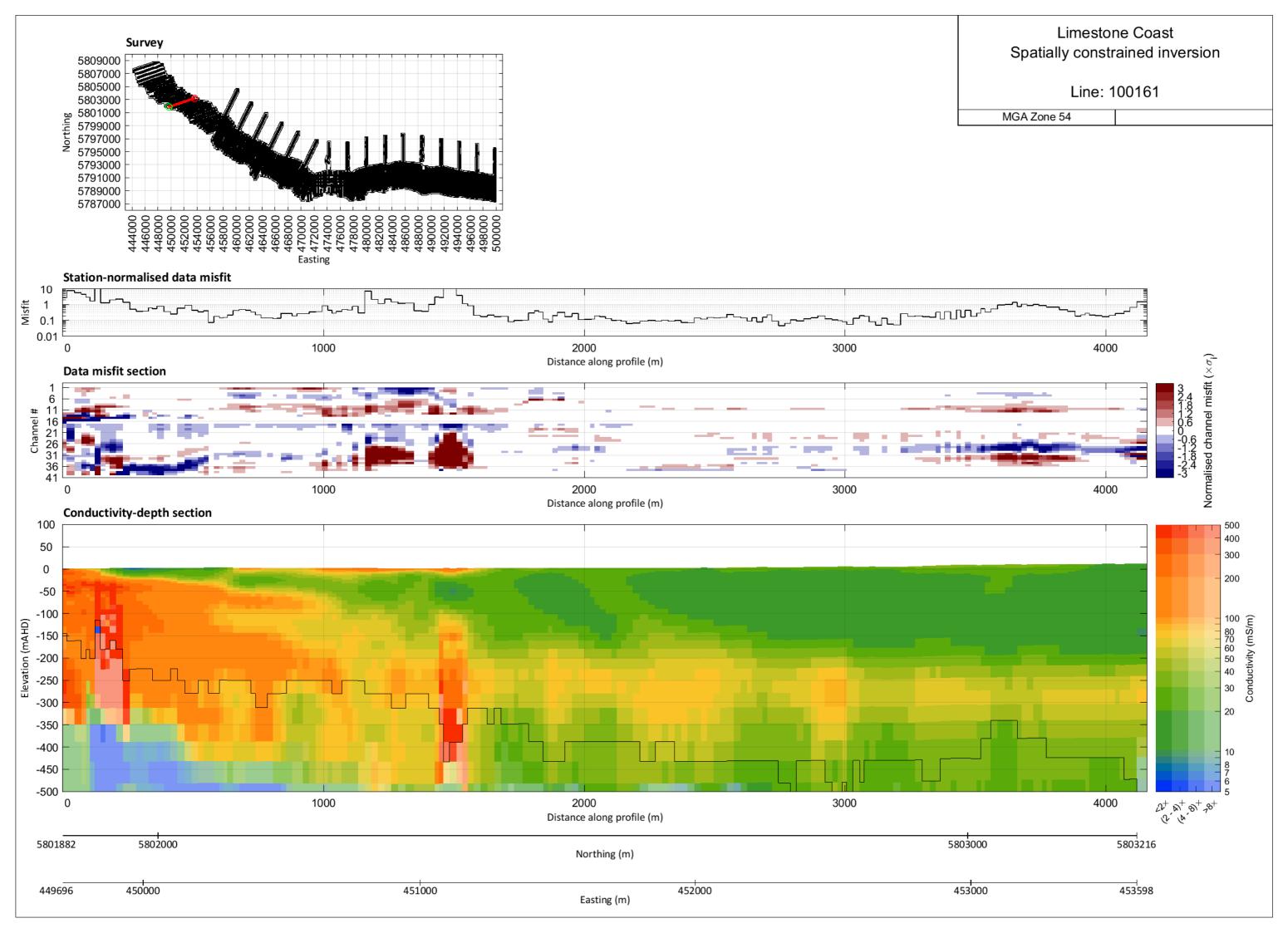


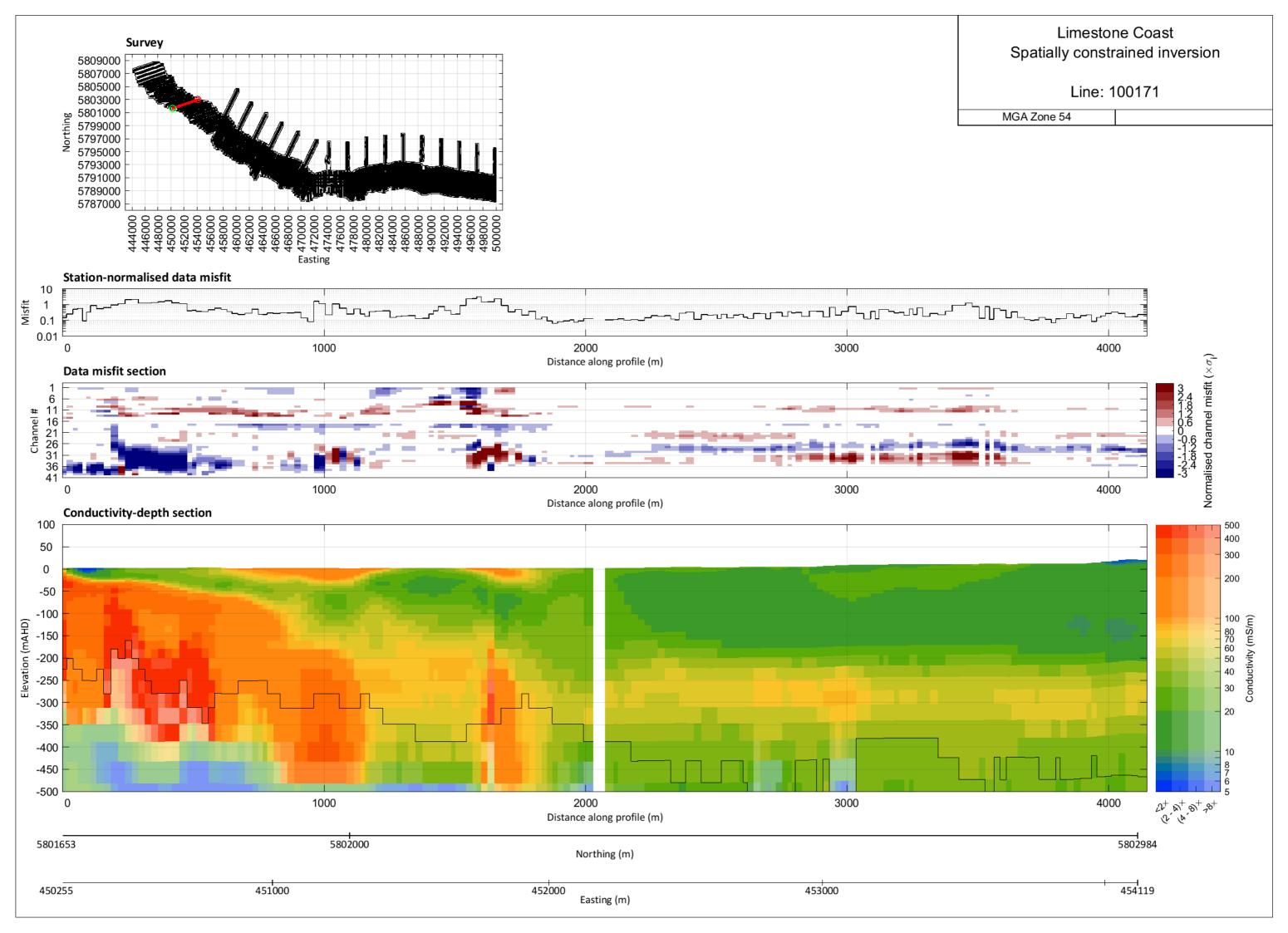


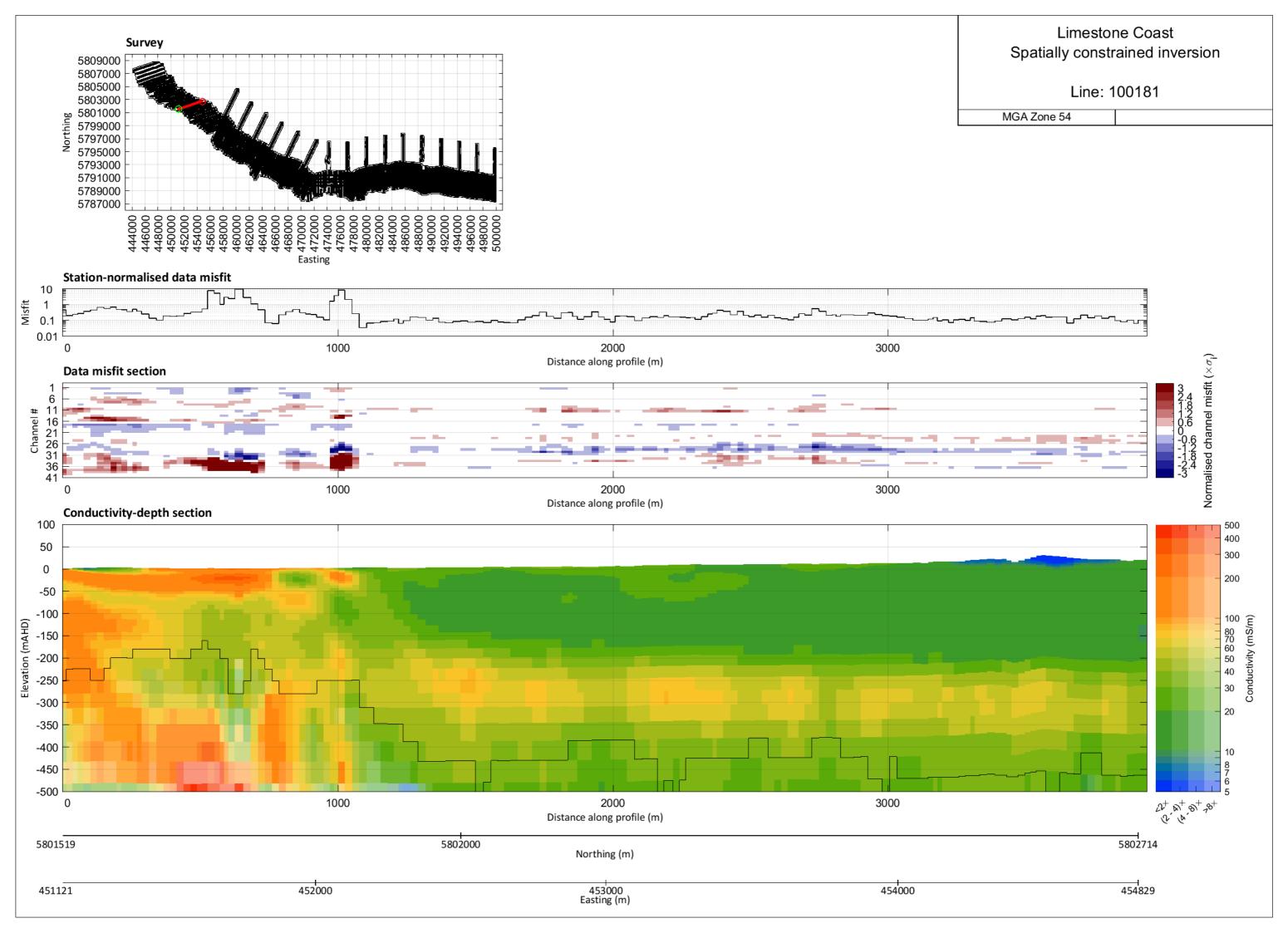


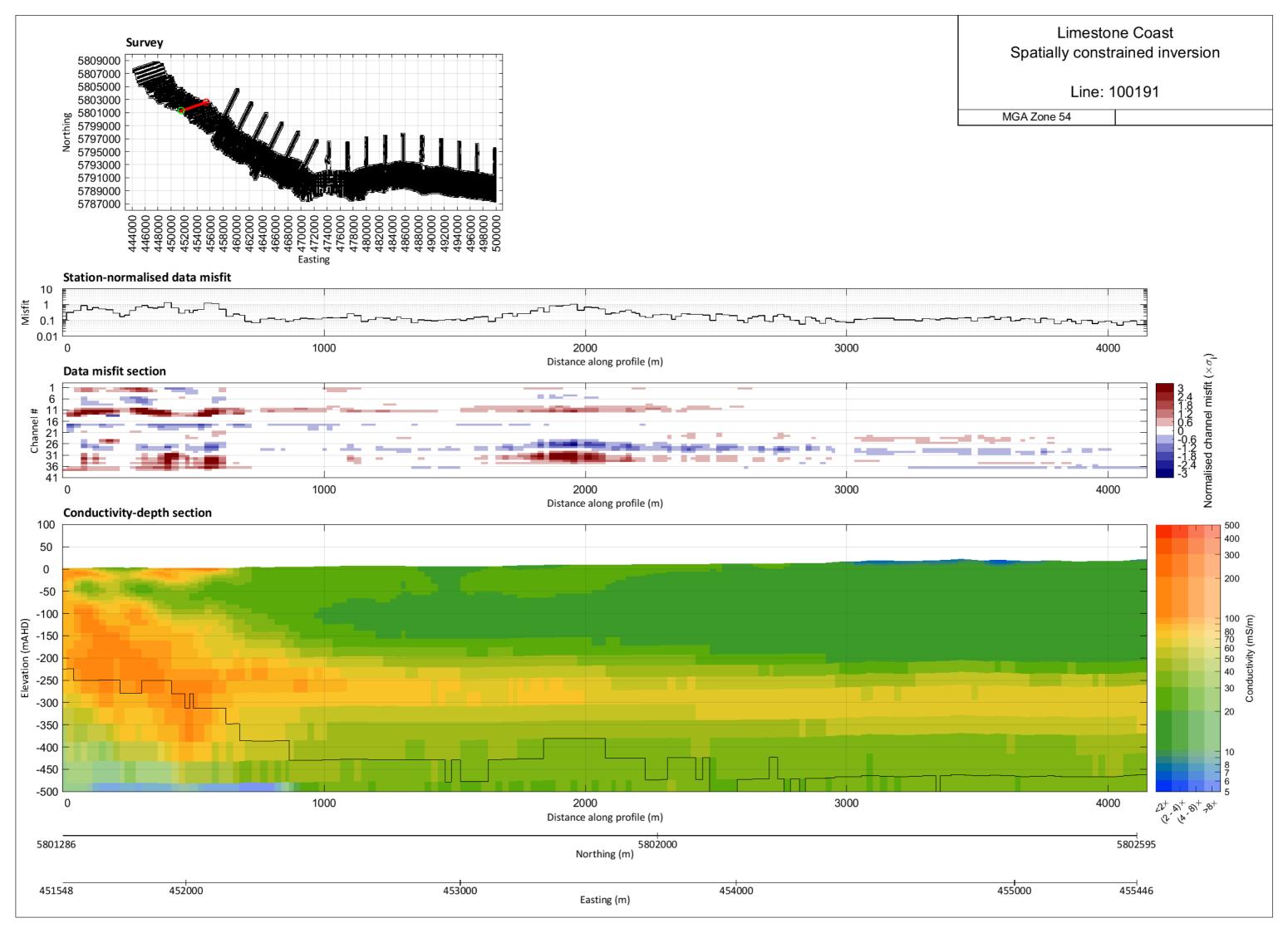


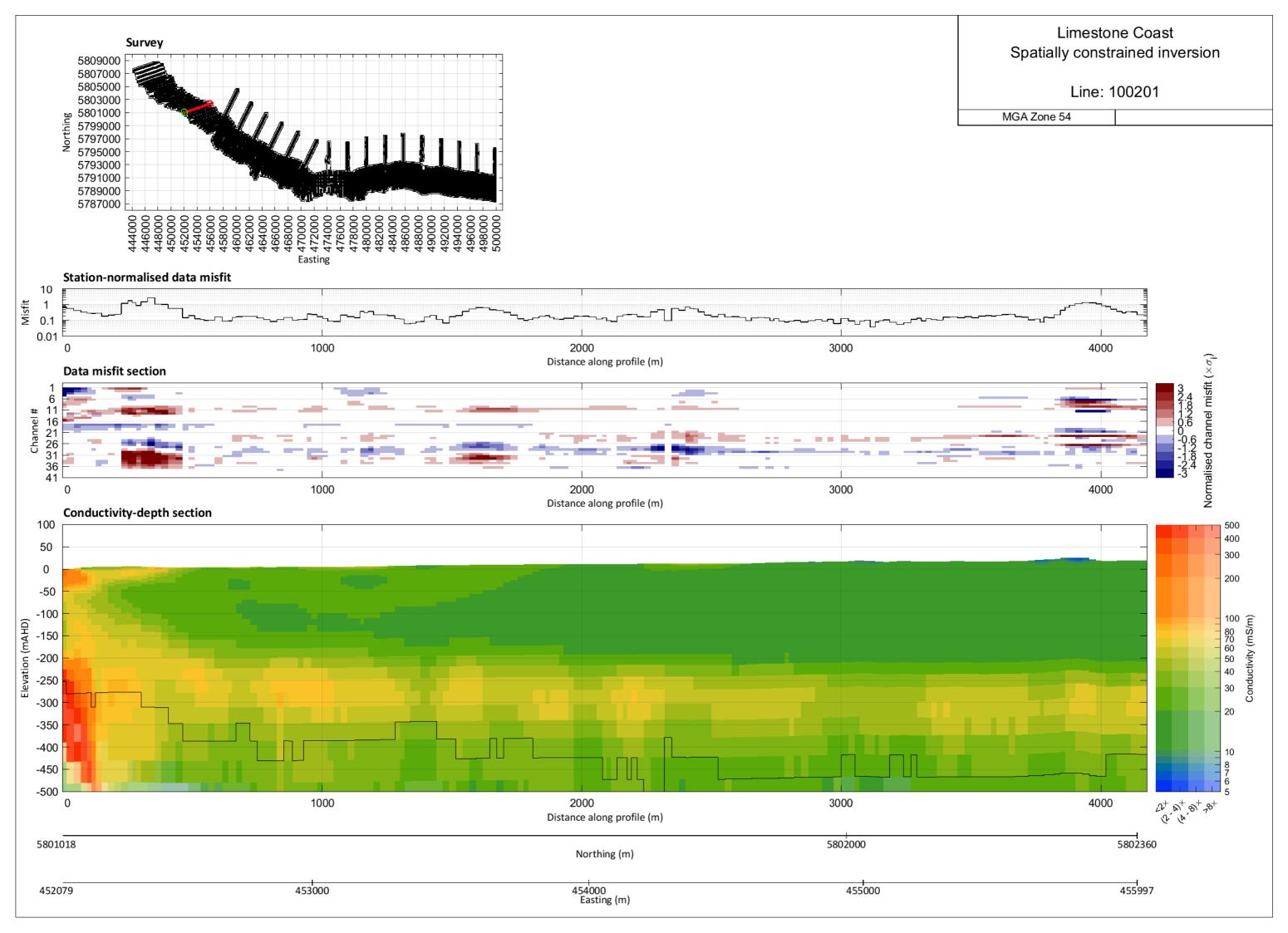


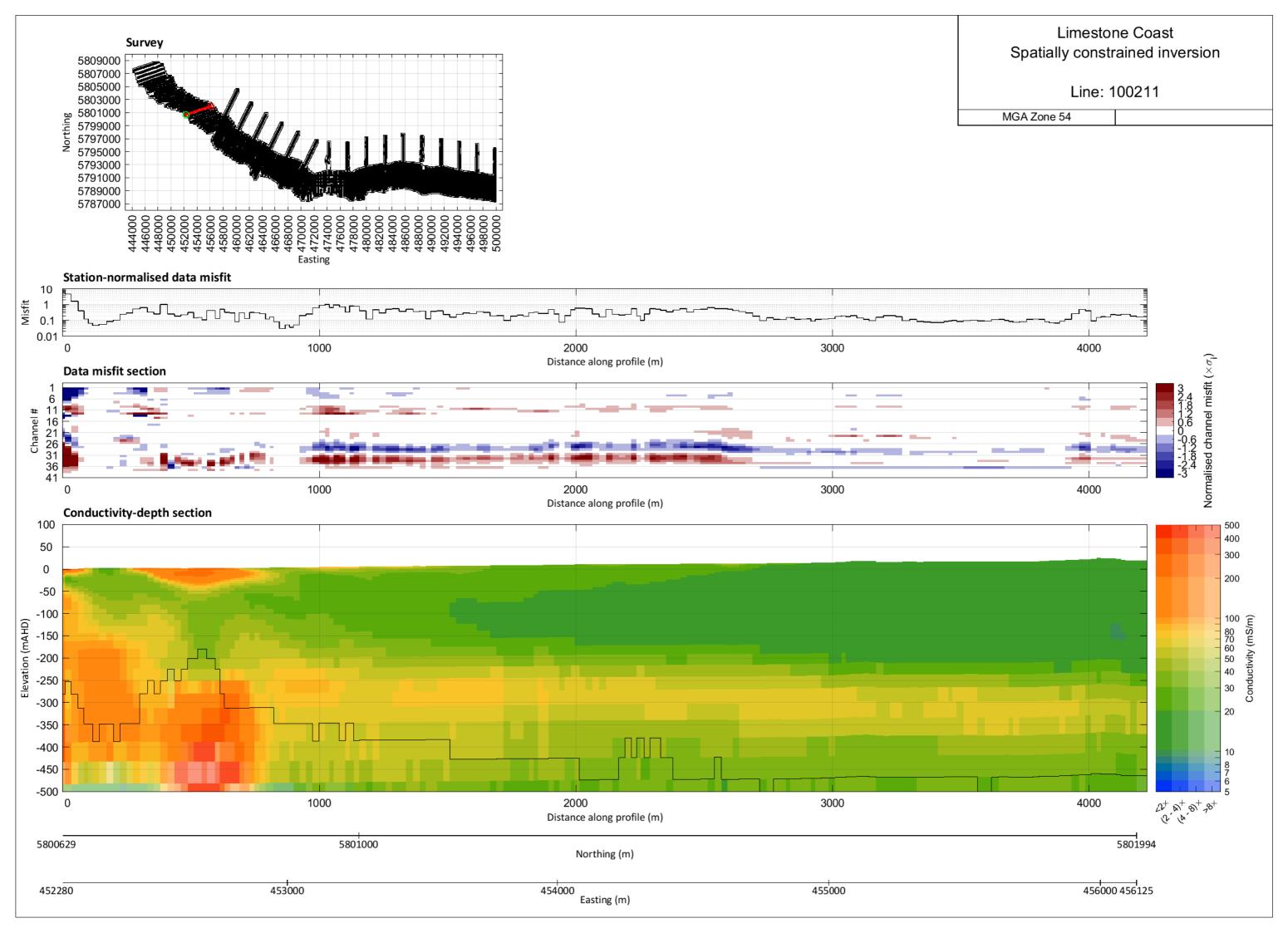


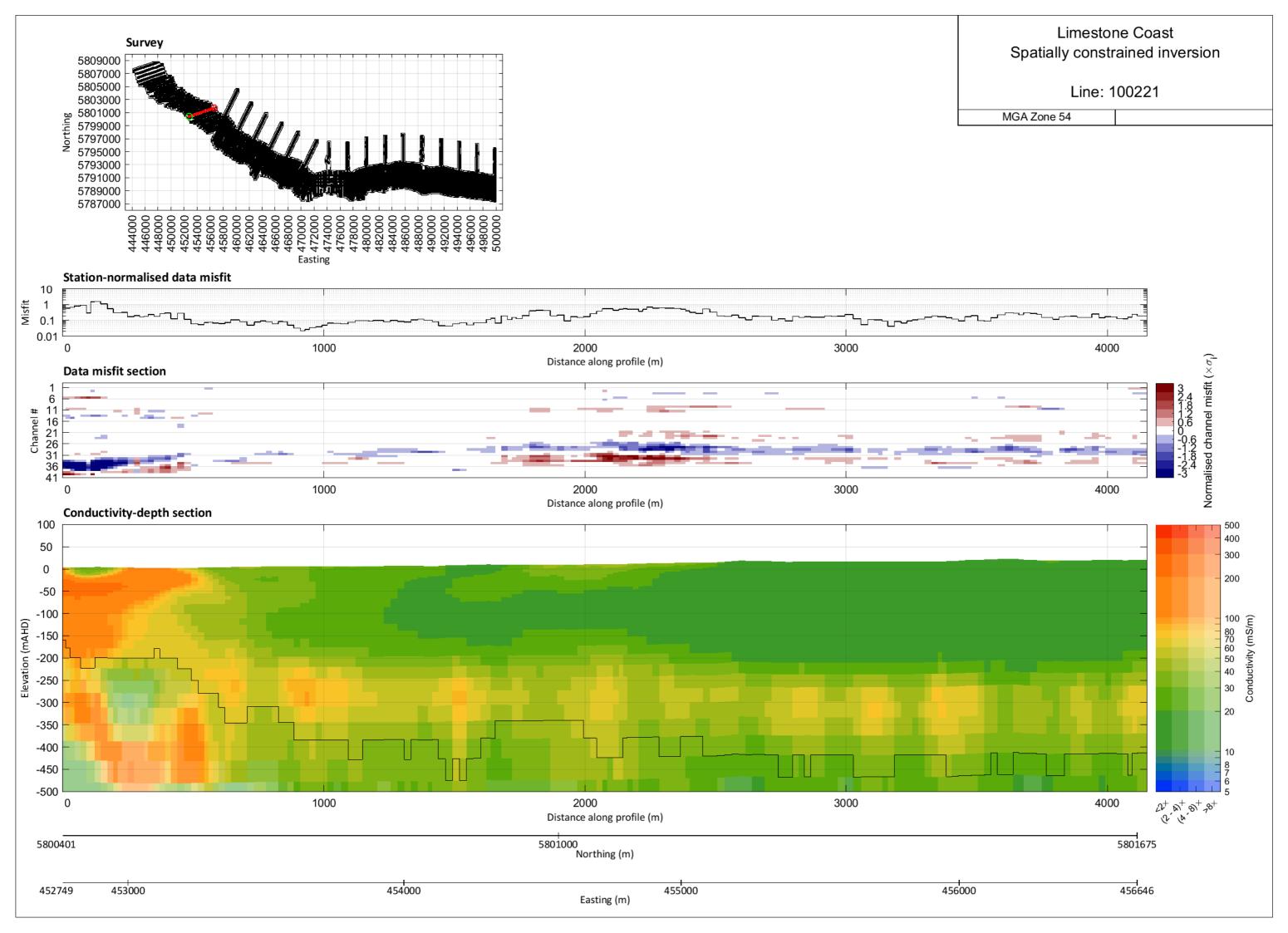


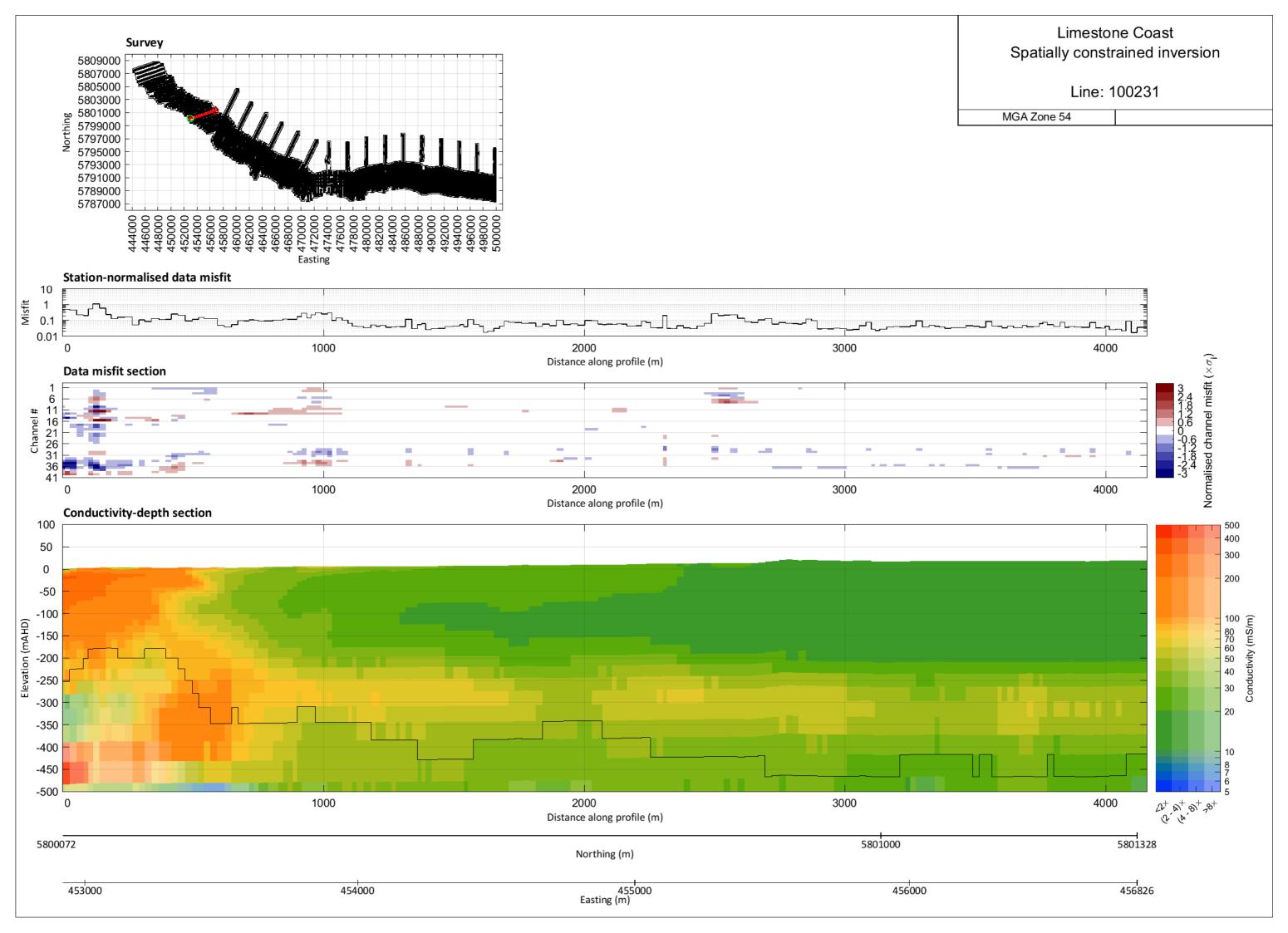


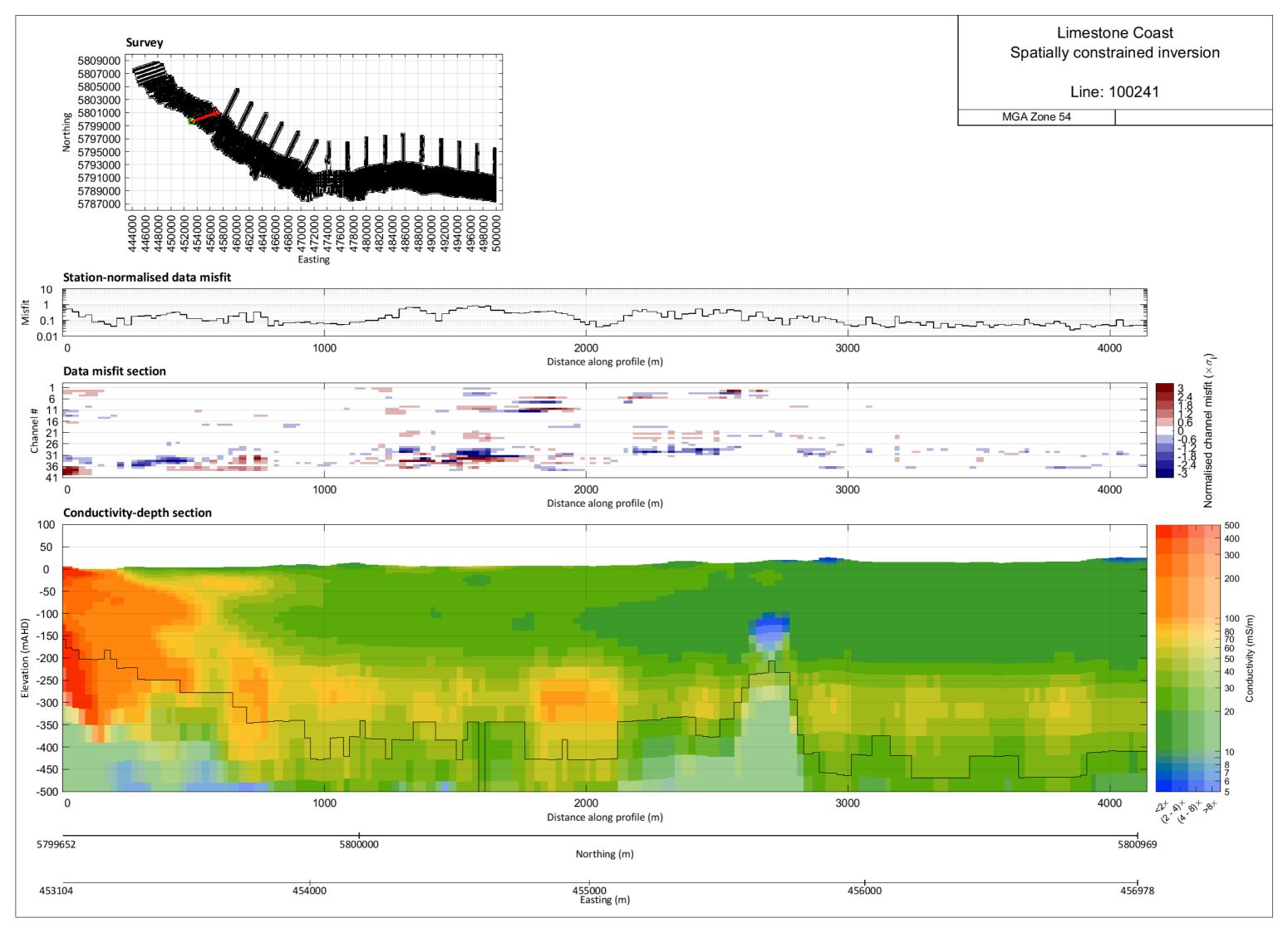


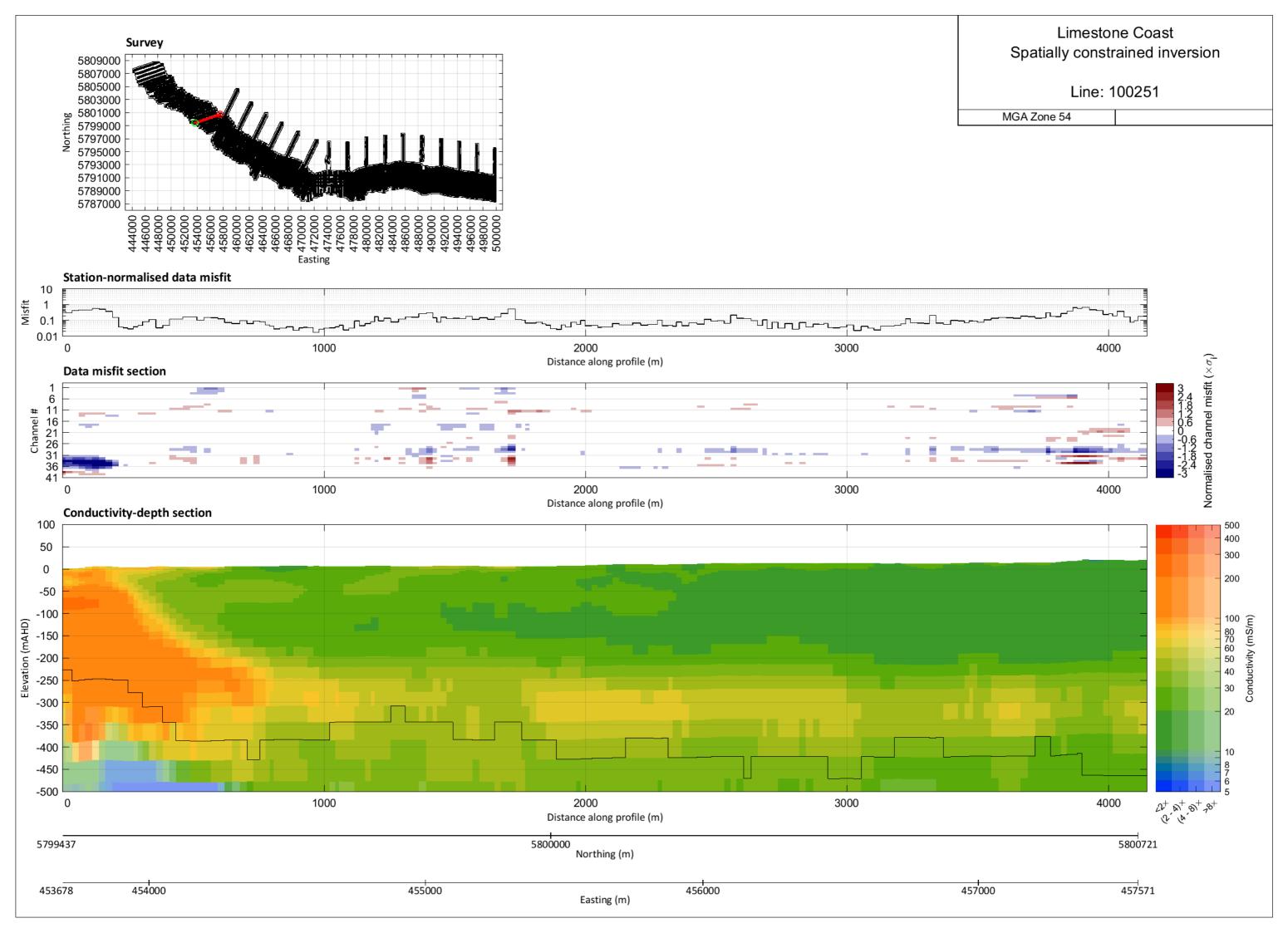


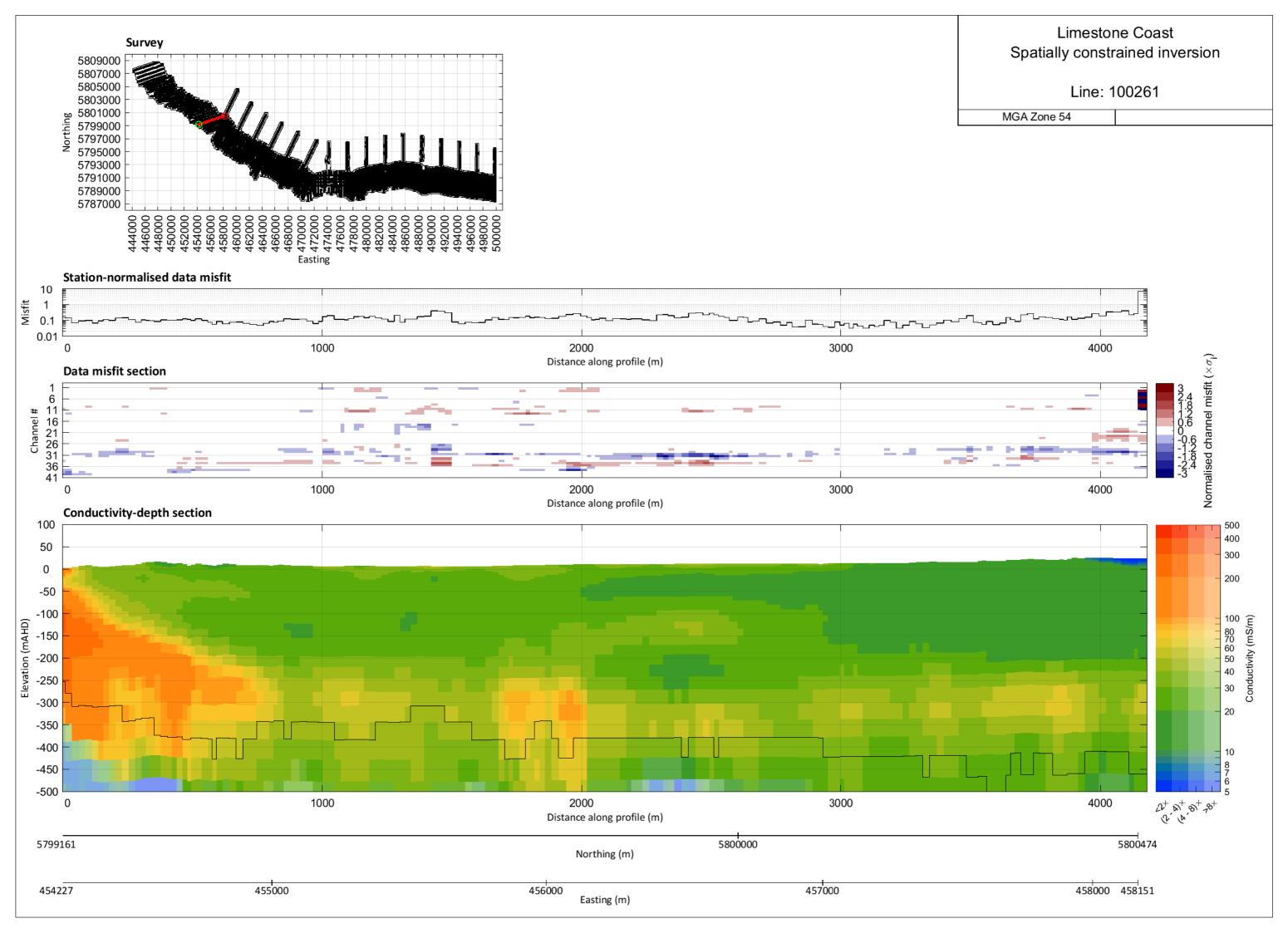


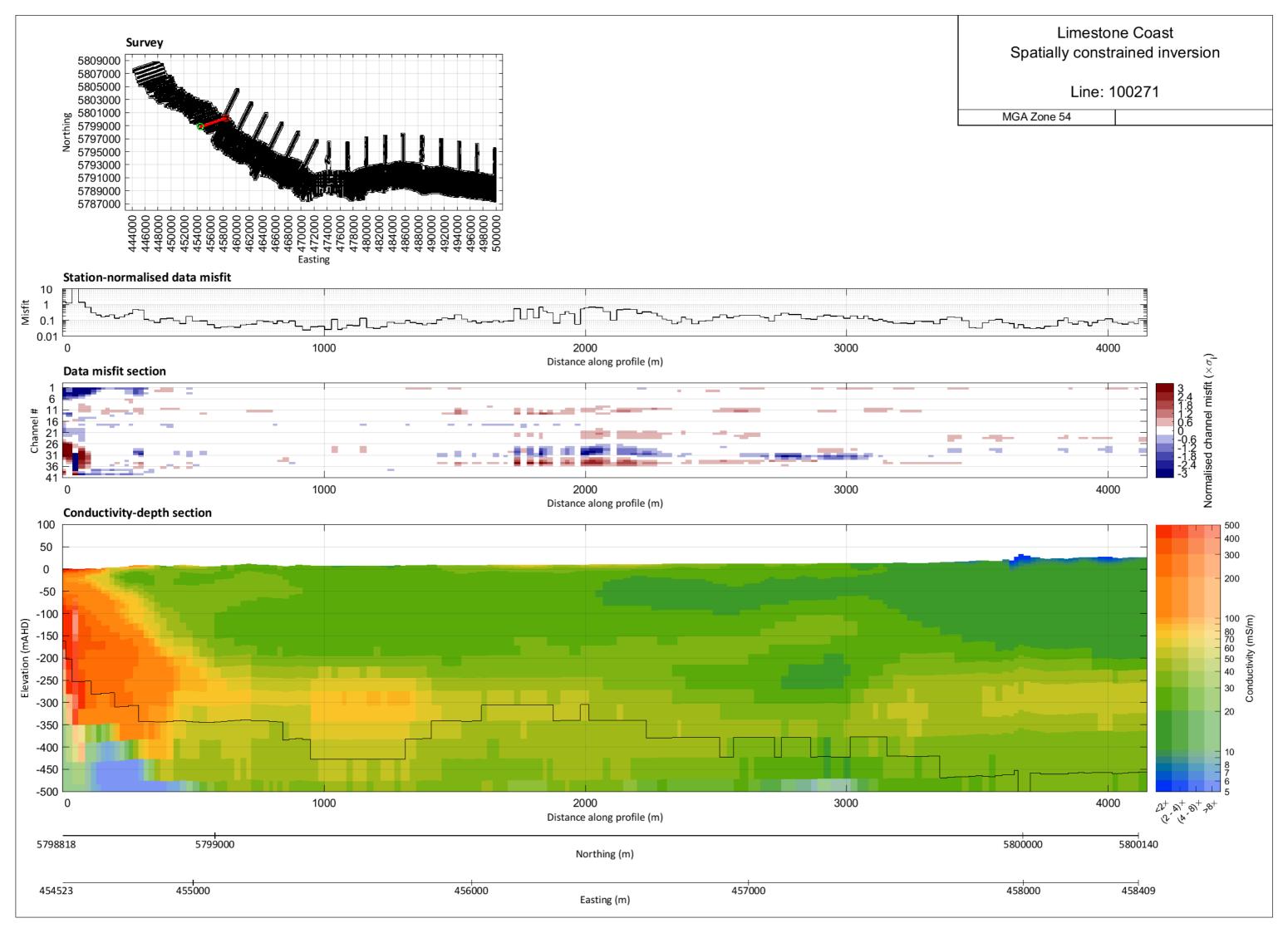


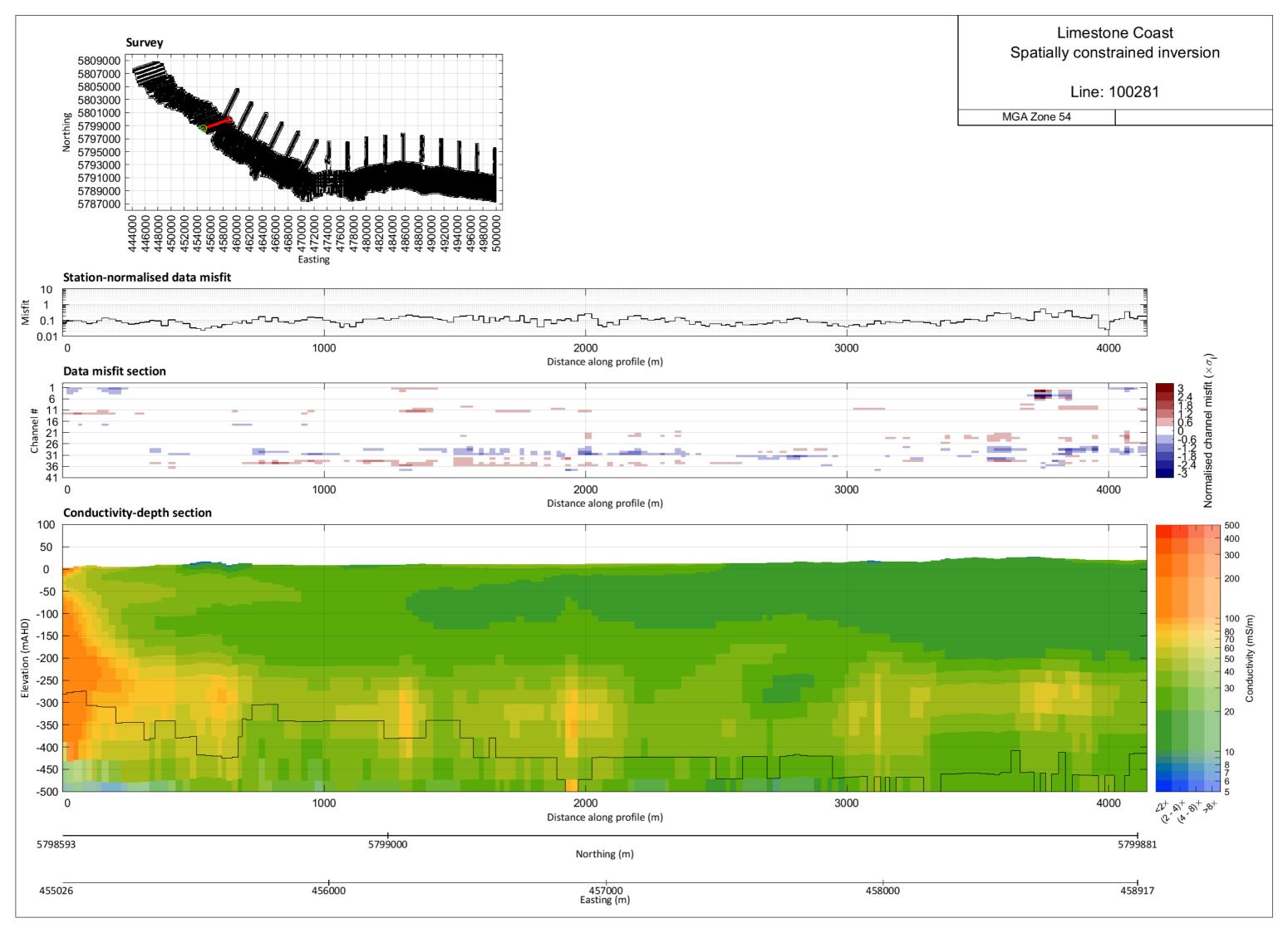


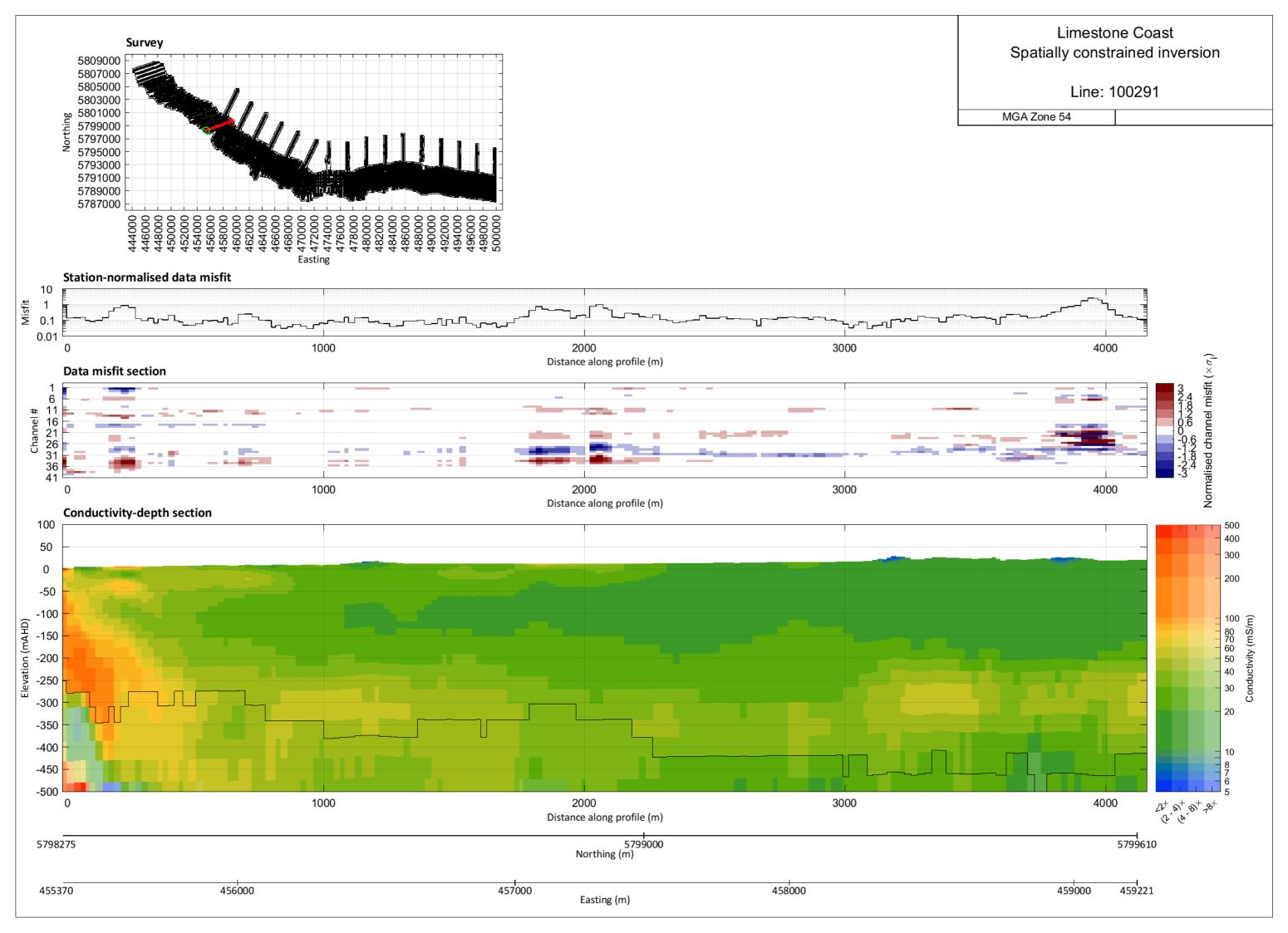


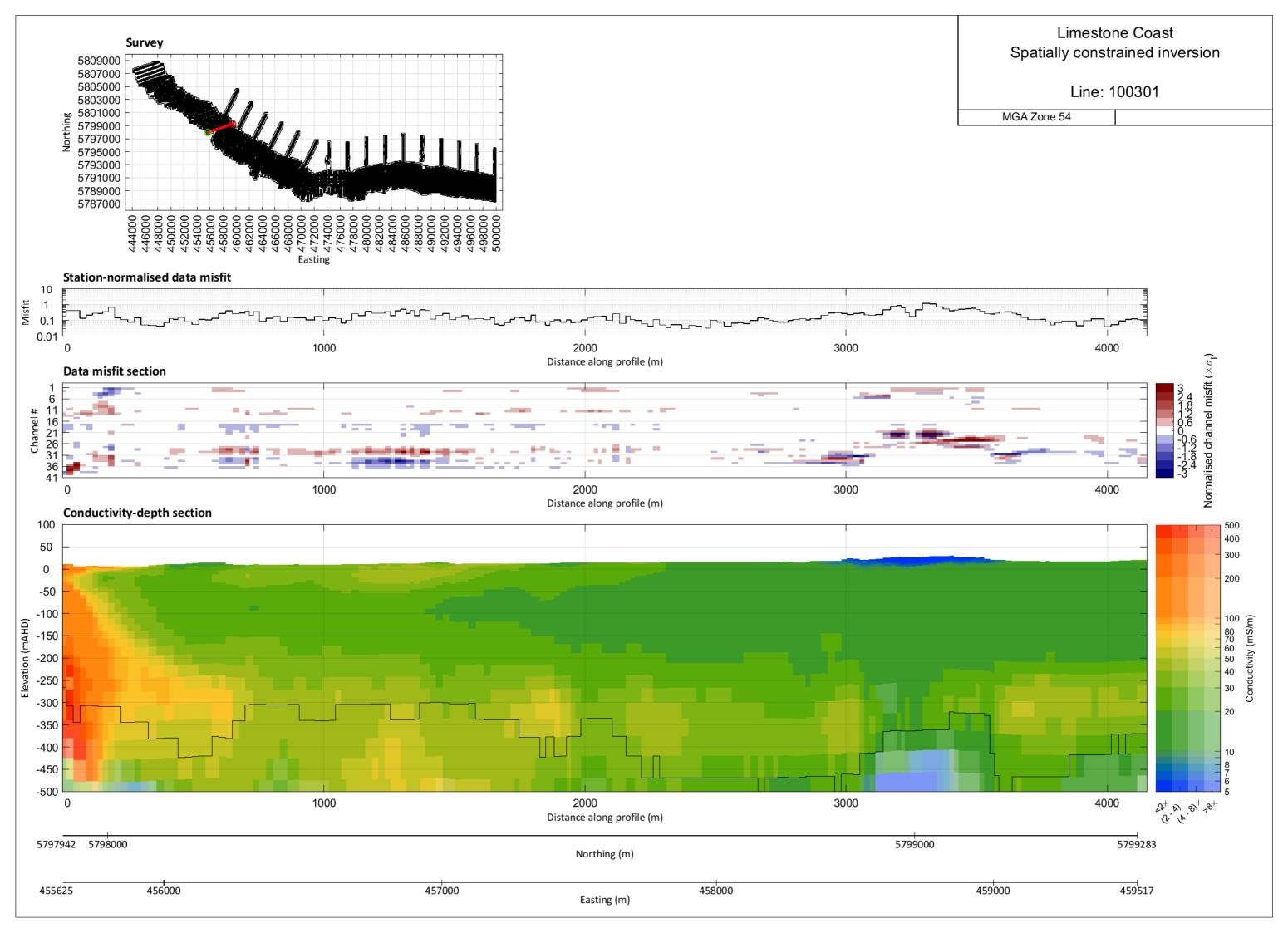


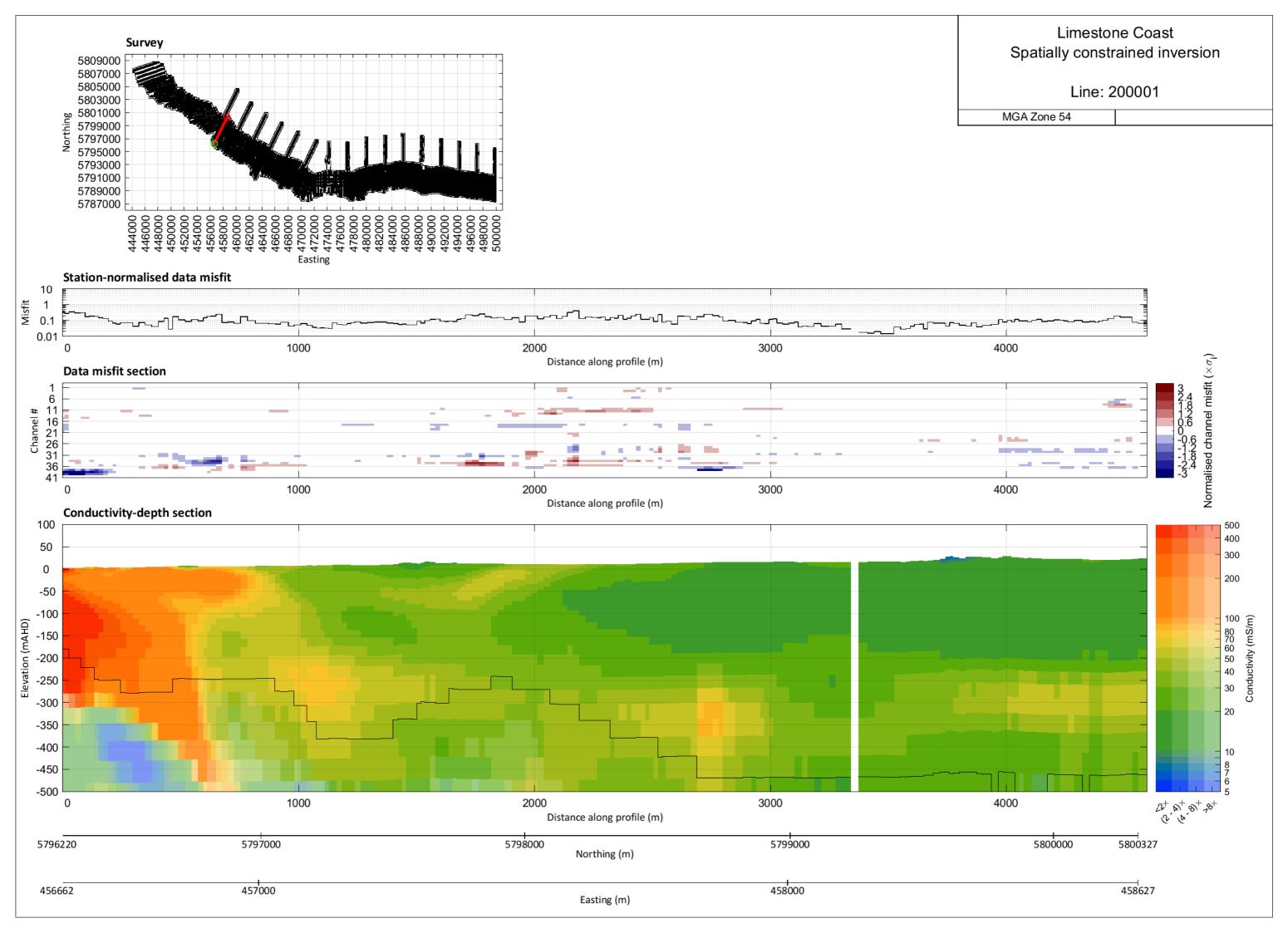


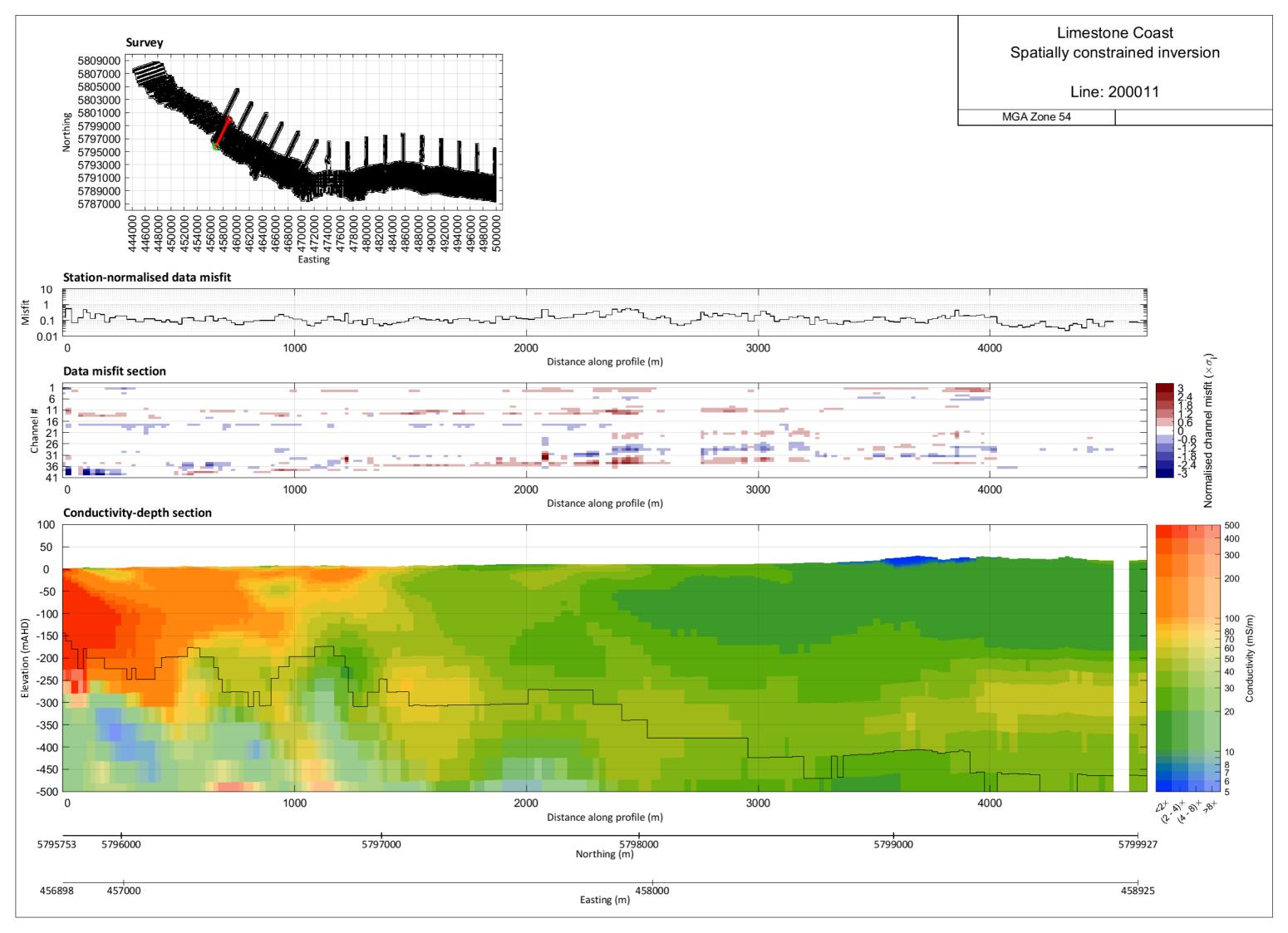


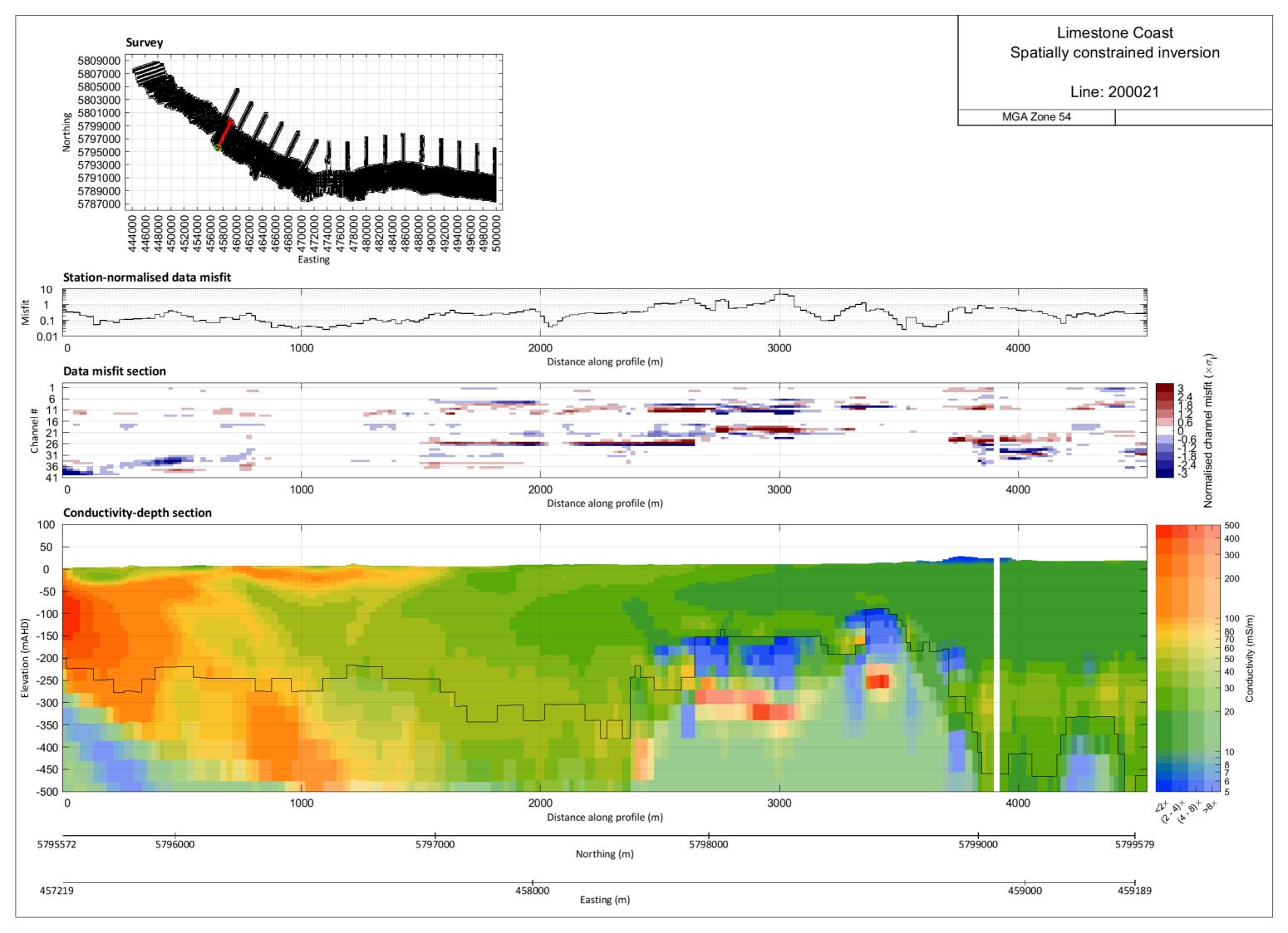


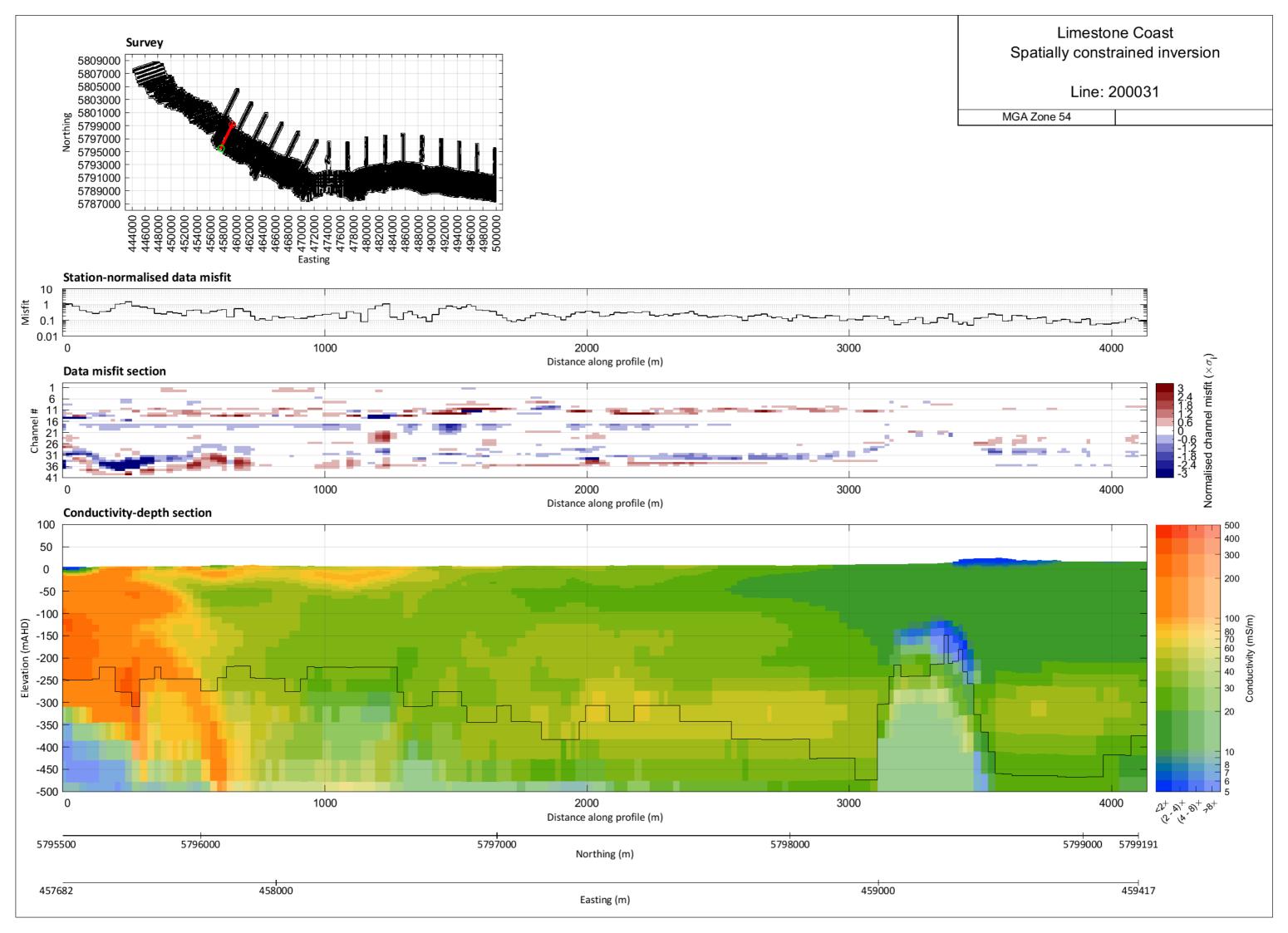


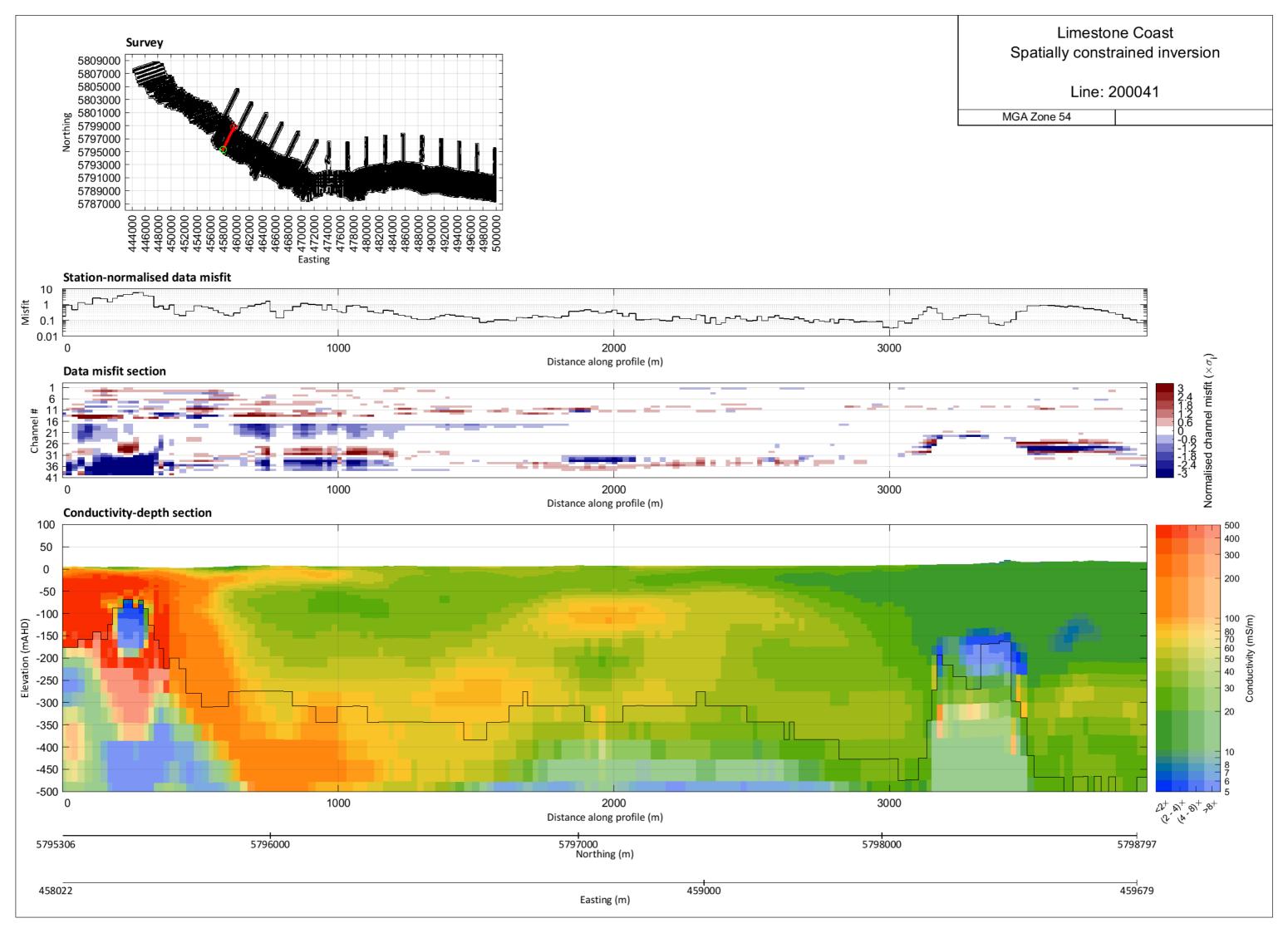


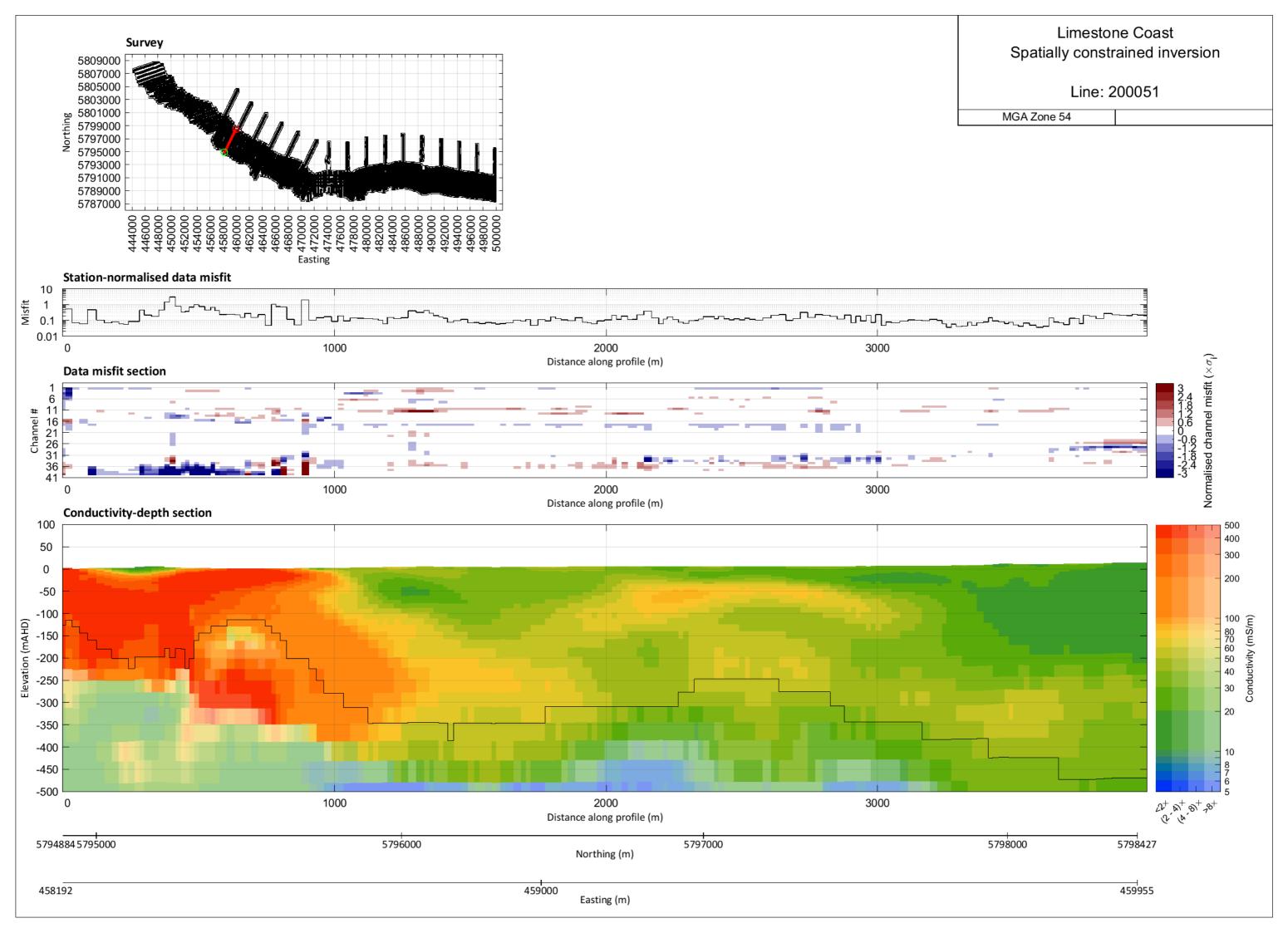


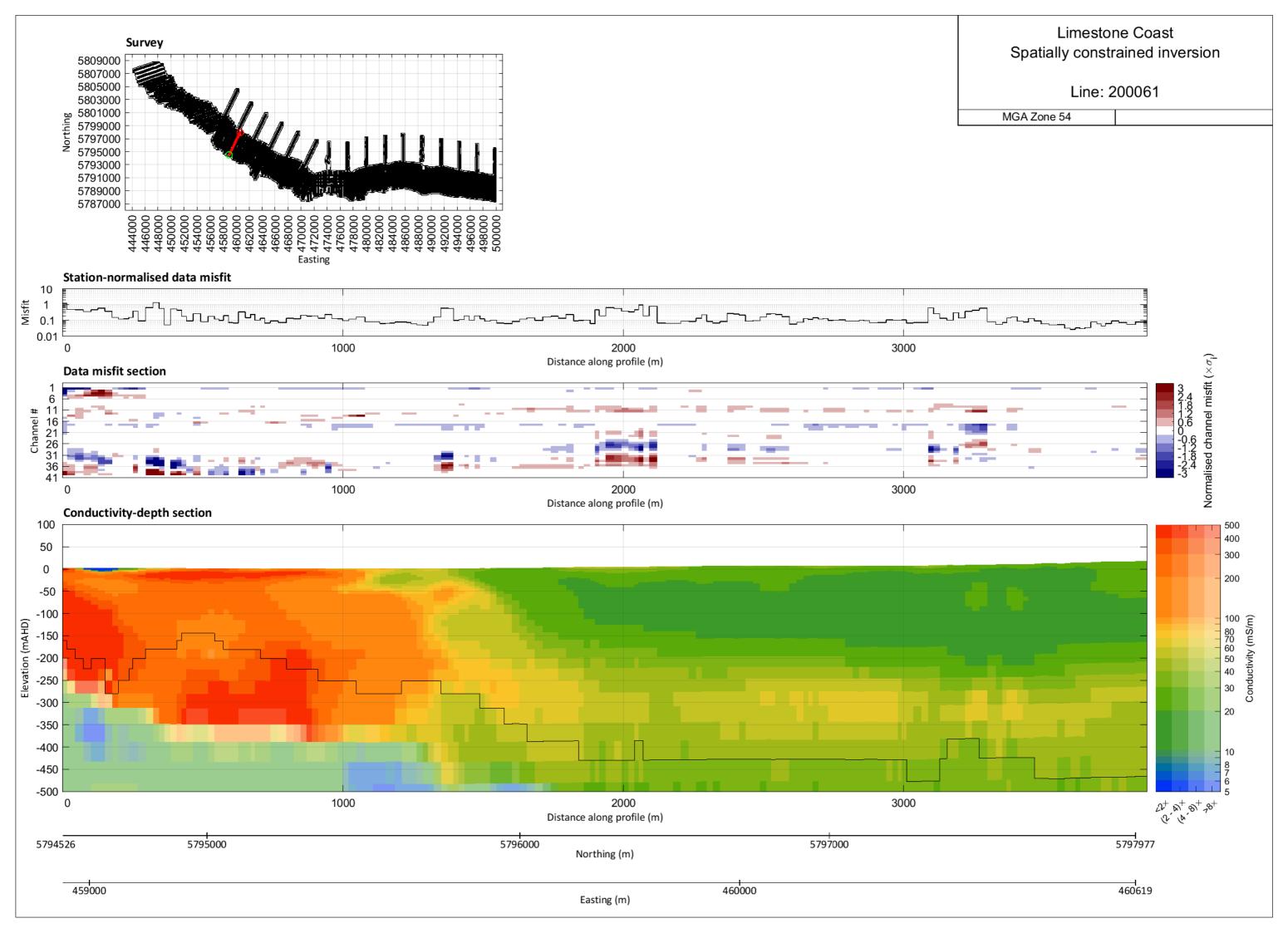


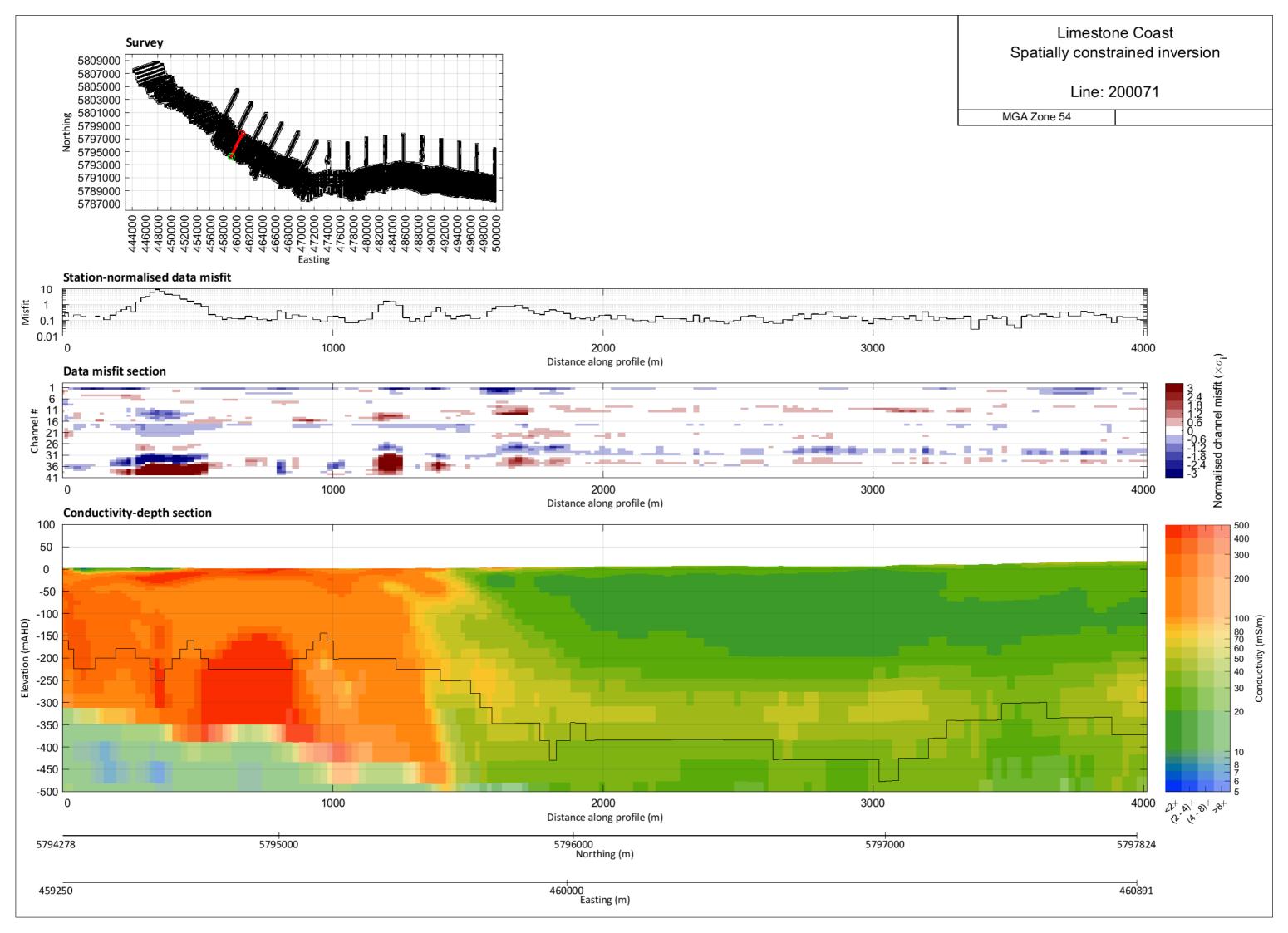


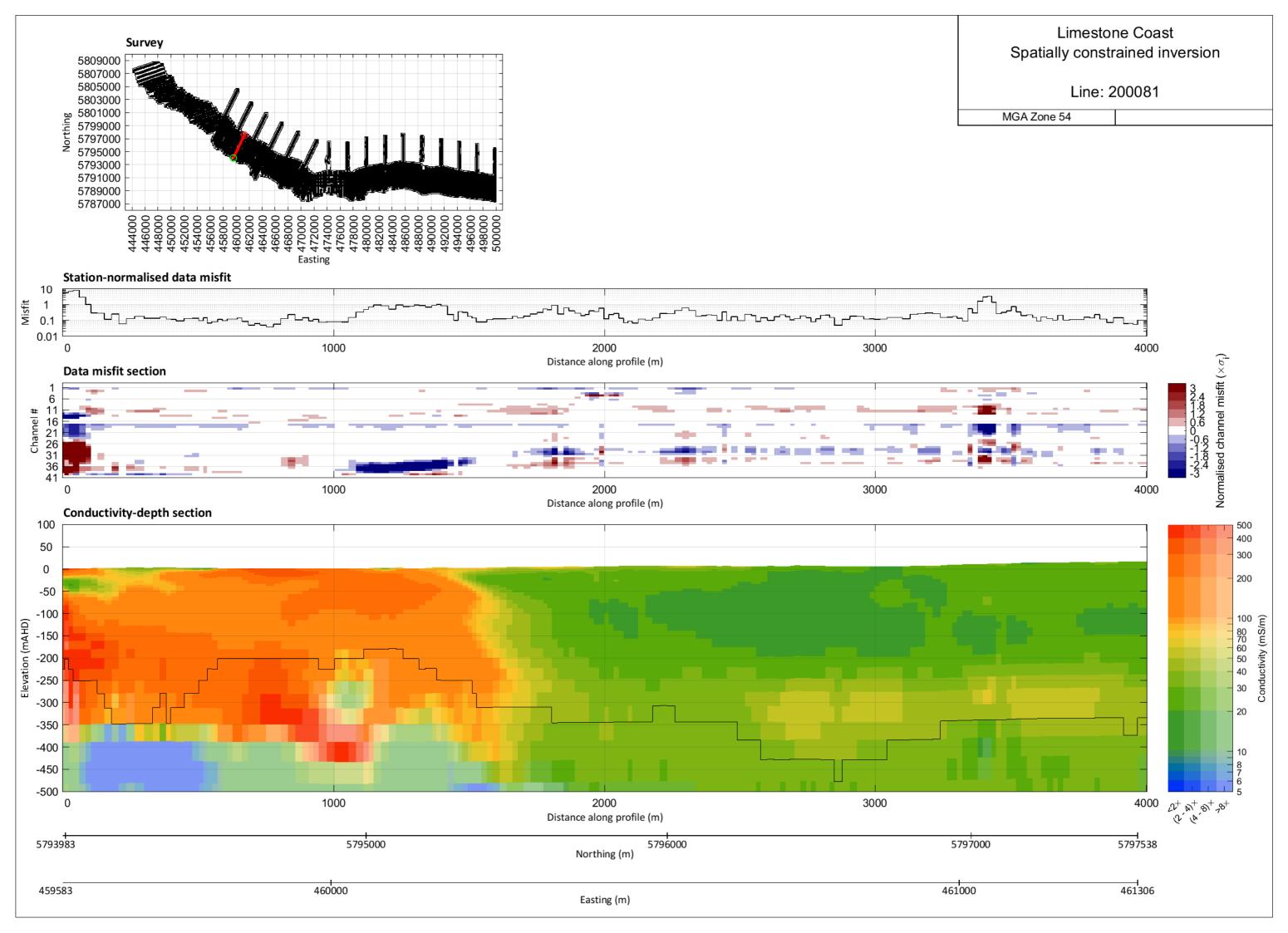


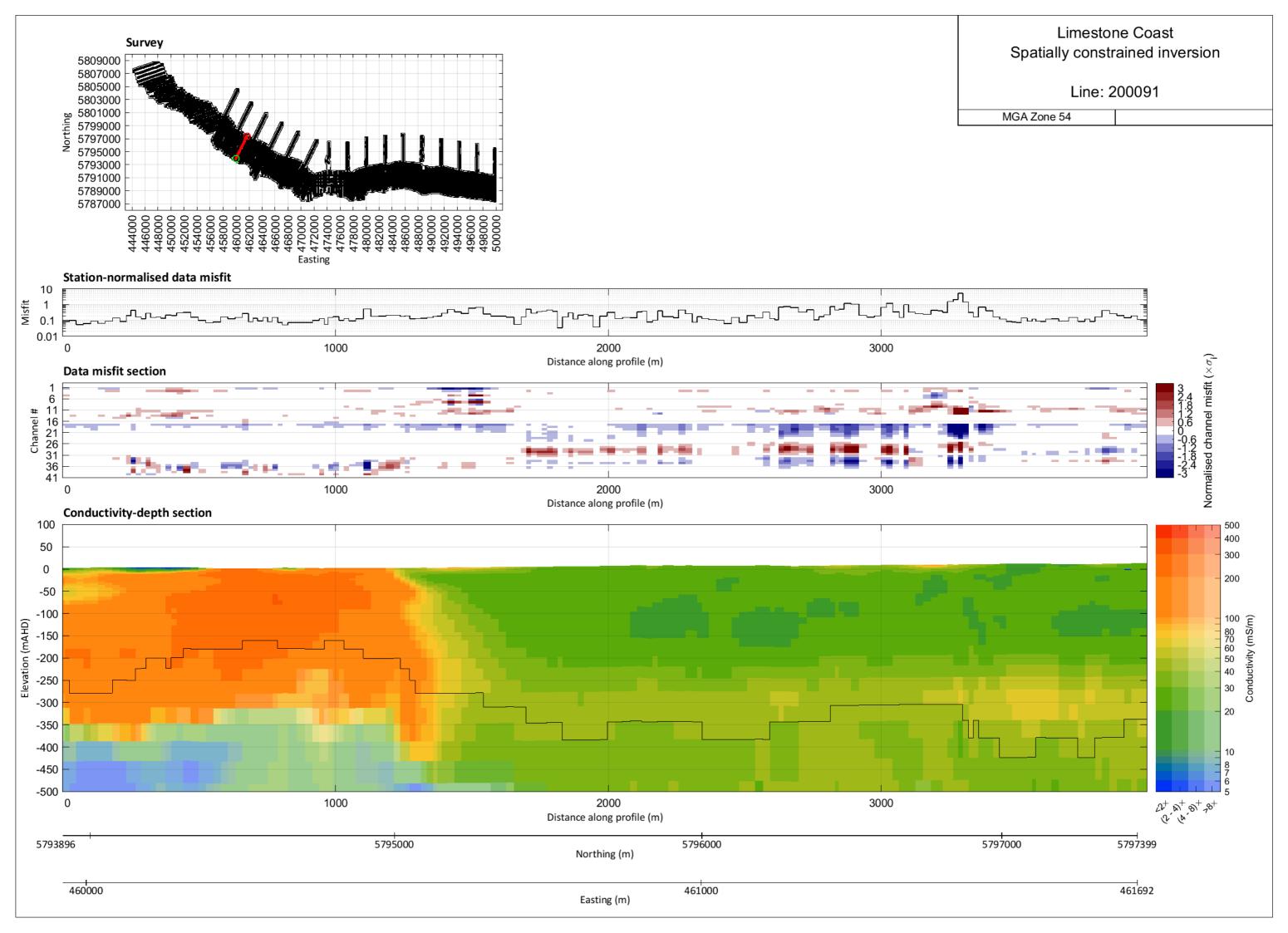


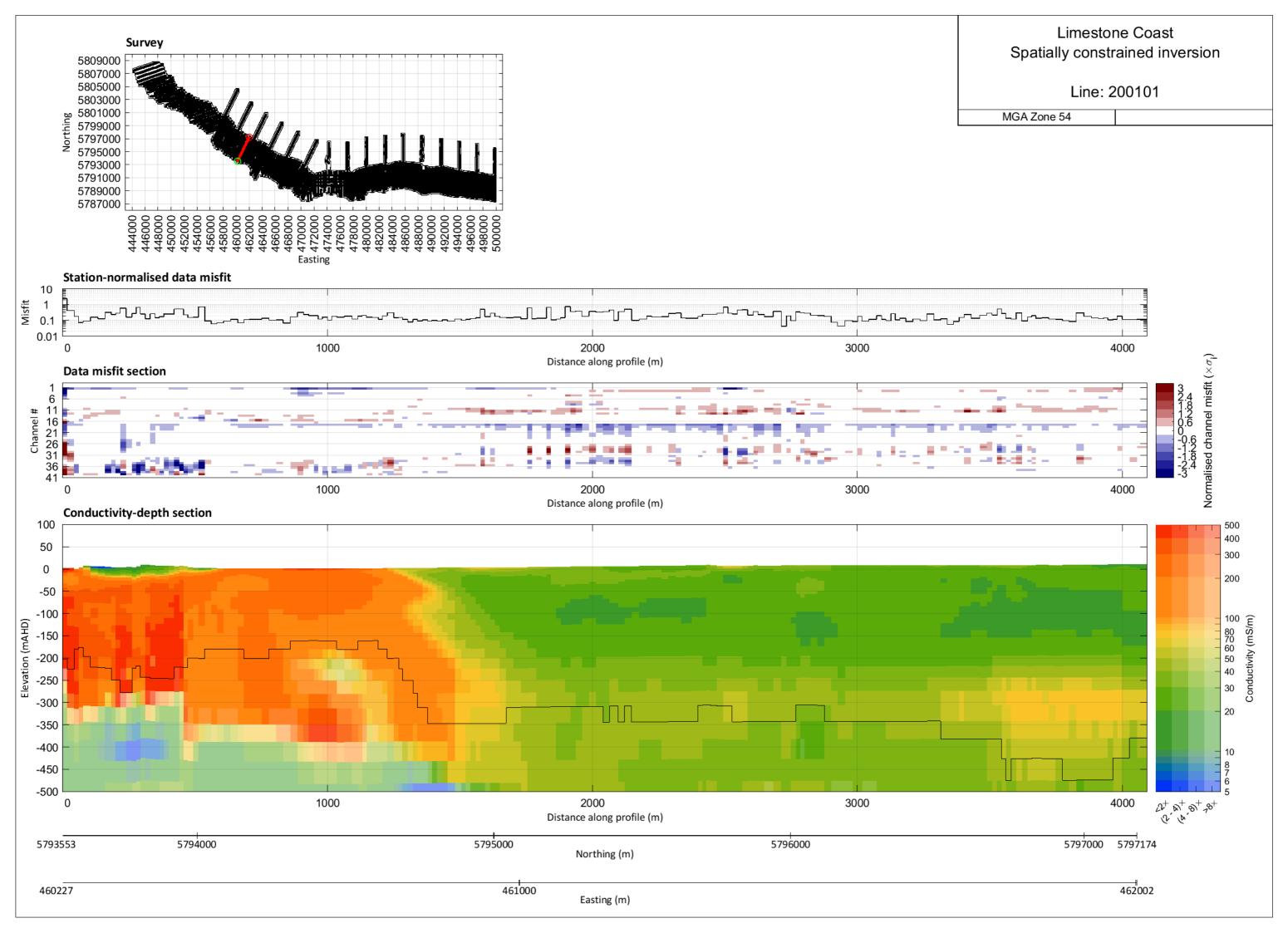


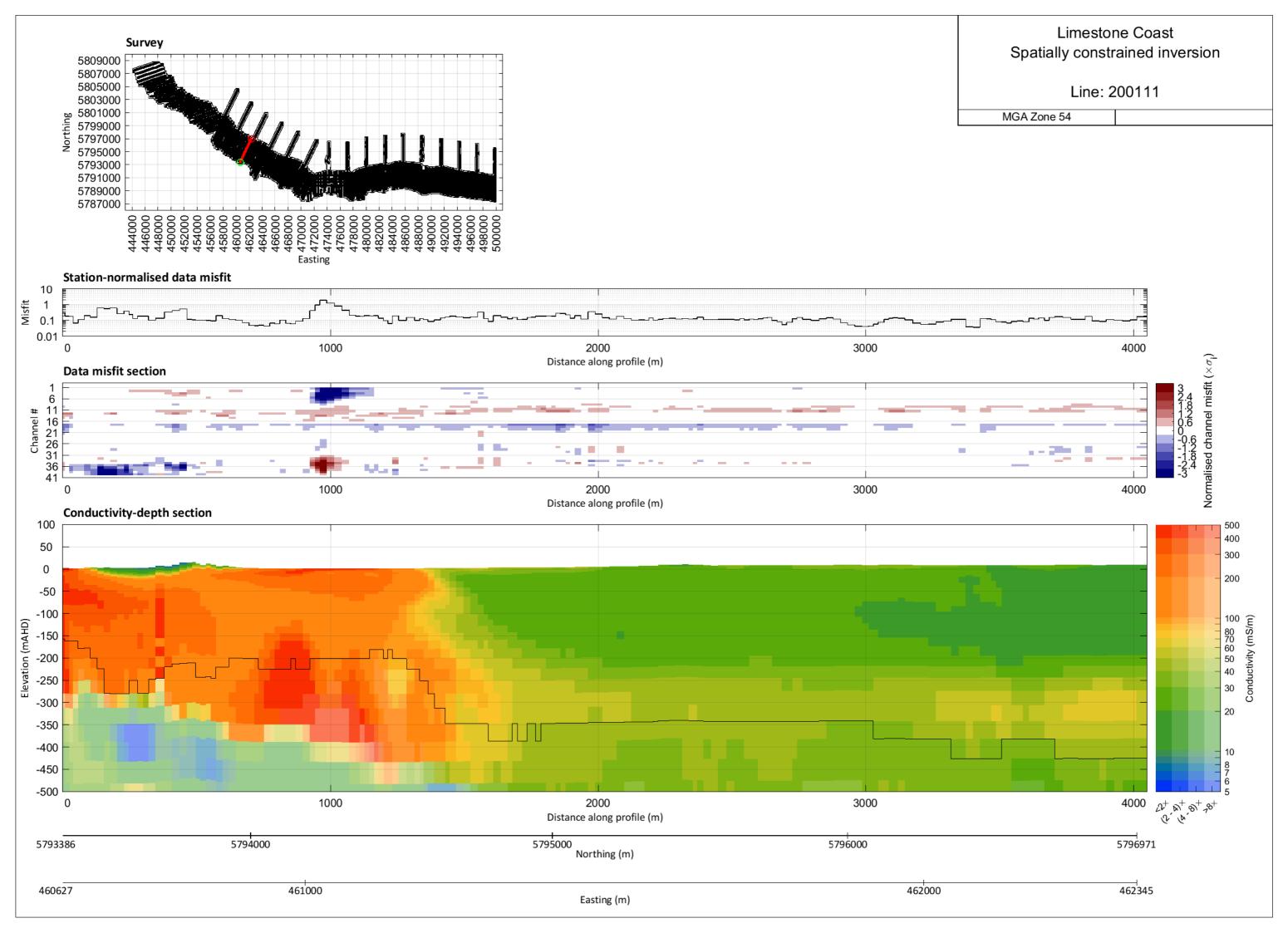


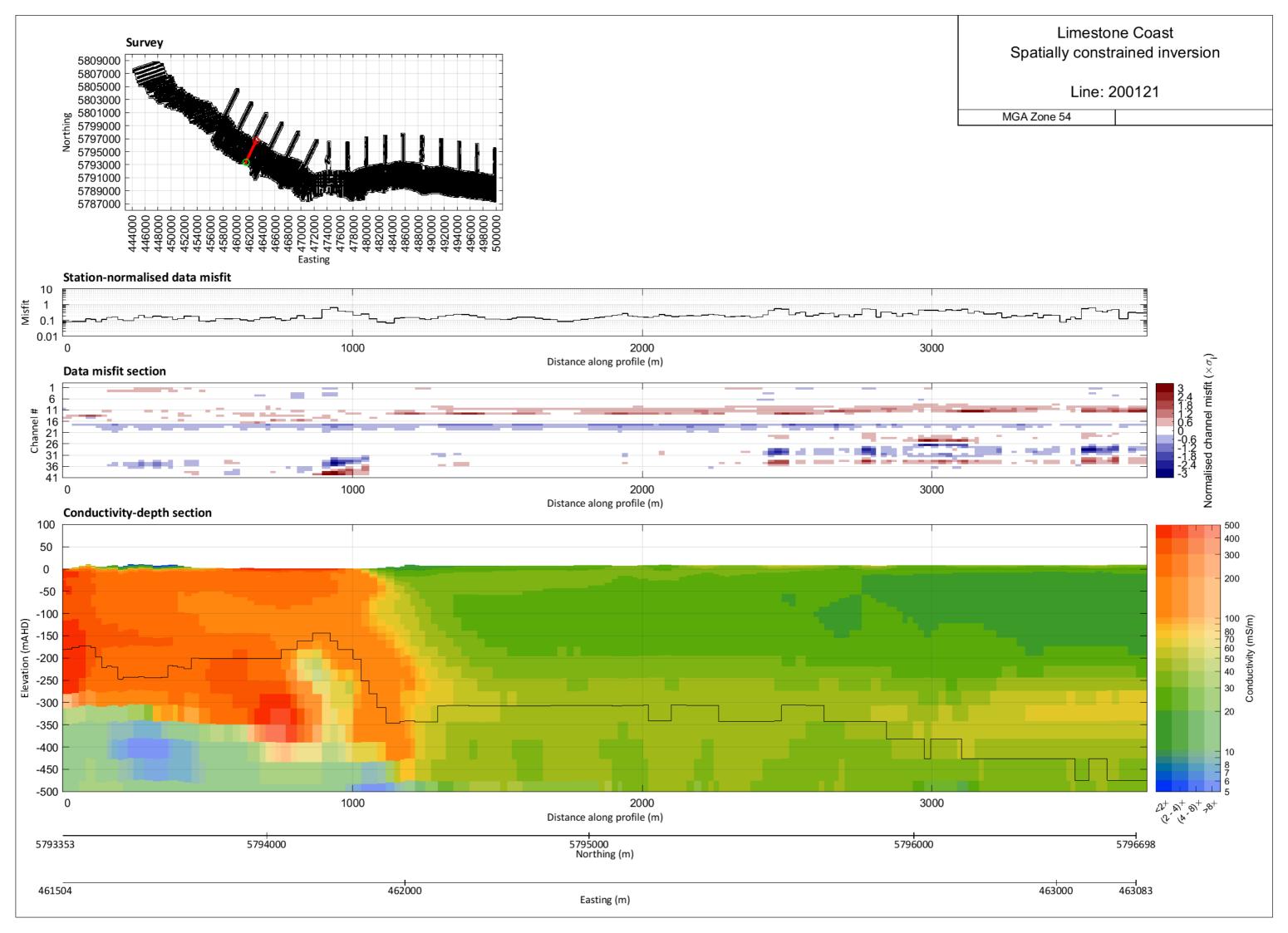


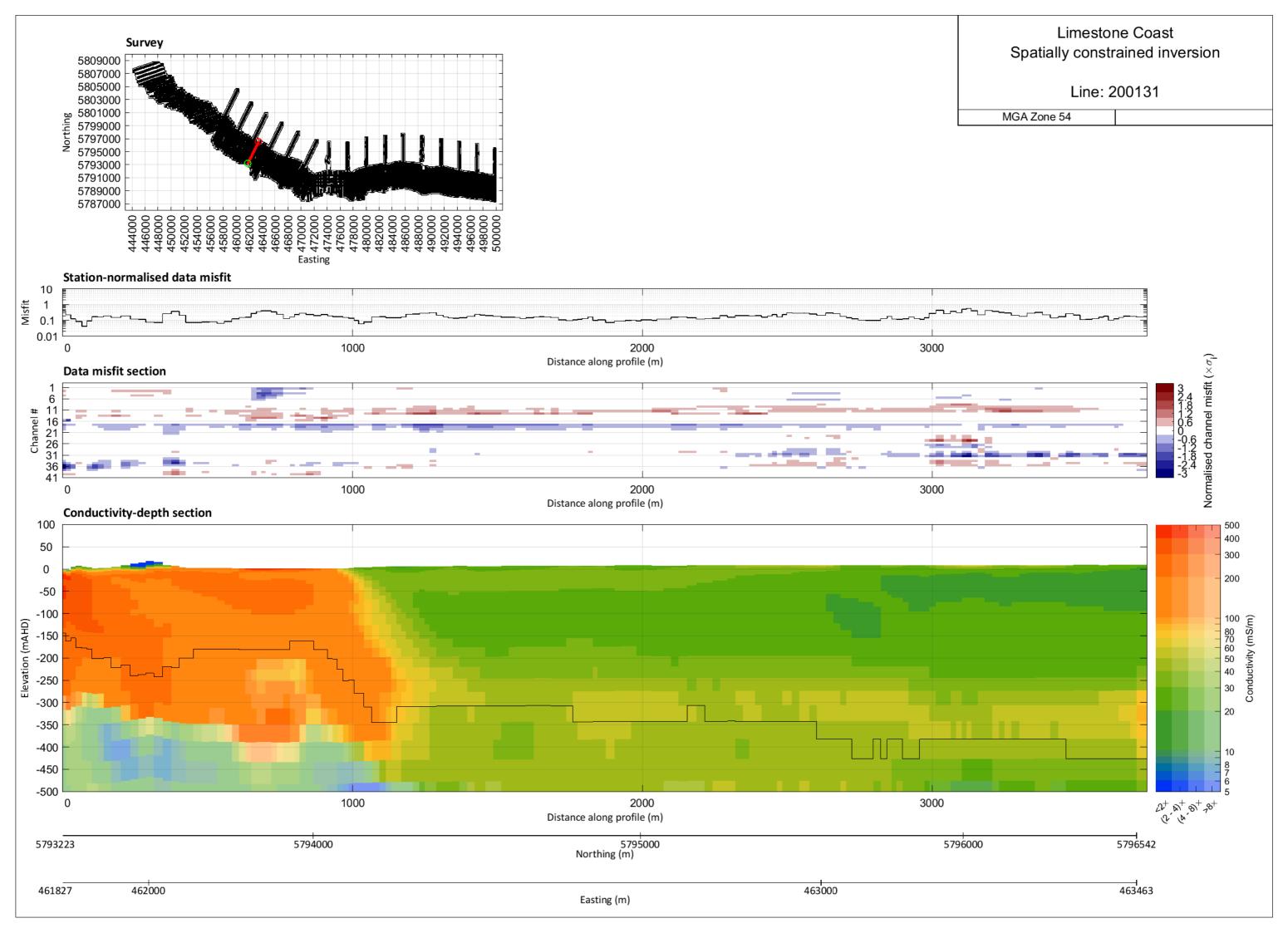


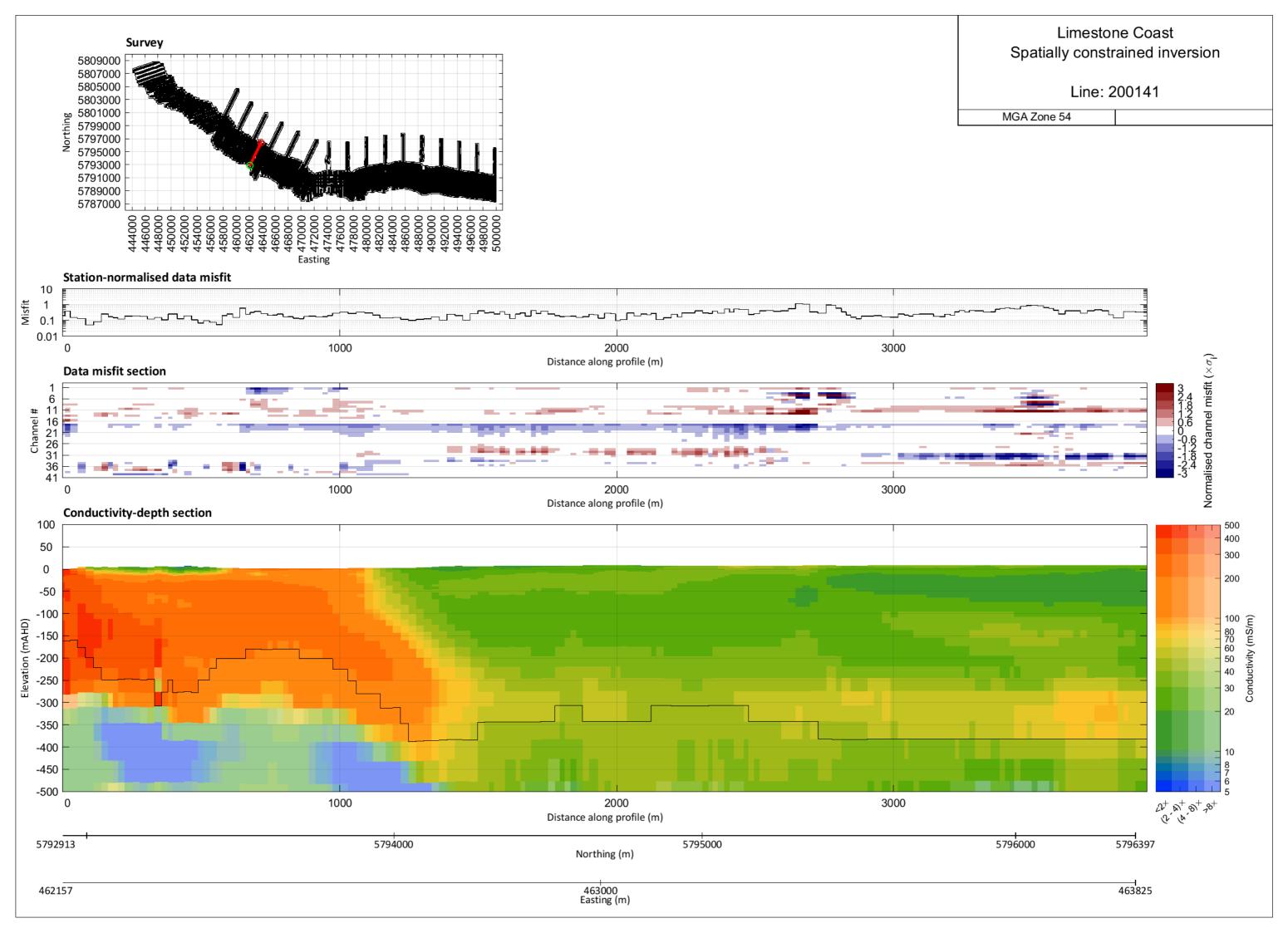


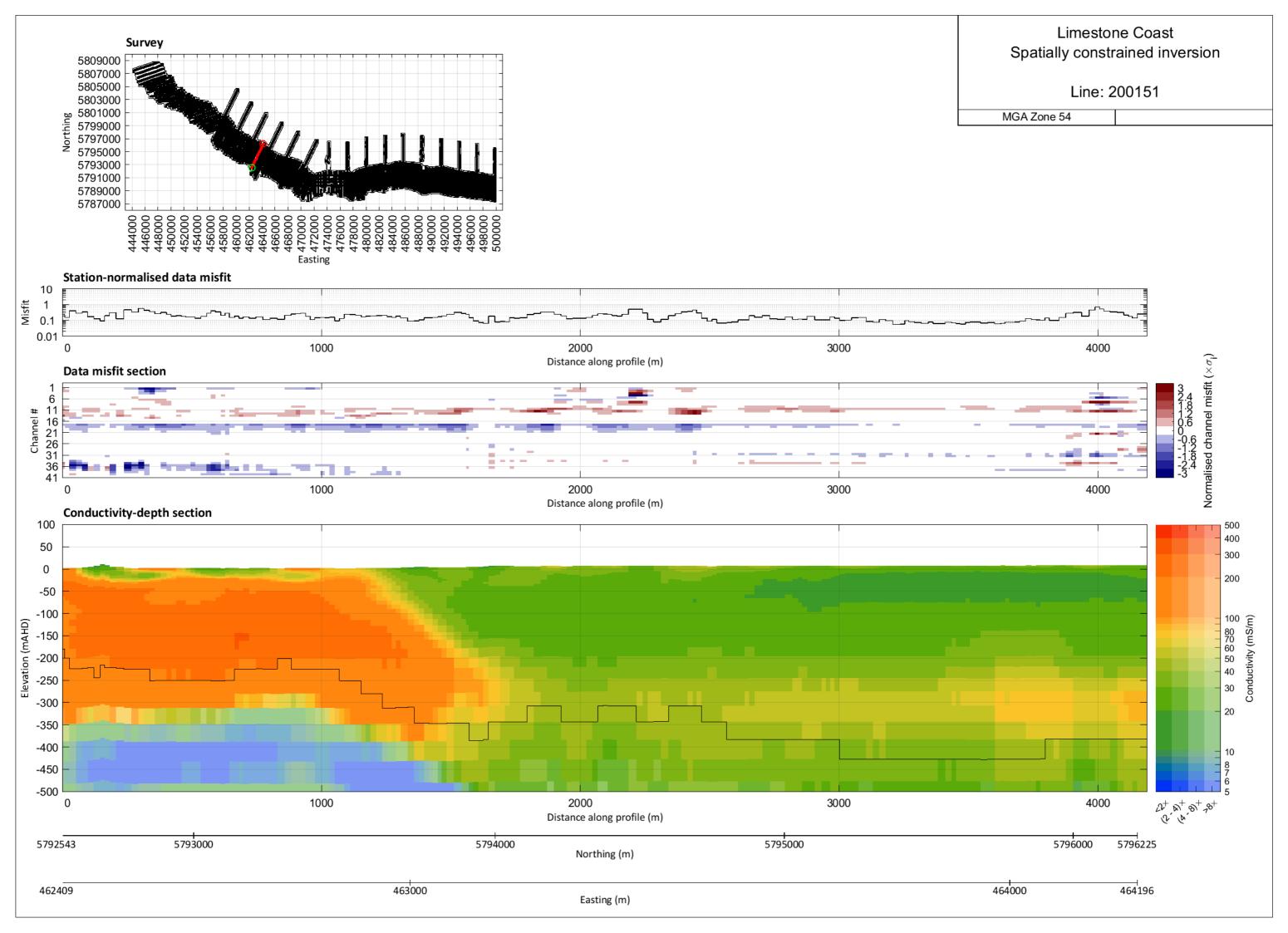


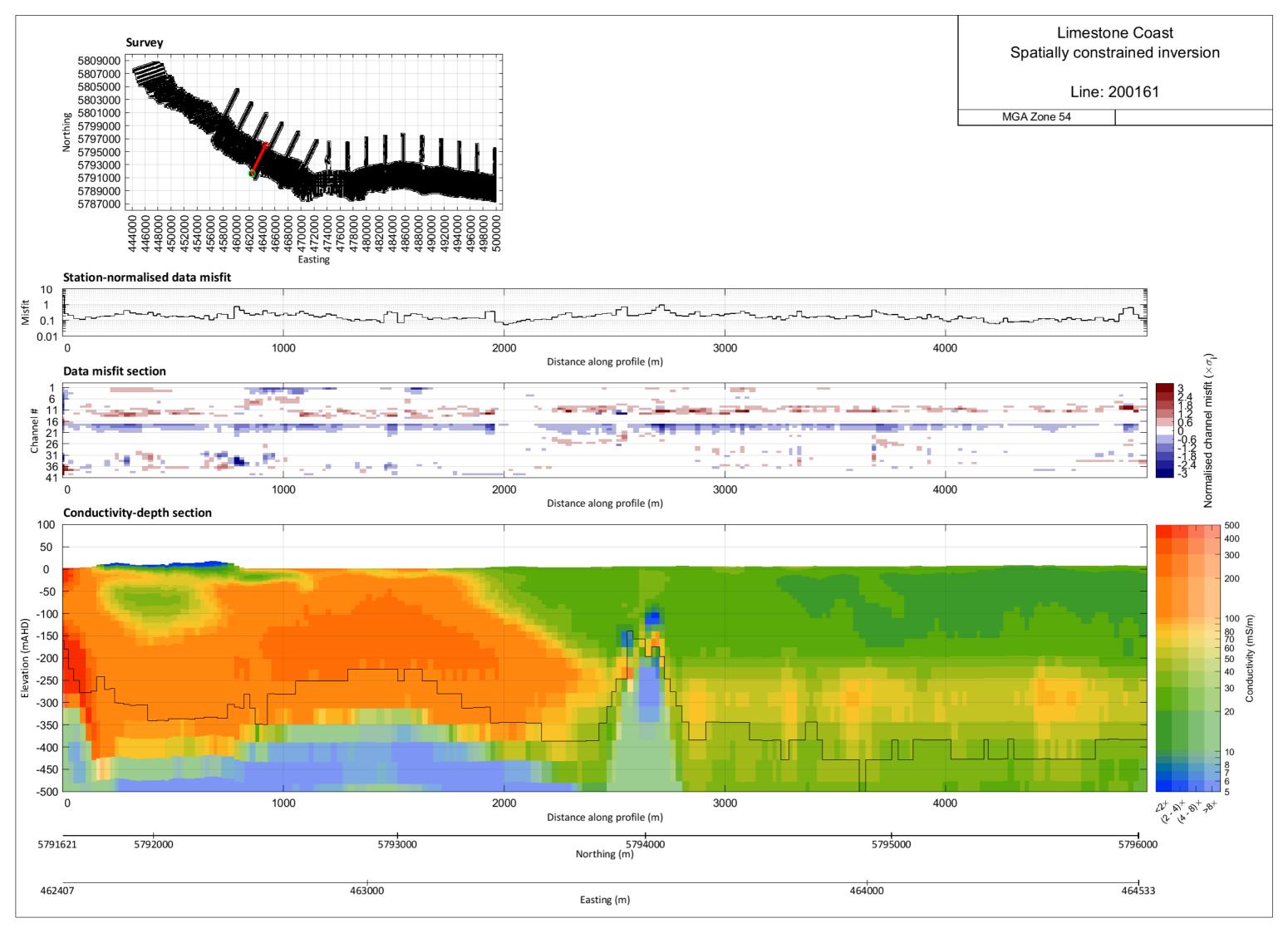


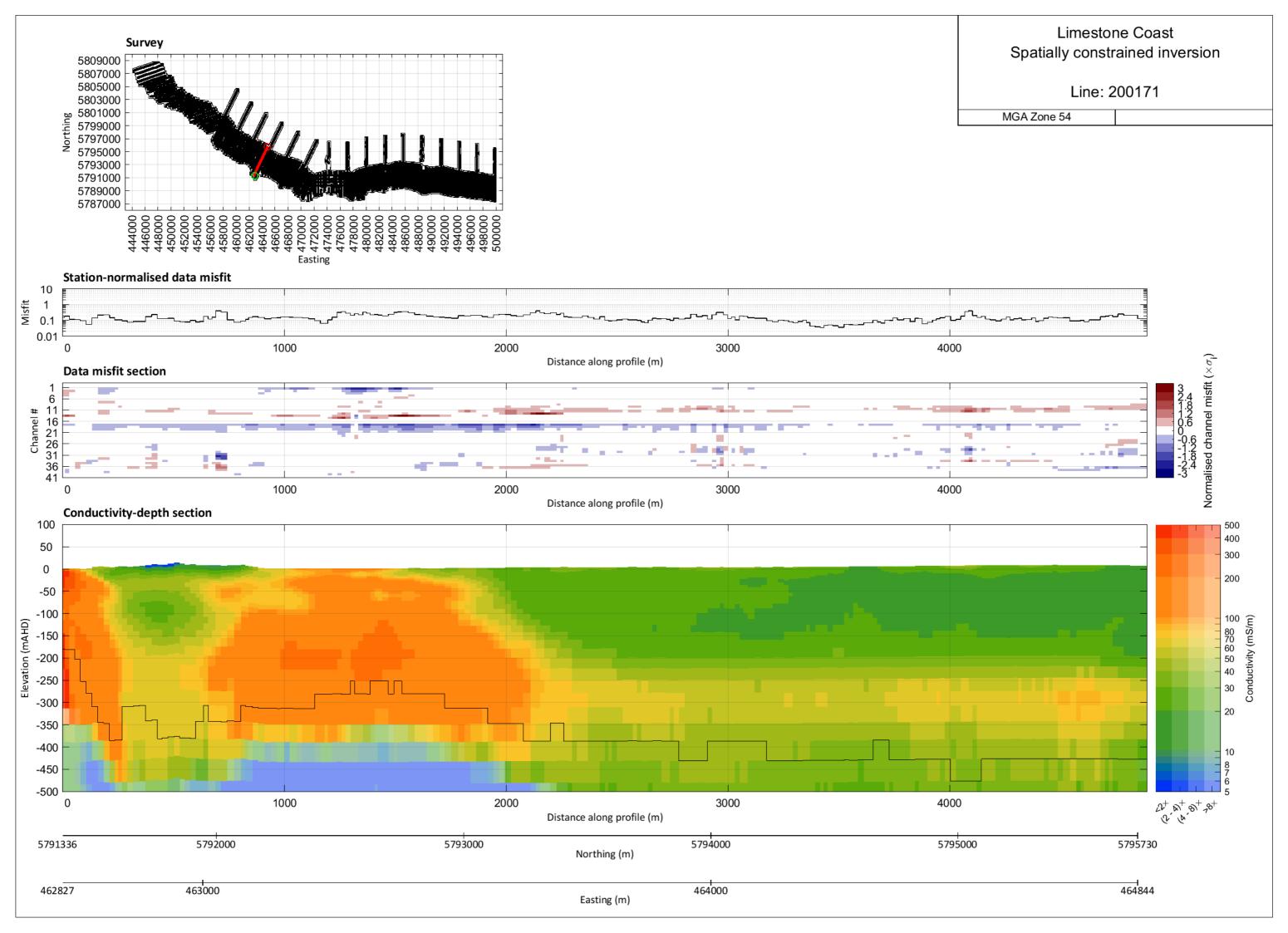


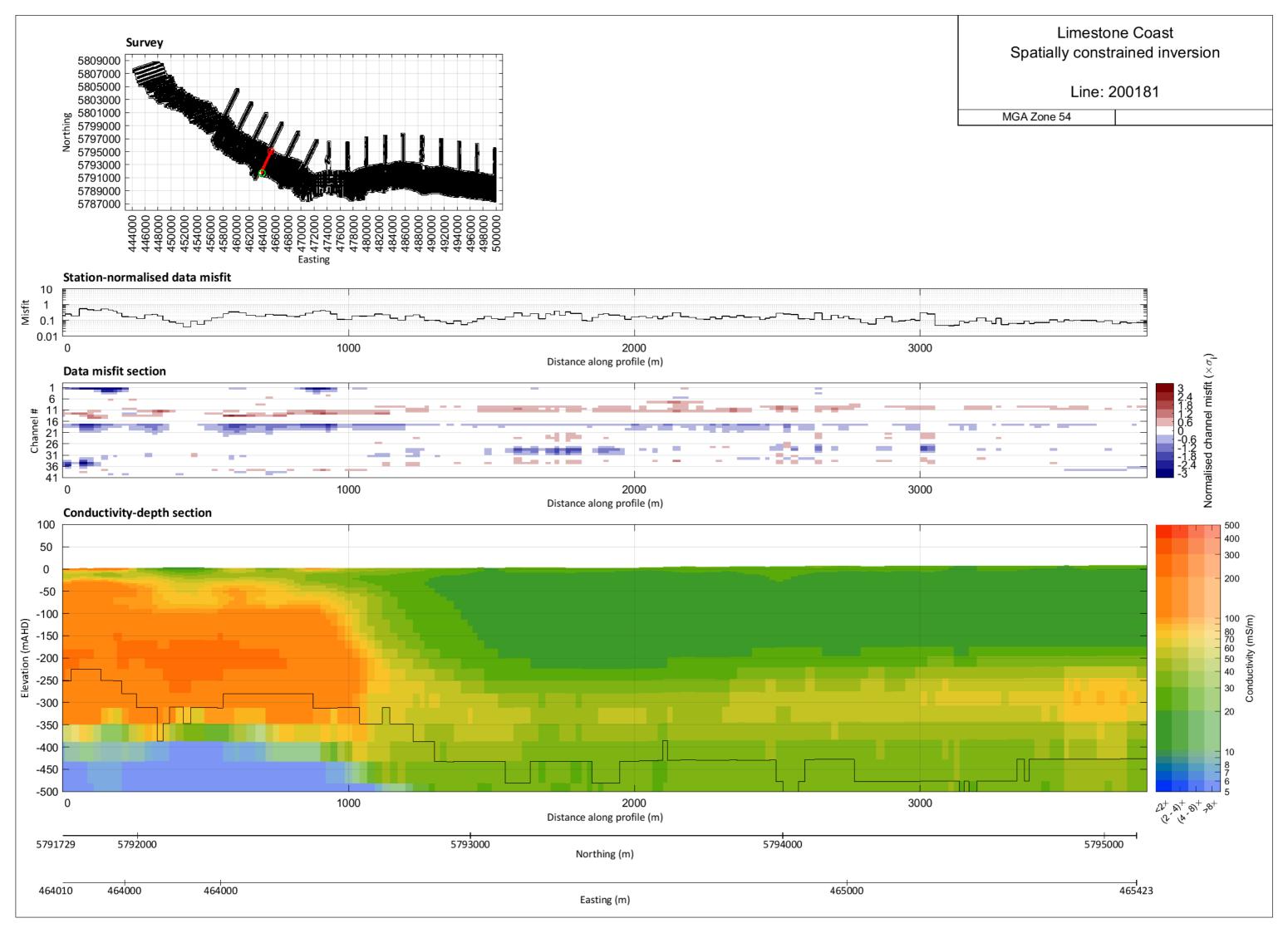


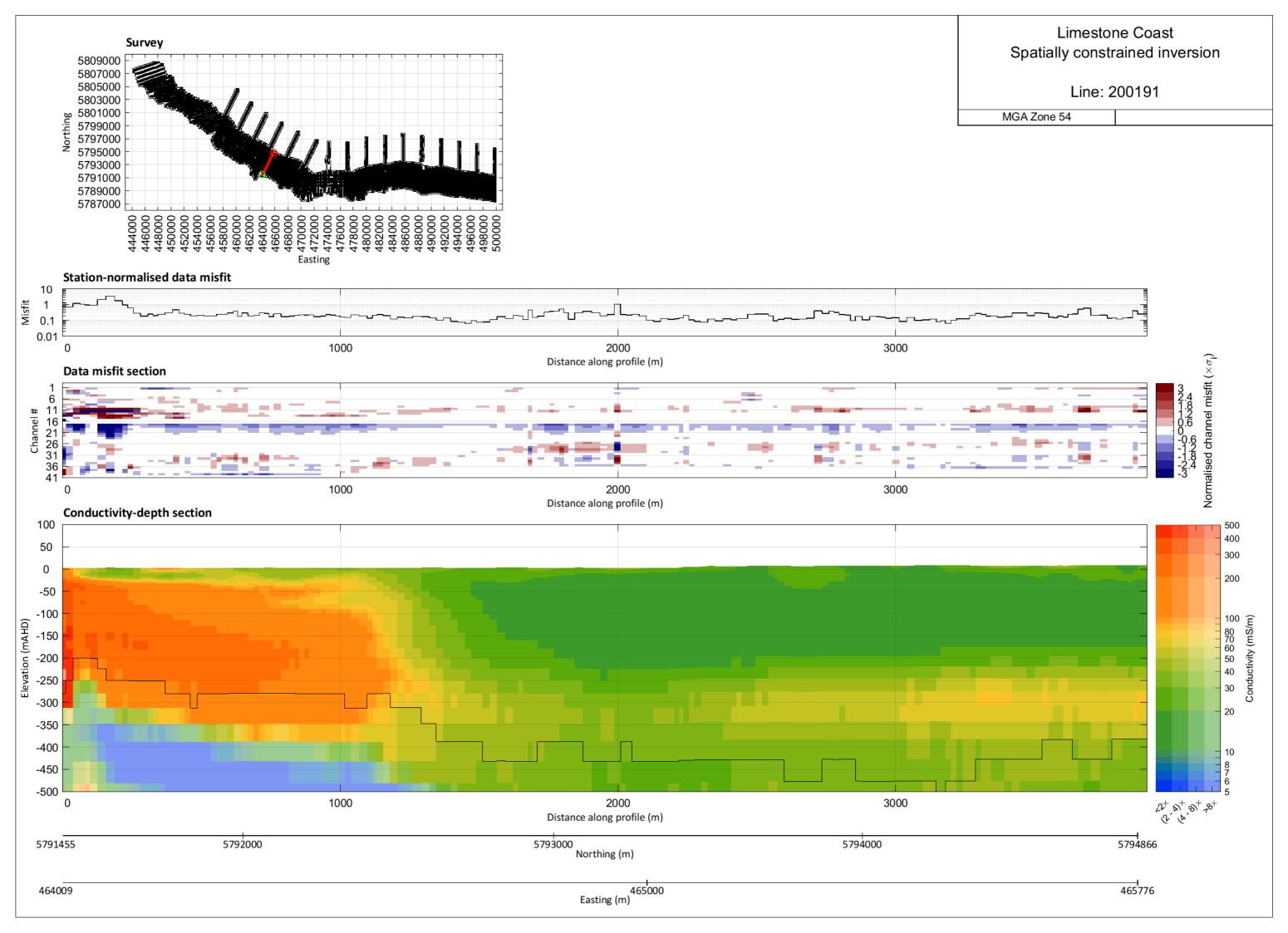


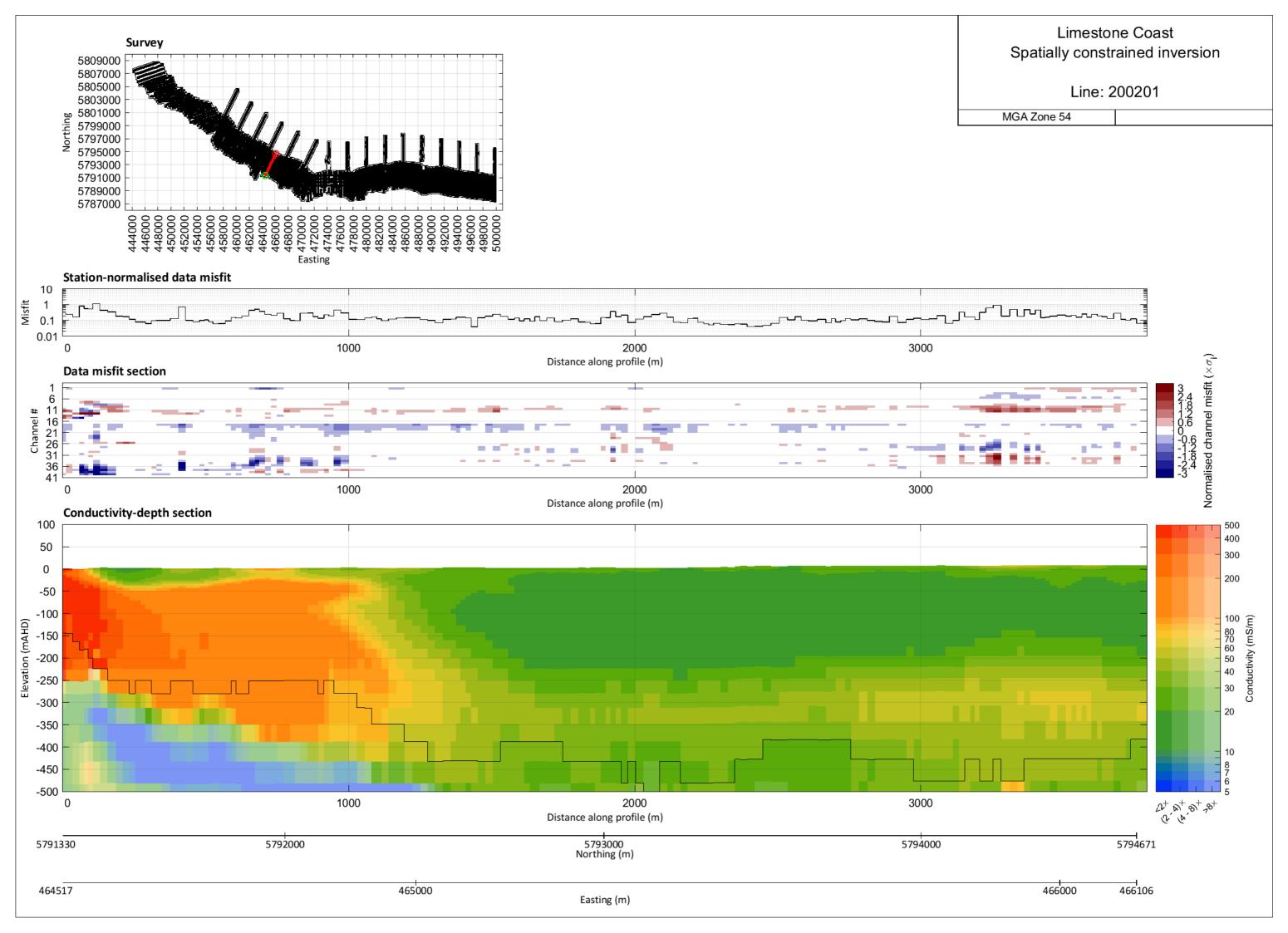


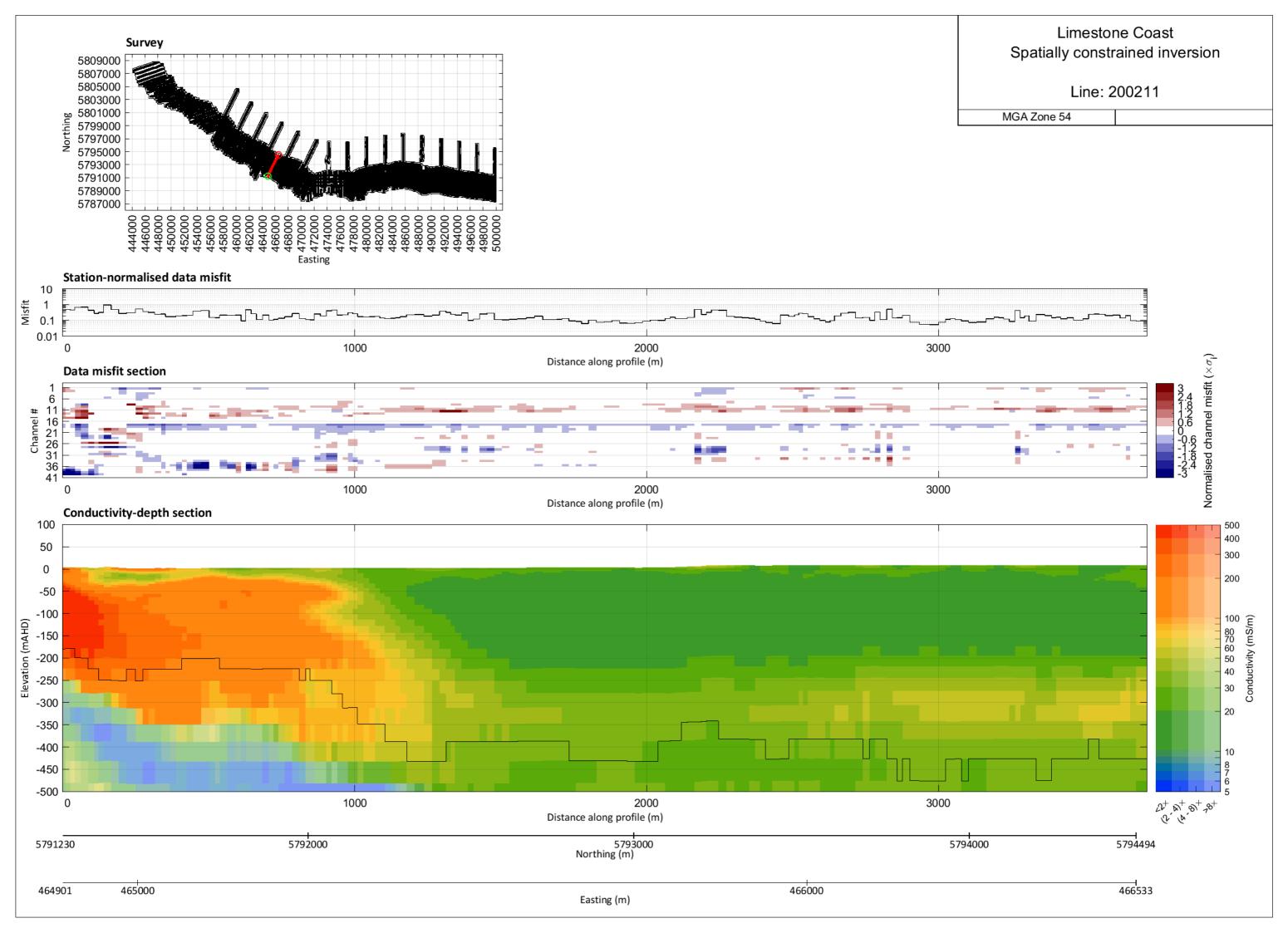


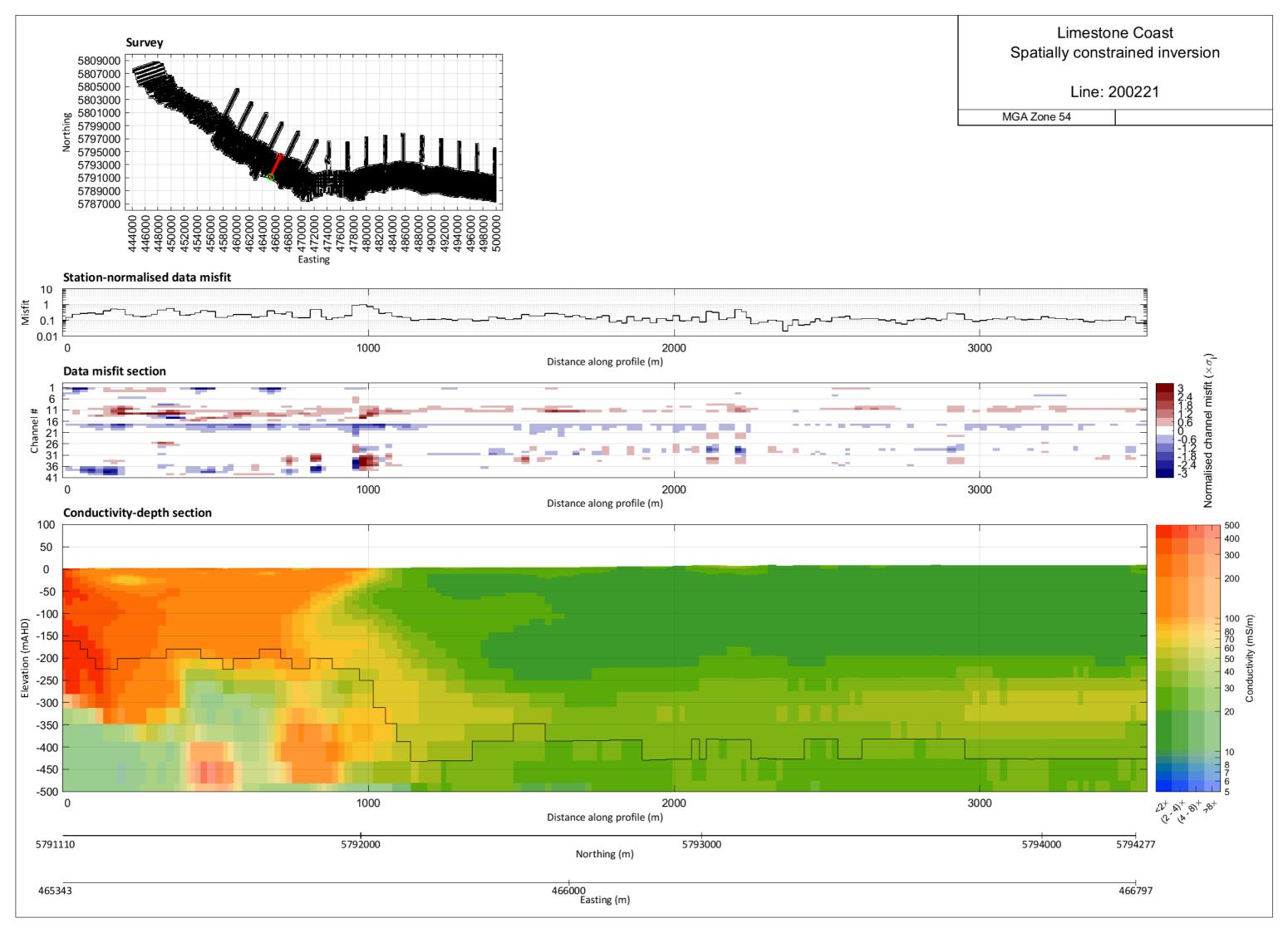


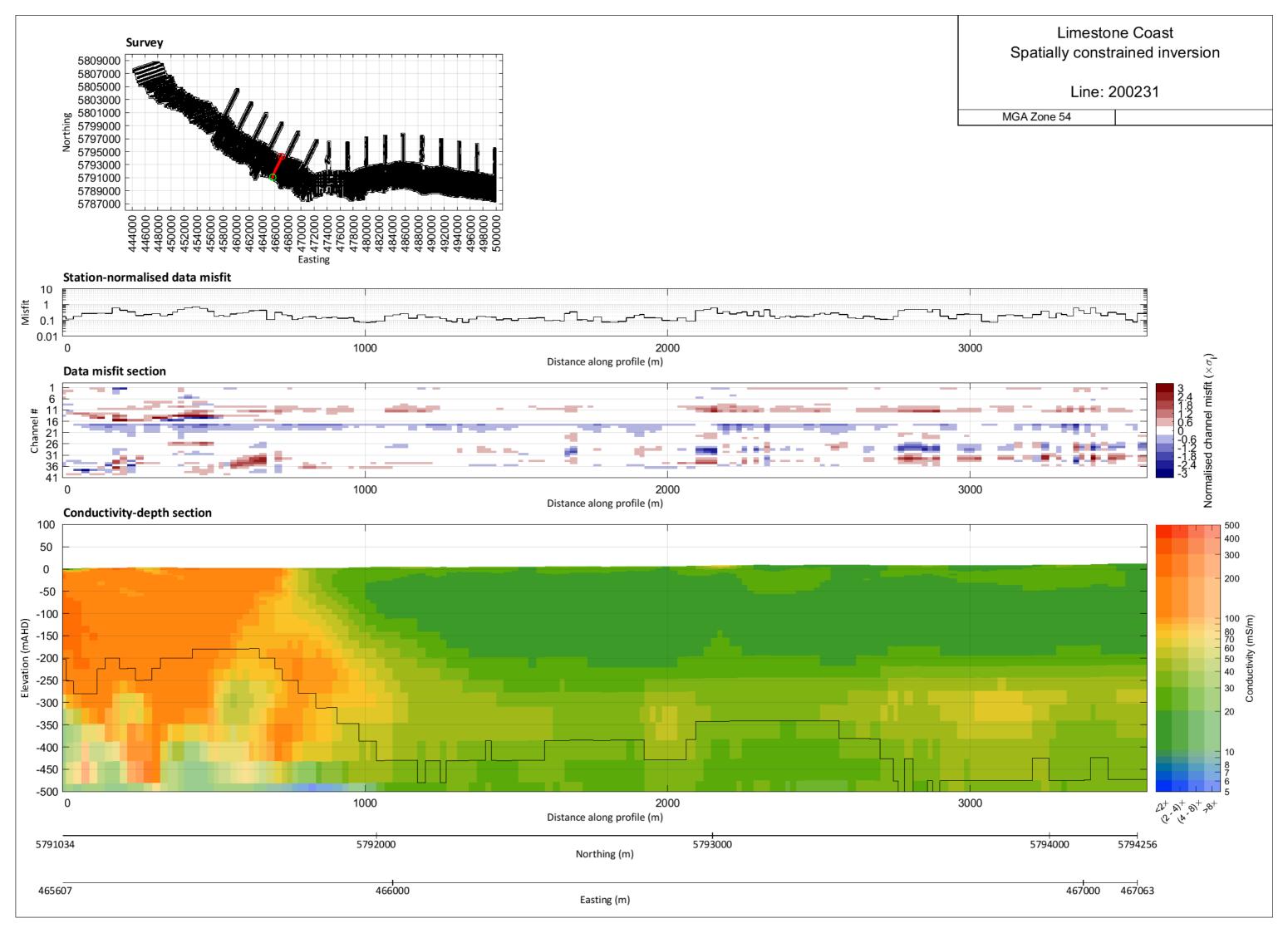


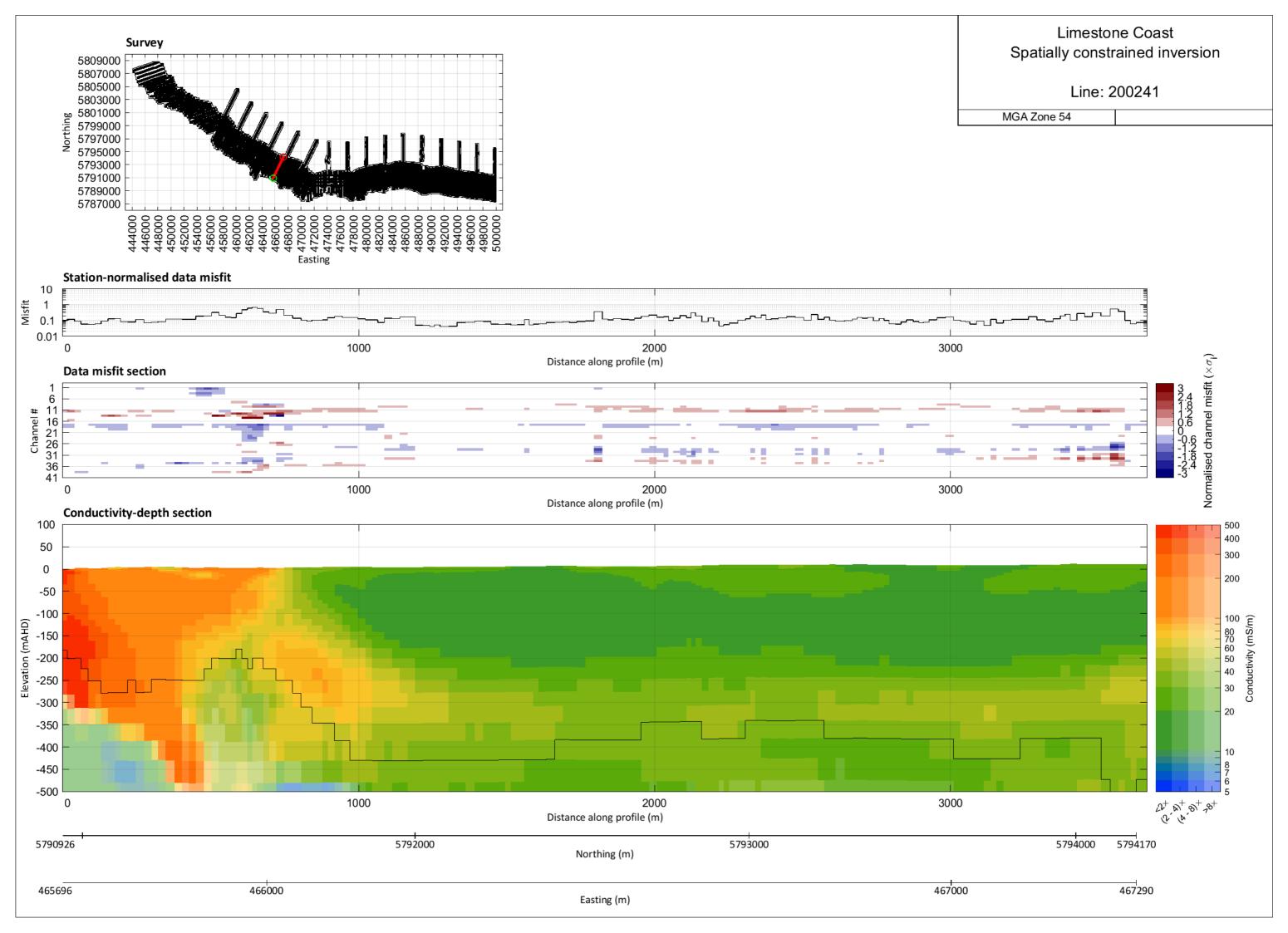


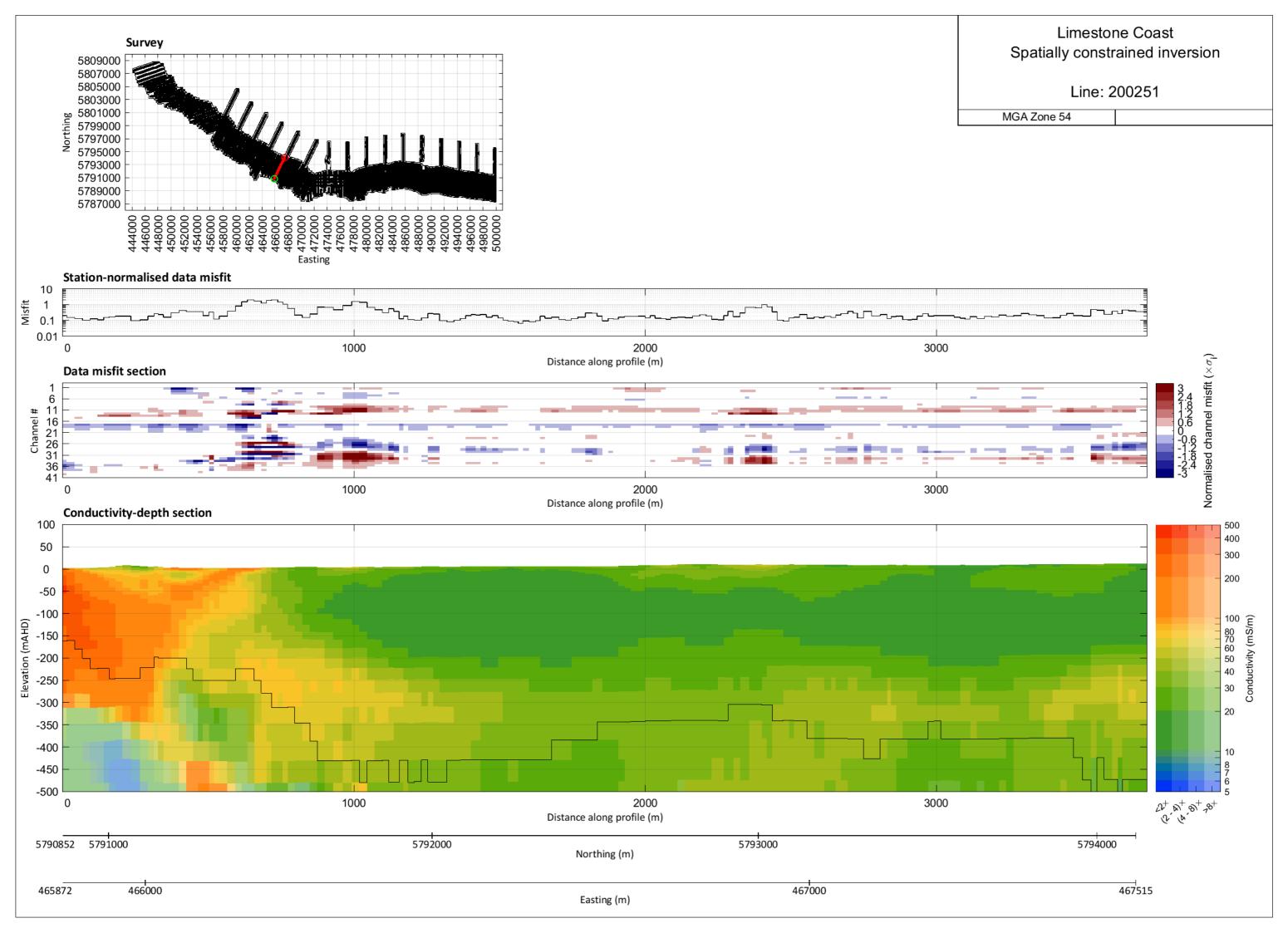


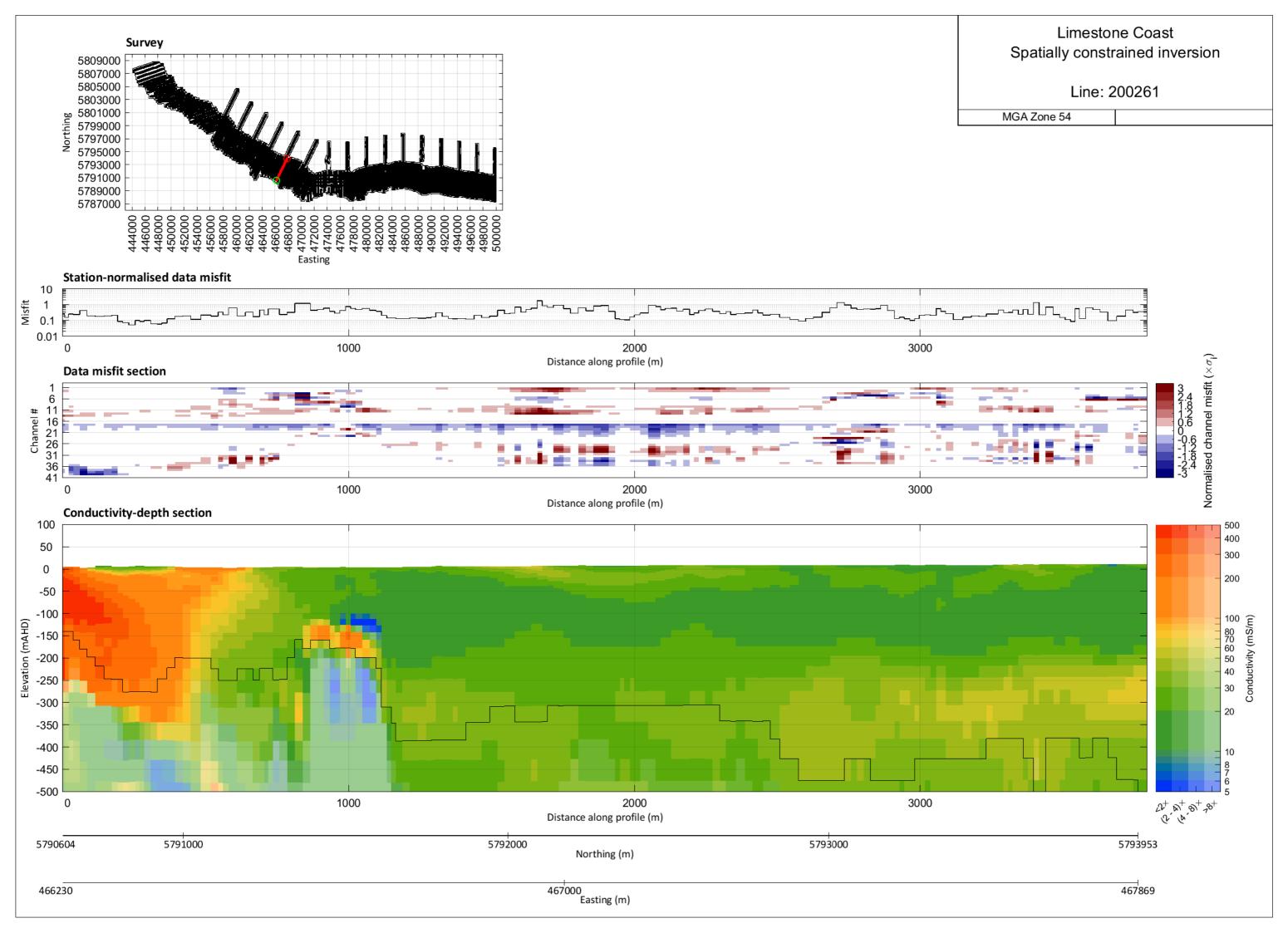


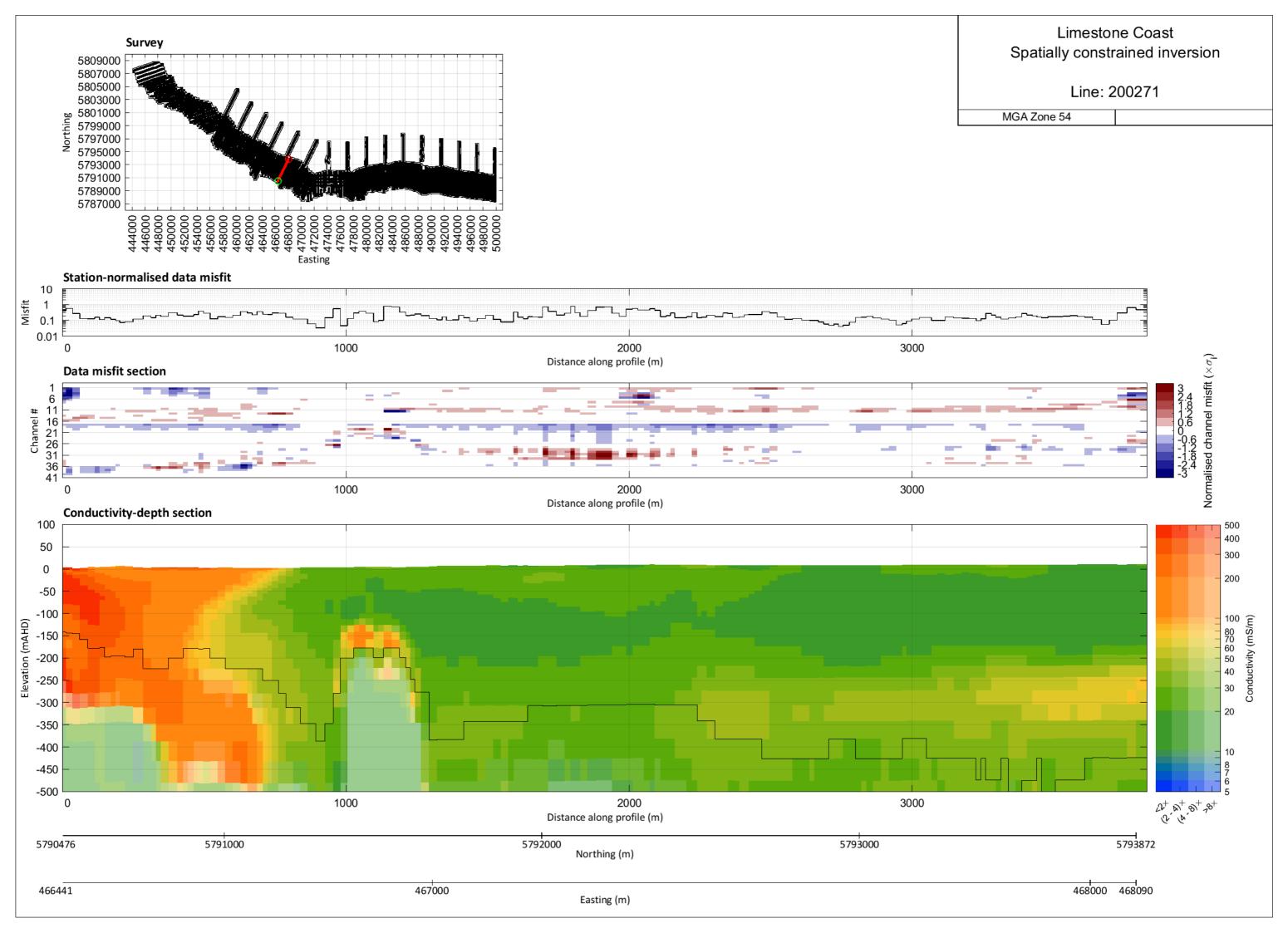


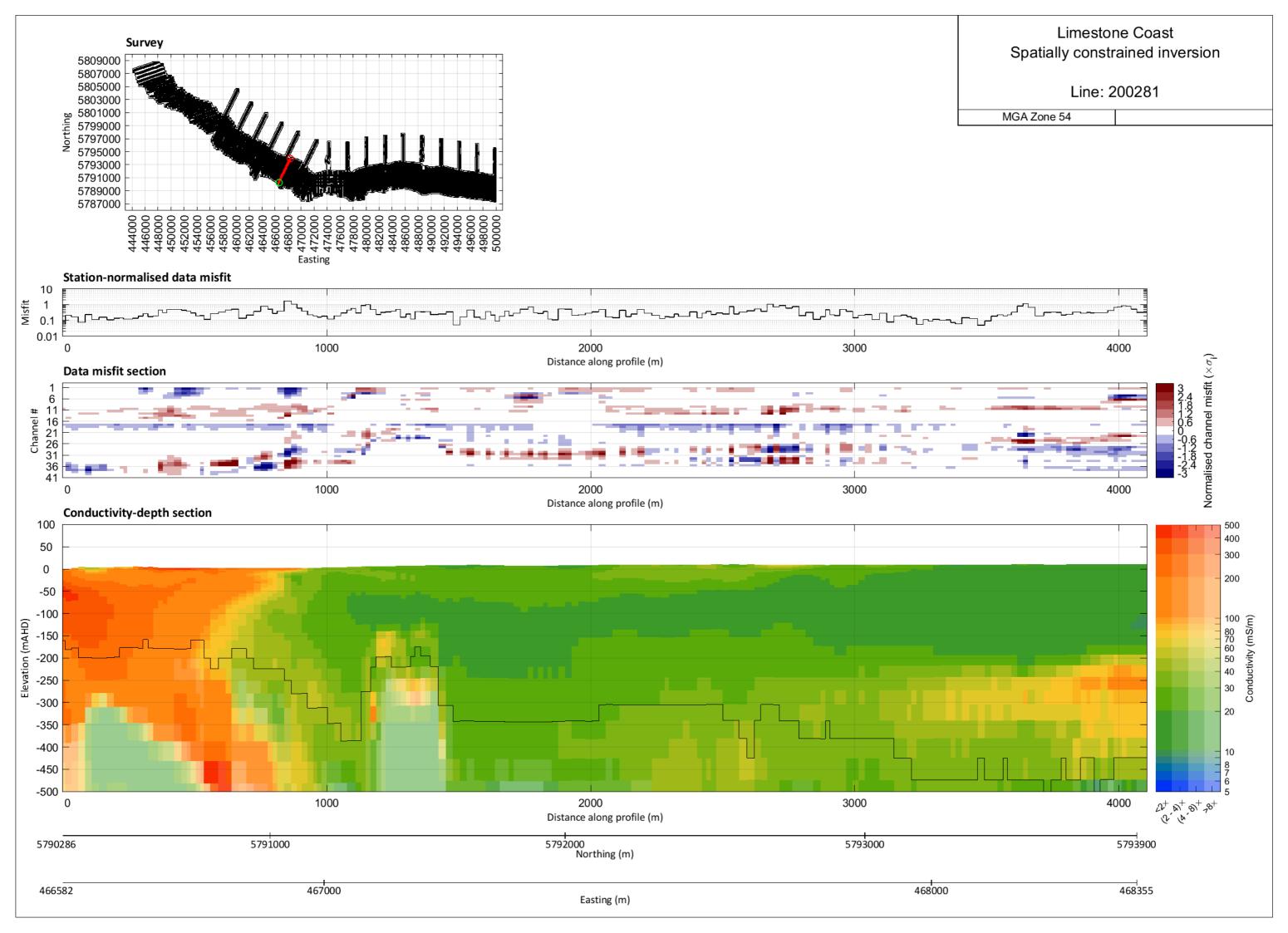


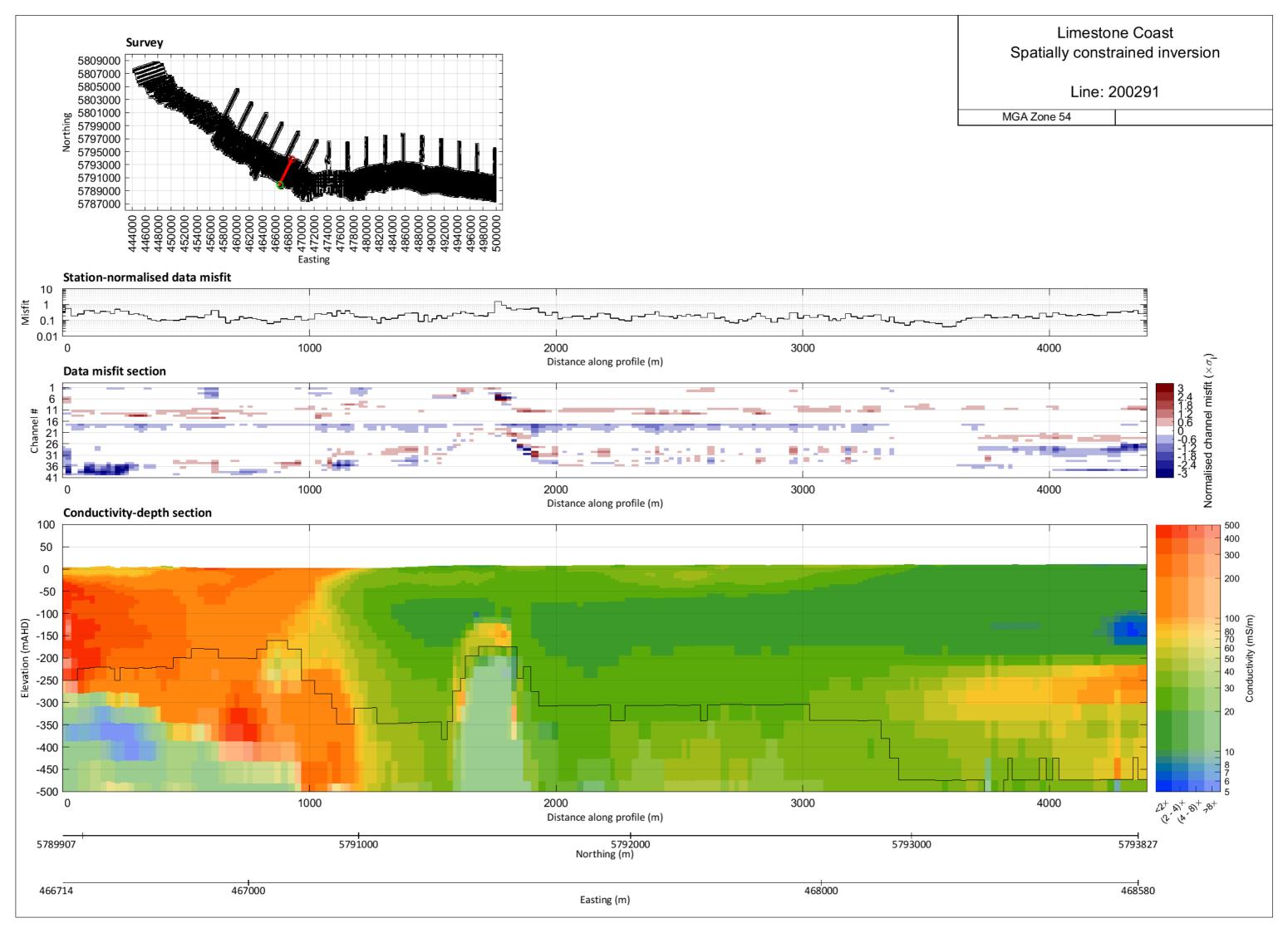


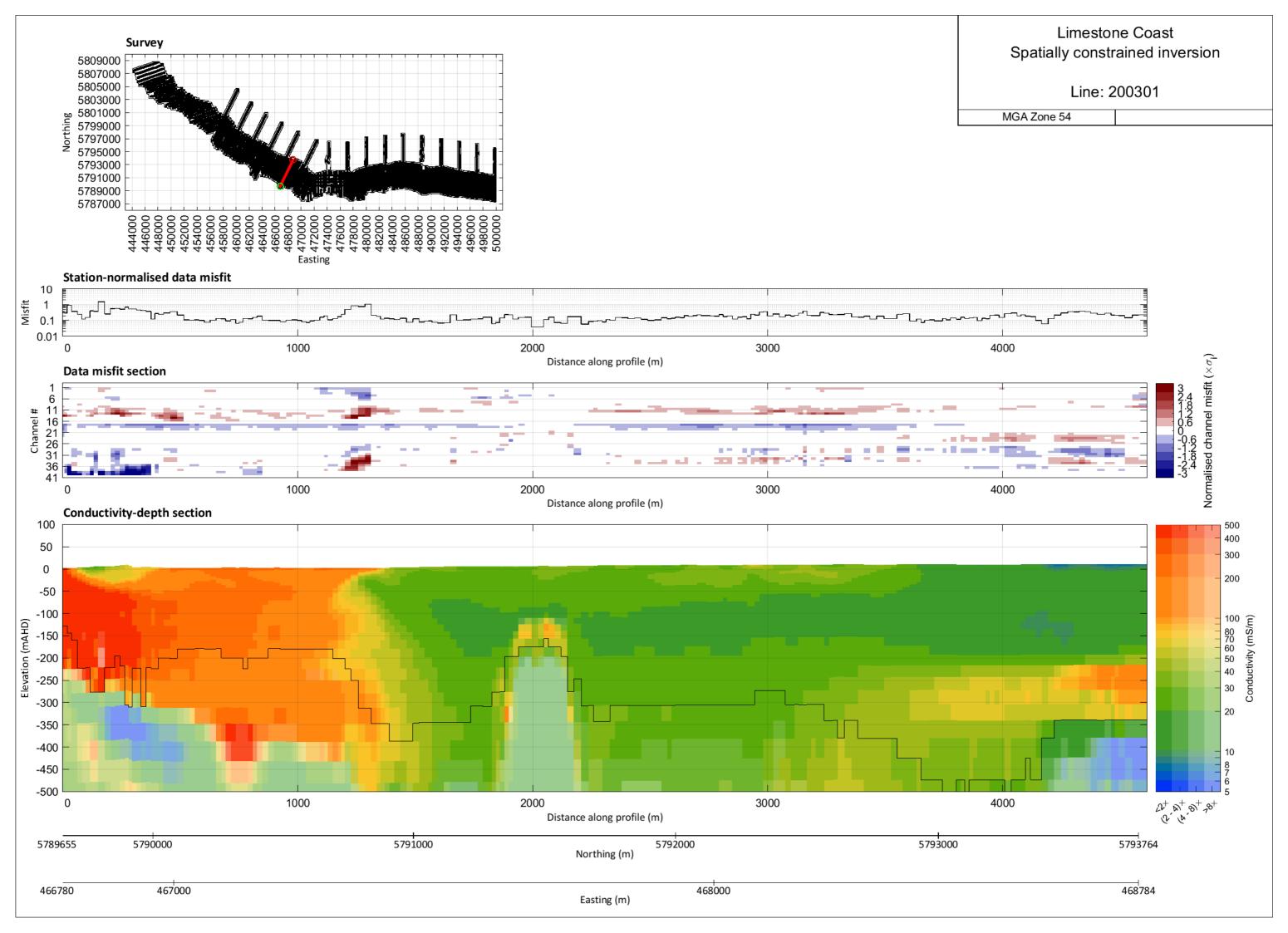


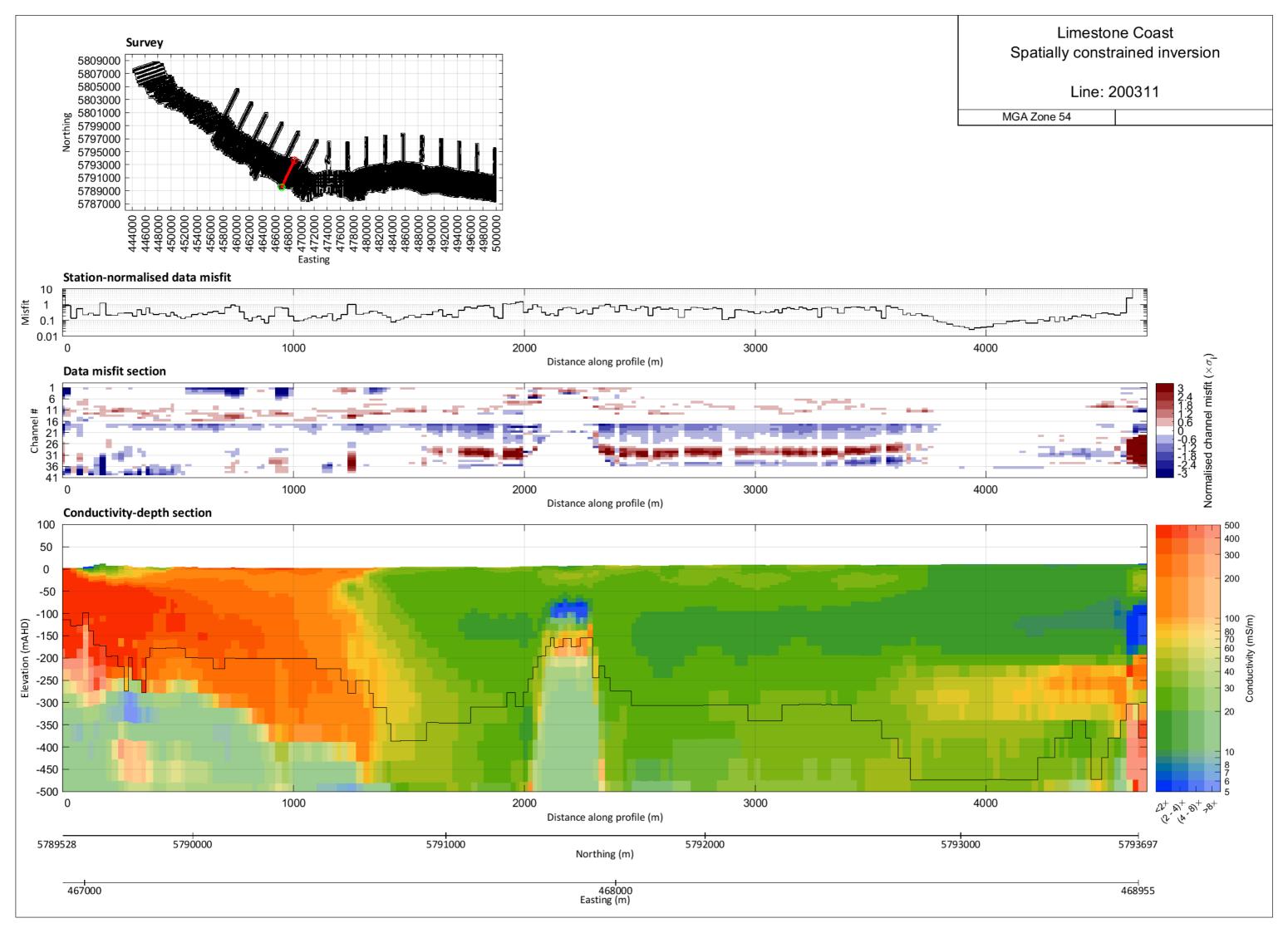


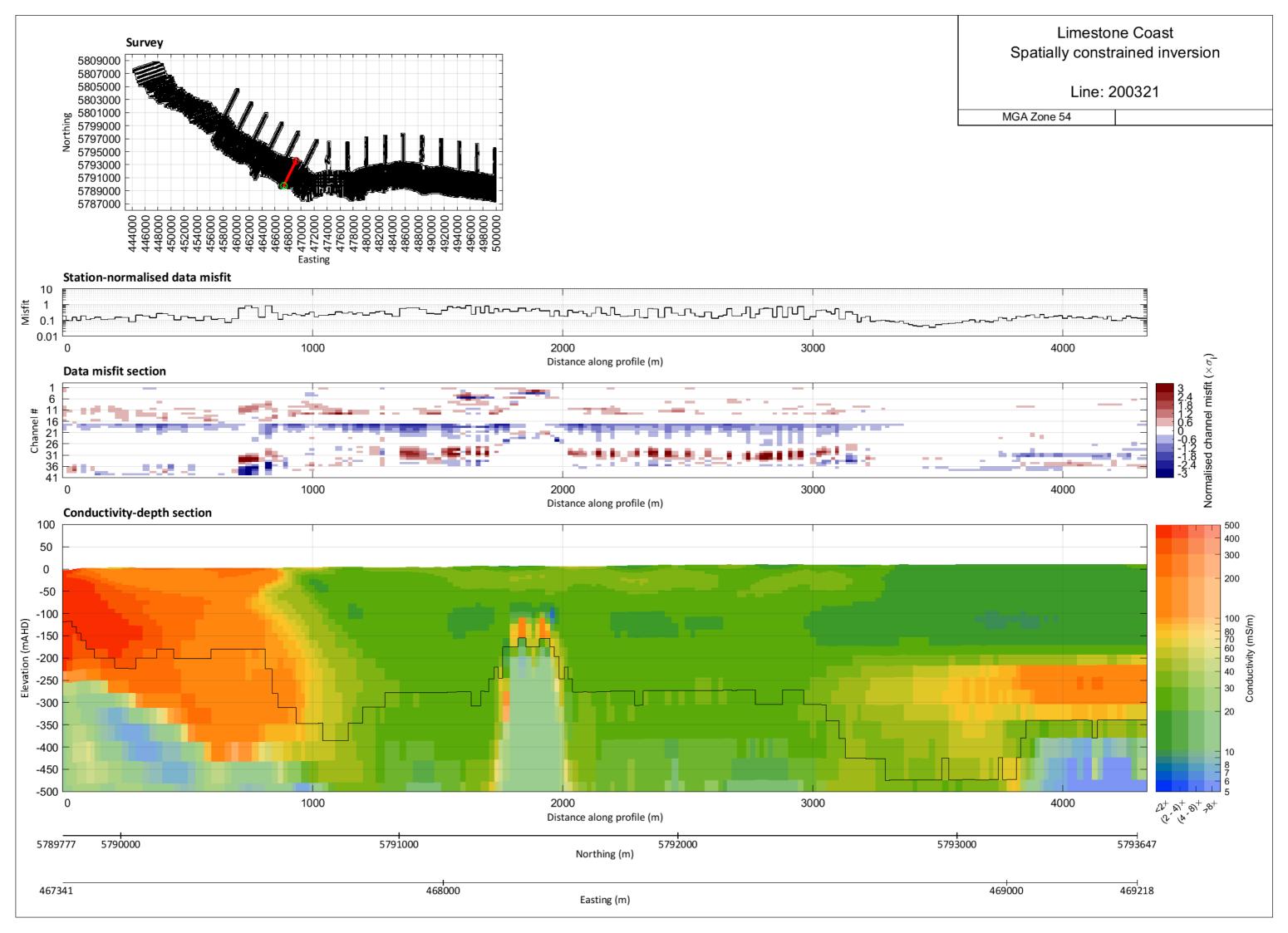


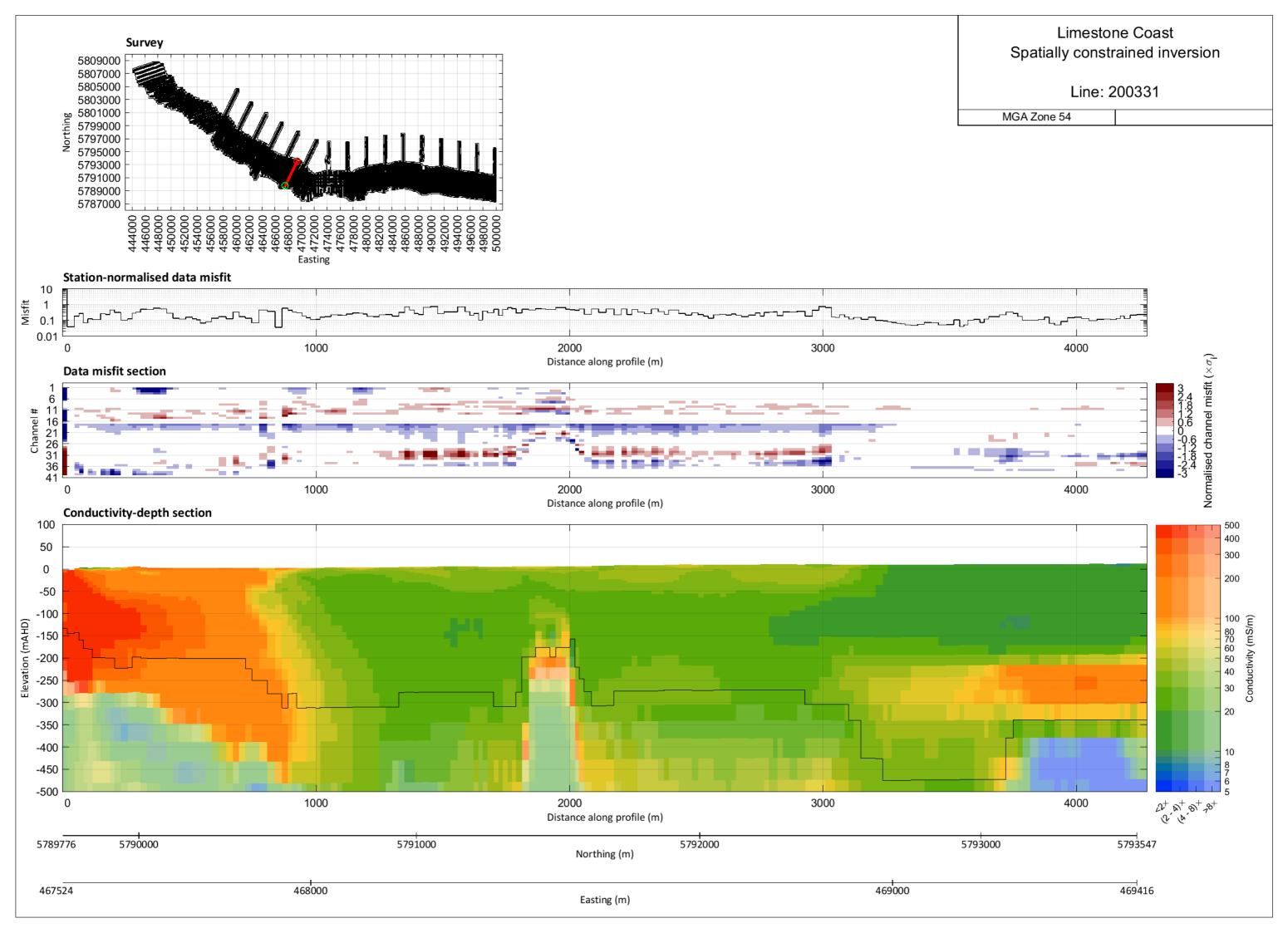


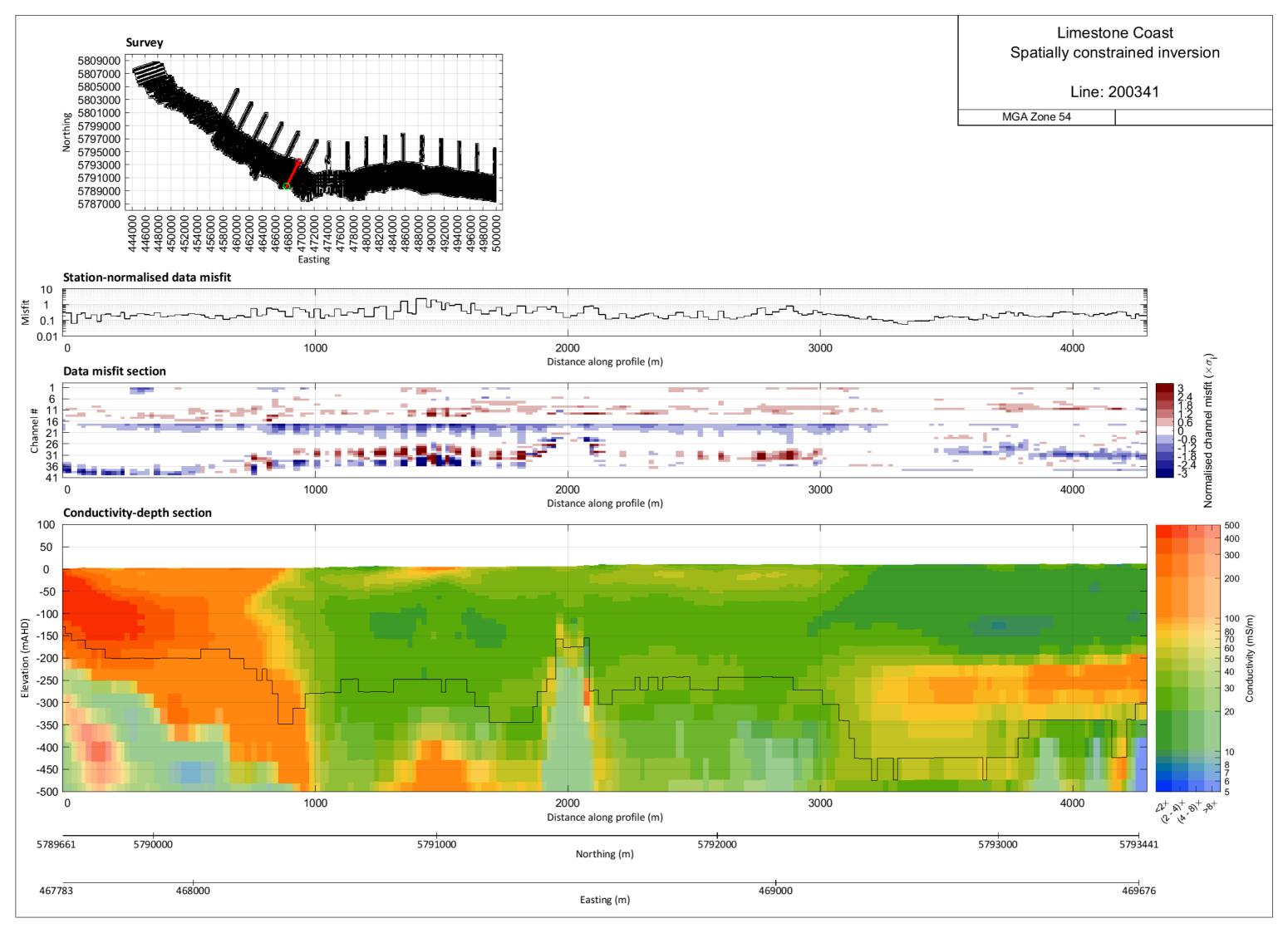


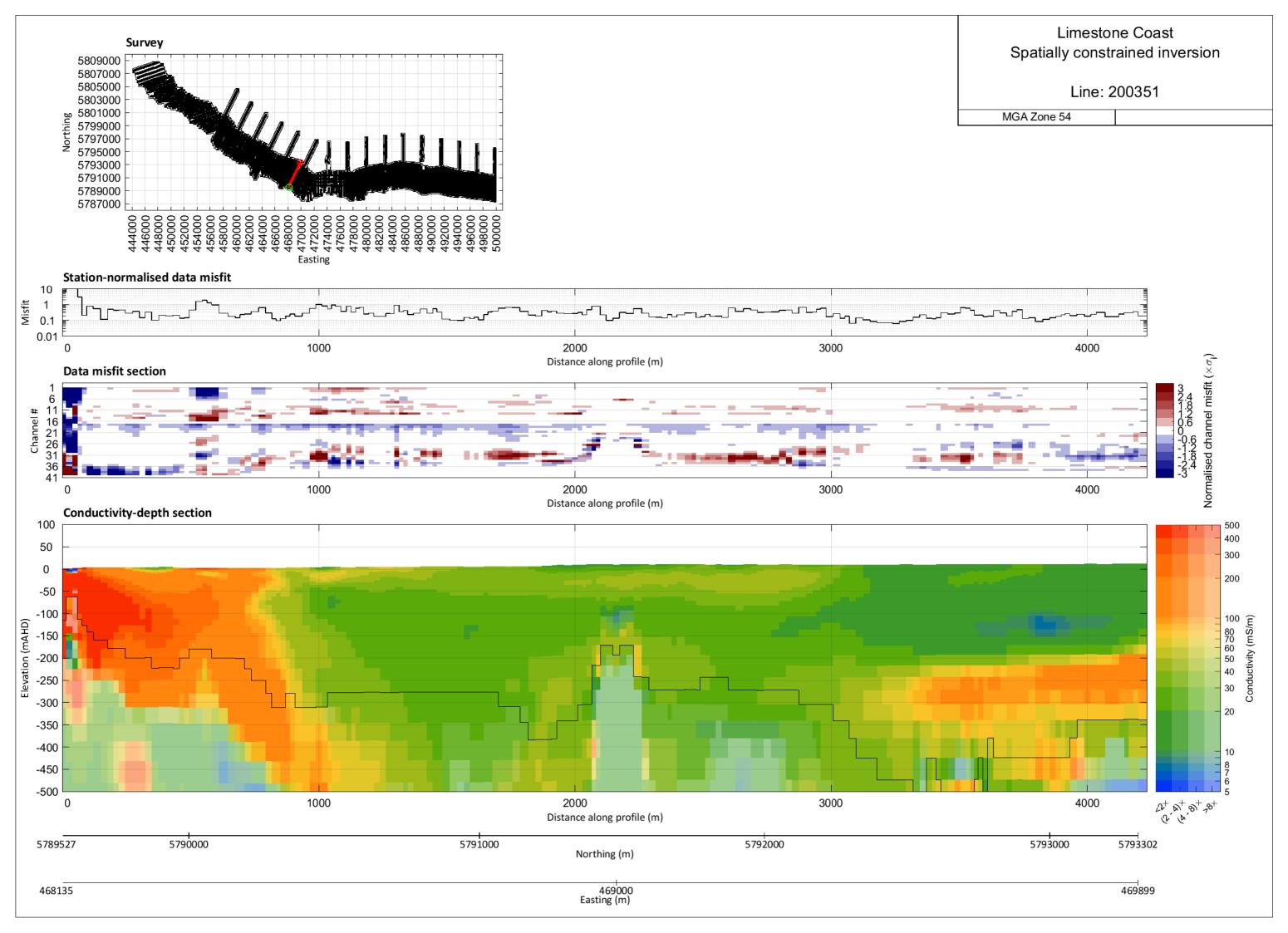


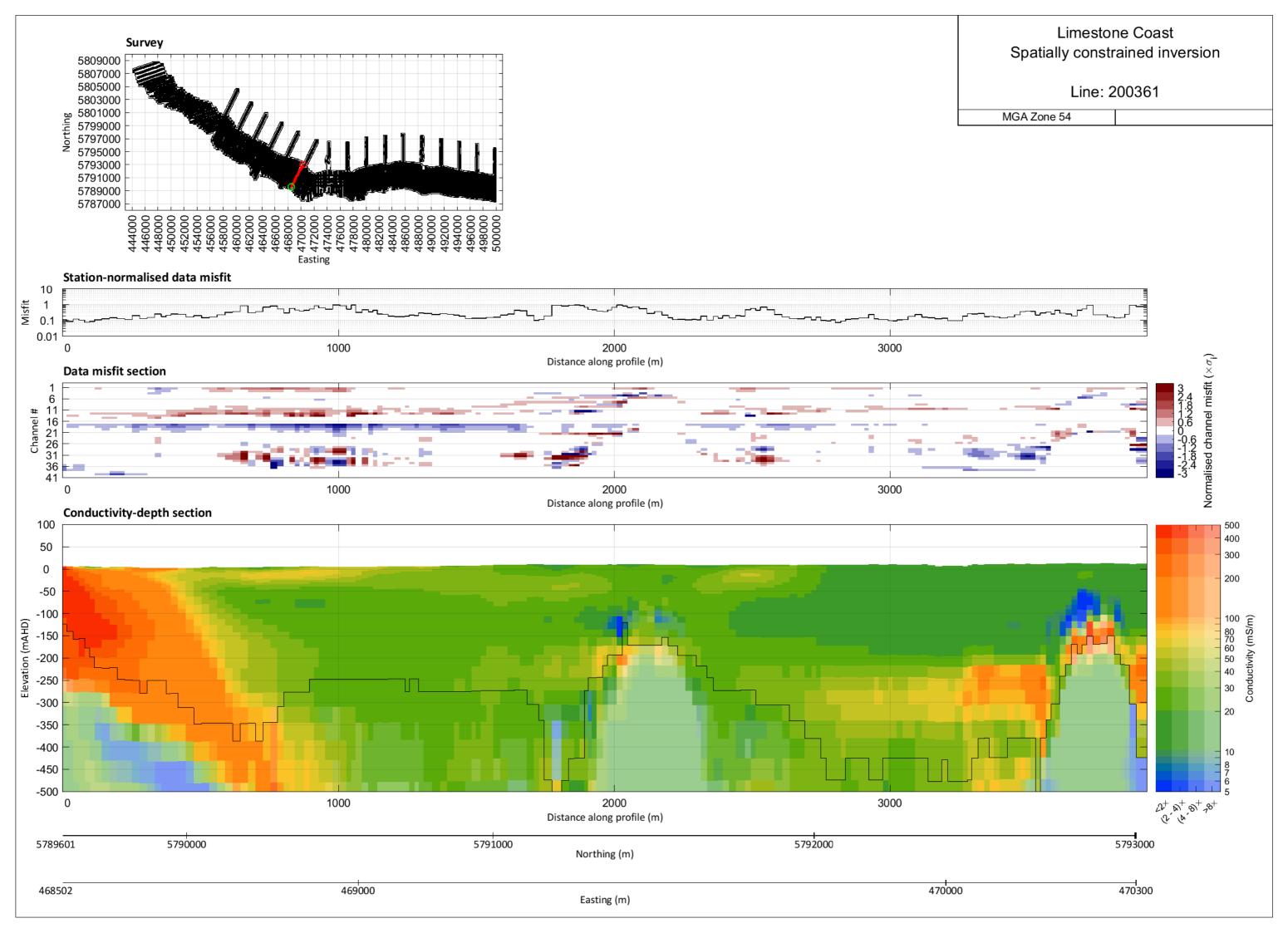


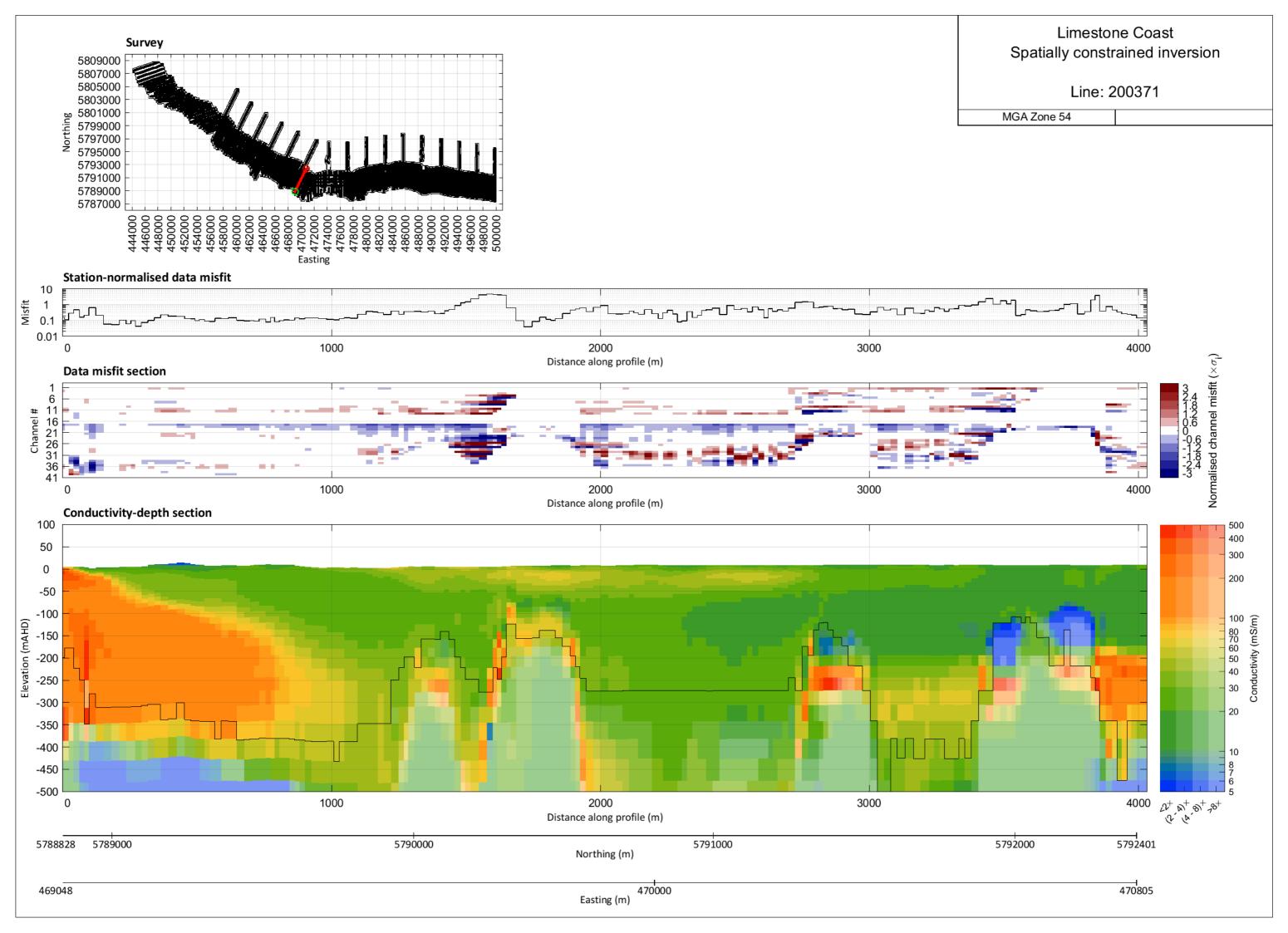


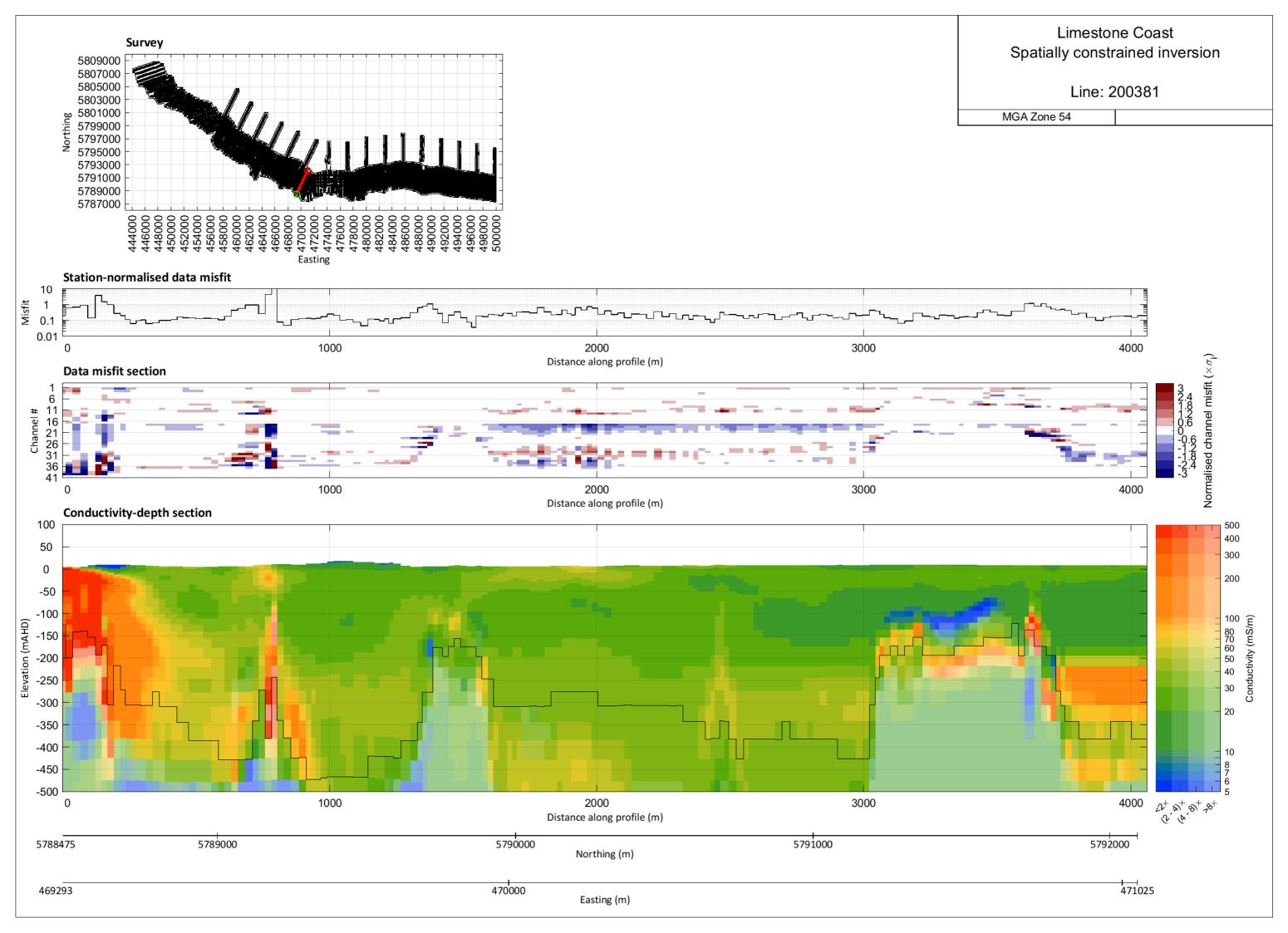


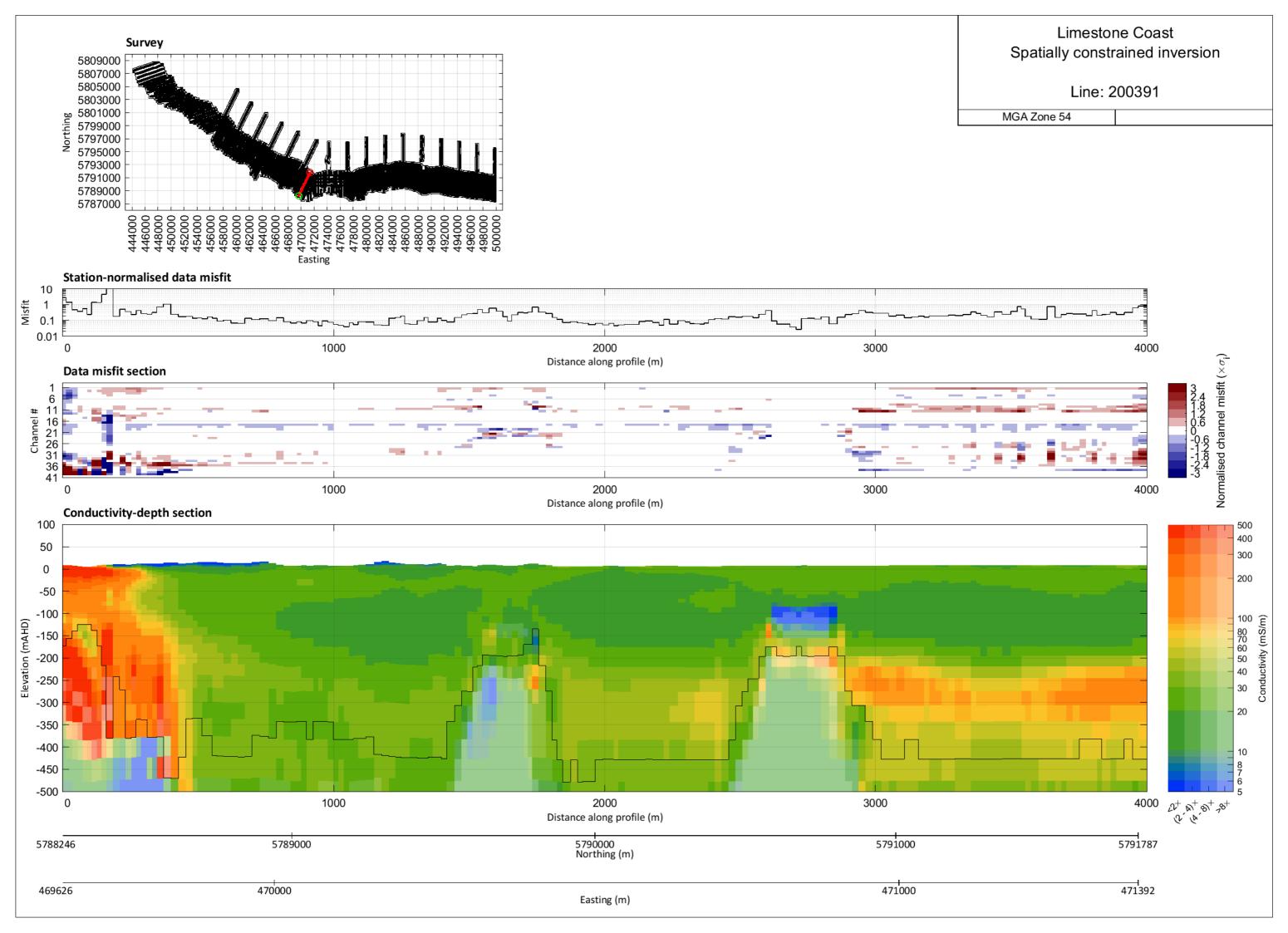


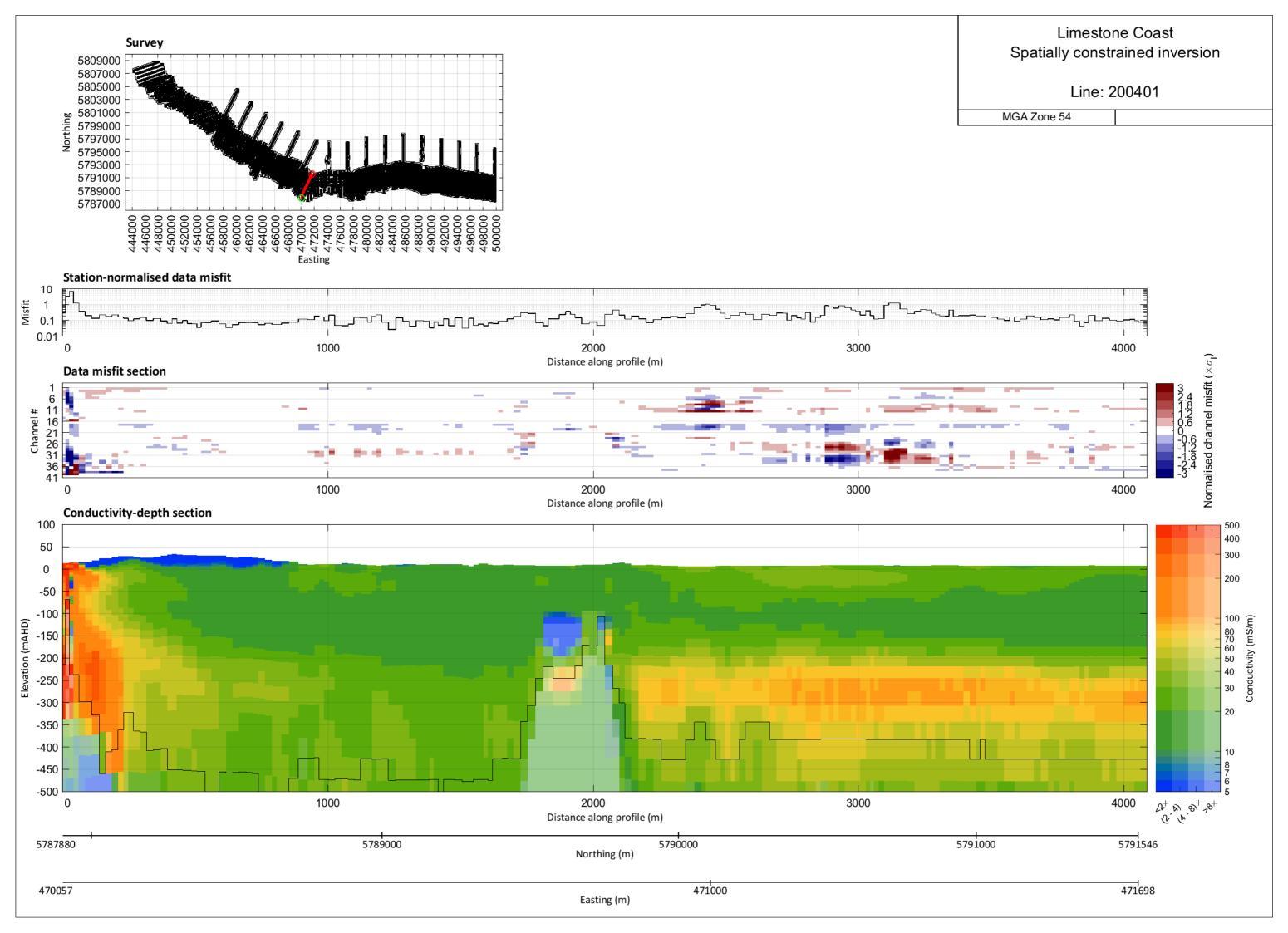


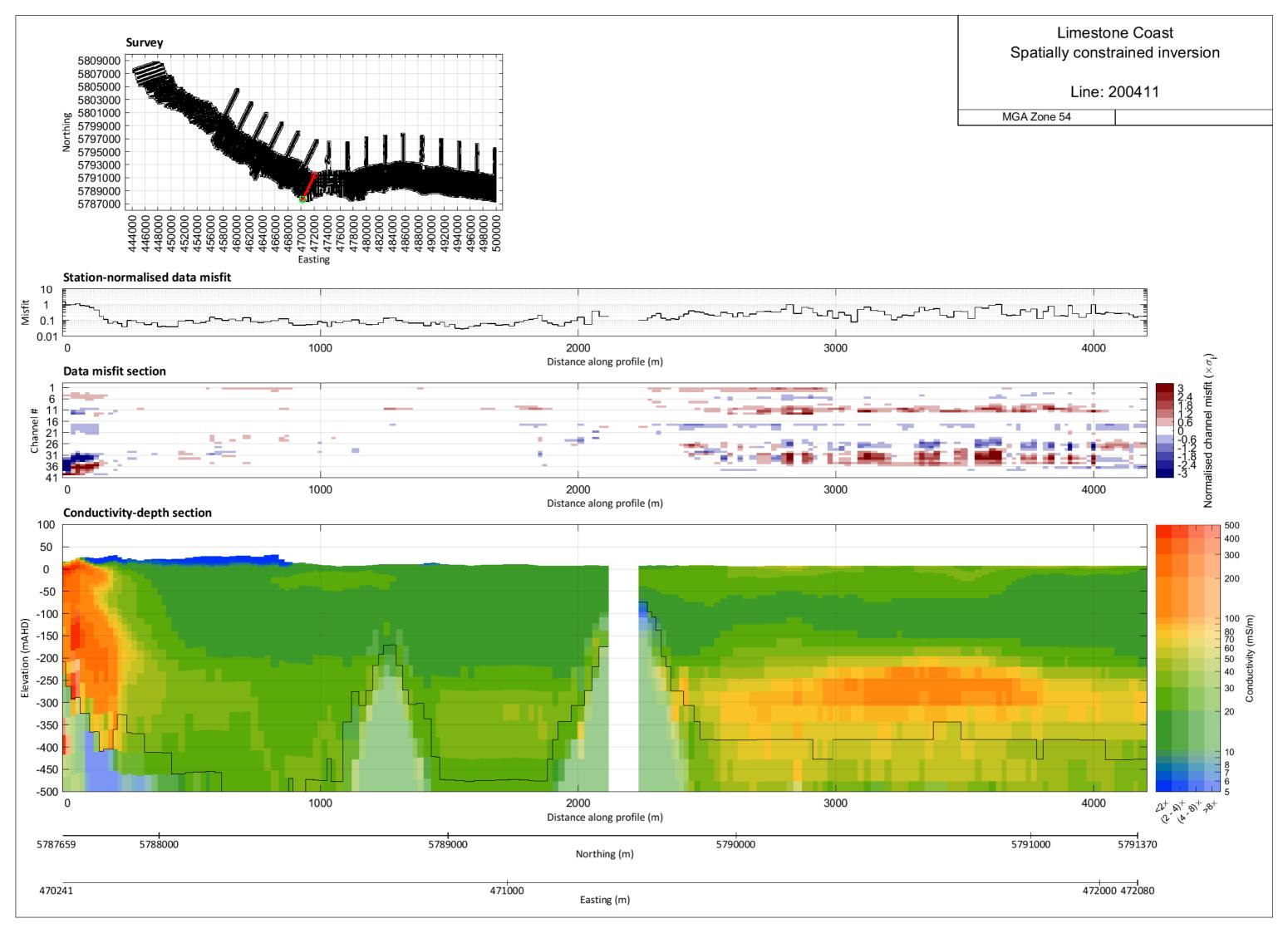


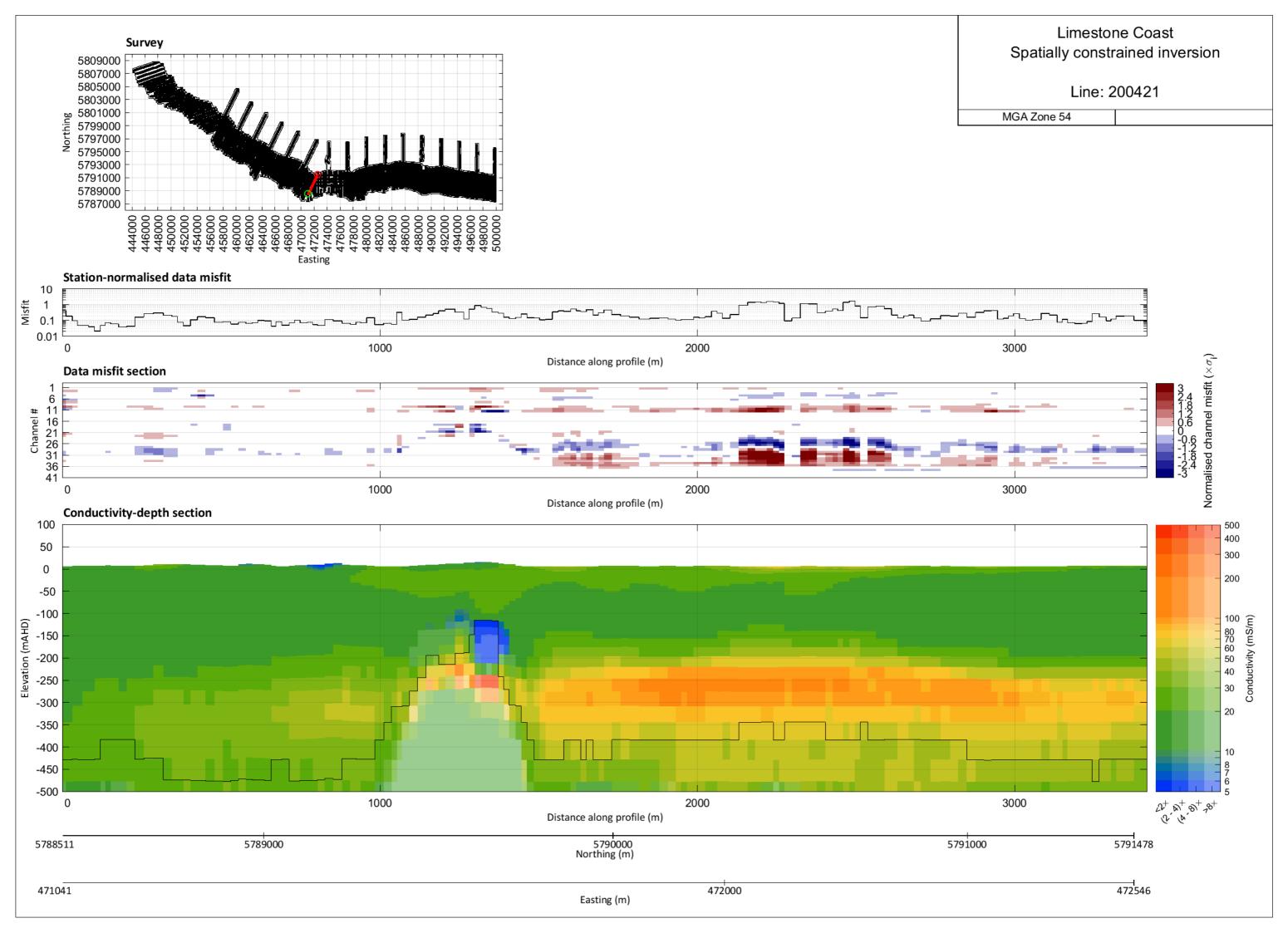


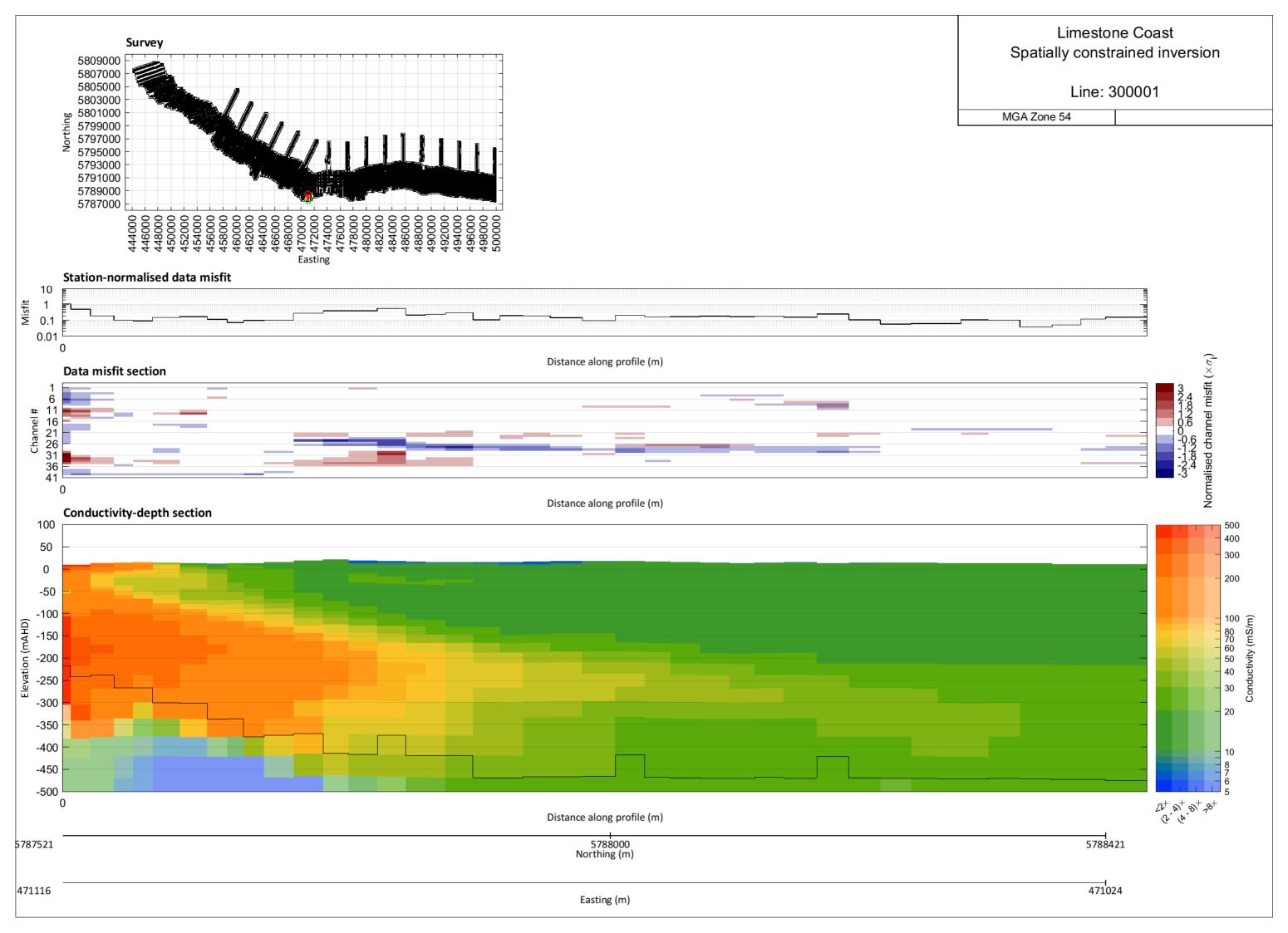


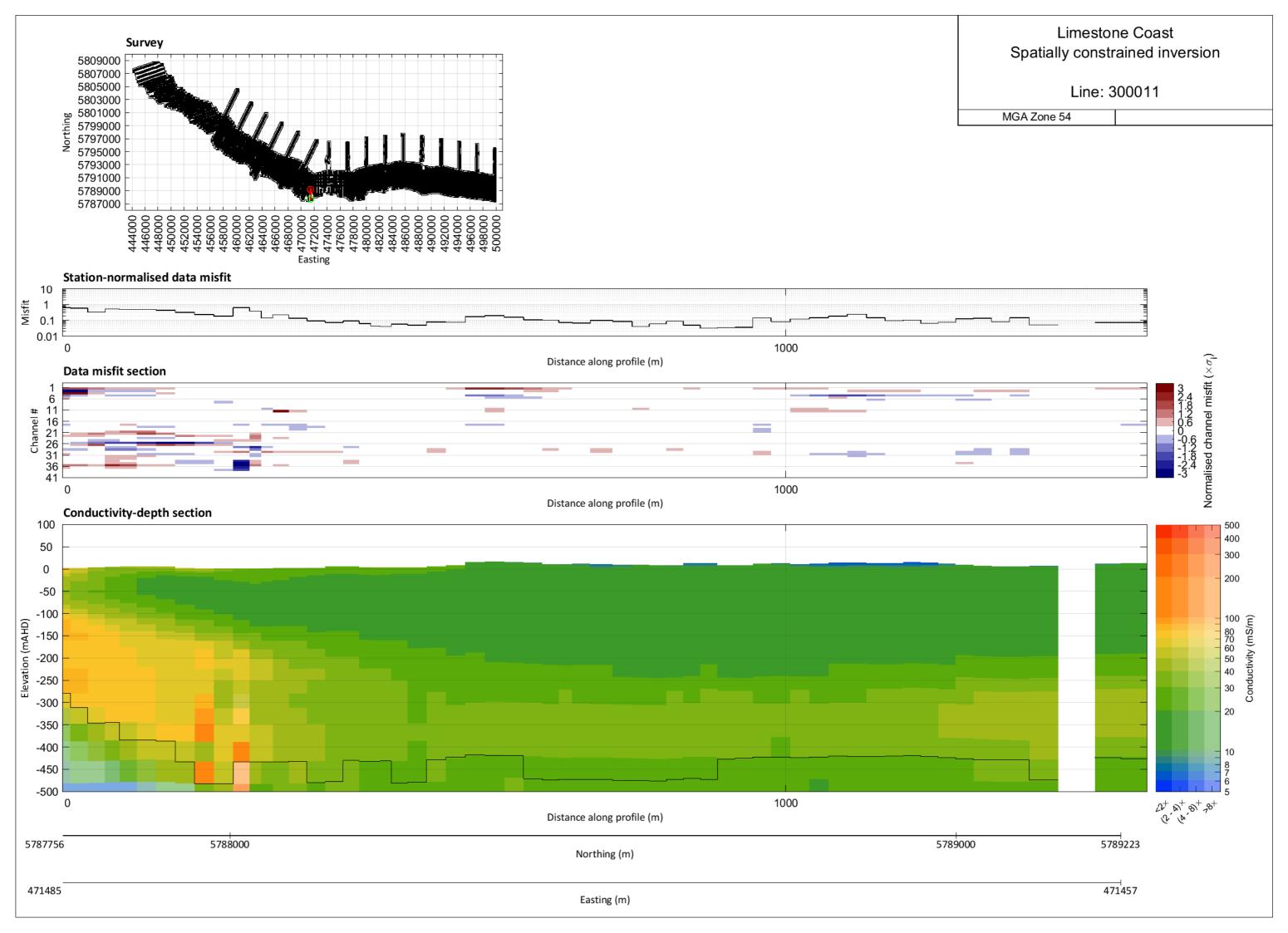


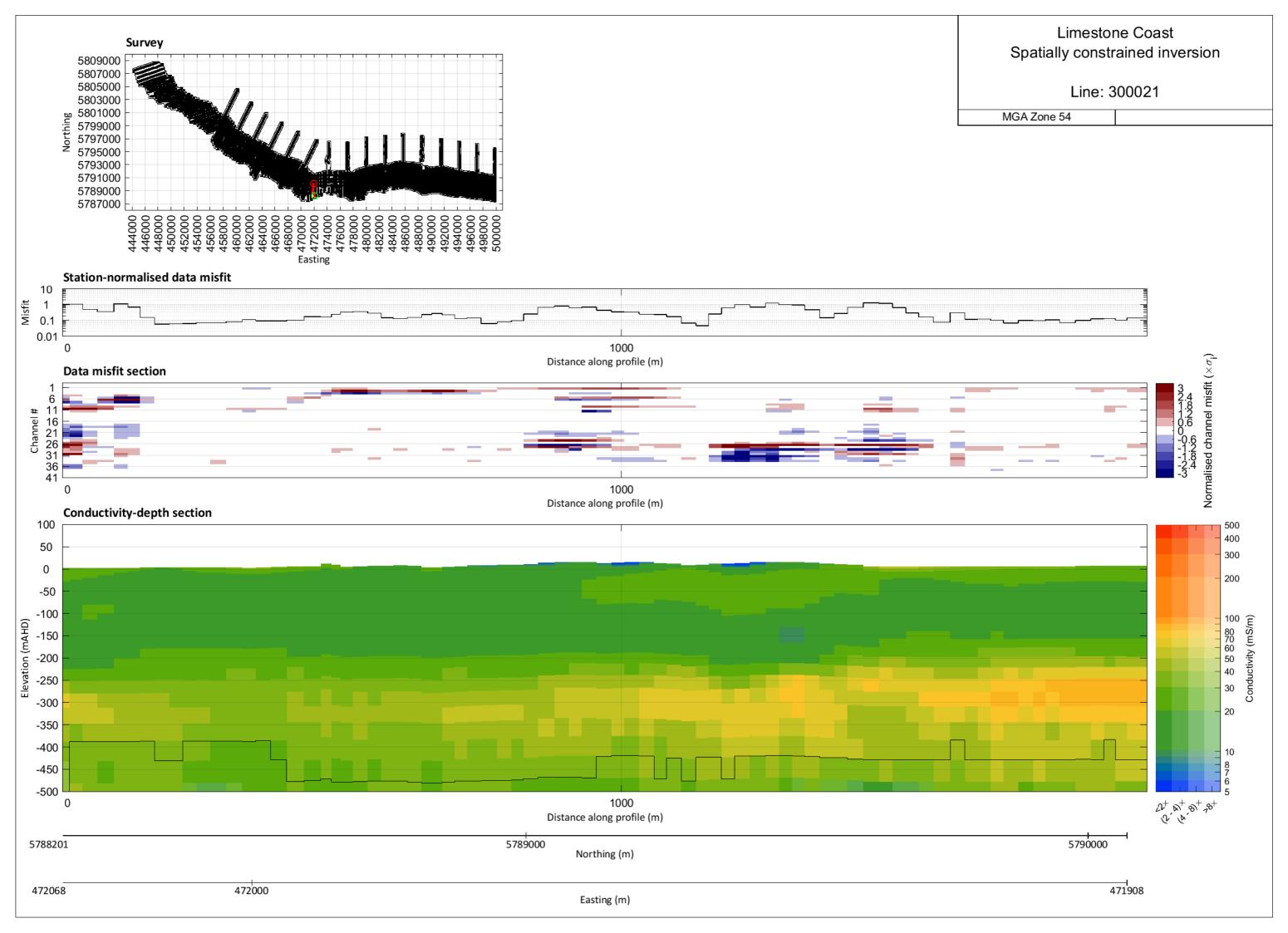


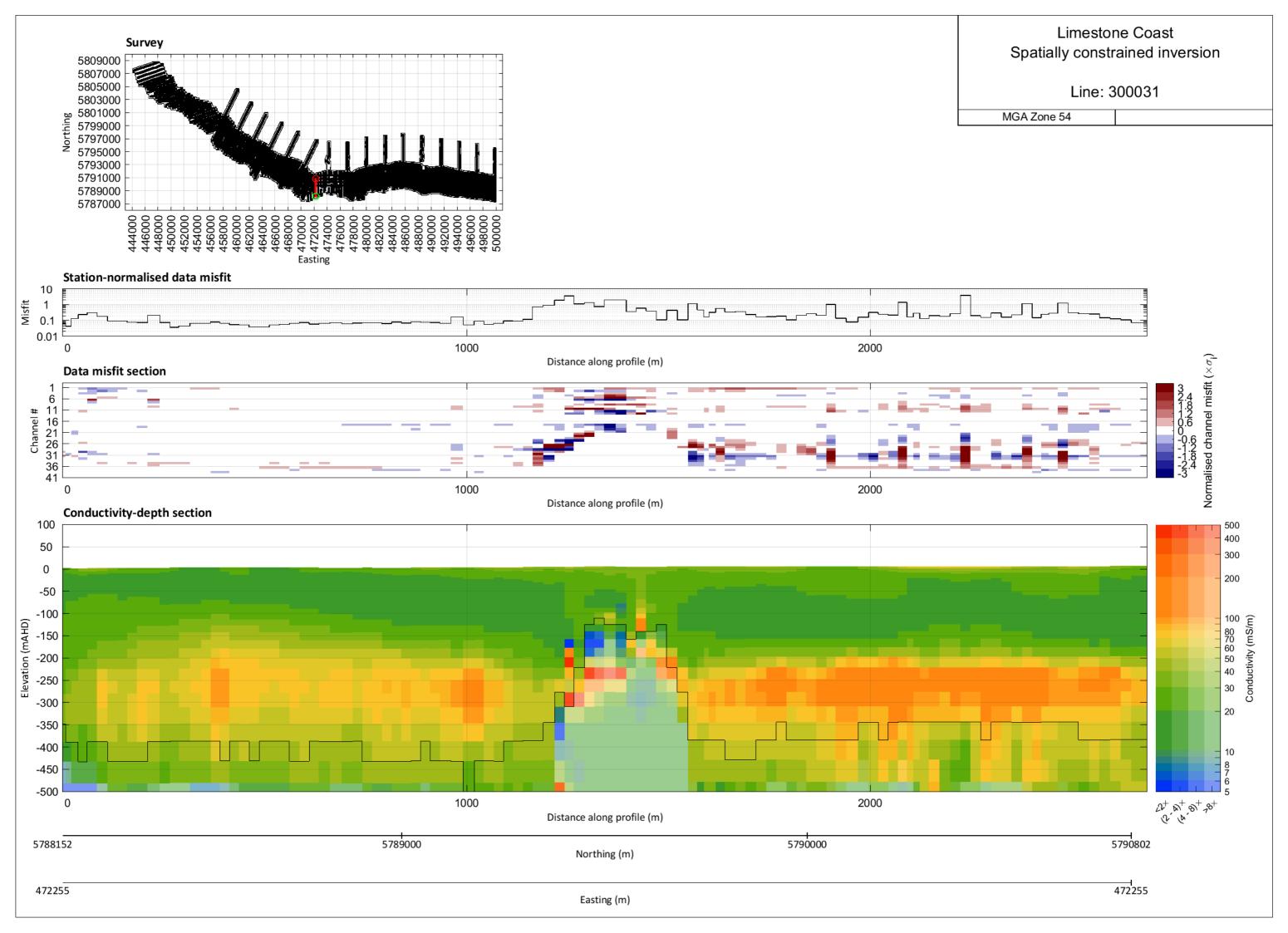


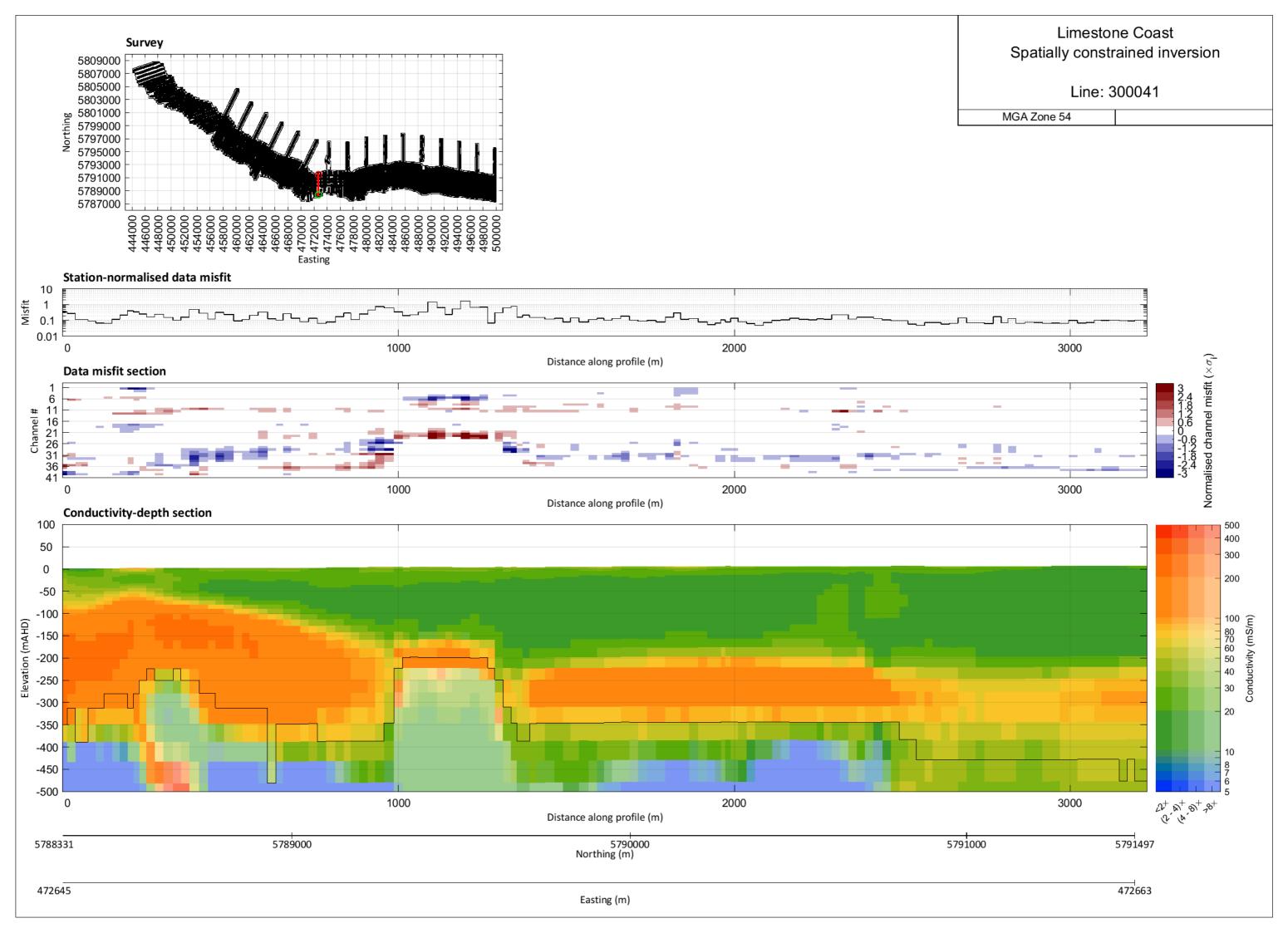


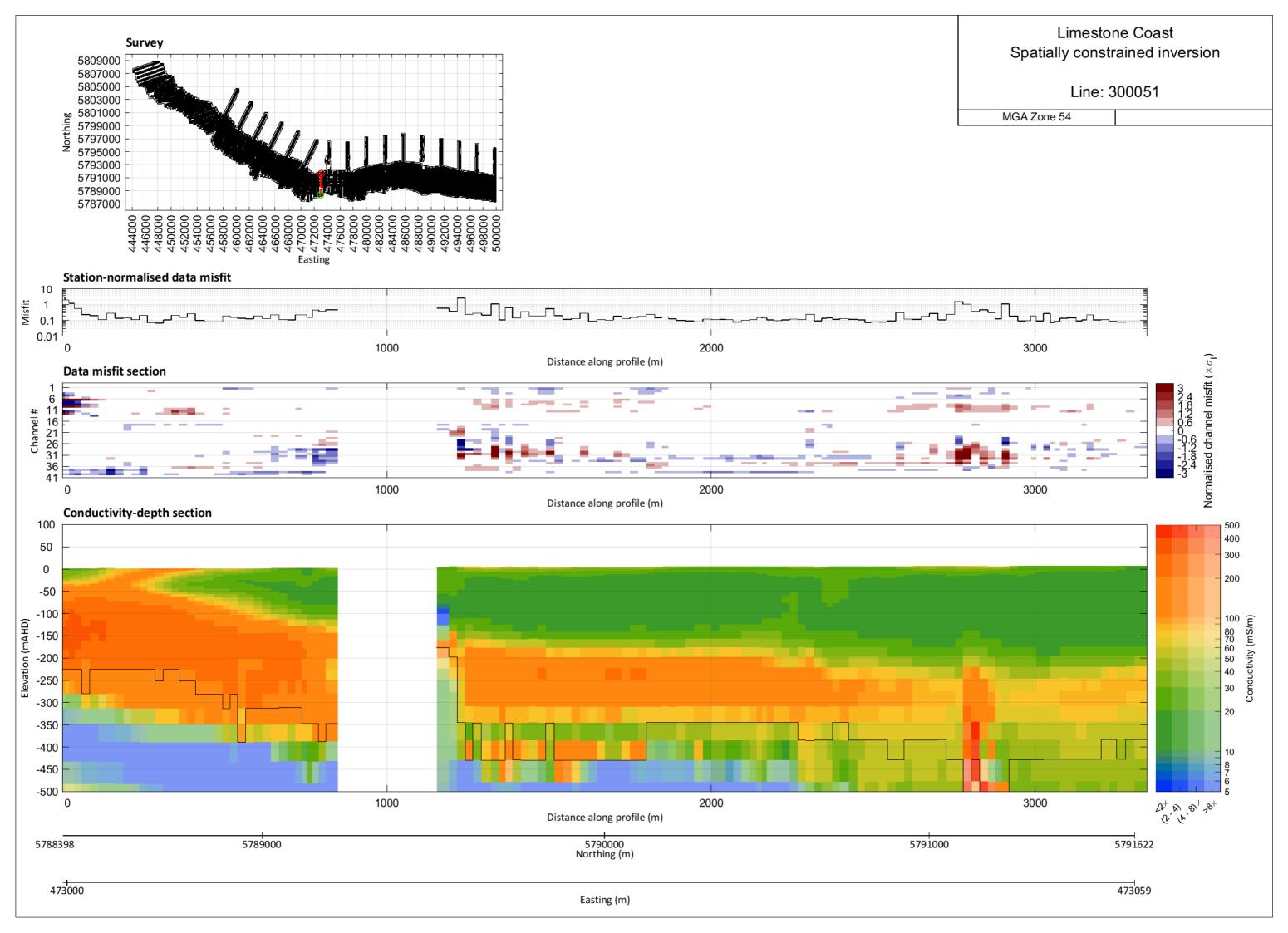


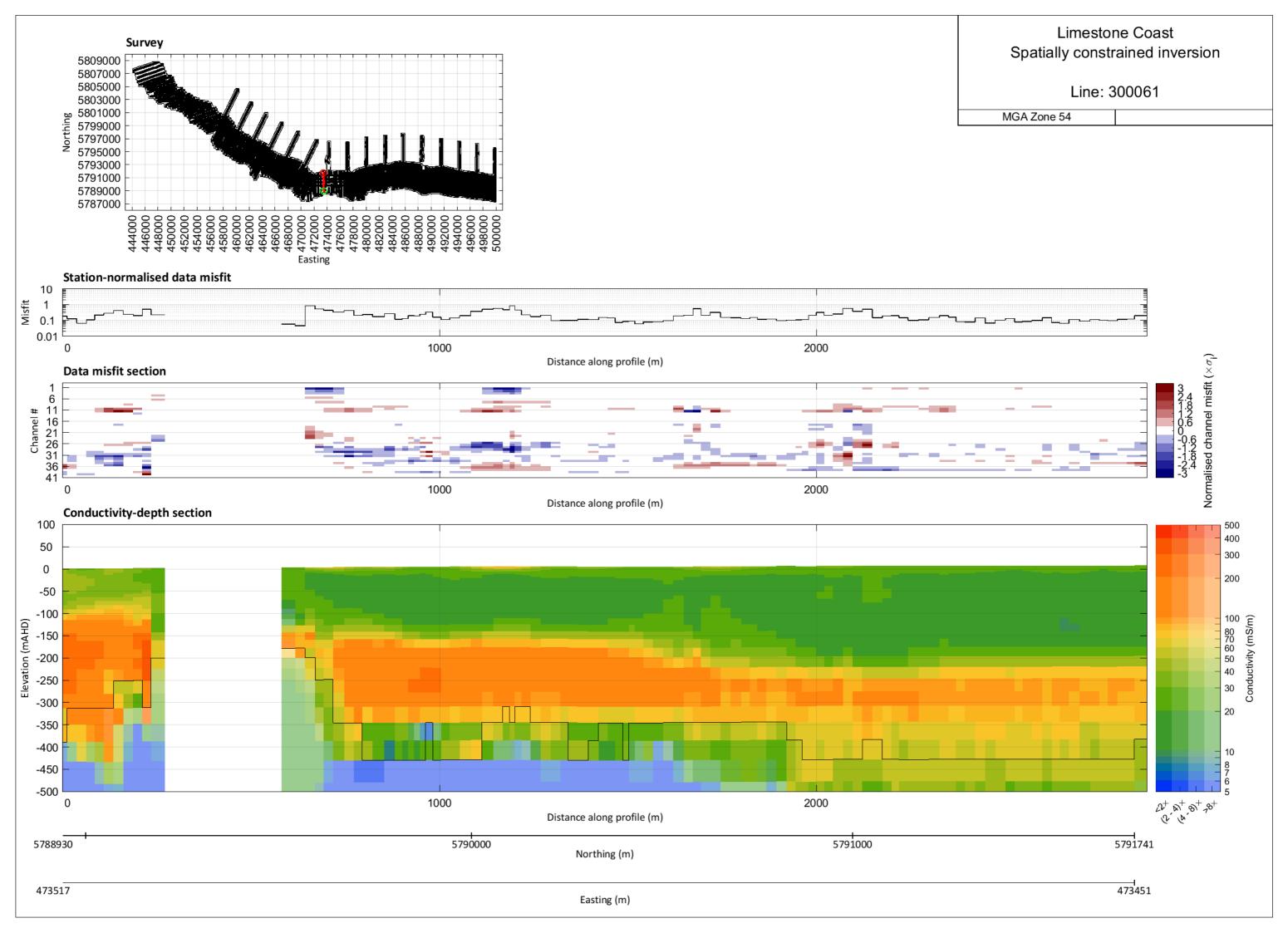


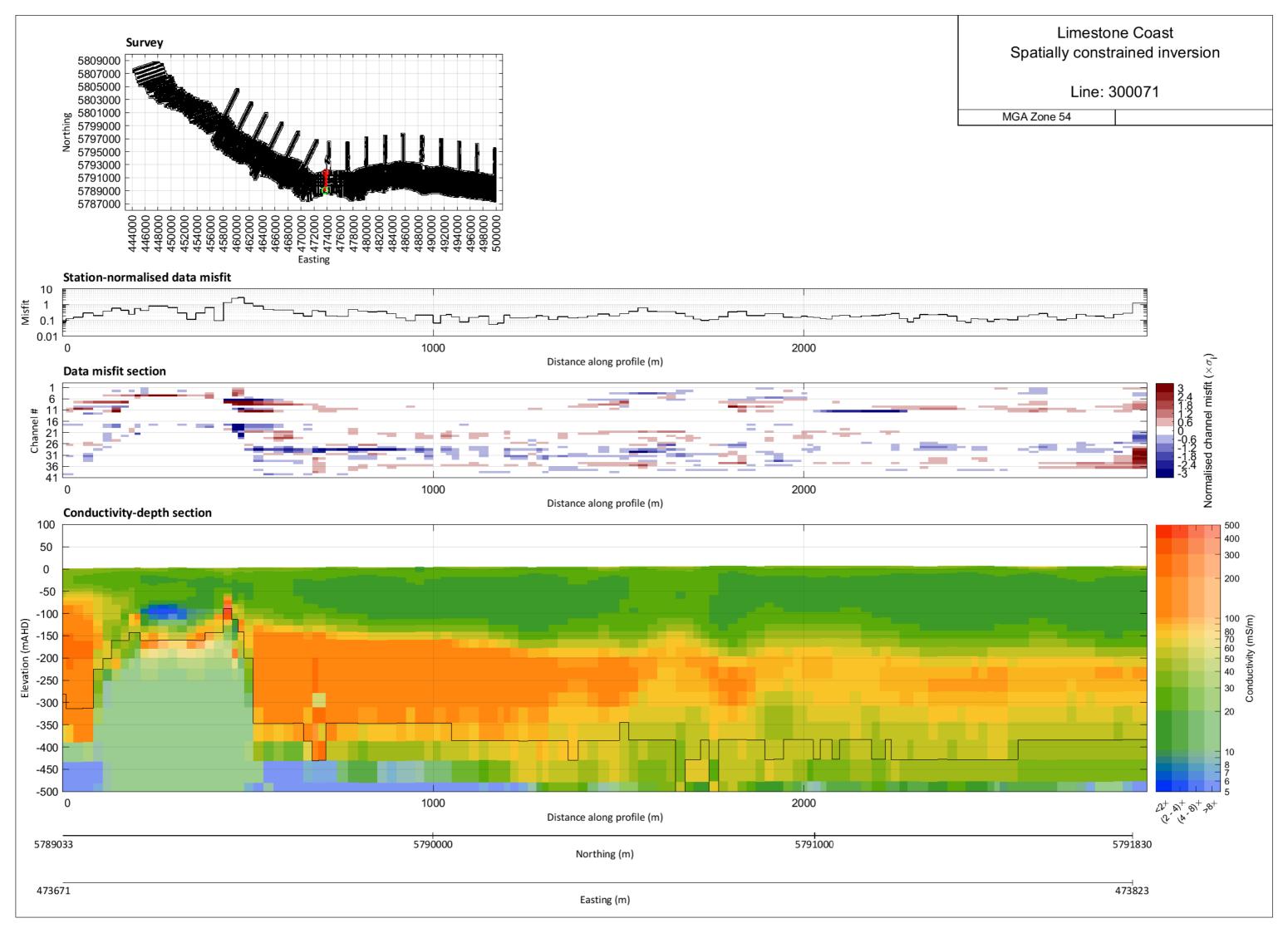


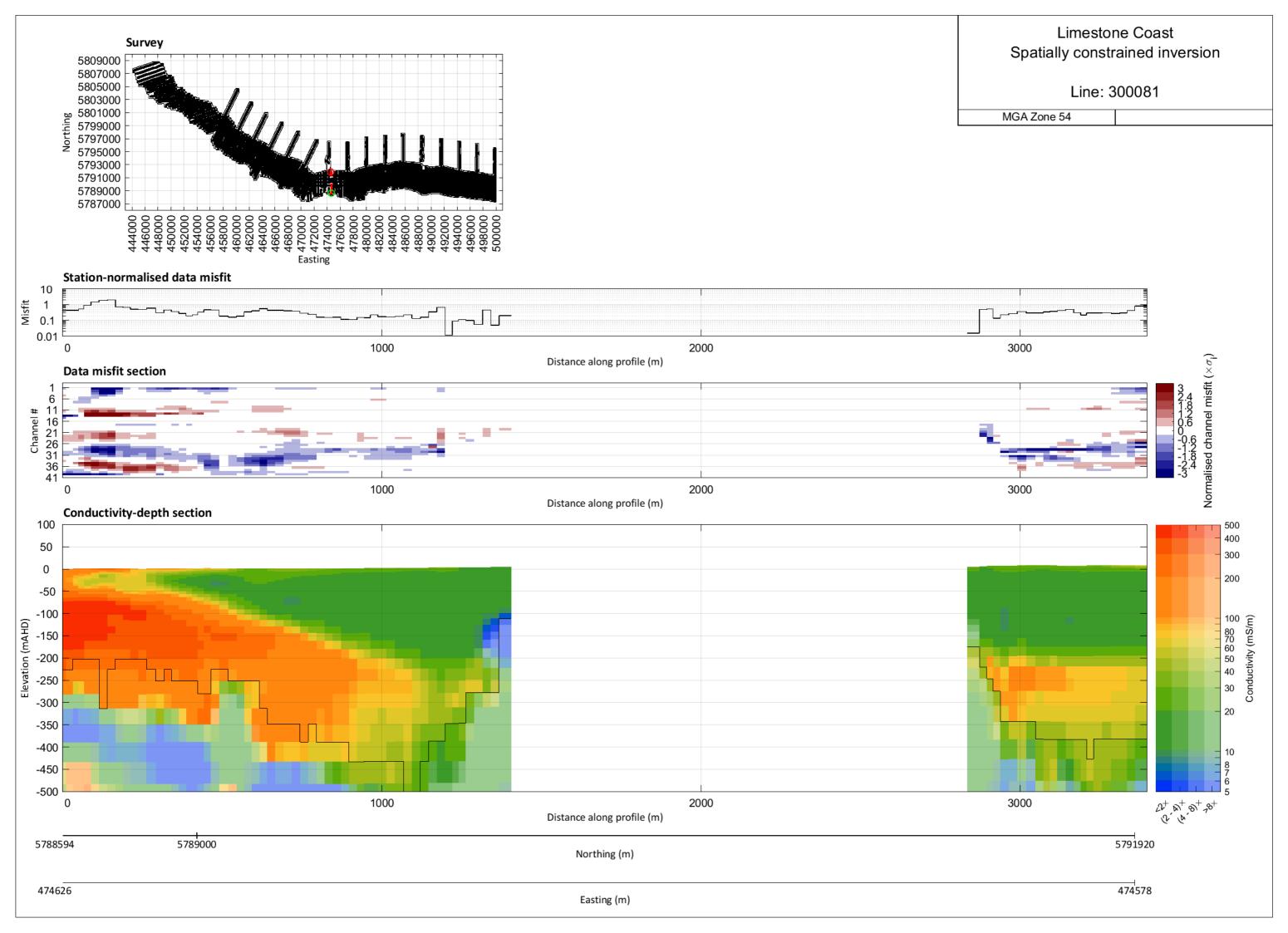


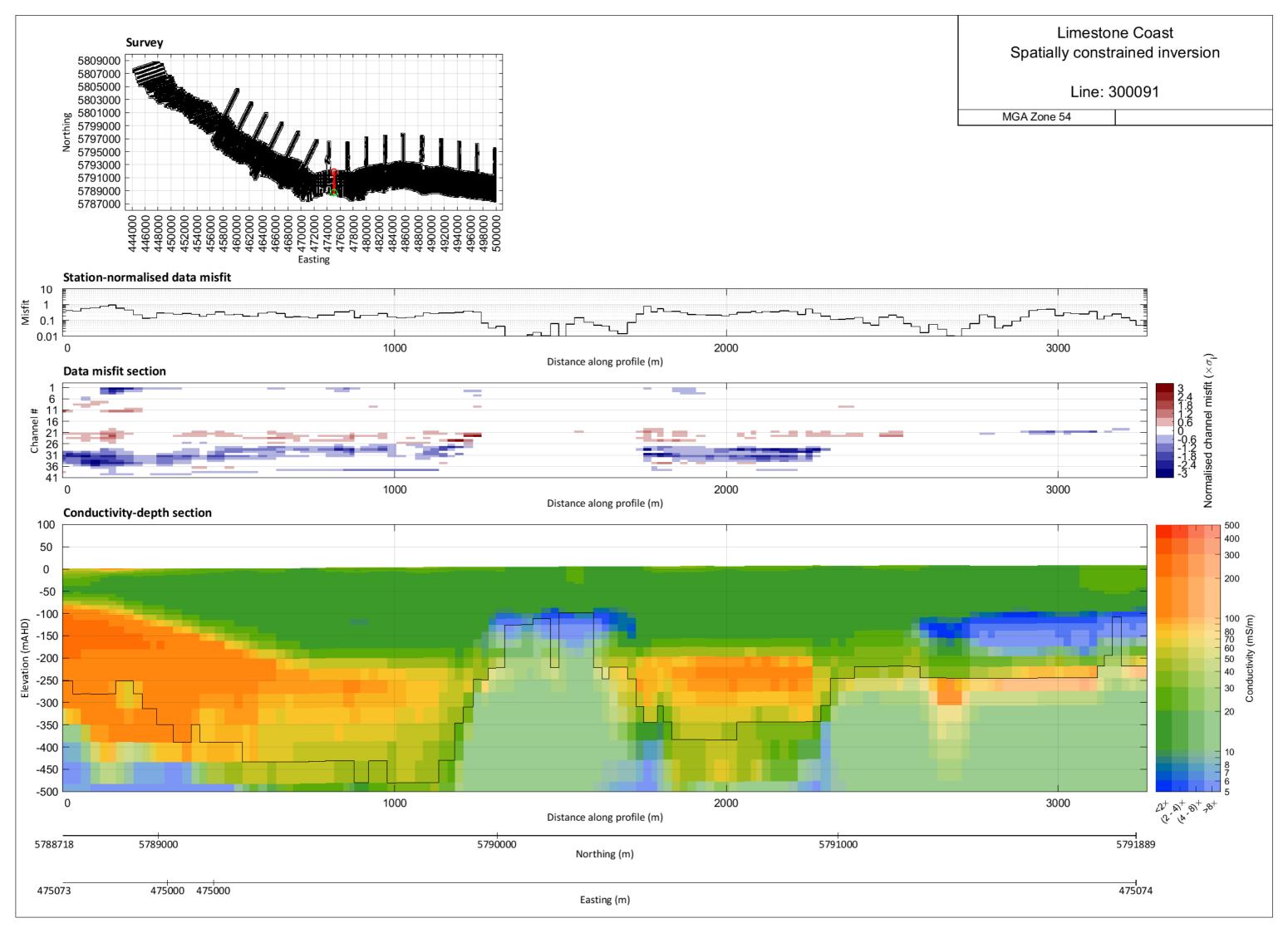


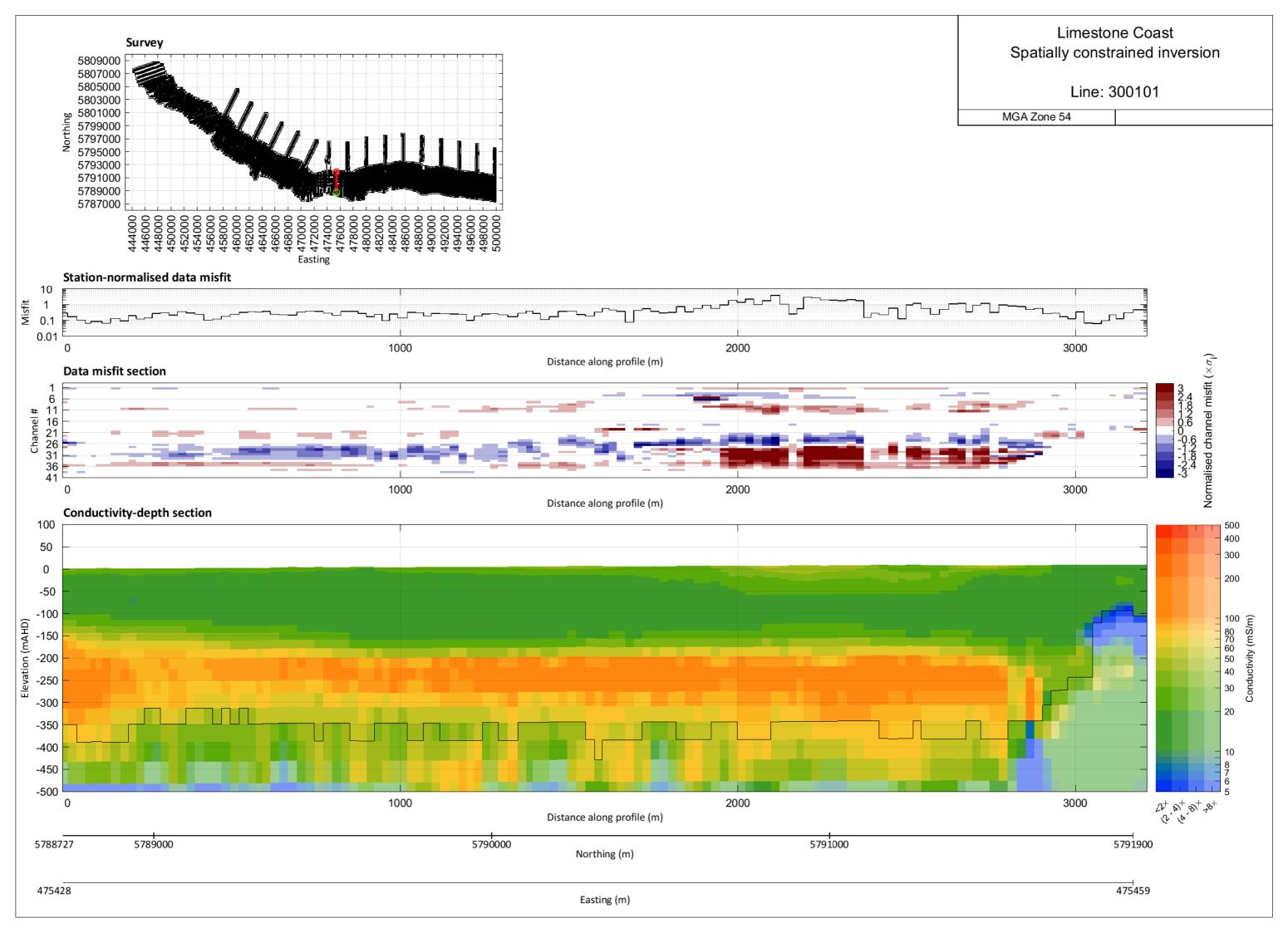


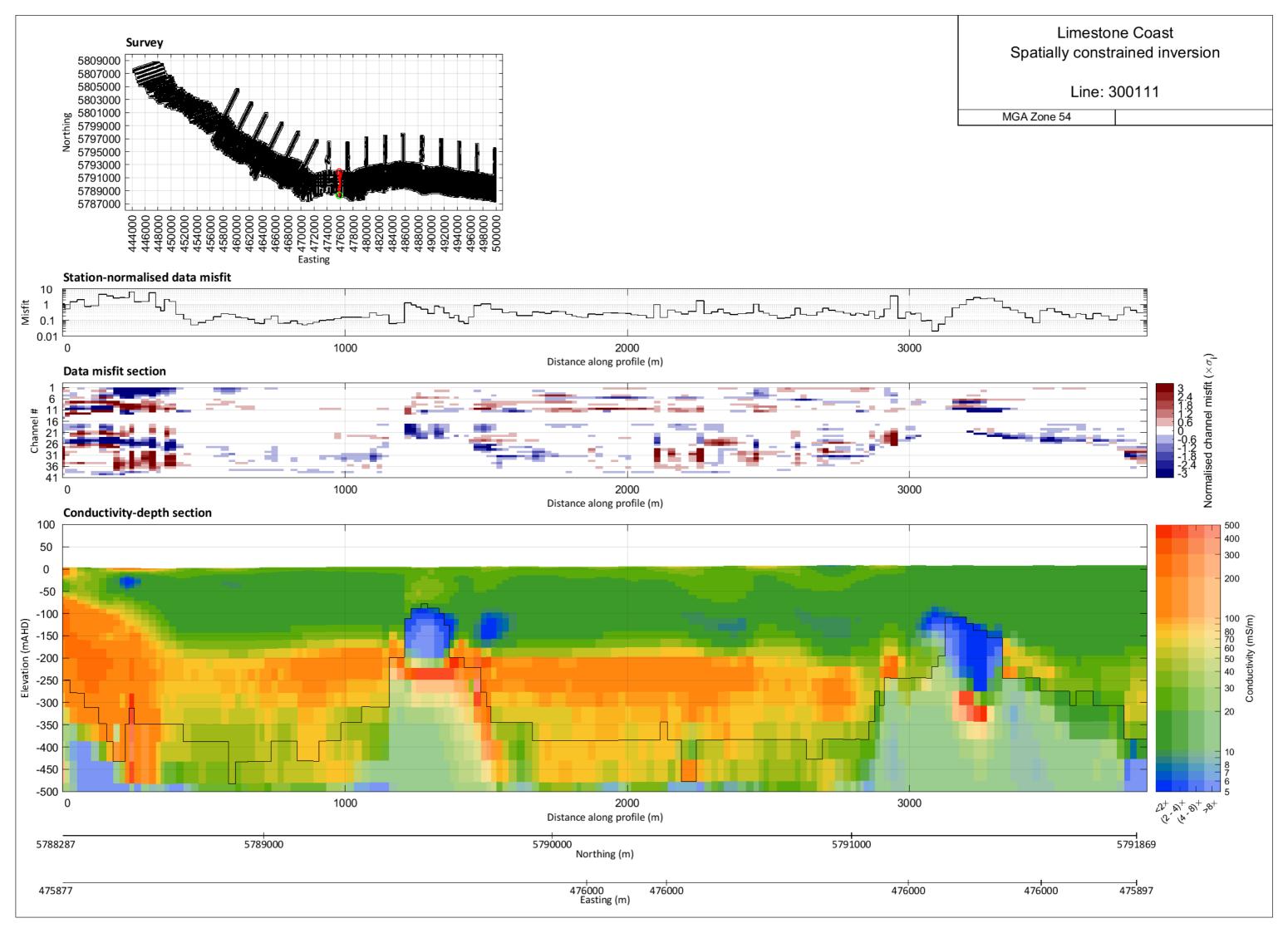


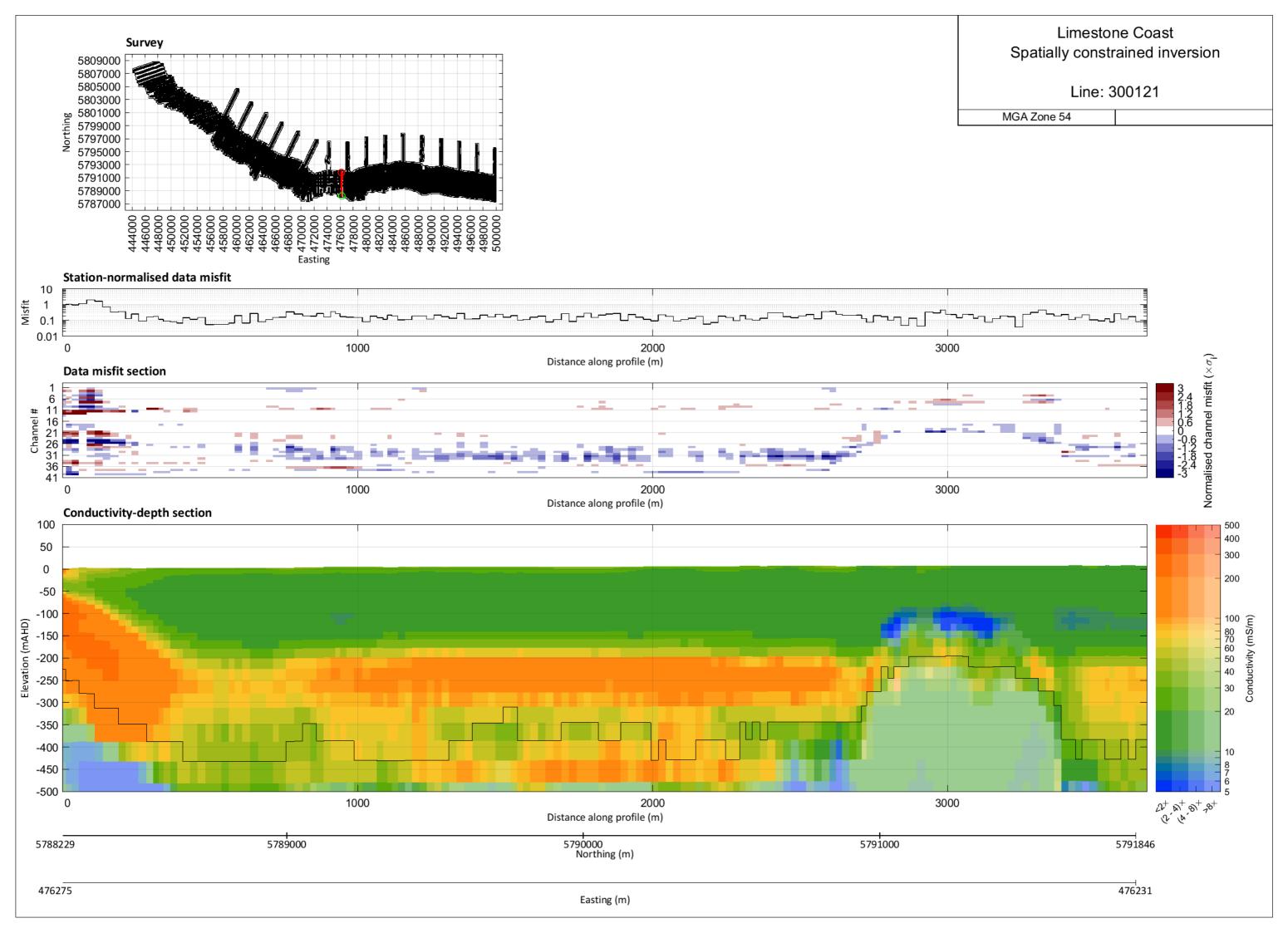


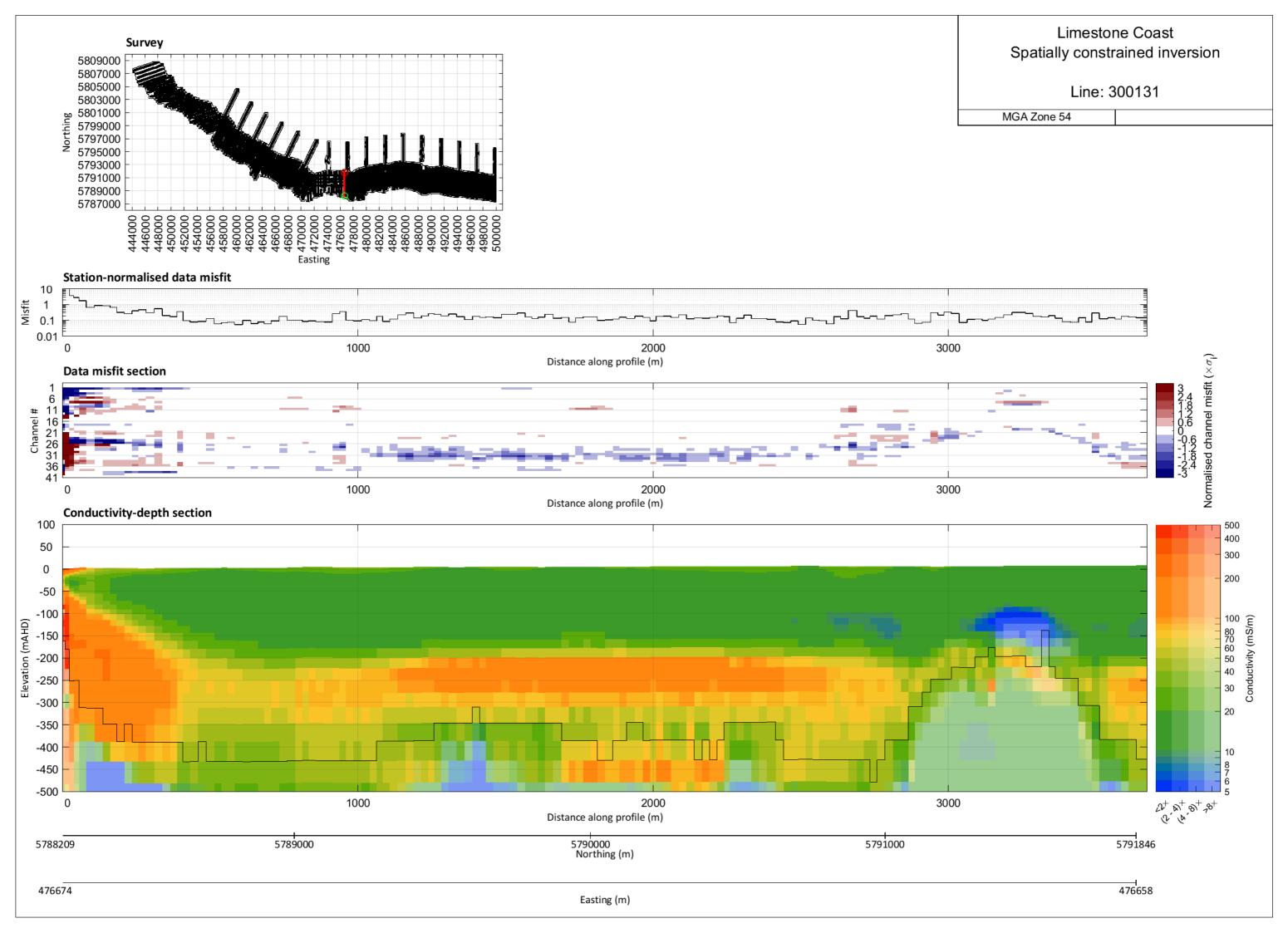


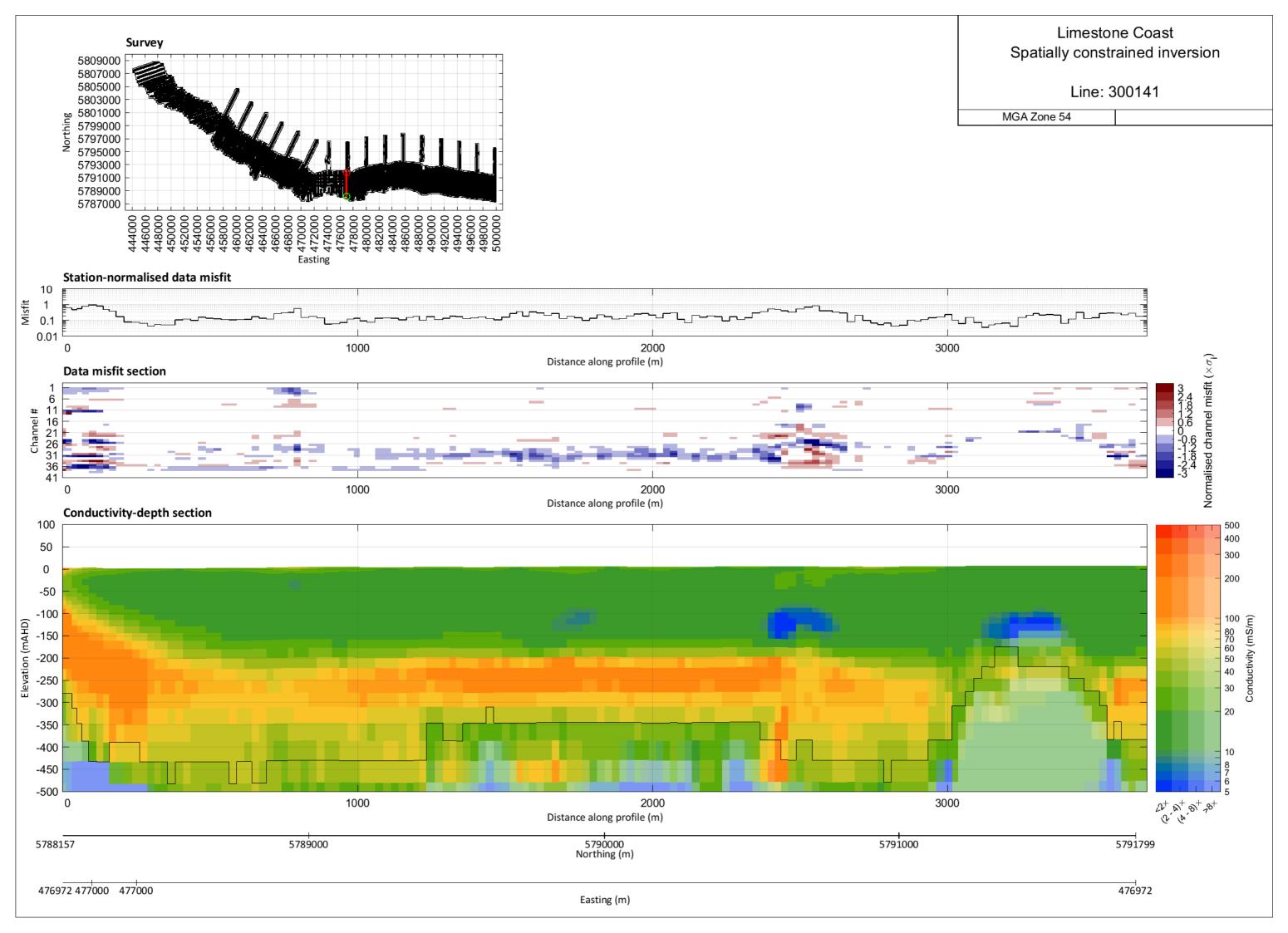


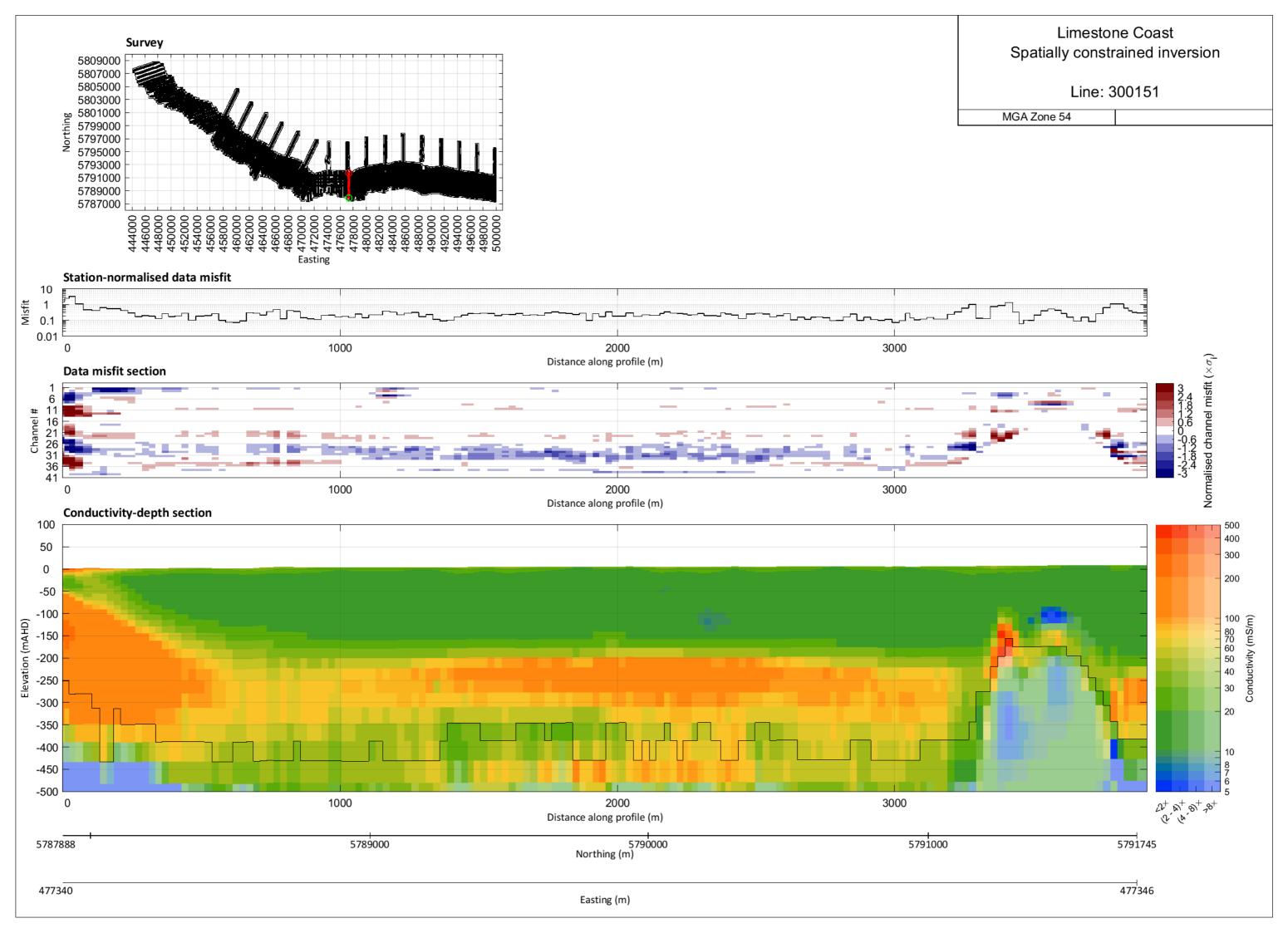


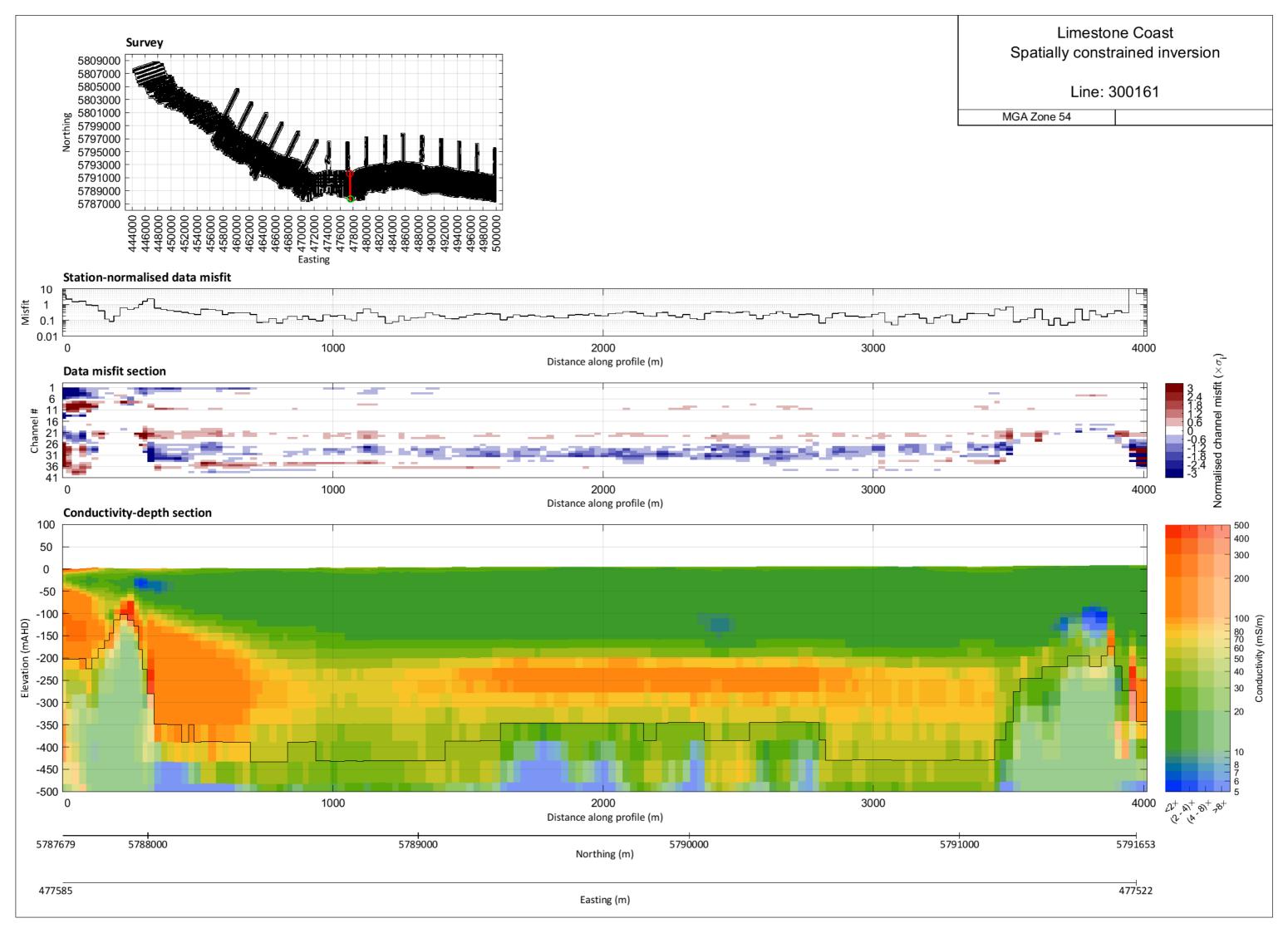


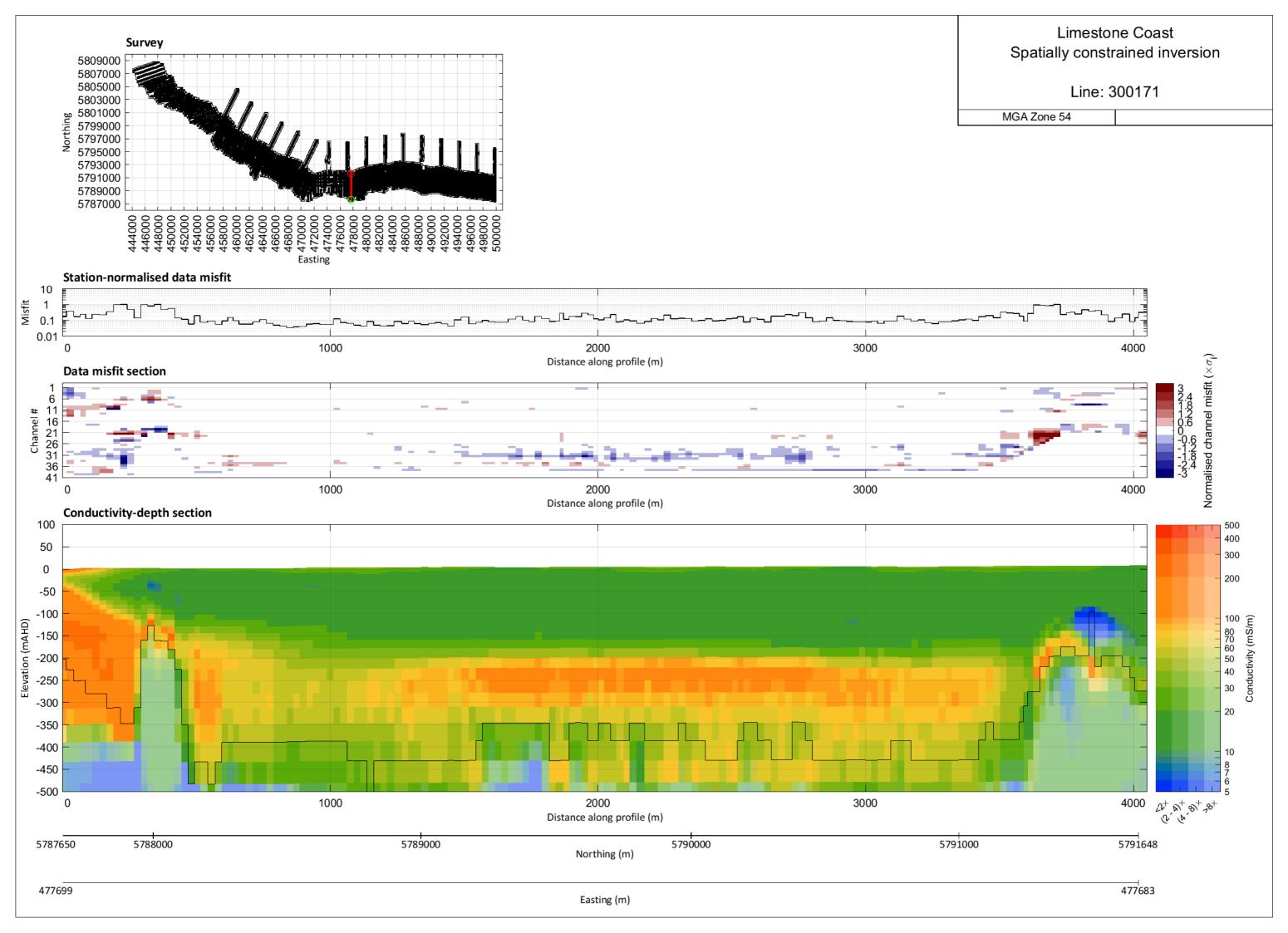


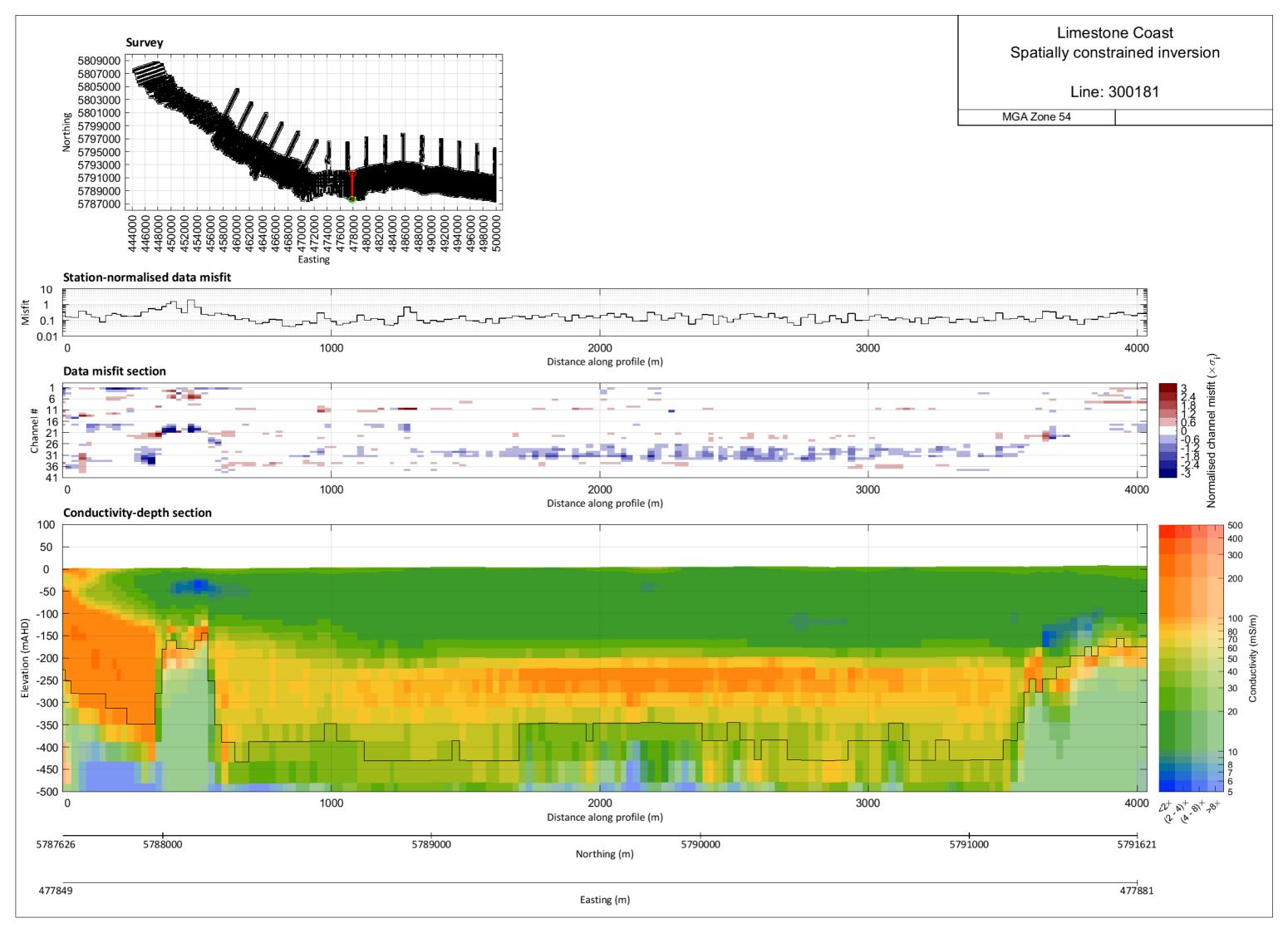


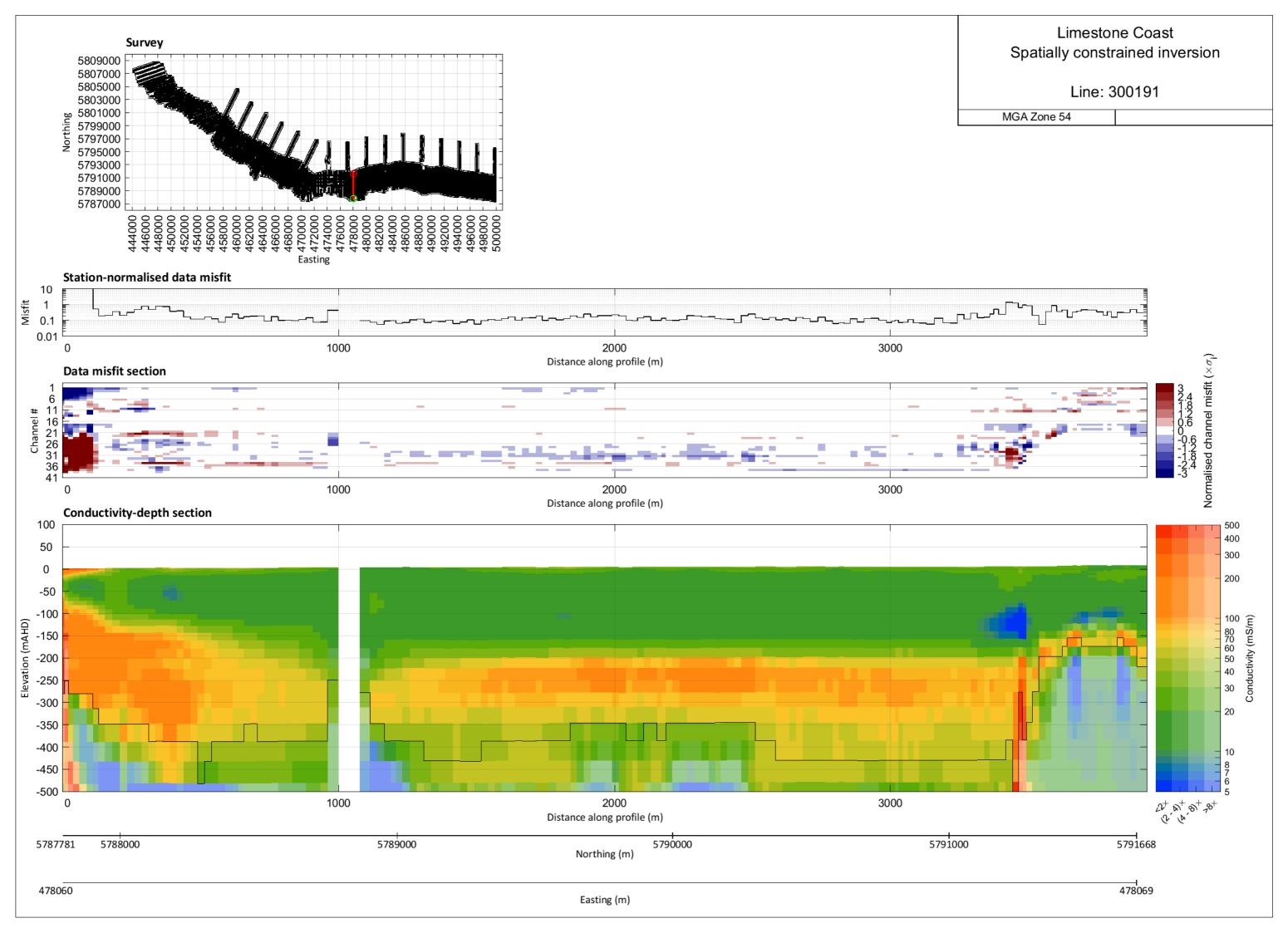


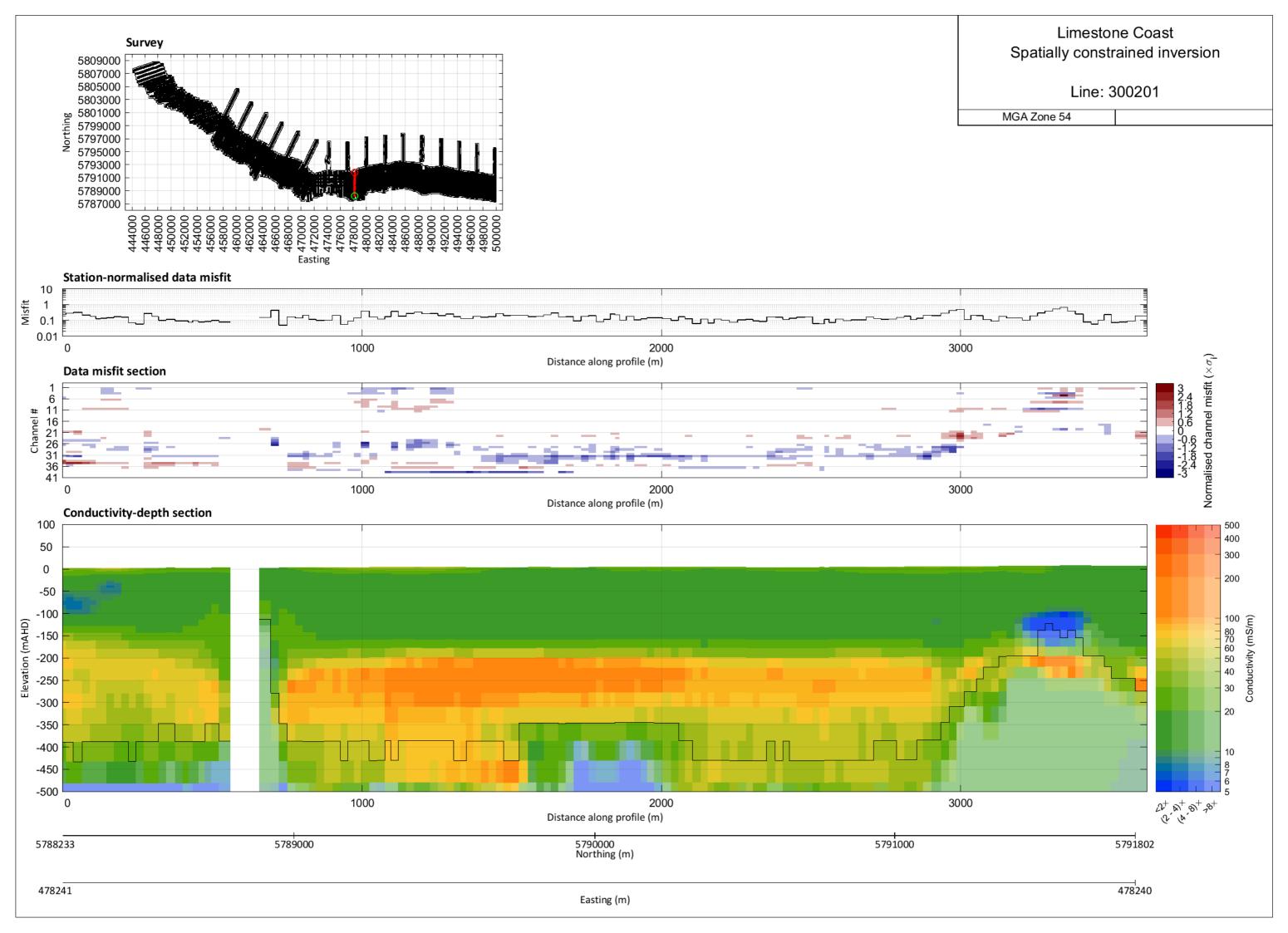


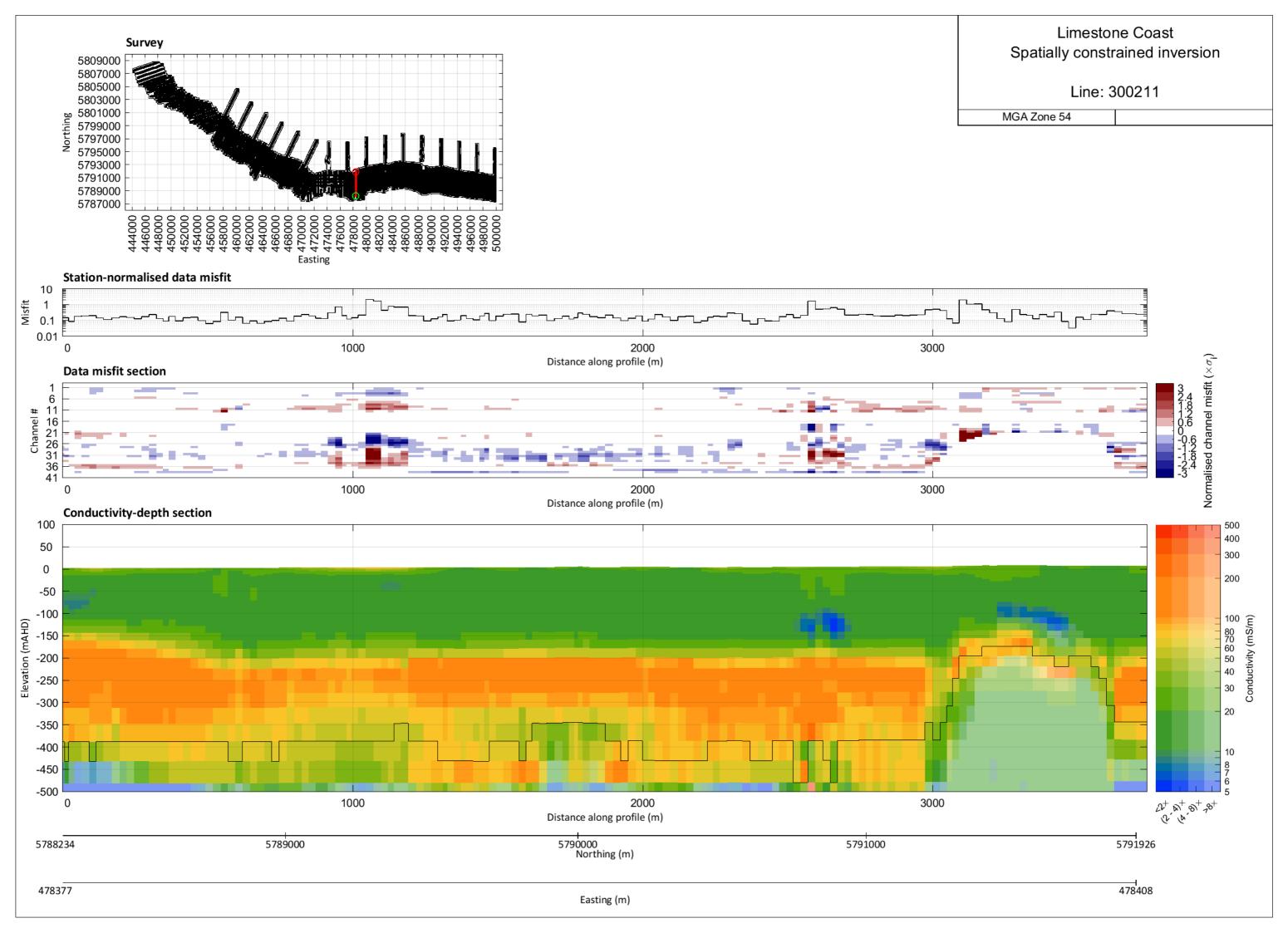


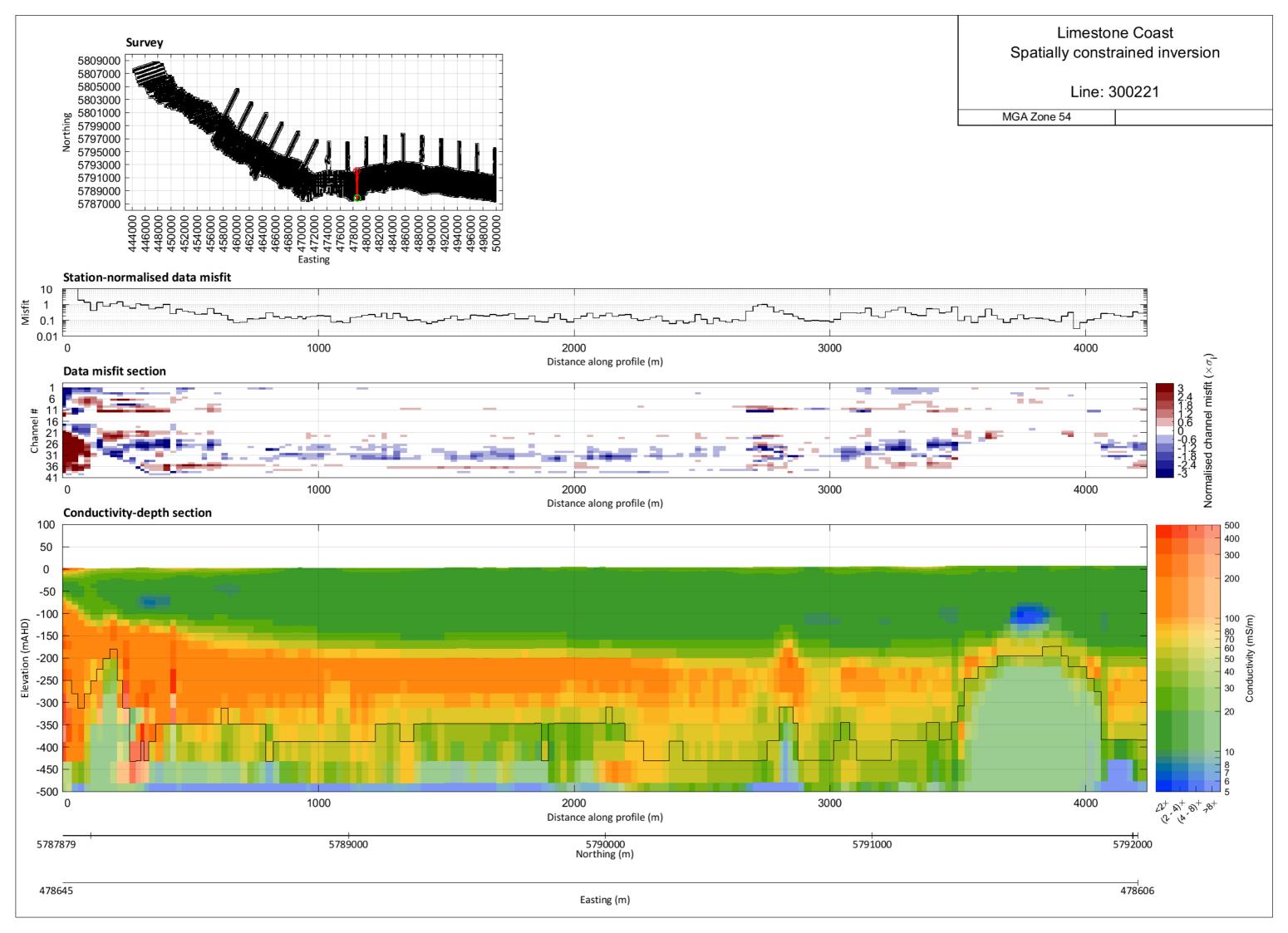


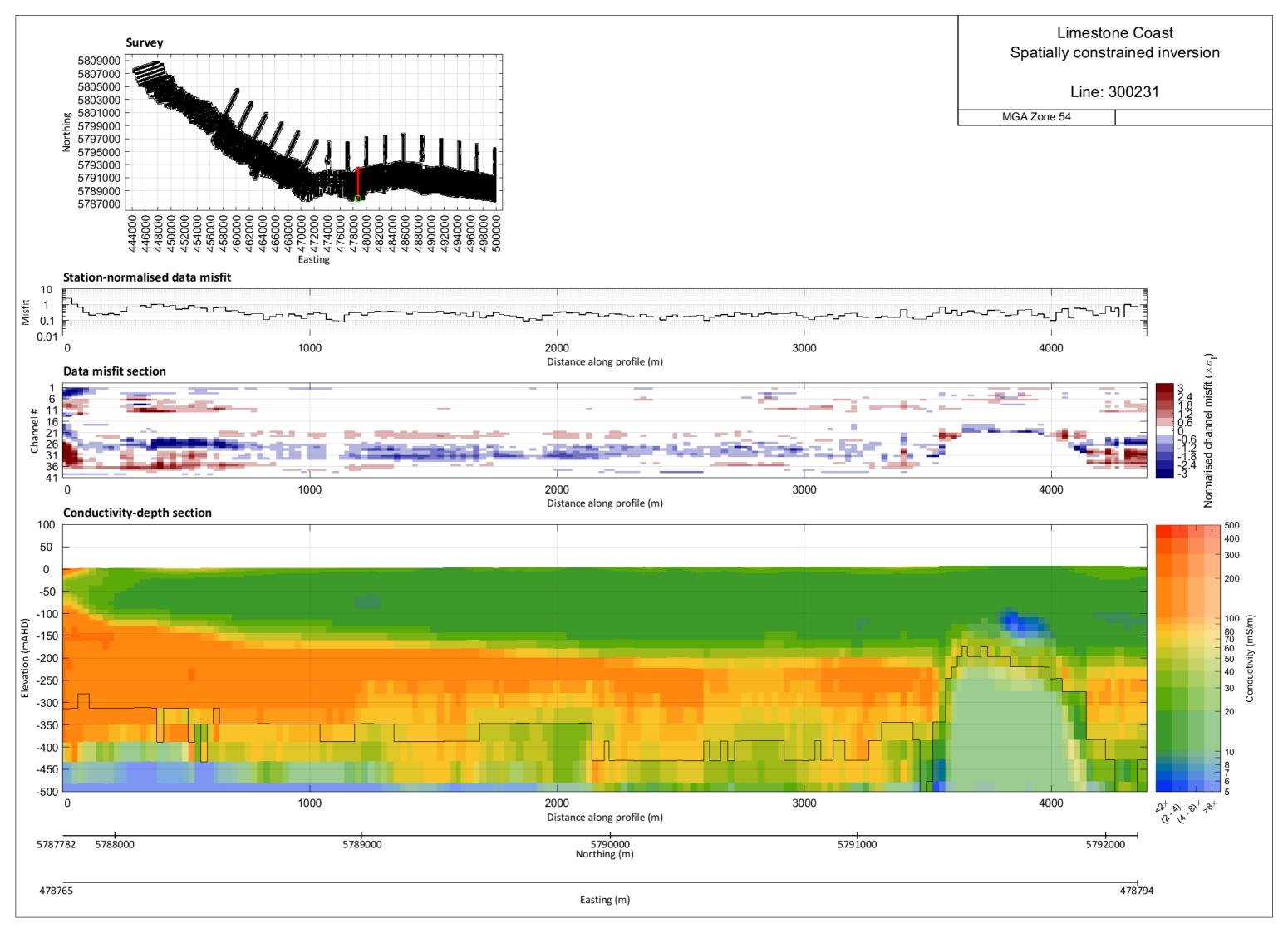


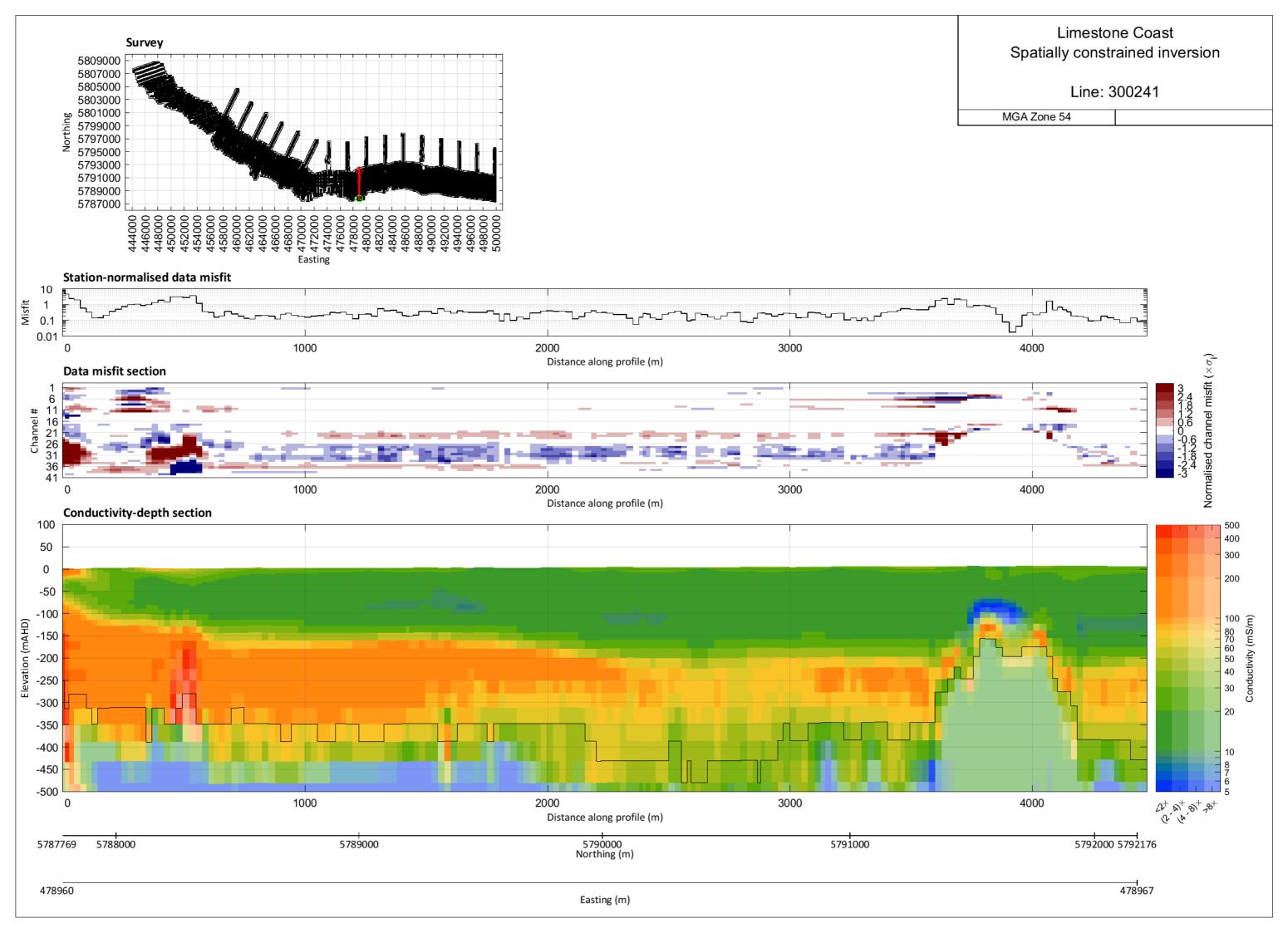


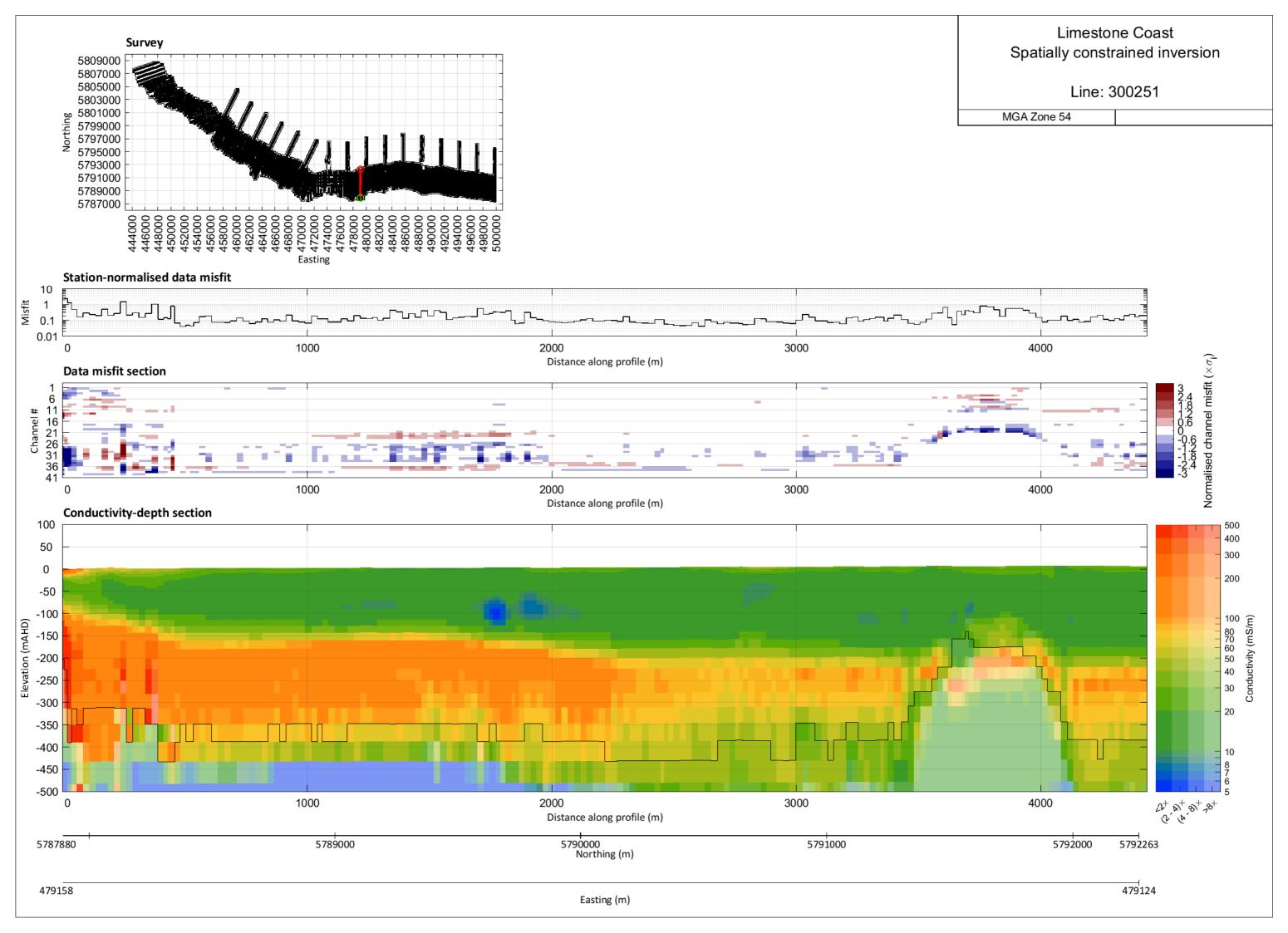


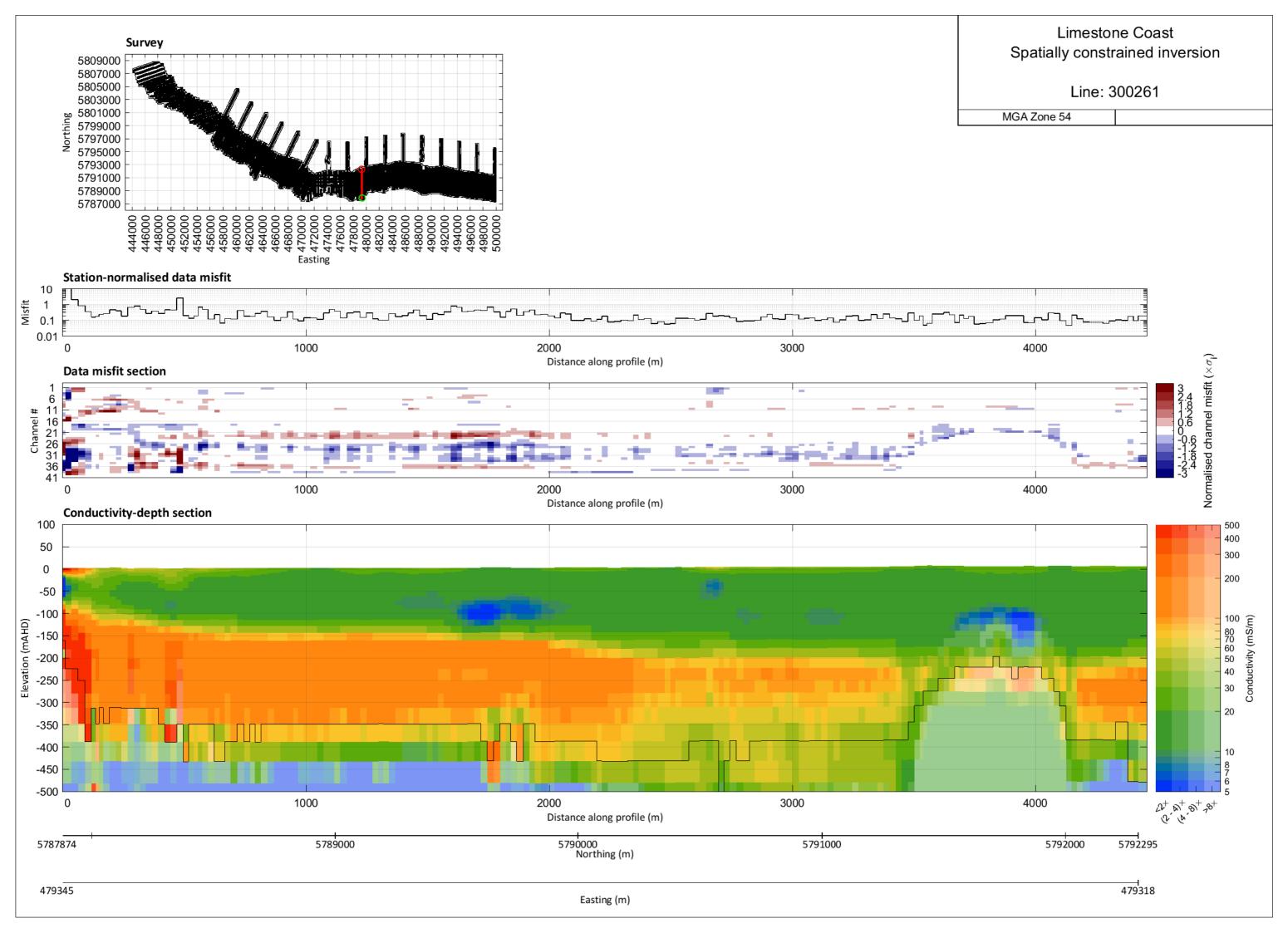


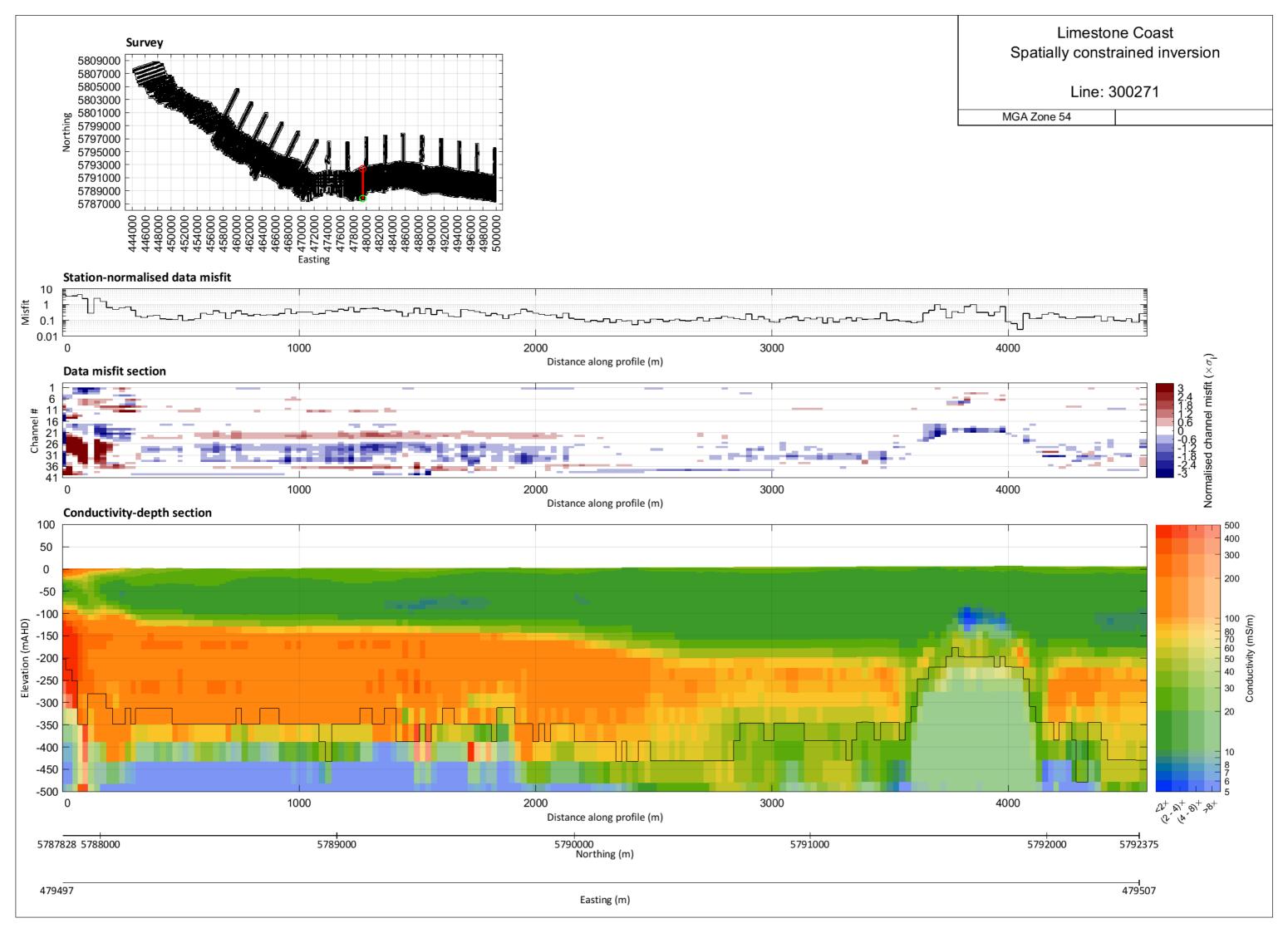


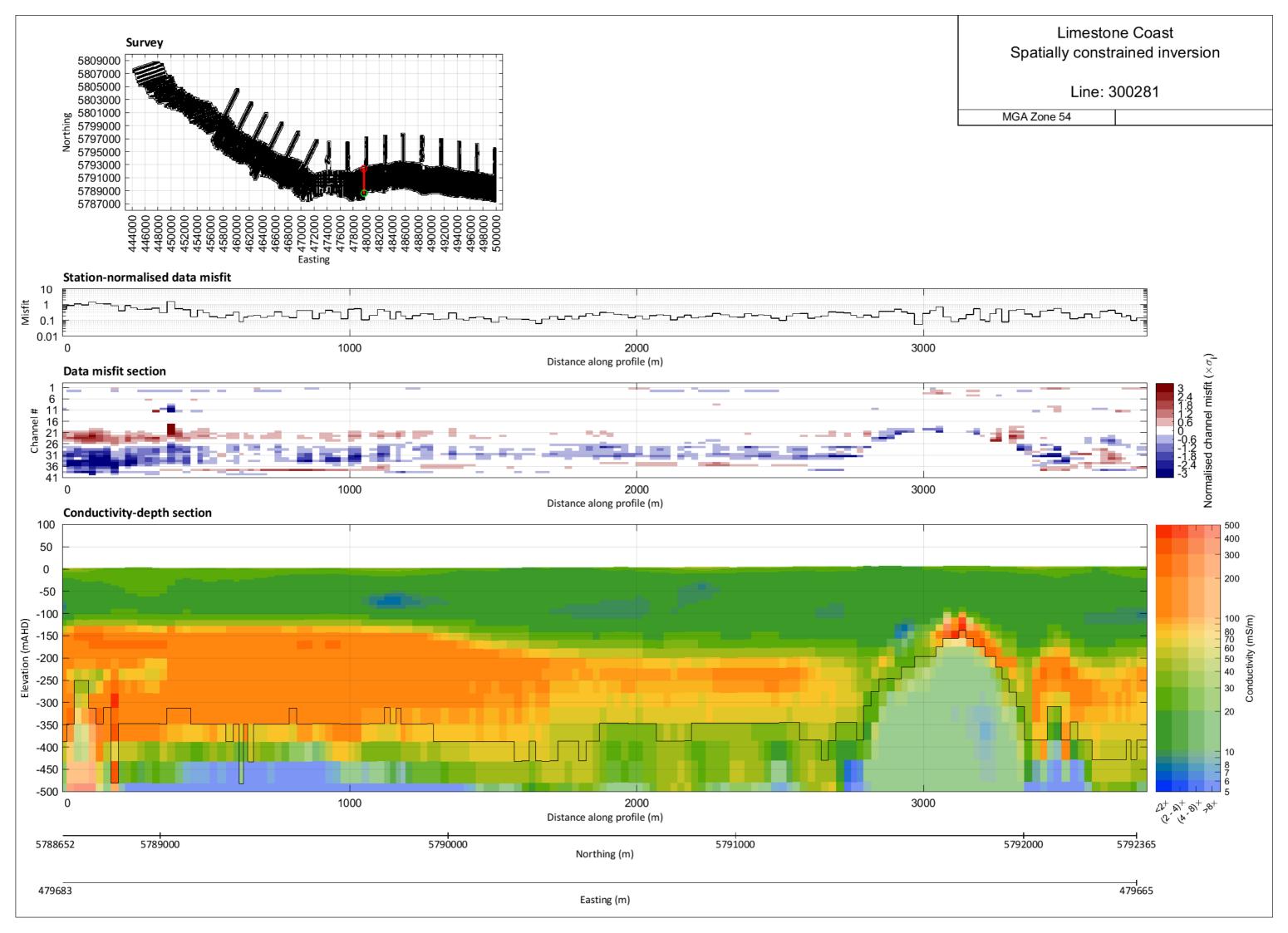


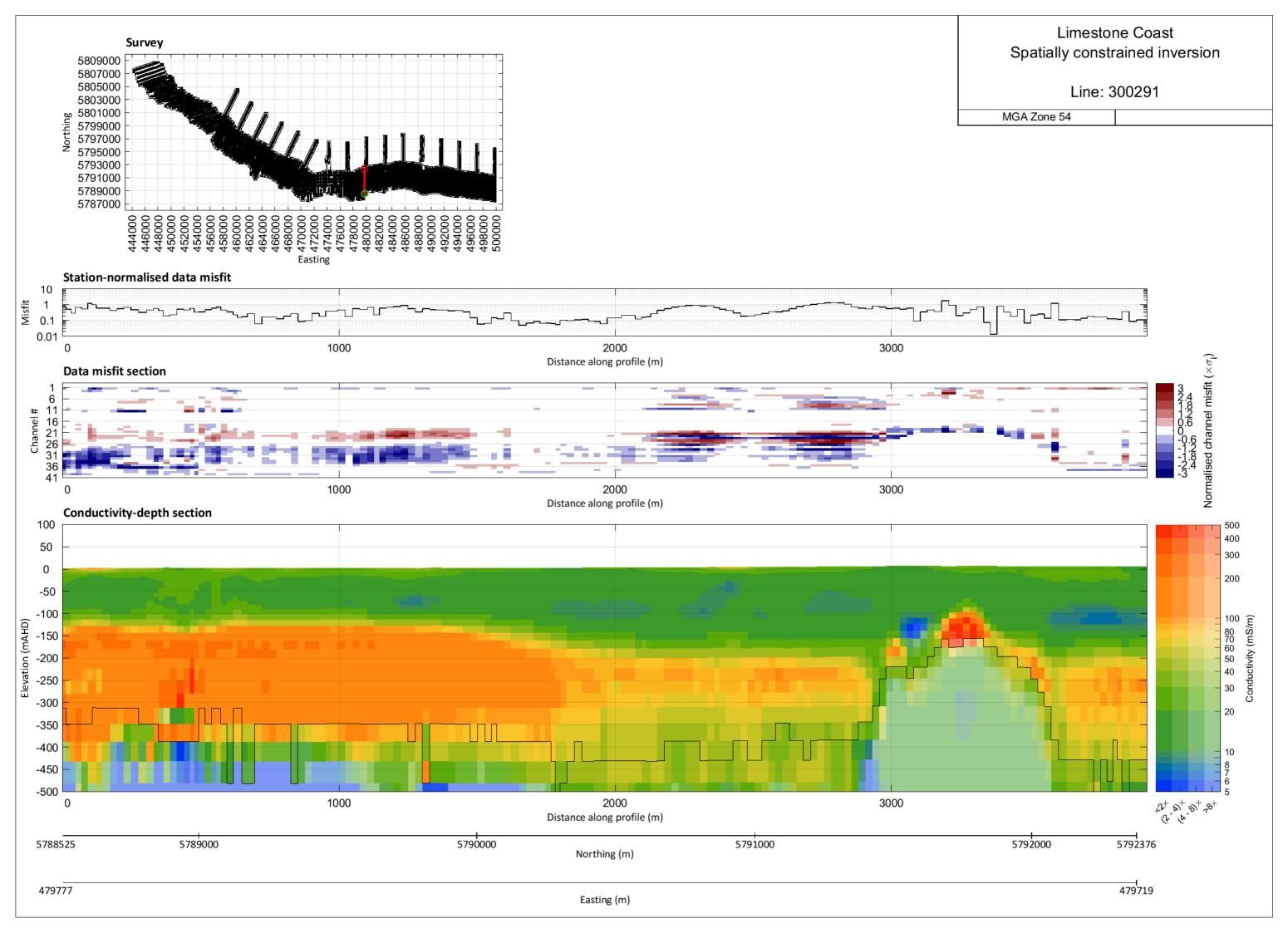


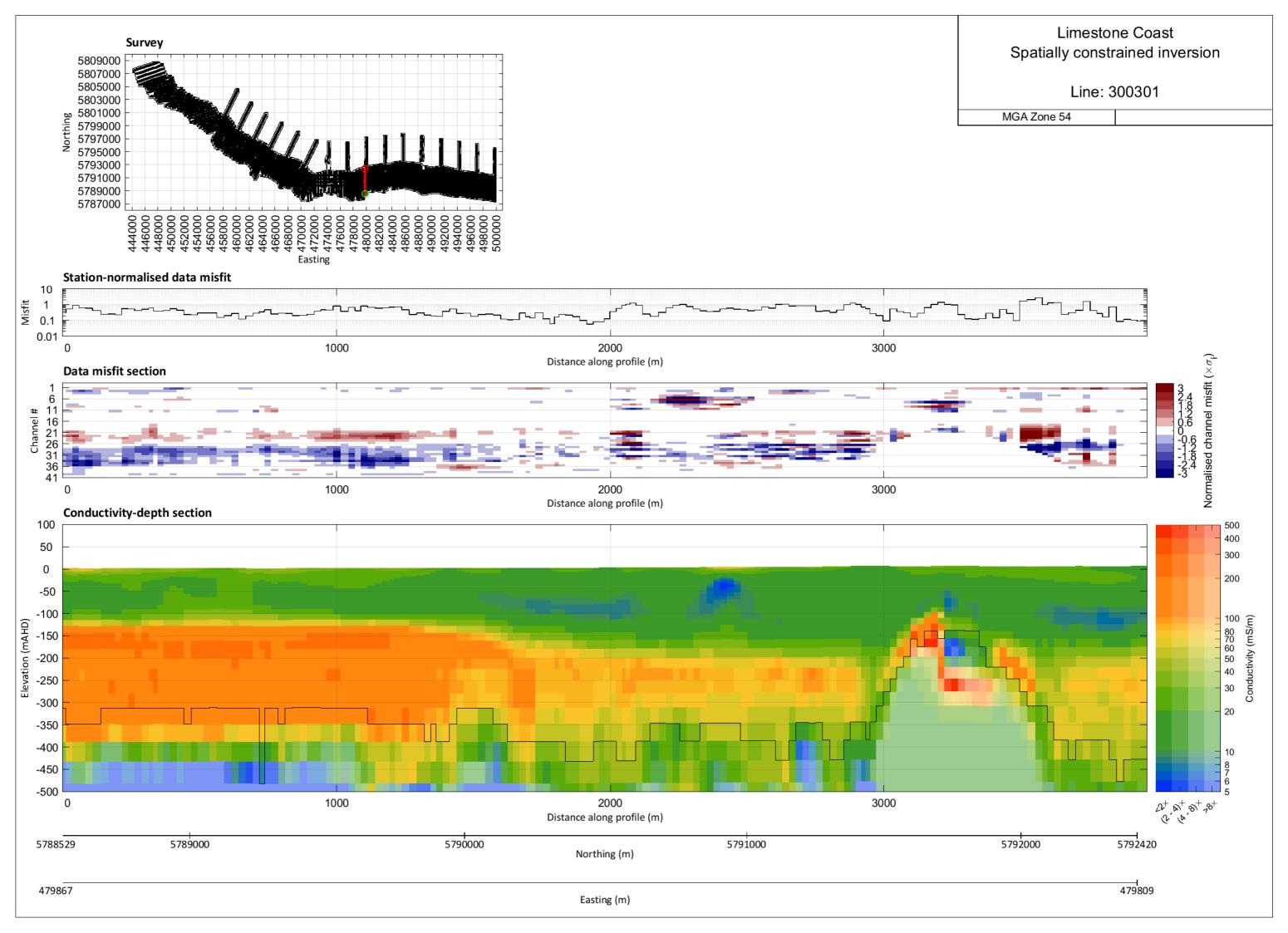


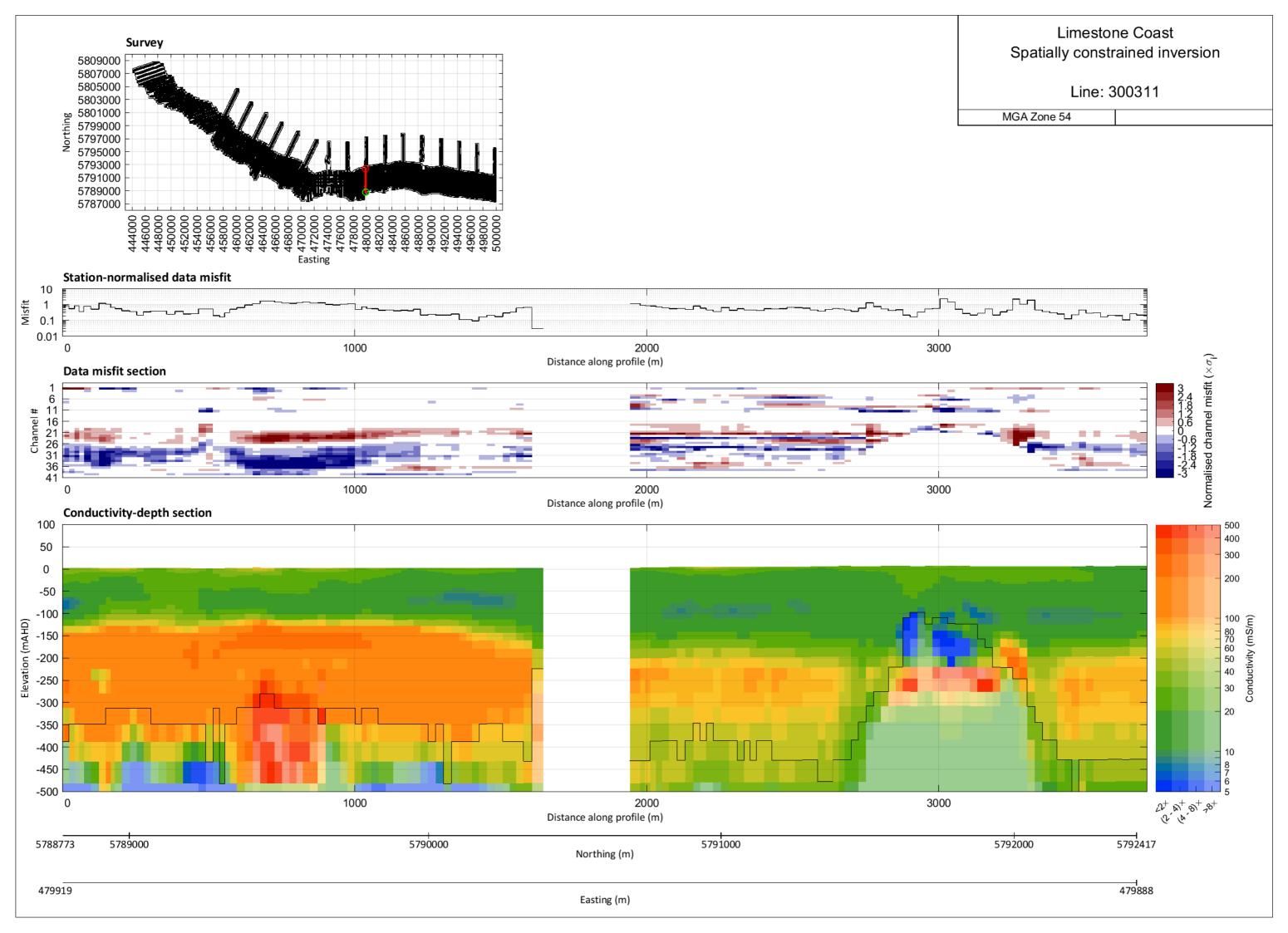


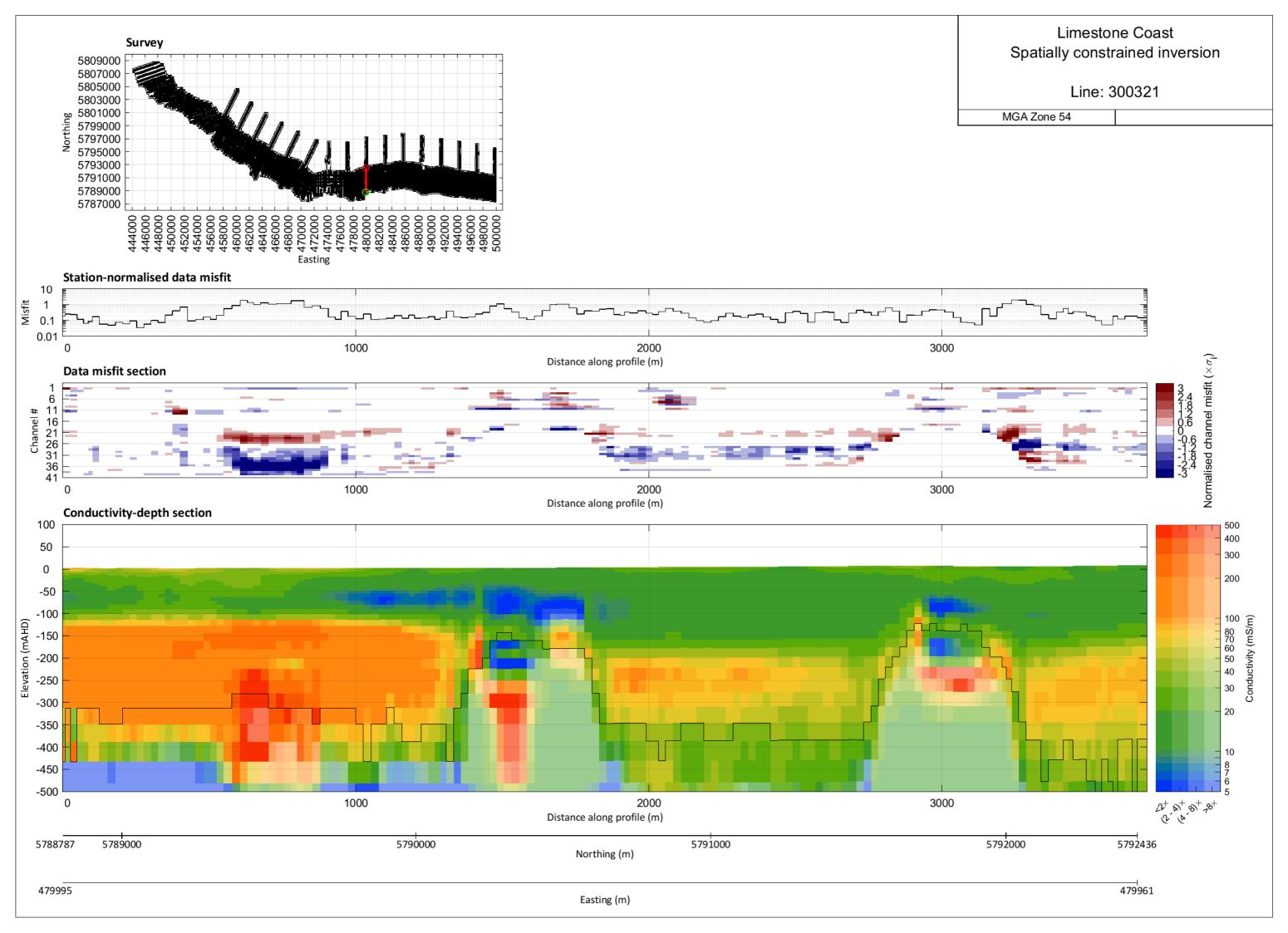


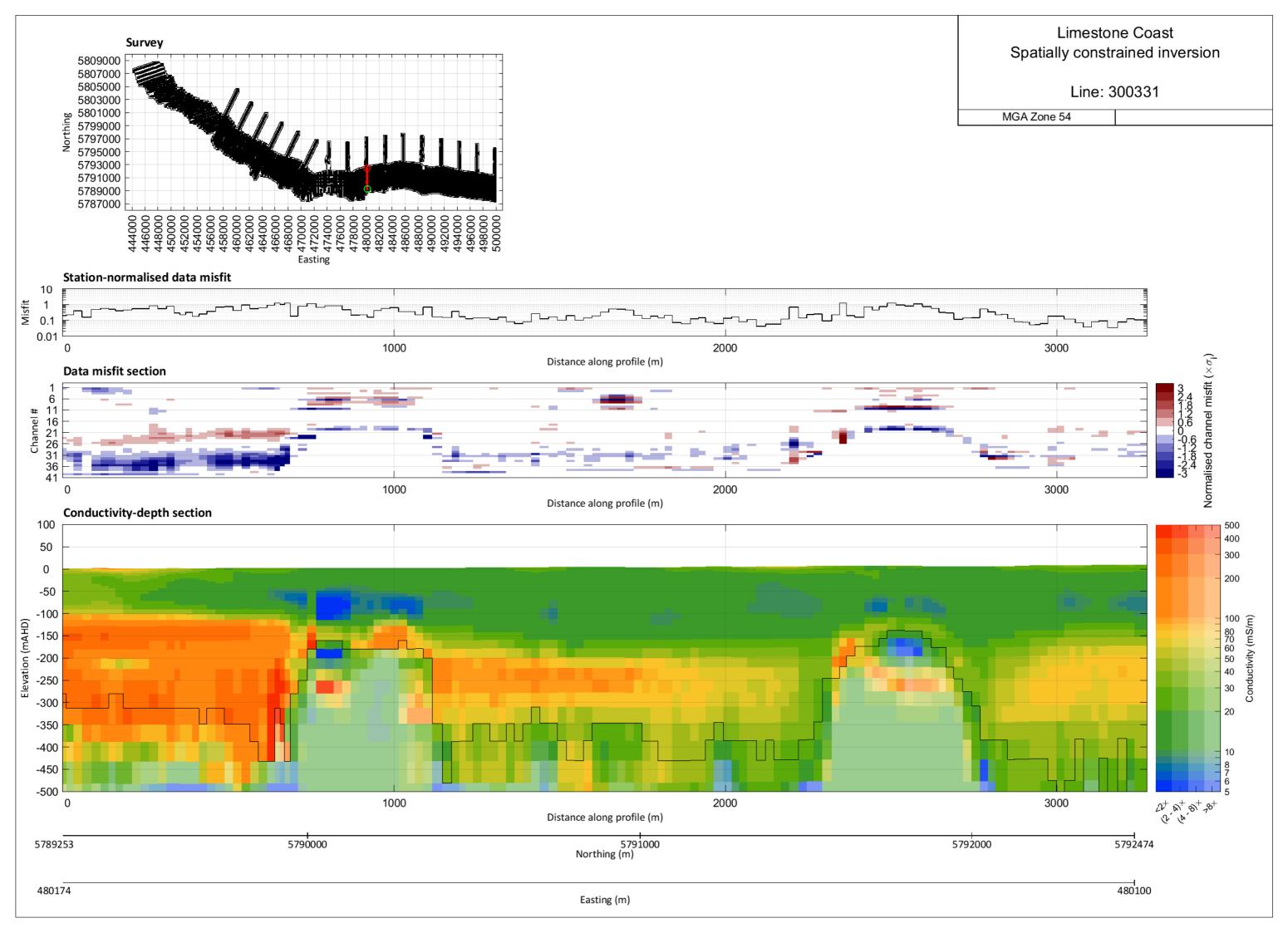


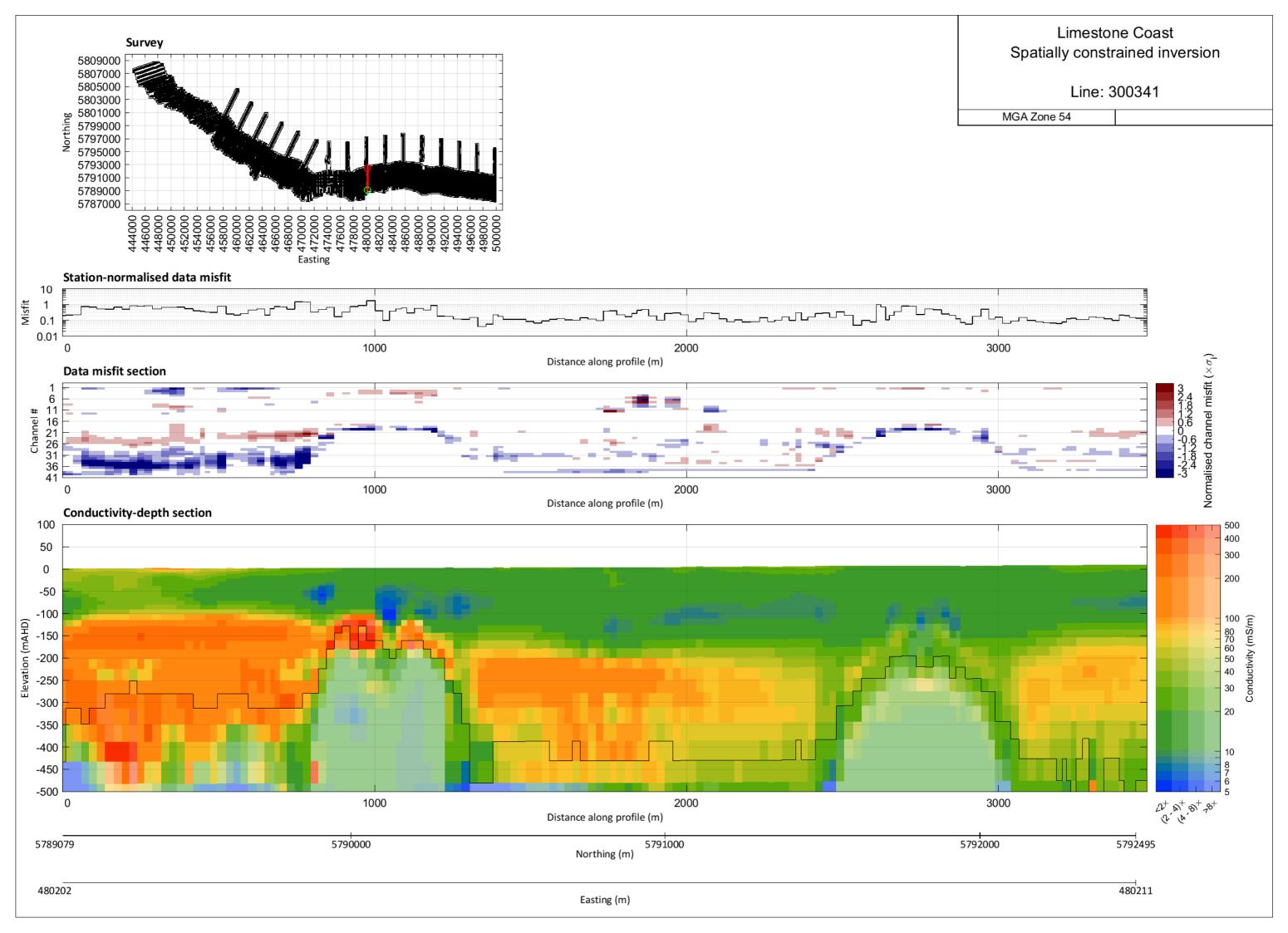


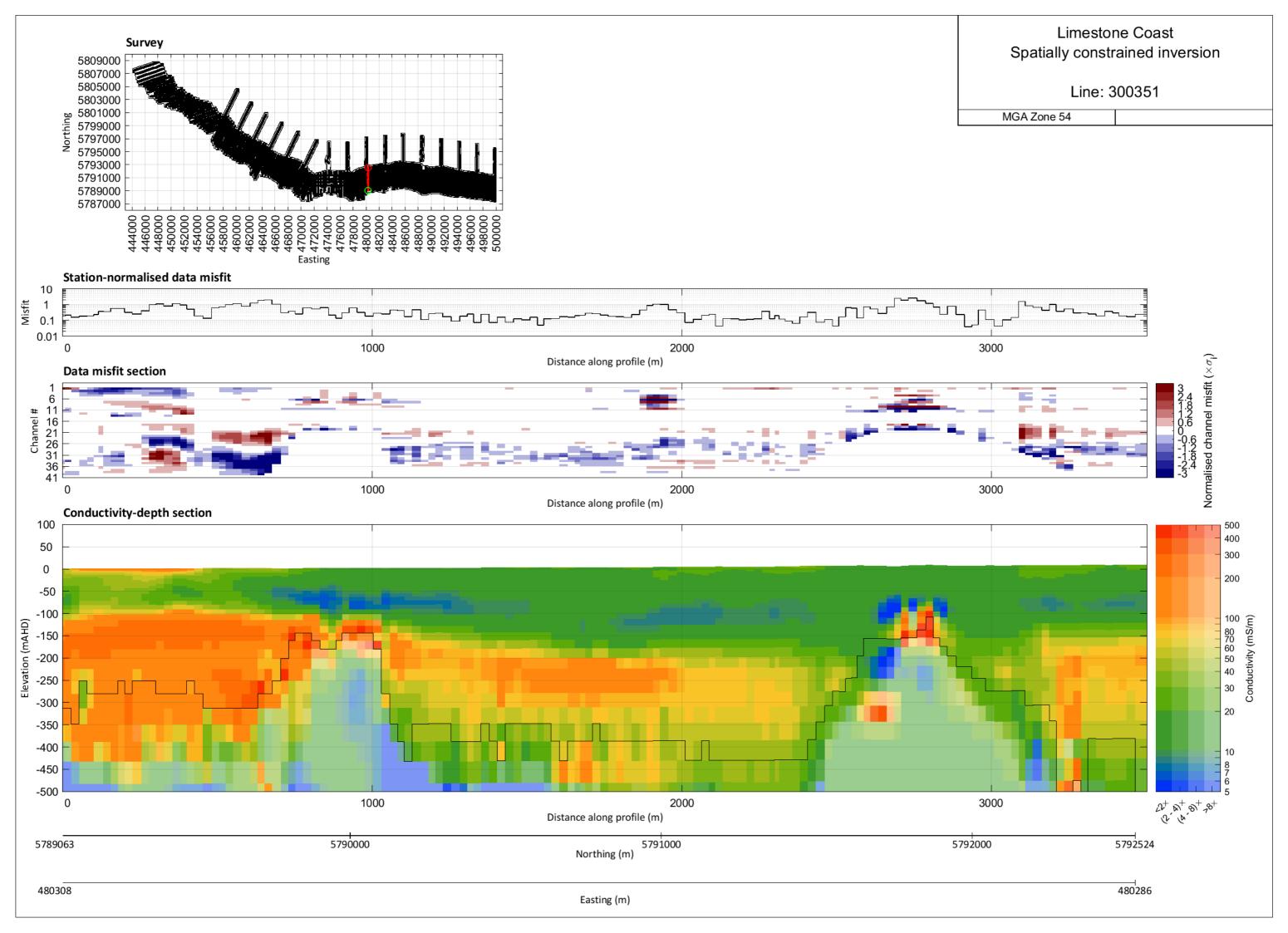


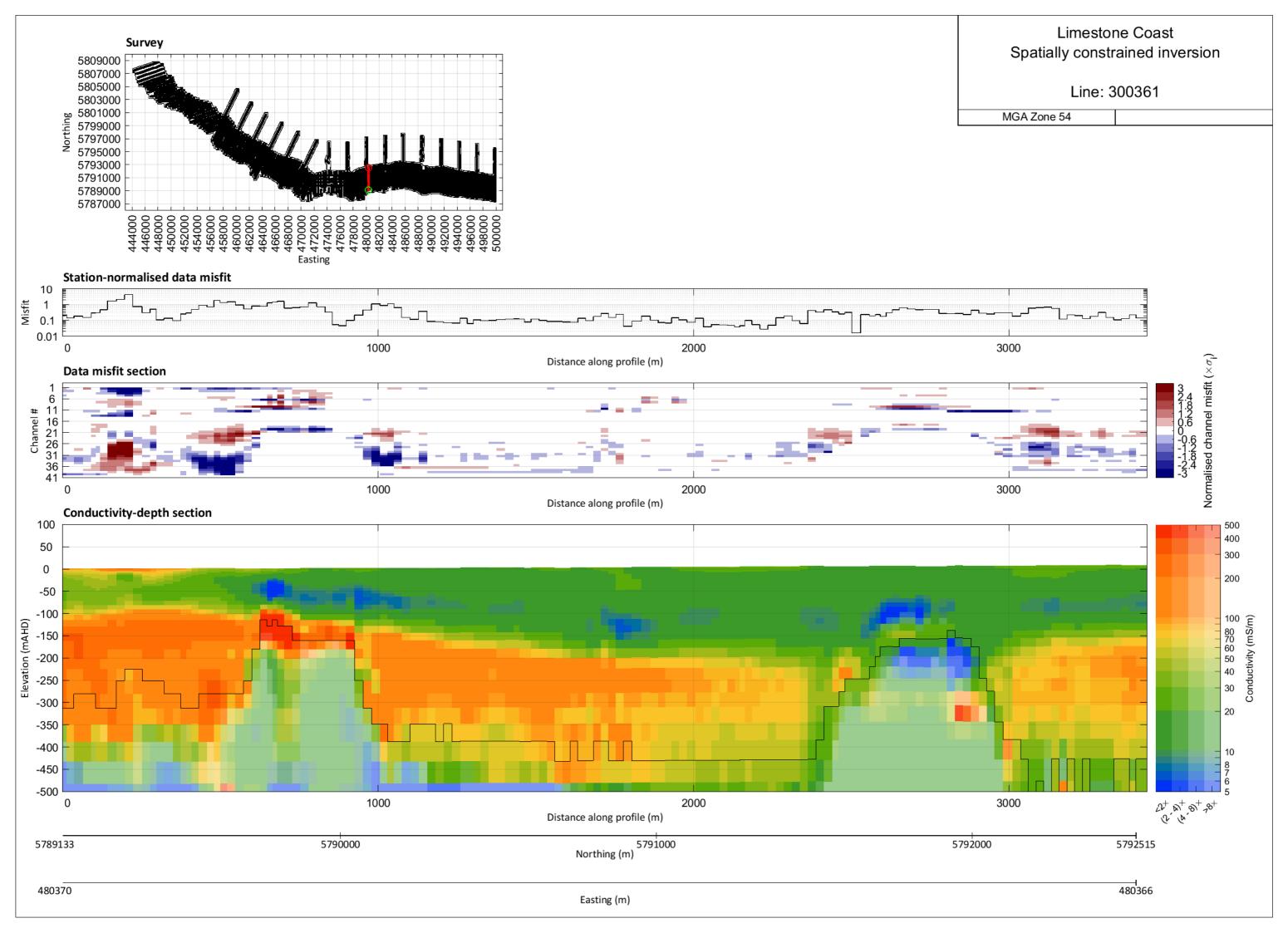


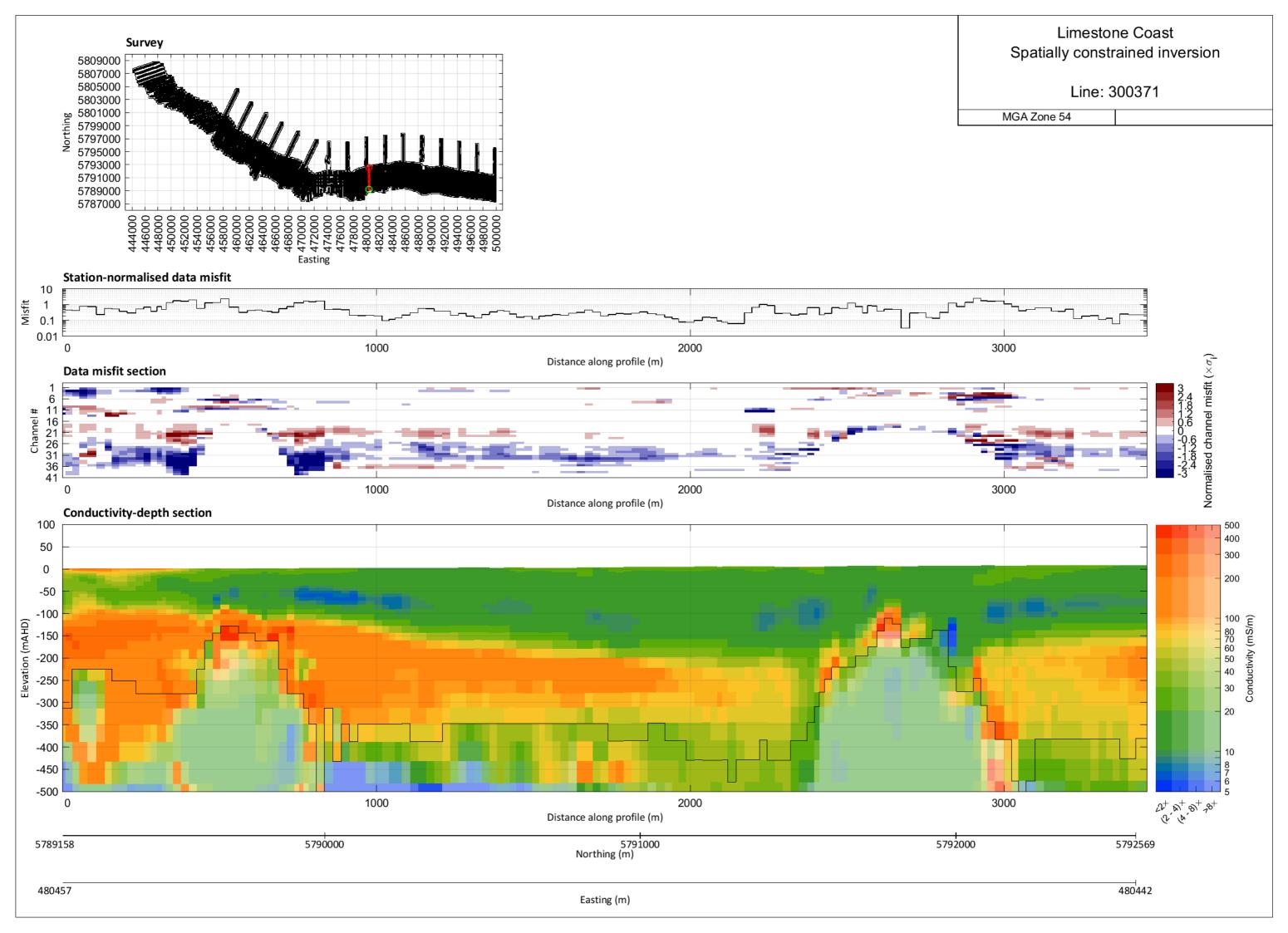


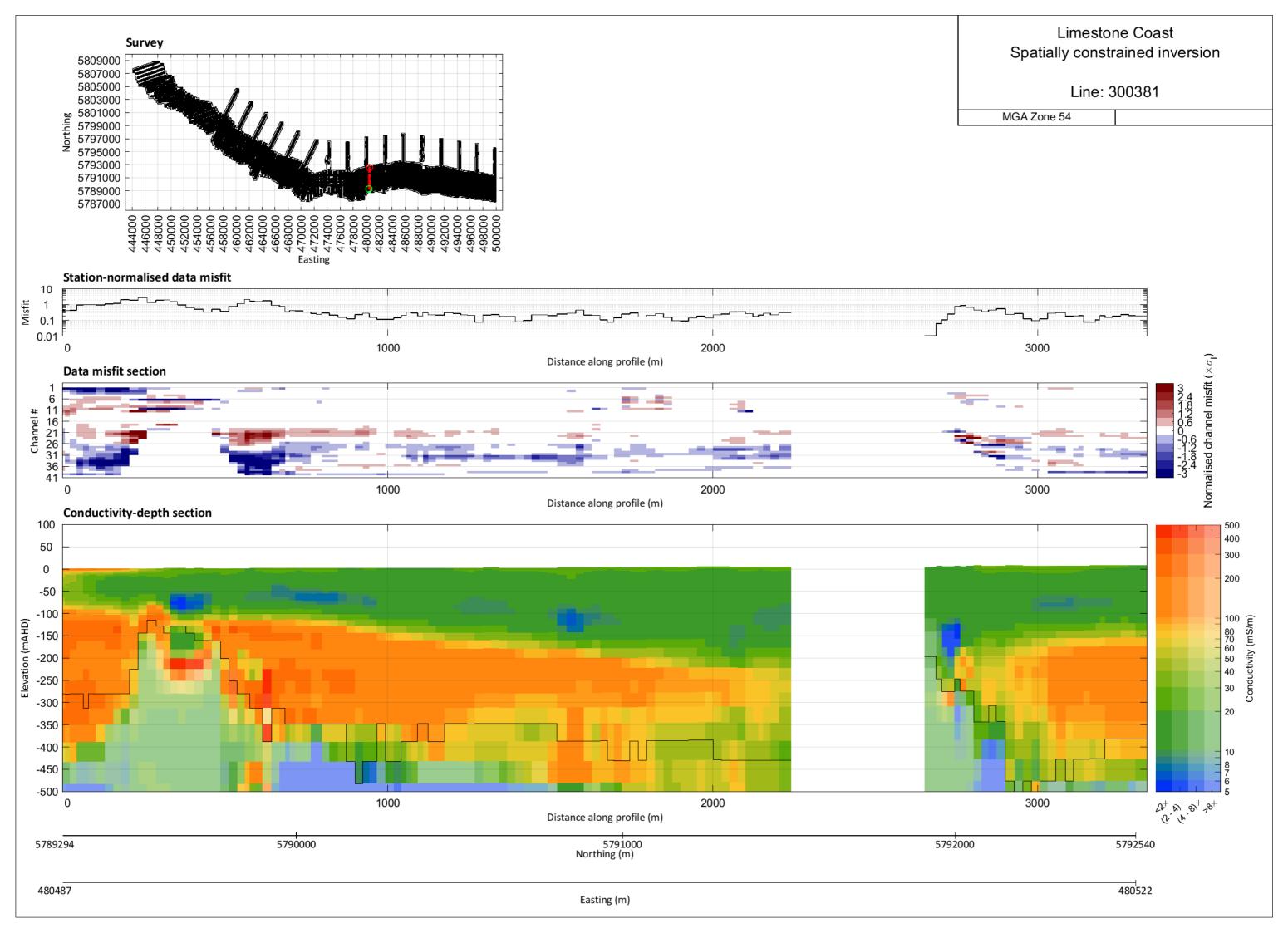


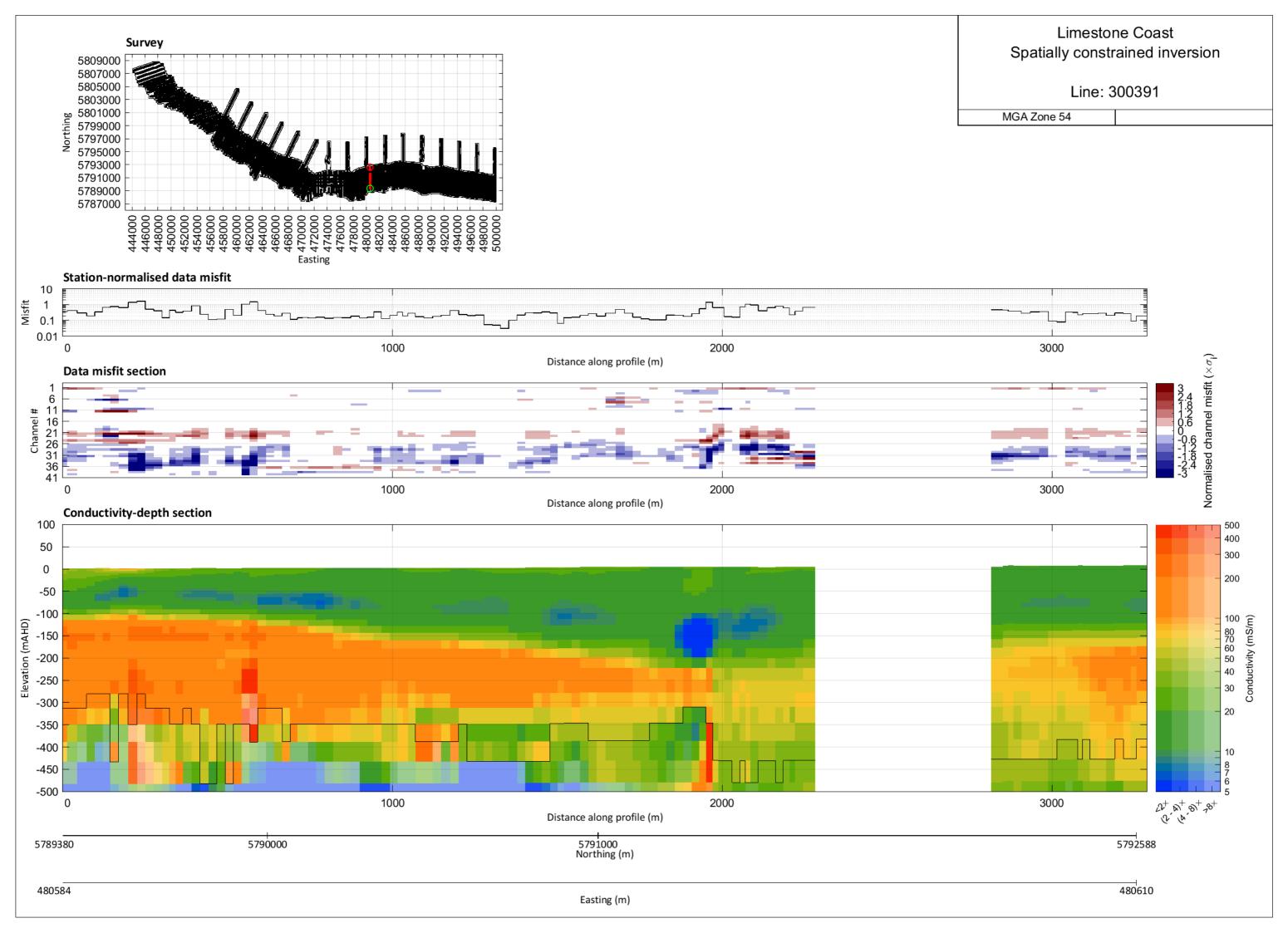


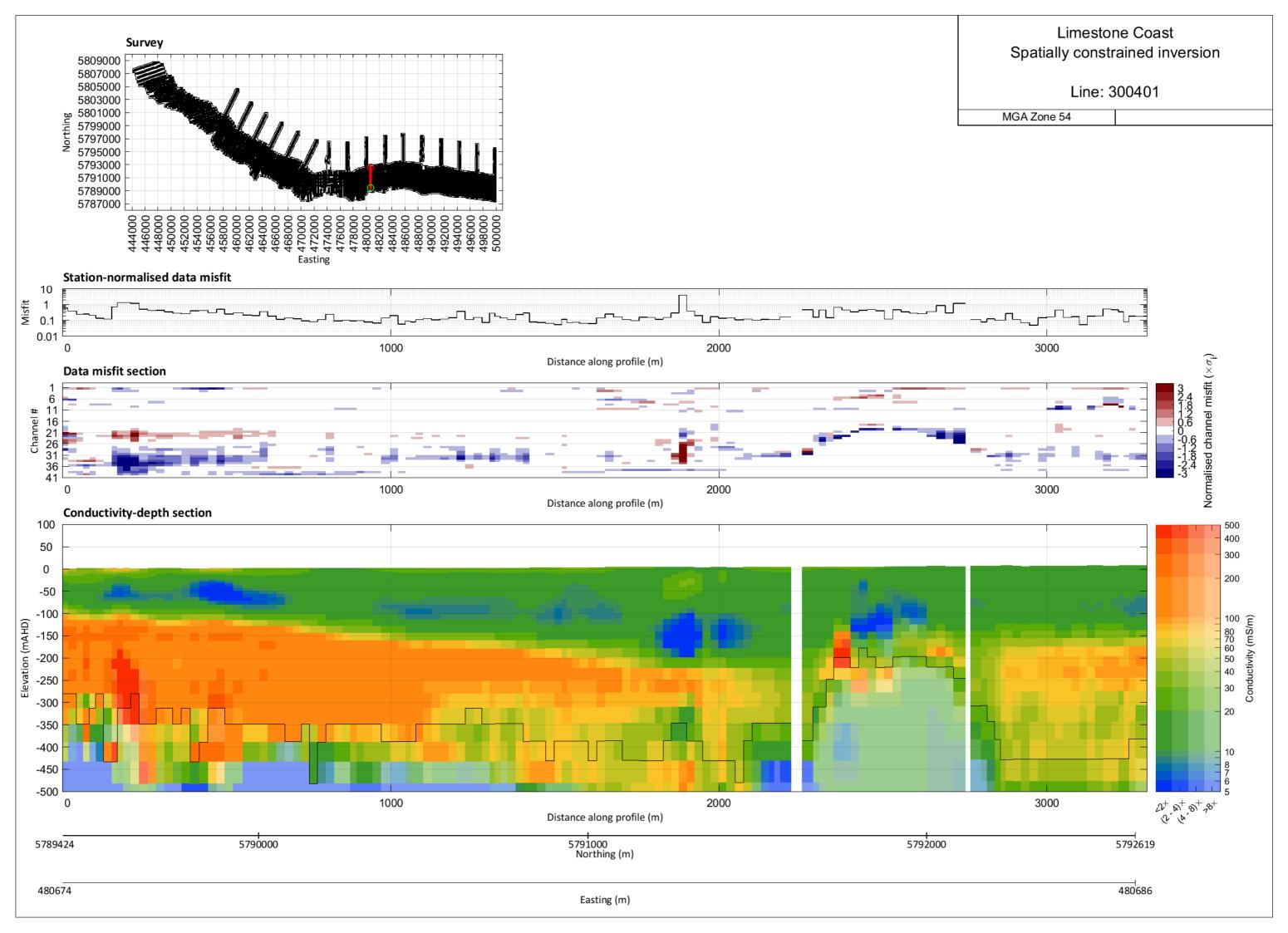


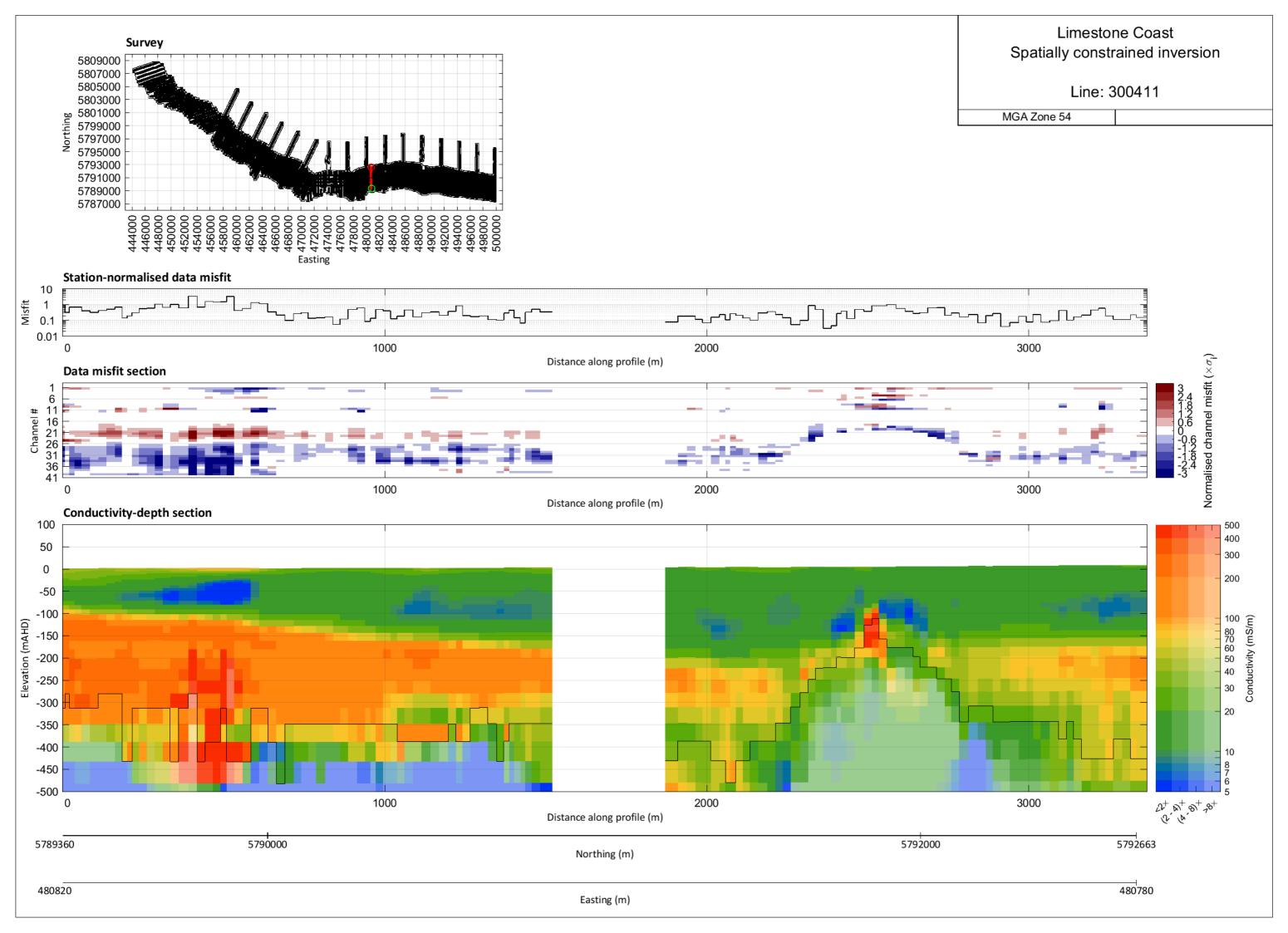


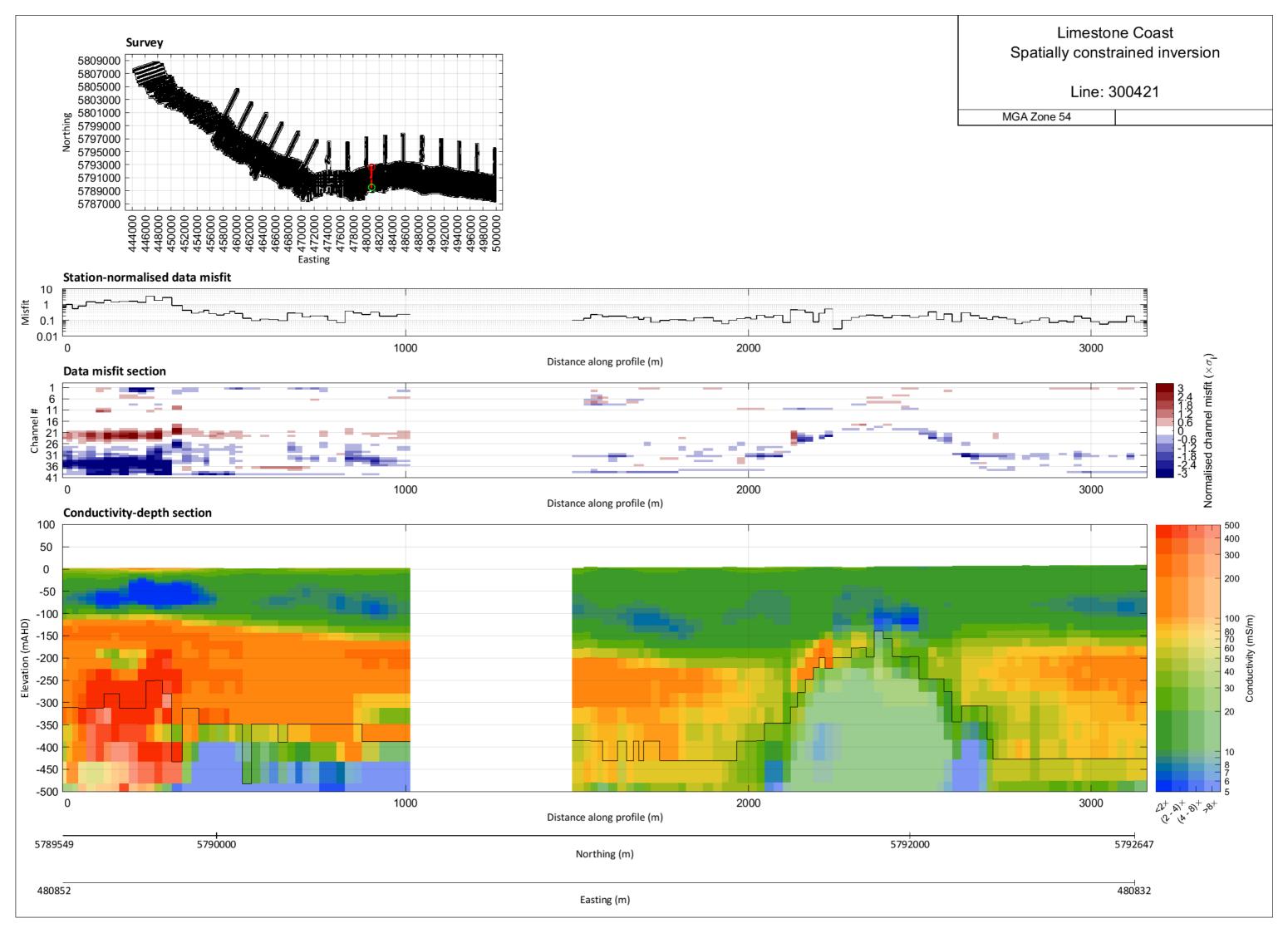


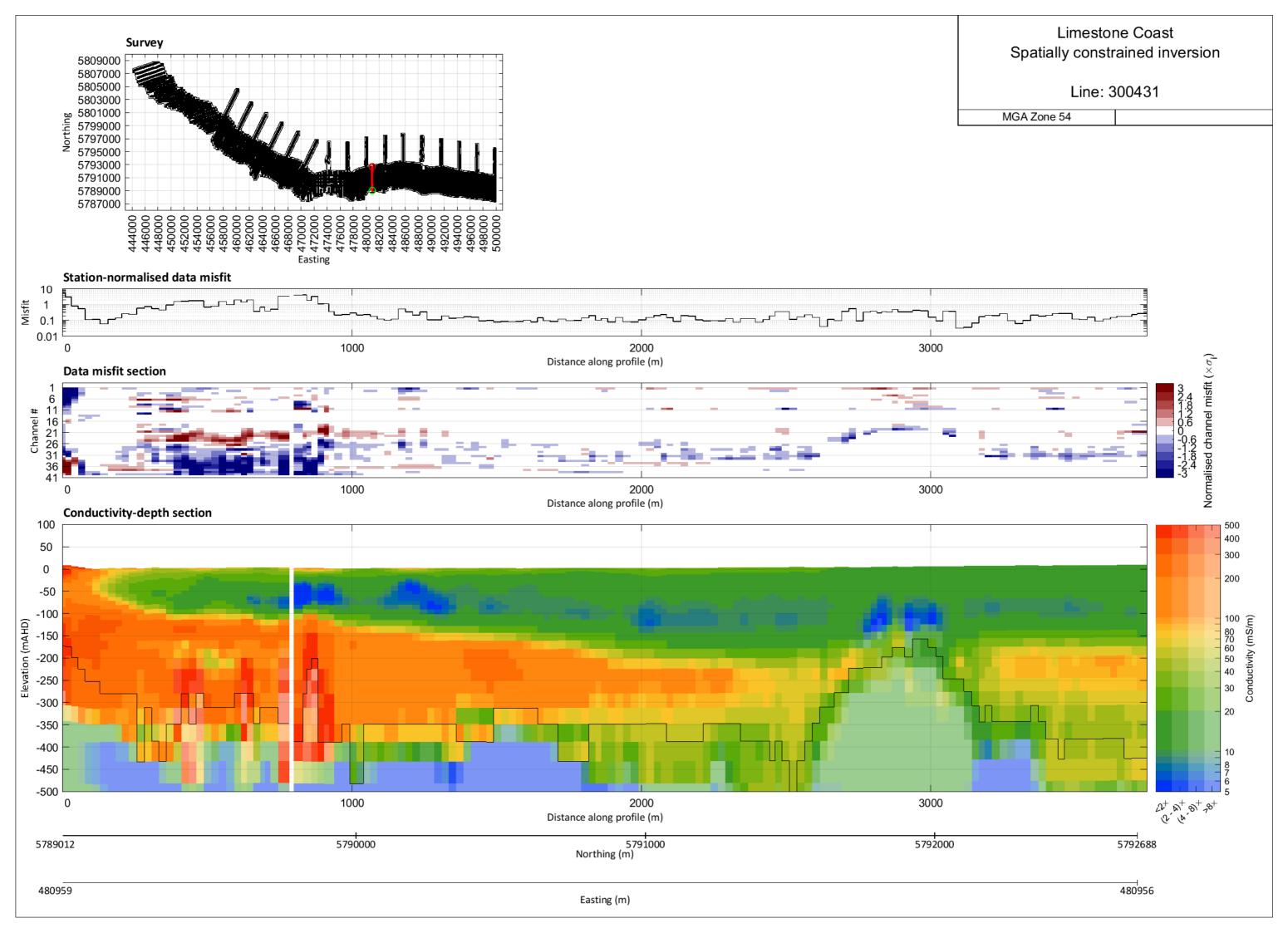


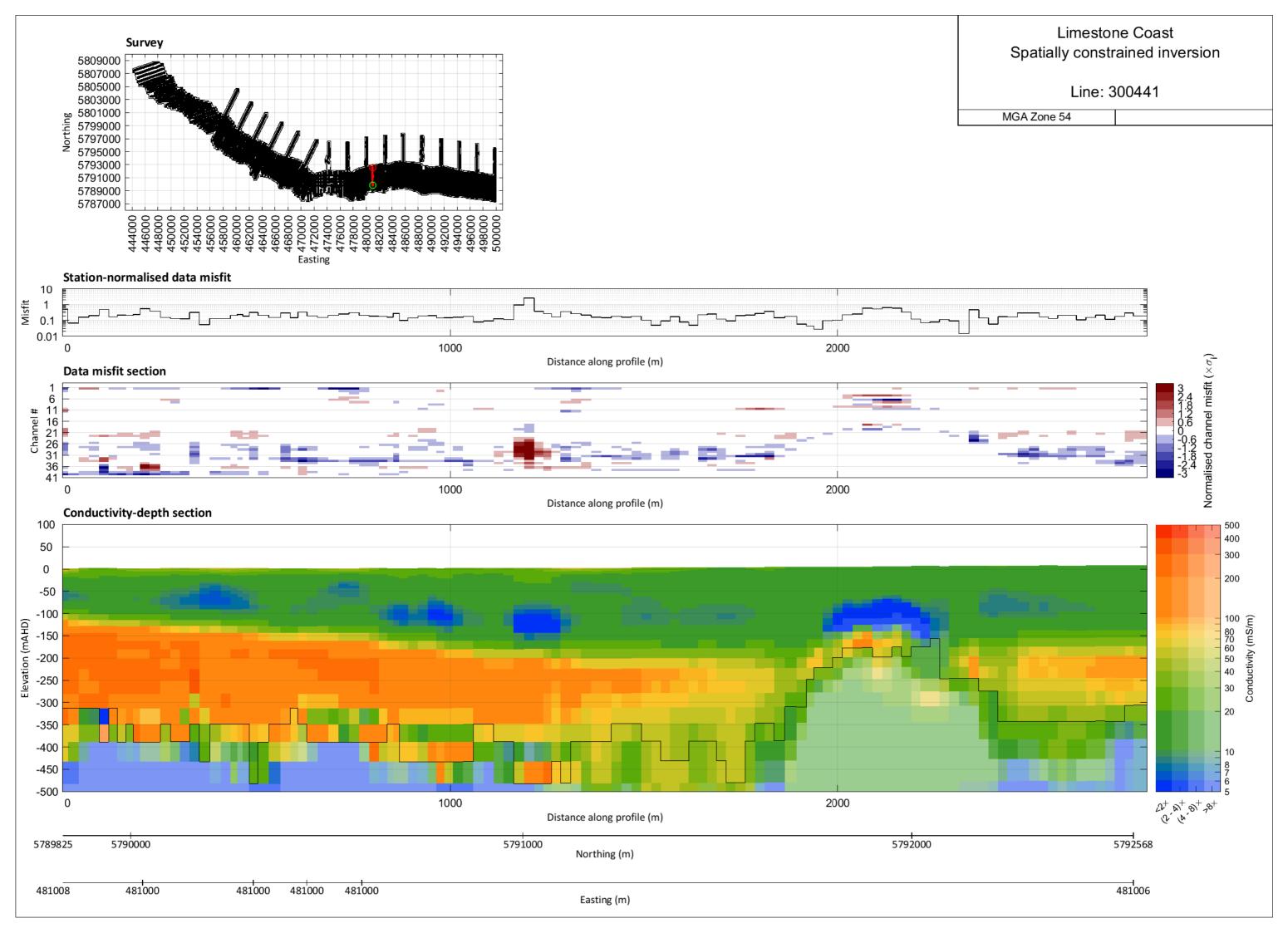


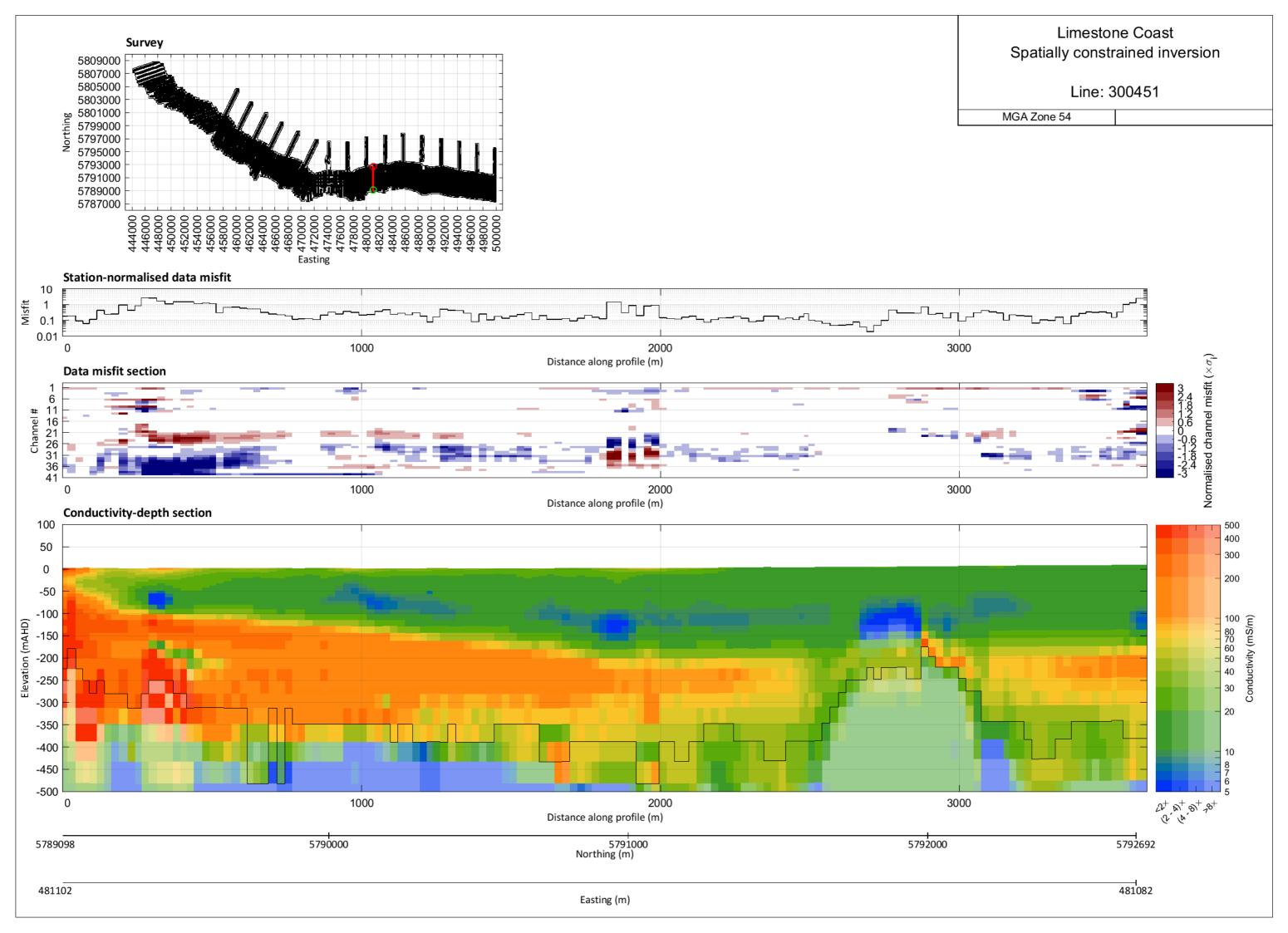


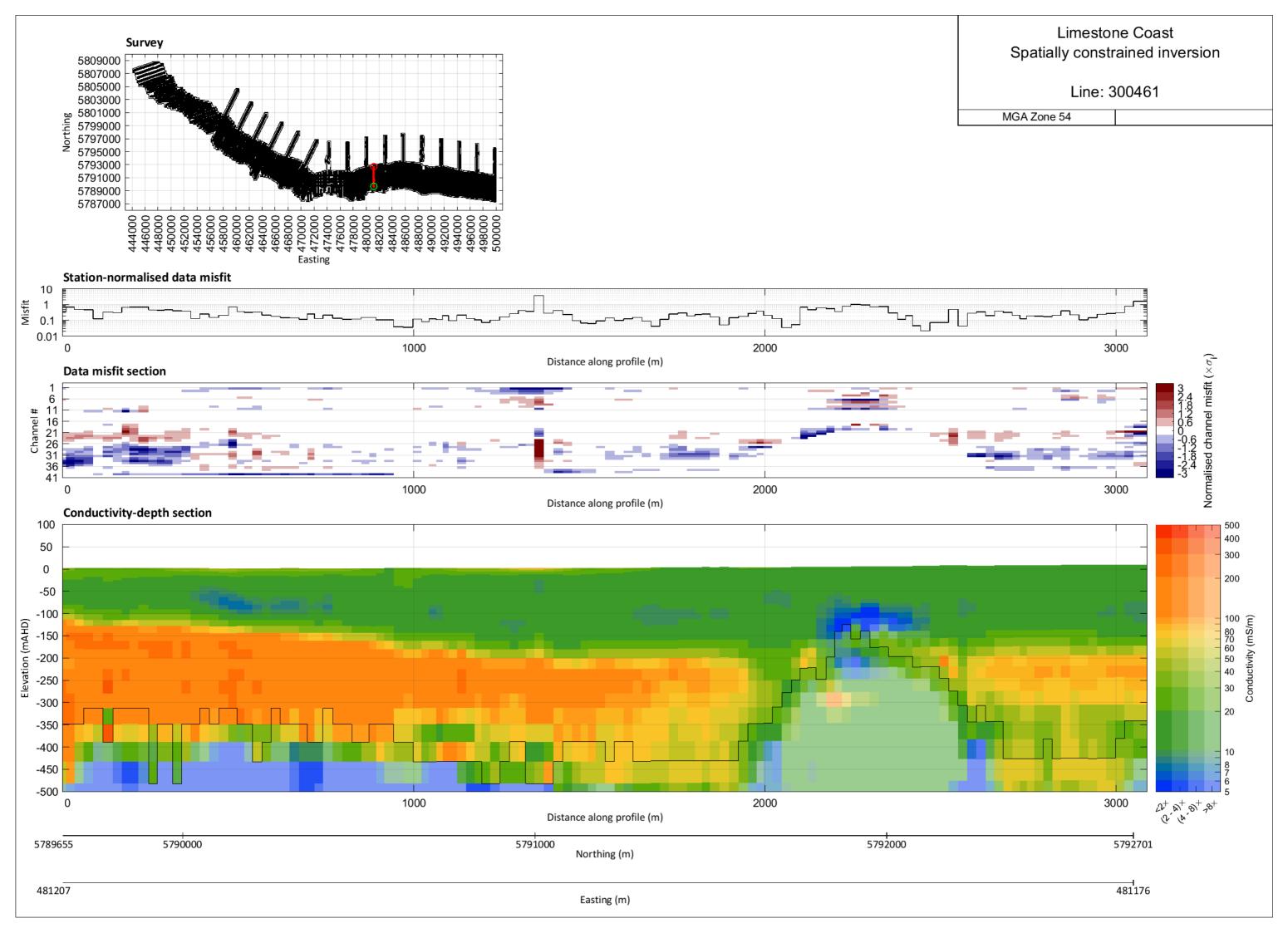


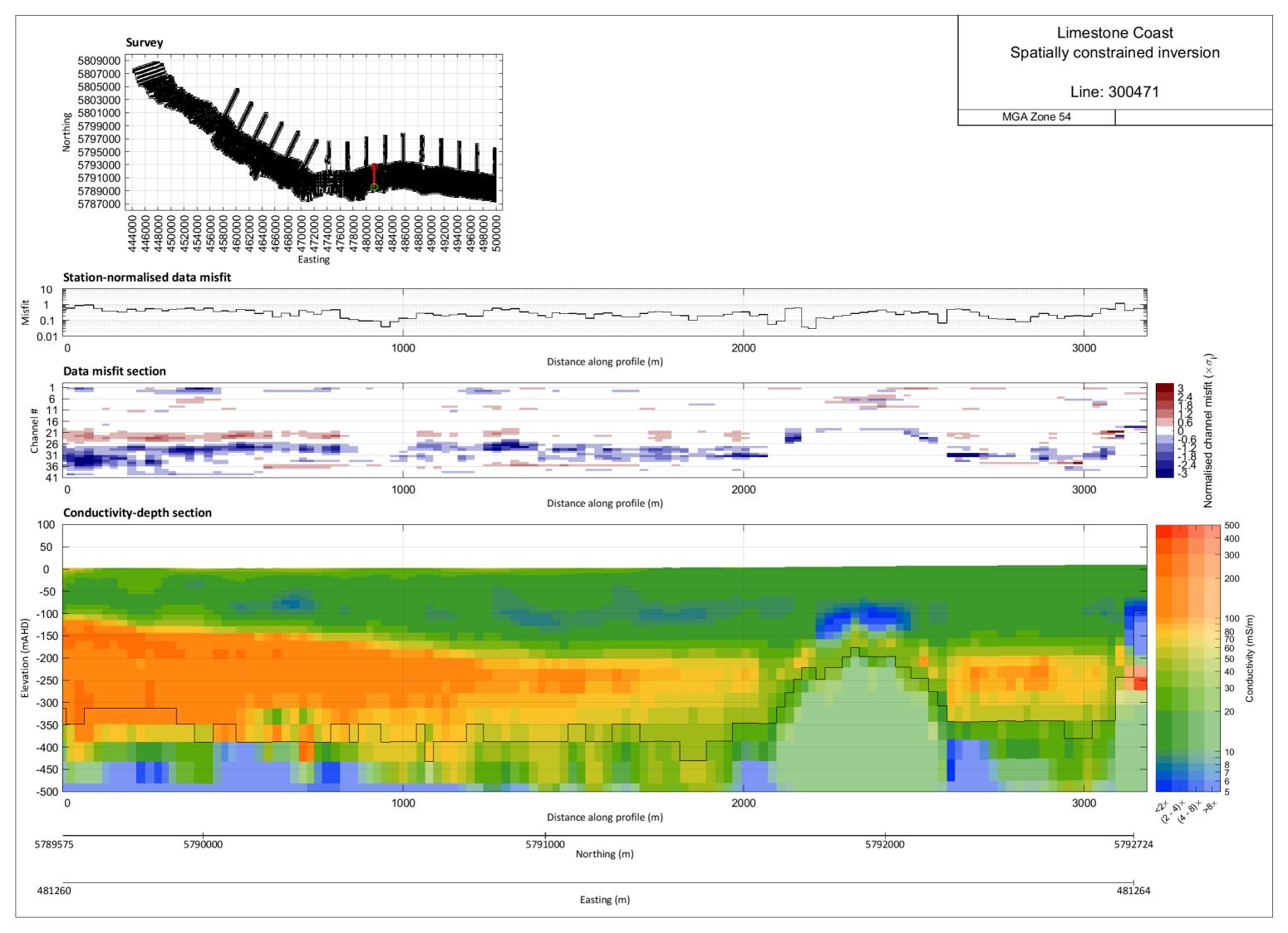


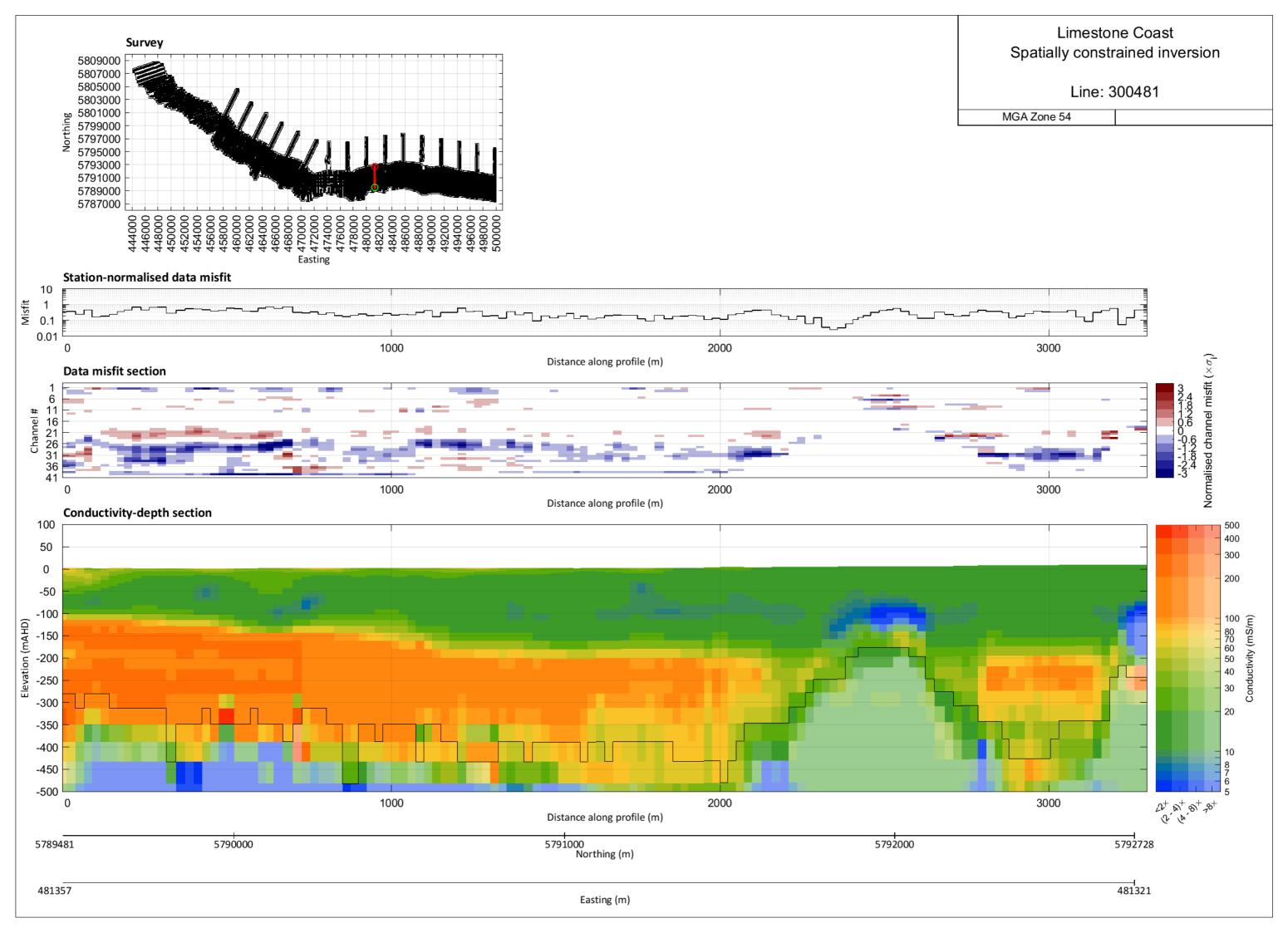


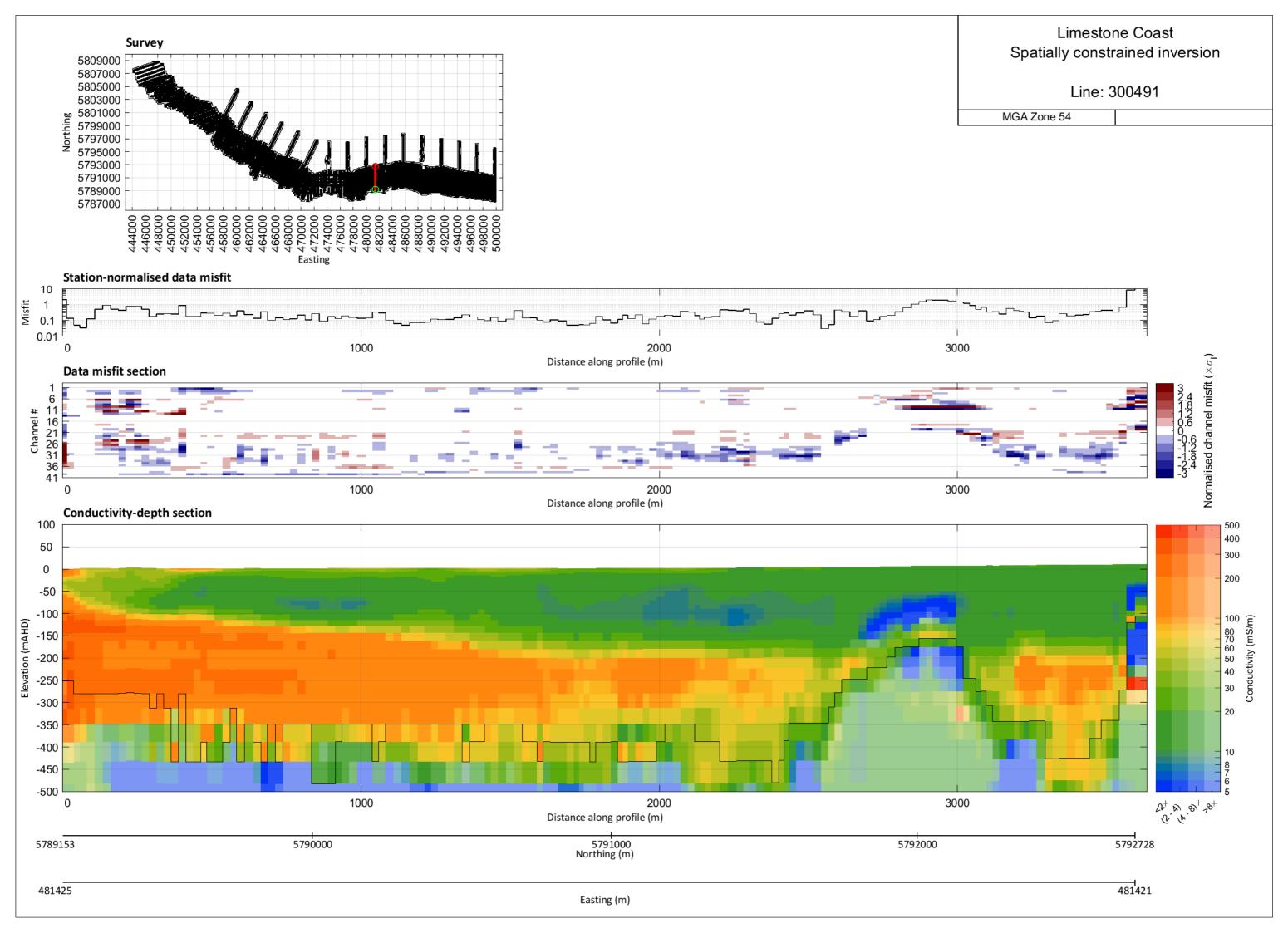


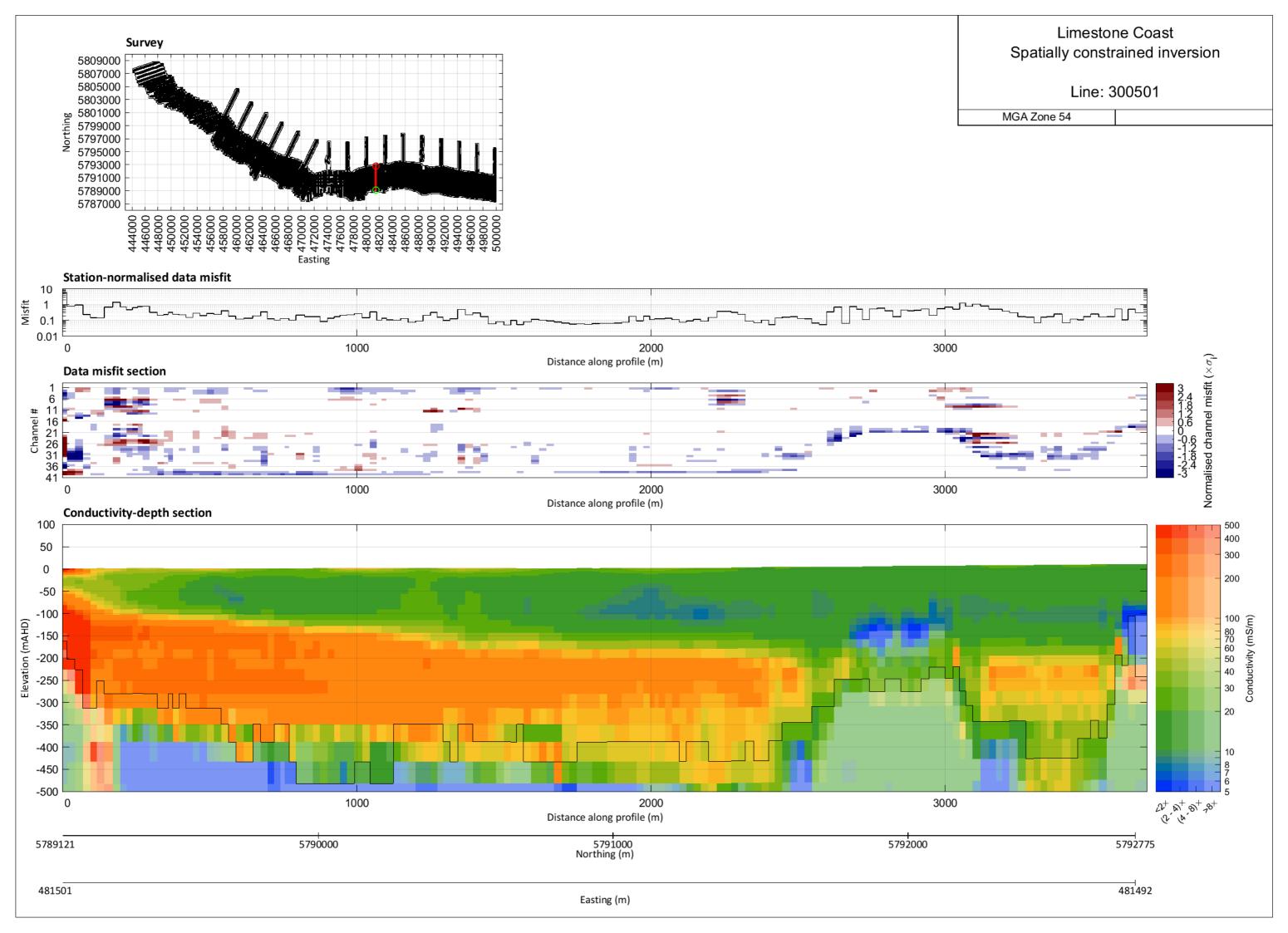


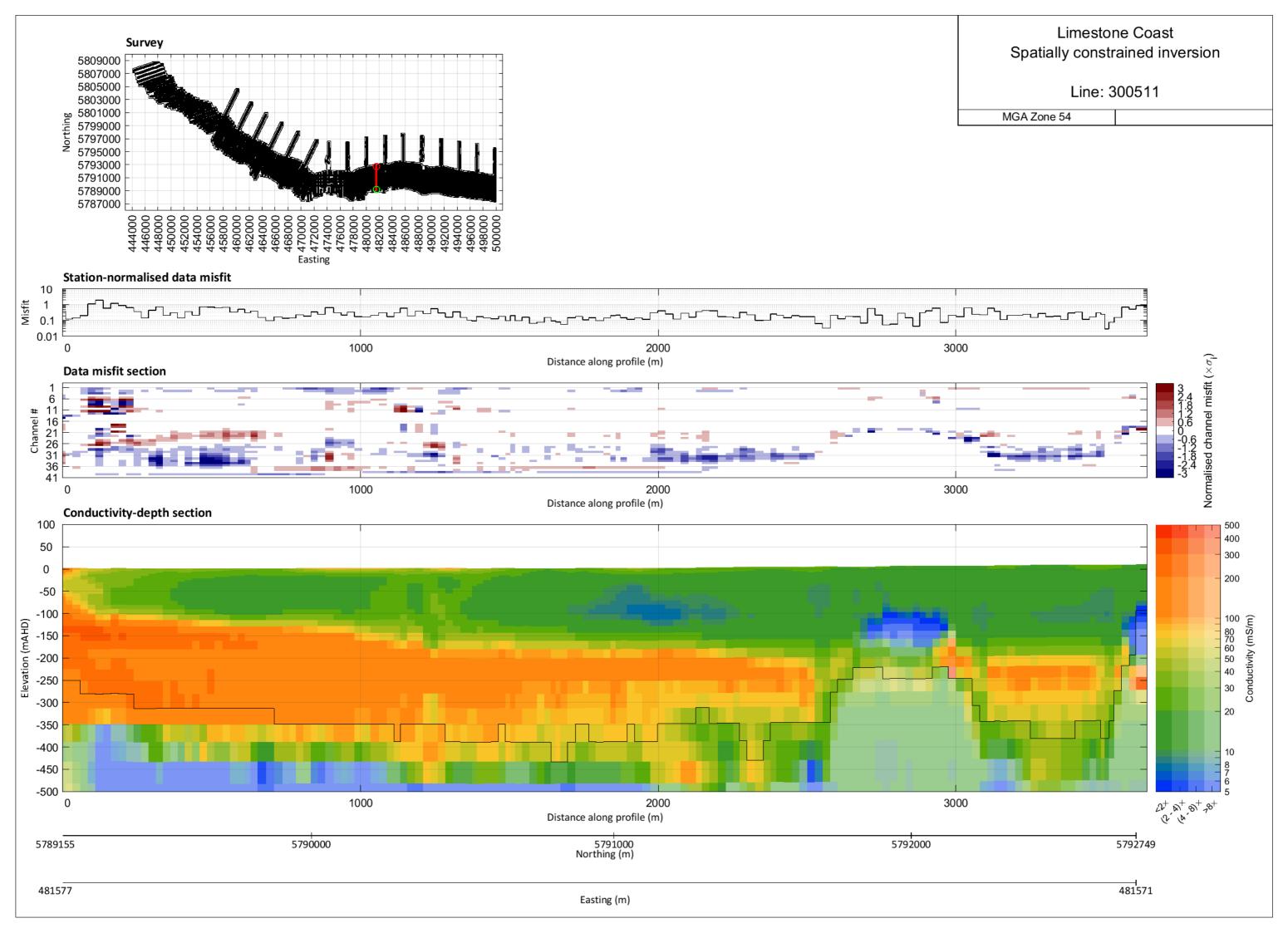


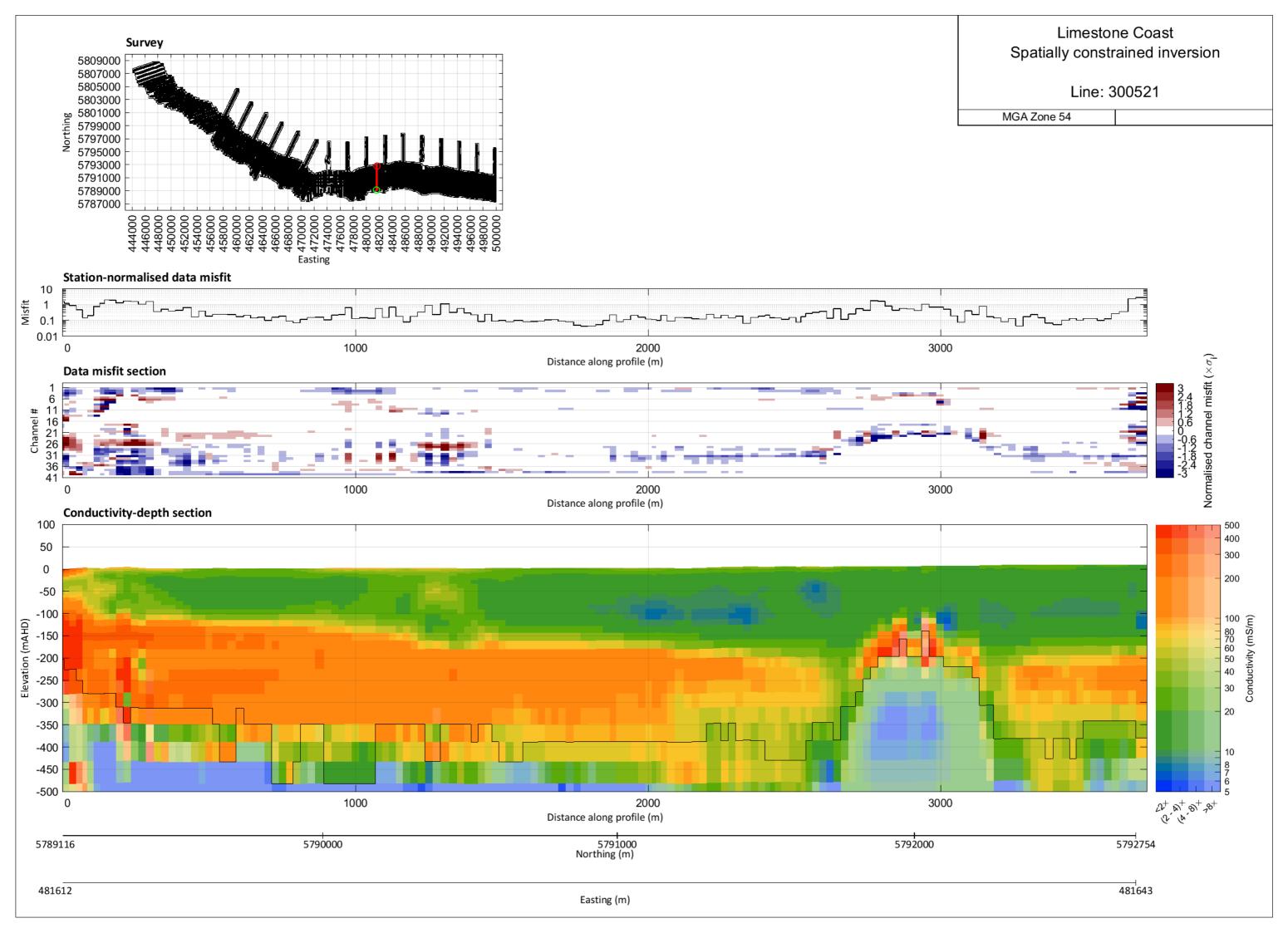


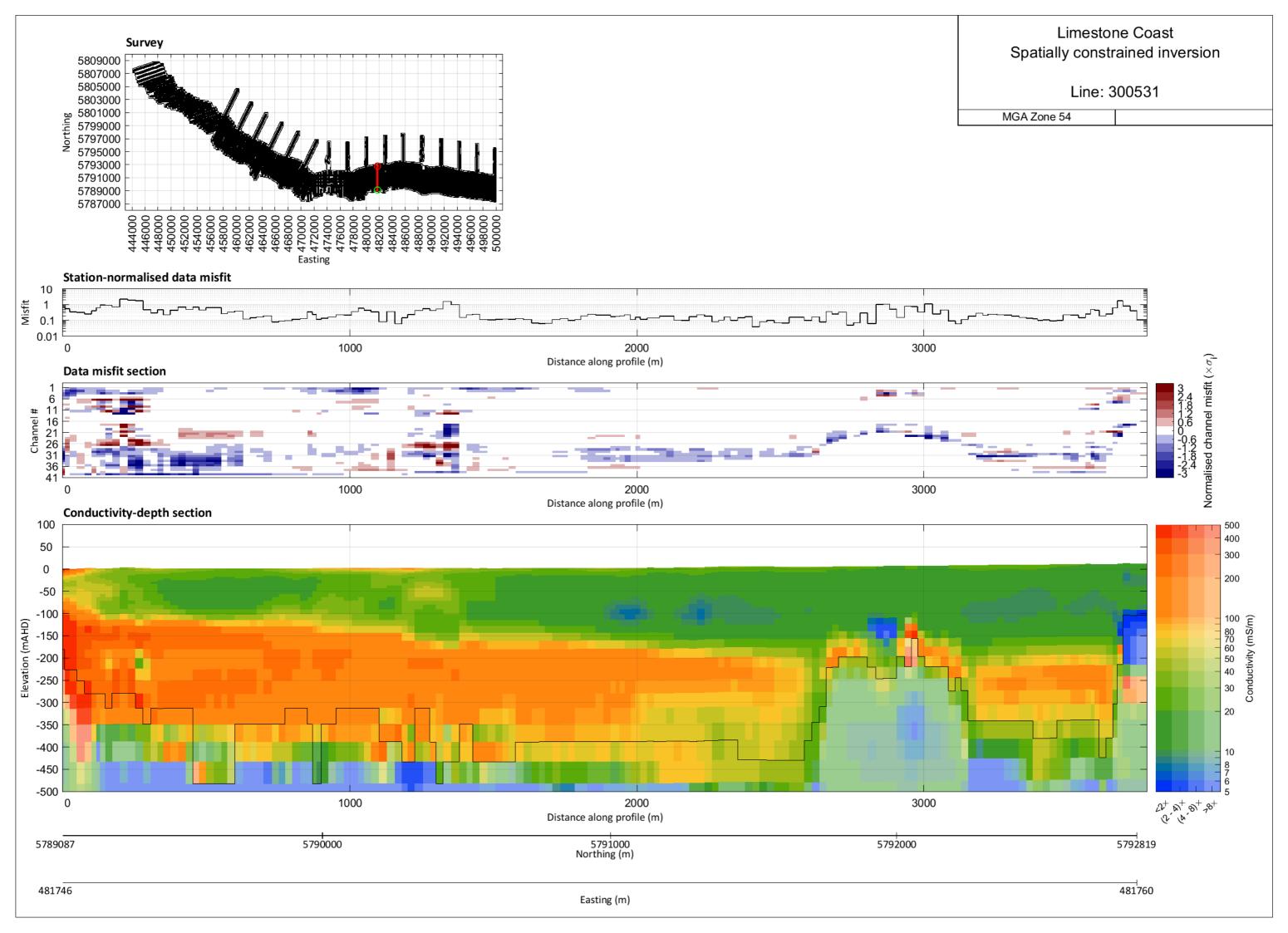


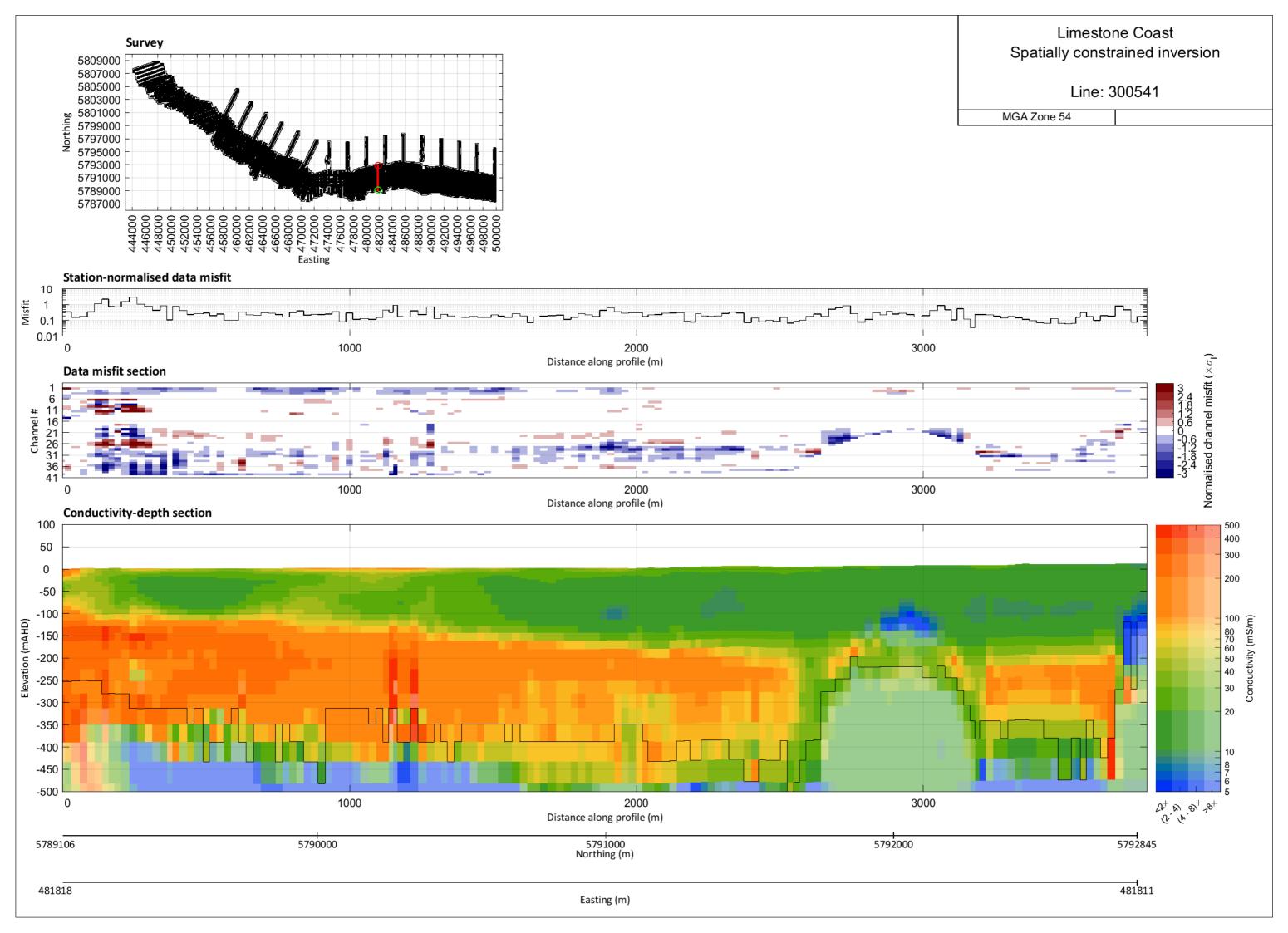


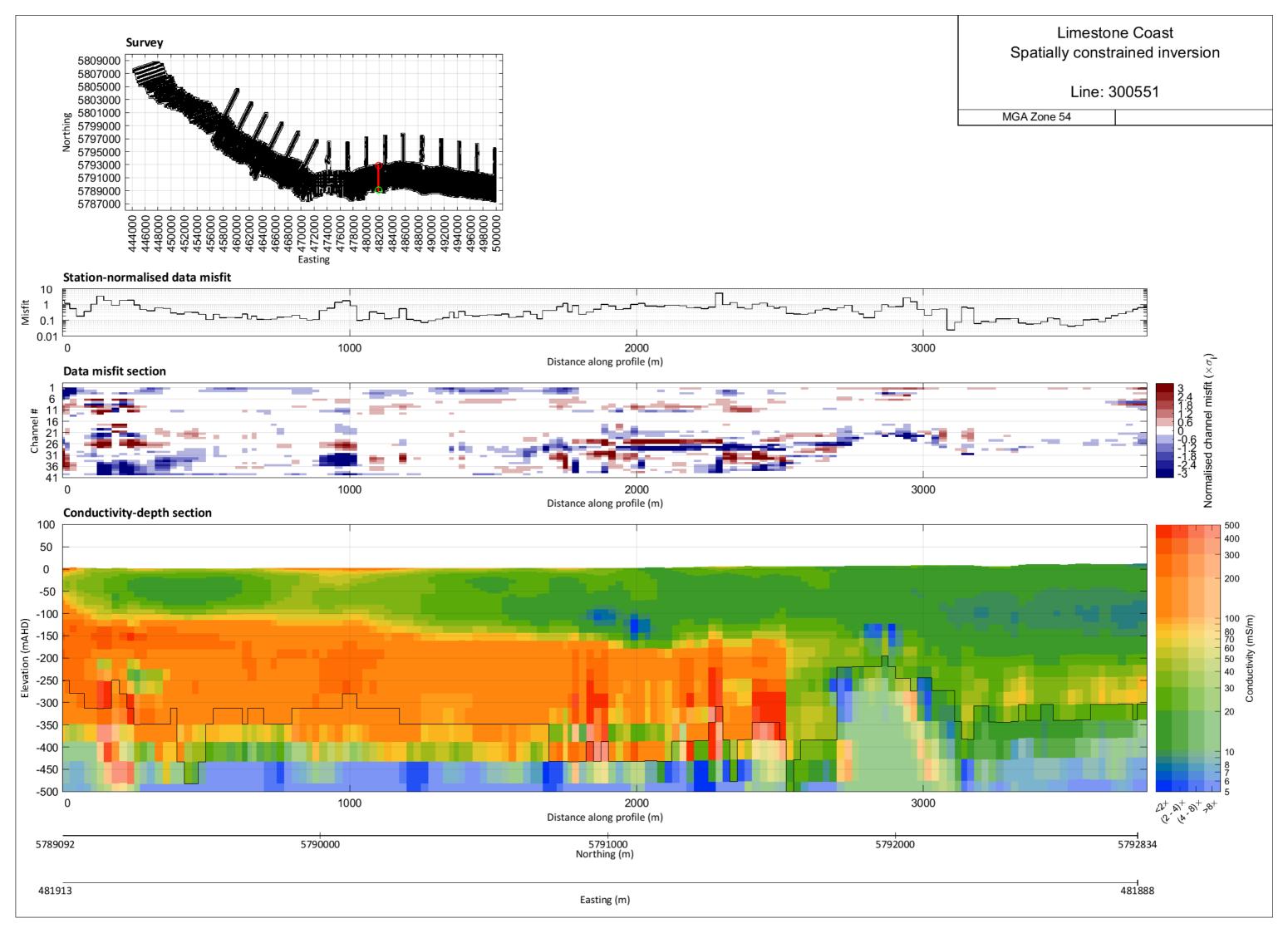


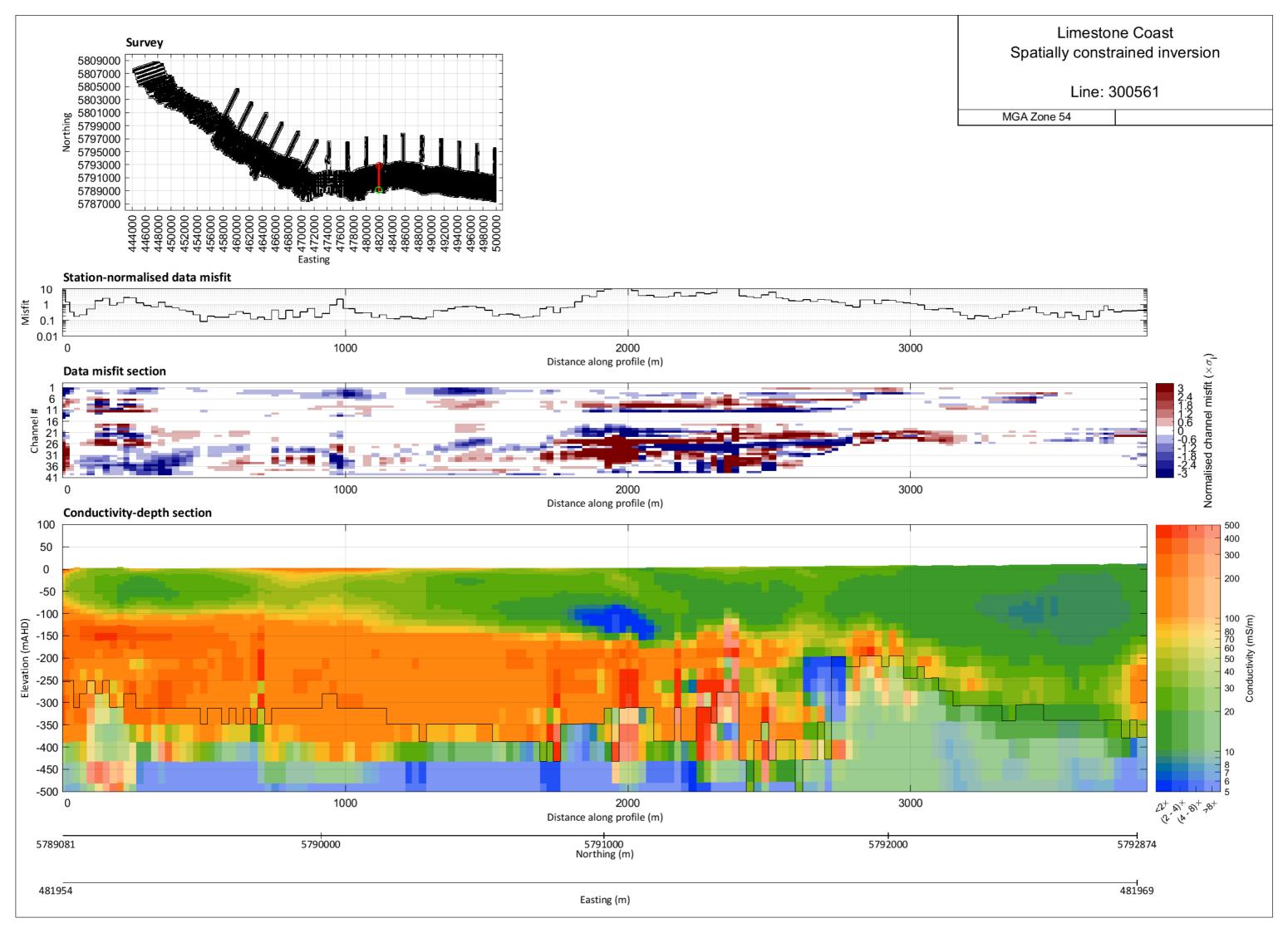


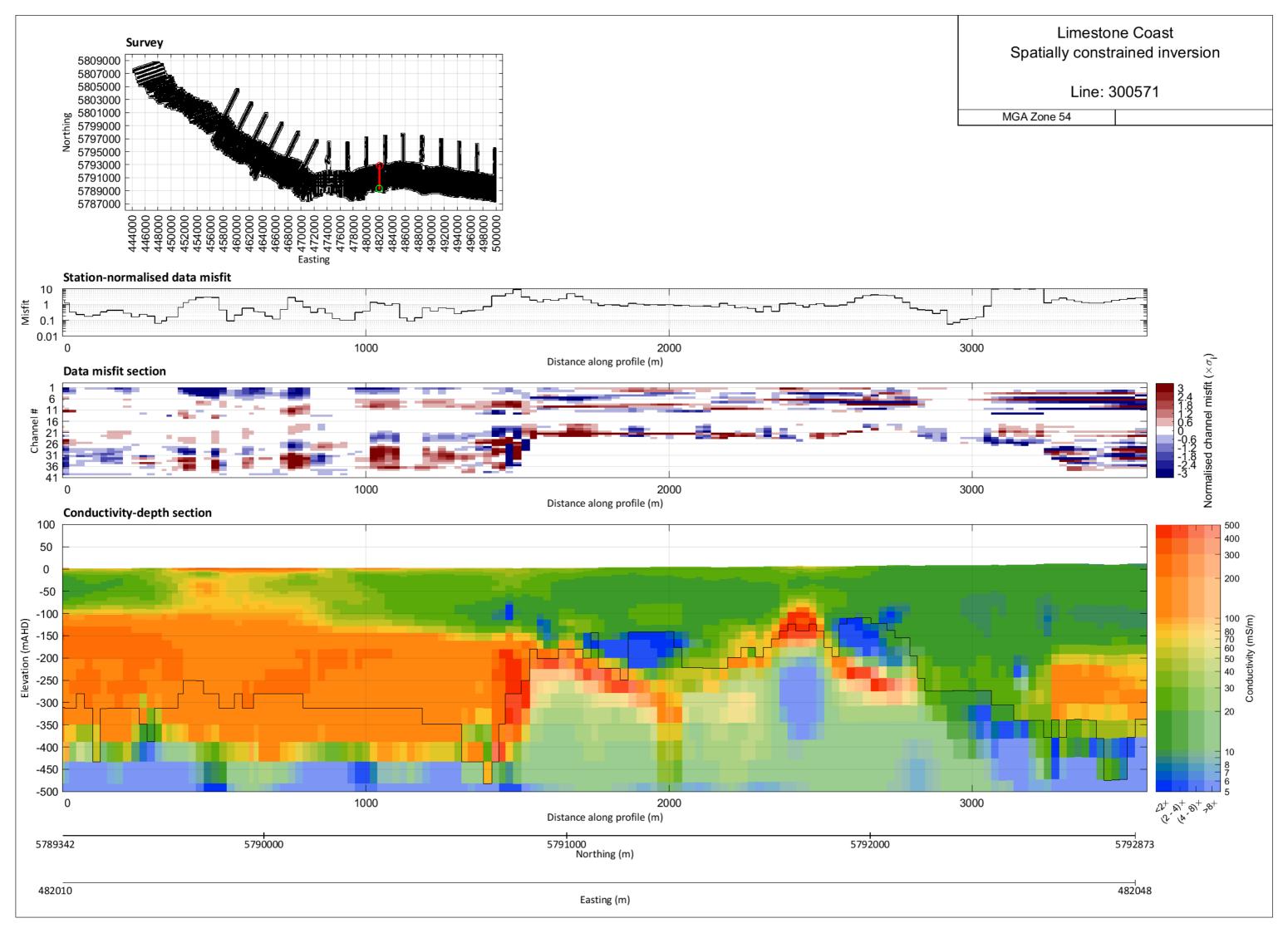


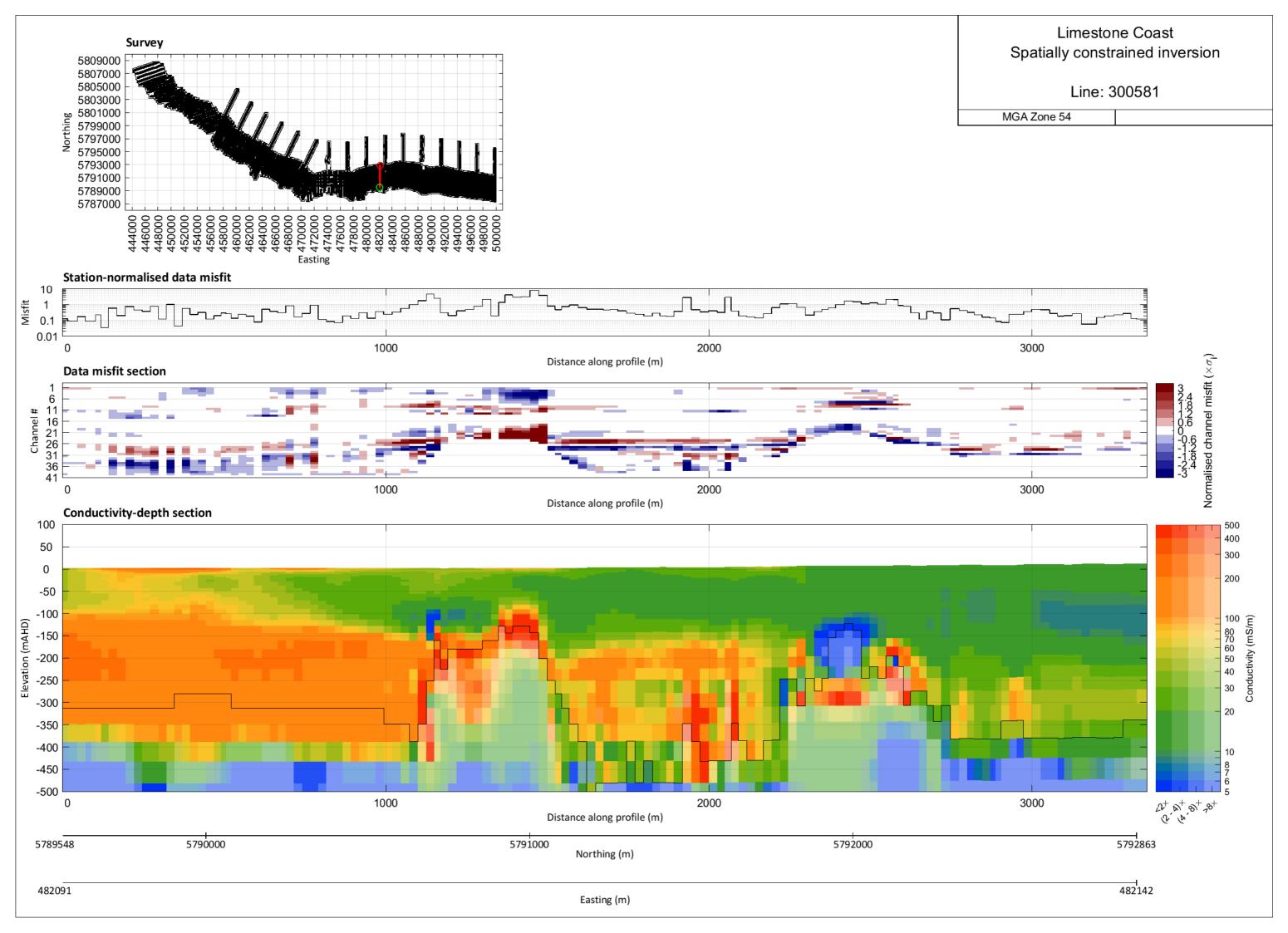


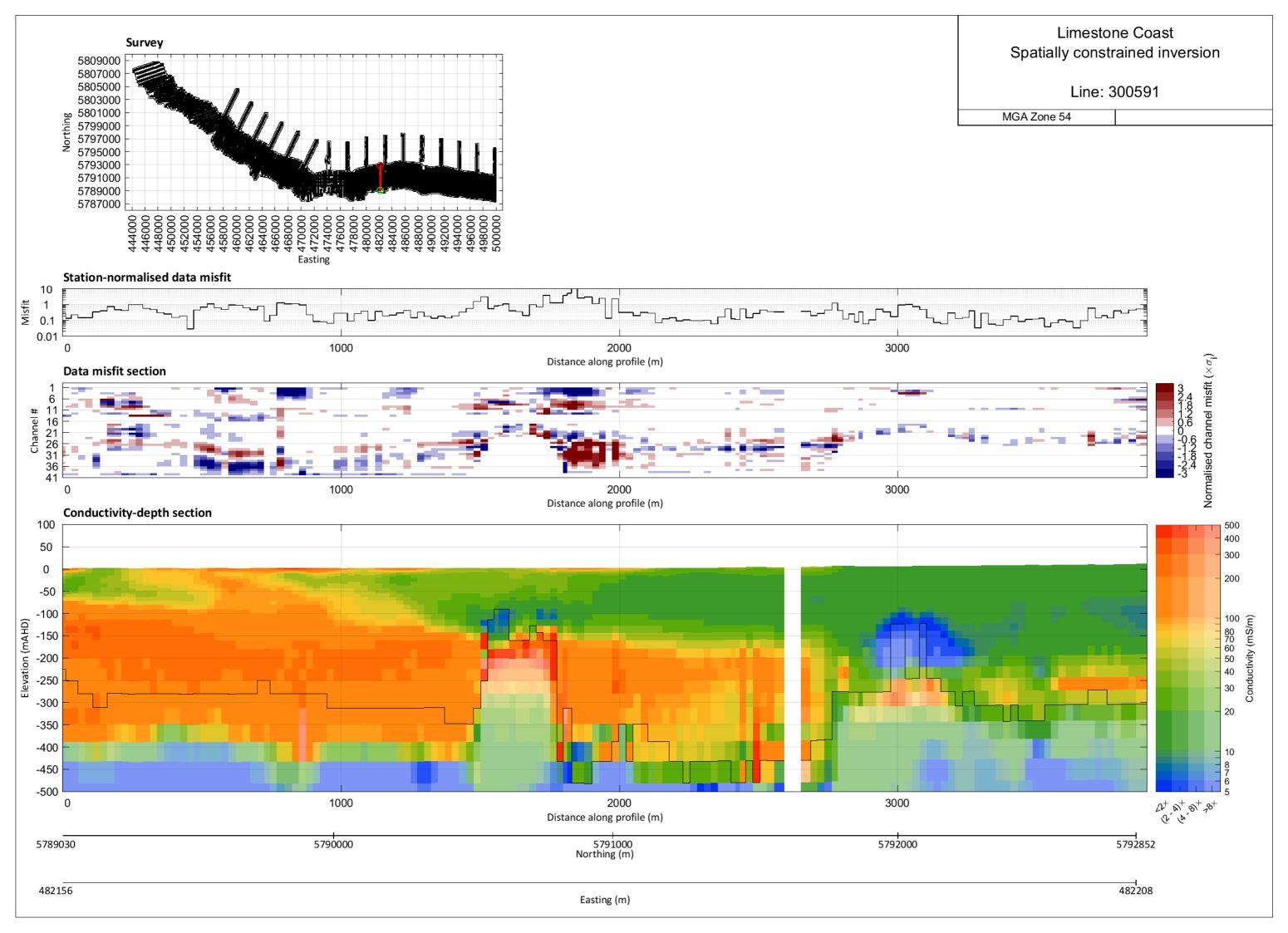


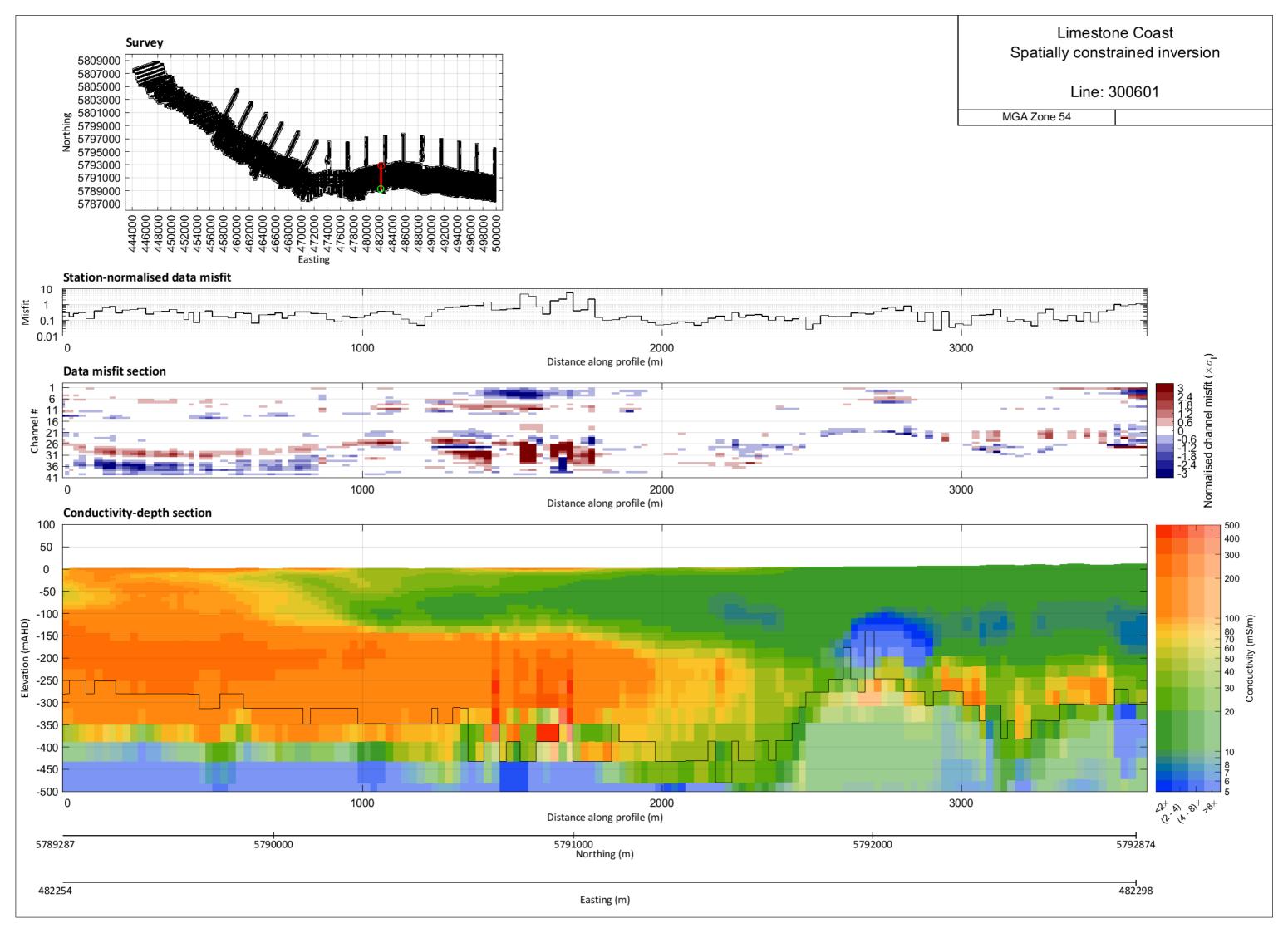


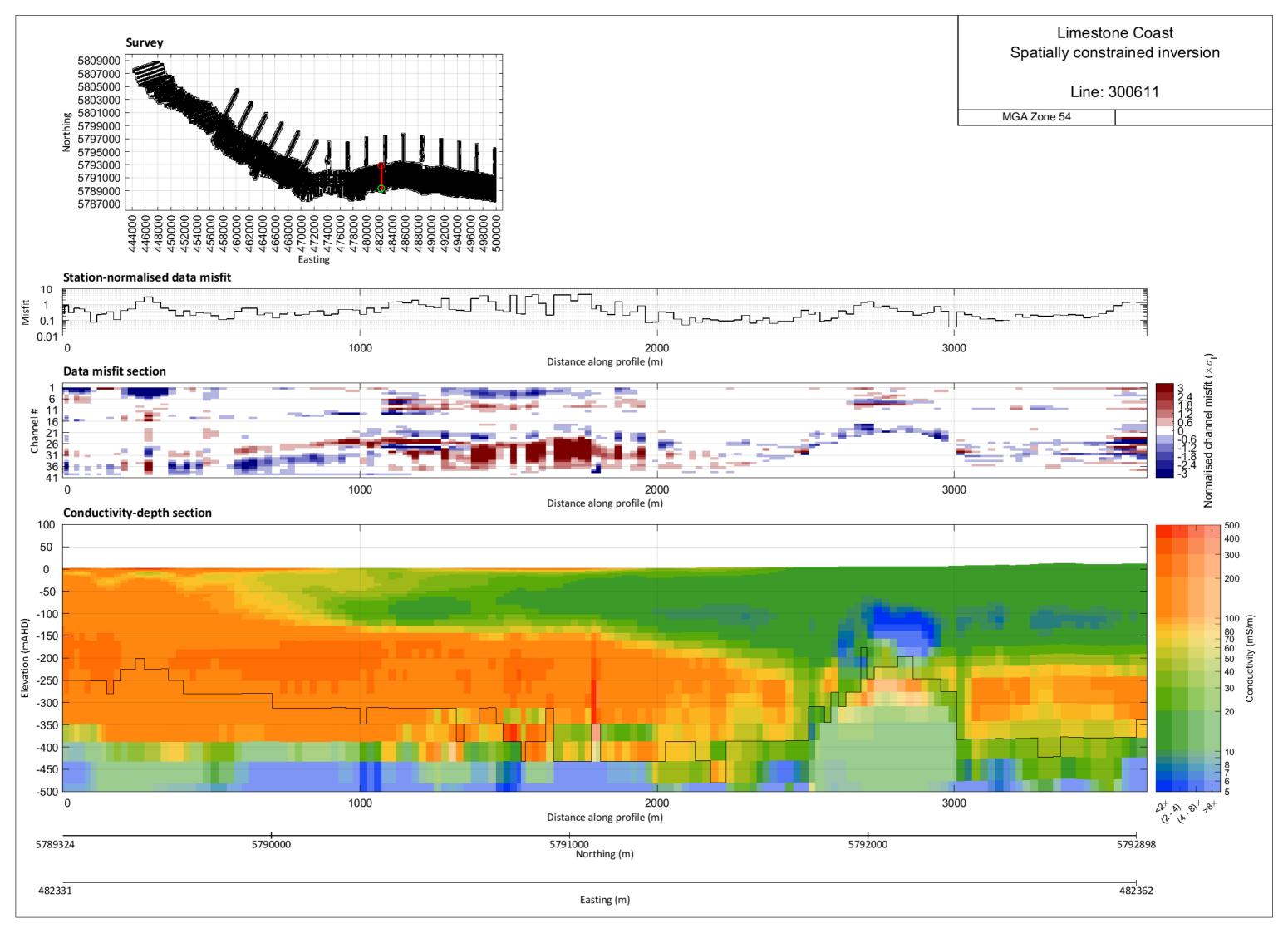


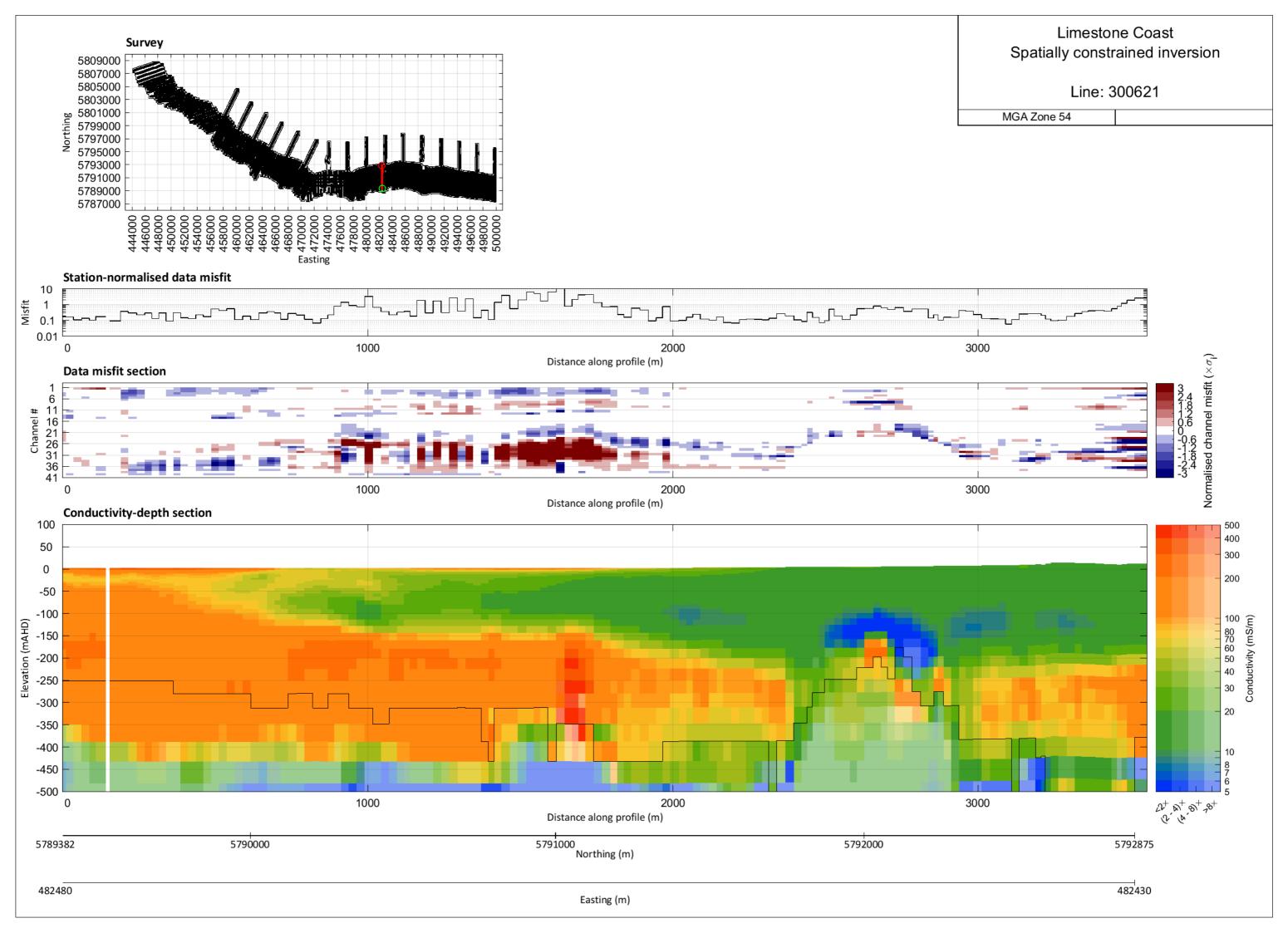


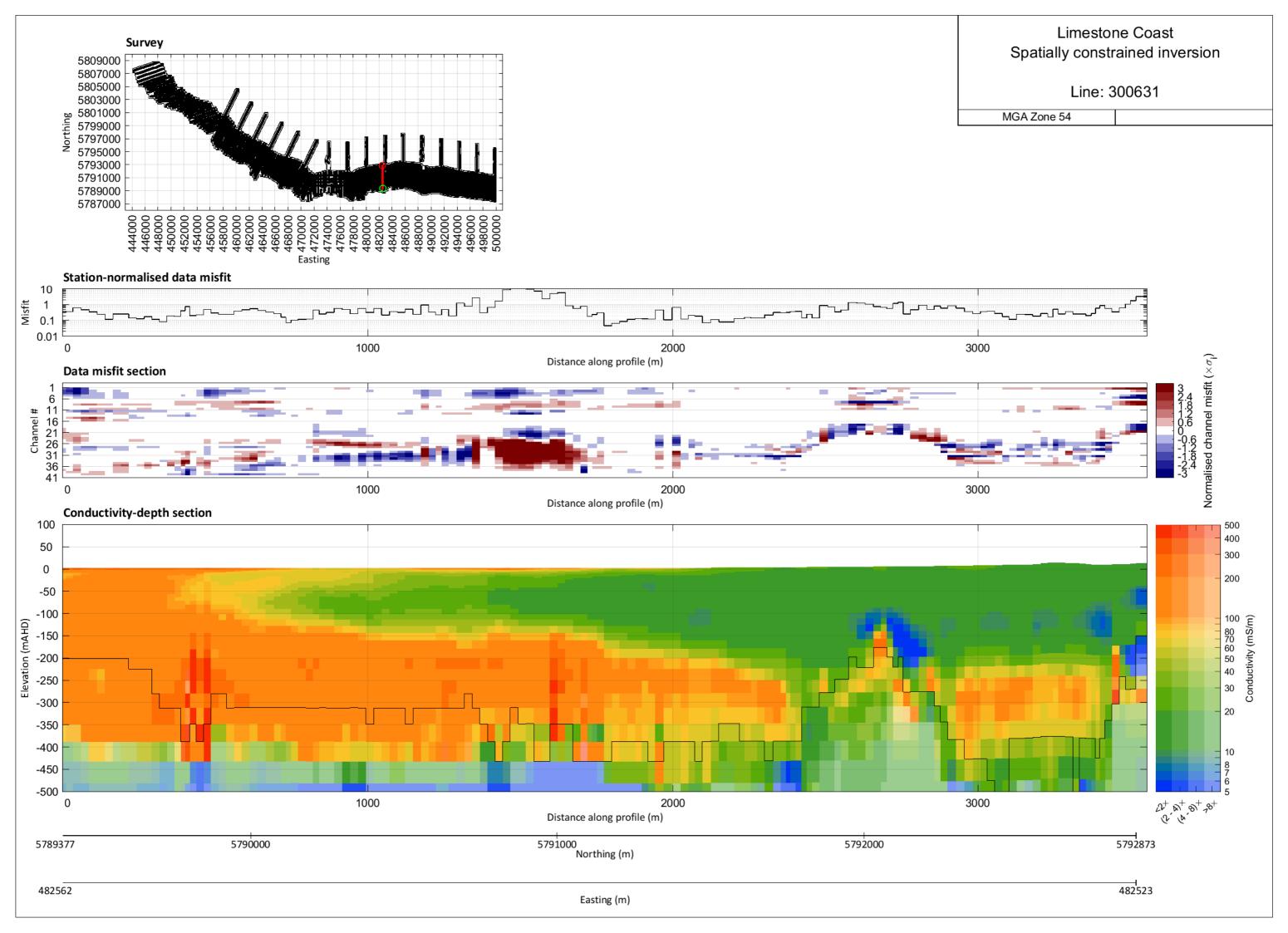


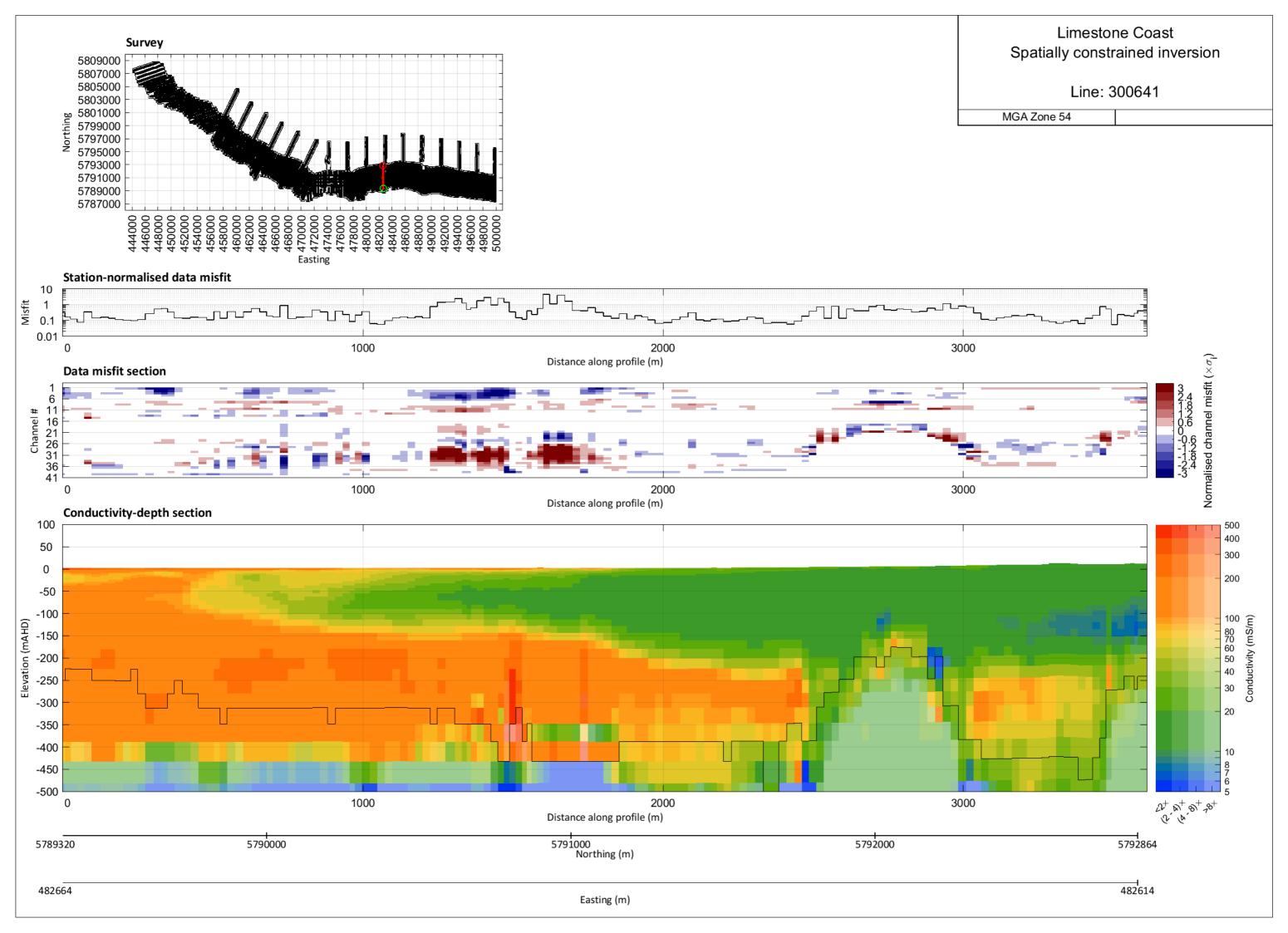


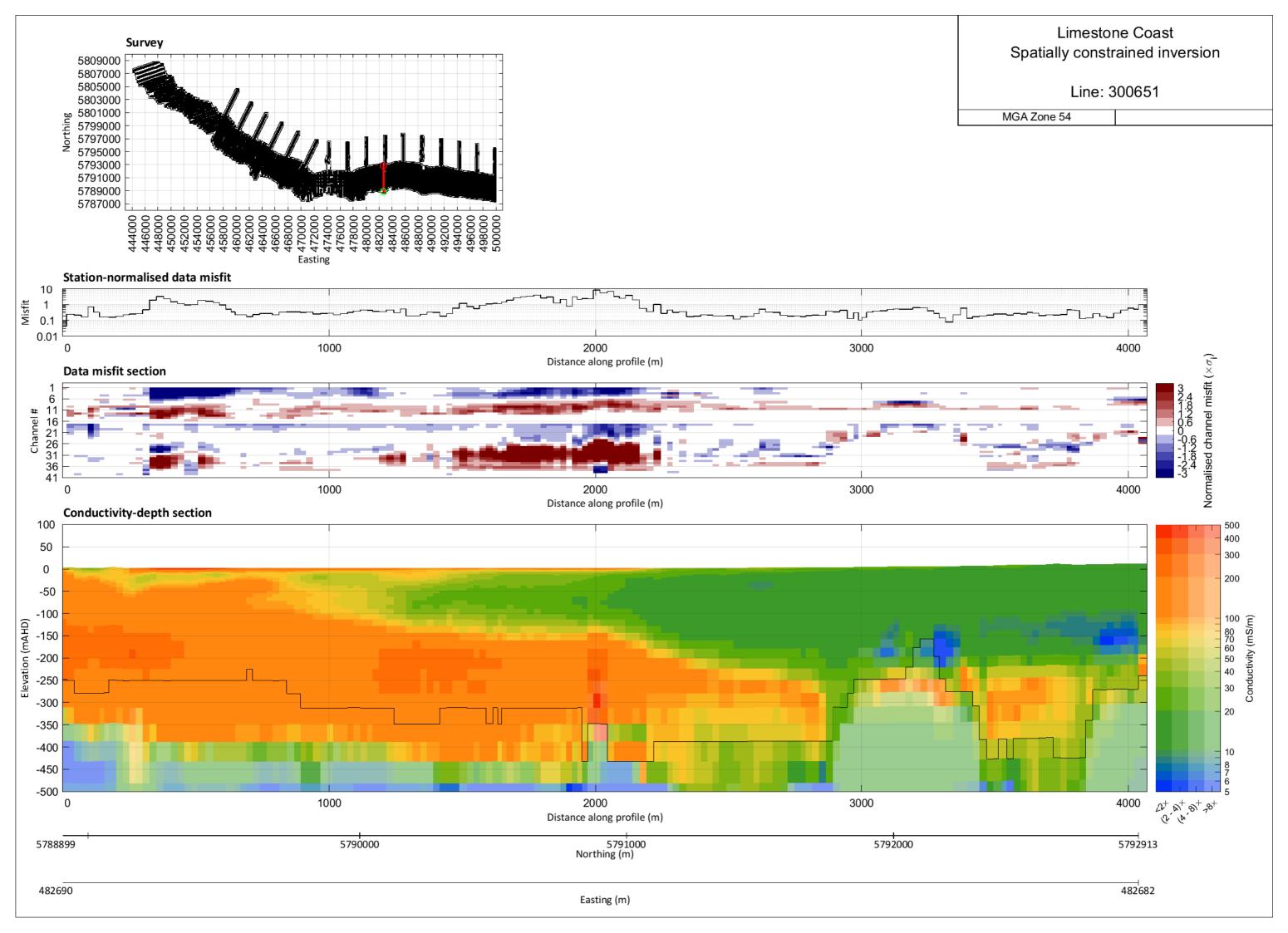


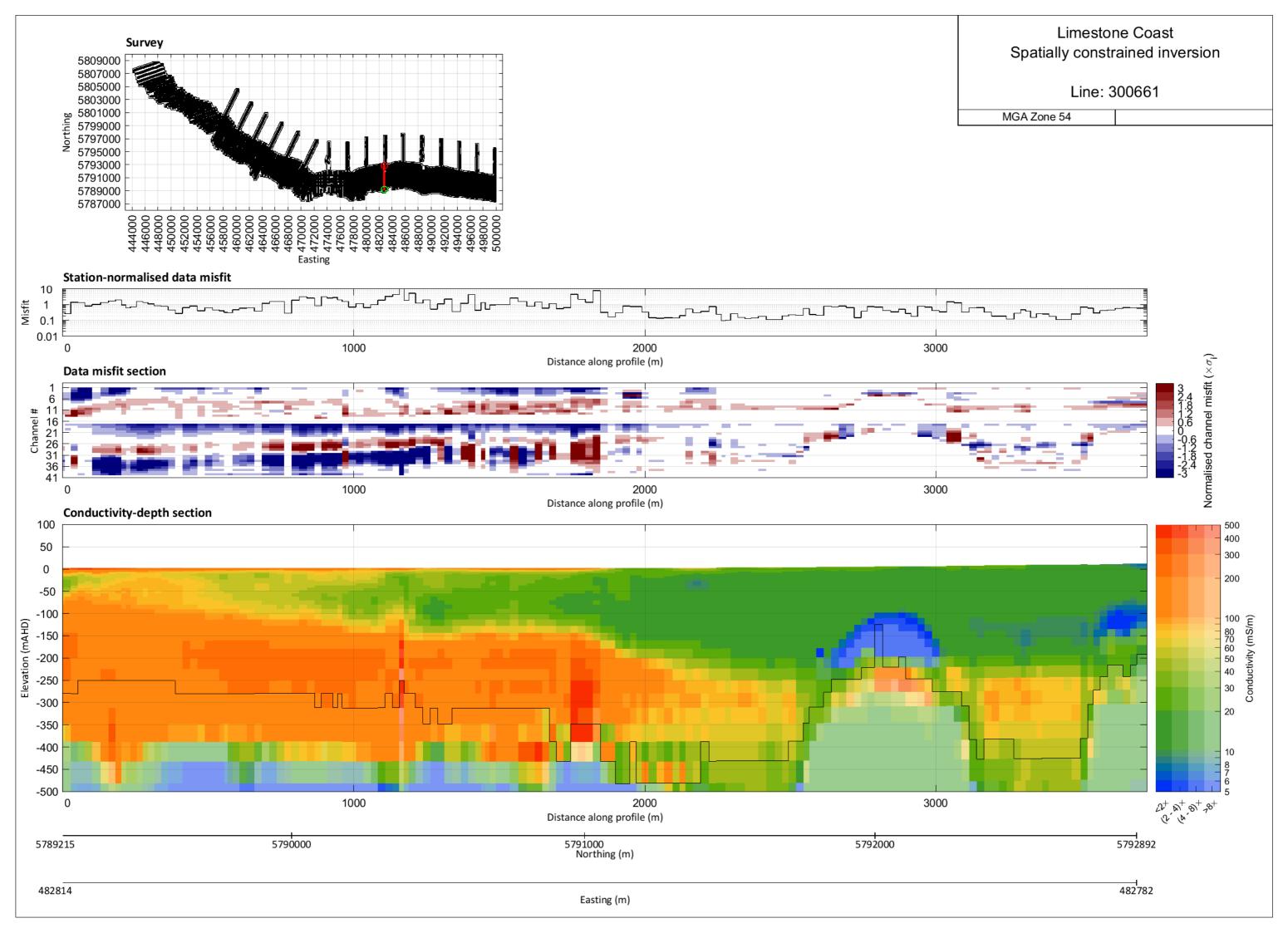


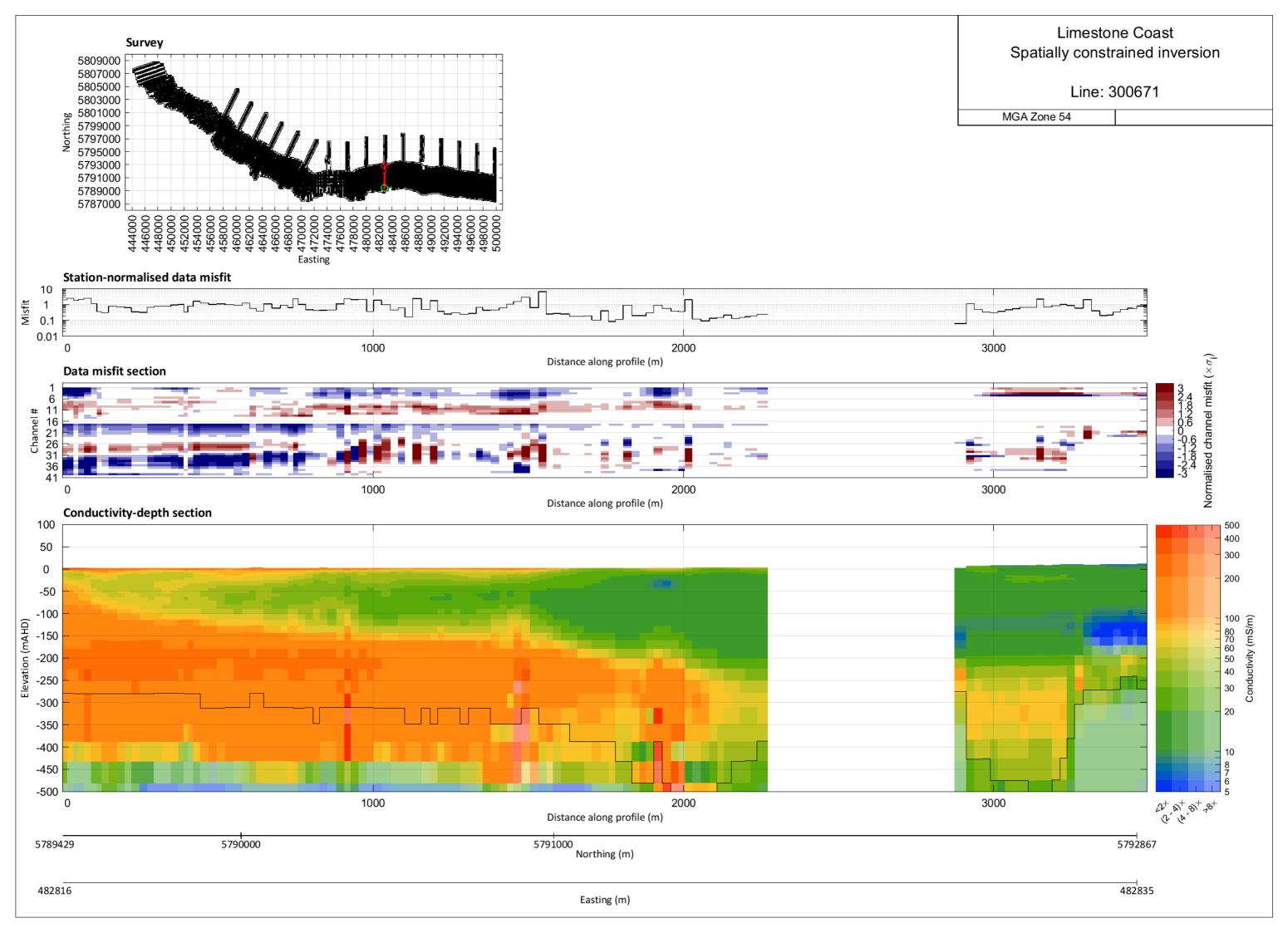


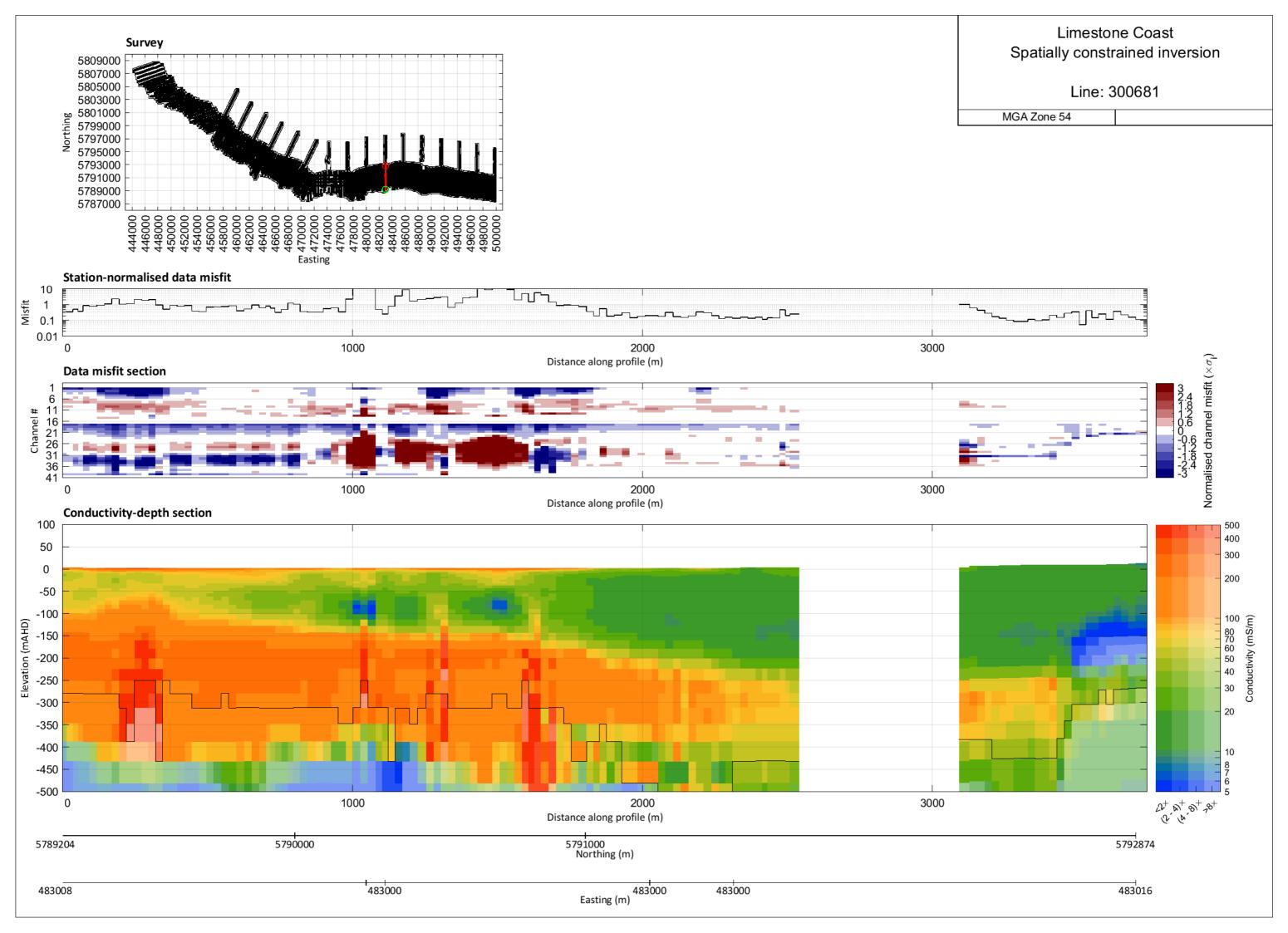


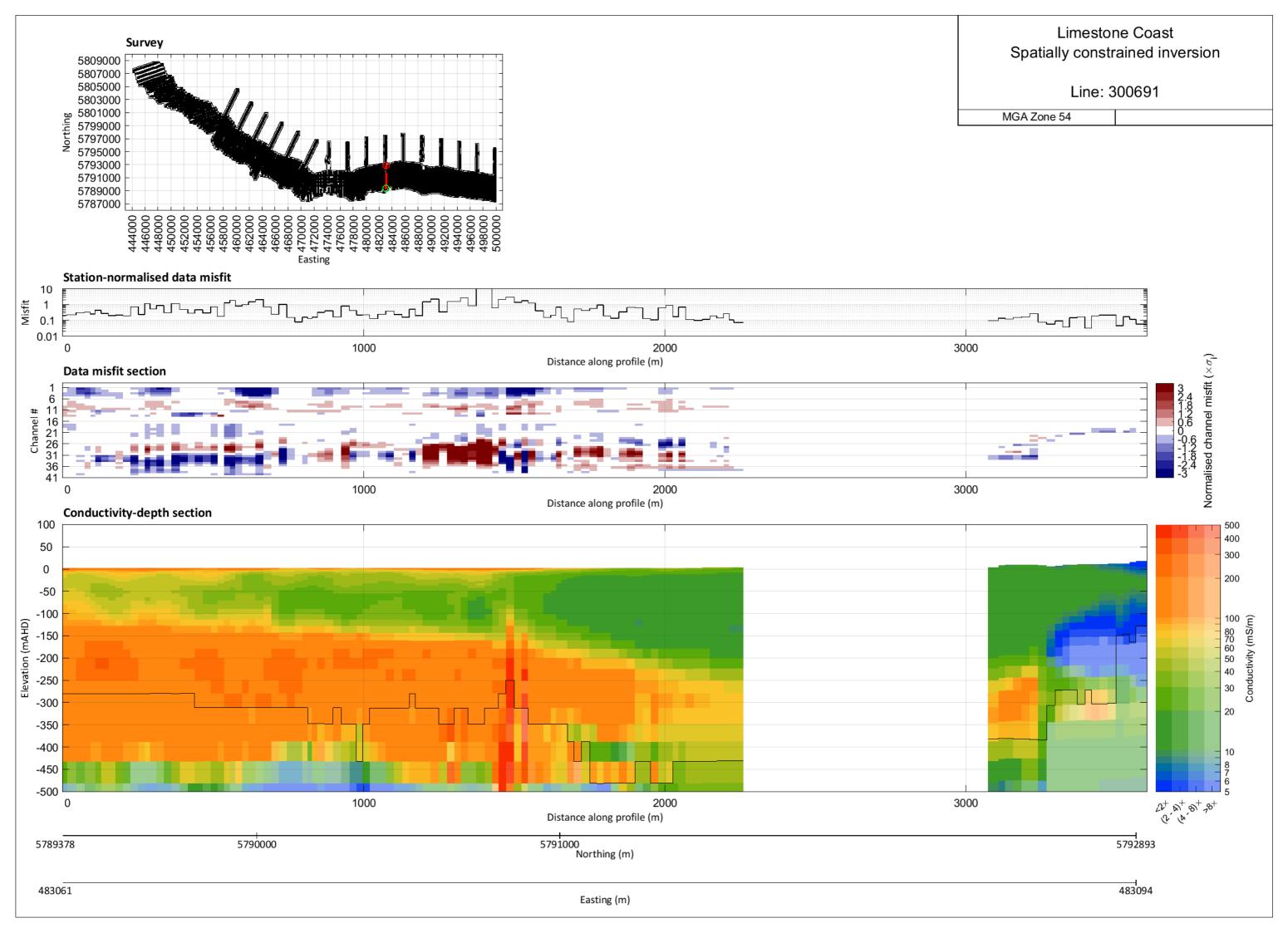


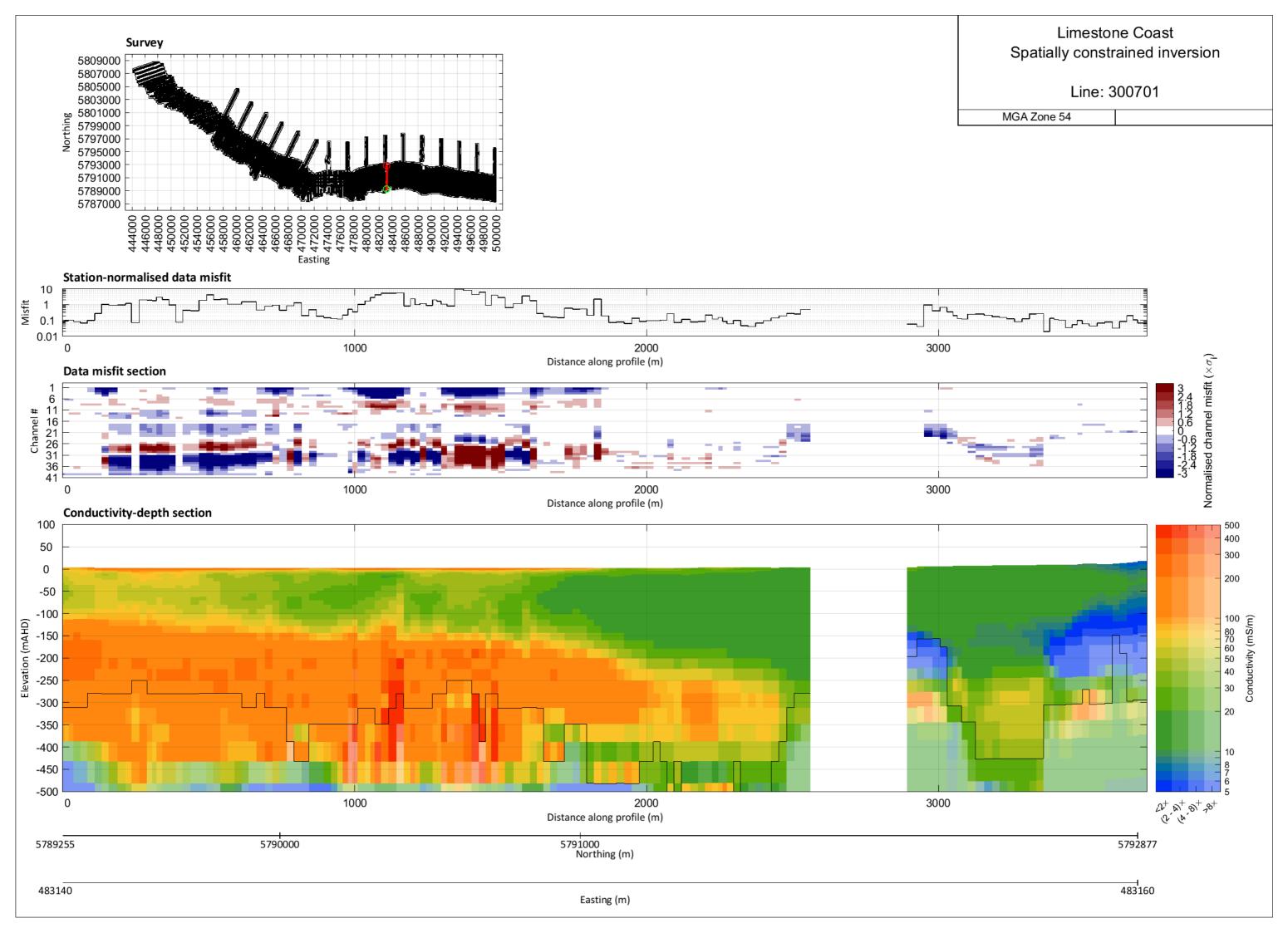


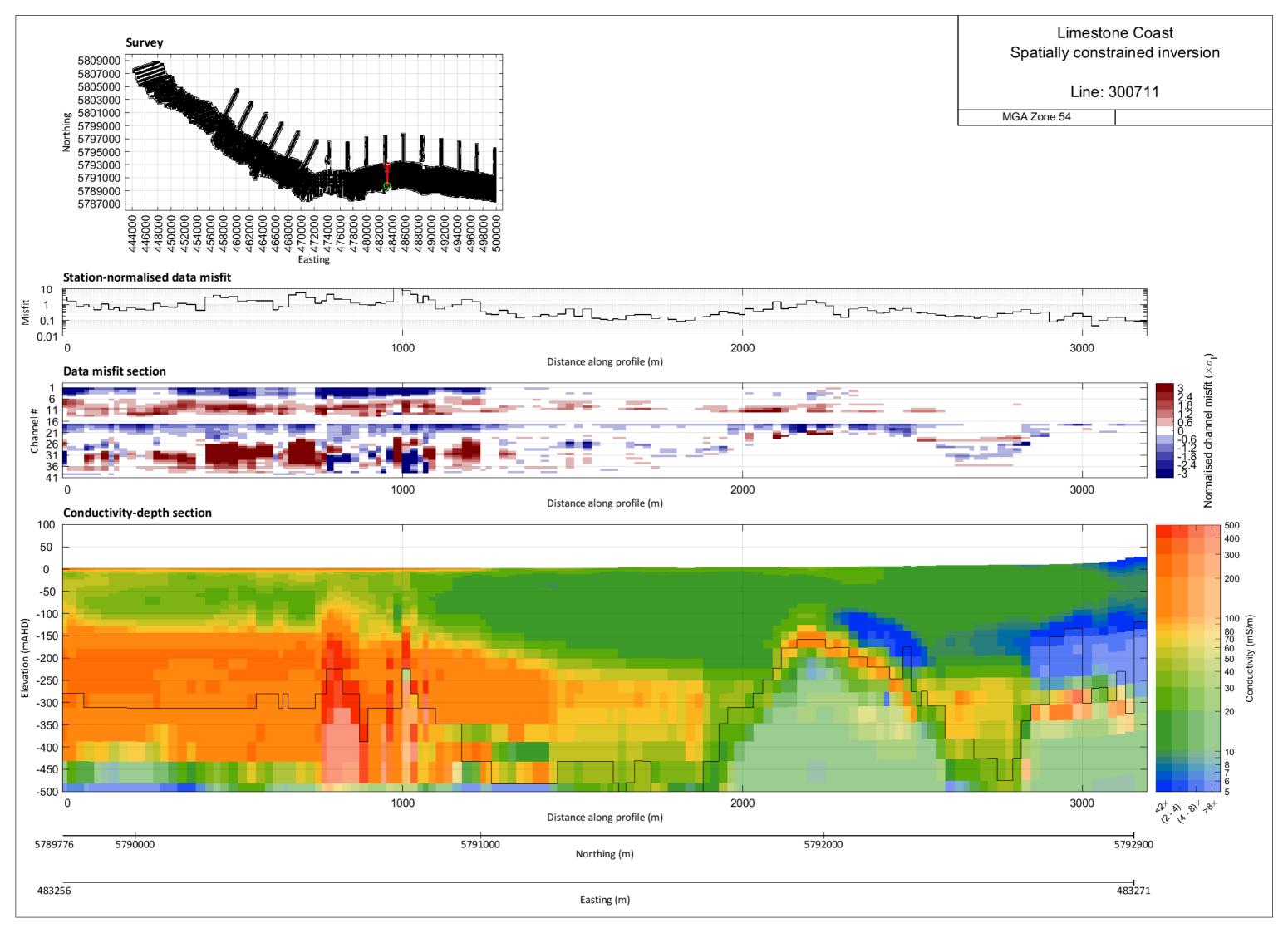


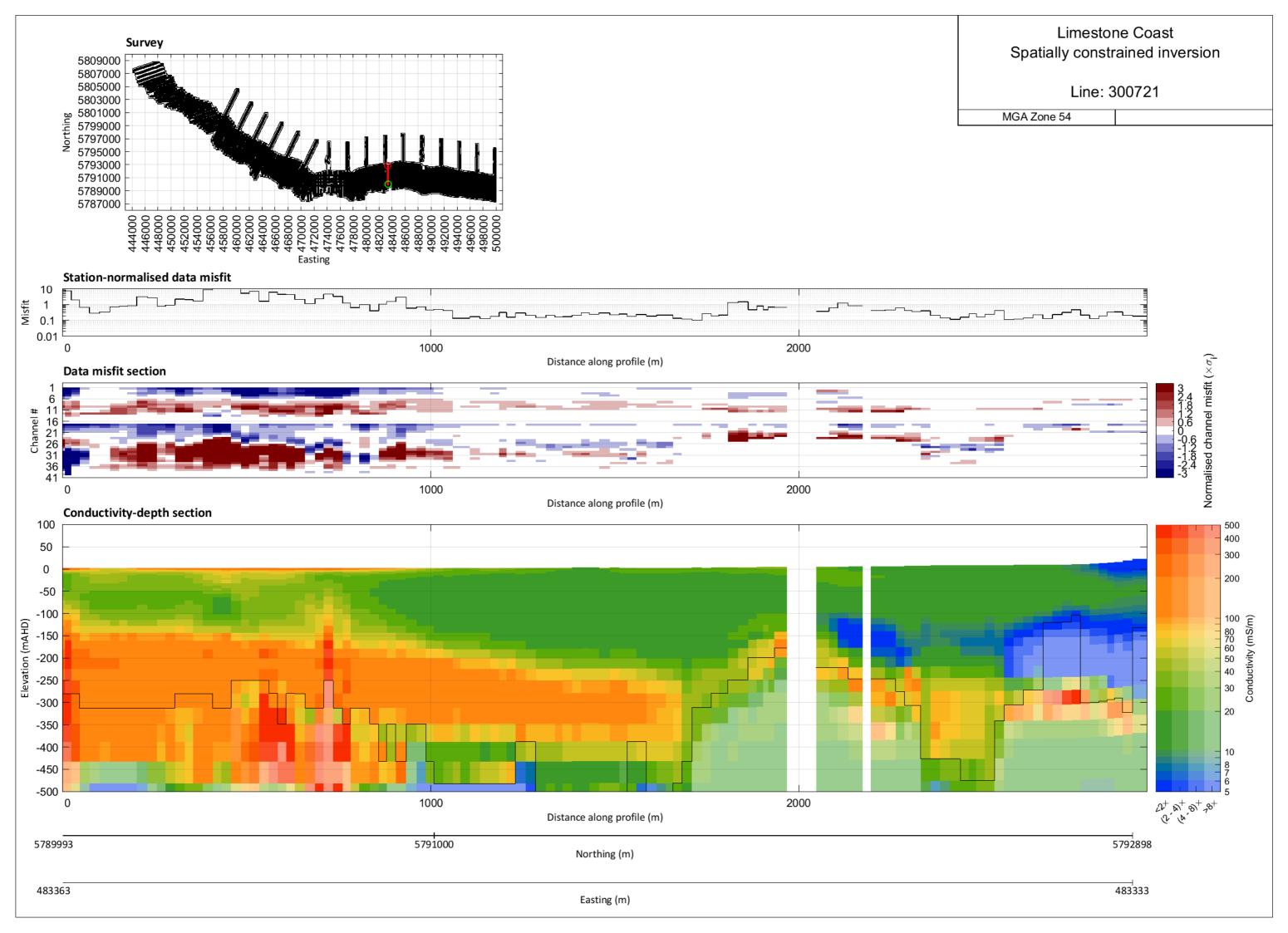


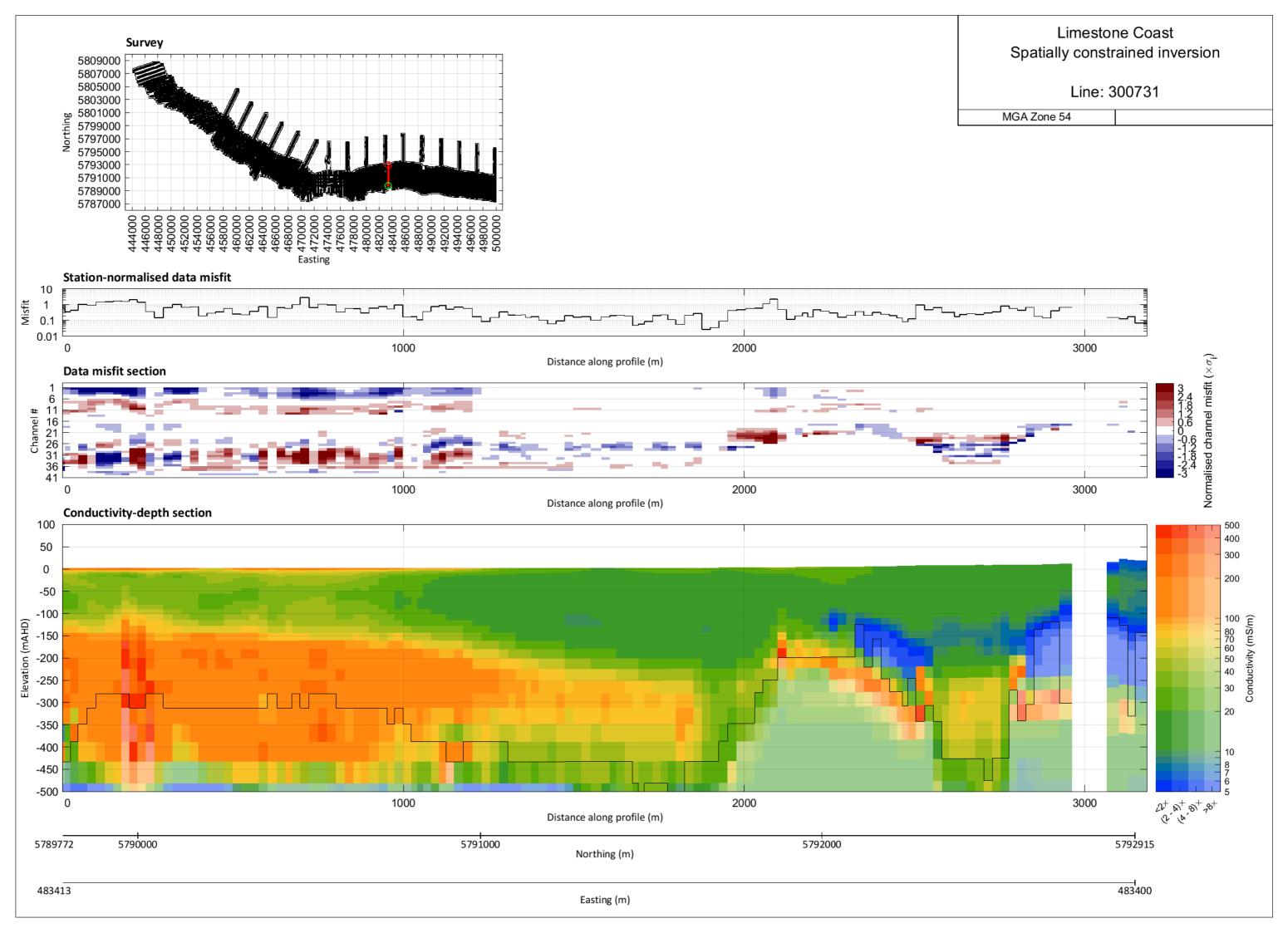


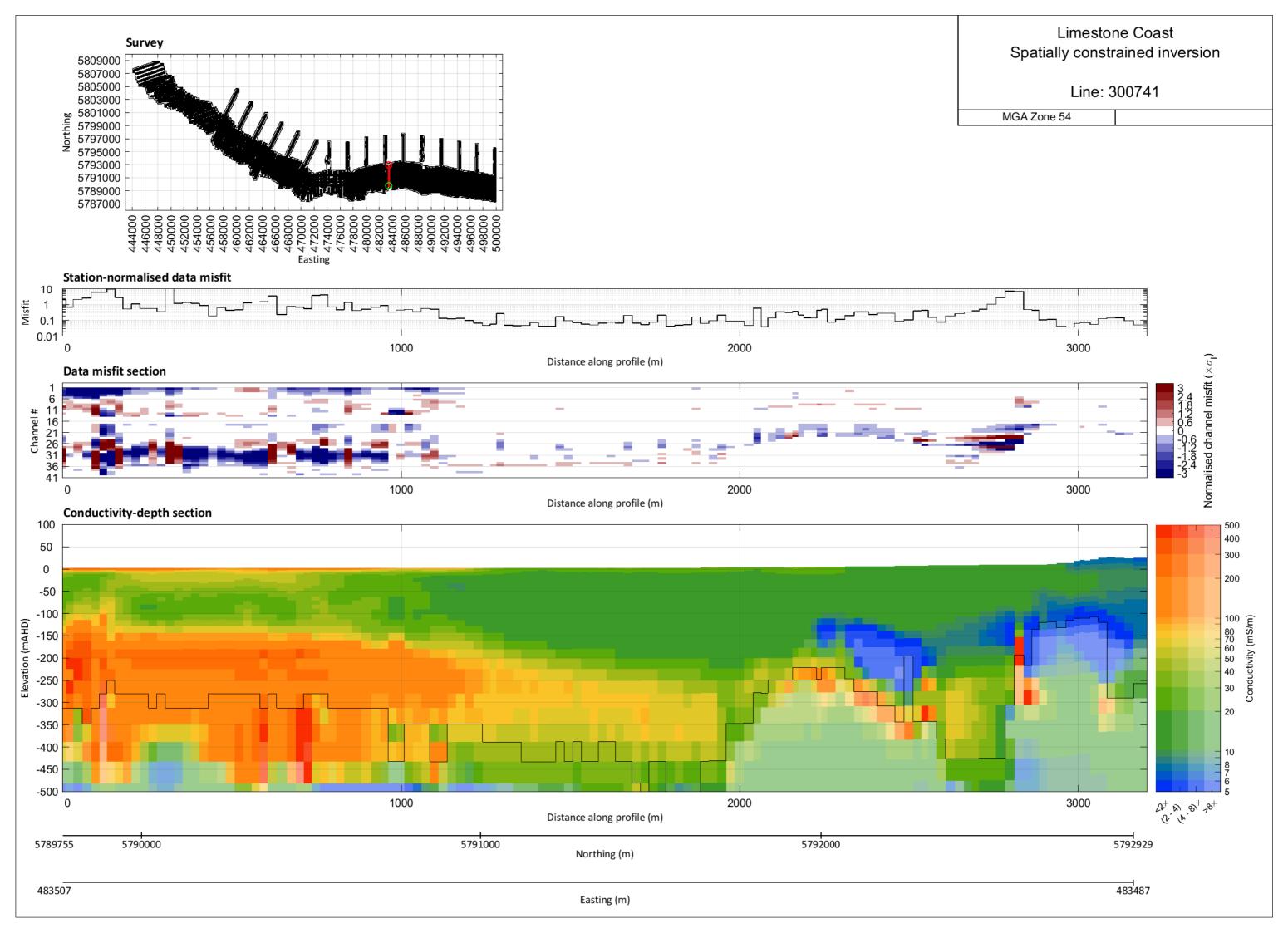


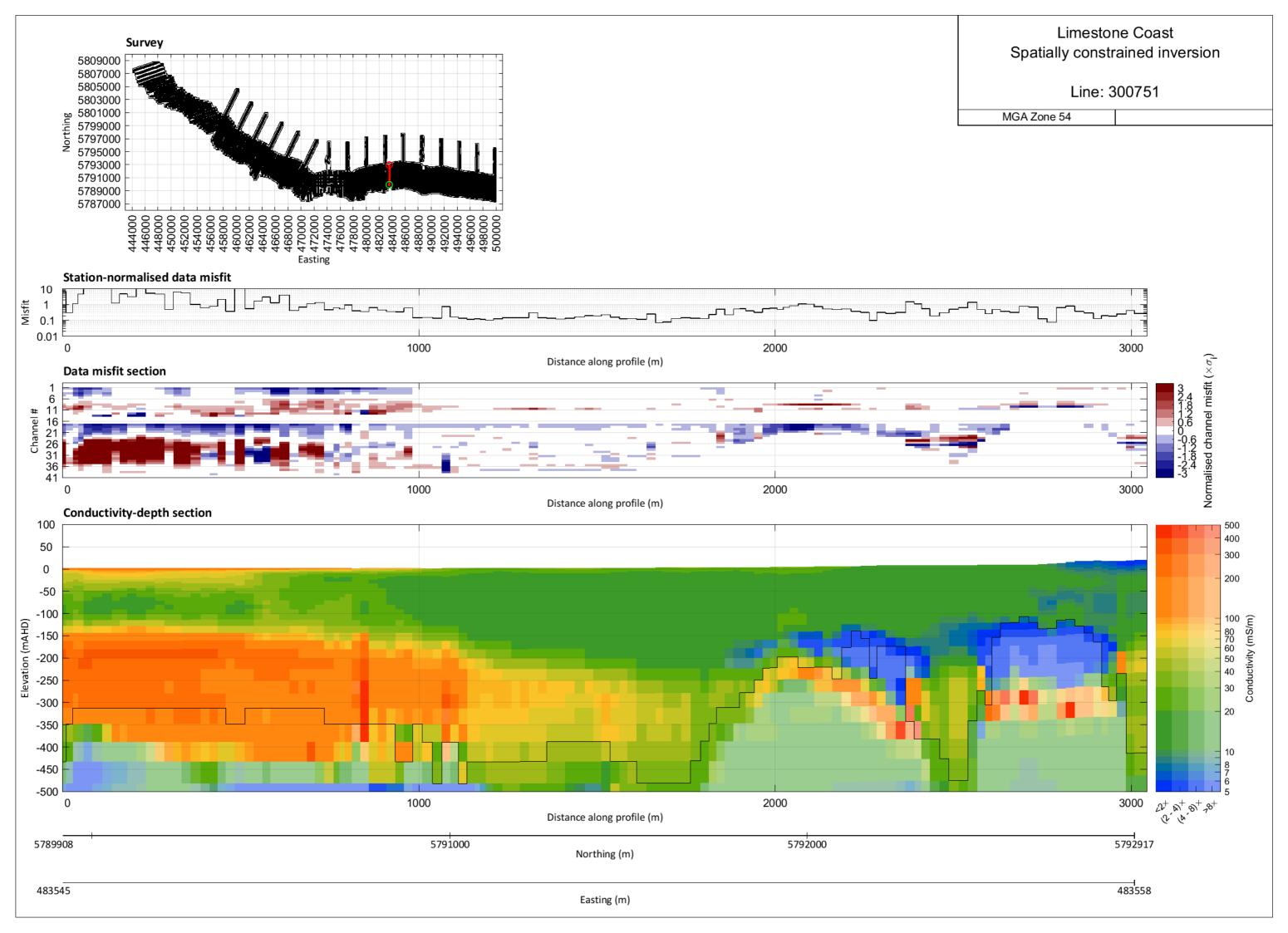


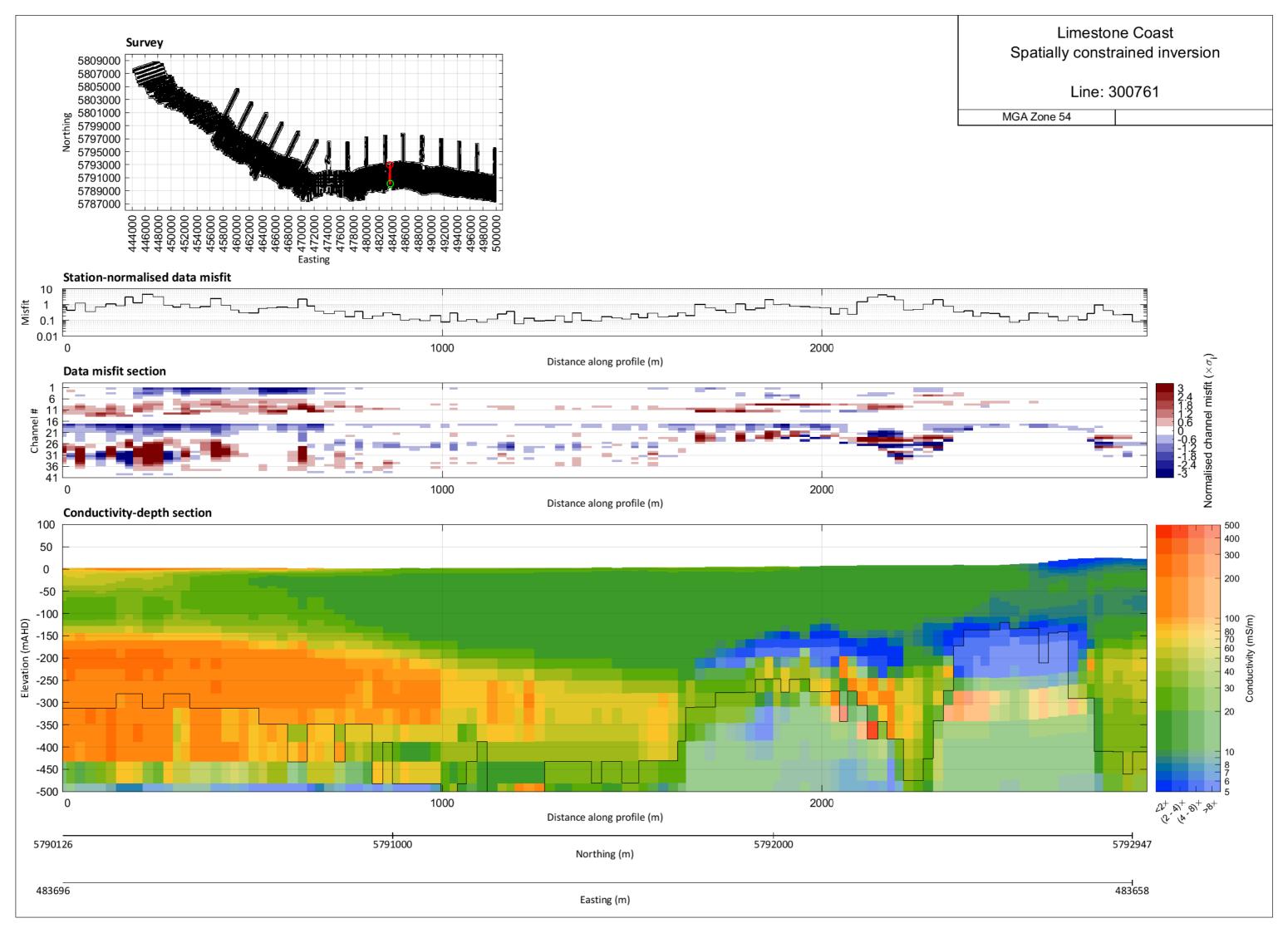


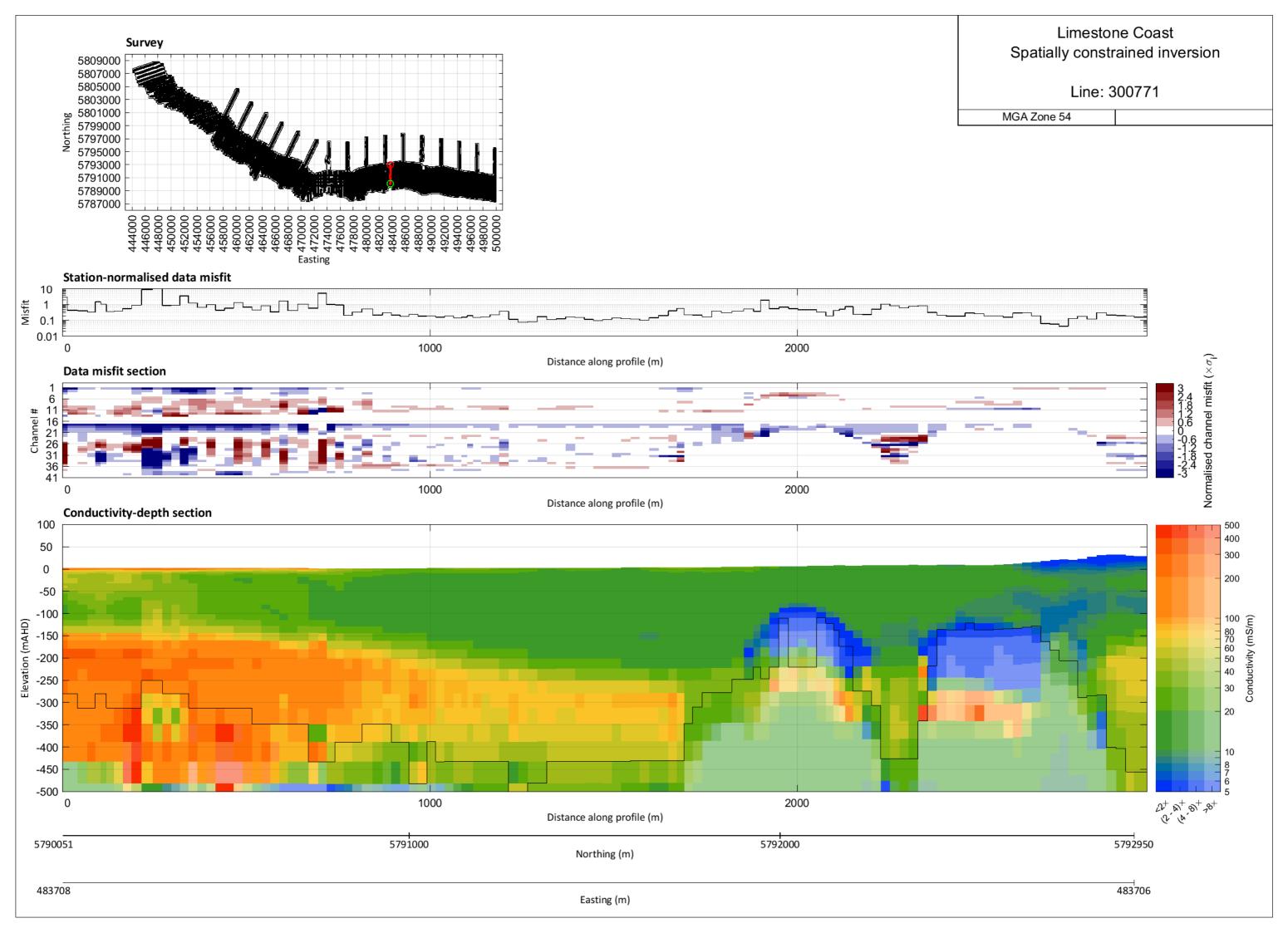


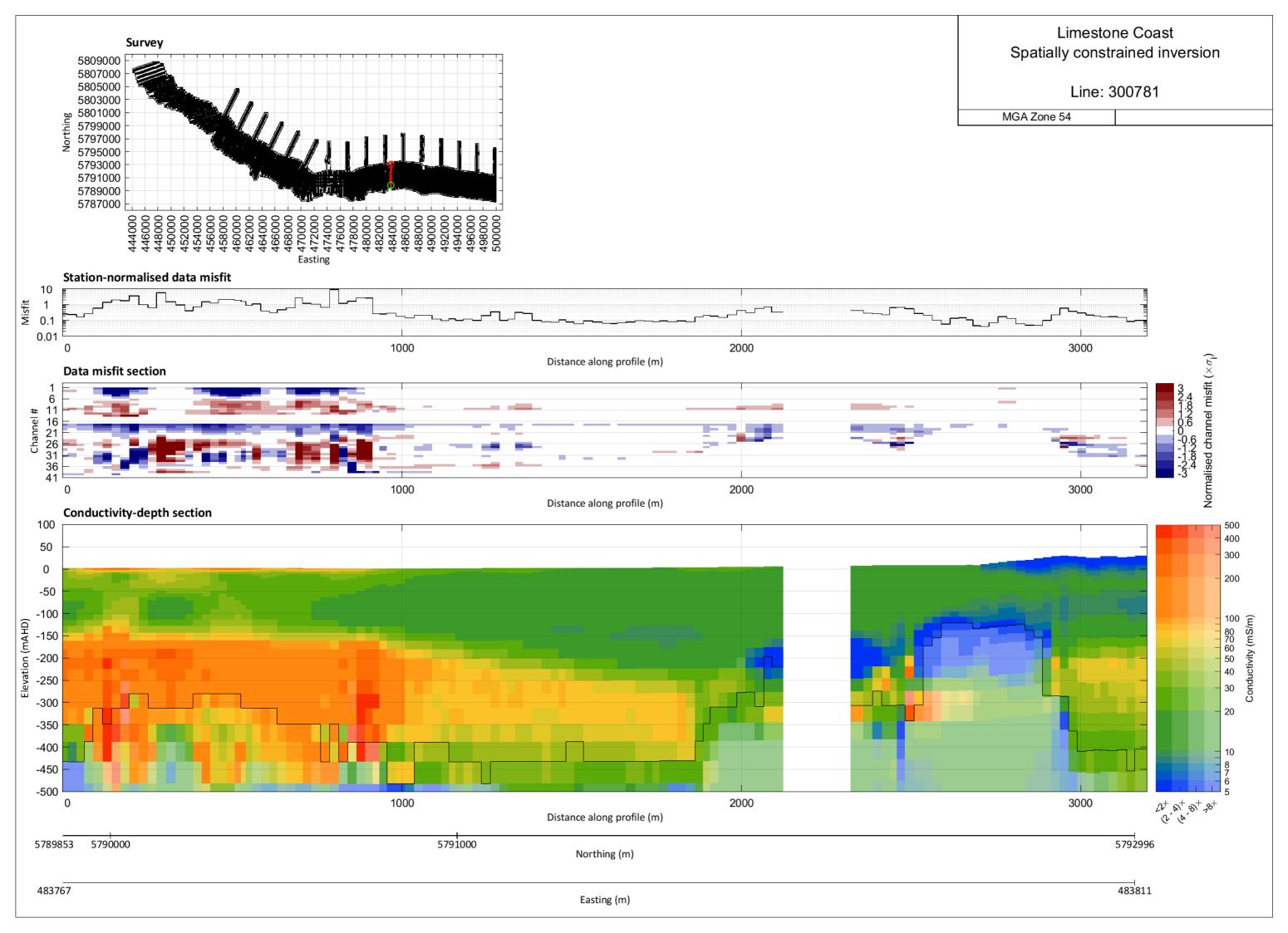


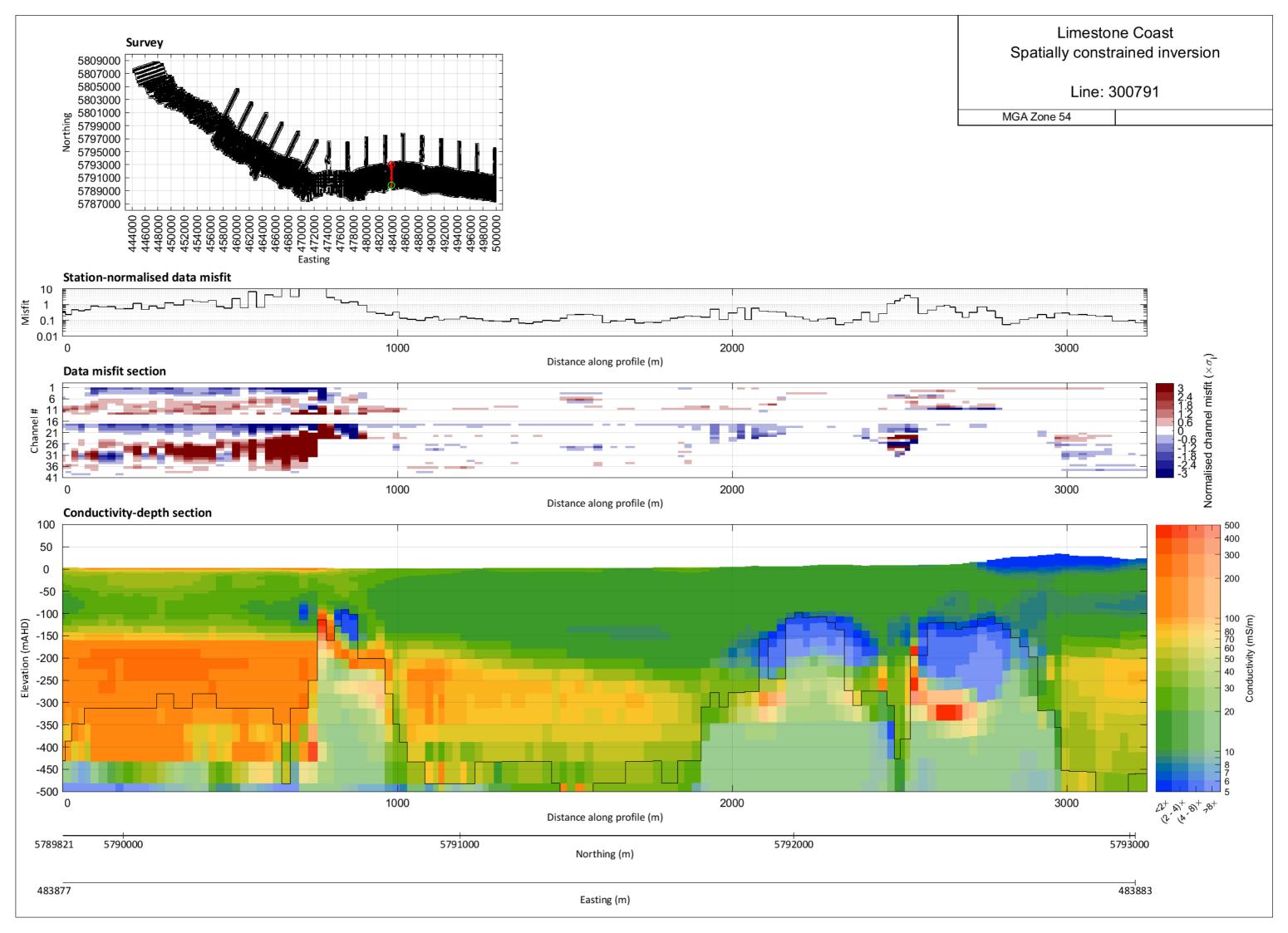


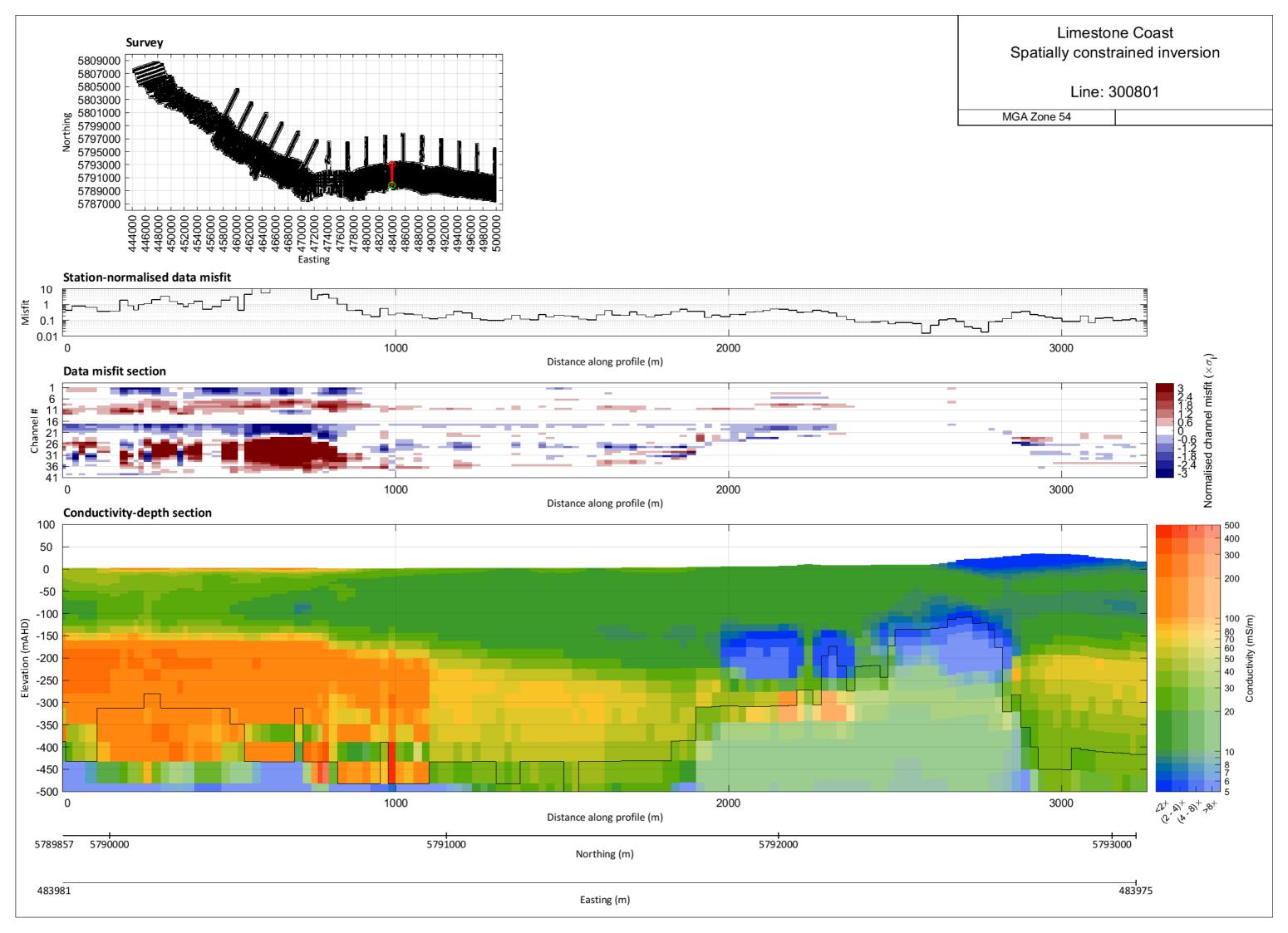


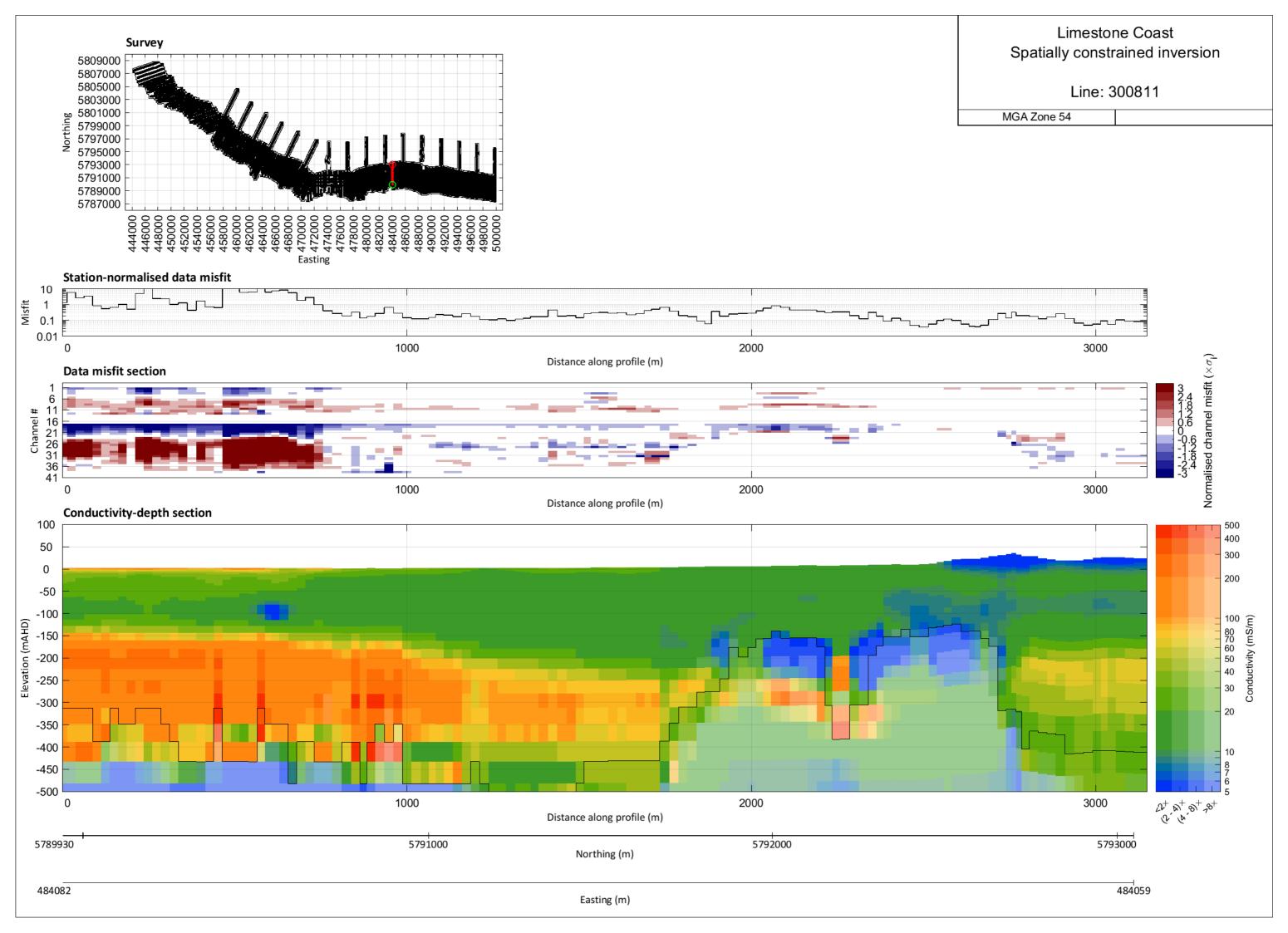


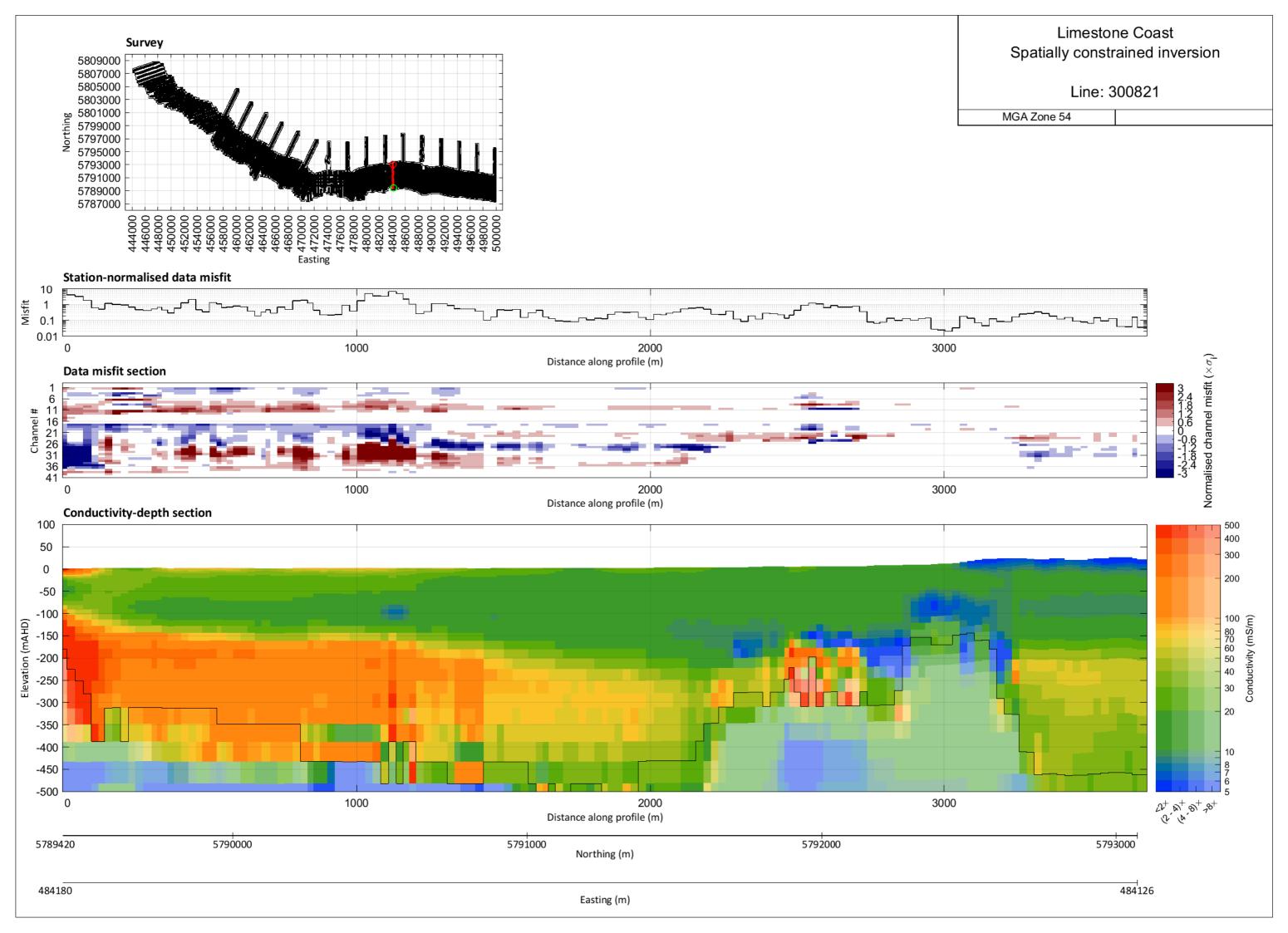


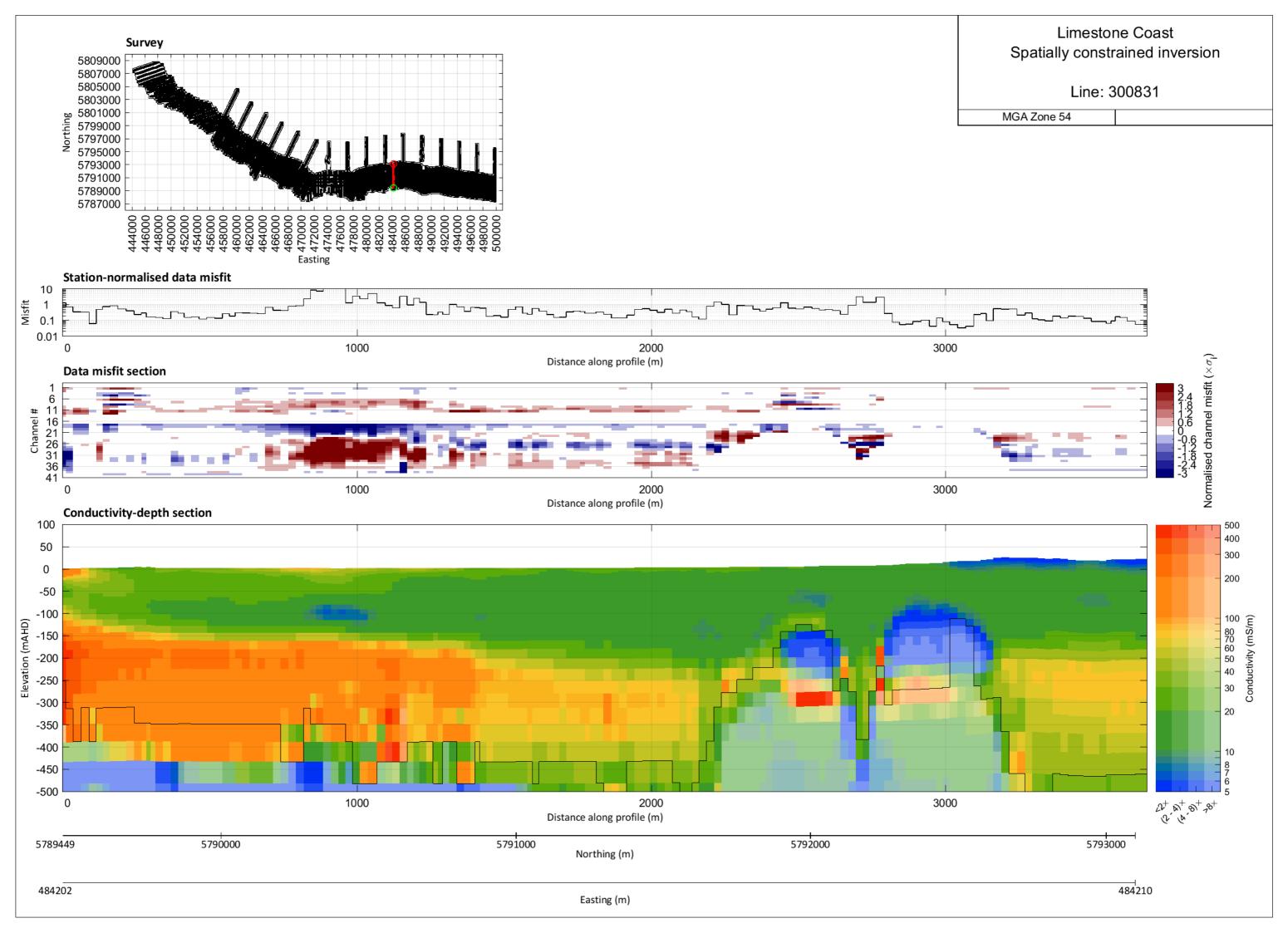


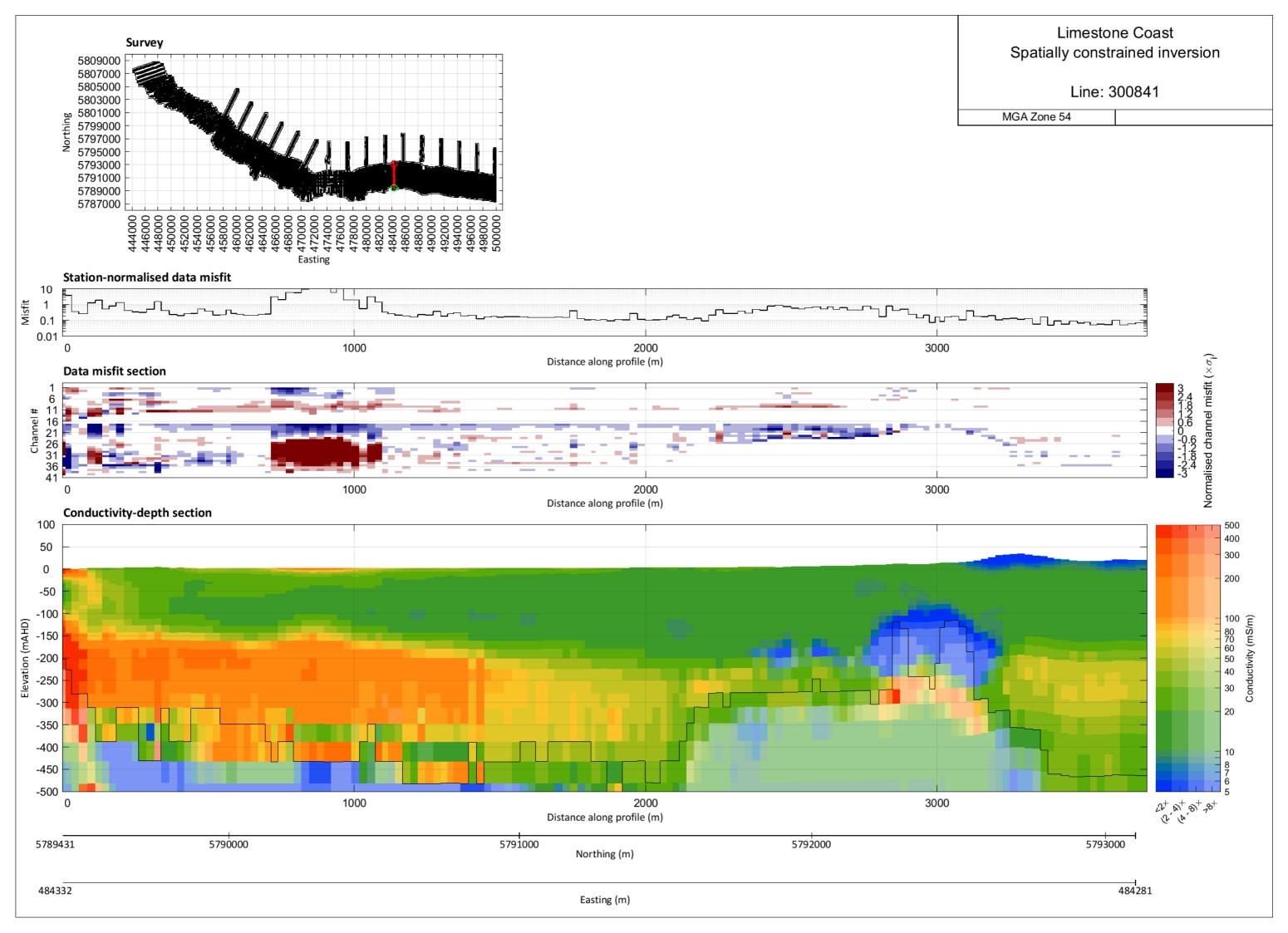


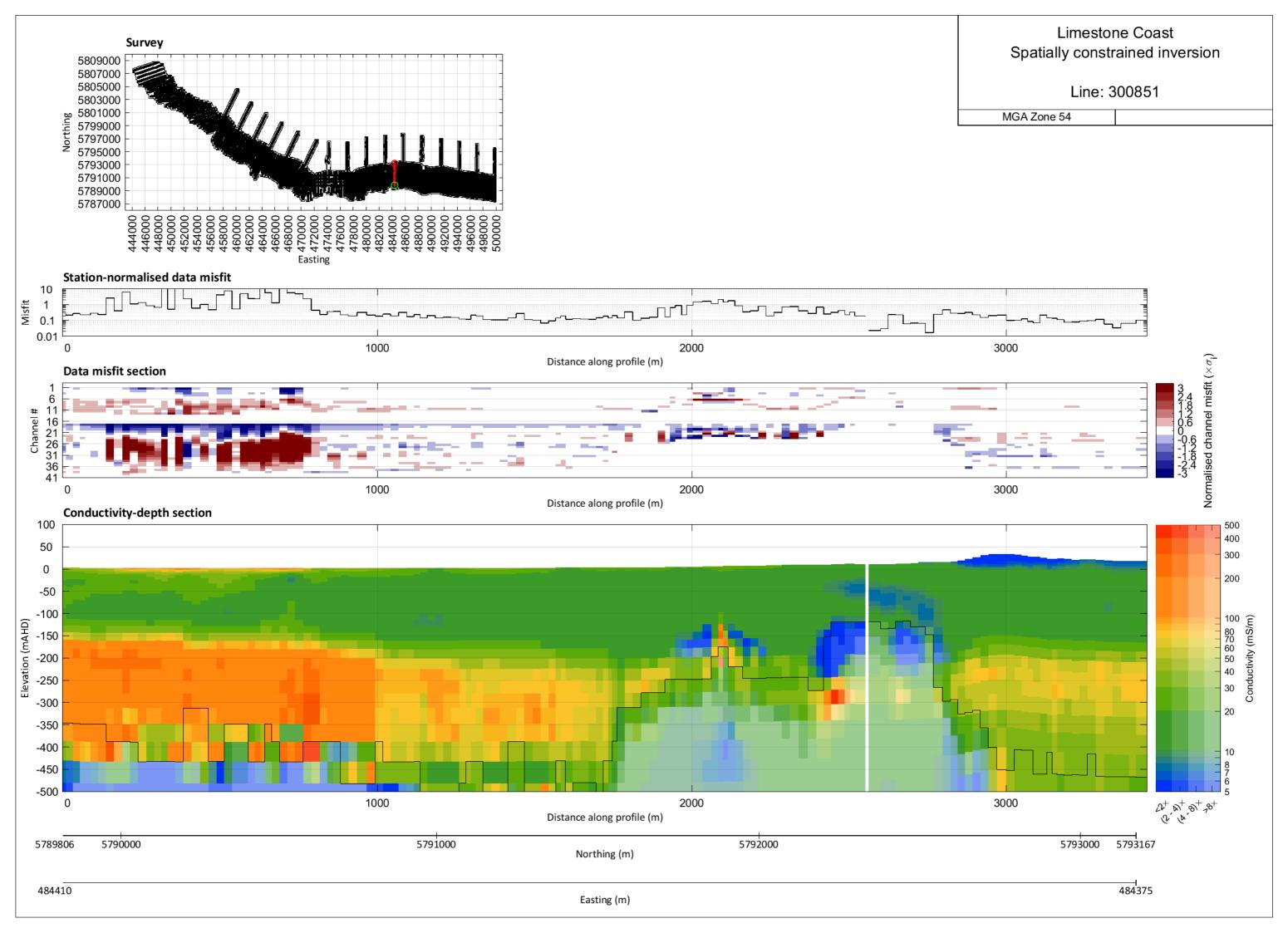


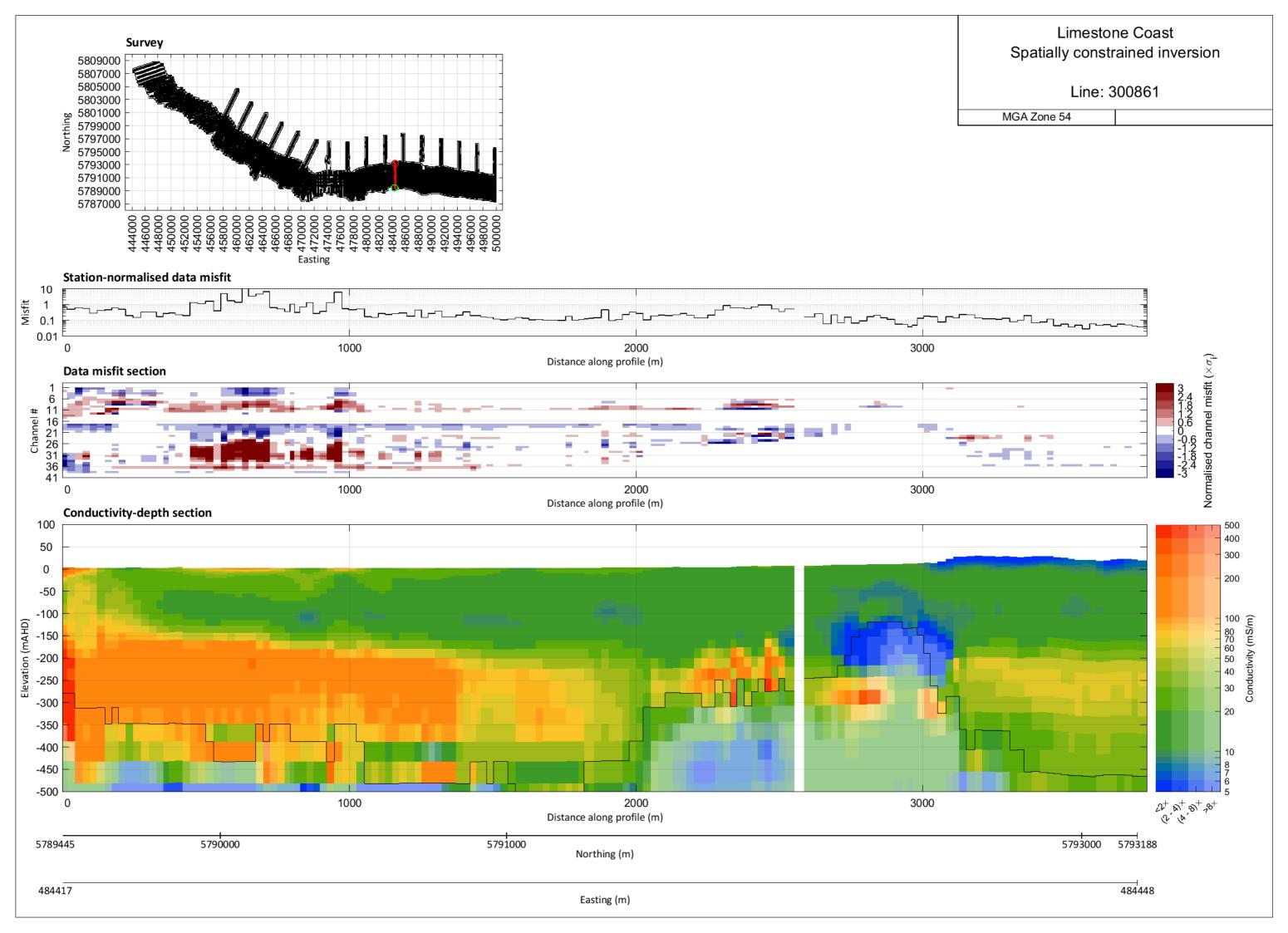


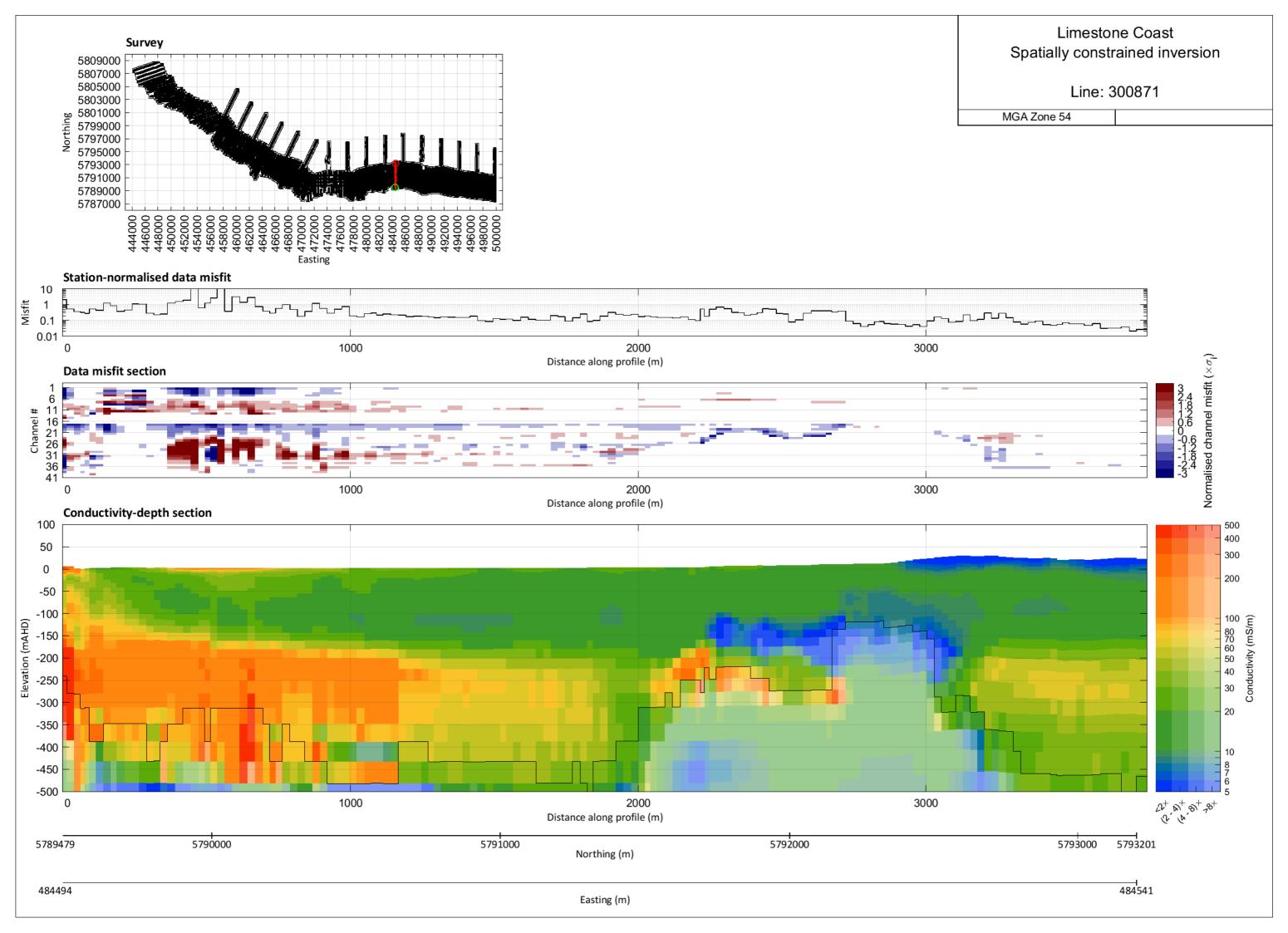


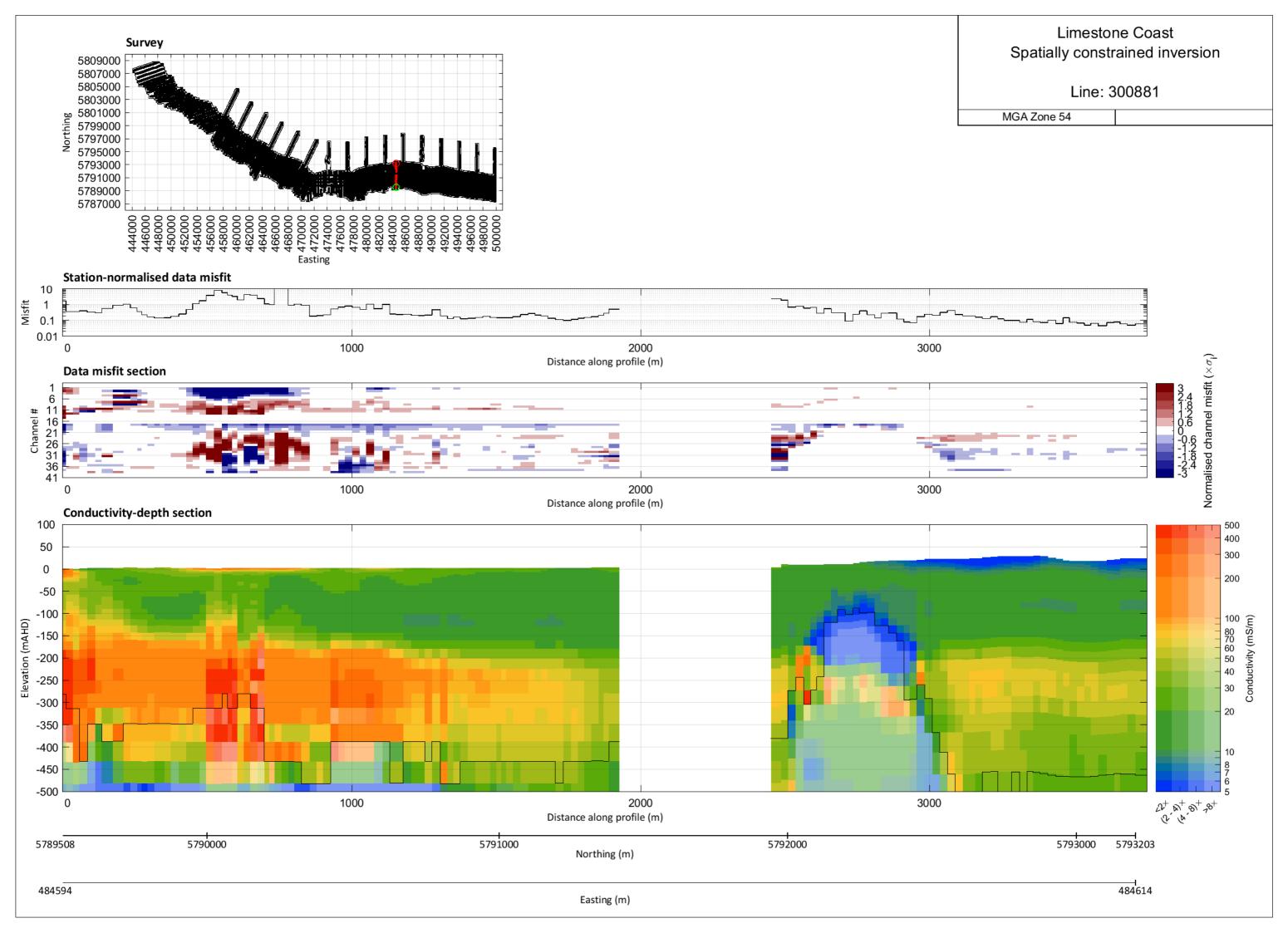


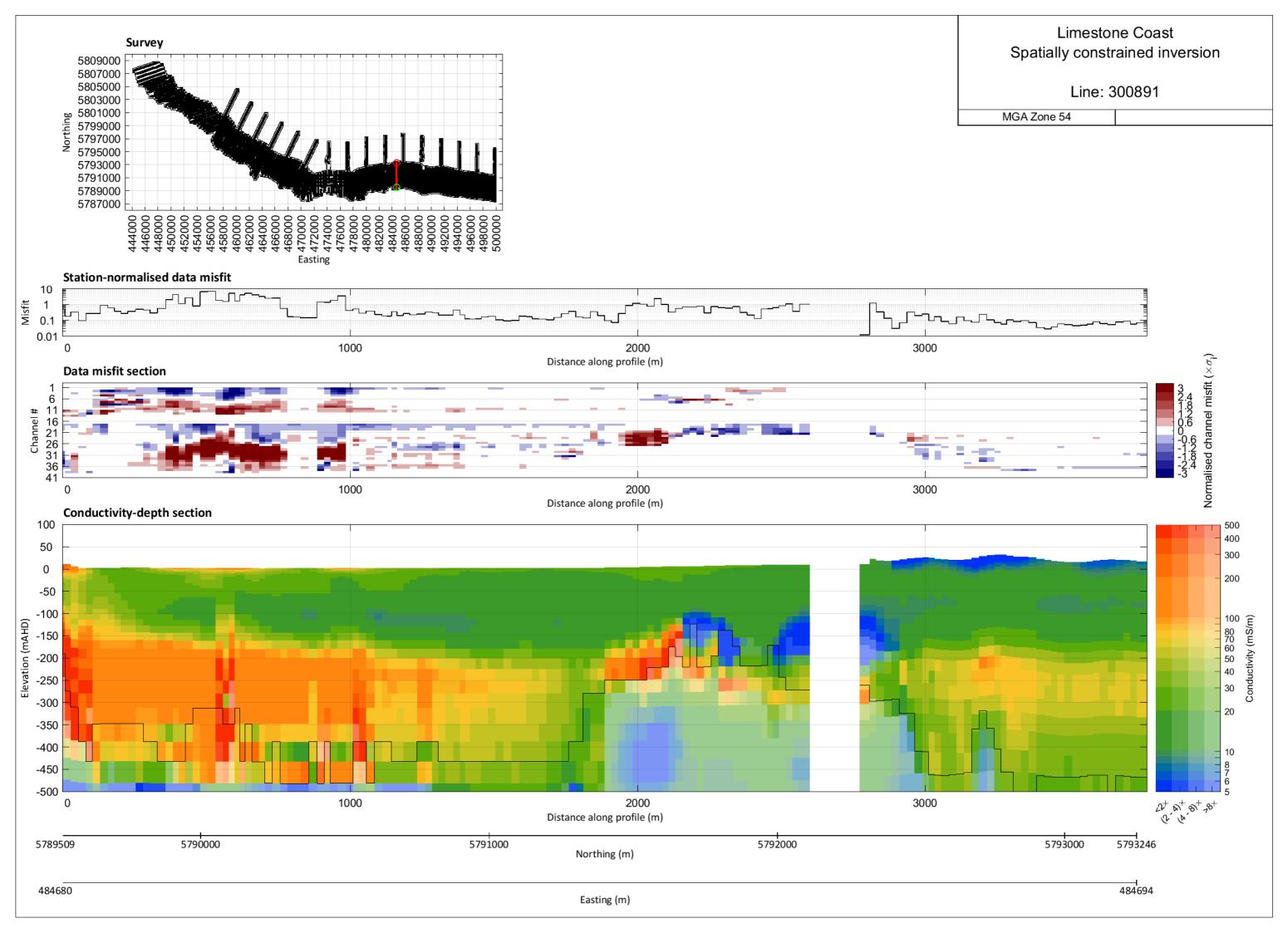


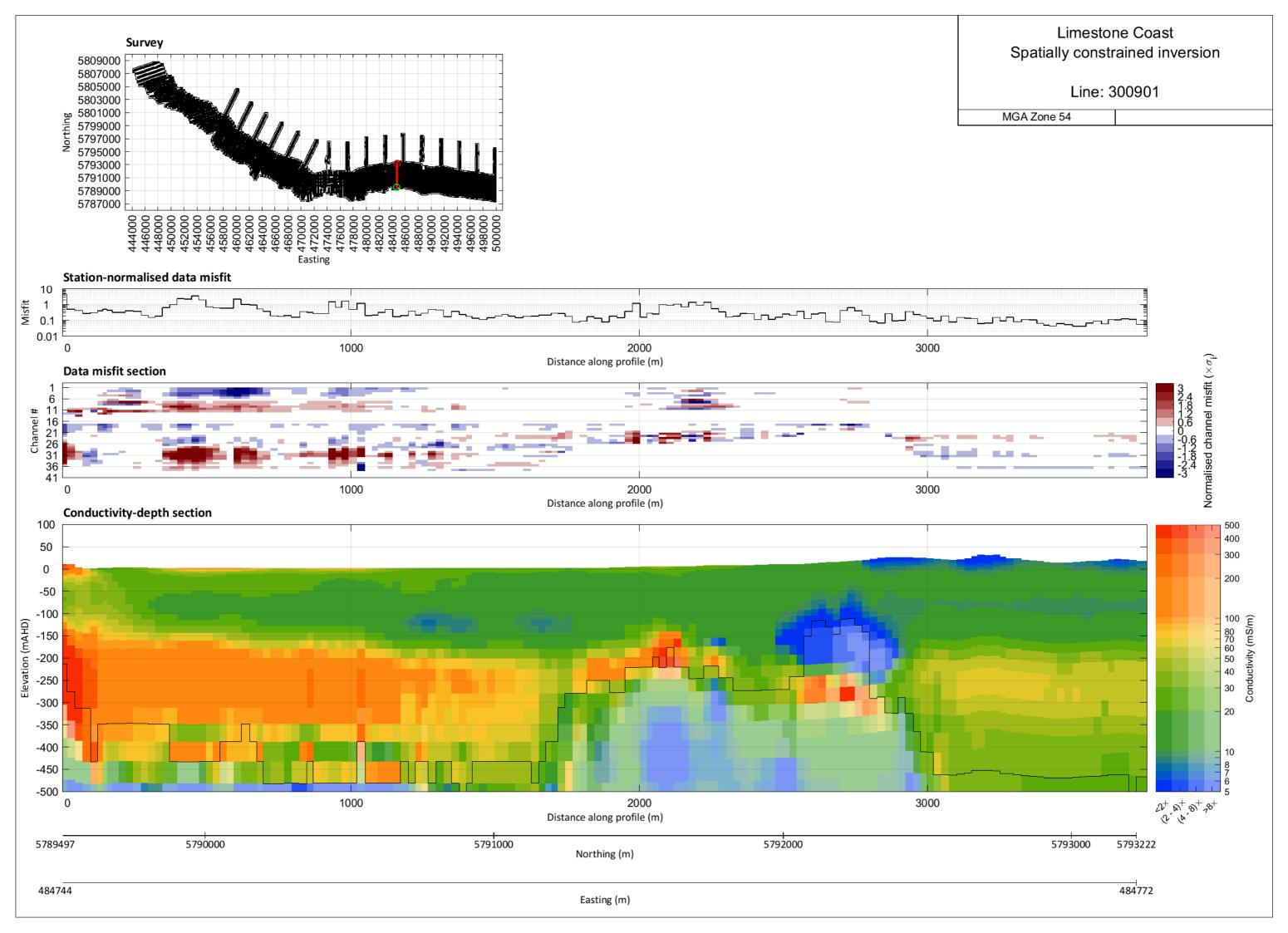


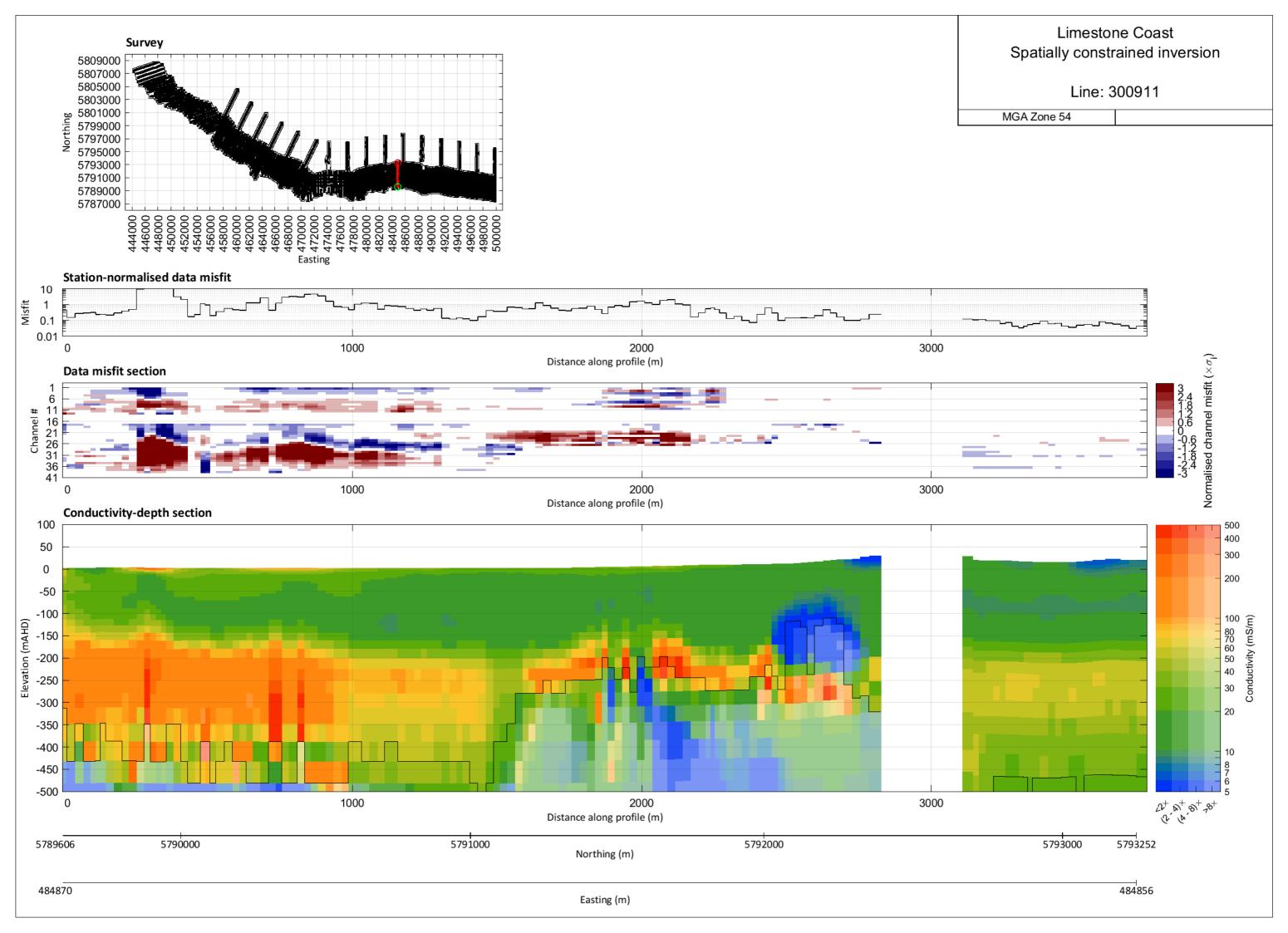


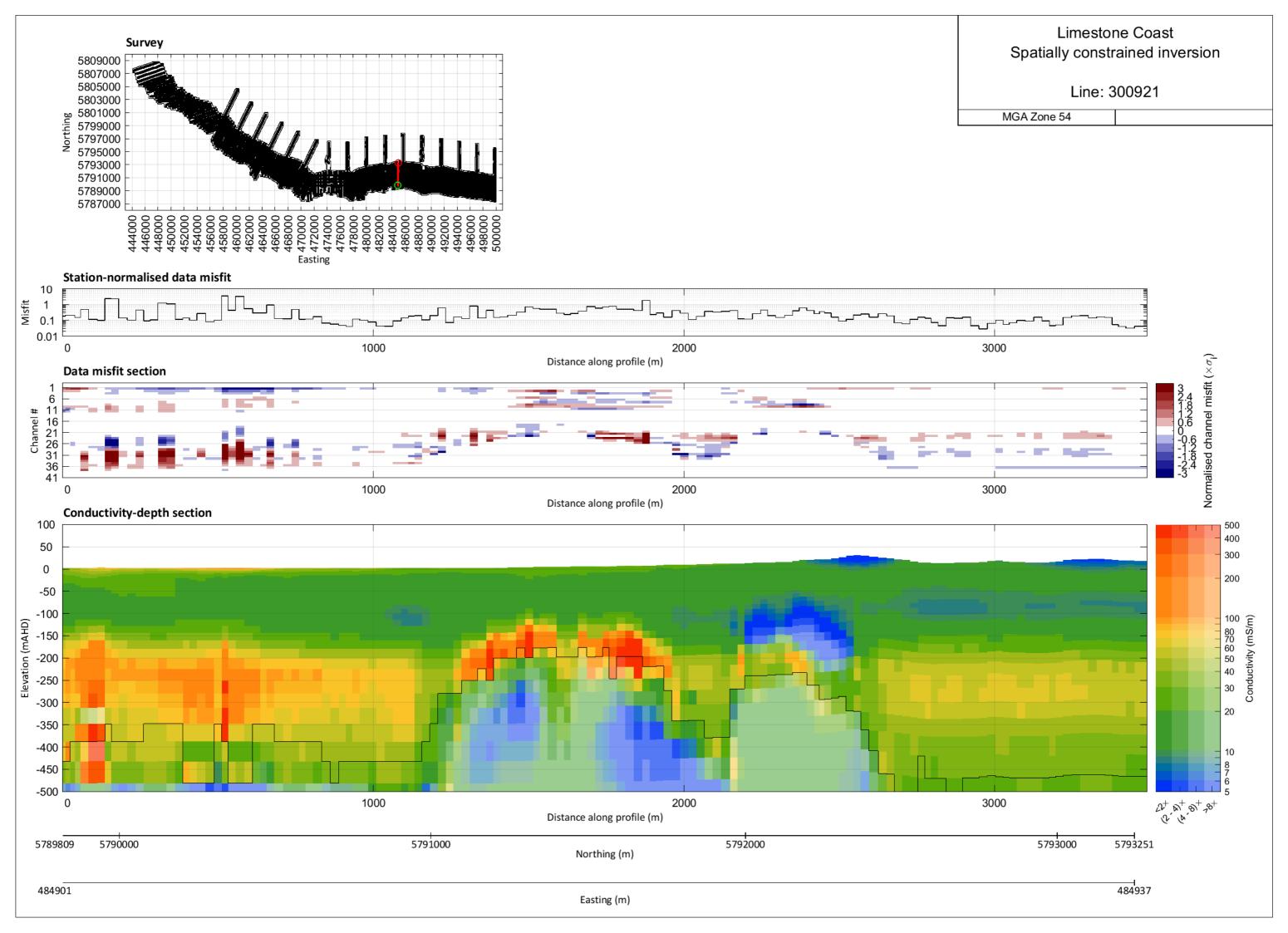


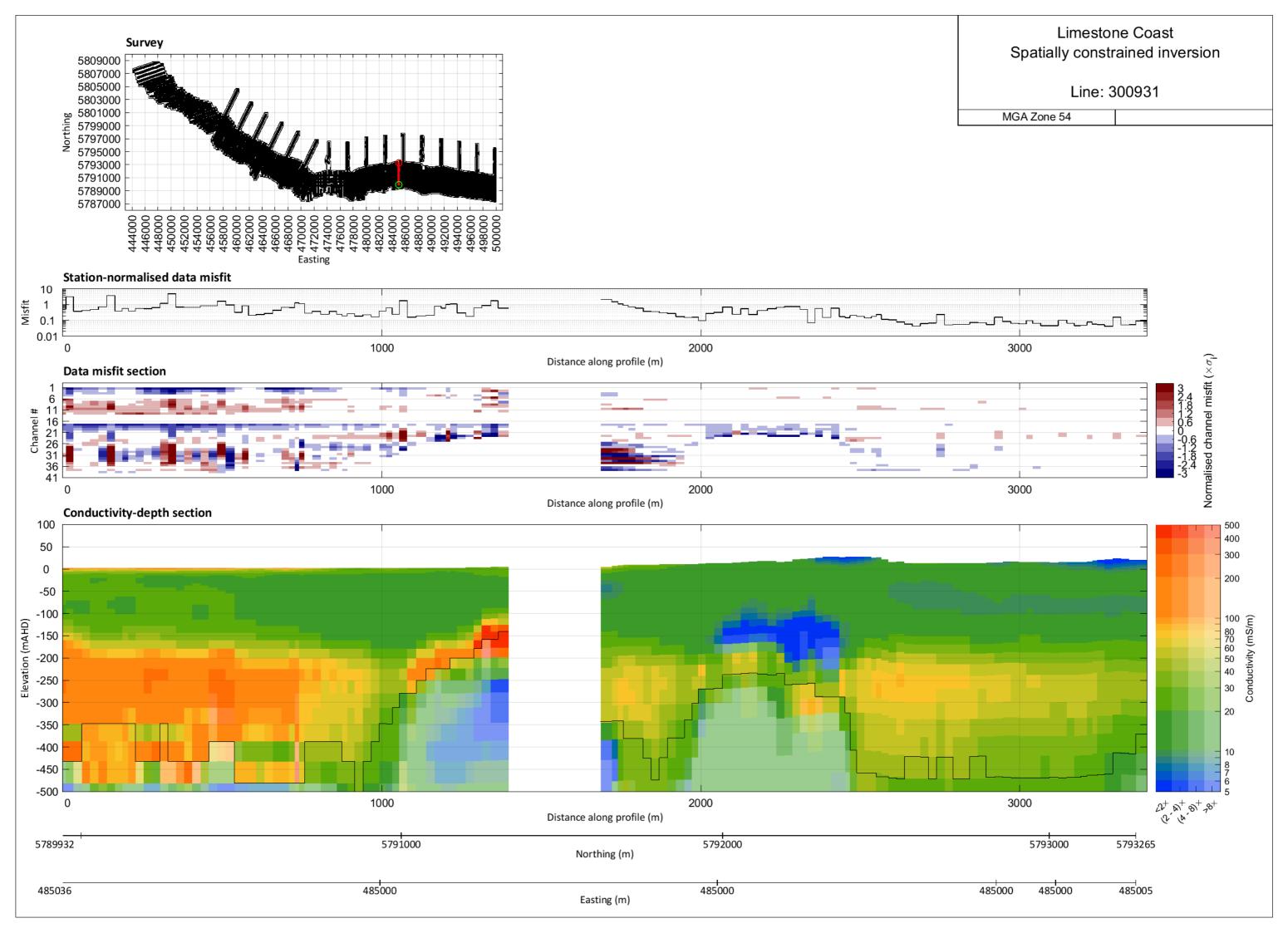


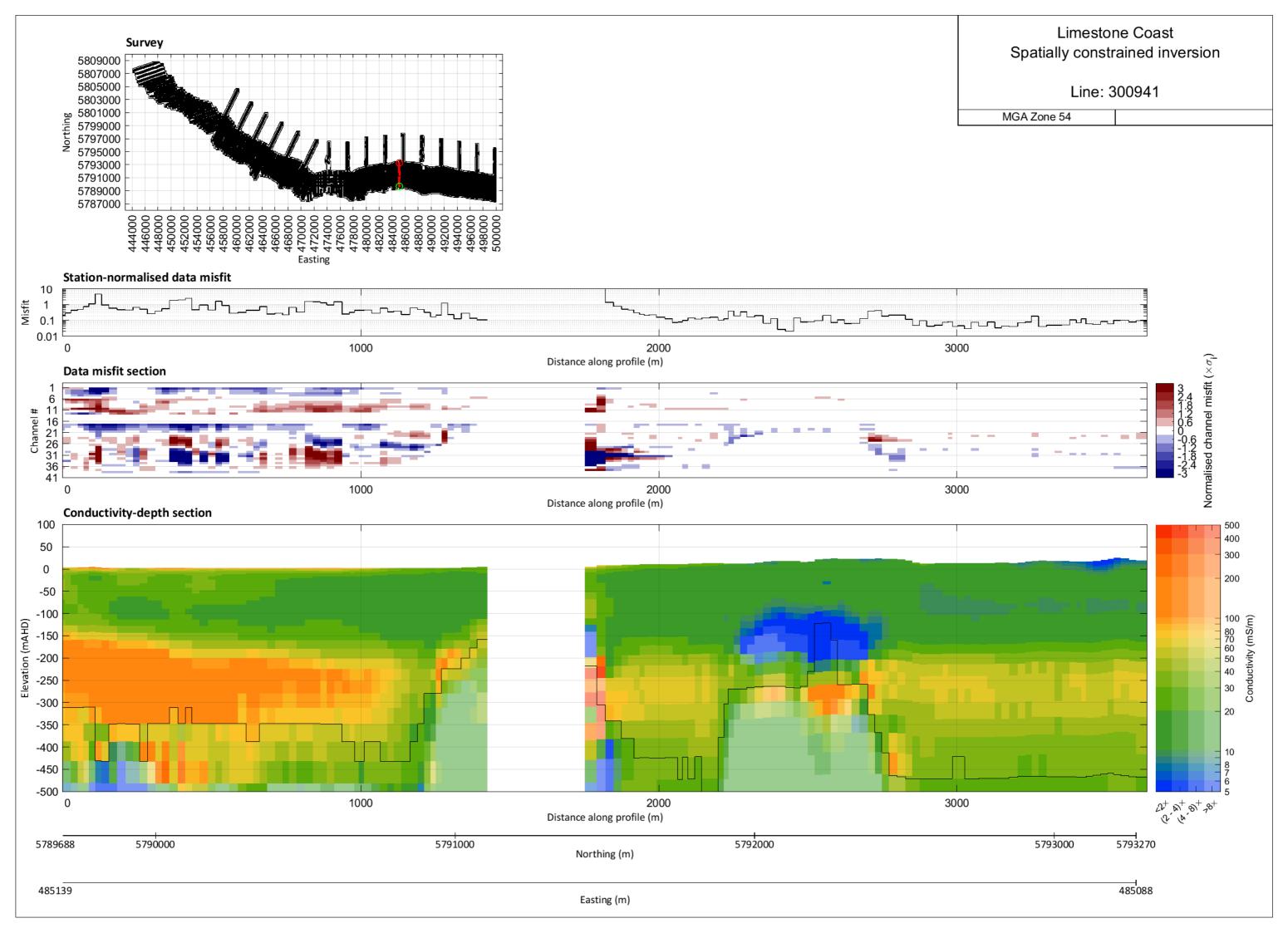


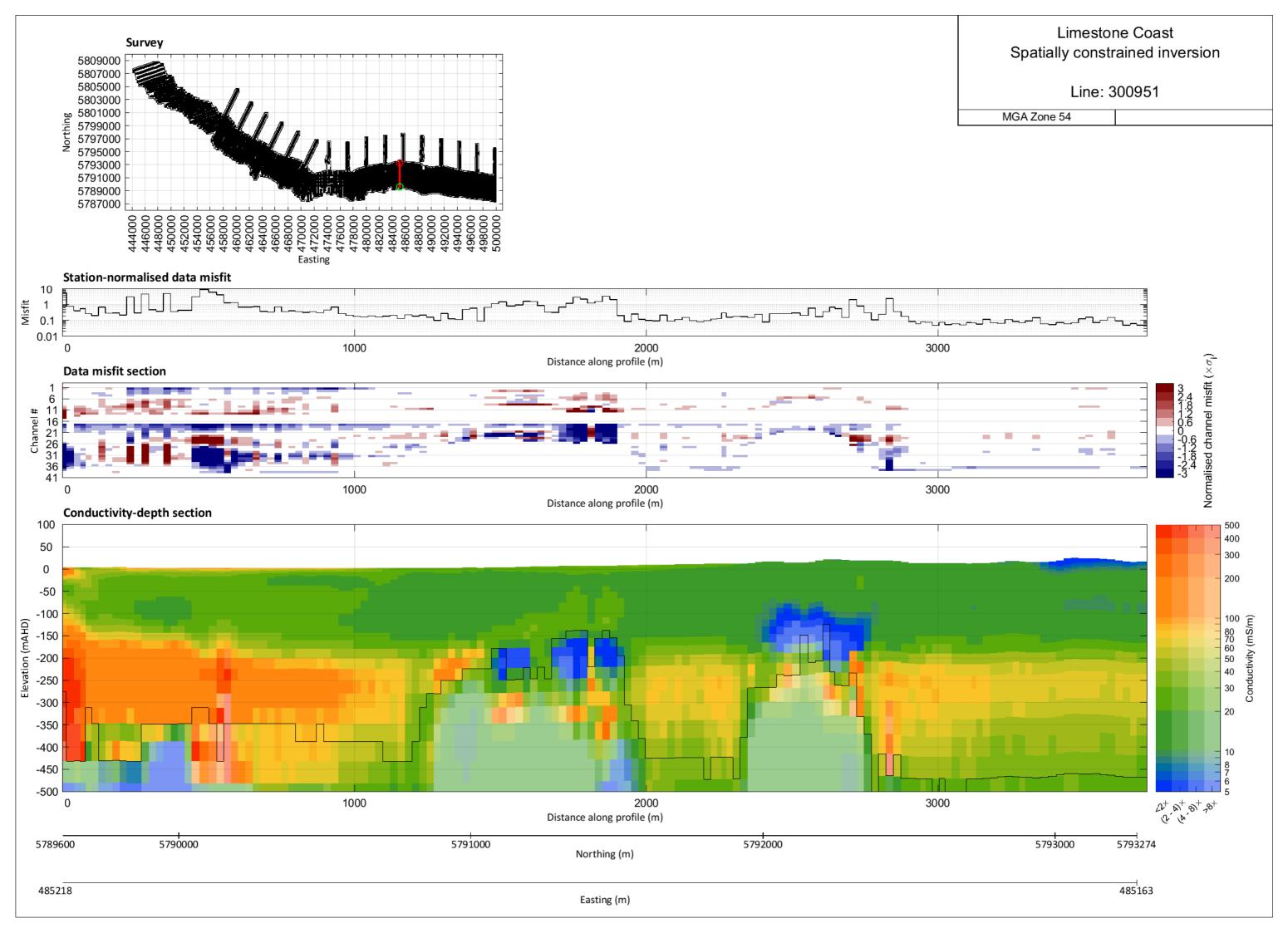


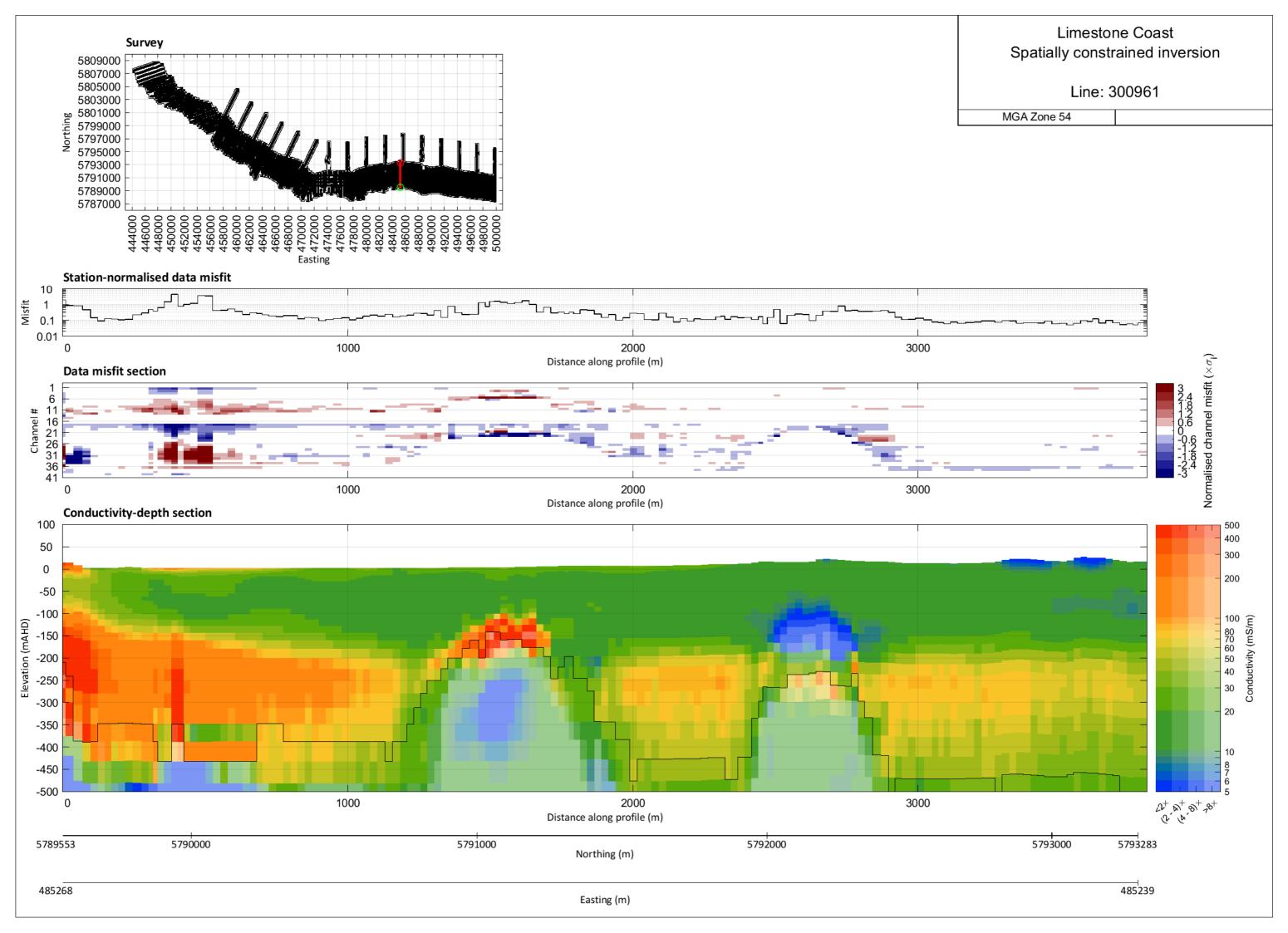


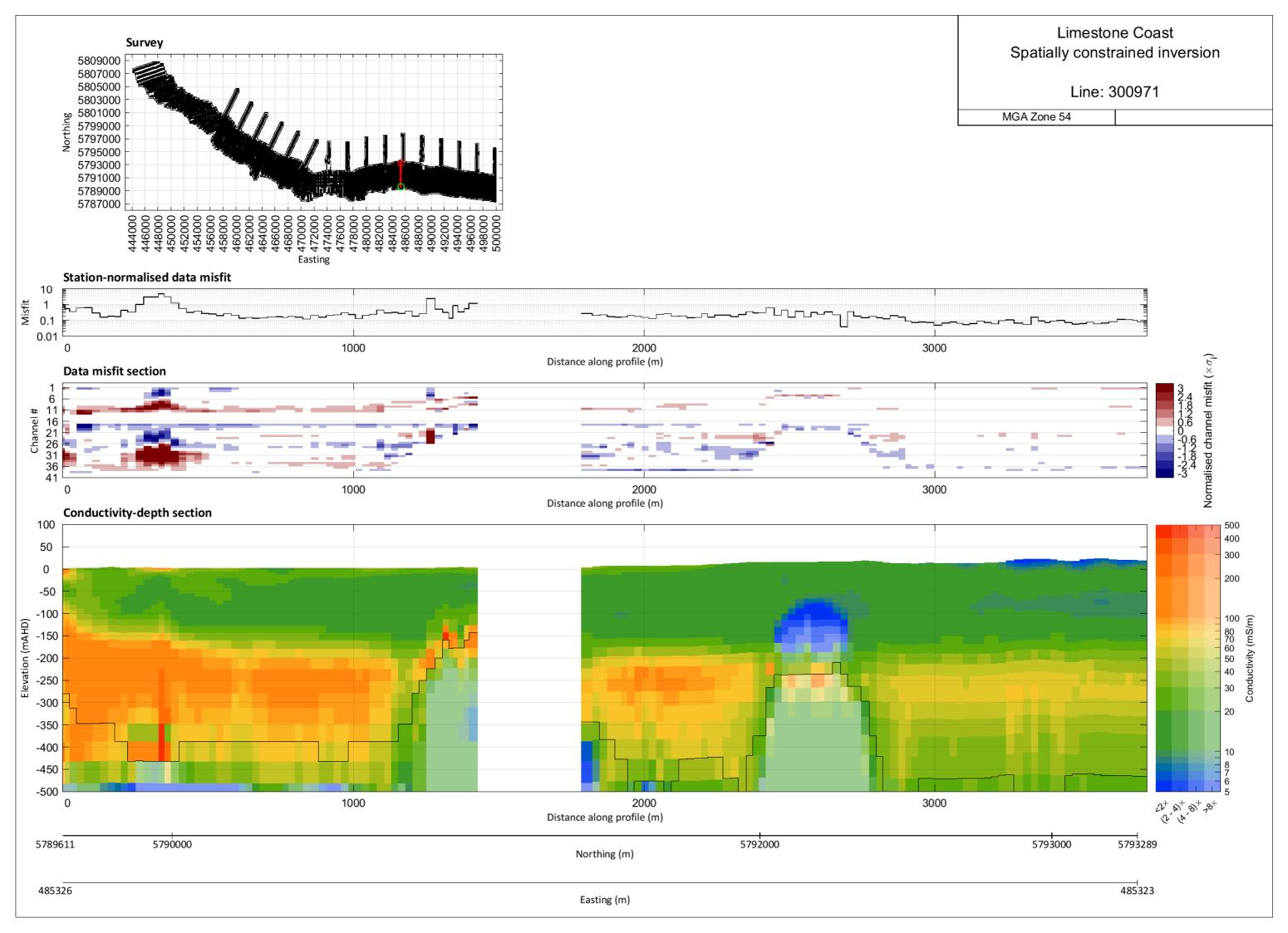


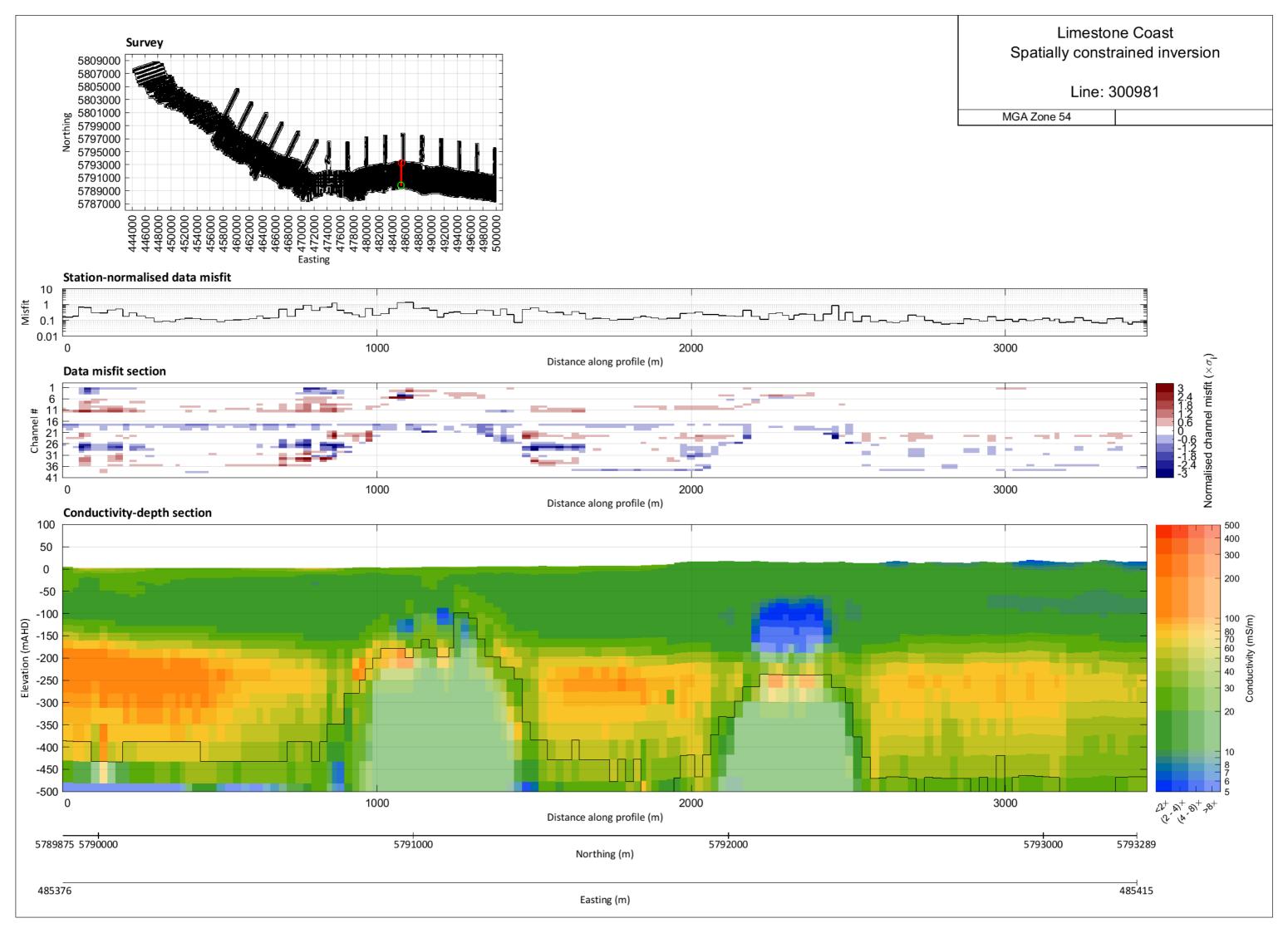


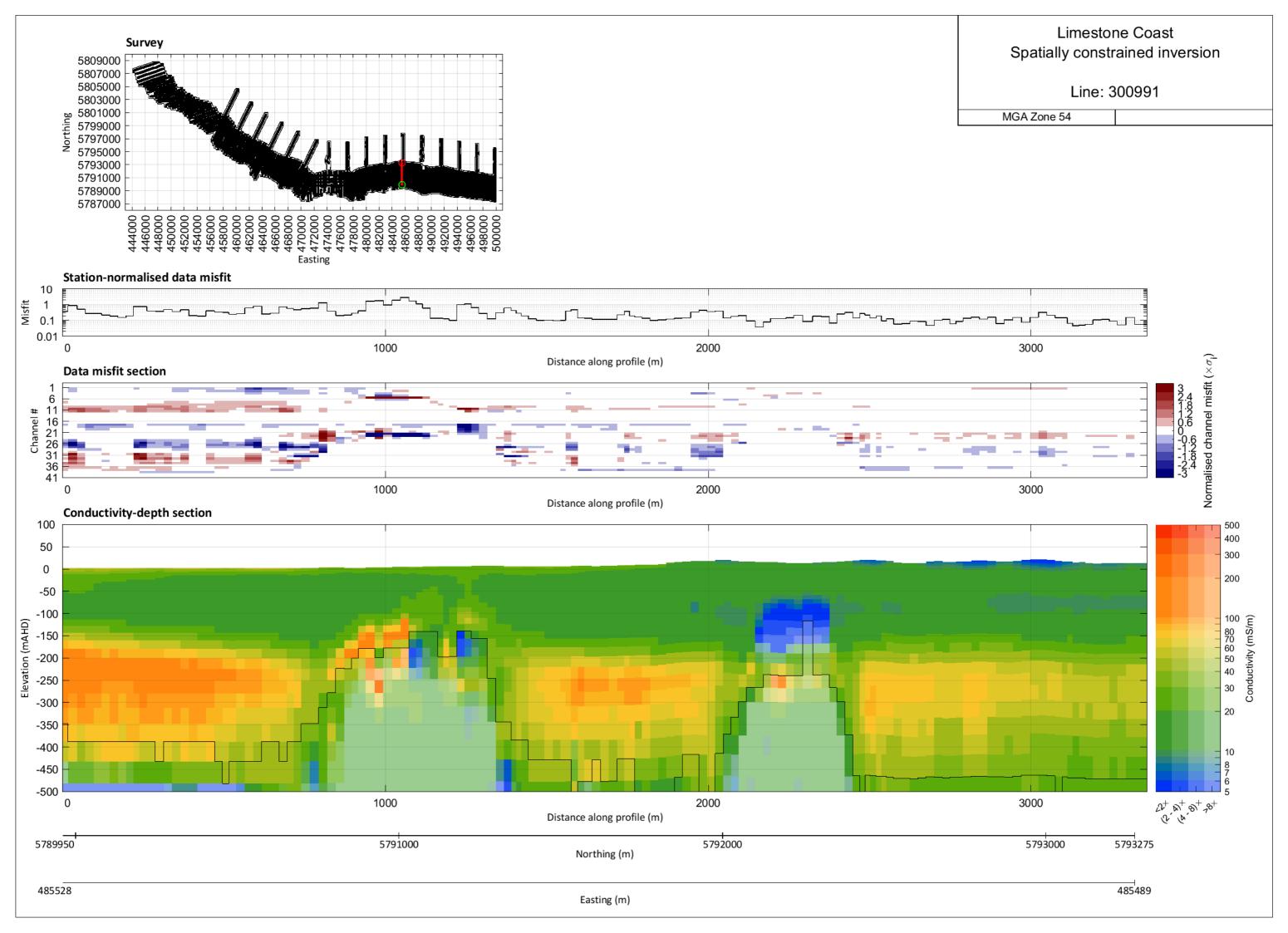


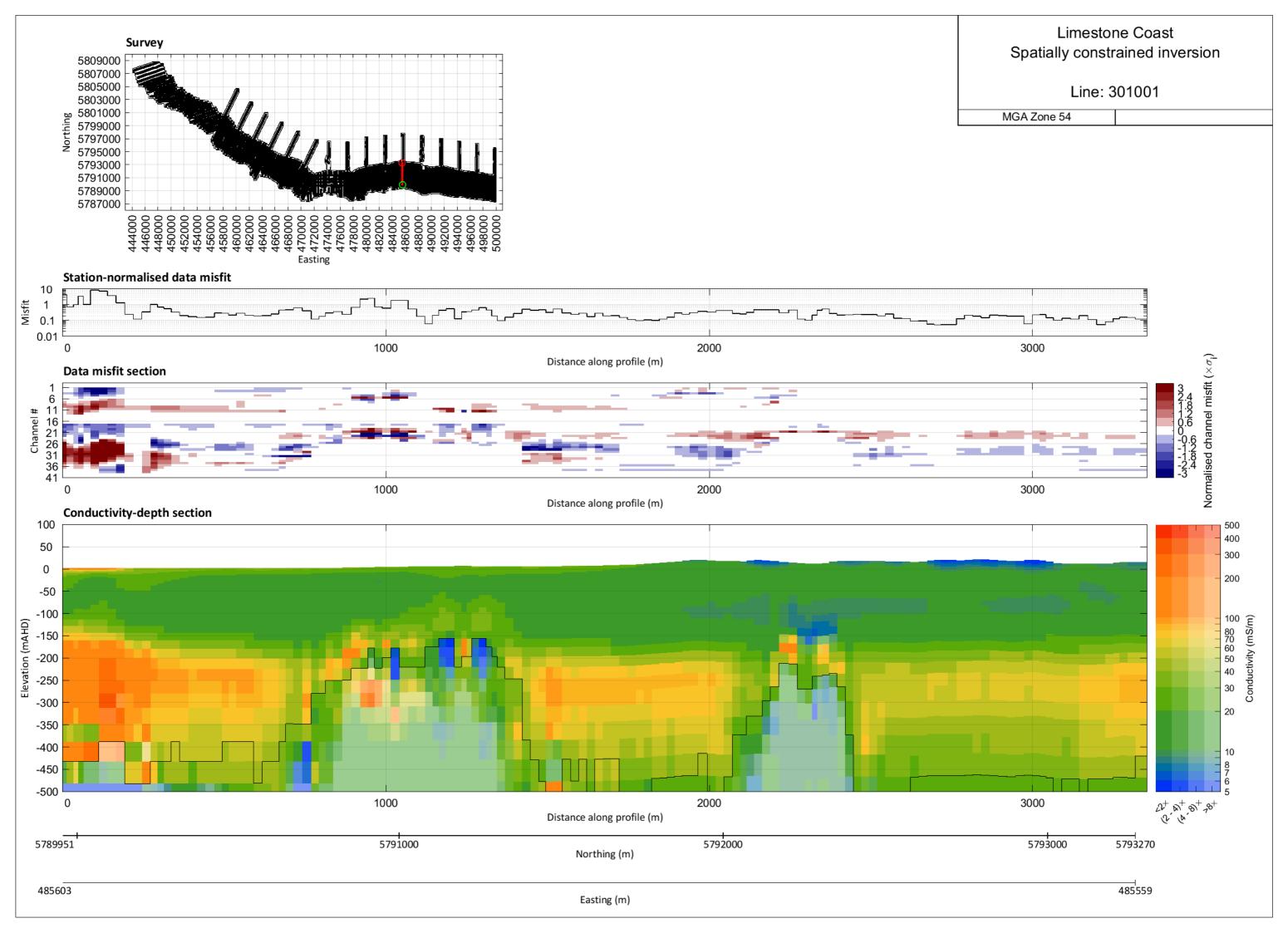


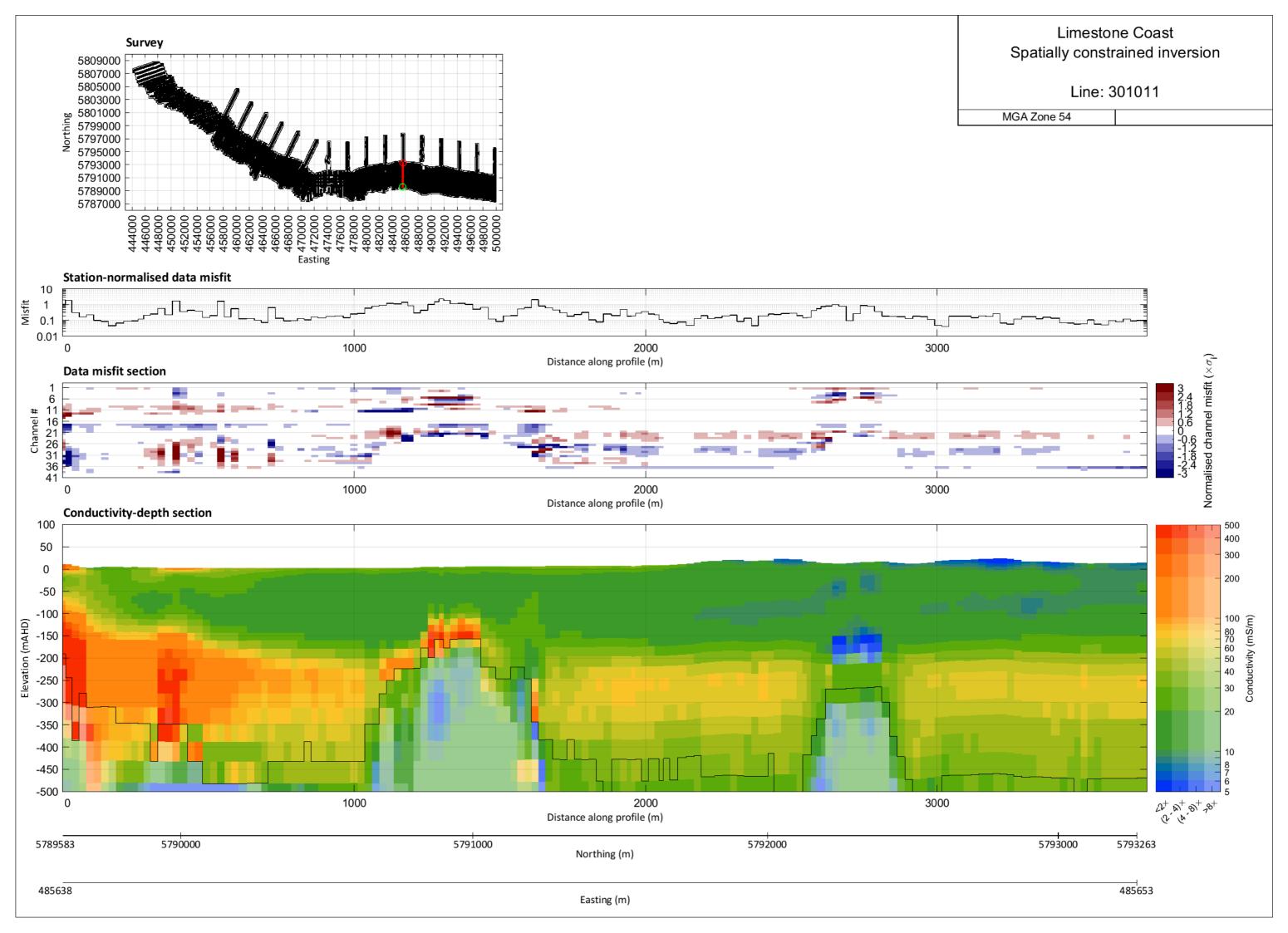


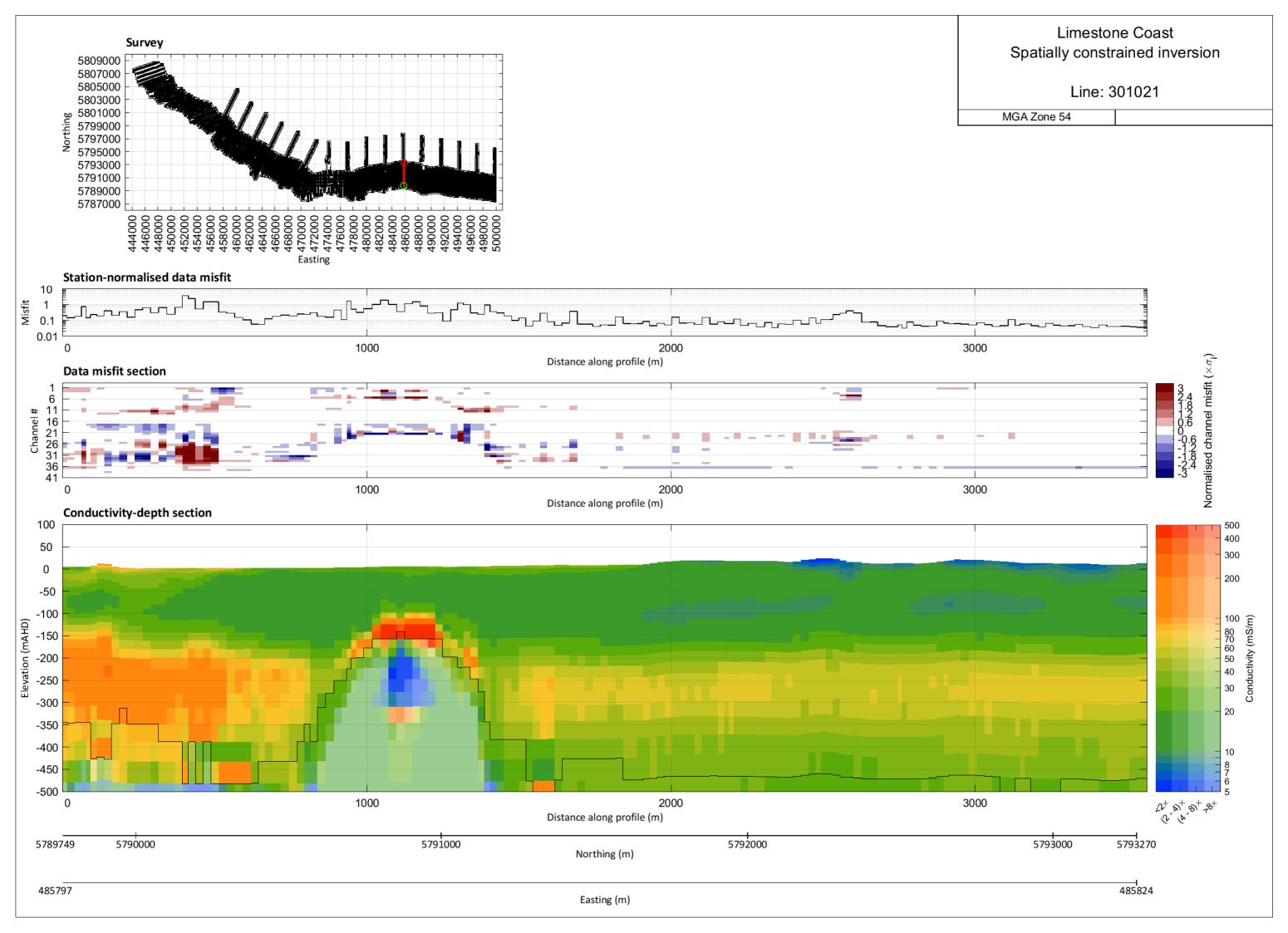


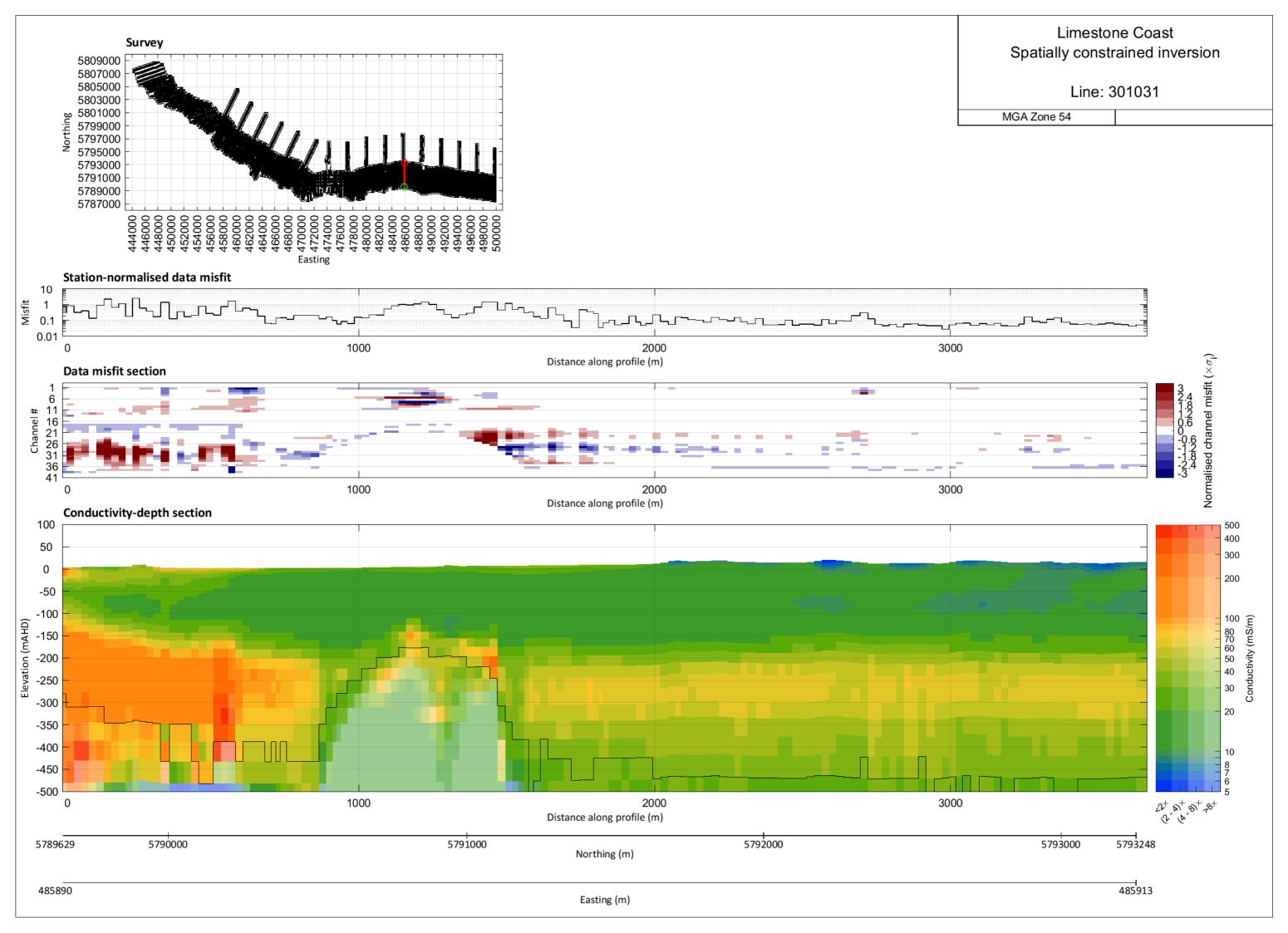


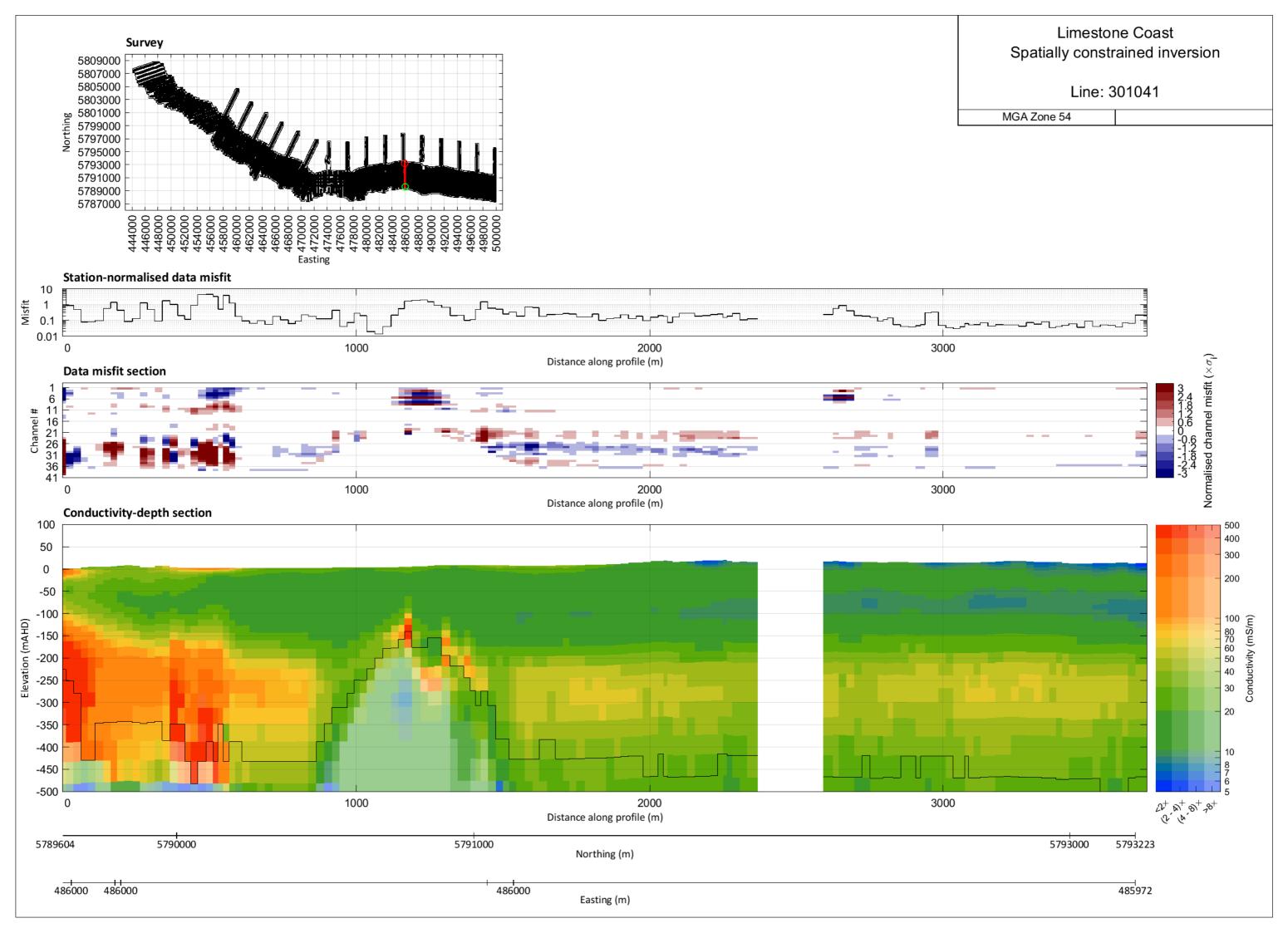


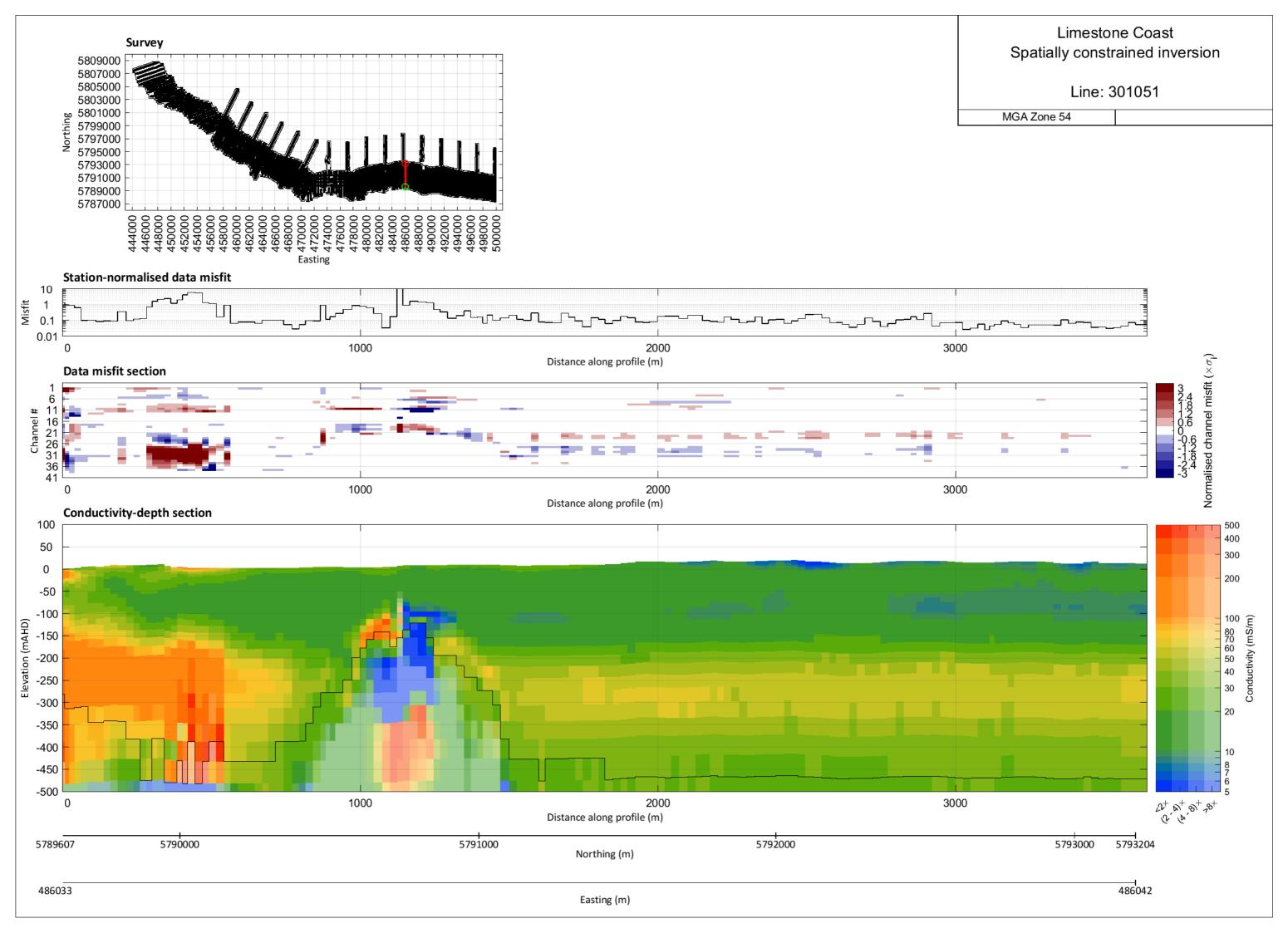


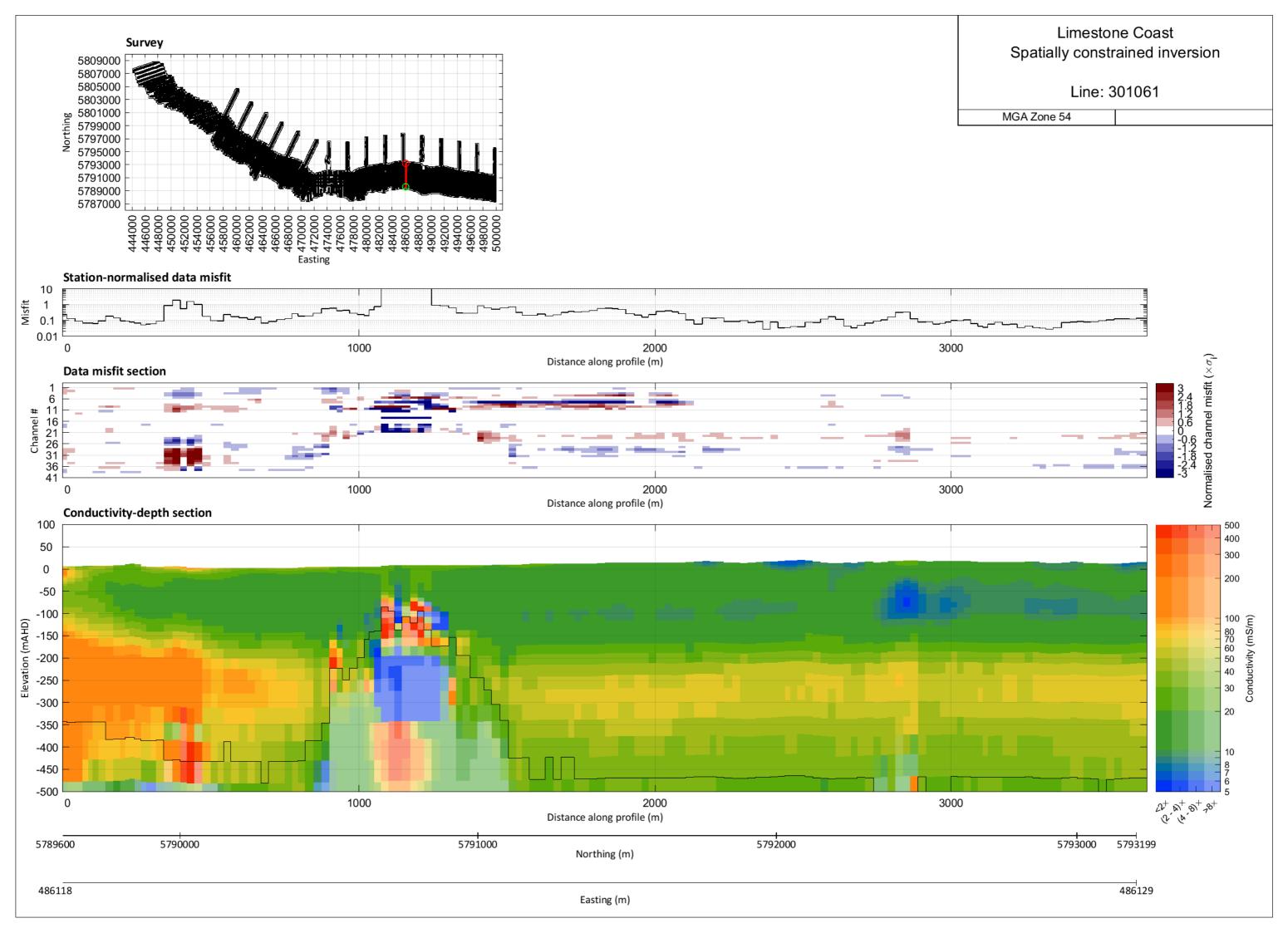


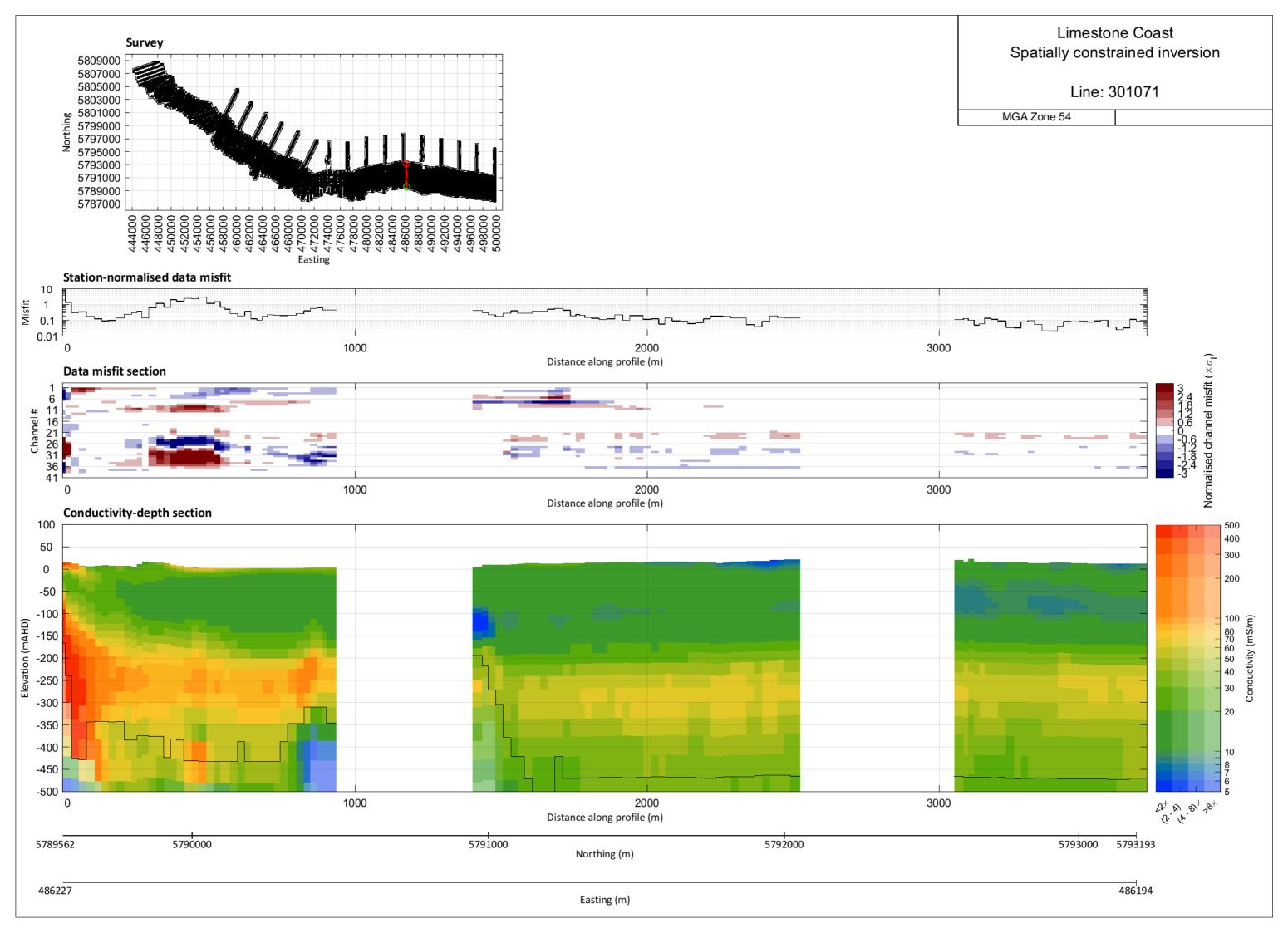


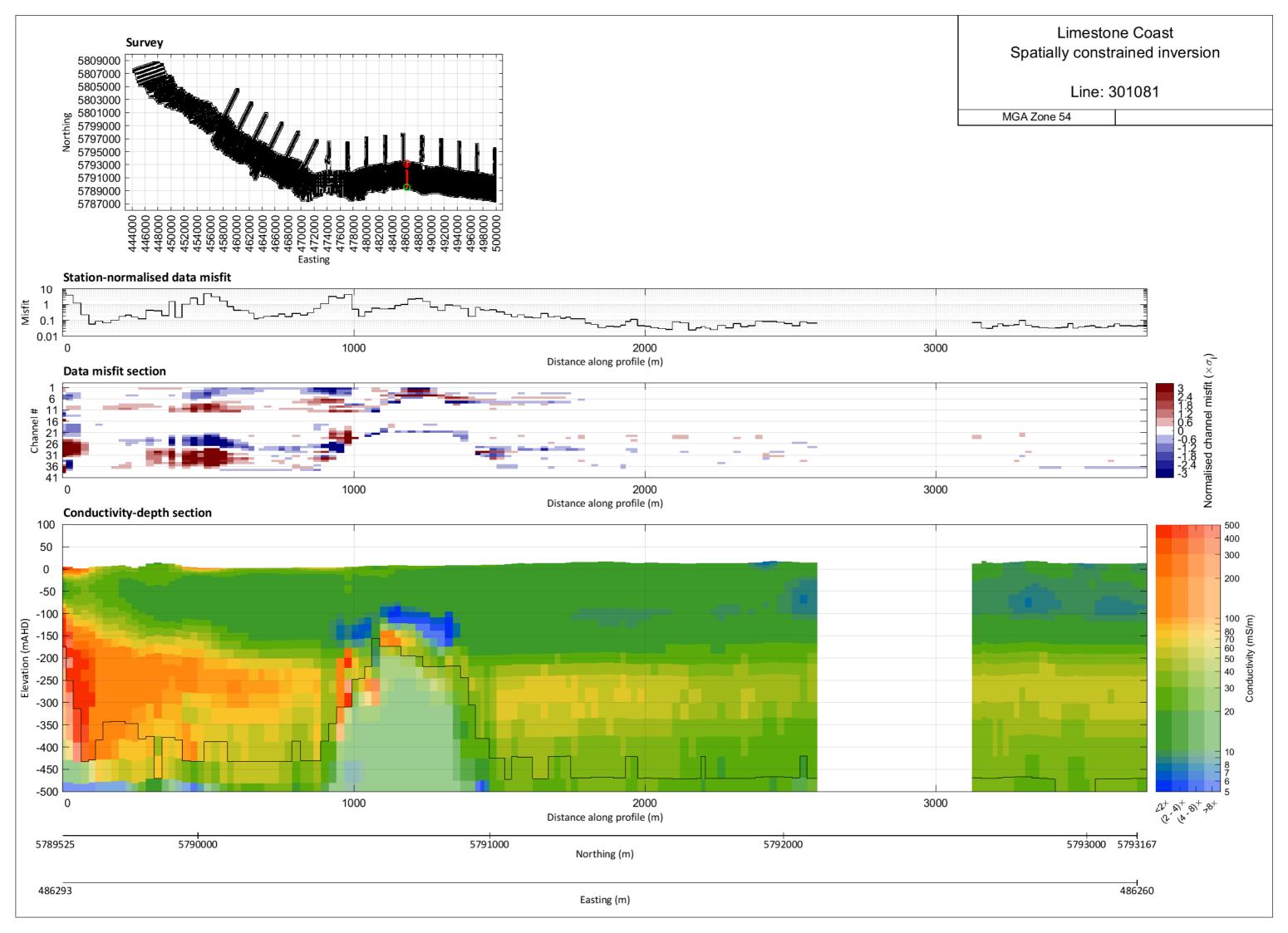


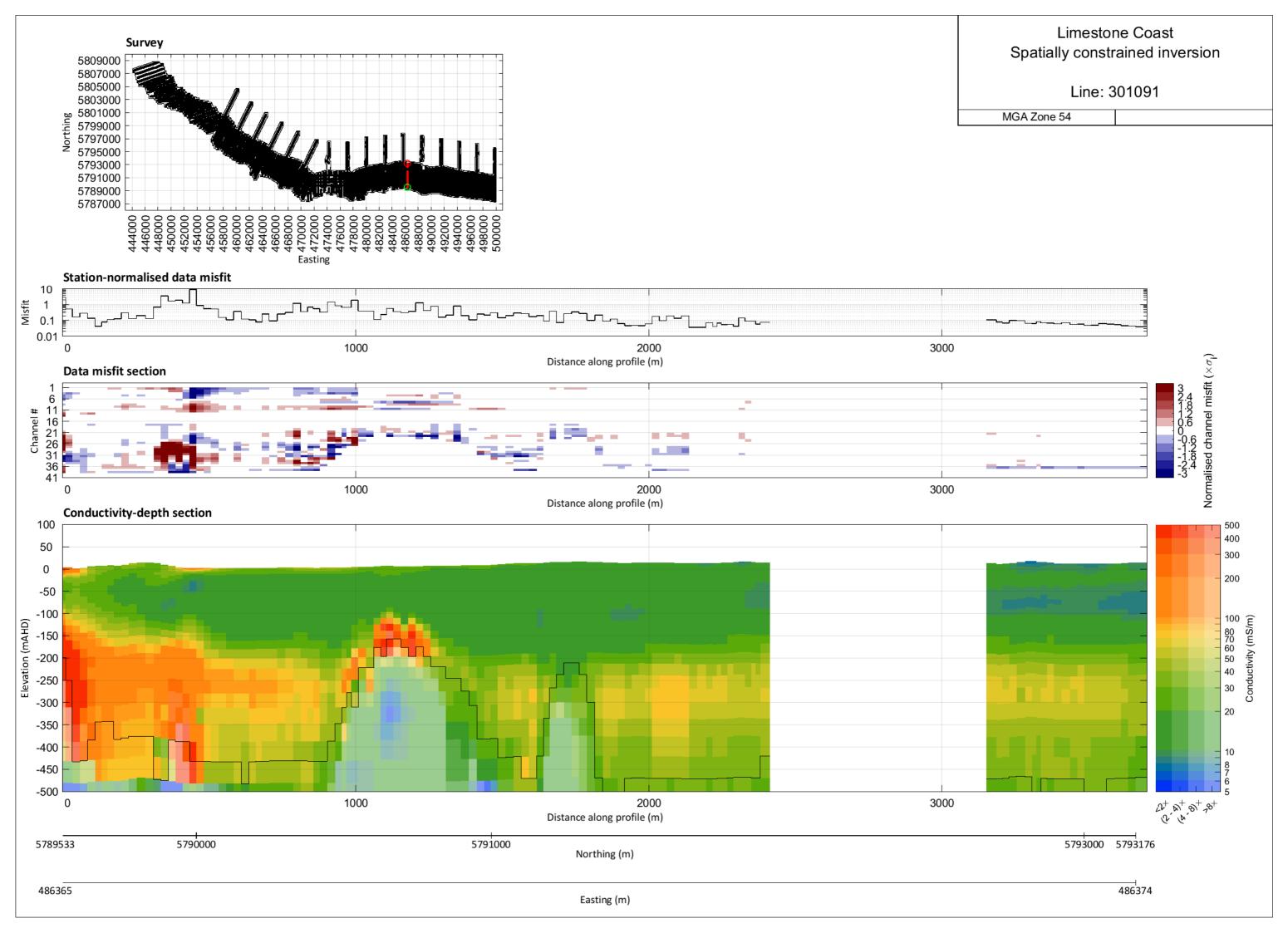


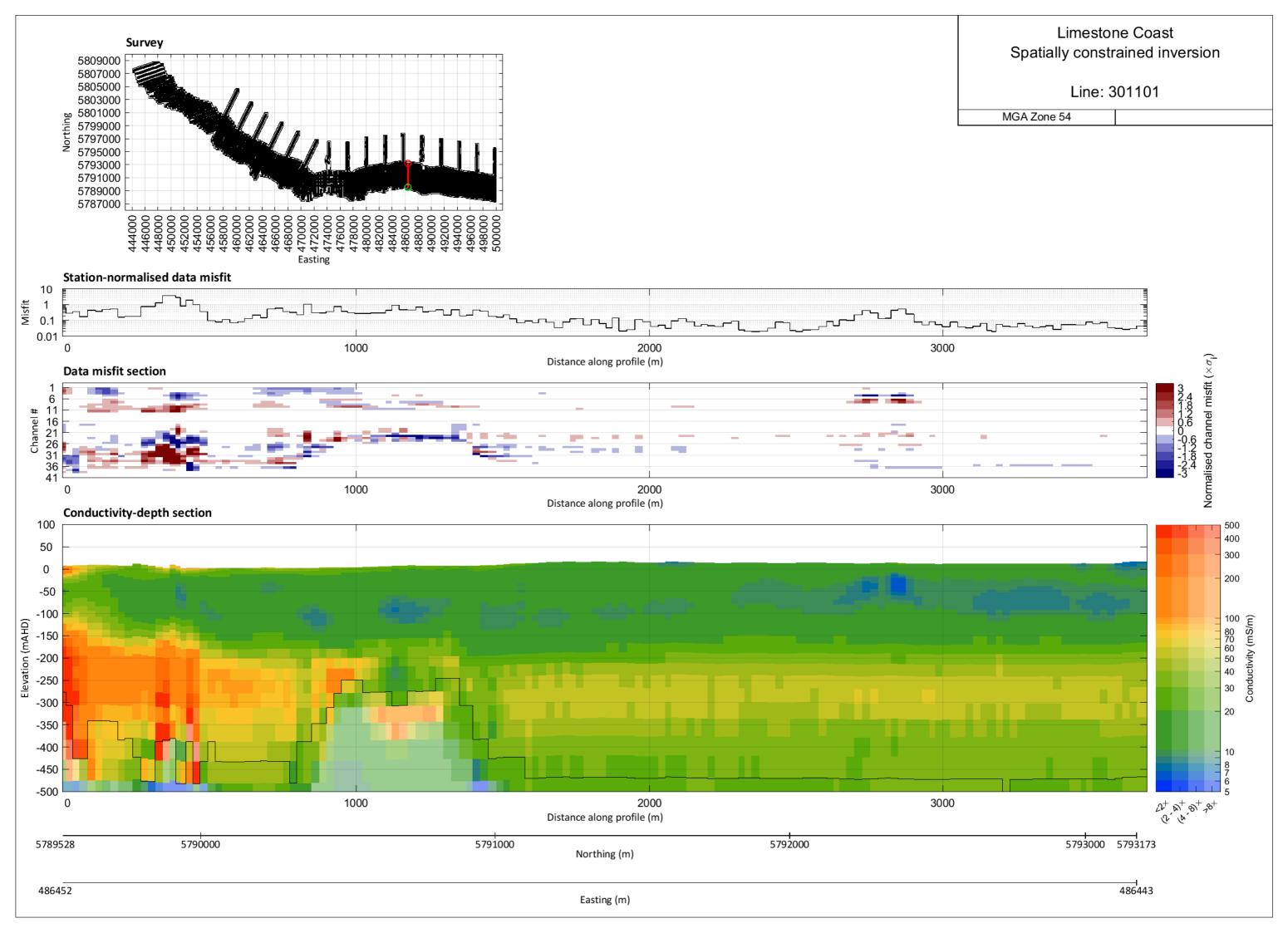


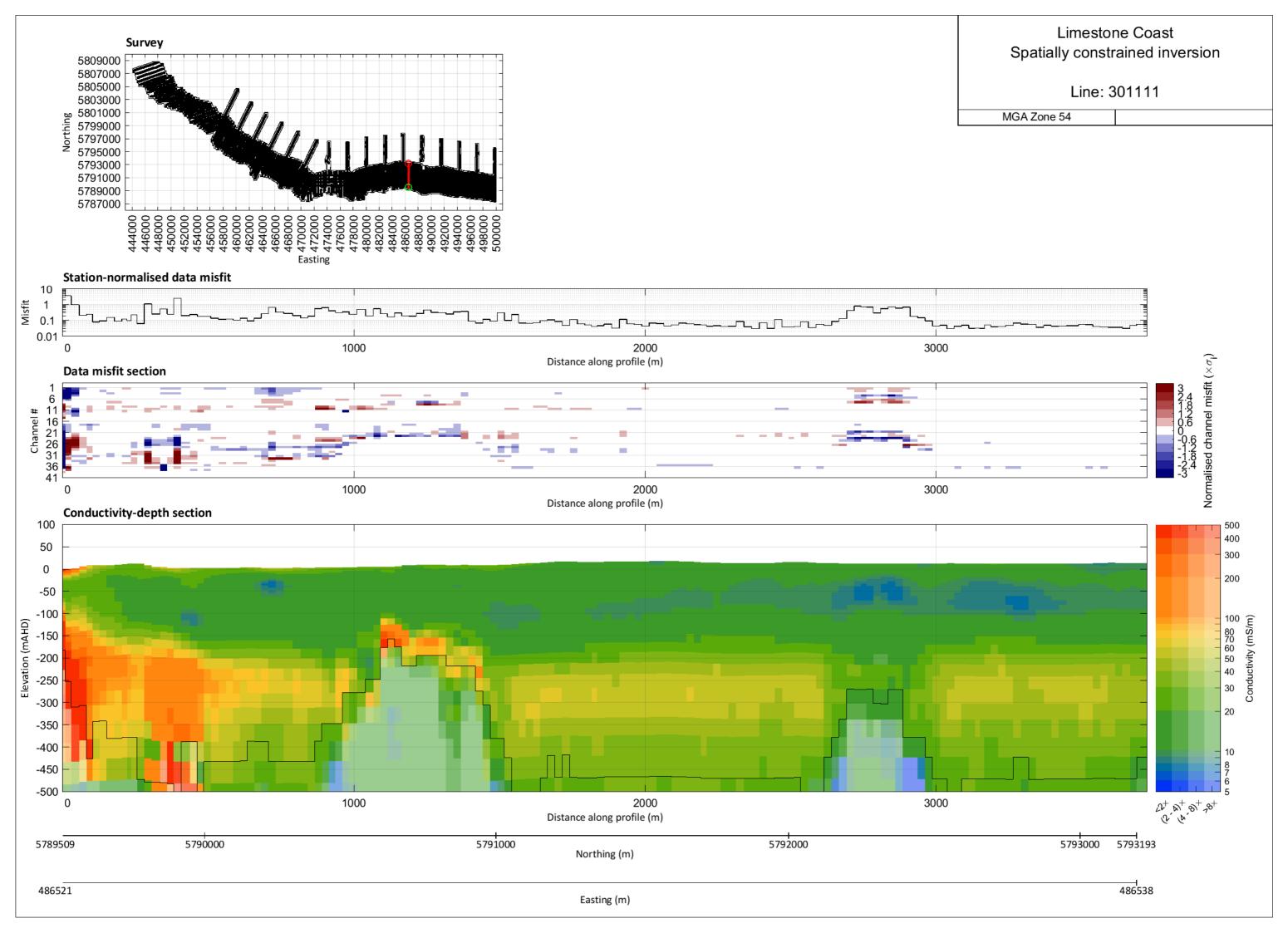


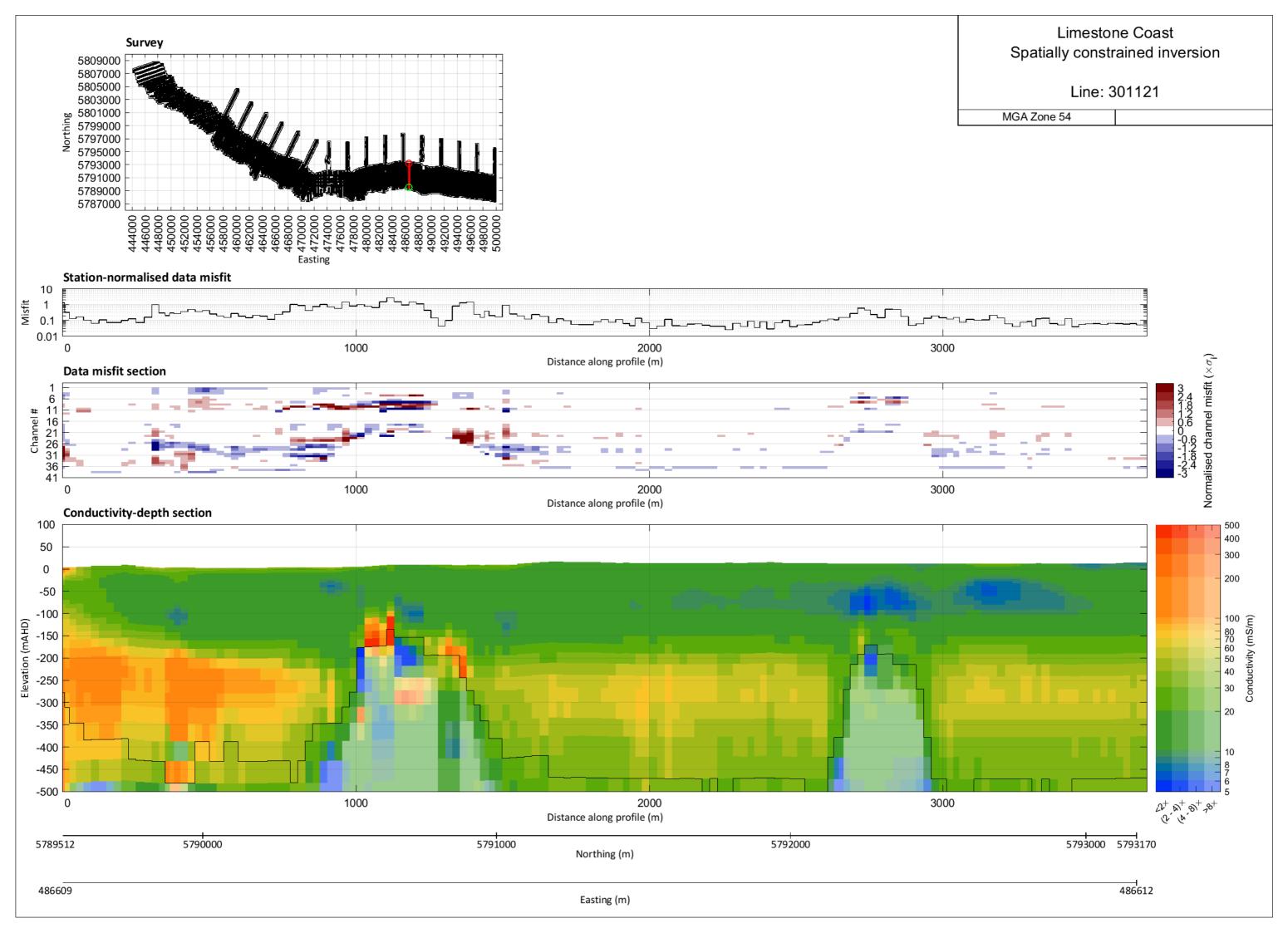


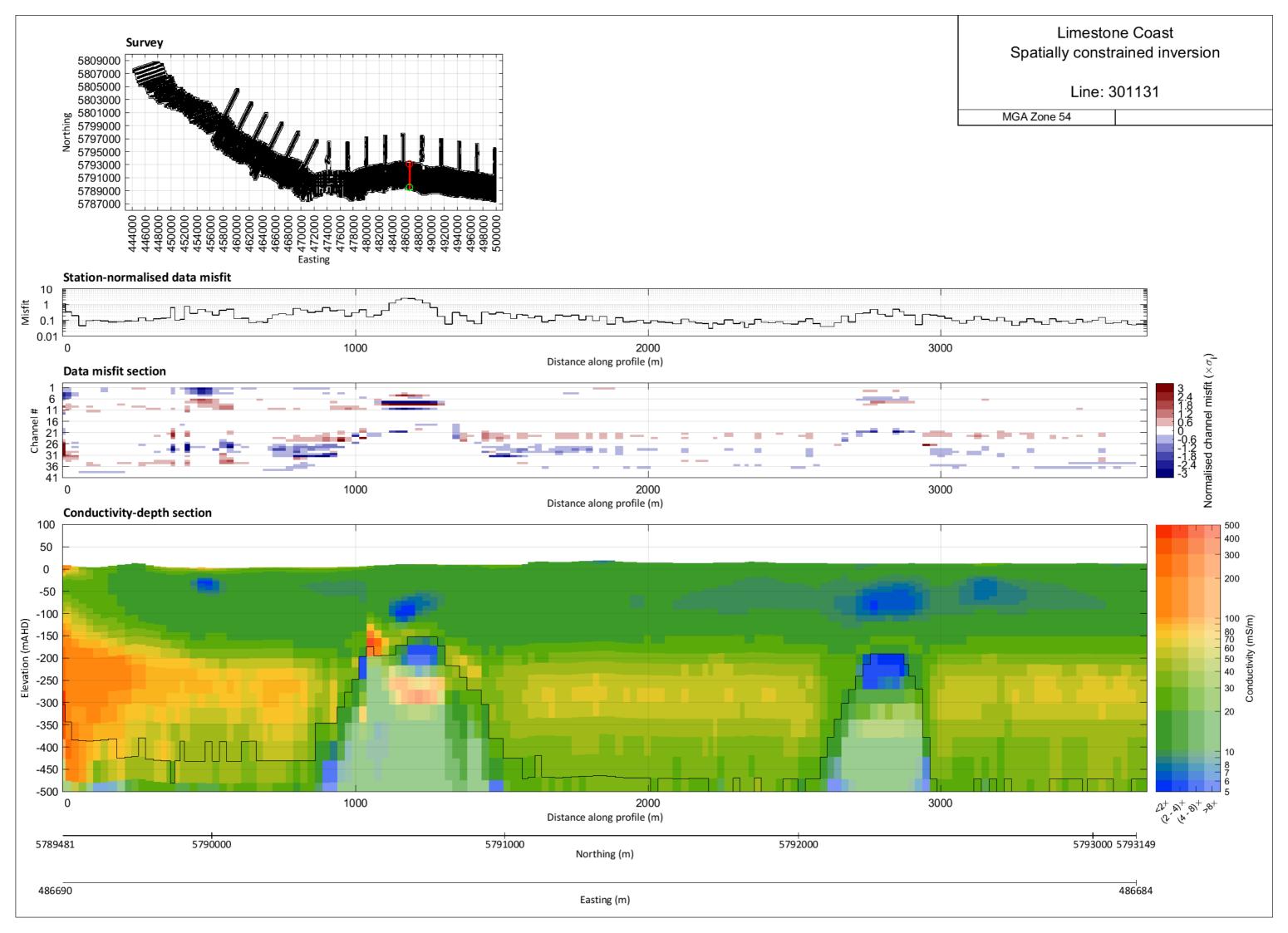


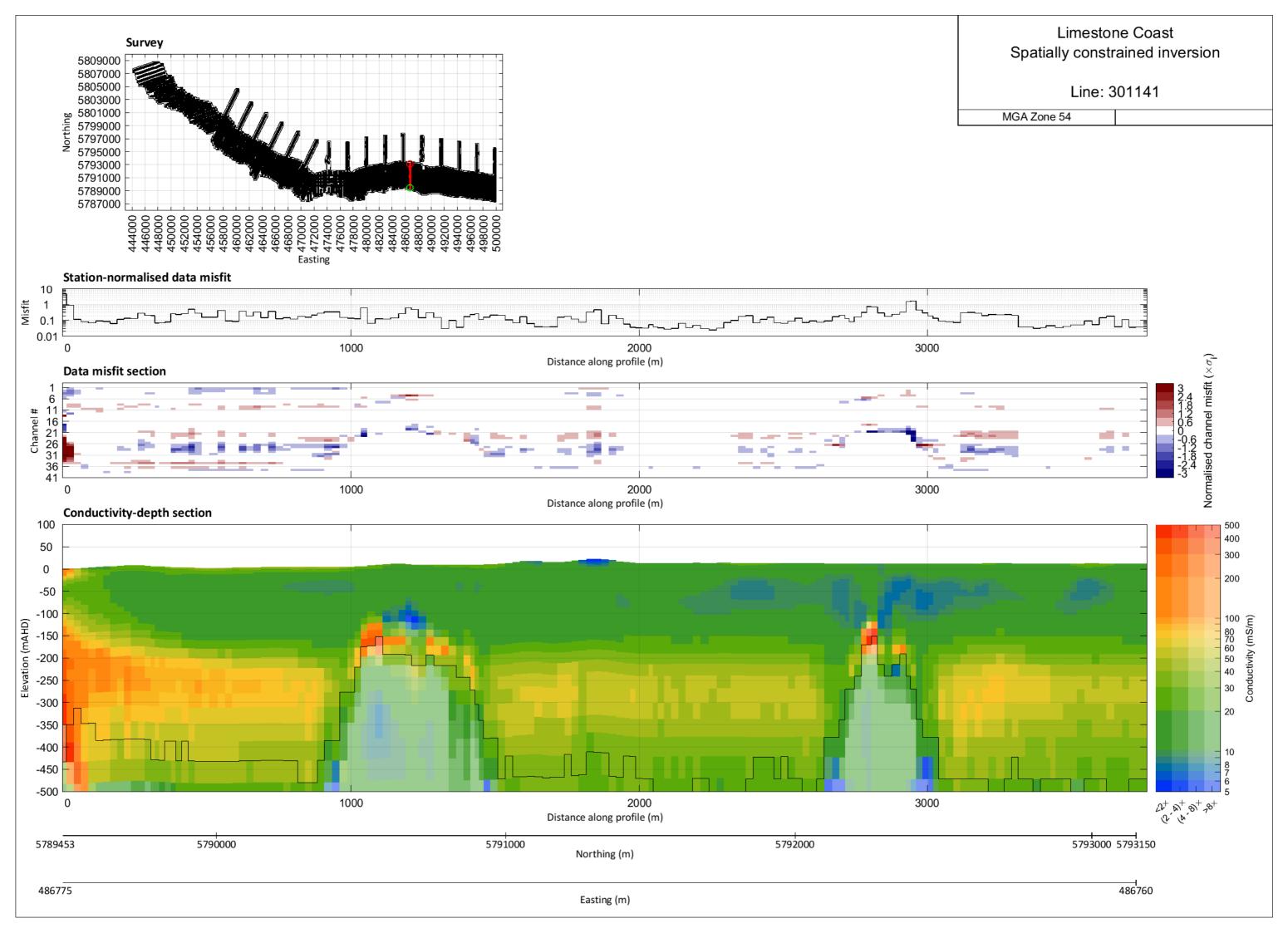


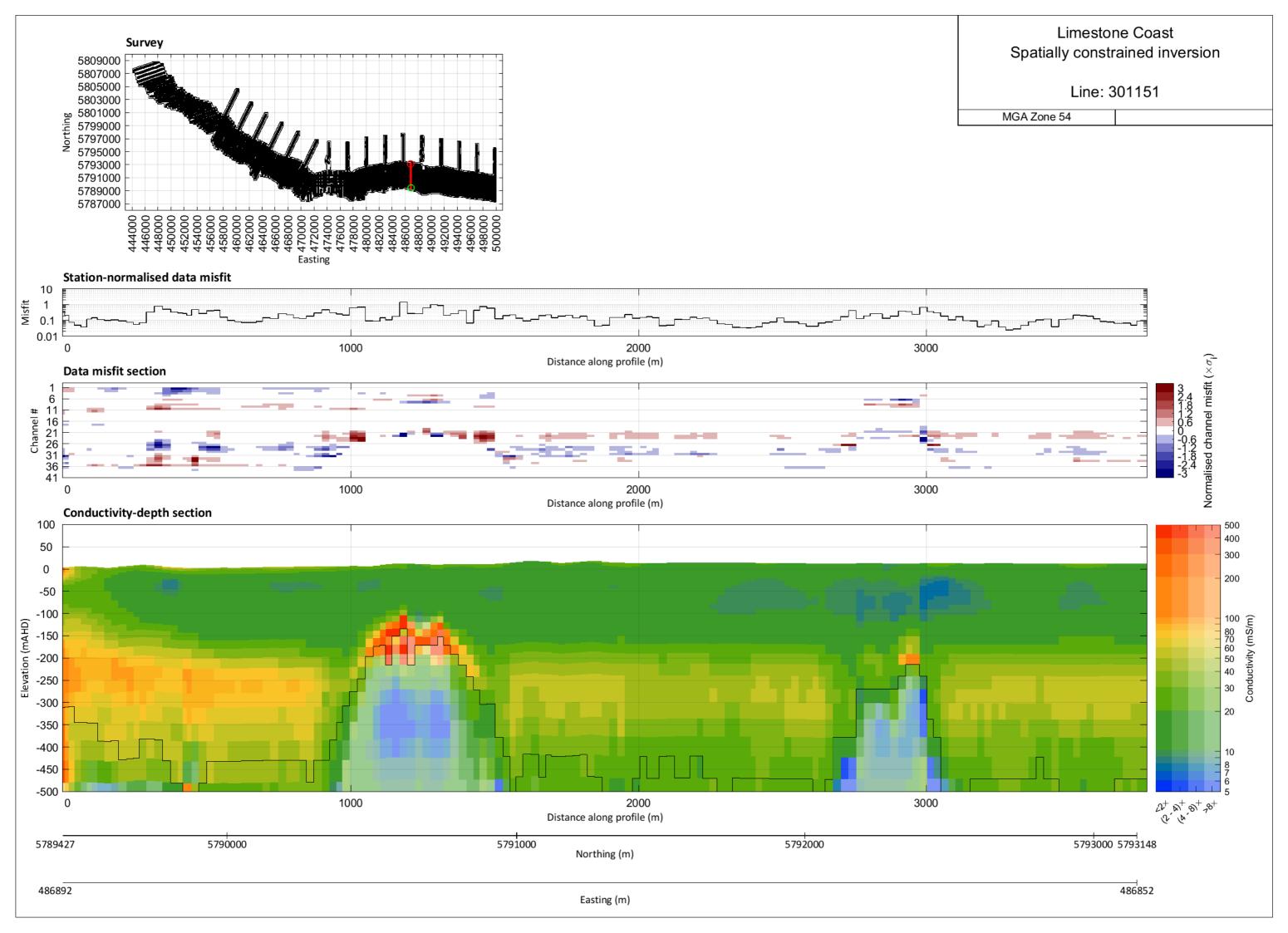


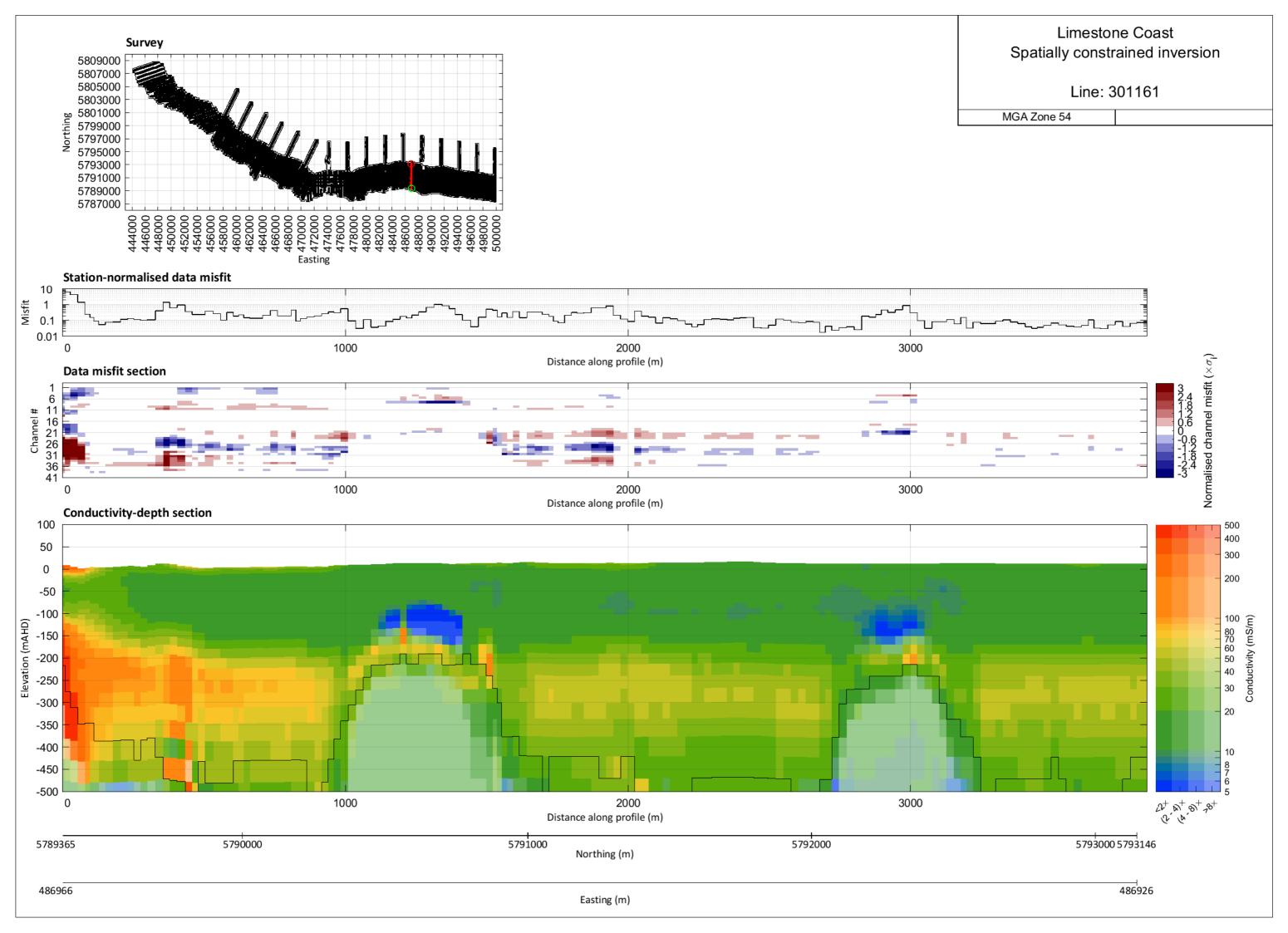


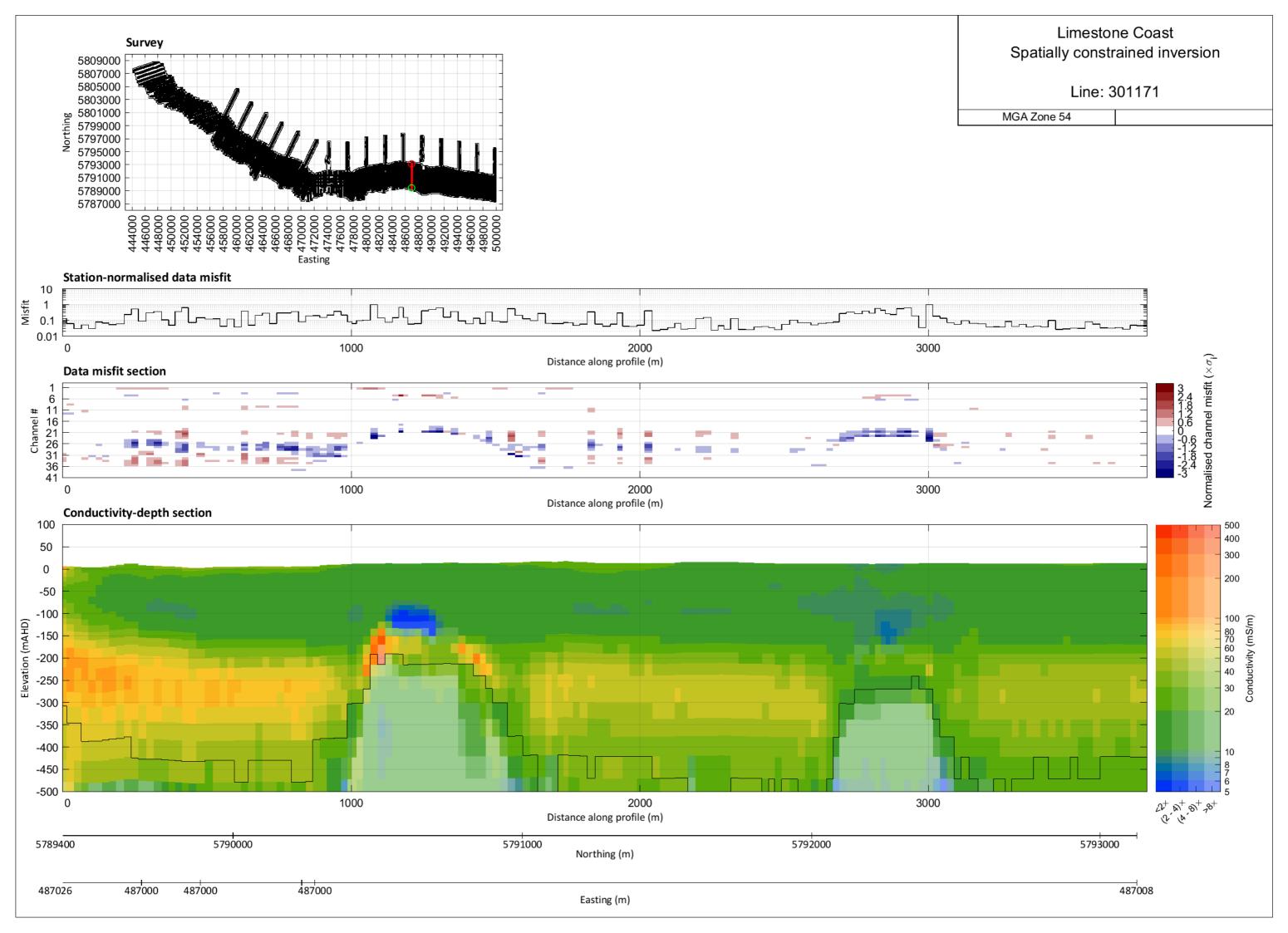


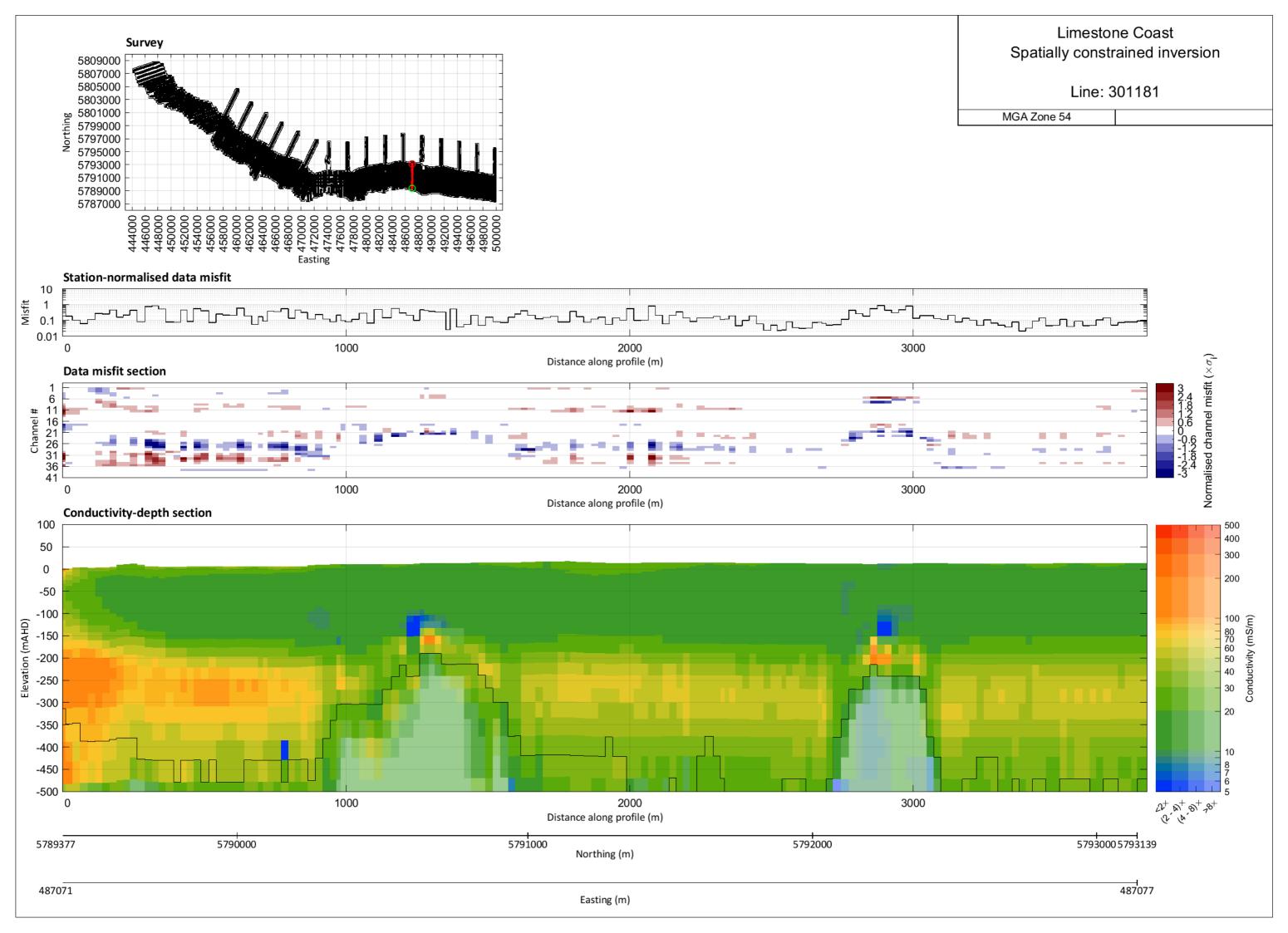


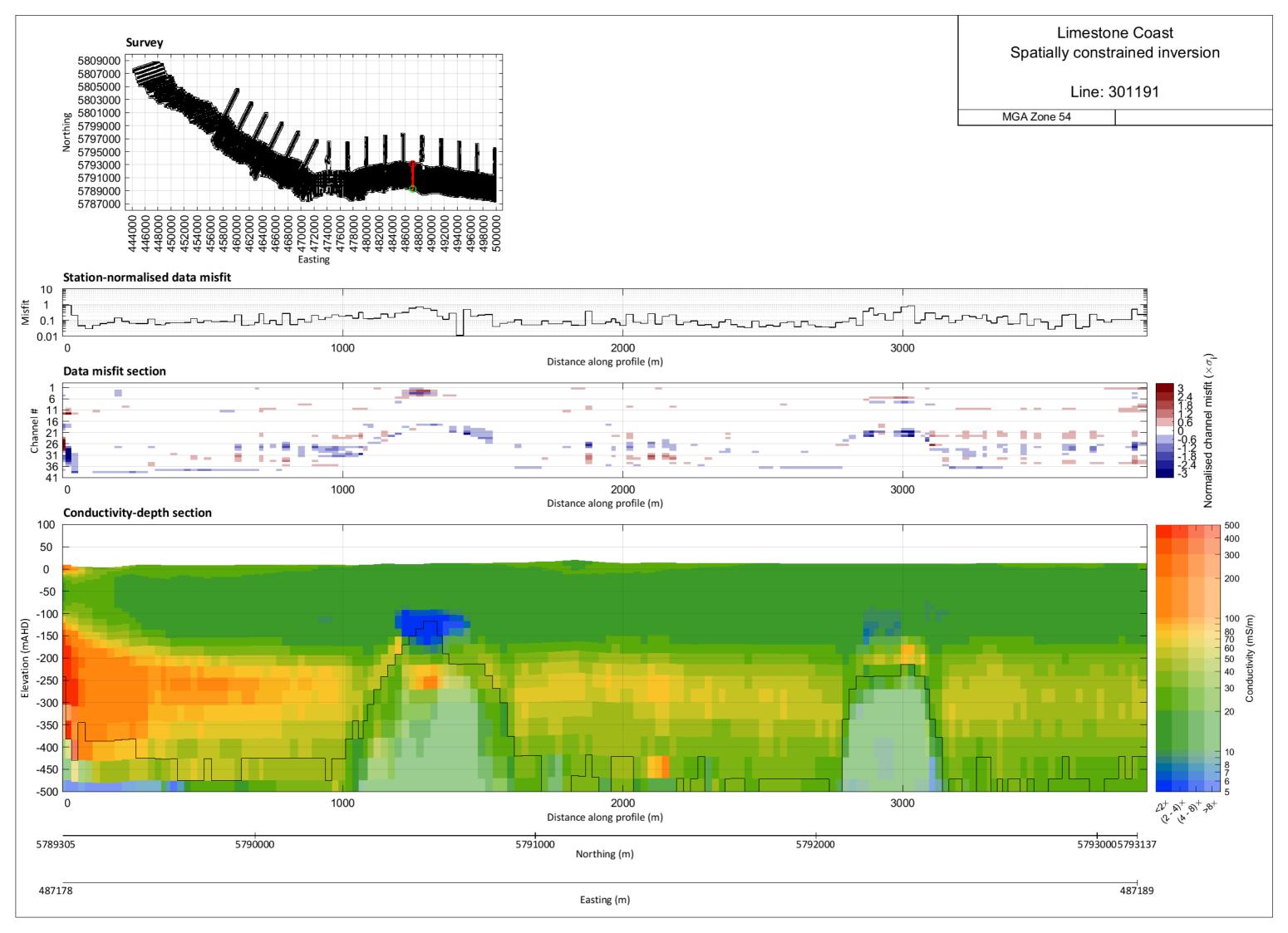


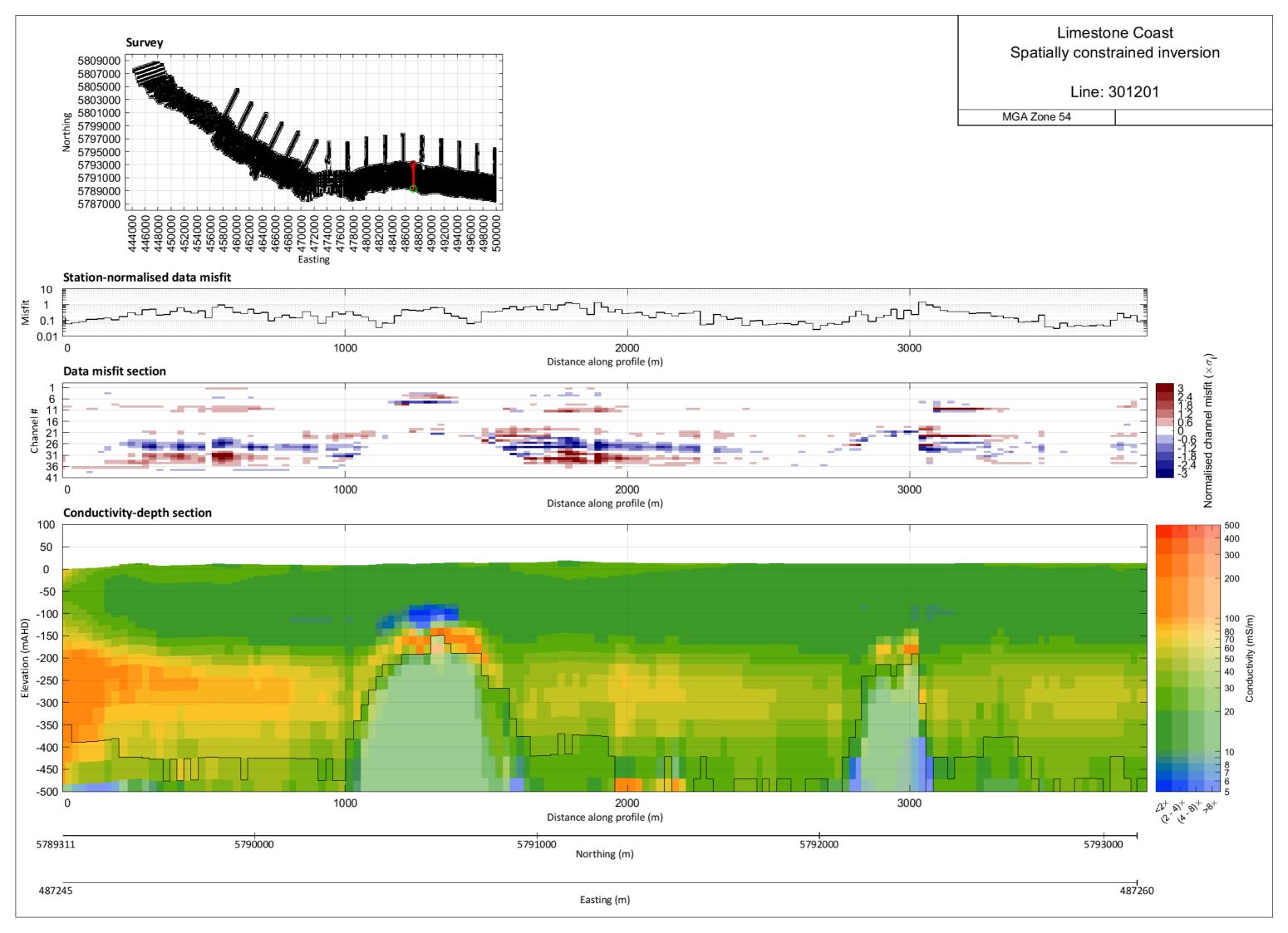


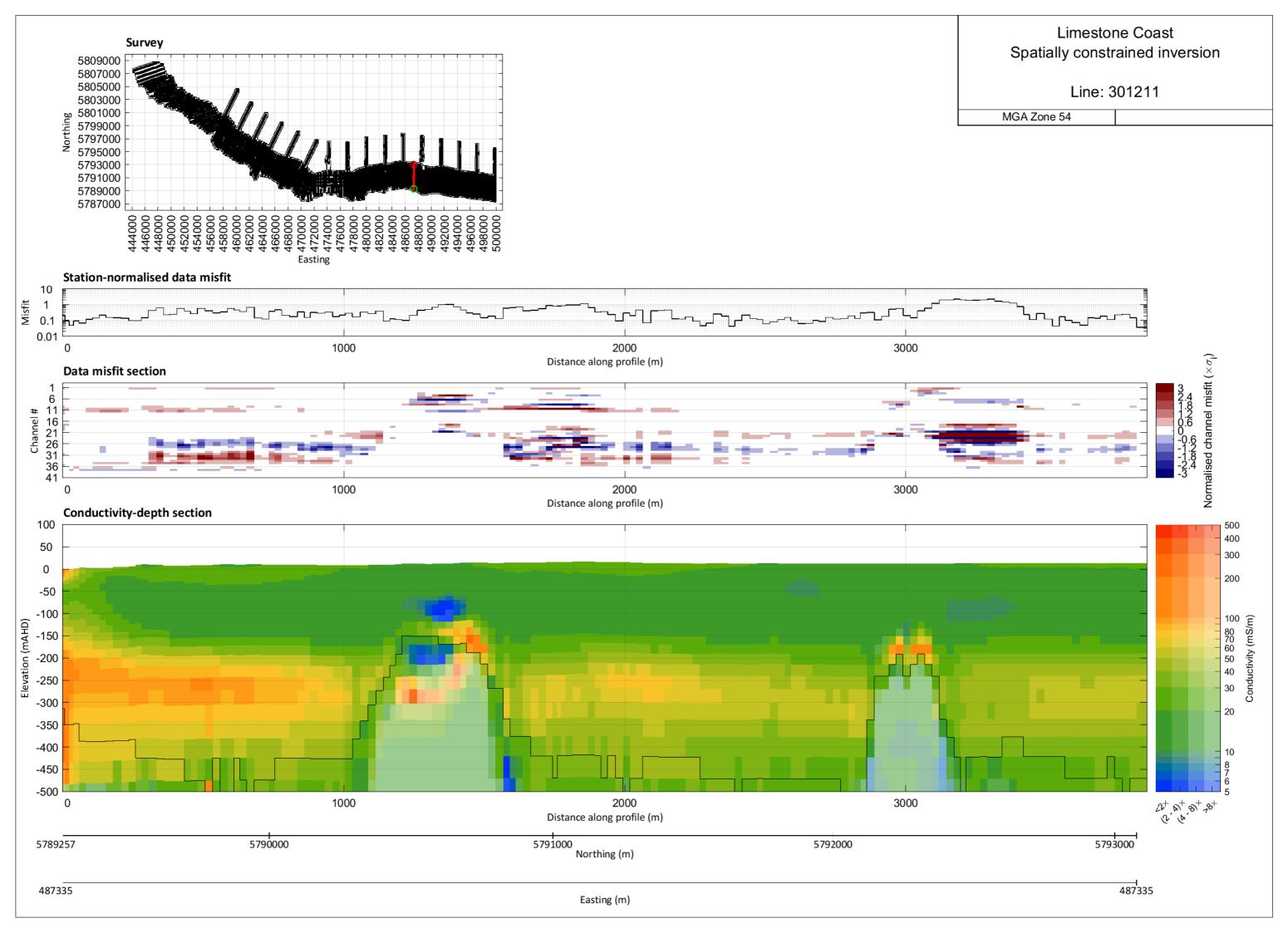


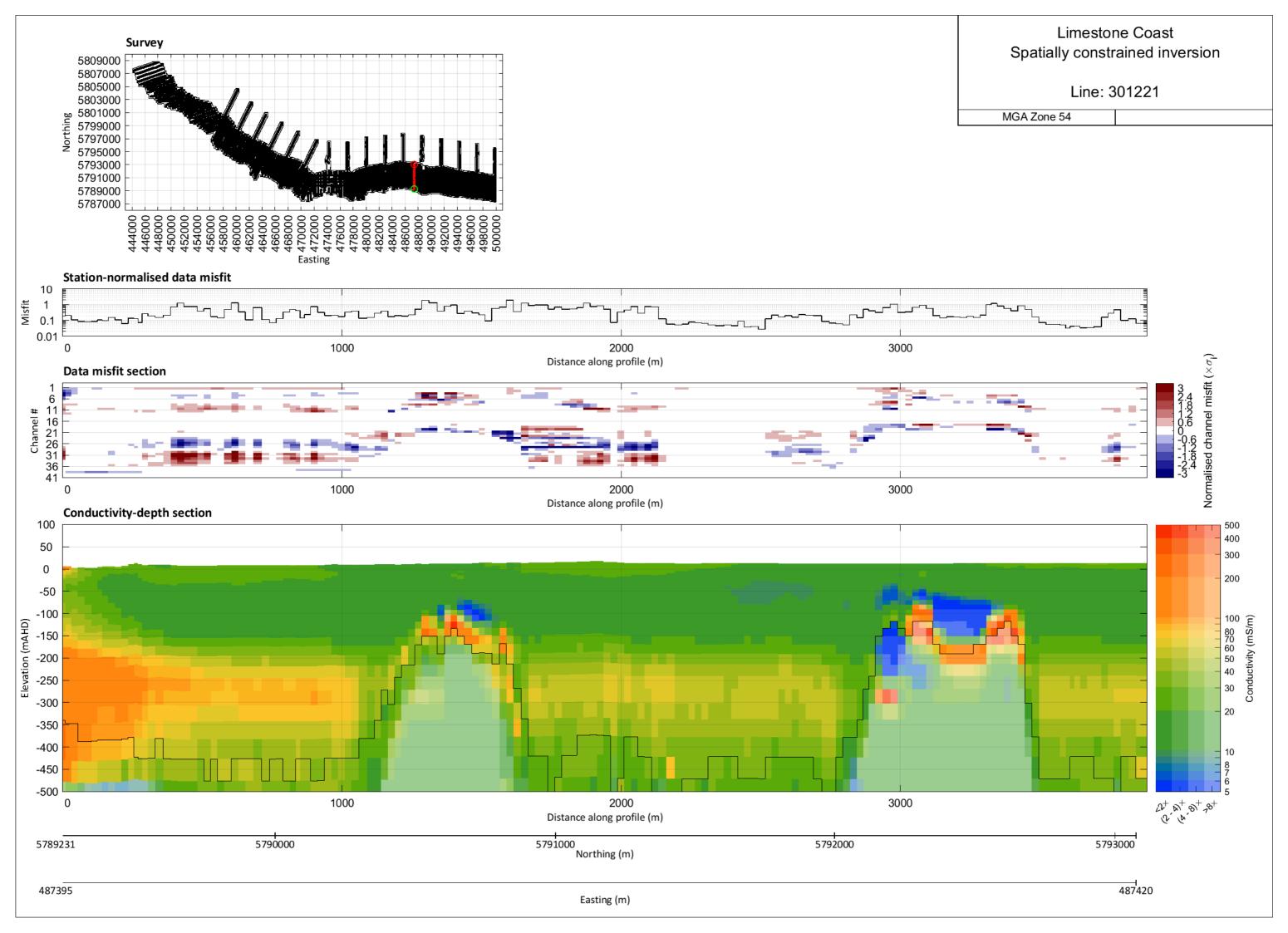


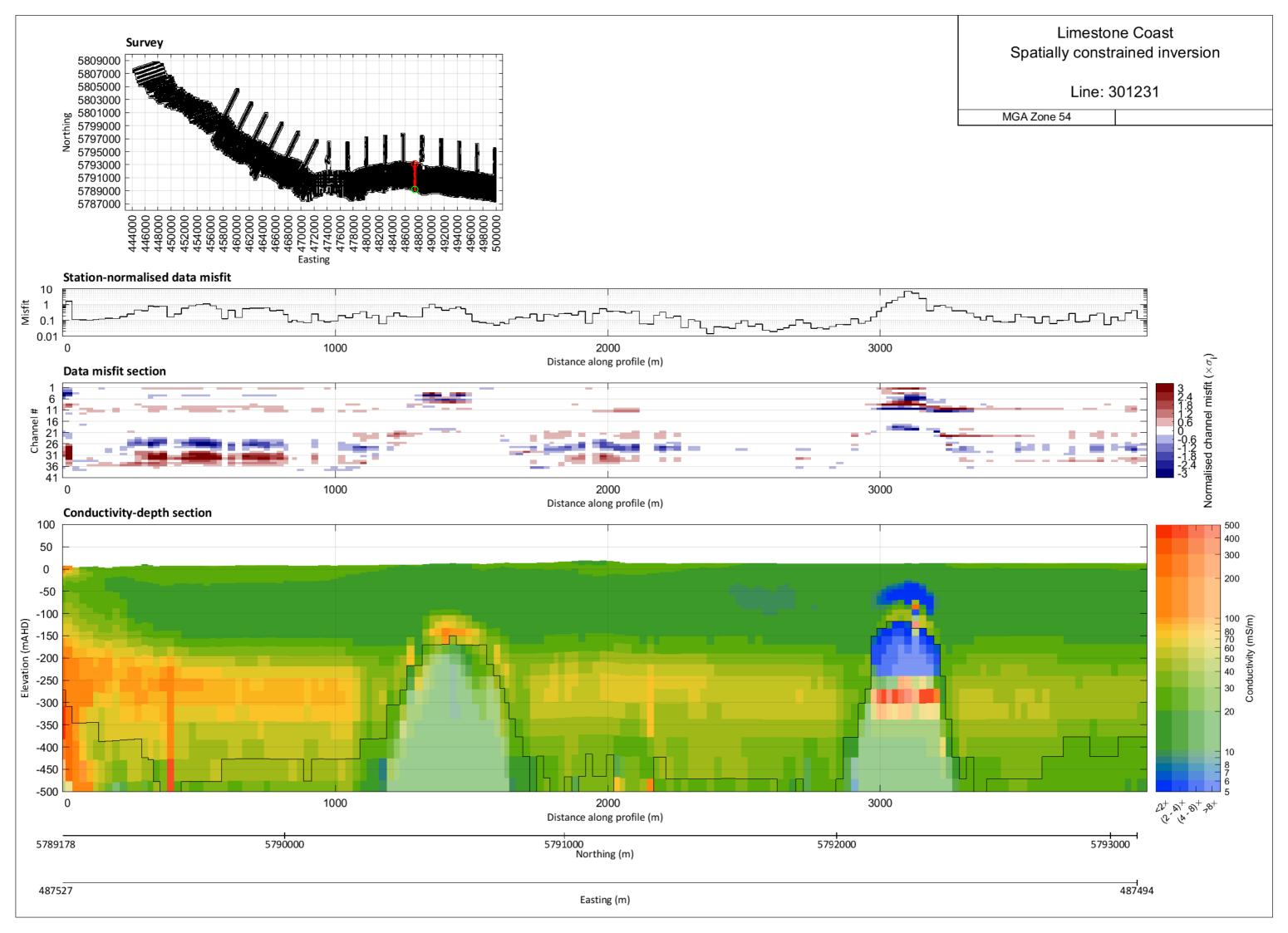


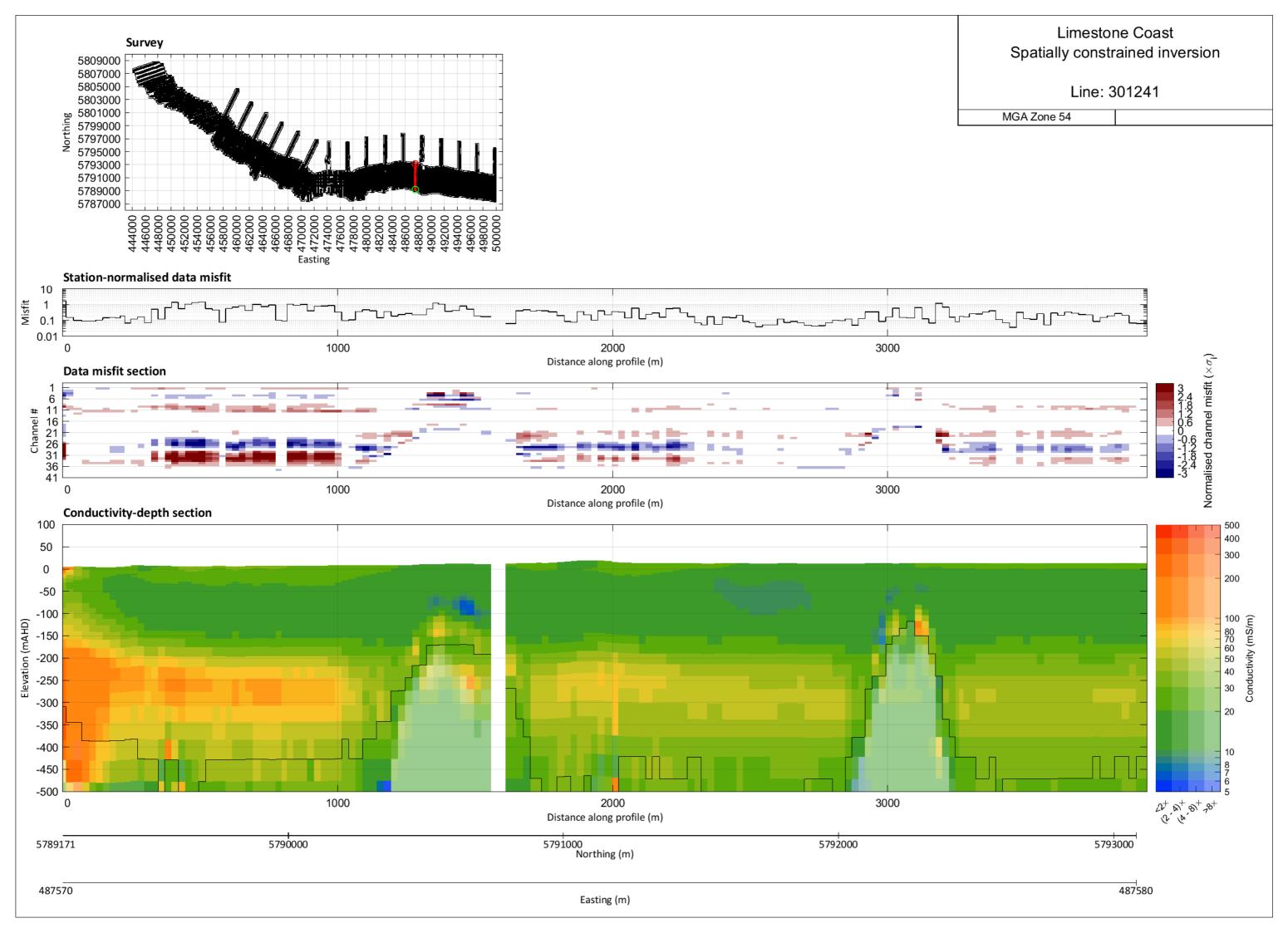


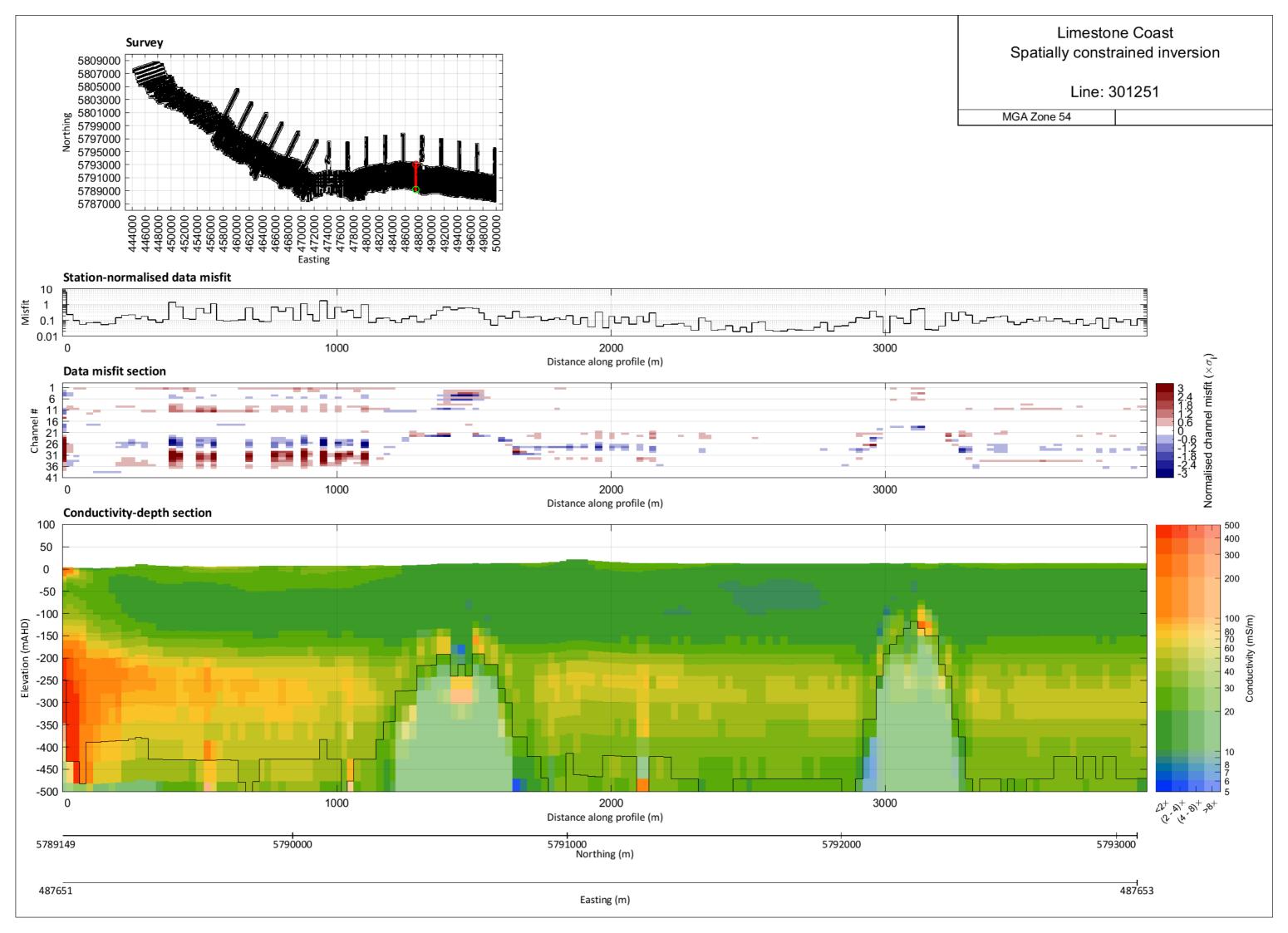


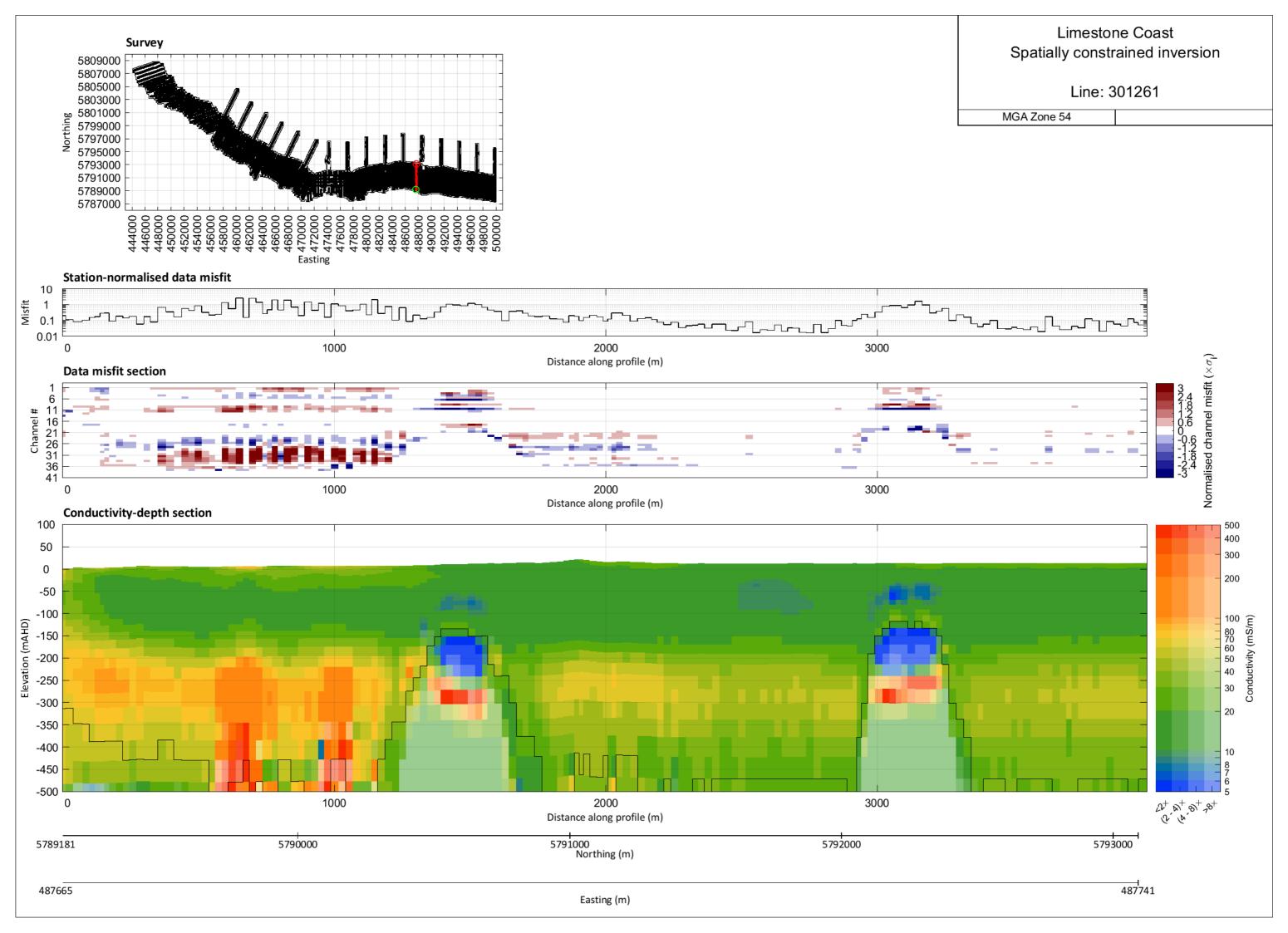


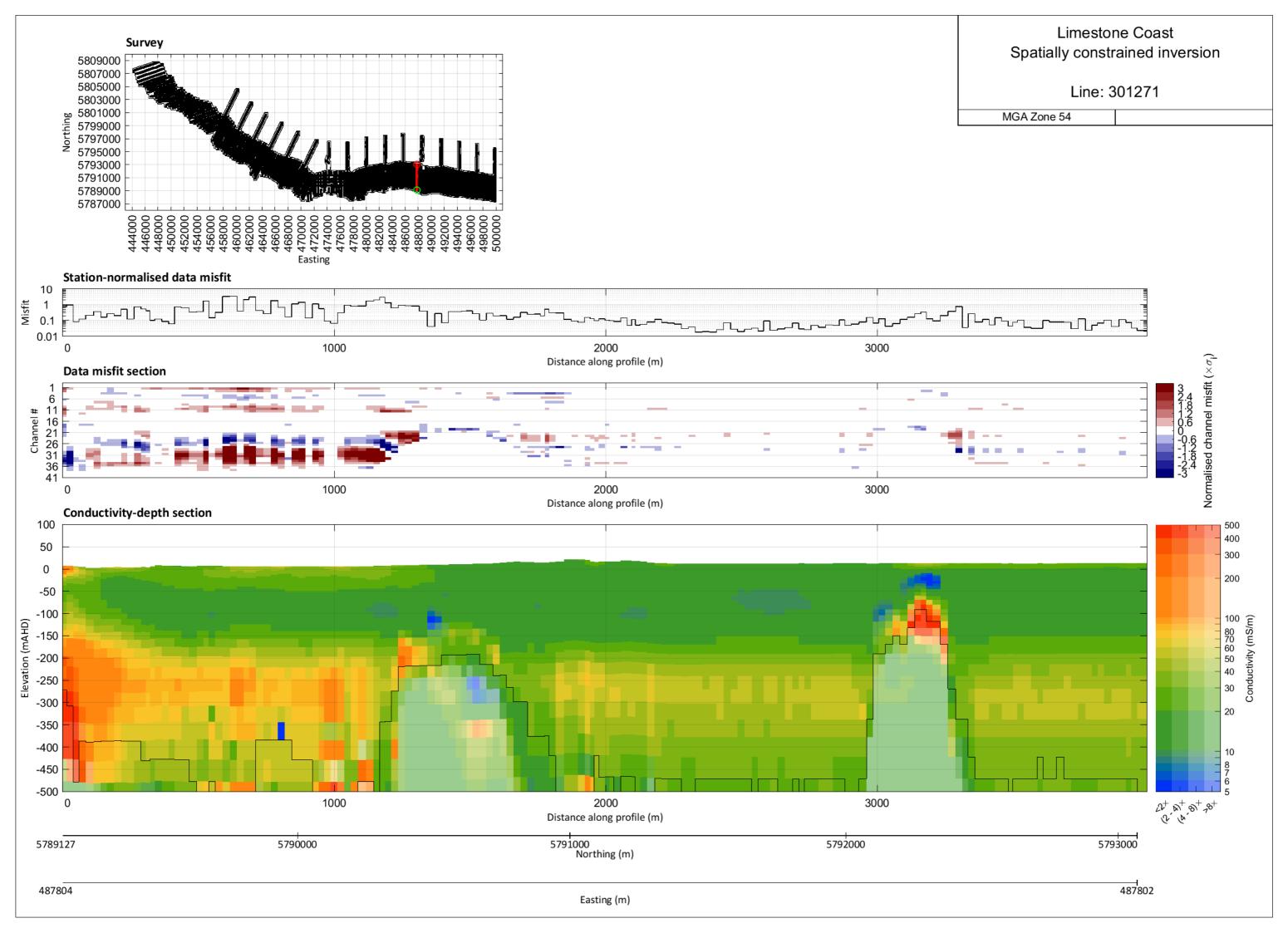


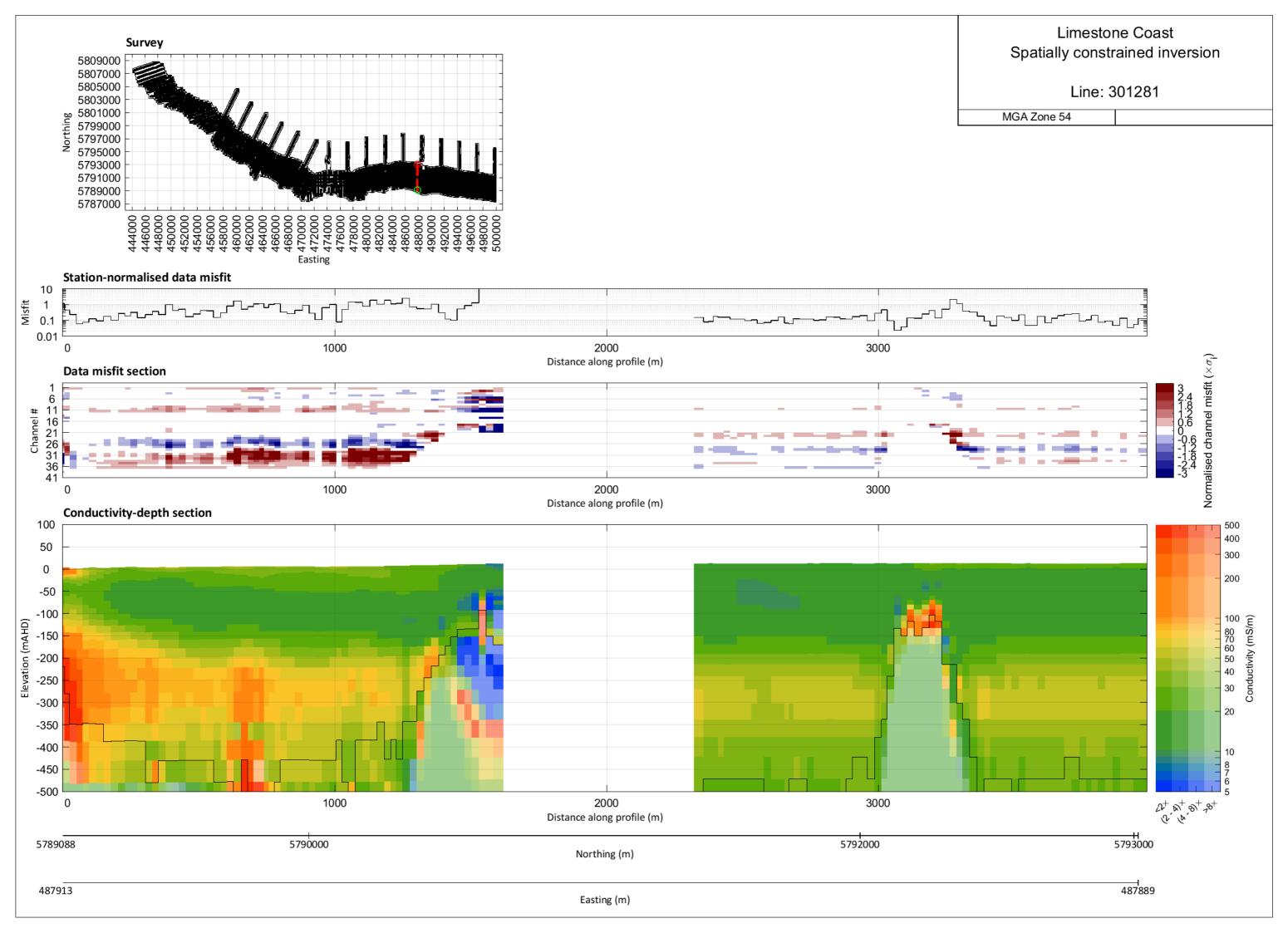


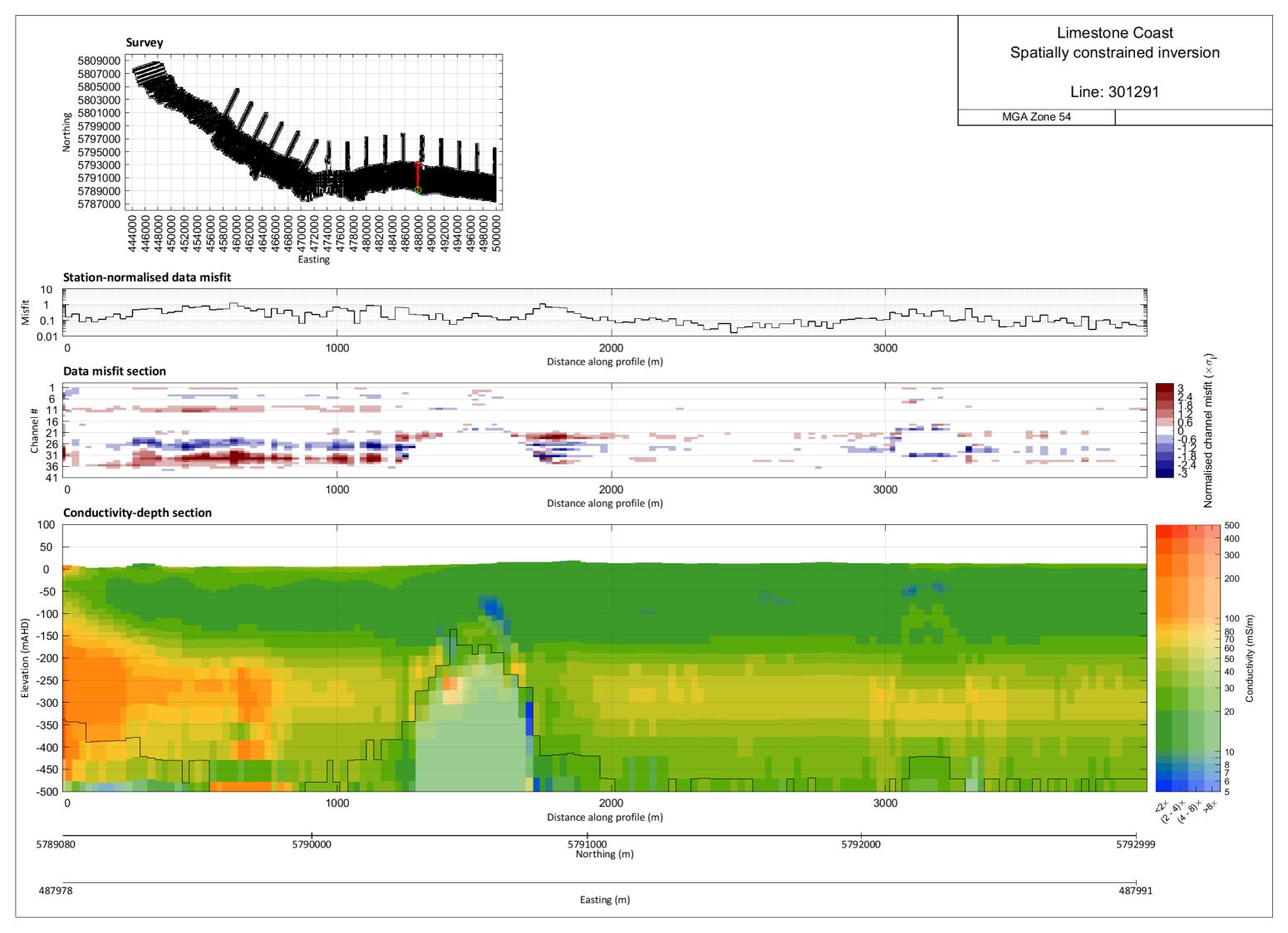


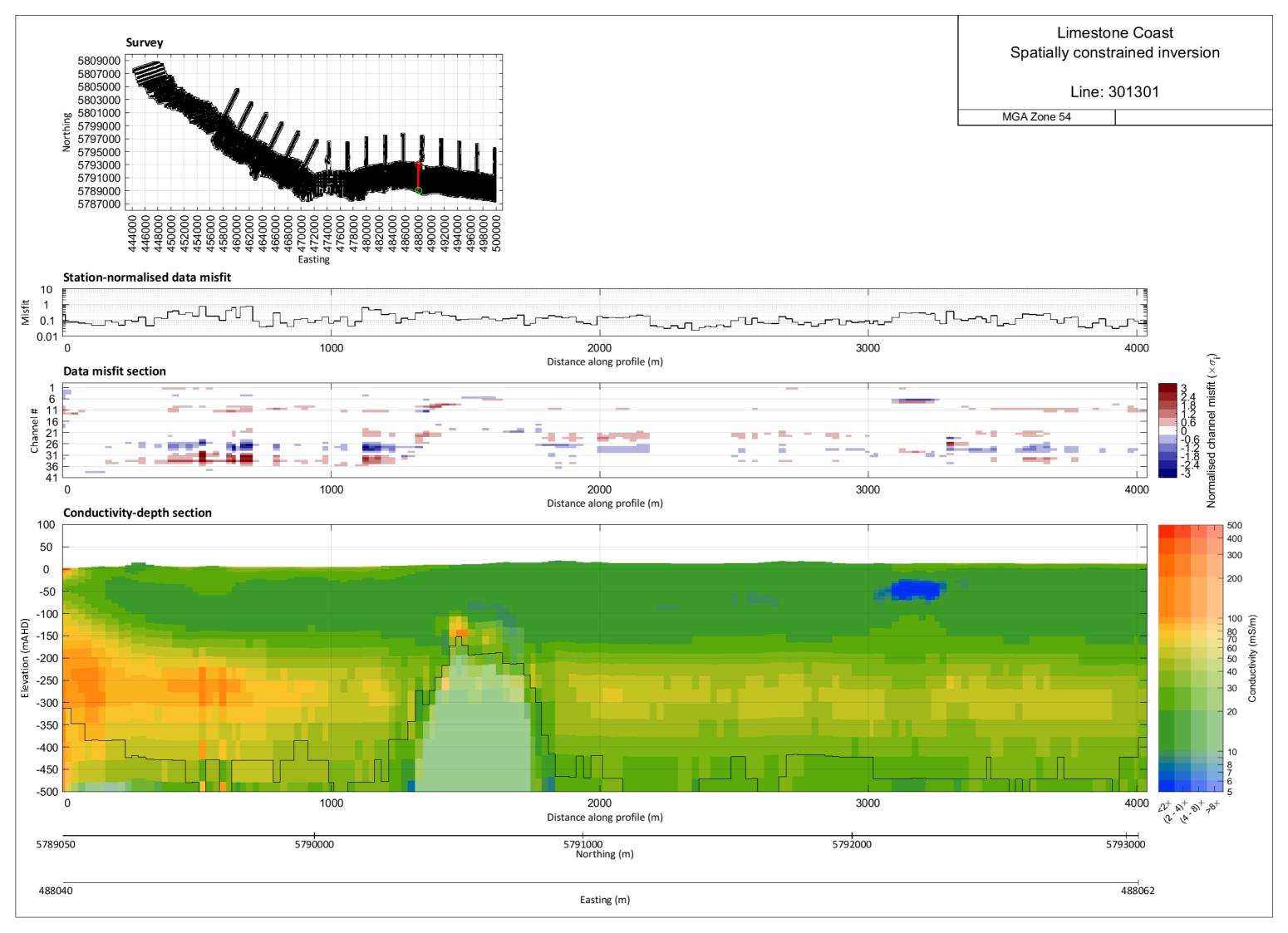


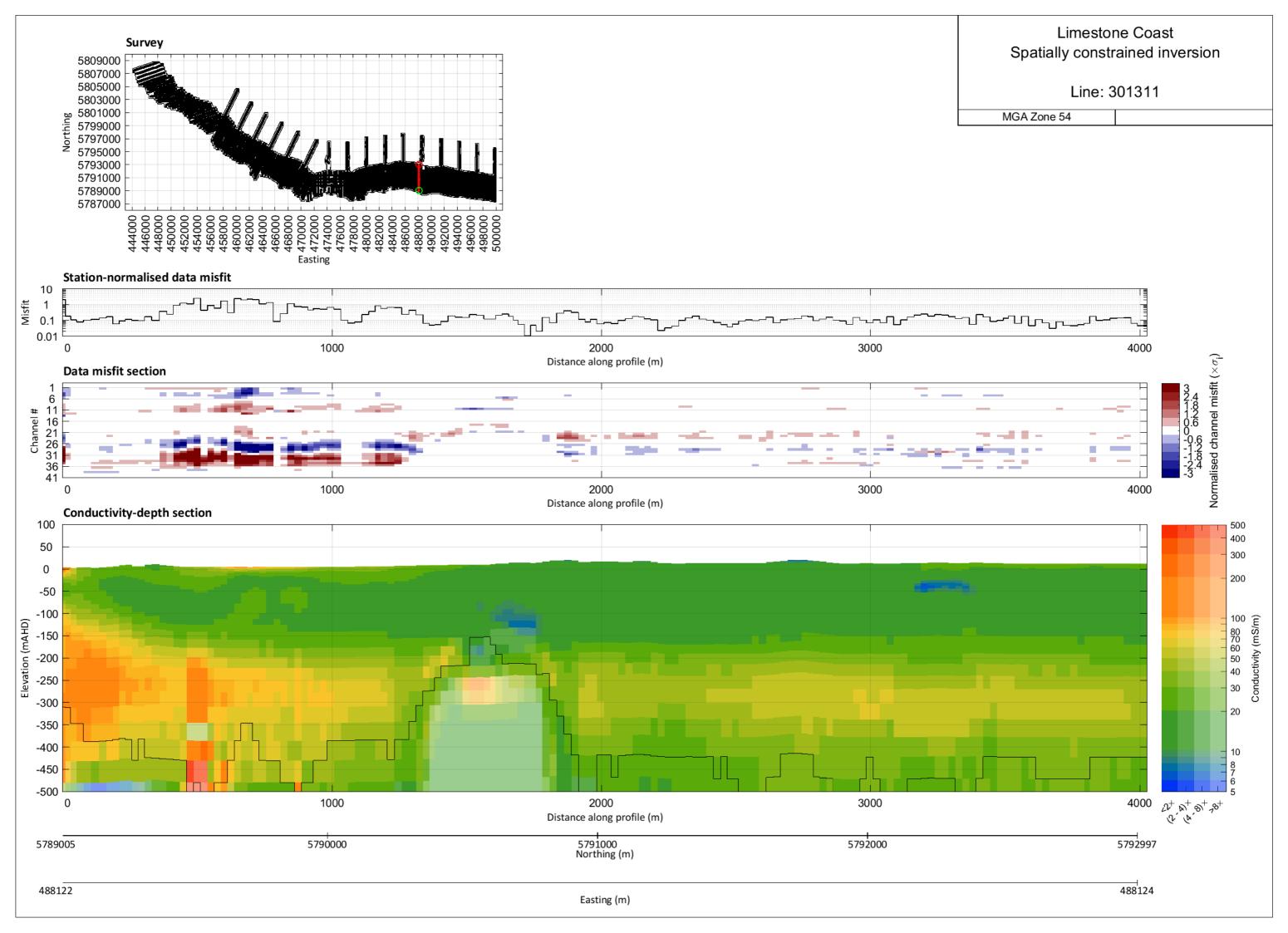


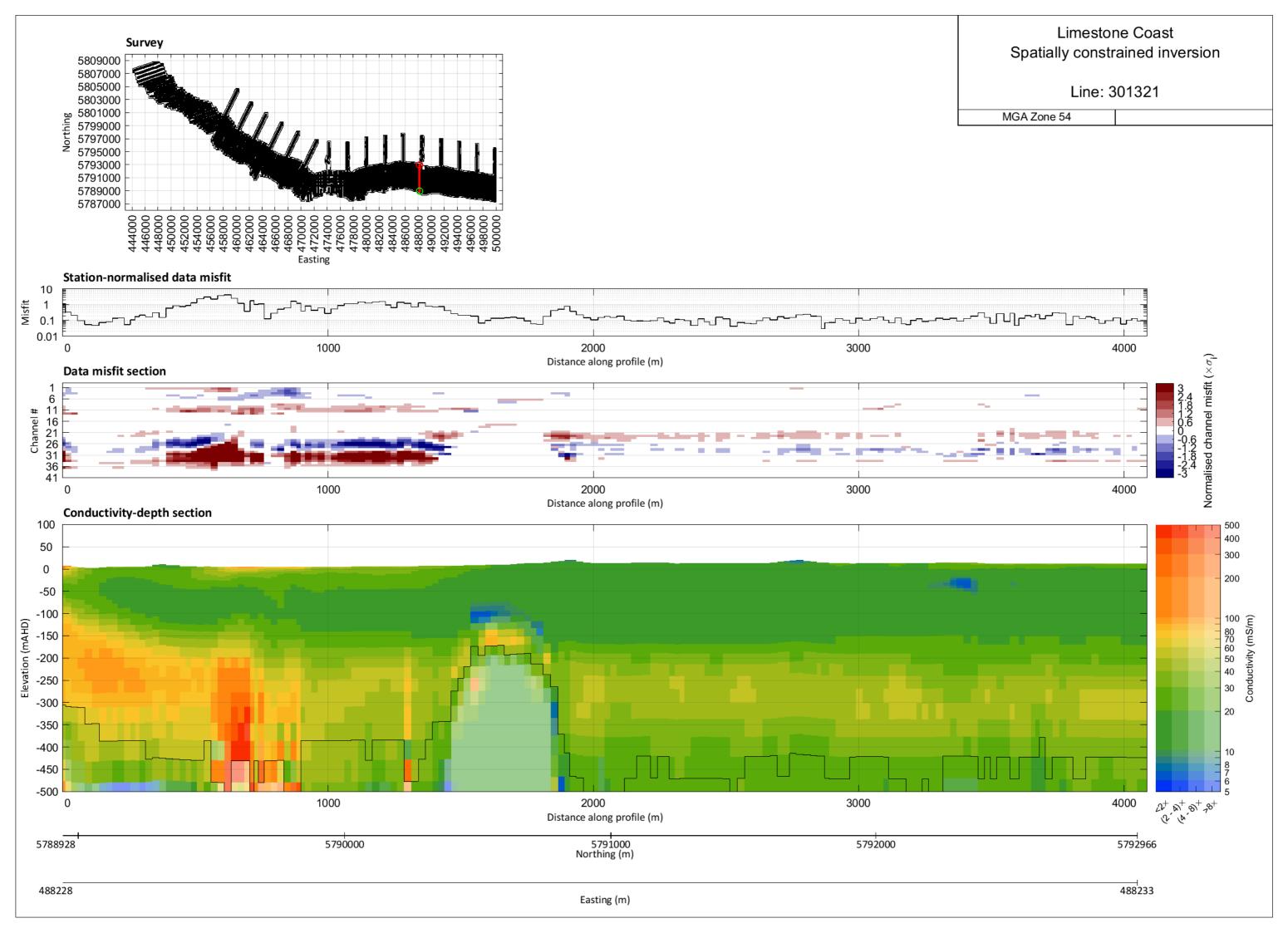


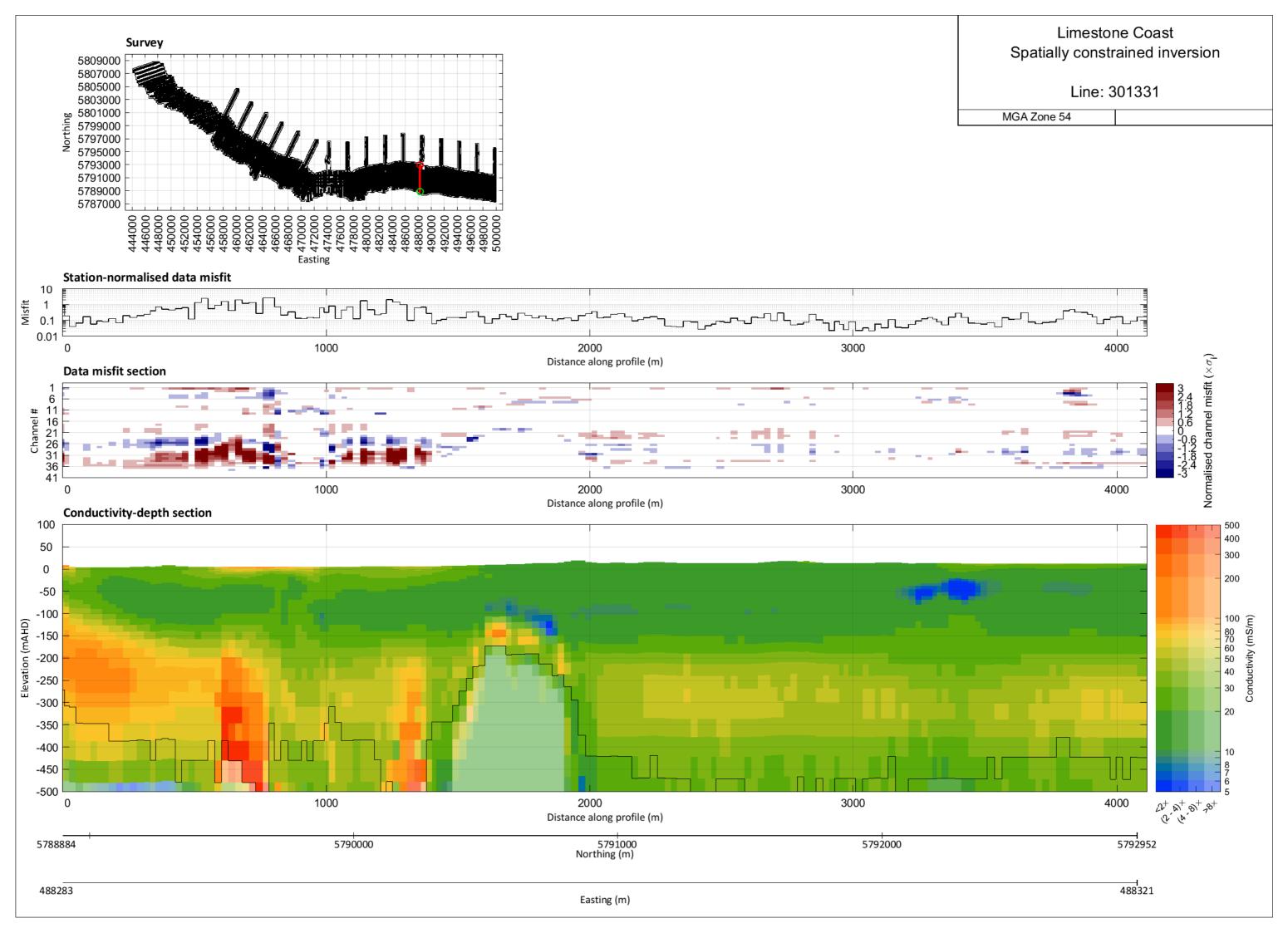


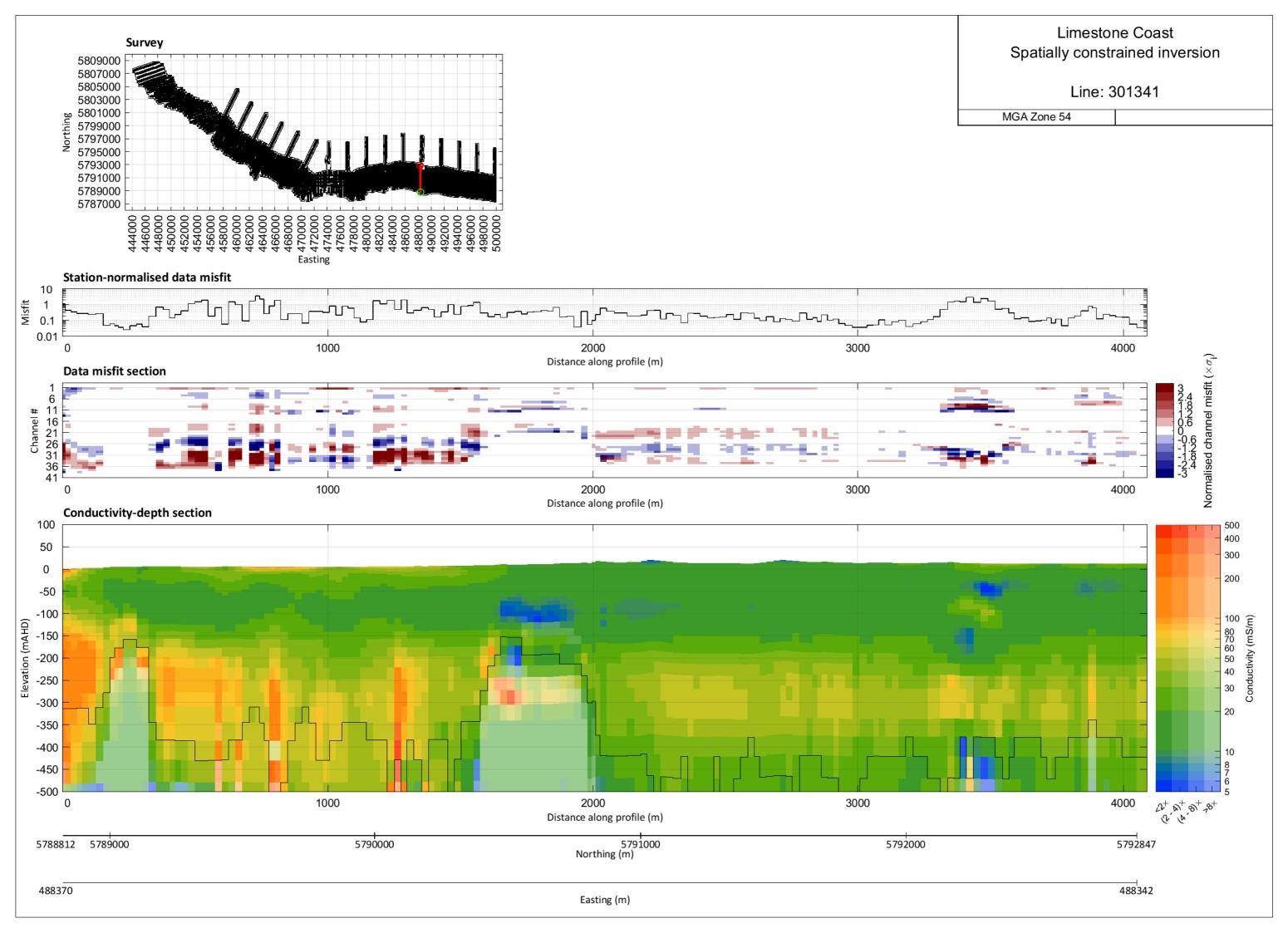


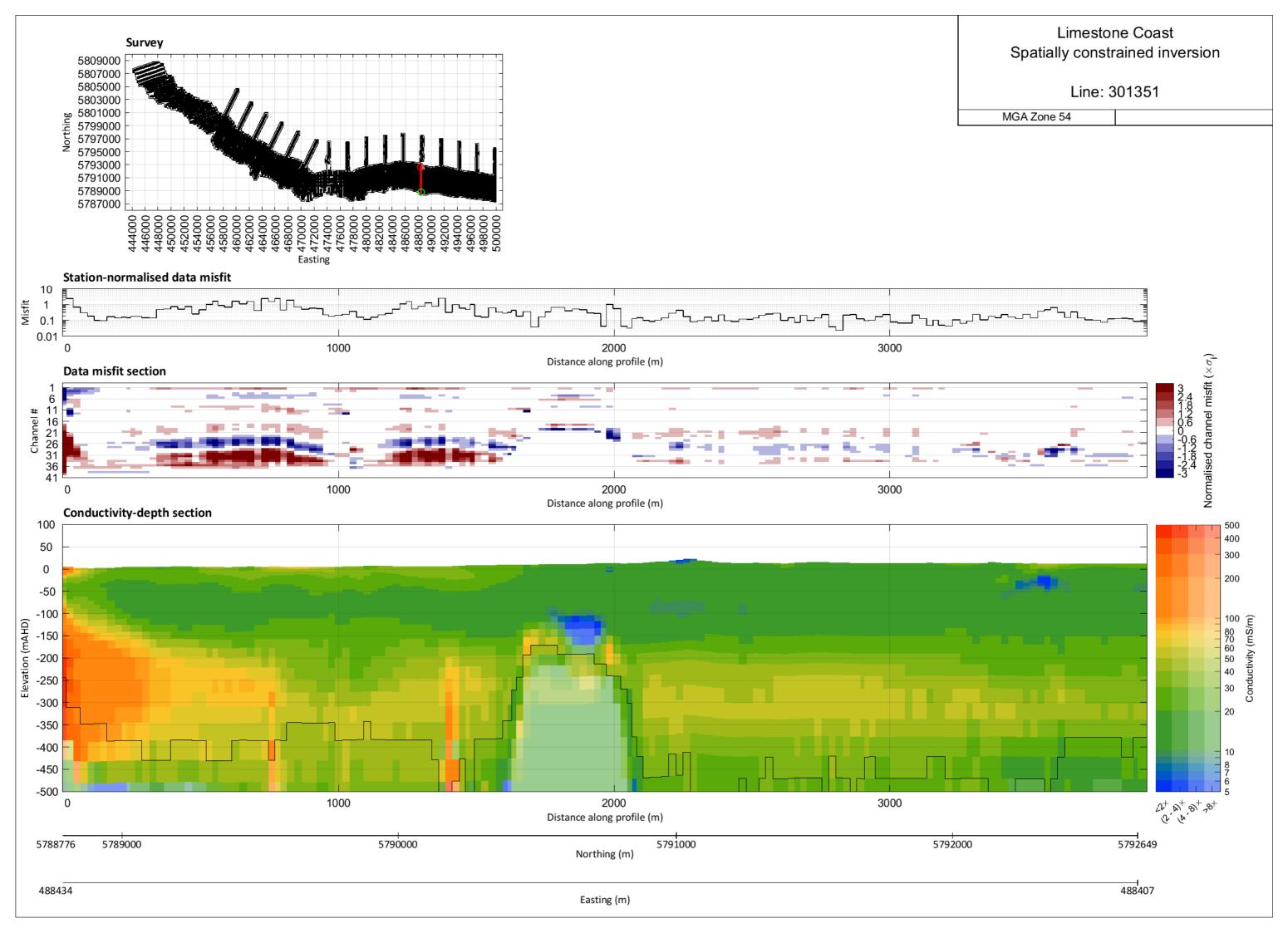


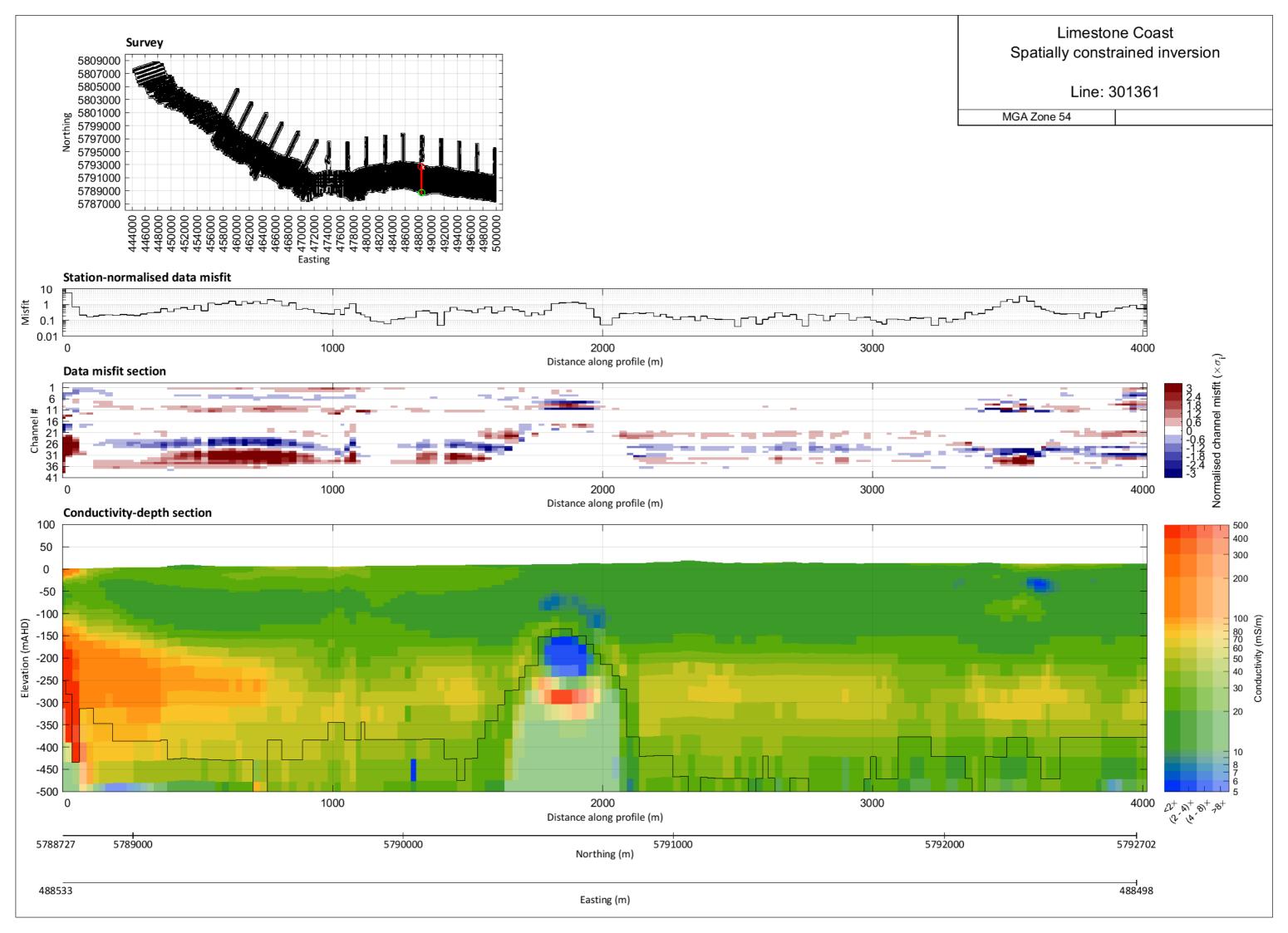


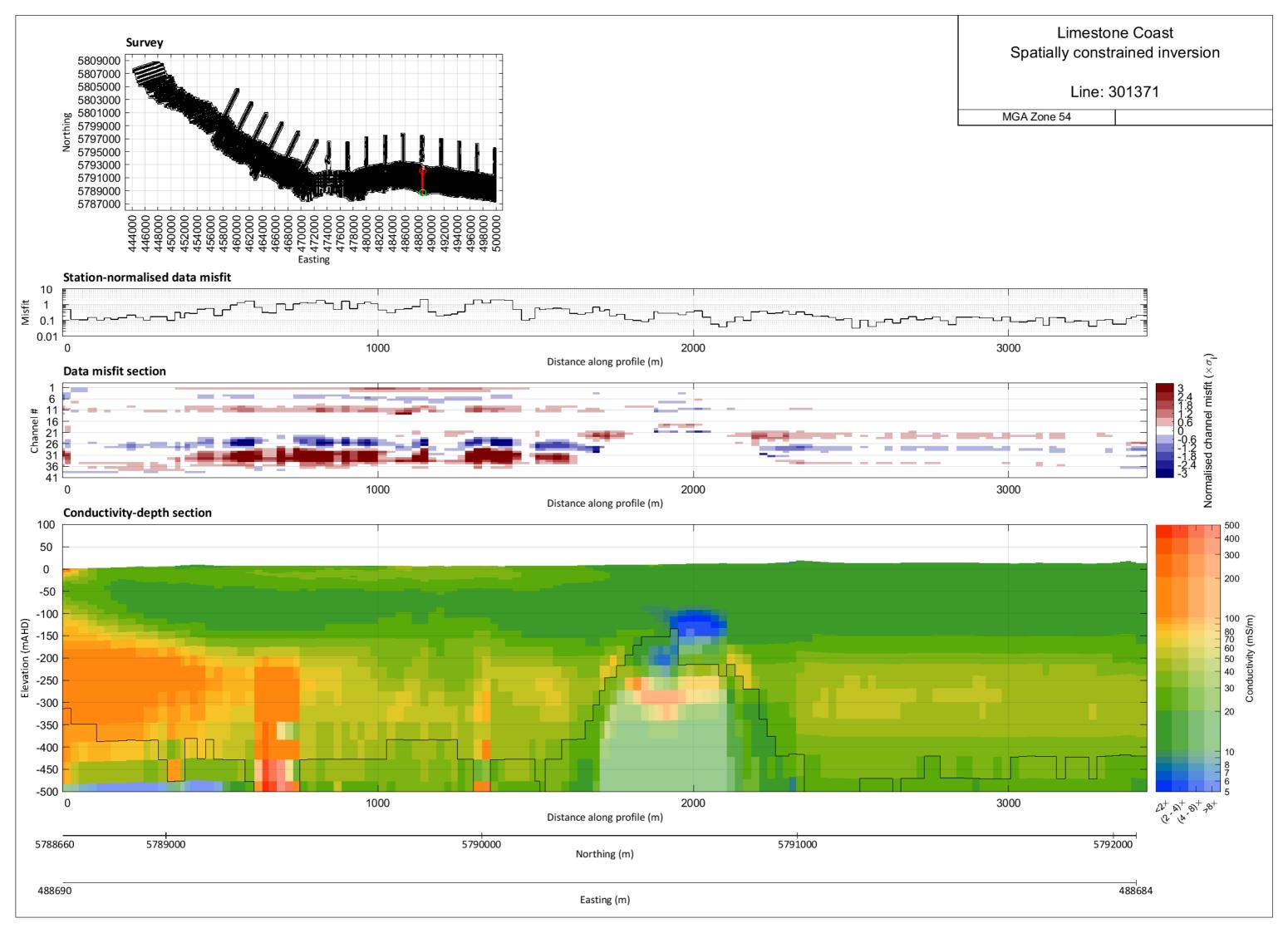


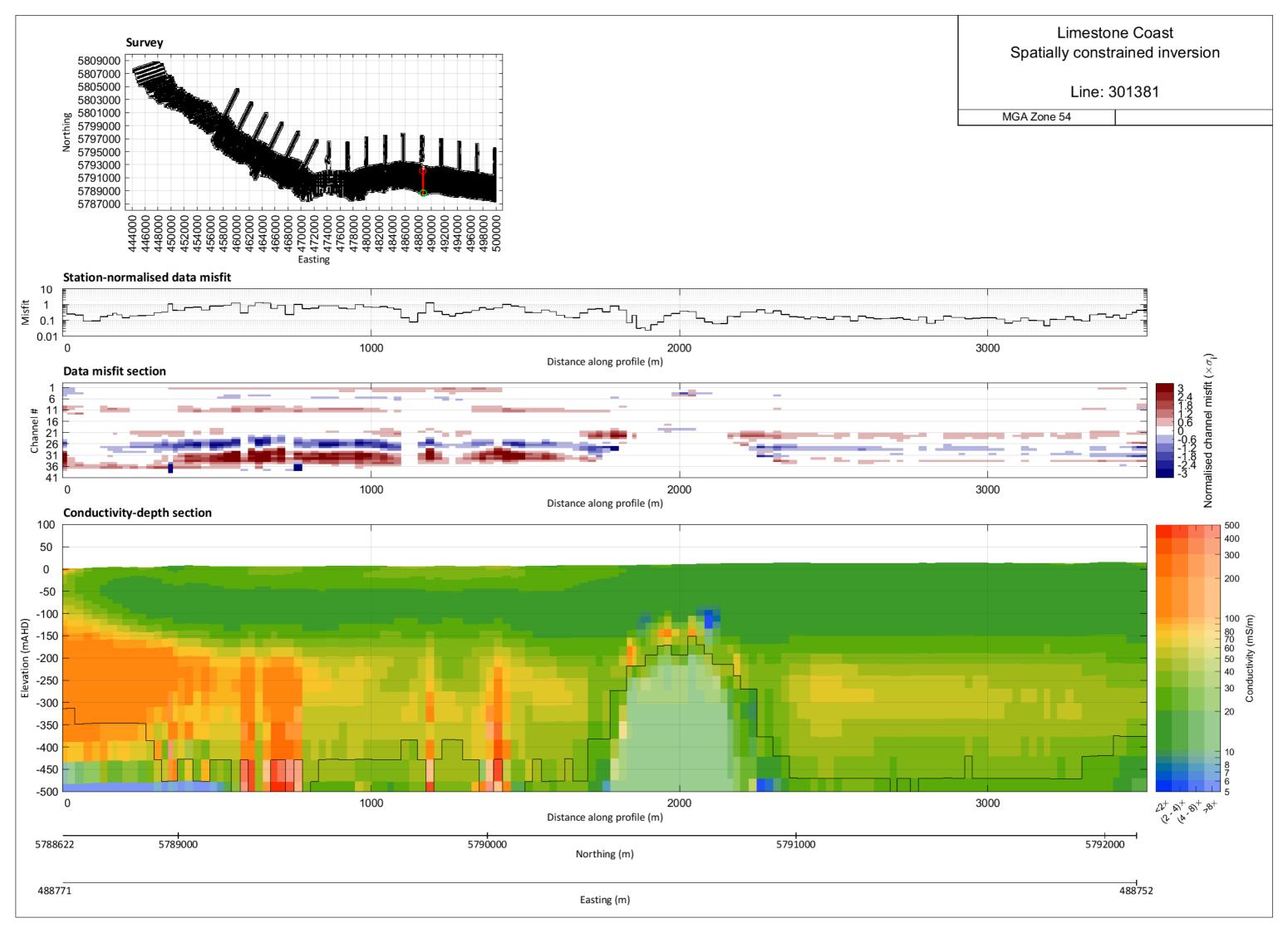


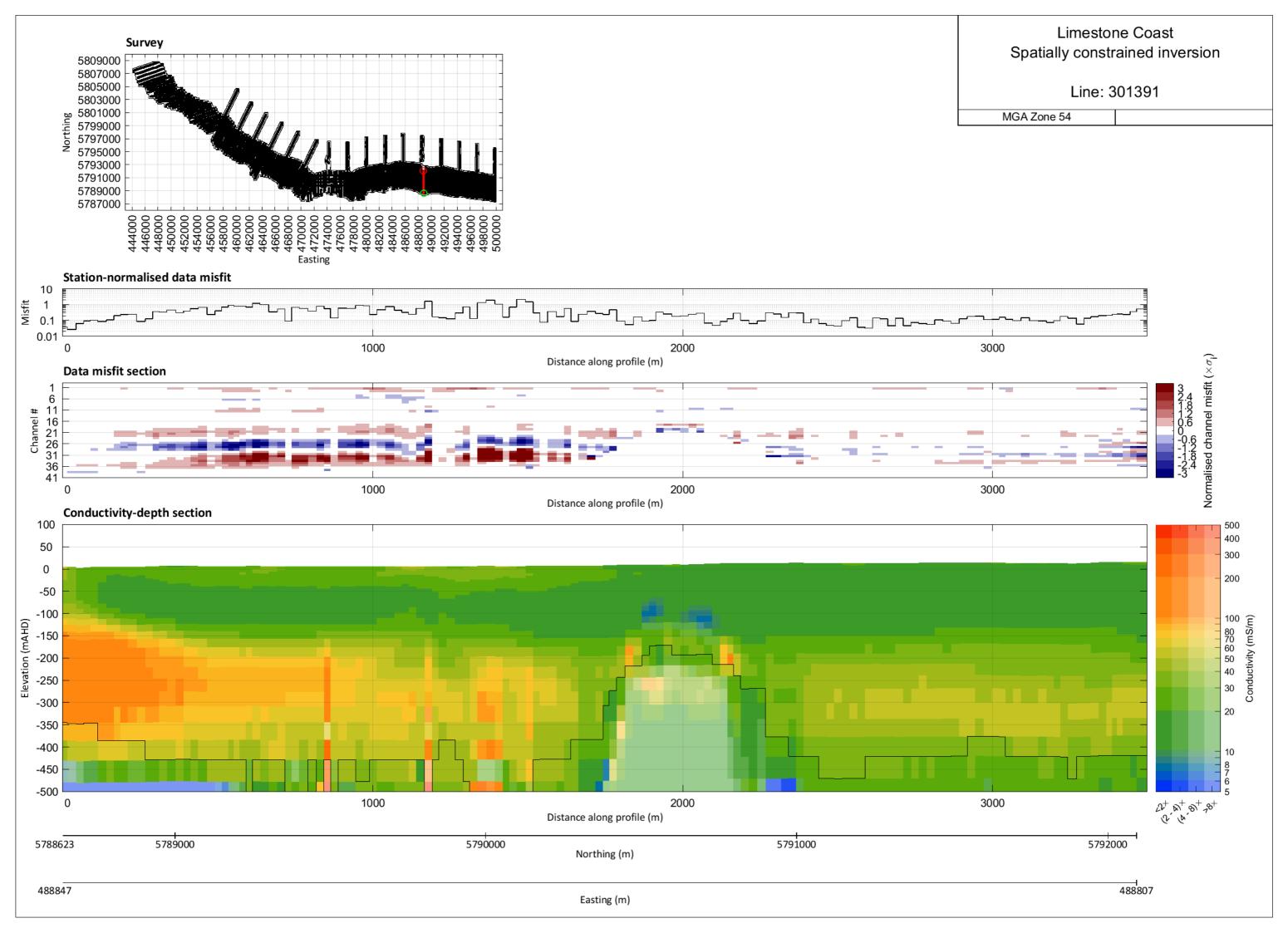


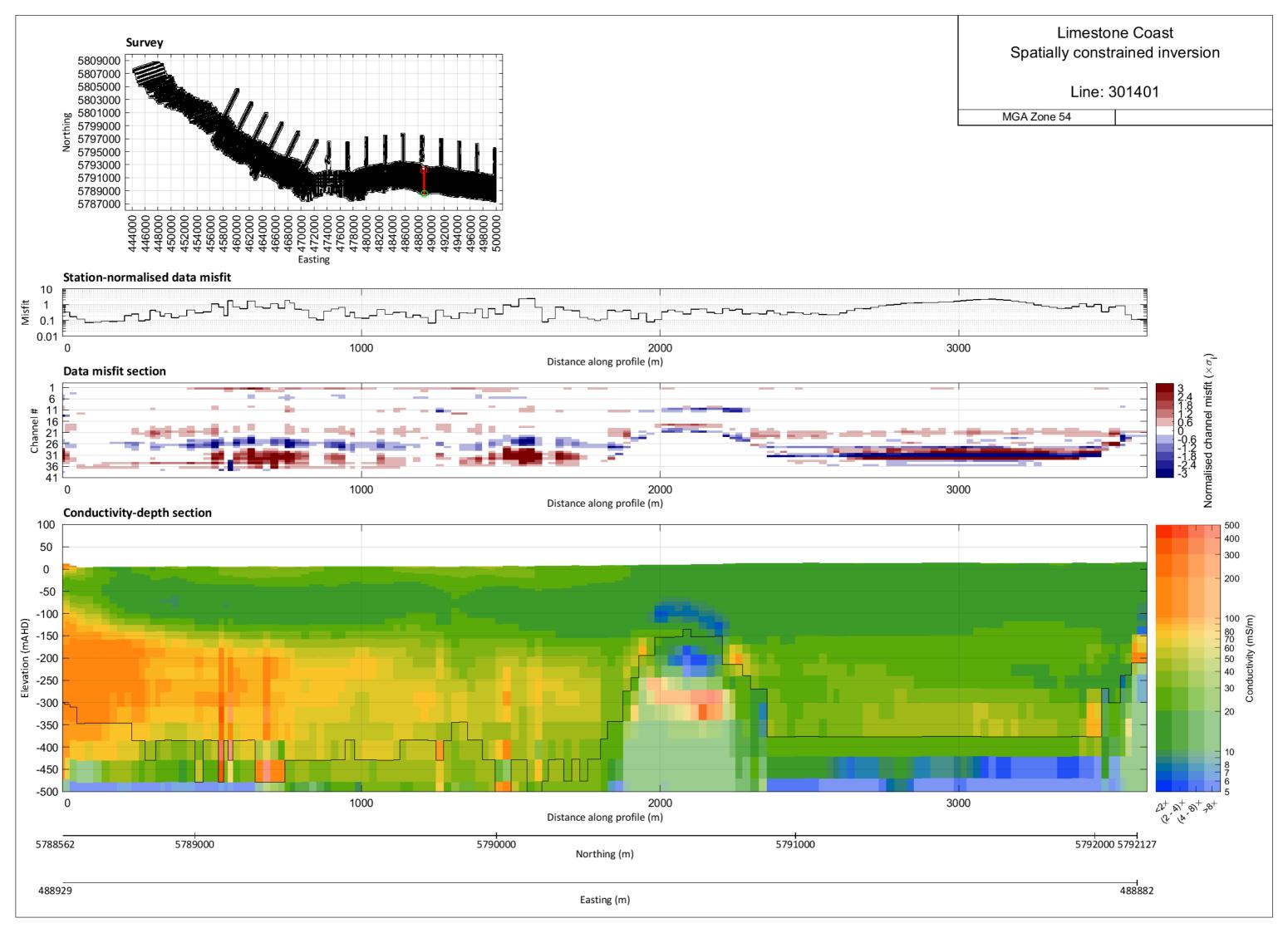


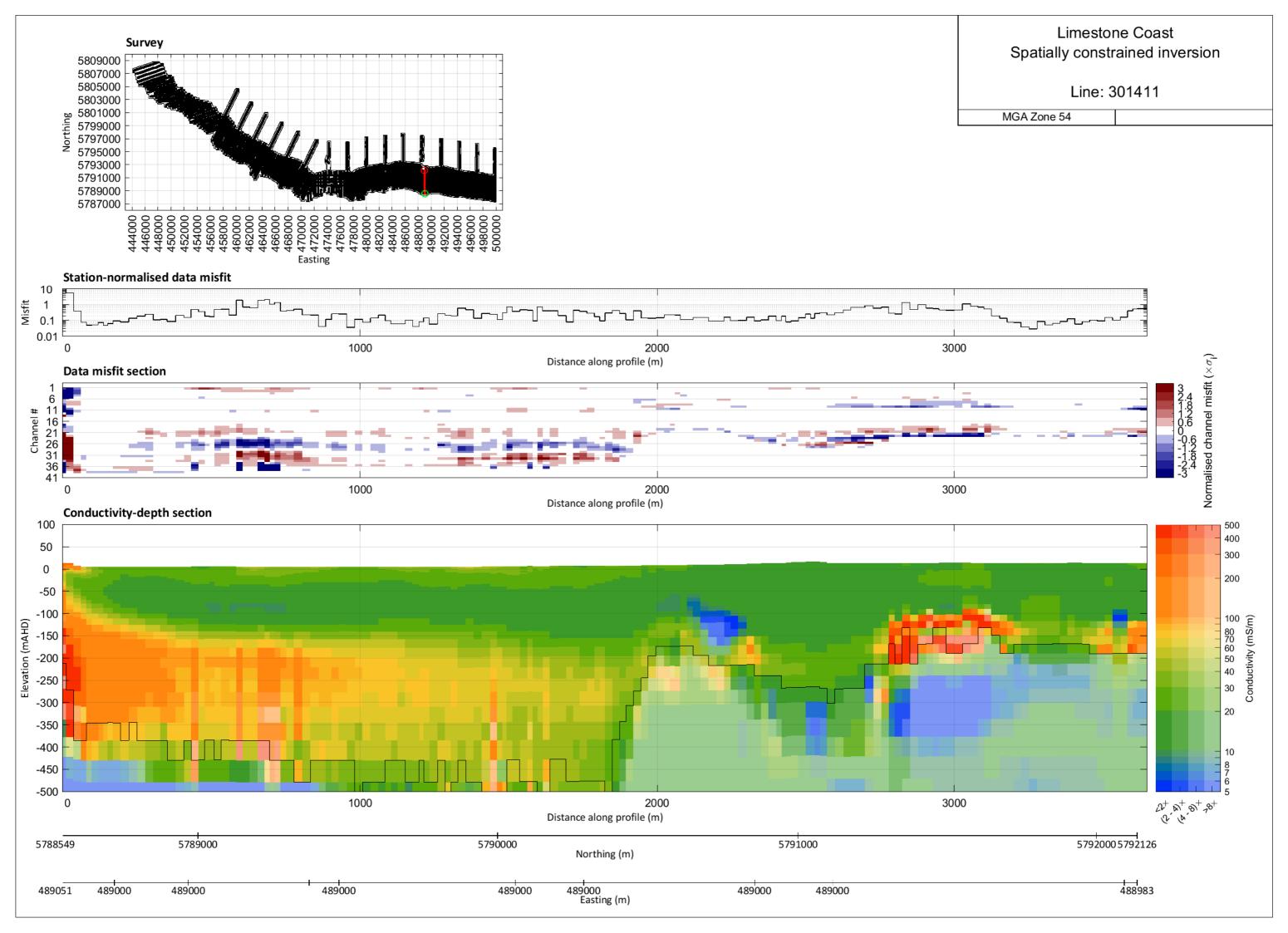


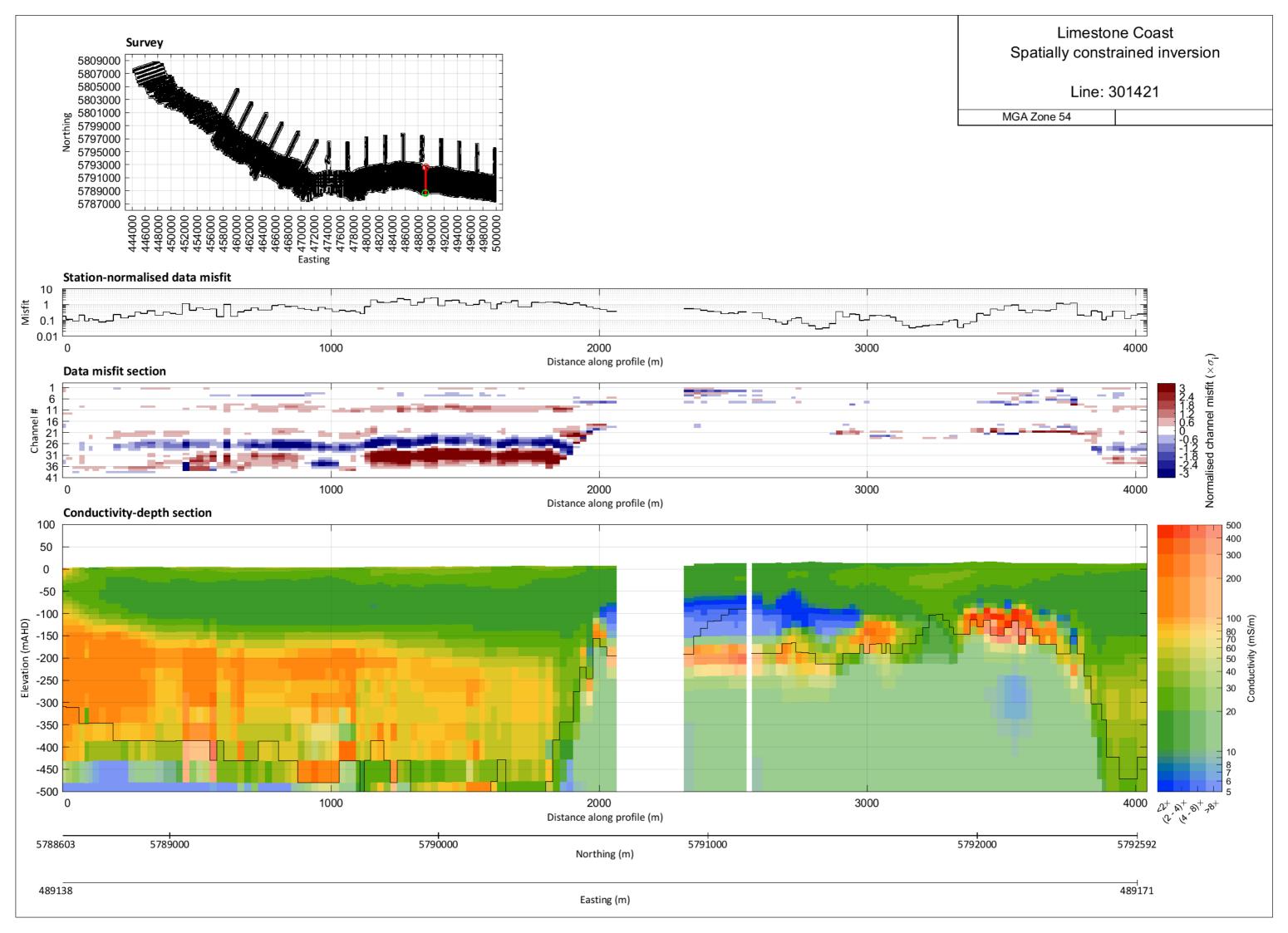


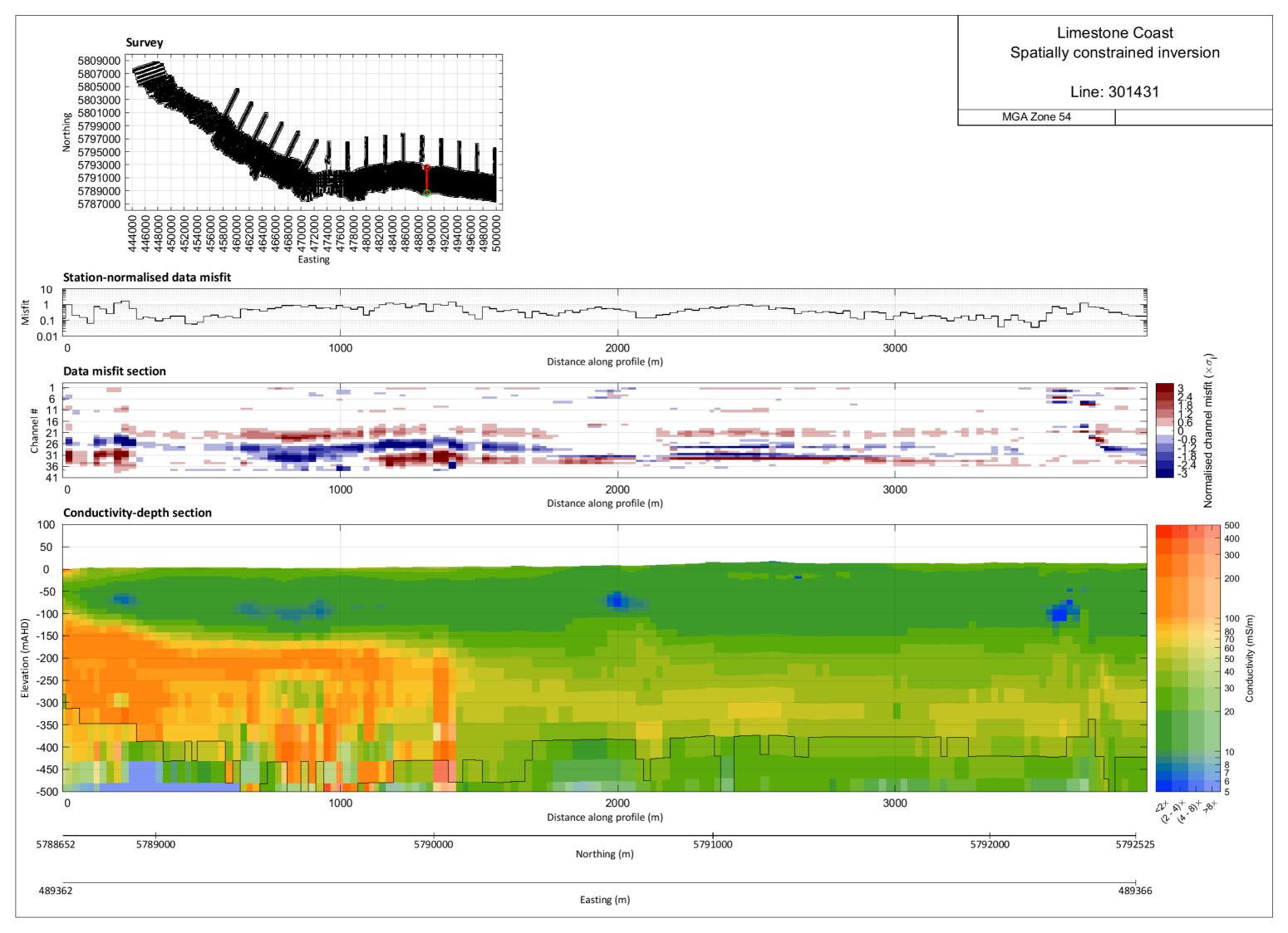


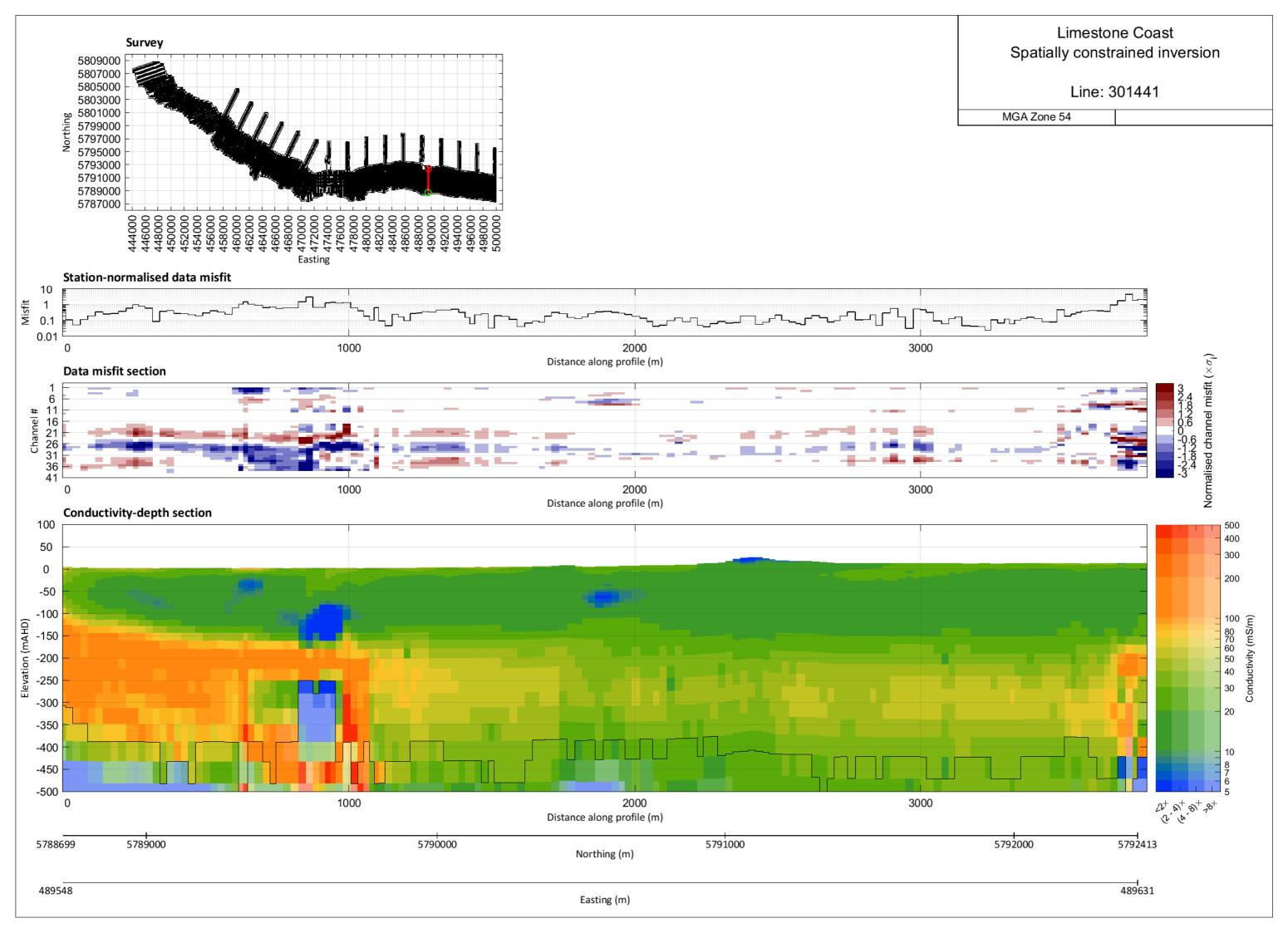


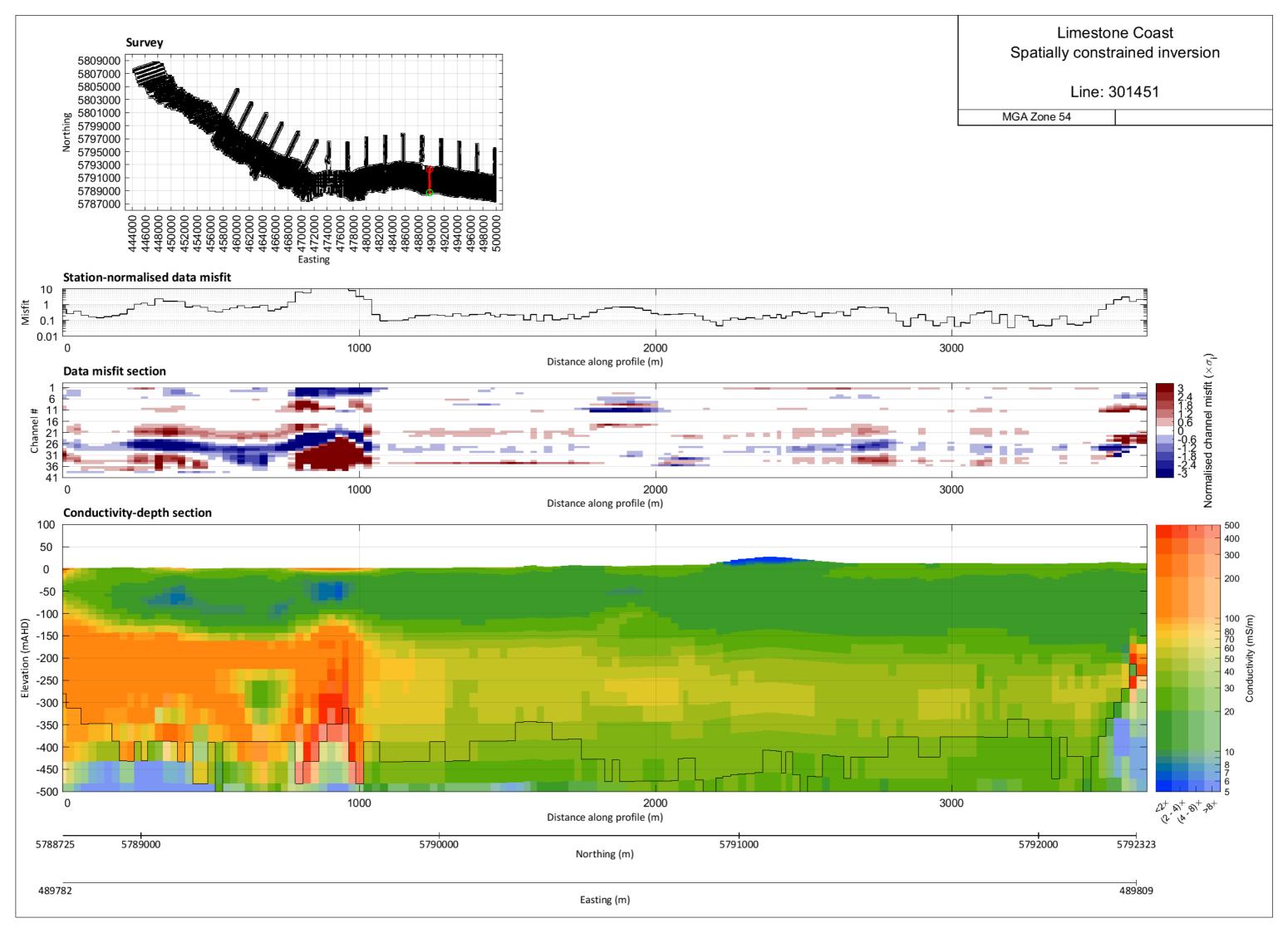


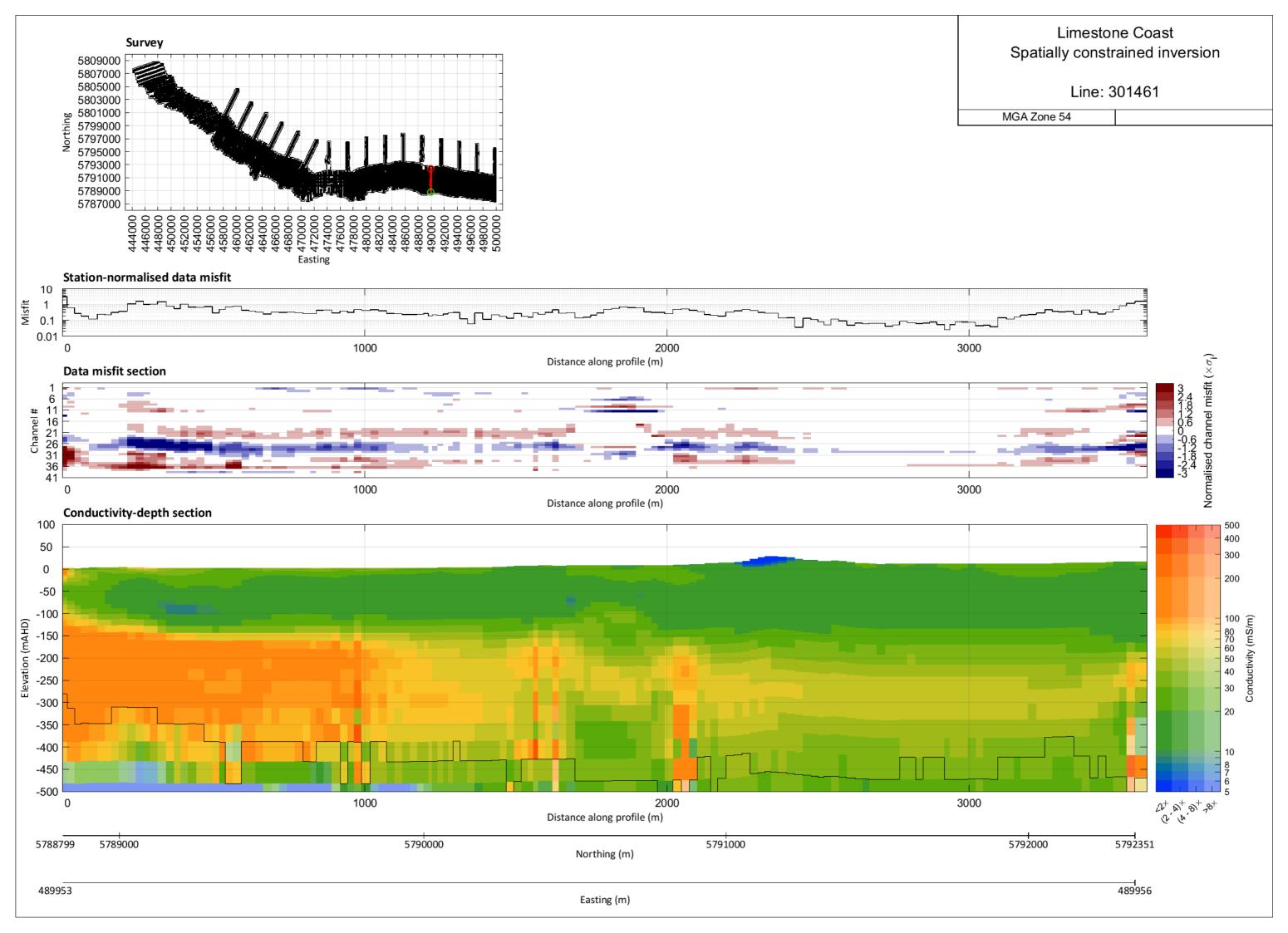


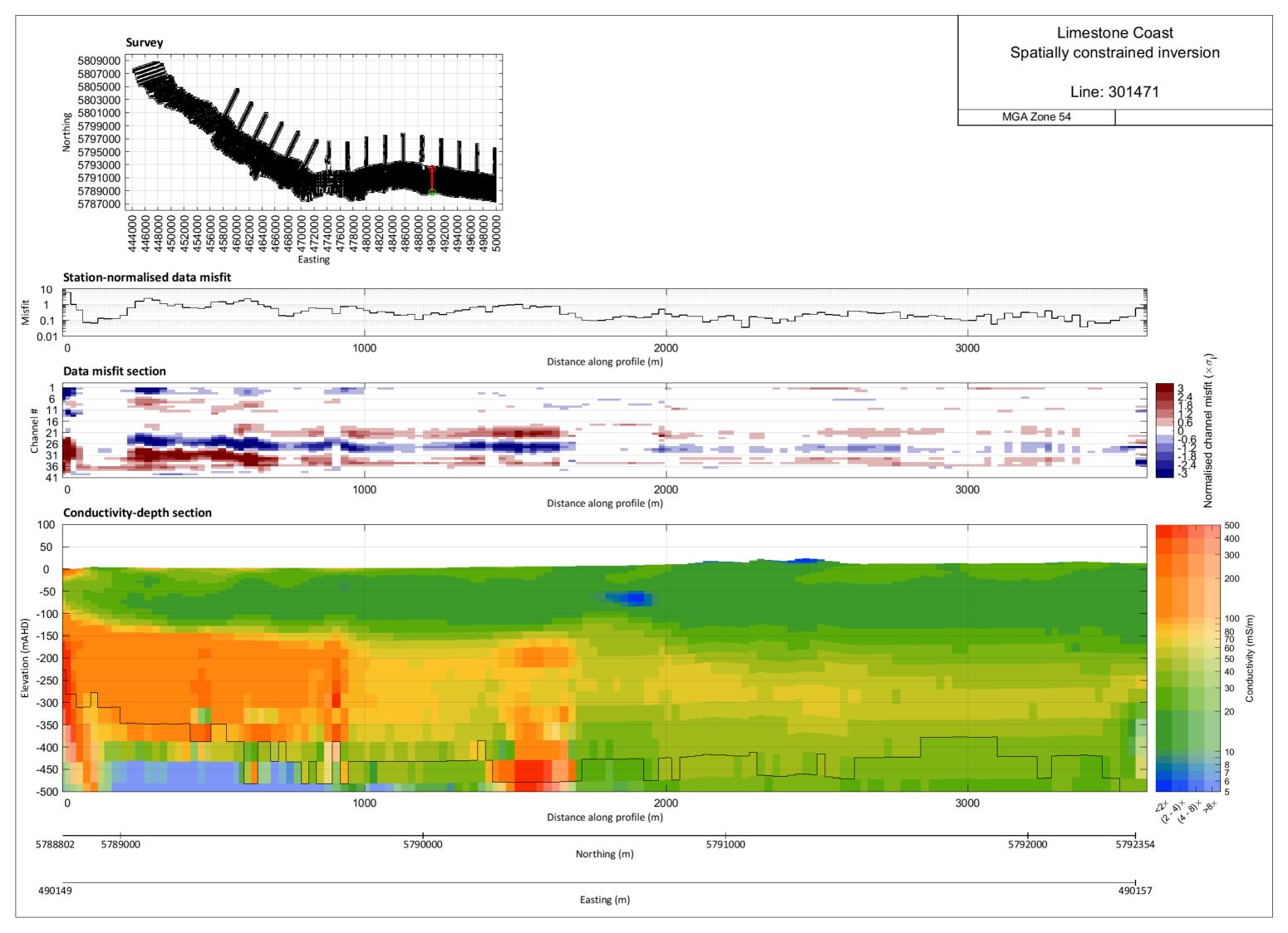


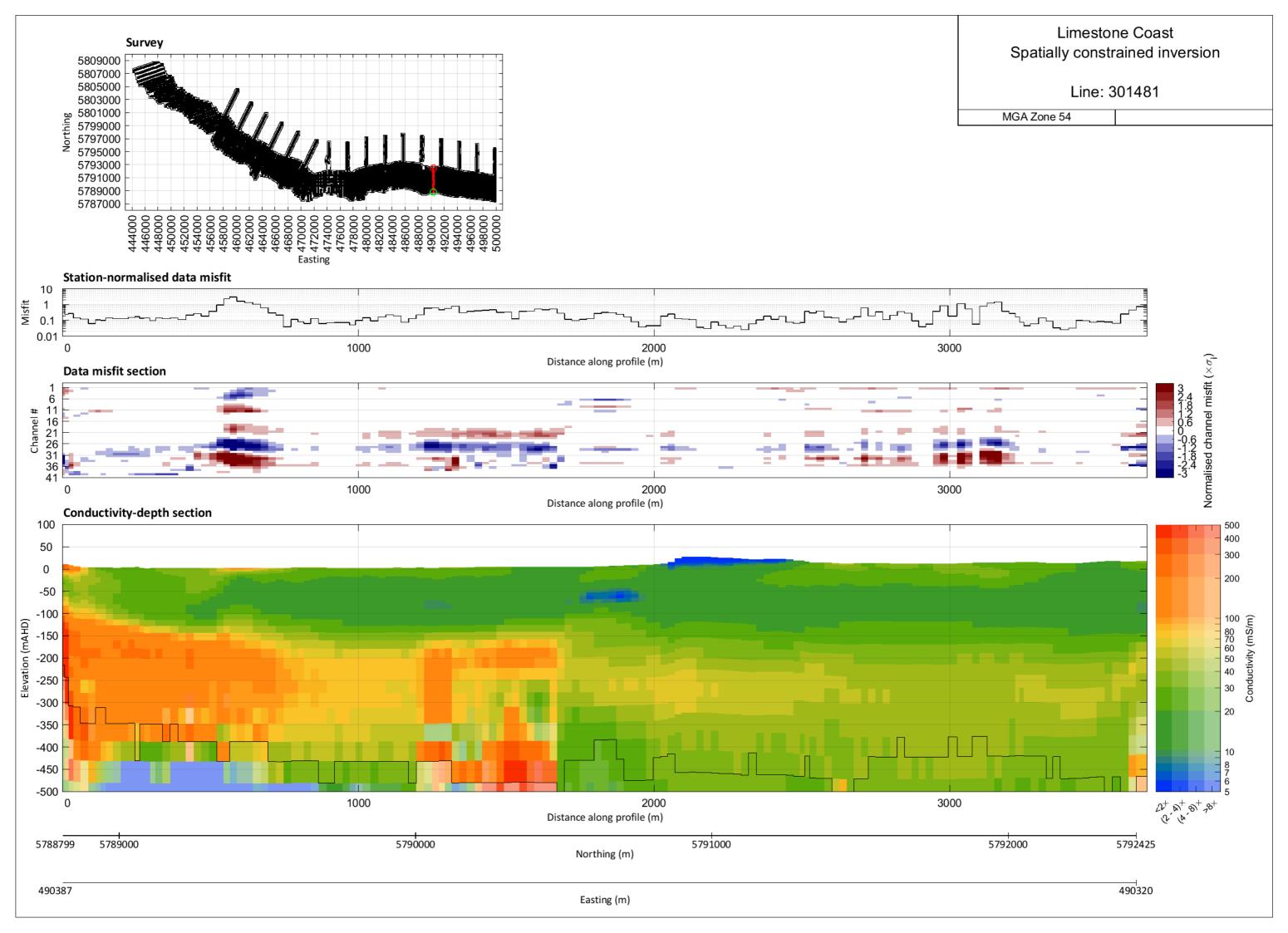


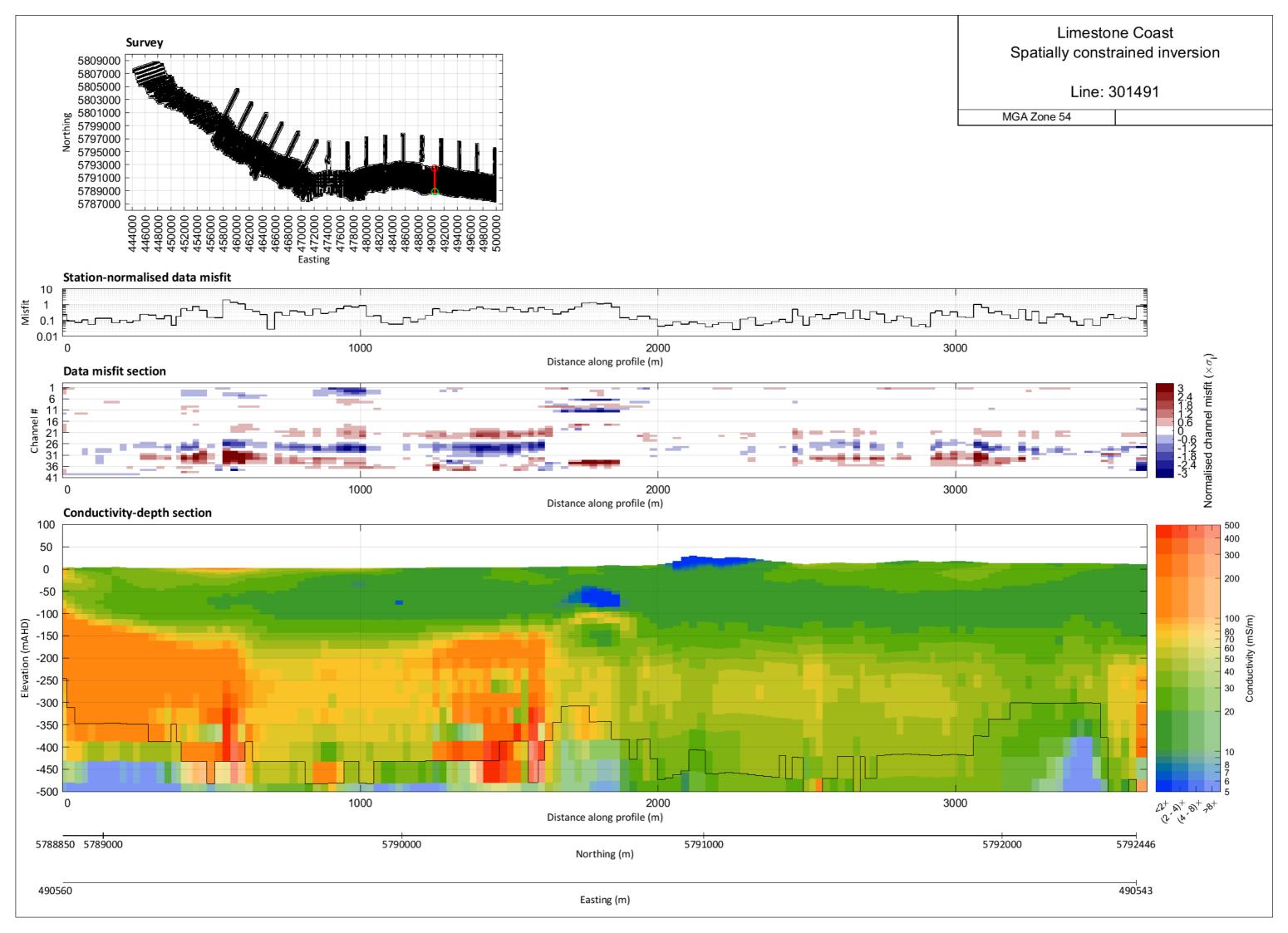


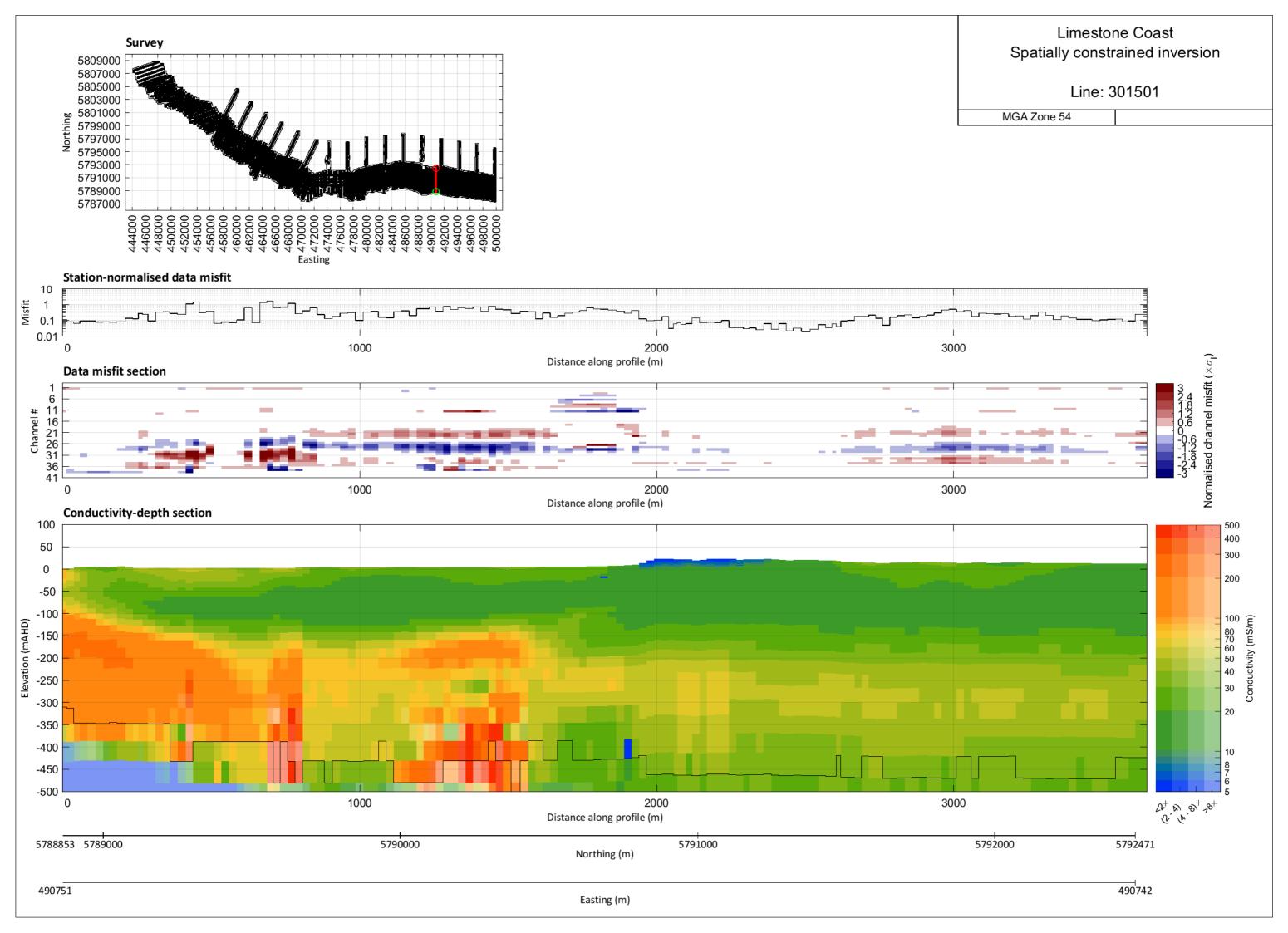


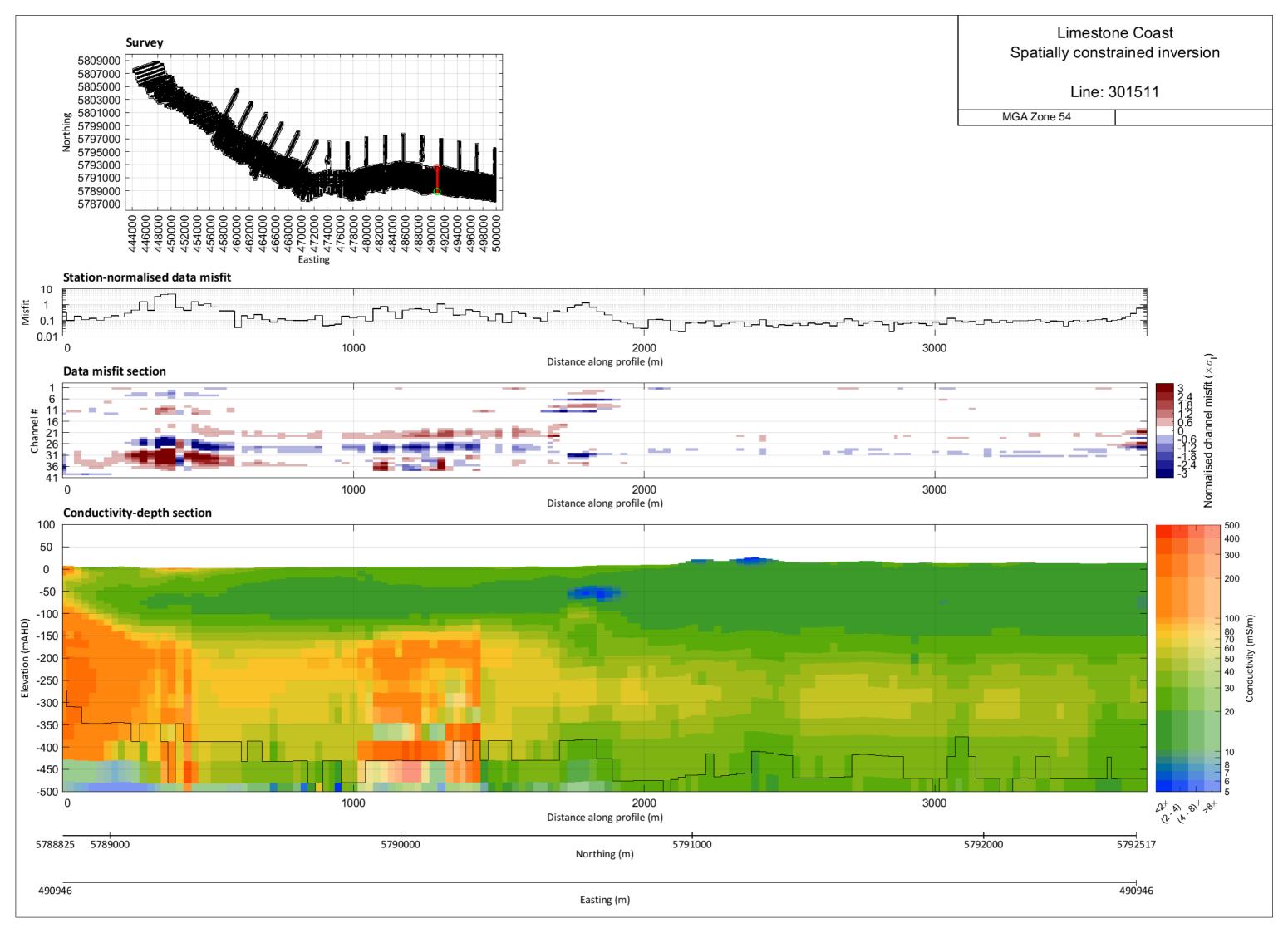


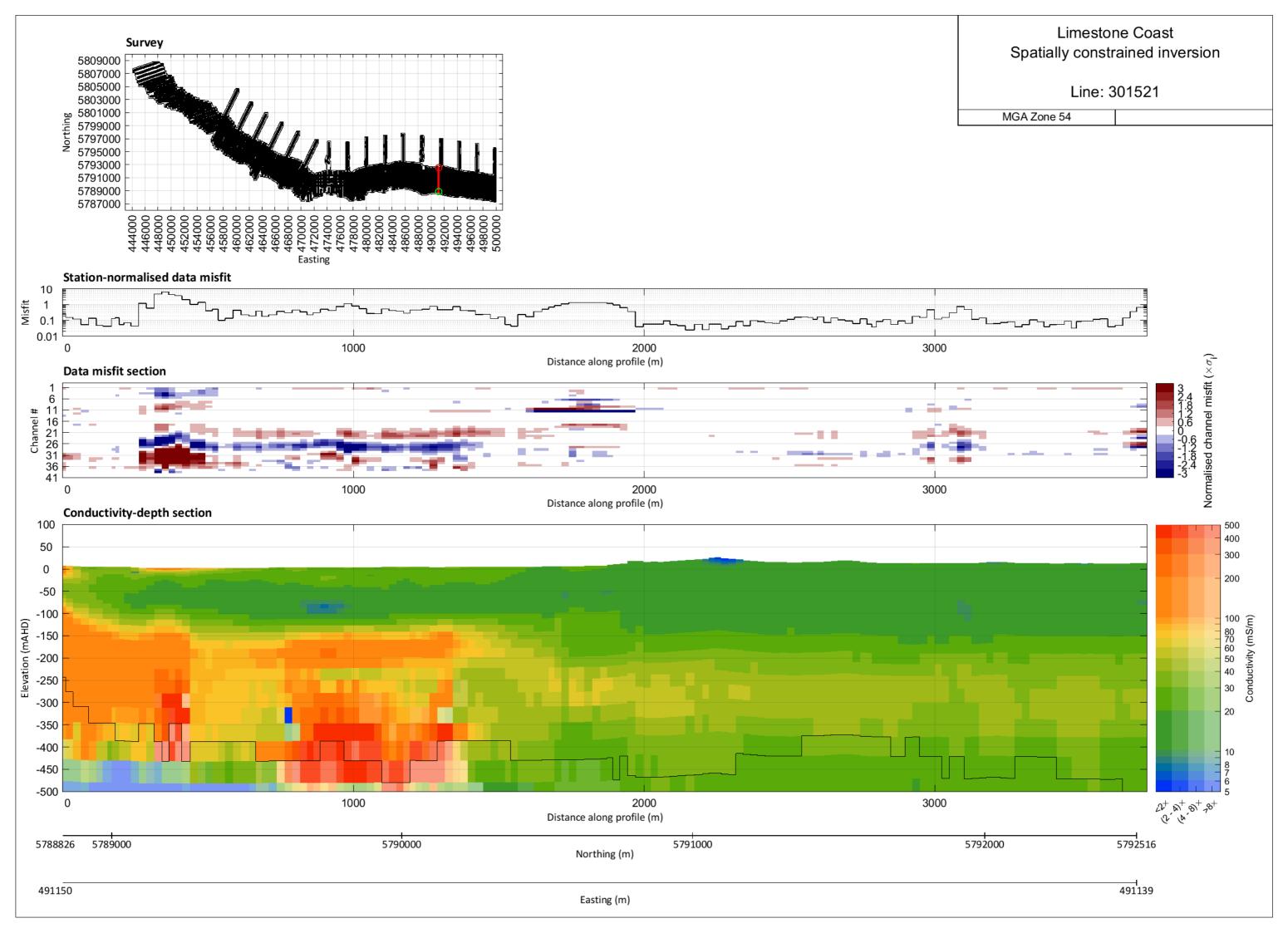


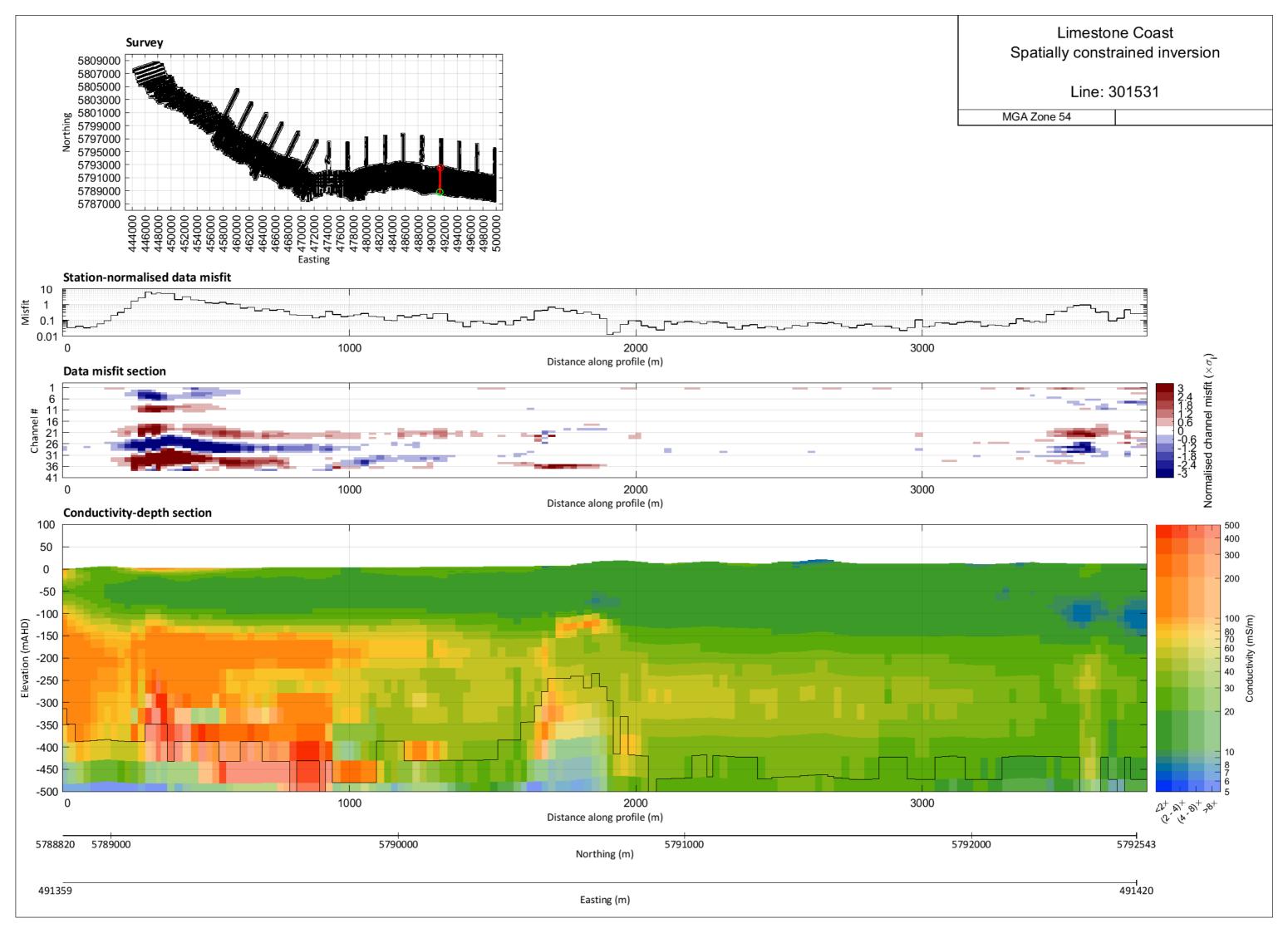


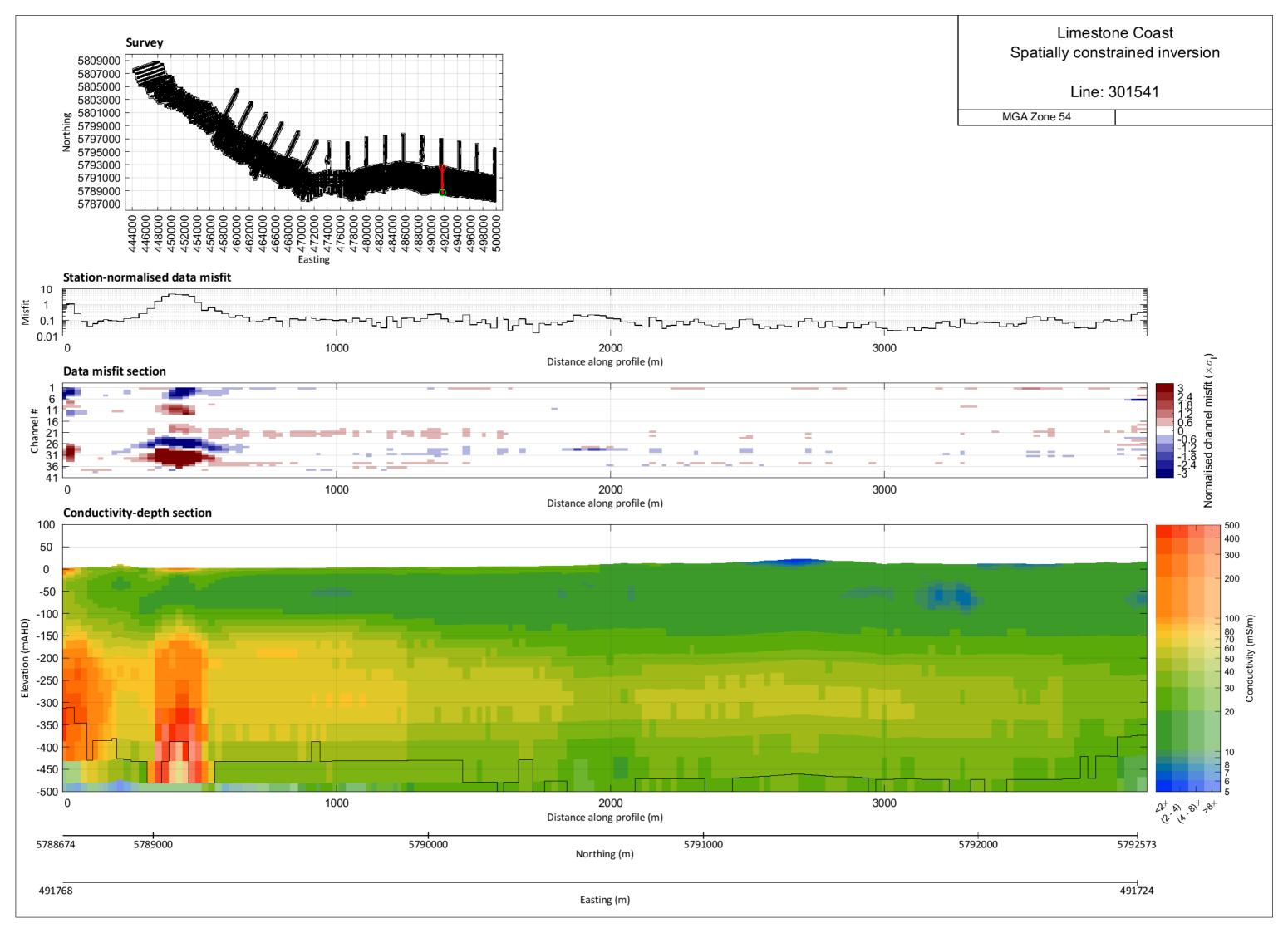


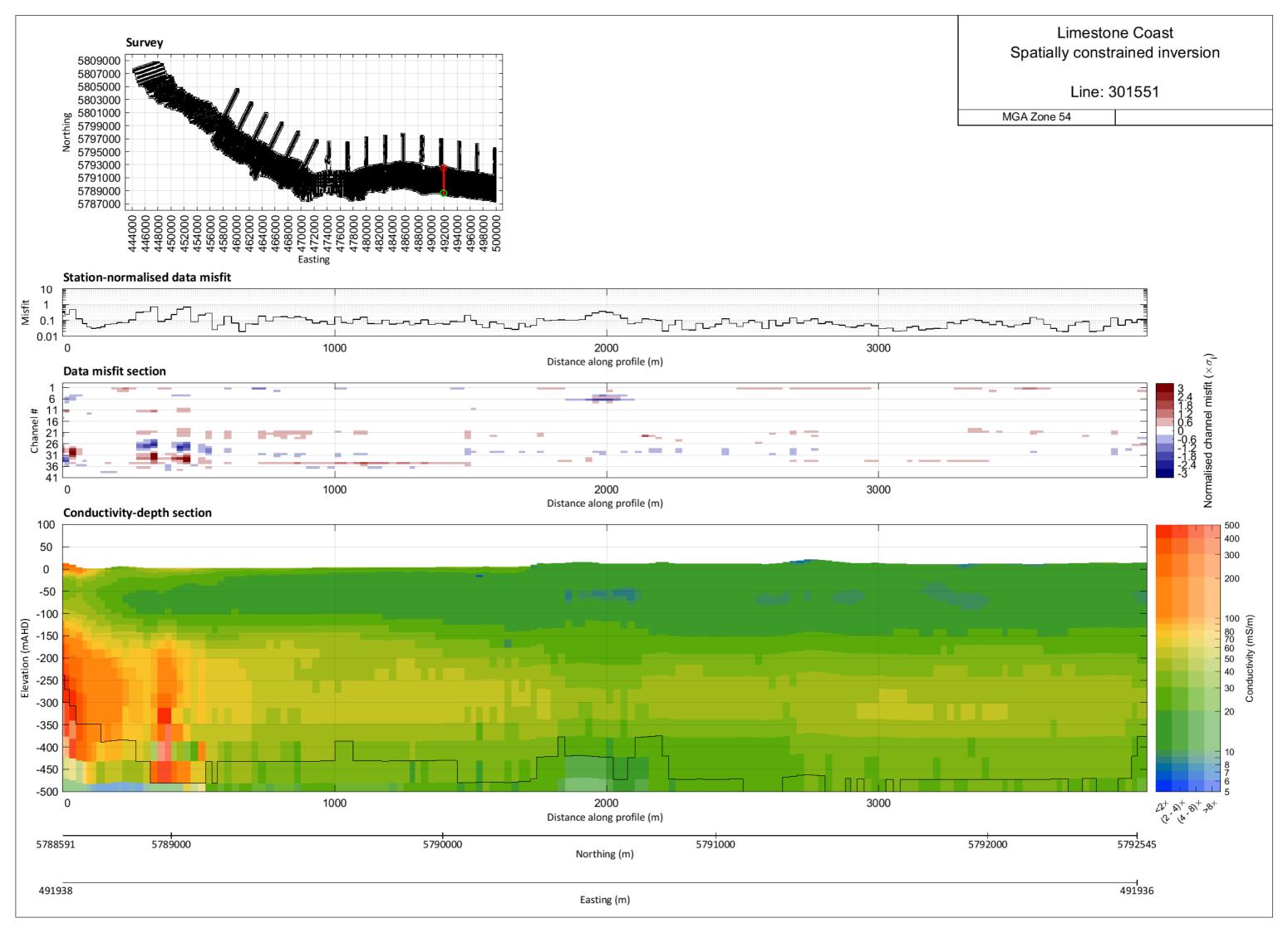


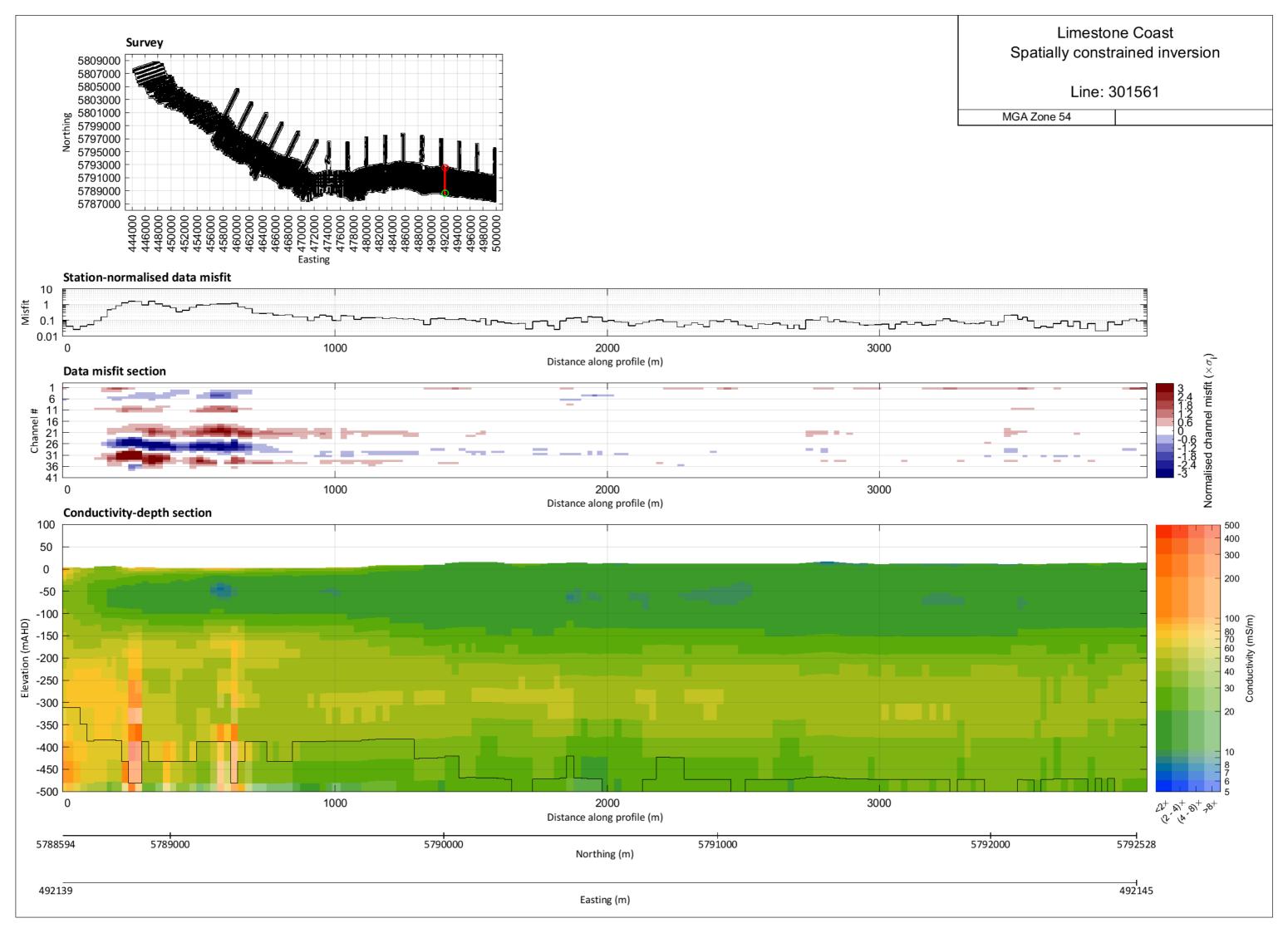


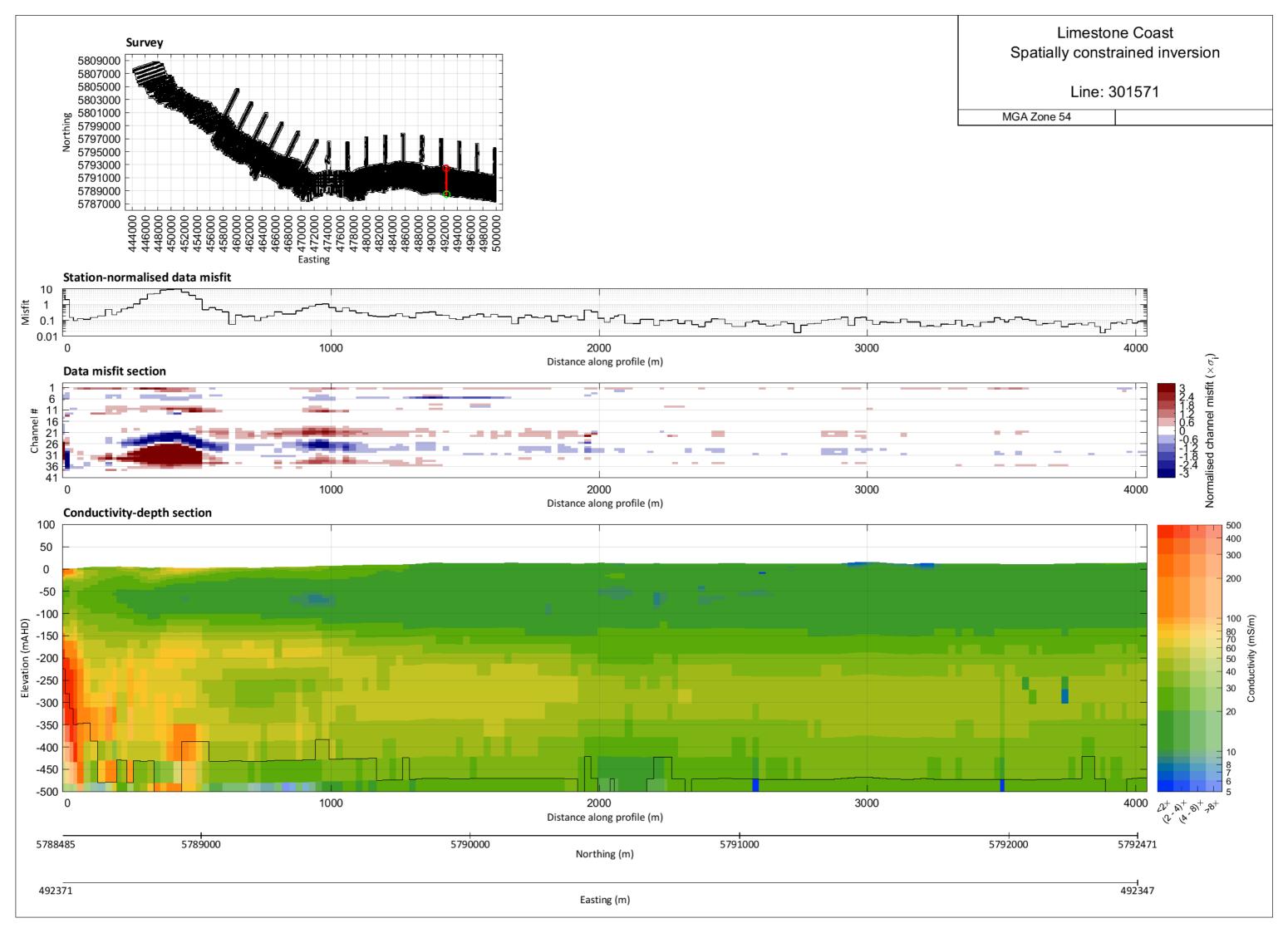


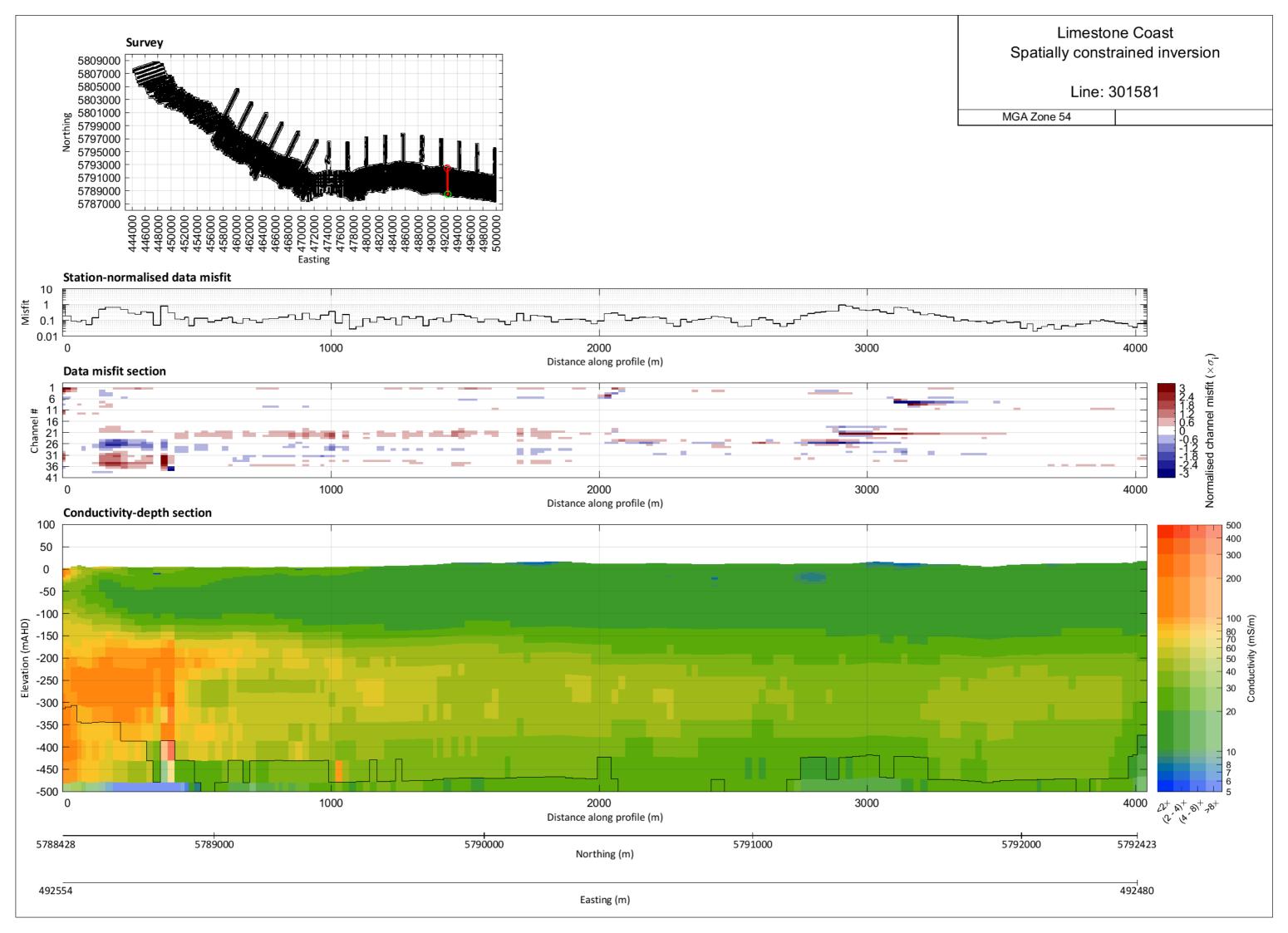


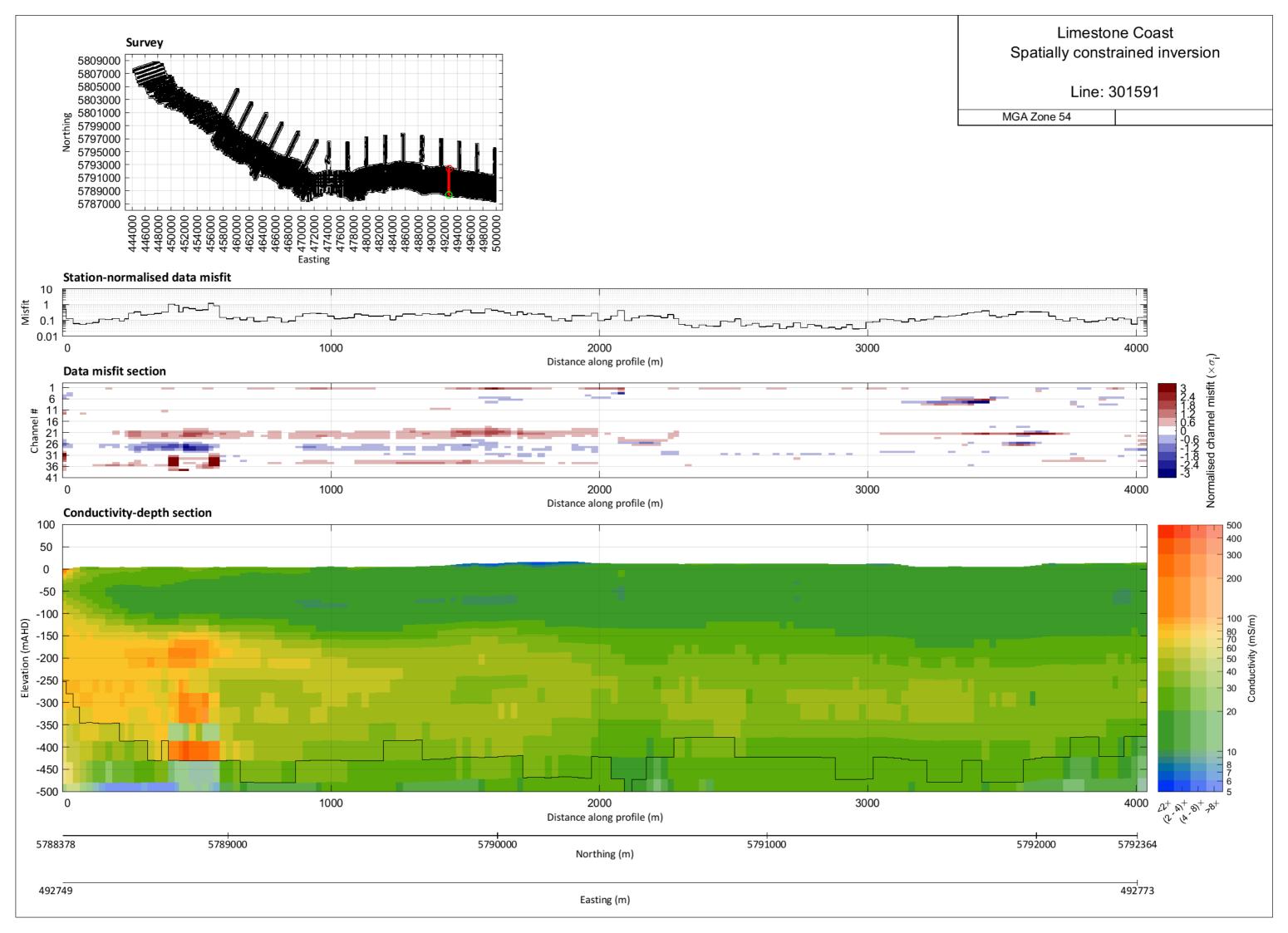


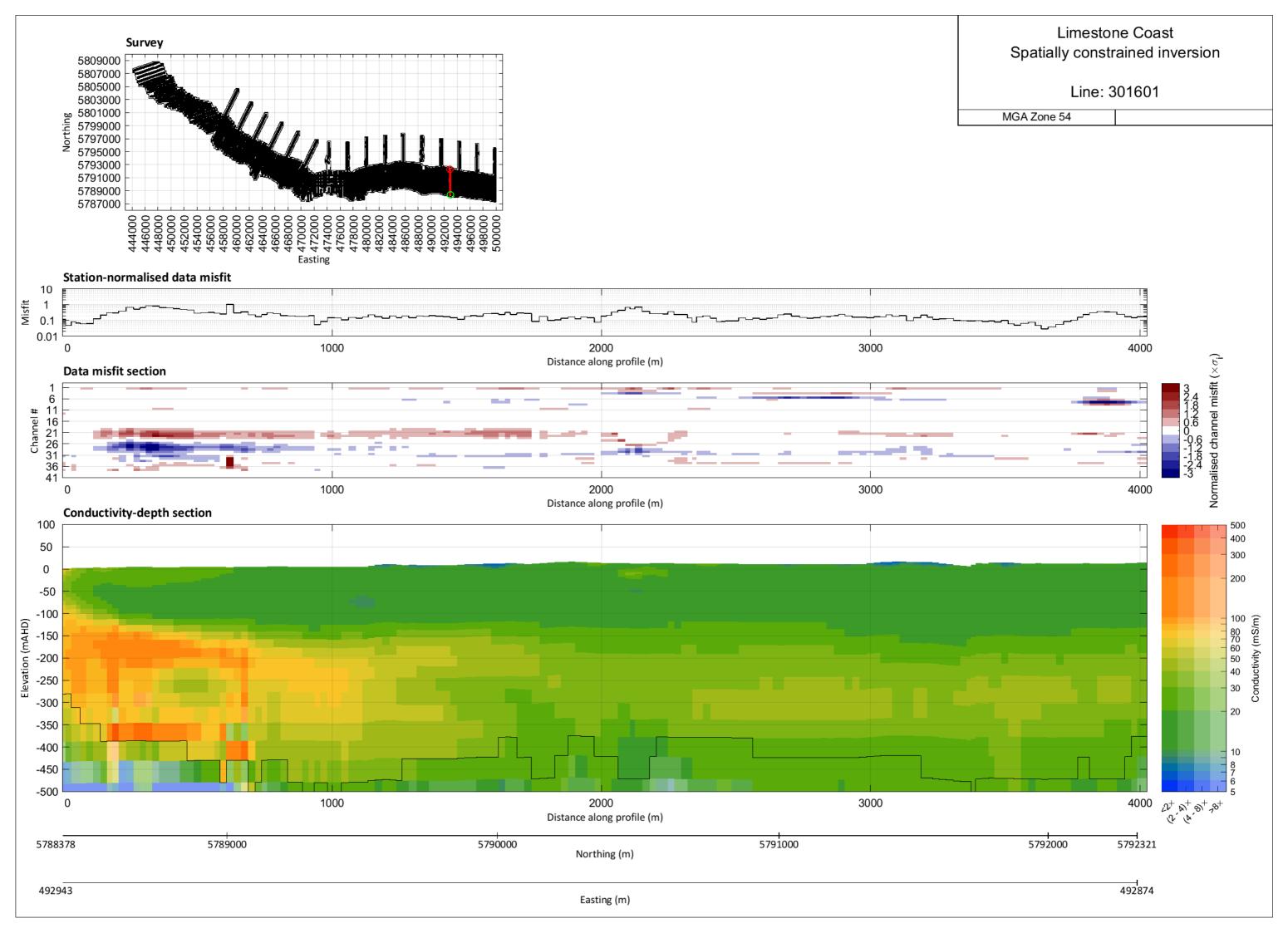


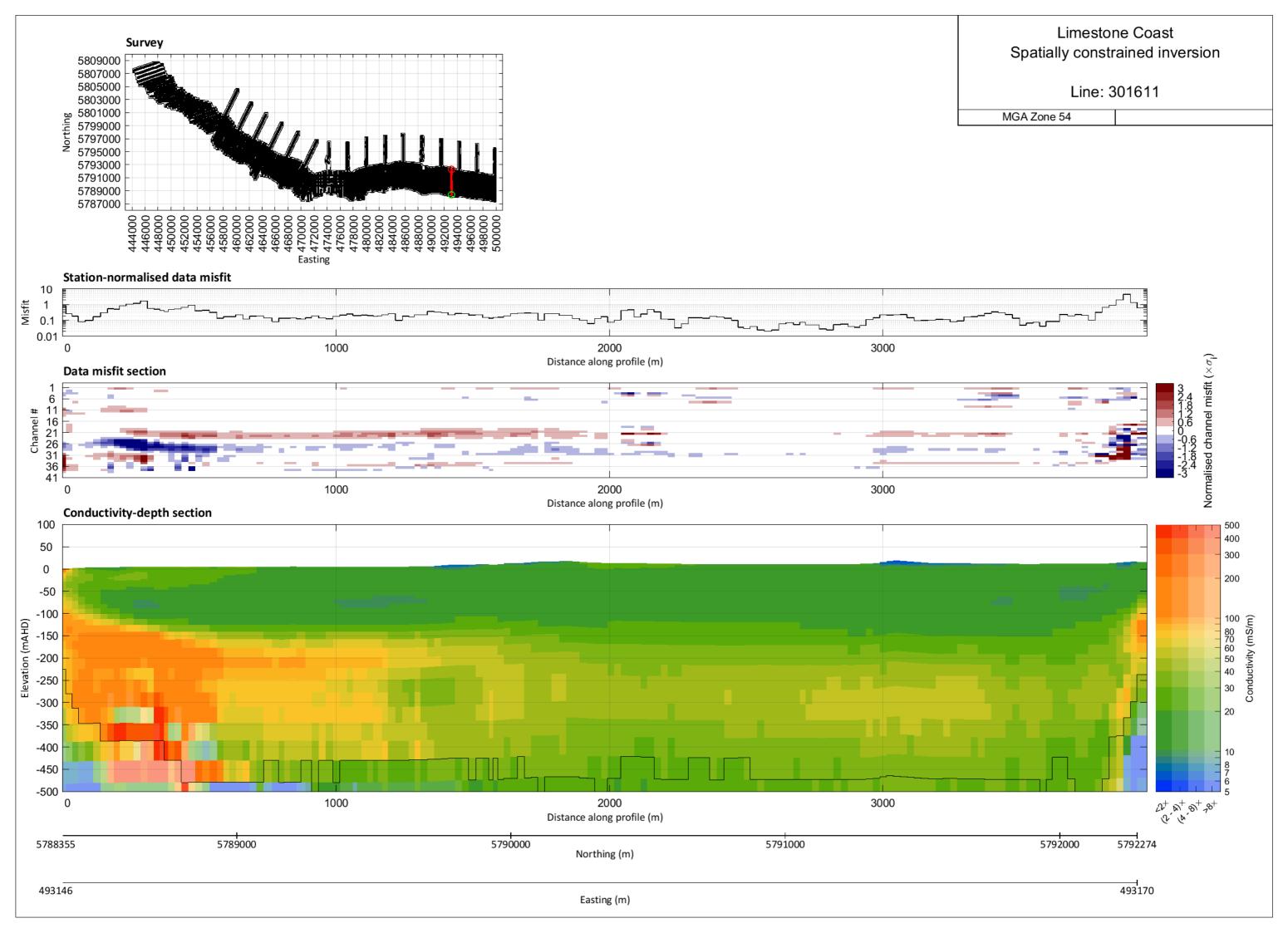


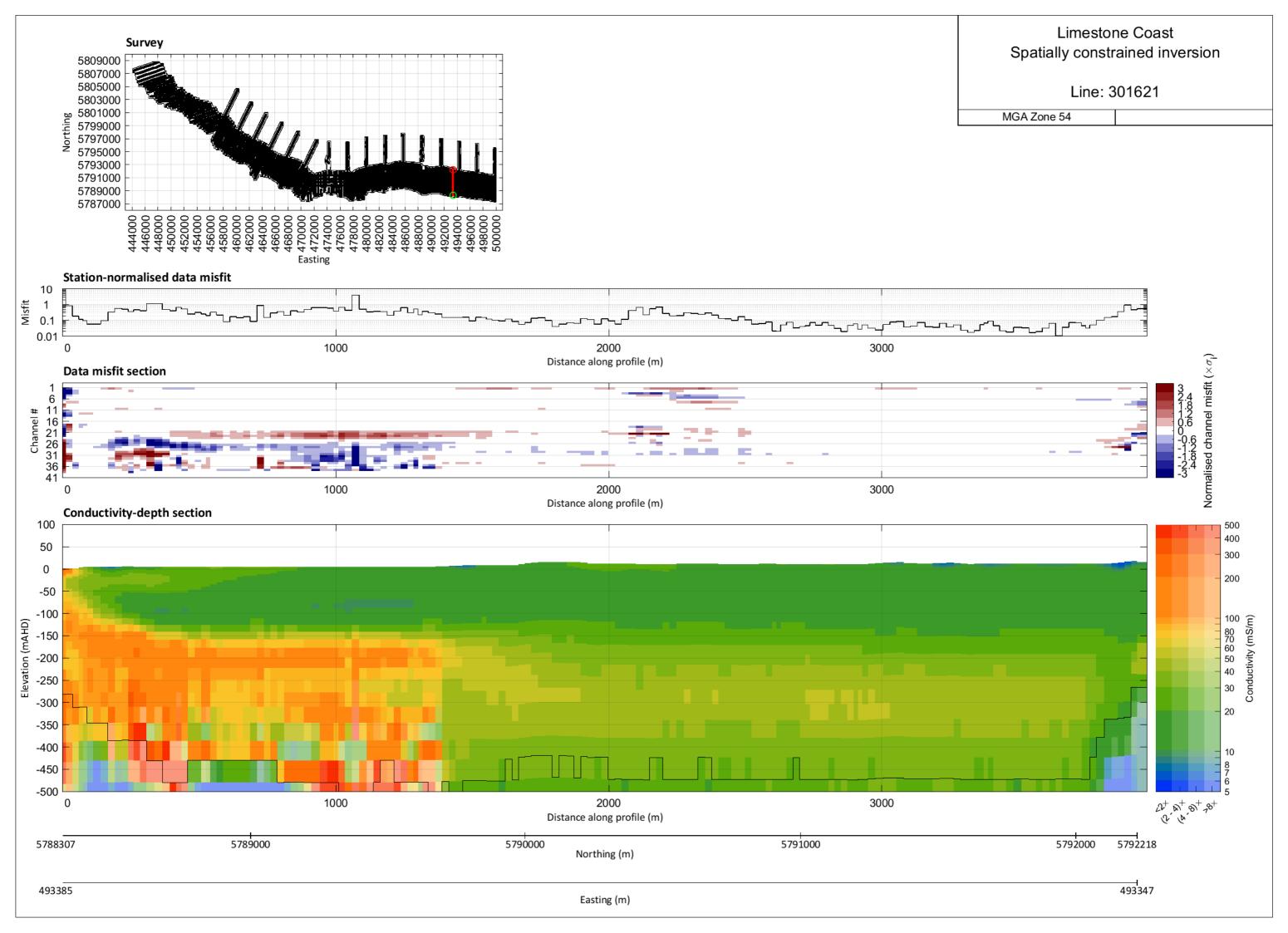


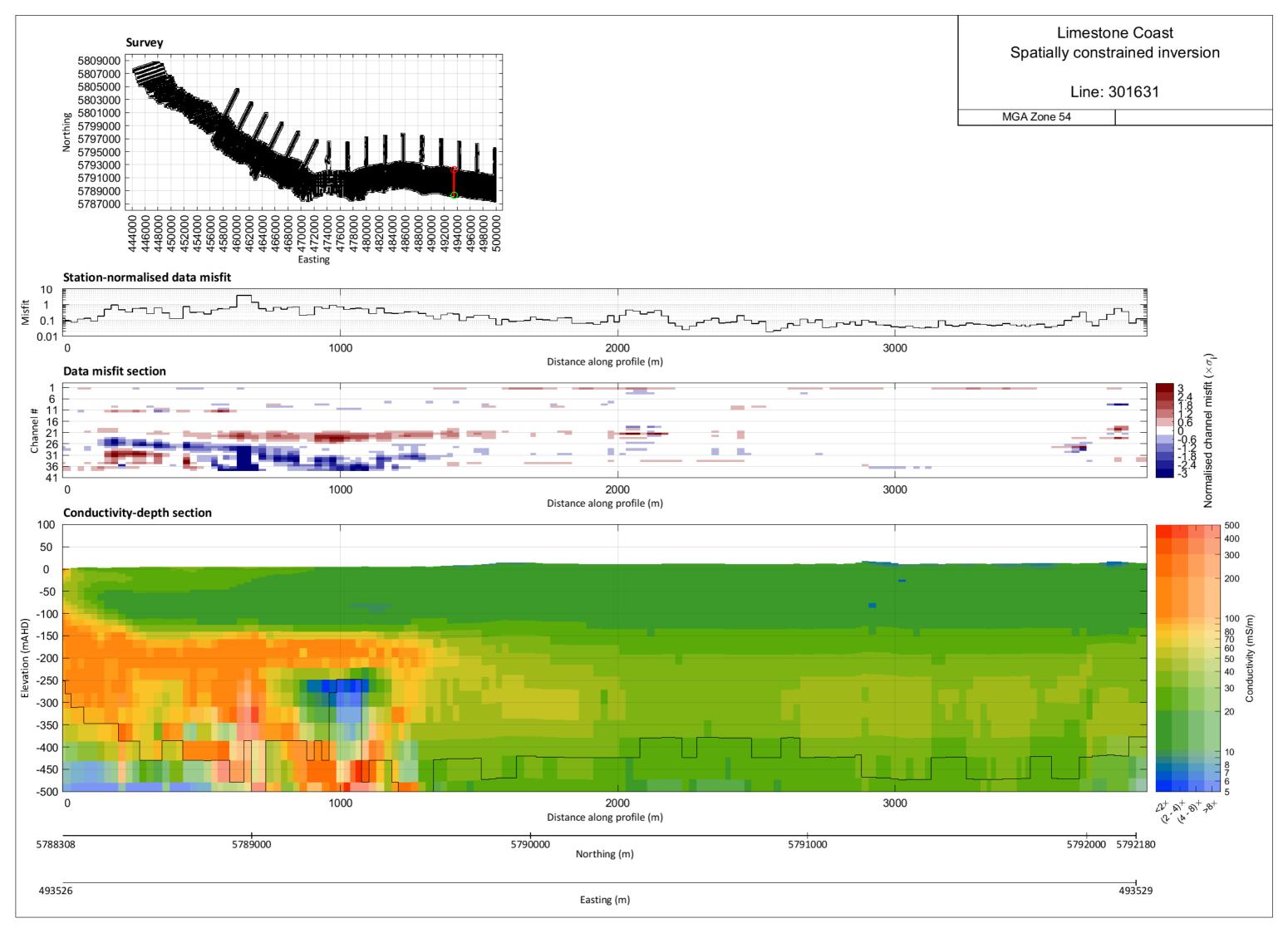


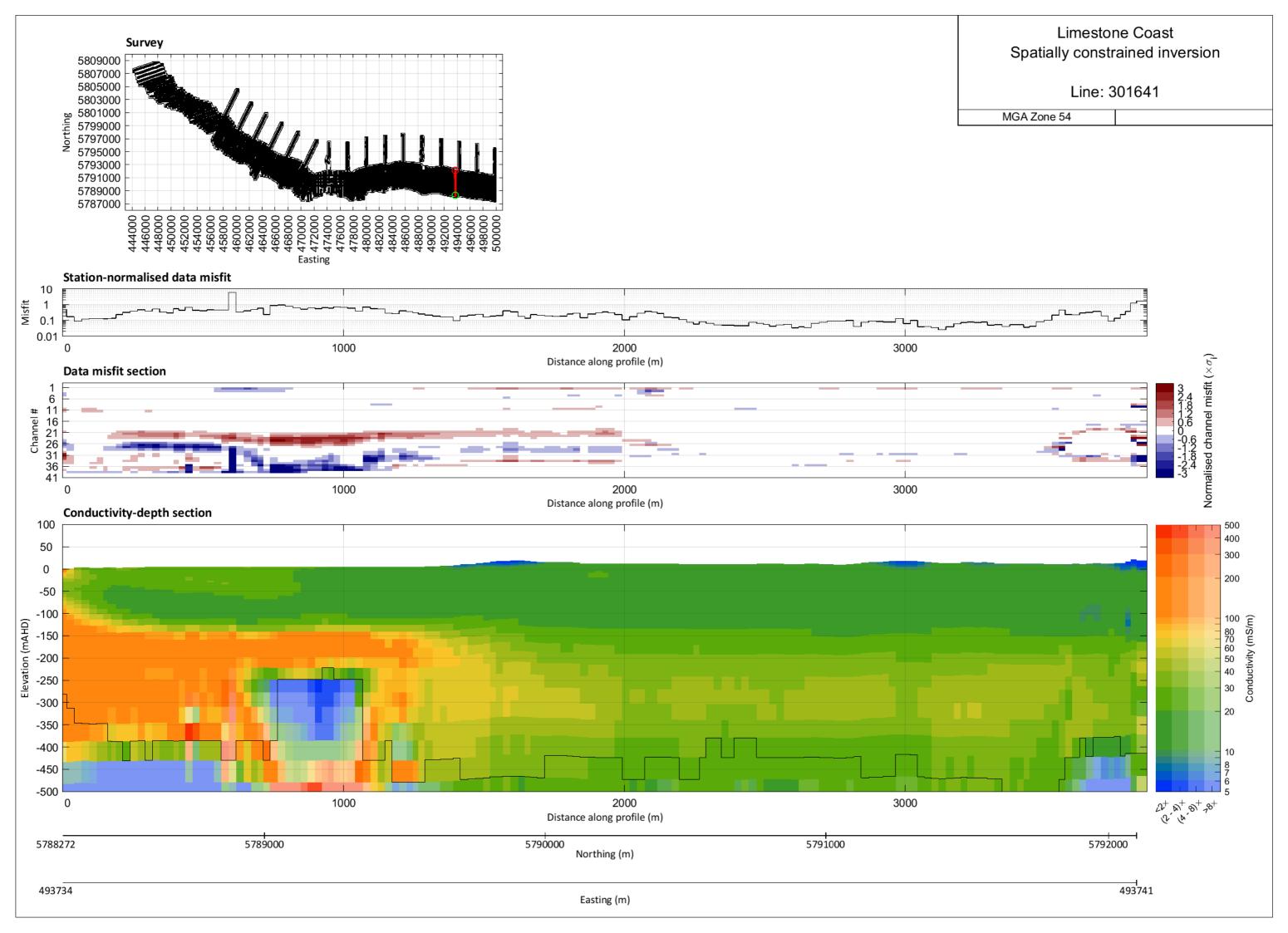


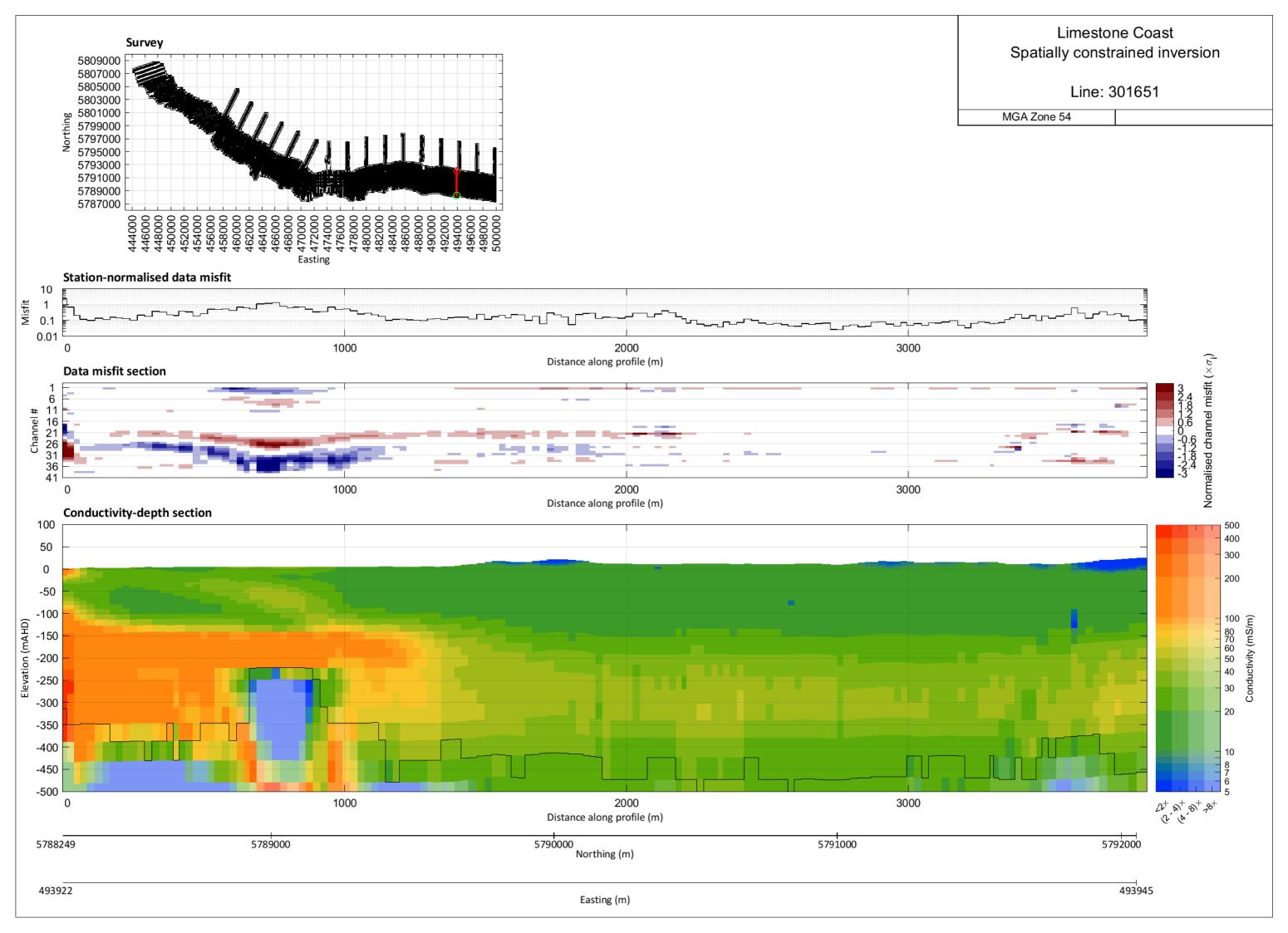


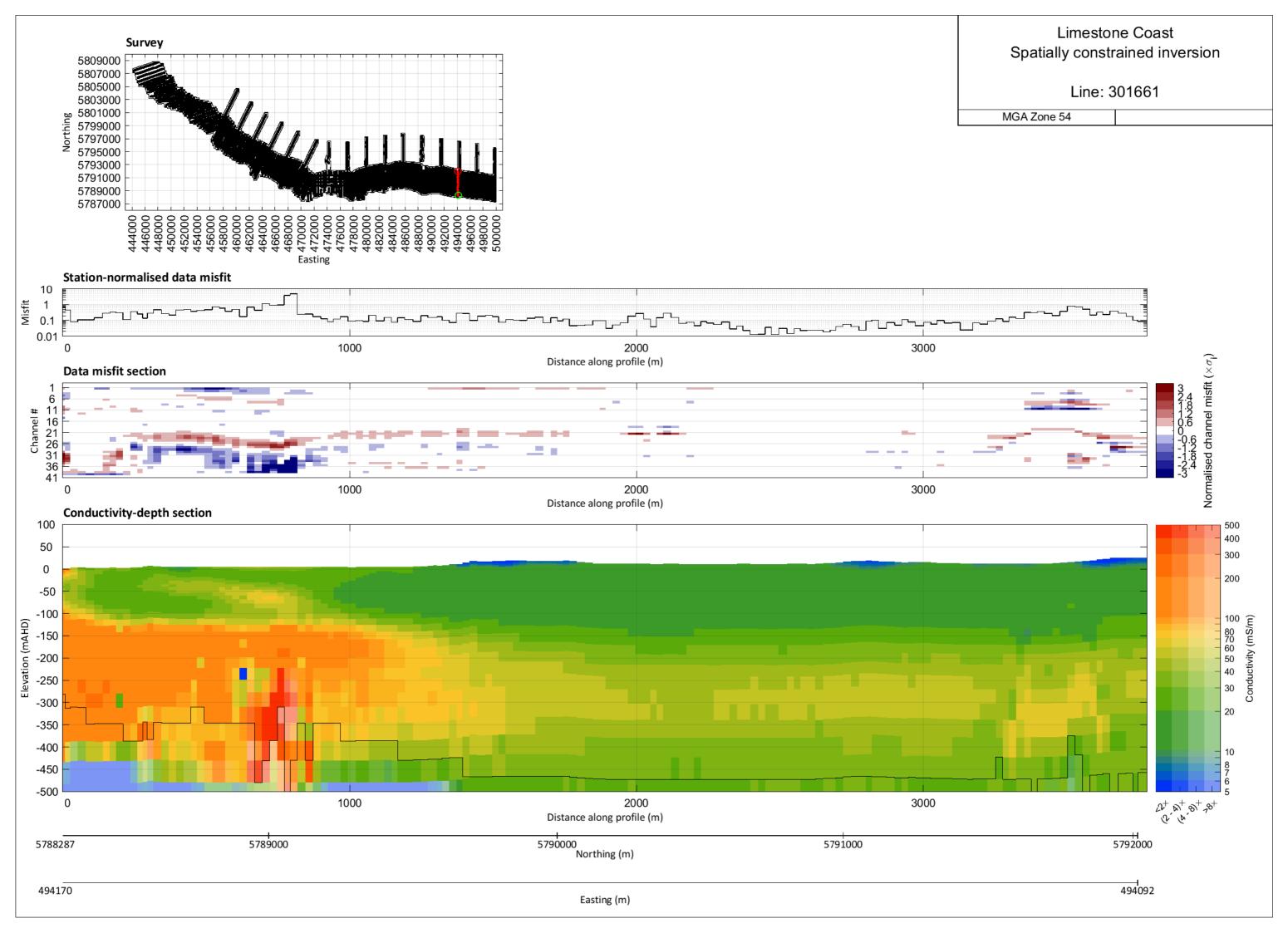


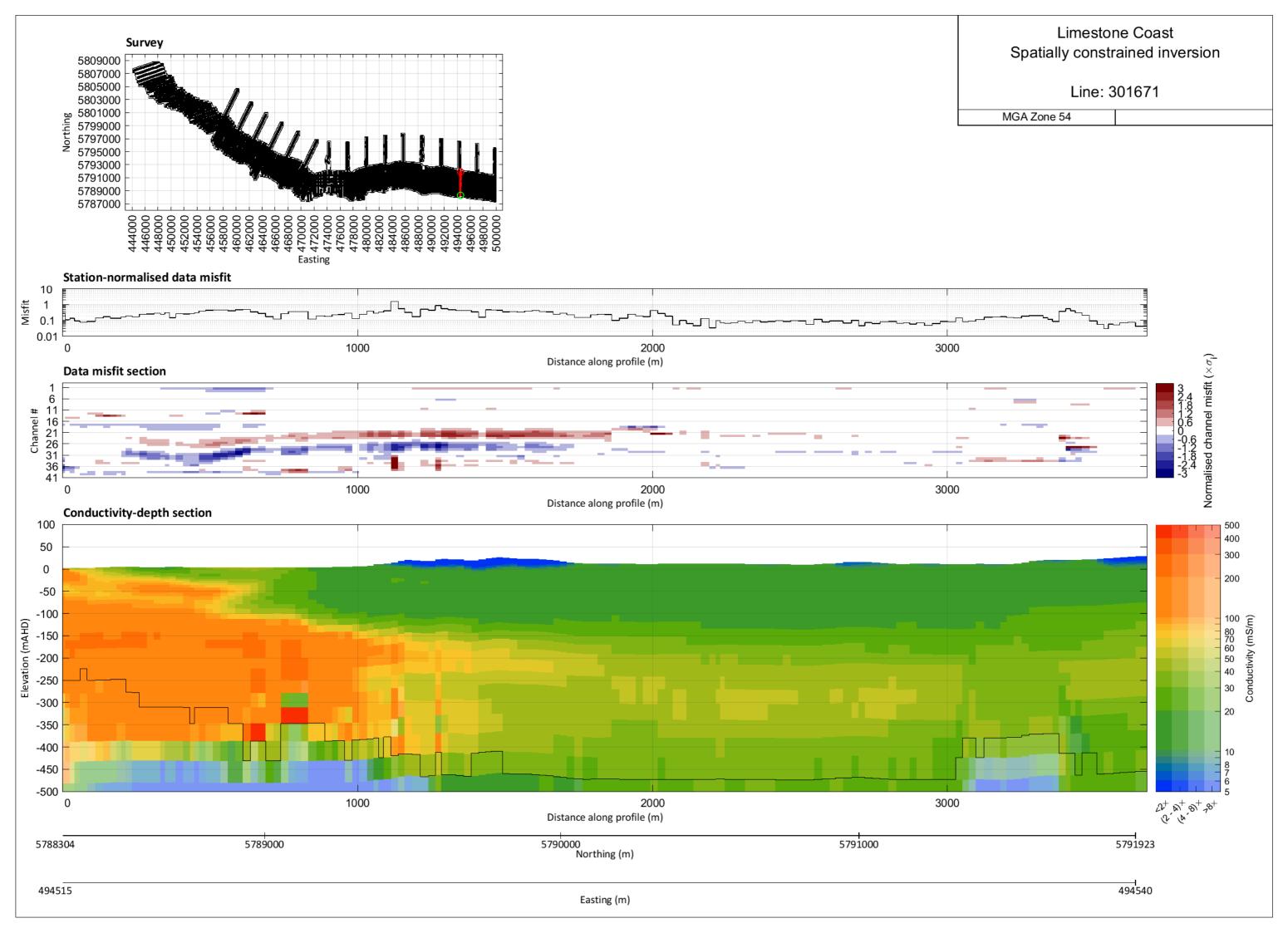


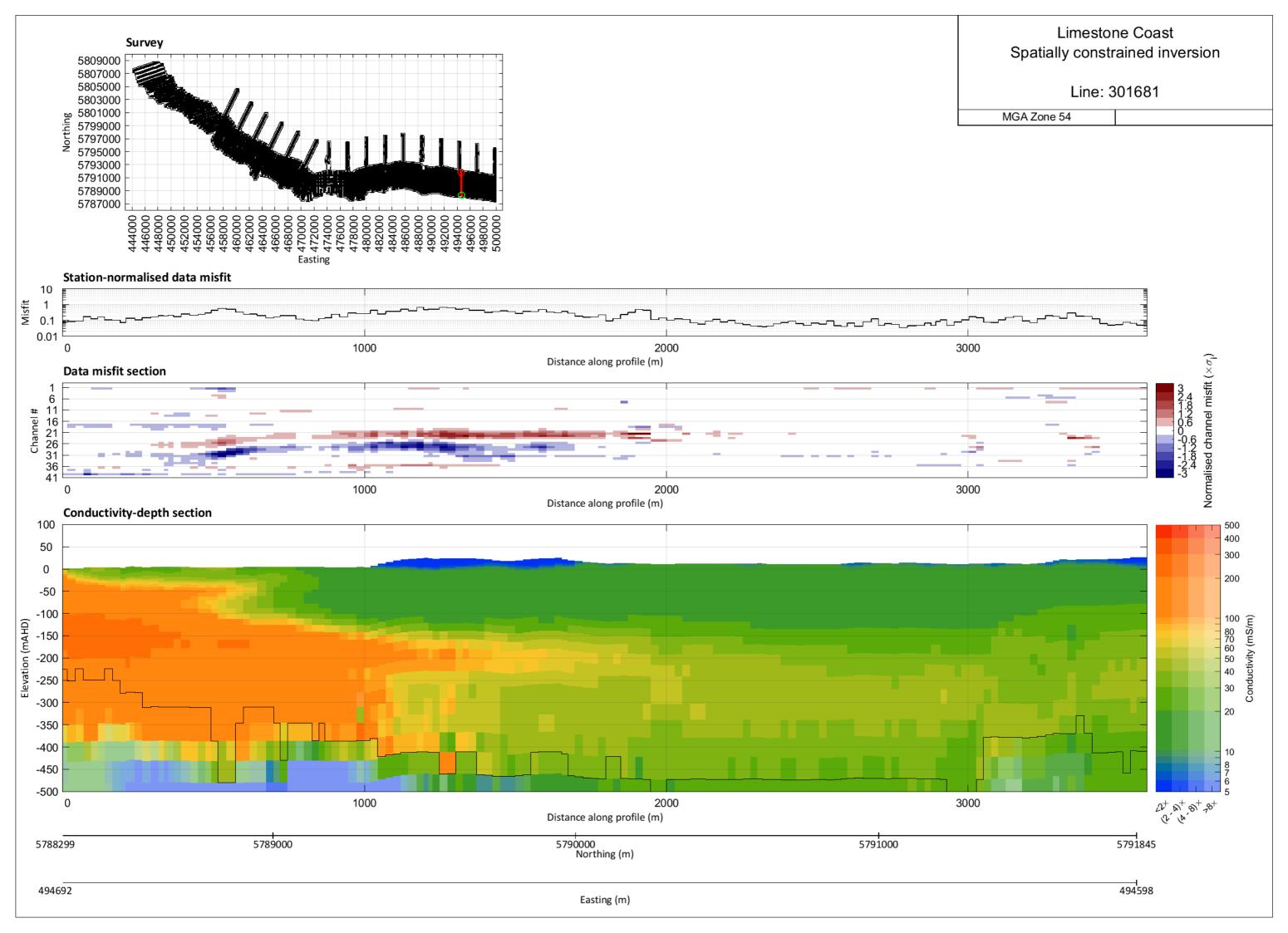


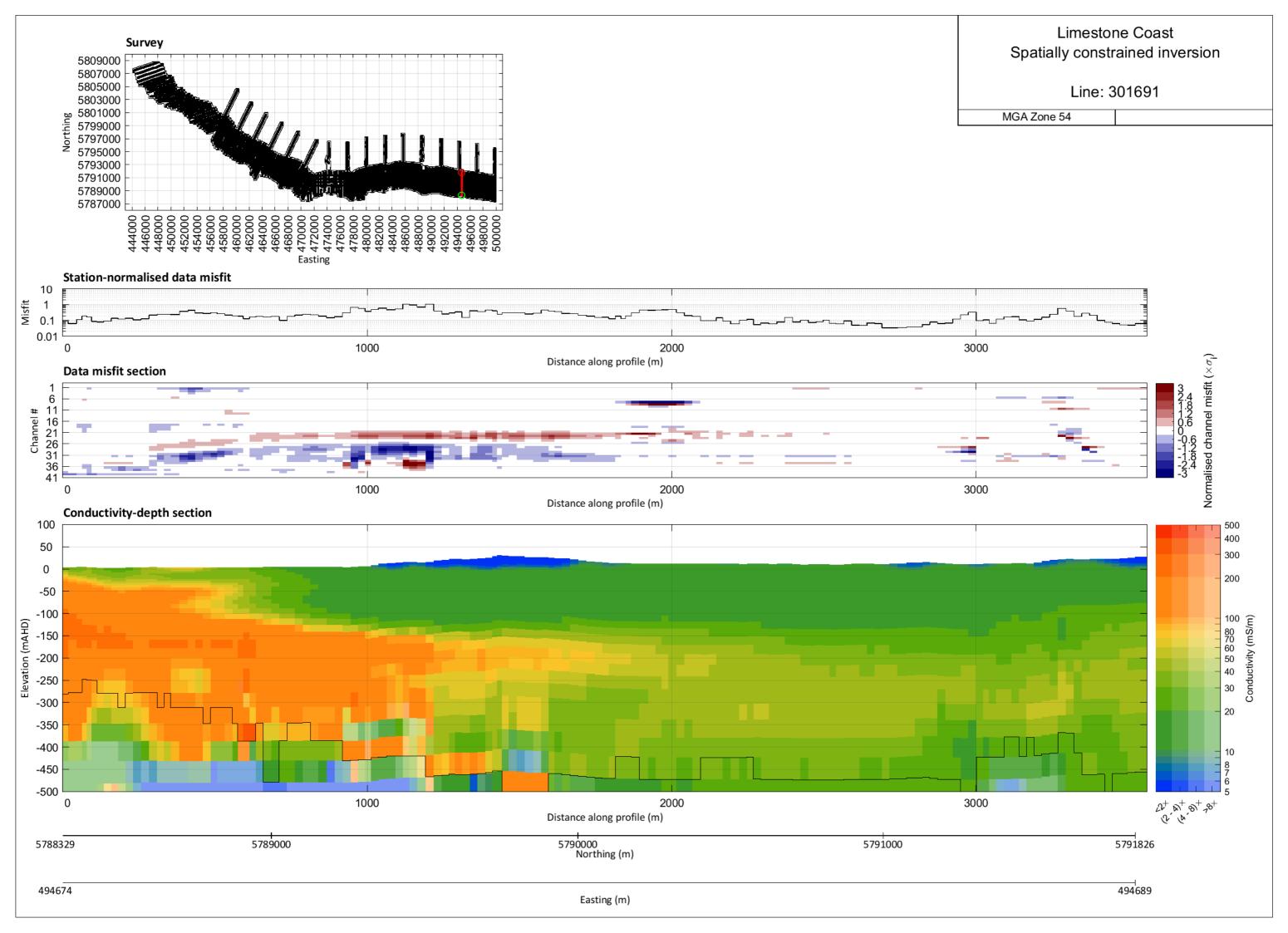


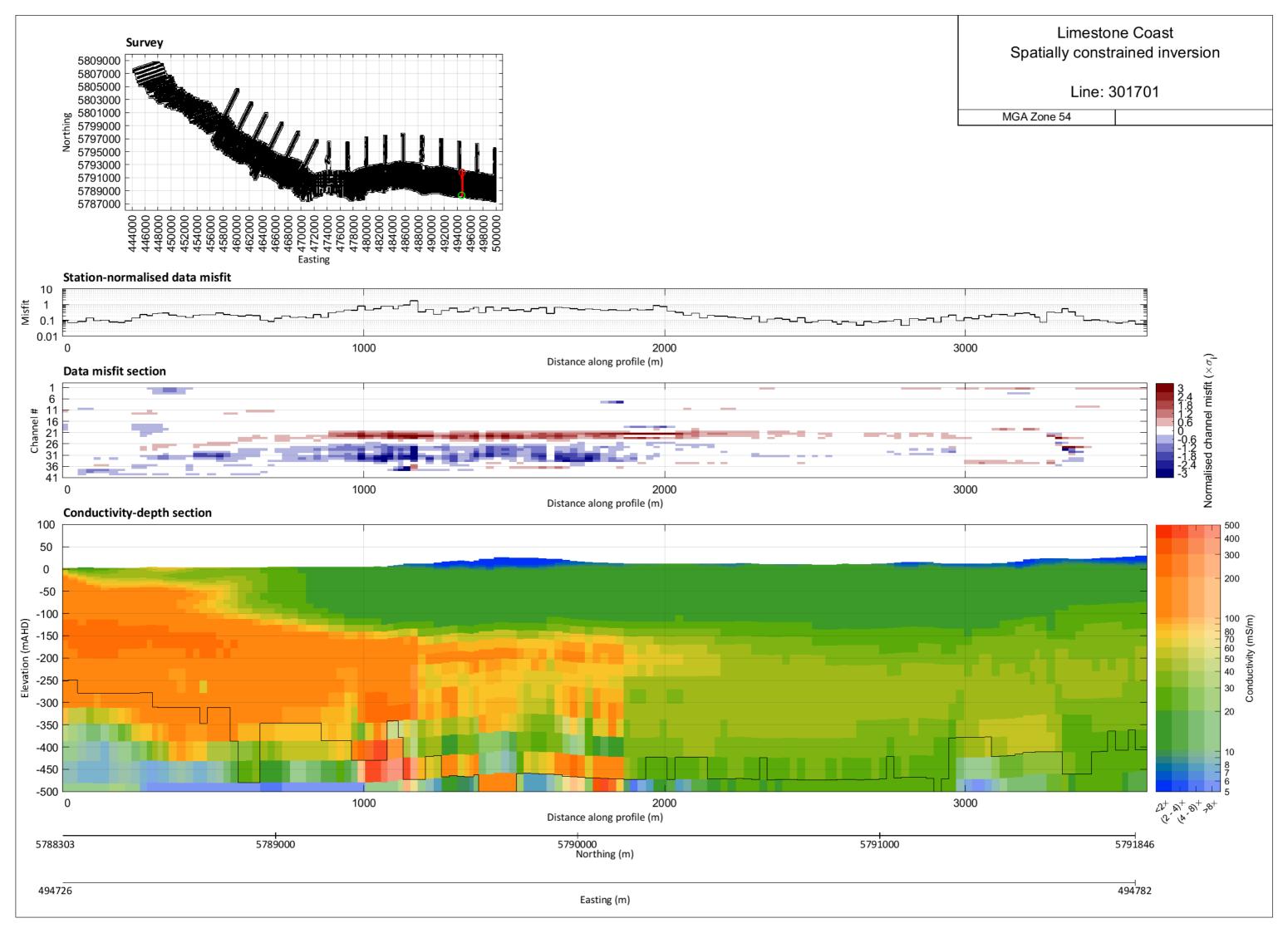


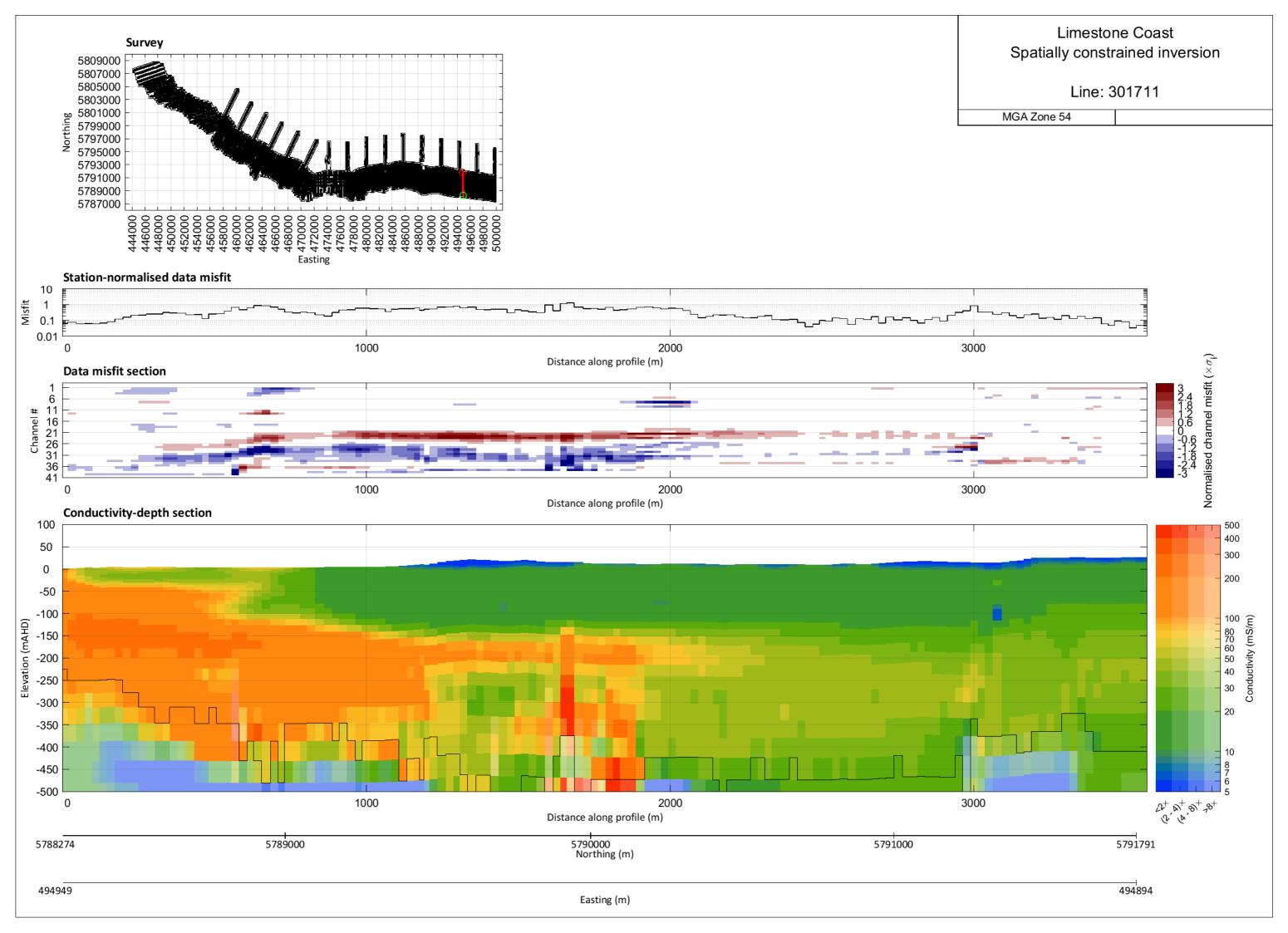


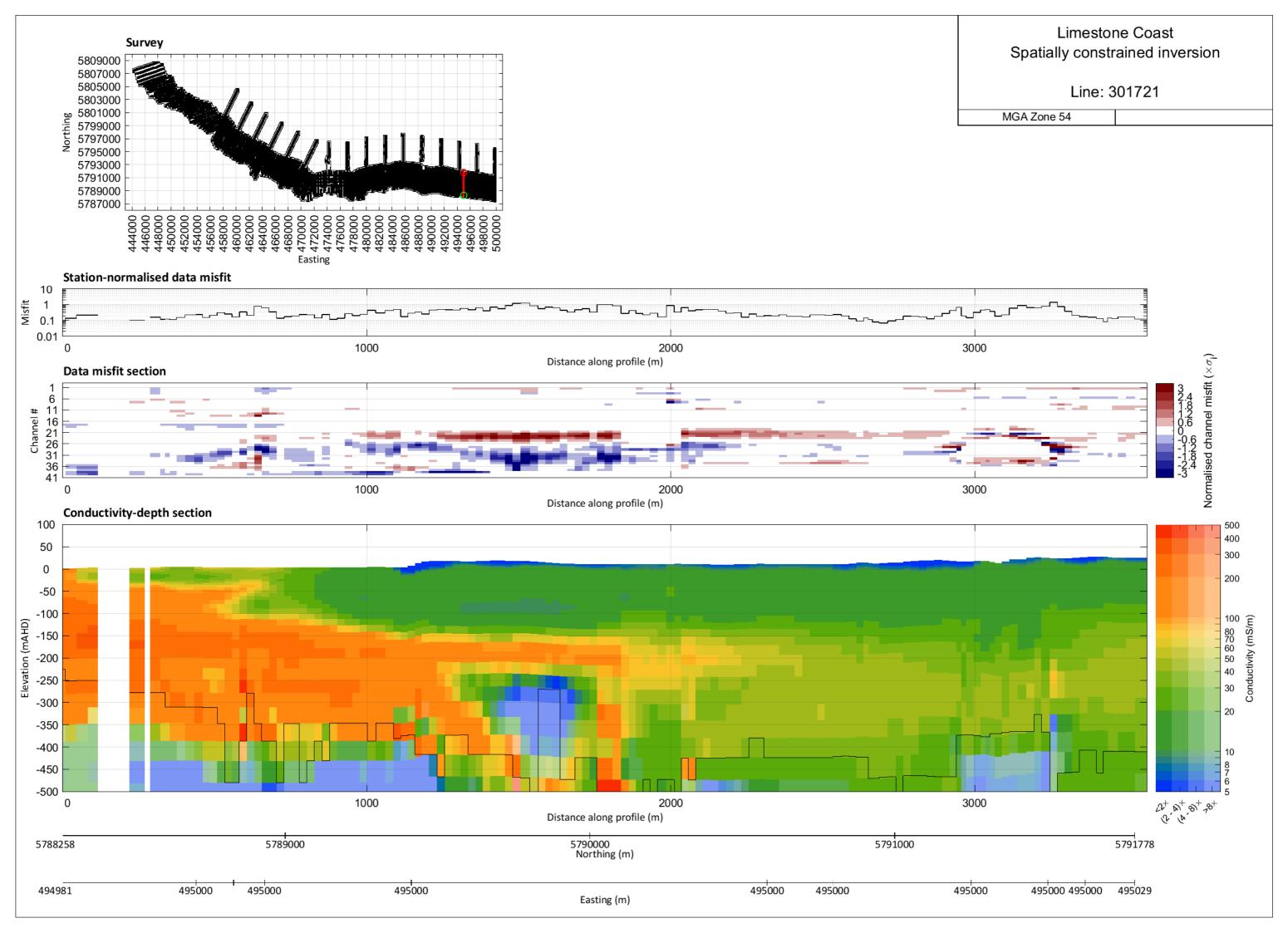


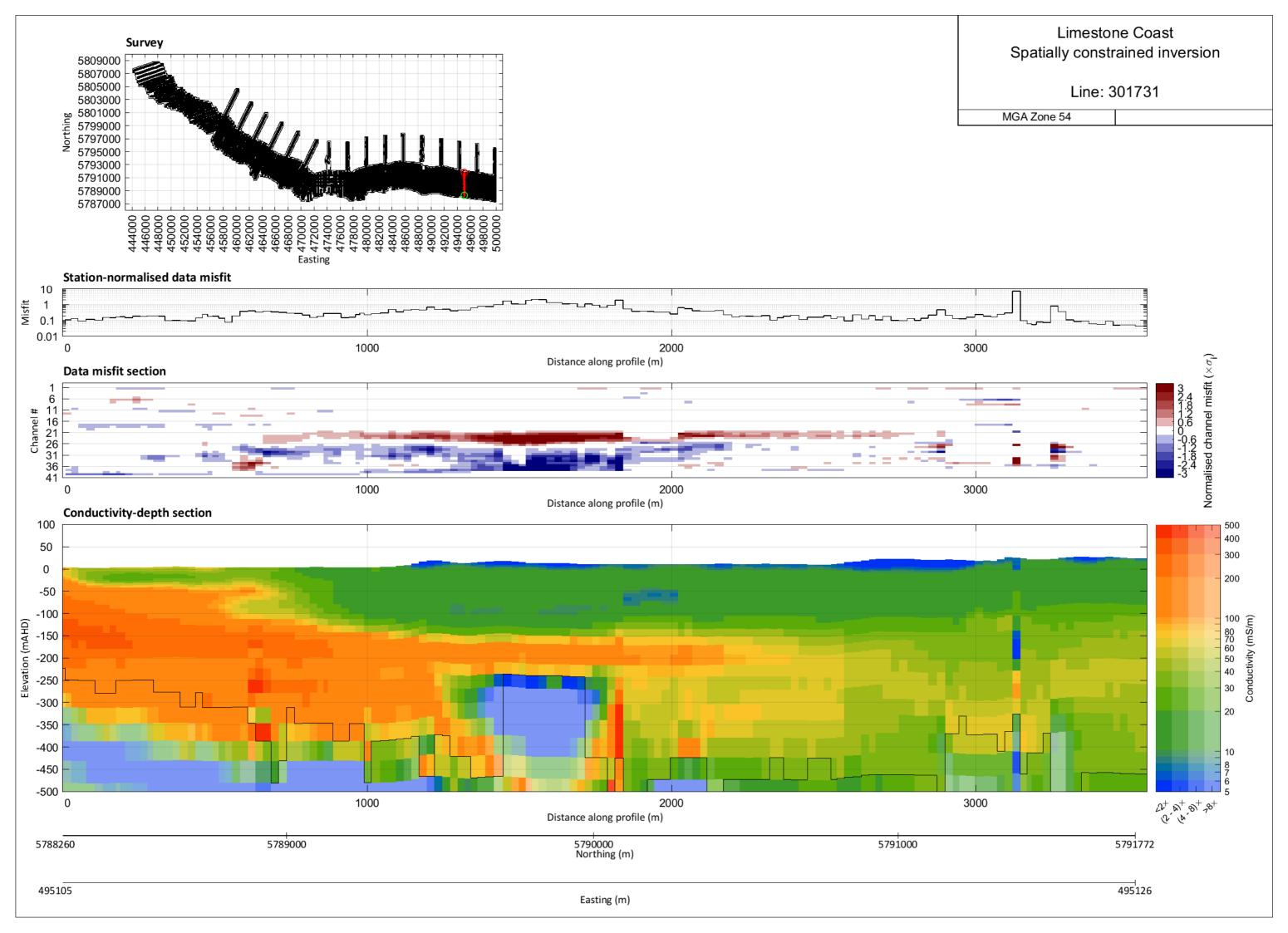


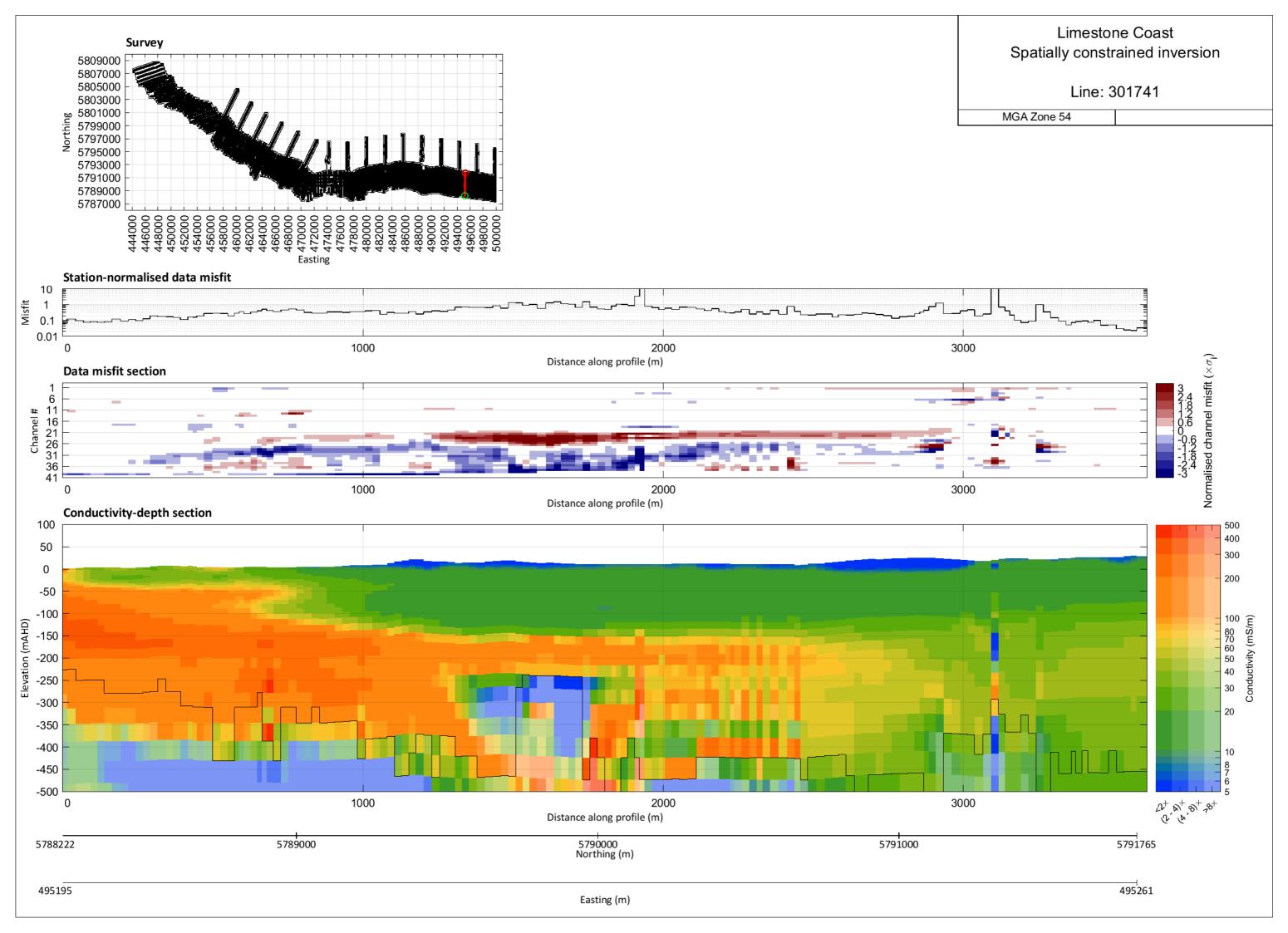


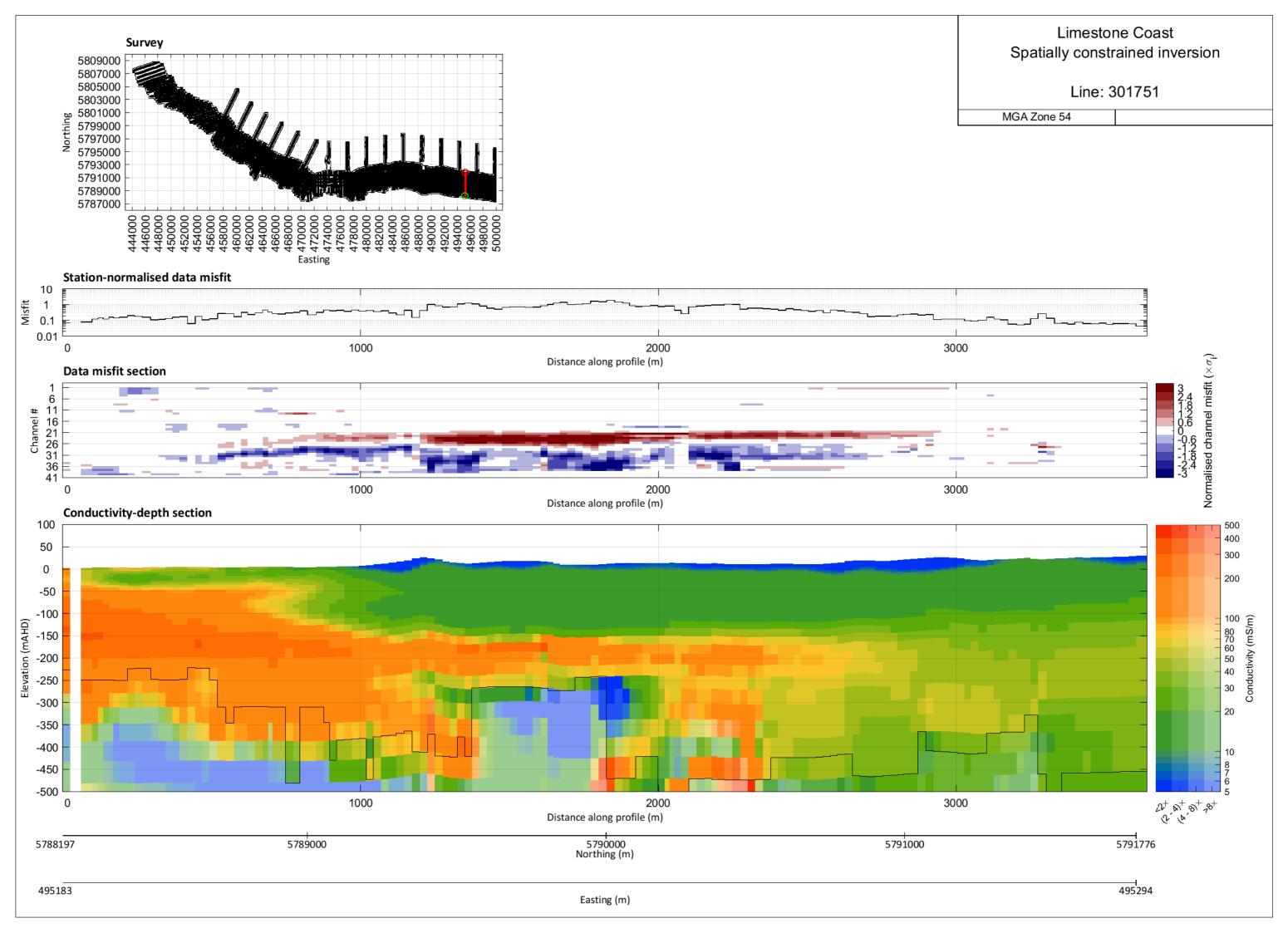


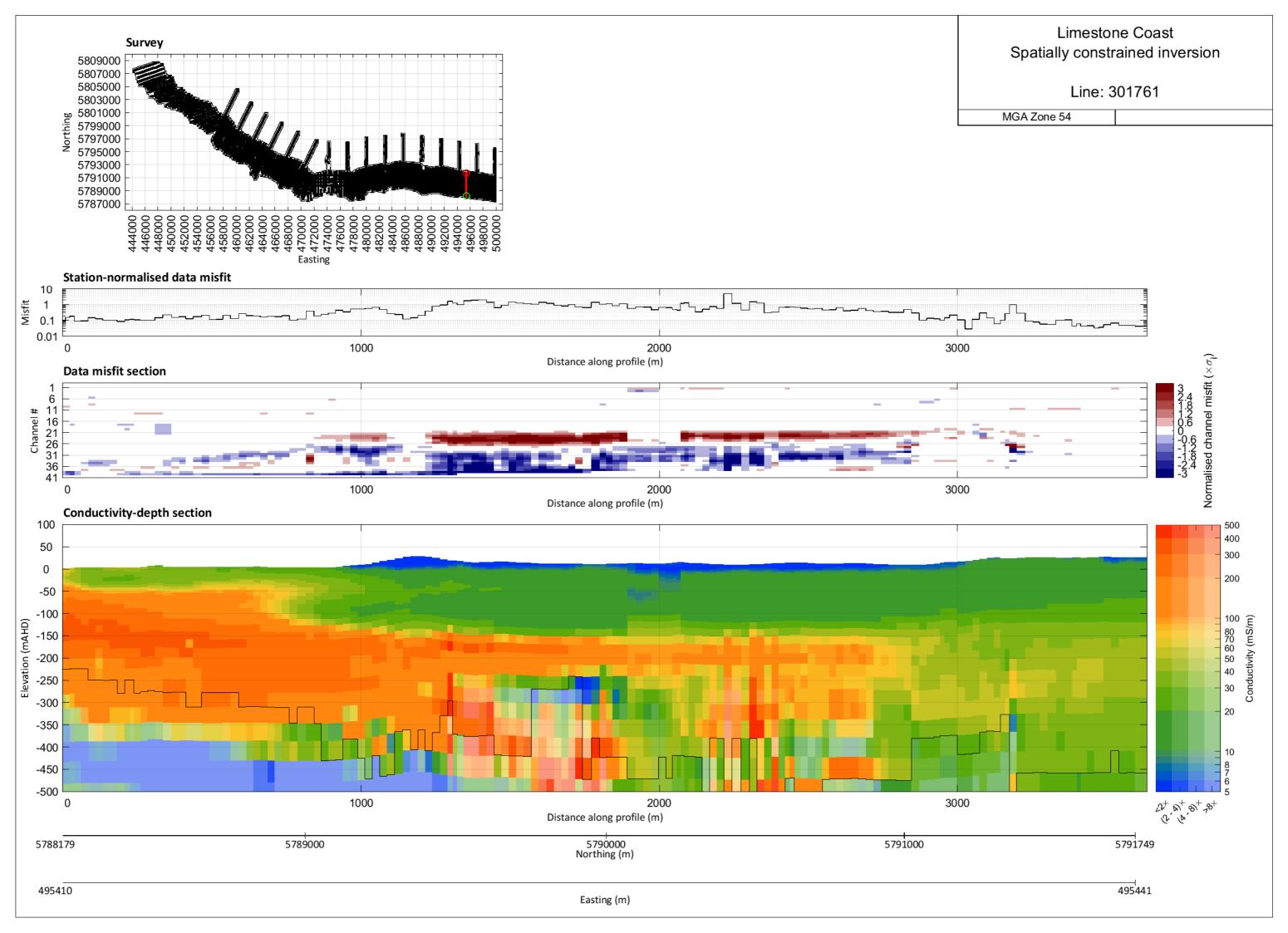


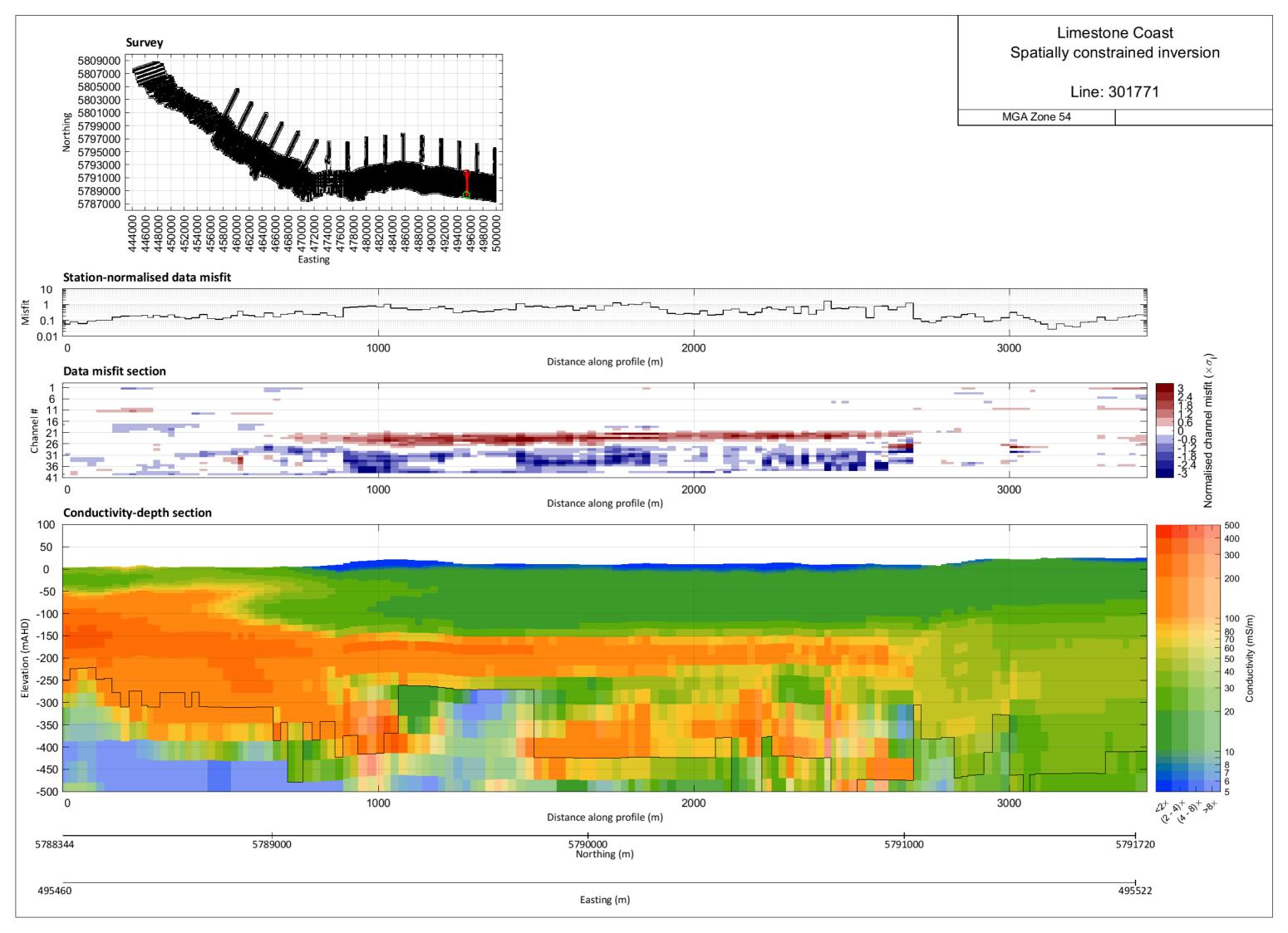


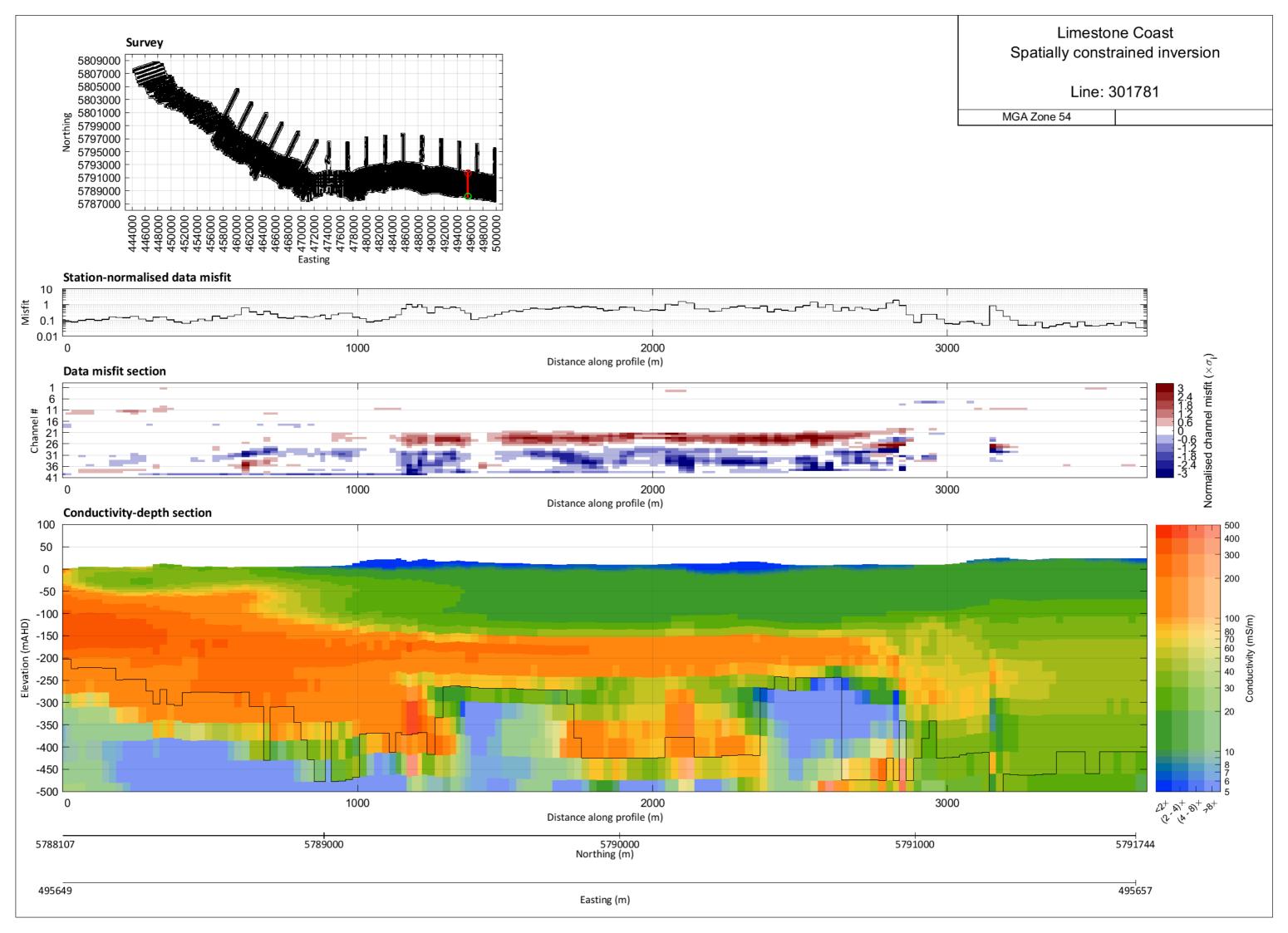


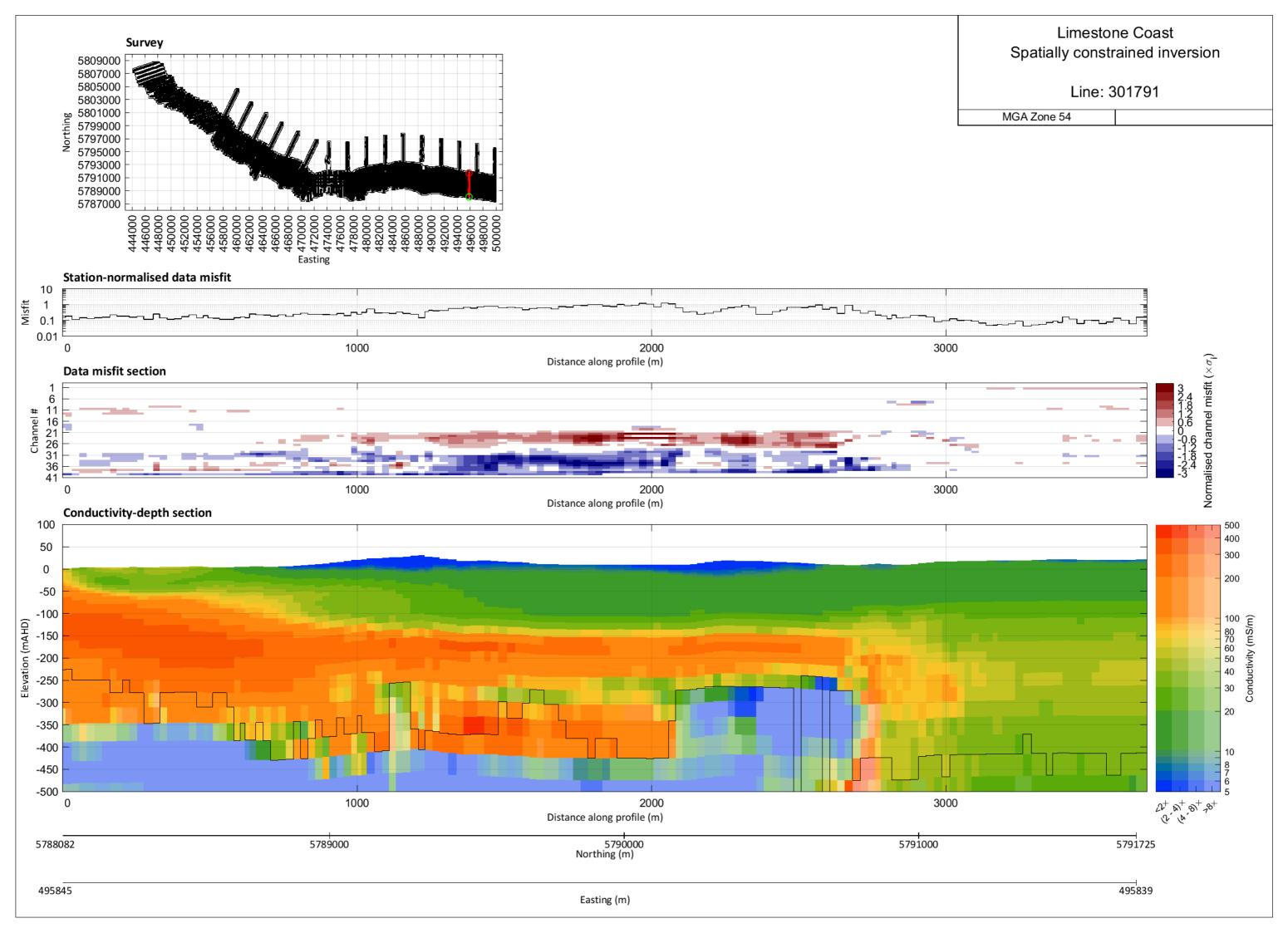


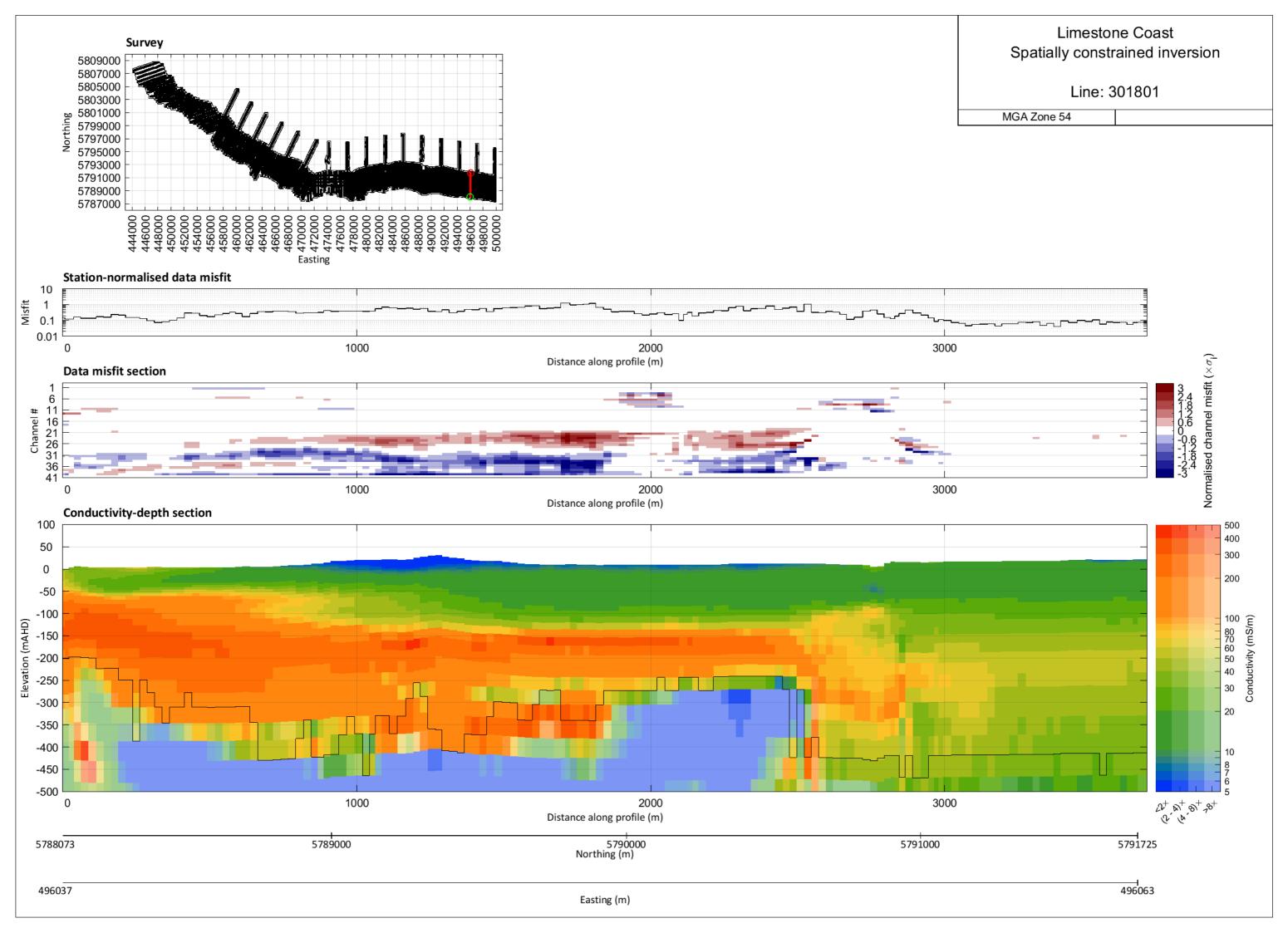


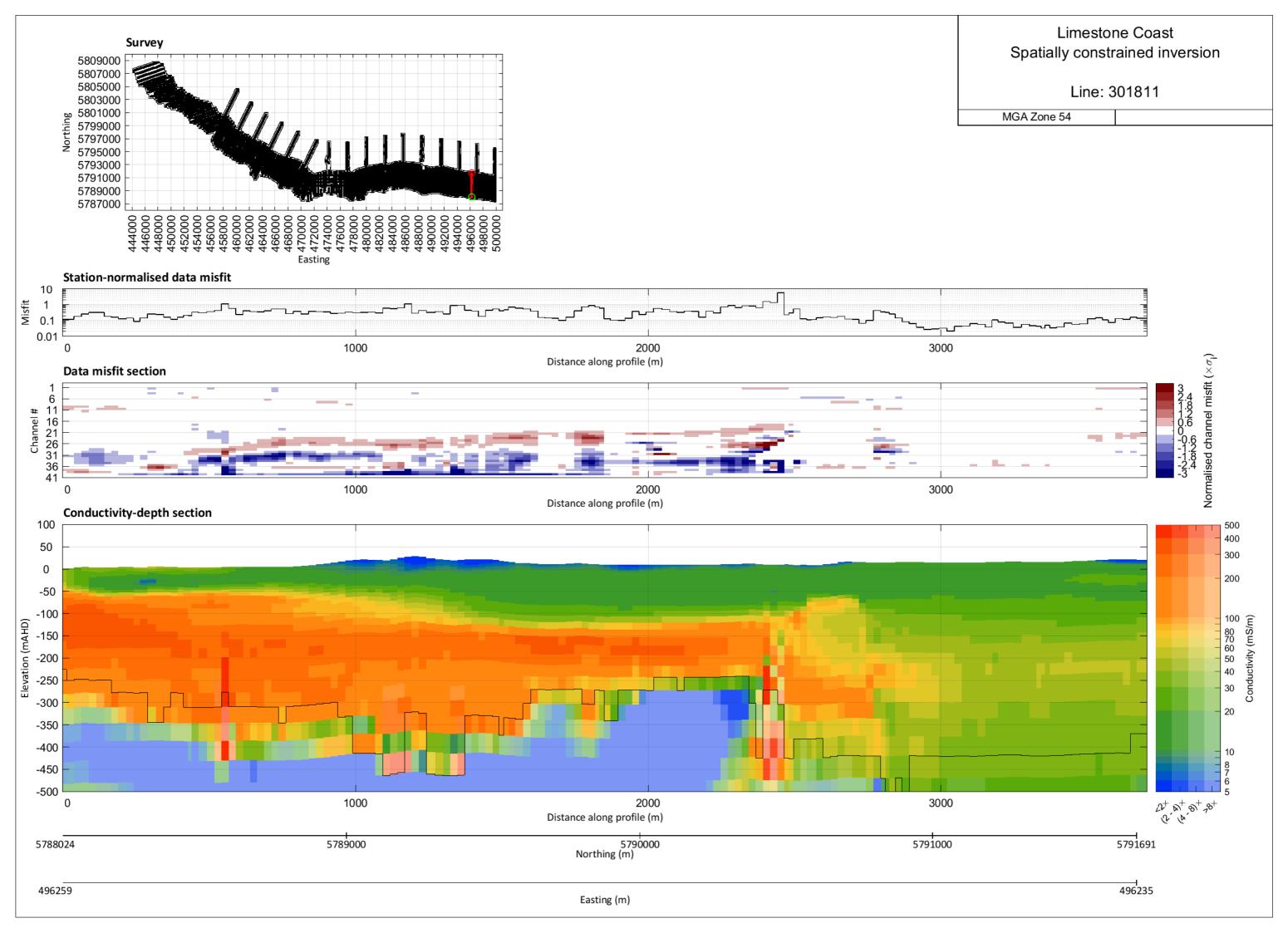


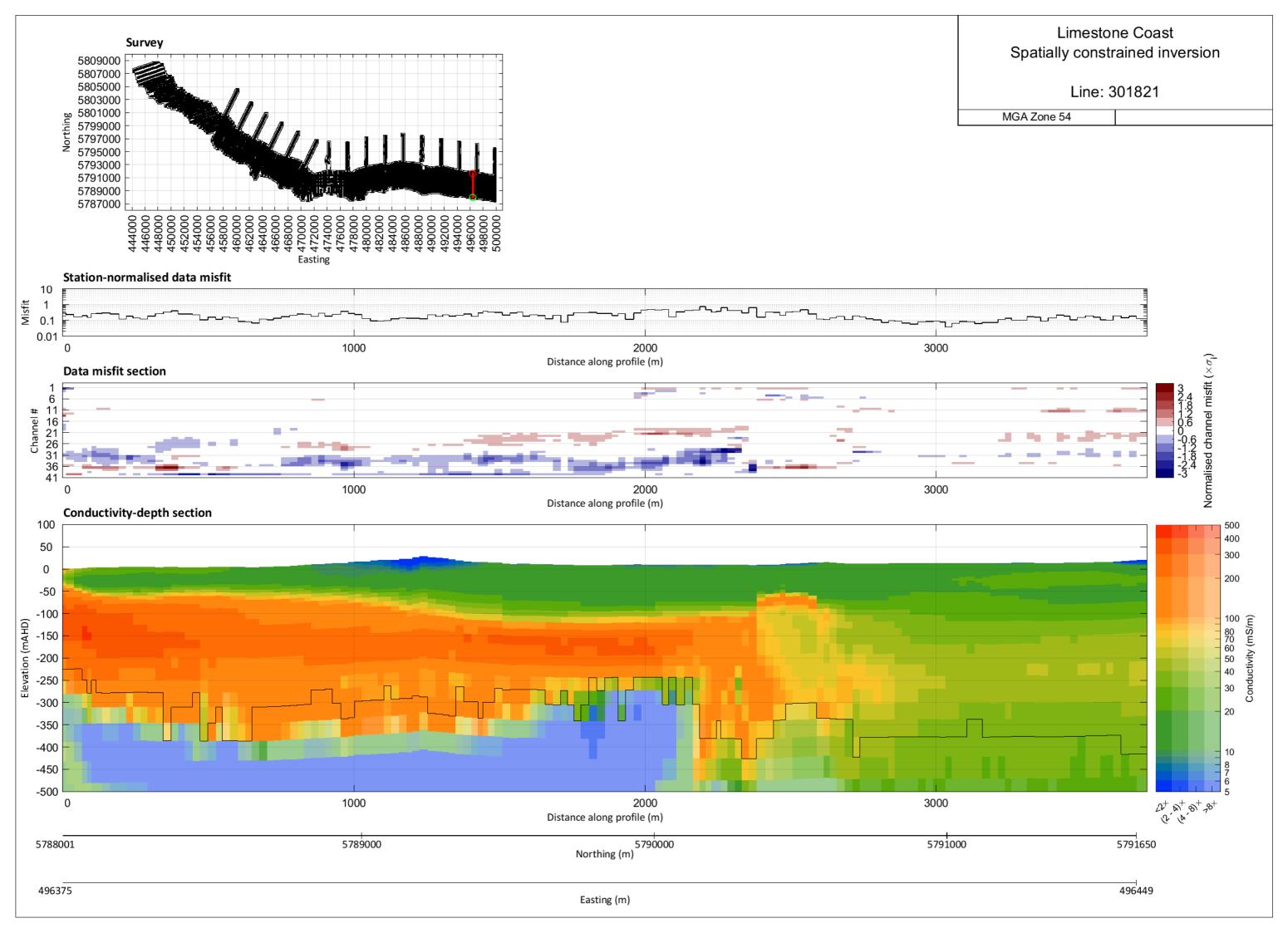


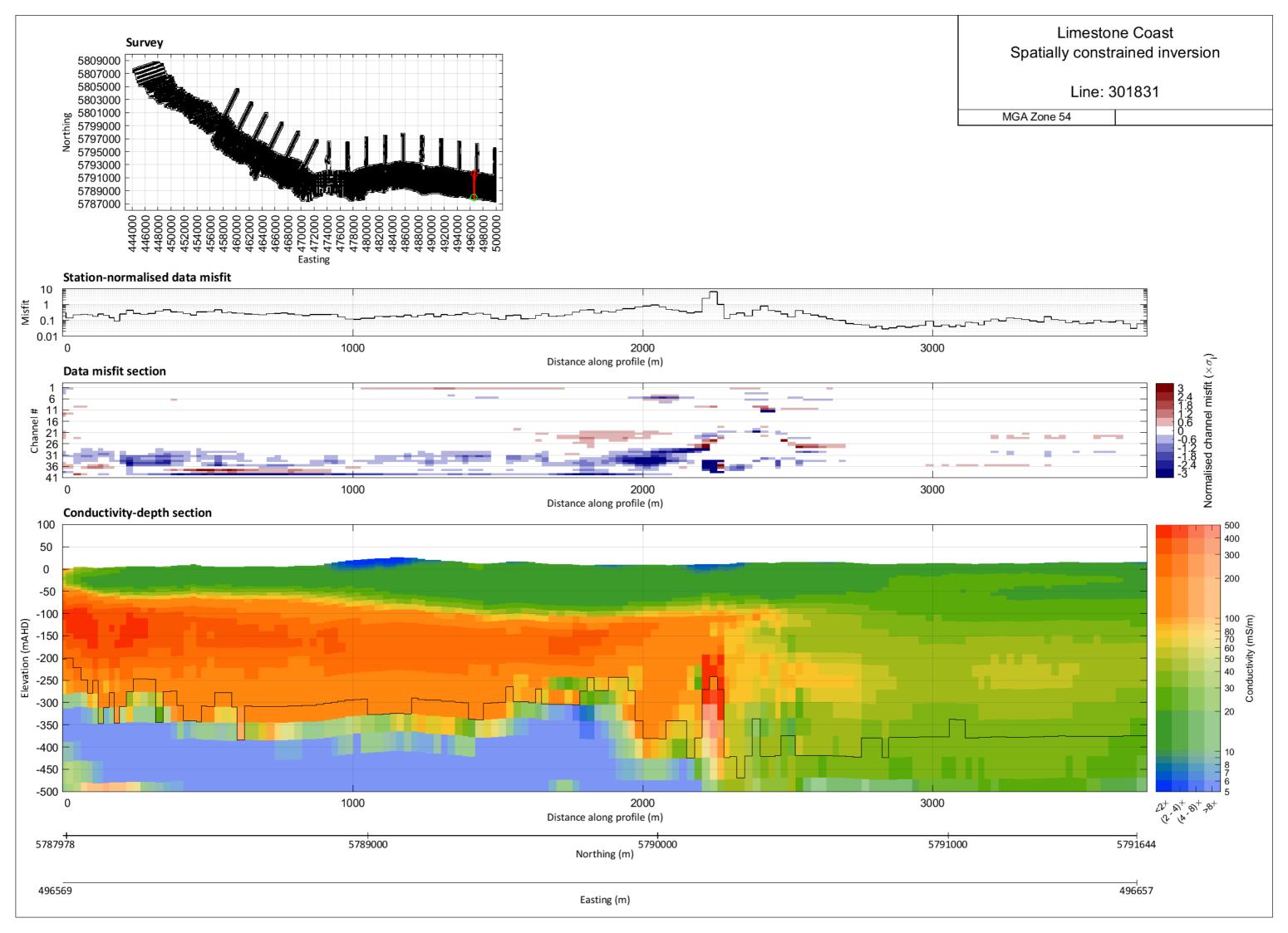


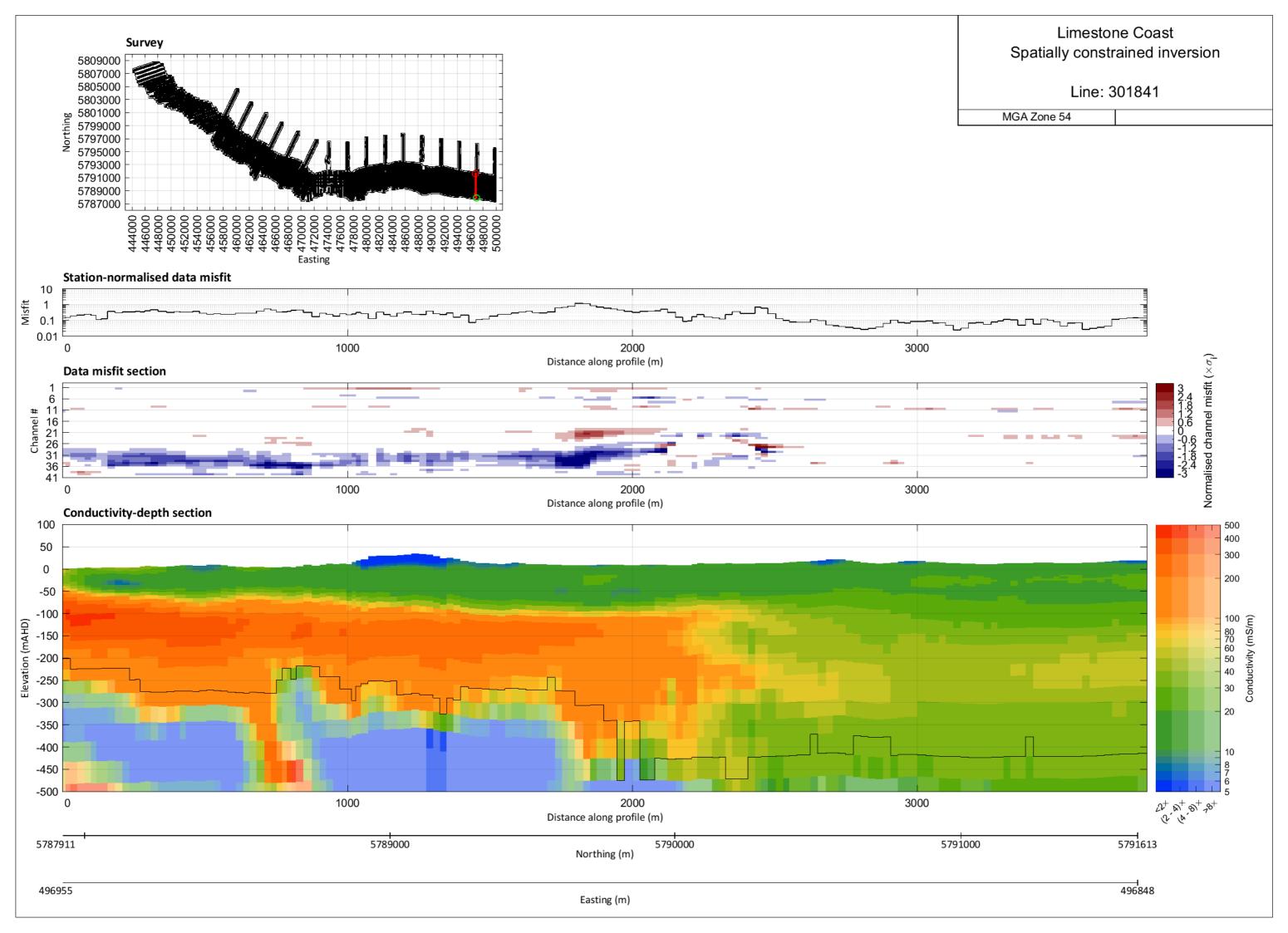


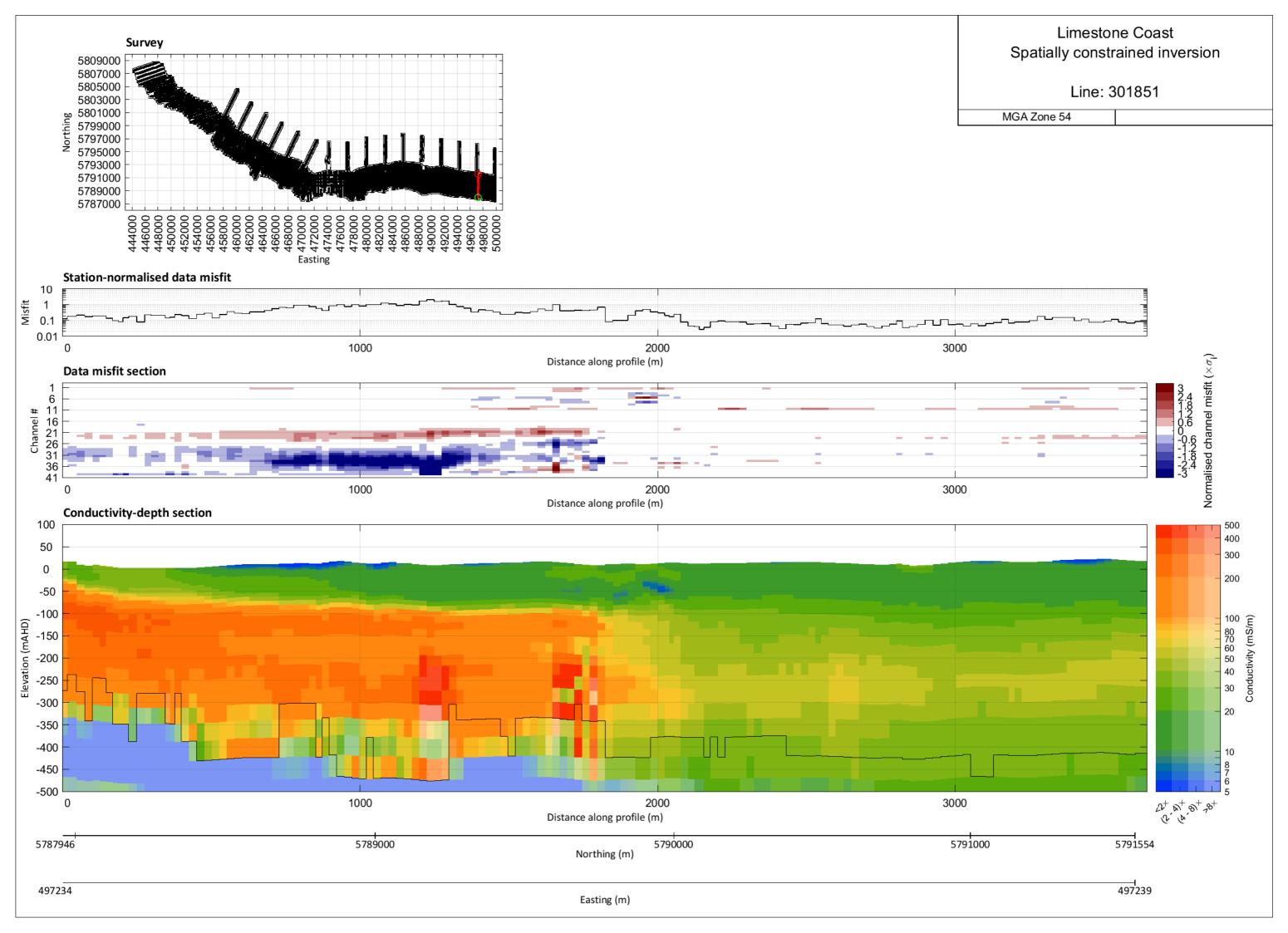


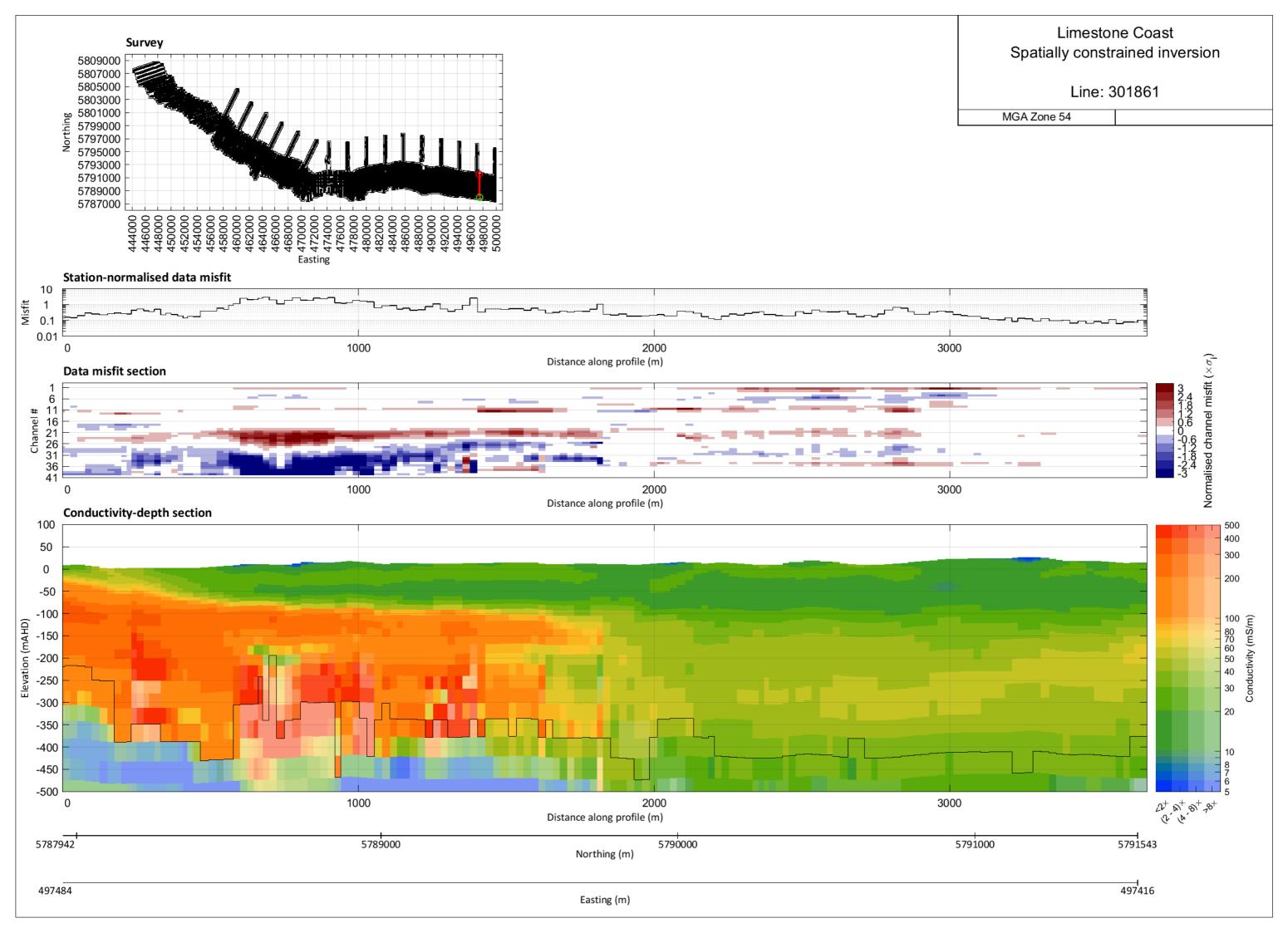


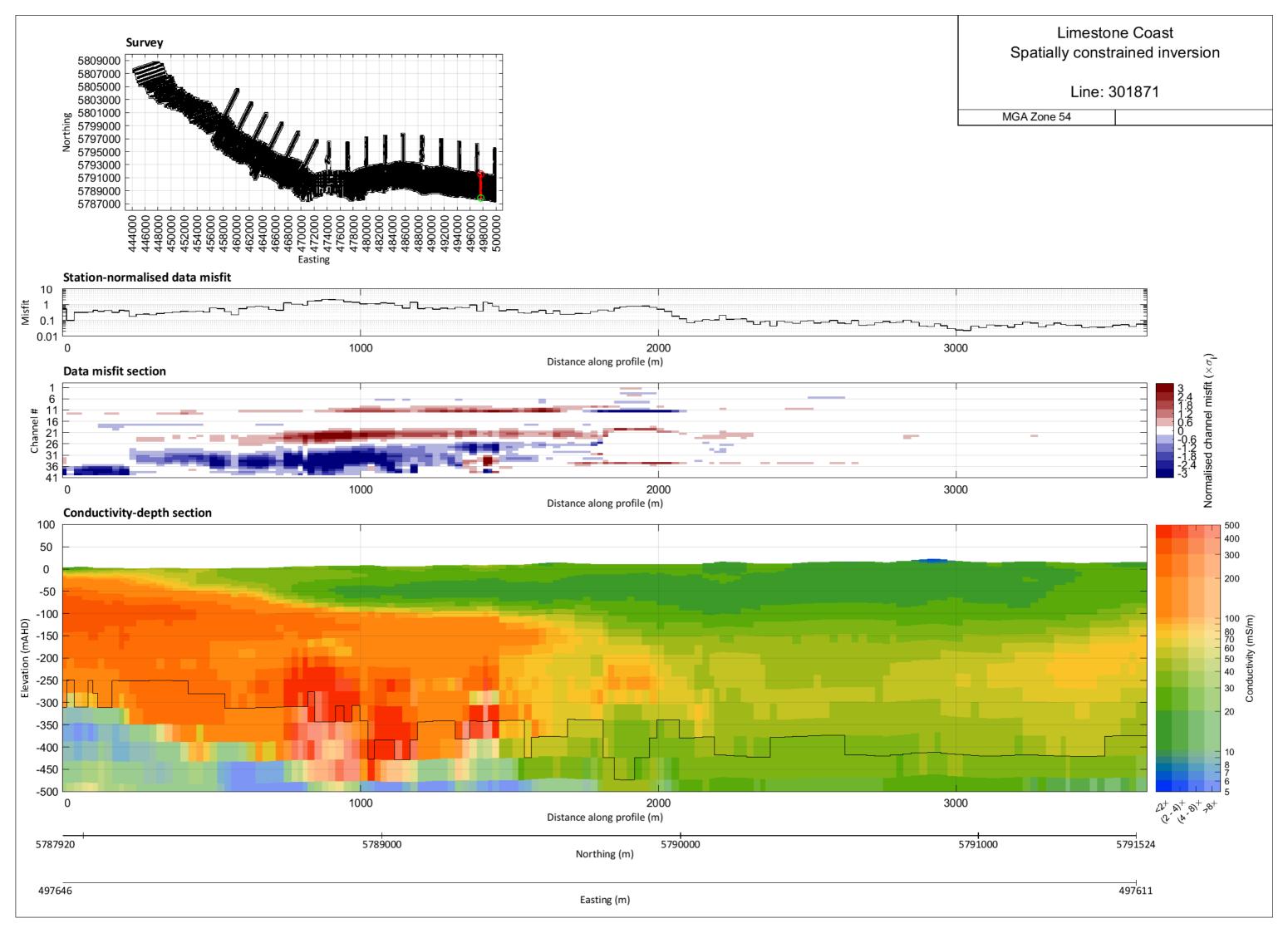


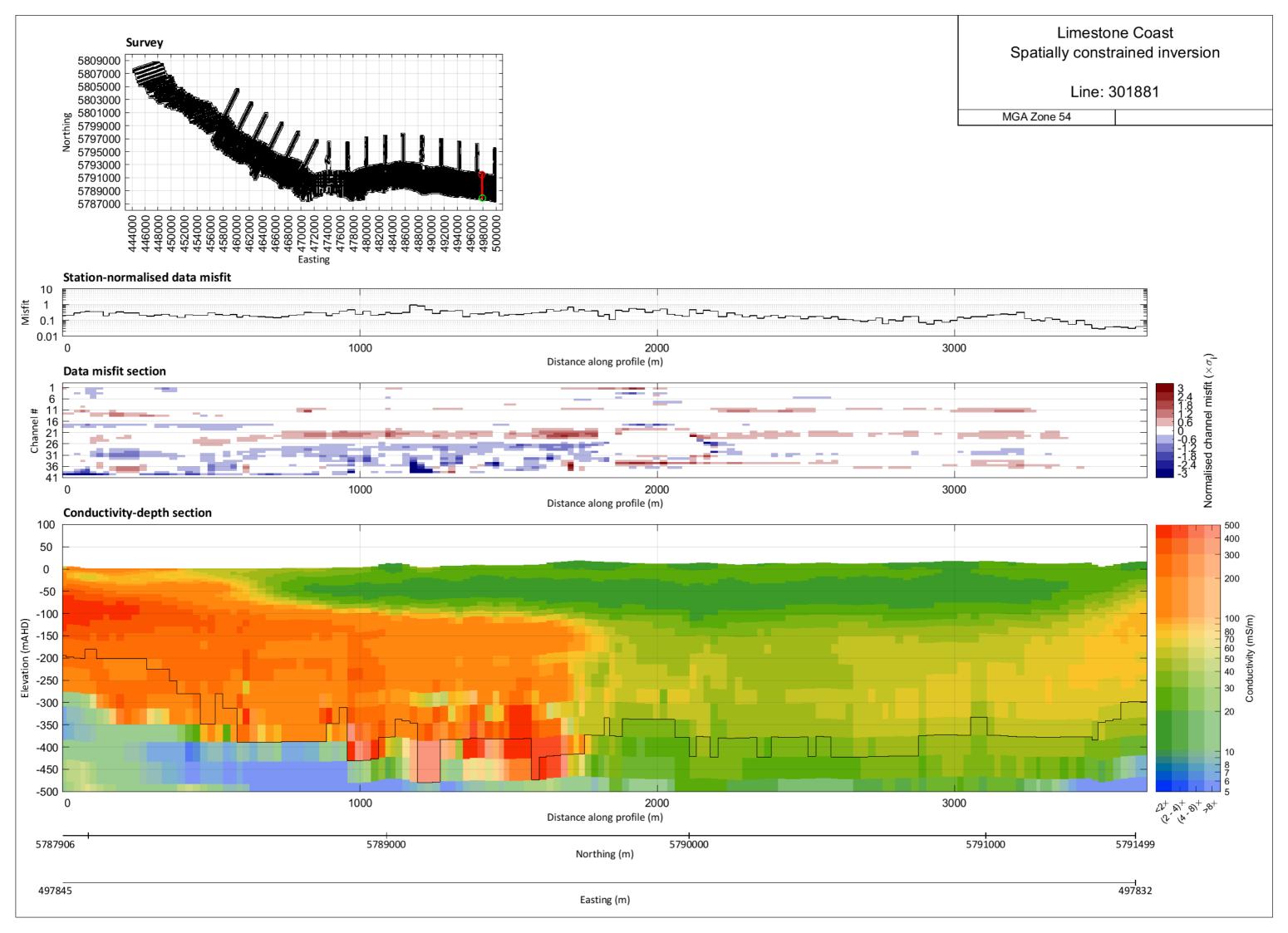


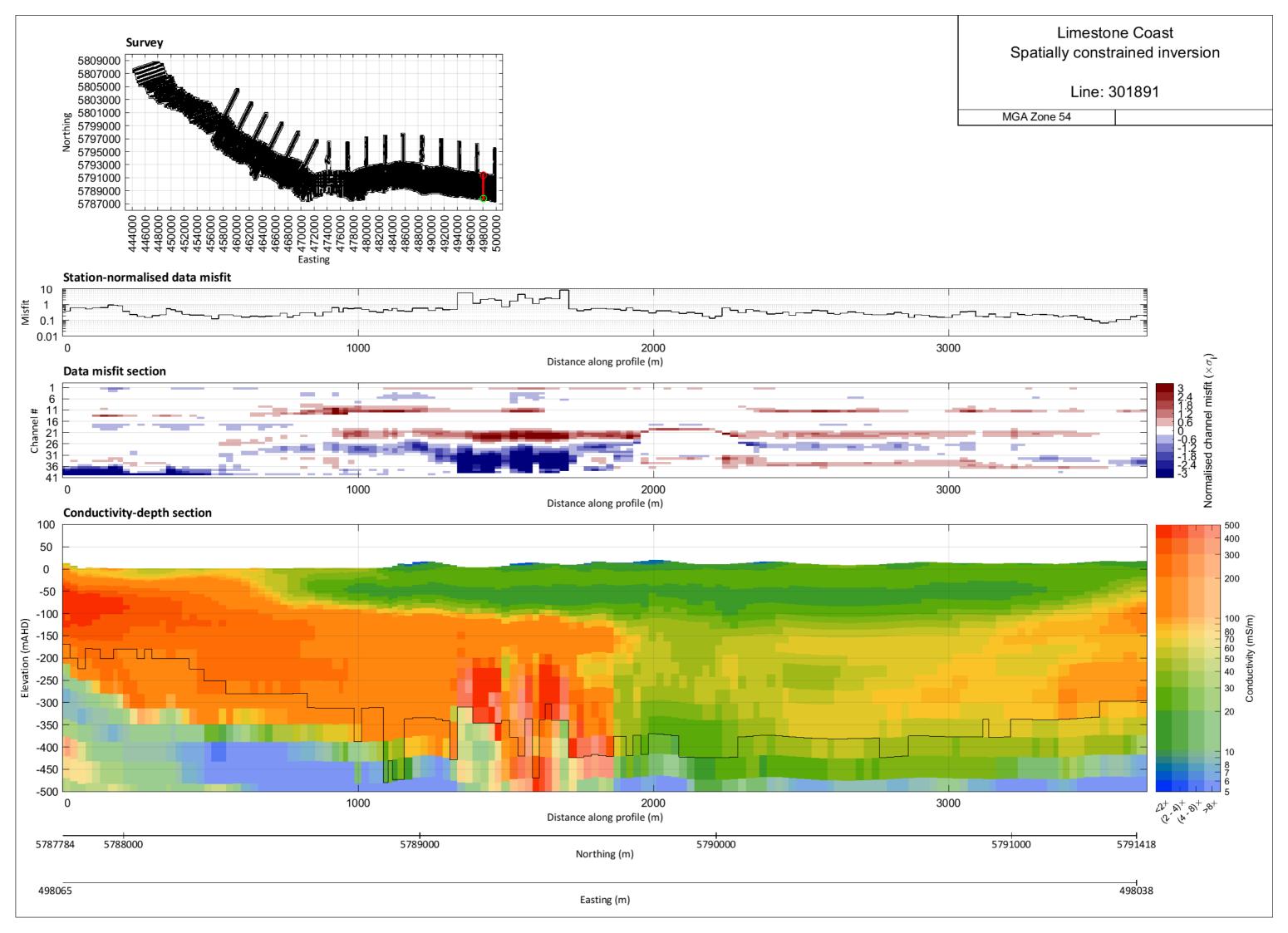


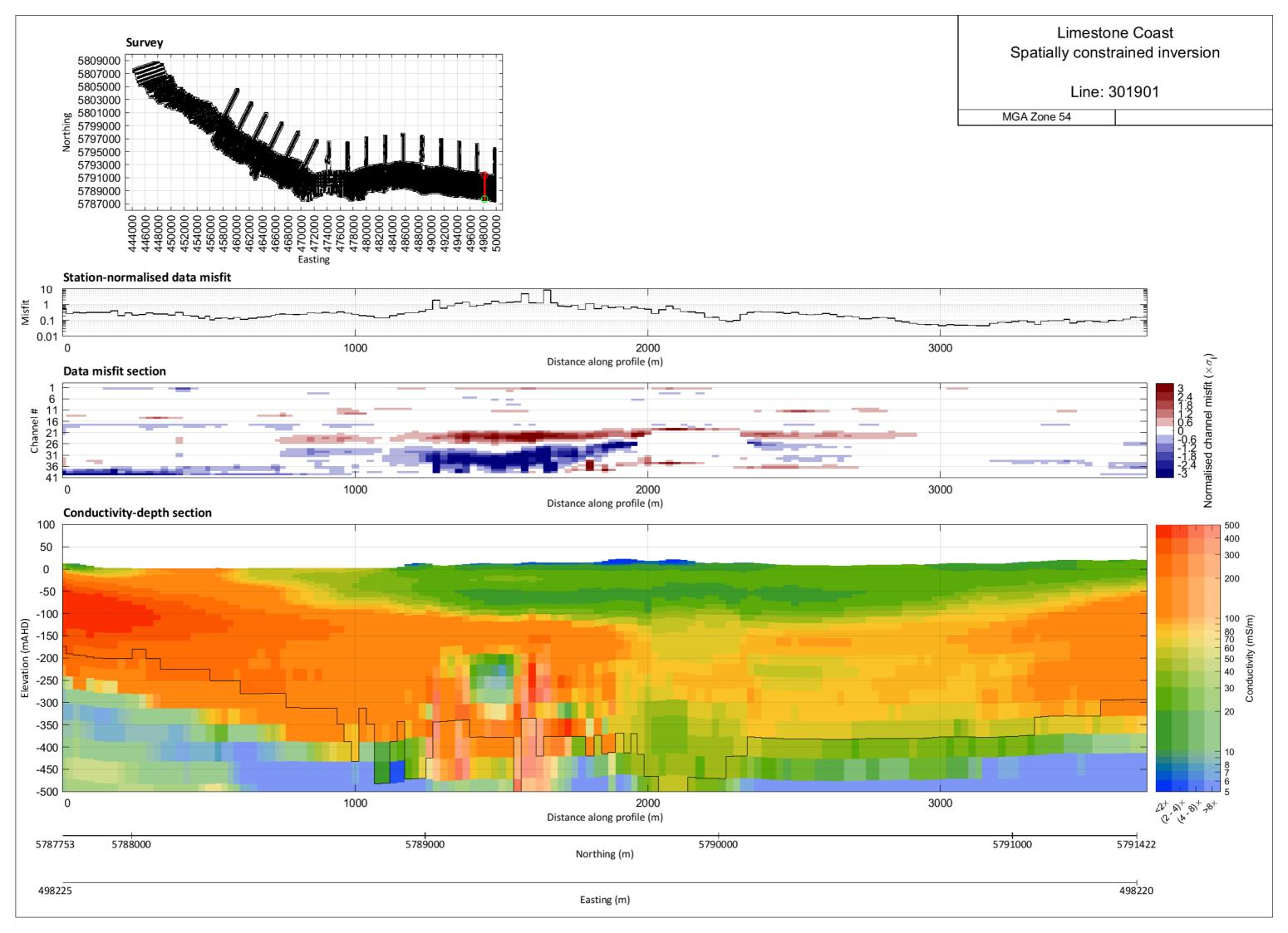


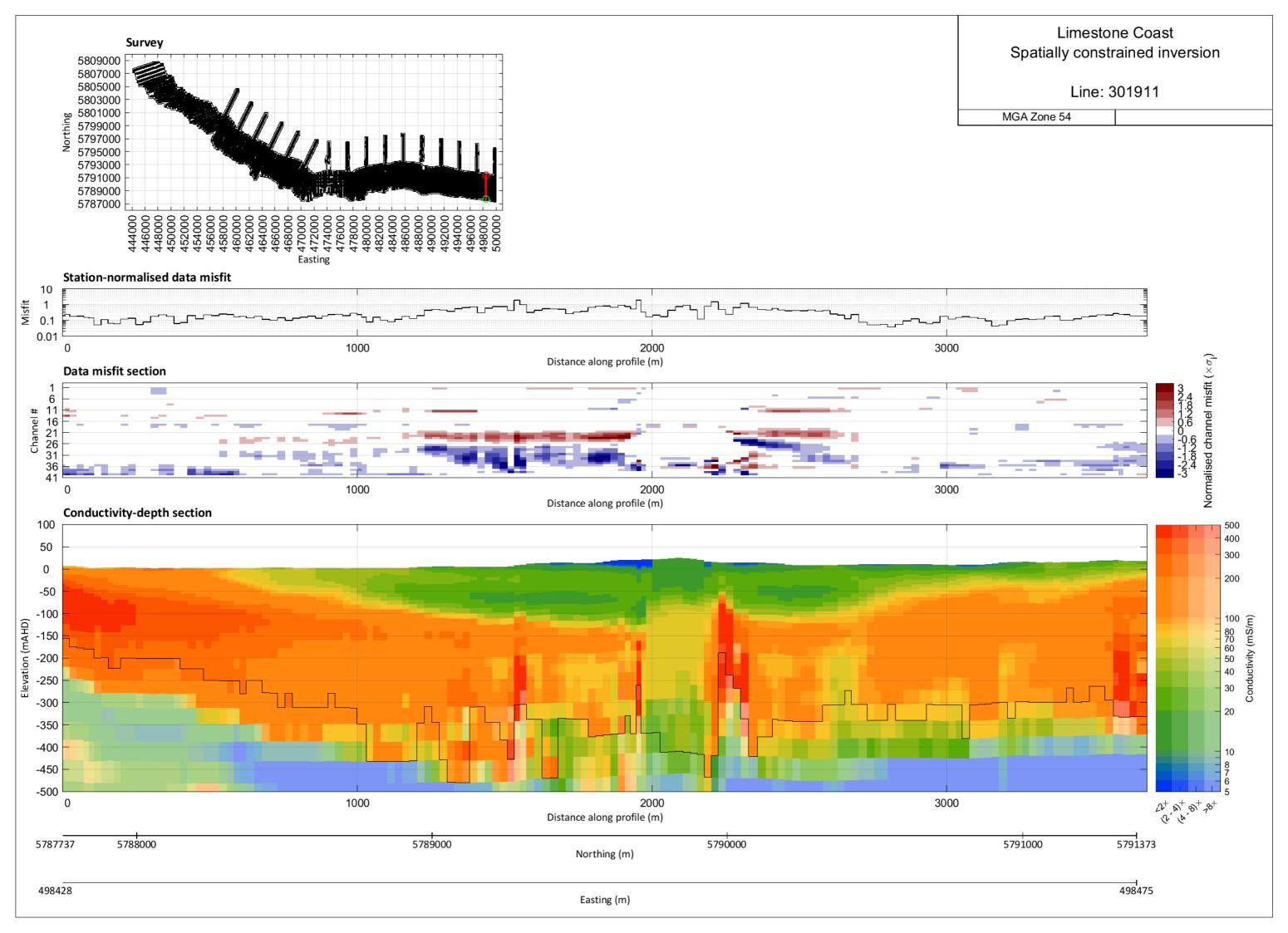


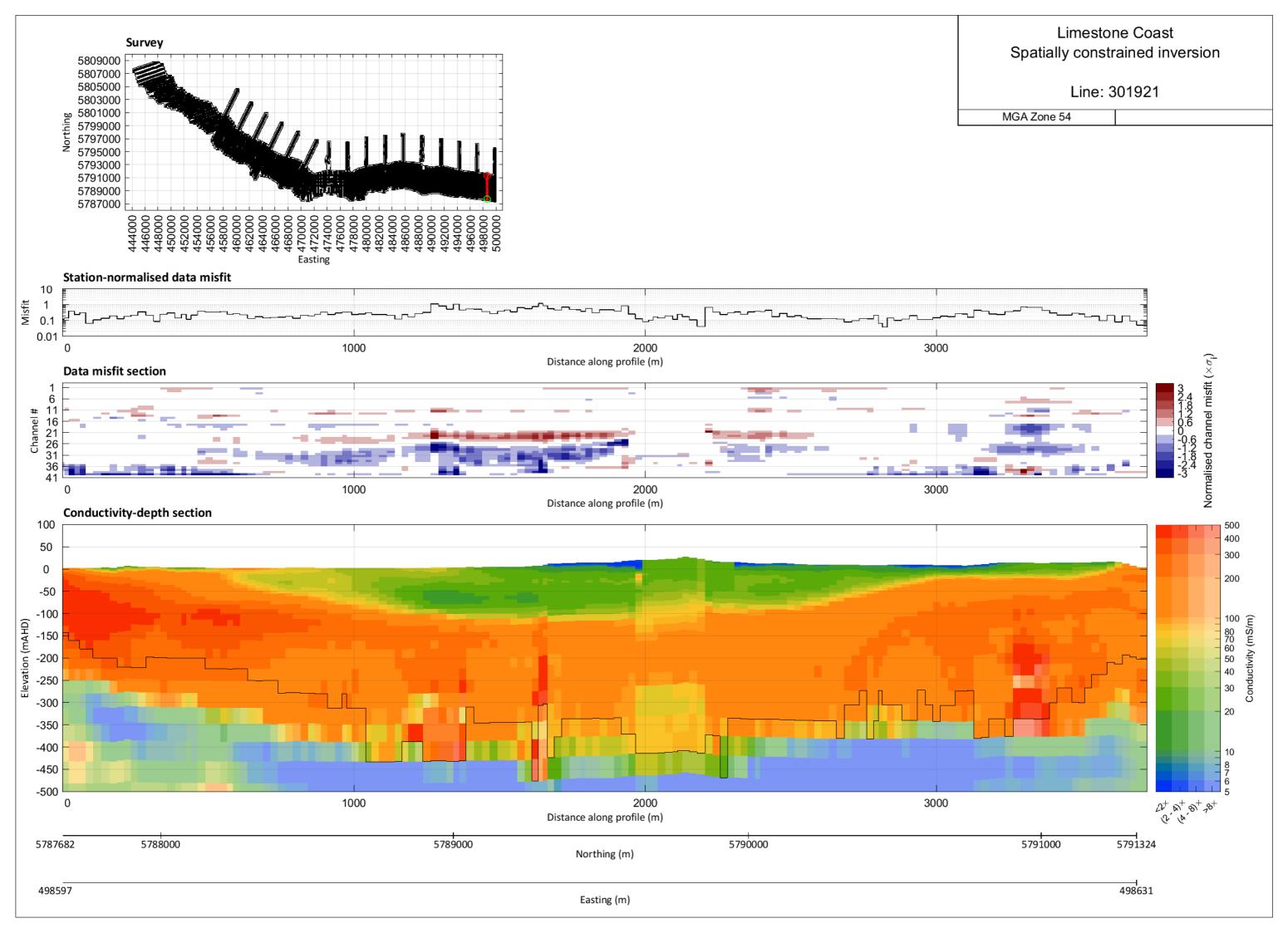


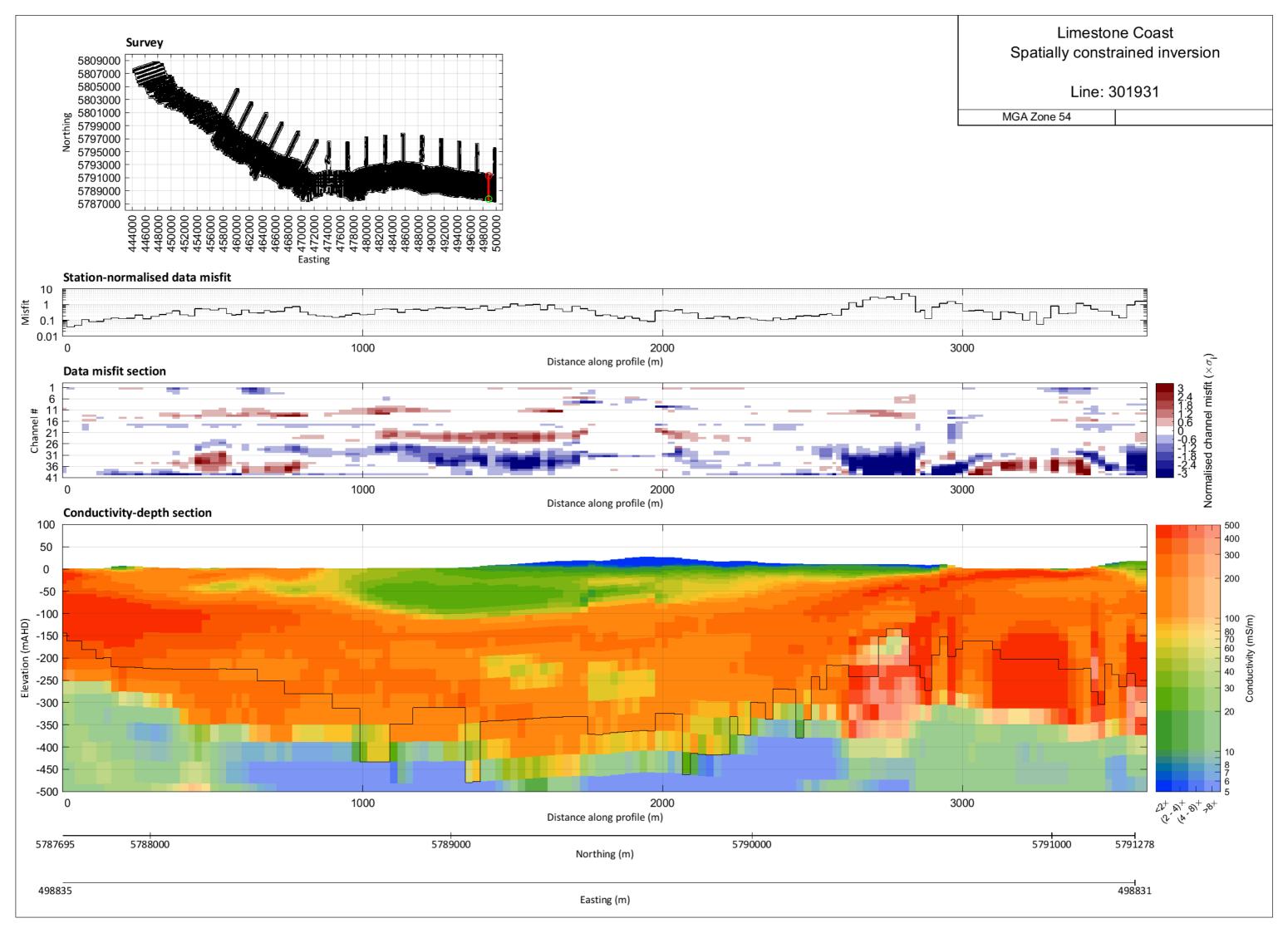


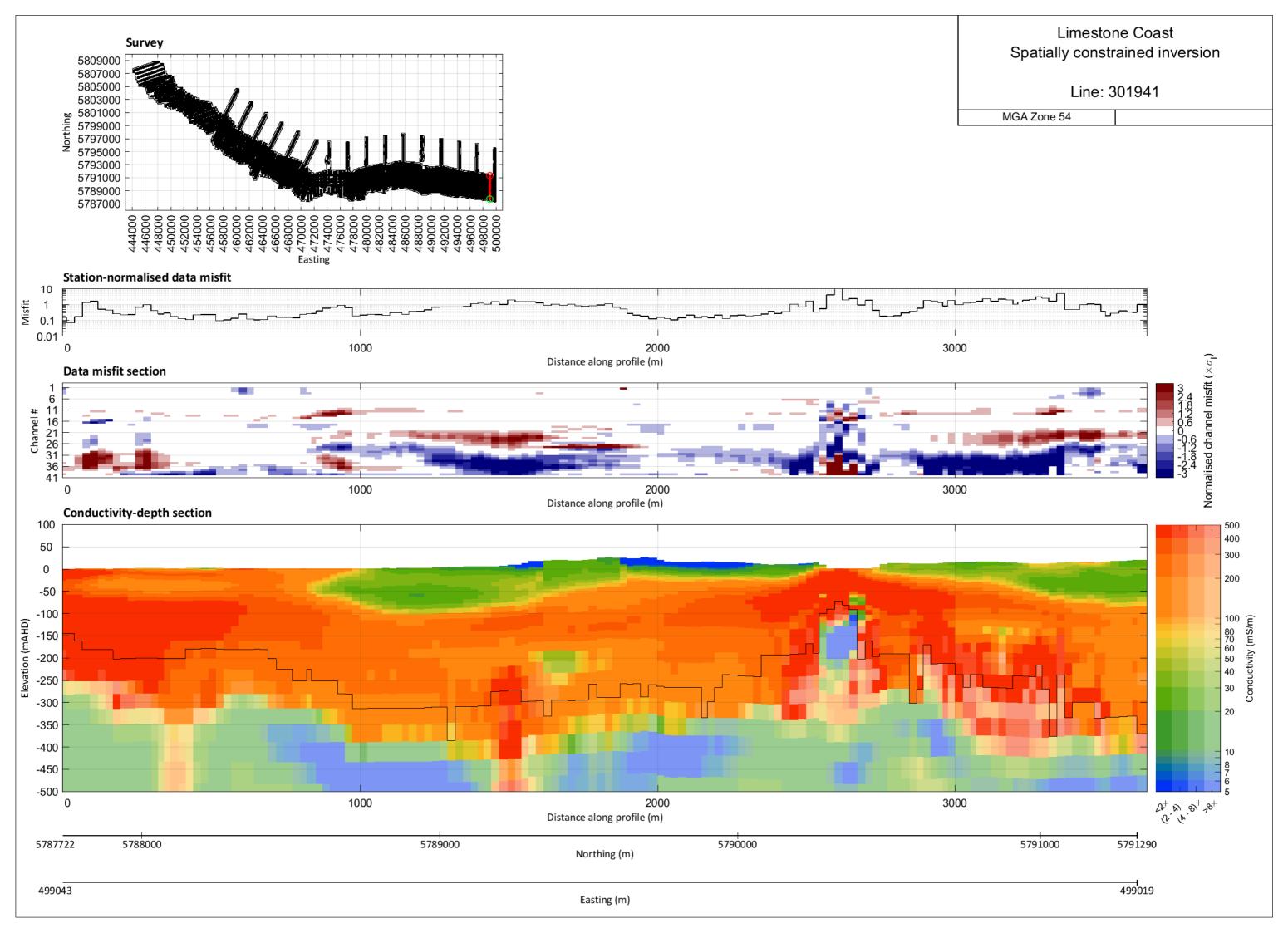


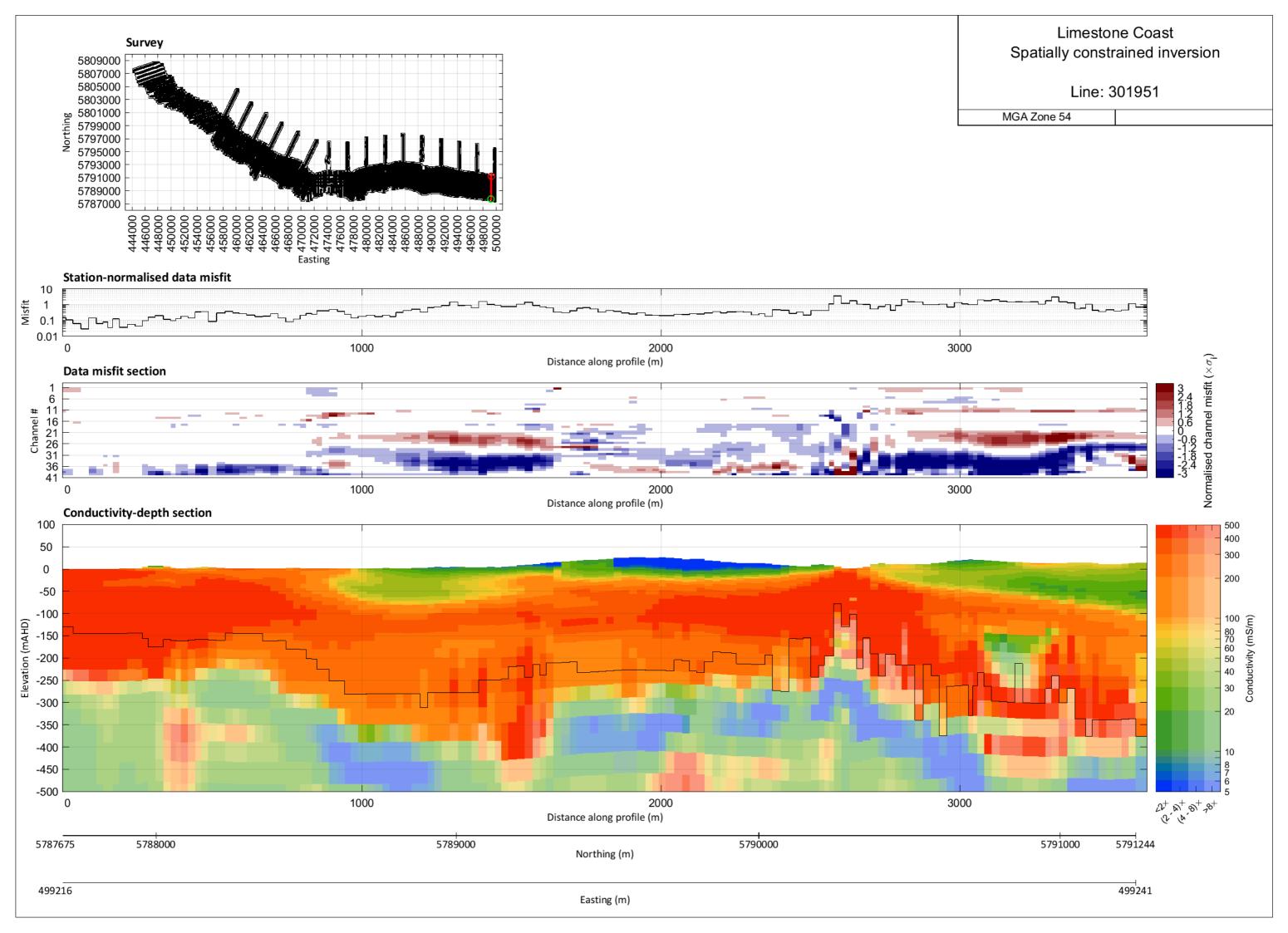


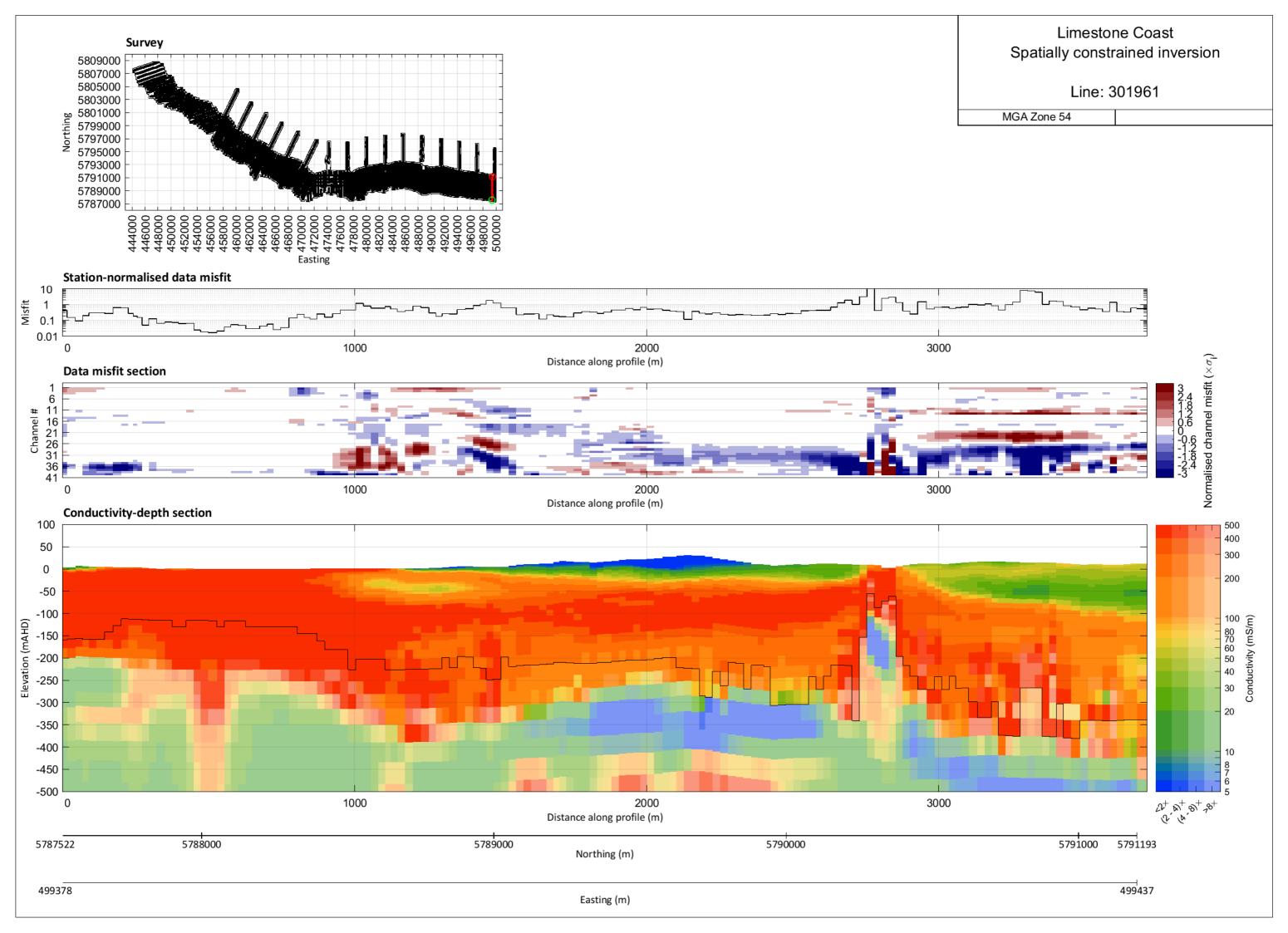


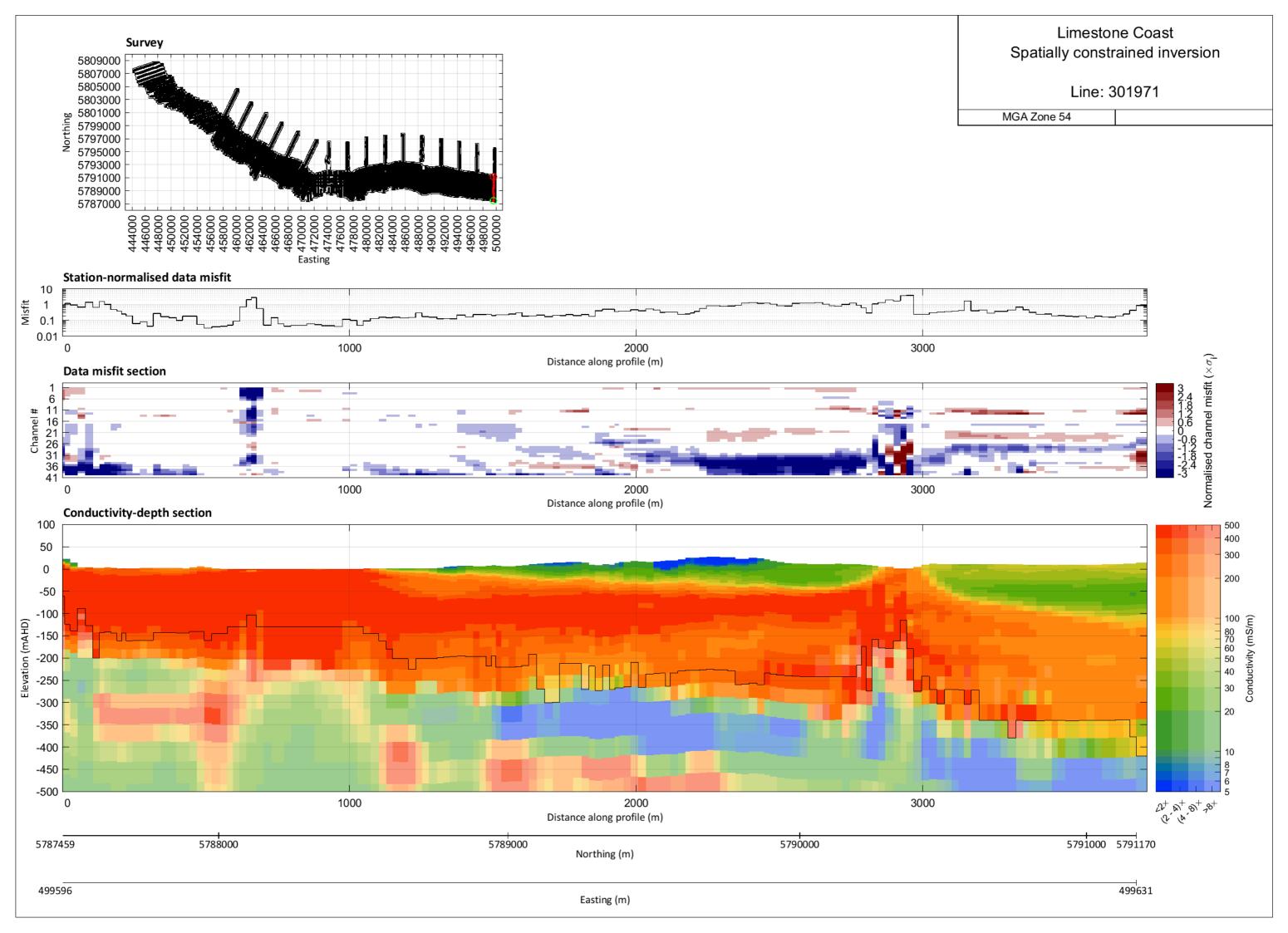


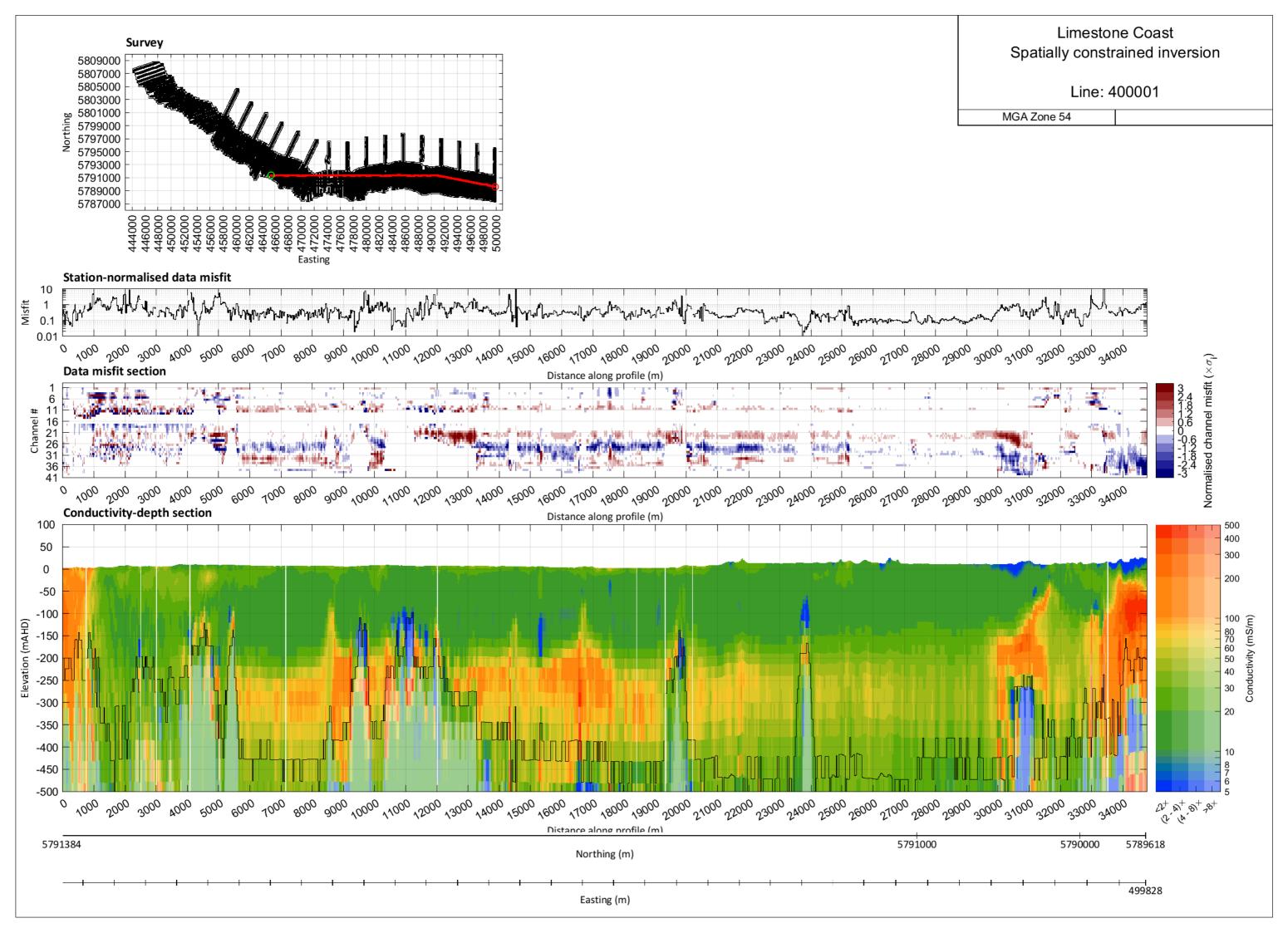


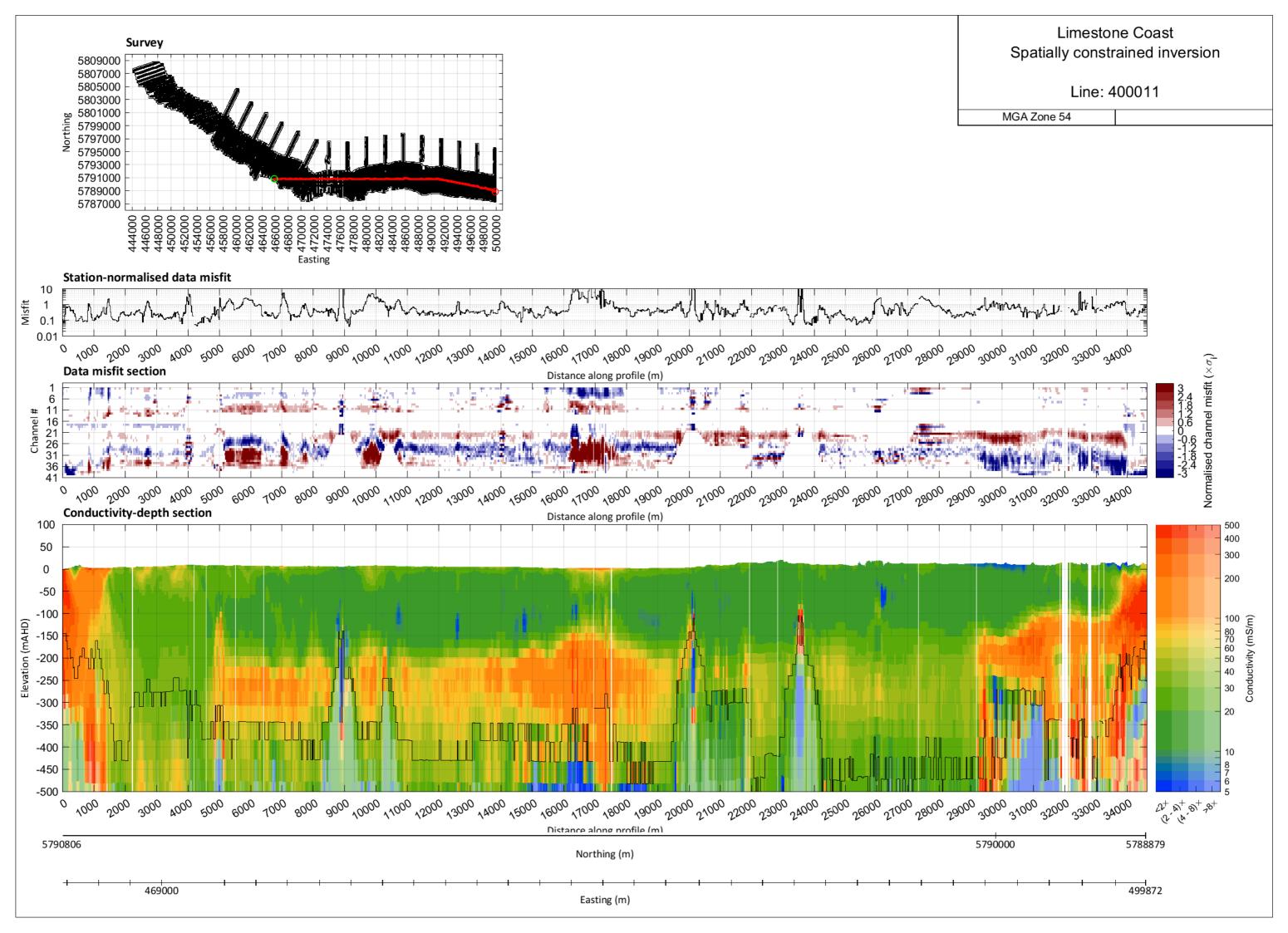


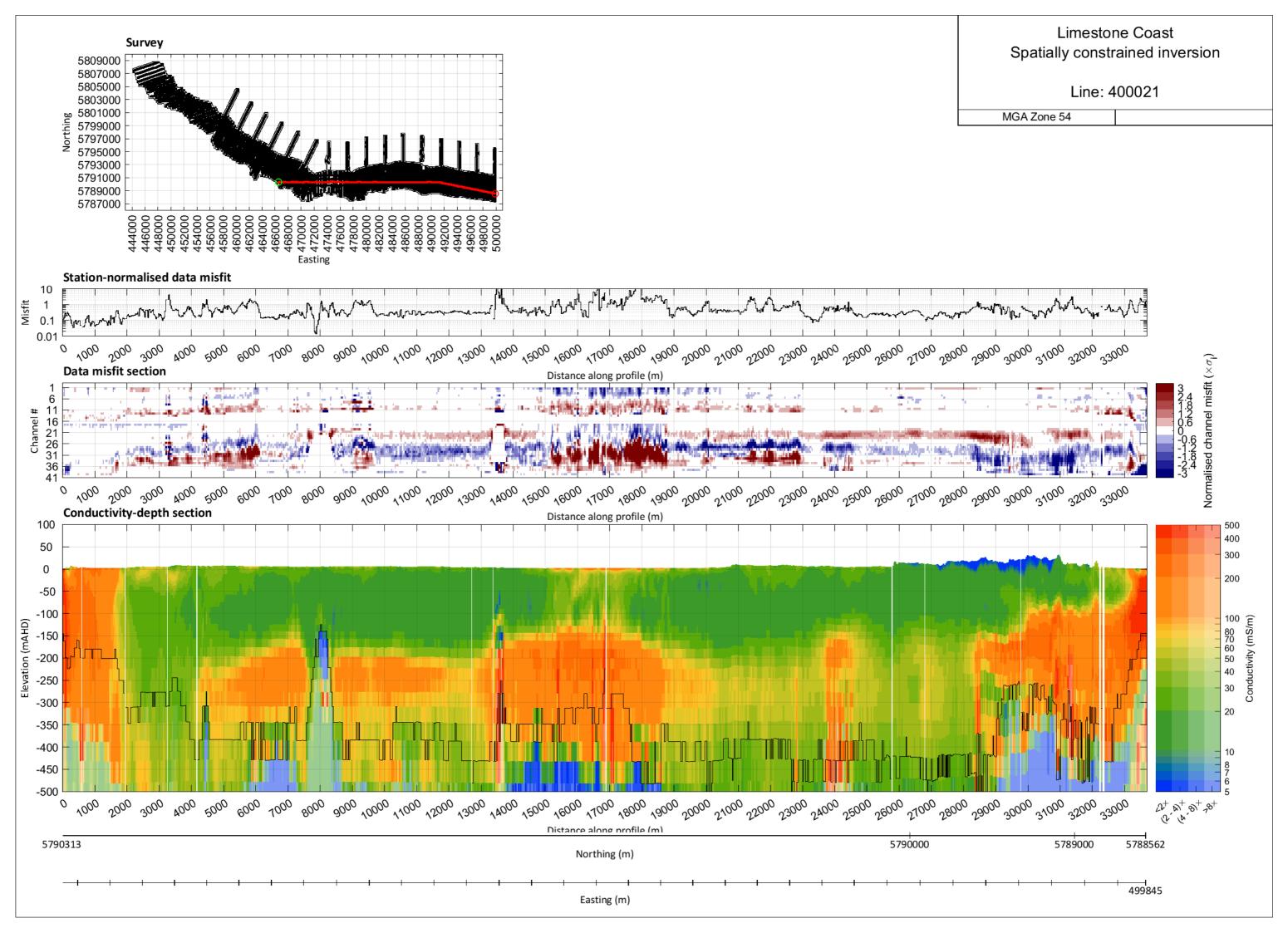


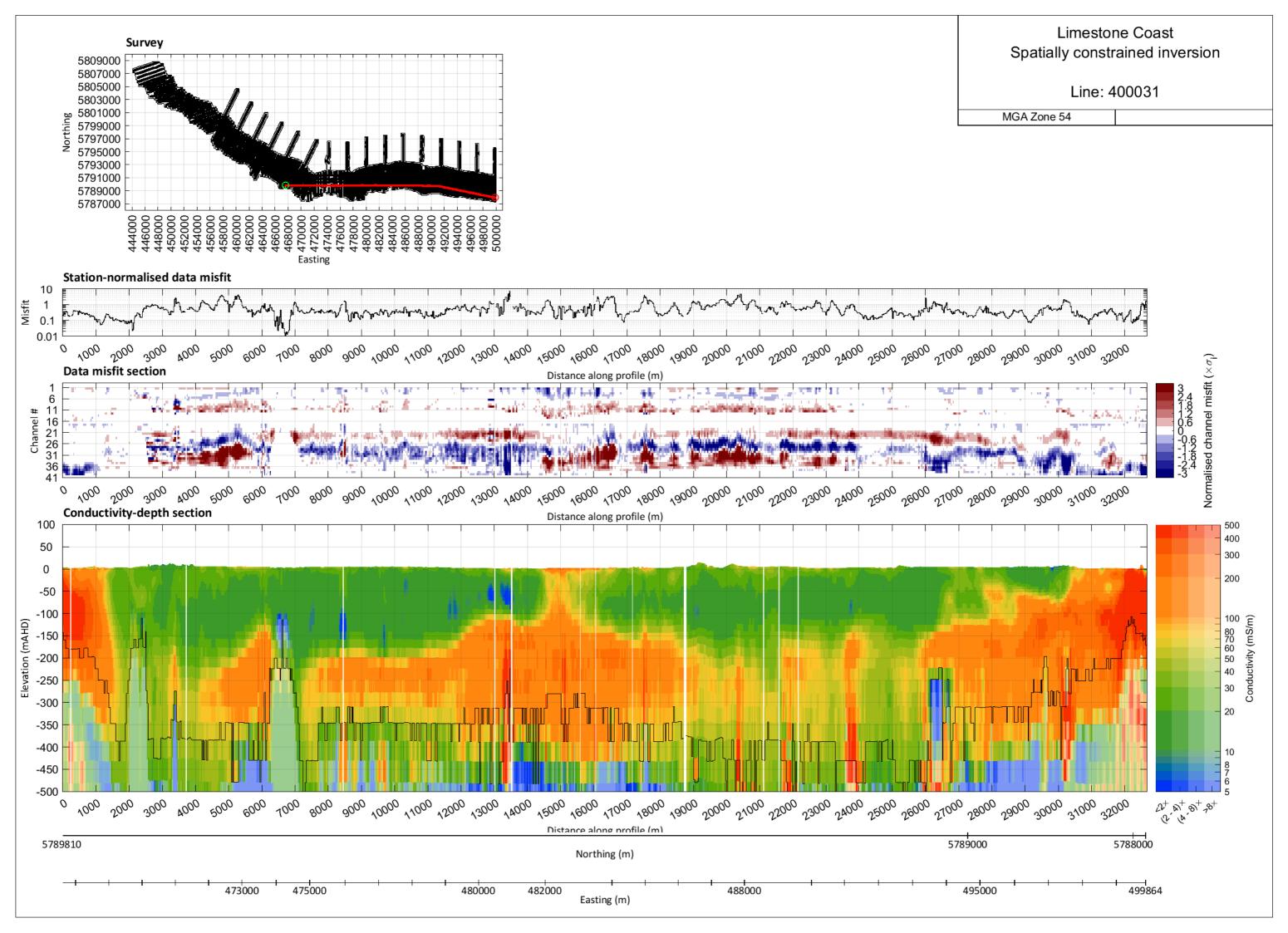


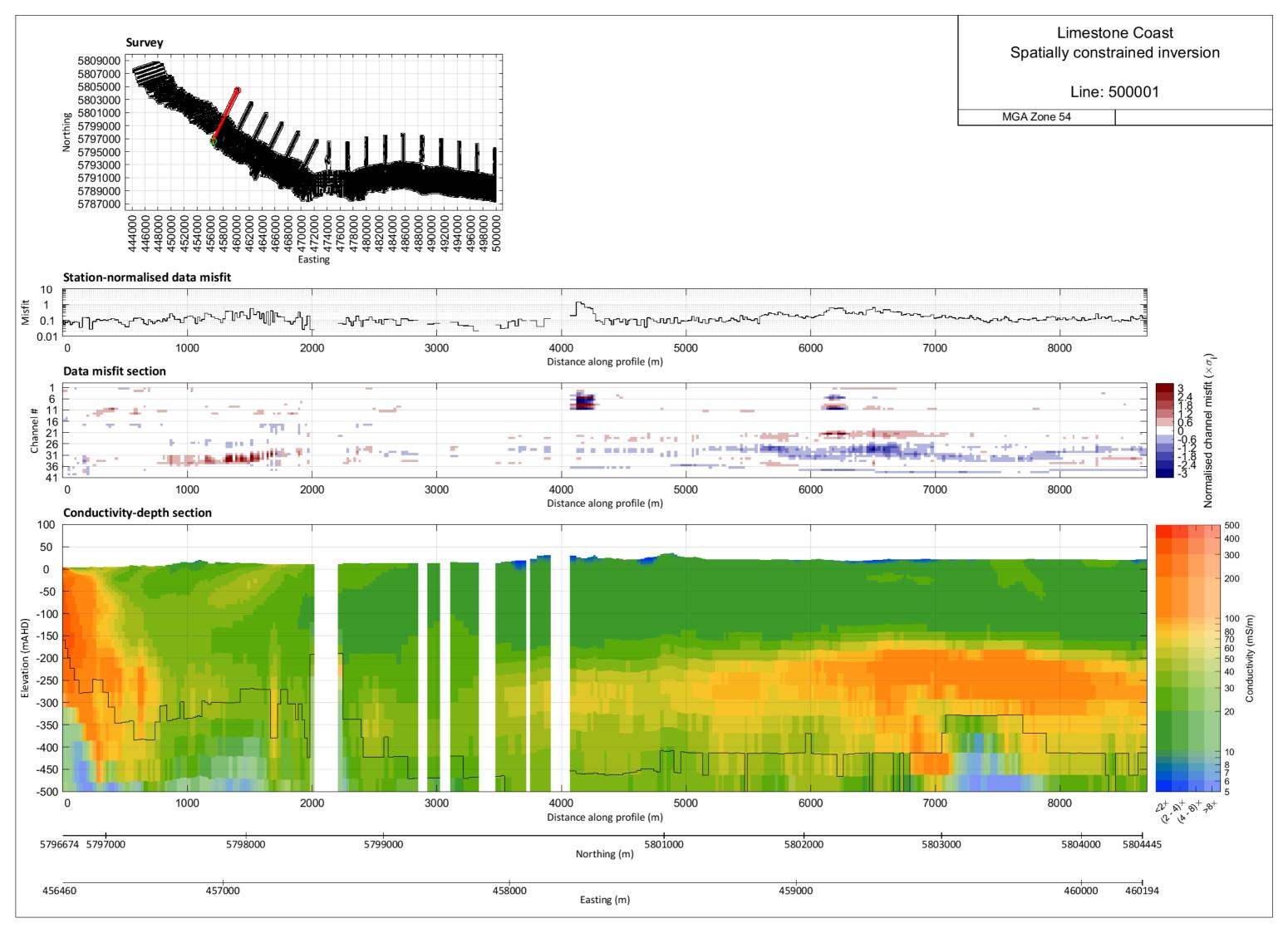


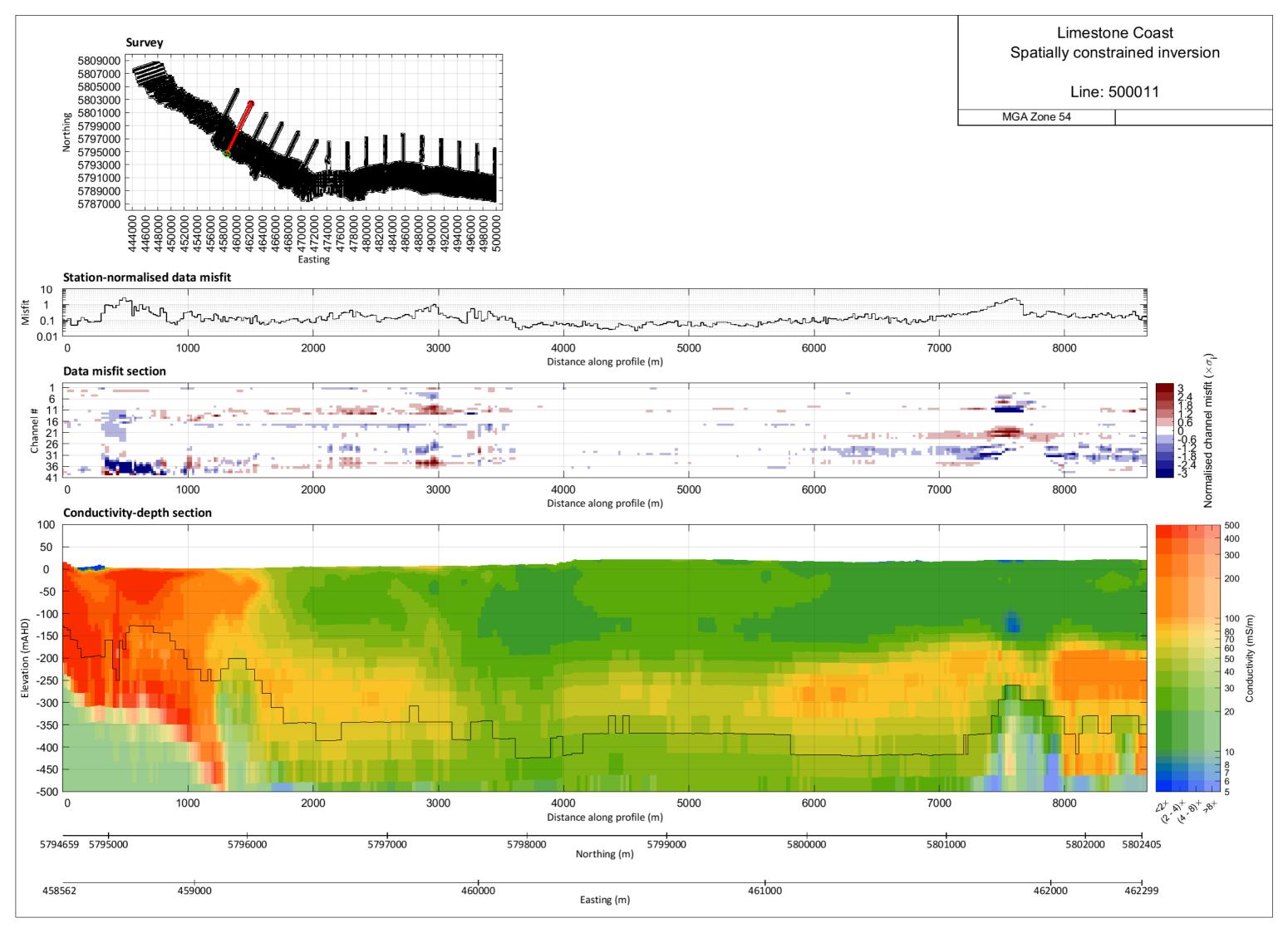


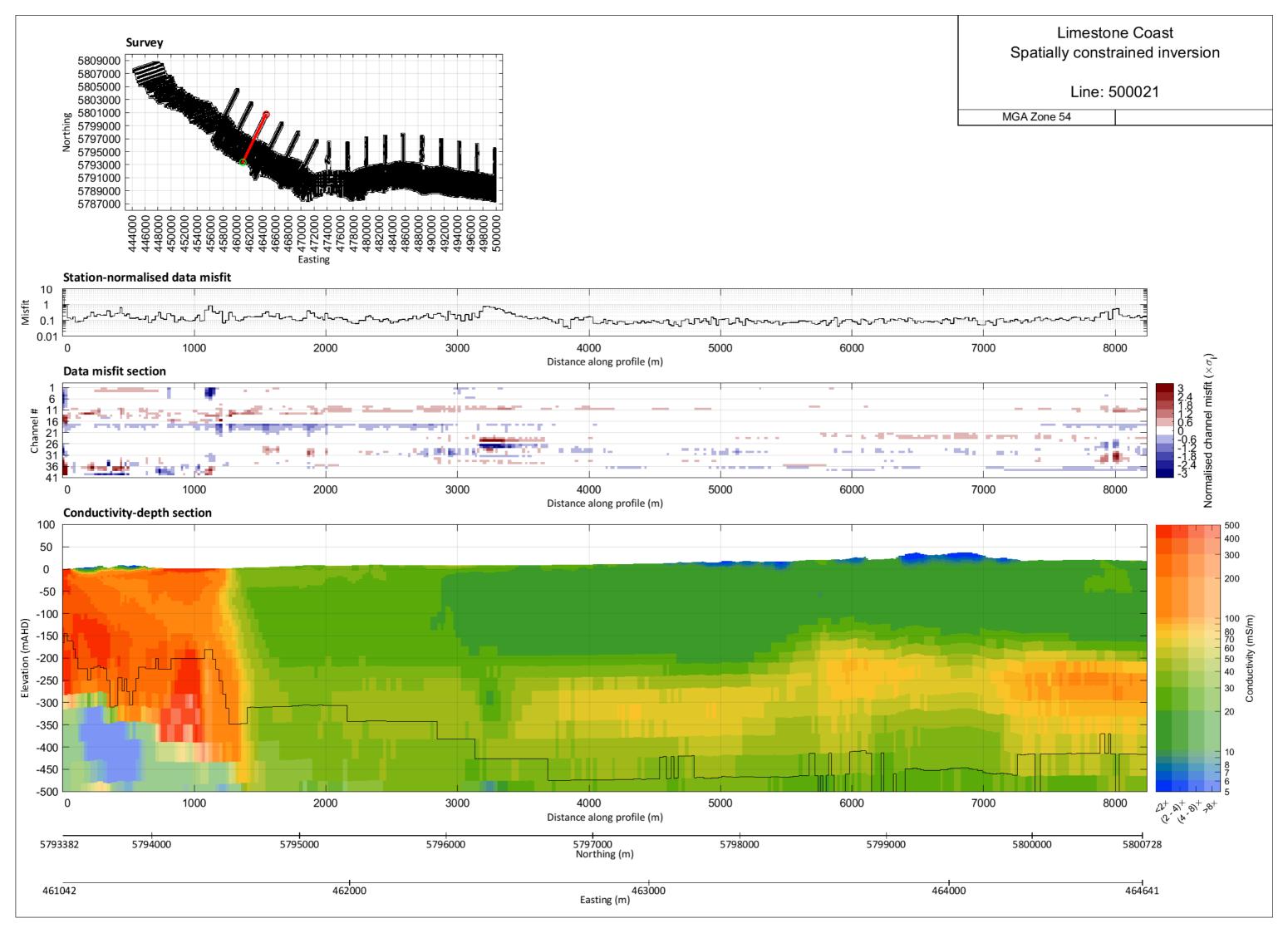


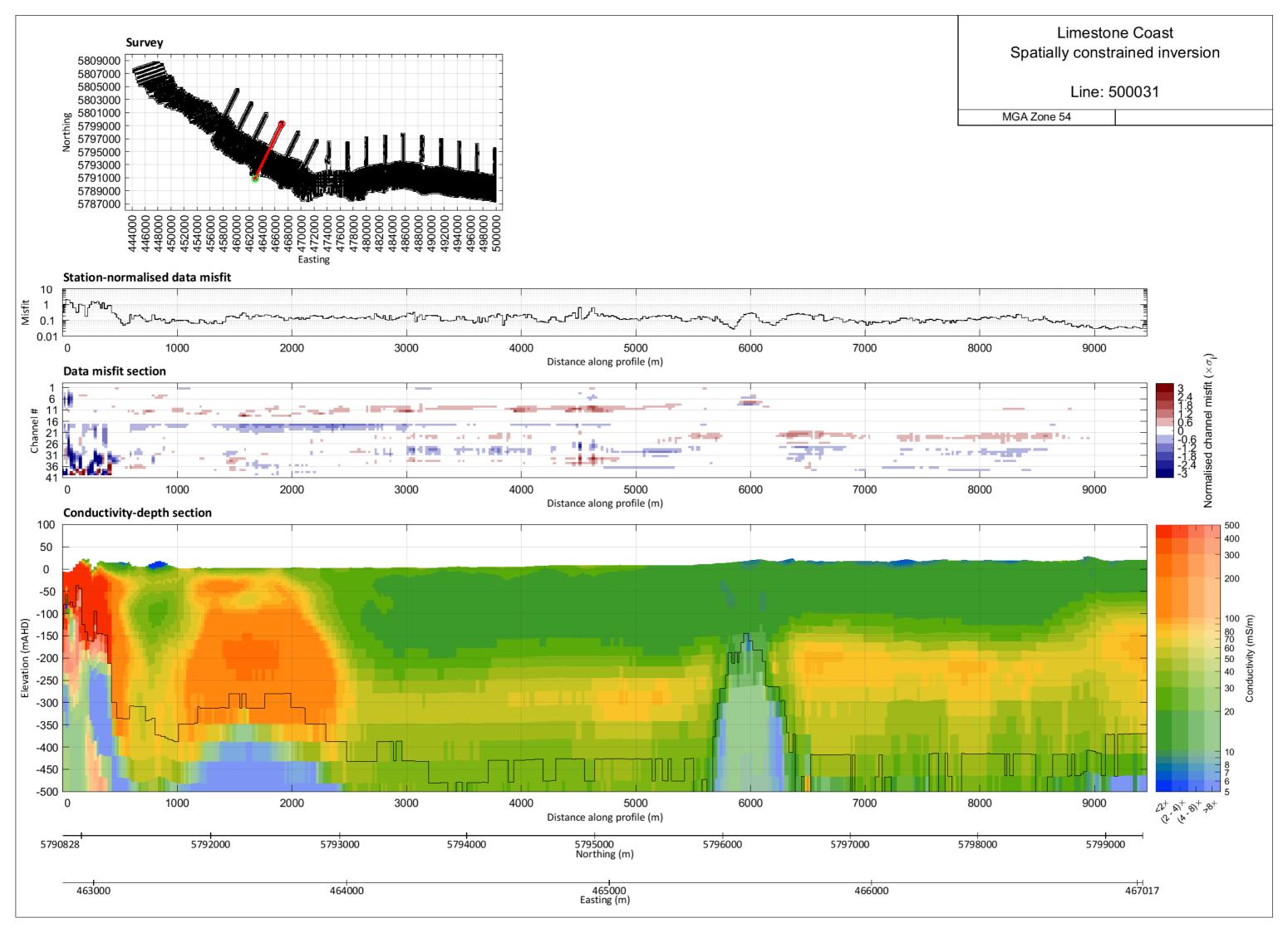


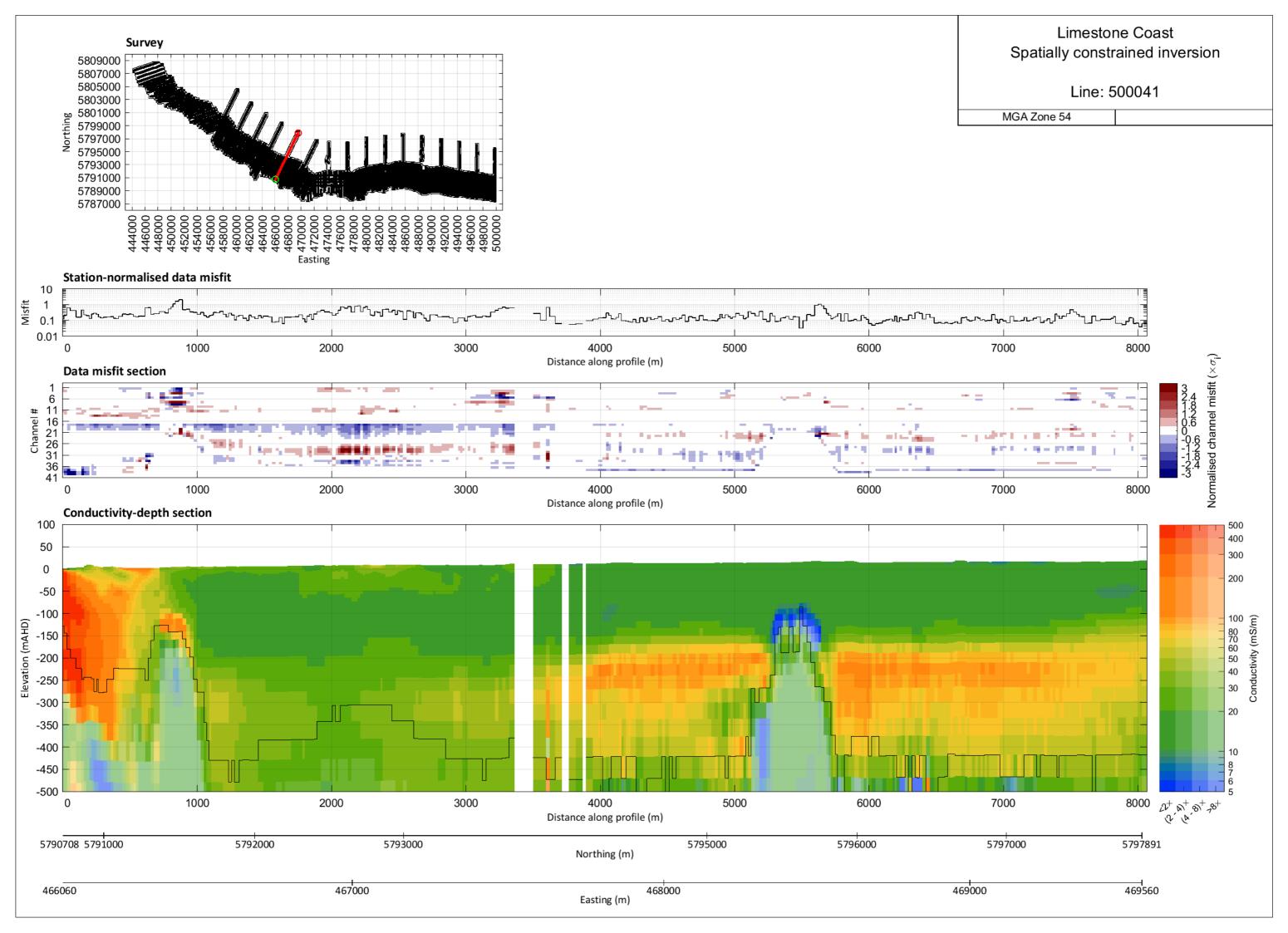


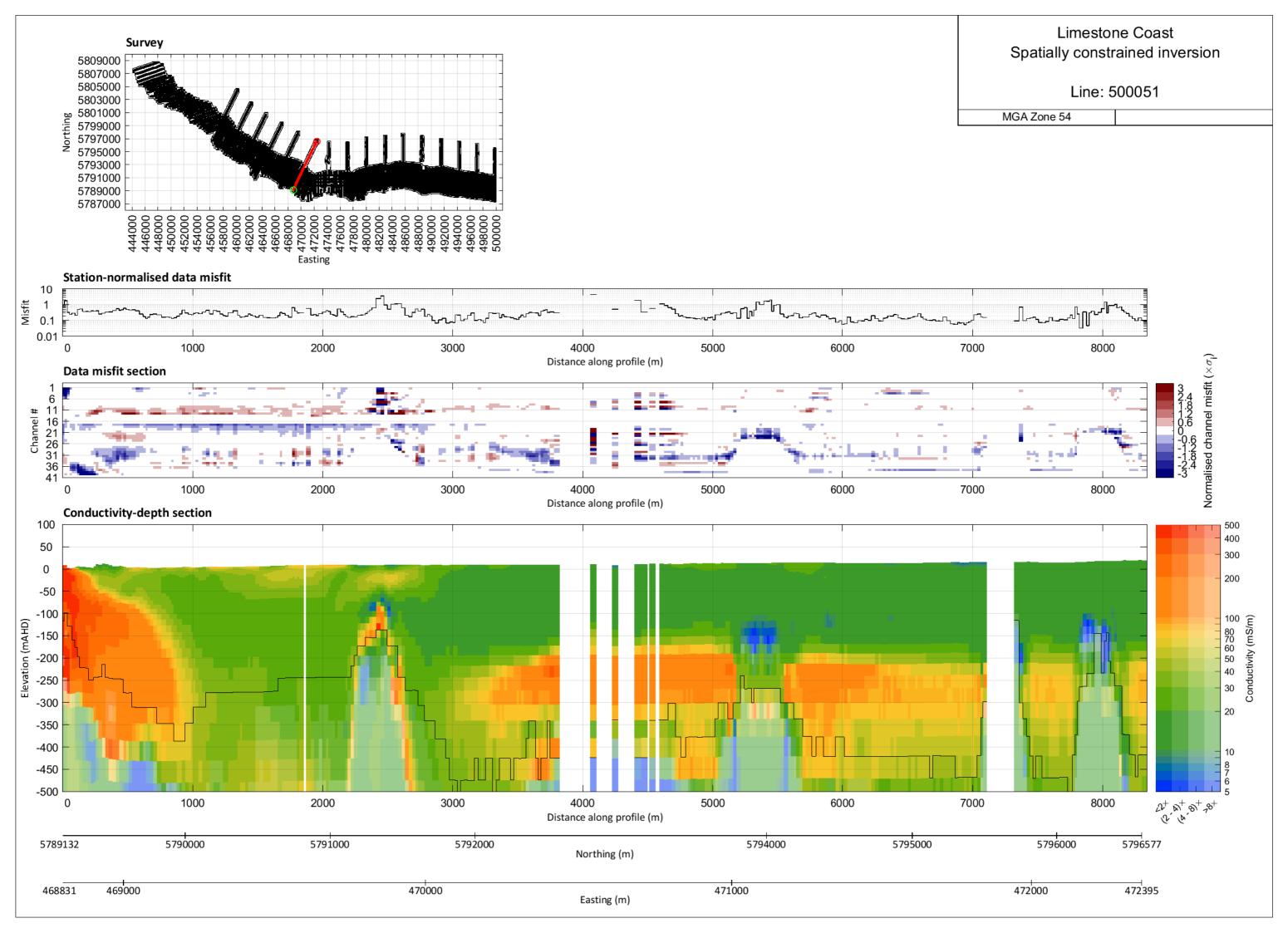


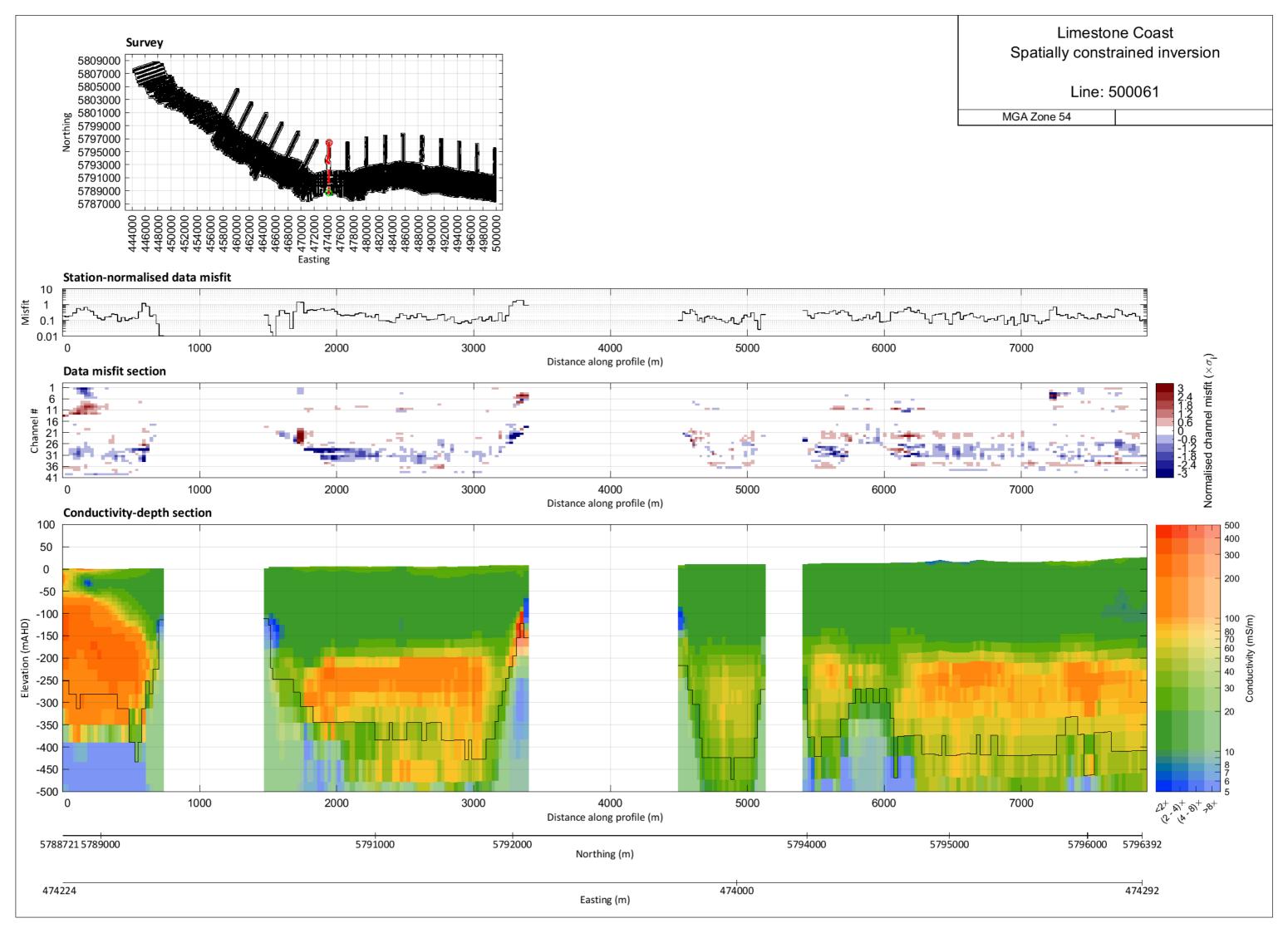


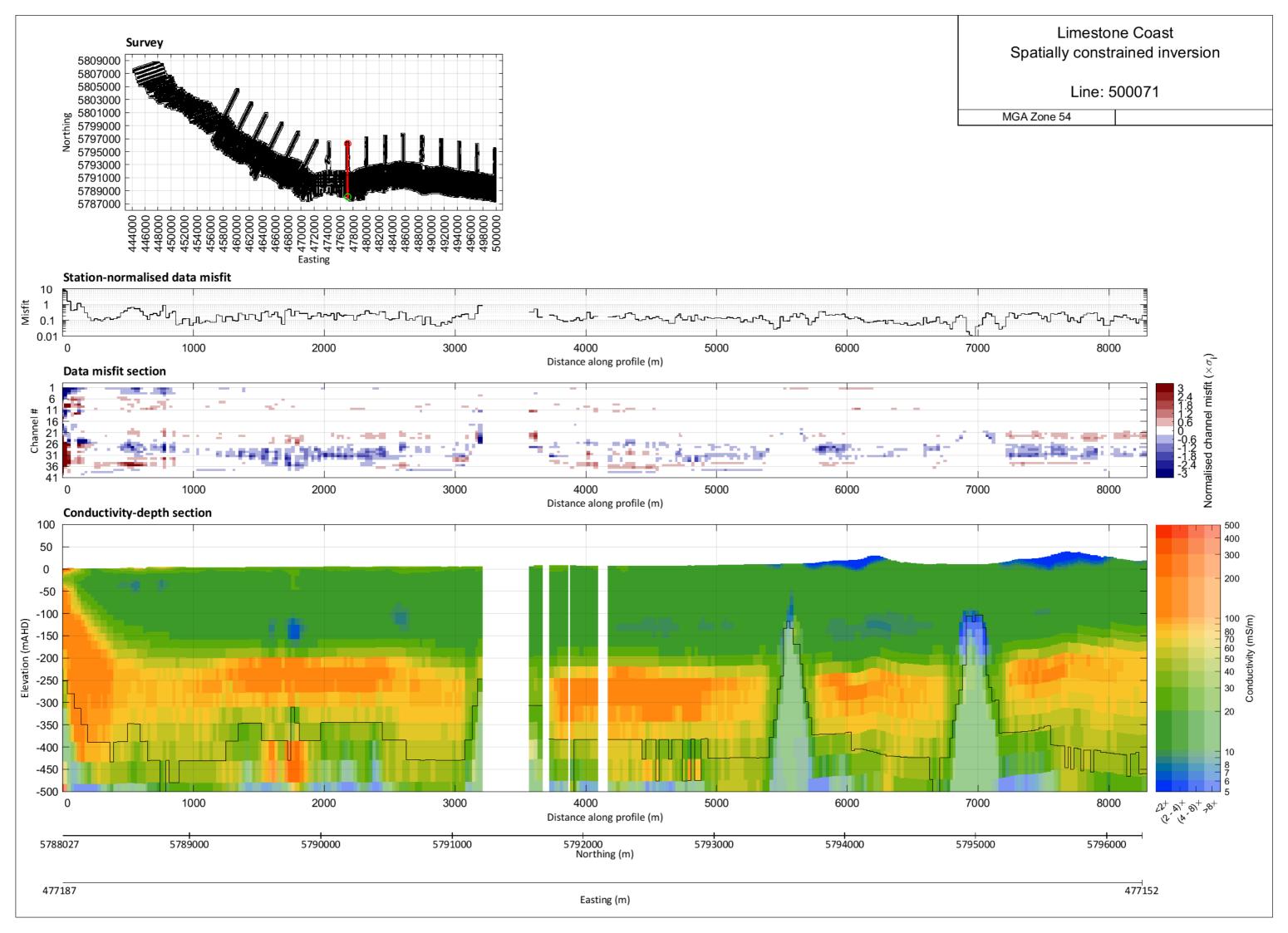


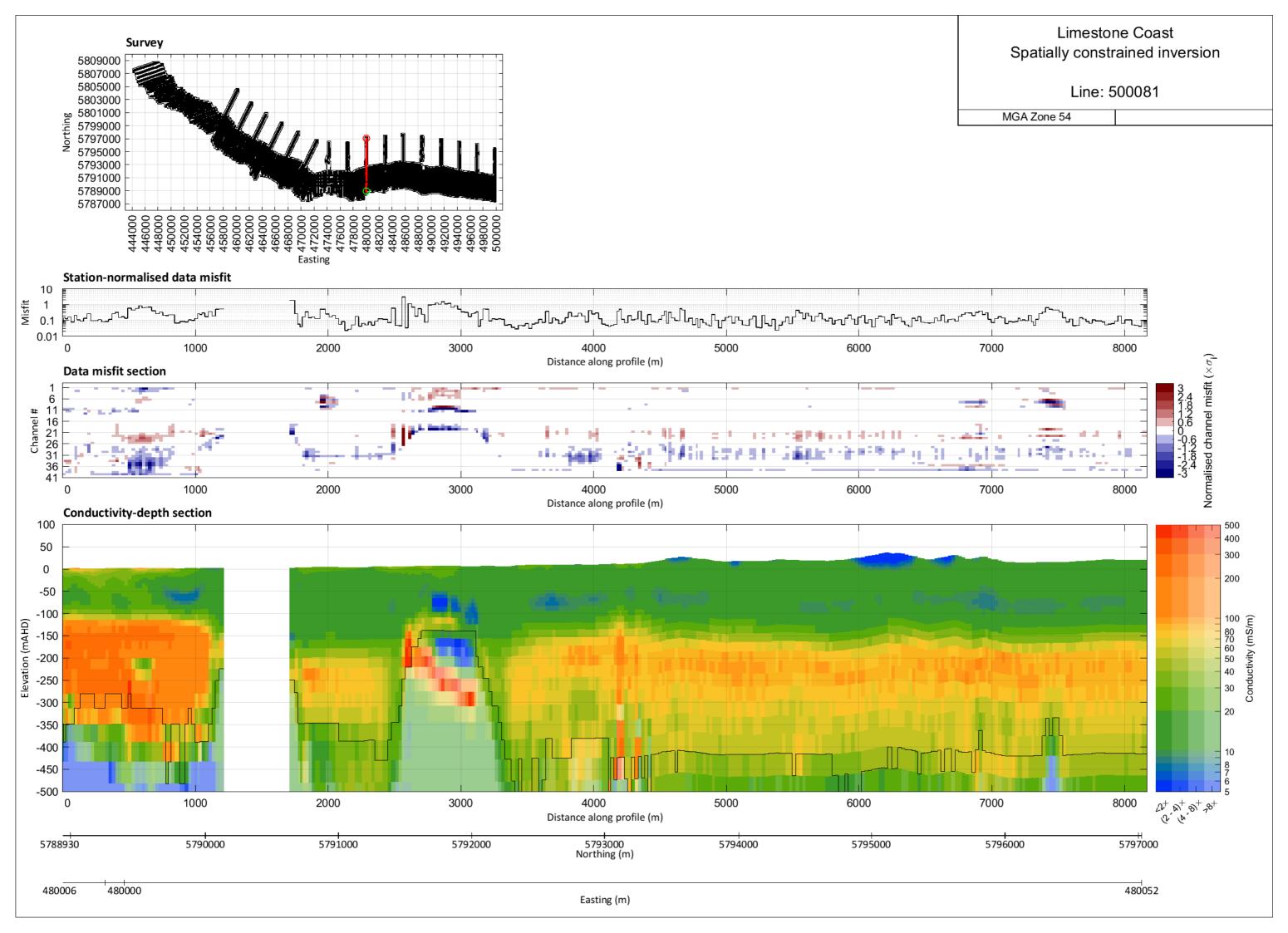


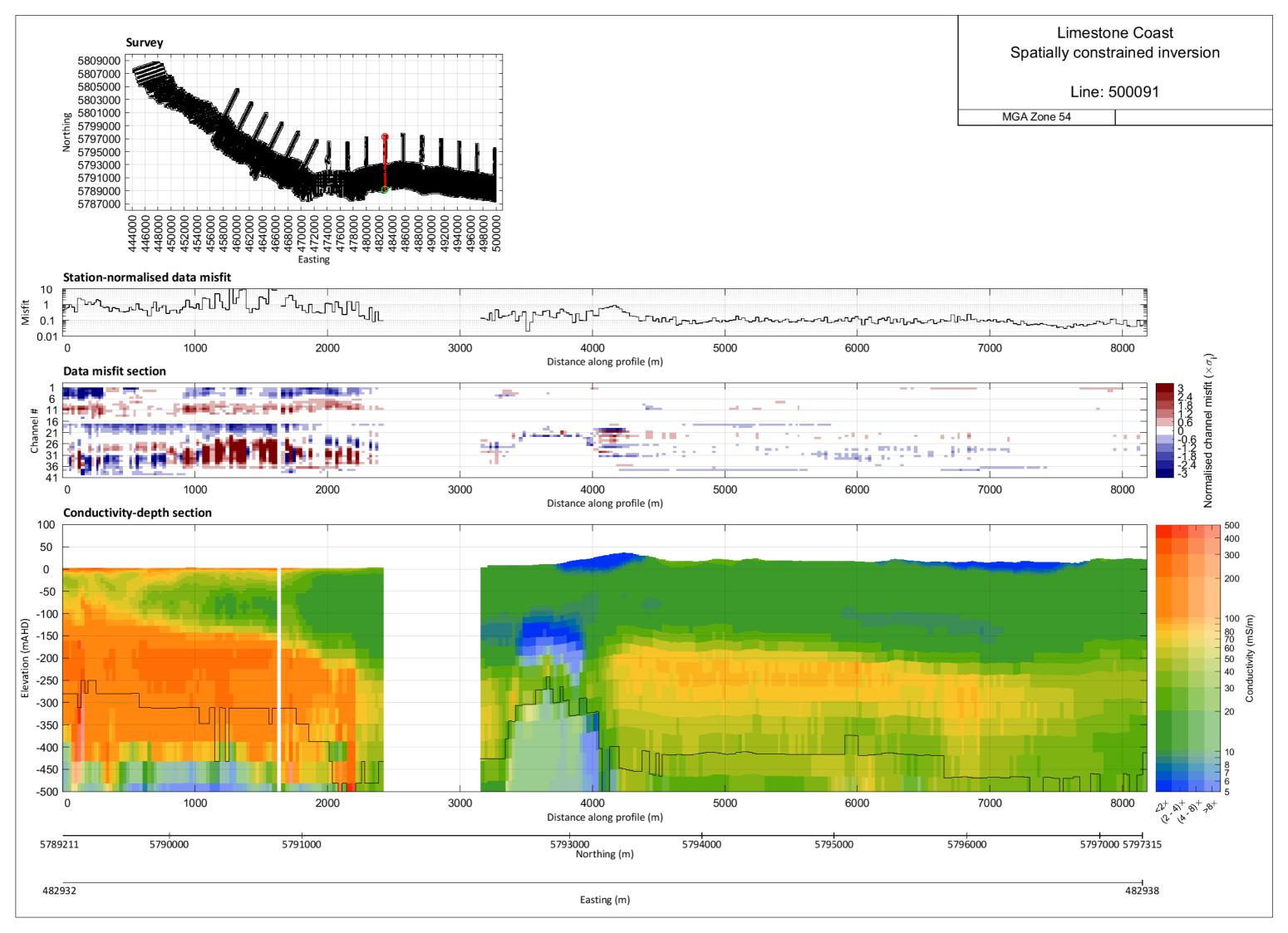


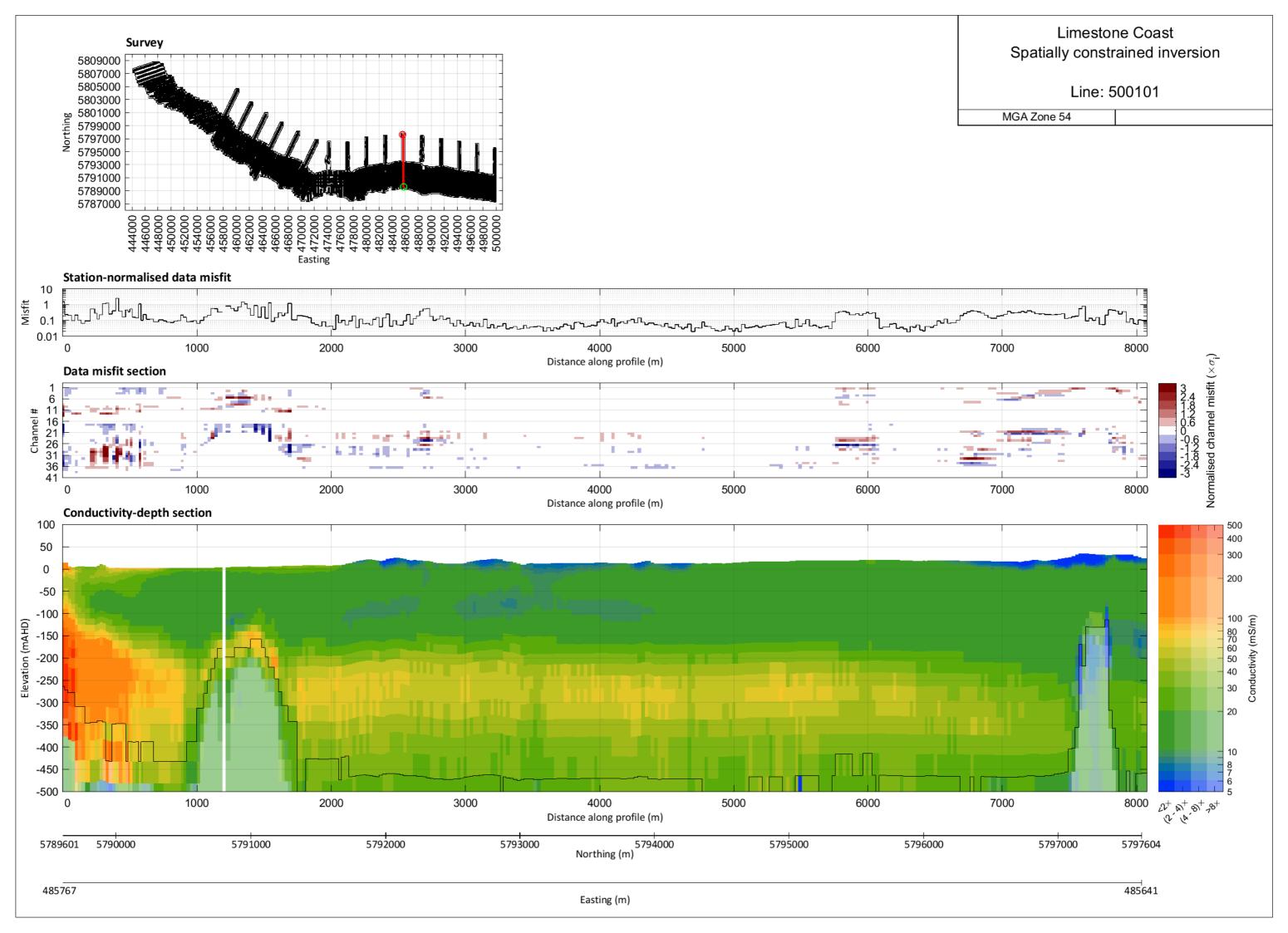


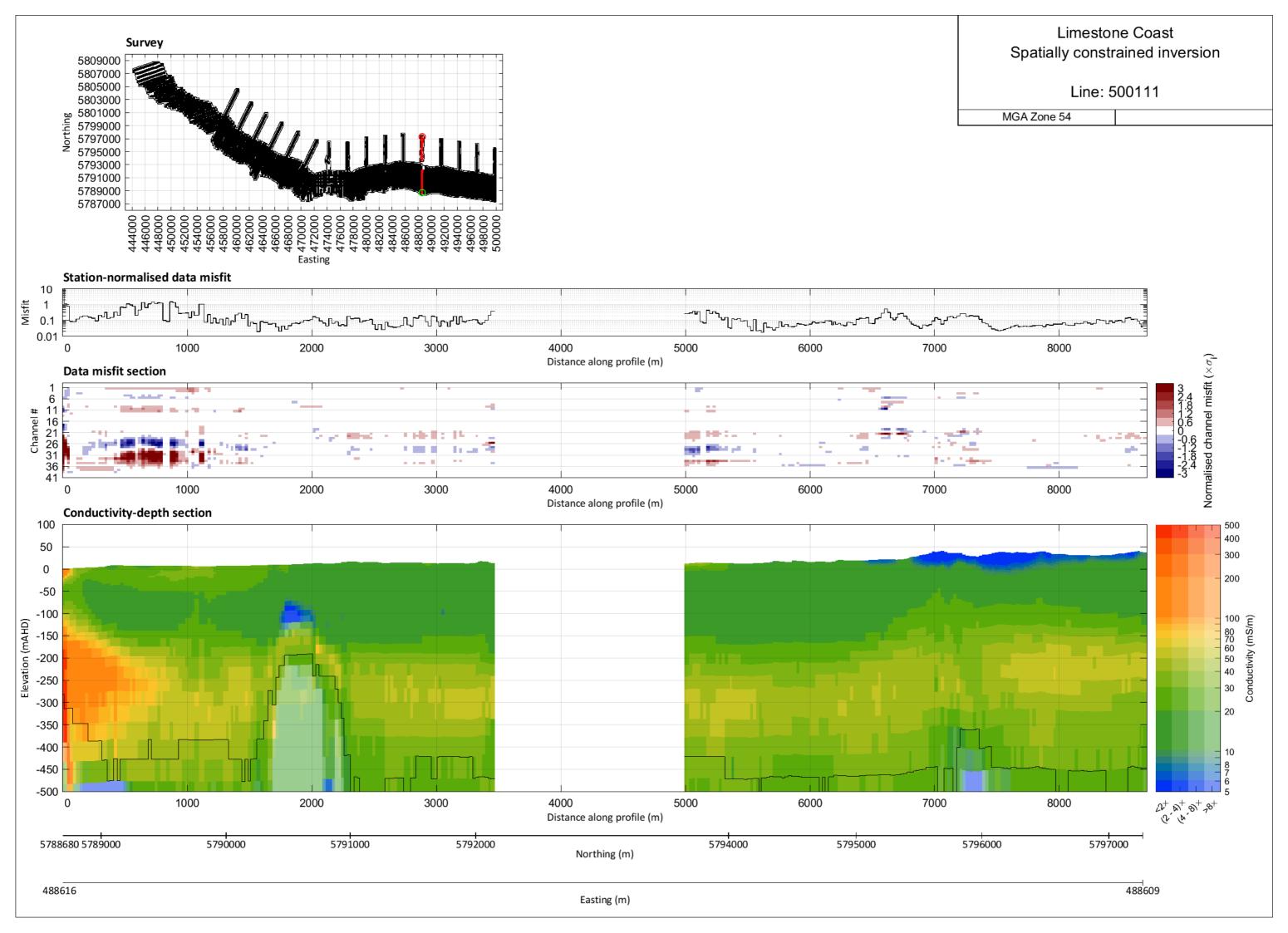


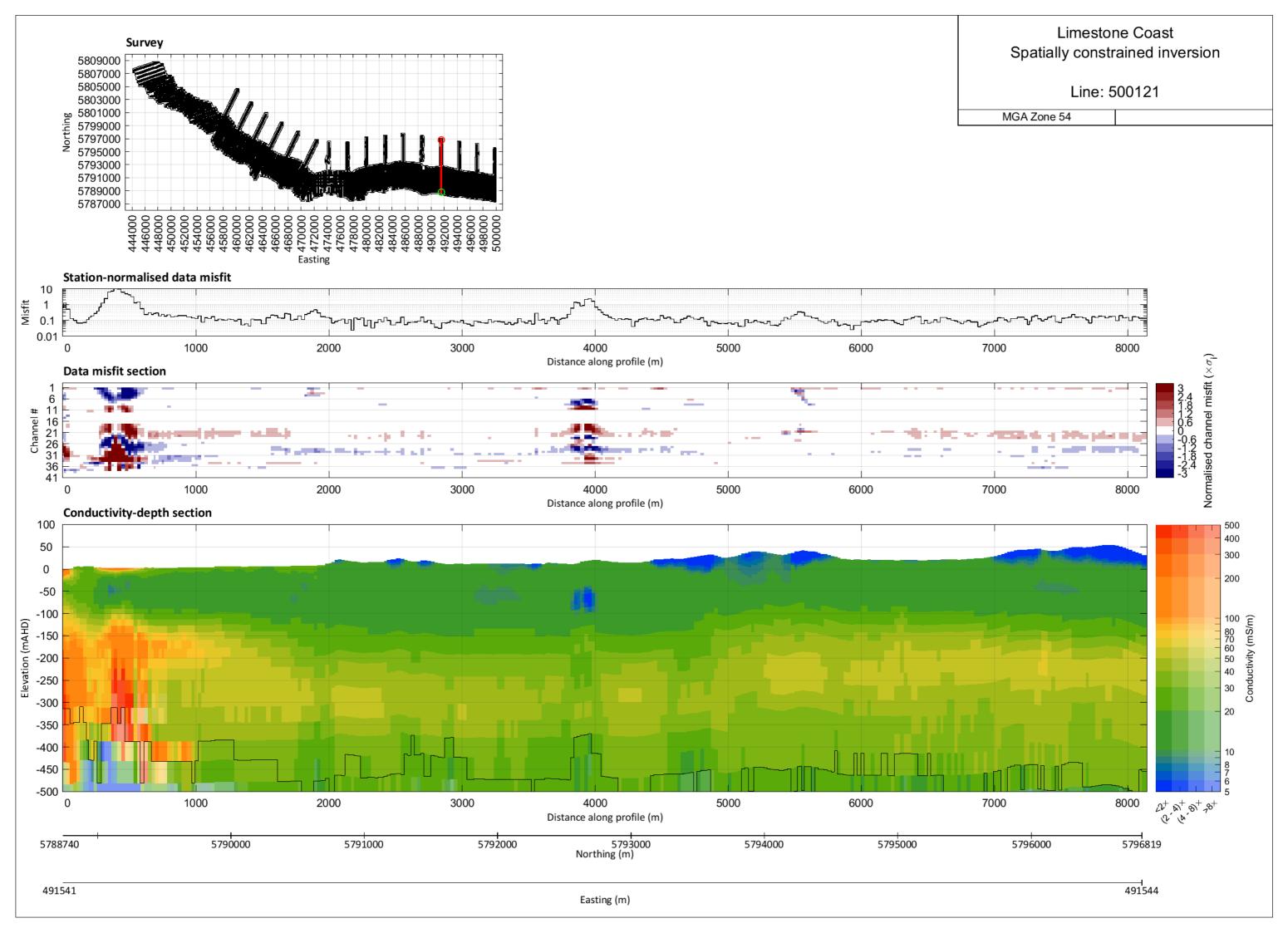


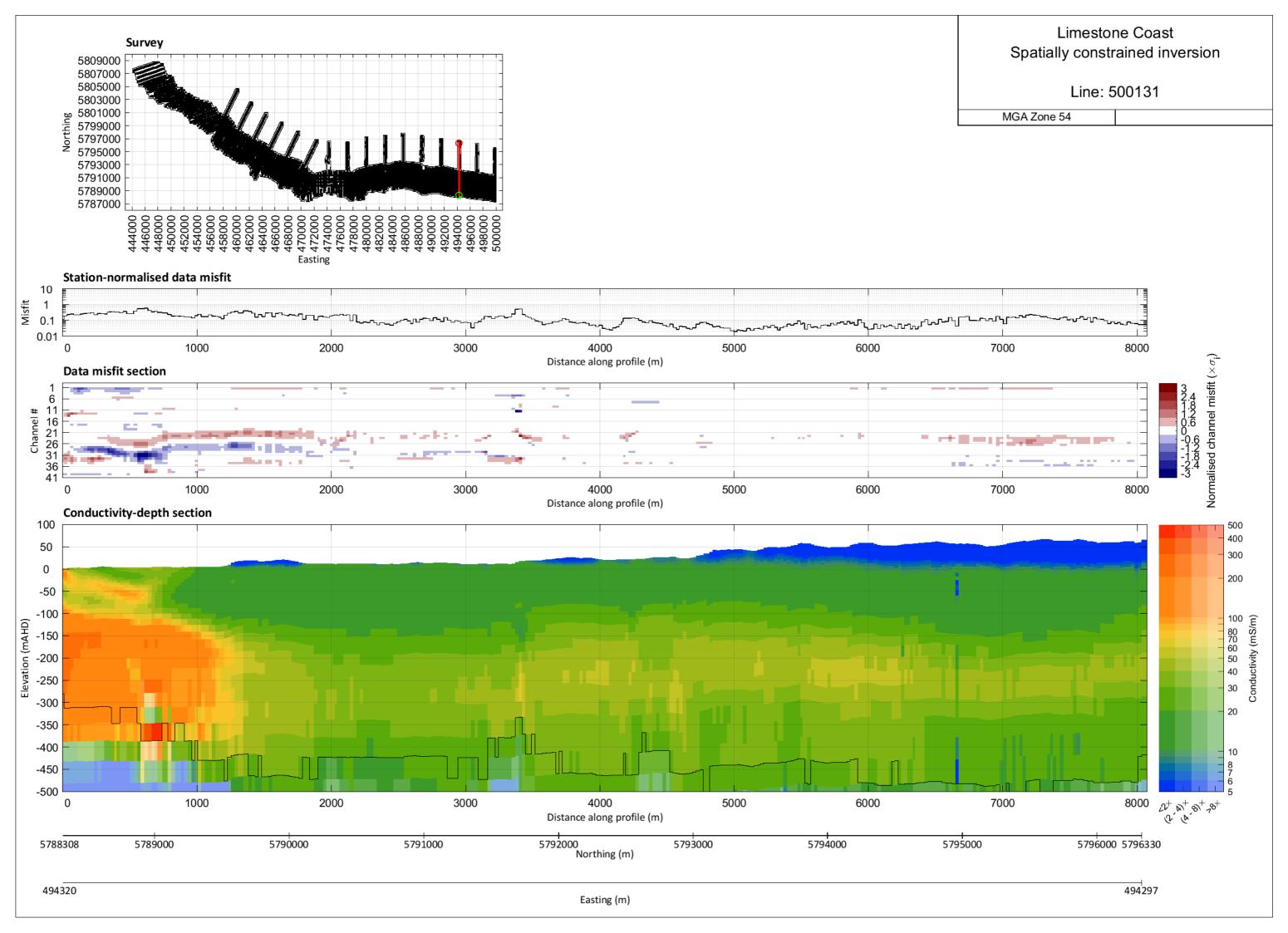


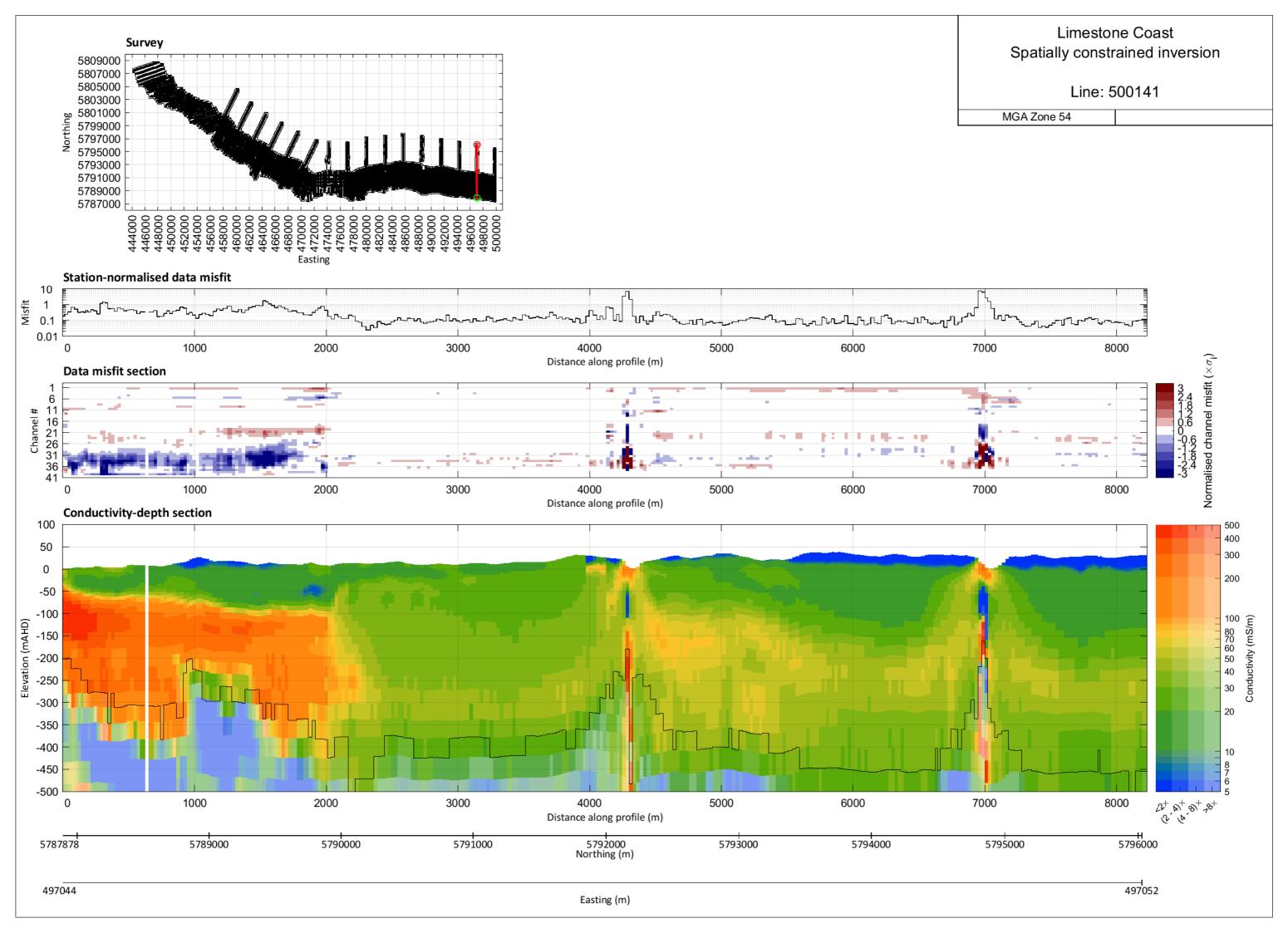


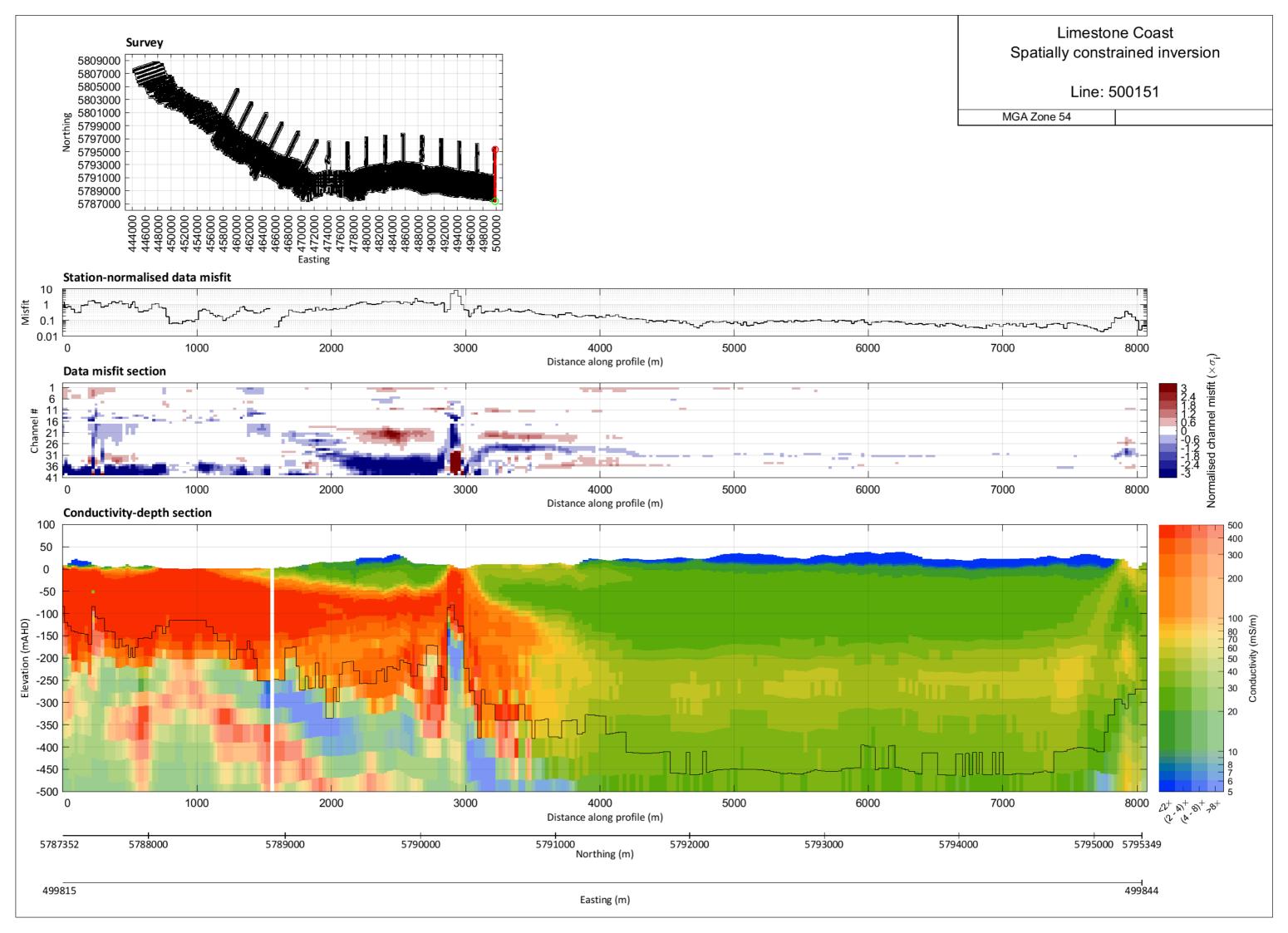


















**Environment and Water** 









The Goyder Institute for Water Research is a research alliance between the South Australian Government through the Department for Environment and Water, CSIRO, Flinders University, the University of Adelaide and the University of South Australia.