TORRO SITE INVESTIGATION
SUMMARY REPORT
Dereham, Norfolk
20 October 2025

Report number: SI20251020_Dereham

Site Investigator: Ryan Finch

Authors:

Site Investigator: Ryan Finch ryan.finch@metoffice.gov.uk

David Smart david.smrt@gmail.com
Sarah Horton sarah.horton@torro.org

Dates of site visits: 24 October 2025 (Dereham), 16 November 2025 (Rockland-Letton), 23 November 2025 (Westfield-Toftwood)

Document status: Draft

Document history:

Author	Version	Type	Date	Comments
Finch, R.	0.1	Initial draft	14/11/2025	
Finch, R.	0.2	Revision	24/11/2025	Two Separate SI's South of Dereham added, revision to Meteorological Summary, track length extended
Smart, D.	0.3	Revision	28/11/2025	Text and figures revised and edited.
RF, DJS and SH	1.0	Final	02/12/2025	Minor corrections and approval

Keywords: Tornado, Dereham, Norfolk, injury, shallow arc convection

How to cite: Finch, R (2025). TORRO site investigation summary report: Dereham, Norfolk, 20 October 2025.

https://www.torro.org.uk/pdf/SI/SI20251020_Dereham.pdf

DOCUMENT OR CONTENT NOT TO BE REPRODUCED WITHOUT EXPRESS PERMISSION

Site Investigation Summary

Cause of damage:	Tornado
Strength:	T2
Track Length:	18km
Maximum measured Width:	200−300m
Time/ duration	1515 UTC±15min
Map Location/postcode	NR17, NR9, IP25, NR19

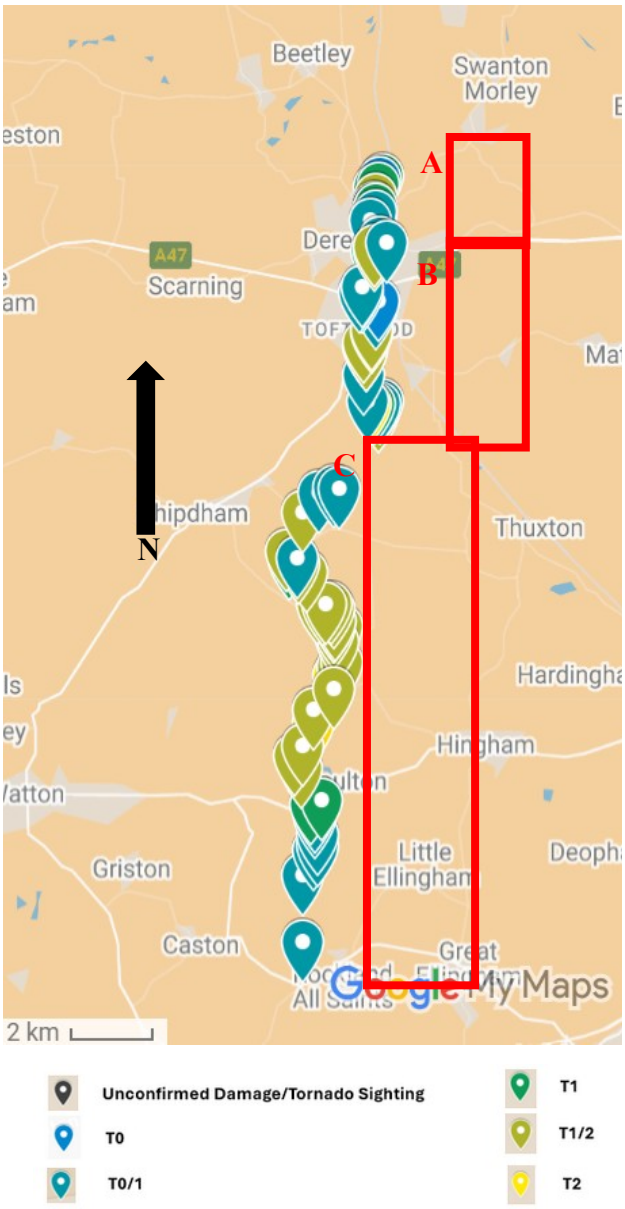

Figure 1a: Damage track of the Dereham tornado (2025). Boxes indicate separate site investigations: A (Dereham, 24/10/2025), B (Westfield-Toftwood, 23/11/2025) and C (Rockland-Letton, 16/11/2025). The tornado tracked north-north-eastwards, touching down around Rockland All Saints and dissipating just north of Dereham. A key to damage indicators is below. Map data ©2025 Google.

Key Damage Indicators

Site Investigation A, Dereham, 24/11/2025

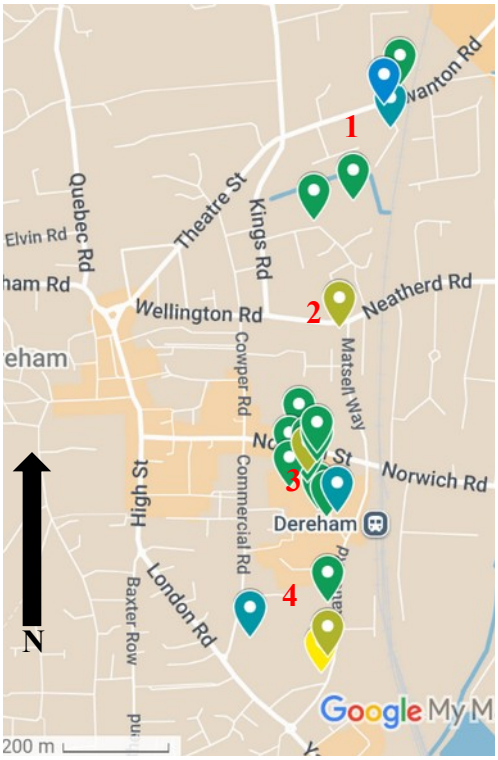

Figure 1b

1. *Swanton Avenue & King's Park Infant School:* Large branches down at lat 52.6803, lon 0.9481 (hereafter all coordinates will be given in lat, lon degrees). Resident reported weak a wooden fence knocked over at 52.6853, 0.9479. Telephone testimony from a staff member at King's Park Infant School (52.6842, 0.9469) reported that play equipment had been blown around and 'rearranged', including large benches. Minor roof damage, including few lost/dislodged tiles, was anecdotally reported in the King's Park area, although this was not witnessed at the time of the SI. **Intensity rating: T0-1**

2. *31 Neatherd Road:* (52.6821, 0.9465)*:* Inhabitants reported that 20 tiles were violently blown into the road (approximately 5m), narrowly missing passing cars. This left a significant hole in the roof, with a line of ridge tiles missing. Additional damage included a large jasmine plant, which had been knocked off the windowsill and smashed and a hanging plant which had been knocked off a hook. Roof damage was highly localised, indicating a maximum path width of around 10–20m at this point. **Intensity rating: T1-2**

3. *Morrisons supermarket car park:* Eyewitnesses reported that 4 or 5 plastic panels, which had been covering trolley shelters, had been removed and lofted. One of these panels is reported to have struck a customer, causing minor injuries. A large glass panel at the store

entrance was smashed (52.6790, 0.9461). A large piece of metal flat roofing struck a lamp post, damaging its base and exposing the wiring. Branches of large trees were twisted/warped significantly, including near-total leaf loss on one deciduous tree. Tiles appeared to have been disturbed on an abandoned house (52.6803, 0.9454), causing minor holes in the roof. **Intensity rating: T1-2**

4. *East Dereham Skate Park:* Two trees, taller than 30ft were snapped and felled (52.6765, 0.9460), falling onto a metal bike shelter. One tree measured 76cm in diameter, and one of the bases had been splintered by the force of the uprooting. Large branches had been snapped from nearby trees. An additional, smaller tree had been snapped in two, on half still lying on the fence. Light/Moderate tree damage was observed across the width of the park, indicating a path width of around 150m at this point. **Intensity rating: T0-2**

Site Investigation B, Westfield to Toftwood, 23/11/2025

Figure 1c

5. *Dereham South:* Eyewitnesses report the tornado crossing the A47 road, with moderate-damage (twisted/broken branches) to large trees observed at 52.6719, 0.9453 and 52.6708, 0.9457 either side of the dual carriageway. Minor tree damage was also observed near Yaxham Road (52.6725, 0.9493). **Intensity rating: T0-2**

6. *Toftwood:* Minor damage to large tree branches and saplings observed around 52.6627, 0.9409 and 52.6609, 0.9468. **Intensity rating: T0-1**

7. *Westfield North:* Many small trees severely damaged/snapped, including one larger tree which had been felled at 52.6548, 0.9451. **Intensity rating: T1-2**

8. *Westfield South:* Widespread moderate tree damage (twisted/broken branches). Eyewitness report of a large tree which had been felled and blocked the road around 52.6404, 0.9441. **Intensity rating: T0-2**

Site Investigation C, Rockland-Letton, 16/11/2025

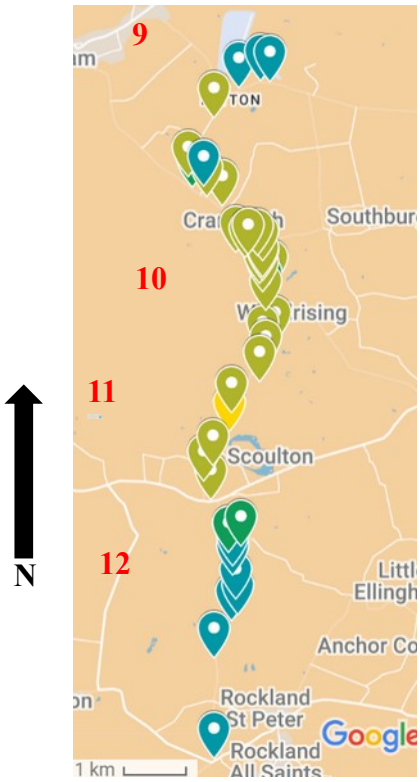

Figure 1d

9. *Letton:* Light-moderate tree damage to branches and saplings, with branches severely twisted at 52.6189, 0.9215. **Intensity rating: T0-1**

10. Cranworth-Woodrising*:* Widespread tree damage observed along Woodrising road, with large branches broken/twisted and significant leaf loss. More significant damage was observed to a row of trees lining the road around 52.5962, 0.9326, with total leaf loss and large branches snapped violently. One tree had been snapped in half at this location. A dead tree had been snapped in half at 52.5887, 0.9350. Path width exceeded 200 M at some points. **Intensity rating: T1-2**

11. Scoulton: Continuation of moderate/severe tree damage as seen in Woodrising, including a snapped tree at 52.5768, 0.9248. Telegraph poles were observed to be leaning toward the North at 52.5676, 0.9207. **Intensity rating: T1-2**

12. Rockland: Tree damage was less severe here with indicators becoming more sporadic, although small branches had been snapped and leaves stripped on some trees. The furthest South any notable tree damage was observed was at 52.5327, 0.9215. It is likely the tornado originated in the fields just to the South of this. **Intensity rating: T0-1**

Meteorological Summary

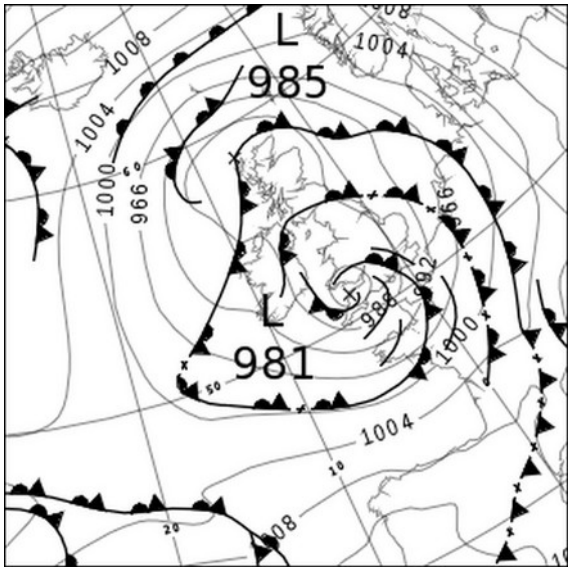

Figure 2: Section of UKMO ASXX 1200 UTC 20 October 2025. Original: Crown copyright.

On the afternoon of 20 October 2025 low pressure and a returning Polar Maritime (rPM) airmass lay over the UK. A jet streak was present over Brittany coincident with a broad cold pool aloft at 500hPa moving eastwards. Warm air was also being advected near the surface over East Anglia from the Channel and near continent. These factors combined to create an environment supportive of deep convection.

Heavy showers developed along a trough which moved north-north-eastwards into East Anglia during the afternoon. The 12 UTC sounding from Shoeburyness, Kent (see Figure 3) may be representative of the environment further north over East Anglia and indicates deep instability (SBCAPE ~1100J/Kg, equilibrium level near 300hPa) and low lifted condensation levels (LCL, < 300m). Surface winds were backed to the south-south-east producing modest surface-to-1km shear and surface-to-3km shear of ~13ms^{-1}.

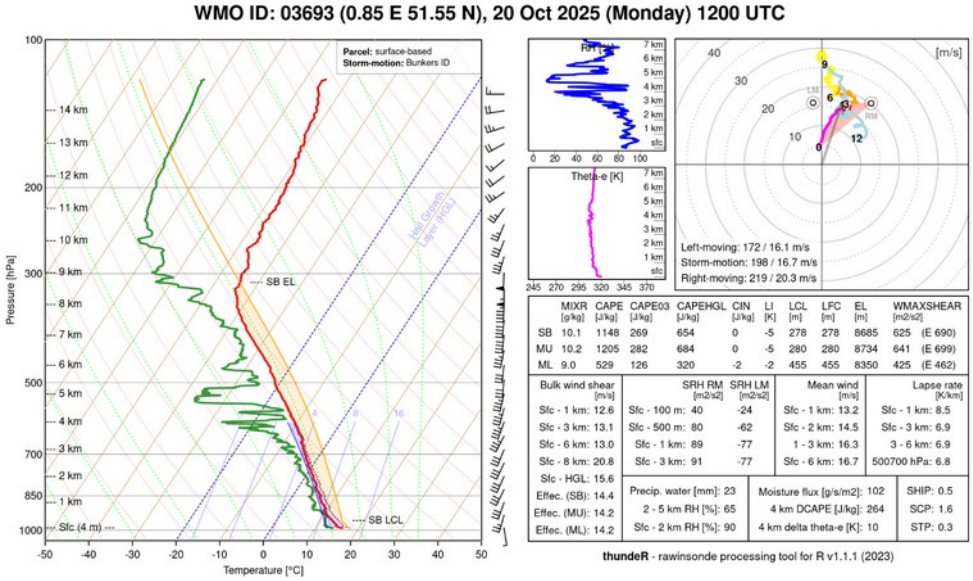

Figure 3: 12 UTC RAOB sounding from Shoeburyness, Kent. Source: https://rawinsonde.com/

There is no Doppler radar coverage of this area. Figure 4 shows a sequence of 5-min network radar images as the tornadic shower cell moved across Dereham. This isolated cell moved north-north-eastwards to the east of a long-lived arc of showers and weaker echoes. Satellite imagery (not shown) indicates this arc was very shallow in nature with relatively warm cloud tops, whereas the Dereham cell, exhibited cold cloud tops with temperatures lower than −40C. The relationship, if any, between the two features is unclear. No lightning was detected by the MTG LI instrument.

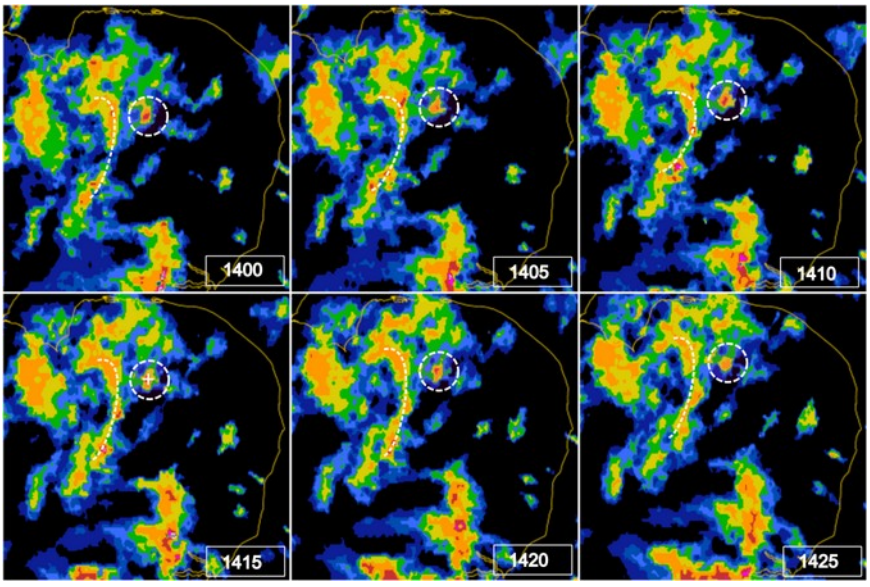

Figure 4: A sequence of network radar images over East Anglia from 1400 to 1425 UTC showing the tornadic shower/cell as it moved north-north-eastwards across Dereham. The location of Dereham is annotated with a cross at 1415 UTC. The position of the shower is highlighted with a dashed circle. An arc of showers to the west of the cell is highlighted with a dashed line. NIMROD 1-km radar product, original data UKMO archived at CEDA.

Conclusions

1. Damage to trees in and around Dereham indicates a tornado with a maximum rating of T2.
2. Damage to buildings was minor, though damage to car park structures caused minor injury to a member of the public.
3. The tornado appeared to have been associated with a discrete shower cell in environment of deep instability but modest low-level shear.

Comments

1 We were unable to locate any video/photographic evidence of the tornado itself. Staff at Morrisons supermarket reported that the vortex had been captured crossing the car park on CCTV, however the footage was not shared due to GDPR concerns.
2 An unconfirmed Facebook post reported that strong winds had removed the roof of a stable at Stanfield, north-east of Dereham. This has been discounted from the SI due to inconsistent timing and location.
3 Possible damage to a cemetery on Northgate Road, including fallen gravestones, was discounted from the SI as it could not be determined when the damage occurred.
4 At the time of writing this is the only report TORRO has received on this day.
5 No Met Office weather warnings were in force at the time.
6 Relevant forum thread: TORRO Forum ACCESS RESTRICTED TO TORRO MEMBERS.

Thank you to the members of public who contacted TORRO and all those who aided the site investigation.