MAGWATCH

OBJECTION TO APP/23/00822/F

DEBUNKING CANFORD CARBON CAPTURE READINESS

This objection debunks the recent supporting letter submitted by Kanadevia Inova AG (MVV_CC_001a, October 2024), which presents a highly speculative narrative regarding the feasibility of retrofitting carbon capture and storage (CCS) on the proposed (constrained) Canford site. This objection outlines the assumptions, and technical omissions that together render the claimed CCS feasibility entirely speculative and potentially, materially misleading for planning decision-makers.

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1. Lack of Proven CCS Experience in EfW Sector

Neither Kanadevia Inova (KVI) nor MVV has any track record of delivering a viable scaled CCS project in the Energy from Waste sector:

- KVI's first and only EfW-related CCS project is a pilot system in Wales, in partnership with Enfinium. This trial system is in its infancy and will capture only 1 tonne of CO_2 per day, a minuscule fraction compared to Canford's expected emissions[1].
- The proposed Canford plant would emit approximately c712 tonnes of CO_2 per day. To capture 90–95% (c696 tonnes of Co2 per day), a commercial-scale system required to capture this volume of would need to be larger by a significant magnitude, and far greater than KVI's pilot with Enfinium. *KVI has no demonstrable EfW experience at this scale with CCS*.
- All other CCS references by KVI pertain to the biogas sector, which is fundamentally and technologically unrelated to EfW. Biogas projects operate with different gas compositions, flow rates, engineering constraints and capture technology.
- MVV similarly lacks any operational history of implementing CCS at EfW scale, and neither party has delivered CCS under constrained site conditions like those at Canford.

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2. Arena Way Pipeline Proposal is a Pipedream, Illusory and Non-Viable

MVV proposes a pressurised CO_2 pipeline beneath Arena Way to support a future CCS retrofit. This idea is ill-conceived and unsubstantiated:

- No CO_2 pipeline network exists in Dorset.
- The Canford site is not part of any UK Government Track 1 CCS cluster.
- No licensed CO_2 storage operators or geological sites are located nearby. The nearest viable sites are in the North Sea, requiring long-distance transport infrastructure.
- No local heavy industrial cluster exists to justify or share the cost of a CO_2 pipeline development. As a stand-alone EfW plant, MVV is highly unlikely to qualify for government support for bespoke infrastructure.

The proposed pipeline lacks an identified route, terminus, engineering design, funding source, or regulatory approval. It would likely require disturbance of green belt land and serve no viable end-use. Without an integrated transport and storage chain, CCS retrofitting is not deliverable.

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[1] https://www.kanadevia-inova.com/hitachi-zosen-inova-to-build-and-operate-the-uks-first-waste-to-energy-carbon-capture-facility-for-enfinium/

3. Inadequate Site Layout for CCS Retrofit

Drawing Ref: MVV_CC_001a claims that space has been "safeguarded" for CCS in Area ID 23. However:

- This area is already designated for laydown, maintenance, firewater storage, and HGV circulation.
- A full-scale CCS plant capturing c696 tonnes/day would require at least 3,000–4,000 m². The available space is by far too limited.
- No plan is presented showing how essential components such as absorbers, compressors, flue gas diversion, and CO_2 conditioning units would be integrated safely.

MVV's claim that the space is big enough is unsupported by any engineering analysis. In fact, the absence of detailed design or sequencing plans substantiates the Planning Inspector's prior conclusion in the Portland ERF case, that: *"the [Canford] site is not suitable for CCS".*

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4. CCS Economic and Technical Viability Not Demonstrated

MVV states CCS will be implemented "as soon as technically and commercially possible." This statement lacks substance:

- Industry estimates place CCS retrofit costs for EfW at £80–£150 per tonne of waste. For Canford, this implies £20–£30 million annually, excluding transport and storage.
- MVV has provided no financial model (CAPEX/OPEX) to demonstrate how this would be funded.
- MVV is not part of a CCS cluster and has no identified funding stream.
- There is no port, pipeline, or shipping route defined to move CO_2 off-site.

These omissions undermine any suggestion that CCS at Canford is technically or financially credible.

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5. Claimed Site Safeguarding for CCS Is Theoretical, Not Deliverable

The site layout includes an illustrative wireframe of a possible carbon capture plant[2]. However:

- The CCS facility is squeezed into Area ID 23, which is already designated for laydown, HGV tracking, maintenance, and future environmental requirements.
- A commercial-scale CCS plant capturing >670 tonnes/day would likely require 3,000–4,000 m², particularly for absorber towers, compressors, CO_2 conditioning units, and buffer storage. The proposal shows no validated engineering plan or operational phasing for how this would be safely and practically accommodated.
- The diagram lacks any details of vehicular access, safety clearances, structural loads, or integration with steam and flue gas infrastructure, all essential components of a realistic CCS retrofit.
- This renders the spatial feasibility of carbon capture on-site entirely speculative.

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6. Kanadevia Inova Letter is Speculative

The KVI letter submitted by MVV is not a feasibility study. It lacks:

- Engineering drawings or technical details.
- Capture performance estimates;
- Site-specific integration plans;
- Specific examples of successful KVI CCS retrofits at constrained EfW sites with similar technology and scale requirements;

Instead, it amounts to a speculative endorsement unsupported by real-world application. It should

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[2] MVV_CC_001a, October 2024

not be treated as reliable planning evidence. Savills' portrayal of CCS readiness is, at best, another desperate play of aspirational myth-making. The Planning Authority should attach no weight to the claims and challenge all CCS-related claims unless they are substantiated by:

- A fully engineered CCS layout and integration plan;
- A complete economic viability assessment;
- Verified CO_2 transport and storage solutions;
- Evidence of committed participation in a UK CCS cluster and government funding.

Conclusion

The assertion that Canford EfW is compatible with future carbon capture is demonstrably untrue. The proposal lacks:

- Proven technology and implementation experience;
- Demonstrable portfolio of delivered CCS projects for EfW constrained sites;
- Portfolio of KVI delivered CCS at scale for EfW;
- Viable infrastructure for CO_2 transport and storage;
- Evidence of sufficient space or engineering design for retrofit;
- A realistic financial model or operational commitment.

Accordingly, we recommend the Planning Authority give no weight to the KVI letter on the following grounds:

- The CCS retrofit is technically and commercially unviable;
- The proposed CO_2 pipeline is unfounded and speculative;
- The site layout is substantially inadequate for meaningful carbon capture integration;
- KVI have no demonstrable experience in delivering CCS plant to EfW facility's' on constrained sites or otherwise;
- MVV now propose an entirely different CCS laydown, further stretching MVV's credibility for their submitted proposal;
- MVV have stated their aim would be to consider implementing CCS as soon as it becomes technically and commercially possible[3]. Isn't this an admission it is not technically possible contrary to the KVI submission?
- No substantiating evidence or facts have been provided, only speculative and theoretical hyperbole.

Paul Brelsford
(on behalf of Magwatch)
29 May 2025

ADDENDUM (5th June, 2025)

At a community liaison meeting in Wisbech on 15 April this year, this is what Paul Carey had to say on the matter when asked by a local resident:

Q. 'Does MVV agree to carbon capture?'

Paul Carey (MD of MVV): 'Yes, but an effective, industrial carbon capture plant requires very large equipment. The technology is evolving and the biggest challenge is what to do with the carbon at the end of the process. Currently, to avoid it being released into the atmosphere, a leading option is to build a pipeline and pump the carbon into empty gas fields. A further Development Consent Order would be required for that pipeline.'

[3] Savill's letter/email dated 18 Nov 2024