

Mr David White

Email: [REDACTED]

16th Dec 2025

To: The Planning Inspectorate, IP Ref [REDACTED]

Microplastic Pollution from the Long-Term Burial of XLPE Cables: Risks and Correspondence with Professor [REDACTED], IP Ref [REDACTED]

Introduction

In a number of previous written and oral submissions made on behalf of our communities, we have set out detailed concerns regarding the potential for pollution arising from the long-term burial of XLPE (cross-linked polyethylene) electrical cables within agricultural land and a designated **Drinking Water Protected Area**. These concerns relate specifically to the inevitable degradation of **thousands of tonnes of plastic-based cable materials** over time, with the consequent release of microplastics and associated chemical additives into soils and groundwater.

Our concerns have been formally presented to the Examining Authority through the following submissions:

- *Microplastic Pollution, Particularly in Drinking Water Protected Areas – Ref [REDACTED]* (submitted 15 May 2025)
- *Public Hearing Response – Plastic Cables and Pollution – Ref [REDACTED]* (submitted 19 July 2025)
- *Response for [REDACTED] Q13.0.6: Impacts on Soil and Agriculture* (submitted 18 August 2025)
- *Say No to One Earth Solar Farm – Clean Water or Energy* (submitted 12 November 2025)

Despite the scale of the proposed development and what our communities consider to be a clear and credible environmental risk, the responses provided by the developer, One Earth Solar Farm, have consistently dismissed the potential for harm. In particular, the developer has asserted that the burial depth of approximately 0.9 metres precludes any environmental impact and has compared the proposal to the long-term burial of agricultural plastics, claiming that this practice has not resulted in adverse effects.

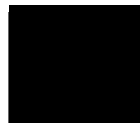
These assurances are increasingly at odds with a growing body of scientific literature (links previously supplied and resubmitted), which indicates that plastics buried in soils do degrade and fragment over time and the inevitable result is the formation of microplastics and the subsequent release of chemical additives that can migrate through soil profiles and enter groundwater systems. Evidence addressing these issues has already been submitted to the Examining Authority, yet our concerns continue to be minimised by the developers and the EA.

In order to seek independent, authoritative clarification on these matters, we contacted **Professor [REDACTED]**, one of the **world's leading experts in microplastic pollution**. Professor [REDACTED] is internationally recognised for his work in this field and led the research team that first coined the term “microplastics” in a landmark 2004 publication.

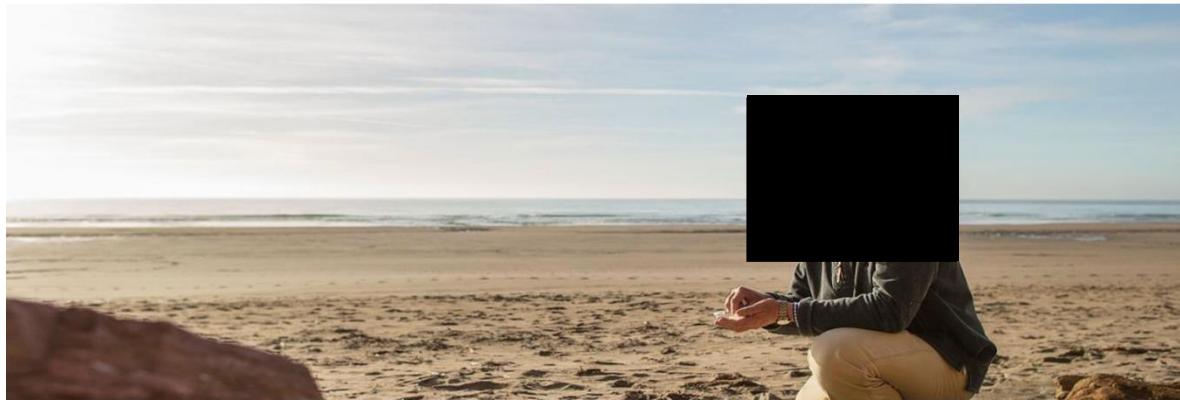
His expert observations are provided with his consent and are submitted to assist the Examining Authority in its assessment of the long-term environmental implications of the proposed development.

A Note on Professor [REDACTED]

Director of the Marine Institute,
School of Biological and Marine Sciences (Faculty of Science and Engineering)



Academic profile
Professor [REDACTED]
Director of the Marine Institute
School of Biological and Marine Sciences (Faculty of Science and Engineering)



About [REDACTED]

Professor [REDACTED] is Professor of [Marine Biology](#) and Director of the [Marine Institute](#) at the University of Plymouth.

[REDACTED] is a world-leading marine scientist and is at the forefront of pioneering research into the causes and effects of marine litter. He founded and heads the University's [International Marine Litter Research Unit](#), which has charted the global distribution of microplastics from Arctic sea ice to the deep seas. In 2019, the University was awarded the [Queen's Anniversary Prize](#) for the pioneering research of [REDACTED] and his colleagues on marine microplastics pollution and its impact on the environment and changing behaviour.

Honours

[REDACTED] was presented with the [2023 Blue Planet Prize](#) in recognition of his groundbreaking research and ongoing work with colleagues in the UK and worldwide.

In 2017, [REDACTED] was awarded with an OBE (Officer of the Order of the British Empire) for his services to marine science.

He was awarded the 2017 Marsh Award for Marine and Freshwater Conservation for his pioneering research into microplastics.

Academic career

Director of the Marine Institute, University of Plymouth, 2018–present
Associate Dean, Research, University of Plymouth, 2016–2018
Professor of Marine Biology, University of Plymouth, 2010–present
Reader in Marine Ecology, University of Plymouth, 2004–2010
Senior Lecturer, University of Plymouth, 2001–2004
Research Fellow (Leverhulme funded), University of Southampton, 1997–2000
Teaching Assistant, Newcastle University, 1996–1997

Teaching

Programme Leader [BSc \(Hons\) Marine Biology](#) 2009–2013 Ecology of Shallow Water Marine Habitats
Experimental Marine Ecology
Field Ecology
Statistics

Supervised Research Degrees

Current PhD students

[REDACTED] Funding Argans Limited Remote sensing sensitivity of marine and terrestrial plastic litter, 2019 – present
[REDACTED] Funding NERC Env East DTP Does microplastic pollution pose a risk to marine life and food security? 2018 –present
[REDACTED] Funding NERC Industrial CASE (UKWIR). Quantifying the influence of waste water treatment on the release of microplastics to the environment, 2018–present.
[REDACTED] Funding NERC Env East DTP. Bioavailability of microplastics to zooplankton, 2017 – present
[REDACTED] Funding, UK Charity and University of Plymouth, Marine Litter: Can behavioural sciences help reduce land-based waste entering the oceans? 2017 – present.
[REDACTED] Funding self, Plastics in the marine environment. 2014 – present

Completed PhD students

[REDACTED] Funding self, Plastics in the marine environment. 2014 - 2018
[REDACTED] Funding EU Mares, Microplastic distribution and ecological interactions across latitudinal gradients, 2015-2018
[REDACTED] Funding Defra, Physical effects of microplastics on marine life. 2011 - 2015
[REDACTED] Funding ESF. Environmentally & Ecologically durable surface design for the coastal built environment. 2011 -2015
[REDACTED] Funding FCT, Portugal. Microplastics in the environment. 2011- 2015.
[REDACTED] Funding: Self. Distribution and effects on microplastics in the environment. 2009 – 2015 (part time).
[REDACTED] PhD 2015 Monitoring microplastics in the marine environment. 2009 – 2014. Funding Defra.
[REDACTED] PhD 2015 Recruitment and succession on coastal defence structures. Funding: Self.
[REDACTED] PhD 2014 Rocky Shores: From habitat threat to marine awareness and restorative experiences. Funding NERC/ESRC.
[REDACTED] PhD 2013, The role of plastic production pellets in the transport and availability of trace metals in the marine environment. Funding: University of

Mr David White

16th Dec 2025

To: The Planning Inspectorate, IP Ref [REDACTED]

Subject: Microplastic Pollution and Chemical Leaching Risks and our correspondence with Professor [REDACTED]

Dear Sirs,

Despite continued and repeated assurances from the developer that microplastic and chemical pollution could not arise from the permanent burial of approximately 1,200 kilometres (almost 8,000 tonnes) of XLPE cables across some 4,000 acres (1,600+ hectares) of agricultural land, there is substantial evidence to suggest otherwise.

Our submission, *"Microplastic Pollution, Particularly in Drinking Water Protected Areas – Ref [REDACTED] (Redacted)"*, sets out in detail the risks posed by buried XLPE cables, which will inevitably degrade over time and release microplastics and associated chemical additives into surrounding soils and groundwater. This raises significant concerns regarding potential impacts on a **Drinking Water Protected Area** and on areas of good and high-quality agricultural land. We subsequently provided further submissions containing additional evidence that we believe substantiates these concerns.

Disappointingly, despite what our communities consider to be a clear and credible environmental risk, the responses received from the developer, One Earth Solar Farm and the EA, are appearing to dismiss or deny the potential for harm arising from these materials.

In order to better understand the issue and to seek independent expert advice, we contacted Professor [REDACTED], a recognised authority in environmental science. Notably, in 2004 Professor [REDACTED] and his team published the seminal paper that first coined the term "microplastics" to describe microscopic plastic fragments in the environment.

Professor [REDACTED] kindly provided a detailed response addressing several of the specific concerns we had raised, and has allowed for his comments to be included in our submission to the Examining Authority (ExA). Any emphasis, including bold text or underlining, has been added by us for clarity.

Microplastic Pollution and Chemical Leaching Risks

1. In answer to our concerns regarding the almost certain pollution dangers from the long term burial of XLPE cables and subsequent chemical leaching, and the developer's refusal to accept this point.

Professor [REDACTED] wrote; "Its well established that plastics will leach chemical additives." and he stressed the importance of understanding the specific composition of the cables and any associated heavy metals.

2. In our question regarding the developers stating that there would be no issues using plastics and that “agricultural plastics had been in use for decades without any issues”. **Professor [REDACTED] wrote “the plastics used (in the cables) are likely to differ from those used in agriculture and so I am not sure it is appropriate to draw parallels. In any event there are escalating concerns about plastics used in agriculture.”**
3. **Professor [REDACTED]** also stressed that, “although exact concentrations and timescales are uncertain, the developer has a duty of care to confirm safety, and **end-of-life removal should be required** — as is standard in offshore oil and gas infrastructure.
4. **Professor [REDACTED]** went on to say “So while it’s true that chemicals **will most probably [be] leached** and that the plastics will eventually break down in to microplastics a key unknown is the time scale which will then determine the realised concentrations. My feeling is the duty of care should be on the developer to confirm safety, this is not the same as saying there is no evidence of harm. Is there evidence this practice is benign.

We wish to place on record our sincere thanks to Professor [REDACTED] for taking the time to respond to our queries. We consider his expert observations to clearly confirm that the risks identified are real, scientifically credible, and not merely hypothetical. **The release of microplastics into sensitive and protected water environments presents the potential for long-lasting and possibly irreversible harm.**

We respectfully urge the Examining Authority (ExA) to give due weight to Professor [REDACTED]’s remarks and to carefully consider the long-term implications of installing **thousands of tonnes of heavy-duty XLPE cables within an important Drinking Water Protected Area**. Based on the developer’s own figures and similar large solar farm developments, this infrastructure could equate to approximately **five tonnes of plastic and heavy metals per hectare**, embedded permanently within sensitive soils and groundwater catchments.

The **protection of drinking water resources, agricultural soils, and community health represents both a legal obligation and a moral responsibility**. We therefore request that the ExA does not permit either the long-term or permanent burial of these cables within such a protected and sensitive environment, and that the ExA makes a recommendation that the Secretary of State for Energy turn down this application, in order to safeguard the integrity of the water supply and food production for both current and future generations.

In summary, we submit that the only environmentally responsible location for these cables is elsewhere, and not within a designated **Drinking Water Protected Area**.

Thank you for your attention and careful consideration.

Yours sincerely,

David White

Planning Officer for North Clifton PM

and through our action group representing over 90% of North and South Clifton residents.

From Mr David White
On behalf of the communities of North and South Clifton

16th Dec 2025

To: The Planning Inspectorate

IP Ref: [REDACTED]

Massive BESS Fire at Moss Landing and the Subsequent Discovery of Heavy Metal and Chemical Pollution

Introduction

This submission is made in relation to the proposed One Earth Solar Farm, with particular concern regarding the inclusion of a large-scale Battery Energy Storage System (BESS) within the development. While the broader solar farm proposal has been considered, the specific risks associated with the BESS — particularly the potential for airborne and waterborne pollution in the event of fire, thermal runaway or system failure — appear to have received insufficient scrutiny by both the developer and the Environment Agency.

Recent events, most notably the catastrophic fire at the Moss Landing Battery Energy Storage System in California, have underscored the severe hazards posed by large-scale lithium-ion battery installations. Following this incident, independent scientific research and investigations have identified the widespread deposition of battery-derived heavy metals, including nickel, manganese and cobalt, in surrounding sensitive environments. Tens of thousands of pounds of these metals were detected in nearby soils and wetlands, with a chemical signature directly matching the battery cathode materials, demonstrating a clear causal link to the BESS fire. Crucially, the contamination was found to exist as a very thin surface layer, meaning that conventional soil sampling techniques may fail to detect such pollution, thereby significantly underestimating environmental impacts.

These findings, which have been widely reported in multiple national and international news articles submitted alongside this representation, demonstrate that BESS fires can generate airborne pollutants capable of travelling beyond the site boundary and settling onto land and water bodies. Such emissions have the potential to cause long-term harm to ecosystems and present risks to human health, particularly where sensitive receptors are present.

The relevance of this evidence to the proposed One Earth Solar Farm is profound. The proposed BESS is located within a drinking water protected area and within approximately 500 metres of the 20-acre North Clifton Reservoir, a critical water resource. In the event of a BESS fire at this location, there is a clear and credible risk that heavy metals and other toxic combustion by-products could be released into the environment through airborne deposition or via contaminated fire-fighting runoff, with pathways to soils, groundwater and surface waters connected to public drinking water supplies.

Airborne Pollution effects on soil and wetlands due to a large BESS fire at Moss Landing USA

Moss Landing Pollution Event (all news articles are produced under 'fair use')

Moss Landing Pollution Problem

Nearly a year after a massive battery storage facility fire in Moss Landing, California, researchers are uncovering evidence of toxic metals in the nearby Elkhorn Slough. The fire, which broke out at a large lithium-ion battery installation in January 2025, sent smoke and particles across the landscape. Scientists say those particles may have deposited harmful metals."

[55K pounds of toxic metals found in soil near Moss Landing ...](#)

Link Doc:A12 sent in separate document



Residents near Moss Landing fire provide...

Residents near Moss Landing fire provide samples to measure health impact



VOTE NO
Readers' choice
Voting ends January 5
MONTEREY HERALD 2025

RECOMMENDED FOR YOU

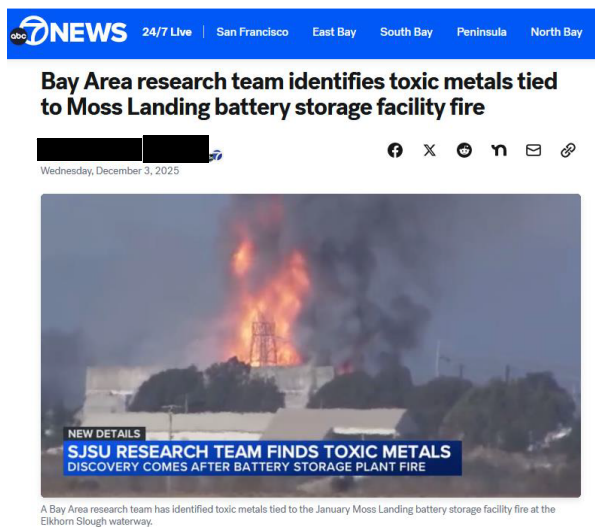
- 1 The Bay Area culinary scene is eating its way through the region
- 2 Game day hangouts: 7 of the best Bay Area sports bars
- 3 Frank Bruno Obituary
- 4 Dr. Seth Pollack Obituary

Link Doc:A13 sent in separate document



Using a powerful electron microscope, they saw tiny beads of those metals in the soil. “That was pretty much a smoking gun,” [REDACTED] said. Concentrations [of the metals](#) were between **10 and 1,000 times** greater than they had been before the fire. They also found that the correlation of nickel to cobalt followed a strict 2:1 ratio — the same proportion used in manufacturing the batteries at the Vistra facility.

Link Doc:A14 sent in separate document



Link Doc:A15 sent in separate document



Heavy Metals Contamination Found – Researchers reported **elevated nickel, cobalt, and manganese** in marsh soils near the fire site, potentially 10–100× higher than normal, indicating **environmental metal pollution from the fire**.



Link Doc:A4 sent in separate document

Researchers have discovered alarming concentrations of heavy metals near a California battery fire site, raising concerns over environmental and public health risks.

Researchers from the [Moss Landing Marine Laboratories](#) have detected elevated levels of toxic heavy metals, including nickel, cobalt, and manganese, in the [Elkhorn Slough](#), located approximately one mile from the Vistra Energy battery storage facility that caught fire on January 16. The findings suggest the incident may have caused greater environmental damage than initially reported.

The study revealed metal concentrations in the estuary to be between 10 and 100 times higher than normal levels, according to lead researcher [REDACTED], a marine geology professor at San Jose State University. "Those three metals are toxic. They are hazardous to aquatic life," [REDACTED] told *Mercury News*. "We need to understand how they interact with the environment and whether they pose risks to the food web, from microbes to sea otters."

[REDACTED] collected samples from over 100 locations near the site and reported that microplastics and heavy metals could potentially enter the food chain. "These particles are toxic," he emphasized, calling for urgent research into their potential hazards.

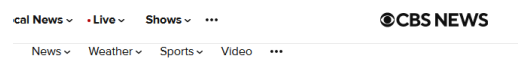
AP News: The blaze at the world's largest battery storage plant in **Northern California released toxic smoke and triggered evacuations** as it smoldered for days.



Link Doc:A5 sent in separate document

CBS News: Local officials compared the huge lithium-ion battery fire to a “Three Mile Island”-like incident for the emerging BESS industry, highlighting concerns about air quality and community risk.

Link Doc:A6 sent in separate document



Environment

County official calls huge Northern California lithium battery storage fire a "Three Mile Island" event for emerging industry

By [REDACTED]

Updated on: January 22, 2025 / 2:39 PM PST / CBS San Francisco

[Add CBS News on Google](#)

The massive fire at one of the world's largest lithium battery storage plants in Northern California has shaken a local community worried about possible long-term impacts and brought scrutiny to the emerging industry's safety practices.

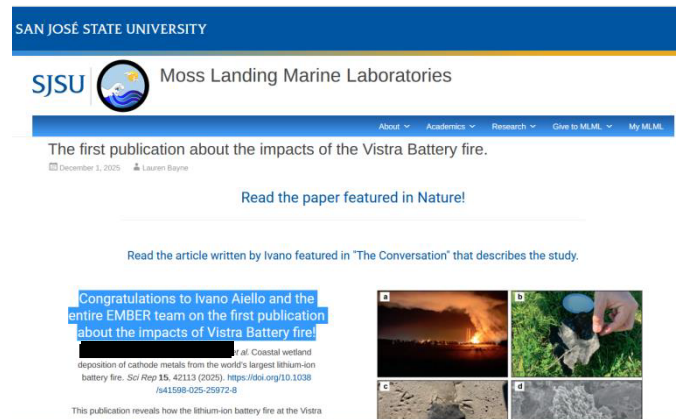
The fire at a power plant and battery facility operated by Vistra Energy in the Monterey County community of Moss Landing began Thursday afternoon, forcing evacuations and the closure of coastal Highway 1. A Monterey County official on Friday called it the largest fire ever of its kind.



The Guardian: Detailed reporting on the fire's impact on evacuations, closures, and smoldering weeks later

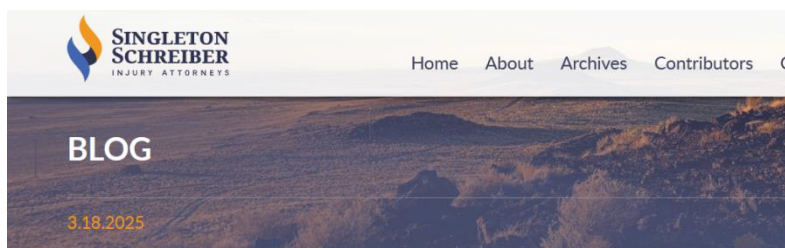
Link Doc:A7 sent in separate document

This publication reveals how the lithium-ion battery fire at the Vistra Energy facility in Moss Landing led to a rapid but shallow deposition of nickel, manganese, and cobalt from cathode materials onto nearby estuarine wetland soils — highlighting a real-world example of battery-derived metal pollution and the importance of rapid environmental monitoring.



Link Doc:A8 sent in separate document

Community Lawsuits and Legal Action – Local law firms have highlighted the risks residents faced, including litigation against Vistra and PG&E over health and environmental damages from the fire and smoke.



Link Doc:A9 sent in separate document

Community Risks From the Battery Fire at Moss Landing Energy Facility

By [REDACTED]



On January 16, 2025, a fire broke out at Moss Landing Energy Storage Facility, a battery storage plant in Monterey County, California. Due to unknown hazards posed by the smoke and fire, evacuation orders were issued, forcing approximately 1,500 local residents to leave their homes, schools to close, and highways to shut down. According to Vistra Energy (the project owner) active

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(805) 549-3001
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MONTEREY, CA 93940
(831) 649-2832

May 27, 2025

[REDACTED] President
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Subject: Request for Update on an Independent Investigation and Action in regards to the January 2025 Moss Landing Battery Energy Storage System Fire

Dear President [REDACTED]

We, as the undersigned members representing the Monterey-Santa Cruz region, are asking for an update to the investigation conducted by the CPUC and the actions taken to guarantee future safety at Moss Landing. Previously, we called for an independent investigation and immediate action in regards to the January 2025 fire that lasted six days, and reignited weeks later, at the Vistra Battery Energy Storage System (BESS) at the Moss Landing Power Plant in Monterey County. In our previous letter on January 22, 2025, we asked for a fully transparent and independent investigation, updated safety enforcement, prevention enhancements, and for the Vistra BESS to remain

Calls for Regulatory Review & Safety Measures – Local representatives have made formal requests for **independent investigations and updated safety standards** for battery storage facilities following repeated incidents at Moss Landing.

Link Doc:A10 sent in separate document

A fire broke out at the **Vistra Energy lithium-ion battery storage facility in Moss Landing** in January 2025. The facility is one of the largest grid-scale battery storage sites in the world.

The blaze was severe enough that local authorities **declared a state of emergency** and **evacuated about 1,200 residents** from nearby areas

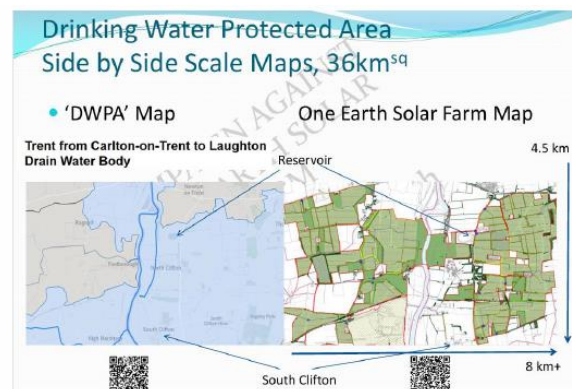
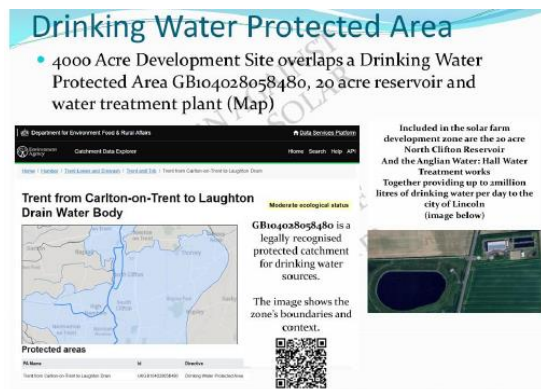


Researchers looking into impacts of fire at Moss Landing lithium battery plant

Link Doc:A11 sent in separate document

This is a Drinking Water Protected Area (DrWPA)

A substantially large part of the proposed One Earth Solar Farm – particularly east of the River Trent is planned over the top of an important Drinking Water Protected Area (see images below)



In summary

Despite the clear lessons arising from the Moss Landing incident and subsequent scientific study, the current application provides insufficient consideration of the risks posed by airborne pollution, undetected surface contamination, and the failure of standard monitoring approaches under real-world fire conditions. Given the sensitivity of the receiving environment, the proximity to critical water infrastructure, and the emerging evidence that BESS fire impacts may be more extensive and less predictable than previously assumed, the precautionary principle should apply.

We therefore respectfully request that the Examining Authority consider this evidence, including the scientific findings and the supporting news articles provided, and recommend to the Secretary of State that this application be refused. Approval of a large-scale BESS in this location would expose public health, local ecosystems and vital drinking water resources to unacceptable and potentially irreversible risks.

Yours sincerely

Mr David White

On behalf of the communities of North and South Clifton

Document Links for Ref F1800218E 16th Dec 2025 (Not for Publication)

- A1: <https://www.gov.uk/government/publications/drinking-water-protected-areas-challenges-for-the-water-environment>
- A2: <https://pubmed.ncbi.nlm.nih.gov/35819676/>
- A3: <https://www.eurekalert.org/news-releases/962083>
- A4: <https://yournews.com/2025/01/28/3173071/toxic-contamination-found-near-site-of-california-battery-fire-researchers>
- A5: <https://apnews.com/article/battery-storage-plant-fire-california-moss-landing-7c561fed096f410ddecfb04722a8b1f8>
- A6: <https://www.cbsnews.com/sanfrancisco/news/northern-california-lithium-battery-fire-moss-landing-monterey-county>
- A7: <https://www.theguardian.com/us-news/2025/jan/17/california-battery-plant-fire-monterey>
- A8: <https://mlml.sjsu.edu/2025/12/01/the-first-publication-about-the-impacts-of-the-vistra-battery-fire/>
- A9: <https://www.singletonschreiber.com/theblog/community-risks-from-the-battery-fire-at-moss-landing-energy-facility>
- A10: <https://a30.asmdc.org/sites/a30.asmdc.org/files/2025-06/Letter-to-the-CPUC-Final-051725.pdf>
- A11: <https://www.youtube.com/watch?v=UG5Wicq0Row>
- A12: https://www.youtube.com/watch?v=tv_CaSWUhMw
- A13: <https://www.montereyherald.com/2025/12/13/residents-near-moss-landing-fire-provide-samples-to-measure-health-impact/>
- A14: <https://www.kqed.org/news/12065862/research-confirms-heavy-metals-in-elkhorn-slough-after-battery-plant-fire>
- A15: <https://abc7news.com/post/moss-landing-battery-storage-facility-fire-bay-area-research-team-identifies-toxic-metals-tied-explosion-elkhorn-slough/18242248/>