



Cornish Lithium

St Dennis Public Meeting

20<sup>th</sup> September 2023

## AGENDA

1. Welcome and Introductions
2. Cornish Lithium – Who we are and what we do
3. Trelavour Project Update
4. Community Engagement
5. Question and Answer Session



## BUILDING BRITAIN'S LITHIUM SUPPLY CHAIN

Opportunity to develop two sources of lithium to supply the UK



- One of the most advanced lithium projects in Europe
- Existing china clay pit with associated infrastructure
- Innovative, low carbon, sustainable processing methodology
- UK's first defined lithium JORC Resource
- Demonstration Plant under construction
- Scoping Study complete – Feasibility Study kick off Q4 2023



- Opportunity to develop countywide network of modular lithium extraction sites with a central refinery
- Three deep research boreholes complete
- Fourth hole drilled to a depth of 1,800m at Blackwater
- UK's first lithium extraction Pilot Plant established
- Process testing underway



**Jeremy Wrathall**  
Founder & CEO

- Founded Cornish Lithium in 2016
- Trained as a mining engineer at Camborne School of Mines
- Over 25 years of experience in the mining finance industry

### Cornish Lithium "at a glance"

**c.£20.8m** Raised through angel investors, crowdfunding and Government grants

**£18m** Funding received from TechMet – specialist technology metals firm

**c. 70** Employees and consultants across four sites in Cornwall. Stable, non-seasonal jobs

**c. £53.6m** Funding 2023 - received from UKIB, EMG and TechMet

**A proud Cornish company**



## A TRANSFORMATIONAL FUNDING PACKAGE

- £53.6 million initial investment secured from a group of leading institutional investors led by the UK Infrastructure Bank alongside The Energy & Minerals Group (EMG) and TechMet
- This funding package is expected to significantly accelerate progress toward the creation of a domestic supply of battery grade lithium compounds
- The investment signals a significant boost for Cornwall to enable the County's development as an industrial cluster for lithium extraction
- The investment will support the UK's transition to Net Zero and boost regional and local economic growth
- Part of a larger funding package of up to an additional c. £168 million - a potential second stage financing
- Local people have invested in the Company through our crowdfunding campaigns to support the potential renaissance of Cornwall's mining industry that our modern mineral extraction techniques represent

## FUNDING WILL ENABLE SIGNIFICANT PROGRESS

- Cornish Lithium aims to build its 70-strong Cornwall-based workforce to over 300
- It is estimated that Cornish Lithium could generate £800 million of economic activity for the local economy from the Trelavour hard rock project over a 20-year life of mine
- The initial funding will also enable Cornish Lithium to progress its lithium in geothermal waters projects at its other sites throughout Cornwall
- Further sites are being investigated across a wider area of the County where additional exploratory boreholes could be drilled
- There is potential to produce significant quantities of water and carbon-free heat for the benefit of local industry and communities

## TRELAVOUR AND TRELITH PROJECT UPDATE

- Trelavour Pit
  - Land Holdings
  - Pointy and Flatty
  - In Pit Works
  - Public Amenity
  - Health and Safety Update
- TreLith Processing Facility
- Demonstration Plant Update
- Community Engagement

## TRELAVOUR PROJECT – LAND HOLDING

- Trelavour Downs is privately owned by the Tregothnan Estate, with whom we have negotiated an agreement to operate at the site
- Our Trelavour hard rock project comprises Trelavour Pit and the TreLith Processing Facility, which will also incorporate a Demonstration Plant that is currently under construction
- The land around Carsella Farm borders the site of the TreLith Processing Facility
- After 150 years, a local family of dairy farmers has served notice on the tenancy of Carsella Farm to the Tregothnan Estate
- Cornish Lithium has agreed terms with the Tregothnan Estate to take on the lease of Carsella Farm under a Farm Business Tenancy
- We will continue to manage Carsella Farm in collaboration with new farming tenants who we will sub-let to and the existing residential tenants who remain part of our tenancy agreement with the Tregothnan Estate
- There may be opportunities for the land around Carsella Farm to provide ancillary uses to support our planned operations in the future

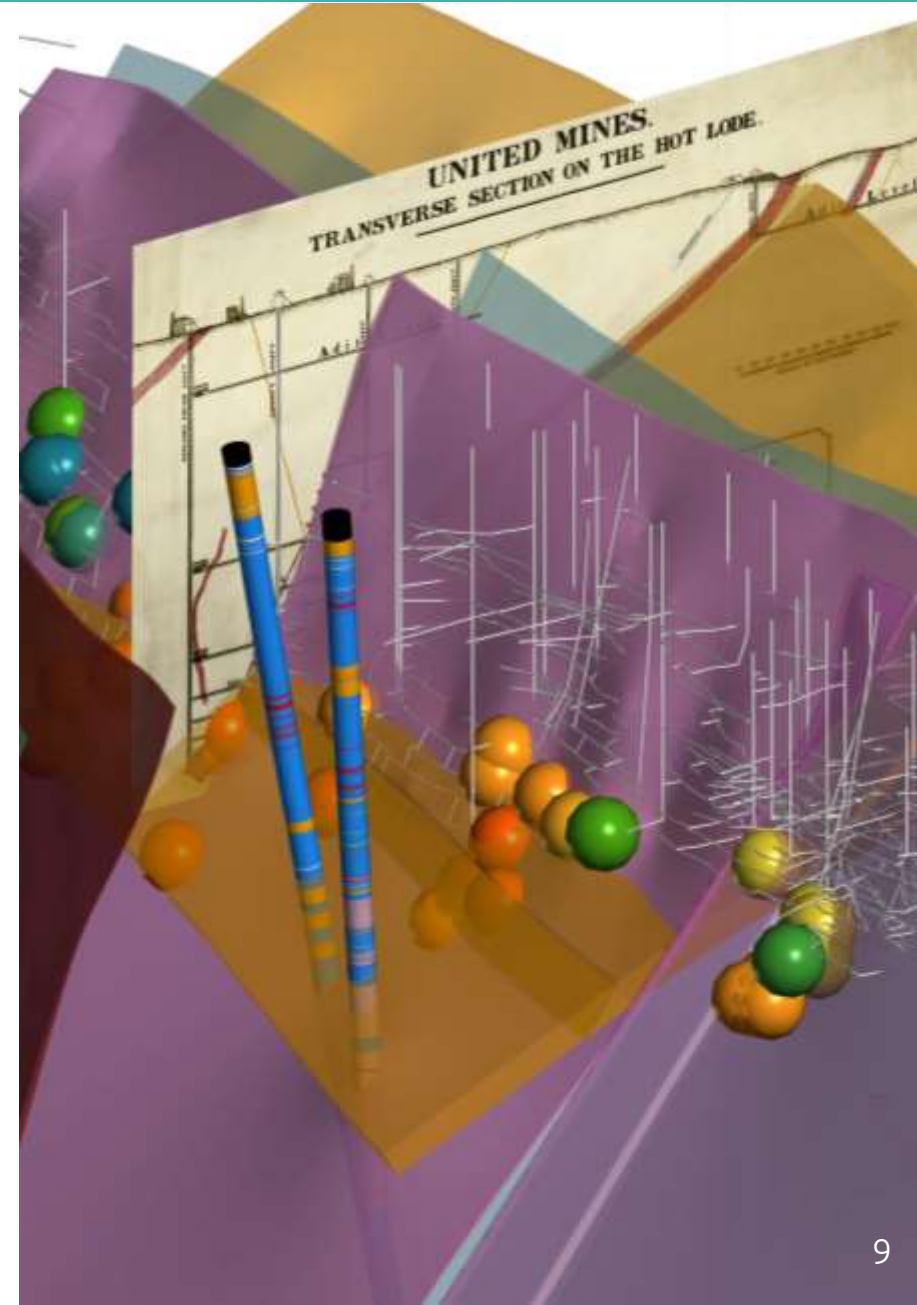
## TRELAVOUR PROJECT – LAND HOLDING

- Cornish Lithium will:
  - Continue to manage the farmland with existing residential and new farm tenants
  - Survey parts of Carsella Farm to better understand its ecological condition
  - Explore the potential for the St Dennis area to become a centre for geothermal energy production and lithium extraction, creating new industries for Cornwall, such as vertical farming and modern horticulture, by investigating the underlying geological structure and the opportunity to drill exploratory wells and research boreholes

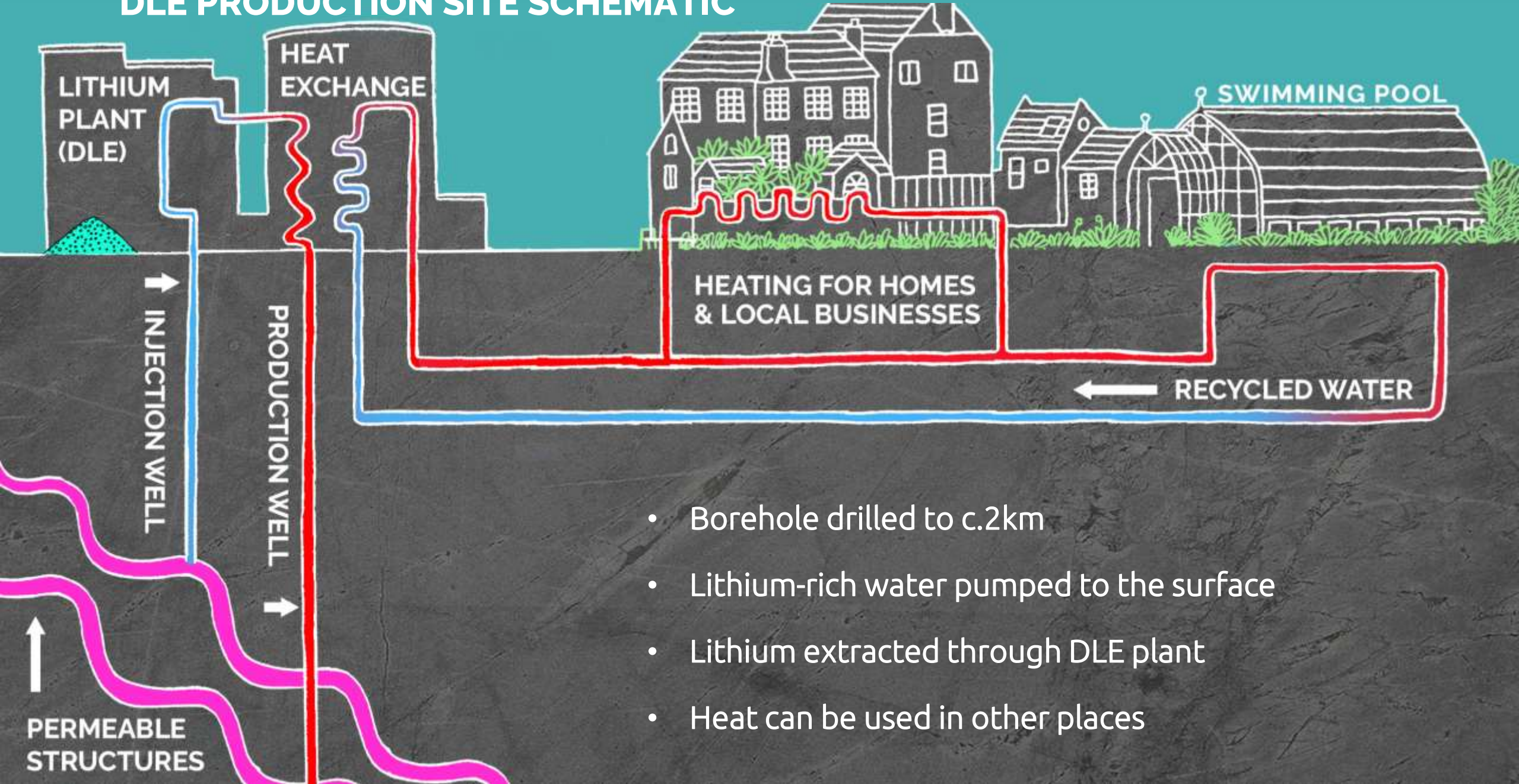


## GEOHERMAL LITHIUM EXPLORATION ACROSS CORNWALL

- Three exploration boreholes have been drilled and tested with very encouraging initial results
- Further hydrogeological testwork has been undertaken on our first boreholes
  - Indicates significant structure permeability (i.e. good water flow)
  - Further independent evaluation work planned during 2024
- Fourth exploration borehole at Blackwater drilled to c.1,800m
  - Preliminary testwork is underway with promising initial results
- UK's first lithium extraction Pilot Plant sited near United Downs continues to test a selection of innovative Direct Lithium Extraction (DLE) technologies
- Lithium in geothermal waters workstream is gathering significant pace:
  - Several key milestones expected during 2024
  - Forming partnerships with local companies to commercialise geothermal heat, decarbonise their businesses and provide heat as a by-product for Cornish communities



## DLE PRODUCTION SITE SCHEMATIC



- Borehole drilled to c.2km
- Lithium-rich water pumped to the surface
- Lithium extracted through DLE plant
- Heat can be used in other places



## TRELAVOUR PROJECT – POINTY AND FLATTY

- Pointy and Flatty are sky tips within the boundary of the Trelavour Pit planning permission area
- Exploration drilling is continuing at Trelavour to understand if the lithium resource extends beneath these sky tips. This work should be completed this Autumn, after which our geologists will interpret and model the results
- This modelling will form part of the Feasibility Study for the project, which will determine where the open pit boundaries would extend in relation to Pointy and Flatty
- As part of our Environmental Impact Assessment, we will consider any negative impacts or future opportunities relating to these sky tips
- We intend to continue our engagement with local communities throughout the Feasibility Study and Environmental Impact Assessment processes



## TRELAVOUR PROJECT – POINTY AND FLATTY

### Why are we concerned about the stability of these sky tips?

- Multiple cases of erosion on and around the sky tips have been identified
- Previous investigations have highlighted the instability of the underlying material below the base of Pointy, and at the lagoon edges, due to water erosion and weathering
- In Winter 2022, a fall of ground incident, due to erosion around the lagoon opposite Pointy, occurred
- Cornish Lithium has employees and contractors working in the Trelavour Pit. Reports are regularly received about members of the public gaining unauthorised access to the site for recreational purposes. **The safety and wellbeing of everyone is our primary concern**



## TRELAVOUR PROJECT – POINTY AND FLATTY

### Geotechnical Report – Findings

- The Report was commissioned from SLR Consulting to ensure an unbiased assessment of compliance with the requirements of the Quarries Regulations
- The Report confirmed that whilst Pointy has been there for many years, the tip is constructed of unconsolidated, free-tipped material that settled at a natural angle of repose, rather than as an engineered structure
- Natural weathering has been progressively eroding the surface of the horizon at the base of Pointy, giving rise to potential instability

## TRELAVOUR PROJECT – POINTY AND FLATTY

### Actions – what was recommended and what we've done

- Internal Road - remains closed beneath Pointy
- An Exclusion Zone - has been defined within the Trelavour Pit area. Save for emergency works, no employees or contractors are permitted to enter this defined zone
- Further Assessments - to provide more information about the ground conditions under the sky tips, the groundwater in these areas and what additional works may be required to ensure we can keep people safe and comply with the Quarries Regulations
- Monitoring - a programme of slope monitoring has been designed and is being carried out
- Public Safety - the welfare of members of the public, who are accessing the site without authorisation, in spite of the enhanced security measures that we have implemented to ensure their safety, remains a key concern for Cornish Lithium
- Further information, when available, will be distributed to the local community



## TRELAVOUR PROJECT – IN PIT WORKS



**Water management lagoons**



**Pit viewing platform**



**Removal of invasive  
rhododendron on tip slope**



**Heathland brash  
receptor area**

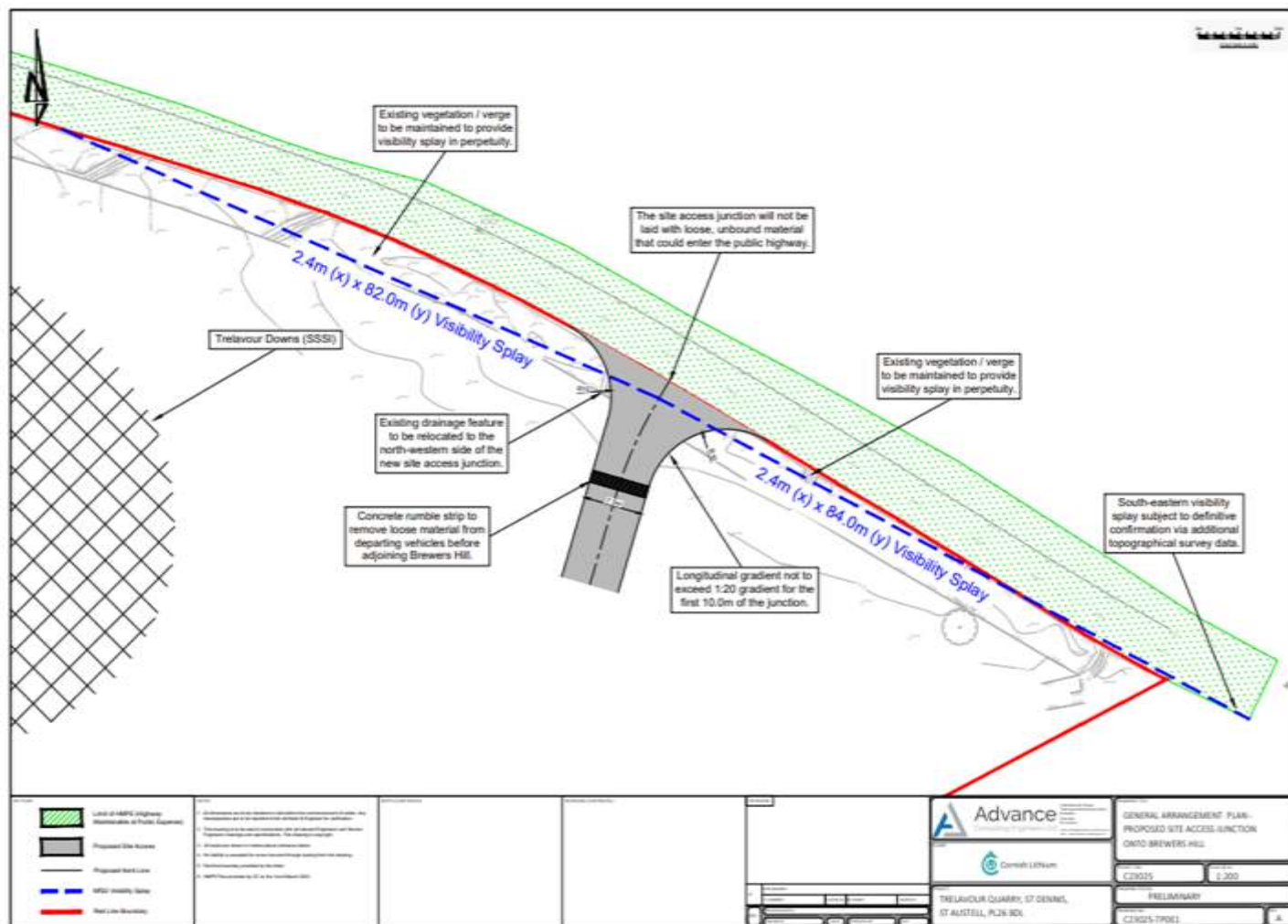
## PROPOSED CONSTRUCTION / USE OF NEW VEHICULAR ACCESS ONTO BREWERS HILL FROM TRELAVOUR DOWNS



A short service road to enable access to the northern area of Trelavour for :

- Mobilisation of exploratory drilling and ancillary equipment
- Access to facilitate ongoing quarry safety inspections
- Maintenance vehicle access
- Emergency services access

## PROPOSED CONSTRUCTION / USE OF NEW VEHICULAR ACCESS ONTO BREWERS HILL FROM TRELAVOUR DOWNS



- Pre-application discussions held with the Mineral Planning Authority
- Formal application submitted to Cornwall Council and validated on 21st July 2023 under Ref No PA/2305172
- Decision expected shortly

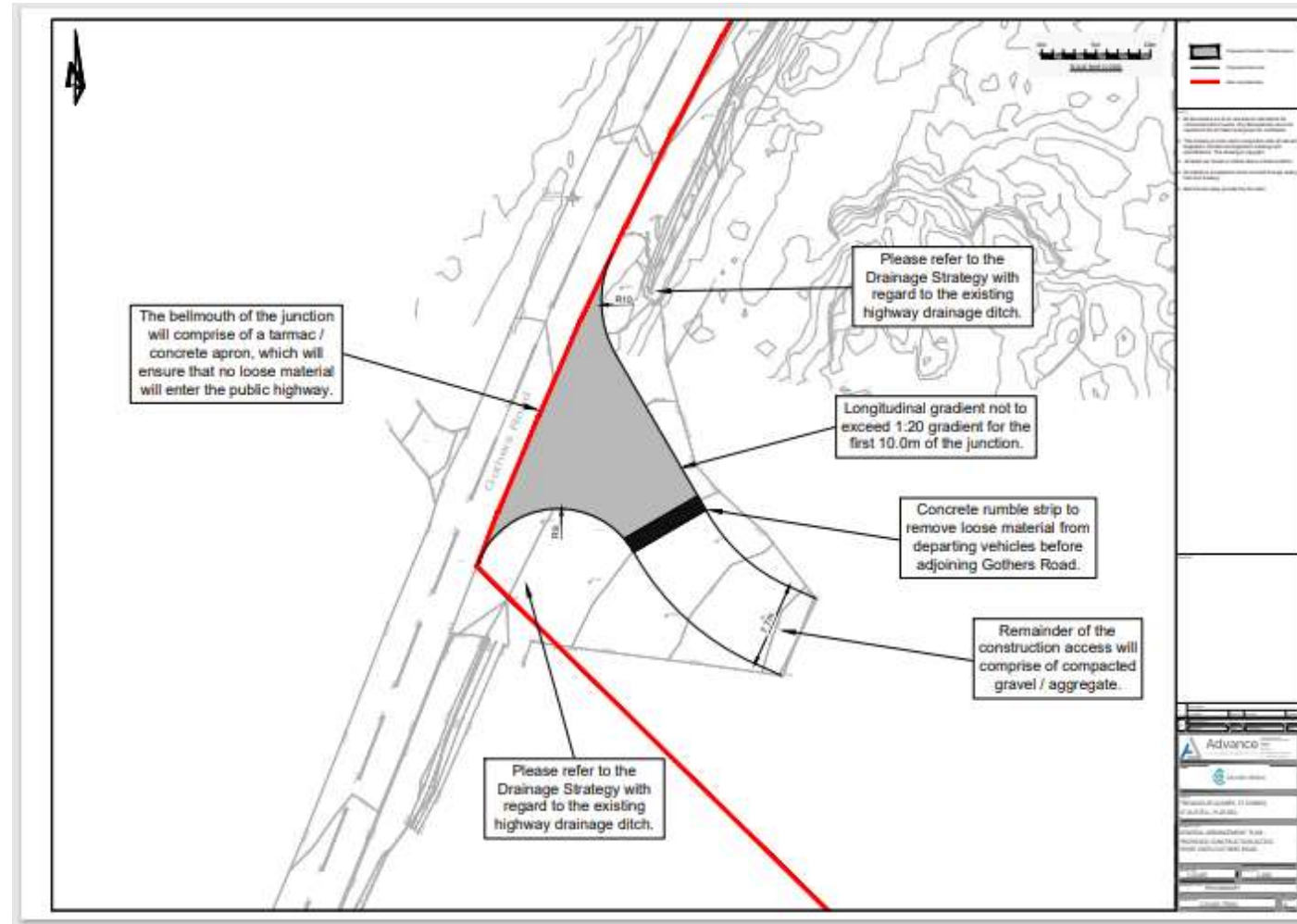
## APPLICATION TO REGULARISE THE USE OF THE VEHICULAR ACCESS ONTO GOTHERS ROAD FROM TRELAVOUR DOWNS

- The access benefits from an existing planning consent
- Historically used by Goonvean Ltd for emergency access, site inspections and occasionally for maintenance work
- Cornish Lithium has undertaken a review of vehicular access to determine if the Gothers Road location could be utilised as the primary point of access
- Initial discussion held with the Mineral Planning Authority who require submission of full details regarding the development
- Highways engineers have been instructed to draw up the required information





## APPLICATION TO REGULARISE THE USE OF THE VEHICULAR ACCESS ONTO GOTHERS ROAD FROM TRELAVOUR DOWNS



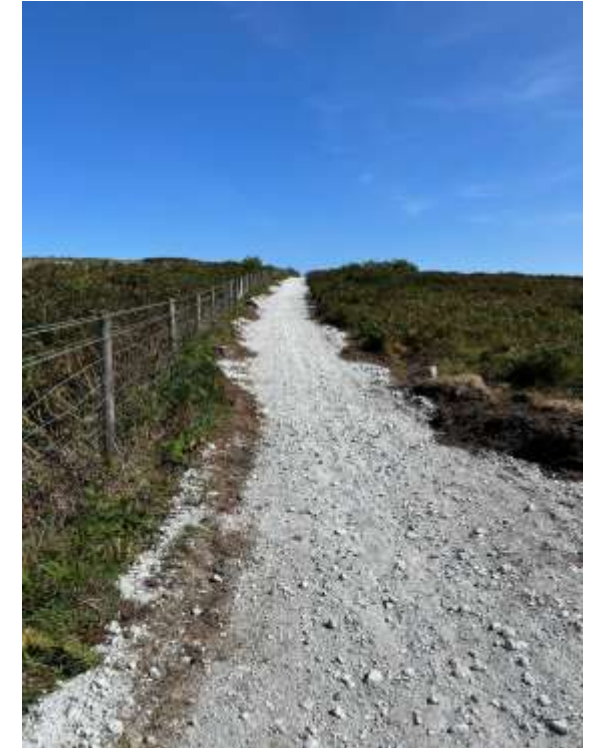
## TRELAVOUR PIT PUBLIC AMENITY



- Diversion of the existing Permissive Path required to ensure that health and safety is not compromised
- New route identified along the site boundary
- Links to the wider path network in the area have been maintained
- The path was opened in time for the August Bank Holiday weekend
- Investigate options to make access more difficult for off-road bikers
- Some final works to be completed – including drainage, seeding of banks and provision of benches



## TRELAVOUR PIT PUBLIC AMENITY



## TRELAVOUR PIT HEALTH AND SAFETY UPDATE

- Concerns regarding continued unauthorised access to the site by members of the public
- Additional fencing at the Moses Pool 'Dog Pond'
- Security camera has been installed above old Trelavour Pit
- Internal Health and Safety and Wellbeing Groups established to help develop best practice going forward



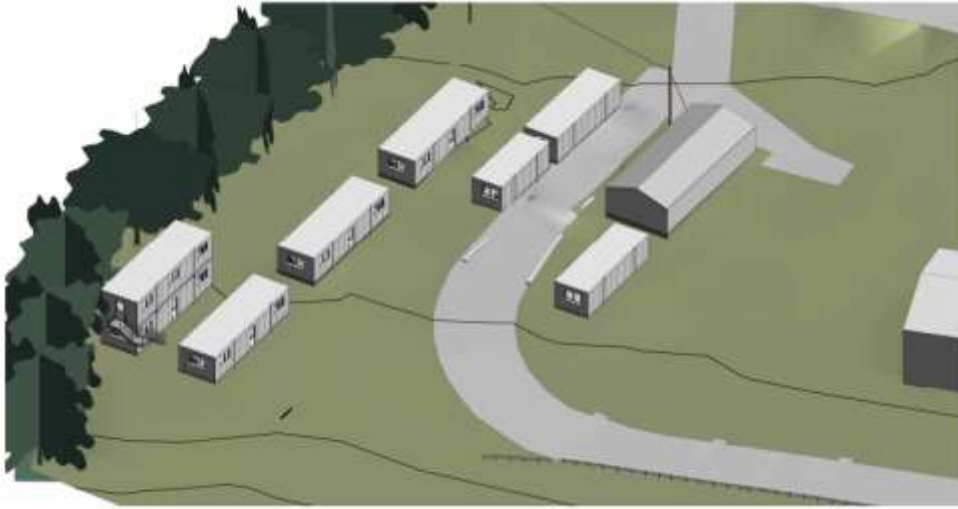
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## TRELITH – LITHIUM HYDROXIDE PROCESSING FACILITY

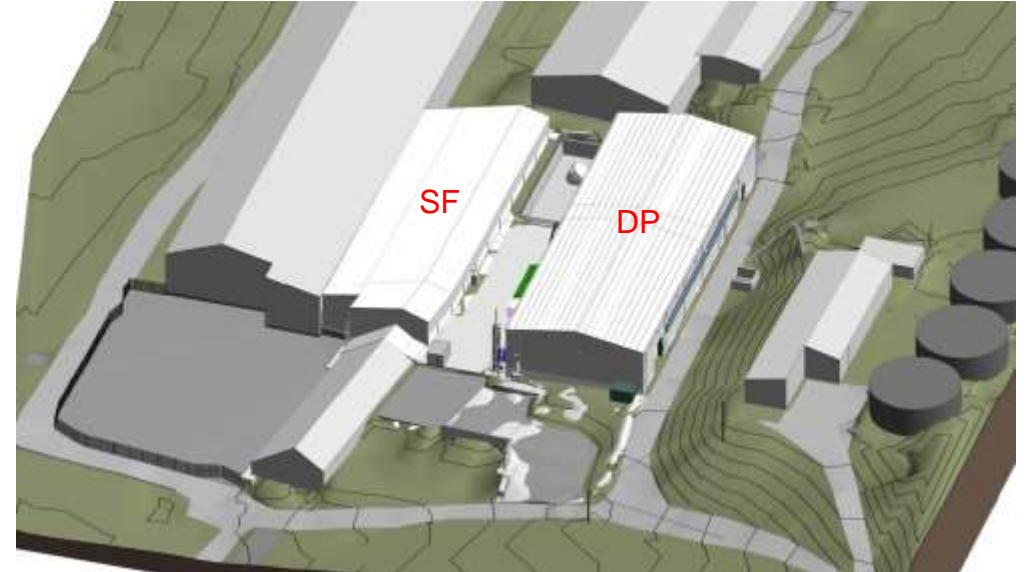
- Through 2023, we will be finalising the installation of a lithium hydroxide Demonstration Plant at TreLith
- The Demonstration Plant will do what it says and assure the Company, the community, The Environment Agency, Cornwall Council and our investors that we can safely and economically produce the vital lithium hydroxide component of batteries for cars etc
- Two elements to the Plant :-
  - A mineral processing “mica concentrator” facility, which will convert the ore from Trelavour Pit into a lithium-enriched micaceous “sand”
  - A hydrometallurgical “Lepidico” process facility, which will convert the lithium-enriched mica into a high purity, battery grade lithium hydroxide “salt”
- Both facilities, as well as a new laboratory, welfare units, offices and visitor centre are currently under construction and the build will be completed and commissioned early in 2024, operating through to 2025
- We expect to recruit around 30 new staff as a mix of permanent and fixed term positions including - Laboratory technicians, Mechanical/Electrical/Automation engineers, Process technicians, Chemists/Chemical engineers. (Seven of these roles have been appointed, with recruitment now ramping up)
- Please see our website for job adverts: [www.cornishlithium.com](http://www.cornishlithium.com)

## TRELITH – LITHIUM HYDROXIDE PROCESSING FACILITY

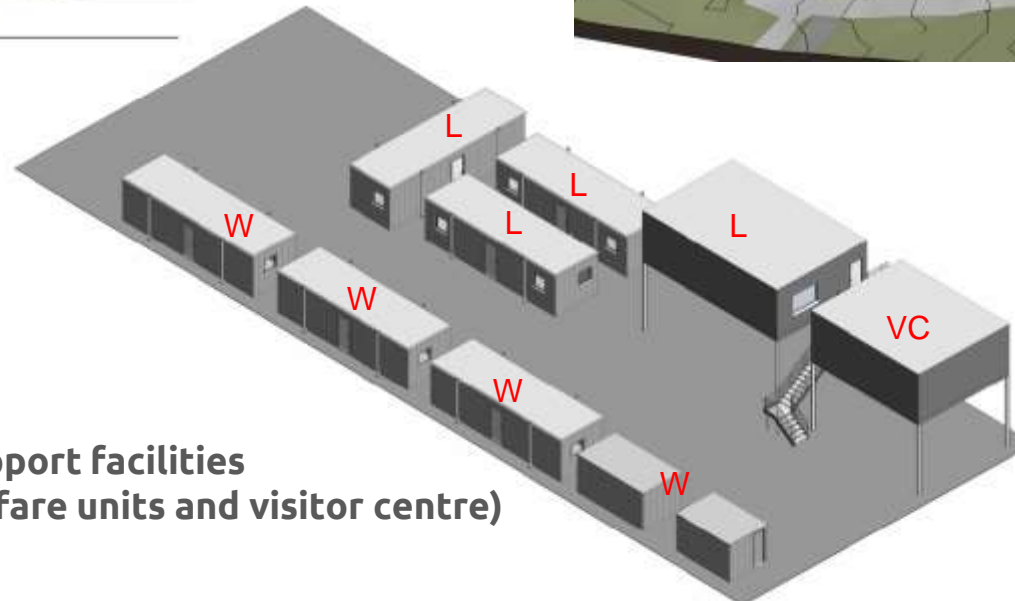


Office Isometric NW View

**Proposed new office blocks  
and reception building**



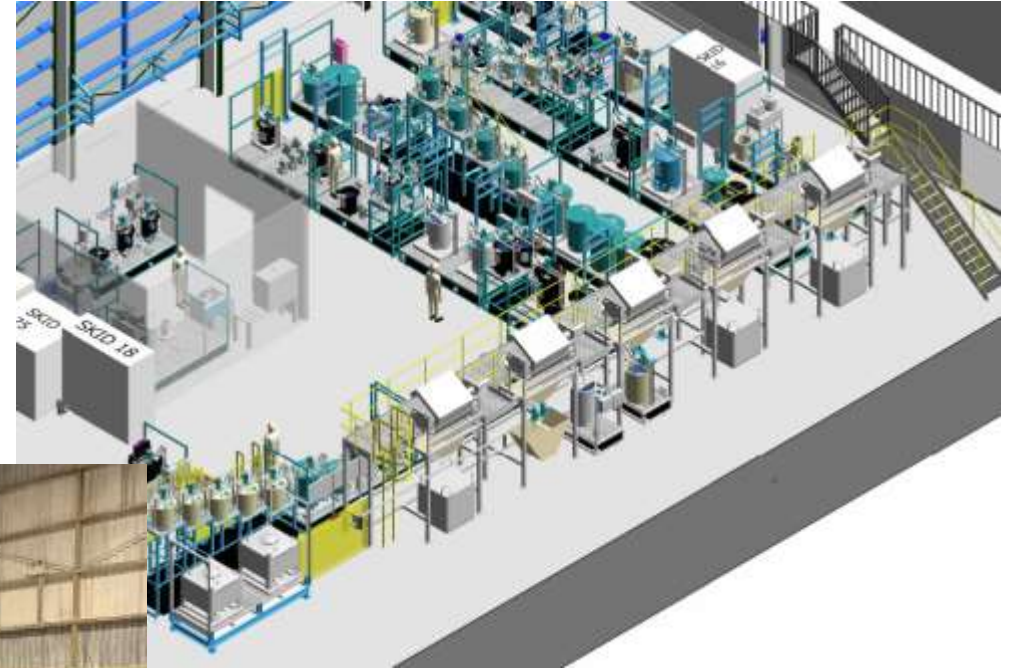
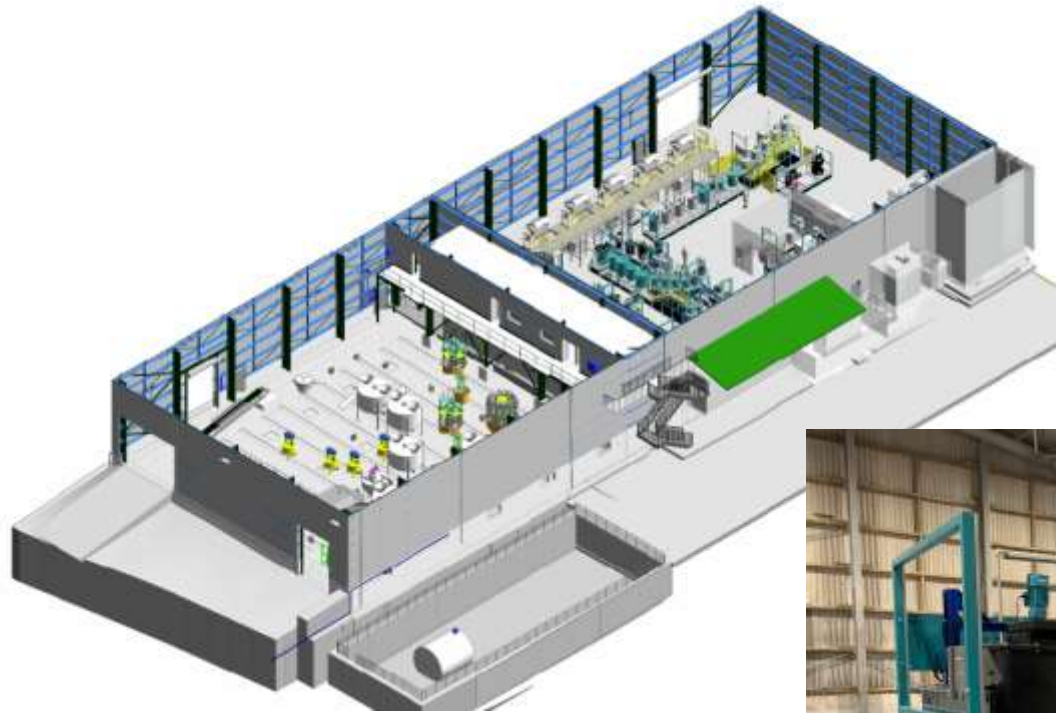
**Proposed new Demonstration  
Plant and support facilities**



**Proposed new support facilities  
(laboratories, welfare units and visitor centre)**

## TRELITH – LITHIUM HYDROXIDE PROCESSING FACILITY

- Equipment has started to arrive on site for the Demonstration Plant, with regular arrivals between now and the end of the year





## COMMUNITY ENGAGEMENT

- Chloe Bayliss, Cornish Lithium's new Stakeholder and Engagement Coordinator now in post
- A programme of further drop-in sessions is planned – details will be circulated
- Further Community Perception survey proposed
- The Cornish Lithium Community Fund awards grants of between £250 and £2,500 to support local clubs, charities and activity groups in the Company's project areas through the Cornwall Community Foundation. See [www.cornwallcommunityfoundation.com/news/cornish-lithium-community-fund/](http://www.cornwallcommunityfoundation.com/news/cornish-lithium-community-fund/) for how to apply in 2024.
- Support provided for St Dennis Litter Pick
- Provision of consumables for a Defibrillator unit at The Pitch
- Staff volunteering day at Castle an Dinas with Cornwall Heritage Trust



## COMMUNITY ENGAGEMENT – VOICES OF CORNISH MINING

- A community heritage project
- Recording local memories of Cornwall's industrial and mining heritage
- A collaborative project with communities surrounding Trelavour and TreLith, celebrating the rich local history
- Further details will be communicated soon



# THANK YOU FOR YOUR ATTENTION

Any Questions?

## Contact Cornish Lithium

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