

Welcome to our exhibition

Thank you for showing your interest in coming to our event about SSE's proposed battery storage facility, held in conjunction with our planning consultant Pegasus Group. We hope you will find the information interesting and informative.



We all need to get to net zero quicker. The spiralling costs of imported gas and the knock-on effects on our energy bills has highlighted the need for cheaper, cleaner, and secure homegrown energy.

A key part of the transition to a net zero future will be our ability to store excess green power produced by offshore wind turbines when demand is low; to be discharged back to the Grid for use later when demand is high. Battery storage systems are mission critical on our path to net zero.

Storing energy is especially important as we increasingly rely on weather dependent generators such as wind or solar panels.

Batteries are green technology enablers and produce no emissions or pollution during normal operation - so we all have enough electricity whatever the weather.

In addition to the batteries, the proposed facility will require its own substation to manage the voltage for safe and reliable transmission to connect to the existing Staythorpe National Grid substation.

We have set out in greater detail the site location plan with its proposed boundaries. Because the design of the scheme is at an early stage, we want to hear your views on our plans.

You can give us your feedback by filling out the forms we have with us today.

About SSE

SSE is a FTSE-100 company whose purpose is to provide the energy needed today, while building a better world of energy for tomorrow. SSE is a leading generator of renewable electricity and one of the largest electricity network companies in the UK.

SSE has nearly 80-years' experience of energy generation in the UK and Ireland. It develops, owns and operates low carbon infrastructure to support net zero. This includes onshore and offshore wind, hydro power, electricity transmission and distribution grids, and efficient gas-fired generation.

SSE is a UK listed company, employing 10,000 talented and skilled people and real Living Wage and Fair Tax Mark accredited. Today SSE is the UK's largest generator of renewable energy, in keeping with our historic aim to provide safe and reliable electricity for all.

SSE is committed to investing £25bn by 2030 in the low carbon infrastructure we need to help us get to net zero. In doing so it will create 1,000 green jobs a year through the development, construction, and operation of world-class renewable power assets.



SSE can trace its renewable energy heritage back over 80 years – here bringing hydro power to Scotland in the 1940s at Pitlochry Dam.



Today SSE is building more offshore wind energy than any other company in the world right now.

SSE Net Zero
Acceleration
Programme

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Why this site?



The UK Government has set a target to achieve a Net Zero Electricity System in the UK by 2035. National Grid estimate that 13GW of batteries are required to ensure that energy generated by renewables can be stored when it is not needed, and then used when it is.

This battery project will help unlock progress on local as well as national net zero targets. For example, Newark and Sherwood District Council declared its own climate emergency in 2019 (see QR code link here to Carbon Reduction Action Plan) and has set a target of becoming a carbon neutral organisation by 2035.

The Staythorpe National Grid substation is located at a point in the network where

renewable generation, including battery storage, can deliver the power quality and resilience we need. This means the battery storage facility at Staythorpe can act as both an importer and an exporter of energy, providing a source of reliable and resilient energy. Locating the project close to the existing National Grid Staythorpe Substation ensures a cost effective and viable connection at this important point on the National Grid network.

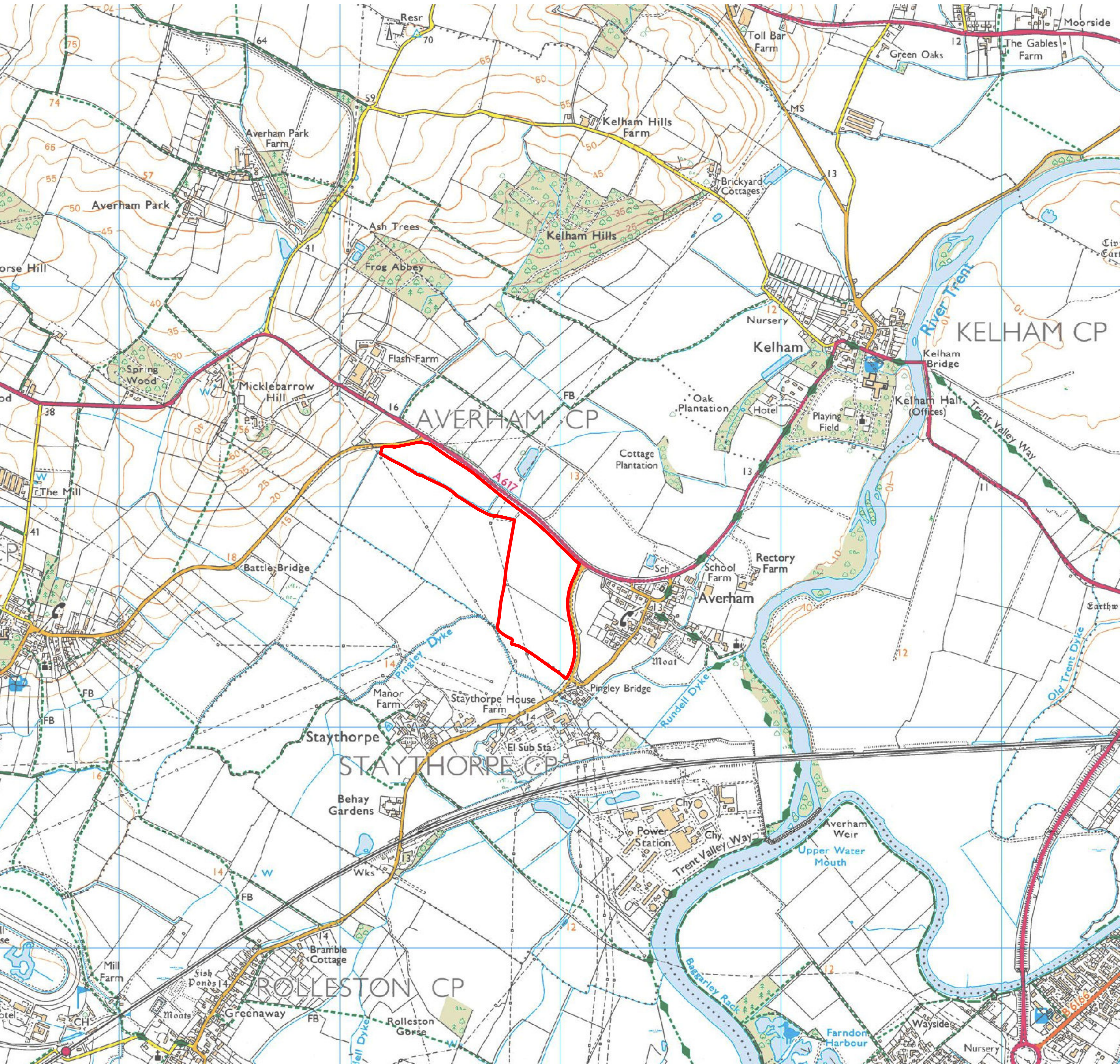
Carbon
Reduction
Action Plan

Scan Here



Our location

The site is made up of three fields that are currently used for growing crops which have a total area of about 18.2 hectares - though only a part of the field will be taken up by the site.



About battery storage

Battery storage is a proven technology which provides the flexibility needed to integrate more renewable generation and future-proof our electricity system. A battery storage system can be charged by electricity generated from renewable energy, like wind and solar power and then released to the Grid when needed the most - to ensure supply matches demand.

The battery element of the unit is like a far more advanced version of the rechargeable batteries you keep at home for your TV remote or children's toys. We use computer technology and algorithms to calculate when the battery's energy reserves should be kept or released to the Grid.

Our battery units are simple to install and run without the need for much maintenance. They are weatherproof and safe for passing people or pets – though the area is obviously fenced off and clearly signed for additional community safety.

SSE's team of remotely based engineers will always monitor the performance of the battery units to ensure they are running smoothly and safely.



What is being proposed?

The main part of the proposal will entail a number of battery storage units arranged in rows which will be surrounded by trees and hedges to ensure they are less obtrusive.

The batteries are enclosed in painted steel containers up to 4m high that contain cooling, control and safety systems. There will also be a transformer substation which contains some equipment which is 12m high protected by a safety and security fence, screened by the same planting as the batteries.

Poles up to 5m will be installed to support movement sensors and cameras for site security. The proposal consists of the construction and operation of a battery storage facility and substation. Access to the site will be taken from Main Road or the A617. The associated equipment would comprise:

- Battery storage units - battery units arranged in rows up to 22m in length, circa 3.5m wide, and up to 4m in height ;
- Inverters and transformers local to the batteries will be up to 4m in height;
- Substation/SGT - Equipment extending up to 12m in height;
- Water Storage Tanks - 10m diameter and up to 2m in height;
- Compound, single storey operational buildings, switch room, workshop and stores;
- Site fencing, access tracks (including temporary abnormal loads access and emergency only access) and gates;
- CCTV - 2.5m security mesh fence, CCTV and light poles to be up to 5m in height;
- Surface water storage basins; and
- Landscaping, biodiversity enhancements around the site will include substantial amounts of tree and hedgerow planting.



What we showed you last time

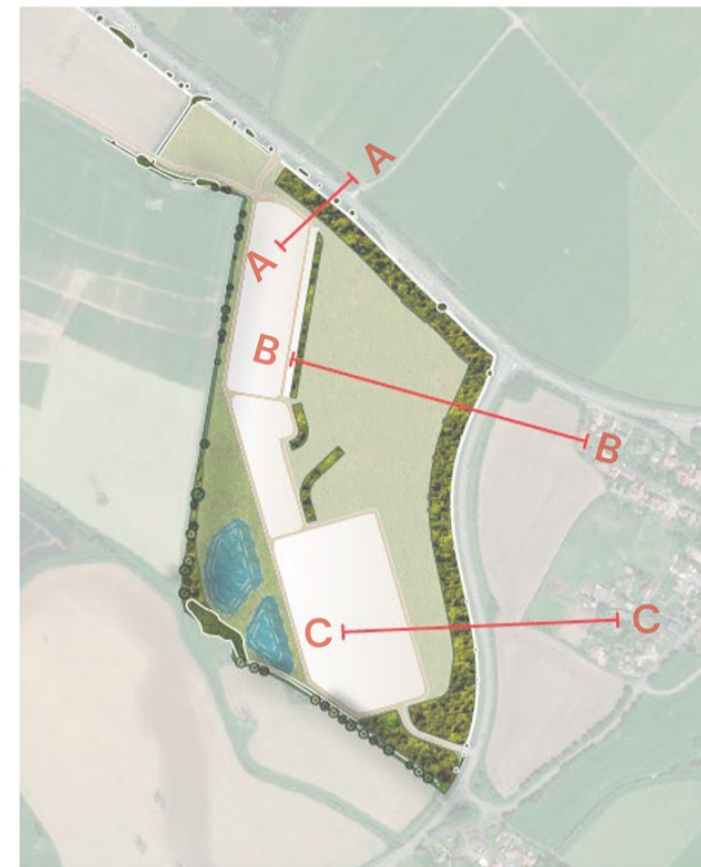


Submitted Plan

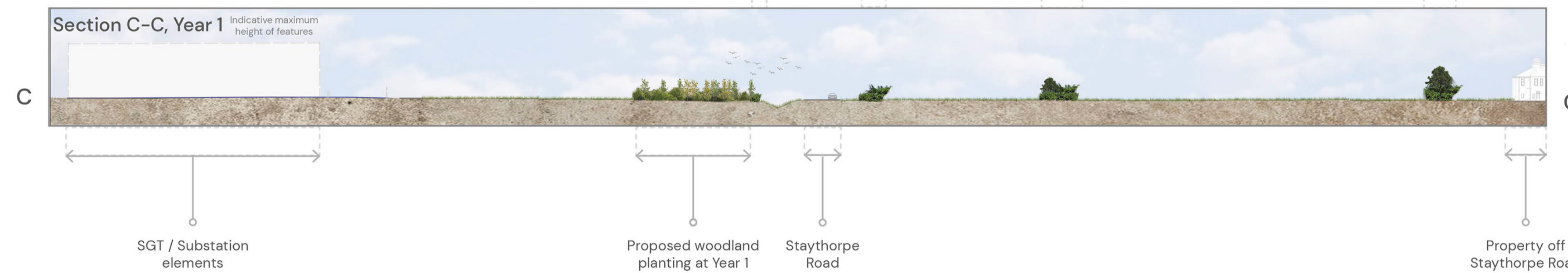
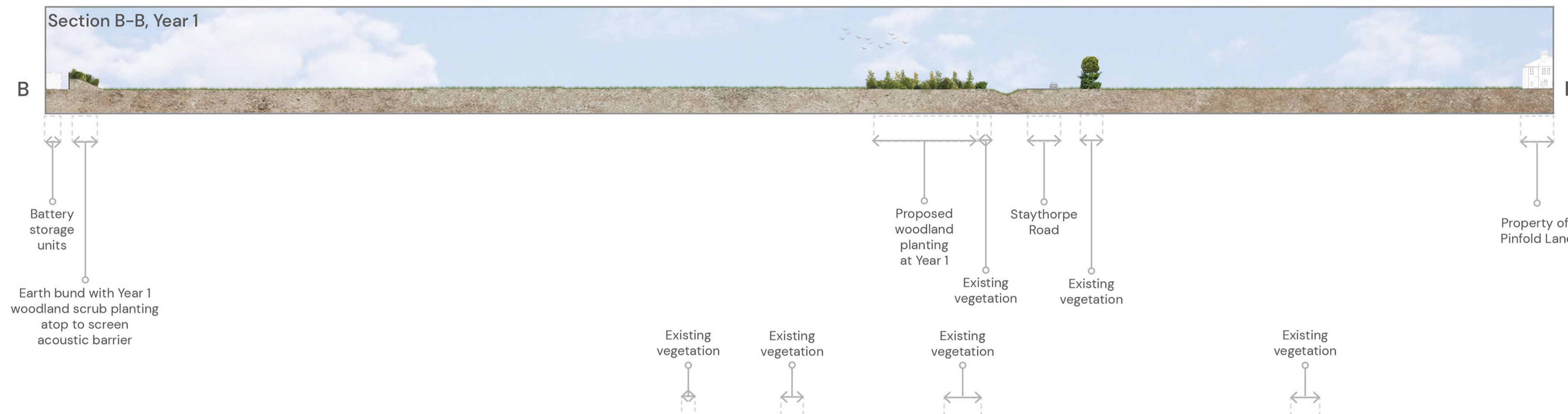


Sections

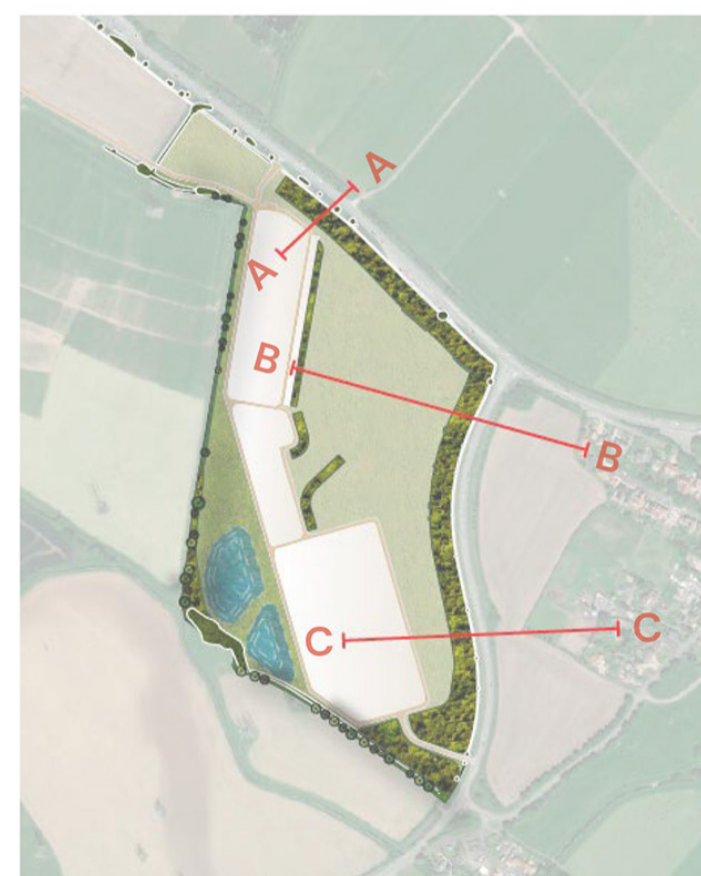
Year 1



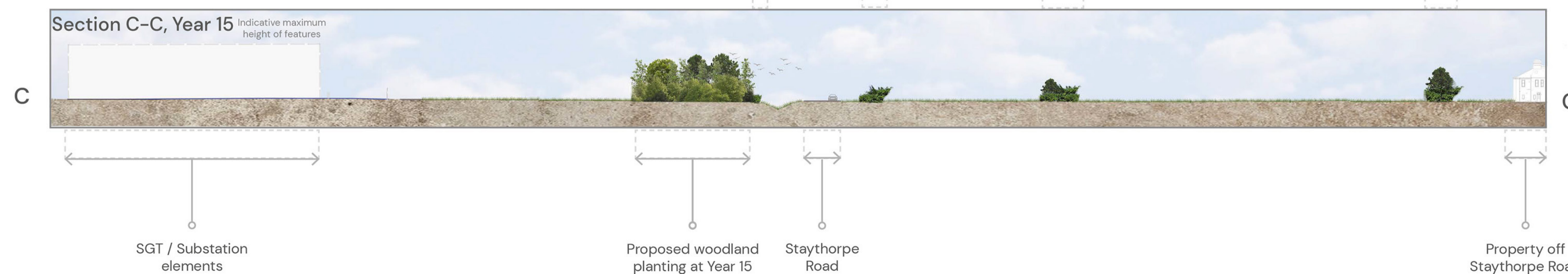
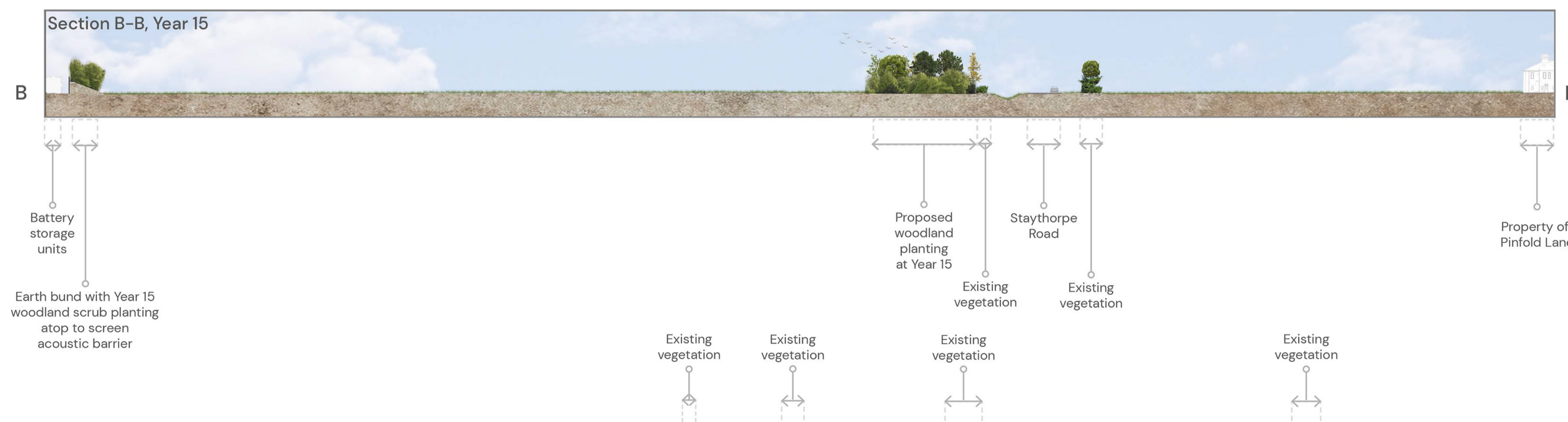
Section location map
1:10,000 @ A3



Year 15

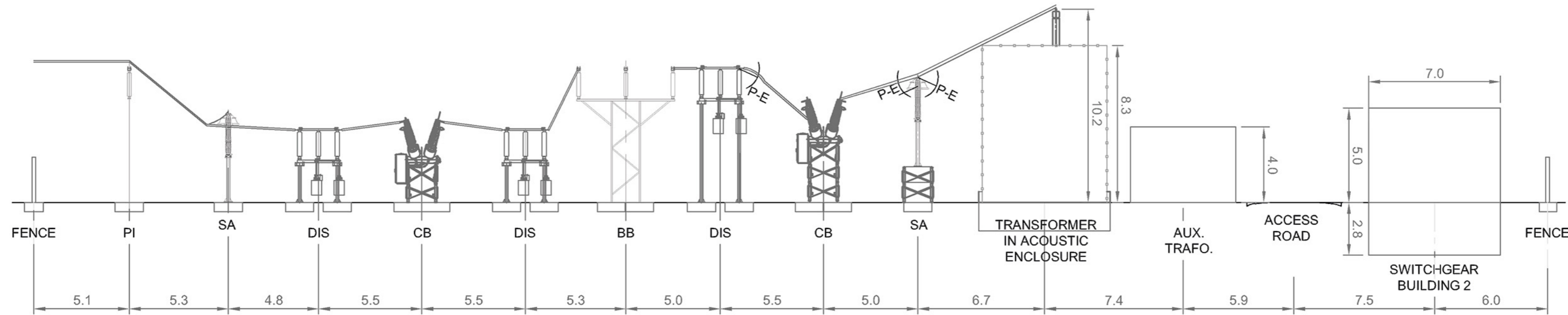


Section location map
1:10,000 @ A3

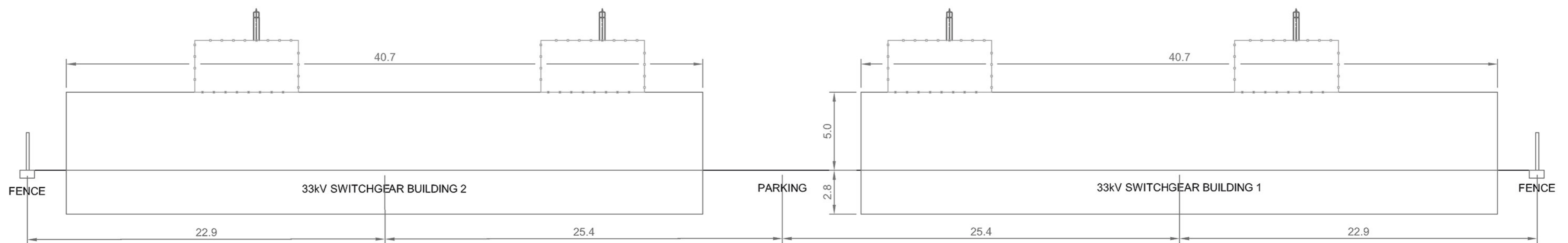


Elevations

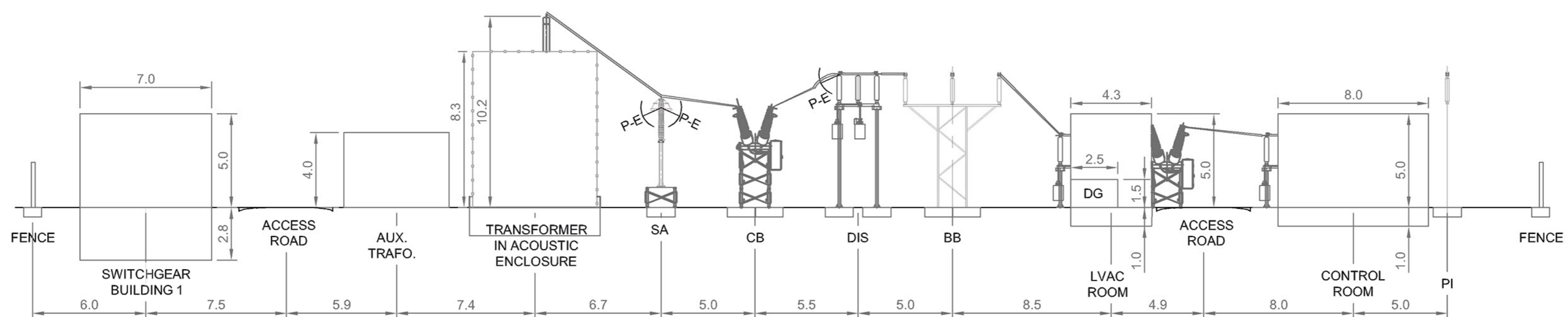
BESS Substation Elevations



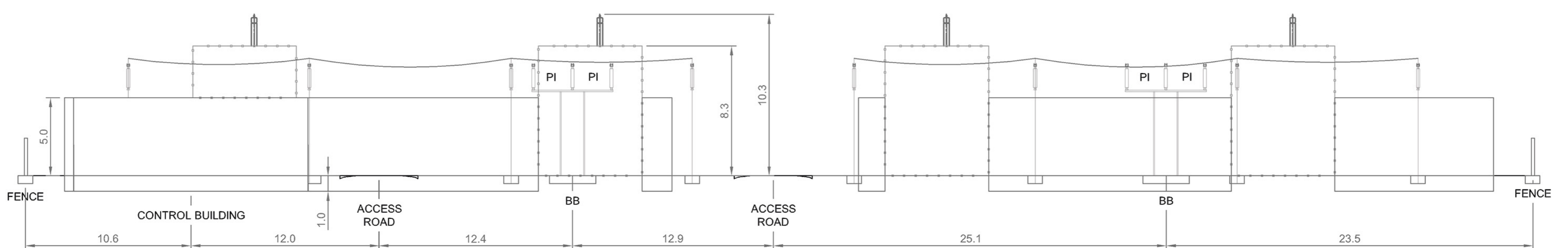
ELEVATION A - A
SOUTH - NORTH



ELEVATION B - B
EAST - WEST



ELEVATION C - C
NORTH - SOUTH



ELEVATION D - D
WEST - EAST

Addressing Comments

YOU SAID: *Concerned that the site is located in the flood zone and will increase flooding for existing properties.*

The Flood Map for planning is identified below. We have followed a sequential approach to our site selection process. There are a limited number of Flood Zone 1 sites within close proximity to Staythorpe.

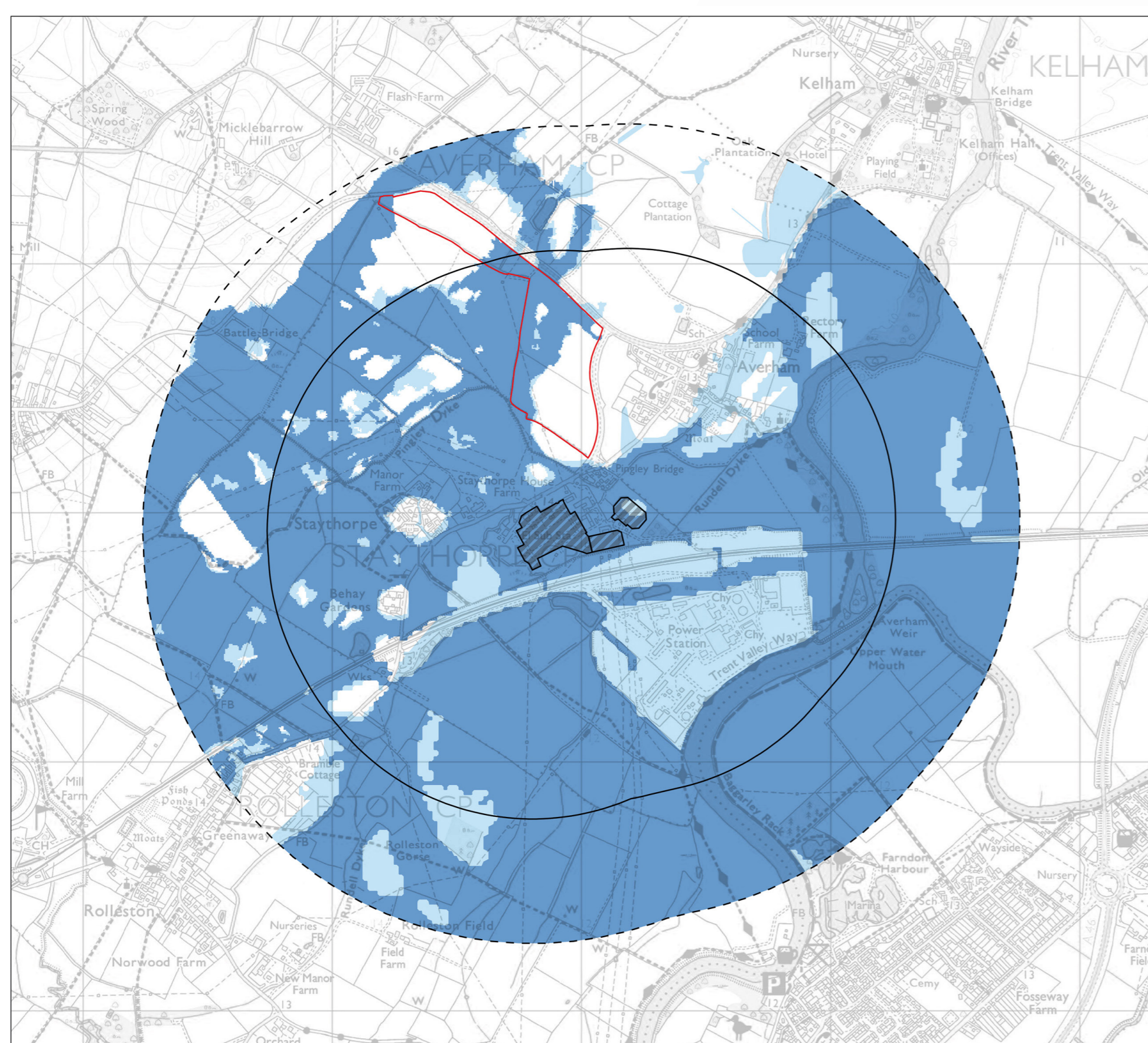
When considering our site, 70% of the total red line boundary is located outside of the flood zone. Without mitigation 86% of the proposed development area would be outside of the flood zone. The submitted Flood Risk Assessment provides details on the mitigation in the form of raised concrete plinths, after which only 2% of the development would be located within the Flood Zone, with the balance being raised up. Compensation storage basins are proposed to ensure that the development will not result in flooding elsewhere.

The substation and access tracks have been designed to be predominantly located within the low risk flood area within the site.

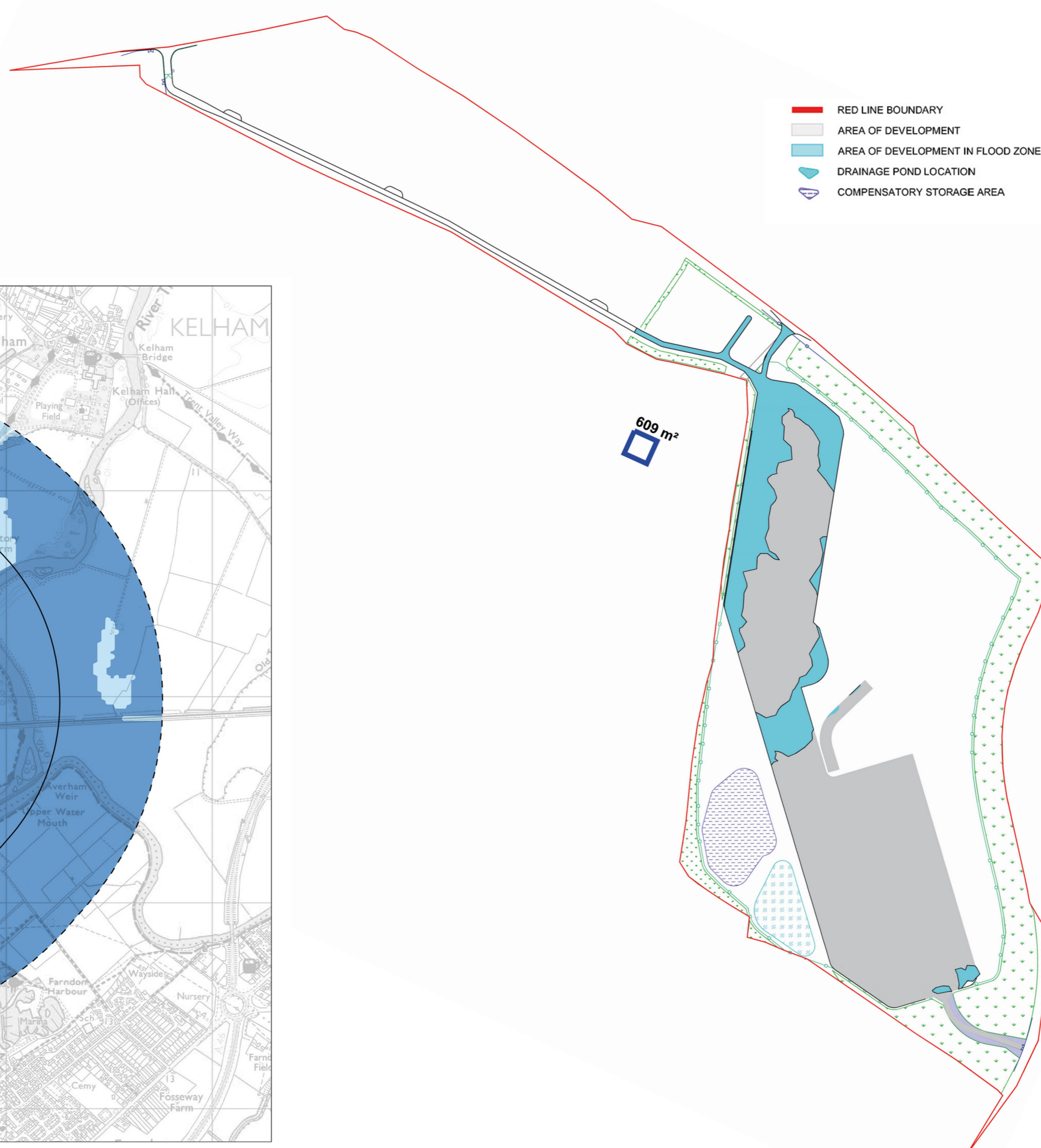
It is therefore clear that having identified a site capable of largely accommodating the development outside the flood zone, the design iteration process of the scheme itself has followed a sequential approach within its own site boundary and minimised the land take with any effects upon flood risk being adequately mitigated.

An indicative location and area for compensatory storage within the south western area of the site. An area of indicative Sustainable Drainage System is also proposed within this area.

- KEY**
- SITE BOUNDARY
 - - - 15KM SUBSTATION BUFFER
 - - - 1KM SUBSTATION BUFFER
 - ▨ NGET STAYTHORPE SUBSTATION
 - FLOOD ZONE 3
 - FLOOD ZONE 2



- RED LINE BOUNDARY
- AREA OF DEVELOPMENT
- AREA OF DEVELOPMENT IN FLOOD ZONE
- DRAINAGE POND LOCATION
- COMPENSATORY STORAGE AREA



Addressing Comments

YOU SAID: *Concerned that the site would cause noise disturbance for local residents.*

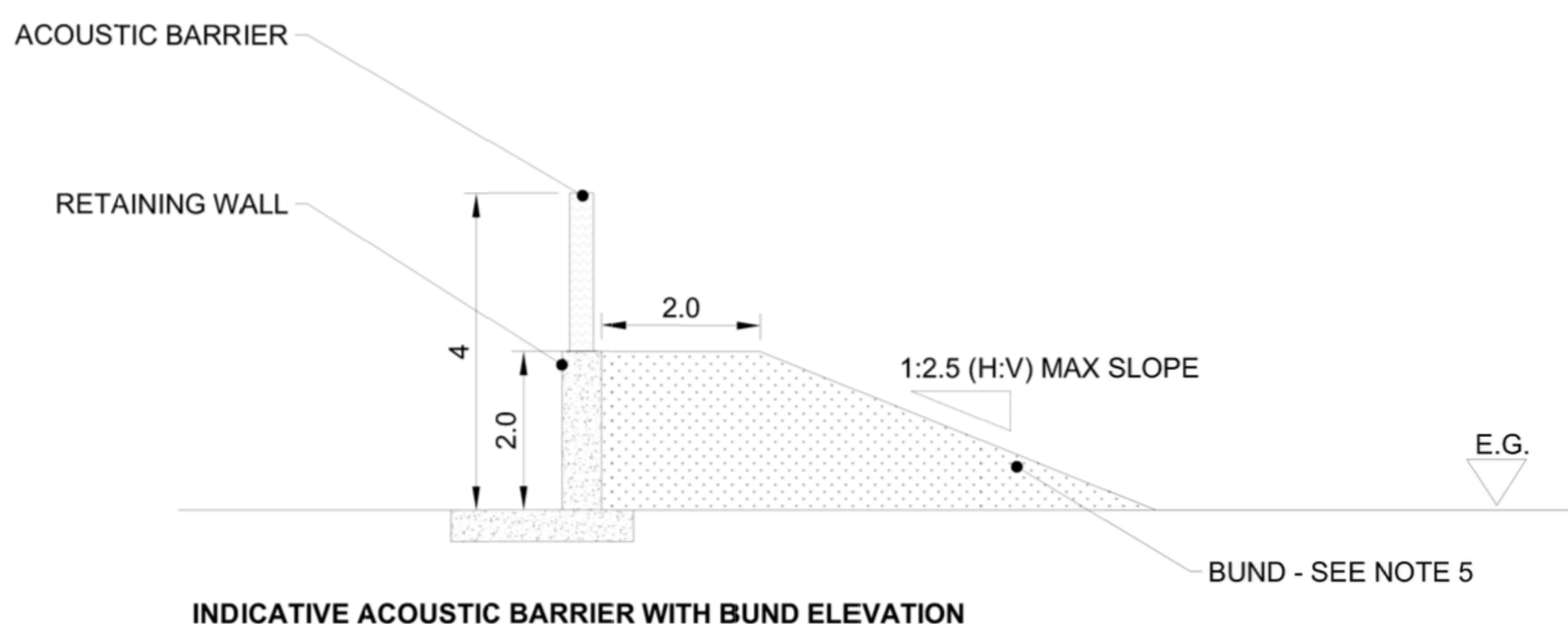
Long term noise monitoring was initially undertaken on the site in July 2022 and further noise monitoring survey undertaken in October 2022 to assess noise levels in the vicinity of noise sensitive receptors in close proximity to the development.

The noise climate in the vicinity of nearby receptors was found to be controlled by a combination of local and distant road traffic noise on the surrounding noise network, plus noise from the nearby power station and substation

An assessment of noise emissions from the proposed development has been undertaken to assess noise levels at the façade of the nearest noise sensitive receptors.

Conservative noise assumptions have been used in modelling to ensure noise at receptors does not exceed thresholds. Noise from the development was mitigated through limiting the capacity of the development and siting equipment as far from receptors as possible within the site constraints. Further mitigation in the form of a 4m acoustic barrier is proposed around the boundary of the battery storage elements of the scheme and a landscape bund is to be erected to mitigate the visual impact of this infrastructure.

The predicted plant noise levels are below the level at which adverse impacts would be expected. On this basis, the proposed location is considered suitable.



YOU SAID: *Concerned that the site will be lit and cause visual impact for local residents.*

Only low level lighting or temporary task lighting is required for the site in the operational phase. A planning condition could be imposed to secure the final design and lighting technology to be utilised on site.

Any additional lighting that will be required for the construction period will be controlled as part of a construction management plan and will be restricted to the hours of operation.

Addressing Comments

YOU SAID: *Concerned about the visual amenity of the proposal on local residential receptors.*

In order to mitigate against landscape and visual impacts, the landscape proposals as illustrated on the submitted plan, take account of the identified areas of sensitivity by providing additional planting where required and any relevant maintenance notes for existing planting.

Care has been taken to retain existing trees and hedgerows where possible, to retain the 'green' character of the local area, to maintain existing visual buffers and to maintain biodiversity value. The proposals would result in some loss of existing hedgerows along field boundaries to the north-west in order to accommodate the proposed access road, however, this has been minimised wherever possible and replaced within the site.

The landscape mitigation proposals include the following:

- retention, protection and enhancement of the existing network of trees and hedgerows along field boundaries, including necessary temporary protective fencing during construction;
- provision of new native woodland planting with some evergreen species along the northern, eastern, southeastern and southwestern boundaries, to supplement existing field boundary vegetation and provide visual enclosure. Planting to include a mix of semi-mature planting, along with other sizes of planting;

- creation of a new tree lined hedgerow along the parts of the western boundary, with tree planting avoiding overhead powerline offsets;
- existing hedgerow planting along southern boundary to be supplemented by new native planting to provide additional visual enclosure;
- proposed earth bunds to the east of the development to be planted with new native woodland and scrub;
- all existing and proposed native hedgerows managed to a height of 3m or over to enhance visual enclosure;
- creation of an attenuation ponds seeded with appropriate species rich grassland tolerant of seasonally wet conditions; and
- ongoing landscape management of planting during the lifetime of the proposed development.

From a landscape and visual perspective, any notable effects on landscape character or visual receptors as a result of the proposed development would be confined to surrounding local areas with visual effects reduced by the retention of the existing vegetation and the proposed mitigation planting around the periphery of the site.

Next steps

Thank you for taking the time to visit. Now the planning application has been submitted to Newark and Sherwood Council the appropriate way to leave feedback is via their website, details below.

We would like to invite members of the community to make suggestions for local initiatives they would like to see in the area and send them to us using the comments sheet provided. Alternatively, you can view the information provided today on our project website <https://www.staythorpebatterystorage.co.uk> and provide your comments online.

All responses from today's exhibition will be carefully considered, and we welcome all feedback. Our intention is to examine all comments received and record them for internal purposes only. Should we be successful

with planning we will reengage with the community. This is in accordance with SSE's policies and we would do so in line with any conditions associated with the approval.

To comment on and feedback on the application please visit the Newark and Sherwood Councils website, details below and on our project website.

Planning
Application Portal
(Ref.23/00317/

Scan Here



Key dates:

