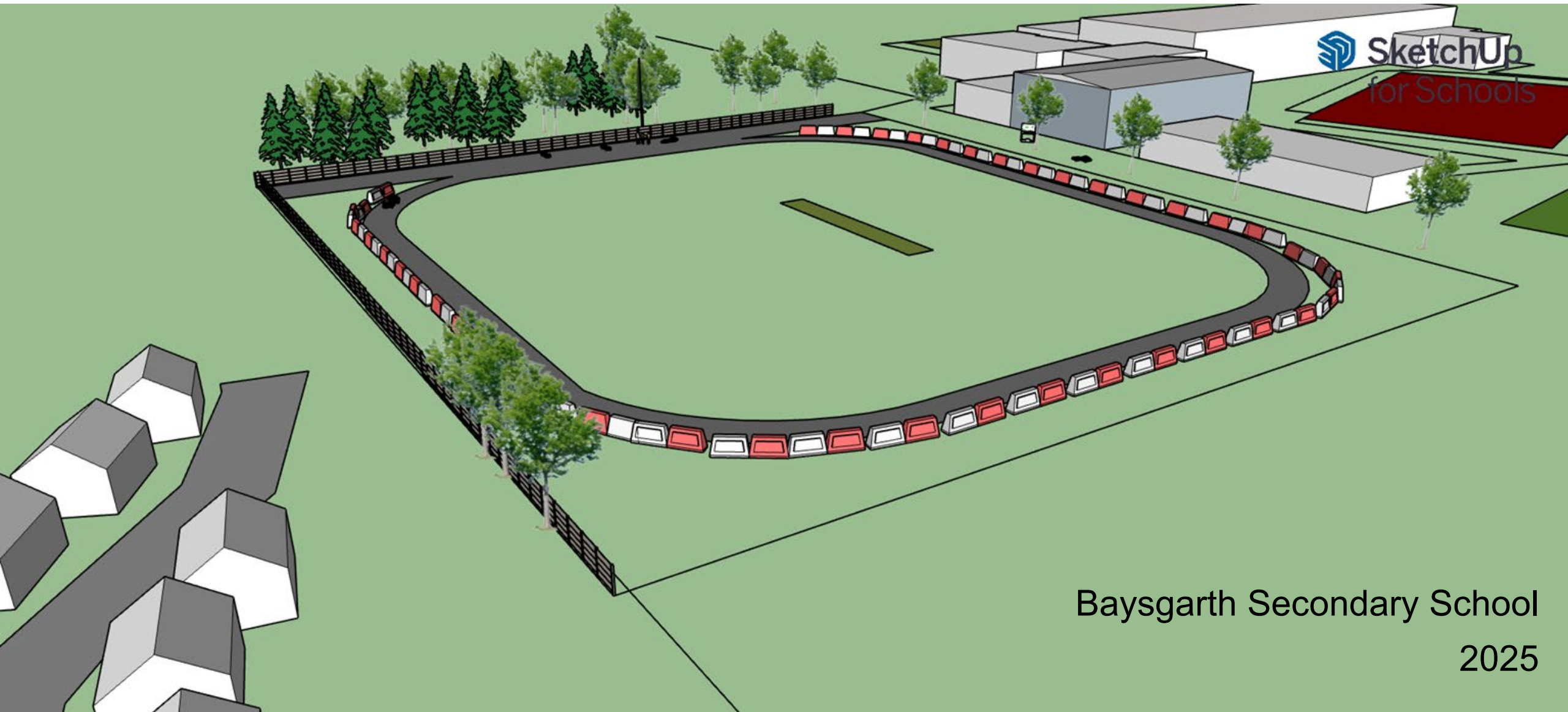


# Design & Access Statement

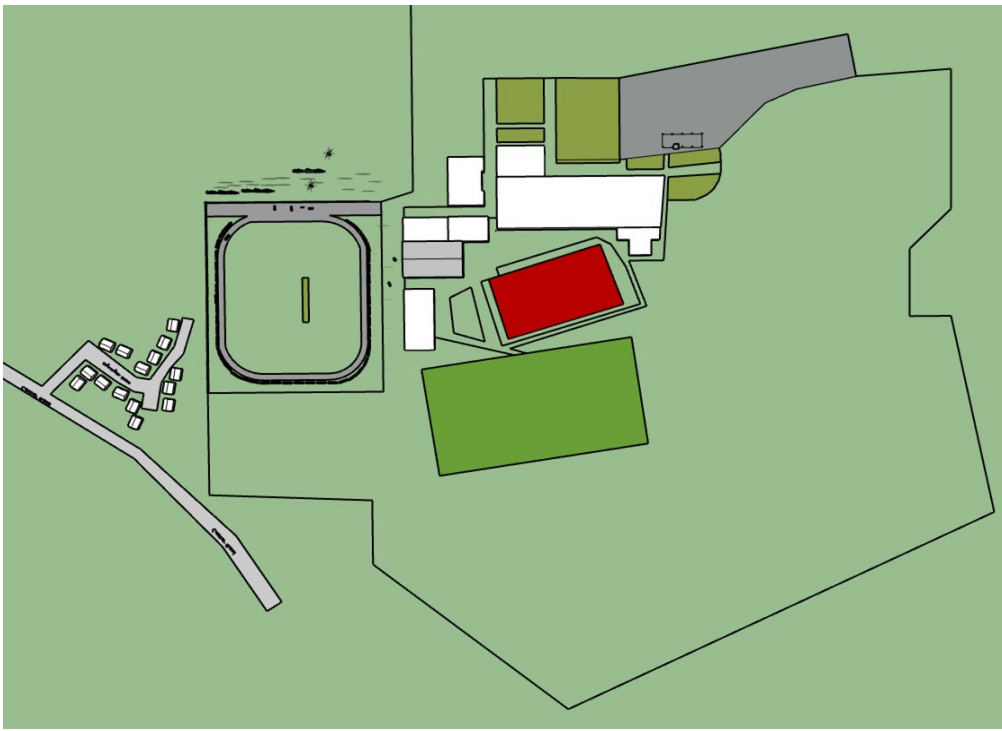
## Baysgarth Test Track



# Introduction

This Design and Access Statement supports the planning application for the installation of a Greenpower electric test track at Baysgarth Secondary School. The proposal aims to enhance educational opportunities in STEM (Science, Technology, Engineering, and Mathematics) by providing a dedicated space for students to design, build, and test their Greenpower electric vehicles in a safe and controlled environment.

This report is to be read in conjunction with the Planning Statement and the relevant plans submitted with the planning application.



## Overview of the project:

The test track will be located in the west 'lower' field of the school, increasing the curriculum use of the field.

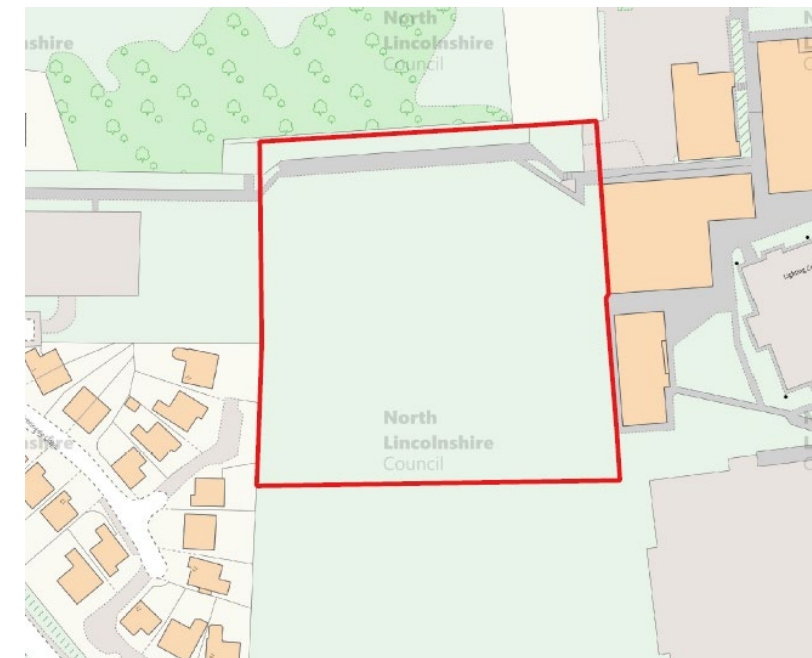
It will take up the outer limits of the field in a circular shape to ensure testing data collected is consistent and accurate.

The test track is to be used by all students at the school integrated into their Maths, Science and Engineering lessons. In addition to this the track will cater for school in the immediate local area and across the region to support their provision of STEM learning.

## Purpose of the test track:

The primary purpose of the test track is to enhance the provision of the STEM Greenpower project at Baysgarth School. It will allow young people to develop, test and validate design thinking within the electric car industry.

This practical hands-on way of learning will cater for all students in a practical and innovative way increasing their involvement in sustainable engineering.



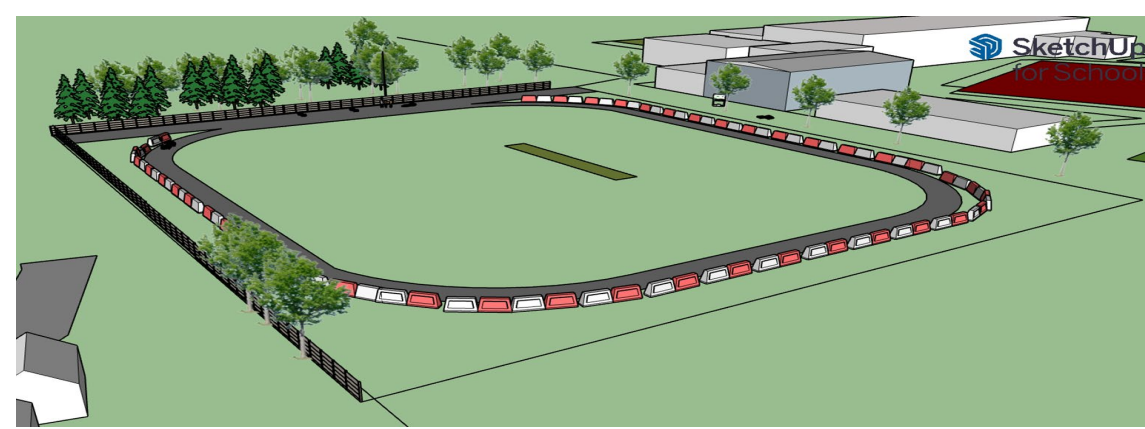
# Design Principles

## Location & Layout

- The track will be situated on a portion of the school's existing sports field, designed to optimise space without disrupting existing school activities. The intended track will be sited towards the perimeter of the field leaving sufficient space to continue curriculum activities in the centre of the field. The sports field is used minimally currently, and the track only enhances the extended use of the field for curriculum activities across the STEM subjects.
- The track is to enhance testing for the Greenpower cars. Motorsport UK (MSUK) have been consulted in the track design to ensure that as a testing facility, data collected by the students will be consistent to allow further development of designs that the students iterate over extended periods of time. Therefore, the track design has been designed to be a smooth continuous 'circular' track. Straightened sections have been included to allow students to consider acceleration testing and the curved sections can test the handling performance of the drivers in preparation for Greenpower events across the country.
- There are no plans at this stage to incorporate lighting into the project. The intended use is to be conducted during normal school opening hours.

## Sustainability

- While considering track surfaces, a plastic supplemented tarmac was found, which is manufactured by MacRebur. The tarmac uses less raw material due to the plastic additive. The plastic is sustainably sourced which takes plastic out of the potential landfill cycle. As an establishment at Baysgarth School, we will aim to match the amount of plastic needed for the track, which will be processed in house to create new material for student projects. This will be done through competitions and continued recycling efforts within the Design & Technology Engineering department.
- These considerations into the surface of the track could save 2200kg of CO2 by negating the need for the amount of raw material needed in standard tarmac. Using this eco-friendlier material helps to ensure the impact on the environment is minimal yet enhanced by reusing plastic material.
- The added benefits of the surface material continue with the tarmac being semipermeable which will reduce the amount of surface water runoff, allowing the existing ground water to drain sufficiently.



## Safety Features

- Safety considerations for users of the track whilst driving will include barriers that encircle the entire perimeter of the track. The barrier system intended to be used has an interlocking method to ensure containment of any Greenpower vehicle. The interlocking mechanism allows the cars to reduce in speed and come to a more controlled stop, rather than a sudden stop to provide more protection to the driver. This method of barriers also further protects stewards on the outside of the barrier system. Spectators are only to be situated on the natural higher-level ground 5 meters away from the outside of the track.
- Emergency exits will be clearly labelled with signage at the eastern side of the track. Emergency service vehicular access will be enhanced in the project, providing a hard surface onto the field and a shallower gradient for ease of access for those vehicles.
- The intention is to train staff and students to carry out checks of the track and report to site staff using a proforma. This will include any dangerous occurrences and/or injuries. Monitoring systems such as CCTV will be installed as part of improving security for the site.
- Signage will include outlined protocols and supervised access of the track will be implemented to minimise risk further.
- MSUK have been consulted in the design and safety of the track to suggest which health and safety guidance is relevant. Greenpower and CLEAPPS are producing a full risk assessment (RA) of the use of the test track prior to its opening use. These outside bodies will continue to review the RA on an annual basis.

# Access Considerations

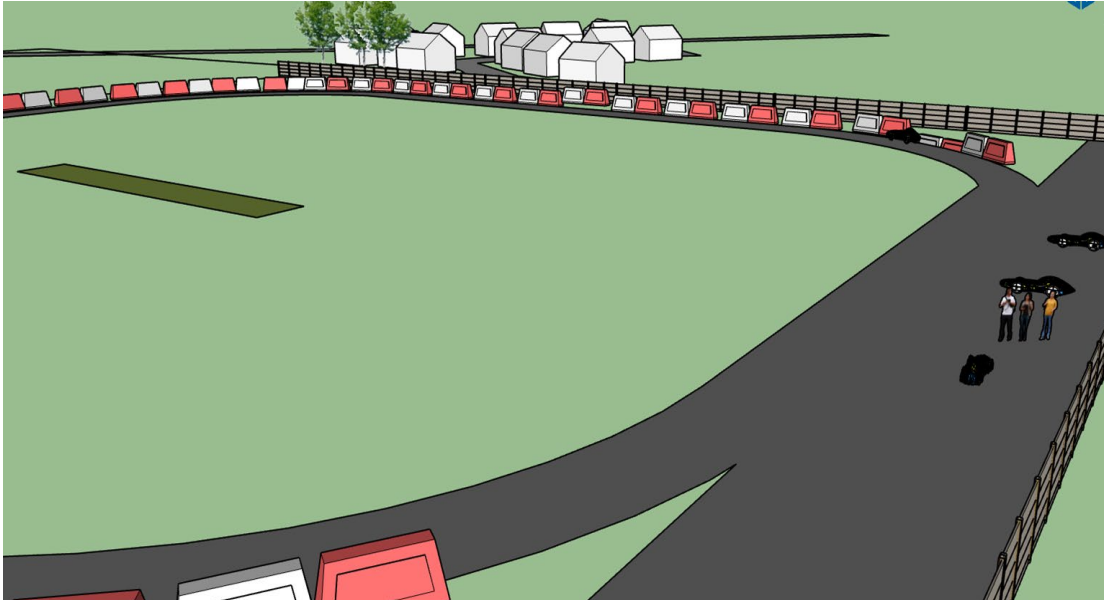
## Vehicular Access

Access to the Baysgarth site will be via the day-to-day main entrance gate off Barrow Road. We do not envisage an increase in access in the first two years of operation while curriculum is developed and tested out with Baysgarth students and the wider federation or primary feeder schools. Beyond this time, we will work with local post 16 providers and existing primary and secondary schools to enhance their STEM provision. All of which are intended to happen during normal school hours and access is currently sufficient to cater for this need with students arriving by hired transport.

## Pedestrian Access

Access for pedestrians will be via the existing pathway and access ramp along the sport hall entrance which is sufficient for individuals with disabilities. Increased signage is needed to enhance current signage along this area.

Access to this area will be through the school's main entrance gate, leading directly to the site. The test track will connect seamlessly with the existing pathway surrounding the school, creating a pedestrian route suitable for year-round use.



## Emergency Access

Added signage for emergency vehicular access is to be enhanced. Normal procedures will be for emergency services to contact a member of Baysgarth staff in the first instance, to then be guided to the area. This will either be done by walking using existing pathways, or in the event of an emergency vehicle being needed on the track site, they will be chaperoned as per existing sports facilities RA's.

# Environmental Impact

## Noise and Air Quality

- The cars will be tested during normal school hours so should not create additional noise outside of these hours.
- The air quality is unaffected due to the cars being electric, which in turn adds very minimal noise levels to the site.

## Biodiversity

The site currently comprises modified grassland and several urban trees, with a baseline biodiversity value of 3.69 biodiversity units (BU). The development will result in the loss of a small portion of grassland and one tree, leading to a net onsite reduction of 0.27 BU, equivalent to a 7.31% loss.

To compensate, offsite habitat enhancements are proposed at Baysgarth School's allotment area and at Castledyke School. These enhancements include the creation of traditional orchards, improvement of grassland to higher ecological value, and additional tree planting. Collectively, these measures will deliver a gain of 0.71 BU, bringing the total post-development biodiversity value to 5.33

# Community Engagement & Uses

## Community Use

The track will be made available to all students and curriculum areas of the school, to be used as a whole school resource.

The community use will extend initially to athletic groups that currently use other Baysgarth facilities, and this will enhance their provision for training through the Baysgarth Sports Village strand of Baysgarth school.

Testing the electric cars will solely be under the supervision of trained Baysgarth staff during normal school hours while delivering lessons as part of our commitment to involve students in our sustainable values and curriculum.

The project is committed to enhancing provision outside of federation and feeder schools, as well as colleges in programmes that will be designed specifically for:

**Educational Outreach:** Hosting workshops, events, and open days to promote awareness of EV technology and sustainability.

**Community Enrichment:** By hosting events like Greenpower challenges, the school aims to inspire a wider interest in renewable energy and engineering among students and the local community.

# Consultation

A public consultation was undertaken to gather the views of students, parents and local residents etc on the proposal. A questionnaire was shared online, and an in-person consultation event was held at Baysgarth School. A summary of the consultation responses can be seen in the Planning Statement.

# Conclusion

The proposed Greenpower electric test track will be a valuable asset, enriching the educational experience of students while supporting sustainability and community engagement. The thoughtful design ensures accessibility and safety, reflecting the school's commitment to inclusivity and innovation.

In conclusion, the Greenpower test track at Baysgarth School offers a valuable opportunity for students to engage in hands-on STEM learning, develop practical engineering and teamwork skills, and foster a deeper understanding of sustainable technology. By providing a dedicated space for innovation and collaboration, the track not only supports the Greenpower initiative but also inspires the next generation of environmentally conscious engineers and problem-solvers who will have greater opportunity with academic outcomes, employability skills and post 16 destinations.

