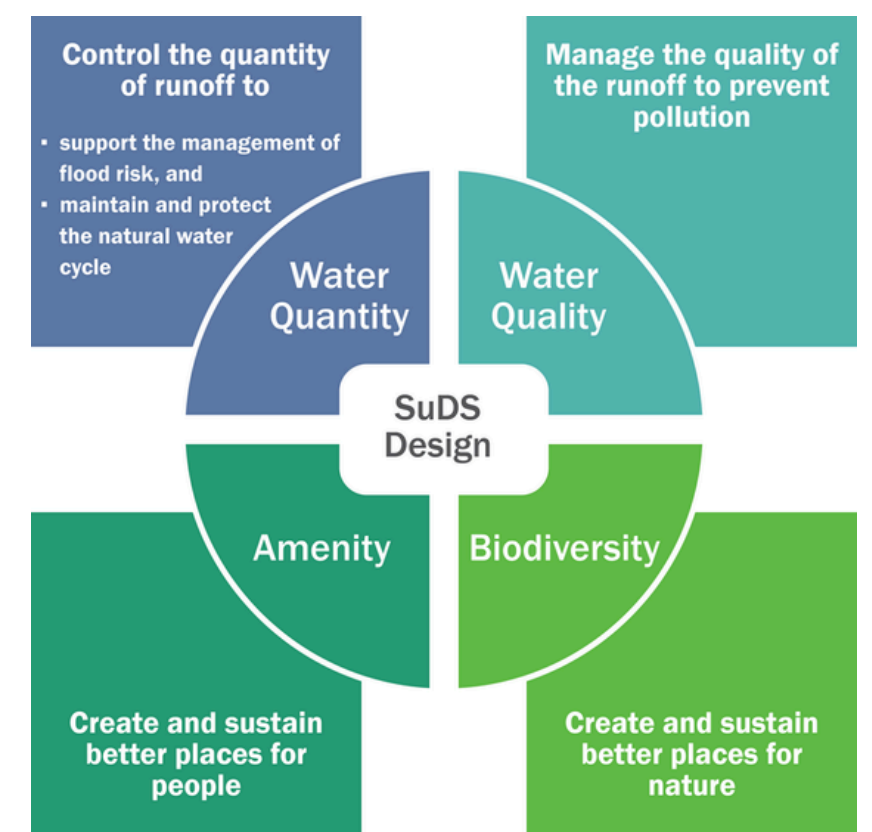


SuDS at Alde Valley Academy

What are SuDS?

Sustainable Drainage Systems (SuDS) are a type of surface water drainage that provide many benefits. These benefits include capturing surface water to reuse and reduce flood risk, provide amenity and biodiversity benefits to the local environment. They can be provided above and below ground, often uniquely designed for each site.

The benefits provided by SuDS are referred to as the 4 pillars of SuDS design and are summarised in the image on the right.



Why Alde Valley Academy?

A Surface Water Management Plan (Flood modelling study) of Leiston was completed in 2017 and identified Leiston High School to be at risk from surface water flooding. The school is predicted to be impacted by flooding directly on the site, adjacent to and within the main buildings and in the wider space around the main building.

The scheme to retrofit SuDS created the potential to provide betterment to the school and wider community from a reduction in flood risk, whilst also providing educational opportunities following their installations.

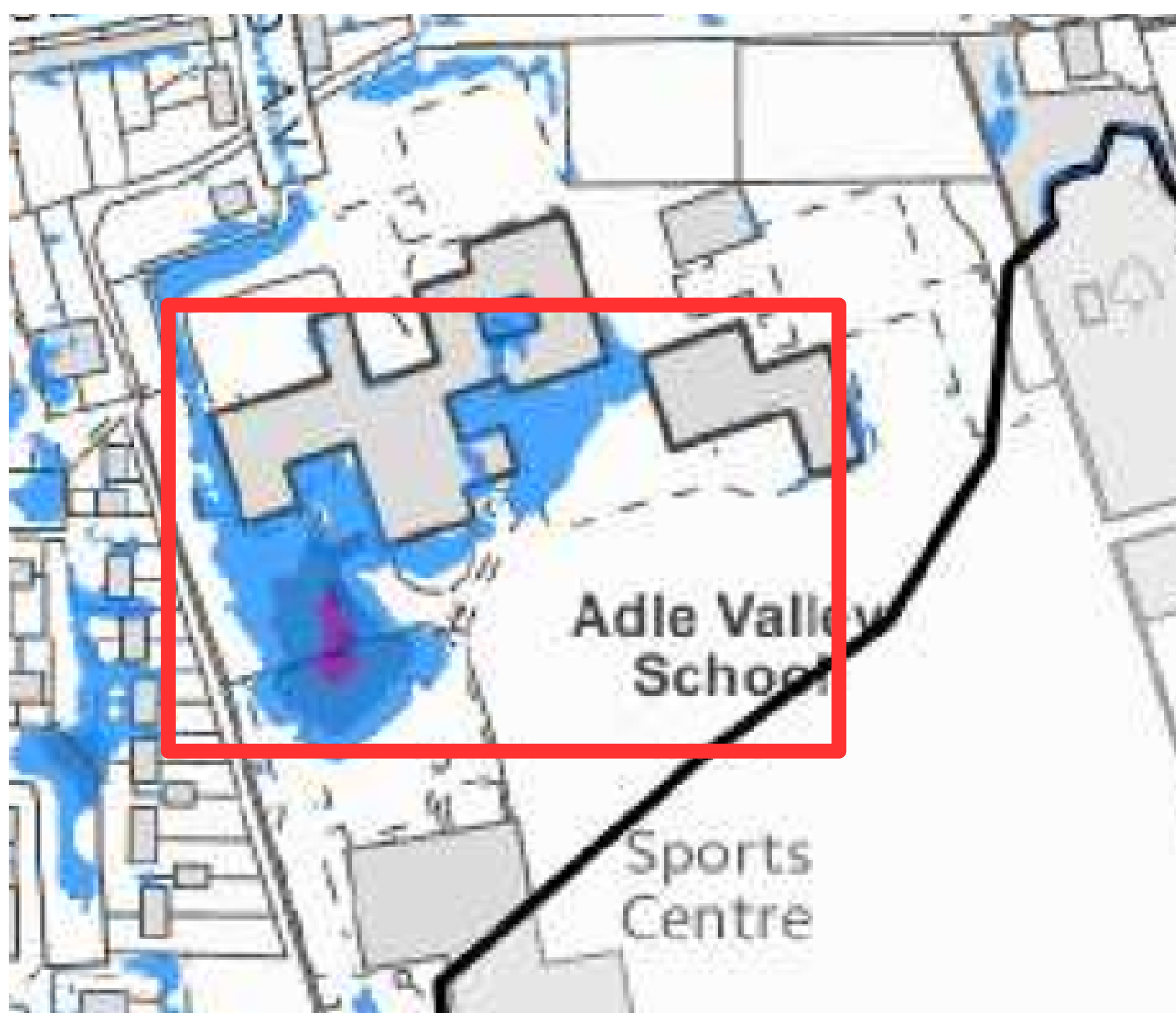


Figure: The figure above shows a surface water flood risk (1% AEP) map. Highlighted in blue, are the main flow paths water takes in this area. As you can see, the school is affected by a major flow path in the courtyard and on the field.

Benefits to students and the community:

- Support recreational time and educational benefit.
- Awareness of the flooding issue.
- Reduces the risk and damage to the school caused by flooding.
- Reduction of downstream flood risk.
- Surface water has been repurposed.

Who have we worked with?

- Anglian Water Services
- Leiston High School
- Illman Young Landscape Architects
- Department for Education
- Brooks & Wood Ltd.

What have we done?

Outside sports area

This area was prone to flooding which would leave a significant amount of silt deposit from the playground in the drainage system of the school. To combat this, a small basin (1) planted with grass and trees was created in the area between the sports fields and the drainage system to intercept the surface water runoff from the playgrounds. This green belt with a shallow depression retains most of the silt preventing it from clogging up the drainage system.

Seating benches (2) were also put at the edge of this green space to create a relaxing environment shaded by trees planted in the same area once they mature. This will be an attractive space for the students to spend their breaks.

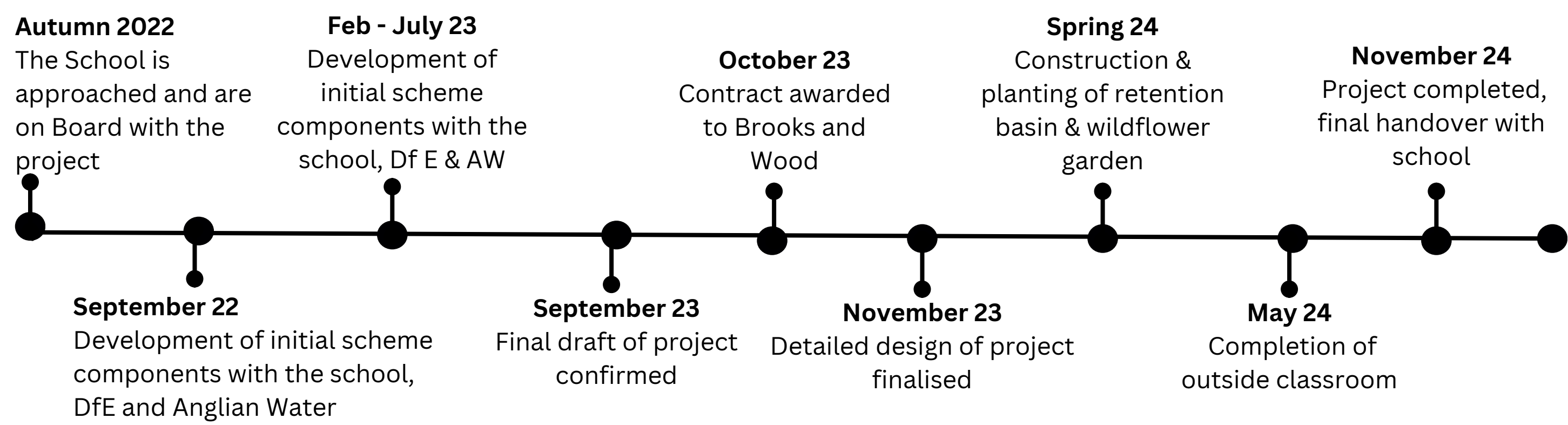


Basin and Outdoor Classroom

This area was identified by the modelling to be at high risk of flooding. The surface water that collects in this area is at the beginning of the surface water flood flow path that affects the community as well. Therefore, the aim was to adapt this once empty underutilised space (1) to capture and use surface water to create an area of nature biodiversity, offer an outdoors GCSE teaching and provide a quiet outdoor study area. As a result, a retention pond was constructed in this space (2). Wooden benches (2) were put around the pond to encourage its use as a recreational space. The soil from the excavation of the pond was repurposed to create a seating bund with pollinator friendly planting and some trees (3).



Key Timeline Dates



<u>What has it cost?</u>	Cost (exc. VAT)	Content
Preliminary Costs	£15,617	Developemnt of the outline and detailed designs
Outside Sports area	£10,454	3 Benches, Trees and tree guards, excavation of small basin strip and planted with grass.
Basin and Outdoor classroom	£50,969	Excavation of large basin, creation of outdoor classroom area with sitting bunds, planting of wildflower meadow and planting of trees, sitting benches, fencing of outdoor classroom area.
Total	£77,040	