
Maidstone Barracks

New Build 2FE Primary & 6FE Secondary School

Feasibility Report



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Our Values



Collaborative



Trusted



Focused

1.0 Executive Summary

Kier have been engaged by The Kent County Council (KCC) to establish the feasibility of RIBA Stages 0 to 6 for the delivery of a new build 2FE Primary School and a 6FE Secondary School on the Invicta Barracks site in Maidstone.

The objective of this report is to determine whether this site would provide sufficient space for the education requirements and to establish whether the project is viable to be delivered by Kier.

Based on KCC information issued to date our understanding is that the initial scope of works is as follows:

- **The proposed site is Invicta Barracks and the Client has provided a red line boundary mark up to indicate the area for the feasibility. The existing site has a large area of existing buildings and woodland.**
- **Construction of a new All-Through School located in Maidstone, Kent, within the site boundary of Invicta Barracks. This includes a 6FE Secondary School and a 2FE Primary School including access roadways/footpaths, car park, landscaping, and play areas.**
- **Demolition and clearance of buildings and required woodland**

Kier Construction have worked collaboratively with Kier Design Services to ascertain whether the proposal would fit on the suggested site. Within this report, you will find 3nr design options providing consideration to how the proposal may fit within the boundary and the related key risks. The options are as follows:

1. Removal of majority of existing woodland – **PLANNING ISSUE ANTICIPATED**
2. Partial removal of woodland (still a large amount removed) – **PLANNING ISSUE ANTICIPATED**
3. Potential use of adjacent site – **Unknown political/planning issues? Client to feedback**
4. Potential use of adjacent site – **Unknown political/planning issues? Client to feedback**

The following report details the outline proposals for the design to form a basis of agreement for the project.

We would welcome further discussions to clarify the Scope of Works and next steps.

- KCC basic need calculation: £45m excluding Inflation
- Kier Feasibility Estimate: £48m - £60m excluding Inflation & V.A.T

KCC key dates for the project are:

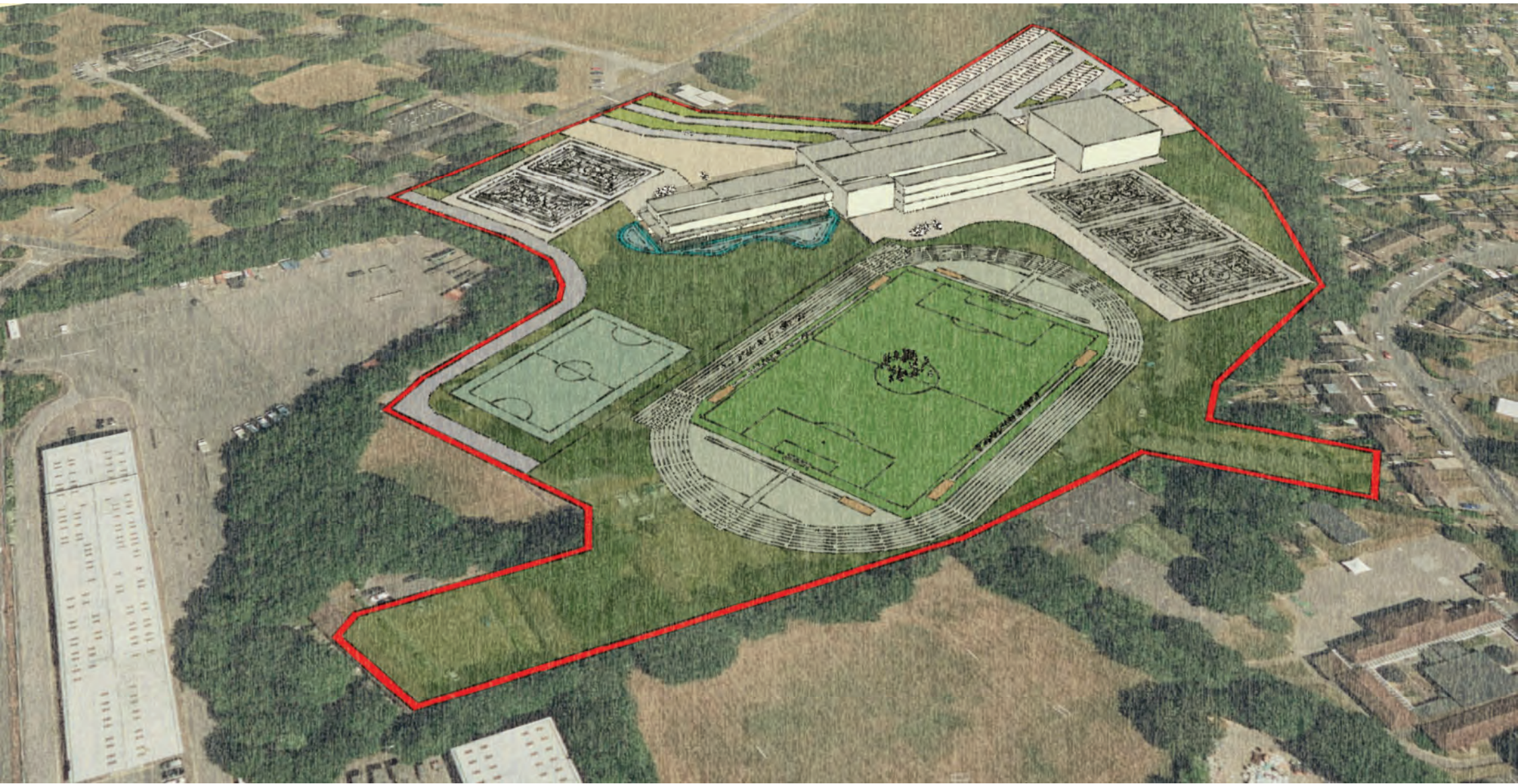
- Construction: 2029

2.1 Design Feasibility

New Build

Options Appraisal 2FE Primary 6FE Secondary





Maidstone All-Through School

Design Options - Executive Summary

Kier Design and Business Services were commissioned by Kier Construction and Kent County Council to carry out a Site and Options Appraisal to assist in the Feasibility Study for the Design and Construction of a new All-Through School located in Maidstone, Kent, within the site boundary of Invicta Barracks. The new facility formal design process would not commence until 2029 therefore, the site has been assessed in view of objectives to decarbonization and energy standards past 2030.

An architectural team was engaged to carry out this Report which encompasses area analysis and commentary on footprint location, site setting out and design solutions. If the Client does pursue this site, a series of Engagement meetings are required to be carried out with the Client and School, including staff and stakeholders to help develop a robust Client Brief, Cost Plan and Schedule of Accommodation. The team have identified surveys required in order to progress an education scheme on this site.

An analysis of the whole site was carried out and a number of high risk items and unknowns, particularly to the woodland area, restricts any conclusive recommendations for this sites viability.

The site area is adequate for a 2FE primary and 6FE secondary all through school however, the site constraints provide significant challenge and risk. This is particularly due to the area and potential removal of woodland, resulting in restriction of area for Soft PE, the design does attempt to mitigate area challenge with the provision of an All Weather Pitch. All elements of the scheme can be successfully located onto the site with some removal of trees, an Option has also been proposed with full tree removal as briefed. It is assumed all 10,000m² of existing building footprint within the site boundary will be demolished. Surrounding context has been analysed and identification of further opportunities noted. 2 adjacent alternative sites have been explored with apparent less risk involved.

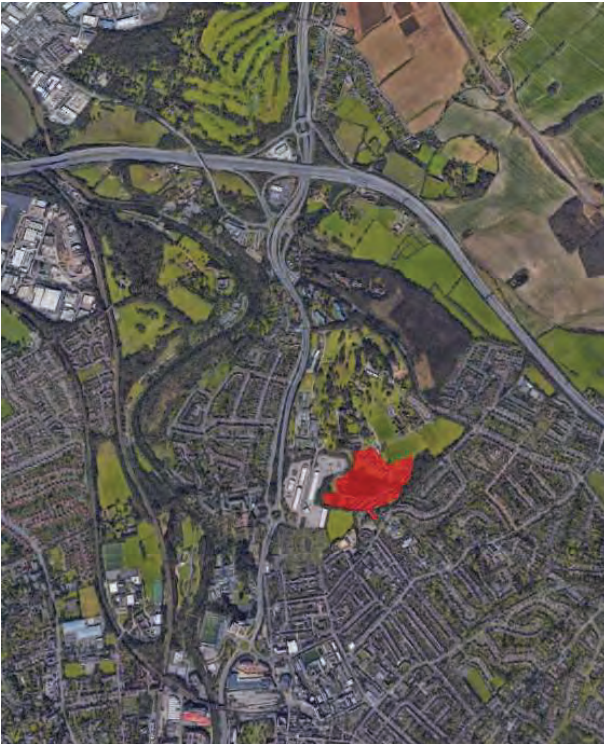
The Primary and Secondary Blocks have been placed on the site with access and orientation considered for low energy Passivhaus design. A separate sports Hall block has been accommodated on the site to give flexibility to out of hours use and community. Blocks and Accommodation schedule have been analysed against BB103 recommendations, any shared space opportunities or restrictions should be developed within a formal Stage 1 engagement process with the Client and end user.



Maidstone All-Through School

Site Location

The site is located within the perimeter fence line of Invicta Barracks in Maidstone, Kent. The barracks form a 46.74ha site located within Maidstone Kent. The site is only a 10 minute walk from the town centre and sits within an urban context. A recent Strategic Land Use Plan shows the remaining barracks site proposed as residential and leisure use.



Site Features

The red line boundary of the proposed site shows likely main access points into the site from the North. There is opportunity for footpath and service vehicle access to the whole of the site but until further site investigations are undertaken this can only be reviewed at high level. The site currently contains a 10,000m² footprint of existing buildings requiring demolition, a full asbestos survey will be required.



Surrounding Site Opportunities

The wider existing context shows well maintained playing fields to the North and East of the Site. There is currently Primary School provision adjacent to the site to the South on Peel St, North Borough Junior and on Hillary street, St. Pauls Infant school. These adjacencies could provide further opportunity for enhancement to educational provision, particularly for Soft PE. Alternative sites been reviewed with lower risk and can be found at the back of this report.



Maidstone All-Through School

Building areas based on BB103 guidance:

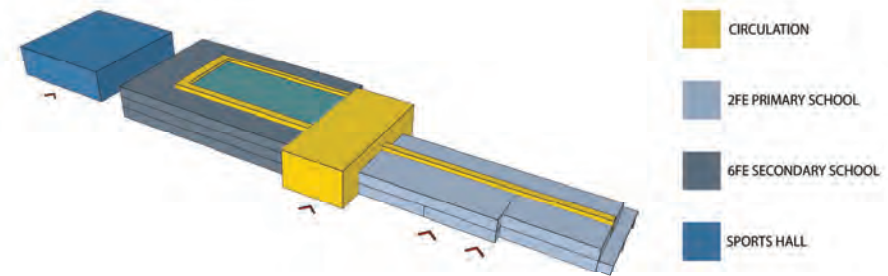
- Base area for all through school Range – 1050m² -1270m²
- Additional area/pupil:
- Primary 420 Pupils Range – 1829m² – 1890m²
- Secondary 900 Pupils Range – 5,670m² – 6390m²
- Nursey 26 Pupils Range – 106.6m² – 117m²
- **Total Range 8,656m² – 9,667m²**

- **GIFA:**
- 2E Primary [w/26 place nursery] – 2,190m²
- 6FE Secondary [11-16] – 6,720m²
- Approx. GIFA – 8,901m²

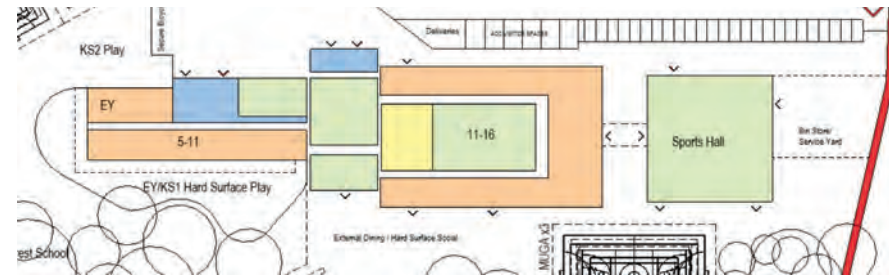
A schedule of Accommodation can be found at the end of this Report.

The Primary and Secondary Blocks have been placed on the site to low energy Passivhaus principles. A separate sports Hall block has been accommodated on the site to give flexibility to out of hours use and community.

It is recommended full Stage 1 engagement is carried out with the Client and end users at the next stage of development to understand the area needs of the school and any shared space requirements between primary and Secondary cohorts.



Primary, Secondary and Sports Block Arrangement with Circulation



The primary school is located to the West, adjacent to Forest School provision with the KS1 play area wrapping around the existing trees to the south. Entrance to the secondary school is to the East, specialist and general teaching accommodation wrap around large hall and resource spaces.

Maidstone All-Through School

Existing Site:

- Allocated Site Area Approx. – 66,000m²
- Building Demolition Required Approx. – 10,000m²
- Existing Woodland within site Approx. – 16,000m²
- External Areas:

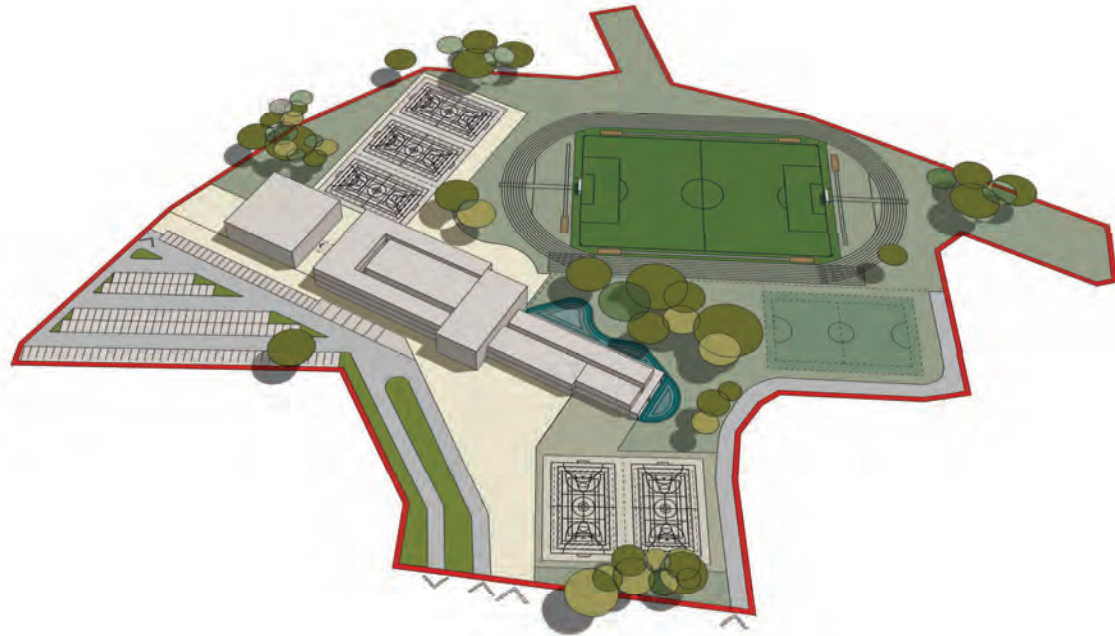
BB103 Requirement Primary:

- Base Total Site Area Primary 2000m² – 2400m²
- Additional area/pupil
- Nursery 26 Pupils Range – 156m² – 182m²
- 5-11 Primary 420 Pupils Range – 13,986m² – 17,640m²
- **Total Range Primary 16,142m² – 20,222m²**

BB103 Requirement Secondary:

- Base Site Area Secondary 9000m² – 11000m²
- Area/pupil
- 11-16 Secondary 900 Pupils Range – 45,000m² – 56,700m²
- **Total Range Secondary – 45,000m² – 56,700m²**

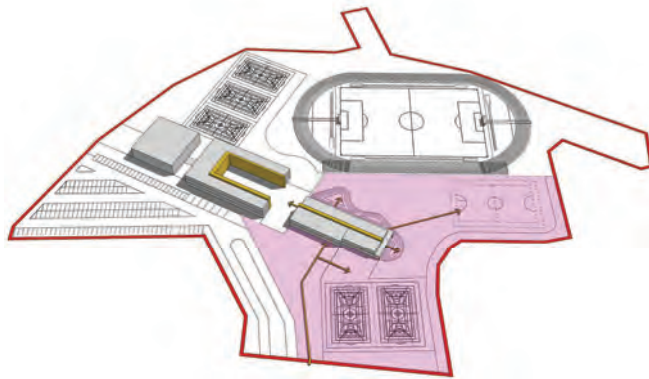
Grand Total – 61,142m² – 76,922m²



The existing site area falls within range of a school of this size, by placing the access, parking and building footprint to the North, this maximises the south of the site for hard and soft games and PE. Two Options have been developed to analyse the extent to which tree removal would be necessary. It is recommended site surveys are undertaken before any further development, to understand the condition and ecology of the trees and site as removal of trees is currently high risk. Without some removal of trees, the extent of outdoor provision for sports and suitability of this site for educational purposes is limited.

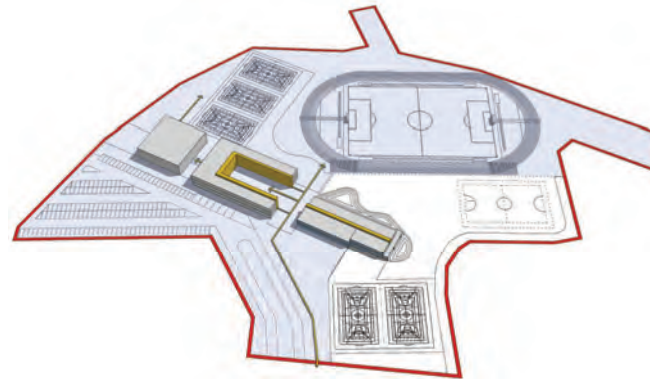
Maidstone All-Through School

User Circulation and Site Area



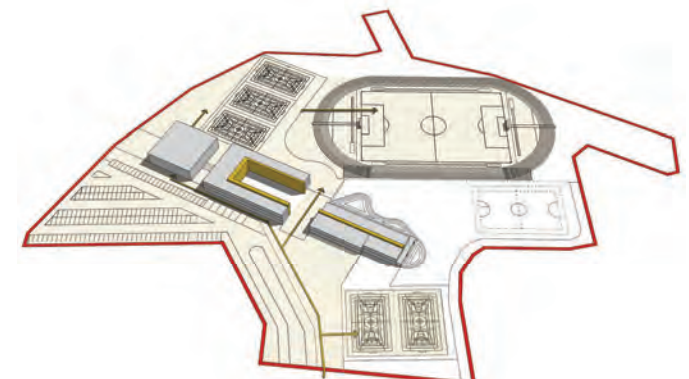
Primary Site Boundary

16,200m² + Shared Entrance **and** Parking



Secondary Site Boundary

49,800m² including Shared Entrance and Parking



Out of Hours Use

If required, the school can be used out of hours by community groups for sporting and educational purposes.

Maidstone All-Through School

External BB103 Area Analysis

Soft Outdoor PE – 45,900m²

Unachievable: available area can be increased if majority of trees removed from central zone but an All Weather Pitch would be recommended, supported by a Junior pitch and surrounding soft PE activities within an area of approx. 22,000m². There are 4 grass pitches already established to the North and East of the site suitable for secondary curriculum and community use and a junior pitch to the South of the site at North Borough Junior School.

Approx. 29,800 to the secondary site [including double counting for all weather pitch] and 4000m² to the Primary site totalling 33,800m².

Hard Outdoor PE – 2,780m²

Achievable: located adjacent to pitches in the form of MUGA's. The area can be increased by placement of further MUGA's to compensate the loss of soft PE. There is area within the site for 2 MUGA's to the Primary one and 2-3 to the Secondary zone. Approx. 6,400m² MUGA area.

Soft Informal and Social Area – 3,892m²

Achievable: located across the site through careful engagement with the end users and community.

Hard Informal and Social Area – 1,720m²

Achievable: located across the site through careful engagement with the end users and community.

Habitat – 660m²

Achievable: If the majority of the woodland is managed and maintained, this could provide opportunities for outdoor education, forest school and orienteering. There are further educational and biodiversity opportunities to introduce habitat and wildlife through ponds and sustainable drainage solutions [SuDS] within and around the perimeter of the site.

Non net/Float – 8,052m²

Main access points to the site are only available from the north at present. There is opportunity for foot path access and service vehicles to the site but until further site investigations are undertaken this can only be reviewed at high level. An access road for drop off and parking is proposed to the East of the site, this will facilitate staff parking, drop off, visitor parking and potential community out of hours parking if the sports hall and outdoor facilities are available out of hours and holidays. Service and refuge can also be accessed from this point, there is also potential to retain the service road running to the North West of the site to service the soft sports pitches and primary school facilities.

Total – 63,004m²

Where there is limited outdoor space available to pupils on a restricted site, consideration should be given to providing the following:

- firstly, hard informal and social area, including outdoor play area immediately accessible from early years classrooms;
- then hard outdoor PE space, ideally in the form of a multi-use games area;
- then soft informal and social area;
- finally soft outdoor PE area.

There is a large central woodland within the site boundary of approximately 16,000m², which is most likely well established. This will likely result in significant ecological and biodiversity risk to the scheme if removed. There are opportunities to integrate a forest school and other outdoor education provision within this zone however, for the scheme to work to its full potential it is likely some trees will have to be removed to achieve a workable school site and BB103 areas.

Parking

154 parking spaces and 6 Acc. spaces are currently achievable on the site. A secure, covered cycle store for 90 bicycles has been positioned to the front of the site. There is further potential to create parking to the West and East of the site if further spaces are required, this should be discussed with the local planning authority, Client, end users and Community.



Maidstone All-Through School