



HLM
Architects

Single Living Accommodation Programme
RMA Sandhurst | Stage 3 Design Report

Z9A8177Y20-HLM-XX-XX-RP-A-007003

Revision - P01
13/04/2022



Defence
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Project Team



Ministry
of Defence



Defence
Infrastructure
Organisation



ARMY

Lead TSP



Design Team



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Produced & Reviewed By: Christopher Liddle, Luke Riggall, Scott Fredrick, Stuart Beaumont, Alethea Ottewell, George Morley, Nicolas Hubin, James Cocking, Ben Booth, Niamh Thornton, Peter Wright and Conrad Clayden.

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This document is designed to be read as a two-page spread, please view double sided with cover.

Accompanying Drawings and Surveys

Proposed Drawings:

Z9A8177Y20-HLM-00-00-DR-A-000001 EXISTING SITE LOCATION PLAN

Z9A8177Y20-HLM-10-00-DR-A-000104 DEMOLITION SITE PLAN

Z9A8177Y20-HLM-10-00-DR-L-000103 PROPOSED SITE 1 LANDSCAPE PLAN

Z9A8177Y20-HLM-11-00-DR-A-001110 BUILDING 1, GA PLAN, GROUND FLOOR

Z9A8177Y20-HLM-11-01-DR-A-001111 BUILDING 1, GA PLAN, FIRST FLOOR

Z9A8177Y20-HLM-11-02-DR-A-001112 BUILDING 1, GA PLAN, SECOND FLOOR

Z9A8177Y20-HLM-11-04-DR-A-001113 BUILDING 1, GA PLAN, ROOF

Z9A8177Y20-HLM-11-XX-DR-A-003110 BUILDING 1, GA ELEVATIONS

Z9A8177Y20-HLM-11-XX-DR-A-002110 BUILDING 1, GA SECTIONS

Z9A8177Y20-HLM-11-XX-SH-A-005110 BUILDING 1, AREA SCHEDULE

Z9A8177Y20-HLM-10-03-DR-A-751115 SITE 1, ACCESS AND MAINTENANCE STRATEGY

Z9A8177Y20-HLM-11-00-DR-A-751110 BUILDING 1, FIRE STRATEGY, GROUND FLOOR

Z9A8177Y20-HLM-11-01-DR-A-751111 BUILDING 1, FIRE STRATEGY, FIRST FLOOR

Z9A8177Y20-HLM-11-02-DR-A-751112 BUILDING 1, FIRE STRATEGY, SECOND FLOOR

Z9A8177Y20-HLM-11-03-DR-A-751113 BUILDING 1, FIRE STRATEGY, ROOF

Z9A8177Y20-HLM-10-00-DR-L-000203 PROPOSED SITE 2 LANDSCAPE PLAN

Z9A8177Y20-HLM-11-00-DR-A-001210 BUILDING 2, GA PLAN, GROUND FLOOR

Z9A8177Y20-HLM-11-01-DR-A-001211 BUILDING 2, GA PLAN, FIRST FLOOR

Z9A8177Y20-HLM-11-02-DR-A-001212 BUILDING 2, GA PLAN, SECOND FLOOR

Z9A8177Y20-HLM-11-04-DR-A-001213 BUILDING 2, GA PLAN, ROOF

Z9A8177Y20-HLM-11-XX-DR-A-003210 BUILDING 2, GA ELEVATIONS

Z9A8177Y20-HLM-11-XX-DR-A-002210 BUILDING 2, GA SECTIONS

Z9A8177Y20-HLM-11-XX-SH-A-005210 BUILDING 2, AREA SCHEDULE

Z9A8177Y20-HLM-20-03-DR-A-751215 SITE 2, ACCESS AND MAINTENANCE STRATEGY

Z9A8177Y20-HLM-21-00-DR-A-751210 BUILDING 2, FIRE STRATEGY, GROUND FLOOR

Z9A8177Y20-HLM-21-01-DR-A-751211 BUILDING 2, FIRE STRATEGY, FIRST FLOOR

Z9A8177Y20-HLM-21-02-DR-A-751212 BUILDING 2, FIRE STRATEGY, SECOND FLOOR

Z9A8177Y20-HLM-21-03-DR-A-751213 BUILDING 2, FIRE STRATEGY, ROOF

Documents:

SLAW2-HLM-XX-XX-RP-A-000120 Derogation Schedule

SLAW2-HLM-XX-XX-SP-A-005001 Project Typical Outline Specification

SLAW2-HLM-XX-XX-RD-A-005002 Room Data Sheets

SLAW2-HLM-XX-XX-RP-A-000121 Design Responsibility Matrix

SLAW2-HLM-XX-XX-RP-A-008001 Access and Maintenance Strategy

Technical Notes:

SLAW2-HLM-XX-XX-RP-A-000110 Provision of Lifts in SLA

SLAW2-HLM-XX-XX-RP-A-000111 External Laundry Drying Facilities

SLAW2-HLM-XX-XX-RP-A-000113 MMC Technical Note

SLAW2-HLM-XX-XX-RP-A-000114 CTM Technical Note

Note: Do not scale from the drawings in this report. Refer to individual drawings for numerical scale.

01 Introduction

01 Introduction

1.1 SLA Programme

Executive Summary

HLM Architects submitted an RIBA Stage 1 Feasibility Study in September 2021. The purpose of this study was to present the DIO with a series of design layout options which were informed by site surveys undertaken during the RIBA Stage 1 period.

During the RIBA Stage 1 design period it became apparent that the original URD requirement of 108 Junior Rank bedspaces could not feasibly be delivered on the downselected development site. As such the requirement was reduced down to 63 and this was reflected in the RIBA Stage 1 submission.

Following the submission of this Study, a downselection meeting was held in late September 2021 where HLM Architects, Arcadis, the DIO and the Army came together to discuss the pros and cons of the designs for the two sites at RMAS. Due to the site constraints identified during RIBA Stage 1, HLM only produced 1 development option for the two sites.

Following the downselection meeting, the TSP looked to progress the designs for both sites to the end of RIBA Stage 2. During the Stage 2 process, the downselected designs have been developed with additional layers of information added into the design, including;

- Developing the landscape proposals around the new building
- Consideration of the building massing and elevational treatment.
- Developing the design in co-ordination with commentary from other design team consultants including Mechanical, Electrical, Structural and Civil Engineers, Sustainability Consultants and Fire Engineers.

Following the close out of RIBA Stage 2 in late 2021/early 2022, the architectural designs continued to be refined, developed and co-ordinated with other consultants. This report contains the final RIBA Stage 3 Outputs.

Aim of the Report

The following Report sets out the design proposals for the works at RMA Sandhurst and this acts as HLM's primary output from the RIBA Stage 2 process.

The report starts with a comprehensive site analysis of the existing site history, surrounding context, and a review of the constraints and opportunities associated with the development site(s).

Following this analysis, the design proposal is presented in the form of floor plan, elevation and section drawings alongside a review of material finish options and some 3D Visualisations.

Following the production of the RIBA Stage 3 outputs the next steps are for the TSP to prepare and submit a full planning application (following closure of the pre-application process) and for the DIO to use the Stage 3 information to engage in the ITT process with a view to progressing the works to RIBA Stage 4 with the input of a contractor team.

Abbreviation Key

- BEP = BIM Execution Plan
- BIM = Building Information Modelling
- BPS = Building Performance Standards
- CTM = Counter Terrorism Measures
- DIO = Defence Infrastructure Organisation
- ECAM = Enhanced Commissioning and Assurance Model (Procurement Framework)
- JSP = Joint Service Publications
- LPA = Local Planning Authority
- MMC = Modern Methods of Construction
- NZC = Near Zero Carbon
- NZEB = Near Zero Energy Building
- RMA(S) = Royal Military Academy (Sandhurst)
- RFI = Request for Information
- SLA = Single Living Accommodation
- SME = Subject Matter Expert
- TSP = Technical Service Provider

Project Aspirations

The current poor state of accommodation blocks at MoD Barracks is not an enduring solution; it detracts from the primary role and does not support the Lived Experience proposition as it is retention negative and does not support recruitment.

The proposed developments provide much needed, high quality, living accommodation for all ranks of personnel and therefore forms an essential requirement for on-going military operational needs within the wider defence organisation.

The developments have key targets in relation to sustainability. Building design aims to exceed current Near Zero Carbon building standards, meaning the developments will have a positive impact. The designs will be future proofed against likely extreme variations in climate conditions. This is a pilot scheme and, as such, is seeking to push the boundaries in sustainable building design.

New Build Single Living Accommodation (SLA) buildings will be inclusive of the following:

- Provision of bedrooms which include en-suite facilities
- The bedrooms will be expected to provide adequately sized living quarters to accommodate the sleeping, leisure, storage and personal office space requirements and be fully communication accessible.
- There is a requirement for a laundry area housing washers and driers (adequate for the number of personnel living in the building) alongside a drying space.
- Storage area sufficient to store large items (e.g. bicycles).
- Communal and amenity space in line with MOD guidance.
- Defence Related Environmental Assessment Method (DREAM) rating - to archive 'Excellent'.
- Meet MOD guidelines - including JSP 315 - Services Accommodation Code

Project Description

The project seeks to build new Single Living Accommodation blocks across seven sites.

The Assessment Study originally used a series of existing SLA floor plan layouts completed by MACE as a basis for the study. As the ECAM SLA Framework has progressed, the SLA Design has further diverged from that originally produced by MACE to better suit requirements regarding MMC Compatibility, Near-Zero Carbon requirements and facilitating a better Lived Experience for the personnel.

The approach for wave 2 captures the learning from experience outcomes, particularly early testing of sites and earlier engagement with planners.

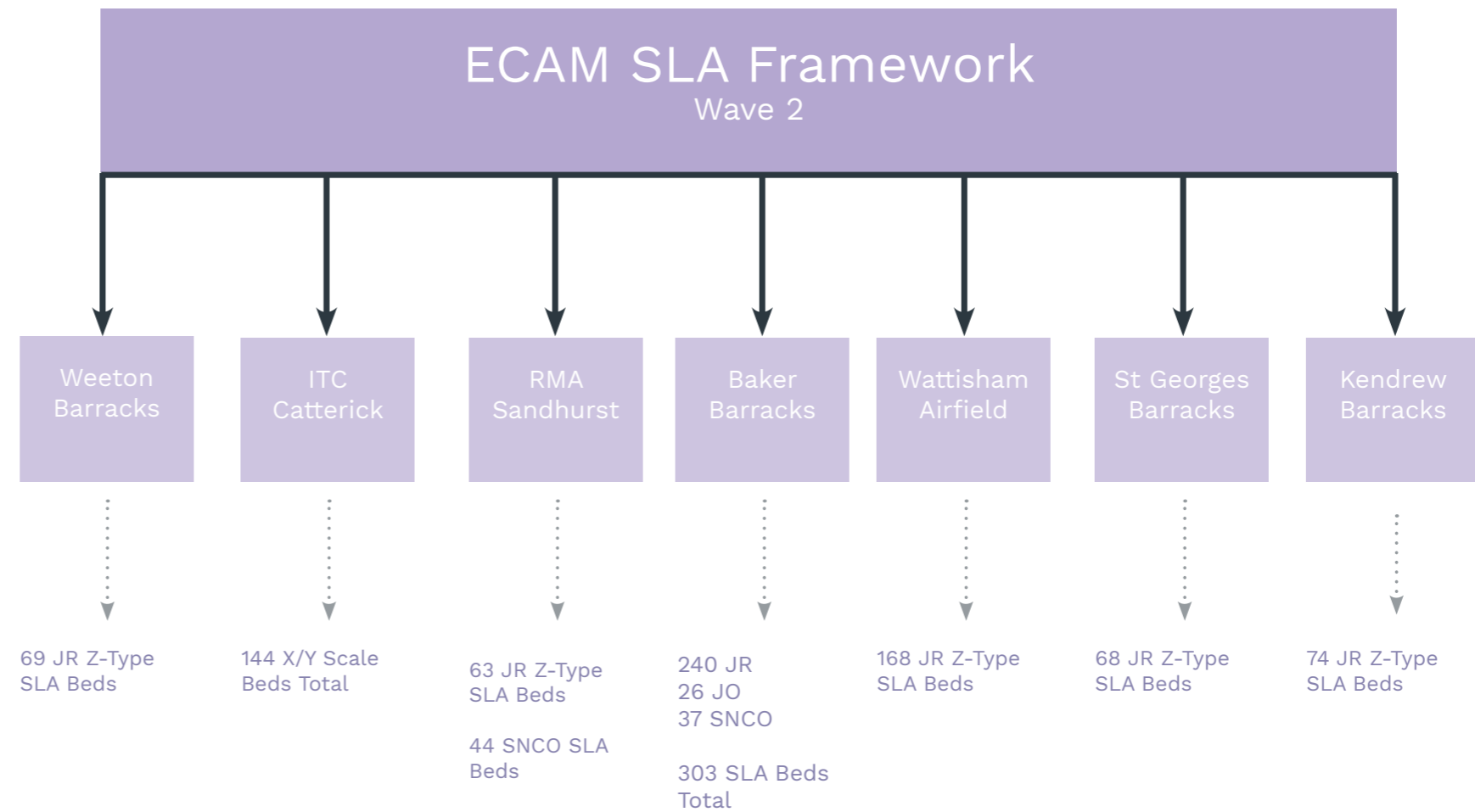
01 Introduction

1.2 MoD SLA Programme Context

Project Context (MoD Statement)

“Single Living Accommodation is a key part of the overall employment ‘offer’ made to regular service personnel by the Ministry of Defence (the Department). Around 80,000 personnel, more than half of the Armed Forces, live in Single Living Accommodation. However, for many years it has not been given the attention it deserves, suffering neglect at times of wider pressures on the defence budget. A ‘fix on fail’ policy has led to a £1.5 billion maintenance and repairs backlog across all accommodation, including Single Living Accommodation. Although there is variation in the type and quality of accommodation provided, much of the estate is old, and as of 31 October 2020, 36% of personnel in Single Living Accommodation lived in the lowest-grade accommodation. Of these, 3% were not required to pay a rental charge because their accommodation was so poor. Amongst service personnel living in Single Living Accommodation, satisfaction with the overall standard of their accommodation has declined from 58% in 2015 to 49% in 2020, with some personnel experiencing problems with basic amenities such as hot water. Despite this, the Department is only spending a third of what the Royal Institution of Chartered Surveyors suggest is needed to maintain the estate. As we have previously reported, low levels of satisfaction with military accommodation risks reducing retention levels among service personnel.”

“Ultimately, a failure to look after armed forces personnel properly affects the ability of the services to deliver operational capability, yet the Department has taken the goodwill of service personnel for granted and has been complacent in how it has managed its Single Living Accommodation. There is no minimum standard for Single Living Accommodation, unlike for private or social housing, or for the Department’s own Service Family Accommodation. It does not have the data to make decisions on the use of Single Living Accommodation or how best to invest, as the Single Living Accommodation Management Information System, on which work started eight years ago, is still not functioning. There is also no single senior person with responsibility for Single Living Accommodation, limited coordination across the Commands and no clear departmental strategy. Commands have plans to invest £1.5 billion to upgrade accommodation over the next 10 years and intend to utilise some of the additional £16.5 billion in defence funding announced in November 2020. However, this extra funding seems to have already been spent more than once before it had even arrived with the Department, which raises questions about how much investment Single Living Accommodation will actually receive. A step change in management is needed if the Department is to meet the reasonable expectations of service personnel and be fit for the 21st century.”



01 Introduction

1.3 Planning Authority Engagement

During September-October 2021, HLM and Arcadis attempted to reach out to Bracknell Forest LPA for an informal introductory meeting to discuss the proposals at RMAS however were unable to make meaningful contact.

HLM and Arcadis were able to draw from recent experience of working together on other projects at RMAS to identify some common planning risks on the Barracks such as;

- The removal of Category A tree(s)
- Potential height restrictions due to preservation of key views towards listed buildings

HLM produced a draft pre-application package which was issued to the regional DIO Town Planning SME on the 8th November 2021. Following the return of comments from the DIO SME, HLM issued their pre-application information for submission via Arcadis in December 2021.

Following liaison with the appointed case officer from the LPA, a site visit to discuss the proposed works was arranged for 6th April 2022. This subsequently had to be cancelled and as such we are currently in the process of re-arranging the visit. The pre-application enquiry for RMAS therefore remains open.

02

Site and Context

02 Site and Context

2.1 Heritage

Site History

Royal Military Academy's date back to 1741, when the first sanctioned military college was established, RMA Woolwich.

Historically RMA's have considered the study of military history to be a key part of their training regime, focusing on advancing technical skills, maths and science alongside more military orientated subjects.

The origins of RMA Sandhurst date back to 1802, when the Royal Military College (RMC) was established at Great Marlow and High Wycombe, in Buckinghamshire. The Senior and Junior departments of the RMC moved to a new specially built premises at Sandhurst in Berkshire in 1812, the site became known as RMC Sandhurst.

Cadets who completed the college course at RMC Sandhurst were awarded free commission into the Army, as the Army quickly acknowledged the fact that academic study developed effective military leaders, this belief was reflected in the courses at RMC Sandhurst and RMA Woolwich.

When it was founded RMC Sandhurst trained officers for arms other than the Royal Artillery and Royal Engineers. It wasn't until 1947 that it began training cadets for the Royal Artillery and the Royal Engineers, after RMC Sandhurst unified with RMA Woolwich to become the Royal Military Academy Sandhurst which it is known as in the present day.

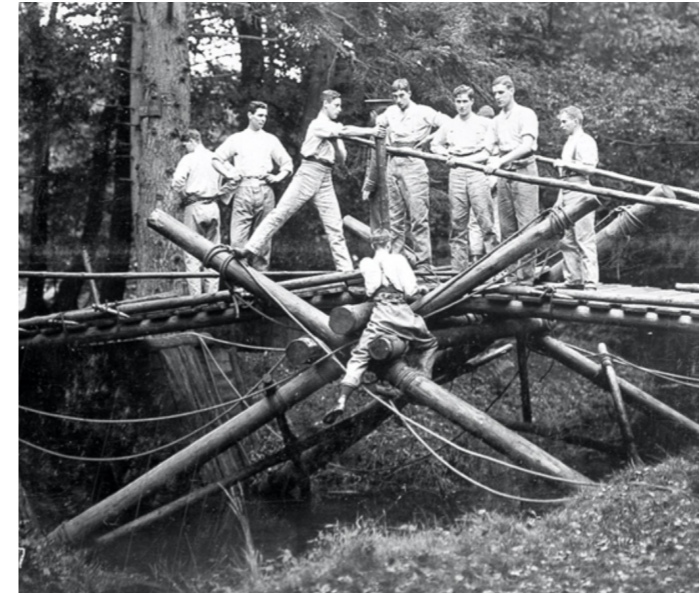
In 1972 RMA's became the sole establishment for male initial officer training in the British Army. It wasn't until 1992 that a new Commissioning Course finally unified the training of male, female, and overseas cadets.

The Royal Military Academy Sandhurst Collection documents the history of the Royal Military Academy Woolwich, the Royal Military College Sandhurst, and the Royal Military Academy Sandhurst, succinctly detailing the heritage of RMA Sandhurst.



Cadets constructing a Wooden Palisade, 1905

Source: <https://www.nam.ac.uk/explore/sandhurst-officers-and-role-history>



Cadets undertaking a Bridge building exercise, 1911

Source: <https://www.nam.ac.uk/explore/sandhurst-officers-and-role-history>



Passing Out Parade, 1955

Source: <https://www.nam.ac.uk/explore/sandhurst-officers-and-role-history>



Cadets attending a Lecture, 1960

Source: <https://www.nam.ac.uk/explore/sandhurst-officers-and-role-history>



Queen Elizabeth II opening the National Army Museum, 1960

Source: <https://www.nam.ac.uk/explore/sandhurst-officers-and-role-history>



Prince William at the Sovereign's Parade, 2018

Source: <https://www.thebritishmonarchy.co.uk/post/the-sovereign-s-parade-at-rma-sandhurst>

02 Site and Context
2.2 Site Location Plan



02 Site and Context

2.3 Site Location

The Royal Military Academy (RMA) Sandhurst is located in the town of Sandhurst. The site is located in the south-east of Berkshire, south of Bracknell. Sandhurst itself is located 51km west-southwest of central London.



02 Site and Context

2.4 Site Context

The RMA Sandhurst base is bordered primarily by towns; Camberley to the south-east, Blackwater to the south-west, and Sandhurst to the west. The primary vehicular entrance is from the south-west off of Yorktown Road. The main entrance serves the majority of the infrastructure on the base which is situated in the south-western corner of the MoD site.

RMA Sandhurst sits with a wider MOD site encompassing the natural landscape to the north and east which is used for military training activities.

North of Site

To the north RMA Sandhurst is bordered by areas of forestry and fields which extend beyond the natural landscape contained within the MoD site. Further north is the town Bracknell.

East of Site

Natural landscape owned by the MoD extends beyond the RMA Sandhurst infrastructure. To the east of the MoD owned landscape are residential estates located in Camberley.

South of Site

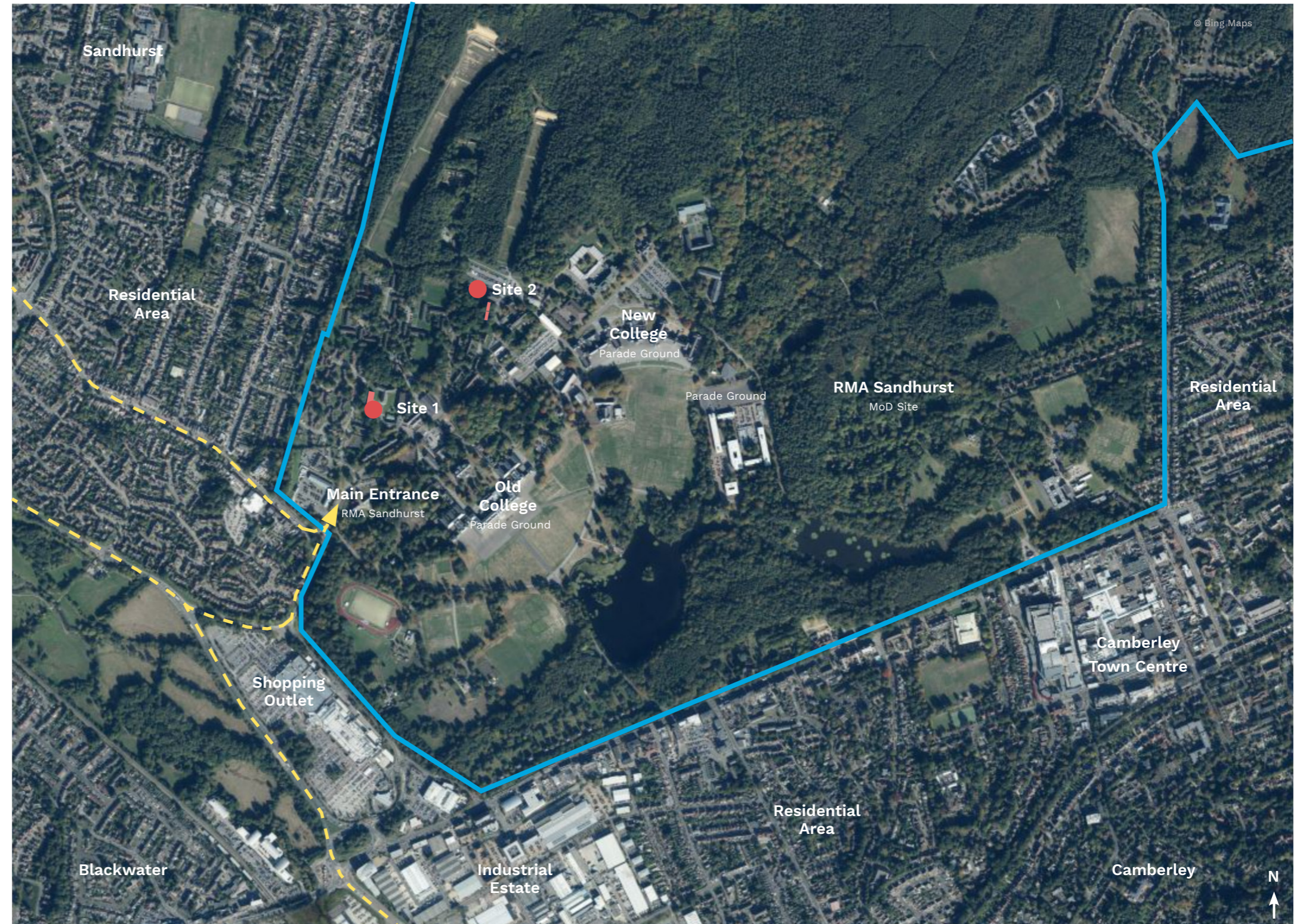
Shopping outlets, industrial units and residential estates border the site to the south.

West of Site

Residential neighbourhoods of Sandhurst border the site to the west.

As the majority of the RMA Sandhurst infrastructure is located in the south-western corner of the base, it can be easily accessed via existing vehicle and pedestrian networks within the MoD site.

Amenities located further afield can be easily accessed via the nearby bus network.



02 Site and Context

2.4 Site Context

Local Material Palette

The Royal Military Academy Sandhurst has many listed buildings. Most notably the Old College, New College and buildings surrounding Chapel Square. The listed infrastructure has a varied material palette consisting of brick, render and stone.

New residential developments within and around the area have also utilised various colours of brick as a facade material. Red brick, beige brick and stone are all common within the locality.

It is suggested that the design proposal features brick as a predominant facade material. Brick requires little maintenance compared to other materials and has high impact resistance.

Due to the location and nature of the proposal, robustness is essential to the building typology.

The palette of materials has been selected for a number of key objectives:

- Complement and have a relationship with the surrounding area and the existing infrastructure on the base
- Create a high quality and robust development
- Require minimal maintenance
- Carefully consider affordability (material palette shouldn't negatively impact the project costs)
- Ensure good acoustic standards/qualities
- Achieve high sustainability credentials



Old College - South East of Sites
Source: HLM Architects



New College - South East of Sites
Source: HLM Architects



Royal Memorial Chapel- South East of Sites
Source: HLM Architects



King Hammad Hall
Source: HLM Architects



Housing on Site - South of Site 1
Source: HLM Architects



Yorktown Road - Housing to South of Barracks
Source: Google Maps, Street View 2020

Suitable Material Palette



Taylor Maxwell, 211061
Source: <https://www.taylormaxwell.co.uk/product-colours/results/100>



Taylor Maxwell, 201033
Source: <https://www.taylormaxwell.co.uk/product-colours/results/100>



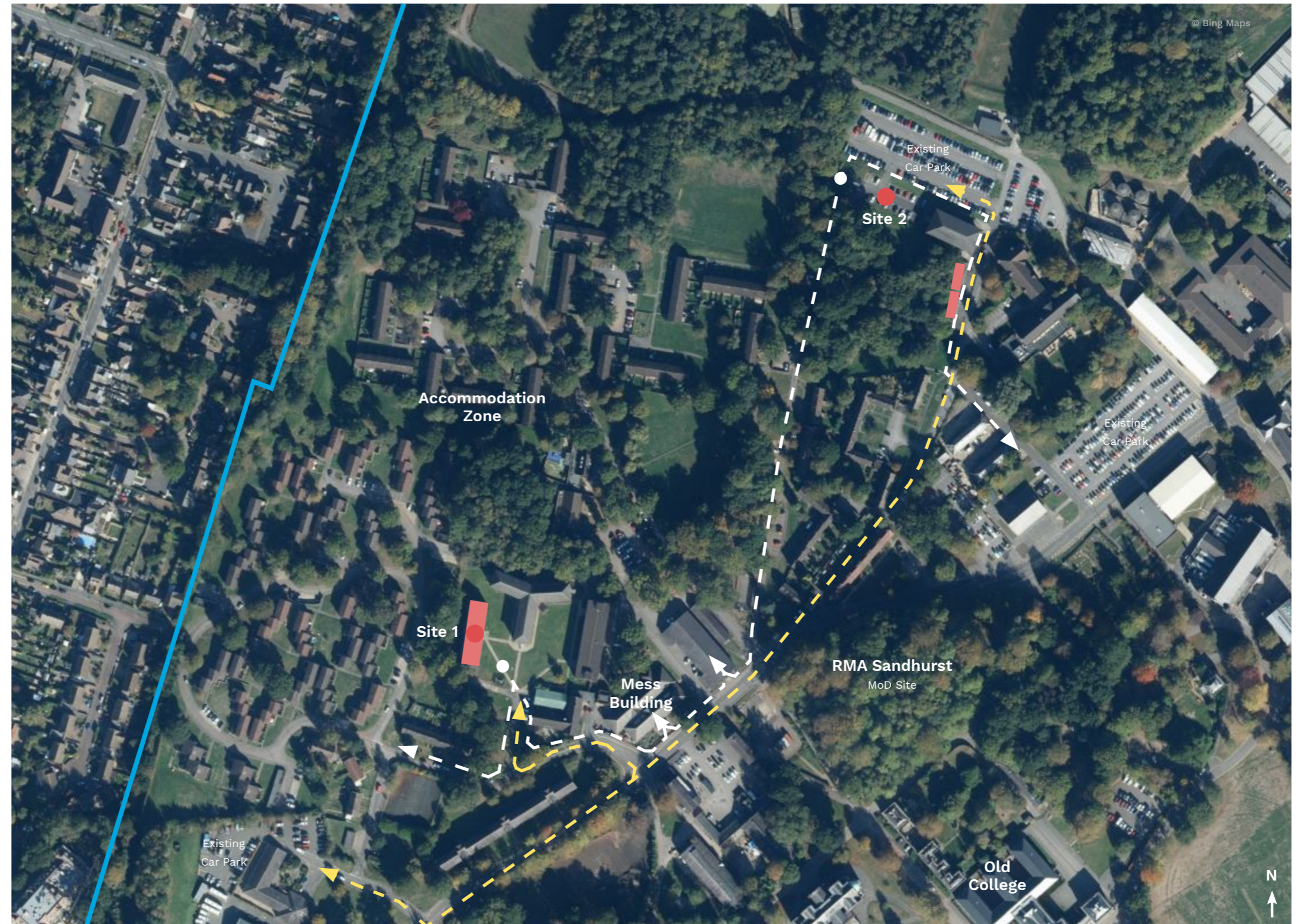
Taylor Maxwell, 201013
Source: <https://www.taylormaxwell.co.uk/product-colours/results/100>

02 Site and Context

2.5 Site Access & Movement

A closer immediate contextual analysis was undertaken that focused on access and movement between the development sites and the RMA Sandhurst key facilities. The analysis documents the suitability of the proposed development locations.

The RMA Sandhurst site is well zoned, therefore the masterplan and surrounding facilities need to be carefully considered when evaluating development possibilities. Both of the proposed development sites are situated within the accommodation zone, and as a result other accommodation blocks and mess buildings can be conveniently accessed on foot.



- Development Sites
- Building Scheduled for Demolition
- RMA Sandhurst Site Boundary
- - - Development Site Vehicular Access
- - - Pedestrian Routes leading to wider site