



# 11 – 18 EDUCATION SPACE PLANNING REPORT

States of Guernsey

30 NOVEMBER 2018



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# I.0 INTRODUCTION AND BACKGROUND

The States of Guernsey are implementing a new education vision which will end the current 11+ test and grammar/secondary education model and replace it with a new system of 11-18 education. The new system has been designed to provide the very best opportunities for all learners throughout their 11-18 year old education, irrespective of their academic performance at the age of 11.

In order to implement this policy some existing school sites will close, and others will need to expand to accommodate the increase in pupil numbers. We have examined the future education space requirements of the new schools in order to inform the brief for new buildings (or extensions to existing buildings) that will be required to support this future education vision.

## I.1 Background

Currently there are four schools that are operated by the States of Guernsey for 11-16 year-olds with an academic sixth form based on the selective Grammar School and Sixth Form Centre School site. At the age of 11 some students opting to sit the 11+ were selected to attend the Grammar School, with remaining students attending their catchment High School. At the age of 16 learners then moved on to the local FE College to undertake a vocational, technical or professional course of learning; or they progressed to the Grammar School and Sixth Form Centre to complete a programme of A Level studies; or they took up an apprenticeship or other training pathway.

On the Island there are also three grant aided independent schools which receive some States funding to support scholarships for young people who secure places in these schools. They are: Elizabeth and Ladies College who share a joint post-16 provision; and, Blanchelande Catholic College - which is a through-college catering for the ages of 4-16 that closed its Sixth Form some time ago.

## I.2 Future Vision

The future vision of the States of Guernsey for post-11 education is for there to be one 11-18 school operating on two sites. Under this plan the existing Grammar School and Sixth Form Centre and the La Mare 11-16 school would close and the new school would be then based on the sites of the current St Sampson's and Les Beaucamps schools. Current assumptions of the Education team are that there would be a ten-form entry intake on both sites. As a result, over the implementation of this policy, the current Grammar School and its Sixth Form Centre would close; in its place the new school would have a post-16 sixth form provision operating over both of its future sites. Whilst the relationship between the schools and the further education college on the island would be affected by this change, we understand that the intention is to continue to offer a vocationally-based post-16 education provision from the further education college on a single site; there are plans to 'join that provision up' with wider training and adult education offerings on the Island.

There are no changes to the independent school structure proposed as a result of these changes, although there will be a gradual reduction in the numbers of scholarship places that are funded as the future plans include the ending of the scholarship programme on the basis that the quality of the post-11 education for all learners will be improved. Existing scholarship places will be funded until learners complete their studies but no new scholarship places will be funded. The removal of the selective 11+ test may also reduce the demand for places in private schools from families whose children may not have been selected to attend the Grammar School had the new non-selective system not been introduced.

## I.3 Historic Roles and Conflict

We have been informed that there have been some disagreements in the past among the Education and Policy & Resources teams on the determination of space requirements and the impact that these have on capital budgets. With new build costs ranging from £3,000 to £4,000 per m<sup>2</sup> (these numbers are broad all-in estimates) we know that the briefed area is the key driver of capital costs. We understand that in the past the process of determining the area brief has not been fully owned across P&R and ESC teams.

It has been explained to us that a Guernsey factor was applied in the past on top of BB98 space allowances to cater for differences in average class sizes on the Island compared to the English norm. We do not fully understand the mechanics of this since there is nothing in BB98 or BB103 which prevents a school building having more smaller classrooms to meet the needs of its learners. We have understood that part of our task in this project has been to assess the validity of those assumptions, to develop a revised approach to space planning that can be agreed by all stakeholders and to assess the impact on the future brief of decisions that were taken in the design and construction of the two recently built new schools.

We understand the importance of 'getting this right' so that when proposals come forward for review by both Education and Resources/Policy teams they are able to pass the assessment criteria that will be applied at the 'Outline Business Case' stage.

## I.4 Final Brief – Two Sites, One School

We understand that in order to deliver the future 11-18 education vision the starting presumption is that the two recently built new schools will need to be adapted and extended to cater for the increase in pupil numbers from age 11-16 and also for the new Sixth Form provision for ages 16-18 with 450 pupils split equally across both sites. The two schools are:

- St Sampson's High School which was designed by Architecture PLB; and,
- Les Beaucamps School which was designed by Design Engine Architects.

We understand that a review took place in 2017 which suggested a total additional area might be required on both sites as follows:

- St Sampson's High, based on a 10-form entry, would need to increase by 7,100 m<sup>2</sup> to c16,600 m<sup>2</sup> in total (excluding the Le Murier); and,
- Les Beaucamps, based on a 10-form entry, would need to increase by 7,600 m<sup>2</sup> to c16,500<sup>1</sup> m<sup>2</sup> in total.

Together this would represent a total area requirement for the new school of 33,100 m<sup>2</sup> which represents an increase in space of 14,700 m<sup>2</sup>, or 75%, over and above the existing combined area of 18,400 m<sup>2</sup>.

This space planning project has been undertaken to determine the accuracy, or otherwise, of this assumption in order to provide the States of Guernsey with a clear analytical assessment of future space needs.

<sup>1</sup> Please note that the accommodation schedule that we were provided at the start of our work suggested that Les Beaucamps had an area of 8,858 m<sup>2</sup>. Following our detailed review of the final construction drawings we have agreed that the as-built areas are 9,881 m<sup>2</sup>. The numbers included in this section are based on the accommodation schedule information. In later sections we update these for the actual areas now confirmed.

## I.5 Scope of the Review

The scope of this review that was agreed as part of our service proposals is as follows:

- in the context of the existing buildings, to review standard BB103 space planning based on English school average attendance numbers and to apply these to the average predicted total school rolls in Guernsey and make recommendations as to an appropriate area brief for the extensions;
- to critically appraise areas to see how and why they differ from those suggested by BB103;
- to review the external areas against BB103 guidelines and requirements in the Guernsey context and sports facilities available in the vicinity of the proposed preferred sites; and,
- to engage with both parts of the States executive - Education, and Policy and Resources, to ensure a shared understanding of the issues and to agree a joint way ahead.

We have clarified that this scope applies both to building areas (for teaching and learning and support purposes) as well as to site areas (in relation to sporting, recreation and other activities). We have also been asked to review the future demographic profiling and consider the extent to which the brief for new buildings should allow for adaptation from education to other uses should the future demand for places not rise in accordance with the forecasts proposed.



# 2.0 KEY FINDINGS AND RECOMMENDATION

## 2.1 Selection of Sites

Both of the proposed selected sites for the operation of the new school at St Sampson's and Les Beaucamps have, in our view, sufficient space within their grounds to meet the future new build space requirements of the new school system. They are also far more suitable for adaptation and development to meet the future brief of the States of Guernsey than either the Grammar School and Sixth Form Centre or the La Mare school sites.

## 2.2 Current Spare Capacity

Based on UK space standards we consider that, without any further building work, Les Beaucamps High School has the capacity to increase its student intake from 470 (current number) to 715-908 pupils (as set out in Table 5.3) and that St Sampson's High School has the capacity to increase its student intake from 675 (current number) to 764-964 (as set out in Table 5.4).

## 2.3 Future Space Requirements

We have taken account of the current design of the existing schools and built a model for space planning that takes account of previous decisions made in relation to space standards at both Les Beaucamps High School and St Sampson's High School. We have modelled future demand for pupil places using data provided to us (as set out in section 5.1) together with our knowledge and experience of working in the English state school and further education sectors. We have developed a number of options and scenarios to test the potential range of future pupil numbers and their associated space requirements. We have based our assessment on both the top down application of the BBI03 formula and by reference to the Schedule of Accommodation tool (SoA), which we were provided with by the Executive Head, and which we have subsequently modelled and iterated.

From the work that we have completed we recommend that the minimum<sup>2</sup> additional accommodation required on both sites is as follows (as set out further in Table 5.14):

- St Sampson's - an additional 2,878 m<sup>2</sup> to take the total building to 12,378 m<sup>2</sup> ; and,
- Les Beaucamps – an additional 3,240 m<sup>2</sup> to take the total building to 13,121 m<sup>2</sup>.

Together this would represent a total area requirement for the new school of 25,449m<sup>2</sup> which represents an increase in space of 6,117 m<sup>2</sup>, or 32%, over and above the existing combined area of 19,332 m<sup>2</sup>. This is some 7,651 m<sup>2</sup> less than the areas that had been previously identified in the 2017 study referenced in section 1.4 above.

The additional area required for the two sites differs due to the St Sampson's site having a higher proportion of existing teaching spaces available. From the room schedule (refer to **Appendix 5**), we have identified that Les Beaucamps has two classrooms, two science laboratories and one textile classroom less than St Sampson's. As a result, more teaching space (and gross area) is required to be added to the Les Beaucamps site in order to cater for the same number of learners on both sites in the future.

<sup>2</sup> Please note we have not modelled within this analysis additional accommodation for community education or additional space for non-school staff.

## 2.4 Impact of Class Size on School Area

Our area recommendations are based on the required areas as determined using the Schedule of Accommodation tool. We have determined that a 10 Form Entry school would be large enough to cope with future planned demand on the assumption that - in some years - the average group size will rise from 24 to 26. We have carried out research on the implications of class size on education outcomes (see **Annex I** Background Research Paper on the Possible Link Between Class Size and Achievement) and we have found that the policy basis for the application of a universally lower than standard class size is weak. We have modelled alternative scenarios in this regard and set these out below:

Table 2.1 – Space Requirements Summary for Scenario I

Scenario I – Alternative Class Size Assumptions				
Site	Variation (group size)	Additional teaching space (m <sup>2</sup> )	Additional gross area (m <sup>2</sup> )	New site area (m <sup>2</sup> )
Les Beaucamps High School	A – 24 students	2,792	3,490	13,371
	B – 26 students	2,592	3,240	13,121
	C – 28 students	2,427	3,304	12,915
St Sampson's High School	A – 24 students	2,502	3,128	12,628
	B – 26 students	2,302	2,878	12,378
	C – 28 students	2,137	2,671	12,171

Please note that in the UK the 'standard' 11-16 class size is 30 rather than 24 or 26 and there is no evidence that we are aware of which supports an argument that lower class sizes has helped to improve education outcomes to date; on this basis we do not consider that having class sizes of 26 should be considered a detrimental policy choice to make. Should the States of Guernsey wish to continue with a maximum group size of 24, despite the absence of evidence that this represents a value for money policy choice, the additional space that would be required would be 250 m<sup>2</sup> at both Les Beaucamps and St Sampson's sites – resulting in a total additional area requirement of 500 m<sup>2</sup>.

## 2.5 Detailed Space Analysis

We set out in our report below a more detailed assessment of the types of additional space required to meet the future needs of the two school sites. We also set out a number of interventions that we consider could make better use of the existing buildings: these include converting 'over-sized' classrooms to IT labs, and converting some IT labs to science or art rooms.

## 2.6 SEN and Inclusive Education Policy

We have also considered both the current buildings that are occupied by Le Murier School and the current approach to inclusive education. In our view, a substantial proportion of the learners at Le Murier School might benefit from a better education if they were taught in a mainstream school setting. We have therefore modelled the impact of adopting a more inclusive approach to SEN provision and have concluded that the relocation of provision for learners with the most acute needs from the St Sampson's High School site may release 3,630 m<sup>2</sup> (of which c1,300 m<sup>2</sup> is currently being used as teaching space) to meet the future accommodation needs of the new school. In discussion with officers we have identified potential relocation options that may include an existing school site such as the Le Rondin School & Centre (which we understand may be below capacity), or to a bespoke new build (on one of the two school sites, or offsite). We have modelled the potential impact of this policy option on the total space required at the preferred St Sampson's site. We have determined that, based on the current ratio of teaching to non-teaching space, the inclusion of Le Murier School buildings within the base-case area scenario might mean that the additional area needed to be added to the site to accommodate the planned increase in student numbers at the St Sampson's site would reduce from 3,240m<sup>2</sup> to no more than c1,500 m<sup>2</sup>, which would take the total building area to 14,588 m<sup>2</sup>.

We have also estimated that a more inclusive SEN policy might require a further 500 m<sup>2</sup> to be added to the Les Beaucamps site, increasing the total additional space required there from 3,240 m<sup>2</sup> to 3,740 m<sup>2</sup>. This would mean that the additional space requirement over the two sites would reduce from 6,117 m<sup>2</sup> to no more than 4,877 m<sup>2</sup>.

As we further observe in section 6, some of the existing non-teaching areas in Le Murier School could be converted into teaching space and this would further reduce the need to create additional space to meet the needs of future students on this site. We also observe that the more generous non-teaching:teaching area ratio in the Le Murier buildings, in comparison to the St Sampson's School buildings, creates more of a sense of space than may otherwise be possible via adaptations to the existing school buildings.

We recognise that this option would still require around 30 learners with the most acute needs to be accommodated elsewhere on the site – or at another school site. There may well be a cost of either conversion or new build facilities to meet this need. We have not assessed the space need or the detailed brief for this but consider that the cost of this move is likely to be easily accommodated within the budget that would be saved by reducing the new-build area requirements at St Sampson's from 2,878 m<sup>2</sup> to c1,500 m<sup>2</sup> or less.

Therefore, on the basis of inclusion, cost-efficiency and programme delivery, we recommend that this option be given careful consideration. We understand that since we first made this observation, agreement has been reached that a feasibility study should be conducted in order to evaluate it as part of the next stage of planning for the future. We recognise that the assumptions we have made in respect of the number of learners and the split of learners over the two sites would need to be further assessed and the impact of further adjustments taken account prior to confirming the future space brief on both sites.

## 2.7 Review of External Areas

Finally, we have examined the availability of external space at both Les Beaucamps and St Sampson's sites.

At the St Sampson's site there is sufficient external space to meet the requirements of increased learner numbers on that site for most categories of external space with the exception of 'soft out-door PE'. This means that there is adequate space for tarmac and MUGA and informal play areas but that there is likely to be a substantial shortfall against the theoretical requirements for playing field space. At the Les Beaucamps site there is sufficient external space only to meet the requirements of increased learner numbers for 'hard outdoor' and 'hard informal and social areas' although the potential purchase of a nearby field would go some way to alleviate this shortfall. There appears to be a substantial future shortfall against the theoretical requirements for both soft informal areas and for playing field space.

BB103 Guidance makes it clear that the provision of soft outdoor PE space is the area of least priority when considering external space for a new school. The vast majority of new schools – and very many existing schools – do not provide areas large enough to comply with the guidance in this regard. The guidance states that *"Some schools will be on restricted sites and will not have enough outdoor space to meet requirements on site. In these situations, students will need to be provided with access to suitable offsite provision"*. We observe that there are a number of offsite locations<sup>3</sup> which might be suitable for this purpose including the Garenne Stand (c.14,600 m<sup>2</sup>), Hockey Club Pitch (c.6,000 m<sup>2</sup>), playing fields at the current La Mare site (c. 25-33,000 m<sup>2</sup>) and pitches at Beau Séjour site (18,500 m<sup>2</sup>). We consider that the effective management of these assets, to allow for their use by the new school, would give pupils access to premium quality specialist spaces that are unlikely to be able to be provided to the same standard on any single site.

<sup>3</sup> We recognise that it will be important to review the current users and associated agreements on each of these sites in order to confirm the extent to which they may be available to support the future school's use and how the facilities could be shared. We also understand that part of the external spaces at Beau Séjour (Cambridge Park) is owned by St Peter's Port Parish and any use of that space would need to be agreed with them.







## 3.0 METHODOLOGY

In this section we describe the methodology that we have adopted in our space planning analysis which has underpinned the work we have completed on this project.

### 3.1 Background and Qualitative Research

On 16 and 17 October we met with key stakeholders and visited each of the existing school sites to gain a closer understanding of the needs of the future school and to understand how the existing schools currently operate. We visited each of the sites and walked around most of the buildings and a sample of rooms and spaces in each school such as classrooms, specialist spaces, dining areas, etc.. We also examined the quantum and quality of external areas.

At the start of our visit we attended a workshop with the Executive Head and her team to identify the potential constraints of the preferred sites (e.g. shortage of specialist and non-teaching spaces, inadequacy of dining areas, concerns around circulation at the St Sampson's site, shortage of external sport facilities at Les Beaucamps, etc.). We also met with officers from both Policy & Resources and the Education team along with the President and Vice President of the Education Sport and Culture Committee to discuss our early observations and to explain our approach to the work. A set of notes from that visit is included as **Annex 2** to this report.

Following the two-day site visit, we summarised a number of key issues for consideration as part of our previously agreed scope and brief:

- the two preferred sites are currently operating under capacity and therefore there is potential for accommodating a degree of growth in student numbers without further physical intervention;
- the two preferred sites are, however, not big enough to accommodate forecast student numbers from the academic year 2022/23 when La Mare will no longer be used and the majority of students from the Grammar School (Y7-Y10) and Sixth Form Centre (Y12) will be accommodated within Les Beaucamps High School and the St Sampson's High School sites;
- there is a need to identify what new additional spaces (for teaching activities, for learning activities, for staff, etc.) are needed and of what sizes they need to be to accommodate future student numbers;
- the site of the St Sampson's High School is also the home of the Le Murier SEN School and we observed both an oversupply of space at this school, a lack of integration between the activities of the two schools and a large number of learners that we would normally expect (in a UK context) to be taught in a mainstream setting; and,
- some teaching spaces have been over-designed in terms of size and therefore their current capacity is sufficient to accommodate a higher number of students than is currently planned.

We then met one representative of the Education, Sport & Culture department from the States of Guernsey in our office in Winchester on Tuesday 6 November 2018 and reviewed our emerging findings and interim analysis ahead of completing our work on this report.

### 3.2 Building Bulletin 103 (BB103)

This document was created and published by the UK Department of Education in June 2014 and provides guidelines to assist in the creation of a design brief for a new school, for school refurbishment, for conversion projects or to help inform the brief for the expansion of an existing school. We have based our space planning analysis on the latest BB103 guidelines. We are aware that the design of the two newer school buildings that have been selected as the preferred sites for the new school (Les Beaucamps and St Sampson's) used the previous Building Bulletin, BB98. We note that BB103, as the latest guidelines, offers 'non-statutory area guidelines for mainstream school buildings and sites'. Whilst these guidelines are non-statutory we know that in the UK both the Department of Education and Her Majesty's Treasury use them as a basis for the allocation of capital funding for new schools.

BB103 also states that "the guideline offers recommendations for both overall categories of space and individual types of spaces (teaching area, learning area, space for dining, etc.) and includes graphs and formulae to show the recommended area ranges of these spaces. The document also sets out the types and categories of external areas and includes site area recommendations for the various categories of outdoor spaces needed within the playing field area and net site area. The graphs allow users to determine the sizes of external areas." The recommended area range is calculated by using the formula suggested and by using the number of students as the key input. This could be the actual number of learners in the case of existing building where the use of the school is being tested, or the forecast number of students in the case of a proposed expansion or for the creation of a new school building.

In addition, BB103 supports the Schedule of Accommodation (SoA) tool and states that "the tool can be used to calculate the number and types of spaces recommended for a specific school based on its proposed pupil numbers, age range and curriculum. For secondary schools a curriculum analysis, like the template attached to the SoA tool, should be used to check the number and type of rooms that suit the curriculum of the individual school." In the analysis that we have completed, we have used the BB103 guidelines to calculate the overall range within which the new school area should fall along with the individual space type requirements as described below. BB103 suggests different formulae depending on the school level (primary, secondary, sixth form, etc.) and for the purpose of this analysis we have used formulae for both secondary and sixth form levels and have combined these to calculate the required area for the two new sites. Whilst we understand that the intention is for one school to operate over two sites, we have carried out our space planning on the basis that there will be two separate school communities which will each require the full range of secondary and sixth-form facilities – hence we have assessed space needs as if both sites were operating as self-contained school units.

BB103 defines the net area as follows: "The net area is the total area of all usable spaces, both teaching and non-teaching. It includes everything except corridors, toilets and showers, boiler and plant rooms, school kitchens, and the area occupied by internal walls". Therefore, the non-net area includes toilets and personal care, kitchen facilities, circulation, plant and internal walls. BB103 then defines the overall gross area as the sum of net and non-net areas. For a more detailed description of this guidance please see: "Area guidelines for mainstream schools – Building Bulletin 103 (June 2014)". We have therefore used BB103 to complete a 'top-down' assessment of the range of areas required at the new school sites after taking into account in some detail how the design of the existing two school sites meets the needs of the future school.



We have also been provided with a planned SoA from the Executive Head and her team. We are aware that this file is based on the SoA template provided by BB103 and that the School has adjusted it to reflect the future school's curriculum offer. We have further adapted this template to allow us to assess the impact of changes in pupil numbers, form sizes and forms of entry on the detailed build-up of space-type requirements. We have used this tool to cross-check the top-down space assessment on a 'bottom-up' basis.

### 3.3 Building Bulletin 98 (BB98)

We are aware that the two preferred sites for the new one-school model were originally designed using an adapted version of this earlier UK space guideline. For this reason, we agreed to analyse the differences in space requirements between BB98 and BB103 guidance documents and assess how these differences impact on the future brief. We know, for instance, that the latest BB103 guide recommends reduced minimum internal and external areas and we anticipated that the application of BB103 guidance on a site designed using BB98 would identify additional spare capacity based on current actual numbers.

BB98, being the previous version of the latest BB103, has the same structure and broad approach as the current guidance: the difference between them is due to the different base area and area per learner values given and the subsequent space planning formulae adopted. Further details on this guideline can be found in: "Briefing Framework for Secondary School Projects – Building Bulletin 98 (2004)".

### 3.4 Review and Assessment/Validation

We reviewed and validated the results obtained from the BB103 formulae against the more detailed build-up of space requirements set out in the SoA. We checked if the outcomes from the Schedule of Accommodation were in line with and within the range suggested by BB103 and we comment on our findings in the analysis below.

# 4.0 ASSESSMENT OF EXISTING SPACE AND CAPACITY

## 4.1 Introduction and Methodology

We were asked by the States of Guernsey to calculate the space requirements for the two preferred schools as they currently operate, as they were designed, and as they would be designed for future planned student numbers. We have therefore applied BBI03 guidelines to show a range of space requirements. We have considered a wide range of variables which could impact on our results which we describe below. We have been informed that the two existing schools were designed broadly using BB 98 guidelines and we have adjusted the outcomes of our new analysis to take into account what has been described as “Guernsey factor”. This amplifying factor was used to provide more space than that which is generally adopted in the UK (we understand this to be at least an additional 16% of area over and above BB98 requirements). We have then tested the “real” capacity of the two buildings and also the reduced capacity due to the “Guernsey factor”.

## 4.2 Base Case Assumptions

We have made the following base assumptions which have been adopted in each model and scenario tested:

- the number of students adopted for the “current student number” scenario is based on the information shared by the States of Guernsey (as requested by PMc in the “Request For Information - RFI”) – this is the document “2018.05.01 Secondary School Population”;
- the current number of students for the academic year 2018/19 is 470 pupils enrolled at the Beaucamps site and 675 pupils at the St Sampson’s site;
- the two sites currently accommodate secondary pupils aged 11-16 and therefore we have used formulae from BBI03 and BB98 for secondary learners only when assessing the current capacity based on current numbers;
- the existing areas on both campuses have been obtained from the room schedule shared by the States of Guernsey in response to our RFI – we have not completed a measured survey in order to test the robustness of that data set. The three room schedules can be found in **Appendix 5**;
- the ‘as-designed’ capacity of the two schools was reported to us as 660 pupils at Les Beaucamps High School and 720 pupils at St Sampson’s High School; and,
- the comparative UK capacity of the existing buildings was reported to us as 825 pupils at Les Beaucamps High School and 900 pupils at St Sampson’s High School.

We also found that on both campuses there are some spaces that are not always provided in mainstream schools in the UK according to BBI03 e.g. the swimming pools and their associated ancillary spaces which have been grouped as ‘supplementary areas’ in the room schedules (refer to **Appendix 5**); however, their net and non-net areas are included in the overall spaces as suggested by BBI03.

The following table shows the current student numbers, and the year group breakdown, that we have used in this part of our analysis:

**Table 4.1 – Current student numbers in Les Beaucamps High School and St Sampson’s High School – academic year 2018/19**

Student number										
2018/19	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Lower school	Sixth Form	Total
Les Beaucamps	98	91	90	95	96			470	0	470
St Sampson	133	133	139	138	132			675	0	675



4.3 Pupil Number and Area Capacity Assessment – Les Beaucamps

4.3.1 Current Student Numbers

We find that, according to BB103, and using the current student numbers of 470, the Beaucamps building gross area should range between c4,000 m<sup>2</sup> and c4,600 m<sup>2</sup>. According to BB98, the area should lie between c4,500 m<sup>2</sup> and c5,100 m<sup>2</sup>. We have compared the existing gross area (9,881 m<sup>2</sup>) with the BB103 upper range outcomes, and find that there is a surplus of c5,300 m<sup>2</sup> which represents 53% of the existing gross area. This would suggest that theoretically the building is currently used at around 47% capacity. Using BB98 guidance the difference between suggested maximum area required and existing area is reduced to c4,800 m<sup>2</sup>.

We also analysed the useable area (defined by BB103 as net area) and, established that according to the guidelines, the current net area should range between c2,900 m<sup>2</sup> and c3,200 m<sup>2</sup>. The existing net area on site is c6,000 m<sup>2</sup> which suggest a surplus of c2,800 m<sup>2</sup>. Using BB98 guidelines would suggest that difference from the existing area is c2,500 m<sup>2</sup>.

According to both BB98 and BB103 there is a surplus of teaching space of circa 1,000 m<sup>2</sup> which represents over 1/3 of the existing teaching area.

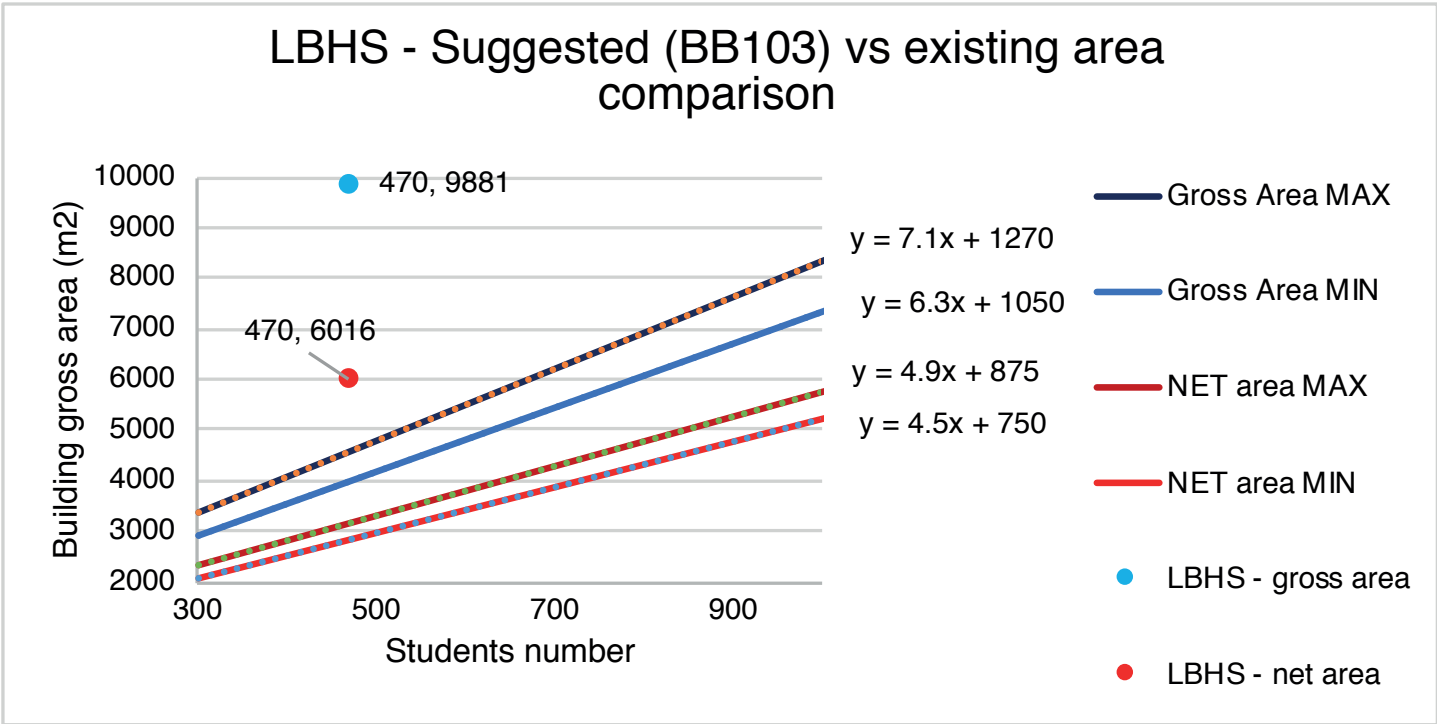
These results show that the school is currently underused – we confirmed this during our walk around during our site visit. Table 4.2, below, summarises the results of this analysis.

Table 4.2 – Les Beaucamps space requirement at current student numbers

	Current 2018/19 student number					LBHS=470 Students			
Les Beaucamps	BB98 minimum area required (m²)	BB98 maximum area required (m²)	BB103 minimum area required (m²)	BB103 maximum area required (m²)	Existing area (m²)	BB98 Difference (based on upper value)(m²)	BB98 Percentage	BB103 Difference (based on upper value)(m²)	BB103 Percentage
Gross Area	4,521	5,088	4,011	4,607	9,881	4,793	49%	5,274	53%
Net Area	3,118	3,509	2,865	3,178	6,016	2,507	42%	2,838	47%
Other net area					642				
Halls, Dining and PE	860	1,107	582	929	1,212	105	9%	283	23%
Storage	340	413	243	388	618	205	33%	230	37%
Staff and Admin.	266	340	194	340	478	139	29%	139	29%
Learning Resources	193	266	146	243	377	111	29%	135	36%
Teaching Area	1,460	1,701	1,363	1,701	2,689	988	37%	988	37%
Sum of minimums	3,118	3,827	2,527	3,600	6,016	2,190	36%	2,416	40%

We set out in the graph below a visual depiction of how we judge that the building is oversized in terms of overall gross area and net area at current student numbers.

Graphic 4.1 – Comparison of existing area and BB103 space suggested



4.3.2 “As designed” Capacity (reduced to take into consideration the “Guernsey factor”)

We have adopted, as input into the model, the figure that we were given by the Executive Head for the maximum number of learners that could be enrolled each academic year as the building currently stands. The increase in the number of students between current and “as-designed” capacity is 40% of current enrolments. The required area varies between +25% and +30% of that shown in the previous section 4.3.1. At these higher numbers, we find that the building is still oversized, whether according to BB98 or to BB103. The only exception is for “Hall, dining and PE” which now sits within the BB98 range. Overall the area of the building is still between 35% and 40% larger than the BB upper ranges as we show in Table 4.3 below.

Table 4.3 – Les Beaucamps space requirement at the “as designed” capacity

	Building "as designed" student capacity					LBHS=660 students			
Les Beaucamps	BB98 minimum area required (m²)	BB98 maximum area required (m²)	BB103 minimum area required (m²)	BB103 maximum area required (m²)	Existing area (m²)	BB98 Difference (based on upper value) (m²)	BB98 Percentage	BB103 Difference (based on upper value) (m²)	BB103 Percentage
Gross Area	5,733	6,383	5,208	5,956	9,881	3,498	35%	3,925	40%
Net Area	3,954	4,402	3,720	4,109	6,016	1,614	27%	1,907	32%
Other net area					642				
Halls, Dining and PE	955	1,221	696	1,062	1,212	-9	-1%	150	12%
Storage	406	489	290	464	618	129	21%	154	25%
Staff and Admin.	323	406	232	406	478	72	15%	72	15%
Learning Resources	240	323	174	290	377	54	14%	87	23%
Teaching Area	2,030	2,328	1,914	2,328	2,689	361	13%	361	13%
Sum of minimums	3,954	4,767	3,306	4,550	6,016	1,249	21%	1,466	24%

4.3.3 Building Capacity at UK Standards

We then ran the model by increasing the number of students further to identify the maximum capacity of the building according to UK standards. As reported above, the figure that we were provided for its capacity based on UK standards was 825 pupils. Even at this higher number we found that the building still shows a significant excess of both net and gross area on both models. The individual area types are still over the upper limit according to BB103 guidelines with the exception of the dining/hall and teaching areas which are now within the recommended range.

Table 4.4 – Les Beaucamps space requirement at maximum capacity

	Building maximum capacity according to UK standard					LBHS=825 students			
Les Beaucamps	BB98 minimum area required (m²)	BB98 maximum area required (m²)	BB103 minimum area required (m²)	BB103 maximum area required (m2)	Existing area (m²)	BB98 Difference (based on upper value) (m²)	BB98 Percentage	BB103 Difference (based on upper value) (m²)	BB103 Percentage
Gross Area	6,786	7,507	6,248	7,128	9,881	2,374	24%	2,754	28%
Net Area	4,680	5,178	4,463	4,918	6,016	839	14%	1,099	18%
Other net area					642				
Halls, Dining and PE	1,038	1,320	795	1,178	1,212	-108	-9%	35	3%
Storage	464	555	331	530	618	63	10%	88	14%
Staff and Admin.	373	464	265	464	478	14	3%	14	3%
Learning Resources	281	373	199	331	377	5	1%	46	12%
Teaching Area	2,525	2,873	2,393	2,873	2,689	-184	-7%	-184	-7%
Sum of minimums	4,680	5,584	3,983	5,375	6,016	432	7%	641	11%



4.4 Pupil Number and Area Capacity Assessment – St Sampson’s

4.4.1 Capacity at Current Student Numbers

We find that, according to BB103 and using the current enrolment figure of 675, the gross area of St Sampson's building should range between c5,300 m² and c6,100 m². According to BB98 the gross area should fall within the range c5,800 m2 and c6,500 m². We compared the existing gross area (9,500 m²) with the BB103 upper range area and found a surplus of over 3,400 m² which represents 36% of the existing gross area. This would suggest that, theoretically, the building is currently used at c64% capacity. According to BB98 the difference between the suggested maximum area required and the existing area is reduced to c3,000 m².

We analysed the useable area (defined by BB103 as net area) and, according to the guidelines, found that the current net area should range between c3,800 m² and c4,200 m². The existing net area on site is c6,300 m² which suggests a surplus of c2,100 m². BB98 suggests a lower range and the difference from the existing net area is c1,850 m².

In both BB98 and BB103 there is a surplus of teaching space of circa 500 m² which represents around 1/5 of the existing area.

These results show that the school is currently underused. During our site visit we observed that some parts of the building appeared underused (some workshops during the lesson period, and the hall at lunch time, in particular) but the common areas such as dining and circulation space were quite busy. We gained an impression from our visit that this site appears more heavily used than Les Beaucamps.

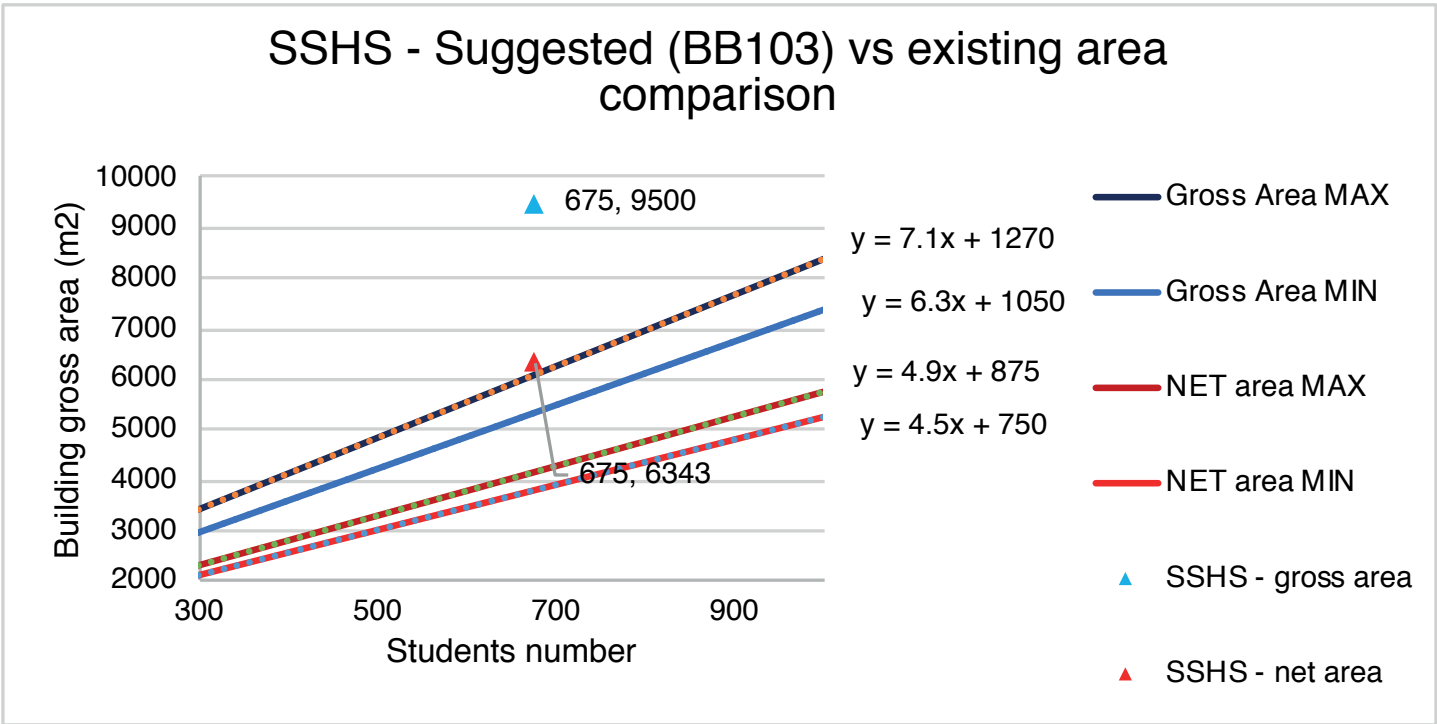
Table 4.5 below summarises the results of this analysis.

Table 4.5 – St Sampson’s space requirement at current student numbers

	Current 2018/19 student number					LBHS=675 Students			
St Sampson's	BB98 minimum area required (m²)	BB98 maximum area required (m²)	BB103 minimum area required (m²)	BB103 maximum area required (m²)	Existing area (m²)	BB98 Difference (based on upper value)(m²)	BB98 Percentage	BB103 Difference (based on upper value)(m²)	BB103 Percentage
Gross Area	5,829	6,485	5,303	6,063	9,500	3,015	32%	3,438	36%
Net Area	4,020	4,473	3,788	4,183	6,343	1,871	29%	2,161	34%
Other net area					801				
Halls, Dining and PE	963	1,230	705	1,073	1,198	-32	-3%	126	10%
Storage	411	495	294	470	596	101	17%	126	21%
Staff and Admin.	328	411	235	411	441	30	7%	30	7%
Learning Resources	244	328	176	294	454	127	28%	160	35%
Teaching Area	2,075	2,378	1,958	2,378	2,853	476	17%	476	17%
Sum of minimums	4,020	4,841	3,368	4,625	6,343	1,502	24%	1,718	27%

The graph below provides a visual depiction of how we judge that the building is oversized in terms of overall gross area and net area at current student numbers.

Graphic 4.2 – Comparison of existing area and BB103 space suggested



4.4.2 “As designed” Capacity (reduced to take into consideration the “Guernsey factor”)

We have adopted as input into the model, the figure that we were given by the Executive Head for the maximum number of learners that could be enrolled each academic year as the building currently stands. The increase in the number of students between current and “as-designed” capacity is 7% of current enrolments. At these higher numbers, we find that the building is still oversized, whether according to BB98 or to BB103. The only exception is for “Hall, dining and PE” which now sits within the BB98 range. Overall the area of the building is still between 29% and 33% larger than the BB upper ranges as we show in Table 4.6 below.

It should also be noticed that whilst the overall area of the building exceeds the suggested area requirement by over 3,000 m² based on BB103, the teaching area is only exceeded by 300 m².

Table 4.6 – St Sampson’s space requirement at the “as designed” capacity

	Building "as designed" student capacity					LBHS=720 students			
St Sampson's	"BB98 minimum area required (m²)"	"BB98 maximum area required (m²)"	"BB103 minimum area required (m²)"	"BB103 maximum area required (m²)"	"Existing area (m²)"	"BB98 Difference (based on upper value) (m²)"	BB98 Percentage	"BB103 Difference (based on upper value) (m²)"	BB103 Percentage
Gross Area	6,116	6,792	5,586	6,382	9,500	2,708	29%	3,118	33%
Net Area	4,218	4,684	3,990	4,403	6,343	1,659	26%	1,940	31%
Other net area					801				
Halls, Dining and PE	985	1,257	732	1,104	1,198	-59	-5%	94	8%
Storage	427	513	305	488	596	83	14%	108	18%
Staff and Admin.	341	427	244	427	441	14	3%	14	3%
Learning Resources	255	341	183	305	454	113	25%	149	33%
Teaching Area	2,210	2,526	2,088	2,526	2,853	327	11%	327	11%
Sum of minimums	4,218	5,064	3,552	4,850	6,343	1,279	20%	1,493	24%

4.4.3 Building Capacity at UK Standards

We then ran the model by increasing the number of students further to identify the maximum capacity of the building according to UK standards. As reported above, the figure that we were provided for its capacity based on UK standards was 900 pupils. Even at this higher number we found that the building still shows an excess of both net and gross area on both models. With the exception of the Learning Resources area (which remains over BB103 target), the rest of the individual area types are within +/- 11% of the guideline upper areas.

Table 4.7 – St Sampson’s space requirement at maximum capacity

	Building maximum capacity according to UK standard					LBHS=900 students			
St Sampson's	"BB98 minimum area required (m²)"	"BB98 maximum area required (m²)"	"BB103 minimum area required (m²)"	"BB103 maximum area required (m²)"	"Existing area (m²)"	"BB98 Difference (based on upper value) (m²)"	BB98 Percentage	"BB103 Difference (based on upper value) (m²)"	BB103 Percentage
Gross Area	7,265	8,019	6,720	7,660	9,500	1,482	16%	1,840	19%
Net Area	5,010	5,530	4,800	5,285	6,343	813	13%	1,058	17%
Other net area					801				
Halls, Dining and PE	1,075	1,365	840	1,230	1,198	-167	-14%	-32	-3%
Storage	490	585	350	560	596	11	2%	36	6%
Staff and Admin.	395	490	280	490	441	-49	-11%	-49	-11%
Learning Resources	300	395	210	350	454	59	13%	104	23%
Teaching Area	2,750	3,120	2,610	3,120	2,853	-267	-9%	-267	-9%
Sum of minimums	5,010	5,955	4,290	5,750	6,343	388	6%	593	9%

4.5 Indoor Sport Provision Requirement

We analysed the Beaucamps’ floor plan and room schedule and we observed that the Sports Hall building contains a four-lane swimming pool, a gymnasium of c.250 m² plus a sports hall which contains four courts with an area of c.600 m².

We analysed the St Sampson’s High School’s floor plan and room schedule and we observed that the sports zone is the physical link between St Sampson’s and Les Murier buildings. The zone contains a six-lane swimming pool, a gymnasium of c.200 m² and the sport hall itself contains four courts with an area of c.600 m².

We have compared the existing area for sports activities with the BB103 and BB98 guidelines and both documents suggest that for schools with more than 450 students a four-court sports hall of c600 m² should be provided. We therefore observe that both schools more than comply with indoor sports requirements. Indeed, this large volume of internal sports space accounts for a significant element of the ‘over-supply’ of non-teaching areas in both schools at the present time. This generous provision of internal sporting space should also be taken into account in assessing the adequacy of outside sporting space.



4.6 Existing External Area and m² Space Requirement

We have assessed the external area for both schools from the site plans provided to us by Design Engine Architects and the States of Guernsey. It can be noted in table 4.7 that the Beaucamps site occupies an area of c.41,000 m², the St Sampson’s School on c.89,000 and, if combined with Le Murier school, the site area is c105,000 m².

Table 4.8 – Existing External Areas

	Existing area (m²)		
	Les Beaucamps High School	St Sampson’s High School	St Sampson’s High School + Le Murier School
Gross Area	40,610	88,660	104,860
Net Area	15,980	35,355	42,215
Soft outdoor PE	5,450	13,900	15,930
Soft informal and social area	700	9,550	10,750
Hard outdoor PE	5,000	6,750	7,550
Hard informal and social area	3,230	5,155	7,985
Habitat area	1,600	0	0

4.6.1 Les Beaucamps High School External Areas

We observed that the campus has a limited footprint and that the buildings sit on a relatively steeply sloping site with a flat area at the top of the site situated between the main teaching blocks and the sports hall building. The majority of the non-building area accommodates sporting facilities which comprise:

- a large MUGA with two full sized five-a-side pitches of c.3,000 m²;
- a large tarmac area with a range of sports activities lined-up such as tennis courts of c.2,000 m²; and,
- a playing field which provides one full-size football pitch at c.5,450 m².

We understand that the current location of the MUGA pitches is the most pragmatic location for adding additional teaching and learning space on the site and that, if this site were used, the MUGA courts would be relocated to the playing field. This would create a deficit of on-site playing pitches which could be met by acquiring more land, making use of higher quality pitches managed by the Education, Culture and Sports Committee on other sites on the island and/or sharing facilities at the St Sampson’s site.

Another of the site’s constraints is parking space. We observed that the car park is located at the front of the site next to the MUGA courts. We recommend that a parking survey be undertaken and a future travel plan be developed to understand the current capacity of the space for both car and scooter parking as a result of the planned increase in pupil places. We also observed that when sixth form students move onto this site, there is likely to be greater need for parking spaces, especially scooter parking, due to the overall increase of 14+ learners. We consider that it is likely that the current parking area will not be sufficient for future needs and this issue needs to be factored into the future external space planning on the site.

4.6.2 St Sampson’s High School External Areas

We observed that the campus site is on a larger and flatter footprint than the Beaucamps site and that there is much more external space. As a result of the long and comb-shaped nature of the current building, there are a number of small three-sided courtyards between wings of the building which lead onto the MUGA pitch areas. We also observed on the rear of the building large external sport facilities and playing fields. We have observed from the site plan the following outdoor sport spaces:

- a large MUGA with one full sized eleven-a-side pitch of c.5,000 m²;
- a large tarmac area with a range of sports activities lined-up such as tennis courts of c.2,500 m²; and,
- a playing field which contained one full size football pitch, one baseball pitch, etc. of c.15,000 m².

We also observed that at lunch time much of this external space – and all of the grassed playing pitches – was out of bounds to learners.

We consider that there is a strong potential to introduce Les Beaucamps High School style landscaping into these spaces. The option of creating a covered cloister at the back of the building to help disperse the flow of learners is also worthy of further consideration as part of the next design phase.

4.6.3 St Sampson’s High School and Le Murier School External Areas

If the outdoor sport spaces within Le Murier school are also considered in addition to the above provision there is also:

- a small playing field which contains a single five-a-side MUGA area of c.1,300 m²; and,
- a small tarmac area of c.600 m².

4.6.4 External Space Requirements

BB103 provides a tool for the calculation of external space requirements based on student numbers. We have therefore employed the formulae suggested by the guide for the current number of students (470 pupils at the Beaucamps site and 675 pupils at the St Sampson’s site). Please refer to the BB103 guidelines for detailed definitions of external areas and their sub-categories. We set out below in Table 4.9 how the current sites comply with those guidelines.

Table 4.9 – External site area requirement

Les Beaucamps

Student number = 470

	Lower range (m²)	Upper range (m²)	Existing area (m²)	Surplus/ shortage area (m²)	Surplus/ shortage area (m²)
Gross Area	32,357	40,625	40,610	8,254	-15
Net Area	29,150	32,500	15,980	-13,170	-16,520
Soft outdoor PE	22,450	24,890	5,450	-17,000	-19,440
Soft informal and social area	1,540	2,410	700	-840	-1,710
Hard outdoor PE	1,105	1,975	5,000	3,895	3,025
Hard informal and social area	670	1,540	3,230	2,560	1,690
Habitat area	235	1,105	1,600	1,365	495
Sum of minimums	26,000	31,920	15,980	-10,020	-15,940

It can be seen that on the Beaucamps site the overall external area is within the recommended range. However, there is a significant shortage of external net area. Indeed, the existing external net area is only 50% of that recommended under BBI03. The greatest shortage is in soft outdoor PE space.

On the St Sampson’s site, there is a surplus of external gross area overall (which suggests that the site is larger than that recommended at the current number of pupils); however there is also a shortage of net area where the deficit is mainly related to soft outdoor PE.

BBI03 Guidance makes it clear that the provision of soft outdoor PE space is the area of least priority when considering external space for a new school; it states that “Some schools will be on restricted sites and will not have enough outdoor space to meet requirements on site. In these situations, students will need to be provided with access to suitable offsite provision”.

St Sampson’s

Student number = 675

	Lower range (m²)	Upper range (m²)	Existing area (m²)	Surplus/ shortage area (m²)	Surplus/ shortage area (m²)
Gross Area	42,596	53,438	88,660	46,064	35,223
Net Area	38,375	42,750	37,205	-1,170	-5,545
Soft outdoor PE	29,625	32,475	15,000	-14,625	-17,475
Soft informal and social area	1,950	3,025	9,550	7,600	6,525
Hard outdoor PE	1,413	2,488	7,500	6,088	5,013
Hard informal and social area	875	1,950	5,155	4,280	3,205
Habitat area	338	1,413		-338	-1,413
Sum of minimums	34,200	41,350	37,205	3,005	-4,145







# 5.0 FUTURE SPACE REQUIREMENTS FOR THE NEW SCHOOL

## 5.1 Introduction, Methodology and Assumptions

We have established in section 4 above that the two preferred sites chosen for the new school are currently underused and that they are able to accommodate a larger number of students. We have used the BB103 formulae to calculate the maximum capacity of the two schools considering separately the constraints implied using:

- gross area;
- net area; and,
- teaching area.

As we had expected, Table 5.1 shows us that the current teaching area is the most significant limiting constraint on future capacity.

**Table 5.1 – Range of building capacity for the two schools obtained assuming only 11-16 year old school students**

	Les Beaucamps		St Sampson's	
Max Capacity based on BB103 guidelines	Max number of student (based on BB103 lower limit formula)	Max number of student (based on BB103 upper limit formula)	Max number of student (based on BB103 lower limit formula)	Max number of student (based on BB103 upper limit formula)
Gross Area	1,402	1,213	1,341	1,159
Net Area	1,170	1,049	1,243	1,116
Other net area				
Halls, Dining and PE				
Storage				
Staff and Admin.				
Learning Resources				
Teaching Area	927	769	984	819

In this section, we undertake a top-down analysis in order to show how much area the two campuses need to have available to accommodate future student numbers. We have used the BB103 guidelines to calculate the range of areas required on both sites based on forecast student numbers. We have tested the two scenarios using different assumptions. This top down analysis has then been checked against results we have derived using the Schedule of Accommodation model which allows for a more quantitative bottom-up analysis of future space needs. The assumptions we have used for this analysis are set out below.

### 5.1.1 General Assumptions

For this analysis, we have used the latest BB103 guidelines (note that we have used BB98 in the previous section to assess the existing site occupancy with its theoretical capacity at the time it was designed). BB103 provides formulae to calculate space requirements for primary, secondary and post 16 schools and is the accepted method for determining the area requirements of a new state-funded school in England.

Other assumptions:

- in our model we have adopted the secondary formula for Y7 to Y11 pupils and the post 16 formula for Y12 and Y13 students; this provides a more generous allocation than using the secondary school formula for all learners and we consider this to be appropriate for this setting given the combined nature of 11-16 and 16-18 education that is planned;
- we have adjusted the teaching area to take into consideration the fact that some spaces such as IT suites and general purpose classrooms in the existing buildings' design include an excess of space over and above that for which they would be currently designed, based on UK BB103 standards; we explain this further in section 5.1.4;
- in the case of any new spaces needed, we have assumed the areas suggested by BB103 for a class size of 30 students in order to allow flexibility in terms of layout, configuration and larger student groups. It should be noted that for a group of 26 learners this builds in spare, or growth capacity, of 15%;
- for new buildings for teaching purposes only (e.g. extension of existing building) we assume that a further 15% of the teaching space will be required for circulation purposes and that a further 10% allocation will be required as space for toilets and personal care;
- the number of students in each cohort is assumed to be the average of Year 7 to Year 11 numbers. This has the effect of matching the space requirements that are required over the period better than designing for a peak maximum cohort size, whilst still providing flexibility for spikes in demand as explained at (c) above;
- we assume that some general purpose classrooms and IT suites can be shared between similar subjects in order to allow a more efficient number of spaces to be provided in subjects with lower student numbers; and,
- PE activities do not fall within the teaching area but they are assumed to be taught in the sports hall or the gymnasium, and in outside spaces as suggested by the BB103 guidelines.

### 5.1.2 Student Population Numbers

The States of Guernsey have provided us with the forecast student numbers for the academic years 2019/20 to 2025/26. We have summarised these forecasts in **Appendix I**. We are aware that the new school model will require the first moves of provision (and students) from September 2022 when Year 7 will not start at the Grammar School and Sixth Form Centre and at La Mare, but will all be accommodated across Beaucamps and St Sampson's. We then understand that the new school model will be in full-swing from the academic year 2023/24 when The Grammar School and La Mare will be closed. We note that the peak number of students is forecast to be in the academic year 2025/26.

We have checked the variation in student numbers between 2023/24 and 2025/26 and observe that the peak differs by just 1.2% from the mean value and therefore we have adopted 2025/26 student numbers as the baseline case scenario for prudence purposes.

We have then applied the following assumptions onto the baseline scenario as follows:

- i. The adoption of a 15% retention factor to recognise that in the future a proportion of the current forecast CoFEY12 students will stay on at the school because (a) they may make better progress in the new schools and are able to complete A-levels on site and/or (b) it may be decided at some point in the future that some Level 2 and Level 3 classroom based post-16 vocational courses<sup>4</sup> might be offered (in partnership with College of FE) alongside an A Level programme as part of a Level 3 progression strategy. As a result, the number of learners in the new school post-16 is likely to increase further above the current forecasts (and the number in the CoFE is likely to reduce by the same amount).
- ii. We understand that from 2019/20 State-funded scholarship places that currently cover the costs of private tuition fees for around 52 young people at year seven will no longer be offered. Following a review of potential responses to this policy change we have agreed to assume that 75% of these learners will move into the state sector at year seven and that for the remaining 25% their parents will find alternative means to pay for their tuition fees. We are therefore modelling an addition of 20 learners per year group on each site (40 in total per year with numbers rising until the policy has worked through from year seven). We recognise that there may be a more complex split than 50/50 of this cohort but we do not consider that any change in the split is likely to materially impact on the results of our analysis.
- iii. As further detailed in section 5.1.3, we have modelled an alternative scenario that considers that some students, currently within the Le Murier SEN school, would benefit from a mainstream education. Under this scenario we have included 60 additional students in the new school, split equally across the two sites. This leaves around 30 learners outside of the mainstream setting – these learners would require specialist education in order to meet their more acute and complex needs. The impact of this assumption is to increase the number of pupils for Les Beaucamps site from 1,501 students to 1,531, and at St Sampson's site from 1,495 students to 1,525 students.

In **Appendix I** we show in detail the “original” forecast student numbers and the “adjusted” forecast student numbers generated from the above assumptions.

<sup>4</sup> Whilst we find this to be common practice in the UK in both state and private schools that open new sixth forms, we understand from the Executive Head and her team, that there are no plans to add L2 or vocational qualifications in the school sixth forms. We have agreed, however, that our assumptions in respect of increased numbers remains sound as a result of the expected improvement in progression to level 3 academic programmes as a result of the changes to the school structure.

### 5.1.3 SEN Provision and Space Requirements

During our visit to the school sites (17 October 2018) we noticed that at the St Sampson's site there was no integration in the teaching and learning between learners in the school buildings and learners with SEN needs at the Le Murier school – despite the physical link and the co-location of these two school buildings. We further observed a number of groups of learners who, in our professional view, did not appear to have sufficiently acute SEN needs that either required or justified them being taught in a separate setting. From an inclusion perspective we consider this to be poor practice – all of the evidence in the UK shows us that for most learners a more inclusive education leads to both more positive learning outcomes for the learners and improved integration post-school. We have considered both the current building are occupied by Le Murier School and the current approach to inclusive education. In our view, a substantial proportion of the learners at Le Murier School would receive a better education if they were taught in a mainstream school setting. We have therefore modelled the impact of adopting a more inclusive approach to SEN provision. We have then modelled the potential impact of the total space required at the St Sampson's site.

We have applied the following assumption to generate an alternative scenario based upon a change in policy in relation to SEN education and inclusion:

- relocation of 60 pupils (c2/3 of the total SEN student numbers) into the mainstream school. This implies moving higher needs students (c26 pupils) to a suitable alternative venue (e.g. an existing school, a purpose built special school, etc.). In doing so, Le Murier School would be released and its teaching spaces be available to accommodate an expansion in mainstream school numbers.

We arrived at an assumption of 2/3rds based on discussion with officers; we recognise that this is an estimation that would need to be further tested as part of a future evaluation of this proposition. An alternative proposition has been suggested to us that a further 24-30 learners might remain within the SEN special school setting. In very simplistic terms that would reduce the space requirements of the new schools by around 240 m<sup>2</sup> on each of the two sites (based on an estimated 16 m<sup>2</sup> per SEN learner). We have identified that there is a large volume of non-teaching space at Le Murier and that there may well be a hybrid approach that sees much greater integration of students at the St Sampson / Le Murier sites, improved utilisation of the Le Murier spaces whilst still achieving a reduction in new build requirements near to that estimated at section 2.6 above.

### 5.1.4 Impact of Existing Design on Space Requirements of Teaching Area

During the site visit and the analysis of the room schedules of both schools, we found that some teaching spaces, such as general purpose classrooms and IT suites, were larger than BB103 recommendations. We needed to factor in the impact of this on our future space planning in order to avoid an underestimation of the future required teaching area. The alternative of attempting to move internal walls to right-size rooms is neither practical nor cost-effective.

We observe that in the Les Beaucamps High School room schedule (See **Appendix 5**) there are 18 general purpose classrooms with an average size of 64 m<sup>2</sup>. BB103 recommends a size of 55 m<sup>2</sup> for 30 learners and therefore there is an excess of c.170 m<sup>2</sup> across the school which we have factored into our analysis. Similarly, the IT suites on site are c.22 m<sup>2</sup> more generous than BB103 suggests and therefore over the three spaces there is some 65 m<sup>2</sup> of over-provided space. Taken together, we have factored this extra 235 m<sup>2</sup> into the model by adjusting the BB103 formulae results to add this space into the baseline requirements.

In the same way, at the St Sampson's High School the 20 general purpose classrooms as well as the IT suites are all slightly oversized. We have quantified this excess as c.110 m<sup>2</sup> which has been factored into our model.

## 5.2 Adopted Scenarios: Impact of Group Size and Numbers of Forms of Entry

We have modelled two scenarios where the main difference is the inclusion (or exclusion) of pupils in the SEN school provision and its spaces as detailed above.

**Scenario 1** is the baseline where we have considered that Le Murier School remains unaltered and the future students are accommodated in Beaucamps and St Sampson's buildings.

**Scenario 2** takes the baseline scenario and includes the existing space at the St Sampson's site and the space at Le Murier School. As a result, the available area is larger than in Scenario 1.

In both scenarios, we have tested the impact of different group sizes and this produces three variations of each scenario which we have referred to as A, B and C are described below:

- **Variation A** posits a group size of 24 learners for Key Stages 3 and 4 (sixth form provision is likely to be provided in smaller groups);
- **Variation B** shows the result of adopting a group size of 26 students; and,
- **Variation C** shows the result of adopting a group size of 28 learners.

**Table 5.2 – Summary of Scenario 1 and Scenario 2**

	Building	Variation	Group size	Forms of entry	Pupils input	Existing gross area (m²)
Scenario 1	- Les Beaucamps - St Sampson's	A	24	11	LBHS 1,501 pupils SSHS 1,495 pupils	9,881 9,500
		B	26	10		
		C	28	9		
Scenario 2	- Les Beaucamps - St Sampson's - Le Murier	A	24	11	LBHS 1,531 pupils SSHS 1,525 pupils	9,881 13,130
		B	26	10		
		C	28	9		

The forms of entry for each variation are obtained by dividing the average of the five-year cohort (Year 7-Year 11) by the chosen group size and rounding it up to the closest whole number. In this report, Scenario 2 assumes that Le Murier School is released to accommodate the mainstream provision and Scenario 1 excludes all the spaces in that school and assumes no change in the current inclusion policy. Variation A is based on a group size of 24 and requires 11 FE; variation B is based on student groups of 26 and requires 10 FE; and finally, variation C is based on average groups of 28 pupils and requires 9 FE.



5.2.1 Scenario I – Excluding Le Murier School Area

The table below shows the result from Scenario I. BBI03 allows us to calculate:

- the area range of the overall building (net area + non-net area);
- the net area; and,
- area ranges for individual space types such as teaching, learning, halls and dining spaces, etc..

It should be noted that the top down analysis is not affected by variations in student group size; in fact, scenarios 1A, 1B and 1C produce the same results. The student group size affects the second part of our analysis when we employ the Schedule of Accommodation. To recap, we input the adjusted forecast student numbers of 1,501 for Beaucamps and 1,495 for St Sampson’s. In section 5.1.2 we have explained how these values were obtained. Tables 5.3 and 5.4 show the lower and upper area ranges obtained from employing the BBI03 formulae and the lower and upper ranges adjusted, reflecting the considerations explained in section 5.1.4.

Table 5.3 – Scenario I: Space requirement by space type at Les Beaucamps High School

Les Beaucamps	Lower range (m²)	Lower range - adjusted* (m²)	Upper range (m²)	Upper range - adjusted (m²)	Existing area (m²)	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)	Max number of student (based on lower limit)	Max number of student (based on max limit)
Gross Area	11,052	11,287	12,567	12,802	9,881	-1,406	-2,921	1,317	1,128
Net Area	7,894	8,129	8,669	8,904	6,016	-2,113	-2,888	1,090	968
Other net area					642				
Halls, Dining and PE	1,275	1,275	1,804	1,804	1,212	-63	-592		
Storage	539	539	850	850	618	79	-232		
Staff and Admin	400	400	711	711	478	78	-233		
Learning Resources	421	421	646	646	377	-44	-269		
Teaching Area	4,437	4,672	5,308	5,543	2,689	-1,983	-2,854	908	715
Sum of minimums	7,072	7,307	9,320	9,555	6,016	-1,291	-3,539		

\*the teaching area is adjusted to take into consideration of some oversized teaching rooms

Table 5.3 shows that the area of the buildings at the Beaucamps site should range between 11,300 m² and 12,800 m². The available area on site is 9,881 m² and therefore there is a shortage of between c.1,400 m² and c.2,900 m². Although there is a shortfall in the net area, some of its components such as the space allocated for storage and staff/administration are within the suggested range. This suggests that theoretically on the Beaucamps site there is adequate area for these two activities. There is, however, a significant shortage of teaching space ranging between c2,000 m² and c2,800 m².

Table 5.4, below, shows the results obtained for the St Sampson’s site.

Table 5.4 – Scenario 1: Space requirement by space type at St Sampson’s High School

St Sampson	Lower range (m²)	Lower range - adjusted* (m²)	Upper range (m²)	Upper range - adjusted (m²)	Existing area (m²)	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)	Max number of student (based on lower limit)	Max number of student (based on max limit)
Gross Area	11,014	11,127	12,524	12,637	9,500	-1,627	-3,137	1,258	1,076
Net Area	7,867	7,980	8,640	8,753	6,343	-1,637	-2,410	1,162	1,034
Other net area					801				
Halls, Dining and PE	1,272	1,272	1,800	1,800	1,198	-74	-602		
Storage	538	538	848	848	596	58	-252		
Staff and Admin.	399	399	709	709	441	42	-268		
Learning Resources	420	420	645	645	454	34	-191		
Teaching Area	4,419	4,532	5,289	5,402	2,853	-1,679	-2,549	964	764
Sum of minimums	7,048	7,161	9,290	9,403	6,343	-818	-3,060		

\*the teaching area is adjusted to take consideration of some oversized teaching rooms

Table 5.4 shows that the gross area at the St Sampson’s site should fall between 11,100 m² and 12,600 m². The available area on site is 9,500 m² and therefore there is a shortage of between c.1,600 m² and c.3,100 m². Although there is an overall shortfall in net area, some of its components such as the space allocated for learning, storage and staff/administration are within the suggested range. This suggests that theoretically on the St Sampson’s site there is adequate area for these activities. There is, however, a significant shortage of teaching space, ranging between c1,700 m² and c2,550 m².

The difference in group sizes does not affect our top down analysis but affects the teaching space requirement when employing the Schedule of Accommodation (SoA). The summary table below shows the results obtained for Beaucamps from the more detailed analysis we have completed using the SoA. A more detailed breakdown of the results is shown in **Appendix 2**.

Table 5.5 – Scenario I: Teaching space requirement from SoA

	Scenario I	Required number of teaching rooms (sharing)	Teaching area required (m²)	Excess teaching space in design (m²)	Total teaching area required (m²)	Existing number of teaching rooms	Existing teaching area (m²)	Additional teaching rooms needed	Additional teaching area required (m²)	Circulation - 15% (m²)	Toilets & personal care - 10% (m²)	Total gross area required (m²)
Les Beaucamps	Scenario 1A	77	5,131	235	5,366	34	2,689	43	2,792	419	279	3,490
	Scenario 1B	74	4,931	235	5,166	34	2,689	40	2,592	389	259	3,240
	Scenario 1C	71	4,766	235	5,001	34	2,689	37	2,427	364	243	3,034
St Sampson's	Scenario 1A	77	5,131	113	5,244	39	2,853	39	2,502	375	250	3,128
	Scenario 1B	74	4,931	113	5,044	39	2,853	36	2,302	345	230	2,878
	Scenario 1C	71	4,766	113	4,879	39	2,853	33	2,137	321	214	2,671

**Appendix 2** lists the teaching space requirement for each of the scenarios by room type (e.g. general purpose classroom, science laboratory, etc.) and provides the number of rooms needed for each space type based on the scenario chosen.



### 5.2.2 Scenario 2 – Including Le Murier School Area

As explained above, we have generated an additional scenario which we believe may significantly help the programme and would reduce the inevitable disruption that more extensive building work on the St Sampson's site would require. The table below shows the results of Scenario 2 in the same format as the table in section 5.2.1. It should be noted (again) that the top down analysis is not affected by variations in student group size: scenarios 2A, 2B and 2C produce the same results. The student group size affects the second part of our analysis when we employ the Schedule of Accommodation. To recap, we input the adjusted forecast student numbers of 1,531 for Beaucamps and 1,525 for St Sampson's. In section 5.1.2 we explained how these values were obtained. Tables 5.6 and 5.7 show the lower and upper ranges obtained by employing the BB103 formulae and the lower and upper ranges adjusted which reflect the considerations listed in section 5.1.4.

**Table 5.6 – Scenario 2: Space requirement by space type at Les Beaucamps High School**

Les Beaucamps	Lower range (m <sup>2</sup> )	Lower range - adjusted* (m <sup>2</sup> )	Upper range (m <sup>2</sup> )	Upper range - adjusted (m <sup>2</sup> )	Existing area (m <sup>2</sup> )	Surplus/ shortage area (based on lower value) (m <sup>2</sup> )	Surplus/ shortage area (based on upper value) (m <sup>2</sup> )	Max number of student (based on lower limit)	Max number of student (based on max limit)
<b>Gross Area</b>	<b>11,241</b>	<b>11,476</b>	<b>12,780</b>	<b>13,015</b>	<b>9,881</b>	<b>-1,595</b>	<b>-3,134</b>	<b>1,317</b>	<b>1,128</b>
<b>Net Area</b>	<b>8,029</b>	<b>8,264</b>	<b>8,816</b>	<b>9,051</b>	<b>6,016</b>	<b>-2,248</b>	<b>-3,035</b>	<b>1,090</b>	<b>968</b>
Other net area					642				
Halls, Dining and PE	1,293	1,293	1,825	1,825	1,212	-81	-613		
Storage	547	547	862	862	618	71	-244		
Staff and Admin	406	406	721	721	478	72	-243		
Learning Resources	426	426	654	654	377	-49	-277		
Teaching Area	4,524	4,759	5,407	5,642	2,689	-2,070	-2,953	908	715
Sum of minimums	7,195	7,430	9,470	9,705	6,016	-1,414	-3,689		

\*the teaching area is adjusted to take consideration of some oversized teaching rooms

Table 5.6 shows that the area of the buildings at the Beaucamps site should fall between 11,500 m<sup>2</sup> and 13,000 m<sup>2</sup> (the increase of 30 students generates an increase in space of c200 m<sup>2</sup>). The available area on site is 9,881 m<sup>2</sup> and therefore there is a shortage of between c1,600 m<sup>2</sup> and c3,150 m<sup>2</sup>.

Although there is a shortfall in the net area, some of its components such as the space allocated for storage and staff/administration are within the suggested range as in the previous section.

This suggests that theoretically on the Beaucamps site there is adequate area for these two activities. There is a significant shortage of teaching space ranging between c2,050 m<sup>2</sup> and c3,000 m<sup>2</sup>.

Table 5.7 shows the results obtained for St Sampson's following the same approach. On this occasion however we have included the area of the Le Murier School within the "existing area". Le Murier School has a footprint of 3,630 m² of which 2,378 m² is net area. As a result the overall available area at the St Sampson's site is 13,130 m².

Table 5.7 – Scenario 2: Space requirement by space type at St Sampson's High School

St Sampson + Le Murier	Lower range (m²)	Lower range - adjusted* (m²)	Upper range (m²)	Upper range - adjusted (m²)	Existing area (m²)	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)	Max number of student (based on lower limit)	Max number of student (based on max limit)
Gross Area	11,203	11,316	12,737	12,850	13,130	1,814	280	1,821	1,577
Net Area	8,002	8,115	8,787	8,900	8,721	606	-179	1,678	1,509
Other net area					964				
Halls, Dining and PE	1,290	1,290	1,821	1,821	1,400	110	-421		
Storage	545	545	860	860	869	324	9		
Staff and Admin.	405	405	719	719	617	212	-102		
Learning Resources	425	425	652	652	725	300	73		
Teaching Area	4,506	4,619	5,388	5,501	4,146	-473	-1,355	1,401	1,151
Sum of minimums	7,171	7,284	9,440	9,553	8,721	1,437	-832		

\*the teaching area is adjusted to take consideration of some oversized teaching rooms

Table 5.7 shows that the gross area at the St Sampson's site exceeds the area suggested by BBI03. Theoretically the building can accommodate additional learners. However, from the site visit we identified a range of constraints which we describe later in this document. The individual space types are within the recommended range or exceeding it, with the exception of the teaching area which is between 500 m² and 1,400 m² short under this scenario. The difference in group size does not affect our top down analysis as mentioned above but affects the teaching space requirement when employing the SoA. The summary table below shows the results obtained for Beaucamps from the SoA. A more detailed breakdown of the results is shown in **Appendix 2**.

Table 5.8 – Scenario 2: Teaching space requirement from SoA

	Scenario 2	Required number of teaching rooms (sharing)	Teaching area required (m²)	Excess teaching space in design (m²)	Total teaching area required (m²)	Existing number of teaching rooms	Existing teaching area (m²)	Additional teaching rooms needed	Additional teaching area required (m²)	Circulation - 15% (m²)	Toilets & personal care - 10% (m²)	Total gross area required (m²)
Les Beaucamps	Scenario 2A	77	5,131	235	5,366	34	2,689	43	2,792	419	279	3,490
	Scenario 2B	74	4,931	235	5,166	34	2,689	40	2,592	389	259	3,240
	Scenario 2C	71	4,766	235	5,001	34	2,689	37	2,427	364	243	3,034
St Sampson's	Scenario 2A	77	5,131	113	5,244	60	4,146	20	1,366	205	137	1,708
	Scenario 2B	74	4,931	113	5,044	60	4,146	17	1,166	175	117	1,458
	Scenario 2C	71	4,766	113	4,879	60	4,146	14	1,001	150	100	1,251

**Appendix 2** lists the teaching space requirement for each of the scenarios by room type (e.g. general purpose classroom, science laboratory, etc.) and provides the number of rooms needed for each space type based on the scenario chosen.



5.3 Review of Non-Teaching Space Requirements

5.3.1 Space for Learning

From tables 5.3-5.8 we can see that the existing area on the Beaucamps site is currently too small for both scenarios. However, the overall space available at the St Sampson’s site meets BB103 requirements and, in Scenario 2, it exceeds them. This is also shown in the table 5.8b below where we note that the additional area available at the Le Murier School (c.65 m²) may not be required according BB103; however, we suggest that this area is maintained for learning activity as an area for more informal learning - releasing pressure from the narrower circulation spaces elsewhere on this site.

At the Beaucamps site the existing library appears too small to cope with future student numbers; however, its location works well and rather than move the library we suggest that the future brief seeks to create more informal learning spaces throughout the building (including the hall and refectory areas outside lunchtime) rather than create an additional library or an extension to the existing one.

Table 5.8b – Space requirement for library

		School	Recommended area based on BB103 (m²)	current area for learning space type	Difference (m²)
Library	Scenario 1	LBHS	180	102	-78
		SSHS	179	192	13
Library	Scenario 2	LBHS	184	102	-82
		SSHS + LM	183	257	74

5.3.2 Space for Staff and Storage

We note from the results above that the space required for future staff numbers can theoretically be accommodated within existing spaces; this was backed up by our observations during the site visit. On the St Sampson’s site there is a very large staff room that appears poorly used. We consider that this space could be repurposed in part to provide a ‘PPA’ workspace area within this large existing space. At the Beaucamps site rooms 2-19 and 2-10 have seating capacity for approximately 25 - 30 staff.

5.3.3 Space for Dining and Kitchens

We have used the formulae provided by the BB103 guidelines to identify the space requirements for the dining areas and the sizes of the kitchens. The school informed PMc that the new school will adopt a staggered lunch break to better manage student behaviour and to avoid students feeling overwhelmed in a larger school. This will also improve the use of common areas such as the dining and refectory spaces – reducing the need to add substantially to these areas in the future.

We are aware that the school will provide students a 40 minutes lunch break and therefore we have assumed that the dining area will provide two settings each with a 35-45 minutes slot. In both scenarios however, we have added some “other potential dining spaces” which we identified and observed during the site visit, that could support the existing dining area. There are, for example, the assembly hall (219 m²) in the Beaucamps building, the covered courtyard (221 m²) in the St Sampson’s building and the “additional dining” area (40 m²) in Le Murier school.

Table 5.9 – Kitchen and dining area space requirement in Scenario 1

	Site	Area required based on total students number (m²)	Area required based on half students number (m²)	Existing area (m²)	Other potential dining space (m²)	Total available space (m²)	Spare/ deficit space (m²)
Dining area	LBHS	535	273	160	219	379	106
	SSHS	533	272	166	221	387	115
Kitchen	LBHS	195	120	70		70	-50
	SSHS	194	120	55		55	-65

The table shows that, if the kitchen space and dining area were designed for all students to have their lunch break at the same time, there would not be sufficient provision on site to accommodate future numbers; therefore new space would need to be created elsewhere as part of the new build programme (e.g. new building extension, etc). In contrast, if a staggered lunch is adopted, and the dining space is designed to accommodate half of the total student numbers at any one time, then the current spaces on both sites appear adequate for their future dining needs.

In both the scenarios we have tested it can be seen that there is a shortage of kitchen provision. However, we are aware that Guernsey has no obligation to provide a full hot meal as in the UK, that some food is prepared offsite and that the kitchens are mainly used to heat and/or unpack food which has been prepared elsewhere. Larger kitchens may not be needed if cold food service (baguette carts etc.) are to be provided for use in other areas – this theoretical space requirement could therefore be saved.

The table below shows the results for dining and kitchen areas obtained for Scenario 2.

Table 5.10 – Kitchen and dining area space requirement in Scenario 2

	Site	Area required based on total students number (m²)	Area required based on half students number (m²)	Existing area (m²)	Other potential dining space (m²)	Total available space (m²)	Spare/ deficit space (m²)
Dining area	LBHS	546	278	160	219	379	101
	SSHS + LM	544	277	218	261	479	202
Kitchen	LBHS	198	122	70		70	-52
	SSHS + LM	197	122	76		76	-46

Les Beaucamps High School numbers are only marginally varied, whilst at the St Sampson's High School site there is higher spare capacity of dining space due to the inclusion of spaces from Le Murier School. Some of the ground floor spaces at Le Murier could be converted to allow for different activities such as informal learning or breakout space – it may be possible to recreate the successful café and informal learning space at The Grammar School for the sixth form learners in this space.

Whilst a clear case can be made NOT to add additional dining and kitchen space, it is perfectly acceptable – within the spirit of BB103 – to consider 'using' some of this saved space for an alternative use as part of the design of the new school, provided that the total area remains within the BB103 proposed ranges.

5.3.4 Space for Sport

We have described the current indoor sport spaces in section 4.5 and have confirmed, based on both BB103 guidance and through discussion with the Executive Head and her team, that the volume of internal sporting space is considered more than adequate on both sites.

5.3.5 Area Requirements for Toilets

The school has shared with PMc the current number of toilets on both campuses and we understand that the toilets at the Beaucamps site were designed for a capacity of just under 1,000 people overall (pupils + staff + disabled). The St Sampson's site and Le Murier School combined have just over 81 WCs and 16 urinals which generate a capacity of over 2,100 people overall (pupils + staff + disabled). Nevertheless, in the case of new building or an extension to the existing, there would be a need to conduct a more detailed survey to identify exact toilet requirements based on accepted ratios and the need for a reasonable distribution of toilets across the site. We have adopted a ratio of 1:25 for disabled and staff WC and a ratio of 1:20 for pupil WC. The latter is in accordance with BS 6465 while there is no reference for staff.

Table 5.11 – Existing WC provision by site

		Area	Number of WCs	Number Urinals	Capacity
Les Beaucamps High School	Disabled	30	7		175
	Staff	30	10		250
	Student	103	28		560
	Total	163	45		985
St Sampson's High School + Le Murier	Disabled	N/A	20	0	500
	Staff	32	15	3	450
	Student	143	46	13	1,475
	Total	175	81	16	2,425

5.3.6 Area Requirements for Circulation

We observed during the site visit that the student flow in Beaucamps works well as a result of the building layout - students can reach their next timetabled room via various paths. This arrangement should accommodate larger volumes of learners without circulation feeling tight or cramped. The staircases are also wide and many of them allow four people to walk up or down at the same time; similarly, some of the fire escape staircases appear to be designed for much larger capacities than are currently enrolled at the school.

At the St Sampson's site, however, we observed that the width of the corridor ranges from 1.80m to more than four metres. As a result of the comb-shape of the building, there is only one corridor running along the length of the building, with teaching wings with circulation off this. This means that all learners are moving up and down the one corridor space at break and lunch times making it feel busier and, at times, a rather cramped space (even though the corridor is wide). At four metres the width does not allow for the space to be used for informal teaching but we noted many students sitting on the floor in the corridors and at the bottom of stairs eating their lunch.

At St Sampson's we therefore believe that there will need to be some intervention to the circulation space to cope with future learners in order to avoid a feeling of over-crowding. Options to be considered include:

- building covered cloisters along the rear of the site to connect the 'wings' of specialist provision and in so doing to create more welcoming courtyards within these new circulation zones; and,
- adding a new circulation zone from the front reception to Le Murier school buildings under Scenario 2.

5.4 Overall Space Requirement for the New School

In this section we present the results obtained by combining the work that we have completed on the Schedule of Accommodation (SOA) and the top down analysis for Scenarios 1B and 2B (group size assumed 26 students). The other results for alternative options A and C are shown in **Appendices 2** and **3**.

5.4.1 Space Requirements in Scenario 1B

The table below is an expansion of the Scenario 1B shown in table 5.5 and it shows the number of rooms required by type.

Table 5.12 – Teaching space requirement by type

Les Beaucamps Scenario 1B	Area adopted for new room (m²)	Required number of rooms (sharing)	Area required (m²)	Excess teaching space in design (m²)	Total area required (m²)	Existing number of rooms	Existing area (m²)	Additional rooms needed	Additional area required (m²)
Classroom	55	43	2,365	170	2,535	18	1,160	25	1,375
Science Laboratory	90	11	990		990	4	364	7	630
IT room	62	6	372	65	437	3	251	3	186
2D Art studio	83	2	166		166	1	103	1	83
3D Art studio	97	1	97		97	1	99	0	0
Photography studio	76	1	76		76	0	0	1	76
Workshop	97	2	194		194	2	229	0	0
Food room	104	1	104		104	1	116	0	0
Studio	83	0	0		0	0	0	0	0
Graphics room	83	2	166		166	1	91	1	83
Music recital	83	1	83		83	1	89	0	0
Music classroom	69	2	138		138	1	69	1	69
Drama studio	90	2	180		180	1	118	1	90
		74	4,931	235	5,166	34	2,689	40	2,592
							Teaching space required		2,592
							Circulation	15%	389
							Toilets and personal care	10%	259
							Total area needed		3,240



St Sampson's Scenario IB	Area adopted for new room (m²)	Required number of rooms (sharing)	Area required (m²)	Excess teaching space in design (m²)	Total area required (m²)	Existing number of rooms	Existing area (m²)	Additional rooms needed	Additional area required (m²)
Classroom	55	43	2,365	52	2,417	20	1,152	23	1,265
Science Laboratory	90	11	990		990	6	529	5	450
IT room	62	6	372	61	433	3	247	3	186
2D Art studio	83	2	166		166	1	91	1	83
3D Art studio	97	1	97		97	1	102	0	0
Photography studio	76	1	76		76	0	0	1	76
Workshop	97	2	194		194	2	204	0	0
Food room	104	1	104		104	1	102	0	0
Studio	83	0	0		0	1	90	extra room available	0
Graphics room	83	2	166		166	1	86	1	83
Music recital	83	1	83		83	1	90	0	0
Music classroom	69	2	138		138	1	62	1	69
Drama studio	90	2	180		180	1	98	1	90
		74	4,931	113	5,044	39	2,853	36	2,302
							Teaching space required		2,302
							Circulation	15%	345
							Toilets and personal care	10%	230
							Total area needed		2,878

The table above shows that most of the teaching area required is generated by general purpose classroom, science laboratories and IT rooms on both sites. As mentioned in section 5.1.1 we have assumed an additional 15% of the space required to allow for circulation and 10% for toilets in addition to the teaching areas required. Please note that our assessment of the types of rooms required is indicative; we would expect the detailed mix to be agreed with the school leadership teams based on their future curriculum model.

Table 5.13 combines the result from the SoA (table above) and the top down analysis table shown in section 5.2.1. In this table we provide a breakdown of future areas by space type based on the detailed SoA and compare it with the theoretical areas required under BB103.

Table 5.13 – Space requirement including SoA results for Scenario 1B

Les Beaucamps	Lower range - adjusted* (m²)	Upper range - adjusted* (m²)	Existing area (m²)	Additional area from SoA (m²)	Total area new school (m²)	Total new area within BB103 recommendation?	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)
Gross Area	11,287	12,802	9,881	3,240	13,121	NO - over	1,834	319
Net Area	8,129	8,904	6,016	2,592	8,608	YES	479	-296
Other net area			642					
Halls, Dining and PE	1,169	1,697	1,212		1,212	YES	43	-485
Storage	539	850	618		618	YES	79	-232
Staff and Admin.	400	711	478	60	538	YES	138	-173
Learning Resources	421	646	377		377	NO - under	-44	-269
Teaching Area	4,672	5,543	2,689	2,592	5,281	YES	609	-262
Sum of minimums	7,201	9,448	6,016	2,652	8,668	YES	1,467	-780

Note: Halls, Dining and PE area has been reduced by the excess of space identified in the “dining section”

St Sampson	Lower range - adjusted* (m²)	Upper range - adjusted* (m²)	Existing area (m²)	Additional area from SoA (m²)	Total area new school (m²)	Total new area within BB103 recommendation?	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)
Gross Area	11,127	12,637	9,500	2,878	12,378	YES	1,250	-259
Net Area	7,980	8,753	6,343	2,302	8,645	YES	665	-108
Other net area			801					
Halls, Dining and PE	1,156	1,684	1,198		1,198	YES	42	-486
Storage	538	848	596		596	YES	58	-252
Staff and Admin.	399	709	441		441	YES	42	-268
Learning Resources	420	645	454		454	YES	34	-191
Teaching Area	4,532	5,402	2,853	2,302	5,155	YES	623	-247
Sum of minimums	7,045	9,287	6,343	2,302	8,645	YES	1,600	-642

Note: Halls, Dining and PE area has been reduced by the excess of space identified in the “dining section”

Table 5.13 above shows that the gross areas, net areas and their breakdown are within the recommended range suggested by the BB103 guidelines with the exception of Les Beaucamps gross area. It should be noted that in this table we have added to our top down analysis the additional teaching space required as shown in section 5.2.1 along with taking into account the spare capacity in some non-teaching areas such as the dining space. Overall, we have reduced the upper and lower limit on the “Halls, dining and PE” area allowances to offset the spare capacity generated by the use of other non-dining spaces for this purpose as explained in section 5.3.3.

Table 5.13 shows only one deficit item, area for learning, which means that on the Beaucamps site more area is needed; as explained above, this could be achieved through creating informal study spaces across the building (e.g. using halls and/or other non-timetabled spaces). The overall area at the Beaucamps site is over provided and this suggest that the site is over provided with non-net area.

5.4.2 Space requirements in Scenario 2B

In the same way as for section 5.4.1, we present the teaching space requirement obtained from the SoA for Scenario 2B (26 students per group and Le Murier used to accommodate mainstream provision).This is shown in table 5.14.

Table 5.14 – Teaching space requirement by type

Les Beaucamps Scenario 2B	Area adopted for new room (m²)	Required number of rooms (sharing)	Area required (m²)	Excess teaching space in design (m²)	Total area required (m²)	Existing number of rooms	Existing area (m²)	Additional rooms needed	Additional area required (m²)
Classroom	55	43	2,365	170	2,535	18	1,160	25	1,375
Science Laboratory	90	11	990		990	4	364	7	630
IT room	62	6	372	65	437	3	251	3	186
2D Art studio	83	2	166		166	1	103	1	83
3D Art studio	97	1	97		97	1	99	0	0
Photography studio	76	1	76		76	0	0	1	76
Workshop	97	2	194		194	2	229	0	0
Food room	104	1	104		104	1	116	0	0
Studio	83	0	0		0	0	0	0	0
Graphics room	83	2	166		166	1	91	1	83
Music recital	83	1	83		83	1	89	0	0
Music classroom	69	2	138		138	1	69	1	69
Drama studio	90	2	180		180	1	118	1	90
		74	4,931	235	5,166	34	2,689	40	2,592
							Teaching space required		2,592
							Circulation	15%	389
							Toilets and personal care	10%	259
							Total area needed		3,240



St Sampson's + Le Murier Scenario 2B	Area adopted for new room (m²)	Required number of rooms (sharing)	Area required (m²)	Excess teaching space in design (m²)	Total area required (m²)	Existing number of rooms	Existing area (m²)	Additional rooms needed	Additional area required (m²)
Classroom	55	43	2,365	52	2,417	34	2,026	9	495
Science Laboratory	90	11	990		990	7	591	4	360
IT room	62	6	372	61	433	5	317	1	62
2D Art studio	83	2	166		166	2	169	0	0
3D Art studio	97	1	97		97	1	102	0	0
Photography studio	76	1	76		76	0	0	1	76
Workshop	97	2	194		194	3	282	extra room available	0
Food room	104	1	104		104	2	171	extra room available	0
Studio	83	0	0		0	1	90	extra room available	0
Graphics room	83	2	166		166	1	86	1	83
Music recital	83	1	83		83	1	90	0	0
Music classroom	69	2	138		138	2	124	0	0
Drama studio	90	2	180		180	1	98	1	90
		74	4,931	113	5,044	60	4,146	17	1,166
							Teaching space required		1,166
							Circulation	15%	175
							Toilets and personal care	10%	117
							Total area needed		1,458

Table 5.15 combines the results from the SoA, this time for the Scenario 2B and the top down analysis.

Table 5.15 – Space requirement including SoA results from Scenario 2B

Les Beaucamps	Lower range - adjusted* (m²)	Upper range - adjusted* (m²)	Existing area (m²)	Additional area from SoA (m²)	Total area new school (m²)	Total new area within BB103 recommendation?	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)
Gross Area	11,476	13,015	9,881	3,240	13,121	NO - over	1,645	106
Net Area	8,264	9,051	6,016	2,592	8,608	YES	344	-443
Other net area			642					
Halls, Dining and PE	1,192	1,724	1,212		1,212	YES	20	-512
Storage	547	862	618		618	YES	71	-244
Staff and Admin.	406	721	478	60	538	YES	132	-183
Learning Resources	426	654	377		377	NO - under	-49	-277
Teaching Area	4,759	5,642	2,689	2,592	5,281	YES	522	-361
Sum of minimums	7,329	9,603	6,016	2,652	8,668	YES	1,339	-935

Note: Halls, Dining and PE area has been reduced by the excess of space identified in the “dining section”

St Sampson	Lower range - adjusted* (m²)	Upper range - adjusted* (m²)	Existing area (m²)	Additional area from SoA (m²)	Total area new school (m²)	Total new area within BB103 recommendation?	Surplus/ shortage area (based on lower value) (m²)	Surplus/ shortage area (based on upper value) (m²)
Gross Area	11,316	12,850	13,130	1,458	14,588	NO - over	3,271	1,738
Net Area	8,115	8,900	8,721	1,166	9,887	NO - over	1,772	987
Other net area			964					
Halls, Dining and PE	1,087	1,618	1,400		1,400	YES	313	-218
Storage	545	860	869		869	NO - over	324	9
Staff and Admin.	405	719	617		617	YES	212	-102
Learning Resources	425	652	725		725	NO - over	300	73
Teaching Area	4,619	5,501	4,146	1,166	5,312	YES	693	-189
Sum of minimums	7,082	9,350	8,721	1,166	9,887	NO - over	2,805	537

Note: Halls, Dining and PE area has been reduced by the excess of space identified in the “dining section”

We have determined that, based on the current ratio of teaching to non-teaching space, the inclusion of Le Murier School buildings within the base-case area scenario would mean that the additional area that needs to be added to the site to accommodate the planned increase in student numbers at the St Sampson's site would reduce from 3,240m² to no more than c1,500 m², which would take the total building area to 14,588 m².

Whilst the areas above show the same areas for the new school at Les Beaucamps for both scenarios we have further estimated that a more inclusive SEN policy might require a further 500 m² to be added to the Les Beaucamps site to provide a dedicated SEN area. This would have the impact of increasing the total additional space required there from 3,240 m² to 3,740 m².