

# Primary School Extension and Alteration

# Fulbourn Primary School

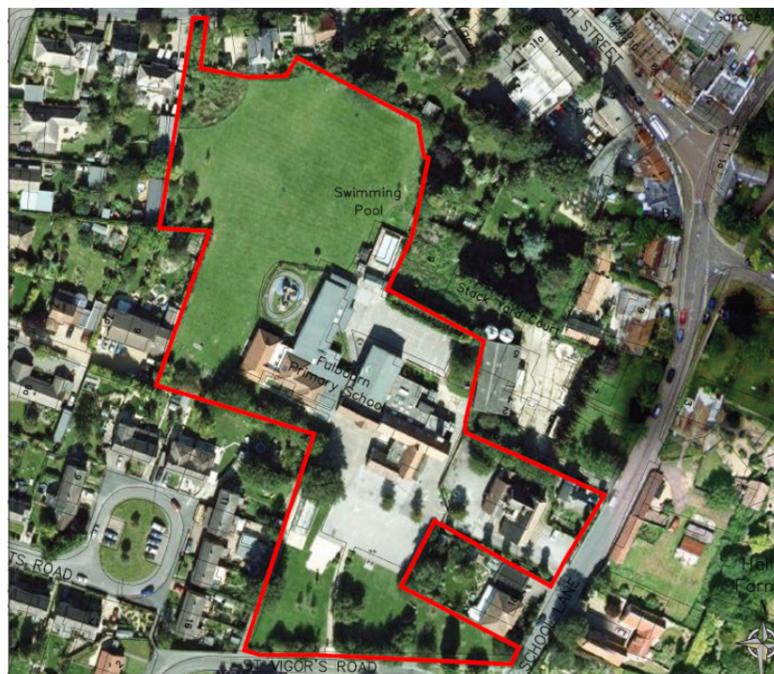
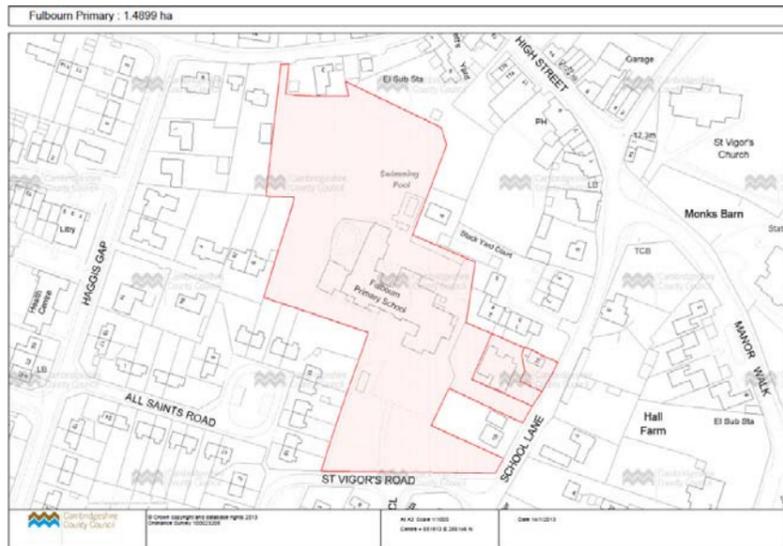
## Milestone 2 Report



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# Executive Summary 1.0



**1.1** The Local Authority has identified a need to expand the primary school to address increased demand for pupil places, as well as ensuring provision for pre-school children.

**1.2** Mouchel were appointed in September 2013 to provide an architect-led multi-disciplinary design consultancy services for Design and Build project led by Faithful+Gould as project manager and RG Carter as contractor to support delivery of the expansions of the Fulbourn Primary School to build on the existing work to date and progress the schemes through the remaining stages to completion (work stages MS2 to MS8 inclusive)

The project will be delivered through a Design and Construct contract with the early appointment and collaboration with the building contractor. Responsibility for design will be delivered by Mouchel working with RG Carter through all the stages in accordance with Cambridgeshire County Council Design and Build Contractor framework.

**1.3** Consultative meetings with all members of the project team including the client (CCC-CYPS), project managers (Faithful+Gould); the contractor (RG Carter), estates advisor (LSH) and Mouchel representatives informed the understanding of the overall development of this study.

**1.4** The village of Fulbourn lies approximately five miles east of Cambridge. The area is largely residential in character, with a large area of open space to the east and north of the Site. In terms of planning policy, the greater part of the site is designated as Protected Village Amenity Area (PVAA) - (policy CH/6) and is partly in the Conservation area (policy CH/5), however it is outside of the Green Belt.

**1.5** The original brief to expand the current capacity of the school from 240 places to 330 places plus a 52 place Early Years facility in the first instance with the prospect of expanding it further to 420 places plus Early Years, was abandoned as soon as Option 1 was reviewed, due to the site constraints. Therefore a further 3 options proposing the expansion of the school to 420 places plus Early Years in one phase seemed to be more purposeful. The scheme has been developed on the basis that the Site is treated as being 'confined'.

**1.6** The proposals are based on information gathered at the time of the report preparation:

- Existing OS Plan provided by Cambridgeshire County Council
- Architects site visit during the study
- Briefing meeting with the project team
- Meeting with client (CYPS)
- Communication with consultees (Planning, Highways, Sports England)

This report does not include extensive consultation with any of the parties, nor with the statutory bodies, as that will be carried out at the next stages of the project.

**1.7** Section 4, item 4.7 of this report contains the total estimated outline cost of the 4 options for the scheme within the existing site. They range from £ 3,063,000 option 1, £3,710,000 option 4, 4,640,000 option 3 to £5,230,000 option 2. In all the cases the cost is above the original clients budget in the sum of £1,250,000 due to the change of the scope of works and expanding the school capacity from 240 places plus Early Years to 420 (2FE) plus 52 place Early Years. In addition to this, there is the cost of option 5, in the sum of £7,800,00 for a new 420 primary school on a new site as described in the appendix E of this report.

# Brief Development 2.0

## Client Brief

Originally the Milestone 2 Report was required for the expansion of the school from 240 places to 330 places plus 52 place Early Years. The report was to include the following:

- A review of the whole school against the BB99 guidelines
- A site development plan to look access, parking, play areas etc
- The site development to be further developed to consider the following options:
  1. Extend the school from 240 to 330 place plus early years and consider if the existing community building site is required to be included.
  2. Consider whether the school is ultimately suitable for extending from 330 place to 420 place (2FE) plus early years.
  3. Build a new 2FE school with 420 places plus early years elsewhere and sell the site.

The report should consider the existing adjacent community building, whether the land or building are required for incorporation into the school development or whether it is feasible to dispose of it and lose the building footprint and part of the School Lane frontage. The following Estates advice will be provided:

- A valuation of the site and consideration whether the capital receipt is sufficient to develop a new 2FE primary school.
- A potential land search of the surroundings area to establish whether a suitable site exists for a new 2FE primary school.



Existing Site Photographs

# Current Brief 3.0



Existing Site Photographs

## Client Brief

Following a review of the proposal (Option1) when the full extent of the site constraints were made more apparent to the client, a decision was made to consider more options alongside the initial proposal and to produce alternative plans. The site constraints making an impact on that decision are as follows:

- The community building being in the conservation area
- Local public interest and objection to development of the school site (reference to recent demountable classroom)
- Expansion of the car parking area on site and restrictions imposed by Planners.
- The impact that a two storey extension would cause loss of natural light on neighbouring properties .

Those 'new options would not necessarily allow for delivering the required accommodation in phases (expansion from 240 to 330 place plus early years - phase 1 and 330 to 420 place plus early years - Phase 2), but to be delivered in phases within the one contract (expansion from 240 place to 420 place plus early years) . The Report was to include the following:

- A review of the whole school against the BB99 guidelines
- A site development plan to look access, parking, play areas etc
- The site development to be developed to consider the following:
  1. Extension of the school from 240 to 420 place plus early years.
  2. Build a new 2FE school with 420 places plus early years and sell the site.

## Key Objectives

- The school is to be identified as 'confined site' so that the undersized sports fields could be compensated by the provision of a MUGA in order to comply with BB99.
- BB99 review shows that additional teaching spaces are required.
- 2 pre-school classrooms and 5 additional classrooms need to be provided when the school is extended from 240 to 420 place.
- A small hall, additional space for the kitchen and staff room is also to be provided. The size and location of those spaces varies, dependant on the options.
- New accommodation needs to be fully accessible and inclusive.
- Parking will need to be increased, and 40 no. new cycle spaces are proposed as part of the green travel plan.
- Temporary accommodation will be required and the number of required spaces would vary dependant on the option that is to be chosen.

## 4.1 ARCHITECTURAL

### BB 99 Schedule of accommodation

Fulbourn Primary School								
Primary School Comparison of Schedules								
No. Of places. Net capacity range	Max. Group size	Average area m2	Existing accomodation (240)		BB99 420 pupils (2FE)		Additional Accomodation (420)	
			No. of rooms	total area (m2)	of rooms	total area	No. of rooms	total area (m2)
<b>TEACHING</b>								
<b>Basic Teaching</b>								
reception class	30	63	1	64**	2	132	1	66
infant classbase	30	60	2	124*	4	240	2	60
junior classbase	30	60	6	359*	8	480	2	120
<i>specialist practical</i>								
food/science/D&T	8	24	N/A					
food/science/D&T	15	38	N/A		1	38	1	38
ICT/group room: (no.of computers)								
ICT suite:(no.of computers)					(30)	68	(30)	68
<b>halls</b>								
main hall (used for dining)	30		1	155	1	150		
small hall	30	80	1	N/A	1	80	1	80
studio	30	50	1	N/A				
<b>learning resource areas</b>								
Library resource centre	15 to 30		1(independent learning) 62		1	40		
small group room (SENco)	6	12	se below		1	12		
small group rooms	6	9	3 19+21+50-90 1(music room) 14		3	27		
<b>TOTAL TEACHING AREA</b>								
			868		1267			
<b>staff and admin</b>								
head's office/meeting room			1	20	1	16		
senior management offices		8	2	12	1	8		
staff room			1	31	1	58	1ext.	27
general office			1	20	1	14		
sick bay (adjacent)		3			1	3		
entrance/ reception			1	24 (20 circul.)	1	5		
copier/reprographics						8		
SEN therapy/MI room		12	1	9 (first aid room)	1	12		
interview/social services		8			1	8	1	8
<b>storage</b>								
class storage (reception)		3	2	2+9-11	2	6	1	3
class storage (infant and junior)		1.5	4	12 (2+3+3+4)	12	18	4	6
specialist stores		6 or 8	4	7 (1+1+2+3)	3	24	2	16
PE stores (adjacent to hall)		12	1	9	1	12		
PE store (external)		4	1	11	1	4		
<b>non-teaching storage</b>								
central stock		8	1	7	1	8		
cloakrooms/lunch box storage		3	2	24+37 (incl. circ.)-61		42		15
dining chair/table store (no. of sittings)			(3) sittings	22	(3)	16		
staging/appliance store			N/A		1	8		
community store		see below			1	4		
caretakers/maitenance store			1	8	1	7		
cleaner's store		1.5	1	3	3	4.5	1	1.5
			267					
<b>Total Net Area</b>			<b>1135</b>		<b>1553</b>		<b>508.5</b>	
<b>(BB99 recommendation)</b>			<b>994</b>		<b>1552</b>			

## 4.1 ARCHITECTURAL

BB 99 Schedule of accommodation –cont...

<b>non-net area</b>							
kitchen (full service)		1	53.5	1	77	extension	23.5
servery			see table store		8		
<b>toilets (and personal care)</b>							
reception toilets		3	2x5+7=17	3	12	2	8
other pupil toilets		4	9+9+6+11= 35		60		15
accessible toilets/hygiene facilities		3	9+4+4=17		16		
staff toilets		2	5x2=10		14		
<b>Circulation (calculated at 23% of net)</b>			215.5		349		117
<b>Plant (including server) (calculated at 3% of net)</b>			27+3+4=34		47		13
<b>Partitions (calculated at 5% of net)</b>			57		78		25
<b>Total Gross Area</b>			1574		2212		709
recommended gross area (net as 70% of gross)			1574.00%		2212.00%		
*reception/year 1(2no); years 2/3 (3no.); years 4/5 (2 no.); years 5/6 (1 no.)							
** community accommodation converted to reception/year 1 class (included in gross area above)							
Community room OSC		1	64				
Store		1	9				
Access Toilet		1	4				
Nappy Change		1	7				
Office/kitchenette		1	9				
Partitions			5				
Total			98				

## 4.1 ARCHITECTURAL

### OPTION 1

#### 4.1.1 Description

Option 1 proposes the construction of a new single storey teaching block, wrapped around the neighbouring property to the east of the hard play area. The new freestanding teaching block is linked to the existing main building via covered path. The construction of this block would require the removal of 3 no. trees. The quality of those will be known once a Tree survey is completed at the next stage of the project. The proposed teaching block would be single storey with two standard size classrooms (60m<sup>2</sup>); male and female WCs and plant room built in Phase 1 and further three classrooms with toilets, cloaks and a small hall of 80m<sup>2</sup> built in phase 2. The existing hall would still be used for dining.

Option 1 proposes that the existing kitchen and the staff room would be extended during the Phase 2 construction works. The location of the block would require the vehicular access and parking area to be improved/reconfigured and this would effect the existing community building (referred on the drawing as disused library) that is proposed to be converted/alterd to Early years accommodation. The single storey block would be in keeping with the linear form of the existing teaching accommodation.

The site is big enough for a 2FE school only if the site is classified as a 'confined' site, and as such would require the pitches to be provided off-site. As for the games courts a 781m<sup>2</sup> MUGA area is suggested in the location that currently 'serves' the recently erected

Pre- school mobile.

It is proposed to increase the parking provision where there is a spatial opportunity. The total amount of proposed car parking places (22 including existing 16 no.) do not fully match with SCDC requirements, however with an updated travel plan supporting 'green travelling modes' that could be balanced out. In support of that there is an additional 40 no. cycle places which would with 100 no. existing places add up to 140 cycle places, slightly more than SCDC requires ( 30% of 420 pupils no.= 126 places).

#### 4.1.2 Advantages and Disadvantages

##### Advantages:

- This is the only option that could be delivered in two phases as originally required.
- The new block could be constructed with minimal disruption to the school's existing operation.
- The refurbishment works in the library building also could be carried out without any effect on the school operation.
- Construction site access from School Lane.
- The total estimated cost in the sum of £ 3,063,000 is the lowest when compared with other three options.
- No demolition is involved.
- Sport England supportive of this option

##### Disadvantages:

- The school master plan is already somewhat sprawling and this new block would not aid in consolidating the blocks.
- Likely to have a planning issue (partly built in the conservation area).
- Likely to have an objection from the 18 School Lane neighbour.
- Less car parking than in other options (22no.oppoed to 26 no.).
- Pre-school hard play area is small if the site manager's house is kept as existing. Note: Additional area could be acquired subject to approval from CCC to reduce the size of the plot.
- Loss of mature trees to the edge of hard play area.



## 4.1 ARCHITECTURAL

### OPTION 2

#### 4.1.1 Description

The new accommodation will be created within the replacement of the part of the existing building proposed for demolition. The newly created admin. area including a staff room, together with a new kitchen, plant room and a new teaching area (3 classrooms on the ground floor and 4 classes on the first floor) would create a new two storey block.

This new building would enable the existing main entrance area to be reconfigured and converted into a new small hall which will together with the existing hall and a new kitchen create a heart of the school, easily accessible for all the pupils accommodated in the existing and the new teaching wings.

The existing community building will be converted to form the early years accommodation and once that is completed the temporary pre-school mobile could be used to accommodate the children from the existing classes that area proposed for demolition (Maple and Rowan classrooms). However there would still be a need for the temporary accommodation for the following: independent learning/library; kitchen and boiler/ plant room. Consideration should be given, if this option is chosen, to find a solution to keep the existing plant room and incorporate it within the footprint of the new extension.

The car park (26 no. places is proposed to extend over part of the existing playground area and onto grassed area. An additional 40. no. cycle places are also proposed and they are located near the 'community' building and the existing main building entrance area. A MUGA is shown to the west elevation of the site adjacent the existing school building.

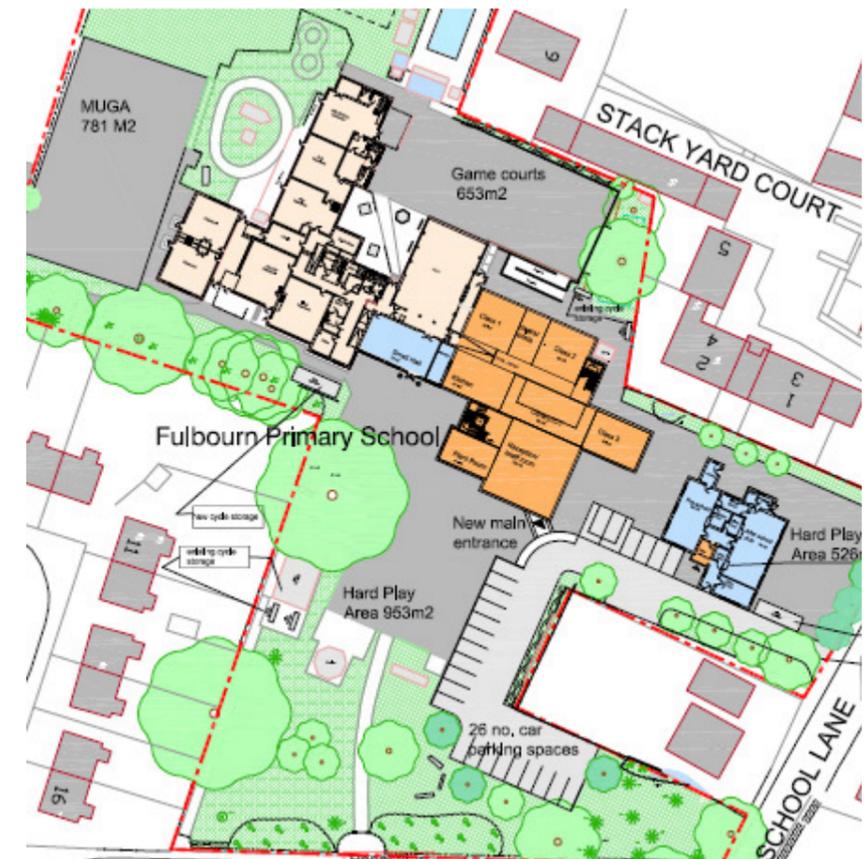
#### 4.1.2 Advantages and Disadvantages

##### Advantages:

- New main entrance location is more prominent and as such more welcoming.
- The position of the new kitchen is more accessible .
- New small hall (converted existing admin. area) is well located 'sitting' next to the new kitchen on one side and the existing hall on another creating 'heart' of the building
- New extension together with the remaining existing accommodation makes a good compact plan that functionally works very well.
- Very good connectivity within the school.
- Construction site access from School Lane.
- The existing pre-school mobile can be used for 2 classes proposed for demolition, once the existing disused library is converted to the new pre-school accommodation.
- Sport England supportive of this option

##### Disadvantages:

- Likely to have a planning issue (partly built in the conservation area and proximity to the neighbouring property at Stack Yard Court)
- Additional temporary accommodation would be required for the following: independent learning/library, kitchen and plant room\*. (\*nb: this would be difficult to provide).
- Site Manager's house is proposed for demolition. However it may be possible to retain it with the reduced hard play area to pre-school or the agreement is acquired from CCC to reduce the size of the site manager's house plot.
- Could not be delivered in 2 phases (330 and 420 places).
- Loss of mature trees to the edge of the hard play area.
- The total estimated cost in the sum of £5,230,000 is the highest when compared to other options.



## 4.1 ARCHITECTURAL

### OPTION 3

#### 4.1.1 Description

Option 3 would propose the construction of a two-storey teaching block consisting of 8 classrooms, new Resources/ICT/Library space on the ground floor and a staff/PPA room with associated areas area on the first floor. However, the erection of this block would be associated with a demolition of 3 no. existing classrooms one of which was recently converted from the former pre-school use.

In addition to the above a new entrance and admin. area are proposed to be built within a new single storey block adjacent to the existing building on the east side and to the left linked to the reconfigured community building. In this option the 'disused' library will be converted into a new kitchen/small hall accommodation. This would allow the existing kitchen to be demolished which would help with a hard play area enhancement.

The remodelling of the existing school admin. area and independent learning/library space should potentially create 2 no. reception classrooms, one of which would be approx. 59m<sup>2</sup>, slightly below the size recommended by BB99 (63m<sup>2</sup>). The existing classrooms (Maple and Rowan ) and partly resources room would then be remodelled to accommodate Early Years block.

The car park is proposed to extend over part of the existing playground area and this time encroaching a small amount onto the grassed area. An additional 40. no cycle places are also proposed and they are located near the 'community' building and the existing main building entrance area. The existing Games Court area is indicated to have been slightly increased. A new MUGA is shown to the west elevation of the site adjacent the existing school building.

#### 4.1.2 Advantages and Disadvantages

##### Advantages:

- The new two-storey extension is located away from the neighbouring properties.
- A new kitchen is better located and easily accessible.
- A new main entrance location is more prominent and as such is more welcoming.
- New location for the reception classrooms and the new pre – school is suitable for shared use of hard play area.
- The refurbishment works in the existing disused library building could be carried out without any effect on the school operation.

##### Disadvantages:

- The school master plan is already somewhat sprawling and this new blocks either side would not aid in consolidating the blocks.
- Connectivity within the existing and a new section of the building is very lengthy.
- Likely to have a planning issue (partly built in the conservation area).
- Additional temporary accommodation would be required for the following: independent learning/library, two further classrooms, other than the existing mobile used presently as a pre-school.
- Construction site access for two-storey building deemed to be difficult – see section 6, item 6.2 of this report.
- Pre-school hard play area is small if the site manager's house is kept as existing. Note: Additional area could be acquired subject to approval from CCC to reduce the size of the plot.
- Sport England has some concerns about this options - see section 6, item 6.5 of this report.
- The total estimated cost in the sum of £ 4,640,000 is higher than the cost for options 1 and 4, but just a little bit lower than option 2 estimated cost.



## 4.1 ARCHITECTURAL

### OPTION 4

#### 4.1.1 Description

Option 4 involves a proposed new build two storey extension with a single storey Agora to the north-west elevation of the existing school building. Some internal remodelling to relocate the staff room and provide circulation spaces and a food & technology classroom will be required. A new single storey extension is to be provided to the north east corner by the kitchen.

The disused Library building is proposed to be converted to a Early Years area -pre-school. A new single storey entrance extension is to be provided.

The design philosophy is to extend the school in a simple linear form taking reference from the existing school. The new two storey building is arranged to form an 'agora' space that would be shared with other three existing classes. This space of approx. 197m<sup>2</sup> would 'serve' numerous purposes, but primarily to accommodate the function of small hall area that is required for a 2FE school.

The concept is to provide much needed accommodation that would allow the school to expand to 2 FE, and not to compromise the school operation as much as in other to options (2 and 3).

The car park with 26 no. car parking spaces is proposed to extend over part of the existing playground area and onto grassed area. An additional 40. no cycle places are also proposed and they are located near the 'community' building and the existing main building entrance area. A new MUGA is shown to the west of the new car park area. The provision of a multi-games area in that location allows an intensified use of external areas whilst keeping playing field space uninterrupted.

The style of the building will complement the existing school estate and raise the quality of the existing premises in overall terms. The main roof should be pitched to match the majority of the existing roofs, although the roof above agora is much more likely to be flat.

#### 4.1.2 Advantages and Disadvantages

##### Advantages:

- New extension building footprint is outside of the conservation area.
- New extension is reasonably well located away from the neighbouring properties.
- Pre-school playing area will be big enough whilst the site manager's house can still be kept as existing.
- Car parking number is as required for 2 FE school (approx. 26 no. places)
- Additional temporary accommodation other than existing mobile would not be required.
- Not much disruption for the school operation during the construction works except for the existing accommodation to the north-west .
- No demolition is involved.
- The total estimated cost in the sum of £ £3,710,000 is lower than the cost for options 2 and 3.
- The existing pre-school mobile can be used for 2 classes proposed for demolition, once the existing disused library is converted to the new pre-school accommodation.

##### Disadvantages:

- Construction site access for two-storey building deemed to be difficult – see section 6, item 6.2 of this report
- A bigger floor area is proposed as 2 storey building is required (2 staircases, circulation etc.)
- Existing classrooms that we are abutting to will lose the daylight on the west side of the building. That would need to be compensated by the new roof lights.
- Could not be delivered in two phase as originally required, but one phase only.
- Sport England has some concerns about this options - see section 6, item 6.5 of this report.

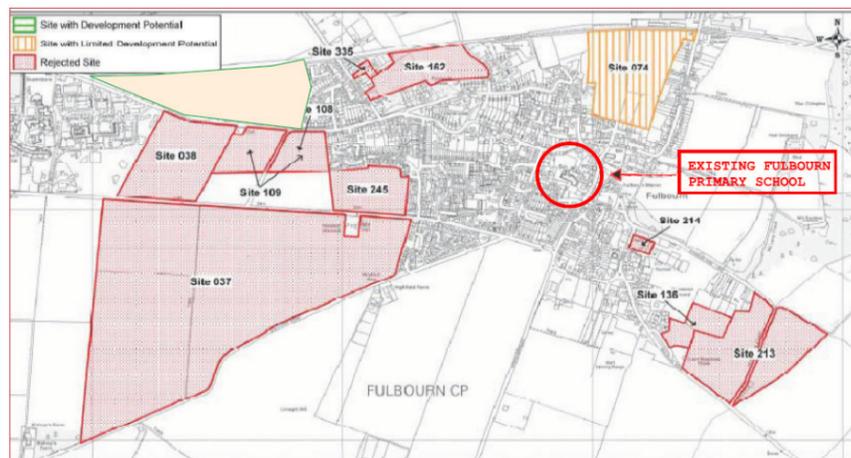


## 4.1 ARCHITECTURAL

### OPTION 5

#### 4.1.1 Description

A School Site Market Appraisal and Alternative Site Search Identification and Assessment has been carried out by Lambert Smith Hampton - see attached as appendix E.



## 4.2 BUILDING SERVICES

### 4.2.1 M&E Services and Boiler Condition & Capacity Report

- The existing boiler and plant installations should be verified in terms of condition and capacity prior to progressing the next stages of the project.
- The mains services should be verified in terms of capacity prior to progressing the next stages of the project.
- It is considered that a separate boiler plant will be provided to serve the new multiple classroom teaching wings (option 1, 3 and 4). However the small extension in option 3 (main entrance area including headteachers, and deputy offices as well as toilets it is likely to be linked to the existing school system. In option 2 the new plant would serve both, the new teaching block as well as the rest of the existing school building. The existing plant room in the disused library would serve the new accommodation (either the pre- school or kitchen and the small hall) in all the options subject to the condition and capacity as notified in item 1.1.1 above. It is very likely that the existing boiler would need to be replaced with the new one.
- Electrical supplies: the capacity of the existing installations have yet to be verified as our team were asked not to visit until clearance had been confirmed. The mechanical and electrical engineers will visit as soon as possible and an allowance will be made within the contingency sum at this stage.
- Fire alarm - the new areas will need to be covered by a similar system with an interface to activate the whole school area upon alarm.
- The new building areas will have a security system installed and this is recommended to be connected to an off site monitoring service.

- **Statutory Services Information**  
Details of overhead and below ground services routes should be obtained from statutory services providers. These should be reviewed to check if any public services are routed through the site which may impose restrictions on proposed building options due to easement areas. This data will also assist in capacity checks enquiries for the infrastructure at the next development stage.

## 4.3 STRUCTURES

### 4.3.1 Site Appraisal

- **Former Land Use**  
The initial school buildings and established trees within the grounds are shown on historical maps dating from around 1885-1886.
- **Topography**  
A topographical survey by 'greenhatch group', dated October 2013, has been carried out. The site is generally highest at the south east corner and slopes down in a north-westerly direction. There do not appear to be any sudden step changes in height on the proposed options that would require retaining structures to be provided although levels for DDA access and drainage should be considered for the proposed building and external works options.
- **Flooding**  
The site is not shown on the Environment Agency website to be in a flood zone.
- **Geology**  
British Geological Survey (BGS) borehole records for the local area indicate superficial surface geology consisting of river terrace deposits over chalk bedrock.  
There are limited borehole records available within 1km of the school site which indicate differing ground conditions. Of the records available there appears to be a varying combination of strata including; general fill, structureless chalk rubble in a white clay matrix, soft gritty broken lumpy chalk, soft and hard beds of chalk marl, gault, hard stone, green sand and

Jurassic or Oxford grey clays.

A Phase 1 Desk Study followed by a Phase 2 Intrusive Site Investigation with factual and interpretive reporting is recommended to be carried out at the next development stage in order to determine the actual ground conditions on site.

- **Groundwater**  
The site overlays a Major Aquifer with high permeability and the area is designated a Groundwater Source Inner Protection Zone 1 (SPZ1). The SPZ1 – Inner protection zone is defined as the 50 day travel time from any point below the water table to the source, therefore care must be taken to ensure that the proposed forms of ground construction do not create a risk of groundwater pollution.
- **Structural Engineering Considerations:**

**Option 1** involves a new build single storey extension, built over two phases, with a link corridor to the existing school building. Remodelling of the existing school building by knocking through an external wall and internal refurbishment of the Cedar Classroom to create circulation space for the link corridor will be required.

The disused Library building is proposed to be converted to a pre-school area. It is assumed that no internal remodelling of the structure is required. A new single storey entrance extension is to be provided.  
The proposed layout of the new build would ideally suit traditional load bearing masonry construction cavity walls, internal block work walls and trussed timber roof trusses over. Ground floor slab constructed of reinforced concrete or precast beam and block flooring with screed over. Foundation options to be considered on receipt of the site investigation survey report. The site investigation will need to include for determining the existing building foundations.  
The building is shown to be built over the area of existing trees that would need to be felled, next to established trees to be retained and adjacent to a line of established conifers to the rear garden of 18 School Lane. Foundation solutions for these areas would likely require deep foundations to mitigate the risk of future settlement of the building due to rebalancing of the ground conditions over time and against live root attack.

## 4.3 STRUCTURES CONT.

- **Option 2** involves the partial demolition of existing school buildings, to the east of the Hall and new Small Hall, and construction of a new build two storey extension. Some remodelling of the existing Staff offices and Entrance/Reception areas to form a Small Hall will be required.

The disused Library building is proposed to be converted to a pre-school area. It is assumed that no internal remodelling of the structure is required. A new single storey entrance extension is to be provided.

The proposed layout of the two storey new build construction would ideally suit steel framed construction with masonry cavity walls and non load bearing partitions or internal sliding partition walls. Roof options either flat roof constructions or trussed timber roof trusses over. Ground floor slab constructed of reinforced concrete or precast beam and block flooring with screed over. First floor slab constructed of cast in-situ or pre-cast concrete planks or precast beam and block flooring with screed over. Staircases to be constructed of pre-cast concrete. The steel frame will allow for flexibility of internal spaces to be remodelled in the future. Foundation options to be considered on receipt of the site investigation survey report. The site investigation will need to include for determining the existing building foundations.

The single and two storey extensions could also be constructed using off-site manufactured panellised construction, such as timber frame with solid laminated infill panels that would be designed and manufactured by a specialist. External cladding to suit architect's details, probably with exposed brickwork or rendered concrete blockwork. The ground floor slab would be constructed of reinforced concrete or precast beam and block flooring with screed over. Concrete up stands would be required at the base to support the timber frame. The upper floors and roof would be constructed using timber members.

The building is shown to be built over the footprint of part of the building to be demolished. The existing foundations and

ground floor construction will need to be grubbed up as part of the demolition process.

- **Option 3** involves the partial demolition of existing school buildings, and construction of a new build two storey extension. Major remodelling of the existing school building to the south of the Hall and corridor line will be required. A single storey extension is shown to the east of the Cedar Classroom with a link corridor to the disused Library building.

The disused Library building is proposed to be converted to a kitchen and a Small Hall, for which some internal remodelling will be required.

The proposed construction for 2 storey building would be similar to new build in option 2.

The building is shown to be built over the footprint of part of the building to be demolished. The existing foundations and ground floor construction will need to be grubbed up as part of the demolition process.

The proposed layout of the new build single storey construction would ideally suit traditional load bearing masonry construction cavity walls, internal block work walls and trussed timber roof trusses over. Ground floor slab constructed of reinforced concrete or precast beam and block flooring with screed over. Should flexibility of internal spaces be required, steel framed construction with external masonry walls and non load bearing partitions or internal sliding partition walls could be considered. Foundation options to be considered on receipt of the site investigation survey report. The site investigation will need to include for determining the existing building foundations.

The proposed single storey building is shown to be built near to an existing mature tree to be felled. Foundation solutions for this area may require deep foundations to mitigate against the risk of future settlement of the building due to rebalancing of the ground conditions over time

- **Option 4** involves a proposed new build two storey extension with a single storey Agora to the north-west elevation of the existing school building. Some internal remodelling to relocate the Staff Room and provide circulation spaces and a Food & Technology classroom will be required. A new single storey extension is to be provided to the north east corner by the Kitchen.

The disused Library building is proposed to be converted to a pre-school area. It is assumed that no internal remodelling of the structure is required. A new single storey entrance extension is to be provided.

The proposed layout of the two storey new build construction would ideally suit steel framed construction with masonry cavity walls and non load bearing partitions or internal sliding partition walls. Roof options either flat roof constructions or trussed timber roof trusses over. Ground floor slab constructed of reinforced concrete or precast beam and block flooring with screed over. First floor slab constructed of cast in-situ or pre-cast concrete planks or precast beam and block flooring with screed over. Staircases to be constructed of precast concrete. The steel frame will allow for flexibility of internal spaces to be remodelled in the future. Foundation options to be considered on receipt of the site investigation survey report. The site investigation will need to include for determining the existing building foundations.

The two storey extensions could also be constructed using off-site manufactured panellised construction, such as timber frame with solid laminated infill panels that would be designed and manufactured by a specialist. External cladding to suit architect's details, probably with exposed brickwork or rendered concrete blockwork. The ground floor slab would be constructed of reinforced concrete or precast beam and block flooring with screed over. Concrete up-stands would be required at the base to support the timber frame. The upper floors and roof would be constructed using timber members.

## 4.4 LANDSCAPE

4.4.1 The key objectives for the landscape layout are to:

- To keep the existing playing field area, as much as possible, in the original shape and size.
- Provide a secure, safe and friendly environment within the school.
- Create a welcoming entrance and sense of arrival with easy access around the building (option 2 and 3)
- Provide outdoor hard surfaces areas associated with new/existing accommodation
- Retain as many as possible existing trees and where possible substitute it with the new trees. Some mature trees (2 no.) will be lost on the eastern boundary to the neighbouring property to allow new development to be built (option 1) or construction of the new car park area and MUGA (options 2,3 and 4).
- Provide new car parking areas for cars and cycles.
- It is proposed to provide an additional 6 (option 1) /10( options 2,3 1and 4) car parking spaces.
- The new cycle places 40 no. is also proposed and location for those are as follows:  
  - Option 1 – 20 no. located near existing community building and 20 no. located alongside the vehicular access.
  - Options 2, 3, and 3 -20 no. located near existing community building and 20 no. near the boundary close to the existing entrance area.
- The landscape design should enhance the local and wider environment, improving biodiversity and using the best in sustainable 'green' solutions.

## 4.5 BREEAM and Sustainability

- The project has been designed from the conceptual plan with the principles of sustainability in mind.
- Early advice on all aspects of the external environment is essential to providing sustainable solutions. Thorough site surveys and investigations, site analysis and appraisals including the ecology, soils and drainage will form the background to the development of design solutions.
- A sustainability statement required at the later stage of the project should outline the elements of the scheme that address sustainable development issues, including the environmental, social and economic implications.
- The possibility to have a timber structure prefabricated off site would minimise waste, increase quality control and maximise building speed.
- Timber will be obtained from FSC sources to maintain quality and sustainability of the renewable natural resource.
- Insulation levels used on the building regardless of the option that is to be chose should exceed building control levels with good air sealing.
- Low energy initiatives, recycle, build tight, ventilate right, concepts will also be utilised. Maximising natural light and passive ventilation reduce the amount of artificial lighting and mechanical ventilation. Automatic lighting with PIR's should be used in the corridors and pupil toilets.
- Windows and doors to be good quality with high performance double glazed units.
- The selection of building materials should be informed by the BRE's published Green Guide to Specification where the majority of materials and construction methods achieve an 'A' Rating and twill need to be reflected in the Very Good BREEAM Schools Rating that the project is aiming for.
- Through BREEAM, we can ensure that less waste is produced during construction and encourage recycling where possible.



View to the green frontage area

## 4.6 RISKS

### Principal Items

- Delays to approval to proceed from CCC and other authorities.
- Confirmation of Project Brief - Suitability to project objectives
- Progress of Planning Application delayed by unforeseen planning issues, i.e. PVAA; conservation area
- Future local campaign against the new school extension
- School agreeing to construction site access, phasing and temporary accommodation needs during construction
- Client changes and consequential improvements exceeding budget provision.
- Change of Building Regulations requirements
- Adequacy of M&E supply capacities (gas, water and gas)
- Below ground unforeseens
- Ecology (habitat and bats in the disused library etc.)
- Highways requirements
- Sports England requirements
- Asbestos Survey
- Inflation over and above forecasted costs due to economic climate.
- Condition survey - Re-roofing of the existing flat roof areas affected by the extension.
- Archaeology



View from Pierce Lane

## 4.7 PROJECT COST SUMMARY

4.7.1 The estimated cost of the extensions, alterations, external works and other associate works are as follows:

- (I) Option 1 is £ 3,063,000
- (II) Option 2 is £ 5,230,000
- (III) Option 3 is £ 4,640,000
- (IV) Option 4 is £ 3,710, 000
- (V) Option 5 is £ 7,800, 000

4.7.2 For the Cost Plan summaries of the five options based on completion by middle of January 2016, plus a summary of the effect of inflation up to 2017 completion see Appendix C.



View to the school main entrance

## 5.01 Surveys

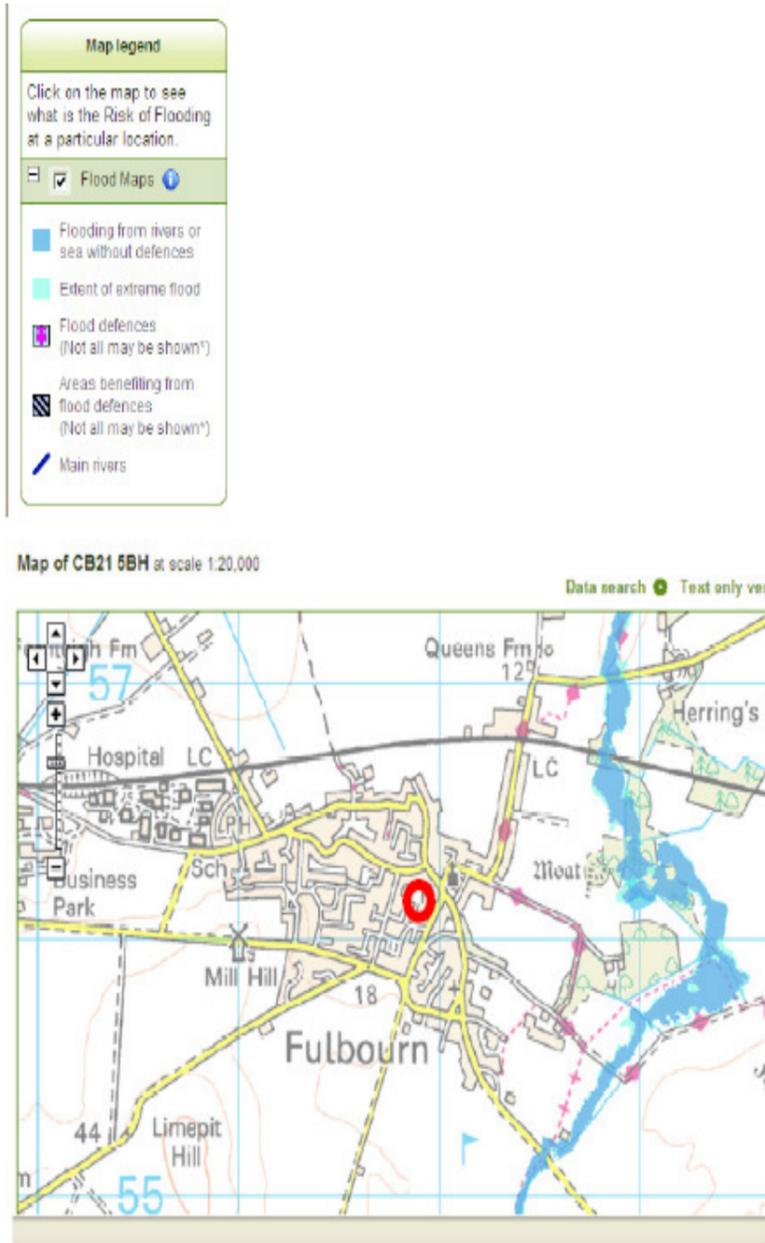
- **Topographical Survey** has been carried out by Greenhatch Group and was completed in October. The scope of the survey covered the school site as well as the community building site.
- **Building Survey** for both buildings, the school and community building was also carried out and completed in October. The surveys included plans, elevations and sections. The survey also included recently erected double mobile classrooms used as a temporary accommodation for pre-school.
- **Drainage Survey** as well as **Utility mapping and below ground services survey** were carried out at the same time as topographical survey and have been completed.
- **Tree Survey.** Although the location of the trees was marked up on the topographical survey, a comprehensive arboricultural assessment would still need to be carried out at the next stage of the project.
- **Condition survey** carried out in-house by Mouchel, is very useful as a background information on the existing buildings. However the content should be reviewed at a future stage as no allowance has been made for work to be included at this stage.
- **Asbestos** - MAN (Management Survey) was completed in 2012 by CCC. The exact location for R & D asbestos survey, if required, will be confirmed at the later stage.
- All other surveys, as listed on the schedule, will be carried out at the later stage of the project.

## 05.02 The list of the surveys

### Schedule of Survey Information Required

Issue 1 - 25/11/2013		Primary Schools						
		Fulbourn Primary School and Proposed Pre-School						
Type	Tender Action Owner	Planning Requirement	Req?	Benchmark Cost	Cost	Date Appointed	Company	Status / Date Rcd
Topographical Survey	RGC/Mouchel	Yes	Yes 1	£2,500.00	TBC		Greenhatch	completed
Building Survey (Plan)	RGC/Mouchel	Yes	Yes 1	£3,000.00	TBC			completed
Building Survey (Elevations/Sections)	RGC/Mouchel	Yes	Yes 1					
Structural Building Survey	RGC/Mouchel	Yes	Yes 2	£1,000.00	TBC	TBC	TBC	
Drainage Survey	RGC/Mouchel	No	Yes 1	£5,000.00	TBC	TBC	Greenhatch	completed
Utility mapping and below ground services scan	RGC/Mouchel	No	Yes 1					
Tree Survey	RGC/Mouchel	Yes	Yes 2	£750.00	TBC	TBC	TBC	
M&E Load Monitoring	RGC/Mouchel	No	Yes 2	£500.00	TBC	TBC	TBC	
Geotechnical Survey (Trial Holes)	RGC/Mouchel	Yes	Yes 2	£7,000.00	TBC	TBC	TBC	
Contamination Survey (Trial Holes)	RGC/Mouchel	Yes	Yes 2					
Flood Risk Assessment / BREEAM	RGC/Mouchel	Yes	Yes 3	£2,000.00	TBC	TBC	TBC	
Ecologist (Planning / BREEAM)	RGC/Mouchel	Yes	Yes 3	£500.00	TBC	TBC	TBC	
Acoustician (Planning / BREEAM)	RGC/Mouchel	No	TBC 4	£3,500.00	TBC	TBC	TBC	
Building Services Survey- within building	TBC	TBC	TBC 3	TBC	TBC	TBC	TBC	
Transport Survey and Statement /Assessment	RGC/Mouchel	Yes	No 3	£4,000.00	TBC	TBC	TBC	
School Travel Plan	School	Yes	Yes 4	by school	by school	TBC	TBC	
Archaeological (desktop study)	RGC/Mouchel	Yes	Yes	£3,000.00	£0.00	TBC	TBC	Andy Thomas to advise
R and D Type Asbestos Survey (Exact locations TBC)	CCC	No	Yes 2	£2,000.00	TBC	TBC	TBC	
<b>Total</b>				<b>£34,750.00</b>	<b>£0.00</b>			

Schedule of Site Surveys



### 6.1 Archaeology

Contact was made with County Archaeology team who confirmed that the site is located in the historic parish church of St.Vigor (Historic Environment Record Number 06483).Archaeological fieldwork on the immediately adjacent Stack Yard Court development revealed well preserved evidence for the Saxo - Norman development of the village (her ecb2716). It is clear that elements of this settlement will extend into the school site. The team recommend that archaeological investigations would be appropriate.

### 6.2 Highways

The highway team represented by Linda Blower was also consulted, but they could not determined what impact would additional 180 children have on highways aspect of the site without seeing a Transport Assessment/Statement. Linda says: 'It would depend how they travelled to the school, if the majority were being dropped off my car then this may well cause problems but if they travel more sustainably by walking and cycling (as we hope would be the case) then this would hopefully not cause any problems that couldn't be overcome.

A travel plan would be required to encourage sustainable modes and depending on the number of additional vehicle movements they would need to look at the operation of the local junctions. It may be that they also need to make improvements to the vehicular access and also pedestrian/cycle routes so allowance should be made for this'.

The proposed construction access in option 3 and 4 from Pierce Lane has not been considered appropriate by Jon Finney the CCC Highway Officer, so a different solution is to be considered. An option is to use the existing site vehicular access alongside the community building and the main building entrance area. This was proven to work in the past when the two class extension to the west of the main building was built in 2000.

### 6.3 Planning

Mouchel approached both CCC planners and SCDC Conservation officer.

The CCC planner advised the following:

1. It would be good to keep the footprint out of the Conservation Area, although this may not be possible due to the other constrains on this site. His advice was that due to the sensitivities of the site (PVAA & Conservation Area) the design will need to be of a high standard and be seen to improve the vis-

sequential explanation of the site selection process should be demonstrated in a planning application should this option is chosen and submitted.

There will need to be an assessment of the hard play area being lost and the total amount need for the proposed number of pupils we are seeking to accommodate.

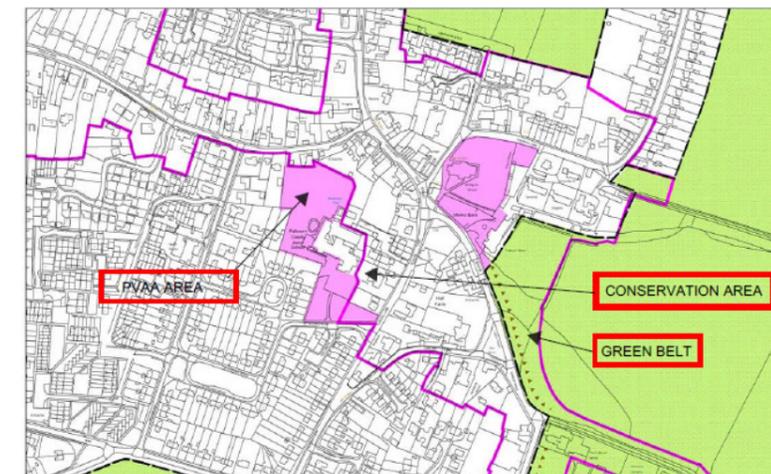
There is a strong recommendation from SCDC conservation officer to retain the community building and not to demolish it as in the Fulbourn Conservation Area Appraisal the building has been assessed as making a positive contribution to the Conservation Area. The planners also recall that some years ago –possibly when the library was relocated – some villagers wanted the building to be assessed for Listing but as the building is Victorian and appears to have had the bellcote removed it probably would not meet the English Heritage criteria. It is however of local historical importance being the original village school.

The trees within the site that are in conservation area are TPO trees.

SCDC Planning officer advice could only be obtained once a Pre-application Planning Advice form is submitted together with all the necessary information including plans, elevations as well as draft Design and Access Statement. This form will be completed and submitted at the next stage of the project (MS3).

### 6.4 Environment Agency

The Environment Agency website has been checked and confirms that the site is outside of flood risk zone.



## 6.5 Sport England

Contact was made with Philip Raiswell, a planning manager from Sport England. Sport England are a statutory consultee on any proposal affecting playing fields. They consider any proposals against our adopted policy 'A Sporting Future for the Playing Fields of England'.

He briefly assessed each option against the above policy and his comments are as follows:

Option 1 – this proposal would see the school extended on land currently within the building footprint and partly on the amenity grassland to the front of the site. This grassland is not large enough to accommodate any additional pitches and the main playing field is unaffected by the proposal. It is considered that the new build element would satisfy exception E3 of the above policy. The new 40m x 20m MUGA would be sited on a narrow strip of playing field that currently contains a mobile classroom and even if the classroom was removed it would still be too narrow to accommodate a sports pitch. Consequently the MUGA can meet exception E5 (a new sports facility where the benefit to the development of sport outweighs any loss of playing field). Consequently, Sport England would be unlikely to object to Option 1.

Option 2 – similar to Option 1 in that the main playing field is not affected, and the MUGA would satisfy exception E5 of the above policy. The new build affects the area of existing building footprint rather than the amenity grassland but would not be considered to be contrary to Sport England policy. Consequently, Sport England would be unlikely to object to Option 2.

Option 3 – again Sport England would not object to the MUGA (exception E5). The new build now extends onto the playing field and may impact on the potential use of sports pitches and be considered contrary to Sport England policy. Therefore Sport England have some concerns and they would need to see existing and proposed pitch layouts for winter/summer pitches on this site in order to assess more fully against their playing fields policy.

Option 4 - the proposed MUGA again would not be contrary to Sport England policy as it is sited on a part of the site not currently in use as playing fields or any other sporting use. In terms of the main build for the new school the Sport England have the same concerns regarding this option as for the option 3. They would need to see existing and proposed pitch layouts for winter/summer pitches on this site in order to assess more fully against their playing fields policy.



*View to the school playing field*

## 7.1 Programme

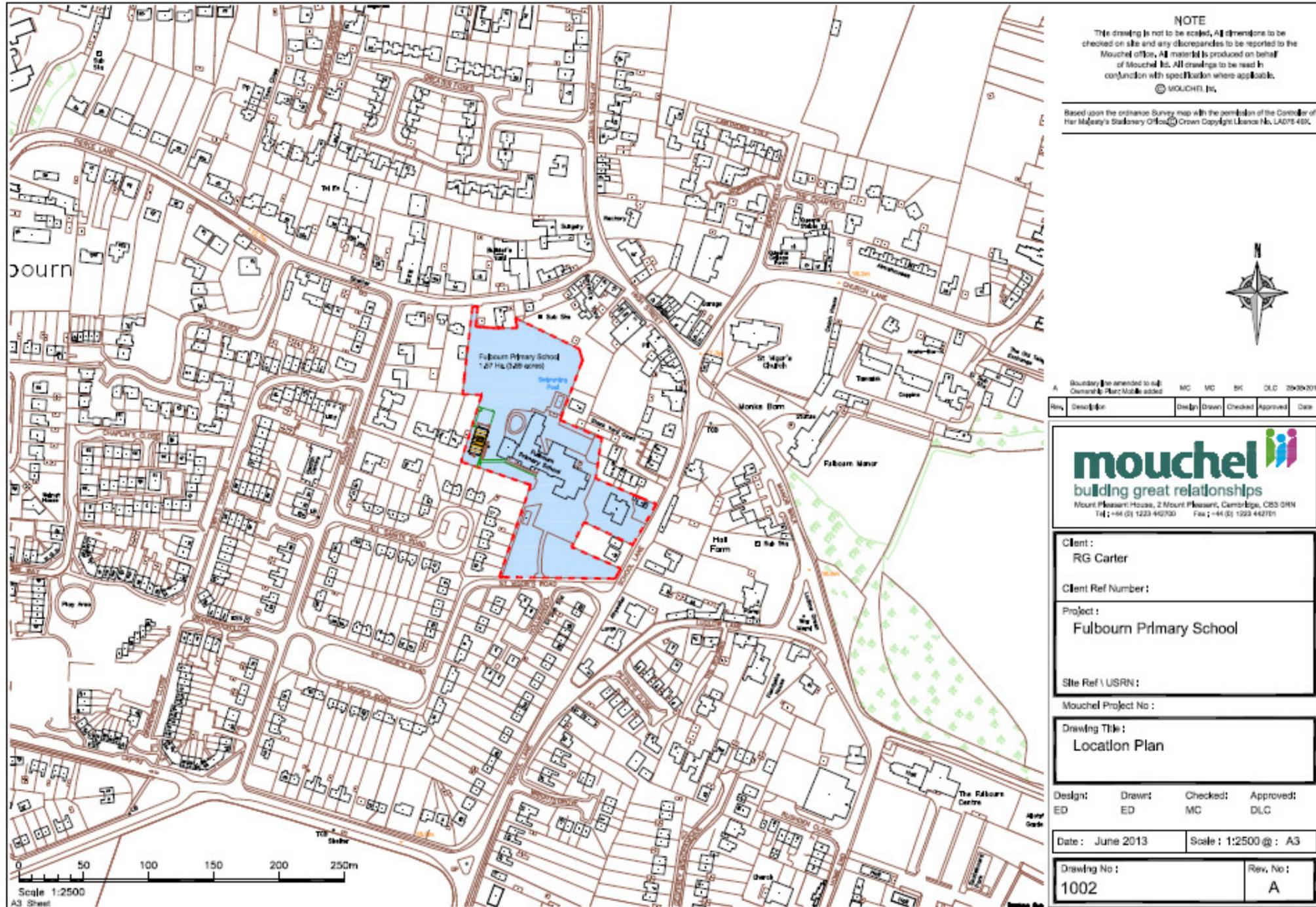
A Project Programme is indicating middle of February 2015 for a start of the construction works and a practical completion in the middle of January 2016 - see Appendix D attached.



View from School Lane

# Appendix A- Architectural Drawings

Location Plan



Fulbourn Primary school



# Appendix A- Architectural Drawings

Existing Site Plan



Fulbourn Primary school

# Appendix A- Architectural Drawings

Proposed Site Plan—Option 1



Fulbourn Primary school



# Appendix A- Architectural Drawings

Proposed Site Plan—Option 3



Fulbourn Primary school

# Appendix A- Architectural Drawings

Proposed Site Plan—Option 4



Fulbourn Primary school

# Appendix B Options Suitability Assessment

## Options Appraisal Assessment

Fulbourn Primary School  
Cambridgeshire County Council



Date: November 2013

Option	Site	Area as existing	New area	Prog	Cons
Option 1	Fulbourn Primary School School Lane Fulbourn Cambridge Cams. CB21 5BH	MAIN BUILDING 1523 m2 +51m2 refurbished area = 1574m2  PRE-SCHOOL 235m2 refurbished	MAIN BUILDING 258 – Phase1 485 – Phase 2 743 m2 –Total  PRE- SCHOOL 10m2	<ol style="list-style-type: none"> <li>Could be delivered in two phases (330 and 440 places &amp; Early Years)</li> <li>No big disruption for the existing building during the construction works</li> <li>Easy access during the construction works</li> <li>Additional temporary accommodation would not be required other than the existing pre-school mobile.</li> <li>Sport England supportive of this option.</li> <li>No demolition required</li> </ol>	<ol style="list-style-type: none"> <li>Likely to have a planning issue (partly built in the conservation area).</li> <li>Likely to have an objection from the 18 School Lane neighbour.</li> <li>Less car parking than in other options (22no. opposed to 26 no.).</li> <li>Pre-school hard play area is small if the site manager's house is kept as existing. Note: Additional area could be acquired subject to approval from CCC to reduce the size of the plot.</li> <li>Not compact plan.</li> </ol>
Option 2		MAIN BUILDING 975 m2 +96m2 refurbished area Note:503m2 demolished  PRE-SCHOOL 235m2 refurbished	MAIN BUILDING 1253 m2  PRE- SCHOOL 13m2	<ol style="list-style-type: none"> <li>New main entrance location is more prominent and as such more welcoming.</li> <li>A new small hall (converted existing admin. area) is well located being next to the new kitchen on one side and the existing hall on another. Together they all create a 'heart' of the building</li> <li>New extension together with the remaining existing accommodation makes a good compact plan that functionally works very well.</li> <li>Construction site access would be from School Lane.</li> <li>The existing pre-school mobile can be used for 2 classes proposed for demolition, once the existing disused library is converted to the new pre-school accommodation.</li> <li>Sport England supportive of this option.</li> </ol>	<ol style="list-style-type: none"> <li>Likely to have a planning issue (partly built in the conservation area)</li> <li>Additional temporary accommodation would be required for the following: independent learning/library, kitchen and plant room (nb: difficult to achieve).</li> <li>Site Manager's house is proposed for demolition. However it may be possible to retain it with the reduced hard play area to pre-school or if the agreement is acquired from CCC to reduce the size of the site manager's house plot.</li> <li>Could not be delivered in 2 phases (330 and 420 places plus early Years).</li> <li>The total estimated cost is likely to be the highest when compared to other options.</li> </ol>
Option 3		MAIN BUILDING 805 m2 (as existing)+402 m2 (refurb.area) = 1207m2	MAIN BUILDING 1054 +106= 1160m2	<ol style="list-style-type: none"> <li>A new 2 storey extension is located well from the neighbouring properties.</li> <li>A new kitchen is better located and easily accessible.</li> </ol>	<ol style="list-style-type: none"> <li>Connectivity within the existing and new section of the school building is rather elongated.</li> <li>Likely to have a planning issue (partly built in the conservation area)</li> </ol>

Option	Area as existing	New area	Prog	Cons	
Option 4	Note:503m2 demolished  PRE-SCHOOL 235m2 refurbished	PRE- SCHOOL 42m2		<ol style="list-style-type: none"> <li>Main entrance location is more prominent and as such more welcoming.</li> <li>New location for the reception classrooms and the new pre - school is suitable for shared use of hard play area.</li> <li>No demolition, other than of the kitchen area is involved.</li> </ol>	<ol style="list-style-type: none"> <li>Construction site access for the 2 storey building would be required over the school wildlife area. That has not been considered appropriate by CCC Highway officer.</li> <li>Could not be delivered in 2 phases (330 and 420 places plus Early Years).</li> <li>Additional temporary accommodation would be required for the following: independent learning/library, two further classrooms, other than the existing mobile presently used as a pre-school.</li> <li>Sport England has concerns with this option - see section 6, item 6.5 of this report.</li> </ol>
Option 5*	MAIN BUILDING 1459 m2 (as existing)+ 125m2 (refurb.area)=1574 m2  PRE-SCHOOL 235m2 refurbished	MAIN BUILDING 945 +11m2= 956m2  PRE- SCHOOL 10m2		<ol style="list-style-type: none"> <li>New extension building footprint is out of the conservation area.</li> <li>New extension is reasonably away from the neighbouring properties.</li> <li>Pre-school playing area big enough with the site manager's house kept as existing.</li> <li>Car parking number is as required for 2 FE school (approx. 26 no. places)</li> <li>Additional temporary accommodation other than existing mobile would not be required.</li> <li>Not much disruption for the school operation during the construction works except for the existing accommodation to the north-west.</li> </ol>	<ol style="list-style-type: none"> <li>Construction site access over wildlife area deemed to be difficult. Existing site vehicular access alongside the community building and the main building entrance area should be considered instead.</li> <li>A bigger floor area is proposed as 2 storey building is required (2 staircases, circulation etc.)</li> <li>Existing classrooms we are abutting to will lose the daylight on the west side of the building. That would need to be compensated by the new roof lights.</li> <li>The total estimated cost is lower than the cost for options 2 and 3.</li> <li>Sport England has concerns with this option - see section 6, item 6.5 of this report.</li> <li>Could not be delivered in 2 phases (330 and 420 places plus early Years).</li> </ol>

To be read in conjunction with Fulbourn Primary School Milestone 2 Report  
\* For option 5 Look at Appendix E - School Site Market appraisal and Alternative Site Search Identification and Assessment

Fulbourn Primary school



# Appendix C – Cost Plan

## Cost Plan Summary

Fulbourn Primary School - Options estimates

06-Dec-13

Ref	Element	Gross internal floor areas				
		m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>
	Main building	743	1,253	1,160	956	2,250
	New build/extension	51	96	402	125	
	Refurbishment					
	Pre-school					
	New build/extension	10	13	42	10	250
	Refurbishment	235	235	235	235	
	<b>Total</b>	<b>1,039</b>	<b>1,597</b>	<b>1,839</b>	<b>1,326</b>	<b>2,500</b>

Ref	Element	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
		£	£	£	£	£
<b>1.0</b>	<b>Main building</b>					
1.1	New extension - phase 1	417,444	2,027,354	1,876,880	1,546,808	3,641,000
1.2	New extension - phase 2	784,730				
1.3	Works at junction new to existing	20,000	10,000	20,000	30,000	
1.4	Refurbished areas	25,500	48,000	201,000	65,500	
1.5	Canopies	63,000				
1.6	Demolitions		45,150	25,150		
1.7	Provide temporary kitchen		20,000			
1.8	Provide temporary boiler		15,000			
<b>2.0</b>	<b>Pre-school</b>					
2.1	New build/extension	16,180	21,034	67,956	16,180	405,000
2.2	Refurbished areas	141,000	141,000	141,000	141,000	
	<b>Building works sub-total (£)</b>	<b>1,467,854</b>	<b>2,327,538</b>	<b>2,331,986</b>	<b>1,799,488</b>	<b>4,046,000</b>
<b>3.0</b>	<b>External works</b>					
3.1	MUGA pitch	62,480	62,480	62,480	68,180	
3.2	Fence to MUGA	20,300	20,300	20,300	20,300	
3.3	Main school - new hard play areas	17,640	36,820	25,130	82,390	
3.4	Main school - refurbish/resurface existing hard play areas	35,740	19,060	23,860	14,020	
3.5	Pre-school - new hard play areas/access roads	26,400	65,310	26,400	78,610	
3.6	Pre-school - refurbish/resurface existing hard play areas	11,400				
3.7	Boundary treatment, new fences, etc.	15,000	15,000	15,000	15,000	
3.8	Landscaping, trees, etc.	15,000	15,000	15,000	15,000	
3.9	Cycle hoops, shelters	12,000	12,000	12,000	12,000	
3.10	Drainage	50,000	50,000	50,000	50,000	
3.11	Relocate habitat and reinstate on completion			10,000	10,000	
	<b>Sub-total (£)</b>	<b>266,020</b>	<b>295,970</b>	<b>260,230</b>	<b>365,500</b>	<b>1,011,500</b>
	<b>Sub total (£)</b>	<b>1,733,874</b>	<b>2,623,508</b>	<b>2,592,216</b>	<b>2,164,988</b>	<b>5,057,500</b>
<b>4.0</b>	<b>INFLATION</b>					
	Inflation to mid-point 3Q15 (building works only)	6.33%	109,754	166,068	164,087	137,044
<b>5.0</b>	<b>DESIGN DEVELOPMENT RISK ALLOWANCE</b>					
5.1	Contractor's design development risk		9,218	27,896	27,563	11,510
	<b>TOTAL BUILDING WORKS (£)</b>	<b>1,852,846</b>	<b>2,817,472</b>	<b>2,783,866</b>	<b>2,313,542</b>	<b>5,431,416</b>
<b>6.0</b>	<b>PRELIMINARIES</b>					
6.1	Preliminaries		178,297	320,667	178,297	342,458
	<b>Total Building Works (including Preliminaries) (£)</b>	<b>2,031,143</b>	<b>3,138,139</b>	<b>3,104,533</b>	<b>2,491,839</b>	<b>5,773,874</b>
<b>7.0</b>	<b>FEES</b>					
7.1	Pre-construction fees (MS2-4)		155,201	236,466	192,734	457,657
7.2	Post-contract (MS 5-8)		65,146	50,548	49,942	81,344
	<b>Sub-total (£)</b>	<b>220,347</b>	<b>287,012</b>	<b>283,638</b>	<b>274,078</b>	<b>555,097</b>
	<b>Sub total (£)</b>	<b>2,251,490</b>	<b>3,425,151</b>	<b>3,388,171</b>	<b>2,765,917</b>	<b>6,328,971</b>
<b>8.0</b>	<b>Main Contractor's overheads &amp; profit</b>					
		2.25%	50,659	77,066	76,234	62,233
	<b>TOTAL ANTICIPATED CONTRACT SUM (£)</b>	<b>2,302,149</b>	<b>3,502,217</b>	<b>3,464,405</b>	<b>2,828,150</b>	<b>6,471,373</b>

Cont...

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<b>9.0</b>	<b>PROFESSIONAL FEES</b>					
9.1	MS2/mini tender fees		11,000	11,000	11,000	26,000
9.2	PM/EA/QS/NEC Supervisor (MS3-8)		109,000	149,000	147,000	226,000
9.3	CDM Co-ordinator (MS 3-8)		9,000	11,000	11,000	18,000
9.4	Legal fees		2,000	2,000	2,000	4,000
<b>10.0</b>	<b>LOCAL AUTHORITY FEES</b>					
10.1	Planning fees		8,000	8,000	8,000	10,000
10.2	Building Control fees		4,000	4,000	4,000	5,000
<b>11.0</b>	<b>EMPLOYER'S OTHER DIRECT COSTS</b>					
11.1	ICT installations		100,000	100,000	100,000	150,000
11.2	Loose F&E		99,000	99,000	99,000	99,000
11.3	Remove temporary classrooms		10,000	10,000	10,000	10,000
11.4	Purchase of new caretaker's house			400,000		
11.5	Temporary accommodation			250,000	160,000	
11.6	Site disposal					-1,540,000
11.7	Site acquisition					1,200,000
11.8	Public art (1% of building cost)					55,000
<b>12.0</b>	<b>RISK REGISTER</b>		10%	265,000	455,000	402,000
	<b>Sub-total (£)</b>		<b>2,919,149</b>	<b>5,001,217</b>	<b>4,418,405</b>	<b>3,528,150</b>
<b>13.0</b>	<b>INTERNAL FEES</b>					
13.1	Internal client's costs/programme management fees		1%	29,191	50,012	44,184
	<b>Sub-total (£)</b>		<b>2,948,340</b>	<b>5,051,229</b>	<b>4,462,589</b>	<b>3,563,432</b>
<b>14.0</b>	<b>EMPLOYER'S RISK</b>					
14.1	Employer's change risk/contingency % of contract sum		5%	115,107	175,111	173,220
	<b>TOTAL ANTICIPATED PROJECT COST (£)</b>		<b>3,063,447</b>	<b>5,226,340</b>	<b>4,635,809</b>	<b>3,704,840</b>
	<b>TOTAL ANTICIPATED PROJECT COST ROUNDED (£)</b>		<b>3,063,000</b>	<b>5,230,000</b>	<b>4,640,000</b>	<b>3,710,000</b>

**Exclusions**  
Value Added Tax.  
Demolition of existing school (Option 5).

**Notes**  
Approximate purchase price of new caretaker's house is based average value provided by Lambert Smith Hampton.  
Approximate site acquisition cost for new primary school is based on average value provided by Lambert Smith Hampton.  
Approximate site disposal value is based on sale for redevelopment of lower density housing. (See Appendix E Option 1)  
Loose F&E for Option 5 assumes re-use of existing, supplemented as necessary.

Fulbourn Primary School - Effect of inflation on project costs

06-Dec-13

Ref	Element	Gross internal floor areas				
		m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>	m <sup>2</sup>
	Main building	743	1,253	1,160	956	2,250
	New build/extension	51	96	402	125	
	Refurbishment					
	Pre-school					
	New build/extension	10	13	42	10	250
	Refurbishment	235	235	235	235	
	<b>Total</b>	<b>1,039</b>	<b>1,597</b>	<b>1,839</b>	<b>1,326</b>	<b>2,500</b>

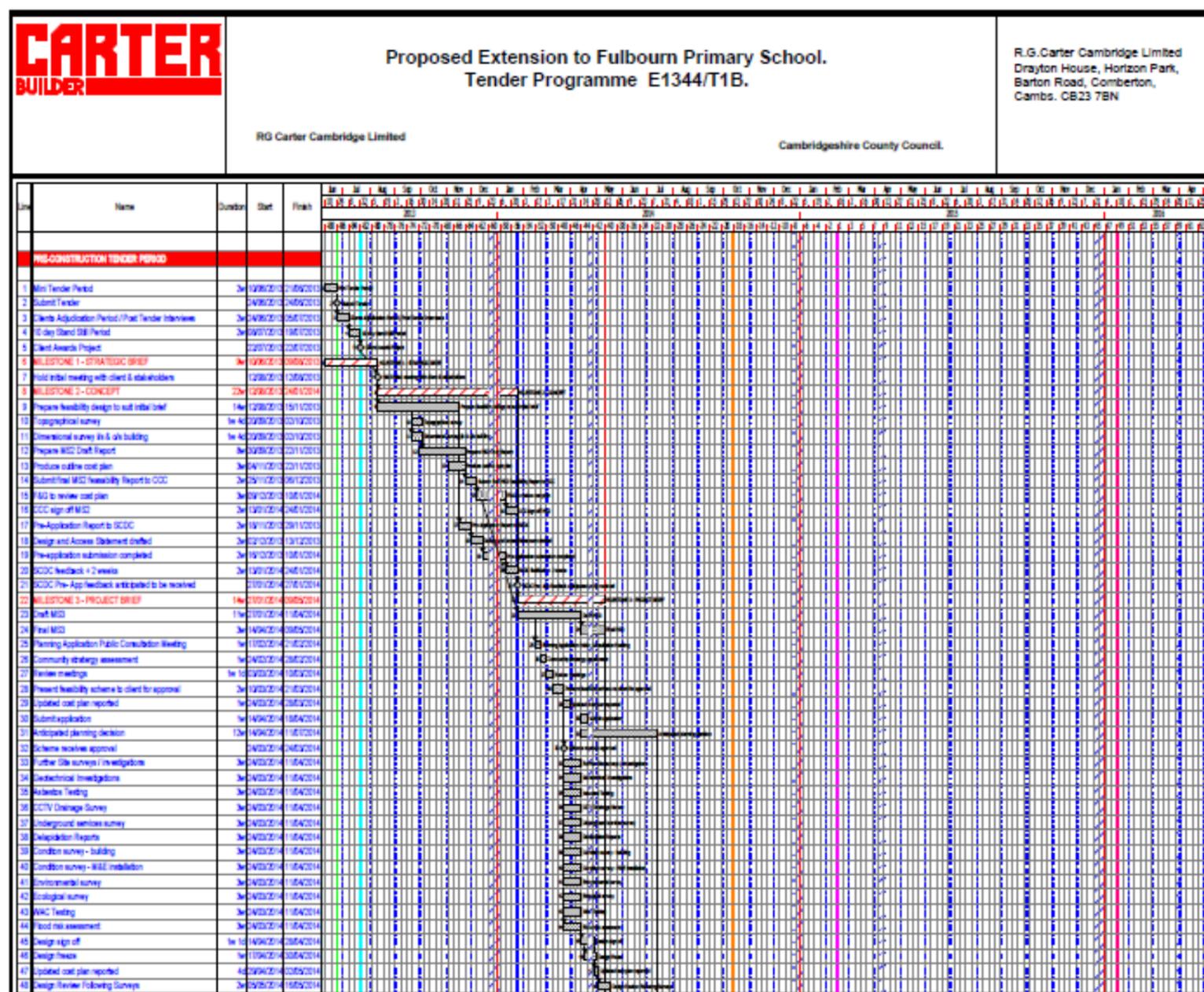
  

Ref	Element	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
		£	£	£	£	£
	<b>TOTAL ANTICIPATED PROJECT COST (JAN 2016) (£)</b>	<b>3,063,000</b>	<b>5,230,000</b>	<b>4,640,000</b>	<b>3,710,000</b>	<b>7,800,000</b>
	Inflation to mid-point 3Q 2016	4.76%	146,000	249,000	221,000	177,000
	<b>TOTAL ANTICIPATED PROJECT COST (JAN 2017) (£)</b>	<b>3,209,000</b>	<b>5,479,000</b>	<b>4,861,000</b>	<b>3,887,000</b>	<b>8,171,000</b>
	Inflation to mid-point 3Q 2017	7.20%	231,000	394,000	350,000	280,000
	<b>TOTAL ANTICIPATED PROJECT COST (JAN 2018) (£)</b>	<b>3,440,000</b>	<b>5,873,000</b>	<b>5,211,000</b>	<b>4,167,000</b>	<b>8,759,000</b>

**Exclusions**  
Value Added Tax.  
Demolition of existing school (Option 5).

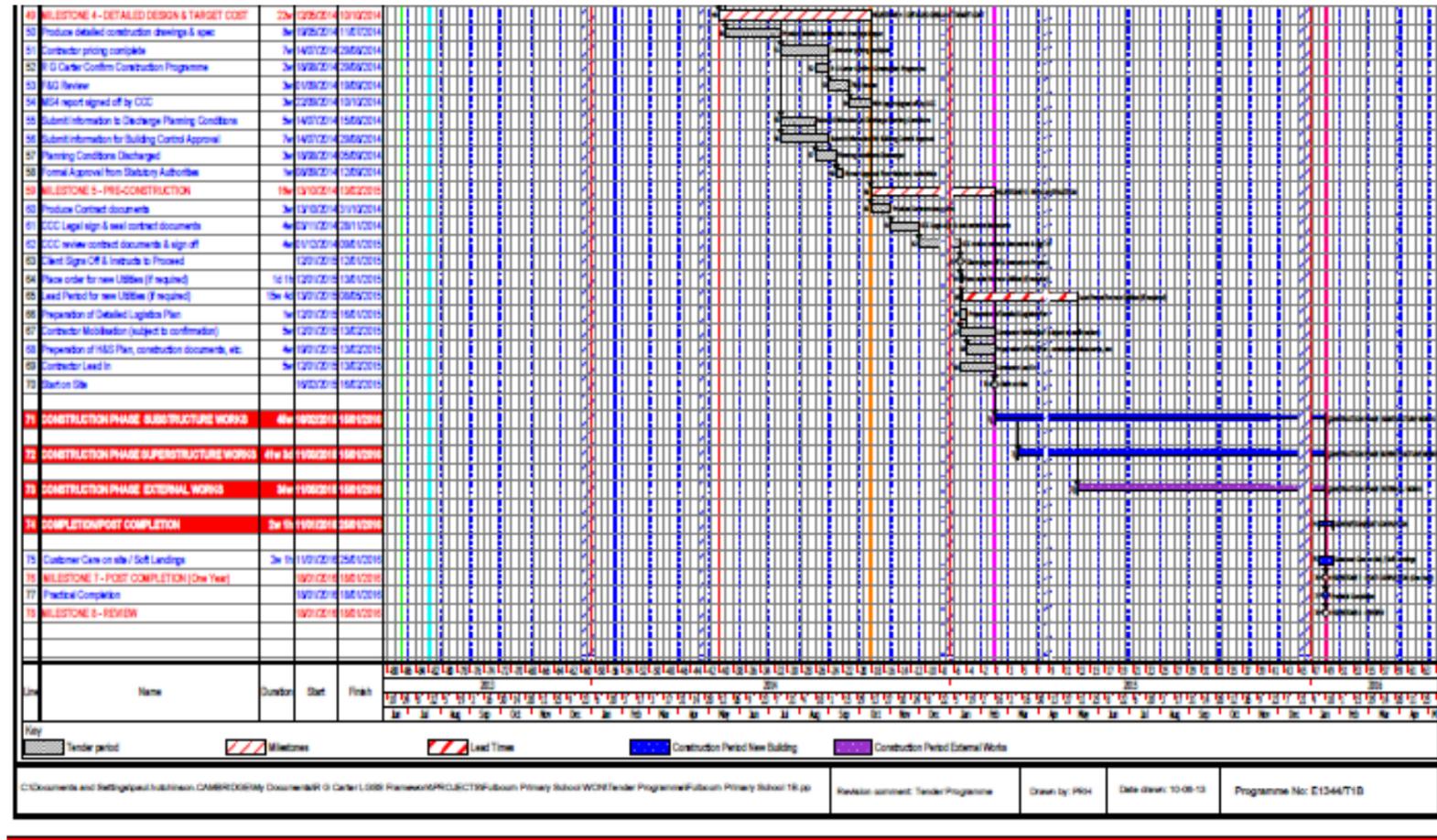
**Notes**  
Total project costs have been adjusted on the basis of the BCIS all-in tender price indices.

Programme -part 1



Fulbourn Primary school

Programme -part 2



# Recommendations 14

### Summary & Conclusions

- The capacity of the existing school as well as a potential of the existing site has been assessed using the guidelines set out in BB99.
- It should be noted that the school could be developed to increase to 2 FE school (420 places) only if the site is classified as a 'confined' site. The BB99 requirement for 'standard' classified site to be 17,320 to 19,300 m2 which is beyond the existing site area of 15,790m2 that includes the 'former' library building site as well as the school site manager's house .
- Site investigations and buildings survey have been carried out to allow development of four options as presented in this report. All other surveys, as noted in section 5, would need to be carried out at the next stage of the project.
- The scheme is on programme for delivery with completion date January 2016, as indicated in Section 7.
- The scope of the works, as required, could be delivered sequentially in phases (refurbishment of the detached building and new build) in options 2, 3 and 4. It is only in option 1 that the works could be delivered, as originally intended, in 2 sections (expansion to 330 places plus Early Years followed by further expansion to 420 places plus Early Years).
- Installation of the temporary accommodation for the following: Independent learning/library; kitchen and boiler room (option 2) or independent learning/library and two further classrooms (option 3) should be carried prior the start on work on building of the new extensions.
- Removal of the existing 2 class mobile that is currently accommodating pre-school should commence as soon as the conversion of the existing community building to early years accommodation is completed (options 1 and 4), or when the building of the new extensions and alterations works is completed (options 2 and 3).
- The estimated cost of the scheme within the existing sites ranges from 3,063,000 to £ 5,230,000 with Option 4 (£3,710,000) being both, less expensive and disruptive for the school operation for a duration of the construction works. In addition to this the estimated cost of Option 5 for a new 2FE primary school on a different site is £7,800,000.



View from St.Vigor 's Road