

**Madras College,  
A school for the 21<sup>st</sup> century?**

**Educational considerations**

**Keir Bloomer**

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## **Remit**

This report has been commissioned by the Muir Group. The Group is interested in the future of Madras College, as it owns land that could provide a suitable site for a new school. This land has been offered for sale to the Council.

The report is, however, the outcome of an independent study by the author. The views expressed are his and do not necessarily reflect those of the Muir Group. The Group has made no attempt to influence the contents of the report.

The author's remit was

- to examine and comment on the educational consequences of the Council's preferred option,
- to consider the implications of the introduction and further development of *Curriculum for Excellence* for school design in general, and
- to suggest how these general considerations should influence decisions of the future of Madras College so as produce the most advantageous outcome from an educational perspective.

The remit is focused on educational considerations. However, the report also makes reference to other matters such as building condition, planning and safety where these are relevant.

## **The author**

Keir Bloomer is an independent education consultant. He is also Chair of the Court of Queen Margaret University, Edinburgh, Chair of the Tapestry Partnership, Chair of the School Reform Commission and Vice-convenor of Children in Scotland.

From the time of the reorganisation of Scottish local government in 1996 until November 2000, he was Executive Director of Education and Community Services with Clackmannanshire Council and was President of the Association of Directors of Education in Scotland for the year 1999/2000. Subsequently he became Chief Executive of the Council, a post from which he retired in May 2007.

He now undertakes a range of consultancy tasks, curriculum and professional development work with the Scottish Government, local authorities, national agencies, schools and private organisations.

He was a member of the review group which wrote “A Curriculum for Excellence”, Scotland’s national curriculum policy statement, having previously been one of the advisers to the Education, Culture and Sport Committee of the Scottish Parliament in connection with its Inquiry into the purposes of education. He recently chaired the Higher Order Skills Excellence Group.

At various times he has been Vice-Chair of Learning and Teaching Scotland (now Education Scotland), Depute General Secretary of the Educational Institute of Scotland and a member of the General Teaching Council.

He is well known in Scotland as a speaker, broadcaster and writer on a wide variety of educational topics.

# **Madras College**

## **A school for the 21<sup>st</sup> century?**

### **History**

The origins of Madras College can be traced back to the work of an eighteenth century clergyman. The Rev. Andrew Bell, a native of St Andrews who spent much of his career as a chaplain with the East India Company in Madras, developed a system of education in which a lesson was taught to the older pupils who then instructed the younger ones. On his return from India, he encouraged the development of schools using this 'monitorial' system and funded the establishment of such a school in St Andrews.

Madras College, as the school was known, has occupied the premises at South Street since the completion of the original building in the 1830s. Over time it developed into the senior secondary school for a large part of north east Fife including not only the town of St Andrews but also, Leuchars, Newport, Tayport, Wormit and other small towns and villages.

Fife Council was a relatively early adopter of the comprehensive approach to secondary education. As a result Madras College was amalgamated with the town's junior secondary school, the Burgh School, in 1963. As neither school had a building capable of accommodating all of the pupils, the new comprehensive school operated on a split-site basis.

Such an arrangement was a common feature of the period in which comprehensive schooling was introduced across Scotland. During the 1960s and '70s many secondary schools occupied two or even three sites. Most were rehoused on a single campus as quickly as possible. By 1980, split-site working was largely a thing of the past.

However, the situation in St Andrews was different. Prior to the creation of the comprehensive Madras College, a decision had already been taken to relocate the Burgh School on a new site at Kilrymont Road and, perhaps surprisingly, this plan was not changed. The new Kilrymont premises were opened in 1967 as the junior campus of the combined school. This situation has not been altered in the ensuing forty-four years. Madras College thus continues as a split-site operation.

Operating a secondary school over two sets of buildings presents particular difficulties, especially if (as in this case) the two sites are

widely separated. Deployment of staff is not straightforward. Time is wasted because of travel. There is a need for some duplication of specialist accommodation. The community life of the school is constrained. Young people are faced with what is in effect an additional transition to another school.

Such considerations were clearly in the minds of Her Majesty's Inspectors when they reported on the last full inspection of Madras College in 2006. At that time HMI used a six-point grading scale, ranging from 'excellent' to 'unsatisfactory'. The school's accommodation received the lowest grading; of the 19 factors that were assessed, accommodation was the only one to be classified in this way.

Both the condition of the buildings and their facilities were criticised. However, the main problem in the inspectors' view was that "this dispersed accommodation had a negative impact on learning, teaching and the school's capacity to supervise behaviour".

Two years later HMI returned for a 'follow through' inspection. This was not a fresh evaluation of the school's work but was instead focused on the progress that had been made since the original inspection. The poor accommodation was described as a "main point for action" and it was noted that "progress had been weak". Some improvements had taken place in facilities. However, the inspectors considered that "The fabric of the buildings and the quality of furnishings, toilets and security arrangements provided a poor and deteriorating environment for learning". Action had not been taken in relation to the split-site working.

It is not surprising, therefore, that the possibility of uniting the school on a single site has been explored on a number of occasions over the years and with an increased sense of urgency in recent times. Among the more divergent options considered was the possibility of establishing a separate secondary school for the towns and villages of the north western part of the catchment area. More recently attention has reverted to seeking a site in St Andrews that would be capable of accommodating the entire school.

For some years, the Council's strategy was to reach agreement with the University of St Andrews that would allow the building of a new Madras College on land owned by the University at Lang Lands, which is a greenfield site. At the time, this was evidently considered to be an advantage.

In the event, the discussions collapsed in August 2011 and the Council

found itself without a preferred option for relocating the school. Subsequently the Council has clearly considered it a matter of urgency to reach a conclusion and has evaluated 11 different options, involving 10 sites (although three university-owned sites were effectively discounted). The scoring system adopted suggests that rapid completion of the project has come to be seen as the main consideration with educational suitability being viewed as important but secondary. (This point is discussed in detail later.)

Finally on 10<sup>th</sup> November 2011 the Council's Education and Children's Services Committee reached the conclusion that the best option would be a redevelopment of the Kilrymont site. This option is now the subject of formal consultation.

### **The Council's preferred option**

The Council takes the view that, for a variety of reasons, the best way forward would be to locate the whole school – but not all of the sports facilities – at Kilrymont.

The detail of what is proposed has not been revealed. Indeed, given the short period of time that has elapsed since the end of the negotiations with the University, it seems likely that only the general outline of the scheme has yet been developed. The consultation paper contains no plans or detailed description of what the premises at Kilrymont will ultimately look like.

The sketch plan that is on the Council's website and has been shown at public meetings shows a substantial new construction located among, and connected to, the existing buildings. This drawing appears to indicate that one part of the existing complex would be demolished. There is insufficient detail to reveal exactly the extent of the suggested demolition and it is not clear why the Council believes that the consent of Historic Scotland could be obtained. The point is a relatively important one in that, were the foyer adjacent to the architecturally significant assembly hall to be retained, some of the practical operating problems of the existing premises would be extremely difficult or maybe impossible to remediate. (This point is dealt with in more detail below.)

An attraction of the scheme is that the swimming pool would be retained although the school would still use playing fields at Station Park.

While the possibility of a wholly new school on the site has been examined, this option has been dismissed because of the likely attitude of Historic Scotland to the demolition of the existing school buildings that carry a ‘B’ listing.

### *The listed buildings*

The buildings at Kilrymont were designed in 1963/64 by Robert Sorley Lawrie, Fife’s County Architect, were opened in 1967 and were given a grade B listing in 2007. Particular architectural interest is attached to the range containing the assembly and dining halls while the more utilitarian classroom block is described by Historic Scotland as “a foil” to the other more distinctive buildings.

Historic Scotland’s remit, of course, is “safeguarding the nation’s historic environment”. Buildings are listed on the basis of their historic interest and/or architectural quality. The question of whether a building has the capacity to fulfil a particular role, for example as a school functioning in accordance with contemporary educational requirements, is not Historic Scotland’s main concern. It is evident from the record of recent consultative meetings that many parents are sceptical about the future *educational* value of the Kilrymont premises and suggestions have been made that the Council should seek to have the building delisted.

The Council has not, in fact, formally approached Historic Scotland seeking consent for demolition but has posed a hypothetical question and received in return an indication of the response that a formal request would be likely to be given.

Historic Scotland has indicated that, in order to secure consent for the demolition of a listed building, it would necessary to meet one of four conditions:

- the building is no longer of listable quality
- its condition is such that it is incapable of being repaired
- demolition would bring significant economic or wider community benefit
- the building is uneconomic to reuse for a different purpose.

Historic Scotland considers that none of the first three considerations are likely to be met. Furthermore, given the Council’s intention to continue to use the site for a school, it believes that the fourth point is not relevant. Historic Scotland, therefore, seems fairly certain to take the view that the

listed buildings will require to be retained although it also suggests that there could be “considerable scope for alteration within the classroom block”. While this point is in some ways encouraging, it means that the nature of the alterations that could be made in any attempt to produce a building suitable for twenty-first century educational purposes would require to be negotiated with Historic Scotland. It may also suggest that the scope for remodeling of the other blocks is more limited.

### *Implications of refurbishment*

On a greenfield site, subject only to such obvious constraints as geography and the extent of the resources available, architects are able to interpret their clients’ aspirations as best they can. Refurbishment, on the other hand, inevitably entails compromises. In some cases these may be relatively insignificant but, in others, they can be educationally seriously damaging.

It is worth recalling the observations made by Audit Scotland in its 2008 study of the school estate improvement programme which looked at both new build and refurbished schools:

*“The refurbished schools fall below the standards being met by new-builds in every aspect. Refurbishment work can have unintended consequences resulting in a negative impact.”*

(Improving the School Estate, Audit Scotland, 2008)

Overall Audit Scotland felt that, “Refurbishments can leave schools well short of good practice standards.”

Of course, each case has to be considered on its merits. At Kilrymont, compromises will be required not only because of the kind of structural factors that affect any refurbishment but also as a result of conditions imposed by Historic Scotland in order to ensure that as much as possible of the original character of the building is retained. Such conditions will not necessarily be in the educational interests of future learners.

The decision to retain most or all of the listed buildings raises a number of issues of concern. At 16 acres, Kilrymont is not a large site for a school the size of Madras College. Elsewhere, new schools with comparable rolls have often been provided with sites of 20 acres or more. Furthermore, the position of the existing blocks largely constrains how the site can be developed. The Council has taken the view that, in order

to retain the playing field area intact (although reconfigured), the necessary large new build extension should be placed in the middle of the present structures and should be used to link them together.

In the sketches on the Council website, this is presented as an imaginative and architecturally exciting solution. A small group of pupils is shown in a lofty well-lit atrium. No doubt, such an atrium will be a feature of this new extension. (In many of Scotland's new secondary schools, such atriums have been used to give a note of innovation to structures that are otherwise almost entirely traditional.) However, the new build will also have to accommodate a considerable amount of teaching spaces. As the new construction will be attached to the existing buildings on both its long sides and possibly also on one of the short sides, these spaces will be largely internal and lit only from above (on the top floor only), by artificial light or through the use of light wells.

Bringing a large number of additional young people on to the Kilrymont site will unquestionably impose a need for more classroom and other teaching spaces. As the school's roll has declined in recent years (by a small percentage compared to schools in many parts of Scotland) some space can no doubt be found in the existing buildings. However, most of the increased demand will have to be met by providing new accommodation.

The exact amount of accommodation needed in the new build will depend on how the existing main classroom block is to be remodeled. If, as has been suggested in Council presentations, this will involve letting in more light by opening up corridors, creating new social spaces and reducing the number of classrooms, especially on the north side, the need for new teaching spaces will be correspondingly increased.

Furthermore, placing the new building in the midst of the existing ones will remove much of the current outside playground area. It has apparently been suggested that this problem will be overcome by encouraging the use of indoor areas for recreation. It is certainly a valid criticism of the way schools have traditionally been designed and run that young people have often been expected to use bleak outdoor areas in all weather. However, at a time when there is growing concern about child obesity and the new curriculum gives greatly increased emphasis to health and wellbeing, it is strange that this design will reduce outdoor play areas to a small fragment.

Given that, for the size of the school, Kilrymont is not a large site and,

apart from the playing fields, it will be developed highly intensively, there will be little, if any, room for future development. The question of future development may seem irrelevant at this stage. However, as a later section of this report relating to *Curriculum for Excellence* will show, educational changes currently in train are likely to impose new and space consuming demands in the future.

The building has also been criticised in the past by staff on both educational and other grounds. Their concerns include the following:

- The games hall has one end higher than the other. This reduces its functionality for some kinds of games.
- The gymnasium is small and poorly lit. Changing and shower rooms are inadequate.
- At points, corridors and stairs are congested. This is particularly true of the point where the main teaching block links to the foyer. The structure has so far made it impractical to widen the stairs leading to this point.
- Other stairs in the main block are also undesirably narrow.
- The pagoda-style roofs that are apparently the principal architectural attraction of the complex are also difficult to maintain and are a cause of frequent leaks.
- Northward-facing rooms often have poor light.
- Vehicle access to the site is unsatisfactory.

This list is illustrative rather than exhaustive.

Some of these issues will certainly be resolved by the refurbishment. In other cases, the outcome is less certain.

The only way that it would be possible to judge how far the problems can be overcome by refurbishment would be by studying detailed drawings. Unfortunately, these do not seem yet to be available. Parents, pupils and other interested people are required, therefore, to reach a judgment on a key aspect of the proposal in the absence of the necessary information.

### *Sports facilities*

One shortcoming of the proposal is, however, already clear. Although all classroom activity will take place on the Kilrymont site, the same is not true of sports. Even though the new building will be contained within the area occupied by the existing blocks, the limitations of the site mean that the current facilities cannot be expanded.

Indeed, the sketch plan on the Council's website shows a new layout of sports facilities with the number of pitches actually reduced (although their quality would presumably be improved). The likely outcome appears to be that the existing three pitches would be replaced by one all-weather and one smaller practice pitch. The development of the all-weather pitch appears to leave insufficient space for a 400m running track although a smaller track is shown on the sketch. Thus, a substantially larger on-site pupil population would have access to fewer facilities than currently exist. The school would remain dependent on the playing fields at Station Park and would continue to incur the resulting transport costs for the indefinite future. Clearly, this is not the ideal solution.

Furthermore, as *Curriculum for Excellence* unfolds, the disadvantage of this arrangement is likely to become more apparent.

The new curriculum aims to encourage wider achievement beyond the classroom. This will involve encouraging participation in an expanding range of activities. Some of these will be sporting. Indeed, extending the range of sports that schools can support is likely to be a feature. This will impose demands in terms of both the quantity and range of facilities required.

In addition, it is now a national priority that all young people should receive at least two hours of high quality physical education each week. National advice contains the following statement (emphasis added):  
“A balanced programme requires the availability, ideally on site, of a range of indoor and outdoor sports facilities.”  
(School Playing Fields: Planning and Design Guidance, 2006)

If the Kilrymont scheme were to be implemented, some of the outdoor facilities would be situated at an inconvenient distance. In addition, it is not clear whether the indoor facilities would be entirely adequate. As noted above, the existing gymnasium and changing accommodation have been the subject of criticism in the past. It appears to be the intention to provide a new sports hall (presumably somewhere within the extension building) to accommodate four games courts. At the time of the negotiations over Lang Lands, a facility with six courts was envisaged. An element of compromise appears evident.

A further official target aimed at improving the health and fitness of the nation's young people is that at least 85% of 13 to 17 year olds should be taking part in sport outwith the school curriculum for an hour or more

each week. Although this sporting activity can take place anywhere, in practice success will depend to a significant extent on the quality and quantity of facilities that schools have on offer.

*Transition: a medium-term problem*

In addition, the Council's proposal involves a further difficulty which, although temporary, is sufficiently serious to merit careful consideration.

The refurbishment and extension work at Kilrymont can obviously take place only while the whole school (or a substantial part of it) is unoccupied. Ideally, during the construction phase, all of the S1-3 pupils would be educated elsewhere. The Council's consultation paper, however, is somewhat vague about what exactly is intended.

In two short paragraphs under the heading 'transitional arrangements', it is indicated that "preliminary work" suggests that the whole school population could be accommodated at South Street. If there are no suitable vacant premises elsewhere in the area this is, no doubt, preferable to leaving some part of the S1-3 group at Kilrymont, being relocated from one part of the site to another as refurbishment proceeds. However, the proposal has a number of important shortcomings.

Reduction of the school roll in recent years means that some additional pupils can be accommodated at South Street as it stands. However, wholesale relocation from Kilrymont will involve placing a large number of temporary classrooms somewhere on what is already a crowded site for a period that will not be less than 18 months to two years (although the consultation paper is not explicit about the timescale). This solution seems to be the only one that is practically available and must, therefore, be regarded as an intrinsic part of the Council's proposals.

It is, however, a solution, which falls far short of ideal. The South Street site is very constrained. It is not clear how the necessary number of temporary structures can be accommodated. There are two small areas towards the rear of the site where some could be placed. However, it seems inevitable that the courtyard areas and the grassed area between the original building and South Street will also be required.

Furthermore, it seems unlikely that it is only classroom space that will be required. Additional specialist accommodation may well be needed. For example, it is difficult to see how the whole school could be provided

with a satisfactory PE programme, given the limited facilities at South Street. This problem would, of course, be compounded by total reliance on off-site playing fields.

Once the necessary temporary structures are in place, there will be no space for any other purpose. Young people will have no outdoor facilities for play and recreation. Even circulation around the site is likely to be difficult. Although, the accommodation will, no doubt, be of an acceptable quality, it will be inflexible and unfamiliar.

Furthermore, the timing is particularly bad. The introduction of *Curriculum for Excellence* is reaching a critical stage. The first cohort of pupils (the current S1) is due to sit new national examinations in 2014, during the refurbishment period. The whole school is being affected by change. The school's new curriculum structure, both for the phase of 'broad, general education' (S1-3) and the senior Phase (S4-6) will be put in place during these years. Teachers who will need to carry out an intensive programme of development will be required to cope with unfamiliar, temporary accommodation and an overcrowded site. These educational pressures will be compounded by difficulties of transport and parking that are likely to have an adverse effect on the school's extra-curricular activities.

There can be no question that these transitional arrangements are likely to be damaging to the educational interests of the young people involved. The extent of the risk is difficult to judge in the absence of detailed information about how the South Street site will be arranged and operated. The fact that this information is not available is another sign that the Council's sense of urgency is assuming a very high priority.

There is a further issue which, although not educational, is potentially so serious that it must be mentioned. It is not clear from the consultation paper whether the preliminary work that has been undertaken includes a full check of the safety implications of the proposed temporary arrangements. Apart from on the north side, the site is fully enclosed by buildings and by a high wall. There is a single, comparatively narrow gateway at the southern extremity. It would be reassuring to know that, even when the site is crowded and temporary structures make movement more difficult, it could be speedily and safely evacuated in the event of an emergency, such as fire. The consultation paper, however, is silent on this issue.

Serious disruption during the period of transition would seem to be an

inescapable consequence of the Council's current proposals. It could only be justified by a belief that, taken as a whole, the proposal represents the best option for the long-term.

### *The issue for the long-term*

In reaching its view on the best way forward, the Council has laid great stress on deliverability and completion by 2015. It is not clear why this date has been chosen and the issue is not discussed in the consultation paper. There is nothing in the *Curriculum for Excellence* development programme that attaches particular significance to this date.

The scoring system used in the evaluation of possible sites presented to the Education and Children's Services Committee on 10<sup>th</sup> November amply illustrates this point. Sites were measured against 13 indicators. One of these, *development constraints*, was treated as a pass/fail test. Of the others, only one (with a maximum score of 12), *education impact*, was straightforwardly concerned with educational suitability. Another (maximum score 12) related to wider *community impact*. One, *impact on school and community during transition*, assessed problems during the building phase. Surprisingly in view of the extent of the potential disruption, this attracted a maximum score of only 4. Three measures with a combined maximum score of 28 related to deliverability issues. The remaining six indicators (maximum score 48) were all concerned with planning, environmental and economic matters.

Thus, long-term educational suitability accounted for only up to 12 out of a total possible score of up to 94. (Thus, in theory at least, it would be possible for an option deemed to be educationally quite unsuitable to score higher than all others.) While all of the measures are entirely legitimate, it seems unlikely that the weightings used reflected the priorities of parents, pupils or others concerned with the long-term future of the school.

It is surprising that the two options for the Kilrymont site (a complete new build and the hybrid of new build and refurbishment that emerged as the Council's favoured proposal) were scored identically for educational suitability. Both received the highest grading. However, the arguments outlined above indicate clearly that it is virtually impossible for a refurbishment to achieve the same quality of outcome as a genuinely new school.

On the other hand, it is also clear that, once fully implemented, the Council's proposals would bring substantial benefits. Problems such as the unsatisfactory condition of large parts of the existing buildings and poor quality furnishings would be fully addressed. The new and refurbished premises would unquestionably be brighter, cleaner, better maintained and, in general, more suited to contemporary educational needs than the existing school estate. Apart from part of the physical education programme, all school activities would be brought on to a single site. The problems of managing a split-site operation would disappear.

Furthermore, as the Council's method of scoring the various potential sites emphasises, the preferred solution has a good chance of being delivered by 2015. The Council already owns the site. No change of use is involved. On the other hand, obtaining planning consent may not be as straightforward as the consultation paper implies, given the need to secure the agreement of Historic Scotland to the final proposals. The possibility also exists that issues such as potential over-development of the site may be raised by neighbours. Furthermore, refurbishment can bring unanticipated problems, especially given the interest of Historic Scotland and the presence of asbestos, and it is possible that the timescale may have to be extended.

The questions that need to be addressed are whether it offers the best educational outcome for the foreseeable future and, if that is not the case, whether urgency should take priority over long-term benefit. The following section seeks to address the first question by looking at how current educational developments, especially *Curriculum for Excellence*, is changing the demands made on school accommodation.

The second question is ultimately a matter of judgment. Only those with an interest in the school's future can weigh up the options and say where they think the priority should lie.

### **Education in the future**

Development in Scottish education is currently concerned with realising the vision set out in "*A Curriculum for Excellence*", published by the then Scottish Executive in 2004. This is a short document that describes the purposes of education and sets out a number of principles that should underpin the development of the curriculum from early years through to the end of secondary education and on into lifelong learning.

It was produced by a review group set up by the Scottish Executive in response to the outcomes of a ‘national debate’ on education that took place in 2002. About 25,000 people took part in the debate and some 2,000 written submissions were received. It is clearly impossible to summarise such a mass of material in a sentence or two. However, the central message was clear. People felt that Scotland’s schools were generally doing a good job but recognised that education would still require to change because the world was changing in ways that meant that young people would need different knowledge and different skills in the future.

This reasoning is well summed up in the popular powerpoint presentation, *Shift Happens*, where it is stated that “we are preparing young people for jobs that don’t yet exist, requiring technologies that haven’t yet been invented to solve problems of which we are not yet aware”.

Fundamentally, therefore, *Curriculum for Excellence* is Scotland’s educational response to global change. For that reason it needs to have ambitious long-term aims and has to be seen as a process of gradual but ultimately transformative change stretching far into the future. It is thus unlike earlier educational innovations that could be fully ‘implemented’ after a relatively short period of development work. *Curriculum for Excellence* is now in its eighth year and a huge mass of official guidance (such as the *Building the Curriculum* series and the *Experiences and Outcomes*) has been built up. However, all of this material represents only the first stage in continuing process of development.

It is also important to recognise that *Curriculum for Excellence* is not a curriculum in the traditional sense of being a catalogue of essential knowledge. Rather it is a programme of change and improvement that contains many strands. Thus it is concerned with teaching approaches, the development of skills, interdisciplinary learning, assessment and reporting, making education more responsive to the needs of the individual, the organisation and structure of the school, relationships within the school, achievement beyond the school and so forth. This list is by no means exhaustive.

Thus, in looking at the implications of current developments for the design of schools it is important to bear two points in mind:

- The process of change is going to extend far into the future. It is essential to try to anticipate future developments as well as to take

account of what is taking place at the moment. This is particularly important in relation to substantial investments such as a new school.

- Some aspects of the *programme* will lead to radical change in school design while others will probably have little or no impact.

What follows is a description of some of the changes that *Curriculum for Excellence* involves and of their implications for school design. No attempt has been made to cover every aspect of the programme. Attention has been focused on those that seem likely to change the way in which schools are designed and function.

### *Looking to the future*

In 2004, with the publication of *Curriculum for Excellence*, Scotland embarked on a long-term process of educational change. It has already brought significant changes in almost every aspect of educational practice. However, the full implications are yet far from clear. As the following sub-sections of this paper will show, key features of the programme such as ‘active learning’ and personalisation will set in motion processes of evolutionary change that are likely to transform educational practice.

Over much the same period an extensive programme of improving school premises has been implemented. Many new schools have been built and many existing ones have been refurbished. As the 2008 Audit Scotland report quoted earlier demonstrates, this programme has had its shortcomings. However, there have also been significant improvements in several important aspects of school design and construction.

New schools are more environmentally friendly and sustainable. Technical features such as electrical services for ICT, ventilation and heating have been improved. Indoor social areas for young people are of much better quality (although still usually falling short of the standards that would be expected in most adult workplaces). Modest steps have been taken to make learning areas more flexible, for example by the provision of shared areas for group work that can be accessed from a group of classrooms.

However, as yet the changes to the design of these areas that are at the core of the school’s function have not been far-reaching. This is a reflection of the fact that the educational changes themselves are at an

early stage. However, as *Curriculum for Excellence* gathers pace, the demand for more far-reaching change will grow. For this reason the design of schools currently being planned has to both reflect and anticipate educational change. They have to be built in such a way as to be able to accommodate a variety of possible futures. Flexibility is crucial.

### *Contexts for learning*

*Curriculum for Excellence* takes a broad view of the purposes of education. The aim is not only to help young people become *successful learners* but also to develop them into *confident individuals, effective contributors* and *responsible citizens*. In practice, Scottish schools have always been concerned with these broad aims but it is only with the new curriculum that they have been given such prominence.

In order to achieve these purposes, *Curriculum for Excellence* acknowledges that learning takes place outside school as well as in classrooms. It recognises four contexts for learning. Two are concerned with the formal curriculum. One relates to broader achievement, learning in the community, through clubs and voluntary activities and as a result of a wide range of formative experiences. The final context is learning “through the ethos and life of the school”.

For learners, school is their place of work. For many it also plays an important role in their social lives. Friendships, extra-curricular activities, residential trips and so forth offer a context in which young people learn about themselves, about others, about life. Some of this learning will be positive, and some will not. The quality of the environment and the ethos that the school offers has a significant influence, one way or the other.

In this vital part of the process of growing up, the part played by the school as a building is obviously small but it can be important. The building should provide good facilities for play, for talk, for eating, for studying. Very importantly, it should be designed, built and maintained to a quality that makes clear to the young people that society values them. School buildings have all too often failed in this regard.

A school that has been designed with a clear sense of purpose which is not compromised by considerations of expediency is more likely to support the kind of ethos and community life that young people will value

and remember. This has implications for overall design and layout as well as for a wide range of specific aspects of the school such as social and recreational spaces, dining facilities, circulation areas and meeting places. Good quality design, construction and finishes are essential. Anything that suggests standards ‘good enough for kids’ is fatal.

### *“Active learning”*

Much of the official guidance on *Curriculum for Excellence* makes clear that approaches to learning and teaching should embody the concept of “active learning”. This is not concerned with physical but intellectual activity. Learners should not be passive recipients of knowledge but should be engaged in a process of understanding as well as knowing. Throughout their schooling (and, indeed, in the outside world) they should be actively making sense of everything they encounter.

Many schools have adopted techniques such as ‘co-operative learning’ which involve teamwork in order to encourage this kind of mental activity. Learners are increasingly likely to be set challenges and to have to find information for themselves. Problem solving is a key aspect of active learning. This kind of learning has three important implications for school design.

- Firstly, it is space consuming. The same class engaged in, say, co-operative learning will take up more space than in a traditional classroom layout.
- Secondly, learners need to be able to work in large groups, small groups and individually as well as in a whole class setting. This has implications for the kind of spaces that are needed. Some new schools have purpose built group work areas adjacent to classrooms. This demand for variety and flexibility in the use of space is certain to grow.
- Finally, the research and problem solving aspects of active learning have implications for the size and nature of the library and resource facilities of the school. The overall demand is almost certain to increase. There may well be a requirement for several resource bases scattered throughout the school. Easy access to ICT will be essential. There will be a need to accommodate whole class activities, group work and individual study. All this has implications for flexibility of construction, electrical services and, of course, quantity of accommodation.

It is worth noting also that the drive to reduce class sizes that enjoys considerable political support also means that the same number of learners is likely to occupy more space in the future than at present.

There is, therefore, a significant risk that even some new schools (or, at least, their main classroom areas) will end up by being simply too small. Room for expansion is a wise precaution.

### *Personalisation and Choice*

This is one of the seven curriculum design principles of *Curriculum for Excellence*. Both parts have implications for the nature and extent of the accommodation that will be needed in the future.

Schools are familiar with the concept of choice and usually interpret it as referring to choice of course or subject. Traditionally, choice has become a feature of the curriculum from S3 onwards but there are now moves in many schools to offer some measure of choice at an earlier stage. Increasing choice, of course, has the effect of sub-dividing class or year groups further and increasing demands for space.

There is also a move towards providing a greater range of vocational options (in line with the thinking of the 2007 OECD report on Scottish education). Most of these are of a practical character and require specialist accommodation.

In some areas choice can be increased by making use of opportunities in a nearby further education college. Where this is difficult to organise – as in St Andrews - because of distance and travel time, it may well be necessary make provision within the school itself. This would have important implications for the amount and nature of the specialist highly-serviced accommodation the school would require.

Personalisation is a more complex concept than choice and one that is new to school education. The idea is to fit provision as closely as possible to the needs (and preferences) of the learner. The implications are very far-reaching and are only beginning to be explored. Schools have adopted a range of measures such as assisting young people to become independent learners, involving them more in decisions about their learning and providing opportunities for coaching and mentoring.

Such activities tend to bring a demand for more space for independent

study and for meetings. Again there is likely to be an increase in the overall amount of space required.

It is difficult to be sure how the notion of personalisation will develop in practice. Over time, it is likely to challenge some of the traditional assumptions about how schools are organised such as age cohorts, standard-sized classes and fixed operating hours. However, a demand for more flexible spaces is certain.

### *School organisation and structure*

The organisation of secondary schools has undergone only comparatively slight change over the past fifty or more years. It continues to be assumed that the school will be open for a fixed period on a limited number of days but that almost all learners will be fully programmed during these hours. The curriculum consists very largely of subject-based courses with the pupil day being run in accordance with a complex timetable. Learners, particularly in the earlier years, are grouped into class units of fixed size that may vary between practical and other subjects but will normally be otherwise constant. These traditional assumptions have important, though generally unspoken, implications for the design of schools. In particular, they cause school accommodation to consist largely of standard classrooms of similar size and appearance, together with more specialist accommodation that is also designed to be occupied by a single class at a time.

*Curriculum for Excellence* embraces the notion that all of this could change. *Building the Curriculum 3*, the official guidance on the organisational aspects of current developments, indicates clearly the potential for innovation:

*“... The opportunities presented for planning of learning and teaching across the S1-3 phase will include pathways which go beyond traditional subject groupings or year groupings.”*

*“Different patterns of organisation can contribute to pace, progression and coherence.”*

*“Schools can structure the senior phase (S4-6) in different ways ranging from offering option choices largely targeted at specific year groups to models that view the senior phase as a single cohort.”*

(Building the Curriculum 3 – a framework for learning and teaching)

Schools are only beginning to translate these ideas into new forms of practice. The full implications, including the implications for school

design, will not be obvious for some years. However, it is surely fair to assume that the direction of travel is towards greater flexibility and that reliance on standard classroom ‘boxes’ is likely to diminish.

### *Ambition in the curriculum*

An important aim of *Curriculum for Excellence* is to raise aspirations and improve performance. This is evident in a determination to ensure high standards of basic skills by making the promotion of literacy and numeracy a responsibility of all staff. At a very different level, it is also apparent in a focus on deep learning and the cultivation of advanced intellectual skills such as analysis, evaluation and creativity.

*Curriculum for Excellence* sees knowledge as vitally important but also insufficient. To thrive in the modern world, young people need to *know* but they also need to *understand* and possess the skills to *apply* their knowledge in useful ways. This thinking underpins the *Experiences and Outcomes* which contain the most detailed guidance within the development programme.

Putting into place a curriculum based on understanding and skill as well as knowledge is a radical undertaking with huge long-term implications. Most of these implications have little to do with the physical premises of the school.

However, an emphasis on advanced skills requires a problem-solving approach and a conscious effort to encourage teamwork, independent thinking and creativity. In other words, realising the ambition that is inherent in *Curriculum for Excellence* will take further the trends already noted in connection with active learning and personalisation. Increased flexibility in teaching approaches requires increased flexibility in the fabric of buildings.

### *Other considerations*

There are many other considerations that should affect the design of a contemporary school, some of which suggest different conclusions from

those offered in the previous sub-sections.

Increased partnership working, especially with colleges and other education providers, is likely to lead senior pupils in particular to spend less time in school premises, thus potentially reducing the demand for accommodation. At present it is difficult to schedule such activities in a way that allows the release of space throughout the school week and year. Furthermore, St Andrews is less well-placed than many other towns and cities to support such partnerships. The impact of this factor is, therefore, likely to be small.

In a similar way, ICT is likely to influence the amount of time spent in school. On-line learning is already an established feature of higher and, to a lesser extent, further education. It will certainly be used to expand the range of choice available to senior school pupils. However, schools' duty of care means that its impact on younger learners will be very limited. Furthermore, learning is in large measure a social activity, particularly during the years of schooling. Thus, while ICT may significantly affect the accommodation requirements of universities in the future, the effect on schools will be much more limited.

On the other hand, it will affect the nature of school accommodation. The requirement for services will increase. The role of ICT for individual study and group work in school will certainly grow. All of this is, of course, consistent with trends mentioned above.

### *Summary*

Current trends in school education, particularly the implications of the development of *Curriculum for Excellence* will unquestionably have far-reaching implications for the design of schools. It is not possible to predict in any detail what all of these may be. However, some are reasonably clear:

- As with many areas of human activity, progress in education is likely to involve changes in practice that impose demands for increased space
- The organisation of schools is likely to become more flexible. Demand for standard sized classroom spaces (including more specialised ones such as laboratories) will reduce and the need for spaces of varying sizes will increase.
- Active learning and the development of young people as independent learners will similarly require greater flexibility in

design.

- It is unlikely that space demands will be constant from year to year (or possibly even from day to day). School accommodation will ideally be capable of being easily and quickly reconfigured. The school of the future may resemble more a conference centre than a traditional row of classrooms.
- Social spaces will be increasingly important. Their quality will have to reflect the value society should put on its young people.
- The range of specialist facilities schools will require (especially if they do not have easy access to partner providers) will increase. This is likely to be particularly relevant to sports, arts and vocational education.

So far, the modernization of Scotland's school estate has taken less account of these factors than it should. It is important that assets designed to serve for half a century or more should not only meet current needs but also anticipate future ones.

### **Best use of resources**

One further consideration is worth bearing in mind.

A budget of £40m is available for the project. It is important that as much of this resource as possible is devoted to meeting educational requirements. For this reason, significant expenditure on temporary needs such as hatted accommodation for the transition phase, is undesirable. Equally, the balance between what the council might have to spend on acquiring a new site and the receipt it could attract by the sale of one or more existing sites is important. An option that leaves the Council with as many saleable assets as possible has significant merit from this point of view.

Another issue that is likely to impact on the extent of the resources available for genuinely educational purposes is the amount of money to be held as a contingency reserve. In a project that is completed at or below the budgeted cost, this resource is returned to the Council. Clearly, the size of the contingency is likely to be influenced by the degree of uncertainty in the original costings. A fully new build project can normally be costed with greater reliability than one involving refurbishment.

The consultation paper provides no information on this point but it is

possible that resources may be withheld from investment in educational purposes for this reason.

## **Conclusion**

The current consultation on the future of Madras College is an important one. It will influence schooling in St Andrews and the adjoining area for decades to come. It is very unfortunate that the information provided so far is not sufficient to allow consultees to reach well-informed decisions on such matters as the risks (educational and other) associated with decant and, even more important, the quality of new school that will ultimately emerge.

In contributing to the debate, parents, young people and other interested parties will need to balance two factors that are in tension:

1. Madras College has operated on two sites since comprehensive reorganisation. Issues that were resolved long ago in most parts of the country remain problematic nearly 50 years after the amalgamation with the Burgh School. There is an understandable feeling that it is time that action was taken. Now that a feasible proposal is on the table and resources are available, there will be an expectation that the project will be completed as soon as possible.
2. Education is going through a period of rapid change. That change has implications for buildings as well as for curriculum, teaching approaches and so forth. It is important to try to ensure that the new school is as good as it can be and meets the needs of the present and the foreseeable future.

There is no single, simple answer. It is perfectly legitimate to give priority to either of these considerations. In reaching a conclusion, a number of issues needs to be taken into account. The first group relates to the Council's preferred option:

1. The Council's preferred solution will bring worthwhile improvements. The school will be housed on a single site in accommodation of good quality.
2. Furthermore, the solution can probably be implemented within a reasonable timescale. Some delay could, however, occur if refurbishment presents unexpected difficulties or negotiations with Historic Scotland prove problematic.
3. Refurbishment inevitably entails compromises. In this case, these

will be dictated both by structural issues and by the concerns of Historic Scotland. The detailed information that would be required to evaluate these compromises is not available.

4. The Kilrymont site is not large for the roll of the school. The position of the existing buildings and the need to maintain a large area for playing fields largely determine how it can be developed. There is little, if any, room for future development.
5. Some sports facilities will continue to have to be provided at a distance of some two miles. This is not an ideal situation.
6. During the period of building work, the school will unquestionably suffer considerable disruption. Once again, the details are not yet available.
7. The period of the work co-incides with a critical time in the development of *Curriculum for Excellence*. This seems certain to compound the effects of the disruption.
8. In conclusion, the Council's preferred option:
  - offers a practical way forward but a sub-optimal final outcome, and
  - entails serious educational and other problems during the period of transition.

A second set of considerations derives from consideration of the design consequences of *Curriculum for Excellence* and other developments:

1. Changing educational practices are likely to impose requirements for increased space that will outweigh the effects of slowly declining rolls. Ideally, new schools should occupy sites that allow for future developments.
2. Active learning and other aspects of *Curriculum for Excellence* will impose a need for more and better library and research facilities.
3. Space for group work and independent study will be needed in increasing quantity.
4. Changing approaches to learning and teaching and increasing flexibility in the way schools are organised mean that accommodation will need to be flexible too. Ideally, it should be capable of being easily reconfigured. This has important implications for physical structure.
5. Social spaces will play an increasing role in the life of the school and should be of excellent quality.
6. The demands of ICT and of an increasing emphasis on arts, sports and vocational learning will need to be met.
7. In conclusion, educational considerations would suggest that the best option for the long-term future of the school would be based

on a site that:

- is capable of accommodating all current school functions (including sports)
- provides space for future development
- can be developed free of the constraints imposed by any existing buildings and any requirements other than those imposed by education considerations.

The best option for Madras College would be the building of an entirely new school, imaginatively designed to meet present and future educational requirements, and situated on a spacious clear site of 25 or more acres. The mixture of new build and refurbishment proposed at Kilrymont offers a deliverable solution that would bring significant improvement, albeit after a difficult period of transition. It could be considered a reasonable fall-back option if a suitable greenfield site could not be found.

Keir Bloomer  
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