

# Public Document Pack

## ADDITIONAL CIRCULATION



### **ABERDEEN CITY COUNCIL**

To: Councillor May, Convener; Councillor Greig (Vice-Convener); and Councillors Allan, Boulton, Collie, Cooney, Corall, Cormack, Laing, Leslie, McCaig, Reynolds, Robertson, Jennifer Stewart, Kevin Stewart, Kirsty West and Wisely; and Mumtaz Abdullah, Grant Bruce, Peter Campbell, Stewart Duncan and Mario Vicca.

Town House,  
ABERDEEN 24 August 2009

## **EDUCATION, CULTURE AND SPORT COMMITTEE**

The undernoted items are circulated in connection with the meeting of the **EDUCATION, CULTURE AND SPORT COMMITTEE** to be held here in the Town House on **THURSDAY, 27 AUGUST 2009 at 2.00 pm.**

RODERICK MACBEATH  
HEAD OF DEMOCRATIC SERVICES

### **BUSINESS**

#### **EDUCATION**

- 3.4 **3R's Project - Decant - Kaimhill School to Braeside School - Please note that an appendix to this report which contains exempt information is listed as item 6.2 on this agenda (Pages 1 - 22)**
- 3.5 **Information Communication Technology (ICT) Connectivity for Education Establishments - **ADDITIONAL ITEM** (Pages 23 - 36)**

#### **ITEMS WHICH THE COMMITTEE MAY WISH TO CONSIDER IN PRIVATE**

- 6.2 **3Rs Project - Decant - Kaimhill School to Braeside School - **Appendix to the report at item 3.4** (Pages 37 - 38)**

Should you require any further information about this agenda, please contact Helena Tuffin, tel. (52)2503 or e-mail [htuffin@aberdeencity.gov.uk](mailto:htuffin@aberdeencity.gov.uk)



## ABERDEEN CITY COUNCIL

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COMMITTEE :	<b>Education, Culture and Sport</b>
DATE:	<b>27<sup>th</sup> August, 2009</b>
CORPORATE DIRECTOR :	<b>John Tomlinson Lead for Education, Culture and Sport</b>
TITLE OF REPORT :	<b>3Rs Project - Decant - Kaimhill School to Braeside School</b>

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### 1. PURPOSE OF REPORT

To inform Committee of the transfer arrangements that must be put in place to ensure a safe walking route for pupils who are to be decanted from Kaimhill Primary School to Braeside Primary in September 2009. These arrangements are required to allow the construction of the new 3 R's Kaimhill School on the Kaimhill site in Garthdee.

To inform elected members of a number of transport options, which they may wish to consider, to support the transfer of pupils from Kaimhill School to Braeside School, during the construction period.

To inform the Committee of the cost to the authority, of the proposed walking route arrangements and the various transport options to be considered.

### 2. RECOMMENDATION(S)

It is recommended that the Committee note the content of the report and approve the proposal that all appropriate measures are put in place, by the education service, to ensure that the identified walking route from Garthdee to Braeside School is in accordance with applicable legislation and conforms to all necessary safety standards.

The Committee is also asked to agree to such provision for school transport, as they consider necessary, on an exceptional basis, due to the particular circumstances of this decant proposal. This provision to be reviewed in December 2009. It is recommended that transport for all Nursery and Primary 1-3 pupils is approved (Option 5).

The transport options are:

- **Option 1** - Provide transportation for all P1 – P7 pupils from Kaimhill School to Braeside School during the new school build (current roll is around 180 pupils)

- **Option 2** - Provide transportation for all P1 – P3 pupils from Kaimhill School to Braeside School during the new school build, on the basis that the route is particularly challenging for younger pupils (approximately 85)
- **Option 3** - Provide transportation for Nursery pupils from Kaimhill School to Braeside School (current numbers are 40 in the morning and 20 in the afternoon)
- **Option 4** – A combination of all the above options.
- **Option 5** – A combination of options 2 and 3

### 3. FINANCIAL IMPLICATIONS

There will be cost implications for each option as follows:

#### Establishing a Safe Walking Route

- It is anticipated that a minimum of 2 Road Crossing Patrol stations will be required at different stages of the preferred walking route for 1.5hrs per day - **£6.72 x 1.5 x 250 = £2 520 (annual increasing cost)**
- Improvements to the area of hard standing at the former Copper Beech site - **£6,000 (one-off cost)**
- Improvements to lighting and improving accessibility Old Railway crossing - **£14,000 (one-off cost)**
- Warning signage on Auchinyell Road, North Deeside Road Railway line as appropriate - **£ 1000 (one-off cost)**
- Install safety barriers at junction of North Deeside Road and Springfield Road - **£6 000 (one-off cost)**
- Walking buses be established for younger pupils and others as appropriate. - voluntary basis
- An additional **£16,250** would be required each financial year if PSAs were identified to support the walking buses - **£13 x 10 x 250 = £32,500**
- Approximate financial outlay:  
 2009/2010 - **£29,520 or £45,770 (if staff rather than volunteers provide the walking bus)**  
 2010/2011 - **£2,520 or £18,770 (if staff rather than volunteers provide the walking bus)**

### **Transportation by Bus**

The transport options identified by the Education Service are as follows with indicative costs. A more detailed breakdown is provided in a confidential report in line with financial regulations, as the education service may be required to go to tender.

- **Option 1** - Provide transportation for all P1 – P7 pupils from Kaimhill School to Braeside School during the new school build (the current roll is around 185) – estimated cost £340,000
- **Option 2** - Provide transportation for all P1 – P3 pupils from Kaimhill School to Braeside School during the new school build, on the basis that the route is particularly challenging for younger pupils (approximately 85 – estimated cost £170,000
- **Option 3** - Provide transportation for Nursery pupils from Kaimhill School to Braeside School (current numbers are 40 in the morning and 20 in the afternoon) – estimated cost £170,000
- **Option 4** – Provide transportation for all P1 – P7 pupils and nursery pupils – estimated cost £510,000
- **Option 5** – Provide transportation for all P1 – P3 pupils and nursery pupils – estimated cost £340,000

It should also be noted that any delay in the 3Rs programme may increase the costs accordingly.

Members are advised that regardless of which option is selected the local authority will require to ensure that there are appropriate measures in place to enable pupils to walk to Braeside School.

Subject to approval from the 3R's budget (a report is being submitted for the agenda of the Budget Monitoring Board meeting on 28<sup>th</sup> August 2009), a sum of up to £202,000 could be available to support the Kaimhill Decant in the current financial year (a one-off sum arising from the recovery of interest on loans made as part of re-financing the 3R's project). Any additional monies would require equivalent savings from the Education budget.

## **4. SERVICE & COMMUNITY IMPACT**

This report is in accordance with the Administrations programme for the Council – Vibrant, Dynamic and Forward looking:

- a. This will enable the Aberdeen City Council to implement the ambitious £110 million 3Rs schools project and Aberdeen's pupils and teachers have school buildings fit for 21st century; (VDFL)
- b. Promote the health and well-being of pupils through healthy exercise and eating; (VDFL)

- c. Continue to invest in the proper maintenance of roads, pavements and streetlights; (VDFL)
- d. Encourage walking in our city; (VDFL)

It also meets with the local Community Plan Objectives as it supports the objective of developing Aberdeen City as a City of Learning.

## 5. OTHER IMPLICATIONS

<b>People</b>	Additional staff and / or increased hours will be required
<b>Systems &amp; Technology</b>	Not applicable
<b>Property</b>	Not applicable
<b>Other</b>	Installation of road safety measures and upgrade to approved walking route.

## 6. REPORT

Kaimhill School, pupils and staff, are to be decanted to Braeside School to enable a new purpose built school to be built on the Kaimhill site. This project is part of the 3Rs initiative.

Pupils and staff are to move to the Braeside School on the 1<sup>st</sup> October 2009. An exceptional closure of three days has been granted from Scottish Government to support this move. They will return to the new Kaimhill School when it opens in December 2010.

It is recognized that for the majority of children there will be a significant increase in the distance they will have to travel to their new school. It is therefore incumbent on the education service to ensure that all appropriate safety measures are in place to allow pupils to walk to school, where appropriate.

It is also recognized that compulsory education of children could impose a financial burden on parents when transporting their children to their nearest school. It has therefore been a long established tenet that parents should have a right to free transport for their children where the distances involved are too far to walk (or where the route is dangerous)

The current applicable legislation is the Education (Scotland) Act 1980 (as amended). Section 42(4) of the Act on school attendance sets out the maximum distances which children can be expected to walk.

- Children under 8 years of age – maximum 2 miles: and
- all other pupils – maximum of 3 miles

Aberdeen City has however adopted a more favourable policy and provides transport for all primary school pupils, who normally reside more than two miles from their identified local school.

As the majority of the pupils who attend Kaimhill School live within the agreed walking distance to Braeside School there is no requirement for the education service to provide transport for these pupils to their new school.

There are also approximately 17 children who attend Kaimhill School from out with the school zone. The families of these children will continue to be responsible for getting their children to school.

Officers of the education service have visited the local area and identified a walking route from Garthdee to Braeside School, which is outlined on the Map in Appendix 1 and analysed in detail as part of the Travel Plan report in Appendix 2

## **Formal Assessment of the Travel Route by the Education Service**

The Education Service has made an assessment on the travel options based on the following sources of information.

1. A report commissioned from the School Travel Plan Co-ordinator (Appendix 2)
2. Analysis of the feedback from consultation with parents in the Kaimhill community (Appendix 3)
3. Consultation with elected members, council officers and members of the school community.

The Education service assesses the following:

1. There is a safe and manageable route that has been identified for pupils to travel from their homes to Braeside School. This route is within the recommended distance for primary aged children, and with a range of modifications can be made safe. It is a challenging route, especially for younger pupils, however it falls within the acceptable application of the existing school travel policy in terms of distance, safety and manageability.
2. There are however several exceptional circumstances about the proposed new travel route that merit consideration.
  - (a) The new travel route is being imposed on a temporary basis by the education service in order to facilitate the rebuilding of Kaimhill School. This new location is out with the existing school zone.
  - (b) As this move is not permanent it is anticipated that all children will make this move and then return to the newly rebuilt school.
  - (c) There are no alternative public transport options available to families who do not feel the walking route is reasonable.
  - (d) The timing of the proposal from the education service means that there is limited time available for families to consider or arrange other travel options.
3. In light of the particular **combination** of these exceptional circumstances, the education service have identified alternative transport options for consideration, in addition to the establishment of a safe walking route to school.

## **The Identified Safe Walking Route**

### **The route**

The route from Garthdee to Braeside via Deeside Railway is approximately 860m from the proposed marshalling point at the Copper Beech and goes via the Deeside Railway and Deeside Drive, right into North Deeside Road, left into Springfield Road, left into Braeside Terrace and right into Braeside Place.



A Map of the route can be found in Appendix 1, and analysed in detail as part of the Travel Plan report in Appendix 2

An alternative walking route, avoiding the Deeside railway has been identified via Morningside Road. Although significantly longer it is still less than the maximum distance a primary aged pupil could be expected to walk to school.

In response to the formal report from the school travel plan co-ordinator (Appendix 2) priority has been given to progress the necessary works identified. These are:

- ii. to surface an area of hard standing in the former Copper Beech car park, nominally 10m x 7m if required, and to improve access to the start of the route - estimated cost £6,000
- iii. upgrade the path through the wooded area including improved lighting - estimated cost £14,000
- iv. provide crossing signs on the Deeside Line to alert cyclists or install another form of traffic calming measure – estimated cost £1,000
- v. install barriers between the traffic lights on North Deeside Road and the junction with Deeside Drive – estimated cost £6000
- vi. review the timing for pedestrians to cross the North Deeside Road at the traffic lights
- vii. provide crossing patrollers on Auchinyell Road and North Deeside Road on a temporary basis until the number of pupils using these crossings can be assessed. – estimated cost £2520
- viii. support parents in setting up voluntary walking bus options and consider employing supervisors on the route to ensure children are making their way to school safely – this might be managed by extending the hours of classroom assistants who were willing to take part. – estimated cost £16250
- ix. The Committee are advised that there could be potential recruitment difficulties for vii and viii above.

### **Health Benefits of Walking**

The Scottish Health Survey (1998) shows that most people in Scotland are not active enough. It identified that among children, 27% of boys and 40% of girls are not active enough to meet the guidelines.

The most recent data for school children at Primary 1 (2006) suggests that the level of overweight and obesity in this age group may be leveling out, but that it is still much higher than expected.

The National Performance Framework includes a target for local authorities and their Community Planning Partners to contribute to reducing the rate of increase in the proportion of children with their Body Mass Index out with a healthy range by 2018

The local authority has responded to these concerns for the health of our young people, by actively promoting Health Promoting Schools and appointing Active School co-ordinators across the city.

Schools are working towards engaging all pupils in a minimum of two hours of physical activity and walking to and from school could justifiably be considered part of this activity.

There is significant evidence of a consistent association between physical activity and heightened self-esteem, or self-concept, among young people. In particular, it is believed that physical activity can promote feelings of self-sufficiency, self-determination and personal control

### **Statement from Active Schools Co-ordinator**

'The fundamental aim of active schools is to offer all children and young people the opportunity and motivation to adopt active, healthy lifestyles, now and into adulthood.

The undulating roads to Kaimhill Primary School's new home at Braeside will provide children a daily workout walk of 20-30 minutes. This contributes to the Governments National Physical Activity target for children and young people attaining 1 hour of accumulated moderate physical activity per day.

Introducing children to this type of activity at an early age promotes a positive message, encouraging children to be regularly active and develops lifelong healthy habits which should ultimately reduce car-dependency and help tackle childhood obesity levels.

Active Schools are looking forward to working in partnership with both the school and school travel co-ordinator to use both existing walking initiatives and to develop new creative projects that will involve a school-wide approach and link into the framework of the curriculum for excellence'.

### **Transportation by Bus**

The transport options identified by the Education Service are as follows with indicative costs outlined. More detail is provided in the additional confidential report in line with financial regulations.

- **Option 1** - Provide transportation for all P1 – P7 pupils from Kaimhill School to Braeside School during the new school build (the current roll is around 185) – estimated cost £340,000
- **Option 2** - Provide transportation for all P1 – P3 pupils from Kaimhill School to Braeside School during the new school build, on the basis that the route is particularly challenging for younger pupils (approximately 85 – estimated cost £170,000
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- **Option 5** – Provide transportation for all P1 – P3 pupils and nursery pupils – estimated cost £340,000

### **Safety**

Where pupils are transported by bus, the education service must ensure, as far as is reasonably practicable, the safety of pupils at all times, in accordance with current legislation.

### **Health Issues**

Where any pupil of whatever age is unable to walk the prescribed safe route due to his/her own medical condition or to the medical condition of the adult who would normally accompany him/her on the walking route to school, transport will be considered. In these cases the education service will seek the opinion of the Family General Practitioner or School Medical staff, before any final decision is made.

### **Procedures**

For any of the transport options, pupils would be required to arrive at the pick-up point, most probably adjacent to the church in Auchinyell Road from around 8 am in the morning. This 'muster' point is currently being assessed by the education service and will be supervised. It is anticipated that a minimum of 3 '60 seater' buses would be required, based on which transport option is selected. Transportation would have to be on a phased departure of 5-minute intervals to ensure all pupils were at Braeside in time for an 8.55 am school start and 9 am nursery school start.

The more buses used the earlier the start time.

The Public Transport Unit estimate that due to the volume of traffic in the area at this time, a minimum of 35 minutes will be required to transport the pupils and escorts to the drop off point in Springfield Road. Pupils would then have to be accompanied to Braeside School gate, to begin their school day.

Detailed arrangements would be identified, in consultation with the school, to ensure pupils knew in advance the timings of the buses they had to catch to and from school.

It is anticipated that a similar timescale would be required in the evening for the return trip for pupils with the last pupils being dropped off at the same site at approximately 4pm.

There is no statutory requirement on the education service to provide supervisors on school transport. There is little doubt however that supervision is desirable and we would suggest that for large numbers of primary age children it is essential. In discussion with Aberdeenshire who have greater experience of transporting Primary aged children, they advise that they no longer employ escorts on their buses. Their position is that parents of all primary aged pupils who receive transport are responsible for getting them to school or to the transport on offer. The driver then resumes responsibility to take them to the school drop off point. In light of the numbers involved we are

proposing that the ratio should be the driver at least 1 escort for 30 primary pupils.

There is no requirement on the education service to transport nursery pupils, regardless of distance, as the reference to school in the legislation does not include a nursery school or a nursery class.

However if transportation was approved for Nursery pupils, they would be required to be accompanied to and from school by a responsible adult. It is proposed that this would be the parent or guardian of the nursery child. There may also be additional health and safety requirements for transporting nursery aged children and these will be further explored pending the decisions on the transport options.

It would continue to be the parents' responsibility to make their own way from and to school after registering their children and collecting them at the end of the nursery session.

### **Charges**

Section 51 of the Education (Scotland ) Act 1980, as amended requires the authority to make such arrangements as they consider necessary for the provision of school transport and transport facilities on such terms and conditions as may be arranged, and pay all or part of reasonable travelling expenses for school pupils residing in their area and attending designated schools.

Charges can be made for transport at a cost that is considered appropriate and these charges can vary accordingly. It is however important that account is taken of the financial circumstances of parents and consideration should be given as to when a charge should be paid by parents without undue hardship.

Experience has shown us that demands for transport often reduce once pupils become familiar with the proposed walking route. It is therefore recommended that the transport option is reviewed by December 2009 and adjusted according to the numbers actually using the buses provided

### **In Conclusion**

It is recommended that the Committee note the content of the report and:

Approve the proposal that all appropriate measures are put in place, by the education service, to ensure that the identified walking route from Garthdee to Braeside School is in accordance with applicable legislation and conforms to all necessary safety standards.

Consider provision for school transport, on an exceptional basis, due to the particular circumstances of this decant proposal. The recommendation is that transport is provided for all Nursery and Primary 1-3 pupils (Option 5). This provision to be reviewed by December 2009.

## **7. AUTHORISED SIGNATURE**

John Tomlinson

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## **8. REPORT AUTHOR DETAILS**

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## **9. BACKGROUND PAPERS**

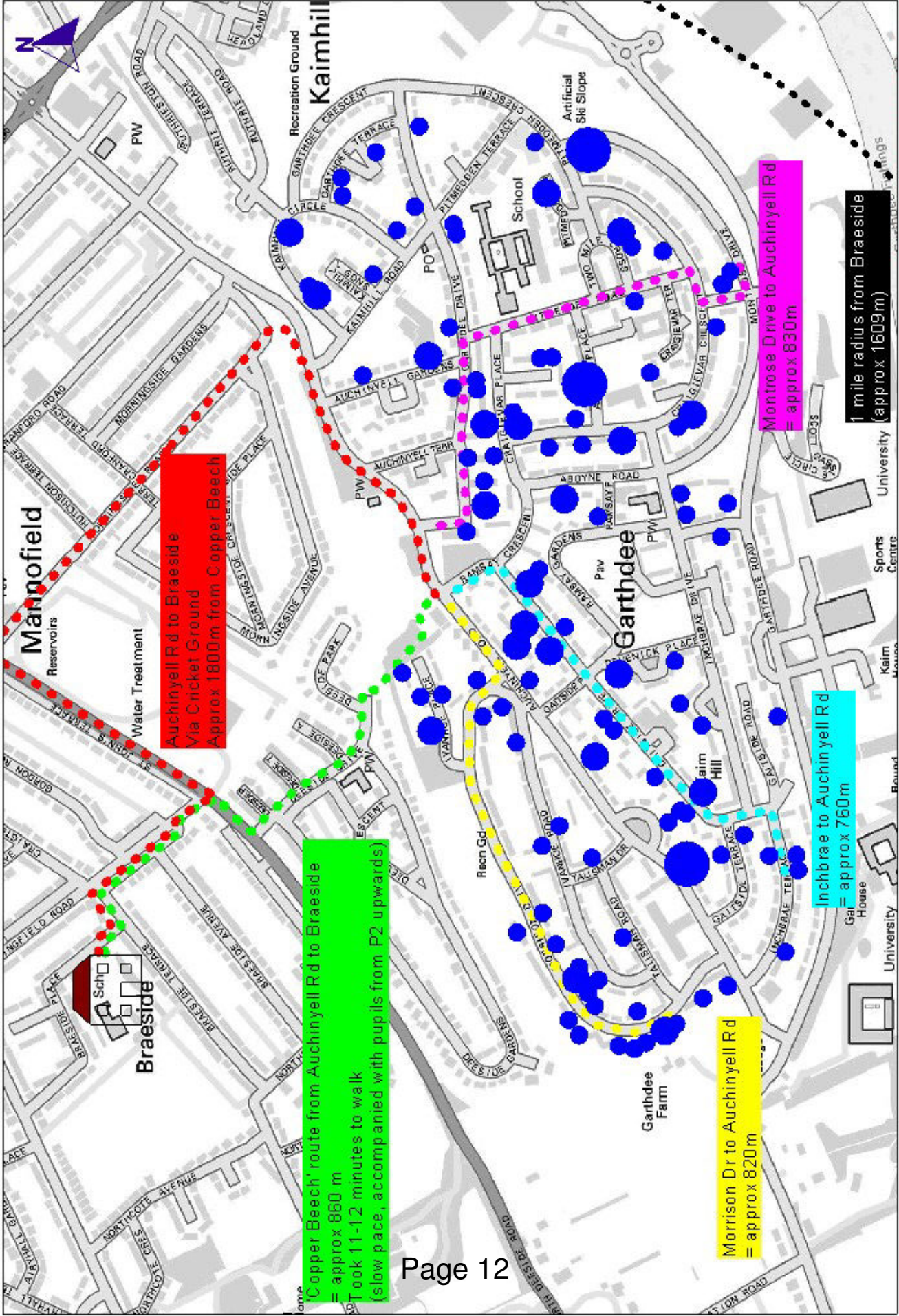
Education (Scotland) Act 1980, as amended

School Transport Guidance: Scottish Executive Circular No 7/2003

Analysis of Parental Questionnaire issued following the public meetings at Kaimhill School on July 24<sup>th</sup> 2009.

Formal Assessment of Identified Walking Route





### **Kaimhill School: the Journey to Braeside**

**Report by Dawn Haggerty,**

**School Travel Plan Co-ordinator**

**July 2009**

#### **Introduction**

On Monday 11 May 2009, a group of pupils (pupil council members who ranged in age) walked the route from Kaimhill School to Braeside. The walk took place around 9:15 am, outside the 'school run' hours, but this was so that pupils could participate and not by design. The pupils, who were accompanied by adults, did not experience any difficulties walking the route to and from Braeside on this occasion. A number of observations and suggested improvements were identified which are noted in this report.

#### **Policy**

The local authority has a responsibility to provide safe routes to schools and encourage active and sustainable transport however the journey to school is the parent's responsibility.

Entitlement to free school transport is determined by Aberdeen City Council policy and is based on walking distance criteria: pupils must live more than 2 miles from their zoned primary school to qualify. The only exceptions to the policy are:

- a. Where a child lives less than the prescribed distance from his/her zoned school but cannot reach the school either by an available transport service or by an available safe walking route accompanied by an escort
- b. Where a child lives less than the prescribed distance from his/her zoned primary school, does not have access to a transport service and is unable to walk the prescribed safe route due to his/her own medical condition or to the medical condition of the adult who would normally accompany him/her on the walking route to school.
- c. Where a child lives less than the prescribed distance from his/her zoned primary (that is, less than two miles as indicated above), does not have access to a transport service, and is unable to walk the prescribed safe route due to his/her own medical condition or to the medical condition of the adult who would normally accompany him/her on the walking route to school.

When determining whether or not a safe walking route exists, the Education Authority will take expert advice from the Police or other qualified road safety practitioners. In the case of medical conditions it will seek the opinion of the Family General Practitioner or School Medical staff, before any final decision to support a request is made.

The policy deals with safety, distance and medical issues but does not specifically include a move to a temporary location or how 'manageable' a route is.

The authority has no statutory duty to provide transport for Nursery pupils and places can be allocated anywhere within the ASG, regardless of distance. In this case the ASG is Harlaw Academy. Subsequently, nursery pupils in Garthdee could be allocated a nursery place Ferryhill and Broomhill School, and involve, depending on the home postcode, journey distances greater than those to Braeside.

## **Distance**

Walking distances from postcodes of pupils in zone and attending Kaimhill School\* have been reviewed. Google Maps and [www.walkit.com](http://www.walkit.com) were used to identify walking distances from home postcodes. All routes were automatically generated by sites offering directions/ walking routes and not manipulated.

Full details of the distances are available. Average distances are as follows:

Average distance to Kaimhill School	0.5 mile
Average journey to Braeside via 'Cooper Beech' footpath	1.1 mile (+0.6 mile)
Average journey to Braeside via Morningside Road	1.5 mile (+1 mile)

\*The information was taken from Phoenix in May 2009 and does not include P1 or Nursery intake for August 2009, P7 pupils as they will no longer be attending Kaimhill School or pupils that attend from out of zone.

Based on distance criteria, pupils are unlikely to qualify for free school transport, although individual cases can be reviewed. However, as previously stated, the policy does not take into account a school being moved to a temporary location or how 'manageable' the route is to walk.

## **A Safe Route – Road Safety**

Allan Jeffrey, Principal Technical Officer from Road Safety & Traffic Management assessed the 'Cooper Beech' route to Braeside on the morning of 10 June 2009. He identified:

- Two locations where particular care should be taken at the crossing points on Auchinyell Road and North Deeside Road



- That North Deeside Road has crossing point which is controlled by traffic signals with a pedestrian phase and should be relatively safe.

Auchinyell Road was not observed peak hour traffic so additional observations would be required to make a full evaluation of the risk involved in directing pupils across this section of road.

Both Auchinyell Road and North Deeside Road are already routes to school. There are a number of pupils attending Kaimhill School from areas north of Auchinyell Road, who already cross this road on the route to school. Similarly, any pupils attending Airyhall School from south of North Deeside Road will already be crossing this road.

These points suggest that pupils travelling from Kaimhill to Braeside would not qualify for free school transport on the grounds that safe walking route (accompanied if necessary by an adult) is unavailable.

### **A Safe Route - Community Safety**

At the consultation events, some parents felt that the area around the footpath and the Deeside line was generally unsafe. Senior Community Warden Robin Donald is familiar with the area and recently walked the 'Cooper Beech' route. His observations follow.

- There is a potential for pupils to use alternative crossing areas and then walk along the "railway line". Experience tells us that school children will go the quickest route whether it is through mud, water or fences.
- The area around the Copper Beech especially behind the remaining foundations and betting shop would benefit from clearing and regular checking.
- The grassy and tree area between Auchinyell Rd and Deeside Park would possibly need to be upgraded especially in the more inclement weather. The bushes and trees may also need to be pruned to give better access.
- Lighting in that area would also need to be upgraded.
- Deeside Drive is steep and the gradient of the road may well be an issue in the winter.
- Another factor would be how the residents in the Deeside Park area respond to the pupils, especially if the pupil behaviour impacts on their day to day living. (This may not be an issue but it can happen).
- It would be desirable to have a school crossing patrol at Auchinyell Road, North Deeside Road and possibly Braeside Terrace.
- Potential for a build up of vehicles around the Braeside School which would need to be managed. Such as parking on double yellow lines and Zig Zags etc.
- Other factors to consider would be the amount of pupils that are walking home at lunchtimes or perhaps using other routes.

## **A Safe Route – Potential Improvements**

There are a number of measures have been identified that could improve the safety of the route to Braeside:

- Improved access onto the footpath behind the Copper Beech
- Cut back foliage along the footpath
- Additional lighting along the footpath
- Signs to alert cyclists that children will be crossing the Deeside line
- Prioritising Deeside Drive for snow/ice clearing and gritting
- Barriers at the crossing on North Deeside Rd
- Extending the 'green man' phase of the pedestrian crossing
- School crossing patrollers at Auchinyell Road and North Deeside Road, although these could be difficult to recruit for

Colleagues from Planning & Infrastructure would need to be involved to confirm what access & footpath improvements could be implemented and the associated costs. No approach has been made to them to see if improvements required are possible. As the move to Braeside is scheduled for September, it could be difficult to implement the improvements identified in time.

## **A Manageable Route**

How manageable or reasonable a route to school is, is entirely subjective and down to individual circumstances and point of view. Manageability is not considered in the policy regarding eligibility for free school transport. Distance, gradient, mobility, age of pupils and number of times a day the route needs to be walked, all contribute to how reasonable it is to expect pupils and parents to walk the route.

The **distances** to Braeside from Garthdee, using the Copper Beech route, range from 0.6 miles (966m) for those living closest to the site, to 1.4 miles (2253m) for those living furthest away. The nature of primary school catchment areas serving local communities means generally journey distance should remain low.

A journey of 1.4 miles to school is in the higher range but not unique. There are comparable journey distances in other areas of the city, as illustrated in the table below.

School	Area in Catchment	Distance
Greenbrae School - AB23 8NT	Seaview/Dubford - AB23 8RI	0.7 miles
Fernielea School - AB15 6HD	Fara Close - AB15 6WN	0.9 miles
Braehead School - AB22 8RF	Grandholm - AB22 8AF	0.9 miles*
Kingswells School - AB15 8TG	Concraig Park - AB15 8DH	1.1 miles
Culter School - AB14 0XR	Drumview/Kencast - AB14 0PS	1.4 miles*
Cults School - AB15 9BP	Primrosehill Avenue - AB15 9NL	1.8 miles*

\*No public transport available, limited /partial coverage available on the other examples.

This information was obtained from [www.walkit.com](http://www.walkit.com) or Google Maps and whenever possible, actual pupil postcodes have been used (Culter, Braehead, Greenbrae).

The potential 'Copper Beech' route from Garthdee to Braeside involves Deeside Drive which has a significant **gradient**. While this may not be common in Aberdeen, it is not unique. There are other areas in the city where a similar gradient can be found, as illustrated in the table below.

School	Area in Catchment
Airyhall School	Deeside Drive. There are approximately 33 pupils who live in the area so climb Deeside Drive and cross North Deeside Road daily.
Scotstown School	Simpson Road
Forehill School	Jesmond Drive – perhaps not as steep but longer
Greenbrae School	Top of Greenbrae Drive
Braehead School	Grandholm / Balgownie Drive
Cults School	Park Brae, Quarry Road

The **mobility** and health of pupils and parents will have a bearing on how manageable the route is. This is covered by the existing policy on entitlement to school transport. Transport may be provided where a child lives less than 2 miles from primary school, does not have access to a transport service and is unable to walk the prescribed safe route due to his/her own medical condition or to the medical condition of the adult who would normally accompany him/her on the walking route to school. The Education Authority will seek the opinion of the Family General Practitioner or School Medical staff, before any final decision to support a request is made.

Many parents will propose that their **individual circumstances** make walking the route to Braeside unmanageable. It is difficult to take this into account. However, it is understandable why families with young children, living furthest from the location and having to make numerous trips to and from Braeside would feel it is unmanageable.

### **Additional Information**

It is parents who must judge how able their children are to walk a route unaccompanied. Leslie Harrold, Senior Road Safety Officer offers advice from the Department for Transport.

Children under the age of eight have difficulty in dealing with traffic and should not cross a road alone. If these children are going to continue to walk alone, an adult should initially walk the route with them.

They can then highlight any dangerous places where crossing the road should be avoided and encourage the children to use any safe crossing points, traffic Islands, etc.

A planning application from Langstane Housing has been submitted for the Copper Beech site. It has not yet been to Committee and a colleague in Planning (Matthew Easton) advises that this is expected to happen in September at the earliest.

The application maintains a path/access but improvements to this are one of the areas that planning officers are in the process of negotiating. It's all at a very early stage and they are now going to ask them to consider including access through/around the site during constructive.

The planning officer did not think work would progress within the next 15 months and felt the bid of a more speculative nature.

### **An Exceptional Route**

Some examples have been offered in earlier sections to illustrate that there are some comparisons that can be drawn with other journeys to school.

In additional to those examples, there have been recent instances of schools being moved to a temporary location.

<b>From</b>	<b>To</b>	<b>Distance between Schools</b>	<b>Notes</b>
Walker Road AB11 8DL	Victoria Road AB11 9NT	0.6 miles	Temporary move while asbestos was being removed from Walker Road. It would seem pupils did not live over 2 miles, but a bus was provided to those who lived furthest away from Victoria Road. No nursery pupils; they went to Torry Nursery.
Hanover Street AB24 5HN	Linksfield AB24 5SS	1.3 miles	Buses provided, initially to all pupils. However, it appears that numbers dwindled and eventually the bus was only offered to those living furthest from the new site, although this is anecdotal.
Upper Westfield AB22 8RR	Balgownie AB22 8RF	0.6 miles	As part of the merger of the two schools, Upper Westfield pupils were moved to Balgownie.
Seaton AB24 1XE	Linksfield AB24 5SS	0.7 miles	Walking is the primary mode of transport. No bus provided.

The distance between Kaimhill School and Braeside is 1.1 miles.

The majority of public transport routes which service the city are quite linear and run to and from Union Street. Subsequently there are very few cross town services in the City. So in this instance, Kaimhill to Braeside is not unique in the lack of a direct bus service. For example, there are no bus routes that travel from south of North Deeside Road north to Cults, Milltimber or Culter Schools and no buses serve the Grandholm area of Bridge of Don.

There are a number of comparisons that can be drawn throughout the city regarding previous moves to a temporary location, distance, gradient and public transport. One aspect that is perhaps unique to Kaimhill to Braeside is the lack of options available. The Deeside Line runs between the two communities so routes have to involve crossing it and this limits the choice of routes available.

One choice is via the Cooper Beech but as stated previously, a number of improvements would be required. A second option is via Morningside Place. This removes some of the safety concerns and the need to climb Deeside Drive but significantly increases the distance travelled (ranging from 1.2 to 1.8 miles, with an average of 1.5 miles). The proximity of the Deeside line limits the opportunities to cross into Airyhall.

## **Possible Solutions**

## **Walking Buses**

At the consultation event, walking buses were suggested as a potential solution. There would need to be a huge level of commitment from parents at Kaimhill to run the number of walking buses that would be required to have the necessary impact. Walking buses would need to run on several routes, every day, morning and evening. Even the most successful schemes in Aberdeen, with parents keen to help, haven't achieved this. Assistance will be available to any parents who wish to set up a walking bus scheme and it could work well for small groups of parents and pupils, but it should not be viewed as the solution for all parents.

## **Paid Walkers**

This concept was referred to at the consultation events. There do not seem to be any such schemes, using paid 'walkers' to escort pupils to school, in Scotland but details of a scheme in Essex were found, although the document is a couple of years old. Despite contacting the local authority, no additional information is available so it would suggest the information is out of date and the scheme no longer active. If this option were to be pursued, there are many issues to consider, not least what training would be required, who could deliver it, safety procedures, line management, Disclosure checks, risk assessments, adult to child ratios and recruitment.

## **Route Improvements**

At the consultation event, there were some parents who were willing to consider walking but they were concerned about the Copper Beech site that is used to access the footpath and cross the Deeside line. Colleagues from Planning & Infrastructure would need to be involved to confirm what access & footpath improvements could be implemented and the associated costs. However, such improvements would have long term benefits and permanently improve access to the Deeside Line.

## **Buses**

Allan Jeffrey from the Road Safety & Traffic Management team advises that the access roads to both schools are unsuitable for use by 50 seater coaches due to width restrictions and junctions, which were not designed to accommodate such vehicles.

There seems to have been some consideration to how bus provision could work and involves pick up and drop off points, staggered departures and early muster times. At the consultation event, Cllr Wisely suggested running buses for part of the year while other projects in the city have provided limited places on buses, for those living furthest from the site.

## Summary

- The current school transport policy does not indicate whether or not it applies when there is a move to a temporary site. It must be decided whether or not it should be applied or if there are grounds to disregard it.
- The nature of the journey in terms on distance, safety and route (with the improvements suggested) should be manageable for a number of pupils and parents to walk. How many pupils and parents cannot be determined as the manageability of walking the route is subjective.
- The walk will be least manageable for those affected by a number of factors, for example, families with young children, living furthest from Braeside and making multiple trips to and from the school and nursery daily.
- Many will never have walked the route so have perceptions about the distance, safety and nature of the route. The opportunity to walk the route would be beneficial.
- There is a precedent on providing a bus services but anecdotal evidence suggests uptake either dwindled or numbers were limited.
- The implementation of a bus service will result in a journey time that is significantly longer than walking to Braeside, particularly if pupils are living near to the pick up point at the Copper Beech.
- If a bus is provided, walking may remain the obvious and first choice for some pupils and parents so improvements to the 'Cooper Beech' route would still be recommended.
- The provision of better access in the 'Copper Beech' area has yet to be discussed with colleagues in Planning & Infrastructure.
- There are community wardens who serve the Garthdee area. Further discussions should be held with the service to identify what support they can offer.

## Analysis of Parental Questionnaire

### KAIMHILL SCHOOL – 3Rs TRANSFER QUESTIONNAIRE SUMMARY OF RESPONSES

A set of the full responses is available in the Members Library.

48 (27%) of the 180 questionnaires distributed were returned. Of these, 23% were from families living within the Kaimhill School zone.

32% of parents were in favour of children walking to the Braeside School, 56% were against this option and the rest remained undecided.

The over riding concern expressed by all respondents was for the safety of their children. Helpful comments and suggestions were made by some parents as to how this could be achieved as follows:

#### Supervision

Adequate supervision provided by qualified staff. A few parents offered support to help on a rota basis but several expressed concerns that volunteers were hard to find in this area and parental support alone would be inadequate.

Muster points needed to be supervised and clear procedures given for times of collection and pick up.

#### Safe Route

A safe route needed to be identified – concerns were expressed about both The Deeside Line and Morningside routes.

Helpful suggestions as to how the Deeside line could be upgraded included:

- Clearing of debris and rubbish, trimming back bushes and undergrowth
- Install lighting
- Ensure paths and steps were treated during bad weather

#### Road Safety

Adequate school patrol crossing officers appointed to designated crossing points along route.

Children and supervisors provided with high visibility vests and or arm bands. Of the parents who were against the walking option, several were concerned that children would have to walk to and from school during bad weather and would be wet by the time they reached school and have to remain in damp clothing for the remainder of the school day.

Concerns were also raised regarding the walking during the winter months when then there is limited day light.



## ABERDEEN CITY COUNCIL

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COMMITTEE	Education Culture and Sport
DATE	27 <sup>th</sup> August 2009
CORPORATE DIRECTOR	John Tomlinson
TITLE OF REPORT	Information Communication Technology (ICT) Connectivity for Educational Establishments

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### 1. PURPOSE OF REPORT

This report follows a paper of the same name that was presented and approved at the Resources Management Committee on 5<sup>th</sup> February 2009.

This report presents:

- Outcomes of procurement of consultancy undertaken throughout February and March 2009 for the Review phase of the project
- Findings and recommendations provided by the appointed consultancy firm upon completion of the Review phase of the project on 31<sup>st</sup> July 2009
- Details of the recommended approach for project progression and implementation of an upgraded Wide Area Network (WAN) connectivity solution for schools

### 2. RECOMMENDATION(S)

- That committee note progress to date.
- The committee approve the following recommendations:
  - a) Point-to-multipoint wireless is progressed as the preferred approach for education WAN connectivity
  - b) Information is conveyed to City schools which outlines the recommended solution, the benefits and the health and safety statements as appended.
  - c) A report on the review recommendations to be presented to Finance and Resources Committee on 17<sup>th</sup> September 2009 requesting approval to begin the procurement process and

establish a preferred network design for further stakeholder consideration.

### 3. FINANCIAL IMPLICATIONS

The consultant led review looked at all suitable technologies and approaches, providing information and indicative costing for the implementation and on-going operation. A brief description of these technologies is presented within Appendix 3. The below table provides a summary of the likely cost associated with each technological option considered.

Option	Capital	Revenue (annual)	Five-Year Total
Do Nothing	-	£323,564	£1,617,822
Upgrade Secondary's to 100mps	£25,080	£363,935	£1,844,751
Local Loop Unbundling	£365,860	£317,098	£1,951,350
Fixed Wireless	£505,114	£69,175	£851,058
Managed Fibre (50% of sites only)	-	£235,000	£1,175,000
MPLS	£438,000	£946,935	£5,172,675

Point-to-multipoint wireless is by far the most financially viable solution available to ACC and effectively satisfies bandwidth, resilience and scalability requirements of the project. all other efficiencies sought within the project.

### 4. SERVICE & COMMUNITY IMPACT

The subject of this report is in keeping with the community plan and the objectives within 'Vibrant, Dynamic and Forward looking. Specifically;

Objective 3 – Ensure expenditure on education delivers maximum benefit to pupils' education

Objective 5 – Continue work to improve attainment across city schools

Objective 6 – Ensure education is appropriate to pupils' needs and ensure pupils leave school with skills essential for living

This report is intended to ensure that appropriate and fit-for-purpose ICT connectivity is provided within educational establishments to be accessed by all children, young people and adults in Aberdeen City. This will play a key part in ensuring lifelong learning needs are met and that ICT can be used as a tool to improve life chances.

This is not only relevant to City residents, but will also act as an enabler to allow all those based in such establishments and employed in providing modern services across Aberdeen City Council (teachers, community workers etc) to perform more effectively. All of the above is in line with Aberdeen City Council policies on Human Rights, Equality and Diversity.

## 5. OTHER IMPLICATIONS

### 5.1 Resource

This project is being led by a Project Leader, Andy Duncan, from within Service Design and Development (SD&D) with input from other SD&D staff as appropriate. Education, Culture and Sport are represented by Principal Officer (Learning Resources), Rosaleen Rentoul, the project sponsor. Following procurement and installation of an upgraded solution, resources will be required from SD&D to implement the new network at individual education sites.

### 5.2 Property

The proposed approach will involve the installation of wireless equipment on school buildings and, potentially, a small number of other Council buildings in the city (possibly making use of the high-rise estate).

### 5.3 Equipment

The proposed approach will involve the installation of wireless equipment on school buildings and, potentially, a small number of other Council buildings in the city (possibly making use of the high-rise estate).

Wireless equipment has developed significantly over recent years and the proposed equipment is discreet and unobtrusive. It is foreseen that the antenna to be used will be of approximate dimension 37cm x 37cm. Images of potential equipment are contained in Appendix 1.

### 5.4 Sustainability

Analysis of available technologies has shown that point-to-multipoint wireless is by far the most financially sustainable, also scoring highly in other network efficiencies desired within the project. Aberdeen City Council's school estate is in a state of development and revision, with new schools being built and sites closing/merging on a regular basis. All wireless equipment will be owned by ACC therefore if sites no longer require connectivity, the equipment can simply be removed and re-configured for use elsewhere, The capital and revenue costs of implementing network connectivity using alternative technologies are significant, involving long lead times and disruption associated with civil works .

Once the initial wireless education network is established there is potential for further education sites, corporate sites and Libraries to join the network

at a reasonable capital cost. This would realise significant future revenue savings.

### 5.5 Health and Safety/Policy

It is noted that some may have concerns regarding Health and Safety implications of wireless/microwave technology. The Health Protection Agency (HPA) carry out on-going research in to the technology and state on their website (<http://www.hpa.org.uk>) that;

*"There is no scientific evidence to date that WiFi and WLANs adversely affect the health of the general population"*

and

*"there is no particular reason why schools and others should not continue to use WiFi or other wireless networks"*

In addition, point-to-multipoint wireless involves the distribution of signals between two devices installed at height, and not a 'blanket' coverage of the school estate below. This means that signals will not be focused on the school population.

Further information regarding the Health and Safety of point-to-multipoint wireless can be found in Appendix 2. This information will be sent to schools along with the information about the recommended solution.

### 5.6 Risk

Risk will be managed in line with corporate guidelines and is the responsibility of the Project Leader. A risk register is held within the Project Documentation and is continuously reviewed and updated as appropriate. This project is governed by the Education ICT Programme Board (formally known as the SSDN Programme Board).

## 6. REPORT

### 6.1 Background

Aberdeen City Council's current education related Wide Area Network (WAN) is not fit for purpose and requires to be upgraded. The main issues that currently exist are;

- Increased revenue costs – Regulated price increases implemented by BT Openreach will affect annual circuit rental costs as of December 2009. Revenue costs for these circuits will increase by 88% to around £330,000. Such a rise was unforeseen and is unsustainable.

- As time progresses, the requirement for the number of sites requiring access to the corporate network increases. The addition of sites to the existing infrastructure is expensive, time-consuming and has knock-on effects to the performance of existing sites on the network. In addition, further sites will add to the ever increasing revenue cost.
- Existing network resilience is extremely limited meaning risk of significant and widespread downtime exists. ICT is vital to the running of schools and their delivery of the curriculum and steps require to be taken to nullify/mitigate this risk.
- The current infrastructure has bandwidth limitations with all schools currently operating with 10 Megabits per second (Mbps) circuits. Use of these links is increasing over time as more and more learning resources come via the internet or from a centralised network point. Current bandwidth limitations cause network blockages, affecting performance, therefore a solution needs to be identified which will support additional bandwidth where needed at a reasonable cost.

## 6.2 Consultancy Procurement and Review Phase of Project

Following the Resources Management Committee Meeting on 5<sup>th</sup> February 2009, eleven companies were approached within an Office of Government Commerce (OGC) ICT Consultancy specific framework to quote for the work required to review our current Education network and investigate/make recommendations regarding an upgraded solution to satisfy a number of desired efficiencies.

Five companies responded with quotes which were subsequently evaluated by an evaluation panel using pre-defined criteria. It was ultimately deemed that the second cheapest proposal, from a company called Mott MacDonald, offered Best Value. Costs associated were £32,250 with expenses capped at £2500.

As this was not the cheapest bid, a request was made to the City Solicitor, City Chamberlain and the Convener of Resources Management Committee to make use of the delegated powers granted within Recommendation(s) section b) of Committee Report of 5<sup>th</sup> February 2009. This request was authorised, allowing award of contract to Mott MacDonald.

Mott MacDonald carried out the study as of 7<sup>th</sup> May 2009 and ultimately presented a series of recommendations to Service Design and Development (SD&D) operational management and representatives from Education, Culture and Sport on 31<sup>st</sup> July 2009.

### 6.3 Review Recommendations

Mott MacDonald engaged with many suppliers and stakeholders throughout the course of their study and ultimately concluded that the use of point-to-multipoint wireless technology most effectively satisfied all Aberdeen City Council's connectivity requirements for educational establishments.

The following points outline the technological benefits that address the areas of issue associated with the current network infrastructure -

- The advantage of wireless is that ACC own the kit with the only revenue cost being for the support of the kit and licensing (if required). This means ACC have a far greater control over future revenue price increases than at present. The reason that this project is being progressed as a matter of urgency is because of forthcoming major revenue increases for existing solution. It is worth noting that the wireless solution (capital and revenue) is less expensive than continuing with our current solution (revenue only), after only two years.
- Network monitoring, benchmarking with other local authorities and consultation with local schools indicates that bandwidth of 10mps for Primaries and 100mps for Secondary's should be a minimum standard. This can be achieved with wireless technology and increased upon, as required, with relevant ease.
- The addition of new sites to the network is relatively inexpensive, has a short lead time and will have no impact on the network performance experienced by other networked sites. Equipment will be owned by ACC, therefore, if a site closes the equipment can be reconfigured for use elsewhere within the estate.
- Any network design will involve resilient back-up whereby the network will automatically adjust to direct traffic away from any link shown to be displaying problem symptoms. This will limit any downtime to individual schools, as opposed to multiple schools which could experience issue with the current non-resilient network.

An executive summary of network related findings and recommendations can be found within Appendix 3.

### 6.4 Procurement

It is the intention to consult with the Central Procurement Unit (CPU) on the procurement options available. It is believed that Best Value can be delivered procuring using an Office of Government Commerce (OGC) Catalist framework

#### 7. AUTHORISED SIGNATURE

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#### 8. REPORT AUTHOR DETAILS

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#### 9. BACKGROUND PAPERS

'ICT Connectivity' Committee Report - Policy and Strategy (Education) Committee, 22<sup>nd</sup> January 2008.

'ICT Connectivity for Educational Establishments' Committee Report – Resources Management Committee, 5<sup>th</sup> February 2009.

Appendix 1  
Images of Wireless Equipment





**Appendix 1**  
**Images of Wireless Equipment**



Note – It is not the intention to site wireless equipment on lampposts. The images serve only to demonstrate the dimensions of the equipment.

## 1 Addressing Wireless Safety Concerns

The proposed wireless networking equipment at schools operates in the non-ionising 5GHz microwave band, with the point-to-point microwave links between hub sites (potentially high-rise buildings) in the 38GHz and 80GHz bands. From a scientific perspective, there is no reason to consider microwave point-to-point links hazardous to health – the Health Protection Agency ([www.hpa.org.uk](http://www.hpa.org.uk)) has responsibility for wireless health and safety in the UK and they have not highlighted any potential hazards from similar microwave networking equipment.

The maximum power output of the proposed equipment at schools is typically between 2W and 4W – this is much lower than the 60W typically emitted from antennae at the top of mobile phone masts. The power emission is not continuous - typically bursting technology transmits only when there is information to be sent. The result is that the mean emission level is further reduced. The proposed microwave antennae are directional and designed to channel the signal towards the horizon in the direction of the remote fixed equipment, rather than provide street level coverage as is the case with mobile phone masts. Signals detected at ground level from the microwave equipment will be minimal, typically 150 times lower than the main signal path.

In the 5GHz microwave band, the wavelengths in use are much lower than those of mobile phones and they have a very limited capacity to penetrate solid objects. This means for example that the transmitted signal from a roof mounted antenna is likely to be completely undetectable within the building below. A typical roof antenna for a school site has dimensions of 370mm x 370mm x 85mm.

The Council would need to complete a consultation exercise with the education department, individual schools and tower block residents (for the selected hub sites if appropriate) prior to any potential implementation of wireless networking equipment in the city. However, it is noted that similar wireless networking equipment is already being used between Cordyce School and Dyce Academy.

## 1 Executive Summary

### 1.1 The Problem

A review of the [wide area network \(WAN\)](#) services at Aberdeen City Council (the Council) has found that the current schools' network connectivity is not sustainable because:

- There is network congestion at Academy hub sites
- It is not resilient or sufficiently scalable to deliver the growing education curriculum
- It does not support the Council's strategic priorities
- Doing nothing is not an option, as to delay will result in a twofold increase in circuit costs in 2009/2010.

A review of the [server infrastructure](#) at the Council has enabled the following observations to be made:

- The individual domain model at schools does not allow roaming between sites
- There is no centralised management, so consistency is lacking in user, group policy and equipment standards
- There is no centralised back-up facility and the local server back-up process is inefficient
- There are opportunities for efficiencies through a more centralised approach to server infrastructure deployment.

### 1.2 The Approach

The Council commissioned Mott MacDonald in May 2009 to carry out a review of its schools' connectivity in order to develop pragmatic options and recommendations for a future wide area network (WAN) and a strategy for server deployment. The review was to consider the wider strategic drivers for the Council, the challenges and the opportunities presented by the corporate estate.

This report presents the findings of the study and a recommended approach to replacing the schools' network:

- The Council requirements were gathered through a series of stakeholder interviews with representatives agreed in collaboration with the Council
- A technology audit was carried out of the Council's network and server infrastructure that aggregated information from a range of sources into a single validated repository
- Technology options were identified, evaluated against the Council's requirements and financially assessed to reach a recommendation.

### 1.3 Consultation - Key Findings

The following key connectivity requirements were identified:

- Resilience
- Reliability
- Robustness
- Consistency / Network Management
- Security
- Sufficient bandwidth
- Capacity.

The overriding message that came out from all the stakeholders consulted was that technology is now at the heart of delivery of education. As such schools, teachers and pupils expect and demand a resilient, high speed and well managed service. However, the organisation has not responded quickly enough and the provision of support has not grown to meet the increased demands for technology in the sector. The result is a mixed landscape of experience amongst users, which is a function of the quality of both the systems on site and the access to stretched IT support services.

#### 1.4 Technology Options Analysis

Technology options were identified to provide a replacement connectivity solution and scored against the Council's requirements.

Technology Option	Description	Score
0 Current State or Do Nothing	Retain the existing fibre based circuits and do not improve the connectivity or stabilise revenue costs	-
1 Upgrade Academy Links to 100Mbps	Upgrade the network capacity between Academy hub sites and the Panther Room	77%
2 Exchange Local Loop Unbundling	A resilient gigabit fibre ring linking eight unbundled BT exchanges and providing school and community centre connectivity via wholesale copper and fibre circuits	90%
3 Fixed Wireless Access	A 5.8GHz microwave point-to-multipoint network connecting schools and community centres using eight Council high rise buildings as hubs with resilient backhaul via a combination of licensed / lightly licensed microwave links	84%
4 Managed Fibre	A managed fibre solution provided by leasing fibre infrastructure installed in the city sewer network providing gigabit connectivity to 50% of the required Council sites	69%
5 MPLS IP-VPN	A fully flexible carrier MPLS IP-VPN providing any-to-any connectivity across schools and community centres	94%

Our analysis shows that Options 2, 3 and 5 best meet the Council's requirements for connectivity.

#### 1.5 Financial Analysis

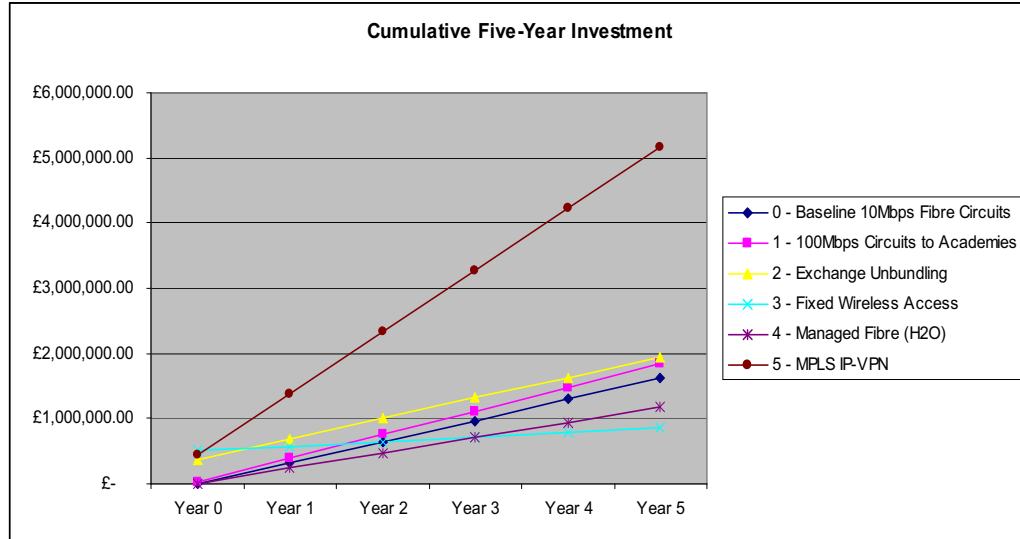
The indicative costs for each option are summarised in the table below.

	Capital (year 0)	Revenue (annual)	Five-Year Total	Ten-Year Total
Option 0	-	£323,564	£1,617,822 <sup>1</sup>	£3,235,644
Option 1	£25,080	£363,935	£1,844,751	£3,664,422
Option 2	£365,860	£317,098	£1,951,350	£3,536,840
Option 3	£505,114	£69,175	£851,058	£1,196,988
Option 4	-	£235,000	£1,175,000	£2,350,000
Option 5	£438,000	£946,935	£5,172,675	£9,907,350

<sup>1</sup> BT circuit prices (pre-increase) are £162,000 per annum or £810,000 over five years

By assessing the financial impact of each option, it can be concluded that Option 3 (Fixed Wireless Access) is the best value technology option to deliver the Council’s network connectivity requirements in terms of annual revenue costs and total five-year costs.

This is depicted in the graph below.



It should be noted that an additional £134,000 year-one revenue charge for LES / EES circuit migration would also apply for Options 2 to 5. This covers the renewal of all Phase 1 circuits (end dates Oct to Dec 2009) and Phase 2 circuits (with end dates Dec 2009 to March 2010) for 12 months. It is assumed that with Option 3 a new WAN solution will be in place by April 2010 and all remaining circuit contracts cancelled.

## 1.6 Recommendations

### Network Connectivity

A key driver for this review was to stabilise and increase control over revenue costs, whilst delivering increased bandwidth and resilience to academies. There is more than one technically acceptable solution, but there is a trade-off to be made against the level of technical requirements compliance and budget constraints – only Option 3 has the potential to meet these requirements at a level of investment comparable to the current (pre-price increase) network costs when analysed over a five-year term.

Based on our assessment of the technology options presented in this report, the ability to deliver the Council’s connectivity requirements and the financial analysis, it is recommended that the Council adopts Option 3 – a Fixed Wireless Access solution. Similar wireless connectivity solutions have been implemented by other UK Council’s in recent years, including Dundee City and Milton Keynes.

It is acknowledged that there are certain unknowns associated with the wireless option, in terms of planning permission, achieving the desired wireless coverage and avoiding spectral interference. These issues can be overcome by an early wireless consultation exercise, robust wireless surveys and correct design and implementation of the wireless links.

A cost-effective fibre solution, to complement the wireless connectivity at academies or high-rise hub sites, has not emerged during the options analysis, and so, a hybrid solution has not been presented as part of this study.

It is recommended that the Council moves towards a single wide area network logically separated for education, corporate and library services that will provide staff with access to corporate and curricular services from any location on the network. This will require advance planning and network reconfiguration activities by the Council and it is recommended that this is scheduled in a phased manner to coincide with contract expiry dates for corporate and library network connections.

#### Server Infrastructure

It is recommended that the Council:

- Migrates to a single Active Directory domain across schools, which will allow for a more centralised and efficient approach to user management
- Initiates a proof-of-concept pilot of a virtualised server environment in schools, which assesses standardisation with the Corporate Services VMWare platform.

### 1.7 Next Steps

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The recommended next steps for the Council are to:

- Review and agree the findings presented in this report
- Communicate decisions resulting from this study and secure buy-in with project team and stakeholders
- Submit a paper to the September 2009 Council Committee Meeting with the agreed recommendations
- Conduct a wireless consultation exercise between the Council, Education Department and schools
- Develop a more detailed migration plan to better understand the desired outcomes from the pilot phase, the required network re-configuration activities and investigate the feasibility of using the identified high rise buildings for hubs, including power, security, access and safety requirements
- Initiate a wireless pilot
- Initiate a formal tendering process and develop a requirements based tender specification and supplier evaluation criteria - a decision is required on whether feasibility surveys are conducted in advance or procured as part of the replacement network.

Exempt information as described in paragraph(s) 8 of Schedule 7A of the Local Government (Scotland) Act 1973.

Document is Restricted

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