OUTLINE BUSINESS CASE FOR THE DEVELOPMENT OF A&E SERVICES AT ANTRIM AREA HOSPITAL

Executive Summary

August 2009
0.0 EXECUTIVE SUMMARY

0.1 Introduction and background

There are two strands to the case for a reorganisation of the A&E service at Antrim Hospital:

- the transfer of attendances from Whiteabbey Hospital resulting from the change to a Minor Injuries unit; and
- the increase in attendances at Antrim Area Hospital due to changes in November 2006 at Whiteabbey and Mid-Ulster Hospitals.

0.1.1 Transfer of services from Whiteabbey

This document comprises the strategic context and outline business case for the transfer of Accident and Emergency services from the Whiteabbey Hospital site to Antrim Area Hospital, with Whiteabbey Hospital continuing to provide Minor Injuries Services capable of treating 35% of patients who currently present there. The acute reform programme has been identified as part of the Trust's Reform and Modernisation Programme and is in keeping with Developing Better Services (DBS).

As part of the proposals outlined in DBS, Whiteabbey Hospital is to be reconfigured by the Northern Health and Social Care Trust into a local hospital providing day surgery, endoscopy, outpatient clinics, a daytime minor injuries unit, rehabilitation beds, diagnostics including CT Scanning via a mobile unit and allied health professional services.

0.1.2 Changes in Mid-Ulster and Whiteabbey Hospitals

In November 2006, the former United Hospitals Trust reorganised the A&E services at Antrim Area, Mid-Ulster and Whiteabbey hospitals. This reorganisation followed a clinical risk assessment of acute hospital services across the Trust. Clinical risks were identified associated with providing the full range of trauma and paediatric services at the two smaller sites. By pass protocols where put in place with the NI Ambulance Service and GP Practices for dealing with major trauma and services for ill children diverting to Antrim Area Hospital or in some instances Belfast hospitals. The opening hours of the Mid Ulster were reduced from a 24hour service and Whiteabbey; which already had a reduced service was reduced further including closure at the weekends. As a result, roughly 12,000 (23%) additional attendances were seen on the Antrim site in 2008/09. The floor space in Antrim Area Hospital has not increased correspondingly.
This Business Case provides information in respect of the following:

- The existing service provision
- The “case for change” as required by DFP’s NI Practical Guide to the Green Book, particularly in relation to optimism bias
- The capital investment appraisal process
- The preferred option and
- The associated revenue and capital costs

0.2 Strategic Context

This section outlines the existing services, provides the case for change and the need for capital development to deliver the required reconfiguration.

In addition to the proposals for modernisation set out in DBS, Deloitte and Touche LLP (Deloitte) were commissioned in May 2005 to carry out a risk assessment to assess whether services provided at Mid Ulster and Whiteabbey hospitals were safe and sustainable until the developments outlined in DBS could be implemented.

For Whiteabbey Hospital this risk assessment highlighted a number of clinical risks and governance issues that had to be addressed prior to the implementation of DBS. These included:

1. The hospitals restricted training status and limited case mix causing difficulties in developing skills and expertise;
2. The difficulties that would be faced when implementing the European Working Time Directive in 2009;
3. Senior staff being stretched across Antrim and Whiteabbey Hospitals to provide appropriate levels of cover;
4. Difficulties in adhering to implications of college guidelines and standards for services;
5. Ongoing problems securing and retaining nursing staff and theatre nurses at Whiteabbey Hospital;
6. No 24 hour on site anaesthetic cover at Whiteabbey Hospital;
7. The medical and surgical on-call rotas exceeding 1:5; and
8. The high level of dependency on locum cover

The strategic context demonstrates that leaving services at Whiteabbey Hospital as they currently are will not address the clinical risks raised in the Deloitte report and reconfiguring Whiteabbey to a local hospital must begin to happen as soon as possible to avoid the Trust exposing itself to unnecessary risks.

The shortage of space in the Antrim Area Hospital A&E Department has an adverse effect on:

- Patients and relatives experience of visiting the Antrim Area A&E Department. Due to insufficient number of cubicles, patients stay in
public areas when they should be in clinical areas. This has implication for control of infection. There is insufficient space for relatives, particularly if the patient is a child or a vulnerable adult.

- Patient workflows within the department. Because space is limited, the different sections of A&E are placed in areas where there is capacity. This means that they are not in the optimum configuration for patient flow. Patients may have to backtrack along busy corridors rather than moving in a circular flow within the department.

- An insufficient number of cubicles to transfer patients to hospital trolleys delays ambulance staff from handing over the patient to A&E staff, and affects ambulance turn around times which in turn affects response times to emergency calls.

- Priorities for Action (PfA) targets for treating patients within acceptable timescales. Antrim Area Hospital A&E Department does not have a ‘holding’ area for patients who require admission to an inpatient bed. The patient, therefore, remains in a treatment area until a bed becomes available. This then means another patient’s treatment is delayed. This can lead to a breach in the maximum waiting times in A&E.

0.3  Overview of service provision

The following tables show A&E attendances over the last five years for Antrim, Whiteabbey and Mid-Ulster Hospitals.

<table>
<thead>
<tr>
<th>Year</th>
<th>Antrim Attendances</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New and Unplanned Re-attenders</td>
<td>Review/</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Planned</td>
<td>Attendances</td>
<td></td>
</tr>
<tr>
<td>2004/2005</td>
<td>50,704</td>
<td>1,838</td>
<td>52,542</td>
<td></td>
</tr>
<tr>
<td>2005/2006</td>
<td>52,591</td>
<td>1,479</td>
<td>54,070</td>
<td></td>
</tr>
<tr>
<td>2006/2007</td>
<td>55,940</td>
<td>1,462</td>
<td>57,402</td>
<td></td>
</tr>
<tr>
<td>2007/2008</td>
<td>57,944</td>
<td>3,344</td>
<td>61,288</td>
<td></td>
</tr>
<tr>
<td>2008/2009*</td>
<td>64,170</td>
<td>1,437</td>
<td>65,607</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Whiteabbey Attendances</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New and Unplanned Re-attenders</td>
<td>Review/</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Planned</td>
<td>Attendances</td>
<td></td>
</tr>
<tr>
<td>2004/2005</td>
<td>27,585</td>
<td>3,093</td>
<td>33,771</td>
<td></td>
</tr>
<tr>
<td>2005/2006</td>
<td>27,411</td>
<td>3,375</td>
<td>34,161</td>
<td></td>
</tr>
<tr>
<td>2006/2007</td>
<td>24,840</td>
<td>3,259</td>
<td>31,358</td>
<td></td>
</tr>
<tr>
<td>2007/2008</td>
<td>20,360</td>
<td>2,137</td>
<td>22,497</td>
<td></td>
</tr>
<tr>
<td>2008/2009*</td>
<td>20,780</td>
<td>1,569</td>
<td>22,349</td>
<td></td>
</tr>
</tbody>
</table>
### Mid-Ulster Attendances

<table>
<thead>
<tr>
<th>Year</th>
<th>New and Unplanned Re-attenders</th>
<th>Review/Planned Re-attenders</th>
<th>Total Attendances</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004/2005</td>
<td>21,507</td>
<td>2,059</td>
<td>23,566</td>
</tr>
<tr>
<td>2005/2006</td>
<td>21,025</td>
<td>2,064</td>
<td>23,089</td>
</tr>
<tr>
<td>2006/2007</td>
<td>18,530</td>
<td>1,921</td>
<td>20,451</td>
</tr>
<tr>
<td>2007/2008</td>
<td>17,716</td>
<td>1,276</td>
<td>18,992</td>
</tr>
<tr>
<td>2008/2009</td>
<td>17,621</td>
<td>1,342</td>
<td>18,963</td>
</tr>
</tbody>
</table>

Source: Information Dept, Northern Trust

* - extrapolated to an annualised total from Mar 08 to Feb 09 figures

**Note:** Whiteabbey and Mid Ulster A&E Departments moved to reduced hours on 22nd November 2006. Records from Mid-Ulster were manual for 2004/05

The changes in opening times in Mid-Ulster and Whiteabbey Hospitals were a direct response to identified risks and were coupled with Ambulance by-pass protocols and procedures for paediatric cases to be admitted to an alternative appropriate acute setting.

This change in provision has already had a consequence in terms of A&E attendances at Antrim Area Hospital. This can be seen in the table above. The proposed further changes to the provision of minor injuries services will see further impact for Antrim Area Hospital A&E Department.

Based on the first 11 months of the financial year of 2008/09, Whiteabbey Hospital will have 22,433 attendances. It proposed that 35% of these attendances, through service promotion and engagement with and the partnership of the local Primary care services, will continue to be treated on the Whiteabbey site (7,852) as part of the minor injuries service. Of the remaining 14,581 attendances, it is anticipated that 53% will transfer to Antrim Area Hospital (7,728). The rest, 47% (6,853) attendances, are expected to divert towards the Belfast Trust.

### 0.4 Project objectives and constraints

#### 0.4.1 Objective 1

To create additional A&E capacity at Antrim Area Hospital to allow the A&E service at Whiteabbey Hospital to become a Minor Injuries Unit in line with DBS proposals. This addresses one of the clinical governance risks currently existing at Whiteabbey Hospital.

The Risk Assessment of key acute services in 2005 by Deloitte & Touche LLP (Deloitte), prior to the implementation of DBS, identified 4 risks within the A&E of Whiteabbey Hospital which need to be addressed. These can be summarised as follows:-
- CT Scanning Availability
- Paediatrics – lack of appropriate medical cover
- Delays in Transfer Process
- Inability of other network hospitals to manage additional activity

**Measure:**

- To reduce the current levels of Clinical Risk at Whiteabbey Hospital identified on the Trust’s Risk Register from 20 to zero.

- Monthly monitoring of attendances at Antrim Area Hospital A&E Department against projected total of 73,335.

- Monthly monitoring of the attendances at the Nurse Led Minor Injuries Unit at Whiteabbey Hospital against the target of 35% (7,852) of patients who currently present there on an annual basis.

**0.4.2 Objective 2**

To provide the additional A&E capacity on the Antrim Hospital site by mid-2011.

The Trust has an obligation to address the risks associated with Whiteabbey Hospital within a reasonable timescale. Whatever solution is chosen must allow the transfer of the Major A&E cases to the Antrim Area Hospital site as soon as possible within the constraints of creating a safe and effective service.

**Measure:**

- The available cubicle and treatment areas to be increased as identified in the Schedule of Accommodation. These together with associated patient waiting areas and facilities to be created at Antrim Area Hospital by the end of first quarter 2011.

- Achievement of PfA targets for A&E Department:- 95% of A&E attendances treated or discharged within 4 hours; 50% of patients attending hospital within 1 hour of onset of stroke symptoms receive a CT scan and report within a maximum of 2 hours.

- Compliance with HBN 22 – Accident and Emergency facilities for adults and children.

**0.4.3 Objective 3**

To provide care will be provided in the Antrim Area A&E department by an appropriately qualified and experienced multi professional team led by the Consultant in Emergency Medicine.
Measure:

- Continuous professional development of all staff per Knowledge and Skills Framework (KSF) and use of other specialty specific CPD training.

- Keep a current training record of all training and qualifications on NIMS (Nursing Information Management System).

0.4.4 Assumptions and Constraints

- The expansion of A&E accommodation has to be in close proximity to the existing service on the Antrim Hospital Site to ensure service efficiency.

- The new accommodation must conform to the minimum standards laid out in HBN 22 – Accident and Emergency facilities for adults and children.

- This project has to be achieved by mid 2011

- Capital funding will need to be secured from DHSSPS to develop additional accommodation in Antrim Area Hospital and associated revenue funding from the Health and Social Care Board (HSCB) to run it.

- Must not affect long term plans for the expansion for Antrim Area Hospital.

0.5 Identification of options

Following a short listing exercise the following options for capital development have been identified. Any refurbishment of the current Antrim Hospital A&E discussed below will not alter the current Short Stay Ward.

0.5.1 Option 1: Do Nothing

This option does not reorganise the A&E services at Whiteabbey Hospital. The A&E Department at Whiteabbey Hospital continues to treat all types of patient.

0.5.2 Option 3: An internal refurbishment of existing Antrim Hospital accommodation, with an expansion into the adjacent Rehabilitation Area. Rehabilitation services will need relocated to Fern House and the Postgraduate Centre.

This option proposes that the Antrim Area Hospital A&E accommodation is refurbished to improve patient flow. Additional space is allocated to the Antrim Area Hospital A&E service by
expanding into the Rehabilitation Area located in an area adjacent to the current A&E footprint. Rehabilitation services will need relocated to Fern House and the Postgraduate Centre.

0.5.3 Option 4: An internal refurbishment of existing Antrim Hospital accommodation, with an expansion into the adjacent OPD3 area, with OPD3 relocated to Fern House.

This option proposes that the Antrim Hospital A&E accommodation is refurbished to improve patient flow. Additional space is allocated to the Antrim Hospital A&E service by expanding into OPD3 located in an area adjacent to the current A&E footprint. The Outpatient services currently located in this area would require relocation. Some of the services would be moved to join Outpatients1 and 2. The remaining services, together with the displaced services from Outpatients 1 and 2, would be relocated to Fern House.

0.5.4 Option 5: An internal refurbishment of existing Antrim Hospital A&E accommodation, with an expansion into the adjacent OPD3 area, with OPD3 relocated to Postgraduate Centre.

This option proposes that the Antrim Hospital A&E accommodation is refurbished to improve patient flow. Additional space is allocated to the Antrim Hospital A&E service by expanding into OPD3 located in an area adjacent to the current A&E footprint. The Outpatient services currently located in this area would require relocation. The Postgraduate Centre is moving to Bretten Hall, making their current location on a floor available to house the displaced OPD3 services.

0.6 Assessment of non-monetary costs and benefits

A weighting and scoring exercise was undertaken to assess the non-monetary costs and benefits of each option. Criteria relate to service quality/quality care degree of strategic fit, quality of environment and accessibility, ease and speed of implementation.
The results of this non-financial appraisal are:

<table>
<thead>
<tr>
<th>Option</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Do nothing</td>
<td>255</td>
<td>4</td>
</tr>
<tr>
<td>3  Refurbishment of Antrim Hospital A&amp;E excluding the Short Stay Ward – expansion into Rehabilitate</td>
<td>820</td>
<td>2</td>
</tr>
<tr>
<td>4  Refurbishment of Antrim Hospital A&amp;E excluding the Short Stay Ward – expansion into OPD3 – OPD3 moving to Fern House</td>
<td>820</td>
<td>2</td>
</tr>
<tr>
<td>5  Refurbishment of Antrim Hospital A&amp;E excluding the Short Stay Ward – expansion into OPD3 – OPD3 moving to Postgraduate Centre</td>
<td>860</td>
<td>1</td>
</tr>
</tbody>
</table>

0.7 Financial evaluation

Based on the scoring of the options above, it has been agreed that Options 1, 3, 4 and 5 will be fully costed. The initial capital costs including fees and equipment for each of these options are summarised in the table below.

<table>
<thead>
<tr>
<th>Option</th>
<th>Capital Costs £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>0</td>
</tr>
<tr>
<td>Option 3</td>
<td>972,103</td>
</tr>
<tr>
<td>Option 4</td>
<td>853,494</td>
</tr>
<tr>
<td>Option 5</td>
<td>747,445</td>
</tr>
</tbody>
</table>

The recurring revenue costs for each of the chosen options after the unit is fully operational are summarised in the following table:

<table>
<thead>
<tr>
<th>Option</th>
<th>Pay £</th>
<th>Non Pay £</th>
<th>Attendances to Belfast Trust £</th>
<th>Recurring Revenue £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1</td>
<td>4,595,385</td>
<td>2,745,955</td>
<td>-</td>
<td>7,341,340</td>
</tr>
<tr>
<td>Option 3</td>
<td>4,481,289</td>
<td>2,718,662</td>
<td>634,989</td>
<td>7,834,940</td>
</tr>
<tr>
<td>Option 4</td>
<td>4,478,253</td>
<td>2,714,357</td>
<td>634,989</td>
<td>7,827,600</td>
</tr>
<tr>
<td>Option 5</td>
<td>4,472,181</td>
<td>2,714,181</td>
<td>634,989</td>
<td>7,821,352</td>
</tr>
</tbody>
</table>
0.8 Identification of the preferred option

The Trust considers that the preferred option, based on the combination of financial and non-financial appraisal, is Option 5 – an internal refurbishment of existing Antrim Hospital A&E accommodation, excluding the Short Stay Ward, with an expansion into the adjacent OPD3 area – OPD3 relocated to Postgraduate Centre. This option will fully meet the objectives of the Business Case:

- ensuring that A&E services currently delivered at Whiteabbey Hospital are transferred to Antrim Area Hospital seamlessly and with a minimum of disruption;

- allowing the reconfiguration of services at Whiteabbey Hospital to provide local hospital services as detailed in DBS and in the Trust Acute Services Reform and Modernisation Programme;

- addressing all the risks highlighted in the Deloitte of May 2005.

- facilitating the provision of services in a high quality environment which is ‘fit for purpose’ for staff, patients and visitors.

- delivering services, in line with the strategic direction established in Developing Better Services and meet the requirements of the Commissioner.

- ensuring Antrim Area Hospital is developed in such a way as to maximise performance and improve efficiency.

0.9 Project management, monitoring and evaluation

0.9.1 The Acute Services Reform Team (established to take forward the delivery of Acute Services Reform in line with Developing Better Services) will provide a strategic management overview of the project, its delivery and a communication point for informing the Chief Executive, Senior Management and clinical staff of progress on the project.

0.9.2 It will also be responsible for the management and implementation of the developments including among other things:

(a) Business case preparation as necessary.

(b) Project Brief preparation.

(c) Examination and choice of the procurement methods available for both design and construction services.

(d) Appointment of Design Team Consultants (if appropriate).
(e) Co-ordination of client / user input throughout the planning, design, construction and commissioning stages of the project(s).

(f) Maintain adequate programme, cost and quality controls on the project.

(g) Control client requests for change during the design and construction stages of the project.

(h) Communicate project details and progress to the Chief Executive and the Project Steering Group.

0.9.3 In addition a Post Project Evaluation Team will be established prior to practical completion of the project, to measure its success in relation to its objectives of this Business Case. This group will be under the chairmanship of the Trust's Director of Acute Hospital Services plus representatives of the Trust, Commissioners and Patients.

Post Project Evaluation will be carried out in 2 stages:

**Stage 1** will be carried out one year after "Practical Completion" of the project and will evaluate its performance against the objectives and targets set during the planning process and recorded under the "Concise " system; it will pay particular attention to project costs, programme and the quality of both building and services achieved.

**Stage 2** will be carried out over the 3 year period after "Practical Completion" and concentrate on evaluation of the service levels and clinical improvements achieved in relation to those used in the Business Case for the Project.

A report summarising the outcome of each stage of Post Project Evaluation will be produced and submitted to the Trust Board and the Infrastructure Investment Directorate of the DHSSPSNI.

0.10 Conclusion

This document reflects the desire of the Northern Health and Social Care Trust to transfer Accident and Emergency services from Whiteabbey Hospital to Antrim Area Hospital and in doing so address existing issues in relation to risk and clinical governance, retaining Minor Injuries services at Whiteabbey Hospital capable of treating 35% of those who currently present there. The proposed transfer will allow services to be delivered in a way that:-
• Are clinically effective and meets college guidelines;
• Allows for the maximum control of clinical governance and risk;
• Is cost effective;
• Provides high quality, patient focused accommodation; and
• Is flexible and responsive to change.
• Reduces the risks currently identified at Whiteabbey Hospital.