

LOCAL HOSPITAL FOR OMAGH
TYRONE AND FERMANAGH SITE, OMAGH
ENVIRONMENTAL STATEMENT - NON-TECHNICAL SUMMARY

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1.0 Background

In February 2003, the Minister for Health, Social Services and Public Safety announced his decision on the pattern of services set out in 'Developing Better Services', including that the new acute hospital for the South West of Northern Ireland was to be located to the north of Enniskillen, whilst a new local hospital would be located in Omagh. In October of that year, The Sperrin Lakeland Health and Social Services Trust, through the appointment of a Strategic Partnership Board, commenced their search for a suitable site for the new local hospital in Omagh.

In April 2004 Ferguson McIlveen LLP were commissioned to carry out a more detailed site search and recommend a suitable site for the new local hospital in Omagh. The 'Hospital for Omagh - Site Selection Report' was presented to the Sperrin Lakeland Health and Social Services Trust in June 2004 and recommended that any of the following options could be developed further:

- Redevelop the existing Tyrone County Hospital Site and construct a new hospital building;
- Refurbish the Tyrone County building for use as a modern local hospital;
- Build a new hospital at the Tyrone and Fermanagh Hospital site.

Following further architectural evaluation of each site, an Outline Business Case published by the Trust determined that the new Omagh hospital was to be located at the Tyrone and Fermanagh Hospital site.

While the application is only outline, the concept submitted as part of this application is for a 150-160 - bedded hospital complex, on a 29-hectare site with space for c.1000 car parking spaces.

An Environmental Impact Assessment has been carried out based on the above concept and this resultant Environmental Statement (ES) has been submitted as part of the planning application.

The location of the subject lands in relation to Omagh is shown in **Figure 1** with the proposed hospital site shown in **Figure 2**.

Figure 1
Location of Site

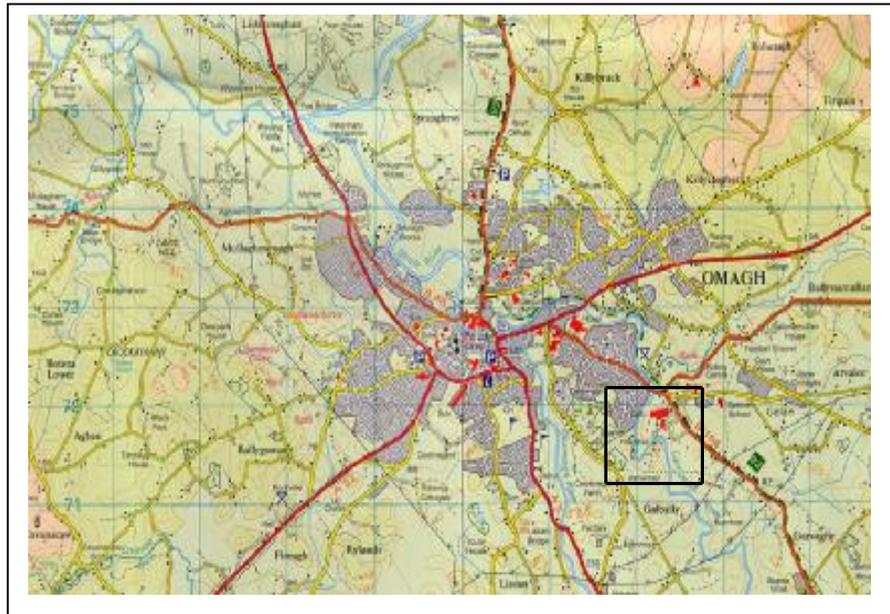
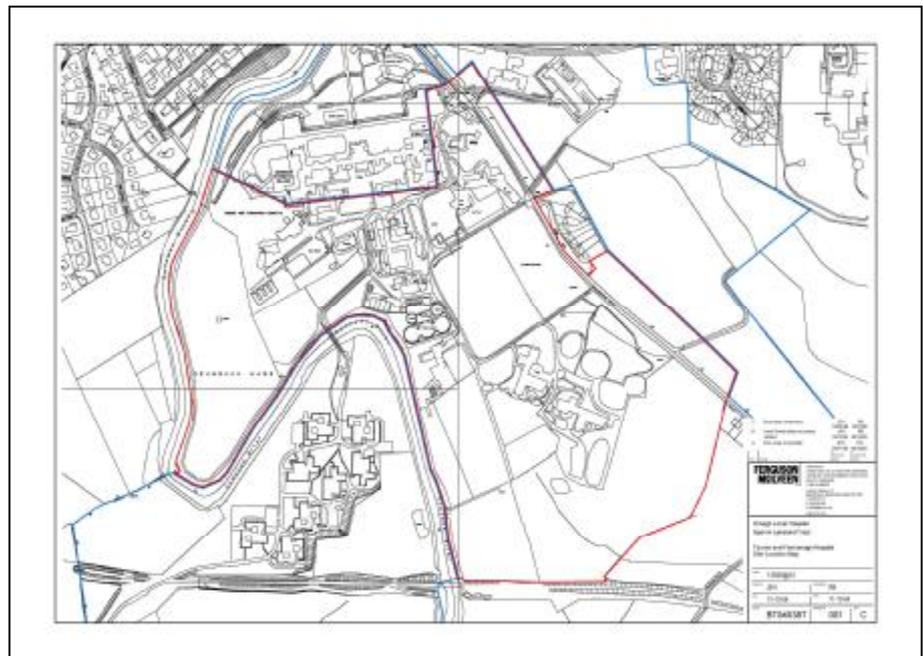


Figure 2
Planning Application
Site Boundary (Red)

Land Owned by
Applicant (Blue)



2.0 EIA and Planning Regulations

In accordance to the European Council Directive 85/337/EEC, as amended by Directive 97/11/EC, the Environmental Impact Assessment (Northern Ireland) Regulations 1999 [the EIA Regulations] introduce to the Planning procedures a process by which the effects of a development on the environment are evaluated and considered when determining whether a development should proceed.

Where an EIA is required, the assessment normally begins with a Scoping Study to identify the key impacts and issues of concern that warrant detailed assessment. Detailed assessment typically involves impact analysis according to accepted methodologies, consultations and site visits, leading to the evaluation of the significance and magnitude of any direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects on the environment from the development.

During and following this evaluation, mitigation measures are developed to avoid, reduce or remediate the impacts. The ES describes the investigations, findings and conclusions of the EIA, and any proposed monitoring of the environmental impacts that would be undertaken during and after the construction of the new hospital.

Screening and Scoping Decision

In a screening letter of 21st October 2004, Planning Service confirmed that the proposal was EIA development. The construction of a new hospital in Omagh falls within Category 10(b) of Schedule 2 of the Planning EIA Regulations (NI) 1999, and as such the application should be accompanied by an Environmental Statement. The key issues dealt with in this EIA were:

- Landscape and Visual impact
- Ecology
- Noise impact
- Traffic impact
- Impact on water and sewage provision
- Pollution
- Geology and Hydrogeology
- Air Quality

- Cultural Heritage
- Socio-economic

3.0 Planning Context

Strategically the Regional Development Strategy ('Shaping Our Future') identifies Omagh as one of sixteen main hubs within the province. Thereby it has the potential to develop as a 'growth pole' for the clustering of economic activity and provision of employment and services.

Located on the Western Key Transport Corridor, to Monaghan, Omagh is also regarded as a Major Inter-Regional Gateway and hence an ideal location for a new hospital.

An overall assessment of policy context reveals that the principle of this development is broadly in line with central Government policy, provided a Traffic Impact Assessment is carried out and the environmental and visual impact on the designated landscape is kept to a minimum.

- The proposal meets regional planning objectives and is in accordance with local planning policy and guidance because:
- The proposal reflects the Regional Development Strategy's aims for equal growth in all sectors across the Region;
- While it will have an impact on the natural landscape, the design and mitigation can ensure that it is broadly consistent with the policy objectives for nature conservation and archaeological preservation as detailed in PPS2 and PPS6. It is also consistent with the objectives set out in PPS3 and I3 in terms of vehicular and pedestrian access, as well as an integrated approach to land use and transport through its siting and location; the proposal is also consistent with PPS 8 as it is considered to provide a valuable public service; the draft PPS 15 on flood risk was also considered, although not in a flood plain area, the proximity to a major river still makes it an important consideration.

- The 'need' requirement in the PSRNI has been satisfied as showing that the facility meets a need in Omagh and the building can be integrated with the landscape;
- The Area Plan has already designated the site as white land and this proposal will strive to attain a design and layout which respects and integrates with the local landscape and natural and man made features;
- Finally in terms of the Landscape Character Assessment, the proposal respects the importance of the local landscape character through screening and a sympathetic design layout, it is therefore considered that the development would not be prominent and would not detract from the quality of the area.

4.0 Scheme Description and Alternatives Considered

4.1 Proposal and the Site

The proposal is for a new local hospital and mental health facility for Omagh. The proposal is submitted for outline permission, so at this stage, final details on the design and layout are not fully developed. However, the concept, which is the basis of this application, is for a 80-90-bed hospital building over two storeys, health and care centre, mental health facility with between 90-100 beds, community and administration buildings, c.1000 car parking spaces and new access roads.

The site is compact and visually well contained by boundary vegetation. The layout and character of the site is mixed, and although it contains strong landscape features worthy of retention (stands of mature beech and established hedgerow lines), there is potential for improvement of the therapeutic nature of the open spaces. The existing buildings of Drumragh College and the trees associated with it create an attractive setting for the site. Mature trees around the boundary of the site also frame very attractive views of the existing building with its visually interesting roofline.

4.2 Alternatives

In line with the requirements of the EIA Regulations, the following section describes the alternatives considered in proposing the application site for the development of the new local hospital for the Omagh area.

a. Do Nothing

EIA good practice dictates that the “Do Nothing” alternative is also considered. However, because of the context within which this proposal is now being put forward, doing nothing was not an option for the applicant. The “Developing Better Services” report published in June 2002, recommended reducing the number of acute hospitals in Northern Ireland from fifteen to nine, one of which was to be located in the southwest, as well as a network of local hospitals, which were to have a supporting role. In February 2003 the then Health Minister Des Browne developed this recommendation further and made the decision to locate the new acute hospital for the south-west to the north of Enniskillen, and a new local hospital to Omagh. These political decisions to provide modern health services to Omagh and Enniskillen effectively means that the “Do Nothing” option could not be considered.

b. Alternative Sites

Ferguson McIlveen LLP commenced a site selection exercise in April 2004 for the most suitable site for the new hospital in Omagh. The search area was to the most part determined by the Ministerial statement that the local hospital would be in Omagh.

The search area was therefore confined to within the existing urban area of Omagh as defined by the current Omagh Area Plan 1987-2002. This approach was supported by both Planning Service and Road Service as it conforms with planning policy to promote sustainable patterns of development by encouraging major development proposals to locate in close proximity to public transport routes and reduce the need to use the private car.

At the early stages of the site selection, a site with an area of approximately 8 Hectares (20 acres) was sought. Two sites had initially been identified in Omagh by the Sperrin Lakeland Trust for assessment – the Tyrone County Hospital site and the Tyrone and Fermanagh Hospital site. A detailed search was then carried out by Ferguson McIlveen LLP, which identified a further four sites (all sites are shown in figure 3)

It should be noted that the Tyrone and Fermanagh site in Omagh was sub-divided into three clearly identifiable sites for the following reasons. Firstly the area around the football field was noted as the primary option (site 1). Secondly, part of the site adjacent to the Crevanagh Road (site 2) was also considered suitable but was subsequently excluded, as it emerged that it was the proposed site for the new college. Thirdly, as the investigation progressed in consultation with Sperrin Lakeland Trust and Health Estates, it emerged that there were opportunities to re-use currently developed land to the rear of the main Tyrone & Fermanagh hospital building, which was also considered to be visually more appropriate (site 6).

Each of the six sites were scored and were the subject of consultation with various statutory bodies including Planning Service, EHS, Roads Service. The sites were scored by Ferguson McIlveen, against a range of criteria, which reflected planning and environment issues. The scoring exercise produced two sites with significantly higher scores than the rest. With reference to Figure 3 below, these were the Tyrone and Fermanagh Hospital site (combination of sites 1 & 6) and the Tyrone County Hospital site on Hospital Road (Site 5). These were subject to further consultation, and also

architectural assessment by Ferguson McIlveen/Capita Percy Thomas and at a later stage by the Exemplar Design Team.

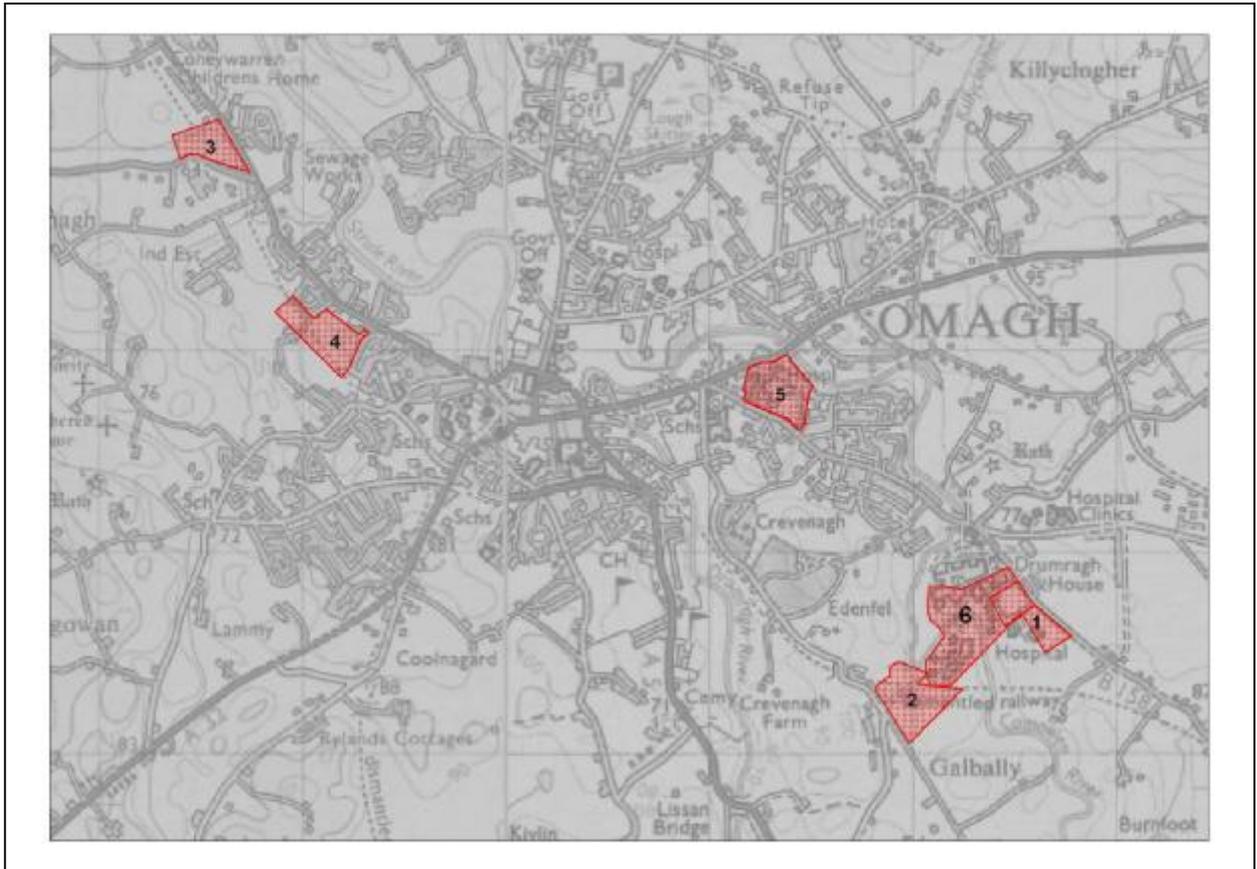


Figure 3 Long List of Sites

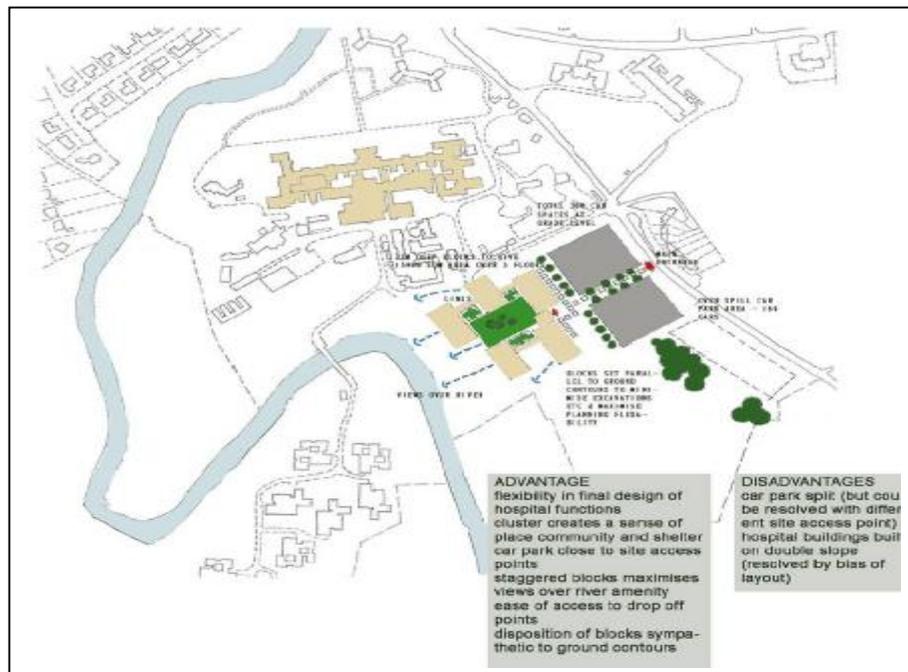
Following the detailed assessment of each site, the Tyrone and Fermanagh Hospital site was chosen for the following reasons:

- T&F is a much larger site with greater scope for expansion
- T&F has better potential links to the proposed bypass.
- Minimal disruption to existing services at the T&F as opposed to redevelopment of the Tyrone County site which is likely to cause significant disruption
- Access into the Tyrone County site via Woodvale Avenue would be intensified use of an access, which is likely to have a detrimental affect on the amenity of the Woodvale Avenue residents.

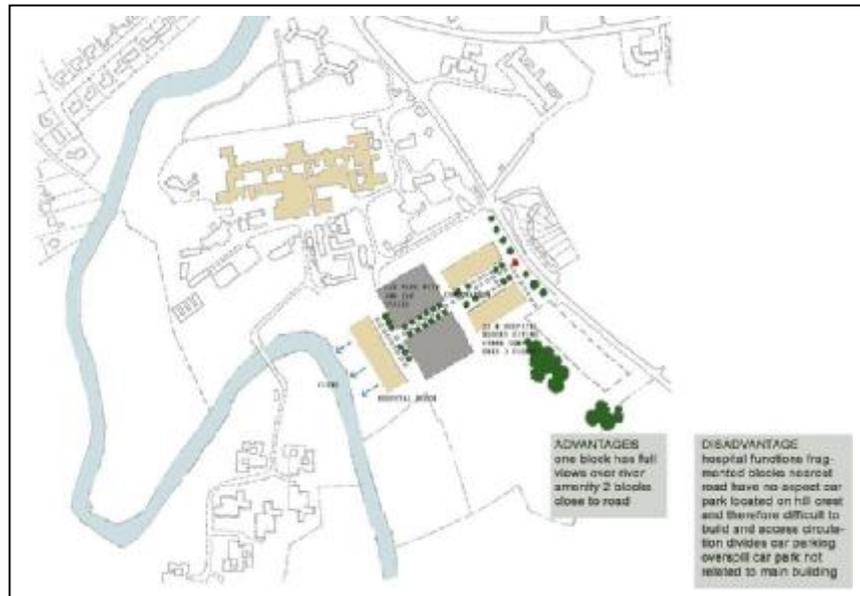
- Development at the T&F presents the opportunity to rationalise development on the entire site.
- Development of the school to the south of the site and the proximity to the proposed bypass means that the site and area is becoming more strategically important within Omagh.

At this point the exemplar design team began developing designs for the chosen site at Tyrone and Fermanagh. This evolved over time from the original 8 hectare site to the 29 hectare site, which is the subject of this current planning application. This increase in size of site area has come about as the project has grown to incorporate community facilities. The evolution in design is documented as follows.

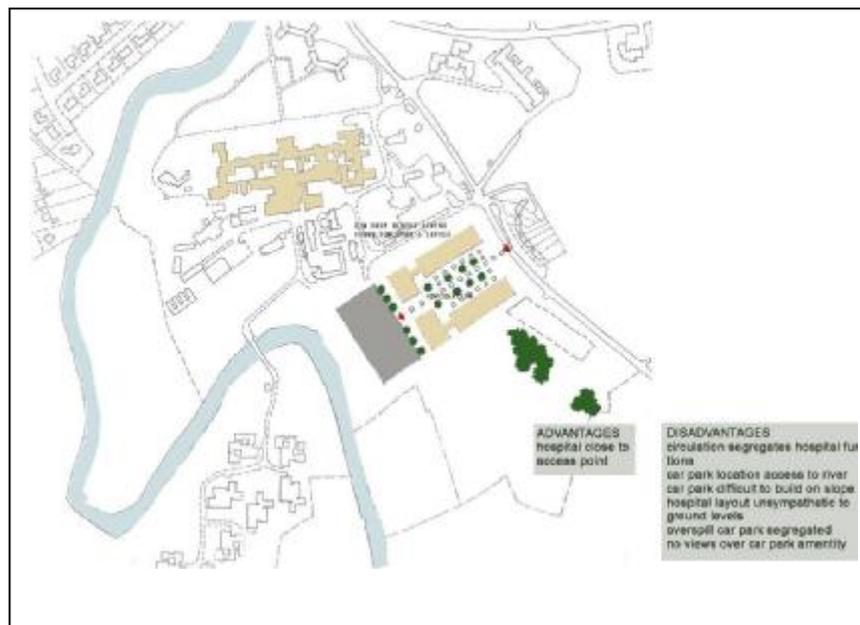
c. Alternative Designs I-5



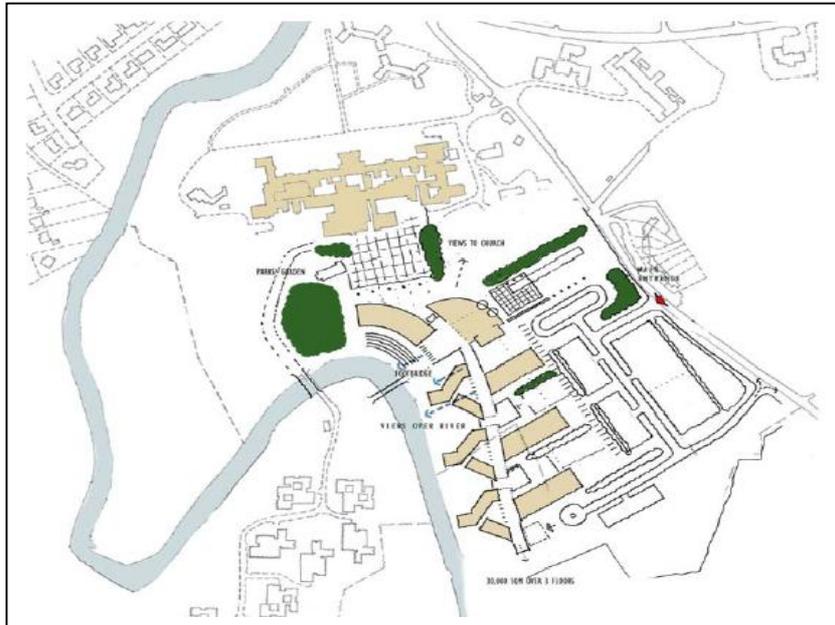
Option I – This layout is on a relatively level portion of the site. It offers good healing views and potential for expansion up the hill. This layout has the advantage of creating a sense of place, community and shelter with car parking close to access. However, the main problems are that the car park is split and buildings restricted by double slope.



Option 2 – Again, this design affords good healing views but not as much potential to expand and is a comparatively inefficient use of space. One block has full views over the river, however the hospital is fragmented with poor access and circulation.



Option 3 – This layout is Close to the main access but has poorer ‘healing’ views. Expansion would take the form of another block. This option addresses the fragmented nature of the hospital in previous designs but circulation still leads to some segregation. There are also potential problems of building car parks on the slope.



Option 4 – This layout Benefits from good views in a number of directions and from a range of landscape types, the adjacent river and distant rolling hills. This layout combines the healing views over the river and ensures that circulation does not fragment the building functions, whilst ensuring good linkage with parking and access.



Option 5 – This is The preferred approach to the strategic development of the site (which develops on from site layout 4) is indicated in the adjacent proposed layout drawing. This is the result of a separate Estate Strategy Report, which assessed the current facilities and conditions and proposed a series of options for overall site rationalisation.

4.3 Design Description

a. Built

Access

Primary public access to the new Omagh Hospital is proposed via the creation of a new entrance to the T & F site at Donaghanie Road.

A secondary access is also proposed to accommodate 'service' traffic.

The existing T & F site entrance will remain to structure the existing Listed building and Churches which are not then subject to this application.

The proposals have been developed following extensive traffic studies and discussions with DRD Roads Service (refer to TIA studies of EIS and to separate detailed drawings by Doran Consulting).

Public Realm

The 'public space' created are seen as an important element of the design proposals and are intended to address and respect the historic setting of the listed structures. The new hospital facilities are largely remote from these buildings, however some of the facilities are arranged to form a landscaped 'square' to the rear of the listed hospital building, the centre piece of which is one of the two listed Churches on the site, which in turn is maintained intact with its stone wall surrounds and green space.

The quality of external spaces generally are to be well considered and developed to create a high quality and durable public domain along with sensitive landscaping interventions to create linkages to the Connswater River.

Existing 'fields' and vegetation / mature trees etc. are proposed to be retained as is the stone boundary walls to the site which will be enhanced as required.

Entrances

A number of entrances are required to meet with medical planning needs. The main entrance is located 'in line' with the site boundary to assist in way finding with adjacent 'drop-off' and public transport provision.

This is envisaged as a mainly transparent structure providing glimpses through to the river and landscape beyond.

This space will be the primary point or 'hub' of arrival for visitors from which direction will be given.

A second entrance will accommodate an Emergency Assessment Unit directly, with others relating to renal dialysis and mental health services. All will be clearly identifiable.

Functional Content/Organisation

The total development proposal extends to c. 50,000 sq. m. comprising a variety of services including:

- Emergency Assessment Unit
- Clinical Decision Unit
- Medical Ward
- Rehabilitation Ward
- Day Surgery Unit
- Renal Unit
- Imaging and Diagnostics
- Pharmacy
- Physiotherapy & Occupational Treatment Area
- Children's Outpatient, Assessment and Day Centre
- Woman's Outpatients
- General Outpatients
- Mental Health Services
- Ambulance Base
- Health & Care Centre
- Community Facilities
- Support Services

These departments are organised around a 'spirit' or 'street' and located to comply with medical adjacency needs and to maximise the 'healing' benefits of the site in terms of creating a peaceful and calm environment both internally and externally including

views to surrounding landscape, high quality external treatments / landscaping and public spaces and comfortable interiors.

The 'street' space will be the main form of circulation and communication linking the points of access and clinical / functional content.

The quality of this space is paramount to the 'de-institutionalising' of the proposed Hospital thus careful consideration of environmental qualities are required:

- Daylight
- Materials
- Street furniture
- Landscape
- Transparency
- Wayfinding
- Art

The massing of the proposals is reflection of the site, topography and context with the various medical planning needs informing the scale of individual blocks of the built form.

The overreaching scale is of a 2 storey collection of partitions – a rational and single form utilising natural materials and creating a sense of place and best practice healing environment.

The main hospital elements of the development are located parallel to the Connswater River with support services positioned to the Southern part of the site.

The health and care centre is positioned centrally forming part of the public square / setting for the listed church and hospital buildings with the majority of mental health accommodation to the north / west of the site.

Servicing

The main support service accommodation, community stress and ambulance base are located to the southern section of the site.

A designated service access is proposed via Donaghane Road, providing a separate route to that of public / visitor access.

Car Parking

A series of car parks are proposed for the new hospital as indicated on the site layout drawing and up to c. 1000 cars. The proposed substantial landscaping of the car zone areas is an important element in order to enhance the visual impact of the development.

b. Landscape

General Objectives

The objective of the landscape design is to integrate the proposed new buildings with the listed retained buildings and the surrounding landscape, creating a cohesive and legible environment surrounding the hospital. The challenge is to retain the attractive mature trees as a setting for the buildings and to create a series of accessible and attractive spaces to link buildings and accommodate circulation.

Planting

Where possible existing vegetation of high visual and ecological value will be retained. Non-native, visually unattractive planting would be replaced, where screening is required, by native woodland species.

A blend of planting is proposed including the following types:

Mature/Semi-mature specimen trees: Large mature Beech (*Fagus sylvatica*) Lime (*Tilia spp*) and Pine (*Pinus nigra/maritima*) on high drier parts of site especially associated with the entrance and close to existing mature trees to replace these trees in the future.

Formal Pleached or Box-headed trees: Trained pleached or box-headed Hornbeam (*Carpinus betulus*) or Lime (*Tilia spp*) to be used in formal courtyards and hard paved plaza areas to connect the existing and proposed buildings and to formalise the spaces, giving direction as well as enclosure.

Hedgerows: The car park areas are divided in sections associated with each of the three ward blocks, and the planting reinforces the separation of bays of parking spaces with strong lines of hedgerow planting. Hedgerow species to include Beech (*Fagus sylvatica*), Hawthorn (*Crateagus monogyna*), Hazel (*Corylus avellana*), Blackthorn (*Prunus spinosa*), Holly (*Ilex aquifolium*) and Honeysuckle (*Lonicera spp*). Tree species to include Ash (*Fraxinus excelsior*), Field Maple (*Acer campestre*), Oak (*Quercus spp*) and Rowan (*Sorbus aucuparia*).

Wet Woodland Planting: Within the floodplain area copses of woodland to be established to enhance wildlife value and visual interest. Species to include Alder (*Alnus glutinosa*), Ash (*Fraxinus excelsior*), Willow (*Salix spp*) and reeds (*Phragmites spp*).

Ornamental Planting: In ward courtyards and outside the wards, small garden areas will be created for visual interest and/or outdoor seating. A simple palate of predominantly native species would be selected to provide year round interest, colour pattern and scent.

Circulation routes

Circulation follows a simple linear form between buildings opening out into courtyards and plaza spaces. Vehicular traffic is limited to the drop off area and in to the car parks, leaving free pedestrian circulation around buildings. Circulation routes are defined by the planting. Pedestrian circulation to include upgrading/recreation of riverside walk.

Views

Views from the ward buildings will allow views down to the river, framed by woodland. Within the site, new buildings and the arrangement of open spaces will frame attractive views of the listed buildings.

Maintenance

All the spaces are designed for ease of circulation and a very simple palate of planting is proposed. Elements which will require regular maintenance include the pleached trees

and hedges which should be cut twice per annum, formal grass areas which will be cut weekly or fortnightly during the growing season and ornamental planting areas which will require weeding, fertilizing and pruning etc. Areas of woodland will require weed control during the first two growing seasons and will later require thinning out in accordance with a management plan. Areas of meadow grass will be cut once or twice during the year.

5.0 Potential Impacts & Recommended Mitigation

The following are the key issues and their potential impacts arising from the hospital proposal. The table that follows summarises the degree of the impacts and mitigation measures.

Landscape and Visual

The site and the surrounding area was visited on 10th October 2005, and an initial assessment has been carried out, assessing the ability of the landscape to absorb any potential impacts arising from the development. This report is an appraisal of the potential landscape and visual impacts of this proposed design by Todd Architects and Soltys:Brewster Consulting.

Owing to the fact that the site is situated on the edge of an existing built up area, the zone of visual impact is relatively small, despite the scale of the site. Topography and existing vegetation/buildings restrict views from the north and south and reduces the extent of views from the east and west.

Considering the possible footprint of a development of this size, the potential for impact on visual character of the identified open viewpoints is high. The only identified open view of the site is along the section of the Donaghane Road, which adjoins the site. The visual impact caused by a series of large buildings and expanse of car parking would be high, but not necessarily negative with the application of good design. The height of the building should take into account the potential for attractive views out from higher floors, while acknowledging the potential for negative impact of a high structure in the landscape.

Potentially negative impacts could arise from large areas of car parking and boundary treatment along the Donaghane Road. The existing stone wall boundary should be retained and to accommodate the new entrance and junction, the site boundary should be relocated further into the site, to contain the development and restrict the landscape and visual character change to one side of the Donaghane Road. Thought should also be given to breaking up the area of hard surfacing in the car park by the use of tree and other planting. The lighting of this area should also be carefully considered. Although the site lies at a lower level than the Donaghane Road and views of the car parking will be limited, the associated lighting and 24hr access to the Emergency

Assessment Unit will have negative visual impact on road users and the residential properties of the Donaghanie Road.

A number of mitigation measures are suggested to help limit the impact of the hospital structure on the landscape. Such measures involve ensuring that the design and layout of the building reflect the character of the site. Utilisation of the natural screening provided by the vegetation and topography. Careful use of landscaping to break up any large expanses of car parking and natural screening to reduce external light pollution. Also the establishment of a management plan to ensure continued development of landscaping through to maturity as part of the overall healing environment.

Photomontages depicting the likely change in visual character, along with a written description can be found in Appendix I of this document.

Ecology

Moore Group was commissioned by Ferguson McIlveen LLP to conduct a baseline natural heritage assessment and constraints study of lands at the site of the existing Tyrone & Fermanagh Hospital. This report outlines the existing environment, the predicted impacts of the proposed development and suggests mitigation measures to ameliorate potential impacts.

The survey site is located on the outskirts of Omagh, adjacent to some recent suburban developments. The site consists of the existing Tyrone & Fermanagh Hospital site and surrounding farmland. The hospital grounds consist of mature plantation woodland and intensively managed lawns with tall, spreading parkland trees. The local landscape consists of improved fields, surrounded by tall, species-diverse hedgerows with abundant mature trees.

The site was surveyed for its flora and habitat by walking the entire site and recording all emergent macrophyte species. For the purposes of the survey the habitats were assessed individually. The abundance of individual species was estimated using a scale developed specifically for this assessment.

Predicted Impacts on Flora - In general, there would be a loss of improved grassland, some trees would have to be removed and there would be some loss of hedgerows.

Grassland on the site is generally common and species poor. The proposed development would remove a significant proportion. However, habitat creation would enhance the conservation value of the site. The herb rich grassland habitat would be significantly impacted upon. Re-creation of this habitat in other areas would reduce the impact of habitat loss. Mature trees are common on the site and are an important habitat. Some trees may be lost during the proposed development. The larger woodland area and planted woodland lie outside the development zone and so would not be affected.

The river corridor is also an important habitat on the site. Development would not directly affect the river corridor. However, measures can be taken to reduce risk of damage to this sensitive habitat. The poor fen habitat would not be affected by the proposed development. Similarly the rush pasture habitat will be unaffected by development. Hedgerows are important for local wildlife and as a landscape feature. A number of hedgerows would be lost during development. Sensitive development would minimise disturbance to this habitat and replanting should be carried out using native species to recreate the habitat.

Mitigation for Flora Impacts – Measures given for mitigation include minimising impact on grasslands and hedgerows; consideration of mature trees within the design process; extending the woodland areas through further planting; carefully considered management schemes as well as re-creation of habitats in other parts of the site.

Predicted Impacts on Fauna - Impacts on local bird populations are likely to be low, as foraging and nesting habitats will be minimally disturbed. Bats will be affected by the development. Mitigation will help reduce these impacts and ensure continued habitat use. Badgers will not be significantly impacted during proposed development. Sensitive landscaping will encourage the continued habitat use by badgers. Otters may occur on the site. Mitigation measures should be incorporated to ensure minimal disturbance.

Mitigation for Fauna Impacts – Measures include; avoiding the removal of hedgerows during bird breeding season; retention of as much grassland as possible as well as hedgerows and significant trees; retain bankside vegetation at the river as well as the buffer zone.

Noise

This section of the Environmental Statement will assess the potential noise impact of the proposed Omagh Hospital development on the existing noise environment. The proposed works will potentially result in an increase in road traffic into and around the site; increases in numbers of people using the site over current conditions and general activity in the area. However, the site is currently part of the existing mental health hospital and office site, therefore, in the past, all the potential noise sources i.e. plant, vehicular movement, etc. would previously have existed. It is therefore submitted that the proposed development will not present any new noise sources to the area, but will simply relocate noise sources to a different section of the site.

Evaluation Criteria

The noise impact potential from the proposed development can be usefully split into three sources, which, are subject to separate noise impact criteria.

(i) Facility Noise

(ii) Vehicle Noise

(iii) Construction Noise

Background noise levels at the existing site boundaries were recorded on 15th, 20th and 21st October 2005. At all times weather conditions were suitable with all readings being recorded in dry conditions with low wind speeds.

All measurements presented in this report were obtained using Type I instrumentation, calibrated as required by BS4142.

Impacts and Mitigation

The potential noise impact from the proposed hospital development on the most proximate noise sensitive properties has been assessed and appropriate target noise levels have been ascertained based on the noise survey conducted across the site.

Maximum noise targets for externally sited plant have been produced based on 'worst case', unscreened locations. It is noted that these target levels can be raised with increased distance and screening.

No excessive impact from normal internal activity is likely, provided adequate design of building envelope is carried out, and, where plant associated with these facilities is utilised, it can also be selected and designed to ensure any noise impact is below background noise level.

It is predicted that the potential noise impact from service vehicle activity is within the daytime target levels and of marginal significance with regard to the night-time levels.

Typical impact of car park activity will be below both daytime and night-time target levels.

Changes to traffic noise on roads around the site will be generally imperceptible based on the available traffic data and the percentage increases in traffic that are predicted.

Typical short-term construction noise can be controlled to within Environmental Health guidelines for both daytime and night-time exposure. Extra care will need to be taken when carrying out works close to the existing properties. Works here may exceed the target levels. It is suggested that the affected residents be consulted to obtain a suitable time and duration for this activity.

Water and Pollution

The objective at this stage is to undertake sufficient assessment to identify the key constraints and consequences for water quality and drainage on the site from the construction of a new hospital development based on the baseline water quality and drainage conditions that have been identified for the site through desktop research, site visits and consultations with the following statutory bodies:

- Rivers Agency
- Water Service
- EHS

Conclusions from Consultation with Rivers Agency

The main aspect that can be drawn with consultations with Rivers Agency is that there is a potential risk of flooding to the site if a particularly serious flood should occur.

Planning Policy Guidance 15: Planning and Flood risk offers useful advice with regards to development on floodplains, the potential risks and mitigating measures.

Conclusions from Consultations with EHS

If sufficient structures are put in place and properly managed during the construction and operational phases of the development there should be no detrimental impact to water quality in the area.

Also, given that the existing Waste Water Treatment Works on the site is being abandoned to facilitate the new development it is envisaged that water quality in the Camowen River will improve at this point as the chemical and biological loading will not be as great as it currently is given that treated effluent is currently discharged into the Camowen River on the site.

Conclusions from Consultation with Water Service

At this stage of the investigation it does not appear that there should be any major problems with the proposal to make a new connection into Water Service sewerage or to increase the overall site demand for mains water. Further consultation with Water Service will be required on these issues where it will be necessary to produce accurate figures for water demand and sewage flow and loading.

Impacts and Mitigation

It is noted that in terms of impacts during the construction phase, the main risk will be from silting and spillages of potentially harmful substances. This can be mitigated against, by following procedure carefully as set out in the CIRIA reports 'Environmental Good Practice on Site' and the 'Environmental Handbooks for Building and Civil Engineering Projects – Part 2 Construction' and 'Pollution Prevention Guidelines' (PPG) issued by the Environmental Alliance.

Potential impacts at operational phase are likely to come from sewage, waste and surface drainage issues causing contamination to watercourses. This can be successfully mitigated against by frequent monitoring of all infrastructure on a regular basis. The use

of sustainable urban drainage systems (SUDS) would be an effective measure for controlling surface water run-off.

Geology/Hydrogeology

The study was based on a desktop study of available published information. In addition to the desktop survey, a review of Ordnance survey maps and photographs of the site was carried out to provide a preliminary overview of the landscape geomorphology. In addition a walkover inspection of the site was carried out to understand the topography of the site.

The potential geological impact of the proposed development will be principally concerned to the ground disturbance during the construction of the various buildings, access roads and car parking facilities. However there are no features of outstanding geological significance within the confines of the proposed development. Similar geological conditions are replicated within a short distance of the site.

Potential damage will principally be caused by the movement of plant over the site, together with the stripping of topsoil and overburden, stockpiling of materials on site and the construction of cut and fill operations within the site and excavation for foundations. Mitigation measures used to reduce this potential damage include the use of temporary haul roads for plant movement; topsoil should be stripped in dry conditions to preserve its quality and retained for re-use after construction.

With regard to contamination, generally the concentrations of Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, and Selenium are well below the Soil Guideline Values for industrial / commercial sites.

Cultural Heritage

This report details the archaeological baseline for any proposed development within this area and offers an assessment of the potential archaeological impacts.

This archaeological study was conducted in four stages. Firstly a detailed desk top survey was undertaken. This entailed a review of the Sites and Monuments Records,

the Industrial Archaeological Records, Historic Buildings Archive and Historic Gardens Records, all housed within the Department of Environment: Environment and Heritage Service. The Topographic Records within the Ulster Museum were consulted as were the pre Ordnance Survey maps held by the Public Records Office (NI).

Secondly a review of aerial photographs relevant to the proposed development area was carried out.

Thirdly a qualified archaeologist undertook a site inspection. The purpose of the site inspection was to assess the archaeological potential of surviving sub-surface strata within the proposed development area.

Finally the information provided by these three components was assessed in relation to the potential impact on archaeological remains by any proposed development.

Impacts

The archaeological baseline established that while no archaeological or industrial heritage sites are located within the proposed development area, a number of listed buildings survive within the development boundaries. While it is not possible to ascertain the potential for impact on any of these buildings at this juncture, several points for consideration have been included.

The site-specific assessment found that while no archaeological or industrial heritage sites are located within the proposed development area, the listed building HB 11/15/6, is within the development boundaries. The proposed development will have no direct physical effect on this church and the layout of the development has taken into consideration the relationship between the church and the main hospital building and its setting within the wider landscape, thereby reducing any potential impact on setting.

The desktop survey did also identify a number of other archaeological monuments within the study zone, which indicate that the area may be archaeologically sensitive. Coupled with this is the local knowledge of a possible paupers grave within the area. There is therefore the possibility of previously unknown sub-surface archaeological deposits to exist within the development area. Given the nature of development any

such deposits may be negatively impacted upon and therefore the proposed precautionary measures should be adopted.

Mitigation

Prior to any construction commencing, an archaeological programme of works should be presented to and approved by the Department of Environment: Environment and Heritage Service. This approved programme should be incorporated into a pre-build Construction Method Statement, prepared by the developer. The written scheme should specify the methodology and timetable for a programme of work covering the investigation and evaluation of archaeological remains within the site, for mitigation of any impacts through excavation or recording and preservation of the remains *in situ*. A number of measures were suggested to ensure a sensitive approach.

Air and Climate

This chapter considers the potential air quality impacts arising from the proposed redevelopment of the Tyrone And Fermanagh Hospital site, Omagh, Co. Tyrone.

The main air quality impacts likely to arise include the following:

- Emissions to atmosphere from traffic generated by the proposed development, and
- Emissions to atmosphere of sulphur dioxide (SO₂), oxides of nitrogen (NO_x) and dust (PM₁₀) emissions from the boiler and generator plant associated with the new hospital.

These emissions may extend off site, possibly as far as residential areas in the local communities and surrounding settlements.

The proposed development site is located in a suburban area on the outskirts of Omagh. The full project description of the proposed redevelopment of the Tyrone And Fermanagh Hospital site has been outlined in Chapter 2 - Project Description.

Long term ambient air quality monitoring was carried out through the use of continuous exposure of NO₂, SO₂ and benzene diffusion tubes over an approximate

four-week period. Monitoring of nitrogen dioxide (NO₂), the more harmful component of nitrogen oxides, sulphur dioxide (SO₂) and benzene was carried out at 4 locations. The monitoring was carried out as outlined below and the results have been compared with the relevant Ambient Air Quality Standards.

The main impacts will arise from the generation of dust during construction, as well as potential pollutant increases from traffic and boilers.

Impact from Dust – Construction Phase

There are no residential receptors located directly adjacent to the proposed construction site boundary and therefore, it is likely that construction dust impacts at nearby properties will not cause a significant nuisance.

Boiler Emissions

Emissions from the proposed generators and standby generators on-site will be negligible. The exact specification of the boilers to be used is still not finalised, however, should the boilers have similar thermal output as those proposed for the Downe Hospital, emissions of air pollutants will be within the NAQS objective limit values and will not have a significant impact on the receiving environment.

Traffic Emissions

With regard to traffic, a worst-case scenario was used to provide a baseline for calculations. The predicted air pollutant concentrations calculated are inclusive of the background pollutant concentrations. According to these calculations, the relevant air quality limit values are not predicted to be exceeded in the area with or without the proposed redeveloped Tyrone and Fermanagh Hospital site in operation. The impact of traffic movements on the existing greenhouse gas emissions in Northern Ireland will be minimal.

A number of mitigation measures were cited for the reduction of dust during the construction phase, including the implementation of a dust minimisation plan.

Socio-economic

The new model for Health Care in Northern Ireland consists of a network of 9 acute hospitals, working in partnership with local hospitals and providing a wide range of services on a local basis. The Omagh Local hospital will primarily serve the local population of Omagh and wider area of Tyrone, providing a wide range of services on a local basis and meeting 70% of the local populations 'acute' hospital needs. The Omagh local hospital will network with acute hospitals to serve the local population of Omagh and wider area of Tyrone.

The aim of the new hospital is to provide new state of the art facilities that will implement modern techniques and provide improved access to diagnostics (test and investigation), which should have direct benefit on health services in the Omagh area. The proposal is likely to put an added strain on other services such as refuse collection and public transport, although these will benefit in the long term through rates and fares.

It is considered that the hospital will have beneficial impacts on the economy of the local area. The construction works would require the presence of a work force, which could be employed from local resources or imported. An estimated 500 construction staff will be required.

The local economy in a wider sense is likely to benefit both during construction of the hospital and during operation. The benefit will come from the increased numbers of people visiting or working in the hospital and spending on services and goods in and around Omagh.

Traffic and Transportation

This section has considered the effects of the traffic attracted to a new Local Hospital and, due to the closure of the rear entrance to the existing site at the Crevanagh Road, the subsequent redistribution of through traffic.

This section has been prepared in accordance with the approach set out in the guidelines published by the Institute of Highways & Transportation (1994) and concludes that the proposal does offer a significant impact to the surrounding network.

The new Local Hospital is to be constructed within the grounds of the existing Tyrone & Fermanagh Hospital at the B158 Donaghanie Road, Omagh. It should be noted that as part of the proposals by the Sperrin Lakeland Trust (SLT), it is foreseen that the existing Tyrone County Hospital, which is currently located at the B4 Hospital Road, will close.

Traffic surveys conducted in October 2005 by White Young Green in the vicinity of the existing Tyrone & Fermanagh Hospital site, have been used to assess the existing traffic flows on the surrounding network. The surveys have been factored using NRTF central growth rates to calculate existing conditions for year of opening 2011 and future years 2021 and 2026.

Computer software has been used to carry out an assessment of the junctions where the percentage impact due to development traffic exceeded the threshold stipulated by DRD Roads Service. Additionally, as per IHT guidance, the various site entrances have been assessed at year of opening, and then 10 years and 15 years after the proposed development is envisaged to open.

The analysis of junctions within the vicinity of the proposed site revealed that the Swinging Bars Roundabout (ie. Campsie Road/A505 Killyclogher Road/B4 Hospital Road/Crevanagh Road) will operate over capacity even without the assignment of committed development traffic. Consultation with DRD Roads Service has revealed that there are proposals to upgrade this junction. It is proposed that a dedicated left turn lane will be provided on the B4 Hospital Road to assist vehicular traffic turning onto the Crevanagh Road. Notwithstanding the revisions to the junction proposed, further mitigation measures are likely to be required by Roads Service to accommodate future development.

In terms of B4 Hospital Road/ Winters Lane, analysis revealed that the junction is forecast to operate over capacity at opening year 2011 and throughout the assessment years. It should be noted that if this junction was reverted back to a priority junction, capacity would be greatly improved and queuing would not be problematic.

With respect to the B4 Hospital Road/Drumnakilly Road/Deverney Road/B158 Donaghane Road Roundabout, the existing entrance to the site and the proposed main site entrance both located at the B158 Donaghane Road, analysis indicated that the aforementioned junctions can deal adequately with the traffic generated by the new hospital and also redistributed through traffic.

In relation to a potential link road at Winters Lane, it is evident that traffic congestion at the Swinging Bars roundabout will be relieved to a certain extent if this proposal was introduced. For example, traffic traveling from the Crevanagh Road to the B4 Hospital Road could avoid the junction and simply utilize Winters Lane. Obviously a link road would involve the significant upgrade of Winters Lane and also mitigation measures being required at the B4 Hospital Road/Winters Lane and the Crevanagh Road/Winters Lane junctions.

With regard to sustainable transport, although reasonable opportunities exist within the vicinity of the site, it is clear that given the size and nature of the proposed development, improvements are required in terms of public transport provision, and pedestrian and cycling facilities.

Table I Summary of Environmental Effects and their Mitigation

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|--------------------|--|---------|--------|----------------------------------|--|
| Landscape & Visual | Potential open viewpoint of the building along the Donaghane Road | Adverse | Lt.IR | High | <ul style="list-style-type: none"> - Careful and high quality design of the building - Consideration of the use of the natural topography to better incorporate the buildings into the landscape - Height of the building should be assessed by the potential for good views but also how it relates to the landscape |
| | Visual impact caused by large areas of car parking and boundary treatment viewed from the Donaghane Road | Adverse | Lt.IR | Moderate | <ul style="list-style-type: none"> - Retain and extend the original boundary wall - Relocate the stonewall into the site to accommodate any alterations to the road to accommodate new entrances - Use of planting and landscaping to soften and break up the car park |
| | Impact from lighting of the hospital on a 24hour basis | Adverse | Lt.IR | Moderate | <ul style="list-style-type: none"> - Use of tree planting and other natural screening to reduce light emissions |
| Ecology | Significant loss of grassland | Adverse | Lt.R | Moderate-High | <ul style="list-style-type: none"> - Recreation of the habitat in other areas |
| | Loss of some mature trees | Adverse | Lt.R | Slight | <ul style="list-style-type: none"> - Tree retention and re-planting in other areas |

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|---------------------|--|---------|--------|----------------------------------|---|
| Ecology (continued) | Loss of some hedgerows | Adverse | Lt.R | Moderate | - Sensitive development and re-planting of native species elsewhere |
| | Loss of fen and rush pasture to the SE of site | Adverse | Lt.R | High | - Habitat restoration and retention and management of existing habitats |
| Noise | Potential impact on nearby dwellings from construction noise | Adverse | St.R | Moderate | - Restrict construction times to those recommended by EHO guidelines - Construct screening during excavations - Works near to existing properties may exceed the target levels. It is suggested that the affected residents be consulted to obtain a suitable time and duration for this activity |
| | Potential Impact on nearby dwellings from operational traffic and hospital plant | Adverse | Lt.IR | Very Slight | - Ensure proposed plant is designed and installed to ensure any noise impact is below background noise level - Typical impact of car park activity and changes in traffic noise are considered to be negligible, natural screening will ensure this |

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|---------------------|---|---------|--------|----------------------------------|--|
| Water and Pollution | Silting up of water courses during the construction phase | Adverse | St, R | Moderate | <ul style="list-style-type: none"> - Water bearing silt should be contained by the use of silt ponds or cut-off ditches/walls. - Stockpiles must be minimised and where they occur they should be seeded or covered. - All washing facilities need to be securely constructed and the effluent properly contained for treatment and disposal. - Site roads should be kept free from dust and other deposits. The inclusion of small dams in roadside ditches may assist in silt retention, which, if properly planned may be used as part of a Sustainable Urban Drainage System (SUDS) post construction. |
| | Pollution of water courses due to poor construction phase technique and maintenance of Sewage and Waste Water Disposal systems. | Adverse | Lt, IR | High | <ul style="list-style-type: none"> - Proper and effective monitoring on a frequent basis of all infrastructure will be required to ensure it is operating as required. - Foul sewage may require some pre-treatment onsite before being released into Water Service Infrastructure. |

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|------------------------------------|---|---------|--------|----------------------------------|---|
| Water and Pollution (continued) | Contamination of the watercourses by pollutants e.g. hydrocarbons in the surface water. | Adverse | Lt, IR | High | - Consideration of SUDS. SUDS can be divided into three main sections, source control techniques, permeable conveyance systems and passive treatment systems. Regular inspection and maintenance of SUDS ditches is required to ensure they remain effective throughout the life of the facility. |
| | Flooding caused by blockages in the drainage system and flooding due to high water levels in the Camowen River. | Adverse | St, R | Moderate | - Site should have a Pollution Incident Response Plan in place to deal with a pollution incident or flood should it occur. |
| Geology/ Hydrogeology | Potential damage caused by movement of plant machinery over the site | Adverse | Lt.IR | Slight | - Haulage roads will be required to follow agreed routes to minimise damage until permanent accesses are built. - Any temporary haul roads will be constructed with geotextile lining and aggregate capping. |
| | Surface run-off and deterioration of topsoil | Adverse | Lt.R | Slight | - Stripping of topsoil and other layers should be carried out in dry weather - Topsoil stripped may be stockpiled for reuse on site |

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|-----------------------------------|---|---------|--------|----------------------------------|--|
| Geology /Hydrogeology (continued) | Ground disturbance during construction | Adverse | Lt.IR | Slight | <ul style="list-style-type: none"> - There are no features of outstanding geological significance within the confines of the proposed development. - No requirement to retain the landform in the site |
| | Construction of cut and fill operations within the site | Adverse | Lt.IR | Moderate | <ul style="list-style-type: none"> - Use of appropriate fill material on site will be a priority to avoid the importation of fill from other sources |
| | Excavation for foundations | Adverse | Lt.IR | High | <ul style="list-style-type: none"> - Generally the 'ridge areas' of the site is covered with a significant layer of boulder clay. This clay is reported as being of 'firm to stiff' which is regarded as adequate for construction purposes - Ground conditions are anticipated to present structural problems only in areas where soft clay or loose sand is the predominant overburden material in respect of placing foundations. |

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|-------------------|---|---------|--------|----------------------------------|---|
| Cultural Heritage | Possible uncovering of sub-surface archaeological remains, possibly a Paupers grave | Adverse | Lt. IR | Slight | - Prior to any construction commencing, an archaeological programme of works should be presented to and approved by the Department of Environment: Environment and Heritage Service |
| Air and Climate | Generation of dust during construction phase | Adverse | St.R | Slight | - Implementation of a dust minimisation plan involving procedures such as regular cleaning of site roads and vehicles; use of misting or spraying on dry or windy days |
| | Vehicle emissions during construction | Adverse | St.R | Slight | - Well maintained plant equipment; switching off vehicles when not in use |
| | Emissions from traffic during operational phase of hospital on closest dwellings | Adverse | Lt.IR | Negligible | N/A |
| | CO2 Emissions from new boilers on local atmosphere | Adverse | Lt.R | Negligible | - Adhere to standard control measures - Use of modern boiler technology and design of appropriate stack height |

| Receptor | Description of Effect | Effect | Nature | Potential Significance of impact | Key Mitigation |
|----------------|--|------------|--------|----------------------------------|--|
| Socio-economic | Boost to local economy from construction employment. | Beneficial | St, R | High | N/A |
| | Improved health care | Beneficial | Lt, R | High | N/A |
| Traffic | Increase in traffic at 'Swinging Bars' roundabout | Adverse | Lt. IR | Moderate | <ul style="list-style-type: none"> - Proposals with DRD Roads Service to upgrade this junction/potential dedicated left turn lane on B4 Hospital Rd. to assist traffic turning onto Crevenagh Road - Potential link road at Winters Lane |
| | Increase in traffic at B4 Hospital Rd./Winters Lane junction | Adverse | Lt.IR | Moderate | <ul style="list-style-type: none"> - Revert status back to that of a priority junction |
| | Pressure on public transport/pedestrian/cycle provision | Adverse | Lt.IR | Moderate | N/A |

*KEY: St =Short Term; Lt =Long Term; R =Reversible; IR =Irreversible

6.0 Summary & Conclusions

In scoping this Environmental Assessment, it was established that the potential impacts would include:

- Landscape and Visual
- Ecology
- Noise
- Water and Pollution
- Geology and Hydrogeology
- Cultural Heritage
- Traffic
- Air and Climate
- Socio-economic

Of these issues, the scoping exercise identified traffic, landscape/visual, ecology and cultural heritage as the most important. As a result of the assessment, it is considered that the remaining topics in the list above do not give rise to impacts so adverse as to be significant enough to fetter the proposed scheme.

Table I above lists the impacts and mitigation associated with each environmental topic. The following draws together all the short and long term impacts of this proposal and states how the design has dealt with them where necessary.

Short-term impacts

The short-term impacts (those lasting approximately 1-7 years) of this new development will occur during the construction phase. On the positive side there will be a boost to the labour force via construction employment, together with a positive multiplier effect on the local economy. Negative short-term impacts will include the visual impact of earthworks on the hillside. Most of this will be screened from open views by existing vegetation and will only last for the period of the construction. There is also the potential for increased noise and dust created by construction machinery. However, the ES has shown that there are no nearby properties that will be adversely affected and good working practices will ensure that any disturbance is kept to a minimum. Construction also has the

potential to cause silting up of nearby watercourses and affect wetlands. Again good working practices such as bunding and use of SUDs ponds will prevent pollution of nearby watercourses.

Long-term impacts

Long term impacts (those lasting approximately 15-60 years) mostly affect the environment during the operation of the proposed development. The main long-term beneficial impact will be the modernization of healthcare facilities that will provide the local population with improved access to new technologies and diagnostics.

There will be a long term visual impact of a new building on the landscape which will be mostly screened from open views on the Donaghane Road with trees and other vegetation. Due to existing landform, uses and tree coverage, it would be possible to integrate the hospital into the landscape and not adversely affect the setting of this site. The main open view comes along the Donaghane Road, which could be mitigated through a quality design to ensure that the impact is not adverse. The perception of this visual impact will also dissipate over time, as the new building becomes a normal part of the wider landscape.

There is a minor/ moderate loss of various habitats throughout the site. Most of the building work will take place on the improved agricultural grassland, which is of low ecological value. Some trees are lost to accommodate the development, which is unavoidable. The development will also involve the loss of some hedgerows and fen pasture, but this can be mitigated through re-creation of these habitats elsewhere. The development has been kept away from the riverbank and flood plain. Although the risk to this habitat is very low, it is recommended that the riverbank buffer on the river be expanded and improved to ensure it is protected.

There will be no impact on any known cultural heritage sites, buildings or features. Despite this, there always remains the risk of impacting on undiscovered archaeology on a site of this size. The ES therefore recommends early inspection of the site and ongoing monitoring during construction by a qualified archaeologist.

Increase in noise and impact on air quality in the area are more minor issues that will be caused by the new land use. The ES has shown that there are no noise sensitive receptors close to the site that will be significantly affected by increase in noise on the site. The existence of activity on this site already means that the noise increase will be negligible. In terms of the air quality, modeling has been carried out on the impact from traffic emissions. As with the noise impact, the closest residential properties will not be adversely affected by increase in traffic emissions. The boiler emissions are considered to be negligible and are expected to amount to 0.07% of the Northern Ireland total.

In terms of traffic, the main impacts as a result of the proposed hospital development are expected to arise through increases in traffic and congestion, particularly at the 'Swinging Bars' roundabout and the B4 Hospital Road/Winters Lane junction. However, these impacts can be mitigated against, through potential upgrade and restructuring of these junctions.

APPENDIX I – PHOTOMONTAGES