New Stobhill Hospital

Case Study produced by the A+DS Healthcare Design Programme.

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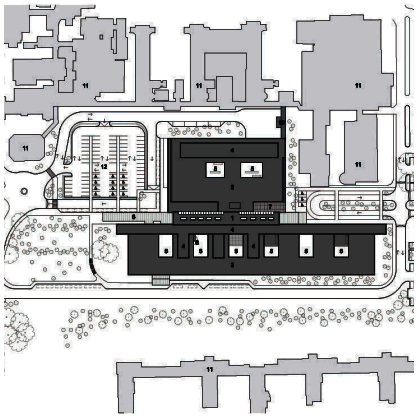
New Stobhill Hospital

Overview

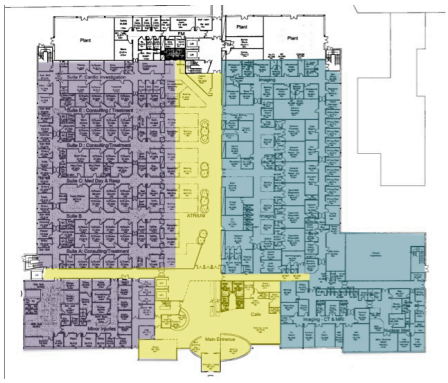


^ Site plan

This world beating little hospital is the latest in a series of successful innovations for Glasgow's Stobhill. From humble beginnings in 1904 as a Poor Law Hospital where people were ashamed to go, the hospital has achieved a number of 'firsts'; the world's first geriatric unit in 1953 and world's first test-tube baby boy in 1979. The new generation Ambulatory Care and Diagnostics (ACAD) facility, in 2010, became the first Scottish hospital to win 'world's best small hospital'. More importantly, it has won the affection of its patients.

Founded on the need to bring all the ambulatory care facilities that were scattered around the site into one location so that different clinical disciplines could work more effectively together, the building is designed to cope effortlessly with around 400,000 patients each year; that's over 2,000 people through the doors each day plus 800 staff. As a key part of the implementation of Glasgow's Acute Services Review, Stobhill ACAD, and its sister facility at the Victoria Hospital, exist to enable outpatient diagnostics and treatment and elective surgery to be well planned and managed away from the pressures placed on facilities by emergency care. However the hospital also accommodates a Minor Injuries Unit (MIU) and, overnight, lends part of the consulting space to out of hours GP services. Stobhill's last inpatients were transferred on 18th March 2011 and the hospital is now functioning as a stand-alone facility.

From initial concept to delivery took well over a decade. For much of this time work centred on redesigning clinical pathways; the relationships between outpatient services, Diagnostics and laboratories. Research also focussed on understanding how surgical services might operate safely away from inpatient and emergency facilities, with the team looking to America for models of how this worked. The significant time spent with clinical groups at this stage, including colleagues in primary care and the ambulance service, developed a collaborative spirit around the project and a clarity of vision. The building had to process people quickly and efficiently and to do so it had to be organised around the patient experience; reducing waiting times by reducing the time taken to transfer between different areas of the facility, and ensuring that patients arrive in the right place at the right time with the minimum levels of stress and anxiety. This may sound quite clinical and cold; but the client focussing so entirely on the experience of being a patient required their architect to respond to that challenge with a design that recognised human needs.



^ Ground Floor Plan of unbuilt Public Sector Comparator

The response was to bring clarity from complexity. The brief included a series of schematics showing the many relationships that must be facilitated between 20 different services; the site for the building posed a myriad of challenges in phasing as the new facility would be shoe-horned into a small area of demolition and the space around the building only freed once it was in operation and services could be decanted in. The Public Sector Comparator (PSC) design had placed the parking to the west then brought most people into the hospital from the south elevation. An atrium containing a number of waiting areas then gave access to each department, organised as a series of largely internal rooms and corridors; the deep plan approach to the whole building meant that most rooms and circulation areas would have no daylight. Reiach & Hall's proposal, though similarly compact in its footprint, rotated the main axis through 90 degrees; placing parking either side of the development. Both entrances feed directly into a central atrium which then provides immediate access

<< Main Entrance [Cover Image]
(image credit Andy McGregor)

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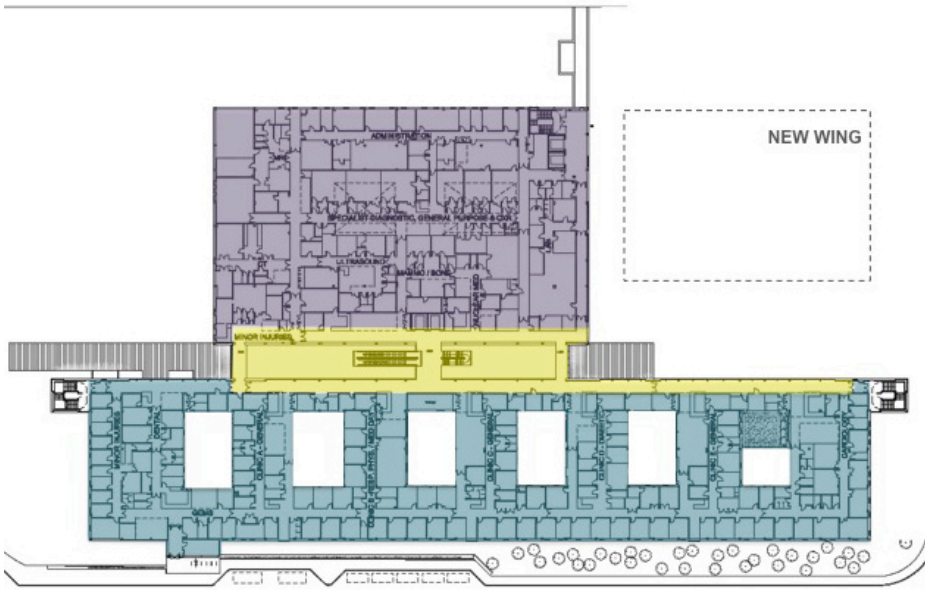


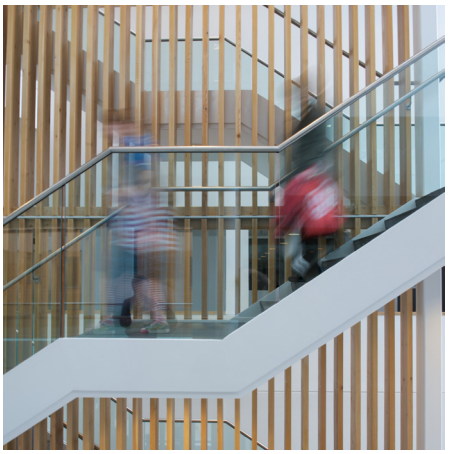
First Floor Plan as built

Section as built

to the outpatient clinics, day surgery and diagnostics. The clinical accommodation is split into two types. Highly serviced areas such as surgery and radiotherapy are placed in a deep-plan 4 storey block to the north of the atrium. At upper levels, courtyards are cut out of this block as the use becomes less intensive. Outpatient consulting areas, and the MIU, are in a 3 storey block to the south; the smaller scale cellular accommodation being arranged in a series of narrow plan 'loops' around courtyards giving daylight and some views. A raised bank to the south of the facility gives direct, and discrete, access to the MIU whilst providing a visual buffer to the adjacent mental health unit. The clarity and humanity of this diagram is in stark contrast to the PSC and many similar scale hospitals.

Experience

The experience of arriving and moving around the hospital is one of ease. It doesn't feel busy or hassled; in fact it doesn't feel much like a hospital and that's the charm of it. The architect has used forms and devices found in familiar, less stressful, settings such as smart shopping centres or office developments. A canopy extends from the entrance, blurring the point at which you cross the threshold: with welcome, but without ceremony, you are in the atrium. To one side are a cafe and a series of landscaped courtyards, and to the other a welcome desk. From this point there is line of sight to the receptions of each service. An escalator draws you straight upstairs – a deliberate move to keep the ground floor clear of too many people, maintaining the calm welcome.



Main staircase in Atrium
(image credit Andy McGregor)

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^ Wayfinding in the Atrium is clear and simple, with signs visible from all levels.

The atrium is large enough to dissipate sound and so, despite the escalators and the number of people moving through or chatting in waiting areas, it is a relaxed place. Margaret Campbell explained there was some worry about the effect of hard surfaces and glazing on noise levels in the area. Although acoustic ceilings were used *"...we had a lot of discussion about the acoustics....", carpets, acoustic baffles etc where all ruled out on the basis of maintenance and aesthetics, "...so until the actual day that we moved in... we actually did not know truly what those acoustics were going to be like. And I remember walking in 'click click click' (high heels) and thinking oh, its fine."* In fact the acoustics are so good there are singing and piano performances in the atrium which the patients and staff really appreciate. It's also wonderfully light. Even on the dull February day of our visit most of the lights in the atrium were off. But due to the simple clean design, good orientation and positioning of glazing and the use of light, reflective materials it felt bright and welcoming.

The visibility of the different services from atrium makes wayfinding easy, though the location of the lifts could be clearer. This pragmacy, combined with the atmosphere and scale of the atrium, which though civic belies the overall size of the facility, eases the nerves.

"... it doesn't feel like a hospital, and patients therefore do not feel like they're patients or that they're unwell, we are promoting health and wellbeing in this building just from the very fact that it is the building that it is."

Jackie Wilson, outpatient services manager

This ethos continues into the arrangement of each outpatient department. The client team had to work hard to maintain a layout which allows 'front of house' to be one step removed from circulation to the consulting and treatment rooms. Reception and Waiting areas are strung along the atrium allowing each to accommodate overflow from the neighbouring department without the patient feeling too far divorced from their appointment. Each has a view of a courtyard, and into the atrium, providing a pleasant distraction. The busy 'back' areas are separated from the waiting areas, maintaining the calm impression and allowing staff the flexibility to deal with situations away from the immediate attention of other patients; it also allows patients a discrete exit after consultation or treatment. The 'back of house' circulation can allow services to expand and contract by borrowing space from the neighbour and were designed to encourage interaction between adjacent services, though the doors between services are acting somewhat as a physical and psychological barrier to this opportunity. Thus the solution adopted, though not the most economical in terms of the number of square meters built in that area, the net:gross of the whole building is pretty tight due to the clarity of the main circulation diagram; more importantly though it supports both staff working and the patient experience and provides for flexibility in use in a manner that would have been impossible in more traditional layouts.

The innovation continues on the 'technical' side of the facility. With outpatients departments being over three floors, diagnostic equipment such as MRI and CT scanners were placed on the first floor. This provided challenges both in the initial construction, in bearing the weight of the

> Circulation in the Atrium
(image credit Andy McGregor)


Seminar Rooms
Welcome Desk
Lifts

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^ High level daylighting in the deep plan Imaging Department

equipment, but also for the future. Two rooms, currently used as a patient waiting area and a store, have been constructed to accommodate additional CT and MRI scanners and removable panels have been constructed in the external walls to allow the machines to be installed. Though counter intuitive in technical terms, placing this equipment at the heart of the building was the key to achieving the relationships and short transfer times that were a core objective of the development.

Patient routes through day surgery are designed on a similar principle to that described for outpatients above with the waiting areas removed from discharge to help reduce anxiety and retain dignity. Courtyards are cut into the upper levels of the block allowing rooflights to bring much welcome natural light into waiting areas in the 2nd floor diagnostics suites. The narrowing of the plan at upper floors also provides court views and daylight at the heart of the 3rd floor Endoscopy and Ophthalmology departments and from the staff facilities on the 4th floor.

Throughout the development a simple yet robust palate of materials is used in muted colours; monochrome and natural timber. Even the artwork is understated, using lines of poetry and small blocks of colour as points of focus in a space. This approach, in contrast to showy architecture and bright colours which can divide opinion, acts as a backdrop to the life and colour that people bring to the spaces. The interior of the main part of the hospital is quite simply a joy.

There are, however, a few aspects of the development that might have been better. A significant niggle is that the entrance to the Minor Injuries Unit is not visible from arrival on site. It was positioned away from the main entrance in response to a briefing requirement to separate the 'walking wounded' from outpatients. In doing so, the one entrance that is required on an unplanned visit being has been placed in a less than obvious location which could cause confusion and additional stress. The simple approach to materials and detailing realised so successfully at the main entrance points and within the building falls down on the south elevation. The scale and regularity of this elevation results in a somewhat stark impression; particularly when viewed together with the large energy centre which sits at the east of the outpatients block, restricting views and affecting the view of the hospital. These issues, which would not appear so strongly but for the significant achievements in other areas, are in part consequences of the very tight site that was given to the team. However, as the site context changes as the service withdraws from the Victorian buildings, the new Stobhill may be seen from very different angles and therefore such issues may become more evident. Already a new wing has been added incorporating 12 support beds for day surgery on the ground floor, 48 bedded rehabilitation wards and large meeting area that could not be incorporated into ACAD. A site masterplan plotting out a longer vision for the physical structure of the site might have informed different choices. The development of such a long term vision could certainly assist in reinforcing the setting of the hospital in relation to other services remaining on site, the nearby amenity of Springburn Park and any new buildings that will, in time, replace parts of the old hospital.

> The sub-receptions and waiting rooms overlook external courtyards
bottom image - (image credit Andy McGregor)


Tilia cordata

New Stobhill Hospital

^ Entrance to Minor Injuries Unit and South Elevation
(image credit Andy McGregor)

Reaction

"It's a stunning hospital...There is no reason why patients shouldn't feel positive when they go there. It's not dark or dingy. It is lovely and light. All hospitals should be designed like the Stobhill site in the future"

Margaret Watt, Scottish Patients Association on her visit to New Stobhill Hospital

The hospital has been sweeping the board at awards ceremonies, winning both health specific awards and more 'elite' architectural ones which for many years did not recognise public sector developments as good enough. Notably, Stobhill won the International Academy of Design & Health's 'World's Best Small Hospital 2010'. In fact its popularity has brought attention that has amazed some. People come just to see and be in the building. Some are local people coming for a coffee in a nice place, others are architects and students or health colleagues from the UK and overseas who have come to learn. As a result security staff often have to stop visitors taking photographs, and those involved in its development are asked to lead tours and speak on the secrets of their success both at home and abroad. More importantly, it has been very well received by the community that was nervous about the changes on the site.

"I've yet to meet a patient who doesn't like it or isn't impressed.... with cross-site booking we've got a lot of patients that have been treated elsewhere and they all come here and say wow"

Dr J Shand, Consultant Radiologist

The staff response, though broadly positive, inevitably picks up on the details; things that in a more 'everyday' hospital may have gone unnoticed among bigger issues, but things worth learning from nonetheless. Foremost are fire doors which separate departments. These are heavy and feel a repeated barrier to be overcome when moving around, and a psychological bar to communication with the team next door. With time again, the project team may have looked to have more doors on hold-open devices. Staff facilities might also have been enhanced. As the building becomes a stand-alone facility, staff's personal needs such as banking, food and refreshments, must be entirely met within the facility. The cafe on the top floor is nice but a bit small, and during our visit staff were bringing food down into the main atrium to eat. The other areas of briefing the team would revisit with hindsight is to have even greater commonality of provision in front of house areas, rather than sizing individual waiting areas specifically for one service's modelled needs they would look to have each one of a standard size to allow services to swap area more easily. There is also a drive to learn from the unintended consequences of DDA 'compliance'. Much work was done with the Better Access to Health (BATH) group who were involved in briefing and have reviewed the facility. However some features can be off-putting depending where placed, such as low mirrors opposite endoscopy exam benches allowing the patient to view the procedure and the staff members expressions!

There have been some teething problems with some of the innovative technology used to reduce construction times, resulting in leaks, and also the heating and ventilation system has had a thorough test through its first

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year of operation. The building is completely mechanically ventilated and so is generally a pleasant temperature, however when the system fails there is little back-up. This caused real problems in the summer when cooling failed and windows could not be opened to help ventilation, also in the freezing winter when heating failed and atrium vents were stuck open. The south block was designed to allow natural ventilation, but mechanical was chosen as computer modelling could not guarantee that temperatures could be maintained within acceptable realms using natural systems; some learning here around risk avoidance and robustness.

Such issues aside, the staff really appreciate the space, privacy and cleanliness the building affords and are proud of their hospital. Dr Shand admitted he now dislikes the times when he works on other sites, preferring always to come to Stobhill in the mornings.

This sense of pride and ownership is as much to do with the way the project has been developed as the quality of the end product. Starting with the clinical redesign, staff and stakeholders were involved in all aspects of the project, building an esprit de corps that extended to include the tradesmen on the site. Supported by a motivated senior management team with a clear and shared direction, Margaret Campbell – a first time client on Stobhill - played a key role in developing this ethos. An OT by background but with a family connection to the building industry she's been 'dragged around' buildings for many years and had a view of what could be achieved and the communication skills for mediating between the different disciplines and perspectives.

Part of that role was in helping groups with a focussed agenda to see the bigger picture; building up a brief that would meet their needs without creating territories or helping them consider different ways of doing things. Margaret has a particular skill for deconstructing a group's requirements; not dismissing them but taking them back to the basic intent and getting the designer to deliver on that intent rather than on the detail of what was asked for, which may not always fit the broader setting. The translation the other way was more difficult as drawings and architect's verbal descriptions of space were not readily understood by the stakeholder groups most of whom are 'one time clients'. Models, mock-ups and 3D visualisations worked best, but the team were clear that many designers also have to work harder at talking human, and that stakeholders need support and time to engage, particularly at a room design level.

Significant skill and effort was also employed to maintain the core principles of the project through the design development phase; some robust conversations ensued in which allegiances did not always fall down contractual lines. Margaret recalled a couple of issues where build cost and functionality where seemingly at odds, and the client and architect had to push hard together to maintain the focus on the patients in discussion with the cost managers on both sides *"...and I became very aware that they weren't used to somebody doing that, reminding them that this is an environment that patients are going to be treated within and that our focus is to create an environment for them".* These frank conversations built a firm basis for working relationships with the developers - something that Margaret sees as a key for all projects – which continued into the site work. She started taking groups of staff onto site on a regular basis during

Ground floor waiting area and external courtyard

Art strategy
(image credit Andy McGregor)

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the construction. This had practical benefits, allowing detailed issues to be addressed timeously, but more than that it helped the tradesmen form a link between what they were building and the service and people it was for. Equally it developed the sense of ownership in the users, so that by the time they moved in it was “our hospital”.

What is also clear from hearing all sides of the team speak is that there was a particular and mutual trust and respect between the client and their architect, a happy accident as the client did not pick them through the procurement process. Reiach and Hall where one of two teams chosen by the single bidder, Canmore (Balfour Beatty), to work on the two Glasgow ACADs within the same contract. However the ability to work directly with one team, with an architect that understood what the client was looking for, built confidence and allowed things to move faster, sooner. Although Margaret sometimes also had to say ‘no’ to the architect *“…I just knew it was going to be a good job”*. The confidence, drive and clarity of vision on both the client and design team sides shines through in a world-beating hospital which truly embodies NHS Scotland’s vision of “an estate designed with a level of care and thought that conveys respect”.

The Sanctuary
(image credit Andy McGregor)

With thanks to Margaret Campbell (Commissioning Manager, former OT), Dr John Shand (Consultant Radiologist) and Jackie Wilson (nurse and outpatient services manager) for their time and candour.

Main Entrance and reception

Project Information

Location:	Stobhill, Glasgow
Delivery Team:	Canmore Partnership Balfour Beatty Construction Limited and Reiach and Hall Architects
Value:	£65m Construction Cost
Opening Date:	March 2009
Procurement Type:	PFI
Client body:	NHSGG&C/Renfrewshire CHP

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