

Environmental Influences on Wellbeing within the Hospice

Evaluation of The Prince & Princess of Wales Hospice at Carlton Place

Executive Summary
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29th February 2020



Acknowledgements

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A Building Research Monitoring group was set up within The Prince & Princess of Wales Hospice to support the research. The author would like to thank the time, guidance and support given to the project by the following people:

Gillian Sherwood Director of Clinical Services, The Prince & Princess of Wales Hospice
Anne Hattie Director of Operations, The Prince & Princess of Wales Hospice
Audra Cook Clinical Governance Co-ordinator, The Prince & Princess of Wales Hospice
Liz Smith Practice Development Facilitator, The Prince & Princess of Wales Hospice
Rhona Baillie Chief Executive, The Prince & Princess of Wales Hospice
Alastair Forbes Architectural Director, Ryder Architecture
Gordon Murray Architectural Partner, Ryder Architecture

The author would also like to acknowledge the support and guidance given by the research group within the PPWH chaired by Dr Alistair McKeown, Palliative Care Consultant, The Prince & Princess of Wales Hospice. In addition, this work wouldn't have been possible without all the staff, volunteers, patients and relatives who kindly gave their time to take part in interviews and questionnaires.

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Jointly funded by



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1.0

Executive Summary

The Prince & Princess of Wales Hospice (PPWH) was established in Glasgow in 1980 and provides care and support for patients with life limiting conditions and their families. The services run within the building are the In-patient Unit (IPU), Day Services, Outpatient Clinic and Family Support Services. Recently the services have moved to a new purpose-built facility within Bellahouston Park, as its previous location within Carlton Place was no longer suitable for the needs of the services.

With joint funding from the PPWH and The Engineering and Physical Sciences Research Council (EPSRC) through UKRI, a research study was set up to produce an evaluation of the new PPWH facility. This research focussed on the hospice environment and the way in which it impacts on the wellbeing of those who use the building. The overall outcomes of the study will provide lessons for the PPWH, as well as guidelines for informing current and future facilities on aspects of design which positively contribute to people's wellbeing.

The aim of this particular report is to use the wellbeing framework to evaluate Carlton Place in relation to its impact on the wellbeing of people who use the services, as well as those who work and volunteer within the building. The evaluation of Carlton Place will echo some of the findings within the Architect's design

statement and consultation reports. However, the aim for this report is not to produce new findings but to test out the validity of the framework and provide a set of information that can be replicated and used to benchmark results gathered from the new facility. The data collection phase took place over a three month period, starting in August 2018, before the move to the new facility in November 2018. This phase included: interviews with 16 members of staff, questionnaires completed by 6 patients and 25 staff and volunteers, observations, recording walking distances and environmental monitoring. The questionnaires asked people to rate their views on various elements within the environment on a 5 point Likert scale where there was a choice of two positive, one neutral and two negative responses. The semi structured interviews allowed for exploration of people's views on the environment in more depth.



The Framework and Floor Plans

Table 1. The Framework Criteria

Choice	Evaluating privacy, relationships, preference and sense of control
Inclusion	Evaluating accessibility, independence and sense of purpose and belonging
Noise	Measuring dB levels and perceptions of these
Indoor Air Quality	Measuring temperature, relative humidity, CO2 levels and perception of these
Nature	Evaluating visual and physical access to nature
Design	Evaluating appearance and layout

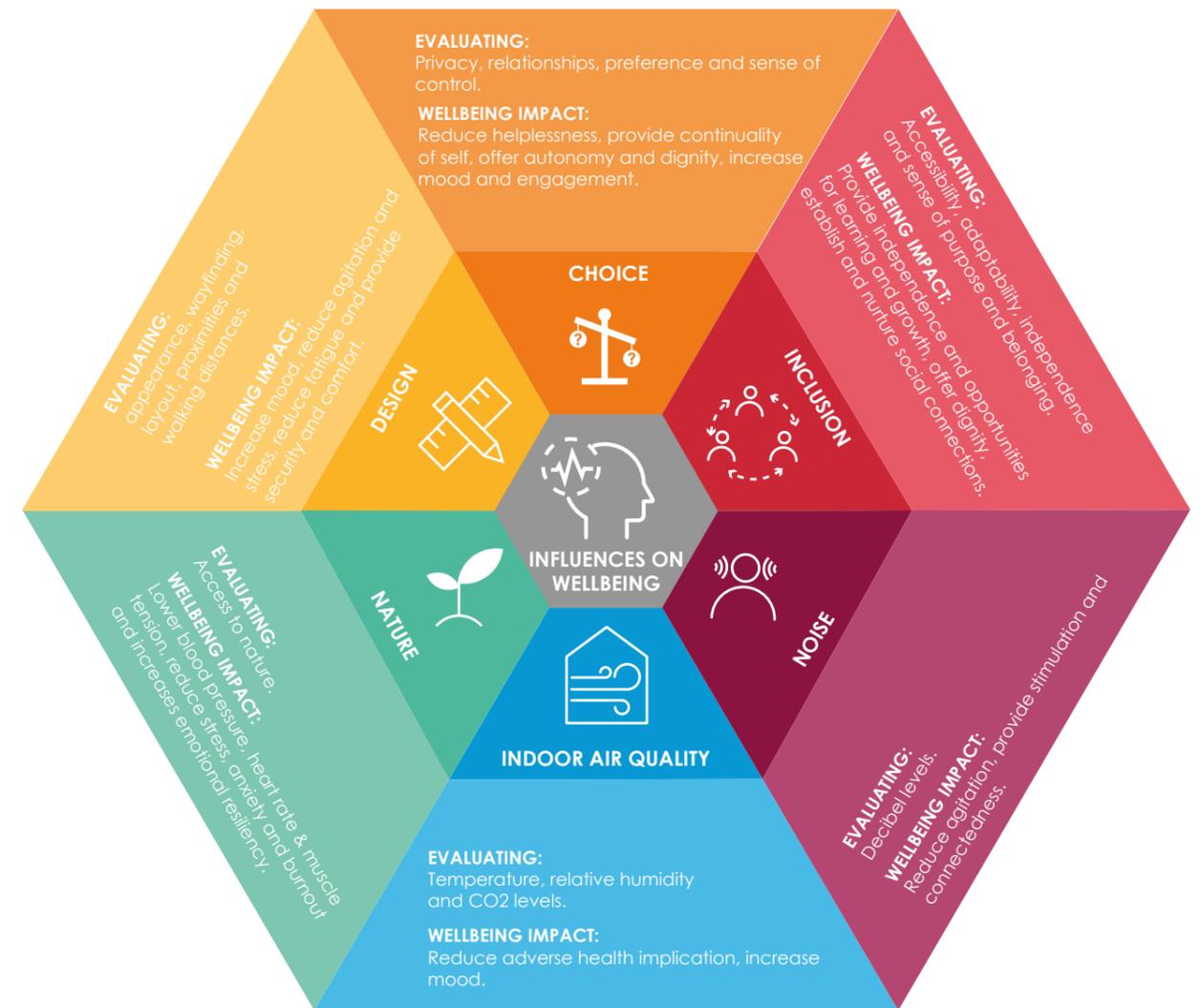
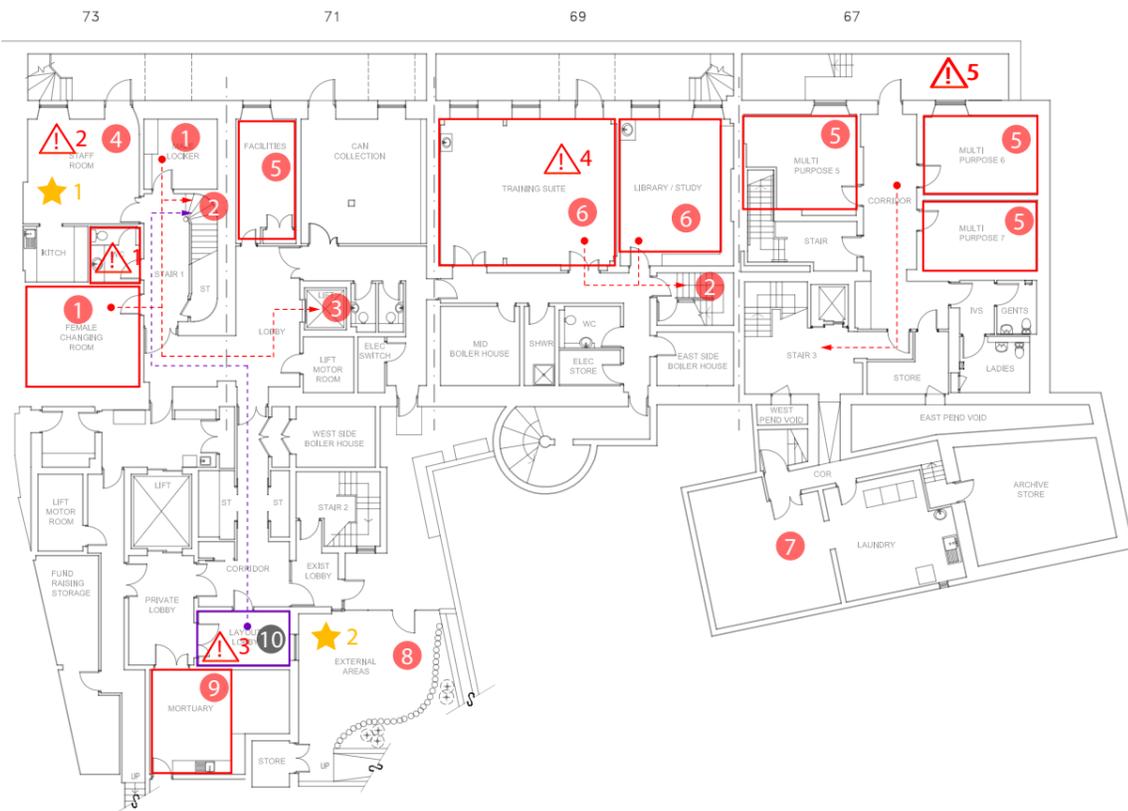


Figure 2.0 'Influences on wellbeing within the hospice' diagram



Basement Floor Plan

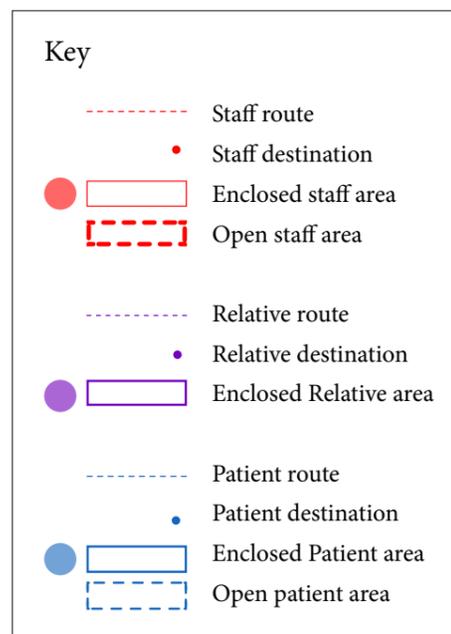
- 1 Changing rooms
- 2 Stair access to GF
- 3 Lift access to GF
- 4 Staff room
- 5 Staff office
- 6 Meeting room
- 7 Laundry
- 8 Staff garden area
- 9 Mortuary
- 10 Layout room

Issues

- ⚠️ 1 Broken staff shower
- ⚠️ 2 Staff room too far from IPU, poor views and dark
- ⚠️ 3 Layout room was 'back of house' and not a nice route for families
- ⚠️ 4 The two meeting room were often booked
- ⚠️ 5 Bars on windows of office and view of wall

Positives

- ★ 1 Staff Room gave staff a private space to discuss things and socialise with colleagues
- ★ 2 Small garden area for staff to use



Ground Floor Plan

- 1 Rear entrance
- 2 Front entrance
- 3 Reception
- 4 Lift to IPU
- 5 Stairs to IPU
- 6 Stairs to basement
- 7 Dining room
- 8 Large lift to IPU
- 9 Cafe
- 10 Access to basement
- 11 IPU staff W/C
- 12 Stairs up to IPU
- 13 Counselling rooms
- 14 Art room
- 15 Hairdressers
- 16 Day lounge
- 17 Sanctuary
- 18 Complimentary therapy room
- 19 Consulting room
- 20 Large inpatient shower room
- 21 Eddie Lloyd room
- 22 Garden Patio
- 23 Rear car park

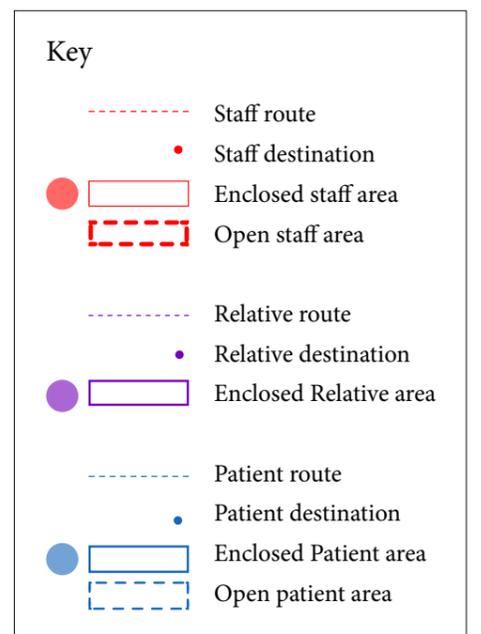
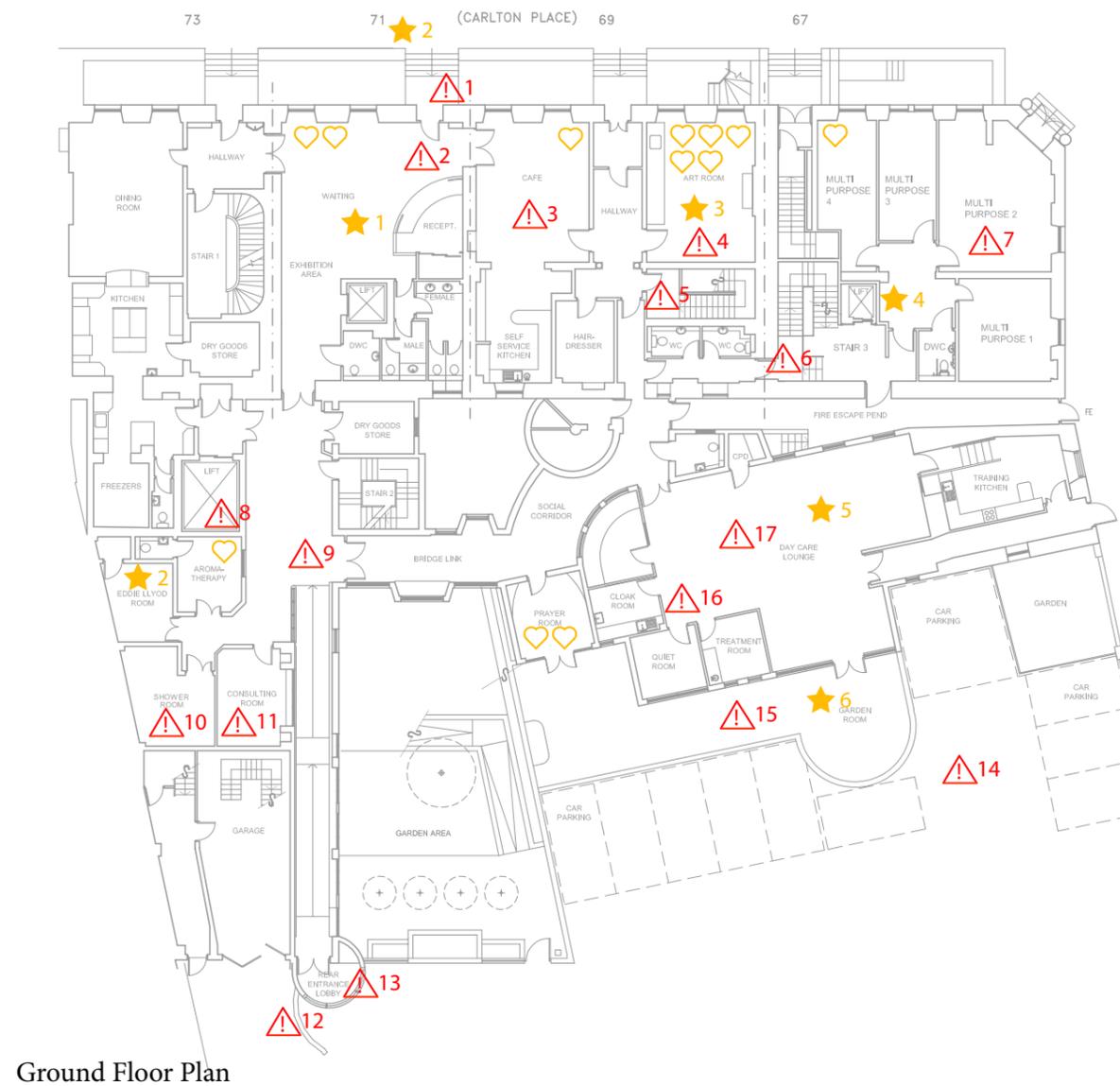


Figure 2.1. Basement floor plan showing typical routes taken through the building

Figure 2.2 Ground floor plan showing typical routes taken through the building



Ground Floor Plan

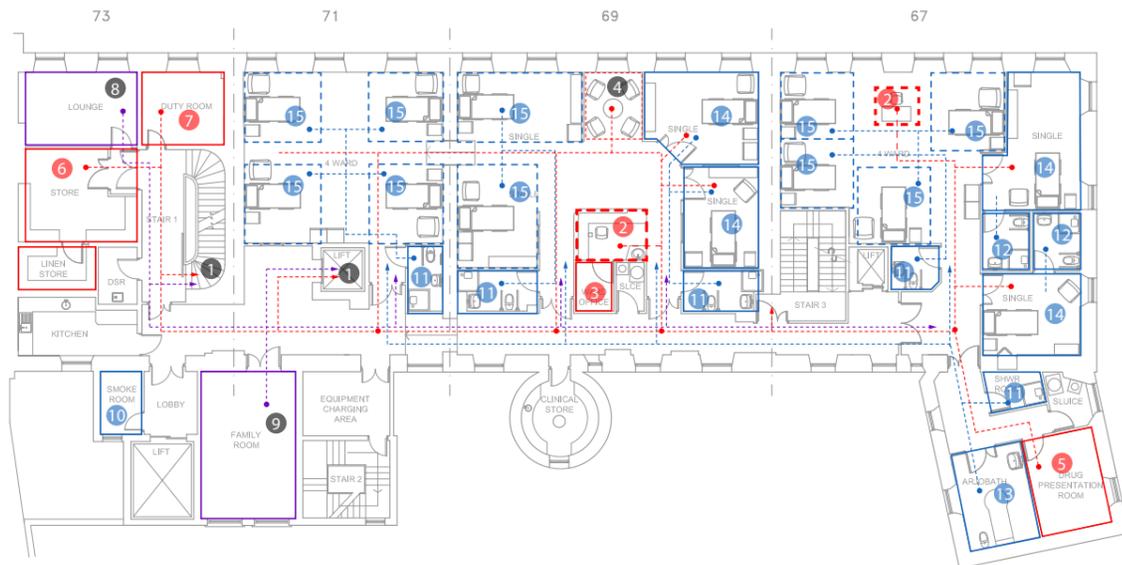
Issues

- ⚠️ 1 Front entrance: not accessible
- ⚠️ 2 Reception: can be congested at the desk, due to sign in process and loud
- ⚠️ 3 Private conversation could take place in cafe, where there was no privacy.
- ⚠️ 4 Art Room: limited space for accessibility
- ⚠️ 5 Appearance of route to meeting rooms wasn't great
- ⚠️ 6 Staff w/c: located off the ward and issues with tight corridor/doors
- ⚠️ 7 Butterfly Room: decor not suitable for demographic
- ⚠️ 8 Large bed lift: takes patient straight up to the ward - can be disorientating
- ⚠️ 9 Rear ramp: although accessible very long and not same positive experience as front entrance
- ⚠️ 10 Large patient shower room: takes staff off ward
- ⚠️ 11 Isolated location of consulting room
- ⚠️ 12 Visibility of ambulances and undertakers
- ⚠️ 13 Pressing access buzzer can be difficult for those with limited dexterity
- ⚠️ 14 Poor access to parking
- ⚠️ 15 Accessibility restrictions within garden patio
- ⚠️ 16 Noise transfer between rooms within day lounge, which can impact on people who are distressed or having upsetting conversations
- ⚠️ 17 Old-fashioned appearance of day lounge and patterned carpet

Positives

- ♡ Favourite space
- ★ 1 Reception: welcoming, good social space and can see everyone who's in the building
- ★ 2 Eddie Lloyd room: good for families and discreet with access close to an exit
- ★ 3 Art Room: provided focus away from illness and instilled a sense of purpose
- ★ 4 Counselling Rooms: area for tea/coffee within space
- ★ 5 Was good to have some access to outside

Figure 2.3. Ground floor plan showing issues and positives



First Floor Plan

- 1 Lift/stair access to GF
- 2 Nurse stations
- 3 IPU office
- 4 Seating area
- 5 Drug room
- 6 Large store
- 7 Duty room
- 8 Western club lounge
- 9 Family lounge
- 10 Smoke room
- 11 Shower rooms
- 12 Ensuite
- 13 Arjo bath
- 14 Patient single bedroom
- 15 Patient bed area

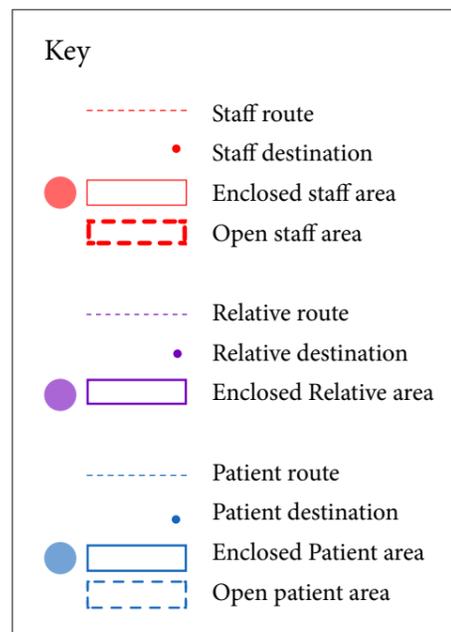
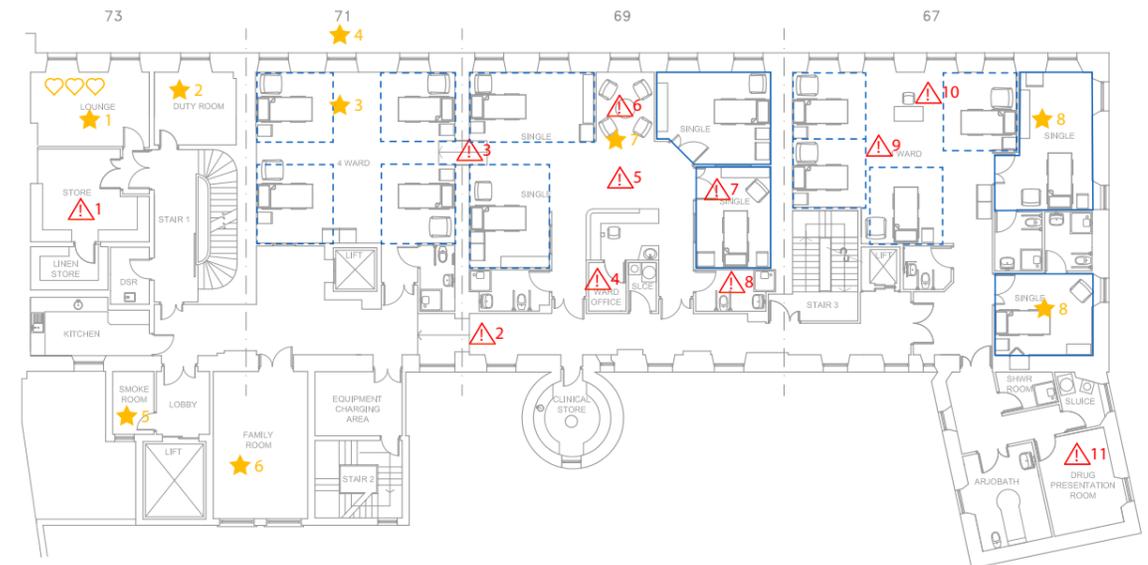


Figure 2.4. First floor plan showing typical routes taken through the building



First Floor Plan

Issues

- 1 Large Store: away from ward
- 2 Narrow corridors in certain areas
- 3 Small ramp between ward sections
- 4 Ward office: small and one computer
- 5 Inconsistent ward temperature and high noise levels on ward at night
- 6 Seating area: used for handover
- 7 Single room: has no windows
- 8 Shower room: used for storage
- 9 Limited space for overnight visitors within the ward
- 10 Nurse station: distracting and no privacy
- 11 Drug room: disconnected from ward

Positives

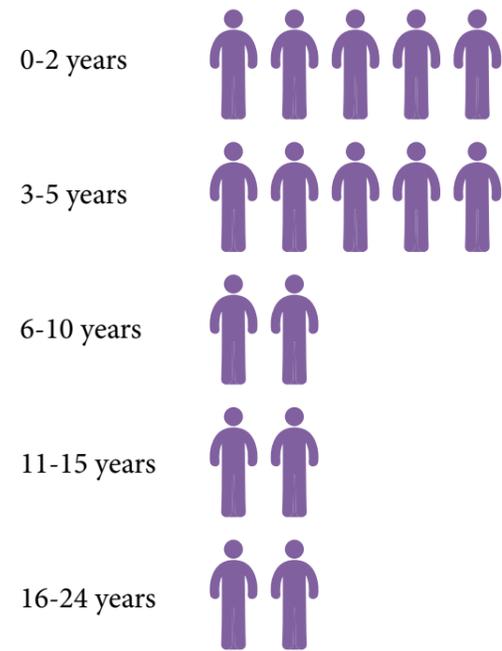
- Favourite space
- 1 Western club lounge: nice relaxing room, away from ward
- 2 Duty room: used for private conversation and time alone
- 3 Ward is a good place to socialise with other patients/relatives
- 4 Good view from ward
- 5 Smoke room: good for choice
- 6 Family room: good for large families and children
- 7 Seating area: break/social area used by staff
- 8 Single room: large and bright with ensuite

Figure 2.5. First floor plan showing issues and positives

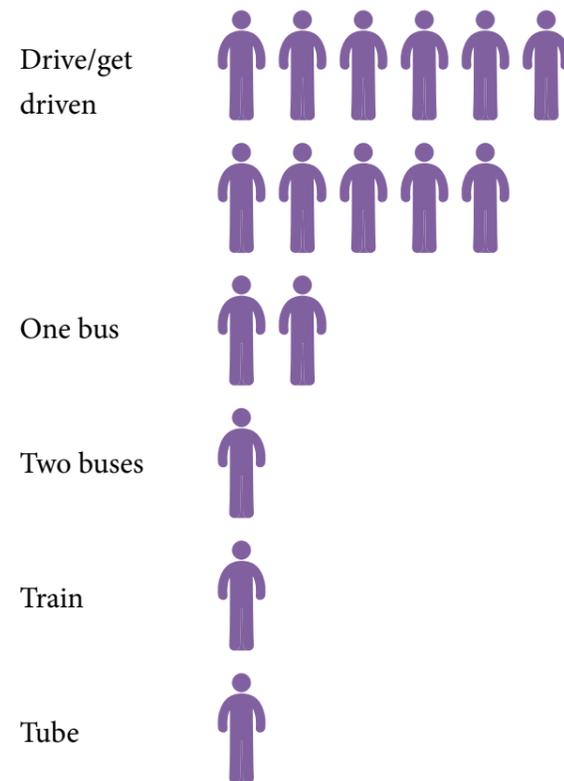


16 Staff Interviews

Number of years worked



Travel

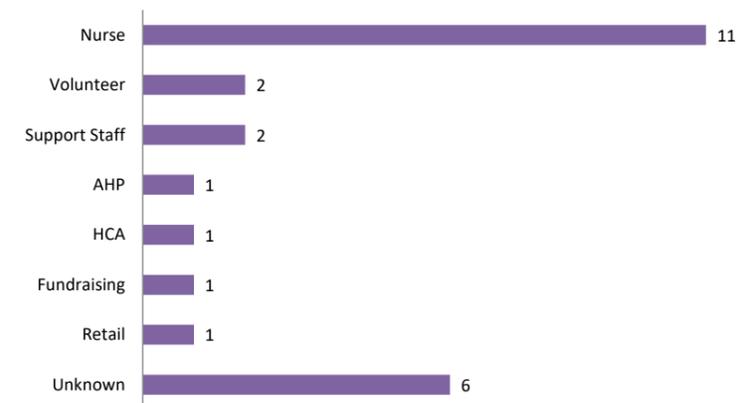


Interviewees experience

- 59% (n9) had work involving direct care of patient or relatives
- 76% (n3) had work interacting with patient, relatives or visitors
- 24% (n4) had limited or no work involving patient, relatives or visitors but worked closely with staff and received feedback.

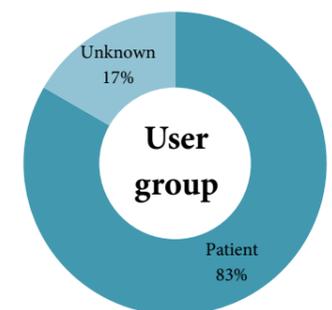
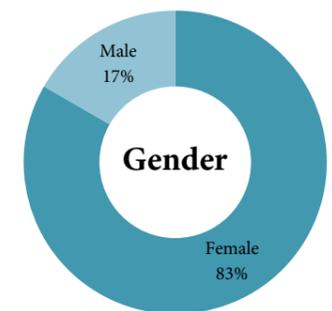
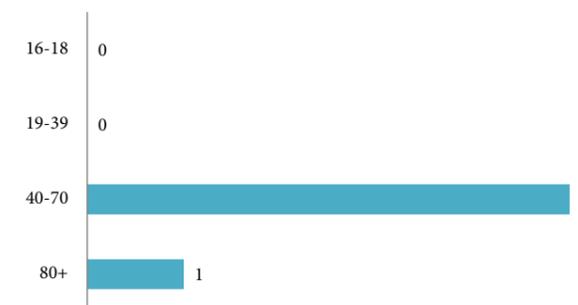
25 Staff & Volunteer Questionnaires

Job Role



06 Patient Questionnaires

Age





4.0 Choice



Figure 4.1. Photo of a single room within ward 2



Figure 4.2. Photo of an area in front of the nurse station within ward 1, which would frequently be used by staff for handovers



Figure 4.3. Photos of the open plan ward space



Figure 4.4. Photo of large family room within the IPU

The environment was successful in the following areas:

Privacy

- Staff commented that patients and families would be more candid within the single rooms, as they created the ideal environment for carrying out private conversations (see Figure 4.1): *I think you're able to ask a bit more about sensitive stuff and patients are maybe a bit more open...because obviously the one thing about curtains is they are not soundproof.* This could allow patients more freedom to express themselves, and establish more trusting and supportive relationships with staff.

Relationships

- There were opportunities within the Art Room to run family sessions, which allows families to spend time together and take time away from the IPU: *a private session; where family members could come together and have a more private time, quality time together in a non-clinical environment and something that's a bit more positive, something they can do together'*
- The day services offered space for inpatients to socialise with their peers: *that's the whole point of day services - a bit of socialisation. So even if they don't want to chat, they can sit*

and listen to other people chatting, so it's good for bringing people together.'

- Staff and volunteers rated the visibility of patients or visitors 'good' during the day 52% of the time and only 39% of the time at night, they felt it was poor 5% of the time during the day and 22% 'poor' or 'very poor' during the night (See Graph 4.1 & 4.2). Within the IPU staff and volunteers felt that the observability of patients was 'good' or 'excellent' 67% of the time (See Graph 4.3). Patients felt that the accessibility of staff was 83% 'good' or 'excellent' (See Graph 4.4).

Sense of control

- Some staff felt the sign-in process was beneficial as they knew everyone who was in the building. This could offer the staff a sense of security over who was in the building.



Figure 4.5. Photo showing the main corridor within the IPU, where patients would be taken along to access the wards from the large lift



Figure 4.6. Photo of the nurse desk within ward 2, which was located within the centre of the bed areas



Figure 4.7. Photo of the café

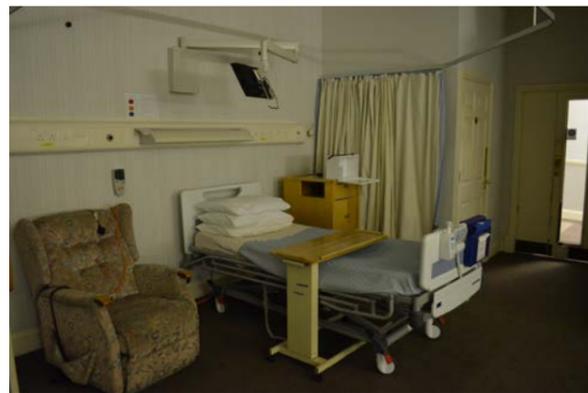
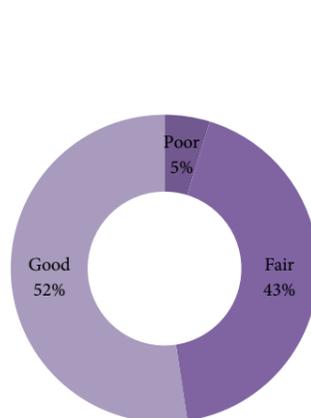
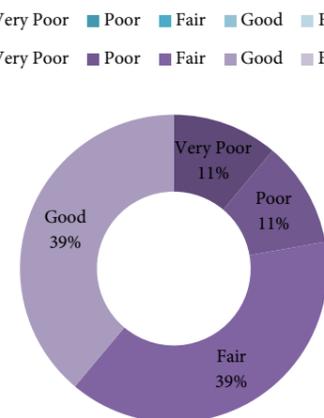


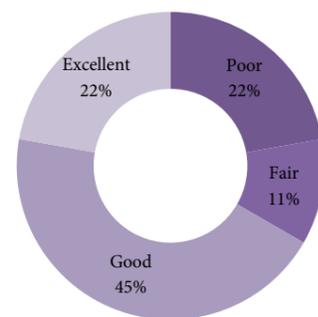
Figure 4.8. Photo of a recliner chair, that would be used for overnight visitors to sleep on within the wards



Graph 4.1. Staff & volunteer rating of patient & visitor visibility during the day



Graph 4.2. Staff & volunteer rating of patient & visitor visibility at night



Graph 4.3. Staff & volunteer rating of patients being observable on IPU

The environment was less successful in the following areas:

Privacy

- The ward areas did not lend themselves to privacy and sometimes patients overheard confidential conversations because staff did not have a private space near the ward to do handovers or discuss notes (see Figure 4.1): *'I think in the morning is important [to have space for private conversation], when you're doing the handover, because we are sitting at the desk and you've got family members and patients in a close proximity to where we do the handover. And we need to discuss every single patient.'* The questionnaire data corroborates these comments with 33% of patients felt they 'sometimes' overheard private information that wasn't related to themselves (See Graph 4.5).
- If patients were in the ward for end of life care then staff commented that they could see this impact on the other patients and their families (see Figure 4.3). This could affect the atmosphere of the whole ward and does not offer privacy or dignity to the patient or family. One staff member commenting on lack of privacy on the wards, *'I feel that sometimes visitors see too much and hear too much, but again this is just my opinion. I feel that if somebody is dying, their breathing changes, it's becomes*

heavy - the curtains are round - so common sense tells you and there is nowhere for them to go, as such, that they are hearing all of this and I don't think that's a good thing for families... you can see it in people's faces. You can see fear'

- Sometimes family meetings were held within the family rooms, which was not ideal as they are open to everyone to use, which could interrupt discussions (see Figure 4.4).
- Within all of the departments there was not a private or secondary exit, which means that often patients or clients would have to be taken through public routes when they would rather have more privacy (see Figure 4.5).
- The desk in the centre of ward two did not afford visual or auditory privacy (see Figure 4.6), which could be detrimental for staff writing notes or having confidential discussions: *'if you're on the computer and you're trying to do stuff and patients are talking to you or their relatives will come in and talk to you and interrupt you. Then equally if you're trying to speak to the nurse about somebody and you just can't do it there because there's just no privacy - it's very open and exposed.'*
- Staff felt that space for talking with their colleagues, away from patients' areas was 44% 'poor' or 'very poor' (See Graph 4.6).



Figure 4.9. Photo of the basement staff room



Figure 4.10. Photo of over bed lights within the ward

Patients rated both space for having private conversation and space for socialising as 83% 'good' and availability of space for all their visitors as 67% 'good' (See Graph 4.7, 4.8 & 4.9).

- Often the café had to be used for meetings, which offered no privacy for the discussion (see Figure 4.7).
- The day lounge office was visually exposed and often people would walk right into the space, denying the staff a sense of privacy and forcing them to be aware of their body language when distressed.

private area for staff was located within the basement staff room (see Figure 4.9). However, the majority of staff did not eat in the staff room as IPU staff felt it was too disconnected from the ward and other staff commented that it was not a pleasant environment to sit in: *'[the] basement dining room area is not light and airy, and again there's not fresh air. At least with the café: in the summer the windows are open, you can see what's happening in the outside world – you don't see that in the basement dining area.'*

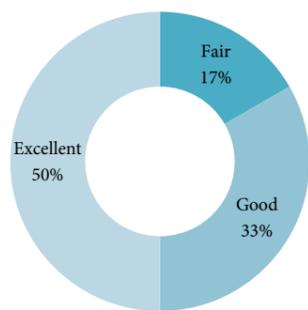
Relationships

- There was no dedicated family area, which staff thought would have been beneficial: *'There's not a specific area for family to go and be able to have some privacy, which I think is a significant issue, having worked in other hospices that do have that facility, I think it makes a difference.'*
- The lack of overnight facilities meant that the number of visitors staying was restricted on the ward due to space (see Figure 4.8).
- Staff felt that some of the patients felt isolated within the single rooms. With there being more opportunities within the ward environments to socialise and get some peer-support.
- The café and dining area could be used by everyone within the hospice. The only

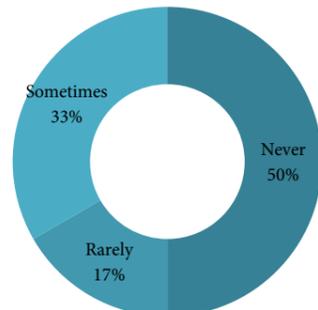
Sense of control

- There were issues with broken window latches and radiator valves, meaning that people felt they could not always control the environment around them. See Graphs 4.19-4.28 for staff and volunteer and patient's perception of choice over various elements within the environment.
- Although there was a variety of lighting in the IPU, there were issues with the light above beds shining directly into patients' eyes, and bedside lamps waking up patients at night by being too bright (see Figure 4.10).
- The majority felt happy with the levels of natural light with 54% of staff and volunteers and 80% of patients feeling it was 'just right' but 42% of staff felt it was 'low'

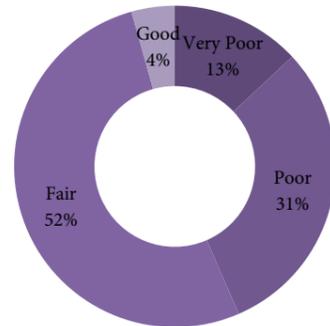
■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent
■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent



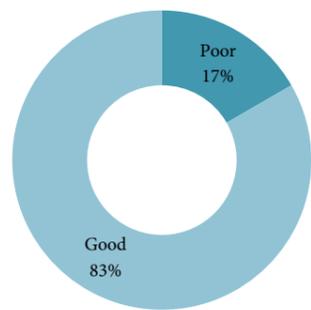
Graph 4.4. Patient rating of accessibility of staff



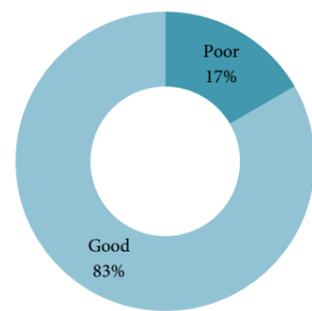
Graph 4.5. Patient rating of overhearing private information



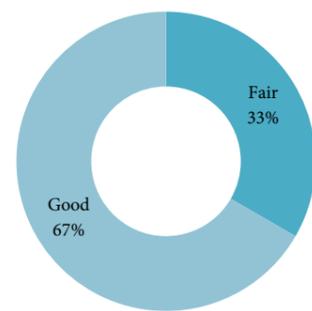
Graph 4.6. Staff & volunteer rating of space for talking with colleagues alone



Graph 4.7. Patient rating of space for private conversation

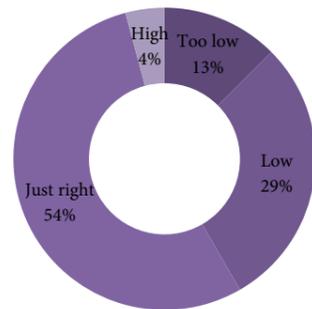


Graph 4.8. Patient rating of space for socialising

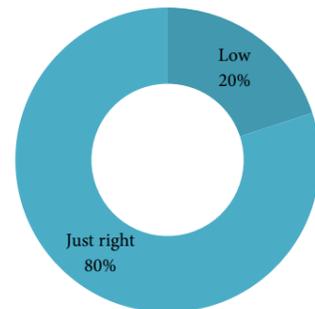


Graph 4.9. Patient rating of availability of space for all family/friends

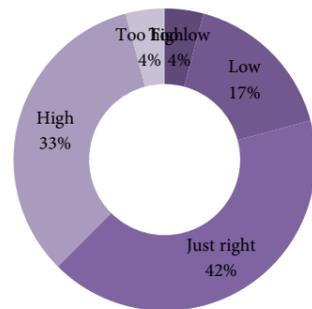
■ Too low ■ Low ■ Just right ■ High ■ Too high
 ■ Too low ■ Low ■ Just right ■ High ■ Too high



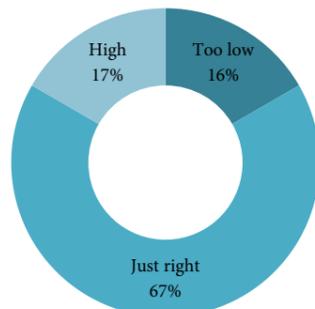
Graph 4.10. Staff & volunteer rating of natural light level



Graph 4.11. Patient rating of natural light level

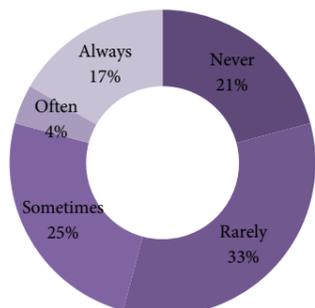


Graph 4.12. Staff & volunteer rating of artificial light level

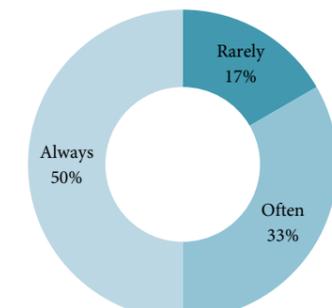


Graph 4.13. Patient rating of artificial light level

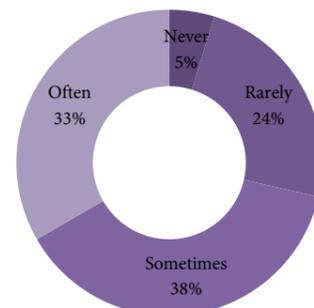
■ Never ■ Rarely ■ Sometimes ■ Often ■ Always
 ■ Never ■ Rarely ■ Sometimes ■ Often ■ Always



Graph 4.14. Staff & volunteer rating of having time alone, when required



Graph 4.15. Patient rating of having time alone, when required



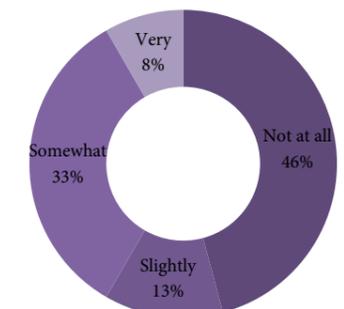
Graph 4.16. Staff & volunteer rating of How often staff and volunteers are able to take a break without being on demand

or 'too low' and 20% of patients felt it was 'low' (See Graph 4.10 & 4.11). The majority of patients felt that the level of artificial light was 'just right' at 67% and although the majority of staff rated the level of artificial light as 'just right' (42%), 37% did feel it was 'high' or 'too high' (See Graph 4.12 & 4.13).

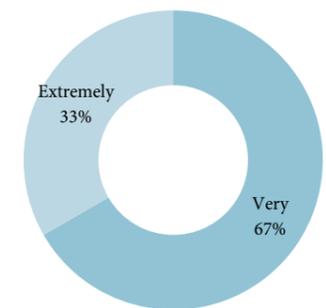
- The ward buzzers could be heard in different areas throughout the building, to the extent that some staff felt they could not get a break away from being 'on-demand'.
- The lack of space for time alone was detrimental to staff wellbeing, as many felt they did not have a private space to go: *'there's nowhere you can go that's quiet ... It can be quite upsetting at times as well and sometimes you just like to sit...'*
- When asked to comment on their feelings on time alone people wrote: *'No real space to rest, relax and recharge before break is over' ... 'Sometimes feels inappropriate when relatives suffering loss have also no space'* and they felt 'claustrophobic' and 'frustrated'. For those who felt they had adequate time alone then they commented that this made them feel *'relaxed' and 'treated like a person'*. 54% of staff and volunteers felt they had no time alone, if they required it but conversely 83% of patients felt they had time alone 'often' or 'always', if they required (See Graph 30a & 30b).
- When asked to rate their feelings of being

comfortable within the building, 46% of staff and volunteers selected 'not at all'. Whereas patients had an overwhelming positive response with 67% rating that they felt 'very' comfortable within the building and 33% felt 'extremely' comfortable within the building (See Graph 4.17 & 4.18).

- See charts 33-38 for staff and volunteer and patient's perception of choice over different elements within the environment.



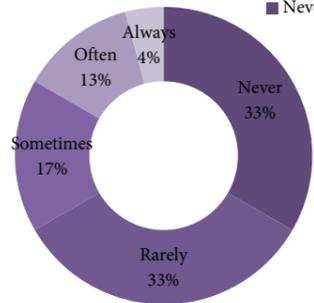
Graph 4.17. Staff & volunteer rating of feeling of comfort within the building



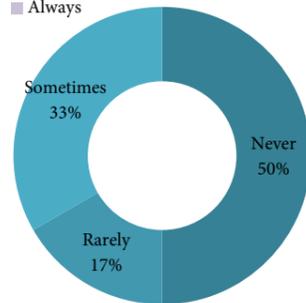
Graph 4.18. Patient rating of feeling of comfort within the building

■ Never ■ Rarely ■ Sometimes ■ Often ■ Always
 ■ Never ■ Rarely ■ Sometimes ■ Often ■ Always

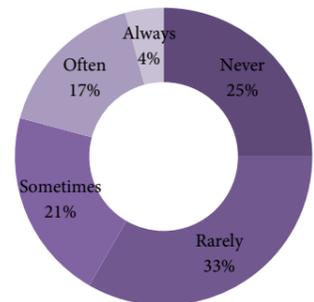
Graph 4.19. Staff & volunteer rating of temperature choice



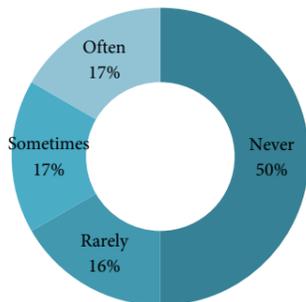
Graph 4.20. Patient rating of temperature choice



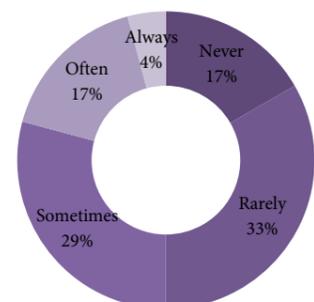
Graph 4.21. Staff & volunteer rating of ventilation choice



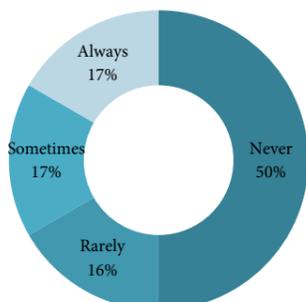
Graph 4.22. Patient rating of ventilation choice



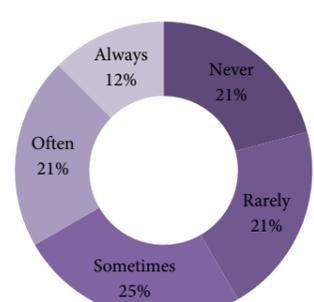
Graph 4.23. Staff & volunteer rating of natural light choice



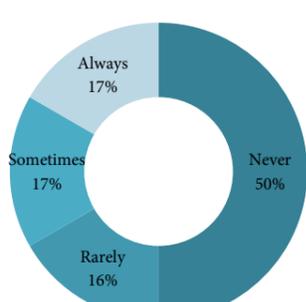
Graph 4.24. Patient rating of natural light choice



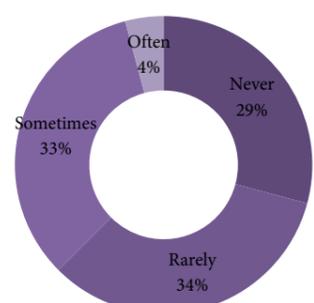
Graph 4.25. Staff & volunteer rating of artificial light choice



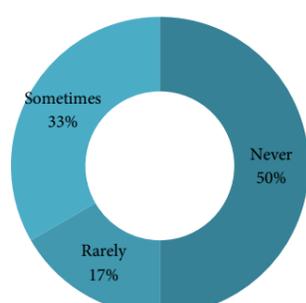
Graph 4.26. Patient rating of artificial light choice



Graph 4.27. Staff & volunteer rating of noise choice

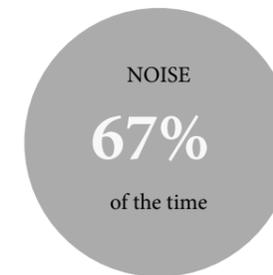
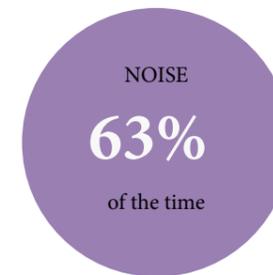
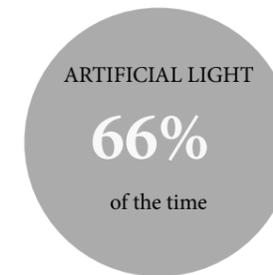
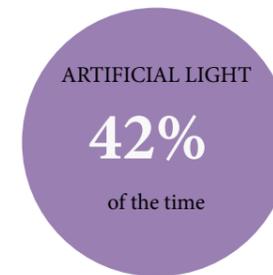
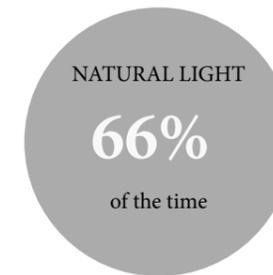
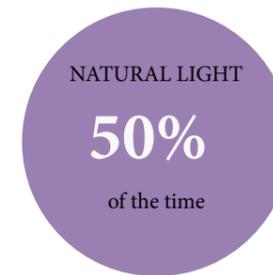
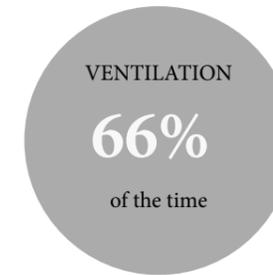
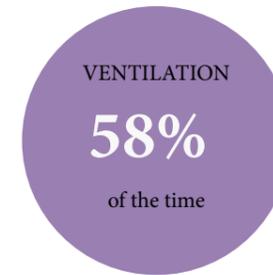
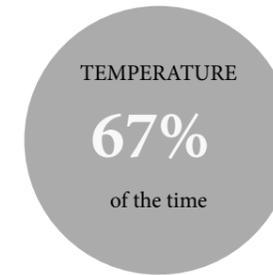
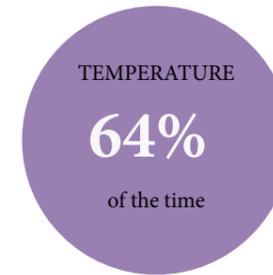


Graph 4.28. Patient rating of noise choice



Staff and volunteers felt they NEVER or RARELY had control over:

Patients felt they NEVER or RARELY had control over:



5.0 Inclusion



Figure 5.1. Day services showing the social space, which provides patients with an opportunity to engage with various activities

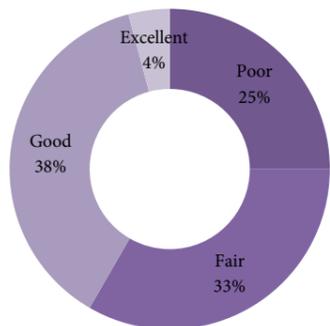


Figure 5.2. Photo showing the Art Room (photo provided by the PPWH Artist)



Figure 5.3. Photo showing the space within the counselling areas which could be used to bring down drinks and food from the cafe

■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent
 ■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent



Graph 5.1. Staff & volunteer rating of building accessibility



Graph 5.2. Patient rating of building accessibility

The environment was successful in the following areas:

Accessibility

- The city centre location provided easy access to a wide range of shops within walking distance where families would often use to buy essentials for impromptu overnight stays. The central location also provided good public transport links by bus, train and subway.

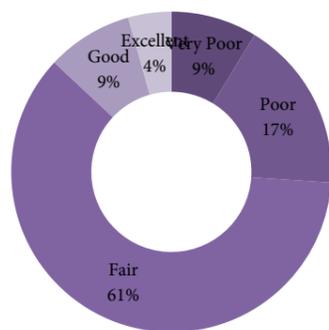
Purpose

- Day services provided opportunities for inpatients to socialise with their peers, offering patients a choice of getting off the ward to experience a more engaging and stimulating environment in terms of activities offered, while being able to establish peer support networks (see Figure 5.1).
- The art services, although providing a form of art creation rather than art therapy, were highlighted within the report as playing an integral role in positively influencing many different aspects of wellbeing. They offered a service where patients could decide what type of art they wished to create, with resident artists there to support and facilitate; providing a sense of purpose, choice and independence and offering patients an outlet to explore and discover

their own creativity. Many staff commented that the Art Room was one of their favourite spaces within the building, and mentioned a shift in mood of patients when participating. The atmosphere of the room was both relaxed and focused, providing a safe and private space in which to work; this was supported by the location of the room in a quiet area of the building, with little footfall directly outside the door and a calming outlook over the river (see Figure 5.2).

- The Art Room could be used for family sessions, which staff felt gave everyone a shift in focus away from illness; to build upon relationships, create a safe and stress-free environment and facilitate other means of communication through shared creative activities.
- The hospice artist would work with patients within the IPU and often found that if they were working with one patient within the ward, then others would become interested in accessing the services. There was one instance on the ward when there were 4 patients all working on art and supporting each other, providing vital peer support. Of working on the wards one staff member commented, *'even if somebody is not able to take part and if they're not overwhelmed with their symptoms - I think it can be quite stimulating for people to see other things*

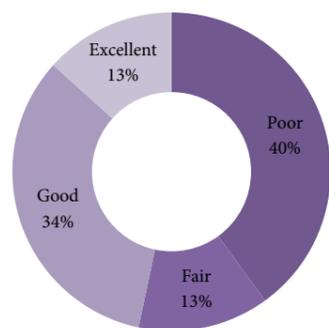
Very Poor Poor Fair Good Excellent
Very Poor Poor Fair Good Excellent



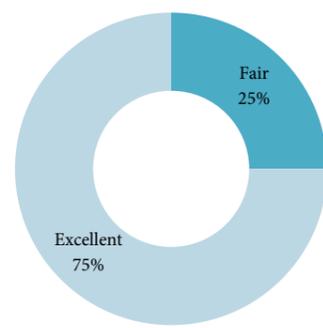
Graph 5.3. Staff & volunteer rating of suitability of furniture for work



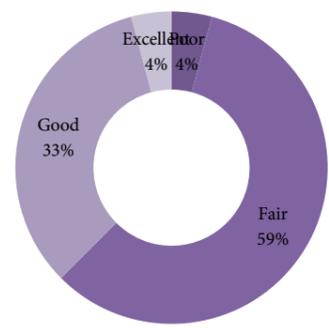
Graph 5.4. Patient rating of suitability of furniture for needs



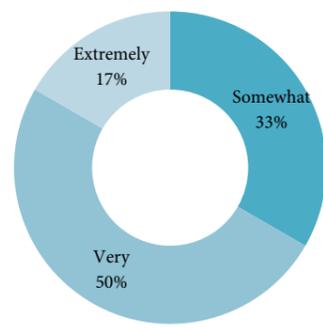
Graph 5.5. Staff & volunteer rating of bed adaptability for patient needs



Graph 5.6. Patient rating of how therapeutic the bed area is



Graph 5.7. Staff & volunteer rating of facilities for meals/drinks



Graph 5.8. Patient rating of how well the building caters for specific need

going on in the ward. Things must be very monotonous up there, so even if they aren't able to take part themselves or they don't have the energy, I think it can work that they just like the conversations that you're having or thinking about things. I think that can be quite stimulating in itself'.

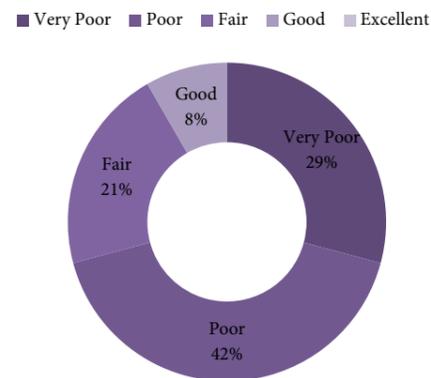
was beneficial to have this presence within the building.

Belonging

- Counselling rooms had an area from which to provide drinks and serve food, which allowed everyone to eat together in a private space away from the café; staff felt this encouraged people to be more candid as it was a more safe and confidential space (see Figure 5.3).
- The art group, which ran within family support services, were beneficial as the art was displayed around the building and gave those who use the services a sense of being part of the hospice.
- The art produced within the hospice could be displayed within external places, providing the general public with an insight into the hospice services and helping to break down barriers, spread awareness and provide an outreach for people who might benefit from the services.
- The PPWH had a strong relationship with the local community and often police officers would stop by to use the public facilities. Staff commented that they felt it



Figure 5.4. Photo showing the space at the top of the rear entrance ramp



Graph 5.9. Staff & volunteer rating of parking facilities



Figure 5.5. Photo showing the rear entrance ramp



Figure 5.6. Photo of narrow corridors



Figure 5.7. Photo of heavy doors

The environment was less successful in the following areas:

Entrances

- The front entrance was not obvious or accessible, and often people had difficulty getting to the rear entrance by car, due to the one-way roads. Staff mentioned that this could be a cause of stress, especially as this was the first visit and people might already be apprehensive.
- When people were using the rear entrance, the reception could be difficult to locate due to inadequate signage and the fact that the most obvious route is through an open corridor with no doors, which led round to day services (see Figure 5.4). There was normally two people on reception and one would go round to greet people at the top of the rear entrance ramp; however this was difficult when only one person was on reception, where reaching the top of the ramp could cause some disorientation and could result in not everyone having the same experience of being greeted right away (see Figure 5.5).

Accessibility

- The internal doors were heavy and corridors were narrow (see Figure 5.6 & 5.7).
- The entrance buzzer to the rear was not accessible to everyone. Even though the

doors were automatic, people with limited dexterity couldn't always reach or press the button to alert reception to open the doors (see Figure 5.8).

- There were small inclines throughout the building, due to the nature of the existing building but these often caused trips – even for able bodied people.
- Contradictory to comments made about the accessibility, the questionnaire results showed that 33% of staff and volunteers felt that the accessibility of the building was 'fair' and a further 42% felt it was 'good' or 'excellent'. Patients shared these feelings, as they rated building accessibility as 80% 'good' or 'excellent' (See Graph 5.1 & 5.2).
- Some issues with parking were: the lack of spaces, small accessible spaces, poor lighting at night, bad road surfaces and locked gates. In addition, using the metered parking was especially stressful and disruptive (see Figure 5.9). 71% of staff and volunteers felt the parking facilities were 'poor' or 'very poor' (See Graph 5.9).

Adaptability

- The IPU beds would often have to be reorganised, which took staff away from providing patient care and did not afford dignity to those who were bedbound and had to be moved about the corridors: *It's fairly restrictive for the patient's needs, having*



Figure 5.8. Photo of rear entrance door and buzzer system



Figure 5.9. Photos of rear parking

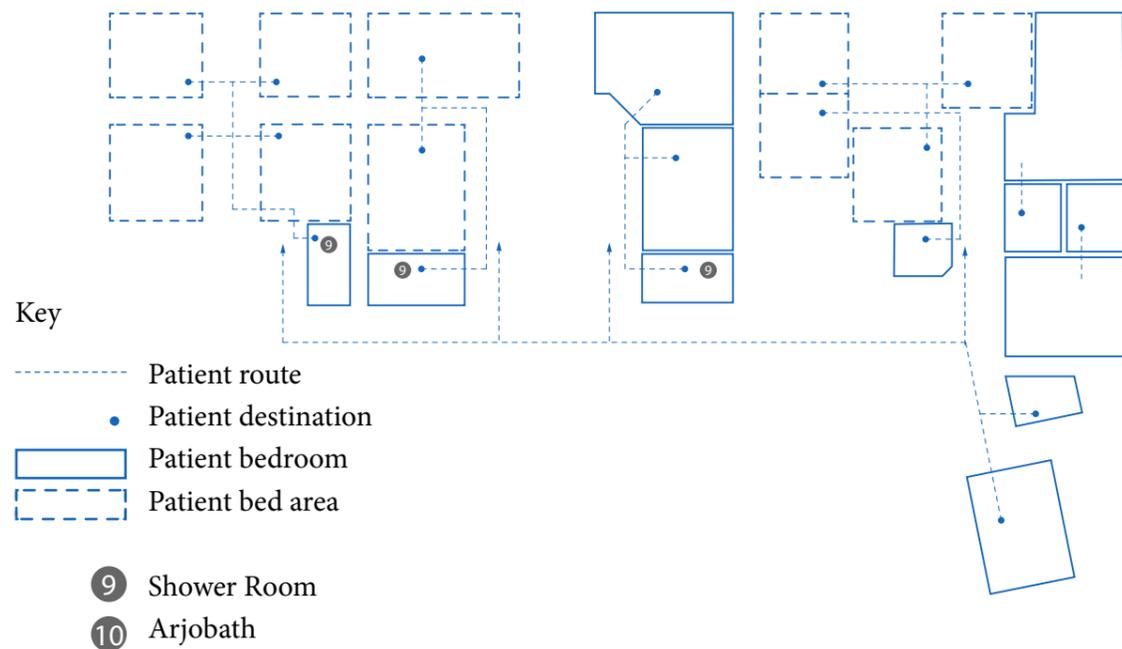


Figure 5.10. Diagram of all patient bathrooms within the IPU

the flexibility to use the spaces, depending on whether the patients sick or well, or for observation or requiring privacy, but that's moving patients - not adapting spaces.'

- Contradictory to some of the comments made about the adaptability of the space the questionnaire results showed that 47% of staff and volunteers rated the bed adaptability as 'good' or 'excellent' and patients rated how therapeutic they felt the bed area was as 75% 'excellent' (See Graph 5.5 & 5.6). In terms of the building catering for the specific needs of patients, they viewed this in a positive light with 50% feeling it did this 'very' well and 17% feeling it was 'excellent' (See Graph 5.8).
- There was not a lot of space for storing large equipment on the ward, so this equipment would have to be taken back and forward to the storage cupboard when it was needed. Furthermore, it was not immediately accessible for patients to use independently.

Independence

- The ward bathrooms were small, which did not always offer adequate support for patients with additional needs and took away independence for those who would ordinarily be able to do things for themselves (see Figure 5.11).
- The circulation within the Art Room was limited, which could be difficult for

manoeuvring wheelchairs around and restricted which part of the room patients could access (see Figure 5.12).

- Some of the drawers were not labelled within the Art Room and some were located high up, meaning that people couldn't readily access supplies themselves.

Purpose and Belonging

- There was not a specific space for ward visitors to leave their belongings and this could often create trip hazards.
- There was a young people's art group that ran within The Butterfly Room, which was not ideal as the décor, and even the name of the room, can be off-putting to young people, which can be a barrier to making people feel at ease and able to open up (see Figure 5.13): *'what we want for young people is to have ownership of a space so as they feel like they belong and that they are valued'*
- There were no dedicated staff showering facilities, as the current shower was broken. This has deterred some staff from cycling to work, as the only other shower facility was shared with families and was not guaranteed to be available before the start of their shift. Staff had expressed a desire to run multiple activities at once within the day services lounge; however due to the open-plan layout that was not possible (see Figure 5.1).



Figure 5.11. Photo of ward bathrooms



Figure 5.12. Photo showing the limited circulation space within the Art Room (photo provided by the PPWH Artist)



Figure 5.13. Photo of the Butterfly Lounge within the counselling area



6.0 Noise

Noise, Ward: Friday 5th October

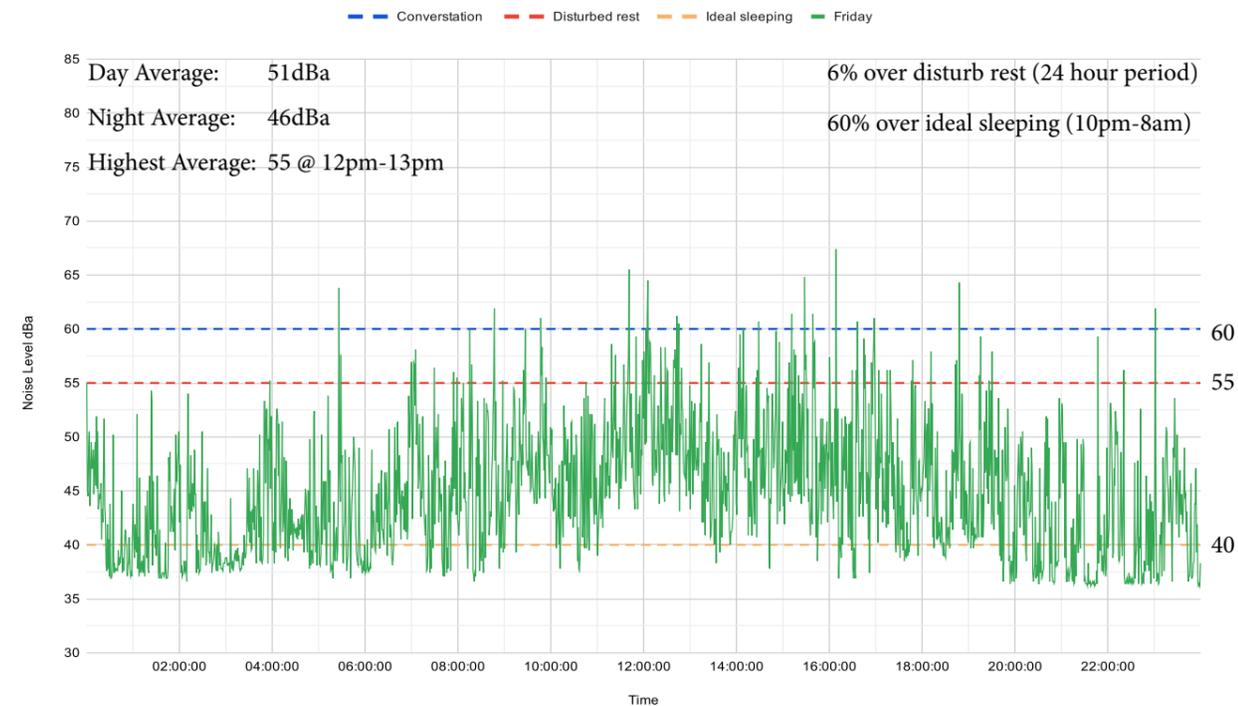


Figure 6.1. Graph showing noise measurements within the ward over a 24hr period

Noise, Single Room: Thursday 5th September



Figure 6.2. Graph showing noise measurements within the single room over a 24hr period

The environment was successful in the following areas:

Noise

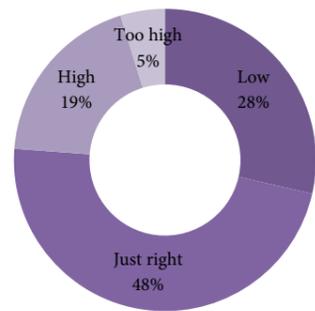
- The single rooms were more effective than the ward areas at keeping an average noise level below the ideal sleeping condition range of 55dBa, making them less disruptive for sleep (see Figure 6.1).
- In terms of the level of noise, 83% of patients felt that the noise level was 'just right' and 48% of staff felt the same (See Graph 6.1 & 6.2).
- Patients felt that 83% and staff and volunteers felt that 71% of the time they were 'rarely' or 'never' bothered by noise. Although 8% of staff and volunteers felt that they were 'often' bothered by noise (See Graph 6.3 & 6.4), which could impact on stress levels. It was positive that 67% of patients felt they 'never' had a hard time hearing or understanding comments due to the noise levels (See Graph 6.6).

The environment was less successful in the following areas:

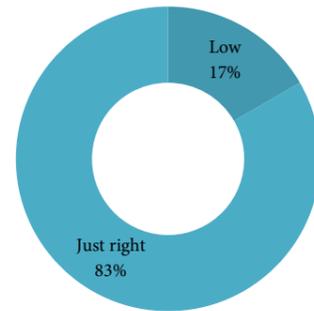
Noise

- Between 10am and 8pm, the ward noise levels reached beyond ideal sleeping conditions 60% of the time; the frequency for single rooms was 34%, meaning it was at the range that causes sleep to be disturbed, which could significantly impact on patients' rest (see Figure 6.1).
- The reception was where the main switchboard was located. This could often be a noisy environment, which could make it difficult for staff to hear people on the phone.
- The noise levels in the day lounge could make it difficult for people to keep track of conversations. There was also a lot of noise transfer between the main lounge and the side rooms, which staff indicated could impact on relaxation activities. However, in general, the measured dB levels didn't reach extreme levels (see Figure 6.2).
- Staff and volunteers felt that 45% of the time that noise negatively impacted on their work, with 8% feeling it was 'often' (See Graph 6.5).
- There was noise transfer between rooms within the day lounge which was a particular issue when someone was distressed.

■ Too low ■ Low ■ Just right ■ High ■ Too high
 ■ Too low ■ Low ■ Just right ■ High ■ Too high

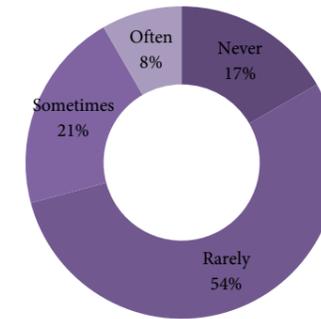


Graph 6.1. Staff & volunteer rating of noise level

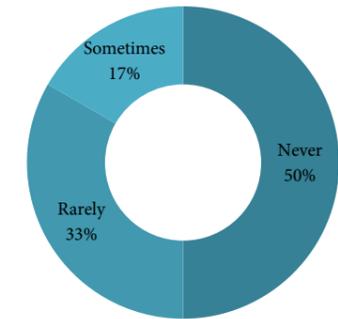


Graph 6.2. Patient rating of noise level

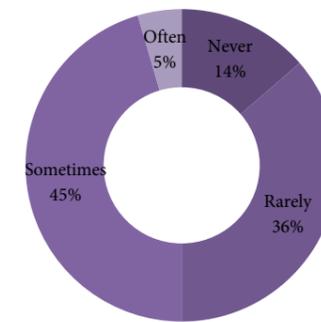
■ Never ■ Rarely ■ Sometimes ■ Often ■ Always
 ■ Never ■ Rarely ■ Sometimes ■ Often ■ Always



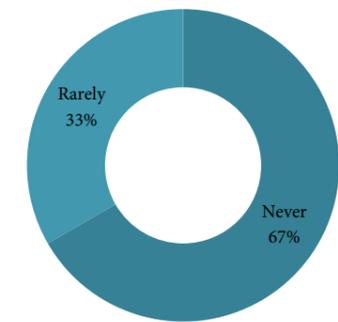
Graph 6.3. Staff & volunteer rating of being bothered by noise



Graph 6.4. Patient rating of being bothered by noise



Graph 6.5. Staff & volunteer rating of noise negatively impacts work



Graph 6.6. Patient rating of hard time hearing or understanding comments due to noise



7.0 Indoor Air Quality

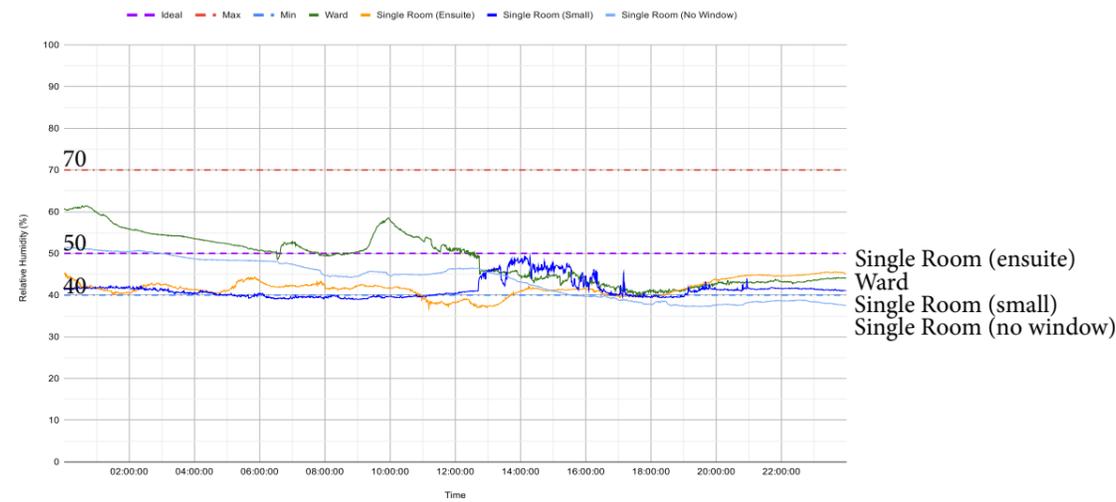


Figure 7.1. Graph showing relative humidity levels measured in the IPU over a 24hr period

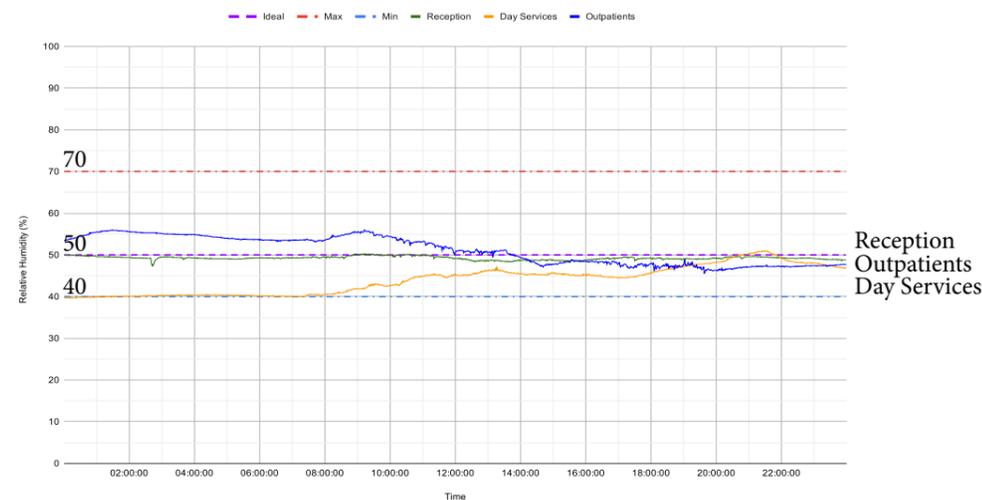


Figure 7.2. Graph showing relative humidity levels measured in patients spaces within the building over a 24hr period

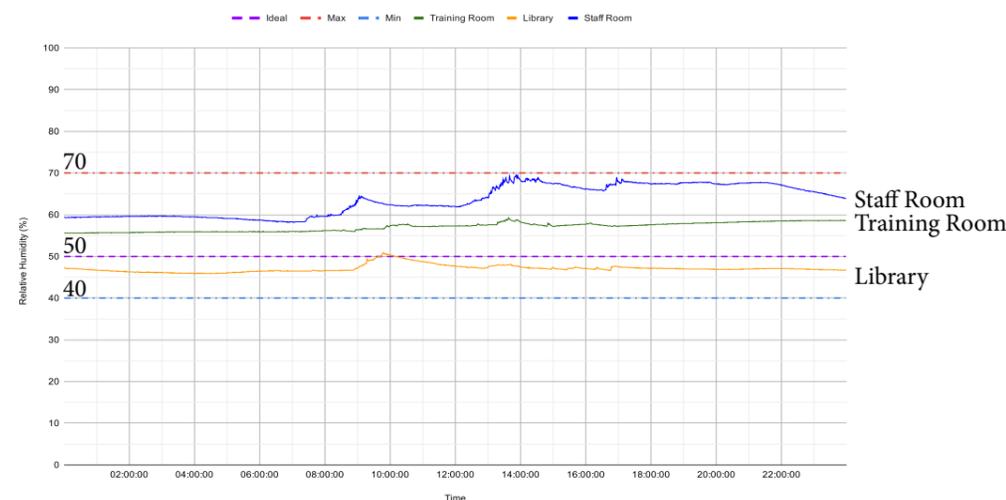


Figure 7.3. Graph showing relative humidity levels measured in staff spaces within the building over a 24hr period

The environment was successful in the following areas:

IAQ

- Measured levels of relative humidity and CO2 fell within the standard range of acceptable levels for most areas, see Figures 23 and 24 for a sample of results.

The environment was less successful in the following areas:

IAQ

- Due to it being a renovation of a pre-existing building, with the lack of 'climate control' of newer healthcare facilities, the temperature was often difficult to control; consequently, most areas could be too hot in summer and too cold in winter.
- When rating the temperature, 18% of staff and volunteers selected that the temperature was both 'high' and 'low', with only 39% feeling that it was 'just right' and the majority of 30% feeling it was 'high' or 'too high'. Patients felt more comfortable with the temperature with 67% feeling it was 'just right' (See Graph 7.1 & 7.2). These results were consistent with staff comments on the building and measurements throughout the building showing the inconsistent of temperature. Measurements indicate some areas, the ward in particular, could have rapid changes in temperature throughout the day, resulting in great discomfort for people (see Figures 7.7 & 7.8).
- Within the IPU there was a single room with an internal window facing into the ward that was shown to average around 26°, both during the day and at night (see Figure 7.4). Staff often commented that patients would choose to leave their doors open in

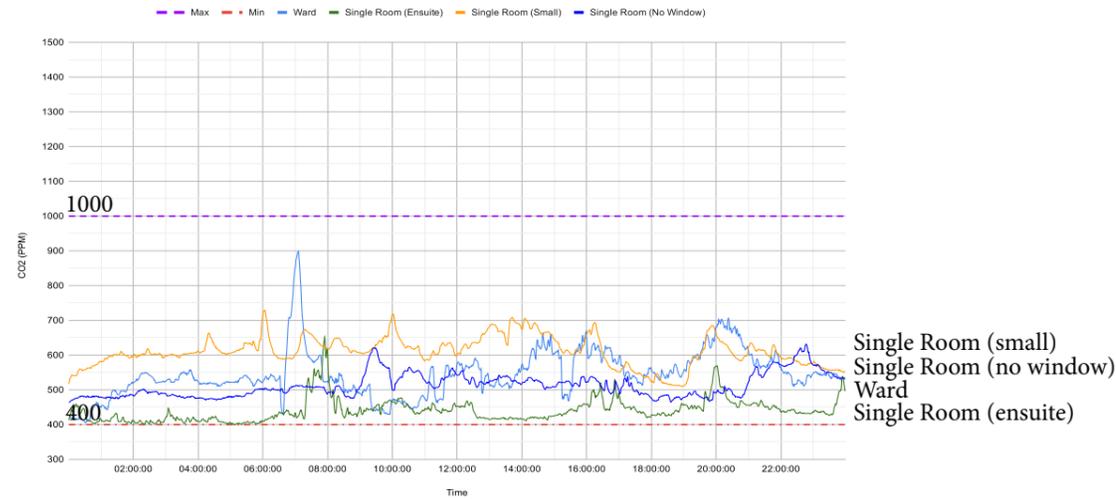


Figure 7.4 Graph showing CO2 levels measured within the IPU over a 24hr period



Figure 7.5. Graph showing CO2 levels measured in patients spaces within the building over a 24hr period

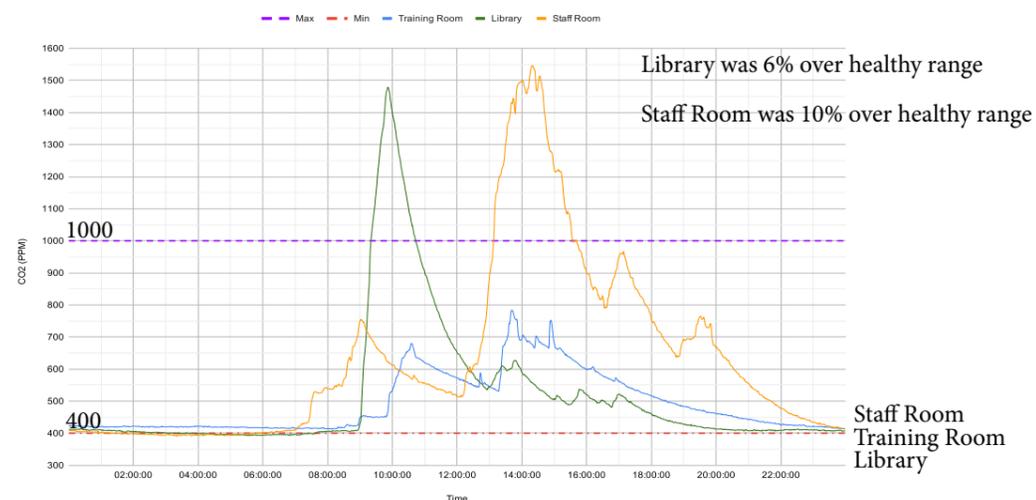


Figure 7.6. Graph showing CO2 levels measured in staff spaces within the building over a 24hr period

many of the single rooms but particularly in this one.

- Most of the staff commented that the air quality felt ‘stuffy’, which wasn’t related to the temperature as they mentioned it could feel this way even when it was cold. Some staff also mentioned that smells could linger within the ward, indicating a poor air exchange rate. However, CO2 levels didn’t indicate any issues (see Figures 7.1 & 7.2). 56% of staff and volunteers felt the ventilation was ‘low’ or ‘too low’ but 83% of patients felt that it was ‘just right’ (See Graph 7.3 & 7.4).
- Measured levels of CO2 were shown to reach over the healthy upward limit of 1000 6% of the 24hr period within the library and 10% within the Staff Room, see Figures 7.6. This indicated a poor ventilation rate for the number of people or type of activity within the rooms and as they are situated below ground level than this could also reduce the amount of air circulating. Reaching beyond 1000ppm could lead to drowsiness and reduced concentration.

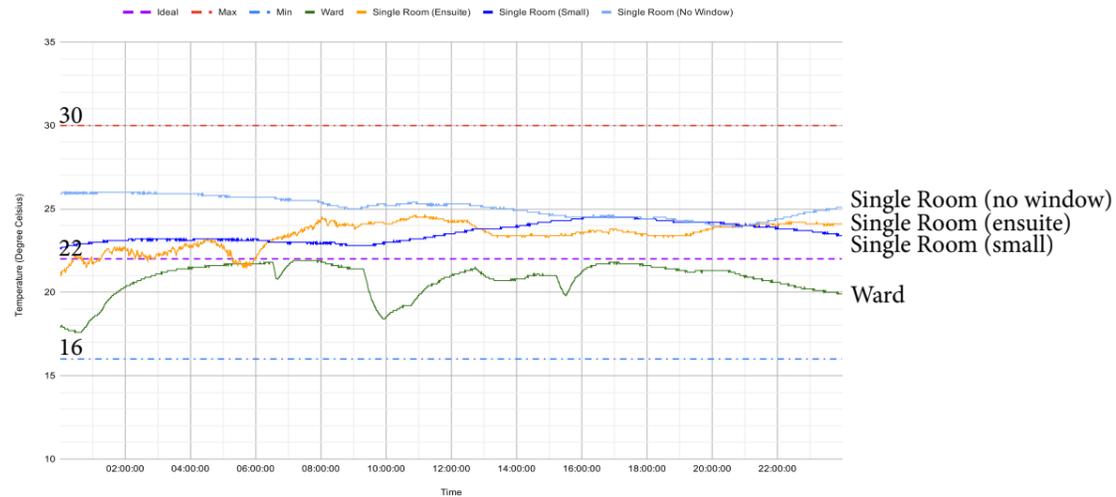


Figure 7.7. Graph showing temperature measurements within the IPU over a 24hr period

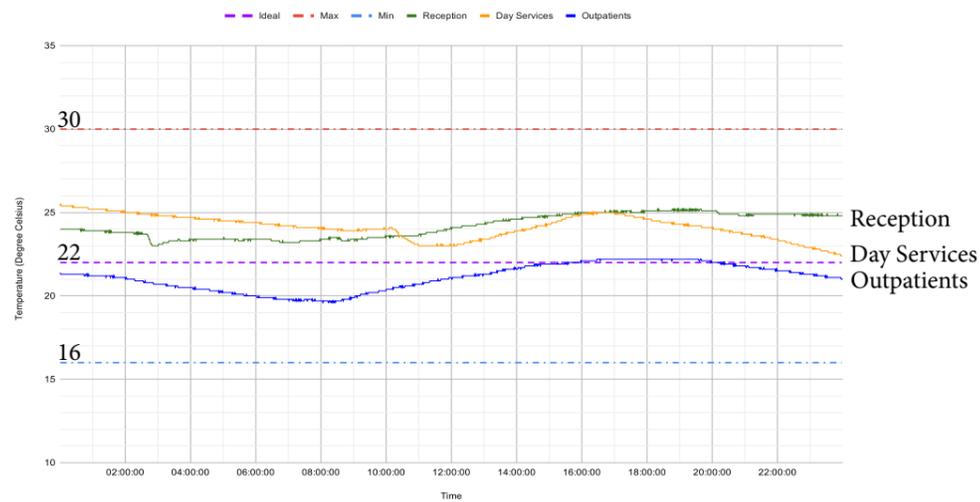


Figure 7.8. Graph showing temperature measurements in patients spaces within the building over a 24hr period

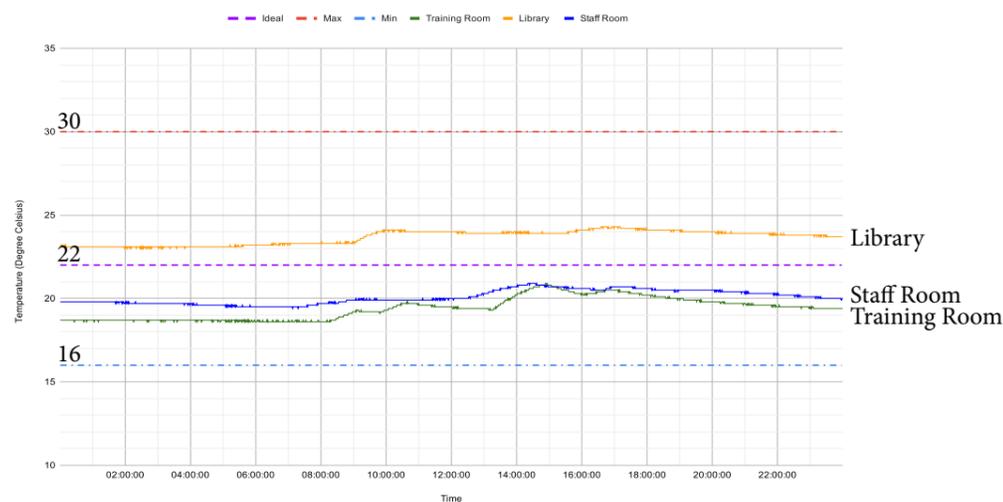
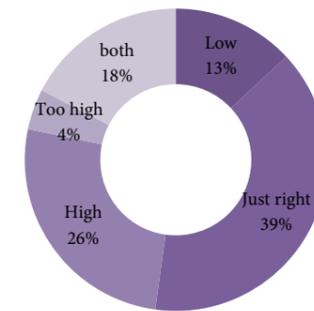
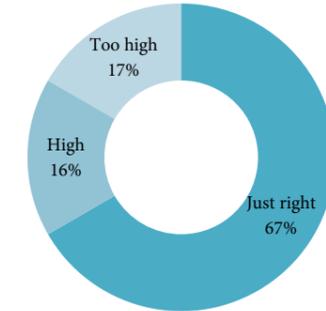


Figure 7.9. Graph showing temperature measurements in staff spaces within the building over a 24hr period

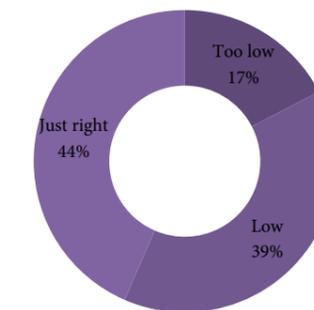
■ Too low ■ Low ■ Just right ■ High ■ Too high
■ Too low ■ Low ■ Just right ■ High ■ Too high



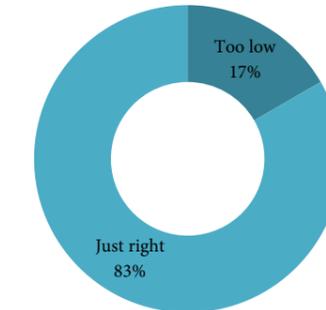
Graph 7.1. Staff & volunteer rating of temperature level



Graph 7.2. Patient rating of temperature level



Graph 7.3. Staff & volunteer rating of ventilation level



Graph 7.4. Patient rating of ventilation level



8.0 Nature



Figure 8.1. Photo of the view of the river



Figure 8.2. Photos of the view of the river from the IPU



Figure 8.3. Photo of the garden patio



Figure 8.4. Photo of the garden area that staff could access from the basement

The environment was successful in the following areas:

Nature

- Staff felt the outlook from the counselling rooms was good and would often be a source of inspiration for producing art work, especially at night, where the bridge and city would be illuminated by lights (see Figure 8.1).
- Many staff remarked upon the view of the river (see Figure 8.2), mentioning it being relaxing for patients and that being able to watch the busy city life was a good distraction: *'The hustle and bustle of everyday and no two days are ever the same and it's just amazing watching the wildlife; like the swans and the ducks and the gulls on the water. And watching everybody going back and forth across the bridge and all the cars going past. Then at Christmas time when Buchanan Street is all lit up with all the lights and things... It's brilliant for the patient because if they've got their bed at the window they can see out and they just love that.'*
- 59% of staff and volunteers felt they had 'good' or 'excellent' access to a window with a view (See Graph 8.1). Inpatients felt that 75% of the time they had a 'good' view of nature from their bed and '25%' felt it was 'excellent' (See Graph 8.3).
- It was good having access to an outside

patio area, which staff mentioned was used frequently in summer (see Figure 8.3).

- Some staff mentioned an outside area that was accessed from the basement (see Figure 8.4), where they would sit alone or with colleagues during their breaks: *'we would put some benches out there and staff would maybe sit out there, maybe take their packed lunch out there and sit out there or in really good weather and there was no day patients I would maybe sit out in the garden space with a packed lunch... but I don't think everybody knew about that space.'*
- Some of the staff mentioned that they like to get out the building at lunch time and they had the opportunity to do so (see Figure 8.5): *'I quite like to go into town and things on my lunch or go out for a walk just around the block or whatever to get some fresh air and I sometimes think if you sit in the dining room you can get completely caught and then it takes away your opportunity to go out and get fresh air so that's why I go down to the staff room. I can just eat quickly, take whatever it is back up and then I can get out.'*



Figure 8.5. Photo of the areas outside of the hospice, on the other side of the river



Figure 8.6. Photo of the view from a basement office



Figure 8.7. Photo of one of treatment room within day services with the blinds closed for privacy

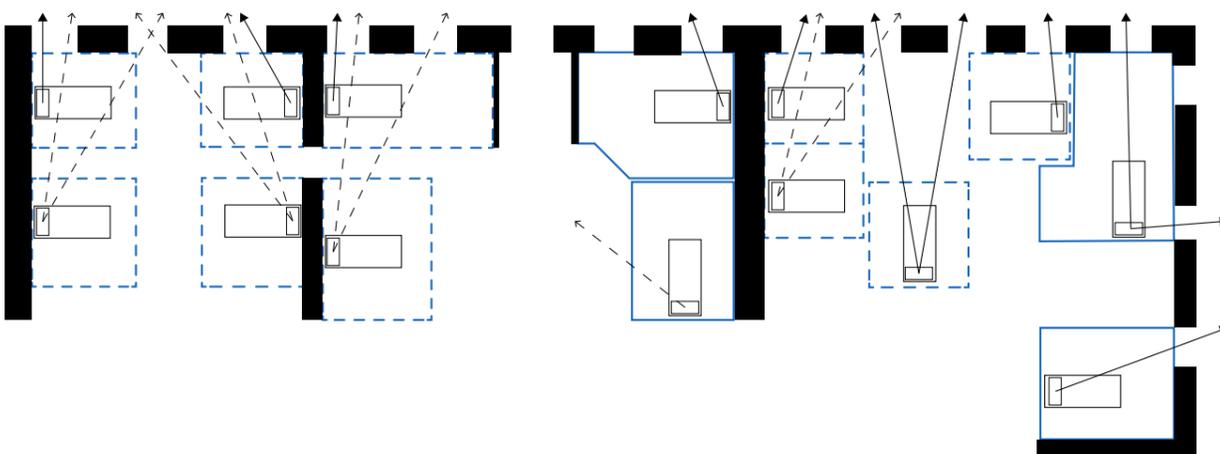


Figure 8.9. Diagram depicting access to views from area bed space

The environment was less successful in the following areas:

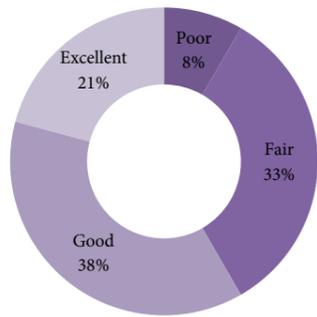
Nature

- The basement offices had a view of a brick wall and were quite dark spaces (see Figure 8.6).
- Blinds often had to be drawn in a lot of rooms to afford privacy, therefore not a lot of natural light got into these areas (see Figure 8.6).
- Access to a window within the ward could be restricted depending on bed location (see Figure 8.9), with 50% of patients feeling they had ‘poor’ access to a window with a view (See Graph 8.2).
- There were many barriers to accessing outside space which included: the patio being too narrow, so wheelchair users can get through doors but no further; and the uneven paving stones surface which is difficult to walk on, especially with reduced mobility (see Figure 8.1).
- Patients within the IPU had limited access to outside and some staff indicated that this could cause disorientation and an inability to situate themselves within the building. This was especially true if they had been brought in by ambulance and up through the building in a bed without ever repeating the journey: *‘we get patients quite a lot that say they would like to go outside but they*

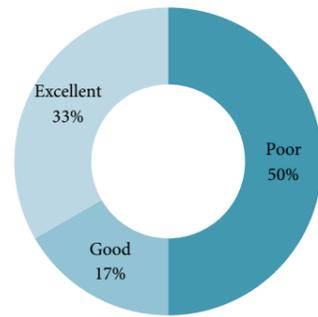
know they can’t go outside and they just kind of are accepting of that but if somebody really likes the outdoors and things like that and would like to be outside we would try and get them closer to the window... and they all find the water quite comforting’... ‘People just want fresh air, and especially if they’ve come from a hospital where they’re in air vacuumed rooms. They often talk about wanting some fresh air and just not been well enough to get out. I think being able to do that for people who are very frail and even near end of life, it’s fantastic.’

- 71% of staff and volunteers felt they had ‘poor’ or ‘very poor’ access to outside but patients felt that 67% of the time they had ‘good’ or ‘excellent’ access to outside (See Graph 8.4 & 8.5).
- Smoking within the garden patio was allowed and, as it was fairly close to the building, the smell often got into the rooms within day services.
- Staff tended not to use the outside patio area as they felt it was more for patients: *‘I like the idea of having an outside space but I don’t feel it’s my space to use, out there.’*

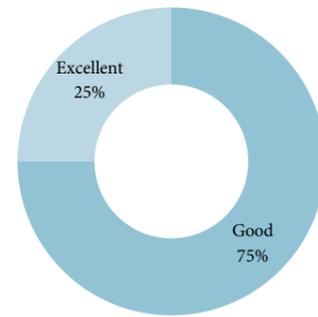
■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent
 ■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent



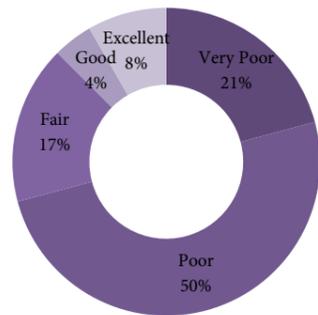
Graph 8.1. Staff & volunteer rating of access to a window with a view



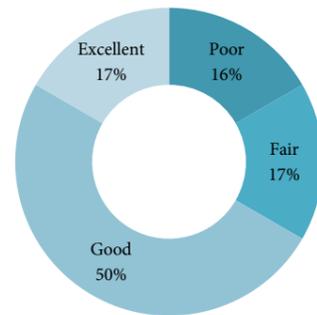
Graph 8.2. Patient rating of access to a window with a view



Graph 8.3. Patient rating of access to a view of nature from bed



Graph 8.4. Staff & volunteer rating of access to an outside area



Graph 8.5. Patient rating of access to an outside area



Figure 8.10. Photo of paving and access issue to the garden patio



Figure 9.1 Photo of seating areas within reception

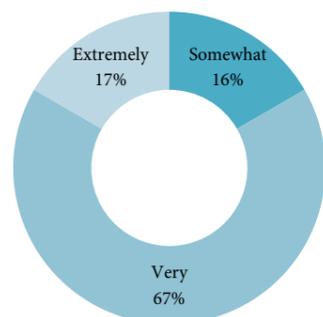


Figure 9.2. Photo of 'green' counselling room

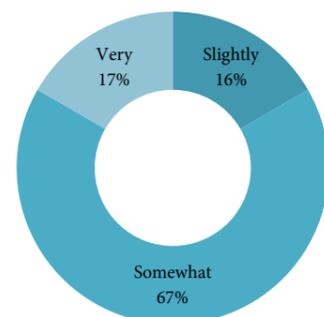


Figure 9.3. Photo of Western Club Lounge, one of the two family rooms within the IPU

■ Not at all ■ Slightly ■ Somewhat ■ Very ■ Extremely



Graph 9.1. Patient feeling of being 'at home' within the building



Graph 9.2. Patient rating of how clinical the building looks

The environment was successful in the following areas:

Appearance

- Staff felt that overall, the interior design made the hospice feel homely and welcoming, with its; neutral colour palette, domestic style décor and room scale (see Figure 9.13-9.16 for mood boards of the different areas). 84% of the patient felt the environment was 'very' or 'extremely' homely (see Graph 9.1)
- The reception was highlighted as one of the main contributors to this feeling due to the presence of someone to greet people upon entering, as well as the domestic style furniture (see Figure 9.1): *'[it] feels like a big home with lots of family'*
- Someone said about reception: *'It also lets people see, people who are visiting the hospice, how busy hospices are and what it's about, it's full of life and noise and laughter'*
- The modern décor within the counselling rooms was seen as conducive to establishing a relaxing environment and therefore helping to facilitate the emotional support provided for people within these rooms (see Figure 9.2).
- Many staff commented that the Western Club Lounge was their favourite space within the building, which was due to its modern appearance; moreover, they thought

it provided a relaxing space for families and patients out with the IPU, as well as a good space for privacy (see Figure 9.3).

Layout

- The reception was the first point of contact for everyone entering the building making it a central 'hub' for activities with something different always going on. Staff felt this created a distraction for people who were maybe waiting on an appointment and allowed them to feel connected with everyday life (see Figure 9.1).
- All the staff felt that the building was fairly contained and people could be easily located. A Fitbit study conducted to track the walking distances of staff within the Inpatient unit revealed that average distances were 4-5miles during a 12-hour shift, which fall within standards. No-one mentioned walking distances as a concern, as they felt everything was fairly close by (see Figure 9.5 & 9.6).
- 67% of patients felt that the overall building layout was 'fair', with only 29% feeling it was 'poor'. Staff and volunteers had a slightly more positive response with 50% feeling it was 'fair' and 50% feeling it was 'good' (see Graph 9.3 & 9.4). Staff and volunteers who used the IPU 53% felt that the IPU layout was 'good' or 'excellent', although 41% felt that the layout was 'poor' (see Graph 9.6).

Fitbit 3 Nurse - Friday 5th October

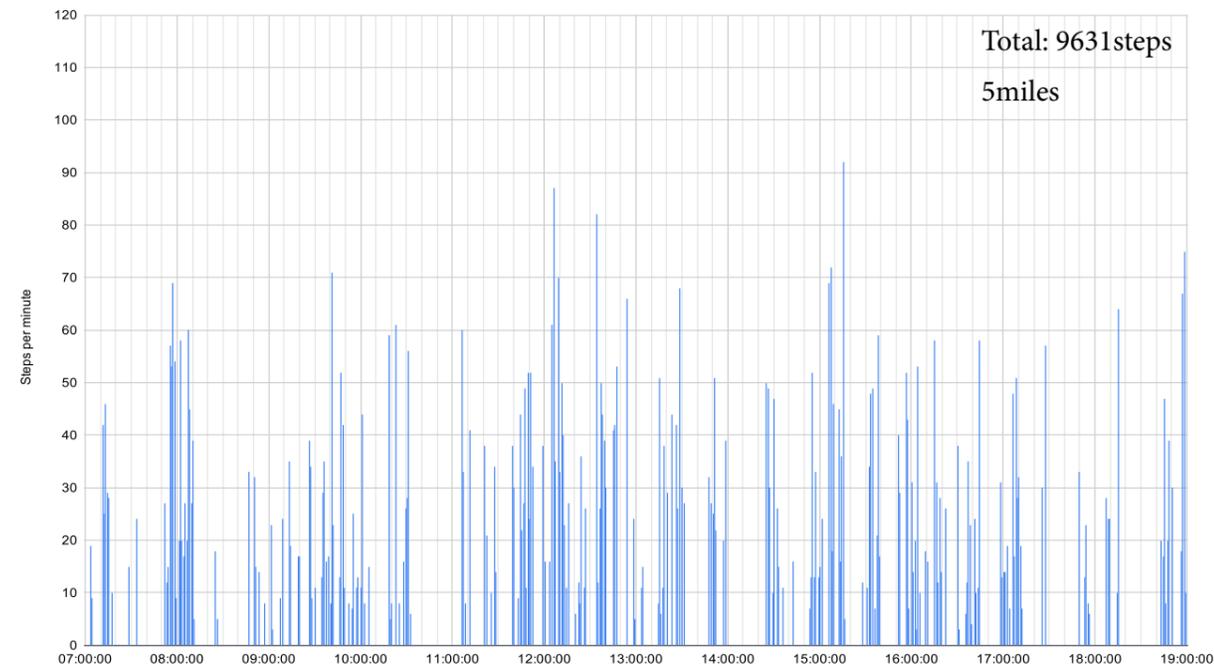


Figure 9.5. Graph showing the walking distances on the IPU during a 12-hour day shift

Fitbit 2 Nurse - Nightshift Friday 12th -Saturday 13th October

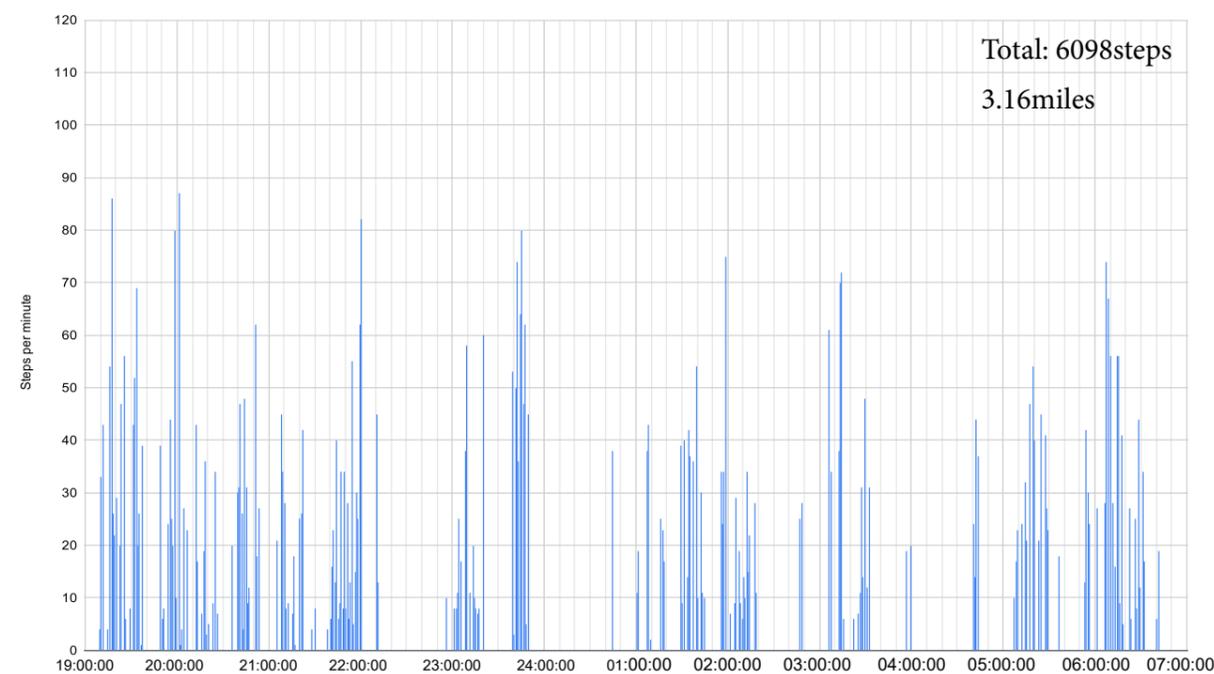


Figure 9.6. Graph showing the walking distances on the IPU during a 12-hour night shift



Figure 9.7. Photo showing the rear entrance with visibility of ambulances



Figure 9.8. Photo of the day lounge

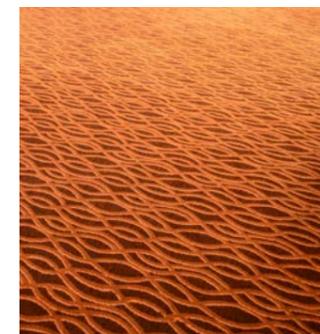
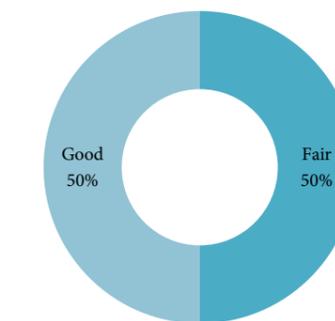
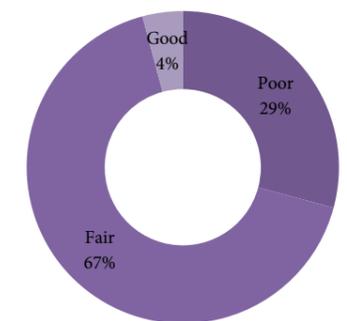


Figure 9.9. Photos of the carpet within the day lounge

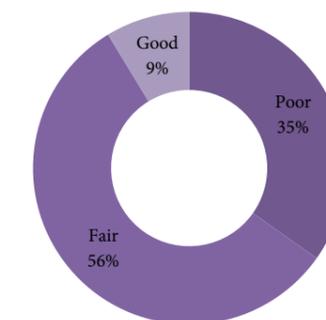
Very Poor Poor Fair Good Excellent
Very Poor Poor Fair Good Excellent



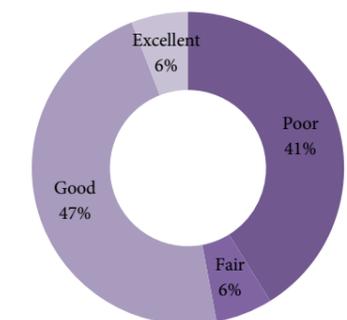
Graph 9.3. Patient rating of building layout



Graph 9.4. Staff & volunteer rating of building layout



Graph 9.5. Staff & volunteer rating of design & layout for facilitating a productive working environment



Graph 9.6. Staff & volunteer rating of IPU layout



Figure 9.10. Photos of the training room

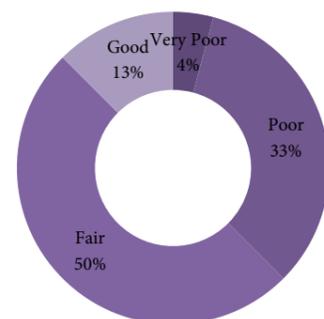


Figure 9.11. Photos of the library meeting room



Figure 9.12. Photo of office within ward 1, located behind the nurse's station.

■ Very Poor ■ Poor ■ Fair ■ Good ■ Excellent



Graph 9.7. Staff & volunteer rating of suitability of storage

The environment was less successful in the following areas:

Appearance

- Although viewed as homely, patient respondents felt the environment was 17% 'very' and 67% 'somewhat' clinical (see Graph 9.2). However, the majority of patients who completed the questionnaire were in the IPU, which was one of the more clinical areas within the building.
- Staff felt the visibility of undertakers and ambulances parked directly beside the rear entrance didn't feel very welcoming for patients and visitors (see Figure 9.7).
- Some staff felt that the old-fashioned appearance of day services could be off-putting to potential patients, making them feel that the services weren't suitable for them and thus causing them to miss out on vital peer support (see Figure 9.8 & 9.14).
- The patterned carpet was brought up as a potential issue for those with brain tumours or dementia, as they could find it difficult to walk on (see Figure 9.9).

Layout

- 35% of staff and volunteers felt that the environment was 'poor' at facilitating a productive working environment and another 56% had neutral response, that it was 'fair' (See Graph 9.5).
- Someone felt the layout didn't suit the services and couldn't be adapted any further: *'Carlton Place is an old building which we have occupied for over 30 years, during that time [we] have adapted and*

modified. Space is constrained and layouts not ideal'

- The location of the consulting room could feel isolating for the staff, potentially leaving them feeling vulnerable and unsafe in that space.
- There was a lack of meeting rooms, with the only two being the training room and the library, with staff often finding it difficult to get a booking. The route to reach them was not practical or visually effective for external visitors, as it was through the public café and then into a dark and narrow corridor to the basement (see Figure 9.10 & 9.11).
- Access to the computer within inpatient unit could be difficult as it was not always available and this was further impeded by the tight office space, meaning only one person could be in there at the one time (see Figure 9.12). Someone commented, *'if you need to get on [a computer] now, to access patient records, and then you can't get on it, and you have to wait, and that obviously interferes with providing care as well'*.
- The majority of staff and volunteers viewed the suitability of storage as positive, with only 37% feeling it was 'poor' or 'very poor' (See Graph 9.6).



Figure 9.13. Mood board for IPU



Figure 9.15 Mood board for outpatient room

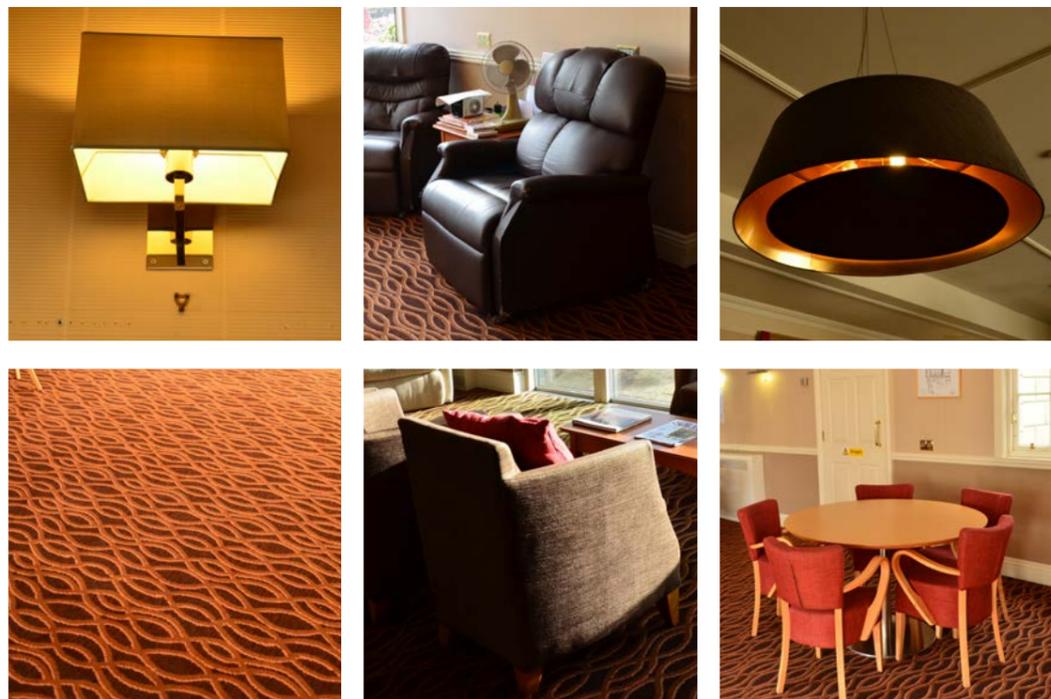


Figure 9.14. Mood board for day lounge

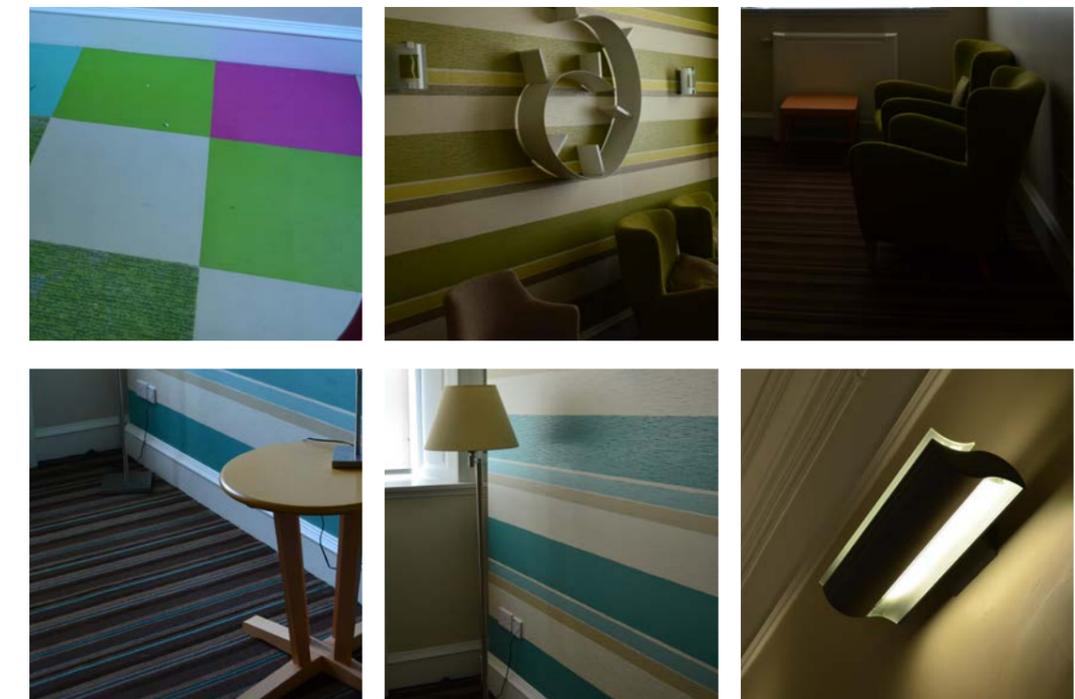


Figure 9.16 Mood board for family support services



10.0 Conclusion

<p>S Strengths</p> <ul style="list-style-type: none"> Views of nature within the IPU Good public transport links Good accessibility and visibility of staff IPU is a safe and secure environment Strong building identity and established 'homely' atmosphere 	<p>W Weaknesses</p> <ul style="list-style-type: none"> Lack of access to an outdoor area Poor parking facilities Lack of rooms for private conversation Poor temperature control and regulation Visibility of some medical equipment Route to access some services aren't visually attractive
<p>O Opportunities</p> <ul style="list-style-type: none"> Use of the day lounge out of hours for other services Good community integration and outreach 	<p>T Threats</p> <ul style="list-style-type: none"> Staff dissatisfaction with visual exposure of office room/desks No potential for expansion Cannot significantly alter existing fabric of listed building Space is not adaptable for more complex needs Ongoing maintenance costs of an older building

The methodology used to evaluate the building utilised both objective and subjective information and provided a holistic evaluation of the Prince and Princess of Wales Hospice (PPWH) environments' impact on wellbeing. While many of those interviewed commented that they felt it was the people rather than the building that impacted upon wellbeing, the data collected supports the theory that the environment has a role to play. The six categories of the framework identified areas in which to explore how different aspects of the environment can impact on wellbeing.

 In terms of choice, the single rooms were beneficial; offering patients and their families' choice, providing privacy and dignity during treatment and providing a space for establishing strong and trusting relationships with staff. There was no privacy within the wards, which could lead to confidential information being overheard and deny privacy or dignity for patients and their families. Meetings within the IPU were normally held within the family rooms and not dedicated private areas, meaning it might not feel like a safe space to share as there could be interruptions. All the routes out of the building were fairly public, which did not always afford people dignity or privacy when upset or wanting a private exit. Within the services

some of the staff areas were visually exposed – leading to having to take into consideration body language while in that space. Patients had some control over lighting within the ward but none of the lighting brightness seemed ideal. Although people had an element of control over heating and ventilation, some of the temperature controls were broken and even once activated could take a considerable amount of time for the temperature to change. Many felt that they didn't have any space to have time alone, if required.

 In terms of inclusion, the majority of design issues seemed to be down to the accessibility and poor adaptability of the building, as well as an overall shortage of spaces. This was detrimental to independence when moving around the building or when using areas which were not adaptable to specific needs. The city centre location was positive for public transport links but conversely caused many issues with parking, which was mentioned frequently as negatively impacting many aspects of wellbeing. The art services were an integral part of positively impacting wellbeing across the services in a multitude of ways due to offering people a sense of purpose, distraction and focus. The décor of The Butterfly room within the counselling areas could reduce the sense of inclusion for some that used it. The open plan

Figure 61. A SWOT analysis of Carlton Place which gives a general overview of the building

design of the day services lounge meant that there were restrictions on the type of activities that could be offered.



In terms of noise, decibel levels (dB) within the IPU could frequently exceed the level deemed ‘disturbed rest’ throughout the night, this was particularly evident within the ward. The noise in reception could sometimes cause issues in terms of staff being able to hear people on the phone; as this was the location of the switchboard it was vital they were able to listen and pass on information to the right place. Although measurements of dB levels did not indicate anything out with the norm, the perception of the levels within day services was that it could be difficult to hear due to the amount of other conversations going on. There was a lot of sound transfer between the main lounge and the side rooms, therefore, not affording a space for private conversation or a quiet area for discussions.



In terms of Indoor air quality, temperature control was a problem across the majority of the services, as well as issues with rapid fluctuation in temperatures throughout the course of the day, particularly within the ward. In general, excluding the basement rooms, there were no major concerns

over levels of relative humidity or CO2 but people’s perceptions of the air quality suggests there was a poor ventilation rate throughout the building.



In terms of nature, a major restriction of the building was lack of access to outside space. Access to nature through views within the ward could be achieved but this depended on the location of the bed space within the ward. Appreciation of both river and city views were useful in facilitating a calming atmosphere and providing a meditative outlook which could establish ‘effortless attention’. In general, there was a good level of natural light throughout the building but issues within the ward related to which bed space patients had and if there were barriers in front of the window.



In terms of design, the general impression of the PPWH at Carlton Place was that it felt welcoming, homely and non-clinical. The design of the space facilitated wellbeing, both by the reception desk being located directly at the front entrance allowing visitors to be greeted straight away and by the use of domestic-style furniture throughout giving a homely impression. The modern décor of the in certain areas was seen as conducive to

establishing relaxing atmospheres and offering distraction. However, the appearance of the rear entrance and visibility of ambulances and undertakers did not offer a welcoming entrance. The old-fashioned appearance in some areas was viewed by staff as feeling like a barrier for patients accessing the services. The wallpaper and carpet pattern was an issue for those with cognitive disorders or impairments. In terms of the layout, staff felt that most of the rooms were easy to access and close together, which made people easy to find within the building. The location of the consulting room felt isolated, which had the potential to cause an issue with feeling vulnerable in that space. Within the IPU there were issues with the accessibility of computers, either for patient care or typing up notes.

The information gathered within this report can be used as a benchmark for the evaluation of the new building at Bellahouston. In addition, the information can help inform the design of future hospice environments to positively contribute to wellbeing and therefore establish environments which will facilitate the high quality of care given throughout the palliative care journey.

Limitations

One limitation of the study was that there were no direct interviews with those

who received care within the facility, or their relatives. Due to the researcher’s experience and time limitations, NHS ethical approval could not be obtained, and meant that interviews could not be conducted with those who use the services. An attempt to mitigate this was made by asking staff their opinions, or feedback received from those who used the services about their experience of the environment. In addition, an anonymous questionnaire was issued to gather information from those who used the services. Another limitation was the small number of respondents to complete the patient and relative questionnaires; all of whom were patients and the majority within the IPU.

Bibliography

- Adamkiewicz, G. (2010) "WHO guidelines for indoor air quality : selected pollutants." Copenhagen, Denmark: World Health Organization, Regional Office for Europe. http://www.euro.who.int/__data/assets/pdf_file/0009/128169/e94535.pdf.
- Anderson, D. (2007) "The Palliative Care Unit: Does Room Design Matter?," University of Toronto Medical Journal, 84(3), pp. 183–189.
- Arif, M., Katafygiotou, M., Mazroei, A., Kaushik, A., Elsarrag, E. and others (2016) "Impact of indoor environmental quality on occupant well-being and comfort: A review of the literature," International Journal of Sustainable Built Environment. Elsevier, 5(1), pp. 1–11.
- Beauchemin, K.M. & Hays, P. (1996) 'Sunny hospital rooms expedite recovery from severe and refractory depressions.' *Journal of Affective Disorders*: 40(1-2), pp49-51. Available at: <http://www.sciencedirect.com/science/article/pii/0165032796000407> (Accessed 28.07.2017).
- Van den Berg, A. E., Maas, J., Verheij, R. A. and Groenewegen, P. P. (2010) "Green space as a buffer between stressful life events and health.," *Social science & medicine* (1982), 70(8), pp. 1203–10. doi: 10.1016/j.socscimed.2010.01.002.
- CIBSE (2011) Module 27: Indoor air quality. <https://www.cibsejournal.com/cpd/modules/2011-04/> (Accessed: 01.03.20).
- Cohen, S. R. and Leis, A. (2002) "What determines the quality of life of terminally ill cancer patients from their own perspective?," *Journal of palliative care*, 18(1), pp. 48–58.
- Diener, E. (2009) *Well-being for public policy*. Oxford: Oxford University Press.
- Drageset, J., Haugan, G. and Tranvåg, O. (2017) "Crucial aspects promoting meaning and purpose in life: perceptions of nursing home residents," *BMC geriatrics*. BioMed Central, 17(1), p. 254.
- Enes, S. P. D. (2003) "An exploration of dignity in palliative care.," *Palliative medicine*, 17(3), pp. 263–9.
- Glass, D. C. and Singer, J. E. (1972) "Urban stress: Experiments on noise and social stressors." Academic Press.
- Hartig, T., Mang, M. and Evans, G. W. (1991) "Restorative effects of natural environment experiences," *Environment and behavior*. Sage Publications Sage CA: Thousand Oaks, CA, 23(1), pp. 3–26.
- HSE (1992a) Sick building syndrome: Guidance for specialist inspectors. https://www.hse.gov.uk/foi/internalops/ocs/300-399/oc311_2.htm (Accessed: 01.03.20).
- HSE (1992b) Workplace Health, Safety and Welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice and Guidance. HM Stationery Office.
- Kaplan, S. (1995) "The restorative benefits of nature: Toward an integrative framework." *Journal of Environmental Psychology*, 15(3), pp169-182. Available at: <http://www.sciencedirect.com/science/article/pii/0272494495900012> (Accessed 19.07.2017).
- Kaplan, R. & Kaplan, S., (1989) *The Experience of Nature. A Psychological Perspective*. Cambridge University Press, Cambridge, England.
- Kolokotsa, D., Kalaitzakis, K., Stavrakakis, G., Sutherland, G. and Eytaxias, G. (2001) "Local operating networks technology aiming to improve building energy management system performance satisfying the users preferences," *International journal of solar energy*. Taylor & Francis, 21(2-3), pp. 219–242.
- Leichtentritt, R. D. and Rettig, K. D. (2000) "The good death: reaching an inductive understanding," *Omega- Journal of Death and Dying*. SAGE Publications Sage CA: Los Angeles, CA, 41(3), pp. 221–248.

- Naderi, J. & Shin, W. (2008) 'Humane Design for Hospital Landscapes: A Case Study in Landscape Architecture of a Healing Garden for Nurses'. *Health Environments Research & Design Journal*, 2(1), pp82-119. Available at: <http://journals.sagepub.com/doi/pdf/10.1177/193758670800200112> (Accessed 15.07.2017).
- NHS (2019) '5 steps to mental wellbeing', NHS, 6 November. <https://www.nhs.uk/conditions/stress-anxiety-depression/improve-mental-wellbeing/> (Accessed 05.07.2019).
- Oberti, I. (2017) "Environmentally Friendly and Low-Emissivity Construction Materials and Furniture," in Capolongo, Stefano (ed.) *Indoor air quality in healthcare facilities* / [internet resource]. Cham, Switzerland : Springer, pp. 73–81.
- Phiri, M. (2014) "Health Building Note 00-01 General design guidance for healthcare buildings," Department of health.
- Pretty, J. (2004) 'How Nature Contributes to Mental and Physical Health'. *Spirituality and Health International*, 5(2), pp68–78. Available at: https://www.researchgate.net/publication/240033610_How_nature_contributes_to_mental_and_physical_health (Accessed 02.07.2017)
- Steptoe, A., Deaton, A. and Stone, A. A. (2015) "Subjective wellbeing, health, and ageing," *The Lancet*. Elsevier, 385(9968), pp. 640–648.
- Triggle, N. (2016) 'Gardening and volunteering: The new wonder drugs?', *BBC News*, 13 June. Available at: <http://www.bbc.co.uk/news/health-36482370> (Accessed 05.07.2017).
- Ulrich, R. S. (1984). 'View through a window may influence recovery from surgery' *Science*, 224(4647), pp420–421. Available at: <http://journals.sagepub.com/doi/s/10.1177/193758670800100306?journalCode=he-ra> (Accessed 29.07.2017).
- Ulrich, R.S., Zimring, C., Quan, X. & Joseph, A. (2006). 'The environment's impact on stress'. Chapter 3 in Marberry, S.O. (ed.) *Improving healthcare with better building design*. Chicago: Health Administration Press: pp37–61.
- Ulrich, R.S, Zimring, C., Quan, X., Joseph, A. & Choudhary, R. (2004) 'The role of the physical environment in the hospital of the 21st century: A once-in-a-lifetime opportunity'. Concord, CA: The Center for Health Design. Available at: https://www.healthdesign.org/system/files/Ulrich_Role%20of%20Physical_2004.pdf (Accessed 29.07.2017).
- Ulrich, R.S., Zimring, C.P., Zhu, X., DuBose, J.M., Seo, H.-B., Choi, Y.-S., Quan, X. & Joseph, A. (2008) 'A Review of the Research Literature on Evidence-Based Healthcare Design'. *Health Environments Research and Design Journal*, 1(3), pp61-125. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/21161908> (Accessed 29.07.2017).
- Walch, J. M., Rabin, B. S., Day, R., Williams, J. N., Choi, K. & Kang, J. D. (2005) 'The effect of sunlight on post-operative analgesic medication usage: A prospective study of patients undergoing spinal surgery'. *Psychosomatic Medicine*, 67(1), pp156–163. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/15673638> (Accessed 29.07.2017).
- WHO (1948) "Constitution of the World Health Organization."
- Zolkefli, Y. (2017) "Evaluating the Concept of Choice in Healthcare," *The Malaysian journal of medical sciences: MJMS*. School of Medical Sciences, Universiti Sains Malaysia, 24(6), p. 92.

'the aim at all times is to enhance the quality of life... the building itself part of the therapy'

Dr Anne Gilmore, founder of the PPWH

