

**Northern Lincolnshire & Goole NHS FT
Diana, Princess of Wales Hospital**

Emergency Department

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01 Introduction

Purpose of the Document

This Design and Access statement has been prepared on behalf of the Northern Lincolnshire & Goole NHS FT in support of a planning application for the erection of a new Emergency Department at Diana Princess of Wales Hospital.

This statement will demonstrate how the proposals will result in the development of the site in a way that addresses the specific issues relative to the actual site and its neighbouring uses. This section introduces the project, the development site and the client strategic aims and objectives.

The statement continues by outlining both constraints and opportunities in the local development context. The report then examines the way this information has been used to formulate key design principles, showing how these principles have been applied to the design of the submitted proposed use, amount of development, layout of the scheme, access to the development, scale, massing and appearance .

Strategic Case

Demands on Urgent and Emergency Care Services in Grimsby have risen significantly over recent years. This has been driven by increased attendances to the Emergency Department (ED), a higher acuity of patients and more patients regularly accessing emergency interventions. Whilst there has been the development of more innovative

clinical service models (e.g. ambulatory and frailty models) for the delivery of urgent and emergency care aimed at providing quicker assessment of patients, the infrastructure and physical environment required for these to operate effectively is not in place. This is limiting the full realisation of the patient experience and clinical benefits.

There is a requirement to develop facilities within the region to improve the urgent care infrastructure to support and enable the roll out of standardised, urgent and emergency care. This improvement will include two key developments at Diana, Princess of Wales Hospital:

- New, purpose built Emergency Department
- Refurbishment of existing accommodation to create a new Acute Assessment Unit (AAU)
- New infrastructure to service the new additions, such as an additional car park and substation.

The current clinical accommodation is outdated nor fit for purpose; patients are being admitted to specialty beds that only require observation or further assessment but are not critically in need of specialty secondary care input, meaning the bed availability for those that do is compromised. This effects patient flow and impacts on long waits in the emergency department. Until suitable beds are identified, often with a change of ward for other patients, that subsequently lead to a change in management plan and therefore longer non-elective length of stay.

01 Introduction

Clinical Case: Urgent and Emergency Care

Emergency Department:

The new build element of the project will be a new Emergency Department offering access 24 hours a day, 365 days a year. ED staff will include paramedics, ED nurses, diagnostic radiographers, ED reception staff, porters, healthcare assistants and emergency medicine doctors. However, the ED patients will initially be triaged and then directed through to either ED, AAU or discharged. The ED will have a suite of resuscitation rooms, and a clinical zone with flexible zones for major and minor treatments. The waiting time target for patients in the ED is 4 hours from arrival to admission, transfer or discharge.

The current ED is undersized by ~50% for the patient population and number of annual patient visits.

Urgent Treatment Centre:

Hosted within the ED, the Urgent Treatment Centre is for minor ailments and injuries such as cuts and bruises, infections, strains, rashes and burns. This service exists currently, but will benefit from the increased quality of accommodation.

Acute Assessment Unit:

Provision of the new ED unlocks the potential for further redevelopment of the Urgent and Emergency Care pathway. Alongside the ED, the planned development of an Acute

Assessment Unit (AAU) allows the hospital to improve the complete urgent care model. The AAU offers rapid access to assessment, prompt review and real time post-take for patients presenting with specific problems. The AAUs core functions are;

- Acute Assessment
- Same Day Emergency Care (SDEC)
- Frailty

Same Day Emergency Care (SDEC):

Rapid diagnosis and management overseen by senior clinical decision makers at the 'front door' enable the identification of a patient who can be assessed and treated on the same day and who would have otherwise been admitted.

Frailty:

Frail and elderly patients will be reviewed by the frailty service which comprises of a MDT led by a care of the elderly, Acute Physician / Nurse Practitioner / Social Services and Therapies. This delivers comprehensive frailty assessment at the front door within the Emergency Department, Ambulatory Care and Frailty seated areas, and reaches into the Acute Assessment Unit and Short-Stay area. This will be linked to integrated care in the community.

Short Stay:

Short-Stay will be for patients who will be admitted and staying in for longer than 24 hours and then discharged within 72 hours.

01 Introduction

Substation

The new build Emergency Department will add circa 300kVA of additional load to the Hospital's electrical infrastructure. An electrical load of that magnitude is beyond the capacity of the existing low voltage infrastructure. The electrical infrastructure is to be reinforced with the addition of a new substation; incorporating a new transformer, standby generator and LV switch panel.

The main permanent components of the proposed substation will include:

- 1000Kva Containerised Generator
- LV Switch panel
- 1000Kva External Transformers
- Manifold
- Paving and soft landscaping to the proposed plant from the existing site

As part of the proposal, electric charging points and bike shelters will be included throughout the site to encourage sustainable travel methods.

Carparking

As outlined in the strategic case, the increase in clinical space will allow the hospital to capacitate larger numbers of admitted patients. The proposed ED and substation will be built upon an existing carpark causing a reduction in carparking spaces. In order to accommodate with the new changes, additional car parking will be introduced to facilitate the increased patient numbers and to relocate the previously lost spaces.

02 Planning Statement

Planning Guidance & Consultations

Initial pre-application discussions between the Design Team and North East Lincolnshire Council planners have taken place with a view to explaining the development intentions, including how the new Emergency Department will respond to the wider hospital context. Discussions also included agreeing the planning validation content for this application.

Application Details

This Application seeks the erection of a new Emergency Department with associated, enclosed plant at first floor, a new entrance lobby to the main hospital, a retail space, a substation and a new modular deck of car parking.

The hospital site boundary is 14.59 ha.

The Emergency department will have 2 levels, with emergency clinical accommodation on the ground floor and a plant some with associated accommodation on the roof.

The modular carparking will consist of 2 floors with 122 carparking spaces on the ground floor and 112 carparking spaces on the first floor.

The total car parking module deck GEFA = 3118.5m²

As part of the sustainable travel system, cycle stores and electrical vehicle charging points will be included within the scheme.

The proposed substation will consist of 2 floors, with the main permanent components including a Containerised Generator, LV Switch panel, External Transformers and a manifold. The ground floor will be securely contained housing the generator, transformer and manifold accommodation. The first floor will house the LV switch room.

The total substation GEFA = 131.8m²

02 Planning Statement

The following architectural design drawings accompany this report:

General Site Drawings:

- UECDPW-PHS-ZZ-ZZ-DR-A-07001 SITE LOCATION PLAN
- UECDPW-PHS-ZZ-ZZ-DR-A-07002 EXISTING BLOCK PLAN
- UECDPW-PHS-ZZ-00-DR-A-07004 EXISTING FLOOR PLAN - LEVEL A
- UECDPW-PHS-ZZ-01-DR-A-07005 EXISTING FLOOR PLAN - LEVEL B
- UECDPW-PHS-ZZ-ZZ-DR-A-07006 PROPOSED BLOCK PLAN

Emergency Department Drawings:

- UECDPW-PHS-ZZ-ZZ-DR-A-07003 EXISTING ED SITE LAYOUT
- UECDPW-PHS-ZZ-ZZ-DR-A-07007 PROPOSED ED SITE LAYOUT
- UECDPW-PHS-Z1-00-DR-A-07008 PROPOSED ED FLOOR PLANS - GF
- UECDPW-PHS-Z1-01-DR-A-07009 PROPOSED ED FLOOR PLANS - 1F
- UECDPW-PHS-Z1-ZZ-DR-A-07101 EXISTING ED ELEVATIONS
- UECDPW-PHS-Z1-ZZ-DR-A-07102 PROPOSED ED ELEVATIONS

Substation Drawings:

- UECDPW-PHS-Z6-ZZ-DR-A-07001 PROPOSED SUB-STATION FLOOR PLANS
- UECDPW-PHS-Z6-ZZ-DR-A-07002 PROPOSED SUB-STATION ELEVATIONS
- UECDPW-PHS-Z6-ZZ-DR-A-07003 PROPOSED SUB-STATION SITE LAYOUT
- UECDPW-PHS-Z6-ZZ-DR-A-07004 EXISTING SUB-STATION SITE LAYOUT

Car Park Drawings:

- UECDPW-PHS-Z4-ZZ-DR-A-07013 PROPOSED CAR PARK FLOOR PLANS
- UECDPW-PHS-Z4-ZZ-DR-A-07014 PROPOSED CAR PARK ELEVATIONS

02 Planning Statement

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Local Development Framework

Policy 22: Good design in new developments

This policy identifies a number of ways that new design should provide 'quality', including:

- Thorough consideration of the site context
- Climate change resilience
- Sustainable Transport
- Accessibility and social inclusion
- Reduction of crime and fear of crime
- Protection of heritage assets
- Efficient use of land
- High quality public realm

Other sections in this document will describe in detail how the scheme addresses each of these points.

Policy 38: Parking

"Where private and/or public on-site parking for public use is to be provided at least 5% of parking bays, should be designed, set out and reserved for people with mobility impairments. Such parking bays should be located as close to the main access to the building as possible."

"Where 100 or more parking places are to be provided to serve a commercial development, a minimum of three charging points should be provided for electric vehicles."

The Transport Assessment addresses these items in detail. Accessible parking spaces have been relocated closer to the building. The overall parking capacity is retained, and charging points will be provided for electric vehicles

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02 Planning Statement

NHS Long Term Plan

Whilst improving out-of-hospital care could have a huge impact on local health, the NHS Long Term Plan also sets out the key improvements needed for Emergency Care:

- Introduce comprehensive clinical streaming at the front door of A&E departments, so patients are directed to the service best suited to their needs on arrival;
- Implementing Same Day Emergency Care (SDEC), (also known as ambulatory emergency care), increasing the proportion of people who are not admitted overnight in an emergency;
- Reduced the number of people delayed in hospital – reducing the length of stay of patients who remain in hospital for more than 21 days, and freeing up nearly 2,000 beds;
- Rapid growth in the number of whole time equivalent A&E consultants
- By expanding and reforming urgent and emergency care services the practical goal is to ensure patients get the care they need fast, relieve pressure on A&E departments, and better offset winter demand spikes

The scheme submitted here address all these critical points and provides a key opportunity to address emergency care provision for the next 30 years.

National Planning Policy Framework

11. Making effective use of land
“make more effective use of sites that provide community services such as schools and hospitals, provided this maintains or improves the quality of service provision and access to open space. “

The Diana, Princess of Wales Hospital site has been developed over a period of nearly 40 years, although historic parts of the site were built in the late 1800s. Although space is still available for development around the perimeter of the site, Emergency Care is central to the acute hospital model and requires close connections with other departments, dictating a central location. This development makes use of available land by reconfiguring car parking, vehicle routes and phased development to unlock effective use of the site.

03 Statement of Community Involvement

Public Engagement

The Trust have arranged several different communication streams to ensure that interested members of the public can engage with the design process.

News of the proposed new work was published on the Trust Facebook page, gaining over 6.8k views in the first 24 hours.

A dedicated web portal was created to host information about the schemes, and provide an opportunity for feedback: <https://www.nlg.nhs.uk/patients/feedback/plans-for-two-new-aes/>

The Trust also held public engagement meetings on site, with information about the scheme on television screens and printed boards. Key members of the Trust team were on hand to answer queries.

Comments Received

Across all the methods of engagement, the feedback very positive. Critical focused on one key areas: the impact on car parking

Feedback Provided

The Director of Estates & Facilities responded to each social media comment individually, demonstrating that all views are welcomed and taken seriously.

The concerns about the demolition of the Administration Building are discussed on page 07 as part of the Heritage Statement.

The design team have prepared a robust Transport Assessment which addresses the concerns relating to traffic and parking; this document is included in the main submission.



03 Statement of Community Involvement

Stakeholder Consultation

In addition to public engagement, the Trust has carried out an extensive Outline Business Case (OBC) study for this proposal to evaluate the clinical and financial options open to them. As a part of this process there have been weekly consultations with Trust stakeholders and specialist consultants, including

- Clinical leads
- Trust Estates
- Facilities Management
- Infection Prevention and Control
- IT
- Patient Transport Services
- East Midlands Ambulance Service
- Fire Consultants

The stakeholder consultation has assisted with all aspects of the development, ensuring that the proposed development functions internally, connects to the wider hospital, and properly supports the delivery of emergency care services to the Grimsby area.

Design Team

The design has been developed by a multi-faceted designed team comprising a wide range of specialist consultants:

Project Manager	WT Partnership
Cost Advisor	WT Partnership
Contractor	Kier Health
Architect	P+HS Architects
Civil/Structural	Mott MacDonald
Building Services	Mott MacDonald
Principal Designer	WT Partnership



QR code linking to the fly-through video created to accompany public/stakeholder consultation

03 Location & Context

Site Location

The location of the proposed development is on the existing hospital site. Diana, Princess of Wales Hospital is a busy acute hospital, located off Scartho Road (East) and Second Avenue (West). The DPW Hospital is situated on the south edge of Grimsby.

The site is currently used as parking and is relatively level to the finished floor level of the adjacent buildings.

The proposed extension will be built on the north side of the existing hospital, immediately outside the existing Emergency Department and adjacent to the main entrance.



Existing aerial view from Google Earth identifying the proposed site in boundary in red.

05 Heritage Statement

History of the Site

Although the Diana, Princess of Wales Hospital opened in 1983, the site has a longer history.

Towards the northern end of the hospital site are historic buildings of the Grimsby Union Workhouse, opened in 1894. Designed by architect HC Scaping, the buildings were modelled after a pavilion set in landscaped grounds.

The collection of buildings still remaining includes the Workhouse admin block, clock tower and entrance block.

As the new hospital expanded, the Workhouse buildings were gradually surrounded by sprawling development. This changed in the last few years when a number of the surrounding buildings were demolished and new staff parking was arranged around the historic buildings.

None of the Workhouse buildings are of High (national) Grade I, II* or Medium (National Grade II) listed buildings or structures identified. They have no statutory protection but have been identified for local listing.



05 Heritage Statement



View towards the Workhouse from the proposed drop-off/accessible parking exit route

Assessment of Impact

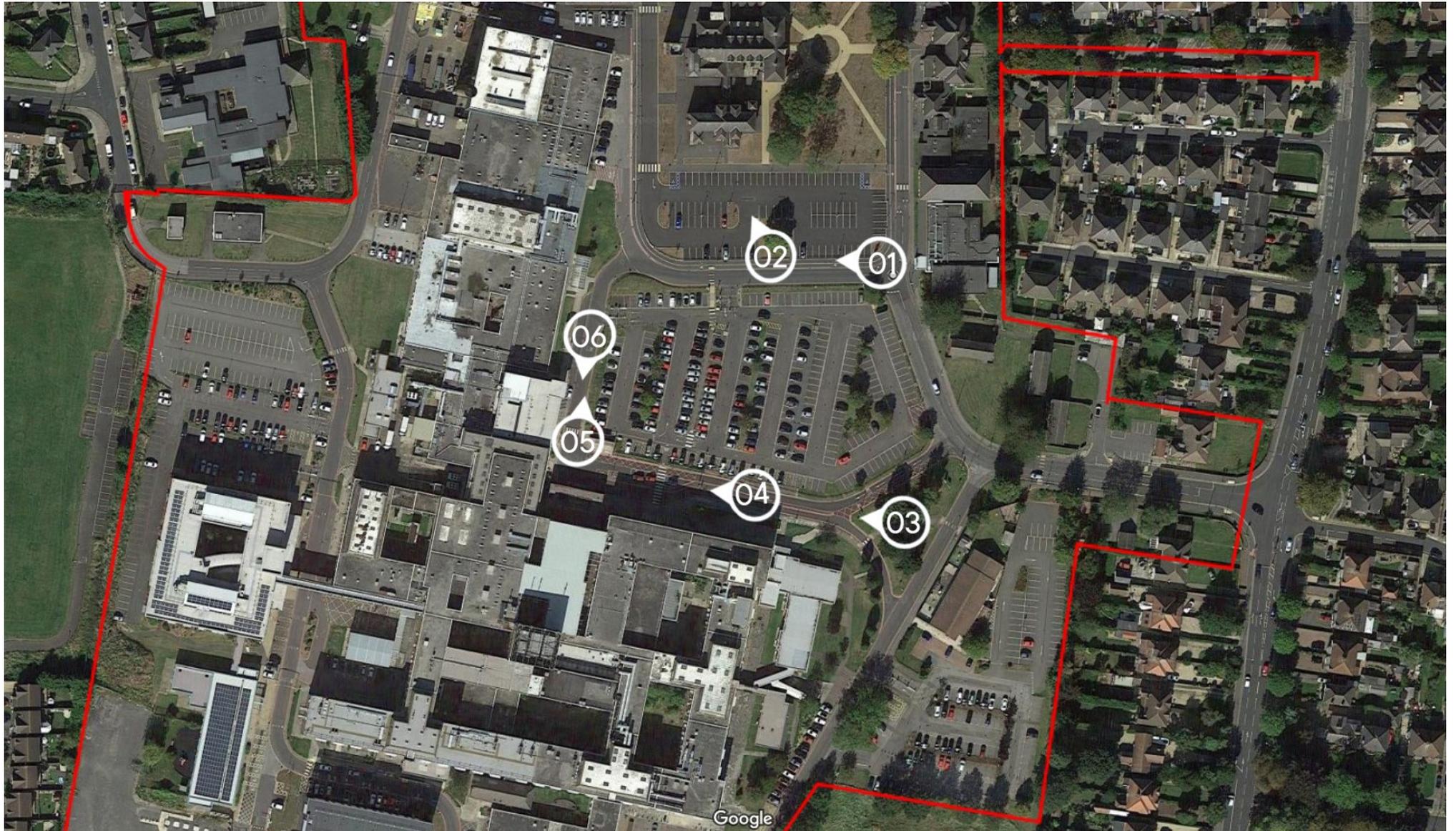
The new ED will be positioned approx. 80m from the Workhouse, measured at the closest point. Cars using the one-way drop-off look past the front of the new department will have a view towards the Workhouse as they leave the site. Views of the Workhouse from the first and second floor of the main hospital may be impeded to some extent.

Views from the Workhouse towards the hospital will see the ambulance drop-off and canopy, plus one elevation of the new deck car park. The elevation facing the new buildings is a secondary elevation with few windows.

Mitigation of Impact

On balance the impact on the Workhouse heritage asset is considered minimal, due to the distance between the buildings and clear views to/from the workhouse from most positions on the site. No specific mitigation is considered necessary.

04 Site Photographs



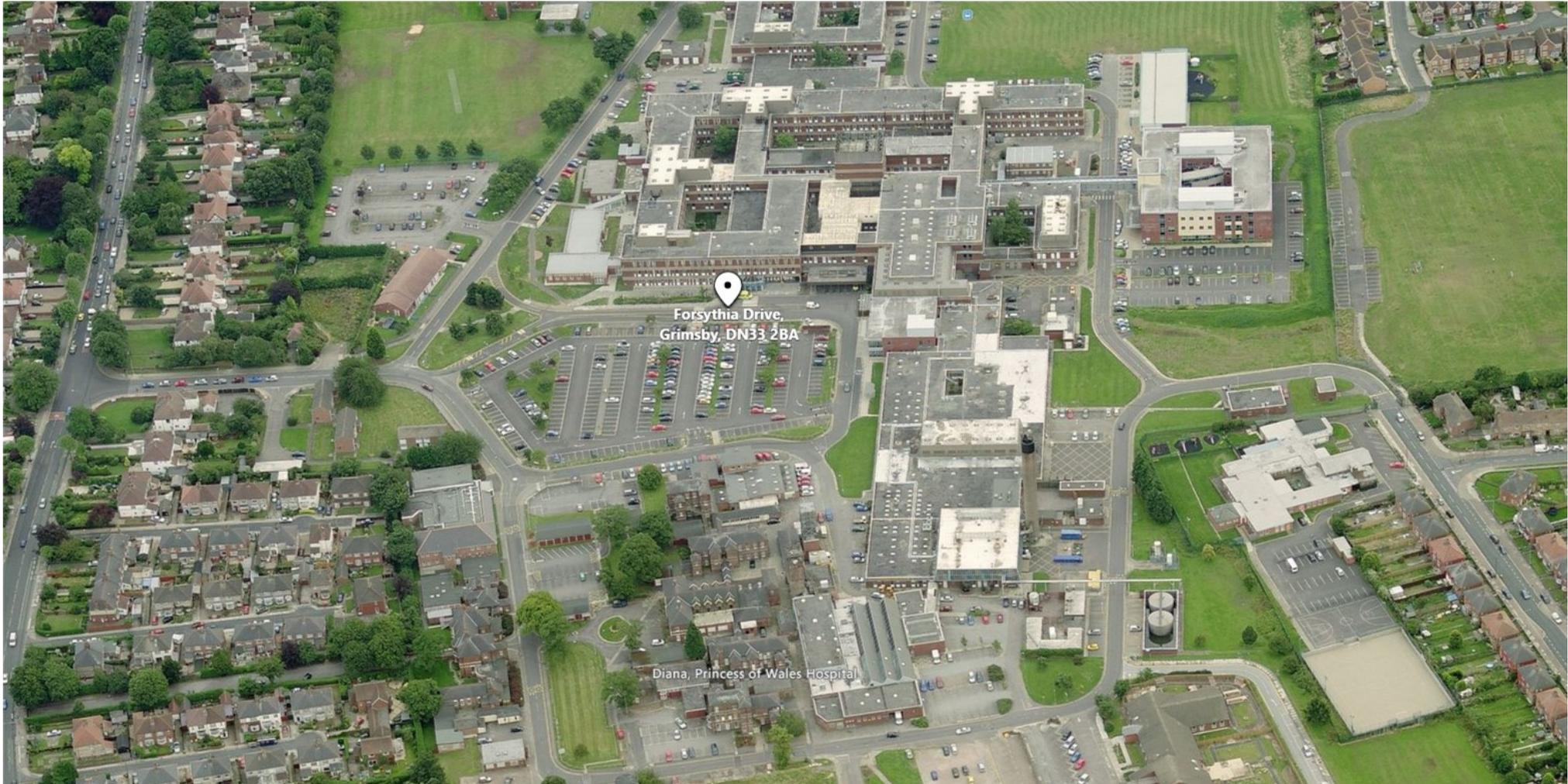
04 Site Photographs



04 Site Photographs



04 Site Photographs



05 Site Characteristics & Constraints



Constraints

- Retain existing car parking capacity
- Retain safe and functional Ambulance Drop-Off all throughout construction.
- Create and maintain functional link between new ED and hospital.
- Ambulance and Visitor traffic flow to follow existing principles. Rec and blue light flows to be separated.

Opportunities

- Opportunity to create new Hospital frontage, improve aspect & identity.
- Transform existing hospital approach in to a welcoming landscaped area. Enhance place making.
- New modern and futuristic emergency department for DPoW Hospital.
- Opportunity for artwork integration and the creation of a healing environment.



- Ambulance Flow
- Visitor for Drop Off Flow
- Visitor for Car Park Flow

06 Brief

Use

The application covers a new Emergency Department, hospital entrance, retail space, substation and modular car park deck. Collectively, these require an additional, gross external floor area of nearly 6165sqm. The Use Class of the internal areas is stated below:

Emergency Department	Use Class E(e)
Retail space	Use Class E(b)

Amount

The Trust have carried out data modelling and detailed health planning to assess the size of the new department. The assessment confirmed that the existing department is significantly under-sized for the patient population.

The new department is therefore larger than existing, rising from approx. 1250sqm (existing area) up to 2300sqm. (proposed area) This ensures that the new department will provide fit-for-purpose accommodation which meets the latest NHS guidance and enables the clinical team to improve the quality of care and efficiency of treatment.

The construction of a new department provides the opportunity for the Trust to redesign the main entrance to the hospital, providing greater accessibility and connectivity whilst enhancing the appearance. Shell space for a new retail unit will be created adjacent to the new entrance, formed

from the space between ED and the existing hospital façade.

The site for the new building requires a reconfiguration of the existing car parking on site. A new, modular deck car park will be installed to retain the majority of the parking capacity. As part of the proposal, electric charging ports and bike shelters will be included throughout the site to encourage sustainable travel methods. A sequence of alterations around the rest of the estate will ensure no net loss of spaces, following a strategy of improvements detailed in the Transport assessment.

In order to sustain the additional electrical load to the Hospital's electrical infrastructure, a new substation will be installed to capacitate this. This will be located adjacent to the proposed ED department due to its easy maintenance access from the hospitals loop road and its close proximity to the proposed Emergency Department.

Opening Hours:

By its nature, the Emergency Department is required to be open at all times, 24 hrs a day, 365 days a year.

07 Scale & Massing

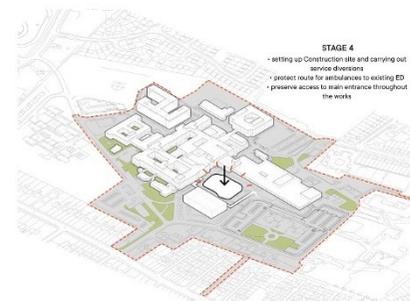
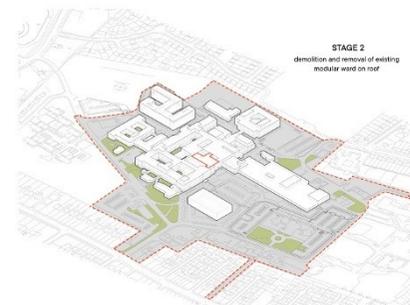
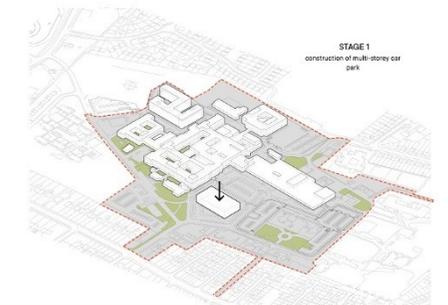
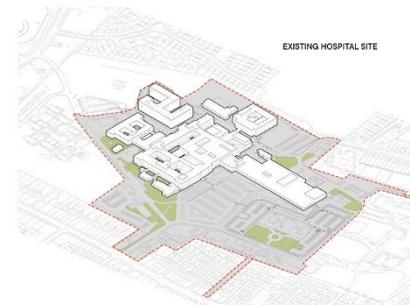
The proposed Emergency Department is predominantly single-storey, with an area of enclosed plant on the roof. The design team commissioned a 3D model of the site and context to explore how the new building footprint and massing will fit within the surrounding built environment.

As an acute hospital department, the building is highly serviced and the height of the building takes into account the ideal clinical ceiling heights, required service zone, a structural zone which minimises internal columns, and a parapet around the roof to allow safe maintenance. This generates an overall parapet height of nearly 6m from finished ground floor level.

The enclosed plant room is set back from the front parapet to reduce the apparent height of the building.

The proposed carpark is 2 storeys high. The carpark deck is to be located east of the proposed ED site above the existing carpark, this is due to the limited space constraints of the hospital site. The massing has been kept low and the footprint is stepped to avoid blocking views and access to the hospital entrance. Another factor determining the massing is the number of required and relocated parking spaces needed to support the hospital.

The substation footprint is stepped to avoid blocking views of the main ED Department. Due to its nature the building is highly serviced and the height of the substation takes into account the ideal service heights and structural zone required for the electrical infrastructure.



Exploratory sequencing diagrams, using massing model to explore site strategy

09 External Appearance

Just as the internal arrangement of the building has provided an opportunity to improve emergency care delivery for the Trust, the external appearance provides an opportunity to raise the quality of the approach and entrance to the hospital.

After considering a wide range of materials, the palette has been chosen to provide an inviting and forward looking emergency department.

The main elements of façade have been designed with a high-quality cladding system with crisp, clean aesthetic. The cladding sits on top of a masonry plinth, with feature LED whilst high level windows to the Resuscitation Bays provide relief and give a rhythm to the long elevation.

The prominent, northern elevation includes the ambulance bays and canopy, which requires a robust, functional finish. The masonry plinth therefore extends full height in this area, up to the underside of the canopy.

Due to its location being close to the main hospital entrance and adjacent to the hospital loop road, the substations palette has been chosen to compliment the adjacent emergency department. The cladding sits on top of a masonry plinth, with a material palette that follows the proposed ED department. The substation will therefore act as a playful and complimentary design to the adjacent ED department. A secure fenced perimeter will be established to protect the upper floor from trespassers.

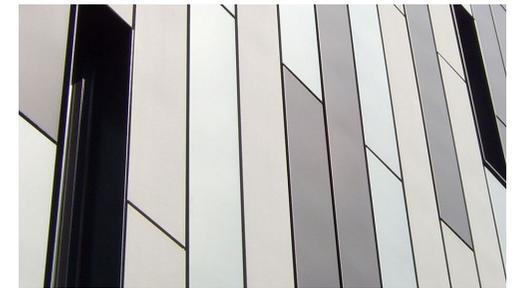
The car park has been designed to follow the same palette, but is designed with perimeter fins. This design maintains direct light into the car park whilst screening the oblique views for visitors entering the site.

The long stay cycle shelters will be encompassed in high secure mesh panels with a twin mesh double gated entrance.

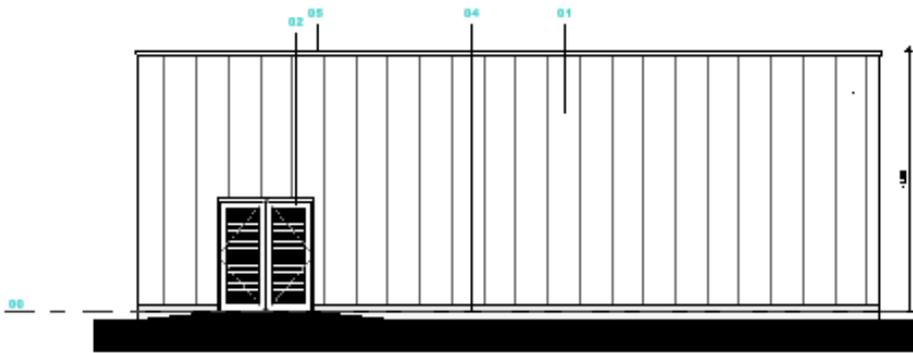
Soft and hard landscaping will be essential to the scheme in order to create access routes to and from site. Landscaping choices will be low maintenance with the intention to maintain pedestrian routes from the south of the site. This will be clearly defined and well lit and constructed from firm, durable and slip resistant material.



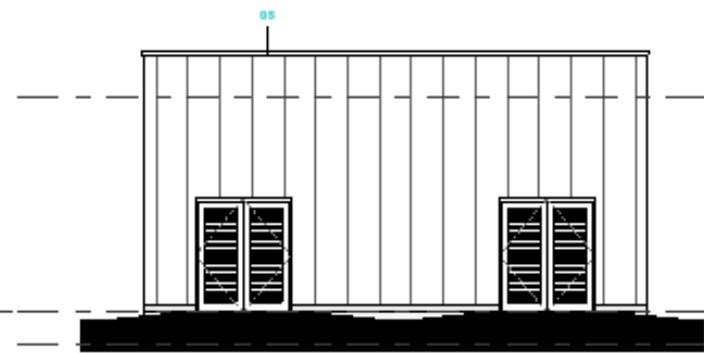
Precedent images, showing similar materiality to the proposed scheme



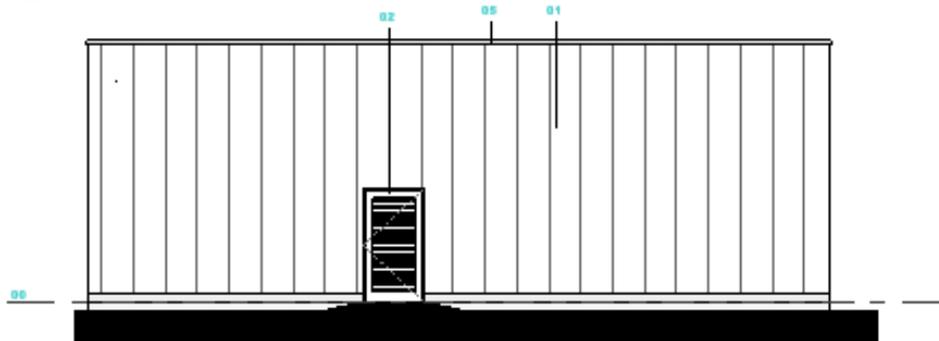
09 External Appearance



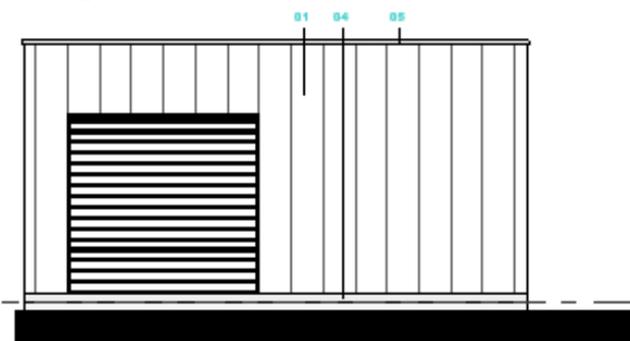
1: BUILDING ELEVATION 1
1:50



2: BUILDING ELEVATION 2
1:50



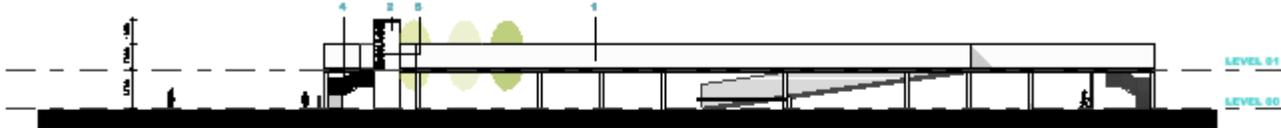
3: BUILDING ELEVATION 3
1:50



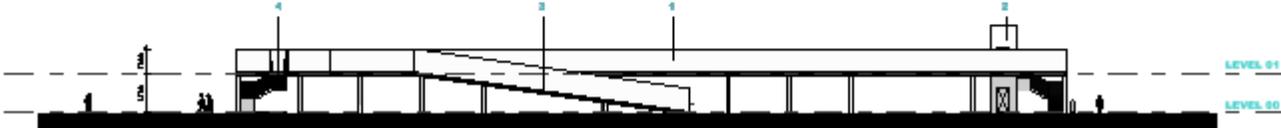
4: BUILDING ELEVATION 4
1:50



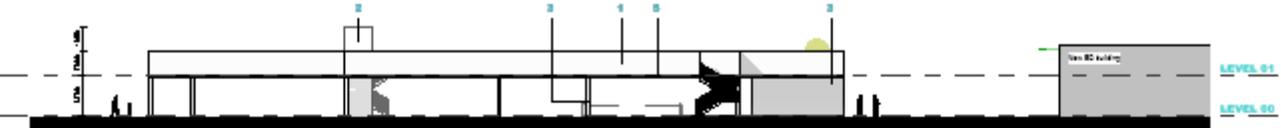
09 External Appearance



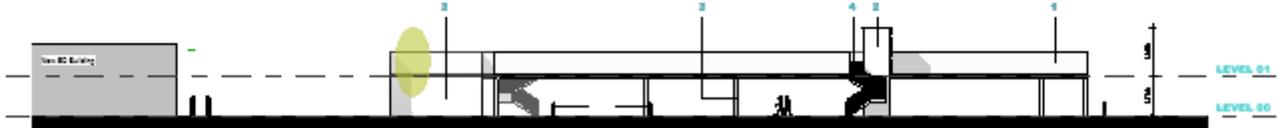
1: EAST ELEVATION
1:200



2: WEST ELEVATION
1:200



3: NORTH ELEVATION
1:200



4: SOUTH ELEVATION
1:200

09 External Appearance



1: EAST ELEVATION
1:200



2: WEST ELEVATION
1:200

09 External Appearance



10 Access

External Access

The design of the site will promote free movement around and through the site for all, including disabled, frail or older people.

All pedestrian routes will be cleared defined and well lit. Access routes will be constructed from firm, durable and slip resistant material.

Accessible parking has been relocated so patients/visitors using these spaces will no longer have to cross a road and blue-light route.

Public parking is provided in the reconfigured, external car park, which now includes a first floor deck to maintain capacity. Stairs and a lift will provide access down to ground floor, and a new road crossing provides direct access to the hospital entrance. The replanned blue-light route increases safety of this crossing.

Drop-off spaces are provided on a one-way loop in front of the hospital, and the bus will follow the same route.

The new entrance lobby features sliding doors with a level threshold, an improvement on the existing swing doors. The lobby will be fitted with extensive entrance matting to reduce the risk of slipping on vinyl flooring within the main hospital or emergency department.

Internal Access

The design of the building is based on a fully inclusive environment that allows access to everyone regardless of disability. As such, the design is based on the current recommendations of the 2010 Equality Act.

The internal floor finishes to all areas of the building near the entrance will be slip-resistant, whilst ensuring that the movement of wheelchairs is not impeded. Visual contrast will be provided to doorways, edges and changes of surface, whilst dementia needs will be considered in the choice of individual finishes.

A bespoke wayfinding sign system will be developed to assist patients and visitors understand the treatment process in the department and identify toilet/washing facilities. Providing clear information to patients can help reduce aggression and make a safer environment for all.

12 Sustainability

The proposed scheme is designed from the outset to meet the client's sustainability goals. The scheme will be assessed under the BRE's Environmental Assessment Method (BREEAM), seeking to achieve Very Good rating.

The following principles will be considered:

- The internal layouts ensure future flexibility and the option of future reconfiguration if required
- Room sizes and layouts will be standardised to ensure that spaces are flexible to the changing requirements of the department
- Reduced operational carbon footprint, as the Trust moves towards Net Zero Carbon targets across the estate
- Promotion of sustainable travel, including electrical charging points, cycle storage and consideration of a park-and-ride system
- The building fabric will achieve high levels of airtightness, minimising uncontrolled heat loss and allowing precise control over the internal environment
- The building will have high standards of insulation
- The building will benefit from the latest energy efficient plant systems
- Energy efficient lighting
- Non-clinical water use will be minimised through the specification of appropriate sanitaryware
- The building fabric, internally and externally, will be designed to be robust, reducing future maintenance requirements

12 Recommendation

This submission is intended to demonstrate the suitability of the proposed new Emergency Department.

The design team have considered the integration with the hospital site, the local context, community feedback, clinical and technical requirements, and the vision of modern Urgent and Emergency Care in Grimsby.

We believe that the scale, form and use of the proposals are appropriate for the site, and present an opportunity for improving the quality, accessibility and delivery of emergency healthcare.

The result is a scheme that will help in the future delivery of advanced clinical procedures and greatly benefit the immediate hospital and wellbeing of the local community.

P+HS Architects

84 Albion Street
Leeds LS1 6AG

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The Old Station
Station Road
Stokesley TS9 7AB

01642 712 684

Milburn House
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