# Delivering Sustainable Infrastructure Solutions

# Outline

- The importance of infrastructure in delivering integrated care
- Key considerations for developing sustainable infrastructure solutions
- Developing practical infrastructure solutions – a case study
- Workshop Activities

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# Importance of Integrated Infrastructure

- Improves
  - patient health and well-being
  - value for money
  - safe and effective service delivery
  - staff morale and productivity
  - capacity to enable more services to be provided
  - security of visitors and staff
  - civic pride within a community
  - sustainability

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# Key Considerations

- Statutory compliance
- Convenience
- Visibility
- Capacity
- Enhancing the patient experience
- Sustainability
- Non-rentalised income streams, eg PBC

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# Statutory Compliance

- Disability Discrimination Act 2005
- Regulatory Reform (Fire Safety) Order 2005
- Health and Safety at Work etc Act 1974
- Infection Control Guideines

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# Convenience

- Located in area of most need
  - *right services. right place.*
- Co-location with complementary service providers
  - Pharmacy, Social Services, Children's Services
- Good public transport links, pedestrian links and car parking for private commuters
  - Different requirements for rural v urban locations

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# Visibility

- Increasing competition as a mixed health economy is evolving
- Practice needs to be identifiable and have good exposure

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# Capacity

- Shift potential for services to move from secondary to primary care presents a significant opportunity
- Increasing demand for treatment
  - Increasing ageing population
  - Increased prevalence of chronic conditions
- Advances in medicine and technology
- Improved access to information
- Government policy driving local integration of services

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# Patient Experience

- Good design enhances the patient recovery
- Improves health and wellbeing of patients and staff
- Therapeutic environment enhances the patient experience

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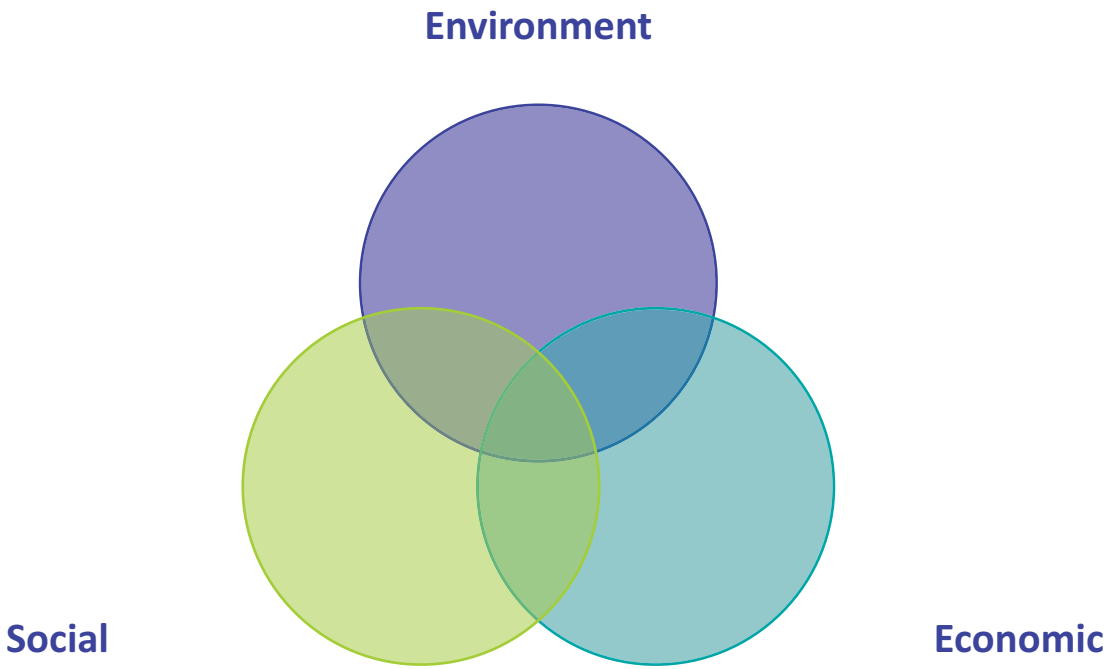
# Sustainability

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# Non-rentalised Income Streams

- No rent re-imbursement available for PBC services
- To deliver PBC, you need space
- Options:
  - Utilise existing space within your practice or PBC Consortia
  - If PBC service is small, include “multifunctional rooms” that can be used for PBC and other services
  - If PBC service is large, complete feasibility studies on PBC model prior to developing space specifically for PBC

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# Single Practice Primary Care Centre

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# The Vision

- Modern, integrated, flexible premises
  - Reflect "Designed for Life"
  - Patient friendly environment
  - Inspiring, light, spacious
  - Supporting wide range of services
  - Community ownership
  - Integration with other services
  - But…….a vision is nothing, without delivery

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# Core Project Team

- Developer
- Architect
- M&E Services and Sustainability Advisor
- Employers Agent & Quantity Surveyor
- CDM Co-Ordinator
- Facilities Management

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# Criteria

- Effective Communication
- Location
- Statutory Compliance
- Specification
- Demographics
- Schedule of Accommodation
- Parking
- Sustainability
- Future Proof
- Balance of Innovation & Deliverability
- Enhanced Resources
- Optimal Value for Money

- Making It Happen

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One Team Ethos

# Stakeholder Engagement

- Managing the Process
  - Identify key stakeholder concerns and aspirations
  - Draft a set of guiding principles
  - Establish lead contacts from each stakeholder
  - Stakeholder steering group to meet monthly
  - Monthly reporting mechanisms
  - Form an appropriate forum for public consultation
  - Report and feedback from public consultation

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# Architectural Principles

- Maintaining identity within an integrated service
- Welcoming scale, ease of wayfinding & reduced travel distances
- Functionality
- Flexibility for additional services
- Environmentally responsive
- Strong civic identity
- Community Involvement

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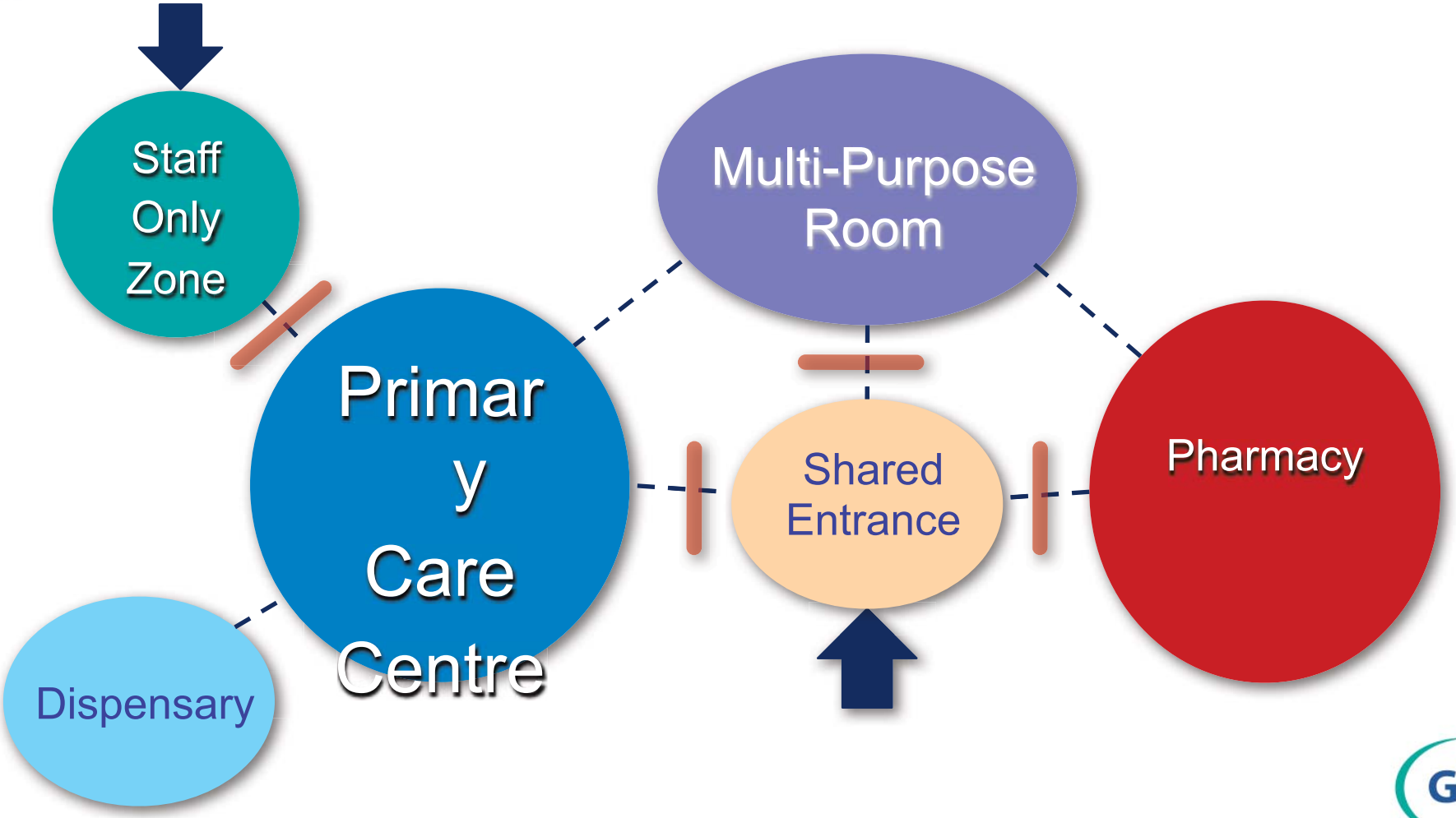
# Single Practice: Key Adjacencies

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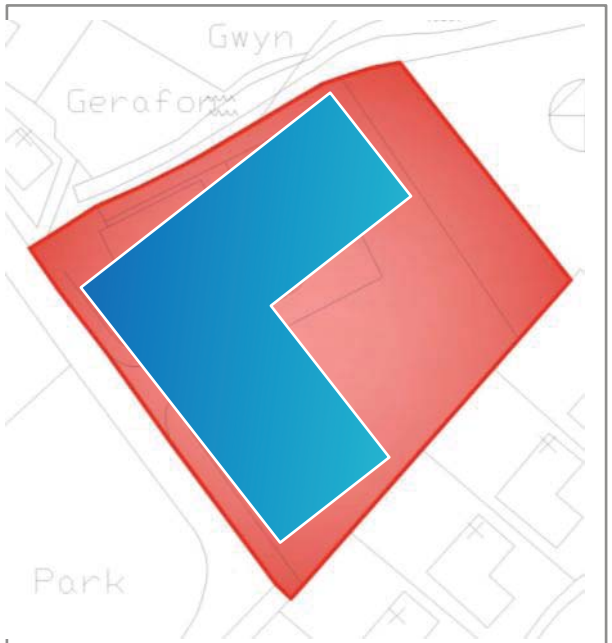
Private
Public

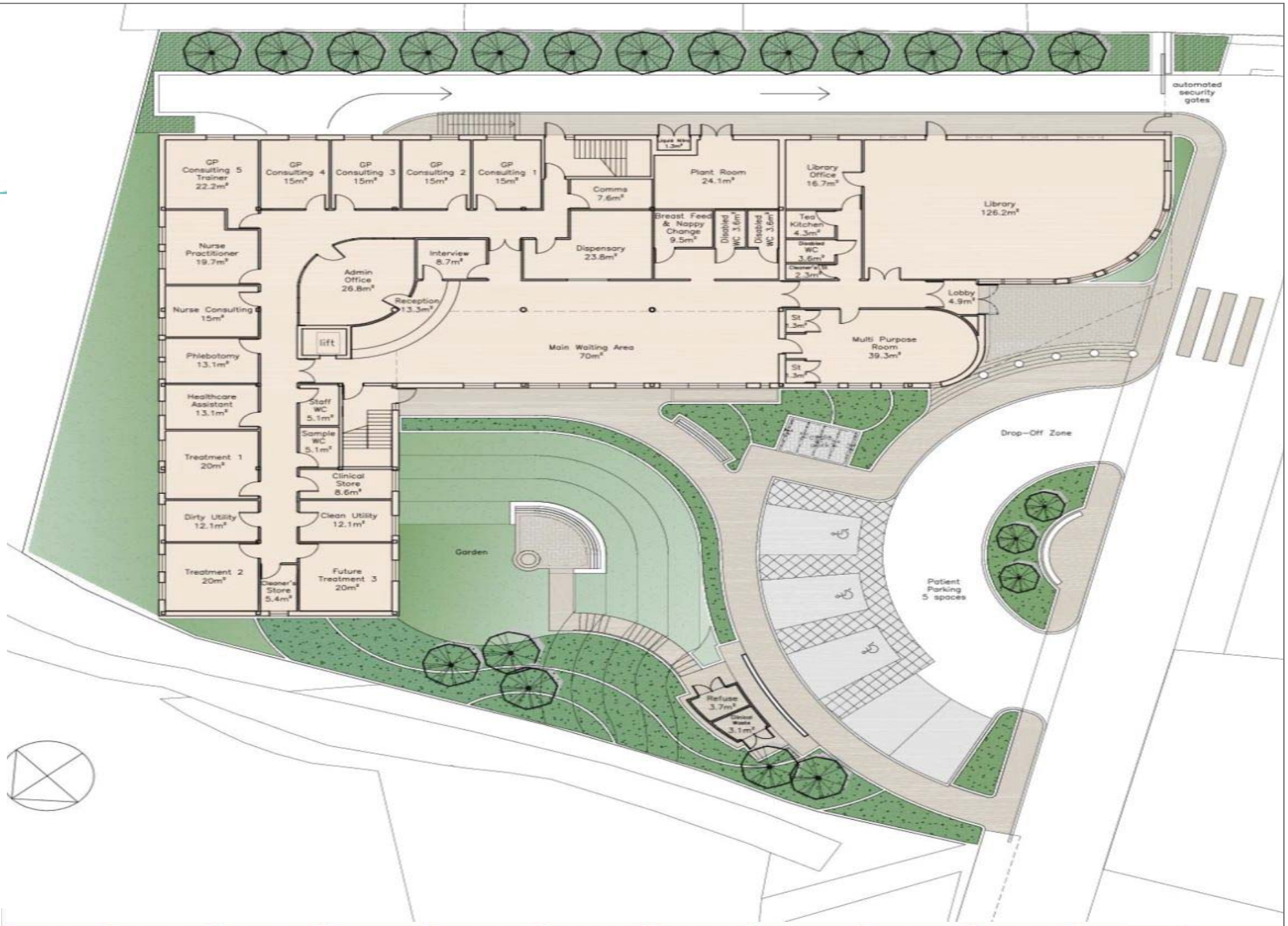
# Design Evolution




- Prominent street frontage
- Private gardens to rear
- Doesn't fit on the site
- No space for staff parking

- Staff Park & Garden
- Waiting Area facing South
- Competition for frontage
- Doesn't fit on the site
- Too close to river

- Prominent street frontage
- Privacy of neighbours protected
- Staff parking undercroft
- fits on the site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GP Consulting 4 15m²
GP Consulting 3 15m²
GP Consulting 2 15m²
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Comms 7.6m²
Plant Room 24.1m²
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lift
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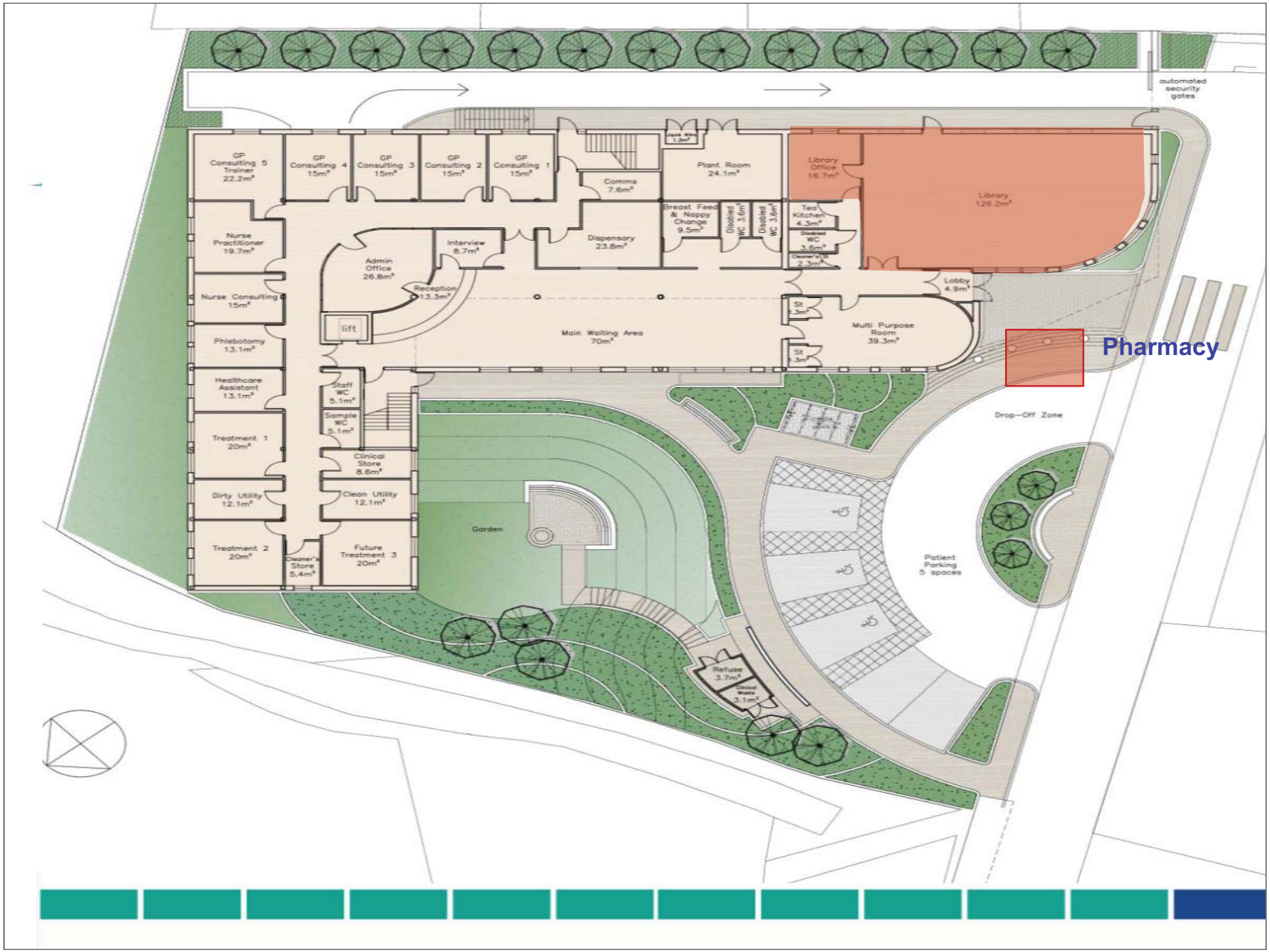
Future Treatment 3 20m²
Patient Parking 5 spaces
Refuse 3.7m²
Clinical Waste 3.1m²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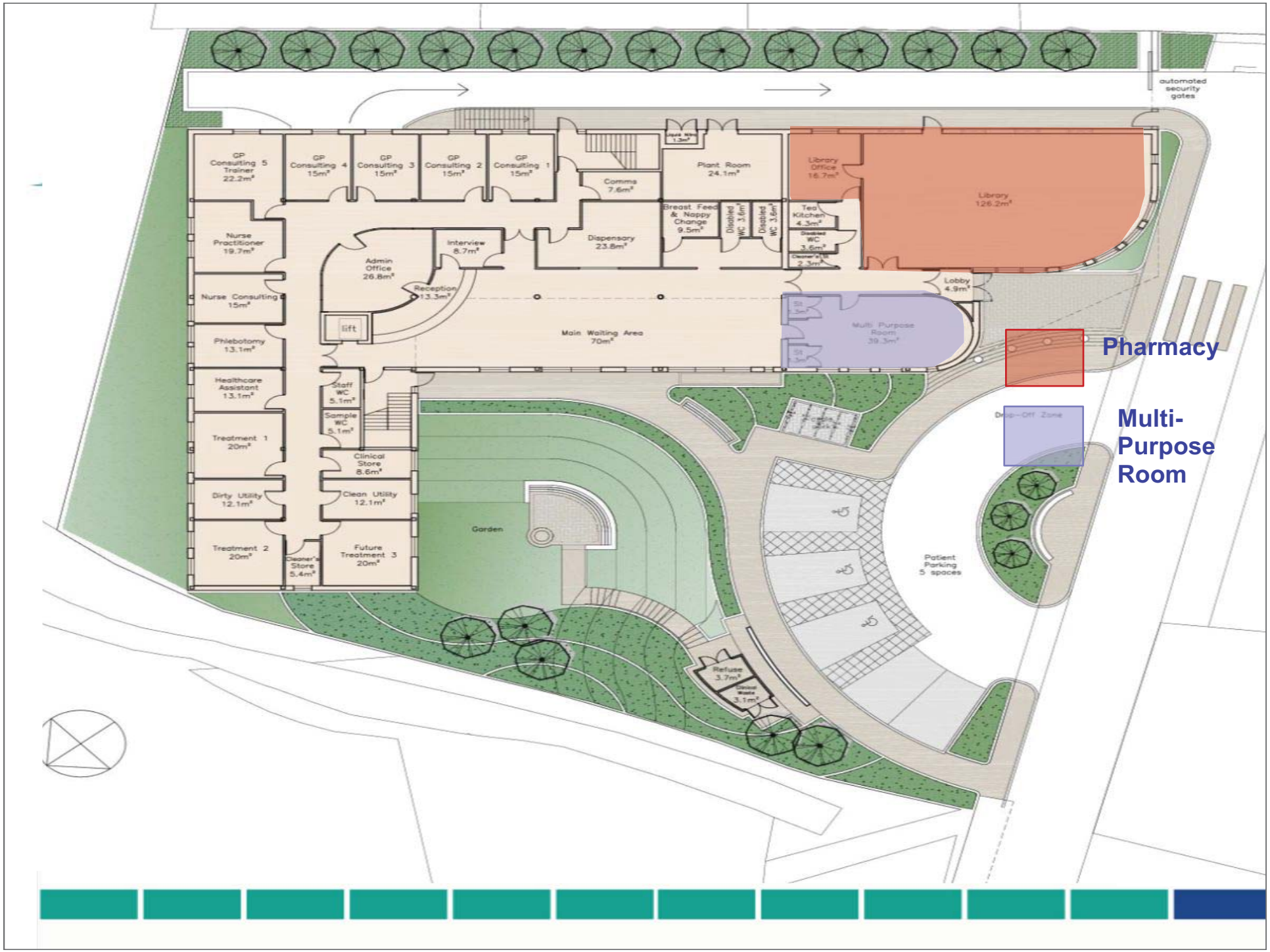
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Pharmacy
Multi-Purpose Room

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Multi-Purpose Room
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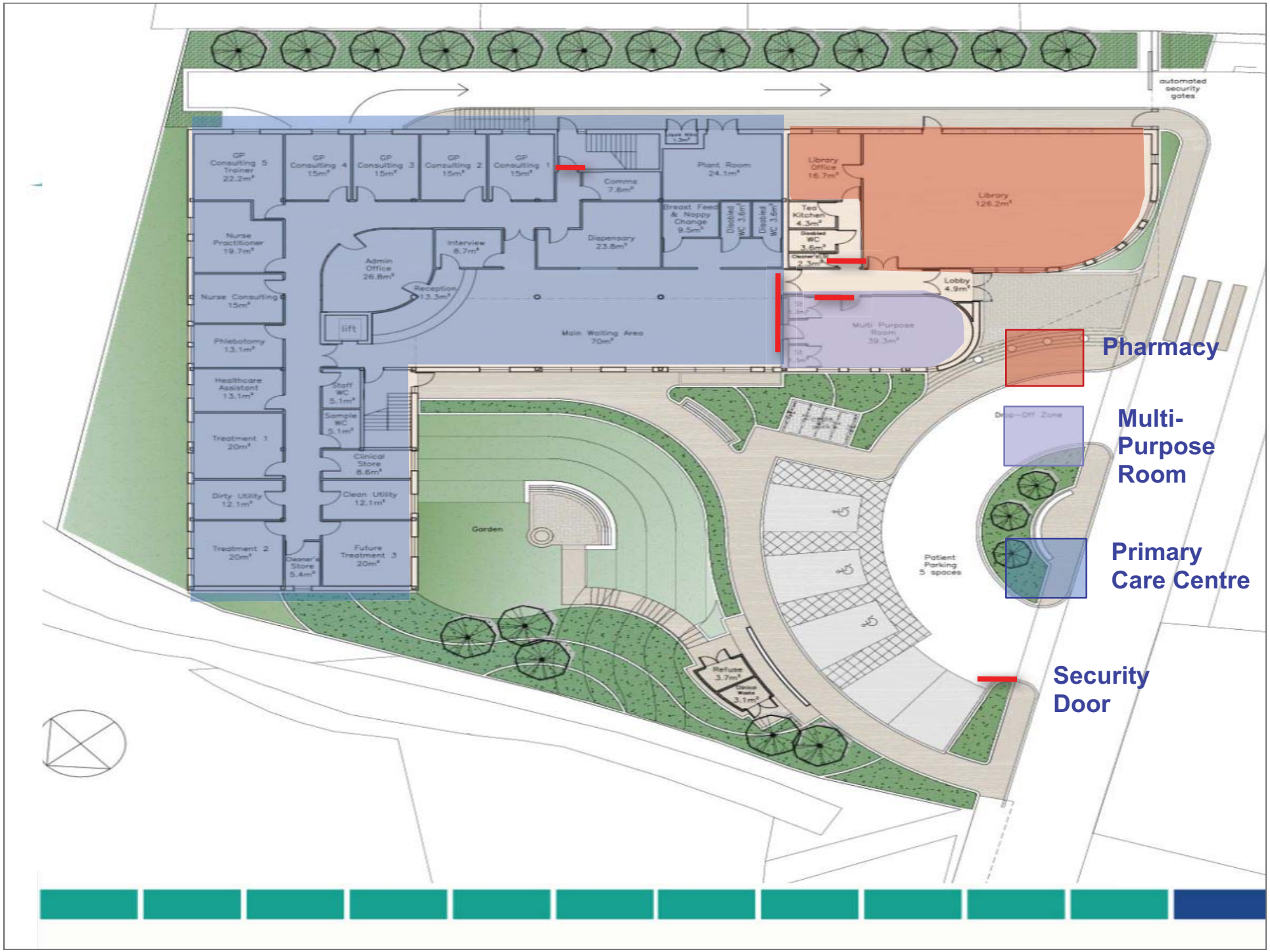
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Pharmacy
Multi-Purpose Room
Primary Care Centre
Security Door

# Welcoming Internal Area

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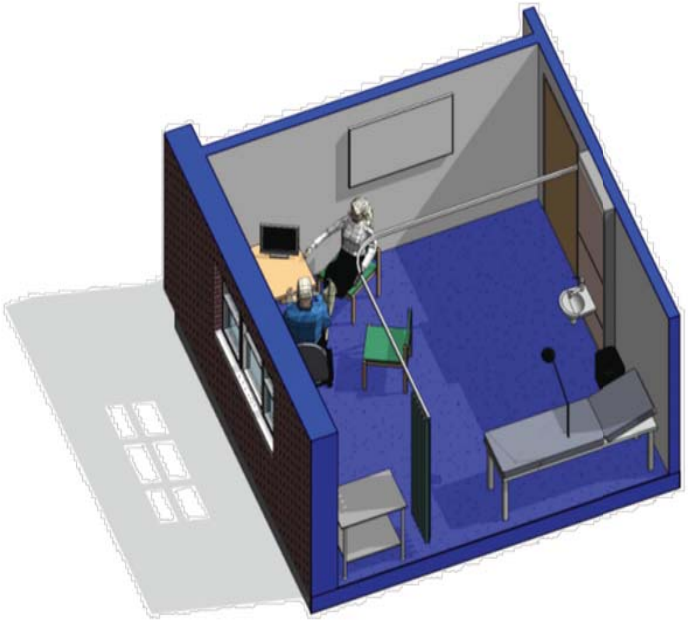
# Room Data Sheets & Layouts



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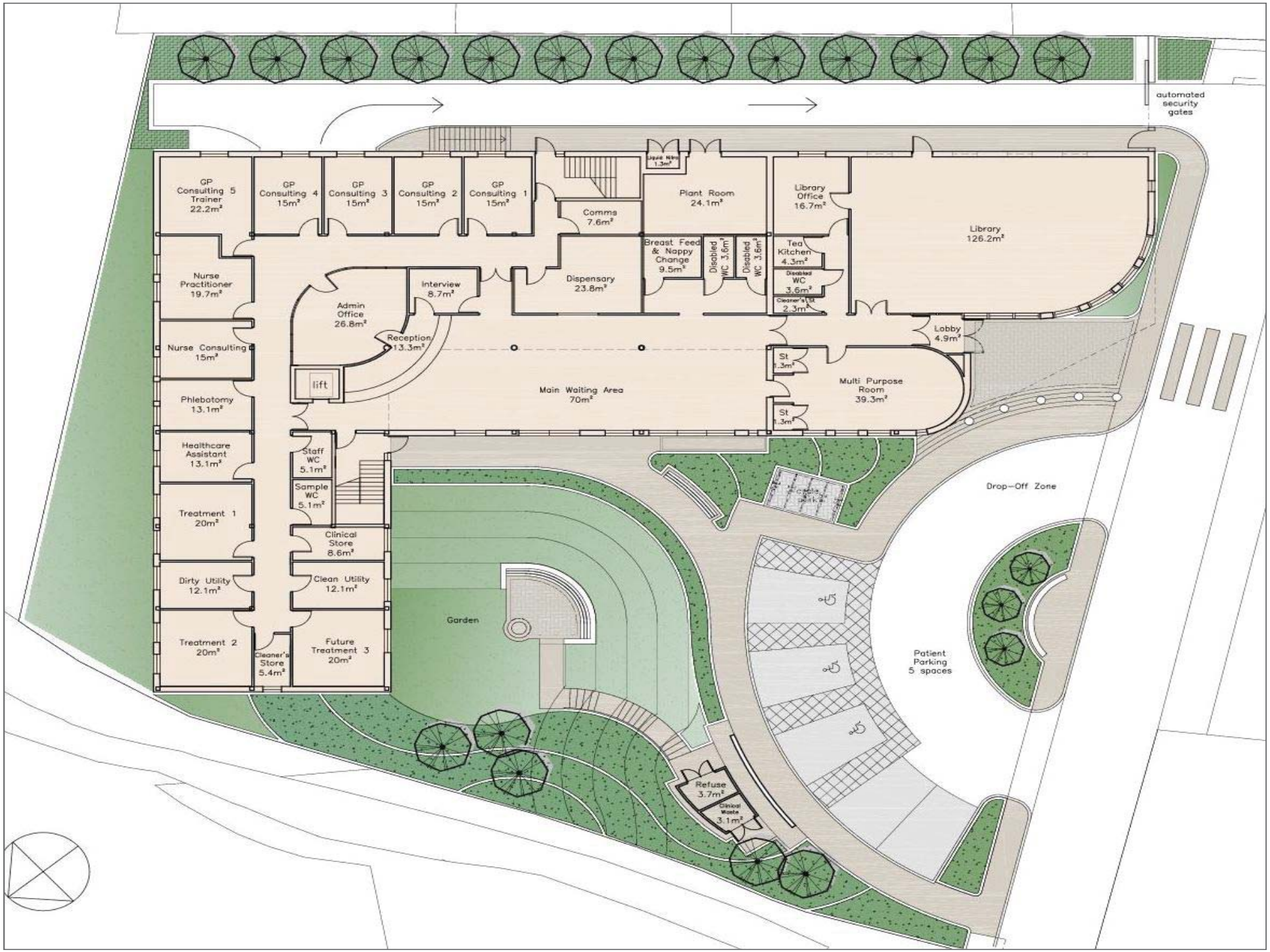
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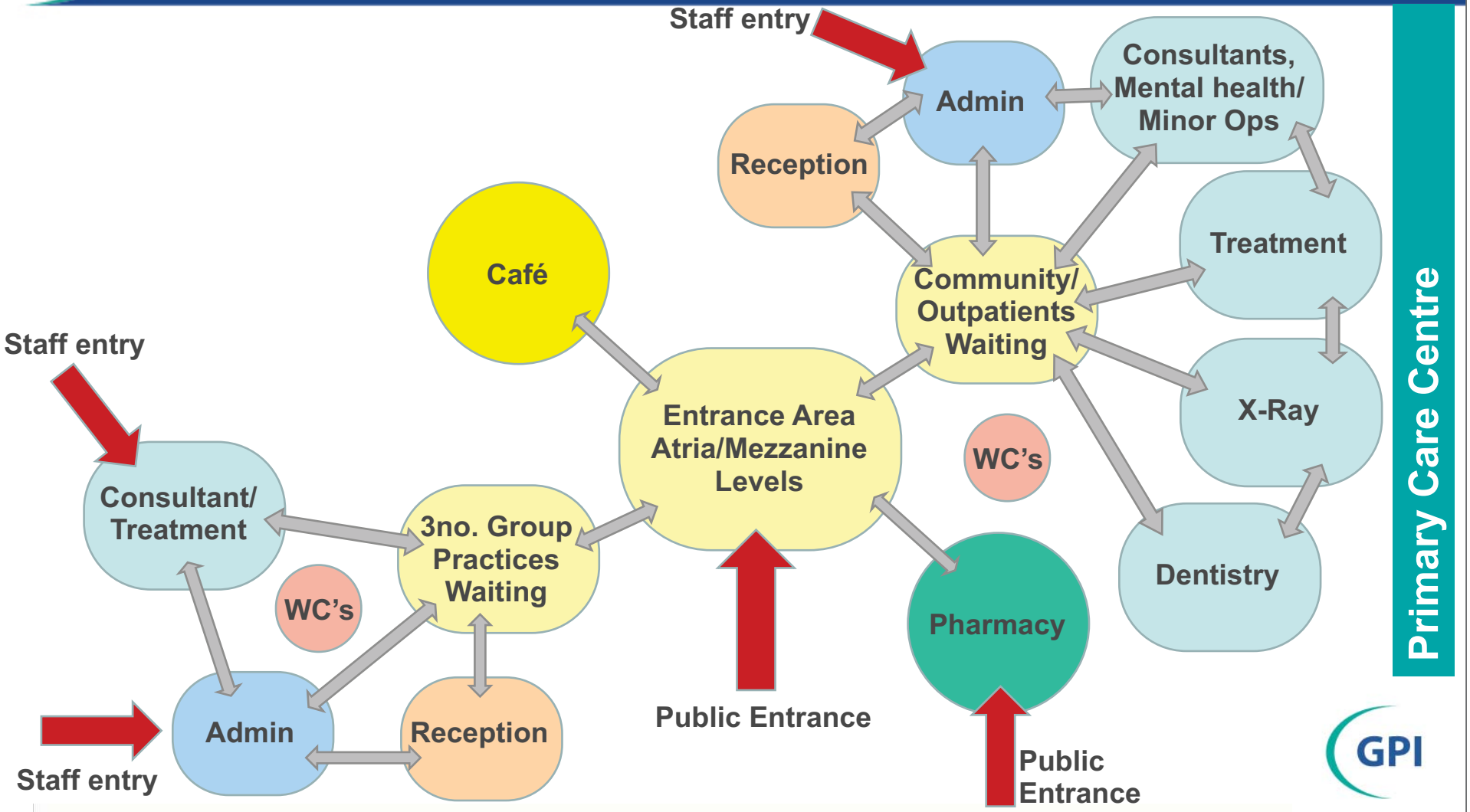
# Civic Landmark Building

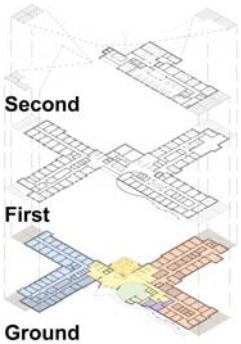
# Integrated PCC: Key Adjacencies



# Site & Ground Floor Plan

## Key

- Central Main Waiting and reception areas
- 'Toft Road' Practice
- Community/Out Patients
- Dentist
- Cafe
- Pharmacy
- Future Potential Expansion

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# Entrance Area

- Greeting point
- Clear way finding through colour coding and visual links
- Views to first floor via triple height space
- Views through to sensory garden and café
- Light, bright naturally lit space

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# Sustainability

**‘Lean’**

**‘Mean’**

**‘Green’**

**BREEAM “excellent”**

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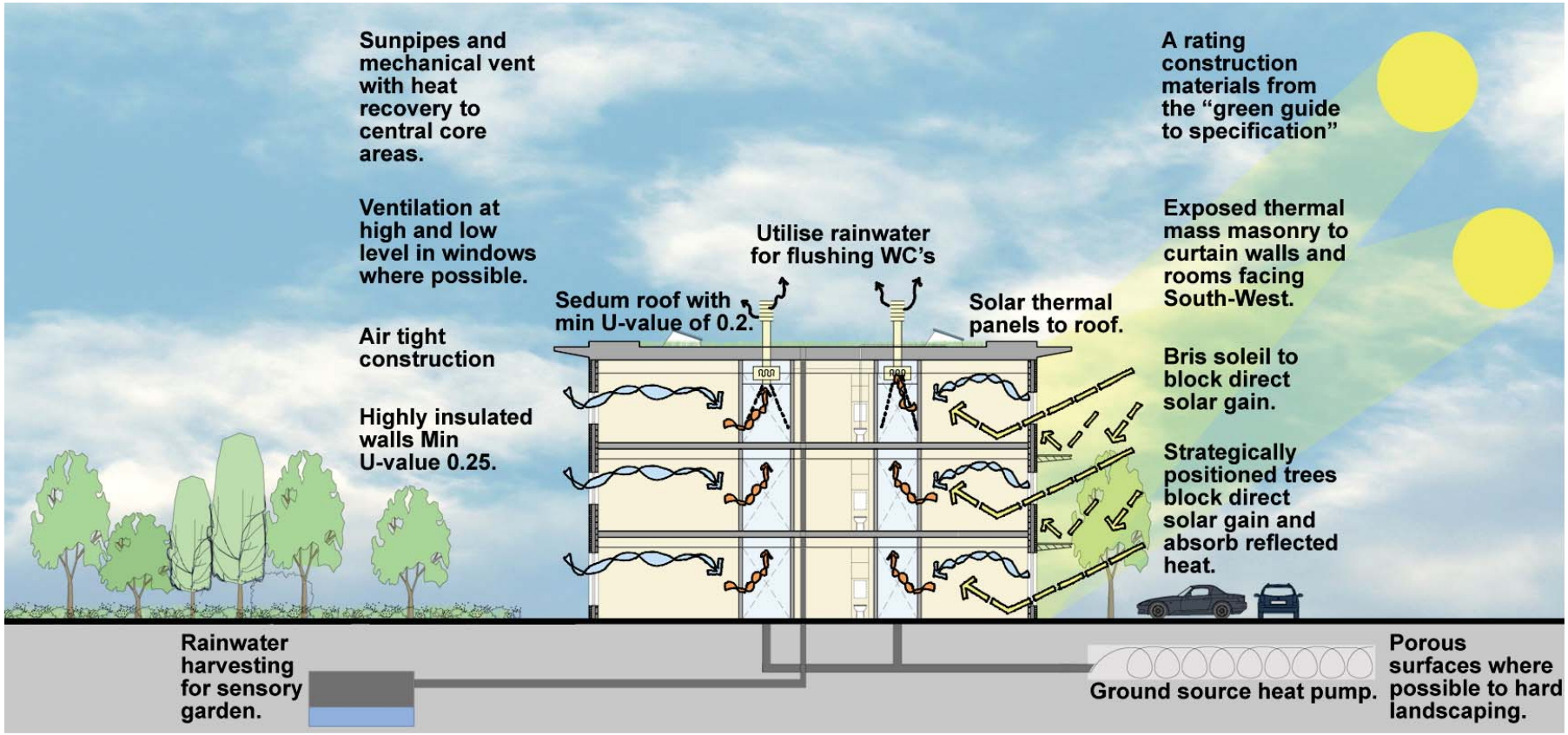
# Environmental Strategy



# BREEAM Credits demonstrated by Thermal Model

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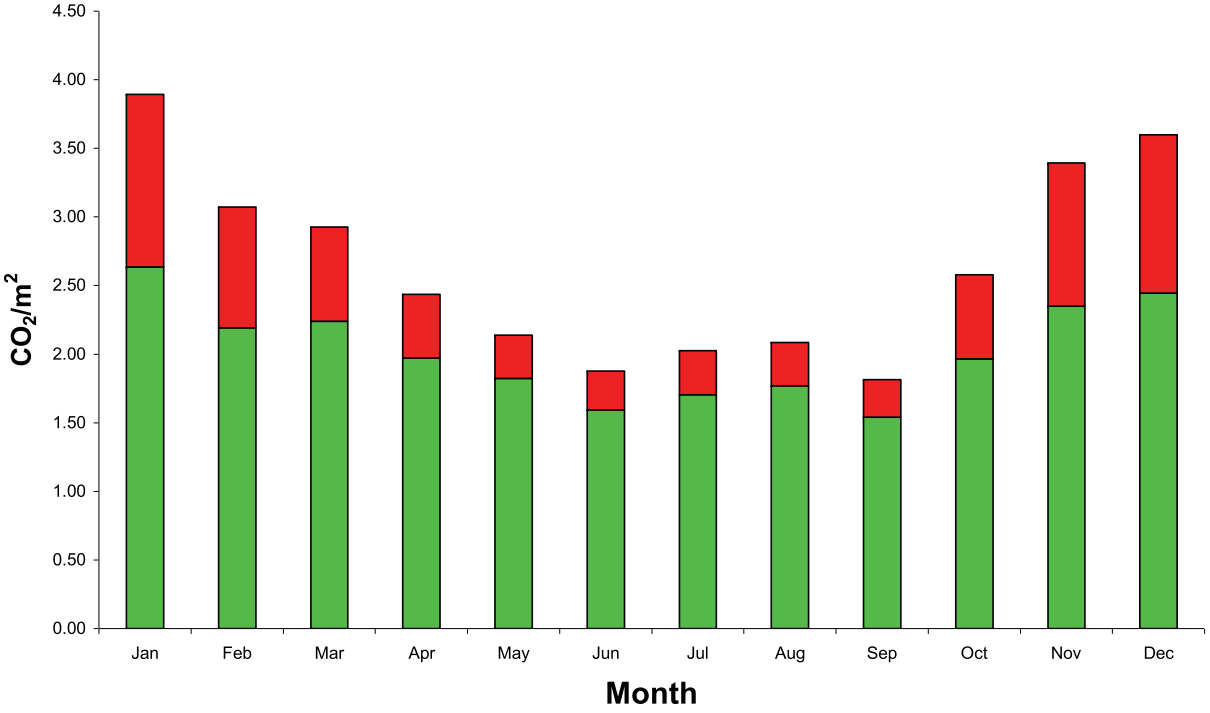


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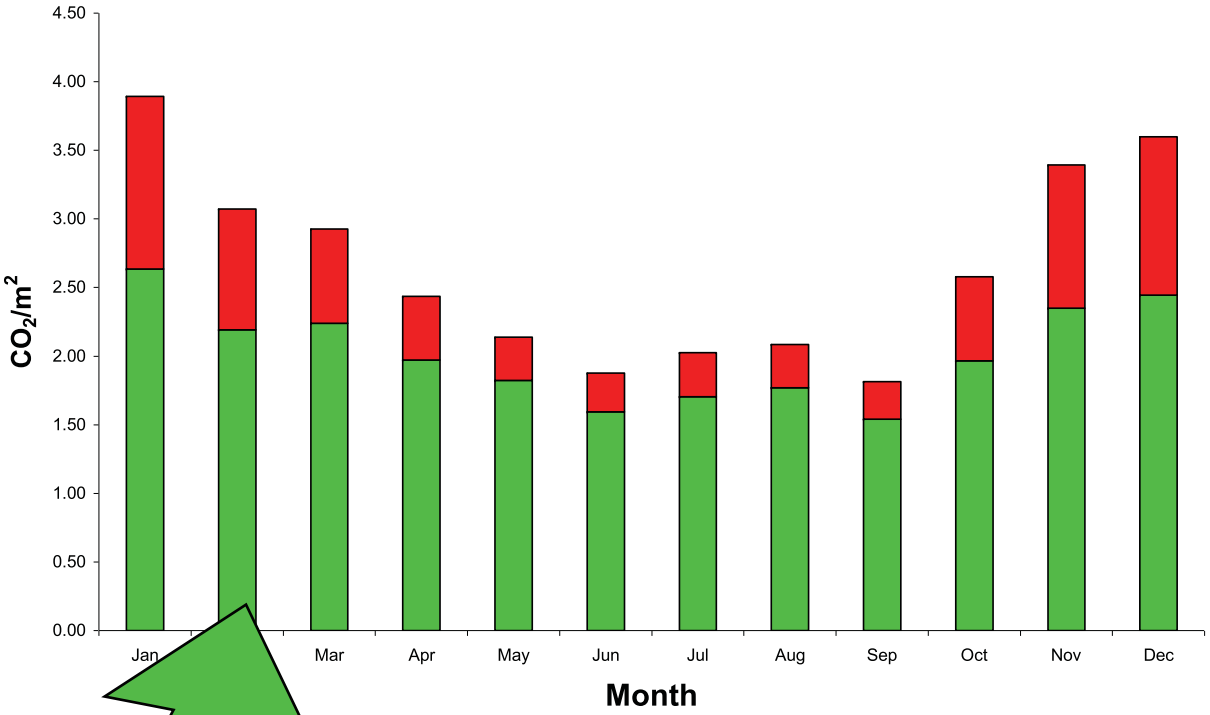


**CO2 Used By Actual**

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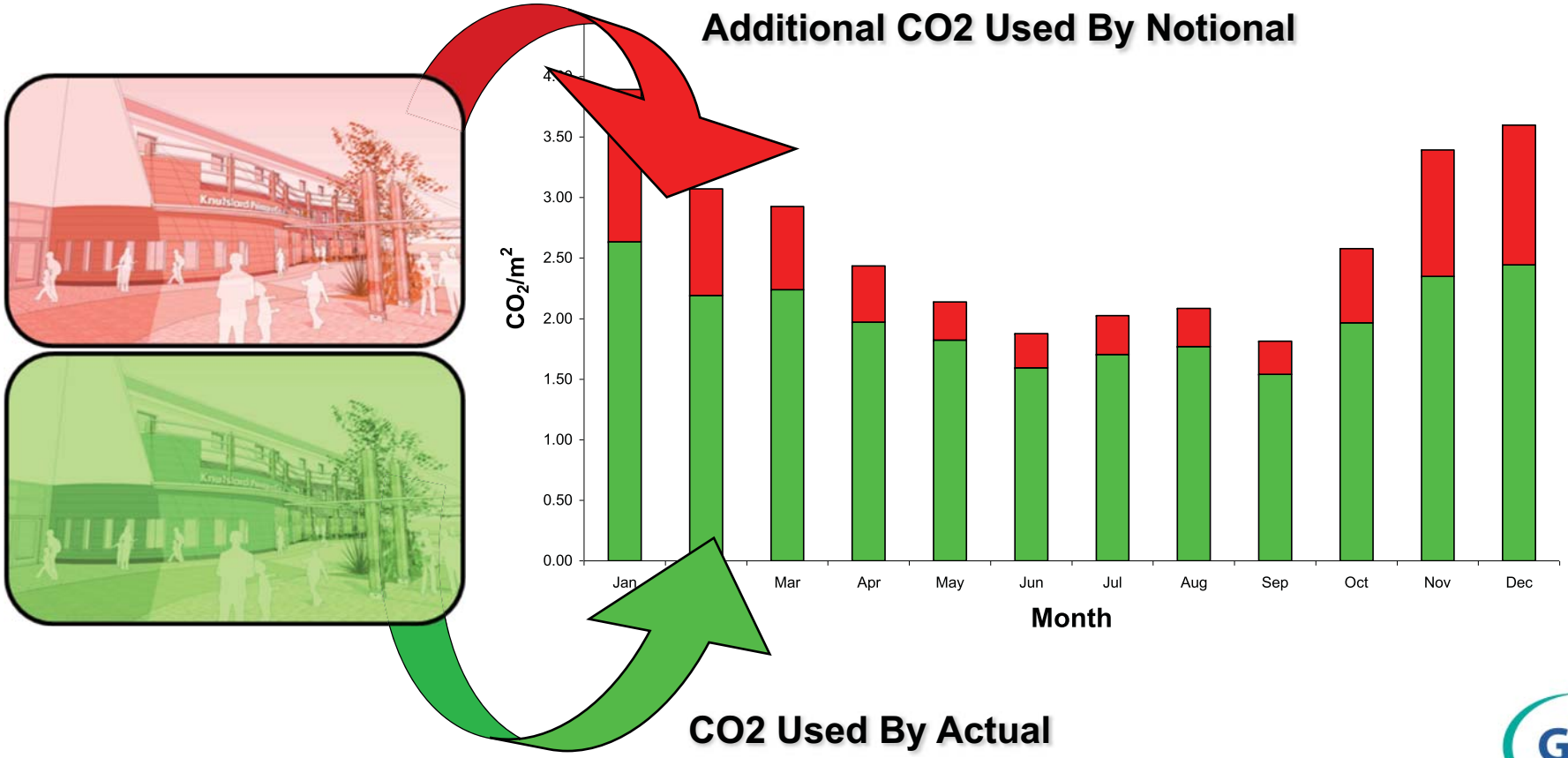
# BREEAM Credits demonstrated by Thermal Model

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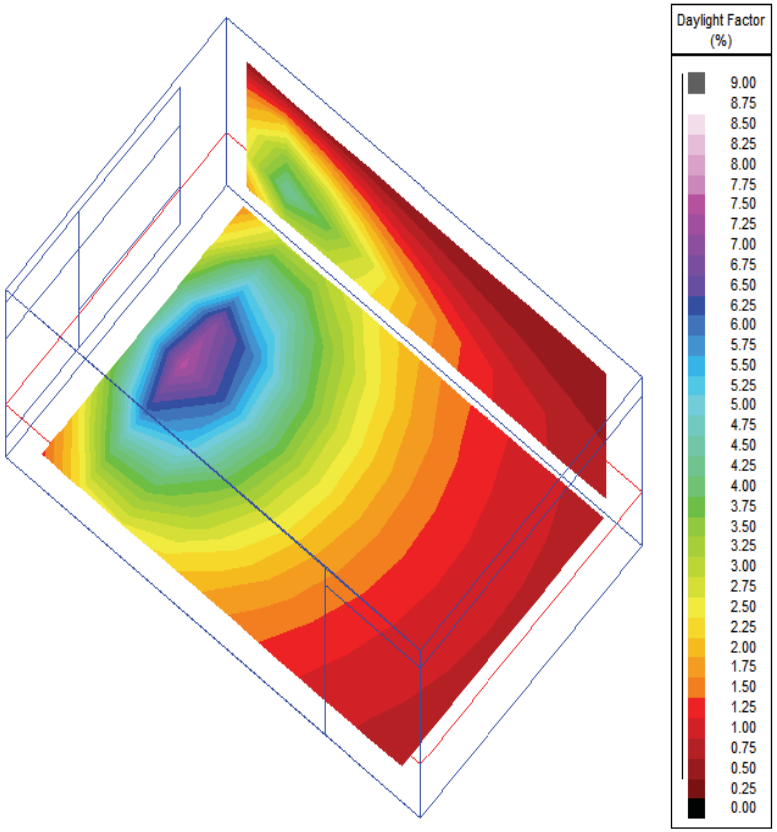
# Hea 1 Daylight factors

- 80% of rooms to achieve 3% for consultant / patient areas.
- 80% of rooms to achieve 2% for staff occupied/ public areas.
- Require correct window sizes.
- Increase window size if Brise soleil are being considered.
- Light transmission of solar glass now critical (light/ heat balance).

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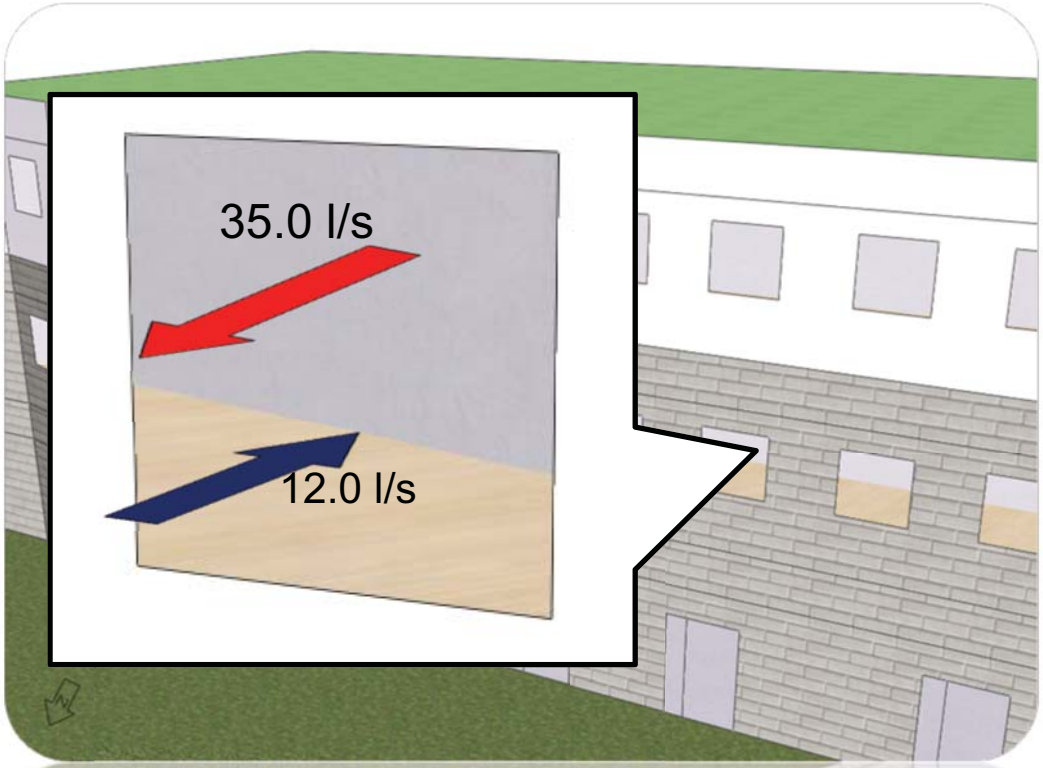
# Hea 10 – Thermal Comfort

- Patient areas do not exceed 28°C for more than 50 hours.
- Other areas not to exceed 28°C for more than 1% of the occupied time.

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# Discussion

- Experience, Challenges & Opportunities

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