

4.1 LANDSCAPE



Woodland Planting Understorey Typology



Iris 'Silver Edge'



Hosta 'Francee'



Shaded Planting



Vinca minor



Brunnera macrophylla



Climbers - Parthenocissus quinquefolia



Bluebells



Tulipa 'White Triumphator'



Asarum europaeum



Polystichum aculeatum



Blechnum spicant



Climbers - Lonicera henryi



Herbaceous Planting



Nandina domestica 'Fire Power'



Wildflower Meadow Mix



Deschampsia cespito- Anemanthele less-



Green wall



Skimmia japonica 'Kew White'



Luzula nivea



Anemone honorine jobert



Deschampsia cespito- sa



Scabios



Stipa tenuissima



Species Rich Lawn

4.1 LANDSCAPE

Ecology Strategy

The design strives to encourage a healthy and biodiverse wildlife community alongside its residential community.

The planting palette incorporates a number of native flowering species providing food for invertebrates, and a couple of bug hotels are proposed in The Rest.

The inclusion of a number of bird boxes aims to entice the associated species to make the site their home. The boxes are strategically placed based on where the individual species are inclined to nest and to the advice of the ecologist.

Bird boxes for swifts and peregrines would be located on the upper levels of One Station Hill, details of which can be secured by condition



Ecology Strategy Diagram





Insect Hotel



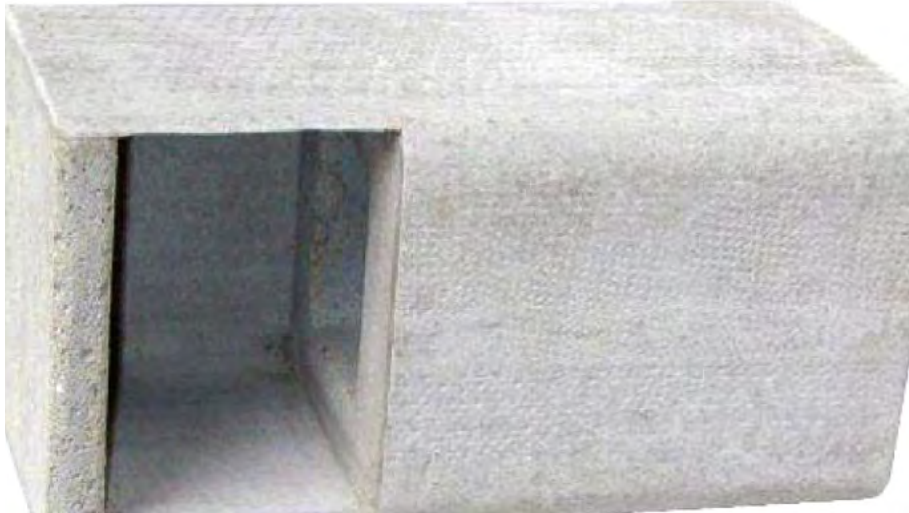
Black Redstart



Bat Box



Bat Box



Black Redstart Box



Biodiverse Species that encourage pollinators



Insect Hotel

4.1 LANDSCAPE

Play

The approach to play is to integrate playful features in the public realm, rather than to have a separate play area. Two lawns provide play opportunities for all ages, and the water feature invites sensory and active play activities. The level difference between the podium and Station Hill is used for a slide and scrambling slope which cuts down through the planted slope. There is also a playful stepping stone route between the seating terraces within the Pocket Park, and curved linear benches throughout the site can be used as play edges for balancing and climbing.

There are also opportunities for small informal areas of play throughout the public realm such as spinning discs or balancing poles. The wayfinding/art sculpture could also be designed to accommodate a play element such as climbing, balancing or sensory play.

Key

-  Lawn - Play for all ages
-  Splash pad
-  Scramble bank
-  Scramble path
-  Slide - play for all ages
-  Art Installation - Opportunities for play to be incorporated into the wayfinding/ art feature
-  Incidental 'play on the way' features



Play Strategy Diagram

4.1 LANDSCAPE



Splash Pad



Slide



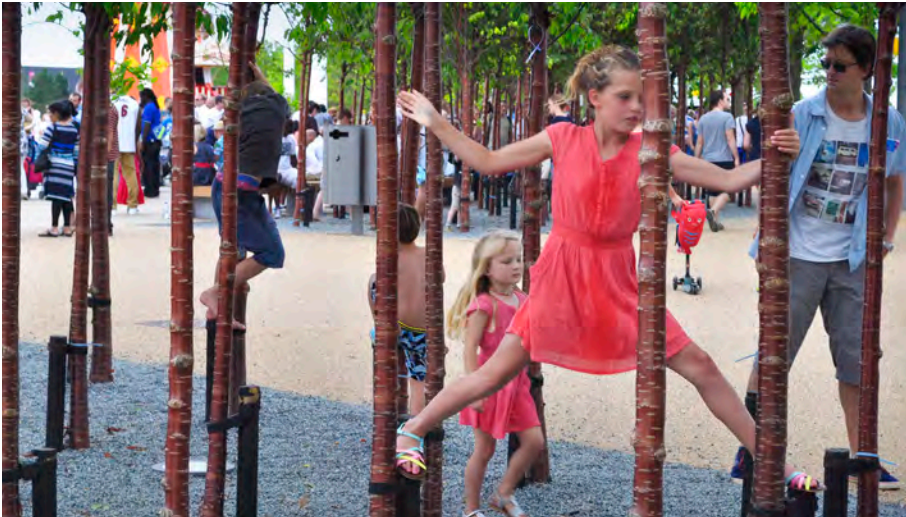
Wayfinding Art Sculpture and Play



Scramble Edge



Lawn



Incidental play in public realm



Play to bench edges



Incidental Play



Playful Edge

4.1 LANDSCAPE

4.1.6 PHASING

Phases 1, 2 & 3

The plan opposite shows the aerial masterplan with all three phases. The landscape character, appearance and materiality will stitch the three phases together to create one cohesive landscape; public realm. Phase 3 will provide a strong link to Greyfriars Road with a lift for all inclusive access.

The Landscape design will comply with the design code.



4.1 LANDSCAPE

Temporary Activation
The interface between Phases 2 and 3 will have a hoarding edge before Phase 3 is developed. This is an opportunity to activate the edge with meanwhile uses.



Precedent Images; Hoarding

4.1 LANDSCAPE

4.1.7 PHASE 3 OUTLINE SCHEME OPTION 1

Overview

The landscape and public realm elements of Phase 3 of the masterplan are made up of residential gardens, spill out areas to ground floor uses, play spaces and a garden. A breakdown of the analysis of the area is listed below and opposite.

Sun Analysis

Morning sun next to Plot C entrance - great spot for coffee and breakfast. Afternoon sun within central flexible space adjacent to restaurants. Evening sun in summer months shines down Station Hill.



Sun Analysis

Key

- ① Flexible gathering space with seating, paving and lawn
- ② Moveable tables and chairs in morning sunny spot
- ③ Play area for older children and outdoor gym for all ages
- ④ Flexible paved area for outdoor working and dining
- ⑤ Play area for young children
- ⑥ Densely planted intimate garden
- ⑦ Balustrade
- ⑧ Seating and planting to create semi-private space next to residential entrances
- ⑨ Densely planted intimate garden
- ⑩ Trees with seating
- ⑪ Spill-out / eating area
- ⑫ Lift from podium down to Garrard Street
- ⑬ Steps from podium down to Garrard Street



Illustrative Plan, Station Hill Gardens

Station Hill Gardens

The residential gardens are greener and more intimate than other spaces within the masterplan. There are active and flexible spaces adjacent to Plot C for outdoor dining and working. Quieter, planted, semi-private spaces next to residential areas and a central spine acts as a buffer between the quieter and active sides, and contains planting, lawn, play and exercise

Pedestrian Movement

Primary routes through the space are between Station Hill Plaza, Plot C main entrance and the steps down to Greyfriars Road. Secondary routes are to co-working, restaurant and residential entrances.

The layout accommodates a wider paved area adjacent to restaurants and co-working space. This allows for flexible dining and work with movable furniture in a seamless indoor and outdoor space.



Pedestrian Movement



Intimate seating areas



Lawn



Swinging benches



Spill-out from active frontages



Moveable tables and chairs



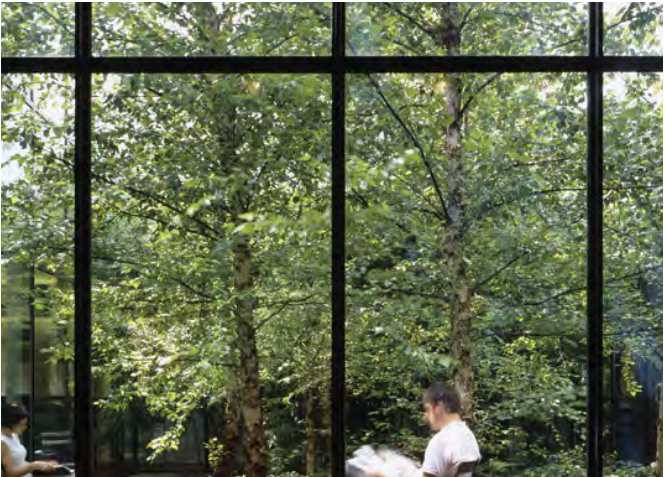
Garden Walk



Outdoor restaurant dining



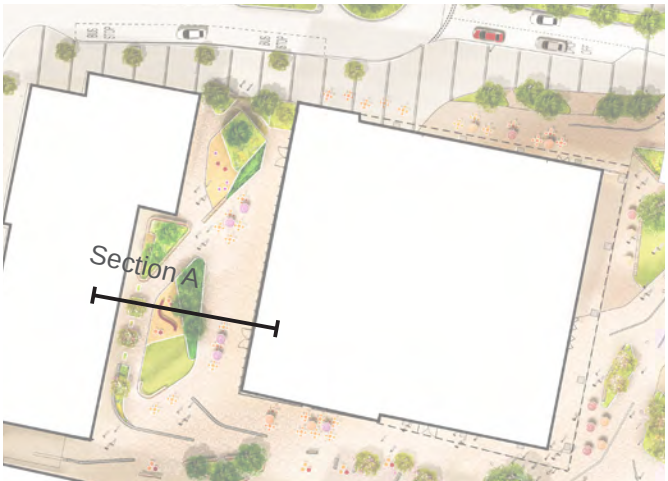
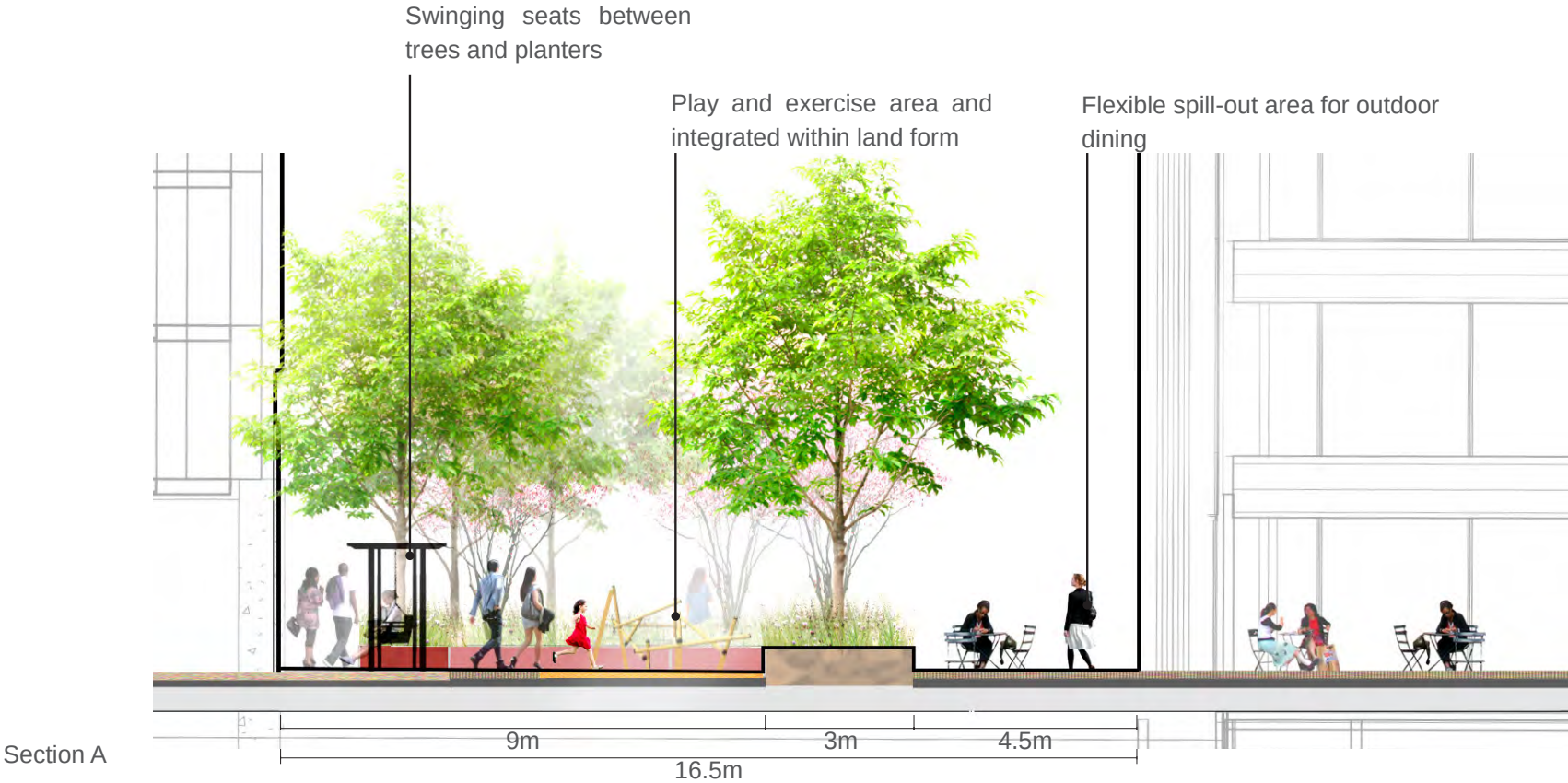
Garden Walk



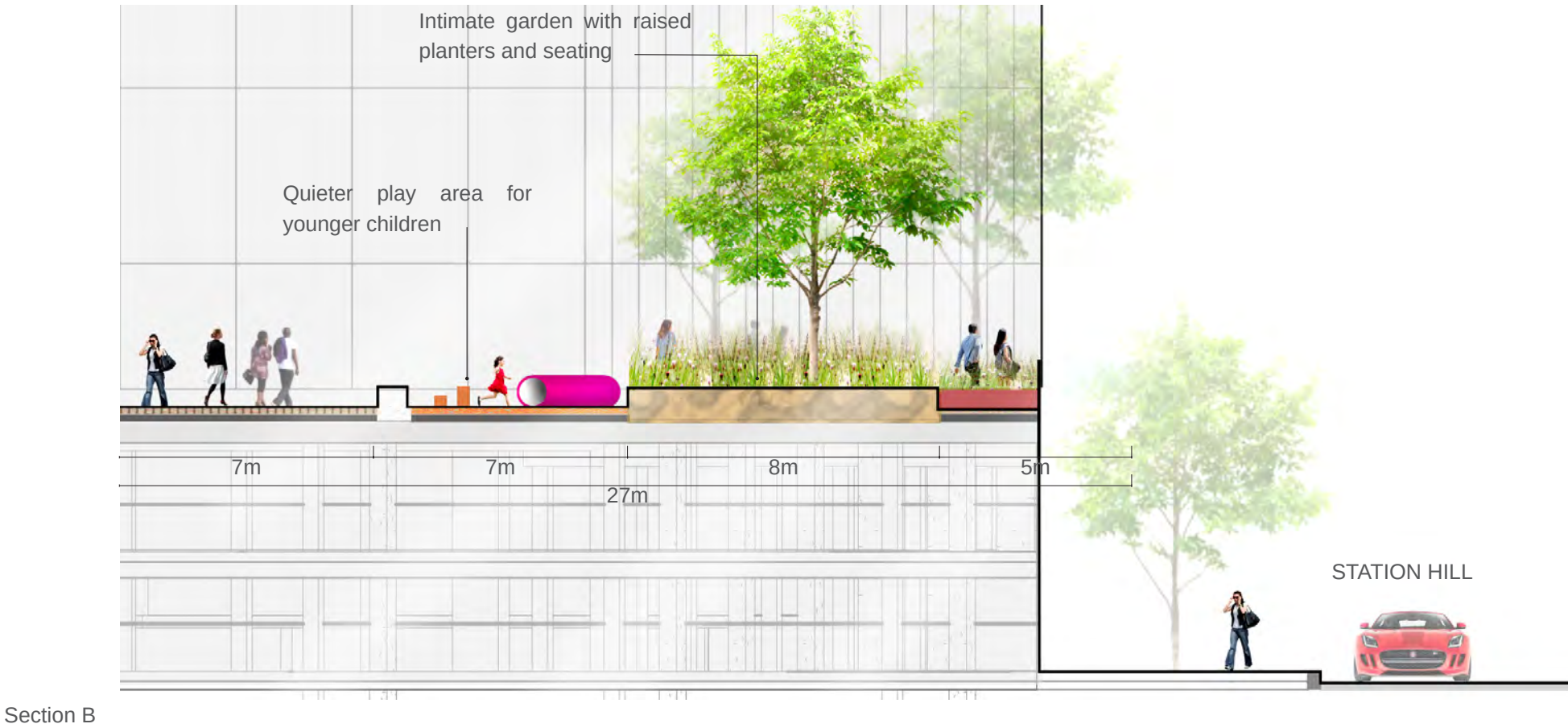
Blurred inside outside

4.1 LANDSCAPE

Sections through Station Hill Gardens
The section opposite shows the varying conditions between the residential areas, central green buffer and play space and office spill out/ cafe eating areas to the eastern edge of the Phase 3 courtyard.



Sections through Station Hill Gardens
Section B opposite traverses the northern most play area intended for younger children. Seating in the planting buffer and garden area affords views out over Station Hill.



Elevated look out



Linear seating



Planting and Seating

4.1 LANDSCAPE

Greyfriars Road

The public realm improvements to Greyfriars Road are intended to be undertaken as part of Phase 3 of the development. Main improvements include paving and additional street trees along the length of the Phase 3 boundary. A stepped access between Phase 3 Station Hill Gardens and Greyfriars Road is also shown on the plan opposite.

For proposals for cycle route along Greyfriars Road refer to transport consultant (PBA) proposals.



Key

- ① Proposed street trees
- ② Car Park entrance
- ③ Steps up to Phase 3 podium garden
- ④ Lift up to Phase 3 podium garden



Proposed street trees



Existing condition Greyfriars Road



Steps to Phase 3

Illustrative Plan, Greyfriars Road

4.2 LIGHTING DESIGN

4.2.1 OVERVIEW

Introduction

This chapter outlines the external lighting strategy approach conceived for the Station Hill North development. The external lighting has developed giving consideration to appropriate lighting for the human in the space, engendering a sense of place and belonging, encouraging use of the space during the evening hours, whilst ensuring appropriate lighting for safety and security, way-finding, ecological considerations, and the development within the wider urban context.

Lit Context

The site is located in central Reading in close proximity to the Reading Railway Station, bounded to the North by Station Hill and to the South by Garrard Street. There is a proposed new link running North to South linking these two streets, creating a new pedestrian square and walkway, a mixture of residential and commercial buildings with retail and restaurants at street level, helping to animate the space and create a new destination close to the Reading Railway Station.

The streets surrounding the site are currently typically illuminated from a mixture of street lighting column types. The columns are approximately 6m tall mounted with a mix of ceramic metal halide and LED lanterns illuminating the street. The light sources have a cool white appearance (approximately 4,000 K Colour Correlated Temperature (CCT)). Some spill light is also received from the existing NCP car park which is illuminated with what is believed to be cool white (4,000 K CCT) fluorescent lamps. In addition there are a number of wall mounted sodium flood lights mounted to the NCP car park façade, none of which are currently operational.

Along the length of Garrard Street are a number of staggered lighting columns. The columns are approximately 7m tall topped with a street lighting lantern providing roadway illumination. The lanterns utilise a cool white (4,000 K – 5,000 K CCT) light source and appear to have a flat glass giving full horizontal cut off to prevent the upward spill of light.

In addition to the above, two types of wall mounted flood light style luminaires are installed on the NCP carpark façade. At lower level at approximately 4m above ground a regular row of luminaires tilted and at higher level (approximately 15m above ground) a single large flood light. All luminaires appears to be utilising high pressure sodium lamps, indicating a warm almost monochromatic yellow colour of light. All luminaires are tilted at approximately 45 degrees from vertical, likely to provide a broad unshielded wash to the road and opposite building along this section of Garrard Street. It is to be noted that none of these luminaires were in operation during the time of the visit and may only provide emergency lighting.

Station Square is illuminated from approximately 5m tall columns with cool white 4000 K Lanterns, during a visit in November 2018 an illuminated advertisement board was also present, which dominated the lit environment. The Thames Tower building just off Station Square has a warm white light source (approximately 2700 - 3000 K) to selected facade elements at street level, the commercial entrance and coffee shop also have a warm white light source.

Lighting Objectives

The objectives of the exterior lighting are to:

- Create an attractive, welcoming and memorable environment
- Complement and reinforce the landscape and architecture
- Create a comfortable and enjoyable space
- Use energy efficient luminaires and light sources for minimised energy consumption
- Minimise light pollution
- Avoid visual discomfort to occupants of the buildings and users of the public realm
- Provide appropriate lighting to engender safety and security.

- Consider ease of access for maintenance
- Use automated lighting controls to minimise energy consumption and on-going maintenance requirements.
- Ensure the daytime appearance is considered, where possible integrating luminaires with the architecture for minimal visual distraction.
- Design in accordance with relevant standards and guidance
- Achieve optimum value for money

Light Sources and Luminaires

To create a comfortable, calm and welcoming lit environment for residents, workers and visitors alike, warm white (2700 K – 3000 K CCT) LED light sources will be utilised for the external areas of the development.

The selection of a warm white CCT for the development will also visually contrast with the surrounding streets' comparatively cooler appearance street lighting, subtly and intuitively leading visitors and helping to identify a different, high quality, welcoming environment.

The LED light sources will also have a high colour rendering index (CRI), helping to reveal colours of the illuminated objects in the space and creating attractive skin tones of persons using the space, again reinforcing the quality environment and making the area feel more welcoming.

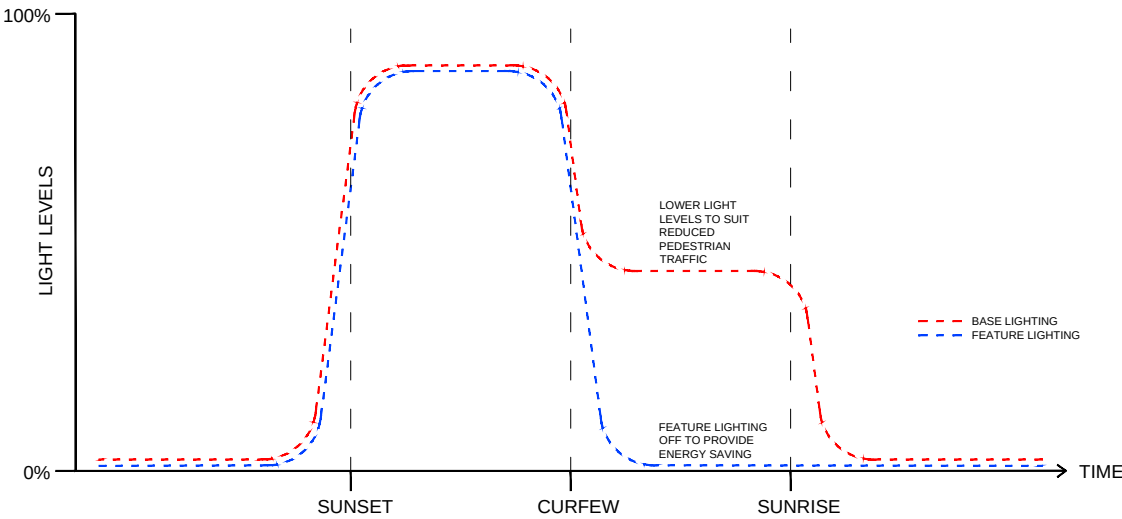
Luminaires with efficient LED light sources and luminaire optics will be utilised to ensure light is delivered to where it is required with minimal spill. This use of efficient light sources and luminaire optics will help to reduce the overall number of lighting points, installation costs, energy usage and ongoing maintenance costs.



Illustrative View - Pocket Park

4.2 LIGHTING DESIGN

Diagram 0.1: Indicative Lighting Levels during 24h period



Lighting Layers

The lighting will be conceived as a series of layers:

Base – Landscape

Ambient lighting will be provided to the pedestrian areas of the development, providing suitable light levels to engender a feeling of safety and promote security.

It is the intent to minimise the use of lighting columns to reduce street clutter and physical obstacles within the public space. Instead where possible luminaires will be building mounted, carefully integrated with the architecture, minimising their daytime visual impact. It is proposed to utilise discreet projector style luminaires with well controlled optics, directing the light to where it is required with minimal spill. Suitable accessories (cows, louvres, etc.) will be utilised to further minimise potential views of the light source, prevent upward spill of light and potential distraction to pedestrians, building occupants and residents. In some areas the potential use of sleek columns/totems is being considered to provide a feature element but also create the opportunity to discreetly incorporate lighting equipment to provide flexible ambient illumination for larger open areas for general circulation as well as special events.

Within the general landscape low level human scale luminaires and concealed lighting integrated with the landscape features, such as benches and handrails, will be utilised to provide illumination where it is required. The luminaires will be selected and specified with appropriate accessories, or where integrated within landscape features detailed so as to avoid upward spill of light.

Feature – Landscape

To create visual interest and encourage use of the space during the evening hours, lighting will be utilised to emphasise features in the landscape, such as seating, planting, trees and other feature elements.

Hardscape elements such as bench lighting will be carefully detailed so as to conceal the light source and prevent upward spill of light. Some feature elements such as trees will be up-lit from in-ground up-light luminaires, creating a visually attractive space during the evening, helping to express the visual texture, colour and density of the objects. These up-light luminaires will be carefully selected to ensure they have excellent optical control and will be adjustable so that they can be aimed at the objects that are to be lit, with minimal spill beyond the object being illuminated. Accessories such as internal snoots and baffles will be utilised to further control the light distribution and minimise unwanted upward spill light. Incorporate lighting equipment to provide flexible ambient illumination for larger open areas for general circulation as well as special events.

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Lighting Control

All lighting is to be controlled via an astronomical time clock, adjusting switch on and off times for changing sunrise and sunset times during the year, ensuring illumination of the space is only provided during the hours of darkness and energy is not wasted illuminating the space during the daylight hours when the lit effect cannot be appreciated.

All external lighting will switch on at 30 minutes before sunset (dusk).

The feature lighting elements of the scheme will switch off at curfew/2300, after which time only the base lighting for safety and security will be left on.

The base lighting for safety and security will then switch off at 30 minutes after sunrise (dawn).

In addition, a dimmable lighting scheme will be investigated in order to allow the lighting levels and overall brightness to be controlled throughout the nocturnal hours to suit the time of evening and activities

taking place. Dimming will also allow smooth, subtle, imperceptible changes between the different lighting states and avoid confusion from the sudden turning off of the feature lighting at curfew. Further a DALI dimmable lighting scheme could be utilised to provide data on the operational status of luminaires, assisting the client's site maintenance team and simplifying ongoing maintenance of the lighting installation.

The lighting controls will provide further energy savings ensuring that the external lighting is only operational at the hours it is required. (see Diagram 0.1)

Sustainability and Ecological Considerations

As already noted above, all exterior lighting will be carefully positioned and aimed, integrated with the architecture where appropriate, and specified with suitable optics and accessories to ensure that light is delivered to the point where it is required, thereby avoiding light pollution and light trespass.

Where up-lighting of features is used it will be very carefully detailed and aimed to ensure minimal spill of light, and where possible completely eliminate this. Any upward light spill will be kept within the limits for the relevant environmental zone as outlined in the ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2011.

In locations of any bird boxes, lighting will be carefully adjusted to ensure that no light from the development falls on any roosting or sensitive locations.

Further, the decorative feature elements of the scheme (including the up-lighting elements) will be switched off at curfew, limiting the timing of this lit effect to that when it can be appreciated by residents, workers and visitors.

The aforementioned use of lighting controls will also save energy in use, ensuring that lighting is only operational when it is required during the hours of darkness, and adjusting to suit changing times of sunrise and sunset.

Further energy will be saved through the use of long life, high efficacy, efficient LED light sources and luminaire optics, reducing the overall number of lighting points and energy in use.

To reduce the attractiveness of light sources to invertebrates, warm white (2700 K to 3000 K CCT) LED light sources with little to no output in the UV / extreme blue end of the spectrum will be utilised.

4.2 LIGHTING DESIGN

Relevant Standards and Guidance

The requirements and recommendations of all appropriate standards and guidance has been considered during the development of the exterior lighting concepts, as outlined below:

- Clean Neighbourhoods and Environment Act 2005 (Section 102)
- DEFRA, Guidance on Sections 101 to 103 of the Clean Neighbourhoods and Environment Act 2005
- BS EN 13201, Road Lighting (Part 1, 2014 & Part 2, 2015)
- BS 5489-1:2013 Code of practice for the design of road lighting, Lighting of roads and public amenity areas
- BS EN 12464-2:2007 Lighting of Workplaces - Part 2: Outdoor Work Places
- Institution of Lighting Professionals (ILP), Guidance Notes for the Reduction of Obtrusive Light, GN01:2011
- Countryside Commission / Department for Communities and Local Government,
- Lighting in the Countryside: Towards Good Practice (1997) (Out of Print)
- Society of Light and Lighting (SLL/CIBSE), The SLL Code for Lighting (2012)
- Society of Light and Lighting (SLL/CIBSE), The SLL Handbook (2018)
- Society of Light and Lighting (SLL/CIBSE), LG6: The Outdoor Environment (2016)
- Society of Light and Lighting (SLL/CIBSE), Guide to Limiting Obtrusive Light (2012)



Illustrative View - Station Hill Plaza

4.2.2 MASTER GLOWPLAN

4.2.2 MASTER GLOWPLAN

The Master Glowplan adjacent indicatively shows the Station Hill North Site in context with the Station Hill South Site and the general surrounding city blocks.

The warm white lighting and human scale feature lighting creates a welcoming experience for visitors, workers and residents alike.



Illustrative View - Station Hill North Masterplan

4.3

FACADE CLEANING AND MAINTENANCE

4.3 FACADE CLEANING AND MAINTENANCE

4.3.1 OVERVIEW

Summary

The content of this section outlines the proposed facade access strategy for cleaning and maintenance of the Station Hill North Site development in Reading.

The objective of the strategy is to provide the most reasonably practicable, appropriate and robust methods of safe access to the entirety of the building facades for all cleaning and maintenance tasks that are to be expected to occur over the lifetime of the building.

One Station Hill

For One Station Hill, a Building Maintenance Unit (BMU) is to be used as the primary method of access to the facade. The BMU is to be used to support the glass and plant replacement strategies.

Facades accessed via the BMU require a 1.5m clear zone at the foot of the elevation for emergency platform landing. Routine management of terrace and ground floor areas beneath the working platform will therefore be required during BMU operation.

A Mobile Elevated Working Platform (MEWP) is proposed for routine cleaning access to the low-level recessed facades, which are approximately 12m in height. For glass replacement work in this area, a mobile spider crane is proposed to work in tandem with the MEWP. The MEWP and spider crane require approximately 3m and 5.5m wide operating zones respectively and are recommended to be hired in when required.

Windows on ground floor and terraces can be cleaned using traditional cleaning tools, working from the floorplate. Personnel access through the building to the terrace areas will therefore be required.

Scaffolding may be required to assist with glass replacement of the glazed winter gardens roofs as access is not directly accessible by operators from the fully enclosed BMU platform.

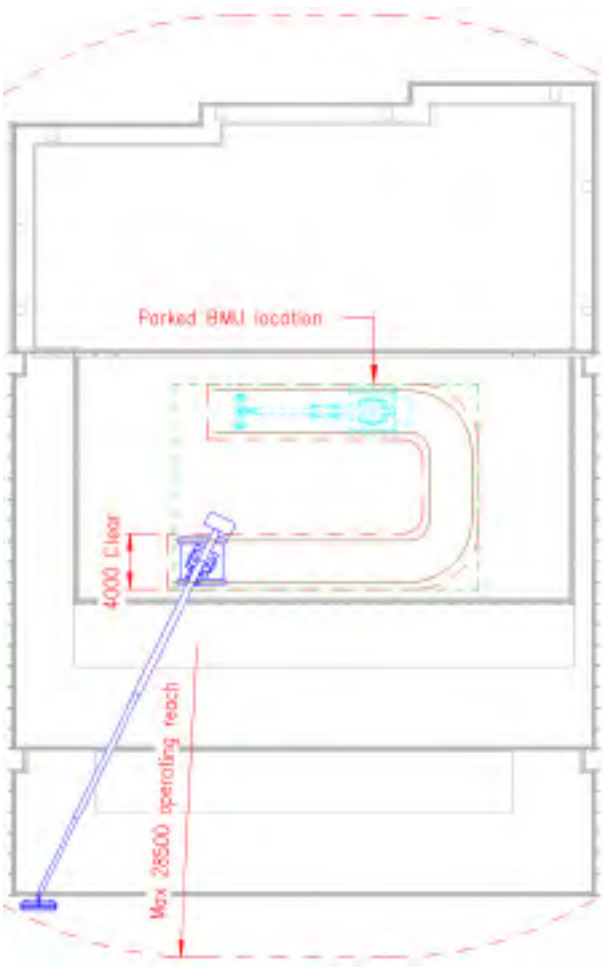
Plot C and Residential Plots

The primary facade access strategy for Plot C is anticipated to be via BMU. For the residential Plots, an internal cleaning and glass replacement approach should be prioritised, however where this is not reasonably practicable, suspended access methods will be required, due to the height of the buildings.

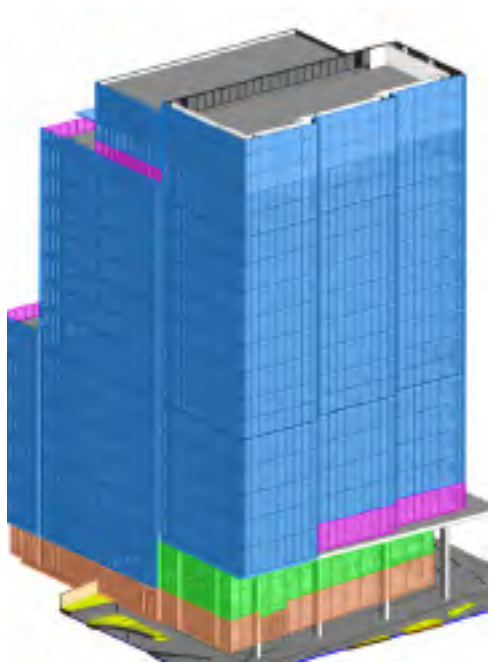
Designing for the Safety of Operatives Working at Height

The Work at Height Regulations, The Construction (Design and Management) Regulations and the Health & Safety Executive advise that work at height risk is addressed in accordance with the points below and the control measures presented in Table 1.

- **Avoidance:** where possible the design should avoid the need to work at height.
- **Prevention:** where avoidance is impractical, the design should incorporate measures that prevent falls or that prevent operatives accessing a position from which a fall could occur. The design should prioritise permanent, collective and passive measures ahead of temporary, personal and active measures.



One Station Hill BMU tracked across roof level



Diagrammatic strategy overview. North-east view.



Diagrammatic strategy overview. South-east view.

Table 1: Work at Height Control Measures Hierarchy

Control Measures	Example Control Measures	Desirability
Avoid the need to work at height	- Ground/floor-level based maintenance - Internal access methods	Most ↑ ↓ Least
Collective fall protection	- Building Maintenance Unit - Temporary Suspended Platforms (e.g. from Davits) - Mobile Elevating Work Platform - Scaffold	
Personal fall protection	- Rope Access techniques - Anchors and anchor lines for work restraint	

4.4 ENERGY & SUSTAINABILITY

4.4.1 OVERVIEW

The Station Hill North development is comprised of two phases; Phase 2 and Phase 3. This section provides a brief overview of the energy strategy for the detailed planning application for Phase 2 which includes One Station Hill, and the outline planning application for Phase 3 which includes Plot A, Plot B, Plot C and Plot D. Further details on the Energy Strategy for Station Hill North can be found in the Energy Strategy standalone document.

A range of passive and active energy efficiency measures will be employed on the Proposed Development.

A detailed facade study into the most appropriate passive measures has been conducted for One Station Hill. This study looked at a plethora of facade options with the aim of limiting the amount of solar gain in summer and achieving the required number of BREEAM ENE 01 credits.

A decentralised Air Source Heat Pump network would be the optimum solution for Phase 2 due to the unbalanced heating and cooling load with the option of exploring both Air Source Heat Pump or Ground Source Heat Pump for Phase 3 to plug into the decentralised network.

When Phase 3 comes forward the scheme will be designed for the peak loads across the entire site and therefore when the system isn't running at peak capacity then there would be an opportunity to export or share on a wider network in line with Reading's aspirations. This would depend on how a wider heat pump network is designed and being able to make suitable commercial agreements across sites. A provision will be provided for connecting the Phase 2 Air Source Heat Pump network with the Phase 3 Energy network in the future.

Detailed modelling has taken place for Phase 2, with target modelling for Phase 3. This detailed modelling shows that the non-domestic regulated carbon emissions for Phase 2 are approximately 12% below the Part L 2013 baseline scheme.

The table below shows how the energy strategy for Phase 2 and Phase 3 of the Station Hill North development is complying with the emerging policy requirements.

Policy		Notes
BREEAM Excellent	✓	For both Block G & C
Zero Carbon for domestic elements with minimum 35% on site reduction	✓	Minimum target set at 45%
Decentralised Energy	✓	Provision for ASHP network (potential to link to ASHP or GSHP)
Part L 2013	✓	Targets achieved using current carbon factors

4.5.1 INTRODUCTION

This section has been prepared by David Bonnett Associates (DBA) and describes how the Proposed Development has been designed with consideration and understanding of the principles of inclusive design.

This section describes the access provisions using a journey around the proposed development as follows:

- Arrival at the site;
- Approaches to the buildings;
- Entrance ways;
- Horizontal and vertical circulation;
- Access to facilities; and
- The emergency evacuation strategy.

The access review considers the requirements of all users, residents, visitors, staff and wider community including:

- People with mobility impairments;
- People with visual impairments;
- People with cognitive impairments;
- Deaf people;
- Older people; and
- Small children.

Access aims

The intention is that Station Hill North is designed to be as inclusive as possible so that it can be comfortably and independently used by staff, residents, people visiting the development and the wider community regardless their age, ability or gender.

The development therefore should meet the guidance of Approved Document M, and the access and inclusive access policies set out by Reading Borough Council as a minimum.

The Commission for Architecture and the Built Environment published a guide called The Principles of Inclusive Design in 2006, which states that inclusive design:

- Places people at the heart of the design process;
- Acknowledges diversity and difference;
- Offers choice where a single design solution cannot accommodate all users;
- Provides for flexibility in use; and
- Provides buildings and environments that are convenient and enjoyable to use for everyone.

Summary of access provisions

The proposals for the development at this stage demonstrate that a good level of inclusive design will be achieved by the finished scheme, given the constraints of the site.

The key access provisions for the proposed masterplan include:

- Improved permeability across the site and accessible routes to all pedestrian connections via external passenger lifts; and
- A pedestrianised public realm free of vehicular traffic, that is comfortable to use by residents, people working in and visiting the development regardless their age and abilities;
- Suitably drop-off points within 50 metres of all entrances; and
- 5% of the total car parking provision will be designed to be suitable for wheelchair users.

The key access provision for the proposed One Station Hill include:

- Direct and convenient approaches to the entrances at ground floor and lower ground floor, which are easily identifiable and logically located in relation to the surrounding streets;
- Step-free access into and to all parts of the building, including balconies and roof terraces;
- Two banks of four passenger lifts each to serve different parts of the office building; one goods lifts and one additional passenger lift between ground floor and lower ground floor;
- Wheelchair-accessible facilities where sanitary accommodation is provided, including the reception areas, all office floors and facilities for cyclists; and
- Internal escape routes suitable for independent escape, with wheelchair refuges provided within protected enclosures and the availability of a fire fighting lift to assist with the safe and efficient evacuation of disabled people.

4.5 INCLUSIVE ACCESS

4.5.2 MASTERPLAN OVERVIEW

Arrival

Public Transport Connections

The Site has good transport links with convenient access to bus stops and interchange facilities, serving the wider Reading area and neighbouring towns, and rail services providing access to a number of local towns as well as regional and nationally important centres throughout the UK.

All Reading bus services are accessible with a low floor and an entrance ramp. Reading rail station provides step-free access from the street to the platforms.

Drop-off points

The Site benefits from a good provision of drop-off locations so that disabled people who rely on taxis or community transport can be dropped off / picked up within 50m of any entrances of the buildings. Additionally, a taxi rank is located on the south-west of the rail station.

Car parking

The Phase 2 and Phase 3 full development will provide car parking across two levels: at Station Hill level and at Garrard Street level with a potential additional basement level. The allocation of spaces is proposed as follows:

- 145 car parking spaces allocated to serve Thames Tower;
- Residential spaces provided at a ratio of 0.3 spaces per unit; and
- Remaining spaces to be publicly accessible.

6 bays, which represents 5% of the total provision, will be accessible car parking bays.

Parking bays designated for disabled people will be designed in accordance with Approved Document M and follow the guidance from BS8300-1:2018, and in accordance with the Revised Parking Standards and Design - SPD, these bays will:

- Be easily identifiable with clear and consistent directional signage;
- Should, if appropriate, be available both for employees and visitors;
- Have designated accessible parking bays as close to the entrance as possible;
- Meet the dimensions as recommended in BS 8300;
- Be level and next to firm, even and slip-resistant pedestrian surfaces;
- Have dropped kerbs to give access to adjacent pavements be well lit;
- Have entry control that are easy to use by everyone.

Cycles

The north-south connection from Reading Station towards the town centre across the development will be designed as a pedestrian environment but cyclists will not be prohibited and instead advised to travel cautiously and considerately. A suitable cycling wayfinding strategy will be developed to encourage cyclists to use the designated cycle routes around the edge of the site and along Garrard Street. Additionally, provision of visitor cycle parking stands at the entrances of the development is to encourage visiting cyclists to dismount and park.

The development will make provision of secure and covered cycle parking for residents and employees working within the development, adjacent to the designated cycle routes.

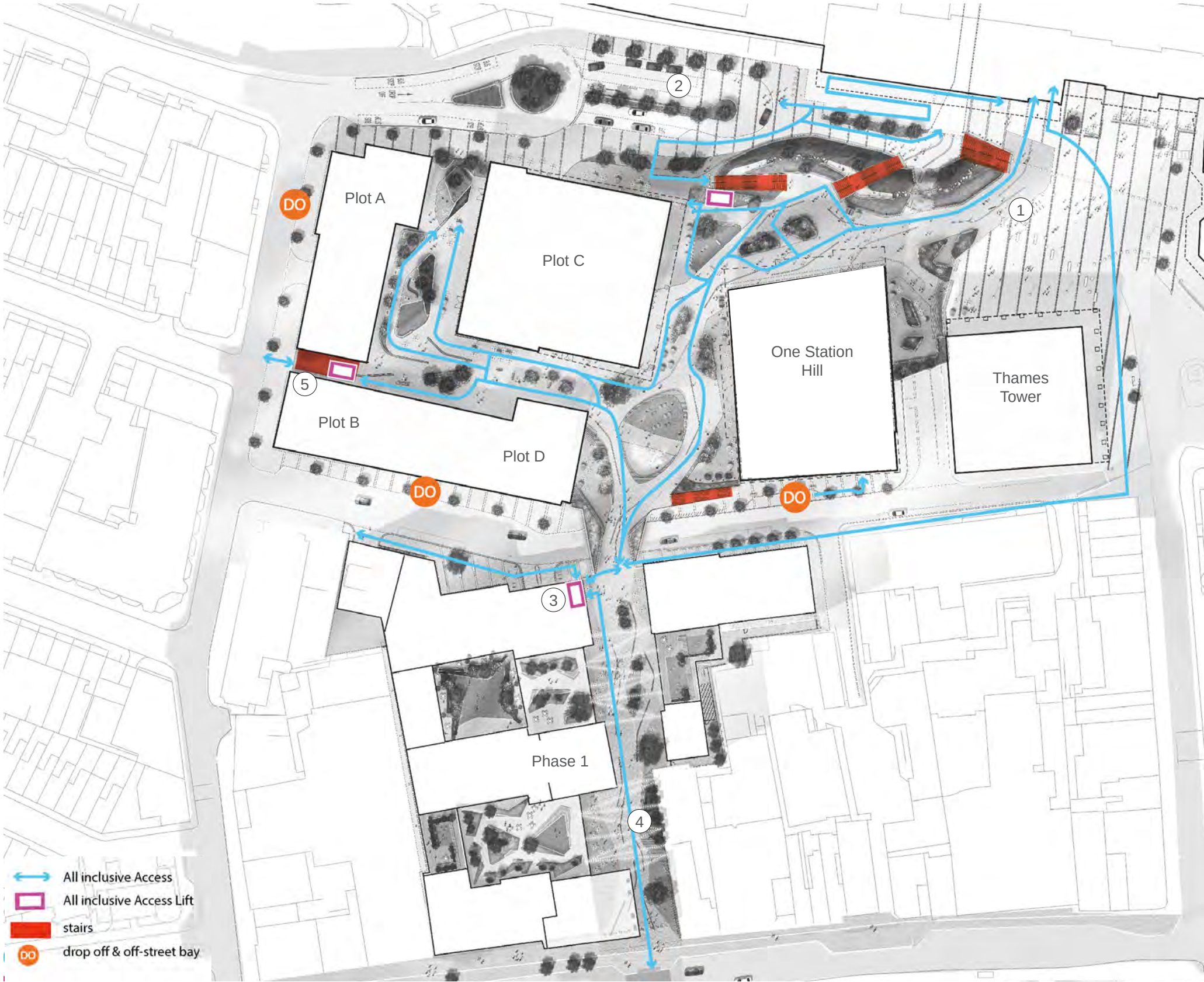
Provision for adapted cycles, e.g., recumbent tricycles, will be made if required by a resident/employee in the future.

Supporting facilities such as lockers, showers and changing rooms will be provided for employees working within the development within the buildings. These facilities will include wheelchair-accessible facilities for disabled cyclists.

Pedestrian Access - Entrances to the Site
The proposed public realm will provide a good pedestrian connectivity across the site. All entry points for people travelling to a destination within the Station Hill development will be step-free as follows:

- ① Station Square - a gentle slope will address the level change between the rail station and Station Hill Plaza.
- ② Taxi rank on Station Hill - A lift is proposed to connect Station Hill and the Plaza in addition to the existing ramps, and a new flight of steps.
- ③ Garrard Street - A lift is proposed to connect Garrard Street with the Plaza in addition to a flight of steps.
- ④ Friar Street - Access from Friar Street will be gently sloped.
- ⑤ Greyfriars Road - A lift is proposed in addition to a flight of steps to address the level change between Greyfriars Road and Station Hill Gardens leading to Station Hill Plaza.

Lifts are considered the best means of access where the change of level is more than 2m and therefore are proposed in the development on such basis.



Public realm - Access strategy

4.5 INCLUSIVE ACCESS

Public realm

Topography

The existing site is sloped with a level difference of approximately 5 metres between Station Square and Garrard Street, and 2 metres between Station Hill and Garrard Street.

The Masterplan vision is to create a flat public realm from Station Square to Friar Street, via a footbridge over Garrard Street. A 1.5m level difference will still need to be addressed, which will be mitigated in the design. Slopes will be as shallow as possible, with a gradient no steeper than 1:21, and resting points are provided every 500mm rise.

The proposed elevated public realm across the site will create level differences to the adjacent streets of up to 5m. In all cases a step-free access will be provided, as described in the previous section.

Primary Access Routes

Pedestrian access routes (PARs) are defined as the most direct and convenient pedestrian routes linking key parts of a Development and should follow main desire lines. PARs should connect the public spaces to the individual entry points for each building. These will be for use by pedestrians and shared with cyclists as well as link all pedestrian footways alongside roads, all approaches to buildings and their entrances, routes between vehicle passenger setting down points.

PARs across the site will be designed to be inclusive and have access features such as gentle gradients, suitable surfaces, rest points and good lighting.

As design develops provisions to ensure the comfort of all pedestrians using the public realm are to include:

- Predictable spaces, with logical routes linking across the site entrances, facilitating wayfinding for people who are blind or partially sighted.
- Clear visual links from PARs to entrances and key buildings.
- A legible layout for visitors.
- Any street furniture, paving and landscape features such as the proposed trees, public seating and cafe seating, will be located so as to avoid creating barriers or hazards for disabled people.

Planting and landscape feature including seats and resting places every 50m, and be guided by BS8300. For example seating that can offer a range of heights, armrests and back support with some allowing sideways transfer for wheelchair users. Where provided to meet the 50m guidance for level resting areas then seating that is sheltered will be the preference when this is developed as part of the overall design strategy.

- Consistent and reliable lighting between the various spaces and along routes - for security and to enable visually impaired users to navigate safely.
- Minimise the visual impact of passing between bright sun, avoiding light and deep shadowed areas.
- Quieter areas protected by surroundings buildings, with minimal traffic noise, facilitating conversation and communication, with particular benefits for people with impaired hearing and those with mental health conditions.
- Suitable tonal contrast between any structure that might protrude into the public area (such as columns) and the background against which it is seen.
- All drainage gullies will be kept clear of PARs.
- Suitable non-slip, even, level walking surfaces. Cobbled surfaces are generally too uneven to provide good access.
- Floor surface avoid dark strips that may be confused by steps or level changes by partially sighted people and people with mental health conditions.

External lifts

External public passenger lifts are located at the entrances to the development where a level change exceeds 2 metres. Additionally, lifts located on Station Hill will provide access to the car parking at the basement.

Alternative step-free routes will be available when one of the lifts break down on Station Hill via the existing ramps. The other lifts will have a rapid repair and maintenance contract implemented to keep single lifts in service. Information about whether lifts are working will be essential for disabled users.

External slopes and ramps

Gradients across the elevated public realm will be within 1:21 - 1:60 and will be treated as gentle slopes. Intermediate level landings will be provided every 500 mm change in level.

Where these are bordered by soft ground or a drop they will include a raised kerb or balustrade.

External stairs

Stairs linking the street and the elevated public realm are located strategically to ensure that people have the minimum travel distances on the PARs or can choose an adjacent lift.

All stairs will be designed to meet the requirements of Part K for 'general access stair', including dimensions that suit ambulant disabled people, tonal contrast to aid people with impaired sight, and handrails to both sides of steps and that extend 300 mm beyond the top and bottom riser.

4.5.3 PHASE 2 - ONE STATION HILL

One Station Hill is a shell and core commercial office building with NIA of approx. 250,000 sqft over 15 storeys from Station Square and additional storey connection to Garrard St.

The floorplate arrangements for the typical office levels are larger floorplates from Level 03-07, an office level at 08 which incorporates a terrace, mid-size floorplates from Level 09-14 and a tenant amenity floor with terrace on Level 15. Level 16 contains plant/MEP spaces.

The building has a centre core arrangement, which comprises lifts, stairs and the sanitary facilities.

Entrances

Entrances to One Station Hill are located on the northern side at Plaza level, and on the southern side from Garrard Street.

The main entrance at Plaza level will be via revolving doors and an adjacent door that provides accessible access; and the entrance from Garrard Street will be via hinged doors. Entrance doors will be detailed at a later stage according to AD Part M and the guidance of BS 8300 where relevant.

Office lobbies are spacious and clear of obstructions with a reception desk clearly identifiable from the entrance doors.

WC's will be provided within the lobby areas, which will include a AWC cubicle.

Horizontal circulation

All floors - of both the office and retail provision - will allow for level-access. Corridors will be wide enough to allow people on crutches and wheelchairs to pass each other, and turn through 180° where necessary.

Internal doors will be avoided where possible, as they are potential barriers for disabled people. Internal doors will be detailed at a later stage according to AD-M and the guidance of BS 8300 where relevant.

Access to terraces on levels 8 and 15 will be step-free.

Vertical circulation

Lifts

Provision will be made for a total of 10no. lifts; 8no. passenger lifts and 1no. goods lift within a central core, and an additional passenger lift that provides access from the main entrance to the lower ground floor. 2no. of the passenger lifts will serve all levels from the lower ground floor, where there is access to the car parking, to level 15, of which one is a fire-fighting lift; 2no. passenger lifts will serve from the ground floor to level 15; and the remain 4no. passenger lifts will serve from the ground floor to level 8.

All lifts will exceed the minimum dimensions required by the standards, i.e. 1400mm deep by 1100mm wide, and will be detailed at later stages to meet Approved Document Part M and the guidance of BS 8300 where relevant; however, DBA do not anticipate any access issues.

Stairs

Provision is to be made for 2no. stair-cores within the central core which will provide access to all levels, from the lower ground floor to level 15, and are expected to be used for emergency egress.

There are 2no. additional stairs on the ground floor, one that connects the two office lobbies, and the other connects the main lobby with the co-working reception at level 1 and co-working space at level 2.

All stairs will be designed to meet the requirements of Part K for 'general access stair', including dimensions that suit ambulant disabled people, tonal contrast to aid people with impaired sight, and handrails extended 300 mm beyond the top and bottom riser.

Sanitary provision

Typical office levels

A unisex WAWC compartment will be provided on each sanitary core provided. On all levels where two AWC are provided, they will have opposite side-transfer to the WC.

The typical office floor (levels 03-07) has female/male sanitary cores, on the north and south of the lift core, to allow tenant flexibility. In addition, there is a unisex AWC on each core.

The typical office floor (levels 09-14) has only a female/ male sanitary core on the north side of the lift core, which includes unisex AWC compartment.

The amenity floor at level 15 also has only a sanitary core on the north side of the lift core, which includes unisex AWC compartment.

The co-working spaces at levels 1 and 2 has only a female/male sanitary core on the south side of the lift core, which includes unisex AWC compartment.

There will be a wheelchair accessible WC within 40m of all areas of the office floorplates. Doors along the route to the accessible WC's will be minimised where possible.

A WC cubicle for use by ambulant people is provided on each sanitary core, both where there are female/male cubicles and where there are unisex superloos.

Enlarged WC cubicles are not provided, as these cubicles are intended for parents with children or people with luggage, which is not expected in an office environment.

Cyclists facilities

Facilities for cyclists will be provided on the lower ground floor next to the cycle store, including lockers, and a drying room.

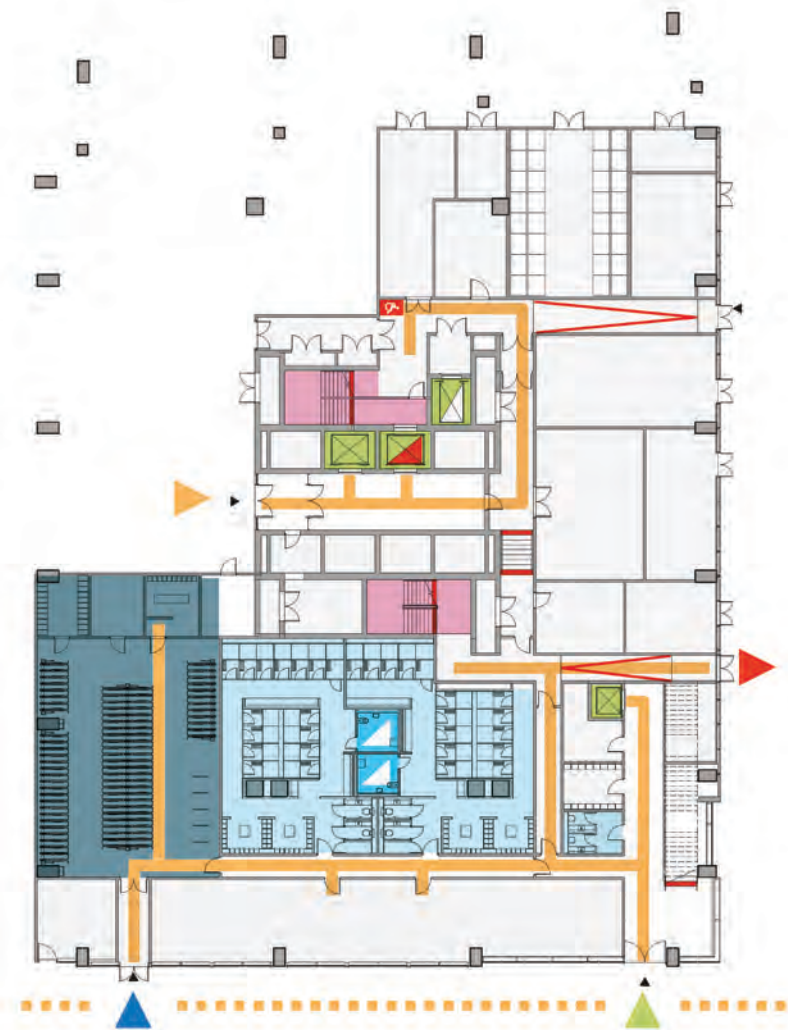
A unisex wheelchair-accessible WC and shower compartment will be provided. Additional facilities, such as lockers will be provided for the benefit of wheelchair users.

Additionally, a WC cubicle for use by ambulant people will be provided on each changing room.

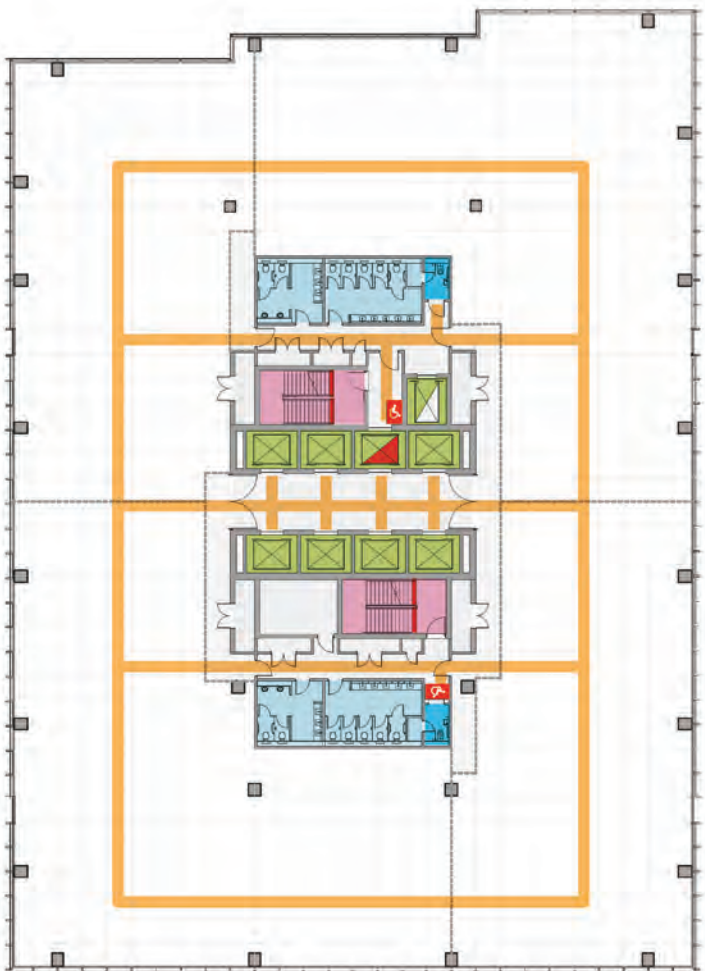
4.5 INCLUSIVE ACCESS



Proposed Ground floor



Proposed Lower Ground floor



Proposed Typical office floor (Levels 03-07)

Key:

- | | | |
|--------------------------------------|--------------------------------|----------------------|
| external wheelchair accessible route | passenger lift | safe refuge |
| internal wheelchair accessible route | passenger / fire-fighting lift | ramp ($\leq 1:20$) |
| office accessible entrance | goods lift | bicycle storage |
| retail accessible entrance | accessible WC | |
| accessible emergency exit | accessible WC/shower | |
| VIP entrance | WC/showers/changing rooms | |
| stepped entry / exit | step | |
| | escape stairs | |

4.5.4 REFERENCES FOR INCLUSIVE DESIGN

Legislation

Equality Act 2010

The Equality Act 2010 ('the Act') combines and supersedes previous separate discrimination legislation (including the Disability Discrimination Act 1995 as amended ('the DDA') and the disability discrimination provisions of SENDA 2001 for England, Wales and Scotland. People are protected from discrimination and harassment based on 'protected characteristics'; victimising anyone as a result of action taken in connection with the Act is also unlawful. There are nine different protected characteristics under the Act which have different levels of protection depending on the context (such as employment, provision of goods and services or the provision of education). This Access Review focuses on the protected characteristic of disability; the definition of disability is essentially the same as under the DDA.

The types of discrimination that can arise in relation to disability are:

- Direct disability discrimination;
- Indirect disability discrimination;
- Treating disabled people unfavourably because of something arising in consequence of their disability without justification; and
- A failure to make reasonable adjustments for disabled people ('the RA duty'). The RA duty works in different ways depending on who requests the reasonable adjustments to be made, for example an employee or a member of the public.

The Act also provides protection for people who are treated less favourably because of their relationship with a disabled person (such as a carer) or for people treated less favourably because they are mistakenly believed to be disabled. A disabled person can always be treated more favourably than a non-disabled person.

If an employer is a listed public authority (such as a local authority) they will be subject to the public sector equality duty. If the employer is not a public authority but carries

out a public function as part of its work, it will be covered by the general part of the equality duty in relation to the exercise of that function.

The public sector equality duty seeks to promote equality from within an organisation and the general duty requires the organisation to have due regard to the need to:

- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by the Act;
- Advance equality of opportunity between persons who share a relevant protected characteristic and those who do not; and
- Foster good relations between persons who share a protected characteristic and those who do not.

Due regard must be given to these three aims when undertaking procurement and to comply with procurement law, consideration must be given to the extent to which equality considerations are relevant and proportionate to the subject matter of the contract.

Most of the listed public authorities are also subject to the specific duty (which operates slightly differently in England and Wales). This involves reporting requirements to demonstrate compliance with the three aims of the general duty. The public sector equality duties are relevant both to the design and the management of the built environment.

The Reasonable Adjustment Duty and specific building provisions

The Equality Act does not contain any specific requirements for the built environment and therefore has no relevance to 'compliance' in respect of physical building standards.

Statutory Consents

When considering a reasonable adjustment to a physical feature, the Act does not override the need to

obtain consents such as planning permission, building regulations approval, listed building consent, scheduled monument consent and fire regulations. If the consent is not given, there is still a duty to consider a reasonable means of avoiding the feature.

Regulations and Standards

Building Regulations 2010

The Building Regulations 2010, Approved Document M (Access to and use of buildings) Volume 1: Dwellings. Volume 2: Building other than dwellings, HM Government, 2015 edition.

The Building Regulations 2010, Approved Document K: Protection from falling, collision and impact, HM Government, 2013 edition.

The Building Regulations 2010, Approved Document B (Fire safety) Volume 1: Dwellings, HM Government, 2006 edition incorporating 2010 and 2013 amendments.

The Building Regulations 2010, Approved Document B (Fire safety) Volume 2: Buildings other than dwellinghouses, HM Government, 2006 edition incorporating 2007, 2010 and 2013 amendments.

The Regulations make clear that designs other than those shown in the document can be approved if they are justified as being equally or more effective. Approval confers acceptance that the building meets the regulations in respect of physical access for disabled people.

National Planning Policy

National Planning Policy Framework (NPPF), Ministry of Housing, Communities and Local Government, 2019.

The NPPF states that all developments should be designed to be inclusive and that this should be addressed by local policies.

Town and Country Planning (Development Management Procedure) (England) Order 2015, Article 9.

Local Planning Policy

Reading Borough Local Development Framework, Reading Borough Council, January 2008

Station Hill South Planning and Urban Design Brief, Reading Borough Council, March 2007

Reading Borough Local Development Framework, Revised Parking Standards and Design, Supplementary Planning Document, Reading Borough Council, October 2011

4.5 INCLUSIVE ACCESS

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BS 8501:2002 Graphical symbols and signs. Public information symbols, British Standards Institute, 2002. International Standards

ISO 7176-28:2012, Wheelchairs - Part 28: Requirements and test methods for stair climbing devices, British Standards Institution, 2012.

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Guidance on Information Requirements and Validation, Department for Communities and Local Government, 2010.

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Good Loo Design Guide, CAE, RIBA Enterprises, 2004.

Changing Places: the practical guide, Changing Places Consortium, undated.

BS6465-2: 2017 Sanitary installations Part 2: Space recommendations - Code of practice, British Standards Institution, 2017.

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Inclusive Urban Design: A guide to creating accessible public spaces, David Bonnett Associates, BSI, 2013.

Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure, Department for Transport, 2005.

Improving Walkability: Good Practice Guidance on Improving Pedestrian Conditions as Part of Development Opportunities, Transport for London, 2005.

Guidance on the Use of Tactile Paving Surfaces, Department for Transport 2007.

Traffic Advisory Leaflet 5/95 Parking for Disabled People, Department for Transport, 1995.

Inclusive Design for Getting Outdoors l'DGO, Legacy website <http://www.idgo.ac.uk/>, 2011.

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Design Solutions to Include the Needs of Visually Impaired People, Barker, Barrick and Wilson, RNIB/HMSO, 1995.

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The Accessible Office: Designing the Inclusive Workplace, JMU Access Partnership, Royal National Institute of Blind People, 2005.

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4.6 SECURITY SUMMARY

4.6.1 OVERVIEW

The high-level aim of the security design for One Station Hill, Plots A, B, C, D, the public realm and the immediately surrounding podium levels is to provide appropriate and proportionate security risk mitigation measures that allow residents and users to not only be, but feel, safe and secure.

A formal security risk assessment (SRA) has been undertaken to determine the security requirements across the Station Hill development. This approach will provide a robust, auditable methodology to identify the security risks posed to the site or assets and subsequent treatment measures. This SRA has been completed at masterplan level, then the defined strategies applied to all the plots and public realm. As part of the SRA, a detailed threat assessment has been completed that identifies the design basis threats from which the security risks are assessed.

Furthermore, a vehicle threat mitigation strategy has been developed that will identify requirements and strategy options for the protection of the public realm from vehicle threats.

Throughout the process there has been and will continue to be engagement with both internal and external development stakeholders. Including, but not limited to, the Thames Valley Police Designing Out Crime Officer (DOCO) and as appropriate, the police’s Counter Terrorism Security Adviser (CTSA) through the DOCO.

This design and access statement has been structured around key headings taken from international best practice for the incorporation of security design into projects, such as Crime Prevention Through Environmental Design (CPTED). It outlines those elements that will be derived from the security as well as architectural design.

It also acknowledges the guidance of the National Planning Policy Framework (NPPF), which instructs local authorities to promote healthy and safe communities by considering wider security and defence requirements and support the need for appropriate and proportionate security solutions to be applied.

4.6.2 ACCESS AND CONNECTIVITY

A layered approach to security will be adopted for One Station Hill, Plots A, B, C, D, the public realm and the immediately surrounding podium levels, creating a series of security zones. This will be enforced through a mixture of electronic access control, mechanical access control (key locks) or through clear delineation of areas (see ownership). Another key principle within the zoning approach that will be included is that of ‘secure lobbies’ and the requirements within these for a degree of permissible access from users.

Pedestrian access into One Station Hill will be from Plaza Level, Garrard Street (Level -02) or from the car park (Station Hill Street Level -01). Where entrance points exist, two lines of security control will be adopted (secure lobbies). Access into Plots A, B and D is perceived to be from Greyfriars Road, Garrard Street (into level -02) or Station Hill Gardens, between the buildings. Access into Plot C will be from Station Hill, or Station Hill Gardens / Station Hill Plaza level, within the development. Where entrance points exist, two lines of security control will be adopted (secure lobbies).

There is private vehicular access from Garrard Street into the parking at Level -02. Access will be controlled through a flexible locking strategy based upon a vehicle barrier, electronic access control systems, mechanical locks and operational procedures.

Vehicular access (service vehicles) will be from Garrard Street (Level -02) into a dedicated service yard. Control of access for deliveries and contractors into the core of One Station Hill will be via a dedicated access point on Level -02 and will be managed by access control and operational management. Control of access for deliveries and contractors into the cores of Plots A, B, C and D is intended via a dedicated approach route from this service yard and operationally managed access into the cores.

A number of emergency exit points exist at the base of stair cores. These are for emergency egress only.

4.6.3 STRUCTURE AND SPATIAL ARRANGEMENTS

The security zoning will be applied to the most current architectural designs and this will provide the basis for design development. Where security zones border an adjacent zone greater than one factor higher (e.g. public borders semi-private) then this provides an additional focus for security measures.

The following will be considered in relation to the spatial arrangements:

- Reduction in the number of secluded spaces.
- Spaces have a clear and identifiable function / use.
- Separate location of entrance points for retail and commercial spaces.
- Location and access of refuse stores – accessible from public spaces with secured through access to the development.

4.6.4 SURVEILLANCE

Surveillance requirements will be achieved through a balance of natural and active surveillance (video surveillance systems – VSS). The optimisation of natural surveillance- where space is naturally overlooked by users and occupiers - has the increased benefit of reducing the need for active measures whilst remaining an excellent deterrent to crime within that space. This is particularly applicable to the building curtilage/immediate public space and the public realm further outside One Station Hill and Station Hill Gardens between plots A, B, D and C.

Active surveillance will reinforce the natural surveillance as well as provide mitigation for those vulnerable areas identified within the SRA that are less able to benefit from natural surveillance, such as lift lobbies, parking and bike stores etc. It can also be used to enhance surveillance in those areas where natural surveillance is limited to certain times of the day (e.g. retail operating hours).

As part of the surveillance design there will also be integration and coordination with lighting design to support both active systems and natural surveillance.

- Project Notes:
- 1. External cameras to be mounted on the lighting column.
 - 2. Cameras to be mount at the height of 3.5 m to 4 m

Video Surveillance Legend

A

Type A – Fixed camera, internally mounted

B

Type B – Fixed camera, externally mounted

D

Type D – Pan, Tilt and Zoom (PTZ) camera, externally mounted.

E

Type E – 360 degree camera, internally mounted.



Composite CCTV Location Plan

4.6 SECURITY SUMMARY

4.6.5 PHYSICAL PROTECTION

Physical protection of assets within the development will be as identified through the SRA or in accordance with the SBD principles.

Any enhancements to the public realm will integrate physical security requirements in the landscape design and will include crime prevention measures such as those designed to reduce the likelihood of anti-social behaviour such as rough sleeping.

The provision of vehicular access control measures to potential vehicle access points to the public realm will form the HVM line protecting the entire public realm within the Station Hill master plan.

Design of physical protection will be proportionate to the identified security risks and aligned to the principles of defence in depth.

Where retail facilities exist, security measures are being limited to physical security of access points only. For tenant spaces within the commercial areas, physical security of access points is also being included along with the provision of containment only for future installation of tenant systems

4.6.6 OWNERSHIP AND ACTIVITY

The development has been designed such that there are clear areas of ownership and intended activity of spaces. Areas such as resident terraces and amenity spaces, retail, amenities and commercial tenant spaces provide a clear understanding of what the space is to be used for.

4.6.7 ADAPTABILITY

Safety and security of a development is enhanced where there is adaptability within the space to manage changes in security needs. The flexibility in access permissions afforded by the electronic access control system provides opportunity to enhance or reduce security posture dependent upon any future potential needs. For example, horizontal and vertical compartmentalisation can be addressed should that fit with the operational security stance.

4.6.8 OPERATIONAL MANAGEMENT

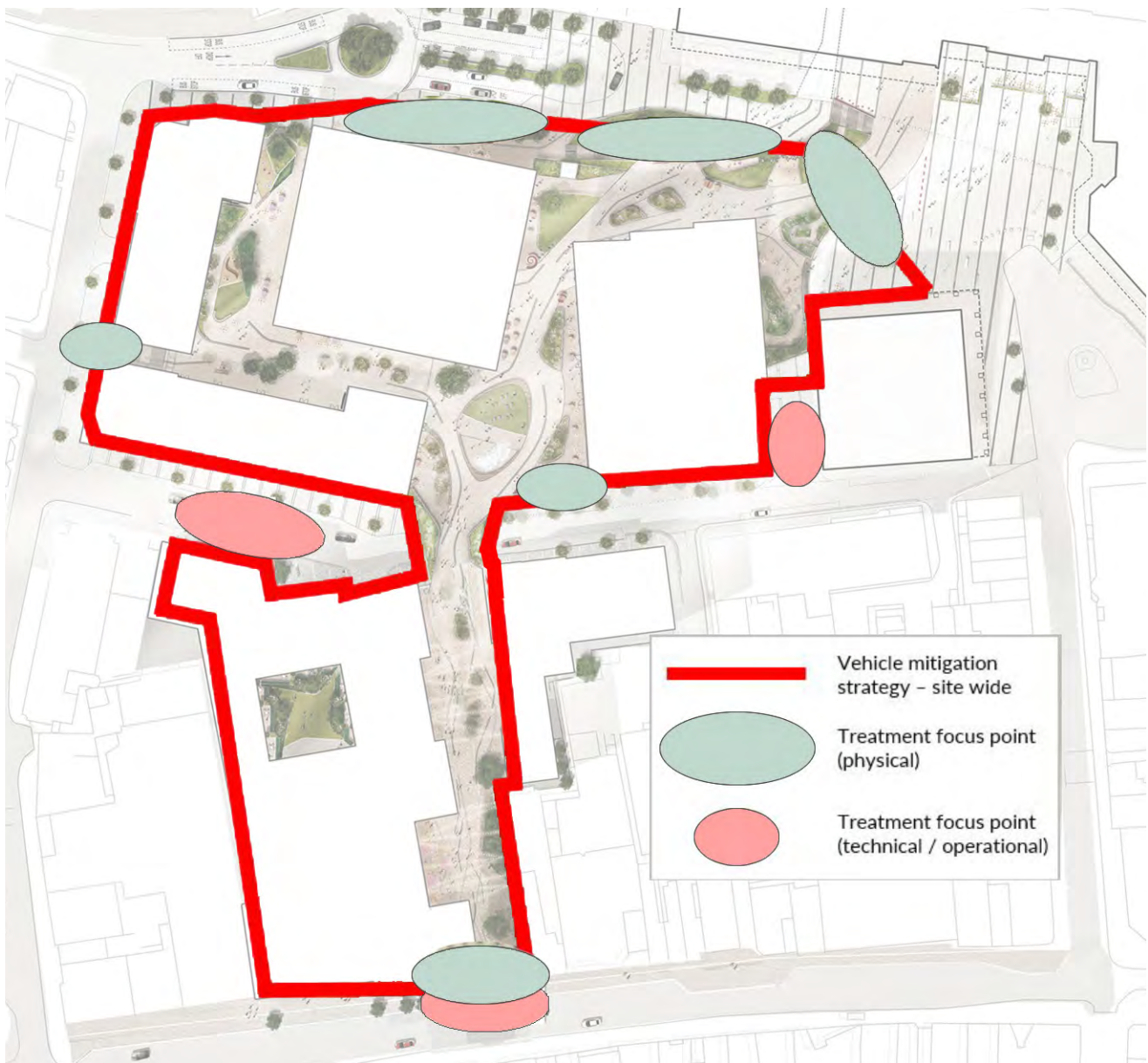
The security design allows for Plots A, B, D, C, One Station Hill, Station Hill Gardens, Station Hill level, Garrard Street level and basement parking to be operationally managed on a day to day basis from either a central control room or locally in isolation.

Servers within server rooms and control PCs for the security systems will exist within designated spaces and/or offices to enable occasional management requirements such as new card issue or interrogation of video surveillance systems.

4.6.9 BREEAM AND SECURE BY DESIGN

The SRA meets the requirements of the security needs assessment (SNA) as stated within BREEAM 2018.

The principles of secured by design will be followed in the design development.



Vehicle Dynamics Assessment - High Level Strategy and Focus Points

