MARLOW FILM STUDIOS

DESIGN AND ACCESS STATEMENT

May 2022

Marlow Film Studios

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Masterplanners: **Prior + Partners**

Concept Architects: **WilkinsonEyre**

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PREFACE

A VISION FOR THE FUTURE

The British film and TV industry stands as one of this country's great ongoing success stories.

In 2021, £5.1 billion was spent on film and television production here, up nearly 30% from the previous, pre-pandemic record. With the great majority of that spend coming from overseas and going to studios close to Marlow.

The combination of our rich cultural heritage, our world-leading facilities, our deep pool of talent and supportive Government policies, both national and local, has made the UK, and southern Buckinghamshire in particular, the premier destination for many film makers at the highest level.

In a time when so much is uncertain, the benefits to the economy, to jobs and to our international status are self-evident. In an era when global households become increasingly connected to high speed broadband, and preferring UK made content, these benefits have a clear route to future expansion.

But that very success also presents challenges.

Productions, that are eager to come here, are having to relocate abroad. Simply because they can't all be accommodated. Demand for well-placed specialist space and human resources increasingly outstrips what's available and even what's planned.

Our record of seizing this market, spectacular as it is, must be even better and have the room to be better. The creation of new career pathways and life chances is a substantial opportunity, within reach which we must not let slip.

Marlow Film Studios will be a major force in addressing this, meeting the industry's increasing very specific needs, while setting new standards for film studio design. It will be an unashamedly inspiring place to work, create, educate and learn, for a celebrated and award-winning workforce.

It will provide a welcoming environment delivering a workplace focused on its occupants' health and well-being, providing strong bonds to nature alongside active mobility options and amenities.

The goal is to positively influence the local economy and contribute to the area's culture. It will create a hub for skills, technology, and creative people, as well as for social and community life – for both the film industry and neighbours.

This proposal is also aligned with the community's ambitions for public infrastructure improvements, recreational opportunities and increased biodiversity.

It is the right idea, at the right time, in the right place.

Robert Laycock
CEO Marlow Film Studios.

CHAPTERS

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8.0 LANDSCAPE

8.23 CONTEXT

The masterplan and landscape proposals have been developed with consideration for the wider landscape context, its immediate surroundings and the existing conditions within the Red Boundary Line. The following pages describe key considerations that have shaped the proposals' development.

8.23.1 WIDER CONTEXT

The site is located within the relatively flat, low-lying Thames Floodplain area characterised by open fields, hedgerows and woodland belts and water bodies associated with the former gravel pits. Marlow's built-up area is immediately to the west beyond the A404 and there are smaller clusters of development, including the village of Little Marlow, dotted along the river valley and around the site.

The land to the north rises within the Chilterns Area of Outstanding Natural Beauty (AONB) and to the south on Winter Hill. Therefore, there are long views of the site from both directions. Views from the west and east are more limited due to the flat landscape and existing vegetation.

The Thames Path long-distance path runs along the river immediately to the south of the site, whilst the Chilterns Way sits further to the north within the AONB, providing pedestrian and cycle connections and recreational routes. The Public Right of Way through the site and the Marlow Road to the north link Marlow to Little Marlow. North-south routes are more limited and less direct; however, there are a series of Public Right of Ways and permissive paths connecting the river and the AONB.

The A404 severs the site from Marlow and limits the connectivity for pedestrians and cyclists to a few locations.

Figure 8.1 Wider landscape context

8.23.2 EXISTING EDGE CONDITIONS

The existing Public Right of Way runs south of Plots 1 and 3 and connects back to Marlow via the existing footbridge over the A404. It is well used as an amenity route as well as a direct link between Marlow and Little Marlow. The path is currently unsurfaced and unlit. A permissive path along the west side of Plot 5 provides a link between the footbridge and the Thames Path.

The existing lane through the centre of the site provides access to Westhorpe House and Westhorpe Park, whilst Westhorpe Farm Lane along the eastern boundary provides access to the cluster of dwellings to the southeast of Plot 2A, the Aquatics Centre, the cottages of Westhorpe Farm Lane and the Stallworthy.

The proposed design also needs to consider interfaces with these near neighbours: Westhorpe House, Westhorpe Park Homes and the houses immediately adjacent to the development area. Westhorpe House is fairly well enclosed by existing trees within its grounds which are subject to an area TPO whilst the Westhorpe Park Homes site benefits from the high garden wall around its perimeter.

Westhorpe House and Corners Cottage are Grade II Listed Buildings. It is important to understand their settings and the way it has changed through time. A new entrance to Westhorpe House was created off the drive 30-40 years ago, with a new avenue of trees. Westhorpe House has dense blocks of planting along the north and west boundaries of its garden, with some of the trees dating back perhaps 400 years or more, and some Cedars from the Victorian era. These remain unaffected by the development.

The northern plots (1,2 and 3) were used as a landfill and are a fairly open landscape of grassland and ruderal vegetation with trees and hedges around the perimeter field boundaries. The row of poplars to the north provides good screening to views from the Area of Outstanding Natural Beauty, whilst the combination of a dense native hedge within the site and a row of conifers beyond screens the eastern boundary along Westhorpe Farm Lane.

The southern plots (4 and 5) have been more extensively colonised by pioneer vegetation. There are mature woodland belts around the perimeters and a mosaic of scrub, grassland and young woodland to the centres.

The southern part of the site has a close relationship with surrounding water bodies, and the flooded gravel pits provide an varied setting for Plots 4 and 5 and are visible from the Public Right of Way south of Plot 3. Westhorpe water course associated with Westhorpe House runs between Plots 4 and 5. The Westhorpe water course has been heavily colonised by dense woodland. Shallow ephemeral water bodies are also present within Plot 5 and provide valuable habitat.

The northern plots slope from north to south, with a level change of approximately 7m between the Marlow Road and the Public Right of Way. The southern plots are broadly flat and slightly elevated above the surrounding landscape by fill. Plot 1 is surrounded by an earth bund around 1-2m high, whilst a mound of material is present in the northeast of Plot 5.

Figure 8.2 Existing landscape plan

Figure 8.3 Existing Public Right of Way

Figure 8.4 View from the Public Right of Way towards Westhorpe Lake

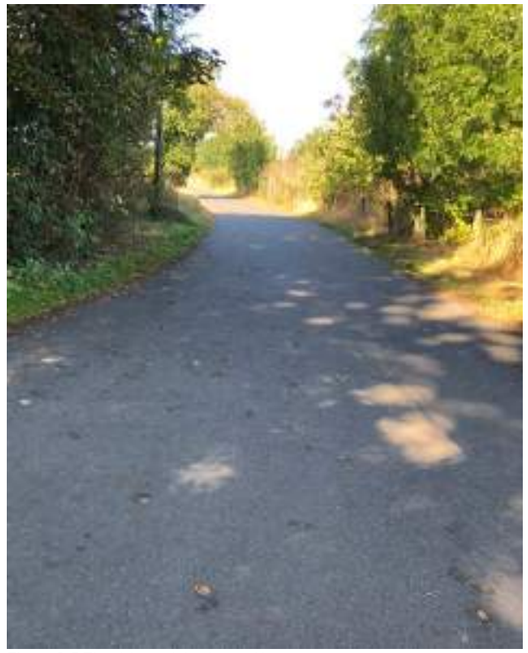

Figure 8.5 The drive to Westhorpe House

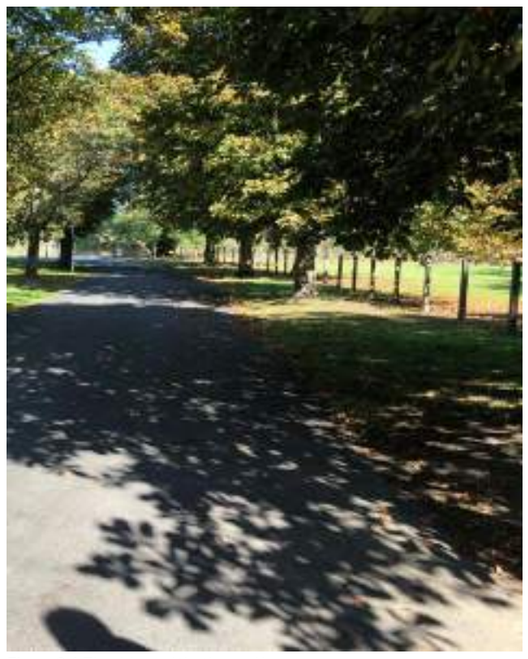

Figure 8.6 The drive to Westhorpe House

Figure 8.7 Northern plots vegetation and bund

Figure 8.8 Row of poplars to northern boundary

Figure 8.9 Westhorpe Farm Lane

Figure 8.10 Properties to the south of Plot 2A

Figure 8.11 Woodland belts on Plots 4 and 5

Figure 8.12 Mosaic habitat on Plots 4 and 5

Figure 8.13 Flooded gravel pits

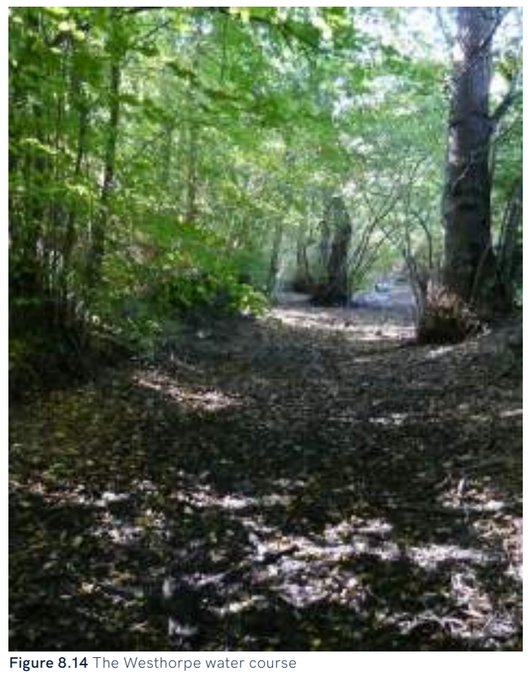

Figure 8.14 The Westhorpe water course

Figure 8.15 Garden wall around Westhorpe Park Homes

8.23.3 KEY CONSIDERATIONS

The wider landscape context, boundary conditions and near neighbours, combined with existing conditions on the site itself, have informed a number of key considerations which have shaped the development of the landscape masterplan as described below:

1. Enhance the existing Public Right of Way surfacing and lighting to provide an improved pedestrian and cycle link, the proposed studio development and Little Marlow and recreational spaces.
2. Provide a new pedestrian and cycle route along the western and northern edges of the site to create a network that adjacent landowners could further extend to improve connections between Marlow and the wider area.
3. Provide and improve amenity walking routes within Plot 4 which connect to the existing Public Right of Way and permissive footpaths.
4. Retain and improve the existing drive to Westhorpe House on its current alignment.
5. Provide suitable landscape buffers to minimise the impact on nearby neighbours, particularly Westhorpe House, Westhorpe Park Homes, the cottages in Westhorpe Farm Lane to the southeast of Plot 2A, the Stallworthy and the Crowne Plaza Hotel.
6. Provide landscape buffers to screen the development from sensitive views, particularly from the Area of Outstanding Natural Beauty to the north and Winter Hill to the south. Retain existing screening trees and enhance them with new planting.
7. Locate the development in less ecologically valuable northern plots.
8. Retain existing field boundaries and enhance them with new buffer planting to tie the development into its landscape and ecological context and provide habitat corridors that link the Area of Outstanding Natural Beauty to the river corridor.
9. Design the landscape to consider the public experience of the studio perimeter, particularly along the Public Right of Way and the drive to Westhorpe House. Secure lines to be integrated into the landscape.
10. Retain existing high distinctiveness habitat to Plots 4 and 5 and enhance grassland/scrub areas to maximise biodiversity value of southern plots.
11. Create a landscaped area at the intersection of the Public Right of Way and the drive to Westhorpe House to address the setting of the Heritage Asset at Westhorpe House. This area will also focus on the interface between the private studio landscape and adjacent public spaces with the Studio Hub, Community Building, and HQ spaces helping activate the Public Right of Way, provide public amenities and reward use.

Figure 8.16 Constraints and opportunities plan

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8.24 LANDSCAPE MASTERPLAN

8.24.1 VISION

The following key principles underpin the approach to landscape design to support the delivery of these objectives:

A Biodiverse Campus, Integrated with its Landscape Setting...

The design will provide environmental enhancements and maximise opportunities to contribute to sustainability targets whilst helping to integrate the development into its surrounding context.

The existing landscape will inspire landscape design with an informal, natural character which connects to the site's surroundings. The perimeters of the studio plots will incorporate linear habitat corridors and sustainable water management features as well as providing a buffer to soften built form, whilst Plots 4 and 5 will be managed to maximise contribution to biodiversity.

Landscape design along the Public Right of Way and within Plot 4 will enhance the public experience and functionality of the route, support new public amenities and provide an appropriate setting for Westhorpe House.

Figure 8.17 Habitat creation combined with Sustainable Urban Drainage Strategies

DESIGN PRECEDENTS

Figure 8.18 A broad brush approach to landscape with an informal, natural character that connects to surroundings

Figure 8.19 A landscape setting to the Public Right of Way

Figure 8.20 Pedestrian and cycle connections

An Attractive, Creative and Healthy Workplace...

Landscape design will work hard to deliver a scheme that provides an attractive, healthy workplace for studio staff.

Focal points within the studio plots will be supported by versatile attractive external spaces that allow the activity to spill out from buildings and for staff to rest or socialise surrounded by nature.
The streetscape and pedestrian routes design will incorporate greening and support active modes of travel.

Figure 8.21 Spill-out for socialising and external working embedded in nature

Figure 8.22 An exciting, creative place to work

Figure 8.23 More intricate planting in focal spaces

Figure 8.24 Cycle and pedestrian routes

8.24.2 CONCEPT

The site covers a large area with a wide range of existing conditions, constraints and opportunities. The landscape design needs to be sensitive to the wider setting and landscape character and provide public amenities. In addition, the landscape will maximise biodiversity and ecology whilst also supporting the operation of the film studio.

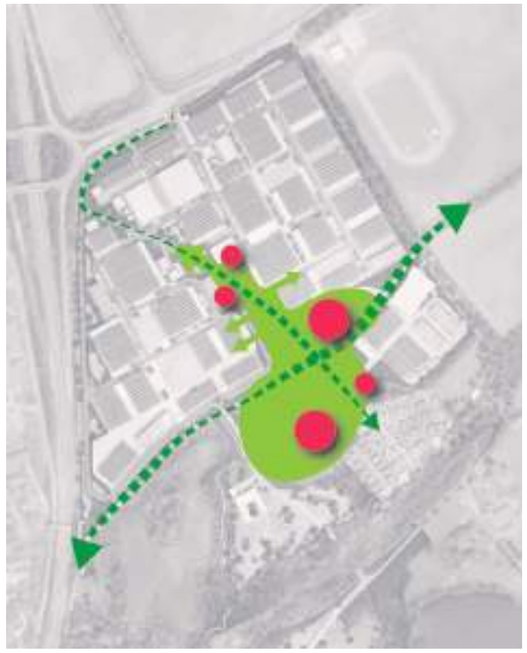
A series of overarching principles underpin the development of the landscape masterplan to provide a characterful, coherent scheme that is appropriate to its setting and delivers the requirements of the studio brief alongside wider public and environmental benefits.

An ecological approach

The current ecology of the site and its surrounding area has been shaped by its fluvial geology, the flood zone extent and past land use. The interaction between these layers of the landscape has resulted in the tapestry of habitats, and ecological networks present today and influenced the settlement pattern that has developed along the river corridor.

The landscape design seeks to build on this structure, taking its cues from the existing context and identifying key ecological opportunities to shape an approach to planting design and create new habitats within the site.

A green setting

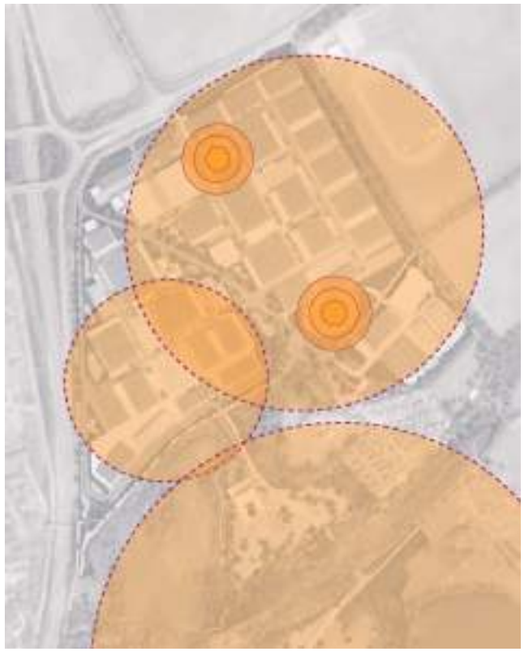


The experience of the Public Rights of Way and the setting of Westhorpe House are key considerations in the landscape design of Marlow Film Studios.

As part of the development, there is an opportunity to create new public amenity and interests along the Public Right of Way. The enhanced footpath will offer an interface between the public and the studio to create a draw to increase the use of the route.

The scheme buildings are set back from the intersection of the Public Right of Way and the drive to Westhorpe House, offering the opportunity for the landscape here to provide a setting to the historic building and the new amenities.

Broad brush/finer grain



For the majority of the development, highly designed planting schemes would not be appropriate to the character and scale of the site and its rural setting. Instead, a broad-brush approach is taken with natural plant communities such as meadow, woodland and native hedgerow. The use of local natural landscapes brings additional benefits in terms of biodiversity.

In key locations, such as the Studio Hub Plaza, a finer-grained approach is appropriate, and there is an opportunity to provide a more detailed, designed landscape.

8.24.3 LANDSCAPE MASTERPLAN

The studio production zones are located on the northern plots (1, 2A, 2B and 3), whilst the more ecologically valuable southern plots (4 and 5) are maintained as predominantly open spaces with existing high-distinctiveness habitats retained.

The development is surrounded by landscaped buffers which have been developed with consideration for the specific conditions on each side of the site. These are multifunctional landscapes providing ecological corridors and Sustainable Urban Drainage Strategies attenuation as well as providing separation from near neighbours and screening to long views.

The main studio entrance is located off the existing lane entrance on the Marlow Road to the north and connects to an Entrance Square, providing a welcoming space and leading to key pedestrian circulation routes allowing visitors to orientate themselves. This Entrance Square is connected to the heart of the Studio Hub Plaza via the main pedestrian spine.

The drive to Westhorpe House is maintained in its current alignment to maintain access to Westhorpe House and Westhorpe Park. The existing Public Right of Way is retained and upgraded to improve access.

Plot 4 provides publicly accessible walking routes and an ecologically rich setting for the Culture and Skills Academy building, whilst Plot 5 provides a backlot area for external filming in the centre, with the perimeter managed to maximise biodiversity.

8.25 LANDSCAPE BUFFERS

8.25.1 BUFFER ZONES

Landscaped buffer zones are provided around the studio plots to help integrate the development with its surroundings. These incorporate existing and proposed vegetation, topography and fence lines to mitigate the visual impact of the development and provide privacy and security.

Buffers will also play an essential role in enhancing site ecology. They are an opportunity to provide linear stretches of valuable habitat that improve connectivity and increase biodiversity. In places, they will also incorporate circulation routes, and Sustainable Urban Drainage Strategies (SuDS) features planted with marginal and aquatic species to increase the diversity of habitat further.

The perimeter of the site includes a wide variety of existing features and conditions both within the site and in the adjacent landscape. Buffers have been designed with consideration for the specific character and sensitivities at each interface. The plan opposite illustrates the key buffer zones around the site, whilst the following pages describe the design approach to each of these.

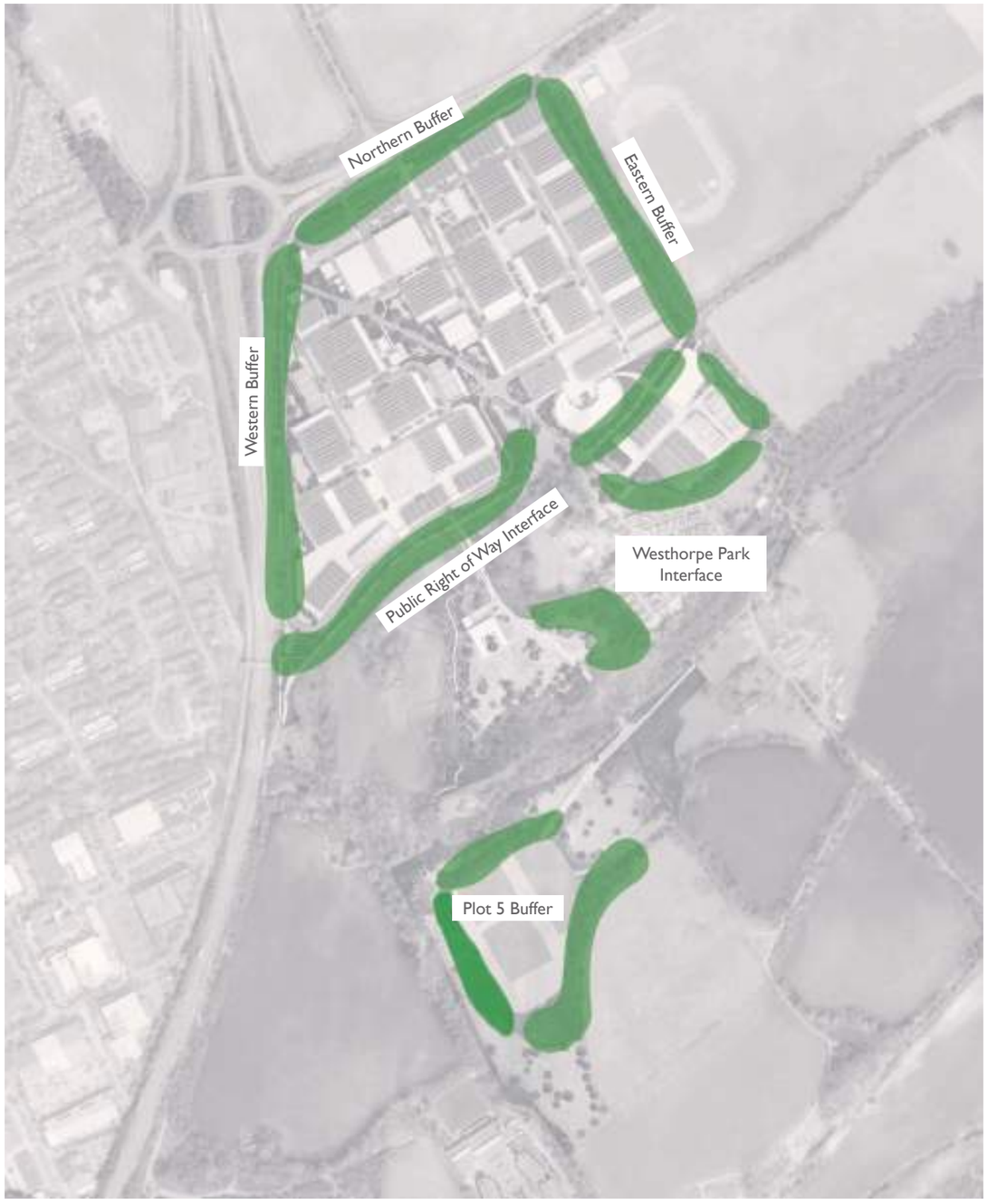


Figure 8.26 Landscape buffers diagram

8.25.2 NORTHERN BUFFER

The northern boundary is a sensitive area in terms of visual impact due to the elevated land and long views from the Area of Outstanding Natural Beauty.

The design ties in with the existing buffer of the neighbouring Athletics Track with a woodland strip of similar width (20-27m) along the north of the studio plots creating a continuous belt of habitat which connects to its surroundings.

The row of existing poplars within the site provides valuable screening; these are well-established middle-aged trees, and the masterplan layout, and vehicular access has been designed to retain as many of these as possible.

The northeastern corner of the site has less cover from existing trees and is visible in long views. Infill tree planting is proposed to plug gaps in the existing tree line along with a secondary internal buffer of woodland edge planting, which combines with the existing earth bund to create layered screening. Beyond the Red Boundary Line, the masterplan enables the enhancement of the existing footway along the Marlow Road to create a shared pedestrian and cycle route to improve connectivity.

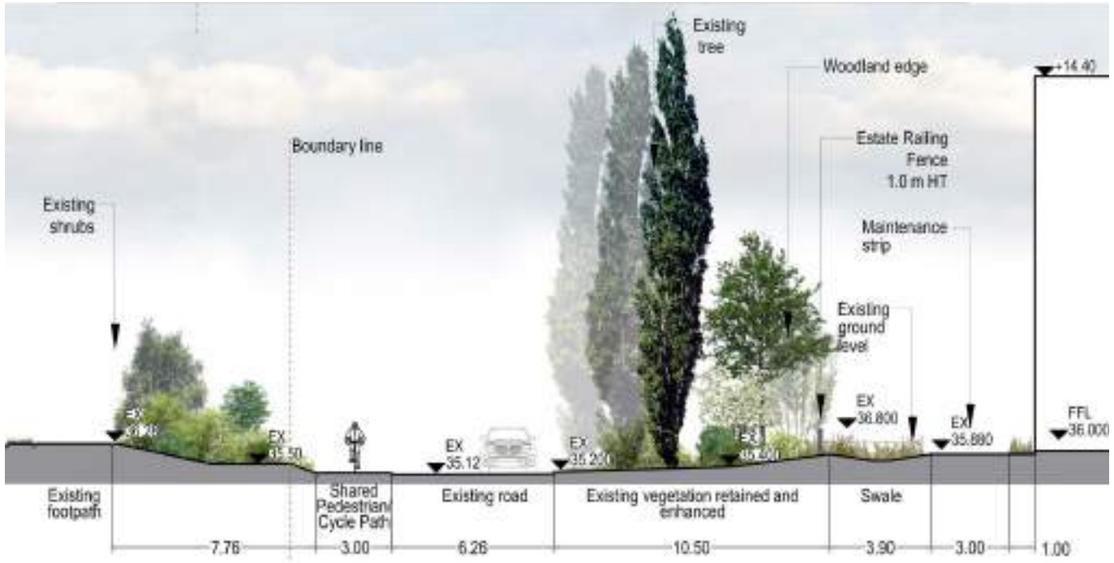


Figure 8.27 Section A-A through northern buffer to west of site entrance

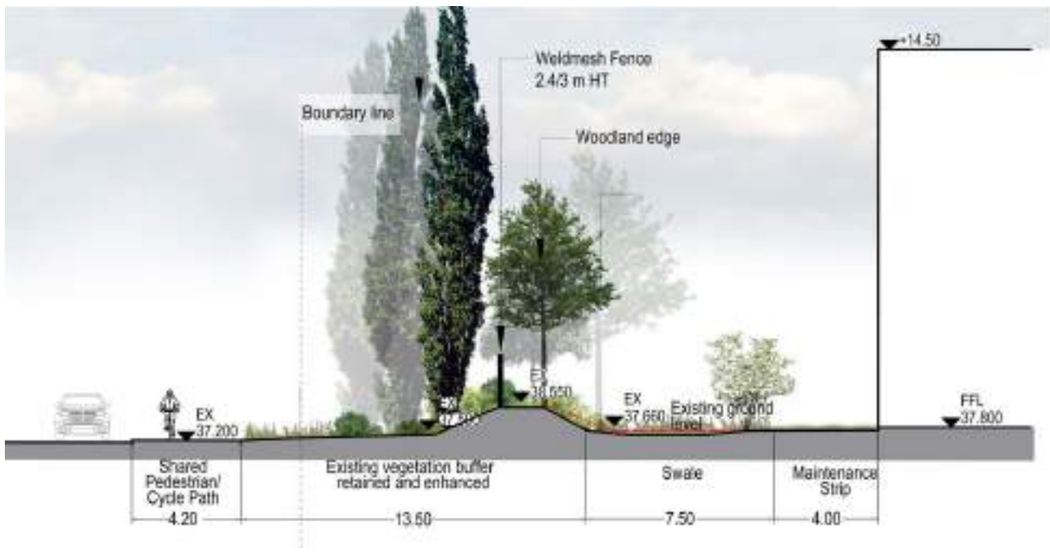


Figure 8.28 Section B-B through northern buffer to east of site entrance

Figure 8.29 Existing poplars and bund

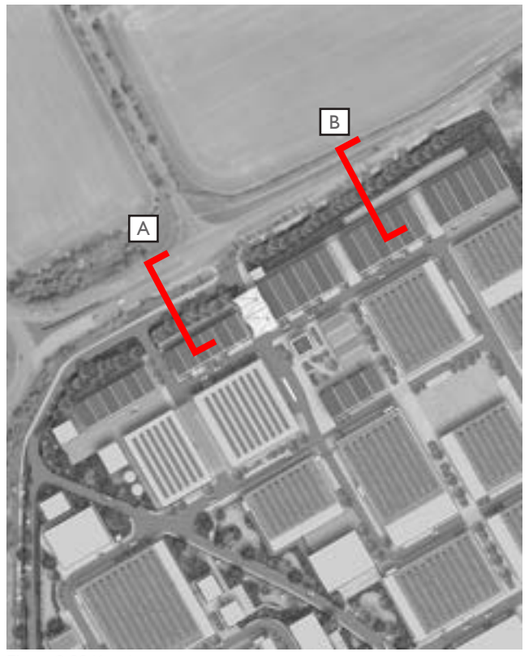


Figure 8.30 Keyplan

8.25.3 WESTERN BUFFER

The A404 borders the western boundary, and there are some transitory views into the site from the road through the existing intermittent tree line. Views from the northwest are more sensitive with potential visibility from the Area of Outstanding Natural Beauty (AONB), and the site is also highly visible from the Public Right of Way, where it crosses the road on the footbridge.

Existing mature trees are retained whilst new infill tree planting is proposed to the northwest to provide a more continuous buffer to the AONB. To the south, a more layered approach allows some views through the tree line of ecological planting, Sustainable Urban Drainage features and vertical greening on the façades of buildings.

The secure line to the western edge is set within the planted landscape. At a minimum, a wide native hedge is provided on the outside to screen the fence, whilst in less constrained areas, the fenceline sits back closer to the buildings with layered native planting and vegetated SuDS features providing increased separation.

A new pedestrian and cycle route is provided outside the secure line to connect the footbridge to the route along Marlow Road.

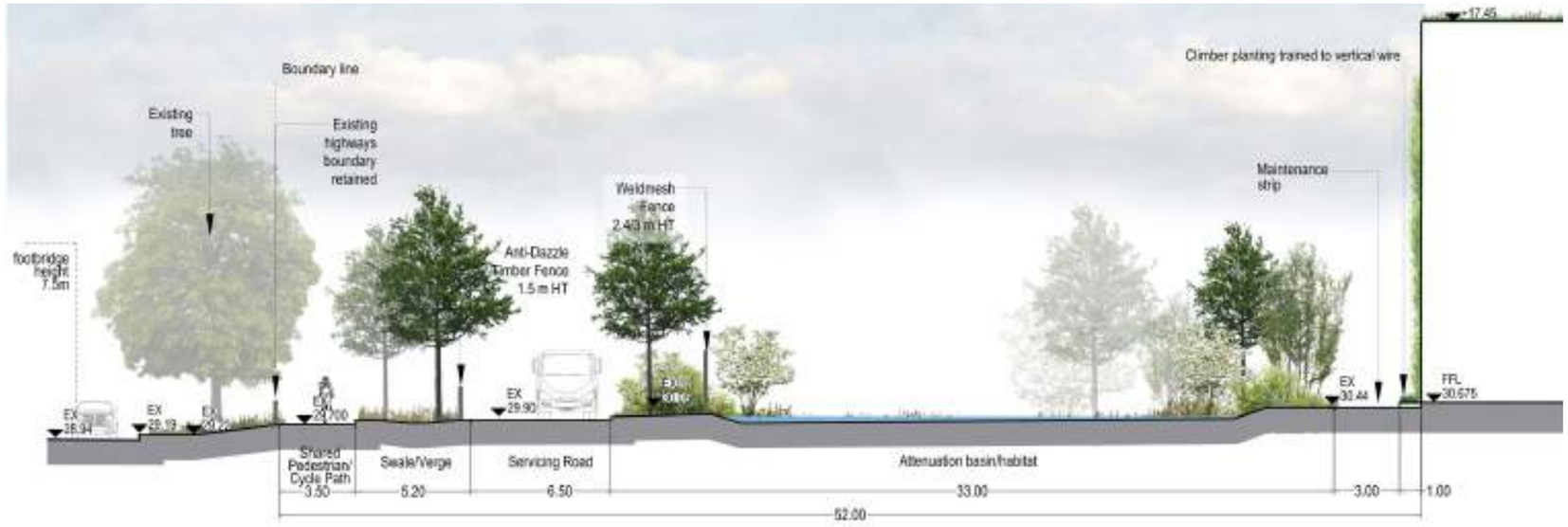


Figure 8.31 Section C-C through western buffer

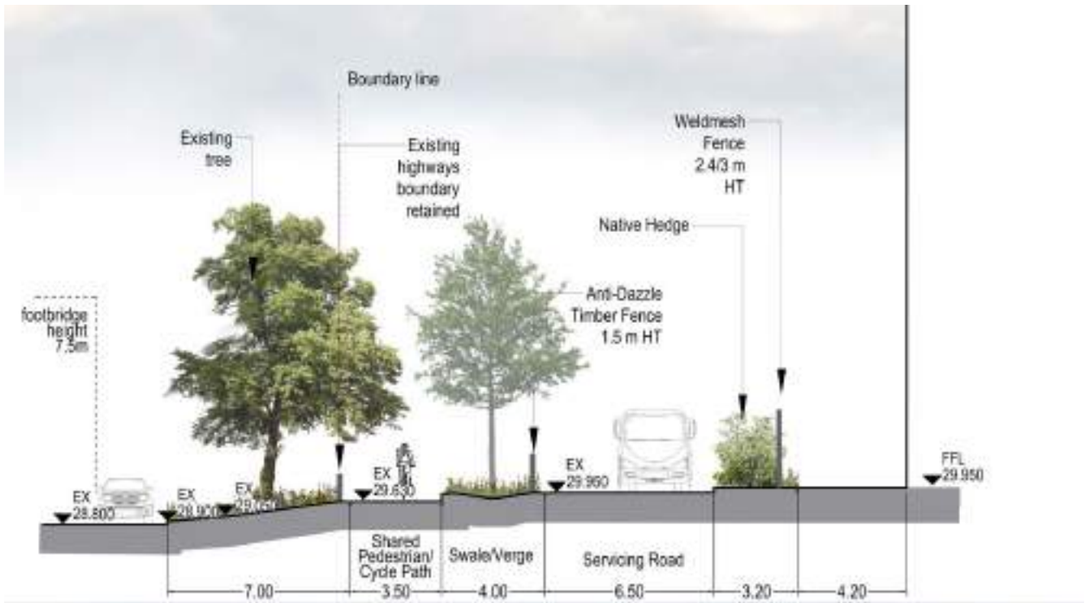


Figure 8.32 Section D-D through western buffer

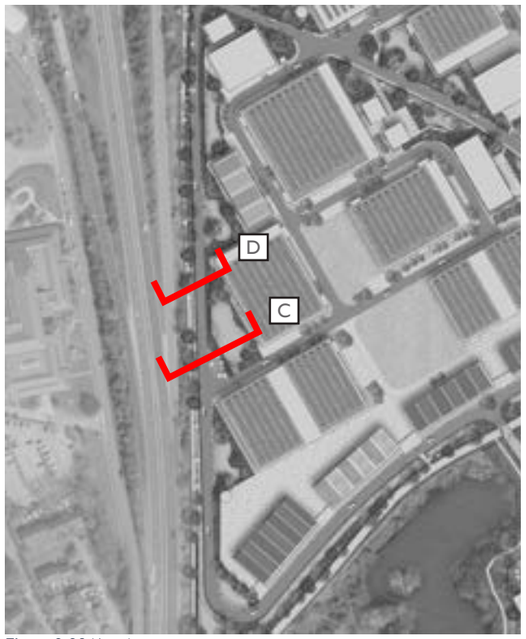


Figure 8.33 Keyplan

8.25.4 EASTERN BUFFER

The eastern boundary to Westhorpe Farm Lane benefits from a strong line of existing conifers to the east of the lane, providing good screening. A mixed-species hedge to the west of the lane combines with the earth bund around Plot 1 to provide a buffer to the immediate surroundings.

The proposed layout sets buildings back to allow retention of the existing bund and hedgerow. This is strengthened with additional woodland edge planting to create a more significant buffer and enhance its value as a wildlife corridor providing continuous linear habitat linking the Area of Outstanding Natural Beauty to hedgerows and woodland corridors to the south of the site. The building edge forms the secure line to the site minimising the presence of security on the perimeter.

Climber planting trained to vertical wires is also proposed for some sound stage eastern elevations to soften their appearance and provide habitat links to green roofs.

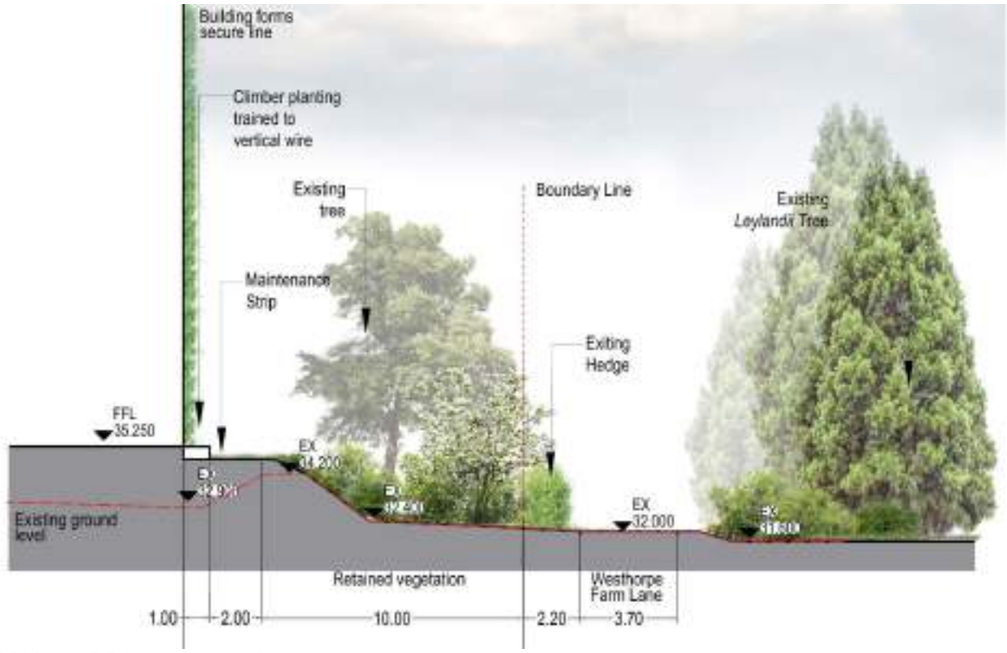


Figure 8.34 Section E-E through eastern buffer

Figure 8.35 Existing hedge and evergreen trees

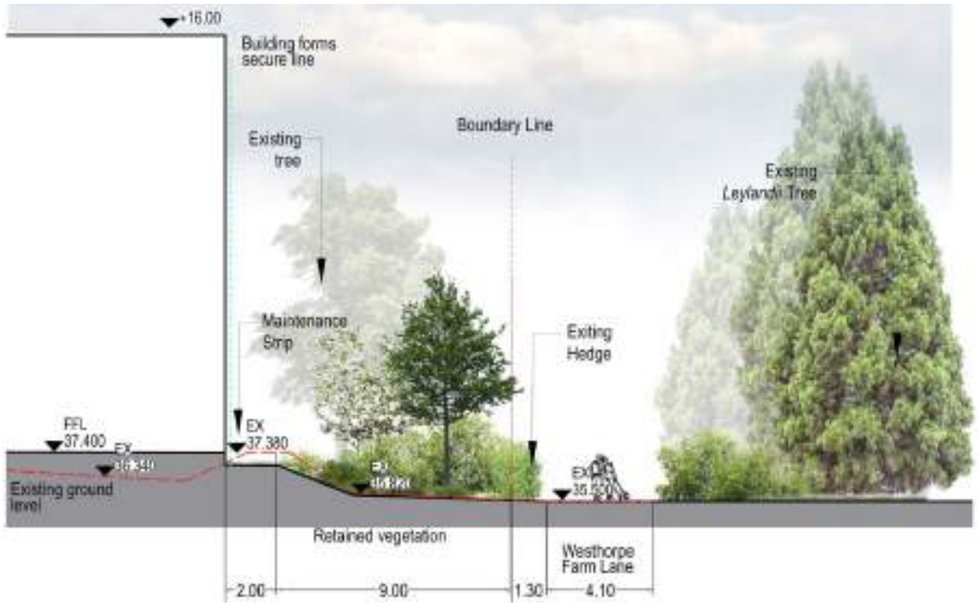


Figure 8.36 Section F-F through eastern buffer

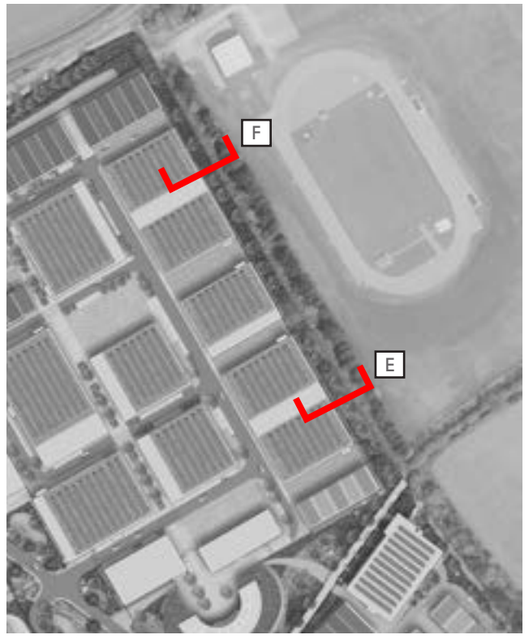


Figure 8.37 Keyplan

8.25.5 PUBLIC RIGHT OF WAY INTERFACE

Plots 1, 3 and 2A interface with the existing Public Right of Way. The public experience of the route has shaped the design of the masterplan and landscape buffers in this location.

The built form is set back to the west and steps down towards the Public Right of Way. Wide landscape buffers with existing hedgerows, new planting, and planted swales create separation and maintain the rural character of the footpath. Buildings provide a secure line minimising the impact of security on the public experience. Further east, the development has a more active relationship with the Public Right of Way with the Studio Hub, Community Building and cafe interfacing with the route. The buildings are set within a more open landscape with meadows and scattered trees. Plot edges are delineated with a low fence whilst secure lines are set back between buildings. A planted bund provides a subtle defensible edge to the Studio Hub.

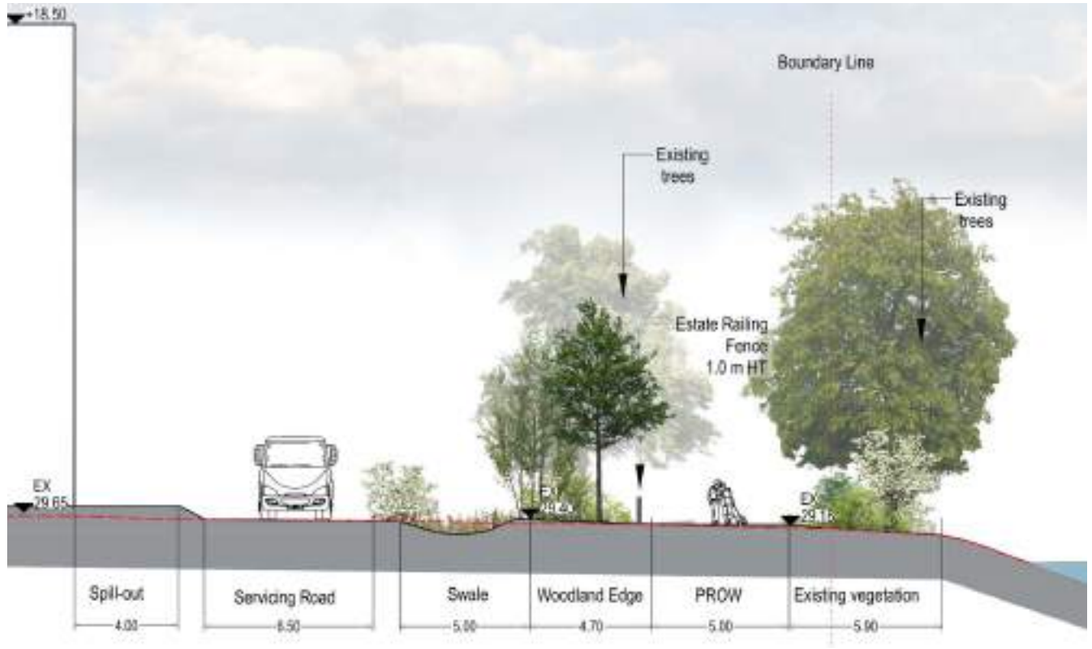


Figure 8.38 Section G-G through Plot 3 Public Right of Way interface

Figure 8.39 Buffer zone incorporating Sustainable Urban Drainage Strategies swale

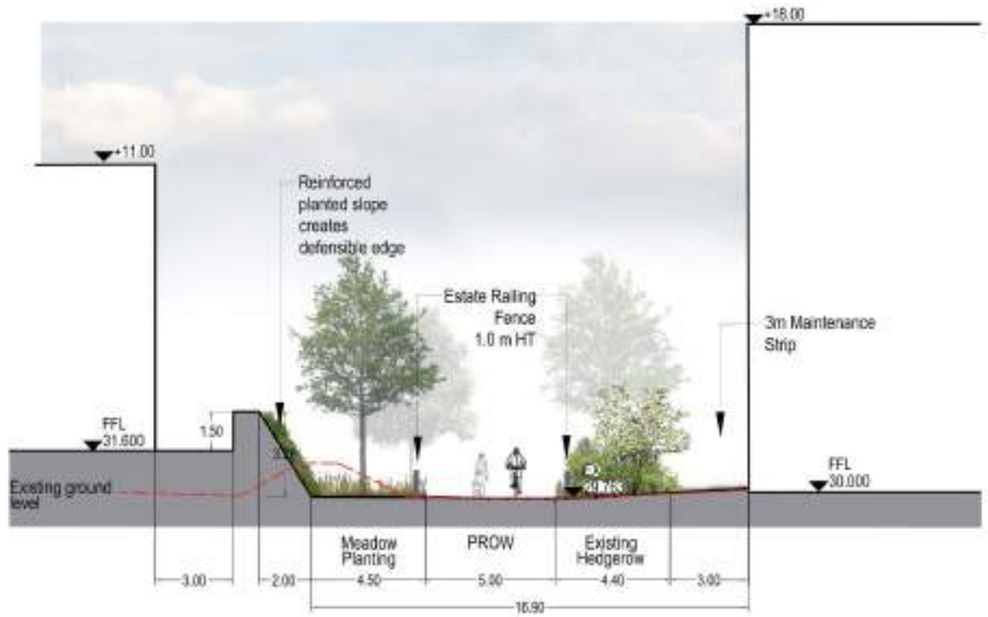


Figure 8.40 Section H-H through Plot 1, Public Right of Way and Plot 2A interface

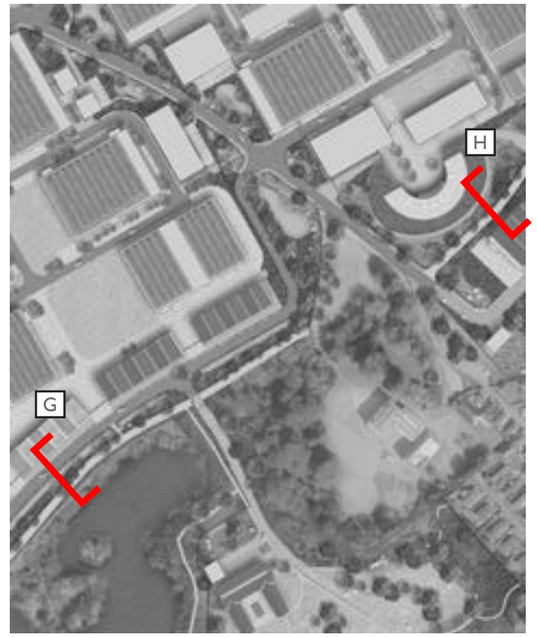


Figure 8.41 Keyplan

8.25.6 WESTHORPE PARK INTERFACE

The sensitivity of the Westhorpe Park interface with Plot 2A has resulted in a wide landscape buffer along the southern edge of the site. The existing wall (approx. 3m in height) provides a solid boundary whilst woodland planting gives additional separation and screening at the upper level.

Plot 4 is primarily maintained as an ecological area with no development close to the Westhorpe Park interface. There is a vehicular access route linking to plot 5. Additional woodland planting is proposed along this edge to strengthen the existing tree line and scrub, whilst further into plot 4, existing grassland and scrub areas are maintained and enhanced as open mosaic habitats to maximise biodiversity value.

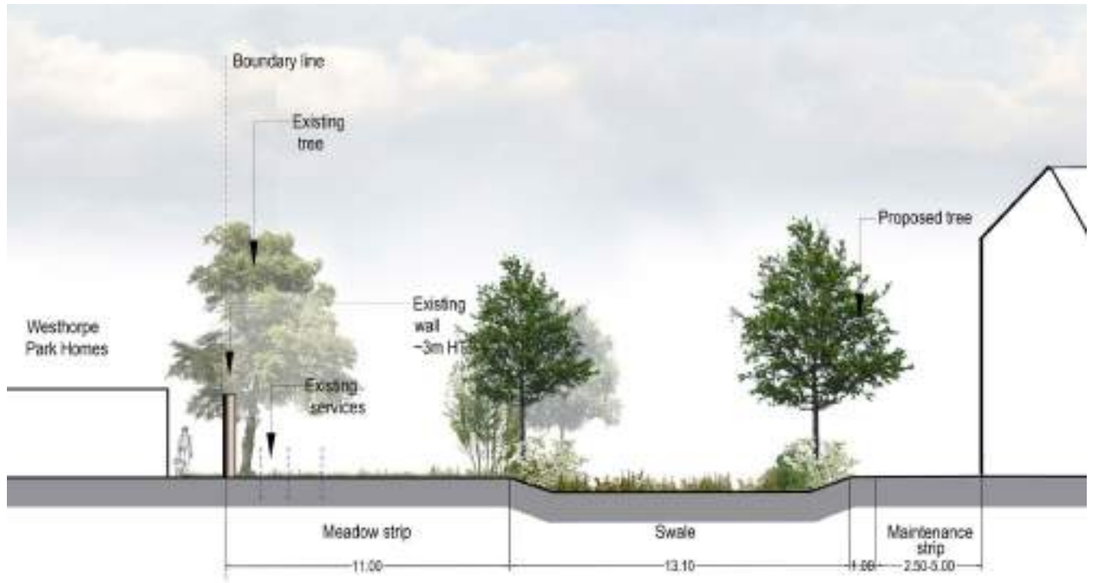


Figure 8.42 Section I-I through Plot 2A / Westhorpe Park boundary

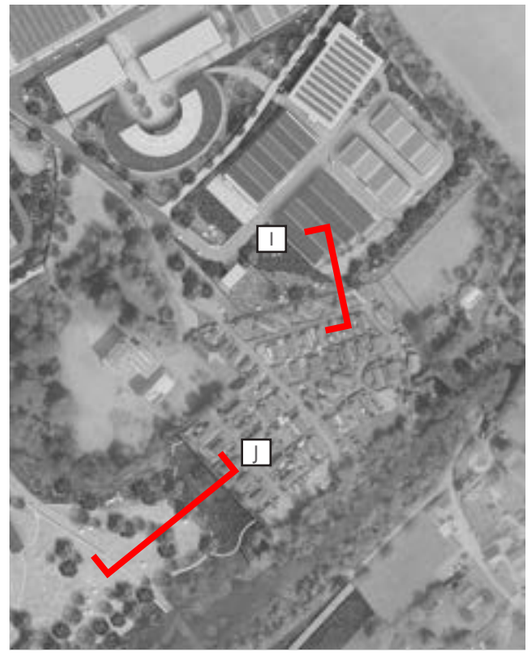


Figure 8.43 Keyplan

Figure 8.44 Section J-J through Plot 4 / Westhorpe Park boundary

8.25.7 PLOT 5 BUFFERS

The backlot in Plot 5 will be used for temporary large film-related sets. The design of buffer zones has been considered to minimise the impact on long views and near neighbours and maximise benefits for biodiversity.

The backlot area is located centrally within the Plot enabling existing high-value vegetation and trees around the perimeter to be retained and enhanced for biodiversity value.

New woodland and hedgerow planting around the immediate perimeter of the backlot combines with existing retained woodland to provide screening to long views from Winter Hill and a buffer to the Stallworthy and Crowne Plaza Hotel. Interfaces with these near neighbours are further enhanced through planted landscaped bunds.

A low agricultural fence set within the landscape provides a deterrent to public access to the backlot without the requirement for an intrusive security fence. This is further enhanced through the use of dense planting.

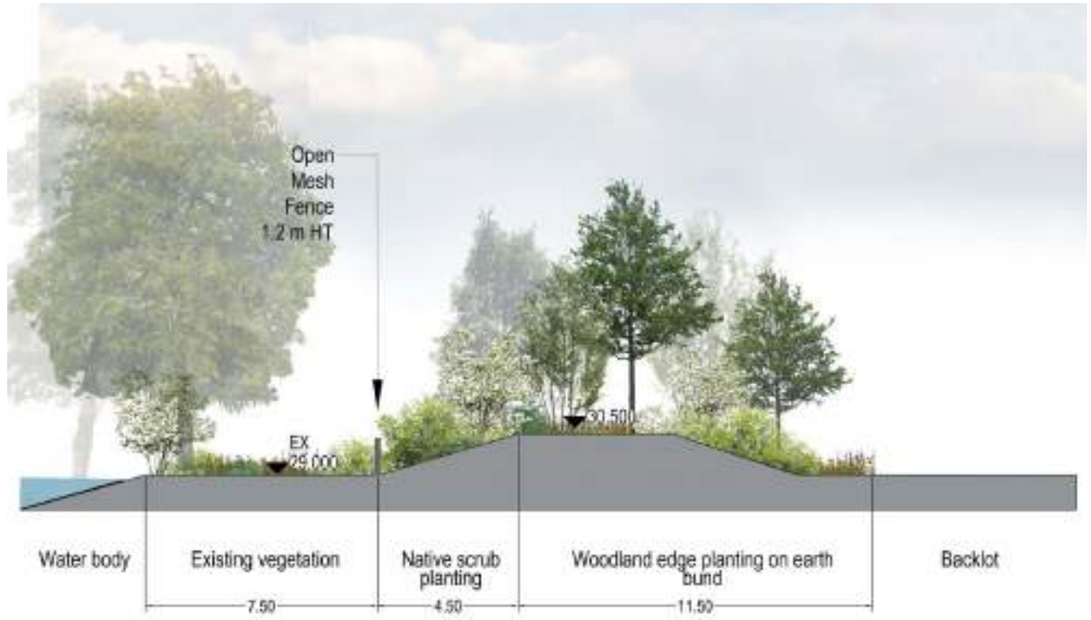


Figure 8.45 Section K-K through Plot 5 northern edge

Figure 8.46 Existing self-seeded woodland areas retained

Figure 8.47 Section L-L through Plot 5 southwestern edge

Figure 8.48 Keyplan

8.26 FILM STUDIO LANDSCAPE

Plots 1, 2 and 3 will accommodate the primary production zones, office spaces, workshops and communal areas for the film studio. The landscape has been designed to support the needs of the studio whilst providing an attractive, accessible, creative environment for occupants. The studio's landscape is also critical in contributing to the sustainability agenda, with blue and green infrastructure and biodiverse planting integrated throughout.

8.26.1 STREETSCAPE

Streetscape is designed to accommodate the film studio's operational needs whilst providing attractive spaces for staff and visitors and maximising contribution to Biodiversity, tree canopy cover and Sustainable Urban Drainage Strategies (SuDS).

A variety of paving types help define vehicular and pedestrian areas. Materials like resin-bound gravel are used to provide a more informal, softer character suited to the rural setting whilst key pedestrian routes are delineated through block paving.

The streetscape incorporates accessible parking bays and hard standing aprons around buildings to meet servicing requirements. Covered cycle shelters are provided at key locations whilst smaller groups of cycle stands are incorporated throughout the streetscape.

The planting strategy employs a broad brush approach with native meadow and hedgerow, providing a low maintenance, attractive solution reinforcing the rural character of the development and maximising contribution to biodiversity.

The streetscape is designed to provide space for tree planting. Generally, this is consolidated at the corners of buildings where there will be more light and less conflict with vehicular access and servicing of buildings. The soft landscape areas provide SuDS function for surface water from roads and buildings.

1. Unit base
2. Main pedestrian link with tree planting
3. Raised table crossings on pedestrian priority route
4. Vehicular streets
5. Production zone 1 secure line
6. Street-side parking bays
7. Building servicing aprons
8. Workshop flexible spaces
9. Biofiltration strips with tree planting
10. HQ building spill-out
11. Cycle parking integrated into streets
12. Green roofs and PVs to sound stages

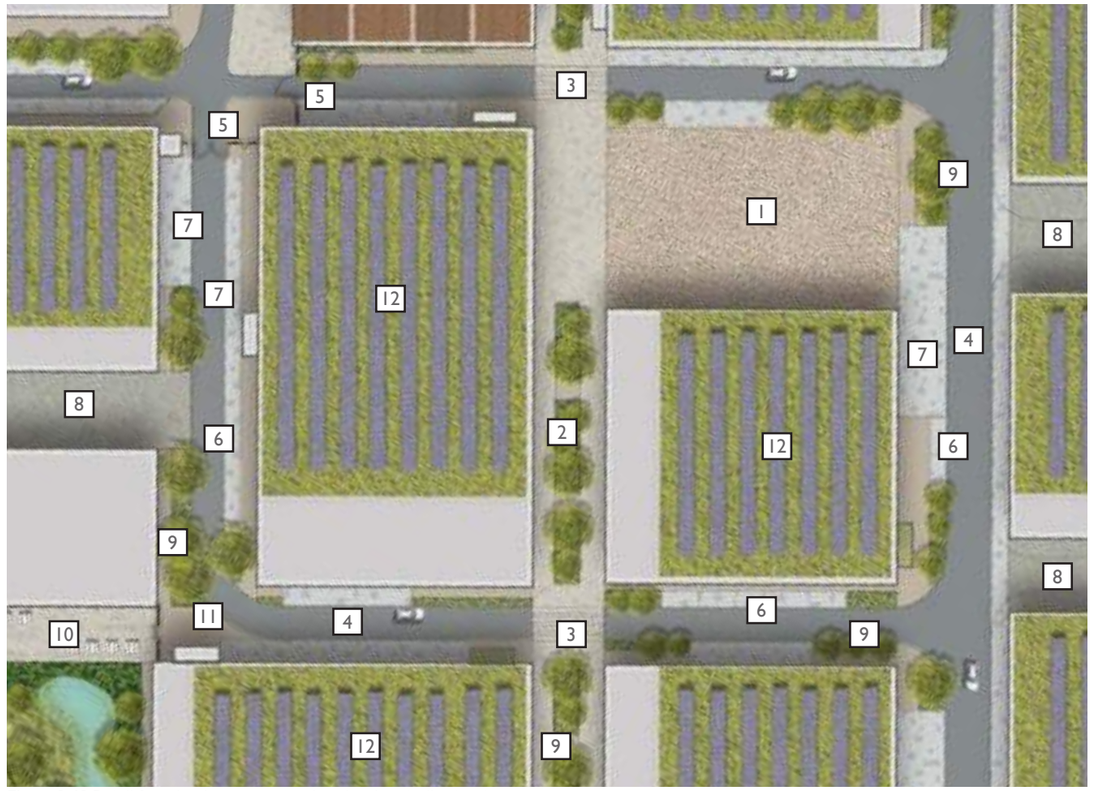


Figure 8.49 Detail from landscape masterplan showing studio streetscape

Figure 8.50 Sustainable Urban Drainage biofiltration strips with tree planting

Figure 8.51 Resin bound gravel footpaths with informal planting

VEHICULAR STREETS

The road network within the studio plots is required to accommodate traffic flow, including large vehicles to production zones and allow space for delivery, unloading, and other servicing requirements. Streets will also need to provide a safe, accessible and attractive environment for pedestrians and cyclists and contribute to biodiversity, tree cover and sustainable drainage.

Primary vehicular areas are separated from pedestrian zones by raised kerbs and clearly defined by the variation of surfacing. The layout has been developed to allow space for kerbside planting to provide additional separation between vehicles and pedestrians, as well as greening the masterplan and providing a biofiltration function for surface water.

Covered cycle parking is provided at key locations whilst additional kerbside cycle hoops are scattered throughout the streetscape.

Figure 8.52 Section O-O through entrance road

Figure 8.53 Biofiltration strips with tree planting

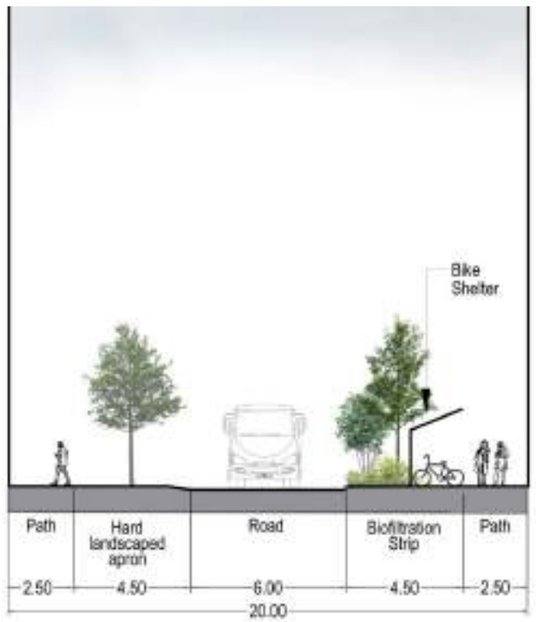


Figure 8.54 Section M-M through vehicular street

Figure 8.55 Section N-N through vehicular street

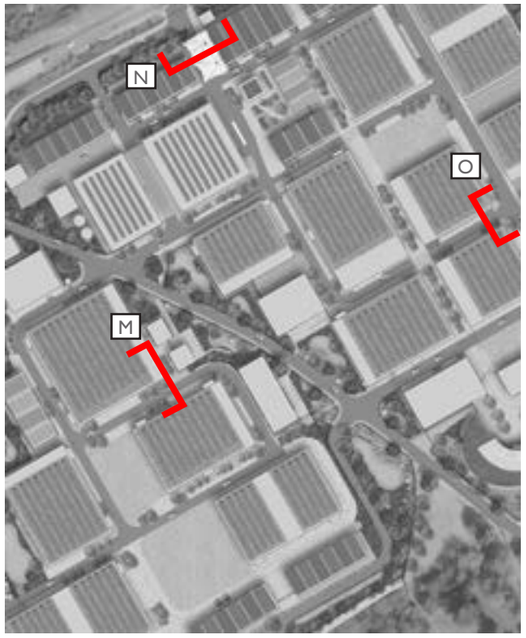


Figure 8.56 Keyplan

PEDESTRIAN STREETS

A primary pedestrian spine links the Entrance Square to the north with the Studio Hub to the south. This street incorporates wide pathways to either side to accommodate larger pedestrian flows and a central planted area with pockets of seating.

The central planting provides an opportunity for broad canopied tree planting and will also perform a Sustainable Urban Drainage function, taking surface water from adjacent hard paving and providing biofiltration.

The route will be prioritised for pedestrians but is designed to accommodate occasional maintenance or service vehicle access when required.

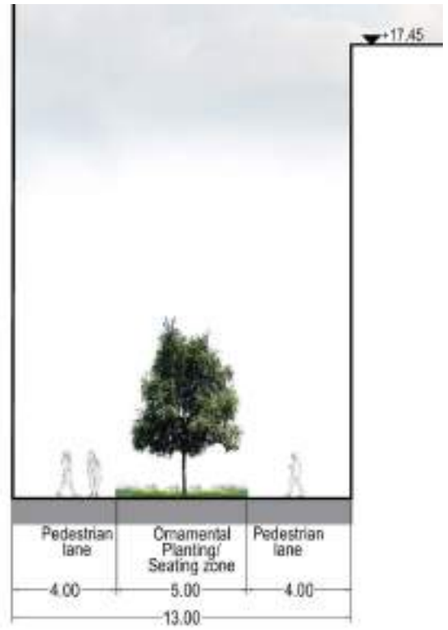


Figure 8.57 Section L-L through pedestrian street

Figure 8.58 Space for broad canopied trees

Figure 8.59 Pockets of seating in central planted zone

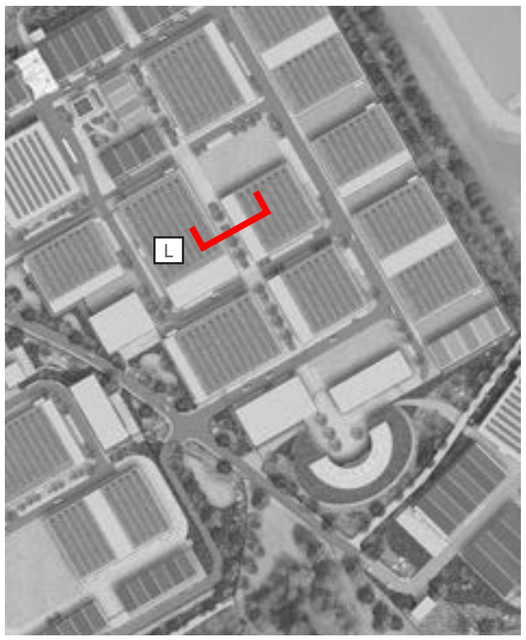


Figure 8.60 Title

Figure 8.61 Wide pedestrian paths and central planted zone

WORKSHOP SPACES

Spaces between workshops provide a flexible paved area to accommodate spill-out of activity from the buildings. They also allow for a range of servicing and delivery requirements throughout the studio's various operational stages, helping to take pressure off streetscape and allowing buffer zones to be prioritised for landscape and biodiversity.

These areas are kept free of obstruction to maintain maximum flexibility. They are surfaced with permeable paving allowing them to contribute to the site-wide Sustainable Urban Drainage Strategy.

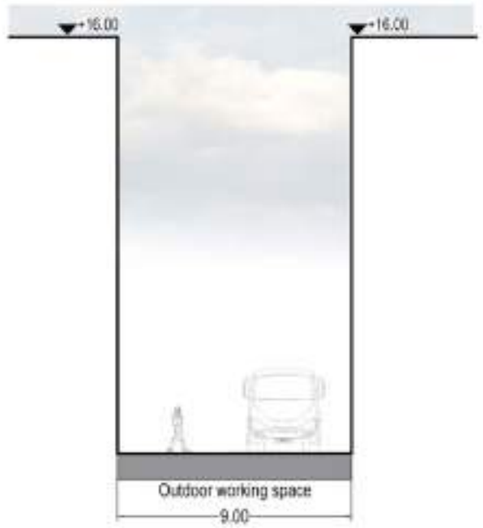


Figure 8.62 Section Q-Q through workshop space

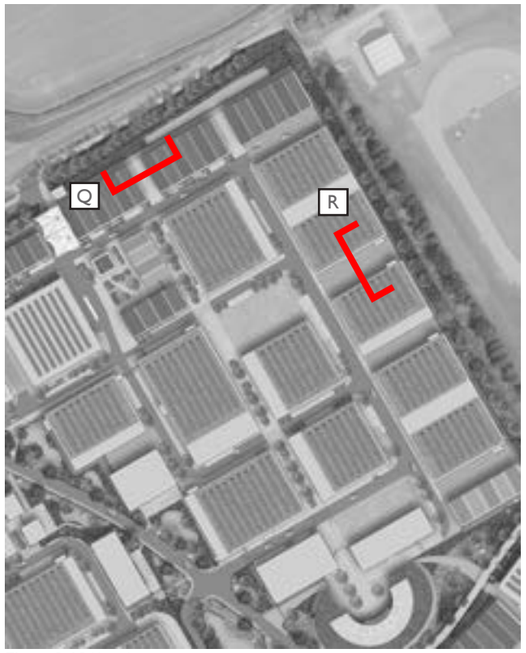


Figure 8.63 Keyplan

Figure 8.64 Section R-R through workshop space

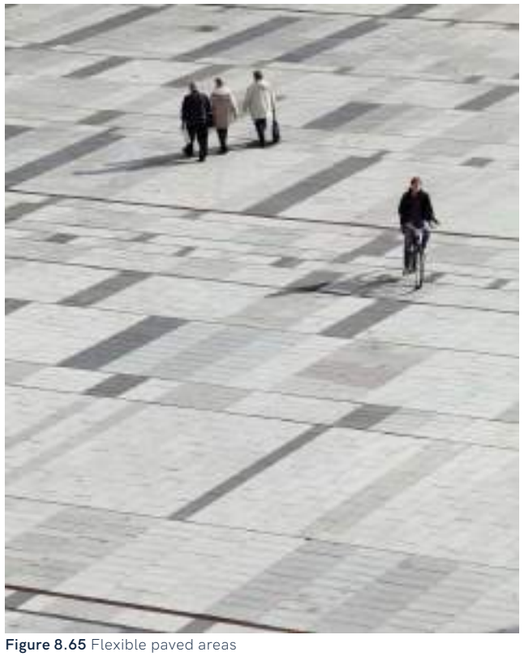


Figure 8.65 Flexible paved areas

8.26.2 FOCAL SPACES

Key focal points within the studio plots provide space for staff, production crew and visitors to take breaks, congregate and socialise, or sit and relax. The landscape within these spaces is designed to support the prominent role they play in the day to day running of the studio and provide flexibility for occasional events.

ENTRANCE SQUARE

The Entrance Square is situated close to the main studio entrance and carpark and hosts the site's Mobility Hub and bus interchange. It is designed to help orient staff and visitors as they enter the site and progress into the Production Clusters. Generous pathways and paved areas provide breathing space to accommodate pedestrian flows, and the layout of planting and furniture helps to direct users to the main pedestrian routes into the rest of the scheme.

The Entrance Square is surrounded by active building uses with the Mobility Hub, site security, and the Amenity Pavilion hosting food and beverage, providing the opportunity for these uses to spill out into the plaza and activate the space. Wide paved areas to the edges allow room for tables and chairs. Raised lawn areas and planters provide opportunities for informal seating and some separation from the main vehicular entrance, whilst clusters of street furniture amongst tree planting provide opportunities for people to sit and relax out of the main pedestrian flows.

Figure 8.66 Detail from landscape masterplan showing main entrance and Entrance Square

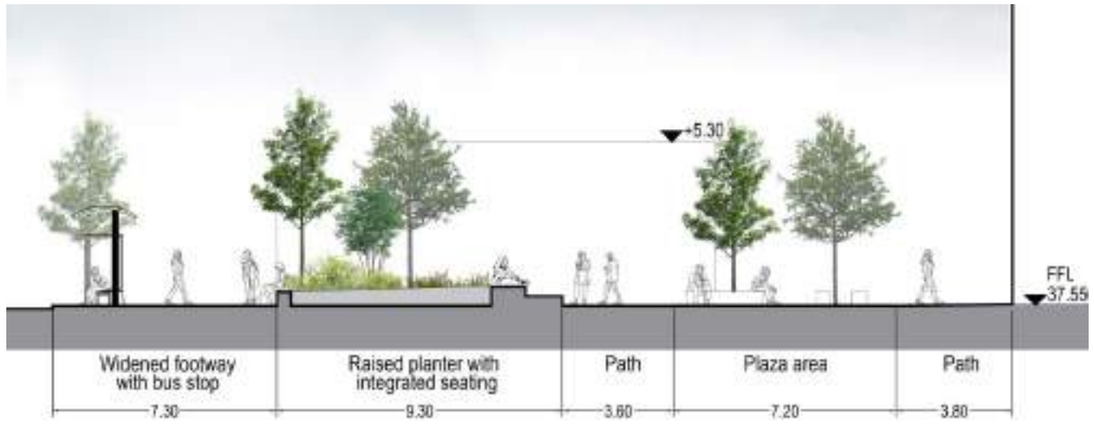


Figure 8.68 Section S-S through Entrance Square

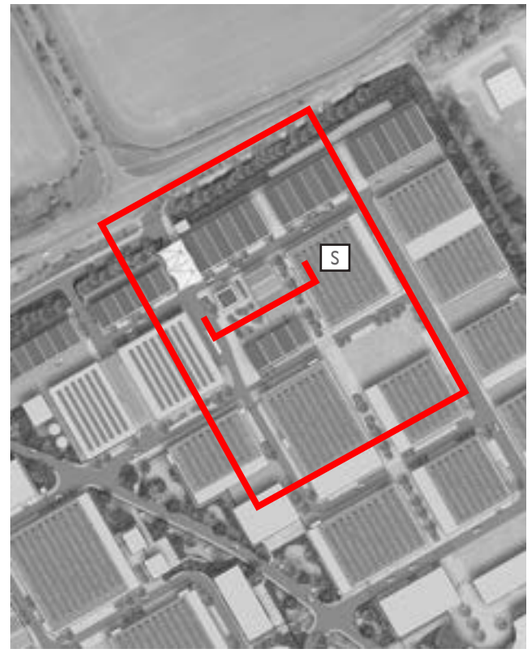


Figure 8.67 Keyplan

Figure 8.69 Circulation routes and spill-out

STUDIO HUB PLAZA

The Studio Hub is at the heart of the scheme and provides a wide variety of internal uses, including exhibition space, screening rooms, offices and food and beverage, and the design of external spaces supports this varied programme. There is a central, flexible space to host food concessions or occasional events whilst raised planters provide seating opportunities for individuals or small groups around the edges.

The building also interfaces with the Public Right of Way to the south, and the landscape surrounding is designed to maintain views into the internal exhibition space and disguise secure lines within the landscape whilst also contributing to the setting of nearby Westhorpe House.

The building edge forms the secure line whilst a planted bund provides a natural barrier to access the facade without imposing fencelines on the open landscape. Pedestrian paths connect the Studio Hub space with Plots 2A and 3. A secure secondary line allows the Studio Hub Plaza to be isolated from the production zones enabling it to host events without compromising security.

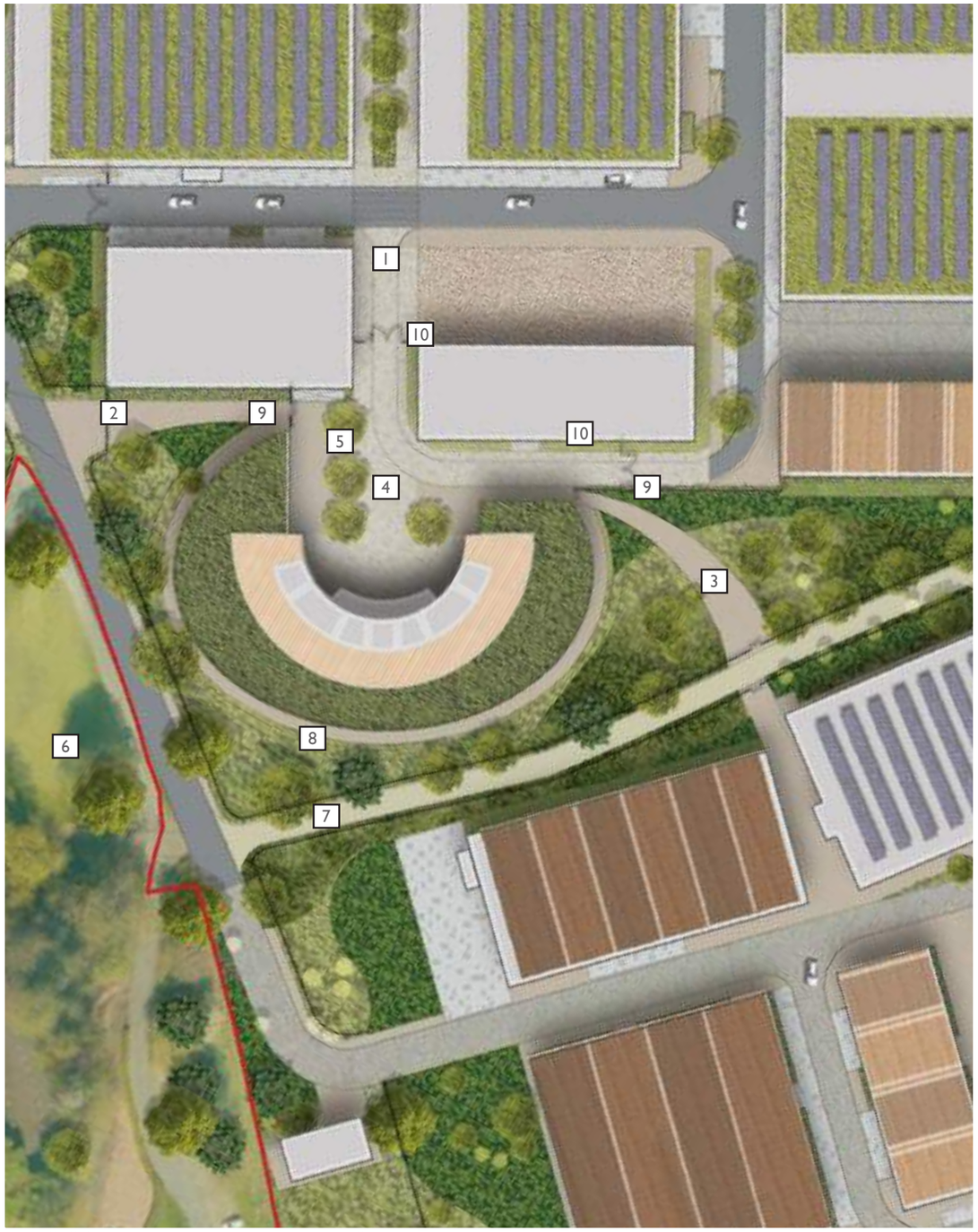


Figure 8.70 Detail from landscape masterplan showing Studio Hub

Figure 8.71 Keyplan

1. Main Pedestrian Street
2. Route from Plot 3
3. Route from Plot 2A
4. Studio Hub Plaza
5. Raised planters / seating
6. Landscaped area
7. Public Right of Way
8. Planted bund
9. Primary secure line
10. Secondary secure line

N

EXISTING DRIVE TO WESTHORPE HOUSE

The drive to Westhorpe House remains on its current alignment and provides access to Westhorpe House, Westhorpe Park and Plot 2A. The geometry of the masterplan grid creates a sequence of widenings along the route that provide a continuous habitat corridor linking through the centre of the masterplan and connecting existing habitat in the south to the Area of Outstanding Natural Beauty to the north. They also perform a vital Sustainable Urban Drainage function with a series of attenuation basins planted to maximise biodiversity value.

The user experience of the drive to Westhorpe House and relevance to the setting of Westhorpe House have been considered in the design. The drive widens out in front of Westhorpe House to provide a landscaped area. Clusters of trees punctuate the carpet of meadow planting whilst attenuation basins are richly planted with marginal and aquatic species to maximise biodiversity value.

A low railing denotes the ownership boundary whilst the film studio's secure line is set back, formed by building frontages with fences in between. Where fencelines are exposed to the route, a line of native hedgerow and woodland planting disguises this within the landscape and provides a continuous linear habitat. Mesh fences will be designed with wildlife access panels to maintain routes for small mammals.

The intersection of the drive to Westhorpe House and Public Right of Way forms the focus for the more public-facing elements of the studio. The Studio Hub internal exhibition space is visible from the Public Right of Way and provides interest and excitement along the route, whilst the Community Building to the south within Plot 2A provides amenity for residents of Westhorpe Park Homes and other visitors.

Figure 8.72 Detail from landscape masterplan showing HQ spaces, the drive to Westhorpe House and interface with Westhorpe House

Figure 8.73 Keyplan

1. Drive to Westhorpe House
2. Existing grassland with trees
3. Westhorpe House
4. Public Right of Way
5. Landscaped area
6. Planted Sustainable Urban Drainage attenuation basins
7. Existing trees retained
8. Secure line set back to building edge
9. Woodland planting screens fences
10. Studio Hub
11. Community Building
12. HQ spaces

N

The landscape along the drive to Westhorpe House allows staff and crew from the production zones with outdoor space to relax and socialise. HQ buildings associated with each production zone are complemented by external spaces facing out onto the green corridor. These provide spaces for staff to spill out, eat lunch or relax within an attractive, natural setting.

These spaces are located outside the studio secure line. The low railing along the drive to Westhorpe House denotes the public/private space boundary, whilst planting provides further privacy to these spaces.

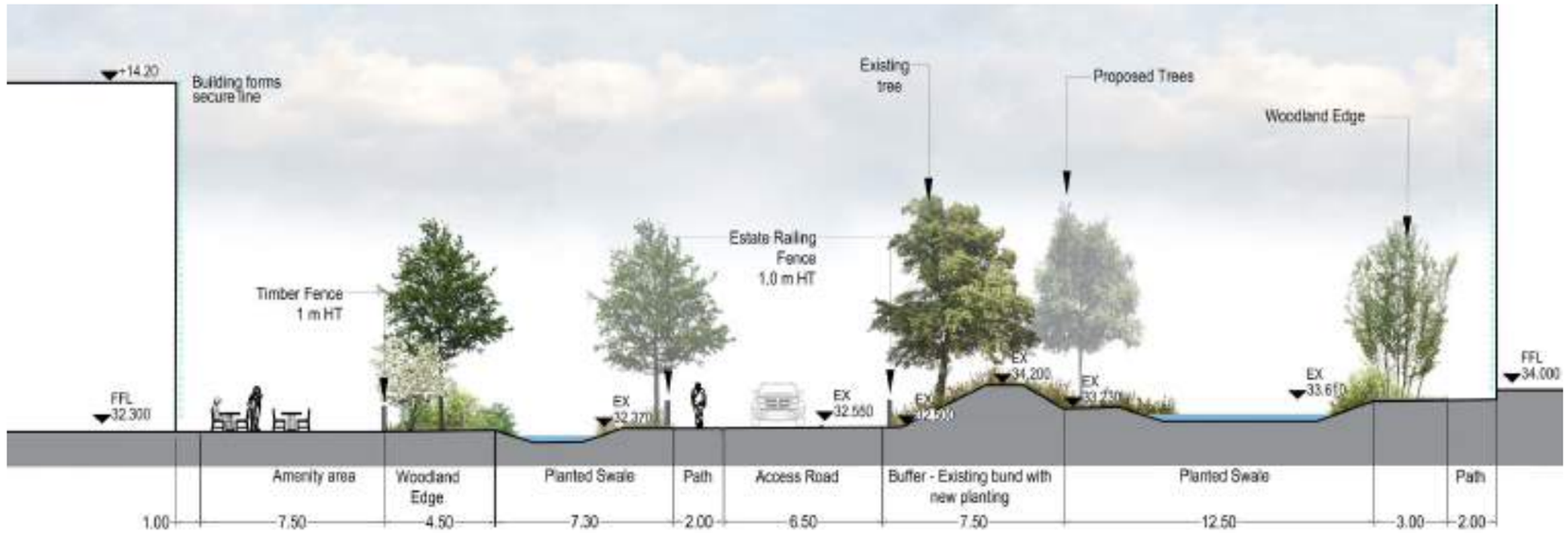


Figure 8.74 Section U-U though HQ spaces and the drive to Westhorpe House

DESIGN PRECEDENTS

Figure 8.75 Keyplan

Figure 8.76 Spaces to spill-out set within nature

Figure 8.77 Landscape with meadow and trees

Figure 8.78 Sustainable Urban Drainage attenuation planted for ecological value

8.26.3 PLOT 4

Plot 4 benefits from an attractive natural setting amongst mature trees and in close proximity to the gravel pit water bodies. It is largely retained as an area for nature with new permissive footpaths providing enhanced public amenity. The Culture and Skills Academy (CSA) provides additional amenity and training opportunities and is equipped with a limited number of accessible parking bays.

The Culture and Skills Academy will host events and activities for school children. For safeguarding reasons, the footpaths in plot 4 will need to be closed at some times.

The plot also contains some of the highest value existing habitats on site. The area is optimised for biodiversity value with areas of wet woodland retained and the central scrub and grassland enhanced and managed to create valuable open mosaic habitat.

An access road and new bridge across the Westhorpe water course provide a route linking the studios to the backlot on Plot 5 as well as serving the Culture and Skills Academy. These are positioned to minimise the impact on existing habitats.

1. Public Right of Way
2. Access road
3. Culture and Skills Academy
4. Courtyard
5. Parking (7no. Accessible bays)
6. Plot 4/5 bridge
7. Westhorpe water course
8. Existing wet woodland
9. Open mosaic habitat
10. New permissive path
11. Woodland buffer planting to Westhorpe House and Westhorpe Park

Figure 8.79 Detail from landscape masterplan showing Plot 4

Figure 8.80 Existing habitat retained and enhanced

Figure 8.81 Keyplan

8.26.4 PLOT 5

Plot 5 will provide the backlot area for external filming. This is accessed via the new bridge from Plot 4 and an access track.

Plot 5 benefits from strong mature woodland belts to its perimeter, particularly to the north along the Westhorpe water course, which will mitigate the impacts to Stallworthy and the western edge. These woodland belts provide valuable ecological corridors and screening to the principal backlot. There are other areas of high-distinctiveness habitat, including shallow ponds to the north. The backlot is positioned centrally within the plot to allow retention of these features. Existing scrub and grassland around the backlot will be enhanced as open mosaic habitat to maximise biodiversity value on the plot.

The backlot area will be surrounded by a low agricultural fence and dense woodland and hedgerow planting to help screen the filming area and discourage public access without the need for an intrusive secure line. This perimeter will also incorporate existing self-seeded woodland areas.

The screening will be further enhanced with an earth bund to the north and southwest to create additional separation from near neighbours at the Stallworthy and Crowne Plaza Hotel. New semi-mature trees planted within the woodland edge will help screen the area from longer views, particularly from Winter Hill.

The area around the principal backlot is prioritised for ecology with no public access. The existing lakeside permissive path, that sits outside the Red Boundary Line, is unaffected.

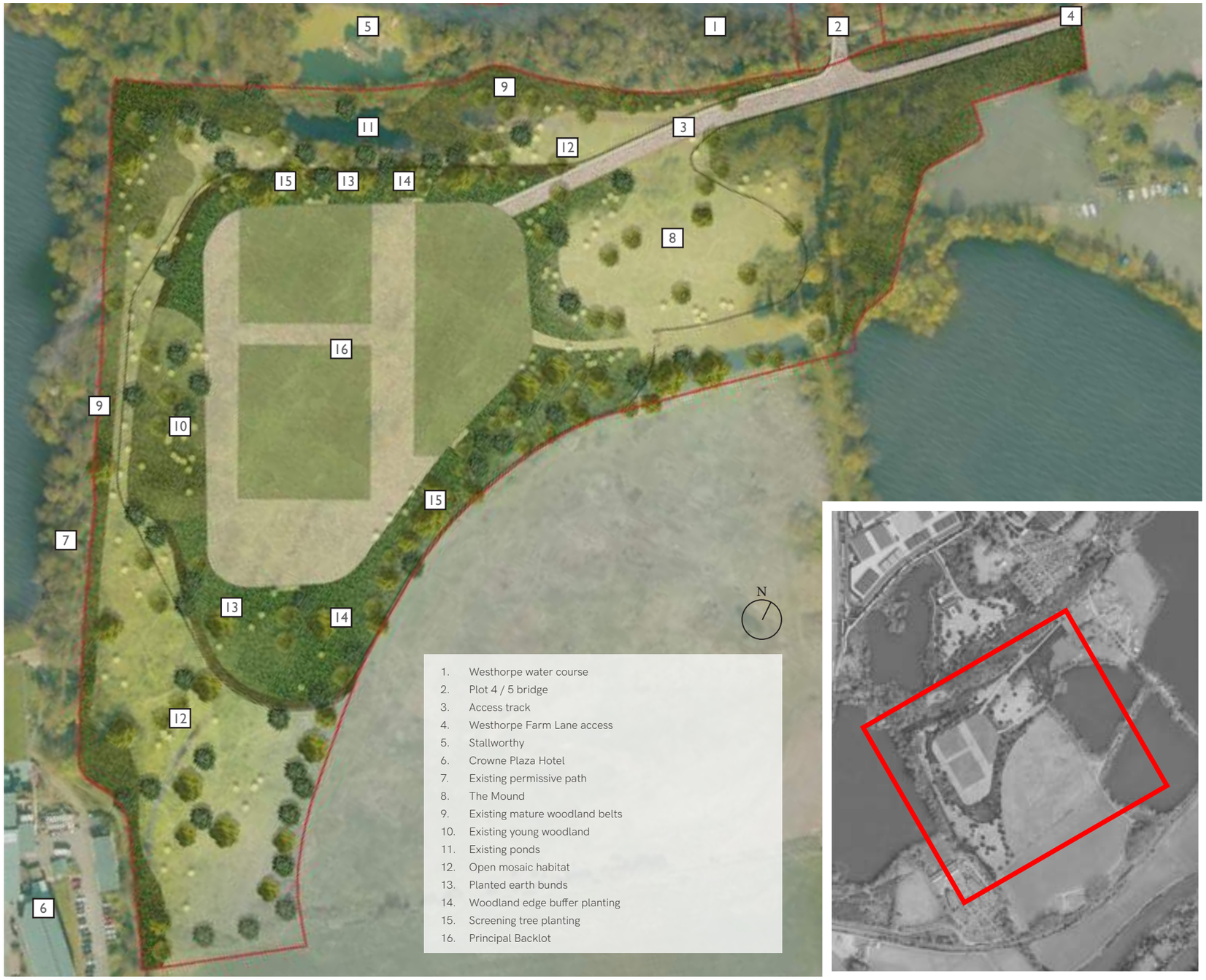


Figure 8.82 Detail from landscape masterplan showing Plot 5

Figure 8.83 Keyplan

8.27 SOFT LANDSCAPE STRATEGY

8.27.1 TREE STRATEGY

Where possible existing trees are retained and incorporated into the proposals. A total of 234 individual trees (167), groups of trees (59 groups (each group containing a number of trees), woodlands (3 areas) and hedgerows (5) were surveyed on or adjacent to the site. Of these:

- 180 are unaffected by the proposals
- 14 are retained but require protection.
- 40 will require removal to facilitate development including 5 Category B, 32 Category C and 3 Category U
- Of those retained, 7 groups require partial removal to facilitate the development
- Details of trees retained/removed and protection measures for trees to be retained can be found in the Arboricultural Impact Assessment submitted with this application

New tree planting is incorporated throughout the scheme. Buffer zones are designed with a mix of native woodland matrix planting and standard trees to provide screening at all levels and act as ecological corridors. The streetscape is also designed to provide space for tree planting. Generally, this is consolidated at the corners of buildings where there will be more light and less conflict with vehicular access and servicing of buildings.

In total, the proposal includes:

- 348 new individual trees
- Approx 33,600m2 new woodland matrix planting
- Approx 1,450m2 new native scrub planting

The design has been reviewed to ensure that it meets and exceeds the Wycombe Local Plan policy requirement for a 25% tree canopy cover. Details of this can be found within the 'Tree Canopy Cover' section of this document.

The selection of tree species is critical to the character of the development and to how it integrates with its landscape setting. It is also an opportunity to maximise biodiversity, ecological value and the long term resilience of the scheme. Trees are selected according to the following principles:

- Appropriateness to setting and local habitat
- Character and identity
- Suitability for growing conditions
- Adaptability to Climate Change
- Resilience to pests and disease
- Ecological value as habitat or food source, including use of predominantly native species

Figure 8.84 Tree strategy plan

STANDARD TREES

Tree planting within streets will be planted as a mixture of 25-30cmg and 18-20cmg stock. Proposed species for street tree planting are:

1. Betula utilis Jackuemontii
2. Carpinus betulus 'Fastigiata'
3. Quercus frainetto 'Trump'
4. Crataegus monogyna
5. Sorbus aria
6. Prunus ceracifera 'Nigra'
7. Malus evereste

Tree planting within buffer zones will be planted as a mixture of 20-25cmg and 250cm height feathers. Proposed species are:

8. Alnus glutinosa
9. Betula pubescens
10. Crataegus monogyna
11. Corylus avellana
12. Carpinus betulus
13. Prunus spinosa
14. Prunus avium
15. Quercus robur
16. Malus sylvestris
17. Ilex aquifolium
18. Ulmus procera (planted as smaller feathered stock to ecologists recommendations).

Figure 8.85 Species palette for street tree planting

Figure 8.86 Species palette for buffer tree planting

WOODLAND PLANTING

Areas of new woodland will be planted as a matrix of native canopy and under-storey tree species. These will be planted as bare-root stock at 2m centres with approximately 70% under-storey species planted as whips and 30% canopy species planted as 250cm feathers. All planting to be fitted with rabbit guards. Proposed species are:

1. Betula pubescens
2. Cornus sanguinea
3. Corylus avellana
4. Prunus spinosa
5. Quercus robur
6. Rhamnus cathartica
7. Rosa canina
8. Salix cirenea 'Oleifolium'
9. Sambucus nigra

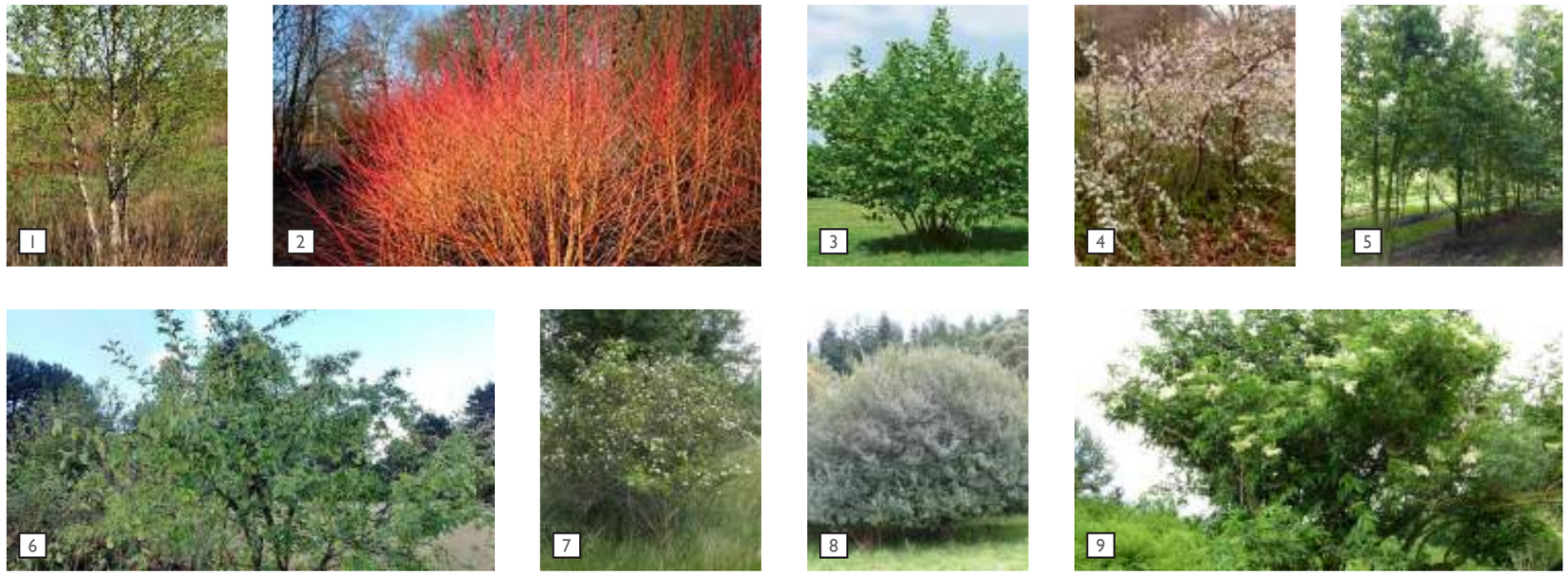


Figure 8.87 Species palette for woodland planting

HEDGEROW PLANTING

Native hedgerow to buffer zones will be planted as bare root whips in double staggered rows at 400mm centres. All planting to be fitted with rabbit guards. Proposed species are:

10. Corylus avellana
11. Crataegus monogyna
12. Ilex aquifolium
13. Rosa canina
14. Euonymus europaeus
15. Rubus fruticosus
16. Prunus spinosa

Figure 8.88 Species palette for hedgerow planting

TREE PIT DESIGN

Proposed tree planting is located within soft landscape areas, including ornamental planting beds, roadside biofiltration strips and landscape buffer zones to maximise the available root space and minimise compaction giving trees the optimal conditions to grow and flourish. Key considerations for the design of tree pits are outlined below, and illustrative details for tree pits are provided opposite.

Root Volume:

In line with former Wycombe District Council guidance, proposed trees will be provided with a minimum of 0.6m3 of good quality, aerated soil per 1m2 of crown projection at maturity. In many cases, the design allows sufficient space around proposed trees within the soft landscape to achieve the required root volumes; however, for more constrained locations adjacent to hard surfaces, structural soil cells will be used to achieve desired volumes and limit compaction.

Root Barriers and Deflectors:

Root barriers will be installed where trees are proposed in close proximity to services or building foundations. Barriers will be installed between the tree and the services/foundations only to avoid surrounding the tree pit and limiting root growth.

Surface Permeability:

Tree roots require access to permeable surfaces to allow gas exchange between the soil and atmosphere. For the majority of trees, this will be provided by planted areas around the tree; however, where access to permeable surfaces is limited integrated irrigation and aeration pipes will be installed within tree pits.

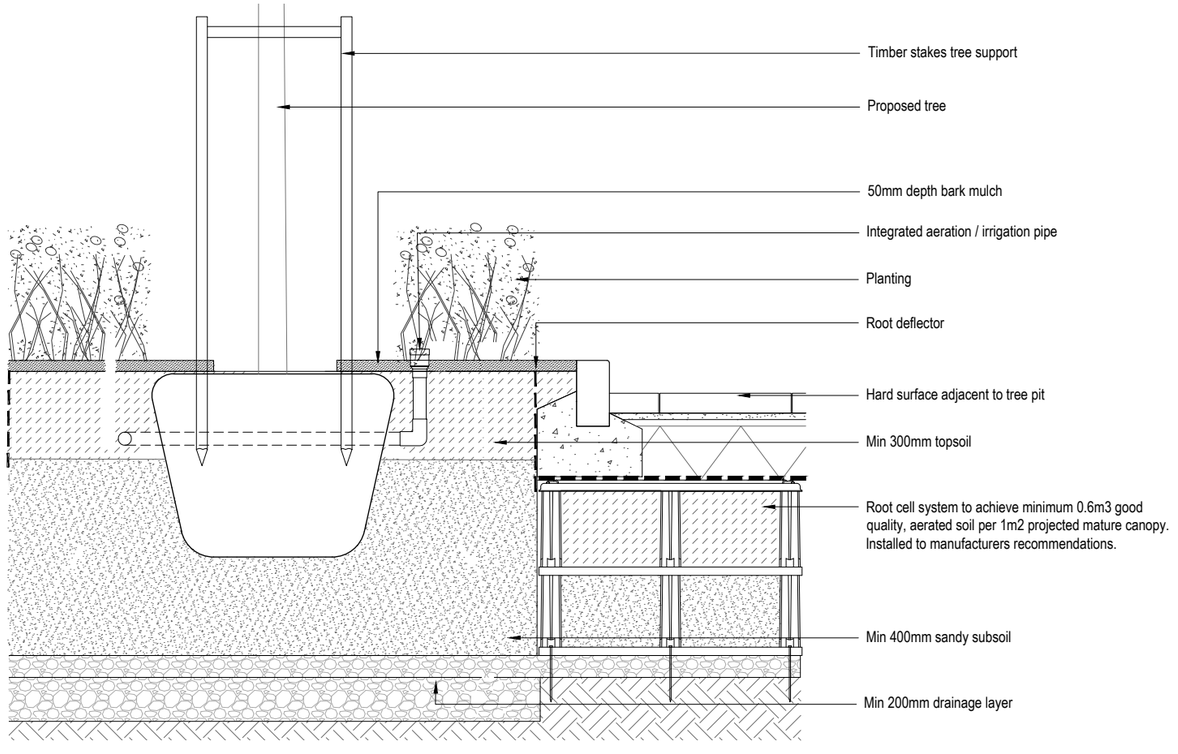


Figure 8.89 Illustrative tree pit detail - tree with soil volume in root cells

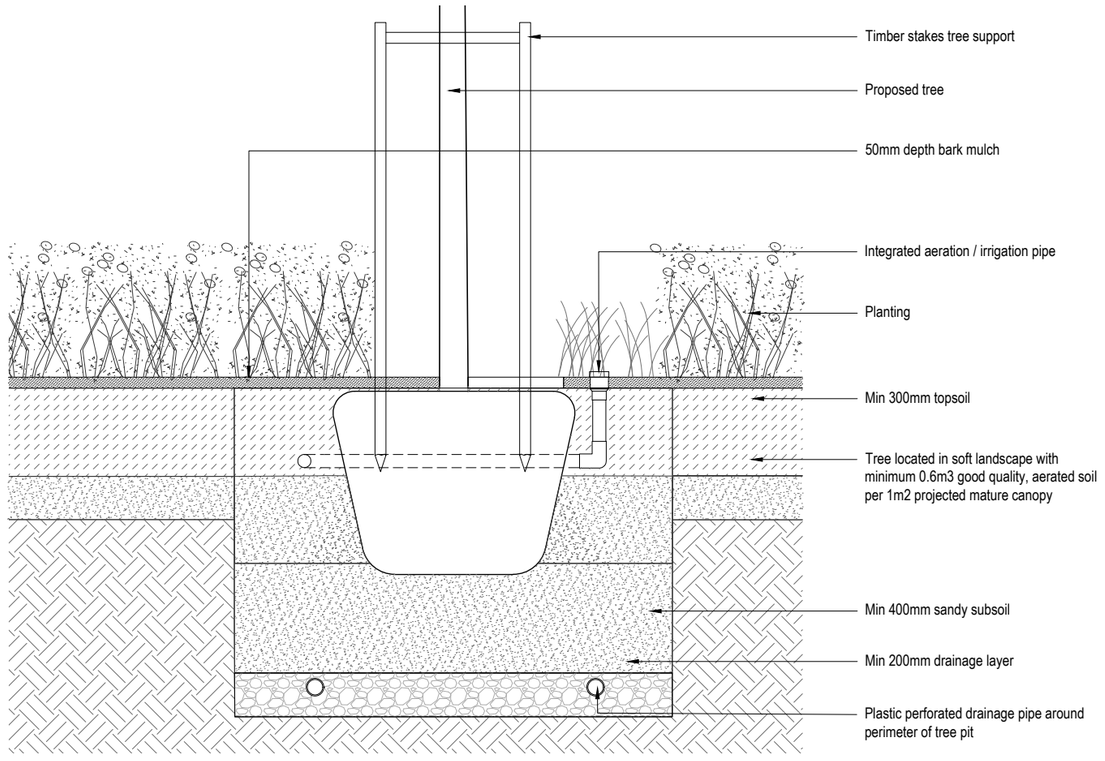


Figure 8.90 Illustrative tree pit detail - tree with soil volume in soft landscape

8.27.2 TREE CANOPY COVER

Policy DM34 of the Wycombe Local Plan requires sites over 0.5Ha outside of town centres to provide a minimum of 25% tree canopy cover.

The Canopy Cover Supplementary Planning Document (SPD) provides guidance on the delivery and calculation methods for this requirement. The proposed design has undergone iterative testing through the tree canopy metric to ensure it is able to deliver the 25% target.

Full details can be found within document 7: Tree Canopy Cover Assessment.

The plan opposite illustrates the tree canopy cover across the masterplan. A number of components contribute to canopy cover:

- Retention of existing trees and groups
- Creation of new woodland areas, for the purposes of the calculation, these areas are counted as groups
- New tree planting
- New green infrastructure elements, including biodiverse roofs and green walls

In line with the SPD, existing habitats that are to be retained for biodiversity value and would not benefit from tree planting are excluded from the net site area. This relates primarily to areas of scrub and grassland on Plots 4 and 5 that will be enhanced as open mosaic habitat as part of the ecological strategy.

It should be noted that the tree planting palette included in this application is illustrative as the detailed landscape design is expected to be conditioned. For the purposes of the Tree Canopy Cover Calculation, individual tree planting is included as a range of suitable species. These are shown on the landscape plan based on projected canopy sizes as defined by the Tree Canopy Cover Calculation to ensure that there is sufficient space for that species, or one of equivalent canopy size, to reach maturity.

Total GI canopy cover for the site has been calculated as approximately 100,553m2, equating to 32% in line with the policy requirement.

This is made up of 15% retained trees, 13% new tree planting and 4% new green infrastructure elements.

Figure 8.91 Tree canopy cover plan

ANTICIPATED TREE GROWTH

The landscape masterplan uses a combination of standard tree planting to provide more immediate impact and screening and woodland matrix planting, which will be planted as smaller stock but will establish quickly to provide dense, layered screening as well as valuable habitat. Anticipated tree establishment is shown on the illustrations opposite with tree size at planting and in years 0, 5, 10 and 15. This has been based on nursery anticipated growth rates described below.

Standard trees (large):

- Planted @ 25-30cmg (approx 6m height).
- 3 years with minimal growth allowed for establishment, followed by growth rates of between 23-45cm per year (based on nursery rates for Quercus robur and Acer campestre).

Standard trees (small):

- Planted @ 18-20cmg (approx 4.5m height).
- 3 years with minimal growth allowed for establishment, followed by growth rates of between 30-40cm per year (based on nursery rates for Sorbus aria and Betula pendula).

Woodland matrix (feathers):

- Planted as feathers @ 2.5m height).
- 3 years with minimal growth allowed for establishment, followed by growth rates of between 30-40cm per year (based on nursery rates for Quercus robur and Alnus glutinosa).

Woodland matrix (whips):

- Planted as whips @ 1m height.
- 3 years with minimal growth allowed for establishment, followed by growth rates of between 23-45cm per year (based on nursery rates for Prunus spinosa).

Figure 8.92 Anticipated growth - standard trees

Figure 8.93 Anticipated growth - woodland edge

8.27.3 PLANTING STRATEGY

Planting across the site creates a tapestry of varied and complementary habitats to provide an attractive, natural setting for the studio, support site ecology and help to tie the development into its surrounding context. It also performs a key role in treating surface water as part of the Sustainable Urban Drainage Strategy.

Planting across the majority of the film studio plots and plots 4 and 5 takes a broad-brush approach with swathes of native plant communities rather than highly designed planting to prioritise ecological benefit and provide a scheme that is easy to maintain.

Buffer zones incorporate native woodland planting and hedgerows alongside existing field boundaries to strengthen visual and physical buffers and provide ecological benefits. These combine with areas of meadow and attenuation ponds planted with native marginal and aquatic vegetation to maximise habitat value.

Existing scrub and grassland within plots 4 and 5 are retained and enhanced to optimise it for biodiversity with the introduction of new grassland species and the management of scrub/pioneer woodland in order to maintain it as an open mosaic habitat.

Wide verges are seeded with meadow planting within the studio streetscape, whilst narrower strips against buildings are planted with a rain garden matrix of shrubs and perennials. These areas perform a vital Sustainable Urban Drainage function, taking surface water from paved surfaces and pitched roofs and helping to filter it before relaying it to attenuation features within the buffer zones.

Focal spaces and key pedestrian routes have limited areas of more designed ornamental planting with flowering shrubs and perennials, providing an attractive backdrop to social spaces.

The sound stage flat roofs host biosolar roof planting with native seeding and plug planting, working in conjunction with PVs.

Figure 8.94 Planting strategy plan

MARGINAL / AQUATIC PLANTING

The edges of attenuation ponds will be planted with native marginal species as a mix of plug planting and seeding whilst areas of permanent water will include native aquatic species. Proposed species are:

1. Caltha palustris
2. Glyceria maxima
3. Iris psedacorus
4. Juncus effusus
5. Lythrum salicaria
6. Mentha aquatica
7. Myosotis palustris
8. Rumex acetosa
9. Lysimachia thyrsiflora
10. Menyanthes trifoliata
11. Carex elata 'Aurea'

Figure 8.95 Species palette for marginal / aquatic planting

MEADOW PLANTING

Meadow areas to buffer zones, verges and swales will be seeded with native meadow mixes. A variety of mixes will be used to suit varied conditions across the site in terms of sun / shade and moisture. Proposed species are:

12. Cynosurus cristatus
13. Agrostis capillaris
14. Festuca rubra
15. Phleum bertolonii
16. Centaurea nigra
17. Daucus carota
18. Galium verum
19. Leontodon hispidus
20. Leucanthemum vulgare
21. Malva moschata
22. Prunella vulgaris
23. Silene dioica

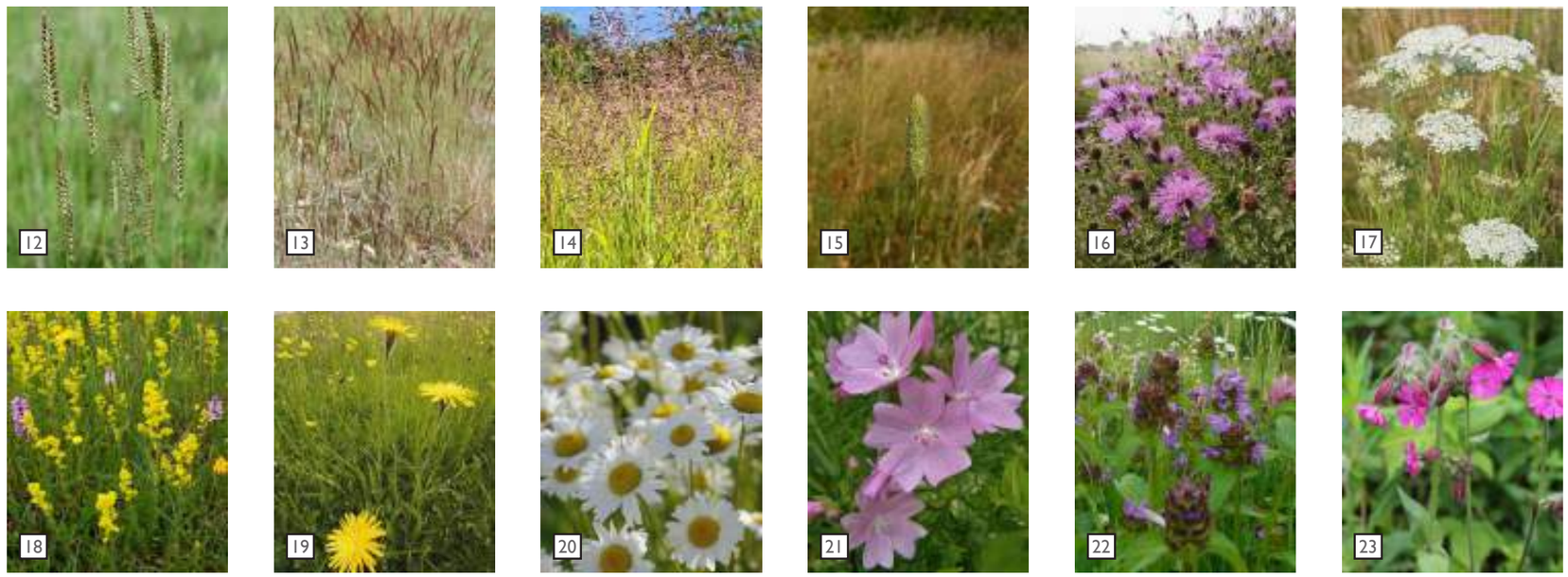


Figure 8.96 Species palette for meadow planting

RAIN GARDEN PLANTING

Rain garden strips against buildings will take water from pitched roofs and will be planted with a mixture of ornamental perennials and shrubs including native species and species of benefit to wildlife as habitat or food source. These will be planted as 3L container grown stock at 7 plants per square meter. Proposed species are as follows:

1. Carex divulsa
2. Bergenia 'Eroica'
3. Bistorta amplexicaulis 'Blackfield'
4. Geranium macrorrhizum
5. Libertia grandiflora
6. Liriope muscari 'Big Blue'
7. Polygonatum
8. Viburnym opulus 'Compactum'
9. Aronia prunifolia 'Brilantissima'

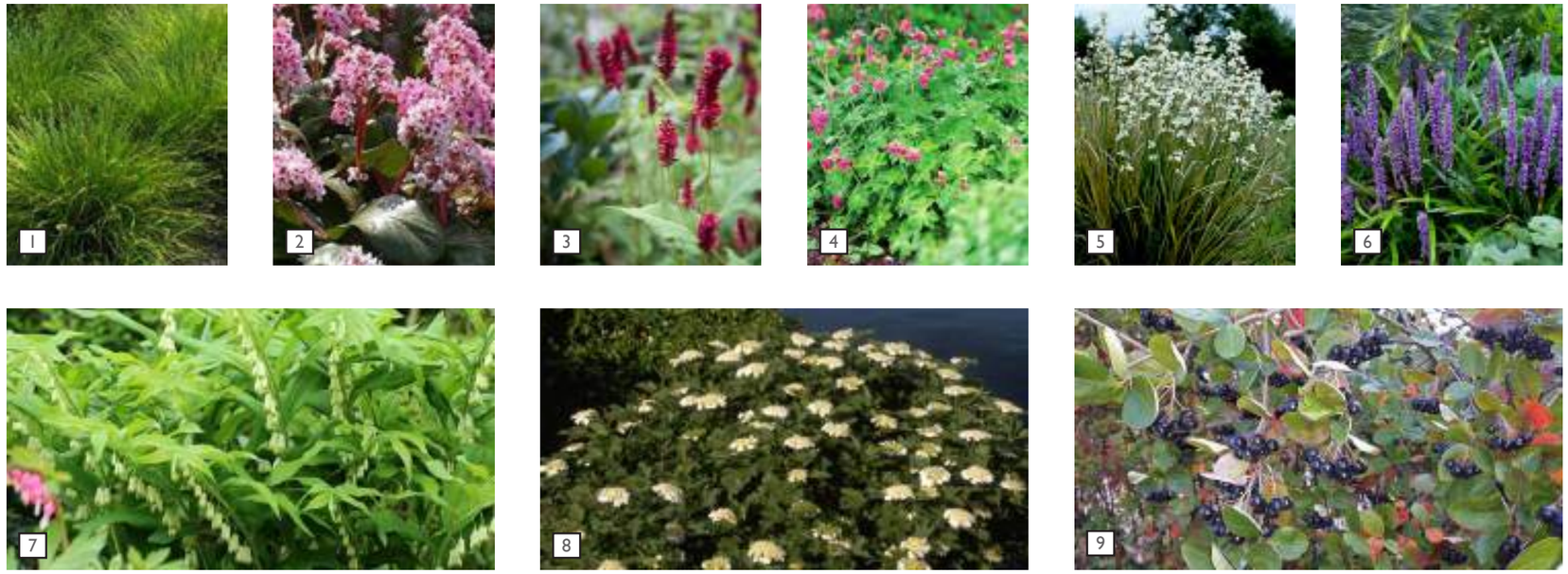


Figure 8.97 Species palette for rain garden planting

ORNAMENTAL PLANTING

Focal areas will be planted with a mixture of ornamental perennials and shrubs including native species and species of benefit to wildlife as habitat or food source. These will be planted as 3L container grown stock at 7 plants per square meter. Proposed species are as follows:

10. Bistorta orientalis
11. Helleborus orientalis
12. Heuchera 'Green Spice'
13. Heuchera 'Timeless Treasure'
14. Hosta 'Blue Moon'
15. Hosta sieboldiana 'Elegans'
16. Hosta 'Undulata Variegata'
17. Lamium galeobdolon
18. Liriope Muscari
19. Molinia caerulea Variegata
20. Primula denticulata
21. Symphoricarpos orbiculatus

Figure 8.98 Species palette for ornamental planting

ENHANCED OPEN MOSAIC

Existing grassland and scrub areas within Plots 4 and 5 will be retained and managed to increase biodiversity. This will include the addition of mounded substrate to provide diverse growing conditions, replicate the former gravel pit ecology, and introduce new species to create an open mosaic habitat.

Areas of open mosaic habitat will be managed to suspend the natural succession of the plant community to maximise contribution to site biodiversity. A combination of occasional grazing and manual removal will be used to limit the extent of encroaching scrub and pioneer woodland. This management, combined with the creation of varied substrate conditions, allows for the development of highly diverse plant communities that provide valuable habitat and food sources to invertebrates, birds, and reptiles.

Figure 8.99 Open mosaic habitat

Figure 8.100 A mixture of grassland areas and scrub

BIOSOLAR ROOFS

Sound stage roofs are designed to combine blue roof attenuation and photovoltaic panels with biodiverse roof planting.

Substrates of varying depth (minimum 80mm) will allow the development of diverse plant communities, providing habitat for invertebrates and foraging for birds and bats.

These will be seeded with Bauder 'Flora 3' seed mix, which is designed for use in conjunction with photovoltaic panels with a mix of species suited to varying light levels beneath panels and on exposed roof areas. This will be sown onto roof substrate at the supplier's recommended rate of 100g/m2.

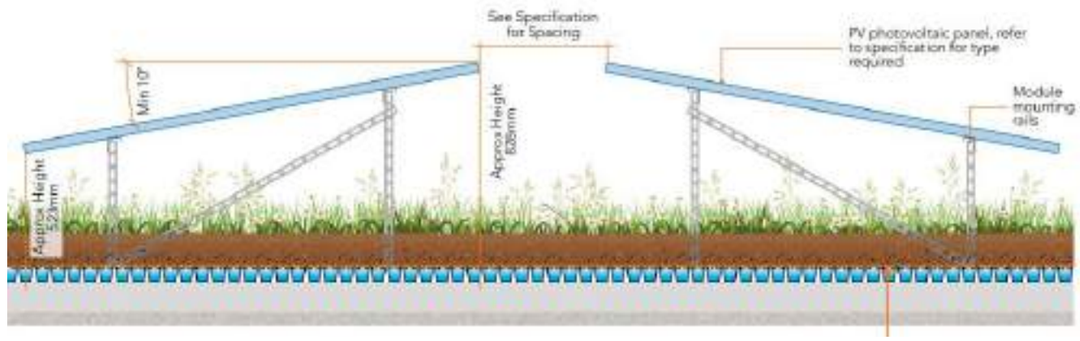


Figure 8.101 Typical biosolar roof

Figure 8.102 Biosolar roof seed mix

FACADE GREENING

Climber planting trained to vertical steel wires is proposed to the façades of some of the sound stage buildings along the eastern and western edges of the studio to help soften the appearance of buildings. Planting is also designed to maximise contribution to habitat and wildlife value providing connections between the ground level landscape and biodiverse roofs. It will contribute to an informal, natural character along the edge of the site, and a mix of native species and species of known value to wildlife is proposed.

Due to the proximity to tall buildings and likely rain shadow effect, climber planting will require regular watering to ensure success and planter beds at the base of the wall will be equipped with automated irrigation fed by rainwater harvesting.

Planting will be 3L container grown stock at 3 plants per Lm. Proposed climber species are as follows:

1. Parthenocissus Tricuspidata
2. Hedera Helix
3. Hedera Canariensis
4. Lonicera Periclymenum
5. Clematis Montana

Figure 8.103 Facade greening location plan

Figure 8.104 Species palette for climber planting

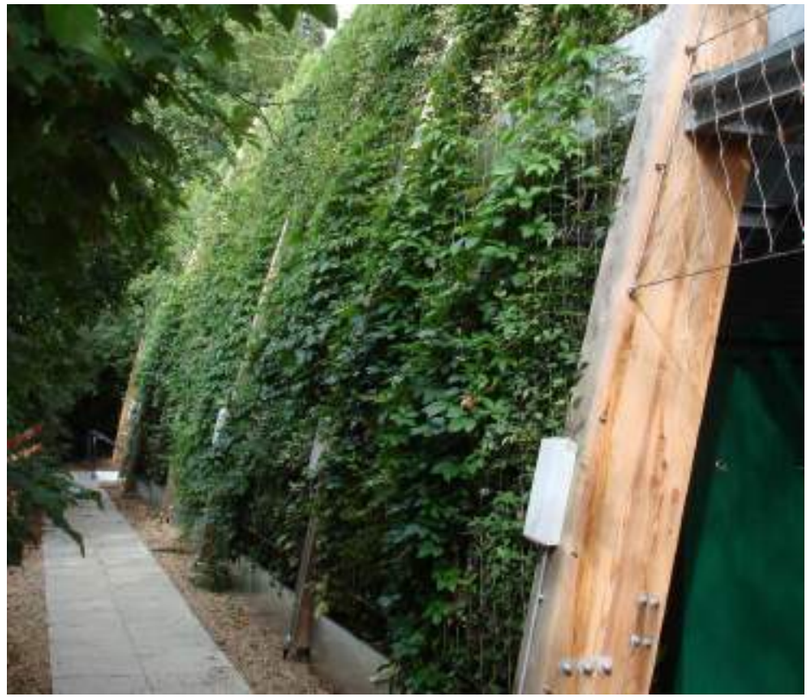


Figure 8.105 Informal, naturalistic character

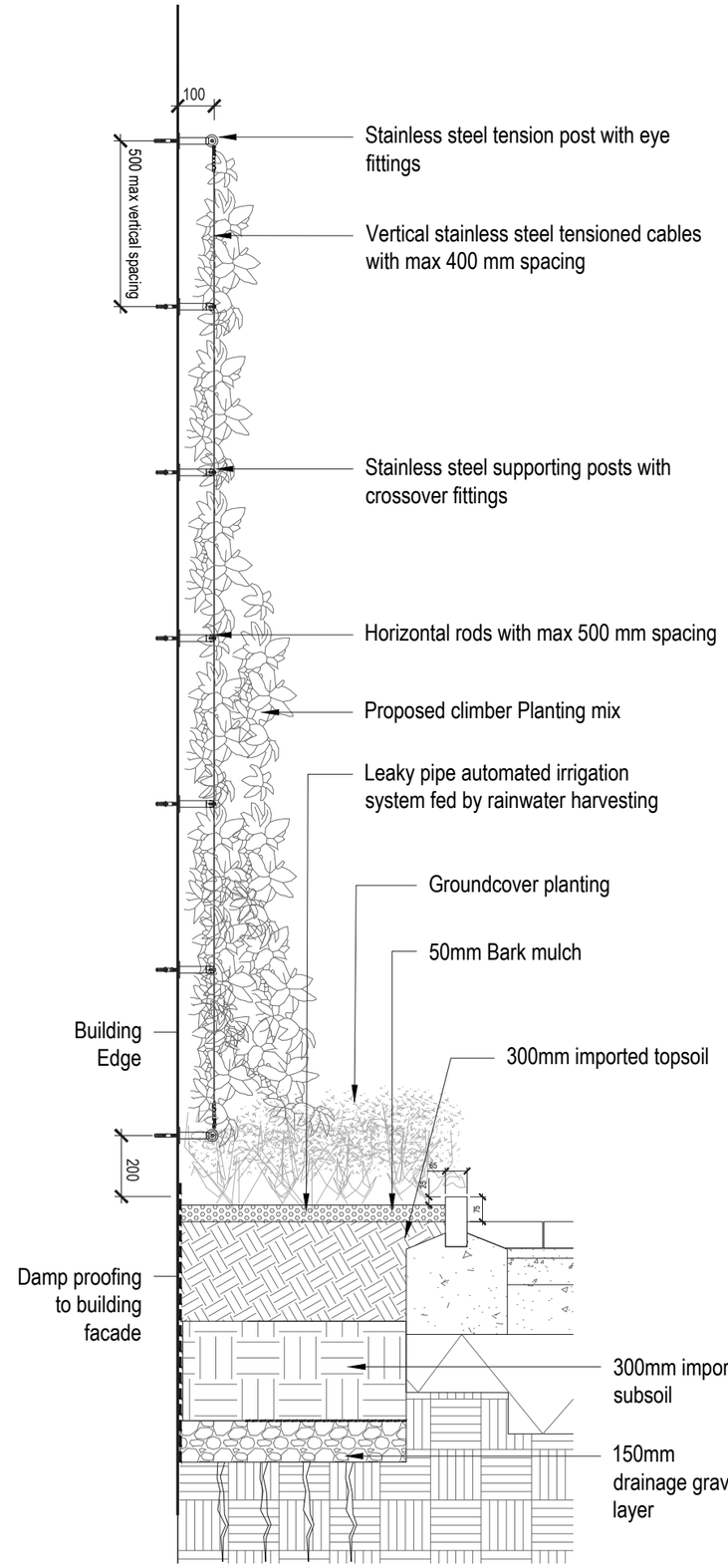


Figure 8.106 Indicative detail showing proposed climber planting

8.28 HARD LANDSCAPE STRATEGY

8.28.1 LANDSCAPE FINISHES

A palette of paving materials has been selected to provide a unified scheme whilst helping to differentiate between the various spaces and uses within the studio plots. Materials are chosen to be durable, functional and easy to maintain as well as providing an attractive and legible environment.

Main vehicular routes are surfaced in asphalt. The use of raised kerbs to edges, contrasting block paving, and resin-bound gravel on footways helps differentiate between primarily vehicular and mixed-use or pedestrian areas to provide a safer, more accessible environment.

The main pedestrian spine and focal spaces are picked out in higher quality concrete sets to assist with wayfinding and define these important spaces.

Some of the flexible workshop spaces are surfaced in permeable block paving as part of the Sustainable Urban Drainage strategy.

Where occasional facade access is required to the rear of buildings for maintenance, grasscrete provides a solid surface whilst maintaining a greener character and helping to soften the edges of the site.
Beyond the film studio plots, the Public Right of Way and new permissive paths are surfaced with self-binding gravel to give a softer, more informal appearance whilst improving accessibility for pedestrians and cyclists.

Access tracks to the backlot are surfaced in compacted gravel to maintain a softer, more informal appearance, whilst the backlot itself is surfaced in a combination of compacted gravel and grasscrete to provide solid bases for temporary constructions.

Figure 8.107 Hard landscape strategy plan

DESIGN PRECEDENTS

Figure 8.108 Self binding gravel paths

Figure 8.109 Resin bound gravel footways

Figure 8.110 Concrete setts to focal spaces / pedestrian spine

Figure 8.111 Concrete block paving / permeable paving

Figure 8.112 Asphalt to carriageways

Figure 8.113 Compacted gravel to tracks and backlot

Figure 8.114 Grasscrete to maintenance strips and backlot

8.28.2 FURNITURE AND FITTINGS

A simple, robust palette of furniture is used across the studio plots to create a coherent scheme.

Planter integrated seating and free-standing benches are concentrated in key pedestrian spaces such as the Entrance Square, pedestrian spine, Studio Hub Plaza and HQ spaces to provide seating opportunities for staff and visitors. Picnic benches are also provided within the HQ spaces to allow staff to spill out and gather or eat lunch.

Covered cycle parking is provided at key locations in the masterplan; this is complemented by additional kerbside cycle stands scattered throughout the streetscape.

Litter bins are provided at key locations in primary pedestrian spaces and adjacent to food and beverage areas.

Within Plot 4, the Culture and Skills Academy is provided with cycle parking and various seating opportunities to benefit all users.

Figure 8.115 Furniture strategy plan

DESIGN PRECEDENTS

Figure 8.116 Planter integrated seating

Figure 8.117 Free-standing benches

Figure 8.118 Picnic benches

Figure 8.119 Covered cycle stands

Figure 8.120 Kerbside cycle stands

Figure 8.121 Litter bins

8.28.3 SECURITY LINE

The secure line to the production zones is made up primarily of the building edges. A 2.4-3 meter height anti-climb mesh fence between buildings completes the secure line where necessary. Along the Public Right of Way and the drive to Westhorpe House, the secure line is set back from the edge of the site allowing breathing space for the public routes. Woodland edge, tree planting and existing bunds screen the secure line and soften the edge of the development. Mesh fences are fitted with wildlife access panels to maintain movement corridors.

A secondary secure line of mesh fence and gates beyond the Studio Hub Plaza allows this space to be isolated from the production zones and utilised for events.

A low parkland-style railing delineates the edge of the site along the Public Right of Way, the drive to Westhorpe House and around the unsecured film trade clusters on Plots 2A and 2B, defining the boundary between public and private. The design of this element also references to the site's historic character.

The interface between Public Right of Way and Studio Hub is kept as visually open as possible to maintain views of the internal exhibition space. A planted bund provides a physical deterrent to access the Studio Hub, which blends with the landscape whilst the building facade acts as the secure line.

The backlot area will be surrounded by a low agricultural fence and dense woodland and hedgerow planting to help screen the filming area and discourage public access without the need for an intrusive secure line.

An anti-dazzle fence is required along the A404 to prevent headlight glare from encroaching onto the adjacent road.

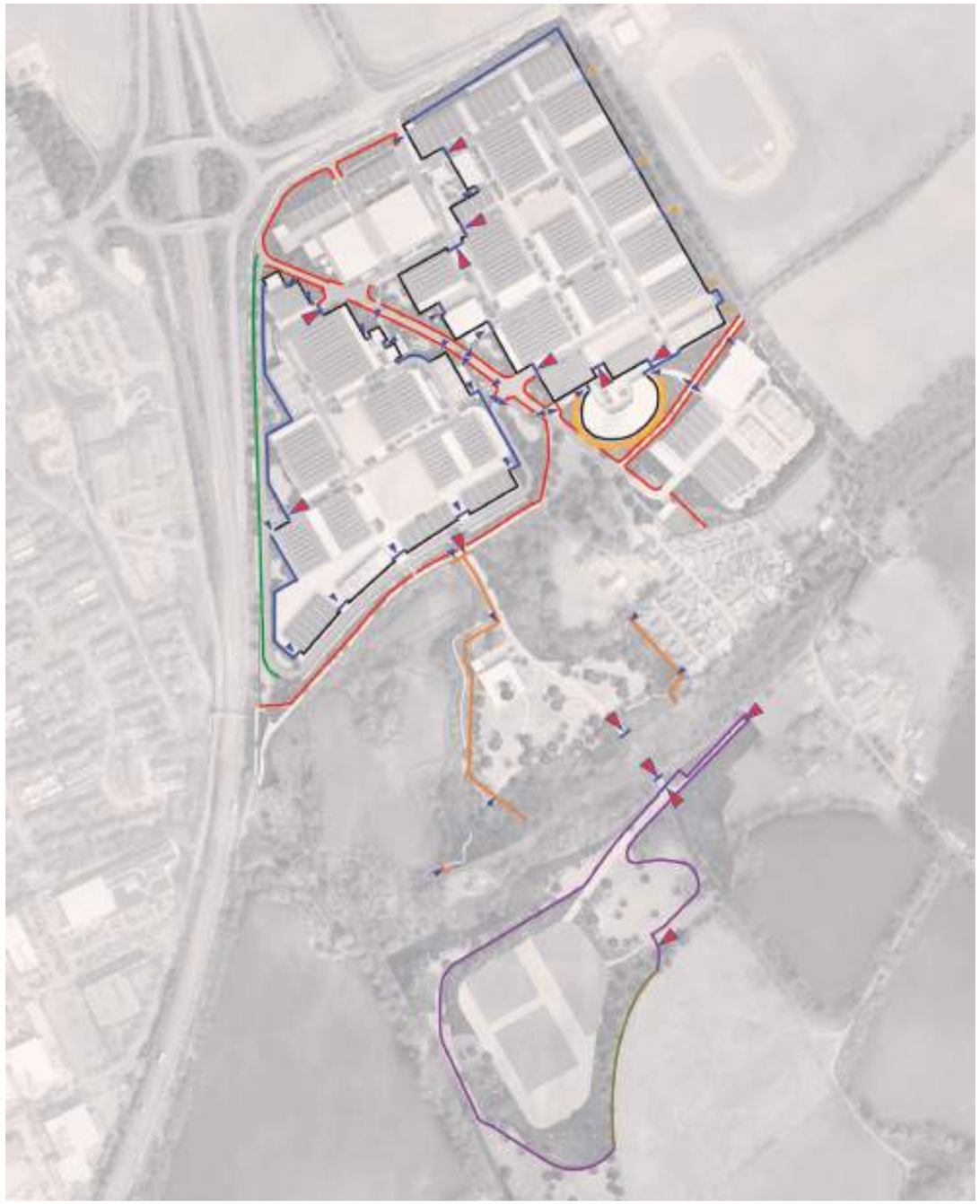


Figure 8.122 Boundaries and security strategy plan

DESIGN PRECEDENTS

Figure 8.123 2.4-3m height 358 weldmesh fence with wildlife access panels

Figure 8.124 Native planting screens security fences

Figure 8.125 1.2m height estate railing

Figure 8.126 1.5m height anti-dazzle fence to A404

Figure 8.127 1.2m height chestnut pale fence to Plot 4

Figure 8.128 1.2m sheep fencing to Plot 5

8.29 ECOLOGY STRATEGY

8.29.1 ECOLOGICAL CONTEXT

The landscape proposals for the site have been developed with consideration for the wider ecological context.

A number of ecologically important designated areas exist in the vicinity of the site, including the, Spade Oak Nature Reserve, Marlow Gravel Pits and Cookham Dean Islands Biological Notification Sites, Fern House Gravel Pit and Cook Marsh SSSIs and Bisham Woods SSSI / SAC / LNR / Ancient Woodland.

The river corridor, existing field boundaries and woodland belts provide corridors for ecological connectivity.

Buffer zones around the film studio plots to the north provide an opportunity to link to these existing wildlife corridors and enhance connectivity, particularly north-south between the river and the Area of Outstanding Natural Beauty.

Plots 4 and 5 will be retained predominantly as recreational outdoor space and managed to maximise site biodiversity, and there is an opportunity here to enhance existing vegetation for ecological gain.

The enhancement of walking and cycling routes in and around the site, as well as the creation of publicly accessible natural space within Plot 4, also provides outdoor amenity close to Marlow, helping to take pressure off nearby designated areas.

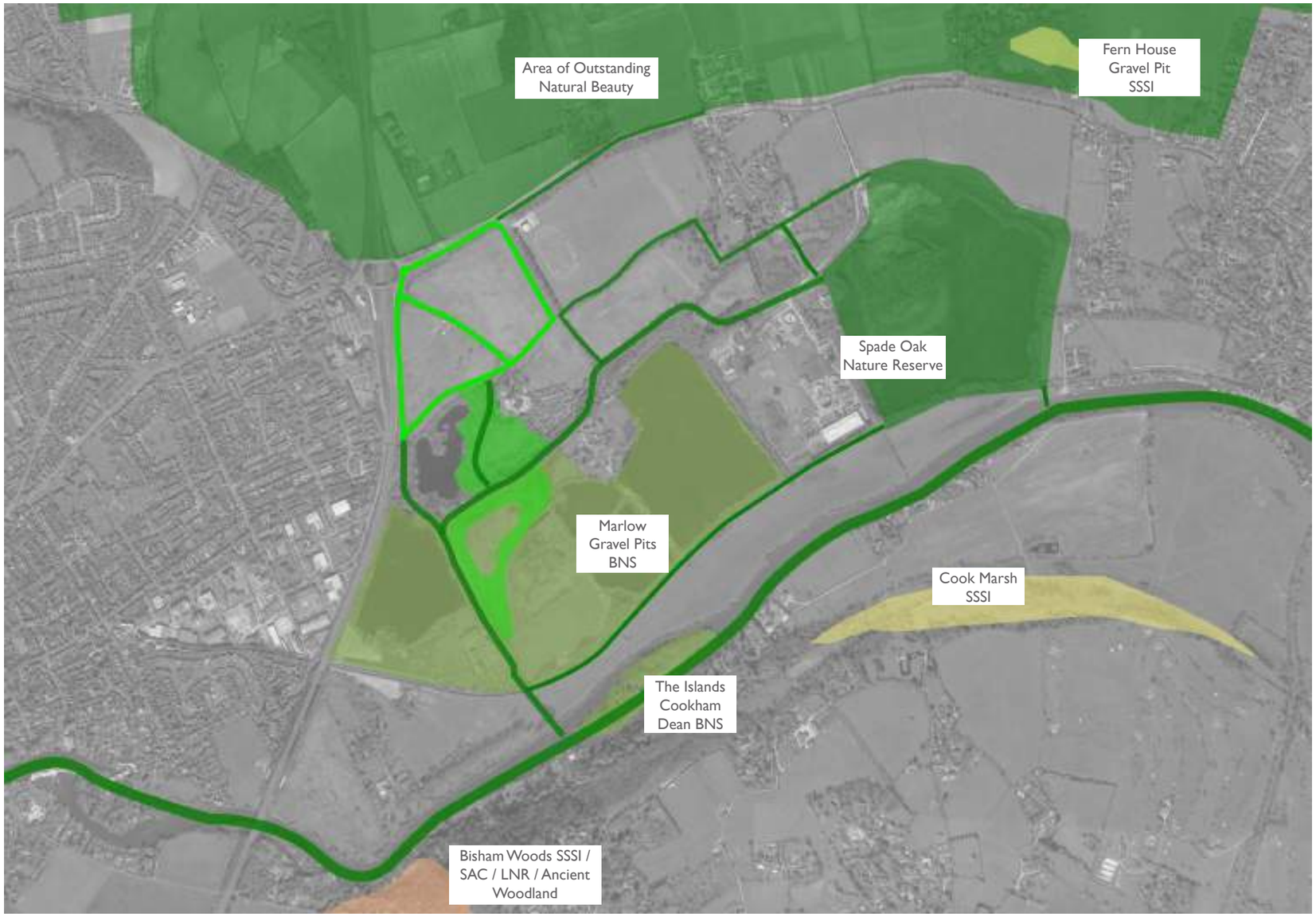


Figure 8.129 Green network

Existing ecological corridors - rivers, woodland belts, field boundaries
Opportunities to enhance connectivity - buffer zones, Plots 4 and 5

8.29.2 ECOLOGICAL APPROACH

The ecological strategy has been informed by the site's existing habitat character and ecological context, which varies between the northern and southern plots. This helps to shape a landscape and planting design that is diverse, varied and appropriate to its surroundings and maximises ecological benefits.

The northern part of the site sits within a landscape characterised by open fields with strong, well-defined field boundaries which provide important habitat corridors. The studio development is situated within areas of less ecologically rich grassland and ruderal vegetation, whilst field boundaries are retained as buffer zones and strengthened to enhance ecological connectivity.

These buffer zones are designed with a mixture of native woodland edge, hedgerow and meadow habitat to provide corridors for wildlife movement that link to surrounding field boundaries and woodland belts. This transitional grassland and woodland edge provide habitat for key species such as slow worm and grass snake whilst English Elm scattered within the woodland edge, and hedgerow planting supports existing populations of white letter hairstreak butterfly.

Biodiverse roofs on sound stages respond to the open grassland character of the surrounding area with native grassland species that will provide habitat for insects and foraging birds and are suited to growing in combination with PVs. Log piles, rubble piles and other habitat features are included to provide additional habitat value.

The southern part of the site on Plots 4 and 5 has been colonised by pioneer vegetation with belts of mature woodland around the perimeter. Their proximity to surrounding water bodies also characterises the plots.

Existing high-distinctiveness woodland and wet woodland areas around Plots 4 and 5 are predominantly retained and enhanced to provide additional screening, strengthen wildlife corridors, and provide foraging for key species such as Barbastrelle Bat. Existing water bodies are retained, and ponds in plot 5 are enhanced to provide suitable habitat for aquatic mammals, birds, invertebrates and fish.

Existing grassland and scrub habitat on Plots 4 and 5 is retained and enhanced to maximise ecological value. This will include adding mounded substrate, introducing new species into the existing sward, and managing encroaching scrub to provide a diverse open mosaic habitat.

Marlow Film Studios will not only deliver Biodiversity Net Gain in line with the emerging national requirement of +10%, but in addition has set voluntarily its own bespoke target to reach +20% net gain

Figure 8.130 Ecological strategy plan

8.30 SUSTAINABLE DRAINAGE STRATEGY

8.30.1 SUSTAINABLE DRAINAGE

The Sustainable Urban Drainage Strategy (SuDS) integrates rainwater management features into the landscape and provide multiple benefits in terms of site character and biodiversity as well as rainwater management. The approach to SuDS utilises a chain of features to treat, attenuate and reduce the outflow of surface water at every step:

- Biodiverse roofs to buildings are combined with blue roof attenuation to hold water at the roof level
- Rainwater harvesting tanks located between some of the buildings will allow rainwater to be recycled for irrigation and greywater
- Permeable block paving to some hard paved areas, particularly between workshops, reduces surface water run-off and provides a storage function as well as managing water quality
- Rainwater planting strips against buildings with pitched roofs take water from downpipes and perform a biofiltration function before water is relayed to main attenuation features
- Planted verges along roads within the studio take water from hard surfaces and provide biofiltration
- These connect to larger attenuation features located within the buffer zones around the studio plots, which will hold water before releasing it into existing waterbodies. These are planted with native marginal and aquatic vegetation to provide valuable habitat in conjunction with SuDS
- The use of permeable surfaces, such as grasscrete and unbound gravel, for less-trafficked maintenance and pedestrian areas, reduces surface water run-off as well as manages water quality

Figure 8.131 SuDS strategy plan

DESIGN PRECEDENTS

Figure 8.132 Blue roof storage

Figure 8.133 Permeable block paving

Figure 8.134 Biofiltration strips in streets

Figure 8.135 Rainwater planters along buildings

Figure 8.136 Planted attenuation basins

Figure 8.137 Permeable surfaces

8.31 MAINTENANCE AND MANAGEMENT

8.31.1 OVERVIEW

The general landscape of Marlow Film Studios will maximise opportunities to contribute to site biodiversity and other sustainability targets and help integrate the development into its surrounding context. It also has a considerable role in creating a positive impression with staff, visitors, and the public. As such, it must be maintained in the correct manner to ensure that it reflects the quality and value of the development as a whole and ensures long term contribution to site biodiversity.

This section provides a high-level summary of the maintenance goals and requirements for the landscape. Additional detail can be found in document 8: Landscape Management and Maintenance Plan.

MANAGEMENT RESPONSIBILITY

The Marlow Film Studios landscape will initially be managed during the Defects Liability Period by the appointed landscape sub-contractor. Subsequent landscape management will be provided either by private landscape contractors or by the client's own landscape management team.

AIMS AND OBJECTIVES

While creating optimum planting conditions combined with high standards of implementation are essential to give properly specified plant material the best start in life, the establishment and future success of the landscape will be dictated by the quality and frequency of the subsequent maintenance and management received.
The following key objectives for maintenance and management have been informed directly by best practice guidance to ensure a robust regime will be adopted for the site both during the establishment period and thereafter.

Key objectives for maintenance and management include:

- To maintain a low impact and holistic approach to site management, consistent in delivery and flexible to changing site demands.
- To adapt management in accordance with the changing needs, requirements, desires, and legal requirements over 5-year periods.
- To uphold a high standard of management.
- To maintain a high level of visual amenity.
- To demonstrate a high level of horticultural awareness that considers the qualities of the specific plant species used and the timing of maintenance operations required.
- To maintain an appropriate density of plant species, pruning and dividing as required to generate healthy growth and appearance.
- To ensure that undesirable invasive and dominating plant species are prevented from establishing.
- To recognize the plant typologies represented on-site and manage them to realize their primary characteristics.
- To enhance the site's biodiversity through appropriate management, in accordance with the principles and criteria required to achieve Biodiversity Net Gain targets.

Figure 8.138 Vegetation management plan

8.31.2 SOFT LANDSCAPE MANAGEMENT

A range of planting typologies are represented on-site, and the Landscape Maintenance Plan identifies specific objectives, management operations and schedules for each. Key objectives for each typology are summarised below.

Existing Trees

Key Objectives:

- To maintain healthy and safe existing vegetation
- To optimise contribution to site ecology and Biodiversity Net Gain
- To maintain the character of trees and contribution to their amenity value
- To maintain the contribution to landscape buffers and screening

Proposed Trees

Key Objectives:

- To ensure the successful establishment of new standard trees and maintain their architectural and aesthetic qualities
- Street trees will be regular in shape with bushy/dense canopies. Woodland trees may be more irregular/asymmetrical with more open canopies
- To maintain clear sightlines and clearances for trees located close to vehicular and pedestrian routes
- To optimise contribution to site ecology and Biodiversity Net Gain

Woodland

Key Objectives:

- To ensure the successful establishment of new planting to create self-sustaining woodland habitat.
- To ensure existing and proposed woodland areas are managed to achieve Biodiversity Net Gain criteria.
- Woodland will have a diverse canopy with shrub and ground layers with 3D vertical structure and a range of age classes.
- Woodland will be maintained as a dark area with minimal lighting. Lighting will only be provided in areas dictated by health and safety requirements /personal security.

Open Mosaic

Key Objectives:

- Manage existing scrub and grassland to produce an open mosaic habitat
- Ensure colonisation of scrub is kept in balance to provide varied habitat in line with Biodiversity Net Gain criteria

Native Hedges and Scrub

Key Objectives:

- To ensure successful establishment to create diverse species rich hedgerows and scrub
- Hedgerows will be free from any gaps and will include a number of standard trees along their length

Ornamental Planting

Key Objectives:

- To ensure successful establishment
- Provide year-round interest and colour
- Maintain good coverage to minimise weed growth
- Manage to maximise ecological benefit and provide nectar, pollen, fruit and habitat for invertebrates and birds

Meadow

Key Objectives:

- To ensure successful establishment
- To maintain biodiversity – a single species or a few species of grass will not dominate
- Species to be structurally diverse with grass and herb species that provide pollen and nectar throughout the growing season

Marginal / Aquatic Planting

Key Objectives:

- To ensure successful establishment
- Maintain a diverse range of species typical of regional wetland habitat
- Maintain a range of species able to cope with a range of water levels and marginal habitats
- Provide a range of nesting, foraging and breeding opportunities for wildlife, including birds, invertebrates, reptiles and amphibians

Biodiverse Roof

Key Objectives:

- To ensure the successful establishment of a new biodiverse roof
- Maintain a range of vegetation suited to a variety of rooftop conditions
- Maintain a broad range of wildflowers to give an extended flowering season providing nectar and pollen-rich habitat
- Maintain with consideration for interfaces with built form, blue roof, drainage and PVs to ensure the biodiverse roof does not compromise functioning of other elements

Facade Greening

Key Objectives:

- To ensure the successful establishment of new climber planting
- Planting is selected to optimise habitat and wildlife value, an informal appearance is desirable, and planting will be allowed to grow naturally on areas of the façade intended for greening
- Maintain a balanced mix of species
- Maintain good coverage of façade areas intended for greening
- Prevent spread of climbers to surfaces and façade areas not intended for greening

Figure 8.139 View looking East along Public Right of Way

Figure 8.140 View North along the drive to Westhorpe House to Westhorpe House and Homes

9.0 SUSTAINABILITY

9.1 OVERVIEW

9.1.1 SUSTAINABILITY STRATEGY

The vision for the Marlow Film Studios is to create a best-in-class film and TV studio campus designed to high sustainability standards. Sustainable development principles have informed the proposed development design from the outset. The aim is to provide a high-quality development that benefits the local community and economy, enhances local ecosystems, will enable the UK's transition to a net-zero economy and is resilient to the future impacts of climate change. Key sustainability measures incorporated into the proposals include:

- Energy Efficient Buildings
- Renewable Energy
- Low Carbon Sustainable Transport
- Resilience to Climate Change
- Ecology and Biodiversity Net Gain
- Resource Efficiency and Circular Economy
- Health and Wellbeing

This chapter summarises the sustainability ambition and strategies for Marlow Film Studios. Refer to the following documents for further information:

- Document 1: Planning Statement
- Document 17: Sustainability Statement
- Document 18: Energy Statement
- Document 22: Daylight and Sunlight Analysis
- Document 23: Light Pollution Analysis
- Document 24: Solar Glare Analysis
- Environmental Statement

9.1.2 BREEAM AMBITIONS

Buildings are being designed to target a rating of Very Good or Excellent under the Building Research Establishment Environmental Assessment Method (BREEAM) New Construction 2018 scheme. BREEAM is a robust, well established third-party certified scheme that recognises performance across multiple sustainability issues, including:

- Health and wellbeing
- Energy
- Transport
- Land use and ecology
- Waste
- Pollution
- Water

Figure 9.1 BREEAM Certification Sample

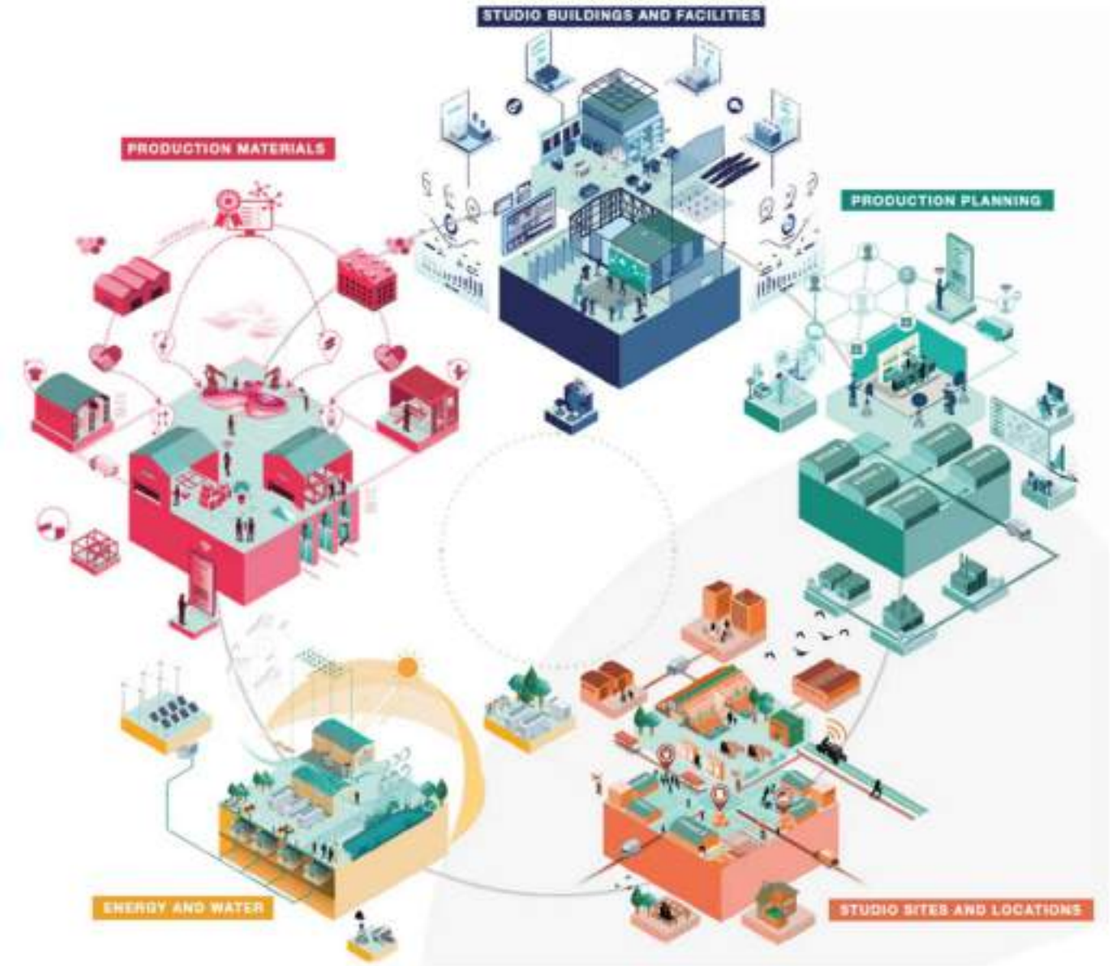


Figure 9.2 Sustainable Film Making Vision © Screen New Deal Sustainable Film Studios by Arup

9.2 ENABLING NET ZERO CO_2 EMISSIONS

9.2.1 OVERVIEW

The Climate Change Act has set a legally binding target for the UK to achieve net-zero CO2 emissions by 2050. The film industry itself is taking action to cut the carbon emissions associated with film production, with production companies routinely assessing the carbon footprint of their productions through Albert, the film industry's established system for assessing the sustainability of film production. The proposed development has been designed to enable low carbon film production by reducing the carbon emissions associated with the buildings used for film production, enabling low carbon modes of travel for production teams, and enabling the segregation of waste streams to support improved waste management practices.

For the UK and Buckinghamshire to meet their net-zero carbon targets, it is essential that all new development seeks to reduce energy demands for all uses to a minimum and supply a significant proportion of the energy demand from low carbon or renewable energy sources. It is also key that provision is made to measure and monitor energy use in operation easily.

A key part of the UK's strategy for delivering net-zero CO2 emissions is to shift heating and transport away from fossil fuels and instead use electricity supplied from a decarbonised electricity grid. The Government's recent Net-Zero Strategy – Build Back Greener, has committed to reducing the UK's grid electricity CO2 emissions to zero by 2035.

To enable the Proposed Development to deliver net-zero CO2 emissions, all buildings have been designed to be fossil fuel-free with the exception of back up diesel generators (provided for emergency life safety purposes only).

The Energy Statement submitted with the Application sets out the energy strategy for the Proposed Development. It sets out the baseline energy demands for the Proposed Development, assuming it was designed to meet the current Part L of the Buildings Regulations and sets out the proposed measures for reducing the scheme's energy demands and supplying those from low carbon and renewable energy supplies and quantifies the energy savings and carbon reductions achieved against the Part L 2013 baseline.

The energy strategy for the Proposed Development includes:

Reducing Energy Demand

- Passive design measures to reduce heating, cooling and lighting energy use
- Highly insulated and air-tight building fabric
- Efficient building services and equipment

Low carbon and renewable energy supply

- Low carbon heat pumps
- Large PV arrays meet 100% of the development's regulated energy use

Effective management in-use

- Energy metering to allow ongoing monitoring and improvement in-use

Figure 9.3 © Del Rio Bani

Figure 9.4 © St Photo: Jonathan Choo

Figure 9.5 © Seksan94/Adobe Stock

Figure 9.6 © Urban Racks

9.2.2 ENERGY EFFICIENCY OF BUILDINGS

Passive design measures, high fabric insulation standards, and high-efficiency building services are proposed to reduce the energy demands for all buildings. Office and workshop spaces are designed with openable windows to allow mixed mode operation, with buildings being naturally ventilated for most of the year but with comfort cooling available for peak summer periods. This will reduce energy demands for ventilation and cooling.

Space heating and comfort cooling will be provided by air-source heat pumps fuelled by electricity in place of gas boilers, eliminating fossil fuels from the development.

To avoid the need for diesel generators for outdoor filming, backlots will be provided with power supplies. The Applicant is committed to ensuring all electricity supplied is contracted from 100% renewable energy tariffs.

4.15 MW of solar photovoltaic (PV) panels will be incorporated into the green roofs of the sound stages and carpark roofs. These will generate an estimated 3479 MWh of renewable energy annually, enough to meet more than 100% of the annual regulated energy use of the development.

Calculations set out in the Energy Statement show that in combination, the proposed measures will reduce site-wide regulated CO2 emissions by 105% against the current Part L 2013 Building Regulations baseline, based on the latest fuel emission factors.

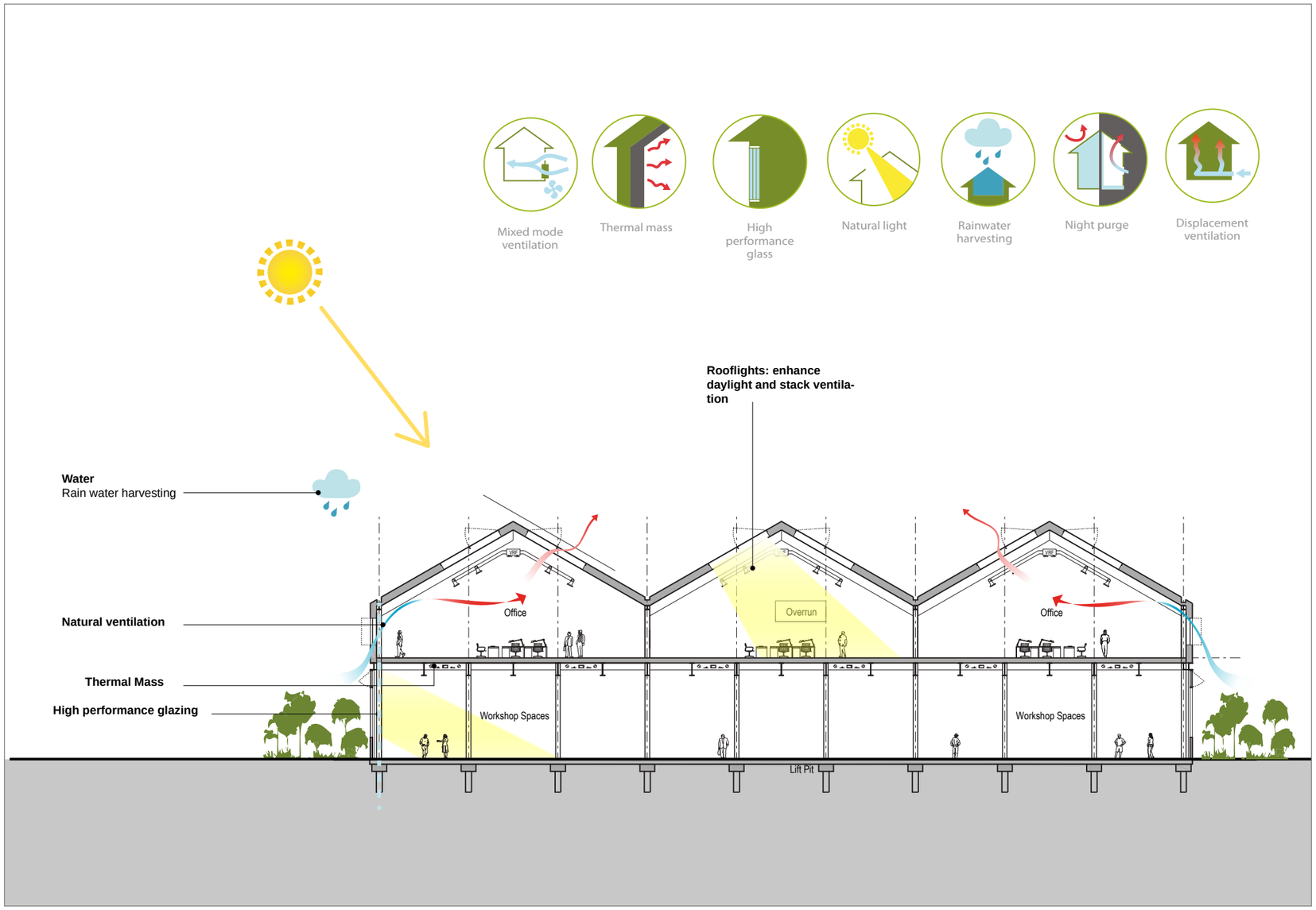


Figure 9.7 Workshops Sustainability Strategy

The use of all-electric systems will allow the development's CO2 emissions to continue to fall over time, in line with the Government's proposals to decarbonise the UK electricity grid by 2035.

Automated meter reading and sub-metering of energy supplies will enable future monitoring of energy use and enable production companies to be billed for the energy they use, further incentivising energy saving.

9.2.3 LOW CARBON SUSTAINABLE TRANSPORT

The Transport Assessment sets out proposed measures to enable a model shift away from car use to more sustainable modes. Enhancements to pedestrian and cycle routes through the site will improve local connectivity, supporting walking and cycling for local trips. Showers, lockers and secure cycle storage provision designed in accordance with BREEAM and Local Plan targets will encourage cycling by studio staff and visitors.

The bus interchange at the Entrance Square and enhancements to local bus services to High Wycombe, Maidenhead, Marlow and Bourne End will support the use of public transport both for visitors to the development and for the wider community. Internal movement around the site will rely on active mobility and utilise electric scooters and vehicles. Electric vehicle charging infrastructure provided on-site will help support the shift from fossil fuel to electric vehicles.

Further detail is provided in the Chapter 6 "Masterplan", document 9: Transport Assessment and document: 28 Framework Travel Plan.

Figure 9.8 Cycling Storage Forbury Place, London © 2017 Re:public

Figure 9.9 Electric Scooters © Travelwest 2022

Figure 9.10 GWR © Jack Boskett Media Ltd

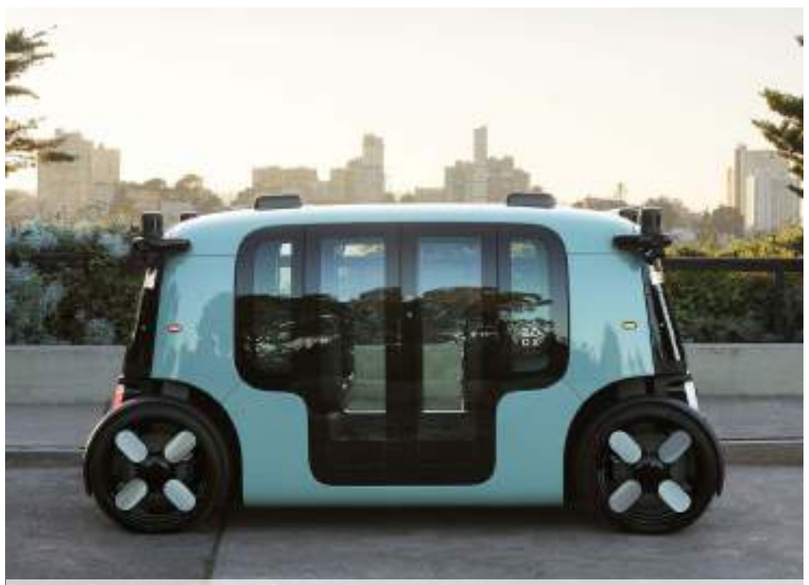


Figure 9.11 Future electric shuttles© Zoox, Inc. 2022

9.3 RESILIENCE TO CLIMATE CHANGE

9.3.1 WATER & DRAINAGE

The development has been planned and designed to be resilient to the now unavoidable changes projected for the UK climate, including hotter, drier summers and more extreme rainfall events.

The specification of low water use fittings, water meters, leak detection and flow control devices will minimise the development's water demand. The landscaping design will incorporate native, drought-tolerant species to reduce and, where practical, avoid irrigation for landscaping.

A rainwater harvesting system will collect rainwater from building roofs, storing this in attenuation tanks for use in flushing WCs. Potable water consumption within the buildings connected to the rainwater harvesting system is being designed to achieve the maximum BREEAM NC 2018 credit Wat 01 credits.

Document 10: Flood Risk Assessment (FRA), submitted with the application, confirms that the majority of the site (plots 1, 2 & 3) is located in Flood Zone 1 with a low probability of flooding. Plots 4 & 5 are located in Flood Zone 2 with a low to medium probability of flooding. The groundwater level is classed as high, with all other sources of flooding (surface water, sewer and reservoir) at low risk. Mitigation measures are proposed to reduce all residual risks to a low status.

The drainage strategy has been designed to provide source control management, improve water quality, reduce flood risk and provide amenity and biodiversity.

Attenuation and treatment of water run-off will be achieved through a combination of green/blue roofs to sound stages, biofiltration swales, rain gardens, retention ponds, permeable paving and geo-cellular attenuation crates. The latter will also provide rainwater storage for non-potable uses. Run-off from non-green roofs and roads will be filtered through biofiltration SUDS features prior to discharge to existing water courses.

9.3.2 SUN & HEAT ABSORPTION

Buildings have been designed with a broadly south-east-northwest orientation to enable more effective control of solar gains in summer. Projecting roof lines, brise-soleil (solar shading), and low g-value glazing will all help to reduce solar gain and overheating risk. Extensive planting and Green Infrastructure, including bio-solar roofs to all sound stages and an extensive network of surface level Sustainable Urban Drainage Systems (SuDS) and green landscaping, will help reduce heat absorption from the sun, creating a cooler local microclimate. Retention of existing trees and new tree planting will provide additional shade.

The Tree Canopy Cover for the site has been calculated as approximately 32%, which exceeds the policy requirement of 25%. The tree canopy within the streetscape and buffers contribute to the creation of a cooler local microclimate that helps reduce building cooling demands and create a more comfortable external environment.

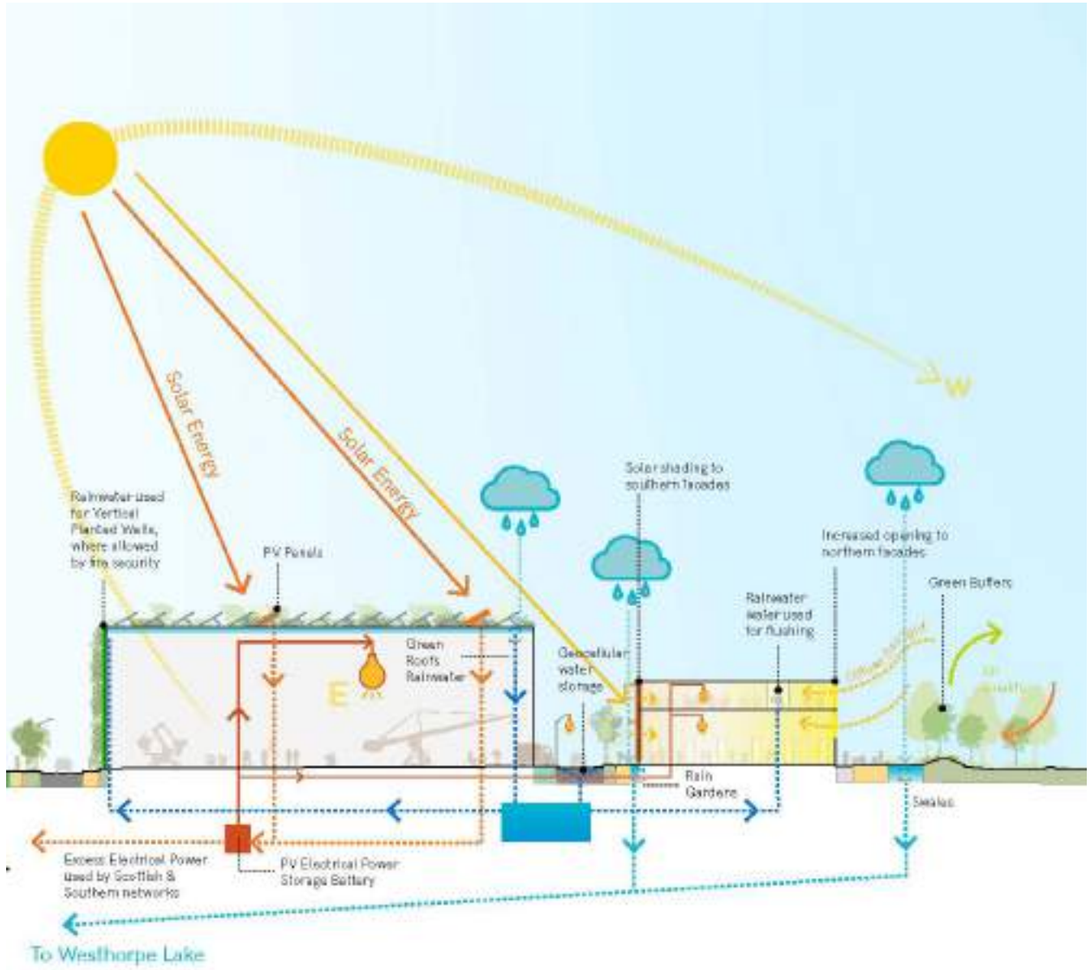


Figure 9.12 Masterplan Sustainability Strategy

9.4 ECOLOGY & BIODIVERSITY NET GAIN

9.4.1 OVERVIEW

There are 210.42 Biodiversity Units (BU) within the Red Boundary Line as measured under DEFRA metric 3.0. This is the 'baseline' used for calculations of biodiversity impacts.

Coming legislation means that any qualifying development will in future be required to deliver Biodiversity Net Gain. It is expected that Parliament will amend the Town & Country Planning Act to mandate 10% net gain for applications made after the autumn of 2023. Despite being submitted ahead of the legislative framework, Marlow Film Studios will not only deliver Biodiversity Net Gain in line with the emerging national requirement of +10%, but in addition has set voluntarily its own bespoke target to reach +20% net gain.

The site masterplan shows a net loss within the Red Boundary Line of -22.84 Biodiversity Units (BUs) (-10.85% from the baseline). The two main components are:

- The removal of 24.55 hectares of lower value ground cover, largely over landfill caps, in plots 1 to 3 resulting in a loss of -105.36 BUs.
- Enhancements within the site boundary in areas which offer the best current and potential habitats will deliver +82.52 BUs.

A net loss of 0.13 hedgerow biodiversity units (hBUs) of -1.51% is also anticipated.

To achieve the emerging national requirement of 10%, and our own voluntary target of +20% net gain, additional land will be secured by appropriate planning mechanisms. The habitat provided will be covered by a 30 year conservation covenant and meet the standards of the coming statutory framework once passed into law.

This approach offers a significant additional ecological improvement and sets a bold new benchmark for other development more generally to aspire to.

Figure 9.13 © 2022 Eddington Cambridge Sustainable Urban Drainage

Figure 9.14 Wetlands

Figure 9.15 © Green roof Rice Plant Conservation Science Centre © Daniel F. Ada. L

Figure 9.16 Green flat roof with PV panels © Contec

9.5 HEALTH & WELLBEING

9.5.1 OVERVIEW

In addition to the significant benefits stated in section 4.15," Community Benefits" of this document, the Proposed Development has been designed to provide an attractive, healthy environment for the public, visitor and occupiers of the Studios.

The recent Covid-19 pandemic has brought health and wellbeing much more into focus. There is increased understanding of the benefits of high-quality outdoor space, nature and exercise to our wellbeing.

The landscape proposals set out in chapter 6 bring nature into the heart of the development and will increase access to recreational space. The creation of large areas of accessible outdoor space on Plot 4, the enhancements to the existing cycle networks and Public Right of Way and the new lakeside path will all help provide access to attractive outdoor space where staff and the local community can relax and unwind.

High-quality facilities for cyclists, including showers, lockers and cycle storage, will enable and encourage active commuting.

With the exception of sound stages, buildings have been designed to provide attractive daylit spaces with rooflights and high-level glazing that provide daylight deep into spaces.

Detailed designs will draw on The Well Building Institute's Well Standard. This sets out measures and standards for:

- Improving air quality
- Maintaining water quality
- Managing risk and creating organisational resilience
- Supporting movement and comfort
- Strengthening immune systems
- Fostering mental resilience
- Championing community resilience and recovery

The project will be targeting BREEAM Credit Man 03 - Responsible Construction Practices, which recognises and encourages construction sites managed in an environmentally and socially considerate, responsible, and accountable manner. This will ensure that the construction phase is managed to reduce nuisance and disruption to neighbours.

Figure 9.17 Woodland © Land Hire

Figure 9.18 © Conserve and Restore

Figure 9.19 Sherwood Forest © sustrans.org.uk

Figure 9.20 Lepe Country Park © www.visit-hampshire.co.uk

Figure 9.21 ©Brainstorming Workshop © ELEKS

Figure 9.22 Bradfield Woods Visitor Centre © modece architects ltd

9.5.2 AIR QUALITY

An Air Quality Assessment has been prepared, and findings are set out in Chapter 9 of the ES submitted in support of the Planning Application. The Proposed Development includes a range of embedded mitigation and design features that will help to reduce NOx and particulate emissions. Using all-electric systems in buildings will remove local NOx and particulate emissions usually associated with gas boilers or combined heat and power plants.

The greatest source of pollution in the area is the A404 and its road traffic emissions. The sustainable transport strategy aims to promote the use of electric cars and alternative modes. A detailed modelling exercise has been undertaken to assess likely effects on local air quality associated with changes to road traffic from the Development. The modelling indicates that levels of nitrogen dioxide and particulates will be below accepted levels both for nearby residential properties or within the development. The Air Quality Assessment concludes that the effect of the Development on levels of nitrogen dioxide and particulates will be negligible.

Healthy indoor air quality will be promoted through the specification of internal finishes and fittings with low emissions of volatile organic compounds (VOCs), wherever possible. Where these products are specified, these will meet relevant standards for reduced VOC emissions.

Figure 9.23 © ZinCo Green Roof Systems Ltd.

Figure 9.24 © SCAPE Landscape Architecture D.P.C.

Figure 9.25 © 2022 carwow Ltd.

Figure 9.26 © The University of Nottingham

9.6 RESOURCE EFFICIENCY & CIRCULAR ECONOMY

9.6.1 OVERVIEW

Plot levels have been carefully designed around the site's contours to minimise soil disturbance and movement, recognising the site's former use as a landfill site.

Building designs are being developed around a "screwed not glued" approach, with composite materials that cannot easily be recycled at the end of their lives being avoided.

Office and workshop spaces have been designed to provide flexibility for a range of fit-out options, including cellular and open plan configurations, with openable windows distributed to provide single-sided or cross ventilation depending on how spaces are fitted out.

The overall impact of the development will be assessed using life cycle Carbon Assessments and Environmental Product Declarations (EPDs) to reduce the burden on the environment of the major building elements.

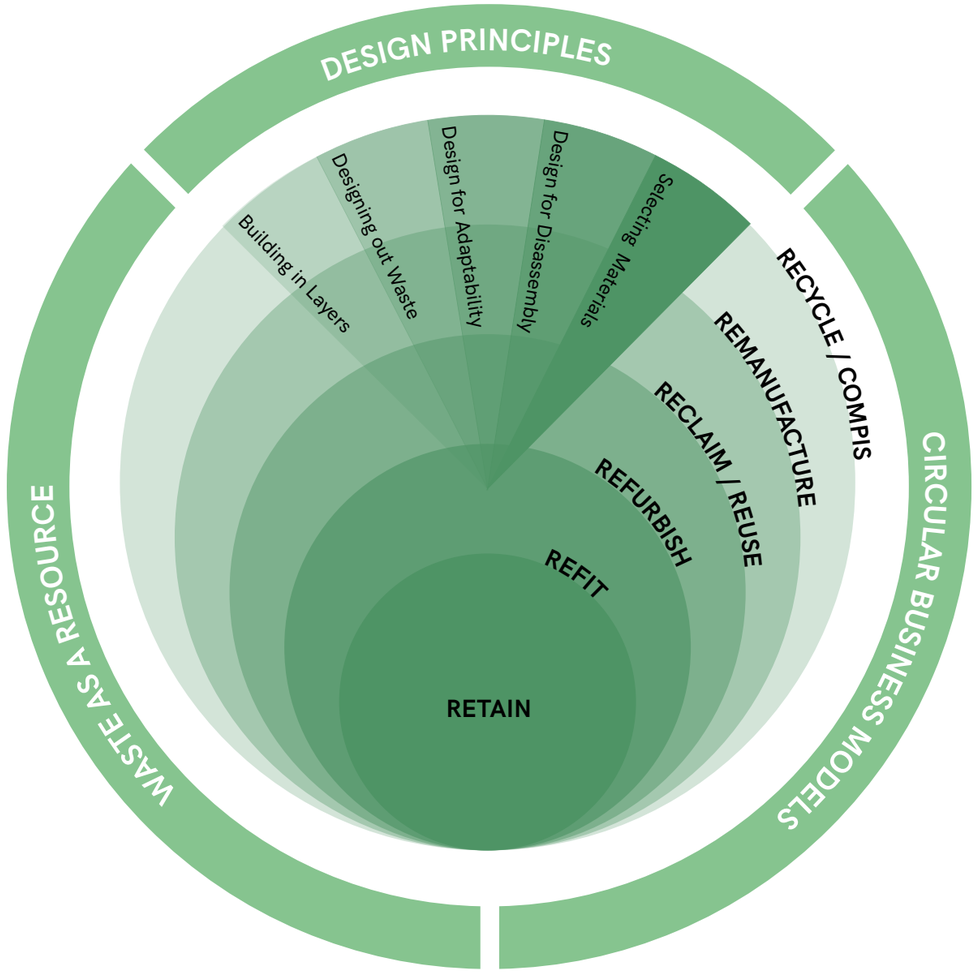


Figure 9.27 Waste Management Strategies

9.6.2 OPERATIONAL WASTE MANAGEMENT STRATEGY

Typical Storage Location during Set Construction

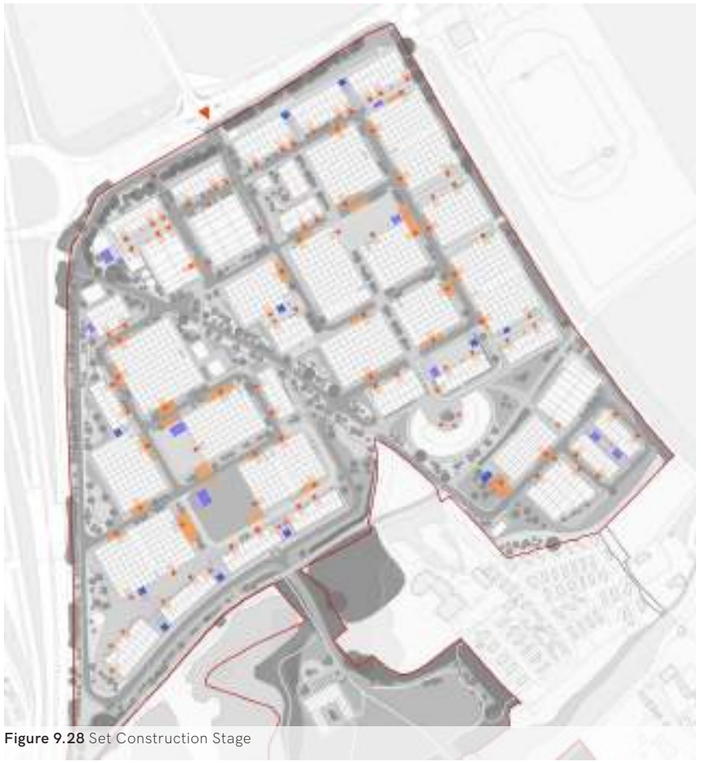


Figure 9.28 Set Construction Stage

Typical Storage Location during Film Shooting

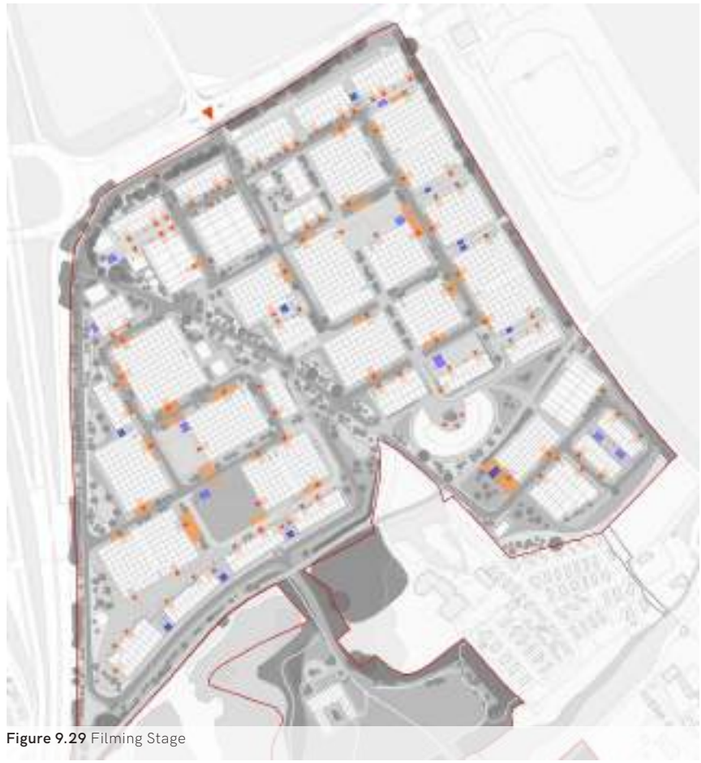


Figure 9.29 Filming Stage

Typical Storage Location during Deconstruction

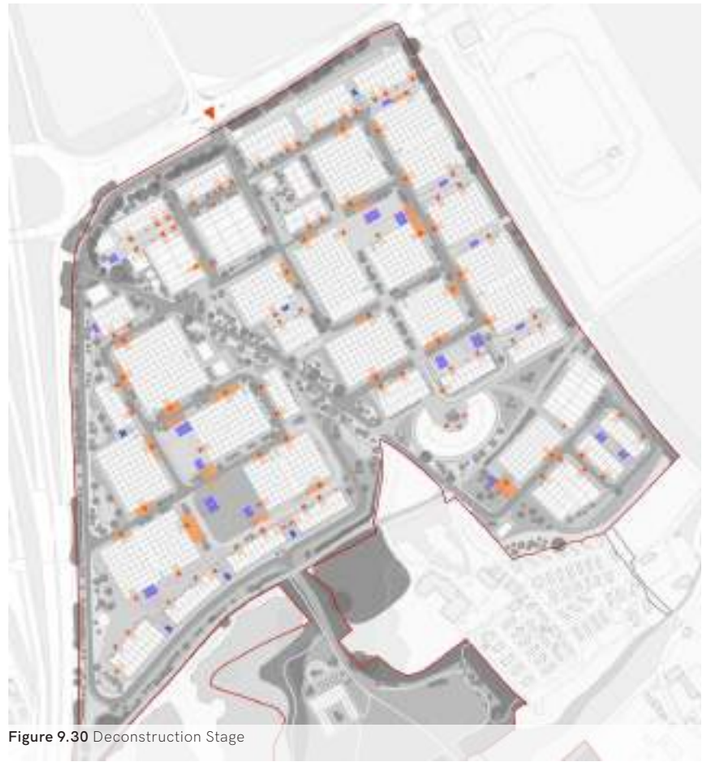


Figure 9.30 Deconstruction Stage

The Proposed Development will provide dedicated and appropriately signed and segregated waste management facilities to enable and encourage the separation and recycling of waste associated with office, workshop and filming use. A flexible Operational Waste Management Strategy (OWMS) has been proposed, which will involve the use of segregated specialist containers for various types of waste and recycled products will be carefully managed by specialist collection processes.

Buildings and in-between spaces have been designed to ensure efficient and sustainable operational waste management. The building design has allowed for internal storage areas for wheeled bins. The number, size, and type of bin will depend on the requirements of each production tenant and the nature of the space they are renting. Spaces involving catering, such as the Studio Hub, will provide separate storage provisions for at least four waste streams (residual, mixed dry recyclable, food, and glass).

The streetscape design has allowed for flexible hard-standing spaces for external storage. Site staff will use mechanical aids to move waste to the external storage areas, from where private contractors will collect the waste at suitable frequencies. The team assessed the capacity of the external storage spaces under different scenarios to ensure the scheme is able to adapt to the changing needs of the different film production stages and occupants.

- Waste Route for Workshops
- Waste Route for Sound stages
- Waste Collection Vehicles Turning Curve
- 10.5 m^3 Dedicated Waste Containers
- Extra Adjacent Space for collection
- Loading/Unloading Area for Waste Collection Vehicles
- 27 m^3 Dedicated Waste Containers
- Extra Adjacent Space for collection
- Loading/Unloading Area for Waste Collection Vehicles
- Skip Size on Location
- Recycling Bins Route
- Allocated Space for Recycling Bins Collection
- Indicative Sizes/location of Recycling Bins within buildings
- Building Entrance Location & Area

9.7 DAYLIGHT, SUNLIGHT AND GLARE

9.7.1 DAYLIGHT & SUNLIGHT

No habitable buildings are within 25m of any proposed buildings, none of which are higher than 12m. The daylight and sunlight assessment conducted shows that as the sun passes across the southern sky in the United Kingdom, there will not be any additional material overshadowing arising from the Proposed Development on any of the surrounding sensitive receptors.

The assessment of the potential impacts on the daylight and sunlight enjoyed by neighbouring residential properties and the sunlight available to neighbouring amenity spaces follows the methodologies set out within the Building Research Establishment's Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (2011) (The BRE Guidelines). This guide is used by the local authority to determine the acceptability of a proposal regarding its effect on neighbouring daylight and sunlight amenity.

Waldrams' conducted an analysis to establish the acceptability of daylight and sunlight within the neighbouring habitable rooms. A proposed scheme will retain the potential for good interior daylighting if the scheme subtends less than 25 degrees from the horizontal as measured from the lower habitable windows in the neighbouring buildings.

Preliminary assessment shows that, as seen from most of these properties, the whole development will fall under a 25-degree angle that subtends from the horizontal as measured from the lowest habitable neighbouring windows. They will retain good access to daylight with the proposal in place. Where there are properties that are closer to the proposal, a detailed numerical analysis has been undertaken.
When considering overshadowing of amenity spaces adjacent to the site, the following have been considered: Gardens at 1 to 7 Westhorpe Park, Grounds associated with Westhorpe House, Gardens at Thimble Cottage, and Rear gardens at 3, 4 & 5 The Chase. All surrounding overshadowing receptors are located to the south of the proposed development or a significant distance from it.

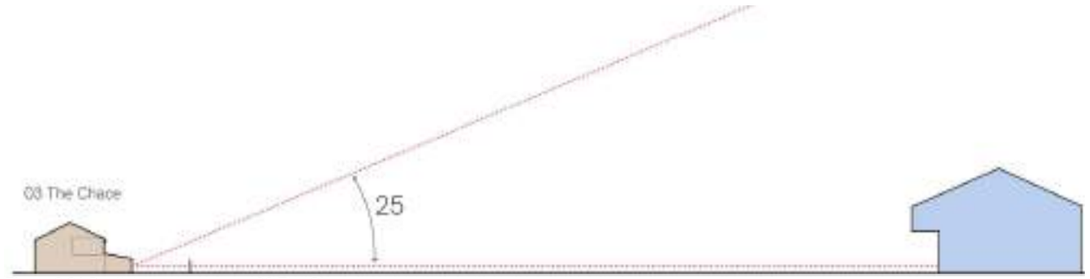


Figure 9.31 Daylight assessment to 03 The Chase

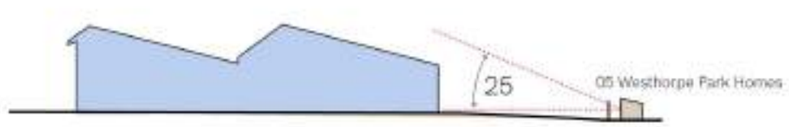


Figure 9.32 Daylight assessment to 05 Westhorpe House

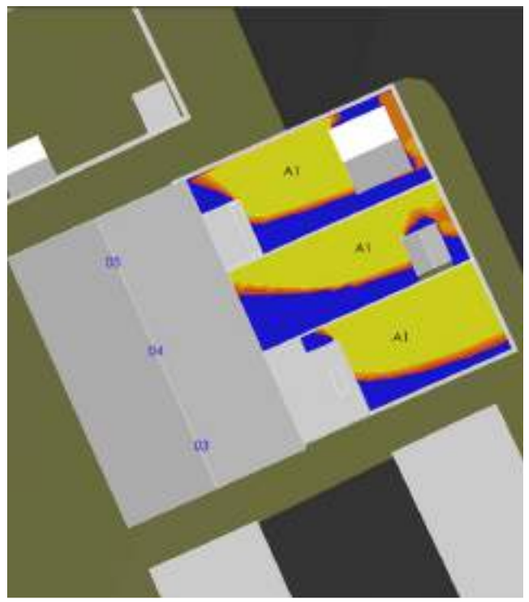


Figure 9.33 Daylight amenity spaces The chase

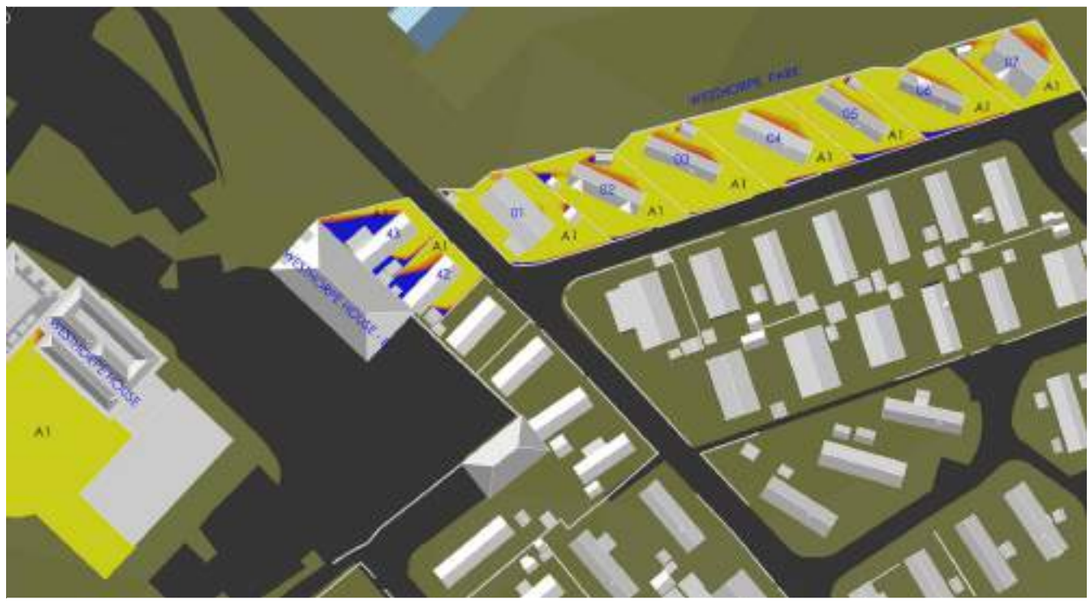


Figure 9.34 Daylight amenity spaces Westhorpe House

9.7.2 SOLAR GLARE

The only significant fenestration is in the north of the site, there are a limited number of workshops and offices with fenestration along the A404, an so the risk of solar glare is diminished as the sun passes across the southern sky in the United Kingdom.

Where potential for glare has been identified, measures to mitigate the glare will be implemented. Therefore, the proposal will be unlikely to cause disabling glare or any significant distracting glare.

It is important to consider solar glare to nearby pedestrian crossings and vehicular junctions where glare can cause temporary blinding of pedestrians or motorists. BRE in their handbook' Site Layout Planning for Daylight and Sunlight a Guide to Good Practice' and their Information Paper IP3/87 provide guidance on assessing solar glare.

A preliminary assessment of the site has identified the following junctions where reflected solar glare will be assessed: [1] Junction of Pump Lane South & Marlow Road (A4155), turning onto Marlow Road; [2] Junction of A404 & Marlow Road, on roundabout heading south; [3] Junction between slip road off A404/Marlow Road roundabout & A404 heading south.

The northern and north-western site boundaries run alongside the major roads adjacent to the site, and so are the locations where any potential solar glare is of most importance. The buildings in these locations are either sound stages or workshops/offices. The sound stages do not feature glazing facing the roads, so no significant solar glare is expected from these buildings.

Numerical analysis was conducted for the reflections of sunlight from the proposed scheme, which have the potential to be viewed by a road user on the adjacent roads. The analysis determines the passage of the reflection of the sun across the surface of the proposed scheme.

The location of the sensitive receptors for reflected solar glare has been determined as those intersections where road users' visibility is of greatest importance when considering the safety of all road users.

Figures 9.35 to 9.37 show the glare analysis from different junctions. Windows, where no glare is identified, are shown as light blue. An overlay of the driver's line of sight angle to the proposal is included on the drawings, divided into 10 degrees.

Glare closest to the line of sight has the greatest risk of causing distracting or disabling glare. Glare that has the potential to occur close within the field of view is most likely to cause significant visual impairment.

Incidents of reflected solar glare from the façades of the proposed development were identified, measures to mitigate the glare in these limited occasions will be implemented.

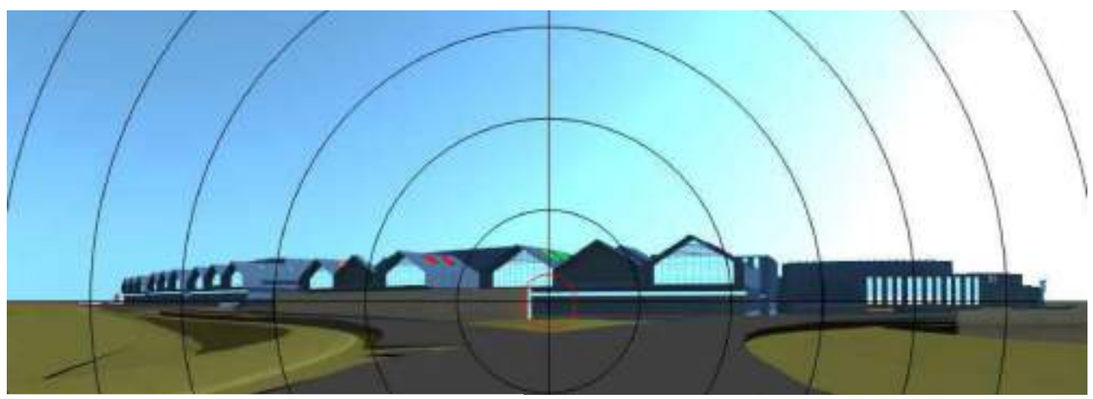


Figure 9.35 Junction A404 and Marlow Road (A4155)

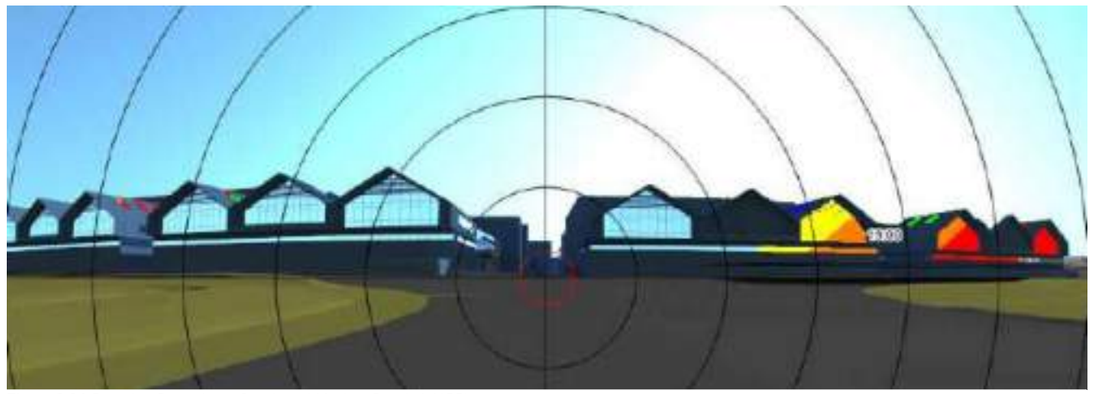


Figure 9.36 Junction Pump Lane South and Marlow Road (A4155)

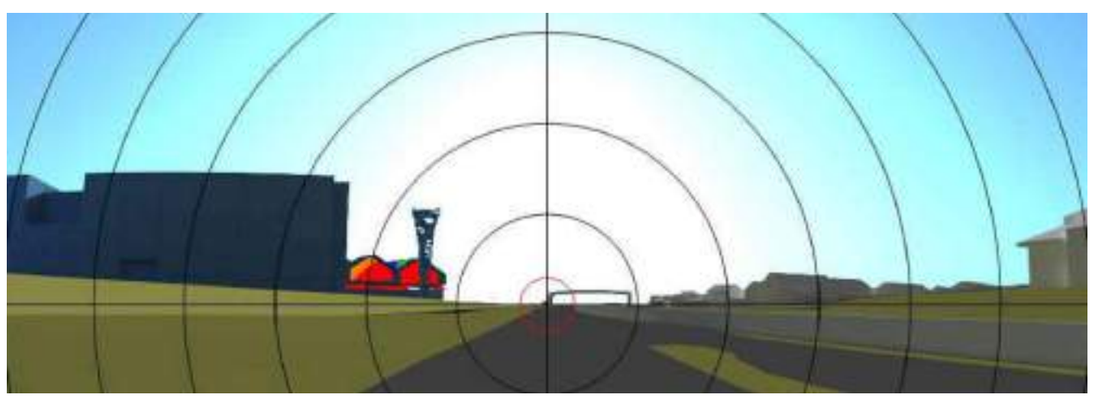


Figure 9.37 Existing slip road on to A404 travelling south

9.8 LIGHT SPILL

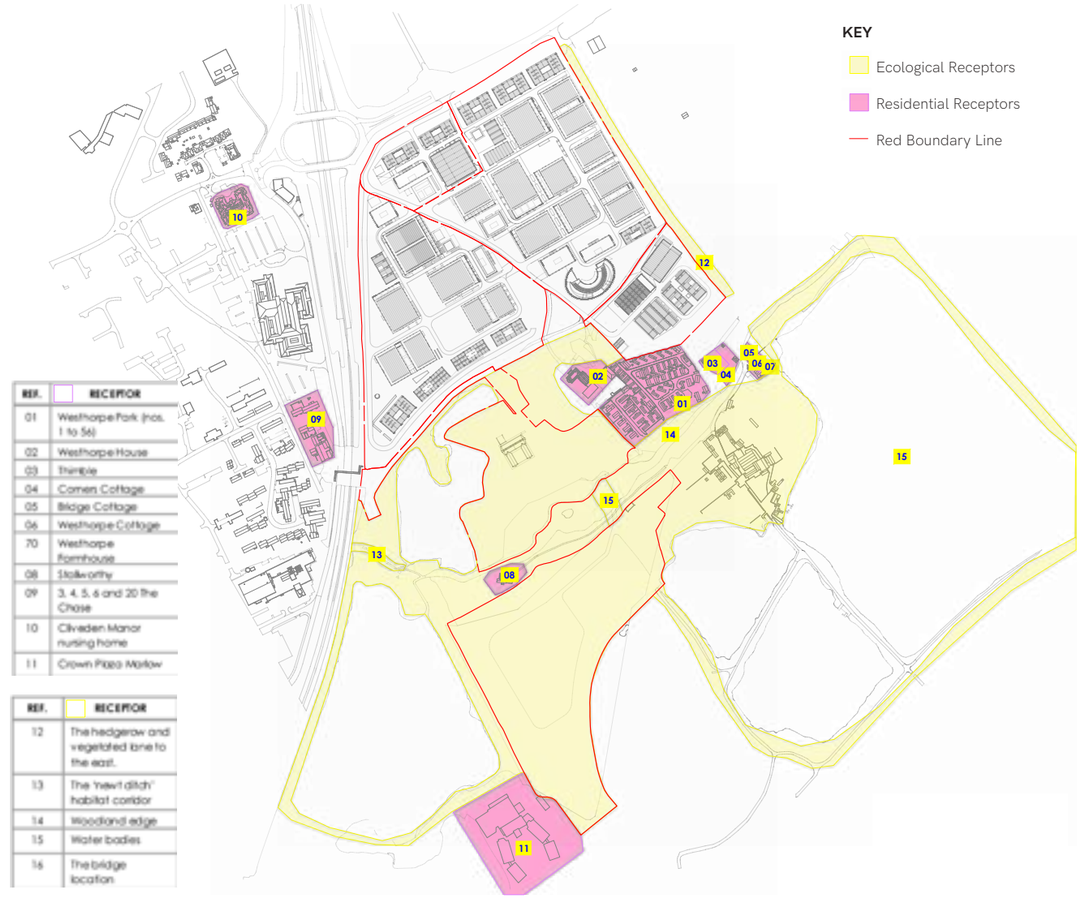
The lighting strategy for the proposed development aims to enhance the appearance of the building whilst recognising the area's medium to low district brightness. A lighting scheme has been developed that reinforces the legibility of the architectural design after dark, which is subtle rather than seeking to make a grand statement.

Furthermore, lighting in backlot is designed to film night-time scenes and therefore, high levels of lighting are not frequently required. Production lighting for night shooting, which is relatively infrequent, is about the art of controlling lighting for cinematography and subtly featuring sets with light at night-time.

A light spill assessment has been conducted on the recommendations in the 'Institution of Lighting Professionals (ILP) document Guidance. Sensitive receptors have been identified as the hedgerow and vegetated lane to the east of the site, the Westhorpe water course habitat corridor, Woodland edge, Water bodies to the south, and the proposed bridge's location. Light pollution will occur due to the lighting within the proposed buildings and around the site. Of note are the outdoor areas used for filming at night, including the "Backlot" area, as it is not enclosed by the surrounding buildings and will sometimes be used after the 11 pm curfew proposed by the ILP.

Modelling and analysis has been undertaken to understand the likely light spill caused by the proposed development. The baseline assessment shows that most of the immediate surrounding context is within these levels but includes examples of light levels above these levels. These existing light sources were observed at Crowne Plaza Marlow, Thimble Cottage, Access to Westhorpe House and the Athletics Track.

The assessment has been undertaken in three scenarios: Scenario 1, "Permanent Lighting", represents the day to day lighting of the site at night when no night shoot filming is taking place. Scenario 2, "Temporary Lighting General Production Setup and Set Strike", adds to Scenario 1 the lighting required for General Production Setup and Set Strike as well as lighting required for Access and Egress for the areas designated for this purpose. Scenario 3, "Temporary Lighting Filming", adds to Scenario 2 the lighting required for filming. The 3 scenarios assess lighting post 11 pm and propose a reasonable worst-case scenario allowing in each case.



REF.	RECEPTOR
01	Westhorpe Park (nos. 1 to 56)
02	Westhorpe House
03	Thimble
04	Corren Cottage
05	Bridge Cottage
06	Westhorpe Cottage
70	Westhorpe Farmhouse
08	Stalworthy
09	3, 4, 5, 6 and 20 The Chase
10	Cliveden Manor nursing home
11	Crown Plaza Marlow

REF.	RECEPTOR
12	The hedgerow and vegetated lane to the east.
13	The 'Newt ditch' habitat corridor
14	Woodland edge
15	Water bodies
16	The bridge location

Figure 9.38 Light Pollution - Sensitive Receptors

Site Wide Smart Light Pollution Analysis

Scenario 1: Baseline

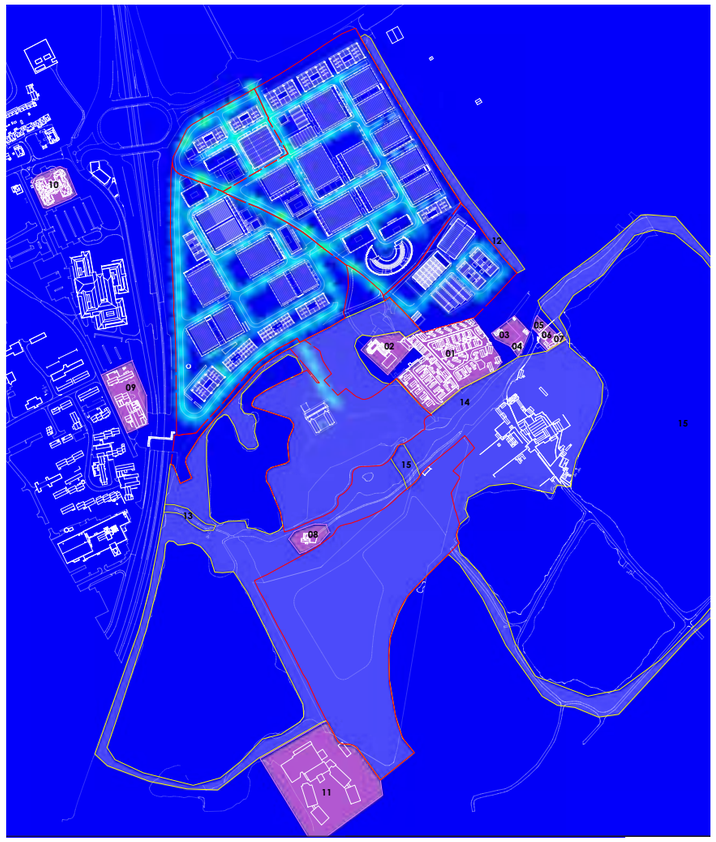


Figure 9.39 Scenario 1 Light Pollution Analysis

In Scenario 1, lighting providing minimum illumination for safe use of the site at night can be achieved while limiting light spill from the site to levels recommended within E2 Rural to E3 Suburban Zones by the ILP. There is limited light trespass from the site on the northern and eastern edges next to the main roads, but no sensitive receptors are located here.

Scenario 2: Night time construction of sets in unit base and backlots

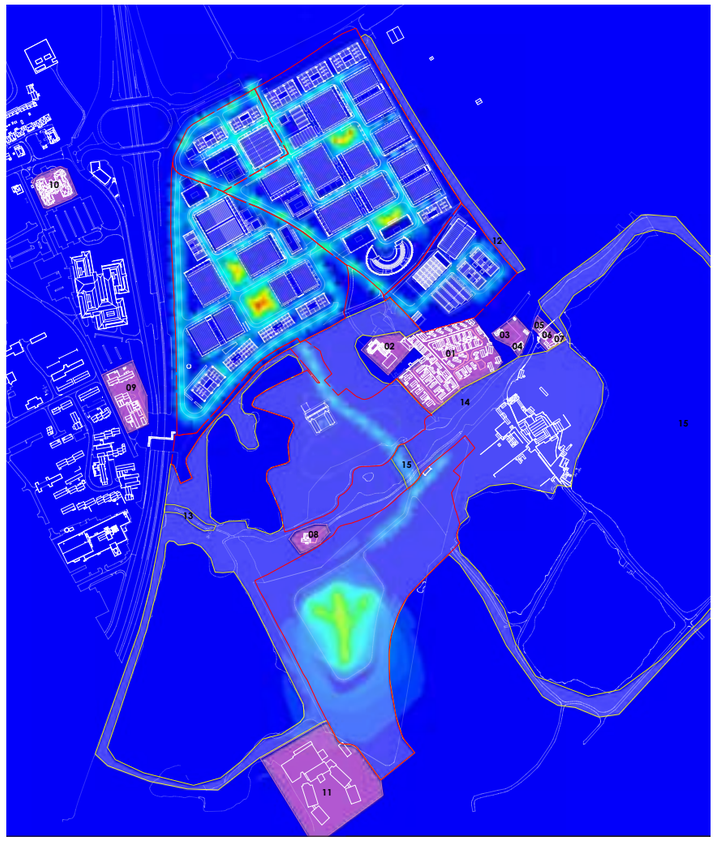


Figure 9.40 Scenario 2 Light Pollution Analysis

In Scenario 2, filming areas are used for production setup and strike at night, will be above the district light levels proposed by the ILP Guidance when the immediate area around the backlot is considered.
Scenario 2 is infrequent, and a Backlot management will set out the measures that will be taken to reduce and control the risk.

Scenario 3: Night time filming in all unit base and backlots

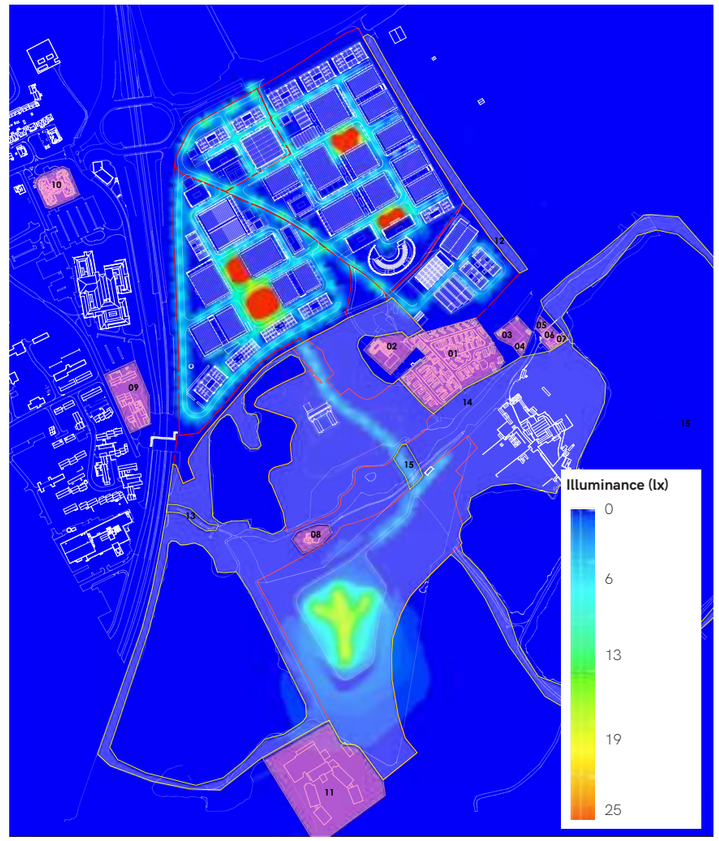


Figure 9.41 Scenario 3 Light Pollution Analysis

In Scenario 3, filming is taking place, the filming areas within the site are enclosed, and much of the potential additional vertical illuminance is blocked by the surrounding buildings of the proposal. Outside the Red Boundary Line, vertical illuminance, for the most part, will remain within the district light levels proposed.
Scenario 3 is infrequent, and a Backlot management will set out the measures that will be taken to reduce and control the risk.

Figure 9.42 Enhanced Public Right of Way

Marlow Film Studios

DESIGN AND ACCESS STATEMENT

Masterplanners: **Prior & Partners**

Concept Architects: **WilkinsonEyre**

May 2022