Lancaster West Estate

LANCASTER WEST NEIGHBOURHOOD TEAM W11

Introduction

The vision for Lancaster West is to become a 'Garden Estate', for the wellbeing of residents and the future resilience of the site we need to work together to transform the Estate. Into a better connected, and nature-rich network of inclusive and high quality public green spaces, where everyone has access to nature.

The scheme primarily focuses on flood alleviation through Sustainable Drainage Systems (SuDS) interventions, with the aim of addressing the recent flooding that occurred in July 2021, and with the wider aim of making the area more resilient to climate change, enhancing greening, and improving residents' quality of life through improved landscape design.

Installation of SuDS interventions along with landscape improvements on Lots 2 and 3 will be the opportunity to deliver these key design principles on the ground, and to serve as a pilot project for the wider Estate. To realise this vision for a 'Garden Estate' three design objectives have been used to inform and guide the proposals:

Design Objectives

SUPPORTING SUSTAINABLE, VIBRANT SPACES AND EMPOWERING COMMUNITIES

LIVING IN A CONNECTED COMMUNITY AS DRIVERS OF CHANGE, EXPERIENCING IMPROVED LEVELS OF EQUALITY

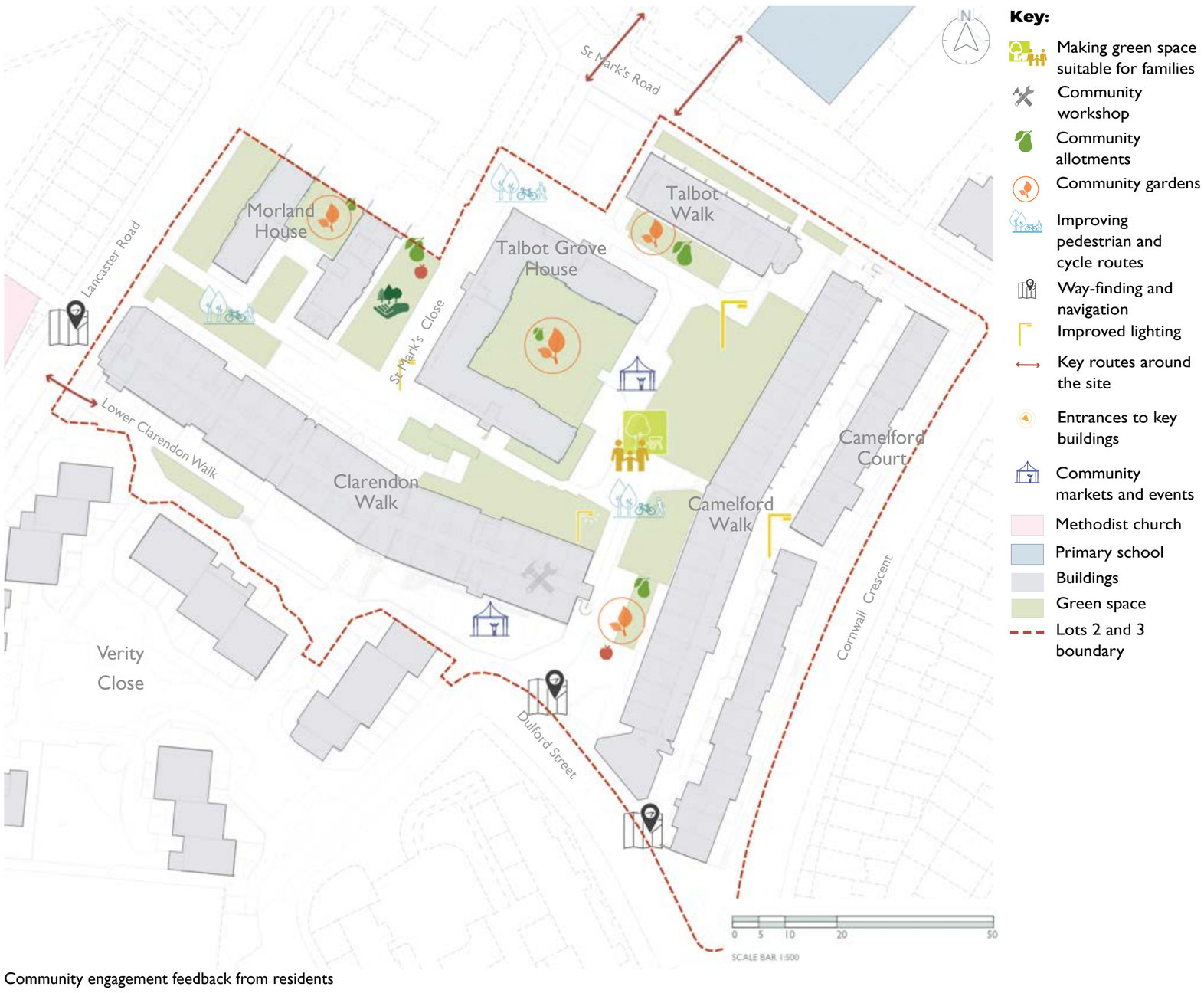
CREATING A GARDEN ESTATE WITH A THRIVING ENVIRONMENT

Future Neighbourhood Vision Engagement

The purpose of Future Neighbourhood Vision for Lancaster West Estate was to help define priorities and a potential way forward for future services, programmes and spaces in and around the Estate.

During engagement events, residents identified the following ideas for how Lots 2 and 3 could be improved:

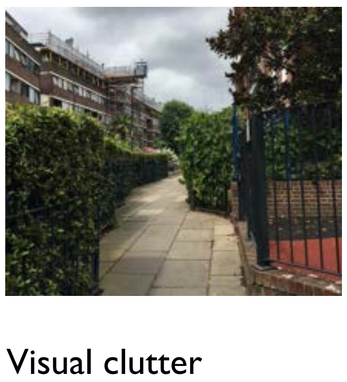
- Install 'neighbourhood totems' at entrances
- Create a play street on St Marks Close
- Establish a community market
- Create an activity trail
- Removal of ramps
- Improved lighting
- Install more seating
- Create more private green space
- Make better connections to neighbouring church and primary school
- Improve security along Cornwall Crescent



Community engagement feedback from residents

Current challenges

Poor connectivity, legibility and safety



Poor connectivity creates pinch points and access issues in particular for those with disability or mobility issues, with young children or the elderly.

Narrow pathways, poor sight-lines and destinations hidden from view makes residents and visitors feel unsafe.

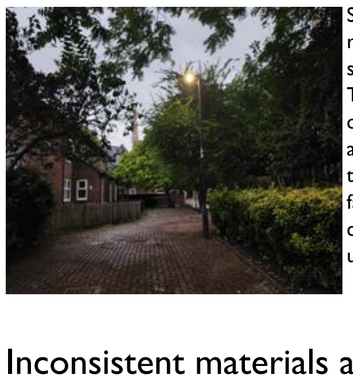
Barriers to movement

Spaces are fenced, gated and locked creating lower pedestrian permeability, and restrict access to green space creating a feeling of enclosure and a hostile environment.

Poor ecology

In terms of ecology the site suffers from poor connectivity of habitats, lack of habitat variety (e.g., there are not water features for water-loving wildlife), lack of functionality and some of the current species could be vulnerable to climate change, e.g. drought.

Poor lighting



Some key pedestrian routes do not have sufficient lighting levels. There are also issues with quality of illumination across the site, glare, light trespass, and nuisance and failing lighting equipment causing residents to feel unsafe.

Visual clutter

Items like frequent bollards create visual clutter with opportunities to reduce it where not required.

Changes in level

The site contains many complex changes in level which creates barriers to pedestrian movement, makes the site hard to navigate and creates drainage issues.

Lack of spaces for different groups

Many public spaces and uses are segregated which does not encourage people to come together for example there is a lack of seating and benches for people to spend time in a space for longer.

Inconsistent materials and character

Due to the estate having had different interventions over time there is no consistent material palette and character across the Estate. There are some negative associations with some materials due to poor design, defects and maintenance.

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Flood Risk and Drainage

Issues contributing to flooding at the Estate:

- High degree of hardstanding/ impermeable surfaces
- Levels fall towards buildings in some areas
- Capacity concerns in Thames Water public sewer network
- Limited natural environment to provide flood storage
- Basement properties at higher risk of sewer flooding
- Local sewers include several storm relief pipes

Flood event July 2021

The plan to the right shows the flood mechanism associated with the July 2021 extreme storm event which directed flood waters down St Marks Close and caused significant damage across the estate.

Extreme Rainfall
Extreme rainfall event, equivalent in some parts of the borough to a severity which has a probability of only occuring once every 185 years.

↓

High Tide
High tide in the River Thames coincided with heavy rainfall, not allowing rainfall run-off to outfall freely and overwhelming larger storm relief sewers in the area.

↓

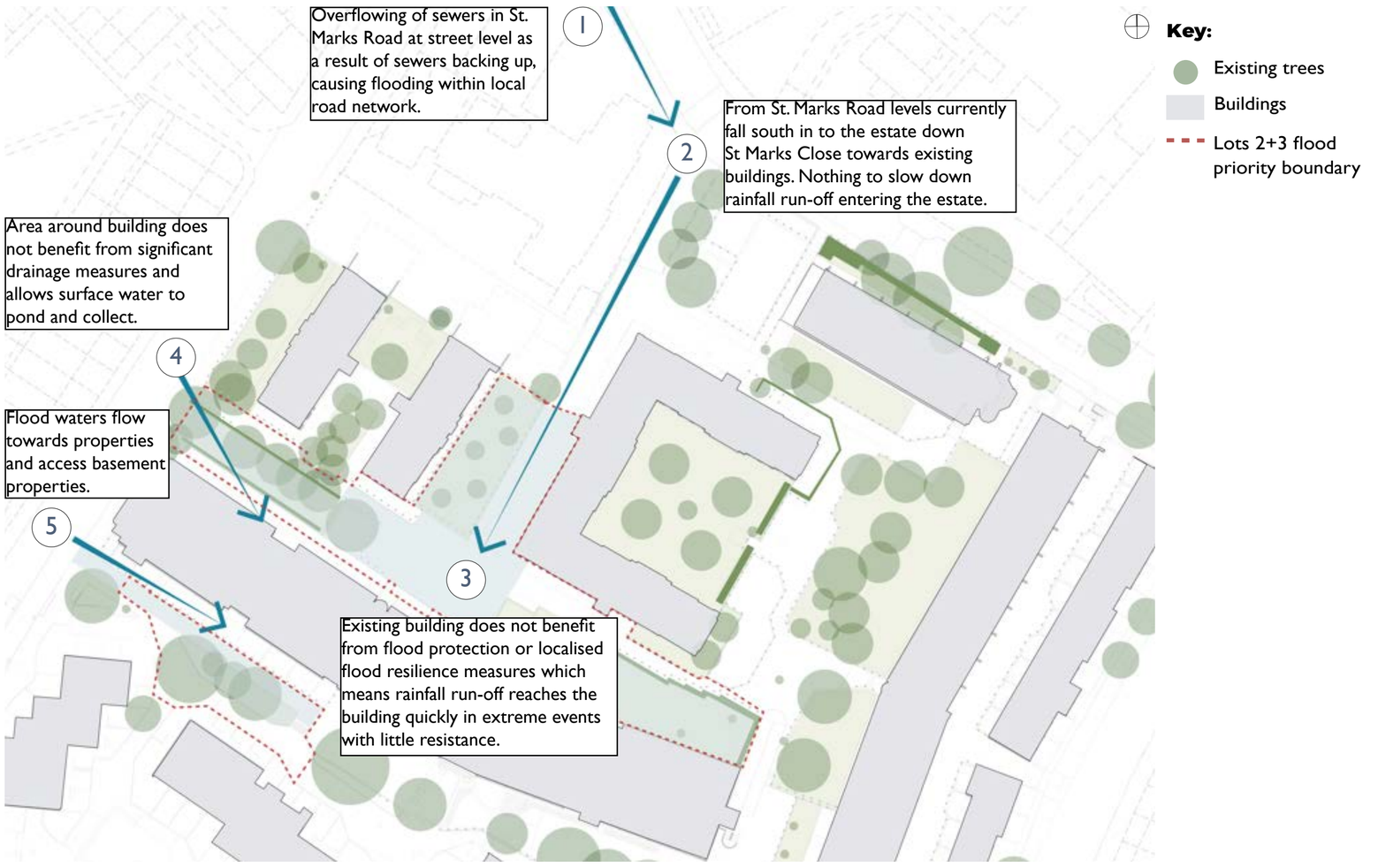
Sewer Surcharging
Combined foul and surface water sewers became overloaded and backed up leading to flooding above ground

↓

Overland Flows
Site generated runoff insufficiently accommodated for within the site and leading to basement flooding

↓

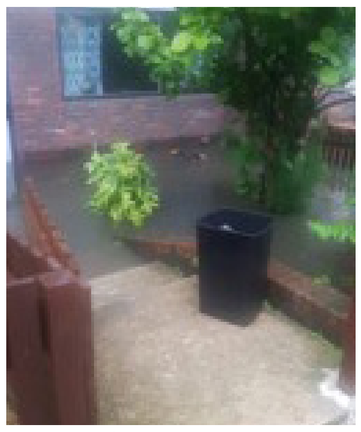
Internal Flooding
Basement properties experienced internal flooding from combined sewers backing up



Flood mechanism plan

Overflowing at the Thames Water manhole on St Marks Road (refer to point 1 above)

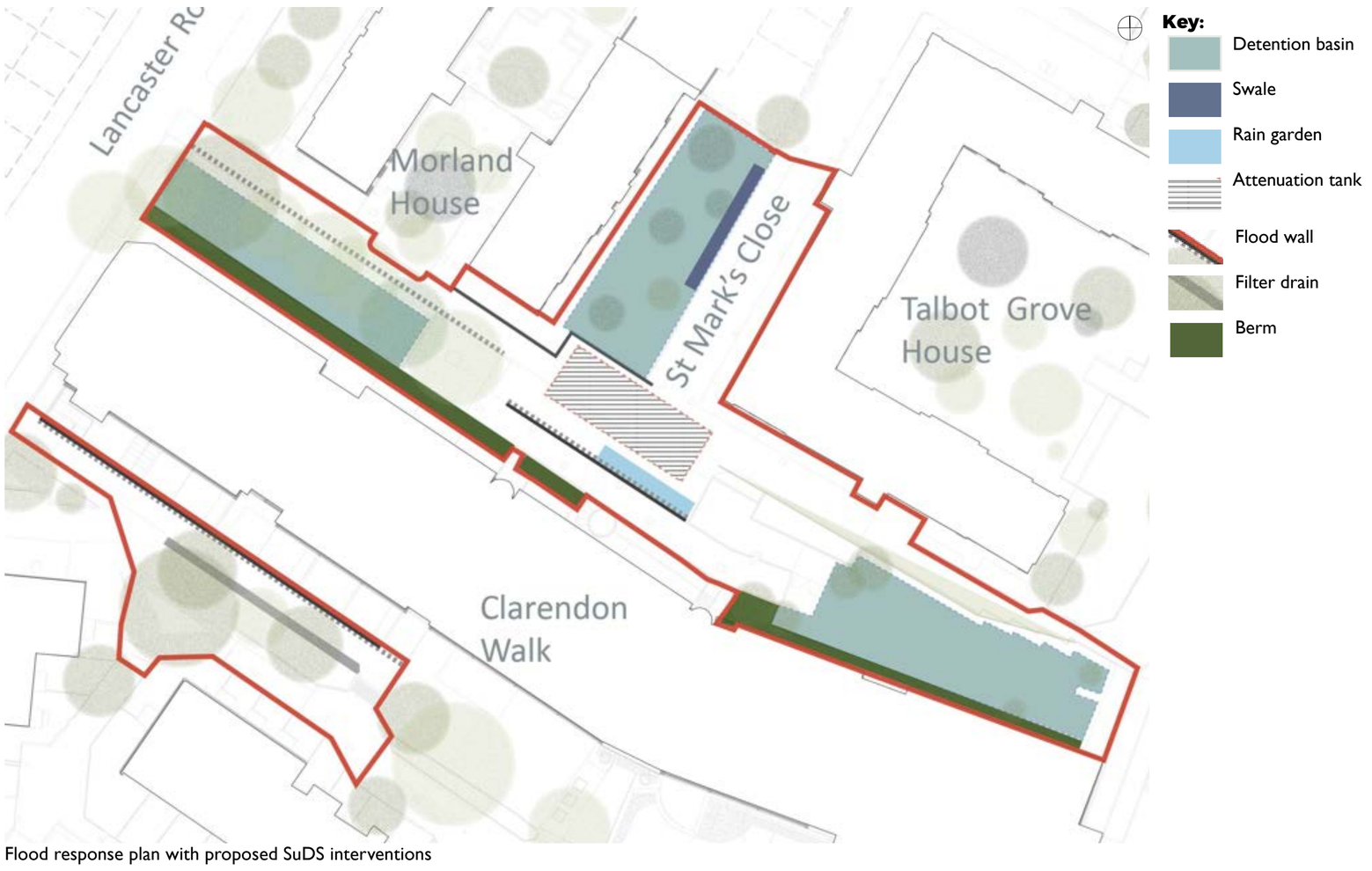
Flood occurring in communal areas on Lower Clarendon Walk



Flooding in front garden on Lower Clarendon Walk

Flood response:

- Improvements will help prevent flooding during less severe storms and will improve resilience in more extreme storms. This will not stop flooding completely for all storms but will provide significantly more time to respond and will reduce damage caused by flooding.
- Help control rainfall run-off, introduce areas where rainfall can be stored and provide barriers to limit flood water in to buildings.
- Introduce shallow storage basins at key locations to allow rainfall to be temporarily stored and not flow overland as runoff.
- Provide a combination of temporary flood gates, formal walls and softer green raised areas (bunds) in key frontages to help prevent water overflowing in to basement properties.
- Assess opportunities to increase the capacity of the existing sewers on the estate by introducing below ground storage tanks.
- The proposed measures provide multi-functional benefits to increase planting and biodiversity.
- The proposals are external and do not address flooding from backing up of sewers internally.



Flood response plan with proposed SuDS interventions

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Sustainable Drainage Systems

SuDS are drainage measures which provide multi-functional benefits, are often greener, help provide water storage and can help with water quality far better than a traditional piped system. It could cosist of rain gardens, detention basins, swales, permeable paving.

Benefits can include:

- provide temporary water storage
- mitigate and manage flood risks
- remove pollutants from surface water run off
- increased biodiversity and habitat creation
- improved air quality
- reduced surface temperature on hot days
- improved visual aspects.

Detention basin

Swale

Permeable paving

Rain garden

Below ground attenuation tank

Filter drain

Case Study

Queen Caroline Estate and Cheesemans Terrace, Hammersmith London

This project was delivered by Groundwork London with the London Borough of Hammersmith and Fulham as part of the LIFE+ Climate Proofing Social Housing Landscapes project to deliver packages of low-cost retrofit sustainable drainage solutions.

A range of nature based solutions such as rain gardens, swales, stony detention basins were implemented across the estate with the following aims:

- Managing stormwater
- Providing respite areas on hot days
- Increasing biodiversity and residents interaction with nature
- Providing opportunities for outdoor activity and social interaction
- Informal play features were also incorporated into the design which included bridges, mounds, stepping logs, beams and boulders

Benefits include:

- Unused uninspiring landscape converted to diverse, attractive, multi-functional space
- Reduction in flooding from intense rainfall
- Reduced surface water pollution to receiving water bodies

LOCATION
London

ARCHITECT/ DESIGNER
Groundwork

CLIENT
London Borough of Hammersmith and Fulham

YEAR COMPLETED
2017-2018

IMPACT

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Landscape Concept Plan

The landscape proposals have been developed in coordination with the multi-disciplinary team and have sought to make the area more resilient to climate change, enhancing ecology, and improving residents' quality of life. The SuDS concept proposals have been underpinned by the vision of a 'Garden Estate' and the set of design principles that identify how this key objective for the Estate can be delivered.

Key to the landscape proposals is to ensure enhanced ecological diversity, habitat creation through the introduction of a carefully selected palette of trees and plants.

Concept Masterplan

0m 5m 10m

Proposed Landscape features:

1. Detention basin
2. Swale
3. Rain garden
4. Flood wall
5. Permeable paving
6. Permeable asphalt
7. French drain
8. Drainage channel
9. Attenuation tank (beneath ground)
10. Raised table
11. Raised planters
12. Seating
13. Playable elements

A. Existing Monkey puzzle trees - retained
B. Existing sunken gardens
C. Existing residential front gardens
D. Existing car park / drop off spaces
E. Existing bike store relocated
F. Existing cycle racks rearranged

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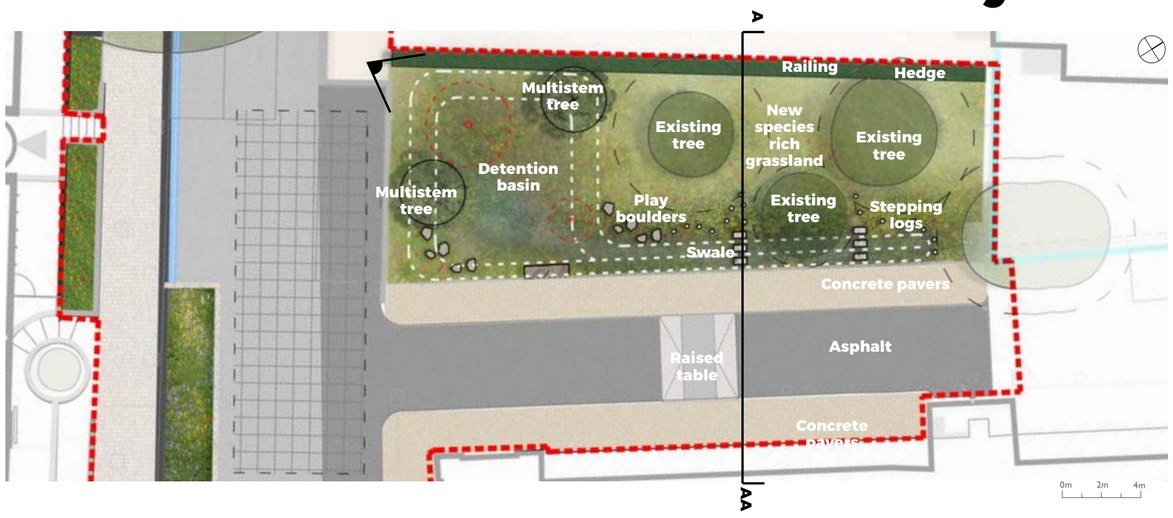
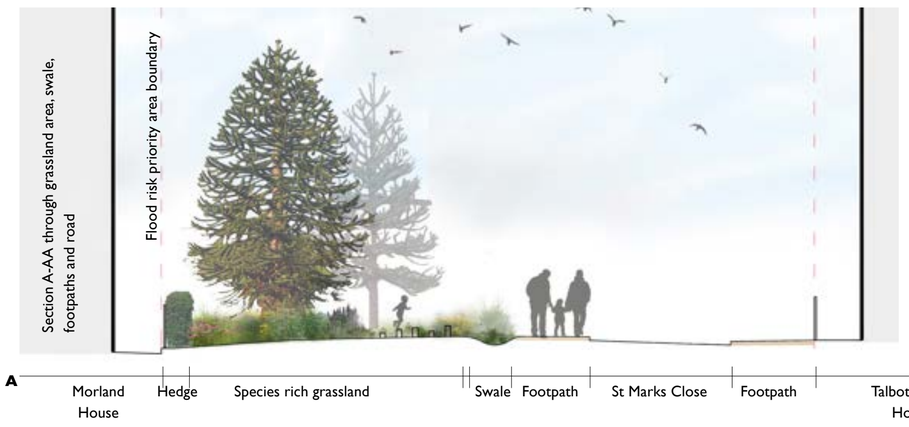
Area 1 - Detention Basin and Conveyance Swale - St Mark's Close



Zoom in of area 1 - detention basin and swale



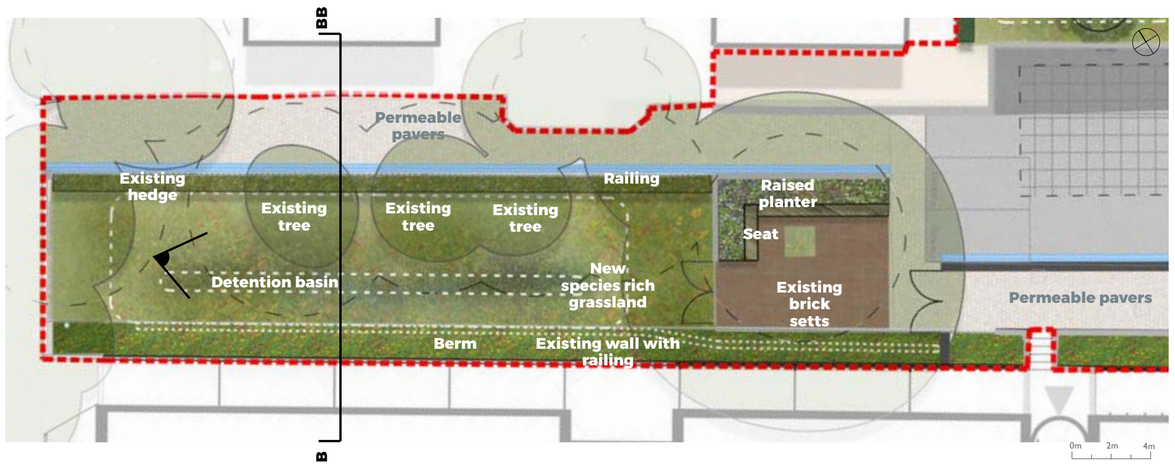
Location plan

The area adjacent to Morland House and St Mark's Close is currently a fenced area of amenity grassland, with a number of scattered Monkey Puzzle trees. The large open space presents an opportunity for a SuDS to be retrofitted in order to enhance the flood resilience of the Estate, by controlling and managing surface water flows.

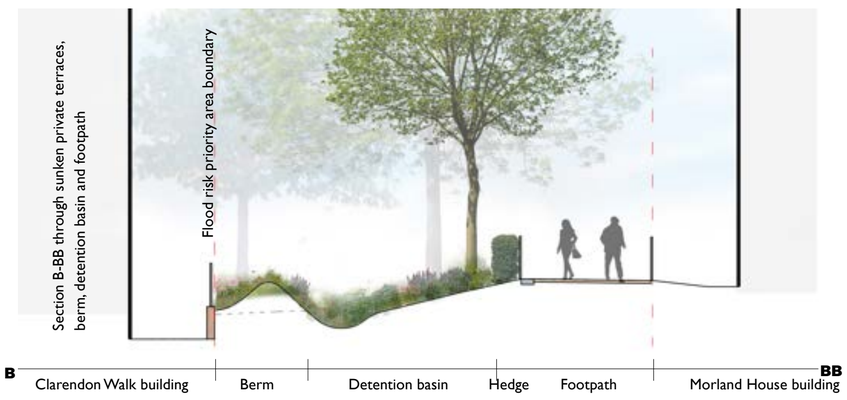
Before

Illustrative 3D Visual

Area 2 - Detention Basin and Berm Adjacent to Clarendon Walk



Zoom in of area 2 - detention basin and berm



Location plan

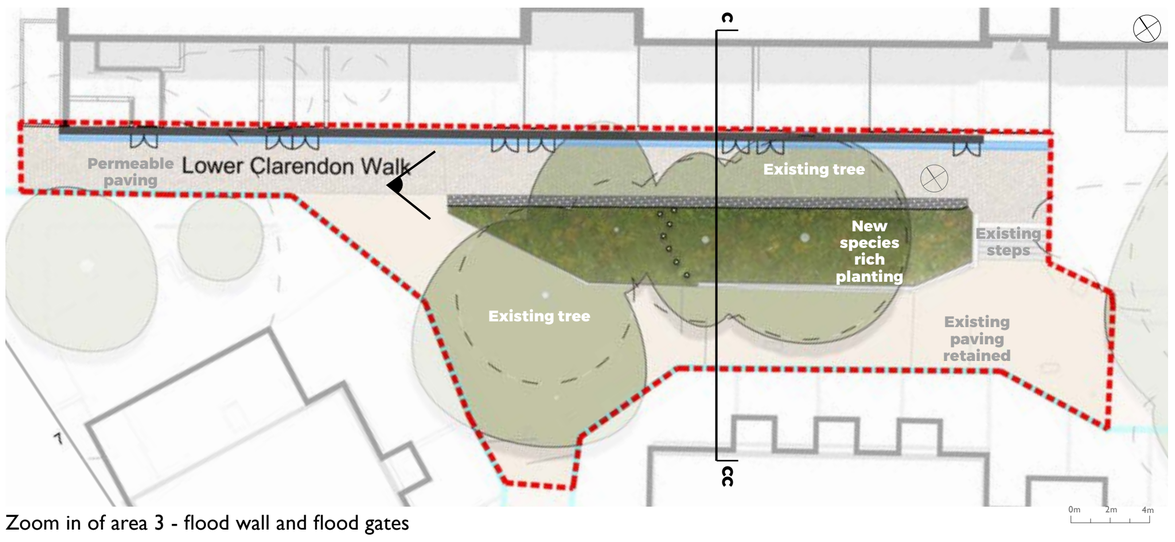
The area adjacent to Clarendon Walk is currently a fenced area of grassland, comprising a strip of shrubs, row of mature trees, a mature hedge and railing.

The proposals for this area incorporate a linear detention basin and bund, to enhance flood mitigation in this area by capturing water, slowing the flow and runoff, and allowing it to infiltrate into the ground where possible.

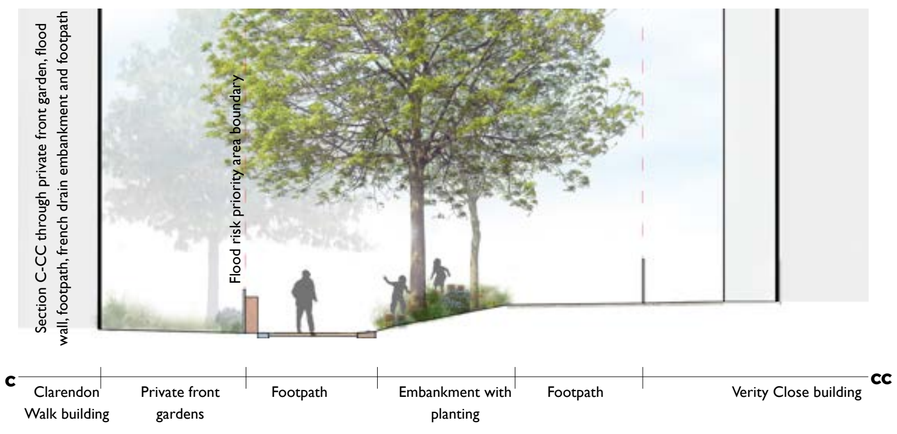
Before

Illustrative 3D Visual

Area 3 - Flood Wall and Flood Gates - Lower Clarendon Walk



Zoom in of area 3 - flood wall and flood gates

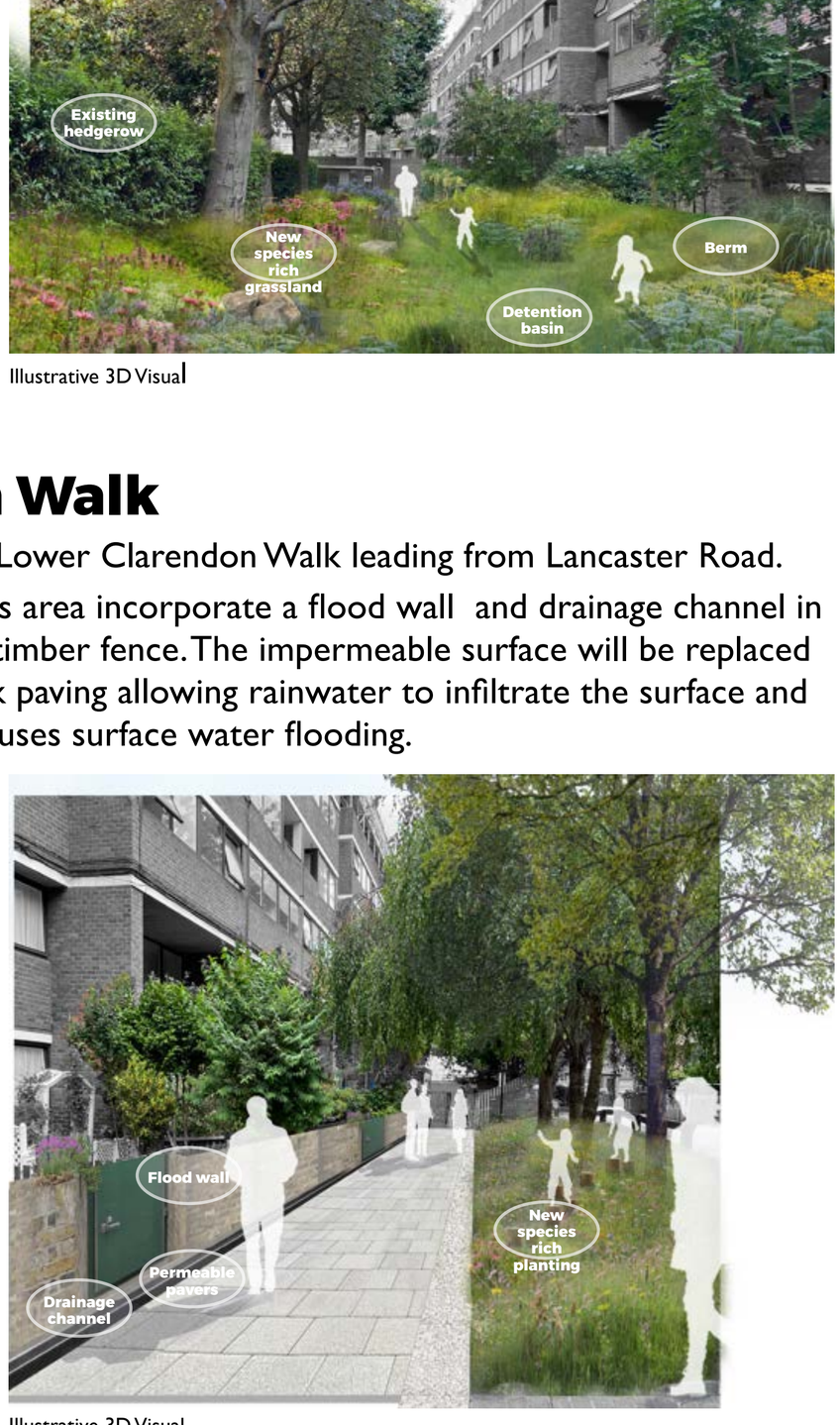


Location plan

Area 3 is located on Lower Clarendon Walk leading from Lancaster Road.

The proposals for this area incorporate a flood wall and drainage channel in place of the existing timber fence. The impermeable surface will be replaced with permeable block paving allowing rainwater to infiltrate the surface and reduce runoff that causes surface water flooding.

Before



Illustrative 3D Visual

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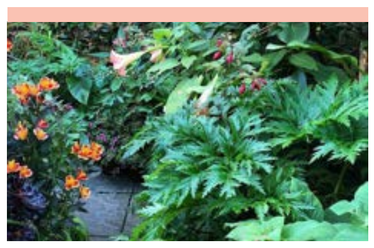
What Kind of Planting is Proposed?

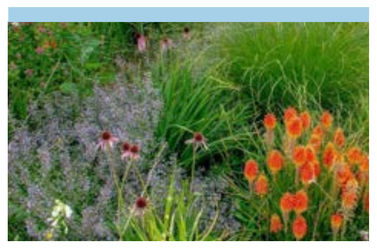
Soft landscape planting palette

Key:

- Naturalistic meadow
- Wet tolerant meadow
- Shade tolerant meadow
- Native mixed hedging
- Ornamental borders
- Ornamental rain gardens
- Raised planters
- Tree/ Shrub planting

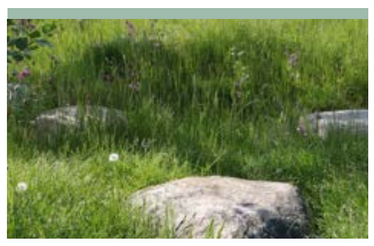


Ornamental borders



Ornamental rain gardens

Naturalistic meadow



Wet tolerant mead

Shade tolerant meadow

Native mixed hedging

Raised planters

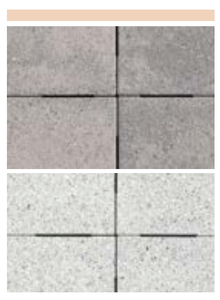
Tree/ Shrub planting

What Paving is Proposed?

Hard landscape palette

Key:

- Existing tarmac
- Permeable tarmac
- Permeable concrete pavers
- Concrete pavers
- Existing concrete surface
- Raised table



Permeable pavers

Permeable setts

Concrete flag pavers

Permeable tarmac

EXISTING HARD SURFACES

Concrete paving slabs

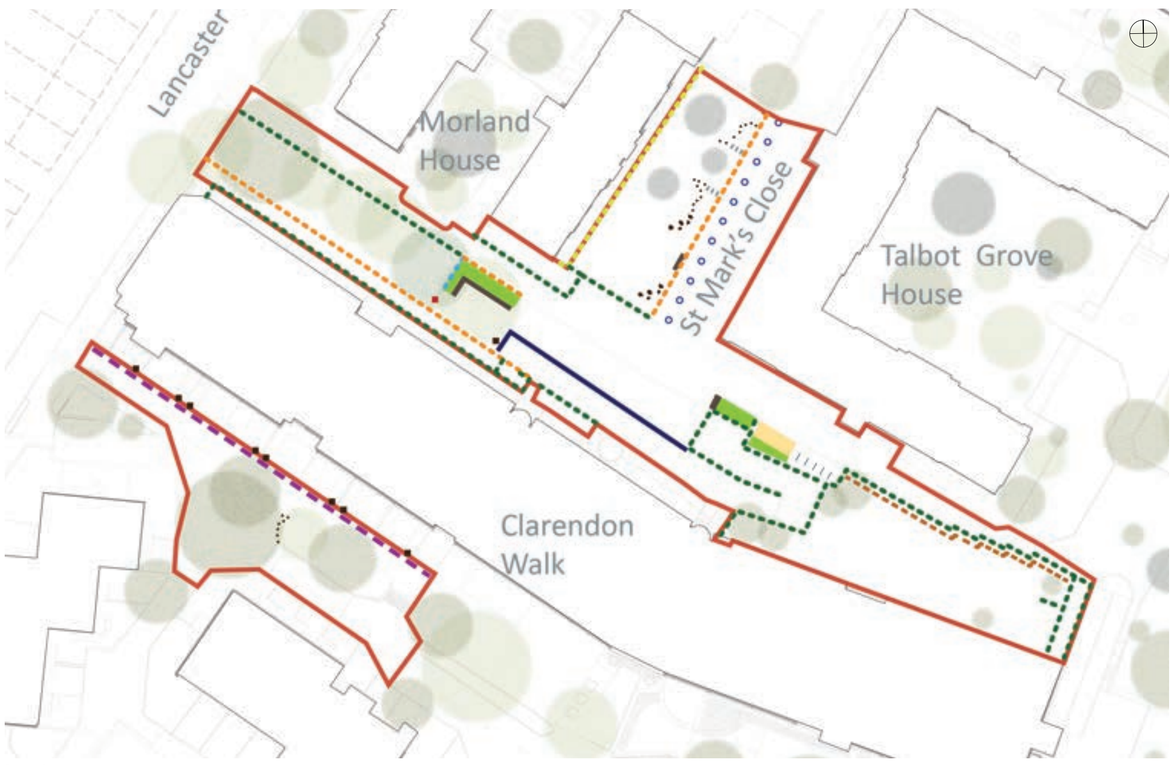
Brick

Concrete block pavers

Tarmac to pavements

Tarmac and concrete kerbs

What Furniture is Proposed?



Landscape components strategy

Key:

- Integrated seating
- Free standing seating
- Repositioned fence (tbc co-design)
- Existing fence
- Opportunity to remove fence and widen pedestrian route (tbc co-design)
- Removed fence
- Repositioned cycle racks
- Covered bike storage to be replaced with new covered bike storage
- Large boulders
- Timber stepping stones
- Existing fence lowered
- Existing gate retained
- Existing bollards to be removed
- New flood wall
- Existing fence to be replaced with flood wall and flood gates
- Proposed flood gates

Raised planter with integrated seating

Free standing seating

Large boulders

Timber stepping stones

Timber stepping logs

EXISTING COMPONENTS

High railings are positioned along all landscape areas and paths

Bike store to be relocated

Cycle racks to be repositioned

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Your views are important to us.

This is your chance to share your thoughts.

Use sticky notes to respond

Do you have any questions about the planned works?

Do you have any concerns?

Do you have any preferences for any of the elements we discussed?

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