COLLECTIVE
ARCHITECTURE

Depot Site Feasibility
Queensferry Early Years Centre

April 2025

CONTENTS

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Introduction

This document has been prepared as an addendum to the 'Our Future Queensferry' report which was prepared by Collective Architecture in October 2024.

This report provides further detail on the depot and garage site which is a City of Edinburgh Council Asset. The depot currently meets the needs of the Council's cleansing, waste and parks departments.

However, located within the heart of a residential area, the service would be better co-located with other similar services functions such as Transport Scotland and Bear Scotland at the Forth Bridge as part of a new Transport Hub and potential Park & Ride facility. This would release the existing site for a more appropriate use.

This study explores the feasibility of using the site for a new Early Years Centre and highlights the site's challenges and opportunities.

The study also proposed some high level scenarios of how the site may be developed. These have been prepared without detailed topographical information and surveys. A number of recommended surveys for developing this study further are highlighted at the end of the report.

01 The Wider Site

The below drawing shows the wider site which formed part of the original feasibility study and the existing uses and ownership.

Private Residential Properties

Road Access

Community Boundary

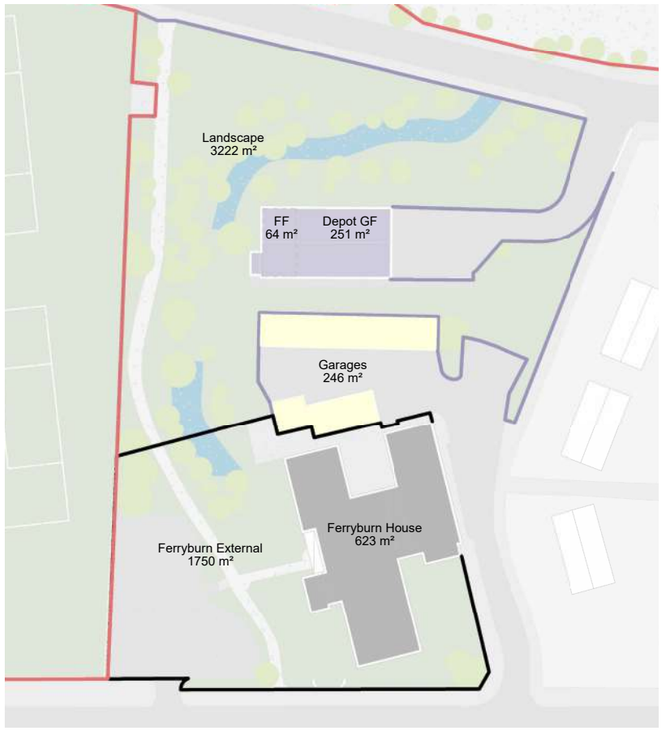
Community Playspace

Burgess Park: The campus includes the Burgess Park area used for school play and limited community use.

Private Land: not owned by CEC and used for parking and landscape for Ferryburn House/ The Haven which is privately owned BUPA Dental Practice with space leased to Queensferry Churches Care in the Community QCCC which operates a day care for the elderly.

Waste & Cleansing Depot/ Garages: forms part of CEC assets and is made up of an existing transport Depot, garage spaces which are vacant or leased to surrounding residents and a burn and surrounding landscape.

Learning Campus: made up of the Primary School and Early Years building and adjacent external, services and parking space.

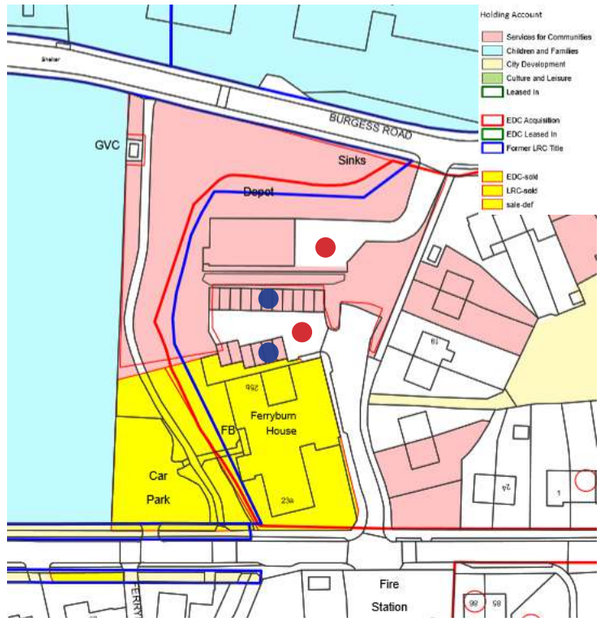


Depot	315 m^2
Garages	246 m^2
Depot Landscape	3222 m^2
Ferryburn House	623 m^2
Ferryburn External	1750 m^2

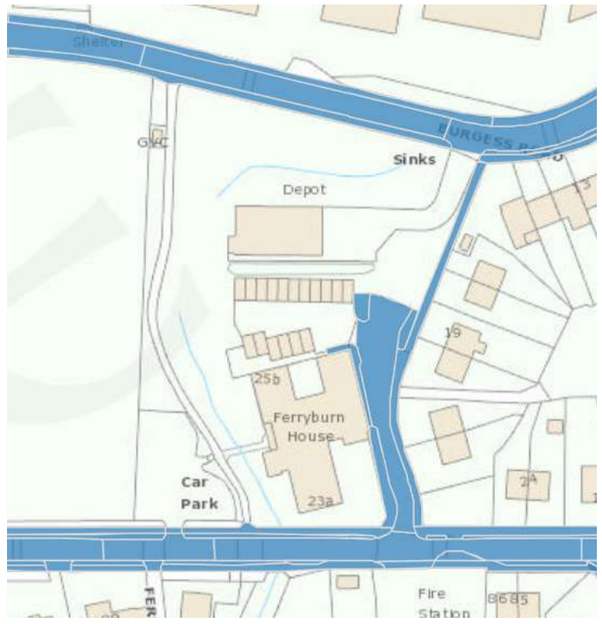
The depot and garage site is being explored as an alternative location for the new early years centre which will replace the existing early years centre on the learning campus

02 The Depot Site - Existing Information

Boundaries and Ownership



Ownership



Adopted Roads

The adjacent drawings show the site ownership boundaries and highlights the adopted roads.

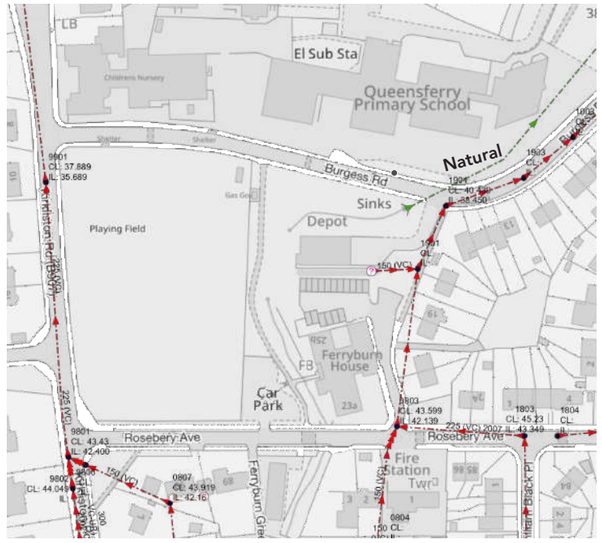
- The two tarmac areas are not highlighted on either drawing so confirmation on ownership is required.
- The garages;

  During the original feasibility study in 2023 a desktop investigation by the Housing Officer who manages Garages for the North West Locality found that there are number of vacant garages as well as sitting tenants.

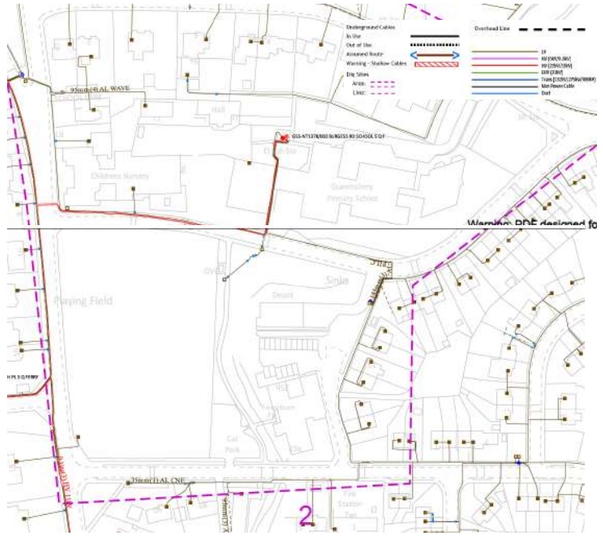
  The following advice was given by Housing Operations; in order to progress matters a Housing Operations will prepare a report to be submitted to the Tenant & Resident Services Operations Manager, Housing Operations Service to advise that they seek transfers for sitting garage tenants so that all of the garage units can be transferred to the Schools & Lifelong Learning Service (as part of the Education Land Portfolio) for the purposes of Queensferry Primary School Redevelopment and Education & Community Provision within South Queensferry. This report will then need to be signed off by the Head of Service; if agreed. Potentially, a Business Bulletin may need to be issued to the Housing Convener so that the Housing, Homelessness & Fair Work can be sighted on the operational decision.

Utilities

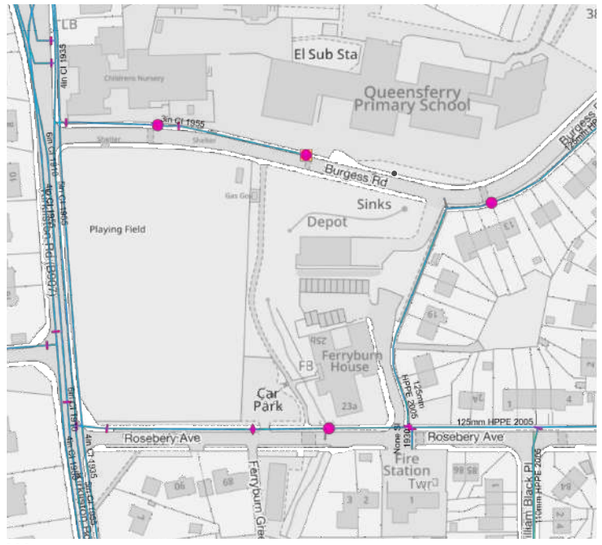
The below utility maps show that most services run beneath the path to the East of the site which runs north to west in front of the houses.



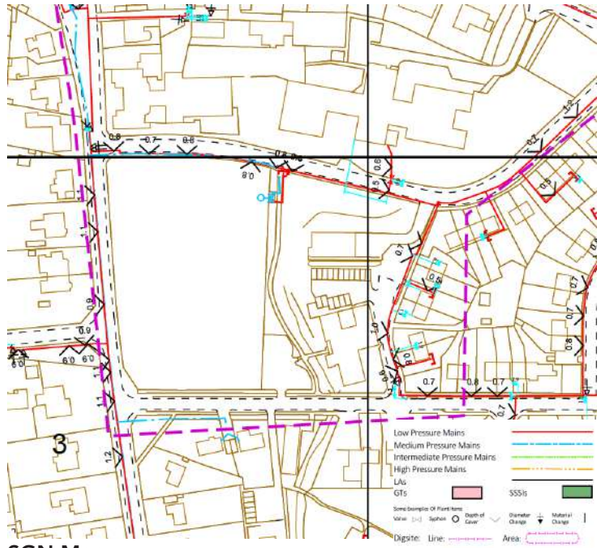
Waste Water



Scottish Power Map



Water



SGN Map

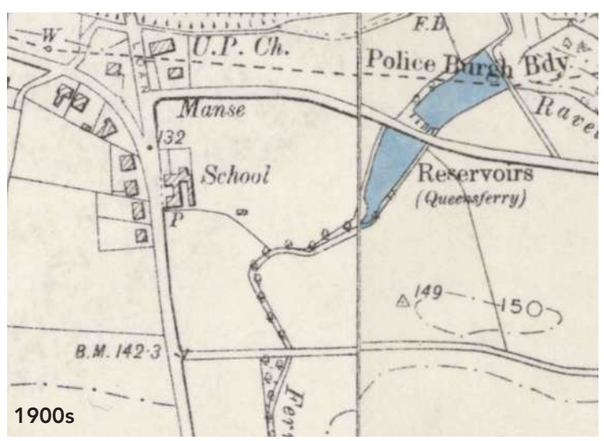
03 The Depot Site - Flooding Information

The adjacent flood maps give high level information on flooding in the area. Engineering input and consultation with SEPA will be required to assess the flood risk in the area.

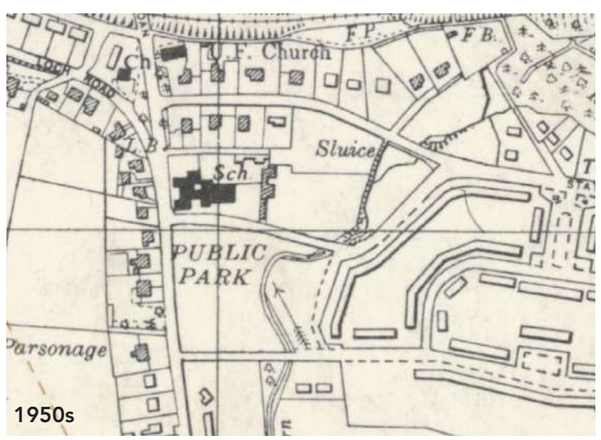
The historical maps show that the area was always home to a reservoir and burn. The flood maps highlight a high risk of flooding from surface water and small watercourses. The below is an extract of advice provided by SEPA when considering flooding:

- As a first principle, you should avoid placing any built development in or close to areas shown to be at risk of flooding
- NPF4 states that for planning purposes, at risk of flooding or in a flood risk area means land or built form with an annual probability of being flooded of greater than 0.5%, which must include an appropriate allowance for future climate change
- You should avoid building up ground levels.
- Make space for flood water in your site to help ensure your development is resilient to flooding and climate change. Such space also creates an opportunity to enhance your site/development through the provision of multi-functional blue/green infrastructure (contributing towards occupier amenity, biodiversity enhancement, opportunities for active travel or local food production, and the protection and enhancement of carbon stores).
- Make enquiries about any past flooding, flood protection schemes or detailed flood studies for the area of interest.
- Show that your development is set back from - and is higher up than - any nearby sources of flooding
- Provide topographic information should be included to show the height difference between areas that could flood, and the land being developed. This could include surveyed ground levels and finished floor levels.
- Provide pictures and dimensions of any nearby bridges or culverts, including the height of any flood relief points where water would go in the event of them being blocked or overflowing.
- Provide photos and local information on any past flooding.

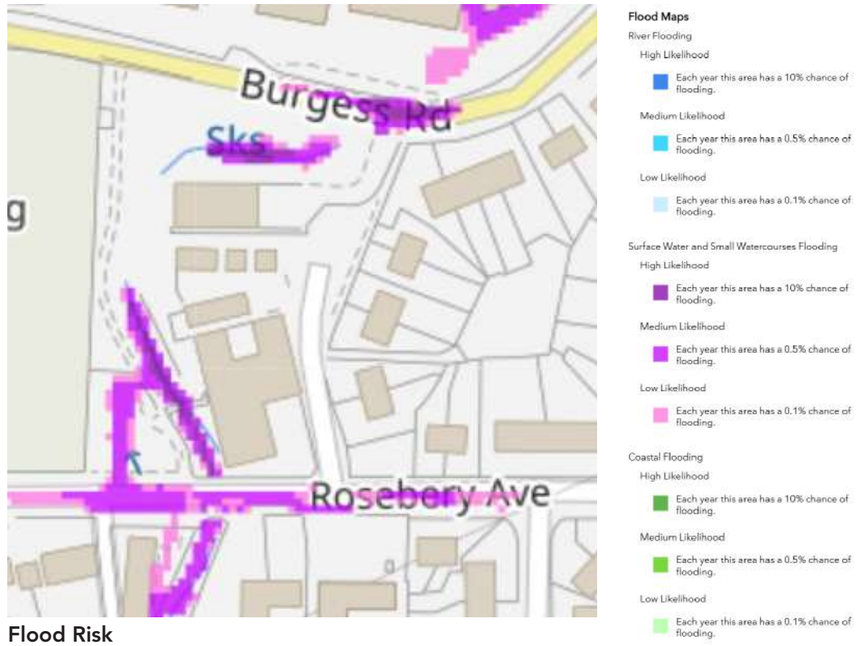
We recommend a Flood Risk Assessment for the area to be carried out and early consultation with SEPA to help understand any mitigation for flooding that should be implemented on the development.



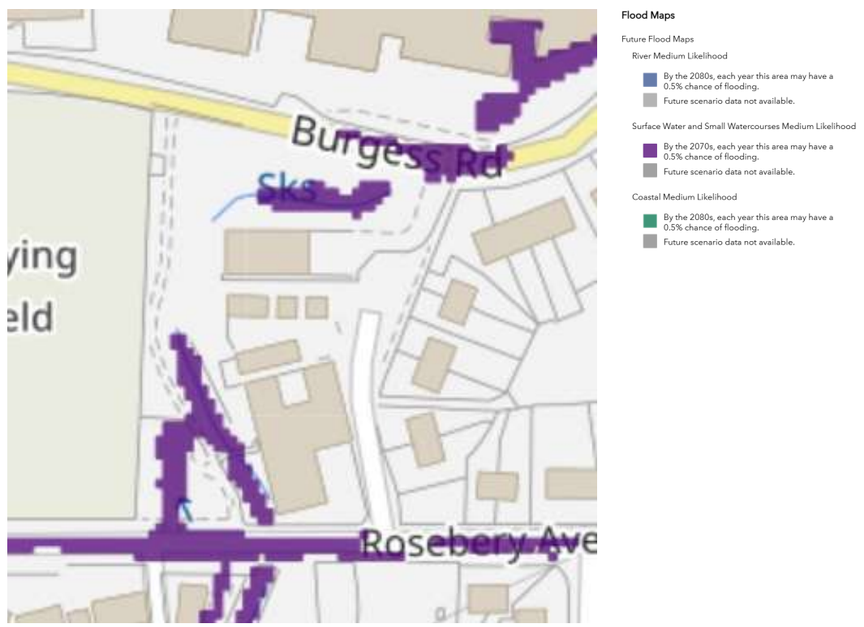
1900s



1950s



Flood Risk



Flood Risk - Future

BUILDING A CULVERT OVER A WATERCOURSE

AtkinsRéalis provided input on whether building over the burn would be viable. Building a culvert over the watercourse adjacent to the depot involves several technical challenges:

1. Regulatory Compliance: The Scottish Environment Protection Agency (SEPA) has strict regulations to protect water habitats. Culverting can only be justified if there are no viable alternatives

2. Environmental Impact: Culverts can disrupt local ecosystems, affecting fish passage, sediment transport, and water quality. Mitigation measures are often required to minimize these impacts

3. Hydraulic Design: Ensuring the culvert can handle peak flow events without causing upstream flooding or downstream erosion is crucial. This involves detailed hydraulic modeling and design.

4. Structural Integrity: The culvert must be designed to withstand the loads from the watercourse and any overlying infrastructure.

5. Maintenance and Access: Regular maintenance is necessary to prevent blockages and ensure the culvert functions correctly. Designing for easy access can be challenging, especially in remote or difficult-to-reach areas.

6. Geotechnical Considerations: The underlying soil and rock conditions can significantly impact the design and construction process. Stability and erosion control measures are essential.

04 The Depot Site - Analysis

The site analysis highlighted a number of key parameters to be considered when developing the site.

- Avoid building over and close to the existing burn.
- Avoid removal of trees, especially mature trees where possible and keep away from tree roots if possible.
- Position building on existing footprint & hardstanding where possible.
- Maintain access off Burgess Road to help link with existing school.
- Provide turning circle to allow residents access to driveways and drop off/pick up for QCCC.
- Maintain pedestrian path East of Burgess Park.
- Consider level changes across site.

LEVELS

This diagram shows the challenging topography of the site and the depot sitting at lower level which puts this area at increased risk of flooding. The levels pose challenges for accessibility across the site as well.

The depot building on the right hand side and the garages sitting at a higher level on the left hand side. The photo also shows two mature trees on either side of the depot.

Photo taken from the opposite end to the photo on the LHS

The elevation of the depot facing the park

The edge of the burn in the foreground, the depot with steps down in the background

The garages and parking area at the upper level

Slope from back of garage to the depot building

Other set of garages on the health centre side, with QCCC container in the parking area

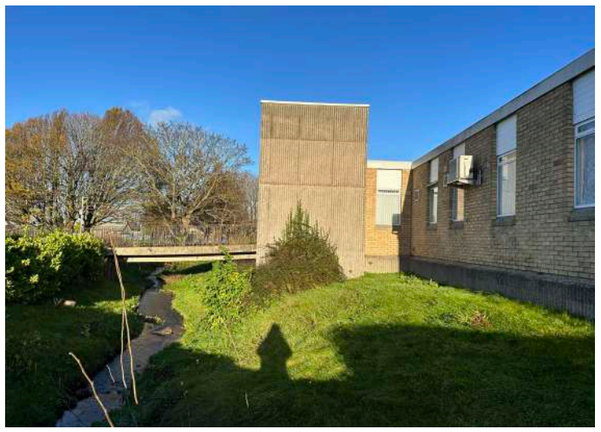


Photo showing a bridge across the burn at The adjacent Private Health Centre/QCCC

Photo of the depot site from Burgess Road

A photo looking along the path besides Burgess Park shows the ground sloping down towards the depot site.

A photo showing the edge of the burn with a mature tree adjacent and the depot to the RHS

A photo looking towards the depot site from outside the health centre

05 The Early Years Centre Brief

The brief for the centre is to accommodate 128 place nursery from 2-5 years and 12 spaces for 0-2 years (babies).The below is an accommodation schedule provided by CEC.

		Registered capacity 128, inc up to 30 two year olds **Garden registered for 16 children**
Room type	**Area**	**Comments**
Playroom 1: **x2** Inc dining	192	92 sqm unobstructed playspace 4 sqm for 2 x craft sinks (with drainers) and 2 x whb WHB to be located next to kitchen area Linked to Playroom 2 via sliding/folding door Next to kitchen area Direct access to garden (free flow policy) Canopy
Playroom 2: **x2**	92	42 sqm unobstructed playspace 4 sqm for 2 x craft sinks (with drainers) and 2 x whb Linked to Playroom 1 via sliding/folding door Direct access to garden (free flow policy) Canopy
Nursery toilets inc changing room + accessible wc and laundry room **x2**	60	IVS from playrooms and to garden Each cluster requires a minimum of 5 wc = 5 whb and one changing cubicle (wc + changing bench (1500) + child and adult height whb) Laundry room off toilets or IVS (washing machine, tumble dryer and pulley) If toilet block is split Playroom 1 requires 4 wc + 1 changing cubicle + laundry room and Playroom 2 requires 1 wc + 1 changing cubicle + laundry room
Cloaks	64	Can be part of the playroom, pick up + drop off cannot disrupt learning and play
Kitchen	30	One kitchen (15sqm) to serve each cluster Maintains visibility to Playrooms 550mm high worktop on playroom side with sink and drainer Include heated gantry to store lunches Domestic appliances (oven, electric hob, full height fridge) One sink with drainer, one whb, one commercial dishwasher
Storage **x2**	40	20 sqm for each cluster
Lobby	8	
Office	24	
IT cupboard	4	
1:1 meeting room	6	For confidential meetings, near entrance
Accessible wc	4	One wc and one whb Inc wall mounted baby change
Multi purpose room	30	Include storage, tea / coffee making facilities and fridge
Staff Room	15	
Cleaners cupboard	4	Bucket sink and whb, square
Adult wc	6	Three staff wc required
Adult shower room	4	
Plant	30	
Sub-total	613	
Circulation	61.3	
Total	**674.3**	
Registered Garden	1191	Minimum - to be split, one for each cluster

Room type	**Occupancy**	**Area**	**Comments**
Playroom	12	47	2 sqm for sinks (one adult whb and one adult craft sink required) Direct access to garden Canopy
Kitchen		10	Maintain visibility to playroom, Space for heated gantry to store lunches, Domestic Appliances (oven, electric hob, full height fridge), Commercial dishwasher, whb, sink with drainer. Additional power points for steriliser
Changing room and laundry room and IVS		13	One changing cubicle with a changing table, two whb. Separate laundry room
Storage		10	
Cloaks		6	
Total		**86**	

06 Concept Plans

SCENARIO 1 - SINGLE STOREY

The schematic layouts shown are initial concepts to support discussions around potential opportunities and constraints on the site. The overall areas of both internal and external spaces align with the brief, however, the layouts need further detailed design development to ensure they meet capacity and suitability requirements for a new early years centre including the consideration of accessibility, visibility, daylighting, acoustics, servicing and security.

This scenario shows a single storey nursery with direct access out from the playrooms to outdoor learning spaces.

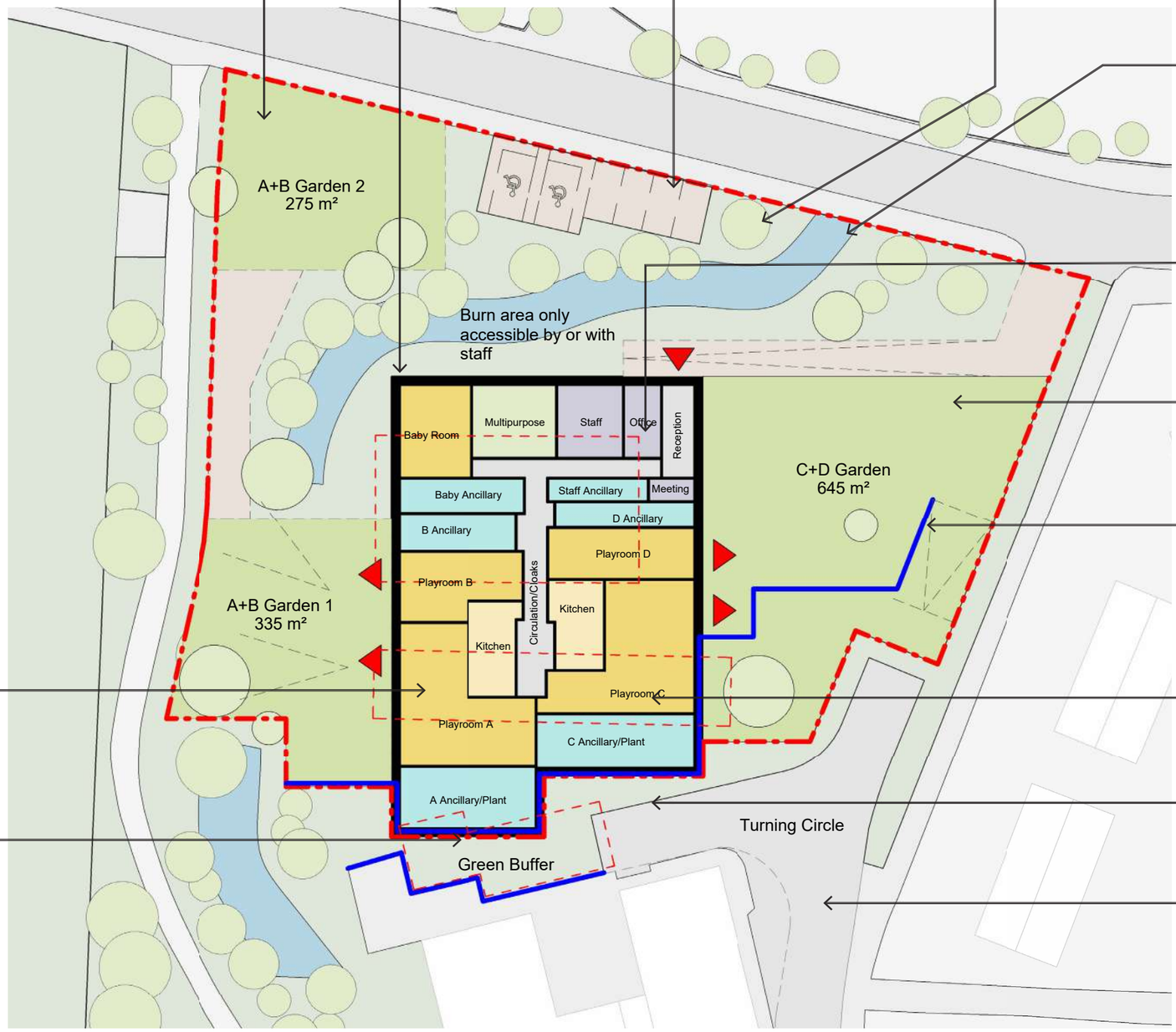
A single storey nursery is preferred since it avoids the needs for stairs and lifts which can present challenges when dealing with young children. It also improves supervision and visibility by staff and streamlines logistics such as meal distribution. However, a single storey building results in more floor and roof area which impacts site drainage and flood management.

The position of the burn requires the garden spaces for playrooms A+B to be split which could impact supervision and visibility by staff.

Engineering input required to confirm whether proximity of building edge to burn is achievable

Consultation with roads department required to assess parking requirements and position.

The green, leafy site offers an inviting setting for a nursery within an otherwise urban area.



The burn and surrounding trees have been excluded from the designated play areas due to safety concerns. The intention would be for this area to be fenced off but could be accessible as a space for learning and play when the children are under direct supervision. Further investigation during the detailed design could explore options for making this area safer and accessible.

The rooms positioned to the north of the plan are single aspect and are overshadowed by trees, making these darker spaces. These areas would benefit from rooflights.

The garden spaces all benefit from south light and have minimal overshadowing from adjacent buildings.

The topography will likely require some retention and sloping ground at all garden spaces. This may impact how much accessible play space is available. Refer to section for more information on levels.

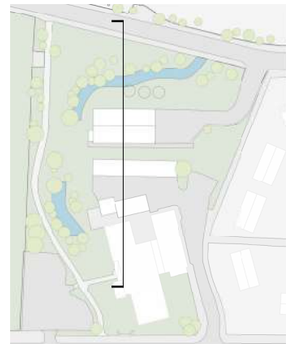
The orientation of the building on the site provides the playrooms with East and West light, with the potential for rooflights to bring more sunlight to the centre of the plan.

Use of the garage and parking areas may require these spaces to be provided elsewhere.

The container currently used by QCCC would need to be relocated elsewhere.

Engineering input required to confirm whether existing foundations of adjacent building will be undermined by the proposed development.

A turning circle is provided for the residents who have driveways on this street and for drop off/pick up at the adjacent day care centre.



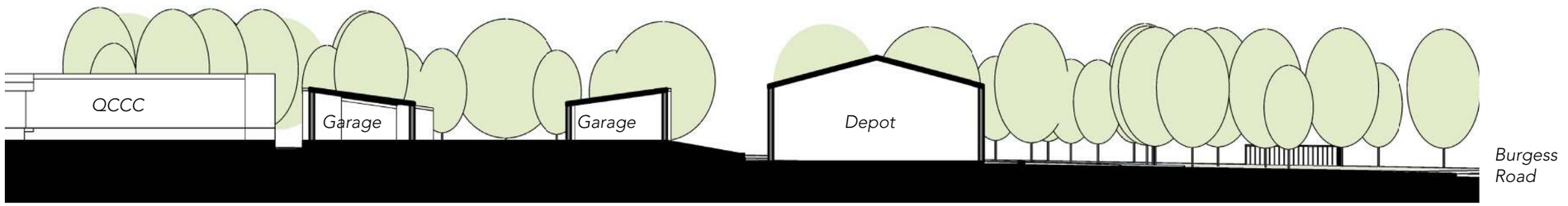
SCENARIO 1 - SINGLE STOREY

Levels shown are indicative only and a topographical survey is required to assess existing levels and inform proposed development levels.

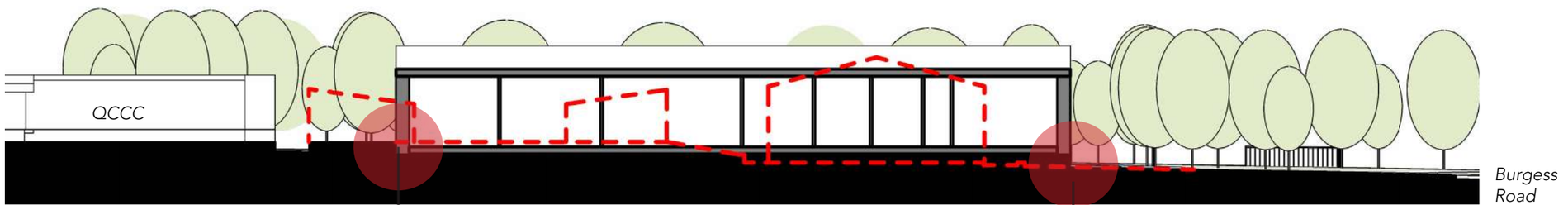
The proposal shows the building ground floor sitting somewhere between the depot floor level and the garage floor levels. Raising the building up from the burn will help with flood risk while still allowing access from Burgess Road via a gently sloping path.

The topography of the gardens will need to be formed to allow level access from the play spaces to the outdoors which will require some regrading of the ground.

The extent of excavation and regrading can only be assessed following a topographical survey and will require civil engineering input to ensure there is no undermining of nearby foundations or the integrity of the burn.



Existing South-North Section



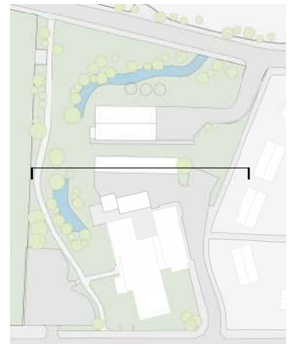
Proposed South-North Section

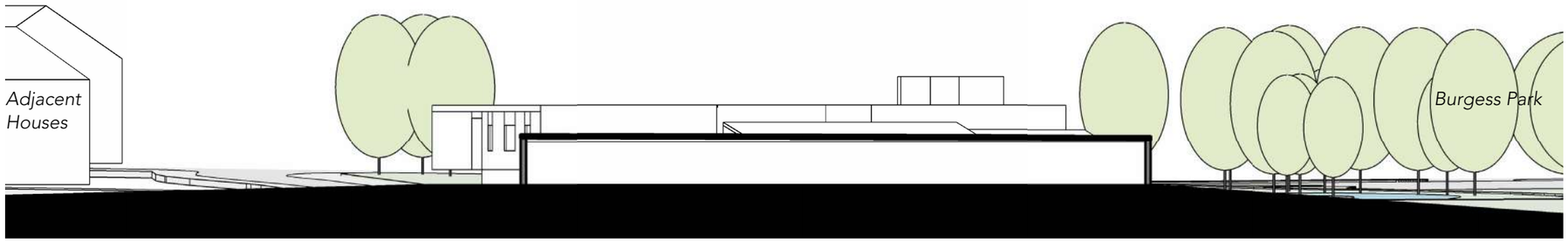
Building floor level sits lower than level to south of site and some retention would be required. Where access is required ground to be excavated to form levels.

Building floor level would be raised up from burn level at front and where access is required ground to built up to form levels.

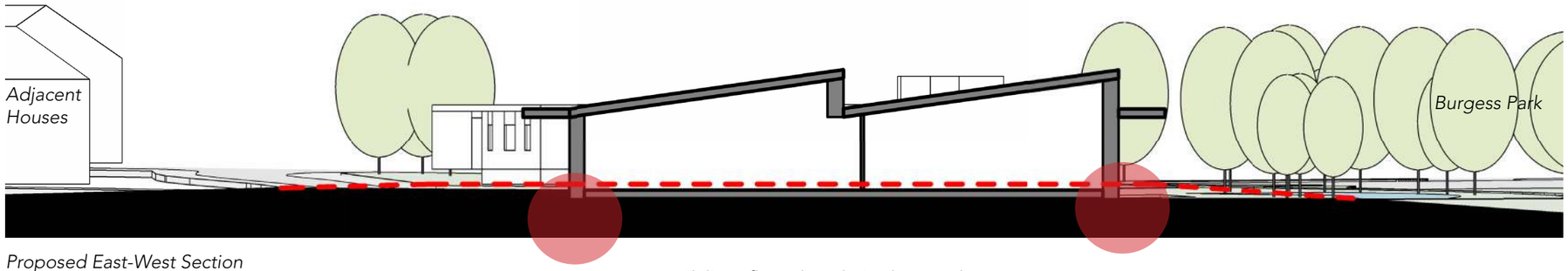
SCENARIO 1 - SINGLE STOREY

Levels shown are indicative only and a topographical survey is required to assess existing levels and inform proposed development levels.





Existing East-West Section



Proposed East-West Section

Adjacent two storey houses will overlook the early years centre.

Building floor level sits lower than existing and some retention would be required. Where access is required ground to be excavated to form levels.

SCENARIO 2 - TWO STOREY - GROUND FLOOR

The schematic layouts shown are initial concepts to support discussions around potential opportunities and constraints on the site. The overall areas of both internal and external spaces align with the brief, however, the layouts need further detailed design development to ensure they meet capacity and suitability requirements for a new early years centre including the consideration of accessibility, visibility, daylighting, acoustics, servicing and security.

This scenario shows a two storey building with the upper playrooms having access to a roof terrace.

The benefit of a two storeys is that it takes up less footprint. However, it requires a bigger building overall due to additional circulation and creates logistical challenges with playrooms being provided across two levels.

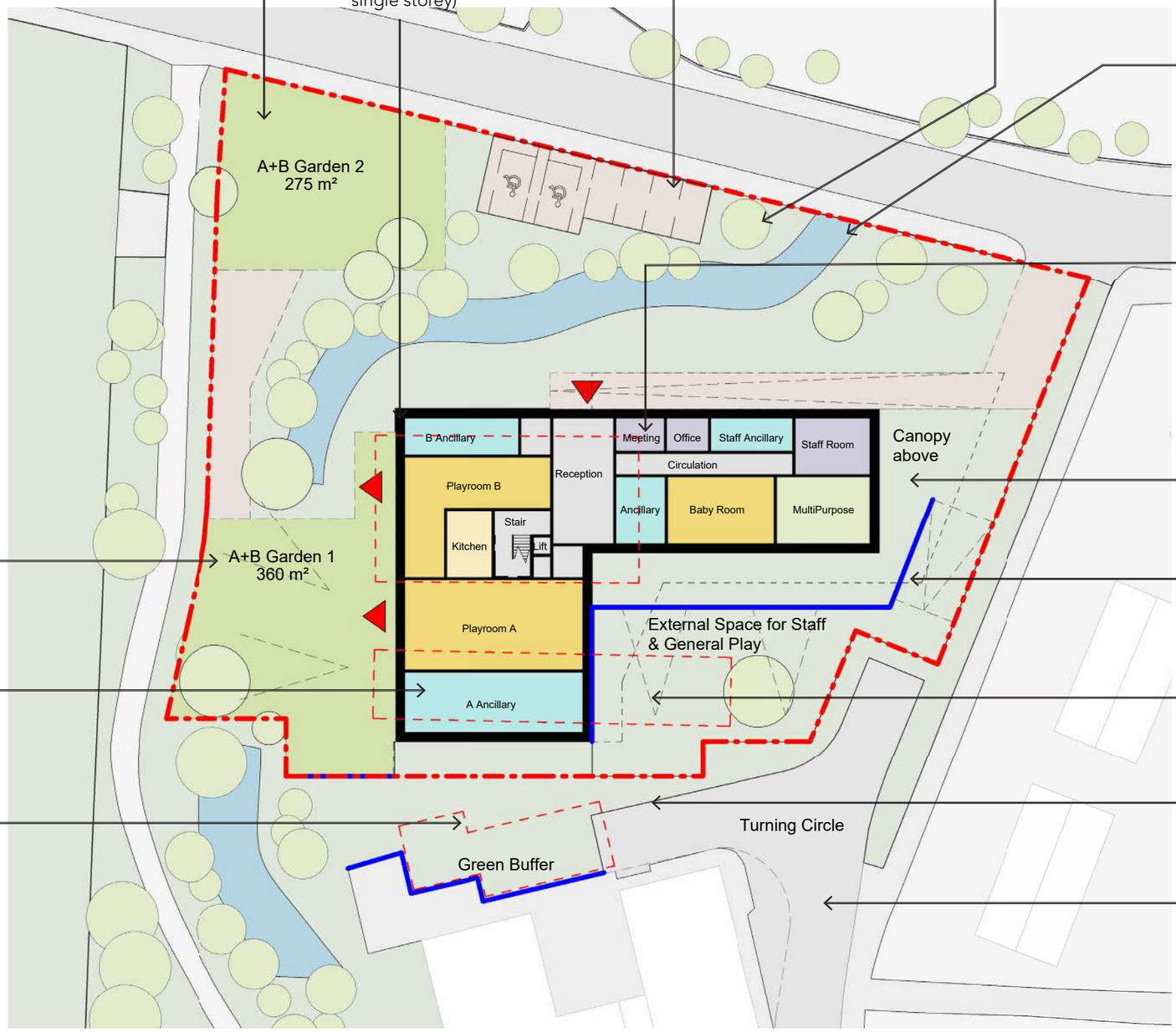
The position of the burn requires the garden spaces for playrooms A+B to be split which could impact supervision and visibility by staff.

Engineering input required to confirm whether proximity of building edge to burn is achievable. (Distance further than single storey)

Consultation with roads department required to assess parking requirements and position.

The green, leafy site offers an inviting setting for a nursery within an otherwise urban area.

The burn and surrounding trees have been excluded from the designated play areas due to safety concerns. The intention would be for this area to be fenced off but could be accessible as a space for learning and play when the children are under direct supervision. Further investigation during the detailed design could explore options for making this area safer and accessible.



The rooms positioned to the north of the plan are single aspect and are overshadowed by trees, making these darker spaces. These areas would benefit from rooflights although these will be limited due to roof garden above.

Canopy forming roof garden above. Daylighting analysis will be required to ensure rooms get enough sunlight.

The topography will likely require some retention and sloping ground at garden. This may impact how much accessible play space is available. Refer to section for more information on levels.

The topography will likely require some retention and sloping ground at garden. This garden is not allocated to specific play spaces so could be used by staff or other general play.

The ground floor playrooms are west facing. Daylighting analysis will be required to ensure rooms get enough sunlight.

Use of the garage and parking areas may require these spaces to be provided elsewhere.

This option allows for more buffer space between the proposed building and existing QCCC building. However, engineering input would still be required to confirm whether there is risk of undermining foundations.

The container currently used by QCCC would need to be relocated elsewhere.

A turning circle is provided for the residents who have driveways on this street and for drop off/pick up at the adjacent day care centre.

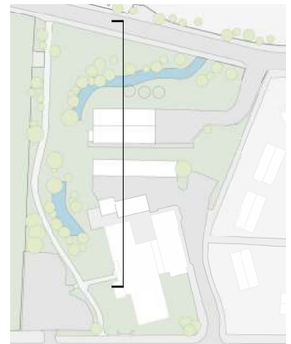
SCENARIO 2 - TWO STOREY - FIRST FLOOR

The schematic layouts shown are initial concepts to support discussions around potential opportunities and constraints on the site. The layouts need further detailed design development to ensure they meet capacity and suitability requirements for a new early years centre including the consideration of accessibility, visibility, daylighting, acoustics, servicing and security.

This plan shows how a roof terrace can provide the outdoor play area for playrooms C & D. To accommodate the area required, canopies/cantilevers to the roof are proposed which will require engineering input and additional drainage considerations. The use of a roof terrace as garden space will limit the type of soft landscaping and planting for this play space and make accessing other outdoor areas on site more challenging.

The garden spaces benefits from south light and has minimal overshadowing from adjacent buildings.

The playrooms at the upper level are west facing, with the potential for rooflights to bring more sunlight into the centre of the plan.

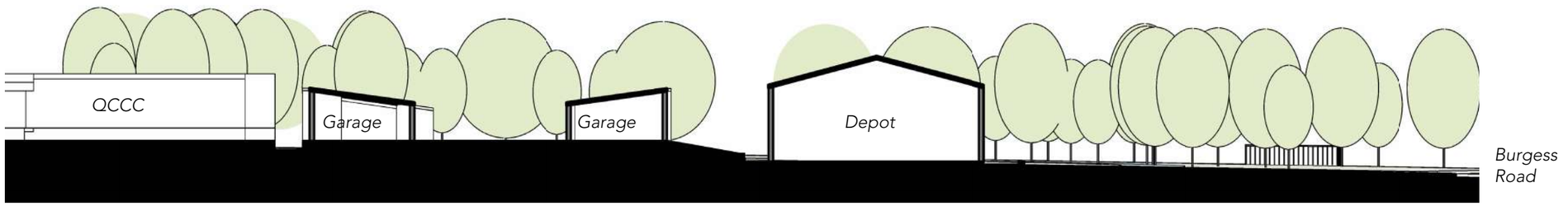


SCENARIO 2 - TWO STOREY

Levels shown are indicative only and a topographical survey is required to assess existing levels and inform proposed development levels.

The proposal shows the building ground floor sitting somewhere between the depot floor level and the garage floor levels. Raising the building up from the burn will help with flood risk while still allowing access from Burgess Road via a gently sloping path.

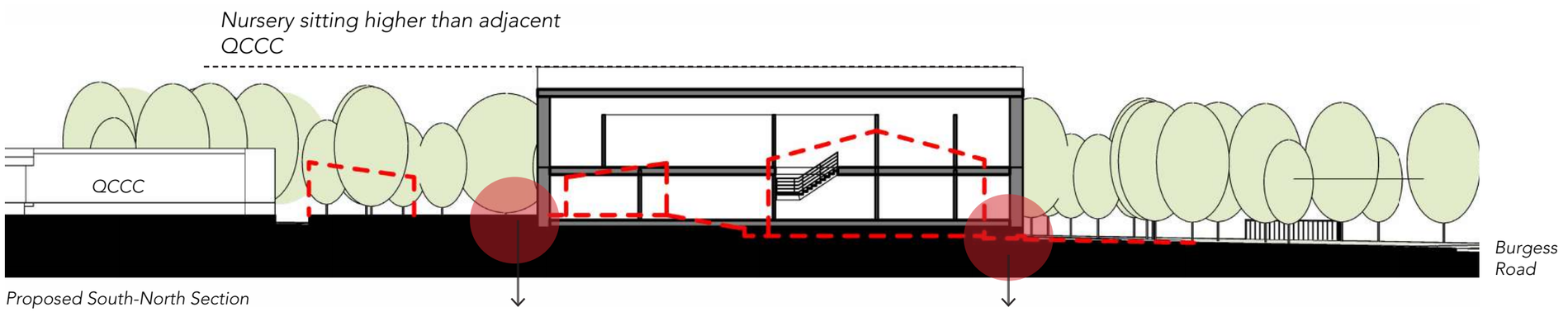
The topography of the gardens will need to be formed to allow level access from the play spaces to the outdoors which will require some regrading of the ground.



Existing South-North Section

The extent of excavation and regrading can only be assessed following a topographical survey and will require civil engineering input to ensure there is no undermining of nearby foundations or the integrity of the burn.

The two storey building sits higher than the adjacent QCCC building and an assessment of the impact should be made once levels are confirmed. The distance between the two buildings will help to ensure the nursery is not overbearing.



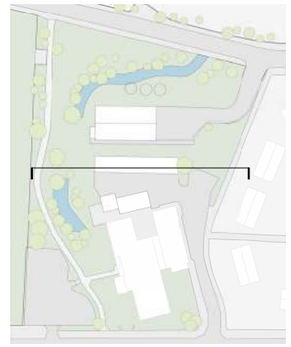
Proposed South-North Section

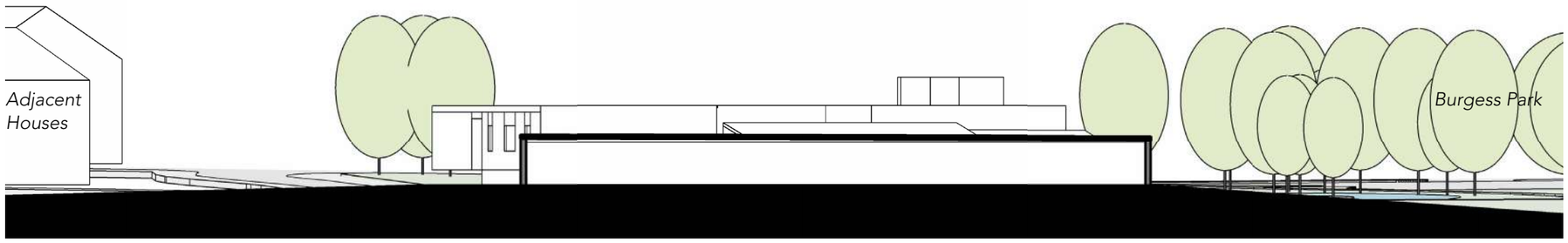
Building floor level sits lower than level to south of site and some retention would be required. Where access is required ground to be excavated to form levels.

Building floor level would be raised up from burn level at front and where access is required ground to built up to form levels.

SCENARIO 2 - TWO STOREY

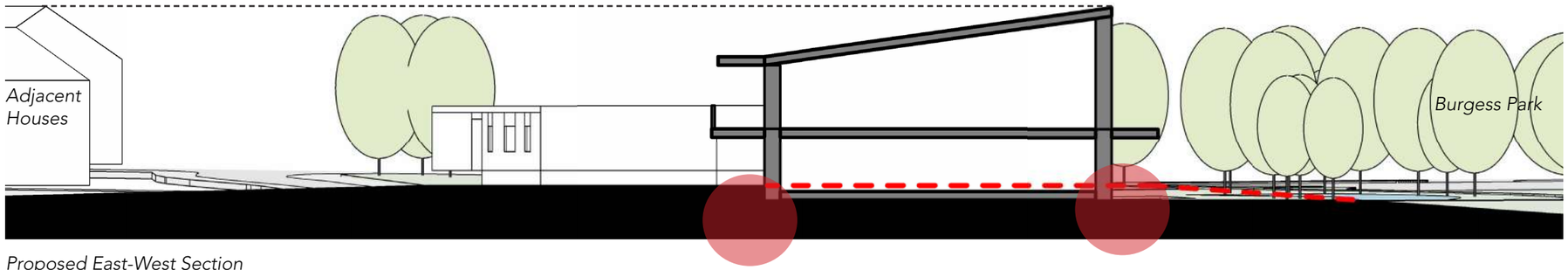
Levels shown are indicative only and a topographical survey is required to assess existing levels and inform proposed development levels.





Existing East-West Section

consideration of height in relation two adjacent houses to be considered.



Proposed East-West Section

Adjacent two storey houses will overlook the early years centre.

Building floor level sits lower than existing - retention at east side where access is not required

Building floor level sits lower than existing and some retention would be required. Where access is required ground to be excavated to form levels.

07 Conclusion & Next Steps

This report set out to assess whether the existing depot site and garages would be able to accommodate a new build Early Years Centre.

Two scenarios were tested on the site including a single storey and two storey option, both to accommodate a 128 place nursery with 12 baby places. The scenarios are not exhaustive and alternative layouts could be accommodated. Due to the importance of access to external space and operational logistics, the single storey nursery would be preferred.

The scenarios show that the site can accommodate an Early Years Centre. However, the document also highlights a number of challenges posed by the existing site conditions, including; flood risk, accessibility & levels, daylighting and construction adjacent to the existing burn.

A number of surveys and enquiries, including but not limited to those noted below, will help in further investigating the feasibility of the proposals.

- Structural & Civil engineering input
- Topographical survey
- Existing buildings survey
- Tree Survey including root protection zones
- Ecological Survey
- Flood Assessment
- Drainage survey
- Trial pits to assess ground conditions
- Trial pits to locate foundations

Single Storey

Two Storey with roof garden

COLLECTIVE
ARCHITECTURE

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