reusefully

Report From:

Circular Economy and Waste Specialists

Reusefully Ltd

Report Prepared For:

Gerald Eve

Pre-Redevelopment Audit of Former MSD Site, Harefield

27.02.24

Executive Summary

This report presents the findings of a Pre-Redevelopment Audit exploring the potential to retain buildings and elements at the former MSD Site, in line with the Circular Economy Statement Guidance as required for developments referable to the GLA under the London Plan Policy SI 7.

The Pre-Redevelopment Audit is intended to help clients determine whether retention of any of the existing buildings, spaces and elements is feasible, in their current state or following alterations, whilst still delivering project aims and wider societal benefit. The benefits of avoiding demolition and new construction through retention of existing assets include avoiding the generation of waste reducing material use, and embodied carbon emissions generally associated with new construction.

Several options for avoiding full demolition of the existing buildings, spaces and elements were evaluated for feasibility in the context of client requirements as well as wider social, environmental, and economic concerns. The audit found that it is not feasible to retain many of the existing buildings and spaces (see table below), and that there is likely to be sufficient social, economic and environmental benefit of some demolition when comparing to a full retention scenario. In all cases where retention is recommended, it is likely that significant retrofit/refurbishment will be required to make the buildings fit-for-purpose and to meet modern or future performance or quality standards (e.g. for energy or internal environment).

Where retention of a building, or part thereof, is considered further by the client, it is strongly recommended that suitably qualified professionals are commissioned to conduct additional assessments, ensuring the technical and structural performance of retained elements would be safe and fit-for-purpose in the new scheme.

See Appendix A for details of the report authors.

Asset	Recommendation
Building 20	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 24	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 25	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 29	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 31	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 40	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 17	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 16	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 23	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 30	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 27	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.

Building near 17	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 16	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 30	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 29	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 28	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 34	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 34	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 31	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 43	Consider for retention and refurbishment, with some adaptation and repurposing.
Externals	Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.

Table: Summary of overall conclusion per building

Contents

1. The Requirement

Gerald Eve engaged Reusefully Ltd to carry out a pre-redevelopment audit of the former MSD Site in Harefield, to understand whether retention of the existing building was feasible whilst meeting client aims and achieving wider social, economic and environmental benefits.

This investigation supports compliance with the requirements of the London Plan Policy SI7 and the complementary London Plan Guidance for Circular Economy Statements (March 2022 revision) [1]. For eligible projects in London, the Circular Economy Statement Guidance states that a pre-redevelopment audit should be undertaken to determine the potential for full or partial building retention (see Figure 1, below).

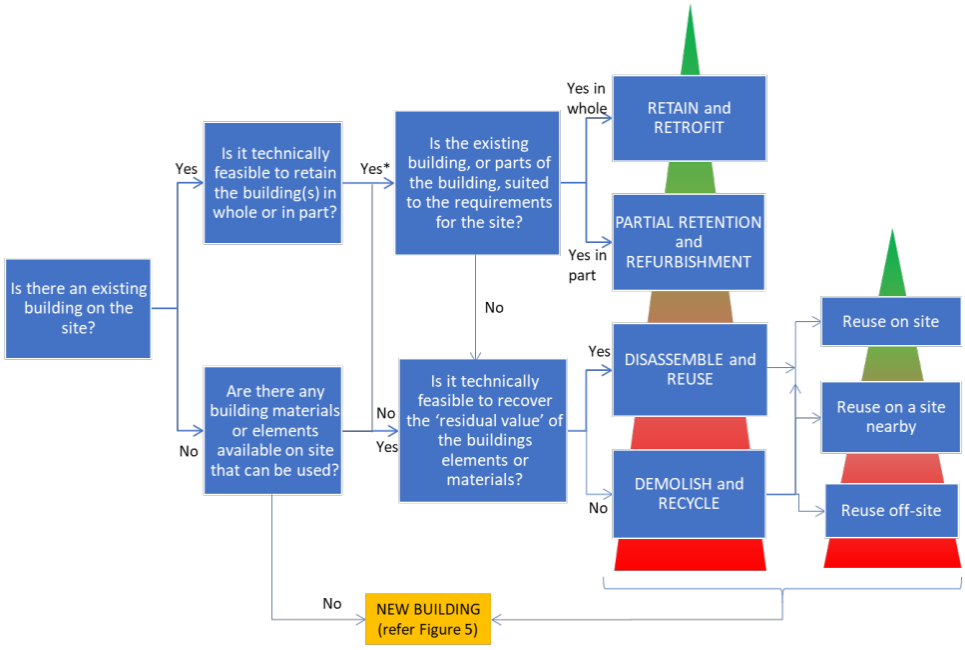


Figure 1. Decision tree for dealing with existing buildings on a site to be redeveloped, taken from the GLA Circular Economy Statement Guidance.

[1] https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/circular-economy-statement-guidance

2. Methodology

The client supplied a site layout with the existing buildings overlaid, design and access statement, proposed design drawings, circular economy statement, planning documents and other documents.

A site visit was undertaken by Reusefully on the 2nd of February 2024, consisting of a non-invasive visual survey of the buildings on the site. Observational notes and photographs were taken to help determine the existing use patterns, dimensions, layout, level of condition, performance, and degree of adaptability of the building. It was possible to access most of the buildings; however one was avoided due to asbestos concerns, and areas of other buildings were also deemed inaccessible for the same reason.

This information, as well as publicly available information such as EPC records, was used to undertake a high-level analysis of the feasibility of retaining the existing buildings.

To facilitate the assessment and evaluation. Buildings and structures have been considered in the following asset groups:

Section 5: Restaurant/café – building 20

Section 6: Single storey office/workshops – buildings 24,25,29,31,40,17,16

Section 7: Two storey offices – buildings 23, 30

Section 8: Plant buildings – buildings 27, near 17, near 16, near 30, near 28

Section 9: Industrial building 28

Section 10: Barns – buildings 34, near 34

Section 11: Storage building near 31

Section 12: Industrial unit/ two storey office building 43

Section 13: External features

For each asset group, several factors were considered in our evaluation (as possible from the information available), including:

- Technical capacity of the asset to accommodate retention scenarios
- Compatibility with client aims/requirements
- Potential energy performance if retained and in-use, after any necessary fit-out, refurbishment, retrofit, or repair work is completed. *(Does not apply to external features)*
- Potential occupant comfort if retained and in-use, after any necessary fit-out, refurbishment, retrofit, or repair work is completed. *(Does not apply to external features)*
- Construction practicalities and logistics, i.e. whether the practical aspects of retaining the asset (in combination with any other site works, e.g. construction of other new assets) are likely to be prohibitively difficult or expensive.
- Social and economic value considerations, i.e. whether the existing asset would offer any significant benefit to the social and economic wellbeing of the wider community if retained.

These are described in detail for the main building groups only (see section 4 for an overview of assets on the site); for the outbuildings and external features, these are considered and described at a higher level.

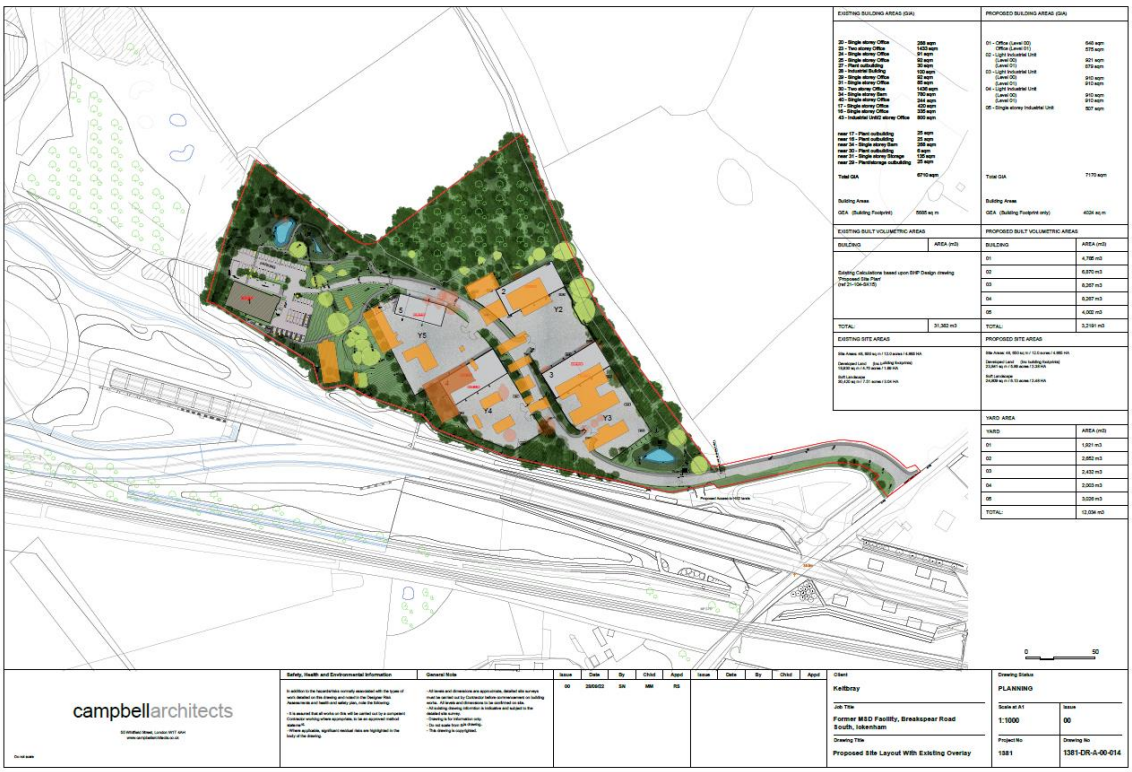
3. Site Details

The proposed development for the former MSD Site includes 20 buildings and several external features. The buildings are of varying ages, sizes, and construction typologies. At the time of the site visit by Reusefully, the buildings were all vacant and in relatively poor condition.

The buildings had varying previous uses including offices, plant outbuildings, industrial buildings, barns, and storage buildings:

- Buildings 20, 24, 25, 29, 31, 40, 17, and 16 were single storey offices.
- Buildings 23 and 30 were two-storey offices.
- Buildings 27, near 17, near 16, near 27, and near 30 were plant outbuildings.
- Building 28 was an industrial building.
- Buildings 34 and near 34 were single storey barns.
- Building near 31 was a single storey storage building.
- Building 43 was used as an industrial unit as well as a two-storey office.

The proposed new site layout with existing overlay and the Reusefully teams assumed building numbering is shown below:



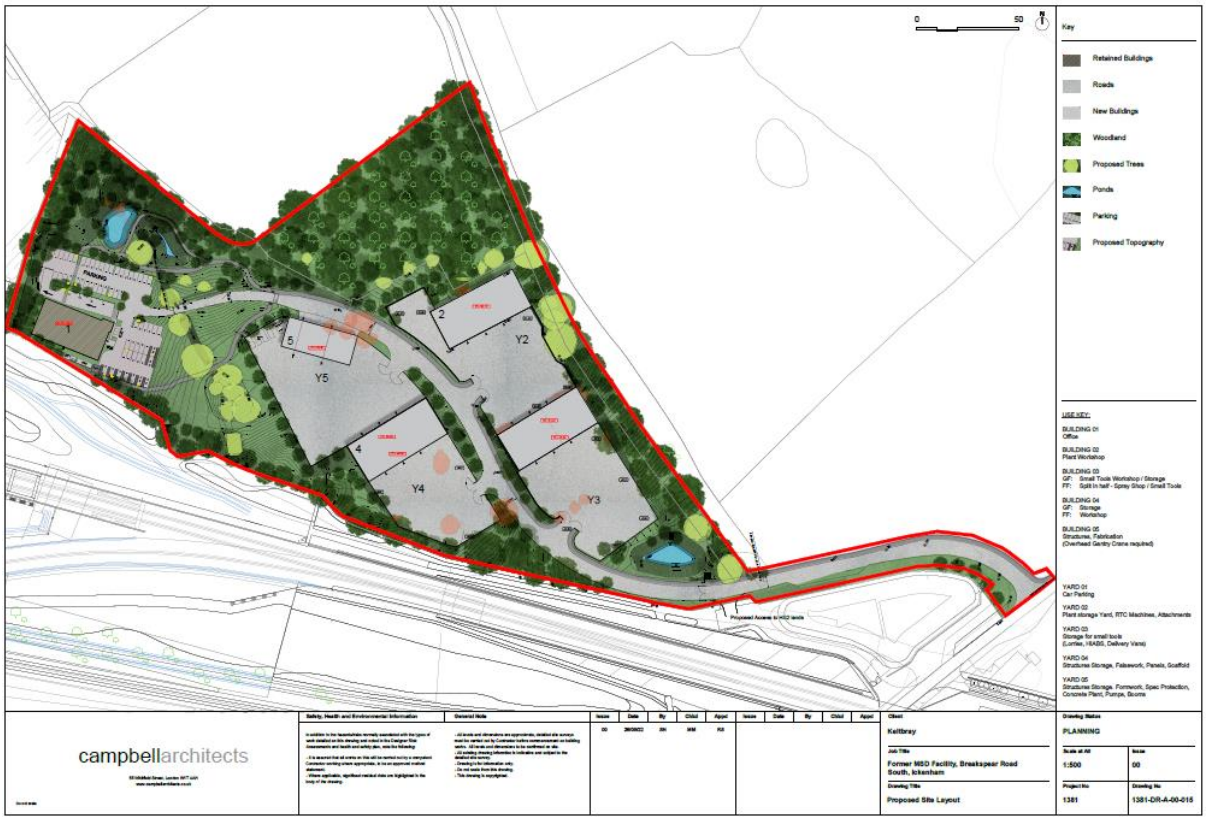
Based on the information available and the site audit, key attributes and primary construction elements were identified for each building and are summarised in the following subsections 3.1 and 3.2.

4. The Proposed Project

The current proposals include (as shown below):

- Demolition of all buildings and structures on the site (other than building 43) to make way for four new office/industrial buildings as well as improved landscaping and ecology.
- Retention and refurbishment of Building 43.

The proposed new site layout is shown below:



5. Restaurant and Cafe

Building 20 has been grouped as a restaurant/ café based on observations by the Reusefully team and property type classifications on the EPC certificate.

5.1. Building 20

Building 20 is assumed to have been built during the mid to late 1990s based on the sites planning history. The building includes multiple small rooms with unknown uses, a large space that is assumed to have been a canteen or restaurant area, a commercial kitchen, and WC facilities.




Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[2]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, reinforced concrete columns, precast concrete rafters and purlins supporting a secondary timber roof structure, and slate roof tiles.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), radiators, and plumbing associated with the kitchen and bathrooms.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

[2] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Space/ layout/ partitioning

There are some internal concrete block walls as well as timber stud walls which are not loadbearing so the internal layout may be adapted for alternative uses. If the building is retained for use as a restaurant/café, these internal walls may technically be retained based on their condition, however their overall impact on occupant comfort should be considered.

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (poor to good condition), carpet tiles (fair to good condition), vinyl flooring (poor to fair condition), floor tiles (poor condition), timber floorboards (good condition), metal kitchen equipment (fair to good condition), and other miscellaneous items.

If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.




5.2. Strategies

Future use strategies (Building 20) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. This forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Feasible.** Would need to be repurposed in accordance with demand for space e.g. single user office space

Modification strategies (Building 20) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** Under any scenario, the existing fit-out and FFE would likely need to be stripped out to make way for new items that meet the future needs for functionality, performance and quality. Furthermore, measures may be implemented to improve occupant experience within the building, in terms of environmental quality (air quality, temperature, humidity, etc.) and visual comfort/quality.
Partial demolition	**Not required.** Unlikely scenario given current structure and general site layout
Expansion	**Not required.** Unlikely scenario given current structure and general site layout

5.3. Conclusions

Technical capacity of building to accommodate retention scenarios: ***Not likely to prohibit retention***

This building could be refurbished to fit an alternative use, such as single occupancy office block.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether this building would be effectively utilised in an alternative use, even with full refurbishment to improve energy performance and user comfort. Compared to overall plans for the site, the existing building would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer a high degree of quality (e.g. see section titled 'Occupant comfort' below) relative to the same floor area of the new building.

As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Currently poor (EPC rating of 'D' in CEPC record[3]) but could technically be brought to acceptable standard through insulation of building envelope and thermal bridges, installation of high-performance windows and doors, improved airtightness, damp-proofing, low-energy HVAC systems, et cetera.

These measures are likely to be extensive for the building to meet future building regulations.

Potential occupant comfort: ***May prohibit retention***

The internal spaces could be adequate for regular occupancy as offices or research spaces following substantial fit-out/refurbishment activities.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing buildings will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

The existing building offers little potential to deliver social or economic value locally or more widely. For instance, its architecture does not hold discernible heritage value, and its potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a complete new development.

[3] https://find-energy-certificate.service.gov.uk/energy-certificate/9358-3071-0300-0200-0021

6. Single storey offices/ workshops

Buildings 24, 25, 29, 31, 40, 17 and 16 have been grouped as single storey offices/ workshops based on the information received from the client. They are all assumed to have been built during the mid to late 1990s based on the sites planning history.

6.1. Building 24

Building 24 includes an open plan office space as well as a small extension with a kitchenette.




Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[4]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, a steel roof structure, and an asbestos cement sheet roof (metal sheet roof on the extension).

The structure of the building was not surveyed in detail; the assessors observed one structural defect during the site visit (the brick wall shown below), though there were no other major structural defects identified (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls, concrete floors, and the roof structure is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.




[4] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units, and plumbing associated with the kitchen and bathrooms.

The services within the building are very basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

The layout is open, and partitions could be added to adapt the internal layout for alternative uses, however this may be difficult as the space is relatively small.

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (poor to fair condition), carpet tiles (poor to fair condition), kitchen cabinets and worktop (good condition), and other miscellaneous items.

If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

6.2. Building 25

Building 25 includes multiple workshop/lab spaces.



Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[5]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, steel roof structure (assumed), and slate roof tiles.

[5] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units and plumbing associated with the sinks.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some metal stud internal walls not loadbearing so the internal layout may be adapted for alternative uses. If the building is retained for use as an lab, these internal walls may be suitable for retention based on their condition.

Finishes, fixtures, and equipment

Finishes include vinyl flooring (poor condition), and other miscellaneous items.

If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

6.3. Building 29

Building 29 includes an open plan office space a small meeting room and a kitchenette.




Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[6]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, timber truss roof structure, and slate roof tiles.

[6] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units and plumbing associated with the kitchen.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some metal stud internal walls not loadbearing so the internal layout may be adapted for alternative uses. If the building is retained for use as an office, these internal walls may need to be replaced based on their condition.

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (poor to fair condition), carpet tiles (poor condition), vinyl flooring (poor condition), and other miscellaneous items.

If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.


6.4. Building 31

Building 31 includes an open plan office space and two filing rooms.




Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[7]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, timber truss roof structure, and slate roof tiles.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), and plumbing associated with the metal sink.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some metal stud internal walls, these are not loadbearing so the internal layout could be adapted for alternative uses. If the building is retained for use as an office, these internal walls may technically be retained based on their condition.

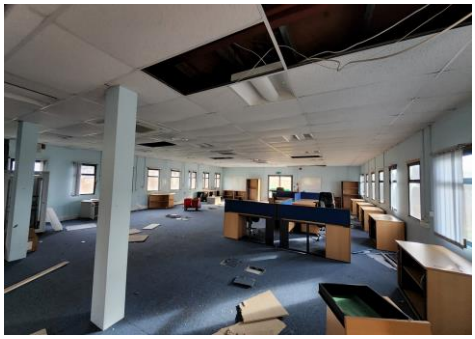
[7] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (fair to good condition), carpet tiles (poor condition), and other miscellaneous items. If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

6.5. Building 40


Building 40 includes an open plan office space, multiple rooms that may have been used as a meeting rooms, a kitchen and a bathroom.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[8]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with steel skin external walls with insulation cores, a reinforced concrete ground floor slab, steel columns, a steel floor and roof structure, and a steel sheet roof.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units, and plumbing associated with the kitchen and bathroom.

[8] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some metal stud internal walls, these are not loadbearing so the internal layout could be adapted for alternative uses. If the building is retained for use as an office, these internal walls may technically be retained based on their condition.

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (fair to good condition), carpet tiles (fair to good condition), vinyl flooring (fair condition), kitchen cabinets and worktop (good




condition), and other miscellaneous items. If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

6.6. Building 17

Building 17 includes a central corridor with multiple office/meeting rooms on either side, there is also bathroom facilities and a kitchen.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[9]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

[9] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, timber roof structure, and slate roof tiles. There is also a flat roof section with asphalt roofing.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units, radiators and plumbing associated with the metal sink.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some metal stud internal walls, these are not loadbearing so the internal layout could be partially adapted for alternative uses. If the building is retained for use as an office, these internal walls may technically be mostly retained based on their condition.

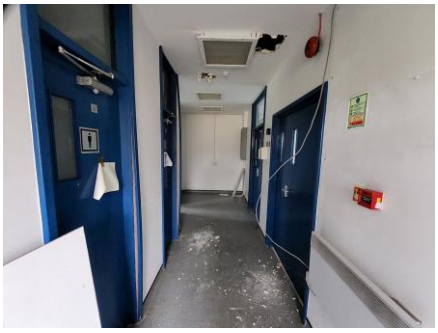
Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (fair condition), carpet tiles (poor condition), vinyl flooring (poor to fair condition), and other miscellaneous items. If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.




6.7. Building 16

Building 16 includes two lab spaces as well as offices areas and bathroom facilities.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[10]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a reinforced concrete ground floor slab, timber and steel roof structure, and asphalt roofing.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units, radiators and plumbing associated with the sinks in the lab areas and the bathrooms.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

[10] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Space/ layout/ partitioning

There are some metal stud internal walls, these are not loadbearing so the internal layout could be partially adapted for alternative uses. If the building is retained for use as a lab/ office, these internal walls may technically be mostly retained based on their condition (note that some walls are in poor condition).

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (poor to fair condition), carpet tiles (poor to fair condition), vinyl flooring (fair to good condition), and other miscellaneous items. If retained, it is likely that a partial internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

6.8. Strategies

Future use strategies (all buildings) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structures forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Feasible.** Would need to be repurposed in accordance with demand for space e.g. single user office space

Modification strategies (all buildings) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** Under any scenario, the existing fit-out and FFE would likely need to be stripped out to make way for new items that meet the future needs for functionality, performance and quality. Furthermore, measures may be implemented to improve occupant experience within the buildings, in terms of environmental quality (air quality, temperature, humidity, etc.) and visual comfort/quality.
Partial demolition	**May be required**. It is possible that some buildings could be retained whilst others are demolished, however, this would impede overall site potential**.** Unlikely scenario given current structures and general site layout
Expansion	**Not required.** Unlikely scenario given current structures and general site layout

6.9. Conclusions

Technical capacity of building to accommodate retention scenarios: ***Not likely to prohibit retention***

These buildings could be refurbished to fit an alternative use, such as single occupancy office block.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether these buildings would be effectively utilised in an alternative use, even with full refurbishment to improve energy performance and user comfort. Compared to overall plans for the site, the existing buildings would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer a high degree of relative to the same floor area of the new building.

As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Energy performance of each building could technically be brought to acceptable standard through insulation of building envelope and thermal bridges, installation of high-performance windows and doors, improved airtightness, damp-proofing, low-energy HVAC systems, et cetera.

These measures are likely to be extensive for the building to meet future building regulations.

Potential occupant comfort: ***May prohibit retention***

The internal spaces could be adequate for regular occupancy as offices or research spaces following substantial fit-out/refurbishment activities. Overall occupant comfort and attractiveness of the site could be compromised compared to the new development planned.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing buildings will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

The existing buildings offer little potential to deliver social or economic value locally or more widely. For instance, the architecture does not hold discernible heritage value, and the potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a new development.

7. Two storey offices

Buildings 23 and 30 have been grouped as two storey offices based on the information received from the client as well as observations by the Reusefully team. They are assumed to have been built during the mid to late 1990s based on the sites planning history.

7.1. Building 23

Building 23 includes multiple office/ meeting rooms, a kitchen, and bathroom facilities.




Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[11]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises two storeys, with cavity brick and block external walls, a reinforced concrete ground floor slab, timber and steel roof structure, slate roof tiles, and asphalt roofing (on the connecting roof section).

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units, radiators, and plumbing associated with the kitchen and bathrooms.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some concrete block and stud internal walls, these are not loadbearing so the internal layout could be partially adapted for alternative uses. If the building is retained for use as an office, these internal walls may technically be mostly retained based on their condition (note that some walls are in poor condition).

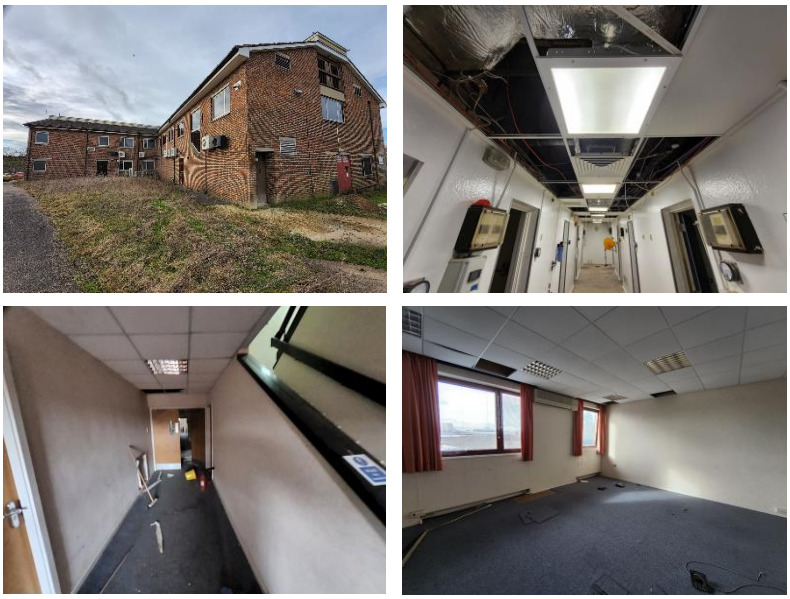
[11] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (poor to fair condition), carpet tiles (fair condition), vinyl flooring (poor to fair condition), kitchen cabinets (fair to good condition), and other miscellaneous items. If retained, it is likely that a partial internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

7.2. Building 30

Building 30 includes multiple lab spaces, offices areas, a server room, a filing room, and bathroom and shower facilities.



Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[12]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises two storeys, with cavity brick and block external walls, a reinforced concrete ground floor slab, a reinforced concrete floor slab, precast concrete stairs, a timber and steel roof structure, and slate roof tiles.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often

[12] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

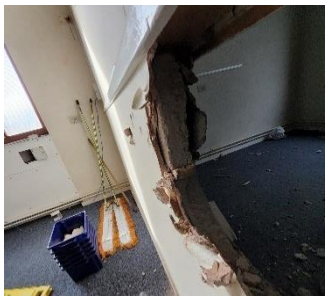
Services

The building contains some basic building services items. These include lighting (suspended ceiling light panels), air conditioning units, radiators and plumbing associated with the bathrooms.

The services within the building are basic and would require near complete replacement/retrofit in any retention scenario.

Space/ layout/ partitioning

There are some concrete block internal walls, these are not assumed to be loadbearing so the internal layout could be partially adapted for alternative uses. If the building is retained for use as a lab/ office, these internal walls may technically be mostly retained based on their condition (note that some walls are in poor condition). It is also important to note that there was a quantity of asbestos identified in the building, this includes asbestos that had been disturbed and covered with plastic sheeting.



Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (fair to good condition), carpet tiles (poor to fair condition), vinyl flooring (poor condition), raised access flooring (fair condition), and other miscellaneous items. If retained, it is likely that a full internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

7.3. Strategies

Future use strategies (both buildings) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structure forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Feasible.** Would need to be repurposed in accordance with demand for space e.g. single or multiple user office space

Modification strategies (both buildings) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** Under any scenario, the existing fit-out and FFE would likely need to be stripped out to make way for new items that meet the future needs for functionality, performance and quality. Furthermore, measures may be implemented to improve occupant experience within the buildings, in terms of environmental quality (air quality, temperature, humidity, etc.) and visual comfort/quality.
Partial demolition	**May be required**. It is possible that one building could be retained whilst the other is demolished, however, this would impede overall site potential**.** Unlikely scenario given current structures and general site layout
Expansion	**Not required.** Unlikely scenario given current structures and general site layout

7.4. Conclusions

Technical capacity of building to accommodate retention scenarios: ***Not likely to prohibit retention***

These buildings could be refurbished to fit an alternative use, such as a research or office block.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether these buildings would be effectively utilised in an alternative use, even with full refurbishment to improve energy performance and user comfort. Compared to overall plans for the site, the existing buildings would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer a high degree of usability relative to the same floor area of the new building.

As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Energy performance of each building could technically be brought to acceptable standard through insulation of building envelope and thermal bridges, installation of high-performance windows and doors, improved airtightness, damp-proofing, low-energy HVAC systems, et cetera.

These measures are likely to be extensive for the building to meet future building regulations.

Potential occupant comfort: ***May prohibit retention***

The internal spaces could be adequate for regular occupancy as offices or research spaces following substantial fit-out/refurbishment activities. Overall occupant comfort and attractiveness of the site could be compromised compared to the new development planned.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing buildings will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

The existing buildings offer little potential to deliver social or economic value locally or more widely. For instance, the architecture does not hold discernible heritage value, and the potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a new development.

8. Plant outbuildings

Buildings 27, near 17, near 16, near 30, and near 29 have been grouped as plant outbuildings based on the information received from the client as well as observations by the Reusefully team. They are assumed to have been built during the mid to late 1990s based on the sites planning history.

8.1. Building 27

Building 27 houses MEP equipment.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building in a similar capacity.

Superstructure and skin/shell

The building comprises one storey, with a steel portal frame structure and an insulated steel shell.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit. Overall, the condition of the external walls and roof and concrete floor is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some building services items. These include lighting (strip lights), and MEP equipment.

The services should be sufficient in any retention scenario.

Finishes, fixtures, and equipment

It is unknown whether the equipment is adequate for future use if retained.

8.2. Building near 17

Building near 17 includes a refrigerated unit, the assessors were unable to access this building internally though it is assumed to be similar to building near 16.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building in a similar capacity.

Superstructure and skin/shell

The building comprises one storey, with brick external walls, a reinforced concrete ground floor slab, timber roof structure with plywood sheets, structural steel columns and beams, and asphalt roofing.

The refrigerated unit is assumed to be constructed of a steel structure with Polyurethane insulated panels.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit. Overall, the condition of the external walls, concrete floors, and roof structure is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building is assumed to contain some basic building services items. These include lighting (bulkhead lights), and the MEP equipment associated with the refrigerated unit.

It is unknown whether the refrigerated unit is adequate for future use if retained.

8.3. Building near 16

Building near 16 includes a refrigerated unit and a small storage area.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building in a similar capacity.

Superstructure and skin/shell

The building comprises one storey, with brick external walls, a reinforced concrete ground floor slab, timber roof structure with plywood sheets, structural steel columns and beams, and asphalt roofing.

The refrigerated unit is assumed to be constructed of a steel structure with Polyurethane insulated panels.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit. Overall, the condition of the external walls, concrete floors, and roof structure is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some basic building services items. These include lighting (bulkhead lights), and the MEP equipment associated with the refrigerated unit.

It is unknown whether the refrigerated unit is adequate for future use if retained.

8.4. Building near 30

Building near 30 is a small plant outbuilding, the assessors were unable to access this building internally.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes). Could be used in a similar capacity.

Superstructure and skin/shell

The building comprises one storey, with cavity brick walls, a reinforced concrete ground floor slab, and an asbestos cement sheet roof.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that the assessors were unable to access this building internally). Overall, the condition of the external walls and concrete floors is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

It is unknown whether the building contains any service items.

Finishes, fixtures, and equipment

It is unknown whether the building contains any finishes, fixtures, or equipment.

8.5. Building near 29

Building near 29 includes 3 small storage areas (assumed).

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes). Could be used in a similar capacity.

Superstructure and skin/shell

The building comprises one storey, with brick external walls, a timber roof structure, and an asbestos cement sheet roof.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit. Overall, the condition of the external walls and concrete floors is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building did not appear to contain any service items.

Finishes, fixtures, and equipment

The building did not appear to contain any finishes, fixtures, or equipment.

8.6. Strategies

Future use strategies (all buildings) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structure forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Not Feasible.** Would need to be repurposed in accordance with demand for space and the technical capacity to adapt accordingly, which is very limited for these structures.

Modification strategies (all buildings) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** Under any scenario, the existing plant and refrigeration equipment is likely to be unfit for the new development. Potentially, they could be used again in a similar capacity with the installation of new services and other refurbishment work to bring buildings up to required performance standards.
Partial demolition	**May be required**. It is possible that buildings could be retained whilst others are demolished, however, this would impede overall site potential**.** Unlikely scenario given current structures and general site layout
Expansion	**Not required.** Unlikely scenario given current structures and general site layout

8.7. Conclusions

Technical capacity of building to accommodate retention scenarios: ***May prohibit retention***

These buildings could be refurbished but are only suitable for limited uses that are likely to be unnecessary in the context of a new development.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether these buildings would be utilised in an alternative use. Compared to overall plans for the site, the existing buildings would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer investment returns. As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Energy performance of each building could technically be an acceptable standard for an industrial use, rather than occupied buildings.

Potential occupant comfort: ***May prohibit retention***

The internal spaces are only currently adequate for similar industrial uses, rather than occupied for offices or research spaces following substantial fit-out/refurbishment activities.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing buildings will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

The existing buildings offer little potential to deliver social or economic value locally or more widely. For instance, the architecture does not hold discernible heritage value, and the potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a new development.

9. Industrial building

Building 28 has been grouped as an industrial building based on the information received from the client as well as observations by the Reusefully team. The building is assumed to have been built during the mid to late 1990s based on the sites planning history.

9.1. Building 28

Building 28 is an industrial building.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes). Could be used in a similar capacity.

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, concrete external walls, a steel portal frame structure, steel sheet walls and roof, and asbestos insulating boards internally.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that some structural elements were concealed by the internal ceiling and wall coverings). Overall, the condition of the external walls and concrete floors and the steel portal frame is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some lighting (strip lights).

The services within the building would require near complete replacement/retrofit in any retention scenario.

Finishes, fixtures, and equipment

The building contains some MEP equipment.

It is unknown whether the equipment is adequate for future use if retained.

9.2. Strategies

Future use strategies (Building 28) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structure forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Not Feasible.** Would need to be repurposed in accordance with demand for space and the technical capacity to adapt accordingly, which is very limited for this structure.

Modification strategies (Building 28) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** Under any scenario, it could be used again in a similar capacity with the installation of new services and other refurbishment work to bring building up to required performance standards.
Partial demolition	**May be required**. It is possible that this building could be retained whilst others are demolished, however, this would impede overall site potential**.** Unlikely scenario given current structures and general site layout
Expansion	**Not required.** Unlikely scenario given current structures and general site layout

9.3. Conclusions

Technical capacity of building to accommodate retention scenarios: ***May prohibit retention***

This building could be refurbished but is only suitable for limited uses that are likely to be unnecessary in the context of a new development.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether this building would be utilised in an alternative use. Compared to overall plans for the site, the existing building would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer investment returns. As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Energy performance of the building could technically be an acceptable standard for an industrial use, rather than occupied buildings.

Potential occupant comfort: ***May prohibit retention***

The internal spaces are only currently adequate for similar industrial uses, rather than occupied for offices or research spaces following substantial fit-out/refurbishment activities.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing building will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

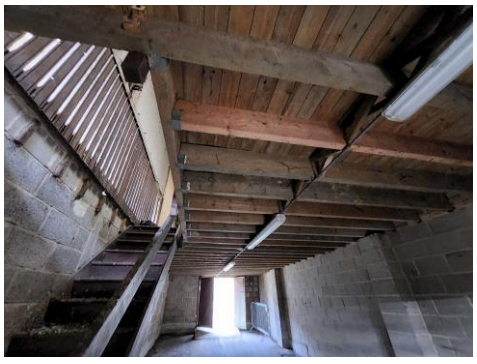
The existing building offer little potential to deliver social or economic value locally or more widely. For instance, the architecture does not hold discernible heritage value, and the potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a new development.

10.Barns

Buildings 34 and near 34 have been grouped as barns based on the information received from the client as well as observations by the Reusefully team. The buildings are assumed to have been built during the mid to late 1990s based on the sites planning history.

10.1. Building 34

Building 34 includes two large barn areas as well as two internal spaces with mezzanine floors.



Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[13]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with concrete block external walls, a reinforced concrete structure, steel sheets, timber structure mezzanine floors, and asbestos cement sheet (upper) walls and roof covering.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit. Overall, the condition of the external walls and concrete floors and roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some lighting (strip lights).

The services within the building are assumed to be sufficient if the building is retained for continued use.

[13] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Space/ layout/ partitioning

There are some concrete block walls, these appear to be connected to the structure so it may not be possible to adapt the layout. If the building is retained for use as a barn, these internal walls may be retained based on their condition.

10.2. Building near 34

Building near 34 is a barn/ cattle building and includes multiples rooms as well as a mezzanine floor.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[14]).

[14] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with concrete block external walls, a steel portal frame structure, asbestos cement sheet upper walls and roof covering, and a timber structure mezzanine.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that some structural elements were concealed by wall coverings and suspended ceilings). Overall, the condition of the external walls, concrete floors and steel portal frame structure is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some lighting (strip lights).

The services within the building are assumed to be sufficient if the building is retained for continued use.

Space/ layout/ partitioning

There are some concrete block walls internally, it is assumed that they are not load bearing so it may be possible to adapt the layout. If the building is retained for use as a barn, these internal walls may be retained based on their condition.

10.3. Strategies

Future use strategies (all buildings) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structure forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Not Feasible.** Would need to be repurposed in accordance with demand for space and the technical capacity to adapt accordingly, which is very limited for these structures.

Modification strategies (all buildings) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** Under any scenario, the existing structures are likely to be unfit for the new development. Potentially, they could be used again in a similar capacity with the installation of new services and other refurbishment work to bring buildings up to required performance standards.
Partial demolition	**May be required**. It is possible that buildings could be retained whilst others are demolished, however, this would impede overall site potential**.** Unlikely scenario given current structures and general site layout
Expansion	**Not required.** Unlikely scenario given current structures and general site layout

10.4. Conclusions

Technical capacity of building to accommodate retention scenarios: ***May prohibit retention***

These buildings could be refurbished but are only suitable for limited uses that are likely to be unnecessary in the context of a new development.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether these buildings would be utilised in an alternative use. Compared to overall plans for the site, the existing buildings would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer investment returns. As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Energy performance of each building could technically be an acceptable standard for an industrial use, rather than occupied buildings.

Potential occupant comfort: ***May prohibit retention***

The internal spaces are only currently adequate for similar industrial uses, rather than occupied for offices or research spaces following substantial fit-out/refurbishment activities.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing buildings will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

The existing buildings offer little potential to deliver social or economic value locally or more widely. For instance, the architecture does not hold discernible heritage value, and the potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a new development.

11.Storage buildings

Building near 31 has been grouped as a storage building based on the information received from the client as well as observations by the Reusefully team. The building is assumed to have been built during the mid to late 90's based on the sites planning history.

11.1. Building near 31

Building near 31 includes an open plan storage room, the assessors were unable to enter this building due to asbestos concerns.

Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes). This could be used again in a similar capacity.

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises one storey, with cavity brick and block external walls, a timber roof structure with asbestos board and asphalt roofing covering. There also internal brick columns.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit. Overall, the condition of the external walls, concrete floors, and timber roof structure is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture. It should be noted that the asbestos concerns should be addressed.

Services

The building contains an air conditioning unit. It is unknown whether the building contains other services.

Space/ layout/ partitioning

There are some internal brick columns, these are assumed to be load bearing.

Finishes, fixtures, and equipment

Finishes include carpet tiles (poor condition). If retained, it is likely that a full internal refurbishment would be required to achieve levels of quality are adequate for future use.

11.2. Strategies

Future use strategies (storage building) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structure forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Alternative use/ adaptation	**Not Feasible.** Would need to be repurposed in accordance with demand for space and the technical capacity to adapt accordingly, which is very limited for these structures.

Modification strategies (storage building) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required.** This is likely to be unfit for the new development. Potentially, it could be used again in a similar capacity with the installation of new services and other refurbishment work to bring building up to required performance standards.
Partial demolition	**May be required**. It is possible that buildings could be retained whilst others are demolished, however, this would impede overall site potential**.** Unlikely scenario given current structures and general site layout
Expansion	**Not required.** Unlikely scenario given current structures and general site layout

11.3. Conclusions

Technical capacity of building to accommodate retention scenarios: ***May prohibit retention***

The building could be refurbished but is only suitable for limited uses that are likely to be unnecessary in the context of a new development.

Compatibility with client aims/requirements: ***May prohibit retention***

In terms of overall site and layout, versus site potential, it is unclear whether this building would be utilised in an alternative use. Compared to overall plans for the site, the existing building would be likely to take up valuable footprint area on the site, potentially limiting the design and layout of the new development and would not offer investment returns. As such, it is not foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

Energy performance of the building could technically be an acceptable standard for a storage use, rather than occupied buildings.

Potential occupant comfort: ***May prohibit retention***

The internal spaces are only currently adequate for similar storage and industrial uses, rather than occupied for offices or research spaces following substantial fit-out/refurbishment activities.

Construction practicalities and logistics: ***May prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. Retention of existing buildings will limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***May prohibit retention***

The existing building offer little potential to deliver social or economic value locally or more widely. For instance, the architecture does not hold discernible heritage value, and the potential to supply employment and decent spaces for occupants if retained is poor in comparison to what could be achieved through a new development.

12. Industrial unit/ two storey office

Building 43 has been grouped as an industrial unit/ two storey office based on the information received from the client as well as observations by the Reusefully team. The building is assumed to have been built in the early 2000's based on the sites planning history.

12.1. Building 43

Building 43 includes ground floor storage areas, first floor office areas, a kitchen and bathroom facilities.




Physical description and condition

Substructure

The substructure is assumed to comprise a reinforced concrete floor slab, exact dimensions unknown (see pre-demolition audit report for assumed tonnages and volumes).

Overall, assuming they are in acceptable condition, it is likely that the substructure elements would permit continued use of the building for most use types (e.g. offices, light industrial, residential[15]).

However, it is possible that the condition or design of the substructure is not suitable for either continued use, increases in intensity of use, or changes to the physical architecture that significantly increase structural loading (e.g. vertical extension).

Superstructure and skin/shell

The building comprises two storeys, with cavity brick and block external walls, steel cladding, steel structure, a timber upper floor (assumed), steel roof structure (assumed), and steel sheet roofing.

The structure of the building was not surveyed in detail; however, the assessors did not observe any major structural defects during the site visit (though note that structural elements were often concealed by floor coverings and suspended ceilings). Overall, the condition of the external walls, concrete floors, and the roof is assumed to be sufficient to allow continued use where no major changes are made to the building's physical architecture.

Services

The building contains some building services items. These include lighting (suspended ceiling light panels and strip lights), air conditioning units, and plumbing associated with the kitchen and the bathrooms.

The services within the building may need updating in any retention scenario.

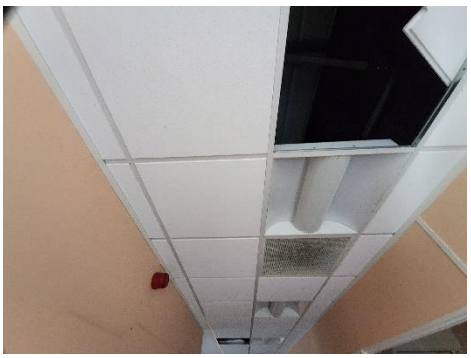
[15] Though note that other aspects, e.g. internal layout, may also limit the feasibility of different use types.

Space/ layout/ partitioning

There are some metal stud and concrete block internal walls, these are not loadbearing so the internal layout could be partially adapted for alternative uses. If the building is retained for use as an industrial unit/ office, these internal walls may technically be mostly retained based on their condition (note that some walls are in poor condition).


Finishes, fixtures, and equipment

Finishes include suspended ceilings with mineral fibre ceiling tiles (good condition), carpet tiles (fair to good condition), vinyl flooring (fair to good condition), and other miscellaneous items. If retained, it is likely that a partial internal refurbishment would be required to achieve levels of interior design quality and occupant comfort that are adequate for future use.

12.2. Strategies

Future use strategies (Building 43) *i.e. ways in which the use patterns of the existing building could be managed where the building is retained*	
Continued use	**Not feasible**. Each structure forms part of a collection of buildings that served the purposes of the previous single occupant. Currently vacant and not usable without repurposing.
Addition of alternative uses	**Feasible.** Would need to be repurposed in accordance with demand for space and the technical capacity to adapt accordingly.
Adaptive reuse	**Feasible.** Considering the size and layout of the existing building, it may be possible to adaptively reuse this property for alternative uses.

Modification strategies (Building 43) *I.e. changes to the physical architecture of the existing building that is required or beneficial for a Future Use strategy to be implemented*	
Refurbishment/ retrofit	**Required**. Under any scenario, the existing fit-out and FFE would likely need to be stripped out to make way for new items that meet the future needs for functionality, performance and quality. Furthermore, measures may be implemented to improve occupant experience within the building, in terms of environmental quality (air quality, temperature, humidity, etc.) and visual comfort/quality.
Partial demolition	**May be required** to achieve overall site development plans and be effectively used / designed into the overall scheme.
Expansion	**May be required** to achieve overall site development plans and be effectively used / designed into the overall scheme.

12.3. Conclusions

Technical capacity of building to accommodate retention scenarios: ***Not likely to prohibit retention***

This building could be refurbished to fit an alternative use, such as multiple occupancy commercial unit, or large single occupancy combined office and industrial space.

Compatibility with client aims/requirements: ***Not likely to prohibit retention***

In terms of overall site and layout, versus site potential, this structure is best placed for retention without impeding the design and layout of the overall new development. Once refurbished, it could offer a high degree of quality relative to the same floor area of a new building. As such, it is foreseen that this retention scenario is feasible given the client aims.

Potential energy performance: ***Not likely to prohibit retention***

This building could technically be brought to acceptable standard through insulation of building envelope and thermal bridges, installation of high-performance windows and doors, improved airtightness, damp-proofing, low-energy HVAC systems, et cetera.

These measures are likely to be extensive for the building to meet future building regulations.

Potential occupant comfort: ***Not likely to prohibit retention***

The internal spaces could be fit for regular occupancy as offices or research spaces following substantial fit-out/refurbishment activities.

Construction practicalities and logistics: ***Not likely to prohibit retention***

It is clear that multiple buildings will need to be removed to facilitate overall site development. The location of this building means that it is less likely to limit scope and complicate site works due to the loss of access and space for vehicles, equipment, and materials.

Social and economic value considerations: ***Neutral***

The existing building offers potential to deliver economic and social value locally. However, its architecture does not hold discernible heritage value, so aesthetics would need to be considered in the context of the overall development design.

13.External Features

Use patterns, physical description, and condition

The are areas of external hardstanding as well as the road that connects the buildings on site. The hardstanding appears to have been intended for use as car parking. It appears to be in poor condition but may be suitable for use as car parking or other functions of hardstanding.

Other items present in the external areas are listed in the table below.

Item	Use	Condition	Indicative photographs
Brick planter outside building 23	No function at present (remnant from previous buildings or functions).	Fair	
Block paving outside building 23	No function at present (remnant from previous buildings or functions).	Poor (cleaning and minor maintenance required)	
Brick wall and gravel feature	No function at present (remnant from previous buildings or functions).	Poor	
Brick structure with fuel oil tank	No function at present (remnant from previous buildings or functions).	Fair (fuel oil tank condition unknown)	

Item	Use	Condition	Indicative photographs
Steel structure housing generator	No function at present (remnant from previous buildings or functions).	Unknown	
Tanks	No function at present (remnant from previous buildings or functions).	Unknown	
Steel structure	No function at present (remnant from previous buildings or functions).	Fair (internally unknown)	
Metal structure	No function at present (remnant from previous buildings or functions).	Fair	
External hardstanding	No function at present (remnant from previous buildings or functions).	Poor	

Feasibility of retention

Overall, whilst many of the existing external site features may be technically suitable for future use based on their condition, they provide little function other than ancillary storage and car parking. The most useful external feature is the road on the site which is likely to be suitable for retention.

All other external site features are unlikely to be suitable for retention.

14.Summary and Recommendations

As discussed in previous sections, there are several assets on the former MSD site that could technically be retained (i.e. that do not present an imminent need for demolition and could feasibly be used if retained).

However due to various factors including incompatibility with client aims, difficulty of achieving good performance and condition, issues with construction logistics, and low potential to deliver social and economic value, it is not believed that many of the existing assets on the former MSD site present a conclusive case for retention even when taking the environmental benefits of doing so into consideration.

Asset	Recommendation
Building 20	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 24	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 25	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 29	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 31	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 40	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 17	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 16	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 23	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 30	Retention is feasible with extensive refurbishment, however, utilisation potential seems low. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 27	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.

Building near 17	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 16	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 30	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 29	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 28	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 34	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 34	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building near 31	Utilisation potential is limited. Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.
Building 43	Consider for retention and refurbishment, with some adaptation and repurposing.
Externals	Do not retain – demolish/deconstruct and recover key materials as recommended in pre-demolition audit report.

Where retention is given further consideration for any of the assets, it is strongly recommended that the client commissions further assessments by suitably qualified professionals to ensure that the retained assets would be safe, fit-for-purpose, and would demonstrate suitable performance and condition. Design studies should be carried out exploring the opportunities and impacts of different design options involving retention of technically retainable assets. To support these, it is recommended that the following assessments are commissioned by suitably qualified third-party experts:

Assessment	Assessors
Structural survey investigating the condition, estimated remaining service life and tolerances of existing building's structural elements, to determine the feasibility of different retention and/or expansion scenarios. These may include continued use according to the original design intent of the buildings, changes in use type or intensity of use, as well as changes to the physical architecture (e.g. extension, partial demolition).	Structural engineer

General condition survey to assess the condition of key assets and components, estimate their remaining service life, and evaluate whether they are suitable to be retained in a retention scenario.	RICS qualified surveyor
MEP survey, to determine the remaining lifespan and determine the potential to retain MEP elements.	MEP engineer
Energy assessment, to calculate the potential energy performance of the existing buildings under retention scenarios and to determine the key building elements that may need to be replaced or added (e.g. glazing, insulation).	Energy consultant
Whole life carbon assessment of retention scenarios vs. (partial) demolition and new build. Data from a pre-demolition audit can feed into this to account for the embodied carbon benefits of retention and potential for avoided embodied carbon in a new build.	Whole life carbon consultant
Financial options appraisal of retention scenarios and demolition and new construction scenarios.	Client (in-house) or consultant
Local/regional analysis of demand for uses of space in proposed retention scenarios, e.g. offices, coworking space, light industrial.	Real estate consultant
Consultation/evaluation of wider social & economic impacts of the existing building to the community under the proposed retention scenarios, to determine the scope for the building to be an asset to the community. This should explore the possible alternative uses in terms of their social and economic costs and benefits, ideally with local stakeholder/community engagement.	Social value consultant Specialist organisations e.g. Platform Places[16]

Where retention is not considered further by the client, design studies and the supporting assessments listed above will not be necessary.

[16] https://www.platformplaces.com/

Appendix A

Report Authors

Gilli Hobbs is a Director of Reusefully Ltd and has provided technical & expert input to sustainability related projects in the built environment for 30 years. Until 2021, this was at BRE, where she was Director in the Strategic Advisory team, working across low carbon buildings and building products, circular & lean construction, renewable energy technologies and sustainable communities, in the UK and overseas. In this role she also led BRE's work on resource efficiency and circular economy. Recently, she has been working as circular economy advisor to London Borough of Enfield on the Meridian Water regeneration project, undertaking numerous pre-redevelopment audits and various projects such as the EC commissioned project relating to Measurement of Circularity Approaches in the Construction Ecosystem. Gilli is a member of various standards committees including CEN TC 350 SC1 Circular Economy in Construction (Also Chair of UK mirror committee), ISO SCP 1/4 Circular Economy, BSI CB 101 Service Life Planning and B/558 Sustainability of Construction Work.

Ben Cartwright is a researcher and expert advisor on sustainability in the built environment, focusing on circular economy but with broad experience also covering embodied carbon, health & wellbeing, nature/biodiversity, building performance evaluation and more. With a firm belief that circular economy can only be achieved through systemic change, Ben is always keen to work with a wide variety of stakeholders on projects that span multiple industries, technical approaches, and policy areas. Recent projects include: developing data and digital approaches to support a circular built environment as part of the EU Horizon 2020-funded project CIRCuIT (Circular Construction in Regenerative Cities); delivering training to local authorities on embodied carbon and circular economy; carrying out pre-demolition audits; contributing to industry reports on circular economy in different sectors; and, supporting the integration of circular economy into the BREEAM sustainability assessment schemes.

Zoe Culverhouse is a recent graduate who has joined the Reusefully team. Her interest in design and sustainability was sparked when she started researching the housing crisis, empty homes, and retrofitting. These subjects ended up forming her dissertation in her final year of university and continue to be topics she is passionate about in her work. Zoe has skills and experience from university such as carrying out site visits, analysis and more. She is now aiming to apply these skills to her work at Reusefully.

About Reusefully

Reusefully is a partnership created to provide expert circular economy and broader sustainability advice and support within the built environment. We enable the practical implementation of circular economy thinking throughout the construction supply chain and provide evidence-based support and advice for related policy development. We are keen to collaborate and work with others who genuinely share this objective and value our commitment to delivering effective & impactful project outcomes.

We address material and resource efficiency, embodied carbon and net zero, design for deconstruction, waste prevention and waste management, end markets, reuse and recycled content. Collectively, Reusefully brings together over 45 years of experience, working across multiple parts of the value chain, from small practical projects to large scale R&D, for a wide variety of clients. More information at www.reusefully.co.uk