

Appendix 6: Feasibility Study





SUFFOLK RECORDS OFFICE

Relocation to UCS Campus

FEASIBILITY REPORT

PRIVATE & CONFIDENTIAL

DOCUMENT CONTROL SHEET

| | |
|--------------------------------------|--|
| Premises: | Suffolk Records Office |
| Address: | Fore Street Ipswich Suffolk IP4 1JW |
| Project: | Relocation of Suffolk Records Office |
| Job Number: | 14-0187 |
| Document Title: | Feasibility Study |
| Client: | Suffolk County Council |
| Contributors: | |
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The Keep East Sussex Record Office, Brighton
Image Source: Google Images
October 09, 2014.

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University Campus Suffolk Waterfront Building, Suffolk
Image Source: Google Images
October 09, 2014.

Objectives

The records for Suffolk are currently situated within separate stores across the county. Gatacre Road being the site in Ipswich. With the life cycle of the building coming to an end at Gatacre Road, a new industry standard archives store is required.

It will support the future, countywide accrual needs of at least the next 20 years and the holdings of the Bury Outstore. The development will also include potential for an extension to the store with a new East of Suffolk research centre.

This is a long term strategy, moving Suffolk Records Office (SRO) towards a new East of Suffolk research centre (including storage capacity for medium term countywide needs and the replacement of the Bury Outstore, and Lowestoft Records Store). The final new research centre would accommodate a shared space approach for UCS academic and research teams, a hub for local heritage expertise, information and public visitor access and facilities. The new research centre will broaden accessibility to new audiences across a range of primary heritage archives and collections. Research room facilities will accommodate new audiences, particularly given the collaboration with UCS and inclusion of a 200 seat lecture auditorium.

This report has been prepared by Concertus Design and Property Consultants. Its purpose is to provide a clear option appraisal and feasibility study of a potential site, floor plans and facilities required by Suffolk County Council (SCC) for a new industry standard archive store.

Structure of Report

This report aims to provide an analysis based approach to each design proposed. It investigates to what extent the site can provide the facilities required by the brief, both currently and in the future should the site be further developed. It has taken into account the possible future master plan of the East Suffolk Research Centre, in plan form. It also takes into consideration the possible architectural, structural, landscape, mechanical and electrical design and looks at the opportunities for the external material treatment of the new building work.

Assumptions

This study was largely carried out as a desktop study, supported by walk around site visits, discussion with SCC and anecdotal information. It relies only upon the information that it was possible to obtain within the time frame available. Should a site and design be chosen to advance to the planning stage there may be the requirement for further detailed investigations into key areas.

A number of working assumptions have been made to produce the report. These are intended to enable an equal analysis of each site. The key assumptions are:

1. Any existing buildings or structures on the site can be, where necessary, demolished;
2. No conditions exist on the proposed site that would limit its use as a site for a records store and research facility, unless consequently found during the compilation of this report.

Cost

All high level costs given within this report are based upon available information's. Figures given exclude:

- Loose Furniture,
- Equipment,
- Disbursements,
- VAT.

General Considerations

Design Principles

The design should incorporate:

- Stimulating design within the budget for both public and the staff,
- Meet Standards set in PD5454.
- Flexibility to allow ICT changes as technology develops.
- Inclusive designs for the functionality and effective use of the building.
- Community use, for reading, research and ability to use areas of the building outside the normal opening hours, excellent environmental design to ensure the SRO is fit for purpose for the longer term.
- Safe, secure and sustainable designs.
- External environment to be an extension of the internal environment where possible.
- Use accepted guidelines as a guide to achieving satisfactory and appropriate levels of facilities.
- Secure storage and the ability to expand if required.
- A sense of public gathering allowing it to be a viable source of activity for the public.

Observations On Client Brief

The client brief calls for a specialist archive store to meet the standard set in PD5454.

Using the initial brief as described the following observations have been made;

The path of the document is extremely important and this should be one of the main priorities for the basis of the design.

This should be protected in the form of a break between public and non public areas. Once the documents path has been considered the public area can then be considered.

The public area must be inviting and complement the surround facilities of the UCS campus.

Initial Client Brief

Working brief

The initial design brief called for the design of the a new industry standard archive store for the SRO on the UCS site. It will support the future, countrywide accrual needs of at least the next 10 years and the holdings of the Bury St Edmunds outstore. Providing a two phase plan, as stated below;

Phase 1

- 737m³ of archive storage.
- Loading Bay
- 40m² Document transit area, (including welfare and staff facilities)
- 25m² Gas Storage area.
- Plant Rooms

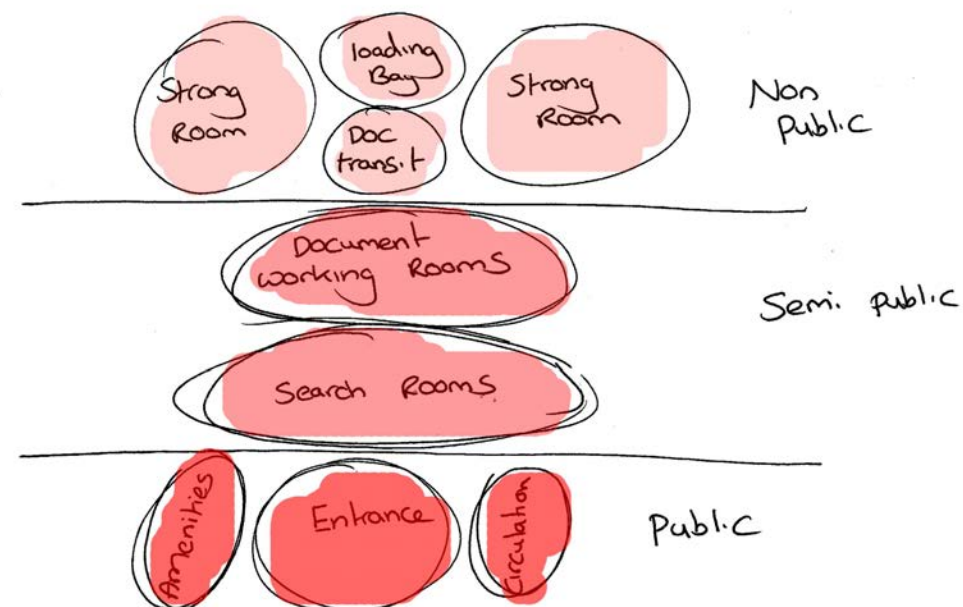
Phase 2

- 1371m³ of archive storage (extension)
- 60m² Accession & Cataloguing Room
- 100m² Conservation Room
- 40m² Digitisation and Copying Room
- 14m² Cleaning Room
- 7m² Air Drying Room
- 8m² Archive Quarantine Store
- 30m² Document Production Area
- 500m² Public search rooms.
- 30m² Seminar Room x 2
- c650m² 160 Seat Auditorium
- 25m² Reception and Shop
- 100m² Exhibition Spaces
- 50m² Refreshment Area
- 40m² Public Toilets
- 20m² Cloakroom and Lockers
- 10m² Equipment Store
- 5m² First Aid
- 15m² Computer Room
- c100m² Office Space
- 20m² Small Meeting Room
- 6m² Cleaner's Store
- 3m² Refuse Disposal (internal)
- 30m² Staff Kitchen
- 20m² Staff WC and Showers
- 30m² Stationery
- 12m² External Refuse disposal area

Revised Client Brief

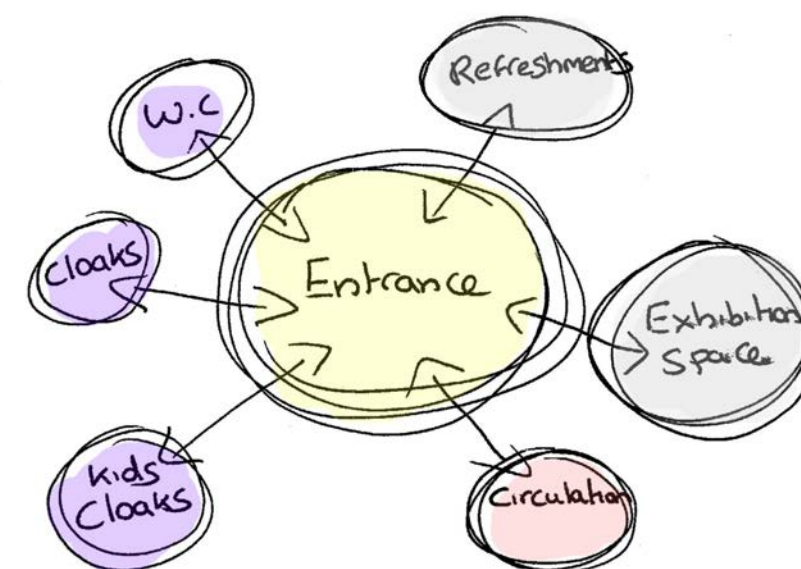
The revised design brief calls for the design of the a new industry standard archive store for the SRO on the UCS site. Providing a single phase plan with the following room schedule:

- 1610m³ of archive storage.
- Loading Bay
- 40m² Document transit area, (including welfare and staff facilities)
- 25m² Gas Storage area.
- Plant Rooms (area as required)
- 60m² Accession & Cataloguing Room
- 85m² Conservation Room
- 35m² Digitisation and Copying Room
- 14m² Cleaning Room
- 7m² Air Drying Room
- 8m² Archive Quarantine Store
- 30m² Document Production Area
- 510² Public search rooms.
- 80m² Seminar Room x 2
- c230m² 200 Seat Auditorium
- 10m² Technicians Room
- 25m² Reception and Shop
- 100m² Exhibition Spaces
- 75m² Refreshment Area
- 40m² Public Toilets
- 20m² Cloakroom and Lockers
- 10m² Equipment Store
- 15m² Computer Room
- c70m² Office Space
- 20m² Small Meeting Room
- 6m² Cleaner's Store
- 3m² Refuse Disposal (internal)
- 21m² Staff Kitchen
- 20m² Staff WC and Showers
- 30m² Stationery
- 12m² External Refuse disposal area



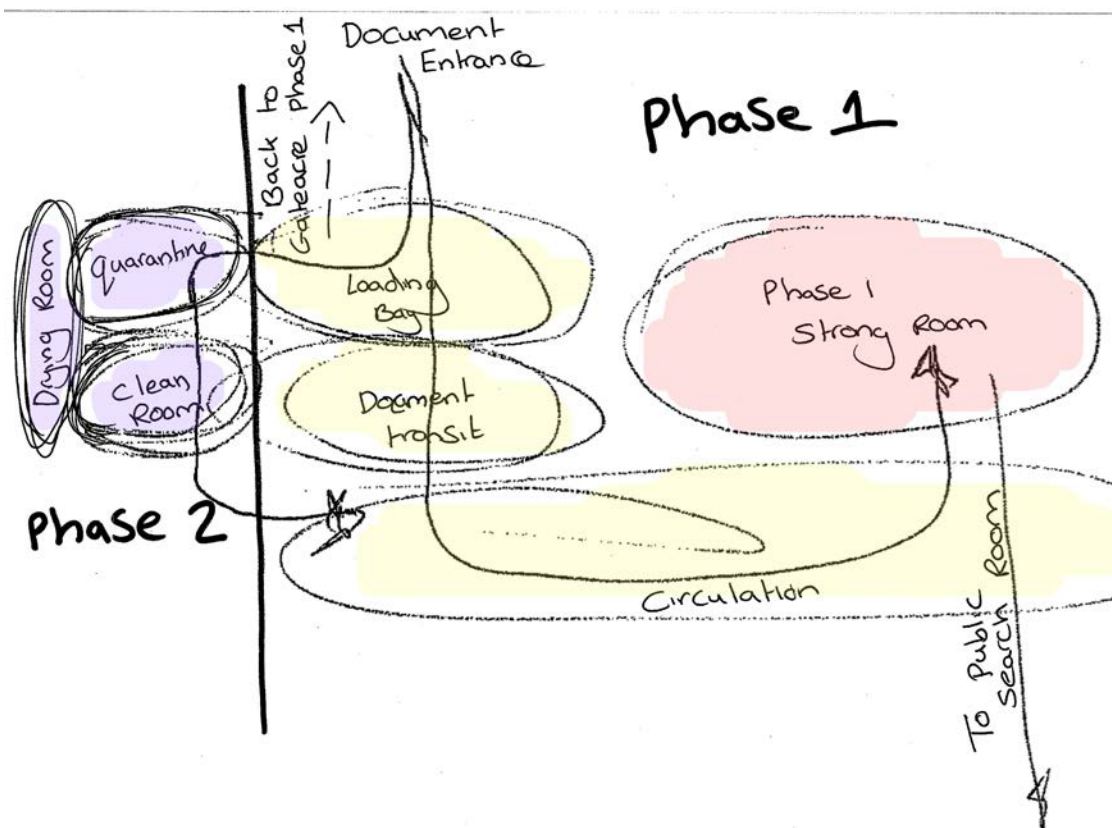
The diagram right indicates:

- The needs of public entrance.
- WC, Cloaks & Kids cloaks are a requirement of the building.
- Refreshments and Exhibition Space



The diagram above indicates:

- The need for allocated Public, Semi Public and Non Public Spaces.
- Strong Rooms and Document Area - Non Public
- Working Rooms & Search Rooms - Semi Public
- Entrance Foyer and Amenities - Public



The diagram left indicates:

- The document path
- Documents can enter via document entrance
- If they need work
- Phase 1 - back to Gatacre Road
- Phase 2 - Purpose-built rooms to aid with document care.
- If a document is requested it will be taken from the strong room and to the public search rooms.

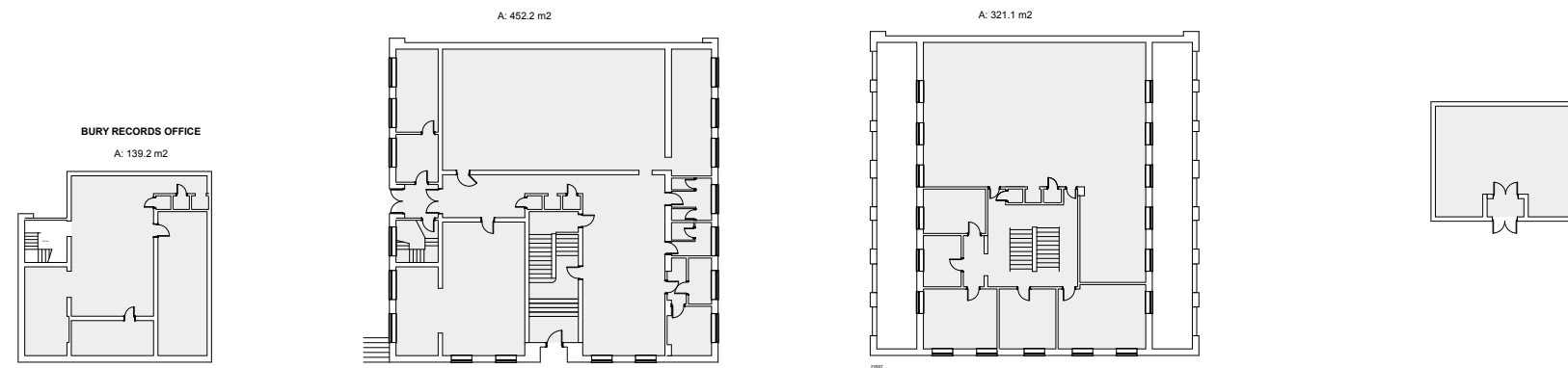
Bury St Edmunds Record Office

The Bury St Edmunds record office is situated at 77 Raingate Street, Bury St Edmunds. The original building, was designed to be extended, as is evident from the rear elevation.

There is no free parking on the site, there is one disabled parking space at the Manor House Car Park near by.

Bury St Edmunds railway station is about 1 mile north of the office. The office is not on a bus route but there is a taxi rank at the railway station.

The facilities currently provided include search rooms, full access to the microfilm sources and local studies materials. The records from the storage annex will be relocated to the new stronghold at the proposed site.



Basement Floor

Ground Floor

First Floor

Annexe



The Image below shows the location of existing record stores.

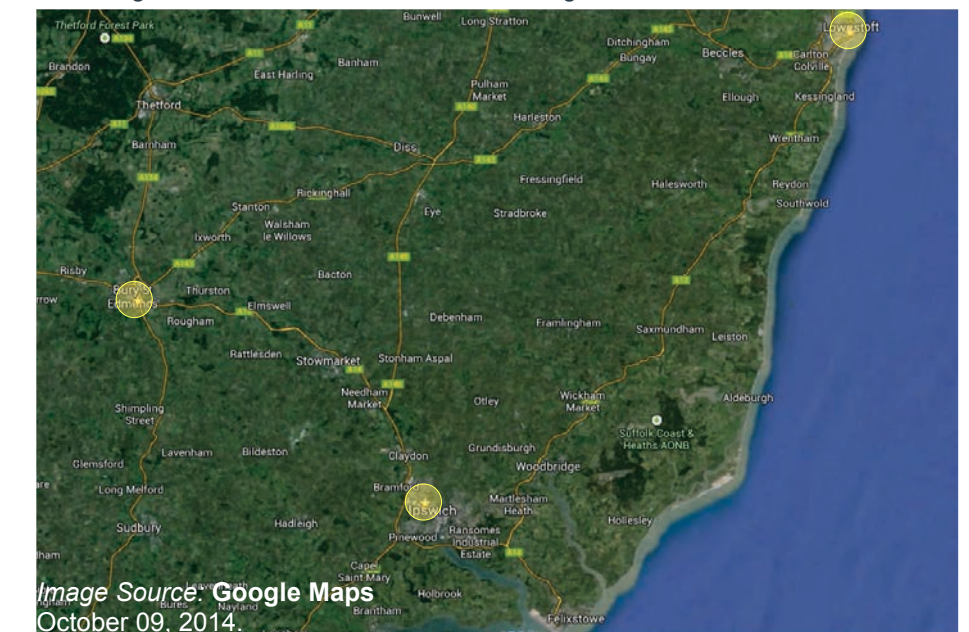


Image Source: Google Maps
October 09, 2014.

Ipswich Record Office

The Ipswich Records Office is situated at Gatacre Road, within the listed former Bramford Road school building which has been extended over the years. Most recently, further purpose-built strong rooms were added.

The office can be reached by car from the A14 (Bury St Edmunds, Cambridge and Midlands) via Norwich Road or Bramford Road, from the A12 and A1214 (Colchester and London) via London Road and Yarmouth Road, and from the A12 and A1214 (Woodbridge and Lowestoft) via Colchester Road and Valley Road.

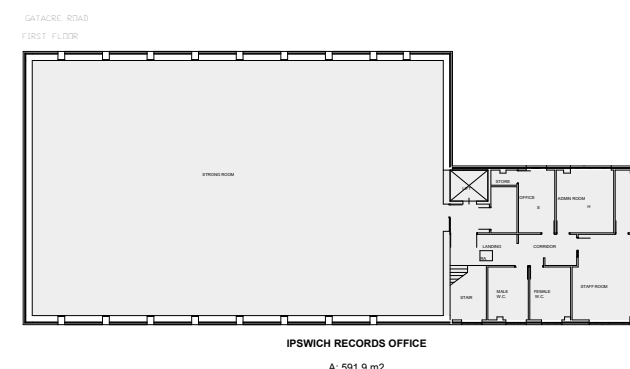
Car parking is available on site, entrance in Gatacre Road (closed after office hours).

Ipswich buses service 8 and 8b (ASDA via Whitehouse) from Tower Ramparts operates every 10 minutes and stop outside the record office. Taxis are available at Ipswich Rail Station, alternatively take any bus to Tower Ramparts and then catch a number 8 or 8b.

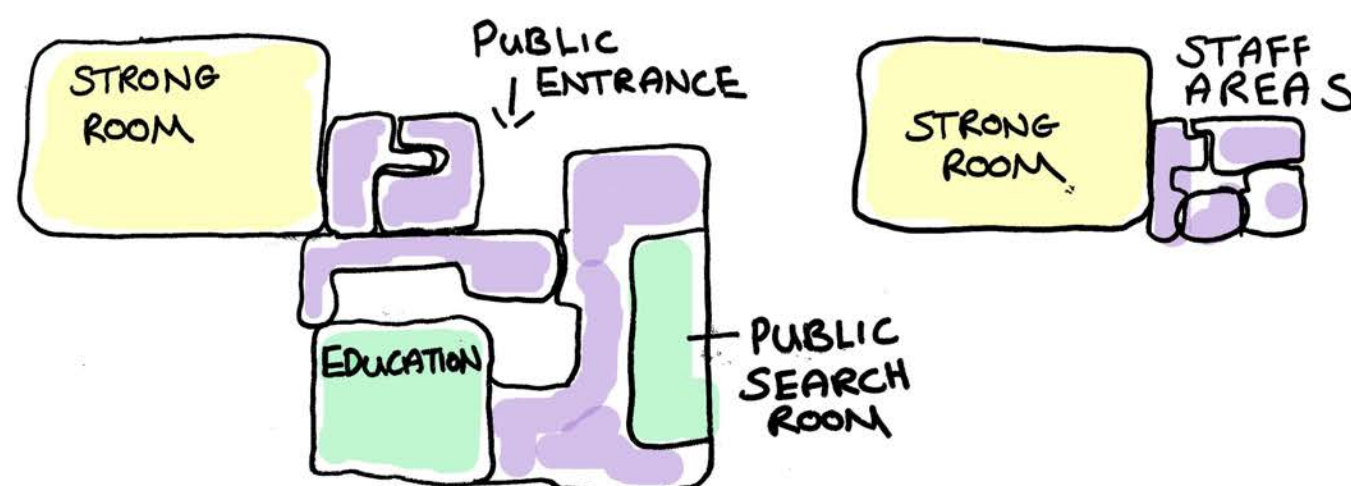
The records from this site will also be situated within the new facility on the UCS site.

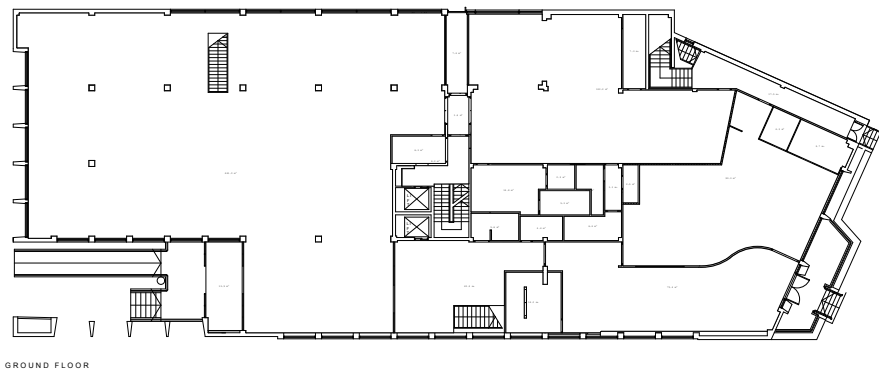


Ground Floor

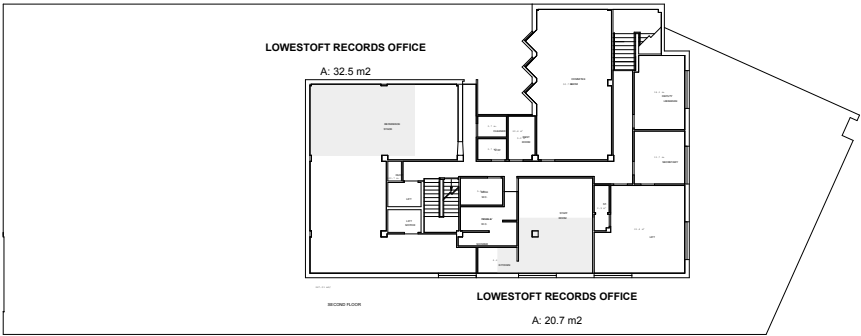


First Floor

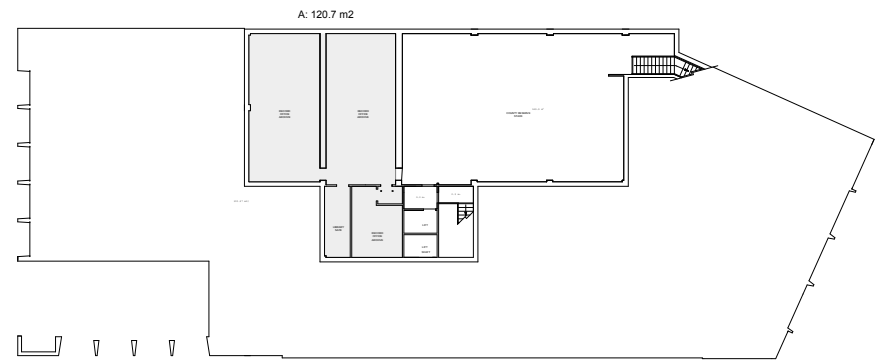




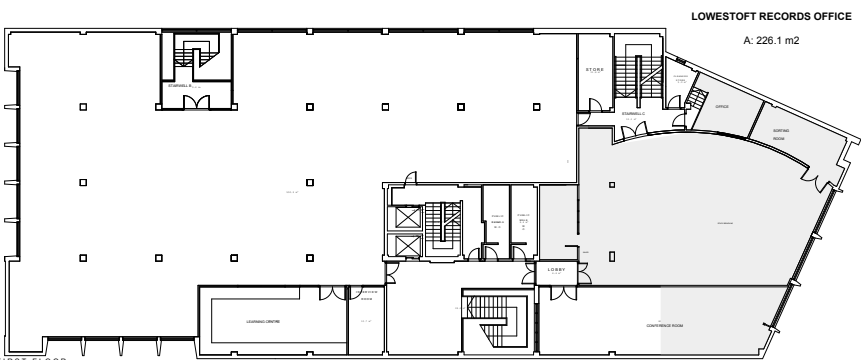
Ground Floor



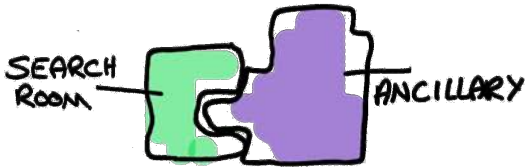
Second Floor



Basement Floor



First Floor



Lowestoft Record Office

The office is situated on the first floor of the central library, just off the main shopping area in Lowestoft.

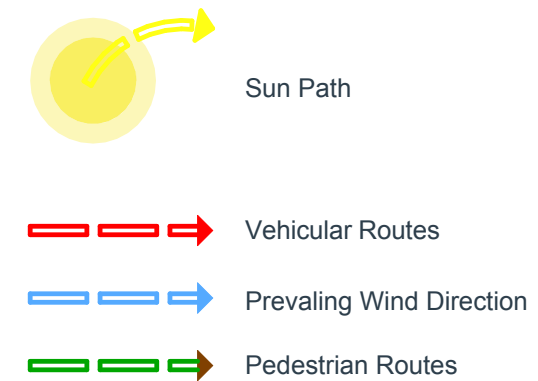
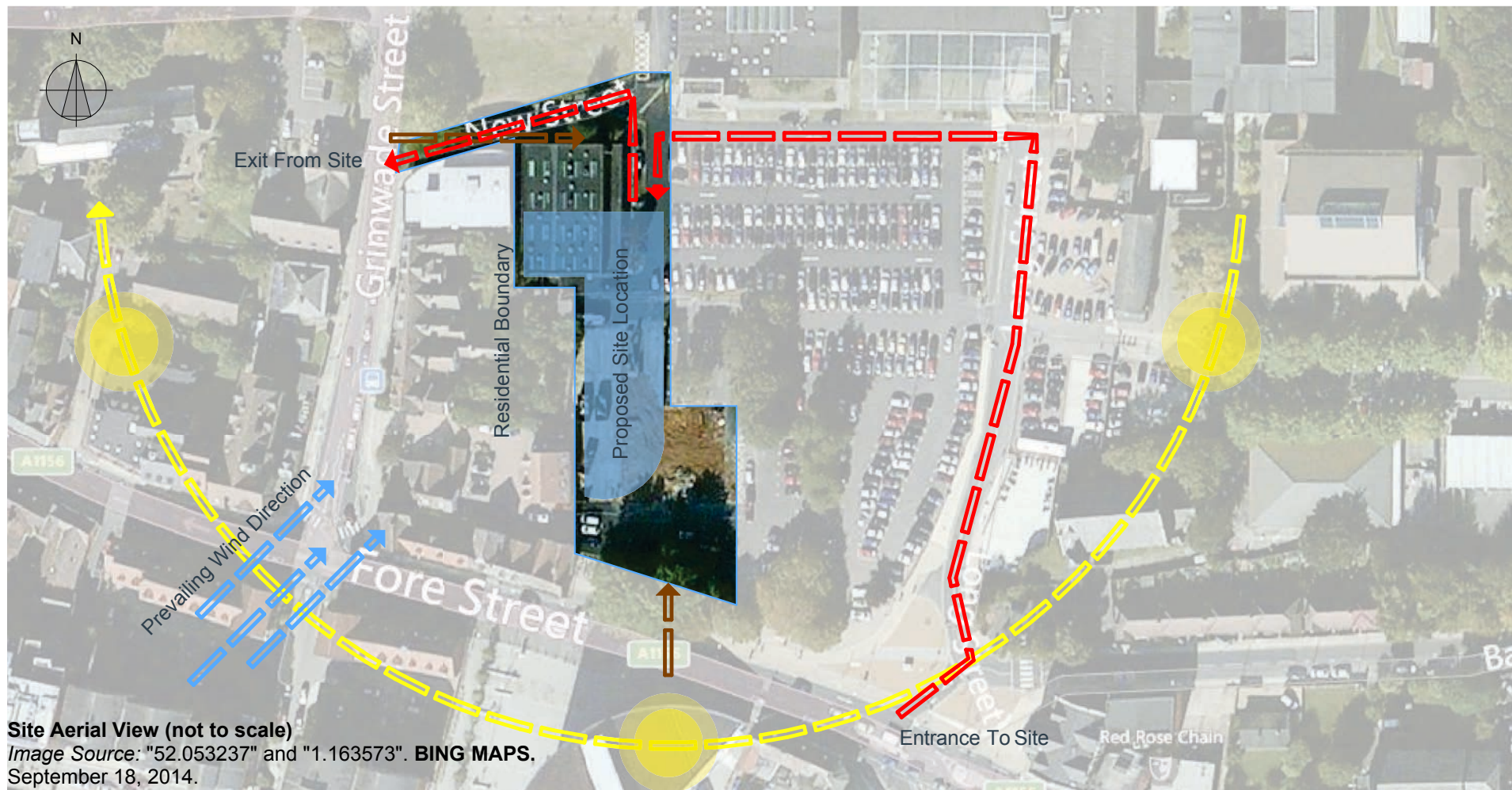
The main entrance to the public areas is on the first floor (which is accessible) but is via a very un-inviting pair of doors

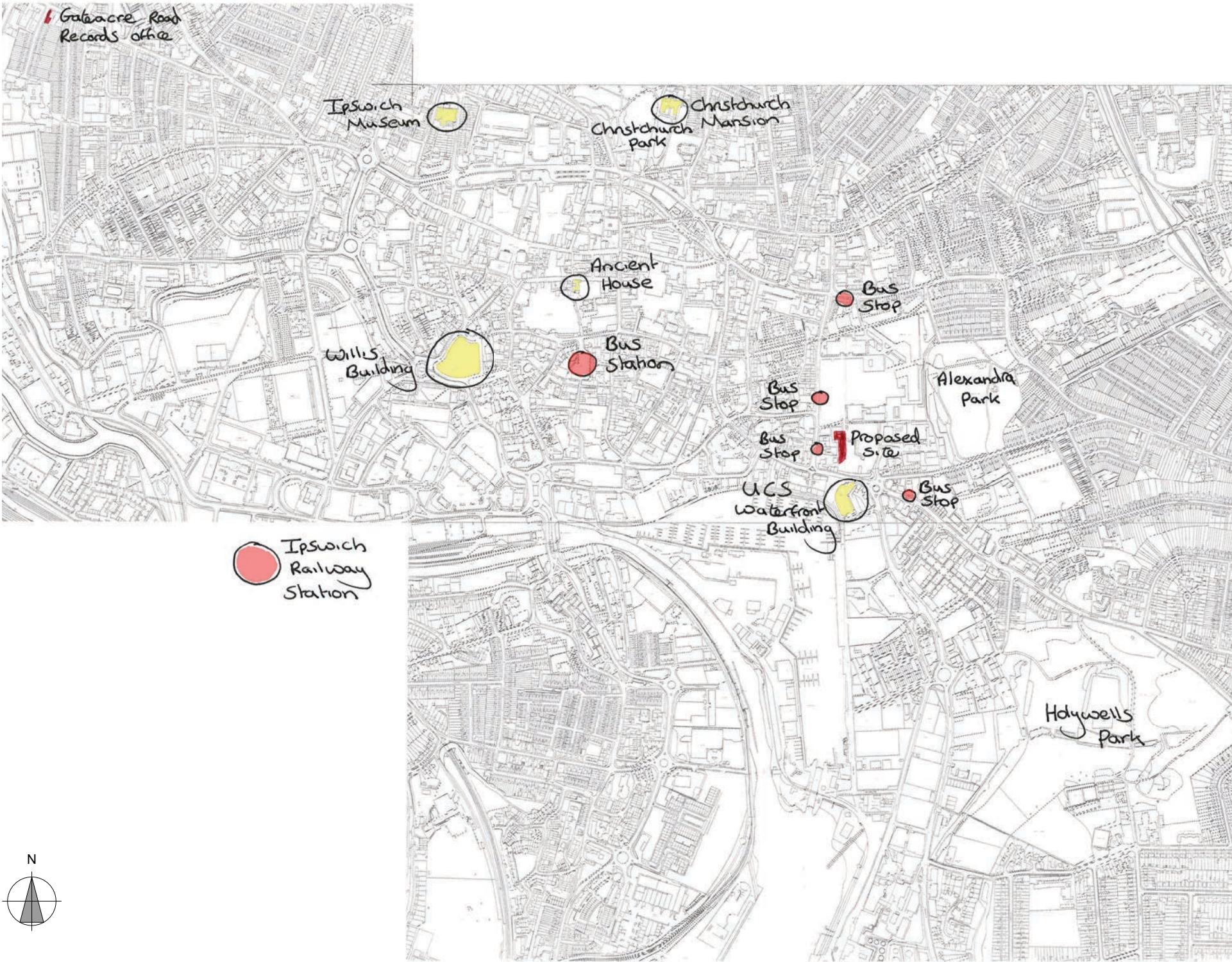
It is reached via the A12 from Ipswich and the south, and from Great Yarmouth via the A146 (Norwich) and A143 (Bury St Edmunds) from the west. There is no car parking on site but long and short-stay car parks are located near the town centre.

The office is within easy walking distance of both the bus and railway stations.

The records from this site will be situated within the new facility on the UCS site.







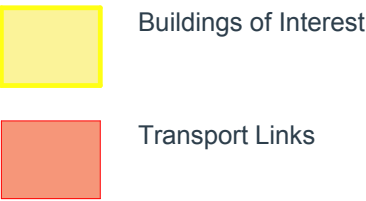
Site Location

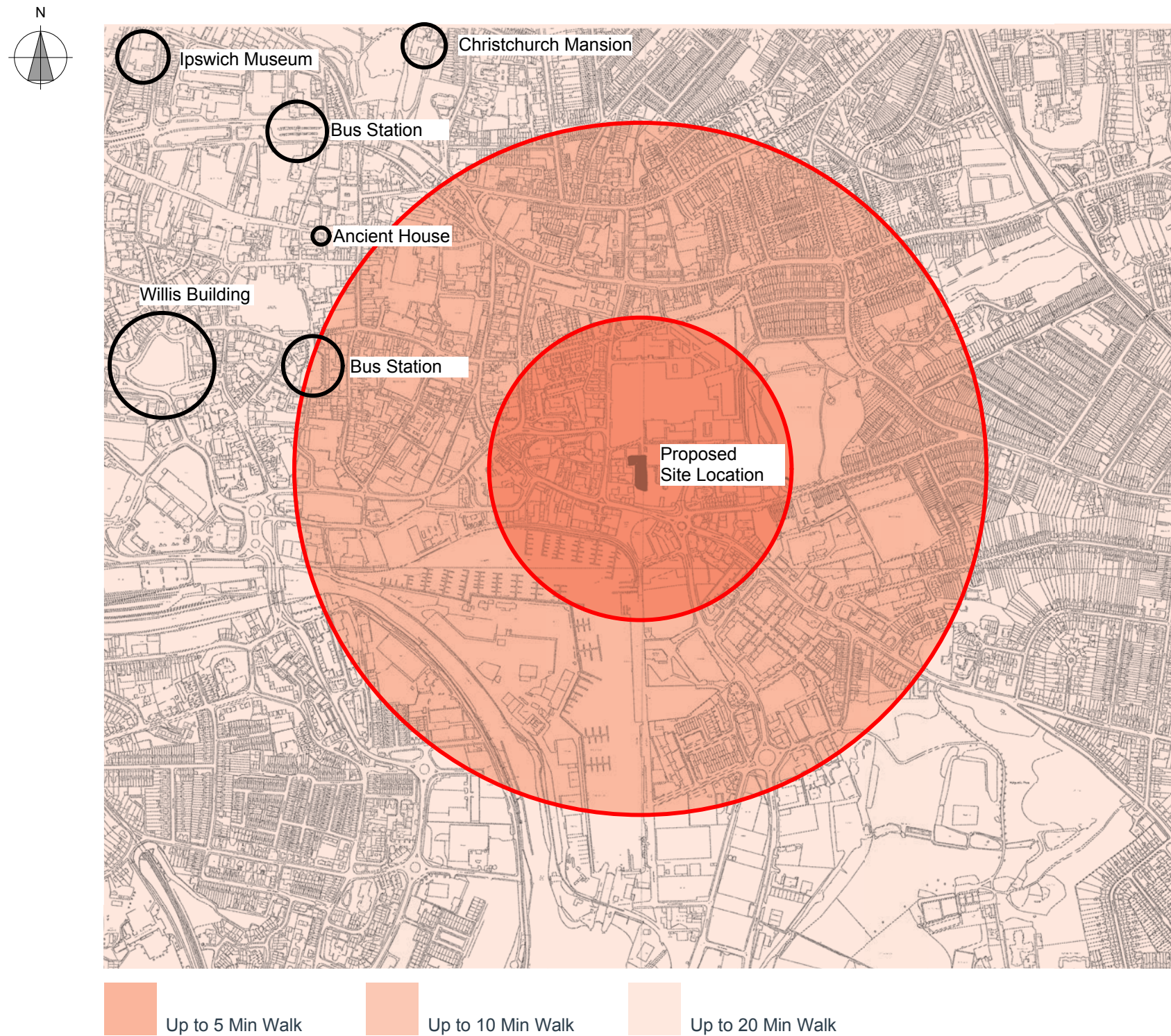
The site is situated within the waterfront area of Ipswich town centre, within the University Campus Suffolk (UCS) complex.

To the north and east of the site is Suffolk One College, with the GOALS soccer centre situated just to the north. To the south of the site is the Ipswich Marina waterfront. On which UCS have their main building. There are residential and commercial buildings along the waterfront creating a vibrant atmosphere. To the east of the site, there is student accommodation and residential houses, with offices at the bottom of Grimwade Street. The town centre is situated north west to the site and is approximately a 10 minute walk.

The site is approx a 7 minute drive from the current Gatacre Road site which will be entirely relocated to the new building, both in terms of storage and public/back office facilities.

In general the site is very central and would provide additional public interest, in an easily accessible location. To ensure that the site is as easily accessible as the existing three sites, close transport links are highly important. Walking distance to the railway station is important with close regular bus services. Parking facilities to accommodate driving visitors would be desirable and recommended.





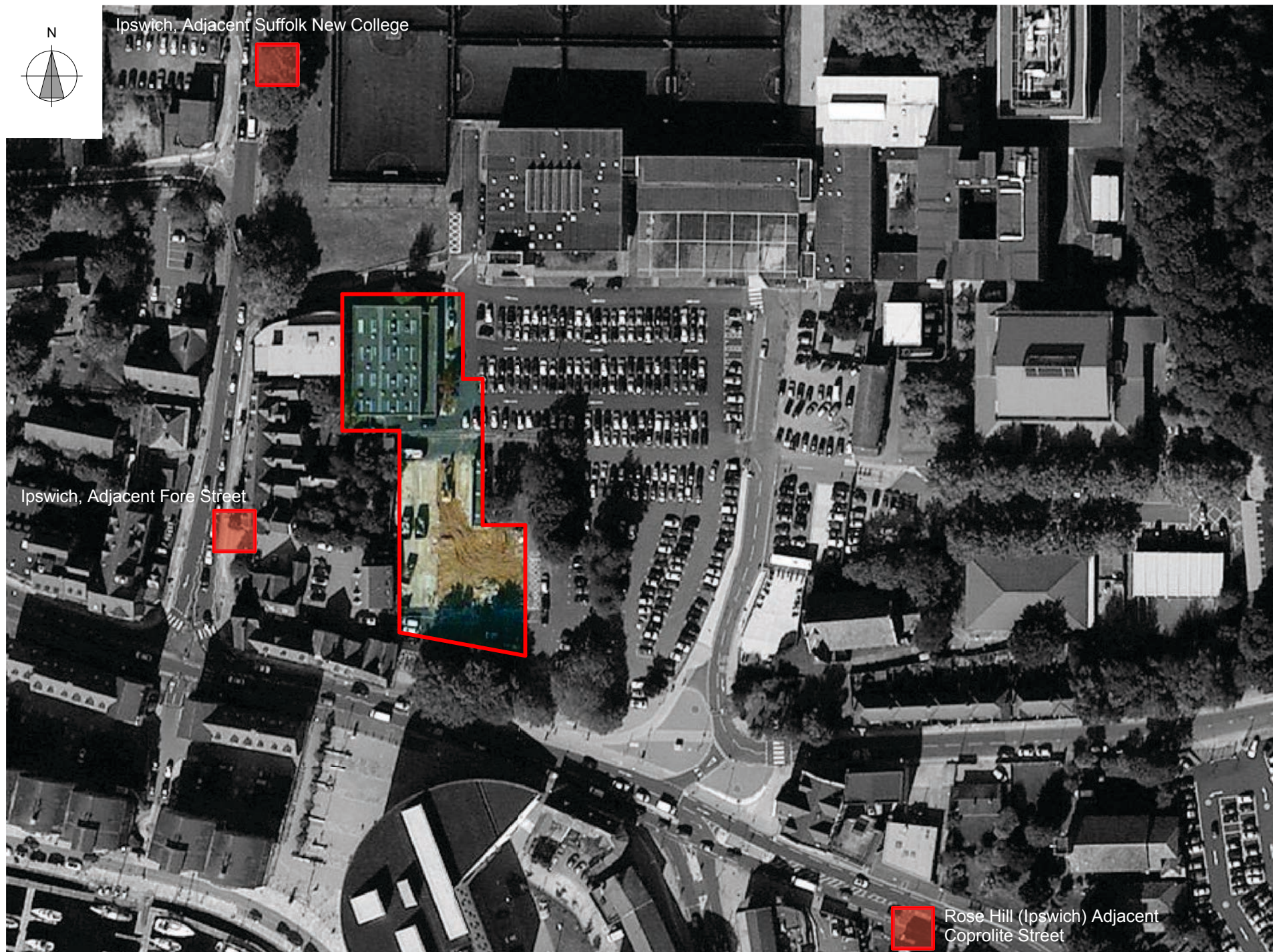
Travel Distances

The diagram shows 5 min, 10 min and 20 min walking distances from the site. In terms of radius as the crow flies, using this diagram it is easy to see how accessible the site is from local points of interest.

Local points of interest within walking distance, may include Christchurch Park (18 Mins), Ipswich Museum (18 Mins), Ancient House (13 Mins), and the Willis Building (15 Mins).

For those driving, there are many car parks within a 10 min walking radius. The transport to Ipswich is good with the railway station situated to the west of the site, (20 minute Walk). There are bus links throughout Ipswich with multiple buses using the bus stop situated on Grimwade Street (named Ipswich, adjacent Fore Street).

Walking to the site from other areas of Ipswich is very easy as can be seen on attached diagram.



Rose Hill (Ipswich) Adjacent Coprolite Street



Bus Stop Location

Site Aerial View (not to scale)
Image Source: "52.053237" and "1.163573". BING MAPS.
September 18, 2014.

Bus Links

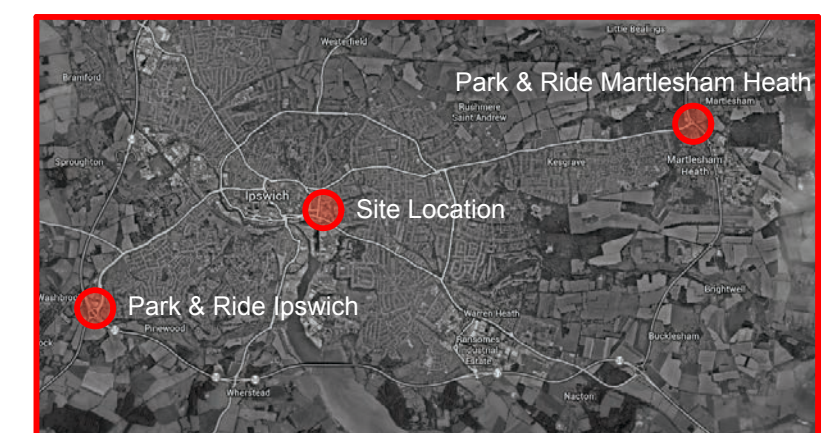
Within a couple of minutes walk to the site there are numerous bus stops that provide ease of access. The nearest of which being situated on Grimwade Street (named Ipswich, adjacent Fore Street), this serves the following bus routes:

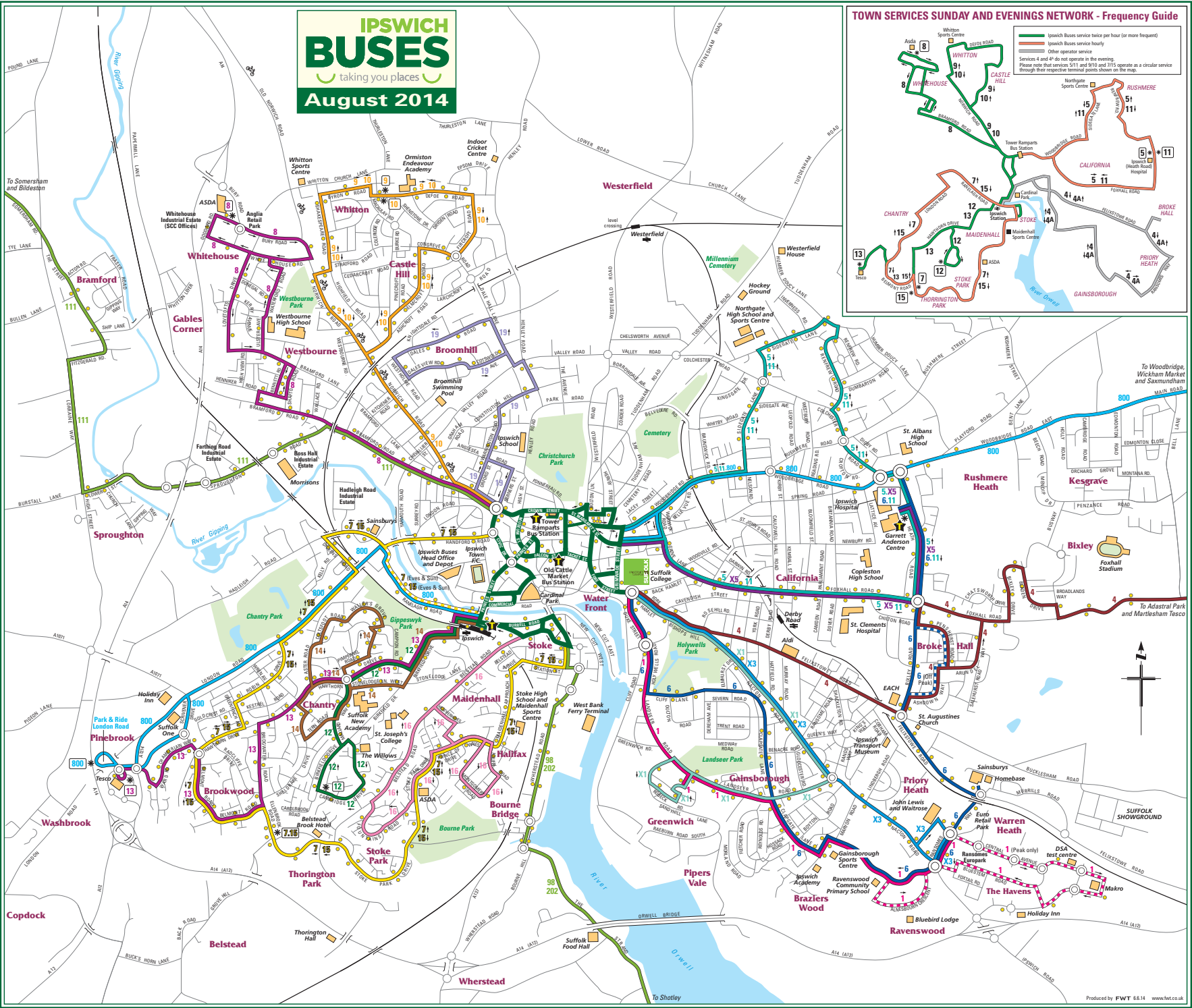
1, 4, 4A, 6, 60, 61, 61A, 76, 76A, 77, 77A, 91, 163, X1 and X3

The Route 66 From Martlesham, stops at the town centre, and The Dove (Ipswich, adjacent Dove Street) stop on St Helens Street, both within 10 min walking distances.

The Park and Ride situated to the north east and south west of Ipswich, has a route that travels through the centre of Ipswich. The park and ride also stops at The Dove bus stop. The park and ride locations can be seen below.

A full bus route map can be found on the following page.







Site Aerial View (not to scale)
Image Source: "52.053237" and "1.163573". BING MAPS.
September 18, 2014.

Railway Station

NCP

Private Car Parks

Road And Rail

The railway station situated to the east of the site, (approx 20 min walk), with a regular service to Norwich, Colchester, and Cambridge. There is a bus from the station to town centre locations, on regular time intervals.

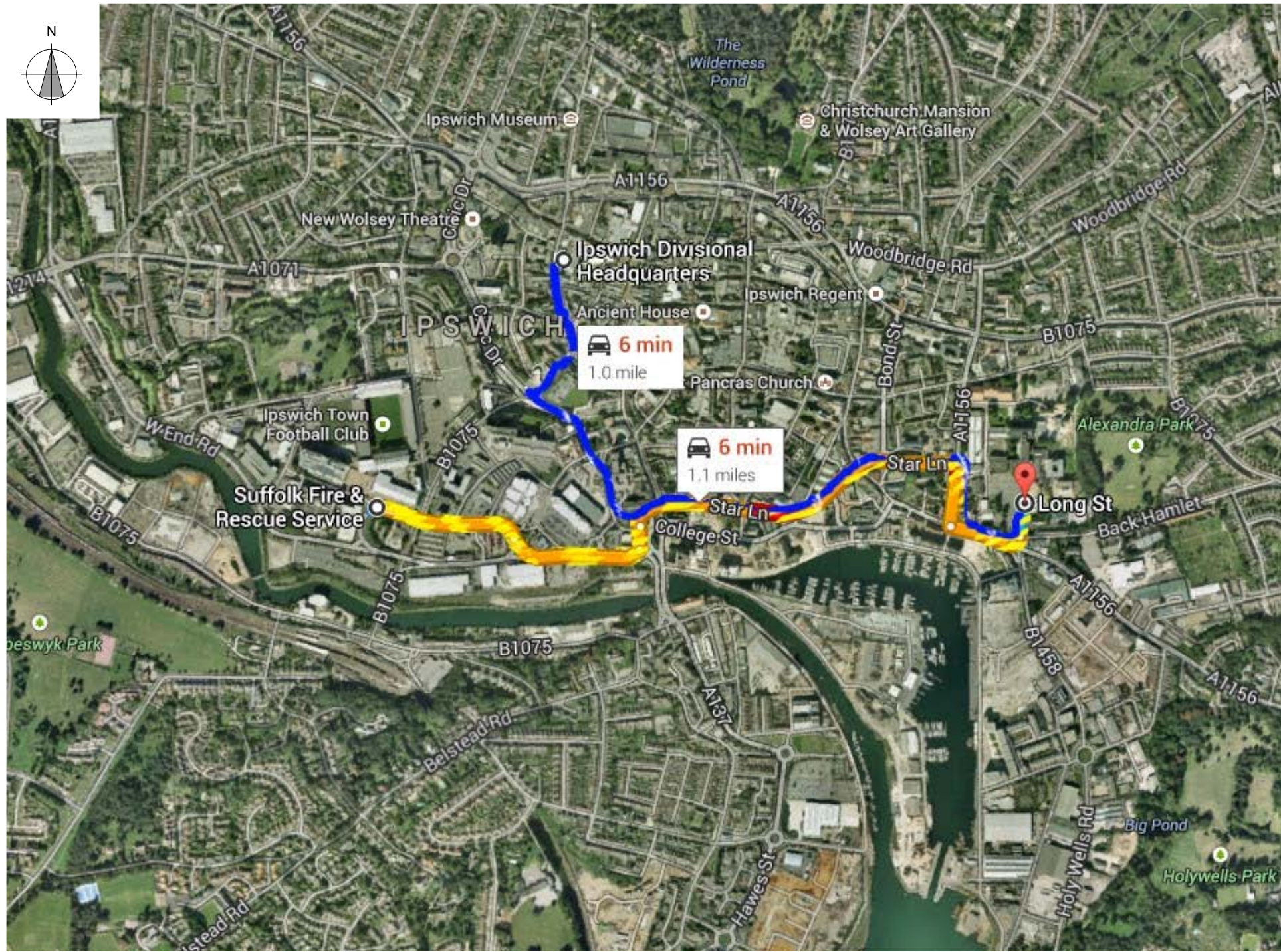
The main road routes into Ipswich are via the A14 and A12. The town is then accessible via numerous routes, mainly 'B' roads. The site is situated near the one way system in Ipswich therefore cars would have to travel to the site via two routes, either down Grimwade Street or via Fore Hamlet.

When coming off the A12 or A14 before entering the town there is a a Park and Ride service. Which runs a regular service.

The site benefits from having its own car parking facilities, however there are numerous NCP and private car parks throughout the town centre including the car park to the south of the main UCS building to supplement this.

The diagram opposite shows the location of current car parks that would be available for visitors to the records office should the car parking facilities at the proposed site be unavailable.

The full effects of traffic generation from the redeveloped site will need to be considered against existing uses. It is possible there would be a decrease in overall traffic levels, due to a reduction in parking spaces available. This would have a positive impact on surrounding roads where there is existing congestion at peak hours.



Site Aerial View (not to scale)
Image Source: "52.053237" and "1.163573". BING MAPS.
September 18, 2014.

Fire Response

Within PD5454 6.4.2 the elements of structure of the repository should be designed to provide four hours of fire resistance.

To enable the fire protection to be aided suitably the geographical location in relation to emergency services is important.

There is a fire station in Ipswich within quick reach of the records office, located on Princes Street.

A fire vehicle leaving the fire station would take between 4-6 mins to reach the site. This can be seen with the red and yellow line.

Without traffic, during a quieter period, it would take no longer than 4 mins to reach the site.

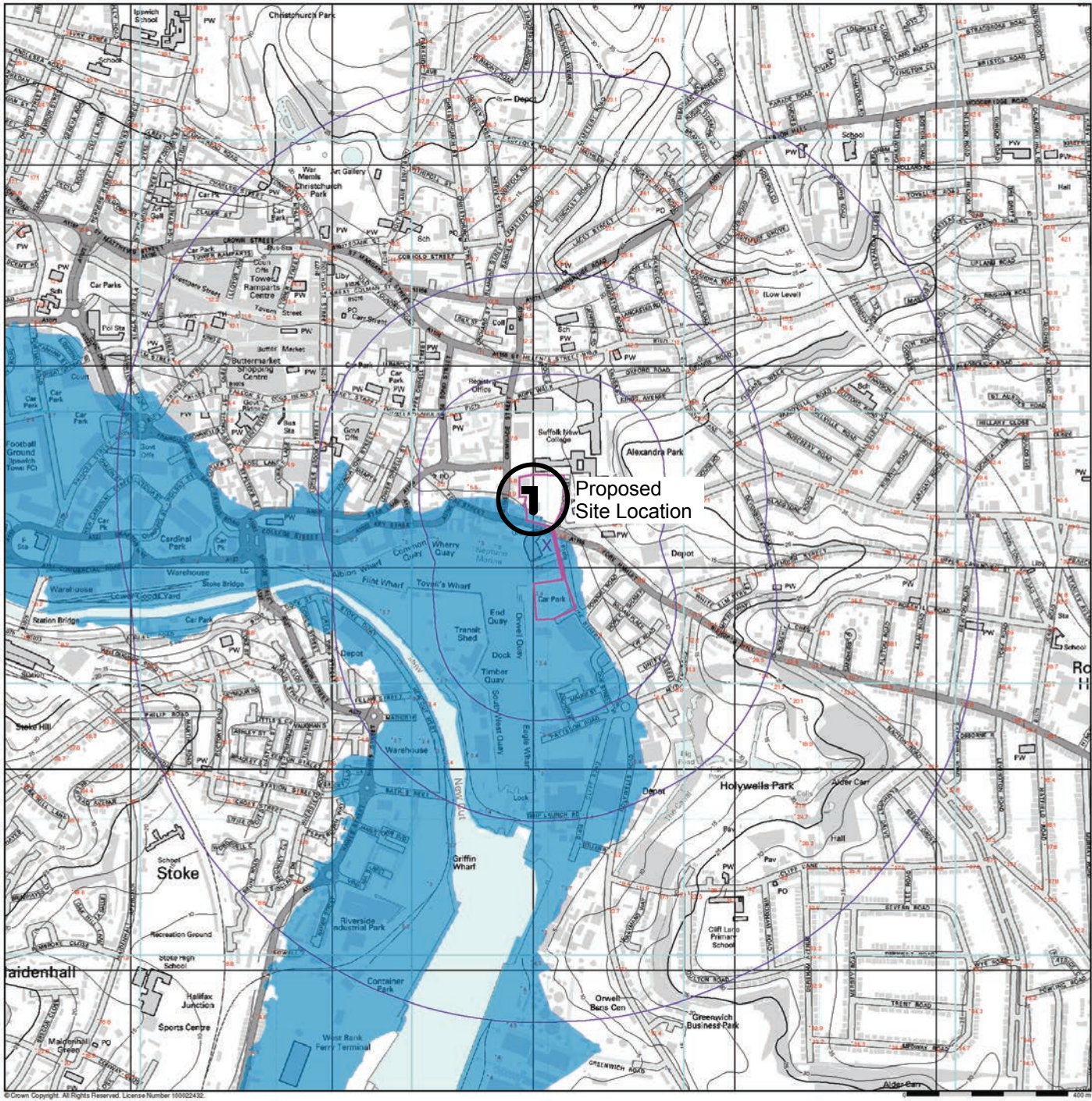
This should provide a very quick response and call out time to assist with 6.4.2 in PD5454.

Police Response

Security for the site is also a predominantly important issue. The records need to be protected and as well as CCTV and the building's own security, the distance for police response is important.

There is a community police station in Ipswich within easy reach of the records office, located on Museum Street.

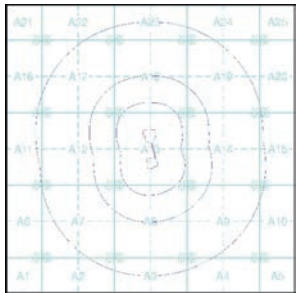
A police vehicle leaving the police station would take 4-6 mins to reach the site. This can be seen with the blue and white Line.



EA Flood Data Map (1:10,000)

- General**
- Specified Site
 - Specified Buffer(s)
 - Bearing Reference Point
- Environment Agency Flood Data**
- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
 - Flooding from Rivers or Sea without Defences (Zone 3)
 - Area Benefiting from Flood Defence
 - Flood Water Storage Areas
 - Flood Defence
- Contours (height in metres)**
- Standard Contour: 105, 100, 95
 - Index Contour: 105, 100, 95
 - Spot Height: 167.8
 - Air Height: 45.9

EA Flood Data Map - Slice A



Order Details

Order Number: 45900823_1_1
Customer Ref: AMW-0000 Duke St
National Grid Reference: 617030, 244060
Slice: A
Site Area (Ha): 2.07
Search Buffer (m): 1000

Site Details

Duke Street, IPSWICH, IP3 0AG



Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

A Landmark Information Group Service v47.0 02-May-2013 Page 1 of 6

Flood Risk

The flood report shows that the southern part of the site is within the 100 year-return-period of the river flood plain, as well as the groundwater flood high-susceptibility zone, and within the 100-year-return rainfall flood zone.

The flood report shows that the site is less affected by flooding risk, but not completely free of it. A small corner of the site, adjacent to Duke Street is within the 100-year river flood zone. The site slopes up from the highway, so it is likely that the building would need to be set back from the highway to be above the 100-year-return contour discussed for the quayside site. The site is also just within the 100 year-return rainfall flood zone. It should be possible to accommodate this through design, for example by locally landscaping the surrounds to ramp up slightly to the building so any flash-flood water would flow around the building.

The flood risk assessment for the UCS phase 2 building recommended that a first floor level of 5.67m be adopted for 'more vulnerable' uses, approximately 3m higher than the quayside level. At this level the ground floor storage would be above the predicted 100-year-return flood level and this may also be deemed appropriate for records storage subject to further consideration by the client.

Flood Barriers

The site is situated on the gradient of Grimwade Street, with the strongrooms situated to the back of the site, to aid with protection from the elements. The site is also protected by a series of barriers from the water and risk of flooding.

Barrier 1 - Marina Wall

The Marina wall is the first form of flood defence for our site. The wall is approx 1.5m above the river level and provides a basic form of flood protection.

Barrier 2 - Neptune Quay

The Neptune Quay is formed from a cobbled roadway and paths. The Quay is surrounded by buildings, many of the residential premises on the site have a raised ground floor level for protection.

Barrier 3 - Building

The current UCS building on the waterfront provides a significant barrier against potential flooding. The building is within the 100 year flood zone and as a precaution they keep vulnerable equipment etc off on the first floor.

Barrier 4 - Fore Street

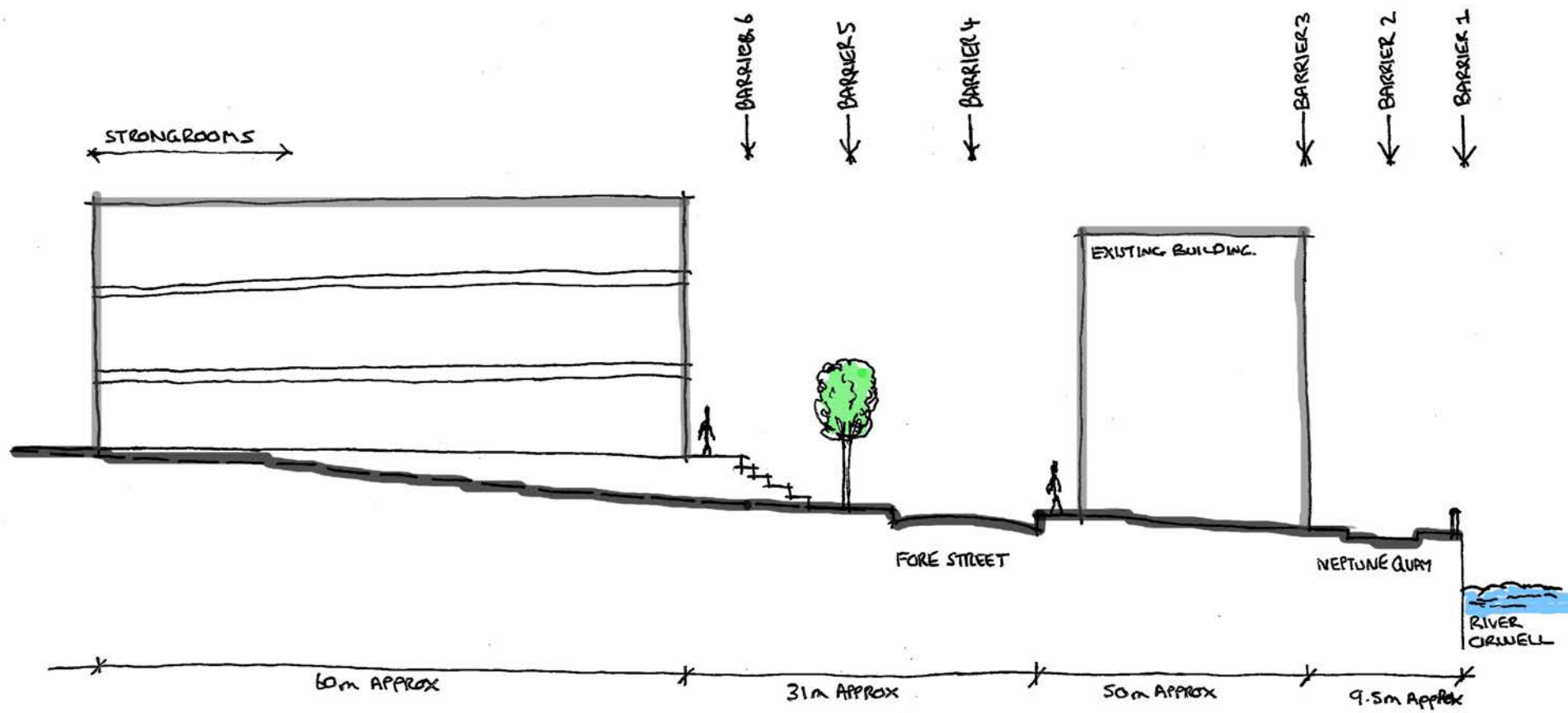
Fore Street is a tarmac road with rainwater drainage system to prevent the build up of water to the road surface, this also provides a barrier against flooding from the river.

Barrier 5 - Greenery

The street at present has a natural green barrier provided by Plane trees with a shingle covering on the ground, this will be adapted as part of the proposal to form a new welcoming entrance to the site, increasing the protection from flooding.

Barrier 6 - Raised level of building.

The proposal on the site will be situated up 1.6m from the front of the site to ensure that a level floor is achieved. The current UCS building on the waterfront had a flood risk assessment for the UCS phase 2 building, it recommended that a first floor level of 5.67m AOD be adopted for 'more vulnerable' uses, approximately 3m higher than the quayside level. At this level the first floor would be above the predicted 100-year-return flood level and this may also be deemed appropriate for records storage subject to further consideration by the client. By raising the ground level of the building this will ensure that the records store is at least 6.71m AOD and out of height of the 100 year flood zone. This is an important requirement for a records office.



Planning Policies

During the feasibility we have had discussions with both Ipswich Borough Planning officers and Suffolk County Council planning officers over the concept of the scheme.

Gail Broom who is the conservation officer for Ipswich Borough Planning confirmed that the site in question was outside the conservation area. The proposed location also would not affect any historical important buildings within the area so the application could be dealt with by the local planning officer.

We discussed further the proposal with Jason Burgess who is a planning officer for Ipswich Borough Planning. He stated that as the building proposed was part of an educational development this would coincide with the current Ipswich Local Plan that has been adopted as the site and adjacent waterfront to the South of the site have been designated for educational use only. He believed the scheme in question would also complement the site as it brought a valued research building to the university campus.

His main concerns were parking and travel to the site and requested that this was reviewed prior to the planning application was submitted. He indicated that Suffolk Highways would be best to consult on this matter and a travel survey/audit would be required as part of the application.

Due to its size the project would need to be submitted as a major development and his thoughts were to submit the application as one submission. He believed as a whole they would support an application but he would require a formal pre application submission to allow further consideration of the scheme and to allow them to offer further advice. This would have a 10% fee of the overall application cost if required.

Anita Seymour who is the planning officer for Suffolk County Council stated that the Ipswich Local Plan November 1997 and the core strategy policies development plan document adopted December 2011 would need to be referred to. The relevant policies would be;

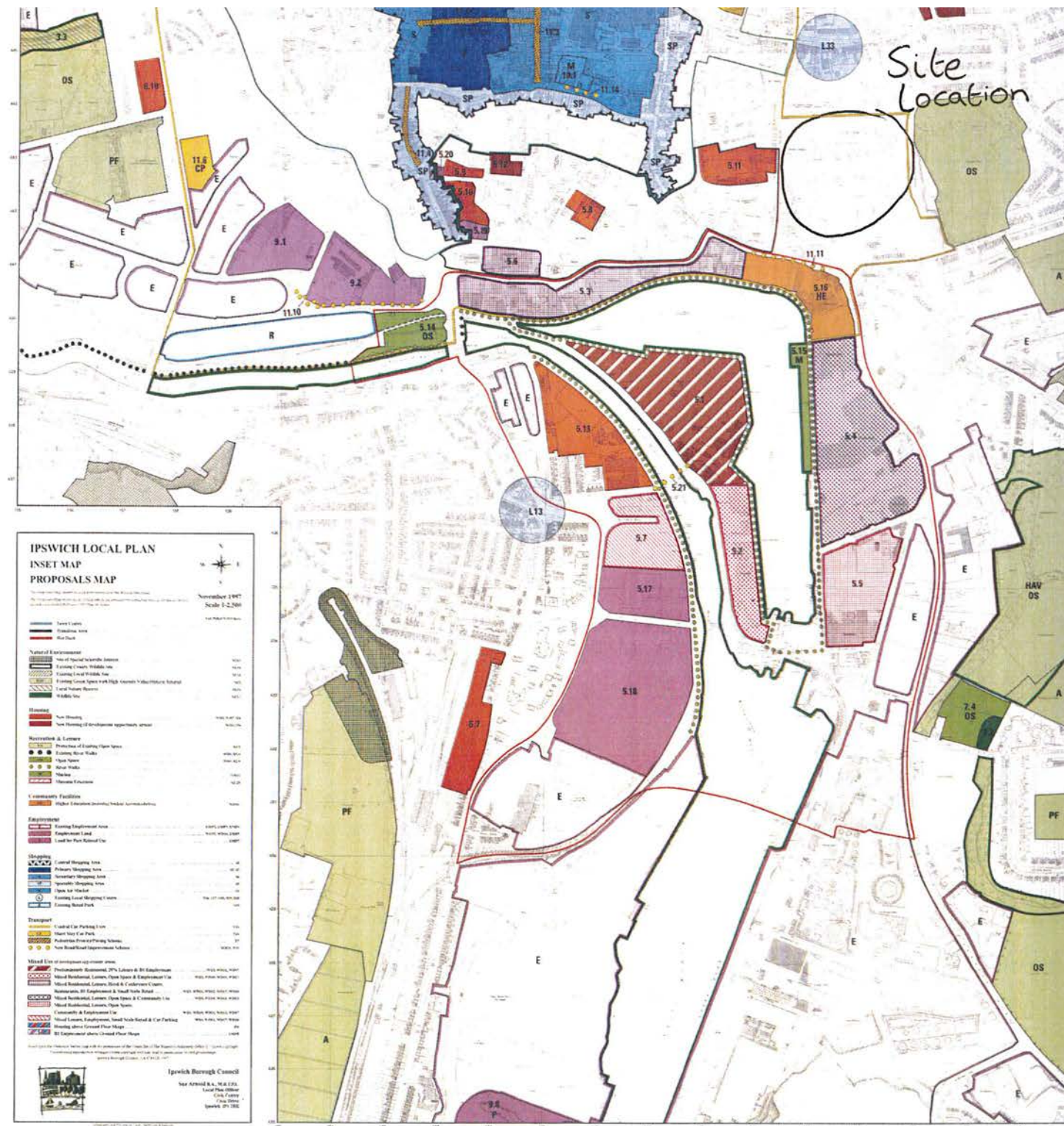
CS4 Protecting assets - reducing waste construction and lifetime of building
DM1 sustainable development from 2013 Breeam Excellent required on buildings exceeding 50sqm unless demonstrate not feasible
DM2 buildings >1000sqm at least 15% energy requirement from either decentralised and renewable or low carbon sources
DM4 Development and flood risk
DM5 Urban design quality - We would expect a high quality of design bearing in mind where it is going
DM15 >1000sqm Travel demand and management if <1000sqm policy 16 applies
DM17 Transport access in new development
DM18 Car parking.
In reference to parking the new parking standard for D1 use i.e. museums/libraries would be;
1 space/25sqm for cars,
1 stand/4 staff plus visitor bikes
1space + 1 per 20 cars (1st 100 cars) for motor bikes
Disabled parking for <200 car spaces 3 or 6% whichever greater

Emerging Policy DM53 Education quarter.
The Education Quarter is defined on the IP-One Area inset policies map, comprising the Suffolk New College campus and the University Campus Suffolk campus (and proposed primary school). Within the defined Education Quarter, development for education and ancillary uses such as student accommodation or offices will be permitted.

On sites which fall within the Education Quarter and the Waterfront, the Council would consider Waterfront uses on their merits, provided they would not compromise the ability of the University to function or expand and to meet future education needs.

Development of site reference IP049 No 8 Shed Orwell Quay will be required to include an element of public car parking in accordance with policy DM57.

6.47 The Council wishes to safeguard the Education Quarter for predominantly education uses, because of its importance to the town and the benefits that can flow from locating educational uses in close proximity. The institutions need to be able to grow and adapt over coming years. The policy allows for education uses, but also offers some flexibility for appropriate uses provided this would not compromise future use or expansion for education purposes.



Ipswich Local Plan 1997

The Ipswich Local Plan was developed in 1997 and sets out detailed policies and specific proposals for the development and use of land and indicates areas of planned growth and restraint. "The Plan will guide most day to day planning decisions and will cover the period up to 2006 from its base date of mid 1988. The Plan's performance in tackling the issues will be monitored on a regular basis and the whole plan will be reviewed at least every five years".

"Environmental issues are given a high priority in the Plan in order to reflect national and local concern about the quality of Britain's towns and cities and the need to promote sustainable development to help reduce the use of scarce natural resources. The Strategy seeks to retain the best of today's environment for the benefit of current and future generations by guiding development away from environmentally sensitive areas especially when considering proposals for permanent buildings and other forms of 'irreversible' development".

The following pages highlights some of the key points within this plan and how our site falls within its ideals.

The proposed site fits within the Educational and Public Building Section of the Ipswich Local plan, therefore the chosen use of the site will not conflict with the local plan.

There is plans for a new Ipswich Local Plan going forward, however the current local plan will provide a suitable basis from which to reference.

Green Corridors

The diagram shows existing green sites within Ipswich and the allocated green corridors of Ipswich.

The existing open spaces are predominantly parks.

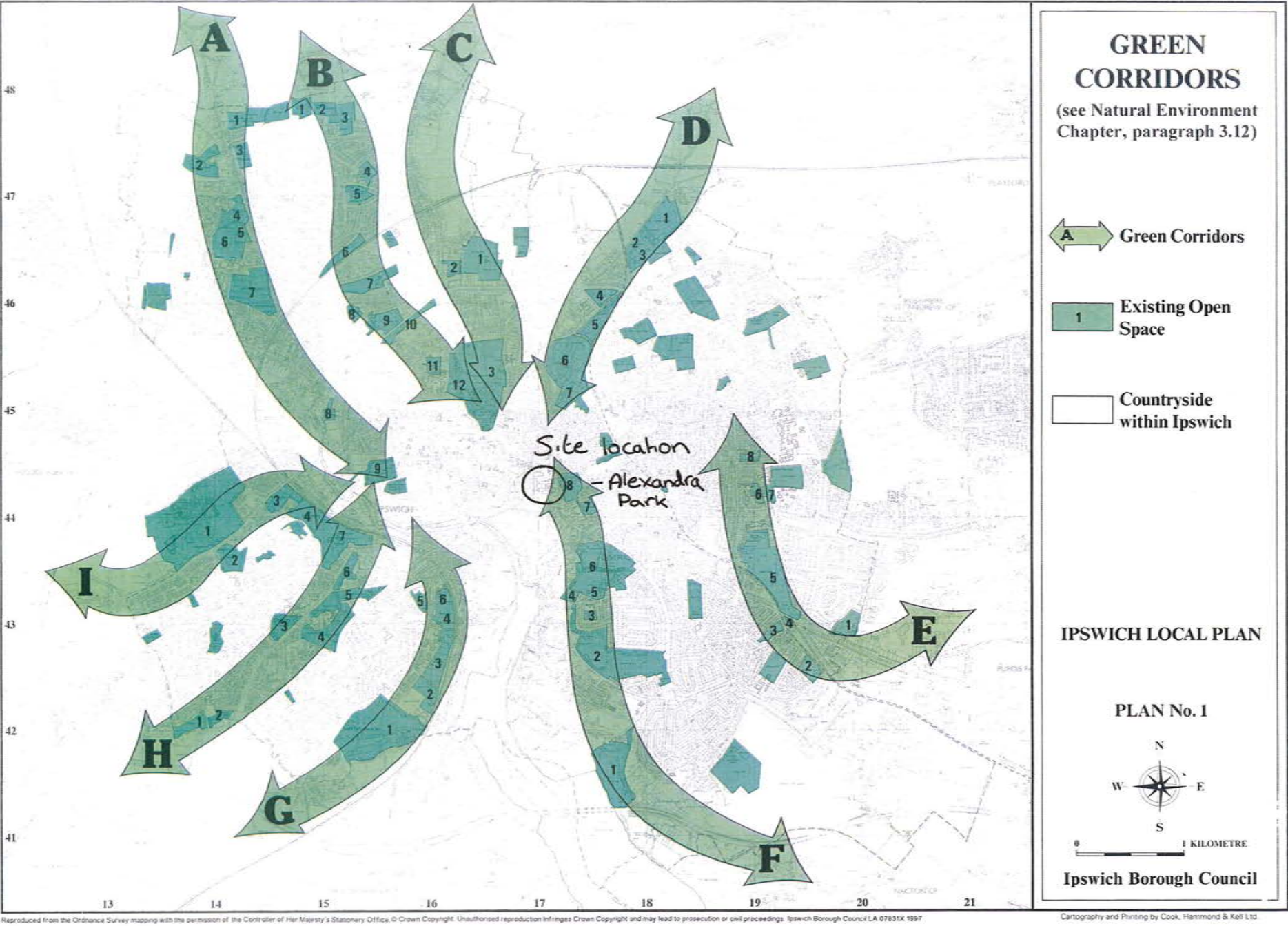
"A habitat corridor, wildlife corridor or green corridor is an area of habitat connecting wildlife populations separated by human activities or structures (such as roads, development, or logging)."

The proposed site is situated to the west of an existing open space, that being Alexandra park.

The site also sits to the west of green corridor F.

The following information shows our site is not within these areas and will not affect these.

However an Arboriculture and Ecology report is still advised.



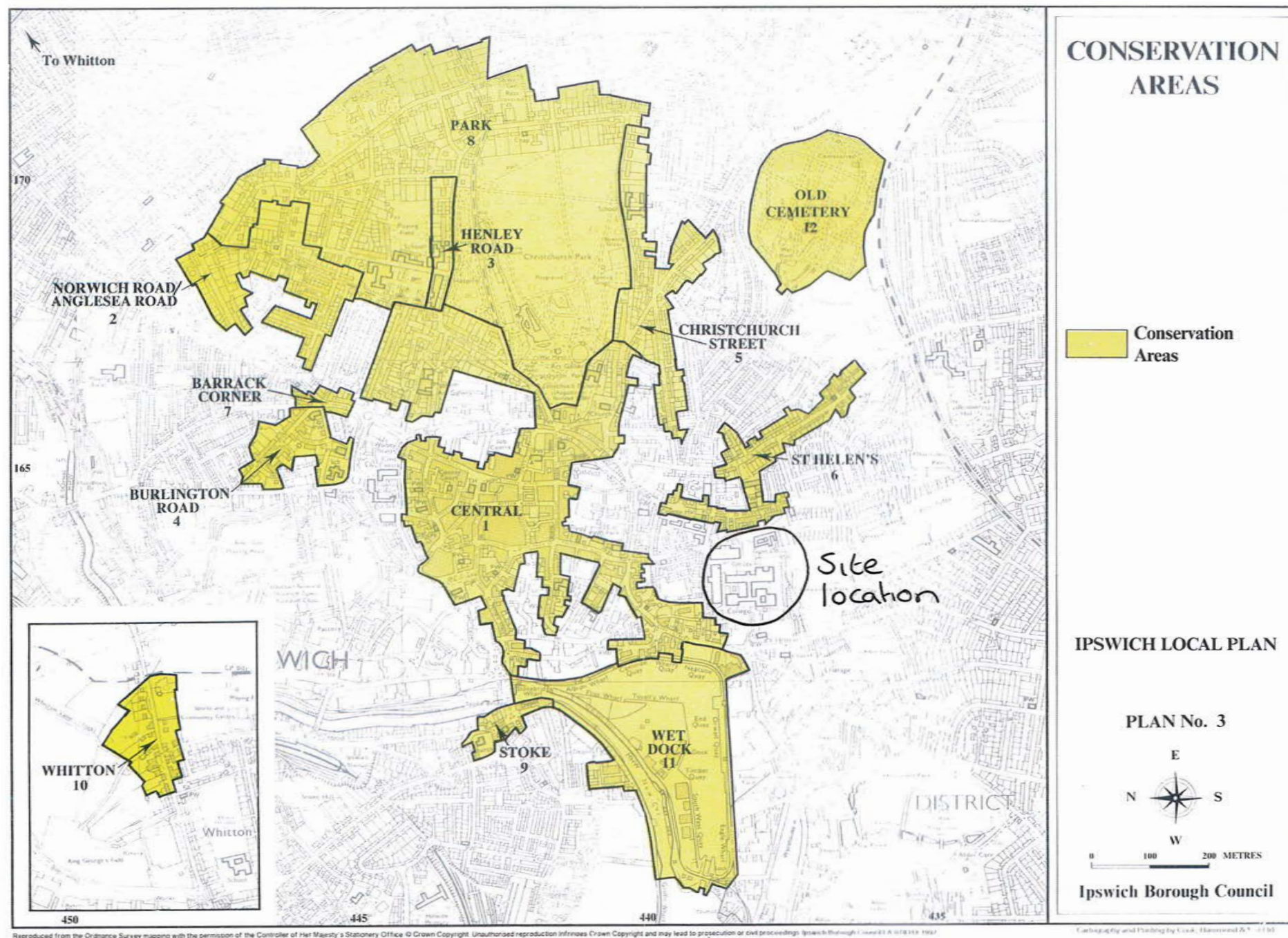
Conservation Areas

The diagram shows conservation areas within Ipswich.

The proposed site is situated outside of the conservation areas. However the central 1 conservation area runs across the bottom boundary of our site. This may be a consideration with planning with our proposal being a new building. However the current UCS building on the waterfront has been constructed within the Wet Dock 11 conservation area, so this may provide an example of the type of building that may be considered.

Looking at previous consultations with SCC planning officer for early indication of planning issues that may arise on each site. We have assumed that the proposed building would be of the scale shown i.e. the 3/4 storey Building. One of the key impacts in terms of planning will be siting near to Conservation Areas (CA) or adjacent to Listed Buildings.

This site is adjacent to the Ipswich Central CA. Assuming that the building is of the scale as mentioned above it will have a difficult fit into the urban fabric bearing in mind the rears of the houses on High Street, which also have access to the rear from Claude Street. The scale of any proposed building may have an significant impact on daylighting levels and overshadowing of these properties. The argument that there once stood a multi storey concrete framed car park on this site, and what we are proposing has an impact no worse than that, will not hold. Any new building on this site will have to fit with the framework for building in or near to Conservation Areas.



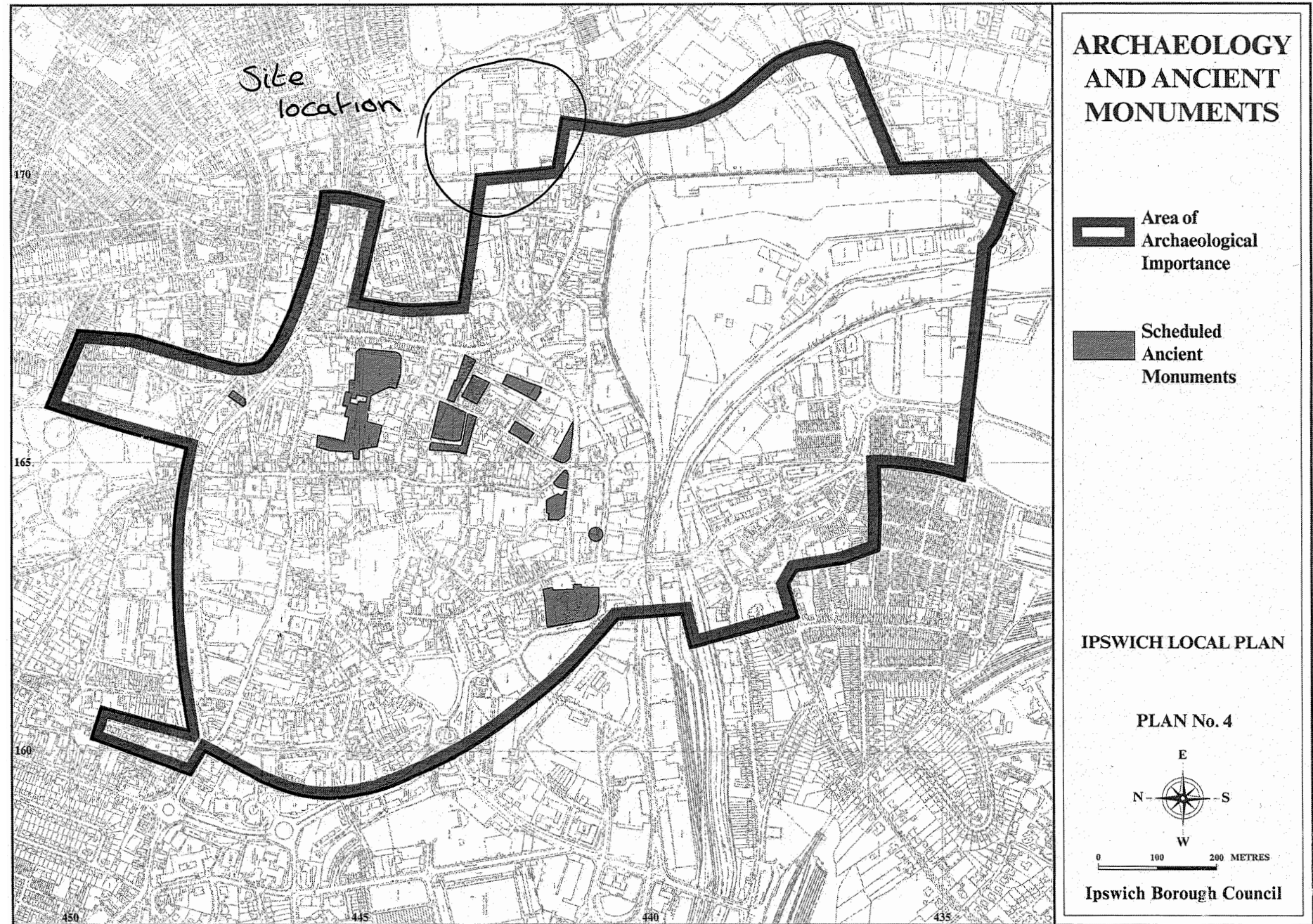
Ancient Monuments

The diagram shows areas of archaeological importance and ancient monuments within Ipswich.

Our site is situated on the boundary of the area of archaeological importance and so may have a level of interest.

However, with the site being redeveloped for the Suffolk College and UCS car park, the belief should be that this information has already been researched.

Archaeological interest and incurring costs should be considered.





Site Plan (1:1000)

Architectural Design

The existing unused UCS building on the site is a brick and block flat roof construction building. It was designed with the purpose of being used for the Ipswich College as one of the faculty buildings.

The positioning of the building was to allow the flow of vehicular traffic to pass by, allowing a creative one way system to be provided.

Due to the age of the building it will be necessary to carry out a refurbishment & demolition asbestos survey.

The demolition of this building will need to be taken into account within the costs to allow the position for the new storage facility to be located at the highest part of the site. The demolition will require a safe area to be positioned around the building and therefore the current barrier controlled exit may have to be put out of use, this would still leave the Fore Street exit available. A schedule of demolition will be required in order to comply with BREEAM, careful consideration will be required. It is highly advised that a BREEAM assessor is brought into the design process as early as possible to ensure that the BREEAM rating can achieve highest quality.

The surrounding buildings on the site consist of college buildings, which are three storey 1960's buildings.

Contamination

The land surrounding the sites has been extensively redeveloped by UCS and Suffolk New College, and it is therefore likely that these sources may be able to provide further detailed assessments relating to flood risk, contamination risk and geotechnical data.

The earliest (1884) site records returned indicate the site comprised mainly residential streets but with some light industrial activity - post war this area was gradually demolished to make way for the civic college. The college has used these areas as car parking together with workshop areas for construction and car mechanics.

The site therefore has the potential for contamination and therefore it is highly likely that ground contamination testing will be required.



Precedence

The Keep, Brighton
Designed By Atkins

- 01.External Parking, in relation to building.
- 03. Searching Room, Spacious and proving ample research equipment..
- 06.Archive Store, Ambient Temp Room.
- 08. Decorative Concrete Frieze.

The Hive, Worcester
Designed By Feilden Clegg Bradley Studios

- 02. External Space at The Hive.
- 04. Library Space.
- 05.Shelving to provide storage for box files.

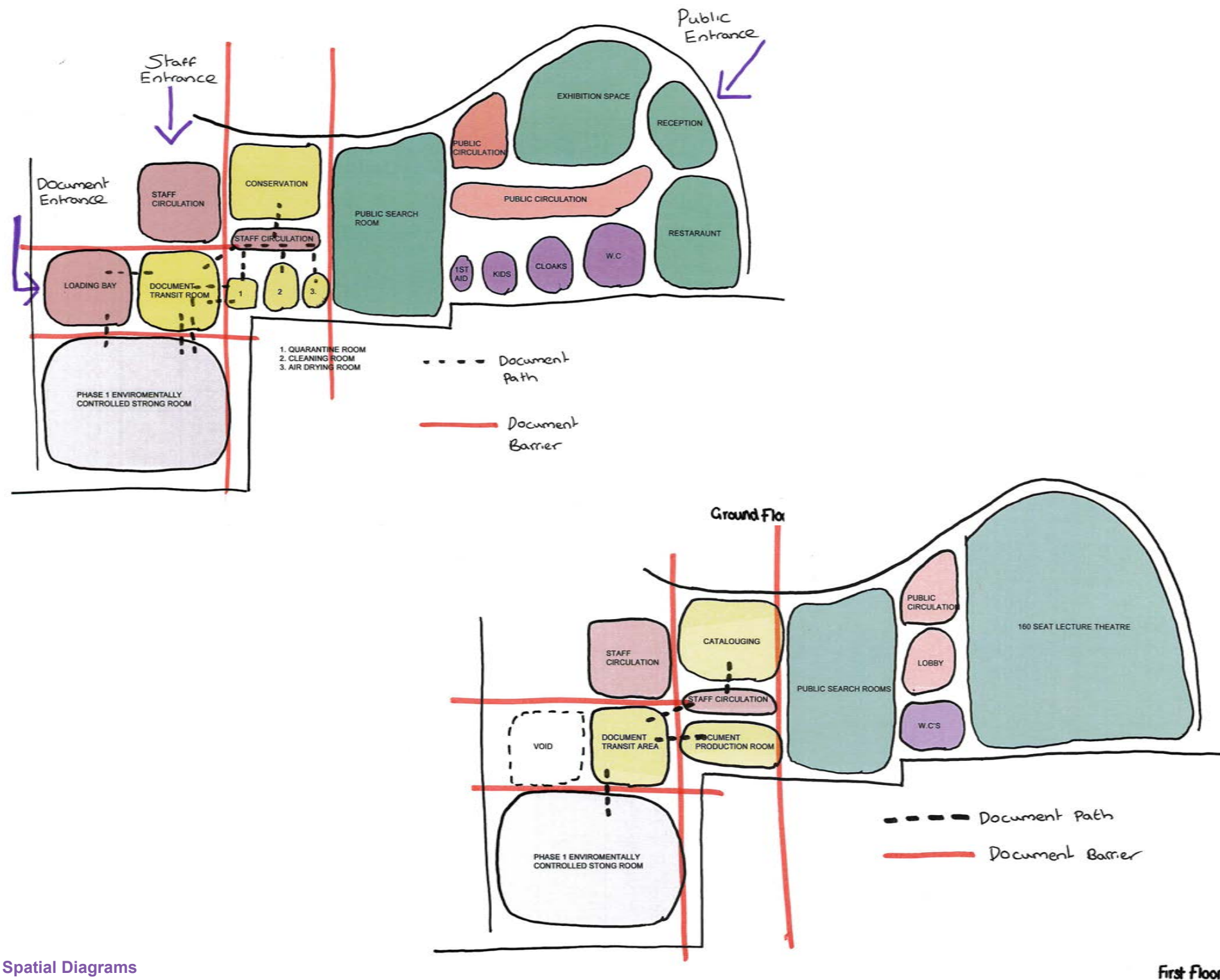
Treasure House, Beverly

- 07. External Public Entrance at Treasure House.



Materials

The materials palette will be carefully selected with reference to the Green Guide with the majority achieving an A or A+ rating. The selection will also be guided by the surrounding buildings and the guidelines specified in document PD5454, paragraph 6.3.3



Spatial Diagram

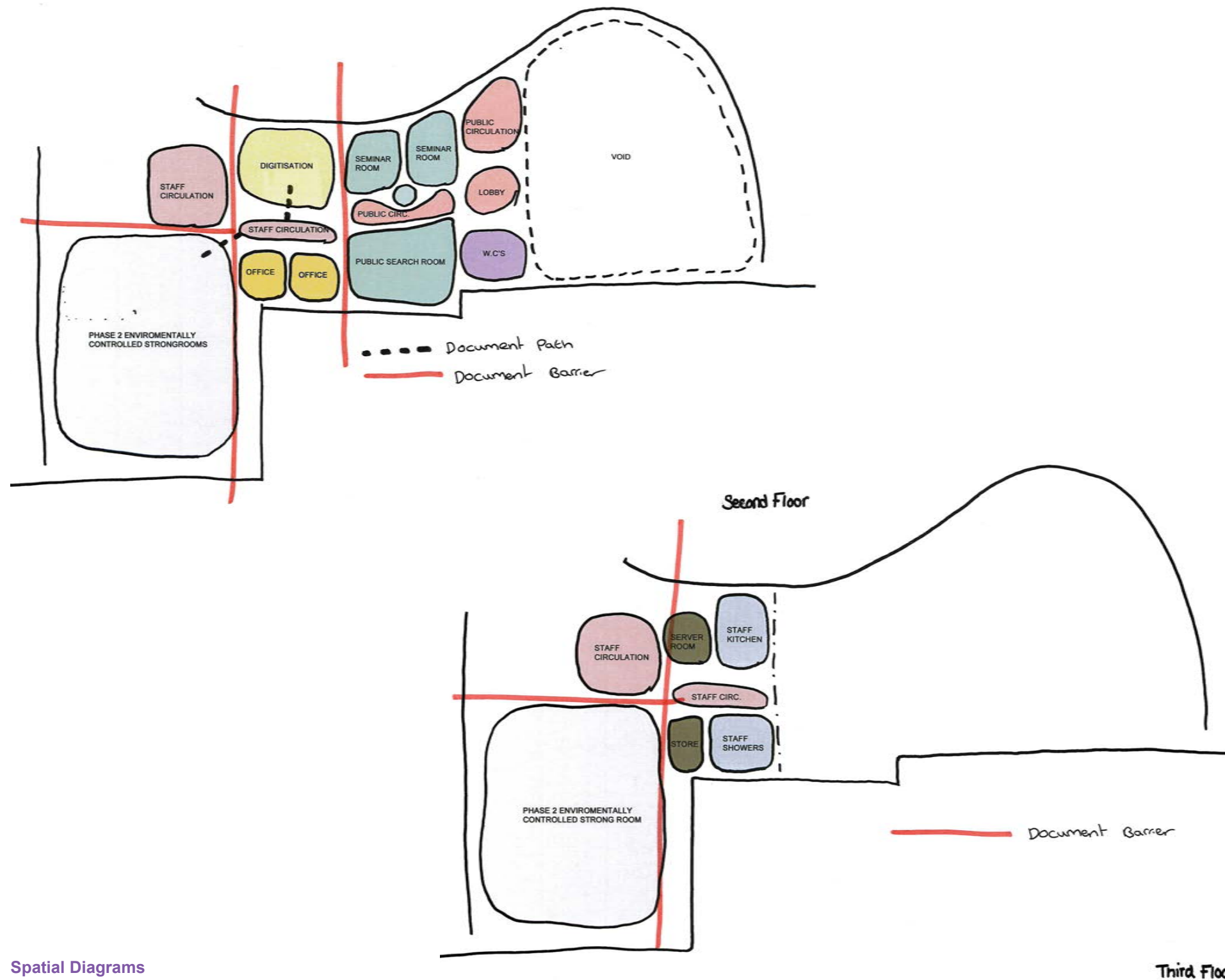
Using the required areas as highlighted by the client's initial brief, a spatial diagram using the original concept building shape was created.

The spatial plan consists of a Phase 1 development and a further Phase 2 development and the inter-relationship between the two. However, with further consideration it may be more cost effective to keep the design a single phase.

The ground floor consists of SRO elements of the construction to be located at the back of the building at the highest ground level. The main public elements will sit towards the front of the building, with reception and facility elements to be a welcoming entrance to the public face. All of the public rooms will enter off of the reception and main public circulation spaces. The SRO rooms, will have to be entered via the loading bay and document transit room, before being distributed onto further rooms. The quarantine, cleaning and drying rooms are all within the same vicinity to allow the flow of documents to be as smooth as possible.

The 1st floor will be of a similar layout with SRO situated to the back and public elements to the front. On the first floor, the lecture theatre will be situated within the curved element of the building, rising up within a second storey void to create a tiered theatre space. The public search rooms will continue to progress through the centre of the building providing an atrium like feel. The SRO rooms will be linked off the document transit store, and into a central lobby area for processing. The public areas will become accessible after exiting the circulation core of the building into a lobby that will divide to different quarters of the building.

Spatial Diagrams

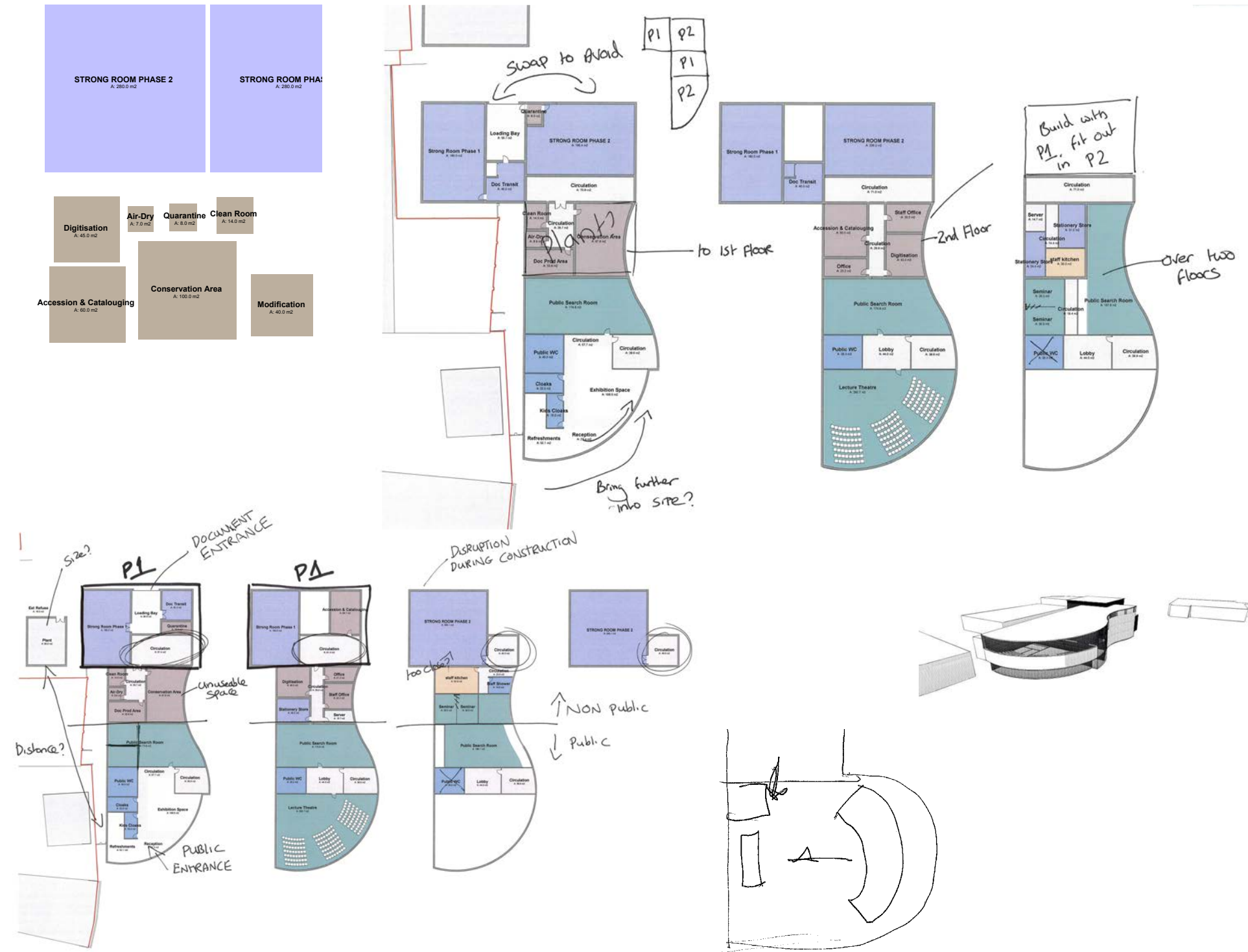


Spatial Diagram

The second floor will keep the balance of SRO at the back and public spaces towards the front, with seminar rooms and a smaller search room. The second floor will be the beginning of a further two storey extension of the storage facility covering the vast majority of the back of the building. The final few production rooms and offices will be situated here. Again the SRO rooms will be linked off the document transit store, and into a central lobby area for processing. The public areas will become accessible after exiting the circulation core of the building into a lobby that will divide to different quarters of the building.

The third and final floor is only a partial floor level and relates the building to the gradient of the site. This could house the fourth storey of record storage with staff facilities situated on this floor. The facilities are all accessible after exiting the staff circulation core. The strong room facilities will not have access through this floor.

Spatial Diagrams



Floor Plan Development

Development of design

The spatial diagram provided a starting point to enable a more developed floor plan to be looked at. Using the scheduled spaces as allocated in the brief, a template space for each room was created.

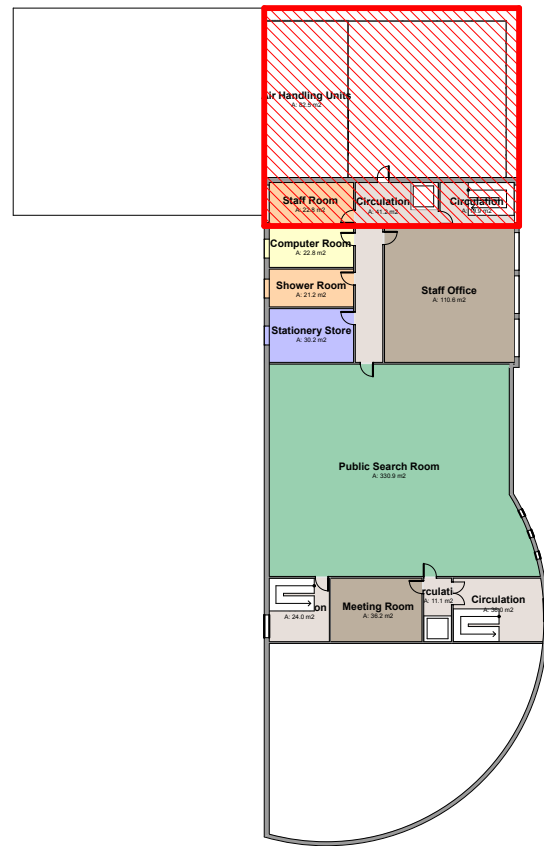
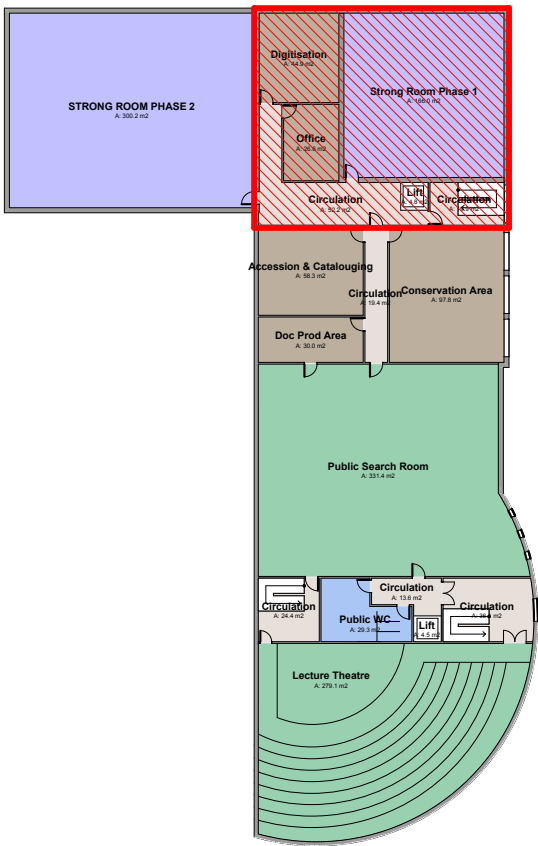
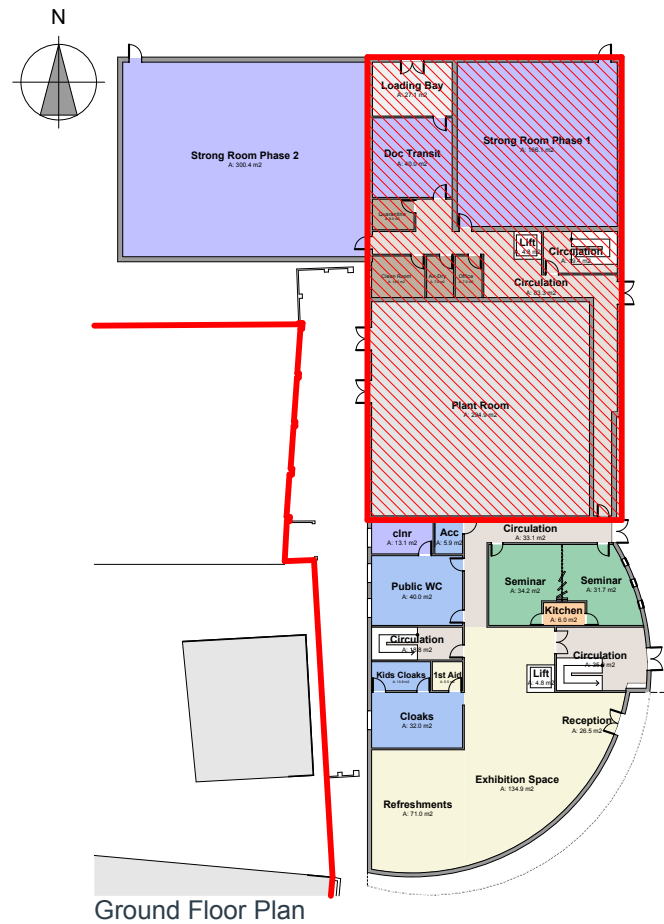
Floor plans using the spatial diagram layout and sizing areas, were created across a four storey strong room and three storey public space.

The flow of the document is staggered and using the research information provided from the keep it does not appear to work. The division between public and non public spaces, allows a clear objective as to which area is to be contained.

With the strong room extension being proposed on top of the Phase 1 strong room, concerns arose as to how this may disrupt documents within the store as well as cost and mechanical implications. This was thought to be adapted to allow a more cost effective proposal

Using the 1st draft plan and information gathered from early discussions a revised floor plan was created, keeping an external plant area to very north of the site, nearest the strong room areas. Keeping the division as per the original scheme. However, after having discussions within the design team and referral to PD5454 it was thought best that the plant location be moved to a more central position to avoid the use of duct work under/ or over the strong rooms. With this in mind, the avoidance of chequerboard building and ensuring future development is possible, the thought to swap the strong room phases over was believed to be the best strategy.

With the public search rooms over 3 floors, there were concerns that the ease of use would be hindered and so within the final proposal a split across two floors was believed to be a more suitable compromise. The curve on the building to encourage the pedestrian flow across the front of the building would serve its purpose, but the relocation of the entrance further round the crest would encourage pedestrians further onto the site.




Development Of Design

Further review of the design led to a preliminary design from which to base further discussions. The document loading bay is situated at the north of the site, in the middle of the building. The strong rooms will also be sited at the back of the building, providing a shelter from the sun to the south side of the strong rooms with the plant rooms and public spaces. The strong rooms will also be protected from flooding at a higher level.

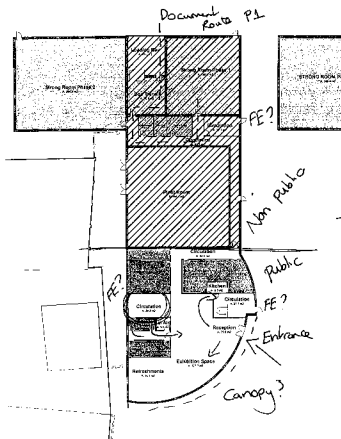
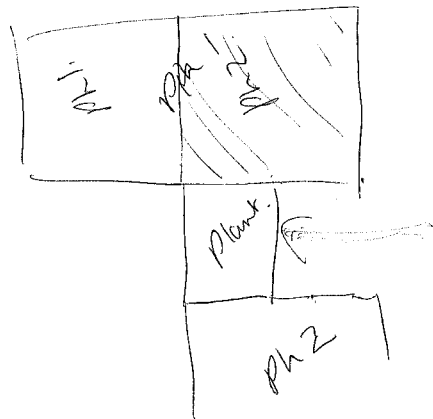
The public entrance to the building will be positioned to the front of the building on the south facing elevation. Maximising the use of the site and the external landscape to the exterior of the building. The curve will guide visitors to the main entrance and also provide an area in which the 160 seat auditorium can be situated.

Staff entrance will be via the circulation on Phase 1, keeping a clear divide between the entrance for the documents, staff and public. This is key within PD5454 that the strong rooms are not used as corridor routes.

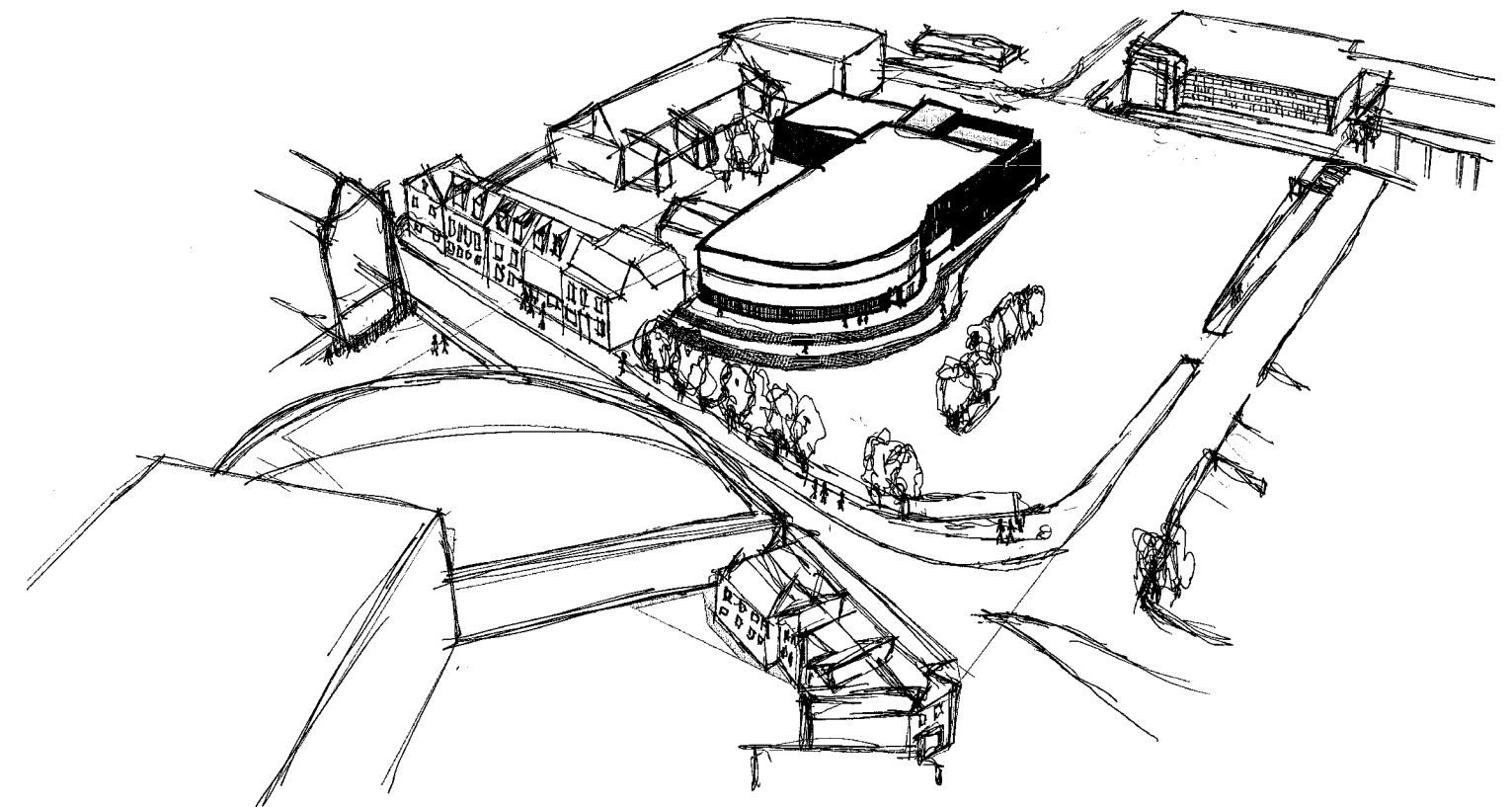
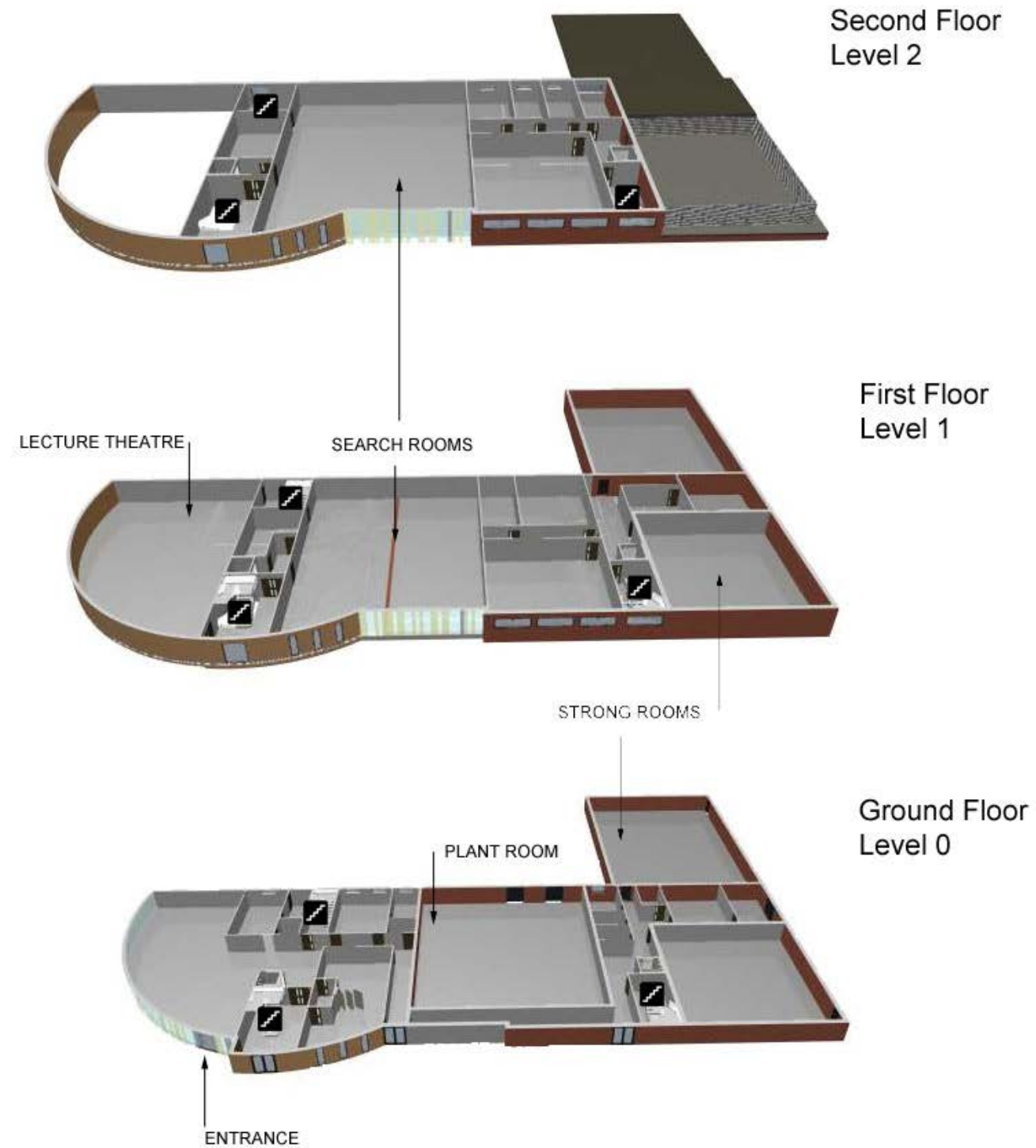
The document path will follow a logical route from the time they are received, to the strong rooms and then to the public search rooms.

 Phase 1 Development

Design Proposal (Not To Scale)

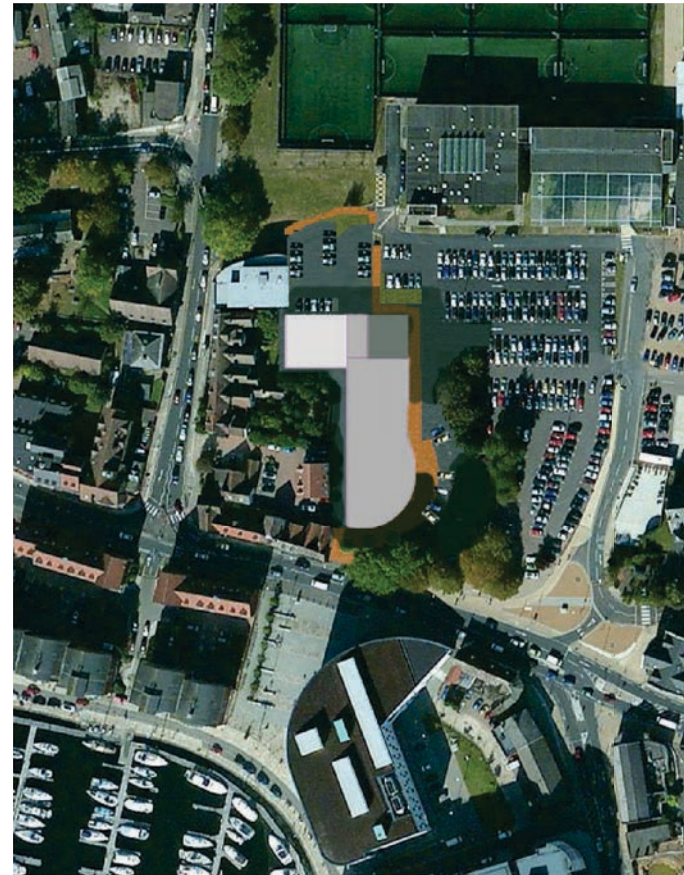


Development Sketches





Site Plan (1:1250)

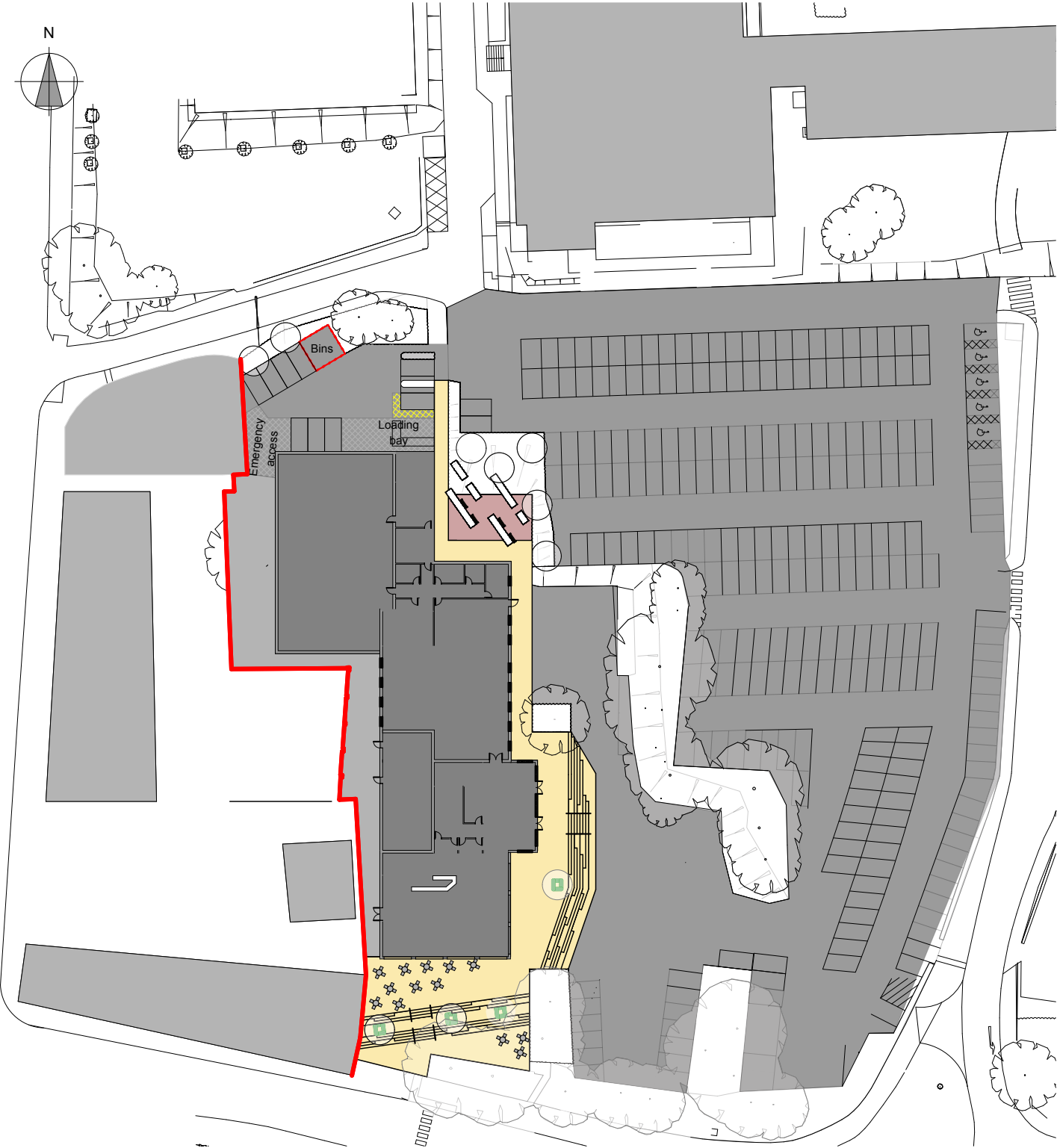


Site Plan

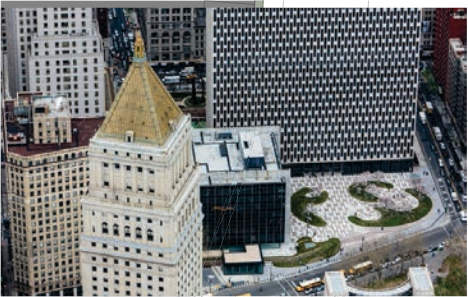
The proposal takes into account the development & feedback already received from the site analysis as to reasonings and validation for the site.

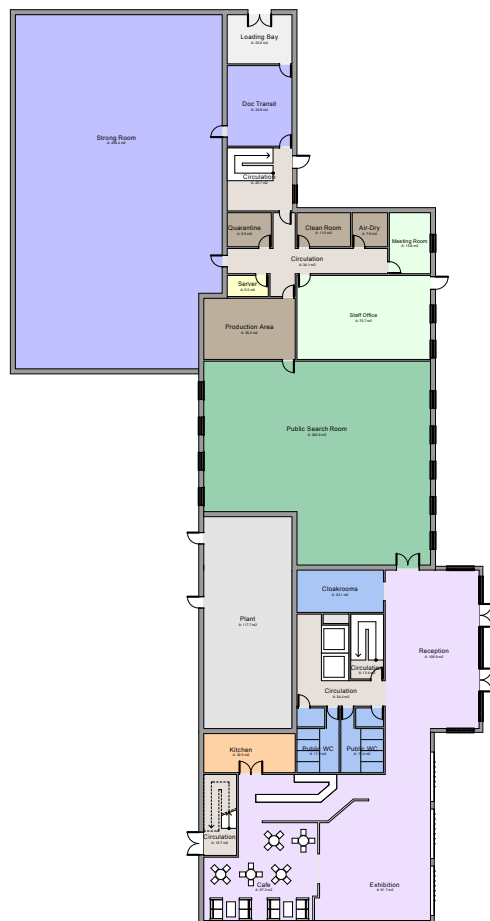
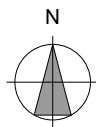
Key points from the report that have been considered are:-

- The site is centrally positioned in Ipswich and close to the waterfront with multiple visitor attractions and transport options.
- The location of the site provides a quick response time for emergency services, meaning a four hour protection should provide enough time for emergency services to respond to protect the documents inside.
- The site is sloped and has a potential south facing entrance by keeping the storage facility to the back of the site the risk of flooding and over heating can be kept to a minimum.
- Being close to the conservation area, careful consideration to the look of the building and the size is extremely important.



- Approximate areas
- Stepped entrance plaza area incorporating level change and providing congregation and seating space
 - Car parking
 - Fire escape and emergency access
 - Shrub and tree planting 400m²

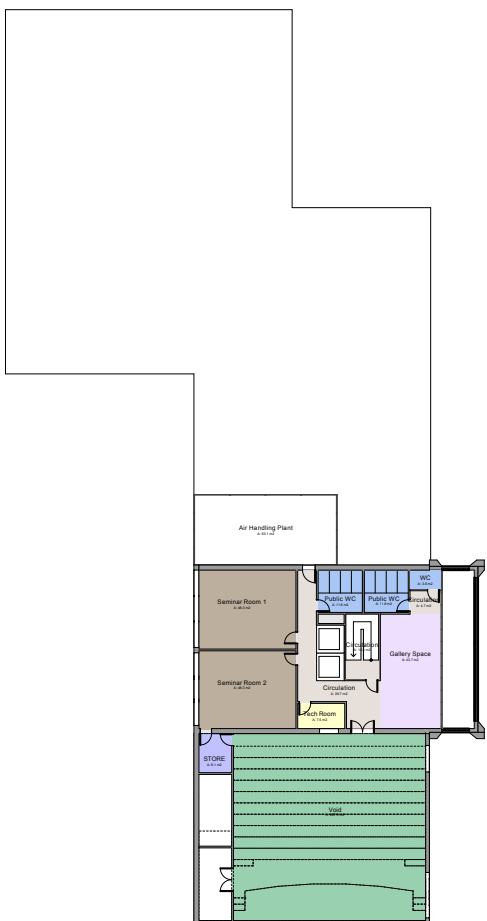




Ground Floor Plan



First Floor Plan



Second Floor Plan

Summary

The document loading bay is to be situated at the north of the site to help ensure easy access for loading and unloading of documents. The strong rooms will also be sited at the back of the building, providing a shelter from the sun, to the south of the strong rooms with the plant rooms and public spaces. The strong rooms will also be protected from flooding at a higher level.

The public entrance to the building will be positioned to east of the building on the east facing elevation. The landscape and external works will be help to maximise the potential of the site and the external landscape to the exterior of the building. The front of the building will house the cafe and exhibition space on the ground floor with an area in which the 200 seat auditorium can be situated. above.

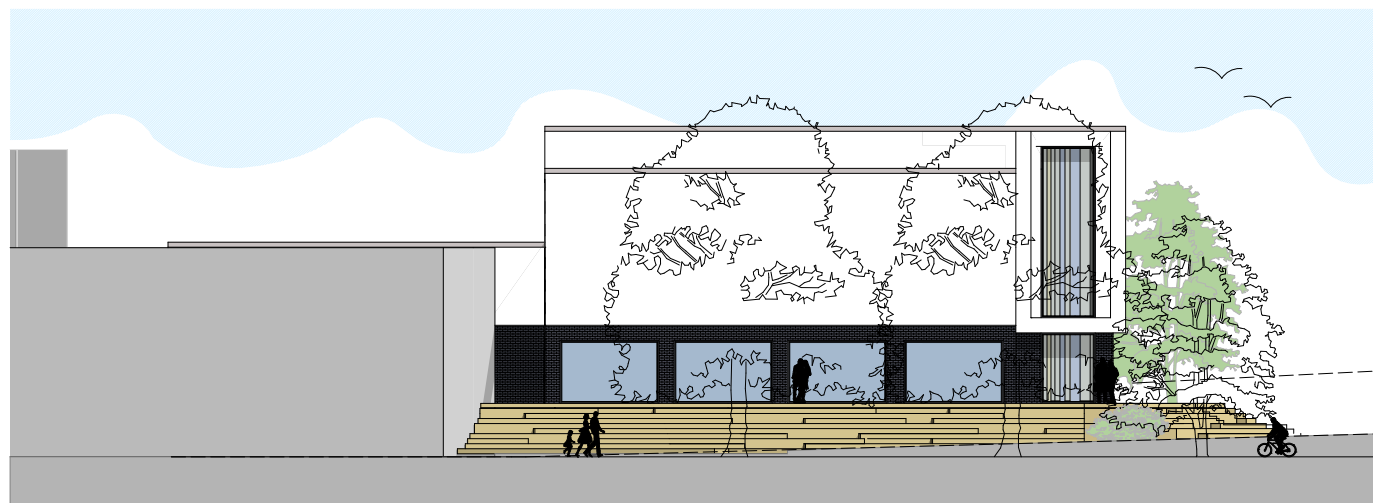
Staff entrance will be via the circulation at the north of the site, keeping a clear divide between the entrance for the documents, staff and public. This is key within PD5454 that the strong rooms are not used as corridor routes.

The document path will follow a logical route from the time they are recieved, to the strong rooms and then to the public search rooms.

Design Proposal (Not To Scale)



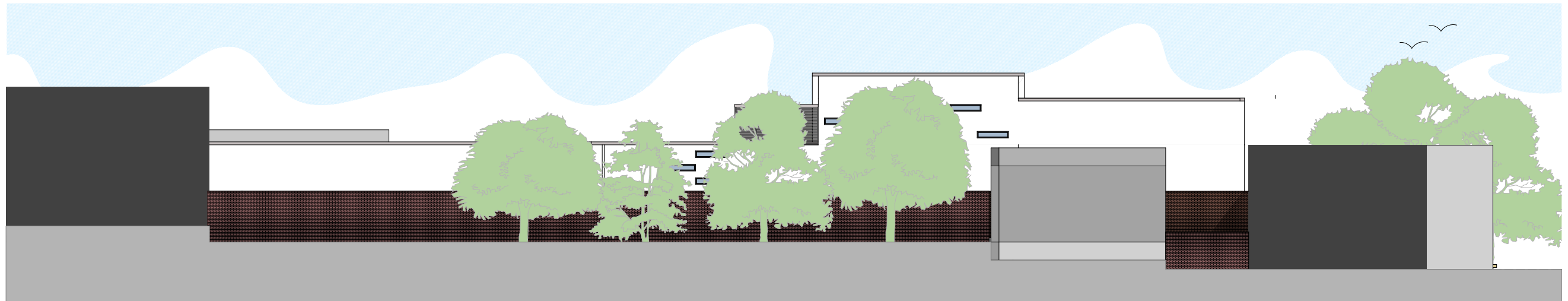
EAST ELEVATION (not to scale)



SOUTH ELEVATION (not to scale)



VISUAL CONCEPT



WEST ELEVATION (not to scale)



NORTH ELEVATION (not to scale)



VISUAL CONCEPT

Substructure & Geology

The type of foundation used and drainage strategy will be confirmed once a Phase 1 Environmental Survey has been carried out and the results of the site investigation, using boreholes with standard penetration tests (drilled to 5.0m to 10.0m deep), are known. Trial pits for percolation tests will also need to be undertaken, to inform the surface water strategy.

These investigation works will need to be commissioned during Stage 2, if the feasibility report is signed off. These works will be commissioned via a structural engineer.

Initial thoughts, however, lead to the belief that piles/ reinforced ground beams will be the chosen substructure due to the water table in the area.



Superstructure and Drainage

Initial thoughts are that phase 1 construction will consist of the following, subject to investigation;

- Ground Floor Slab - 75mm screed, 200mm reinforced concrete slab, celotex insulation.
- Concrete frame - columns east to west fairface finish
- Walls
 - Strong room - facing brickwork
 - Office, corridors - facing brickwork
- First floor - precast prestressed slabs of minimum 170mm thick with cover to prestressing of 65mm
- Roof - Flat roof use a felt system eg. Bauder.



Existing Site Building Services

We visited the proposed site on the 11th September 2014 to review utility provisions serving the existing building P Block which will be demolished as part of the project.

Currently, the existing electrical services serving block P are supplied from the nearby O Block also located on the University College Suffolk (UCS) estate. These will need to be disconnected, made safe, and removed. A Car Park Lighting distribution Board located in a store room adjacent to P Block will need to be re-fed from the UCS estate prior to block P being demolished.

The existing block P building has a dedicated gas supply serving a ground floor boiler room and a water service pipe.

District heating pipes have been disconnected from the building and left capped below the plant room slab level with a metal grate cover.

As part of the demolition of the existing building the water service pipe must be removed back to the main distribution pipe/nearest take off point still used to ensure there are no unused lengths of pipes which could harbour legionella.

The gas pipe must be isolated by the utility company and removed from the proposed site.

The district heating pipes should be isolated at Building O (if not already isolated) and the pipe removed from beneath the proposed footprint of the new building.

New Utility Services

The new building will require new utility connections from Grimwade Street to the east of the site with new services routed via the existing car park exit road. If there is sufficient available capacity the electric supply will be served from one of the existing local substations. New applications for suitably sized new supplies will have to be made to the utility companies. To avoid too much disruption, we would suggest this work is carried out during the summer holiday period.

Design Brief For M&E Services

The design brief for the new environmentally controlled strong rooms is for the temperature, relative humidity and lighting within the spaces to comply with the recommended parameters given within PD5454 and the revised brief for the for the various records stored.

The rest of the building contains a variety of controlled and public use spaces. Areas where records and artefacts are worked on or documented will be close controlled environments whereas the café, lecture theatre and other public areas will be designed in accordance with CIBSE recommendations.

BREEAM

It is a project requirement to achieve a BREEAM excellent rating. A BREEAM pre-assessment has been recently undertaken by the appointed BREEAM assessors, and includes the following Mechanical and Electrical considerations:

- Reduction of U-values and reduced air permeability over and above the requirements of Part L of the Building Regulations.
- Seasonal commissioning and the appointment of a commissioning specialist at an early stage of design.
- Rainwater harvesting
- Use of renewable/sustainable energy sources such as Photovoltaic panels and CHP or gas absorption plant.
- Reduced pollution from gas fired plant (Low NOx boilers)
- Low water usage sanitary fittings
- Energy metering
- External lighting will not provide any upward light.

Renewable Energy and Energy Reduction

The main project concept and energy reduction strategy for the new building is to reduce the energy demand by increasing the thermal mass of the building (helps with maintaining stable conditions in the strong room) and improving the thermal transmittance (U-values) of the building fabric. In addition, apart from the Café area, it is proposed that glazed areas of the building will be kept to a minimum, particularly in areas where the records/artefacts will be handled.

To meet the local council planning requirements the building must provide 15% of its annual energy consumption from a renewable energy source.

At design stage C an energy study including a low/zero carbon option report will be undertaken to assess the best way to meet the local area planning requirement for 15% of the energy consumption to be provided by a renewable energy source. At this stage of the project we anticipate this will be most likely met from a combination of photovoltaics with either a Combined Heat and Power unit or a Gas Absorption unit.

To ensure that energy is used efficiently the following principles should be considered and agreed upon during future stages of design:

- Metering strategy
- Thermal Energy recovery either via recirculation of conditioned air in the storage areas or thermal wheel/plate heat recuperator
- Lighting controls
- Zoning
- BMS control system

Other considerations include ensuring that all pipework and ductwork is well insulated to reduce the potential for heat transfer with the surrounding air, controlling fresh air volumes based on CO/air quality sensors in the spaces and power factor correction to improve the efficiency of the electrical supply.

Temperature and Relative Humidity External Design Criteria

The Mechanical design services will be based on the following external design conditions:
Winter: -5°, 100% RH
Summer: 29°db, 20°C wb.

The summer external design condition for heat rejection plant shall be 35°Cdb, 24°Cwb

The table below highlights proposed internal environmental conditions for the main spaces in Phase 1 and Phase 2 based on the occupancies given in the revised briefing document.

| Area | Temperature Range °C | Relative Humidity Range | Comments |
|--|---------------------------------------|-------------------------|---------------------------------|
| Records – paper/velum/books | 18(+/- 1) | 50-60% | |
| Records - photographs | 15 (+/- 1) | 30-45% | |
| Records – colour photo or acetate/nitrate film | 2 (+2/-0) | 30% +/- 10% | Specialist storage cabinets |
| Document sensitive areas/conservation | 16-18 | | |
| 200 person Lecture theatre | 24 (+/- 2) | Not controlled | Air supplied from under seating |
| Cafe | 21 winter (+/- 2) & 24 summer (+/- 2) | Not controlled | |
| Seminar room | 21(W)-24(S) (+/- 2) | Not controlled | |

Ventilation strategies

The ventilation systems and associated controls will be designed to best suit the spaces served and some initial thoughts for the primary areas are described in the following clauses. However, we expect the design to evolve during the more detailed design phases of the project.

Strong rooms: The ventilation systems for the main storage areas shall include mixing boxes to maximise recirculation air volumes particularly out of hours, when the space is unoccupied and the ventilation system can switch to 100% recirculation air. During the occupied periods, the percentage of fresh air supplied will be controlled by CO/ air quality sensors sited in the storage areas. The all air system will provide heating, cooling and humidity control to the spaces. It is proposed that the ventilation plant serving the archive stores shall be located on the roof, near but not over the strong rooms themselves to enable easy distribution of ventilation ducts to areas with different environmental conditions.

Conservation/Document areas: The ventilation systems for these sensitive areas shall include mixing boxes to maximise recirculation air volumes particularly out of hours when the ventilation system will be 100% recirculation air. During the occupied periods the percentage of fresh air supplied will be controlled by CO/ air quality sensors sited in the storage areas. The all air system will provide heating, cooling and humidity control to the spaces.

Toilets/Locker areas: Local ventilation systems complete with heat recovery shall be provided to these spaces. Supply air volume shall be 80% of the extract air volume to keep these areas under negative pressures and reduce odour migration to adjacent spaces. No cooling or humidity control will be provided.

Lecture theatre: Our preference is to have local fresh air ventilation plant with heat recovery supplying air via raised seated area, dependant on space available under the seating. The low level supply air strategy allows the room temperature to be raised and still maintain comfort conditions. Air volume will be controlled via CO/Air quality sensors in the exhaust air. The ventilation system will provide heating and cooling to the lecture theatre. Additional background heating will be provided so the ventilation system is only turned on when the space is occupied.

Café/Kitchen: the kitchen will be provided with dedicated ventilation plant sized to account for the proposed kitchen equipment. If possible, natural ventilation will be provided to the café area. However, the final decision as to whether ventilation is natural of mechanical and whether cooling is provided will depend on the amount of glazing proposed, client discussions and overheating calculations.

It is proposed that a number of the air handling units will be located on the roof. In particular, the units serving the strong room will be located as close as possible to the rooms served but not located over the sensitive areas in case of pipework leaks etc.

Four hour fire dampers shall be provided on all ductwork passing through the records store wall together with smoke dampers to allow these spaces to be isolated from both the fire and possible smoke damage.

Heating

A central heat generation plant comprising a renewable heat source and gas fired boilers will installed in one of the plant rooms. The heating plant will provide low temperature hot water heating to the air handling ventilation plant, space heating (type of space heating for each area to be agreed during detail design phase) and hot water storage cylinders. The renewable heat source will be the lead heat generation plant supplemented and backed up by the gas fired boilers. No pipework shall run over or within the archive and records storage areas.

Humidification

Where humidity control is required this shall be provided by electrode steam humidifiers housed in the air handling ventilation plant.

Cooling

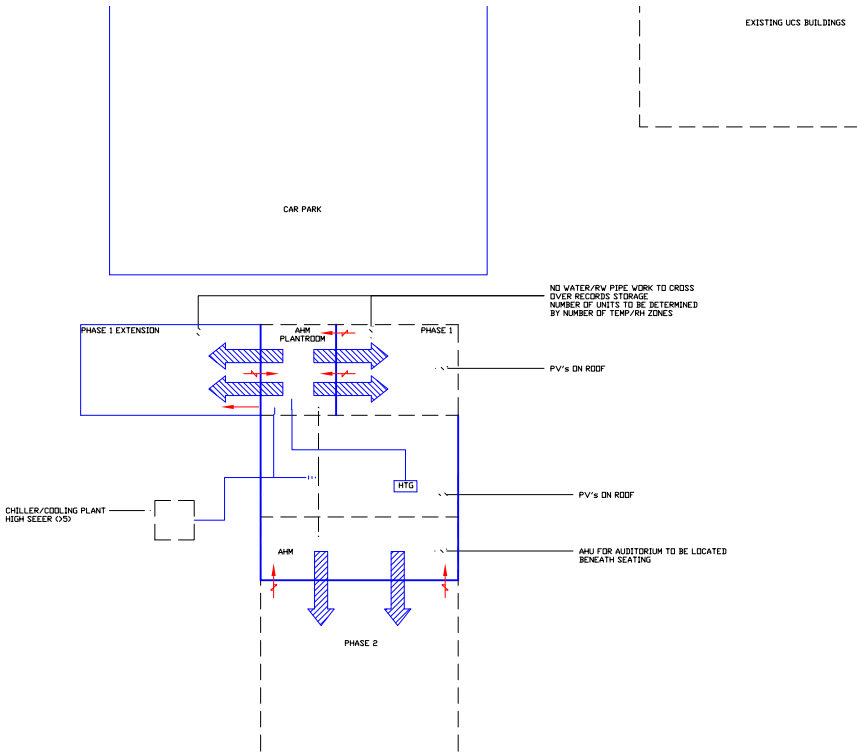
An external compound shall house two air source chillers incorporating the facility for free cooling.

The archive store ventilation plant and will provide both cooling and dehumidification if necessary.

Chilled water pumps, pressurisation unit will be located in the ground floor plant room.

No pipework shall run over or within the archive and records storage areas.

Mechanical Adjacencies



Building Management System (BMS)

For this project the Building Management System is an extremely important part of the design as it will raise an alarm both locally and at a remote facility if any of the space temperature and humidity sensors located within the archive and record stores record figures outside of their designated ranges for the space served.

More generally the BMS shall provide the full digital and analogue control and monitoring needs of the engineering services to maintain the specified environmental and performance requirements of the system.

The BMs will be BACNET or LONWORKS based with a building Management System supervisor provided comprising the following hardware components:

- Central Processor Unit
- Colour graphic visual display unit
- Keyboard and mouse /VDU touch screen
- General alarm printer/remote alarm at separate facility and outside stores/in office areas.
- Ethernet connection to remote facility

The BMS will be fully integrated with the fire alarm system, smoke damper panel and the gas extinguishing system (if required).

Domesticated Piped System

A cold water storage tank and booster set will be provided in the ground floor plant room serving all sanitary fittings and the hot water storage cylinders also located in a plant area. The cold water storage tank shall be sized to provide 20 minutes storage at the calculated required peak flow rate. Storage to allow the facility to remain open in the event of the water supply being interrupted will not be provided.

The hot water service shall have a pumped return to reduce the hot water waiting time at outlets.

Gas Extinguishing System

If required the gas extinguishing system would be Inergen to reduce the possibility of harmful effects on staff working in the stores when the system is operated. The system would be designed in strict accordance with the manufacturer's recommendations with regards to gas cylinder store location and size, ventilation requirements and control/alarm regimes.

However, at The Keep, a similar facility in Brighton the wall construction around the archives provides four hour rating and the risk of a fire within the store was deemed so low that a gas extinguishing system was not provided.





Overview

The Electrical services to be incorporated include:

Mains power supply, medium Voltage supply, Low voltage Distribution, Emergency Power Generation, Small power System, Internal and external Lighting System, Telephone and data, Security System, TV/ Satellite System, Fire detection and Alarm system, Lightning protection, Earthing System.

Small Power

Small power will be provided on each floor via a sub distribution board and will be separately metered. Wiring to be installed within a conduit and trunking containment system, using single core conductors. The strong rooms will require a master switch that isolates all electrical circuits within, except for those serving fire protection or emergency lighting, this is to be located by the entrance, well labelled and secured against vandalism and tampering and fitted with a warning light to indicate when the power is on. This is detailed and in accordance to PD5454.



Distribution of Services

The Electrical Distribution strategy will be based around an LV supply from the existing local substation (FRL 10.36), subject to UKPN capacity survey, to an Essential and Non-essential Main MCCB Panelboard situated within the ground floor mains room, within the Plantroom.

A Standby Generator will provide Life safety and Essential Power/Lighting to the strong rooms and associated rooms and plant, in the event of a power failure. The generator can be part of the site proposal or be brought in and connected in the event of a prolonged power failure.

The mains room will link to an electrical riser on the two floors above, providing Sub distribution boards for local power and lighting and cable containment between floors.

In keeping with guidance from PD5454 No services will pass through the strongrooms. Design will be in accordance with BS7671:2014 or latest revision.

Fire Detection & Alarm

A VESDA smoke detection system is to be used within the Strong Room area's as this provides the quickest detection possible and is in keeping with the requirements of PD5454:2012. In accordance with the basis of design document and fire strategy, the fire detection and alarm system shall be designed in conjunction with a fire risk assessment and complying to BS5839-1:2013 and PD5454:2012 standards to protect both Life and the Property contained within.

Lighting

Lighting throughout will generally be LED fittings, to keep in line with PD5454 and to reduce the UV levels that can damage the Records. This also keeps the lighting loads down and helping with BREEAM requirements. Where LED isn't required or isn't suitable high frequency low energy lights will be used. Light levels will be above minimum requirements throughout due to the nature of the building. Levels will be suitable and uniformed to ensure a good coverage. Lighting within the non-public areas will be functional and fairly industrial, whereas the lighting within the public areas will provide an aesthetically pleasing environment maximising the ability to view Records and artefacts at their highest visual levels, minimising shadowing and replicating natural light as much as possible. Lux levels to be confirmed. Automatic presence detection will be used wherever possible but particularly within the stores to reduce energy consumption and to avoid lighting being left on un-necessarily.

External Lighting

External lighting will be provided by a combination of building mounted lighting and car park column lighting using appropriate LED fittings.

Telephone, Data, & IT

The Phone, Data and IT design is to suit Suffolk County Council's standard Requirements and to integrate into their existing systems. Both a wired and wireless infrastructure is to be installed that fully supports digital communications within the building. The computer room on the second floor will contain all hardware and cable terminations and will be where the incoming phone services are located.

Security & CCTV

The Security design is to provide a safe, secure environment for employees and visitors as well as providing protections against theft of equipment, sensitive information, records and material and preventing service or business interruption.

Lightning Protection

Lightning Protection will be designed and installed in accordance with BS EN 62305-5 latest revision, BS7671:2014 latest revision including any specific requirements required by SCC.

Earthing & Bonding

Earthing and Bonding shall be undertaken in accordance with BS7671:2014 latest revision and BS7430 latest revision. A clean earth shall be provided to BS EN50310 to telecommunication Earthing system, separate to the main building electrical Earthing system. Equipotential bonding will be installed to connect all items of extraneous metal work to the general mass of earth to reduce potential shock hazards. The following items shall be bonded as a minimum - Steel structure, Metallic coverings, Services, Flues, Generator, ducting and mechanical plant.

| Indicative Section | Works | GIFA | Current Cost Estimate £ | Cost 2Q 2017 £ | All in £/m² 2Q 2017 |
|--------------------------------|---------------------|-------------|-------------------------|--------------------|---------------------|
| 1 | Archive/Store Rooms | 1214 | 4,451,738 | 5,120,652 | 4218 |
| 2 | Public Areas | 2134 | 7,624,766 | 8,728,060 | 4090 |
| 3 | Lecture Theatre | 249 | 889,679 | 1,018,410 | 4090 |
| TOTAL CONSTRUCTION COST | | 3597 | | £14,867,122 | |

Summary of estimated total allowing for fees & disbursements, exclusion apply.

Based on assumption works are tendered and commenced 2017 **£17,100,200**

GIFA - Gross Internal Floor Area

Pricing Notes

- Current costs based on 4Q 2014
- Anticipated costs 2Q 2017 includes tender uplift c. 15%
- All costs include external works.
- All costs include preliminaries 12.5%
- All costs include contingency 10%
- Costs include demolition UCS P block.
- GIFA based upon Measured Areas. Lecture theatre 2nd floor excluded.
- Archive & store room costs based on previously measured design details. Public & lecture theatre costs based on indicative costs for similar schemes.
- Provisional Sums included:

| | |
|--------------------------------------|---------|
| - Asbestos Removal | £30,000 |
| - Services disconnection & diversion | £50,000 |
| - Freezer Cabinets | £45,000 |
| - Flood Protection | £25,000 |
| - Substation | £50,000 |
- An uplift for BREEAM excellent equivalent to 5% is included.
- All costs are indicative pending further design and specification. Caution should be taken when reviewing costs for lecture theatre as shared elements including groundworks, roof and plant are to be appointed during detailed design.

Basis of pricing

- Drawings Used**
 Concertus (14-0187) A00-06.2 L00-01A
 Dec '14 Proposed floor plans
 Dec '14 Externals
- Specification Used**
 Concertus
 29.09.2014 Outline Specification
 Visit to University Campus Suffolk dated: 11.09.2014
 Meetings held with Concertus dated: 04.09.2014
 10.09.2014
 02.10.2014
 12.11.2014 (BREEAM)
- Visits & Meetings**
 UCS site visit 11.09.2014
 Meetings Concertus 04.09.2014
 10.09.2014
 02.10.2014
 12.11.2014
 07.01.2015


Exclusions

- General exclusions**
 Value Added Tax
 Consequential Improvements
 Archaeological finds and delays
 Public Art/ Signage
- Technical Exclusions**
 Disposal of any contaminated excavated arisings
 Underground obstructions or unusual subsoils
 Fit out unless stated
 Assumes conventional drainage


Other Project Costs

As part of the development of the project it will be necessary to commission various survey's and reports, including but not restricted to the following:

- This will include;
- Acoustician;
 - Archaeology;
 - Asbestos surveys;
 - Bream Assessment;
 - Building Control Fees;
 - Drainage Surveys;
 - Ecology and associated works;
 - Geotechnical reports;
 - Ground investigation;
 - Planning Fees;
 - Service Surveys;
 - Soil investigation reports;
 - Tree Surveys;
 - Traffic impact assessment;



RIBA Plan of Work 2013



RIBA

The RIBA Plan of Work 2013 organises the process of briefing, designing, constructing, maintaining, operating and using building projects into a number of key stages. The content of stages may vary or overlap to suit specific project requirements. The RIBA Plan of Work 2013 should be used solely as guidance for the preparation of detailed professional services contracts and building contracts.

www.ribaplanofwork.com

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|--|---|--|---|---|--|--|---|
| Stages | Strategic Definition | Preparation and Brief | Concept Design | Developed Design | Technical Design | Construction | Handover and Close Out | In Use |
| Core Objectives | Identify client's Business Case and Strategic Brief and other core project requirements. | Develop Project Objectives, including Quality Objectives and Project Outcomes, Sustainability Aspirations, Project Budget, other parameters or constraints and develop Initial Project Brief. Undertake Feasibility Studies and review of Site Information. | Prepare Concept Design, including outline proposals for structural design, building services systems, outline specifications and preliminary Cost Information along with relevant Project Strategies in accordance with Design Programme. Agree alterations to brief and issue Final Project Brief. | Prepare Developed Design, including coordinated and updated proposals for structural design, building services systems, outline specifications, Cost Information and Project Strategies in accordance with Design Programme. | Prepare Technical Design in accordance with Design Responsibility Matrix and Project Strategies to include all architectural, structural and building services information, specialist subcontractor design and specifications, in accordance with Design Programme. | Offsite manufacturing and onsite Construction in accordance with Construction Programme and resolution of Design Queries from site as they arise. | Handover of building and conclusion of Building Contract. | Undertake In Use services in accordance with Schedule of Services. |
| Procurement *Variable task bar | Initial considerations for assembling the project team. | Prepare Project Roles Table and Contractual Tree and continue assembling the project team. | The procurement strategy does not fundamentally alter the progression of the design or the level of detail prepared at a given stage. However, Information Exchanges will vary depending on the selected procurement route and Building Contract. A bespoke RIBA Plan of Work 2013 will set out the specific tendering and procurement activities that will occur at each stage in relation to the chosen procurement route. | | | Administration of Building Contract, including regular site inspections and review of progress. | Conclude administration of Building Contract. | |
| Programme *Variable task bar | Establish Project Programme. | Review Project Programme. | Review Project Programme. | The procurement route may dictate the Project Programme and may result in certain stages overlapping or being undertaken concurrently. A bespoke RIBA Plan of Work 2013 will clarify the stage overlaps. The Project Programme will set out the specific stage dates and detailed programme durations. | | | | |
| (Town) Planning *Variable task bar | Pre-application discussions. | Pre-application discussions. | Planning applications are typically made using the Stage 3 output. A bespoke RIBA Plan of Work 2013 will identify when the planning application is to be made. | | | | | |
| Suggested Key Support Tasks | Review Feedback from previous projects. | Prepare Handover Strategy and Risk Assessments. Agree Schedule of Services, Design Responsibility Matrix and Information Exchanges and prepare Project Execution Plan including Technology and Communication Strategies and consideration of Common Standards to be used. | Prepare Sustainability Strategy, Maintenance and Operational Strategy and review Handover Strategy and Risk Assessments. Undertake third party consultations as required and any Research and Development aspects. Review and update Project Execution Plan. Consider Construction Strategy, including offsite fabrication, and develop Health and Safety Strategy. | Review and update Sustainability, Maintenance and Operational Strategies and Handover Strategies and Risk Assessments. Undertake third party consultations as required and conclude Research and Development aspects. Review and update Project Execution Plan, including Change Control Procedures. Review and update Construction and Health and Safety Strategies. | Review and update Sustainability, Maintenance and Operational Strategies and Handover Strategies and Risk Assessments. Prepare and submit Building Regulations submission and any other third party submissions requiring consent. Review and update Project Execution Plan. Review Construction Strategy, including sequencing, and update Health and Safety Strategy. | Review and update Sustainability Strategy and implement Handover Strategy, including agreement of information required for commissioning, training, handover, asset management, future monitoring and maintenance and ongoing compilation of 'As-constructed' Information. Update Construction and Health and Safety Strategies. | Carry out activities listed in Handover Strategy including Feedback for use during the future life of the building or on future projects. Updating of Project Information as required. | Conclude activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspects. Updating of Project Information, as required, in response to ongoing client Feedback until the end of the building's life. |
| Sustainability Checkpoints | Sustainability Checkpoint – 0 | Sustainability Checkpoint – 1 | Sustainability Checkpoint – 2 | Sustainability Checkpoint – 3 | Sustainability Checkpoint – 4 | Sustainability Checkpoint – 5 | Sustainability Checkpoint – 6 | Sustainability Checkpoint – 7 |
| Information Exchanges (at stage completion) | Strategic Brief. | Initial Project Brief. | Concept Design including outline structural and building services design, associated Project Strategies, preliminary Cost Information and Final Project Brief. | Developed Design, including the coordinated architectural, structural and building services design and updated Cost Information. | Completed Technical Design of the project. | 'As-constructed' Information. | Updated 'As-constructed' Information. | 'As-constructed' Information updated in response to ongoing client Feedback and maintenance or operational developments. |
| UK Government Information Exchanges | Not required. | Required. | Required. | Required. | Not required. | Not required. | Required. | As required. |

*Variable task bar – in creating a bespoke project or practice specific RIBA Plan of Work 2013 via www.ribaplanofwork.com a specific bar is selected from a number of options.

© RIBA

Proposed Delivery

An outline assessment of timescale has been undertaken to support the design proposals of the feasibility report. This programme for delivery is high level, but it establishes a series of forecasted key milestones throughout design then construction periods for a project of this scope and magnitude from inception to completion.

Our Project Approach will be managed according to the RIBA Outline Plan of Work and this creates a series of deliverable stages of design and construction activity.

These headline dates are outlined below and would be reviewed as the project proceeds.

On page 2 the accommodation requirements are outlined. This is in accordance with the client brief (SRO Facility Development: Revised Option brief for Concertus) issued on 12/09/2014 followed by amendments briefing received on 06/11/2014 and further amendments on 09/12/2014 tbc.

The building will provide storage capacity to house existing storage from the Lowestoft Records Office, the Bury out store, Archaeology and to provide capacity to support additional storage requirements for the Ipswich Records Office. The intention is to keep the existing Ipswich Records Office research and public service elements open to the public until the East of Suffolk research centre is fully operational.

Actual timescales for Design and Delivery are yet to be determined and will be subject to cabinet approvals, funding availability and collaborations with UCS and other parties. A single project to construct the building without phasing is anticipated. This is reflected in the proposed project delivery statement below. Should a phased delivery be required with construction works split across separate projects, this could significantly increase both pre-construction and construction timescales and is likely to increase the cost of the whole scheme.

High Level Programme For Development & Delivery

Proposed Project Delivery Design and Pre-construction Phases

Stage 0-1 - Strategic Definition, Preparation & Brief (Aug - Dec 2014)

- Strategic Brief & Client Business Case
- Define scope and project objectives (outcomes, sustainability aspirations, project budget)
- Planning pre-application discussions
- BREEAM pre-Assessment
- Produce Feasibility Proposals
- Review stage report and receive approval to proceed.

Bid for Development Funding (Dec 2015 - April 2016)

Stage 2 - Concept Design (8 weeks May - June 2016)

- Finalise design brief with client
- Prepare outline proposals for structural design & building services
- Pre-planning consultation
- Present concept design and high level cost plan to clients
- Review stage report and receive approval to proceed.

Stage 3 - Developed Design (12 weeks July - Sept 2016)

- BREEAM Design Stage Assessment
- Submit planning application (allow 3 months for determination)
- Conclude research and development aspects
- Coordinated architectural, structural, building services and landscape designs & updated cost information
- Assess procurement strategy and appropriate form of contract
- Review stage report and receive approval to proceed.

Stage 4 - Technical Design (16 weeks Oct 2016 - Jan 2017)

- BREEAM Interim Design Stage Certification
- Prepare and Submit Building Regulations application and any other third party submissions
- Develop to completion all architectural, structural, building services and landscape designs, spec and specialist sub-contractor designs
- Production information measurement by QS

Bid for Delivery Funding (Jan 2017 - March 2017)

(Upon successfully obtaining sufficient grant funding to support the scheme, the following activities could be undertaken)

- Contractor Tender, Evaluation (April 2017 - May 2017)
- Review tender, receive approval to proceed and appoint contractor (June 2017)

Construction, Client Commissioning and Occupation

Stage 5 - Construction (June 2017 - Dec 2018)

- Mobilisation
- Demolition of Facilities Building & Construction Phase
- External landscaping
- BREEAM Construction Stage Assessment
- Testing & Commissioning

Stage 6 - Handover (Jan 2019 - Jan 2020)

- User training
- Client fit out - furniture, specialist equipment & IT systems etc.
- Building acclimatisation (Jan - June 2019)
- Move archive data into new store (July 2019 onwards)
- Staff relocate to new ESRC
- Official opening of facility to the public
- Conclude Building Contract & ensuring successful operation and management of the building, resolution of defects arising within contract period

Stage 7 - In use (Jan 2020 onwards)

- Building out of contract and formally in-use
- BREEAM Final Post Construction Stage Certification
- Post-occupancy evaluation

Project Delivery Summary

For the purposes of high level planning, assuming the bid for delivery funding was successful and project board approved the scheme in accordance with outline timescale indicated, the building could potentially be operational by Summer 2019. This is based on an assumed construction handover by the end of December 2018, followed by a 6 month acclimatisation period and client commissioning period.

The pre-construction and construction timescales outlined above are indicative and based on information available at early feasibility only.

Project Specific Risk

Project Specific Risk

For the purposes of this report, the following initial Risks and/or Assumptions have been defined and simply placed into an Assessment List. Any additions to this schedule and prioritisation of a formal Risk Register both in Likelihood and Impact would occur over the next work stage for the Project.

Design and Development

- Delay in finalising client brief or subsequent client changes
Mitigation Action: Obtain Design sign off at developed design phase and implement robust change management process thereafter.
- Insufficient funding available to support proposed and desired design
Mitigation Action: look at all funding opportunities and identify benefits and savings. Client to underwrite funding strategy prior to progressing to subsequent project phases.

Legal Statutory or Regulatory

- Planning Approvals - delay to obtaining approval or onerous conditions
Mitigation Action: undertake pre-application consultation and maintain regular communication with local planners throughout design development.
- Building Regulation Application - possible design or cost impacts due to matters arising from application.
Mitigation Action: Regular consultations with Building Control and pre-application advice
- Achieving BREEAM Excellence - possible time, cost and design constraints could impact success in achieving excellent rating - likely to be a planning requirement.
Mitigation Action: Undertake early pre-assessment to assess likelihood and financial implications of being able to achieve Excellent
- Highways likely to request traffic impact assessment, on site and off site measures in relation to the scheme.
Mitigation Action: Undertake early pre-assessment consultation to ensure any key measures are factored into early designs and cost estimates.
- Site acquisition from UCS - terms and timetable for agreement yet to be determined, unknown legal or site issues
Mitigation Action: Regular consultation with UCS, SCC to secure agreement in principle with UCS prior to progressing project beyond feasibility.
- Party Wall issues with adjacent owners to the side of the site.
Mitigation Action: Early discussion and agreement with neighbours and avoiding excavations being within 6m of the boundary line, careful consideration of deep pile foundations and proximity to part walls etc.

Mobilisation and Construction

- Presence and location of unknown obstructions, ground contamination or below ground services including drainage in proposed development area.
Mitigation Action: undertake early investigations, soil testing and site scan.
- Below Ground Site Conditions - Geotechnical and Geo-Environmental data unknown,
Mitigation Action: undertake extensive site investigations and soakage testing prior to design development phase to inform substructure design and drainage strategy.
- Presence of existing mature trees with TPOs within designated development area
Mitigation Action: Undertake early arboricultural survey and consider impacts
- The site may be of interest for Archaeological Investigation, trench investigations may be required prior to construction - possible time and cost impacts. Further risk of uncovering important archaeological finds during construction unknown time and cost impacts.
Mitigation Action: early consultation with archaeology team to assess likelihood and potential impacts of uncovering finds.
- Capacity, condition and adequacy of existing building services and drainage unknown
Mitigation Action: Undertake early surveys, CCTV drainage surveys etc. Ensure cost plans factor in any upgrades / new connections and repairs to existing drainage or implementation of SUDS or attenuation system for surface water.
- The presence of Asbestos Containing Materials within the facilities building is noted and will require removal.
Mitigation Action: a full refurbishment and demolition survey will be required in order to fully assess extent and likely removal costs.
- Construction works will span the winter period, delay prior to or during construction due to bad weather.
Mitigation Action: build in float to construction programme.
- Restrictions or constraints placed on the logistical use of the existing site and/or car parking during Construction by UCS.
Mitigation Action: Close coordination with UCS in relation to planning and sequencing works.

Personnel and Team

- Partners' interests conflict with proposal / not effectively met by the scheme which reduces their willingness to take the project forward.
Mitigation Action: Partner engagement in design development and identifying Business Case benefits of the scheme for all partners and stakeholders.
- Public opposition to the proposal stops project progressing or leads to requests for amendments / possible delays.
Mitigation Action: Ongoing communications to public and councillors. Communications strategy including key messages to be developed.

Commissioning and Occupation

- Impact to service delivery if new facility not available by required date
Mitigation Action: Careful project planning, monitoring and control and use of early warnings to enable client to make contingency plans.
- Client expectations not met upon delivery of new and complete building.
Mitigation Action: Ensure business case clearly defines project outputs, outcomes and benefits once project is initiated. End of stage reviews to ensure project remains viable / any required changes are reflected by updating agreed benefits / outcomes and outputs.

Ecology

An EnCheck Interpretation Report will be required and can be carried out by Suffolk County Council's Ecology Team.

The report will highlight areas of ecological interest within the site and the surrounding area and highlight any protected and / or endangered species which inhabit the site and the surrounding area. The report will recommend if any further surveys will need to be carried out before a planning application can be submitted and construction work can commence. It will also make suggestions for any measures which could be carried out to enhance the ecological value of the site.

It is important to note that any additional surveys or measures recommended by ecology could have implications on programme and project costs. Due to various things like hibernation periods, nesting season, protective fencing etc. Ecology and nature conservation are important to the success of all SCC projects, and all recommendations and suggestions will be considered and explored.

During the construction process procedures will be put in place to mitigate the impact of construction on the site with the contractor adopting good practice for ecological awareness.



Arboriculturalist

A tree survey will need to be carried out to identify the impact of the proposed scheme on surrounding trees and the ecological impact of any trees that need to be removed. On the site many of the trees are protected.

It is possible that tree protection fencing will need to be erected during the construction phase of any proposed development in areas recommended by the Arboriculturalist. This will protect and maintain existing hedgerows and trees on the site from any detrimental effects of construction works and contractors' compounds.



Concertus Design and Property Consultants and Suffolk County Council are committed to a policy of equality, inclusion and accessibility in the delivery of its services to members of the public and in the employment opportunities afforded to existing and future employees.

The County Council continually monitors access for people with disability to its buildings, both for the public and staff. The provision of its services will be in such a way as to enable its employees and the public to reasonably access those services in a non-discriminatory manner. It is committed to ensuring that the facilities it provides, uses and manages, afford its visitors and employees the opportunity to maximise their individual abilities and enjoy safe and, wherever possible, independent participation and access.

The overall intention of this development is to create a community focal point that will meet diverse needs, and be valued by those who live in the area. Ease of use by all potential users, including disabled people, parents and toddlers, older people, and young people, is also considered to be an essential element of breaking down language and cultural barriers.

Access issues were considered at an early stage of the design process. All entrances into the new building will have level thresholds. All internal doors will have low force overhead cam closers coupled with finger guards. Accessible toilets will be provided. Main design references used include:

- The Approved Document to Part M (2004)
- BS 8300:2001
- Building Sight (RNIB)
- DRC Codes of Practice
- Guidance on Access Statements (DRC)
- Inclusive Projects (DPTAC)
- Planning and Access for Disabled People - A Good Practice Guide (ODPM)
- Inclusive Mobility (Department for Transport)
- The Access Directory (DPTAC)
- Equality Act

In addition to physical features, providing access for people with mobility and dexterity impairments is vital. A colour and lighting scheme shall be designed in accordance with the needs of people with visual impairments all as outlined and required by Part M of the Building Regulations. The corporate, directional and information signage adopted by Suffolk County Council for use in schools, is designed in accordance with the recommendation of the Sign Design Guide. The design, layout and selection of materials for finishes will follow the latest best practice guidance in terms of widths of corridors and doors, manoeuvring spaces, surface finishes to walls, floors and ceilings, colour and luminance contrast, lighting and the usability of features such as, for example, control panels and switches. A Building, Accessibility and Services manual will be developed by the design team. It details the use, testing and replacement of specialist equipment, suggested maintenance cycles and priorities, and the reasons why particular designs, materials, finishes, equipment and colour schemes were chosen. The manual is seen as an important resource in the on-going management of the facility.

APPENDIX A

BREEAM Report

1.0 Introduction

1.1 What is BREEAM?

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's leading and most widely used environmental assessment method for buildings, with over 115,000 buildings certified and nearly 700,000 registered. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance. Credits are awarded in ten categories according to performance. These credits are then added together to produce a single overall score on a scale of Pass, Good, Very Good, Excellent and Outstanding. The operation of BREEAM is overseen by an independent Sustainability Board, representing a wide cross-section of construction industry stakeholders.

Aims of BREEAM:

To mitigate the impacts of buildings on the environment
To enable buildings to be recognised according to their environmental benefits
To provide a credible, environmental label for buildings
To stimulate demand for sustainable buildings

Objectives of BREEAM:

To provide market recognition to low environmental impact buildings
To ensure best environmental practice is incorporated in buildings
To set criteria and standards surpassing those required by regulations and challenge the market to provide innovative solutions that minimise the environmental impact of buildings
To raise the awareness of owners, occupants, designers and operators of the benefits of buildings with a reduced impact on the environment
To allow organisations to demonstrate progress towards corporate environmental objectives

1.2 BREEAM Credibility

Technical Credibility

BREEAM is tried and tested, both in terms of its robust technical standards and its commercial delivery, and expert advice (based on scientific evidence) continues to inform almost every issue in BREEAM.

In the UK there are over 115,000 buildings certified and over 700,000 homes and buildings currently registered for assessment. BREEAM can be used to assess any building type anywhere in the world.

Robust Technical Standards

BREEAM has always used objective criteria to recognise good environmental performance:

Issues for assessment are agreed to be significant, and offer worthwhile reductions in environmental impact
Issues must be assessable at the relevant stage in the building's life
Performance levels are based on scientific evidence wherever possible
Performance levels must exceed demands of law and regulations and encourage innovation
Improvements encouraged by BREEAM are achievable and cost effective

Where specific targets cannot be set using hard science or research, sensible practical measures are recommended to minimise environmental impact or enhance the environment of the building and its users.

Commercial Credibility

Assessments are undertaken by organisations and individuals trained and licensed by BRE Global (Assessors). This ensures:

Competition in the market for assessment services
Engagement with the whole of the industry
Assessors work to the same quality standards (monitored by BRE)

BRE Global has gained UKAS (United Kingdom Accreditation Service) accreditation for all its BREEAM schemes. This means that its management of BREEAM is monitored and overseen by UKAS.

2.0 Scoring and Rating

This section of the report explains how an assessed building's certified BREEAM rating is calculated.

There are a number of elements that determine the BREEAM rating; these are as follows:

BREEAM rating benchmarks
BREEAM environmental weightings
Minimum BREEAM standards

2.1 Rating Benchmarks

The rating benchmarks for the 2014 version of BREEAM are outlined in table 1 below :

Table 1 BREEAM 2014 rating benchmarks

| BREEAM Rating | % score |
|---------------|---------|
| UNCLASSIFIED | <30 |
| PASS | ≥30 |
| GOOD | ≥45 |
| V GOOD | ≥55 |
| EXCELLENT | ≥70 |
| OUTSTANDING* | ≥85 |

* Please note: there are additional criteria for achieving a BREEAM Outstanding rating.

2.2 Environmental section weightings

Table 2 below outlines the environmental weightings for the nine BREEAM sections.

Table 2 BREEAM 2014 environmental weightings

| BREEAM Section | Fully fitted out (%) | Weighting (%) | Shell and core only (%) |
|--------------------|----------------------|---------------|-------------------------|
| Management | 12 | 12.5 | 11 |
| Health & Wellbeing | 15 | 10 | 10.5 |
| Energy | 15 | 14.5 | 15 |
| Transport | 9 | 11.5 | 10 |
| Water | 7 | 4 | 7.5 |
| Materials | 13.5 | 17.5 | 14.5 |
| Waste | 8.5 | 11 | 9.5 |

From the pre-assessment meeting and overview of the drawings and building location the following was ascertained:-

The following information was allowed for by RIBA Stages B/C. Production of this information to be supplied to the BREEAM Assessor to achieve the 'Excellent' rating.

| | |
|-------|---|
| MAN 1 | Consultation and sustainability champion monitoring |
| MAN 4 | Commissioning responsibilities/design team responsibilities |
| HEA 6 | Safety and Security - Letters/report/drawings confirming an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) has been consulted. |
| ENE 1 | SBEM/INP File. |
| ENE 4 | Low and zero carbon technologies report. |
| TRA 5 | Travel Plan. |
| WST 6 | Adaptation to climate change report. |
| ECO | Appointment of Ecologist to produce survey and report. |

The following percentages in each category have been achieved:

| | |
|----------------------|--------|
| Management | 81.00% |
| Health & Wellbeing | 58.80% |
| Energy | 56.50% |
| Transport | 77.80% |
| Water | 75.00% |
| Materials | 71.40% |
| Waste | 75.00% |
| Land Use and Ecology | 90.00% |
| Pollution | 69.20% |
| Innovation | 20.00% |

The pre-assessment has been undertaken, to achieve the minimum requirements of an 'Excellent' rating, and the design team have achieved the minimum standards to an 'Excellent' standard and achieves a score of **73.20%**.

Due to the nature of the building and its location it is not deemed feasible or cost effective to achieve an 'Outstanding' rating. To achieve 'Excellent' 70% is required, and this would mean an additional sum of money between 3.5% and 5% of the project value would be required. Losing this sum of money impacts on the building and consequently deprives the end users/the students) of extra floor area and (space).

As can be seen the buffer over the threshold is minimal, and the 'Excellent' will be particularly difficult to achieve. There are a number of credits that cannot be targeted due to the nature or location of the building. For example the natural ventilation and indoor air quality is not achievable. Where possible the team have targeted all credits to achieve a good BREEAM score regardless of cost, and time for the design team.

5.0 Results

The table within the appendix gives the action criteria roles and responsibilities, and the predicted credits for the project.

It also gives the breakdown of the individual credits to achieve an 'Excellent' rating. The pre-assessment should be read in conjunction with the BREEAM 'Other Buildings New Construction 2014' Manual for a fuller understanding of the actual requirements and commitments.

6.0 Recommendations

Further to our Pre-Assessment review with the design team a preliminary score of **73.20%** is achieved. This equates to an 'Excellent' rating and all of the minimum requirements have been achieved.

This is based upon the assumption that a LZC Report will be carried out, Drainage Calculation report for surface water run-off undertaken and that an Acoustic report and Thermal Analysis will be provided. The SBEM calculations will also be required to demonstrate that the requirements of meeting carbon emissions reduction. A Travel Plan is to be provided.

In addition the following elements must be included for:

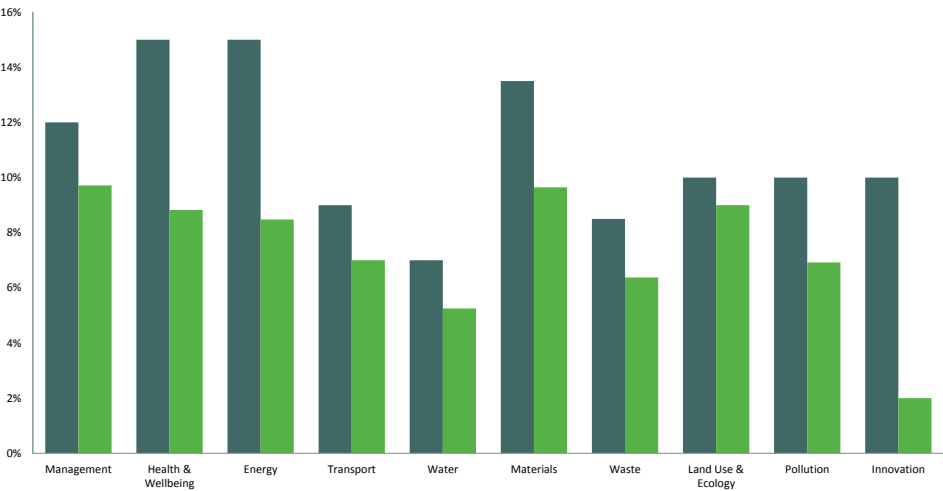
- Contractor to adopt the Considerate Constructor Scheme
- Thermal Comfort Report
- Simple to use Building User Guide to be produced (not the O&M manual!)
- Seasonal Commissioning Testing & Programme
- Low flush WCs/low flow taps
- Green Guide Materials Specifications throughout
- Contractor to adopt best practice policies and monitor water/electricity/CO₂ consumption, and source legal timber
- Calculations report for surface water run-off
- Consultation report
- Ecology Report
- Site Waste Management Plan
- Travel Plan
- Flow restrictors to sanitary fittings with low level volumes, including leak detection, sanitary supply shaft off and water meter
- A+ or A rated building materials for building elements

BREEAM UK New Construction 2014 Pre-Assessment Estimator: Indicative Rating & Building Performance

BREEAM® UK1

| | |
|-------------------------------|-----------------|
| Overall Building Performance | |
| Building name | Records Office |
| Indicative BREEAM rating | Excellent |
| Indicative Total Score | 73.2% |
| Min. standards level achieved | Excellent level |

Building Performance by Environment Section



| Environmental Section | No. credits available | Indicative no. credits Achieved | % credits achieved | Section Weighting | Indicative Section Score |
|-----------------------|-----------------------|---------------------------------|--------------------|-------------------|--------------------------|
| Management | 21 | 17 | 81.0% | 12.0% | 9.7% |
| Health & Wellbeing | 17 | 10 | 58.8% | 15.0% | 8.8% |
| Energy | 23 | 13 | 56.5% | 15.0% | 8.5% |
| Transport | 9 | 7 | 77.8% | 9.0% | 7.0% |
| Water | 8 | 6 | 75.0% | 7.0% | 5.3% |
| Materials | 14 | 10 | 71.4% | 13.5% | 9.6% |
| Waste | 8 | 6 | 75.0% | 8.5% | 6.4% |
| Land Use & Ecology | 10 | 9 | 90.0% | 10.0% | 9.0% |
| Pollution | 13 | 9 | 69.2% | 10.0% | 6.9% |
| Innovation | 10 | 2 | 20.0% | 10.0% | 2.0% |

BREEAM UK Refurbishment 2014

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|------------|--|--|-----------------------------------|---------------------------------------|-------------------|---------------|
| Management | | | | | | |
| MAN 1 | Stakeholder Participation 1 credit required for minimum standards | Consultation Plan & consultation project delivery | Client representative / Architect | Stage C | 1 | 1 |
| | | Consultation with Stakeholder | Client representative | Stage C | 1 | 1 |
| | | Sustainability champion | Client representative | Stage F | 1 | 1 |
| | | Sustainability champion monitoring process | Representative | Stage F | 1 | 1 |
| MAN 2 | Life Cycle Cost and Service Life Planning | LCC analysis during design development | Client representative/QS | Stage B/C | 1 | 0 |
| | | LCC compare 2 building options and selected appropriately | Client representative/QS | Stage B/C | 1 | 0 |
| | | LCC analysis incorporating maintenance strategy | Client representative/QS | Stage B/C | 1 | 0 |
| MAN 3 | Construction Site Impacts Minimum standards | Site timber is sourced in accordance with UK timber procurement policy | Contractor | Stage J | 1 | ✓ |
| | | Monitoring and record construction site impacts | Contractor | Stage J | 1 | ✓ |
| | | Monitor and record site utility consumption | Contractor | Stage J | 1 | 1 |
| | | Monitor and record transport to and from site inc. fuel use, carbon emissions and distance travelled | Contractor | Stage J | 1 | 1 |
| | | Contractor operates ISO 140001 system, and implements best practice pollution policies | Contractor | Stage J | 1 | 1 |
| | | Contractor to designate a sustainability champion | Contractor | Stage J | 1 | 1 |
| | | Considerate Constructors scheme compliance and compliance exceeded | Contractor | Stage J | 2 | 2 |
| | | Exemplary performance | Contractor | Stage G | 1 | 0 |
| | | Roles and responsibilities and Schedule of Training | Client/representative | Stage B | 1 | 1 |
| | | Thermographic Survey and rectification of any defects/building fabric commissioned | Contractor | Stage E | 1 | 1 |

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|----------|---|--|---|---------------------------------------|-------------------|---------------|
| MAN 4 | Commissioning and Handover Mandatory standards | Specialist Commissioning Manager Appointed, schedule and programme undertaken | Contractor | Stage F to M | 1 | 1 |
| | | Building User Guide | Contractor | Stage E | | ✓ |
| | | Schedule for building users and Managers handover training | Contractor | Stage J | 1 | 1 |
| MAN 5 | Aftercare | Adtercare support provided to building occupiers | Client representative | Stage D | 1 | 1 |
| | | Seasonal commissioning | M&E | Stage J | 1 | 1 |
| | | 12 month post contract aftercare, analysis of energy/water use, inc. systems support | Contractor/Client | Stage M | 1 | 1 |
| | | First 3 years after occupation, analysis of building energy use and occupant satisfaction, report to BRE | By Client Instruction - BREEAM Assessor | Stage M | 1 | 1 |

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|----------------------|--------------------|--|---|---------------------------------------|-------------------|---------------|
| Health and Wellbeing | | | | | | |
| Hea 1 | Visual Comfort | Daylight Analysis meeting daylight factor co-efficient levels | Client instruction to daylight specialist | Stage C | 1 | 0 |
| | | Exemplary level criteria for daylighting | M&E | Stage D | 1 | 0 |
| | | Glare control (via brise soleil/blinds etc) | Architect | Stage G | 1 | 1 |
| | | View out (window 20% of wall area) | Architect | Stage G | 2 | 2 |
| | | Internal and External Lighting levels in accordance with CIBSE Code for Lighting | M&E | Stage G | 1 | 1 |
| HEA 2 | Indoor Air Quality | Natural ventilation air quality plan, site layout showing position of air intakes/exhausts | M&E | Stage D | 1 | 0 |
| | | VOC specification to be BREEAM compliant | Architect | Stage D | 1 | 0 |
| | | Formaldehyde level testing post-construction | Architect/Contractor | Stage G | 1 | 0 |
| | | Natural Ventilation Strategy in accordance with CIBSE AM11 | M&E | Stage G | 1 | 0 |
| | | Exemplary level VOC testing | M&E | Stage F | 2 | 0 |
| | | Minimising the concentration and recirculation of pollutants in the building | M&E | Stage F | 1 | 0 |

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|-----------|---|--|------------------------|---------------------------------------|-------------------|---------------|
| Energy | | | | | | |
| ENE 1 | Reduction of CO2 Emissions 5 achieved for Excellent | SBEM Calculations/EPC | Energy Consultant | Stage C | 12 | 6 |
| | | Exemplary level criteria | Energy Consultant | Stage C | 5 | 0 |
| ENE 2 | Energy Monitoring 1 credit mandatory | Sub metering by pulsed meters of all systems | M&E | Stage D | 1 | 1 |
| | | Sub metering by pulsed meters of all function areas | M&E | Stage D | 1 | 1 |
| ENE 3 | External Lighting | External lighting to BREEAM standards | Electrical Engineer | Stage G | 1 | 1 |
| ENE 4 | Low and Zero Carbon Technologies | LZC Feasibility Study | Energy Consultant | Stage C | 1 | 1 |
| | | Passive design measures | Energy Consultant | Stage C | 1 | 0 |
| | | Free cooling system incorporated in line with Passive Design analysis | M&E/Energy Consultant | Stage D | 1 | 0 |
| ENE 6 | Energy efficient transport system | Analysis to determine size and optimum number | M&E | Stage G | 1 | 1 |
| | | Energy efficient features | M&E | Stage g | 1 | 1 |
| ENE 8 | Energy efficient transport system | All computers and white goods to be A rated and listed on Buying standards website | Client | Stage G | 2 | 0 |
| Transport | | | | | | |
| TRA 1 | Public Transport Accessibility | Bus drop / public transport systems | Client/BREEAM Assessor | Stage G | 3 | 3 |
| TRA 2 | Proximity to Amenities | Evidence that food outlet / cash machine or post box within 500m | Client/BREEAM Assessor | Stage G | 1 | 1 |
| TRA 3 | Cyclist Facilities | Cycle storage (10% of staff) | Architect | Stage G | 1 | 1 |
| | | Showers/Lockers/changing facilities | Architect | Stage G | 1 | 1 |
| TRA 4 | Maximum car aprking capacity | 1 parking space for every 4 building users | Architect | Stage G | 2 | 2 |
| TRA 5 | Travel Plan | BREEAM compliant Travel Plan | Client | Stage G | 1 | 1 |

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|-----------|--|--|----------------------|---------------------------------------|-------------------|---------------|
| Water | | | | | | |
| WAT 1 | Water Consumption 1 credit mandatory | Energy efficient water fittings and flow restrictors fitted & rainwater harvesting | Architect/M&E | Stage G | 5 | 4 |
| WAT 2 | Water Monitoring 1 Credit mandatory | Pulsed water meter | Mechanical Engineer | Stage G | 1 | 1 |
| WAT 3 | Water Leak Detection and Prevention | Water leak detection system | Mechanical Engineer | Stage G | 1 | 0 |
| | | Flow control devices fitted | Mechanical Engineer | Stage G | 1 | 1 |
| Materials | | | | | | |
| MAT 1 | Life Cycle Impacts | Green Guide specified materials | Architect | Stage G | 6 | 4 |
| MAT 2 | Hard Landscaping and Boundary Protection | At least 80% to be A or A+ rated | Architect | Stage G | 1 | 1 |
| MAT 3 | Responsible Sourcing of Materials | Sourced from approved suppliers | Architect/Contractor | Stage G | 3 | 1 |
| | | All timber legally harvested | Contractor | Stage F | | ✓ |
| | | Sustainable procurement plan | Contractor | Stage G | 1 | 1 |
| MAT 4 | Insulation | Green Guide Insulation and amounts/responsibly sourced | Architect/M&E | Stage G | 1 | 1 |
| MAT 5 | Designing for Robustness | Drawings/specification of protection of building | Architect | Stage G | 1 | 1 |
| MAT 6 | Material efficiency | Material efficiencies to be identified and implemented | Architect | Stage G | 1 | 1 |

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|-----------------|---|--|-----------------------|---------------------------------------|-------------------|---------------|
| Pollution | | | | | | |
| POL 1 | Impact of Refrigerants | Are there no refrigerants or green refrigerants | M&E | Stage G | 2 | 0 |
| | | Refrigerant leak detection | M&E | Stage G | 1 | 0 |
| POL 2 | NOx Emissions | Less than <40mg/kwh | M&E | Stage G | 3 | 3 |
| | | Less than <70mg/kwh | M&E | | | 0 |
| | | Less than 100mg/kWh | M&E | | | 0 |
| POL 3 | Surface Water Run Off | Site specific Flood Risk Assessment | Client appointment | Stage E | 2 | 1 |
| | | Surface water run off drainage calculations | Client appointment | Stage E | 1 | 1 |
| | | If flooding does not occur in extreme/failure conditions | Client appointment | Stage E | 1 | 1 |
| | | SUDs specified | Client appointment | Stage E | 1 | 1 |
| POL 4 | Reduction of Night Time Light Pollution | Design + specification in accordance with BREEAM | Electrical Engineer | Stage G | 1 | 1 |
| POL 5 | Noise Attenuation | Awarded by default if no other buildings within 800m | Architect/Acoustician | Stage G | 1 | 1 |
| Innovation | | | | | | |
| INV | Innovation Credits | Sustainable Procurement approved | BREEAM Assessor | Stage G | 10 | 0 |
| Potential Score | | | | | | 73.20% |

Key

closed out

required

required

Credit not achievable

Credit not targeted

Mandatory Credits

| Issue No | Issue Title | Outstanding Design Team Requirements | Action | Interim Design Stage Info Required By | Credits Available | Credit Status |
|----------------------|--|--|---------------------------|---------------------------------------|-------------------|---------------|
| Waste | | | | | | |
| WST 1 | Construction Waste Management | SWMP to keep amount of waste/100m2 less than 3.2 tonnes | Contractor | Stage J | 3 | 3 |
| | | Non hazardous water to be diverted from landfill (70-80%) | Contractor | Stage J | 1 | 1 |
| WST 2 | Recycled Aggregates | Recycled/secondary aggregates to BREEAM | Contractor | Stage J | 1 | 0 |
| WST 3 | Operational Waste Mandatory 1 credit | Recycling space + bins | Client/Architect | Stage G | 1 | 1 |
| WST 5 | Adaption to climate change | Will climate change adaptation strategy appraisal for structural and fabric resilience | Structural Engineer | Stage C | 1 | 0 |
| | | Response to adaptation to climate change be implemented | Structural Engineer | Stage C | 1 | 0 |
| WST 6 | Functional adaptability | Building specific functional adaptation strategy appraisal and implemented | Structural Engineer | Stage C | 1 | 0 |
| Land Use and Ecology | | | | | | |
| LE 1 | Site Selection | Development on previous developed site | Architect/Client | Before Stage K | 1 | 1 |
| | | and contaminated land | Architect/Client | Before Stage K | 1 | 0 |
| LE 2 | Ecological Value of Site and Protection of Ecological Features | Ecologist report from SQE | Architect/Client | Before Stage D | 1 | 1 |
| LE 3 | Mitigating Ecological Impact 1 credit mandatory | Ecologist report from SQE | Ecologist/BREEAM Assessor | Before Stage D | 2 | 2 |
| LE 4 | Enhancing Site Ecology | Ecologist report from SQE | Ecologist | Before Stage D | 3 | 2 |
| LE 5 | Long Term Impact on Biodiversity | Ecologist report from SQE | Ecologist | Before Stage D | 2 | 2 |

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